



ELECTRONICS TEST & DEVELOPMENT CENTRE, CHENNAI
STQC Directorate, Department of Electronics & Information Technology
Government of India

Dr. VSI Estate, Thiruvanmiyur, Chennai - 600 041.
Tel : 044-2454 7700 / 7701 / 7702 Fax : 044-2454 3713
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TEST REPORT

Test Report No. ETDC(CN)/2016/49463

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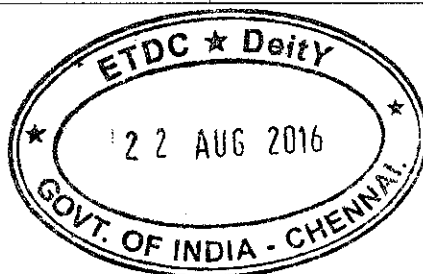
Date: 22.08.2016

1.1	Service Request No.	20102/2016-17	17.08.2016
1.2	Name & Address of the Customer	M/s VOLTECH MANUFACTURING COMPANY LIMITED 132, 133, 134 SRI KUMARAN NAGAR, KUNDRATHUR MAIN ROAD, KOVUR, CHENNAI- 600122	
1.3	Description of Test Item (s)	Nomenclature	220V 55A FLOAT CUM BOOST BATTERY CHARGER
		Make	VOLTECH MANUFACTURING COMPANY LTD
		Model	NIL
		Sl.No. / ID. No.	VMC-08-16 FCBC-371
	Number of items tested	1 (one)	
	Condition of item on receipt	Good	
1.4	Date of receipt of item	18.08.2016	
	Date of completion of testing	18.08.2016	
1.5	Place where testing carried out	Onsite Testing (M/s VOLTECH MANUFACTURING COMPANY LTD, Kovur, Chennai)	
1.6	Applicable standard/specification	As Per Customer Specification	
	Test method / procedure	Onsite	
1.7	Environmental Conditions	Temperature: 32°C ± 2 °C	Relative Humidity: 55 % to 65%
1.8	Details of Major equipment used		
Sl. No.	Equipment Used	Calibration Agency/ Report Reference	Calibration Valid up to
1	Data Acquisition Switch Unit, Agilent, 34970A	ETDC(CN)/2016/1708	19.04.2017
2	Infrared Thermo Meter, Fluke, 62Mini	CT16-395-1	12.05.2017
3	Digital Clamp Meter AC/DC, Kyoritsu, 2003A	CT16-129-1	11.02.2017
4	Digital Temperature Indicator, Logic, 0-200°C	CT16-27-4	12.01.2017

Tested by

Praveen Kumar Sharma

Praveen Kumar Sharma:



Approved by

[Signature]
(Head)



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2.0 TEST RESULTS:

Sl. No.	Cl. No.	Test Details	Requirement	Observation										Remarks	
2.1	---	Temperature Rise Test: Load: @100% (55A) Duration:8hrs a) Input Transformer b) SCR	Temperature rise shall be less than 130°C	Temperature in °C											P
				Initial Reading ↓	Temperature in °C										
				Duration(in Hours) →	1	2	3	4	5	6	7	8			
				Primary											
				R phase	34.6	61.5	78.8	83.3	85.7	89.0	93.1	94.8	95.8		
				B phase	35.1	71.1	88	89.5	90.4	92.1	92.3	94.8	95.9		
			Secondary												
			R phase	37.3	77.9	86.4	91.0	91.3	91.6	92.4	93.8	94.9			
			B phase	37.2	80.1	88.3	91.1	91.2	91.8	92.0	94.1	95.2			
			Core	38.4	48.9	61.5	70.9	75.5	77.5	80.6	82	82.5			
			SCR1	41.4	44.6	51.2	53.0	53.2	53.5	53.6	53.8	54			
			SCR2	40.4	45.1	50.6	52.0	52.8	53.9	54	54.2	54.5			
SCR3	40.2	46.1	52.0	52.8	53.4	53.9	54.2	54.3	54.6						
			Temperature rise shall be less than 130°C												

P→ Passed (Meets requirement); F→ Failed (Does not meet requirement); NA→ Limits of Performance Not Applicable

Tested by

Praveen Kumar Sharma:

Approved by

(Head)

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Sl. No.	Cl. No.	Test Details	Requirement	Observation	Remarks									
2.1	---	Temperature Rise Test: Load: @100% (55A) Duration: 8 Hours c) Free Wheeling Diode d) Blocking Diode e) DC Capacitor	Temperature rise shall be less than 200°C Temperature rise shall be less than 200°C Temperature rise shall be less than 85°C	Temperature in °C										P
				Initial Reading	Temperature in °C									
				Duration (in Hours) →	1	2	3	4	5	6	7	8		
				37.8	42.8	47.0	48.2	48.6	48.9	49.2	49.5	49.5		
				40.0	43.2	48.0	48.4	48.8	50.4	51.2	51.4	51.6		
				33.8	45.5	50.4	50.6	50.9	51.0	51.1	51.1	51.2		

P→ Passed (Meets requirement); F→ Failed (Does not meet requirement); NA→ Limits of Performance Not Applicable

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Sl. No.	Cl. No.	Test Details	Requirement	Observation	Remarks								
2.1	---	Temperature Rise Test: Load: @100% (55A) Duration: 8 Hours f) Ambient Temperature g) Cabinet Inside Temperature	-----	Temperature in °C						-----			
				Initial Reading	Temperature in °C								
				Duration(in Hours) →	1	2	3	4	5		6	7	8
				30.0	30.0	32.0	32.0	32.0	32.0		32.0	30.0	30.0
				34.2	43.6	46.6	46.8	48.3	48.3	47.5	47.5	47.3	

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Sl. No.	Cl. No.	Test Details	Requirement	Observation	Remarks
2.2	---	Temperature Rise Test for Rectifier Section: Load: @200% (110A) Duration: 1hr			
	a)	SCR	Temperature rise shall be less than 130°C	SCR1: Observed Temperature rise is from 54°C to 61°C SCR2: Observed Temperature rise is from 54.5°C to 67°C SCR2: Observed Temperature rise is from 54.6°C to 60.2°C	
	b)	Free Wheeling Diode	Temperature rise shall be less than 200°C	Observed Temperature rise is from 49.5°C to 50.2°C	P
	c)	Blocking Diode	Temperature rise shall be less than 200°C	Observed Temperature rise is from 51.6°C to 61.4°C	
	d)	DC Capacitor	Temperature rise shall be less than 85°C	Observed Temperature rise is from 51.2°C to 52.4°C	

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Tested by

Praveen Kumar Sharma:

Approved by

(Signature)
ANIL KUMAR
(Head)
SCIENTIST 'E'

Issued by

(Signature)

S.M. SARASWATHI
SCIENTIST 'C'

ELECTRONICS TEST AND DEVELOPMENT CENTRE

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