



Test Report : SPRN01M-15

1W SIP Package DC-DC Regulated Converter

■ DESIGN VERIFY TEST

Output Function Test

Input Function Test

Protection Function Test

■ SAFETY TEST

Safety Test

■ RELIABILITY TEST

Environment Test

DESIGN VERIFY TEST

OUTPUT FUNCTION TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	VOLTAGE ACCURACY	-3.0 % ~ +3.0 % (Max)	I/P:12VDC O/P:FULL LOAD Ta:25°C	-0.29%	P
2	RIPPLE & NOISE	75 mVp-p (Max)	I/P:12VDC O/P:FULL LOAD Ta:25°C	6mV	P
3	LINE REGULATION	-1.0% ~ +1.0% (Max)	I/P:11.4VDC~13.2VDC O/P:FULL LOAD Ta:25°C	-0.08% ~ +0.05%	P
4	LOAD REGULATION	-1.0% ~ +1.0% (Max)	I/P:12VDC O/P:10% LOAD~FULL LOAD Ta:25°C	-0.05% ~ +0.03%	P

INPUT FUNCTION TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	INPUT VOLTAGE RANGE	11.4 VDC ~13.2 VDC	I/P:TESTING O/P:FULL LOAD Ta:25°C	10.8VDC ~13.2VDC	P
2	EFFICIENCY	73% (Typ)	I/P:12VDC O/P:FULL LOAD Ta:25°C	73.25%	P
3	DC CURRENT	115 mA / FULL LOAD (Max) 18 mA / NO LOAD (Max)	I/P:12VDC O/P:NO / FULL LOAD Ta:25°C	112 mA / FULL LOAD 14 mA / NO LOAD	P

PROTECTION FUNCTION TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	SHORT PROTECTION	Current Limit Protection (60s max.)	I/P:13.2VDC O/P:FULL LOAD Ta:25°C	Current Limit Protection NO DAMAGE	P

SAFETY TEST

SAFETY TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	WITHSTAND VOLTAGE	I/P-O/P:1.5K VDC/min	I/P-O/P:1.5K VDC/min Ta:25°C	I/P-O/P: 0.002mA NO DAMAGE	P
2	ISOLATION RESISTANCE	I/P-O/P:500VDC>100MΩ	I/P-O/P:500 VDC Ta:25°C	I/P-O/P>100MΩ NO DAMAGE	P

■ RELIABILITY TEST

ENVIRONMENT TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT											
1	TEMPERATURE RISE TEST	1. ROOM AMBIENT BURN-IN : 8HRS I/P:12VDC O/P:FULL LOAD Ta=25℃ 2. HIGH AMBIENT BURN-IN : 8HRS I/P:12VDC O/P:FULL LOAD Ta=71℃ 3. HIGH AMBIENT BURN-IN : 8HRS I/P:12VDC O/P:60% LOAD Ta=85℃ <table><tr><th>NO</th><th>Position</th><th>1</th><th>2</th><th>3</th></tr><tr><td>1</td><td>CASE</td><td>49.4℃</td><td>92.6℃</td><td>102.7℃</td></tr></table>			NO	Position	1	2	3	1	CASE	49.4℃	92.6℃	102.7℃		P
NO	Position	1	2	3												
1	CASE	49.4℃	92.6℃	102.7℃												
2	LOW TEMPERATURE TURN ON TEST	TURN ON AFTER 4 HOURS	I/P:12VDC O/P: FULL LOAD Ta= -40℃	TEST : OK	P											

OTHER

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	MTBF	MIL-HDBK-217F,GB,25℃ TOTAL FAILURE RATE : 0.80807 M.T.B.F : 1,237,522.68 HRS			P

TEST RESULT	TESTER	APPROVAL
PASS	Archen Hsiao	VINCENT ZENG