



# Test Report : SFTN01N-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

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 % (Max) | I/P:24VDC<br>O/P:FULL LOAD<br>Ta:25°C           | -0.10%            | P       |
| 2  | RIPPLE & NOISE   | 100 mVp-p (Max)      | I/P:24VDC<br>O/P:FULL LOAD<br>Ta:25°C           | 70 mV             | P       |
| 3  | LINE REGULATION  | -12% ~ +12% (Max)    | I/P:21.6VDC~26.4VDC<br>O/P:FULL LOAD<br>Ta:25°C | -10.89% ~ +10.87% | P       |
| 4  | LOAD REGULATION  | -8% ~ +8% (Max)      | I/P:24VDC<br>O/P:10% LOAD~FULL LOAD<br>Ta:25°C  | -1.16% ~ +1.71%   | 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      | 82.33%                                    | P       |
| 2  | DC CURRENT | 55 mA / FULL LOAD (Max)<br>10 mA / NO LOAD (Max) | I/P:24VDC<br>O/P:NO / FULL LOAD<br>Ta:25°C | 50.72 mA / FULL LOAD<br>6.51 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:3K VDC/min  | I/P-O/P:3K 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**
**ENVIRONMENT TEST**

| NO | TEST ITEM                    | SPECICATION   | TEST CONDITION                           | RESULT    | VERDITC |    |          |     |   |   |   |   |      |        |        |        |         |
|----|------------------------------|---|--|-----------|---------|----|----------|-----|---|---|---|---|------|--------|--------|--------|---------|
| 1  | TEMPERATURE RISE TEST        | 1. ROOM AMBIENT BURN-IN : 4HRS<br>I/P:24VDC O/P:FULL LOAD Ta=25°C<br>2. HIGH AMBIENT BURN-IN : 4HRS<br>I/P:24VDC O/P:FULL LOAD Ta=85°C<br>3. HIGH AMBIENT BURN-IN : 4HRS<br>I/P:24VDC 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>35.1°C</td> <td>92.5°C</td> <td>101.3°C</td> </tr> </tbody> </table> |  |           |         | NO | Position | P/N | 1 | 2 | 3 | 1 | CASE | CENTER | 35.1°C | 92.5°C | 101.3°C |
| NO | Position                     | P/N   | 1  | 2         | 3       |    |          |     |   |   |   |   |      |        |        |        |         |
| 1  | CASE                         | CENTER  | 35.1°C                                   | 92.5°C    | 101.3°C |    |          |     |   |   |   |   |      |        |        |        |         |
| 2  | LOW TEMPERATURE TURN ON TEST | TURN ON AFTER 4 HOURS   | I/P:24VDC<br>O/P: FULL LOAD<br>Ta= -40°C | TEST : OK | P       |    |          |     |   |   |   |   |      |        |        |        |         |

**OTHER**

| NO | TEST ITEM | SPECICATION  | TEST CONDITION | RESULT | VERDITC |
|----|-----------|--|----------------|--------|---------|
| 1  | MTBF      | MIL-HDBK-217F,GB,25°C<br>TOTAL FAILURE RATE : 0.95693<br>M.T.B.F : 1045 KHRS |                |        | P       |

| TEST RESULT | TESTER       | APPROVAL    |
|-------------|--------------|-------------|
| PASS        | ARCHEN HSIAO | PETER CHENG |