



# Test Report : SKMW15F-03

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15W 1"x1" 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

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

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT
1	VOLTAGE ACCURACY	-2.0% ~ +2.0 % (Max)	I/P:24VDC O/P:FULL LOAD Ta:25°C	3.3164 +0.5%
2	RIPPLE & NOISE	50 mVp-p (Max)	I/P:24VDC O/P:FULL LOAD Ta:25°C	6mV
3	LINE REGULATION	-0.5% ~ +0.5% (Max)	I/P:9VDC~36VDC O/P:FULL LOAD Ta:25°C	3.3168 3.3164 3.3138 -0.01% ~ -0.08%
4	LOAD REGULATION	-0.5% ~ +0.5% (Max)	I/P:24VDC O/P:10% LOAD~FULL LOAD Ta:25°C	3.3146 3.3195 3.3219 -0.09% ~ +0.07%

**INPUT FUNCTION TEST**

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT
1	INPUT VOLTAGE RANGE	9 VDC ~36 VDC	I/P:TESTING O/P:FULL LOAD Ta:25°C	8.5VDC ~36.0 VDC
2	EFFICIENCY	85% (Typ)	I/P:24VDC O/P:FULL LOAD Ta:25°C	84.57%
3	DC CURRENT	500 mA / FULL LOAD (Max) 70 mA / NO LOAD (Max)	I/P:24VDC O/P:NO / FULL LOAD Ta:25°C	494 mA / FULL LOAD 50 mA / NO LOAD

**PROTECTION FUNCTION TEST**

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT
1	SHORT PROTECTION	CONTINUOUS	I/P:36VDC O/P:FULL LOAD Ta:25°C	HICCUP MODE AUTO-RECOVER
2	OVER LOAD PROTECTION	110% ~ 220% (Typ)	I/P:24VDC O/P:TESTING Ta:25°C	190.3% HICCUP MODE AUTO-RECOVER

**CONTROL FUNCTION TEST**

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT
1	REMOTE CONTROL	Power on : R.C. ~ - Vin > 2.5V or open circuit Power off : R.C. ~ - Vin < 0.8Vdc or short	I/P:24VDC O/P:FULL LOAD Ta:25°C	Power on : R.C > 2.5Vdc or Open Power off : R.C < 0.8Vdc or short
2	TRIM	-10% ~ +10% (Typ) Trim ~ +Vout Trim DOWN Trim ~ -Vout Trim UP Using 500K ohms VR	I/P:24VDC O/P:FULL LOAD Ta:25°C	Trim DOWN -13.89% Trim UP +11.12%

**SAFETY TEST**
**SAFETY TEST**

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT
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: 0.002mA NO DAMAGE
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

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

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT										
1	TEMPERATURE RISE TEST	1. ROOM AMBIENT BURN-IN : 8HRS I/P:24VDC O/P:FULL LOAD Ta=25°C 2. HIGH AMBIENT BURN-IN : 8HRS I/P:24VDC O/P:FULL LOAD Ta=71°C 3. HIGH AMBIENT BURN-IN : 8HRS I/P:24VDC O/P:55% LOAD Ta=85°C												
		<table border="1"> <thead> <tr> <th>NO</th> <th>Position</th> <th>1</th> <th>2</th> <th>3</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>CASE</td> <td>49.9°C</td> <td>93.5°C</td> <td>100.7°C</td> </tr> </tbody> </table>			NO	Position	1	2	3	1	CASE	49.9°C	93.5°C	100.7°C
NO	Position	1	2	3										
1	CASE	49.9°C	93.5°C	100.7°C										
2	LOW TEMPERATURE TURN ON TEST	TURN ON AFTER 4 HOURS	I/P:24VDC O/P: FULL LOAD Ta= -40°C	TEST : OK										

**OTHER**

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT
1	MTBF	MIL-HDBK-217F,GB,25°C TOTAL FAILURE RATE : 3.75905 M.T.B.F : 266,024.80 HRS		

TEST RESULT	TESTER	APPROVAL
PASS	ARCHEN HSIAO	PETER CHENG