



# Test Report : DKMW15F-05

---

15W 1"x1" Package DC-DC Regulated 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	SPECICATION	TEST CONDITION	RESULT
1	VOLTAGE ACCURACY	-2.0% ~ +2.0 % (Max)	I/P:24VDC O/P:FULL LOAD Ta:25°C	5.0077 +0.15% -5.0186 +0.37
2	RIPPLE & NOISE	50 mVp-p (Max)	I/P:24VDC O/P:FULL LOAD Ta:25°C	7mV 7mV
3	LINE REGULATION	-0.5% ~ +0.5% (Max)	I/P:9VDC~36VDC O/P:FULL LOAD Ta:25°C	5.0085 5.0077 5.0115 +0.02% ~ +0.08% 5.0209 5.0186 5.0178 +0.05% ~ -0.02%
4	LOAD REGULATION	-0.5% ~ +0.5% (Max)	I/P:24VDC O/P:10% LOAD~FULL LOAD Ta:25°C	5.0077 5.0106 5.0148 -0.06% ~ +0.08% 5.0186 5.0171 5.0151 +0.03% ~ -0.04%

**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	8.4VDC ~36.0 VDC
2	EFFICIENCY	85% (Typ)	I/P:24VDC O/P:FULL LOAD Ta:25°C	85.67%
3	DC CURRENT	750 mA / FULL LOAD (Max) 35 mA / NO LOAD (Max)	I/P:24VDC O/P:NO / FULL LOAD Ta:25°C	742 mA / FULL LOAD 9 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	176.1% 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

## SAFETY TEST

### SAFETY TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT
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
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" style="margin-left: auto; margin-right: auto;"> <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>62.2°C</td> <td>104.3°C</td> <td>100.6°C</td> </tr> </tbody> </table>					NO	Position	1	2	3	1	CASE	62.2°C	104.3°C	100.6°C
NO	Position	1	2	3										
1	CASE	62.2°C	104.3°C	100.6°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