



# Test Report : SKA40A-05

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35W 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:100% LOAD Ta:25°C	-0.58%	P
2	RIPPLE & NOISE	60mVp-p (Max)	I/P:12VDC O/P:FULL LOAD Ta:25°C	30mV	P
3	LINE REGULATION	-0.5%~+0.5% (Max)	I/P:9VDC-18VDC O/P:FULL LOAD Ta:25°C	-0.12% ~ +0.24%	P
4	LOAD REGULATION	-0.5%~+0.5% (Max)	I/P:12VDC O/P:MIN-FULL LOAD Ta:25°C	-0.48% ~ +0.18%	P

**INPUT FUNCTION TEST**

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	INPUT VOLTAGE RANGE	9VDC-18VDC	I/P:TESTING O/P:FULL LOAD Ta:25°C	8.2-18VDC	P
2	EFFICIENCY	91% (Typ)	I/P:12VDC O/P:FULL LOAD Ta:25°C	91.22%	P
3	DC CURRENT	3850 mA / FULL LOAD (Max) 150 mA / NO LOAD (Max)	I/P:12VDC O/P:NO / FULL LOAD Ta:25°C	3633 mA / FULL LOAD 111 mA / NO LOAD	P

**PROTECTION FUNCTION TEST**

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	OVER LOAD PROTECTION	110%~180% (Typ)	I/P:12VDC O/P:TESTING Ta:25°C	165% HICCUP MODE AUTO-RECOVER	P
2	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>1.1Vdc or Open Power off : R.C<1.1Vdc or Short	P
2	REMOTE SENSE	YES	I/P:12VDC O/P:FULL LOAD Ta:25°C	+SENSE OK -SENSE OK	P
3	TRIM CONTROL	+10%~ -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 -10.18% Trim UP +13.32%	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:12VDC O/P:FULL LOAD Ta=25°C 2. HIGH AMBIENT BURN-IN : 19HRS I/P:12VDC O/P:FULL LOAD Ta=60°C			P										
<table border="1" style="margin-left: auto; margin-right: auto;"> <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>57.4°C</td> <td>95.7°C</td> </tr> </tbody> </table>						NO	Position	P/N	1	2	1	CASE	CENTER	57.4°C	95.7°C
NO	Position	P/N	1	2											
1	CASE	CENTER	57.4°C	95.7°C											
2	LOW TEMPERATURE TURN ON TEST	TURN ON AFTER 3 HOURS	I/P:12VDC O/P: 100% LOAD Ta= -40°C	TEST : OK	P										

DATE	SAMPLE	TEST RESULT	TESTER	APPROVAL
2010.3.17	RD SAMPLE	PASS	PETER	VINCENT ZENG