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.

MAV	**002**	**0**	**D**	**P**
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

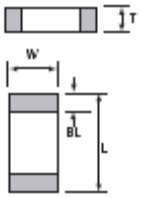
AVX Part Number	V_W(DC)	V_W(AC)	V_B	V_C	I_{VC}	I_P	E_T	I_L	Cap	# of Elements
MAV0010	70	50	120±15%	225	1	2	0.015	10	22pF max	1
MAV0020	70	50	120±15%	225	1	3	0.02	10	8pF max	2

V_W(DC) DC Working Voltage [V]
V_W(AC) AC Working Voltage [V]
V_B Typical Breakdown Votage [V @ $1mA_{DC}$]
V_C Clamping Votage [V @ I_{VC}]
I_{VC} Test Current for V_C [A, 8x20µS]

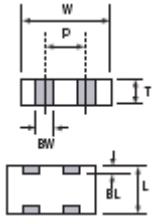
I_P Peak Current [A, 8x20µS]
E_T Transient Energy (J)
I_L Maximum leakage current at the working voltage [µA]
Cap Maximum capacitance @ 1MHz and $0.5V_{RMS}$

Dimensions

MAV0010



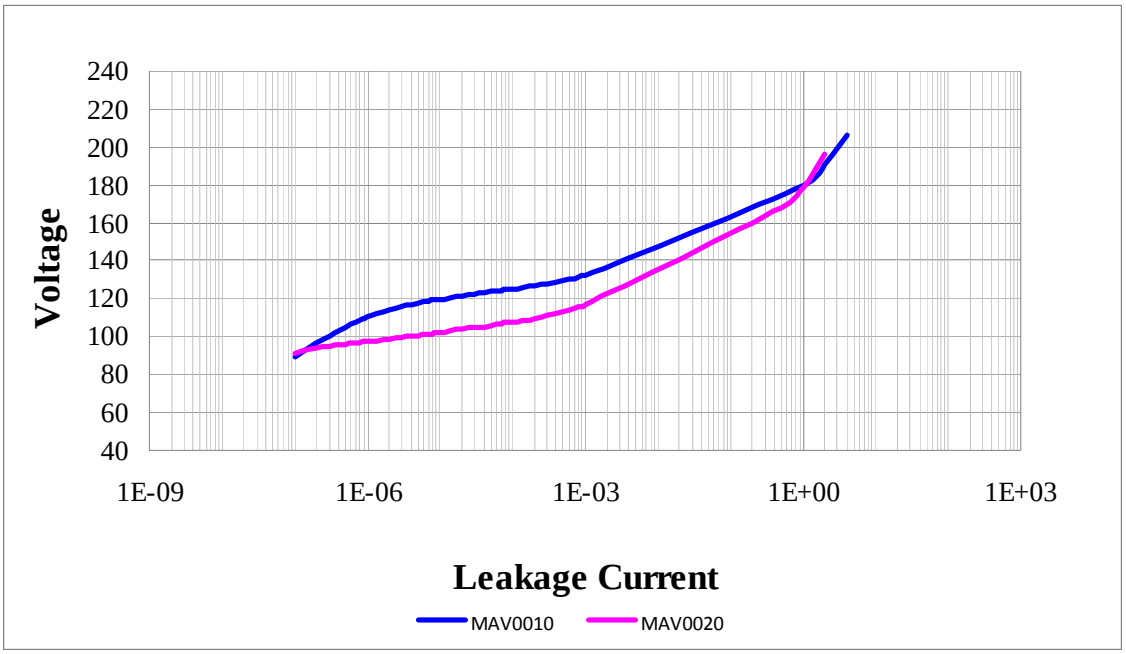
MAV0020



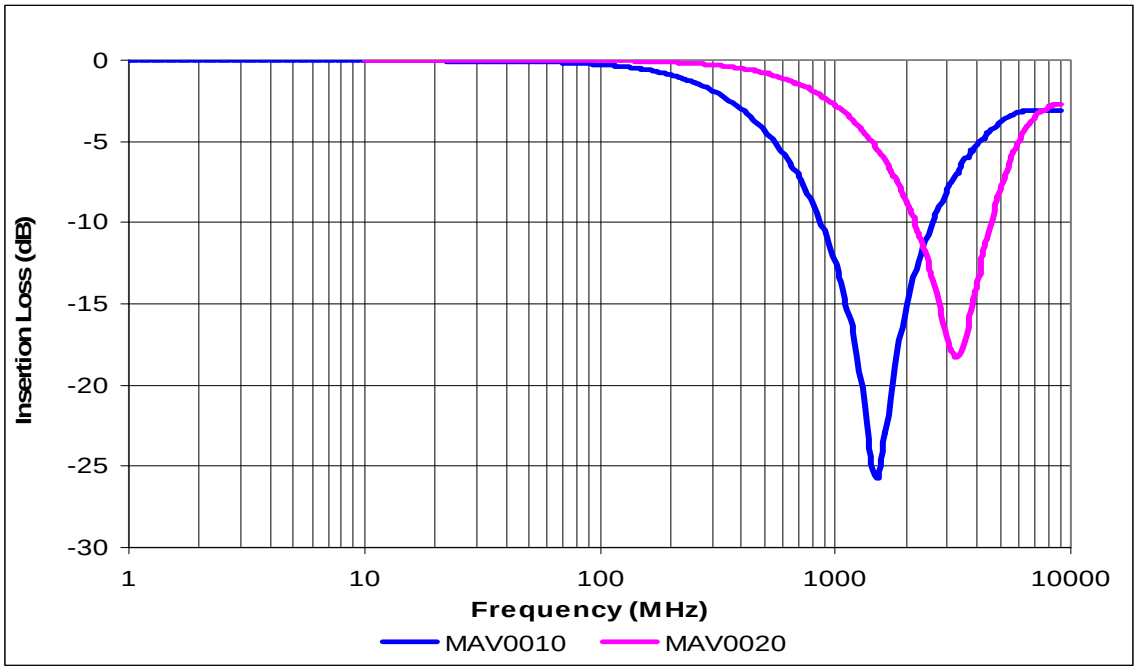
In mm

	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

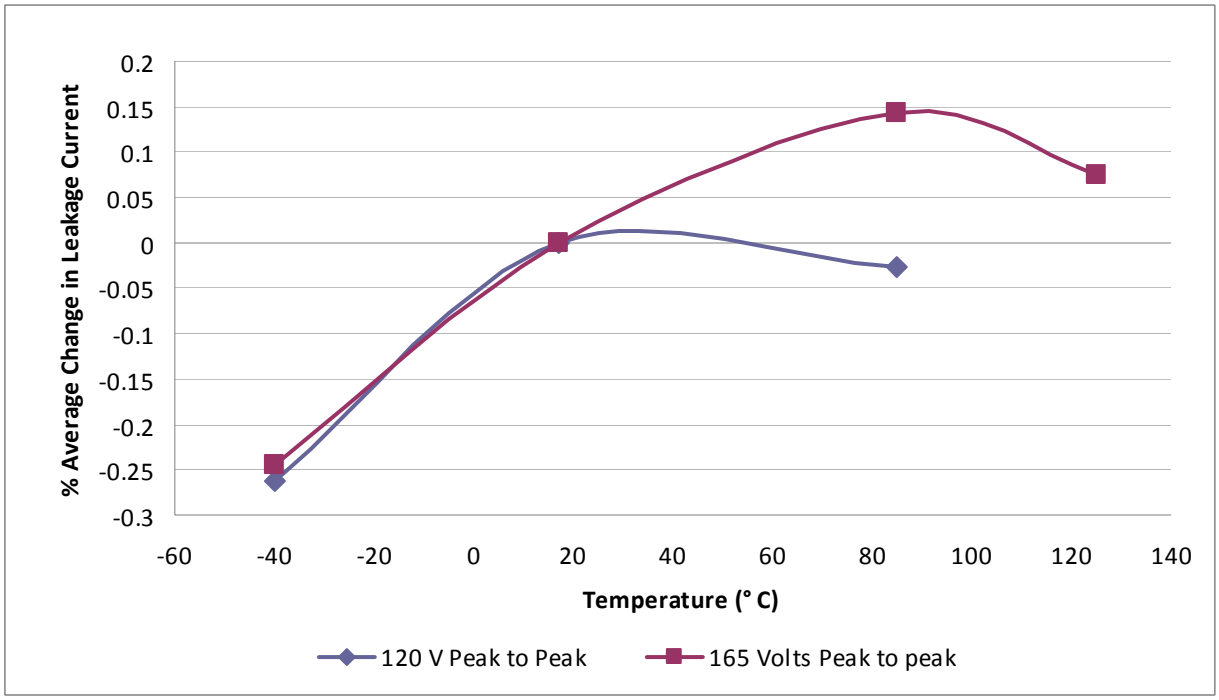
V/I Curve



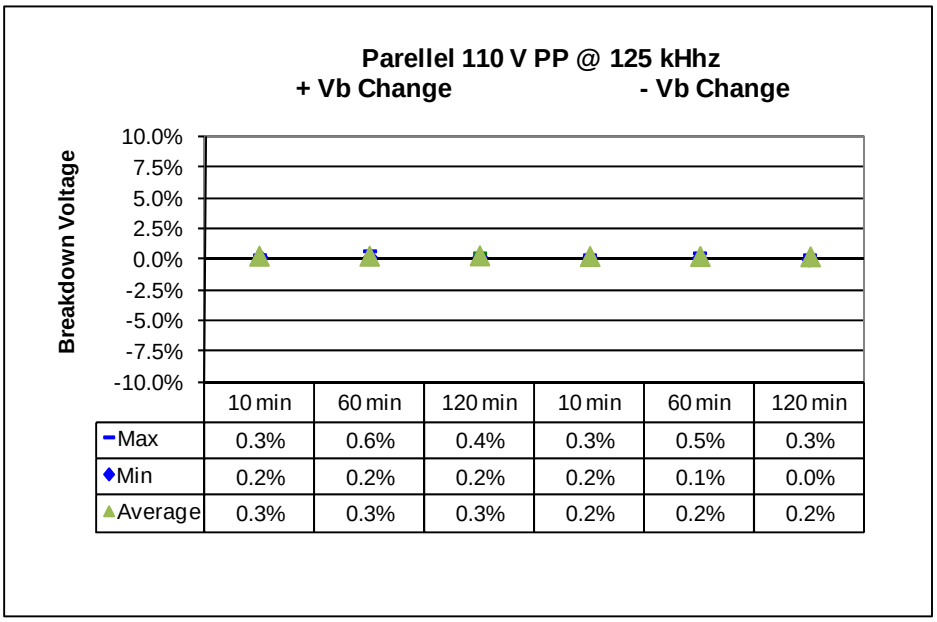
TRANSMISSION CHARACTERISTIC



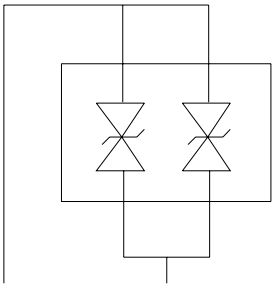
IMPACT OF AC VOLTAGE ON LEAKAGE CURRENT



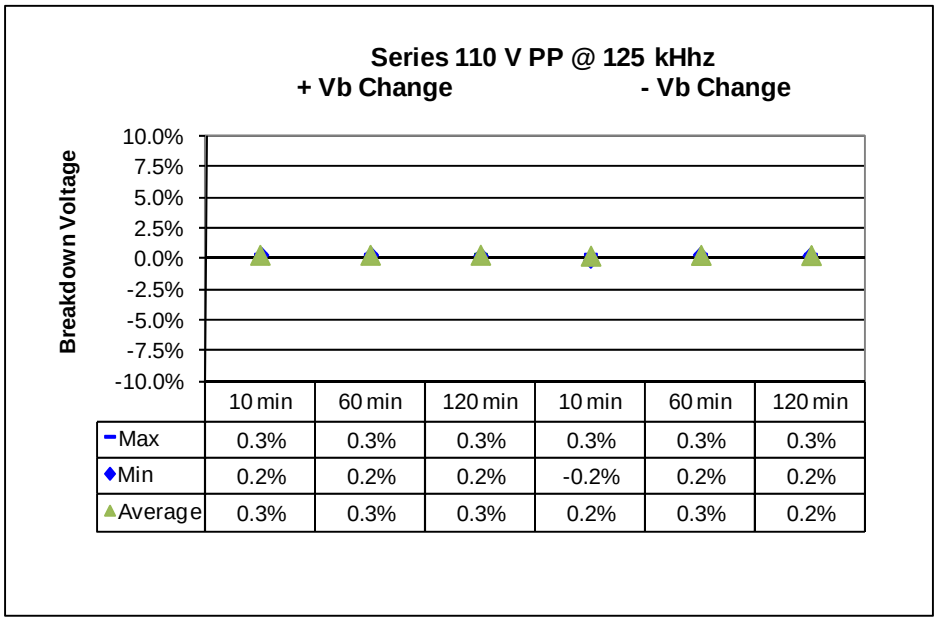
IMPACT OF 110V PEAK TO PEAK SINE WAVE @ 125KhZ ON BREAKDOWN VOLTAGE



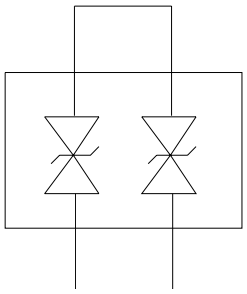
	10 min	60 min	120 min	10 min	60 min	120 min
Max	0.3%	0.6%	0.4%	0.3%	0.5%	0.3%
Min	0.2%	0.2%	0.2%	0.2%	0.1%	0.0%
Average	0.3%	0.3%	0.3%	0.2%	0.2%	0.2%



Apply 110V pp 125KHz Sine wave (Parallel)



	10 min	60 min	120 min	10 min	60 min	120 min
Max	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%
Min	0.2%	0.2%	0.2%	-0.2%	0.2%	0.2%
Average	0.3%	0.3%	0.3%	0.2%	0.3%	0.2%



Apply 110V pp **125KHz** Sine wave (Series)