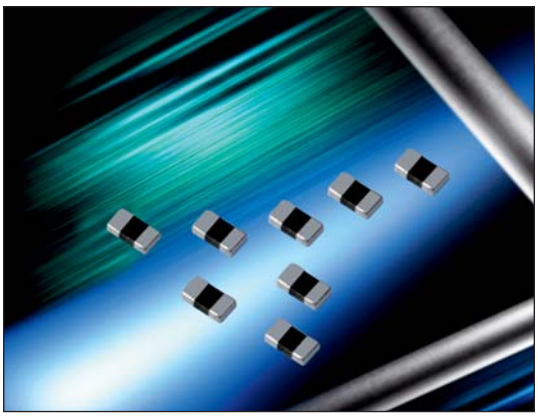
Controlled Capacitance Multilayer Varistor



GENERAL DESCRIPTION

The Controlled Capacitance TransGuard is an application specific bi-directional transient voltage suppressor developed for use in mixed signal environments. The Controlled Cap MLV has three purposes: 1) reduce emissions from a high speed ASIC, 2) prevent induced E fields from conducting into the IC, and 3) clamp transient voltages

By controlling capacitance of the MLV, the center frequency and 20db range for filtering purposes can be targeted. A Controlled Cap MLV can greatly improve overall system EMC performance and reduce system size.

Operating Temperature: -55ºC to +125ºC

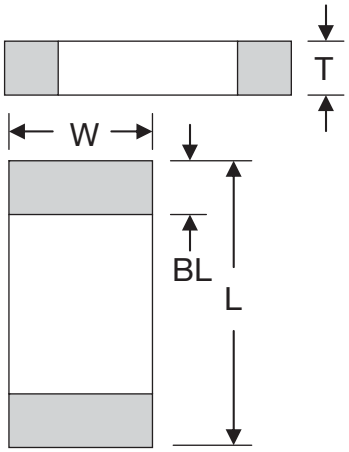
HOW TO ORDER

VCAC	0603	22	A	470	N	R	P
Varistor Chip Automotive Capacitance	**Chip Size** 0603	**Working Voltage** 22 = 22V 26 = 26V	**Energy Rating** A = 0.1J C = 0.3J	**Capacitance** 470 = 47pF 820 = 82pF	**Tolerance** N = ±30% M = ±20%	**Packaging** R = 4k pcs	**Termination** P = Ni Barrier/ 100% Sn (matte)

RoHS COMPLIANT

AVX Part Number	V_W (DC)	V_W (AC)	V_B	V_C	I_L	E_T	I_P	Cap	Cap Tolerance	Case Size
VCAC060322A470NRP	22	17	32.5±25%	50	10	0.1	30	47	30%	0603
VCAC060326C820MRP	26	20	36.0±15%	67	10	0.3	30	82	20%	0603

V_W(DC)	DC Working Voltage [V]	I_L	Maximum leakage current at the working voltage [µA]
V_W(AC)	AC Working Voltage [V]	E_T	Transient Energy Rating [J, 10x1000µS]
V_B	Breakdown Votage [V @ 1mA$_{DC}$]	I_P	Peak Current Rating [A, 8x20µS]
V_C	Clamping Votage [V @ 1A]	Cap	Capacitance [pF] @ 1KHz specified and 0.5V_{RMS}

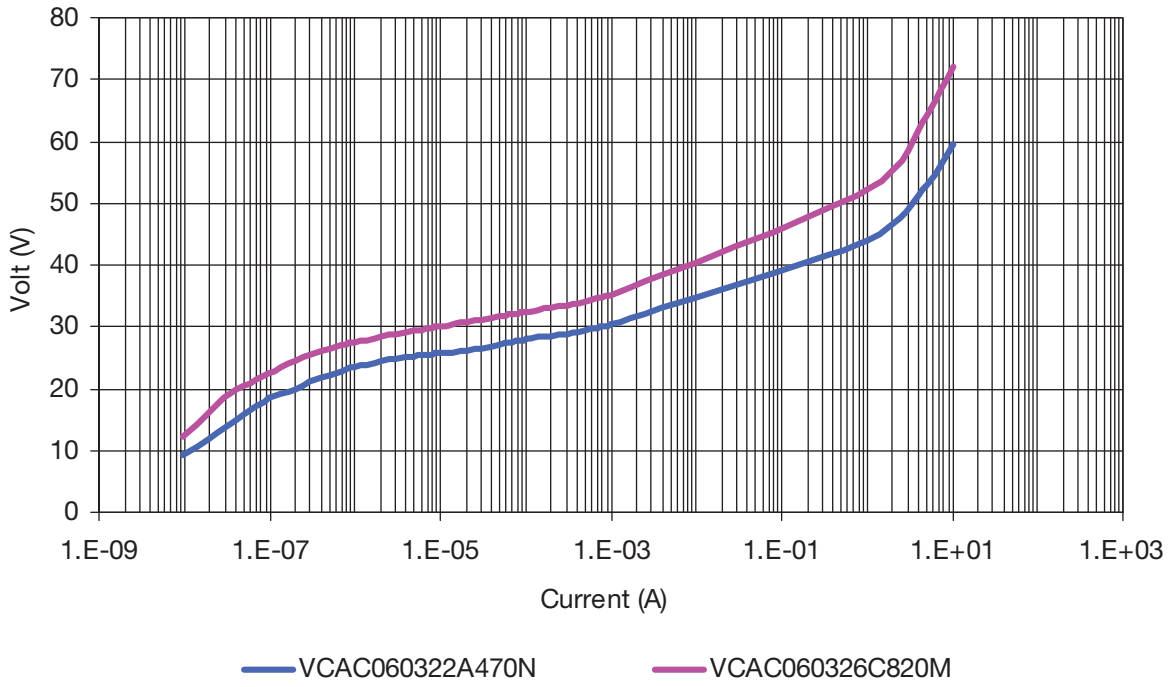


0603 Discrete Dimensions

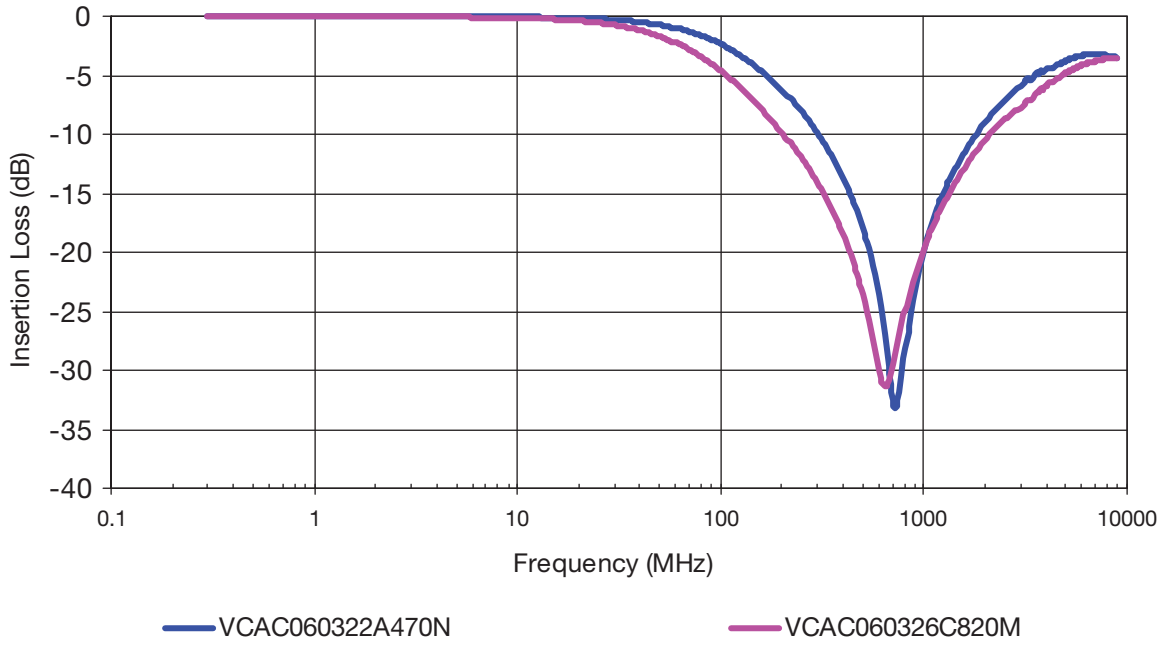
mm (inches)

L	W	T	BW	BL
1.60±0.15 (0.063±0.006)	0.80±0.15 (0.031±0.006)	0.90 MAX (0.035 MAX)	N/A	0.35±0.15 (0.014±0.006)

V-I Curve


80
70
60
50
40
30
20
10
0
Volt (V)
1.E-09
1.E-07
1.E-05
1.E-03
1.E-01
1.E+01
1.E+03
Current (A)
VCAC060322A470N
VCAC060326C820M

S21


0
-5
-10
-15
-20
-25
-30
-35
-40
Insertion Loss (dB)
0.1
1
10
100
1000
10000
Frequency (MHz)
VCAC060322A470N
VCAC060326C820M