Laboratory	**Associated Electronics Research Foundation, C-53, Phase-II, Noida, Uttar Pradesh**		
Accreditation Standard	**ISO/IEC 17025: 2005**		
Discipline	**Electrical Testing**	**Issue Date**	**10.09.2014**
Certificate Number	**T-0980**	**Valid Until**	**09.09.2016**
Last Amended on	**-**	**Page**	**1 of 4**

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
I.	**ELECTRONICS COMPONENTS**			
1.	**Fixed Capacitor Used in Electronic Equipment**	Capacitance	Cl 8.3.2 of IS 7305-1984 RA 2009	100 pF to 100 µF
		Leakage current	Cl 8.3.4 of IS 7305-1984 RA 2009	10 µA to 10mA
2.	**Electrolytic Capacitor**	Capacitance	Cl 8.3.2 of IS 4317-1981 RA 2009	100 pF to 100 µF
		Leakage Current	Cl 8.3.1 of IS 4317-1981 RA 2009	10 µA to10 mA (max).
		Voltage proof	Cl 8.3.6 of IS 4317-1981 RA 2009	0 to 5 kVAC and DC
		Insulation resistance	Cl 8.3.5 of IS 4317-1981 RA 2009	10 MΩ to 150 GΩ at 100 / 500 VDC
		Characteristics at low & high Temperature	Cl 8.6 of IS 4317-1981 RA 2009	Qualitative
3.	**Resistors**	Resistance value	Cl No 8.3.1 of IS : 5786 (Part I)-1978	1 mΩ to 2000 Ω 2000 Ω to 10kΩ 10 MΩ to 150 GΩ
		Temperature characteristics	Cl No 8.3.4 of IS : 5786 (Part I)-1978	1 m Ω to 2000 Ω 2000 Ω to 10k Ω
		Insulation Resistance	Cl No 8.3.1 of IS : 5786 (Part I)- 1978	10 MΩ to 20 x 10^3 GΩ at 100 / 500 VDC
		Voltage proof	Cl No 8.3.3 of IS : 5786 (Part I)-1978	0 to 5 kVAC and DC

N. Venkateswaran
Program Manager

Rajeshwar Kumar

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Certificate Number	**T-0980**	**Valid Until**	**09.09.2016**	
Last Amended on	**-**	**Page**	**2 of 4**	

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
II.	**ELECTROMAGNETIC COMPONENTS**			
1.	**Power Transformer**	DC resistance of windings	Cl No 6.2.1.2 (IS : 6297(Part I)-1971) RA 2008	1 mΩ to 2000 Ω
		Voltage proof	Cl No 6.2.1.7 (IS : 6297(Part I)-1971) RA 2008	0 to 5kVAC & DC
		Insulation resistance	Cl No 6.2.1.6 (IS : 6297(Part I)-1971) RA 2008	10 MΩ to150 GΩ at 500VDC
		No load test	Cl No 6.2.2.1 (IS : 6297(Part I)-1971) RA 2008	100 mV to700 VAC (max) at 10A (max)
		Secondary no load voltages & primary tap voltage	Cl No 6.2.2.2 (IS : 6297(Part I)-1971) RA 2008	100 mV to 700VAC(max)
		Voltage regulation	Cl No 6.2.2.4 (IS : 6297(Part I)-1971) RA 2008	100 mV to700 V AC (max)
III.	**ENVIRONMENTAL TEST FACILITY**			
1.	**Electronics and Electrical Products & Components**	Dry heat Test	IS : 9000(Part III /sec1 to 5) -1977	Ambient to 100 ºC
		Cold test	IS : 9000(Part II /sec1 to 4) -1977	-25º C to Ambient
		Damp heat test	IS : 9000(Part IV) -1979	-25º C to 100˚C R.H. 20% to 95%
		Change in Temperature	IS : 9000(Part 14 /sec1 to 3) -1988	-25º C to100 ºC

N. Venkateswaran
Program Manager

Rajeshwar Kumar

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Composite temperature/humidity cycle	IS : 9000(Part V /sec1 to 2) –1981	-25º C to 100˚C R.H. 20 % to 95%
		Salt Mist test	IS 9000(Part XI)-1983 (Reaffirmed 1997) Procedure 1,2,3	35 ºC ± 3 ºC
IV.	**POWER SUPPLY EQUIPMENTS AND SYSTEMS**			
1.	**Stablized Power Supply (DC O/P)**	Rated source current	Sr No 2 of Table 3 of IS 7204 (Part II):1980	AC Current: 10 A max DC Current: 10 A max W: 2.5 kW max AC Voltage: 700 V max DC Voltage: 1000 V max
		Efficiency	Sr No 3 of Table 3 of IS 7204 (Part II):1980	AC Current: 10 A max DC Current: 10 A max W: 2.5 kW max AC Voltage: 700 V max DC Voltage: 1000 V max
		Power factor	Sr No 3 of Table 3 of IS 7204 (Part II):1980	0.20 lag to UPF
		Source Voltage effect	Sr No 2 of Table 4 of IS 7204 (Part II):1980	AC Current: 10 A max DC Current: 10 A max W: 2.5 kW max AC Voltage: 700 V max DC Voltage: 1000 V max

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Last Amended on	**-**	**Page**	**4 of 4**

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Stablized Power Supply (DC O/P)	Short Circuit Current	Sr No 5 of Table 7 of IS 7204 (Part II):1980	AC Current: 10 A max DC Current: 10 A max W: 2.5 kW max AC Voltage: 700 V max DC Voltage: 1000 V max
		Peak open Circuit Voltage	Sr No 8 of Table 4 of IS 7204 (Part II):1980	AC Current: 10 A max DC Current: 10 A max W: 2.5 kW max AC Voltage: 700 V max DC Voltage: 1000 V max
		Over Current Protection	Sr No 10 of Table 4 of IS 7204 (Part II):1980	AC Current: 10 A max DC Current: 10 A max W: 2.5 kW max AC Voltage: 700 V max DC Voltage: 1000 V max
		Reverse Current Protection	Sr No12 of Table 4 of IS 7204 (Part II):1980	AC Current: 10 A max DC Current: 10 A max W: 2.5 kW max AC Voltage: 700 V max DC Voltage: 1000 V max

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N. Venkateswaran
Program Manager

Rajeshwar Kumar