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Sherman, TX 75

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Texas Instruments Enhanced Plastic Products Reliability Re

(Subject To Attached Disclaimers)

Device Type/Device Family:	TPS3307-33MDGNREP
Package Type:	8/DGN
Wafer Fabrication Facility:	DL-LIN
Assembly/Test Facility:	Hana
Compiled:	12/13

Biased Life Test

Test Method:	JESD22-A108
Test Condition:	125°C / 1000 hours or equivalent
Sample Size:	9204
Rejects:	2
Activation Energy (eV):	0.7
Equivalent Device Hours:	3.04E+08
Failure Rate (FIT)*:	10.22

*Derated to +55°C with a 6

Package Related Tests

Description	Condition	Referenced Method	Sample Size
Biased Humidity or HAST	85°C / 85% / 1000 hours or 130°C / 85% / 96 hours	JESD22-A101 JESD22-A110	231
Autoclave	121°C @ 2 atmospheres absolute for 96 hours	JESD22-A102	**308**
Temperature Cycle	-65°C to +150°C non-biased for 1000 cycles or equivalent	JESD22-A104	770
High Temp Storage	150°C / 1,000 hours	JESD22-A103-A	334

* Preconditioning per JEDEC Std. 2

Initial Product Qualification

The subject Enhanced Plastic device, device family, and/or package family have passed Texas qualification as follows:

Description	Condition	Referenced Method	Sampl
Electrical Characterization	TI Data Sheet	N/A	3 lot(s)/3
Electrostatic Discharge Sensitivity	HBM MM CDM	EIA/JESD22-A114 EIA/JESD22-A115 JESD22-C101	3 Units/ N/ N/
Latch-up	Per Technology	EIA/JESD78	6/
Physical Dimensions	TI Data Sheet	EIA/JESD22- B100	N/
Thermal Impedance	Theta-JA on board	EIA/JESD51	Per Pin-I
Bias Life Test	125°C / 1000 hours or equivalent	JESD22-A108	11(
Biased Humidity or HAST	85°C / 85% / 1000 hours or 130°C / 85% / 96 hours	JESD22-A101 JESD22-A110	23
Autoclave	121°C @ 2 atmospheres absolute for 96 hours	JESD22-A102	23
Temperature Cycle	-65°C to +150°C non-biased for 1000 cycles or equivalent	JESD22-A104	23
High Temp Storage	150°C / 1,000 hours	JESD22-A103-A	12
Solder Heat	260°C for 10 seconds	JESD22-B106	N/
Solderability	Condition A (steam age for 8 hours)	ANSI/J-STD-002-92	66
Bond Strength	-	ASTM F-459	14(
Moisture Sensitivity	Surface Mount Only	J-STD-020-A	44

* Preconditioning per JEDEC Std. 2

Suplemental Device Characteristics

Master Die:	BLBD3307T33A	Assembly Site:	Hana
Wafer Fab:	DL-LIN	Pin/Package Type:	8/DGN
Fab Process:	LBC3S	Lead Composition:	CU
Fab Technology:	LBC3S	Lead Finish:	NIPDAU
Die Revision:	A	Mount Compound:	Ablestik 2200D
Passivation:	Nitride	Bond:	Au/1.0 mil
Metal 1:	TiW/AlSiCu (3.0kA/7.6kA)	Mold Compound:	Sumitomo EME-(
Metal 2:	TiW/AlSiCu (3.0kA/15.2kA)	Die Thickness:	10 mil

Quality and Reliability Data Disclaimer

The attached quality and reliability information is specific to the TI Enhanced Plastic product family of plastic encapsulated commercial-off-the-shelf (COTS) semiconductor products and components. Due to possible differences in product assembly and test baselines, this information is NOT APPLICABLE to TI standard, industrial, or automotive catalog commercial products.

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0% Confidence Level

Rejects

0	*
0	*
0	*
0	*

2, Method A112/A113

Instruments product

e Size

30 Units

'voltage
/A
/A

'0

/A

Package

6/0

1/0 *

1/0 *

1/0 *

7/0 *

/A

/0

6/0

/0

2, Method A112/A113

3600

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