

A Series

PulsEater® Ceramic Composition Available in E12 Ohmic values



The “A” Series non-inductive, ceramic composite resistors are designed for a variety of applications where high energy handling capabilities are crucial. These resistors are ideal for any application which is subject to surges, high peak power, or impulse energy.

Their unique design allows uniform distribution of energy throughout their structure which results in low thermal stress. The high-temperature, solvent-resistant epoxy coating carries a UL94V0 flammability rating which is suitable for almost any environment.



*AZ style is provided with dual terminal wires

FEATURES

- High Surge Energy
- Non-Inductive
- Small Size

APPLICATIONS

- Motor Drives
- Power Supplies, UPS
- Power Conversion
- In-Rush Current Limiting

SERIES SPECIFICATIONS

Series	Resistance ¹ (ohms)	P avg. ² (watts)	Impulse Voltage ³ (volts)	Energy ⁴ (joule)
AV	3.3 to 10K	2.0	1000	250
AW	4.7 to 15K	2.5	1500	400
AX	1.0 to 3.3K	3.5	1000	700
AY	2.2 to 6.8K	4.5	2000	1400
AZ	1.5 to 4.7K	5.5	2500	2800

¹E12 Standard Values $\pm 10\%$; ²Free Air 40°C Ambient; ³In Air; ⁴Single Impulse

CHARACTERISTICS

Resistance Element	Bulk Ceramic
Terminals	Radial; 100% Sn solder coated radial (60/40 solder available upon request)
Coating	UL94V0, solvent resistant epoxy
Tolerance	$\pm 10\%$ Standard
Operating Temp. Range	-55°C to 150°C
Derating	Derates linearly from 100% @ 50°C to 0% @ 150°C
Temperature Rise	100°C @ 100% rated power, 50°C ambient

Parameter	Max. ΔR	Test Method
Life Test	+5%	MIL-STD-202F, method 108A, except 50°C, 1000 hrs. @ rated power; 1.5 hrs. ON, 0.5 hrs. OFF
Single Pulse Energy	$\pm 1.5\%$	Single pulse, capacitor discharge at Rated Energy; 350VDC for AW and AX sizes; 650VDC for AY and AZ sizes.
Repetitive HV Pulsing	$\pm 2.0\%$	10 joules @ 5.0KV, 10,000 cycles
Short-time Overload	$\pm 1.5\%$	10x rated power. 5 sec. ON, 5 sec. OFF, 5 cycles
Short-term High Temp	$\pm 1.5\%$	250°C for 30 seconds
Long-term High Temp	$\pm 2.0\%$	1000 hours @ 150°C
Thermal Shock Cycle	$\pm 2.0\%$	MIL-STD-202F, method 107D. -55°C to +125°C, 5 cycles
Moisture Resistance	$\pm 1.0\%$	90% to 95% rh @ 40°C, 1000 hrs.

Mounting clip



This saddle clip conforms to the configuration of Ohmite's A Series resistor to provide secure mounting. Made of a durable thermoplastic polyester, the saddle clip is designed to secure the A Series in place while safely withstanding its operating temperatures. Use (2) saddle clips per resistor for extra stability.

Part No.	Dim. (mm)	for Series	Color
5911E	20 23 13	AX and AY	White
5910E	25 26 15	AZ	Black

(continued)

A Series

PulsEater® Ceramic Composition
Available in E12 Ohmic values

DIMENSIONS



Series	P avg. 2 (watts)	L max. (mm)	D max. (mm)	H max. (mm)	S norm. (mm)	Term. wire gauge (AWG)	Weight (g)
AV	2.0	15	13	22	12.5	20	3.9
AW	2.5	20	13	19	17.5	20	5.4
AX	3.5	15	21	26	12.5	18	10
AY	4.5	25	21	26	22.5	18	19
AZ	5.5	30	26		27	18	33

ORDERING INFORMATION

RoHS compliant

A W 5 6 G K E

Size Ohm Value Tolerance
Example:
33G = 3.3 Ohms K = 10% std.
330 = 33 Ohms M = 20%
331 = 330 Ohms

Standard Values

Ohmic value	Part No. Prefix ▶ Suffix ▼	Series	Ohmic value	Part No. Prefix ▶ Suffix ▼	Series	Ohmic value	Part No. Prefix ▶ Suffix ▼	Series	Ohmic value	Part No. Prefix ▶ Suffix ▼	Series
1.0 — 10GK		✓	5.6 — 56GK			33 — 330K		✓	220 — 221K	✓	✓
1.2 — 12GK			6.8 — 68GK	✓		39 — 390K	✓	✓	270 — 271K		
1.5 — 15GK			8.2 — 82GK		✓	47 — 470K	✓	✓	330 — 331K		✓
1.8 — 18GK			10 — 100K	✓	✓	56 — 560K		✓	470 — 471K	✓	✓
2.2 — 22GK		✓	12 — 120K	✓	✓	68 — 680K	✓	✓	560 — 561K		
2.7 — 27GK			15 — 150K	✓	✓	82 — 820K		✓	680 — 681K		✓
3.3 — 33GK	✓	✓	18 — 180K			100 — 101K	✓	✓	820 — 821K	✓	✓
3.9 — 39GK		✓	22 — 220K	✓	✓	120 — 121K			1000 — 102K	✓	✓
4.7 — 47GK	✓	✓	27 — 270K	✓		150 — 151K	✓	✓			
						180 — 181K					

Check product availability at www.ohmite.com

✓ = Standard values Non-standard values subject to a minimum handling charge per item.

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Ohmite:

[AW101K](#) [AX221K](#) [AX22GK](#) [AW681K](#) [AX220K](#) [AW820K](#) [AW82GK](#) [AW821K](#) [AZ220K](#) [AZ221K](#) [AZ680K](#) [AX18GK](#)
[AX181K](#) [AY391K](#) [AY390K](#) [AY39GK](#) [AX330K](#) [AX331K](#) [AX33GK](#) [AY561K](#) [AZ22GK](#) [AY56GK](#) [AX471K](#) [AW181K](#)
[AX47GK](#) [AX470K](#) [AW180K](#) [AZ120K](#) [AW102K](#) [AX820K](#) [AX82GK](#) [AX821K](#) [AW100K](#) [AY681K](#) [AY680K](#) [AY68GK](#)
[AX120K](#) [AX102K](#) [AY22GK](#) [AY221K](#) [AX100K](#) [AZ470K](#) [AZ471K](#) [AZ47GK](#) [AZ82GK](#) [AZ821K](#) [AY181K](#) [AY101K](#)
[AX391K](#) [AY102K](#) [AX27GK](#) [AX39GK](#) [AX270K](#) [AX271K](#) [AY120K](#) [AY121K](#) [AW680K](#) [AW68GK](#) [AX390K](#) [AY100K](#)
[AZ390K](#) [AY560K](#) [AX180K](#) [AX150K](#) [AW471K](#) [AW470K](#) [AX15GK](#) [AX151K](#) [AW47GK](#) [AZ270K](#) [AZ271K](#) [AZ391K](#)
[AZ39GK](#) [AZ27GK](#) [AZ820K](#) [AZ15GK](#) [AZ151K](#) [AZ150K](#) [AZ330K](#) [AZ331K](#) [AZ33GK](#) [AW330K](#) [AX12GK](#) [AX121K](#)
[AZ681K](#) [AZ561K](#) [AZ18GK](#) [AZ181K](#) [AZ180K](#) [AZ102K](#) [AW120K](#) [AW121K](#) [AZ100K](#) [AZ121K](#) [AW390K](#) [AY82GK](#)
[AX681K](#) [AY821K](#) [AW391K](#) [AX68GK](#)