



Test Report : SKA20A-12

20W 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	0.29%	P
2	RIPPLE & NOISE	60mVp-p (Max)	I/P:12VDC O/P:FULL LOAD Ta:25°C	20mV	P
3	LINE REGULATION	-0.2%~+0.2% (Max)	I/P:9VDC-18VDC O/P:FULL LOAD Ta:25°C	-0.01% ~ +0%	P
4	LOAD REGULATION	-0.5%~+0.5% (Max)	I/P:12VDC O/P:MIN-FULL LOAD Ta:25°C	-0.06% ~ +0.03%	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	88% (Typ)	I/P:12VDC O/P:FULL LOAD Ta:25°C	88.04%	P
3	DC CURRENT	1910 mA / FULL LOAD (Max) 35 mA / NO LOAD (Max)	I/P:12VDC O/P:NO / FULL LOAD Ta:25°C	1891 mA / FULL LOAD 17 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	164.5% HICCUP MODE AUTO-RECOVER	P
2	INPUT OVER VOLTAGE PROTECTION	20VDC-23VDC (Typ)	I/P:TESTING O/P:MINI. LOAD Ta:25°C	22.6 VDC SHUTDOWN OUTPUT VOLTAGE AUTO-RECOVER	P
3	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 < 0.8Vdc 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<1.08Vdc or Short	P
2	TRIM CONTROL	-20%~ +10% (Typ) Trim ~ +Vout Trim DOWN Trim ~ -Vout Trim UP Using 20k ohm VR	I/P:12VDC O/P:FULL LOAD Ta:25°C	Trim DOWN -26.53% Trim UP +10.41%	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: 0.02 mA 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>100 MΩ NO DAMAGE	P

RELIABILITY TEST

ENVIRONMENT TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT									
1	TEMPERATURE RISE TEST	1. ROOM AMBIENT BURN-IN : 5 HRS I/P:12VDC O/P:FULL LOAD Ta=25°C 2. HIGH AMBIENT BURN-IN : 15 HRS I/P:12VDC O/P:FULL LOAD Ta=75°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>57.5°C</td> <td>103.7°C</td> </tr> </tbody> </table>				NO	Position	P/N	1	2	1	CASE	CENTER	57.5°C
NO	Position	P/N	1	2										
1	CASE	CENTER	57.5°C	103.7°C										
2	LOW TEMPERATURE TURN ON TEST	TURN ON AFTER 4 HOURS	I/P:12VDC O/P: 100% LOAD Ta= -40°C	TEST : OK	P									

DATE	SAMPLE	TEST RESULT	TESTER	APPROVAL
2011.11.15	RD SAMPLE 1122R	PASS	PETER	VINCENT