



# Test Report : SPU01M-12

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1W SIP Package DC-DC Unregulated 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 % ~ +3 % (Max)	I/P:12VDC O/P:FULL LOAD Ta:25°C	0.71 %	P
2	RIPPLE & NOISE	75 mVp-p (Max)	I/P:12VDC O/P:FULL LOAD Ta:25°C	54.4 mV	P
3	LINE REGULATION	-12% ~ +12% (Max)	I/P:10.8VDC~13.2VDC O/P:FULL LOAD Ta:25°C	-10.59% ~ +10.14%	P
4	LOAD REGULATION	-10% ~ +10% (Max)	I/P:12VDC O/P:20% LOAD-FULL LOAD Ta:25°C	-2.19 % ~ +1.84 %	P

**INPUT FUNCTION TEST**

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	EFFICIENCY	83% (Typ)	I/P:12VDC O/P:FULL LOAD Ta:25°C	84.6%	P
2	DC CURRENT	104 mA / FULL LOAD (Max) 15 mA / NO LOAD (Max)	I/P:12VDC O/P:NO / FULL LOAD Ta:25°C	100 mA / FULL LOAD 12 mA / NO LOAD	P

**PROTECTION FUNCTION TEST**

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	SHORT PROTECTION	MOMENTARY 1sec. max	I/P:13.2VDC O/P:FULL LOAD Ta:25°C	OK	P

## SAFETY TEST

### SAFETY TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	WITHSTAND VOLTAGE	I/P-O/P:1500 VDC/min	I/P-O/P:1500 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 : 12HRS I/P:12VDC O/P:FULL LOAD Ta=25°C 2. HIGH AMBIENT BURN-IN : 12HRS I/P:12VDC O/P:FULL LOAD Ta=85°C			P								
		<table border="1"> <thead> <tr> <th>NO</th> <th>Position</th> <th>1</th> <th>2</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>CASE</td> <td>34.9°C</td> <td>89.2°C</td> </tr> </tbody> </table>		NO	Position	1	2	1	CASE	34.9°C	89.2°C		
NO	Position	1	2										
1	CASE	34.9°C	89.2°C										
2	LOW TEMPERATURE TURN ON TEST	TURN ON AFTER 2 HOURS	I/P:12VDC O/P: FULL LOAD Ta= -40°C	TEST : OK	P								

### OTHER

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	MTBF	MIL-HDBK-217F,GB TOTAL FAILURE RATE : 0.406 M.T.B.F : 2,463,278 HRS			P

TEST RESULT	TESTER	APPROVAL
PASS	ALROY WANG	VINCENT ZENG