

# AVX Ceramic Transient Voltage Suppressors



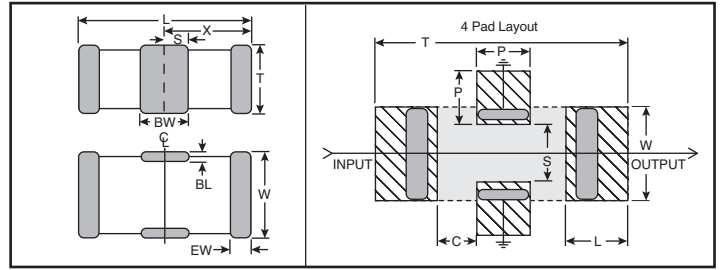
## AVX TRANSFEED™ MULTILAYER CERAMIC TRANSIENT VOLTAGE SUPPRESSORS

AVX has combined the best electrical characteristics of its TransGuard™ Transient Voltage Suppressors (TVS) and its Feedthru Capacitors into a single chip for state-of-the-art overvoltage circuit protection and EMI reduction over a broad range of frequencies. This unique combination of multilayer ceramic construction in a feedthru configuration gives the circuit designer a single 0805 chip that responds to transient events faster than any TVS device on the market today, and provides significant EMI attenuation when in the off-state.

Where designers are concerned with both transient voltage protection and EMI attenuation, either due to the electrical performance of their circuits or due to required compliance to specific EMC regulations, the TransFeed™ product is an ideal choice.

**Applications:**

- Fingerprint ID Circuit
- Magnetic Field Circuit
- LCD Dashboard Driver



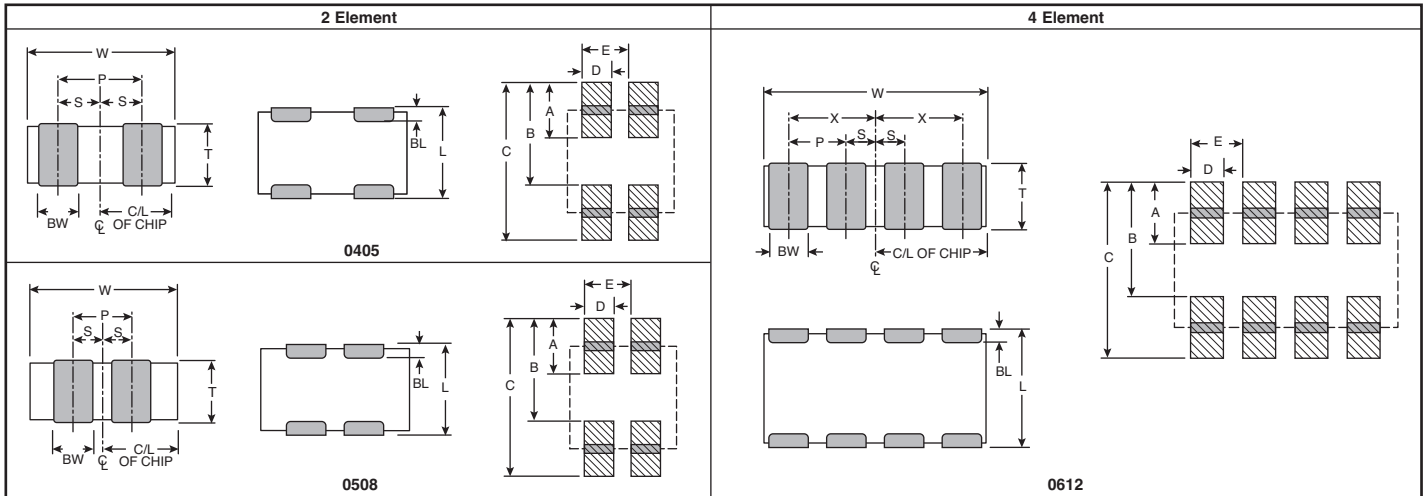
DIMENSIONS: mm (in.)										Recommended Solder Pad Layout					
Size	L	W	T	BW	BL	EW	X	S		T	P	S	W	L	C
0805	2.01 ± 0.20 (0.079 ± 0.008)	1.25 ± 0.20 (0.049 ± 0.008)	1.143 Max. (0.045 Max.)	0.46 ± 0.10 (0.018 ± 0.004)	0.18 ± 0.25 -0.08 (0.007 ± 0.010 -0.003)	0.25 ± 0.13 (0.010 ± 0.005)	1.02 ± 0.10 (0.040 ± 0.004)	0.23 ± 0.05 (0.009 ± 0.002)		3.45 (0.136)	0.51 (0.020)	0.76 (0.030)	1.27 (0.050)	1.02 (0.040)	0.46 (0.018)

For quantities of 1000 and up, call for quote.

MOUSER STOCK NO.	AVX Part Number	Working Voltage (DC)	Working Voltage (AC)	Breakdown Voltage (V@Im <sub>DC</sub> )	Clamping Voltage (V@I <sub>VC</sub> )	Max. Leakage Current (μA)	Transient Energy Rating (Joules (J))	Peak Current Rating (A)	Typical Cap (pF)	DC Resistance	Max. Feedthru Current	Price Each				Price Per Reel of 1000 (ea.)
												1	50	100	500	
581-V2F105A150Y2EDP	V2F105A150Y2EDP	5.6	4	8.5+20%	18	35	0.1	30	800	0.20	0.75	.46	.38	.33	.30	.27
581-V2F105C150Y1FDP	V2F105C150Y1FDP	5.6	4	8.5+20%	18	35	0.3	120	25000	0.15	1	.68	.57	.50	.46	.40
581-V2F109A200Y2EDP	V2F109A200Y2EDP	9	6.4	12.7+15%	22	25	0.1	30	575	0.20	0.75	.46	.38	.33	.30	.27
581-V2F109C200Y1FDP	V2F109C200Y1FDP	9	6.4	12.7+15%	22	25	0.3	120	1800	0.15	1	.68	.57	.50	.46	.40
581-V2F114A300Y2EDP	V2F114A300Y2EDP	14	10	18.5+12%	32	15	0.1	30	300	0.20	0.75	.46	.38	.33	.30	.27
581-V2F114C300Y1FDP	V2F114C300Y1FDP	14	10	18.5+12%	32	15	0.3	120	900	0.15	1	.68	.57	.50	.46	.40
581-V2F118A400Y2EDP	V2F118A400Y2EDP	18	13	25.5+10%	42	10	0.1	3	200	0.20	0.75	.46	.38	.33	.30	.27
581-V2F118C400Y1FDP	V2F118C400Y1FDP	18	13	25.5+10%	42	10	0.3	120	500	0.15	1	.68	.57	.50	.46	.40
581-V2F118X500Y3DDP	V2F118X500Y3DDP	18	13	25.5+10%	50	10	0.05	20	75	0.25	0.5	.46	.38	.33	.30	.27

## AVX MULTIGUARD™ MULTILAYER CERAMIC TRANSIENT VOLTAGE SUPPRESSION ARRAYS

AVX's Transient Voltage Suppression (TVS) Arrays address six trends in today's electronic circuits: (1) mandatory ESD protection, (2) mandatory EMI control, (3) signal integrity improvement, (4) PCB downsizing, (5) reduced component placement costs, and (6) protection from induced slow speed transient voltages and currents.



2 Element DIMENSIONS: mm (in.)								Pad Layout Dimensions				
Size	L	W	T	BW	BL	P	S	A	B	C	D	E
0405	1.00±0.15 (0.039±0.006)	1.37±0.15 (0.054±0.006)	0.66 MAX (0.026 MAX)	0.36±0.10 (0.014±0.004)	0.20±0.10 (0.008±0.004)	064 REF (0.025 REF)	0.32±0.10 (0.013±0.004)	0.46 (0.018)	0.74 (0.029)	1.20 (0.047)	0.38 (0.015)	0.64 (0.025)
0508	1.25±0.20 (0.049±0.008)	2.01±0.20 (0.079±0.008)	1.02 MAX (0.040 MAX)	0.41±0.1 (0.016±0.004)	0.18 <sup>+0.25</sup> <sub>-0.08</sub> (0.007 <sup>+0.010</sup> <sub>-0.003</sub> )	0.76 REF (0.030 REF)	0.38±0.10 (0.015±0.004)	0.89 (0.035)	1.27 (0.050)	2.16 (0.085)	0.46 (0.018)	0.76 (0.030)

4 Element DIMENSIONS: mm (in.)							Pad Layout Dimensions						
Size	L	W	T	BW	BL	P	X	S	A	B	C	D	E
0612	1.60±0.20 (0.063±0.008)	3.20±0.20 (0.126±0.008)	1.22 MAX (0.048 MAX)	0.41±0.10 (0.016±0.004)	0.18 <sup>+0.25</sup> <sub>-0.08</sub> (0.007 <sup>+0.010</sup> <sub>-0.003</sub> )	0.76 REF (0.030 REF)	1.14±0.10 (0.045±0.004)	0.38±0.10 (0.015±0.004)	0.89 (0.035)	1.65 (0.065)	2.54 (0.100)	0.46 (0.018)	0.76 (0.030)

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MOUSER STOCK NO.	AVX Part Number	Working Voltage (DC)	Working Voltage (AC)	Breakdown Voltage (V@Im <sub>DC</sub> )	Clamping Voltage (V@I <sub>VC</sub> )	Max. Leakage Current (μA)	Transient Energy Rating (J, 10x1000μS)	Peak Current Rating (A)	Typical Cap (pF)	Number of Elements	Chip Size	Price Each				Price Per Reel of 1000 (ea.)
												1	50	100	500	
581-MG052S05A150DP	MG052S05A150DP	5.6	4	8.5+20%	18	35	0.1	30	825	2	0508	1.64	1.52	1.27	1.14	1.01
581-MG064S05A150DP	MG064S05A150DP	5.6	4	8.5+20%	18	35	0.1	30	825	4	0612	1.59	1.47	1.22	1.10	.98
581-MG052S09A200DP	MG052S09A200DP	9	6.4	12.7+15%	22	25	0.1	30	550	2	0508	1.21	1.11	.93	.83	.74
581-MG064L18X500DP	MG064L18X500DP	9	6.4	12.7+15%	22	25	0.1	30	550	4	0612	1.51	1.40	1.16	1.05	.93
581-MG052S14A300DP	MG052S14A300DP	14	10	19.5+12%	32	15	0.1	30	425	2	0508	1.21	1.11	.93	.83	.74
581-MG064S09A200DP	MG064S09A200DP	14	10	19.5+12%	32	15	0.1	30	425	4	0612	1.59	1.47	1.22	1.10	.98
581-MG042L18V500DP	MG042L18V500DP	18	14	N/A	50	10	0.2	15	40	2	0405	.66	.61	.51	.45	.40
581-MG052S18A400DP	MG052S18A400DP	18	14	25.5+10%	42	10	0.1	30	225	2	0508	1.10	1.01	.84	.76	.67
581-MG052L18X500DP	MG052L18X500DP	18	14	N/A	50	10	0.1	20	50	2	0508	.98	.91	.76	.68	.61
581-MG064S14A300DP	MG064S14A300DP	18	14	25.5+10%	42	10	0.05	15	120	4	0612	1.59	1.47	1.22	1.10	.98
581-MG064S18A400DP	MG064S18A400DP	18	14	N/A	50	10	0.1	20	75	4	0612	1.59	1.47	1.22	1.10	.98

