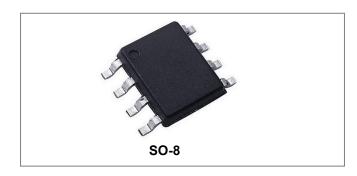






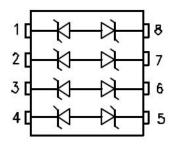
### SMDA03C THRU SMDA36C TVS ARRAY SERIES



### **Description**

The SMDAXXC series of TVS array have been designed to provide bidirectional protection for sensitive electronics from damage due to voltage transients caused by electrostatic discharge (ESD), electrical fast transients (EFT), lightning and other voltage-induced transient events. The device can be used to protect combinations of four bidirectional lines.

# Schematic & Pin Configuration



#### **Features**

- Protects 3.3, 5, 12, 15, 24, 36V Components
- Bidirectional
- Provides Electrically Isolated Protection
- 300 W @ 8/20 us
- Protects 4 Lines
- SO-8 Packaging
- "-A" is an AEC-Q101 qualified device
- This is a Pb Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

#### **Mechanical Characteristics**

- SO-8 Surface Mount Package
- Approximate Weight: 0.1 grams
- PIN #1 Indicator: DOT on top of package
- Packaging: Tubes or Tape & Reel per EIA Standard 481

### **Application**

- RS-232 & RS-422 Data Lines
- Microprocessor Based Equipment
- Notebooks, Desktops, & Servers
- LAN/WAN Equipment
- Serial and Parallel Port
- Peripherals

### **Absolute Maximum Ratings:**

Parameter	Symbol	Value	Units
Peak Pulse Power, 8/20 µs Wave shape	Р	300	W
Operating Temperature	TJ	-55 to +125	°C
Storage Temperature	T <sub>stg</sub>	-55 to +150	°C
Lead Soldering Temperature	T∟	260 (10 Sec.)	°C

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### **Electrical Characteristics:**

Part Number	Stand-off Voltage Vwm (V) Max	Breakdown Voltage V <sub>BR</sub> @1mA (V) Min	Clamping Voltage Vc @ 1 A (V) Max	Leakage Current I <sub>R</sub> @ Vwm (uA) Max	Capacitance (f = 1MHz) C @ 0V (pF) Max	Temperature Coefficient of V <sub>BR</sub> a(V <sub>BR</sub> ) mv/°C Max
SMDA03C	3.3	4	7	200	400	-5
SMDA05C	5.0	6	9.8	40	300	1
SMDA12C	12.0	13.3	19	1	94	8
SMDA15C	15.0	16.7	24	1	70	11
SMDA24C	24.0	26.7	43	1	45	28
SMDA36C	36.0	40	60	1	25	-

## **Ratings and Characteristics Curves**

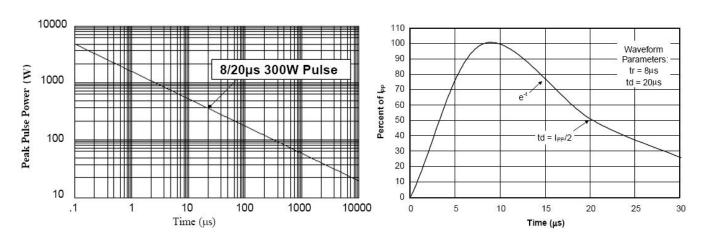


Figure 1. Peak Pulse Power Vs Pulse Time ( $\mu$ s)

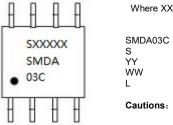
Figure 2. Pulse Wave Form

### **Ordering Information**

Device	Package	Shipping	
SMDA03C THRU SMDA36C	SO-8 (Pb-Free)	2500pcs / reel	
SMDA03CTR THRU SMDA36CTR	SO-8 (Pb-Free)	2500pcs / reel	

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

# **Marking Diagram**



Where XXXXX is YYWWL

 SMDA03C
 = Part Number

 S
 = S

 YY
 = Year

 WW
 = Week

 L
 = Lot Number

Cautions: Molding resin

Epoxy resin UL:94V-0

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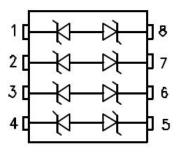




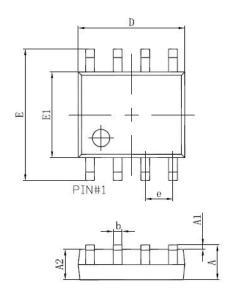
### **Circuit Diagram**

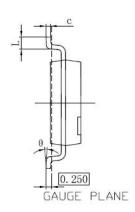
The SMDAxxC series of devices are designed to protect up to four data lines. The devices are connected as follows:

✓ The SMDAxxC are bidirectional devices and are designed for use on line where the normal operating voltage is above ground. Pins 1, 2, 3, and 4 are connected to the protected lines. Pins 5, 6, 7, and 8 are connected to ground. Since the device is electrically symmetrical, these connections may be reversed. The ground connections should be made directly to the ground plane for best results. The path length is kept as short as possible to reduce the effects of parasitic inductance in the board traces.



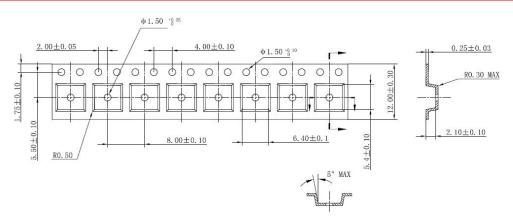
### **Mechanical Dimensions SO-8**





CVMDOL	Millin	neters	Inches	
SYMBOL	MIN.	MAX.	MIN.	MAX.
Α	1.350	1.800	0.053	0.071
A1	0.100	0.250	0.004	0.010
A2	1.350	1.750	0.053	0.069
b	0.306	0.510	0.012	0.020
С	0.150	0.300	0.006	0.012
D	4.720	5.120	0.186	0.202
е	1.140	1.400	0.045	0.055
E	5.700	6.300	0.224	0.248
E1	3.750	4.150	0.148	0.163
L	0.300	1.270	0.012	0.050
θ	0°	8°	0°	8°

# **Carrier Tape & Reel Specification SO-8**



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