



Test Report : DPB09W8-15

9W 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	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	VOLTAGE ACCURACY	-2.0% ~ +2.0 % (Max)	I/P:24VDC O/P:FULL LOAD Ta:25°C	V1: +0.09% V2: +0.15%	P
2	RIPPLE & NOISE	120 mVp-p (Max)	I/P:24VDC O/P:FULL LOAD Ta:25°C	V1: 35mV V2: 32mV	P
3	LINE REGULATION	-0.5% ~ +0.5 %	I/P:9VDC~75VDC O/P:FULL LOAD Ta:25°C	V1: +0.01% ~ +0.02% V2: -0.01% ~ -0.04%	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% ~ +0.07%	P
5	CROSS REGULATION	-5.0% ~ +5.0%	I/P:24VDC O/P:25%~FULL LOAD Ta:25°C	V1: +0.80% V2: +0.79%	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	86.97%	P
2	DC CURRENT	431 mA / FULL LOAD 10 mA / NO LOAD	I/P:24VDC O/P:NO / FULL LOAD Ta:25°C	430 mA / FULL LOAD 8.2 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	8.52VDC 7.96 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	120~230%	I/P:24VDC O/P:TESTING Ta:25°C	173.8% HICCUP MODE AUTO-RECOVER	P
3	CASE TEMPERATURE	+115°C max	I/P:24VDC O/P:TESTING Ta: TESTING	OK AUTOMATIC RECOVERY	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 <1.0VDC OR SHORT	I/P:24VDC O/P:100% LOAD Ta:25°C	POWER ON : R.C.>1.86VDC OR OPEN POWER OFF : R.C.<1.83VDC OR SHORT	P

SAFETY TEST

SAFETY TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	WITHSTAND VOLTAGE	I/P-O/P:1500 VDC/min	I/P-O/P:1500 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:24VDC O/P:FULL LOAD Ta=25°C 2. HIGH AMBIENT BURN-IN : 4HRS I/P:24VDC O/P:FULL LOAD Ta=90°C 3. HIGH AMBIENT BURN-IN : 4HRS I/P:24VDC O/P:50% LOAD Ta=95°C	<table border="1"> <thead> <tr> <th>NO</th><th>Position</th><th>1</th><th>2</th><th>3</th></tr> </thead> <tbody> <tr> <td>1</td><td>CASE</td><td>63.8°C</td><td>98.8°C</td><td>104.2°C</td></tr> </tbody> </table>	NO	Position	1	2	3	1	CASE	63.8°C	98.8°C	104.2°C	
NO	Position	1	2	3										
1	CASE	63.8°C	98.8°C	104.2°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	SPECICATION	TEST CONDITION	RESULT
1	MTBF	MIL-HDBK-217F,GB,25°C TOTAL FAILURE RATE : 2.0 M.T.B.F : >500KHRS		

TEST RESULT	TESTER	APPROVAL
PASS	ARCHEN HSIAO	PETER CHENG