Public Products List

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PCN Title : SOT323 5lds Transfer Qualification in Hefei TF (Assembly & Test)

PCN Reference : AMS/22/13762

Subject : Public Products List

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

TSZ121ICT	TS331ICT	LDK120C33R
TS881ICT	LMV821AICT	TSV851ICT
LMX321ICT	TSU101RICT	LDK130C33R
LMV331ICT	LMV321LICT	LMV821ICT
TSU111ICT	TSV851AICT	TSU101ICT
OA1NP22C		

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Reliability Evaluation Report

LDK120C33R
SOT 323 5 LDS in TFME HEFEI - CHINA

General Information	
Product Line	V79801
P/N	LDK120C33R
Product Division	AMS
Package	SOT 323 5 LDS
Silicon Process Technology	BCD6S

Location	
Wafer Fab	CM5F-Catania
Assembly plant	TFME HEFEI - CHINA
Results	
Reliability Assessment	PASS

DOCUMENT INFORMATION

Version	Date	Pages	Prepared by	Approved by	Comment
1.0	10/31/2022	4	Antonio Russo	Ivan Grasso	Intermediate Report

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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
Tj	Temperature at junction of the device
T_A	Temperature of ambient air
RH	Relative Humidity
Vcc max	Max Operative Voltage

3 RELIABILITY EVALUATION OVERVIEW

3.1 Objectives

This document is intended to provide reliability evaluation report of New Assembly plant TFME HEFEI - CHINA for SOT 323 5 LDS package

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.

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 (Abbv.)	Ref.	Conditions	Requirements				Notes
			# Lot	SS	Duration	Pass Criteria (Fails / Tested)	
MSL Preconditioning Must be performed prior to: THB, HAST, TC, AC, & UHAST	JESD22 A113 J-STD-020	Preconditioning: (Test @ Rm) SMD only; Moisture Preconditioning for THB/HAST, AC/UHST, TC, & PTC; Peak Reflow Temp = 260C	MSL1				
High Temperature Storage Life (HTSL)	JESD22 A103	$T_A \geq 150°C$	3 Lots	231	168hrs 500hrs 1000hrs	0/231 0/231 Running	
Unbiased HAST (UHAST)	JESD22 A118	130 °C / 85% RH	3 Lots	231	96hrs	0/231	1
Temperature Cycling (TC)	JESD22 A104	-65°C to +150°C	3 Lots	231	500 cycles	0/231	1
Temperature Humidity bias (THB)	JESD22-A101	85 °C, 85 % RH, Vcc max	3 Lots	231	168hrs 500hrs 1000hrs	0/231 Running	1

Table 2. Assembly integrity Tests

Stress (Abbv.)	Ref.	Conditions	Requirements			Notes
			# Lot	SS	Pass Criteria (Fails / Tested)	
Solderability	J-STD-002	>95% Lead coverage	3	15 units / All Lead	PASS	
WBP	Mil-STD-883, Method 2011	30 wires, characterization	3	15 units / All bonds	PASS Cpk>1.67	
WBS	JESD22-B116	30 balls, characterization	3	15 units / All bonds	PASS Cpk>1.67	

Notes:

1. Preconditioning with soak per J-STD-020 at rated moisture sensitivity level prior to acceleration stress testing.