HA SERIES PRECISION AXIAL LEADED RESISTORS



Specialists in precision high value, high voltage resistors and networks, serving the industry since 1972.

Our offer for short term deliver has been company policy for years. The majority of our customers take advantage of this service allowing them to meet their production requirements. If you are having delivery problems call our toll free number for assistance on small or larger orders.

The HA Series is intened for use where tight tolerances, low TCR's, and greater stability is required. If your needs are not addressed by our standard specifications please contact the factory for help in meeting your design requirements. We will do our best to solve your problems.

AVAILABLE OPTIONS

- Tolerances from .1% to 10%
- Guaranteed voltage coefficients
- Special temperature coefficients
- Flame proof coating
- Coatings for use in oil
- Marking to customer specifications
- Matched sets for low ratio TC and tolerance tracking
- Manufacturing and testing to MIL-PRF-49462
- Packaging supplied in bulk or ammo pack

SPECIFICATIONS

HMC	WATT-	VOLTAGE	RESISTANCE		MAXIMUM DIMENSIONS		
TYPE	AGE	RATINGS	Min.	Max.	CL	BD	LD
HA60	.50W	750VDC	50K	2 000M	.405 (10.287)	.150 (3.810)	.032 (.812)
HA65	1.0W	1500VDC	100K	5000M	.620 (15.748)	.171 (4.343)	.032 (.812)
HA70	2.0W	3500VDC	300K	7500M	.835 (21.209)	.255 (6.477)	.032 (.812)
HA80	3.0W	5000VDC	500K	8500M	.965 (24.511)	.340 (8.636)	.032 (.812)
HA100	4.0W	7500VDC	500K	10000M	1.815 (46.101)	.340 (8.636)	.032 (.812)
HA120	5.0W	10,000VDC	500K	10000M	2.130 (54.102)	.340 (8.636)	.032 (.812)

ENVIRONMENTAL PERFORMANCE

Load Life: 1,000 hours at rated voltage at +70°C, not to exceed rated power, ΔR, 0.25% Max. **Overvoltage/Overload:** 1.5 times rated voltage, not to exceed 5 times rated power for 10 sec.,

 Δ R, 0.25% Max.

Thermal Shock: MIL-STD-202, Method 107,

Cond. F, ΔR , 0.20% Max.

Moisture Resistance: MIL-STD-202, Method 106,

 Δ R, 0.50% Max.

Insulation Resistance: 10,000 Megohms minimum,

at 500 volts DC.

Shelf Life: 1 year at +25°C, ΔR, 0.10% Max. Dielectric Strength: MIL-STD-202, Method 301,

 Δ R, 0.25% Max.

TEMPERATURE COEFFICIENTS

T9 = $0 \pm 25 \text{ PPM/}^{\circ}\text{C}$ from $0 \text{ to } +70^{\circ}\text{C}$

 $T2 = 0 \pm 50 \text{ PPM/}^{\circ}\text{C from } -15^{\circ}\text{C to } +105^{\circ}\text{C}$

 $T0 = 0 \pm 100 \text{ PPM/}^{\circ}\text{C from } -55^{\circ}\text{C to } +125^{\circ}\text{C}$



HOW TO ORDER BY PART NUMBER:

The part number is a combination of series, size, thickness, substrate and wrap.

Example: HA65 - 10M - 1% - H

HMC TYPE:

RESISTANCE VALUE:

TOLERANCE:

TEMPERATURE COEFFICIENT:

25PPM = E	150PPM = L
50PPM = H	200PPM = N
100PPM = K	250PPM = R





