



Test Report : DCW12W8-15

12W DIP Package 8:1 Ultra-Wide Input 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	-2.0% ~ +2.0%	I/P:24VDC O/P:FULL LOAD Ta:25°C	V1: -0.75% V2: -0.77%	P
2	RIPPLE & NOISE	100 mVp-p	I/P:24VDC O/P:FULL LOAD Ta:25°C	V1: 11 mV V2: 11 mV	P
3	LINE REGULATION	-0.5% ~ +0.5%	I/P:9VDC~75VDC O/P:FULL LOAD Ta:25°C	V1: +0.02% ~ +0.03% V2: +0.01% ~ +0.05%	P
4	LOAD REGULATION	-0.5% ~ +0.5%	I/P:24VDC O/P:0% LOAD~FULL LOAD Ta:25°C	V1: -0.01% ~ +0.04% V2: -0.03% ~ +0.02%	P
5	CROSS REGULATION	-5% ~ +5.0%	I/P:24VDC O/P:25%~FULL LOAD Ta:25°C	V1: +0.66% V2: +0.71%	P

INPUT FUNCTION TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	EFFICIENCY	86%	I/P:24VDC O/P:FULL LOAD Ta:25°C	86.82%	P
2	DC CURRENT	575 mA / FULL LOAD 10 mA / NO LOAD	I/P:24VDC O/P:NO / FULL LOAD Ta:25°C	569.0 mA / FULL LOAD 9.1 mA / NO LOAD	P

PROTECTION FUNCTION TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	SHORT PROTECTION	CONTINUOUS	I/P:75VDC O/P:FULL LOAD Ta:25°C	CONTINUOUS, AUTOMATIC RECOVERY	P
2	OVER LOAD PROTECTION	110~230%	I/P:24VDC O/P:TESTING Ta:25°C	192.8% HICCUP MODE AUTO-RECOVER	P
3	CASE TEMPERATURE	+110°C max	I/P:24VDC O/P:TESTING Ta: TESTING	OK AUTOMATIC RECOVERY	P
4	OVER VOLTAGE PROTECTION	YES	I/P: 24VDC O/P: MIN LOAD Ta:25°C	PROTECTION TYPE : CLAMP BY TVS DIODE	P
5	UNDER VOLTAGE LOCKOUT	START-UP 8.8V SHUTDOWN OLTA GE 8.0V(Type)	I/P:TESTING O/P:FULL LOAD Ta:25°C	8.52 VDC 8.05 VDC	P

CONTROL FUNCTION TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	REMOTE CONTROL	POWER ON : R.C. ~ -VIN >2.5~30VDC OR OPEN CIRCUIT POWER OFF : R.C. ~ -VIN <1VDC OR SHORT	I/P:24VDC O/P:100% LOAD Ta:25℃	POWER ON : R.C>1.44 OR OPEN POWER OFF : R.C.<1.39VDC OR SHORT	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℃	I/P-O/P: 0.002mA NO DAMAGE	P
2	ISOLATION RESISTANCE	I/P-O/P:500VDC>1000MΩ	I/P-O/P:500 VDC Ta:25℃	I/P-O/P>1000MΩ NO DAMAGE	P

RELIABILITY TEST

ENVIRONMENT TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT										
1	TEMPERATURE RISE TEST	1. ROOM AMBIENT BURN-IN : 4HRS I/P:24VDC O/P:FULL LOAD Ta=25℃ 2. HIGH AMBIENT BURN-IN : 4HRS I/P:24VDC O/P:FULL LOAD Ta=70℃ 3. HIGH AMBIENT BURN-IN : 4HRS I/P:24VDC O/P:50% LOAD Ta=85℃	<table border="1"> <tr> <th>NO</th><th>Position</th><th>1</th><th>2</th><th>3</th></tr> <tr> <td>1</td><td>CASE</td><td>55.0℃</td><td>100.0℃</td><td>102.6℃</td></tr> </table>	NO	Position	1	2	3	1	CASE	55.0℃	100.0℃	102.6℃	
NO	Position	1	2	3										
1	CASE	55.0℃	100.0℃	102.6℃										
2	LOW TEMPERATURE TURN ON TEST	TURN ON AFTER 4 HOURS	I/P:24VDC O/P: FULL LOAD Ta= -40℃	TEST : OK										

OTHER

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT
1	MTBF	MIL-HDBK-217F,GB,25℃ TOTAL FAILURE RATE : 3.333 M.T.B.F : 300KHRS		

TEST RESULT	TESTER	APPROVAL
PASS	ARCHEN HSIAO	PETER CHENG