


**PRODUCT / PROCESS CHANGE NOTIFICATION**

**1. PCN basic data**

1.1 Company		STMicroelectronics International N.V
1.2 PCN No.	MDG/19/10994	
1.3 Title of PCN	ST Muar (Malaysia) back-End line capacity extension STM32 LQFP 14x14 SHD 100L listed products	
1.4 Product Category	STM32 LQFP 14x14 100L listed products	
1.5 Issue date	2019-11-15	

**2. PCN Team**

<b>2.1 Contact supplier</b>	
2.1.1 Name	HARTMANN DORIS
2.1.2 Phone	+49 89460062186
2.1.3 Email	doris.hartmann@st.com
<b>2.2 Change responsibility</b>	
2.2.1 Product Manager	Ricardo Antonio DE SA EARP
2.1.2 Marketing Manager	Veronique BARLATIER
2.1.3 Quality Manager	Pascal NARCHE

**3. Change**

3.1 Category	3.2 Type of change	3.3 Manufacturing Location
Materials	New direct material part number (same supplier, different supplier or new supplier), Bond wire material, diameter	ST Muar (Malaysia)

**4. Description of change**

	Old	New
4.1 Description	Back-end source: - ST Muar Malaysia (existing capacity line)	Back-end source: - ST Muar Malaysia (extended capacity line)
4.2 Anticipated Impact on form,fit, function, quality, reliability or processability?	SS marking is inserted. Pin1 identifier remains in the same corner but might change in terms of form and positioning. Package darkness changes depending on molding compound.	

**5. Reason / motivation for change**

5.1 Motivation	Due to the success on the market of STM32 devices, ST Microcontrollers Division decided to qualify an additional back-end line to maintain state of the art service level to our customers thanks to extra capacity.
5.2 Customer Benefit	CAPACITY INCREASE

**6. Marking of parts / traceability of change**

6.1 Description	Change is visible on the marking. Please refer to PCN 10994 – Additional information attached document.
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**7. Timing / schedule**

7.1 Date of qualification results	2019-09-25
7.2 Intended start of delivery	2019-12-16
7.3 Qualification sample available?	Upon Request

**8. Qualification / Validation**

8.1 Description	10994 MDG-MCD RER1604 V3.0 - PCN9511-PCN10994 - LQFP14x14 Muar -Reliability evaluation report.pdf		
8.2 Qualification report and qualification results	Available (see attachment)	Issue Date	2019-11-15

### 9. Attachments (additional documentations)

10994 Public product.pdf  
 10994 MDG-MCD RER1604 V3.0 - PCN9511-PCN10994 - LQFP14x14 Muar -Reliability evaluation report.pdf  
 10994 PCN10994\_Additional information.pdf

### 10. Affected parts

10. Affected parts		
10. 1 Current		10.2 New (if applicable)
10.1.1 Customer Part No	10.1.2 Supplier Part No	10.1.2 Supplier Part No
	STM32F205VCT6	
	STM32F205VCT6TR	
	STM32F205VET6	
	STM32F205VFT6TR	
	STM32F205VGT6	
	STM32F207VCT6	
	STM32F207VET6	
	STM32F207VFT6	
	STM32F207VGT6	
	STM32F215VGT6	
	STM32F217VGT6	
	STM32F217VGT6TR	
	STM32F401VBT6	
	STM32F401VCT6	
	STM32F401VET6	
	STM32F405VGT6	
	STM32F405VGT6TR	
	STM32F405VGT7	
	STM32F407VET6	
	STM32F407VGT6	
	STM32F407VGT6TR	
	STM32F407VGT7	
	STM32F411VET6	
	STM32F412VET6	
	STM32F415VGT6	
	STM32F415VGT6TR	
	STM32F417VGT6	
	STM32F417VGT6TR	
	STM32F427VGT6	
	STM32F427VIT6	
	STM32F429VET6	
	STM32F429VET6TR	
	STM32F429VGT6TR	
	STM32F429VIT6	
	STM32F437VGT6	
	STM32F437VIT6TR	
	STM32F439VIT6	
	STM32F446VET6	
	STM32F722VCT6	
	STM32F730V8T6	
	STM32F745VET6	
	STM32F745VGT6	
	STM32F750V8T6	
	STM32F765VGT6	

	STM32F765VIT6	
	STM32F767VIT6	
	STM32F407VET6TR	
	STM32F767VGT6	

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## PRODUCT/PROCESS CHANGE NOTIFICATION PCN 10994 – Additional information

### ST Muar (Malaysia) back-End line capacity extension STM32 LQFP 14x14 listed products

#### MDG - Microcontrollers Division (MCD)

#### What are the changes?

Changes are described in the below table on LQFP 14x14 packages:

	Existing back-end lines			Added back-end line
Assembly site	ST Muar Malaysia	ASE Kaohsiung Taiwan	Amkor ATP Philippines	ST Muar Malaysia
Leadframe finishing	PPF	Pure Tin	PPF	Pure Tin
Mold Compound/Resin (1)	Sumitomo EME-G700L	Sumitomo EME-G631SH	Sumitomo EME-G631HQ	Sumitomo EME-G700LS
Glue	Henkel 3280T	Sumitomo CRM 1076WA	Sumitomo CRM 1076YB	Henkel 8302
Wire	Gold 1.0mil	Gold 0.8mil	Gold 0.8mil	Silver 96.5% 0.8mil
Enhanced Traceability in marking	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.

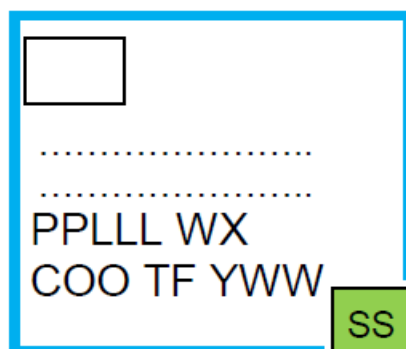
## How can the change be seen?

**PP** code indicates the Assembly traceability plant code.

Existing		Additional	
PP code	back-end lines	PP code	back-end line
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 subplot assembly traceability information.

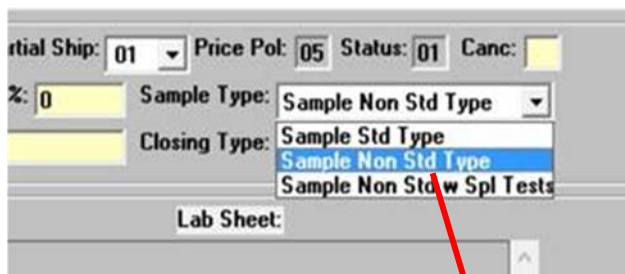
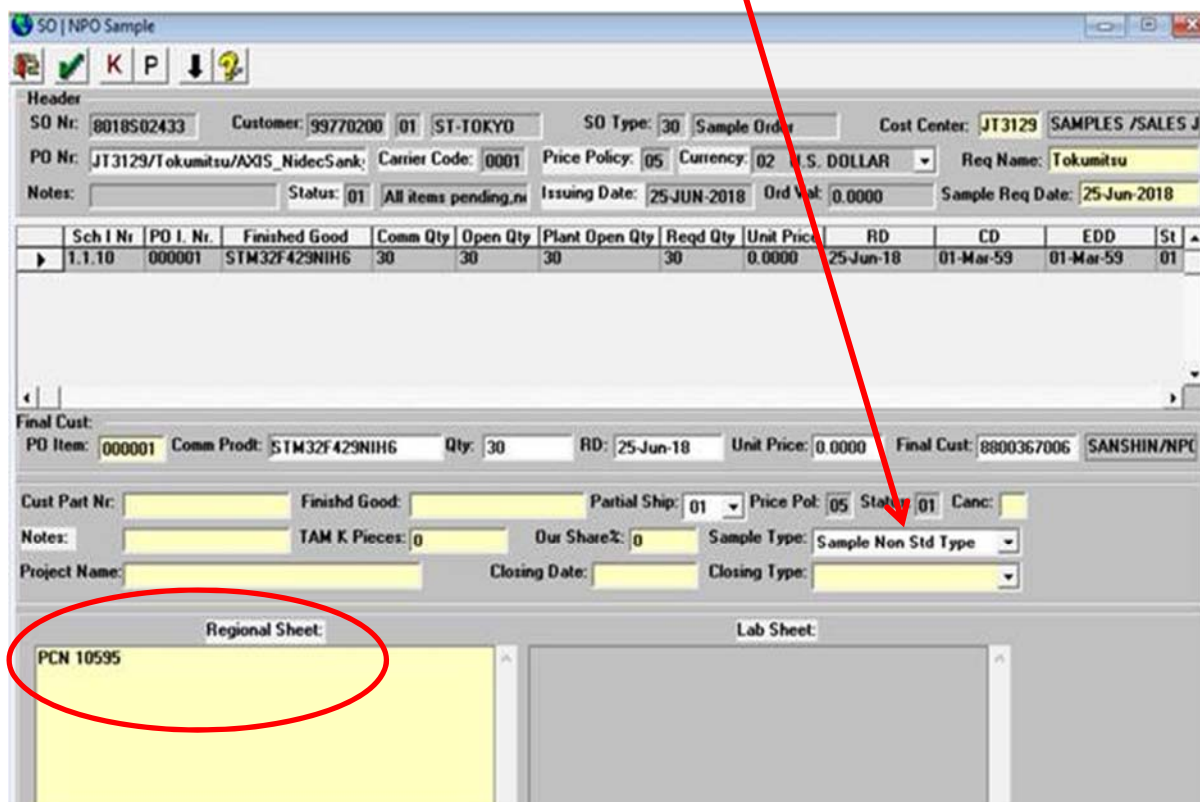


Please refer to the [DataSheet](#) for marking details.

## How to order samples?

For all samples request linked to this PCN, please:

- place a **Non-standard** sample order (choose Sample Non Std Type from pull down menu)
- insert the PCN number “**PCN 10994**” into the NPO Electronic Sheet/**Regional Sheet**
- request sample(s) through Notice tool, indicating a single Commercial Product for each request

Header

SO Nr: 8018502433 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,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: Finished 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

Lab Sheet:

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**LQFP 14x14 100L – ST Muar**  
**Additional back-end line qualification**  
**Test Vehicles 410, 427, 414, 415, 411, 419, 413**  
(PCN MMS-MCD/15/9511 dated 5 Nov 2015)  
(PCN10994 dated Sept 2019)

Product / Process & Package Information	Die 410	Die 427	Die 414	Die 415	Die 411	Die 419	Die 413
Commercial Product:	STM32F103 VBT6	STM32L152 VCT6	STM32F103 VET6	STM32L476 VGT6	STM32F205 VGT6	STM32F427 VIT6	STM32F415VG T6
Product Line:	STM32F die 410	STM32L die 427	STM32F die 414	STM32L Die 415	STM32F Die 411	STM32F Die 419	STM32F Die 413
Product Description:	Micro 32Bits						
Finish Good Code:	IS32F103 VBT6\$98	IS32L152 VCT6\$U6	IS32F103 VET6\$UA	IS32L476V GT6\$94	IS32F205V GT6\$98	IS32F427VI T6\$U6	IS32F415VGT6 \$97
Mask Set Revision:	X410XXXX	X427XXXV	X414XXX3	R415XXX4	R411XXX2	R419XXX3	R413XXX4
Silicon Process Technology:	0.18 M8 EMBEDDED FLASH	8X - CMOSF9S	0.18 M8 EMBEDDE D FLASH	N90_eFLAS H_6M1T	CMOSM1 0 6M1T	CMOSM1 0 6M1T	CMOSM1 0 6M1T
Wafer Fabrication Location:	TSMC Fab 3 Taiw an	ST Rousset 8 France	TSMC Fab 8 Taiw an	TSMC Fab14	ST Crolles	ST Crolles	TSMC Fab14
Electrical Wafer Sort Test Plant Location:	ST MICROELECTRONICS Ang Mo Kio EWS SINGAPORE		ARDENTEC Hsinchu EWS Taiw an	ST MICROELECTRONICS Ang Mo Kio EWS SINGAPORE		ARDENTEC Hsinchu EWS Taiw an	ARDENTEC Hsinchu EWS Taiw an
Package:	LQFP 100 14x14x1.4						
Assembly Plant location:	ST Muar (Malaysia)						
Final Test plant location:	ST Muar (Malaysia)						

Approval List			
Function	Location	Name	Date
Division BE Quality Manager	ST Rousset	Gisele SEUBE	October 15, 2019
Division Quality Manager	ST Rousset	Pascal NARCHE	October 15, 2019

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# 1 RELIABILITY RESULTS OVERVIEW

## 1.1 Objectives

This report summarizes the reliability results for LQFP 100 14x14 package manufactured at ST Muar (Malaysia).

Test vehicles are described here below :

Product	Package
STM32L152VCT6	LQFP 100 14x14x1.4
STM32F103VET6	
STM32F103VBT6	
STM32L476VGT6	
STM32F205VGT6	
STM32F427VIT6	
STM32F415VGT6	

## 1.2 Context

Due to the success on the market of STM32 devices, ST Microcontrollers Division decided to qualify an additional line to maintain state of the art service level to our customers, improving flexibility on manufacturing sites, thanks to extra capacity.

Changes are described in the below table on LQFP 14x14 packages:

Existing manufacturing sites				Added manufacturing site
<b>Assembly site</b>	Amkor ATK (Korea)	Amkor ATP (Philippines)	ST Muar (Malaysia)	ST Muar (Malaysia)
<b>Mold compound</b>	Nitto GE7470LQ	Sumitomo G631HQ	Sumitomo EME-G700L	Sumitomo EME-G700LS
<b>Glue</b>	Ablestik 8200C	Sumitomo CRM1076YB	Henkel 3280T	Henkel ABP8302
<b>Leadframe finishing (*)</b>	PPF	PPF	PPF	Pure Tin
<b>Silver wire</b>	0.8mil Au	0.8mil Au	1.0mil Au	0.8mil Ag

(\*) Lead color and surface finish change depending on lead finishing

Changes are qualified using the standard STMicroelectronics Corporate Procedures for Quality and Reliability, in full compliancy with the JEDEC-47 international standard.

## 1.3 Conclusion

All reliability tests have been completed with positive results for 410,414,427 (Products phase 1) for assembly line qualification then 415,411,419, 413 (Products phase 2/3) for proliferation of different Front End technology. Neither functional nor parametric rejects were detected at final electrical testing.

According to the positive reliability results, the qualification is granted for LQFP14x14 package assembled at ST Muar (Malaysia).

## 2 RELIABILITY TEST VEHICLES Characteristics

### 2.1 Reliability Test vehicles description

Package line	Assembly Line Package	Products Phase	Device (Partial Raw Line Code)	Diffusion Process	Number of Lots
SHD LQFP	LQFP14*14 100L	1	STM32 (1L*410)	TSMC 0.18µm	1
			STM32 (1L*414)	TSMC 0.18µm	1
			STM32L (1L*427)	F9GO2S (ST Rousset)	1
		2	STM32 (1L*411)	M10 (ST Crolles)	1
			STM32 (1L*419)	M10 (ST Crolles)	1
			STM32 (1L*415)	TSMC 90nm	1
		3	STM32 (1L*413)	TSMC M10	1

### 2.2 Reliability Information

Lot ID	Lot 1	Lot 2	Lot 3	Lot 4	Lot 5	Lot 6	Lot 7
Die Name /cut:	410	427	414	415	411	419	413
Diffusion Lot Number:	93610010	VG540403	98612075	9R606046	VQ647800	VQ607810	9R808115
Trace Code:	996220MM	996241E1	996220MN	99723041	997210YD	9973110J	99831124
Assy lot number	996220MM 01	996241E1 01	996220MN RR	99723041 RR	997210YD RR	9973110J 02	99831124 01
Raw Line Code Package:	921L*410 ESXX	U01L*427 ISXV	UH1L*414 ISX3	931L*415 ISX4	931L*411 ISX2	U01L*419 ISX3	941L*413 EIX4
Reliability Lab location :	ST Muar (Malaysia) (except THB for 415 done in Grenoble)						

## 2.3 Front-End information

Front-End	Lot 1 (410)	Lot 2 (427)	Lot 3 (414)	Lot 4 (415)	Lot 5 (411)	Lot 6 (419)	Lot 7 (413)
<b>Wafer Diameter:</b>	8 inches			12 inches			
<b>Wafer Thickness:</b>	375 +/-25 µm			775 +/-25 µm			
<b>Die Size:</b>	3.3908 x 3.328 µm	3.263 x 4.199 mm	4.511 x 4.440 mm	3.794 x 4.443 mm	4.006 x 3.674 mm	5.582 x 4.556 mm	4.004 x 4. 258 mm
<b>Scribe Line size x/y:</b>	80 x 80 µm		80.6 x 80.2 µm	80 x 80 µm			
<b>Pad Die Size /Pad type:</b>	59 x 123 µm	53 x 108 µm	65 x 70 µm	123 x 59 µm	123 x 59 µm 63 x 73 µm	123 x 59µm	123 x 59 µm 63 x 73 µm
<b>Metal Layers Number /Materials /Thickness:</b>	Metal 1 Tin/AlCu/Tin 0.450 µm Metal 2 Tin/AlCu/Tin 0.450 µm Metal 3 Tin/AlCu/Tin 0.450 µm Metal 4 Tin/AlCu/Tin 0.450 µm Metal 5 Tin/AlCu/Tin 0.875 µm	Metal 1 TaN/Ta/Cu 0.280 µm Metal 2 Ti/AlCu/TxTN 0.310 µm Metal 3 Ti/AlCu/TxTN 0.310 µm Metal 4 Ti/AlCu/TxTN 0.310 µm Metal 5 Ti/AlCu/TxTN 1.200 µm	Metal 1 Tin/AlCu/Tin 0.450 µm Metal 2 Tin/AlCu/Tin 0.450 µm Metal 3 Tin/AlCu/Tin 0.450 µm Metal 4 Tin/AlCu/Tin 0.450 µm Metal 5 Tin/AlCu/Tin 0.875 µm	Metal 1 TaN/Ta/Cu Seed /Cu 0.240 µm Metal 2 TaN/Ta/Cu Seed /Cu 0.310 µm Metal 3 TaN/Ta/Cu Seed /Cu 0.310 µm Metal 4 TaN/Ta/Cu Seed /Cu 0.310 µm Metal 5 TaN/Ta/Cu Seed /Cu 0.310 µm Metal 6 TaN/Ta/Cu Seed /Cu 0.850 µm Metal 7 AlCu 1.450µm	Metal 1 TaN/CuSeed/ Cu 0.240 µm Metal 2 TaN/CuSeed/ Cu 0.330 µm Metal 3 TaN/CuSeed/ Cu 0.330 µm Metal 4 TaN/CuSeed/ Cu 0.330 µm Metal 5 TaN/CuSeed/ Cu 0.330 µm Metal 6 TaN/CuSeed/ Cu 0.850 µm Metal 7 AlCu/TinArc 1.450µm	Metal 1 TaN/CuSeed/ Cu 0.240 µm Metal 2 TaN/CuSeed/ Cu 0.330 µm Metal 3 TaN/CuSeed/ Cu 0.330 µm Metal 4 TaN/CuSeed/ Cu 0.330 µm Metal 5 TaN/CuSeed/ Cu 0.330 µm Metal 6 TaN/CuSeed/ Cu 0.850 µm Metal 7 AlCu/TinArc 1.450µm	Metal 1 TaN/Ta/Cu Seed /Cu 0.220 µm Metal 2 TaN/Ta/Cu Seed /Cu 0.280 µm Metal 3 TaN/Ta/Cu Seed /Cu 0.280 µm Metal 4 TaN/Ta/Cu Seed /Cu 0.280 µm Metal 5 TaN/Ta/Cu Seed /Cu 0.280 µm Metal 6 Ta/Ta/AlCu 0.730 µm Metal 7 AlCu 1.200 µm
<b>Passivation Layers :</b>	HDPOx 10kA+SRO 1.5kA+ PESIN 6kA	USG + NitUV (HFP USG+UV Nitride)	HDPOx 10kA+SRO 1.5kA+ PESIN 6kA	PSG + NITRIDE	PSG + NITRIDE	PSG + NITRIDE	USG + NITRIDE
<b>Back Metal Finishing</b>	RAW SILICON - BACK GRINDING			RAW SILICON			

## 2.4 Back-End information

Back-End	Lot 1 (410)	Lot 2 (427)	Lot 3 (414)	Lot 4 (415)	Lot 5 (411)	Lot 6 (419)	Lot 7 (413)
Assembly Plant Location/ Address:	ST MICROELECTRONICS TANJONG AGAS IND ESTATE PO BOX 28 84007 MUAR / JOHOR MALAYSIA						
Die Thickness after Back grinding:	NA	NA	NA	375 +/-25 µm			
Die sawing method:	Step cut						
Die attach material: Type: Supplier:	Glue ABP8302 Loctite Ablestik (Henkel)						
Lead frame material: L/F Finishing Type: Die paddle size: Supplier:	RgAg+TNCu3r LF-HD LQFP 100L 14x14  TNCu3 Ring Ag  5.2 x 5.2  Shinko					RgAg+TNCu3r LF-HD LQFP 100L 14x14  TNCu3 Ring Ag 6.6 x 6.6  Shinko	RgAg+TNCu3r LF-HD LQFP 100L 14x14  TNCu3 Ring Ag 5.2 x 5.2  Shinko
Wire bonding: Type /Diameter: Supplier:	AG 96,5% WIRE 0.8MIL MKE						
Pitch:	80µm	70µm	80µm	65µm			
POA:	0086901						
Molding Compound Supplier:	EME-G700LS  SUMITOMO						
Package Moisture Sensitivity Level (JEDEC J-STD020D):	3						

### 3 RELIABILITY RESULTS SUMMARY

#### 3.1 Die oriented test

Die Related Tests						Results LQFP 14x14						
Description	Test/Method	Conditions	Sample Size	Criteria	Readout/Duration	410	427	414	415	411	419	413
Electrostatic discharge – Charge Device Model												
ESD CDM	ANSI/ESD STM5.3.1	500V	3 units	500V	NA	0/3	0/3	0/3	NA	NA	NA	NA
ESD CDM	ANSI/ESD STM5.3.1	250V	3 units	250V	NA	NA	NA	NA	0/3	NA	0/3	NA
ESD CDM	JESD22-C101D	500V	3 units	500V	NA	NA	NA	NA	NA	0/3	NA	0/3

#### 3.2 Package Oriented Test

Package Related Tests						Results LQFP 14x14		
Description	Test/Method	Conditions	Sample Size	Criteria	Readout/Duration	410	427	414
PC	J-STD-020 JESD22-A113	MSL3	231 units	Electrical test: A0/R1 (Accepted 0 reject/ Rejected 1 reject)	NA	0/231	0/231	0/231
		Delamination	60 units	No delamination		0/60	0/60	0/60
HTSL (no preconditioning)	JESD 22-A103	150°C	77 units	Elect test A0/R1	1000h	0/77	0/77	0/77
TC	JESD 22-A104	-50c/+150°c	77 units	Elect test A0/R1	1000cy	0/77	0/77	0/77
					2000cy as monitoring	0/77	0/77	0/77
Wire Bond Shear	AEC Q100-001	Min bond shear 15g after TC	30wires x 3	A0/R1	After TC 500cy TC 1000cy	0/30	0/30	0/30
Wire Bond Pull	Mil Std 883 Method 2011	Minimum pull strength after TC=3 grams after TC	30wires x 3	A0/R1	After TC 500cy TC 1000cy	0/30	0/30	0/30
UHASt	JESD 22A118	130°C ,85% 2Atm RH	77 units	Elect test A0/R1	96h	0/77	0/77	0/77
THB	JESD 22A110	85°C/85%RH Bias	77 units	Elect test A0/R1	1000h	0/77	0/77	0/77

Construction Analysis						
CA	Construction Analysis including : -Wire bond shear -Wire bond pull -Solderability -Physical Dimension	JESD 22B102 JESDB100/B108	50		No major concern	No major concern

Package Related Tests						Results LQFP 14x14			
Description	Test/Method	Conditions	Sample Size	Criteria	Readout/Duration	415	411	419	413
PC	J-STD-020 JESD22-A113	MSL3	231 units	Electrical test: A0/R1 (Accepted 0 reject/ Rejected 1 reject)	NA	0/231	0/231	0/231	0/231
		Delamination	60 units	No delamination		0/60	0/60	0/60	0/60
HTSL (no preconditioning)	JESD 22-A103	150°C	77 units	Elect test A0/R1	1000h	0/77	0/77	0/77	0/77
TC	JESD 22-A104	-50c/+150°C	77 units	Elect test A0/R1	1000cy	0/77	0/77	0/77	0/77
PPT	JESD 22-A102	121°C ,100% 2Atm RH	77 units	Elect test A0/R1	96h	0/77	0/77	0/77	0/77
THB	JESD 22A110	85°C/85%RH Bias	77 units	Elect test A0/R1	1000h	0/77	0/77	0/77	0/77
Construction Analysis									
CA		JESD 22B102 JESDB100/B108	50	No major concern		No major concern			



## 4 APPLICABLE AND REFERENCE DOCUMENTS

<b>ADCS/DMS 0061692 :</b>	Reliability Tests And Criteria For Qualifications
<b>SOP 2.6.2:</b>	Process qualification and transfer management
<b>SOP 2.6.7:</b>	Product Maturity Level
<b>SOP 2.6.9:</b>	Package and process maturity management in Back End
<b>SOP 2.6.11:</b>	Program management from product qualification
<b>SOP 2.6.19:</b>	Process maturity level
<b>ANSI-ESD STM5.3.1:</b>	Electrostatic discharge (ESD) sensitivity testing charge device model (CDM)
<b>JESD 22-A103</b>	High Temperature Storage Life
<b>J-STD-020D:</b>	Moisture/reflow sensitivity classification for non-hermetic solid state surface mount devices
<b>JESD22-A113:</b>	Preconditioning of non-hermetic surface mount devices prior to reliability testing
<b>JESD22-A118:</b>	Unbiased Highly Accelerated temperature & humidity Stress Test
<b>JESD22-A104:</b>	Temperature cycling
<b>JESD22-A110:</b>	Temperature Humidity Bake
<b>JESD22-A102:</b>	Pressure Pot (Unbiased Autoclave Test)
<b>JESD 22B102:</b>	Solderability test
<b>JESD22B100/B108:</b>	Physical dimension

## 5 GLOSSARY AND TESTS DESCRIPTION

<b>PC</b>	Preconditioning (solder simulation)
<b>THB</b>	Temperature Humidity Bias
<b>TC</b>	Temperature cycling
<b>uHAST</b>	Unbiased HAST
<b>PPT</b>	Pressure Pot (Unbiased Autoclave Test)
<b>HTSL</b>	High temperature storage life
<b>ADCS/DMS</b>	ST Advanced Documentation Controlled system/ Documentation Management system
<b>ESD CDM</b>	Electrostatic discharge (charge device model)
<b>CA</b>	Construction Analysis

## 6 REVISION HISTORY

Version	Date	Author	Comment
1.0	October 17, 2016	Lionel NEVORET	Initial release for qualification
1.1	January 24, 2017	Gisele Seube	Sample size correction page 7
2.0	August 03, 2018	Lionel NEVORET	Update with 415, 411 & 419 result
3.0	October 15, 2019	Lionel NEVORET	Update with 413 result

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## Public Products List

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**PCN Title :** ST Muar (Malaysia) back-End line capacity extension

STM32 LQFP 14x14 SHD 100L listed products

**PCN Reference :** MDG/19/10994

**Subject :** Public Products List

Dear Customer,

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

STM32F437VIT6WTR	STM32F215VGT7	STM32F205VCT7TR
STM32F427VIT7TR	STM32F405VGT6	STM32F407VGT6J
STM32F401VBT6TR	STM32F413VGT6	STM32F745VGT6
STM32F767VGT6	STM32F756VGT6	STM32F205VET6TR
STM32F217VET6	STM32F217VGT6	STM32F217VET6TR
STM32F207VGT6J	STM32F446VET6	STM32F207VCT6TR
STM32F407VGT7	STM32F205VGT6TR	STM32F401VBT6
STM32F407VET6	STM32F207VFT6TR	STM32F439VIT6
STM32F405VGT6J	STM32F205VFT6TR	STM32F777VIT6
STM32F439VGT6	STM32F205VCT6	STM32F217VGT6TR
STM32F437VGT7TR	STM32F205VET7TR	STM32F427VGT6TR
STM32F207VCT6	STM32F411VET6TR	STM32F429VGT6
STM32F405VGT6W	STM32F429VGT6TR	STM32F417VET6TR
STM32F446VET7	STM32F413VGT6TR	STM32F429VIT6
STM32F215VET6	STM32F205VCT7	STM32F205VGT7TR
STM32F205VGT6J	STM32F417VET6	STM32F207VGT6TR
STM32F469VIT6	STM32F732VET6	STM32F205VBT6
STM32F429VIT6TR	STM32F437VGT6	STM32F207VGT6
STM32F427VGT6	STM32F415VGT6	STM32F205VFT6
STM32F401VET6TR	STM32F207VET6	STM32F437VIT7TR
STM32F429VET6	STM32F401VCT7	STM32F437VIT6TR
STM32F205VGT6V	STM32F437VIT7	STM32F207VET6TR
STM32F427VIT6	STM32F437VGT7	STM32F205VET7
STM32F469VET6	STM32F215VGT6	STM32F412VGT6
STM32F413VGT3TR	STM32F427VIT6TR	STM32F417VGT6
STM32F405VGT6TR	STM32F411VET6	STM32F446VCT6
STM32F429VIT6E	STM32F407VGT6	STM32F767VIT6
STM32F407VGT7TR	STM32F205VGT6W	STM32F207VCT7
STM32F205VCT6TR	STM32F417VGT6TR	STM32F207VFT6
STM32F401VDT6	STM32F205VGT6	STM32F722VET6
STM32F750V8T7	STM32F412VET6TR	STM32F401VDT6TR
STM32F205VET6	STM32F205VGT7	STM32F765VGT6
STM32F746VGT6	STM32F412VGT6TR	STM32F412VET3TR
STM32F207VGT7	STM32F437VIT6	STM32F429VIT6G
STM32F765VIT6	STM32F746VGT7	STM32F750V8T6



## Public Products List

STM32F417VGT7	STM32F405VGT7TR	STM32F412VET3
STM32F412VET6	STM32F413VGT3	STM32F429VET6TR
STM32F730V8T6	STM32F405VGT7	STM32F401VCT6
STM32F405VGT6V	STM32F407VET6TR	STM32F401VET6
STM32F446VET6TR	STM32F415VGT6TR	STM32F765VGT6TR
STM32F479VGT6	STM32F746VET6	STM32F746VET6TR
STM32F479VIT6	STM32F407VGT6TR	STM32F722VCT6
STM32F423VHT6	STM32F413VHT6	STM32F767VGT7
STM32F745VET6	STM32F411VCT6	STM32F767VIT7
STM32F469VGT6	STM32F765VGT7	STM32F411VCT6TR
STM32F446VCT7		



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