



# Test Report : SPU01N-12

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1W SIP 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

**DESIGN VERIFY TEST**
**OUTPUT FUNCTION TEST**

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	VOLTAGE ACCURACY	-3 % ~ +3 % (Max)	I/P:24VDC O/P:FULL LOAD Ta:25°C	0.77 %	P
2	RIPPLE & NOISE	75 mVp-p (Max)	I/P:24VDC O/P:FULL LOAD Ta:25°C	47 mV	P
3	LINE REGULATION	-12% ~ +12% (Max)	I/P:21.6VDC~26.4VDC O/P:FULL LOAD Ta:25°C	-10.46% ~ +10.41%	P
4	LOAD REGULATION	-10% ~ +10% (Max)	I/P:24VDC O/P:20% LOAD-FULL LOAD Ta:25°C	-1.43 % ~ +0.47 %	P

**INPUT FUNCTION TEST**

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	EFFICIENCY	81 % (Typ)	I/P:24VDC O/P:FULL LOAD Ta:25°C	81.5 %	P
2	DC CURRENT	52 mA / FULL LOAD (Max) 7 mA / NO LOAD (Max)	I/P:24VDC O/P:NO / FULL LOAD Ta:25°C	52 mA / FULL LOAD 7 mA / NO LOAD	P

**PROTECTION FUNCTION TEST**

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	SHORT PROTECTION	MOMENTARY 1sec. max	I/P:26.4VDC 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:1500 VDC/min	I/P-O/P:1500 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

**RELIABILITY TEST**
**ENVIRONMENT TEST**

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT								
1	TEMPERATURE RISE TEST	1. ROOM AMBIENT BURN-IN : 12HRS I/P:24VDC O/P:FULL LOAD Ta=25°C 2. HIGH AMBIENT BURN-IN : 12HRS I/P:24VDC O/P:FULL LOAD Ta=85°C	<table border="1" data-bbox="651 1055 1147 1149"> <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>27.2°C</td> <td>88.2°C</td> </tr> </tbody> </table>	NO	Position	1	2	1	CASE	27.2°C	88.2°C		P
NO	Position	1	2										
1	CASE	27.2°C	88.2°C										
2	LOW TEMPERATURE TURN ON TEST	TURN ON AFTER 2 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 TOTAL FAILURE RATE : 0.394 M.T.B.F : 2,538,904 HRS			P

TEST RESULT	TESTER	APPROVAL
PASS	ALROY WANG	VINCENT ZENG