PRODUCT/PROCESS CHANGE NOTIFICATION
PCN 9976 – Additional information

Transfer assembly plant from Stats ChipPAC Shanghai China (SCC) to Stats ChipPAC Jiangyin China (JSCC) for selected products in LQFP packages

MDG - Microcontrollers Division (MCD)

For LQFP 32 7x7x1.4 package:

What are the changes?

	Transfer from:	Transfer to:	As information:	
Assembly site	Stats ChipPAC Shanghai China (SCC)	Stats ChipPAC Jiangyin China (JSCC)	ST Muar Malaysia	Amkor ATP Philippines
	Source closure	New source	Existing source	Existing source
Lead frame	Copper Frame Spot Ag	Copper Frame Spot Ag (1)	Pre Plated Frame	Copper Frame Spot Ag
Leadfinishing (3)	Pure Tin (e3)	Pure Tin (e3)	Ni Pd Au (e4)	Pure Tin (e3)
Mold compound	Sumitomo G700E	Sumitomo G631SHQ (2)	Sumitomo G700LS	Sumitomo G631HQ
Die attach Glue	Ablestik 3230	Ablestik 3230	Hitachi EN4900	Evertech AP4200
Wire	Gold 0.8mil	Silver 96.5% 0.8mil	Gold 0.8mil	Gold 0.8mil
Enhanced traceability in marking	No digits	2 digits added	No digits	No digits
Tray	No change	No change	No change	No change

(1) Lead frame harmonization:

- Down Bonds/Ground Bonds (DB/GB): slots mandatory

- No Down Bonds (DB): no slots

(2) Package darkness changes depending on molding.

(3) Lead color and surface finish may change depending on leadfinishing.
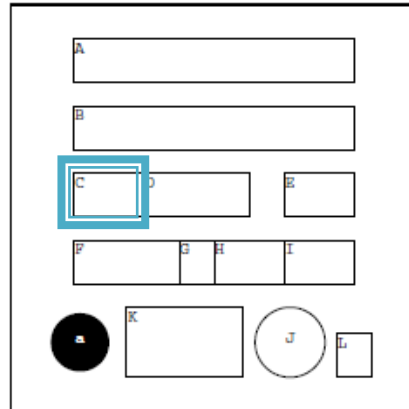
How can the change be seen?

The marking instruction of the assembly plant indicated on the products is changing from:
- o   Stats ChipPAC Shanghai China   : GH (in C)
- o   ST Muar Malaysia : 99 (in C)
- o   Amkor ATP Philippines : 7B (in C)

to
- o   Stats ChipPAC Jiangyin China : GQ (in C)
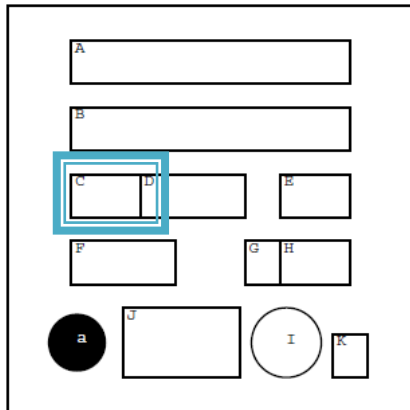
Example of previous marking

Example of new marking

For LQFP 44 10x10x1.4 package:

What are the changes?

	Transfer from:	Transfer to :	As information:
Assembly site	Stats ChipPAC Shanghai China (SCC)	Stats ChipPAC Jiangyin China (JSCC)	ST Muar Malaysia
	Source closure	New source	Existing source
Lead frame	Copper Frame Spot Ag	Copper Frame Spot Ag (1)	Pre Plated Frame
Leadfinishing (3)	Pure Tin (e3)	Pure Tin (e3)	Ni Pd Au (e4)
Mold compound	Sumitomo G700E	Sumitomo G631SHQ (2)	Sumitomo G700F
Die attach Glue	Ablestik 3230	Ablestik 3230	Hitachi EN4900
Wire	Gold 0.8mil	Silver 96.5% 0.8mil	Gold 0.8mil
Enhanced traceability in marking	No digits	2 digits added	No digits
Tray	No change	No change	No change

(1) Lead frame implementation harmonization:

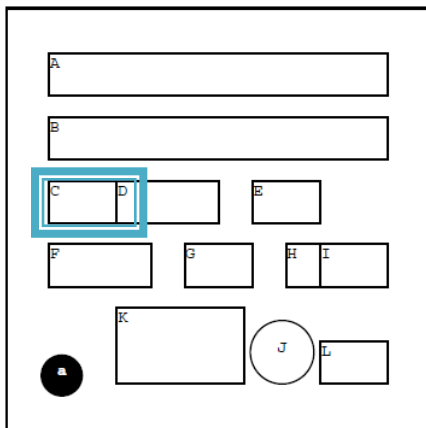- Down Bonds/Ground Bonds (DB/GB): slots mandatory

- No Down Bonds (DB): no slots

(2) Package darkness changes depending on molding.

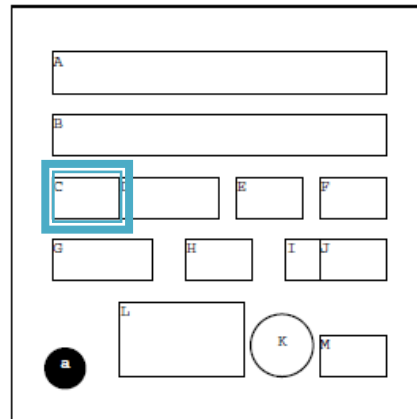(3) Lead color and surface finish may change depending on leadfinishing.

How can the change be seen?

The marking instruction of the assembly plant indicated on the products is changing from:
- o Stats ChipPAC Shanghai China : GH (in C)
- o ST Muar Malaysia : 99 (in C)
- o Amkor ATP Philippines : 7B (in C)
- to
- o Stats ChipPAC Jiangyin China : GQ (in C)

Example of previous marking   Example of new marking

For LQFP 48 7x7x1.4 package:

What are the changes?

	Transfer from:	Transfer to :	As information:		
Assembly site	Stats ChipPAC Shanghai China (SCC)	Stats ChipPAC Jiangyin China (JSCC)	ST Muar Malaysia	ST Muar Malaysia	Amkor ATP Philippines
	Source closure	New source	Existing source	Existing source	Existing source
Lead frame	Copper Frame Spot Ag	Copper Frame Spot Ag (1)	Pre Plated Frame	Pre Plated Frame	Copper Frame Spot Ag
Leadfinishing (3)	Pure Tin (e3)	Pure Tin (e3)	Ni Pd Au Ag (e4)	Ni Pd Au Ag (e4)	Pure Tin (e3)
Mold compound	Sumitomo G700E	Sumitomo G631SHQ (2)	Sumitomo G700LS	Sumitomo G700LS	Sumitomo G631HQ
Die attach Glue	Ablestik 3230	Ablestik 3230	Hitachi EN4900	Hitachi EN4900	Evertech AP4200
Wire	Gold 0.8mil	Silver 96.5% 0.8mil	Gold 0.8mil	Silver 96.5% 0.8mil	Gold 0.8mil
Enhanced traceability in marking	No digits	2 digits added	No digits	2 digits added	No digits
Tray	No change	No change	No change	No change	No change

(1) Lead frame implementation harmonization:

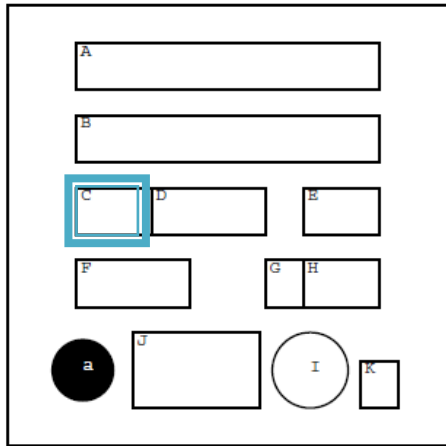- Down Bonds/Ground Bonds (DB/GB): slots mandatory

- No Down Bonds (DB): no slots

(2) Package darkness changes depending on molding.

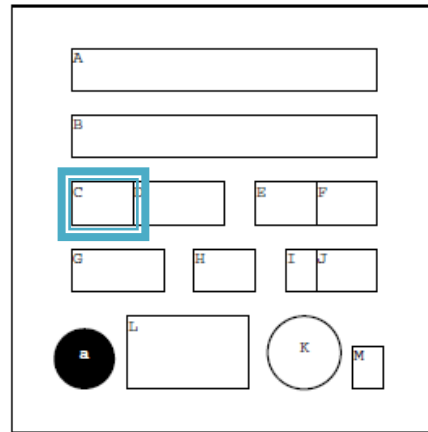(3) Lead color and surface finish may change depending on leadfinishing.

How can the change be seen?

The marking instruction of the assembly plant indicated on the products is changing from:
- o Stats ChipPAC Shanghai China : GH (in C)
- o ST Muar Malaysia : 99 (in C)
- o Amkor ATP Philippines : 7B (in C)
- to
- o Stats ChipPAC Jiangyin China : GQ (in C)

Example of previous marking

Example of new marking

For LQFP 64 10x10x1.4 package:

What are the changes?

	Transfer from:	Transfer to :	As information:		
Assembly site	Stats ChipPAC Shanghai China (SCC)	Stats ChipPAC Jiangyin China (JSCC)	ST Muar Malaysia	ST Muar Malaysia	Amkor ATP Philippines
	Source closure	New source	Existing source	Existing source	Existing source
Lead frame	Copper Frame Spot Ag	Copper Frame Spot Ag (1)	Pre Plated Frame	Copper Frame Spot Ag	Copper Frame Spot Ag
Leadfinishing (3)	Pure Tin (e3)	Pure Tin (e3)	Ni Pd Au (e4)	Pure Tin (e3)	Pure Tin (e3)
Mold compound	Sumitomo G700E	Sumitomo G631SHQ (2)	Sumitomo G700F	Sumitomo G700LS	Sumitomo G631HQ
Die attach Glue	Ablestik 3230	Ablestik 3230	Hitachi EN4900	Hitachi EN4900GC	Evertech AP4200
Wire	Gold 0.8mil	Silver 96.5% 0.8mil	Gold 1 mil	Gold 0.8mil	Gold 0.8mil
Enhanced traceability in marking	No digits	2 digits added	No digits	2 digits added	No digits
Tray	No change	No change	No change	No change	No change

(1) Lead frame implementation harmonization:

- Down Bonds/Ground Bonds (DB/GB): slots mandatory

- No Down Bonds (DB): no slots

(2) Package darkness changes depending on molding.

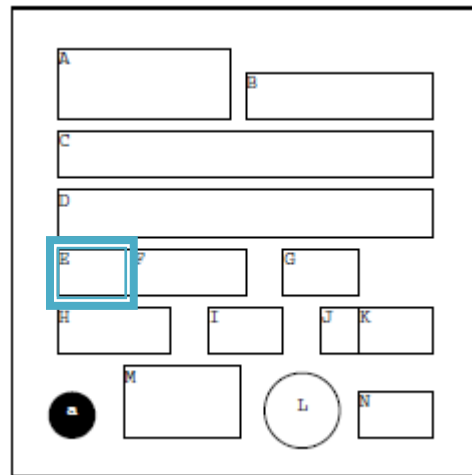(3) Lead color and surface finish may change depending on lead finishing.

How can the change be seen?

The marking instruction of the assembly plant indicated on the products is changing from:
- o   Stats ChipPAC Shanghai China : GH (in E)
- o   ST Muar Malaysia : 99 (in E)
- o   Amkor ATP Philippines : 7B (in E)

to
- o   Stats ChipPAC Jiangyin China : GQ (in E)
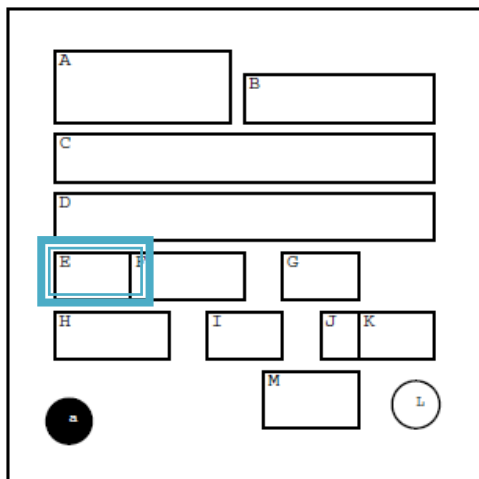
Example of previous marking

Example of new marking

How to order samples?

For all sample request linked to this PCN, please:

- request sample(s) through Notice tool, indicating a single Commercial Product for each request.
- insert "PCN 9976" into the remarks of your order.
- place **non standard** sample order using the following field in your system.

PCN 9976 & 10011 – MCDRER1621 Qualification Plan LQFP Transfer assembly plant from Stats ChipPAC Shanghai China (SCC) to Stats ChipPAC Jiangyin China (JSCC)

Dec 13th 2016

MDG MCD Quality & Reliability Department

- Qualification plan for changes described in the PCN 9976 & 10011

- Reliability report: RERMCD1621

- Test Vehicles

Package line	Assembly Line	Package	Device (Partial RawLine Code)	Diffusion Process	Number of qual Lots
LQFP	LQFP 7*7	32L	STM32 (5V*438)	TSMC0.18μm	1
		48L	STM8L(5B*764)	F9GO2	1
			STM32L(5B*425)	F9GO2S	1
			STM32(5B*435)	TSMC90nm	1
	LQFP 10*10	64L	STM32(5W*423)	M10	1
			STM8L(5W*768)	F9G02	1
		44L	STM8S(4Y*765)	F9GO1	1

Reliability Trial		Test Conditions	Pass Criteria	Unit per Lot	Lot qty
PC	Pre Conditioning: Moisture Sensitivity Jedec Level 3 J-STD-020/ JESD22-A113	Bake (125°C / 24 hrs) Soak (30°C / 60% RH / 192 hrs) for level 3 Convection reflow: 3 passes	3 passes MSL3	308	**1/ device qual**
AC or Uhast(*)	Autoclave JESD22 A102 or UnBiased Highly Accelerated Temperature and Humidity Stress JESD22 A118	121°C, 100% RH, 2 Atm 130°C, 85%RH, 2 atm	96h	77	**1/ device qual**
TC(*)	Thermal Cycling JESD22 A104	-50°C, +150°C Or equivalent -65°C +150°C	1000Cy 500Cy *(1000cy/2000cy as monitoring)*	77	**1/ device qual**
WPT/WBS After TC	Wire Bond Pull- Mil Std883 method 2011 Wire Bond Shear ,AECQ100-001	3g min pull strengh 15g min bond shear	500Cy 1000Cy 2000Cy		
THB(*) **or** **HAST(*)**	Temperature Humidity Bias JESD22 A101	85°C, 85% RH, bias	1000h	77	**1/ device qual**
	Biased Highly Accelerated temperature & humidity stress JESD22 A110	110°C, 1.2 atm , 85% RH bias	264h	77	
HTSL	High Temperature Storage Life JESD22 A103	150°C- no bias	1000h	77	**1/ device qual**
Construction analysis including Solderability, Physical demensions	JESD 22B102 JESDB100/B108			15 10	**1/ Lead frame and Front end technology**
ESD	ESD Charge Device Model ANSI/ESD STM5.3.1	250V / 500V/ 750V depending on device datasheet	250V or 500V or 750V	3	**1/ device qual**

Public Products List

Publict Products are off the shelf products. They are not dedicated to specific customers, they are available through ST Sales team, or Distributors, and visible on ST.com

PCN Title : Transfer assembly plant from Stats ChipPAC Shanghai China (SCC) to Stats ChipPAC Jiangyin China (JSCC) for selected products in LQFP packages

PCN Reference : MDG/17/9976

Subject : Public Products List

Dear Customer,

Please find below the Standard Public Products List impacted by the change.

STM32F031C6T6TR	STM32F303RET7	STM32F072C8T6
STM8S903K3T6CTR	STM32F091RBT6	STM32F410RBT6TR
STM32F100RBT6B	STM32F103RCT6	STM32L151CBT6A
STM32L151RCT6ATR	STM32F405RGT6	STM8S105K6T6C
STM32F102R6T6A	STM32L071CZT6TR	STM32F103CBT6
STM32F103R8T6	STM32F103CBT7TR	STM32F302RET6TR
STM8S207C8T6TR	STM32L100R8T6	STM8S207C6T6
STM32F105RBT6TR	STM32F334C8T7TR	STM8S105K4T3CTR
STM32F101RCT6TR	STM32F038C6T6	STM32F101RBT6
STM32F103C8T6TR	STM32F205RET7	STM32F100CBT6B
STM32F373RCT6TR	STM32F102C8T6TR	STM32F302RDT6
STM32F051C6T7	STM8S207CBT6	STM8S005C6T6
STM32F072R8T6	STM32F103C8T7	STM32F101C8T6
STM8L052R8T6TR	STM32L151CBT6	STM32F405RGT6TR
STM8S207C8T6	STM32F042C4T6	STM32F401RCT7TR
STM32F101CBT6TR	STM32F100R8T7BTR	STM8L101K3T6
STM8L151C6T3	STM32F103RET6TR	STM32F103C6T6A
STM32F031K6T7	STM32F101R8T6	STM32F205RBT6
STM32F103RFT6	STM32F215RGT6	STM8S207S8T3CTR
STM32L152R8T6TR	STM32F103R8T6TR	STM8L162R8T6
STM8L152K4T6	STM32F100C8T6B	STM8S207CBT3
STM32F102R8T6	STM32F051R8T6	STM32F072RBT7
STM32F303RBT6TR	STM32F373CBT6	STM32F051C6T6TR
STM32F105RCT6W	STM32F101RDT6TR	STM32L051K8T7
STM8S105K4T6C	STM32F303CBT7TR	STM32F072R8T6TR
STM32F205RET6TR	STM32F101R4T6A	STM8L151K6T6
STM32F101RET6	STM32L162RCT6TR	STM32F105RCT6
STM32F051C6T6	STM32F401RDT6	STM32F205RGT6W
STM32F030C6T6	STM32F301C8T6	STM32L031C4T6
STM32F302C6T6	STM32L152RET6	STM32F100R8T6B
STM8L152C6T6	STM32F205RFT6	STM32F101CBT6
STM32F072CBT6	STM8S105C6T6	STM32F103RET7
STM32F205RCT6TR	STM32F102CBT6TR	STM8L151C4T6TR
STM8S207K6T6CTR	STM32F103R6T6ATR	STM32F405RGT6W
STM32F051R6T6TR	STM32L073RBT6	STM32F373RCT6

STM32F103RET6	STM32L083RZT6	STM32F103R4T6A
STM8S207CBT6TR	STM32F101C8T6TR	STM8S105C4T3
STM32L151R6T6TR	STM32F103C6T7A	STM32F102RBT6
STM32F103RFT6TR	STM8S208C8T6TR	STM32F103CBT6TR
STM32F103C4T6A	STM8S105S6T6C	STM32F302R6T6
STM32F107RCT6	STM8S007C8T6TR	STM32F373R8T6TR
STM8L152C8T6	STM8S207R8T3TR	STM32F100R6T6BTR
STM32F302CBT6TR	STM32L071CBT6	STM8S207RBT6TR
STM8S207S6T6C	STM32F100C8T7BTR	STM32F051C8T6TR
STM32L100R8T6A	STM8L151C2T6	STM32F100R8T6BTR
STM8S105K4T3C	STM8S005C6T6TR	STM32L053C8T6
STM32F051K6T7	STM32F334C8T7	STM8L052C6T6TR
STM8S207S8T3C	STM32F103RGT6	STM32F072RBT7TR
STM8L151C4T6	STM32L162RCT6	STM32L151C8T6A
STM32F405RGT7	STM32L100R8T6ATR	STM32F415RGT6
STM32F105RBT6	STM8S207K8T6C	STM8S207C8T3
STM32F101RBT6TR	STM32F030C6T6TR	STM32L162RDT6TR
STM32L053R6T6	STM32F105RCT6TR	STM32F051R8T6TR
STM32F030C8T6TR	STM8S207C6T6TR	STM8L151C8T7
STM8L151R8T6TR	STM8S207RBT3	STM8S208CBT6
STM32F098CCT7	STM32L100RBT6A	STM32L052R6T6
STM32F078CBT6	STM32F401RBT6	STM32F051K4T6TR
STM32F100RBT6BTR	STM8S207K8T3CTR	STM32F373C8T6
STM8S105K6T6CTR	STM8S207RBT6	STM32F103C8T6
STM32L151RET6	STM32F410RBT7TR	STM32F405RGT6V
STM32F103CBT7	STM32L071C8T7	STM32F103RDT6
STM32F205RGT6V	STM32L051R8T7	STM32F205RGT6TR
STM32F205RCT7	STM32F107RCT7	STM32F103RCT6TR
STM32F101RGT6	STM32F102C8T6	STM32L151RCT6A
STM32F205RET6	STM32F373RBT6	STM32F303CCT6TR
STM32F051C8T7TR	STM32F410R8T6	STM32F107RBT6
STM32F051K6T7TR	STM32F070CBT6	STM32F102C4T6ATR
STM32F411RCT6	STM32F103R8T7TR	STM8L152C4T6TR
STM32L071KBT6TR	STM8S208C6T6TR	STM8S005K6T6CTR
STM32F205RCT6	STM32F100R6T6B	STM32F102CBT6
STM32F072CBT7	STM32F334K6T6	STM8S208C8T6
STM32F303RCT7	STM32F101R8T6TR	STM32L152R6T6
STM32L051K8T6TR	STM32F030R8T6	STM32F446RET7TR
STM32L162RDT6	STM32F410RBT6	STM32F415RGT6TR
STM32F373CCT7	STM8S105K4T6CTR	STM32L152R6T6TR
STM32L151C8T6TR	STM32F051K8T7	STM32L053R8T7
STM32F072RBT6	STM32F100R4T6BTR	STM8S105S6T6CTR
STM32F378RCT6	STM8L152R6T6	STM8S208RBT6
STM32L053C6T6	STM32L151CCT6TR	STM32F100CBT7B
STM32L021K4T6	STM8S207R6T6TR	STM32F401RCT6
STM32F101C6T6ATR	STM32F100C4T7B	STM8S208C6T3
STM32F334R8T6	STM32F091RCT6J	STM32F302CCT7
STM8S207K6T3CTR	STM8S208C6T6	STM8S207R6T6
STM32F101RGT6TR	STM32L071RZT6	STM32F302RCT7
STM32L071RBT7	STM32F031C6T6	STM8S207K6T6C

STM32F205RBT7	STM32F373R8T6	STM32F042K6T6
STM32F373C8T6TR	STM32F031C6T7	STM32F101RCT6
STM32F100C8T7B	STM32F446RET6	STM32F107RBT6TR
STM8S207S6T6CTR	STM32F303RET6TR	STM32F302CBT6
STM32L053C6T7	STM32F446RCT6TR	STM32F303K8T6
STM32L151RBT6D	STM8S105S6T3C	STM32L100R8T6TR
STM32F301R8T6	STM32L151RBT6	STM32L100RCT6
STM8S105S4T6CTR	STM32F334R8T7	STM32F070RBT6TR
STM32F072C8T6TR	STM32L031C6T7D	STM32F215RET6
STM8L151K4T3	STM32F303K6T6	STM32F051R6T7TR
STM32F051R4T6TR	STM32F378CCT6	STM32F334C6T7
STM32F058R8T6	STM8L151C6T6	STM32F101RDT6
STM8L151R6T6	STM32F302RBT7	STM32F103RDT6TR
STM32L151RBT7ATR	STM32L071CZT6	STM32F038C6T7
STM32L073CZT3	STM32F051R4T6	STM32F107RCT6TR
STM32L152RCT6D	STM8L152C4T6	STM32F358RCT6
STM32F103R8T7	STM32L152RCT6A	STM32L152CBT6
STM32L151C8T6	STM32F301C6T7	STM32F103RCT7
STM32L083CZT6TR	STM32F051C4T6TR	STM8S207S8T6CTR
STM32F102RBT6TR	STM32F303RBT7TR	STM32F302RDT6TR
STM32L053R8T6	STM32F302RET7TR	STM32F031K6T6
STM32F030R8T6TR	STM32L151R6T6A	STM32L152R6T6A
STM32L052K8T7	STM32F071CBT6TR	STM32L031K6T6
STM32F302C8T6	STM32F102C4T6A	STM8S207R8T6
STM32F072CBT6TR	STM8S207SBT6C	STM8L152K6T6
STM32F030C8T6	STM32F373CBT7	STM32F100C6T6BTR
STM32F101RET6TR	STM8L152R8T6	STM32F031C4T6
STM32L100RCT6TR	STM32L041K6T7	STM32F405RGT7TR
STM32F215RGT6TR	STM32L100RBT6	STM32L051C8T3
STM8S207C6T3	STM8S105K6T3C	STM32L151RDT6
STM32L071KZT6	STM32F051K8T6TR	STM32F334R8T7TR
STM32F205RGT6	STM32L152RCT6TR	STM32F102C6T6A
STM32F091CCT7	STM32F105RCT7	STM32L151RDT7
STM32L151R6T6	STM32L071RZT6TR	STM32F051C4T6
STM32L053R8T6TR	STM32L151CBT6ATR	STM32L151RCT6
STM8S207K6T3C	STM32F051K4T6	STM8S005K6T6C
STM32F205RGT7	STM32L053R8T6D	STM32L071C8T6
STM8S105C4T6	STM32F091CBT6	STM32L152C6T6A
STM32F091CCT6J	STM32L152CBT6A	STM32F401RCT6TR
STM32F334C6T6	STM8S207R8T6TR	STM32F301C6T6TR
STM32L062K8T6	STM32L052C8T6D	STM32F302CCT6
STM32F051C8T6	STM32L031K6T6TR	STM8S208RBT3
STM32F301C8T6TR	STM32F100C4T6B	STM32F105R8T6
STM8S207S8T6C	STM32F410RBT7	STM8L101K3T3
STM32F103C6T7ATR	STM32F446RCT7	STM32L053R8T3
STM32F071CBT6	STM32F098CCT6	STM32F071RBT6TR
STM32F105RCT6V	STM32F401RDT6TR	STM8S105C4T6TR
STM32L151RET6TR	STM32F411RET7	STM8L152C6T6TR
STM32L151CBT6D	STM32F071CBT7	STM32L073CZT6
STM8L152C8T6TR	STM32F103R6T7A	STM32F051C8T7

STM32F100R4T6B	STM32F091RCT7	STM8S208S6T6C
STM32F031C6T7TR	STM32L063C8T6	STM32F302RET7
STM32F100C8T6BTR	STM32L152R8T6	STM32L072RBT6
STM32F042C6T6	STM32L071RBT6	STM32L052C8T6
STM32L151C6T6ATR	STM8S105S4T6C	STM32F302RET6
STM32F072C8T7	STM32F100RET6B	STM32L051R8T6
STM32L071RBT6TR	STM32L152RDT6	STM32F070CBT6TR
STM32L152C6T6	STM32F051K6T6	STM32F100C6T7B
STM32F030CCT6TR	STM32F103C8T7TR	STM8L151R8T6
STM32F105R8T6TR	STM32F303RDT6	STM32F411RET6TR
STM8S207R8T3	STM32F411RET6	STM32F334C8T6
STM32F103RGT6TR	STM32F301C8T7	STM32F318C8T6
STM32L072CBT6	STM32L152RBT6	STM32L073RZT6
STM32L151RBT6A	STM32F302RBT6	STM32F100C4T6BTR
STM8L152R8T3	STM32L031C6T7	STM32F103RGT7
STM32F030RCT6TR	STM8S207S6T3CTR	STM32F303CCT6
STM32F070C6T6	STM32L152RBT6A	STM32F334K4T6
STM8L151C8T6	STM32F334K8T7	STM32F030K6T6
STM32L073CBT6	STM8L152C4T3	STM32F373CCT6TR
STM32F100R8T7B	STM8L151K4T6TR	STM32F070RBT6
STM32L151CBT6TR	STM32F091CBT6TR	STM32L100RBT6ATR
STM32F303CBT6TR	STM8S105K6T3CTR	STM32F100RCT6B
STM32F334K8T6	STM32L053C8T6TR	STM32L071CZT7
STM32F103RBT6	STM8S208R8T6	STM32L031C6T6
STM8S207S6T3C	STM32L151RDT6TR	STM32L151RCT6TR
STM8S208S6T3C	STM8S207K8T6CTR	STM32F101C6T6A
STM32L071CBT6TR	STM8L052R8T6	STM32L052R8T7
STM32F328C8T6	STM32L051R8T6TR	STM32F303RCT6
STM8S105C6T6TR	STM32L051K6T6	STM32F051K6T6TR
STM32L051C6T6TR	STM32L072KZT6	STM32F091RCT6
STM32F103R6T6A	STM8S007C8T6	STM32F410CBT6
STM32F302RCT6TR	STM32L051R6T6	STM32L151CCT6
STM32F030RCT6	STM32F334C4T6	STM32F303CBT7
STM8S105C4T3TR	STM32F100RDT6BTR	STM32L151RBT6ATR
STM32L011K4T6	STM32F100CBT6BTR	STM32F071RBT7TR
STM32F411RCT7TR	STM32F373CCT6	STM32F303RET6
STM8L151R8T3	STM32F091RCT6TR	STM32F072RBT6TR
STM32F101RFT6	STM32L053C8T6D	STM32F303R8T6
STM32L152R8T6A	STM32F401RET7	STM32F446RET7
STM32F071RBT6	STM32F205RET7TR	STM32F303CBT6
STM32F303C8T6	STM32L072RBT3	STM8L151K4T6
STM32L071CBT3	STM32F091CCT6	STM32F401RBT6TR
STM32F051R8T7	STM32L052K6T6	STM32L051C8T7TR
STM32F102R4T6A	STM32L151R8T6A	STM32F303R6T6
STM32F030K6T6TR	STM32F446RCT6	STM32L162RET6TR
STM32L052K8T6	STM32F100C6T6B	STM32F302RCT6
STM8L151C3T6	STM32L151RBT6TR	STM32F410CBT3
STM32L072CZT6	STM32F091CCT6TR	STM32F302C8T7
STM32F302R6T6TR	STM32F051R6T6	STM32L152C8T6
STM32L152CCT6	STM32L162RET6	STM32L051C8T6TR

STM32F078RBT6	STM32F042K6T7	STM8L052C6T6
STM32F334C6T7TR	STM32F102C6T6ATR	STM32L081KZT6
STM8L151C8T3	STM32F302R8T6TR	STM32F100CBT7BTR
STM32L051C8T6	STM8L151C8T6TR	STM32F401RET6TR
STM32F030CCT6	STM32L151CCT6J	STM32F103RFT6JTR
STM32F051K8T6	STM32F101R6T6ATR	STM32L051K8T6
STM32L152RCT6	STM32F031C4T6TR	STM32L083CBT6
STM32F411RCT7	STM32L053C8T7	STM32F100RDT6B
STM32F098RCT6	STM32L031K6T7	STM32L052K8T6D
STM32L051C8T7	STM32F301C6T6	STM32F301R6T6
STM32L151RBT7A	STM32F446RCT7TR	STM8L151C3T3
STM8L151C4T3	STM32F334K8T6TR	STM32L151R8T6
STM32L081CZT6	STM8L152K6T3	STM32L082KZT6
STM32F334R6T6	STM32F302R8T6	STM32F303RBT6
STM32L073RZT3	STM8L152R6T6TR	STM32F302CBT7
STM32L151C6T6TR	STM32F401RCT7	STM32L011K4T6D
STM32L071CBT7	STM32F302RBT6TR	STM32F358CCT6
STM32L052C8T7	STM8L151K6T3	STM32L162RCT6A
STM32F101R6T6A	STM32L083CZT6	STM32F303RCT6TR
STM32F303RBT7	STM32L071KBT6	STM32L072RZT6
STM8S105C6T3TR	STM32L051K6T6TR	STM32L051C6T6
STM32L063R8T6	STM32F100RET6BTR	STM32F303C6T6
STM32L152C8T6A	STM32L052R8T6	STM32L151C6T6A
STM32F401RET6	STM32L151C6T6	STM32L100RBT6TR
STM32F302R8T7	STM32L052C6T6	STM32F334R8T6TR
STM32L041C6T7	STM32F205RBT6TR	STM32F215RET6TR

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