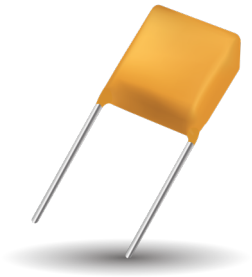
Radial Leaded CapGuard®

Varistor/Capacitor Combination for EMI/Surge Suppression



GENERAL DESCRIPTION

KYOCERA AVX radial leaded CapGuard® products are designed to provide both transient voltage protection and EMI/RFI suppression for electronic circuits. CapGuards® are ideally suited to filter out EMI/RFI noise generated by switch mode power supplies or motors on DC lines or I/O lines in electronic circuits. With multilayer varistor (MLV) utilized in CapGuard® product, effective transient voltage protection is achieved to protect sensitive electronics from high voltage transients. The capacitor, on the other hand, absorbs high frequency noise on the line. The MLCC capacitors are designed with temperature stable X7R dielectric, allowing for wide temperature use with good capacitance stability.

GENERAL CHARACTERISTICS

- Operating Temperature: -55 to +125°C
- Working Voltage: 26Vdc, 45Vdc
- Capacitance: 0.47µF - 4.7µF

FEATURES

- High Capacitance / EMI Filtering
- Bi-Directional Protection
- AEC Q200 qualified
- Multiple Strike Capability
- Radial, epoxy encapsulated

APPLICATIONS

- EMI filtering with surge protection
- DC motors
- Inductive switching
- Relays
- Power supplies
- I/O Ports
- and more

HOW TO ORDER

CG	21	AS	26	F	474	M	R	TR1
Series	**Size** 21	**Automotive Series**	**Working Voltage** 26 = 26Vdc 45 = 45Vdc	**Energy** K = 0.6J F = 0.7J H = 1.2J	**Capacitance** 474 = 0.47µF 105 = 1.0µF 475 = 4.7µF	**Tolerance** M = ±20%	**Leads** R = RoHS Compliant	**Packaging** Blank = Bulk TR1 = T&R Standard 1 TR2 = T&R Standard 2

RoHS COMPLIANT

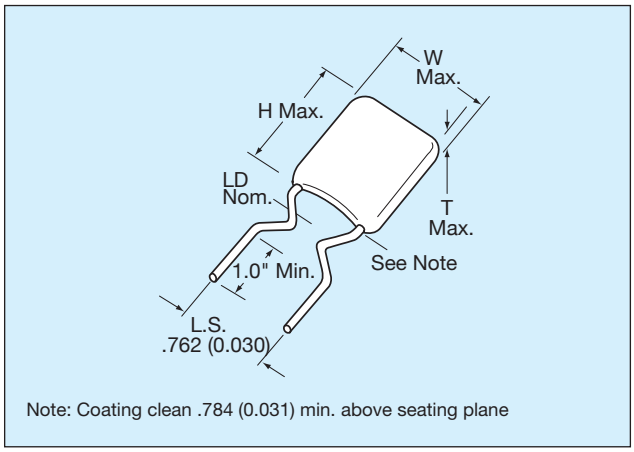
ELECTRICAL CHARACTERISTICS

Part Number	$V_{W\,DC}$	$V_{W\,AC}$	V_B	V_C	I_{VC}	I_L	E_T	E_{LD}	I_P	Cap	Tol	V_{JUMP}
CG21AS26F474MR	26.0	18.0	33.0±10%	54	1	15	0.7	1.5	200	0.47	±20%	27.5
CG21AS26F105MR	26.0	18.0	33.0±10%	54	1	15	0.7	1.5	200	1	±20%	27.5
CG21AS26H475MR	26.0	18.0	34.5±10%	60	5	15	1.2	3	300	4.7	±20%	27.5
CG21AS45K474MR	45.0	35.0	56.0±10%	90	1	15	0.6	1.25	200	0.47	±20%	48
CG21AS45K105MR	45.0	35.0	56.0±10%	90	1	15	0.6	1.25	200	1	±20%	48

V_W(DC) DC Working Voltage [V]
V_W(AC) AC Working Voltage [V]
V_B Typical Breakdown Votage [V @ 1mA$_{DC}$]
V_C Clamping Voltage [V @ I_{IV}]
I_{VC} Test Current for V_C
I_L Maximum leakage current at the working voltage [µA]
E_t Transient Energy Rating [J, 10x1000µS]
E_{LD} Load Dump Energy (x10) [J]
I_P Peak Current Rating [A, 8x20µS]
Cap Typical capacitance [pF] @ frequency specified and 0.5V_{RMS}
Tol Capacitance tolerance [%] from Typ value
V_{Jump} Jump Start (V)

The Important Information/Disclaimer is incorporated in the catalog where these specifications came from or available online at www.kyocera-avx.com/disclaimer/ by reference and should be reviewed in full before placing any order.

PHYSICAL DIMENSIONS



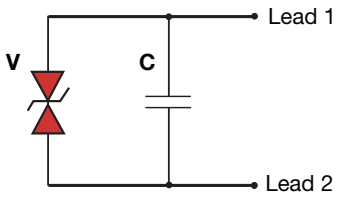
Note: Coating clean .784 (0.031) min. above seating plane

Drawings are for illustrative purposes only. Actual lead form shape could vary within stated tolerances based on body size.

mm (inches)

Style	Width (W)	Height (H)	Thickness (T)	Lead Spacing	Lead Diameter
CG21	6.35 Max (0.250)	8.25 Max (0.325)	5.08 Max (0.200)	5.08±0.76 (0.200±0.030)	0.508 nom. (0.020)

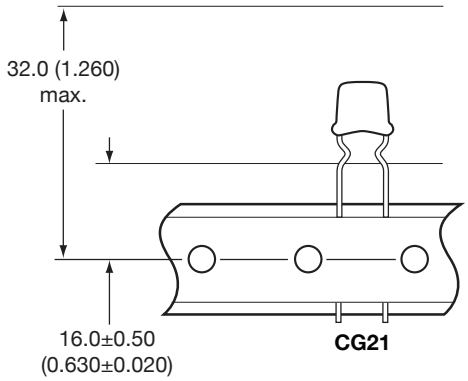
Schematic Diagram

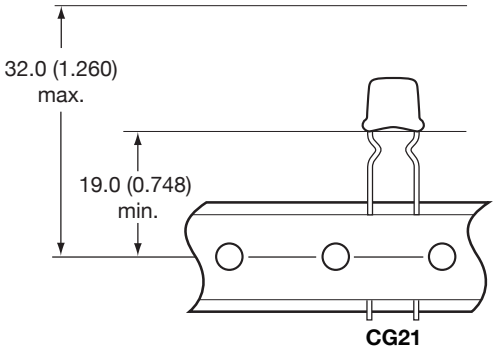


TAPE & REEL PACKAGING OPTIONS

TR1

Tape & Reel Standard 1



TR2

Tape & Reel Standard 2