TELLURIAN®
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Qualifying Test Conditions For Crystals, Oscillators, and SAW Devices

TEST	TEST CONDITION	REFERENCE STANDARD
THERMAL SHOCK	55°C to +125°C, each temperature 10 minutes, total of 200 cycles	MIL-STD-883 1010, condition B
FINE LEAK	Mass spectrometer leak rate less than $2x10^{-8}$ ATM cc/sec of helium	MIL-STD-883D 1014.9, condition A
GROSS LEAK	All units leak tested in deionized water Vacuum degree: 70 cm/Hg (700 torr)	MIL-STD-883D 1014.9, condition A
HIGH TEMPERATURE & HUMIDITY STORAGE	85°C, 85% relative humidity, 500 hours	JESD22-A101
AGING	+25°C, +85°C, +125°C, test time period 1, 2, 4, 7, 10, 20, 50, 100 days	MIL-STD-883 1005 Condition A or B MIL-STD-883 1005 Condition A or B
MECHANICAL SHOCK	5000 g, half-sine, 0.3 ms, 3 directions 3 times	MIL-STD-883D 2002.3, condition D
VIBRATION	10~2000 Hz, 1.52 mm, 20 g each axis 4 Hours	MIL-STD-883 2007, condition A
RESISTANCE TO SOLDERING HEAT	260°C ±5°C for 10 ±1 seconds 260°C ±5°C for 10 ±1 seconds	MIL-STD-202F 210B, condition B
SOLDERABILITY	First: Steam Aging 93°C +3/-5, 8 ±0.5 hours Second: Dipping 245°C ±5°C , 5 ±0.5 seconds	JESD22-B102
IR REFLOW	Pre-heating: 150°C to 200°C, 60~120 seconds Heating: 217°C , 60~150 seconds Peak: 260°C ±5°C , 25 ±5 seconds; Go through twice	J-STD-020D
DROP TEST	70, 80, 90 cm, each height for 3 times on hardboard	IEC 60068-2-32
RESISTANCE TO SOLVENT	165°C, 3 mins in deionized water; 2.5 mins in coolant	MIL-STD-202E 215
PIN BEND TEST	Pins will withstand maximum 3 bend of 90°	IEC 60068-2-21
LOW TEMP STORAGE	-40°C for 500 hours -40°C for 500 hours	IEC 60068-2-1
SALT SPRAY	35 ±2°C, 5% salt spray for 96 hours	MIL-STD-883H
BUMP TEST	40 g / 6 ms, each axis for 4000 times	IEC 60068-2-29
BEND TEST	Deflection: 3 mm for 30 seconds	IEC 60068-2-21
PUSH TEST	10 N for 10 seconds	IEC 60068-2-21
PRESS TEST	10 N for 10 seconds	IEC 60068-2-21
TENSILE FORCE	10 N for 10 seconds	IEC 60068-2-21