



Test Report : SGAS15x24

15W 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	100mVp-p (Max)	I/P:230VAC O/P:FULL LOAD Ta:25°C	30 mVp-p
2	VOLTAGE TOLERANCE	-2% ~ +2% (Max)	I/P:90VAC~264VAC O/P:FULL~MIN. LOAD Ta:25°C	-0.03% ~ +0.84%
3	LINE REGULATION	-0.5% ~ +0.5% (Max)	I/P:90VAC ~264VAC O/P:FULL LOAD Ta:25°C	-0.00% ~ +0.00%
4	LOAD REGULATION	-2% ~ +2% (Max)	I/P:230VAC O/P:FULL ~MIN LOAD Ta:25°C	-0.44% ~ +0.43%
5	SET UP TIME	3000 mS (Max)	I/P:230VAC O/P:FULL LOAD Ta:25°C	912.12 mS
6	RISE TIME	50 mS (Max)	I/P:230VAC O/P:FULL LOAD Ta:25°C	47.203 mS
7	HOLD UP TIME	10 mS (Min)	I/P:115VAC O/P:FULL LOAD Ta:25°C	29.132 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	46.5V ~ 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	86%	I/P:230VAC O/P:FULL LOAD Ta:25°C	86.44%
4	AVERAGE EFFICIENCY	84.09% (LEVEL VI) 84.46% (LEVEL 5)	I/P:115/230VAC O/P:25%、50%、75%、100% LOAD Ta:25°C	86.56% (115VAC) 85.37% (230VAC)
5	AC CURRENT	0.4A (Max)	I/P: 100VAC O/P:FULL LOAD Ta:25°C	0.31 A
6	NO LOAD POWER CONSUMPTION	< 0.075W (Max)	I/P:230VAC O/P: NO LOAD Ta:25°C	0.0659 W

7	INRUSH CURRENT	<50A COLD START	I/P:230VAC O/P:FULL LOAD Ta:25°C	47.843A
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% ~ 250%	I/P:230VAC O/P:TESTING Ta:25°C	132.9% HICCUP MODE RESET : AUTO RECOVER
2	OVER VOLTAGE PROTECTION	>120%	I/P:230VAC O/P:MIN LOAD Ta:25°C	118.1% (MMSZ5254BF) 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;">55.9°C</td><td style="text-align: center;">69.2°C</td><td style="text-align: center;">84.2°C</td></tr> <tr><td style="text-align: center;">2</td><td style="text-align: center;">I/P L1</td><td style="text-align: center;">56.9°C</td><td style="text-align: center;">70.3°C</td><td style="text-align: center;">84.6°C</td></tr> <tr><td style="text-align: center;">3</td><td style="text-align: center;">C1</td><td style="text-align: center;">54.8°C</td><td style="text-align: center;">68.0°C</td><td style="text-align: center;">83.1°C</td></tr> <tr><td style="text-align: center;">4</td><td style="text-align: center;">C2</td><td style="text-align: center;">66.3°C</td><td style="text-align: center;">79.3°C</td><td style="text-align: center;">88.6°C</td></tr> <tr><td style="text-align: center;">5</td><td style="text-align: center;">Q1</td><td style="text-align: center;">81.2°C</td><td style="text-align: center;">94.1°C</td><td style="text-align: center;">95.8°C</td></tr> <tr><td style="text-align: center;">6</td><td style="text-align: center;">U1</td><td style="text-align: center;">74.8°C</td><td style="text-align: center;">88.0°C</td><td style="text-align: center;">94.3°C</td></tr> <tr><td style="text-align: center;">7</td><td style="text-align: center;">T1 coil</td><td style="text-align: center;">83.2°C</td><td style="text-align: center;">97.1°C</td><td style="text-align: center;">97.5°C</td></tr> <tr><td style="text-align: center;">8</td><td style="text-align: center;">T1 core</td><td style="text-align: center;">82.5°C</td><td style="text-align: center;">95.8°C</td><td style="text-align: center;">96.9°C</td></tr> <tr><td style="text-align: center;">9</td><td style="text-align: center;">O/P D4</td><td style="text-align: center;">78.9°C</td><td style="text-align: center;">91.0°C</td><td style="text-align: center;">93.8°C</td></tr> <tr><td style="text-align: center;">10</td><td style="text-align: center;">O/P L2</td><td style="text-align: center;">59.6°C</td><td style="text-align: center;">72.7°C</td><td style="text-align: center;">84.9°C</td></tr> <tr><td style="text-align: center;">11</td><td style="text-align: center;">O/P C5</td><td style="text-align: center;">67.3°C</td><td style="text-align: center;">80.0°C</td><td style="text-align: center;">88.3°C</td></tr> <tr><td style="text-align: center;">12</td><td style="text-align: center;">O/P C6</td><td style="text-align: center;">59.5°C</td><td style="text-align: center;">72.7°C</td><td style="text-align: center;">85.1°C</td></tr> <tr><td style="text-align: center;">13</td><td style="text-align: center;">CASE</td><td style="text-align: center;">52.6°C</td><td style="text-align: center;">66.7°C</td><td style="text-align: center;">83.1°C</td></tr> </tbody> </table>					NO	Position	1	2	3	1	BD1	55.9°C	69.2°C	84.2°C	2	I/P L1	56.9°C	70.3°C	84.6°C	3	C1	54.8°C	68.0°C	83.1°C	4	C2	66.3°C	79.3°C	88.6°C	5	Q1	81.2°C	94.1°C	95.8°C	6	U1	74.8°C	88.0°C	94.3°C	7	T1 coil	83.2°C	97.1°C	97.5°C	8	T1 core	82.5°C	95.8°C	96.9°C	9	O/P D4	78.9°C	91.0°C	93.8°C	10	O/P L2	59.6°C	72.7°C	84.9°C	11	O/P C5	67.3°C	80.0°C	88.3°C	12	O/P C6	59.5°C	72.7°C	85.1°C	13	CASE	52.6°C	66.7°C	83.1°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 C5 IS THE MOST CRITICAL COMPONENT I/P:230 VAC O/P:100% LOAD Ta=25°C LIFE TIME= 27284.32HRS I/P:230 VAC O/P:100% LOAD Ta=40°C LIFE TIME= 11313.71HRS		
2	MTBF	MIL-KDBK-217F NOTICES 2 PARTS COUNT TOTAL FAILURE RATE : 1.985044 M.T.B.F : 503767.17 HRS		

TEST RESULT	TESTER	APPROVAL
PASS	ARCHEN HSIAO	PETER CHENG