

Transient Voltage Suppressors

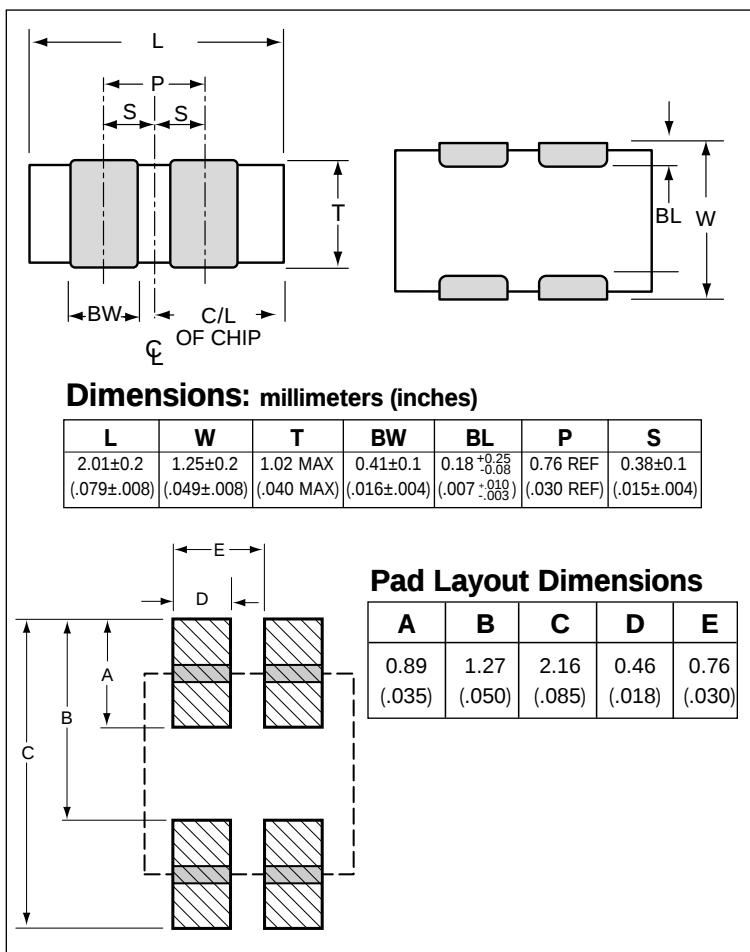
MultiGuard 2-Element TVS Arrays - 0508

ESD Protection for CMOS and Bi-Polar Systems

HOW TO ORDER

MG 05 2 S 14 A 300 T
 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧

- ① **MultiGuard**
- ② **Chip Size:** 05=0508
- ③ **Configuration:** 2=2 Elements
- ④ **Style:** S=Standard Construction
L=Low Capacitance
- ⑤ **Working Voltage:**
05=5.6V 14=14.0V
9=9.0V 18=18.0V
- ⑥ **Energy Rating:**
A=0.10 Joules X=0.05 Joules
- ⑦ **Clamping Voltage:**
150=15.5V 400=40.0V
200=20.0V 500=50.0V
300=30.0V
- ⑧ **Packaging (Pcs/Reel):**
D=1,000 T=10,000
R=4,000



Electrical Characteristics Per Element

AVX Part Number	Working Voltage	Breakdown Voltage	Clamping Voltage	Peak Current	Transient Energy	Capacitance	Inductance
Symbol	V_{WM}	V_B	V_C	I_{peak}	E_{trans}	C	L
Units	Volts (max.)	Volts	Volts (max.)	Amp. (max.)	Joules (max.)	pF (typ.)	nH (typ.)
Test Condition	<50μA	1mA DC	8/20μS†	8/20μs	10/1000μS	0.5Vrms @: 1MHz	di/dt = 100mA/nS
MG052S05A150	5.6	6.8 - 9.3	15.5	30	0.1	825	<1.0
MG052S09A200	9.0	10.0 - 14.0	20	30	0.1	550	<1.0
MG052S14A300	14.0	14.7 - 20.3	30	30	0.1	425	<1.0
MG052S18A400	18.0	20.4 - 28.0	40	30	0.1	225	<1.0
MG052L18X500	≤18.0	N/A	50	20	0.05	<75	<1.0

*Test Condition = <25μA

V_{WM} —Maximum steady-state DC operating voltage the varistor can maintain and not exceed 50μA leakage current

V_B —Voltage across the device measured at 1mA DC current

V_C —Maximum peak voltage across the varistor measured at a specified pulse current and waveform

†Transient Energy Rating Pulse Current & Waveform

.1 Joule	2A 8/20μS
.05 Joules	1A 8/20μS

I_{peak} —Maximum peak current which may be applied with the specified waveform without device failure

E_{trans} —Maximum energy which may be dissipated with the specified waveform without device failure

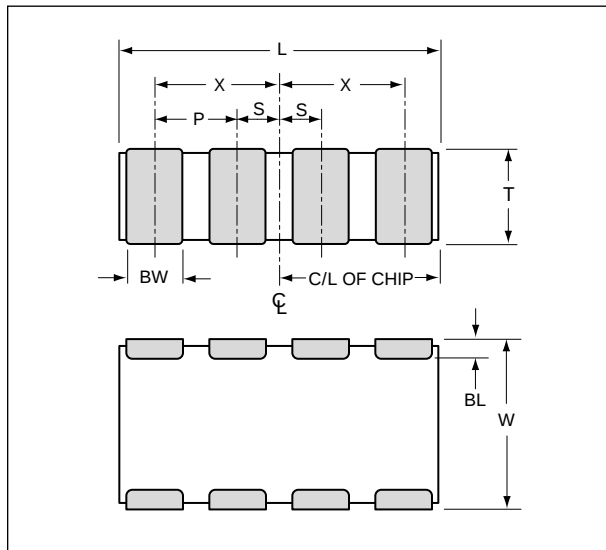
C—Device capacitance measured with zero volt bias at 0.5Vrms and 1MHz

L—Device inductance measured with a current edge rate of 100mA/nS

Additional information on this product is available from AVX's catalog or AVX's FAX Service.
 Call 1-800-879-1613 and request document #104. Visit our website <http://www.avxcorp.com>

Transient Voltage Suppressors

MultiGuard 4-Element TVS Array - 0612



HOW TO ORDER

MG 06 4 S 14 A 300 T
 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧

- ① **MultiGuard**
- ② **Chip Size:** 06=0612
- ③ **Configuration:** 4=4 Elements
- ④ **Style:** S=Standard Construction
L=Low Capacitance
- ⑤ **Working Voltage:**
05=5.6V 14=14.0V
09=9.0V 18=18.0V
- ⑥ **Energy Rating:**
A=0.10 Joules
X=0.05 Joules
- ⑦ **Clamping Voltage:**
150=15.5V 400=40.0V
200=20.0V 500=50.0V
300=30.0V
- ⑧ **Packaging (Pcs/Reel):**
D=1,000
R=4,000
T=10,000

Dimensions: millimeters (inches)

L	W	T	BW	BL	P	X	S
3.20±0.2 (.126±.008)	1.60±0.2 (.063±.008)	1.22 MAX (.048 MAX)	0.41±0.1 (.016±.004)	0.18 ^{+0.25} _{-0.08} (.007 ^{+0.010} _{-.003})	0.76 REF (.030 REF)	1.14±0.1 (.045±.004)	0.38±0.1 (.015±.004)

Electrical Characteristics Per Element

AVX Part Number	Working Voltage	Breakdown Voltage	Clamping Voltage	Peak Current	Transient Energy	Capacitance	Inductance
Symbol	V_{WM}	V_C	V_C	I_{peak}	E_{trans}	C	L_L
Units	Volts (max.)	Volts	Volts (max.)	Amp. (max.)	Joules (max.)	pF (typ.)	μ Amp (max.)
Test Condition	<50μA	1nA DC	8/20μS†	8/20μs	10/1000μS	0.5Vrms @: 1MHz	@ V_{WM}
MG064S05A150	5.6	7.6 - 9.3	15.5	30	0.1	825	<1.0
MG064S09A200	9.0	11.0 - 14.0	20	30	0.1	550	<1.0
MG064S14A300	14.0	16.5 - 20.3	30	30	0.1	425	<1.0
MG064S18A400	18.0	22.9 - 28.0	40	30	0.1	220	<1.0
MG064L18X500	≤18.0*	N/A	50	30	0.05	<75	<1.0

*Test Condition = <25μA

V_{WM} —Maximum steady-state DC operating voltage the varistor can maintain and not exceed 50μA leakage current

V_B —Voltage across the device measured at 1mA DC current

V_C —Maximum peak voltage across the varistor measured at a specified pulse current and waveform

†Transient Energy Rating Pulse Current & Waveform

.1 Joule
.05 Joules

2A 8/20μS
1A 8/20μS

I_{peak} —Maximum peak current which may be applied with the specified waveform without device failure

E_{Trans} —Maximum energy which may be dissipated with the specified waveform without device failure

C—Device capacitance measured with zero volt bias at 0.5Vrms and 1MHz

L—Device inductance measured with a current edge rate of 100mA/nS

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