



Test Report: SPWM-240-48

240W Constant Voltage PWM Output 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

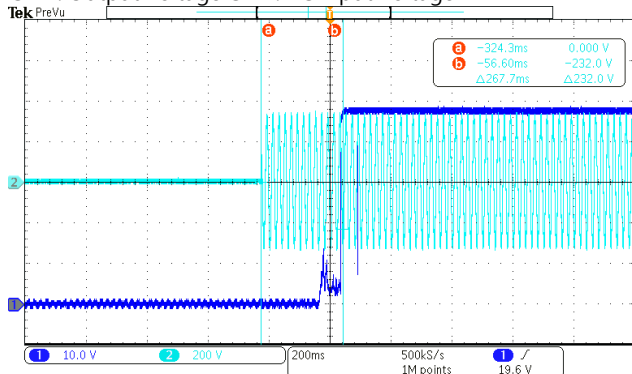
DESIGN VERIFY TEST

OUTPUT FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT
1	DIMMING RANGE	0~100%	I/P: 230 VAC O/P:FULL LOAD Ta:25°C	0.15%~100% /3.2KHz
2	VOLTAGE ADJ. RANGE	47V~50V	I/P: 230 VAC O/P:NO LOAD Ta:25°C	Test : 45.33V~51.6V
3	OVER/UNDERSHOOT TEST	< $\pm 5\%$	I/P: 230 VAC O/P:FULL LOAD Ta:25°C	TEST: 0.7 %
4	SET UP TIME (Max)	230VAC/500ms	I/P: 230 VAC O/P:FULL LOAD Ta:25°C	267.7ms

INPUT=230VAC/50HZ @ FULL LOAD

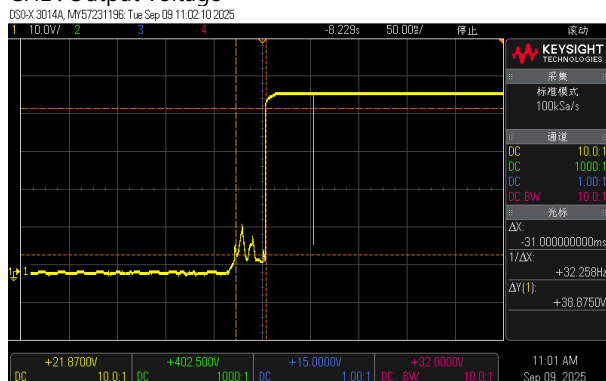
CH1 : Output Voltage CH2 : AC Input Voltage

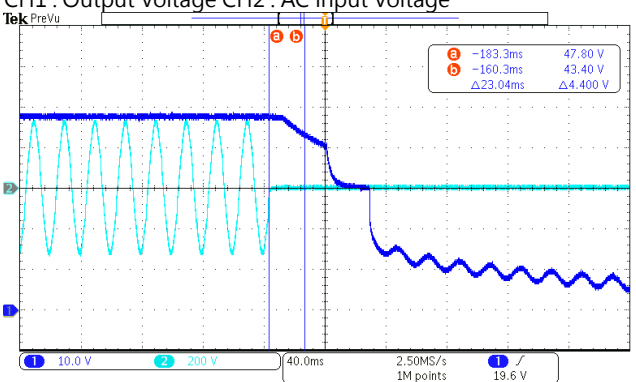


5	RISE TIME (Max)	230VAC/80ms	I/P: 230 VAC O/P:FULL LOAD Ta:25°C	31ms
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INPUT=230VAC/50HZ @ FULL LOAD

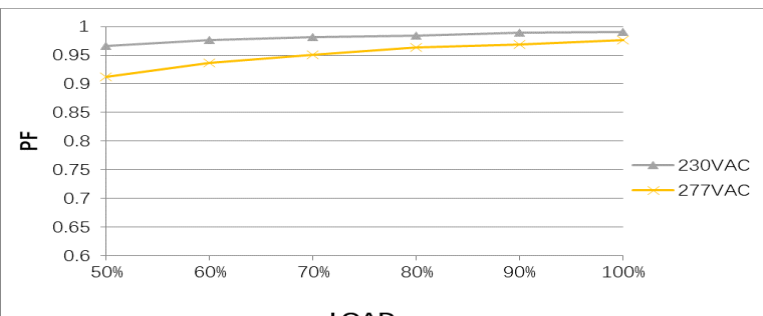
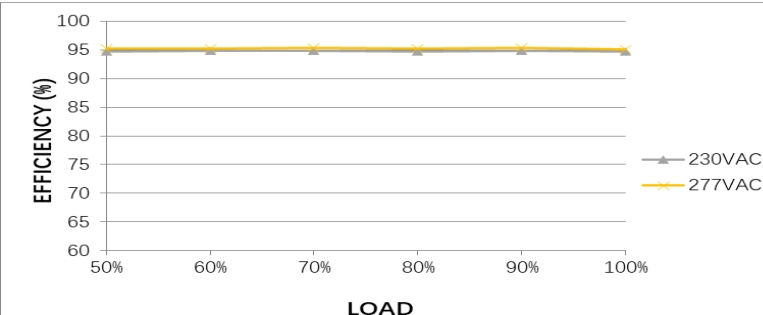
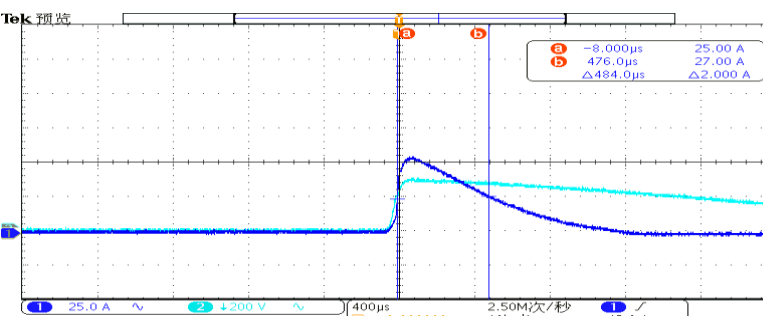
CH1 : Output Voltage

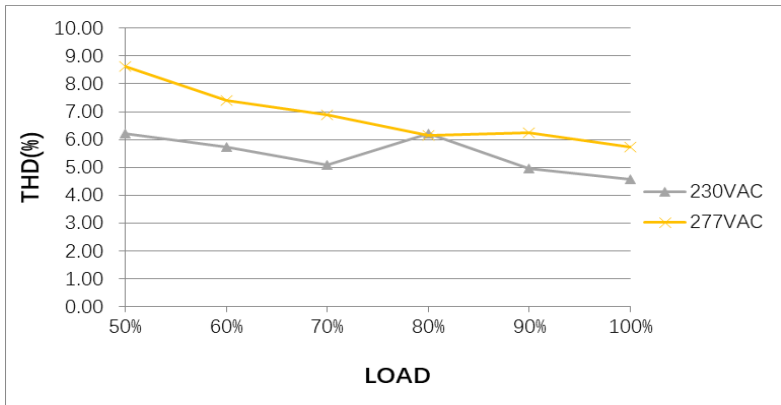


6	HOLD UP TIME (Typ.)	230VAC/10ms	I/P: 230 VAC O/P:FULL LOAD Ta:25°C	23.04ms
INPUT=230VAC/50HZ @ FULL LOAD CH1 : Output Voltage CH2 : AC Input Voltage  a -183.3ms 47.80 V b -160.3ms 43.40 V Δ23.04ms Δ4.400 V 1 10.0 V 2 200 V 40.0ms 2.50MS/s 1M points 1 19.6 V				

INPUT FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT
1	INPUT VOLTAGE RANGE	180VAC~305 VAC 255VDC~410VDC	(1) I/P:TESTING O/P:FULL LOAD (2) I/P:DC TESTING(L: + N:-) O/P: FULL / 50% LOAD (3) I/P:DC TESTING(L:- N: +) O/P: FULL / 50% LOAD (4) I/P: LOW-LINE=255VDC HIGH-LINE=410VDC O/P: Dimming on/off Ta:25°C	(1) 177V~308V (2)252 Vdc~410Vdc/FULL LOAD 252Vdc~410Vdc/50% LOAD (3)252 Vdc~410Vdc/FULL LOAD 252Vdc~410Vdc/50% LOAD (4)OK
			I/P: LOW-LINE-3V=177 V HIGH-LINE+10V=315 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: 180VAC ~305VAC O/P:FULL~MIN LOAD Ta:25°C	OK
3	INPUT CURRENT (TYP)	277 VAC/1.1A 230 VAC/ 1.3A	I/P: 277VAC I/P: 230VAC O/P:FULL LOAD Ta:25°C	I =0.92A/ 277VAC I = 1.09A/ 230VAC

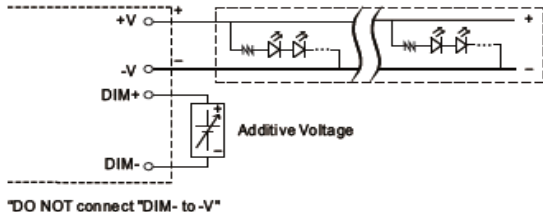
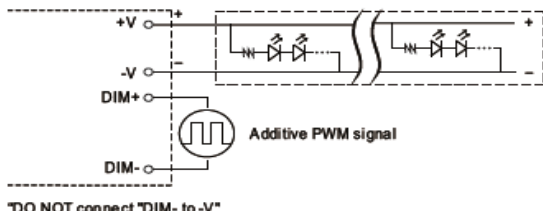
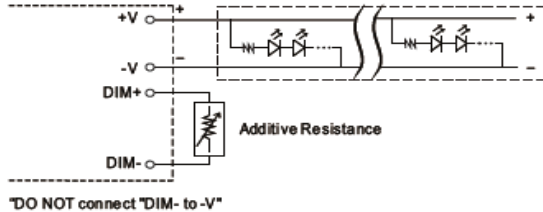
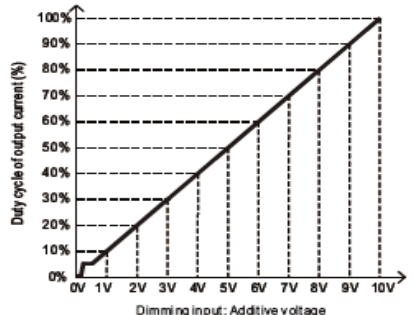
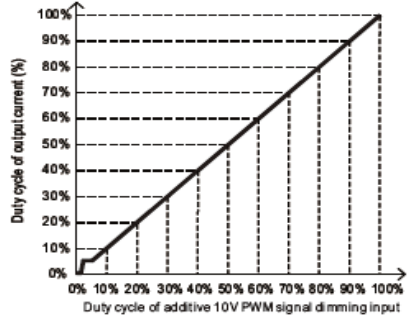
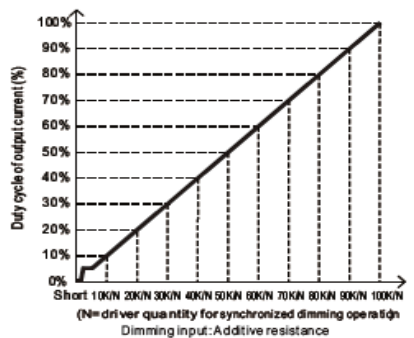
4	LEAKAGE CURRENT	< 0.25mA / 277 VAC	I/P : 277 VAC O/P : Min LOAD Ta : 25°C	L-FG: 0.010mA N-FG:0.011mA
5	STANDBY POWER CONSUMPTION	<0.5W (Dimming off)	I/P: 230VAC O/P : DIM OFF Ta : 25°C	0.4540W
6	POWER FACTOR(TYP)	0.92/277 VAC 0.95/230 VAC	I/P: 277VAC I/P: 230VAC O/P: FULL LOAD Ta:25°C	PF=0.974/277VAC PF=0.991/230VAC
P.F vs LOAD 				
7	EFFICIENCY (TYP)	94%	I/P: 230 VAC O/P:FULL LOAD Ta:25°C	94.95 %
EFFICIENCY vs LOAD 				
8	INRUSH CURRENT (TYP)	230 V/60A COLD START (twidth=600us measured at 50% Ipeak) COLD START	I/P: 230 VAC O/P:FULL LOAD Ta:25°C	I = 56A/ 230VAC T50= 484 us
INPUT=230VAC/50HZ @ FULL LOAD CH1 : Input current CH2: AC Input Voltage 				

9	TOTAL HARMONIC DISTORTION	THD<10% @load≥ 50%, 230VAC; @load≥ 75%/277VAC	I/P : 230VAC/277VAC O/P : 75% LOAD 50% LOAD Ta : 25°C	THD : 5.66%/230VAC*50%load THD : 6.42%/277VAC*75%load																					
THD&LOAD																									
 <table><caption>THD (%) vs LOAD (%) Data</caption><thead><tr><th>LOAD (%)</th><th>230VAC THD (%)</th><th>277VAC THD (%)</th></tr></thead><tbody><tr><td>50%</td><td>6.2</td><td>8.8</td></tr><tr><td>60%</td><td>5.8</td><td>7.5</td></tr><tr><td>70%</td><td>5.2</td><td>6.8</td></tr><tr><td>80%</td><td>6.2</td><td>6.2</td></tr><tr><td>90%</td><td>5.0</td><td>6.2</td></tr><tr><td>100%</td><td>4.5</td><td>5.8</td></tr></tbody></table>					LOAD (%)	230VAC THD (%)	277VAC THD (%)	50%	6.2	8.8	60%	5.8	7.5	70%	5.2	6.8	80%	6.2	6.2	90%	5.0	6.2	100%	4.5	5.8
LOAD (%)	230VAC THD (%)	277VAC THD (%)																							
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100%	4.5	5.8																							

PROTECTION FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT
1	OVER LOAD PROTECTION	105 % ~ 150 %	I/P: 305VAC I/P: 230VAC I/P: 180VAC O/P: TESTING Ta: 25°C	118.2%/ 305VAC 118.2%/ 230VAC 118.2%/ 180VAC Protection type : Hiccup mode, recovers automatically after fault condition is removed
2	OVER VOLTAGE PROTECTION	V1: 52V~ 63V	I/P: 305VAC I/P: 230VAC I/P: 180VAC O/P: MIN LOAD Ta: 25°C	56.2V/ 305VAC 56.2V/ 230VAC 56.6V/ 180VAC Protection type : Shut down O/P voltage, re-power on to recover after fault condition is removed
3	OVER TEMPERATURE PROTECTION	NO DAMAGE	I/P: 305 VAC I/P: 180 VAC O/P: FULL LOAD	O.T.P Active Protection type : Shut down O/P voltage, re-power on to recover after fault condition is removed
4	SHORT PROTECTION	SHORT EVERY OUTPUT 1 HOUR NO DAMAGE	I/P: 305VAC I/P: 180 VAC O/P: FULL LOAD Ta: 25°C	NO DAMAGE Protection type : 【For Blank type】 : Shut down O/P voltage, re-power on to recover after fault condition is removed. 【For DA2/DA2Q type】 : Hiccup mode, recovers automatically after fault condition is removed.

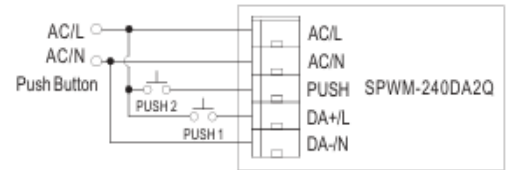
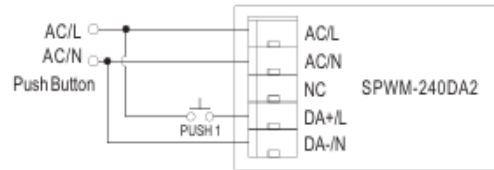
CONTROL FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT										
1	DIMMING OPERATION (Blank 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: 100 μ A (typ.) ◎ Applying additive 0 ~ 10VDC  ◎ Applying additive 10V PWM signal (frequency range 300Hz~3KHz):  ◎ Applying additive resistance: 0~100k Ω  Note: 1. Min. dimming level is about 6% and the output current is not defined when 0% < I_{out} < 6%. 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 : 230 VAC ; O/P : DIMMING TEST ; Ta : 25°C	  											
1		Resistance value	Short	10K	20K	30K	40K	50K	60K	70K	80K	90K	100K	OPEN
		Output Current	0	0.585 A	1.072 A	1.569 A	2.086 A	2.562 A	3.126 A	3.622 A	4.193 A	4.715 A	5.230A	5.240 A
		Output Current duty	0%	11.70 %	21.44 %	31.38 %	41.72 %	51.24 %	62.52 %	72.44 %	83.86 %	94.30 %	104.60 %	104.80 %
		Dimming value	0V	1V	2V	3V	4V	5V	6V	7V	8V	9V	10V	OPEN
		Output Current	0	0.578 A	1.069 A	1.574 A	2.099 A	2.567 A	3.147 A	3.652 A	4.190 A	4.720 A	5.240A	5.240 A
		Output Current duty	0%	11.56 %	21.38 %	31.48 %	41.98 %	51.34 %	62.94 %	73.04 %	83.80 %	94.40 %	104.80 %	104.80 %
		Duty value	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	OPEN
		Output Current	0	0.600 A	1.093 A	1.594 A	2.101 A	2.567 A	3.096 A	3.623 A	4.120 A	4.690 A	5.220A	5.220 A
		Output Current duty	0%	12.00 %	21.86 %	31.88 %	42.02 %	51.34 %	61.92 %	72.46 %	82.40 %	93.80 %	104.40 %	104.40 %
		Dimming value	0V	1V	2V	3V	4V	5V	6V	7V	8V	9V	10V	OPEN
		Output Current	0	0.578 A	1.069 A	1.574 A	2.099 A	2.567 A	3.147 A	3.652 A	4.190 A	4.720 A	5.240A	5.240 A
		Output Current duty	0%	11.56 %	21.38 %	31.48 %	41.98 %	51.34 %	62.94 %	73.04 %	83.80 %	94.40 %	104.80 %	104.80 %

2 PUSH DIMMING OPERATION (DA2/DA2Q Type)

※PUSH dimming (primary side), for DA2/DA2Q Model

• Input wiring diagram



- The factory default dimming level is at 100%.
- Up to 10 drivers can perform the PUSH dimming at the same time when utilizing one common push button.
- The maximum length of the cable from the push button to the last driver is 20 meters.

Action	Action duration
Short Push	0.1~1s
Long Push	>1s

Push Button functionally

Model	Application	Dip Switch			Push 1 for brightness	Push 2 for colour
		1	2	3		
DA2 Type	1 logic unit of LED (DT6, Brightness Dimming)				Short Push : ON/OFF Long Push : Dim up/down. - dim up stop at maximum; dim down stop at minimum dim (not dim off) - with next push, direction change(up/down) - dim up possible even if when unit is OFF	This model does not feature this button.
DA2Q Type	1 logic unit of LED (DT6, Brightness Dimming)	ON	ON	ON	Short Push : ON/OFF Long Push : Dim up/down. - dim up stop at maximum; dim down stop at minimum dim (not dim off) - with next push, direction change(up/down) - dim up possible even if when unit is OFF	Short Push : no response Long Push : no response
	4 logic unit of LED (DT6, Brightness Dimming)	ON	ON	OFF	4 control gears are synchronously controlled Short Push : ON/OFF Long Push : Dim up/down. - dim up stop at maximum; dim down stop at minimum dim (not dim off) - with next push, direction change(up/down) - dim up possible even if when unit is OFF	Short Push : no response Long Push : no response
	1 logic unit of colourtype RGBW (DT8, RGBW colour control) (factory default)	OFF	OFF	OFF	Short Push : ON/OFF Long Push : Dim up/down. - dim up stop at maximum; dim down stop at minimum dim (not dim off) - with next push, direction change(up/down) - dim up possible even if when unit is OFF	Short Push : Switch to "W channel control" or "RGB color control". Long Push : Dimming "W channel control" or "RGB color control". -W channel control: Long press to dim up stop at maximum. Long press to dim down stop at minimum(0). -RGB color control: Long press to change RGB color.
	1 logic unit of colourtype Tc (DT8, Tunable white control)	ON	OFF	OFF	Short Push : ON/OFF Long Push : Dim up/down. - dim up stop at maximum; dim down stop at minimum dim (not dim off) - with next push, direction change(up/down) - dim up possible even if when unit is OFF	Short Push : ON/OFF Long Push : Dim2Warm - The color temperature warms up while the brightness dims, and the color temperature cools down while the brightness brightens. - dim up stop at maximum; dim down stop at minimum dim (not dim off) - with next push, direction change (up, cooler/down, warmer) - dim up possible even if when unit is OFF

Model		Dip Switch			PUSH 1 for brightness	PUSH 2 for colour
		1	2	3		
DA2Q Type	2 logic units of colour type Tc (DT8. Tunable white control)	OFF	ON	OFF	2 control gears are synchronously controlled Short Push : ON/OFF Long Push : Dim up/down - dim up stop at maximum; dim down stop at minimum dim (not dim off) - with next push, direction change(up/down) - dim up possible even if when unit is OFF	2 control gears are synchronously controlled Short Push : ON/OFF Long Push : Dim2Warm - The color temperature warms up while the brightness dims, and the color temperature cools down while the brightness brightens. - dim up stop at maximum; dim down stop at minimum dim (not dim off) - with next push, direction change (up,cooler/down,warmer) - dim up possible even if when unit is OFF
	2 logic units (1 logic unit of DT6) (1 logic unit of colour type Tc)	OFF	OFF	ON	Only the DT6 device responds Short Push : ON/OFF Long Push : Dim up/down - dim up stop at maximum; dim down stop at minimum dim (not dim off) - with next push, direction change(up/down) - dim up possible even if when unit is OFF	Only the DT8 device responds Short Push : ON/OFF Long Push : Dim2Warm - The color temperature warms up while the brightness dims, and the color temperature cools down while the brightness brightens. - dim up stop at maximum; dim down stop at minimum dim (not dim off) - with next push, direction change (up,cooler/down,warmer) - dim up possible even if when unit is OFF

I/P : 230 VAC
O/P : DIMMING TEST
Ta : 25°C
TEST RESULT : OK

COMPONENT STRESS TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT
1	PWM Transistor (D to S) or (C to E) Peak Voltage	Q3 Rated 600 V/21 A	AC ON/OFF I/P:High-Line +3V =308V O/P: (1)Full Load input (2)Output Short (3)Dimming off (4)OLP (5) No Load VDS: I/P:Low-Line -3V = 177V O/P: (1)Full Load input (2)Output Short (3)Dimming off (4)OLP (5) No Load Ta:25°C	VDS: (1) 462 (2) 446V (3) 466V (4) 454V (5) 466V VDS: (1) 526V (2) 454V (3) 474V (4) 478V (5) 462V

2	P.F.C Transistor (D to S) or (C to E) Peak Voltage	Q1 Rated 650V/25A	AC ON/OFF I/P:High-Line +3V =308 V O/P: (1)Full Load input (2)Output Short (3)Dimming off (4)OLP (5) No Load I/P:Low-Line -3V = 177V O/P: (1)Full Load input (2)Output Short (3)Dimming off (4)OLP (5) No Load Ta:25°C	VDS: (1) 546V (2) 458V (3) 502V (4) 530V (5) 462V VDS: (1) 542V (2) 546V (3) 534V (4) 542V (5) 490V
3	P.F.C DIODE	D5 Rated 8A/600V	AC ON/OFF I/P:High-Line +3V =308 V O/P: (1)Full Load input (2)Output Short (3)Dimming off (4)OLP (5) No Load I/P: Low-Line -3V = 177V O/P: (1)Full Load (2)Output Short (3)Dimming off (4)OLP (5) No Load Ta:25°C	(1) 490V (2) 470V (3) 486V (4) 482V (5) 450V (1) 466V (2) 466V (3) 462V (4) 454V (5) 450V
4	Diode Peak Voltage	Q100 Rated 50A/ 150V	AC ON/OFF I/P: High-Line +3V =308 V O/P: (1)Full Load (2)Output Short (3) Dimming off (4) OLP (5).NO LOAD Ta:25°C	VDS: (1) 116V (2) 107V (3) 115V (4) 115V (5) 112V
5	Input Capacitor Voltage	C5/C6 Rated: 68μ / 450V Surge voltage: 580V	I/P:High-Line +3V =308V 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)462V (2)450V (3)462V (4) 447V

6	Control IC Voltage Test	PWM IC U2Rated 10V~27V PFC IC U1 Rated -0.3 V~ 27V MCU IC U602 Rated 1.7 V~ 3.6 V	AC ON/OFF I/P:High-Line +3V =308 V O/P:(1) Full Load (2) Output Short (3) O.L.P (4) O.V.P. (5) No Load VR min (Low Line) (6) DIM OFF Ta:25°C	U2 (1) 16V (2) 17.2V (3) 16V (4) 16V (5) 13.2V (6) 12.4 V U1 (1) 16V (2) 16V (3) 16V (4) 9V (5) 13.2 V (6) 12.2V U602 (1)3.299V (2)3.299V (3)3.299V (4)3.299V (5)3.298V (6)3.298V
7	DIMMING MOS	Q110/ Q113 Rated : 100V/94A	AC ON/OFF I/P : High-Line +3V = 308 V O/P : (1) Full Load (2) Output Short (3) Dim on/off Ta : 25°C	Q110 (1)42.4V (2)40.8V (3)8.4V Q113 (1)46V (2)28V (3)10V

SAFETY & EMC TEST REPORT

SAFETY TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT
1	WITHSTAND VOLTAGE	I/P-O/P: 3.75 K VAC/min	I/P-O/P: 4.125 KVAC/min Ta:25°C	I/P-O/P: 0.967 mA NO DAMAGE
2	ISOLATION RESISTANCE	I/P-O/P: 500 VDC>100MΩ	I/P-O/P: 500 VDC Ta:25°C	I/P-O/P: >9999 MΩ NO DAMAGE

E.M.C TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT
1	HARMONIC	EN61000-3-2 CLASS C	I/P: 230 VAC/50HZ O/P:FULL LOAD Ta:25°C	PASS
2	CONDUCTION	EN55015 CLASS B	I/P: 230 VAC /50HZ O/P:FULL/50% LOAD Ta:25°C	PASS Test by certified Lab
3	RADIATION	EN55015 CLASS B	I/P: 230 VAC /50HZ O/P:FULL LOAD Ta:25°C	PASS Test by certified Lab
4	E.S.D	EN61000-4-2 AIR :8KV / Contact :4KV	I/P: 230 VAC/50HZ O/P:FULL LOAD Ta:25°C	CRITERIA A/ Blank type CRITERIA B/ DA2&DA2Q type
5	E.F.T	EN61000-4-4 INPUT: 1KV	I/P: 230 VAC/50HZ O/P:FULL LOAD Ta:25°C	CRITERIA A
6	SURGE	IEC61000-4-5 L-N :2KV	I/P: 230 VAC/50HZ 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 : SPWM-240-48 1. ROOM AMBIENT BURN-IN : 2 HRS I/P : 230VAC O/P : FULL LOAD Ta=35.2 °C 2. HIGH AMBIENT BURN-IN : 2 HRS I/P : 230VAC O/P : FULL LOAD Ta=49.2 °C <table><tr><th>NO</th><th>Position</th><th>ROOM AMBIENT Ta=35.2°C</th><th>HIGH AMBIENT Ta=49.2 °C</th></tr><tr><td>1</td><td>ZNR1</td><td>66.2°C</td><td>78.9°C</td></tr><tr><td>2</td><td>C1</td><td>72.0°C</td><td>85.8°C</td></tr><tr><td>3</td><td>C2</td><td>69.7°C</td><td>83.8°C</td></tr><tr><td>4</td><td>C9</td><td>75.0°C</td><td>89.5°C</td></tr><tr><td>5</td><td>BD1</td><td>77.8°C</td><td>92.2°C</td></tr><tr><td>6</td><td>R7</td><td>84.4°C</td><td>98.9°C</td></tr><tr><td>7</td><td>Q1</td><td>79.0°C</td><td>93.6°C</td></tr><tr><td>8</td><td>C5</td><td>72.6°C</td><td>87.5°C</td></tr><tr><td>9</td><td>C88</td><td>74.6°C</td><td>90.3°C</td></tr><tr><td>10</td><td>U1</td><td>77.2°C</td><td>92.3°C</td></tr><tr><td>11</td><td>Q2</td><td>80.6°C</td><td>96.2°C</td></tr><tr><td>12</td><td>RTH2</td><td>75.7°C</td><td>90.6°C</td></tr><tr><td>13</td><td>T1</td><td>78.0°C</td><td>94.1°C</td></tr><tr><td>14</td><td>C130</td><td>70.1°C</td><td>85.5°C</td></tr><tr><td>15</td><td>C104</td><td>72.0°C</td><td>87.3°C</td></tr><tr><td>16</td><td>Q100</td><td>75.8°C</td><td>91.2°C</td></tr><tr><td>17</td><td>U100</td><td>77.2°C</td><td>92.7°C</td></tr><tr><td>18</td><td>TC</td><td>64.0°C</td><td>79.0°C</td></tr></table>			NO	Position	ROOM AMBIENT Ta=35.2°C	HIGH AMBIENT Ta=49.2 °C	1	ZNR1	66.2°C	78.9°C	2	C1	72.0°C	85.8°C	3	C2	69.7°C	83.8°C	4	C9	75.0°C	89.5°C	5	BD1	77.8°C	92.2°C	6	R7	84.4°C	98.9°C	7	Q1	79.0°C	93.6°C	8	C5	72.6°C	87.5°C	9	C88	74.6°C	90.3°C	10	U1	77.2°C	92.3°C	11	Q2	80.6°C	96.2°C	12	RTH2	75.7°C	90.6°C	13	T1	78.0°C	94.1°C	14	C130	70.1°C	85.5°C	15	C104	72.0°C	87.3°C	16	Q100	75.8°C	91.2°C	17	U100	77.2°C	92.7°C	18	TC	64.0°C	79.0°C
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2	OVER LOAD BURN-IN TEST	NO DAMAGE 1 HOUR (MIN)	I/P : 230 VAC O/P : 103 % LOAD Ta : 25°C	TEST : OK																																																																												
3	LOW TEMPERATURE TURN ON TEST	TURN ON AFTER 2 HOUR	I/P : 305VAC/180VAC O/P : 100/80 % LOAD Ta= -25 °C	TEST : OK																																																																												
4	HIGH HUMIDITY HIGH TEMPERATURE HIGH VOLTAGE TURN ON TEST	AFTER 12 HOURS IN CHAMBER ON CONTROL 45 °C NO DAMAGE	I/P : 315 VAC O/P : FULL LOAD Ta=45 °C HUMIDITY= 95 %R.H	TEST : OK																																																																												
5	TEMPERATURE COEFFICIENT	±0.03 %(0°C~50°C)	I/P : 230 VAC O/P : FULL LOAD	± 0.002 %(0~50°C)																																																																												

6	STORAGE TEMPERATURE TEST	-40~80°C	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 : 10CYCLE 5. Input/output condition : STATIC TEST : OK
7	THERMAL SHOCK TEST	-20~45°C	1. Thermal shock Temperature : -25°C~ +50°C 2. Temperature change rate : 25°C / MIN 3. Dwell time low and high temperature : 30 MIN/EACH 4. Total test cycle : 16 CYCLE 5. Input/Output condition : 15cycle:230V/ FULL LOAD AC ON 3sec/AC OFF 1sec TEST 1cycle:230V/ FULL LOAD Burn In Test
8	VIBRATION TEST	5 ~ 100Hz, 2G 12min./1cycle, 72min. each along X, Y, Z axes	1 Carton & 1 Set (1) Waveform : Sine Wave (2) Frequency : 5~100Hz (3) Sweep Time : 12min/sweep cycle (4) Acceleration : 3G (5) Test Time : 180min in each axis (X.Y.Z) (6) Ta : 25°C
9	CAPACITOR LIFE CYCLE	SUPPOSE C104 IS THE MOST CRITICAL COMPONENT (1) I/P : 230VAC O/P : FULL LOAD Ta=25 °C LIFE TIME (2) I/P : 230VAC O/P : FULL LOAD Ta=45 °C LIFE TIME (3) I/P : 230VAC O/P : 75% LOAD Ta =45 °C LIFE TIME (4) I/P : 230VAC O/P : 50% LOAD Ta =45 °C LIFE TIME	(1) 212718HRS (2) 48597HRS (3) 139714HRS (4) 240986HRS
10	MTBF	Conducted by Parts Stress Analysis Prediction 1801.3K hrs min. Telcordia SR-332 (Bellcore) ; 155.5K 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	WUWQIN/ZHOUBIAO	WENF	WUWQ

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