

## Transient Voltage Suppressors Array for ESD Protection

### SMDAXXC-7 Series

#### Description

The SMDAXXC-7 is in an SO-08 package and may be used to protect two high-speed line pairs. The “flow-thru” design minimizes trace inductance and reduces voltage overshoot associated with ESD events. The low clamping voltage of the SMDAXXC-7 minimizes the stress on the protected IC.

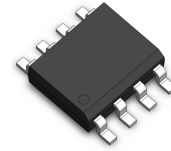
#### Feature

- u 300 Watts Peak Pulse Power per Line (tp=8/20µs)
- u Protects Seven Data Lines
- u Working Voltage : 5V, 12V, 15V and 24V
- u Monolithic Design
- u RoHS Compliant
- u IEC61000-4-2 (ESD) ±30kV (air), ±30kV (contact)  
-5V, 12V, 15V
- u IEC61000-4-2 (ESD) ±15kV (air), ±8kV (contact) - 24V
- u IEC61000-4-4 (EFT) 40A (5/50ns)
- u IEC61000-4-5 (Lightning) 12A (8/20µs)

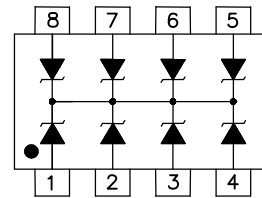
#### Applications

- u Microprocessor Based Equipment
- u RS-232 and RS-422 Data Lines
- u LAN/WAN Equipment
- u Notebooks, Desktops and Servers
- u Instrumentation
- u Set Top Box
- u Serial and Parallel Ports
- u Peripherals

SO-08



#### Functional Diagram



#### Mechanical Characteristics

- u JEDEC SO-08 Package
- u Molding Compound Flammability Rating : UL 94V-0
- u Weight 70 Milligrams (Approximate)
- u Quantity Per Reel : 500pcs
- u Reel Size : 7 inch
- u Lead Finish : Lead Free

#### Mechanical Characteristics

Symbol	Parameter	Value	Units
P <sub>PP</sub>	Peak Pulse Power (tp=8/20µs waveform)	300	W
T <sub>L</sub>	Lead Soldering Temperature	260 (10sec)	°C
T <sub>STG</sub>	Storage Temperature Range	-55 to +150	°C
T <sub>J</sub>	Operating Temperature Range	-55 to +150	°C
	IEC61000-4-4 (EFT)	40	A
	IEC61000-4-5 (Lightning)	12	A

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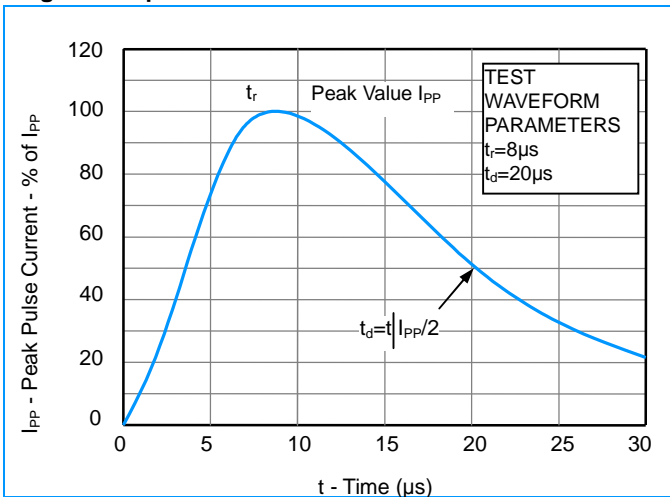
## SMDAXXC-7 Series

### Electrical Characteristics (@ 25°C Unless Otherwise Specified)

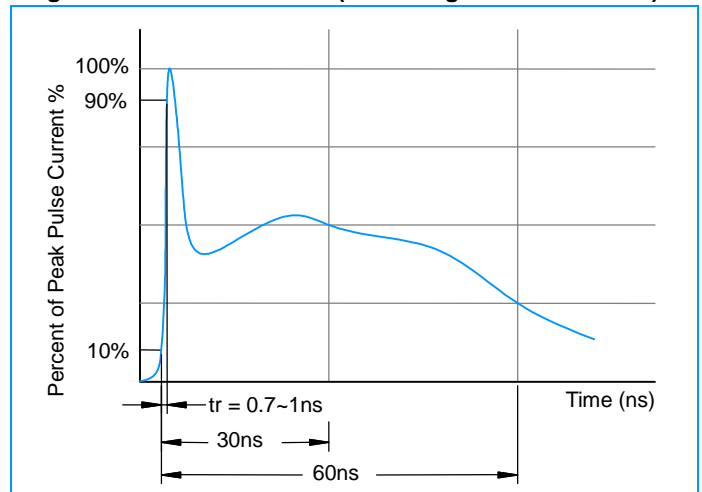
Part Number	Device Marking	V <sub>RWM</sub> (V) (Max.)	V <sub>B</sub> (V) (Min.)	I <sub>T</sub> (mA)	V <sub>C</sub> @5A (Max.)	V <sub>C</sub>		I <sub>R</sub> (μA) (Max.)	C (pF) (Typ.)
						(Max.)	(@A)		
SMDA05C-7	SMDA 05C-7	5	6	1	9.8	19	30	20	350
SMDA12C-7	SMDA 12C-7	12	13.3	1	19	29.2	20	1	120
SMDA15C-7	SMDA 15C-7	15	16.7	1	24	31.1	18	1	75
SMDA24C-7	SMDA 24C-7	24	26.7	1	43	45	13	1	50

### Characteristic Curves

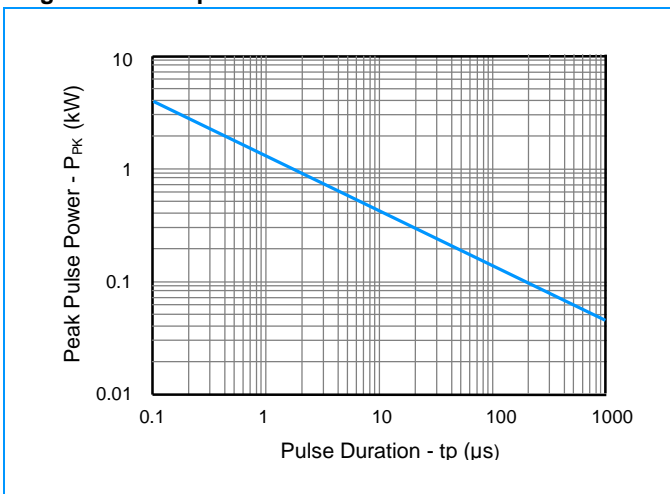
**Fig1. 8/20μs Pulse Waveform**



**Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)**



**Fig3. Non - Repetitive Peak Pulse Power vs. Pulse Time**



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### Characteristic Curves

Fig4. ESD Clamping (+8KV Contac per IEC61000-4-2)

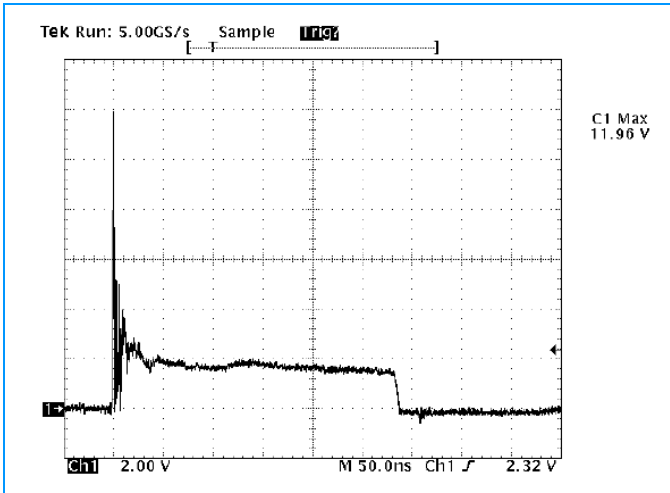
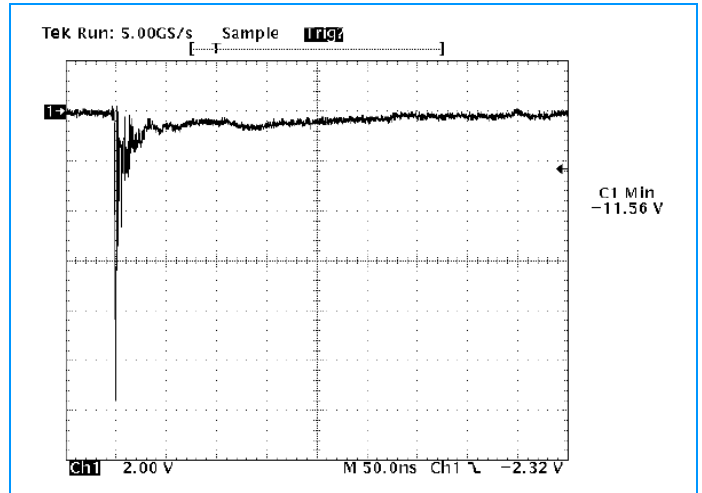
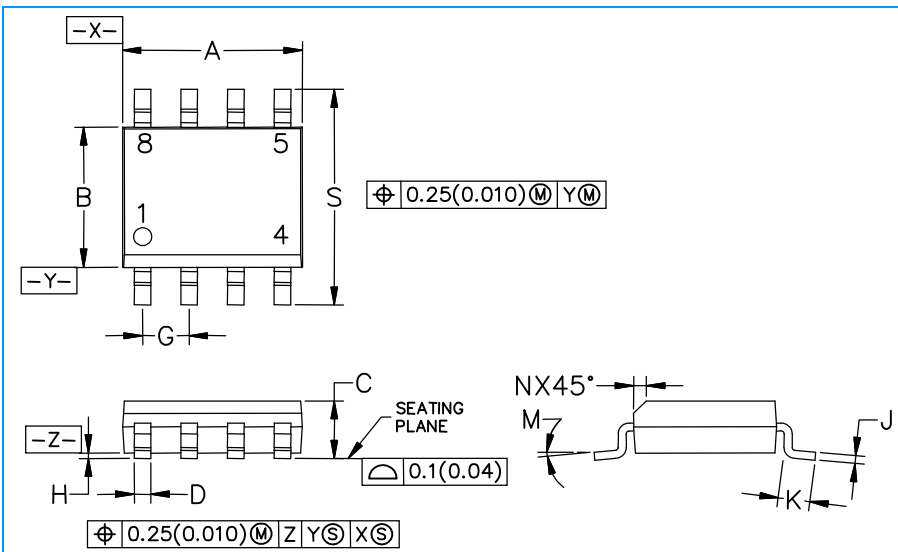


Fig5. ESD Clamping (-8KV Contac per IEC61000-4-2)



### SO-8 Package Outline & Dimensions



DIM	Millimeters		Inches	
	Min	Max	Min	Max
A	4.80	5.00	0.189	0.197
B	3.80	4.00	0.150	0.157
C	1.35	1.75	0.053	0.069
D	0.35	0.51	0.013	0.020
G	1.27BSC		0.050BSC	
H	0.10	0.25	0.004	0.010
J	0.19	0.25	0.007	0.010
K	0.40	1.27	0.016	0.050
M	0°	8°	0°	8°
N	0.25	0.50	0.010	0.020
S	5.80	6.20	0.228	0.244

### Soldering Footprint

