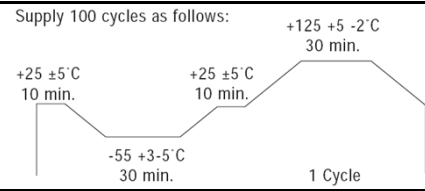


# RELIABILITY TEST PROCEDURES FOR ECX-1048 Series



<b><u>NO.</u></b>	<b><u>TEST NAME</u></b>	<b><u>TEST PROCEDURES</u></b>	<b><u>REQUIREMENTS</u></b>
1	<b>SHOCK</b>	Drop 3 times from the height of 100cm onto hard wooden board.	Frequency Drift $\pm 5$ PPM Max. Resistance Drift $\pm 15\%$ Max.
2	<b>VIBRATION</b>	Vibration Frequency: 10 to 55Hz, 1.5mm, full wave Cycle: 2 min. Direction: X.Y.Z. Time: 2 hours in each direction	Frequency Drift $\pm 5$ PPM Max. Resistance Drift $\pm 15\%$ Max.
3	<b>STORAGE IN HIGH TEMPERATURE</b>	+85 $\pm 2^{\circ}\text{C}$ for 500 hours.	Frequency Drift $\pm 5$ PPM Max. Resistance Drift $\pm 15\%$ Max.
4	<b>STORAGE IN LOW TEMPERATURE</b>	-40 $\pm 2^{\circ}\text{C}$ for 500 hours.	Frequency Drift $\pm 5$ PPM Max. Resistance Drift $\pm 15\%$ Max.
5	<b>RESISTANCE TO SOLDERING HEAT</b>	Pass through reflow for 10s (Max.) which is pre-heated at a temperature of 160 $^{\circ}\text{C}$ $\pm$ 10 $^{\circ}\text{C}$ and 240 $^{\circ}\text{C}$ $\pm$ 5 $^{\circ}\text{C}$	Frequency Drift $\pm 5$ PPM Max. Resistance Drift $\pm 15\%$ Max.
6	<b>HUMIDITY</b>	+ 60 $\pm 2^{\circ}\text{C}$ in humidity 95% for 500 hours.	Frequency Drift $\pm 5$ PPM Max. Resistance Drift $\pm 15\%$ Max.
7	<b>THERMAL SHOCK</b>	Supply 500 cycles as follows: Temperature shift shall be done within 30 sec. -55 $\pm 2^{\circ}\text{C}$ <span style="float:right">+125 <math>\pm 2^{\circ}\text{C}</math></span> (30 min) <-----> (30 min)	Frequency Drift $\pm 5$ PPM Max. Resistance Drift $\pm 15\%$ Max.
8	<b>TEMPERATURE CYCLE</b>	Supply 100 cycles as follows:  +25 $\pm 5^{\circ}\text{C}$ 10 min. <span style="float:right">+125 <math>\pm 5.2^{\circ}\text{C}</math></span> <span style="float:right">30 min.</span> -55 $\pm 3.5^{\circ}\text{C}$ 30 min. <span style="float:right">1 Cycle</span>	Frequency Drift $\pm 5$ PPM Max. Resistance Drift $\pm 15\%$ Max.
9	<b>SEALING TIGHTNESS MIL-STD 202F METHOD 112D TEST C AND D</b>	1) Dipping in Florinert at: +125 $\pm 5^{\circ}\text{C}$ for 5 min. (Gross Leak)	There are no visual abnormalities.
		2) Leak rate shall be measured by using: Helium leak Detector (Fine Leak)	There are no visual abnormalities.
10	<b>Mean Time Between Failures (MTBF)</b>	$\text{MTBF (25}^{\circ}\text{C)} = \frac{E_a \times (1/T_1 - 1/T_2) / K}{\pi}$ HsXe <sup>9</sup> Ce	16396600 Hours