



# Test Report : DCWN03C-12

---

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	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	VOLTAGE ACCURACY	-1.5 % ~ +1.5 % (Max)	I/P:48VDC O/P:FULL LOAD Ta:25°C	V1 +0.07 % V2 +0.15 %	P
2	RIPPLE & NOISE	50 mVp-p (Max)	I/P:48VDC O/P:FULL LOAD Ta:25°C	V1 20.8 mV V2 21.6 mV	P
3	LINE REGULATION	-0.5% ~ +0.5% (Max)	I/P:36VDC~75VDC O/P:FULL LOAD Ta:25°C	V1 -0.002% ~ +0.019% V2 -0.016% ~ +0.011%	P
4	LOAD REGULATION	-1.0% ~ +1.0% (Max)	I/P:48VDC O/P:25% LOAD~FULL LOAD Ta:25°C	V1 -0.020 % ~ +0.020 % V2 -0.001 % ~ +0.001 %	P

### INPUT FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	EFFICIENCY	87 % (Typ)	I/P:48VDC O/P:FULL LOAD Ta:25°C	87.3 %	P
2	DC CURRENT	73 mA / FULL LOAD (Max) 5 mA / NO LOAD (Max)	I/P:48VDC O/P:NO / FULL LOAD Ta:25°C	72 mA / FULL LOAD 2.8 mA / NO LOAD	P

### PROTECTION FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	OVER LOAD PROTECTION	120%~250% LOAD (Typ)	I/P:48VDC O/P:TESTING Ta:25°C	178 %	P
2	INPUT UNDER VOLTAGE PROTECTION	POWER DOWN 31V (Typ) POWER UP 34V (Typ)	I/P:TESTING O/P: 10% LOAD Ta:25°C	POWER DOWN:30.9V POWER UP:32.3V	P
3	SHORT PROTECTION	CONTINUOUS	I/P:72VDC 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:3000 VDC/min	I/P-O/P:3000 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:48VDC O/P:FULL LOAD Ta=25°C 2. HIGH AMBIENT BURN-IN : 12HRS I/P:48VDC O/P:FULL LOAD Ta=85°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>37.2°C</td> <td>88.0°C</td> </tr> </tbody> </table>		NO	Position	1	2	1	CASE	37.2°C	88.0°C		
NO	Position	1	2										
1	CASE	37.2°C	88.0°C										
2	LOW TEMPERATURE TURN ON TEST	TURN ON AFTER 2 HOURS	I/P:48VDC 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 : 0.437 M.T.B.F : 2,288,104 HRS			P

TEST RESULT	TESTER	APPROVAL
PASS	ALROY WANG	VINCENT ZENG