



Test Report: NSP-150-7.5

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

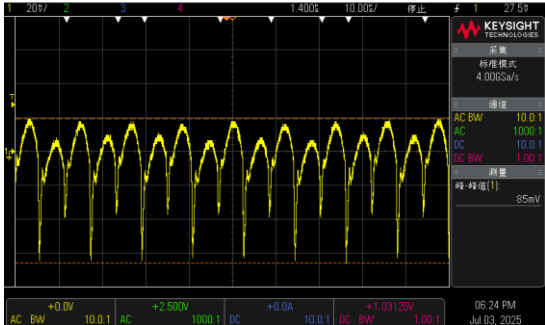
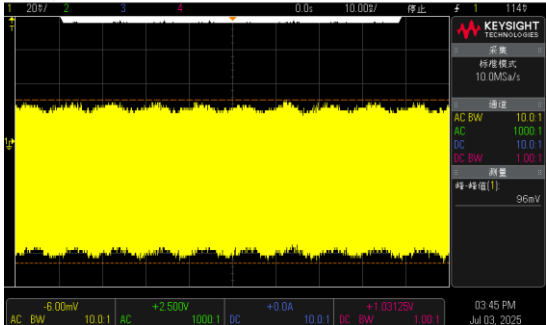
E.M.C. Test

■ RELIABILITY TEST

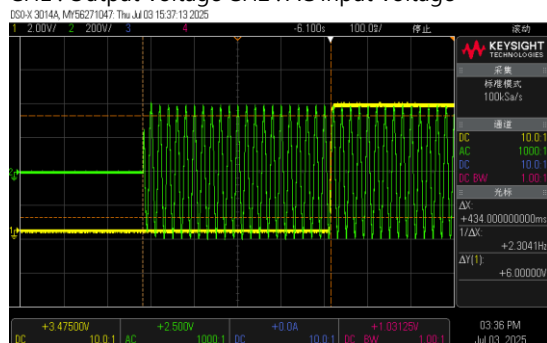
ENVIRONMENT TEST

DESIGN VERIFY TEST

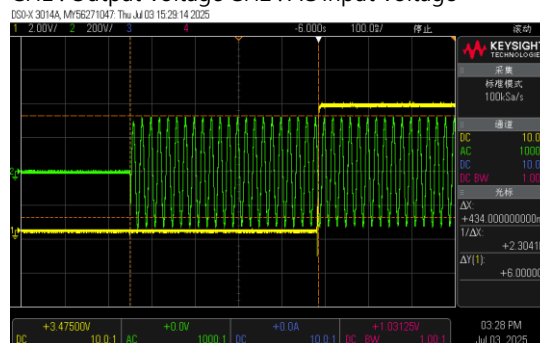
OUTPUT FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT
1	OUTPUT VOLTAGE ADJUST RANGE	CH1: 6.8V~ 9.0V	I/P : 230 VAC O/P : MIN LOAD Ta : 25°C	6.6V~9.19V/230VAC
2	OUTPUT VOLTAGE TOLERANCE	V1: -2%~ 2%	I/P: 85VAC /305VAC O/P:FULL/ MIN. LOAD Ta:25°C	V1: -0.93%~0.13 %
3	LINE REGULATION	V1: -0.5%~ 0.5%	I/P: 85VAC~ 305VAC O/P:FULL LOAD Ta:25°C	V1: 0%~ 0 %
4	LOAD REGULATION	V1: -1%~ 1%	I/P: 230VAC O/P:FULL ~MIN LOAD Ta:25°C	V1: -0.5%~ 0.4%
5	OVER/UNDERSHOOT TEST	< ± 10%	I/P: 230VAC O/P:FULL LOAD Ta:25°C	4.6%
6	RIPPLE & NOISE (Max)	V1: 150 mVp-p	I/P: 230 VAC O/P: MIN LOAD—FULL LOAD Ta:25°C	V1: 96mVp-p / 100% load
high frequency : 		low frequency : 		
7	SET UP TIME(Max)	277VAC/1000ms 230VAC/1000ms 115VAC/1500ms	I/P : 277 VAC I/P : 230 VAC I/P : 115VAC O/P : FULL LOAD Ta : 25°C	277VAC/434ms 230VAC/434ms 115VAC/414ms

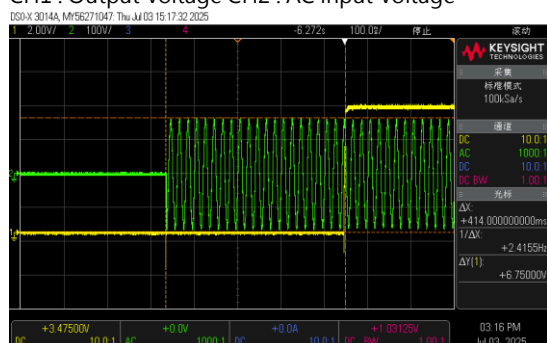
INPUT=277VAC/60HZ @ FULL LOAD
CH1 : Output Voltage CH2 : AC Input Voltage



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

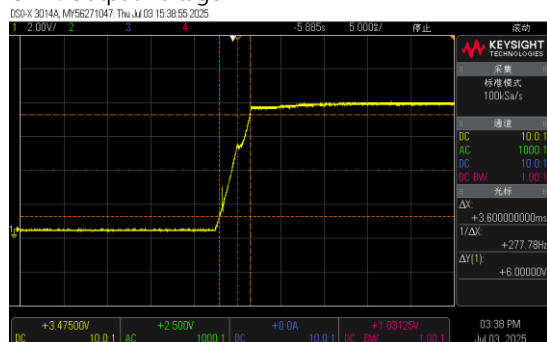


INPUT=115VAC/60HZ @ FULL LOAD
CH1 : Output Voltage CH2 : AC Input Voltage

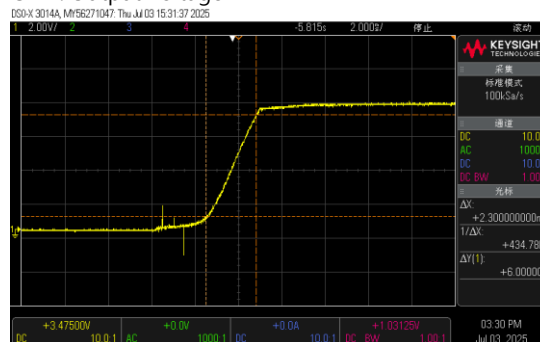


8	RISE TIME (Max)	277VAC/80ms 230VAC/80ms 115VAC/80ms	I/P : 277 VAC I/P : 230 VAC I/P : 115VAC O/P : FULL LOAD Ta : 25°C	277VAC/3.6 ms 230VAC/2.3 ms 115VAC/ 3.5ms
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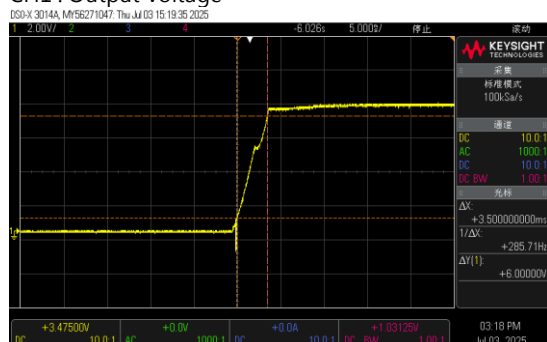
INPUT=277VAC/60HZ @ FULL LOAD
CH1 : Output Voltage



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



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

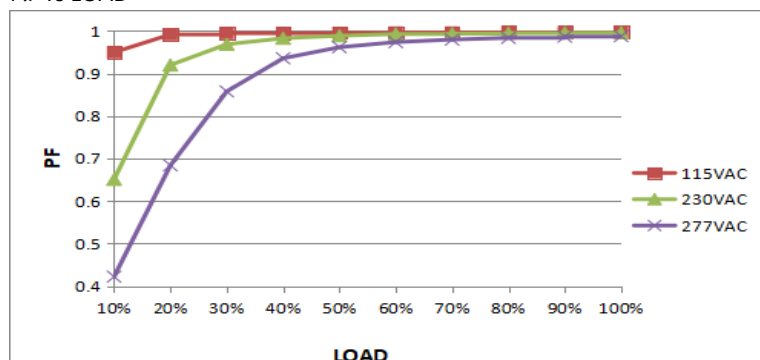


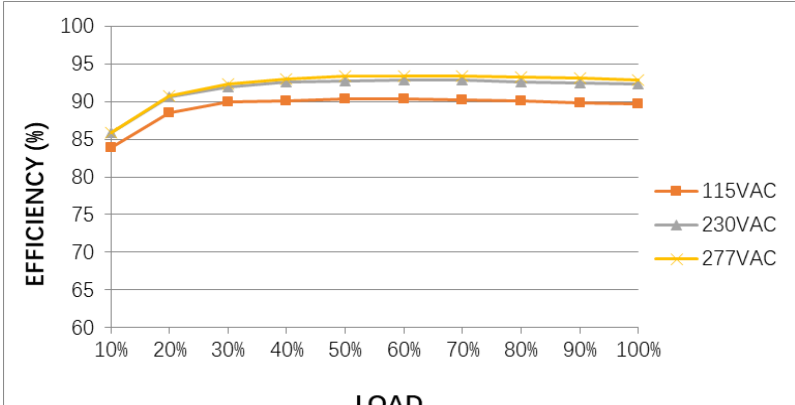
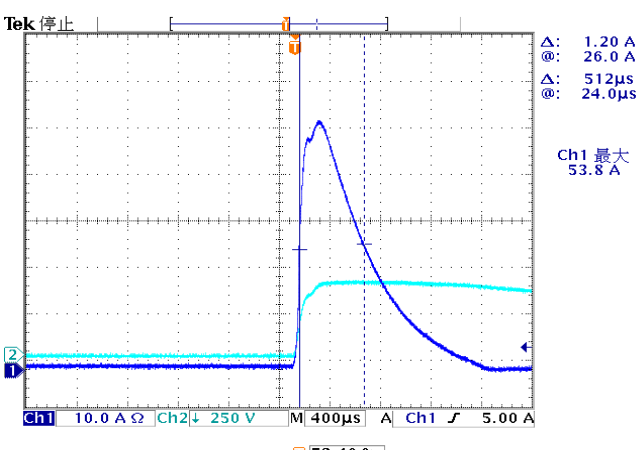
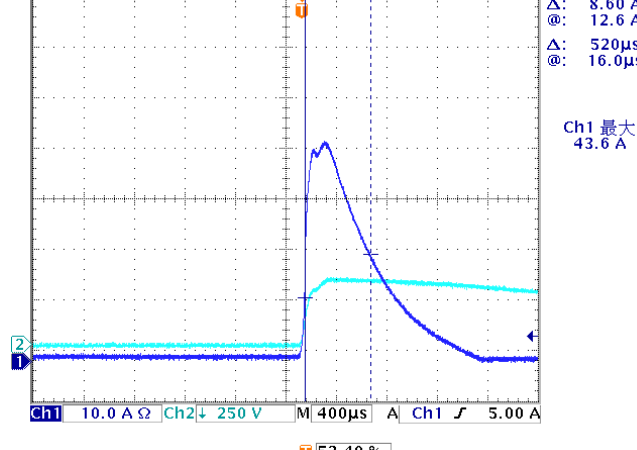
9	HOLD UP TIME (Typ.)	277VAC/16ms 230VAC/16ms 115VAC/16ms	I/P : 277VAC I/P : 230 VAC I/P : 115VAC O/P : FULL LOAD Ta : 25°C	277VAC/ 28.4 ms 230VAC/ 26.8ms 115VAC/ 28.6ms
INPUT=277VAC/60HZ @ FULL LOAD CH1 : Output Voltage CH2 : AC Input Voltage INPUT=230VAC/50HZ @ FULL LOAD CH1 : Output Voltage CH2 : AC Input Voltage				
INPUT=115VAC/60HZ @ FULL LOAD CH1 : Output Voltage CH2 : AC Input Voltage				
10	DYNAMIC LOAD	V1: 1500mVp-p	I/P: 230VAC O/P: (1)FULL /50% LOAD 50%DUTY / 120HZ (2)FULL /50% LOAD 50%DUTY / 1KHZ Ta:25°C	199mVp-p 161mVp-p
FULL /50% LOAD 50%DUTY / 120HZ FULL /50% LOAD 50%DUTY / 1KHZ				

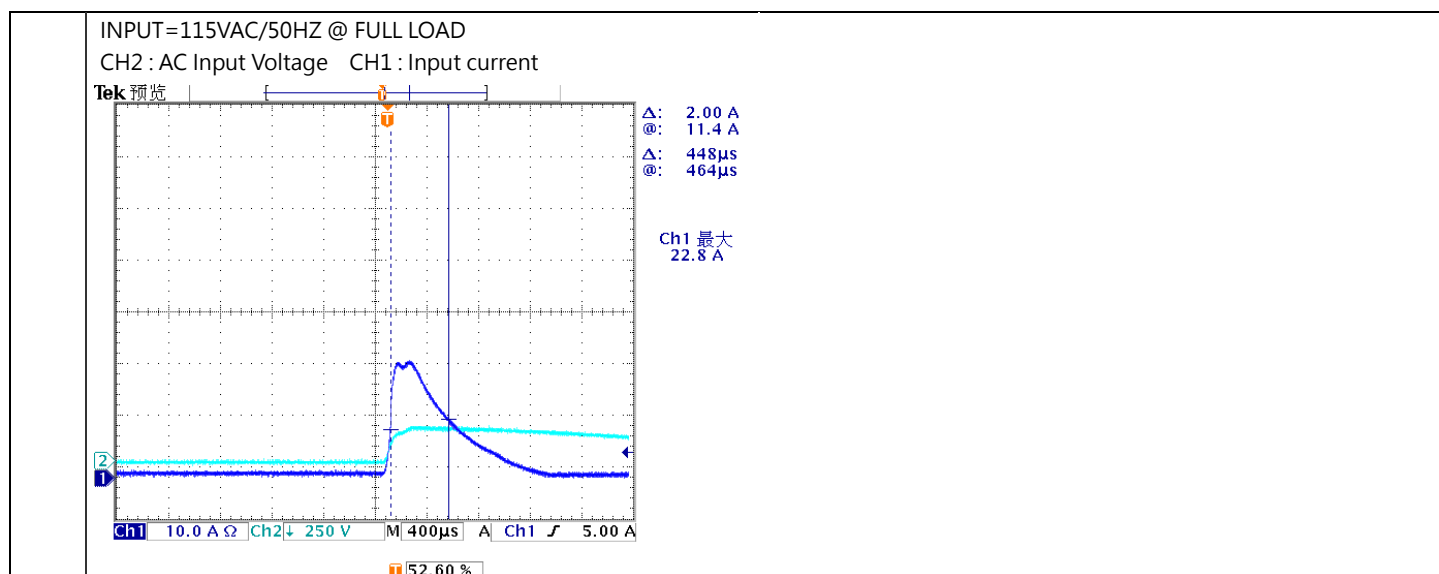
INPUT FUNCTION TEST

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) 80Vac~ 308V (2) 120Vdc~ 431Vdc/FULL LOAD 117Vdc~431Vdc/50% LOAD (3) 120Vdc~431Vdc/FULL LOAD 117Vdc~431Vdc/50% LOA
			I/P: LOW-LINE-3V=82V 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:PASS
2	INPUT FREQUENCY RANGE	47HZ ~63 HZ NO DAMAGE	I/P:85 VAC ~305VAC O/P:FULL~MIN LOAD Ta:25°C	TEST: PASS
3	INPUT CURRENT (Typ.)	277VAC/ 0.63 A 230VAC/ 0.75 A 115VAC/ 1.55 A	I/P : 277 VAC I/P : 230 VAC I/P : 115 VAC O/P : FULL LOAD Ta : 25°C	I =0.58A/ 277VAC I =0.70A/ 230VAC I =1.43A/ 115VAC
4	LEAKAGE CURRENT	Earth leakage current <350μA(rms)@277Vac	I/P : 277 VAC O/P : Min LOAD Ta : 25°C	L-FG : 227μA N-FG : 242μA
		Touch current <100μA(rms)@277Vac	I/P : 277 VAC O/P : Min LOAD Ta : 25°C	L-V+ : 43μA L-V- : 43μA N-V+ : 43μA N-V- : 43μA
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=0.988/277VAC PF=0.996/230VAC PF=0.998/115VAC

P.F vs LOAD



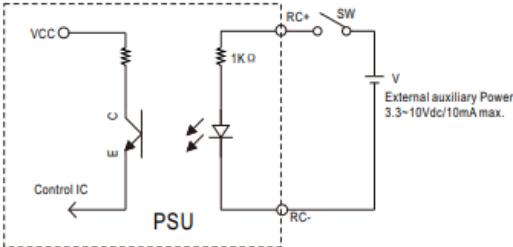
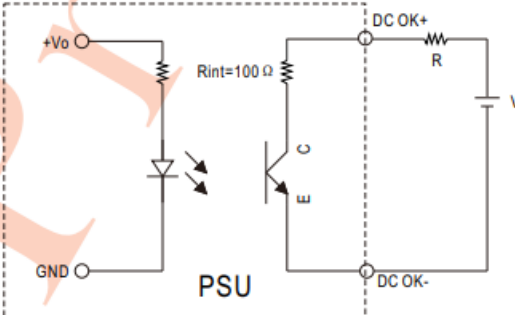
6	EFFICIENCY(Typ.)	91.5%	I/P:230 VAC O/P:FULL LOAD Ta:25°C	91.81%
EFFICIENCY vs LOAD 				
7	NO LOAD POWER CONSUMPTION(Typ.)	Remote Power ON : 3W/277VAC 3W/230VAC 3W/115VAC Remote Power OFF : 0.5W/277VAC 0.5W/230VAC 0.3W/115VAC	I/P : 277 VAC I/P : 230 VAC I/P : 115 VAC O/P : RC ON/RC OFF Ta : 25°C	Remote Power ON : 0.577W/277VAC 0.578W/230VAC 0.570W/115VAC Remote Power OFF : 0.397W/277VAC 0.304W/230VAC 0.131W/115VAC
8	INRUSH CURRENT(Typ.)	277VAC/55A 230VAC/45A 115VAC/23A	I/P : 277 VAC I/P : 230 VAC I/P : 115 VAC O/P : FULL LOAD Ta : 25°C	I =53.8A/ 277VAC T50= 512us/277VAC I =43.6A/ 230VAC T50= 520us/230VAC I =22.8A/ 115VAC T50=448us/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%~ 150%	I/P: 305VAC I/P: 230VAC I/P: 85VAC O/P:TESTING Ta:25°C	123.8%/ 305VAC 124%/ 230VAC 123.8%/85VAC Protection type : 105~150% rated output power; Constant current limiting for more than 5 seconds and then shut down o/p voltage, AC re-power on to recover
2	OVER VOLTAGE PROTECTION	9V~13V	I/P: 305VAC I/P: 230VAC I/P: 85VAC O/P:MIN LOAD Ta:25°C	10.3V/ 305VAC 10.3V/ 230VAC 10.3V/ 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 (Vout<30%) and then shut down a/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 ON (0~0.8V)</td><td>ON</td></tr><tr><td>POWER OFF (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 ON (0~0.8V)	ON	POWER OFF (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 ON (0~0.8V)	ON															
POWER OFF (3.3~10V)	OFF															
2	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												
3	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.  External voltage source(V) and resistor(R) <table><tr><td>PSU Vo Status</td><td>Photo transistor</td></tr><tr><td>POWER ON</td><td>Conduct(Low impedance)</td></tr><tr><td>POWER OFF</td><td>Open(High impedance)</td></tr></table> Optocoupler Rating(max.) 15Vdc/10mA resistive load I/P:230VAC O/P:FULL LOAD Ta:25°C TEST :PASS	PSU Vo Status	Photo transistor	POWER ON	Conduct(Low impedance)	POWER OFF	Open(High impedance)								
PSU Vo Status	Photo transistor															
POWER ON	Conduct(Low impedance)															
POWER OFF	Open(High impedance)															

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. 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) 465V (2) 505V (3) 465V (4) 489V (5) 493V (6) 489V (7) 505V VDS: (1) 441V (2) 485V (3) 441V (4) 437V (5) 477V (6) 457V (7) 481V
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.	VDS: (1) 454V (2) 474V (3) 446V (4) 437V (5) 467V (6) 458V (7) 494V

			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) 543V (2) 551V (3) 543V (4) 528V (5) 537V (6) 539V (7) 514V
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 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) 459V (2) 459V (3) 455V (4) 459V (1) 463V (2) 463V (3) 459V (4) 459V
4	Diode Peak Voltage	Q100 Rated : 160A/ 30V Q101 Rated 160A/ 30V	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	Q100: VDS: (1) 21.6V (2) 6.5V (3) 21.6V (4) 21.8V (5) 22V (6) 21.6V (7) 21.6V (8) 7.1V

				Q101 VDS: (1) 20.8V (2) 6.5V (3) 20.4V (4) 20.8V (5) 20.8V (6) 21V (7) 21V (8) 7.1V
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)432V (2)436V (3)440V (4) 428V
6	Control IC Voltage Test	PWM IC U1 Rated 9.6V~ 36V O/P IC U100 Rated 3V~ 30V	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	U1 (1) 18.9V (2) 18.9V (3) 18.9V (4) 18.9V (5) 12.2V U100 (1) 11.56V (2) 10V (3) 9.96V (4) 11.4V (5) 5.21V

■ 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: 1.712 mA I / P - F G : 1.601 mA O / P - F G : 1.692 m A
2	ISOLATION RESISTANCE	I/P-O/P: 500 VDC>100MΩ I / P - F G : 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 - F G : 9999 MΩ O / P - F G : 9999 MΩ NO DAMAGE
3	GROUNDING CONTINUITY	FG(PE) TO CHASSIS OR TRACE < 100 mΩ	40A / 2min Ta:25°C	15 mΩ

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-150-5 1. ROOM AMBIENT BURN-IN : 2 HRS I/P : 230VAC O/P : FULL LOAD Ta=26.8 °C 2. HIGH AMBIENT BURN-IN : 2 HRS I/P : 230VAC O/P : FULL LOAD Ta=61.1 °C <table><tr><th>NO</th><th>Position</th><th>ROOM AMBIENT Ta=26.8 °C</th><th>HIGH AMBIENT Ta=61.1 °C</th></tr><tr><td>1</td><td>LF1</td><td>52.4°C</td><td>87.2°C</td></tr><tr><td>2</td><td>C2</td><td>51.6°C</td><td>86.1°C</td></tr><tr><td>3</td><td>RTH1</td><td>73.0°C</td><td>99.5°C</td></tr><tr><td>4</td><td>C10</td><td>63.4°C</td><td>96.7°C</td></tr><tr><td>5</td><td>L1</td><td>69.3°C</td><td>103.2°C</td></tr><tr><td>6</td><td>Q1</td><td>61.1°C</td><td>95.2°C</td></tr><tr><td>7</td><td>C5</td><td>59.4°C</td><td>93.5°C</td></tr><tr><td>8</td><td>C36</td><td>62.5°C</td><td>96.6°C</td></tr><tr><td>9</td><td>C14</td><td>64.7°C</td><td>99.0°C</td></tr><tr><td>10</td><td>U2</td><td>68.1°C</td><td>101.7°C</td></tr><tr><td>11</td><td>Q5</td><td>61.1°C</td><td>96.4°C</td></tr><tr><td>12</td><td>Q6</td><td>60.8°C</td><td>95.6°C</td></tr><tr><td>13</td><td>U4</td><td>62.4°C</td><td>96.6°C</td></tr><tr><td>14</td><td>T1</td><td>72.2°C</td><td>106.5°C</td></tr><tr><td>15</td><td>C105</td><td>72.5°C</td><td>108.2°C</td></tr><tr><td>16</td><td>U100</td><td>83.6°C</td><td>117.7°C</td></tr><tr><td>17</td><td>Q100</td><td>72.3°C</td><td>107.6°C</td></tr><tr><td>18</td><td>Q101</td><td>77.6°C</td><td>113.5°C</td></tr><tr><td>19</td><td>RTH3</td><td>68.7°C</td><td>103.8°C</td></tr></table>			NO	Position	ROOM AMBIENT Ta=26.8 °C	HIGH AMBIENT Ta=61.1 °C	1	LF1	52.4°C	87.2°C	2	C2	51.6°C	86.1°C	3	RTH1	73.0°C	99.5°C	4	C10	63.4°C	96.7°C	5	L1	69.3°C	103.2°C	6	Q1	61.1°C	95.2°C	7	C5	59.4°C	93.5°C	8	C36	62.5°C	96.6°C	9	C14	64.7°C	99.0°C	10	U2	68.1°C	101.7°C	11	Q5	61.1°C	96.4°C	12	Q6	60.8°C	95.6°C	13	U4	62.4°C	96.6°C	14	T1	72.2°C	106.5°C	15	C105	72.5°C	108.2°C	16	U100	83.6°C	117.7°C	17	Q100	72.3°C	107.6°C	18	Q101	77.6°C	113.5°C	19	RTH3	68.7°C	103.8°C
NO	Position	ROOM AMBIENT Ta=26.8 °C	HIGH AMBIENT Ta=61.1 °C																																																																																	
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2	OVER LOAD BURN-IN TEST	NO DAMAGE 1 HOUR (MIN)	I/P : 230 VAC O/P : 124 % 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	± 0.0058 %/°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 C105 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) 961855HRS (2) 14558HRS (3) 92920HRS (4) 357363HRS
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

2020.10.1 TAG-QA-009