Test Report: NPP-450-72

450W High Reliable Ultra Wide Output Range Battery Charger & Power Supply 2-in-1

■ 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

Battery Charger mode

■ DESIGN VERIFY TEST

OUTPUT FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT
1	BOOST CHARGE VOLTAGE (default)	72V± 1.2 V	I/P: 230 VAC O/P: CC=90% LOAD Ta:25℃	72.1V
2	FLOAT CHARGE VOLTAGE (default)	69V± 0.6 V	I/P: 230 VAC O/P:NO LOAD Ta:25℃	69.1V
3	OUTPUT CURRENT	5.5A±0.055 A	I/P: 230 VAC O/P:C.V MODE-1V Ta:25℃	5.515 A
4	MAX. POWER	462W	I/P: 230 VAC O/P:C.V =84V Ta:25℃	463.8W
5	OUTPUT VOLTAGE ADJUST RANGE	54V~100 V	I/P： 230 VAC O/P：CC=90% LOAD Ta：25℃	51.5V~103.9V
6	CURRENT ADJUSTABLE RANGE	2.75~5.5A	I/P： 230 VAC O/P：C.V MODE-4V Ta：25℃	2.55A~5.59A

PROTECTION FUNCTION TEST

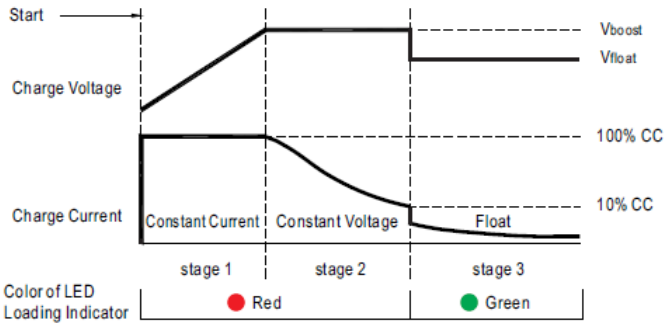
NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT
1	SHORT PROTECTION	SHORT EVERY OUTPUT 1 HOUR NO DAMAGE Constant current Range： 4.95~11.5A PROTECTION TYPE： Constant current limiting, charger will shut down after 5 sec, re-power on to recover	I/P: 264 VAC O/P: BAT. LOAD Ta:25℃	NO DAMAGE Constant current Range： 9.33 A PROTECTION TYPE： Constant current limiting, charger will shut down after 5 sec, re-power on to recover
2	OVER VOLTAGE PROTECTION	102V~120V PROTECTION TYPE： Shut down and latch off o/p voltage, re-power on to recover	I/P: 264VAC I/P: 230VAC I/P: 90VAC O/P:MIN LOAD Ta:25℃	112.0V/ 264VAC 112.0V/ 230VAC 112.0V/ 90VAC PROTECTION TYPE： Shut down and latch off o/p voltage, re-power on to recover
3	OVER TEMPERATURE PROTECTION	Protection type： Shut down O/P voltage, recovers automatically after	I/P: 264VAC I/P: 90VAC O/P:FULL LOAD	O.T.P. Active PROTECTION TYPE： Shut down O/P voltage,

		temperature goes down		recovers automatically after temperature goes down

CONTROL FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT
1	FAN SPEED CONTROL	Depends on internal temperature	I/P: 230 VAC O/P:BAT. LOAD Ta:25℃	TEST: OK
2	REMOTE CONTROL	Rc+ / Rc- OPEN(-0.5V~0.5V) : Charger OFF ; SHORT(10.8V~13.2V) : Charger ON	I/P: 230 VAC O/P:BAT. LOAD Ta:25℃	OPEN /SHORT TEST: OK Charger OFF: -0.5V~1.8V Charger ON: 1.9~13.2V (1) Remote off Pin=2.89W (2) Remote off Vo= 0.29V
3	CHARGE OK SIGNAL	The TTL signal out, Charger OK = 4.5 ~ 5.5V; Charger failure or protection = -0.5 ~ 0.5V	I/P: 230 VAC O/P:BAT. LOAD Ta:25℃	TEST： Charger OK = 5.21 V; Charger failure or protection = 0.035 V
4	BATTERY FULL SIGNAL	The TTL signal out, Battery full = 4.5 ~ 5.5V . Charging = -0.5 ~ 0.5V	I/P: 230 VAC O/P:BAT. LOAD Ta:25℃	TEST： Battery full = 5.21 V Charging = 0.035 V
5	AUX POWER	OUTPUT VOLTAGE RANGE : 10.8~13.2V OUTPUT RIPPLE&NOISE：240mVp-p	I/P: 230 VAC O/P:BAT. LOAD Ta:25℃	TEST: 12.02 V 79 mVp-p
6	CHARGING CURVE	I/P:230Vac O/P:TESTING Ta:25℃		

◎ 3 stage charging curve (Default)



Taper Current	0.55A±0.055A
Io	0.529A

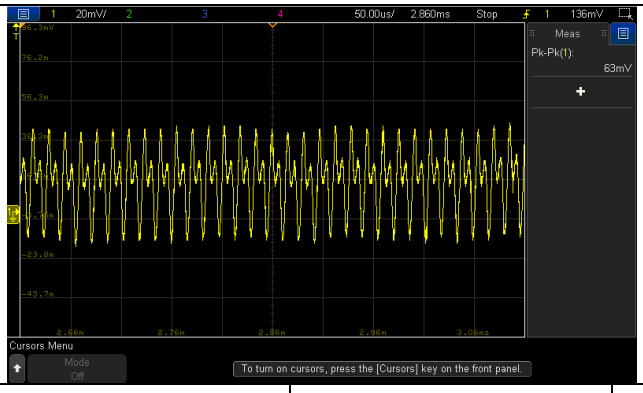
7	LED INDICATOR	<table><tr><th>LED Indicator</th><th>Charger(Default)</th><th>Power Supply</th></tr><tr><td>Green</td><td>Float stage(stage 3) or full charged</td><td>Normal working</td></tr><tr><td>Red</td><td>Charging(stage 1 or 2)</td><td>——</td></tr><tr><td>NO Light</td><td>Abnormal</td><td>Abnormal</td></tr></table> I/P: 230V O/P:TESTING LOAD Ta:25℃	TEST： OK

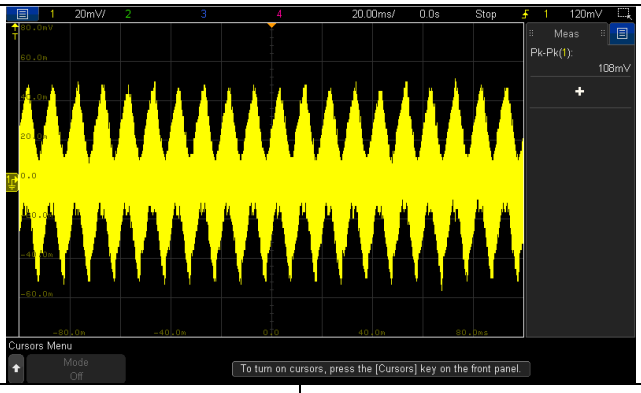
Power Supply mode

■ DESIGN VERIFY TEST

OUTPUT FUNCTION TEST

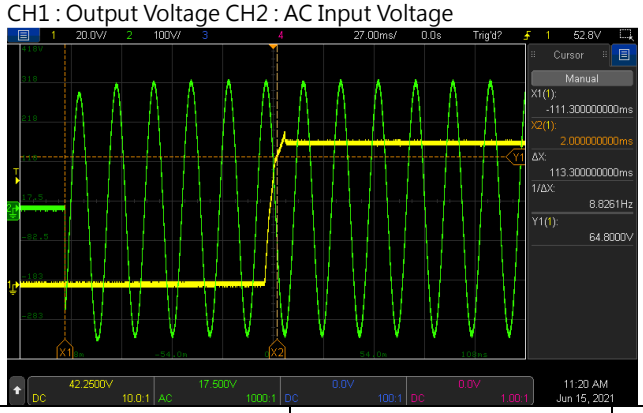
NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT
1	OUTPUT VOLTAGE ADJUST RANGE	CH1: 54 V~ 100 V	I/P： 230 VAC I/P： 115 VAC O/P：MIN LOAD Ta：25℃	51.5V~103.9V/230VAC 51.5V~103.9V /115VAC
2	CURRENT ADJUSTABLE RANGE	2.75~5.5A	I/P： 230 VAC O/P：TEST LOAD Ta：25℃	2.673A~5.66A
3	OUTPUT VOLTAGE(Max) TOLERANCE	V1: -1.0 %~ +1.0 %	I/P: 90VAC /264VAC O/P:FULL/ MIN. LOAD Ta:25℃	V1: -0.01%~ 0.01 %
4	LINE REGULATION (Max)	V1: -0.5 %~ +0.5 %	I/P: 90VAC~ 264VAC O/P:FULL LOAD Ta:25℃	V1: -0.01%~ 0.01%
5	LOAD REGULATION(Max)	V1: -0.5 %~ +0.5 %	I/P: 230VAC O/P:FULL ~MIN LOAD Ta:25℃	V1: -0.01%~ 0.01%
6	OVER/UNDERSHOOT TEST	< ±5%	I/P: 230VAC O/P:FULL LOAD Ta:25℃	3.9%
7	RIPPLE & NOISE(Max)	V1: 600 mVp-p	I/P:230VAC O/P:FULL LOAD Ta:25℃	V1: 108mVp-p
	high frequency：		low frequency：	





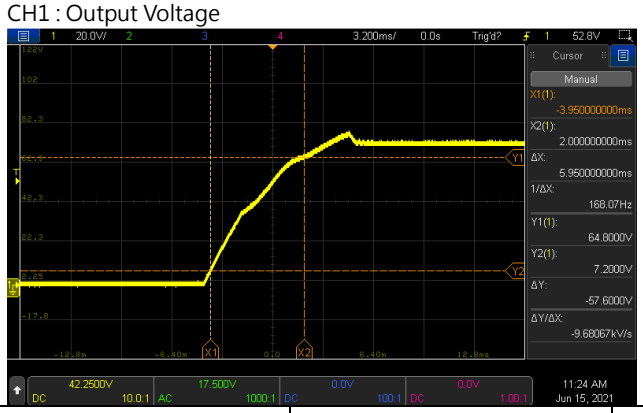
8	SET UP TIME(Max)	230VAC/1800ms	I/P： 230 VAC O/P：FULL LOAD Ta：25℃	230VAC/ 113.3ms

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



9	RISE TIME (Max)	230VAC/60ms	I/P： 230 VAC O/P：FULL LOAD Ta：25℃	230VAC/ 5.95ms

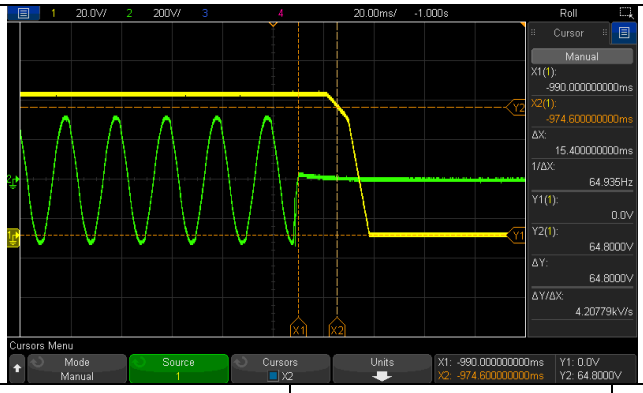
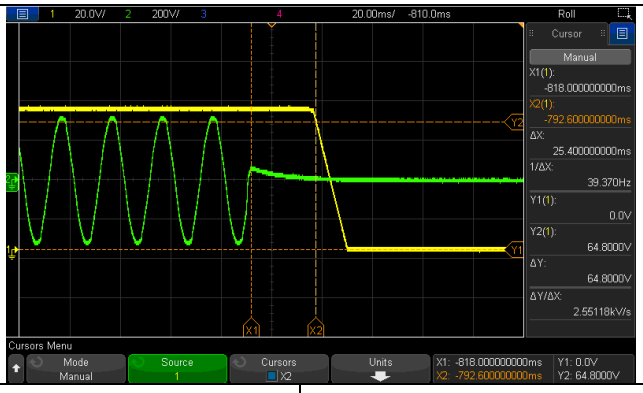
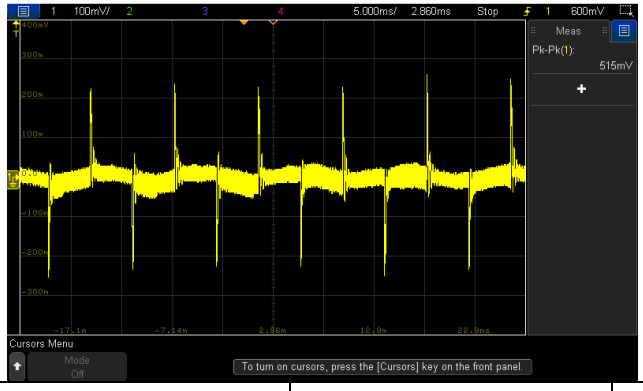
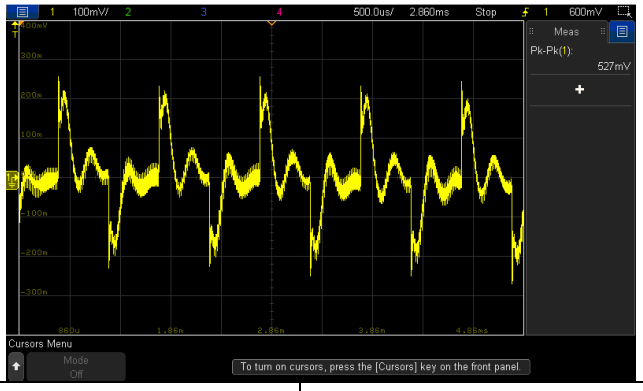
INPUT=230VAC/50HZ @ FULL LOAD
CH1 : Output Voltage



10	HOLD UP TIME (Typ.)	230VAC/FULL LOAD /10ms 230VAC/75% LOAD /16ms	I/P： 230 VAC O/P：FULL LOAD Ta：25℃	230VAC/FULL LOAD / 15.4ms 230VAC/75% LOAD / 25.4ms

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

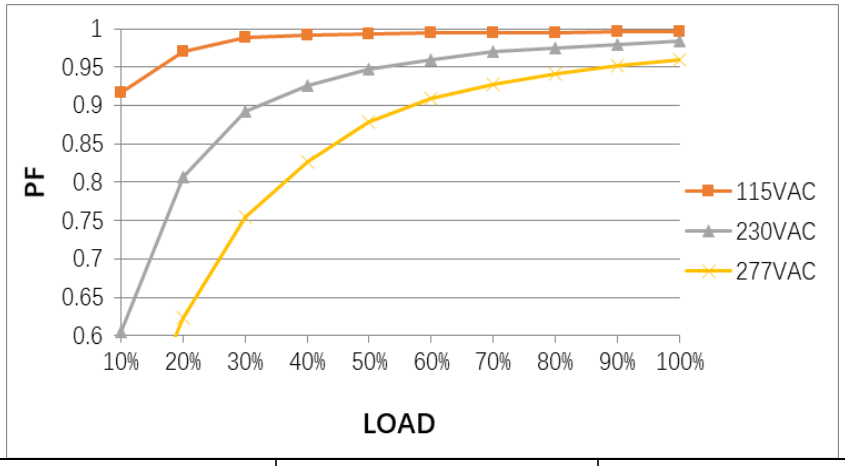
INPUT=230VAC/50HZ @ 75% LOAD
CH1 : Output Voltage CH2 : AC Input Voltage

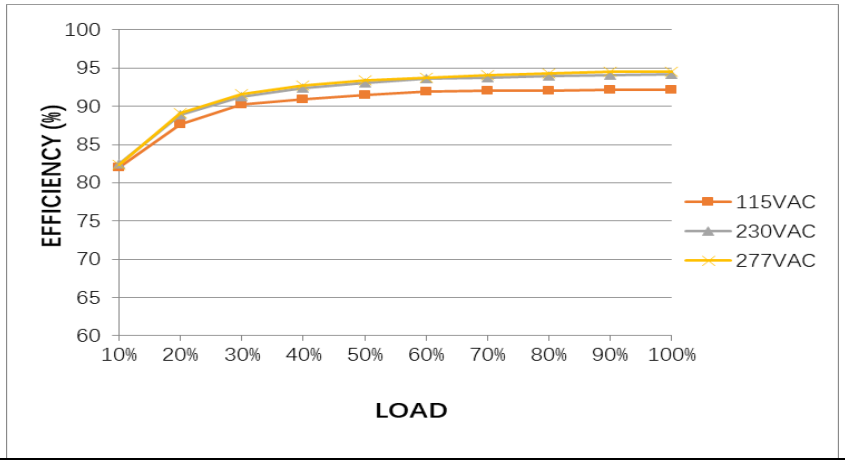
				
11	DYNAMIC LOAD	V1: 7200 mVp-p	I/P: 230VAC O/P: (1)FULL /50% LOAD 50%DUTY / 120HZ (2)FULL /50% LOAD 50%DUTY / 1KHZ Ta:25℃	515mVp-p 527mVp-p
	FULL /50% LOAD 50%DUTY / 120HZ 		FULL /50% LOAD 50%DUTY / 1KHZ 	
12	TRANSIENT RECOVERY TIME	V1: 7200 mVp-p	I/P: 230VAC O/P:40% LOAD CHANGE 50%DUTY/120HZ 1.25A/us	438mVp-p

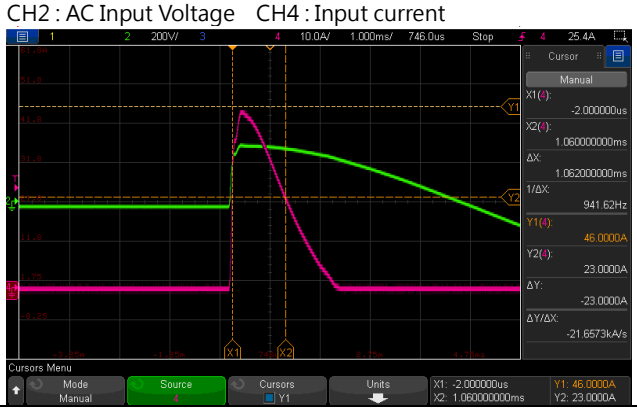
INPUT FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT
1	INPUT VOLTAGE RANGE	90VAC~264VAC 127VDC~ 370VDC	(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℃	(1) 85.7V~264V (2) 115Vdc~370Vdc/FULL LOAD 115Vdc~370Vdc/50% LOAD (3) 115Vdc~370Vdc/FULL LOAD 115Vdc~370Vdc/50% LOAD

			I/P: LOW-LINE-3V=87 V HIGH-LINE+15%=300 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:90 VAC ~264 VAC O/P:FULL~MIN LOAD Ta:25℃	TEST: OK
3	INPUT CURRENT (Typ.)	230V/ 2.2 A 115V/ 4.5 A	I/P： 230 VAC I/P： 115 VAC O/P：FULL LOAD Ta：25℃	I =2.15A/ 230VAC I =4.41A/ 115VAC
6	POWER FACTOR (Typ.)	0.95/ 230VAC 0.98/115VAC	I/P： 230 VAC I/P： 115 VAC O/P：FULL LOAD Ta：25℃	PF=0.988/230VAC PF=0.997/115VAC
	P.F vs LOAD			
7	EFFICIENCY(Typ.)	93%	I/P:230 VAC O/P:FULL LOAD Ta:25℃	93.57%
	EFFICIENCY vs LOAD			





8	INRUSH CURRENT(Typ.)	230V/50A COLD START	I/P： 230 VAC O/P：FULL LOAD Ta：25℃	I =46A/ 230VAC T50=1.062 ms/230V
	INPUT=230VAC/50HZ @ FULL LOAD CH2 : AC Input Voltage CH4 : Input current 			

PROTECTION FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT
1	OVER LOAD PROTECTION	105 %~ 115 % PROTECTION TYPE： Constant current limiting, unit will shut down after 5 sec, re-power on to recover	I/P: 264VAC I/P: 230VAC I/P: 100VAC O/P:TESTING Ta:25℃	108.2%/ 264VAC 108.2%/ 230VAC 108.2%/100VAC PROTECTION TYPE： Constant current limiting, unit will shut down after 5 sec, re-power on to recover
2	OVER VOLTAGE PROTECTION	102V~120V PROTECTION TYPE： Shut down and latch off o/p voltage, re-power on to recover	I/P: 264VAC I/P: 230VAC I/P: 90VAC O/P:MIN LOAD Ta:25℃	112.0V/ 264VAC 112.0V/ 230VAC 112.0V/ 90VAC PROTECTION TYPE： Shut down and latch off o/p voltage, re-power on to recover
3	OVER TEMPERATURE PROTECTION	Protection type： Shut down O/P voltage, recovers automatically after temperature goes down	I/P: 264VAC I/P: 90VAC O/P:FULL LOAD	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 Constant current Range： 4.95~11.5A PROTECTION TYPE： Constant current limiting, charger will shut down after 5 sec, re-power on to recover	I/P: 264 VAC O/P: BAT. LOAD Ta:25℃	NO DAMAGE Constant current Range： 9.34 A PROTECTION TYPE： Constant current limiting, charger will shut down after 5 sec, re-power on to recover

CONTROL FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT
1	FAN SPEED CONTROL	Depends on internal temperature	I/P: 230 VAC O/P:testing Ta:25℃	TEST: OK
2	REMOTE CONTROL	OPEN：POWER OFF ; SHORT：POWER ON	I/P: 230 VAC O/P:FULL. LOAD Ta:25℃	OPEN/SHORT TEST: OK
3	DC OK	The TTL signal out, DC OK = 4.5 ~ 5.5V; Power supply failure or protection = -0.5 ~ 0.5V	I/P: 230 VAC O/P:BAT. LOAD Ta:25℃	TEST： Charger OK = 5.195 V; Charger failure or protection = 0.034 V

COMPONENT STRESS TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT
1	PWM Transistor (D to S) or (C to E) Peak Voltage	Q 5/Q6 Rated : 25A/ 600 V	AC ON/OFF I/P: High-Line +3V =267V 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. Ta:25℃	Q5 VDS: (1) 472V (2) 488V (3) 476V (4) 476V (5) 476V (6) 476V (7) 456V Q6 VDS: (1) 472V (2) 492V (3) 472V (4) 476V (5) 476V (6) 476V (7) 464V
2	P.F.C Transistor (D to S) or (C to E) Peak Voltage	Q1 Rated : 18A/ 600 V	I/P: High-Line +3V =267 V 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℃	VDS: (1) 500V (2) 480V (3) 504V (4) 504V (5) 508V (6) 500V (7) 460V

3	AUX MOS	U600 Rate: 725V/ 0.88A	I/P: High-Line +3V =267 V 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℃	VDS: (1) 616V (2) 596V (3) 616V (4) 616V (5) 620V (6) 612V (7) 588V
4	P.F.C DIODE	D 19 Rated : 650 V/ 6 A	I/P:High-Line +3V =267 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 Ta:25℃	(1) 452V (2) 452V (3) 448V (4) 456V
5	Diode Peak Voltage	Q210 Rated : 20A/300V Q214 Rated : 20A/300	AC ON/OFF I/P:High-Line +3V =267 V Vo=Vmax 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 Vo=Normal O/P: (1)Full Load (2) Before Burst Mode Ta:25℃	Q210 Vo=Vmax VDS: (1) 236V (2) 230V (3) 238V (4) 238V (5) 240V (6) 242V (7) 232V (8) 226V Vo=Normal (1) 206V (2) 198V Q214 Vo=Vmax VDS: (1) 226V (2) 232V (3) 234V (4) 234V (5) 236V (6) 238V (7) 232V (8) 224V Vo=Normal (1) 211V (2) 209V
6	Input Capacitor Voltage	C5 Rated :220u / 450 V	I/P:High-Line +3V =267V 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℃	(1) 442V (2) 442V (3) 439V (4) 444V

7	Control IC Voltage Test	PWM IC U3Rated 8.9V~15.5V PFC IC U2Rated 11V~26V O/P IC U801 Rated 4.5V~36V	AC ON/OFF I/P:High-Line +3V =267 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℃	U3 (1) 13.9V (2) 13.7V (3) 15.1V (4) 13.5V (5) 13.3V U2 (1) 14.1V (2) 13.9V (3) 13.5V (4) 14.1V (5) 14.1V	U801 (1) 10.5V (2) 10.3V (3) 10.5V (4) 10.3V (5) 10.3V

■ SAFETY& E.M.C. TEST

SAFETY TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT
1	WITHSTAND VOLTAGE	I/P-O/P: 3KVAC/min I/P-FG :2KVAC/min O/P-FG:0.5KVAC/min	I/P-O/P: 3.6 KVAC/min I/P-FG: 2.4 KVAC/min O/P-FG:0.6 KVAC/min Ta:25℃	I/P-O/P:3.67mA I/P-FG:3.59mA O/P-FG:1.31m A NO DAMAGE
2	ISOLATION RESISTANCE	I/P-O/P:500VDC>100MΩ I/P-FG: 500VDC>100MΩ O/P-FG:500VDC>100MΩ	I/P-O/P: 500 VDC I/P-FG: 500 VDC O/P-FG: 500 VDC Ta:25℃	I/P-O/P: 9999MΩ I/P-FG: 9999MΩ O/P-FG: 9999MΩ NO DAMAGE
3	GROUNDING CONTINUITY	FG(PE) TO CHASSIS OR TRACE < 100 mΩ	40A / 2min Ta:25℃	20 mΩ

E.M.C TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT
1	HARMONIC	BS EN/EN61000-3-2 CLASS A	I/P:230VAC/50HZ O/P:FULL LOAD Ta:25℃	PASS
2	CONDUCTION	BS EN/EN 55032 (CISPR32), BS EN / EN55014-1 CLASS B	I/P: 230 VAC (50HZ) O/P:FULL/50% LOAD Ta:25℃	PASS Test by certified Lab
3	RADIATION	BS EN/EN 55032 (CISPR32), BS EN / EN55014-1 CLASS B	I/P:230VAC/50HZ O/P:FULL /50%LOAD Ta:25℃	PASS Test by certified Lab
4	E.S.D	BS EN/EN61000-4-2 AIR：8KV / Contact：4KV	I/P:230VAC/50HZ O/P:FULL LOAD Ta:25℃	CRITERIA A

5	E.F.T	BS EN/EN61000-4-4 INPUT: 1KV	I/P:230VAC/50HZ O/P:FULL LOAD Ta:25℃	CRITERIA A
6	SURGE	BS EN/EN 61000-4-5 L-N :1KV L,N-PE:2KV	I/P:230VAC/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：NPP-450-72 1. ROOM AMBIENT BURN-IN：2 HRS I/P： 230VAC O/P： FULL LOAD Ta= 23.5 ℃ 2. HIGH AMBIENT BURN-IN： 2 HRS I/P： 230VAC O/P： FULL LOAD Ta= 50.6 ℃		

NO	Position	ROOM AMBIENT Ta= 23.5 ℃	HIGH AMBIENT Ta=50.6℃
1	ZNR1	26.4℃	55.0℃
2	LF1	28.1℃	57.0℃
3	RY1	29.6℃	57.8℃
4	U3	31.3℃	59.0℃
5	RTH2	29.0℃	57.2℃
6	LF3	37.9℃	68.9℃
7	C2	30.5℃	60.4℃
8	C8	33.6℃	63.0℃
9	BD1	41.7℃	71.1℃
10	R24	35.8℃	65.4℃
11	C5	34.6℃	63.5℃
12	L1	47.7℃	78.2℃
13	C60	37.3℃	68.5℃
14	Q1	37.9℃	68.0℃
15	TSW1	30.2℃	59.4℃
16	Q5	31.6℃	61.1℃
17	T1	56.2℃	91.3℃
18	T600	27.7℃	55.1℃
19	U600	36.5℃	65.8℃
20	RTH5	30.8℃	59.4℃
21	Q211	35.2℃	63.3℃
22	Q213	37.0℃	64.5℃
23	C114	31.6℃	59.2℃
24	C115	26.5℃	54.4℃
25	LF100	26.3℃	54.0℃
26	U150	27.5℃	55.0℃
27	J102	31.9℃	60.1℃
28	D651	34.0℃	61.7℃
29	D19	44.4℃	76.3℃
30	U2	37.3℃	67.9℃
31	R210	36.0℃	65.5℃
32	Q632	30.1℃	58.5℃
33	U801	29.1℃	55.3℃
34	C830	26.8℃	54.4℃

2	LOW TEMPERATURE TURN ON TEST	TURN ON AFTER 2 HOUR	I/P： 230VAC/100VAC O/P： 100 %LOAD Ta= -35℃	TEST：OK
3	HIGH HUMIDITY HIGH TEMPERATURE HIGH VOLTAGE TURN ON TEST	AFTER 12 HOURS IN CHAMBER ON CONTROL 50 ℃ NO DAMAGE	I/P： 272 VAC O/P：FULL LOAD Ta= 50.1 ℃ HUMIDITY= 95 %R.H	TEST：OK
4	TEMPERATURE COEFFICIENT	± 0.05%/ (0℃~50℃)	I/P： 230 VAC O/P：FULL LOAD	0.0073 %/℃(0~50℃)

5	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：10CYCLE 5. Input/Output condition： STATIC
6	THERMAL SHOCK TEST	-30~50℃	1. Thermal shock Temperature： -35℃~ +55℃ 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
7	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℃
8	CAPACITOR LIFE CYCLE	SUPPOSE C114 IS THE MOST CRITICAL COMPONENT (1) I/P： 230VAC O/P：FULL LOAD Ta= 25 ℃ LIFE TIME (2) I/P： 230VAC O/P：FULL LOAD Ta= 50 ℃ LIFE TIME (3) I/P： 230VAC O/P：75% LOAD Ta= 50 ℃ LIFE TIME (4) I/P： 230VAC O/P：50% LOAD Ta= 50 ℃ LIFE TIME	 (1) 1687425HRS (2) 288136.3HRS (3) 379220.2HRS (4) 464041.5HRS
9	MTBF	Conducted by Parts Stress Analysis Prediction 1056.9K hrs min. Telcordia SR-332 (Bellcore) ; 118.5K hrs min. MIL-HDBK-217F (25℃)	
10	Ongoing Reliability Test	I/P：230VAC O/P：FULL LOAD TA=50℃ Demonstration Mean Time Between Failure : 30,000 hours	

TEST RESULT	TESTER	REVIEW	APPROVAL
PASS	LIUTT		Wangdz

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