



Test Report : DPB09B-12

9W SIP Package 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:24VDC O/P:FULL LOAD Ta:25°C	11.998 -0.02% -12.022 +0.18%	P
2	RIPPLE & NOISE	100 mVp-p (Max)	I/P:24VDC O/P:FULL LOAD Ta:25°C	45mV 43mV	P
3	LINE REGULATION	-0.5% ~ +0.5% (Max)	I/P:18VDC~36VDC O/P:FULL LOAD Ta:25°C	12.008 11.998 12.005 +0.08% ~ +0.05% -12.033 -12.022 -12.032 +0.09% ~ +0.08%	P
4	LOAD REGULATION	-0.5% ~ +0.5% (Max)	I/P:24VDC O/P:10% LOAD~FULL LOAD Ta:25°C	11.998 12.020 12.029 -0.18% ~ +0.07% -12.022 -12.036 -12.036 -0.12% ~ +0.00%	P

INPUT FUNCTION TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	INPUT VOLTAGE RANGE	18 VDC ~36 VDC	I/P:TESTING O/P:FULL LOAD Ta:25°C	15.02VDC ~36.0 VDC	P
2	EFFICIENCY	87% (Typ)	I/P:24VDC O/P:FULL LOAD Ta:25°C	88.5%	P
3	DC CURRENT	431 mA / FULL LOAD (Max) 15 mA / NO LOAD (Max)	I/P:24VDC O/P:NO / FULL LOAD Ta:25°C	419.3 mA / FULL LOAD 12.85 mA / NO LOAD	P

PROTECTION FUNCTION TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	SHORT PROTECTION	CONTINUOUS	I/P:36VDC O/P:FULL LOAD Ta:25°C	HICCUP MODE AUTO-RECOVER	P
2	OVER LOAD PROTECTION	120% ~ 250% (Typ)	I/P:24VDC O/P:TESTING Ta:25°C	167.2% HICCUP MODE AUTO-RECOVER	P

CONTROL FUNCTION TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	REMOTE CONTROL	Power on : R.C. ~ - Vin > 2.5V or open circuit Power off : R.C. ~ - Vin < 0.8Vdc or short	I/P:24VDC O/P:FULL LOAD Ta:25°C	Power on : R.C > 2.5Vdc or Open Power off : R.C < 0.8Vdc	P

SAFETY TEST

SAFETY TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	WITHSTAND VOLTAGE	I/P-O/P:1.5K VDC/min	I/P-O/P:1.5K 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	VERDICT												
1	TEMPERATURE RISE TEST	1. ROOM AMBIENT BURN-IN : 8HRS I/P:24VDC O/P:FULL LOAD Ta=25°C 2. HIGH AMBIENT BURN-IN : 8HRS I/P:24VDC O/P:FULL LOAD Ta=60°C 3. HIGH AMBIENT BURN-IN : 8HRS I/P:24VDC O/P:55% LOAD Ta=80°C 4. HIGH AMBIENT BURN-IN : 8HRS I/P:24VDC O/P:40% LOAD Ta=90°C			P												
		<table border="1"> <thead> <tr> <th>NO</th> <th>Position</th> <th>1</th> <th>2</th> <th>3</th> <th>4</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>CASE</td> <td>66.9°C</td> <td>100.6°C</td> <td>105.0°C</td> <td>111.0°C</td> </tr> </tbody> </table>				NO	Position	1	2	3	4	1	CASE	66.9°C	100.6°C	105.0°C	111.0°C
NO	Position	1	2	3	4												
1	CASE	66.9°C	100.6°C	105.0°C	111.0°C												
2	LOW TEMPERATURE TURN ON TEST	TURN ON AFTER 4 HOURS	I/P:24VDC O/P: FULL LOAD Ta= -40°C	TEST : OK	P												

OTHER

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	MTBF	MIL-HDBK-217F,GB,25°C TOTAL FAILURE RATE : 3.75905 M.T.B.F : 266,024.80 HRS			P
TEST RESULT		TESTER		APPROVAL	
PASS		ARCHEN HSIAO		PETER CHENG	