



# Test Report : SGAS06x05

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6W AC-DC High Reliable Extreme Small Wall-mounted Industrial 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
1	RIPPLE & NOISE	75mVp-p (Max)	I/P:230VAC O/P:FULL LOAD Ta:25°C	75 mVp-p
2	VOLTAGE TOLERANCE	-5% ~ +5% (Max)	I/P:90VAC~264VAC O/P:FULL~MIN. LOAD Ta:25°C	-1.18% ~ -0.29%
3	LINE REGULATION	-0.5% ~ +0.5% (Max)	I/P:90VAC ~264VAC O/P:FULL LOAD Ta:25°C	-0% ~ +0. 1%
4	LOAD REGULATION	-5% ~ +5% (Max)	I/P:230VAC O/P:FULL ~MIN LOAD Ta:25°C	-0.13% ~ +0.76%
5	SET UP TIME	1500 mS	I/P:230VAC O/P:FULL LOAD Ta:25°C	754.215 mS
6	RISE TIME	50 mS	I/P:230VAC O/P:FULL LOAD Ta:25°C	5.758 mS
7	HOLD UP TIME	5 mS (Min)	I/P:115VAC O/P:FULL LOAD Ta:25°C	11.11 mS

**INPUT FUNCTION TEST**

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT
1	VOLTAGE RANGE	90VAC ~ 264VAC	I/P:TESTING O/P:FULL LOAD Ta:25°C	42V ~ 264V
2	FREQUENCY RANGE	50HZ - 60HZ (Typ) NO DAMAGE OSC	I/P: 100VAC ~ 240VAC O/P:FULL~MIN LOAD Ta:25°C	TEST: OK
3	EFFICIENCY	75%	I/P:230VAC O/P:FULL LOAD Ta:25°C	78.87%
4	AVERAGE EFFICIENCY	76.62% ( LEVEL VI) 73.77% ( LEVEL 5)	I/P:115/230VAC O/P:25% 、 50% 、 75% 、 100% LOAD Ta:25°C	76.72% (115VAC) 75.91% (230VAC)
5	AC CURRENT	0.2A (Max)	I/P: 100VAC O/P:FULL LOAD Ta:25°C	0.137 A
6	NO LOAD POWER CONSUMPTION	< 0.1W (Max)	I/P:230VAC O/P: NO LOAD Ta:25°C	0.039 W

7	INRUSH CURRENT	<50A COLD START	I/P:230VAC O/P:FULL LOAD Ta:25°C	38.37A
8	LEAKAGE CURRENT	< 0.25mA	I/P:240VAC O/P:Min LOAD Ta:25°C	L-FG: 0.02mA N-FG: 0.02mA

## PROTECTION FUNCTION TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT
1	OVER LOAD PROTECTION	105% ~ 180%	I/P:230VAC O/P:TESTING Ta:25°C	124.2% HICCUP MODE RESET : AUTO RECOVER
2	OVER VOLTAGE PROTECTION	>120%	I/P:230VAC O/P:MIN LOAD Ta:25°C	130.2% (MMSZ5234BF) Clamp by ZENER diode
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

## ■ SAFETY TEST

### SAFETY TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT
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
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

## ■ RELIABILITY TEST

### ENVIRONMENT TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT																																																												
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 : 16HRS I/P:230VAC O/P:100% LOAD Ta=40°C 3. HI AMBIENT BURN-IN : 16HRS I/P:230VAC O/P: 50% LOAD Ta=70°C																																																														
<table border="1" style="margin: auto; border-collapse: collapse;"> <thead> <tr style="background-color: #cccccc;"> <th style="width: 5%;">NO</th> <th style="width: 15%;">Position</th> <th style="width: 15%;">1</th> <th style="width: 15%;">2</th> <th style="width: 15%;">3</th> </tr> </thead> <tbody> <tr><td style="text-align: center;">1</td><td style="text-align: center;">BD1</td><td style="text-align: center;">57.6°C</td><td style="text-align: center;">71.6°C</td><td style="text-align: center;">84.9°C</td></tr> <tr><td style="text-align: center;">2</td><td style="text-align: center;">C1</td><td style="text-align: center;">62.3°C</td><td style="text-align: center;">75.8°C</td><td style="text-align: center;">86.8°C</td></tr> <tr><td style="text-align: center;">3</td><td style="text-align: center;">C2</td><td style="text-align: center;">58.7°C</td><td style="text-align: center;">79.5°C</td><td style="text-align: center;">88.7°C</td></tr> <tr><td style="text-align: center;">4</td><td style="text-align: center;">I/P L1</td><td style="text-align: center;">65.9°C</td><td style="text-align: center;">72.1°C</td><td style="text-align: center;">84.9°C</td></tr> <tr><td style="text-align: center;">5</td><td style="text-align: center;">U1</td><td style="text-align: center;">80.8°C</td><td style="text-align: center;">95.8°C</td><td style="text-align: center;">99.1°C</td></tr> <tr><td style="text-align: center;">6</td><td style="text-align: center;">T1 coil</td><td style="text-align: center;">77.6°C</td><td style="text-align: center;">92.5°C</td><td style="text-align: center;">95.4°C</td></tr> <tr><td style="text-align: center;">7</td><td style="text-align: center;">T1 core</td><td style="text-align: center;">77.0°C</td><td style="text-align: center;">92.4°C</td><td style="text-align: center;">95.4°C</td></tr> <tr><td style="text-align: center;">8</td><td style="text-align: center;">O/P D3</td><td style="text-align: center;">90.8°C</td><td style="text-align: center;">105.5°C</td><td style="text-align: center;">101.7°C</td></tr> <tr><td style="text-align: center;">9</td><td style="text-align: center;">O/P C6</td><td style="text-align: center;">67.9°C</td><td style="text-align: center;">83.5°C</td><td style="text-align: center;">91.2°C</td></tr> <tr><td style="text-align: center;">10</td><td style="text-align: center;">O/P C7</td><td style="text-align: center;">62.1°C</td><td style="text-align: center;">77.5°C</td><td style="text-align: center;">88.5°C</td></tr> <tr><td style="text-align: center;">11</td><td style="text-align: center;">CASE</td><td style="text-align: center;">39.5°C</td><td style="text-align: center;">59.4°C</td><td style="text-align: center;">79.6°C</td></tr> </tbody> </table>					NO	Position	1	2	3	1	BD1	57.6°C	71.6°C	84.9°C	2	C1	62.3°C	75.8°C	86.8°C	3	C2	58.7°C	79.5°C	88.7°C	4	I/P L1	65.9°C	72.1°C	84.9°C	5	U1	80.8°C	95.8°C	99.1°C	6	T1 coil	77.6°C	92.5°C	95.4°C	7	T1 core	77.0°C	92.4°C	95.4°C	8	O/P D3	90.8°C	105.5°C	101.7°C	9	O/P C6	67.9°C	83.5°C	91.2°C	10	O/P C7	62.1°C	77.5°C	88.5°C	11	CASE	39.5°C	59.4°C	79.6°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																																																												

### OTHER

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT
1	CAPACITOR LIFE CYCLE	SUPPOSE C6 IS THE MOST CRITICAL COMPONENT I/P:230 VAC O/P:100% LOAD Ta=25°C LIFE TIME=39259.3HRS I/P:230 VAC O/P:100% LOAD Ta=40°C LIFE TIME=13314.83HRS		
2	MTBF	MIL-KDBK-217F NOTICES 2 PARTS COUNT TOTAL FAILURE RATE : 1.210625 M.T.B.F : 826001.20 HRS		

TEST RESULT	TESTER	APPROVAL
PASS	ARCHEN HSIAO	PETER CHENG