



Test Report : DETN01M-12N

1W SMD Package DC-DC Unregulated Converter

■ DESIGN VERIFY TEST

Output Function Test

Input Function Test

Protection Function Test

■ SAFETY TEST

Safety Test

■ RELIABILITY TEST

Environment Test

Other test

DESIGN VERIFY TEST
OUTPUT FUNCTION TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	VOLTAGE ACCURACY	-5.0% ~ +5.0 %	I/P:12VDC O/P:FULL LOAD Ta:25°C	-2.07% -1.83%	P
2	RIPPLE & NOISE	100 mVp-p	I/P:12VDC O/P:FULL LOAD Ta:25°C	25 mV 27 mV	P
3	LINE REGULATION	-12% ~ +12%	I/P:10.8VDC~13.2VDC O/P:FULL LOAD Ta:25°C	-10.98% ~ +10.99% -10.93% ~ +10.98%	P
4	LOAD REGULATION	-8% ~ +8%	I/P:12VDC O/P:10% LOAD~FULL LOAD Ta:25°C	-1.43% ~ +4.81% -1.40% ~ +3.99%	P

INPUT FUNCTION TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	EFFICIENCY	83% (Typ)	I/P:12VDC O/P:FULL LOAD Ta:25°C	83.55%	P
2	DC CURRENT	103 mA / FULL LOAD 12 mA / NO LOAD	I/P:12VDC O/P:NO / FULL LOAD Ta:25°C	97.72 mA / FULL LOAD 9.7 mA / NO LOAD	P

PROTECTION FUNCTION TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	SHORT PROTECTION	5 second max	I/P:13.2VDC O/P:FULL LOAD Ta:25°C	OK	P

SAFETY TEST
SAFETY TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	WITHSTAND VOLTAGE	I/P-O/P:3K VDC/min	I/P-O/P:3K VDC/min Ta:25°C	I/P-O/P: 0.002mA NO DAMAGE	P
2	ISOLATION RESISTANCE	I/P-O/P:500VDC>10GΩ	I/P-O/P:500 VDC Ta:25°C	I/P-O/P>10GΩ NO DAMAGE	P

RELIABILITY TEST
ENVIRONMENT TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT												
1	TEMPERATURE RISE TEST	1. ROOM AMBIENT BURN-IN : 4HRS I/P:12VDC O/P:FULL LOAD Ta=25°C 2. HIGH AMBIENT BURN-IN : 4HRS I/P:12VDC O/P:FULL LOAD Ta=90°C 3. HIGH AMBIENT BURN-IN : 4HRS I/P:12VDC O/P:60% LOAD Ta=95°C			P												
		<table border="1"> <thead> <tr> <th>NO</th> <th>Position</th> <th>P/N</th> <th>1</th> <th>2</th> <th>3</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>CASE</td> <td>CENTER</td> <td>32.8°C</td> <td>93.2°C</td> <td>95.9°C</td> </tr> </tbody> </table>				NO	Position	P/N	1	2	3	1	CASE	CENTER	32.8°C	93.2°C	95.9°C
NO	Position	P/N	1	2	3												
1	CASE	CENTER	32.8°C	93.2°C	95.9°C												
2	LOW TEMPERATURE TURN ON TEST	TURN ON AFTER 4 HOURS	I/P:12VDC 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 : 0.95693 M.T.B.F : 1045 KHRS			P

TEST RESULT	TESTER	APPROVAL
PASS	ARCHEN HSIAO	PETER CHENG