



Test Report : SKM30A-15

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:12VDC O/P: FULL LOAD Ta:25°C	0.10 %	P
2	RIPPLE & NOISE	120 mVp-p (Max)	I/P:12VDC O/P:FULL LOAD Ta:25°C	84 mV	P
3	LINE REGULATION	-0.2 % ~ +0.2 % (Max)	I/P:9VDC-18VDC O/P:FULL LOAD Ta:25°C	-0.05 % ~ +0.01 %	P
4	LOAD REGULATION	-0.5 % ~ +0.5 % (Max)	I/P:12VDC O/P:MIN-FULL LOAD Ta:25°C	-0.13 % ~ +0 %	P

INPUT FUNCTION TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	UNDER VOLTAGE LOCKOUT	8 VDC (Typ)	I/P:TESTING O/P:FULL LOAD Ta:25°C	7.8 VDC	P
2	EFFICIENCY	89.5 % (Typ)	I/P:12VDC O/P:FULL LOAD Ta:25°C	89.99 %	P
3	DC CURRENT	2800 mA / FULL LOAD (Max) 135 mA / NO LOAD (Max)	I/P:12VDC O/P:NO / FULL LOAD Ta:25°C	2781 mA / FULL LOAD 122 mA / NO LOAD	P

PROTECTION FUNCTION TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	OVER LOAD PROTECTION	110 % - 180 %	I/P:12VDC O/P:TESTING Ta:25°C	152 % HICCUP MODE AUTO-RECOVER	P
2	INPUT OVER VOLTAGE PROTECTION	20 VDC ~ 25 VDC	I/P:TESTING O/P:MIN LOAD Ta:25°C	22.4 VDC SHUTDOWN AUTO-RECOVER	P
3	OUTPUT OVER VOLTAGE PROTECTION	18 VDC ~ 23.3 VDC	I/P:12VDC O/P:MIN LOAD Ta:25°C	CLAMP BY TVS DIODE	P
4	SHORT PROTECTION	SHORT EVERY OUTPUT 1 HOUR NO DAMAGE	I/P:18VDC 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:12VDC O/P:FULL LOAD Ta:25°C	Power on : R.C>1.2Vdc or Open Power off : R.C<1.1Vdc or Short	P
2	TRIM	-20%~ +10% (Typ) Trim ~ +Vout Trim DOWN Trim ~ -Vout Trim UP Using 500k ohm VR	I/P:12VDC O/P:FULL LOAD Ta:25°C	Trim DOWN -33.70% Trim UP +11.33%	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 : 13HRS I/P:12VDC O/P:FULL LOAD Ta=25°C 2. HIGH AMBIENT BURN-IN : 8HRS I/P:12VDC O/P:FULL LOAD Ta=55°C			P									
		<table border="1"> <thead> <tr> <th>NO</th> <th>Position</th> <th>P/N</th> <th>1</th> <th>2</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>CASE</td> <td>CENTER</td> <td>70.4°C</td> <td>94.8°C</td> </tr> </tbody> </table>				NO	Position	P/N	1	2	1	CASE	CENTER	70.4°C
NO	Position	P/N	1	2										
1	CASE	CENTER	70.4°C	94.8°C										
2	LOW TEMPERATURE TURN ON TEST	TURN ON AFTER 13 HOURS	I/P:12VDC O/P: FULL LOAD Ta= -40°C	TEST : OK	P									

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