



# Test Report : DKMW06G-12

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6W 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

Other

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

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	VOLTAGE ACCURACY	-1.0% ~ +1.0 %	I/P:48VDC O/P:FULL LOAD Ta:25°C	V1 +0.07% V2 -0.15%	P
2	RIPPLE & NOISE	85 mVp-p (Max)	I/P:48VDC O/P:FULL LOAD Ta:25°C	V1 40mV V2 65mV	P
3	LINE REGULATION	-0.5% ~ +0.5%	I/P:18VDC~75VDC O/P:FULL LOAD Ta:25°C	V1 +0.01% ~ +0.00% V2 -0.07% ~ +0.01%	P
4	LOAD REGULATION	V1 -1.0% ~ +1.0% V2 -1.5% ~ +1.5%	I/P:48VDC O/P:10% LOAD~FULL LOAD Ta:25°C	V1 -0.01% ~ +0.00% V2 -0.01% ~ +0.10%	P

**INPUT FUNCTION TEST**

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	INPUT VOLTAGE RANGE	18 VDC ~75 VDC	I/P:TESTING O/P:FULL LOAD Ta:25°C	15.77 VDC ~ 75VDC	P
2	EFFICIENCY	85% (Typ)	I/P:48VDC O/P:FULL LOAD Ta:25°C	87.24%	P
3	DC CURRENT	155 mA / FULL LOAD 4 mA / NO LOAD	I/P:48VDC O/P:NO / FULL LOAD Ta:25°C	142 mA / FULL LOAD 3.4 mA / NO LOAD	P

**PROTECTION FUNCTION TEST**

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	SHORT PROTECTION	CONTINUOUS	I/P:75VDC O/P:FULL LOAD Ta:25°C	HICCUP MODE AUTO-RECOVER	P
2	OVER LOAD PROTECTION	110% ~ 190%	I/P:48VDC O/P:TESTING Ta:25°C	171.1% HICCUP MODE AUTO-RECOVER	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: 0.002mA 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 : 8HRS I/P:48VDC O/P:FULL LOAD Ta=25°C 2. HIGH AMBIENT BURN-IN : 8HRS I/P:48VDC O/P:FULL LOAD Ta=71°C 3. HIGH AMBIENT BURN-IN : 8HRS I/P:48VDC O/P:60% LOAD Ta=85°C			<b>P</b>									
		<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>39.6°C</td> <td>83.3°C</td> <td>88.5°C</td> </tr> </tbody> </table>				NO	Position	1	2	3	1	CASE	39.6°C	83.3°C
NO	Position	1	2	3										
1	CASE	39.6°C	83.3°C	88.5°C										
2	LOW TEMPERATURE TURN ON TEST	TURN ON AFTER 4 HOURS	I/P:48VDC O/P: FULL LOAD Ta= -40°C	TEST : OK	<b>P</b>									

**OTHER**

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	MTBF	MIL-HDBK-217F,GB,25°C TOTAL FAILURE RATE : 0.622928 M.T.B.F : 1605.322K HRS			<b>P</b>

TEST RESULT	TESTER	APPROVAL
<b>PASS</b>	<b>ARCHEN HSIAO</b>	<b>PETER CHENG</b>