Laboratory	**MFR Electronics Test Laboratory, MFR Electronics Component Pvt. Ltd., Unit No. 4D, SDF-II, SEEPZ (SEZ), Andheri (East), Mumbai, Maharashtra**		
Accreditation Standard	**ISO/IEC 17025: 2005**		
Discipline	**Electronics Testing**	**Issue Date**	**22.03.2015**
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S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
I.	**ELECTRONIC COMPONENTS AND EQUIPMENT SUB ASSEMBLIES**			
1.	**Resistors**	Visual Examination	JSS 50401: 1994 (RA 2000) 50402: 2003 50403: 1972 (RA 2000) MIL PRF 39017 G: 2014 55182 H: 2014	40 x magnification 10 x magnification
		Dimensions Verification	IS 13554 :1992 (RA 2002) JSS 50401: 1994 (RA 2000) 50402: 2003 MIL PRF 39017 G: 2014 55182 H: 2014	Length upto 300 mm Height upto 300 mm Diameter upto 25 mm
		DC Resistance	IS 9437: 1980 (RA 2002) IS 5786: 1982 (RA 2002) IS 8909 (Part 2 & 3): 1978 (RA 2002) JSS 50401: 1994 (RA 2000) 50402: 2003 50403: 1972 (RA 2000) MIL PRF 39017 G: 2014 55182 H: 2014 50400: 1996 (RA 2001)	0.1 Ω to 10 Ω 10 Ω to 99 Ω 100 Ω to 999 Ω 1 kΩ to 9k99 Ω 10 kΩ to 99k9 Ω 100 kΩ to 999 kΩ 1 MΩ to 9M99 Ω 10 MΩ to 100 MΩ
		Overload	IS 9437: 1980 (RA 2002) 5786: 1982 (RA 2002) 8909 (Part 2 & 3): 1978 (RA 2002) JSS 50401: 1994 (RA 2000), 50402: 2003, 50403: 1972 (RA 2000) MIL PRF 39017 G: 2014, 55182 H: 2014	Up to 1000 V AC/DC

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Resistors	Life Electrical	IS 9437: 1980 (RA 2002), 5786: 1982 (RA 2002) 8909 (Part 2 & 3): 1978 (RA 2002) JSS 50401: 1994 (RA 2000), 50402: 2003, 50403: 1972 (RA 2000) MIL STD 202 G: 2002 JSS 50101: 1996 (RA 2001) MIL PRF 39017 G: 2014, 55182 H: 2014	Up to 1000 V AC/DC Temperature up to 175°C
		Voltage Proof Test	IS 9437: 1980 (RA 2002) 5786: 1982 (RA 2002) 8909 (Part 2 & 3): 1978 (RA 2002) JSS 50401: 1994 (RA 2000) 50402: 2003 50403: 1972 (RA 2000)	Upto 2 kV AC 5 mA
		Temperature Co-efficient of Resistance	IS 9437: 1980 (RA 2002) 5786: 1982 (RA 2002) 8909 (Part 2 & 3):1978 (RA 2002) JSS 50401: 1994 (RA 2000) 50402: 2003 50403: 1972 (RA 2000) MIL PRF 39017 G: 2014 55182 H: 2014	(-)65°C 20°C, 70°C, 150°C, 175°C 10 Ω to 10 MΩ

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S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Resistors	Resistance to Soldering Heat	IS 9437: 1980 (RA 2002) 5786: 1982 (RA 2002) 8909 (Part 2 & 3): 1978 (RA 2002) JSS 50401: 1994 (RA 2000), 50402: 2003, 50403: 1972 (RA 2000) MIL PRF 39017 G: 2014, 55182 H: 2014 MIL STD 202 G: 2002 JSS 50101: 1996 (RA 2001) IS 9001: 1981 (Part 9) (RA 2003)	Up to 260°C
		Temperature Rise	IS 9437: 1980 (RA 2002) 5786: 1982 (RA 2002) 8909 (Part 2 & 3): 1978 (RA 2002) IS 50401: 1994 (RA 2000), 50402: 2003, 50403: 1972 (RA 2000)	Up to 350°C
		Robustness of terminations Tensile Bending Torsion	IS 9437: 1980 (RA 2002) 5786: 1982 (RA 2002) 8909 (Part 2 & 3): 1978 (RA 2002) JSS 50401: 1994 (RA 2000), JSS 50101: 1996 (RA 2001) MIL PRF 39017 G: 2014, 55182 H: 2014 MIL STD 202 G :2002	 10 N 90° 360°

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S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Resistors	Screening Tests -Temperature Cycling - Initial DC Resistance - Power Conditioning - Overload - Final DC Resistance f- Visual Examination	JSS 50115: 1999	(-)65°C 175°C 0.1 Ω to 256 MΩ Upto 1000 V AC/DC Upto 1000 V AC/DC 0.1 Ω to 256 MΩ 10 x / 40 x magnification
		Temperature Cycling	IS 9437: 1980 (RA 2002) 5786: 1982 (RA 2002) 8909 (Part 2 & 3): 1978 (RA 2002) MIL STD 202 G: 2002 JSS 50401: 1994 (RA 2000), JSS 50101: 1996 (RA 2001) IS 9000(Part 14): 1980 (RA 2003)	(-)65°C 175°C
		Dry Heat	IS 9437: 1980 (RA 2002) 5786: 1982 (RA 2002) 8909 (Part 2 & 3): 1978 (RA 2002) MIL STD 202 G: 2002 JSS 50101: 1996 (RA 2001) IS 9000 (Part 3): 1980 (RA 2003)	Ambient to 200°C
		Cold	IS 9437: 1980 (RA 2002) 5786: 1982 (RA 2002) 8909 (Part 2 & 3): 1978 (RA 2002) MIL STD 202 G: 2002 JSS 50101: 1996 (RA 2001) IS 9000 (Part 2): 1980 (RA 2003)	Ambient to (-)65°C

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Resistors	Thermal Shock	IS 9437: 1980 (RA 2002) 5786: 1982 (RA 2002) 8909 (Part 2 & 3): 1978 (RA 2002) MIL STD 202 G: 2002 MIL PRF 39017 G: 2014 55182 H: 2014	(-)65 °C 175 °C
		Damp Heat, Steady State	IS 9437: 1980 (RA 2002) 5786: 1982 (RA 2002) 8909 (Part 2 & 3): 1978 (RA 2002) MIL STD 202 G: 2002 JSS 50101: 1996 (RA 2001) JSS 50401: 1994 (RA 2000) 50402: 2003 50403: 1972 (RA 2000) IS 9000 (Part 4): 2008	40 °C 95 % RH
		Resistance to Solvents	IS 9000 (Part 20): 1979 (RA 2004) MIL STD 202 G: 2002 JSS 50101: 1996 (RA 2001) JSS 50401: 1994 (RA 2000) 50402: 2003 50403: 1972 (RA 2000) IS 9001 (Part 5): 1979 (RA 2004) MIL PRF 39017 G: 2014 55182 H: 2014	Qualitative

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Resistors	Solderability	IS 9000 (Part 20): 1979 (RA 2004) IS 9437: 1980 (RA 2002) 5786: 1982 (RA 2002) 8909 (Part 2 & 3): 1978 (RA 2002) MIL STD 202 G: 2002 JSS 50101: 1996 (RA 2001) JSS 50401: 2000 50402: 2003 50403: 1972 50403: 1972 (RA 2000) IS 9000 (Part 18): 1981 (RA 2004) IS 9001 (Part 9) : 1981(RA 2003) MIL PRF 39017 G: 2014 55182 H: 2014	Upto 260°C Qualitative(> 95 % Coverage with new solder)
		Insulation Resistance	IS 9437: 1980 (RA 2002) 5786: 1982 (RA 2002) 8909 (Part 2 & 3): 1978 (RA 2002) MIL STD 202 G: 2002 JSS 50101: 1996 (RA 2001) JSS 50401: 2000 50402: 2003 50403: 1972 50403: 1972 (RA 2000) JSS 50101: 1996 MIL PRF 39017 G: 2014 55182 H: 2014	100V, 500V DC Upto 10^{10} M Ω
		Dielectric Withstanding Voltage	MIL STD 202 G: 2002 MIL PRF 39017 G: 2014 55182 H: 2014	Upto 2 kV AC

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
2.	**Resistors (Fixed Film, Chip)**	Visual examination -Material, Design, Marking and workmanship	JSS 50461: 2000 MIL PRF 55342 H (issue date:15.10.2007)	40 x Magnification
		Dimensions (Outline)	JSS 50461: 2000 MIL PRF 55342 H (issue date:15.10. 2007)	Qualitative (Size 0805, 1206, 1210, 2010, 2512)
		Thermal Shock	MIL STD 202 G: 2003 Method 107 Test Condition B-1	125 °C (-)55 °C 25 Cycles
		Initial Measurement -DC Resistance	MIL STD 202 G (2003) Method 107 Test Conditions B-1	At 25°C ±2°C 10 Ω to 1 MΩ
		Power Conditioning	JSS 50461 (2000) MIL PRF 55342 H (issue date: 15.10. 2007)	At 1.5 times rated power Duration:- 24 Hrs Voltage not to exceed the limiting Voltage
		Final Measurement -DC Resistance	JSS 50461 (2000) MIL PRF 55342 H (issue date: 15.10. 2007)	At 25°C (±)2°C 10 Ω to 1 MΩ
		- Visual Examination	JSS 50461 (2000) MIL PRF 55342 H (issue date:15.10. 2007)	40 X Magnification No evidence of Mechanical damage

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S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Resistors (Fixed Film, Chip)	Temperature Coefficient to Resistance	JSS 50461: 2000 MIL PRF 55342 H (issue date: 15.10.2007)	At 25°C and 70°C 10 Ω to 1 MΩ

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Mallika Gope
Convenor

N. Venkateswaran
Program Manager