

PRODUCT / PROCESS CHANGE NOTIFICATION

1. PCN basic data

1.1 Company	 STMicroelectronics International N.V
1.2 PCN No.	AMS/24/14631
1.3 Title of PCN	Introduction of additional products on TSHT assembly line (SO8 package for General Purpose Analog)
1.4 Product Category	See product list
1.5 Issue date	2024-03-16

2. PCN Team

2.1 Contact supplier	
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2.2 Change responsibility	
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2.1.2 Marketing Manager	Salvatore DI VINCENZO
2.1.3 Quality Manager	Jean-Marc BUGNARD

3. Change

3.1 Category	3.2 Type of change	3.3 Manufacturing Location
Transfer	Line transfer for a full process or process brick (process step, control plan, recipes) from one site to another site: Assembly site (SOP 2617)	Bouskoura / TSHT

4. Description of change

	Old	New
4.1 Description	Assembly plant : - ST Bouskoura	Assembly plant : - ST Bouskoura - TSHT
4.2 Anticipated Impact on form,fit, function, quality, reliability or processability?	No impact	

5. Reason / motivation for change

5.1 Motivation	SO8 assembly line in TSHT is running for the production of selected general purpose products for 7 years in volume. ST is pleased to announce the introduction of additional products on this line.
5.2 Customer Benefit	CAPACITY INCREASE

6. Marking of parts / traceability of change

6.1 Description	New finished good codes
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7. Timing / schedule

7.1 Date of qualification results	2024-03-11
7.2 Intended start of delivery	2024-06-17
7.3 Qualification sample available?	Upon Request

8. Qualification / Validation

8.1 Description	14631 PCN report for SO8 TSHT.pdf		
8.2 Qualification report and qualification results	Available (see attachment)	Issue Date	2024-03-16

9. Attachments (additional documentations)
14631 Public product.pdf 14631 PCN report for SO8 TSHT.pdf

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
LM211D	LM211D	
LM211DT	LM211DT	
LM311D	LM311D	
LM311DT	LM311DT	
ST1480ABDR	ST1480ABDR	
ST1480ACDR	ST1480ACDR	
	ST1480ACDR/US	
ST3485EBDR	ST3485EBDR	
ST3485ECDR	ST3485ECDR	
	ST3485EIDT	
	ST4485EBDR	
	ST485ABDR	
ST485BDR	ST485BDR	
ST485CDR	ST485CDR	
	ST490ABDR	

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**PRODUCT/PROCESS
CHANGE NOTIFICATION**

PCN AMS/24/14631

Analog, Power & Discrete, MEMS and Sensors Group (APMS)

**Introduction of additional products on TSHT assembly line
(SO8 package for General Purpose Analog)**

WHAT:

SO8 assembly line in TSHT is running for the production of selected general purpose products for 7 years in volume. ST is pleased to announce the introduction of additional products on this line.

Please find more information related to material change in the table here below

Material	Current process	Modified process	Comment
Diffusion location	ST Singapore	ST Singapore	No change
Assembly location	ST Bouskoura	TSHT China	
Molding compound	Sumitomo G700KC	Hitachi CEL-9220	
Die attach	Ablestick 8601-S25	Henkel 8200T	
Leadframe	Copper	Copper	
Plating	Matte Sn	Matte Sn	
Wire	Copper 1mil	Copper Pd coated 1 mil	

WHY:

The purpose of the introduction of additional products on TSHT assembly line is to provide a better support to our customers by enhancing the manufacturing process for higher volume production.

HOW:

The qualification program consists mainly of comparative electrical characterization and reliability tests.

You will find here after the qualification test plan which summarizes the various test methods and conditions that ST uses for this qualification program.

WHEN:

Additional products will be added on TSHT production line in Q2/2024.

Marking and traceability:

Unless otherwise stated by customer's specific requirement, the traceability of the parts assembled with the new material set will be ensured by new internal sales type, date code and lot number.

The changes here reported will not affect the electrical, dimensional and thermal parameters keeping unchanged all the information reported on the relevant datasheets.

There is -as well- no change in the packing process or in the standard delivery quantities. Shipments may start earlier with the customer's written agreement.

External Reliability Evaluation Report

New assembly plant TSHT

General Information		Locations	
Product Line	0158, UM37,UF75 , U494, UW23	Wafer fab	Ang Mo Kio 6", ST Catania
Product Description	Dual op amp, Power switch, RS485 Transceiver ,RS-485/ RS-422 transceiver LM358DT, STMP52141MTR,	Assembly plant	TSHT (TianShui Huatian Technology) China
P/N	ST485ECDR, ST485BDR, ST3485EBDR	Reliability Lab	Grenoble
Product Group	APMS		
Product division	GPA&RF		
Package	SO8,		
Silicon Process technology	Bipolar, BCD6, BCD3, BCD3S		

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

DUT	Device Under Test
PCB	Printed Circuit Board
SS	Sample Size

3 RELIABILITY EVALUATION OVERVIEW

3.1 Objectives

The objective of this evaluation is to qualify additional products in TSHT (Assembly & Test plant)
The line under qualification will serve several part numbers.
The qualification plan is based on the similarity and based on the JESD47 specification.

3.2 Conclusion

Qualification Plan requirements have been fulfilled without exception. It is stressed that reliability tests have shown that the devices behave correctly against environmental tests (no failure). Moreover, 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.

Reliability agreement for qualification.

4 DEVICE CHARACTERISTICS

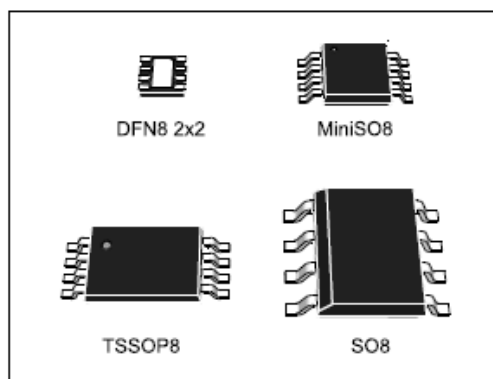
4.1 Device description



LM158, LM258, LM358

Low-power dual operational amplifiers

Datasheet - production data



Features

- Frequency compensation implemented internally
- Large DC voltage gain: 100 dB
- Wide bandwidth (unity gain): 1.1 MHz (temperature compensated)
- Very low supply current per channel essentially independent of supply voltage
- Low input bias current: 20 nA (temperature compensated)
- Low input offset voltage: 2 mV
- Low input offset current: 2 nA
- Input common-mode voltage range includes negative rails
- Differential input voltage range equal to the power supply voltage
- Large output voltage swing 0 V to ($V_{CC+} - 1.5$ V)

Related products

- See LM158W for enhanced ESD ratings

Description

These circuits consist of two independent, high-gain, internally frequency-compensated op amps, specifically designed to operate from a single power supply over a wide range of voltages. The low-power supply drain is independent of the magnitude of the power supply voltage.

Application areas include transducer amplifiers, DC gain blocks and all the conventional op amp circuits, which can now be more easily implemented in single power supply systems. For example, these circuits can be directly supplied with the standard 5 V, which is used in logic systems and will easily provide the required interface electronics with no additional power supply.

In linear mode, the input common-mode voltage range includes ground and the output voltage can also swing to ground, even though operated from only a single power supply voltage.



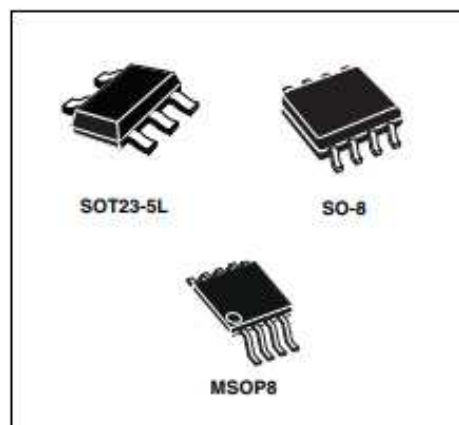
STMPS2141, STMPS2151, STMPS2161, STMPS2171

Enhanced single channel power switches

Datasheet – production data

Features

- 90 mΩ high-side MOSFET switch
- 500/1000 mA continuous current
- Thermal and short-circuit protection with overcurrent logic output
- Operating range from 2.7 to 5.5 V
- CMOS and TTL compatible enable input
- Undervoltage lockout (UVLO)
- 12 μA maximum standby supply current
- Ambient temperature range, -40 to 85 °C
- 8 kV ESD protection
- Reverse current protection
- Fault blanking
- UL recognized components (UL file number: E354278)



Description

The STMPS2141, STMPS2151, STMPS2161, STMPS2171 power distribution switches are intended for applications where heavy capacitive loads and short-circuits are likely to be encountered. These devices incorporate 90 mΩ N-channel MOSFET high-side power switches for power distribution. These switches are controlled by a logic enable input.

When the output load exceeds the current limit threshold or a short is present, the device limits the output current to a safe level by switching into a constant current mode. When continuous heavy overloads and short-circuits increase the power dissipation in the switch, causing the junction temperature to rise, a thermal protection circuit shuts the switch off to prevent damage. Recovery from a thermal shutdown is automatic once the device has cooled sufficiently. Internal circuitry ensures the switch remains off until a valid input voltage is present.

Table 1. Device summary

Order codes			Rated continuous output current (mA)	Enable
SO-8	SOT23-5L	MSOP8 ⁽¹⁾		
STMPS2141MTR	STMPS2141STR	STMPS2141TTR	500	Active low
STMPS2151MTR	STMPS2151STR	STMPS2151TTR	500	Active high
STMPS2161MTR	STMPS2161STR	STMPS2161TTR	1000	Active low
STMPS2171MTR	STMPS2171STR	STMPS2171TTR	1000	Active high

1. MSOP8 package is also known as "TSSOP8".



ST485EB ST485EC - ST485EX

±15 kV ESD protected, low power
RS-485/RS-422 transceiver

Features

- Low quiescent current: 300 μ A
- Designed for RS-485 interface application
- - 7 V to 12 V common mode input voltage range
- Driver maintains high impedance in 3-state or with the power OFF
- 70 mV typical input hysteresis
- 30 ns propagation delay, 5 ns skew
- Operates from a single 5 V supply
- Current limiting and thermal shutdown for driver overload protection
- ESD protection:
 - ± 15 kV (HBM)
 - ± 8 kV (IEC-1000-4-2 contact discharge)
- Allows up to 256 transceivers on the bus



Driver is short-circuit current limited and is protected against excessive power dissipation by thermal shutdown circuitry that place the driver outputs into a high-impedance state.

The ST485E is designed for bi-directional data communications on multipoint bus transmission lines (half-duplex applications).

Description

The ST485E is a low power transceiver for RS-485 and RS-422 communication. Each driver output and receiver input is protected against ± 15 kV electrostatic discharge (HBM) (ESD) shocks, without latch-up. These parts contain one driver and one receiver in half duplex configuration.

This transceiver draws 300 μ A (typ.) of supply current when unloaded or fully loaded with disabled drivers.

It operates from a single 5 V supply.

Table 1. Device summary

Order codes	Temperature range	Package	Packaging
ST485EBD	- 40 to 85 °C	SO-8 (tube)	100 parts per tube / 20 tube per box.
ST485ECDR	0 to 70 °C	SO-8 (tape and reel)	2500 parts per reel
ST485EBDR	- 40 to 85 °C	SO-8 (tape and reel)	2500 parts per reel
ST485EXDR	- 55 to 125 °C	SO-8 (tape and reel)	2500 parts per reel

3.3 V powered, 15 kV ESD protected, up to 12 Mbps RS-485/ RS-422 transceiver



SO8

Features

- ESD protection
 - ± 15 kV IEC 61000-4-2 air discharge
 - ± 8 kV IEC 61000-4-2 contact discharge
- Operate from a single 3.3 V supply - no charge pump required
- Interoperable with 5 V logic
- 1 μ A low current shutdown mode max.
- Guaranteed 12 Mbps data rate
- -7 to 12 V common mode input voltage range
- Half duplex versions available
- Industry standard 75176 pinout
- Current limiting and thermal shutdown for driver overload protection
- Guaranteed high receiver output state for floating inputs with no signal present
- Allow up to 64 transceivers on the bus
- Available in SO8 package
- Automotive grade (ST3485EIY)

Description

The **ST3485EB**, **ST3485EC**, **ST3485EI** and **ST3485EIY** devices are ± 15 kV ESD protected, 3.3 V low power transceiver for RS-485 and RS-422 communications. These devices contain one driver and one receiver in half duplex configuration.

These devices transmit and receive at a guaranteed data rate of at least 12 Mbps.

All transmitter outputs and receiver inputs are protected to ± 15 kV IEC 61000-4-2 air discharge.

The driver is short-circuit current limited and is protected against excessive power dissipation by thermal shutdown circuitry that places the driver outputs into a high impedance state.

Product status link

[ST3485EB, ST3485EC, ST3485EI and ST3485EIY](#)

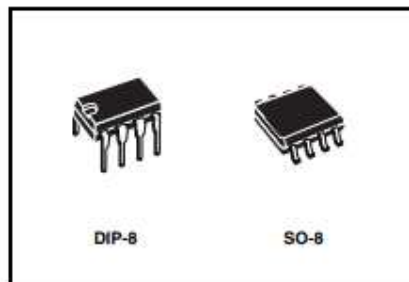


ST485B ST485C

Low power RS-485/RS-422 transceiver

Features

- Low quiescent current: 300 μ A
- Designed for RS-485 interface application
- - 7 V to 12 V common mode input voltage range
- Driver maintains high impedance in 3-state or with the power OFF
- 70 mV typical input hysteresis
- 30 ns propagation delay, 5 ns skew
- Operate from a single 5 V supply
- Current limiting and thermal shutdown for driver overload protection
- Allows up to 64 transceivers on the bus



The ST485 is available in three temperature range: commercial (0 °C to 70 °C), industrial (- 40 °C to 85 °C) and automotive (- 55 °C to 125 °C).

Description

The ST485 is a low power transceiver for RS-485 and RS-422 communication. Each part contains one driver and one receiver.

This transceiver draws 300 μ A (typ.) of supply current when unloaded or fully loaded with disabled drivers.

It operates from a single 5 V supply.

Driver is short-circuit current limited and is protected against excessive power dissipation by thermal shutdown circuitry that places the driver outputs into a high-impedance state.

The ST485 is designed for bi-directional data communications on multipoint bus transmission line (half-duplex applications).

Table 1. Device summary

Order code	Temperature range	Package	Packaging
ST485CN	0 to 70 °C	DIP-8	50 parts per tube / 40 tube per box
ST485BN	- 40 to 85 °C	DIP-8	50 parts per tube / 40 tube per box
ST485CDR	0 to 70 °C	SO-8 (tape and reel)	2500 parts per reel
ST485BDR	- 40 to 85 °C	SO-8 (tape and reel)	2500 parts per reel

Construction note

New Plant Qualification					
	P/N LM358DT	P/N: STMP52141MTR	P/N ST485ECDR	P/N ST485BDR	PN ST3485EBDR
Wafer/Die fab. information					
Wafer fab manufacturing location	ST Singapore	ST Catania	ST Singapore	ST Singapore	ST Singapore
Technology	PRO450S-C	BCD6	BCD3	BCD3S	BCD3S
Process family	Bipolar	BCD6	BCD3	BCD3S	BCD3S
Die finishing back side	Raw Silicon	Raw Silicon	Lapped silicon	Lapped silicon	Lapped silicon
Die size	1070 x 1010 μm^2	2198x0698 μm^2	2980 x 2230 μm	1780x1840	1950x2720
Passivation type	SiN (nitride)	TEOS/SiN/Polyimide	P-VAPOX/NITRIDE/ POLYIMIDE(PIQ)	USG-PSG-SiON-PIX	P-VAPOX /NITRIDE/POLY
Wafer Testing (EWS) information					
Electrical testing manufacturing location	ST SINGAPORE	ST SINGAPORE	ST SINGAPORE	ST SINGAPORE	ST SINGAPORE
Assembly information					
Assembly site	TSHT	TSHT	TSHT	TSHT	TSHT
Package description	SO8	SO8	SO8	SO8	SO8
Molding compound	Hitachi CEL-9220	Hitachi CEL-9220	Hitachi CEL-9220	Hitachi CEL-9220	Hitachi CEL-9220
Frame material	Copper	Copper	Copper	Copper	Copper
Die attach process	Glue	Glue	Glue	Glue	Glue
Die attach material	Ablestik - 8200T-	Ablestik - 8200T	Ablestik - 8200T	Ablestik - 8200T	Ablestik - 8200T
Wire bonding process	Thermosonic ball bonding	Thermosonic ball bonding	Thermosonic ball bonding	Thermosonic ball bonding	Thermosonic ball bonding
Wires bonding materials/diameters	1.0mil PdCu	1.3mil Gold	1 mil Copper	1 mil Copper	1 mil Copper
Lead finishing process	Electroplating	Electroplating	Electroplating	Electroplating	Electroplating
Lead finishing/bump solder material	Sn	Sn	Sn	Sn	Sn
Final testing information					
Testing location	TSHT	TSHT	TSHT	TSHT	TSHT

5 TESTS RESULTS SUMMARY

5.1 Test vehicle

Lot #	Process/ Package	Product Line	Comments
1	SO8/Bipolar	LM358DT	
2	SO8/Bipolar	LM358DT	
3	SO8/Bipolar	LM358DT	
4	SO8/BCD6	STMP52141MTR	
5	SO8/BCD6	STMP52141MTR	
6	SO8/BCD6	STMP52141MTR	
7	SO8/BCD3	ST485ECDR	
8	SO8/BCD3	ST485ECDR	
9	SO8/BCD3S	ST485BDR	
10	SO8/BCD3S	ST3485EBDR	

Detailed results in below chapter will refer to P/N and Lot #.

5.2 Test plan and results summary

P/N LM358DT

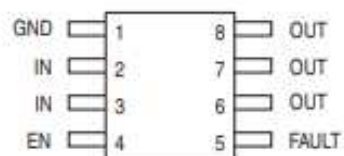
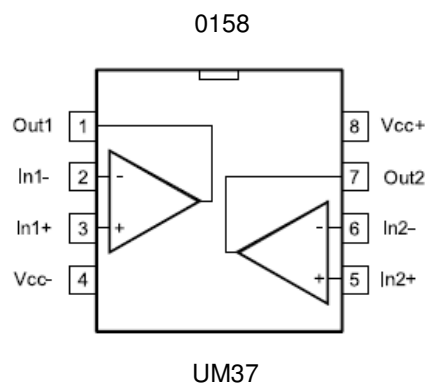
Test	PC	Std ref.	Conditions	SS	Steps	Failure/SS			Note
						Lot 1	Lot 2	Lot 3	
Die Oriented Tests									
HTOL	N	JESD22 A-108	Tj = 125°C, BIAS	80	168 H	0/80	0/80	0/80	
					500 H	0/80	0/80	0/80	
					1000 H	0/80	0/80	0/80	
HTSL	N	JESD22 A-103	Ta = 150°C		168 H	0/77	0/77		
					500 H				
					1000 H	0/77	0/77		
ELFR	N	AEC Q100 - 008		400	48H	0/400	0/401	0/396	
Package Oriented Tests									
PC		JESD22 A-113	Drying 24 H @ 125°C		Final	PASS	PASS	PASS	
			Store 192 H @ Ta=30°C Rh=60%						
			Over Reflow @ Tpeak=260°C 3 times						
uHAST	Y	JESD22 A-118	T°=130°C; Pressure=2.3 atm; HR=85%		96 H	0/80	0/80		
THS	Y	JESD22 A-110	Ta = 85°C, RH = 85%,		168 H	0/80			
					1000 H	0/80			
TC	Y	JESD22 A-104	Ta = -65°C to 150°C		100 cy	0/77	0/77		
					1000 cy	0/77	0/77		
THB	Y	JESD22 A-101	Ta = 85°C, RH = 85%, BIAS		168 H	0/77	0/77	0/77	
					500 H	0/77	0/77	0/77	
					1000 H	0/77	0/77	0/77	
Other Tests									
ESD	N	AEC Q101-001, 002 and 005	CDM	3	1.5kV	PASS			

[illegible]

6 ANNEXES

6.1 Device details

6.1.1 Pin connection



6.1.2 Package outline/Mechanical data

PACKAGE OUTLINE ASSEMBLY

TITLE: POA SO 8L

PLANT CODE: 999L

PACKAGE CODE: 07

PACKAGE WEIGHT: 0,0765 g/unit typ

JEDEC REFERENCE NUMBER: JEDEC MS-012-AA

Option C

PACKAGE DIMENSIONS

DATABOOK				
SYMBOL				NOTE
	MIN.	NOM.	MAX.	
A	-	-	1.75	
A1	0.10	-	0.225	
A2	1.30	1.40	1.50	
A3	0.60	0.65	0.70	
b	0.39	-	0.47	
b1	0.38	0.41	0.44	
c	0.20	-	0.24	
c1	0.19	0.20	0.21	
D	4.80	4.90	5.00	
E	5.80	6.00	6.20	
E1	3.80	3.90	4.00	
e	1.27BSC			
L1	1.05REF			
h	0.25	-	0.50	
L	0.50	-	0.80	
Ø	0	-	8°	

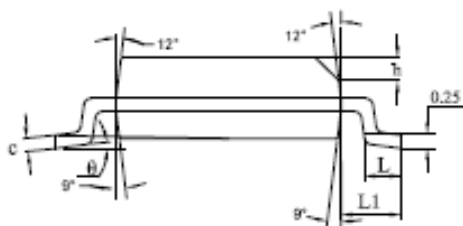
NOTES:

1. Controlling Dimension: MILLIMETER
2. Package outline exclusive of any mold flashes dimensions and metal burrs
3. Max resin gate protrusion : 0.20mm

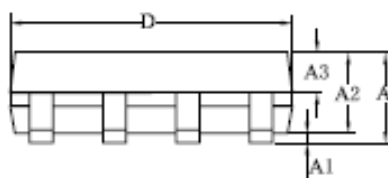
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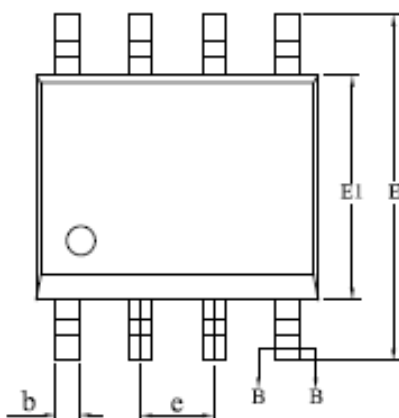
SIDE VIEW



SIDE VIEW

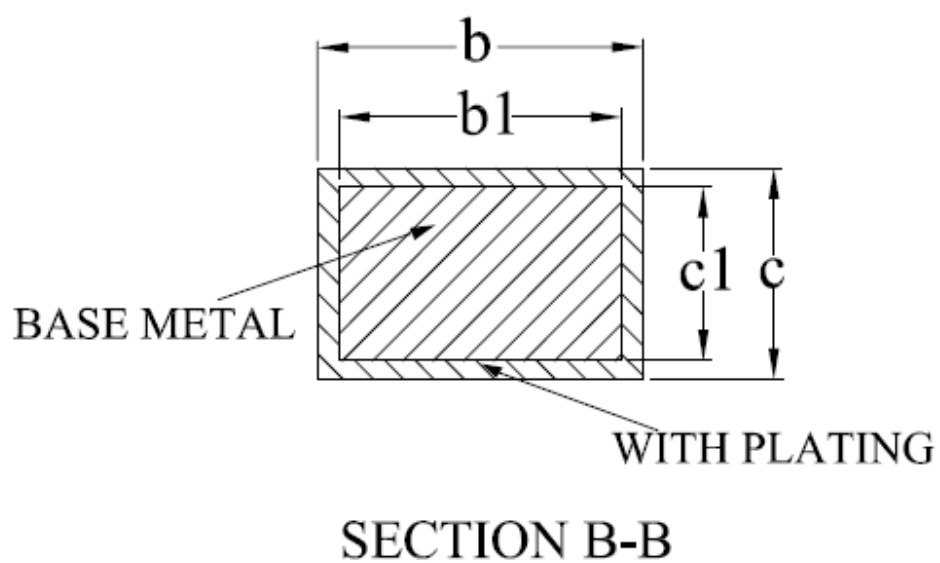


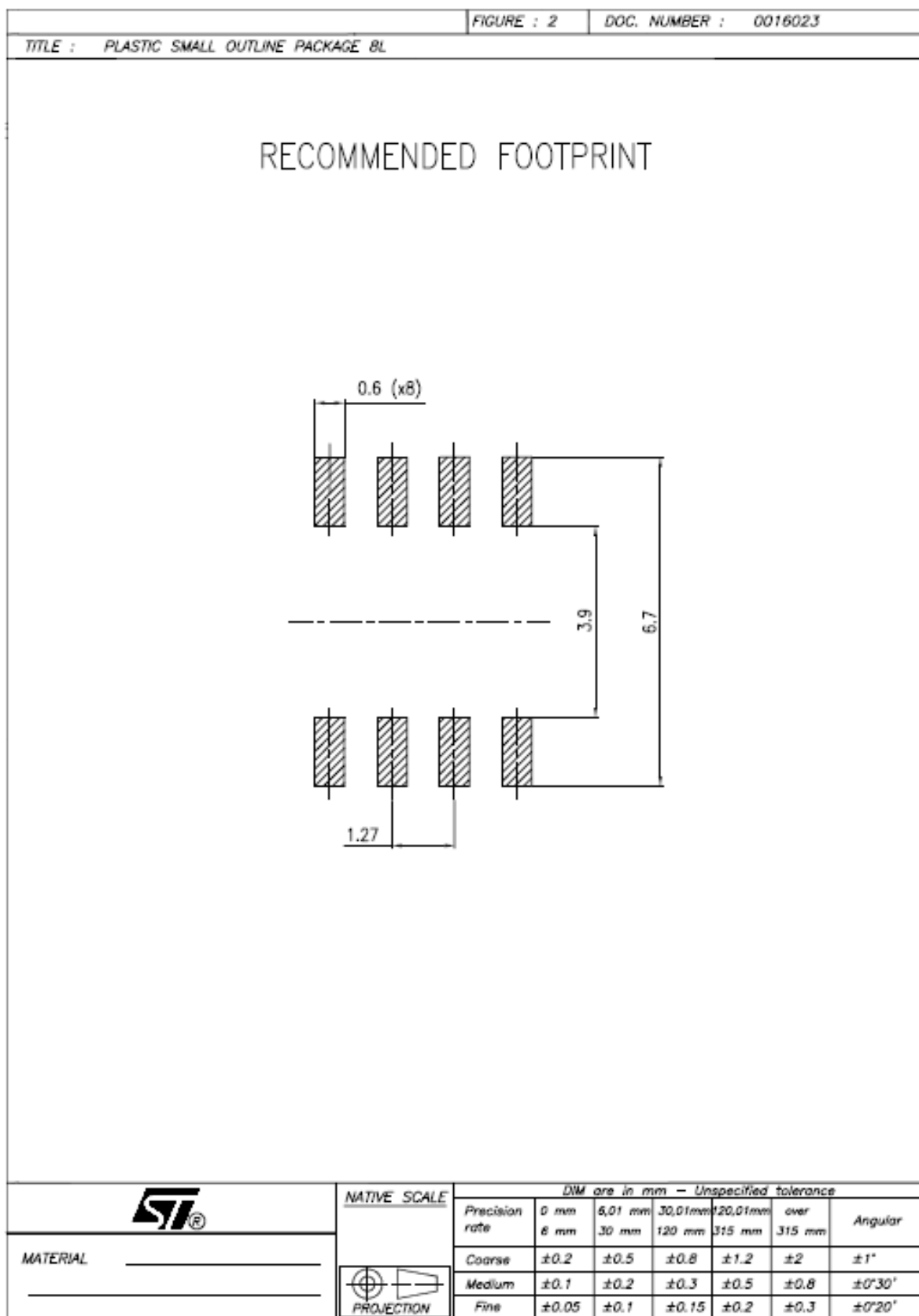
TOP VIEW



PLANT CODE: 999L

S0 8L





6.2 Tests Description

Test name	Description	Purpose
Die Oriented		
HTOL Higt Temperature Operating Life HTB High Temperature Bias	The device is stressed in static or dynamic configuration, approaching the operative max. absolute ratings in terms of junction temperature and bias condition.	To determine the effects of bias conditions and temperature on solid state devices over time. It simulates the devices' operating condition in an accelerated way. The typical failure modes are related to, silicon degradation, wire-bonds degradation, oxide faults.
HTSL High Temperature Storage Life	The device is stored in unbiased condition at the max. temperature allowed by the package materials, sometimes higher than the max. operative temperature.	To investigate the failure mechanisms activated by high temperature, typically wire-bonds solder joint ageing, data retention faults, metal stress-voiding.
ELFR Early Life Failure Rate	The device is stressed in biased conditions at the max junction temperature.	To evaluate the defects inducing failure in early life.
Package Oriented		
PC Preconditioning	The device is submitted to a typical temperature profile used for surface mounting devices, after a controlled moisture absorption.	As stand-alone test: to investigate the moisture sensitivity level. As preconditioning before other reliability tests: to verify that the surface mounting stress does not impact on the subsequent reliability performance. The typical failure modes are "pop corn" effect and delamination.
AC Auto Clave (Pressure Pot)	The device is stored in saturated steam, at fixed and controlled conditions of pressure and temperature.	To investigate corrosion phenomena affecting die or package materials, related to chemical contamination and package hermeticity.
TC Temperature Cycling	The device is submitted to cycled temperature excursions, between a hot and a cold chamber in air atmosphere.	To investigate failure modes related to the thermo-mechanical stress induced by the different thermal expansion of the materials interacting in the die-package system. Typical failure modes are linked to metal displacement, dielectric cracking, molding compound delamination, wire-bonds failure, die-attach layer degradation.
THB Temperature Humidity Bias	The device is biased in static configuration minimizing its internal power dissipation, and stored at controlled conditions of ambient temperature and relative humidity.	To evaluate the package moisture resistance with electrical field applied, both electrolytic and galvanic corrosion are put in evidence.
Other		
ESD Electro Static Discharge	The device is submitted to a high voltage peak on all his pins simulating ESD stress according to different simulation models. CBM: Charged Device Model HBM: Human Body Model MM: Machine Model	To classify the device according to his susceptibility to damage or degradation by exposure to electrostatic discharge.

Annex 1: Other results

Wire pull test

Value in gram (min limit 4g)						
	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
	23.67	23.97	22.2	21.1	22.17	20.99
	24.06	23.24	23.14	20.26	19.5	24.18
	19.33	24.01	21.18	23	25.42	19.36
	19.58	22.17	20.99	21.15	24.64	22.17
	20.16	20.35	24.87	22.87	24.2	20.5
	20.48	20.69	22.96	21.55	22.5	25.97
	20.77	21.29	21.34	21.51	21.3	24.64
	21.65	21.79	20.85	23.26	23.31	24.2
Min(g)	19.33					
Max(g)	25.97					
average(g)	22.09					
cpl	3.56					

Wire shear test

Value in gram (min limit 18g)						
	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
	46.89	49.58	48.33	49.26	46.21	46.88
	48.15	46.33	46.27	47.55	48.71	49.54
	45.25	49.88	16.86	45.65	49.55	49.67
	48.22	48.37	48.17	48.14	46.35	49.18
	47.36	48.16	46.88	49.33	45.33	49.24
	48.31	48.87	47.33	48.98	49.36	48.98
	49.16	49.33	45.33	50.17	48.71	48.36
	48.24	47.24	46.24	48.98	49.36	48.78
Min (g)	16.86					
Max (g)	50.17					
Average (g)	46.67					
cpl	2.05					

Conclusion: in line with ST specification

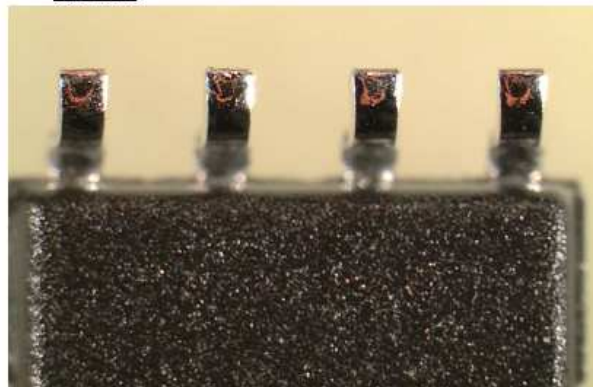
Solderability
Coverage minimum 95% after dipping

PACKAGE	SOLDER BATH	SOLDER BATH TEMP.	SOLDER DIPPING TIME	AGING	SAMPLING	REJECT
Lead finishing Sn Preplated	SnPb	220°C	10s	8h steam @85°C/85HR	10	0
			10s	16hrs dry air @150°C	10	0
	SnAgCu	245°C	10s	8h steam @85°C/85HR	10	0
			10s	16hrs dry air @150°C	10	0

Dry air SnAgCu



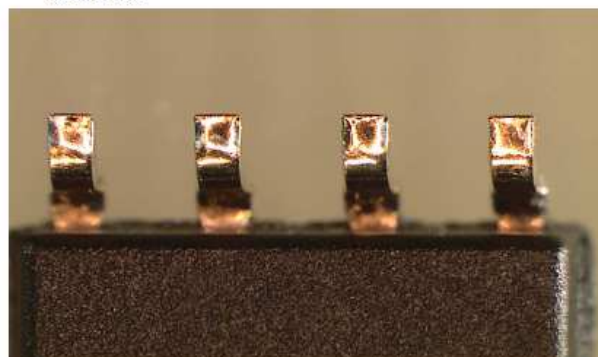
Steam SnPb



Dry air SnPb

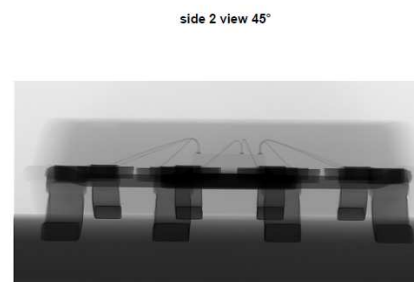
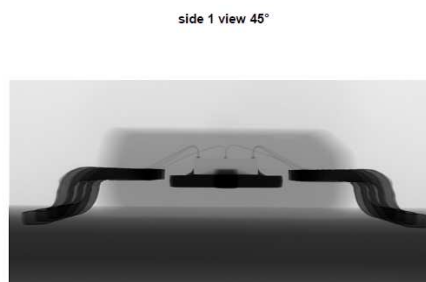
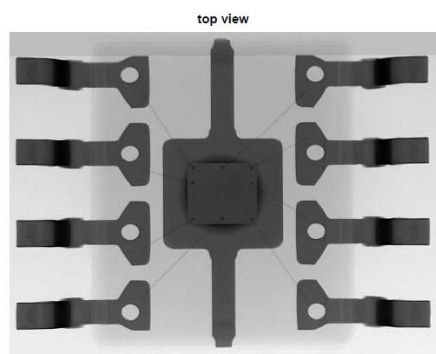


Steam SnAgCu



Conclusion: in line with ST specification.

Xray pictures





Public Products List

Public Products are off the shelf products. They are not dedicated to specific customers, they are available through ST Sales team, or Distributors, and visible on ST.com

PCN Title : Introduction of additional products on TSHT assembly line (SO8 package for General Purpose Analog)

PCN Reference : AMS/24/14631

Subject : Public Products List

Dear Customer,

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

ST490ABDR	ST1480ACDR/US	ST1480ACDR
ST3485ECDR	ST3485EIDT	LM311D
LM211DT	ST485BDR	LM211D
ST1480ABDR	ST485ABDR	ST3485EBDR
LM311DT	ST485CDR	ST4485EBDR

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