



# Test Report : SPU03M-12

---

3W DC-DC Unregulated Single Output 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	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	VOLTAGE ACCURACY	-2 % ~ +2 % (Max)	I/P:12VDC O/P:FULL LOAD Ta:25°C	-0.28 %	P
2	RIPPLE & NOISE	50 mVp-p (Max)	I/P:12VDC O/P:FULL LOAD Ta:25°C	18 mV	P
3	LINE REGULATION	-12 % ~ +12 % (Max)	I/P:10.8VDC~13.2VDC O/P:FULL LOAD Ta:25°C	-10.6 % ~ +10.8 %	P
4	LOAD REGULATION	-8 % ~ +8 % (Max)	I/P:12VDC O/P:MIN-FULL LOAD Ta:25°C	-1.68 % ~ +1.09 %	P

**INPUT FUNCTION TEST**

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	EFFICIENCY	86 % (Typ)	I/P:12VDC O/P:FULL LOAD Ta:25°C	86.86 %	P
2	DC CURRENT	300 mA / FULL LOAD (Max) 25 mA / NO LOAD (Max)	I/P:12VDC O/P:NO / FULL LOAD Ta:25°C	287 mA / FULL LOAD 23 mA / NO LOAD	P

**PROTECTION FUNCTION TEST**

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	OVER LOAD PROTECTION	Momentary	I/P:12VDC O/P:TESTING Ta:25°C	BROKEN	P
2	SHORT PROTECTION	Momentary	I/P:13.2VDC O/P:FULL LOAD Ta:25°C	BROKEN	P

## SAFETY TEST

### SAFETY TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	WITHSTAND VOLTAGE	I/P-O/P:3000 VDC/min	I/P-O/P:3000 VDC/min Ta:25°C	I/P-O/P: 0.02mA 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 : 13HRS I/P:12VDC O/P:FULL LOAD Ta=25°C 2. HIGH AMBIENT BURN-IN : 8HRS I/P:12VDC O/P:FULL LOAD Ta=85°C			P										
		<table border="1"> <thead> <tr> <th>NO</th> <th>Position</th> <th>P/N</th> <th>1</th> <th>2</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>CASE</td> <td>CENTER</td> <td>51.6°C</td> <td>111.6°C</td> </tr> </tbody> </table>			NO	Position	P/N	1	2	1	CASE	CENTER	51.6°C	111.6°C	
NO	Position	P/N	1	2											
1	CASE	CENTER	51.6°C	111.6°C											
2	LOW TEMPERATURE TURN ON TEST	TURN ON AFTER 13 HOURS	I/P:12VDC O/P: FULL LOAD Ta= -40°C	TEST : OK	P										

TEST RESULT	TESTER	APPROVAL
PASS	PETER	VINCENT ZENG