



Test Report : DCWN06A-15

6W DIP Package DC-DC Regulated Converter

■ DESIGN VERIFY TEST

Output Function Test

Input Function Test

Protection Function Test

■ SAFETY TEST

Safety Test

■ RELIABILITY TEST

Environment Test

Other

DESIGN VERIFY TEST

OUTPUT FUNCTION TEST

| NO | TEST ITEM | SPECICATION | TEST CONDITION | RESULT | VERDICT |
|----|------------------|-----------------------|--|--|---------|
| 1 | VOLTAGE ACCURACY | -1.5 % ~ +1.5 % (Max) | I/P:12VDC O/P:FULL LOAD Ta:25°C | V1: -0.38 % V2: +0.05% | P |
| 2 | RIPPLE & NOISE | 50 mVp-p (Max) | I/P:12VDC O/P:FULL LOAD Ta:25°C | V1: 20mV V2: 20mV | P |
| 3 | LINE REGULATION | -0.5% ~ +0.5% (Max) | I/P:9VDC-18VDC O/P:FULL LOAD Ta:25°C | V1: -0.04% ~ +0.01% V2: -0.05% ~ +0.01% | P |
| 4 | LOAD REGULATION | -1.0% ~ +1.0% (Max) | I/P:12VDC O/P:25% LOAD-FULL LOAD Ta:25°C | V1: -0.01% ~ +0.09% V2: -0.05% ~ +0.01% | P |

INPUT FUNCTION TEST

| NO | TEST ITEM | SPECICATION | TEST CONDITION | RESULT | VERDICT |
|----|---------------------|---|--|---|---------|
| 1 | INPUT VOLTAGE RANGE | 9 VDC ~18 VDC | I/P:TESTING O/P:FULL LOAD Ta:25°C | 8.09VDC ~18.0 VDC | P |
| 2 | EFFICIENCY | 84 % (Typ) | I/P:12VDC O/P:FULL LOAD Ta:25°C | 84.0% | P |
| 3 | DC CURRENT | 600 mA / FULL LOAD (Max) 18 mA / NO LOAD (Max) | I/P:12VDC O/P:NO / FULL LOAD Ta:25°C | 594.8 mA / FULL LOAD 14.4 mA / NO LOAD | P |

PROTECTION FUNCTION TEST

| NO | TEST ITEM | SPECICATION | TEST CONDITION | RESULT | VERDICT |
|----|-----------------------|------------------------------------|---------------------------------------|--|---------|
| 1 | SHORT PROTECTION | CONTINUOUS | I/P:18VDC O/P:FULL LOAD Ta:25°C | HICCUP MODE AUTO-RECOVER | P |
| 2 | OVER LOAD PROTECTION | 120% ~250% | I/P:12VDC O/P:TESTING Ta:25°C | 162.8% HICCUP MODE AUTO-RECOVER | P |
| 3 | Under Voltage Lockout | Power Up 8.8Vdc Power Down 8Vdc | I/P:12VDC O/P:NO LOAD Ta:25°C | Power Up 8.73Vdc Power Down 8.09Vdc | P |

SAFETY TEST

SAFETY TEST

| NO | TEST ITEM | SPECICATION | TEST CONDITION | RESULT | VERDICT |
|----|----------------------|----------------------|-------------------------------|--------------------------------|---------|
| 1 | WITHSTAND VOLTAGE | I/P-O/P:3K VDC/min | I/P-O/P:3K VDC/min Ta:25°C | I/P-O/P: 0.002 mA NO DAMAGE | P |
| 2 | ISOLATION RESISTANCE | I/P-O/P:500VDC>100MΩ | I/P-O/P:500 VDC 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 : 8HRS I/P:12VDC O/P:FULL LOAD Ta=25°C 2. HIGH AMBIENT BURN-IN : 8HRS I/P:12VDC O/P:FULL LOAD Ta=80°C | | | P | | | | | | | | |
| | | <table border="1"> <thead> <tr> <th>NO</th> <th>Position</th> <th>1</th> <th>2</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>CASE</td> <td>51.1°C</td> <td>104.4°C</td> </tr> </tbody> </table> | | NO | Position | 1 | 2 | 1 | CASE | 51.1°C | 104.4°C | | |
| NO | Position | 1 | 2 | | | | | | | | | | |
| 1 | CASE | 51.1°C | 104.4°C | | | | | | | | | | |
| 2 | LOW TEMPERATURE TURN ON TEST | TURN ON AFTER 2 HOURS | I/P:12VDC O/P: FULL LOAD Ta= -40°C | TEST : OK | P | | | | | | | | |

OTHER

| NO | TEST ITEM | SPECICATION | TEST CONDITION | RESULT | VERDICT |
|----|-----------|---|----------------|--------|---------|
| 1 | MTBF | MIL-HDBK-217F,GB,25°C TOTAL FAILURE RATE : 0.563 M.T.B.F : 1776277HRS | | | P |

| TEST RESULT | TESTER | APPROVAL |
|-------------|--------------|--------------|
| PASS | ARCHEN HSIAO | VINCENT ZENG |