Qualification Summary:

AEC TEST GROUP	STRESS TEST	AEC TEST #	TEST CONDITIONS [*1]	REFERENCE TEST METHOD	SAMPLE SIZE PER LOT	NUMBER OF LOTS	RESULTS	REMARKS
Group A ACCELERATED ENVIRONMENT STRESS TESTS	Preconditioning (PC)	A1	Per MSL	J-STD-020 JESD22-A113	77	3	Pass	Per MSL classification
	Temperature Humidity Bias (THB) or Biased HAST (HAST)	A2	85°C/85%RH, 1000 hrs or 130°C/85%RH, 96 hrs	JESD22-A101 or JESD22-A110	77	3	Pass	
	Autoclave (AC) or Unbiased HAST (UHAST) or Temperature Humidity Without Bias (TH)	A3	121°C/100%RH, 96 hrs or 130°C/85%RH, 96 hrs or 85°C/85%RH, 1000 hrs	JESD22-A102 or JESD22-A118 or JESD22-A101	77	3	Pass	
	Temperature Cycling (TC)	A4	Per AEC Temp Grade	JESD22-A104	77	3	Pass	
	High Temperature Storage Life (HTSL)	A6	Per AEC Temp Grade	JESD22-A103	45	1	Pass	
Group B ACCELERATED LIFETIME SIMULATION TESTS	High Temperature Operating Life (HTOL)	B1	Per AEC Temp Grade	JESD22-A108	77	3	Pass	
	Early Life Failure Rate (ELFR)	B2	Per AEC Temp Grade	AECQ100-008	800	3	Pass	
Group C PACKAGE ASSEMBLY INTEGRITY TESTS	Wire Bond Shear (WBS)	C1	-	AECQ100-001	30 bonds from minimum of 5 devices		Pass	As applicable
	Wire Bond Pull (WBP)	C2	-	MIL-STD883 Method 2011			Pass	As applicable
	Solderability (SD)	C3	-	J-STD-002	15	1	Pass	
	Physical Dimensions (PD)	C4	-	JESD22-B100 and B108	10	3	Pass	
Group D DIE FABRICATION RELIABILITY TESTS	Electromigration (EM)	D1	-	-	-	-	-	Die Fabrication Reliability data may be viewed on-site at Analog Devices
	Time Dependent Dielectric Breakdown (TDDB)	D2	-	-	-	-	-	
	Hot Carrier Injection (HCI)	D3	-	-	-	-	-	
	Bias Temperature Instability (BTI)	D4	-	-	-	-	-	
	Stress Migration (SM)	D5	-	-	-	-	-	
Group E ELECTRICAL VERIFICATION TESTS	ESD HBM (Human Body Model)	E2	-	AECQ100-002	3	1	See Data Sheet/ Contact Us	
	ESD CDM (Charged Device Model)	E3	-	AECQ100-011	3	1	See Data Sheet/ Contact Us	
	Latch-Up (LU)	E4	-	AECQ100-004	3	1	Pass	
	Electrical Distribution (ED)	E5	-	AECQ100-009	30	3	Pass	

1. *Or equivalent JEDEC conditions*

For FIT/ MTTF estimates, visit FIT/ MTTF

Important Notice and Disclaimer

The Information provided in this report is generic data which reflects the overall reliability of the technology grouping for the selected product. Where a device of interest is not sampled, it is valid to use the reliability data ("Information") of the technologies to which the part belongs, since all parts within the same family are designed to the same rules and manufacturing as controlled by SPC.

Analog Devices products must never be operated outside the specified datasheet limits and conditions, and this Information must never be used as an indication of the reliability of a product outside of those specified data sheet limits and conditions. THE INFORMATION PROVIDED IN THIS DOCUMENT IS PROVIDED FOR REFERENCE ONLY AND "AS IS" AND ANALOG DEVICES DISCLAIMS ALL WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE OR NONINFRINGEMENT. Analog Devices grants you permission to use this Information only for the development of an application that uses the Analog Devices products described in the Information. No license is granted to any other intellectual property right owned by Analog Devices or any third party. Analog Devices does not guarantee compliance of the safety and security applications on the integrating system. You are solely responsible for: (1) ensuring the appropriate Analog Devices products are selected for the integrating application; (2) designing, validating and testing the integrating application; and (3) ensuring the integrating application meets applicable standards and any other safety, security, regulatory or other requirements. You implement safety critical applications at your own risk, including such applications for life support, implantable medical devices, space, transportation, nuclear, and other safety applications. Where malfunction of the product results in personal injury, death, property damage or environmental harm, you agree to defend, indemnify, and hold Analog Devices harmless from all damages, claims, suits or expenses. Analog Devices assumes no liability for direct, indirect, special, incidental, consequential or punitive damages or for infringements of patents or other rights of third parties.

ADI's Terms and Conditions of Sale govern the sale of Analog Devices products.