

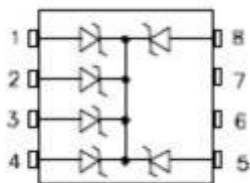
## SMDA03C-4-2 THRU SMDA24C-4-2 TVS ARRAY SERIES



### Description

The SMDAXXC-4-2 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 V Components
- Bidirectional
- Provides Electrically Isolated Protection
- 300 W @ 8/20 us
- Protects 4 Lines
- SO-8 Packaging
- 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

- Network Interfaces
- Portable Electronics
- Cellular Phone Terminals
- Audio/Video Inputs
- I/O Transceivers

### Absolute Maximum Ratings:

Parameter	Symbol	Value	Units
Peak Pulse Power, 8/20 $\mu$ s Wave shape	P	300	W
Operating Temperature	T <sub>J</sub>	-55 to +125	°C
Storage Temperature	T <sub>stg</sub>	-55 to +150	°C
Lead Soldering Temperature	T <sub>L</sub>	260 (10 Sec.)	°C

**Electrical Characteristics@25°C**

Part Number	Stand-off Voltage $V_{wm}$ (V) Max	Breakdown Voltage $V_{BR}$ @1mA (V) Min	Clamping Voltage $V_c$ @ 1 A (V) Max	Leakage Current $I_R$ @ $V_{wm}$ (uA) Max	Capacitance (f = 1MHz) C @ 0V (pF) Max	Temperature Coefficient of $V_{BR}$ a( $V_{BR}$ ) mv/°C Max
SMDA03C-4-2	3.3	4	7	200	300	-5
SMDA05C-4-2	5.0	6	9.8	40	200	1
SMDA12C-4-2	12.0	13.3	19	1	75	8
SMDA15C-4-2	15.0	16.7	24	1	50	11
SMDA24C-4-2	24.0	26.7	43	1	35	28

**Ratings and Characteristics Curves**

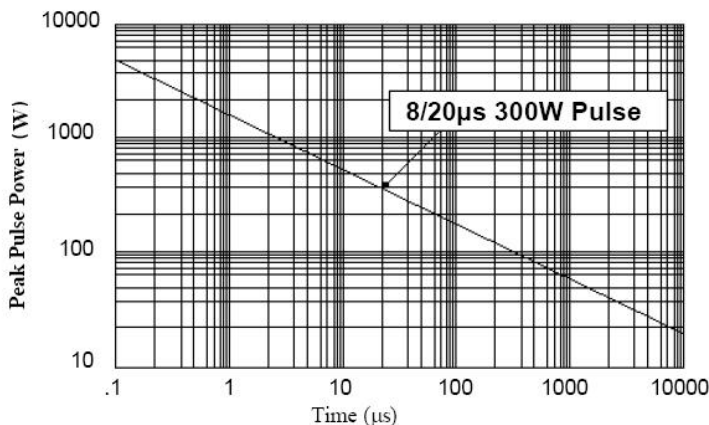


Figure 1. Peak Pulse Power Vs Pulse Time (µs)

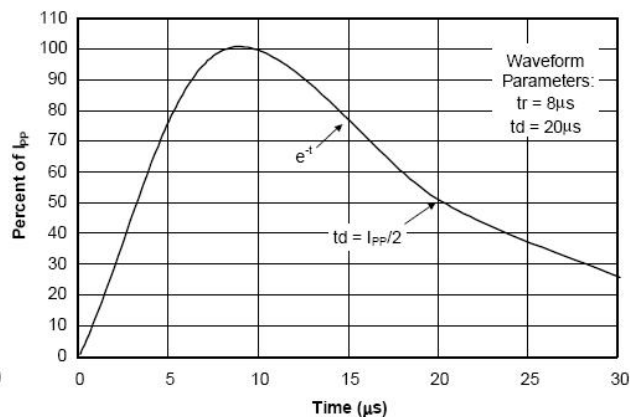


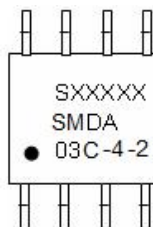
Figure 2. Pulse Wave Form

**Ordering Information**

Device	Package	Shipping
SMDA03C-4-2 THRU SMDA24C-4-2	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

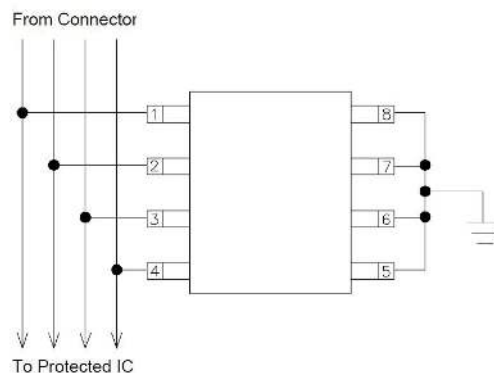
SMDA03C-4-2 = Part Number  
S = S  
YY = Year  
WW = Week  
L = Lot Number

**Cautions:** Molding resin  
Epoxy resin UL:94V-0

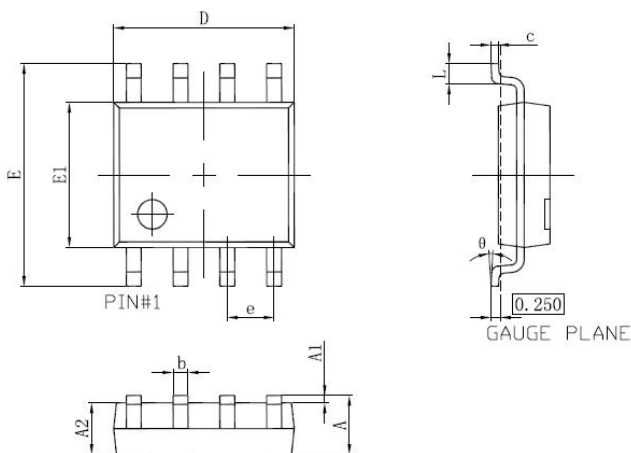
## Circuit Diagram

The SMDAxxC-4-2 can be configured to protect four data line.  
The options for connecting the devices is as follows:

- ✓ Bidirectional protection of four I/O line is achieved by connecting pins 1,2,3, and 4 to the data lines. Pins 5,6,7, and 8 are connected to ground. The ground connection 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 trances. In this configuration, the device can withstand the maximum specified transient impulse on four lines simultaneously.

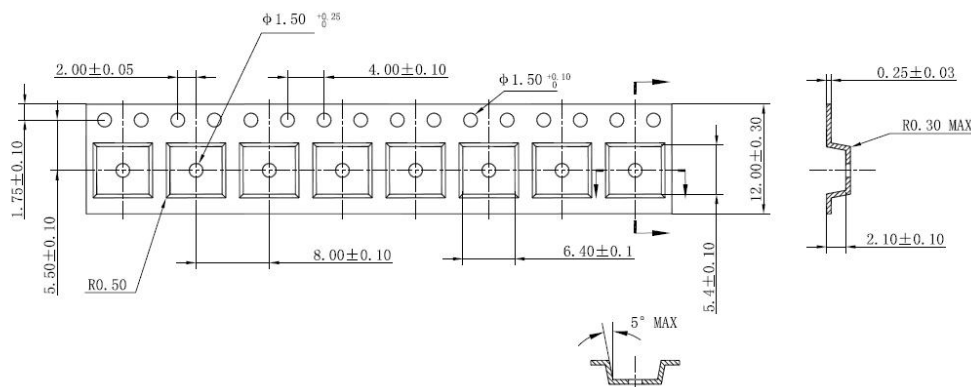


## Mechanical Dimensions SO-8



SYMBOL	Millimeters		Inches	
	MIN.	MAX.	MIN.	MAX.
A	1.350	1.750	0.053	0.069
A1	0.100	0.250	0.004	0.010
A2	1.350	1.550	0.053	0.061
b	0.330	0.510	0.013	0.020
c	0.170	0.250	0.007	0.010
D	4.800	5.000	0.189	0.197
e	1.270(BSC)		0.050(BSC)	
E	5.800	6.200	0.228	0.244
E1	3.800	4.000	0.150	0.157
L	0.400	1.270	0.016	0.031
θ	0°	8°	0°	8°

## Carrier Tape Specification SO-8



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