



Public Products List

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PCN Title : ST Muar (Malaysia) Additional capacity through High Density Matrix Leadframe for STM8A AUTOMOTIVE listed products in LQFP 64 10x10 package

PCN Reference : MDG/22/13076

Subject : Public Products List

Dear Customer,

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

STM8AF5269TAY	STM8AF6289TCX	STM8AF52A9TDY
STM8AF5289TCX	STM8AF6289TCY	STM8AF62A9TCY
STM8AF6269TCX	STM8AF52A9TCY	STM8AF6289TAY
STM8AF5269TAX	STM8AF62A9TDY	STM8AF6269TCY
STM8AF5289TCY	STM8AF6269TAY	STM8AF5289TAY
STM8AF52A9TCX	STM8AF52A9TAY	STM8AF62A9TCX



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**PRODUCT/PROCESS
CHANGE NOTIFICATION
PCN13076– Additional information**

**ST Muar (Malaysia) Additional capacity through High Density
Matrix Leadframe for STM8A AUTOMOTIVE listed products in
LQFP 64 10x10 package**

MDG - Microcontrollers Division (MCD)

What is the change?

	Current back-end lines	New back-end line
Assembly site	ST Muar (Malaysia)	
wire	Gold 1.0 mil	Gold 0.8 mil
Leadframe	Matrix	High Density
Leadfinishing	Spot Ag, postplated (e3)	Ring Ag, postplated (e3)
Resin (1)	Sumitomo G700L	Sumitomo G700LS
Glue	LOCTITE ABLESTIK QMI9507-2A1	Hitachi EN4900GC
Enhanced Traceability in marking	No digit	2 digits SS marking 2D marking

(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 line, without any loss of information.



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How can the change be seen?

	No Digit	With Enhanced Tracability (2D & SS) marking
Marking example		

PP code indicates the Assembly traceability plant code.

PP code	Assembly Line - Fab
99	ST Muar (Malaysia)



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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 "**PCN13076**" into the NPO Electronic Sheet/**Regional Sheet**
- request sample(s) through Notice tool, indicating a single Commercial Product for each request

Partial Ship: 01 Price Pot: 05 Status: 01 Canc:

%: 0 Sample Type: Sample Non Std Type

Closing Type: Sample Std Type
Sample Non Std Type
Sample Non Std w Spl Tests

Lab Sheet:

SO | NPO Sample

Header
SO Nr: 8018502433 Customer: 99770200 01 ST-TOKYO SO Type: 30 Sample Order Cost Center: JT3129 SAMPLES /SALES J
PO Nr: Carrier Code: 0001 Price Policy: 05 Currency: 02 U.S. DOLLAR Req Name:
Notes: Status: 01 All items pending,ni 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 Prod: 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 Pot: 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

Lab Sheet:



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RER2214 for PCN13076
ST MUAR – LQFP10x10 64L
Automotive MTX to HD conversion
(Gold wires)

Reliability Evaluation Plan

August 25th, 2022

MDG GPM Quality & Reliability

RER2214 - ST MUAR - LQFP10x10 64L Automotive MTX to HD conversion Package Test Vehicles

Package line	Assembly Line	Package	Device (RawLine Code)	Diffusion Process Plant	Number of Reliability Lots
LQFP	LQFP 10*10	64L	STM8 (JJ5W*79AZ25T)	CMOS F9 G01 ST RSST 8	3

RER2214 - ST MUAR - LQFP10x10 64L Automotive MTX to HD conversion Extract AEC – Q100 Reliability flow

AEC - Q100 - REV-H
September 11, 2014

Automotive Electronics Council
Component Technical Committee

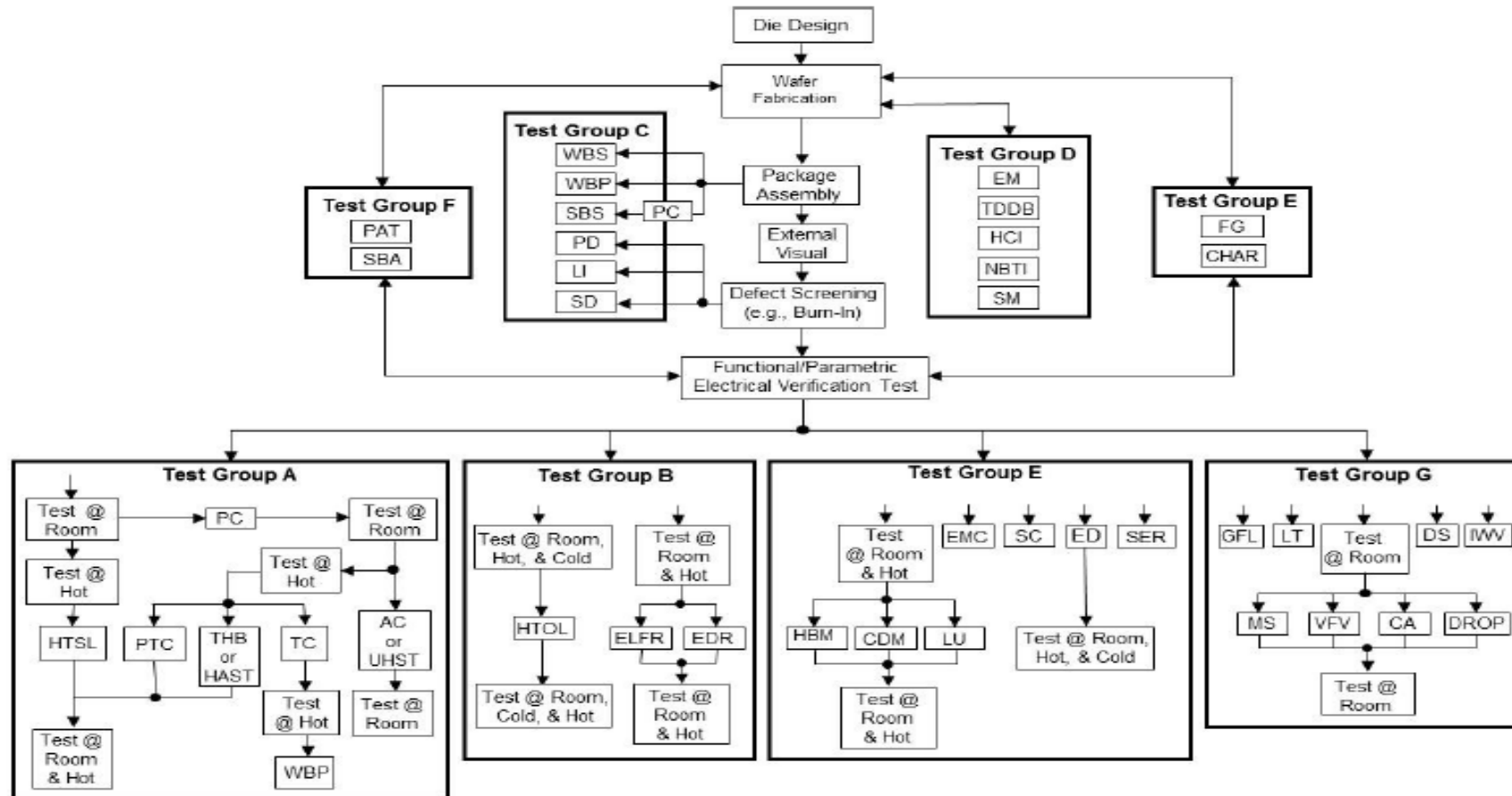


Figure 2: Qualification Test Flow

RER2214 - ST MUAR - LQFP10x10 64L Automotive MTX to HD conversion Package Reliability Trials (1/2)

Reliability Trial & Standards	Test Conditions	Pass Criteria	Unit per Lot	Lot qty	More critical constraints for components	
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	244	3	T0 test @ Room
uHAST (*)	UnBiased Highly Accelerated Temperature and Humidity Stress AEC-Q100 - JESD22 A118	130°C, 85%RH, 2 atm	96h	77	3	Read out after PC @ Room Read out 96h @ Room
TC(*)	Thermal Cycling AEC-Q100 - JESD22 A104	-55°C +150°C or equivalent	G0: 2000cy	90	3	Read out after PC @ Room + Hot Read out 1000cy/2000cy @ Hot
Wire Bond Pull after TC	Mil Std 883 Method 2011	Minimum pull strength after TC=3 grams	0cy/1000cy/ 2000cy	30 bonds from a minimum of 5 devices	3	5 devices @ 0cy/ 5 devices @ 1000cy/ 5 devices @ 2000cy
Wire Bond Shear after TC	AEC Q100-001	Min bond shear 15g	0cy/1000cy/ 2000cy	30	3	5 devices @ 0cy/ 5 devices @ 1000cy/ 5 devices @ 2000cy

(*) tests performed after preconditioning

RER2214 - ST MUAR - LQFP10x10 64L Automotive MTX to HD conversion Package Reliability Trials (2/2)

Reliability Trial & Standards	Test Conditions	Pass Criteria	Unit per Lot	Lot qty	More critical constraints for components	
THB (*)	Temperature Humidity Bias AEC-Q100 - JESD22-A101	85°C, 85% RH, bias, 5,6V	1000h	77	3	Read out after PC @ Room + Hot Read out 500h/1000h @ Room + Hot
HTSL	High Temperature Storage Life AEC-Q100 - JESD22 A103	150°C- no bias	G0: 2000h	77	3	T0 test @ Room + Hot Read out 1000h/2000h @ Room + Hot
Construction analysis	JESD 22B102 JESDB100/B108 ST internal spec	including Solderability, Physical dimensions, wire bond shear, wire pull test, lead integrity			1 full CA	
ESD	ESD Charge Device Model AEC-Q100-011 – ANSI/ESD STM5.3.1	Aligned with device datasheet	750V corner pins / 500V others	3	3	T0 test @ Room + Hot Read out after ESD @ Room + Hot

(*) tests performed after preconditioning

RER2214 - ST MUAR - LQFP10x10 64L Automotive MTX to HD conversion Die Reliability Trials

Reliability Trial & Standards	Test Conditions	Pass Criteria	Unit per Lot	Lot qty	More critical constraints for components	
ELFR	AEC-Q100-008 JESD22-A108	G0: 24h 150°C 2.2V	24h	800	1	T0 test @ Room + Hot Read out 24h @ Room + Hot
HTOL	AEC-Q100-005 JESD22-A108	G0: 1200h 150°C 2.2V	1200h	77	1	T0 test @ Room + Hot + Cold Read out 600/1200h @ Room + Hot + Cold

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