



# Test Report : SI06W8-15

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6W 1"x1" Package 8:1 Ultra-Wide Input DC-DC Regulated 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	VERDITC
1	VOLTAGE ACCURACY	-1% ~ +1 %	I/P:24VDC O/P:FULL LOAD Ta:25°C	-0.49%	P
2	RIPPLE & NOISE	100 mVp-p	I/P:24VDC O/P:FULL LOAD Ta:25°C	9 mV	P
3	LINE REGULATION	-0.2% ~ +0.2%	I/P:9VDC~75VDC O/P:FULL LOAD Ta:25°C	+0.01% ~ -0.04%	P
4	LOAD REGULATION	-0.5% ~ +0.5%	I/P:24VDC O/P: 0% LOAD~FULL LOAD Ta:25°C	+0.00% ~ +0.01%	P

**INPUT FUNCTION TEST**

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDITC
1	INPUT VOLTAGE RANGE	9 VDC ~75 VDC	I/P:TESTING O/P:FULL LOAD Ta:25°C	8.24 VDC ~ 75 VDC	P
2.	EFFICIENCY	86%	I/P:24VDC O/P:FULL LOAD Ta:25°C	86.97%	P
3	DC CURRENT	309 mA / FULL LOAD 8 mA / NO LOAD	I/P:24VDC O/P:NO / FULL LOAD Ta:25°C	280 mA / FULL LOAD 4.7 mA / NO LOAD	P

**PROTECTION FUNCTION TEST**

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDITC
1	SHORT PROTECTION	CONTINUOUS	I/P:75DC O/P:FULL LOAD Ta:25°C	AUTOMATIC RECOVERY	P
2	OVER LOAD PROTECTION	110~230%	I/P:24VDC O/P:TESTING Ta:25°C	178.3% HICCUP MODE AUTO-RECOVER	P
3.	UNDER VOLTAGE LOCKOUT	START-UP 8.8V SHUTDOWN VOLTAGE 8.5V	I/P:TESTING O/P:FULL LOAD Ta:25°C	8.49 VDC 8.24VDC	P

**■ AFETY TEST**
**SAFETY TEST**

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDITC
1	WITHSTAND VOLTAGE	I/P-O/P:3.0K VDC/min	I/P-O/P:3.0K 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 : 4HRS I/P:24VDC O/P:FULL LOAD Ta=25°C 2. HIGH AMBIENT BURN-IN : 4HRS I/P:24VDC O/P:FULL LOAD Ta=71°C 3. HIGH AMBIENT BURN-IN : 4HRS I/P:24VDC O/P:50% LOAD Ta=85°C 4. HIGH AMBIENT BURN-IN : 4HRS I/P:24VDC O/P:20% LOAD Ta=90°C			P												
		<table border="1"> <thead> <tr> <th>NO</th> <th>Position</th> <th>1</th> <th>2</th> <th>3</th> <th>4</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>CASE</td> <td>40.6°C</td> <td>86.6°C</td> <td>93.9°C</td> <td>96.0°C</td> </tr> </tbody> </table>				NO	Position	1	2	3	4	1	CASE	40.6°C	86.6°C	93.9°C	96.0°C
NO	Position	1	2	3	4												
1	CASE	40.6°C	86.6°C	93.9°C	96.0°C												
2	LOW TEMPERATURE TURN ON TEST	TURN ON AFTER 4 HOURS	I/P:24VDC O/P: FULL LOAD Ta= -40°C	TEST : OK	P												

**OTHER**

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDITC
1	MTBF	MIL-HDBK-217F,GB,25°C TOTAL FAILURE RATE : 2.73893 M.T.B.F : 365,105.68 HRS			P

TEST RESULT	TESTER	APPROVAL
PASS	ARCHEN HSIAO	PETER CHENG