

Laboratory Chief Quality Assurance Establishment (Warship Equipment),
Environmental and Dynamic Testing Laboratory, Jalahalli Camp Road,
Yeshwanthpur Post, Bangalore, Karnataka

Accreditation Standard ISO/IEC 17025: 2005

Certificate Number TC-7418 (in lieu of T-3083)

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Validity 22.08.2018 to 21.08.2020

Last Amended on --

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

I. ELECTRONIC COMPONENTS AND EQUIPMENT SUB ASSEMBLIES				
1.	Electronics / Electrical / Electro Mechanical / Mechanical Equipment / Components	Dry Heat Temperature	JSS 55555:2012 (Rev-03) (Test No. 17) Dry Heat Test as per IS 9000:1977, Part 3 Temperature (Dry Heat) as per JSS 50101:1996 (Rev-01) (Test No.22)	Ambient to +100 °C (+3 °C)
		Cold Temperature	JSS 55555:2012 (Rev-03) (Test No. 20) Cold Test as per IS 9000:1977, Part 2 Temperature (Cold) as per JSS 50101:1996 (Rev-01) (Test No.21)	Ambient to -40 °C (+3 °C)
		Damp Heat	JSS 55555:2012 (Rev-03) (Test No. 10)	40 °C±2 °C, (93 % +5% RH)
		Rapid Temperature Cycling / Thermal Shock	JSS 55555:2012 (Rev-03) (Test No. 22) DQA (N) Guidelines dt. 14 Jun 2013	-40 °C to +100±3 °C (Ramp rate Upto 10 °C/min, RH 95 %)
		Tropical Exposure	JSS 55555:2012 (Rev-03) (Test No. 27)	20 °C±5 °C 35 °C±2 °C Min 95% RH
		Dust Test	JSS 55555:2012 (Rev-03) (Test No. 14)	40 °C ±3 °C, (RH<50 %)
		Sinusoidal Vibration Simulation	DQA (N) Guidelines dt. 14 Jun 2013, Joint Service Specification (JSS)	Sine Wave Freq: 5 Hz to 2 KHz Upto 2g

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			5555:2000 & JSS 5555:2012 MIL STD. 810D:1983 MIL STD. 810E:2000 MIL STD. 810G:2003	100 Hz to 2 KHz up to 20g 5 Hz to 20 Hz, \pm 6 mm or 12 mm peak to peak Constant Displacement
		Random Vibration Simulation	DQA (N) Guidelines dt. 14 Jun 2013, Joint Service Specification (JSS) 5555:2000 & JSS 5555:2012 MIL STD. 810D:1983 MIL STD. 810E:2000 MIL STD. 810G:2003	Random Vibration 20 to 2000Hz PSD up to 0.04g ² /Hz
		Driving Rain test	JSS 5555:2012 (Rev-03) (Test No. 12)	200 K Pa \pm 15 % Nozzles-08 04 horizontal & 04 at angle of 45°
		Mould Growth Test	JSS 5555:2012 (Rev-03) (Test No. 21)	29, \pm 1 °C, >90% RH
		Bump Test	JSS 5555:2012 (Rev-03) (Test No. 05)	Force:10 to 40 g selectable Pulse: 6 to 16 ms selectable (half sine wave) Rate: Upto 04 Bump/ s