



# Test Report : DETN02L-05N

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2W 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 % (Max)	I/P:5VDC O/P:FULL LOAD Ta:25°C	-1.73% -1.62%	P
2	RIPPLE & NOISE	150 mVp-p (Max)	I/P:5VDC O/P:FULL LOAD Ta:25°C	25 mV 25 mV	P
3	LINE REGULATION	-12% ~ +12% (Max)	I/P:4.5VDC~5.5VDC O/P:FULL LOAD Ta:25°C	-11.64% ~ +11.69% -11.65% ~ +11.65%	P
4	LOAD REGULATION	-8% ~ +8% (Max)	I/P:5VDC O/P:10% LOAD~FULL LOAD Ta:25°C	-4.05% ~ +3.71% -3.96% ~ +3.65%	P

**INPUT FUNCTION TEST**

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	EFFICIENCY	81% (Typ)	I/P:5VDC O/P:FULL LOAD Ta:25°C	83.52%	P
2	DC CURRENT	513 mA / FULL LOAD (Max) 60 mA / NO LOAD (Max)	I/P:5VDC O/P:NO / FULL LOAD Ta:25°C	472.5 mA / FULL LOAD 34.7 mA / NO LOAD	P

**PROTECTION FUNCTION TEST**

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	SHORT PROTECTION	5 second max	I/P:5.5VDC 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:5VDC O/P:FULL LOAD Ta=25°C 2. HIGH AMBIENT BURN-IN : 4HRS I/P:5VDC O/P:FULL LOAD Ta=90°C 3. HIGH AMBIENT BURN-IN : 4HRS I/P:5VDC 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>38.4°C</td> <td>93.5°C</td> <td>97.5°C</td> </tr> </tbody> </table>				NO	Position	P/N	1	2	3	1	CASE	CENTER	38.4°C	93.5°C	97.5°C
NO	Position	P/N	1	2	3												
1	CASE	CENTER	38.4°C	93.5°C	97.5°C												
2	LOW TEMPERATURE TURN ON TEST	TURN ON AFTER 4 HOURS	I/P:5VDC 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 : 1.12866 M.T.B.F : 886 KHRS			P

TEST RESULT	TESTER	APPROVAL
<b>PASS</b>	<b>ARCHEN HSIAO</b>	<b>PETER CHENG</b>