



Test Report : DKMW15G-12

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:48VDC O/P:FULL LOAD Ta:25°C	12.019 +0.16% -12.033 +0.28%
2	RIPPLE & NOISE	50 mVp-p (Max)	I/P:48VDC O/P:FULL LOAD Ta:25°C	16mV 12mV
3	LINE REGULATION	-0.5% ~ +0.5% (Max)	I/P:18VDC~75VDC O/P:FULL LOAD Ta:25°C	12.014 12.019 12.017 -0.04% ~ -0.02% -12.037 -12.033 -12.031 +0.03% ~ -0.02%
4	LOAD REGULATION	-0.5% ~ +0.5% (Max)	I/P:48VDC O/P:10% LOAD~FULL LOAD Ta:25°C	12.019 12.017 12.016 +0.02% ~ -0.01% -12.033 -12.035 -12.038 -0.02% ~ +0.02%

INPUT FUNCTION TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT
1	INPUT VOLTAGE RANGE	18 VDC ~75 VDC	I/P:TESTING O/P:FULL LOAD Ta:25°C	16.3VDC ~75.0 VDC
2	EFFICIENCY	88% (Typ)	I/P:48VDC O/P:FULL LOAD Ta:25°C	88.55%
3	DC CURRENT	360 mA / FULL LOAD (Max) 25 mA / NO LOAD (Max)	I/P:48VDC O/P:NO / FULL LOAD Ta:25°C	356 mA / FULL LOAD 7 mA / NO LOAD

PROTECTION FUNCTION TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT
1	SHORT PROTECTION	CONTINUOUS	I/P:75VDC O/P:FULL LOAD Ta:25°C	HICCUP MODE AUTO-RECOVER
2	OVER LOAD PROTECTION	110% ~ 220% (Typ)	I/P:48VDC O/P:TESTING Ta:25°C	189.2% 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:48VDC 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: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: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>55.7°C</td> <td>93.9°C</td> <td>98.2°C</td> </tr> </tbody> </table>					NO	Position	1	2	3	1	CASE	55.7°C	93.9°C	98.2°C
NO	Position	1	2	3										
1	CASE	55.7°C	93.9°C	98.2°C										
2	LOW TEMPERATURE TURN ON TEST	TURN ON AFTER 4 HOURS	I/P:48VDC 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