



Test Report: HVG-320-54

320W Single Output Switching Power Supply

■ 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

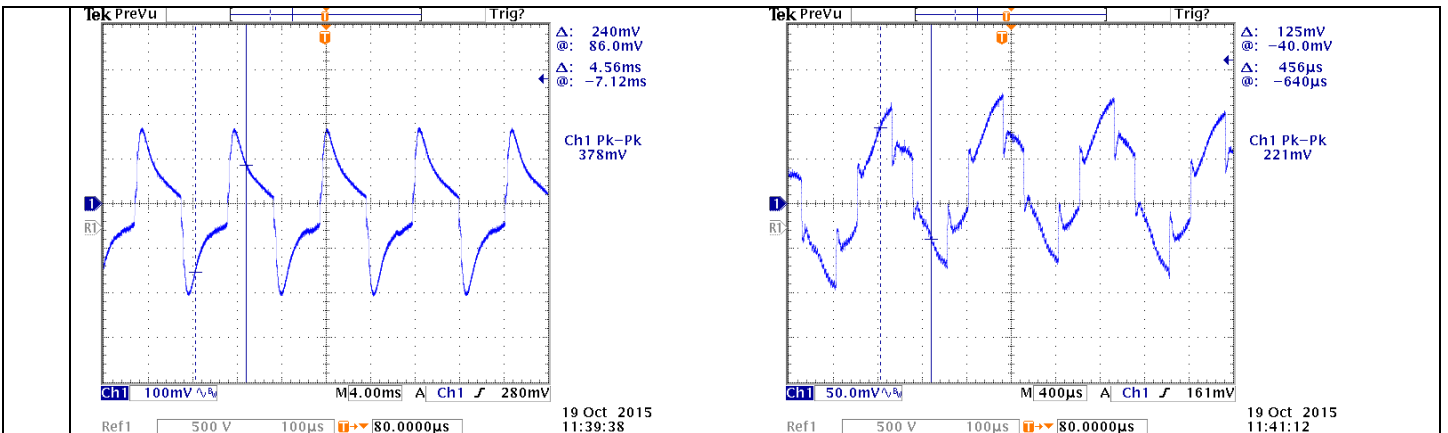
ENVIRONMENT TEST

DESIGN VERIFY TEST

OUTPUT FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT
1	CONSTANT CURRENT REGION	CH1: 27V~ 54V	I/P: 347 VAC O/P: FULL LOAD Ta: 25°C	0.0725V~53 V /347VAC
2	OUTPUT VOLTAGE ADJUST RANGE	CH1: 49V~ 58 V	I/P: 347 VAC I/P: 230VAC O/P: MIN LOAD Ta: 25°C	48.086V~60.441V /347VAC 48.054V~60.449V /230VAC
3	CURRENT ADJ. RANGE	CH1: 3A~ 6A	I/P: 347 VAC I/P: 230VAC O/P: CV MIN & CV MAX-1V Ta: 25°C	2.4731A~ 6.72A /347VAC@CV MAX-1V 2.443A~6.745 A /347VAC@CV MIN 2.48A~7.26A/230VAC@CV MAX-1V 2.445A~6.749A/230VAC@CV MIN
4	OUTPUT VOLTAGE TOLERANCE (Max)	V1: 1 % ~ -1 %	I/P: 180VAC /528AC O/P: FULL / MIN LOAD Ta: 25°C	V1: 0.055%~-0.073%
5	LINE REGULATION (Max)	V1: 0.5 % ~ -0.5 %	I/P: 180VAC~528AC O/P: FULL LOAD Ta: 25°C	V1: 0.037 %~-0.037 %
6	LOAD REGULATION (Max)	V1: 0.5 % ~ -0.5 %	I/P: 347 VAC O/P: FULL ~MIN LOAD Ta: 25°C	V1: 0.073%~-0.073%
7	OVER/UNDERSHOOT TEST	< ±5%	I/P: 347 VAC O/P: FULL LOAD Ta: 25°C	TEST: <5 %
8	RIPPLE & NOISE (Max)	V1: 350 mVp-p	I/P: 347 VAC O/P: FULL LOAD Ta: 25°C	V1: 80.8mVp-p
<p>low frequency :</p>				
9	SET UP TIME	480VAC/ 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	480VAC/326ms 347VAC/332ms 230VAC/358ms
INPUT=347VAC/60HZ @ FULL LOAD CH1 : Output Voltage CH2 : AC Input Voltage		INPUT=230VAC/50HZ @ FULL LOAD CH1 : Output Voltage CH2 : AC Input Voltage		

<p>10</p> <p>RISE TIME</p>	<p>480VAC/ 80 ms (Max) 347VAC/ 80 ms (Max) 230VAC/ 150 ms (Max)</p>	<p>I/P: 480 VAC I/P: 347 VAC I/P: 230 VAC O/P: FULL LOAD Ta:25°C</p>	<p>480VAC/48.4ms 347VAC/49.2ms 230VAC/48.8ms</p>
<p>INPUT=347VAC/60HZ @ FULL LOAD</p>		<p>INPUT=230VAC/50HZ @ FULL LOAD</p>	
<p>CH1 : Output Voltage</p>		<p>CH1 : Output Voltage</p>	
<p>11</p> <p>HOLD UP TIME</p>	<p>480VAC/ 15ms (Max) 347VAC/ 15 ms (Max)</p>	<p>I/P: 480 VAC I/P: 347 VAC O/P: FULL LOAD Ta:25°C</p>	<p>480VAC/23.6ms 347VAC/24.8ms</p>
<p>INPUT=347VAC/60HZ @ FULL LOAD</p>		<p>INPUT=480VAC/60HZ @ FULL LOAD</p>	
<p>CH1 : Output Voltage CH2 : AC Input Voltage</p>		<p>CH1 : Output Voltage CH2 : AC Input Voltage</p>	
<p>12</p> <p>DYNAMIC LOAD</p>	<p>V1: 5400 mVp-p</p>	<p>I/P: 347VAC O/P: (1) FULL /50% LOAD 50%DUTY / 120HZ (2) FULL /50% LOAD 50%DUTY / 1KHZ Ta:25°C</p>	<p>378mVp-p 221mVp-p</p>
<p>FULL /50% LOAD 50%DUTY / 120HZ</p>		<p>FULL /50% LOAD 50%DUTY / 1KHZ</p>	

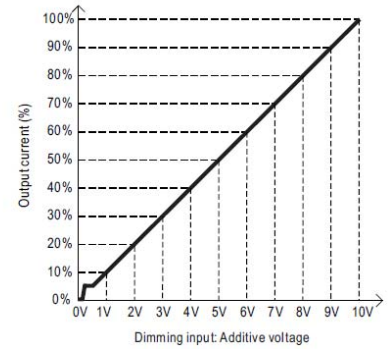
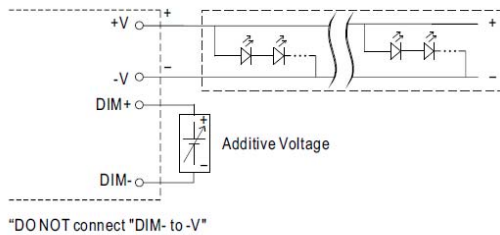


13 DIMMING OPERATION (for B-Type)

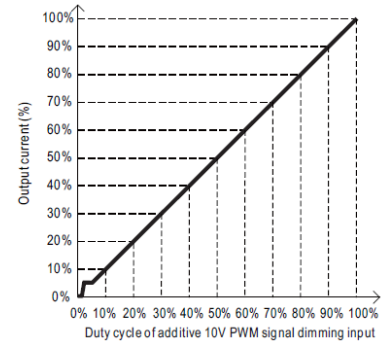
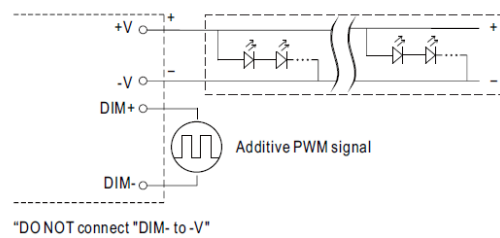
※3 in 1 dimming function

- ※Output constant current level can be adjusted by applying one of the three methodologies between DIM+ and DIM-: 0 ~ 10VDC, or 10V PWM signal or resistance.
- ※Direct connecting to LEDs is suggested. It is not suitable to be used with additional drivers.
- ※Dimming source current from power supply: 100µ A (typ.)

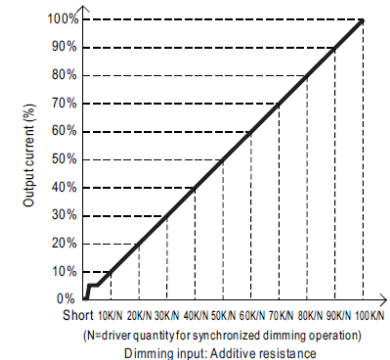
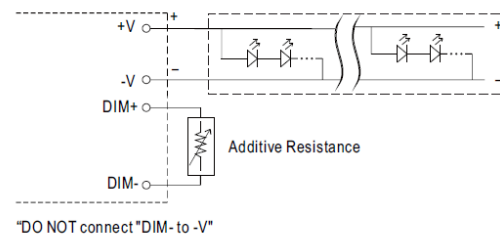
◎ Applying additive 0 ~ 10VDC



◎ Applying additive 10V PWM signal (frequency range 100Hz ~ 3KHz):



◎ Applying additive resistance:



Note : 1. Min. dimming level is about 5% and the output current is not defined when $0% < I_{out} < 5%$.
 2. The output current could drop down to 0% when dimming input is about 0kΩ or 0Vdc, or 10V PWM signal with 0% duty cycle.

I/P : 347VAC
 O/P : DIMMING TEST

TA : 25°C

R	SHORT	10K	20K	30K	40K	50K	60K	70K	80K	90K	100K	OPEN
O/P CURRENT	0A	0.672A	1.250A	1.843A	2.440A	3.010A	3.580A	4.175A	4.740A	5.329A	5.866A	6.070A
%	0.00%	11.20%	20.83%	30.72%	40.67%	50.17%	59.67%	69.58%	79.00%	88.82%	97.77%	101.17%
V	0V	1V	2V	3V	4V	5V	6V	7V	8V	9V	10V	OPEN
O/P CURRENT	0A	0.722A	1.336A	1.915A	2.510A	3.071A	3.643A	4.257A	4.868A	5.450A	6.012A	6.070A
%	0.00%	12.03%	22.27%	31.92%	41.83%	51.18%	60.72%	70.95%	81.13%	90.83%	100.20%	101.17%
PWM (100HZ)	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	OPEN
O/P CURRENT	0A	0.724A	1.310A	1.926A	2.534A	3.112A	3.697A	4.282A	4.858A	5.441A	6.017A	6.070A
%	0.00%	12.07%	21.83%	32.10%	42.23%	51.87%	61.62%	71.37%	80.97%	90.68%	100.28%	101.17%

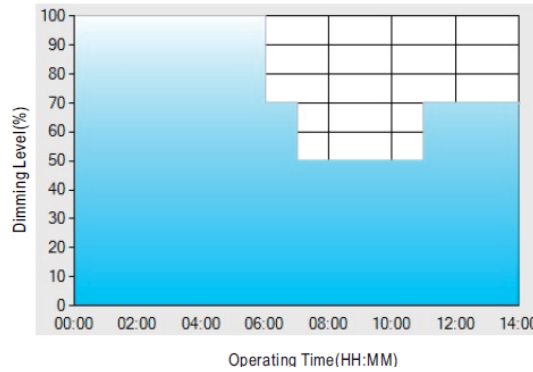
TEST RESULT : OK

14 DIMMING OPERATION (for Dxx-Type by User definition)

※Smart timer dimming function (for Dxx-Type by User definition)

MEAN WELL Smart timer dimming primarily provides the adaptive proportion dimming profile for the output constant current level to perform up to 14 consecutive hours. 3 dimming profiles hereunder are defined accounting for the most frequently seen applications. If other options may be needed, please contact MEAN WELL for details.

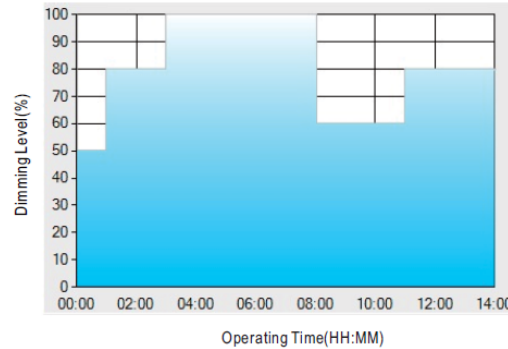
Ex : Ⓒ D01-Type: the profile recommended for residential lighting



Set up for D01-Type in Smart timer dimming software program:

	T1	T2	T3	T4
TIME**	06:00	07:00	11:00	--
LEVEL**	100%	70%	50%	70%

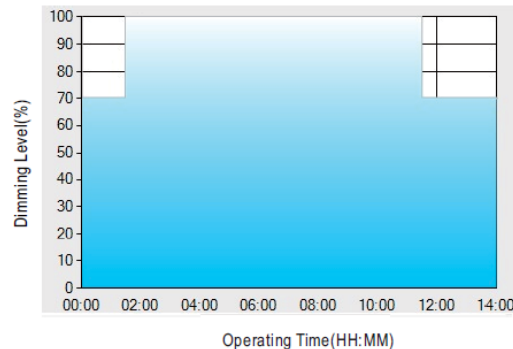
Ex : Ⓒ D02-Type: the profile recommended for street lighting



Set up for D02-Type in Smart timer dimming software program:

	T1	T2	T3	T4	T5
TIME**	01:00	03:00	8:00	11:00	--
LEVEL**	50%	80%	100%	60%	80%

Ex : Ⓒ D03-Type: the profile recommended for tunnel lighting



Set up for D03-Type in Smart timer dimming software program:

	T1	T2	T3
TIME**	01:30	11:00	--
LEVEL**	70%	100%	70%

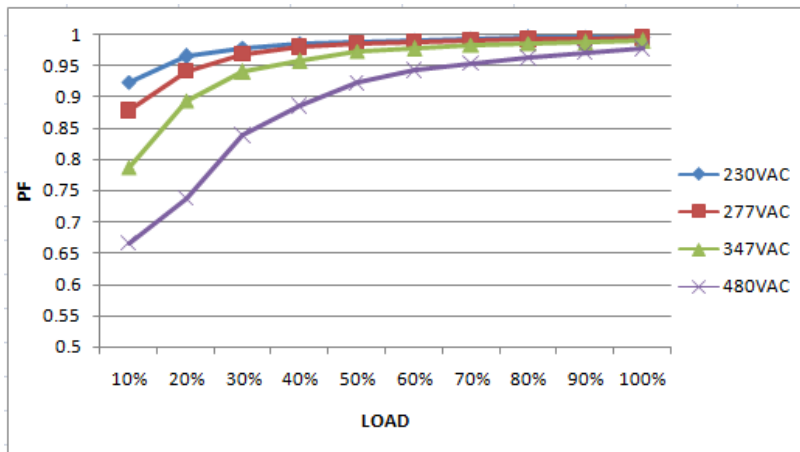
I/P : 347VAC

		O/P : DIMMING TEST TA : 25°C TEST RESULT : OK
--	--	---

INPUT FUNCTION TEST

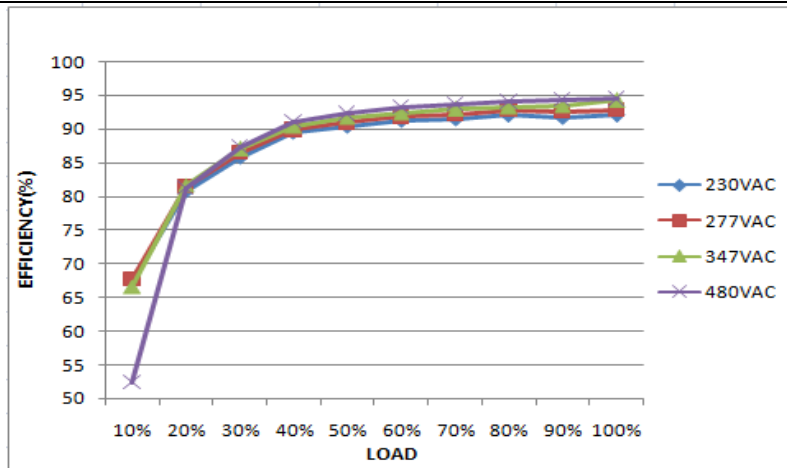
NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT
1	INPUT VOLTAGE RANGE	180VAC~528 VAC	I/P:TESTING O/P:FULL LOAD Ta:25°C	132V~528 V
			I/P: LOW-LINE-3V=177 V HIGH-LINE+10V=538 V O/P:FULL/MIN LOAD (PLEASE CHECK DERATING CURVE) ON: 30 Sec OFF: 30 Sec 10MIN (POWER ON/OFF NO DAMAGE)	TEST:OK
2	INPUT FREQUENCY RANGE	47HZ ~63 HZ NO DAMAGE	I/P: 180 VAC ~528VAC O/P:FULL~MIN LOAD Ta:25°C	OK
3	INPUT CURRENT (TYP)	480VAC/ 0.8 A 347 VAC/ 1.1 A	I/P: 480VAC/347 VAC O/P:FULL LOAD Ta:25°C	I=0.748A/480VAC I=0.996A/347VAC
4	LEAKAGE CURRENT	< 0.75 mA / 480VAC	I/P : 480 VAC O/P : Min LOAD Ta : 25°C	L-FG:0.255 mA N-FG:0.425 mA L,N -V(+): 0.17mA L,N-V(-): 0.165mA
5	POWER FACTOR(TYP)	0.93/480 VAC FULL LOAD 0.95/347 VAC FULL LOAD 0.98/230 VAC FULL LOAD 0.97/277 VAC FULL LOAD	I/P: 480VAC/347VAC/230VAC/277VAC O/P:FULL LOAD Ta:25°C	PF=0.99 /480V/100%LOAD PF= 0.9939 /347V/100%LOAD PF= 0.9947 /230V/100%LOAD PF=0.9932 /277V/100%LOAD

P.F vs LOAD

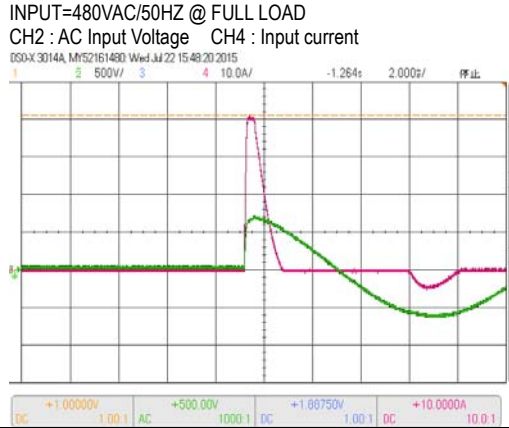


6	EFFICIENCY (TYP)	94%	I/P: 347 VAC O/P:FULL LOAD Ta:25°C	94.24%
---	------------------	-----	--	--------

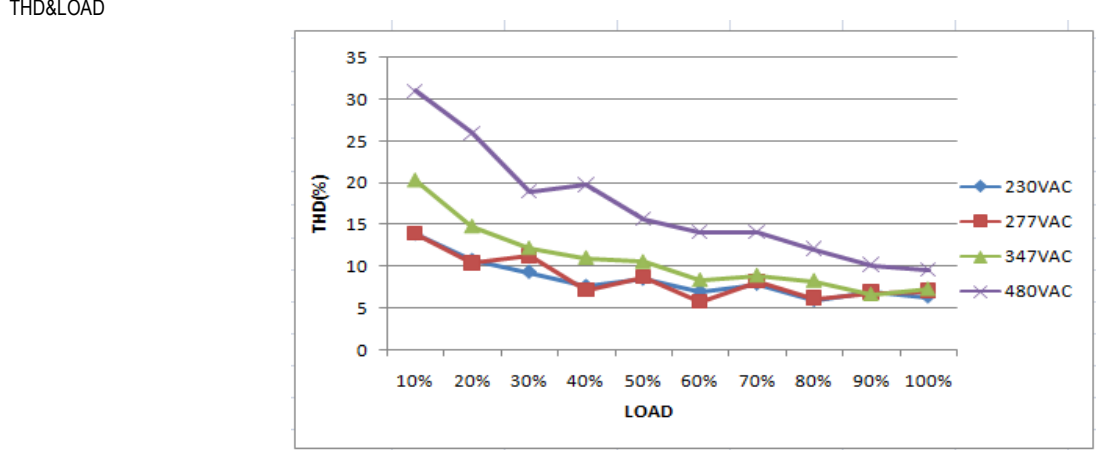
EFFICIENCY vs LOAD



7	INRUSH CURRENT (TYP)	480 V/ 50 A COLD START	I/P: 480VAC O/P: FULL LOAD Ta: 25°C	I = 41 A/ 480VAC
		(twidh=850us measured at 50% Ipeak) COLD START		T50= 770 us



8	TOTAL HARMONIC DISTORTION	Total harmonic distortion will be lower than 20% when output loading is 50% or higher at 230V/277V/347V/480V	I/P : 347VAC O/P : 100% LOAD 50% LOAD	THD : 6.06 % THD : 10.66 %
			I/P : 230VAC/277VAC/480V O/P : 50% LOAD Ta : 25°C	THD : 7.81 % THD : 8.72 % THD : 17.1 %



PROTECTION FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT
1	OVER LOAD PROTECTION	95 %~ 108 % PROTECTION TYPE : Constant current limiting, recovers automatically after fault condition is removed	I/P: 528VAC I/P: 347VAC I/P: 180VAC O/P: TESTING Ta:25°C	104.25%/ 528VAC 104.25%/ 347VAC 104.26%/180VAC PROTECTION TYPE : Constant current limiting, recovers automatically after fault condition is removed
2	OVER VOLTAGE PROTECTION	V1: 59 V~ 65 V PROTECTION TYPE : Shut down and latch off o/p voltage, re-power on to recover	I/P: 528VAC I/P: 347VAC I/P: 180VAC O/P: MIN LOAD Ta:25°C	61.89 V/ 528VAC 61.94V/ 347VAC 61.92V/ 180VAC PROTECTION TYPE : Shut down and latch off o/p voltage, re-power on to recover
3	OVER TEMPERATURE PROTECTION	PROTECTION TYPE : Shut down and latch off o/p voltage, re-power on to recover	I/P: 528 VAC I/P: 180 VAC O/P: FULL LOAD	O.T.P. Active PROTECTION TYPE : Shut down and latch off o/p voltage, re-power on to recover
4	SHORT PROTECTION	SHORT EVERY OUTPUT 1 HOUR NO DAMAGE PROTECTION TYPE : Constant current limiting, recovers automatically after fault condition is removed	I/P: 528VAC I/P: 180 VAC O/P: FULL LOAD Ta:25°C	NO DAMAGE PROTECTION TYPE : Constant current limiting, recovers automatically after fault condition is removed

COMPONENT STRESS TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT
1	P.F.C Transistor (D to S) or (C to E) Peak Voltage	Q1 Rated 9A/950V	I/P: High-Line +3V =531 V AC ON/OFF O/P: (1) Full Load (2) Output Short (3) Dynamic Load Full Load/ Min. Load 90%Duty/1KHz (4) Dynamic Load Full Load/ Min. Load 90%Duty/3KHz (5) Dynamic Load Full Load/ Min. Load 90%Duty/5KHz (6) Dynamic Load 100% Load/ Min. Load 50%Duty/120Hz (7) 0%→400% Load. Ta:25°C	VDS: (1)904V (2)939V (3)931V (4)931V (5)931V (6)931V (7)834V
2	PWM Transistor (D to S) or (C to E) Peak Voltage	Q901 Rated 9A/950V	I/P: High-Line +3V =531V AC ON/OFF VDS: O/P: (1) Full Load (2) Output Short (3) Dynamic Load Full Load/ Min. Load 90%Duty/1KHz (4) Dynamic Load Full Load/ Min. Load 90%Duty/3KHz (5) Dynamic Load Full Load/ Min. Load 90%Duty/5KHz (6) Dynamic Load 100% Load/ Min. Load 50%Duty/120Hz (7) 0%→400% Load. Ta:25°C	VDS: (1)842V (2)858V (3)834V (4)834V (5)834V (6)842V (7)850V
3	Diode Peak Voltage	Q102 Rated: 117A/150V	I/P: High-Line +3V =531 V AC ON/OFF O/P: (1) Full Load (2) Output Short (3) Dynamic Load Full Load/ Min. Load 90%Duty/1KHz	Q102: VDS: (1)120.3V (2)61.6V (3)119.5V (4)120.3V

			(4)Dynamic Load Full Load/ Min. Load 90%Duty/3KHz (5)Dynamic Load Full Load/ Min. Load 90%Duty/5KHz (6)Dynamic Load 100% Load/ Min. Load 50%Duty/120Hz (7)0%→400% Load. (8)NO LOAD Ta:25°C	(5)119.5V (6)117.1V (7)128.3V (8)115.5V
4	Input Capacitor Voltage	C5 Rated: 120u/450V	I/P:High-Line +3V =531V O/P: (1)Full Load input on/off (2) Min load input on /Off (3)Full Load /Min load Change (4)Full load continue Ta:25°C	(1)413V (2)401V (3)373V (4)365V
5	Control IC Voltage Test	PFC IC U1 Rated: 10V~20V	I/P:High-Line +3V =531 V AC ON/OFF O/P(1)FULL LOAD (2) Output Short (3)O.L.P (4)O.V.P. Ta:25°C	(1) 13.36V (2) 13.36V (3) 13.44V (4) 13.03V

SAFETY & EMC TEST REPORT

SAFETY TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT
1	WITHSTAND VOLTAGE	IEC60950-1 I/P-O/P: 3.75KVAC/min I/P-FG:2 KVAC/min<4.5mA O/P-FG:1.5KVAC/min	I/P-O/P: 4.125 KVAC/min I/P-FG: 2.4KVAC/min O/P-FG: 1.8 KVAC/min Ta:25°C	I/P-O/P: 1.913 mA I/P-FG: 1.979 mA O/P-FG: 1.008 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	I/P-O/P: 29.4 GΩ I/P-FG: 4.57 GΩ O/P-FG: 30 GΩ NO DAMAGE
3	GROUNDING CONTINUITY	IEC60950-1 FG(PE) TO CHASSIS OR TRACE < 100 mΩ	40A / 2min Ta:25°C	25 mΩ

■ E.M.C TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT
1	CONDUCTION	FCC Part 15 Subpart B	I/P: 440 VAC /60HZ O/P:FULL/30% LOAD Ta:25°C	PASS Test by certified Lab
2	RADIATION	FCC Part 15 Subpart B	I/P: 480 VAC /60HZ O/P:FULL LOAD Ta:25°C	PASS Test by certified Lab
3	E.S.D	EN61000-4-2 LIGHT INDUSTRY AIR:8KV / Contact:4KV	I/P: 230VAC/50HZ O/P:FULL LOAD Ta:25°C	CRITERIA A
3	E.F.T	EN61000-4-4 LIGHT INDUSTRY INPUT: 1KV	I/P: 230 VAC/50HZ O/P:FULL LOAD Ta:25°C	CRITERIA A
5	SURGE	IEC61000-4-5 INDUSTRY L-N :2KV L,N-PE:4KV	I/P: 230 VAC/50HZ O/P:FULL LOAD Ta:25°C	CRITERIA A
6	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-320-48 1. ROOM AMBIENT BURN-IN : 3 HRS I/P : 347VAC O/P : FULL LOAD Ta= 30.5 °C 2. HIGH AMBIENT BURN-IN : 14 HRS I/P : 347VAC O/P : FULL LOAD Ta= 55.9 °C																																																																																														
		<table border="1"> <thead> <tr> <th>NO</th> <th>Position</th> <th>ROOM AMBIENT Ta= 30.5 °C</th> <th>HIGH AMBIENT Ta= 55.9 °C</th> </tr> </thead> <tbody> <tr><td>1</td><td>BD1</td><td>64.0°C</td><td>89.2°C</td></tr> <tr><td>2</td><td>Q1</td><td>64.1°C</td><td>89.8°C</td></tr> <tr><td>3</td><td>D1</td><td>71.6°C</td><td>95.6°C</td></tr> <tr><td>4</td><td>Q901</td><td>64.3°C</td><td>90.3°C</td></tr> <tr><td>5</td><td>RTH3</td><td>59.4°C</td><td>84.4°C</td></tr> <tr><td>6</td><td>L2</td><td>62.1°C</td><td>87.0°C</td></tr> <tr><td>7</td><td>C2</td><td>60.2°C</td><td>84.8°C</td></tr> <tr><td>8</td><td>LF1</td><td>62.2°C</td><td>86.2°C</td></tr> <tr><td>9</td><td>ZNR1</td><td>59.2°C</td><td>83.6°C</td></tr> <tr><td>10</td><td>C11</td><td>63.1°C</td><td>88.2°C</td></tr> <tr><td>11</td><td>D2</td><td>62.8°C</td><td>88.0°C</td></tr> <tr><td>12</td><td>C5</td><td>64.6°C</td><td>89.2°C</td></tr> <tr><td>13</td><td>C46</td><td>62.2°C</td><td>87.2°C</td></tr> <tr><td>14</td><td>C902</td><td>63.2°C</td><td>88.2°C</td></tr> <tr><td>15</td><td>T1</td><td>64.2°C</td><td>89.4°C</td></tr> <tr><td>16</td><td>L1</td><td>64.3°C</td><td>90.2°C</td></tr> <tr><td>17</td><td>T2</td><td>64.6°C</td><td>90.4°C</td></tr> <tr><td>18</td><td>C200</td><td>62.4°C</td><td>87.8°C</td></tr> <tr><td>19</td><td>Q102</td><td>59.2°C</td><td>84.9°C</td></tr> <tr><td>20</td><td>C102</td><td>56.4°C</td><td>81.8°C</td></tr> <tr><td>21</td><td>U1</td><td>60.5°C</td><td>85.7°C</td></tr> <tr><td>22</td><td>ZNR5</td><td>62.7°C</td><td>87.5°C</td></tr> </tbody> </table>	NO	Position	ROOM AMBIENT Ta= 30.5 °C	HIGH AMBIENT Ta= 55.9 °C	1	BD1	64.0°C	89.2°C	2	Q1	64.1°C	89.8°C	3	D1	71.6°C	95.6°C	4	Q901	64.3°C	90.3°C	5	RTH3	59.4°C	84.4°C	6	L2	62.1°C	87.0°C	7	C2	60.2°C	84.8°C	8	LF1	62.2°C	86.2°C	9	ZNR1	59.2°C	83.6°C	10	C11	63.1°C	88.2°C	11	D2	62.8°C	88.0°C	12	C5	64.6°C	89.2°C	13	C46	62.2°C	87.2°C	14	C902	63.2°C	88.2°C	15	T1	64.2°C	89.4°C	16	L1	64.3°C	90.2°C	17	T2	64.6°C	90.4°C	18	C200	62.4°C	87.8°C	19	Q102	59.2°C	84.9°C	20	C102	56.4°C	81.8°C	21	U1	60.5°C	85.7°C	22	ZNR5	62.7°C	87.5°C		
NO	Position	ROOM AMBIENT Ta= 30.5 °C	HIGH AMBIENT Ta= 55.9 °C																																																																																													
1	BD1	64.0°C	89.2°C																																																																																													
2	Q1	64.1°C	89.8°C																																																																																													
3	D1	71.6°C	95.6°C																																																																																													
4	Q901	64.3°C	90.3°C																																																																																													
5	RTH3	59.4°C	84.4°C																																																																																													
6	L2	62.1°C	87.0°C																																																																																													
7	C2	60.2°C	84.8°C																																																																																													
8	LF1	62.2°C	86.2°C																																																																																													
9	ZNR1	59.2°C	83.6°C																																																																																													
10	C11	63.1°C	88.2°C																																																																																													
11	D2	62.8°C	88.0°C																																																																																													
12	C5	64.6°C	89.2°C																																																																																													
13	C46	62.2°C	87.2°C																																																																																													
14	C902	63.2°C	88.2°C																																																																																													
15	T1	64.2°C	89.4°C																																																																																													
16	L1	64.3°C	90.2°C																																																																																													
17	T2	64.6°C	90.4°C																																																																																													
18	C200	62.4°C	87.8°C																																																																																													
19	Q102	59.2°C	84.9°C																																																																																													
20	C102	56.4°C	81.8°C																																																																																													
21	U1	60.5°C	85.7°C																																																																																													
22	ZNR5	62.7°C	87.5°C																																																																																													
2	LOW TEMPERATURE TURN ON TEST	TURN ON AFTER 2 HOUR	I/P : 528VAC/180VAC O/P : 100 % LOAD Ta= -45 °C	TEST : OK																																																																																												
3	HIGH HUMIDITY HIGH TEMPERATURE HIGH VOLTAGE TURN ON TEST	AFTER 12 HOURS IN CHAMBER ON CONTROL 60 °C NO DAMAGE	I/P : 538 VAC O/P : FULL LOAD Ta= 60°C HUMIDITY= 95 %R.H	TEST : OK																																																																																												
4	TEMPERATURE COEFFICIENT	± 0.03 %/°C (0~60°C)	I/P : 347 VAC O/P : FULL LOAD	± 0.0213 %/°C (0~60°C)																																																																																												
5	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																																																																																												

6	THERMAL SHOCK TEST	1. Thermal shock Temperature : -45°C~ +65°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 : 230VAC/Full Load AC ON/OFF TEST turn on 58sec : turn off 2sec	OK
7	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
8	CAPACITOR LIFE CYCLE	SUPPOSE C102 IS THE MOST CRITICAL COMPONENT (1) I/P : 347VAC O/P : FULL LOAD Tc= 80 °C LIFE TIME (2) I/P : 347VAC O/P : 75% LOAD Tc= 80 °C LIFE TIME (3) I/P : 347VAC O/P : 50% LOAD Tc= 80 °C LIFE TIME	(1) 56488HRS (2) 64589HRS (3) 70227HRS
9	MTBF	Conducted by Parts Stress Analysis Prediction 124.3K hrs min. MIL-HDBK-217F (25°C)	
10	Ongoing Reliability Test	I/P : 230VAC O/P : FULL LOAD TA=50°C Demonstration Mean Time Between Failure : 62,000 hours	

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

12.10.30 A50-F031