



# Test Report : SBTN01M-05N

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1W SMD 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

Other test

**DESIGN VERIFY TEST**
**OUTPUT FUNCTION TEST**

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDITC
1	VOLTAGE ACCURACY	-5.0% ~ +5.0 %	I/P:12VDC O/P:FULL LOAD Ta:25°C	-2.27%	P
2	RIPPLE & NOISE	100 mVp-p	I/P:12VDC O/P:FULL LOAD Ta:25°C	35 mV	P
3	LINE REGULATION	-12% ~ +12%	I/P:10.8VDC~13.2VDC O/P:FULL LOAD Ta:25°C	-12.63% ~ -12.66%	P
4	LOAD REGULATION	-15% ~ +15%	I/P:12VDC O/P:10% LOAD~FULL LOAD Ta:25°C	-4.38% ~ +4.58%	P

**INPUT FUNCTION TEST**

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDITC
1	EFFICIENCY	73% (Typ)	I/P:12VDC O/P:FULL LOAD Ta:25°C	73.35%	P
2	DC CURRENT	112 mA / FULL LOAD 12 mA / NO LOAD	I/P:12VDC O/P:NO / FULL LOAD Ta:25°C	111.4 mA / FULL LOAD 10.5 mA / NO LOAD	P

**PROTECTION FUNCTION TEST**

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDITC
1	SHORT PROTECTION	0.5 second 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	VERDITC
1	WITHSTAND VOLTAGE	I/P-O/P:2K VDC/min	I/P-O/P:2K VDC/min Ta:25°C	I/P-O/P: 0.002mA NO DAMAGE	P
2	ISOLATION RESISTANCE	I/P-O/P:500VDC>10GΩ	I/P-O/P:500 VDC Ta:25°C	I/P-O/P>10GΩ NO DAMAGE	P

**RELIABILITY TEST**
**ENVIRONMENT TEST**

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDITC												
1	TEMPERATURE RISE TEST	1. ROOM AMBIENT BURN-IN : 4HRS I/P:12VDC O/P:FULL LOAD Ta=25°C 2. HIGH AMBIENT BURN-IN : 4HRS I/P:12VDC O/P:FULL LOAD Ta=85°C 3. HIGH AMBIENT BURN-IN : 4HRS I/P:12VDC O/P:60% LOAD Ta=95°C			P												
		<table border="1"> <thead> <tr> <th>NO</th> <th>Position</th> <th>P/N</th> <th>1</th> <th>2</th> <th>3</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>CASE</td> <td>CENTER</td> <td>39.6°C</td> <td>97.4°C</td> <td>102.9°C</td> </tr> </tbody> </table>				NO	Position	P/N	1	2	3	1	CASE	CENTER	39.6°C	97.4°C	102.9°C
NO	Position	P/N	1	2	3												
1	CASE	CENTER	39.6°C	97.4°C	102.9°C												
2	LOW TEMPERATURE TURN ON TEST	TURN ON AFTER 4 HOURS	I/P:12VDC O/P: FULL LOAD Ta= -40°C	TEST : OK	P												

**OTHER**

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDITC
1	MTBF	MIL-HDBK-217F,GB,25°C TOTAL FAILURE RATE : 1.04712 M.T.B.F : 995 KHRS			P

TEST RESULT	TESTER	APPROVAL
PASS	ARCHEN HSIAO	PETER CHENG