

Miniature AC Varistor



AVX introduces Miniature AC varistors for use in automotive applications. MAV series devices are an ideal solution to transient suppression in LC resonant circuits intended for signal & power transfer. The AVX part provides low loss in the resonant circuit yet is able to clamp large amounts of transients in a bidirectional manner.

The ability to handle large transients makes the MAV series useful in low power AC circuit protection as well. Applications including: AC sampling circuitry, transformer secondaries, and GFI modules.

<u>MAV</u>	<u>002</u>	<u>0</u>	<u>D</u>	<u>P</u>
Miniature AC Varistor	Case Size 001 = 0603 002 = 0405	Capacitance 0 = Low	Reel Size D = 7" reel (1k) R = 7" reel (4k) T = 13" reel (10k)	Termination P = Plated Sn over Ni Barrier

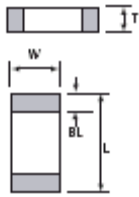
AVX Part Number	V _{w(DC)}	V _{w(AC)}	V _B	V _C	I _{vc}	I _P	E _T	I _L	Cap	# of Elements
MAV0010	70	50	120±15%	225	1	2	0.015	10	22pF max	1
MAV0020	70	50	120±15%	225	1	3	0.02	10	8pF max	2

V_{w(DC)} DC Working Voltage [V]
V_{w(AC)} AC Working Voltage [V]
V_B Typical Breakdown Voltage [V @ 1mA_{DC}]
V_C Clamping Voltage [V @ I_{vc}]
I_{vc} Test Current for V_C [A, 8x20µS]

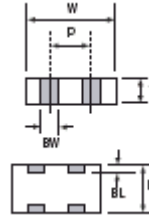
I_P Peak Current [A, 8x20µS]
E_T Transient Energy (J)
I_L Maximum leakage current at the working voltage [µA]
Cap Maximum capacitance @ 1MHz and 0.5V_{RMS}

Dimensions

MAV0010



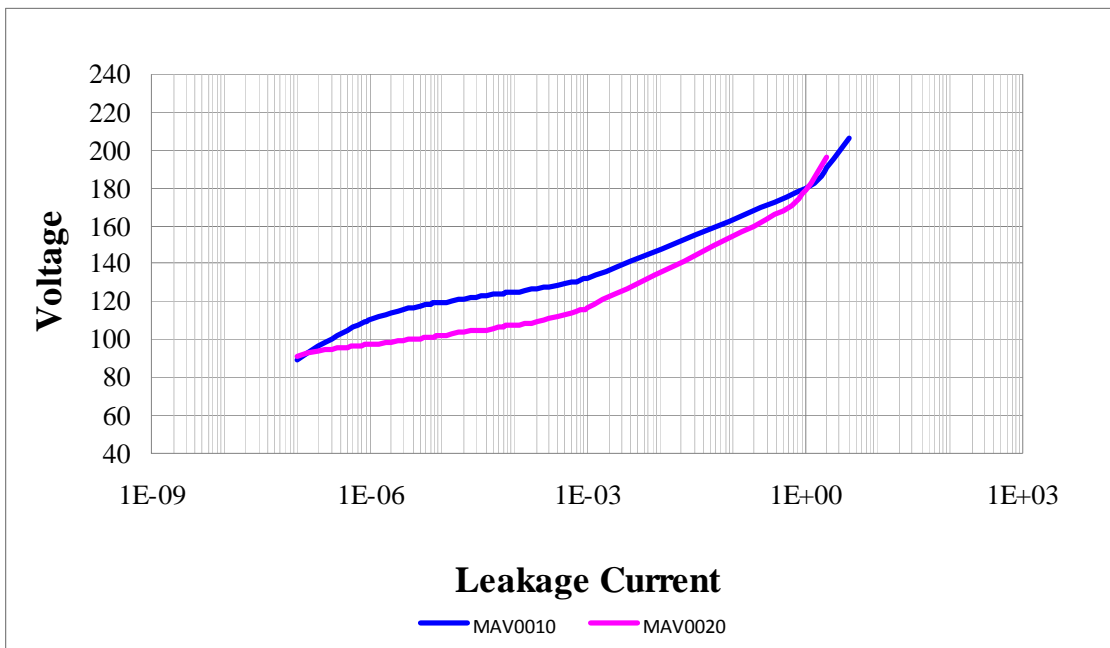
MAV0020



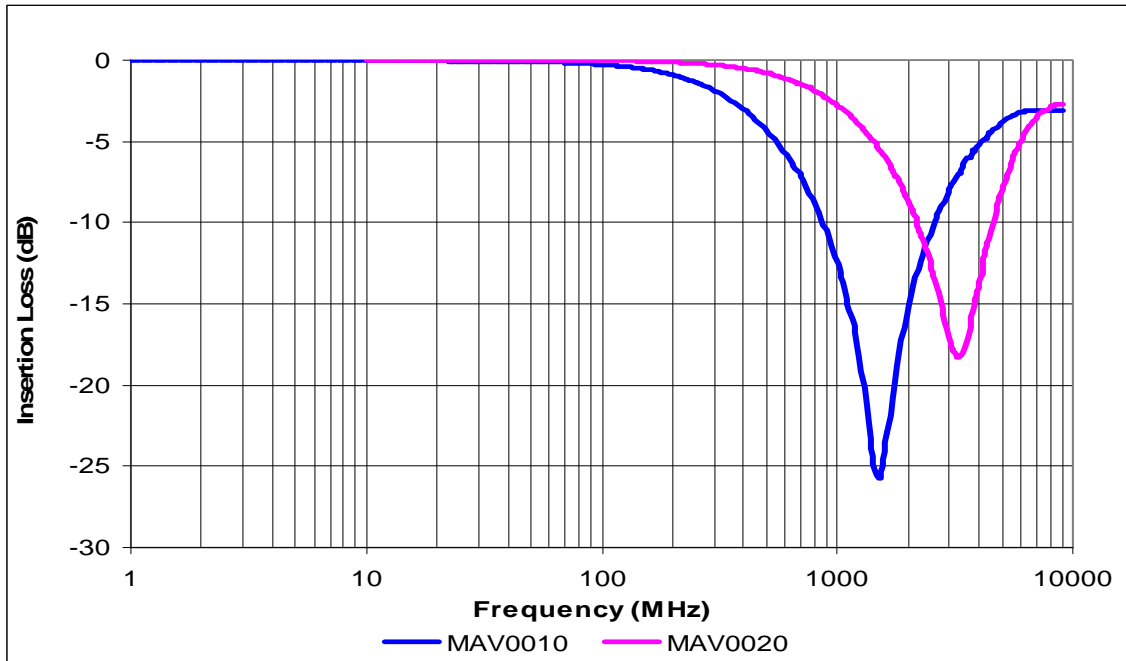
In mm

	L	W	T	BW	BL	P
MAV0010	1.60 ± 0.15	0.80 ± 0.15	0.90 Max	N/A	0.35 ± 0.15	N/A
MAV0020	1.00 ± 0.15	1.37 ± 0.15	0.66 Max	0.36 ± 0.10	0.20 ± 0.10	0.64 REF

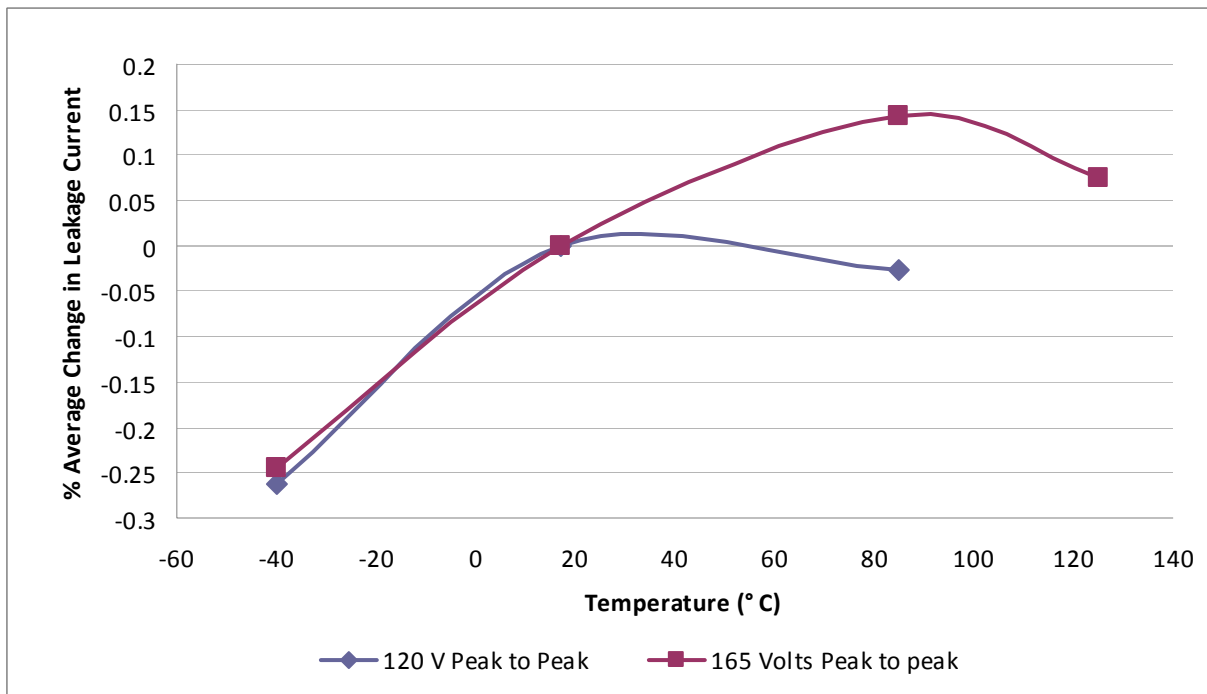
V/I Curve



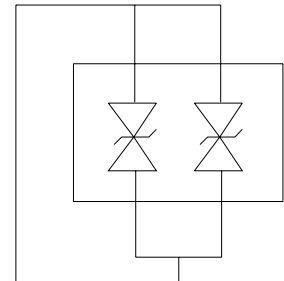
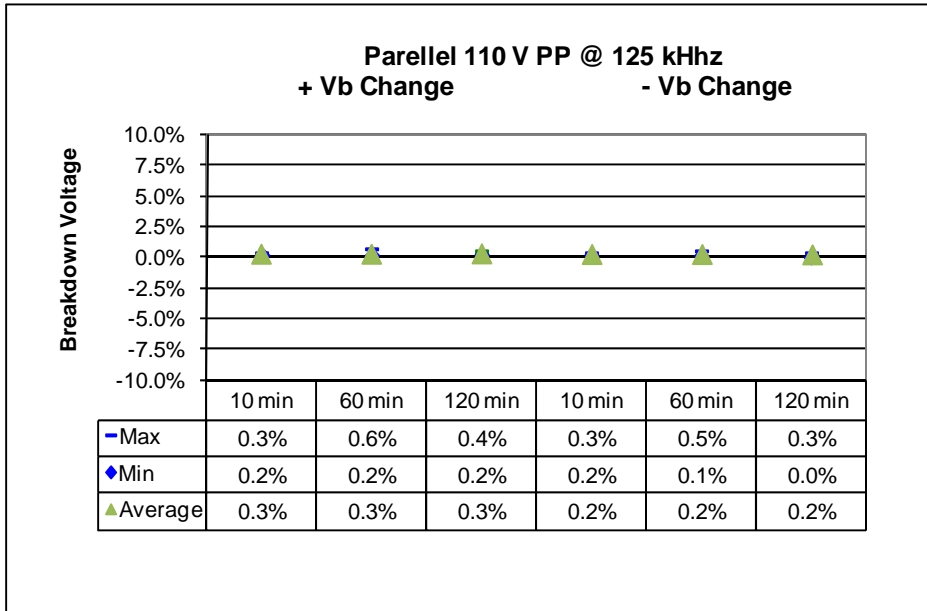
TRANSMISSION CHARACTERISTIC



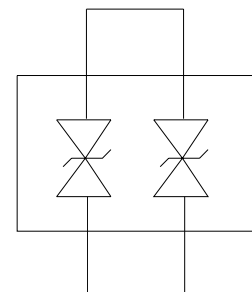
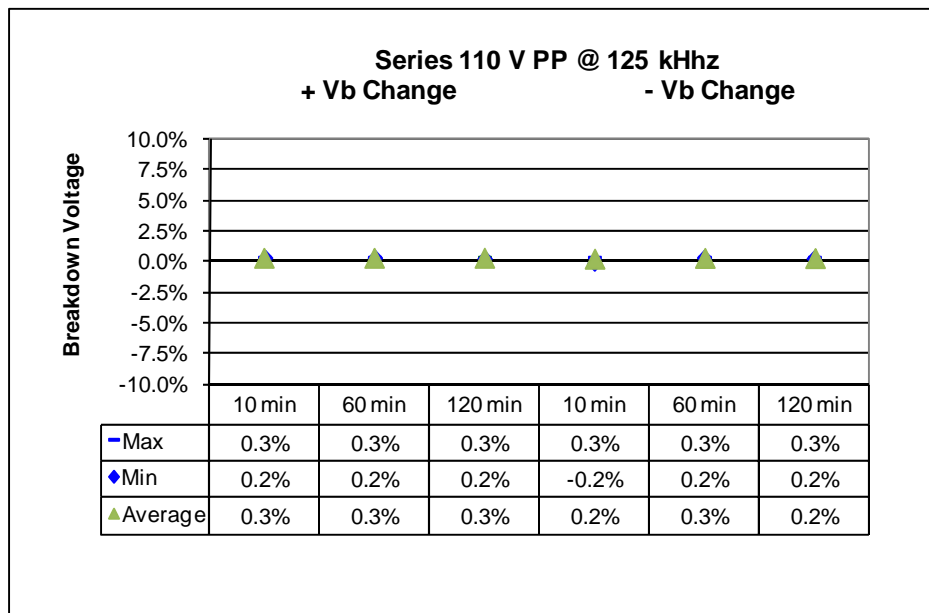
IMPACT OF AC VOLTAGE ON LEAKAGE CURRENT



IMPACT OF 110V PEAK TO PEAK SINE WAVE @ 125kHz ON BREAKDOWN VOLTAGE



Apply 110V pp
125kHz Sine wave
(Parallel)



Apply 110V pp
125kHz Sine wave
(Series)