

A301-300-B2 DC-AC Modified Sine Wave Power Inverter
 I/P:12VDC
 O/P:110VAC 60Hz

OUTPUT FUNCTION TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	AC VOLTAGE	110VAC(Typ)	I/P:12VDC O/P:NO LOAD Ta:25°C	116.6VAC	P
2	AC VOLTAGE REGULATION	-10% ~ +10% (Typ)	I/P:11VDC~15VDC O/P:FULL LOAD Ta:25°C	102.78~115.7VAC	P
3	LOAD REGULATION	NONE	I/P:12VDC O/P: NO ~ FULL LOAD Ta:25°C	111.3~116.6VAC	P
4	AC WAVEFORM	MODIFIED SINE WAVE	I/P:12VDC O/P:FULL LOAD Ta:25°C	MODIFIED SINE WAVE	P
5	AC FREQUENCY	60Hz±1%	I/P:12VDC O/P:MIN LOAD Ta:25°C	60.1Hz	P
6	CONTINUOUS POWER	300W (Max)	I/P:12VDC O/P:FULL LOAD Ta:25°C	300W	P
7	SURGE POWER	600W (Max)	I/P:12VDC O/P:TESTING Ta:25°C	3498W (31.8A)	P

INPUT FUNCTION TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	VOLTAGE RANGE	10VDC ~ 15VDC (Typ)	I/P: TESTING O/P:MIN LOAD Ta:25°C	9.64~15.1VDC	P
2	EFFICIENCY	82% (TYP)	I/P:12VDC O/P:FULL LOAD Ta:25°C	84.3%	P
3	NO LOAD CURRENT DRAW	0.36A (Max)	I/P: 120VDC O/P:NO LOAD Ta:25°C	0.23A(EXCLUDED FAN)	P
4	DC INPUT CURRENT	35A (Typ)	I/P:12VDC O/P:FULL LOAD Ta:25°C	29.4A	P

PROTECTION FUNCTION TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	BAT. LOW ALARM	9.5~10.5VDC	I/P:TESTING O/P:NO LOAD Ta:25°C	9.64VDC	P
2	BAT. LOW SHUTDOWN	9.0~10.0VDC	I/P:TESTING O/P:NO LOAD Ta:25°C	9.4VDC SHUT DOWN RESET RE-POWER ON	P
3	INPUT POLARITY REVERSE	FUSE OPEN	I/P:TESTING O/P:NO LOAD Ta:25°C	FUSE OPEN OK RESET REPLACEMENT FUSE	P
4	OVER LOAD PROTECTION	YES	I/P:12VDC O/P:TESTING Ta:25°C	450W	P
5	OVER VOLTAGE PROTECTION	15~17VDC	I/P:TESTING O/P:NO LOAD Ta:25°C	15.16VDC SHUT DOWN RESET RE-POWER ON	P
6	OUTPUT SHORT PROTECTION	YES	I/P:12VDC O/P:SHORT Ta:25°C	TEST OK BROKEN CAN'T RE-POWER ON	P
7	OVER TEMPERATURE PROTECTION	40°C~ 50°C	I/P:12VDC O/P:FULL LAOD Ta:25°C	42.0°C SHUT DOWN RESET RE-POWER ON	P
8	FAN CONTROL	>100W OR >40°C FAN ON	I/P:12VDC O/P:TESTING Ta:25°C	150W OR 35.4°C FAN ON RESET RE-POWER ON	P

ENVIRONMENT TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	TEMPERATURE RISE TEST	1. ROOM AMBIENT BURN-IN : 2HRS I/P:12VDC O/P:300W LOAD Ta=25°C			P

NO	Position	P/N	TEMP Ta=°C
1	T1	EER-34L	79.7°C
2	C1	2200u/25V fuhjyyu 105°C TNR 13*25	81.7°C
3	C11	220u/200V fuhjyyu 85°C LP 22*32	46.2°C
4	Q18	ST P60NF06	68.6°C
5	Q12	IRF 640B	47.2°C
6	D1	HER303	83.8°C
7	NTC	UEI-310	35.8°C



OTHER

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	CAPACITOR LIFE CYCLE	SUPPOSE C1 IS THE MOST CRITICAL COMPONENT I/P:12 VDC O/P:300W Ta=25°C LIFE TIME=5028HRS			NOTE1
2	MTBF	MIL-HDBK-217F NOTICES 2 PARTS COUNT TOTAL FAILURE RATE: 4.010518 M.T.B.F : 249344HRS			P

DATE	SAMPLE	TEST RESULT	TESTER	APPROVAL
2003.12.12	A301-300-B2	NOTE1: LIFE CYCLE=5028hrs 300W ,24hrs continue use. LIFE CYCLE=15084hrs 300W,8hrs 1/3 cycle use.	T.K.CHENG	MAX LIN