



# Test Report : DETN01M-05

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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	±2%(Max)	I/P:12VDC O/P:FULL LOAD Ta:25°C	V1 +0.32% V2 -0.34%	P
2	RIPPLE & NOISE	75 mVp-p (Max)	I/P:12VDC O/P:FULL LOAD Ta:25°C	V1 18mV V2 15mV	P
3	LINE REGULATION	-12% ~ +12% (Max)	I/P:10.8VDC~13.2VDC O/P:FULL LOAD Ta:25°C	V1 -10.84% ~ +10.94% V2 -10.86% ~ +10.94%	P
4	LOAD REGULATION	-8% ~ +8% (Max)	I/P:12VDC O/P:MINI LOAD-FULL LOAD Ta:25°C	V1 -1.69% ~ +2.43% V2 -1.62% ~ +2.45%	P

**INPUT FUNCTION TEST**

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	EFFICIENCY	82 % (Typ)	I/P:12VDC O/P:FULL LOAD Ta:25°C	83.4%	P
2	DC CURRENT	107 mA / FULL LOAD (Max) 13 mA / NO LOAD (Max)	I/P:12VDC O/P:NO / FULL LOAD Ta:25°C	102.3mA / FULL LOAD 11.38mA / NO LOAD	P

**PROTECTION FUNCTION TEST**

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	SHORT PROTECTION	< 0.5S MAX.	I/P:12VDC O/P:TEST Ta:25°C	OK	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°C	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°C	I/P-O/P>100MΩ NO DAMAGE	P
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## ■ RELIABILITY TEST

### ENVIRONMENT TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT								
1	TEMPERATURE RISE TEST	1. ROOM AMBIENT BURN-IN : 8 HRS I/P:12VDC O/P:FULL LOAD Ta=25°C 2. HIGH AMBIENT BURN-IN : 8 HRS I/P:12VDC O/P:FULL LOAD Ta=85°C			P								
		<table border="1"> <thead> <tr> <th>NO</th> <th>Position</th> <th>1</th> <th>2</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>CASE</td> <td>34.5°C</td> <td>93.2°C</td> </tr> </tbody> </table>		NO	Position	1	2	1	CASE	34.5°C	93.2°C		
NO	Position	1	2										
1	CASE	34.5°C	93.2°C										
2	LOW TEMPERATURE TURN ON TEST	TURN ON AFTER 2 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,Full Load TOTAL FAILURE RATE : 1.39600 M.T.B.F : 716331.87 HRS			P

TEST RESULT	TESTER	APPROVAL
PASS	ARCHEN	VINCENT ZENG