Technical Data
Data Sheet NO290, Rev. A

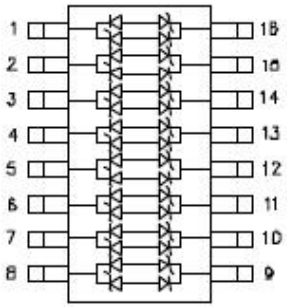
S16LCC03-8 THRU S16LCC24-8 TVS ARRAY SERIES

SO-16

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 µs Wave shape	P	300	W
Operating Temperature	T_J	-55 to +125	°C
Storage Temperature	T_{stg}	-55 to +150	°C
Lead Soldering Temperature	T_L	260 (10 Sec.)	°C

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Electrical Characteristics@25°C

Part Number	Stand-off Voltage Vwm (V) Max	Breakdown Voltage V_{BR} @1mA (V) Min	Clamping Voltage Vc @ 1 A (V) Max	Leakage Current I_R @ Vwm (uA) 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

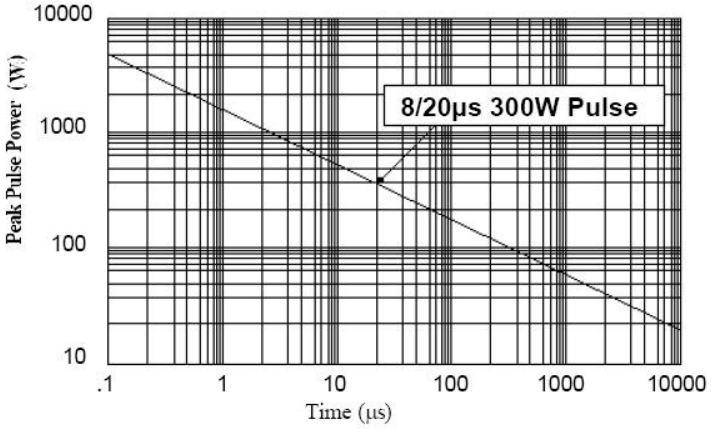


Figure 1. Peak Pulse Power Vs Pulse Time (μs)

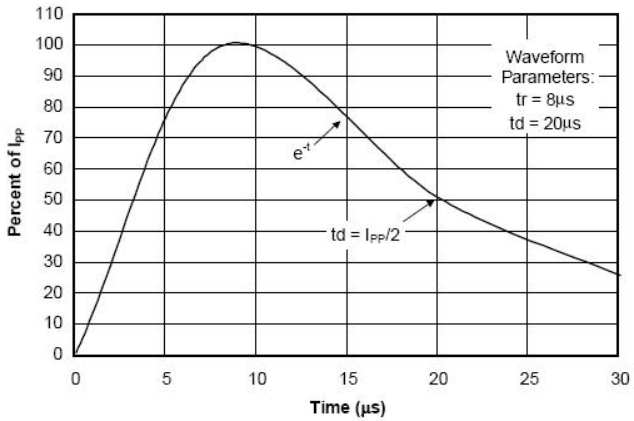


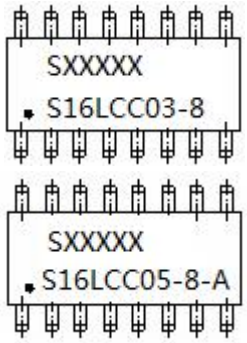
Figure 2. Pulse Wave Form

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
A = AEC-Q101
S = S
YY = Year
WW = Week
L = Lot Number

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

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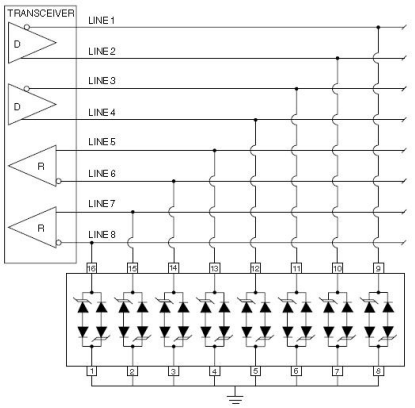
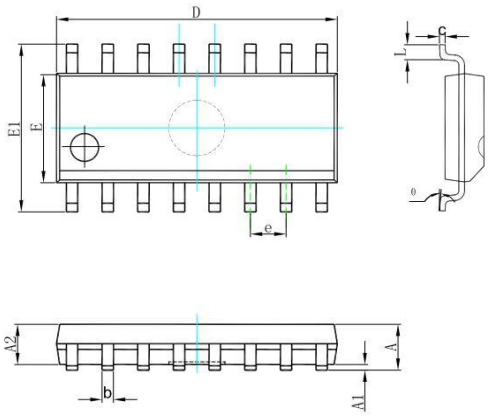
Circuit Diagram

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.

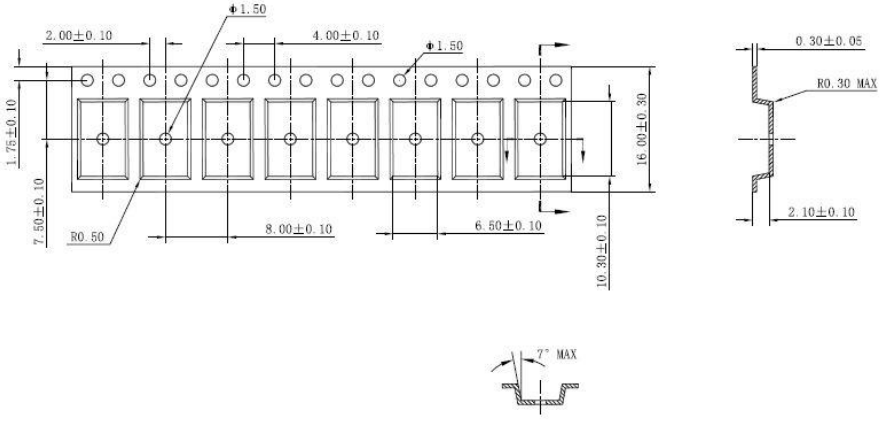


Mechanical Dimensions SO-16



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



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