



Public Products List

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PCN Title : Qualification of a new green resin for TSSOP products in TFME

PCN Reference : AMS/22/13755

Subject : Public Products List

Dear Customer,

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

LM293PT	TS952IPT	ST75185CTR
LM358PT	LM2903PT	TS922IPT
STPIC6C595TTR	TS972IPT	LM393PT
STPIC6D595TTR	STP08CP05TTR	TS462CPT
LM258WPT	ST8024LTR	LM2904PT
LM258PT	STP08DP05TTR	MC4558CPT



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Reliability Evaluation Report

STPIC6D595TTR, STPIC6C595TTR, LM2903PT, TS972IPT,
 ST8024LTR, ST75185CTR
 New Green Molding Compound Hitachi CEL-9210HFVL on
 TSSOP packages assembled in NANTONG FUJITSU -
 CHINA

General Information		Location	
Product Line	UP8701, UF8701, 039301, 046271, UQ8501, RS8501	Wafer Fab	CM5F-Catania, AM6F- Singapore
P/N	STPIC6D595TTR, STPIC6C595TTR, LM2903PT, TS972IPT, ST8024LTR, ST75185CTR	Assembly plant	NANTONG FUJITSU - CHINA
Product Division	AMS	Results	
Package	TSSOP 16/8/20		
Silicon Process Technology	BCD6, BCD3S, BIP, HF2CMOS, BCD6S, BIP (>6um)	Reliability Assessment	PASS

DOCUMENT INFORMATION

Version	Date	Pages	Prepared by	Approved by	Comment
1.0	11/3/2022	4	Antonio Russo	Giuseppe Lisi	
1.1	11/4/2022	4	Claudine Larato	Stephane Bellenger	

Note: This report is a summary of the reliability trials performed in good faith by STMicroelectronics in order to evaluate the potential reliability risks during the product life using a set of defined test methods.
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1 APPLICABLE AND REFERENCE DOCUMENTS

Document reference	Short description
JESD47	Stress-Test-Driven Qualification of Integrated Circuits

2 GLOSSARY

	Short description
T _j	Temperature at junction of the device
T _A	Temperature of ambient air
RH	Relative Humidity
V _{cc} max	Max Operative Voltage

3 RELIABILITY EVALUATION OVERVIEW

3.1 Objectives

This document is intended to provide reliability evaluation report of New Green Molding Compound NANTONG FUJITSU - CHINA on TSSOP 8/16/20 packages assembled in NANTONG FUJITSU - CHINA

3.2 Conclusion

Qualification requirements have been fulfilled without exception. Reliability tests have shown that the devices behave correctly against environmental tests (no failure). The stability of electrical parameters during the accelerated tests demonstrates the ruggedness of the products and safe operation, which is consequently expected during their lifetime.

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4 TESTS RESULTS SUMMARY

ST refers to the JEDEC standard JESD47 when conducting reliability tests for the qualification of new product.

4.1 Test plan and results summary

Table 1. Package qualification tests

Stress (Abb.)	Ref.	Conditions	Pass Criteria (Fails / Tested)						Notes
			UP87	UF87	0393	0462	UQ85	RS85	
			2 lots	1lot	1lot	1lot	2 lots	1lot	
MSL Preconditioning Must be performed prior to: TC, UHAST	JESD22 A113 J-STD-020	Preconditioning: (Test @ Rm) SMD only; Moisture Preconditioning for THB/HAST, AC/UHST, TC, & PTC; Peak Reflow Temp = 260C	MSL3	MSL3	MSL1	MSL1	MSL3	MSL3	
High Temperature Storage Life (HTSL)	JESD22 A103	T _A ≥ 150°C 1000hrs	0/154 parts	0/77 parts	0/77 parts	0/77 parts	0/154 parts	0/77 parts	
Unbiased HAST (UHAST)	JESD22 A118	130 °C / 85% RH 96hrs	0/154 parts	0/77 parts	0/77 parts	0/77 parts	0/154 parts	0/77 parts	1
Temperature Cycling (TC)	JESD22 A104	-65°C to +150°C 1000cycles	0/154 parts	0/77 parts	0/77 parts	0/77 parts	0/154 parts	0/77 parts	1

Table 2. Assembly integrity Tests

Stress (Abb.)	Ref.	Conditions	Requirements			Notes
			# Lot	SS	Pass Criteria (Fails / Tested)	
WBP	Mil-STD-883, Method 2011	30 wires, characterization	3	10 units / All bonds	PASS Cpk>1.67	2
WBS	JESD22-B116	30 balls, characterization	3	10 units / All bonds	PASS Cpk>1.67	2

Notes:

1. Preconditioning with soak per J-STD-020 at rated moisture sensitivity level prior to acceleration stress testing.
2. It has been performed on all the lots

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