



Test Report: RST-10000-36

10000W Single Output 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

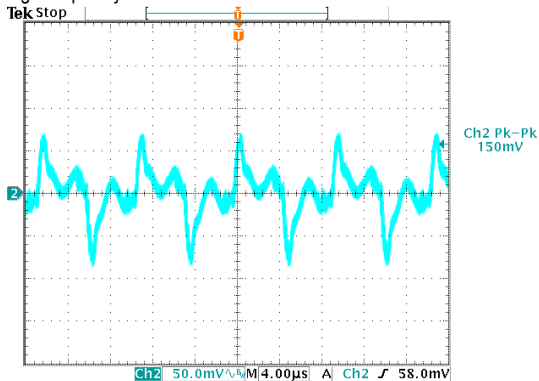
ENVIRONMENT TEST

OUTPUT FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT
1	OUTPUT VOLTAGE ADJUST RANGE	CH1:35 V~43.2 V	I/P:230VAC(Δ) I/P:400VAC(Y) O/P:MIN. LOAD Ta:25°C	34.11V~44.80V/230VAC(Δ) 34.11V~44.80V/400VAC(Y)
2	OUTPUT VOLTAGE TOLERANCE	V1: -1%~ 1% (Max)	I/P: 196VAC /305VAC(Δ) I/P:340VAC /530VAC(Y) O/P: FULL LOAD / MIN. LOAD Ta:25°C	V1:0%~-0.28%(Δ) V1:0%~-0.28%(Y)
3	LINE REGULATION	V1: -0.5%~ 0.5% (Max)	I/P: 196VAC~ 305VAC(Δ) I/P: 340VAC~ 530VAC(Y) O/P: FULL LOAD / MIN. LOAD Ta:25°C	V1: 0%~ 0%(Δ) V1: 0%~ 0%(Y)
4	LOAD REGULATION	V1: -0.5%~ 0.5% (Max)	I/P: 230VAC(Δ) I/P:400VAC(Y) O/P:FULL ~MIN LOAD Ta:25°C	V1:-0.03%~0.25%(Δ) V1:-0.03%~0.25%(Y)
5	RIPPLE & NOISE	V1: 200mVp-p (Max)	I/P:230VAC(Δ) I/P:400VAC(Y) O/P:FULL LOAD Ta:25°C	V1: 153mVp-p(Δ) V1: 149mVp-p(Y)

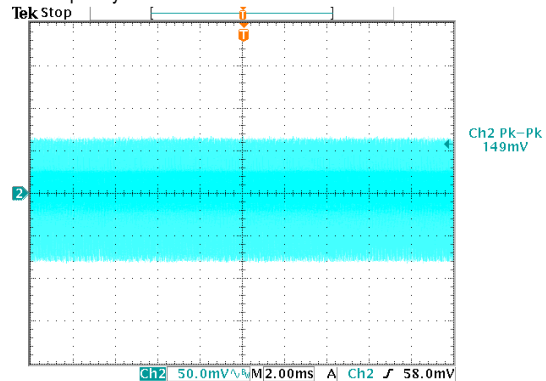
INPUT=400VAC @ FULL LOAD

high frequency :



INPUT=400VAC @ FULL LOAD

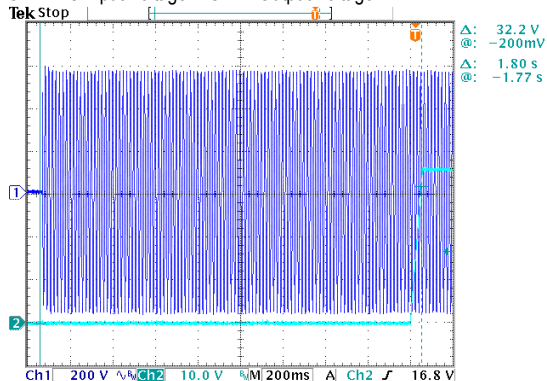
low frequency :



6	SET UP TIME	230VAC/ 2200ms (Max) 400VAC/ 2200ms (Max)	I/P: 230VAC(Δ) I/P:400VAC(Y) O/P:FULL LOAD Ta:25°C	230VAC(Δ) /1790ms 400VAC (Y) /1800ms
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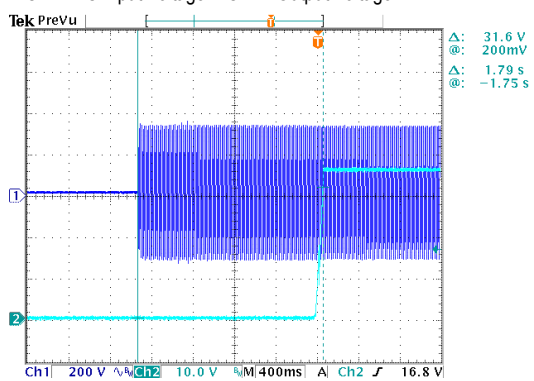
INPUT=400VAC @ FULL LOAD

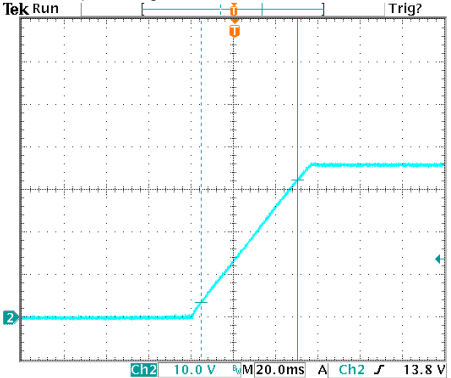
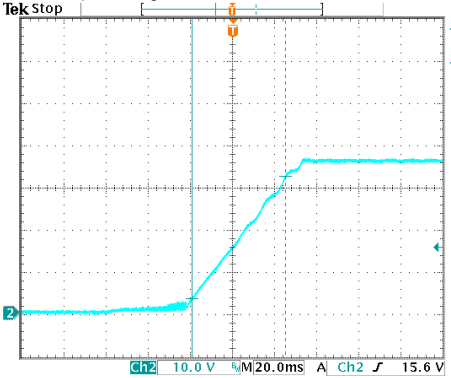
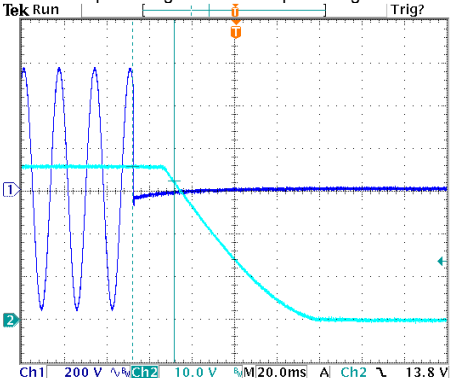
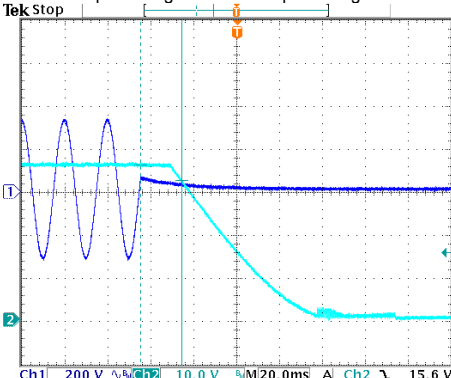
CH1 : AC Input Voltage CH2 : Output Voltage

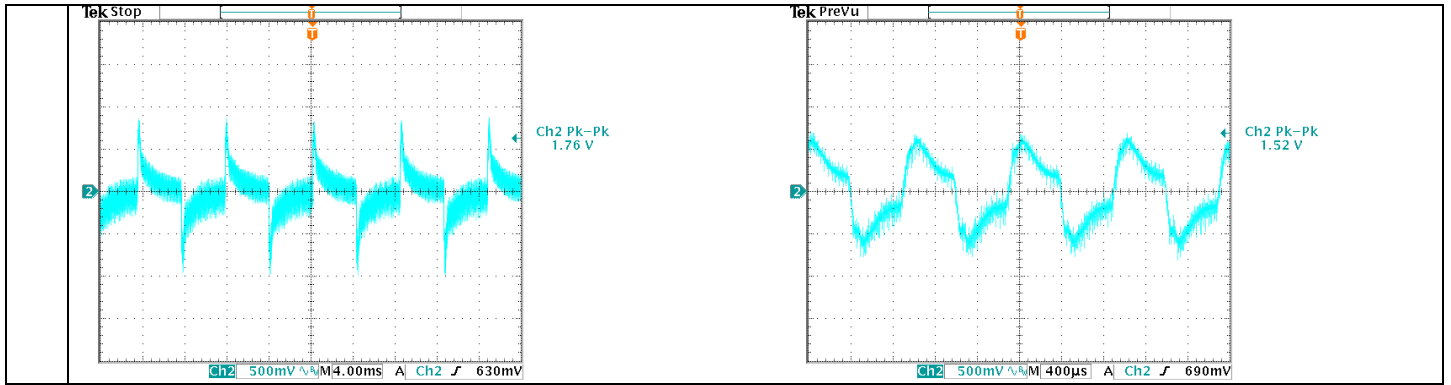


INPUT=230VAC @ FULL LOAD

CH1 : AC Input Voltage CH2 : Output Voltage



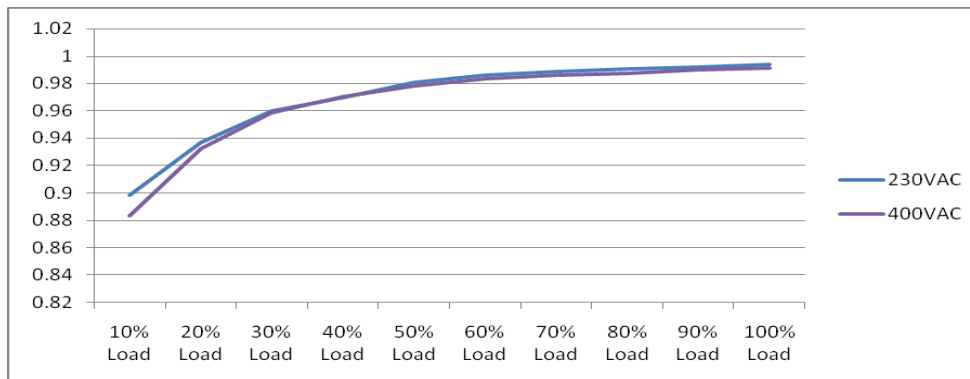
7	RISE TIME	230VAC/ 80ms (Max) 400VAC/ 80ms (Max)	I/P: 230VAC(Δ) I/P:400VAC(Y) O/P:FULL LOAD Ta:25°C	230VAC(Δ)/ 44.4ms 400VAC(Y)/ 45.6ms
INPUT=400VAC @ FULL LOAD CH2 : Output Voltage 		INPUT=230VAC @ FULL LOAD CH2 : Output Voltage 		
8	HOLD UP TIME	230VAC/20ms Typ)75%LOAD 230VAC/14ms (Typ)	I/P: 230VAC(Δ) I/P:230VAC(Δ) O/P:FULL LOAD Ta:25°C	230VAC(Δ)/ 30ms75%load 230VAC(Δ)/ 19.2ms100%load
INPUT=400VAC @ FULL LOAD CH1 : AC Input Voltage CH2 : Output Voltage 		INPUT=230VAC @ FULL LOAD CH1 : AC Input Voltage CH2 : Output Voltage 		
9	OVER/UNDERSHOOT TEST	< ±5%	I/P: 230VAC(Δ) I/P:400VAC(Y) O/P:FULL LOAD Ta:25°C	<1.67%/230VAC(Δ) <1.67 % /400VAC(Y)
10	DYNAMIC LOAD	V1:3600 mVp-p	I/P: 400VAC(Y) / 230VAC(Δ) O/P: (1) FULL /50% LOAD 50%DUTY / 120HZ (2) FULL /50% LOAD 50%DUTY / 1KHZ Ta:25°C	(1):1760mVp-p@400VAC 1760mVp-p @230VAC (2):1520mVp-p@400VAC 1600mVp-p @230VAC
(1).400VAC FULL /50% LOAD 50%DUTY / 120HZ		(2).400VAC FULL /50% LOAD 50%DUTY / 1KHZ		



INPUT FUNCTION TEST

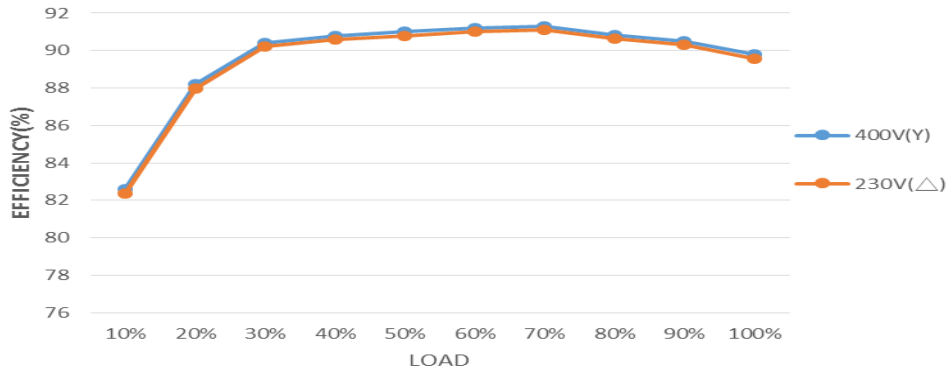
NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT
1	INPUT VOLTAGE RANGE	3Phase 3 Wire 196VAC~305VAC 3Phase 4 Wire 340VAC~530VAC	I/P: TESTING O/P: FULL LOAD Ta: 25°C	193.2 V~305V(Δ) 328.7 V~530V(Y)
			I/P: (1) LOW-LINE-3V=193(Δ) / 337V(Y) HIGH-LINE+5V=305(Δ) / 535V(Y) O/P: FULL/MIN LOAD ON: 30 Sec OFF: 30 Sec 10MIN (2) 230(Δ)/400Vac(Y) ON: 0.5 Sec OFF: 0.5 Sec 20MIN (3) 230(Δ)/400Vac(Y) ON: 3Sec OFF: 3Sec 12HOURS (AC POWER ON/OFF NO DAMAGE)	TEST: OK
2	INPUT FREQUENCY RANGE	47HZ ~63 HZ NO DAMAGE	I/P: 196 VAC ~305 VAC(Δ)/340~530VAC(Y) O/P: FULL-MIN LOAD Ta: 25°C	TEST: OK
3	POWER FACTOR(TYP)	0.95 / 230VAC(Δ) 0.95 / 400VAC(Y)	I/P: 230 VAC(Δ) I/P: 400VAC(Y) O/P: FULL LOAD Ta: 25°C	PF=0.993/230VAC(Δ) PF= 0.99/400VAC(Y)

P.F vs LOAD

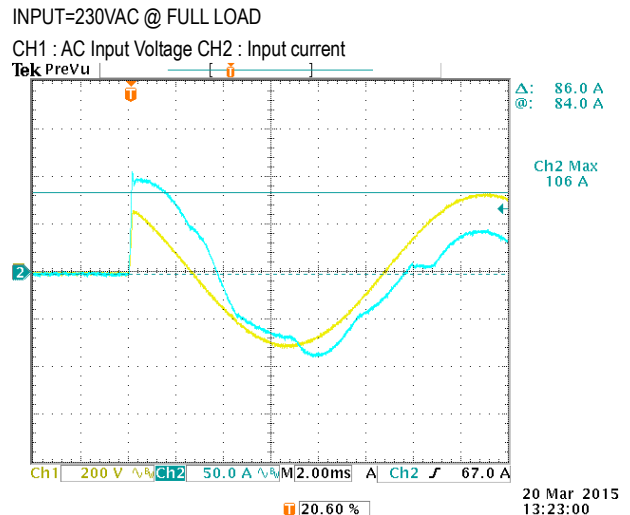
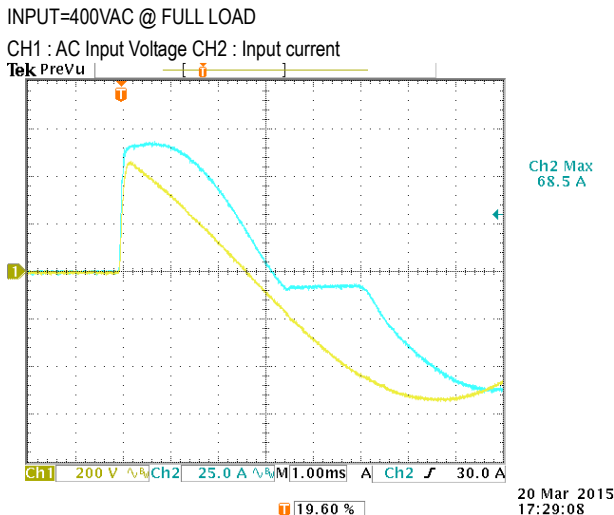


4	EFFICIENCY (TYP)	89.5%	I/P: 230 VAC(Δ) I/P: 400VAC(Y) O/P: FULL LOAD Ta: 25°C	89.52%/230VAC (Δ) 89.58%/400VAC(Y)
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EFFICIENCY vs LOAD



5	INPUT CURRENT (Typ)	230V (3Φ Δ)/ 30A 400V (3Φ Y)/ 18A	I/P: 230 VAC(Δ) I/P:400VAC(Y) O/P:FULL LOAD Ta:25°C	I =28.24 A/ 230VAC(Δ) I =15.67A/ 400VAC(Y)
6	INRUSH CURRENT(Typ)	230V/150 A 400V/100 A COLD START	I/P:230VAC(Δ) I/P:400VAC (Y) O/P:FULL LOAD Ta:25°C	I =106A/230 VAC (Δ) I =68.5A/ 400VAC (Y)



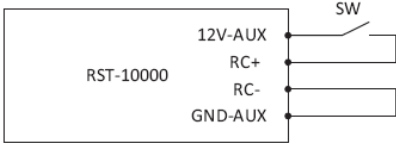
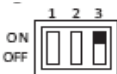
7	LEAKAGE CURRENT	<7mA /305V (Δ)	I/P:305VAC(Δ) O/P:NO LOAD Ta:25°C	R-FG:2.4mA S-FG:2.4mA T-FG:2.4mA R,S,T, -V(+):2mA R,S,T-V(-): 2mA
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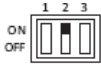
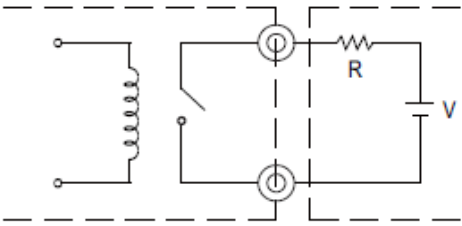
PROTECTION FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT
1	OVER LOAD PROTECTION	100%~112%	I/P: 230VAC(Δ) I/P:400VAC(Y) O/P:TESTING Ta:25°C	104.5%/230VAC(Δ) 104.8%/400VAC(Y) User adjustable continuous constant current limiting or constant current limiting with delay shutdown after 5 seconds, re-power on to recover

2	OVER VOLTAGE PROTECTION	45V~50.4V	I/P: 230VAC(Δ) I/P:400VAC(Y) O/P: MIN LOAD Ta:25°C	48V/ 230VAC(Δ) 48V/400VAC(Y) Shunt down Re- power ON
3	OVER TEMPERATURE PROTECTION	Shut down o/p voltage · recovers automatically after temperature goes down	I/P: 230 VAC(Δ) I/P:400VAC(Y) O/P:FULL LOAD	Shut down o/p voltage · recovers automatically after temperature goes down
4	SHORT PROTECTION	SHORT EVERY OUTPUT 1 HOUR NO DAMAGE	I/P: 305VAC(Δ) I/P:530VAC(Y) O/P: FULL LOAD Ta:25°C	NO DAMAGE constant current limiting with delay shutdown after 5 seconds, re-power on to recover

CONTROL FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT																																										
1	AUXILIARY POWER (AUX)	12V@0.1A Only for Remote ON/OFF Control	I/P: 230 VAC(Δ) I/P: 400VAC(Y) O/P:FULL LOAD Ta:25°C	230 VAC(Δ):11.96V/0.1 A 400VAC(Y): 11.96/0.1VA																																										
2	Remote ON/OFF Control	<p>The PSU can be turned ON/OFF by using the "Remote ON/OFF" function.</p> <table border="1"> <tr> <td>Between ON/OFF(CN313 or CN314 pin10) and 12V-AUX(CN315 pin1)</td> <td>Output Status</td> </tr> <tr> <td>SW close (Short)</td> <td>PSU ON</td> </tr> <tr> <td>SW open (Open)</td> <td>PSU OFF</td> </tr> </table>  <p>Fig 1.1</p>			Between ON/OFF(CN313 or CN314 pin10) and 12V-AUX(CN315 pin1)	Output Status	SW close (Short)	PSU ON	SW open (Open)	PSU OFF																																				
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3	REMOTE SENSE	S+ / S- >0.3V	I/P: 400VAC(Y) O/P:FULL LOAD Ta:25°C	> 0.3 V																																										
4	OUTPUT VOLTAGE PROGRAMMABLE	<p>I/P: 400VAC(Y)</p>  <p>DIP SW3 ON CN313 PV+ Connect to external V+ CN313 PV- Connect to external V-</p> <table border="1"> <thead> <tr> <th>EXT.DC(V)</th> <th>Vo</th> <th>LOAD</th> </tr> </thead> <tbody> <tr> <td>DC=1V±0.5%</td> <td>20%±3%</td> <td>0~100%</td> </tr> <tr> <td>DC=2V±0.5%</td> <td>40%±3%</td> <td>0~100%</td> </tr> <tr> <td>DC=3V±0.5%</td> <td>60%±3%</td> <td>0~100%</td> </tr> <tr> <td>DC=4V±0.5%</td> <td>80%±3%</td> <td>0~100%</td> </tr> <tr> <td>DC=5V±0.5%</td> <td>100%±3%</td> <td>0~100%</td> </tr> <tr> <td>DC=6V±0.5%</td> <td>120%±3%</td> <td>0~83.3%</td> </tr> </tbody> </table> <table border="1"> <thead> <tr> <th>EXT.DC(V)</th> <th>Vo</th> <th>LOAD</th> </tr> </thead> <tbody> <tr> <td>DC=1V</td> <td>20.8%~20.5%</td> <td>0~100%</td> </tr> <tr> <td>DC=2V</td> <td>40.4%~40.1%</td> <td>0~100%</td> </tr> <tr> <td>DC=3V</td> <td>60.3%~60.3%</td> <td>0~100%</td> </tr> <tr> <td>DC=4V</td> <td>80.3%~79.8%</td> <td>0~100%</td> </tr> <tr> <td>DC=5V</td> <td>100.3%~99.7%</td> <td>0~100%</td> </tr> <tr> <td>DC=6V</td> <td>120.3%~119.7%</td> <td>0~83.3%</td> </tr> </tbody> </table>			EXT.DC(V)	Vo	LOAD	DC=1V±0.5%	20%±3%	0~100%	DC=2V±0.5%	40%±3%	0~100%	DC=3V±0.5%	60%±3%	0~100%	DC=4V±0.5%	80%±3%	0~100%	DC=5V±0.5%	100%±3%	0~100%	DC=6V±0.5%	120%±3%	0~83.3%	EXT.DC(V)	Vo	LOAD	DC=1V	20.8%~20.5%	0~100%	DC=2V	40.4%~40.1%	0~100%	DC=3V	60.3%~60.3%	0~100%	DC=4V	80.3%~79.8%	0~100%	DC=5V	100.3%~99.7%	0~100%	DC=6V	120.3%~119.7%	0~83.3%
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5	<p>OUTPUT CURRENT PROGRAMMABLE</p>	<p>I/P: 400VAC(Y)</p>  <p>DIP SW2 ON CN313 PC+ Connect to external V+ CN313 PC- Connect to external V-</p> <table border="1" data-bbox="448 454 901 656"> <thead> <tr> <th>EXT.DC(V)</th> <th>Io_limit</th> <th>LOAD</th> </tr> </thead> <tbody> <tr> <td>DC=1V±0.5%</td> <td>20%±10%</td> <td>0~100%</td> </tr> <tr> <td>DC=2V±0.5%</td> <td>40%±10%</td> <td>0~100%</td> </tr> <tr> <td>DC=3V±0.5%</td> <td>60%±10%</td> <td>0~100%</td> </tr> <tr> <td>DC=4V±0.5%</td> <td>80%±10%</td> <td>0~100%</td> </tr> <tr> <td>DC=5V±0.5%</td> <td>100%±10%</td> <td>0~100%</td> </tr> </tbody> </table>	EXT.DC(V)	Io_limit	LOAD	DC=1V±0.5%	20%±10%	0~100%	DC=2V±0.5%	40%±10%	0~100%	DC=3V±0.5%	60%±10%	0~100%	DC=4V±0.5%	80%±10%	0~100%	DC=5V±0.5%	100%±10%	0~100%	<table border="1" data-bbox="997 376 1359 577"> <thead> <tr> <th>EXT.DC(V)</th> <th>Io_limit</th> <th>LOAD</th> </tr> </thead> <tbody> <tr> <td>DC=1V</td> <td>21.25%</td> <td>0~100%</td> </tr> <tr> <td>DC=2V</td> <td>41.07%</td> <td>0~100%</td> </tr> <tr> <td>DC=3V</td> <td>61.18%</td> <td>0~100%</td> </tr> <tr> <td>DC=4V</td> <td>80.28%</td> <td>0~100%</td> </tr> <tr> <td>DC=5V</td> <td>100.51%</td> <td>0~100%</td> </tr> </tbody> </table>	EXT.DC(V)	Io_limit	LOAD	DC=1V	21.25%	0~100%	DC=2V	41.07%	0~100%	DC=3V	61.18%	0~100%	DC=4V	80.28%	0~100%	DC=5V	100.51%	0~100%
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6	<p>Select OLP mode</p>	<table border="1" data-bbox="603 701 1342 786"> <thead> <tr> <th>SW301</th> <th>PROTECTION</th> </tr> </thead> <tbody> <tr> <td>SW301 PIN1 ON</td> <td>Constant current delay 5sec Vo shutdown repower on</td> </tr> <tr> <td>SW301 PIN1 OFF</td> <td>Constant current</td> </tr> </tbody> </table>	SW301	PROTECTION	SW301 PIN1 ON	Constant current delay 5sec Vo shutdown repower on	SW301 PIN1 OFF	Constant current																															
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7	<p>Front Panel Indicators</p>	<table border="1" data-bbox="448 819 946 920"> <thead> <tr> <th>LED</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>GREEN(LED1)</td> <td>LED on when output voltage is OK</td> </tr> <tr> <td>RED(LED2)</td> <td>LED on when any protection occurs</td> </tr> </tbody> </table>	LED	Description	GREEN(LED1)	LED on when output voltage is OK	RED(LED2)	LED on when any protection occurs																															
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8	<p>FAN LOCK TEST</p>	<p>I/P: 400VAC(Y) O/P: FULL LOAD Ta: 25°C</p>	<p>Shut down Re-power ON</p>																																				
9	<p>AC- FAIL</p>	<p>I/P: 400VAC(Y) O/P: NO LOAD</p> <table border="1" data-bbox="448 1122 941 1211"> <thead> <tr> <th>Test condition</th> <th>Input Voltage</th> <th>STATE</th> </tr> </thead> <tbody> <tr> <td>Low Line</td> <td>316±7Vac(Y)</td> <td>AC Fail</td> </tr> <tr> <td>Low Line recovery</td> <td>332±5Vac(Y)</td> <td>OK</td> </tr> </tbody> </table> <p>Ta: 25°C</p>	Test condition	Input Voltage	STATE	Low Line	316±7Vac(Y)	AC Fail	Low Line recovery	332±5Vac(Y)	OK	<table border="1" data-bbox="981 1048 1383 1189"> <thead> <tr> <th>Test condition</th> <th>Input Voltage</th> <th>STATE</th> </tr> </thead> <tbody> <tr> <td>Low Line</td> <td>320.9</td> <td>AC Fail</td> </tr> <tr> <td>Low Line recovery</td> <td>333.9</td> <td>OK</td> </tr> </tbody> </table>	Test condition	Input Voltage	STATE	Low Line	320.9	AC Fail	Low Line recovery	333.9	OK																		
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10	<p>CURRENT SHARING</p>	<p>PSU1-PSU2 < 10%</p> <p>I/P: 400VAC(Y) O/P : 90% /50% LOAD Ta : 25°C</p>	<p>O/P : 100%</p> <p>PSU1 : 282.6A PSU2 : 272.5A</p> <p>O/P : 50%</p> <p>PSU1 : 142.3A PSU2 : 134.4A</p>																																				
11	<p>Alarm Signal Output</p>	<p>There are 4 alarm signals on CN315, and each signal can select two types of output circuit.</p> <p>(1) Relay contact output Normally open contact. "Short" when the alarm arises. Relay contact rating(maximum) is 30V/1A resistive.</p>  <p>(2) Open collector output Normally open contact. "Short" when the alarm arises. Relay contact rating(maximum) is 30V/1A resistive. An external voltage source is required for this function that is shown in Fig 7.2. These signals are isolated from output. The maximum sink current is 10mA and the maximum external voltage is 20V (there is a built-in 24V zener diode in inner circuitry).</p>																																					

TEST CONDITION :
 I/P: 400VAC(Y)
 O/P: FULL LOAD
 Ta: 25°C

RESULT:

Function	Description
DC- OK 1: AC-FAIL 1 FAN -FAIL 1 OTP 1	Alarm signal of AC-fail. Normally open contact. "Short" when the PSU input voltage is too low. Relay contact rating(maximum) is 30V/1A resistive.
DC- OK 2: AC-FAIL 2 FAN -FAIL 2 OTP 2	Alarm signal of AC fail. Open collector signal. Low when the PSU input voltage is too low. The maximum sink current is 10mA and the maximum external voltage is 20V.

COMPONENT STRESS TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT
1	PWM Transistor (D to S) or (C to E) Peak Voltage	Q124 Rated 38 A/600V	I/P: High-Line =533 V(Y) O/P: (1) Full Load input on/off (2) Output Short (3) Dynamic Load Full Load/ Min. Load 90%Duty/1KHz Ta: 25°C	(1) 462V (2) 458V (3) 454V
2	Diode Peak Voltage	D452 Rated 200A/200V -	I/P: High-Line =530V(Y) O/P: (1) Full Load input on/off (2) Output Short (3) Dynamic Load Full Load/ Min. Load 90%Duty/1KHz Ta: 25°C	(1) 125V (2) 2.41V (3) 126V
3	Input Capacitor Voltage	C146 Rated: 470 μ /450 V SURGE VOLTAGE :490V	I/P: High-Line=530V(Y) O/P: (1) Full Load input on/off (2) Min load input on /Off (3) Full Load /Min load Change Ta: 25°C	(1) 462V (2) 462V (3) 452V
4	Control IC Voltage Test	U302 Rated 9.8~18.5V	I/P: High-Line =530V(Y) O/P: (1) FULL LOAD (2) Output Short	(1) 12.4V (2) 12.2V 1.

			Ta:25°C	
6	P.F.C Transistor (D to S) or (C to E) Peak Voltage	Q2 Rated 47A/ 600V	I/P:High-Line =533V(Y) O/P: (1)Full Load input on/off (2)Output Short (3)Dynamic Load Full Load/ Min. Load 90%Duty/1KHz Ta:25°C	(1)544 V (2)546V (3)454 V

● SAFETY & E.M.C. TEST

SAFETY TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT
1	WITHSTAND VOLTAGE	I/P-O/P : 3 KVAC/min I/P-FG : 2KVAC/min O/P-FG : 0.5 KVAC/min	I/P-O/P : 3.6 KVAC/min I/P-FG : 2.4KVAC/min O/P-FG : 0.6 KVAC/min Ta : 25°C	I/P-O/P : 27.78 mA I/P-FG : 23.08 mA O/P-FG : 13.52 mA 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°C/70% RH	I/P-O/P : 609 MΩ I/P-FG : 4.06 GΩ O/P-FG : 7.21 GΩ NO DAMAGE
3	GROUNDING CONTINUITY	FG(PE) TO CHASSIS OR TRACE < 100 mΩ	40 A / 2min Ta : 25°C /70% RH	6 mΩ

E.M.C TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT
1	HARMONIC	EN61000-3-2 CLASS A	I/P: 400VAC(50HZ) (Y) O/P:100%,LOAD Ta:25°C	PASS
2	CONDUCTION	EN55022 CLASS A	I/P: 400VAC(50HZ) (Y) O/P:FULL/50% LOAD Ta:25°C	Test by certified Lab
3	RADIATION	EN55022 CLASS A	I/P: 400VAC(50HZ) (Y) O/P:FULL LOAD Ta:25°C	Test by certified Lab
4	E.S.D	EN61000-4-2 INDUSTRY AIR:8KV / Contact:4KV	I/P: 400VAC(50HZ) (Y) O/P:FULL LOAD Ta:25°C	CRITERIA A
5	E.F.T	EN61000-4-4 INDUSTRY INPUT: 2KV	I/P: 400VAC(50HZ) (Y) O/P:FULL LOAD Ta:25°C	CRITERIA A
6	SURGE	IEC61000-4-5 INDUSTRY L-N :2KV L,N-PE:4KV	I/P: 400VAC(50HZ) (Y) O/P:FULL LOAD Ta:25°C	CRITERIA A
7	Test by certified Lab & Test Report Prepare			

■ RELIABILITY TEST

ENVIRONMENT TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	
1	TEMPERATURE RISE TEST	MODEL : RST-10000-24 1. ROOM AMBIENT BURN-IN : 2 HRS I/P : 400VAC(Y) O/P : FULL LOAD Ta= 38 °C 2. HIGH AMBIENT BURN-IN : 2 HRS I/P : 400VAC(Y) O/P : FULL LOAD Ta= 48 °C			
		NO	Position	ROOM AMBIENT Ta= 38 °C	HIGH AMBIENT Ta= 48 °C
		1	Q151	68.8°C	80.5°C
		2	Q126	67.8°C	79.0°C
		3	D3	75.5°C	85.6°C
		4	D43	83.6°C	93.4°C
		5	Q3	73.0°C	83.5°C
		6	Q43	84.9°C	94.0°C
		7	BD1	87.4°C	97.4°C
		8	BD41	93.9°C	103.3°C
		9	L1	58.2°C	68.6°C
		10	C1	55.0°C	65.0°C
		11	T123	57.8°C	66.5°C
		12	L121	73.6°C	84.9°C
		13	D452	106.4°C	115.2°C
		14	NTC	57.4°C	67.8°C
		15	T451	88.1°C	99.3°C
		16	T452	92.2°C	102.1°C
		17	T453	80.8°C	91.9°C
		18	D456	58.4°C	68.9°C
		19	L452	69.1°C	80.9°C
		20	Q640	46.5°C	56.7°C
		21	C647	43.2°C	61.2°C
		22	C602	52.8°C	62.6°C
		23	C621	54.6°C	64.9°C
		24	RG603	57.4°C	79.2°C
		25	D148	62.1°C	74.3°C
		26	C122	56.4°C	66.8°C
		27	C146	57.0°C	67.4°C
28	TSW1	75.2°C	85.1°C		
29	C465	58.5°C	69.6°C		
2	OVER LOAD BURN-IN TEST	NO DAMAGE 1 HOUR (MIN)	I/P : 400VAC(Y) O/P : 104 % LOAD Ta : 25°C	TEST : OK	
3	LOW TEMPERATURE TURN ON TEST	TURN ON AFTER 2 HOUR	I/P : 230VAC/196VAC(Δ) O/P : 100 % LOAD Ta= -35 °C	TEST : OK	
4	HIGH HUMIDITY HIGH TEMPERATURE HIGH VOLTAGE TURN ON TEST	AFTER 12 HOURS IN CHAMBER ON CONTROL 50 °C NO DAMAGE	I/P : 540VAC(Δ) O/P : FULL LOAD Ta= 50 °C HUMIDITY= 95 %R.H	TEST : OK	
5	TEMPERATURE COEFFICIENT	± 0.03 %(0~50°C)	I/P : 230 VAC(Δ) O/P : FULL LOAD	± 0.022 %(0~50°C)	

6	STORAGE TEMPERATURE TEST	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 : 5 CYCLE 5. Input/Output condition : STATIC	OK
7	THERMAL SHOCK TEST	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 : 10 CYCLE 5. Input/Output condition : 230VAC(Δ)/Full Load	OK
8	VIBRATION TEST	1 Carton & 1 Set (1) Waveform : Sine Wave (2) Frequency : 10~500Hz (3) Sweep Time : 12min/sweep cycle (4) Acceleration : 2G (5) Test Time : 60min in each axis (X.Y.Z) (6) Ta : 25°C	TEST : OK
9	CAPACITOR LIFE CYCLE	SUPPOSE C453 IS THE MOST CRITICAL COMPONENT (1) I/P : 400VAC(Y) O/P : FULL LOAD Ta= 25 °C LIFE TIME (2) I/P : 400VAC(Y) O/P : FULL LOAD Ta= 50 °C LIFE TIME (3) I/P : 400VAC(Y) O/P : 75% LOAD Ta= 50 °C LIFE TIME (4) I/P : 400VAC(Y) O/P : 50% LOAD Ta= 50 °C LIFE TIME	(1) 1844214 HRS (2) 306284 HRS (3) 384999 HRS (4) 433136 HRS
10	MTBF	Conducted by Parts Stress Analysis Prediction 147.5K hrs min. Telcordia SR-332 (Bellcore) ; 17.1K hrs min. MIL-HDBK-217F (25°C)	
11	DMTBF/Accelerated Life Test	Demonstration Mean Time Between Failure (Expected Life): Above 50,000 hours @ TA 50°C	

SAMPLE	TESTER	REVIEW	APPROVAL
Product sample	DANIEL GAO	SANFORD SU	VINCENT ZENG

12.10.30 A50-F031