



Test Report : DCWN03W8-15

3W 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	-1.5% ~ +1.5 % (Max)	I/P:48VDC O/P:FULL LOAD Ta:25°C	V1: -0.57% V2: -0.56%	P
2	RIPPLE & NOISE	100 mVp-p (Max)	I/P:48VDC O/P:FULL LOAD Ta:25°C	V1: 6mV V2: 6mV	P
3	LINE REGULATION	-0.5% ~ +0.5 %	I/P:9VDC~75VDC O/P:FULL LOAD Ta:25°C	V1: -0.01% ~ +0.03% V2: -0.01% ~ +0.01%	P
4	LOAD REGULATION	-1.0% ~ +1.0%	I/P:48VDC O/P:0% LOAD~FULL LOAD Ta:25°C	V1: -0.01% ~ -0.03% V2: -0.01% ~ -0.02%	P
5	CROSS REGULATION	-5% ~ +5.0%	I/P:48VDC O/P:25%~FULL LOAD Ta:25°C	V1: +0.42% V2: +0.41%	P

INPUT FUNCTION TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	EFFICIENCY	81%	I/P:48VDC O/P:FULL LOAD Ta:25°C	81.99%	P
2	DC CURRENT	78 mA / FULL LOAD 10 mA / NO LOAD	I/P:48VDC O/P:NO / FULL LOAD Ta:25°C	75.0 mA / FULL LOAD 4.7 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	8.16VDC 7.56 VDC	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:48VDC O/P:TESTING Ta:25°C	158.81% HICCUP MODE AUTO-RECOVER	P
3	CASE TEMPERATURE	+115°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 BY ZENER DIODE	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>100MΩ	I/P-O/P:500 VDC Ta:25℃	I/P-O/P>100MΩ 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℃ 2. HIGH AMBIENT BURN-IN : 4HRS I/P:48VDC O/P:FULL LOAD Ta=85℃ 3. HIGH AMBIENT BURN-IN : 4HRS I/P:48VDC O/P:60% LOAD Ta=95℃ <table><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>41.4℃</td><td>99.6℃</td><td>106.5℃</td></tr></table>			NO	Position	1	2	3	1	CASE	41.4℃	99.6℃	106.5℃
NO	Position	1	2	3										
1	CASE	41.4℃	99.6℃	106.5℃										
2	LOW TEMPERATURE TURN ON TEST	TURN ON AFTER 4 HOURS	I/P:48VDC 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 : 0.54054 M.T.B.F : 1,850KHRS		

TEST RESULT	TESTER	APPROVAL
PASS	ARCHEN HSIAO	PETER CHENG