Test Report : SPB09B-05

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℃	4.9663 -0.67%	P
2	RIPPLE & NOISE	100 mVp-p (Max)	I/P:24VDC O/P:FULL LOAD Ta:25℃	66mV	P
3	LINE REGULATION	-0.5% ~ +0.5% (Max)	I/P:18VDC~36VDC O/P:FULL LOAD Ta:25℃	4.9463 4.9663 4.9457 -0.40% ~ -0.41%	P
4	LOAD REGULATION	-0.5% ~ +0.5% (Max)	I/P:24VDC O/P:10% LOAD~FULL LOAD Ta:25℃	4.9663 4.9885 5.0063 -0.45% ~ +0.36%	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℃	15.31VDC ~36.0 VDC	P
2	EFFICIENCY	85% (Typ)	I/P:24VDC O/P:FULL LOAD Ta:25℃	85.1%	P
3	DC CURRENT	392 mA / FULL LOAD (Max) 8 mA / NO LOAD (Max)	I/P:24VDC O/P:NO / FULL LOAD Ta:25℃	386 mA / FULL LOAD 4.66 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℃	HICCUP MODE AUTO-RECOVER	P
2	OVER LOAD PROTECTION	120% ~ 250% (Typ)	I/P:24VDC O/P:TESTING Ta:25℃	160.0% 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℃	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℃	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	VERDICT
1	TEMPERATURE RISE TEST	1. ROOM AMBIENT BURN-IN：8HRS I/P:24VDC O/P:FULL LOAD Ta=25℃ 2. HIGH AMBIENT BURN-IN ：8HRS I/P:24VDC O/P:FULL LOAD Ta=60℃ 3. HIGH AMBIENT BURN-IN ：8HRS I/P:24VDC O/P:55% LOAD Ta=80℃ 4. HIGH AMBIENT BURN-IN ：8HRS I/P:24VDC O/P:40% LOAD Ta=90℃			P
2	LOW TEMPERATURE TURN ON TEST	TURN ON AFTER 4 HOURS	I/P:24VDC O/P: FULL LOAD Ta= -40℃	TEST：OK	P

NO	Position	1	2	3	4
1	CASE	65.1℃	100.4℃	101.3℃	108.3℃

OTHER

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	MTBF	MIL-HDBK-217F,GB,25℃ TOTAL FAILURE RATE：3.75905 M.T.B.F：266,024.80 HRS			P

TEST RESULT	TESTER	APPROVAL
PASS	ARCHEN HSIAO	PETER CHENG