



# Test Report : SCWN06W8-03

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6W DIP Package 8:1 wide Input DC-DC Converter

## ■ DESIGN VERIFY TEST

Output Function Test

Input Function Test

Protection Function Test

## ■ SAFETY TEST

Safety test

## ■ RELIABILITY TEST

Environment Test

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

| NO | TEST ITEM        | SPECICATION    | TEST CONDITION                                | RESULT          | VERDICT |
|----|------------------|----------------|---|-----------------|---------|
| 1  | VOLTAGE ACCURACY | -2.0% ~ +2.0 % | I/P:48VDC<br>O/P:FULL LOAD<br>Ta:25°C         | -0.80%          | P       |
| 2  | RIPPLE & NOISE   | 100 mVp-p      | I/P:48VDC<br>O/P:FULL LOAD<br>Ta:25°C         | 9 mV            | P       |
| 3  | LINE REGULATION  | -0.5% ~ +0.5 % | I/P:9VDC~75VDC<br>O/P:FULL LOAD<br>Ta:25°C    | -0.13% ~ -0.13% | P       |
| 4  | LOAD REGULATION  | -0.5% ~ +0.5%  | I/P:48VDC<br>O/P:0% LOAD~FULL LOAD<br>Ta:25°C | -0.43% ~ +0.47% | P       |

**INPUT FUNCTION TEST**

| NO | TEST ITEM  | SPECICATION                          | TEST CONDITION                             | RESULT                                   | VERDICT |
|----|------------|--------------------------------------|--|--|---------|
| 1  | EFFICIENCY | 75%                                  | I/P:48VDC<br>O/P:FULL LOAD<br>Ta:25°C      | 75.83%                                   | P       |
| 2  | DC CURRENT | 110 mA / FULL LOAD<br>5 mA / NO LOAD | I/P:48VDC<br>O/P:NO / FULL LOAD<br>Ta:25°C | 107.0 mA / FULL LOAD<br>3.4 mA / NO LOAD | P       |

**PROTECTION FUNCTION TEST**

| NO | TEST ITEM               | SPECICATION                                 | TEST CONDITION                          | RESULT                                  | VERDICT |
|----|-------------------------|---|---|---|---------|
| 1  | SHORT PROTECTION        | CONTINUOUS                                  | I/P:75VDC<br>O/P:FULL LOAD<br>Ta:25°C   | CONTINUOUS,<br>AUTOMATIC RECOVERY       | P       |
| 2  | OVER LOAD PROTECTION    | 110~230%                                    | I/P:48VDC<br>O/P:TESTING<br>Ta:25°C     | 141.2%<br>HICCUP MODE<br>AUTO-RECOVER   | P       |
| 3  | CASE TEMPERATURE        | +115°C max                                  | I/P:48VDC<br>O/P:TESTING<br>Ta: TESTING | OK<br>AUTOMATIC RECOVERY                | P       |
| 4  | OVER VOLTAGE PROTECTION | YES   | I/P: 48VDC<br>O/P: MIN LOAD<br>Ta:25°C  | PROTECTION TYPE :<br>CLAMP ZEBER DIODES | P       |
| 5  | UNDER VOLTAGE LOCKOUT   | START-UP 8.8V<br>SHUTDOWN OLTAGE 8.0V(Type) | I/P:TESTING<br>O/P:FULL LOAD<br>Ta:25°C | 8.16 VDC<br>7.60 VDC                    | P       |

## SAFETY TEST

### SAFETY TEST

| NO | TEST ITEM            | SPECICATION          | TEST CONDITION                  | RESULT                        | VERDICT |
|----|----------------------|----------------------|---------------------------------|-------------------------------|---------|
| 1  | WITHSTAND VOLTAGE    | I/P-O/P:3000 VDC/min | I/P-O/P:3000 VDC/min<br>Ta:25°C | I/P-O/P: 0.002mA<br>NO DAMAGE | P       |
| 2  | ISOLATION RESISTANCE | I/P-O/P:500VDC>100MΩ | I/P-O/P:500 VDC<br>Ta:25°C      | I/P-O/P>100MΩ<br>NO DAMAGE    | P       |

## RELIABILITY TEST

### ENVIRONMENT TEST

| NO | TEST ITEM                    | SPECICATION   | TEST CONDITION                           | RESULT    |    |          |   |   |   |   |      |        |         |         |
|----|------------------------------|---|--|-----------|----|----------|---|---|---|---|------|--------|---------|---------|
| 1  | TEMPERATURE RISE TEST        | 1. ROOM AMBIENT BURN-IN : 4HRS<br>I/P:48VDC O/P:FULL LOAD Ta=25°C<br>2. HIGH AMBIENT BURN-IN : 4HRS<br>I/P:48VDC O/P:FULL LOAD Ta=80°C<br>3. HIGH AMBIENT BURN-IN : 4HRS<br>I/P:48VDC O/P:50% LOAD Ta=95°C                    |  |           |    |          |   |   |   |   |      |        |         |         |
|    |                              | <table border="1"> <thead> <tr> <th>NO</th> <th>Position</th> <th>1</th> <th>2</th> <th>3</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>CASE</td> <td>54.0°C</td> <td>103.9°C</td> <td>110.6°C</td> </tr> </tbody> </table> |  |           | NO | Position | 1 | 2 | 3 | 1 | CASE | 54.0°C | 103.9°C | 110.6°C |
| NO | Position                     | 1   | 2  | 3         |    |          |   |   |   |   |      |        |         |         |
| 1  | CASE                         | 54.0°C  | 103.9°C                                  | 110.6°C   |    |          |   |   |   |   |      |        |         |         |
| 2  | LOW TEMPERATURE TURN ON TEST | TURN ON AFTER 4 HOURS   | I/P:48VDC<br>O/P: FULL LOAD<br>Ta= -40°C | TEST : OK |    |          |   |   |   |   |      |        |         |         |

### OTHER

| NO | TEST ITEM | SPECICATION  | TEST CONDITION | RESULT |
|----|-----------|--|----------------|--------|
| 1  | MTBF      | MIL-HDBK-217F,GB,25°C<br>TOTAL FAILURE RATE : 2.5<br>M.T.B.F : 400KHRS |                |        |

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