



# Test Report : SBTN01M-09

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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	VERDICT
1	VOLTAGE ACCURACY	-2%~+2%	I/P:12VDC O/P:FULL LOAD Ta:25°C	+0.13%	P
2	RIPPLE & NOISE	75mVp-p (Max)	I/P:12VDC O/P:FULL LOAD Ta:25°C	13mVp-p	P
3	LINE REGULATION	-12% ~ +12% (Max)	I/P:10.8VDC ~13.2VDC O/P:FULL LOAD Ta:25°C	-11.31% ~ +11.38%	P
4	LOAD REGULATION	-8% ~ +8% (Max)	I/P:12VDCC O/P:FULL ~MIN LOAD Ta:25°C	-1.88 ~ +2.41%	P

### INPUT FUNCTION TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	EFFICIENCY	78%	I/P:12VDC O/P:FULL LOAD Ta:25°C	78.56%	P
2	DC CURRENT	107mA FULL LOAD 14mA NO LOAD	I/P:12VDC O/P:FULL LOAD Ta:25°C	106mA 13mA	P

### PROTECTION FUNCTION TEST

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

## SAFETY TEST

### SAFETY TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	WITHSTAND VOLTAGE	I/P-O/P:1.5KVDC/min	I/P-O/P:1.5KVDC/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:500VDC 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 : 4HRS I/P:12 VDC O/P:100% LOAD Ta=25°C 2. HI AMBIENT BURN-IN : 10HRS I/P: 12 VDC O/P:100% 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>36.2°C</td> <td>96.2°C</td> </tr> </tbody> </table>		NO	Position	P/N	1	2	1	CASE	CENTER	36.2°C	96.2°C		
NO	Position	P/N	1	2											
1	CASE	CENTER	36.2°C	96.2°C											
2	LOW TEMPERATURE TURN ON TEST	TURN ON AFTER 2 HOURS	I/P : 12DC O/P : 100% LOAD Ta= -40°C	TEST : OK	P										

**OTHER**

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	MTBF	MIL-KDBK-217F NOTICES 2 PARTS COUNT TOTAL FAILURE RATE : 1.13390 M.T.B.F : 881914.32 HRS			P

TEST RESULT	TESTER	APPROVAL
PASS	ARCHEN	VINCENT ZENG