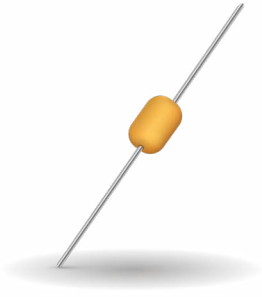


# Axial TransGuard® and StaticGuard

## Axial Multilayer Ceramic Transient Voltage Suppressors



### GENERAL DESCRIPTION

Axial TransGuard® multilayer varistors are zinc oxide (ZnO) based ceramic semiconductor devices with non-linear voltage-current characteristics (bi-directional) similar to back-to-back zener diodes. They have the added advantage of greater current and energy handling capabilities as well as EMI/RFI attenuation.

Axial StaticGuard is low capacitance version of the TransGuard and are designed for general ESD protection of CMOS, Bi-Polar, and SiGe based systems.

KYOCERA AVX Axial varistors are designed for applications where leaded component is preferred and for durability in harsh environment.

### GENERAL CHARACTERISTICS

- Operating Temperatures: -55°C to +125°C
- Working Voltage: 3.3 - 60Vdc
- Case Size: Axial
- Energy: 0.1 - 2.0J
- Peak Current: 30 - 300A

### FEATURES

- Axial leaded, epoxy encapsulated
- Fast Response
- EMI/RFI filtering in the off-state
- Multiple strikes capability

### APPLICATIONS

- White Goods
- Industrial Equipment
- Sensors
- Relays
- DC Motors
- and more

### HOW TO ORDER - AXIAL TRANSGUARD®

<b>VA</b> ↓ <b>Varistor Axial</b>	<b>1000</b> ↓ <b>Case Size</b> 1000 2000	<b>26</b> ↓ <b>Voltage</b> 03 = 3.3Vdc 05 = 5.6Vdc 14 = 14Vdc 18 = 18Vdc 26 = 26Vdc 30 = 30Vdc 48 = 48Vdc 60 = 60Vdc	<b>D</b> ↓ <b>Energy Rating</b> A = 0.1J D = 0.4J K = 0.6J	<b>400</b> ↓ <b>Clamping Voltage</b> 100 = 12V 150 = 18V 300 = 32V 400 = 42V 580 = 60V 650 = 67V 101 = 100V 121 = 120V	<b>R</b> ↓ <b>Packaging</b> D = 7" reel R = 7" reel T = 13" reel	<b>L</b> ↓ <b>Termination</b> L = Ni/Sn plated
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Packaging (Pcs/Reel:			
STYLE	D	R	T
VA1000	1,000	3,000	7,500
VA2000	1,000	2,500	5,000

### HOW TO ORDER - AXIAL STATICGUARD

<b>VA</b> ↓ <b>Varistor Axial</b>	<b>10</b> ↓ <b>Case Size</b> 10 = 1000	<b>LC</b> ↓ <b>Low Capacitance</b>	<b>18</b> ↓ <b>Voltage</b> 18 = 18Vdc	<b>A</b> ↓ <b>Energy Rating</b> A = 0.1J	<b>500</b> ↓ <b>Clamping Voltage</b> 500 = 50V	<b>R</b> ↓ <b>Packaging</b> D = 7" reel R = 7" reel T = 13" reel	<b>L</b> ↓ <b>Termination</b> L = Ni/Sn plated
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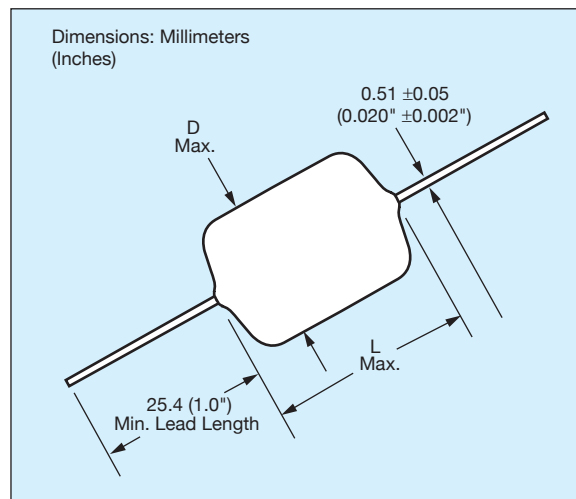
### AXIAL TRANSGUARD®

Part Number	V <sub>w</sub> (DC)	V <sub>w</sub> (AC)	V <sub>B</sub>	V <sub>c</sub>	I <sub>vc</sub>	I <sub>L</sub>	E <sub>T</sub>	I <sub>p</sub>	Cap	Freq	Case
VA100003A100	3.3	2.3	5.0±20%	12	1	100	0.1	40	1500	K	1000
VA100003D100	3.3	2.3	5.0±20%	12	1	100	0.4	150	4700	K	1000
VA100005A150	5.6	4.0	8.5±20%	18	1	35	0.1	40	1000	K	1000
VA100005D150	5.6	4.0	8.5±20%	18	1	35	0.4	150	2800	K	1000
VA100014A300	14.0	10.0	18.5±12%	32	1	15	0.1	40	325	K	1000
VA100014D300	14.0	10.0	18.5±12%	32	1	15	0.4	150	1100	K	1000
VA100018A400	18.0	13.0	25.5±10%	42	1	10	0.1	40	350	K	1000
VA100018D400	18.0	13.0	25.5±10%	42	1	10	0.4	150	900	K	1000
VA100026D580	26.0	18.0	34.5±10%	60	1	10	0.4	120	650	K	1000
VA100030D650	30.0	21.0	41.0±10%	67	1	10	0.4	120	550	K	1000
VA100048D101	48.0	34.0	62.0±10%	100	1	10	0.4	100	200	K	1000
VA200060K121	60.0	42.0	76.0±10%	120	1	10	2.0	300	400	K	2000

### AXIAL STATICGUARD

Part Number	V <sub>w</sub> (DC)	V <sub>w</sub> (AC)	V <sub>B</sub>	V <sub>c</sub>	I <sub>vc</sub>	I <sub>L</sub>	E <sub>T</sub>	I <sub>p</sub>	Cap	Freq	Case
VA10LC18A500	≤18.0	≤14.0	25-40	50	1	10	0.1	30	200	K	1000

- V<sub>w</sub>(DC) DC Working Voltage [V]
- V<sub>w</sub>(AC) AC Working Voltage [V]
- V<sub>B</sub> Typical Breakdown Voltage (V @ 1mA<sub>DC</sub>)
- V<sub>B Tol</sub> V<sub>B</sub> Tolerance is ± from Typical Value
- V<sub>c</sub> Clamping Voltage (V @ I<sub>vc</sub>)
- I<sub>vc</sub> Test Current for V<sub>c</sub> (A, 8x20μS)
- I<sub>L</sub> Maximum Leakage Current at the Working Voltage (μA)
- E<sub>T</sub> Transient Energy Rating (J, 10x1000μS)
- I<sub>p</sub> Peak Current Rating (A, 8x20μS)
- Cap Typical Capacitance (pF) @ frequency specified and 0.5 V<sub>RMS</sub>
- Freq Frequency at which capacitance is measured (K = 1kHz, M = 1MHz)



### DIMENSIONS:

mm (inches)

Style		VA1000	VA2000
(L) Max Length	mm (in.)	4.32 (0.170)	4.83 (0.190)
(D) Max Diameter	mm (in.)	2.54 (0.100)	3.56 (0.140)

Lead Finish: Copper Clad Steel, Solder Coated