



# Test Report : SPAN02A-05

---

2W 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	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	VOLTAGE ACCURACY	-1.5 % ~ +1.5 % (Max)	I/P:12VDC O/P:FULL LOAD Ta:25°C	-0.46%	P
2	RIPPLE & NOISE	75 mVp-p (Max)	I/P:12VDC O/P:FULL LOAD Ta:25°C	11.2mV	P
3	LINE REGULATION	-0.5% ~ +0.5% (Max)	I/P:9VDC-18VDC O/P:FULL LOAD Ta:25°C	-0.01% ~ +0.06%	P
4	LOAD REGULATION	-0.5% ~ +0.5% (Max)	I/P:12VDC O/P:10% LOAD-FULL LOAD Ta:25°C	-0.1% ~ +0.1%	P

**INPUT FUNCTION TEST**

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	EFFICIENCY	80 % (Typ)	I/P:12VDC O/P:FULL LOAD Ta:25°C	81.30%	P
2	DC CURRENT	211 mA / FULL LOAD (Max) 32 mA / NO LOAD (Max)	I/P:12VDC O/P:NO / FULL LOAD Ta:25°C	204mA / FULL LOAD 31mA / NO LOAD	P

**PROTECTION FUNCTION TEST**

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	OVER LOAD PROTECTION	YES	I/P:12VDC O/P:TESTING Ta:25°C	184%	P
2	SHORT PROTECTION	CONTINUOUS	I/P:18VDC O/P:FULL LOAD Ta:25°C	CONTINUOUS	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	<table border="1" data-bbox="651 1055 1147 1149"> <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>34.1°C</td> <td>94.1°C</td> </tr> </tbody> </table>	NO	Position	1	2	1	CASE	34.1°C	94.1°C		P
NO	Position	1	2										
1	CASE	34.1°C	94.1°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-KDBK-217F NOTICE 1 PARTS COUNT TOTAL FAILURE RATE : 0.312 M.T.B.F : 3207678 HRS			P

TEST RESULT	TESTER	APPROVAL
PASS	PETER CHENG	VINCENT ZENG