



Test Report : SKM15C-12

15W DC-DC Regulated Single Output 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	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	VOLTAGE ACCURACY	-2%~+2% (Max)	I/P:48VDC O/P:100% LOAD Ta:25°C	0.32%	P
2	RIPPLE & NOISE	60mVp-p (Max)	I/P:48VDC O/P:FULL LOAD Ta:25°C	30mV	P
3	LINE REGULATION	-0.5%~+0.5% (Max)	I/P:36VDC~75VDC O/P:FULL LOAD Ta:25°C	-0.02% ~ +0.05%	P
4	LOAD REGULATION	-0.5%~+0.5% (Max)	I/P:48VDC O/P:MIN-FULL LOAD Ta:25°C	-0.08% ~ +0.13%	P

INPUT FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	INPUT VOLTAGE RANGE	36VDC~75VDC	I/P:TESTING O/P:FULL LOAD Ta:25°C	31.5-75VDC	P
2	EFFICIENCY	86% (Typ)	I/P:48VDC O/P:FULL LOAD Ta:25°C	86.29%	P
3	DC CURRENT	380 mA / FULL LOAD (Max) 15 mA / NO LOAD (Max)	I/P:48VDC O/P:NO / FULL LOAD Ta:25°C	363mA / FULL LOAD 7 mA / NO LOAD	P

PROTECTION FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	OVER LOAD PROTECTION	110%~180% (Typ)	I/P:48VDC O/P:TESTING Ta:25°C	146% HICCUP MODE AUTO-RECOVER	P
2	OVER VOLTAGE PROTECTION	115%~150% (Typ) CLAMP BY ZENER DIODE	I/P:48VDC O/P:MIN LOAD Ta:25°C	CLAMP BY ZENER DIODE 125% (SMF15A 15V)	P
3	SHORT PROTECTION	SHORT EVERY OUTPUT 1 HOUR NO DAMAGE	I/P:75VDC O/P:FULL LOAD Ta:25°C	NO DAMAGE 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 or open Power off : R.C <0.5Vdc or short (-Vin)	I/P:48VDC O/P:FULL LOAD Ta:25°C	Power on : R.C>1.1Vdc or Open Power off : R.C<1.08Vdc or Short	P
2	TRIM CONTROL	-10%~ +10% (Typ) Trim ~ +Vout Trim DOWN Trim ~ -Vout Trim UP Using 500k ohm VR	I/P:48VDC O/P:FULL LOAD Ta:25°C	Trim DOWN -26.71% Trim UP +10.50%	P

SAFETY TEST

SAFETY TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	WITHSTAND VOLTAGE	I/P-O/P:1500 VDC/min	I/P-O/P:1500 VDC/min Ta:25°C	I/P-O/P: 0.02mA 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 : 4HRS I/P:48VDC O/P:FULL LOAD Ta=25°C 2. HIGH AMBIENT BURN-IN : 61HRS I/P:48VDC O/P:FULL LOAD Ta=60°C 3. HIGH AMBIENT BURN-IN : 6HRS I/P:48VDC O/P:50% LOAD Ta=80°C			P												
		<table border="1"> <thead> <tr> <th>NO</th> <th>Position</th> <th>P/N</th> <th>1</th> <th>2</th> <th>3</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>CASE</td> <td>CENTER</td> <td>61.9°C</td> <td>98.8°C</td> <td>104.9°C</td> </tr> </tbody> </table>				NO	Position	P/N	1	2	3	1	CASE	CENTER	61.9°C	98.8°C	104.9°C
NO	Position	P/N	1	2	3												
1	CASE	CENTER	61.9°C	98.8°C	104.9°C												
2	LOW TEMPERATURE TURN ON TEST	TURN ON AFTER 13 HOURS	I/P:48VDC O/P: 100% LOAD Ta= -40°C	TEST : OK	P												

DATE	SAMPLE	TEST RESULT	TESTER	APPROVAL
2011.11.14	RD SAMPLE 1052R	PASS	PETER	VINCENT