QUAI	IFICATION STATUS – LT8640	) 20L QFN	
TEST	SPECIFICATION	SAMPLE SIZE	RESULTS
High Temperature Operating Life (HTOL)	JEDEC JESD22-A108	3*77	Pass
Highly Accelerated Stress Test (HAST)*	JEDEC JESD22-A110	3*77	Pass
Temperature Cycle (TC)*	JEDEC JESD22-A104	3*77	Pass
Autoclave (AC)*	JEDEC JESD22-A102	3*77	Pass
High Temperature Storage Life (HTSL)	JEDEC JESD22-A103	3*45	Pass
Solder Heat Resistance (SHR)*	JEDEC/IPC J-STD-020	3*231	Pass
Early Life Failure Rate (ELF)	AEC Q100-008	3*800	Pass
Latch-Up	JEDEC JESD78	>±100mA	Pass
Electrostatic Discharge Human Body Model	ESDA/JEDEC JS-001	3/voltage	Pass 3000V
Electrostatic Discharge Field-Induced Charged Device Model	JEDEC JESD22-C101	3/voltage	Pass 2000V

QUAI	IFICATION STATUS – LT8612	28LQFN	
Test	SPECIFICATION	SAMPLE SIZE	RESULTS
High Temperature Operating Life (HTOL)	JEDEC JESD22-A108	3*77	Pass
Highly Accelerated Stress Test (HAST)*	JEDEC JESD22-A110	3*77	Pass
Temperature Cycle (TC)*	JEDEC JESD22-A104	3*77	Pass
Autoclave (AC)*	JEDEC JESD22-A102	3*77	Pass
High Temperature Storage Life (HTSL)	JEDEC JESD22-A103	3*45	Pass
Solder Heat Resistance (SHR)*	JEDEC/IPC J-STD-020	3*231	Pass
Latch-Up	JEDEC JESD78	>±100mA	Pass
Electrostatic Discharge Human Body Model	ESDA/JEDEC JS-001	3/voltage	Pass 1500V
Electrostatic Discharge Field-Induced Charged Device Model	JEDEC JESD22-C101	3/voltage	Pass 1000V

QUAL	IFICATION STATUS – LT8331	16L MSE	
Test	SPECIFICATION	SAMPLE SIZE	RESULTS
High Temperature Operating Life (HTOL)*	JEDEC JESD22-A108	3*77	Pass
Highly Accelerated Stress Test (HAST)*	JEDEC JESD22-A110	3*77	Pass
Temperature Cycle (TC)*	JEDEC JESD22-A104	3*77	Pass
Autoclave (AC)*	JEDEC JESD22-A102	3*77	Pass
High Temperature Storage Life (HTSL)	JEDEC JESD22-A103	3*50	Pass
Solder Heat Resistance (SHR)*	JEDEC/IPC J-STD-020	3*231	Pass
Early Life Failure Rate (ELF)	AEC Q100-008	3*800	In-process Expected completion (April 2019)
Latch-Up	JEDEC JESD78	>±100mA	Pass
Electrostatic Discharge Human Body Model	ESDA/JEDEC JS-001	3/voltage	Pass 3500V
Electrostatic Discharge Field-Induced Charged Device Model	JEDEC JESD22-C101	3/voltage	Pass 1500V

QUAI	LIFICATION STATUS – LT8302	8L SOIC	
Test	SPECIFICATION	SAMPLE SIZE	RESULTS
High Temperature Operating Life (HTOL)*	JEDEC JESD22-A108	3*77	Pass
Highly Accelerated Stress Test (HAST)*	JEDEC JESD22-A110	3*77	Pass
Temperature Cycle (TC)*	JEDEC JESD22-A104	3*77	Pass
Autoclave (AC)*	JEDEC JESD22-A102	3*77	Pass
High Temperature Storage Life (HTSL)	JEDEC JESD22-A103	1*45	Pass
Solder Heat Resistance (SHR)*	JEDEC/IPC J-STD-020	3*231	Pass
Early Life Failure Rate (ELF)	AEC Q100-008	3*800	Pass
Latch-Up	JEDEC JESD78	>±200mA	Pass
Electrostatic Discharge Human Body Model	ESDA/JEDEC JS-001	3/voltage	Pass 4000V
Electrostatic Discharge Field-Induced Charged Device Model	JEDEC JESD22-C101	3/voltage	Pass 2000V

QUAI	IFICATION STATUS – LT8603	40L QFN	
Test	SPECIFICATION	SAMPLE SIZE	RESULTS
High Temperature Operating Life (HTOL)*	JEDEC JESD22-A108	3*77	Pass
Highly Accelerated Stress Test (HAST)*	JEDEC JESD22-A110	3*77	Pass
Temperature Cycle (TC)*	JEDEC JESD22-A104	3*77	Pass
Autoclave (AC)*	JEDEC JESD22-A102	3*77	Pass
High Temperature Storage Life (HTSL)	JEDEC JESD22-A103	3*45	Pass
Solder Heat Resistance (SHR)*	JEDEC/IPC J-STD-020	3*231	Pass
Early Life Failure Rate (ELF)	AEC Q100-008	3*800	Pass
Latch-Up	JEDEC JESD78	>±100mA	Pass
Electrostatic Discharge Human Body Model	ESDA/JEDEC JS-001	3/voltage	Pass 3000V
Electrostatic Discharge Field-Induced Charged Device Model	JEDEC JESD22-C101	3/voltage	Pass 1500V



### Vanguard International Semiconductor Summary

- Plant Address
  - 123, Park Ave-3rd, Science-Based Industrial Park, Hsinchu, Taiwan 30077, R.O.C.
- Headcount

5,200

· Total Building size in sq. ft. and fab size in sq. meters

880,543.3 sq. feet (Building 1)

• Clean room floor space in sq. meters

12,600 sq. meters (Building 1)

· Fab utilization in percent

Fab 1: 100%

· Land Area in sq. meters

41,925 sq. meters

· Wafer capacity for each facility

Fab 1: 87K wafers per month (ADI's material is scheduled to run in Fab 1)

- A list of certifications (i.e. TS16949, ISO-14001, etc.)
  - ISO 9001 Quality Management System (since 1996)
  - ISO 14001 Environment Management System (since 1997)
  - OHSAS 18001 Health & Safety Management System (since 2003)
  - QC 080000 Hazardous Substance Management System (since 2007)
  - ISO 27001 Information Security Management System (since 2015)
  - IATF 16949 Automotive Quality Management System (since 2018)

### **DeltaQualifikationsMatrix**

#### Allgemeines

Kurze Produkt- und Technologiezyklen elektronischer Bauelemente sowie neue Umweltauflagen (Bleiverbot Flammhemmer, ...) führen häufig zu prozeß- und werkstofftechnischen Änderungen an Bauelementen, Leiterplatten, Verbindungstechnik und Schaltung, welche evaluiert werden müssen. Eine geeignete Methodik zur Handhabung von Änderungen an elektronischen Bauelementen beschreibt die ZVEI "Guideline for Customer Notifications of Product and /or Process Changes (PCN) of Electronic Components specified for Automotive Applications". Ein wesentlicher Teil dieser Guideline sind die hier vorliegenden Matrizen, welche sich als Empfehlungen für die Evaluierung von typischen Änderungen an elektronischen Bauelementen verstehen. Dies sollte Teil des offenen und risikobewussten Dialoges zwischen Lieferant und Kunden sein.

Bauteilexperten des ZVEI Arbeitskreis "PCN-Methodik" erarbeitet. Der Inhalt wurde basierend auf dem aktuellen Stand der Technik erstellt und erhebt keinen Anspruch auf Vollständigkeit. Im Einzelfall ist ggf. ein abweichendes Vorgehen abzustimmen, da kundenspezifische Vereinbarungen zur Qualifikation zu berücksichtigen sind.

#### Anwendung der DeltaQualifikationsMatrix (auszufüllen durch den Bauelementehersteller)

- a) Diese Tabelle ist nur bei Änderungen anzuwenden. Neugualifikationen und Sondergualifikation (z.B. Verguß von Modulen) sowie Information Notes bleiben von diesen Matrizen unberührt. b) Ist eine Änderung in dieser Tabelle nicht aufgeführt, so ist der Qualifikationsumfang zwischen Kunde und Lieferant abzustimmen.
- c) Die Matrix der Aktiven Bauelemente ist so aufgebaut, dass zwischen integrierten Halbleitern (AEC-Q100 Rev.H) und diskreten Halbleitern (AEC-Q101 Rev. D1) auszuwählen ist (Zelle D4). Für Passive Bauelemente gilt die AEC-Q200. Für LED's gilt die IEC 60810.
- d) Alle Änderungen in der PCN sind in der Spalte B durch ein Kreuz (x) zu markieren und werden dadurch farblich hervorgehoben. Sofern dies geschehen ist, werden im Feld "Tests, which should be considered for the appropriate process change" (Zeile 83 für Aktive Bauelemente, Zeile 466 für Passive Bauelemente oder in Zeile 77 für LED's) alle in Betracht zu ziehenden Zuverlässigkeitstests angezeigt
- e) In "Tests, which should be considered for the appropriate process change after selection of condition table" (Zeile 85 für Aktive Bauelemente, Zeile 468 für Passive Bauelemente oder Zeile 79 für LED's) wird die Anpassung der in Betracht zu ziehenden Tests in Folge der Relevanz bezüglich der Änderung berücksichtigt.
- Dazu ist die Tabelle "Conditions" entsprechend der Auswahl (A/B/C) mit einem (x) zu bewerten. f) In "Suppliers performed tests" (Zeile 87 für Aktive Bauelemente, Zeile 470 für Passive Bauelemente oder
- Zeile 81 für LED's) dokumentiert der Bauelementehersteller die durchgeführten bzw. geplanten Tests. g) Falls von der Testempfehlung abgewichen wird, so sollten diese Abweichungen vom Bauelementehersteller angezeigt und kommentiert werden. Hierzu ist der Bereich "Reason for exception of tests" (Zeile 89 für Aktive Bauelemente, Zeile 472 für Passive Bauelemente oder Zeile 83 für LED's) zu verwender
- Werden die in Betracht zu ziehenden Tests durch generische Daten (G) belegt, ist dies ebenfalls hier anzuzeigen und zu begründen.

#### Die Einstufung des Untersuchungslevel erfolgt in folgende Kategorien

- "C: Component level": Die Evaluierung der Änderung am Bauelement ist durch Untersuchungen schließlich am Bauelelement beim Bauelementehersteller durchführbar. Zur Evaluierung der Änderung dürfen Ergebnisse aus bereits durchgeführten Untersuchungen herangezoger werden, wenn diese zu einem ähnlichen Bauelement bereits vorliegen (Generische Daten).
- "B: Board level": Die beschriebene Änderung hat möglicherweise Einfluss auf die Verarbeitbarkei des Bauelementes im Steuergerät. Die Evaluierung der Änderung wird wie unter C beim Bauelementehersteller durchgeführt Zusätzlich ist durch den Kunden/Steuergerätehersteller die Verarbeitbarkeit zu prüfen, die z.B. abhängig von der Änderung, Zuverlässigkeitsuntersuchungen auf applikationsrelevanten Testbords erfordert.
- \*A: Application level\*: Die beschriebene Änderung hat möglicherweise Einfluss auf die Applikation/ das Steuergerät. Die Evaluierung der Änderung wird wie unter C oder B durchgeführt. Zusätzlich ist vom Kunden/Steuergerätehersteller der Einfluss der Änderung im Steuergerät durch geeignete Untersuchungen zu bewerten. Dieses Vorgehen ist mit dem OEM abzustimmen. Hierbei ist zu berücksichtigen, ob die Steuergeräte- / Baugruppenanforderungen durch andere Qualifikationen bereits hinreichend abgesichert sind (applikationsspezifische Risikobetrachtung). \*: Not relevant for qualification matrix": Änderung(en), die nicht in A, B oder C eingestuft werden
- können und somit nicht relevant für die DeQuMA sind.

#### Infomation Notes

Änderungen die nur eine Information Note benötigen (bei der Bewertung Risk on Supply Chain als "I" gekennzeichnet ), dürfen nicht in der DeQuMa angekreuzt werden, da Sie ansonsten den erforderlichen Evaluierungslevel verfälschen, Für als "I" bewertete Änderungen ist das Information Note Formblatt zu verwenden, influence evaluation level and test effort.

- <u>Wichtige Hinweise</u> Zur formgerechten Anwendung der DeltaQualifikationsMatrizen steht auf der Homepage des ZVEI AK ein Tutorial bereit (7V/EI-Tutorial)
- ID Nummer: ist eine eindeutige Identifikationsnummer f
  ür iede angegebene Änderung, die in den ZVEI PCN DeltaQualifikatiosMatrizen identifiziert ist. Die gleiche ID Nummer wird zur Identifizierung der Änderung im PCN Form Sheet verwendet Die mittels Matrix identifizierten Tests sind in Betracht zu ziehen, d.h. es ist zu pr
  üfen, ob der
- jeweilige Test für die spezifische Änderung in dieser Form notwendig ist. Abweichungen oder generische Daten sind im Detail zu begründen. - Die Spalte "Further applicable conditions", Bemerkungen und Fußnoten sind unbedingt zu beachten, da sie
- wichtige Hinweise und Einschränkungen enthalten. - Zur Nutzung aller Funktionen muss in Excel die Anwendung von Makros freigegeben sein

#### Form provided by 7VEL- Revision 3.1 - December 2016

### **DeltaQualificationMatrix**

General

Short product and technology cycles as well as new environmental regulations ("Pb-free", flame retardants ) frequently result in process and material changes of components printed circuit boards, assembly techniques and circuit layout which have to be evaluated. The ZVEI "Guideline for Customer Notifications of Product and /or Process Changes (PCN) of Electronic Components specified for Automotive Applications" describes an appropriate methodology for dealing with changed electronic components. The qualification matrices in this guideline are recommendations for how to assess typical changes of electronic components These recommendations promote an open risk-based discussion between supplier and customer regarding gualifications.

The DeltaQualificationMatrices were developed by the Industry Task Force Team "PCN Diese DeltaQualifikationsMatrizen wurden durch den Industriearbeitskreis "PCN DeltaQualifikationsMatrix" und den DeltaQualificationMatrix" together with component experts from the ZVEI Working Group "PCN-Methodology". Actual content represents state-of-the-art technology and does not claim to be comprehensive. Deviation from proposed guideline should be mutually agreed as customer specific requirements have to be considered

### DeltaQualificationMatrix Application (completion by component manufacturer) a) This table has to be used for changes only. The matrices are not applicable for new product,

- special qualifications (for instance for encapsulation of module) or Information Notes. b) If a change is not listed in this table, the qualification plan has to be defined and agreed
- between customer and supplier.
- c) The matrix for Active Components requires the user to chose between integrated circuits (AEC-Q100 Rev. H) and discret semiconductors (AEC-Q101 Rev.D1) (cell D4). For Passive Components AEC-Q200 is used. For LED'S the IEC 60810 is used.
- d) All changes as listed in the PCN have to be marked by a cross (x) in column B and will appear colored. The relevant reliability tests are then shown in "Tests, which should be
- considered for the appropriate process change" (row 83 for Active Components, row 466 for Passive Components, respectively in row 77 for LED's).
- e) In "Tests, which should be considered for the appropriate process change after selection of condition table" (see row 85 for Active Components, row 468 for Passive Components, or row 79 for LED's) is for modification of the found relevant tests under consideration of the weight
- of change. Related table "Conditions" has to be assessed per proposed letters with an (x). f) In "Suppliers performed tests" (here row 87 for Active Components, row 470 for Passive Components, or row 81 for LED's) the component manufacturer documents the planned and performed tests.
- a) In case of deviations from tests, which should be considered this should be notified and commented by the component manufacturer in the area "Reason for exception of tests" (see row 89 for Active Components, row 472 for Passive Components, or row 83 for LED's). Test results in form of generic data (G) are allowed when notified and justified.

#### Evaluation Levels are categorized as follows

"C: Component level ": The evaluation of a change at component level by the component manufacturer is sufficient. Generic data from other relevant evaluations can be used

- "B: Board level ": The intended change described in the PCN may influence processability / manufacturability of the component at board level. Therefore additional evaluation by customer may be necessary, for example reliability tests on application relevant testboards, depending on change.
- "A: Application level ": The intended change described in the PCN may influence the properties of the application (e.g. Electronic Control Unit). In addition to the evaluation under C or B the influence of the change in the application is evaluated by suitable investigations by the customer. The scope of the evaluation has to be aligned with the OEM. It has to be considered whether the application / assembly requirements are already sufficiently safeguarded by other qualifications (application
- specific risk assessment). " \*: Not relevant for qualification matrix": Changes which fulfill neither A.B nor C definitions
- Infomation Notes

Changes indicated as "I" shall not be marked in the DeQuMa. For those changes the InformationNote sheet shall be used. As the DeQuMa is desired for PCN only, a marking of "I"-changes would automatically

### Important Notes

To use the matrices in the right form the ZVEI working group provides a Tutorial on its homepage (ZVEI-Tutorial)

ID number: is a unique identification number for each indicated change defined in the ZVELPCN DeltaQualificationMatrices. The same ID number is used in the PCN Form sheet to identify the change.

Tests identified by the matrix have to be considered and checked if they are necessary to assess the specific change. Test modifications or generic data have to be justified in detail. "Further applicable conditions", comments and notes need attention, as they provide important hints and limitations In order to use all functions in EXCEL, macros have to be allowed.

# History of DeQuMa

Version	Remarks
2.0	Revised by ZVEI PCN Methodology Workgroup in March 2015
2.1	Released March 2015
2.1.1	Active Components - delete write protection in comments
2.2	Solved problems with some ActiveX configurations
2.2.2	Solved Problems in Active Components
2.2.3	Solved Problems ActiveX, Active Components SEM-DE-02 (Design changes in routing) error fixed
2.2.4	Minor fixes
3.0	General Revision by ZVEI PCN Methodology Workgroup in June 2016
	Changes are indicated by underlining in the read only version named Changes_DeQuMa_rev3_vs_rev2.xlsx
3.0.4	Expert Release
3.0.5	Fixing of macro bugs
3.1	Final Release (orthographic and punctuation corrections)

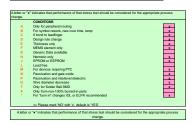
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Date:	18/03/2019		Form provided by ZVEI - Revision 3.1 - Dece	ember 2016																					
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				1	Evaluation level A / B / C	-	(included and included and incl		as orbiased HAST NST Mg	pe Life Ang Life	dentor, and Operation			ic Breakdown	ure in stability			ta ky	100				() (ESD20 ()	i chan ged device deurbulion	
	Assessment of Impact on Supply Chain regarding following aspects - corractual agreements - technolical inference of processability/immufactuality of customer - form, fit, function, quality parformance, reliability	Remainin risks on Supply Chain?	Understanding of semiconductors experts	Examples to explain	<ul> <li>A Application level</li> <li>B Board Data Invel</li> <li>B Board Data Invel</li> <li>C C Component level</li> <li>Not relevent to rgualification matrix</li> </ul>	Further applicable conditions	ian used by data or audition stop of 100 Revision H		Temperature Humishy (1) Autocitive or Unitsand H Temperature Cycleg Power Temperature Cycle	High Temperature Stora High Temperature Opera Event An Endone Press	MrM Endurance, Data R Life Wire Band Shear	Wire Band Put Soldendeiter Besteint Descentions	Solder Ball Shear Lo ad Integrity	Elsictromignation Time Depending Dielectr	Hot Carrier Injection Nogotvo Blas Terrperat	Stre sa Mgration Electronic Olischarge Hurman Brody Model	Electronic Displayage Changed Device Model Larbh up Electrical Distribution	Chana charisa tan Elei cho magne bo Compat	Short Grout Characteriz Suff Error Rate	La ad fros	Package Drop Lid Torque	Dia Shear Internal Water Vipion	0EC 0008-T2-9.2, JEDEC	Percension - Analysis Comparison of current with characterization, electrical	Remarks
<b>_</b>	Type of change	No Ye			A: 40 8: 80 0: 0: 0: 0: 0: 0: 0: 0: 0: 0: 0: 0: 0: 0		AEC-Q1		6 VC 7 C	178 170 101	ED.R	a 8	88 -	EM FOOB	ę Ę	WO	NO 9 8	CHAR	8 8	4	1 DROP	8 8			
SEM-AN-01	ANY Any charge with impact on agreed upon contractual agreements	PP	Not relevant for technical evaluation.	1		1	- I	68	A2 A3 A4 A5			C2 C3 C	× cs ca	5 D1 D2	D3 D4	D5 E2	E3 E4 E	S E7 E9	E10 E1	11 E12 G	1-4 G5 G6 0	27 G8	-		
SEM-AN-02	Any charge with impact on processability/manufacturability at customer, which is not covered in the matrix below.	<sup>зе</sup> р р	Any change which is not covered in the matrix below, but risk assessment at customer is accomparated		в																	/			
	DATA SHEET		recommended.																						
SEM-DS-01	Change of datasheet parametera/electrical specification (min./max.hyp. values) and/or AC/DC specification	P P	Update of data sheet because of technical change of the product.	e.g. recommendations for pull-up/pull-down or NC pins, MSL	A		1 A 1	-															-	-	
SEM-DS-02	Correction of data sheet / errata	I P	No technical charge of the product, only correction in description (wording, drawing,). (): In case of editorial charges. (P): In case of impact on product integrity.	(I): e.g. correction of typo (P): e.g. datasheet correction because of new information about component behavior.	A		· ·																-		
SEM-05-03	Specification of additional parameters	I P	Description of a new not previously covered parameter. No technical change of two product. #I: Definition of new parameter which was not documented before. #Pic Not income as single change. Only in combination with other changes.	(I): e.g. adding new tested parameter.	A																		-		
SEM-DE-01	Ottion Dasign changes in active elements. <sup>1</sup> )	p p	Any device relevant changes in design / layout of	a.g. change of ESD structure e.g. add / remove a transistor in layout	A	Please check if data sheet is affected (SEM-DS-01).	• •		M		• D,J -			D D	D D	D •	• •			•	• F •			•	
SEM-DE-02	Design changes in routing . <sup>2</sup> )	P P	Any change of wiring between elements in chip design / layout with effect on data sheet. <sup>3</sup> ) <b>Not included:</b> Moditation to adjust product parameter within specified design rules.	e.g. mask changes in metal fix for corrective action (based on external 8D report)	с	A: Impact on EMC behavior cannot be evaluated / excluded on component level. A: If impact on electrical function is not excluded on component level. Please check if data sheet is affected (SEM-DS-01).	•	•	• • A M								• •	• •	•					•	
SEM-DE-03	Desahirek <sup>3</sup> )	P P	Shrink of active area. <sup>3</sup> ) Not included: sawing street/kert/scribe line	Typical shrink of die.	A	Please check if change in process technology (SEM-PW-00) is also affected. In case of Co wire product please consider AEC-Q006.		-	• • • M		D,J -			•••	•••	• •	• •	• • •	• •					•	
SEM-DE-04	Prmeare modification	I P	Integrated software by design or memory as defined by suppler. (b): Firmware modification or update without effect of functional performance at the customer (bug for). (b): Firmware modification or update with effect of functional performance at the customer.	(I): e.g. addition of Firmware opportunities (P): e.g. bug fix with impact on functional performance	A		· ·	-																	
	PROCESS - WAFER PRODUCTION		1	a a different ender material in seconds mission	-	1							1 1			1 1						<b>_</b>	-		
SEM-PW-01	New / change of water substrate material	P P	New wafer material.	e.g. different wafer material to currently released material (like change from EPI material into non- EPI material)	с	In case of Cu wire product please consider AEC-Q006.		•										• •					-	•	Qualification effort acc. AEC-Q100: see diffusion/doping
SEM-PW-02	New waler diameter	P P	Change of water diameter resulting in equipment and process changes.		c	Impact on changes in SEM-PW-99 and/or SEM-EQ-91.	• •	-	•••ЕМ	•	• - E	Е-			•	·E	EE						-	·	AEC-Q100: "For broad changes that involve multiple attributes (e.g., a processes), refer to section A1.3 of this appendx and section 2.3 of Q for the selection of worst-case test vehicles to cover all the possible pr
SEM-PW-03	New final water thickness	P P	Change in final water thickness.	«.g. change in final chipidie thickness	c	A: If thermal conductivity is affected (ike MOSFET; IGBT, BGA package, stacked dise,) A: If impact on EMC or ESD behavior cannot be evaluated / michaided on component lawsl. In case of Cu wine product please consider AEC-Q006.	· •		••ЕМ		- E	Е-				· E	EE						-	•	
SEM-PW-04	Change of electrically active doping/implantation element	РР	Change in electrically active doping / implantation element resulting in a new technology.		A				м								• •	• •					-	•	
SEM-PW-05	Change of gate material / dielectrics		Change of gate material and / or gate detectric material.		A				• M		D,J -							• •						•	
SEM-PW-05	New / change of backaide operation (grinding / metallization)	РР	Materia. Charge of bottom layer of die (betresen die and leadframe). Charge in process, material, or dimensions mocessay. Alternative see SEM-PW-09	e.g. change from Cr.NVVAu to Cr.NVVAg	с	A: If thermal conductivity is affected (like MOSFET; IGBT, BGA package, stacked dise,) A: If impact on EMC or ESD behavior cannot be evaluated / excluded on component livel.			м							- м	м •	•			н I	н -		•	AEQ-Q100: Applicable to all smart power devices
SEM-PW-07	New / change of metallization / vias / contacts	рр	Change in metallization of bondpads, material, layer thickness specifically for chip frontaide and internal layers.	e. g. change from AlSiCu to AlCu e. g. change in over pad metallization	с	In case of Cu wire product please consider AEC-Q006.	14 A.		• • • M			•		• .		• .		• • •	•				-	•	
SEM-PW-05	New / change of passivation or die coating (without bare die)	P P	Change of top layer on die (between mold compound and die).	e. g. addition of polyimide	с	Change of intrinsic mechanical stress might influence electrical function. In case of Cu who product elesse consider AEC-0006.	14 A.		• • • M	· • #,	N D,J	• • •			• •	• •	• •	• • •						•	
SEM-PW-09	Change in process technology (e. g. process changes like lithography, etch, oxide deposition, diffusion, die back aufrace preparation backgrind, $\ldots$ )	P	(): If the change in process technology does not influence the integrity of the final product. (P): If the change in process technology can influence the integrity of the final product.	(-); e.g. change from wet to dry etching, e.g. change from hotzontal to vertical oven for oxidation (P); e.g. change of layer thickness	A	Please also check changes described under EQUIPMENT. Please check if change is described by specific type of change in this matrix.	• •	-																•	Qualification effort depends on type of change.
SEM-PW-10	Process Heighty luning within specification	P	Variation within process specification (-): If turing within process specification does no influence the integrity of the final product. (P): F memory ratio of the product specification is anticipated.	e (-): e.g. process control	с	Please check if <b>DATA SHEET</b> is affected. Please check if <b>SEM-PW-03</b> is affected.		-															-	•	
SEM-PW-11	Charge of water supplee.	- P	(-): If no remaining disk in supply chain exist (P): If the change of water supplier can influence the integrity of the final product.	material and / or electrical behavior.	с	Not on component, tested on test atructure (typical for IC), Interaction on component level for discrete components expedied, In case of 200 substate HIP properties have to be qualified. Please check if SEM-PW-01 and SEM-DS-01 is affected.		•																•	Qualification for IC & µ Controller difficult on product level. Observation only on test attracture. AEC-2000: "For bread changes that involve multiple attracture (e.g., procession), relifie to aution A13 of this appendix and section 23 of 05 for the assistion of worst-case test vehicles to cover all the possible p
			Any change which is not covered by another type of change. Risk is to be assessed. (): No Risk for Supply chain. (#): Risk for Supply chain (influence on product	(-): e.g. change of cleaning process in wafer production (Pit e.g. additional sinker implantation after	с			-																-	
SEM-PW-12	Change of specified water process sequence (deletion and/or additional process step)	P	(P): Risk for Supply chain (influence on product integrity)	atandard implantation (to protect circuit against interference impulses).																					
SEM-PW-12	Change of specfield welter process sequence (deletion and/or additional process ship) Nove of all or part of welter fab to a different location/shalkubcontractor	P	iregrij)	e.g. dual source / fab strategy	A	In case of Cu whe product please consider AEC-Q006.	• •	-	• • • M	• •	J	• •		•••	• •	• •	• •			1	н I	н -	-	•	AEC-Q100: 'For broad changes that involve multiple attributes (e.g., a processes), refer to section A1.3 of this appendx and section 2.3 of Q for the selection of worst-case test vehicles to cover all the possible pr

Worked on: (Name, Function)

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SEM-PW-15	Oxide / Interlayer Dielectric	-	Change in process technique for code / interlaye delectric process P (-): If the change in process technology does not provide the integrity of the final product. #): If the change in process technology can influence the integrity of the final product.		A	Please also check changes described under EQUIPMENT.					м		#,N D,	J - •				• •	• •	•								•	
	BARE DIE																												
SEM-BD-01	New final wafer thickness		P Change in final water thickness.	Change in final chipidie thickness	A	In case of Cu wire product please consider AEC-Q006.	÷	-	1.0	- E	M	•	•	EE				- •	- E	E	• •							•	
SEM-BD-02	New / change of frontside metalization	Р	P Change in bondpads, material, pad pitch, surface changes, layer thickness	e. g. change from ASICu to AICu e. g. change in over pad metalization	в	In case of Cu wire product please consider AEC-Q006.	· •		•	•••	м	•									••	• •							
SEM-BD-03	New / change of backaide metalization	Р	Change of bottom layer of die (between die and	e.g. change from Cr/NV/Au to Cr/NIV/Ag	A						м				•••					- ·	•••							•	
				(I): e.g. change from 350 to 240 good dies on																									
SEM-BD-04	Change of water setup or number of possible good dies on water.	1	P Needed information for pick & place machine. Ø: amount of possible good des on water Ø: influence on water setup and water mapping	water (P): e.g. information change for pick & place machine.	В		· ·	•	1		-	•																1	
SEM-BD-05	Change of optical appearance of water edge region (like imide coverage or edge exclusion)	1	P Selection of data in water edge region which have full electrical functionality. @: in case of water edge is affected only (P): in case of single die is affected	(I): e.g. appearance of water edge (rounded instead of square) (P): e.g. polyimide as new costing on die	в				-		-																	•	
SEM-BD-05	Die sofbe or separation		Needed information for sawing and pick & place machine. P (8): If the change in sawing process does not influence the integrity of the final product. (P): in case if product is delivered on wafer	(R): e.g. if product is delivered as known good de (in tape and real) (P): e.g. information change for pick & place machine. e.g. information change for saving machine.	в	Plasse check if SEM-BD-04 is affected.			•		м																		
SEM-BD-07	Die Preparation / Gean	-	Charge in process technique for die preparation dearing P (-): If the charge in process does not influence the integrity of the final product. (P): If impact on product integrity is anticipated.	(-): e.g. change of cleaning time. (P): e.g. change in cleaning procedure after change of sawing equipment.	в	Please check if SEM-BD-05 is affected.		-	•	• .	м			•••											- н				
SEM-BD-05	New / change of passivation or dis costing	Р	P Change of top layer on die.	e.g. addition of polyimide e.g. change of polyimide thickness	в	In case of Cu wire product please consider AEC-Q006.																						•	
	PROCESS - ASSEMBLY								-		1 1		_													-	1		
SEM-PA-01	Charge in critical dimensions of package		P Change in dimensions of existing package.	e.g. changes in package dimensions (further development).	В			-	•		м	• •	•			т •	· ·		• •	•	•	•	• L	н -	· H	н -			
SEM-PA-02	Change of leadhame base material	Р		e.g. change from alloy-12 to copper e.g. change between two different copper alloys	в	In case of Cu wire product please consider AEC-Q006.		•	1	•••	м	•			• •	- •						•	·L	н -	· H	- G		-	
SEM-PA-03	Charge is leadfame dmensions		Change in leadiname dimensions which has impa to the specified electrical parameter acc. data sheet or specification (e.g. heat ank, pin dimensions, de padde stam,) Not included: Variation within specification.	t e.g. change in lead frame geometry	в	ESD investigations are only necessary if internal ground and power supply connection of leadharms is affected. A: If impact on EMC betweior cannot be evaluated / excluded on component level. In case of Cu wire product please consider AEC-Q006.		-		•••	м				•	- •	•						- L	н -					
SEM-PA-04	Charge of lead frame finishing material / area (internal)	Р	P Change of surface material of die attach pad and second bond area (a.g. influence in adhasion to mold compound, wedge bond reliability)	e.g. change from Ag fash to NIP protection layer e.g. change from Ag spot to Au spot e.g. increase of silver plating area	с	In case of Co wire product please consider AEC-Q006.		•	•	•••	м	• •		- c	• •	- •							- L	н -	- н			-	For wire bond strengh test: Pre-& Post-process change comparison to evaluate process change robustness (AEC-Q101).
SEM-PA-05	Change of lead and heat alug plating material/plating thickness (external)		P Change in material and / or process resulting in a new technology (e.g. pure tin).		в			١.	•		м			- c									- L	н -	• н				
SEM-PA-05	Bump Material / Metal System (riterial)		P Stack die or die to substrate (flip chip)	e.g. change of layer thickness e.g. change to Pb-free material e.g. change of copper pillars	с						• M					•							• L						
SEMPHOS	Europ Massima / Metal System (Positia)	_		e.g. change of copper pillars		A - I imposed on UMC holocology around he conducted / embedded		•	· ·		m	-			·   •				-				-				-		
SEM-PA-07	De attach material	P	P Change of die attach material and / or process nasulting in a new technology (e.g. soft solder, sposy, etc.)		c	A: If impact on EMC behavior cannot be evaluated / excluded on component livel (if die attach has impact on electrical conductivity). In case of Cu wire product please consider AEC-Q006.	•	·	٠	•••	м	•					• •				• -	•	• L	н -	• н	н		•	
SEM-PA-05	Charge of wire bonding	Р	Material, dameter, charge in bonding diagram and / or charge in process resulting in a new technology.	e.g. change from Au to Cu material e.g. change from 32µm to 22µm diameter e.g. change from single to double bond e.g. change from slich bond to stich on ball bond.	c	A: In case of bond diagram change and EMC cannot be waitanted on component level. Please also check changes described under SEX-E0-0. In case of Cu wire bonding please consider AEC-Q006.		•	•		Q.	•		<b> </b> . .			•				м -			н -				•	Parameter Analysis: Districty magned only for Pearer devices. In general: 28 analysis for material change with impact on bondprocess (e.g. from Auto Du) recommended. AEC-0100: The head changes that involve multiple attributes (e.g. also, materials, processar), nine to section A13 of this appendix and section 23 of 0100, which allows for the addiction of work can be to verify the possible permutations.
SEM-PA-09	Substrate / Interposer	Р	P Change of BCA substrate	e.ș. changes în routing	в	A: Impact on EMC behavior cannot be evaluated / excluded on component level. A: Il impact on electrical function is not excluded on component level. In case of Cu wire product please consider AEC-Q006.		•	•		м	• •				т -	• .					• .	- L	н -	• н	н -			
SEM-PA-10	Die Overcost / Underfä	-	Supporting layers for complex packages like flip drip and / or change in process resulting in a new technology. (-): It change does not influence the integrity of the final product. (#): I impact on product integrity is anticipated.	(-): e.g. change of dispensing speed (P): e.g. change of undefill material	c				•	• •	• м	•											• •			н.			
SEM-PA-11	Change of mold compound / encapsulation material	P	P Charge of mold compound / encapsulation material.	e.g. change to green mold compound e.g. change of filler particles	в	A: inpact on theme-mechanical stress caused by mismatch of mold compand, thereconnecting schrology and comine is activate and regardless provide the stress of the same of possible changes in permasking of mold compound could affect signal behavior (i.e., digital signal processor), bic case of Cover product please consider AEC-0005C.					• м -	• •	• .			- •							• L						
SEM-PA-12	Change of hermetic sealing	Р	P Affected areas are material and process of hermitic (e.g. ceramic ) packages, capped die ar sealed devices (e.g. pressure sensors)	d e.g. change of sealing material for RoHS	в	A: impact on EMC behavior cannot be evaluated / excluded on component level (if encapsulation / sealing has impact on electrical conductivity)		•		•••		• •				- •	•							• •	• •	• •			
SEM-PA-13	Change of product making		master devices (a.g., pressure seriors)     Charge of marking on device and / or charge in     process resulting in a new technology.     P     (): I change does not influence the integrity of th     final product.     (P): I impact on product integrity is anticipated.	(I): e.g. change of appearance (additional marking) (P): e.g. change from inked marking to laser	в										в -														
SEM-PA-14	Change in process technology (is g. saving, die attach, bending, melding, plating, trim and form, lead frame preparation,)	-	P: I impact on product integrity is anticipated.     C): If the change in process technology does not finance the integrity of the final product.     P: If the change in process technology can influence the integrity of the final product.		в	Please also check changes described under SEM-CQ-01. Please check if change is described by specific type of change in this matrix.																							
SEM-PA-15	Process integrity tuning within specification	-	Influence the integrity of the final product. Variation within process specification (): If aning within process specification does no influence the integrity of the final product. (P): If impact on product specification is anticipated.	l (−): «.g. process control	с	In the codd TVL		-																					
SEM-PA-16	Charge of direct makeful supplier	-	micopana.     Oharge of suppliers for direct materials which an used in assembly process (BOM).     (-): If charge dots not influence the integrity of the final product.     (P): If impact on product integrity is anticipated.		с	Please check if material is changed		•			-																		Sea charge of material.
SEM-PA-17	Charge of specified-assembly process sequence (deletion and/or additional process step)	-	P (-): no influence in final product integrity or apecified acquence (P): Influence in final product integrity or specifie acquence	(-); e.g. additional cleaning step e.g. deletion of optical impection (P); e.g. change lead finishing pre trim & form to post trim & form	c		· .		-		-																	-	Qualification depends on specific change.
SEM-PA-18	Move of all or part of assembly to a different location/site/subcontractor.		P Assembly transfer or relocation	e.g. dual source / fab strategy	c	A or B: impact on other type of changes described under PROCESS ASSEMBLY and SEM-EQ-91. In case of Cu wire product please consider AEC-Q006.	• •		•	•••	м	•	• .	•••	•	т.					•		- L	н -	• н	нg		•	Whisher tests have to be done on monitoring basis! ABC-O100: "For bread changes that involve multiple attributes (e.g., site, materials, processed), refer to auction AI 3 of this append and action 23 d Q100, which allows for the adjection of versit case list virtualities. In cover all the possible permutations."
SEM-PA-19	Die actibe or xeparation	-	Expansion process from single wafer to dies. (-): If the change in process does not influence the integrity of the final product. (P): If impact on product integrity is anticipated.	(-): e.g. change of kerf width (P): e.g. change from sawing to laser cut	c			-	•	•••	м																		
SEM-PA-20	Die Preparation / Dean	-	Charge in process technique for die preparation. dearing P (-): If the charge in process does not influence the integrity of the linal product. (P): If impact on product integrity is anticipated.	(): e.g. change of cleaning time.	с		- ·	-	•	• .	м			• •											• н			-	
SEM-PA-21	Molding / Encapsulation process	-	Charge in process technique for molding / encapesdation. (): E the change in process does not influence the integrity of the final product. (P): E impact on product integrity is anticipated.	(): e.g. turing within process specification	c			-	•	•••	M	• •			•••								- L						
	PACKING/SHIPPING																												

-																							
SEM-PS-01	Packing/shipping specification change	P P	Packing'shipping specification change.																				
SEM-PS-02	Dry pack requirements change	P P	Change of dry pack requirements (e.g. change of MSL)		*	1.1	· · · ·														-	1.1	
SEM-PS-03	Change of carrier (tray, reel)	P P	Change of carrier (tray, reel)		B	1 A 1																	
SEM-PS-04	Charge of labeling		Charge of labeling also on resi. (): Charge of material label without impact on larcode. (): Charges of material label information which affects data processing at customer.	(I) e.g. additional information (RoHS stamp) (IP) e.g. change of defined nomenclature for data processing	в																-		
	EQUIPMENT																						
SEM-EQ-01	Production from a new equipment/lool which uses a different basic technology or which due to its unique form or function can be expected to influence the integrity of the final product	P P	Change in process technique which is not already covered above.	Change from single water to batch process (e.g. over pad metalization) e.g. dambar cutting (mechanical to laser cutting)	A	-											•				-		Affected process change is to check.
SEM-EQ-02	Production from a new equipment/bool which uses the same basic technology (replacement equipment or extension of existing equipment pool) without charge of process.	- P	PCN required for dedicated equipment for smalline component production. (-): If change does not influence the integrity of the final product. (P): If impact on product integrity is anticipated.	(-): e.g. extension of existing equipment pool (P): e.g. extension of declosted equipment in case basic technology still need to be proven	c	-															-	•	
	Change in final test equipment type that uses a different technology.	P P	Change of tester (only in case of bare die: final test means wafer test.)	e. g. change teater equipment from LTX to Teradyne	c												• • •				-	•	Gage R&R / delta correlation
	TEST FLOW																						
SEM-TF-01	Nove of all or part of electrical water test and/or final test to a different location/alte/subcontractor	P P	Tester transfer or relocation. Check impact on SEM-AN-01	Dual source strategy	c	•										· · ·	• • •				-	•	Gage R&R / delta correlation
SEM-TF-01		P P	Tester transfer or relocation. Check impact on SEM-AN-01	Dual source strategy	c	•	• •	• •	••••		• • •	• • •		• • •		• • •	• • •		• • •		-	•	Cage R&R / delta correlation
SEM-TF-01	Nove of all or part of electrical water test and/or final test to a different location/alte/subcontractor	P P	Tester transfer or relocation. Direck impact on SEM-ANO1 e.g. test flow block, reduction from Bree temportative measurements to too temportate measurements. Joage in hours in / non in process. (-) if during does not influence the integrity of the final post. (P): It impact on product integrity is anticipated.	(): e.g. test implemented without customer	c	·	· ·		· · ·		- · ·	· · ·	· · ·	· · ·			• • •		· · ·	· · ·		•	Gage R&F, data constation Parameter Analysis, Data constation - Fur Sum Is' diarque ELFR recommended
SEM-TF-01	When of all or period electrical earlier text and/or final text to a different location/bite/bubcortextore GGATE Change of the text convergetuating process flow used by the supplet to texture data sharet compriserior log, elementarion/addition of electrical measurement/text flow block;	р р - Р	Check impact on SBM-AN-01 e.g. list flow block, reduction from three temperature measurements to two temperature measurements, change in those in / run in process (-): If change does not influence the integrity of the final product.	(-): e.g. test implemented without customer requirement (P): e.g. reduction from three temperature measurements to be temperature measurements	c		· ·	· ·	• • M		- · ·	· · ·	 		• •	- · · ·	· · ·		· · ·	· · ·			Parameter Analysis: Delta correlation
SEM-TF-01	Now of an ayout desired water and when the with a site of the entitication observation GOATE Charge of the test memoryhedrogramma. The works has been desired as a deal charge of the test memoryhedrogramma. The works has been deal and a memory of the test memoryhedrogramma and the site of the test of test	P P	Direck Impact on ESM-AHO1 and See The Bock Includes in Terms Impacts In Terms Includes Interpretent measurements, charge in Sum in Iran in program (See Terms Internet), and the Iran in the Interpretent (See Terms Internet), and the Iran in the Interpretent (See Terms Internet), and the Iran interpretent (See Terms Internet), and the Iran Iran Iran (See Terms Internet), and the Iran Iran Iran (See Terms Internet), and the Iran Iran Iran (See Terms Iran Iran Iran Iran Iran (See Terms Iran Iran Iran Iran Iran Iran Iran Iran	(-): e.g. test implemented without customer requirement (P): e.g. reduction from three temperature measurements to be temperature measurements	c			· · ·	 		- · · ·	· · ·	· · · ·		•••	· · · ·	• • •	· ·	H •	· · · ·			Parameter Analysis: Delta correlation
5EM-TF-01	Now of an year of external water and when the with a silfware location shadownears GANE Compared the converged relation of the start	P P	Direck Impact on ESM-AHO1 and See The Bock Includes in Terms Impacts In Terms Includes Interpretent measurements, charge in Sum in Iran in program (See Terms Internet), and the Iran in the Interpretent (See Terms Internet), and the Iran in the Interpretent (See Terms Internet), and the Iran interpretent (See Terms Internet), and the Iran Iran Iran (See Terms Internet), and the Iran Iran Iran (See Terms Internet), and the Iran Iran Iran (See Terms Iran Iran Iran Iran Iran (See Terms Iran Iran Iran Iran Iran Iran Iran Iran	(-): e.g. test implemented without customer requirement (P): e.g. reduction from three temperature measurements to be temperature measurements	c		•		•		· · · ·		• • •		• •	• •	•	· ·	· · ·	· · · ·			Parameter Analysis: Delta correlation
SEM-TF-01	Non 4 d a par d destroit wide wid wide for wide is officient backwardschulerenses. General		Down they are still 2004/01 a g and the links, reduction from them the second states and the second states and the second states and the second states and the second states and the second states and the second states and the second states and the second	(-): e.g. test implemented without customer requirement (P): e.g. reduction from three temperature measurements to be temperature measurements	c	•	•	• • x x	•	• • •	- <b>• •</b>		• • •	• • •	• •	• •	•	· ·	· · ·				Parameter Analysis: Delta correlation

-	Not required.
1	Information Note required.
P	PCN required.



PCN number:     Device evaluation       Signature:     Signature:       Signature:     Signature:       Signature:     Signature:	Worked on: (Name, Function)	3.1 - December 2016					
	Date: PCN number:				Device evaluati	on	
Image: Section 1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.							to AEC- I0
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	$\overline{\mathbf{x}}$	nt Examples to explain we upped	Further applicable conditions	Terrensian Cristy Dentroine Physical Analysis Mataxos Resolutions Mataxos Resolutions Beaution University Connect Venue	Physical Constants Properties (Constants) Interest in Science Mathematical Brock Mathematical Brock Proceeding Interest Interest (Construction)	evenests installend in	Preserververververververververververververve
	component	5 8 8 9 7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	AEC Const		16 11 12 13 14 15 16 17 16 16	я я и я и я и я и я и я и я	
	INVER A RESISTORS ANY PAS-RES-ANO1 Any change with impact on special customer characteristical contential agreements. P P	Not relevant for technical evaluation.					
And       Samony       b       Samony	PAS-RES-TOTED PAS-RES-NHO2 Any change with impact on processability/manufacturability at customer, which is not covered in p p					· · · · · · · · · · · · · · · · · · ·	
Image: state       Image: state <td< td=""><td>ING &amp; RESISTORS DATASPEET DATASPEET DATASPEET Dataset and control of detailed parameters/lectical specification (min/max/sp. valuet) and / or ACDC D D D D D D D D D D D D D D D D D D</td><td>a a littles of electrical second states</td><td>Risk assessment depending on change</td><td></td><td></td><td></td><td></td></td<>	ING & RESISTORS DATASPEET DATASPEET DATASPEET Dataset and control of detailed parameters/lectical specification (min/max/sp. valuet) and / or ACDC D D D D D D D D D D D D D D D D D D	a a littles of electrical second states	Risk assessment depending on change				
1042 Scale 1	po & monther with a second sec	e.g. data sheet conscion because of new information about component behavior	for such application.				
1042 Scale 1	er s telestrate en	a g addrg new (saled parameter. A	· · · ·				
	AS A RESISTORS ANALY AND ANALY ANA						
104:0 104:0 104:0 10	PAS-RESERVANO1 Dange of material composition - InkWire material of Resistor element P P Change of Ink / Wire material						
1 </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>							
And between	PAS-RES-NA-04 Change of material composition - Paulivation P P Change of Paulivation /inner protoc	e.g. for chip res.: Inal costing, epoxy B Ion e.g. change of glass C			· · · · · · · · · · ·	• · · · R · N · · · · · · ·	affected
1020 <	ING & RESISTORS PAS-RES-MA-05 Change of material composition - Substrate meterial P P P Change of substrate meterial	c					Assumption ma
Mail <	es à lesistors						<ul> <li>remains uncha change of make</li> </ul>
And <td< td=""><td></td><td>e.g. charge of glass, lequer, spory, C</td><td></td><td></td><td></td><td></td><td>-</td></td<>		e.g. charge of glass, lequer, spory, C					-
And <td< td=""><td>AND A RESISTORS</td><td></td><td></td><td></td><td></td><td></td><td></td></td<>	AND A RESISTORS						
And <td< td=""><td>No &amp; Bold Control Cont</td><td>e.g. charge from mill trimming to baser trimming C</td><td></td><td></td><td>• • • • • • • B</td><td>· · · · · · · · · · · · · · · · · · ·</td><td>•</td></td<>	No & Bold Control Cont	e.g. charge from mill trimming to baser trimming C			• • • • • • • B	· · · · · · · · · · · · · · · · · · ·	•
And the state in the	PAS-RES-PR-05 Charges in process technology or manufacturing methods - Termination Attach - P Charges of termination attach process	a g, chip resistors: electroplating process B e.g. welding of leads for through put devices.	• • • •	· · · · · · · · ·	· • · • · • · · B	· · · · · · · · N · · · · · · · ·	
And And And And Angel Ang	A RESISTORS     PG5-855-98-06 Charges in process technology or manufacturing methods - Marking - P Charges of marking process     ALLERS, DB/27 Charges in process technology or manufacturing methods. Marking . P Charges of marking process	e.g. change from tempon printing to laser marking B					-
And the state in the	No & RESISTION PXS & RESISTION PXS & RESISTION PASSES, PROB PASSES,	e.g. process control C					-
And <td>AS &amp; RESERVORS PAS-RES PN-01 Packing / shipping specification change (bosening of tolerances) P P Change of packing specification.</td> <td>e.g. number of pieces on real. B</td> <td></td> <td></td> <td></td> <td></td> <td>-</td>	AS & RESERVORS PAS-RES PN-01 Packing / shipping specification change (bosening of tolerances) P P Change of packing specification.	e.g. number of pieces on real. B					-
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And <th< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td></th<>							
And         Anderson         A         Anderson         A       A        A        A <td>PAS-RES-PV-01 Drange of labeling in p Change of labeling, also on real.</td> <td></td> <td></td> <td></td> <td>· · · · · · · · · · ·</td> <td></td> <td>-</td>	PAS-RES-PV-01 Drange of labeling in p Change of labeling, also on real.				· · · · · · · · · · ·		-
And         Anderson         A         Anderson         A       A        A        A <td></td> <td>e.g. change of content of marking e.g. change of method of marking e.g. change of appearance of marking</td> <td></td> <td></td> <td></td> <td></td> <td>-</td>		e.g. change of content of marking e.g. change of method of marking e.g. change of appearance of marking					-
	PAS-RES-PV-03 Change of packing integring specification where the packing specification where	h e.g. change of documentation in packing .					-
Answer         <	S & PESISTORS LOGISTICS / CAPACITY / TESTING - EQUIPMENENT		• • •	• • • • •	· · · · · · · · B		Test effort de  assessment Performance
Normal Participant Part Part Part Part Part Part Part Par		A e.g. additional equipment to increase production					
Image: Note: No		a.g. replacement of same equipment			• • · B		
Normal contraction       Normal co		d e.g. change of tester platform	• • •	· · · · · ·	· · · · · · B	· · · · · · · · · · · · · · · ·	Gage R&R / c
Image: Normal Problem	ICGASTICS / CAPACITY / TESTING - PROCESS FLOW	Movement or transfer of manufacturing siles or process step(s) to a different location/site.	· · · ·	• • • • • •	• • • • • • . B	· • • R · N · · · · ·	•
Part of the state is a state of the state is a state of the state	PAG-955_PF-02 Elimination or addition of a manufacturing process also PAG-955_PF-02 Elimination or addition of a manufacturing process also PAG-955_PF-02 Elimination or addition of a manufacturing process also PAG-955_PF-02 Elimination or addition of a manufacturing process also PAG-955_PF-02 Elimination or addition of a manufacturing process also PAG-955_PF-02 Elimination or addition of a manufacturing process also PAG-955_PF-02 Elimination or addition of a manufacturing process also PAG-955_PF-02 Elimination or addition of a manufacturing process also PAG-955_PF-02 Elimination or addition of a manufacturing process also PAG-955_PF-02 Elimination or addition of a manufacturing process also PAG-955_PF-02 Elimination or addition of a manufacturing process also PAG-955_PF-02 Elimination or addition of a manufacturing process also PAG-955_PF-02 Elimination or addition of a manufacturing process also PAG-955_PF-02 Elimination or addition of a manufacturing process also PAG-955_PF-02 Elimination or addition of a manufacturing process also PAG-955_PF-02 Elimination or addition of a manufacturing process also PAG-955_PF-02 Elimination or addition of a manufacturing process also PAG-955_PF-02 Elimination or addition of a manufacturing process also PAG-955_PF-02 Elimination or addition of a manufacturing process also PAG-955_PF-02 Elimination or addition of a manufacturing process also PAG-955_PF-02 Elimination or addition of a manufacturing process also PAG-955_PF-02 Elimination or addition of a manufacturing process also PAG-955_PF-02 Elimination or addition of a manufacturing process also PAG-955_PF-02 Elimination or addition of a manufacturing process also PAG-955_PF-02 Elimination or addition of a manufacturing process also PAG-955_PF-02 Elimination or addition of a manufacturing process also PAG-955_PF-02 Elimination or addition of a manufacturing process also PAG-955_PF-02 Elimination or addition or addition of also PAG-955_PF-02 Elimination or addition or addition or addition or addition or addition or addition	e.g. washing / cleaning process e.g. change of order of processes C	• • •	· · · · · ·	· · · · · · · · B	· · · · · · · · · · · · · · · ·	Characterisation     production flow
Name	PAS-9E5-2G-01 Charge of bat coverage used by the supplier to wave data sheet compliance (e.g., distribution) distribution of decision managemention the black, relaxation have smert of messary application of the supplier of the supplier to wave data sheet compliance (e.g., p. 2). Charge of their coverage, messary application of the supplier of the supplier to wave data sheet compliance (e.g., p. 2). Charge of their coverage, messary applications of the supplier of the supplier to wave data sheet compliance (e.g., p. 2). The supplier of the supplier to wave data sheet compliance (e.g., p. 2). The supplier of the supplier to wave data sheet coverage of the supplier	e.g. change from 100% to sample impaction e.g. test flow block, reduction from three to two temperature measurements e.g. change in turn information in process.					R (elecir, func R (relability) o process.
Image: Description of the state of the	ANY ANY						
Approx	PS-RD-WVX Any charge with inpact on special calturer characteristic/contractal agreements P P PS-RD-WVX2 Any charge with inpact on processability/manufacturability at calturer, which is not covered in P P				·         ·	·         ·	-
	DATAGREET      Datage of hypotextin     Datage		Risk assessment depending on change contraction of the second sec				-
	PA-SPC-5-22 Connection of data street PA-SPC-5-22 PA-SPC-5-2		· · · ·		.         .		-
	(C: In case of editorial changes. (P): In case of impact on product						

	_																												
	PAS-IND-MA-01	Change of material composition - Bobbin Material P P	Material without magnetic function ("Sputerkloper") typically made by plast material	ic e.g. change from Thermoset to Thermoplastic	в		-		• •			• • •	• •	· ·	1.0	• • •			1 - 1		1.1			1.1	1.			- 1	
INDUCTORS	PAS-IND-MA-02	Change of material composition - Core Material P P	Change of core material, which is material with manualic function	e.g. change from NZn into MsZn	A											• • •	в.		. 7		. 1			· · ·			. 7	•	
INDUCTORS				e.g. sitre insulation, insulation tapes, e.g. change from Polyarethane to Polyamide	c									• •			. в •				+	$\vdash$			+		+		
INDUCTORS	PAS-IND-MA-03			e.g. change from Polyarethane to Polyamide e.g. change from in coverd to non-coverd lead material			-	• •		-		_	_						+	4	4	⊢∔-	<u> </u>	4	<u> </u>	4	<u> </u>		
INDUCTORS	PAS-IND-MA-04	Change of material composition - Lead Material P P	Change of lead material	e.g. change from thi covero to non-coverd lead material	в		-	•		1		• •	•	1.1	• •	1.1.1.1.1	• • •	• •	<u> </u>	<u>, , , , , , , , , , , , , , , , , , , </u>		<u> </u>	· ·	4		<u></u>	•	-	
	PAS-IND-MA-05	Change of material composition - Mold Compound P P	Change of mold compound material	e.g. change to green mold	в		-		.   .								в.		1.1			1 - I/		1.1	. 1		. 1	• ch	Electrical function affected If mechanical stress distribution changes. ACI, wave soldering and board coaling has to be assessed. MSL might change.
INDUCTORS				eğ calğı biğanı indi						_									4		4	$ \rightarrow $		4			4	bo	card costing has to be assessed. ISL might change.
	PAS-IND-MA-06	Change of material composition - Solder Material P P	Change of solder material at internal connection.	e.g. change of SnAgCu composition	в		-		•				· · ·	· •	• •	• • •	• • •	• •	1 + 1		1.1	1 · 1		1.1		- L -	•	/	
INDUCTORS	PAS-IND-MA-07	Orange of material composition - Wire / Fol Material P P	Wire for wounded inductors. Foil for multilayer inductors (inner electrode).	e.g. charge of Cu composition	в	-			• •								. в .												
INDUCTORS	PAS-IND-MR-07			e.g. change or cu composision	в		-	• •	•												<u> </u>	⊢i∔-		4			· ·	<u> </u>	
	PAS-IND-MA-08	Change of material composition - Gaue P P	Change of glue material	e.g. change from glue A into glue B	с		-		•				1.1	10 A.	• •		в.		1 - 1		1.1			1.1	1.			• 00	Considere in case of core-core glue the air gap.
	PAS-IND-MA-09	Charge of suppler of material	Change to a new or additional material supplier at component manufacturer.	e.g. for 2nd source purpose	с												в -												Assumption material specification
INDUCTORS				e.g. for 2nd source purpose			-			_			_								<u> </u>	⊢i∔-		4			· ·		Assumption material specification remains unchanged. Otherwise see change of material.
NO CTOPS	PAS-IND-MA-10	Change of material composition - Poting Material P P	Change of potting material	e.g. change from eposy resin to allicon	с	A If influence on other connections on PCB or laquer expected.	-	•	•			• •	• •	1.1	• •		в -	1.1	1 - 1	6 - F	1.1	1.1	1. 1.	1.1			- I /	•	
INDUCTORS		DESIGN	Material athent excession is written			1			1	1		1 1	1 1				1 1		<b>_</b>	_				<b></b>	_	_			
INDUCTORS	PAS-IND-DE-01	Changes of termination, surface finish, shape, color, appearance or dimension structure - Bobbin I P	Material without magnetic function ("Sputerkörper") typically made by plasti material	ic e.g. construction / dimension change of bobbin	в		-	•	•	1.1		•	• •	· · ·	1.1	• •	- в -	1.1	1.1	5 - F	1.1	1.1	1.1	1.1	1	5 - F		•	
INDUCTORS	PAS-IND-DE-02	Charges of termination, surface finish, shape, color, appearance or dimension structure - I P Lead Terminate	Change of lead/terminals	e.g. change from PTH terminals to SMD terminals	A		-	• •				•	•••	19 A.	• •	· · ·	• • •	•••	1 + 1	6 - F	1.1	1 - 17	1. 1. 1	1.1	· • 17	8 B 8	•	• 5	Effect regarding EMC relevant for high frequency only.
	PAS-IND-DE-03	Changes of termination, surface finish, shape, color, appearance or dimension structure - Mold J P	Change of mold	e.g. new mold material with different colour	в		-						• •			• • •	в.		1 . 1			1 - I/		1.1	. 1		. 1	• Pa	Parameter Analysis only for components where mold material has
INDUCTORS	PAS-IND-DE-04			e.g. change fromdrum core & shield core into pot core & cover plate core	A												в.				+ +			+	_		+	•	magnetic function
INDUCTORS	PAS-IND-CE-CS	Changes of inner construction - Lore Losstruction - P Changes of inner construction - Insulation System - P	material with magnetic function Change of insulation system	core & cover plate core e.g. sitre insulation, insulation tapes,	c				•			<u>     </u>		•		• A	в.												
INDUCTORS				e.g. wire insubitor, insubitor tapes, e.g. change from Polyurehane to PTFE (Tellon) e.g. change from round creas section to rectangular cross section e.g. from single wire to Rz wire												-				-	-			+	-		+		
	PAS-IND-DE-06		Change of wire / foil dimensions	cross section e.g. from single wire to litz wire	в			•	•			•		1.1	•	•	• в •	• •		1.1	1		1.	1		1.		•	
INDUCTORS	PAS-IND-DE-07	Ohanges of termination, surface linish, shape, color, appearance or dimension structure - Poting	Change of potting dimension	e.g. charge of potting (1lling) height	с	If data sheet is affected (PAS-IND-DS- 01)	÷.		•			•	•		• •		в -						•	<u> </u>		· ·		•	
INDUCTORS		PROCESS	1	T						1					1 1			1 1									T	V	Action of the state of the stat
INDUCTORS	PAS-IND-PR-01		(Mechanical) removal of insulation.	e.g. change from mechanical removal to laser removal	в		•	•		1	•	•	1.1	• •	· •	1 1 1	• • •			1			1 1	1		1 1			Mechanical damage of wire, impact on aciderability in case of stripping process is affecting soldering area.
INDUCTORS	PAS-IND-PR-02	Changes in process technology or manufacturing methods - Lead Prep. / Pating - P	Change of lead prep. / plating	e.g. charge from hot dp tinning to electroplating	в		•	•				•	• •		• •	• • •		• •	· · /			· · ]	· .			• •	•	- 17	area. Influence regarding reliability of solder pint.
incourtence	PAS-IND-PR-03		Connection of wire terminal and / or connection of termination to core/bobbin	e.g. charle from Manual winding to Semi-automic winding (winding of wire on terminal)	с			•			• •	•			• A	• • •		1.1	. 7			. /					•		increase of contact resistance.
INDUCTORS	PAS-IND-PR-04	Danvas in reveau inclusion or man factoring methods, Marian	Change of marking renorms	a a channe from ink marking in laser marking	в									• •											-		+++		
INDUCTORS	PAS-IND-PR-05	Changes in process technology or manufacturing methods - Molding - P	Change of molding process	<ul> <li>a.g. change from one component molding to two component molding (other technology needed)</li> <li>a.g. change from hot lip finning to resistance welding</li> </ul>	в		•	•	• •				•				в.	1.1	· · 7						1.	· ·	• 7	- 1	
INDUCTORS	PAS-IND-PR-06	Changes in process technology or manufacturing methods - Soldering Internal Connections . P	Change of soldering internal connection	e.g. change from hot tip tinning to resistance velicing	в		•	• •				•						• •						1.1		5 - F		-	
INDUCTORS	PAS-IND-PR-07	Changes in process technology or manufacturing methods - Winding Insulation . P	Change of winding - insulation	e.g. charge from manual to automatic process	в		•	• •	•			• • •		• •	· •		в -	1.1	<u> </u>	8 - F	<u> </u>		1. 1.	4	· -	8 - B	<u>+-</u>		
INDUCTORS	PAS-IND-PR-08		Change of winding - wine	e.g. change from semi-automatic winding to full automatic winding	c		•		•		•	•••	1.1	1.1	1.1		• в •	1.1	<u> </u>	<u></u>	<u> </u>	<u> </u>	1. 1.	4	· _	<u>e e</u>	· ·	•	
	PAS-IND-PR-09		Variation within process specification.		c		-												<u> </u>	<u> </u>		<u> </u>	· ·	<u> </u>		· ·	<u>+</u>	<u> </u>	
INDUCTORS	PAS-IND-PR-10	Charges in process technology or manufacturing methods - Poting . P PACRING / SHPPING - NEW MATERIAL, CRITICAL DIMENSIONS	Charge of potting process	e.g. change from manual poting process to automatic pating process	с		•				· · ·	• •	• •						لمغنه	<u></u>	<u> </u>	بل ن	<u>· · ·</u>	<u> </u>	· _	<u></u>	لمغط		
INDUCTORS	PAS-IND-PN-01		Charge of packing specification.	e.g. number of pieces on real.	в		-												· 7									- 1	
INDUCTORS	PAS-IND-PN-02	Dry pack requirements change P P	Change of drypack requirements.	e.g. charge of MSL e.g. charge in dry pack assurance (HIC, MBB)	в														. 7			. /					. /	. /	
INDUCTORS	PAS-IND-PN-03		Change of carrier		в				_	-										—	+	$\vdash$				—	+		
INDUCTORS		PADONG / SHPPING - VISUAL INSPECTION	Change of Carrier	e.g. change by maisrial e.g. change by geometry.		I													<u>با نــــــــــــــــــــــــــــــــــــ</u>	<u> </u>		بل نب				<u> </u>			
INDUCTORS	PAS-IND-PV-01	Drange of labeling I P	Change of labelling, also on reel.	(B) e.g. additional information (RoHS stamp) (P) e.g. change of customer specific information	в		-			1.1									. 7		<b>.</b>						· /	- /	
incourtence	PAS-IND-PV-02		Marking on device.	e.g. change of content of marking e.g. change of method of marking e.g. change of appearance of marking	в														. 7			. /					. /	- 1	
INDUCTORS				e.g. charge of appearance of marking					_	-										—	+	$\vdash$				—	+		
INDUCTORS	PAS-IND-PV-03	Ohange of packing/shipping specification P P	Change in packing specification which does not described a change of dimensions or material of the packing.	e.g. change of documentation in packing specification	•			5 ( S. 1997)		1.1			1.1	1.1	1.1	1.1.1.1		1.1		2 C	1		1.1	1.1	1	5 F.		1.1	
INDUCTORS		LOGISTICS / CAPACITY / TESTING - EQUIPMEMENT	Channe in correct technique which is o	-	1	1			-	1	<u> </u>	<u> </u>	1 1					<u> </u>				<b>T</b>		<b>—</b>			T	-	Test effort depends on final risk
	PAS-IND-ED-01	Production from a new equipment/loci which uses a different technology or which due to its unique p form or function can be expected to influence the integrity of the final product	Change in process technique which is n already covered above. Note: Changes affecting the product not covered by the table require also a PCN.	e.g. introduction of polling process	с		•						1.1	1.1	1.1			1.1	1 - 1	6 - F	1.1	1 × 1	1. 1.	1.1			I	• an	Research organized in the last assessment. Performance test according to affected process change.
INDUCTORS																			+	—	+	++	—	4		—	++	T	focess change. Fest effort depends on final risk
	PAS-IND-ED-02	Production from a new equipment/loci which uses the same basic technology (replacement equipment or extension of existing equipment pool)	PCN required for dedicated equipment for sensitive component production.	e.g. duplication of existing winding machine	c		•						1.1	1.1	1.1			1.1	1 1 1	6 N	1.1		1. 1. 1	1.1	1	1.1	1 · 1	• 80	Test effort depends on final tisk assessment. Performance lest according to affected process change.
neoc.rona	PAS-IND-ED-00	Orange in final test equipment type that uses a different technology P P	Change of final test equipment which use different technology.	e .g. charge of tester platform	_												. в .					1							Gase R&R / deta correlation
INDUCTORS			Charge of final test equipment which use different technology. PCN required for dedicated equipment for sensitive parameters.	w.g. unange or seaser pasform	с																							• •	wyw wark / detta correlation
INDUCTORS		LOGISTICS / CAPACITY / TESTING - PROCESS FLOW				1			1	1															-	_			
INDUCTORS	PAS-IND-PF-01		Change of manufacturing site. Note: Reorganization inside one planifistie is not affected	Movement or transfer of manufacturing site or process step(s) to a different location/site.	в		•	•	• •		• •	• •	• •		•	•	• в •	•	1	1.1	1.1		1.	1	1	1.	•	•	
	PAS-IND-PT-02		Change of manufacturing process sequence.	e.g. washing / cleaning process e.g. change of order of processes	с		•														. T	•					1.	•	Characterisation depends on impact of production flow
moucrons	PAS-IND-PT-03	Elimination of final electrical measurement / last flow block	Reduction of final testing.	e.g. elimination of High-voltage measurement	с																								
INDUCTORS INDUCTORS		Lamination or ninal electrical measurement / test flow block	Reduction of final testing, PCN required for dedicated final test reductions for sensitive parameters.	e. g. exmination of High-voltage measurement	c	L																						-	Characterisation depends on impact of Irrai test flow.
INDUCTORS		LOGISTICS / CAPACITY / TESTING - Q-GATE		e.g. charge from 100% to sample inspection						1																	T		R (electr. funct.): (entronemon
	PAS-IND-QG-01	Change of text coverage used by the suppler to ensure data sheet compliance (e.g., elimination/addition of electrical measurementhant flow block, network/or/sprocedure or sampling). P	Charge of test coverage.	<ul> <li>a.g. change from 100% to sample inspection</li> <li>a.g. test flow block, reduction from three to two temperature measurements</li> <li>a.g. change in burn inhun in process.</li> </ul>	с		1	•		1		•	•	1.1	1.1	1.1		1.1		1 1			1 1	· ·		1 1		- R	R (electr. funct.): test coverage. R (reliability) only for change in burn in process.
CERAMIC / TANTALLM CERAMIC / TANTALLM		CERAMIC / TANTALUM																											
CERAMIC / TANTALUM	PAS-CER-AN-01	Any change with impact on special customer characteristics/contractual agreements P P	1	Not relevant for technical evaluation.	· ·	-				1 .		1	1					1 1 1			1-1		1 1	1-1	-		ŦŦ		
CERAMC / TANTALUM CERAMIC / TANTALUM	PAS-CER-AN-02	DATADHET		Technical interface means component terminals.	в		•				· · ·	1 - 1 -	1					1		· ·			1 1	1 •	•		•		_
SERVICE ON OLD	PAS-CER-05-01	Divergence of databased parameters/electrical specification (min/max/typ.values) and / or ACIDC p p specification	Charge of application relevant information Not included: Editorial charges.	e.g. lighten of electrical parameter distribution	A	Risk assessment depending on change																							
CERAMC / TANTALUM		peciliation P P	Not included: Editorial changes.		^	Risk assessment depending on change for each application.													44	4				4			4-4-		
	PAS-CER-0S-02	Connection of data sheet I P	<ul> <li>w.m.micai change or the product, only correction in description (wording, drawing,)</li> </ul>	e.g. data sheet conscion because of new information about component behavior	A																								
CERAMIC / TANTALUM			No technical change of the product, only correction in description (wording, dwaling,) ((): In case of editorial changes. (P): In case of impact on product integrity.	information about component behavior	Ŷ																								
SERVICE INTRUM			Integrity. Description of a new not previously covered parameter. No technical change of the product. (§): no influence (P): Risk assessment depending on change for each application to provide endersco of additional parameters (stat endeated)	1																									
	PAS-CER-OS-03	Seecification of additional carameters	covered parameter. No technical change of the product. (0: no influence	e.o. adding new (tested) garameter.																									
	75-75-75-75-75	I P	(P): Risk assessment depending on change for each application to provide manual of additional sectors.	w.y. "dding new (sessed) parameter.	A																								
			evaluation)																										
CERAMC / TANTALUM		Bit IEMAL Drange of material composition - Ceramic Binder P P	Binder material (ceramic)		с	-			•	1:			1 · 1 ·		•	•			<b>F</b> • <b>F</b>		10	- T		1-1	-		$ \rightarrow                                   $	· •	
CERAMIC / TANTALIJM CERAMIC / TANTALIJM CERAMIC / TANTALIJM	PRS-CER-MA-01		Dinder material (tantal)	e.g. change from wax 1 to wax 2	c c										•	• •	- B -	с.	•										
CERAMC / TANTALUM CERAMC / TANTALUM CERAMC / TANTALUM CERAMC / TANTALUM CERAMC / TANTALUM	PAS-CER-MA-02 PAS-CER-MA-03	Change of material composition - Dielectric P P	Dielectric change (ceramic only)	e.g. change from ceramic A into ceramic B																									
CERAMC / TANTALUM CERAMC / TANTALUM CERAMC / TANTALUM	PAS-CER-MA-02 PAS-CER-MA-03 PAS-CER-MA-04	Drange of material composition - Electrode Attach         P         P         P           Orange of material composition - Electrode Attach         P         P         P	Dielectric change (ceramic only) Electrode attach (only tantal, glue, carbon, Agi	e.g. change from ceramic A into ceramic B e.g. change of Ag particle size in conductive adhesive	с				• •			• •	1.1		- с		в -	с •			<u> </u>			· ·			1 ·		
CERAMIC / TANTALUM CERAMIC / TANTALUM CERAMIC / TANTALUM	PAS-CER-MA-02 PAS-CER-MA-03 PAS-CER-MA-04 PAS-CER-MA-05	Charge of material composition - Electrode Altech P P Charge of material composition - Electrode Material P P	Electrode attach (only tantal, glue, carbon, Ag) Electrode Material (only cenamic, inner al-trodol	e.g. change of Ag particle size in conductive adhesive e.g. change from spehric to fake shape (N paste)	c c				•••	•		•	•	•	• c		B -	с •							-	· ·		•	heck whether ADI at Tier 1 can be
CERAMIC / TANTALLM CERAMIC / TANTALLM CERAMIC / TANTALLM	PAS-CER-MA-02 PAS-CER-MA-03 PAS-CER-MA-04 PAS-CER-MA-05 PAS-CER-MA-05	Charge of material composition - Electrode Attach         P         P           Charge of material composition - Electrode Material         P         P           Charge of material composition - Electrode Material         P         P           Charge of material composition - Encapsulation         P         P	Electrode attach (only tantal, glue, carbon, Ag) Electrode Material (only ceramic, inner el-trode) Encapsulation	<ul> <li>e.g. change form carrent &amp; into carrents B</li> <li>e.g. change of Ag particle size in conductive detexture</li> <li>e.g. change from spetric to faile shape (N paste)</li> <li>e.g. change from spetric to faile shape (N paste)</li> <li>e.g. change from spetric into spory2</li> <li>e.g. change from SnPb to pure Sn</li> </ul>	с				• •	•			· · ·	• •				C •		· ·			· ·	-	• •	· ·		·	Check whether AOI at Tier 1 can be affected

	PAS-CER-MA-08	1 1	Change in a new or additional meterial	1	1				1		1	1 1																Assumption material specification
CERAMC / TANTALIM CERAMC / TANTALIM	PAS-CER-MA-08	DESIGN	Change to a new or additional material supplier at component manufacturer.	e.g. for 2nd source purpose	с			•	•	• •	•			•	• •	· · ·	• •	• •	в	•		с ·						remains unchanged. Otherwise see chance of material.
CERAMIC / TANTALLIM	PAS-CER-DE-01	Changes of termination, surface finish, shape, color, appearance or dimension structure - Lead	Lead diameter	e.g. change from 0.8mm into 0.6mm	в		<b>.</b>	1.1	•	• •	•	•	• •	•		• •									 -			
CERAMIC / TANTALIJM	PAS-CER-DE-02	Ohunges of termination, surface finish, shape, color, appearance or dimension structure -     I P     Termination Area	Termination area	e.g. change in width of termination from 0.1 -0.3mm Into 0.2 - 0.4 mm	в		1. Sec. 1. Sec	•		•						• •					•				 -			
CERAMIC / TANTALUM CERAMIC / TANTALUM	PAS-CER-DE-03 PAS-CER-DE-04	Termination Area II P Changes of termination, surface finish, shape, color, appearance or dimension structure - II P Dranges of Inner construction - Electrode Thickness - P	Terminal intertace	e.g. additional layer in termination e.g. N layer change from 2.5µm into 3.5µm e.g. Ceramic layer thickness changes from 3µm into	B			:	÷	• •	•	•		•	•	•		•	B	•	•						-	
CERAMC / TANTALUM	PAS-CER-DE-05	Changes of inner construction - Layer Thickness - P	Layer thickness (delectric thickness)	e.g. Ceramic layer thickness changes from 3µm into 5µm.	c		1. Sec. 1. Sec	•	•	•	•	•	•	٠	•		•	•	В		1.1	с -	1.0		 -			
	PAS-CER-DE-06	Changes of inner construction - Number of Layers - P	Number of layers (caramic only). Always in combination with PAS-CER-DE-05.	see also byer thickness	с		<b>.</b>		с	с .	с	с	. с		- c		с	с .	B,C	÷ .		с .			 -			
CERAMC / TANTALLM CERAMC / TANTALLM CERAMC / TANTALLM	PAS-CER-PR-01	PROCESS Diarges in process technology or manufacturing methods - Dicing . P	Charge of dicing	e.g. charge from cutting to sawing	c			•••	•		•	1 • 1	• •	1.1	• •				В			c .		1 • 1 •	 1 • 1			
CERAMC / TANTALUM	PAS-CER-PR-02	Changes in process technology or manufacturing methods - Electrode apply - P	Electrode apply (dielectric layer process	a) e.g. change from wet to dry process	с		•	С	1.0		С					- c		с .	B,C	· с	1.0		1.0	1.1	 			
CERAMIC / TANTALUM CERAMIC / TANTALUM	PAS-CER-PR-03	Ohanges in process technology or manufacturing methods - Pring         -         P           Dhanges in process technology or manufacturing methods - Lamination         -         P	Change of firing profile	e.g. separation of decarbonization and firing profile. e.g. atandeed pressing to iso static pressing.	c				•		•	•							B			c -			 			
	PAS-CER-PR-05	Charges in process echnology or manufacturing methods - Particle Size - P	Change of powder particle size. Always	e.g. charge D50 from 0.5µm into 0.4µm	c				•		•							•	в									
CERAMIC / TANTALUM	PAS-CER-PR-05			e.g. charge from screen printing into difset printing	с							с			. с				B,C			с.						
	PAS-CER-PR-07			e.g. change in plating technology (final termination) r. e.g. change from dip in paste to plating (apply)	в		• • •	•	•					•					в		•		1.1					
CERAMC / TANTALUM CERAMC / TANTALUM		Process integrity: tuning within specification - P	Variation within process specification.	e.g. process control	с																							
CERAMIC / TANTALUM		PACKING / SHEPPING - NEW MATERIAL CONTICAL DIVENSIONS Packing / shipping specification change (lossening of tolerances) P P P	Change of packing specification.	e.g. number of pieces on real.	в	1						· · [		· · ·														
				e.g. change of MSL e.g. change in dry pack assurance (HIC, MBD)	в																							
CERAMC / TANTALUM	PAS-CER-PN-03		Charge of carrier	e.g. change by makrial e.g. change by makrial e.g. change by geometry.	в																							
CERAMIC / TANTALUM CERAMIC / TANTALUM		PACKING / SHIPPING - VISUAL INSPECTION				-					-																	
CERAMIC / TANTALUM	PAS-CER-PV-01	Change of labeling I P	Change of labelling, also on reel.	(8 e.g. additional information (RoHS stamp) (P) e.g. change of customer specific information	в		1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 -			1.1		1.1						1.0	1.1	1.1	1.1		1.0		 -			
CERAMIC / TANTALUM	PAS-CER-PV-02		Marking on device.	e.g. change of content of marking e.g. change of method of marking e.g. change of appearance of marking	в		1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 -		1	1.1			• •		1.1			1.1		1.		· ·	1.1		 -			
CERAMIC / TANTALIJM	PAS-CER-PV-03	Change of packing/hipping specification P P		e.g. change of documentation in packing specification	•		1. A. 1.															· .			 -			
CERAMIC / TANTALUM CERAMIC / TANTALUM		LOGISTICS / CAPACITY / TESTING - EQUIPMEMENT			-						-		-			1 1												
	PAS-CER-ED-01	Production from a new equipment/loci which uses a different technology or which due to its unique p P	Change in process technique which is no already covered show. Note: Changes affecting the product not covered by the table require also a PCN.	at e.g. change from wet to dry technology.	с		•		•			•		А		• •		• •	в			с.			 -			Test effort depends on final risk assessment. Performance test according to affected process change.
CERAMIC / TANTALUM																												process change. Test effort depends on final sizk
	PAS-CER-ED-02	Production from a new equipment/locil which uses the same basic technology (replacement equipment or extension of existing equipment pool)	PCN required for dedicated equipment for sensitive component production.	e.g. elmination of manual handling processes	c		• • •	1.1	•		•	•	•	А		•		• •	в	1.1	1.1	с .			 -		•	Test effort depends on final risk assessment. Performance test according to affected process change.
CERAMIC / TANTALUM	PAS-CER-ED-03		Change of final test equipment which use different technology.																в									
CERAMC / TANTALLM		Change in final test equipment type that uses a different technology P P	PCN required for dedicated equipment for sensitive parameters.	e.g. change of tester platform	c		•		1			1.1							в	1.1	1	· ·					•	Gage R&R / delta correlation
CERAMC / TANTALUM		LOGISTICS / CAPHOLTY / TESTING - PROCESS FLOW	Course of anno danks in such		1	1				1	1		1	1 1	1	1 1	1 1		1 1			1 1		1 1			1	
CERAMC / TANTALUM	PAS-CER-PF-01	Manufacturing also transfer or movement of a part of production process to a different location/bile P P	Change of manufacturing alle. Note: Reorganization inside one plantialle is not affected	Movement or transfer of manufacturing site or process step(s) to a different location/site.	в		• • •	•	•	• •	•	•	• •	•	• •		• •	• •	в	•	•	с .	1.1				• •	•
	PAS-CER-PT-02		Change of manufacturing process sequence.	e.g. washing / cleaning process e.g. change of order of processes	c		• • • •	1.1												1.1			1.1		 -			Characterisation depends on impact of production flow.
CERAMC / TANTALUM CERAMIC / TANTALUM		LOGISTICS / CAPACITY / TESTING - Q-GATE									-									-								
	PAS-CER-QG-01	Dhange of test coverage used by the supplier to ensure data sheet compliance (e.g., eliminationisdition of electrical measuremethant flow block, relaxation/enhancement of monitoring procedure or sampling)	Change of test coverage.	e.g. charge from 100% to sample inspection e.g. test flow block, reduction from three to two temperature measurements.	с																							R (electr. funct.): test coverage. R (reliability) only for change in burn in
CERAMIC / TANTALUM		monitoring procedure or sampling) Film capacitors		temperature measurements e.g. change in burn inihun in process.		l																						ргосния.
The second second																												
Film capacitors	PAS-FLM-AN-01	Any change with impact on special customer characteristics/contractual agreements P P	1	Not relevant for technical evaluation.	•	1						· · ·									· · ·							
Film capacitors	PAS-FLM-AN-01 PAS-FLM-AN-02	Any         Annow with interaction solecial customer characteristics/contractual acreements         P         P           Any charge with impact on processability/manufacturability at customer, which is not covered in p         P         P           Interaction below.         P         P         P	-	Not relevant for technical evaluation. Technical interface means component terminals.	в				-	· ·	-	•	 	-				 -		· ·	-						•	
Film capacitors Film capacitors Film capacitors		DATADEET	Change of application relevant	Technical interface means component terminals.	1	1	· · · ·	•	•	· ·				•						· ·		· ·	· ·		· ·		•	
Film capacitors Film capacitors Film capacitors Film capacitors	PAS-FLM-AN-02 PAS-FLM-AN-02 PAS-FLM-DS-01	DATADEET	Change of application relevant	Technical interface means component terminals.	1	Plak assessment depending on change for each application.		•	•	· ·	-		· ·		· ·	· · ·		· ·		· ·	•	· ·	· ·	· · ·		· · ·	• •	
Film capacitors Film capacitors Film capacitors Film capacitors		DATADEET	Change of application relevant	Technical interface means component terminals.	1	1			· ·	· ·	· · ·		· ·	· ·	· ·			· ·		· · ·	· · ·	· · ·	· · ·			· · · ·	•	
Film capacitors Film capacitors Film capacitors Film capacitors	PAS-FLM-DS-01	Oktoberti         Over of dealerst prevention/decirclet specification (res./max/pp, values) and / or ACOCC         p         p         p           Connection of dealerst prevention/decirclet specification         (res./max/pp, values) and / or ACOCC         p         p         p           Connection of dealerst         1         P         P         P         P         P	Charge of application relevant information Not included: Editorial changes. No included: Editorial changes. No included: Editorial changes of the procession in description (unofing, drawing,) (B): In case of editorial charges. (P): In case of relativist charges.	Technical Interface means component leminals.	A	1		· · ·	• • •	· · ·	· · · · · · · · · · · · · · · · · · ·				· · ·			· · ·	· · ·	· ·	· · ·	· · · · · · · · · · · · · · · · · · ·	• • •			· · · · ·	· · ·	
Film capacitors Film capacitors Film capacitors Film capacitors	PAS-FLM-DS-01	Oktoberti         Over of dealerst prevention/decirclet specification (res./max/pp, values) and / or ACOCC         p         p         p           Connection of dealerst prevention/decirclet specification         (res./max/pp, values) and / or ACOCC         p         p         p           Connection of dealerst         1         P         P         P         P         P	Charge of application relevant information Not included: Editorial changes. No included: Editorial changes. No included: Editorial changes of the procession in description (unofing, drawing,) (B): In case of editorial charges. (P): In case of relativist charges.	Technical Interface means component leminals.	A	1		•	· ·	· · ·	-	· · · · · · · · · · · · · · · · · · ·			· · ·	· · ·		· · ·		· · ·	· · ·	· · · · · · · · · · · · · · · · · · ·	· ·	· · ·		· · ·	· ·	
Film capacitors Film capacitors Film capacitors Film capacitors Film capacitors	PAS-FLM-DS-01	Oktoberti         Over of dealerst prevention/decirclet specification (res./max/pp, values) and / or ACOCC         p         p         p           Connection of dealerst prevention/decirclet specification         (res./max/pp, values) and / or ACOCC         p         p         p           Connection of dealerst         1         P         P         P         P         P	Charge of application relevant information Not included: Editorial changes. No included: Editorial changes. No included: Editorial changes of the procession in description (unofing, drawing,) (B): In case of editorial charges. (P): In case of relativist charges.	Technical Interface means component leminals.	A	1	Image         Image <th< td=""><td>· · ·</td><td>· ·</td><td>· · ·</td><td>· · · · · · · · · · · · · · · · · · ·</td><td></td><td>· · ·</td><td></td><td>· · ·</td><td></td><td></td><td>· · ·</td><td></td><td>· · ·</td><td>· · · · · · · · · · · · · · · · · · ·</td><td>· · · · · · · · · · · · · · · · · · ·</td><td>· · ·</td><td>· · ·</td><td></td><td>· · · ·</td><td>· · ·</td><td></td></th<>	· · ·	· ·	· · ·	· · · · · · · · · · · · · · · · · · ·		· · ·		· · ·			· · ·		· · ·	· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·	· · ·	· · ·		· · · ·	· · ·	
Film capacitors Film capacitors Film capacitors Film capacitors Film capacitors	PAS-FLM-DS-01 PAS-FLM-DS-02 PAS-FLM-DS-03	Databaser         P           Databaser         P           Samp of database         P           Constant of data heat         I           Database         I           Samp of database         I           Database         I           Database         I	Charge of application relevant information Not included: Editorial changes. No included: Editorial changes. No included: Editorial changes of the procession in description (unofing, drawing,) (B): In case of editorial charges. (P): In case of relativist charges.	Technical Interface means component leminals.	A	1		- - -	· ·	· · ·	· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·	· · ·	· · · · · · · · · · · · · · · · · · ·	· · ·			· · ·		· · ·	· · · · · · · · · · · · · · · · · · ·	· · ·	· · ·			· · · · ·	· · ·	
Film capacitors Film Capacitor	PAS-FLM-DS-01 PAS-FLM-DS-02 PAS-FLM-DS-03	Interest         Image of balance in permanentation of specification (inter-transmission of the specification of specification	Dange of epicture relation relevant Mart Madde E. Staffer of merges. In bichtical dange of the product, only corrections. Non-typical buyets (b): In case of desired dange. (b): In case of desired dange. (c): In case of	Technical definition means composed to mean.	A	Rok assesment depending on change for each application.		•	· · ·	· · ·		· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·		· · ·			· · · · · · · · · · · · · · · · · · ·		· · · · · · · · · · · · · · · · · · ·		· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·			· · · · · · · · · · · · · · · · · · ·		
File agenties	PAS-FLM-DS-01 PAS-FLM-DS-02 PAS-FLM-DS-03	Interest         Image of balance in permanentation of specification (inter-transmission of the specification of specification	Dange of epicture relation relevant Mart Madde E. Staffer of merges. In bichtical dange of the product, only corrections. Non-typical buyets (b): In case of desired dange. (b): In case of desired dange. (c): In case of	Technical definition means composed to mean.	A	1		• • •	· · ·	· · ·	· · ·	· ·	· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·	· · ·			· · · · · · · · · · · · · · · · · · ·		· · · · · · · · · · · · · · · · · · ·			· · · · · · · · · · · · · · · · · · ·				· · · · · · · · · · · · · · · · · · ·	
Ten agentara Ten agentara Ten agentara Ten agentara Ten agentara Ten agentara	PAS-FLM-DS-01 PAS-FLM-DS-02 PAS-FLM-DS-03	Interest         Image of balance in permanentation of specification (inter-transmission of the specification of specification	Dange of epicture relation relevant Mart Madde E. Staffer of merges. In bichtical dange of the product, only corrections. Non-typical buyets (b): In case of desired dange. (b): In case of desired dange. (c): In case of	Noticed influes rates composed tended.           • a fifter if during permate database.           • a fifter if during permate database.           • a fifter if during permate database.           • a fifter if during permate.           • a fifter if during permate.           • a fifter if during permate.	A A A	Rok assesment depending on change for each application.		• • • •	· · · ·	· · · · · · · · · · · · · · · · · · ·	· · ·	· · ·	· · ·		· · ·	· · ·		· · · · · · · · · · · · · · · · · · ·		• • • • • • • • • • • • • • • • • • •			· · · · · · · · · · · · · · · · · · ·				· · · · · · · · · · · · · · · · · · ·	Constan direktin ik application
Галарайан Таларайан Галарайан Галарайан Галарайан Галарайан	PAS-FLM-DS-01 PAS-FLM-DS-02 PAS-FLM-DS-03	Enternal         P         P           Compared distance prevention before to gene distance models and prevention of the distance of the object         P         P           Compared and and event         L         P         P           Description of additional prevention         L         P         P           Description of additional prevention         L         P         P           Description of additional prevention         P         P         P           Compared models comparison         Parage         P         P	Charge of systems relation relevant Relational and the system of the product of the instantial of the product of the product of the system of the product	Total claimles resus composer terminit.                e.g. after of descriptional results.                  e.g. descriptional results.              e.g. descriptional results.                e.g. description results.              e.g. description results.                e.g. description results.              e.g. description results.                e.g. description results.              e.g. description results.                e.g. description results.              component results.                e.g. description results.              component results.	A A A	Rok assesment depending on change for each application.		· · · · · · · · · · · · · · · · · · ·	· · · ·	· · · · · · · · · · · · · · · · · · ·	· · ·							· · · · · · · · · · · · · · · · · · ·		· · · · · · · · · · · · · · · · · · ·			· · · · · · · · · · · · · · · · · · ·					Conder dedanis epiloden     Conder dedanis epiloden     Conder dedanis epiloden
Ганаралан Танаралан Ганаралан Ганаралан Ганаралан Ганаралан Ганаралан Ганаралан	PAS-FLM-DS-01           PAS-FLM-DS-02           PAS-FLM-DS-03           PAS-FLM-MM-01	Enternal         P         P           Compared distance prevention before to gene distance models and prevention of the distance of the object         P         P           Compared and and event         L         P         P           Description of additional prevention         L         P         P           Description of additional prevention         L         P         P           Description of additional prevention         P         P         P           Compared models comparison         Parage         P         P	Charge of systems relation relevant Relational and the system of the product of the instantial of the product of the product of the system of the product	Total claimles resus composer terminit.                e.g. after of descriptional results.                  e.g. descriptional results.              e.g. descriptional results.                e.g. description results.              e.g. description results.                e.g. description results.              e.g. description results.                e.g. description results.              e.g. description results.                e.g. description results.              component results.                e.g. description results.              component results.	A A A C B	Rok assesment depending on change for each application.	Image         Image         Image           Image         Image         Image         Image         Image           Image         Image         Image         Image         Image         Image           Image         Image         Image         Image         Image         Image         Image           Image <t< td=""><td>• • • • •</td><td>· · ·</td><td>· · · · · · · · · · · · · · · · · · ·</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>· · · · · · · · · · · · · · · · · · ·</td><td></td><td>· · · · · · · · · · · · · · · · · · ·</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>	• • • • •	· · ·	· · · · · · · · · · · · · · · · · · ·								· · · · · · · · · · · · · · · · · · ·		· · · · · · · · · · · · · · · · · · ·								
Газарайан Газарайан Газарайан Газарайан Газарайан Газарайан Газарайан	PAS-FILM-DS-01           PAS-FILM-DS-02           PAS-FILM-DS-03           PAS-FILM-DS-03	Enternal         P         P           Compared distance prevention before to gene distance models and prevention of the distance of the object         P         P           Compared and and event         L         P         P           Description of additional prevention         L         P         P           Description of additional prevention         L         P         P           Description of additional prevention         P         P         P           Compared models comparison         Parage         P         P	Charge of systems relation relevant Relational and the system of the product of the instantial of the product of the product of the system of the product of the product of the product of the product of the product of the product of the product of the product of the product of the product of the product of the product of the product of the product of the product of the product of the product of	Total claimles resus composer terminit.                e.g. after of descriptional results.                  e.g. descriptional results.              e.g. descriptional results.                e.g. description results.              e.g. description results.                e.g. description results.              e.g. description results.                e.g. description results.              e.g. description results.                e.g. description results.              component results.                e.g. description results.              component results.	A A A C	Reb Assessment depending on change for each application.		• • • • • •	· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·								· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·			· · · · · · · · · · · · · · · · · · ·				· · · · · · · · · · · · · · · · · · ·	Constant Alexandre generality     Constant Alexandre generality     Constant Alexandre generality     Constant Alexandre generality
	PAS-FLM-DS-01           PAS-FLM-DS-02           PAS-FLM-DS-03           PAS-FLM-MM-01	Enhance         F           Company of industry parameteristic spectra (or pro-trans Age states) and (or / AGCOC)         p         p           Company of industry parameteristic spectra (or pro-trans Age states) and (or / AGCOC)         p         p           Company of industry parameteristic (or pro-trans Age states) and (or / AGCOC)         p         p           Sector (additional pro-trans and (or parameteristic (or pro-trans Age states))         p         p           Descention         p         p         p           Outrage of metric companies - Restage         p         p         p           Outrage of metric companies - Restage         p         p         p           Outrage of metric companies - Lead Semanders         p         p         p	Cargo of applications should be applied of applications of app	Noticed induces researce composer benefits.	A A A C B B B	Reb Assessment depending on change for each application.		· · · · · · · · · · · · · · · · · · ·		· ·	•	•		•	•••	•••••••••••••••••••••••••••••••••••••••				· · · · · · · · · · · · · · · · · · ·								Change of base material: Consider ESR, high frequency parameter
	истима истима истима истима истима истима истима истима	Enhance         F           Company of basis in devine specification (specification (specificatititation (specificatititation (s	Congregation should be appreciated on the second se	Noted and the same approver barrelest <ul></ul>	A A A C B B B C	Ref answering Appendix on Object In all registed. A constraints on PACAROSA of the Statement of the AROSA of the second second second second second A is a second second second second second second A is a second se		•	•	· · · · · · · · · · · · · · · · · · ·	•	•	• • • •	•		· ·			в	· · · · · · · · · · · · · · · · · · ·								Dange of base metrical: Consider ESR, high hequercy parameter Constantiation (Constant) Soldersbilly Test for resked SMD components.
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Film capacitors Film capacitors Film capacitors Film capacitors Film capacitors Film capacitors	м57/M650 м57/M550 м57/M550 м57/M60 м57/M60 м57/M60 м57/M60 м57/M60 м57/M60 м57/M60 м57/M60 м57/M60 м57/M60 м57/M60 м57/M60 м57/M60 м57/M50	Enternal         p           Restard         p           Restard Information execution in the two states and in A ISSN and any states any states any states and any states any states and any states ande	Compared and solutions that and the solution of the solution o	Total datafies rates composed tended.         ••••••••••••••••••••••••••••••••••••	A A A C B B B B C C C	An assessment papering on charge for all septimized	· · ·	•	•	· ·	•	•	· ·	•	• • • • • • • •	· ·		· · · · · · · · · · · · · · · · · · ·	B	· · · · · · · · · · · · · · · · · · ·							•	Dange of base metrical: Consider ESR, high hequercy parameter Constantiation (Constant) Soldersbilly Test for resked SMD components.
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Film capacitors Film capacitors Film capacitors Film capacitors Film capacitors Film capacitors	INSTANDS (1)           INSTANDS (2)	Enternal         P           Contrast of data serversion below days fields of of ACGC         p           Contrast of data data         I           Contrast of data data         I           Standard         I           Standard         I           Deschool of a data serversion below data         I           Deschool of a data serversion         I           Deschool of a data serversion         P           Deschool of a data serve	Cargo of applications means and applications of applications o	Total calculations sums comparent travelist.           explainer of distributions	A A A C C B B B C C C C C C C C C C	An assessment papering on charge for all septimized		· · · · · · · · · · · · · · · · · · ·	•	· · ·	•	• • • • • • • • • • • • • • • • • • • •	· · ·	· · ·	· · ·	•			B 	· · ·	•						· ·	Charge of base material: Consider ESR, high heavercy parameter Consider ESR. Solidanabley feel for rasked SAD components.
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Film capacitors Film capacitors Film capacitors Film capacitors Film capacitors Film capacitors	No.5 FLM 05-01           PAS FLM 05-02	Bitser         p           Compared and interpretamentational quantitation (interpretamentational quantitation (interpretamentational quantitation (interpretamentational quantitational quantitatio quantitational quantitatio quantitatio quantitatio	Congret data data man Mandada Catori Angun Mandada Catori Angun Mandada Catori Angun Mandada Catori Angun Mangalan Manga	Total and informations areast component traveless.           • a grapher of descriptions and end balance.           • a grapherode descriptions and end balance.	A           A           A           C           B           C           C           C           C           C           C           B           C           C           C           B           C           C           C           C           C           S           C           C	An assessment papering on charge for all septimized		· · · · ·	· • • • •	· · ·	•	• • • • • • •	• • • • • • • • • • • • • •	· · · · · ·	· · · · · · · · · · · · · · · · · · ·				B	· · · · · · · · · · · · · · · · · · ·	•						· ·	Charge of base material: Consider ESR, high heavercy parameter Consider ESR. Solidanabley feel for rasked SAD components.
Film capacitors Film capacitors Film capacitors Film capacitors Film capacitors Film capacitors	но Ликова истически по	Bitser         p           Compared and interpretamentational quantitation (interpretamentational quantitation (interpretamentational quantitation (interpretamentational quantitational quantitatio quantitational quantitatio quantitatio quantitatio	Congret data data man Mandada Catori Angun Mandada Catori Angun Mandada Catori Angun Mandada Catori Angun Mangalan Manga	Total and informations areast component traveless.           • a grapher of descriptions and end balance.           • a grapherode descriptions and end balance.	A           A           A           C           B           C           C           C           B           C           C           B           C           C           B           C           C           B           S           B	An assured specific on charge     for all specific on     A or antimation one PAE ABS 64     A or antimation one PAE		· · · · ·	· • • • •	· · ·	•	• • • • • • •	• • • • • • • • • • • • • •	· · · · · ·	· · · · · · · · · · · · · · · · · · ·				B	· · · · · · · · · · · · · · · · · · ·	•		-         -				· ·	Charge of base material: Consider ESR, high heavercy parameter Consider ESR. Solidanabley feel for rasked SAD components.
Paramatan Maranan Maranan Marana	MS-FAMSE         INS-FAMSE           INS-FAMSE         INS-FAMSE	Dataset         Image of laboration provides in the two stage of laboration of laboratio laboratio laboration of laboratio laboration of laboration of l	Congregation of the second sec	Balance data factors assues approver traveles.           e.g. Splits of data factors (assues of database).           e.g. Splits of data factors (assues of database).           e.g. Splits of database (assues of database).           e.g. Splits of database.           e.g. Splits of database.           e.g. Splits of database.           e.g. Splits of database. <td>A           A           A           C           B           C           C           C           C           C           C           B           C           C           C           B           C           C           C           C           C           S           C           C</td> <td>An assured specific on charge     for all specific on     A or antimation one PAE ABS 64     A or antimation one PAE</td> <td></td> <td></td> <td>· · · · ·</td> <td>· · ·</td> <td>•</td> <td>· · · · · · · · · · · · · · · · · · ·</td> <td>• • • • • • • • • • • • • •</td> <td>· · · · · ·</td> <td>· · · · · · · · · · · · · · · · · · ·</td> <td></td> <td></td> <td></td> <td>B</td> <td>· · · · · · · · · · · · · · · · · · ·</td> <td>•</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>· ·</td> <td>Charge of two related Concluse ERE, By Respecty promotion     Concerning     Concerning</td>	A           A           A           C           B           C           C           C           C           C           C           B           C           C           C           B           C           C           C           C           C           S           C           C	An assured specific on charge     for all specific on     A or antimation one PAE ABS 64     A or antimation one PAE			· · · · ·	· · ·	•	· · · · · · · · · · · · · · · · · · ·	• • • • • • • • • • • • • •	· · · · · ·	· · · · · · · · · · · · · · · · · · ·				B	· · · · · · · · · · · · · · · · · · ·	•						· ·	Charge of two related Concluse ERE, By Respecty promotion     Concerning
Paramatan Maranan Maranan Marana	MS-FAMSE         INS-FAMSE           INS-FAMSE         INS-FAMSE	Bitser         p           Regin of inder parameteriolitics quoted in process days states of int / ACGC         p         p           Concells of data days         p         p         p           Bitser/Collect of data days         p         p         p           Bitser/Collect of data data         p         p         p           Bitser/Collect of data         p         p         p           Orange of means compasition- Toolog         p         p         p           Orange of means compasition- Toolog         p         p         p           Drange of means compasition- Toolog         p         p         p           Drange of means compasition- Solid Tope (Streng filter         p         p         p           Drange of means compasition- Solid Tope (Streng filter         p         p         p           Drange of means compasition- Solid Tope (Streng filter         p         p         p           Drange of means compasition- Solid Tope (Streng filter         p         p         p	Carpor discrimination of the second s	Notice of the sense component services a graphene of delocid parameter devices a graphene of delocid parameter devices a graphene of delocid parameter devices a graphene of delocid parameters a graphene of delocid pa	A           A           A           C           B           C           C           B           C           C           B           C           B           C           B           C           B           C           B           C           B           C           B           C           B           C           B           C	Ref         An exament depending on charge generative state of the set of the			· • • • • • • • •	· · ·	· · · · · ·		• • • • • • • • • • • • • •	· · · · · ·	· · · · · · · · · · · · · · · · · · ·			· · · · · · · · · · · · · · · · · · ·	B	· · · · · · · · · · · · · · · · · · ·	•						· · · · · · · · · · · · · · · · · · ·	Charge of two related Concluse ERE, By Respecty promotion     Concerning
	NS-FILMOS-01           NS-FILMOS-02           NS-FILMOS-02           NS-FILMOS-02           NS-FILMOS-02           NS-FILMOS-03           NS-FILMOS-04	Enternal         P           Reginal of advances         P           Original of advances         P           Constant of advances         P           Constant of advances         P           Description of advances         P           <	Cargo of applications should be applied of applications of app	Notice is a first and a sense component services. • Support of allocation accession of definitions • Support of allocation accession of definitions • Support of allocation accession of definitions • Support of allocations • Support of allocations	A           A           A           C           B           C           C           C           C           C           C           B           C           B           C           B           C           B           C           C           C           C           C           C           C           C           C           C	A. In control on the State State State           B. In reader State           Choice State State			· • • • • • • • • • • • • • • • • • • •	· · ·	· · · · · · · · · · · · · · · · · · ·		• • • • • • • • • • • • • •		· · · · · · · · · · · · · · · · · · ·			· · · · · · · · · · · · · · · · · · ·	B • • • • • • • • • • • • •	· · · · · · · · · · · · · · · · · · ·	•						· · · · · · · · · · · · · · · · · · ·	Charge of two related Constant DRAW of two related Constant Constant 200 Constant 200 Constant 200 Constant 200 Anarytic related sections Anarytic related s
	NS-FILMOS-01           NS-FILMOS-02           NS-FILMOS-02           NS-FILMOS-02           NS-FILMOS-02           NS-FILMOS-03           NS-FILMOS-04	Enternal         p           Reginal distantian providenti di qualitatis (Ris Mai Agi Malei (M / AGCC)         p         p           Reginal di administrazione di soluttati qualitatis (Ris Mai Agi Malei (M / AGCC)         p         p           Granda di administrazione di soluttati (Ris Mai Agi Malei (M / AGCC)         p         p           Braditati di administrazione di soluttati (Ris Malei (M / AGCC)         p         p           Braditati di administrazione di soluttati (Ris Malei (M / AGCC))         p         p           Braditati di administrazione di soluttati (Ris Malei (M / AGCC))         p         p           Braditati di administrazione di soluttati (Ris Malei (M / AGCC))         p         p           Braditati di administra (Ris Malei (Ris Malei (M / AGCC))         p         p           Braditati di administra - Solutgi Graqueti (M / AGCC)         p         p           Braditati di administra - Solutgi Graqueti (M / AGCC)         p         p           Braditati di administra (Ris Malei (Ris Ma	Cargo of applications of the second s	Notice de la face seus cargores tendes e gales a discritario aconte de la face e gales a discritario aconte de la face e gales a discritario de la face e gales de la face de la face de la face e gales de la face	A           A           A           C           B           C           C           B           C           C           B           C           B           C           B           C           B           C           B           C           B           C           B           C           B           C           B           C	A. In control on the State State State           B. In reader State           Choice State State				· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·				· · · · · · · · · · · · · · · · · · ·			· · · · · · · · · · · · · · · · · · ·	B • • • • • • • • • • • • •	· · · · · · · · · · · · · · · · · · ·	•						· · · · · · · · · · · · · · · · · · ·	Charge of two related Constant DRAW of two related Constant Constant 200 Constant 200 Constant 200 Constant 200 Anarytic related sections Anarytic related s
	MS-FAMSE	Enternal         p           Reginal distantian providenti di qualitatis (Ris Mai Agi Malei (M / AGCC)         p         p           Reginal di administrazione di soluttati qualitatis (Ris Mai Agi Malei (M / AGCC)         p         p           Granda di administrazione di soluttati (Ris Mai Agi Malei (M / AGCC)         p         p           Braditati di administrazione di soluttati (Ris Malei (M / AGCC)         p         p           Braditati di administrazione di soluttati (Ris Malei (M / AGCC))         p         p           Braditati di administrazione di soluttati (Ris Malei (M / AGCC))         p         p           Braditati di administrazione di soluttati (Ris Malei (M / AGCC))         p         p           Braditati di administra (Ris Malei (Ris Malei (M / AGCC))         p         p           Braditati di administra - Solutgi Graqueti (M / AGCC)         p         p           Braditati di administra - Solutgi Graqueti (M / AGCC)         p         p           Braditati di administra (Ris Malei (Ris Ma	Cargo of applications of the second s	Notice is a first and a sense component services. • Support of allocation accession of definitions • Support of allocation accession of definitions • Support of allocation accession of definitions • Support of allocations • Support of allocations	A           A           A           C           B           C           C           C           C           C           C           B           C           B           C           B           C           B           C           C           C           C           C           C           C           C           C           C	A. In control on the State State State           B. In reader State           Choice State State				· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·				· · · · · · · · · · · · · · · · · · ·			· · · · · · · · · · · · · · · · · · ·	B • • • • • • • • • • • • •	· · · · · · · · · · · · · · · · · · ·	•		····································				· · · · · · · · · · · · · · · · · · ·	Charge of two related Constant DRAW of two related Constant Constant 200 Constant 200 Constant 200 Constant 200 Anarytic related sections Anarytic related s
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	INSTANCE           INSTANCE <t< td=""><td>Bitser         P           Compared determination and production (Section Age of Leff AGC COMPARE)         P           Compared determination and production (Section Age of Leff AGC COMPARE)         P           Compared determination and production (Section Age of Leff AGC COMPARE)         P           Sector Address and Age of Leff AGC COMPARE)         P           Description of antiperson and address and Age of Leff AGC COMPARE)         P           Description of antiperson and compared on Age of Leff AGC COMPARE)         P           Description of antiperson and compared on Age of Leff AGC COMPARE)         P           Compared determination - Russing         P         P           Compared determination antiperson - Russing Compared         P         P           Compared determination antiperson - Russing Compared         P         P           Compared determination Age (Section (Section Compared Compare</td><td>Cargo displants and an and a second and a se</td><td>Bit Activity Constraints           a galles of Activity Constraints' Activity           a galles of Activity Constraints' Activity</td><td>A           A           A           C           B           C</td><td>A. In control on the State State State           A. In control on the State State State           B. In reader State           Choice State State</td><td></td><td></td><td></td><td></td><td>· · · · · · · · · · · · · · · · · · ·</td><td></td><td></td><td></td><td></td><td></td><td></td><td>· · · · · · · · · · · · · · · · · · ·</td><td>B</td><td>· · · · · · · · · · · · · · · · · · ·</td><td></td><td></td><td></td><td></td><td></td><td></td><td>· · · · · · · · · · · · · · · · · · ·</td><td>Charge of two related Constant DRAW of two related Constant Constant 200 Constant 200 Constant 200 Constant 200 Anarytic related sections Anarytic related s</td></t<>	Bitser         P           Compared determination and production (Section Age of Leff AGC COMPARE)         P           Compared determination and production (Section Age of Leff AGC COMPARE)         P           Compared determination and production (Section Age of Leff AGC COMPARE)         P           Sector Address and Age of Leff AGC COMPARE)         P           Description of antiperson and address and Age of Leff AGC COMPARE)         P           Description of antiperson and compared on Age of Leff AGC COMPARE)         P           Description of antiperson and compared on Age of Leff AGC COMPARE)         P           Compared determination - Russing         P         P           Compared determination antiperson - Russing Compared         P         P           Compared determination antiperson - Russing Compared         P         P           Compared determination Age (Section (Section Compared Compare	Cargo displants and an and a second and a se	Bit Activity Constraints           a galles of Activity Constraints' Activity	A           A           A           C           B           C	A. In control on the State State State           B. In reader State           Choice State State					· · · · · · · · · · · · · · · · · · ·							· · · · · · · · · · · · · · · · · · ·	B	· · · · · · · · · · · · · · · · · · ·							· · · · · · · · · · · · · · · · · · ·	Charge of two related Constant DRAW of two related Constant Constant 200 Constant 200 Constant 200 Constant 200 Anarytic related sections Anarytic related s

Film capacitors	PAS-FLM-PR-04	Process integrity: tuning within specification	. P	Variation within process specification. e.g. process control	с		1. A.	1 C 1				-	1.1				1.1					1.1	1.1		1.1	-	
Film capacitors	PAS-FLM-PN-01	PADONG / SHIPPING - NEW MATERIAL, ORTICAL DIVENSIONS		Charge of packing specification. as a number of nieves on real	в																						
Film capacitors				a contraction of the second seco	-												-	-								-	
Film capacitors	PAS-FLM-PN-02	Dry pack requirements change	P P	Change of drypack requirements.     e.g. change of MSL     e.g. change in dry pack assurance (HIC, MBB)	в		1 C 1					-	1.1	1.1								1.1	1.1		1.1		
	PAS-FLM-PN-03	Change of carrier (tray, reel)	р р	Change of carrier e.g. change by material e.g. change by geometry.	в								1.1									1.1	1.1				
Film capacitors Film capacitors		PADIONG / SHIPPING - VISUAL INSPECTION		e.g. change by geometry.						_									1 1			<u> </u>					-
	PAS-FLM-PV-01	Change of labeling	I P	Change of labeling, also on reel.     (0 e.g. additional information (Rol/G stamp)     (P) e.g. change of customer specific information	в		1 C 1					-	1.1	1.1								1.1	1.1		1.1		
Film capacitors	-								_																		
	PAS-FLM-PV-02	Change of product marking	I P	Marking on device.     a.g. change of context of marking     a.g. change of method of marking     a.g. change of appearance of marking	в		1 C 1					-		1.1				· ·				1.1	1.1		1.1		
Film capacitors																											
Ein canadima	PAS-FLM-PV-03		P P	Change in packing specification which 9 does not described a change of dmensions or material of the packing specification	•		1 A 1						1.1	1.1			1.1					1.1	1.1	1.1			
Film capacitors Film capacitors		LOGISTICS / CAPACITY / TESTING - EQLIPEMEMENT	-									1 1			-				r 1			1 1	1 1	1 1	r 1	1	
	PAS-FLM-EQ-01	Production from a new equipmentitool which uses a different technology or which due to its unique form or function can be especied to influence the integrity of the final product		Change in process technique which is not already covered above.	с																						Test effort depends on final risk assessment.
	PAS-PDA-EQ-01	form or function can be expected to influence the integrity of the final product	PP	Change in process technique which is not a sheady coursed above. Note: Changes affecting the product not covered by the table require also a PCM.	c		•		•							• • •		ь ·									Test effort depends on final risk assessment. Performance lest according to affected process change.
Film capacitors																	+ +										Test effect descede as first deb
	PAS-FLM-DQ-02	Production from a new equipment/loci which uses the same basic technology (replacement equipment or extension of existing equipment pool)	- P	PCN required for dedicated equipment for sensitive component production. e.g. extension of existing machin capacity	с		• •		•	•	•••	•	• •	1.1		• •		в -				1.1	1.1		1.1	•	assessment. Performance test according to affected process change.
Film capacitors				Change of final text equipment which use different technology.						_		-								_						_	process change.
	PAS-FLM-DQ-03	Change in final test equipment type that uses a different technology	P P	Change of teams reported to the control task different schoolsy. PON required for diadcated equipment for analytic parameters.	с													в .					1.1			•	Gage R&R / delta correlation
Film capacitors Film capacitors				for annalive parameters.																							
Film capacitors		LOGISTICS / CAPACITY / TESTING - PROCESS FLOW	<u> </u>	T	1			- T	1	1	<u> </u>	<u> </u>	<u> </u>		-	- 1	<u>т</u> т	-	<u>1 1</u>	<u> </u>		1 1	<u> </u>	<u> </u>	<u>т т</u>	1	
	PAS-FLM-PF-01	Manufacturing site transfer or movement of a part of production process to a different location/site	P P	Change of manufacturing site. Note: Recegnitudion inside one plantistis is not affected	в				•	•		•	• •		• •		•	в •	• •				1.1			•	
Film capacitors				planifishe is not affected																							
	PAS-FLM-PF-02	Elimination or addition of a manufacturing process step	- P	Change of manufacturing process e.g. weaking / cleaning process e.g. change of order of processes	с																					•	Characterisation depends on impact of production flow
Film capacitors Film capacitors		LOGISTICS / CAPACITY / TESTING - Q-GATE			-				_	-					_		-									-	
			T	e.g. charge from 100% to sample inspection																							R (electr. funct.): test coverage.
	PAS-FLM-QG-01	Change of test coverage used by the supplier to ensure data sheet compliance (e.g., elimination/addition of electrical measurement/test flow block, relaxation/enhancement of monitoring procedure or sampling).	• P	e.g. change from 100% to sample impection e.g. test flow block, induction from three to two temperature measurements e.g. change in burn inhuin to process.	с			1.1			1.1		1.1					1.1					1.1				R (electr. funct.): test coverage. R (reliability) only for change in burn in process.
CLIARTZ CRYSTAL / SAW		QUARTZ CRYSTAL / SAW		w.g. change in som minar of process.																							
QUARTZ ORYSTAL / SAW		ANY							_					_				_									
QUARTZ CRYSTAL / SAW		Any change with impact on special customer characteristica/contractual agreements	P P	Not relevant for technical evaluation.	•																						
QUARTZ ORYSTAL / SAW	PAS-QUA-AN-02		P P	<ul> <li>Technical interface means component terminals.</li> </ul>	в		1. A.						1.0	1.1	1.0	1.1.1		1.1					1 1 1		•	-	
QUARTZ ORYSTAL / SAW		DATASHET	- 1	1	1	-			-	-	1 1	1 1						-	1 1				-	1 1	1 1	1	
	PAS-QUA-DS-01	Change of datasheet parameters/electrical specification (min./max./kp. values) and / or ACIDC specification	P P	Change of application relevant information e.g. tighten of electrical parameter distribution Net included: Editorial changes.	A	Risk assessment depending on change for each application.					1.1	-	1.0					1.1									
QUARTZ CRYSTAL / SAW				Not included: Editorial changes.					-								+ +	-									
				No technical change of the product, only connection in description (wording,																							
	PAS-QUA-DS-02	Connection of data sheet	I P	drawing) (i): In case of editorial changes. (ii): In case of emports or product (iii): In case of imports or product	A							-											1.1.1.1			-	
QUARTZ CRYSTAL / SAW				ragny.						_							_										
				Datachilden of a new-od presidually contend parameters No technical drange of the product. By co of shace of product and depending on the share of and hegistation to produke address of address(parameters), the																							
	PAS-QUA-DS-03	Specification of additional parameters		No technical change of the product. (III: no influence	A																						
	PAS-QUA-DS-03	Specification of additional parameters.	1 1	(P): Risk assamment depending on change for each application to provide	^		-																			-	
				exidence of additional parametes (stat. evaluation)																							
QUARTZ CRYSTAL / SAW QUARTZ CRYSTAL / SAW		MATERIAL			1																						
QUARTZ CRYSTAL / SAW	PAS-QUA-MA-01	Change of material composition - Quartz Blank	P P	A change of Quartz Blank is a wry rare case. Mainly for SAW-Filter	A			• •	•		•		1.0	•	•	•	1.1	в .	• •					1.1	1.1	-	
	PAS-QUA-MA-02			Changing of the material of the base. e.g. change from ceramic to epoxy	A					•	•	•		• •	• •	•							•				C0 may be influenced Temperature expansion coefficient may change
QUARTZ CRYSTAL / SAW																										-	may change
		Change of material composition - Lead / Termination	P P	Change of Lead/Termination e.g. change of plating finish. (eg:Au, AgPd,Sn)	В				•					• •			•	в -	• •			• •				-	
	PAS-QUA-MA-04			P Change of Gassa Seal e.g. change to lead free glass	в		· ·							• •				в -	•••			• •	1.1	1.1	1.1	-	X-Ray inspection may be influenced when sealing is containing Pb
QUARTZ ORYSTAL / SAW	PAS-QUA-MA-05	Change of material composition - Can / Cap	P P	P Changing of the material of the canicap e.g. change from metal to ceramic material	A		· ·						•	• •				в -	• •			• •	1.1		10 A 10 A	-	
QUARTZ CRYSTAL / SAW	PAS-QUA-MA-06	Change of material composition - Blank Support	P P	Change of Blank Support e.g. change of glue (Silicone to Epoxy) e.g. change metal holders (old topes)	с			• •	•	Y Y	Y •		1.0	•	• •	•		в -	• •			Υ .	1.1	1.1	1.1		
																											Electrical function affected in case of mechanical stress distribution change.
	PAS-QUA-MA-07	Change of material composition - Overmold	P P	Change of Overmold     e.g. change to green mold compound     e.g. change of filer particles	в		· ·	• •	• •	• •	•••	•	•	• •	• •	•		в •	• •			• •	1.1			-	mechanical stress distribution change. ACE, wave acidering and board costing has to be assessed. MSL might be
QUARTZ ORYSTAL / SAW										_		-								_						_	changed
	PAS-QUA-MA-08	Change of material composition - Case Sealing	P P	Charge of Case Sealing, Charge of Particular to reason welding Relevant for components with ceramic bases and media cap.	с			• •	•	Y	• •					•		в •	• •							-	Impedance my be influenced.
QUARTZ CRYSTAL / SAW					•																						
QUARTZ CRYSTAL / SAW	PAS-QUA-MA-09	Charge of material composition - Electrode	P P	Change of Electrode material on crystel bank. e.g. change from Au to Ag	с			• •	•	Y	Y •	-		Υ -	• •	•		в .					1.1		- A - A	-	
	PAS-QUA-MA-10			Change of Insulator. Only for leaded types the under of the leaded Table 6.g. Gase sealing for leads	в									• .				в •									
QUARTZ CRYSTAL / SAW	PAS-QUA-MA-10	Change of material composition - Insulator	PP	Par menera na ripputa amo.	8		· ·	• •	• •	• •	•	•	•		• •	•		d •	•							-	
	PAS-QUA-MA-11	Change of material composition - Marking	P P	Charge of marking material e.g. charge of ink e.g. charge of ink e.g. charge of ink	в			•			1 A 1 A	•		• •	•							1.1	1.1			-	
Contraction of the Contraction	PAS-QUA-MA-12	Change of supplier of material		Change to a new or additional material applier at component manufacturer.  a g. for 2nd source purpose	с																					-	
QUARTZ CRYSTAL / SAW			· [ P	supplier at component manufacturer. e.g. for uno source purpose	Ľ																						remains unchanged. Otherwise see change of material.
Gurrine Gertaline Fahrr		DESIGN						_				1 1			1		1 1				1 1	1 1	1 1	1	1	-	
QUARTZ CRYSTAL / SAW	PAS-QUA-DE-01	Changes of termination, surface linish, shape, color, appearance or dimension shucture - Base	I P	Change of Base design e.g. due to miniaturization purpose.	в		•		•		· · ·			• •				• •					• •	- · · ·		-	
	PAS-QUA-DE-02	Changes of termination, surface finish, shape, color, appearance or dimension shucture - Lead / Termination	I P	Change of tasks energy     Change of task energy     Change agrowthy or terminal pad or lead     form     form	в				•		1.1	•	• •	•	• •	1.1	•	в -	• •			• •	1.1			-	C0 may be influenced Reliability of solder joints may be
QUARTZ CRYSTAL / SAW	PAS-QUA-DE-03	Dranges of termination, surface finish, shape, color, appearance or dimension structure - Can /		form P Change of Can/Cap design e.g. due to miniaturization purpose.	A							•						в -				• •					areCB0
QUARTZ CRYSTAL / SAW		Cap			^														<u> </u>							-	Decirical function affected in case of
	PAS-QUA-DE-04	Changes of termination, surface finish, shape, color, appearance or dimension shucture -	I P	Change of Package (Molded). Change the design of the package. Not relevant for typical SMD.	в							•				•		в •				• .				-	mechanical stress distribution change. ACI, were soldering and board costing has to be assessed. MSL might be
QUARTZ ORYSTAL / SAW		ranage																									has to be assessed. MSL might be changed.
	PAS-QUA-DE-05	Changes of termination, surface finish, shape, color, appearance or dimension structure -		Change of Insulator design. Only for leaded types (old technology) Not relevent for typical SMD.	в				• •				•					в.	• •								
QUARTZ ORYSTAL / SAW		Insulator	· P	Not relevant for typical SMD.						-																	
QUARTZ CRYSTAL / SAW	PAS-QUA-DE-06	Changes of inner construction - Quartz Blank		Change of Quartz Blank design     e.g. change dimension of blank, add phase, electrode design,	с		•		•		· •		1.0		•	•		в -	• •						1.1		
QUARTZ CRYSTAL / SAW	PAS-QUA-DE-07	Changes of inner construction - Bank Support	- P	Change of Blank Support design e.g. change design of glue shape e.g. change design of metall supporter	с			•	•	Y	Υ.	-		•	• •	•		в .	• •			Υ.			1.1	-	
QUARTZ CRYSTAL / SAW		PROCESS																									
QUARTZ CRYSTAL / SAW		Changes in process technology or manufacturing methods - Quartz Blank	- P	Change of Quartz Blank process     e.g. change of cutting or lepping technology	с		• •		• •		· ·	-		• •		• •		в -	• •							-	
QUARTZ CRYSTAL / SAW	PAS-QUA-PR-02	Changes in process technology or manufacturing methods - Blank Eliching / Cleaning	- P	Change of Blank Elch/Clean process     Ling different / new technology     a.g. change from liquid eiching to plasma eiching	с		• •				1.1		1.0		• •	•	1.1	в -				1.1	1.1			-	
	PAS-QUA-PR-03	Changes in process technology or manufacturing methods - Electrode Formation	. P	Change of Electrode Formation process     e.g. change from exeporation to sputtering	с				• •						• •	• •		в .	• •							-	
QUARTZ CRYSTAL / SAW				Dama of Auto Trimmore and Balloot of	-						<u>                                      </u>																
QUARTZ ORYSTAL / SAW	PAS-QUA-PR-04	Changes in process lectnology or manufacturing methods - Trimming	- P	Change of Aulo Trim process (Method of Inal frequency suring) a.g. change from exportion to ion beam	c		•						1.0	•	•	• •		в -	• •			1.1	1.1		1.1	-	
	PAS-QUA-PR-05	Changes in process technology or manufacturing methods - Bonding / Annesing		Change of Blank bonding / annealing process. Change of method how apply conductive material to base or blank	с					Y	Y .				•			в.				Y .					
	PAS-QUR-PH-05		· P	conductive material to base or blank																							
QUARTZ CRYSTAL / SAW		Changes in process technology or manufacturing methods - Can / Cap Attaching	. Р	Change of CapiCan attaching process e.g. change of the sealing method e.g. change from batch own to reflow oven	с		•	•		Y	•••	•	•	•	•	• •		в -	• •				1.1	1 A 1		-	
	PAS-QUA-PR-06			Charge of Overmolding process. Not e.g. charge of overmold process parameter	с		• •				•••	•				• •		в •					1.1			-	
QUARTZ CRYSTAL / SAW	PAS-QUA-PR-06 PAS-QUA-PR-07	Changes in process technology or manufacturing methods - Molding			1							•							1 1			1 1		1	1 1	-	
	PAS-QUA-PR-07	Changes in process technology or manufacturing methods - Molding		e.g. charge from inked marking to baser marking																							
QUARTZ CRYSTAL / SAW	PAS-QUA-PR-07 PAS-QUA-PR-08	Ohangas in process technology or manufacturing methods - Molding Dhangas in process technology or manufacturing methods - Marking	. P	Change of Marking process     a.g. change from inked marking to base marking     a.g. marking of pin 1     a.g. change of appearance (additional marking)	в		• •		1.1		1.1	•	1.1	•	1.0	1.1	1.1	1.1				• •		1.1	· · ·	-	ACI check recessary!
OLIARTZ CRYSTAL / SAW OLIARTZ CRYSTAL / SAW OLIARTZ CRYSTAL / SAW	PAS-QUA-PR-07 PAS-QUA-PR-08 PAS-QUA-PR-09	Changes in process technology or manufacturing methods - Marking Changes in process technology or manufacturing methods - Aging	. р	Change of Marking process     a.g. change from initial marking to laser marking     change of Marking process.     Change of Aging process. Typically no     If aging is done: e.g. change of imse or     septor done outure crystation     temperatures	в		· ·	· ·				•			•	•		в.	•	-		• •	· ·	· ·	· ·	-	ACII check recessary!
OLIARTZ CRYSTAL / SAW OLIARTZ CRYSTAL / SAW OLIARTZ CRYSTAL / SAW	PAS-QUA-PR-07 PAS-QUA-PR-08 PAS-QUA-PR-09	Changes in process technology or manufacturing methods - Marking Changes in process technology or manufacturing methods - Aging	. р	Change of Marking process     a.g. change from initial marking to laser marking     change of Marking process.     Change of Aging process. Typically no     If aging is done: e.g. change of imse or     septor done outure crystation     temperatures				•	· ·			•			•	•		в.	•	-		•	· ·		· ·	-	ACII check necessary!
OUARTZ CRYSTAL / SAW OUARTZ CRYSTAL / SAW OUARTZ CRYSTAL / SAW OUARTZ CRYSTAL / SAW OUARTZ CRYSTAL / SAW	PAS-QUA-PR-07 PAS-QUA-PR-08 PAS-QUA-PR-09 PAS-QUA-PR-10	Charges In process technology or manufacturing methods - Marking Charges In process technology or manufacturing methods - Aging Process impairst testing within specification Process impairst - ANIW MATERIAL, CONTICAL, DIMENSIONES	. Р . Р	Drange of Matring process         e.g. charge bron isked marking to be an investige           Drange of Aging process         Aging process           grange of Aging process         Figure (and the site)           Drange of Aging process         Figure (and the site)           Process         8 aging those is a charge of times or improvations           Process         8 aging those is a charge of times or improvations           Process         6 aging process control	c c			· ·	· ·		· ·		· ·		• •	• •		B -	•			• •		· ·		-	ACII check necessary!
OUARTZ CRYSTAL / SAW OUARTZ CRYSTAL / SAW OUARTZ CRYSTAL / SAW OUARTZ CRYSTAL / SAW OUARTZ CRYSTAL / SAW	PAS-QUA-PR-07 PAS-QUA-PR-08 PAS-QUA-PR-09 PAS-QUA-PR-10	Charges In process technology or manufacturing methods - Marking Charges In process technology or manufacturing methods - Aging Process impairst testing within specification Process impairst - ANIW MATERIAL, CONTICAL, DIMENSIONES	. Р . Р	Change of Marking process     a.g. change from initial marking to laser marking     change of Marking process.     Change of Aging process. Typically no     If aging is done: e.g. change of imse or     septor done outure crystation     temperatures	с				· ·		· ·		· · ·		· ·	• •						• · ·	· ·		· ·	· ·	ACE check measure/

	PAS-QUA-PN-02	Dry cack requirements change		P Charge of drypack requirements.	e.g. change of MSL e.g. change in dry pack assurance (HIC, MBB)	в																							
RTZ CRYSTAL / SAW	PAS-QUA-PN-03	Drange of cartier (tray, nee)			e.g. change in dry pack assurance (HC, MBD) e.g. change by material	в						-							-				-			<u> </u>		$\rightarrow$	
Z CRYSTAL / SAW	Photo Anno	PADIONS / SHEPPING - VISUAL INSPECTION	r.	P California	e.g. charge by geometry.					_	1-1			<u> </u>	1.1.														
TZ CRYSTAL / SAW	PAS-QUA-PV-01	Change of labeling	1	P Change of labelling, also on reel.	(8) e.g. additional information (RoHS stamp) (P) e.g. change of customer specific information	в		1.0	1.0						1.1							1.1					/	- 1	
RTZ CRYSTAL / SAW	PAS-QUA-PV-02	Change of product marking			e.g. change of content of marking e.g. change of method of marking e.g. change of appearance of marking	в																							
RTZ CRYSTAL / SAW				P Marking on device.	e.g. change of memory of marking e.g. change of appearance of marking		-					_							-							<u> </u>	4		
RTZ CRYSTAL / SAW	PAS-QUA-PV-03	Change of packing/shipping specification	Р	P Change in packing specification which does not described a change of dimensions or material of the packing.	e.g. change of documentation in packing specification	•		19 (B)				1.1		1.1					-		1.1	1.1		· ·	1.1	1.1	1 - 1	$ \cdot $	
RTZ CRYSTAL / SAW		LOGISTICS / CAPACITY / TESTING - EQUIPMEMENT					1							1 T	T T		- T - T	<b>T</b> T	- T - T	- T - T									_
	PAS-QUA-EQ-01	Production from a new equipment/loci which uses a different technology or which due to its unique form or function can be expected to influence the integrity of the final product	Р	P Change in process technique which is not already covered above. Note: Changes affecting the product not covered by the table require also a PCN.	e. g. new equipment supplier with different process concret	с		•	1.1													1.1					1 . 1	- 1	Test effort depends on final ri assessment. Performance test according to process change.
RTZ CRYSTAL / SAW										_	_							_	_	_		_					4-+		process change.
RTZ CRYSTAL / SAW	PAS-QUA-EQ-02	Production from a new equipmentitool which uses the same basic technology (replacement equipment or extension of existing equipment pool)		P PCN required for dedicated equipment for sensitive component production.	<ul> <li>g. additional equipment to increase production capacity</li> <li>g. replacement of same equipment</li> </ul>	с		•	1.0						1 A A		· · ·					1.1		· ·	1.1	1.1		$(\cdot \mid )$	Test effort depends on final ri asseamment. Performance test according to process change.
RTZ CRYSTAL / SAW				Change of final test equipment which use																									
RTZ CRYSTAL / SAW	PAS-QUA-EQ-03	Change in final test equipment type that uses a different technology	Р	P Change of final test equipment which use different technology. PCN required for dedicated equipment for sensitive parameters.	e.g. change of tester platform	с		•										в.								11		1	Gage R&R / delta correlation
RTZ CRYSTAL / SAW		LOGISTICS / CAPACITY / TESTING - PROCESS FLOW								1	1 1			1 1	1 1	1 1		1 1		1 1			1						
RTZ CRYSTAL / SAW	PAS-QUA-PF-01	Manufacturing alia transfer or movement of a part of production process to a different location take	Р	P Note: Reorganization inside one plantituite is not affected	Movement or transfer of manufacturing sile or process step(s) to a different location/sile.	в		• •		• •		• •	• • •	•••	•••	• •	• • •	в •	•	•	1.1		-	1.1		1.1	- · ·		•
RTZ CRYSTAL / SAW	PAS-QUA-PF-02	Elimination or addition of a manufacturing process step		P Change of manufacturing process sequence.	e.g. washing / cleaning process e.g. change of order of processes	с		<ul> <li>• 100 (100)</li> </ul>	1.0					1.1	1.1	1.0	(1) (1)				1.0	1.1	-	1.1	1.1	1.1	1.1		Characterisation depends on production flow
RTZ CRYSTAL / SAW		LOGISTICS / CAPACITY / TESTING - Q-GATE Decret of last country and by the service the server deta thest complexes (a c			e.g. charge from 100% to sample inspection e.g. test flow block, reduction from three to two temperature measurements		1				<u> </u>			1 1	<u> </u>	<u> </u>		<u> </u>					1	-	Г				R (electr funct): test covered
RTZ CRYSTAL / SAW	QUA-QG-01	Charge of last coverage used by the supplier to ensure data sheet compliance (e.g., altrinutorisiddition of electrical measurementhant flow block, relevation/enhancement of monitoring procedure or sampling)		P Charge of test coverage.	<ul> <li>g. test flow block, reduction from three to two temperature measurements</li> <li>e.g. change in burn inhun in process.</li> </ul>	с		1. A.				1.1		1.1	1.1				-		1.1	1.1		1.1	1.1	1.1		( •   7	R (electr. funct.): test coverag R (reliability) only for change process.
ND ND		monoring procedure or sampling) Auminium Electrohotic Casacitor Any																								_		_	
NP	PAS-ALU-AN-01 PAS-ALU-AN-02	Any change with impact on special customer characteristics/contractual agreements Any change with impact on processability/manufacturability at customer, which is not cowred in	P	P	Not relevant for technical evaluation. Technical interface means component terminals. See processability on board level.	в																						•	
ND ND		DATASHEET			See procezzability on board level.																								
	PAS-ALU-DS-01	Drange of datasheet parameters/electrical specification (min/max/kps.values) and / or AC/DC specification	Р	Not included: Editorial changes.	e.g. tighten of electrical parameter distribution	A	Risk assessment depending on change for each application.	1.0	1.0										-				-			· .			
				No technical change of the product, only contaction in description (section	1																								
	PAS-ALU-DS-02	Correction of data sheet	1		e.g. data sheet correction because of new information about component behavior	A		1.1	1.1		-								-				-			· .			
φ.				yr): In case or impact on product integrity.	<u> </u>																								
				(P)         1 Lame or space of special           Integrity.         Description of a new not previously covered parameter.           No technical drange of the product.         (B): In initiation of the product.           (B): In initiation of the product.         (B): In initiation of the product.           (B): In initiation of the product.         (B): In initiation of the product.           (B): Initiation of the product.         (B): Initiation of the product.           (B): Initiation of the product.         (B): Initiation of the product.           (B): Initiation of the product.         (B): Initiation of the product.           (B): Initiation of the product.         (B): Initiation of the product.           (B): Initiation of the product.         (B): Initiation of the product.           (B): Initiation of the product.         (B): Initiation of the product.           (B): Initiation of the product.         (B): Initiation of the product.           (B): Initiation of the product.         (B): Initiation of the product.           (B): Initiation of the product.         (B): Initiation of the product.           (B): Initiation of the product.         (B): Initiation of the product.           (B): Initiation of the product.         (B): Initiation of the product.           (B): Initiation of the product.         (B): Initiation of the product.           (B): Initiation of the product.         <																									
	PAS-ALU-DS-03	Specification of additional parameters	1	P ((): no influence (P): Risk assessment depending on	e.g. adding new (tested) parameter.	A		19 (B)	1.1			1.1							-		1.1	1.1			1.1	1.1	1 - 1	$ \cdot $	
×				evidence of additional parametes (stat. evaluation)																									
NP I	PAS-ALU-MA-01	MATERIAL			1 1		E: only if a cap holder holds the Capacitor body by pressing.					•		• •		• •							<u> </u>		<u> </u>		<u> </u>		1
NP -	PAS-ALU-MA-01	Charge of material composition - Housing			e.g. change Al alloy for housing			•••			+ +							_	_							<u> </u>	<u> </u>		
	PAS-ALU-MA-02	Change of material composition - Sealing	Р		e.g. change of rubber compound e.g. change of assaing disc material (axial, Snap in)	с	B: in case of external surface of sealing is changed. Evaluation only, if capacitor is glued	- •	•	•		• •	• • •	• •	• •	• s			· -		1.1	1.1		· ·	1.1	1.1	1 - 1		
	PAS-ALU-MA-03	Change of material composition - External Insulation	Ρ	P Change of external insulation / sleeving	e.g. change from PVC into PET e.g. change of colour	с	E: Only for glued capacitors.	· • ·	• •	• •		• •	• • •	• •	• •	• S	· · ·					1.1		1.1	1.1		( + )	- 1	Eissed Hurridity test can be without applying voltage.
_	PAS-ALU-MA-OA	Change of material composition - Lead / Termination	Ρ	P Change of lead or outer termination.	e.g. change of leadhame from iron into copper e.g. change of leadhame finish from tinilead into tin	в		· · ·	•					•	1.1	• •	· · ·	в -	•			1.1		1.1	1.1			•	
	PAS-ALU-MA-05	Chance of material composition - Internal Insulation / Paper	Р		e.g. change of paper thickness 50 µm to 40µm	с	A: Only if impedance increase (delta characterization). Check if datasheet is affected (PAS-ALU-DS-01).						• •					в -				•					/	. 7	
NP I							aflected (PAS-ALU-DS-01). & Only if impedance increase (delta			_									_								+	$\vdash$	
~	PAS-ALU-MA-06	Change of material composition - Electrolyte		P Change of electrolyte	e.g. change in formulation	с	affected (PAS-ALU-DS-01).	· •		• •			•		1.1	1.1	• •	в -			1.1	•			1.1	1.1	1.1		•
* *	PAS-ALU-MA-07 PAS-ALU-MA-08	Ohange of material composition - Tape Material Change of material composition - Base Pale	P	P Change of closing type mailerial P Change of base plate material	e.g. change of glue or basis material e.g. change of used plastic material	C B		· ·								• •	· · ·						-						
																													Test effort depands on final ri assessment. Performance test according b material Assumption material specifics remains unchanged. Change of material.
	PAS-ALU-MA-09	Change of supplier of material		P Change to a new or additional material supplier at component manufacturer.	e.g. for 2nd source purpose	с		· ·	• •	• •		• •		•	•••	• •	· · ·	в •	•	•		1.1		· ·	1.1	1.1	1 - 1	( •   )	Performance test according to material. Assumption material specifics
NP																													remains unchanged. Otherwis change of material.
NP .				P Change of wire dameter	e.g. charge from 0.8 into 0.6 mm wire diameter.	в	1				<del></del>				1 1	• •											<u> </u>	<u> </u>	
	PAS-ALU-DE-01	DESCN Darges of termination, surface finish, shape, color, appearance or dimension shucture - Wire Damates	1	P Change of termination appearance For welded Al capacitors only.																								•	
	PAS-ALU-DE-01 PAS-ALU-DE-02	DESIGN Charges of termination, surface Tritah, shape, color, appearance or dimension structure - Wire Damater Charges of termination, surface Tritah, shape, color, appearance or dimension structure - Termination	1		e.g. charge from matt tin into bright tin.	в			1.0										•										
		Diarge of termination, surface finish, shope, color, appearance or dimension structure - Wire Diareter Diarge of termination, surface finish, shope, color, appearance or dimension structure - Termination Diarges of termination, surface finish, shope, color, appearance or dimension structure -	1	P Note: Marking on device is defined as	e.g. change from mail lin into bright lin. e.g. change of colour/appearance e.n. change of colour/appearance	в								· ·			· · · ·		•									-	
•	PAS-ALU-DE-02 PAS-ALU-DE-03	Diarge of termination, surface finish, shope, color, appearance or dimension structure - Wire Diareter Diarge of termination, surface finish, shope, color, appearance or dimension structure - Termination Diarges of termination, surface finish, shope, color, appearance or dimension structure -	1	Change of appearance P Note: Marking on device is defined as separate change (PAS-ALU-PV-02).	e.g. change of colour/appearance e.g. change of xallety vent shape						· · · · · · · · · · · · · · · · · · ·	· ·		•		· ·	· · · ·	· · ·		· ·	· ·		-	· ·				-	
• •	PAS-ALU-DE-02 PAS-ALU-DE-03 PAS-ALU-DE-04 PAS-ALU-DE-05	Durge of elementaria, suches hink, plan, solor, apparence or dementin elucidar Viro Davidor elementaria de la construcción de la construcción el construcción Dementaria de la construcción de la construcción de la construcción el construcción de la construcción de la construcción de la construcción el construcción de la construcción de	1	P Change of apparences poter Marking on device is delined as separate change (PXS-RLUPI-CQ). P Change of rubber sealing stand-off shape (p) change of hilds with	e g, change of colourhepeanance e g, change of safety vent shape e e, g, change of profile / design e, g, change of width	B		· ·				· ·		· · ·	· · ·	· · ·	· · ·	 	· · ·		· ·	•	-	· ·		· ·	· ·		
	PAS-ALU-DE-02           PAS-ALU-DE-03           PAS-ALU-DE-03           PAS-ALU-DE-04           PAS-ALU-DE-05           PAS-ALU-DE-06	Durge of elementaria, suches hink, plan, solor, apparence or dementin elucidar Viro Davidor elementaria de la construcción de la construcción el construcción Dementaria de la construcción de la construcción de la construcción el construcción de la construcción de la construcción de la construcción el construcción de la construcción de	1	P Charge of appearance Note Mixing on device is defined as apprains charge (PAC-ALL PFL-G). P Charge of rubber asaling stand-off shape for radal) P Charge of apprator with P Charge of apprator with P Charge of apprator density	e.g. change of colouritypesence e.g. change of ankly set shape e.g. change of profile / design e.g. change of yoble e.g. change of width e.g. change of width e.g. change of width	B A C C		- · · · · · · · · · · · · · · · · · · ·		-				· · ·	· · · · · · · · · · · · · · · · · · ·	· · ·	· · · ·	 B - B - B -					-	· ·		· · ·	· ·		
** **	PASALU-DE-02           PASALU-DE-03           PASALU-DE-03           PASALU-DE-04           PASALU-DE-05           PASALU-DE-06           PASALU-DE-07           PASALU-DE-08	Degraf strendsta, stade bah, Appe, olis, spearator ai drinasti ana stade. "Nin Degraf at investito, stade bah, Appe, olis, spearator ai drinasti ana stade." Degraf strendsta, stade bah, Appe, olis, spearator ai drinasti an stade." Apper of terminali, stade bah, Appe, olis, spearator ai drinasti ai stade." Apper of terminali, stade bah, Appe, olis, spearator ai drinasti ai stade." Apper of terminalis. Instano fall. Degraf of term contextus. Sector Tal. Degraf of term contextus. Sector Tal. Degraf of term contextus. Sector Tal.	1 1 1 	P         Charge of Appearance           Notex Mericing (PK-ALUP)+CQ.           ρ         Charge of rubber seeing shm-6 off shape           ρ         Charge of rubber seeing shm-6 off shape           ρ         Charge of aluber seeing shm-6 off shape           ρ         Charge of aluber seeing shm-6 off shape           ρ         Charge of aluber seeing shm-6 off shape           ρ         Charge of aluperator width           ρ         Charge of aluperator demity           ρ         Charge of Inner correction	s.g. charge of colourisppearance s.g. charge of axially and shape s.g. charge of prolite / design s.g. charge of side. s.g. charge of side.	B A C C C C					-		•	· · ·	· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·	· · · ·					· · · · · · · · · · · · · · · · · · ·		· · ·			· ·		
** **	PASALU-DE-02           PASALU-DE-03           PASALU-DE-04           PASALU-DE-05           PASALU-DE-06           PASALU-DE-07           PASALU-DE-08           PASALU-DE-08           PASALU-DE-09	Dragger of memories, which block, replace (site, seguences or densing markets, which block, replace (site, seguences or densing markets).           Dragger of memories, which block, replace, site, seguences or densing markets.           Dragger of memory.           Dragger of memory.     <		P         Charge of Appearance           Notex Mericing (PK-ALUP)+CQ.           ρ         Charge of rubber seeing shm-6 off shape           ρ         Charge of rubber seeing shm-6 off shape           ρ         Charge of aluber seeing shm-6 off shape           ρ         Charge of aluber seeing shm-6 off shape           ρ         Charge of aluber seeing shm-6 off shape           ρ         Charge of aluperator width           ρ         Charge of aluperator demity           ρ         Charge of Inner correction	s.g. charge of colourisppearance s.g. charge of axially and shape s.g. charge of prolite / design s.g. charge of side. s.g. charge of side.	B A C C C C C					•	· ·		· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·	· · · · ·				· · ·	•	-	· · ·			· · · · · · · · · · · · · · · · · · ·		Terminal Strength (11) not for components without paddle to
** **	PASALU-DE-02           PASALU-DE-03           PASALU-DE-03           PASALU-DE-04           PASALU-DE-05           PASALU-DE-06           PASALU-DE-07           PASALU-DE-08	Dragger of memories, which block, replace (site, seguences or densing markets, which block, replace (site, seguences or densing markets).           Dragger of memories, which block, replace, site, seguences or densing markets.           Dragger of memory.           Dragger of memory.     <	1 1 3 3 3 4 3 4 3 4 3 4 3 4 3 4 3 4 3 4	P         Darge of typesonce           P         Netro Moricy on docis a defined as netrosis charge (PACALUPAC)).           P         Darge of typesonic with P           P         Darge of taitype	6 _ draged of draft (grant on a grant of the grant o	B A C C C C C C					•	· ·		· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·	· · ·	· · · · ·	B			· · ·		-	· · · · · · · · · · · · · · · · · · ·			· · · · · · · · · · · · · · · · · · ·		Terminal Strength (11) not for components without paddle ta
** **	PAS-ALL/CE-02           PAS-ALL/CE-03           PAS-ALL/CE-04           PAS-ALL/PR-04	Degrad another, should have, pairs of second or already or should be applied another should be applied another should be applied another should be applied and the appl		P         Dange of presence           P         Dange of presence           P         Dange of presence           P         Dange of balance           P         Dange of kill with           P         Dange of kill with with           P         Dange of second with with           P         Dange of thirtype           P         Dange of thirtype		B A C C C C C C C					• • • •	· · · · · · · · · · · · · · · · · · ·			· · ·	· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·	B - B - B - B - B - B - B - B - B - B -			· · ·	•	-	· · ·			· · · · · · · · · · · · · · · · · · ·		Terminal Strength (11) not for components without packet to Terminal Strength (11) and V (4) not for asial components cadde table.
** **	PAS-ALL/DE-02           PAS-ALL/DE-03           PAS-ALL/DE-03           PAS-ALL/DE-03           PAS-ALL/DE-04           PAS-ALL/DE-04           PAS-ALL/DE-03           PAS-ALL/DE-03           PAS-ALL/DE-04           PAS-ALL/DE-03           PAS-ALL/DE-04           PAS-ALL/DE-04           PAS-ALL/DE-03           PAS-ALL/DE-04           PAS-ALL/DE-04           PAS-ALL/DE-04           PAS-ALL/DE-04           PAS-ALL/DE-04	Dragent devices durates that, spee, die segment au drasen anders. 'With Dragent devices durates that, spee, die segment au drasen at durate devices durates durates that, spee, die segment au drasen at durates.' Regent devices durates hat, spee, die segment au drasen at durates.' Ruber Dragent dere senschen Anseine Alf Dragent dere senschen.' Rubers hat Dragent dere senschen.' Rubers Dragent dere senschen.' Rubers Dragent dere senschen.' Rubers Dragent dere senschen.' Rubers Dragent generationen, dere beständert Dragent genebeständer Dragent generationen, dere beständert Dragent generatio		P         Design of preparements           Section 2011 and 20		B A C C C C C C C B	k shy to M splasion				• • • •	· · · · · · · · · · · · · · · · · · ·			· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·	·         ·         ·           ·         ·         ·           ·         ·         ·           ·         ·         ·           ·         ·         ·           ·         ·         ·           ·         ·         ·           ·         ·         ·           ·         ·         ·           ·         ·         ·           ·         ·         ·           ·         ·         ·           ·         ·         ·	B - B - B - B - B - B - B - B - B - B -			· · ·	• • • • •		· · ·			· · · · · · · · · · · · · · · · · · ·		Terrstinal Strength (11) not for components without pacifie to Terrstinal Strength (11) and Vi (14) not for a skill components pacifie tota.
** **	PAS-ALL/DE-02           PAS-ALL/DE-03           PAS-ALL/DE-03           PAS-ALL/DE-03           PAS-ALL/DE-04           PAS-ALL/DE-04           PAS-ALL/DE-03           PAS-ALL/DE-03           PAS-ALL/DE-04           PAS-ALL/DE-03           PAS-ALL/DE-04           PAS-ALL/DE-04           PAS-ALL/DE-03           PAS-ALL/DE-04           PAS-ALL/DE-04           PAS-ALL/DE-03           PAS-ALL/DE-04           PAS-ALL/DE-04           PAS-ALL/DE-04           PAS-ALL/DE-04           PAS-ALL/DE-04           PAS-ALL/DE-04           PAS-ALL/DE-04           PAS-ALL/DE-04	Dygge of sensitive, started brack, respective of sensitive started.         The sensitive started brack, resp. site, segments of sensitive started sta		P         Design of preparements           Section 2011 and 20		B A C C C C C C C C C C C C C C C C C C	K only he 1% application					· · · · · · · · · · · · · · · · · · ·			· · ·			B - B - B - B - B - B - B - B - B - B -			· · ·	•		· · · · · · · · · · · · · · · · · · ·			· · · · · · · · · · · · · · · · · · ·		Terminal Strength (11) not for components without packs to mental strength (11) and Vi (14) not for axial component packs tak. Surge voltage last for high vol components only.
** **	PAS-ALUCE-02           PAS-ALUCE-03           PAS-ALUCE-04           PAS-ALUCE-04           PAS-ALUCE-04           PAS-ALUCE-05           PAS-ALUCE-08           PAS-ALUCE-08           PAS-ALUCE-08           PAS-ALUCE-08           PAS-ALUCE-08           PAS-ALUCE-08           PAS-ALUCE-08           PAS-ALUCE-08           PAS-ALUSE-08	Degrad and instruction, statuse bank, Apper, ot its, Seguence and antenants instruction bank, Apper, ot its, Seguence and American Statusets.           Degrad of anisets.         Append of anisets.           Degrad of anisets.		Party of digenome           Party of digenome           Barrier in drag (PA 5A 1974 col)           Party of disk stateg amound of digenome           Party of disk stateg amound of disk stategoing amound of disk st	<ul> <li>by danger at print range by danger at print range sa danger at print range da d</li></ul>	B A C C C C C C C C C C C C C C C C C C	K only he 1% application					· · · · · · · · · · · · · · · · · · ·			· · ·	· · · · · · · · · · · · · · · · · · ·		B - B - B - B - B - B - B - B - B - B -			· · ·	• • • • •					· · · · · · · · · · · · · · · · · · ·		Ternal Singl (1) or to empower who paids to empower who paids to (1) or to anal component paids tes. Brog whop set for high or high or empower only.
** **	PRS-ALUCE-02           PRS-ALUCE-03           PRS-ALUCE-04           PRS-ALUCE-04           PRS-ALUCE-05           PRS-ALUCE-08           PRS-ALUCE-09           PRS-ALUCE-09           PRS-ALUCE-09           PRS-ALUCE-09           PRS-ALUCE-09           PRS-ALUCE-09           PRS-ALUCE-09           PRS-ALUCE-09           PRS-ALUPR-01           PRS-ALUPR-02           PRS-ALUPR-03           PRS-ALUPR-04           PRS-ALUPR-05	Drugs of sensitive starters in the binary sets of segment and sets of sensitive starters in the binary sets of segments and sets of sensitive starters in the binary sets of segments and sets of sensitive starters in the binary sets of segments and sets of sensitive starters in the binary sets of segments and sets of sensitive starters in the binary sets of segments and sets of sensitive starters in the binary sets of segments and sets of sensitive starters in the sensitive starters in		P              Sign of agence.            P              Sign of agence.            P              Sign of a loss of agence.            P              Sign of agence.            P	to design of advergences     to design o	B A C C C C C C C C C C C C C C C C C C	R only for HT application					· · · · · · · · · · · · · · · · · · ·			· · ·			B - B - B - B - B - B - B - B - B - B -			· · ·	• • • • •		· · · · · · · · · · · · · · · · · · ·			· · · · · · · · · · · · · · · · · · ·		Terrisol Strength (11) out the composition whole patient is composition whole patient is patient to the patient the patient the patient the Sarge voltage test for high val Barge voltage test for high val R. Depende on processe dram R. Depende on processe dram
** **	PAS-ALUSE-02           PAS-ALUSE-03           PAS-ALUSE-03           PAS-ALUSE-05           PAS-ALUSE-05           PAS-ALUSE-07	Dygen         Dygen <th< td=""><td></td><td>P         Charge of agencia.           P         Charge of agencia.           P         Charge of allow and agencial of agencia.           P         Charge of allow and agencial.           P         Charge of allow and agencial.</td><td>b) dogs of advectores           b) dogs of advectores           c) dogs of advectores           d) dogs of advectores           d) dogs of advectores</td><td>B A C C C C C C C C C C C C C C C C C C</td><td>A stdy for HV application</td><td></td><td></td><td></td><td></td><td>· · · · · · · · · · · · · · · · · · ·</td><td></td><td></td><td>· · ·</td><td></td><td></td><td>B - B - B - B - B - B - B - B - B - B -</td><td></td><td></td><td>· · ·</td><td>• • • • •</td><td></td><td>·         ·           ·         ·</td><td></td><td></td><td>· · · · · · · · · · · · · · · · · · ·</td><td></td><td>Every of the second secon</td></th<>		P         Charge of agencia.           P         Charge of agencia.           P         Charge of allow and agencial of agencia.           P         Charge of allow and agencial.	b) dogs of advectores           b) dogs of advectores           c) dogs of advectores           d) dogs of advectores           d) dogs of advectores	B A C C C C C C C C C C C C C C C C C C	A stdy for HV application					· · · · · · · · · · · · · · · · · · ·			· · ·			B - B - B - B - B - B - B - B - B - B -			· · ·	• • • • •		·         ·           ·         ·			· · · · · · · · · · · · · · · · · · ·		Every of the second secon
** **	PRS-ALUCE-02           PRS-ALUCE-03           PRS-ALUCE-04           PRS-ALUCE-04           PRS-ALUCE-05           PRS-ALUCE-08           PRS-ALUCE-09           PRS-ALUCE-09           PRS-ALUCE-09           PRS-ALUCE-09           PRS-ALUCE-09           PRS-ALUCE-09           PRS-ALUCE-09           PRS-ALUCE-09           PRS-ALUPR-01           PRS-ALUPR-02           PRS-ALUPR-03           PRS-ALUPR-04           PRS-ALUPR-05	Dygen         Dygen <th< td=""><td></td><td>P         Charge of agencia.           P         Charge of agencia.           P         Charge of allow and agencial of agencia.           P         Charge of allow and agencial.           P         Charge of allow and agencial.</td><td>a la despré rationalisation la despré rationalisationalisation la despré rationalisation la desp</td><td>B A C C C C C C C C C C C C C C C C C C</td><td>A rejust tri spinoso</td><td></td><td></td><td></td><td></td><td>· · · · · · · · · · · · · · · · · · ·</td><td></td><td></td><td>· · ·</td><td></td><td></td><td>-         -           B         -</td><td></td><td></td><td>· · ·</td><td>• • • • •</td><td></td><td>·         ·           ·         ·</td><td></td><td></td><td>· · · · · · · · · · · · · · · · · · ·</td><td></td><td>Terrisol Strength (11) out the composition whole patient is composition whole patient is patient to the patient the patient the patient the Sarge voltage test for high val Barge voltage test for high val R. Depende on processe dram R. Depende on processe dram</td></th<>		P         Charge of agencia.           P         Charge of agencia.           P         Charge of allow and agencial of agencia.           P         Charge of allow and agencial.	a la despré rationalisation la despré rationalisationalisation la despré rationalisation la desp	B A C C C C C C C C C C C C C C C C C C	A rejust tri spinoso					· · · · · · · · · · · · · · · · · · ·			· · ·			-         -           B         -			· · ·	• • • • •		·         ·           ·         ·			· · · · · · · · · · · · · · · · · · ·		Terrisol Strength (11) out the composition whole patient is composition whole patient is patient to the patient the patient the patient the Sarge voltage test for high val Barge voltage test for high val R. Depende on processe dram R. Depende on processe dram
** **	PG-ALL/RCG         PG-ALL/RCG	Symposition		P         Comparison of the second comp of the second com	A	B A C C C C C C C C C C C C C C C C C C						· · · · · · · · · · · · · · · · · · ·			· · ·			-         -           B         -			· · ·	• • • • •		·         ·           ·         ·			· · · · · · · · · · · · · · · · · · ·		Every of the second secon
** **	PIG-ALL/PRO	Degree and sensitive states that have, spee, site segments and ansature states. 'Weil Degree and sensitive states have, spee, site segments and sensitive states and sensitive		P              Single and spectra.            P              Single and spectra directorial sp	te després d'autorisations te després d'autorisation	B C C C C C C C C C C C C C C C C C C C	A 49 to 17 spinore 					· · · · · · · · · · · · · · · · · · ·			· · ·			-         -           B         -			· · ·	• • • • •					· · · · · · · · · · · · · · · · · · ·		Every of the second secon
** **	PIG-ALL/DEG         PIG-ALL/DEG	Drugs of smalls, and/or float, Arge, site, seguresce of areases of and/or. 'Wei           Quarge of smalls, and/or float, Arge, site, seguresce of areases of and/or. 'Site           Quarge of smalls, and/or float, Arge, site, seguresce of areases of and/or. 'Site           Quarge of smalls, and/or float, Arge, site, seguresce of areases of and/or. 'Site           Quarge of smalls, and/or float, Arge, site, seguresce of areases of and/or. 'Site           Quarge of areases.'Site float, Arge, site, seguresce of areases of and/or. 'Site           Quarge of areases.'Site float, Arge, site, seguresce of areases of and/or. 'Site           Quarge of areases.'Site float, 'Site float, 'Site float, 'Site float, 'Site float, 'Site areases', 'Site areases		P              Значе странации            P              Значе странации <td>A design of adversaments     A design of</td> <td>B C C C C C C C C C C C C C C C C C C C</td> <td>A r0 to 10 galadan</td> <td></td> <td></td> <td></td> <td></td> <td>· · · · · · · · · · · · · · · · · · ·</td> <td></td> <td></td> <td>· · ·</td> <td></td> <td></td> <td>-         -           B         -</td> <td></td> <td></td> <td>· · ·</td> <td>• • • • •</td> <td></td> <td></td> <td></td> <td></td> <td>· · · · · · · · · · · · · · · · · · ·</td> <td></td> <td>Every of the second secon</td>	A design of adversaments     A design of	B C C C C C C C C C C C C C C C C C C C	A r0 to 10 galadan					· · · · · · · · · · · · · · · · · · ·			· · ·			-         -           B         -			· · ·	• • • • •					· · · · · · · · · · · · · · · · · · ·		Every of the second secon
** **	PIG-ALL/PRO	Symposition		P              Значе странации            P              Значе странации <td>te després d'autorisantes     el després d'autorisantes     e</td> <td>B C C C C C C C C C C C C C C C C C C C</td> <td>A r0 to 10 galadan</td> <td></td> <td></td> <td></td> <td></td> <td>· · · · · · · · · · · · · · · · · · ·</td> <td></td> <td></td> <td>· · ·</td> <td></td> <td></td> <td>-         -           B         -</td> <td></td> <td></td> <td>· · ·</td> <td>• • • • •</td> <td></td> <td></td> <td></td> <td></td> <td>· · · · · · · · · · · · · · · · · · ·</td> <td></td> <td>Every of the second secon</td>	te després d'autorisantes     el després d'autorisantes     e	B C C C C C C C C C C C C C C C C C C C	A r0 to 10 galadan					· · · · · · · · · · · · · · · · · · ·			· · ·			-         -           B         -			· · ·	• • • • •					· · · · · · · · · · · · · · · · · · ·		Every of the second secon
** **	PIG-ALL/DEG         PIG-ALL/DEG	Drugs of smalls, and/or float, Arge, site, seguresce of areases of and/or. 'Wei           Quarge of smalls, and/or float, Arge, site, seguresce of areases of and/or. 'Site           Quarge of smalls, and/or float, Arge, site, seguresce of areases of and/or. 'Site           Quarge of smalls, and/or float, Arge, site, seguresce of areases of and/or. 'Site           Quarge of smalls, and/or float, Arge, site, seguresce of areases of and/or. 'Site           Quarge of areases.'Site float, Arge, site, seguresce of areases of and/or. 'Site           Quarge of areases.'Site float, Arge, site, seguresce of areases of and/or. 'Site           Quarge of areases.'Site float, 'Site float, 'Site float, 'Site float, 'Site float, 'Site areases', 'Site areases		P         Single digence	<ul> <li>a charger of an increases and a charger of an increase and a</li></ul>	B C C C C C C C C C C C C C C C C C C C	A rig to 10 gender					· · · · · · · · · · · · · · · · · · ·			· · ·			-         -           B         -			· · ·	• • • • •					· · · · · · · · · · · · · · · · · · ·		Every of the second secon
** **	PIG ALL/DE GI	Druge of sensities, soften thank, separation, separations of sensities and sensities, soften thank, separation, separations of sensities and sensities.           Organg of sensities, soften thank, separation, separations of sensities and sensities.           Organg of sensities, soften thank, separation, separations of sensities and sensities.           Organg of sensities, soften thank, separations of separations of sensities and sensities.           Organg of sensities.           Organg in sensities of sensities.           Organg in sensities.		P         Single dispersion	A	8 A C C C C C C C C C C C C C C C C C C	A rig to 10 gender					· · · · · · · · · · · · · · · · · · ·			· · ·			-         -           B         -			· · ·	• • • • •					· · · · · · · · · · · · · · · · · · ·		Every of the second secon
** **	PIG-ALL/DE-G3           PIG-ALL/DE-G3           PIG-ALL/DE-G4	Dragen in sometike under beich, desp sichts, despersicht of ansamer anderen. 'Nich Quarger af sometike, under beich, desp, sicht, gesprecht an derseiner anderen.'.           Dragen af sometike, under beich, desp, sicht, gesprecht an derseiner anderen.'.           Dragen af sometike, under beich, desp, sicht, gesprecht an derseiner anderen.'.           Dragen af sometike.'		P              Single and segments             segment and segments              segment and segments             segment and segments             segment and segments             segment and segments             segment and segments             segment and segments             segment and segments             segment and segments             segment and segments             segment and segments             segment and segments             segment and segments             segment and segments             segment and segments             segment and segments             segment an	A school in divergences     A school in divergences     A school in divergences     A school in divergence     A school in d	8 A C C C C C C C C C C C C C C C C C C	A rig to 10 gender					· · · · · · · · · · · · · · · · · · ·			· · ·			-         -           B         -			· · ·	• • • • •					· · · · · · · · · · · · · · · · · · ·		Every of the second secon
** **	PIG ALL/DE GI	Druge of sensities, soften thank, separation, separations of sensities and sensities, soften thank, separation, separations of sensities and sensities.           Organg of sensities, soften thank, separation, separations of sensities and sensities.           Organg of sensities, soften thank, separation, separations of sensities and sensities.           Organg of sensities, soften thank, separations of separations of sensities and sensities.           Organg of sensities.           Organg in sensities of sensities.           Organg in sensities.		P              Single and segments             segment and segments              segment and segments             segment and segments             segment and segments             segment and segments             segment and segments             segment and segments             segment and segments             segment and segments             segment and segments             segment and segments             segment and segments             segment and segments             segment and segments             segment and segments             segment and segments             segment an	A school in divergences     A school in divergences     A school in divergences     A school in divergence     A school in d	8 A C C C C C C C C C C C C C C C C C C	A rig to 10 gender					· · · · · · · · · · · · · · · · · · ·			· · ·			-         -           B         -			· · ·	• • • • •					· · · · · · · · · · · · · · · · · · ·		Every of the second secon
** **	Prick AUL/CRE 01           Prick 2002 05	Druger in structure, studen black, Apper, skite, Seguenez an dreasers an skite.         Program of structure, skite, Seguenez an Annaeser, skite, Seguenez an Annaeser, skite, Seguenez an Annaeser, and Seguenez an Annaeser an skite, Seguenez an Annaeser, Seguenez an Annaeser, Seguenez an Annaeser and Skite, Seguenez an		P         Single dispersion	<ul> <li>a dangar al and angawang al a dangar al angar a</li></ul>	8 A C C C C C C C C C C C C C C C C C C	A rig to 10 gender					· · · · · · · · · · · · · · · · · · ·			· · ·			-         -           B         -			· · ·	• • • • •					· · · · · · · · · · · · · · · · · · ·		Annual Standard, 11 and 1     Annual Standard, 12 and 1     Annual Standard, 12 and 1     Annual Standard, 12 and 12     Annual Standard, 12 and 12     Annual Standard, 12 and 12     Annual S
** **	PIG-ALL/PEG         PIG-ALL/PEG	Bygen and sensitive states that have, spee, state sensitive at attacues attacues. Takat attacues att		P         Single dispersion	<ul> <li>a dangar al and angawang al a dangar al angar a</li></ul>	8 A C C C C C C C C C C C C C C C C C C	A rig to 10 gender					· · · · · · · · · · · · · · · · · · ·			· · ·			-         -           B         -			· · ·	• • • • •					· · · · · · · · · · · · · · · · · · ·		Annual Standard, 11 and 1     Annual Standard, 12 and 1     Annual Standard, 12 and 1     Annual Standard, 12 and 12     Annual Standard, 12 and 12     Annual Standard, 12 and 12     Annual S
** **	PIG_AULCEGI         PIG_AULCEGI           PIG_AULCEGI	Byte         Byte           Byte <td></td> <td>P         Samp degrammed, and set of the second second</td> <td><ul> <li>a donger and an understanding of the sector o</li></ul></td> <td>8 A C C C C C C C C C C C C C</td> <td>A rig to 10 gender</td> <td></td> <td></td> <td></td> <td></td> <td>· · · · · · · · · · · · · · · · · · ·</td> <td></td> <td></td> <td>· · ·</td> <td></td> <td></td> <td>-         -           B         -</td> <td></td> <td></td> <td>· · ·</td> <td>• • • • •</td> <td></td> <td>1         1           2         2           2         2           2         2           2         2           2         2           2         2           3         2           3         2           4         2           4         2           4         2           5         2           4         2           4         2           4         2           5         2           5         2           6         2           6         2           6         2           7         2           6         2           7         2           8         2           9         2           9         2           9         2           9         2           9         2           9         2           9         2           9         2           9         2           9         2           9         3</td> <td></td> <td></td> <td>· · · · · · · · · · · · · · · · · · ·</td> <td></td> <td>Annual Standard Standard</td>		P         Samp degrammed, and set of the second	<ul> <li>a donger and an understanding of the sector o</li></ul>	8 A C C C C C C C C C C C C C	A rig to 10 gender					· · · · · · · · · · · · · · · · · · ·			· · ·			-         -           B         -			· · ·	• • • • •		1         1           2         2           2         2           2         2           2         2           2         2           2         2           3         2           3         2           4         2           4         2           4         2           5         2           4         2           4         2           4         2           5         2           5         2           6         2           6         2           6         2           7         2           6         2           7         2           8         2           9         2           9         2           9         2           9         2           9         2           9         2           9         2           9         2           9         2           9         2           9         3			· · · · · · · · · · · · · · · · · · ·		Annual Standard
** **	PIG_AULCEGI         PIG_AULCEGI           PIG_AULCEGI	Bygen and sensitive states that have, spee, state sensitive at attacues attacues. Takat attacues att		P         Samp degrammed, and set of the second	A control instrumente A control instru	8 A C C C C C C C C C C C C C	A rig to 10 gender					· · · · · · · · · · · · · · · · · · ·			· · ·			-         -           B         -			· · ·	• • • • •		1         1           1         1           2         1           2         1           2         1           2         1           2         1           2         1           2         1           3         1           4         1           4         1           5         1           4         1           5         1           5         1           5         1           6         1           7         1           6         1           7         1           7         1           7         1           8         1           9         1           9         1           10         1           11         1           12         1           13         1           14         1           15         1           16         1			· · · · · · · · · · · · · · · · · · ·		Annual Standard, 11 and 1     Annual Standard, 12 and 1     Annual Standard, 12 and 1     Annual Standard, 12 and 12     Annual Standard, 12 and 12     Annual Standard, 12 and 12     Annual S

Pas-AULED/D	Charoe in final test equipment troe that uses a different technology	P P Charge of linal sust equipment which use different technology. PON required for dedicated equipment for another parameters.	e.g. change of tester platform	с														в.											•	Cana BAD / dab
<b>_</b>	LOGSTICS / CAPACITY / TESTING - PROCESS FLOW	PCN required for dedicated equipment for sensitive parameters.																												
PAS-ALU-PE-01	Manufacturing sile transfer or movement of a part of production process to a different location/sile	P P Change of manufacturing site. Note: Receptrization inside one plantitie is not affected	Movement or transfer of manufacturing site or process step(s) to a different location/site.	в														в.								. 1		•		
PAS-ALU-PF-02	Elimination or addition of a manufacturing process step	plantialia is not affected     P     Charge of manufacturing process     sequence.		с																									•	Characterisati production flow
PAS-ALU-PF-00		I P Reduction of final testing. PCN required for dedicated final test reductions for sensitive parameters.	e.g. seshing / cleaning process e.g. change of order of processes e.g. elemination of additional impedance control	c										-	-						-	-	-							Characterisatio
	Elimination of final electrical measurement / last flow block LOQISTICS / CAPACITY / TESTING - Q-GATE	<ol> <li>PCN required for dedicated linal text reductions for sensitive parameters.</li> </ol>		Ľ																									•	inal test flow.
PAS-ALU-QG-01	Change of test coverage used by the supplier to ensure data sheet compliance (e.g., elimination/addition of electrical measurement/test flow block, relaxation/enhancement of monitoring procedure or sampling)	_ p Change of test coverage.	<ul> <li>e.g. change from 100% to sample inspection</li> <li>e.g. test flow block, reduction from three to two temperature measurements</li> <li>e.g. change in burn infrum in process.</li> </ul>	с			1.																					-	-	R (electr. funct R (reliability) or process.
	NTC		e.g. change in burn in hun in process.										<u> </u>		<u> </u>					<u> </u>				<u> </u>		┶┷┷		<u> </u>	ľ	
PAS-NTC-AN-01 PAS-NTC-AN-02	Pary Any dampa with impact on special customer characteristicAccontractual agreements Pary charage with impact on processability/monducurability at customer, which is not covered in the matrix tables EAXX04EET	P P	Not relevant for technical evaluation. Technical interface means component terminate.	B				1							1		1			1	-		1			F:F		1:1		-
	Permatrix below. DATASHEET	7 7	1	· · · · ·						1 1					1 1						_		1			<b></b>		+ +	_	
PAS-NTC-DS-01	Disorrent in Diarge of data/hell parameters/electrical specification (min./max./kp. values) and / or ACIDC specification		e.g. tighten of electrical parameter distribution	A R	Risk assessment depending on change for each application.											· ·		· ·								<u> </u>				
PAS-NTC-DS-02	Conscion of data sheet	(P): In case of impact on product integrity.	e.g. data sheet connoction because of new information about component behavior	A		• •														-						•				
PAS-NTC-DS-03	Specification of additional parameters	Perception of a new not previously covered parameter. No is technical change of the product. (F) no influence (F): no influence (F): Risk assessment depending on change for each application to provide metadance of additional parametes (stat. metadator)	e.g. adding new (tested) parameter.	A				-									-													
PAS-NTC-MA-01	MAYTE FIAL Dhange of material composition - Geramic Binder	p p Charge of Binder Material to bind	[	с		• •	•				•			• •	•	• •				1 · 1								1 · 1		_
PAS-NTC-MA-02	Change of material composition - Ceramic	p p Change of ceramic composition	e.g. changes in additives amount	с														в.	s .										•	Parameter analy an anticipated in performance. S = SMD device
PAS-NTC-MA-03		P P Change of inner electrode material (ink material). Valid in case of multisyer												_												+				anormanos. i = SMD device
PAS-NTC-MA-03	Change of material composition - Inner Electrode	P P material: Valid in case of multisyer structures only. P P Charge of encapsulation material.	e.g. change from AgPt material to AgPd material	C B	K Risk assessment on application level, if interaction with other material expected.		· ·			•••					•	•		в.								H-			•	Parameter anal an anticipated is
			<ul> <li>e.g. change of coaling</li> <li>e.g. change of additives in an insulation.</li> </ul>	R	I interaction with other material expected. Risk assessment needed to evaluate compatibility of soldering process.									-	+											H-H-			-	an anticipated is performance.
PAS-NTC-MA-OS	Ohange of material composition - Lead material / Termination	P P Change of lead or outer termination. Change of lead (finish) material, termination material or attachment material.	e.g. change from SnPb to pure Sn	в	, my - many process.	• •	•		•			•		•		• •		в -	• •		1							-	·	
PAS-NTC-MA-06	Change of supplier of material	P Charge to a new or additional material supplier at component manufacturer.	e.g. for 2nd source purpose	c		• •	•	•	•	• •		•	•	· ·	•	•	•	в •	• •			•			•	·			•	Assumption mat remains unchar change of mate
PAS-NTC-DE-01	Changes of termination, surface linish, shape, color, appearance or dimension structure - Lead	j p Charge of lead dameter	e.g. charge lead dameler from 0.5 to 0.4 mm	в			1.0				•	• •						в .	• •	· · ·				•		· 1		· ·	•	
PAS-NTC-DE-02	Changes of termination, surface linish, shape, color, appearance or dimension structure -	j P Change of termination area	a.g. change also demain hom U.S to 0.4 mm a.g. change of termination layer thickness a.g. change in termination dimensions a.g. change from soldered connection to welded connection	в		•	1.0		• •		•	•				· ·	•		• •					-			÷ .		•	,MD component
PAS-NTC-DE-03	Changes of termination, aurface finish, shape, color, appearance or dimension structure - Internal Connection	J P Change of inner connection	e.g. change from acidered connection to welded connection	с		· ·	1.0		• •	•••		•		•	-	•	•	в -	• •					1.1		· · ·	÷		•	
PAS-NTC-DE-04	Ohanges of termination, aurface finish, shape, color, appearance or dimension structure - Appearance	I P Note: Marking on device is defined as apprate change (PAS-FLM-PV-02).	e.g. change or adding of colour on component Mainly in combination with other changes!	в		· ·	$(A_{i}) = (A_{i})$				•	e - e		· ·	-	$\sim 10^{-1}$		· ·	1.1								${\bf e}_{i} = {\bf e}_{i}$	1.1	1.0	
PAS-NTC-DE-05	Changes of inner construction - Electrode	<ul> <li>P Charge of electrode layer thickness or geometry. For multi-layer technology only.</li> </ul>	e.g. change of electrode design	с			1.	•	•			•			•	•			• •					1.1						
PAS-NTC-DE-06	Changes of inner construction - Layer Thickness	. P Change of ceramic layer thickness. For multi-layer technology only.	e.g. change from 1.5µm inio 1.0µm	с			1.	•	•			• •			•	• •			• •							•				
PAS-NTC-DE-07	Changes of inner construction - Number of Layers	Change of number of ceramic or electrode layers. For multi-layer technology only. Always in combination with PAS-NIC-DE-05.	see also byer trickness	c		•	ж. н. Н	•	•			•			•	•			• •	-										
PAS-NTC-PR-01	PROCESS Changes in process technology or manufacturing methods - Lamination	- P Change of lamination / press technique technique technique	e.g. stamp press to isostatic press	c	1	• •	1.1	· ·	• •	• •	•		· -		•	• •	· ·	в .	• •	· · 1			-	· · ·				1 · 1	•	_
PAS-NTC-PR-02	Changes in process technology or manufacturing methods - Firing	. p Change of firing / sintering profile	e.g. temperature and / or time and / or atmosphere. e.g. from tunnel to batch klin.	с		• •	1.0	•	• •			• •				• •		в -									÷		•	
PAS-NTC-PR-03	Changes in process technology or manufacturing methods - Dicing	. P Charge of dicing / slicing	e.g. change from cutting to sawing	с		• •	•	•	•	•	•	•	•	•				в -											•	
PAS-NTC-PR-04	Changes in process technology or manufacturing methods - Termination	. P Change for termination preparation like plating or apply of termination base layer	e.g. change in plating technology (Trail termination) e.g. change from dp in paste to plating (apply)	в		• •	1.		•	•••		•		•		•	•	в -	• •							· · ]	· ·		•	
PAS-NTC-PR-05	Changes in process technology or manufacturing methods - Decirode apply	. P Change of electrode apply. For multi layer technology only.	e.g. change of inner electrode lay down method.	с		• •	•			•				÷		• •	1.1	в -	•				-	•		1.1	· ·		•	
PAS-NTC-PR-06	Changes in process technology or manufacturing methods - Assembly	P Charge in assembly process for leaded or encapsulated devices.     P Variation within process specification.	e.g. soldering method for lead attach to element or costing / encapsulation process	в		• •	•	•			•	•	•	•	•	· ·	•	•							• •	•				
PAS-NTC-PR-07										1 · ] ·																				
PAS-NTC-PN-01	Packing / shipping specification change (loosening of tolerances)	P P Change of packing specification.		в			1						· [							·								+ ·		
PAS-NTC-PN-02 PAS-NTC-PN-03	Dry pack requirements change	P P Change of drypack requirements.	e.g. change of MSL e.g. change in dry pack assurance (HIC, MDB)	в				-							-		-						-			<u>+-</u>				
	Change of carrier (Insy, ree) PACIONG / SHIPPING - VISUAL INSPECTION	p p Change of carrier	e.g. change by material e.g. change by geometry.	в					·   ·					1 1		1.		· ·				· [ ·	1.		· [ ·		1 1		1	
PAS-NTC-PV-01	Disciple of labeling	I P Change of labelling, also on real.	(I) e.g. additional information (RoHS stamp) (P) e.g. change of customer specific information	в				· ·			•		•				· ·			•				· ·						
PAS-NTC-PV-02	Change of product marking	I P Marking on device.	e.g. change of content of marking e.g. change of method of marking	в		1.0																								
PAS-NTC-PV-03	Change of packing/shipping specification	P P Change in packing specification which does not described a change of dmensions or material of the packing.	e.g. change of documentation in packing specification	•			1.						-		-											•		-		
-	LOGISTICS / CAPACITY / TESTING - EQLIPTMEMENT							T	1				1	1	1 1		T		1	1 1		1	ī	1 1	1			1		
PAS-NTC-EQ-01	Production from a new exploment/ool which uses a different technology or which due to its unique form or function can be expected to influence the integrity of the final product	P P Change in process technique which is no already counted above. Note: Changes affecting the product not counted by the table require also a PCN.	# e.g. change from wet to dry technology.	c		•	1	•			-		•		•		•			-	•	• •	-	•		·		•	•	Test effort dep assessment. Performance b process chang Test effort dep
PAS-NTC-ED-02	Production from a new equipment/lool which uses the same basic technology (replacement equipment or extension of existing equipment pool)	- P PCN required for dedicated equipment for sensitive component production.	e.g. elimination of manual handling processes	c		•	1.				-			· ·								•			•			-	•	Test effort depe assessment. Performance te process chang
PAS-NTC-ED-03	Charge in final leaf equipment type that uses a different lechnology LOGISTICS / CAPACITY / TISTING - PROCESS FLOW	P P Change of linal text equipment which use different technology. PCN required for dedicated equipment for senative parameters.	e.g. change of leater platform	c		•							•		•			в.		•	•	• •		•		•				Gage R&R / de
PAS-NTC-PF-01	LOGISTICS / CAPACITY / TESTING - PROCESS FLOW Manufacturing use transfer or movement of a part of production process to a different location/site	P P Charge of manufacturing alle. Note: Receparization Inside one plantibile is not affected	Movement or transfer of manufacturing site or process step(s) to a different location/site.	в				•			•				•		•	в •											•	
PAS-NTC-PF-02	Elimination or addition of a manufacturing process step	plantitie is not affected     Charge of manufacturing process     sequence.	e.g. unshing / cleaning process e.g. change of order of processes	с																									• •	Characterisatio
	LOGSTECE / CAMACTY / TESTING - QACHE     Daraged after company used by the supplier to ensure data shart compliance (is.g.,     alimination-baddison of electrical messurementiwal flow block, initiastovierhancement of     minibriring procession or sampling)	P Change of test coverage.	e.g. charge from 100% to sample inspection e. e. test flow block, reduction from three to two	c																										Characterisatic Iset coverage. R (electr. funct R (reliability) o
Proved IC-QueO1	monitoring procedure or sampling)	- P Crawye in Mill COVERIGE.	temperature measurements e.g. change in burn inihun in process.	, c																									-	t (reliability) or process.
PAS-PTC-ANO1	Acry		The education of the instantant	I				1		1.1							1							1.1				1 1		
PAS-PTC-AN-01 PAS-PTC-AN-02	Any change with impact on special cuatomer characteristics/contractual agreements. Any change with impact on processability/manufacturability at customer, which is not covered in the matrix below.	P P P P	Not relevant for technical evaluation. Technical interface means component terminate. See processability on board level.																											
			non proceeding of share with.										لل ال										_		_					
	DATASHEET Change of datasheet parameters/electrical specification (min./max./sp. values) and / or ACIDC specification	Channe of application rate	e.g. tighten of electrical parameter distribution	1 1	Risk assessment depending on change for each application.				1	1 1	<u> </u>	-	<u> </u>		1 1		1 1			1 1	-	1	1	1 1			1	1 1	1	

PAS-PTC-DS-02	Correction of data sheet		No technical change of the product, only correction in description (wording, draster, )	ly e.g. data sheet correction because of new information about component behavior																												
	Conscion of data sheet	'	No technical change of the product, only correction in description (wonding, datasing,) (0; in case of editorial changes, (0; in case of impact on product integrity.) Description of a new not previously		A																			_		-		_				
PAS-PTC-DS-03	Specification of additional parameters	1	<ul> <li>Imaginity:</li> <li>Description of a new not previously covered parameter.</li> <li>No technical change of the product.</li> <li>(P): Roi Influence in (P): Roi Namesament depending on change for each application to provide midiance of additional parameters (httl metalation).</li> </ul>	a.g. adding new (tasked parameter.	*		1. (A)		•	•			• •						•							•						
		Ρ	P Change of Binder Material to bind ceramics.		с			•							•		• •					•			•				· ·			
PAS-PTC-MA-02	Change of material composition - Ceramic		p Change of ceramic composition	e.g. changes in additives amount	с														• в		s .											Parameter an anticip performan
PAS-PTC-MA-03	Change of material composition - Polymer	Р	P Charge of polymer composition		с																											5 - 5ND
PAS-PTC-MA-04	Change of material composition - Encapsulation	0	p Change of encapsulation material.	e.g. change of coating e.g. change of additives in an insulation.	в	& Risk assessment on application level, If interaction with other material expected.			•		• •								. в	•												Parameter an anticip
PAS-PTC-MA-05	Change of material composition - Lead material / Termination		Change of lead (linish) material, P termination material or attachment material	e.g. change of addevies in an insulation.	в	Risk assessment needed to evaluate compatibility of addening process.									•		_	_	• в					_				_				performan
		Ρ	P termination material or attachment material	e.g. change from SnPb to pure Sn		companelity or societing process.			_					_						-												Assumptio
PAS-PTC-MA-06	Change of supplier of material DESIGN	-	P Change to a new or additional material supplier at component manufacturer.	e.g. for 2nd source purpose	c		• •	•	•		•	•	1.1	• •			• •	-	• B	•	• •	1.1	1.0		1.1						•	Assumption remains up change of
PAS-PTC-DE-01	DESGN Charges of termination, surface linish, shape, color, appearance or dimension shucture - Lead	1	p Charge of lead dameter	e.g. change lead dameter from 0.5 to 0.4 mm	в						• •		• •	•					· В		• •								• • •		•	
PAS-PTC-DE-02	Charges of termination, surface finish, shape, color, appearance or dimension structure - Lead Dannelse Danges of termination, surface finish, shape, color, appearance or dimension structure - Termination Area	1	p Charge or termination area	a o change in termination dimensione	в		· •	1.0					• •					-	• B		• •		1.1			-					•	SMD com
PAS-PTC-DE-03	Changes of termination, surface finish, shape, color, appearance or dimension structure - Interna Connection	<sup>al</sup> 1	P Charge of inner connection	e.g. change from siddered connection to velded connection e.g. change or adding of colour on component Mainly in combination with other changes!	с		•	1.0	1.0		• •	• •	1.0	•	•			•	• B	1.1	• •		1.0								•	
PAS-PTC-DE-04	Changes of termination, surface finish, shape, color, appearance or dimension situcture - Appearance	1	P Note: Marking on device is defined as severals charge (PAS.PTC.PV./2)	e.g. change or adding of colour on component Mainly in combination with other changes!	в		· ·	$(x_{i}) \in [0,\infty)$					•			-		-														
PAS-PTC-DE-05	Changes of Inner construction - Electrode		P Charge of electrode layer thickness or geometry.	e.g. change of electrode design	с		•								-		• •				• •					-			-			
PAS-PTC-DE-06	Changes of inner construction - Layer Thickness		P Charge of ceramic layer thickness. For multi-layer technology only.	e.g. charge from 1.5µm into 1.0µm	с		· ·	$(x_{i}) \in \mathcal{X}$	•	•			•		-		• •	-	1.1	1.1	• •		1.0			-						
PAS-PTC-DE-07	Changes of Inner construction - Number of Layers	1.1	Charge of number of ceramic or	see also byer thickness	с			1.1	•											. T		. T				. T			. T			
<u> </u>	PROCESS	11	technology only. Always in combination with PAS-PTC-DE-06.		Ľ																											
PAS-PTC-PR-01	PROCESS Ohanges in process technology or manufacturing methods - Lamination		P Change of lamination / press technique technique	e.g. stamp press to locatalic press	с		• •	1.1		•	• •	• • •				· -	• •		· В	•	• •	·				•			·	-	•	
PAS-PTC-PR-02	Changes in process technology or manufacturing methods - Firing		p Change of firing / sintering profile	e.g. temperature and / or time and / or atmosphere. e.g. from tunnel to batch kin.	с		• •		•									•	. в												•	
PAS-PTC-PR-03	Changes in process technology or manufacturing methods - Dicing	1.1	p Change of dicing / slicing	e.g. change from cutting to sawing	с		• •		•		• •		• •		•				· В												•	
PAS-PTC-PR-04	Changes in process lechnology or manufacturing methods - Termination		P Change for termination preparation like	e.g. change in plating technology (final termination) e.g. change from de in nexts to obtern (mobil)	в			1.1						•	•				• в													
PAS-PTC-PR-05		1.1	P Change of electrode apply. For mall	e.g. change of inner electrode lay down method.	с							• •							. в													
PAS-PTC-PR-06	Changes is process technology or manufacturing methods - Assembly	1.1	p Change in assembly process for leaded	d e.g. soldering method for lead attach to element or coating / encapsulation process					•							•			• •	•												
PAS-PTC-PR-07	Process integrity: turing within specification		P Variation within process specification.	e.g. process control	c																											
	PADIONG / SHIPPING - NEW MATERIAL, ORTICAL DIMENSIONS		* .											1 1											1		-	-				
	Packing / shipping specification change (loosening of tolerances)	Ρ	P Charge of packing specification.	e.g. number of pieces on real.	В			1.		-					-			-								-			-	-		
PAS-PTC-PN-02 PAS-PTC-PN-03	Dry pack requirements change Change of carrier (tray, reel)	P	P Change of drypack requirements. P Change of carrier	e.g. charge of MSL e.g. charge in dry pack assurance (HC, MDB) e.e. charge by material	в			1.0							-			-						-		-						
PADP IC-FIELD	PACKING / SHIPPING - VISUAL INSPECTION			e.g. charge by material e.g. charge by geometry.							· · ·			1 . 1 .										_								
PAS-PTC-PV-01	Change of labeling	1	P Charge of labelling, also on reel.	(8) e.g. additional information (RoHS stamp) (P) e.g. change of customer specific information	в		1. A.	$(A_{i}) = (A_{i})^{2}$			· .				-		· ·	-	1.1	1.1	÷											
PAS-PTC-PV-02	Change of product marking		P Marking on device.	e.g. charge of content of marking e.g. charge of method of marking e.g. charge of method of marking	в		10 C	1.0	1											1.1						-						
PAS-PTC-PV-03	Ohinge of packing/shipping specification	Р	P Change in packing specification which does not described a change of dmensions or material of the packing.	e.g. charge of documentation in packing				1.1																								
	LOGISTICS / CAPACITY / TESTING - EQUIPEMENT	- r - r							-						_										_			_				
PAS-PTC-EQ-01	Production from a new equipmentition which uses a different technology or which due to its uniquitom or function can be expected to influence the integrity of the final product	е р	P Change in process technique which is no already covered above. Note: Changes affecting the product not covered by the table require also a PCN.	not e.g. change from wet to dry technology. N	с		•																								•	DIDCHIA C
PAS-PTC-BQ-02	Production from a new equipment/bol which uses the same basic technology (replacement equipment or extension of existing equipment pool)	-			с		•																									Test affect
PAS-PTC-EQ-03	Drange in final test equipment type that uses a different technology	р	P P PCNnegled final test equipment which use different technology. PCNnegled for dedcated equipment for sensitive parameters.	e .g. change of leater platform	с		•	1.											. в													
<u> </u>	LOGISTICS / CAPACITY / TESTING - PROCESS FLOW	1 1							_																_							
PAS-PTC-PF-01	Manufacturing site transfer or movement of a part of production process to a different location/site	• P	P Note: Reorganization inside one plantituite is not affected	Movement or transfer of manufacturing site or process step(s) to a different location/site.	в		• •		•		•	•		• •	•	•	• •	•	• в	•						-						
PAS-PTC-PF-02	Elimination or addition of a manufacturing process also	1.	P Change of manufacturing process assumes.	e.g. weshing / cleaning process e.g. change of order of processes	с			1.1	1.1									1.1	1.		1.1											Character
	LOGISTICS / CAPACITY / TESTING - Q-GATE				-				-		_														-						_	-
					1																				1							Character test cover R (electr.) R (reliabili
PAS-PTC-QG-01	Change of test coverage used by the supplier to ensure data sheet compliance (e.g., alimination/addition of electrical measurement/lest flow block, releasion/enhancement of	-	p Change of test coverage.	<ul> <li>g. change from 100% to sample inspection</li> <li>g. test flow block, reduction from three to two temperature measurements.</li> </ul>	с			1.1								1.1					1.1					-						
PAS-PTC-QG-01	Change of test coverage used by the supplier to ensure data these compliance (e.g., eliminatorhiddition of electrical measurement/test flow block, relaxation/enhancement of monitoring procedure or sampling). VOR	•	p Charge of test coverage.	e.g. change from 100% to sample impection e.g. test flow block, reduction from three to two temperature measurements e.g. change in turn inhum in process.	с							•								•								_				process.
	VDR knv		•		с				·	· ·	•						• •	·			· ·				·			   .				process.
	VOR Bay Any during with impact on special culturer drandenisticulouritaciual agreements Any during with impact on processability/manufacturability at culturer, which is not covered in	Ρ	•		с в			· ·			· ·		· ·				· ·		· ·		· ·		· ·		-		· ·			-		Process.
PAS-VDR-ANO1 PAS-VDR-ANO2	Vot Pay Any change with Paped on special customer characteristical contractual agreements. Any change with Paped on processability/menducurability at customer, which is not covered in the matteriname. DISTANCET	P P	P P	Not relevant for technical evaluation. Technical interface means component terminals. See processability on board level.	• B			· ·	· ·		· ·		· ·		· ·		· ·	•	· ·		· ·		· ·				· ·	-		•		Process.
	VOR Bay Any during with impact on special culturer drandenisticulouritaciual agreements Any during with impact on processability/manufacturability at culturer, which is not covered in	P P	P P Charge of application relevant P Internation Net industrie fictional charges.	Net nérvent for inchrisci exelution. Technicul interface mans compount territrak. See processabilly on board level.	• B	Rick assessment depending on change for each application.		· ·			· .	· · ·	· ·		· ·		· ·	· ·	· ·		· ·		· ·				· ·			· [		Process.
PAS-VDR-ANO1 PAS-VDR-ANO2	Vot Pay Any change with Paped on special customer characteristical contractual agreements. Any change with Paped on processability/menducurability at customer, which is not covered in the matteriname. DISTANCET	р р р	P P Constant of self-califor relevent P Ref lockards Editorial relevance No beneficial Editorial Annuaga. No beneficial and annual annu	No relevant for technical exclusion. Technical Interface means component interface. Technical Interface means component interface. Technical Interface means and technical and techni	• B			· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·	· · ·		· ·				· · · · · · · · · · · · · · · · · · ·		· ·		· ·		· · ·		· · · · · · · · · · · · · · · · · · ·		· · ·	- · · · · · · · · · · · · · · · · · · ·		-   -   -		P (198309
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PAS-VDR-AN-01           PAS-VDR-AN-02           PAS-VDR-OS-03           PAS-VDR-OS-03           PAS-VDR-OS-03           PAS-VDR-AN-01           PAS-VDR-AN-02	Bit           Percentary damages and impacts and space and impacts and impact	Р Р I I	P         Description           P         Description           P         Description           Marked Extended Statute Angel         Description           P         Description         Description           P         Description         Description           P         Description         Description           Description         Description         Description	Contractive transmission     Contractive		In a same of sporting in charge and specification											• •		• B	•			· · · · · · · · · · · · · · · · · · ·		· · · · · · · · · · · · · · · · · · ·							
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PIG-VCR ANG           PIG-VCR CS-01           PIG-VCR CS-01           PIG-VCR CS-02           PIG-VCR CS-03           PIG-VCR CS-04           PIG-VCR CS-04           PIG-VCR CS-04           PIG-VCR CS-04           PIG-VCR CS-04           PIG-VCR CS-04	Bit           Pre- fee           Registry and inspirate specification of submersion in a submersion of submer	P         P           P         I           I         I	P         Description           P         Description         Description           D         Description         Description           D         Description         Description           P         Description         Description           D         Description	In distantio functionality           State of the second s				• •	•		•	• •		· · ·	•	· · ·	• •	•	• B • B	•	S -							· · · · · · · · · · · · · · · · · · ·				
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PAS-VDR-DE-04	Changes of termination, auface linish, shape, color, appearance or dimension structure - Accessmone	I P	Change of appearance. Note: Marking on device is defined as	e.g. change or adding of colour on component Mainly in combination with other changes!	в	•	1.1									1.1	1.1																
PAS-VOR-DE-05	Changes of inner construction - Electrode	. р	asperals change (PAS-VDR-PV-02). Change of electrode layer thickness or geometry.	e.g. change of electrode design	с					•		• •	•				•		в							•						•	
PAS-VDR-DE-06	Changes of inner construction - Layer Thickness	. P	Change of ceramic layer thickness. For multi-layer technology only.	e.g. change from 1.5µm into 1.0µm	с					•		•	•				•		в							•		. 1				•	
PAS-VOR-DE-07	Changes of inner construction - Number of Layers	. р	Change of number of ceramic or electrode layers. For multi-layer technology only. Always in combination with PAC-VDR DE-V6.	see also byer trickness	с	· •	1.1			•	-	• •	•				•			-	• •	-				•						-	
PAS-VOR-DE-DB	Changes of inner construction - Grain size	. Р	Change of grain size. Grain size is a result of process and / or material change.	e.g. change of grain size.	с	· ·	1.1	-		-		•					-		В	-			-	+		•						•	
PAS-VDR-DE-09	Changes of inner construction - Grain boundary size	. Р	Change of grain boundary size. Grain boundary size is a result of process and i or material change.	e.g. change of grain boundary size.	с	• •	1.1			•		• •						•	в							•		. 1				•	
	PROCESS		o minimum of the																-								· · · ·	-			_		
PAS-VDR-PR-01	Changes in process technology or manufacturing methods - Lamination	- P	Change of lamination / press technique method	e.g. pressures or temperature	с	• •	1.1		•		•			1.1		•	•		В	•	•			-					•			•	
PAS-VDR-PR-02	Changes in process technology or manufacturing methods - Firing	- P	Change of firing / sintering profile	e.g. temperature and / or time and / or atmosphere. e.g. from tunnel to batch klin.	с	• •	1.1	•	• •	•		•	•	1.1			•	•	В					-		•		1	-			•	
PAS-VDR-PR-03	Changes in process technology or manufacturing methods - Dicing	. P	Charge of dicing	e.g. change from cutting to sawing	с	•	1.1	•	•	•	•	•	•	•	•	1.0	•		В		• •	1.1				•						•	
PAS-VDR-PR-04	Changes in process technology or manufacturing methods - Termination	. P	Change for termination preparation like plating or apply of termination base layer.	e.g. change in plating technology (final termination) e.g. change from dp in paste to plating (apply)	в	• •	1.1	•	•			•	•	•		• •	•		в	•	• •	-				•						•	
PAS-VDR-PR-05	Changes in process technology or manufacturing methods - Electrode apply	- P	Change of electrode apply. For multi layer technology only.	e.g. change of inner electrode lay down method.	с	• •	1.1	•			•			÷		•	•	•	В		•			-				1.				•	
PAS-VDR-PR-06	Changes in process technology or manufacturing methods - Assembly	- P	Change in assembly process for leaded or encapsulated devices.	e.g. soldering method for lead attach to element or coating / encapsulation process	в	• •	1.1	•	• •			•	•	•		• •				•			-	-				1	-				
PAS-VDR-PR-07 p	Process integrity: tuning within specification	- P	Variation within process specification.	e.g. process control	с	1.1	1.1	-				1.1			-																		
	PACKING / SHIPPING - NEW MATERIAL, ORTICAL DIMENSIONS																																
PAS-VDR-PN-01 p	Packing / shipping specification change (loosening of tolerances)	P P	Change of packing specification.	e.g. number of pieces on real.	в	1.0	1.1					1.1		1.1		1.0								-		-	1.1	1.	1				
PAS-VDR-PN-02	Dry pack requirements change	P P	Change of drypack requirements.	e.g. change of MSL e.g. change in dry pack assurance (HIC, MBB)	в	1.0	1.1	-				1.1		1.0										-									
	Change of carrier (tray, reel)	р р	Charge of carrier	e.g. change by material e.g. change by geometry.	В	1.0	1.0			-			1.1	1.	1.1		-			-			-	-					-				
4	PACKING / SHIPPING - VISUAL INSPECTION						_																										
PAS-VDR-PV-01 C	Change of labeling	I P	Change of labelling, also on reel.	(8 e.g. additional information (RoHG stamp) (P) e.g. change of customer specific information	в	1.0	1.1							1.1		1.1							-	-			· ·	1	•		•		
PAS-VDR-PV-02	Change of product marking	I P	Marking on device.	e.g. change of content of marking e.g. change of method of marking e.g. change of appearance of marking	в	1990 - 1990 1990 - 1990	1.1	-											-			-		-			•	· ·				-	
PAS-VDR-PV-03	Change of packing/shipping specification	P P	Change in packing specification which does not described a change of dmensions or material of the packing.	e.g. change of documentation in packing specification	·	1.	1.1																										
1	LOGISTICS / CAPACITY / TESTING - EQUIPEMEMENT			· · ·	_																												
PAS-VOR-EQ-01	Production from a new equipmentitical which uses a different technology or which due to its unique form or function can be expected to influence the integrity of the final product	P P	Change in process technique which is no already covered above. Note: Changes affecting the product not covered by the table require also a PCN.	s.g. change from wet to dry technology.	с	• •	1.		•	•		•	-	•		•		•	в					-	•		-					•	Test effort depen assessment. Performance test process change.
4																												. 1				•	Test effort depen assessment. Performance test
PAS-VDR-EQ-02	Production from a new equipment/bool which uses the same basic technology (replacement equipment or extension of existing equipment pool)	. Р	PCN required for dedicated equipment for sensitive component production.	e.g. elimination of manual handling processes	с	• •	1.1		• •	•		•		•		•	1	•	в					-									process criange.
	Production from a new expensition disch. Luss & te same basic schwology (rystocenent expension of webriegespannet post) Drange in front test expenset type that uses a different technology	. р р р	PCN required for dedicated equipment for sensitive component production. Change of final test equipment which use different technology. PCN required for dedicated equipment for sensitive parameters.	e.g. elimination of manual handling processes	c c	• • • •		-	• •	•	•	• •	•	• •	-	• •		•	в	-				•				•				•	
PAS-VDR-ED-03	equipment or extension of existing equipment pool)	. Р Р Р	for sensitive component production. Change of final test equipment which use different technology. PON required for discussed equipment for sensitive parameters.			• • • •		-	• •	•	•	• •	•	• •	•	• •		•	в			-	•					·	•			•	
PAS-YOR-EQ-03	equipment or extension of existing equipment pool	. Р Р Р	for sensitive component production. Change of final test equipment which use different technology. PCN required for dedicated equipment			• •		•	• ·	•	•	• •	•	• ·	•	• •	•	•	B	•	•	•		•				•	-			•	
PAS-YOR-EQ-03	epipment or elements of existing equipment pool Diarge in Troit lest equipment type Pat Lass a different lechology LIDGSTICS / CAPACITY / TESTING - PROCESS FLOW	. р р р р р	for auxiliae component production. Change of tinal test equipment which use different technology. PON required for dedicated equipment for sensitive parameters. Change of manufacturing site.	e.g. change of leater platform	c	· ·		•		•	•	• · ·	· ·	• · ·	•	• •	· ·	•	B	· ·	•	•			· ·			•	· .		· ·	<u> </u>	Gage R&R / debs
PA5-VDR-00-03 C PA5-VDR-PF-01 8 PA5-VDR-PF-02 E	espener or valenis of aliality septenet pool Carage In Trail alle espiperent type the asses a different schedugy CORENCE/ CARACTER/ INSTRICE - PROCEED FLOW Neutracturing this handler or mounteed of pert of production process is a different location/skie	. р р р р р	for aenative component production. Charge of fluid test explorement which use different technology. PCN negative for selected explorent for senative parameters. Charge of manufacturing site. Note: Recognization inside one plantimit is not affected Charge of manufacturing pacess	e.g. change of laster platform Movement or transfer of monutacturing sile or process ado(b) to a different location/sile. e.g. wate/org/constant percess	C B	· ·		•		•	•	• ·	· ·	• · ·	•	• •	•	•	B	· · ·	•	•		- -				· .	•		· ·		Gage R&R / debs
PAS-VDR-EQ-03 C PAS-VDR-PF-01 8 PAS-VDR-PF-02 E PAS-VDR-PF-02 E PAS-VDR-G501 5	expense or when of white geopressipati Caurge Informate expenses type that was a different fact-hology constructs ( caurcentry instrumed – in processos FLOW Manufacturing white when are manement of a part of productioe process to a different instruction Denotation or addition of a manufacturing process they	. Р Р Р . Р . Р	for aenative component production. Charge of fluid test explorement which use different technology. PCN negative for selected explorent for senative parameters. Charge of manufacturing site. Note: Recognization inside one plantimit is not affected Charge of manufacturing pacess	e.g. change of laster platform Movement or transfer of monutacturing sile or process ado(b) to a different location/sile. e.g. wate/org/constant percess	C B			•		•	· .	• .		• · · · · · · · · · · · · · · · · · · ·	•	• • •	•	•	B B		· ·	•		· · · · · · · · · · · · · · · · · · ·					•		· · ·		Process change. Gage R&R / delta Gage R&R / delta Characterisation production flow R (electr. funct.): R (relativity) only process.
PAS-VDR-EQ-03 C PAS-VDR-PF-01 8 PAS-VDR-PF-02 E PAS-VDR-PF-02 E PAS-VDR-G501 5	ngunear munic of utility appendixed. Charges hold and explorent type for all and their tabulage Charges hold and explorent type for all and type of produced process to all forwards Chardwards on their of a mean of all yard of produced process to all forwards Chardwards on their of a mean of all yard of produced process to all forwards Chardwards on their of a mean of all yard of produced process to all forwards Chardwards on their of the one of th	. P P P . P . P	for wardle composer production. Change of trait size explores which as attraver technical PCN regularized or disclass explores for another parameters. Change of manufacturing site. Note Receptoration inside on parameters is out attracted Change of manufacturing stocess manufacturing stocess Change of manufacturing stocess Change of manufacturing stocess Change of manufacturing stocess	4.9 dange di kelar piklom Albaneur or tandir di modulculorgi alla or processi dirijo di a di dimeteri locatori di a 4.9 dange di ndir di processi 4.9 dange di ndir di processi 4.9 dange hono KOS is sampi ingectori 4.9 dange hono KOS is sampi inge	C B C			•		•	· · · · · · · · · · · · · · · · · · ·	• .	· · · · · · · · · · · · · · · · · · ·	• · ·	•	• • •	•	•	B		· ·	•		·				•	· .		· · ·		Cage R&R / dela Characterisation production flow
PAS-VDR-02-03 C PAS-VDR-PT-01 8 PAS-VDR-PT-02 E PAS-VDR-0501 C	ngunear munic of utility appendixed. Charges hold and explorent type for all and their tabulage Charges hold and explorent type for all and type of produced process to all forwards Chardwards on their of a mean of all yard of produced process to all forwards Chardwards on their of a mean of all yard of produced process to all forwards Chardwards on their of a mean of all yard of produced process to all forwards Chardwards on their of the one of th	. Р Р Р . Р	for wardle composer production. Change of trait size explores which as attraver technical PCN regularized or disclass explores for another parameters. Change of manufacturing site. Note Receptoration inside on parameters is out attracted Change of manufacturing stocess manufacturing stocess Change of manufacturing stocess Change of manufacturing stocess Change of manufacturing stocess	4.9 dange di kelar piklom Albaneur or tandir di modulculorgi alla or processi dirijo di a di dimeteri locatori di a 4.9 dange di ndir di processi 4.9 dange di ndir di processi 4.9 dange hono KOS is sampi ingectori 4.9 dange hono KOS is sampi inge	C B C	• • • • • • • • • • • • • • • • • • •		•		•	•	• . • . • . • .		• . • . • . • .	•	• • •	•	•	B B		· · ·	•		· .					•	· .	- · ·		Cage R&R / dela Characterisation production flow

Tests, which should be considered for the appropriate process change after selection of condition table.	
Suppliers performed tests (mark with an 'X' for done or 'G' for generic)	
Reason for exception of tests and/or usage of generic data:	

-	Not required
1	Information Note required
Р	PCN required

	CONDITIONS	No
A	Termination equipment only	
с	Ceramics only	
в	Comparative data (unchanged vs. changed) required	
E	Capacitive trimmers only	
F	Film products only	
N	Networks only	
R	Resistors only	
s	SMD components only	
w	Winewound products only	
Y	Component not hermitically sealed	
Note 1:	For parts marked with ink only. Laser and stamp marked parts shall be exempt.	
	=> Please mark 'NO' with 'x', default is 'YES'	

Vorked on: ne, Function()																											
Date:		Basis: IEC 60810			_																						
N number:															Device												
Signature:														ERIAL PER		E TEST RE	SULTS (	on the basis of	IEC 60810								
	_			Eviduation level A/ B/C		1 and	ria.)				a there															)) Cipica	8
Assessment of Inspect on Supply Chain regarding following superss - contractual operations - contractual operations - time its function, quarky participancy, subditive - time its function, quarky participancy, quarky participancy, subditive - time its function, quarky participancy,	Remaining risks on Supply Chain?	Understanding of semiconductors experts	Examples to explain	<ul> <li>Application level</li> <li>Bisective of</li> <li>Component level</li> </ul>	Further applicable conditions	e valuate log data concertante da e 60610 e geodication comentación	MgA Tergeahan Opealeg Uk (	Terrçenin ve Opting	Viettingh keneratur Operating U	Pune Tergeraue Opting	CSD Ownerkerke Numer See	ESD Drazowenie v Nadiwe M	Phy sized Dimensions	Vitration Variable Filequarces	Maint Reviews (Strack	Parait is Dateritai	Themai Shook	Myone gan Sulphana	Public of Jac Year	Den Tee	Flaw Mawe Can Creation	The erval file sold as co-	We efforce for explain	Mirtisco strate. De Brea	Nom ( herain 1	VID JANNET AN 1.00 FORMENT AN, ALCHOL AND ON Parameter Analysis Comparison of current with change	e Remarks
INCO	No Yes					9	1	- 11	1	al I		3	ą	N	51	<b>й</b> и	8	-	ৰ	a -	1		a .	a a			
	PP	Nat relevant for technical evaluation.		•		• • •				-							-	-	-	-							
LED-XN-02 Kity damps with impact on technical interface or processability/manufacturability of customer, which is foot curvened in the reacts below.	p p	See processability on board level Individual interface means component terminals			Check if LED-05-01 is affected Processability should be assessed.	· · ·		т		-				1.1	-	8,T -	-	-	-				-	· ·	L ·	· ·	
LED-06-01 Dange of database parameters/section specification (min.html.typ. values) and/or Pate/DC	P P	Change of application relevant information (e.g. maximum pulse ourset) Not included: Editorial changes.		A			E	E	E		E	E				s .			E			Е				. E	
LED-0540 Contraction of data shoet		Data sheet (editorial changes) has to sheck if application affected		A					-				-						-	-	-	-					
LED-0640 Specification of additional parameters	1 P	b is as of additional changes as case of impact on product integrity. Postformon at an additional parameter which was not questing balans. If it imparty of the device is not affected. If there is a nick on supply-fails than the at least one additional states change category will apply. Fails: DB-12 camecion of data sheet.	t e.g.: adding new tested parameter	c				-	-										-			-	-				Formalism since this is not a product change, any addl Classification: C
Dision		The barry sample mappy star bed bed constants has about Any device interact changes in design / layout of epitabil best Not lackaded. Changes while design raise and design epicification whou athering epicified functions, parameters	1													<u> </u>		1						╞	Ħ	╪	
LED-DE-E1 Design drangen in spitzery.	P P P P	The builded. Charges while during talks and seign devolution white attracting specified functions, parameters and aniability. Any damps in citip design / tipod. Nat balanded. Charges white design talks and design specification without attracting specified functions, parameters and instanting.	<ul> <li>e.g. change for Duble-Hearts to Quantum wells e.g. change of Banier thickness</li> <li>e.g. change in Taylor of current spinader; thickness of current spinader e.g. reduction of bond pad size</li> </ul>		A change from Double herwo to Quantum wells — spectrum is affected A change in layout of current spreader — tablation patient changes		•	•	•	•	•	•				• •	в.р.м	м	•	н	M		в 1	 в D,M	<b>F</b>	•	
	p p	specification without affecting specified functions, parameters, and reliability.									-	1	-			•	B,D,M	м	•								
LED-BE-B1 De anink	P P	Shrink of active area. Not included: saving street/withcribe ine	Typical shrink of die.				·		•	•	•	•				•	-		•			-		в •	<u>⊢</u> ∔	. •	
LED-DE-E4 LED-package (eccept inadiane)	p p	any change in housing thickness any change in form or dimensions	e.g. change of dimensions e.g. change of x, y, or 2 dimension of the package	8	Check If LSD-05-02 is attended which leads to a change of the elchooptic parameters or distributions.	• • •	•	•	•	•	1	1.1	•	v	v	• т	-	D		D	D	L	B	B D	· .	•	
LED-D6-45 Design of leadhame PROCESS - WARER PRODUCTION	P P	any change of leadhante / carrier dimensions any change of outer dimensions	e.g. change in leadtane / carrier dimensions in x.y. or 2 direction e.g. change inter design of the leadhane not affecting the ero performance & relatelity of the device.	•	or distributions.		ŀ	•	•	•	•	•	•	v	v	• T	•	-	•			•	в	B D	Ŀ	2 •	
LED-PW-01 New/ change of water substrate or cartier material	p p	New water substrate material.	e.g. different water nativial to currently released nativial (change from Sapphire to Silicon)	c	Check if LED-05-02 is affected which leads to a change of the elchooptic parameters or distributions.		•	Ρ	Р	•	Р	Ρ	-	-		• •	Р	Р	•	Р	Ρ	•					
LED-PW-02 Water dammer		change of water diameter resulting in equipment and process changes	40 C 10 C	c	In case other type of changes are affected is equipment/piccess technology - they need to be identified in addition	• • •	·	-	•	-	Р	Ρ				•	-	-	•	-		•	-		•	•	
LED-FW-03 New final water Pricess	p p	Change in final water thickness	e.g. change in final chipide thickness	c	Check if LED-06-02 is affected which leads to a change of the elchooptic parameters or displaytors.		•	•	Р	•	Р	Ρ					-		•			•	в	в.	I		
LED-99-94 Change of electrically active doping/implantation element	p p	Change in electrically active doping / implantation element resulting in a new technology.	e.g. change from lie to C as dopart	с		- • c	•		с	с	•	•					-		•	-	-	•					
LED-PW-95 Change of macking	p p	change in layer sequence or thickness	e.g. change of isolation layer thickness between r- and p-	A	outtomer application needs to be checked due to potential system voltage differences		•	F	•		•	•					-		•	F							
LED-FW-06 New/ change of metallization (specifically chip homside)		Change in metallization of bondpads, material, layer thickness	e.g. change in bond pad metalization thickness	с			•		•		M,B	M,B					в	м		м	м			• •			
LED-PRIOT New / change of metalization (specifically chip backside)	p p	Change of bottom layer of die (between die and subtame/carrier), Change is process, material, or dimensions focessary.	e.g. change from As to Aurile		A customer application needs to be checked due to potential system voltage differences				•	•	D,M	D,M	-			•	D,M	D,M	•	D,M	D,M	D,M	-	•			
LED-PR-06 Change in process technique (e.g. significant process changes like Imagraphy, etch, celde deposition, de tack suffice preparation/backgrind,)	- P	Change from wet to dry withing, change from horizontal to writical own fair oxidation, change from contact litho into diapper litho,	e.g. change from wet eich to die eich e.g. change from seer cutting (sawing) to planma surting (sawing) e.g. change from contact litho to stopper litho	c	LED-PA-14 is also affected.			-	-	-		+	-					-							•		Qualification effort depends on type of shange.
LED-FW-09 Process tragety. Tuning within specification	P	Variation within process specification Change of water suppler. Change of suppler for chemicals	e g. process comput	c c		· · ·	-			-	-		-		-		-		-	-	-		-	· · ·	<u> </u>		Qualification effort depends on type of change.
LID-PM-10 Change of namelial supplier with no inpact on agreed specifications. LID-PM-11 Change of specified water process sequence idention and/or additional process sets		Change of walker supplier. Change of supplier for chemicals teeded for walker production. Any change which is not ourvered by another type of change. Risk is to be assessed.	e.g. Change of while support.	c																			-		+÷+		Cualification effort depends on type of change. Qualification effort depends on type of change. PPAP has to be updated.
LED-PW-12 Charge in die cauting or passivation	P P	Risk is to be assessed. Change in material, thickness, and process for stating and passivation	e.e. chance from SICI to SINI	c			•		•	Р	Р	Р						Р		Р	Р		PI	ρ.			PPAP has to be updated.
LED-PW-11 Newsitive production to the safer of water production to a different not previously released		passivation New water propolation location or transfer of water production with possible additional changes.			Asr & Inpatt on other type of shanges described under PROCESS - WWER PRODUCTION and EQUIPMENT campores					-		•											_			H	
LED-FR-13 kcatoritäleitukoomadur BARE DE DELAERES				č	PRODUCTION and EQUIPMENT caregories of this DeQuMa	•••	·	•	•		•	•	-			•	-		•	1			•	• •		· ·	
LED-BD-E1 New/ change of horst side metallization	p p	Change in bondpade, material, pad pitch, surface changes, leyer thickness.	e.g. change from As to Au alloy e.g. change in over pad metalization			M	•	•	•	•	M,B	M,B					•	•	•	•	•	•	•	• •	· ·		
LED-8D-92 New/ change of backside metallization	p p	Change of bottom layer of die (between die and Isadhamercarrier). Change is process, meterial, or dimensions.	e.g. change from Au to Au alloy	8	Check if LED-DS-02 is affected which leads to a change of the elchooptic parameters or disributions.		•	•	•	•	D,M	D,M	-		-	• •	•	•	•	•	•	•			•		sustamer application needs to be checked due to p voltage differences
LED-40-43 Change of water setup or number of dies on water.	1 P	Needed information for pick & place machine. 1: only additional number of drips	e.g. information change for pick & place machine.	8					-				-						-		1.1				-		
LED-40-64 Terrefinal autor Philosoph	p p	In unweet in abaoing between chics and form of water Changes in final Chip height (including carrier), very tale and usually combined with a material change (change of carrier)	e.g. change on converter thickness		Check if LED-06-01 is also affected.	P	•		Р		Р	Р	•			• •						•	в	в.			
LED-80-45 Change in die caating or passivation	p p	Product in backet planter over an interview where and Dranges in feat Orig height (including carrier); very same and usably contributed with a material change (change of carrier material) Change in material, thickness, and process for making and passionation	e.g. charge from SIC2 to SMI		Check 2 LED-09-01 is also affected.		•		•	Р	Р	Р				• •		Р		Р	Р		P				
PROCESS - ASSEMBLY			T.														1							-			
LED-PA41 Charge of Inactionalization base momental		New Insufframe/carrier material (new in composition) Change of ourface material of de attach-oud and second bond	e.g. change from copper alloy to bare copper	в А	Check if LED-05-02 is affected which leads to a charge of the elchooptic parameters or distributions.	· · ·	Ρ		•	-						• •	-	A	-	A	A	-		• •	F-	Р.	Explanation should be provided in case HDS test is
LED-PA43 Change of leadhame/Larvie fixeblag meeted (mema)	P P P P	Change of eurlace numeric of die attach-paid and second bond area (e.g. influence in adhesion to notid compound, wedge fond reliability) Change in material and process technique for final pin termination (e.g. pure tric) second package, processability and	e.g. change tion Ag train to MPD protocolor tayer e.g. change tion Ag spot to Au spot e.g. change in heat slug stack e.g. change in heat slug stack	•			P	•	• к	•	-	-	-			•••		A		A	A A	P,1	•	•••		к.	Motil text should be considered for automative eate septenation should be provided in case HSS text is Exclanation should be provided in case HSS text is
LED-PR44 Burry Maerial / Medi System (zoeral)		Change in motivital and process technique for final pin- semantion (e.g., puer tros) Herein package, processibility and altability on todal work and we refer the general data. Classification depends on impact of change Black de or de to substrate	e.g. change to Po-feee instantal	A			•	•	•	•						•	•	w	-	w	w	•					Provide a second s
LEDPAGE De unterfail LEDPAGE Present of December 201	p p	Change of die attach namerial (e.g. soft solder, eposy, etc). Thermal management must be respected.	e.g. change of Ag glue to Au glue;	в А			•		•	•				N		•	N	٩	-	N	Q	•	-		1	•	Site audit for material change with impact or bondp
	p p	Material, wire diameter, change in process technique Change of sub-component suppler using different	e.g. change from 30µ to 28µ e.g. using a different ESD-diode in technology and material	A A			•	•	P,D	•			-	D	D	• •	D	P,D	•		P,D	<u>  ·  </u>	•	• •	F-	·   ·	ts Ca) recontinended.
on agreed specifications	p p	Change of sub-component supplier using different extractiogy/materials Mode: Jung start lists of CRMs might be necessary Subcosting laws for complex subclass like fits chip.	than previously														-		-				-		⊢∔-	-	Qualification effort depends on type of change.
LEDPAGE be Overcas / Underfil LEDPAGE Charge of null compounder operation/tealing material	P P P	Supporting layers for complex-packages like flip chip. No change in producti integrity P: change can influence the integrity of final product Dange of mald compound, encapsulation, or sealing naterial legistre a stream optical function in case of package related	P e.g. change of underfill with change of thermal resistance	8 A		· · ·	•	•	Р •	•			D	D	P	• . • т	P	P	•	Р	P	U	-	- u	F	-	
	· *	Change of mold compound, encapsulation, or seeing manetial signt-se alterated optical function in case of package related effect (e.g. securing). Component assembly and board coating has to be assessed. Mill, might be changed.									-													42	<u> </u>	4	
LED-PA-10 Change of convention material LED-PA-11 Change of direct supplier for conventer namerial	p p	Change of material class.	e.g. change from granats to nitibles	c c	Check if LED-05-01 is attached for spic.allyhotometric parameters		•			•				Y P	Y P		Y P	P	P	P	P	Y P	-	4	₩÷+		
	P	New supplier with same material specification ten technology for converter production Lino influence on with performance of product PL is case of impact on product integrity Materia on environment	e.g. change from volume conversion to layer conversion; e.g.	c			•							Y	Y		Y	z	z	z	z	Y			H.		
	1 1 1 2	P: in case of impact on product integrity	e.g. change from volume conversion to layer conversion; e.g. change from stamping to printing of layer	-						-						• •	-	-			-	H-H-		4	$\square$	Ŧ	
LED-PA-12 Dange of converter process Sechnology		Marking on device.																									
UD-94-12 Dauge of assesses including UD-94-11 Dauge of produce metrics	1 Р	Laborg of decay E change in appearance, readability not affected P, change of content or change of appearance of data matrix code	e.g. making of sathode; e.g. change die attached hom gluing to soldering;	•			-	•		•	-		•	-	-							-	-				Qualification effort depends on trop of charme
LED-PM12 Change of converter process technology	1 P P P	teaning in concer. E change in appearance, readability not affected Pr change of anteen or change of appearance of data matrix code Any change in assembly process technique	e.g. marking of cathode; e.g. change die attached from gluing to saidering; e.g. process control	s c	A or B: Pease check 2 EQUIPMENT and other type of changes of material (LED-Pa- 04/05/06/07/08/08/10) are affected		-	•	-	-	-	-	-	-	-		-	-	-	-		-					Qualification effort depends on type of change.

	1		Addition or deletion of a process step in assembly process sequence with optentially significant impact on the product	1									1							1												
LED-PA-17	Change of specified assembly process sequence (additional and/or deletion of process step)	1	Expense with potentially agrindant impact on the product performance E-no influence on product integrity Pi influence on product integrity expected	e.g. additional or deletion plasma cleaning process.	c	Single case assessment necessary to identify possible interactions or risk.	•					-	-	1	-		-			-	1	-	-		-	1		-			walification effort depends on type of change.	
LED-PA-18	New assembly location or transfer of assembly to a different not previously released location/state/udountractor	р	P New assembly location, assembly transfer or relocation. Transfer of known technology and equipment.	e.g. Dual source strategy	c	A or its impact on other type of changes described under PROCESS ASSEMBLY and EQUIPMENT	•			-		-	-	-	-	-	+			-	-		-		-	-	-	+	-		sulfication effort depends on type of change.	
	PACKINGTERPPING									-	-															-						
LED-PS-01	Inner Packing/shipping specification change	P	P dimension change at direct product packing	e.g. SMIT packet in tape changes	8			P		-		P	P		-	-		т	-		-	-	-		-	-						
LED-99-02	Outer Packing/Mrlipping specification citiange	I.	dimension changes indirect product packing P 1. small changes in dimension or appearance Pi number of melti in the packing are changing	eg pitts box	•							-	-		-	-	+		-	-	-			-	-			÷		-		
LED-PS-03	Change of labeling	1	Change of labeling also on met. P E additional information no change of previous information Pi change in content of previous information	(b) e.g. additional internation (RoHL stamp) (P) e.g. change of customer specific internation	8	Check 7 LED-05-01 is also affected.											-		-	÷				-	-	-			-	-		
LED-PS-04	Dry pack requirement change	Р	P Change of dry pack requirements (change in MSL)	e.g. change from MiL3 to MiL1		Check if LED-05-02 is also affected.										-												-		-		
	EQUIPMENT	-																														
LED-EQ-01		Р	P Change in process technique which is not already covered above. Note: Major changes affecting the product not covered by the table require about a PCN.	e.g. change trom single water to taach process e.g. over pad metalization e.g. dambar cutting (mechanical to laser cutting		Check if LED-05-01 is also affected. Convision stability should be assessed.						-			-	-	-	-	-	•	-		-			-	-	-	-	- 0	sulfication what depends on type of change.	
LED-60-62	Production from a new equipment/bod which uses the same basic technology (replacement equipment or extension of existing equipment pool) without change of process.	-	PCN required for dedicated equipment for sensitive component production.	<sup>6</sup> e.g. change from single site to multi site handler.	c			1.1		-			-	1.1	4				-			-		1.1			-	1	1		sulfication effort depends on type of change.	
160-60-63	Change in final test equipment type that uses a different technology		Change of tester platform (e.g. reajor test program changes , new tester interface,) E product specification is not affected P product specification is affected	e.g. change in test method from of to lumen								•	•				+	т					-	-					-	•	lage R&R / delta correlation	
	TEST FLOW																															
LED-19-41	Nove of all or part of electrical earlier test and/or final test to a different location/stellud-contractor	р	P Texter transfer or relacation.	e.g. Dual source statlegy	c		•	- В		•	• В	•	•				•	т	в		в	-			В	в	в	4	1	•	lage RBR / delta correlation; addional specification should be considered for Wafer testing	h dhedk
	0-0ATE																															
LED-QS-01	Change of the test soverage testing process flow used by the supplier to ensure data sheet compliance (in g. elimination/addition of electrical measurementment flow block; relaxation/enhancement of monitoring procedure or sampling)	-	P Reduction or additional scintul steps, test coverage within the process flow	e.g. test flowblock like Final test / final clearance	c					-		-	-	+	-		÷	+	-	-	-				-	-			-	•		
																														·		
Tests, which	hould be considered for the appropriate process change.												-	-	-	-	-	-	-	-	-							-	-			
Tests, which	hould be considered for the appropriate process change after selection of condition tab	éa.							1													-										
Suppliers per	ormed tests (mark with an 'X' for done or 'G' for generic)								1		İ														Ì	1						
Response for an	ception of texts and/or usage of generic data:				_	1 1	1		-					_				-						_		-	_			-		
meason for ea	relevan on same surrout readle on Research many	-				1																										

