



Test Report : DCWN03A-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:12VDC O/P:FULL LOAD Ta:25°C	V1 -0.25 % V2 -0.32 %	P
2	RIPPLE & NOISE	50 mVp-p (Max)	I/P:12VDC O/P:FULL LOAD Ta:25°C	V1 14.8 mV V2 12.8 mV	P
3	LINE REGULATION	-0.5% ~ +0.5% (Max)	I/P:9VDC-18VDC O/P:FULL LOAD Ta:25°C	V1 -0.011% ~ +0.019% V2 -0.008%~ +0.017%	P
4	LOAD REGULATION	-1.0% ~ +1.0% (Max)	I/P:12VDC O/P:25% LOAD-FULL LOAD Ta:25°C	V1 -0.01 % ~ +0.01 % V2 -0.01 % ~ +0.01 %	P

INPUT FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	EFFICIENCY	84 % (Typ)	I/P:12VDC O/P:FULL LOAD Ta:25°C	87.4 %	P
2	DC CURRENT	298 mA / FULL LOAD (Max) 12 mA / NO LOAD (Max)	I/P:12VDC O/P:NO / FULL LOAD Ta:25°C	285 mA / FULL LOAD 9.4 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:12VDC O/P:TESTING Ta:25°C	180 %	P
2	INPUT UNDER VOLTAGE PROTECTION	POWER DOWN 8.0V (Typ) POWER UP 8.8V (Typ)	I/P:TESTING O/P: 10% LOAD Ta:25°C	POWER DOWN:8.0V POWER UP:8.4V	P
3	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: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:12VDC O/P:FULL LOAD Ta=25°C 2. HIGH AMBIENT BURN-IN : 12HRS I/P:12VDC 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>35.0°C</td> <td>88.6°C</td> </tr> </tbody> </table>		NO	Position	1	2	1	CASE	35.0°C	88.6°C		
NO	Position	1	2										
1	CASE	35.0°C	88.6°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 : 0.439 M.T.B.F : 2,278,589 HRS			P

TEST RESULT	TESTER	APPROVAL
PASS	ALROY WANG	VINCENT ZENG