

**Laboratory** Environmental Test Department, Quality Assurance Division, Bharat Electronics Limited, Block-B,C,E & F, Jalahalli Post, Bangalore, Karnataka

**Accreditation Standard** ISO/IEC 17025: 2005

**Certificate Number** TC-5479 (In lieu of T-3322)

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**Validity** 09.03.2017 to 08.03.2019

Last Amended on 13.04.2017

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
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**ELECTRONICS TESTING**

<b>I. ENVIRONMENTAL TEST FACILITY</b>				
1.	<b>Electronic Products, PCBs, Modules, Sub Systems, System</b>	High temperature	JSS 55555:2012 (Rev.No.3) :Test No.17 JSS 50101:1996 (Rev.No.1) Test No.22 MIL 810 G: 31 Oct 2008 Method: 501.5-1 to 501.5-13	Qualitative (25 °C to 250 °C)
		Low Temperature	JSS 55555:2012 (Rev.No.3): Test No.20 JSS 50101: 1996 (Rev.No.1): Test No.21 MIL 810 G: 31 Oct 2008 Method: 502.5-1 to 502.5-9	Qualitative ((-70 °C to 25 °C)
		Damp Heat (Steady State)	JSS 55555:2012 (Rev. No.3): Test No.10 JSS 50101:1996 (Rev. No.1): Test No.7 MIL 810 G 31 Oct 2008 Method: 507.5-1 to 507.5 A-1	Qualitative (20 °C to 75°C 95 % R.H.)
		Damp Heat (Cyclic)	JSS 50101:1996 (Rev. No.1) : Test No.5	Qualitative (25 °C to 55°C 90 % R.H to 95 % R.H.)
		Damp Heat (Moisture resistant)	JSS 50101: 1996 (Rev.No.1): Test No.6. MIL 810 G: 31 Oct 2008 Method:507.5-1 to 507.5A-1	Qualitative (25 °C to 65 °C 90 % to 95 % R.H.)
		Rapid Temperature cycling (Thermal Shock)	JSS 55555: 2012 (Rev. No.3): Test No.22 JSS 50101: 1996 (Rev. No.1): Test No.20 MIL 810 G: 31Oct 2008	Qualitative ((-70 °C to 180 °C)

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			Method :503.5-1 to 503.5-13 Two Chamber Method	
		Corrosion Test (SALT/SALT FOG)	JSS 55555, (Rev. No.3) Test No. 9	Qualitative (Upto 35 °C 95 % R.H.)
		Salt Spray Test	JSS 50101: 1996 (Rev. No.1) Test No. 4. MIL 810 G: 31 Oct 2008 Method: 509.5-1 to 509.5-10	Qualitative (Upto 35 °C 95 % R.H.)
		Combined Altitude, Temperature and Humidity Test	JSS 55555:2012 (Rev. No.3):Test No. 30 MIL 810 G: 31 Oct 2008 Method:520.3-1 to 520.3-22	Qualitative (-40 °C to 85°C 95 % R.H. 30 mbar to 900 mbar)
		Altitude test (Low air pressure)	JSS 55555:2012 (Rev. No.3): Test No. 3 JSS 50101: 1996 (Rev. No.1): Test No. 2 MIL 810 G: 31 Oct 2008 Method: 500.5-1 to 500.5-7	Qualitative (-40 °C to 85 °C 30 mbar to 900 mbar)
		Tropical Exposure	JSS 55555:2012 (Rev. No.3): Test No. 27	Qualitative (20 °C to 35 °C 95 % R.H.)
		Sine Vibration test	JSS 55555: 2012 (Rev. No. 3) Test No. .28 JSS 50101: 1996 (Rev. No. 1) (RA 2006) Test No. 23	Qualitative (5 Hz to 2000 Hz Displacement: 51mm (Peak to Peak) Maximum Acceleration: (981 m/s <sup>2</sup> ) - Peak (With payload capacity of 25 kg))
		Random Vibration Test	JSS 55555: 2012 (Rev. No. 3) JSS 50101: 1996	Qualitative (5 Hz to 2000 Hz Maximum Acceleration:

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			(Rev. No. 1) (RA 2006) MIL 810 G: 31 Oct 2008 Method 516.6	(981 m/s <sup>2</sup> ) - Peak (With payload capacity of 25 kg)
		Shock Test	JSS 55555: 2012 (Rev. No. 3) JSS 50101: 1996 (Rev. No. 1) (RA 2006) MIL 810 G: 31 Oct 2008 Method 516.6	Qualitative (Vertical Axis (Weight of UUT : 22 kg) Pulse Shape: Half Sine, Saw Tooth 100g – Peak Upto 6ms 80g –Peak Up to 11ms Horizontal Axis (Weight of UUT : 40 kg) Pulse Shape: Half Sine, Saw Tooth 65g-Peak Upto 11ms (With payload capacity of 40 kg)
		Bump test	JSS 55555: 2012 (Rev. No. 3) JSS 50101: 1996 (Rev. No. 1) (RA 2006) Test No. 11	Qualitative (Half Sine Pulse Pulse duration : 6 ms Acceleration: 245.25 m/s <sup>2</sup> & 392.4 m/s <sup>2</sup> Maximum Number of Bumps: 4000)
		Drop Test	JSS 55555:2012 (Rev. No. 3) MIL 810 G: 31 Oct 2008 Method 516.6	Qualitative (Drop Height: 1 m maximum Platform Type - Sheet Steel minimum 6 mm thick Wooden Plank - minimum 25 mm thick)

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		Highly Accelerated Life Test (HALT)/ Highly Accelerated Stress Screening (HASS)	SOP No. P 1413 Issue No. 2 Issue Date 05.10.2016 Section 15.0 HAL Test Section 16 HASS Test	Qualitative (-)100 °C to 150 °C maximum Acceleration: 490.5 m/s <sup>2</sup> 10 Hz to 10000 Hz)
		Sand and Dust Test	MIL-STD. 810G Method 510.5 Procedure-I & II	Qualitative (23°C to 90°C < 30% R.H. 1.5 m/s to 29 m/s 0.18 g/m <sup>3</sup> to 3 g/m <sup>3</sup> )

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