



# Test Report: NSP-750-5

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750W 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

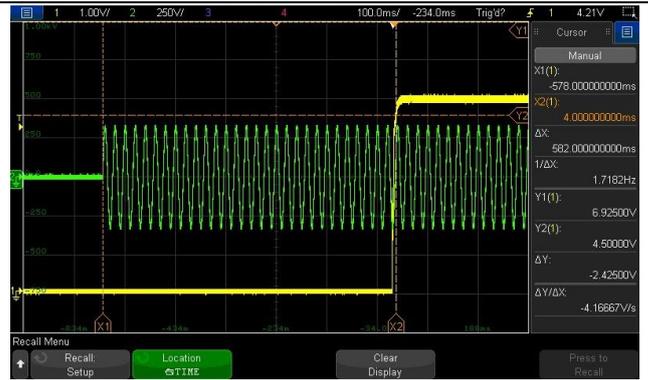
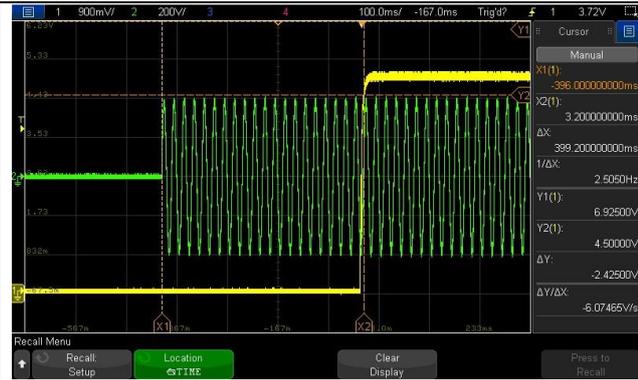
## ■ RELIABILITY TEST

ENVIRONMENT TEST

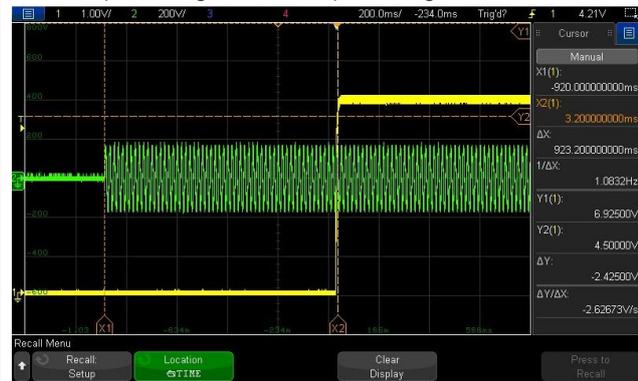
## DESIGN VERIFY TEST

### OUTPUT FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT
1	OUTPUT VOLTAGE ADJUST RANGE	CH1: 4.7V~5.5V	I/P : 277 VAC I/P : 230 VAC I/P : 115 VAC O/P : MIN LOAD Ta : 25°C	4.458V~5.785V/277VAC 4.458V~5.785V/230VAC 4.458V~5.785V/115VAC
2	OUTPUT VOLTAGE TOLERANCE	V1: -2% ~ +2%	I/P: 85VAC~305VAC O/P:FULL~MIN. LOAD Ta:25°C	V1: -0.266% ~ 0.306%
3	LINE REGULATION	V1: -0.5% ~ +0.5%	I/P: 85VAC~ 305VAC O/P:FULL LOAD Ta:25°C	V1: -0.024% ~ 0.135%
4	LOAD REGULATION	V1: -1% ~ +1%	I/P: 230VAC O/P:FULL ~MIN LOAD Ta:25°C	V1: -0.266% ~ 0.306%
5	OVER/UNDERSHOOT TEST	<± 10%	I/P: 230VAC O/P:FULL LOAD / NO LOAD Ta:25°C	1.2%
6	RIPPLE & NOISE (Max )	V1: 200mVp-p	I/P:230VAC O/P:FULL LOAD Ta:25°C	140mVp-p / high frequency 143mVp-p / low frequency
		<div style="display: flex; justify-content: space-around;"> <div style="width: 45%;"> <p>high frequency :</p> </div> <div style="width: 45%;"> <p>low frequency :</p> </div> </div>		
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°C	277VAC/399.2ms 230VAC/582.0ms 115VAC/923.2ms
		<p>INPUT=277VAC/50HZ @ FULL LOAD                      INPUT=230VAC/50HZ @ FULL LOAD</p> <p>CH1: Output Voltage CH2: AC Input Voltage              CH1: Output Voltage CH2: AC Input Voltage</p>		

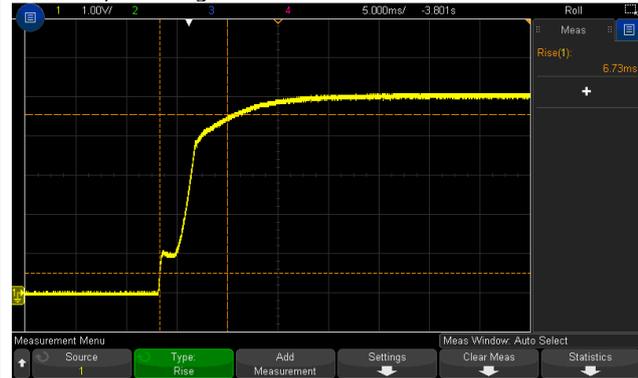


INPUT=115VAC/60HZ @ FULL LOAD  
CH1: Output Voltage CH2: AC Input Voltage

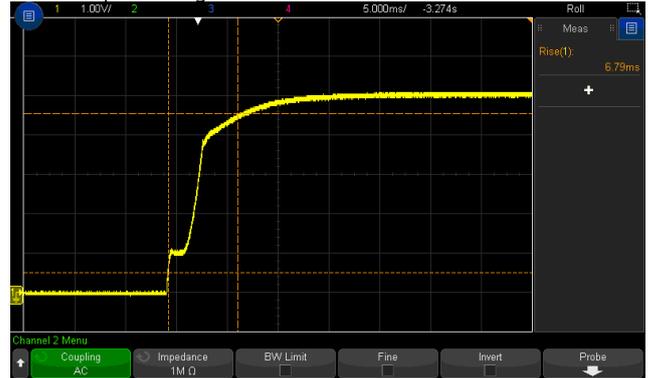


8	RISE TIME (Max)	277VAC/80ms 230VAC/80ms 115VAC/80ms	I/P : 277 VAC I/P : 230 VAC I/P : 115 VAC O/P : FULL LOAD Ta : 25°C	277VAC/6.73ms 230VAC/6.79ms 115VAC/6.86ms
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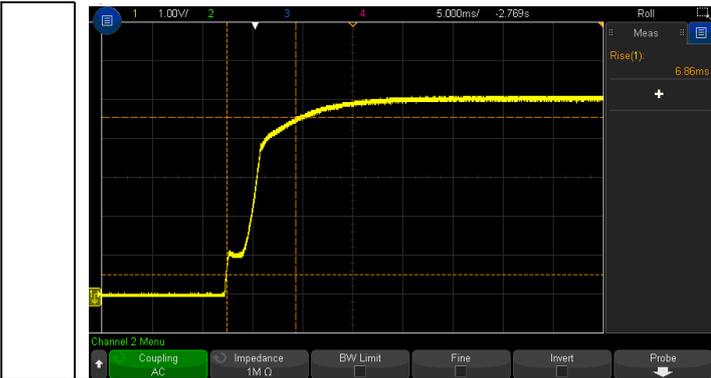
INPUT=277VAC/50HZ @ FULL LOAD  
CH1: Output Voltage



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

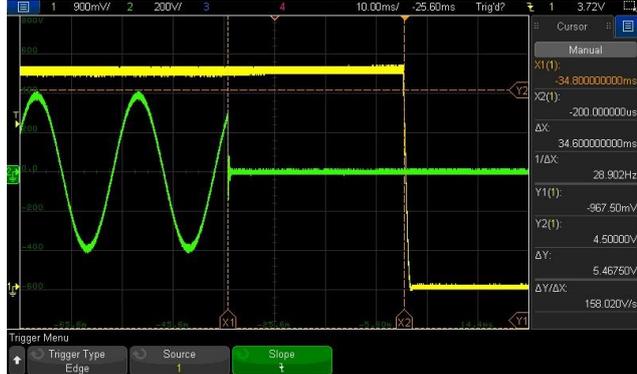


INPUT=115VAC/60HZ @ FULL LOAD  
CH1: Output Voltage

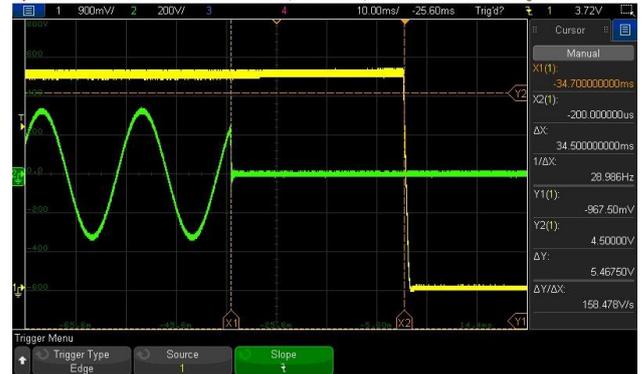


9	HOLD UP TIME (Typ.)	277VAC/16ms	I/P : 277 VAC	277VAC/34.6ms
		230VAC/16ms	I/P : 230 VAC	230VAC/34.5ms
		115VAC/16ms	I/P : 115 VAC	115VAC/34.4ms
			O/P : FULL LOAD	
			Ta : 25°C	

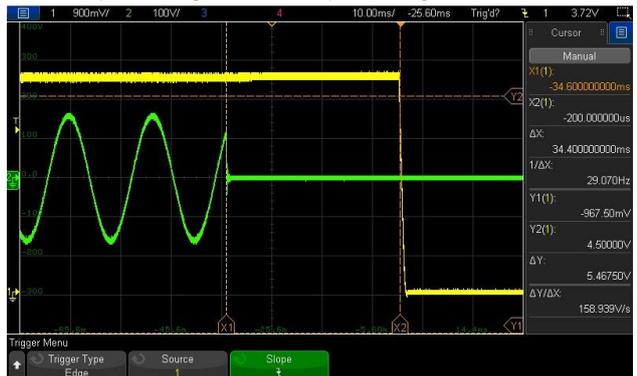
INPUT=277VAC/50HZ @ FULL LOAD  
CH1: Output Voltage CH2: AC Input Voltage



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: 1000mVp-p	I/P: 230VAC	680mVp-p
			O/P:	655mVp-p
			(1) FULL/ MIN LOAD 50%DUTY / 120HZ	
			(2) FULL/ MIN LOAD 50%DUTY / 1KHZ	
			Ta:25°C	

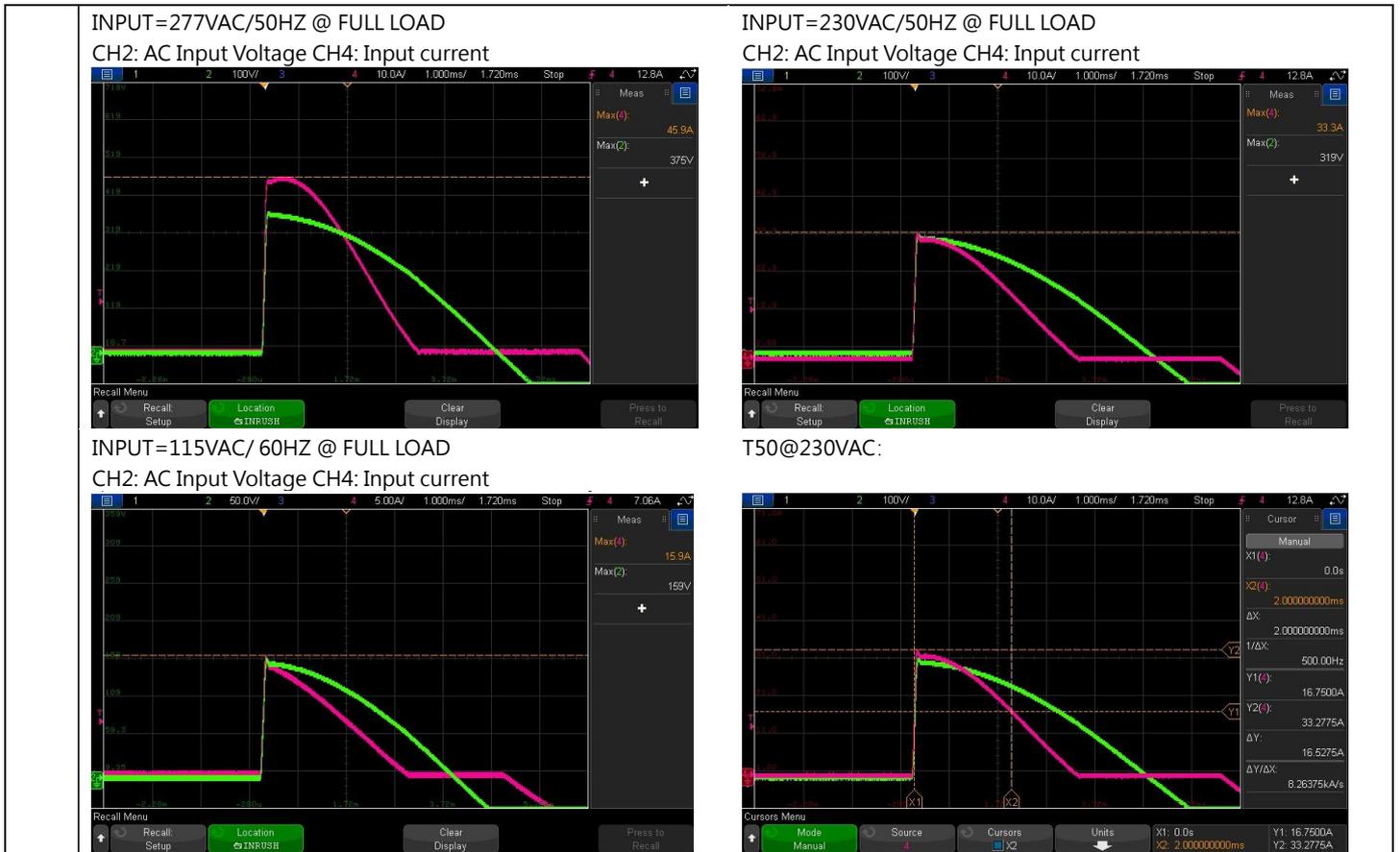
	FULL / MIN LOAD 50%DUTY / 120HZ		FULL / MIN LOAD 50%DUTY / 1KHZ		
11	TRANSIENT RECOVERY TIME	V1: 1000mVp-p <500us	I/P: 230VAC O/P:40% LOAD CHANGE 50%DUTY/120HZ 1.25A/us	350mVp-p	

### 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°C  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 )	(1) 80.0V~305V/ FULL LOAD 80.0V~305V/ 80% LOAD (2) 109.3Vdc~431Vdc/FULL LOAD 109.1Vdc~431Vdc/80% LOAD (3) 109.2Vdc~431Vdc/FULL LOAD 109.1Vdc~431Vdc/80% LOAD  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/ 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°C	I =2.0595A/ 277VAC I =2.4619A/ 230VAC I =4.9808A/ 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°C	For Earth: 199.1uA For touch: 28.0uA						
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 Ta : 25°C	TEST: <table border="1"> <tr> <td></td> <td>Remote Power OFF</td> <td>Remote Power ON</td> </tr> <tr> <td>115VAC</td> <td>0.356W</td> <td>3.866W</td> </tr> </table>		Remote Power OFF	Remote Power ON	115VAC	0.356W	3.866W
	Remote Power OFF	Remote Power ON								
115VAC	0.356W	3.866W								



		Remote Power ON: 5W/115Vac 5W/230Vac 5W/277Vac		<table border="1"> <tr> <td>230VAC</td> <td>0.478W</td> <td>3.597W</td> </tr> <tr> <td>277VAC</td> <td>0.578W</td> <td>3.380W</td> </tr> </table>	230VAC	0.478W	3.597W	277VAC	0.578W	3.380W																																						
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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°C	PF=0.967/277VAC PF=0.9787/230VAC PF=0.9967/115VAC																																												
<p>P.F vs LOAD</p> <table border="1"> <caption>Power Factor vs Load Data</caption> <thead> <tr> <th>LOAD (%)</th> <th>115VAC</th> <th>230VAC</th> <th>277VAC</th> </tr> </thead> <tbody> <tr><td>10%</td><td>0.92</td><td>0.65</td><td>-</td></tr> <tr><td>20%</td><td>0.96</td><td>0.83</td><td>0.67</td></tr> <tr><td>30%</td><td>0.97</td><td>0.90</td><td>0.78</td></tr> <tr><td>40%</td><td>0.98</td><td>0.93</td><td>0.84</td></tr> <tr><td>50%</td><td>0.98</td><td>0.95</td><td>0.89</td></tr> <tr><td>60%</td><td>0.99</td><td>0.96</td><td>0.91</td></tr> <tr><td>70%</td><td>0.99</td><td>0.96</td><td>0.93</td></tr> <tr><td>80%</td><td>0.99</td><td>0.97</td><td>0.94</td></tr> <tr><td>90%</td><td>0.99</td><td>0.97</td><td>0.95</td></tr> <tr><td>100%</td><td>1.00</td><td>0.97</td><td>0.96</td></tr> </tbody> </table>					LOAD (%)	115VAC	230VAC	277VAC	10%	0.92	0.65	-	20%	0.96	0.83	0.67	30%	0.97	0.90	0.78	40%	0.98	0.93	0.84	50%	0.98	0.95	0.89	60%	0.99	0.96	0.91	70%	0.99	0.96	0.93	80%	0.99	0.97	0.94	90%	0.99	0.97	0.95	100%	1.00	0.97	0.96
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7	EFFICIENCY(Typ.)	90%	I/P:230 VAC O/P:FULL LOAD Ta:25°C	90.54%																																												
<p>EFFICIENCY vs LOAD</p> <table border="1"> <caption>Efficiency vs Load Data</caption> <thead> <tr> <th>LOAD (%)</th> <th>115VAC</th> <th>230VAC</th> <th>277VAC</th> </tr> </thead> <tbody> <tr><td>10%</td><td>86</td><td>85</td><td>86</td></tr> <tr><td>20%</td><td>90</td><td>90</td><td>91</td></tr> <tr><td>30%</td><td>91</td><td>91</td><td>92</td></tr> <tr><td>40%</td><td>91</td><td>92</td><td>92</td></tr> <tr><td>50%</td><td>92</td><td>92</td><td>93</td></tr> <tr><td>60%</td><td>91</td><td>91</td><td>92</td></tr> <tr><td>70%</td><td>91</td><td>91</td><td>92</td></tr> <tr><td>80%</td><td>90</td><td>90</td><td>91</td></tr> <tr><td>90%</td><td>89</td><td>90</td><td>91</td></tr> <tr><td>100%</td><td>88</td><td>90</td><td>91</td></tr> </tbody> </table>					LOAD (%)	115VAC	230VAC	277VAC	10%	86	85	86	20%	90	90	91	30%	91	91	92	40%	91	92	92	50%	92	92	93	60%	91	91	92	70%	91	91	92	80%	90	90	91	90%	89	90	91	100%	88	90	91
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90%	89	90	91																																													
100%	88	90	91																																													
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°C	I =45.9A/ 277VAC I =33.3A/ 230VAC I =15.9A/ 115VAC T50= 2000us/230V																																												

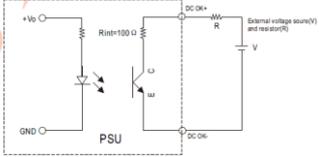


### PROTECTION FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT
1	OVER LOAD PROTECTION	Protection type: 105%~150% rated output power; Constant current limiting for more than 5 seconds and then recovers automatically after fault condition is removed.	I/P: 305VAC I/P: 230VAC I/P: 100VAC O/P: TESTING Ta:25°C	TEST : 125.5%/305VAC; 125.3%/230VAC; 125.5%/100VAC; Protection type: Constant current limiting for more than 5 seconds and then recovers automatically after fault condition is removed
2	OVER VOLTAGE PROTECTION	5.8V~ 7.5V 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°C	6.65V/ 305VAC 6.65V/ 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, recovery automatically after temperature goes down	I/P: 305VAC I/P: 85VAC O/P: FULL LOAD	TEST : <u>OK</u> O.T.P. Active Protection type : Shut down o/p voltage, recovery 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 hiccup mode,recovers automatically after fault condition is removed	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 hiccup mode,recovers automatically after fault condition is removed
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### 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:20% LOAD Ta:25°C Test Result : <table border="1" data-bbox="587 1093 1182 1328"> <thead> <tr> <th>AUX</th> <th>TOLERANCE</th> <th>RIPPLE</th> </tr> </thead> <tbody> <tr> <td>5V / 0.2A</td> <td>-1.618% ~ 0%</td> <td>24mVp-p</td> </tr> <tr> <td>12V / 0.8A</td> <td>-0.78% ~0%</td> <td>26mVp-p</td> </tr> </tbody> </table>	AUX	TOLERANCE	RIPPLE	5V / 0.2A	-1.618% ~ 0%	24mVp-p	12V / 0.8A	-0.78% ~0%	26mVp-p		
AUX	TOLERANCE	RIPPLE											
5V / 0.2A	-1.618% ~ 0%	24mVp-p											
12V / 0.8A	-0.78% ~0%	26mVp-p											
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°C	TEST: <u>OK</u>									
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°C	TEST: <u>OK</u>									
4	DC OK SIGNAL	15Vdc/10mA resistive load 	I/P:230VAC O/P:FULL LOAD Ta:25°C	TEST: <u>OK</u>									
5	FAN CONTROL	(1)Fan ON/OFF control: RTH3 ≥ 50°C ±10°C FAN ON RTH3 ≤ 40°C ±10°C FAN OFF Ta:25°C	I/P:230VAC O/P:TESTING	TEST: (1) <u>OK</u> (2) <u>44.9 dB</u>									

## 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/ Min. Load 50%Duty/120Hz (7)0%→400% Load. Ta:25°C	Q2 Q3 VDS: (1) 485V (2) 501V (3) 485V (4) 481V (5) 481V (6) 485V (7) 489V  (1) 461V (2) 469V (3) 461V (4) 461V (5) 461V (6) 461V (7) 465V
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. Ta:25°C	Q1 VDS: (1) 557V (2) 557V (3) 557V (4) 557V (5) 557V (6) 557V (7) 557V
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 Ta:25°C	(1) 490V (2) 490V (3) 490V (4) 490V
4	Diode Peak Voltage	Q100 / Q104 : Rated: 40V/120A	AC ON/OFF I/P: High-Line +3V =308 V VO=Vomax O/P: (1)Full Load (2)Output Short	Q100: Q104: VO=Vomax VO=Vomax VDS: (1) 22.2V (2) 26.6V  (1) 22.8V (2) 26.8V



			<p>(3) Dynamic Load Full Load/ Min. Load 90%Duty/1KHz</p> <p>(4) Dynamic Load Full Load/ Min. Load 90%Duty/3KHz</p> <p>(5) Dynamic Load Full Load/ Min. Load 90%Duty/5KHz</p> <p>(6) Dynamic Load 100% Load/ Min. Load 50%Duty/120Hz (7)0%→400% Load. (8).NO LOAD</p> <p><u>VO=Vnormal</u> O/P: (1) Full Load Ta:25°C</p>	<p>(3) 26.6V (3) 30.5V (4) 23.6V (4) 22.8V (5) 22.2V (5) 22.8V (6) 26.0V (6) 26.0V (7) 25.0V (7) 26.4V (8) 18.2V (8) 18.0V</p> <p><u>VO=Vnormal</u> <u>VO=Vnormal</u> (1) 20.8V (1) 21.6V</p>
5	Input Capacitor Voltage	C5 : Rated: 120μ /450V	<p>I/P: High-Line +3V =308V</p> <p>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</p>	<p>(1) 441V (2) 437V (3) 441V (4) 437V</p>
6	Control IC Voltage Test	<p>PWM IC U1 : Rated : 12.5V~ 27.9V</p> <p>PFC IC U2: Rated: 12.9V~25V</p> <p>IC U9: Rated: 3.1V~17V</p> <p>O/P IC U101: Rated: 4.75V~38V</p> <p>AUX IC U7 : Rated : 8V~26.5V</p>	<p>AC ON/OFF</p> <p>I/P: High-Line +3V =308V</p> <p>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°C</p>	<p>U1 U101 (1) 14.7V (1) 11.3V (2) 14.7V (2) 11.2V (3) 14.7V (3) 11.4V (4) 14.7V (4) 11.4V (5) 14.6V (5) 11.3V</p> <p>U2 U7 (1) 14.3V (1) 19.6V (2) 14.3V (2) 19.6V (3) 13.9V (3) 19.6V (4) 13.9V (4) 19.2V (5) 14.0V (5) 19.6V</p> <p>U9 (1) 14.1V (2) 14.1V (3) 13.9V (4) 13.9V (5) 13.9V</p>

## ■ 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: 2.44 mA I/P-FG: 2.76 mA O/P-FG: 1.78 mA 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°C	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°C	10 mΩ

### E.M.C TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT
1	HARMONIC	BSEN/EN61000-3-2(IEC61000-3-2) .GB 17625.1 ■ CLASS A	I/P:230VAC/50HZ O/P:FULL LOAD Ta:25°C	■ PASS
2	CONDUCTION	BS EN/EN55032(CISPR32), CNS 15936, GB/T 9254.1 CLASS B BS EN/EN55011 (CISPR11) CLASS B	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 CLASS B, GB/T 9254.1 BS EN/EN55011 (CISPR11) CLASS B	I/P : 230 VAC (50HZ) O/P : FULL LOAD Ta : 25°C	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°C	CRITERIA A
5	E.F.T	BS EN/EN61000-4-4 INPUT : 2KV	I/P : 230 VAC/50HZ O/P : FULL LOAD Ta : 25°C	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°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			





		<table border="1"> <thead> <tr> <th>NO</th> <th>Position</th> <th>ROOM AMBIENT Ta=32.1°C</th> <th>HIGH AMBIENT Ta=60.4°C</th> </tr> </thead> <tbody> <tr><td>34</td><td>U101</td><td>72.1°C</td><td>105.6°C</td></tr> <tr><td>35</td><td>J101</td><td>76.0°C</td><td>109.5°C</td></tr> <tr><td>36</td><td>PCB</td><td>68.9°C</td><td>98.5°C</td></tr> <tr><td>37</td><td>Q105</td><td>80.2°C</td><td>114.9°C</td></tr> <tr><td>38</td><td>Q102</td><td>82.9°C</td><td>118.1°C</td></tr> <tr><td>39</td><td>Q100</td><td>83.7°C</td><td>119.1°C</td></tr> <tr><td>40</td><td>C158</td><td>38.4°C</td><td>71.5°C</td></tr> <tr><td>41</td><td>C201</td><td>51.0°C</td><td>83.6°C</td></tr> <tr><td>42</td><td>RTH3</td><td>47.7°C</td><td>80.7°C</td></tr> <tr><td>43</td><td>U111</td><td>50.0°C</td><td>83.4°C</td></tr> <tr><td>44</td><td>C204</td><td>41.4°C</td><td>74.7°C</td></tr> <tr><td>45</td><td>T2</td><td>44.1°C</td><td>77.3°C</td></tr> <tr><td>46</td><td>D18</td><td>50.9°C</td><td>83.3°C</td></tr> <tr><td>47</td><td>Q4</td><td>59.4°C</td><td>93.9°C</td></tr> <tr><td>48</td><td>U110</td><td>57.4°C</td><td>90.8°C</td></tr> <tr><td>49</td><td>U7</td><td>47.7°C</td><td>80.6°C</td></tr> <tr><td>50</td><td>U100</td><td>71.6°C</td><td>102.8°C</td></tr> <tr><td>51</td><td>U103</td><td>56.9°C</td><td>90.6°C</td></tr> <tr><td>52</td><td>Q6</td><td>52.1°C</td><td>86.1°C</td></tr> <tr><td>53</td><td>C36</td><td>42.5°C</td><td>75.6°C</td></tr> <tr><td>54</td><td>U104</td><td>44.8°C</td><td>78.7°C</td></tr> </tbody> </table>			NO	Position	ROOM AMBIENT Ta=32.1°C	HIGH AMBIENT Ta=60.4°C	34	U101	72.1°C	105.6°C	35	J101	76.0°C	109.5°C	36	PCB	68.9°C	98.5°C	37	Q105	80.2°C	114.9°C	38	Q102	82.9°C	118.1°C	39	Q100	83.7°C	119.1°C	40	C158	38.4°C	71.5°C	41	C201	51.0°C	83.6°C	42	RTH3	47.7°C	80.7°C	43	U111	50.0°C	83.4°C	44	C204	41.4°C	74.7°C	45	T2	44.1°C	77.3°C	46	D18	50.9°C	83.3°C	47	Q4	59.4°C	93.9°C	48	U110	57.4°C	90.8°C	49	U7	47.7°C	80.6°C	50	U100	71.6°C	102.8°C	51	U103	56.9°C	90.6°C	52	Q6	52.1°C	86.1°C	53	C36	42.5°C	75.6°C	54	U104	44.8°C	78.7°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 : 305VAC/100VAC O/P : 80%/100 %LOAD Ta= -45°C/-35°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	± 0.002%/°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) 1336688HRS (2) 23498HRS (3) 116421HRS (4) 632456HRS
10	MTBF	Conducted by Parts Stress Analysis Prediction 1047.1K hrs min. Telcordia SR-332 (Bellcore) ; 137.4K 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	Yuwei	Liutt	Wangzd

2020.10.1 TAG-QA-009