

REPORT NO.: #09-008-0082

PAGE: 1 OF 5

DATE: SEP 22, 2009

PV Connector Temperature Test and Evaluation Report

PV2-P1 & PV2-J1

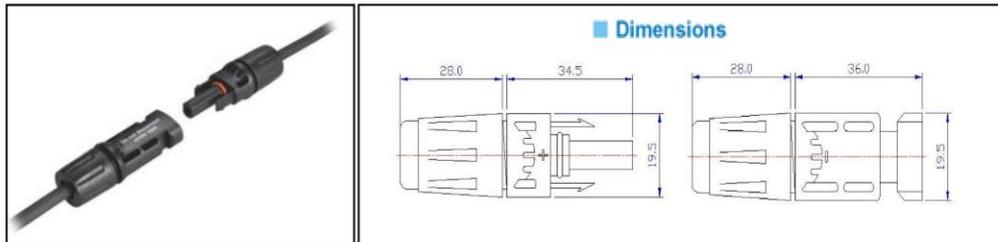


Table of Contents

	<i>Page</i>
PRODUCTION DESCRIPTION.....	2
EXPERIMENT.....	2
EQUIPMENTS REQUIRED.....	2
PROCEDURE.....	23
REQUIREMENTS.....	3
RESULTS.....	35
EVALUATION.....	5

PRODUCTION DESCRIPTION

TEST REPORT: #09-008-0082

PART #: PV2-P1 & PV2-J1

SAMPLE SIZE: 1 Set

START DATE: 8/1/09

ROOM AMBIENT: 29°C

SPECIFICATION: Reference of IEC 512-3

PART DESCRIPTION: PV Connector

COMPLETE DATE: 9/22/09

RELATIVE HUMIDITY: 45%

EXPERIMENT:

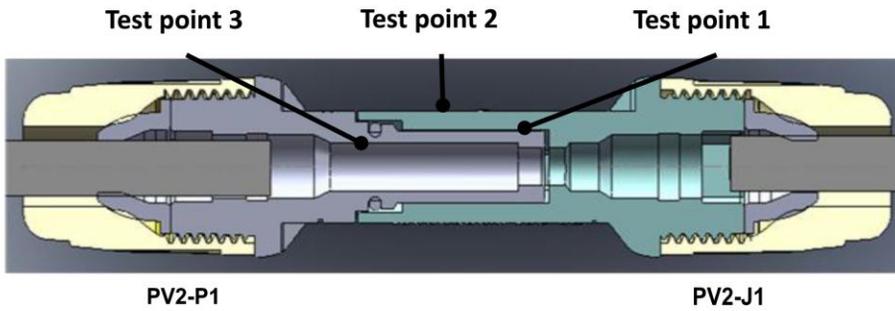
Temperature Rise Test

EQUIPMENTS REQUIRED:

- A) Low Voltage High Current Source with Meter.
- B) K-type Thermocouple and Temperature Gauge.
- C) Electronic Load Machine.
- D) Voltage Measurement Instrument.
- F) Electronic Time Control Device.

PROCEDURE:

- 1) The test performed in according to reference of IEC 512-3 Test 5A & 5B.
- 2) The connectors were prepared for the test by connecting all contacts.
- 3) Test Conditions:
 - A) Current level: 2 amp step to 18 amp (a gradual increase per 2 amps)
 - B) The tested specimen: All contacts/sample of the connector
 - C) Cross voltage of the tested specimen Vs Curve: Yes
 - D) Temp. Rise Vs Current: Yes
- 4) Thermocouple locations:
 - A) Test point 1: At the point between the **PV2-P1** & **PV2-J1**.
 - B) Test point 2: At the point on the surface of the **PV2-J1**.
 - C) Test point 3: At the point near the surface of the conductor of connector.



- 5) An additional thermocouple was placed 2" outside of the test sample in order to monitor ambient temperature.
- 6) Type "K" thermocouples attached to digital thermometer.
- 7) The test program was completed in enclosed space which prevents drafts.
- 8) The current levels were maintained for 5 minutes.

REQUIREMENTS:

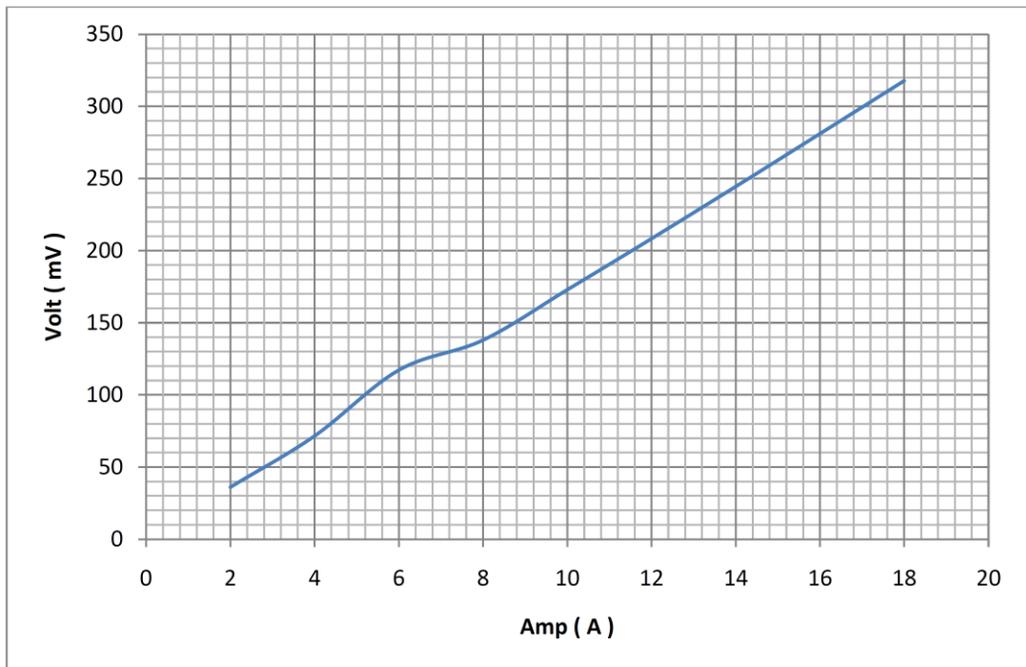
- 1) The temperature rise shall be measured and recorded and a temperature rise curve will be established.
- 2) To establish the simulation of 3D temperature distribution.
- 3) According the test data to estimate the temperature rise condition (up to 25 amp) .

RESULTS:

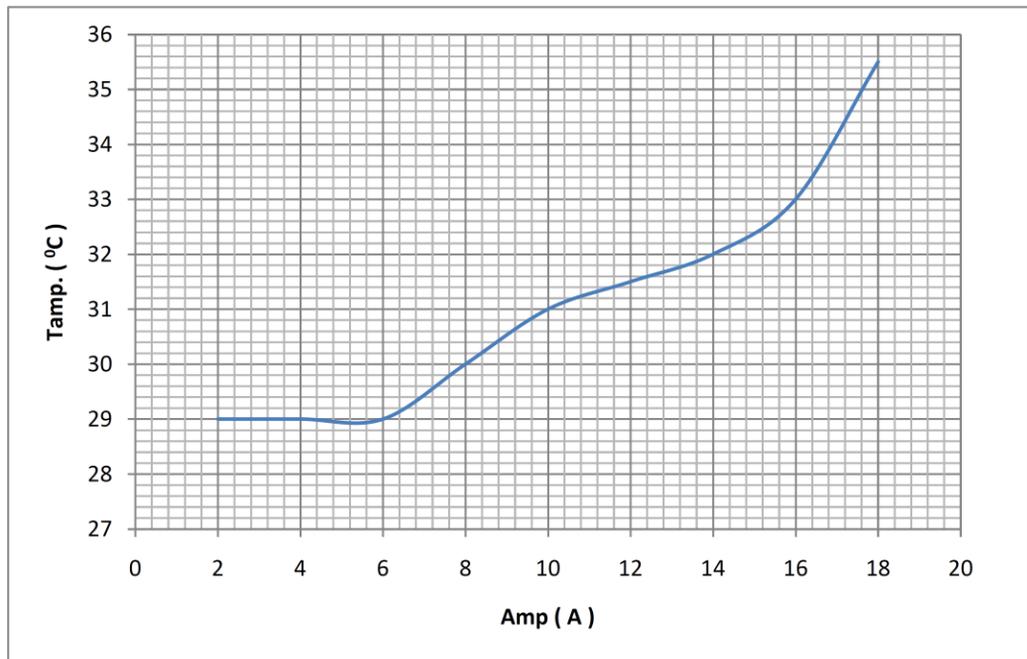
Test Data

Applied Current (amps)	Point of Max Temp. (Num)	Max Temp. at Test Point (°C)	Ambient Temp. (°C)	Cross voltage of the tested specimen. (mV)	Remark
2	Consistently	29	29	36.1	
4	Consistently	29	29	71.6	
6	Consistently	29	29	117.2	
8	3	30	29	138	
10	3	31	29	172.9	
12	3	31	29	208.3	
14	3	32	29	244.4	
16	3	33	29	281	
18	3	35.5	29	317.7	

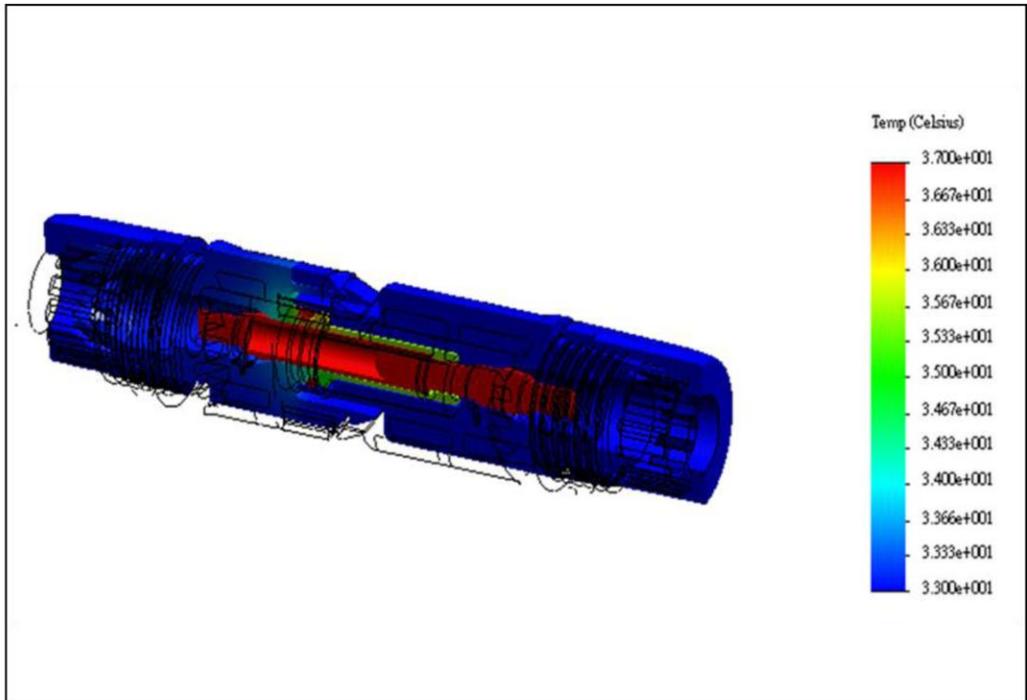
Cross voltage of the tested specimen Vs Curve



Temperature Vs. Current



The simulation of 3D temperature distribution



EVALUATION (up to 25 Amp) :

