



Test Report : SPBW03W8-03

3W SIP 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	-1.5% ~ +1.5 % (Max)	I/P:48VDC O/P:FULL LOAD Ta:25°C	-0.47%	P
2	RIPPLE & NOISE	50 mVp-p (Max)	I/P:48VDC O/P:FULL LOAD Ta:25°C	7 mV	P
3	LINE REGULATION	-0.5% ~ +0.5 %	I/P:9VDC~75VDC O/P:FULL LOAD Ta:25°C	+0.06% ~ -0.10%	P
4	LOAD REGULATION	-0.5% ~ +0.5%	I/P:48VDC O/P:0% LOAD~FULL LOAD Ta:25°C	-0.37% ~ +0.40%	P

INPUT FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	EFFICIENCY	78%	I/P:48VDC O/P:FULL LOAD Ta:25°C	78.36%	P
2	DC CURRENT	62 mA / FULL LOAD 6 mA / NO LOAD	I/P:48VDC O/P:NO / FULL LOAD Ta:25°C	60.8 mA / FULL LOAD 1.4 mA / NO LOAD	P
3	UNDER VOLTAGE LOCKOUT	START-UP 8.8V SHUTDOWN VOLTAGE 8.0V	I/P:TESTING O/P:FULL LOAD Ta:25°C	8.07 VDC 7.45 VDC	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	110~230%	I/P:48VDC O/P:TESTING Ta:25°C	158.6% 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 : CLAMP TVS DIODES	P

CONTROL FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	REMOTE CONTROL	POWER ON : R.C = OPEN CIRCUIT POWER OFF : R.C<R.C.~VIN<1.2VDC OR SHORT	I/P:48VDC O/P:100% LOAD Ta:25°C	POWER ON : R.C=OPEN POWER OFF : R.C<1.4VDC 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°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	SPECICATION	TEST CONDITION	RESULT																
1	TEMPERATURE RISE TEST	1. ROOM AMBIENT BURN-IN : 4HRS I/P:48VDC O/P:FULL LOAD Ta=25°C 2. HIGH AMBIENT BURN-IN : 4HRS I/P:48VDC O/P:FULL LOAD Ta=71°C 3. HIGH AMBIENT BURN-IN : 4HRS I/P:48VDC O/P:60% LOAD Ta=85°C 4. HIGH AMBIENT BURN-IN : 4HRS I/P:48VDC O/P:50% LOAD Ta=90°C <table><tr><th>NO</th><th>Position</th><th>1</th><th>2</th><th>3</th><th>4</th></tr><tr><td>1</td><td>CASE</td><td>52.5°C</td><td>93.6°C</td><td>99.3°C</td><td>102.1°C</td></tr></table>							NO	Position	1	2	3	4	1	CASE	52.5°C	93.6°C	99.3°C	102.1°C
NO	Position	1	2	3	4															
1	CASE	52.5°C	93.6°C	99.3°C	102.1°C															
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 : 0.54054 M.T.B.F : 1,850KHRS		

TEST RESULT	TESTER	APPROVAL
PASS	ARCHEN HSIAO	PETER CHENG