



Test Report : DCW20W8-15

20W 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	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	VOLTAGE ACCURACY	-2.0% ~ +2.0%	I/P:24VDC O/P:FULL LOAD Ta:25°C	V1: -0.70% V2: -0.70%	P
2	RIPPLE & NOISE	150 mVp-p	I/P:24VDC O/P:FULL LOAD Ta:25°C	V1: 24 mV V2: 24 mV	P
3	LINE REGULATION	-0.5% ~ +0.5%	I/P:9VDC~75VDC O/P:FULL LOAD Ta:25°C	V1: +0.01% ~ +0.01% V2: +0.01% ~ +0.01%	P
4	LOAD REGULATION	-0.5% ~ +0.5%	I/P:24VDC O/P:0% LOAD~FULL LOAD Ta:25°C	V1: -0.01% ~ -0.02% V2: -0.01% ~ -0.02%	P
5	CROSS REGULATION	-5% ~ +5.0%	I/P:24VDC O/P:25%~FULL LOAD Ta:25°C	V1: +0.99% V2: +0.99%	P

INPUT FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	EFFICIENCY	87%	I/P:24VDC O/P:FULL LOAD Ta:25°C	88.68%	P
2	DC CURRENT	958 mA / FULL LOAD 10 mA / NO LOAD	I/P:24VDC O/P:NO / FULL LOAD Ta:25°C	929.5 mA / FULL LOAD 9.5 mA / NO LOAD	P

PROTECTION FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	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	110~190%	I/P:24VDC O/P:TESTING Ta:25°C	173.35% 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(Type) SHUTDOWN OLTA GE 8.0V(Type)	I/P:TESTING O/P:FULL LOAD Ta:25°C	8.53 VDC 7.33 VDC	P

CONTROL FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	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°C	POWER ON : R.C.>1.99VDC OR OPEN POWER OFF : R.C.<1.54VDC OR SHORT	P

SAFETY TEST

SAFETY TEST

NO	TEST ITEM	SPECIFICATION	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>1000MΩ	I/P-O/P:500 VDC Ta:25°C	I/P-O/P>1000MΩ NO DAMAGE	P

RELIABILITY TEST

ENVIRONMENT TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT										
1	TEMPERATURE RISE TEST	1. ROOM AMBIENT BURN-IN : 4HRS I/P:24VDC O/P:FULL LOAD Ta=25°C 2. HIGH AMBIENT BURN-IN : 4HRS I/P:24VDC O/P:FULL LOAD Ta=50°C 3. HIGH AMBIENT BURN-IN : 4HRS I/P:24VDC O/P:50% LOAD Ta=80°C												
			<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>61.1°C</td><td>86.1°C</td><td>100.3°C</td></tr> </table>	NO	Position	1	2	3	1	CASE	61.1°C	86.1°C	100.3°C	
NO	Position	1	2	3										
1	CASE	61.1°C	86.1°C	100.3°C										
2	LOW TEMPERATURE TURN ON TEST	TURN ON AFTER 4 HOURS	I/P:24VDC O/P: FULL LOAD Ta= -40°C	TEST : OK										

OTHER

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT
1	MTBF	MIL-HDBK-217F,GB,25°C TOTAL FAILURE RATE : 1.72443 M.T.B.F : >570KHRS		

TEST RESULT	TESTER	APPROVAL
PASS	ARCHEN HSIAO	PETER CHENG