



Test Report : DLC03A-05

3W 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

DESIGN VERIFY TEST
OUTPUT FUNCTION TEST

| NO | TEST ITEM | SPECICATION | TEST CONDITION | RESULT | VERDICT |
|----|------------------|-----------------------|--|--|---------|
| 1 | VOLTAGE ACCURACY | -2 % ~ +2 % (Max) | I/P:12VDC O/P:FULL LOAD Ta:25°C | V1 -1.20 % V2 -0.96 % | P |
| 2 | RIPPLE & NOISE | 50 mVp-p (Max) | I/P:12VDC O/P:FULL LOAD Ta:25°C | V1 27.7 mv V2 16.7 mv | P |
| 3 | LINE REGULATION | -0.2 % ~ +0.2 % (Max) | I/P:9VDC-18VDC O/P:FULL LOAD Ta:25°C | V1 +0.02 % ~ +0.01 % V2 -0.02 % ~ +0.02 % | P |
| 4 | LOAD REGULATION | -0.5 % ~ +0.5 % (Max) | I/P:12VDC O/P:MIN-FULL LOAD Ta:25°C | V1 -0.1 % ~ +0.04 % V2 -0.02 % ~ +0.02 % | P |

INPUT FUNCTION TEST

| NO | TEST ITEM | SPECICATION | TEST CONDITION | RESULT | VERDICT |
|----|------------|---|--|---|---------|
| 1 | EFFICIENCY | 79 % (Typ) | I/P:12VDC O/P:FULL LOAD Ta:25°C | 80.49 % | P |
| 2 | DC CURRENT | 325 mA / FULL LOAD (Max) 30 mA / NO LOAD (Max) | I/P:12VDC O/P:NO / FULL LOAD Ta:25°C | 320.48 mA / FULL LOAD 25.05 mA / NO LOAD | P |

PROTECTION FUNCTION TEST

| NO | TEST ITEM | SPECICATION | TEST CONDITION | RESULT | VERDICT |
|----|----------------------|-----------------|---------------------------------------|-----------------|---------|
| 1 | OVER LOAD PROTECTION | 150%-250% (typ) | I/P:12VDC O/P:TESTING Ta:25°C | 220% | P |
| 2 | SHORT PROTECTION | CONTINUOUS | I/P:18VDC O/P:FULL LOAD Ta:25°C | NO DAMAGE OK | P |

SAFETY TEST
SAFETY TEST

| NO | TEST ITEM | SPECICATION | TEST CONDITION | RESULT | VERDICT |
|----|----------------------|----------------------|---------------------------------|-------------------------------|---------|
| 1 | WITHSTAND VOLTAGE | I/P-O/P:1500 VDC/min | I/P-O/P:1500 VDC/min Ta:25°C | I/P-O/P: 0.002mA 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 : 12HRS I/P:12VDC O/P:FULL LOAD Ta=25°C 2. HIGH AMBIENT BURN-IN : 12HRS I/P:12VDC O/P:FULL LOAD Ta=71°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>54.8°C</td> <td>97.3°C</td> </tr> </tbody> </table> | | NO | Position | 1 | 2 | 1 | CASE | 54.8°C | 97.3°C | | |
| NO | Position | 1 | 2 | | | | | | | | | | |
| 1 | CASE | 54.8°C | 97.3°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,NOTICE 2 ,PARTS COUNT TOTAL FAILURE RATE : 3.31777 M.T.B.F : 301407 HRS | | | P |

| TEST RESULT | TESTER | APPROVAL |
|-------------|------------|--------------|
| PASS | ALROY WANG | VINCENT ZENG |