



# Test Report : SCW20A-05

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20W DIP Package DC-DC Regulated Converter

## ■ DESIGN VERIFY TEST

Output Function Test  
Input Function Test  
Protection Function Test  
Control Function Test

## ■ SAFETY TEST

Safety Test

## ■ RELIABILITY TEST

Environment Test  
Other

## DESIGN VERIFY TEST

### OUTPUT FUNCTION TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	VOLTAGE ACCURACY	-2.0 % ~ +2.0 % (Max)	I/P:12VDC O/P:FULL LOAD Ta:25°C	-0.40%	P
2	RIPPLE & NOISE	80 mVp-p (Max)	I/P:12VDC O/P:FULL LOAD Ta:25°C	14 mV	P
3	LINE REGULATION	-0.5% ~ +0.5% (Max)	I/P:9VDC-18VDC O/P:FULL LOAD Ta:25°C	-0.01% ~ +0.03%	P
4	LOAD REGULATION	-0.5% ~ +0.5% (Max)	I/P:12VDC O/P:10% LOAD-FULL LOAD Ta:25°C	-0.26% ~ +0.11%	P

### INPUT FUNCTION TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	INPUT VOLTAGE RANGE	9VDC ~18 VDC	I/P:TESTING O/P:FULL LOAD Ta:25°C	7.89 ~18.0VDC	P
2	EFFICIENCY	86 % (Typ)	I/P:12VDC O/P:FULL LOAD Ta:25°C	86.48%	P
3	DC CURRENT	1938 mA / FULL LOAD (Max) 110 mA / NO LOAD (Max)	I/P:12VDC O/P:NO / FULL LOAD Ta:25°C	1902 mA / FULL LOAD 97 mA / NO LOAD	P

### PROTECTION FUNCTION TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	SHORT PROTECTION	CONTINUOUS	I/P:18VDC O/P:FULL LOAD Ta:25°C	HICCUP MODE AUTO-RECOVER	P
2	OVER LOAD PROTECTION	120% ~ 190%	I/P:12VDC O/P:TESTING Ta:25°C	156.0% HICCUP MODE AUTO-RECOVER	P

## CONTROL FUNCTION TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	REMOTE CONTROL	Power on : R.C >2.5Vdc--Vin or open Power off : R.C <0.8Vdc or short (-Vin)	I/P:12VDC O/P:100% LOAD Ta:25°C	Power on : R.C>1.14Vdc or Open Power off : R.C<1.15Vdc or Short	P

## SAFETY TEST

### SAFETY TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	WITHSTAND VOLTAGE	I/P-O/P:1.5K VDC/min	I/P-O/P:1.5K VDC/min Ta:25°C	I/P-O/P: 0.002 mA 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 : 8HRS I/P:12VDC O/P:FULL LOAD Ta=25°C 2. HIGH AMBIENT BURN-IN : 8HRS I/P:12VDC O/P:FULL LOAD Ta=50°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>57.6°C</td> <td>87.6°C</td> </tr> </tbody> </table>		NO	Position	1	2	1	CASE	57.6°C	87.6°C		
NO	Position	1	2										
1	CASE	57.6°C	87.6°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 TOTAL FAILURE RATE : 4.46418 M.T.B.F : 224005.20HRS			P

TEST RESULT	TESTER	APPROVAL
PASS	ARCHEN HSIAO	VINCENT ZENG