



Test Report : IQB150W8-05

150W Quarter Brick 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	-1.0% ~ +1.0%	I/P:48VDC O/P:FULL LOAD Ta:25°C	-0.27%	P
2	RIPPLE & NOISE	120 mVp-p	I/P:48VDC O/P:FULL LOAD Ta:25°C	35mV	P
3	LINE REGULATION	-0.2% ~ +0.2%	I/P:9VDC~75VDC O/P:FULL LOAD Ta:25°C	-0.04% ~ +0.05%	P
4	LOAD REGULATION	-0.5% ~ +0.5%	I/P:48VDC O/P:0% LOAD~FULL LOAD Ta:25°C	-0.35% ~ +0.38%	P

INPUT FUNCTION TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	EFFICIENCY	87%	I/P:48VDC O/P:FULL LOAD Ta:25°C	88.0%	P
2	DC CURRENT	2.39A / FULL LOAD 50mA / NO LOAD	I/P:48VDC O/P:NO / FULL LOAD Ta:25°C	2.355A / FULL LOAD 9.5mA / 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	120~200%	I/P:48VDC O/P:TESTING Ta:25°C	186.1% HICCUP MODE AUTO-RECOVER	P
3	CASE TEMPERATURE	+110°C max	I/P:48VDC O/P:TESTING Ta: TESTING	OK AUTOMATIC RECOVERY	P
4	OVER VOLTAGE PROTECTION	YES	I/P: 48VDC O/P: MIN LOAD Ta:25°C	PROTECTION TYPE : KEEP VOLTAGE	P
5	UNDER VOLTAGE LOCKOUT	START-UP 9.0V(Type) SHUTDOWN OLTAGE 7.0V(Type)	I/P:TESTING O/P:FULL LOAD Ta:25°C	8.72VDC 8.19 VDC	P

CONTROL FUNCTION TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	REMOTE CONTROL	POWER ON : R.C. ~ -VIN >3.0~12VDC OR OPEN CIRCUIT POWER OFF : R.C. ~ -VIN <1.2VDC OR SHORT	I/P:48VDC O/P:100% LOAD Ta:25°C	POWER ON : R.C.>1.74VDC OR OPEN POWER OFF : R.C.<1.54VDC OR SHORT	P
2	TRIM CONTROL	+10%~ -10% (Typ) Trim ~ +Vout Trim DOWN Trim ~ -Vout Trim UP Using 1M ohm VR	I/P:48VDC O/P:FULL LOAD Ta:25°C	Trim DOWN -10.34% Trim UP +9.71%	P

SAFETY TEST
SAFETY TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	WITHSTAND VOLTAGE	I/P-O/P:1.6KVAC/min I/P-CASE:1.0K VAC/min O/P-CASE:1.0K VAC/min	I/P-O/P:3.0KVAC/min I/P-CASE:1.5K VAC/min O/P-CASE:1.0K VAC/min Ta:25°C	I/P-O/P:0.002mA I/P-CASE:0.002mA O/P-CASE: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	SPECICATION	TEST CONDITION	RESULT
1	TEMPERATURE RISE TEST	Please refer to the derating curve in the specification.		
2	LOW TEMPERATURE TURN ON TEST	TURN ON AFTER 4 HOURS	I/P:48VDC O/P: FULL LOAD Ta= -40°C	TEST : OK

OTHER

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT
1	MTBF	MIL-HDBK-217F,GB,25°C TOTAL FAILURE RATE : 0.6666 M.T.B.F : >1,500KHRS		

TEST RESULT	TESTER	APPROVAL
PASS	ARCHEN HSIAO	PETER CHENG