



GlobeTek, Inc.

186 Veterans Drive Northvale, NJ 07647

**Pre-compliance Test Report
for
GT3T41-12-150R-3**

Device Under Test	
Date	January 31, 2017
Tested by:	EV
Model No	GTM3T41-12-150R-3
Part No	WR23E150SRP-N-MED
Description	12V/150mA , 1.8W
Serial Number	DC 5015
Customer	SECA
Type of Test	Surge, EFT, ESD
Pass/Fail	PASS
Comments	1 unit tested for Surge, EFT & ESD for compliance to EN60601-1-2 4 th edition. Passed.



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1.0 Test Type: SURGE Test_500V-1KV Differential Mode

Tested with resistive load

Output: 12V/150mA

Input: 230Vac 60Hz

10:15:30 1/20/2017

Surge Generator activated!

Time	Output	Us (kV)	Ph. Rep (? (s)	EUT (A)	Cnt	max	Cnt	CFG	Output
10:15:34	L+N-	0.50	0 60	0.1	4	5		off	
10:16:35	L+N-	0.50	0 60	0.1	3	5		off	
10:17:34	L+N-	0.50	0 60	0.1	2	5		off	
10:18:35	L+N-	0.50	0 60	0.1	1	5		off	
10:19:35	L+N-	0.50	0 60	0.1	0	5		off	
10:20:35	L+N-	0.50	0 60	0.0	0	5		off	
10:20:35	Stop Counter:0								
10:20:38	L-N+	0.50	0 60	0.1	4	5		off	
10:21:38	L-N+	0.50	0 60	0.1	3	5		off	
10:22:38	L-N+	0.50	0 60	0.1	2	5		off	
10:23:39	L-N+	0.50	0 60	0.1	1	5		off	
10:24:38	L-N+	0.50	0 60	0.1	0	5		off	
10:25:39	L-N+	0.50	0 60	0.0	0	5		off	
10:25:39	Stop Counter:0								
10:25:42	L+N-	0.50	90 60	0.1	4	5		off	
10:26:44	L+N-	0.50	90 60	0.1	3	5		off	
10:27:47	L+N-	0.50	90 60	0.1	2	5		off	
10:28:50	L+N-	0.50	90 60	0.1	1	5		off	
10:29:52	L+N-	0.50	90 60	0.1	0	5		off	
10:30:52	Stop Counter:0								
10:30:56	L-N+	0.50	90 60	0.1	4	5		off	
10:31:58	L-N+	0.50	90 60	0.1	3	5		off	
10:33:01	L-N+	0.50	90 60	0.1	2	5		off	
10:34:03	L-N+	0.50	90 60	0.1	1	5		off	
10:35:05	L-N+	0.50	90 60	0.1	0	5		off	
10:36:07	Stop Counter:0								
10:36:11	L+N-	0.50	180 60	0.1	4	5		off	
10:37:16	L+N-	0.50	180 60	0.1	3	5		off	
10:38:20	L+N-	0.50	180 60	0.1	2	5		off	
10:39:24	L+N-	0.50	180 60	0.1	1	5		off	
10:40:29	L+N-	0.50	180 60	0.1	0	5		off	
10:41:31	Stop Counter:0								
10:41:36	L-N+	0.50	180 60	0.1	4	5		off	
10:42:41	L-N+	0.50	180 60	0.1	3	5		off	
10:43:44	L-N+	0.50	180 60	0.1	2	5		off	
10:44:49	L-N+	0.50	180 60	0.1	1	5		off	
10:45:53	L-N+	0.50	180 60	0.1	0	5		off	
10:46:55	Stop Counter:0								
10:47:02	L+N-	0.50	270 60	0.1	4	5		off	
10:48:09	L+N-	0.50	270 60	0.1	3	5		off	
10:49:15	L+N-	0.50	270 60	0.1	2	5		off	
10:50:21	L+N-	0.50	270 60	0.1	1	5		off	
10:51:28	L+N-	0.50	270 60	0.1	0	5		off	
10:52:32	L+N-	0.50	270 60	0.0	0	5		off	



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10:52:32 Stop Counter:0
10:52:38 L-N+ 0.50 270 60 0.1 4 5 off
10:53:44 L-N+ 0.50 270 60 0.1 3 5 off
10:54:51 L-N+ 0.50 270 60 0.1 2 5 off
10:55:57 L-N+ 0.50 270 60 0.1 1 5 off
10:57:04 L-N+ 0.50 270 60 0.1 0 5 off
10:58:07 L-N+ 0.50 270 60 0.0 0 5 off
10:58:08 Stop Counter:0
10:58:10 L+N- 1.00 0 60 0.1 4 5 off
10:59:10 L+N- 1.00 0 60 0.1 3 5 off
11:00:10 L+N- 1.00 0 60 0.1 2 5 off
11:01:11 L+N- 1.00 0 60 0.1 1 5 off
11:02:11 L+N- 1.00 0 60 0.1 0 5 off
11:03:11 L+N- 1.00 0 60 0.0 0 5 off
11:03:11 Stop Counter:0
11:03:14 L-N+ 1.00 0 60 0.1 4 5 off
11:04:14 L-N+ 1.00 0 60 0.1 3 5 off
11:05:14 L-N+ 1.00 0 60 0.1 2 5 off
11:06:14 L-N+ 1.00 0 60 0.1 1 5 off
11:07:14 L-N+ 1.00 0 60 0.1 0 5 off
11:08:15 L-N+ 1.00 0 60 0.0 0 5 off
11:08:15 Stop Counter:0
11:08:18 L+N- 1.00 90 60 0.1 4 5 off
11:09:21 L+N- 1.00 90 60 0.1 3 5 off
11:10:23 L+N- 1.00 90 60 0.1 2 5 off
11:11:25 L+N- 1.00 90 60 0.1 1 5 off
11:12:27 L+N- 1.00 90 60 0.1 0 5 off
11:13:29 L+N- 1.00 90 60 0.0 0 5 off
11:13:29 Stop Counter:0
11:13:33 L-N+ 1.00 90 60 0.1 4 5 off
11:14:35 L-N+ 1.00 90 60 0.1 3 5 off
11:15:37 L-N+ 1.00 90 60 0.1 2 5 off
11:16:40 L-N+ 1.00 90 60 0.1 1 5 off
11:17:42 L-N+ 1.00 90 60 0.1 0 5 off
11:18:43 Stop Counter:0
11:18:48 L+N- 1.00 180 60 0.1 4 5 off
11:19:52 L+N- 1.00 180 60 0.1 3 5 off
11:20:56 L+N- 1.00 180 60 0.1 2 5 off
11:22:01 L+N- 1.00 180 60 0.1 1 5 off
11:23:05 L+N- 1.00 180 60 0.1 0 5 off
11:24:08 L+N- 1.00 180 60 0.0 0 5 off
11:24:08 Stop Counter:0
11:24:13 L-N+ 1.00 180 60 0.1 4 5 off
11:25:17 L-N+ 1.00 180 60 0.1 3 5 off
11:26:22 L-N+ 1.00 180 60 0.1 2 5 off
11:27:26 L-N+ 1.00 180 60 0.1 1 5 off
11:28:31 L-N+ 1.00 180 60 0.1 0 5 off
11:29:32 Stop Counter:0
11:29:39 L+N- 1.00 270 60 0.1 4 5 off
11:30:45 L+N- 1.00 270 60 0.1 3 5 off
11:31:51 L+N- 1.00 270 60 0.1 2 5 off
11:32:57 L+N- 1.00 270 60 0.1 1 5 off
11:34:04 L+N- 1.00 270 60 0.1 0 5 off
```



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```
11:35:08 Stop Counter:0
11:35:14 L-N+ 1.00 270 60 0.1 4 5 off
11:36:20 L-N+ 1.00 270 60 0.1 3 5 off
11:37:27 L-N+ 1.00 270 60 0.1 2 5 off
11:38:33 L-N+ 1.00 270 60 0.1 1 5 off
11:39:40 L-N+ 1.00 270 60 0.1 0 5 off
11:40:43 L-N+ 1.00 270 60 0.0 0 5 off
11:40:43 Stop Counter:0
```

Result: Passed 1KV Surge Differential Mode test.

2.0 Test Type: EFT Test 2KV @100KHz Frequency

Tested with resistive load

Output: 12V/150mA

230Vac input,60Hz

```
13:25:48 1/20/2017
13:26:03 Burst Generator activated!
Time      Output  Volt Freq. Burst Rep T Eut  CFG Output
          (kV) (kHz) (ms) (ms) (A)
13:26:04 L+      2.00 100.0 0.75 300 0.0 off
13:27:07 N+      2.00 100.0 0.75 300 0.0 off
13:28:10 L+N+    2.00 100.0 0.75 300 0.0 off
13:29:12 Stop
13:29:13 L-      2.00 100.0 0.75 300 0.0 off
13:30:14 Stop
13:30:15 N-      2.00 100.0 0.75 300 0.0 off
13:31:17 Stop
13:31:18 L-N-    2.00 100.0 0.75 300 0.0 off
13:32:21 Stop
```

Result: The ammeter connected at the load showed disturbance/momentary loss of ampere display, but the output LED across the resistive load is always present and no sign of blinking or flickering.

See recorded video during the test.

Result: PSU survived the 2KV EFT.

REPEAT Test:

EFT Test 2KV @100KHz Frequency

Note: Using an ANALOG Meter and LED hooked up to monitor the output voltage and ammeter.

```
14:50:10 1/31/2017
14:50:17 Burst Generator activated!
Time      Output  Volt Freq. Burst Rep T Eut  CFG Output
          (kV) (kHz) (ms) (ms) (A)
14:50:19 L+      2.00 100.0 0.75 300 0.0 off
14:51:21 N+      2.00 100.0 0.75 300 0.0 off
14:52:23 Stop
14:52:24 L+N+    2.00 100.0 0.75 300 0.0 off
```



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```

14:53:26 Stop
14:53:27 L-      2.00 100.0   0.75 300   0.0 off
14:54:29 Stop
14:54:30 N-      2.00 100.0   0.75 300   0.0 off
14:55:32 Stop
14:55:33 L-N-    2.00 100.0   0.75 300   0.0 off
14:56:35 Stop

```

Note: The LED output is always ON, while the digital current meter hooked up was momentarily losing its display but the ANALOG meter shows no change in output voltage.

Result: PSU passed EFT 2KV.

3.0 Electrostatic Discharge (ESD) Test

Date Performed: 31-Jan-2017

Model No.: GT3T41-12-150R-3

Output: 12V/150mA, 1.8Watts

Test Procedure:

Testing was basically conducted to the requirement of IEC61000-4-2.

However Horizontal Coupling Plane (HCP) and Vertical Coupling Plane (VCP) testing was not conducted, since this is a less stressful test, and less likely to cause a problem to the EUT.

Test Performance:

Performance Criteria: A

Environmental Conditions: Room Temp (20°C to 26°C range)

UUT Operation Mode:

Vac Input	Description
230V 60Hz	Power supply was loaded with resistive load. (with LED for output monitoring).

Electrostatic Discharge Immunity Test Data

Discharge type	Discharge Level/Polarity	Number of discharges per level and location
Contact Discharge	±8KV	5 per polarity
Air Discharge	±15KV	5 per polarity

Table 1: Electrostatic Discharge Immunity (Contact Discharge)

Test Points	Test Levels (KV)		Observation
	+8KV	-8KV	
A1 Exposed Ground Wire	Pass	Pass	2
A2 Cord Output	Pass	Pass	2
A3 Strain relief	Pass	Pass	2
A4 Enclosure SEAM	Pass	Pass	1
A5 Enclosure surfaces (Top, Bottom & 4 Sides)	Pass	Pass	1
A6 Housing Screws	Pass	Pass	1

Observations:

1. No Discharged Observed, No Observe Response.
2. Discharged Observed, No observed Response.



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Table 2: Electrostatic Discharge Immunity (Air Discharge)

Test Points	Test Levels (KV)		Observation
	+15KV	-15KV	
A1 Exposed Ground Wire	Pass	Pass	2
A2 Cord Output	Pass	Pass	1
A3 Strain relief	Pass	Pass	1
A4 Enclosure SEAM	Pass	Pass	2
A5 Enclosure surfaces (Top, Bottom & 4 Sides)	Pass	Pass	1
A6 Housing Screws	Pass	Pass	1

Observations:

1. No Discharge Observed, No Observe Response.
2. Discharge Observed, No observed Response.

Test point diagram:

