PRODUCT/PROCESS CHANGE NOTIFICATION

PCN 11628 – Additional information

ST Muar (Malaysia) HD line capacity extension
STM8 & STM32 LQFP 10x10 64L additional products

MDG - Microcontrollers Division (MCD)

What are the changes?

LQFP 10x10 packages change is limited to wire bonding material only.

	Existing back-end lines				Added back-end line
Assembly site	Stats ChipPAC JSCC Jiangyin China	ST Muar Malaysia	ASE Kaohsiung Taiwan	Amkor ATP Philippines	ST Muar Malaysia
Resin (1)	Sumitomo G631SHQ	Sumitomo G700LS	Sumitomo EME-G631SH	Sumitomo G631HQ	Sumitomo G700LS
Glue	Ablestik 3230	Hitachi EN4900GC	Sumitomo CRM 1076WA	Evertech AP4200	Hitachi EN4900GC
Wire	Silver 96.5% 0.8mil	Gold 0.8mil	Gold 0.8mil	Gold 0.8mil	Silver 96.5% 0.8mil
Enhanced Traceability in marking	2 digits	No digit	2 digits	No digit	2 digits

(1) Package darkness changes depending on molding compound.

Pin1 identifier can change in terms of form and positioning.
Marking position and size could be different upon assembly site, without any loss of information.

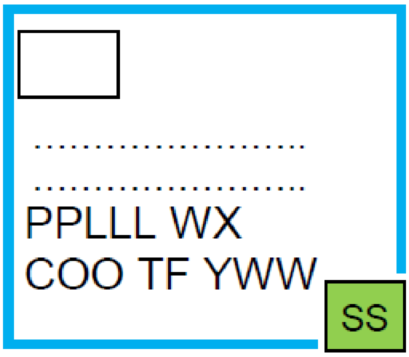
How can the change be seen?

PP code indicates the Assembly traceability plant code.

Existing		Additional	
PP code	Fab	**PP** code	Fab
GQ	Stats ChipPAC JSCC Jiangyin China	99	ST Muar Malaysia
99	ST Muar Malaysia		
7B	Amkor ATP Philippines		
AA	ASE Kaohsiung Taiwan		

In case parts **PP** code is 99 then check Enhanced traceability in marking (**SS** marking) Products from existing ST Muar Malaysia assembly line doesn't have SS marking while products from extended capacity line will have SS marking.

SS marking is inserted at the bottom right corner and indicates the sublot assembly traceability information.

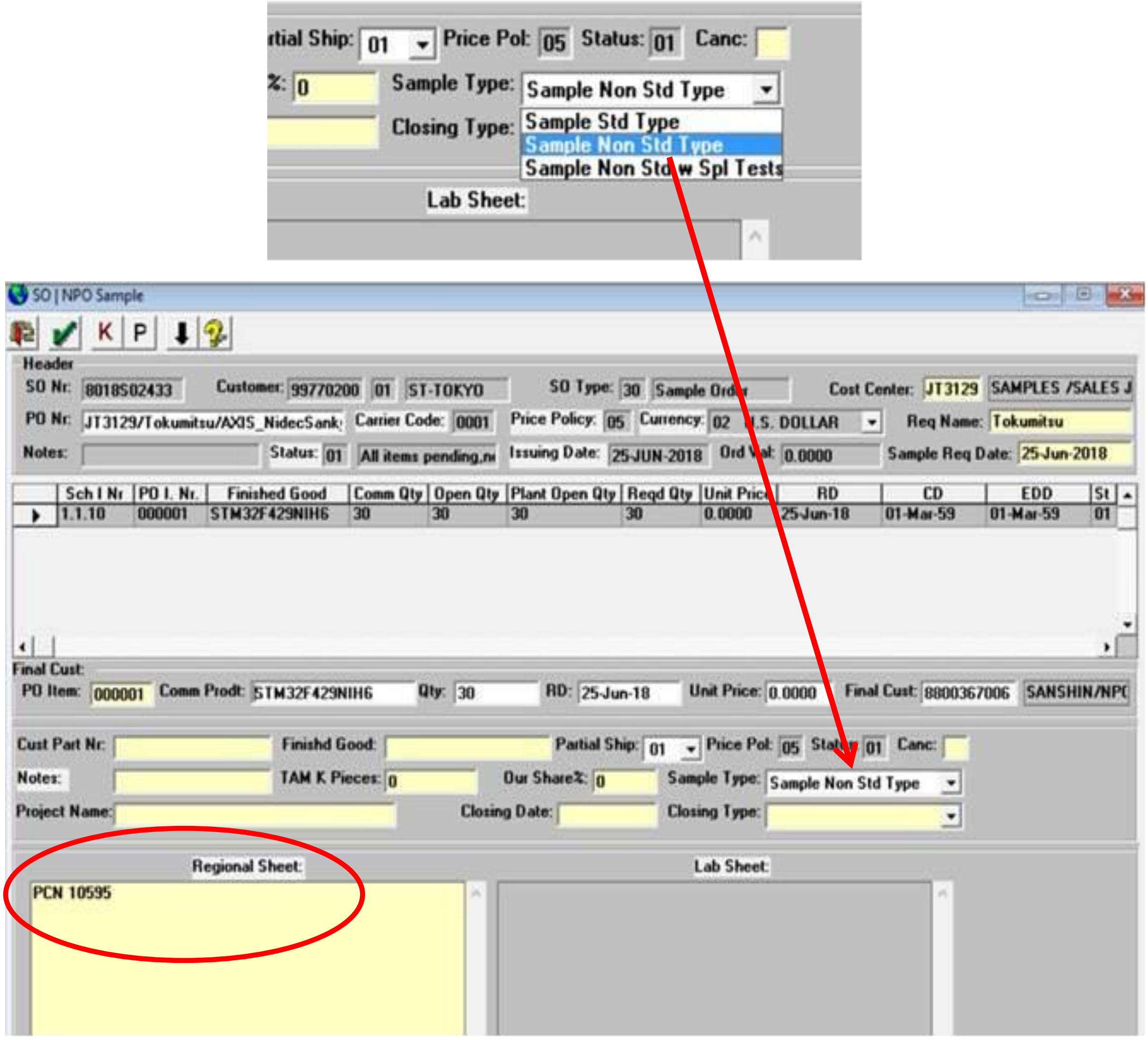


Please refer to the DataSheet for marking details.

How to order samples?

For all samples request linked to this PCN, please:

- place a **<u>Non-standard</u>** sample order (choose Sample Non Std Type from pull down menu)
- insert the PCN number “**PCN 11628**” into the NPO Electronic Sheet/**Regional Sheet**
- request sample(s) through Notice tool, indicating a single Commercial Product for each request



rtial Ship: 01 Price Pol: 05 Status: 01 Canc:
%: 0 Sample Type: Sample Non Std Type
Closing Type:

SO Nr: 8018S02433 Customer: 99770200 01 ST-TOKYO SO Type: 30 Sample Order Cost Center: JT3129 SAMPLES /SALES J
PO Nr: JT3129/Tokumitsu/AXIS_NidecSank Carrier Code: 0001 Price Policy: 05 Currency: 02 U.S. DOLLAR Req Name: Tokumitsu
Notes: Status: 01 All items pending,n Issuing Date: 25-JUN-2018 Ord Val: 0.0000 Sample Req Date: 25-Jun-2018

Sch I Nr	PO I. Nr.	Finished Good	Comm Qty	Open Qty	Plant Open Qty	Reqd Qty	Unit Price	RD	CD	EDD	St
1.1.10	000001	STM32F429NIH6	30	30	30	30	0.0000	25-Jun-18	01-Mar-59	01-Mar-59	01

Final Cust:
PO Item: 000001 Comm Prodt: STM32F429NIH6 Qty: 30 RD: 25-Jun-18 Unit Price: 0.0000 Final Cust: 8800367006 SANSHIN/NPC

Cust Part Nr: Finishd Good: Partial Ship: 01 Price Pol: 05 Status: 01 Canc:
Notes: TAM K Pieces: 0 Our Share%: 0 Sample Type: Sample Non Std Type
Project Name: Closing Date: Closing Type:

Regional Sheet: PCN 10595

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RER1910 for PCN 11330 & PCN 11628 ST Muar (Malaysia) HD line capacity extension STM8 & STM32 LQFP 10x10 64L listed products

Reliability Evaluation Plan

February 18th, 2019

MDG MCD Quality & Reliability Department

RER1910 ST Muar (Malaysia) HD line capacity extension - Package Test Vehicles & Strategy

Test vehicles are selected by Change Review Board based on key parameters such as die size and volumes allowing to qualify the entire product family in LQFP.

Similarity strategy will be applied to cover all combinations of Diffusion Plant, Diffusion Process and LQFP package listed below:

- TSMC 0.18µm / Rousset R8 F9GO1 & F9GO2 diffusion process
- LQFP10x10 on the same assembly line and using same materials for bonding wires, die attach glue and mold compound

Package line	Assembly Line	Package	Device (Partial RawLine Code)	Diffusion Plants & Process	Number of Reliability Lots
LQFP	LQFP 10*10	64L	STM8 (5B*768)	Rousset F9GO2	1
			STM32 (5W*414)	TSMC 0.18	1
			STM32 (5W*420)	TSMC 0.18	1

RER1910 ST Muar (Malaysia) HD line capacity extension - Package Reliability Trials

Reliability Trial & Standard		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	231	1 per device
PPT (*)	Pressure Pot JESD22 A102	121°C, 100% RH, 2 Atm	96h	77	1 per device
TC (*)	Thermal Cycling JESD22 A104	-50°C, +150°C Or equivalent -65°C +150°C	1000Cy 500Cy	77	1 per device
THB (*)	Temperature Humidity Bias JESD22-A101	85°C, 85% RH, bias	1000h	77	1 per device
HTSL	High Temperature Storage Life JESD22 A103	150°C- no bias	1000h	77	1 per device
Construction analysis	JESD 22B102 JESDB100/B108			50	1 per device
ESD	ESD Charge Device Model ANSI/ESD STM5.3.1	Aligned with device datasheet	250V to 500V	3	1 per device

(*) tests performed after preconditioning

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