



Test Report : SGAS15x12

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	SPECIFICATION	TEST CONDITION	RESULT
1	RIPPLE & NOISE	80mVp-p (Max)	I/P:230VAC O/P:FULL LOAD Ta:25°C	40 mVp-p
2	VOLTAGE TOLERANCE	-3% ~ +3% (Max)	I/P:90VAC~264VAC O/P:FULL~MIN. LOAD Ta:25°C	+0.67% ~ +1.90%
3	LINE REGULATION	-0.5% ~ +0.5% (Max)	I/P:90VAC ~264VAC O/P:FULL LOAD Ta:25°C	-0.01% ~ +0.01%
4	LOAD REGULATION	-3% ~ +3% (Max)	I/P:230VAC O/P:FULL ~MIN LOAD Ta:25°C	-0.62% ~ +0.60%
5	SET UP TIME	3000 mS (Max)	I/P:230VAC O/P:FULL LOAD Ta:25°C	451.927 mS
6	RISE TIME	50 mS (Max)	I/P:230VAC O/P:FULL LOAD Ta:25°C	13.65 mS
7	HOLD UP TIME	10 mS (Min)	I/P:115VAC O/P:FULL LOAD Ta:25°C	23.782 mS

INPUT FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	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	85%	I/P:230VAC O/P:FULL LOAD Ta:25°C	86.56%
4	AVERAGE EFFICIENCY	84.13% (LEVEL VI) 84.50% (LEVEL 5)	I/P:115/230VAC O/P:25% 、 50% 、 75% 、 100% LOAD Ta:25°C	86.01% (115VAC) 84.92% (230VAC)
5	AC CURRENT	0.4A (Max)	I/P: 100VAC O/P:FULL LOAD Ta:25°C	0.291 A
6	NO LOAD POWER CONSUMPTION	< 0.075W (Max)	I/P:230VAC O/P: NO LOAD Ta:25°C	0.0279 W

7	INRUSH CURRENT	<50A COLD START	I/P:230VAC O/P:FULL LOAD Ta:25°C	48.453A
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	SPECIFICATION	TEST CONDITION	RESULT
1	OVER LOAD PROTECTION	105% ~ 250%	I/P:230VAC O/P:TESTING Ta:25°C	136.8% HICCUP MODE RESET : AUTO RECOVER
2	OVER VOLTAGE PROTECTION	>120%	I/P:230VAC O/P:MIN LOAD Ta:25°C	122.5% (MMSZ5244BF) 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	SPECIFICATION	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"> <thead> <tr> <th>NO</th><th>Position</th><th>1</th><th>2</th><th>3</th></tr> </thead> <tbody> <tr><td>1</td><td>BD1</td><td>59.9°C</td><td>73.6°C</td><td>87.1°C</td></tr> <tr><td>2</td><td>I/P L1</td><td>61.8°C</td><td>75.7°C</td><td>88.3°C</td></tr> <tr><td>3</td><td>C1</td><td>58.3°C</td><td>72.0°C</td><td>86.1°C</td></tr> <tr><td>4</td><td>C2</td><td>65.9°C</td><td>79.4°C</td><td>89.7°C</td></tr> <tr><td>5</td><td>Q1</td><td>75.5°C</td><td>89.7°C</td><td>94.4°C</td></tr> <tr><td>6</td><td>U1</td><td>73.8°C</td><td>87.6°C</td><td>95.0°C</td></tr> <tr><td>7</td><td>T1 coil</td><td>78.4°C</td><td>92.9°C</td><td>96.9°C</td></tr> <tr><td>8</td><td>T1 core</td><td>75.8°C</td><td>89.6°C</td><td>95.4°C</td></tr> <tr><td>9</td><td>O/P D4</td><td>70.8°C</td><td>84.7°C</td><td>92.5°C</td></tr> <tr><td>10</td><td>O/P L2</td><td>52.5°C</td><td>66.9°C</td><td>83.7°C</td></tr> <tr><td>11</td><td>O/P C5</td><td>60.3°C</td><td>74.2°C</td><td>87.5°C</td></tr> <tr><td>12</td><td>O/P C6</td><td>56.4°C</td><td>70.6°C</td><td>85.7°C</td></tr> <tr><td>13</td><td>CASE</td><td>45.1°C</td><td>59.2°C</td><td>78.6°C</td></tr> </tbody> </table>	NO	Position	1	2	3	1	BD1	59.9°C	73.6°C	87.1°C	2	I/P L1	61.8°C	75.7°C	88.3°C	3	C1	58.3°C	72.0°C	86.1°C	4	C2	65.9°C	79.4°C	89.7°C	5	Q1	75.5°C	89.7°C	94.4°C	6	U1	73.8°C	87.6°C	95.0°C	7	T1 coil	78.4°C	92.9°C	96.9°C	8	T1 core	75.8°C	89.6°C	95.4°C	9	O/P D4	70.8°C	84.7°C	92.5°C	10	O/P L2	52.5°C	66.9°C	83.7°C	11	O/P C5	60.3°C	74.2°C	87.5°C	12	O/P C6	56.4°C	70.6°C	85.7°C	13	CASE	45.1°C	59.2°C	78.6°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 C5 IS THE MOST CRITICAL COMPONENT I/P:230 VAC O/P:100% LOAD Ta=25°C LIFE TIME= 44323.5HRS I/P:230 VAC O/P:100% LOAD Ta=40°C LIFE TIME= 16912.69HRS		
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