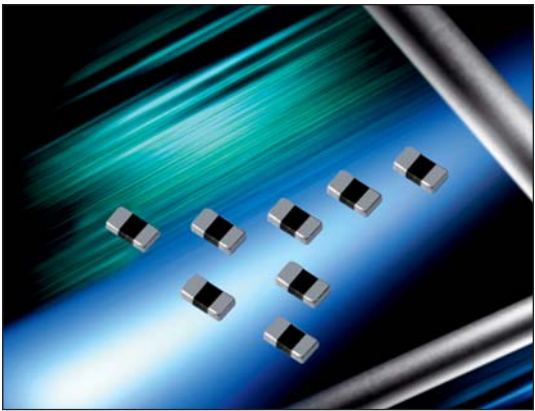


# Controlled Capacitance Multilayer Varistor



## 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: -55°C to +125°C

## HOW TO ORDER

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



| AVX Part Number   | V <sub>w</sub> (DC) | V <sub>w</sub> (AC) | V <sub>B</sub> | V <sub>C</sub> | I <sub>L</sub> | E <sub>T</sub> | I <sub>P</sub> | 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<sub>w</sub>(DC) DC Working Voltage [V]

V<sub>w</sub>(AC) AC Working Voltage [V]

V<sub>B</sub> Breakdown Voltage [V @ 1mA<sub>DC</sub>]

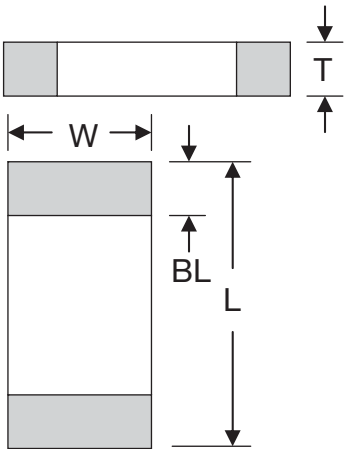
V<sub>C</sub> Clamping Voltage [V @ 1A]

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 Capacitance [pF] @ 1KHz specified and 0.5V<sub>RMS</sub>



## 0603 Discrete Dimensions

mm (inches)

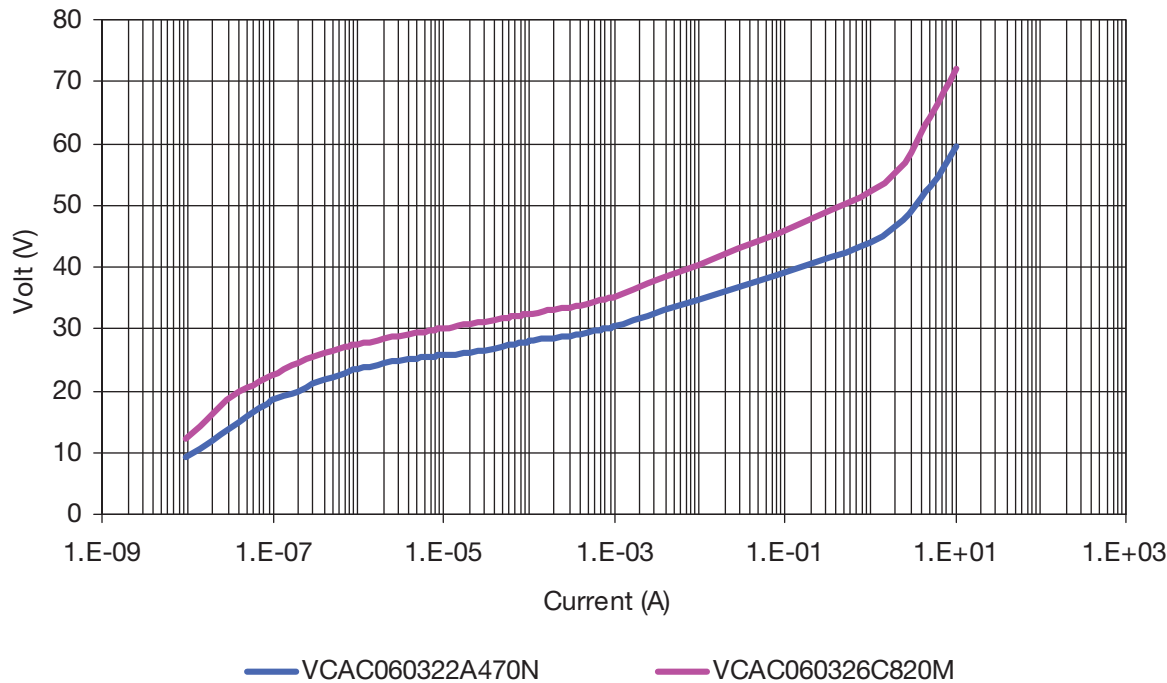
| L                          | W                          | T                       | BW  | BL                         |
|----------------------------|----------------------------|-------------------------|-----|----------------------------|
| 1.60±0.15<br>(0.063±0.006) | 0.80±0.15<br>(0.031±0.006) |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



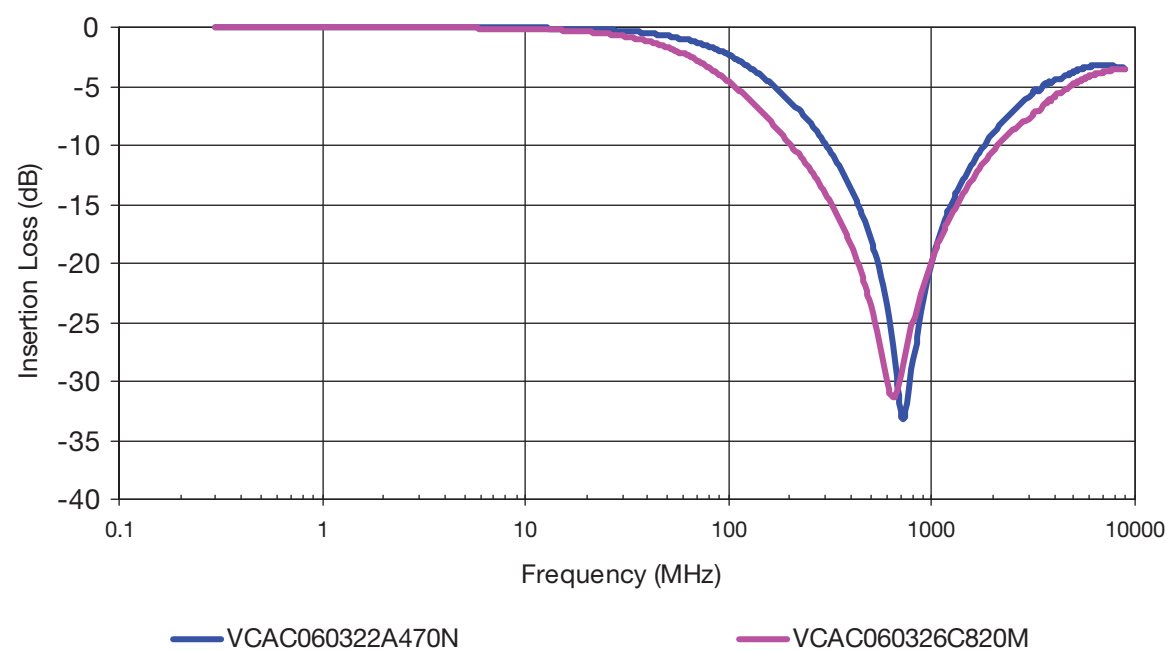
# Controlled Capacitance Multilayer Varistor



V-I Curve



S21



# Mouser Electronics

Authorized Distributor

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