



**PRODUCT/PROCESS
CHANGE NOTIFICATION
PCN 12050 – Additional information**

JSCC capacity increase – for listed products

MDG - Microcontrollers Division (MCD)

What are the changes?

Changes described in table below for QFP and QFN packages

QFP Packages :

- LQFP 48 7x7x1.4

	Existing capacity				Added capacity
Assembly site	StatsChipPAC JSCC Jiangyin China	ST Muar Malaysia	Amkor ATP Philippines	ASE Kaohsiung Taiwan	Stats ChipPAC JSCC Jiangyin China
Leadframe	Copper Frame Spot Ag	Pre Plated Frame	Copper Frame Spot Ag	Copper Frame Spot Ag	Copper Frame Spot Ag
Leadfinishing (1)	Pure Tin (e3)	Ni Pd Au (e4)	Pure Tin (e3)	Pure Tin (e3)	Pure Tin (e3)
Resin (2)	Sumitomo G631SHQ	Sumitomo G700LS	Sumitomo G631HQ	Sumitomo G631SH	Sumitomo G631SHQ
Glue	Ablestik 3230	Hitachi EN4900	Evertech AP4200	Sumitomo CRM 1076WA	Ablestik 3230
Wire	Silver 96.5% 0.8mil	Gold 0.8mil Silver 96.5% 0.8mil	Gold 0.8mil	Gold 0.8mil	Gold 0.8mil
Enhanced Traceability in marking	2 digits	No Digit (Gold) 2 digits (Silver)	No digit	2 digits	2 digits

- LQFP 32 7x7x1.4

	Existing capacity				Added capacity
Assembly site	StatsChipPAC JSCC Jiangyin China	ST Muar Malaysia	Amkor ATP Philippines	ASE Kaohsiung Taiwan	Stats ChipPAC JSCC Jiangyin China
Leadframe	Copper Frame Spot Ag	Pre Plated Frame	Copper Frame Spot Ag	Copper Frame Spot Ag	Copper Frame Spot Ag
Leadfinishing (1)	Pure Tin (e3)	Ni Pd Au (e4)	Pure Tin (e3)	Pure Tin (e3)	Pure Tin (e3)
Resin (2)	Sumitomo G631SHQ	Sumitomo G700LS	Sumitomo G631HQ	Sumitomo G631SH	Sumitomo G631SHQ
Glue	Ablestik 3230	Hitachi EN4900	Evertech AP4200	Sumitomo CRM 1076WA	Ablestik 3230
Wire	Silver 96.5% 0.8mil	Gold 0.8mil	Gold 0.8mil	Gold 0.8mil	Gold 0.8mil
Enhanced Traceability in marking	2 digits	No Digit	No digit	2 digits	2 digits

- LQFP 44 10x10x1.4

	Existing capacity		Added capacity
Assembly site	StatsChipPAC JSCC Jiangyin China	ST Muar Malaysia	Stats ChipPAC JSCC Jiangyin China
Leadframe	Copper Frame Spot Ag	Pre Plated Frame	Copper Frame Spot Ag
Leadfinishing (1)	Pure Tin (e3)	Ni Pd Au (e4)	Pure Tin (e3)
Resin (2)	Sumitomo G631SHQ	Sumitomo G700F	Sumitomo G631SHQ
Glue	Ablestik 3230	Hitachi EN4900	Ablestik 3230
Wire	Silver 96.5% 0.8mil	Gold 0.8mil	Gold 0.8mil
Enhanced Traceability in marking	2 digits	No Digit	2 digits

- LQFP 64 10x10x1.4

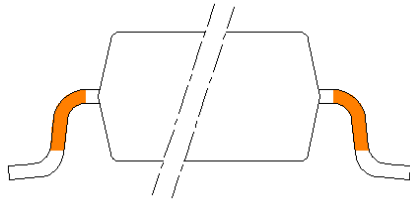
	Existing capacity					Added capacity
Assembly site	StatsChipPAC JSCC Jiangyin China	ST Muar Malaysia		Amkor ATP Philippines	ASE Kaohsiung Taiwan	Stats ChipPAC JSCC Jiangyin China
Leadframe	Copper Frame Spot Ag	Pre Plated Frame	Copper Frame Spot Ag	Copper Frame Spot Ag	Copper Frame Spot Ag	Copper Frame Spot Ag
Leadfinishing (1)	Pure Tin (e3)	Ni Pd Au (e4)	Pure Tin (e3)	Pure Tin (e3)	Pure Tin (e3)	Pure Tin (e3)
Resin (2)	Sumitomo G631SHQ	Sumitomo G700F	Sumitomo G700LS	Sumitomo G631HQ	Sumitomo G631SH	Sumitomo G631SHQ
Glue	Ablestik 3230	Hitachi EN4900	Hitachi EN4900GC	Evertech AP4200	Sumitomo CRM 1076WA	Ablestik 3230
Wire	Silver 96.5% 0.8mil	Gold 1.0mil	Gold 0.8mil Silver 96.5% 0.8mil	Gold 0.8mil	Gold 0.8mil	Gold 0.8mil
Enhanced Traceability in marking	2 digits	No Digit	2 digits	No digit	2 digits	2 digits

QFN Packages

- UFQFPN 5X5X0.55 32L 0.5 MM PITCH
- UFQFPN 7X7X0.55 48L 0.5 MM PITCH

	Existing capacity		Added capacity
Assembly site	StatsChipPAC JSCC Jiangyin China	ST Calamba Philippines	Stats ChipPAC JSCC Jiangyin China
Leadframe	Copper Frame Spot Ag	Pre Plated Frame	Copper Frame Spot Ag
Leadfinishing (1)	Pure Tin (e3)	Ni Pd Au (e4)	Pure Tin (e3)
Resin (2)	Sumitomo G770	Hitachi CEL9240ZHF10	Sumitomo G770
Glue	Ablestik 8290 / Hitachi 4900GC	Ablestik QMI519	Ablestik 8290 / Hitachi 4900GC
Wire	Silver 96.5% 0.8mil	Silver 96.5% 0.8mil	Gold 0.8mil
Enhanced Traceability in marking	2 digits	2 digits	2 digits

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



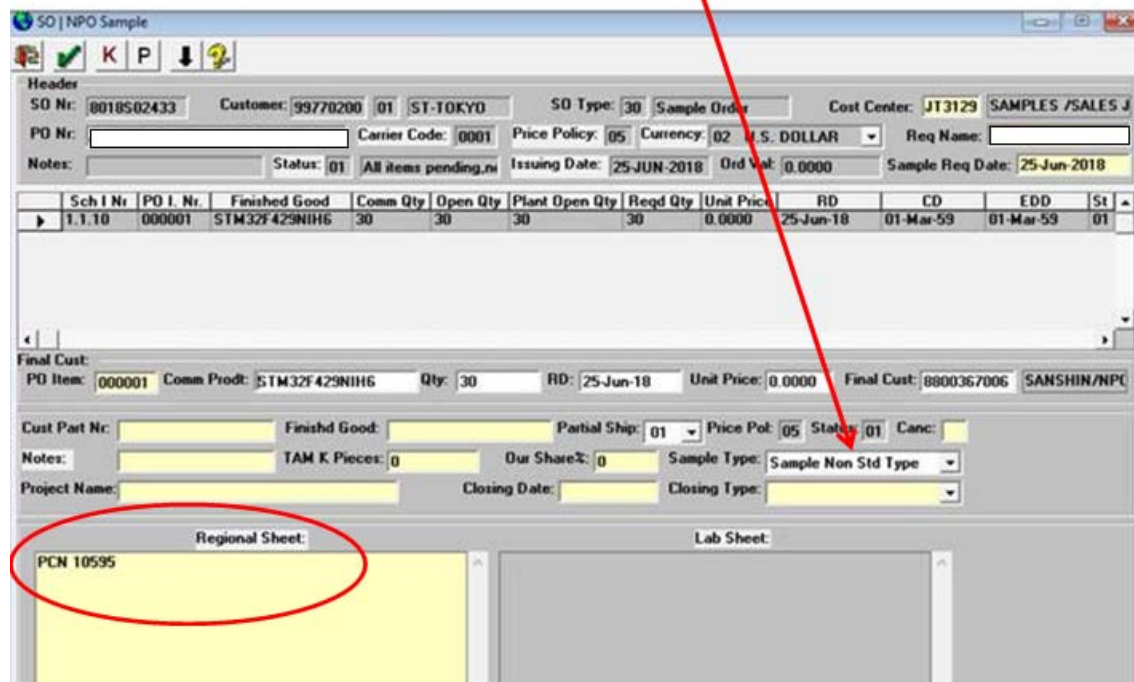
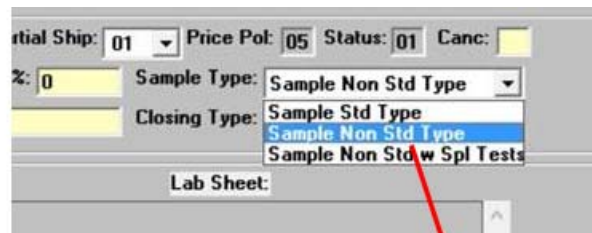
(2) Package darkness changes depending on molding compound.

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 to order samples?

For all samples request linked to this PCN, please:

- place a **Non-standard** sample order (choose Sample Non Std Type from pull down menu)
- insert the PCN number "**PCN12050**" into the NPO Electronic Sheet/**Regional Sheet**
- request sample(s) through Notice tool, indicating a single Commercial Product for each request



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RERMCD2005 JSCC Capacity increase PCN12050

Reliability Evaluation Plan

March 04th, 2020

MDG MCD Quality & Reliability Department



RERMCD2005 – JSCC Capacity increase STM8 / STM32 Die Test Vehicles

Die Vehicle	Process Perimeter	Package	Wire	Die Vehicle / Rawline (*)	Number of Reliability Lots
768	F9GO2 (ST Rousset)	LQFP10*10 64L	Au	768 / 5W*768	1
423	M10 6M1T (ST Crolles)	UQFN7*7 48L	Au	423 / MI*423	1
433	M10 6M1T (TSMC)	UQFN7*7 48L	Au	433 / MI*433	1
421	M10 6M1T (TSMC)	LQFP10*10 64L	Au	421 / 5W*421	1

RERMCD2005 – JSCC Capacity increase STM8 / STM32 Die Test Vehicles

Reliability Trial & Standard		Test Conditions	Pass Criteria	Lot Strategy	Units per Lot
PC	Pre Conditioning: Moisture Sensitivity Jedec Level 3 J-STD-020 / JESD22-A113	Bake (125°C / 24h) Soak (30°C / 60% RH / 192h) Convection reflow: 3 passes for Jedec level 3	3 Passes MSL3	4 lots	231 to 308 (**)
UHASt or AC (*)	Unbiased Highly Accelerated Temperature & Humidity Stress JESD22-A118 Autoclave or Pressure Pot JESD22-A102	130°C, 85%RH, 2 Atm 121°C, 100%RH, 2 Atm	96h	4 lots	77
TC (*)	Thermal Cycling JESD22-A104	-65°C +150°C	500Cy	4 lots	77
THB (*)	Temperature Humidity Bias JESD22-A101	85°C, 85% RH, bias	1000h	2 lots	77
HTSL (*)	High Temperature Storage Life JESD22-A103	150°C - no bias	1000h	4 lots	77
Construction Analysis	Upon ST Specifications	Focus on bonding area	No concern	1 lot by package assembly line	10
ESD CDM	ESD Charged Device Model ANSI-ESD STM5.3.1 / JESD22-C101	Aligned with device datasheet	250V to 750V	1 by package assembly line	2

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