



Test Report: NSP-100-5

100W 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

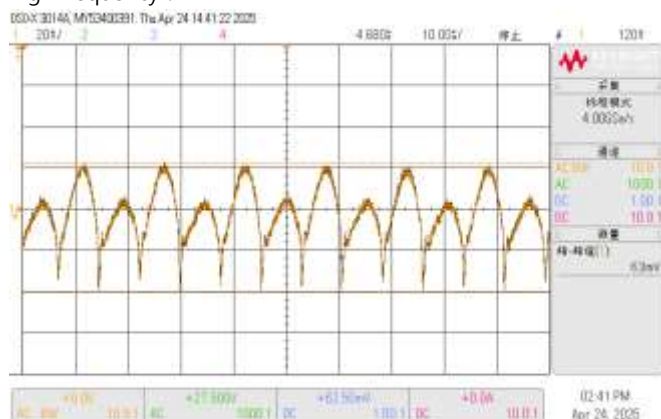
ENVIRONMENT TEST

DESIGN VERIFY TEST

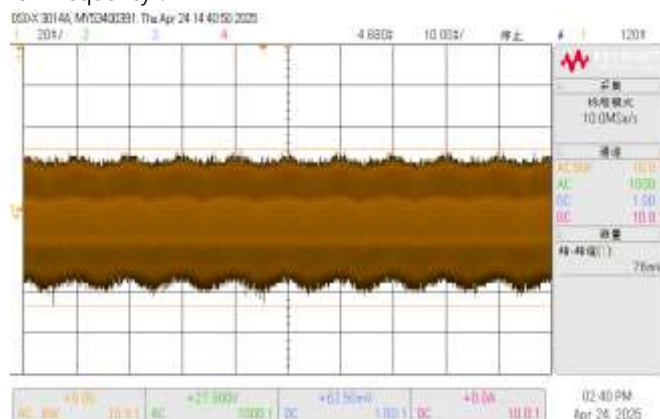
OUTPUT FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT
1	OUTPUT VOLTAGE ADJUST RANGE	CH1: 4.7V~5.5V	I/P : 230 VAC O/P : MIN LOAD Ta : 25°C	4.4125V~5.8425V/230VAC
2	OUTPUT VOLTAGE TOLERANCE	V1: -2 %~ 2%	I/P: 85VAC /305VAC O/P:FULL/ MIN. LOAD Ta:25°C	V1: -0.6 %~ 0.2%
3	LINE REGULATION	V1: -0.5%~ 0.5 %	I/P: 85VAC ~ 305VAC O/P:FULL LOAD Ta:25°C	V1: -0.4%~ 0.4%
4	LOAD REGULATION	V1: -1 %~ 1%	I/P: 230VAC O/P:FULL ~MIN LOAD Ta:25°C	V1: 0 %~ 0.2%
5	OVER/UNDERSHOOT TEST	< ± 10%	I/P: 230VAC O/P:FULL LOAD Ta:25°C	0.2%
6	RIPPLE & NOISE (Max)	V1: 150 mVp-p	I/P: 230 VAC O/P: MIN LOAD—FULL LOAD Ta:25°C	V1:76 mVp-p / 100% load

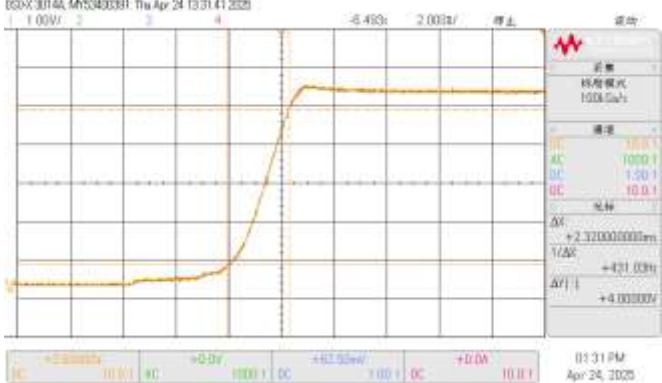
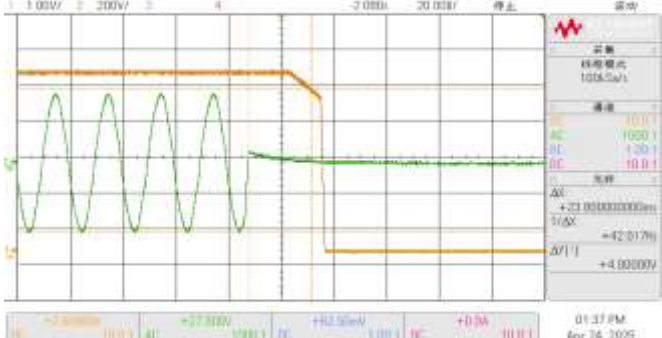
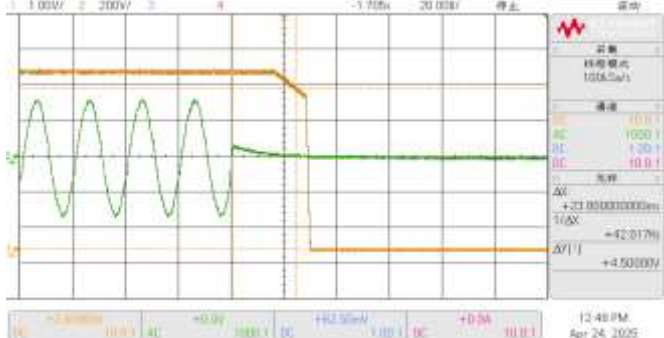
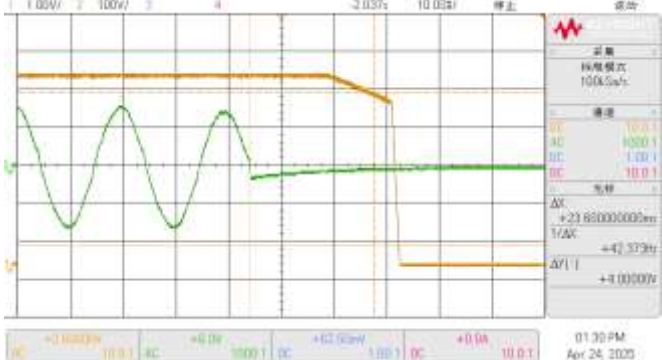
high frequency :

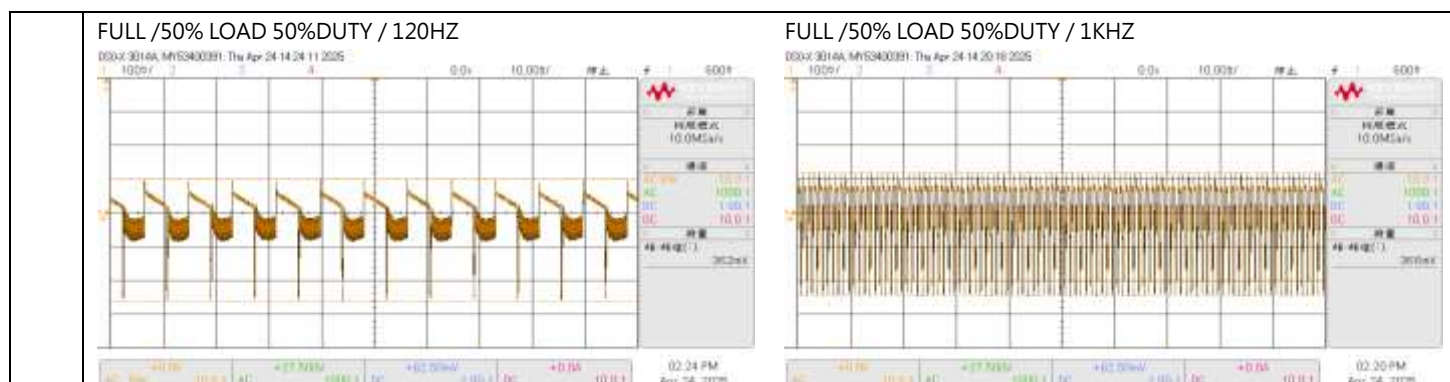


low frequency :



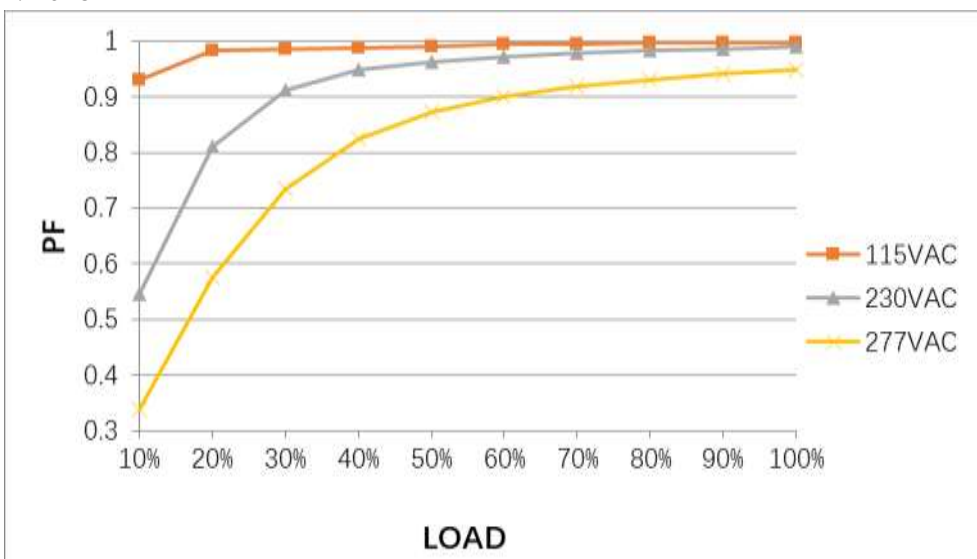
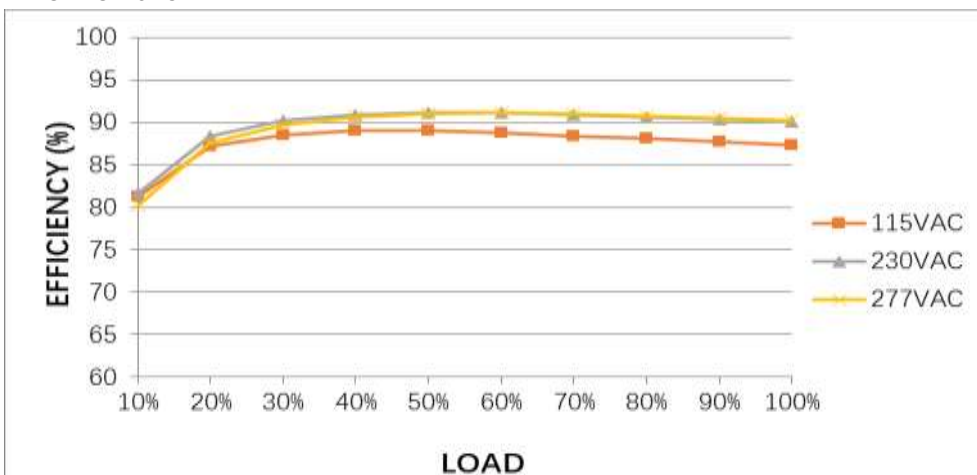
7	SET UP TIME(Max)	277VAC/1000ms 230VAC/1000ms 115VAC/1500ms	I/P : 277 VAC I/P : 230 VAC I/P : 115VAC O/P : FULL LOAD Ta : 25°C	277VAC/454ms 230VAC/448ms 115VAC/406ms
INPUT=277VAC/60HZ @ FULL LOAD CH1 : Output Voltage CH2 : AC Input Voltage INPUT=230VAC/50HZ @ FULL LOAD CH1 : Output Voltage CH2 : AC 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/ 2.3 ms 230VAC/ 2.32 ms 115VAC/ 2.32 ms
INPUT=277VAC/60HZ @ FULL LOAD CH1 : Output Voltage INPUT=230VAC/50HZ @ FULL LOAD CH1 : Output Voltage				

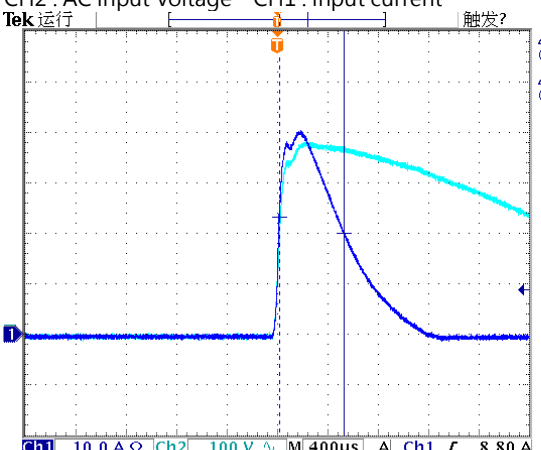
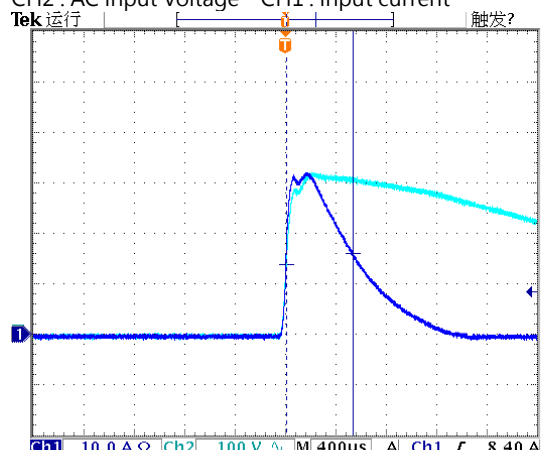
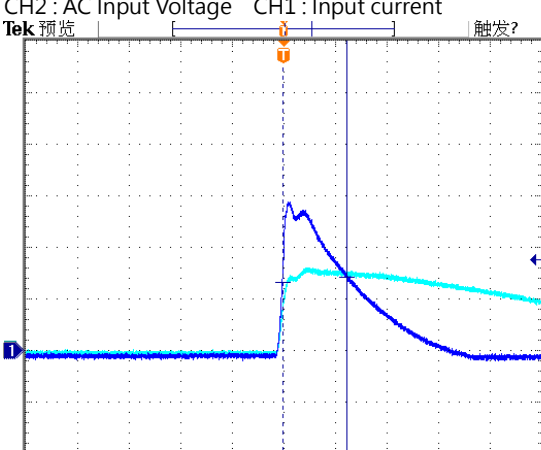
INPUT=115VAC/60HZ @ FULL LOAD CH1 : Output Voltage 				
9	HOLD UP TIME (Typ.)	277VAC/16ms 230VAC/16ms 115VAC/16ms	I/P : 277 VAC I/P : 230 VAC I/P : 115VAC O/P : FULL LOAD Ta : 25°C	277VAC/ 23.8 ms 230VAC/ 23.8 ms 115VAC/ 23.6 ms
INPUT=277VAC/60HZ @ FULL LOAD CH1 : Output Voltage CH2 : AC Input Voltage  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: 1000mVp-p	I/P: 230VAC O/P: (1)FULL /50% LOAD 50%DUTY / 120HZ (2)FULL /50% LOAD 50%DUTY / 1KHZ Ta:25°C	362mVp-p 366mVp-p



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) 82V~308 V (2) 117Vdc~434Vdc/FULL LOAD 117Vdc~434Vdc/50% LOAD (3) 117Vdc~434Vdc/FULL LOAD 117Vdc~434Vdc/50% LOAD
			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:OK
2	INPUT FREQUENCY RANGE	47HZ ~63 HZ NO DAMAGE	I/P:85 VAC ~305VAC O/P:FULL~MIN LOAD Ta:25°C	TEST: OK
3	INPUT CURRENT (Typ.)	277V/ 0.45 A 230V/ 0.52 A 115V/ 1.1 A	I/P : 277 VAC I/P : 230 VAC I/P : 115 VAC O/P : FULL LOAD Ta : 25°C	I =0.407A/ 277VAC I =0.481A/ 230VAC I =0.986A/ 115VAC
4	LEAKAGE CURRENT	Earth leakage current <350μA(rms)@277Vac	I/P : 277 VAC O/P : Min LOAD Ta : 25°C	L-FG : 227 μA N-FG : 227 μA
		Touch current <100μA(rms)@277Vac	I/P : 277 VAC O/P : Min LOAD Ta : 25°C	L-V+ : 55 μA L-V- : 54 μA N-V+ : 55 μA N-V- : 54 μA

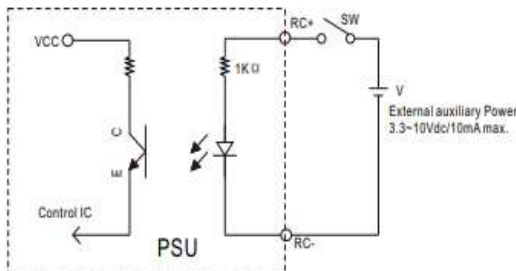
5	POWER FACTOR (Typ.)	0.90/277VAC 0.93/ 230VAC 0.98/ 115VAC	I/P : 277 VAC I/P : 230 VAC I/P : 115 VAC O/P : FULL LOAD Ta : 25°C	PF=0.941/277VAC PF=0.990/230VAC PF=0.998/115VAC																																												
P.F vs LOAD  <table><caption>P.F vs LOAD Data (Approximate)</caption><thead><tr><th>LOAD (%)</th><th>115VAC PF</th><th>230VAC PF</th><th>277VAC PF</th></tr></thead><tbody><tr><td>10%</td><td>0.94</td><td>0.55</td><td>0.35</td></tr><tr><td>20%</td><td>0.98</td><td>0.82</td><td>0.58</td></tr><tr><td>30%</td><td>0.98</td><td>0.92</td><td>0.75</td></tr><tr><td>40%</td><td>0.98</td><td>0.95</td><td>0.85</td></tr><tr><td>50%</td><td>0.98</td><td>0.96</td><td>0.90</td></tr><tr><td>60%</td><td>0.98</td><td>0.97</td><td>0.92</td></tr><tr><td>70%</td><td>0.98</td><td>0.97</td><td>0.93</td></tr><tr><td>80%</td><td>0.98</td><td>0.98</td><td>0.94</td></tr><tr><td>90%</td><td>0.98</td><td>0.98</td><td>0.94</td></tr><tr><td>100%</td><td>0.98</td><td>0.98</td><td>0.94</td></tr></tbody></table>					LOAD (%)	115VAC PF	230VAC PF	277VAC PF	10%	0.94	0.55	0.35	20%	0.98	0.82	0.58	30%	0.98	0.92	0.75	40%	0.98	0.95	0.85	50%	0.98	0.96	0.90	60%	0.98	0.97	0.92	70%	0.98	0.97	0.93	80%	0.98	0.98	0.94	90%	0.98	0.98	0.94	100%	0.98	0.98	0.94
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90%	0.98	0.98	0.94																																													
100%	0.98	0.98	0.94																																													
6	EFFICIENCY(Typ.)	90%	I/P:230 VAC O/P:FULL LOAD Ta:25°C	90.77 %																																												
EFFICIENCY vs LOAD  <table><caption>EFFICIENCY vs LOAD Data (Approximate)</caption><thead><tr><th>LOAD (%)</th><th>115VAC (%)</th><th>230VAC (%)</th><th>277VAC (%)</th></tr></thead><tbody><tr><td>10%</td><td>82</td><td>82</td><td>80</td></tr><tr><td>20%</td><td>88</td><td>89</td><td>87</td></tr><tr><td>30%</td><td>89</td><td>90</td><td>89</td></tr><tr><td>40%</td><td>89</td><td>91</td><td>90</td></tr><tr><td>50%</td><td>89</td><td>91</td><td>91</td></tr><tr><td>60%</td><td>89</td><td>91</td><td>91</td></tr><tr><td>70%</td><td>88</td><td>91</td><td>91</td></tr><tr><td>80%</td><td>88</td><td>90</td><td>91</td></tr><tr><td>90%</td><td>88</td><td>90</td><td>90</td></tr><tr><td>100%</td><td>87</td><td>90</td><td>90</td></tr></tbody></table>					LOAD (%)	115VAC (%)	230VAC (%)	277VAC (%)	10%	82	82	80	20%	88	89	87	30%	89	90	89	40%	89	91	90	50%	89	91	91	60%	89	91	91	70%	88	91	91	80%	88	90	91	90%	88	90	90	100%	87	90	90
LOAD (%)	115VAC (%)	230VAC (%)	277VAC (%)																																													
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80%	88	90	91																																													
90%	88	90	90																																													
100%	87	90	90																																													
7	NO LOAD POWER CONSUMPTION(Typ.)	Remote Power ON : 2W/277VAC 2W/230VAC 2W/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 : 1.087W/277VAC 1.024W/230VAC 0.980W/115VAC Remote Power OFF : 0.420W/277VAC 0.413W/230VAC 0.150W/115VAC																																												

8	INRUSH CURRENT(Typ.)	277V/45A 230V/35A 115V/20A COLD START	I/P : 277 VAC I/P : 230 VAC I/P : 115 VAC O/P : FULL LOAD Ta : 25°C	I =40.4A/ 277VAC T50=512 us/277V I =32.0A/ 230VAC T50= 528 us/230V I =14.4A/ 115VAC T50= 496us/115V
INPUT=277VAC/50HZ @ FULL LOAD CH2 : AC Input Voltage CH1 : Input current Tek 运行  Ch1 最大 40.4 A INPUT=230VAC/50HZ @ FULL LOAD CH2 : AC Input Voltage CH1 : Input current Tek 运行  Ch1 最大 32.0 A INPUT=115VAC/50HZ @ FULL LOAD CH2 : AC Input Voltage CH1 : Input current Tek 预览  Ch1 最大 14.4 A				

PROTECTION FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT
1	OVER LOAD PROTECTION	105 %~ 170%	I/P: 305VAC I/P: 230VAC I/P: 85VAC O/P: TESTING Ta: 25°C	146.8%/ 305VAC 147.2%/ 230VAC 147.1%/85VAC Protection type : 105%-170% rated Output power; Hiccup mode, recovers automatically after fault condition is removed
2	OVER VOLTAGE PROTECTION	5.8V~7.5V	I/P: 305VAC I/P: 230VAC I/P: 85VAC O/P: MIN LOAD Ta: 25°C	6.5V/ 305VAC 6.42V/ 230VAC 6.46V/ 85VAC Protection type : Shut down o/p voltage, AC 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, AC 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 : Hiccup mode, recovers automatically after fault condition is removed

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 : <table><tr><td>Between ON/OFF</td><td>Power Output Status</td></tr><tr><td>SW OFF (0~0.8V)</td><td>ON</td></tr><tr><td>SW 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	SW OFF (0~0.8V)	ON	SW 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															
SW OFF (0~0.8V)	ON															
SW ON (3.3~10V)	OFF															

COMPONENT STRESS TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT
1	PWM Transistor (D to S) or (C to E) Peak Voltage	Q6 Rated 650 V/11 A	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) 435V (2) 443V (3) 439V (4) 431V (5) 431V (6) 431V (7) 427V VDS: (1) 427V (2) 423V (3) 423V (4) 423V (5) 423V (6) 427V (7) 423V
2	P.F.C Transistor (D to S) or (C to E) Peak Voltage	Q1 Rated 650 V/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) 519V (2) 439V (3) 487V (4) 452V (5) 456V (6) 483V (7) 419V

			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) 491V (2) 447V (3) 487V (4) 460V (5) 464V (6) 463V (7) 451V
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) 438V (2) 418V (3) 430V (4) 438V (1) 450V (2) 442V (3) 450V (4) 454V
4	Diode Peak Voltage	Q100 Rated 160A/30 V Q101 Rated 160A/30 V	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) 14.3V (2) 7.63V (3) 14.7V (4) 14.3V (5) 14.1V (6) 13.5V (7) 13.3V (8) 12.9V

				Q101: VDS: (1) 14.1V (2) 5.73V (3) 14.3V (4) 14.5V (5) 14.5V (6) 13.7V (7) 13.9V (8) 13.1V
5	Input Capacitor Voltage	C5 Rated: 68μ/ 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)439V (2)447V (3)439V (4) 435V
6	Control IC Voltage Test	PWM IC U1 Rated -0.4 V~ 30 V O/P IC U100 Rated -0. 3V~ 38V	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) 18.6V (2) 18.6V (3) 18.6V (4) 18.6V (5) 12.4V U100 (1) 11.7V (2) 11.3V (3) 11.3V (4) 11.3V (5) 5.93V

■ 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: 1.768 mA I/P-FG: 1.892 mA O/P-FG: 1.532 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	10 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-100-5 1. ROOM AMBIENT BURN-IN : 2 HRS I/P : 230VAC O/P : FULL LOAD Ta=27.1 °C 2. HIGH AMBIENT BURN-IN : 2 HRS I/P : 230VAC O/P : FULL LOAD Ta=51.6 °C <table><tr><th>NO</th><th>Position</th><th>ROOM AMBIENT Ta=27.1 °C</th><th>HIGH AMBIENT Ta=51.6 °C</th></tr><tr><td>1</td><td>ZNR1</td><td>43.7°C</td><td>68.1°C</td></tr><tr><td>2</td><td>LF1</td><td>53.3°C</td><td>77.6°C</td></tr><tr><td>3</td><td>C2</td><td>52.9°C</td><td>77.1°C</td></tr><tr><td>4</td><td>C10</td><td>55.5°C</td><td>79.1°C</td></tr><tr><td>5</td><td>L2</td><td>57.5°C</td><td>80.7°C</td></tr><tr><td>6</td><td>Q1</td><td>56.2°C</td><td>80.4°C</td></tr><tr><td>7</td><td>C5</td><td>55.7°C</td><td>79.7°C</td></tr><tr><td>8</td><td>C14</td><td>61.8°C</td><td>86.3°C</td></tr><tr><td>9</td><td>U2</td><td>72.3°C</td><td>95.6°C</td></tr><tr><td>10</td><td>C36</td><td>70.3°C</td><td>93.8°C</td></tr><tr><td>11</td><td>BD2</td><td>55.3°C</td><td>79.0°C</td></tr><tr><td>12</td><td>D8</td><td>56.7°C</td><td>80.2°C</td></tr><tr><td>13</td><td>Q5</td><td>57.6°C</td><td>81.0°C</td></tr><tr><td>14</td><td>Q6</td><td>61.4°C</td><td>85.6°C</td></tr><tr><td>15</td><td>T1</td><td>87.4°C</td><td>110.9°C</td></tr><tr><td>16</td><td>C200</td><td>66.9°C</td><td>90.2°C</td></tr><tr><td>17</td><td>C105</td><td>63.4°C</td><td>93.6°C</td></tr><tr><td>18</td><td>U100</td><td>83.6°C</td><td>86.2°C</td></tr><tr><td>19</td><td>Q100</td><td>69.0°C</td><td>90.4°C</td></tr><tr><td>20</td><td>Q101</td><td>67.4°C</td><td>95.7°C</td></tr><tr><td>21</td><td>RTH3</td><td>61.1°C</td><td>83.2°C</td></tr><tr><td>22</td><td>TC</td><td>48.6°C</td><td>72.2°C</td></tr></table>			NO	Position	ROOM AMBIENT Ta=27.1 °C	HIGH AMBIENT Ta=51.6 °C	1	ZNR1	43.7°C	68.1°C	2	LF1	53.3°C	77.6°C	3	C2	52.9°C	77.1°C	4	C10	55.5°C	79.1°C	5	L2	57.5°C	80.7°C	6	Q1	56.2°C	80.4°C	7	C5	55.7°C	79.7°C	8	C14	61.8°C	86.3°C	9	U2	72.3°C	95.6°C	10	C36	70.3°C	93.8°C	11	BD2	55.3°C	79.0°C	12	D8	56.7°C	80.2°C	13	Q5	57.6°C	81.0°C	14	Q6	61.4°C	85.6°C	15	T1	87.4°C	110.9°C	16	C200	66.9°C	90.2°C	17	C105	63.4°C	93.6°C	18	U100	83.6°C	86.2°C	19	Q100	69.0°C	90.4°C	20	Q101	67.4°C	95.7°C	21	RTH3	61.1°C	83.2°C	22	TC	48.6°C	72.2°C
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2	OVER LOAD BURN-IN TEST	NO DAMAGE 1 HOUR (MIN)	I/P : 230 VAC O/P : 146.5 % LOAD Ta : 25°C	TEST : OK																																																																																												
3	LOW TEMPERATURE TURN ON TEST	TURN ON AFTER 2 HOUR	I/P : 85VAC/305VAC O/P : 80/100 % LOAD Ta=-35/-45 °C	TEST : OK																																																																																												
4	HIGH HUMIDITY HIGH TEMPERATURE HIGH VOLTAGE TURN ON TEST	AFTER 12 HOURS IN CHAMBER ON CONTROL 50 °C/95 %R.H NO DAMAGE	I/P : 315 VAC O/P : FULL LOAD Ta= 50 °C HUMIDITY= 95 %R.H	TEST : OK																																																																																												

5	TEMPERATURE COEFFICIENT	± 0.05 %/°C(0~60°C)	I/P : 230 VAC O/P : FULL LOAD	± 0.007 %/°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	-30~50°C	1. Thermal shock Temperature : -35°C~ +55°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=50 °C LIFE TIME (3) I/P : 230VAC O/P : 75% LOAD Ta=50 °C LIFE TIME (4) I/P : 230VAC O/P : 50% LOAD Ta=50 °C LIFE TIME		(1) 3062175HRS (2) 89337HRS (3) 422698HRS (4) 1367823HRS
10	MTBF	Conducted by Parts Stress Analysis Prediction 2163.5K hrs min. Telcordia SR-332 (Bellcore) ; 250.4K 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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