



# Test Report : SKM30C-05

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30W 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	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	VOLTAGE ACCURACY	-2 % ~ +2 % (Max)	I/P:48VDC O/P: FULL LOAD Ta:25°C	-0.58 %	P
2	RIPPLE & NOISE	90 mVp-p (Max)	I/P:48VDC O/P:FULL LOAD Ta:25°C	55 mV	P
3	LINE REGULATION	-0.2 % ~ +0.2 % (Max)	I/P:36VDC~75VDC O/P:FULL LOAD Ta:25°C	-0 % ~ +0.02 %	P
4	LOAD REGULATION	-0.5 % ~ +0.5 % (Max)	I/P:48VDC O/P:MIN-FULL LOAD Ta:25°C	-0.04 % ~ +0.04 %	P

**INPUT FUNCTION TEST**

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	UNDER VOLTAGE LOCKOUT	32 VDC (Typ)	I/P:TESTING O/P:FULL LOAD Ta:25°C	21.5 VDC	P
2	EFFICIENCY	88% (Typ)	I/P:48VDC O/P:FULL LOAD Ta:25°C	88.01 %	P
3	DC CURRENT	720 mA / FULL LOAD (Max) 60 mA / NO LOAD (Max)	I/P:48VDC O/P:NO / FULL LOAD Ta:25°C	706 mA / FULL LOAD 42 mA / NO LOAD	P

**PROTECTION FUNCTION TEST**

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	OVER LOAD PROTECTION	110 % - 180 %	I/P:48VDC O/P:TESTING Ta:25°C	147 % HICCUP MODE AUTO-RECOVER	P
2	INPUT OVER VOLTAGE PROTECTION	80 VDC - 100 VDC	I/P:TESTING O/P:MIN LOAD Ta:25°C	82.2 VDC SHUTDOWN AUTO-RECOVER	P
3	OUTPUT OVER VOLTAGE PROTECTION	7 VDC ~ 8.95 VDC	I/P:48VDC O/P:MIN LOAD Ta:25°C	CLAMP BY TVS DIODE	P
4	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<1.0Vdc or Short	P
2	TRIM	-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 -9.27% Trim UP +11.17%	P

**SAFETY TEST**
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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

DATE	SAMPLE	TEST RESULT	TESTER	APPROVAL
2012.1.12	RD SAMPLE	PASS	PETER	VINCENT