



Test Report : SBTN01L-15

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:5VDC O/P:FULL LOAD Ta:25°C | -0.05% | P |
| 2 | RIPPLE & NOISE | 75mVp-p (Max) | I/P:5VDC O/P:FULL LOAD Ta:25°C | 55mVp-p | P |
| 3 | LINE REGULATION | -12% ~ +12% (Max) | I/P:4.5VDC ~5.5VDC O/P:FULL LOAD Ta:25°C | -11.05% ~ +10.99% | P |
| 4 | LOAD REGULATION | -8% ~ +8% (Max) | I/P:5VDCC O/P:FULL ~MIN LOAD Ta:25°C | -2.73% ~ +2.63% | P |

INPUT FUNCTION TEST

| NO | TEST ITEM | SPECICATION | TEST CONDITION | RESULT | VERDICT |
|----|------------|---------------------------------|--------------------------------------|---------------|---------|
| 1 | EFFICIENCY | 79% | I/P:5VDC O/P:FULL LOAD Ta:25°C | 80.75% | P |
| 2 | DC CURRENT | 253mA FULL LOAD 30mA NO LOAD | I/P:5VDC O/P:FULL LOAD Ta:25°C | 247mA 28mA | P |

PROTECTION FUNCTION TEST

| NO | TEST ITEM | SPECICATION | TEST CONDITION | RESULT | VERDICT |
|----|------------------|-------------|--|-----------|---------|
| 1 | SHORT PROTECTION | MOMENTARY | I/P:5.5VDC 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:5 VDC O/P:100% LOAD Ta=25°C 2. HI AMBIENT BURN-IN : 10HRS I/P:5 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>37.8°C</td> <td>97.8°C</td> </tr> </tbody> </table> | | NO | Position | P/N | 1 | 2 | 1 | CASE | CENTER | 37.8°C | 97.8°C | | |
| NO | Position | P/N | 1 | 2 | | | | | | | | | | | |
| 1 | CASE | CENTER | 37.8°C | 97.8°C | | | | | | | | | | | |
| 2 | LOW TEMPERATURE TURN ON TEST | TURN ON AFTER 2 HOURS | I/P : 5VDC 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 |