



# Test Report : SGA40x12

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40W AC-DC High Reliability Slim Wall-mounted Adaptor

## ■ DESIGN VERIFY TEST

Output Function Test

Input Function Test

Protection Function Test

## ■ SAFETY TEST

Safety Test

## ■ RELIABILITY TEST

Environment Test

Other test

## DESIGN VERIFY TEST

### OUTPUT FUNCTION TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	RIPPLE & NOISE	120mVp-p (Max)	I/P:230VAC O/P:FULL LOAD Ta:25°C	60 mVp-p	P
2	VOLTAGE TOLERANCE	-3% ~ +3% (Max)	I/P:90VAC~264VAC O/P:FULL~MIN. LOAD Ta:25°C	-1.18% ~ +1.08%	P
3	LINE REGULATION	-1% ~ +1% (Max)	I/P:90VAC ~264VAC O/P:FULL LOAD Ta:25°C	-0.01% ~ +0.06%	P
4	LOAD REGULATION	-3% ~ +3% (Max)	I/P:230VAC O/P:FULL ~MIN LOAD Ta:25°C	-1.18% ~ +1.08%	P
5	SET UP TIME	500 mS	I/P:230VAC O/P:FULL LOAD Ta:25°C	320.2mS	P
6	RISE TIME	100 mS	I/P:230VAC O/P:FULL LOAD Ta:25°C	11.7 mS	P
7	HOLD UP TIME	12 mS (Min)	I/P:115VAC O/P:FULL LOAD Ta:25°C	17.0 mS	P

### INPUT FUNCTION TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	VOLTAGE RANGE	90VAC ~ 264VAC	I/P:TESTING O/P:FULL LOAD Ta:25°C	57V ~ 264V	P
2	FREQUENCY RANGE	50HZ - 60HZ (Typ) NO DAMAGE OSC	I/P: 100VAC ~ 240VAC O/P:FULL~MIN LOAD Ta:25°C	TEST: OK	P
3	EFFICIENCY	86.5% (Typ)	I/P:230VAC O/P:FULL LOAD Ta:25°C	87.275%	P
4	AVERAGE EFFICIENCY	87.60% ( LEVEL VI)	I/P:115/230VAC O/P:25% 、 50% 、 75% 、 100% LOAD Ta:25°C	87.86% (115VAC) 87.78% (230VAC)	P
5	AC CURRENT	1.0A (Max)	I/P: 100VAC O/P:FULL LOAD Ta:25°C	0.70A	P
6	NO LOAD POWER CONSUMPTION	< 0.075W (Max)	I/P:230VAC O/P: NO LOAD Ta:25°C	0.0306 W	P

7	INRUSH CURRENT	< 70A COLD START	I/P:230VAC O/P:FULL LOAD Ta:25°C	62.1 A	P
8	LEAKAGE CURRENT	< 0.25mA	I/P:240VAC O/P:Min LOAD Ta:25°C	L-FG: 0.02mA N-FG: 0.02mA	P

## PROTECTION FUNCTION TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	OVER LOAD PROTECTION	110 ~ 250%	I/P:230VAC O/P:TESTING Ta:25°C	147% HICCUP MODE RESET : AUTO RECOVER	P
2	OVER VOLTAGE PROTECTION	110 ~ 140%	I/P:230VAC O/P:MIN LOAD Ta:25°C	125% (1N4744A) Clamp by ZENER diode	P
3	SHORT PROTECTION	SHORT OUTPUT 1 HOUR NO DAMAGE	I/P:264VAC O/P:FULL LOAD Ta:25°C	NO DAMAGE HICCUP MODE RESET AUTO RECOVER	P

## ■ SAFETY TEST

### SAFETY TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	WITHSTAND VOLTAGE	I/P-O/P:4242 VDC/min	I/P-O/P:4242 VDC/min Ta:25°C	I/P-O/P: 0.03uA 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	SPECIFICATION	TEST CONDITION	RESULT	VERDICT																																	
1	TEMPERATURE RISE TEST	1. ROOM AMBIENT BURN-IN : 4HRS I/P:230VAC O/P:100% LOAD Ta=25°C 2. HI AMBIENT BURN-IN : 4HRS I/P:230VAC O/P:100% LOAD Ta=40°C			P																																	
		<table border="1" style="width: 100%; text-align: center;"> <thead> <tr> <th>NO</th> <th>Position</th> <th>1</th> <th>2</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>BD1</td> <td>79.9°C</td> <td>94.6°C</td> </tr> <tr> <td>2</td> <td>I/P C2</td> <td>76.3°C</td> <td>91.0°C</td> </tr> <tr> <td>3</td> <td>I/P Q2</td> <td>84.3°C</td> <td>99.9°C</td> </tr> <tr> <td>4</td> <td>O/P Q1</td> <td>76.4°C</td> <td>92.3°C</td> </tr> <tr> <td>5</td> <td>O/P C14</td> <td>72.1°C</td> <td>88.1°C</td> </tr> <tr> <td>6</td> <td>T1</td> <td>86.0°C</td> <td>99.7°C</td> </tr> <tr> <td>7</td> <td>CASE</td> <td>55.6°C</td> <td>72.7°C</td> </tr> </tbody> </table>		NO		Position	1	2	1	BD1	79.9°C	94.6°C	2	I/P C2	76.3°C	91.0°C	3	I/P Q2	84.3°C	99.9°C	4	O/P Q1	76.4°C	92.3°C	5	O/P C14	72.1°C	88.1°C	6	T1	86.0°C	99.7°C	7	CASE	55.6°C	72.7°C		
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2	LOW TEMPERATURE TURN ON TEST	TURN ON AFTER 2 HOURS	I/P : 230VAC O/P : 100% LOAD Ta= -20°C	TEST : OK	P																																	

### OTHER

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	CAPACITOR LIFE CYCLE	SUPPOSE C13 IS THE MOST CRITICAL COMPONENT I/P:230 VAC O/P:100% LOAD Ta=25°C LIFE TIME= 68467HRS I/P:230 VAC O/P:100% LOAD Ta=40°C LIFE TIME= 22585HRS			P
2	MTBF	MIL-KDBK-217F NOTICES 2 PARTS COUNT TOTAL FAILURE RATE : 2.122442 M.T.B.F : 471155 HRS			P

TEST RESULT	TESTER	APPROVAL
PASS	PETER CHENG	VINCENT TSENG