

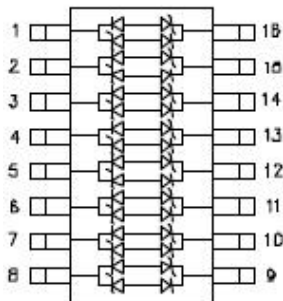
## S16LCC03-8 THRU S16LCC24-8 TVS ARRAY SERIES



### Description

The S16LCCXX-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
- Low Capacitance - 25 pF
- 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
- Low Voltage ASICs

### 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 $I_R$ @ $V_{wm}$ ( $\mu$ A) Max	Capacitance (f = 1MHz) C @ 0V (pF) Max	Temperature Coefficient of $V_{BR}$ a( $V_{BR}$ ) mv/°C Max
S16LCC03-8	3.3	4	7	200	25	-5
S16LCC05-8	5.0	6	9.8	20	25	1
S16LCC12-8	12.0	13.3	19	1	25	8
S16LCC15-8	15.0	16.7	24	1	25	11
S16LCC24-8	24.0	26.7	43	1	25	28

### Ratings and Characteristics Curves

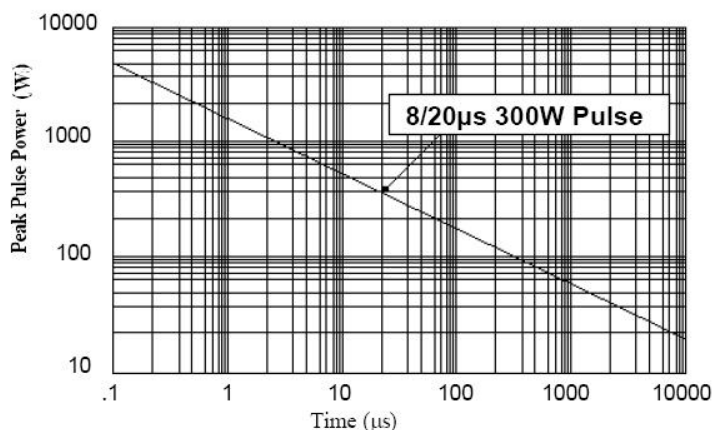


Figure 1. Peak Pulse Power Vs Pulse Time ( $\mu$ s)

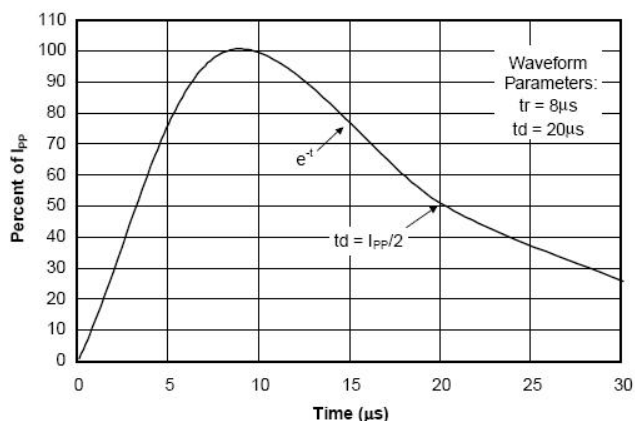


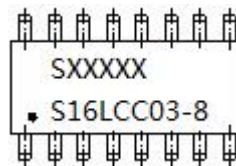
Figure 2. Pulse Wave Form

### Ordering Information

Device	Package	Shipping
S16LCC03-8 THRU S16LCC24-8	SO-16 (Pb-Free)	2500pcs / reel
S16LCC03-8TR THRU S16LCC24-8TR	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

S16LCC03-8 = Part Name  
S = S  
YY = Year  
WW = Week  
L = Lot Number

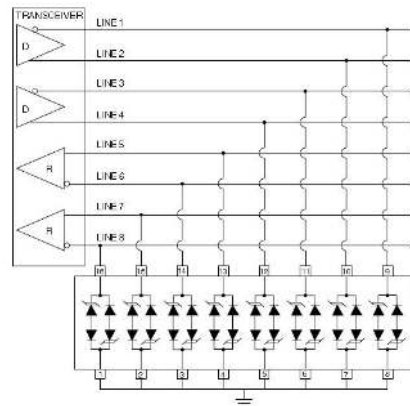
Cautions: Molding resin  
Epoxy resin UL:94V-0

## Circuit Diagram

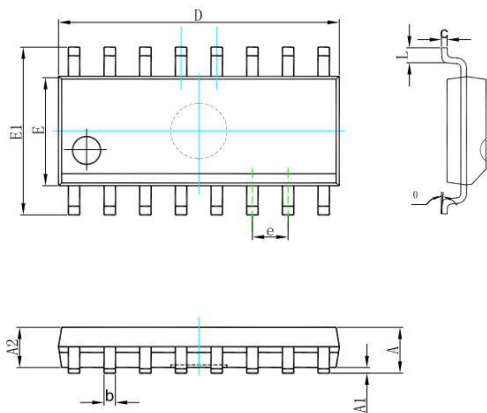
Ideal for RS-485 applications, the S16LCCxx-8 Series provides up to eight (8) lines of protection in a common-mode configuration as depicted in Figure 1. This low capacitance series allows the transceiver or telecommunications circuit to operate safely without significant signal distortion.

Circuit connectivity is as follows:

- ✓ Lines 1 is connected to Pin 9.
- ✓ Line 2 is connected to Pin 10.
- ✓ Line 3 is connected to Pin 11.
- ✓ Line 4 is connected to Pin 12.
- ✓ Line 5 is connected to Pin 13.
- ✓ Line 6 is connected to Pin 14.
- ✓ Line 7 is connected to Pin 15.
- ✓ Line 8 is connected to Pin 16.
- ✓ Pins 1-8 are connected to ground.

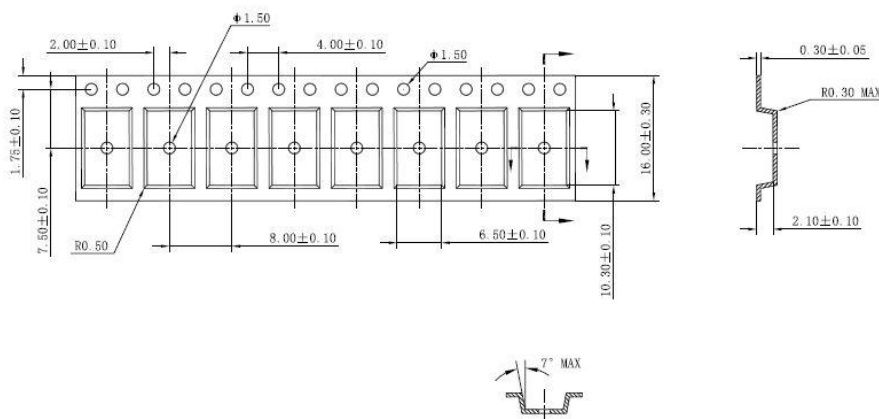


## Mechanical Dimensions SO-16



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



**Technical Data**  
**Data Sheet NO290, Rev. A**



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