


SURE RESISTORS
ALUMINUM HOUSED WIREWOUND POWER RESISTORS - SAA
FEATURES

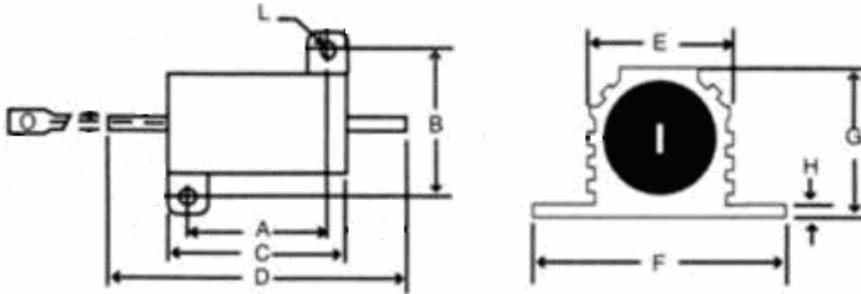

- High Power to size ratio
- Low surface temperature
- Elegant look over whole range.
- Exceptional stability and reliability against severity of damp heat conditions and other environmental abuses.
- Low temperature coefficient over entire range
- Anodized aluminum housing ensures good humidity seal
- Designed with serrations on Aluminum housing for proper thermal conductivity
- Terminations are silver plated
- High level voltage protection
- Non-standard ohmic values available.
- Non inductive and special terminations available

GENERAL SPECIFICATIONS

Test	Conditions
Tolerances	± 1%, ± 2%, ± 5%.
Power Ratings	5 watts to 500watt
Resistance Series	E24 Series
Resistance Range	0.05 Ω - 100 KΩ
Resistant Element	Copper-nickel alloy, or nickel chrome alloy
Housing	Anodized Aluminum
Core Material	Ceramic steatite
Temperature Range	-55C to 250C
Insulation Resistance	Min. 10 G ohms
Dielectric Strength	AC; Max. leakage current : 2mA 1000VAC peak (10-15W); 2500VAC (25-50W); 5000VAC (100-500W)
Short Time Overload	2 X wattage rating - 5sec
Load Life	Wattage rating 1.5h. ON, 30min. OFF, 1000 hours
Thermal Shock	wattage rating 30min., -55 C, 15-30minutes

SAA: These resistors consist of a resistance element wound on the special grade ceramic rod and embedded into an aluminum case. The aluminum casing made from high quality heat sink grade helps to dissipate the heat from the resistor at the faster rate and has a low change of resistance with respect to temperature, with resistance varying in direct proportion. This type of wire wound resistor is manufactured such that the aluminum enclosure is filled with special non-flammable silicon base cement paste.

MECHANICAL DATA



TYPE	POWER (Watt)	A	B	C	D	E	F	G	H	L
SAA-10	10	14.3	15.9	19	35	11	21	10	2	2.4
SAA-25	25	18.3	19.8	27	50	14	27.5	14	2.25	3.18
SAA-50	50	39.8	21.4	50	72	16	29	15.5	2.25	3.18
SAA-75	75	29	37	49	71	27	48	26	3.5	4.4
SAA-100	100	35	37	63	83	27	48	26	3.5	4.4
SAA-150	150	70	57	89	139	46	72	45	5	5
SAA-250	250	98.5	63.5	115	178	54	76	56	6.5	5
SAA-400	400	150	63.5	170	233	54	76	56	6.5	5
SAA-500	500	180	63.5	200	263	54	76	56	6.5	5

Dimensions unless specified in mm

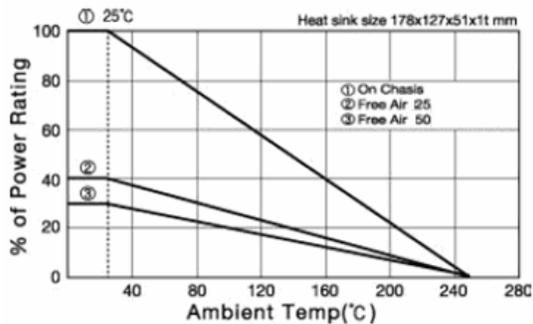
Standard terminations:

- 10-100 watt soldered terminations
- 150-500 watt threaded screw terminations

ELECTRICAL CHARACTERISTICS

DERATING

The power that the resistor can dissipate depends on the operating temperature.



- SAA resistors have an operating temperature range of: -55C to 250C.
- Derating is required for reduced chassis mounting area and for high ambient temperatures.
- The following curves apply to operation of un mounted resistor
- Heat sink size: 178X127X51X11 mm

TESTS AND REQUIREMENTS

TEST ITEM	CHARACTERISTICS
Resistance tolerance	Tolerance resistance $\pm 10\%$ (K)
Temperature coefficient	± 200 PPM/ $^{\circ}$ C MAX
Power rating load	$\Delta R/R \leq \pm(0.5\% + 0.1\Omega)$ Surface temperature up 350° C MAX
Short-term overload	Free of appearance or structural irregularity $\Delta R/R \leq \pm(2\% + 0.1\Omega)$
Insulation resistance	100M Ω min
Dielectric withstanding voltage	Free of appearance or structural irregularity $\Delta R/R \leq \pm(0.1\% + 0.05\Omega)$
Terminal strength	Free of appearance or structural irregularity
Resistor strength	Free of appearance or structural irregularity
Vibration	Free of appearance or structural irregularity $\Delta R/R \leq \pm(1\% + 0.05\Omega)$
Thermal shock	Resistor free of structural irregularity Crack of silicon cement surface $\Delta R/R \leq \pm(2\% + 0.1\Omega)$
Humidity	Free of appearance or structural irregularity $\Delta R/R \leq \pm(3\% + 0.1\Omega)$
Load life	Free of appearance or structural irregularity Discoloration of marking $\Delta R/R \leq \pm(3\% + 0.1\Omega)$
Flame retardation	US UL-94 flame retardation test V-0 grade noncombustible

