



# Test Report: HVG-150-20

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150W Constant Voltage + Constant Current LED Driver

## ■ DESIGN VERIFY TEST

Output Function Test

Input Function Test

Protection Function Test

Component Stress Test

## ■ SAFETY & E.M.C. TEST

Safety Test

E.M.C. Test

## ■ RELIABILITY TEST

ENVIRONMENT TEST

■ **ESIGN VERIFY TEST**

**OUTPUT FUNCTION TEST**

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT
1	RIPPLE & NOISE	V1 : 150 mVp-p (Max)	I/P : 347VAC O/P : FULL LOAD Ta : 25°C	V1 : 9.4 mVp-p (Max)
2	CONSTANT CURRENT REGION	11V~20 V	I/P: 230 VAC O/P:CV MODE Ta:25°C	O/P=11V : 7.659 A O/P=19V : 7.66 A
3	OUTPUT VOLTAGE ADJUST RANGE	CH1 : 17V ~ 22 V	I/P : 480 VAC I/P : 347 VAC O/P : MIN LOAD Ta : 25°C	16.6 V ~ 22.61 V/ 480 VAC 16.6 V ~ 22.61 V/ 347 VAC
4	OUTPUT CURRENT ADJUST RANGE	CH1 : 4.13A~7.5 A	I/P : 480 VAC I/P : 347 VAC O/P : CV MODE Ta : 25°C	3.914 A~ 8.189 A/ 480 VAC 3.914 A~ 8.189 A/ 347 VAC
5	OUTPUT VOLTAGE TOLERANCE	V1 : 1%~-1% (Max)	I/P : 180 VAC / 480 VAC O/P : FULL/ MIN LOAD Ta : 25°C	V1 : 0.2 %~- -0.2 %
6	LINE REGULATION	V1 : 0.5 %~- 0.5% (Max)	I/P : 180 VAC ~ 480 VAC O/P : FULL LOAD Ta : 25°C	V1 : 0 %~- 0 %
7	LOAD REGULATION	V1 : 1 %~-1% (Max)	I/P : 347 VAC O/P : FULL ~MIN LOAD Ta : 25°C	V1 : 0.2 %~- -0.2 %
8	SET UP TIME	480 VAC : 500 ms (Max) 347VAC : 500 ms(Max) 230VAC : 500 ms(Max)	I/P : 480 VAC I/P : 347 VAC I/P : 230 VAC O/P : FULL LOAD Ta : 25°C	480 VAC/ 243 ms 347VAC/ 299 ms 230VAC/ 342 ms
9	RISE TIME	480 VAC : 80 ms (Max) 347VAC : 80 ms (Max) 230VAC : 80 ms (Max)	I/P : 480 VAC I/P : 347 VAC I/P : 230 VAC O/P : FULL LOAD Ta : 25°C	480 VAC/ 55 ms 347VAC/ 60 ms 230VAC/ 60 ms
10	HOLD UP TIME	480 VAC : 18 ms (TYP) 347VAC : 18 ms (TYP)	I/P : 480 VAC I/P : 347 VAC O/P : FULL LOAD Ta : 25°C	480 VAC/ 36 ms 347VAC/ 24 ms
11	OVER/UNDERSHOOT TEST	< ±5%	I/P : 347 VAC O/P : FULL LOAD Ta : 25°C	TEST : <5 %

12	DYNAMIC LOAD	V1 : 2000 mVp-p	I/P : 347 VAC (1).O/P : FULL /Min LOAD 90%DUTY/ 1KHZ (2).O/P : FULL /Min LOAD 90%DUTY/ 3KHZ (3).O/P : FULL /Min LOAD 90%DUTY/ 5KHZ (4).O/P : FULL /Min LOAD 50%DUTY/ 120HZ Ta : 25°C	(1)704 (2)632 (3)588 (4)689	mVp-p mVp-p mVp-p mVp-p
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13	<p>DIMMER TEST (B Type only) SPEC: ※Built-in 3 in 1 dimming function, IP67 rated. Output constant current level can be adjusted through output cable by connecting a resistance or 0 ~ 10Vdc or 10V PWM signal between DIM+ and DIM-. ※Please DO NOT connect "DIM-" to "-V". ※Reference resistance value for output current adjustment (Typical)</p> <table border="1"> <tr> <th>Resistance value</th> <th>Short</th> <th>10K</th> <th>20K</th> <th>30K</th> <th>40K</th> <th>50K</th> <th>60K</th> <th>70K</th> <th>80K</th> <th>90K</th> <th>100K</th> <th>OPEN</th> </tr> <tr> <td>Output current</td> <td>0%</td> <td>10%</td> <td>20%</td> <td>30%</td> <td>40%</td> <td>50%</td> <td>60%</td> <td>70%</td> <td>80%</td> <td>90%</td> <td>100%</td> <td>95%~108%</td> </tr> </table> <p>*1 ~ 10V dimming function for output current adjustment (Typical)</p> <table border="1"> <tr> <th>Dimming value</th> <th>Short</th> <th>1V</th> <th>2V</th> <th>3V</th> <th>4V</th> <th>5V</th> <th>6V</th> <th>7V</th> <th>8V</th> <th>9V</th> <th>10V</th> <th>OPEN</th> </tr> <tr> <td>Output current</td> <td>0%</td> <td>10%</td> <td>20%</td> <td>30%</td> <td>40%</td> <td>50%</td> <td>60%</td> <td>70%</td> <td>80%</td> <td>90%</td> <td>100%</td> <td>95%~108%</td> </tr> </table> <p>*10V PWM signal for output current adjustment (Typical) : Frequency range :100Hz ~ 3KHz</p> <table border="1"> <tr> <th>Duty value</th> <th>Short</th> <th>10%</th> <th>20%</th> <th>30%</th> <th>40%</th> <th>50%</th> <th>60%</th> <th>70%</th> <th>80%</th> <th>90%</th> <th>100%</th> <th>OPEN</th> </tr> <tr> <td>Output current</td> <td>0%</td> <td>10%</td> <td>20%</td> <td>30%</td> <td>40%</td> <td>50%</td> <td>60%</td> <td>70%</td> <td>80%</td> <td>90%</td> <td>100%</td> <td>95%~108%</td> </tr> </table> <p>TEST RESULT: I/P : 230 VAC ;Ta : 25°C</p> <table border="1"> <tr> <td rowspan="3">1</td> <td>Resistance value</td> <td>SHORT</td> <td>10K</td> <td>20K</td> <td>30K</td> <td>40K</td> <td>50K</td> <td>60K</td> <td>70K</td> <td>80K</td> <td>90K</td> <td>100K</td> <td>OPEN</td> </tr> <tr> <td>Output current</td> <td>0.000A</td> <td>0.880A</td> <td>1.620A</td> <td>2.370A</td> <td>3.110A</td> <td>3.940A</td> <td>4.610A</td> <td>5.310A</td> <td>6.020A</td> <td>6.820A</td> <td>7.540A</td> <td>7.749A</td> </tr> <tr> <td>%</td> <td>0</td> <td>11.73%</td> <td>21.60%</td> <td>31.60%</td> <td>41.47%</td> <td>52.53%</td> <td>61.47%</td> <td>70.80%</td> <td>80.27%</td> <td>90.93%</td> <td>100.53%</td> <td>103.32%</td> </tr> <tr> <td rowspan="3">2</td> <td>Dimming value</td> <td>SHORT</td> <td>1V</td> <td>2V</td> <td>3V</td> <td>4V</td> <td>5V</td> <td>6V</td> <td>7V</td> <td>8V</td> <td>9V</td> <td>10V</td> <td>OPEN</td> </tr> <tr> <td>Output current</td> <td>0.000A</td> <td>0.840A</td> <td>1.580A</td> <td>2.330A</td> <td>3.060A</td> <td>3.790A</td> <td>4.540A</td> <td>5.280A</td> <td>6.020A</td> <td>6.750A</td> <td>7.490A</td> <td>7.749A</td> </tr> <tr> <td>%</td> <td>0.00%</td> <td>11.20%</td> <td>21.07%</td> <td>31.07%</td> <td>40.80%</td> <td>50.53%</td> <td>60.53%</td> <td>70.40%</td> <td>80.27%</td> <td>90.00%</td> <td>99.87%</td> <td>103.32%</td> </tr> <tr> <td rowspan="3">3</td> <td>Duty value</td> <td>SHORT</td> <td>10%</td> <td>20%</td> <td>30%</td> <td>40%</td> <td>50%</td> <td>60%</td> <td>70%</td> <td>80%</td> <td>90%</td> <td>100%</td> <td>OPEN</td> </tr> <tr> <td>Output current</td> <td>0.000A</td> <td>1.080A</td> <td>1.790A</td> <td>2.500A</td> <td>3.220A</td> <td>3.930A</td> <td>4.650A</td> <td>5.360A</td> <td>6.080A</td> <td>6.800A</td> <td>7.500A</td> <td>7.749A</td> </tr> <tr> <td>%</td> <td>0.00%</td> <td>14.40%</td> <td>23.87%</td> <td>33.33%</td> <td>42.93%</td> <td>52.40%</td> <td>62.00%</td> <td>71.47%</td> <td>81.07%</td> <td>90.67%</td> <td>100.0%</td> <td>103.32%</td> </tr> </table>													Resistance value	Short	10K	20K	30K	40K	50K	60K	70K	80K	90K	100K	OPEN	Output current	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	95%~108%	Dimming value	Short	1V	2V	3V	4V	5V	6V	7V	8V	9V	10V	OPEN	Output current	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	95%~108%	Duty value	Short	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	OPEN	Output current	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	95%~108%	1	Resistance value	SHORT	10K	20K	30K	40K	50K	60K	70K	80K	90K	100K	OPEN	Output current	0.000A	0.880A	1.620A	2.370A	3.110A	3.940A	4.610A	5.310A	6.020A	6.820A	7.540A	7.749A	%	0	11.73%	21.60%	31.60%	41.47%	52.53%	61.47%	70.80%	80.27%	90.93%	100.53%	103.32%	2	Dimming value	SHORT	1V	2V	3V	4V	5V	6V	7V	8V	9V	10V	OPEN	Output current	0.000A	0.840A	1.580A	2.330A	3.060A	3.790A	4.540A	5.280A	6.020A	6.750A	7.490A	7.749A	%	0.00%	11.20%	21.07%	31.07%	40.80%	50.53%	60.53%	70.40%	80.27%	90.00%	99.87%	103.32%	3	Duty value	SHORT	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	OPEN	Output current	0.000A	1.080A	1.790A	2.500A	3.220A	3.930A	4.650A	5.360A	6.080A	6.800A	7.500A	7.749A	%	0.00%	14.40%	23.87%	33.33%	42.93%	52.40%	62.00%	71.47%	81.07%	90.67%	100.0%	103.32%
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**INPUT FUNCTION TEST**

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT
1	INPUT VOLTAGE RANGE	180VAC-480 VAC	I/P : TESTING O/P : FULL LOAD Ta : 25°C	169 V-480V
			I/P : LOW-LINE-3V=177V HIGH-LINE+3V=531 V O/P : FULL/MIN LOAD ON : 30 Sec . OFF : 30 Sec 10MIN ( AC POWER ON/OFF NO DAMAGE )	TEST : OK
2	INPUT FREQUENCY RANGE	47HZ ~63 HZ NO DAMAGE	I/P : 180VAC ~ 480 VAC O/P : FULL -MIN LOAD Ta : 25°C	TEST : OK
3	POWER FACTOR	0.98 / 230 VAC(TYP)	I/P : 230VAC	PF= 0.994 / 230 VAC
		0.97 / 277VAC(TYP)	I/P : 277VAC	PF= 0.991 / 277 VAC
		0.95 /347 VAC(TYP)	I/P : 347VAC	PF= 0.980 / 347VAC
		0.93 / 480 VAC(TYP)	I/P : 480VAC O/P : FULL LOAD Ta : 25°C	PF= 0.963 / 480VAC
4	EFFICIENCY	90.5 % (TYP)	I/P : 347 VAC O/P : FULL LOAD Ta : 25°C	91.52 %
5	INPUT CURRENT	347V/ 0.5 A (TYP)	I/P : 347 VAC	I = 0.48 A/ 347 VAC
		480V/ 0.38 A (TYP)	I/P : 480 VAC O/P : FULL LOAD Ta : 25°C	I = 0.37 A/ 480 VAC
6	INRUSH CURRENT	480V/ 35 A (TYP) (twidh=790 us measured at 50% Ipeak) COLD START	I/P : 480VAC O/P : FULL LOAD Ta : 25°C	I = 25 A/ 480VAC T50= 789 us
7	LEAKAGE CURRENT	< 0.75 mA / 480 VAC	I/P : 480 VAC O/P : Min LOAD Ta : 25°C	L-FG : 0.36 mA N-FG : 0.36 mA
8	TOTAL HARMONIC DISTORTION	Total harmonic distortion will be lower than 20% when output loading is 50% or higher at 230VAC / 277VAC / 347VAC	I/P : 230VAC I/P : 277VAC I/P : 347VAC O/P : 50% LOAD Ta : 25°C	THD : 7.45 THD : 7.23 THD : 6.01
		Total harmonic distortion will be lower than 20% when output loading is 75% or higher at 480VAC	I/P : 480VAC O/P : 75% LOAD Ta : 25°C	THD : 11.9

**PROTECTION FUNCTION TEST**

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT
1	OVER CURRENT	95% - 108%	I/P : 480 VAC I/P : 347 VAC O/P : TESTING Ta : 25°C	102%/ 480 VAC 102%/ 347 VAC Constant current limiting, recovers automatically after fault condition is removed
2	OVER VOLTAGE PROTECTION	CH1 : 23 V ~ 27 V	I/P : 480 VAC I/P : 347 VAC O/P : MIN LOAD Ta : 25°C	24.881 V/ 480VAC 24.958 V/ 347 VAC Shut down o/p voltage with auto-recovery or re-power on to recovery
3	OVER TEMPERATURE PROTECTION	SPEC : NO DAMAGE	I/P : 347 VAC O/P : FULL LOAD	O.T.P. Active  Shut down o/p voltage, recovers automatically after temperature goes down
4	SHORT PROTECTION	NO DAMAGE	I/P : 528 VAC O/P : FULL LOAD Ta : 25°C	NO DAMAGE Constant current limiting, recovers automatically after fault condition is removed

**COMPONENT STRESS TEST**

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT
1	Power Transistor (D to S) or (C to E) Peak Voltage	Q3 Rated : 7A/950V	I/P : High-Line +3V = 531 V O/P : (1)Full Load Turn on (2) Output Short (3)Full load continue Ta : 25°C	(1) 692 V (2) 340 V (3) 660 V
2	Diode Peak Voltage	Q101 Rated : 80A/75V	I/P : High-Line +3V = 531 V O/P : (1)Full Load Turn on (2)Output Short (3)Full load continue Ta : 25°C	(1) 71.6 V (2) 74 V (3) 68.8 V
3	Input Capacitor Voltage	C5 Rated : 56u/450V	I/P : High-Line +3V = 531 V O/P : (1)Full Load Turn on /Off (2) Min load Turn on /Off (3)Full Load /Min load Change Ta : 25°C	(1) 416 V (2) 432 V (3) 436 V
4	Control IC Voltage Test	U1 Rated : 10.3V~22.5V  U2 Rated : 11V~28V	I/P : High-Line +3V = 531 V O/P : (1)Full Load Turn on /Off (2) Min load Turn on /Off (3)Full Load /Min load Change  (1)Full Load Turn on /Off (2) Min load Turn on /Off (3)Full Load /Min load Ta : 25°C	(1) 17.8 V (2) 17.6 V (3) 18.4 V  (4) 16 V (5) 15.8 V (6) 16 V

5	Power Transistor (D to S) or (C to E) Peak Voltage	Q1 Rated : 7A/950V	I/P : High-Line +3V = 531 V O/P : (1) Full Load Turn on (2) Output Short (3) Full load continue Ta : 25°C	(1) 896 V (2) 820 V (3) 848 V
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## ■ SAFETY & E.M.C. TEST

### SAFETY TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT
1	WITHSTAND VOLTAGE	I/P-O/P : 3.75 KVAC/min I/P-FG : 2KVAC/min O/P-FG : 1.5 KVAC/min	I/P-O/P : 4 KVAC/min I/P-FG : 2.4KVAC/min O/P-FG : 1.8 KVAC/min Ta : 25°C	I/P-O/P : 3.72 mA I/P-FG : 2.634 mA O/P-FG : 3.59 mA NO DAMAGE
2	ISOLATION RESISTANCE	I/P-O/P : 500VDC>100MΩ I/P-FG : 500VDC>100MΩ O/P-FG : 500VDC>100MΩ	I/P-O/P : 500 VDC I/P-FG : 500 VDC O/P-FG : 500 VDC Ta : 25°C/70%RH	I/P-O/P : 30 GΩ I/P-FG : 30 GΩ O/P-FG : 30 GΩ NO DAMAGE
3	GROUNDING CONTINUITY	FG(PE) TO CHASSIS OR TRACE < 100 mΩ	40 A / 2min Ta : 25°C / 70%RH	15 mΩ

### E.M.C TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT
1	HARMONIC	EN61000-3-2 CLASS C	I/P:230VAC/380VAC/50HZ/60HZ O/P:100/60%ELECTRONIC LOAD O/P:100%LED LOAD Ta:25°C	PASS
2	CONDUCTION	EN55015 CLASS B FCC Part 15 Subpart B	I/P: 230VAC/380VAC/50HZ/60HZ O/P:FULL/60% LOAD Ta:25°C	PASS Test by certified Lab
3	RADIATION	EN55015 CLASS B FCC Part 15 Subpart B	I/P: 230VAC/380VAC/50HZ/60HZ O/P:FULL LOAD/60% LOAD Ta:25°C	PASS Test by certified Lab
4	E.S.D	EN61000-4-2 LIGHT INDUSTRY AIR:8KV / Contact:4KV	I/P: 230VAC/380VAC/50HZ/60HZ O/P:FULL LOAD Ta:25°C	CRITERIA A
5	E.F.T	EN61000-4-4 LIGHT INDUSTRY INPUT : 1KV	I/P: 230VAC/380VAC/50HZ/60HZ O/P:FULL LOAD Ta:25°C	CRITERIA A
6	SURGE	IEC61000-4-5 INDUSTRY L-N :2KV L,N-PE:4KV	I/P: 230VAC/380VAC/50HZ/60HZ O/P:FULL LOAD Ta:25°C	CRITERIA A
7	Test by certified Lab & Test Report Prepare. Any contradictions of the test results, please refer to the latest EMC test report.			

■ RELIABILITY TEST

ENVIRONMENT TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT																																																																												
1	TEMPERATURE RISE TEST	MODEL : HVG-150-15 1. ROOM AMBIENT BURN-IN : 13 HRS I/P : 347VAC O/P : FULL LOAD Ta= 28.4 °C 2. HIGH AMBIENT BURN-IN : 3 HRS I/P : 347VAC O/P : FULL LOAD Ta=60.8 °C	<table border="1"> <thead> <tr> <th>NO</th> <th>Position</th> <th>ROOM AMBIENT Ta=28.4 °C</th> <th>HIGH AMBIENT Ta=60.8 °C</th> </tr> </thead> <tbody> <tr><td>1</td><td>LF2</td><td>57.8°C</td><td>83.7°C</td></tr> <tr><td>2</td><td>BD1</td><td>60.3°C</td><td>85.9°C</td></tr> <tr><td>3</td><td>L2</td><td>67.3°C</td><td>93.5°C</td></tr> <tr><td>4</td><td>C48</td><td>61.1°C</td><td>86.7°C</td></tr> <tr><td>5</td><td>C46</td><td>60.1°C</td><td>85.7°C</td></tr> <tr><td>6</td><td>C15</td><td>65.1°C</td><td>90.7°C</td></tr> <tr><td>7</td><td>Q1</td><td>65.0°C</td><td>90.7°C</td></tr> <tr><td>8</td><td>C5</td><td>66.8°C</td><td>91.2°C</td></tr> <tr><td>9</td><td>Q4</td><td>69.7°C</td><td>95.2°C</td></tr> <tr><td>10</td><td>C62</td><td>64.3°C</td><td>88.8°C</td></tr> <tr><td>11</td><td>RTH2</td><td>64.0°C</td><td>88.5°C</td></tr> <tr><td>12</td><td>T1</td><td>75.7°C</td><td>100.3°C</td></tr> <tr><td>13</td><td>C203</td><td>71.2°C</td><td>96.5°C</td></tr> <tr><td>14</td><td>Q101</td><td>75.2°C</td><td>100.5°C</td></tr> <tr><td>15</td><td>C104</td><td>68.4°C</td><td>93.8°C</td></tr> <tr><td>16</td><td>C105</td><td>65.2°C</td><td>91.1°C</td></tr> <tr><td>17</td><td>C106</td><td>64.8°C</td><td>90.5°C</td></tr> <tr><td>18</td><td>U2</td><td>64.8°C</td><td>88.6°C</td></tr> </tbody> </table>	NO	Position	ROOM AMBIENT Ta=28.4 °C	HIGH AMBIENT Ta=60.8 °C	1	LF2	57.8°C	83.7°C	2	BD1	60.3°C	85.9°C	3	L2	67.3°C	93.5°C	4	C48	61.1°C	86.7°C	5	C46	60.1°C	85.7°C	6	C15	65.1°C	90.7°C	7	Q1	65.0°C	90.7°C	8	C5	66.8°C	91.2°C	9	Q4	69.7°C	95.2°C	10	C62	64.3°C	88.8°C	11	RTH2	64.0°C	88.5°C	12	T1	75.7°C	100.3°C	13	C203	71.2°C	96.5°C	14	Q101	75.2°C	100.5°C	15	C104	68.4°C	93.8°C	16	C105	65.2°C	91.1°C	17	C106	64.8°C	90.5°C	18	U2	64.8°C	88.6°C	
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2	OVER LOAD BURN-IN TEST	NO DAMAGE 1 HOUR ( MIN )	I/P : 347 VAC O/P : 104 % LOAD Ta : 25°C	TEST : OK																																																																												
3	LOW TEMPERATURE TURN ON TEST	TURN ON AFTER 2 HOUR	I/P : 528VAC/200VAC O/P : 100 % LOAD Ta= -40 °C	TEST : OK																																																																												
4	HIGH HUMIDITY HIGH TEMPERATURE HIGH VOLTAGE TURN ON TEST	AFTER 12 HOURS IN CHAMBER ON CONTROL 50°C NO DAMAGE	I/P : 528 VAC O/P : FULL LOAD Ta= 50 °C HUMIDITY= 95 %R.H	TEST : OK																																																																												
5	TEMPERATURE COEFFICIENT	± 0.03%(0-50°C)	I/P : 347 VAC O/P : FULL LOAD	± 0.003 % (0-50°C)																																																																												
6	STORAGE TEMPERATURE TEST	1. Thermal shock Temperature : -45°C~ +90°C 2. Temperature change rate : 25°C / MIN 3. Dwell time low and high temperature : 30 MIN/EACH 4. Total test cycle : 5 CYCLE 5. Input/Output condition : STATIC		OK																																																																												



7	THERMAL SHOCK TEST	1. Thermal shock Temperature : -45°C~ +55°C 2. Temperature change rate : 25°C / MIN 3. Dwell time low and high temperature : 30 MIN/EACH 4. Total test cycle : 10 CYCLE 5. Input/Output condition : 347VAC/Full Load AC ON/OFF TEST turn on 58sec ; turn off 2sec	OK
8	VIBRATION TEST	1 Carton & 1 Set (1) Waveform : Sine Wave (2) Frequency : 10-500Hz (3) Sweep Time : 12min/sweep cycle (4) Acceleration : 5G (5) Test Time : 72min in each axis (X.Y.Z) (6) Ta : 25°C	TEST : OK
9	CAPACITOR LIFE CYCLE	HVG-150-15:SUPPOSE C104 IS THE MOST CRITICAL COMPONENT (1) I/P : 347VAC O/P : FULL LOAD Tc= 75 °C LIFE TIME (2) I/P : 347VAC O/P : FULL LOAD Tc= 75 °C LIFE TIME (3) I/P : 347VAC O/P : 75% LOAD Tc= 75 °C LIFE TIME	(1) 52102HRS (2) 60828HRS (3) 70590 HRS
10	MTBF	Conducted by Parts Stress Analysis Prediction 158.6K hrs min. MIL-HDBK-217F (25°C)	
11	Ongoing Reliability Test	I/P : 230VAC O/P : FULL LOAD TA=50°C Demonstration Mean Time Between Failure : 50,000 hours	

TEST RESULT	TESTER	REVIEW	APPROVAL
PASS	DANIEL GAO	SANFORD SU	VINCENT TSENG

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