



Test Report : SI06W8-09

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	-0.13%	P
2	RIPPLE & NOISE	100 mVp-p	I/P:24VDC O/P:FULL LOAD Ta:25°C	35 mV	P
3	LINE REGULATION	-0.2% ~ +0.2%	I/P:9VDC~75VDC O/P:FULL LOAD Ta:25°C	+0.00% ~ -0.03%	P
4	LOAD REGULATION	-0.5% ~ +0.5%	I/P:24VDC O/P: 0% LOAD~FULL LOAD Ta:25°C	-0.01% ~ +0.02%	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	8.34 VDC ~ 75 VDC	P
2.	EFFICIENCY	82.5%	I/P:24VDC O/P:FULL LOAD Ta:25°C	82.85%	P
3	DC CURRENT	309 mA / FULL LOAD 7 mA / NO LOAD	I/P:24VDC O/P:NO / FULL LOAD Ta:25°C	296 mA / FULL LOAD 1.79 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	174.5% 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	8.56 VDC 8.34VDC	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℃	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℃	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℃ 2. HIGH AMBIENT BURN-IN : 4HRS I/P:24VDC O/P:FULL LOAD Ta=71℃ 3. HIGH AMBIENT BURN-IN : 4HRS I/P:24VDC O/P:50% LOAD Ta=85℃ 4. HIGH AMBIENT BURN-IN : 4HRS I/P:24VDC O/P:20% LOAD Ta=90℃			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>47.6℃</td><td>91.1℃</td><td>95.4℃</td><td>97.3℃</td></tr> </tbody> </table>	NO	Position	1	2	3	4	1	CASE	47.6℃	91.1℃	95.4℃	97.3℃			
NO	Position	1	2	3	4												
1	CASE	47.6℃	91.1℃	95.4℃	97.3℃												
2	LOW TEMPERATURE TURN ON TEST	TURN ON AFTER 4 HOURS	I/P:24VDC O/P: FULL LOAD Ta= -40℃	TEST : OK	P												

OTHER

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

TEST RESULT	TESTER	APPROVAL
PASS	ARCHEN HSIAO	PETER CHENG