

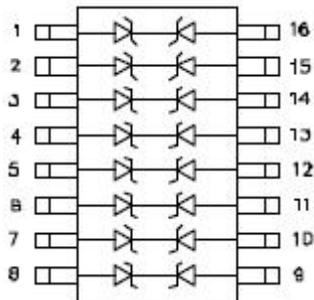
## S16C03-8 THRU S16C24-8 TVS ARRAY SERIES



### Description

The S16CXX-8 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 8 bidirectional lines up to 24 volts.

### Schematic & Pin Configuration



### Features

- Protects 3.3, 5, 12, 15, 24 V Components
- Bidirectional
- Provides Electrically Isolated Protection
- 300 W @ 8/20 us
- Protects 8 Lines
- SO-16 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-16 Surface Mount Package
- Approximate Weight: 0.13 grams
- PIN #1 Indicator: DOT on top of package
- Packaging: Tape and Reel Per EIA Standard 481

### Application

- RS-422, RS-423, & RS-485 Interfaces
- WAN/LAN Equipment
- Wireless Communication Circuits
- Ethernet-10/100 Base T

### 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
S16C03-8	3.3	4	7	200	425	-5
S16C05-8	5.0	6	9.8	40	310	1
S16C12-8	12.0	13.3	19	1	105	8
S16C15-8	15.0	16.7	24	1	80	11
S16C24-8	24.0	26.7	43	1	50	28

### Ratings and Characteristics Curves

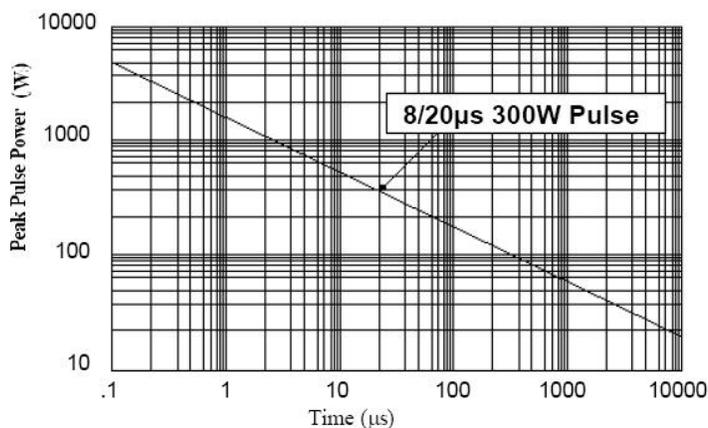


Figure 1. Peak Pulse Power Vs Pulse Time (µs)

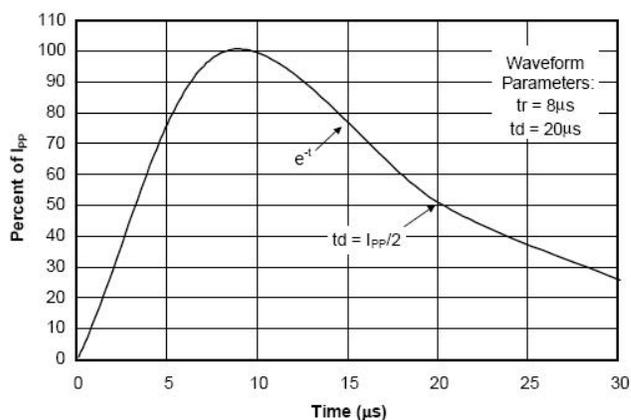


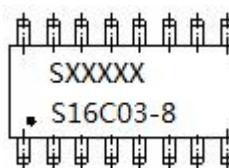
Figure 2. Pulse Wave Form

### Ordering Information

Device	Package	Shipping
S16C03-8 THRU S16C24-8	SO-16 (Pb-Free)	2500pcs / reel
S16C03-8TR THRU S16C24-8TR	SO-16 (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



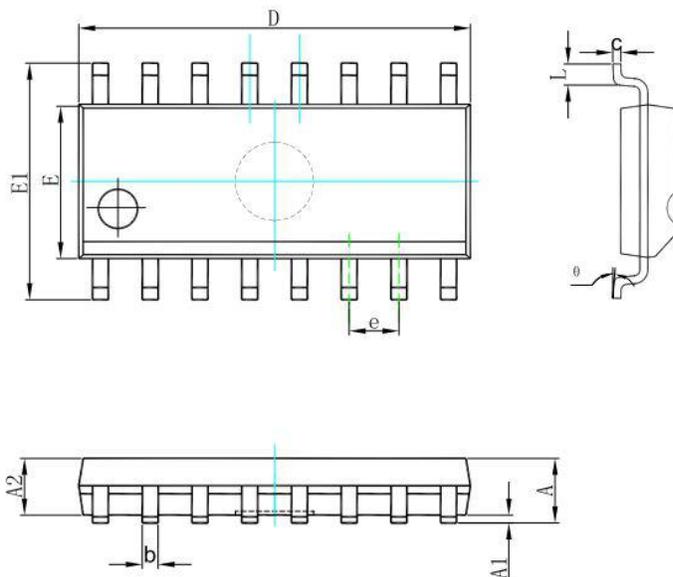
Where XXXXX is YYWWL

S16C03-8 = Part Name  
S = S  
YY = Year  
WW = Week  
L = Lot Number

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

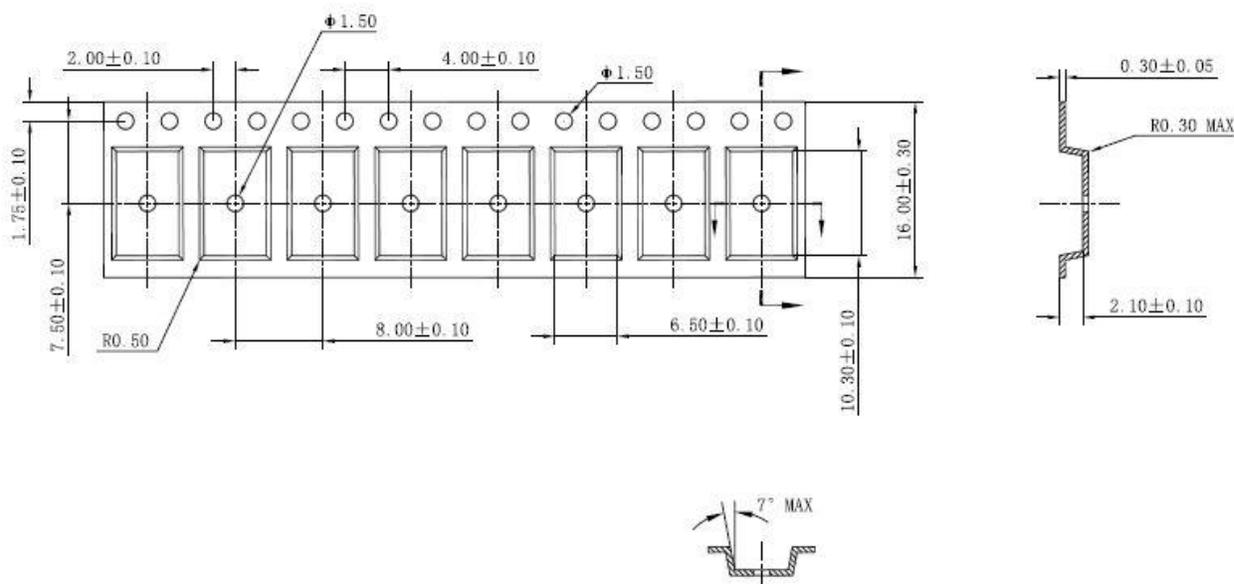
- China - Germany - Korea - Singapore - United States •
- <http://www.smc-diodes.com> - [sales@smc-diodes.com](mailto:sales@smc-diodes.com) •

### Mechanical Dimensions SO-16



SYMBOL	Millimeters		Inches	
	MIN.	MAX.	MIN.	MAX.
A	1.350	1.800	0.053	0.708
A1	0.050	0.250	0.002	0.010
A2	1.350	1.650	0.053	0.065
b	0.330	0.510	0.013	0.020
c	0.153	0.250	0.006	0.010
D	9.700	10.200	0.382	0.402
E	3.800	4.150	0.150	0.163
E1	5.700	6.300	0.224	0.248
e	1.14	1.40	0.045	0.055
L	0.400	1.270	0.016	0.050
θ	0°	8°	0°	8°

### Carrier Tape Specification SO-16





S16C03-8  
THRU  
S16C24-8

**Technical Data**  
**Data Sheet N0289, Rev. B**



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