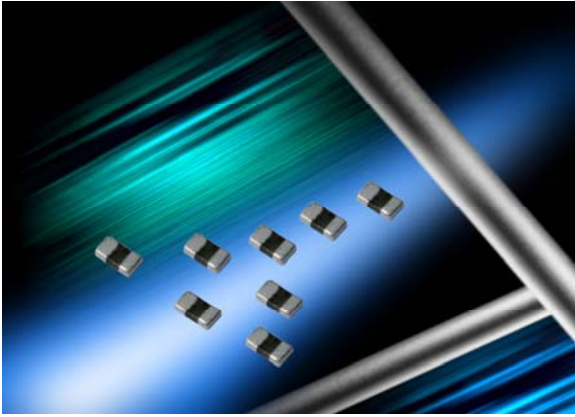




# High Temperature Automotive MultiLayer Varistor



AVX High Temperature Multi-Layer Varistors are designed for underhood applications. Products have been tested, qualified, and specified to 150°C. The MLV advantage is EMI/RFI attenuation in the off state. This allows designers the ability to combine the circuit protection and EMI/RFI attenuation function into a single highly reliable device.

The CAN and AntennaGuard series are the first releases in a planned series to include higher voltages and a variety of case size. AEC Q200 data packages available.

AVX Part No.	V <sub>W</sub> (DC)	V <sub>W</sub> (AC)	V <sub>B</sub>	I <sub>L</sub>	E <sub>T</sub>	I <sub>P</sub>	Cap.	Case Size	Elements
CANAT01_ _	≤ 18	≤14	120	10	0.015	4	22	0603	1
CANAT02_ _	≤ 18	≤14	70	10	0.015	4	22	0405	2
CANAT04_ _	≤ 18	≤14	100	10	0.015	4	22	0612	4

AVX Part NO.	V <sub>W</sub> (DC)	V <sub>W</sub> (AC)	I <sub>L</sub>	Cap	Cap Tolerance	Case Size
VCAT06AG18120YAT_ _	≤ 18	≤ 14	10	12	+4, -2pF	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 @ I<sub>VC</sub>]

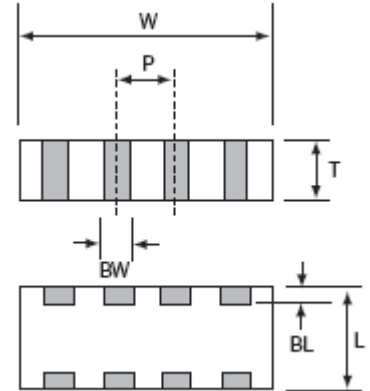
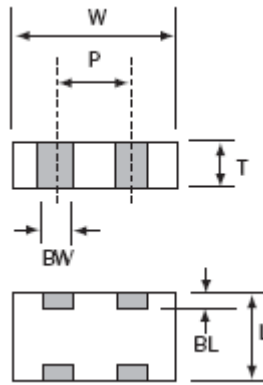
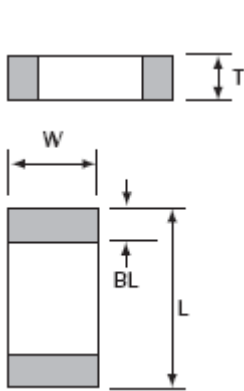
I<sub>VC</sub> Test Current for V<sub>C</sub> [A, 8x20μS]

I<sub>L</sub> Maximum leakage current at the working voltage [μA]

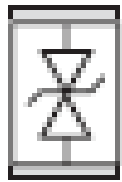
E<sub>T</sub> Transient Energy Rating [J, 10x1000μS]

I<sub>P</sub> Peak Current Rating [A, 8x20μS]

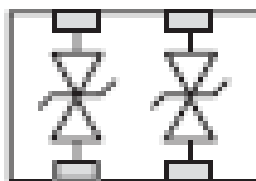
Cap Capacitance [pF] @ 1KHz specified and 0.5V<sub>RMS</sub>



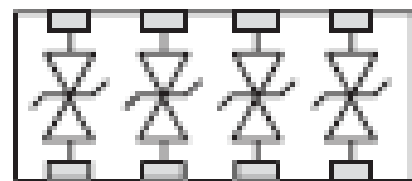
Size (EIA)	0603 Discrete	0405 - 2 Elements Array	0612 - 4 Elements Array
<b>L</b>	1.60±.15 (0.063±0.006)	1.00±0.15 (0.039±0.006)	1.60±0.20 (0.063±0.008)
<b>W</b>	0.80±0.15 (0.032±0.006)	1.37±0.15 (0.054±0.006)	3.20±0.20 (0.126±0.008)
<b>T</b>	0.90 Max (0.035 Max.)	0.66 Max (0.026 Max.)	1.22 Max (0.048 Max.)
<b>BW</b>	N/A	0.36±0.10 (0.014±0.004)	0.41±0.10 (0.016±0.004)
<b>BL</b>	0.35±0.15 (0.014±0.006)	0.20±0.10 (0.008±0.004)	0.18+0.25/-0.08 (0.007+0.01/-0.003)
<b>P</b>	N/A	0.64 REF (0.025 REF)	0.76 REF (0.030 REF)



**0603  
Discrete**



**0405  
Array**



**0612  
Array**

No.	Item	Requirement	Test method
1	Operating Temp.	-55°C to +150° C	
2	Appearance/Dimensions	No visible damage Dimensions: see par. 6	Visual examination at 10% magnification Dimensions verification by class2 caliper
3	Peak Current	Breakdown voltage change shall not be more than $\pm 10\%$	<ul style="list-style-type: none"> <li>a. Apply 1mA DC of each polarity to device terminals. Record polarity and magnitude of resultant voltage.</li> <li>b. Apply 8x20<math>\mu</math>S current pulse, peak value per standard parts table 5, to terminals with same polarity as Step (a).</li> <li>c. Apply 1mA DC to terminals, same polarity as Steps (a) and (b). Record magnitude of resultant voltage.</li> </ul>
4	Transient Energy	Breakdown voltage change shall not be more than $\pm 10\%$	<ul style="list-style-type: none"> <li>(a) Apply 1mA DC of each polarity to device terminals. Record polarity and magnitude of resultant voltage.</li> <li>(b) Apply 10x1000<math>\mu</math>S current pulse of amplitude sufficient to generate the energy as specified in standard parts table, 5(calculated by <math>E=0.0014V_p I_p</math>, where <math>V_p</math> is peak value of voltage and <math>I_p</math> is peak current)</li> </ul>
5	Solderability	The dipped surface shall be at least 95% covered with a new smooth solder coating.	Soak in eutectic solder bath of temperature at 230+/-5°C for 5sec.
6	Solder heat resistance	No mechanical damage. Forward Breakdown voltage change shall not be more than $\pm 10\%$	<ul style="list-style-type: none"> <li>a. Read forward breakdown voltage.</li> <li>b. Soak in eutectic solder bath of temperature at 260+/-5°C. for 10+/-1sec.</li> <li>c. Natural cool down to +25°C</li> <li>d. Read forward breakdown voltage after 24+/-2 hours.</li> </ul>
7	Humidity Life	Forward breakdown voltage change shall not be more than $\pm 10\%$	<ul style="list-style-type: none"> <li>a. Read forward breakdown voltage.</li> <li>b. Leave device in chamber of +85+/-3°C, 85+5% relative humidity at 100% of working voltage for 1,000<math>\pm</math> 5hours.</li> <li>c. Read forward breakdown voltage after 3-4 hours conditioning at 25+/-5°C</li> </ul>
8	Life Test	Forward breakdown voltage change shall not be more than $\pm 10\%$ and IL spec is allowed to increase by one order of magnitude	<ul style="list-style-type: none"> <li>a. Read forward breakdown voltage.</li> <li>b. Apply 100% of working voltage at test temperature of 150+/-4°C for 1,000+48/-0hours.</li> <li>c. Read forward breakdown voltage after 24+/-2 hours conditioning at 25+/-5°C</li> </ul>
9	Termination Strength	All components must stay in place.	<ul style="list-style-type: none"> <li>a. Solder components onto substrate.</li> <li>b. Apply 500 grams lateral force across the body of the component.</li> </ul>

## Данный компонент на территории Российской Федерации

### Вы можете приобрести в компании MosChip.

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<http://moschip.ru/get-element>

Вы можете разместить у нас заказ для любого Вашего проекта, будь то серийное производство или разработка единичного прибора.

В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

### Офис по работе с юридическими лицами:

105318, г.Москва, ул.Щербаковская д.3, офис 1107, 1118, ДЦ «Щербаковский»

Телефон: +7 495 668-12-70 (многоканальный)

Факс: +7 495 668-12-70 (доб.304)

E-mail: [info@moschip.ru](mailto:info@moschip.ru)

Skype отдела продаж:

moschip.ru

moschip.ru\_4

moschip.ru\_6

moschip.ru\_9