Test Report: NSP-750-24

750W AC/DC High Reliable Multi-Industries Encolsed 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

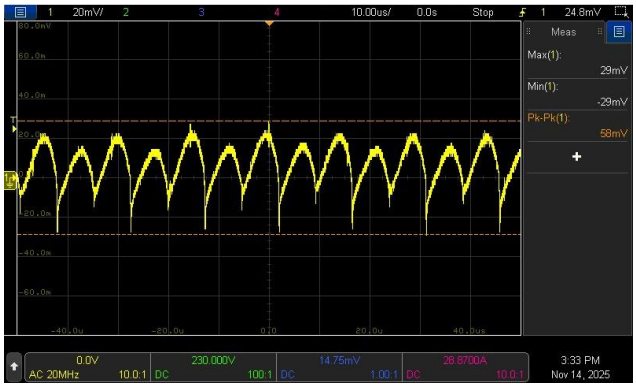
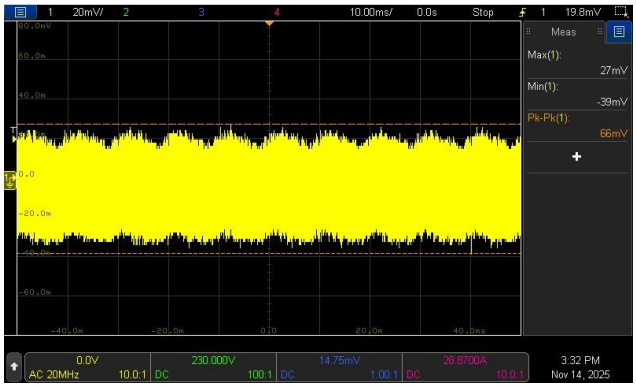
Safety Test
E.M.C. Test

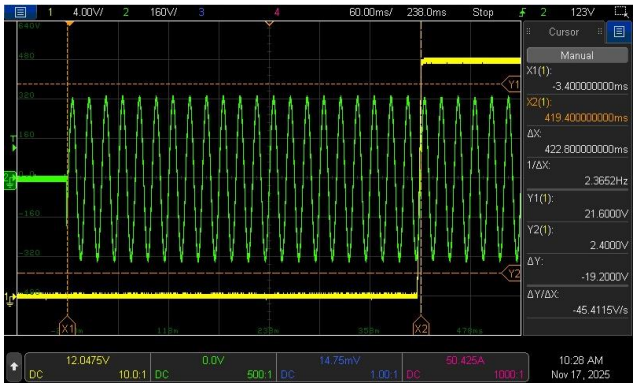
■ RELIABILITY TEST

ENVIRONMENT TEST

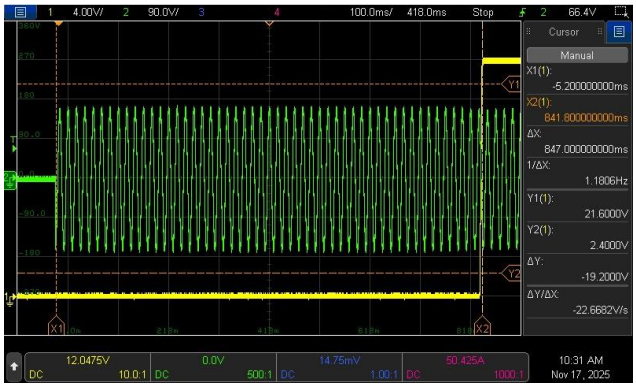
■ DESIGN VERIFY TEST

OUTPUT FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT
1	OUTPUT VOLTAGE ADJUST RANGE	CH1: 21V~26V	I/P： 277 VAC I/P： 230 VAC I/P： 115 VAC O/P：MIN LOAD Ta：25℃	20.33V~26.74V/277VAC 20.34V~26.74V/230VAC 20.34V~26.74V/115VAC
2	OUTPUT VOLTAGE TOLERANCE	V1: -1% ~ +1%	I/P: 85VAC~305VAC O/P:FULL~MIN. LOAD Ta:25℃	V1: -0.04% ~ 0%
3	LINE REGULATION	V1: -0.5% ~ +0.5%	I/P: 85VAC~ 305VAC O/P:FULL LOAD Ta:25℃	V1: -0.0042% ~ 0.0083%
4	LOAD REGULATION	V1: -0.5% ~ +0.5%	I/P: 230VAC O/P:FULL ~MIN LOAD Ta:25℃	V1: -0.0208% ~ 0.0125%
5	OVER/UNDERSHOOT TEST	<± 5%	I/P: 230VAC O/P:FULL LOAD / NO LOAD Ta:25℃	0.75%
6	RIPPLE & NOISE (Max)	V1: 240mVp-p	I/P:230VAC O/P:FULL LOAD Ta:25℃	58mVp-p / high frequency 66mVp-p / low frequency
	high frequency： 		low frequency： 	
7	SET UP TIME(Max)	277VAC/900ms 230VAC/1000ms 115VAC/1500ms	I/P： 277 VAC I/P： 230 VAC I/P： 115 VAC O/P：FULL LOAD Ta：25℃	277VAC/359.7ms 230VAC/422.8ms 115VAC/847ms
	INPUT=277VAC/50HZ @ FULL LOAD CH1: Output Voltage CH2: AC Input Voltage		INPUT=230VAC/50HZ @ FULL LOAD CH1: Output Voltage CH2: AC Input Voltage	

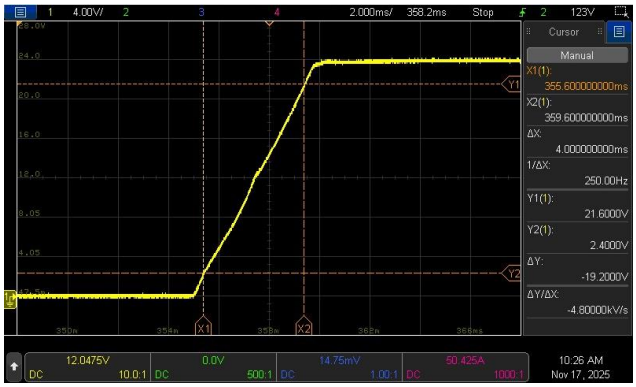


INPUT=115VAC/60HZ @ FULL LOAD
CH1: Output Voltage CH2: AC Input Voltage

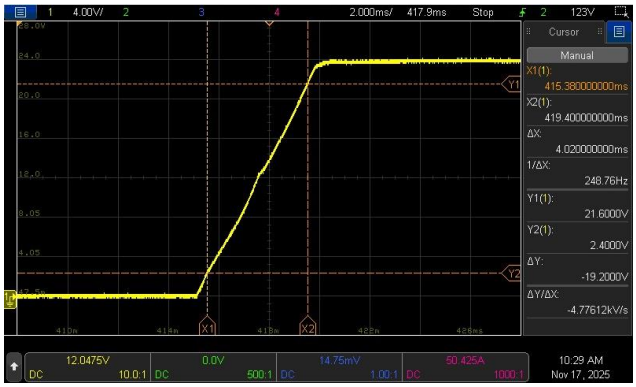


8	RISE TIME (Max)	277VAC/80ms 230VAC/80ms 115VAC/80ms	I/P： 277 VAC I/P： 230 VAC I/P： 115 VAC O/P：FULL LOAD Ta：25℃	277VAC/4ms 230VAC/4.02ms 115VAC/3.92ms

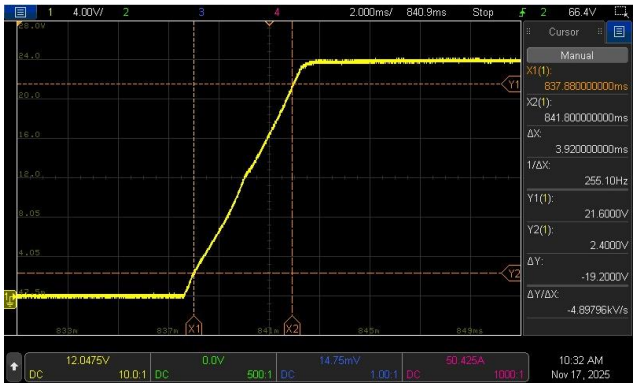
INPUT=277VAC/50HZ @ FULL LOAD
CH1: Output Voltage



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

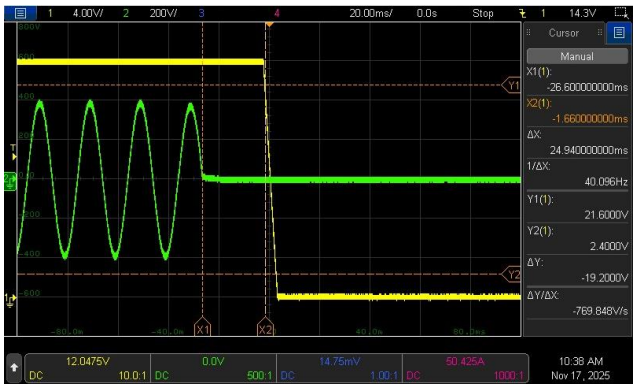


INPUT=115VAC/60HZ @ FULL LOAD
CH1: Output Voltage

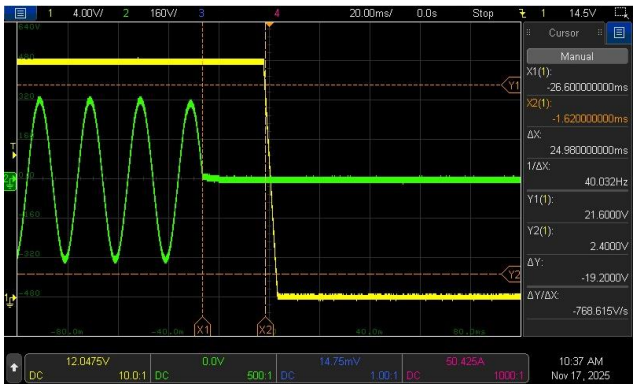


9	HOLD UP TIME (Typ.)	277VAC/16ms 230VAC/16ms 115VAC/16ms	I/P： 277 VAC I/P： 230 VAC I/P： 115 VAC O/P：FULL LOAD Ta：25℃	277VAC/24.94ms 230VAC/24.98ms 115VAC/24.22ms

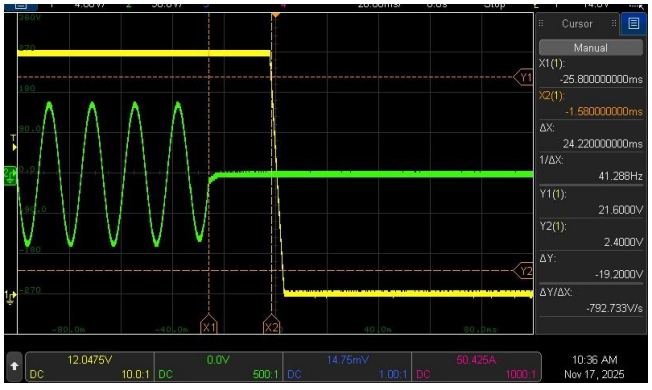
INPUT=277VAC/50HZ @ FULL LOAD
CH1: Output Voltage CH2: AC Input Voltage



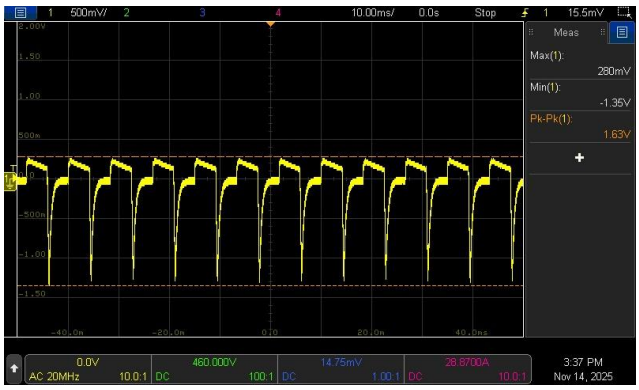
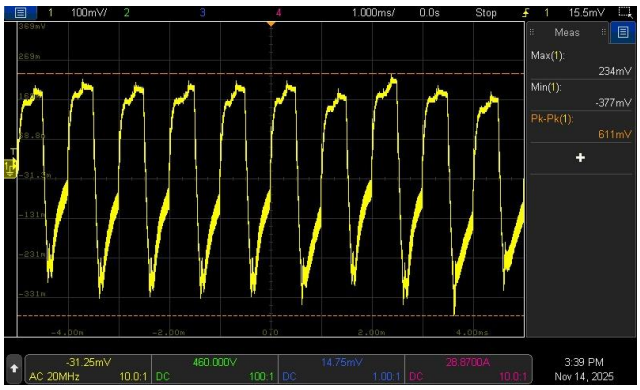
INPUT=230VAC/50HZ @ FULL LOAD
CH1: Output Voltage CH2: AC Input Voltage



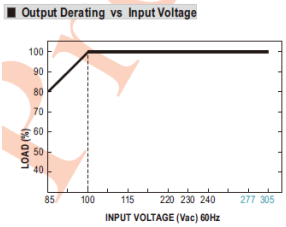
INPUT=115VAC/60HZ @ FULL LOAD
CH1: Output Voltage CH2: AC Input Voltage

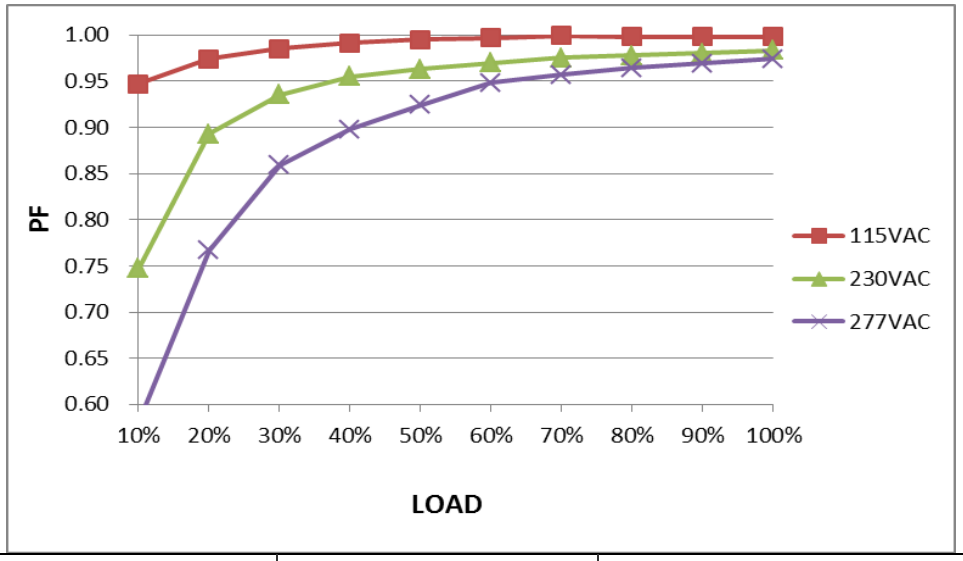
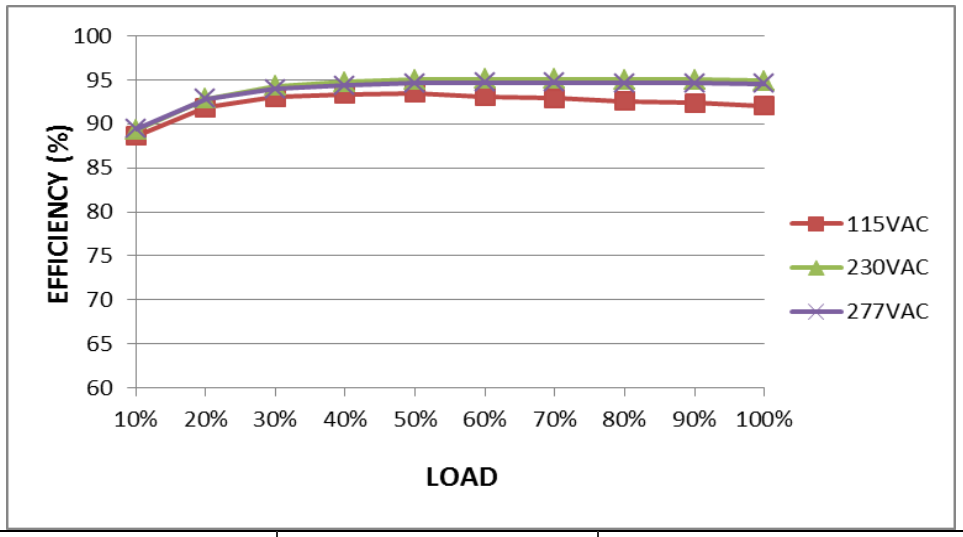


10	DYNAMIC LOAD	V1: 2400mVp-p	I/P: 230VAC O/P: (1) FULL/ MIN LOAD 50%DUTY / 120HZ (2) FULL/ MIN LOAD 50%DUTY / 1KHZ Ta:25℃	1630mVp-p 611mVp-p

	FULL / MIN LOAD 50%DUTY / 120HZ 		FULL / MIN LOAD 50%DUTY / 1KHZ 	
11	TRANSIENT RECOVERY TIME	V1: 2400mVp-p <500us	I/P: 230VAC O/P:40% LOAD CHANGE 50%DUTY/120HZ 1.25A/us	239mVp-p

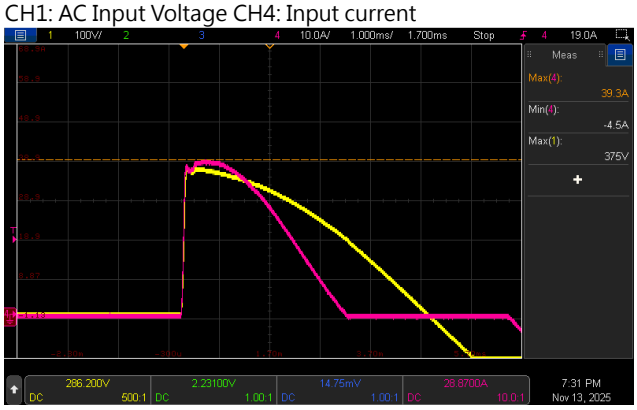
INPUT FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT
1	INPUT VOLTAGE RANGE	85VAC~305VAC 120VDC~ 431VDC 	(1) I/P: TESTING O/P: FULL / 80% LOAD (2) I/P: DC TESTING (L: + N: -) O/P: FULL / 80% LOAD (3) I/P: DC TESTING (L: - N: +) O/P: FULL / 80% LOAD Ta:25℃	(1) 80V~305V/ FULL LOAD 80V~305V/ 80% LOAD (2)108.6 Vdc~431Vdc/FULL LOAD 108.6Vdc~431Vdc/80% LOAD (3) 108.6Vdc~431Vdc/FULL LOAD 108.6Vdc~431Vdc/80% LOAD
			I/P: HIGH-LINE+10V=315V 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℃	TEST: OK
3	INPUT CURRENT (Typ.)	277V/ 3.2 A 230V/ 3.9 A 115V/ 8.2 A	I/P： 277 VAC I/P： 230 VAC I/P： 115 VAC O/P：FULL LOAD Ta：25℃	I =2.9A/ 277VAC I =3.48A/ 230VAC I =7.26A/ 115VAC
4	LEAKAGE CURRENT	Earth leakage current < 350uA (rms)@277Vac; touch current<100uA(rms) @ 277Vac;	I/P： 277 VAC/60HZ O/P：Min LOAD Ta：25℃	For Earth：228.3uA For touch：28.9uA
5	NO LOAD CONSUMPTION	Remote Power OFF: 0.75W/115Vac 0.75W/230Vac 1W/277Vac	I/P：115VAC I/P：230VAC I/P：277VAC O/P：NO LOAD	TEST: Remote Power OFF / Remote Power ON

		Remote Power ON: 5W/115Vac 5W/230Vac 5W/277Vac	Ta：25℃	115VAC 0.356W 3.834W 230VAC 0.459W 3.549W 277VAC 0.553W 3.328W
6	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℃	PF=0.979/277VAC PF=0.988/230VAC PF=0.997/115VAC
	P.F vs LOAD			
7	EFFICIENCY(Typ.)	94%	I/P:230 VAC O/P:FULL LOAD Ta:25℃	94.87 %
	EFFICIENCY vs LOAD			
8	INRUSH CURRENT(Typ.)	277V/50A 230V/40A 115V/20A COLD START	I/P： 277 VAC I/P： 230 VAC I/P： 115 VAC O/P：FULL LOAD Ta：25℃	I =39.3A/ 277VAC I =28.9A/ 230VAC I =15.6A/ 115VAC T50= 1450us/230V

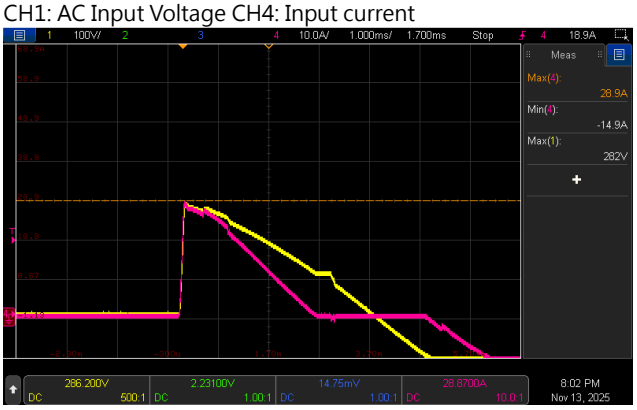
INPUT=277VAC/50HZ @ FULL LOAD

CH1: AC Input Voltage CH4: Input current



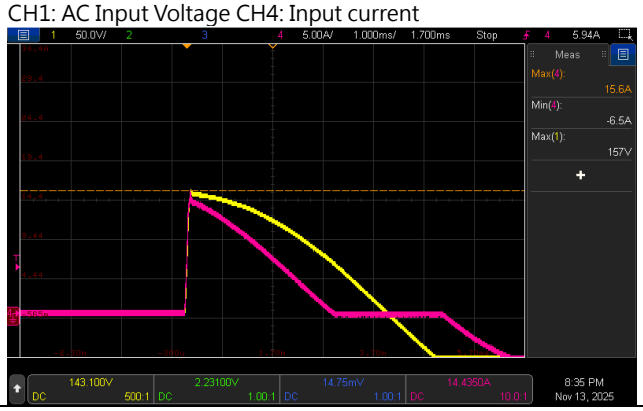
INPUT=230VAC/50HZ @ FULL LOAD

CH1: AC Input Voltage CH4: Input current

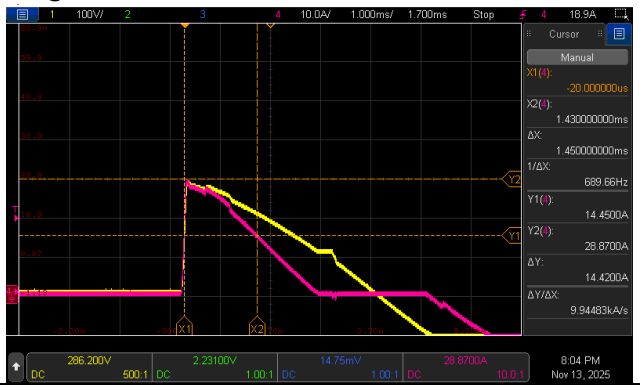


INPUT=115VAC/ 60HZ @ FULL LOAD

CH1: AC Input Voltage CH4: Input current



T50@230VAC:



PROTECTION FUNCTION TEST

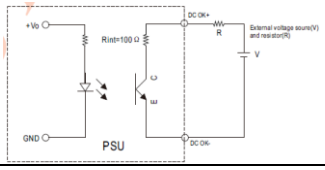
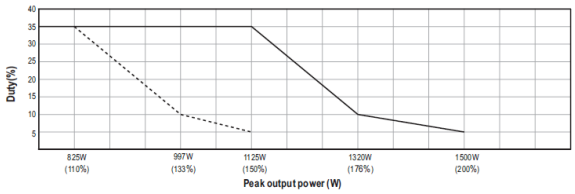
NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT
1	OVER LOAD PROTECTION	Protection type: Normally works within 105 ~ 200% rated output power for more than 5 seconds and then constant current limiting without shutdown(Vout>30%), recovers automatically after fault condition is removed, or shut down o/p voltage when Vout<30%, AC re-power on to recover. Protection type: >200% rated power, constant current limiting (Vout>30%)with auto-recovery after fault condition is removed, or shut down o/p voltage when Vout<30%,AC re-power on to recover.	I/P: 305VAC I/P: 230VAC I/P: 180VAC I/P: 100VAC O/P:TESTING Ta:25℃	TEST： 115.34%/305VAC，； 115.34%/230VAC， 115.34%/100VAC， Protection type: Normally works within 105 ~ 200% rated output power for more than 5 seconds and then constant current limiting without shutdown(Vout>30%), recovers automatically after fault condition is removed, or shut down o/p voltage when Vout<30%, AC re-power on to recover. 217.57 %/305VAC 217.89 %/180VAC 198.72 %/100VAC Protection type:

				>200% rated power, constant current limiting (Vout>30%)with auto-recovery after fault condition is removed, or shut down o/p voltage when Vout<30%,AC re-power on to recover.
2	OVER VOLTAGE PROTECTION	28V~ 36V Protection type: Shut down o/p voltage, AC re-power on to recover	I/P: 305VAC I/P: 85VAC O/P:MIN LOAD Ta:25℃	32.5V/ 305VAC 32.7V/ 85VAC PROTECTION TYPE： Shut down o/p voltage, AC re-power on to recover
3	OVER TEMPERATURE PROTECTION	Protection type: Shut down o/p voltage, recovers automatically after temperature goes down	I/P: 305VAC I/P: 85VAC O/P:FULL LOAD	TEST： OK O.T.P. Active Protection type : Shut down o/p voltage, recovers automatically after temperature goes down
4	SHORT PROTECTION	SHORT EVERY OUTPUT 1 HOUR NO DAMAGE Protection type: Constant current limiting for more than 5 seconds (Vout<30%) and then shut down o/p voltage, AC re-power on to recover or Hiccup mode ,recovery automatically after fault conditon is removed. Depends on the user's wire impedance	I/P: 305VAC I/P: 85VAC O/P:FULL LOAD	NO DAMAGE PROTECTION TYPE： Constant current limiting for more than 5 seconds (Vout<30%) and then shut down o/p voltage, AC re-power on to recover or Hiccup mode, recovery automatically after fault conditon is removed. Depends on the user's wire impedance。

CONTROL FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT
1	AUXILIARY POWER (AUX)	1. 5Vaux @ 0.2A, Tolerance -15% ~ +15% at main output 20% rated current; 2. 12Vaux @ 0.8A, Tolerance -15% ~ +15% at main output 20% rated current. I/P: 230 VAC O/P:FULL LOAD Ta:25℃ Test Result：		

AUX	TOLERANCE
5V / 0.2A	-0.46% ~ 0%
12V / 0.8A	-0.21% ~ 0%

2	REMOTE CONTROL	Power ON: Short between Pin11 & Pin13 on CN1 Power OFF: open between Pin11 & Pin13 on CN1	I/P:230VAC O/P:FULL LOAD Ta:25℃	TEST: OK
3	REMOTE SENSE	S+ / S- Compensate voltage drop on the load wiring up to 0.3V.	I/P: 230 VAC O/P:FULL LOAD Ta:25℃	TEST: OK
4	DC OK SIGNAL	15Vdc/10mA resistive load 	I/P:230VAC O/P:FULL LOAD Ta:25℃	TEST: OK
5	FAN CONTROL	(1)Fan ON/OFF control: RTH3≥ 50℃±10℃ FAN ON RTH3≤ 40℃±10℃ FAN OFF	I/P:230VAC O/P:TESTING	TEST: (1) OK (2) 44.6 dB Ta:25℃
6	PEAK Power	I/P: 100/305VAC O/P:  -------100VAC ———200VAC		TEST: OK

COMPONENT STRESS TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	
1	PWM Transistor (D to S) or (C to E) Peak Voltage	Q2/Q3 : Rated: 600V/40A	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/	Q2 VDS: (1) 491V (2) 523V (3) 488V (4) 488V (5) 488V (6) 491V (7) 491V (8) 491V	Q3 VDS: (1) 484V (2) 516V (3) 482V (4) 482V (5) 482V (6) 482V (7) 486V (8) 486V

			Min. Load 50%Duty/120Hz (7)0%→400% Load. (8) Peak Load Ta:25℃		
2	P.F.C Transistor (D to S) or (C to E) Peak Voltage	Q1 : Rated: 650V/46A	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. (8) Peak Load Ta:25℃	Q1 VDS: (1) 566V (2) 562V (3) 564V (4) 568V (5) 564V (6) 564V (7) 564V (8) 568V	
3	P.F.C DIODE	D5 : Rated: 60A/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 (5) Peak Load Ta:25℃	(1) 476V (2) 465V (3) 469V (4) 472V (5) 469V	
4	Diode Peak Voltage	Q100 / Q104 : Rated: 100V/136A	AC ON/OFF I/P: High-Line +3V =308 V VO=Vomax 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 (9) Peak Load VO=Vnormal O/P: (1) Full Load Ta:25℃	Q100: VO=Vomax VDS: (1) 62.6V (2) 61.8V (3) 62.6V (4) 62.5V (5) 62.5V (6) 62.5V (7) 59.9V (8) 59.5V (9) 64.8V VO=Vnormal (1) 58.9V	Q104: VO=Vomax VDS: (1) 62.1V (2) 61.2V (3) 62.5V (4) 62.1V (5) 62.1V (6) 62.5V (7) 59V (8) 60.8V (9) 64.8V VO=Vnormal (1) 59.4V

5	AUX Transistor (D to S) or (C to E) Peak Voltage	Q4 : Rated:700V/10.5A	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. (8) Peak Load Ta:25℃	VDS: (1) 581V (2) 591V (3) 586V (4) 591V (5) 586V (6) 596V (7) 562V (8) 596V
6	AUX Clamp Diode Peak Voltage	D15 : Rated : 1A/1000 V	AC ON/OFF I/P : High-Line +3V = 308V O/P : (1) Dynamic Load 90%Duty/1KHz (2) Full load continue Ta : 25℃	(1) 581V (2) 533V
7	AUX Diode Peak Voltage	D18 : Rated : 2A/200 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 (9) Peak Load Ta:25℃	D18: VDS: (1) 124V (2) 119V (3) 124V (4) 125V (5) 125V (6) 127V (7) 118V (8) 126V (9) 124V D124: VDS: (1) 76.4V (2) 73.2V (3) 76.4V (4) 76.4V (5) 76.4V (6) 78.0V (7) 72.4V (8) 77.2V (9) 76.4V
8	Input Capacitor Voltage	C5 : Rated: 100u/450V	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 (5) Peak Load on/off (6) Peak Load continue Ta:25℃	(1) 447V (2) 443V (3) 443V (4) 441V (5) 447V (6) 441V
9	Control IC Voltage Test	PWM IC U1 : Rated : 12.5V~ 27.9V	AC ON/OFF I/P: High-Line +3V =308V	U1 (1) 14.8V (2) 14.9V U101 (1) 11.29V (2) 12.47V

		PFC IC U2： Rated：12.9V~25V IC U9： Rated：3.1V~17V O/P IC U101： Rated：4.75V~38V IC U103： Rated：3~30 V IC U104： Rated：4.5V ~36V AUX IC U7： Rated：8V~26.5V	O/P: (1) Full Load (2) Output Short (3) O.L.P (4) O.V.P. (5) No Load VR min (Low Line) Ta:25℃	(3) 14.8V (4) 14.8V (5) 14.8V U2 (1) 14V (2) 14.2V (3) 14V (4) 14V (5) 14V U9 (1) 14V (2) 14.2V (3) 14V (4) 14V (5) 14V	(3) 11.29V (4) 11.29V (5) 11.29V U103/U104 (1) 11.34V (2) 11.34V (3) 11.34V (4) 11.34V (5) 11.34V U7 (1) 19.1V (2) 18.9V (3) 18.9V (4) 18.5V (5) 18.5V

■ 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 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℃	I/P-O/P: 2.33 mA I/P-FG: 2.77 mA O/P-FG: 1.57 m A NO DAMAGE
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: 600 VDC I/P-FG: 600 VDC O/P-FG: 600 VDC Ta:25℃	I/P-O/P: 50 GΩ I/P-FG: 50 GΩ O/P-FG: 50 GΩ NO DAMAGE
3	GROUNDING CONTINUITY	FG(PE) TO CHASSIS OR TRACE < 100 mΩ	40A / 2min Ta:25℃	10mΩ

E.M.C TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT
1	HARMONIC	BS EN/EN61000-3-2 （IEC61000-3-2） ■ CLASS A	I/P:230VAC/50HZ O/P:FULL LOAD Ta:25℃	■ PASS
2	CONDUCTION	BS EN/EN55032(CISPR32), CNS 15936 CLASS B BS EN/EN55011（CISPR11） CLASS B	I/P：230 VAC (50HZ) O/P：FULL/50% LOAD Ta：25℃	PASS Test by certified Lab

3	RADIATION	BS EN/EN55032(CISPR32), CNS 15936 CLASS B BS EN/EN55011（CISPR11） CLASS B	I/P：230 VAC (50HZ) O/P：FULL LOAD Ta：25℃	PASS Test by certified Lab
4	E.S.D	BS EN/EN61000-4-2 AIR：15KV / Contact：8KV	I/P：230 VAC/50HZ O/P：FULL LOAD Ta：25℃	CRITERIA A
5	E.F.T	BS EN/EN61000-4-4 INPUT： 2KV	I/P：230 VAC/50HZ O/P：FULL LOAD Ta：25℃	CRITERIA A
6	SURGE	BS EN/EN 61000-4-5 L-N ：2KV L,N-PE：4KV	I/P： 230 VAC/50HZ O/P：FULL LOAD Ta：25℃	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-750-24 1. ROOM AMBIENT BURN-IN： 2HRS I/P： 230VAC O/P： FULL LOAD Ta=26.8℃ 2. HIGH AMBIENT BURN-IN： 2HRS I/P： 230VAC O/P： FULL LOAD Ta= 60.1℃		

NO	Position	ROOM AMBIENT Ta=26.8℃	HIGH AMBIENT Ta=60.1℃
1	ZNR1	31.0℃	64.8℃
2	LF1	35.3℃	69.6℃
3	LF2	36.1℃	70.3℃
4	C2	33.2℃	67.1℃
5	BD1	55.4℃	88.0℃
6	C16	38.4℃	72.2℃
7	RTH1	36.1℃	69.5℃
8	RY1	39.4℃	72.6℃
9	RTH4	45.5℃	79.0℃
10	L1	50.5℃	84.0℃
11	Q1	45.9℃	79.6℃
12	D5	44.4℃	78.2℃
13	C5	35.4℃	69.0℃
14	ZNR1	31.0℃	64.8℃
15	LF1	35.3℃	69.6℃
16	LF2	36.1℃	70.3℃

NO	Position	ROOM AMBIENT Ta=26.8℃	HIGH AMBIENT Ta=60.1℃
17	C2	33.2℃	67.1℃
18	BD1	55.4℃	88.0℃
19	C16	38.4℃	72.2℃
20	RTH1	36.1℃	69.5℃
21	RY1	39.4℃	72.6℃
22	RTH4	45.5℃	79.0℃
23	L1	50.5℃	84.0℃
24	Q1	45.9℃	79.6℃
25	D5	44.4℃	78.2℃
26	C5	35.4℃	69.0℃
27	D6	41.7℃	75.6℃
28	U1	47.3℃	82.0℃
29	C7	43.4℃	77.7℃
30	Q3	46.7℃	81.9℃
31	Q2	49.2℃	84.4℃
32	Q4	53.5℃	88.2℃
33	C42	43.2℃	76.6℃
34	T1core	56.4℃	87.0℃
35	T1coil	93.4℃	98.0℃
36	C108	43.5℃	79.0℃
37	U9	49.1℃	82.7℃
38	U2	47.2℃	81.7℃
39	R7	47.9℃	81.5℃
40	C92	48.0℃	82.3℃
41	U5	48.1℃	81.8℃
42	U101	53.5℃	87.6℃
43	Q100	54.2℃	88.8℃
44	Q104	56.2℃	91.1℃
45	J101	47.6℃	80.7℃
46	D13	40.2℃	73.9℃
47	U104	35.9℃	69.1℃
48	RTH5	54.9℃	89.1℃
49	C107	45.5℃	80.7℃
50	C110	43.2℃	76.5℃
51	C135	38.5℃	70.7℃
52	U100	45.4℃	80.9℃
53	U7	41.4℃	75.2℃
54	RTH3	39.0℃	73.3℃
55	T2	40.4℃	74.4℃
56	C158	33.1℃	67.1℃
57	C201	39.3℃	74.1℃
58	U111	39.6℃	73.7℃
59	Q5	41.9℃	75.9℃
60	U100	42.3℃	76.2℃

2	OVER LOAD BURN-IN TEST	NO DAMAGE 1 HOUR (MIN)	I/P： 230 VAC O/P： 114%LOAD Ta：25℃	TEST：OK
3	LOW TEMPERATURE TURN ON TEST	TURN ON AFTER 2 HOUR	I/P： 305VAC/100VAC O/P： 80%/100%LOAD Ta= -45℃/-35℃	TEST：OK
4	HIGH HUMIDITY HIGH TEMPERATURE HIGH VOLTAGE TURN ON TEST	AFTER 12 HOURS IN CHAMBER ON CONTROL 60℃/95 %R.H NO DAMAGE	I/P： 315VAC O/P：FULL LOAD Ta= 60℃ HUMIDITY= 95 %R.H	TEST：OK
5	TEMPERATURE COEFFICIENT	± 0.05%/℃(0~60℃)	I/P： 230 VAC O/P：FULL LOAD	± 0.005%/℃(0~60℃)
6	STORAGE TEMPERATURE TEST	-40~85℃	1. Thermal shock Temperature： -45℃~ +90℃ 2. Temperature change rate ：25℃ / 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℃	1. Thermal shock Temperature： -35℃~ +65℃ 2. Temperature change rate ：25℃ / 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℃	
9	CAPACITOR LIFE CYCLE	SUPPOSE C107 IS THE MOST CRITICAL COMPONENT (1) I/P： 230VAC O/P：FULL LOAD Ta= 60℃ LIFE TIME (2) I/P： 230VAC O/P：FULL LOAD Ta= 60℃ LIFE TIME (3) I/P： 230VAC O/P：75% LOAD Ta= 60℃ LIFE TIME (4) I/P： 230VAC O/P：50% LOAD Ta= 60℃ LIFE TIME	 (1) 937548HRS (2) 72642HRS (3) 125350HRS (4) 189547HRS	
10	MTBF	Conducted by Parts Stress Analysis Prediction 1047.1K hrs min. Telcordia SR-332 (Bellcore) ; 137.4K hrs min. MIL-HDBK-217F (25℃)		
11	Ongoing Reliability Test	I/P：230VAC O/P：FULL LOAD TA=50℃ Demonstration Mean Time Between Failure : 50,000 hours		

TEST RESULT	TESTER	REVIEW	APPROVAL
PASS	Yuwei	Liutt	Wangzd

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