Radial Leaded CapGuard[™]

Varistor/Capacitor Combination for EMI/Surge Suppression



GENERAL DESCRIPTION

AVX's 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, 1µF

HOW TO ORDER

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

CG 21 AS 26 F 474 Μ TR1 R Size Series Automotive Working Energy Capacitance Tolerance Leads Packaging Series Voltage $474 = 0.47 \mu F$ R = RoHSBlank = Bulk 20 K = 0.6J $M = \pm 20\%$ 26 = 26Vdc21 F = 0.7 J $105 = 1.0 \mu F$ Compliant TR1 = T&R Standard 1 45 = 45 V dcTR2 = T&R Standard 2





ELECTRICAL CHARACTERISTICS

AVX Part Number	Vwdc	V _{W AC}	V _B	Vc	Ivc	١	ET	ELD	I _P	Сар	Tol	VJUMP
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
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

E,

 I_P

 E_{LD}

Tol

V_w(DC) DC Working Voltage [V]

- V_w(AC) AC Working Voltage [V]
- Typical Breakdown Votage [V @ 1mA_{DC}] V_{B} Clamping Voltage [V @ I_N]
- $V_{\rm C}$ Test Current for V_c
- I_{VC}
- Maximum leakage current at the working voltage [µA]

Transient Energy Rating [J, 10x1000µS]

Load Dump Energy (x10) [J]

Peak Current Rating [A, 8x20µS]

- Cap Typical capacitance [pF] @ frequency specified and 0.5V_{BMS} Capacitance tolerance [%] from Typ value
- V_{Jump} Jump Start (V)

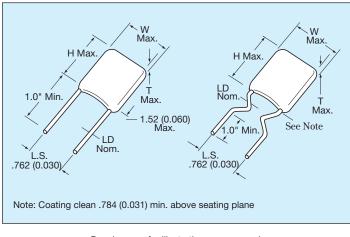


Radial Leaded CapGuard™



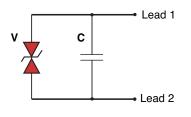
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PHYSICAL DIMENSIONS



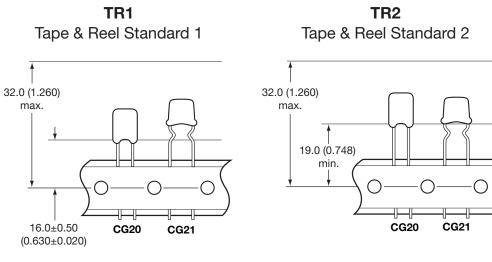
	mm (inches)										
A	VX Style	Width (W	Height (H)	Thickness (T)	Lead Spacing	Lead Diameter					
	CG20	5.99 Max. (0.236)	7.49 Max. (0.295)	4.5 Max. (0.177)	2.54 (0.100)	0.508 (0.020)					
	CG21	5.99 Max (0.236)	7.49 Max (0.295)	4.5 Max (0.177)	5.08 (0.200)	0.508 (0.020)					

Schematic Diagram



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

TAPE & REEL PACKAGING OPTIONS



/AV/X