THE DATASHEET OF

16LCC05-8

S16LCC03-8
THRU
S16LCC24-8

Technical Data
Data Sheet N0290, Rev. A

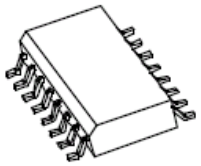
Green Products

TVS ARRAY SERIES

FEATURES

- ✓ Protects 3.3, 5, 12, 15, 24 V Components
- ✓ Bidirectional
- ✓ Low Capacitance – 25 pF
- ✓ Provides Electrically Isolated Protection
- ✓ 300 W @ 8/20 μs
- ✓ Protects 8 Lines
- ✓ SO-16 Packaging
- ✓ This is a Pb - Free Device
- ✓ All SMC parts are traceable to the wafer lot
- ✓ Additional testing can be offered upon request

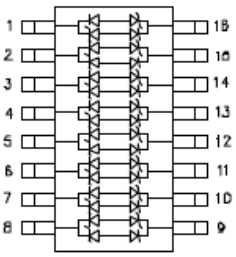
SO-16



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



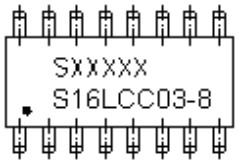
APPLICATION

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

MECHANICAL CHARACTERISTICS

- ✓ SO-16 Surface Mount Package
- ✓ Approximate Weight: 0.13 grams
- ✓ PIN #1 Indicator: DOT on top of package
- ✓ Packaging: Tubes or Tape & Reel per EIA Standard 481

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

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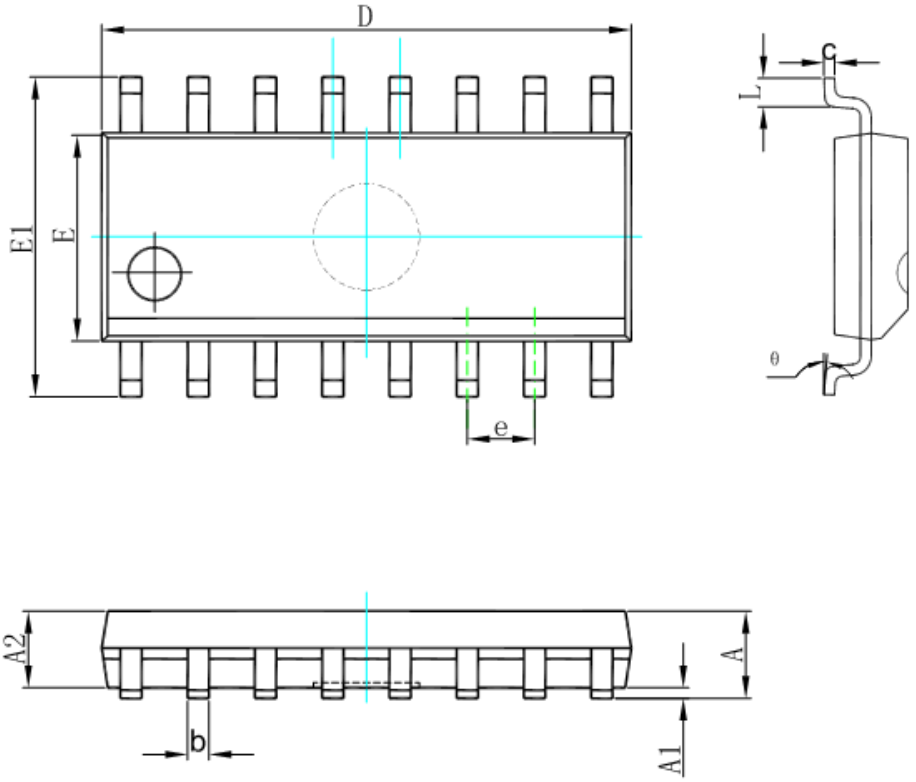
PACKAGE OUTLINES & DEMENSIONS



Symbol	Dimensions In Millimeters		Dimensions In 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	9.800	10.200	0.386	0.402
E	3.800	4.000	0.150	0.157
E1	5.800	6.200	0.228	0.244
e	1.270(BSC)		0.050(BSC)	
L	0.400	1.270	0.016	0.050
θ	0°	8°	0°	8°

SO-16(CJ)

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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.

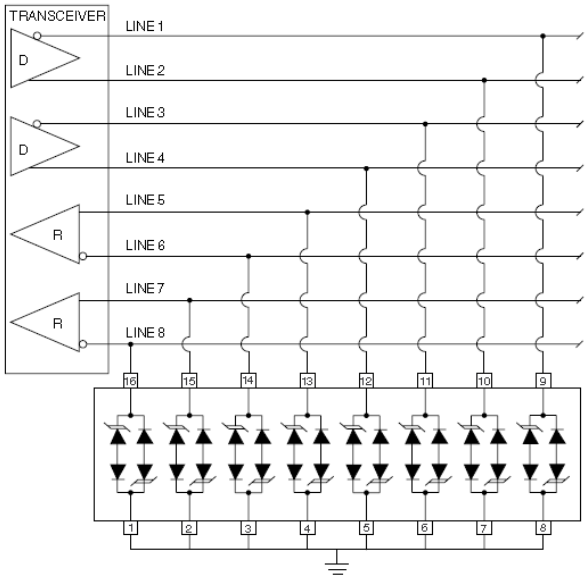

Figure1. Bidirectional Common-Mode Protection

Ordering Information:

Device	Package	Shipping
S16LCC03-8 THRU S16LCC24-8	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.

ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
P	Peak Pulse Power, 8/20 μs Waveshape	300	W
T_J	Operating Temperature	-55 to +125	°C
T_{STG}	Storage Temperature	-55 to +150	°C
T_L	Lead Soldering Temperature	260 (10 Sec.)	°C

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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} (μA) 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

TYPICAL CHARACTERISTICS

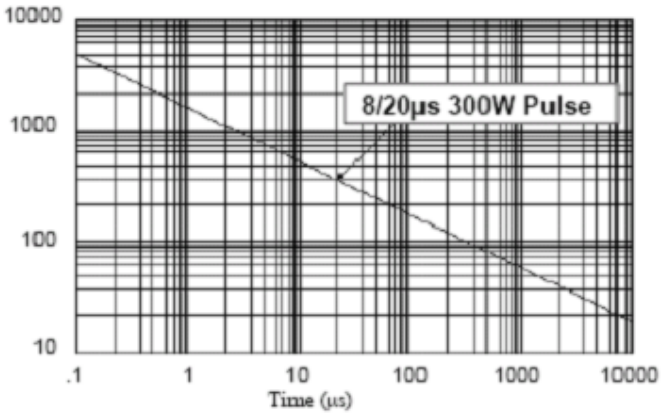

Figure 1. Peak Pulse Power Vs Pulse Time (μs)

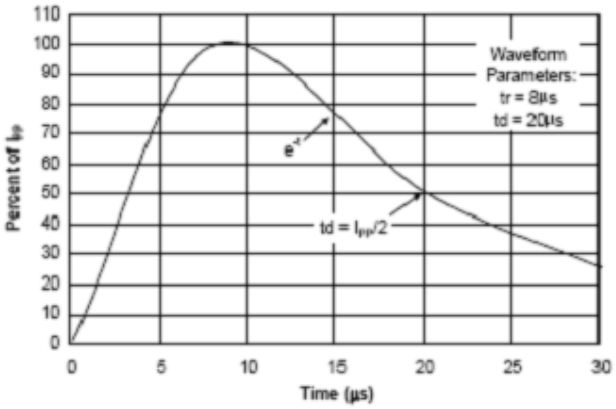

Figure 2. Pulse Wave Form

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