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Texas Instruments Reliability Report

(Subject To Attached Disclaimers)

Device Type/Device Family: OPA549MKVC
Package Type: 11/KVC
Wafer Fabrication Facility: HFAB + SFAB
Assembly/Test Facility: HNC
Compiled: 07/14

Biased Life Test

Test Method: JESD22-A108
Test Condition: 125°C / 1000 hours or equivalent
Sample Size: 52592
Rejects: 0
Activation Energy (eV): 0.7
Equivalent Device Hours: 0.00E+00
Failure Rate (FIT)*: 2.7

*Derated to +55°C with a 60% Confidence Level

Package Related Tests

<u>Description</u>	<u>Condition</u>	<u>Referenced Method</u>	<u>Sample Size</u>	<u>Rejects</u>	
Biased Humidity or HAST	85°C / 85% / 1000 hours or 130°C / 85% / 96 hours	JESD22-A101 JESD22-A110	241	0	*
Autoclave	121°C @ 2 atmospheres absolute for 96 hours	JESD22-A102	415	0	*
Temperature Cycle	-65°C to +150°C non-biased for 1000 cycles or equivalent	JESD22-A104	461	0	*
High Temp Storage	150°C / 1,000 hours	JESD22-A103-A	187	0	*

* Preconditioning per JEDEC Std. 22, Method A112/A113

Initial Product Qualification

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

<u>Description</u>	<u>Condition</u>	<u>Referenced Method</u>	<u>Sample Size</u>	
Electrical Characterization	TI Data Sheet	N/A	3 lot(s)/30 Units	
Electrostatic Discharge Sensitivity	HBM	EIA/JESD22-A114	3 Units/voltage	
	MM	EIA/JESD22-A115	N/A	
	CDM	JESD22-C101	N/A	
Latch-up	Per Technology	EIA/JESD78	Validated by production history	
Physical Dimensions	TI Data Sheet	EIA/JESD22- B100	N/A	
Thermal Impedance	Theta-JA on board	EIA/JESD51	Per Pin-Package	
Bias Life Test	125°C / 1000 hours or equivalent	JESD22-A108	231/0	
Biased Humidity or HAST	85°C / 85% / 1000 hours or	JESD22-A101	231/0	*
	130°C / 85% / 96 hours	JESD22-A110		
Autoclave	121°C @ 2 atmospheres absolute for 96 hours	JESD22-A102	231/0	*
Temperature Cycle	-65°C to +150°C non-biased for 1000 cycles or equivalent	JESD22-A104	231/0	*
High Temp Storage	150°C / 1,000 hours	JESD22-A103-A	77/0	*
Solder Heat	260°C for 10 seconds	JESD22-B106	N/A	
Solderability	Condition A (steam age for 8 hours)	ANSI/J-STD-002-92	66/0	
Bond Strength	-	ASTM F-459	30/0	
Moisture Sensitivity	Surface Mount Only	J-STD-020-A	N/A	

* Preconditioning per JEDEC Std. 22, Method A112/A113

Supplemental Device Characteristics

Master Die: BP434G2427U	Assembly Site: HNC
Wafer Fab: HFAB + SFAB	Pin/Package Type: 11/KVC
Fab Process: P634 Bipolar	Lead Composition: CU
Fab Technology: Bipolar	Lead Finish: Matte SN
Die Revision: A	Mount Compound: Abletherm 2600AT
Passivation: 5KASiO ₂ /8KASiON	Bond: Au/76.2 UM (3.0 MIL)
Metal 1: AlCu0.5%	Mold Compound: EME-G605L
Metal 2: NA	Die Thickness: 279um

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