



Test Report: IRC3

Power Inverter Remote Control

■ DESIGN VERIFY TEST

Output Function Test

Function Test

Component Stress Test

■ RELIABILITY TEST

ENVIRONMENT TEST

DESIGN VERIFY TEST

OUTPUT FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	DIGITAL METER	DISPLAY THE BATTERY LEVEL	INVETTER : I/P:HI→LOW LINE O/P:NO LOAD Ta:25℃	OK	P
		OUTPUT LOAD LEVEL	INVETTER : I/P: DC SOURCE O/P: 0%→100% LOAD Ta:25℃	OK	P
2	CONTROL OUTPUT	REMOTE ON/OFF	INVETTER : I/P: DC SOURCE O/P: 100% LOAD Ta:25℃	OK	P
3	LED INDICATOR	REMOTE TURN ON:LED GREEN REMOTE TURN OFF: LED ORANGE ABNORMAL:LED RED SAVING MODE : LED ORANGE FLASH	INVETTER : I/P: DC SOURCE O/P: TESTING Ta:25℃	REMOTE TURN ON:LED GREEN REMOTE TURN OFF: LED ORANGE ABNORMAL:LED RED SAVING MODE : LED ORANGE FLASH	P

FUNCTION TEST

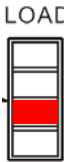
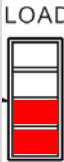
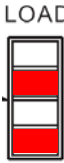
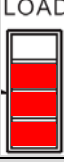
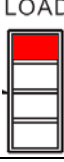
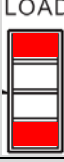
NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	POWER SAVING CONTROL	Power saving enable / disable activation	INVETTER : I/P: DC SOURCE O/P: TESTING Ta:25℃	OK	P
2	SUITABLE SERIES	TN-1500 TN-3000			P

COMPONENT STRESS TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	REGULATOR Voltage	RG1 Rated L7805CV : Vin=7V~25V Vout=4.8V~5.2V V	INVETTER : I/P: TESTING O/P: (1)FULL LOAD (2)NO LOAD (3)FULL LOAD (4)NO LOAD Ta:25℃	(1) Vin : 11.1 V (2) Vin : 11.18 V (3) Vout: 5.01 V (4) Vout :5.01 V	P

LED INDICATOR

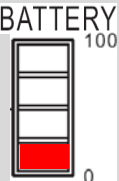
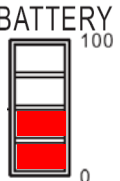
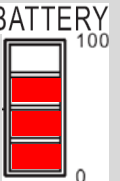
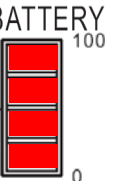
1. Abnormal status indicator (flash)

	LED LOAD	status	LED LOAD	status	LED LOAD	status
TEST CONDITION		Output over load 105%		Output over load 115%		Output over load 150%
RESULT	OK		OK		OK	
TEST CONDITION		Over temperature		AC output fail		AC output fail (short circuit)
RESULT	OK		OK		OK	
TEST CONDITION		Battery input under or over voltage		Battery bad or Battery notch (For TN-3000)		Fan lock (For TN-3000)
RESULT	OK		OK		OK	

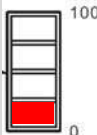
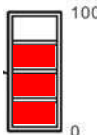
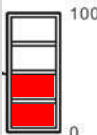
2. Remote off status indicator

	LOAD LED	status
TEST CONDITION	 FLASH	Remote off shutdown
RESULT	OK	

3. Battery voltage level

	LOAD LED	status	LOAD LED	status	LOAD LED	status	LOAD LED	status
TEST CONDITION		<25%		25%~ 50%		50%~75%		75%~100%
RESULT	OK		OK		OK		OK	

4. LOAD percentage

Load light test					
Load LED	Loading range	RESULT	Load LED	Loading range	RESULT
	Min. load ~ 25%±5% LOAD	OK		50%±5% ~ 75%±5% LOAD	OK
	25%±5% ~ 50%±5% LOAD	OK		75%±5% ~ Max. load	OK

5. Solar charger test :

status	Panel indication	RESULT
ON	SOLAR CHARGE 	OK
OFF	SOLAR CHARGE 	OK

6.Ac charger test :

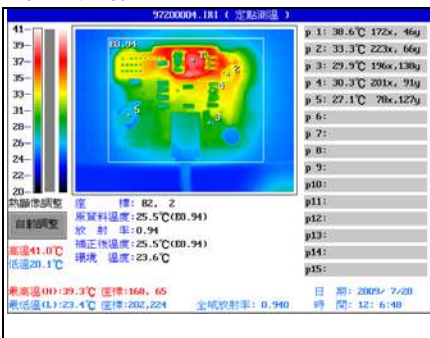
status	Panel indication	RESULT
ON		OK
OFF		OK

7.Saving mode setting

TEST CONDITION	Indicator :GREEN	Saving Mode Enable	Indicator :RED	Saving Mode Disenable
RESULT	OK		OK	

RELIABILITY TEST

ENVIRONMENT TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT																																																				
1.	THERMO TRACER TEST (ROOM AMBIENT)	MODEL:IRC3 9720004, 181 (定點測溫)  <table><thead><tr><th></th><th>Position</th><th>P/N</th><th>Temp</th></tr></thead><tbody><tr><td>1</td><td>RG1</td><td>L7805CV 1A/5V</td><td>38.6℃</td></tr><tr><td>2</td><td>C5</td><td>220u/16V 8Kh ZLH</td><td>33.3℃</td></tr><tr><td>3</td><td>C4</td><td>220u/16V 8Kh ZLH</td><td>29.9℃</td></tr><tr><td>4</td><td>LED3</td><td>103SRDT</td><td>30.3℃</td></tr><tr><td>5</td><td>C1</td><td>10u/50V 10KH YXM</td><td>27.1℃</td></tr><tr><td>6</td><td>TA</td><td></td><td>26℃</td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr></tbody></table>				Position	P/N	Temp	1	RG1	L7805CV 1A/5V	38.6℃	2	C5	220u/16V 8Kh ZLH	33.3℃	3	C4	220u/16V 8Kh ZLH	29.9℃	4	LED3	103SRDT	30.3℃	5	C1	10u/50V 10KH YXM	27.1℃	6	TA		26℃																									P
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2	TEMPERATURE RISE TEST	MODEL : IRC3 1. ROOM AMBIENT BURN-IN : 2 HRS I/P : TN-1500-224B 24VDC/FULL LOAD Ta= 25 °C 2. HIGH AMBIENT BURN-IN : 2 HRS I/P : TN-1500-224B 24VDC/FULL LOAD Ta= 69.5 °C <table><thead><tr><th>NO</th><th>Position</th><th>P/N</th><th>ROOM AMBIENT Ta= 25 °C</th><th>HIGH AMBIENT Ta= 69.5 °C</th></tr></thead><tbody><tr><td>1</td><td>RG1</td><td>RG L7805CV 1.0A/5V</td><td>34.9℃</td><td>80.9℃</td></tr><tr><td>2</td><td>C1</td><td>50V/10uF YXM</td><td>25.5℃</td><td>70.4℃</td></tr><tr><td>3</td><td>C4</td><td>16V/220uF ZLH</td><td>27.1℃</td><td>72.2℃</td></tr><tr><td>4</td><td>C5</td><td>16V/220uF ZLH</td><td>29.5℃</td><td>75.9℃</td></tr><tr><td>5</td><td>U1</td><td>PIC16F723</td><td>25.1℃</td><td>69.5℃</td></tr></tbody></table>			NO	Position	P/N	ROOM AMBIENT Ta= 25 °C	HIGH AMBIENT Ta= 69.5 °C	1	RG1	RG L7805CV 1.0A/5V	34.9℃	80.9℃	2	C1	50V/10uF YXM	25.5℃	70.4℃	3	C4	16V/220uF ZLH	27.1℃	72.2℃	4	C5	16V/220uF ZLH	29.5℃	75.9℃	5	U1	PIC16F723	25.1℃	69.5℃	P																						
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3	LOW TEMPERATURE TURN ON TEST	TURN ON AFTER 2 HOUR	I/P : TN-1500-224B 24VDC/FULL LOAD Ta= -20 °C	TEST : OK	P																																																				
4	HIGH HUMIDITY HIGH TEMPERATURE HIGH VOLTAGE TURN ON TEST	AFTER 12 HOURS IN CHAMBER ON CONTROL 50 °C NO DAMAGE	I/P : TN-1500-224B 24VDC/FULL LOAD Ta= 50℃ HUMIDITY= 95 %R.H	TEST : OK	P																																																				
5	STORAGE TEMPERATURE TEST	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 : 5 CYCLE 5. Input/Output condition : STATIC		OK	P																																																				
6	THERMAL SHOCK TEST	1. Thermal shock Temperature : -25℃~ +55℃ 2. Temperature change rate : 25℃ / MIN 3. Dwell time low and high temperature : 30 MIN/EACH 4. Total test cycle : 10 CYCLE 5. Input/Output condition : I/P : TN-1500-224B 24VDC/FULL LOAD		OK	P																																																				

7	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℃	TEST : OK	P
8	CAPACITOR LIFE CYCLE	SUPPOSE C5 IS THE MOST CRITICAL COMPONENT (1) I/P : TN-1500-224B 24VDC/FULL LOAD Ta= 25℃ LIFE TIME (2) I/P : TN-1500-224B 24VDC/FULL LOAD Ta= 50℃ LIFE TIME	(1) 1573760HRS (2) 278204HRS	P

DATE	SAMPLE	TEST RESULT	TESTER	APPROVAL
2009/12/29	RD SAMPLE	PASS	SANFORD SU	VINCENT TSENG
2010/3/4	W1002B51	PASS	SANFORD SU	VINCENT TSENG

2009/08/04 A50-F023