Delhi

Accreditation Standard ISO/IEC 17025: 2005

Discipline Electronics Testing Issue Date 21.07.2014

Certificate Number T-3058 Valid Until 20.07.2016

Last Amended on - Page 1 of 14

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
I.	AUDIO EQUIPMEN	NT		
1.	Audio-Video and Similar Electronics Apparatus Safety	Marking & Instructions	IS 616: 2010 IEC 60065:2005 (Cl. 5)	Qualitative
	Requirement	Laser Radiation (Products Marked Class I only)	IS 616: 2010 IEC 60065:2005 (Cl. 6.2)	Qualitative
		Heating under normal Operating Condition	IS 616: 2010 IEC 60065:2005 (Cl.7) Except 7.2	0 to 400 °C 0.001 to 11.11x10 ⁶ MΩ
		Constructional requirement with regard to the protection against electric shock	IS 616: 2010 IEC 60065:2005 (Cl.8)	0 to 100 °C, 20 to 99% Rh 0.01 to 200mm 0.01kV to 5kVac/dc 0 to 30N 10 Hz to 55Hz to10Hz 0.35mm
		Electric Shock Hazards under normal operating Conditions	IS 616: 2010 IEC 60065:2005 (Cl.9)	40 to $75V$, 0 to $75N$ $0.001V$ to $1000Vac/dc$ $1\mu A$ to $20Ma$
		Insulation Requirements Surge Test Humidity Treatment Insulation Resistance and	IS 616: 2010 IEC 60065:2005 (Cl.10)	0.01 kV to 15 kV 0 to 100 °C, 20 to 99% Rh
		Dielectric Strength Test	IS 616: 2010 IEC 60065:2005 (Cl.11)	0.01to 5kV ac/dc 100 k Ω to 2 G Ω
		Fault Conditions		0 to 400 °C 0 to 1000Vac/dc

Dheeraj Chawla Convenor

Delhi

Accreditation Standard ISO/IEC 17025: 2005

Discipline Electronics Testing Issue Date 21.07.2014

Certificate Number T-3058 Valid Until 20.07.2016

Last Amended on - Page 2 of 14

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Mechanical Strength	IS 616: 2010 IEC 60065:2005 (Cl.12)	0 to 9999 Counts 10 g to 20 kg 0.01mm to 200 mm Upto 6.0 Nm Torque & 0.5 Nm for Spring Hammer 2 Joules 10 Hz to 55Hz to 10 Hz 0.35mm, 0 to 199.9° C
		Clearances & Creepage (Cl. 13)	IS 616: 2010 IEC 60065:2005	0.05 mm to 1 mm 0.01mm to 200 mm 0 to1000 Vac/dc
		Batteries (Cl. 14.10)	IS 616: 2010 IEC 60065:2005	0.001V to 100V 1 µA to 10 A ac/dc
		Terminal (Cl. 15)	IS 616: 2010 IEC 60065:2005	0 to 6 Nm 0.01 mm to 200mm 0.01 A to 50A, 0.01 to19.99 C`
		External flexible Cords	IS 616: 2010 IEC 60065:2005 (Cl. 16)	0.001 mm to 25 mm 0.01 mm to 200 mm 40 N, 0.25 Nm
		Electrical Connection & Mechanical Fixings	IS 616: 2010 IEC 60065:2005 (Cl. 17)	0 to 6 Nm 0 to 30 N
		Stability & Mechanical Hazards	IS 616: 2010 IEC 60065:2005 (Cl. 19)	Inclination 0 to 20° Force 0 to 250 N
		Resistance to fire	IS 616: 2010 IEC 60065:2005 (Cl. 20)	Mass 20N, Ball Ø 5mm 0 to 500 Vac, 9.5 mm 1ms to 99.99 min

Dheeraj Chawla Convenor

Laboratory		HI-Physix Laboratory, Delhi	HI-Physix Laboratory, L-83, Sector-1, DSIDC Industrial Area, Bawana, Delhi				
Accı	reditation Standar	d ISO/IEC 17025: 2005					
Disc	ipline	Electronics Testing		Issue Date	21.07.2014		
Cert	ificate Number	T-3058		Valid Until	20.07.2016		
Last Amended on		-		Page	3 of 14		
S.No.	Product / Material of Test	Specific Test Performed	Test Method Specificati against which tests are performed		ge of Testing / its of Detection		
II.	IT EQUIPMENT						
1.	Safety of information technology	General Components	IS 13252 (Part 1): 2010 IEC 60950-1 :2005	Qua	litative		
	equipment including electrical business equipment	Power Interface	IS 13252 (Part 1): 2010 IEC 60950-1 :2005(Cl. 1.6)	to 50 DC (Curr to 20 DC (0.01V to 300 V ent AC 0.001A		
		Markings & Instructions	IS 13252 (Part 1): 2010 IEC 60950-1 :2005 (Cl.1.7)		litative		
		Protection from Hazards					
		Protection from Electric Shock & Energy Hazards	IS 13252 (Part 1): 2010 IEC 60950-1 :2005 (Cl. 2.1)	0 to (100 0.05	to 75V, 0 to 75N 5 kV ac/dc, k to 2G) Ω mm to 1 mm, mm to 200 mm		
		SELV Circuits	IS 13252 (Part 1): 2010 IEC 60950-1 :2005 (Cl. 2.2)	DC (Curr	age AC/ 0.01 V to 1000V ent AC/ 0.001 V to 10 A		
		TNV Circuits	IS 13252 (Part 1): 2010 IEC 60950-1 :2005 (Cl. 2.3)	DC (Curr DC (age AC/ 0.01 V to 1000 V ent AC/ 0.001 A to 10 A to 5kV ac/dc		

Dheeraj Chawla Convenor

Delhi

Accreditation Standard ISO/IEC 17025: 2005

Discipline Electronics Testing Issue Date 21.07.2014

Certificate Number T-3058 Valid Until 20.07.2016

Last Amended on - Page 4 of 14

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Safety of information technology	Limited Current Circuits	IS 13252 (Part1): 2010 IEC 60950-1 :2005 (Cl. 2.4)	Current AC/ DC 0.001 A to10 A & Visual Examination
	equipment including electrical business equipment	Limited Power Sources	IS 13252 (Part 1): 2010 IEC 60950-1 :2005 (Cl. 2.5)	Voltage AC/ DC 0.01V to 1000 V Current AC/ DC 0.001 A to 10 A
		Provision for earthing and bonding	IS 13252 (Part 1): 2010 IEC 60950-1 :2005 (Cl. 2.6)	0 to 50 A, 19.99 V 0.001 mm^2 – 25 mm ² 0.001 - 5 ohms
		Over-current and earth fault protection in primary circuits	IS 13252 (Part 1): 2010 IEC 60950-1 :2005(Cl. 2.7)	Qualitative
		Electrical Insurances	IS 13252 (Part 1): 2010 IEC 60950-1 :2005 (Cl. 2.9)	0 to 100 °C, 20 to 99% Rh 0 to 5kV
		Clearances, Creepage distances and distances through insulation	IS 13252 (Part 1): 2010 IEC 60950-1 :2005 (Cl. 2.10)	0.05 mm to 1 mm, 0.01 mm to 200 mm 0.01 kV to 15 kV 0.01 to 5 kVac/dc 0 to 100 °C, 20 to 99%Rh

Delhi

Accreditation Standard ISO/IEC 17025: 2005

Discipline Electronics Testing Issue Date 21.07.2014

Certificate Number T-3058 Valid Until 20.07.2016

Last Amended on - Page 5 of 14

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Safety of information technology equipment	Wiring Connection and Supply General	IS 13252 (Part 1):2010 IEC 60950-1 :2005(Cl.3.1)	Qualitative
	including electrical business equipment	Connections to mains Supply	IS 13252 (Part 1):2010 IEC 60950-1 :2005 (Cl. 3.2)	Voltage AC/ DC 0.01 to 1000V 0.001mm to 25 mm 0.01mm to 200 mm 0.01 kVac/dc to 5 kVac/dc kVac/dc 0 to 100N
		Wiring Terminals for external conductors	IS 13252 (Part 1):2010 IEC 60950-1 :2005 (Cl 3.3)	0 to 400°C 0.001mm to 25mm 0.01mm to 200mm
		Disconnections from the main Supply	IS 13252 (Part 1):2010 IEC 60950-1 :2005 (Cl 3.4)	Qualitative
		Interconnection of equipment	IS 13252 (Part 1):2010 IEC 60950-1 :2005(Cl. 3.5)	Qualitative
		Physical Requirements Stability	IS 13252 (Part 1): 2010 / IEC 60950-1 :2005 (Cl.4.1)	Inclination 0 to 20°, Force 0 to 1000 N
		Mechanical Strength	IS 13252 (Part 1): 2010 / IEC 60950-1 :2005 (Cl. 4.2)	0 to 250 N, 0 to 1000 N 0 to 199.9°C
		Design & Construction:(Cl. 4.3) Batteries (Cl. 4.3.8) Human Exposure to UV Radiation only	IS 13252 (Part 1):2010 / IEC 60950-1 :2005 (Cl. 4.3.13.4)	0 to 100N, 0.25 Nm Voltage AC/DC 0.01 V to 100 V/ 1μA to 5 A

Delhi

Accreditation Standard ISO/IEC 17025: 2005

Discipline Electronics Testing Issue Date 21.07.2014

Certificate Number T-3058 Valid Until 20.07.2016

Last Amended on - Page 6 of 14

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	Safety of information technology	Protection against hazardous moving parts	IS 13252 (Part 1):2010 IEC 60950-1 :2005 (Cl.4.4)	0 to 100N
	equipment including electrical business equipment	Thermal Requirements	IS 13252 (Part 1):2010 IEC 60950-1 :2005 (Cl. 4.5)	0 to 199.9 °C 0 to 400 °C 10 m Ω to 1M Ω
	equipment	Opening in Enclosure	IS 13252 (Part 1):2010 IEC 60950-1 :2005 (Cl.4.6)	(-)50 °C to 100 °C 0.01to 200 mm
		Resistance to fire	IS 13252 (Part 1):2010 IEC 60950-1 :2005 (Cl. 4.7)	0 to 1350 °C Mass 20 N, BallØ5 mm 0-500c, 9.5mm 1 ms to 99.99 min
		Electrical requirements & simulated abnormal conditions		
		Touch current & protective conductor current	IS 13252 (Part 1): 2010 IEC 60950-1 :2005 (Cl. 5.1)	1μA to 20mA
		Electric Strength Test	IS 13252 (Part 1): 2010 IEC 60950-1 :2005 (Cl. 5.2)	0.01 to 5kV ac/dc
		Abnormal operating & fault conditions	IS 13252 (Part 1): 2010 IEC 60950-1 :2005 (Cl. 5.3)	0 to 400°C 10 mΩ to 1 MΩ 1 μ A to 20 mA
		Connections to Telecommunication network	IS 13252 (Part 1): 2010 IEC 60950-1 :2005 (Cl. 6.1, 6.2, 6.3)	0.01 to 5kV ac/dc $100~\text{k}\Omega$ to 2 G Ω 0.01 V to1000 V/ 0 to 10A ac/dc
		Connection to cable Distribution System (Cl. 7.1, 7.2,7.3, 7.4)	IS 13252 (Part 1):2010 IEC 60950-1 :2005	0.01 to 5 kV ac/dc 0.01 kV to 15 kV

Dheeraj Chawla Convenor

Delhi

Accreditation Standard ISO/IEC 17025: 2005

Discipline Electronics Testing Issue Date 21.07.2014

Certificate Number T-3058 Valid Until 20.07.2016

Last Amended on - Page 7 of 14

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
III.	EMI TEST FACILI	TY		
1.	Self-ballasted lamps for general lighting Services	Radio Interference/ Disturbance Measurement (Conducted & Magnetic field Radiated emission)	IS 15111 (Part 2):2002 IEC 60969 ed1.2:2001	Conducted and Radiated (Magnetic Field) 9 kHz to 30 MHz
2.	Electrical lighting and similar equipment		IS 6873 (Part 5):2012 CISPR 15:2009 EN 55015 (Cl. no. 4.3.1)	20 db μA to 100 db μA 150 kHz to 30 MHz 20 db μA to120 db μA
3.	AC static Watt Hour meter		IS 13779:1999 IEC 62053-1:2003/CBIP 304 IEC 62052-11:2003	Conducted and Radiated (Magnetic Field)
4.	AC static transformer operated watt hour & VAR-Hour meter		IS 14697:1999 IEC 62053-22:2003 IEC62053-23:2003 IEC 60255-25:2000	9 kHz to 30 MHz 20 db μA to100 db μA 150 kHz to 30 MHz 20 db μA to 120 db μA
5.	Measuring relays & protection equipment		IS 60947 (Part 5/Sec1): 2003 IEC 60947-5-1:2009 IEC 60204-1:2005	
6.	Electromechanical control circuit devices			
7.	Electrical equipment of machines			

Dheeraj Chawla Convenor

Delhi

Accreditation Standard ISO/IEC 17025: 2005

Discipline Electronics Testing Issue Date 21.07.2014

Certificate Number T-3058 Valid Until 20.07.2016

Last Amended on - Page 8 of 14

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
8.	Electronic equipment used on rail vehicles		IEC 60571:2006	Conducted and Radiated (Magnetic Field)
9.	Medical electrical		IEC 60601-1-2:2007	9 kHz to 30 MHz 20 db μA to 100 db μA
·•	equipment (Table 201)		IEC 61326-1:2005	150 kHz to 30 MHz 20 db μA to 120 db μA
	(Tubic 201)		IEC 62040-2:2005	20 αθ μπτο 120 αθ μπτ
10.	Electrical equipment for			
	measurement,		IS12784 (Part 1): 1989	
	control and		IEC:60688:2002	
	laboratory use		IEC 61000-6-3:2011	
			IS 6873(P-2/Sec-1):2012	
11.	Uninterruptible		CISPR 14-1:2011 (Cl. No 4.1.1)	
	power systems		IS 6873(Part-3):2009	
	(Cl. No. 2.4.1)		CISPR 13:2009 (Cl. No. 4.2)	
10	TD1 4 * 1		IS 6873 (Part 4):2009	
12.	Electrical		CISPR 11:2009/	
	measuring transducers for		EN 501:1999 (Cl. No. 5.1)	
	converting ac		IS 6873(Part -7):1999/	
	electrical		CISPR 22:2008/EN 55022	
	Quantities into		(Cl. No. 5.1)	
	dc electrical		(21.110.211)	
	quantities			

Delhi

Accreditation Standard ISO/IEC 17025: 2005

Discipline Electronics Testing Issue Date 21.07.2014

Certificate Number T-3058 Valid Until 20.07.2016

Last Amended on - Page 9 of 14

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
IV.	SAFETY TESTING	FACILITY		
1.	i) Safety of house hold & Similar Electrical appliances, Part 2 Particular requirements,	Marking	Clause-7 IS 302-2-25:1994 IEC 60335-2-25:2010 IS 302-2-26:1994 IEC 60335-2-26:2002	Qualitative
	(read in conjunction with for Microwave Oven)	Protection Against Electric Shock	Clause-8 IS 302-2-25:1994 IEC 60335-2-25:2010 IS 302-2-26:1994 IEC 60335-2-26:2002	0 to 60V (AC) 0 to 75 N
	ii) Safety of house hold & Similar Electrical		IS:302-1:2008 & IEC 60335-1:2010	
	appliances, Part 2 Particular requirements, read in conjunction with for clock.	Starting Of Motor Operated Appliances	Clause-9 IS 302-2-25:1994 IEC 60335-2-25:2010 IS 302-2-26:1994 IEC 60335-2-26:2002 IS:302-1:2008 & IEC 60335-1:2010	0 to 12 kW
		Input and Current	Clause-10 IS 302-2-25:1994 IEC 60335-2-25:2010	0 to 12 kW
		Temperature Rise	Clause-11 IS 302-2-25:1994 IEC 60335-2-25:2010 IS 302-2-26:1994 IEC 60335-2-26:2002	0 to 400°C

Dheeraj Chawla Convenor

Delhi

Accreditation Standard ISO/IEC 17025: 2005

Discipline Electronics Testing Issue Date 21.07.2014

Certificate Number T-3058 Valid Until 20.07.2016

Last Amended on - Page 10 of 14

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Electrical insulation and Leakage Current at Operating Temperature	Clause-13 IS 302-2-25:1994 IEC 60335-2-25:2010 IS 302-2-26:1994 IEC 60335-2-26:2002	0 to 1999μA 0 to 199.9mA 0 to 5 kV, 200mA (100 to 2G)Ω
	iii) Safety of house hold & Similar Electrical appliances, Part 2 Particular requirements, read in conjunction with for Microwave Oven.	Radio & Television Interference Suppression (Transient Over Voltage test)	Clause-14 IS 302-2-25:1994 IEC 60335-2-25:2010 IS 302-2-26:1994 IEC 60335-2-26:2002 IS 302-1:2008 & IEC 60335-1:2010 IS 302-1:2008 & IEC 60335-1:2010	Upto 15 kV
	iv) Safety of house hold & Similar Electrical appliances, Part 2 Particular	Moisture Resistance Test	Clause-15 IS 302-2-25:1994 IEC 60335-2-25:2010 IS 302-2-26:1994 IEC 60335-2-26:2002	0-100 °C, 20-99% Rh
	rarucular requirements, read in conjunction with for clock.	Insulation Resistance and Electric Strength (After Humidity treatment)	Clause-16 IS 302-2-25:1994 IEC 60335-2-25:2010 IS 302-2-26:1994 IEC 60335-2-26:2002	0 to 1999 μA 0 to 199.9 mA 0 to 5kV, 200 mA (100 to 2G) Ω
		Overload Protection	Clause-17 IS 302-2-25:1994 IEC 60335-2-25:2010 IS 302-2-26:1994 IEC 60335-2-26:2002	0 to 400°C 0 to 300V/0 to 30A Upto 12 kW

Dheeraj Chawla Convenor

Delhi

Accreditation Standard ISO/IEC 17025: 2005

Discipline Electronics Testing Issue Date 21.07.2014

Certificate Number T-3058 Valid Until 20.07.2016

Last Amended on - Page 11 of 14

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Endurance Test	Clause-18 IS 302-2-25:1994 IEC 60335-2-25:2010	0 to 12 kW, 0 to 9999 h Upto 100000 cycle
		Abnormal Operation	Clause-19 IS 302-2-25:1994 IEC 60335-2-25:2010 IS 302-2-26:1994 IEC 60335-2-26:2002	0 to 400 °C
		Stability and Mechanical Hazards	Clause-20 IS 302-2-25:1994 IEC 60335-2-25:2010 IS 302-2-26:1994 IEC 60335-2-26:2002	Inclination 0 to 20° Weight 22.5kg, 7kg, 3.5kg
		Mechanical Strength	Clause-21 IS 302-2-25:1994 IEC 60335-2-25:2010 IS 302-2-26:1994 IEC 60335-2-26:2002	0 to 9999 Counts 10g to 20kg 0 to 200mm, 0 to 25mm Up to 5 Nm Torque &1 Nm for Spring Hammer
	v) Safety of house hold & Similar Electrical appliances, Part 2 Particular requirements, read in conjunction with	Construction	Clause-22 IS 302-2-25:1994 IEC 60335-2-25:2010 IS 302-2-26:1994 IEC 60335-2-26:2002 IS:302-1:2008 & IEC 60335-1:2010	0 to 100W/m ² and Visual and Physical Test
	for Microwave Oven.	xvi) Internal Wiring	Clause-23 IS 302-2-25:1994 IEC 60335-2-25:2010 IS 302-2-26:1994 IEC 60335-2-26:2002	Qualitative

Dheeraj Chawla Convenor

Delhi

Accreditation Standard ISO/IEC 17025: 2005

Discipline Electronics Testing Issue Date 21.07.2014

Certificate Number T-3058 Valid Until 20.07.2016

Last Amended on - Page 12 of 14

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	vi) Safety of house hold & Similar Electrical appliances, Part 2 Particular requirements, Section 26 read in	xvii) Components	Clause-24 IS 302-2-25:1994 IEC 60335-2-25:2010 IS 302-2-26:1994 IEC 60335-2-26:2002 IS 302-1:2008 & IEC 60335-1:2010	Qualitative
	conjunction with for clock.	xviii) Supply Connection And External Flexible Cords	Clause-25 IS 302-2-25:1994 IEC 60335-2-25:2010 IS 302-2-26:1994 IEC 60335-2-26:2002	0 to 99999 Counts
		xix) Terminal For External Conductor	Clause-26 IS 302-2-25:1994 IEC 60335-2-25:2010 IS 302-2-26:1994 IEC 60335-2-26:2002	0 to 5 Nm 0.01 to 200 mm
		xx) Provision For Earthing	Clause-27 IS 302-2-25:1994 IEC 60335-2-25:2010 IS 302-2-26:1994 IEC 60335-2-26:2002	0 to 19.99V 0 to 50A
		xxi) Screws and Connections	Clause-28 IS 302-2-25:1994 IEC 60335-2-25:2010 IS 302-2-26:1994 IEC 60335-2-26:2002	0 to 5Nm

Dheeraj Chawla Convenor

Delhi

Accreditation Standard ISO/IEC 17025: 2005

Discipline Electronics Testing Issue Date 21.07.2014

Certificate Number T-3058 Valid Until 20.07.2016

Last Amended on - Page 13 of 14

S.No.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
	vii) Safety of house hold & Similar Electrical appliances, Part 2 Particular requirements,	xxii) Creepage distances and Clearances	Clause-29 IS 302-2-25:1994 IEC 60335-2-25:2010 IS 302-2-26:1994 IEC 60335-2-26:2002	0.05 mm to 1mm 0.01mm to 200 mm
	Section 25 read in conjunction with for Microwave Oven. viii) Safety of house hold & Similar Electrical	xxiii) Resistance to heat, Fire and Tracking	Clause-30 IS 302-2-25:1994 IEC 60335-2-25:2010 IS 302-2-26:1994 IEC 60335-2-26:2002 IS:302-1:2008 & IEC 60335-1:2010	0 to 1350 °C
	appliances, Part 2 Particular requirements, read in conjunction with for clock.	xxiv) Resistance to Rusting	Clause-31 IS 302-2-25:1994 IEC 60335-2-25:2010 IS 302-2-26:1994 IEC 60335-2-26:2002 IS 302-1:2008 & IEC 60335-1:2010	0 to 40 °C, 0 to 100°C 20 to 99% Rh

Labo	oratory	HI-Physix Laboratory, Delhi	L-83, Sector-1, DSIDC In	ndustrial Are	ea, Bawana,
Accı	reditation Standard	ISO/IEC 17025: 2005			
Disc	ipline	Electronics Testing		Issue Date	21.07.2014
Certificate Number		T-3058		Valid Until	20.07.2016
Last	Amended on	-		Page	14 of 14
				Range of Testing / Limits of Detection	
S.No.	Product / Material of Test	Specific Test Performed	Test Method Specificatio against which tests are performed	_	•