



# Test Report : SBTN01N-12N

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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

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:24VDC<br>O/P:FULL LOAD<br>Ta:25°C           | -0.13%            | P       |
| 2  | RIPPLE & NOISE   | 100 mVp-p      | I/P:24VDC<br>O/P:FULL LOAD<br>Ta:25°C           | 42 mV             | P       |
| 3  | LINE REGULATION  | -12% ~ +12%    | I/P:21.6VDC~26.4VDC<br>O/P:FULL LOAD<br>Ta:25°C | -10.82% ~ -10.91% | P       |
| 4  | LOAD REGULATION  | -15% ~ +15%    | I/P:24VDC<br>O/P:10% LOAD~FULL LOAD<br>Ta:25°C  | -1.20% ~ +1.73%   | P       |

**INPUT FUNCTION TEST**

| NO | TEST ITEM  | SPECICATION                          | TEST CONDITION                             | RESULT                                   | VERDITC |
|----|------------|--------------------------------------|--|--|---------|
| 1  | EFFICIENCY | 80% (Typ)                            | I/P:24VDC<br>O/P:FULL LOAD<br>Ta:25°C      | 80.01%                                   | P       |
| 2  | DC CURRENT | 54 mA / FULL LOAD<br>11 mA / NO LOAD | I/P:24VDC<br>O/P:NO / FULL LOAD<br>Ta:25°C | 52.47 mA / FULL LOAD<br>8.1 mA / NO LOAD | P       |

**PROTECTION FUNCTION TEST**

| NO | TEST ITEM        | SPECICATION     | TEST CONDITION                          | RESULT | VERDITC |
|----|------------------|-----------------|---|--------|---------|
| 1  | SHORT PROTECTION | 0.5 second max. | I/P:26.4VDC<br>O/P:FULL LOAD<br>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<br>Ta:25°C | I/P-O/P: 0.002mA<br>NO DAMAGE | P       |
| 2  | ISOLATION RESISTANCE | I/P-O/P:500VDC>10GΩ | I/P-O/P:500 VDC<br>Ta:25°C    | I/P-O/P>10GΩ<br>NO DAMAGE     | P       |

**■ RELIABILITY TEST****OTHER**

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

| TEST RESULT | TESTER              | APPROVAL           |
|-------------|---------------------|--------------------|
| <b>PASS</b> | <b>ARCHEN HSIAO</b> | <b>PETER CHENG</b> |