



Test Report: RKP-6K1U-12

2000~6000W Front End Power System

■ 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	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	MAX. OUTPUT CURRENT	300A	I/P: 230 VAC O/P:FULL LOAD Ta:25°C	300A	P
2	MAX. OUTPUT POWER	3600W	I/P: 230 VAC O/P:FULL LOAD Ta:25°C	3600W	P

INPUT FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	INPUT VOLTAGE RANGE	180VAC~264 VAC	I/P : TESTING O/P : FULL LOAD Ta : 25°C I/P : LOW-LINE-3V= 177V HIGH-LINE+15%=300 V O/P : FULL/MIN LOAD ON : 30 Sec. OFF : 30 Sec 10MIN (AC POWER ON/OFF NO DAMAGE)	100 V~264V TEST : OK	P
2	INPUT FREQUENCY RANGE	47HZ ~63 HZ NO DAMAGE	I/P : 100 VAC ~ 264 VAC O/P : FULL~MIN LOAD Ta : 25°C	TEST : OK	P
3	INPUT CURRENT(Typ.) FOR EACH UNIT	230V/ 7 A (TYP) 115V/ 13 A (TYP)	I/P : 230 VAC I/P : 115 VAC O/P : FULL LOAD Ta : 25°C	S.P.S1: 6.349A / 230VAC 11.850A /115VAC S.P.S2: 6.727A / 230VAC 12.067A / 115VAC S.P.S3: 6.686A / 230VAC 12.135A / 115VAC	P
4	LEAKAGE CURRENT	< 3.5 mA / 230 VAC	I/P : 264 VAC O/P : Min LOAD Ta : 25°C	L-FG : 2 mA N-FG : 1.8 mA	P

CONTROL FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	AUXILIARY POWER (AUX)	5V@0.3A(4.4~5.5V) 12V@0.8A(10.8~13.2V)	I/P: 230 VAC O/P:FULL LOAD Ta:25°C	5.322 V /0.3A 12.583 V /0.8A	P
2	REMOTE ON/OFFCONTROL	Rc+ / Rc- ON/OFF&- S SHORTS POWER ON ON/OFF&- S OPEN POWER OFF	I/P: 230 VAC O/P:FULL LOAD Ta:25°C	S.P.S1:SHORT POWER ON OK OPEN POWER OFF OK S.P.S2: SHORT POWER ON OK OPEN POWER OFF OK S.P.S3: SHORT POWER ON OK OPEN POWER OFF OK	P
3	REMOTE SENSE	S+ / S- >0.5V	I/P: 230 VAC O/P:FULL LOAD Ta:25°C	> 0.5 V	P
4	DC OK SIGNAL DC NG SIGNAL	HIGH:VOUT ≤ 75%Vout LOW:VOUT ≥ 85%Vout	I/P: 230 VAC O/P:FULL LOAD Ta:25°C	S.P.S1:HIGH : 5.325V LOW: 0V S.P.S2:HIGH : 5.326V LOW: 0V S.P.S3:HIGH : 5.329V LOW: 0V	P
5	AC OK SIGNAL AC FAIL SIGNAL	AC OK ≥ 87V AC FAIL ≤ 75V	I/P: 230 VAC O/P:FULL LOAD Ta:25°C	AC ≥ 87V : 0 V AC ≤ 75V : 5.31 V	P
6	OUTPUT VOLTAGE TRIM	DC=0.5V Vo/p=100%±3% DC=1.5V Vo/p=90%±3% DC=3V Vo/p=100%±3% DC=4.5V Vo/p=110%±3%	I/P: 230 VAC O/P:FULL LOAD Ta:25°C	Vo= 101 % Vo= 91.1 % Vo= 101.5 % Vo= 111 %	P
7	OVER TEMP WARNING	LOW : SW SHORT 0V~0.5V HIGH : SW OPEN 4.5V~5.5V	I/P: 230 VAC O/P:FULL LOAD Ta:TEST	S.P.S1:HIGH : 5.335V LOW: 0V S.P.S2:HIGH : 5.329V LOW: 0V S.P.S3:HIGH : 5.335V LOW: 0V	P
8	FAN FAIL SIGNAL	FAN FAIL	I/P: 230 VAC O/P:FULL LOAD	S.P.S1:HIGH : FAN FAIL: 5.329V LOW : FAN NORMAL 0V S.P.S2:HIGH : FAN FAIL: 5.331V LOW : FAN NORMAL 0V S.P.S3:HIGH : FAN FAIL: 5.335V LOW : FAN NORMAL 0V	P
9	CURRENT SHARING	RACK1-RACK2 -RACK3< 10%	I/P : 230 VAC O/P : FULL/50% LOAD Ta : 25°C	O/P : 100% RACK1 PIN W : 4225 W RACK2 PIN W : 4094 W RACK3 PIN W : 4127 W O/P : 50% RACK 1 PIN W : 2103 W RACK 2 PIN W : 1995 W RACK 3 PIN W : 2038 W	P

■ SAFETY & E.M.C. TEST

SAFETY TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	WITHSTAND VOLTAGE	I/P-O/P : 3 KVAC/min I/P-FG : 1.5 KVAC/min O/P-FG : 0.7 KVDC/min	I/P-O/P : 3.6 KVAC/min I/P-FG : 1.8 KVAC/min O/P-FG : 0.84 KVDC/min Ta : 25°C	I/P-O/P : 33.37 mA I/P-FG : 25.37 mA O/P-FG : 0.002 mA NO DAMAGE	P
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 : 2.68 GΩ I/P-FG : 6.50 GΩ O/P-FG : 7.71 GΩ NO DAMAGE	P
3	GROUNDING CONTINUITY	FG(PE) TO CHASSIS OR TRACE < 100 mΩ	40 A / 2min Ta : 25°C / 70%RH	10 mΩ	P

E.M.C TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	HARMONIC	EN61000-3-2 CLASS A CLASS D	I/P: 220/230/240 VAC/50HZ O/P:100%75%50%25% LOAD Ta:25°C	PASS	P
2	CONDUCTION	EN55022 CLASS B	I/P: 230 VAC (50HZ) O/P:FULL/50% LOAD Ta:25°C	PASS Test by certified Lab	P
3	RADIATION	EN55022 CLASS B	I/P: 230 VAC (50HZ) O/P:FULL LOAD Ta:25°C	PASS Test by certified Lab	P
4	E.S.D	EN61000-4-2 INDUSTRY AIR:8KV / Contact:4KV	I/P: 230 VAC/50HZ O/P:FULL LOAD Ta:25°C	CRITERIA A	P
5	E.F.T	EN61000-4-4 INDUSTRY INPUT: 2KV	I/P: 230 VAC/50HZ O/P:FULL LOAD Ta:25°C	CRITERIA A	P
6	SURGE	IEC61000-4-5 INDUSTRY L-N :2KV L,N-PE:4KV	I/P: 230 VAC/50HZ O/P:FULL LOAD Ta:25°C	CRITERIA A	P
7	Test by certified Lab & Test Report Prepare				

5	STORAGE TEMPERATURE TEST	<ol style="list-style-type: none"> 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	P
6	THERMAL SHOCK TEST	<ol style="list-style-type: none"> 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/Full Load AC ON/OFF TEST turn on 58sec ; turn off 2sec 	OK	P
7	VIBRATION TEST	<p>1 Carton & 1 Set</p> <ol style="list-style-type: none"> (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	P
8	CAPACITOR LIFE CYCLE	<p>RCP-2000-48 SUPPOSE C110 IS THE MOST CRITICAL COMPONENT</p> <ol style="list-style-type: none"> (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 	<ol style="list-style-type: none"> (1) 1013149 HRS (2) 154865 HRS (3) 253317 HRS (4) 309610HRS 	P

DATE	SAMPLE	TEST RESULT	TESTER	APPROVAL
2010/12/16	RD SAMPLE	PASS	SANFORD SU	VINCENT TSENG

12.10.30 A50-F031