



Test Report: NSP-150-60

150W AC/DC High Reliable Multi-Industries Enclosed Type Power Supply

■ DESIGN VERIFY TEST

Output Function Test

Input Function Test

Protection Function Test

Control Function Test

Component Stress Test

■ SAFETY & E.M.C. TEST

Safety Test

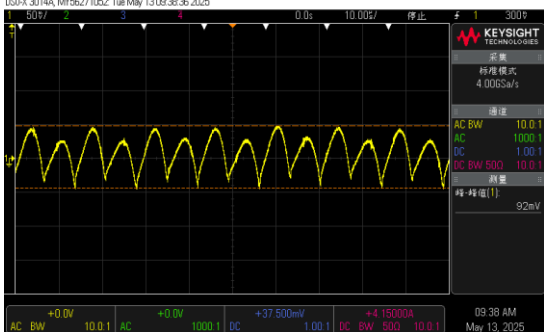
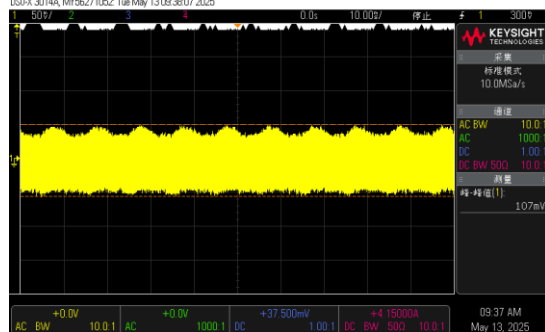
E.M.C. Test

■ RELIABILITY TEST

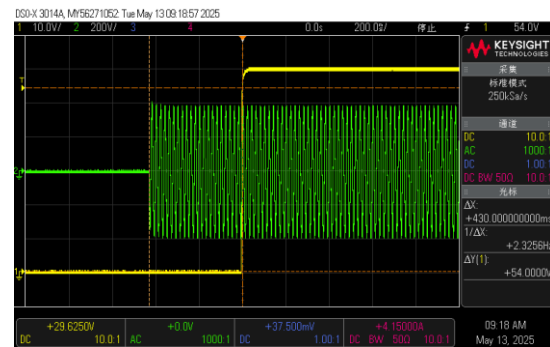
ENVIRONMENT TEST

DESIGN VERIFY TEST

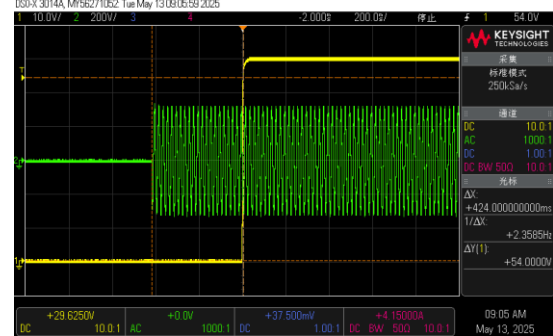
OUTPUT FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT
1	OUTPUT VOLTAGE ADJUST RANGE	CH1: 54V~ 72V	I/P : 230 VAC O/P : MIN LOAD Ta : 25°C	52.1V~75.9V/230VAC
2	OUTPUT VOLTAGE TOLERANCE	V1: -1%~ +1%	I/P: 85VAC /305VAC O/P:FULL/ MIN. LOAD Ta:25°C	V1: -0.15% +0.20%
3	LINE REGULATION	V1: -0.5%~ +0.5%	I/P: 85VAC~ 305VAC O/P:FULL LOAD Ta:25°C	V1: -0.00%~+0.00 %
4	LOAD REGULATION	V1: -0.5%~ +0.5%	I/P: 230VAC O/P:FULL ~MIN LOAD Ta:25°C	V1: -0.02%~ +0.03%
5	OVER/UNDERSHOOT TEST	< ± 5%	I/P: 230VAC O/P:FULL LOAD Ta:25°C	0.85%
6	RIPPLE & NOISE (Max)	V1: 300mVp-p	I/P: 230 VAC O/P: MIN LOAD—FULL LOAD Ta:25°C	V1: 107mVp-p / 100% load
high frequency : 		low frequency : 		
7	SET UP TIME(Max)	277VAC/1000ms 230VAC/1000ms 115VAC/1500ms	I/P : 277VAC I/P : 230 VAC I/P : 115 VAC O/P : FULL LOAD Ta : 25°C	277VAC/430ms 230VAC/ 424ms 115VAC/ 388ms

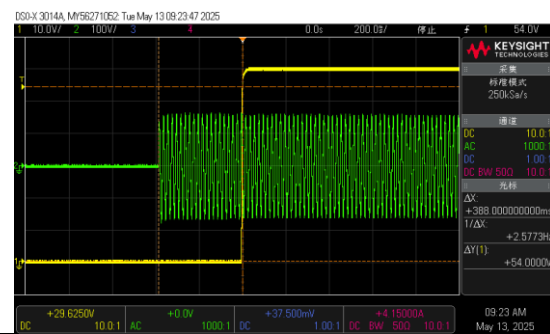
INPUT=277VAC/60HZ @ FULL LOAD
CH1 : Output Voltage CH2 : AC Input Vltage



INPUT=230VAC/50HZ @ FULL LOAD
CH1 : Output Voltage CH2 : AC Input Voltage

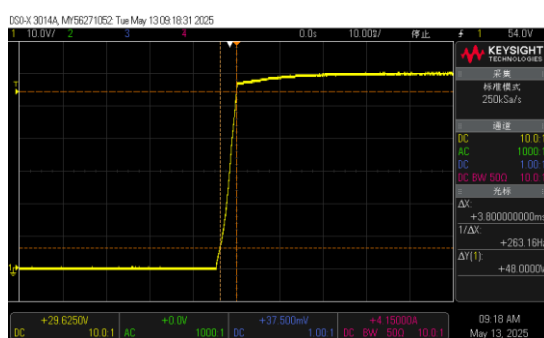


INPUT=115VAC/60HZ @ FULL LOAD
CH1 : Output Voltage CH2 : AC Input Voltage

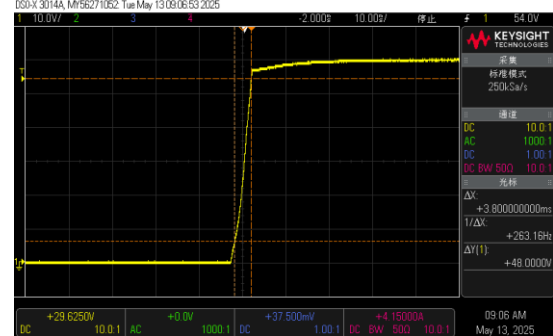


8	RISE TIME (Max) 277VAC/80ms 230VAC/80ms 115VAC/80ms	I/P : 277VAC I/P : 230 VAC I/P : 115 VAC O/P : FULL LOAD Ta : 25°C	277VAC/3.8ms 230VAC/3.8ms 115VAC/3.8ms
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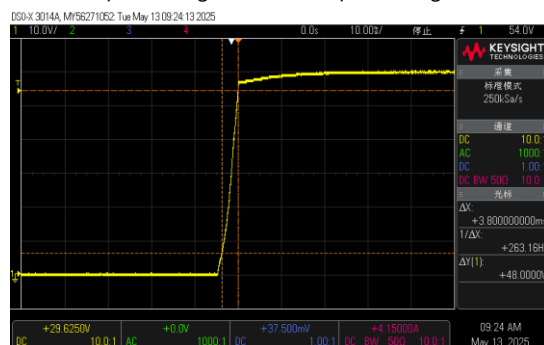
INPUT=277VAC/60HZ @ FULL LOAD
CH1 : Output Voltage



INPUT=230VAC/50HZ @ FULL LOAD
CH1 : Output Voltage



INPUT=230VAC/60HZ @ FULL LOAD
CH1 : Output Voltage CH2 : AC Input Voltage

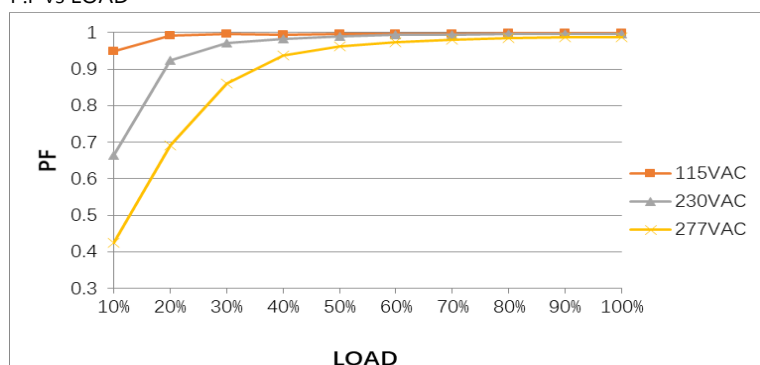


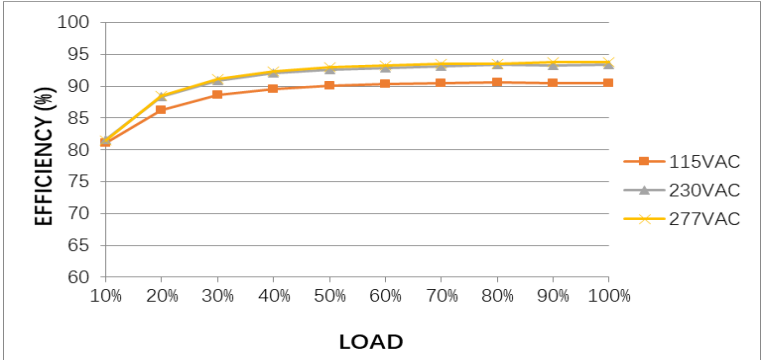
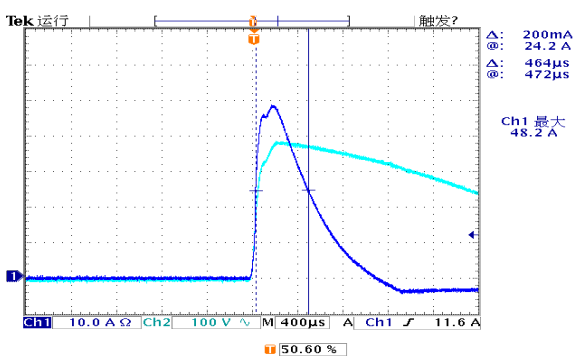
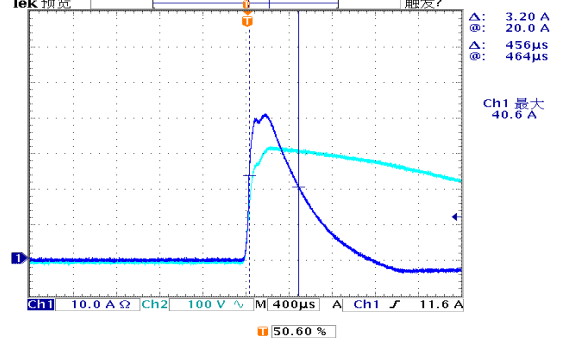
9	HOLD UP TIME (Typ.)	277VAC/16ms 230VAC/16ms 115VAC/16ms	I/P : 277VAC I/P : 230 VAC I/P : 115 VAC O/P : FULL LOAD Ta : 25°C	277VAC/29ms 230VAC/29ms 115VAC/29ms
INPUT=277VAC/60HZ @ FULL LOAD CH1 : Output Voltage CH2 : AC Input Voltage INPUT=230VAC/50HZ @ FULL LOAD CH1 : Output Voltage CH2 : AC Input Voltage INPUT=115VAC/60HZ @ FULL LOAD CH1 : Output Voltage CH2 : AC Input Voltage				
10	DYNAMIC LOAD	V1: 6000mVp-p	I/P: 230VAC O/P: (1)FULL /50% LOAD 50%DUTY / 120HZ (2)FULL /50% LOAD 50%DUTY / 1KHZ Ta:25°C	414mVp-p 302mVp-p
FULL /50% LOAD 50%DUTY / 120HZ FULL /50% LOAD 50%DUTY / 1KHZ				

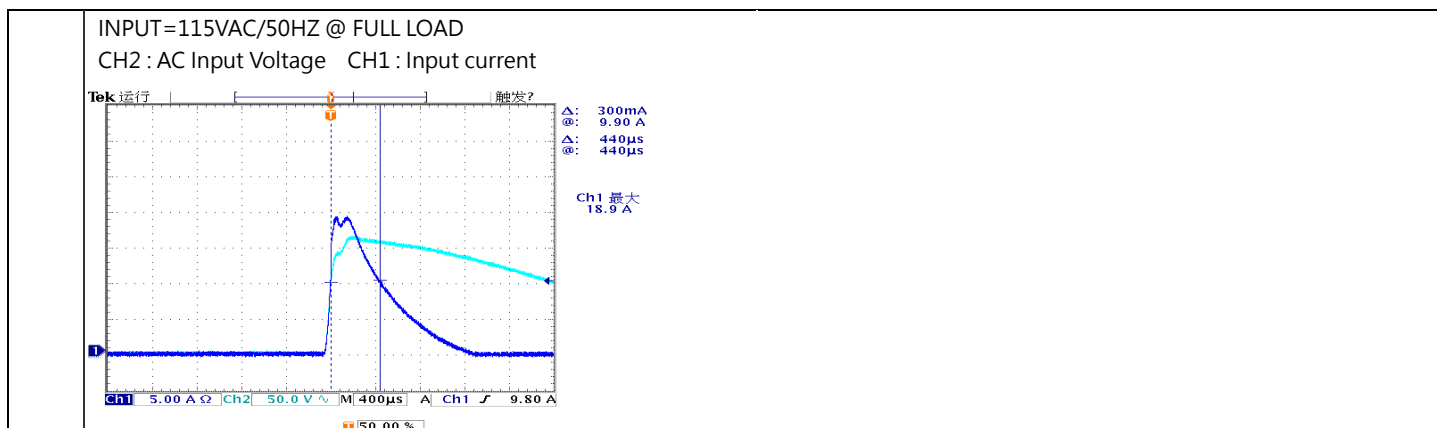
INPUT FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT
1	INPUT VOLTAGE RANGE	85VAC~305VAC 120VDC~ 431VDC	(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 Ta:25°C	(1) 85 V~305V (2) 120Vdc~ 431 Vdc/FULL LOAD 120 Vdc~ 431Vdc/50% LOAD (3) 120Vdc~ 431Vdc/FULL LOAD 120Vdc~431 Vdc/50% LOAD
			I/P: LOW-LINE-3V=82 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:85VAC ~305VAC O/P:FULL~MIN LOAD Ta:25°C	TEST: OK
3	INPUT CURRENT (Typ.)	277V/ 0.63 A 230V/ 0.75 A 115V/ 1.55 A	I/P : 277 VAC I/P : 230 VAC I/P : 115 VAC O/P : FULL LOAD Ta : 25°C	I =0.59A/ 277VAC I =0.71A/ 230VAC I =1.46A/ 115VAC
4	LEAKAGE CURRENT	Earth leakage current <350μA(rms)@277Vac	I/P : 277 VAC O/P : Min LOAD Ta : 25°C	L-FG : 205μA N-FG : 195μA
		Touch current <100μA(rms)@277Vac	I/P : 277 VAC O/P : Min LOAD Ta : 25°C	L-V+ : 45μA L-V- : 45μA N-V+ : 45μA N-V- : 45μA
5	POWER FACTOR (Typ.)	0.90/277VAC 0.93/ 230VAC 0.98/ 115VAC	I/P : 277 VAC I/P : 230 VAC I/P : 115 VAC O/P : FULL LOAD Ta : 25°C	PF=0.987/277VAC PF=0.996/230VAC PF=0.998/115VAC

P.F vs LOAD



6	EFFICIENCY(Typ.)	93%	I/P:230 VAC O/P:FULL LOAD Ta:25°C	93.3%
EFFICIENCY vs LOAD 				
7	NO LOAD POWER CONSUMPTION(Typ.)	Remote Power ON : 3W/277VAC 3W/230VAC 3W/115VAC Remote Power OFF : 0.5W/277VAC 0.5W/230VAC 0.3W/115VAC	I/P : 277 VAC I/P : 230 VAC I/P : 115 VAC O/P : RC ON/RC OFF Ta : 25°C	Remote Power ON : 0.72W/277VAC 0.72W/230VAC 0.73W/115VAC Remote Power OFF : 0.39W/277VAC 0.31W/230VAC 0.13W/115VAC
8	INRUSH CURRENT(Typ.)	277VAC/55A 230VAC/45A 115VAC/23A COLD START	I/P : 277 VAC I/P : 230 VAC I/P : 115 VAC O/P : FULL LOAD Ta : 25°C	I =48.2A/ 277VAC T50=464us/277VAC I =40.6A/ 230VAC T50= 456us/230VAC I =18.9A/ 115VAC T50= 440us/115VAC
INPUT=277VAC/50HZ @ FULL LOAD CH2 : AC Input Voltage CH1 : Input current  INPUT=230VAC/50HZ @ FULL LOAD CH2 : AC Input Voltage CH1 : Input current 				

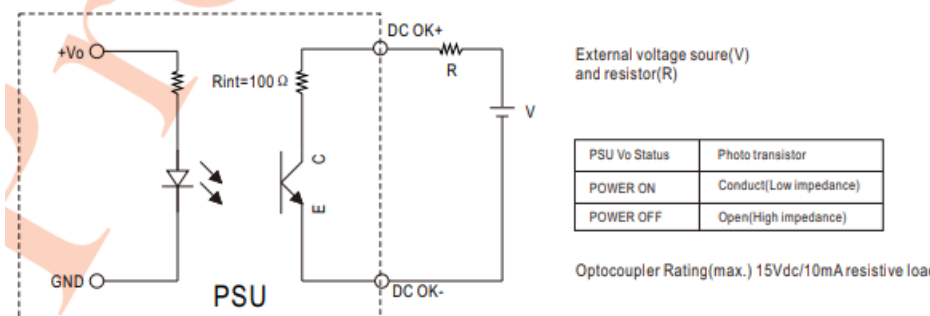


PROTECTION FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT
1	OVER LOAD PROTECTION	105%~ 200%	I/P: 305VAC I/P: 230VAC I/P: 85VAC O/P:TESTING Ta:25°C	125.49%/ 305VAC 125.49%/ 230VAC 125.49%/85VAC Protection type : 1、Normally works within 105 ~ 200% rated output power for more than 5 seconds and then constant current limiting without shutdown($V_{out}>30\%$), recovers automatically after fault condition is removed, or shut down o/p voltage when $V_{out}<30\%$,AC re-power on to recover 2、>200% rated power, constant current limiting ($V_{out}>30\%$)with auto-recovery after fault condition is removed, or shut down o/p voltage when $V_{out}<30\%$,AC re-power on to recover
2	OVER VOLTAGE PROTECTION	73V~86V	I/P: 305VAC I/P: 230VAC I/P: 85VAC O/P:MIN LOAD Ta:25°C	80V/ 305VAC 80V/ 230VAC 80V/ 85VAC Protection type : Shut down o/p voltage, re-power on to recover
3	OVER TEMPERATURE PROTECTION	NO DAMAGE	I/P: 305VAC I/P: 85VAC O/P:FULL LOAD	O.T.P. Active Protection type : Shut down o/p voltage, re-power on to recover
4	SHORT PROTECTION	SHORT EVERY OUTPUT 1 HOUR NO DAMAGE	I/P: 305VAC I/P: 85VAC O/P: FULL LOAD Ta:25°C	NO DAMAGE Protection type : Constant current limiting for more than 5 seconds ($V_{out}<30\%$) and then shut down o/p voltage, AC re-power on to recover

CONTROL FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT												
1	REMOTE ON/OFF CONTROL	2.Remote Control The PSU can be turned ON/OFF by using the "Remote Control" function with external switch and auxiliary power <table><tr><td>PSU Vo Status</td><td>Between RC-(pin1) and RC+(pin2) on CN1</td></tr><tr><td>POWER ON</td><td>Keep 0~0.8Vdc or open</td></tr><tr><td>POWER OFF</td><td>Keep 3.3~10Vdc by external voltage</td></tr></table> I/P: 230 VAC O/P:FULL LOAD Ta:25°C Test Result : PASS <table><tr><td>Between ON/OFF</td><td>Power Output Status</td></tr><tr><td>POWER OFF (0~0.8V)</td><td>ON</td></tr><tr><td>POWER ON (3.3~10V)</td><td>OFF</td></tr></table>	PSU Vo Status	Between RC-(pin1) and RC+(pin2) on CN1	POWER ON	Keep 0~0.8Vdc or open	POWER OFF	Keep 3.3~10Vdc by external voltage	Between ON/OFF	Power Output Status	POWER OFF (0~0.8V)	ON	POWER ON (3.3~10V)	OFF		
PSU Vo Status	Between RC-(pin1) and RC+(pin2) on CN1															
POWER ON	Keep 0~0.8Vdc or open															
POWER OFF	Keep 3.3~10Vdc by external voltage															
Between ON/OFF	Power Output Status															
POWER OFF (0~0.8V)	ON															
POWER ON (3.3~10V)	OFF															
2	PEAK POWER	1. Peak Power $P_{av} = \frac{P_{pk} \times t + P_{ngk} \times (T-t)}{T} \leq P_{rated}$$Duty = \frac{t}{T} \times 100\% \leq 35\%$$t \leq 5 \text{ sec}$ P_{av}: Average output power (W) P_{pk}: Peak output power (W) P_{ngk}: Non-peak output power (W) P_{rated}: Rated output power (W) t: Peak power width (sec) T: Period (sec) ----- 100Vac ————— 220Vac For example (24V model): Vin = 200Vac Duty_max = 5% P_av = P_rated = 200W P_pk = 400W t ≤ 5 sec T ≥ 5 sec / 5% ≥ 100sec P_ngk ≤ (T P_av - t P_pk) / (T - t) P_ngk ≤ 189W Note: When the output voltage is adjusted to the upper limit, the peak power is 150% rated power I/P: 100/305VAC O/P:PEAK LOAD (1Hour NO DAMAGE) Ta:25°C Test Result: PASS														

3	REMOTE SENSE	The remote sensing compensates voltage drop on the load wiring up to 0.3V.	I/P: 230 VAC O/P:FULL LOAD Ta:25°C	> 0.3 V
4	DC_OK Signal	4.DC_OK signal ※ DC_OK is a collector shorted signal. It is used by an optocoupler in the power supply which indicates the output status of the power supply as exhibited below.  I/P:230VAC O/P:FULL LOAD Ta:25°C TEST :OK		

COMPONENT STRESS TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT
1	PWM Transistor (D to S) or (C to E) Peak Voltage	Q6 Rated : 650V/11A	AC ON/OFF I/P:High-Line +3V =308V 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.	VDS: (1) 461V (2) 497V (3) 461V (4) 461V (5) 461V (6) 461V (7) 501V

			I/P:Low-Line -3V = 82V 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) 437V (2) 481V (3) 437V (4) 441V (5) 437V (6) 437V (7) 485V
2	P.F.C Transistor (D to S) or (C to E) Peak Voltage	Q1 Rated : 650V/15A	I/P:High-Line +3V =308V 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. I/P:Low-Line -3V =82V 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) 449V (2) 561V (3) 449V (4) 449V (5) 449V (6) 449V (7) 565V VDS: (1) 513V (2) 557V (3) 505V (4) 505V (5) 501V (6) 493V (7) 557V
3	P.F.C DIODE	D8 Rated : 4 A/650V	I/P:High-Line +3V =308 V AC ON/OFF O/P: (1)Full Load (2)Output Short (3)Dynamic Load Full Load/ Min. Load 90%Duty/5KHz (4)Dynamic Load 100% Load/ Min. Load 50%Duty/120Hz	(1) 441V (2) 457V (3) 441V (4) 433V

			I/P:Low-Line -3V = 82V AC ON/OFF O/P: (1)Full Load (2)Output Short (3)Dynamic Load Full Load/ Min. Load 90%Duty/5KHz (4)Dynamic Load 100% Load/ Min. Load 50%Duty/120Hz Ta:25°C	(1) 437V (2) 457V (3) 441V (4) 441V
4	Diode Peak Voltage	D101 20A/200V	AC ON/OFF I/P:High-Line +3V =308 V 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. (8).NO LOAD Ta:25°C	D101: VDS: (1) 156V (2) 160V (3) 156V (4) 156V (5) 158V (6) 158V (7) 160V (8) 152V
5	Input Capacitor Voltage	C5 Rated: 82μ/ 450V Surge voltage: 500V	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)437V (2)437V (3)445V (4)433V
6	Control IC Voltage Test	PWM IC U2 Rated 9.6V~ 36V	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 VRmin(LOW LINE) Ta:25°C	U2 (1) 19.0V (2) 19.0V (3) 19.0V (4) 19.0V (5) 19.0V

■ SAFETY& E.M.C. TEST

SAFETY TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT
1	WITHSTAND VOLTAGE	I/P-O/P: 4.2 K VAC/min I/P-FG : 2.1 K VAC/min O/P-FG: 1.5 KVAC/min	I/P-O/P: 4.62 KVAC/min I/P-FG: 2.52 KVAC/min O/P-FG: 1.8 KVAC/min Ta:25°C	I/P-O/P: 1.725 mA I/P-FG: 1.608 mA O/P-FG: 1.80 mA
2	ISOLATION RESISTANCE	I/P-O/P: 500 VDC>100MΩ I/P-FG: 500 VDC>100MΩ O/P-FG: 500 VDC >100MΩ	I/P-O/P: 500 VDC I/P-FG: 500 VDC O/P-FG: 500 VDC Ta:25°C	I/P-O/P: >9999 MΩ I/P-FG: >9999 MΩ O/P-FG: >9999 MΩ NO DAMAGE
3	GROUNDING CONTINUITY	FG(PE) TO CHASSIS OR TRACE < 100 mΩ	40A / 2min Ta:25°C	10mΩ

E.M.C TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT
1	HARMONIC	EN61000-3-2 CLASS A	I/P:230VAC/50HZ O/P:FULL LOAD Ta:25°C	PASS
2	CONDUCTION	BS EN/EN55032(CISPR32),CNS 15936 EN/EN55014-1(CISPR14-1) EN/EN55011(CISPR11)	I/P : 230 VAC (50HZ) O/P : FULL/50% LOAD Ta : 25°C	PASS Test by certified Lab
3	RADIATION	BS EN/EN55032(CISPR32),CNS 15936 EN/EN55014-1(CISPR14-1) EN/EN55011(CISPR11)	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 : 15KV / Contact : 8KV	I/P : 230 VAC/50HZ O/P : FULL LOAD Ta : 25°C	CRITERIA A
5	E.F.T	EN61000-4-4 INPUT : 2KV	I/P : 230 VAC/50HZ O/P : FULL LOAD Ta : 25°C	CRITERIA A
6	SURGE	IEC61000-4-5 L-N : 2KV L,N-PE : 4KV	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 : NSP-150-48 1. ROOM AMBIENT BURN-IN : 2 HRS I/P : 230VAC O/P : FULL LOAD Ta=28 °C 2. HIGH AMBIENT BURN-IN : 2 HRS I/P : 230VAC O/P : FULL LOAD Ta=61.4 °C <table><tr><th>NO</th><th>Position</th><th>ROOM AMBIENT Ta=28 °C</th><th>HIGH AMBIENT Ta=61.4 °C</th></tr><tr><td>1</td><td>LF1</td><td>51.1°C</td><td>83.5°C</td></tr><tr><td>2</td><td>C2</td><td>51.7°C</td><td>84.0°C</td></tr><tr><td>3</td><td>RTH1</td><td>77.7°C</td><td>101.0°C</td></tr><tr><td>4</td><td>BD2</td><td>60.8°C</td><td>91.4°C</td></tr><tr><td>5</td><td>L1</td><td>73.4°C</td><td>103.1°C</td></tr><tr><td>6</td><td>D8</td><td>53.7°C</td><td>85.8°C</td></tr><tr><td>7</td><td>Q1</td><td>61.2°C</td><td>92.8°C</td></tr><tr><td>8</td><td>R5</td><td>64.1°C</td><td>95.3°C</td></tr><tr><td>9</td><td>C5</td><td>56.8°C</td><td>88.9°C</td></tr><tr><td>10</td><td>C36</td><td>59.1°C</td><td>91.1°C</td></tr><tr><td>11</td><td>C14</td><td>59.8°C</td><td>91.9°C</td></tr><tr><td>12</td><td>U2</td><td>64.9°C</td><td>96.6°C</td></tr><tr><td>13</td><td>Q5</td><td>54.9°C</td><td>87.4°C</td></tr><tr><td>14</td><td>Q6</td><td>55.5°C</td><td>88.4°C</td></tr><tr><td>15</td><td>U4</td><td>57.4°C</td><td>89.3°C</td></tr><tr><td>16</td><td>T1</td><td>72.2°C</td><td>104.8°C</td></tr><tr><td>17</td><td>C200</td><td>54.9°C</td><td>87.0°C</td></tr><tr><td>18</td><td>C106</td><td>59.2°C</td><td>90.4°C</td></tr><tr><td>19</td><td>U121</td><td>56.5°C</td><td>88.1°C</td></tr><tr><td>20</td><td>D100</td><td>63.6°C</td><td>93.4°C</td></tr><tr><td>21</td><td>D101</td><td>65.3°C</td><td>95.7°C</td></tr><tr><td>22</td><td>RTH3</td><td>59.9°C</td><td>92.4°C</td></tr><tr><td>23</td><td>TC</td><td>49.2°C</td><td>80.6°C</td></tr></table>			NO	Position	ROOM AMBIENT Ta=28 °C	HIGH AMBIENT Ta=61.4 °C	1	LF1	51.1°C	83.5°C	2	C2	51.7°C	84.0°C	3	RTH1	77.7°C	101.0°C	4	BD2	60.8°C	91.4°C	5	L1	73.4°C	103.1°C	6	D8	53.7°C	85.8°C	7	Q1	61.2°C	92.8°C	8	R5	64.1°C	95.3°C	9	C5	56.8°C	88.9°C	10	C36	59.1°C	91.1°C	11	C14	59.8°C	91.9°C	12	U2	64.9°C	96.6°C	13	Q5	54.9°C	87.4°C	14	Q6	55.5°C	88.4°C	15	U4	57.4°C	89.3°C	16	T1	72.2°C	104.8°C	17	C200	54.9°C	87.0°C	18	C106	59.2°C	90.4°C	19	U121	56.5°C	88.1°C	20	D100	63.6°C	93.4°C	21	D101	65.3°C	95.7°C	22	RTH3	59.9°C	92.4°C	23	TC	49.2°C	80.6°C
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2	OVER LOAD BURN-IN TEST	NO DAMAGE 1 HOUR (MIN)	I/P : 230 VAC O/P : 125 % LOAD Ta : 25°C	TEST : OK																																																																																																
3	LOW TEMPERATURE TURN ON TEST	TURN ON AFTER 2 HOUR	I/P : 85VAC/305VAC O/P : 75/100 % LOAD Ta=-35/-45 °C	TEST : OK																																																																																																
4	HIGH HUMIDITY HIGH TEMPERATURE HIGH VOLTAGE TURN ON TEST	AFTER 12 HOURS IN CHAMBER ON CONTROL 60 °C/95 %R.H NO DAMAGE	I/P : 315 VAC O/P : FULL LOAD Ta=60 °C HUMIDITY= 95 %R.H	TEST : OK																																																																																																

5	TEMPERATURE COEFFICIENT	± 0.05 %/°C(0~60°C)	I/P : 230 VAC O/P : FULL LOAD	± 0.0012 %/°C(0~60°C)
6	STORAGE TEMPERATURE TEST	-40~85°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 : 10 CYCLE 5. Input/Output condition : STATIC	
7	THERMAL SHOCK TEST	-30~60°C	1. Thermal shock Temperature : -35°C~ +65°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	10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes	1 Carton & 1 Set (1) Waveform : Sine Wave (2) Frequency : 10~500Hz (3) Sweep Time : 10min/sweep cycle (4) Acceleration : 3G (5) Test Time : 180min in each axis (X.Y.Z) (6) Ta : 25°C	
9	CAPACITOR LIFE CYCLE	SUPPOSE C106 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=60 °C LIFE TIME (3) I/P : 230VAC O/P : 75% LOAD Ta=60 °C LIFE TIME (4) I/P : 230VAC O/P : 50% LOAD Ta=60 °C LIFE TIME		(1) 408694HRS (2) 42074HRS (3) 68515HRS (4) 109051HRS
10	MTBF	Conducted by Parts Stress Analysis Prediction 2159.4K hrs min. Telcordia SR-332 (Bellcore) ; 258.3K 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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