

MODEL : TS-1000-124

OUTPUT FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	RATED POWER (TYP)	1000W	IP: 24VDC Ta:25°C	1000 W	P
2	WAVEFORM	True sine wave (THD<3%)	IP: 26VDC OP: FULL LOAD/NO LOAD Ta:25°C	FULL LOAD: 0.61 % NO LOAD: 0.81 %	P
3	FREQUENCY	60HZ ± 0.1HZ	IP: 24VDC OP: FULL LOAD/NO LOAD Ta:25°C	FULL LOAD: 59.98 HZ NO LOAD: 60.03 HZ	P
4	AC REGULATION (TYP)	3%~3%	IP: 24VDC OP: FULL LOAD/NO LOAD Ta:25°C	1% ~ -1 %	P
5	SAVING MODE TO NORMAL	≤6S (5W-25W)	IP: 24VDC OP: NO LOAD Ta:25°C	≥ <u>13</u> W <u>5</u> SEC	P
6	NORMAL TO SAVING MODE	≤6S (5W-15W)	IP: 24VDC OP:NO LOAD Ta:25°C	< <u>9</u> W <u>5</u> SEC	P
7	MAXIMUM OUTPUT POWER (TYP)	1150W/180sec 1500w/10sec 2000W / 30cycle	IP: 24VDC OP:TESTING LOAD Ta:25°C	<u>1100</u> W <u>180</u> SEC <u>1400</u> W <u>10</u> SEC <u>2090</u> W <u>30</u> cycle Shut down o/p voltage , re-power on to recover	P

INPUT FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	DC CURRENT (TYP)	50A	IP: 24VDC OP:FULL LOAD Ta:25°C	48A	P
2	NO LOAD DISSIPATION	≤ 6W @ saving mode	IP: 24VDC OP:NO LOAD Ta:25°C	5.13W	P
3	OFF MODE DRAW CURRENT	≤1mA	IP: SW OFF OP:NO LOAD Ta:25°C	0.45mA	P
4	VOLTAGE RANGE (TYP)	21VDC-30VDC	IP: TESTING OP:NO LOAD Ta:25°C	21.2VDC ~ 30.4 VDC	P
5	EFFICIENCY (TYP)	89%	IP: 26VDC OP: 750W Ta:25°C	89.9%	P

INPUT PROTECTION FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	BAT LOW ALARM	22.5VDC \pm 4%	IP: TESTING OP: NO LOAD SW:ON Ta:25°C	22.6V	P
2	BAT LOW SHUT DOWN	21VDC \pm 4%	IP: TESTING OP: NO LOAD SW:ON Ta:25°C	21.2V Shut down Recovery	P
3	BAT. RECOVERY VOLTAGE	24VDC-30VDC	IP: TESTING OP: NO LOAD SW:ON Ta:25°C	26V	P
4	BAT POLARITY	BY INTERNAL FUSE	IP: 24VDC OP: NO LOAD SW:ON Ta:25°C	OK	P

OUTPUT PROTECTION FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	OVER TEMPERATURE	70 °C \pm 5 °C (RTH3) detect on heatsink of power transistor	IP: 24VDC OP: FULL LOAD SW:ON Ta:25°C	O.T.P Active Shut down o/p voltage , re-power on to recover	P
2	OUTPUT SHORT	Shut-off :Shut down o/p voltage , re-power onto recover	IP: 24VDC OP: FULL LOAD SW:ON Ta:25°C	Shut down o/p voltage , re-power on to recover	P
3	OVER LOAD (TYP)	105%-115% LOAD for 180sec 115%-150% LOAD for 10sec	IP: 24VDC OP:TESTING Ta:25°C	<u>1100 W 180 SEC</u> <u>1400 W 10SEC</u> Shut down o/p voltage , re-power on to recover	P

APPLICATION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	INDUCTION MOTOR	0.5HP	IP: 24VDC OP:0.5HP Ta:25°C	INVERTER TURN ON/OFF :OK INDUCTION MOTOR ON/OFF:OK	P
2	SWITCHING POWER SUPPLY	RSP-1500-48(Pin=1000W)	IP: 24VDC OP: RSP-1500-48 Ta:25°C	INVERTER TURN ON/OFF :OK INDUCTION MOTOR ON/OFF:OK	P
3	INCANDESCENT LAMPS	1000W	IP: 24VDC OP: 1000W Ta:25°C	INVERTER TURN ON/OFF :OK INDUCTION MOTOR ON/OFF:OK	P
4	ELECTRONIC HOT BLOWERS	1000W	IP:24VDC OP: 1000W Ta:25°C	INVERTER TURN ON/OFF :OK INDUCTION MOTOR ON/OFF:OK(Saving mode off)	P

LED CONTROL TEST

LED IS TREECOLOR LIGHT (●●●)	PANEL
● ● ●	Status Battery Load

Status LIGHT	CONDITION	RESULT
●	Inverter Ok	OK
★ flash per second	Saving mode	OK

Battery LIGHT	CONDITION	RESULT
●	Vin < 22.2V	<23.15
●	---	23.6V-24.3V
●	Vin >25.2V	>24.5V

Load LIGHT	CONDITION	RESULT
●	LOAD > 850W	>800W
●	LOAD=550W~750W	510W-790W
●	LOAD < 450W	<490W

VOLTAGE AND SAVING MODE SETTING CODES

★ flash per second. ● Light on. ○ Light off.

	100V (200V)	110V (220V)	115V (230V)	120V (240V)
50Hz	● ○ ○	● ○ ●	● ● ○	● ● ●
RESULT	OK	OK	OK	OK
60Hz	★ ○ ○	★ ○ ●	★ ● ○	★ ● ●
RESULT	OK	OK	OK	OK

Saving Status	LIGHT	RESULT
Enable	★ ★ ●	OK
Disable	★ ★ ○	OK

ERROR CODE LED

Error Code	LIGHT	EXTRAORDINARY	RESULT
001	○ ○ ★	OLP 105±5%~115±5% error code	P
010	○ ★ ○	OLP 115%±5%~150±10% error code	P
011	○ ★ ★	OLP 150% error code	P
100	★ ○ ○	OTP error code	P
110	★ ★ ○	INV fault error code	P
111	★ ★ ★	Battery Shut Down (Low: No Alarm)	P

SAFETY TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	WITHSTAND VOLTAGE	BAT I/P-AC I/P: 3 KVAC/min AC I/P-FG: 1.5 KVAC/min	BAT I/P-AC O/P: 3.6 KVAC/min AC O/P-FG: 1.8 KVAC/min Ta:25°C	BAT I/P-AC O/P: 6.56 mA AC O/P-FG: 4.67 mA NO DAMAGE	P
2	ISOLATION RESISTANCE	BAT I/P-AC O/P:500VDC>100MΩ BAT I/P-FG: 500VDC>100MΩ	BAT I/P-AC O/P: 500 VDC BAT I/P-FG: 500 VDC Ta:25°C	BAT I/P-AC O/P: 4.56 G Ω BAT I/P-FG: 7.29 G Ω NO DAMAGE	P
3	GROUNDING CONTINUITY	FG(PE) TO CHASSIS OR TRACE < 100 mΩ	40 A / 2min Ta:25°C	8 mΩ	P
4	APPROVAL	TUV: Certificate NO : UL: File NO :			P

E.M.C TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	RADIATION	EN 55022 CLASS B	I/P:24 VDC O/P: :FULL/50% LOAD Ta:25°C	PASS	P
2	E.S.D	EN 61000-4-2 LIGHT INDUSTRY AIR:8KV / Contact:4KV	I/P: 24VDC O/P:100 %LOAD Ta:25°C	CRITERIA A	P
3	E.F.T	EN 61000-4-4 LIGHT INDUSTRY INPUT: 1KV	I/P: 24VDC O/P:100 %LOAD Ta:25°C	CRITERIA A	P
4	SURGE	EN 61000-4-5 LIGHT INDUSTRY L-N :1KV L,N-PE:1KV	I/P: 24VDC O/P:100 %LOAD Ta:25°C	CRITERIA A	P
5	Test by certified Lab & Test Report Prepare				

M.T.B.F & LIFE CYCLE CALCULATION

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	CAPACITOR LIFE CYCLE	TS-1000-112 : SUPPOSE C302 IS THE MOST CRITICAL COMPONENT	I/P: 12VDC O/P:FULL LOAD Ta= 25°C LIFE TIME= 147508 HRS I/P: 12VDC O/P:FULL LOAD Ta= 40°C LIFE TIME= 30336 HRS		P



COMPONENT STRESS TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	DC TO DC Power Transistor (D to S) or (C to E) Peak Voltage	Q 300 Rated STP80NF10 80A/100V	I/P:29 VDC O/P: (1)Full Load Turn On (2) Output Short Ta:25°C	(1) 91.5 V (2) 86 V	P
2	DCTO DC Diode Peak Voltage	D 400 Rated SF20LC30 20A/300V	I/P:29 VC O/P: (1)Full Load Turn On (2) Output Short Ta:25°C	(1) 244 V (2) 244 V	P
3	DC BUS Capacitor Voltage	C415 Rated 330u/250V 105°C	I/P:29VDC O/P: (1)Full Load Turn SW On /Off (2) Min load Turn SW On /Off Ta:25°C	(1) 219 V (2) 225 V	P
4	DC TO AC Power Transistor (D to S) or (C to E) Peak Voltage	Q 11 Rated HGTG12N60A4D 12A/600V	I/P:29VDC O/P: (1)Full Load Turn On (2) Output Short Ta:25°C	(1) 392 V (2) 390 V	P
7	DC TO FAN Power Transistor (D to S) or (C to E) Peak Voltage	Q 309 Rated CEP540A 30A/100V	I/P:29VDC O/P: (1)Full Load Turn On (2) Output Short Ta:25°C	(1) 95 V (2) 84 V	P
8	DCTO FAN Diode Peak Voltage	D 450 Rated HER303 3A/200V	I/P:29 VDC O/P: (1)Full Load Turn On (2) Output Short Ta:25°C	(1) 61 V (2) 62 V	P
9	FAN TO CPU Power Transistor (D to S) or (C to E) Peak Voltage	Q601 Rated IRF540N 27A/100V	I/P:29 VDC O/P: (1)Full Load Turn On (2) Output Short Ta:25°C	(1) 47 V (2) 42 V	P
10	FAN TO CPU Diode Peak Voltage	D 630 Rated 21DQ10 2A/100V	I/P:29.5 VDC O/P: (1)Full Load Turn On (2) Output Short Ta:25°C	(1) 56 V (2) 61 V	P

DATE	SAMPLE	TEST RESULT	TESTER	APPROVAL
2007/11/13	RD SAMPLE	PASS	VINCENT TSENG	MAX LIN
2008/3/24	PRODUCT SAMPLE W0712B58	PASS	SANFORD SU	VINCENT TSENG
2008/6/17	PRODUCT SAMPLE W084C23	PASS	SANFORD SU	VINCENT TSENG

2003/12/12 A50-F023