Technical Data
Data Sheet N0427, Rev. C

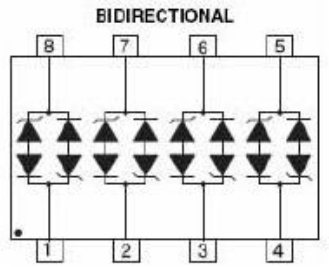
SMDB03LCC THRU SMDB24LCC TVS ARRAY SERIES

SO-8

Description

The SMDBXXLCC 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
- 500 W @ 8/20 us
- Protects 4 Lines
- SO-8 Packaging
- LOW CAPACITANCE: 5PF
- "-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-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

- RS-232 & RS-422 data lines
- Microprocessor Based Equipment
- Notebooks, Desktops, & Servers
- LAN/WAN Equipment
- Serial and Parallel Port
- Peripherals

Absolute Maximum Ratings:

Parameter	Symbol	Value	Units
Peak Pulse Power, 8/20 µs Wave shape	P	500	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
SMDB03LCC	3.3	4	7	200	15	-5
SMDB05LCC	5.0	6	9.8	20	15	1
SMDB12LCC	12.0	13.3	19	1	15	8
SMDB15LCC	15.0	16.7	24	1	15	11
SMDB24LCC	24.0	26.7	43	1	15	28

Ratings and Characteristics Curves

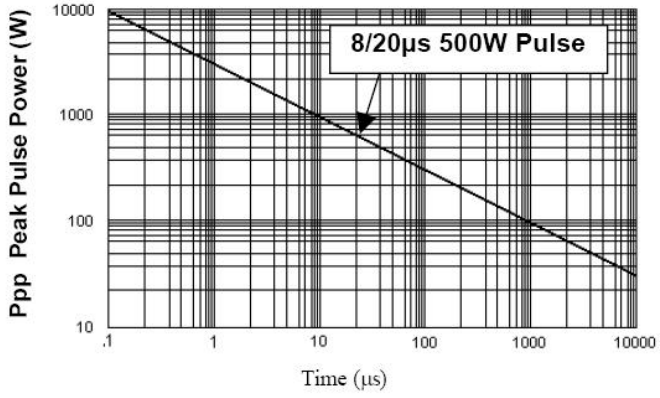


Figure 1. Peak Pulse Power Vs Pulse Time (µs)

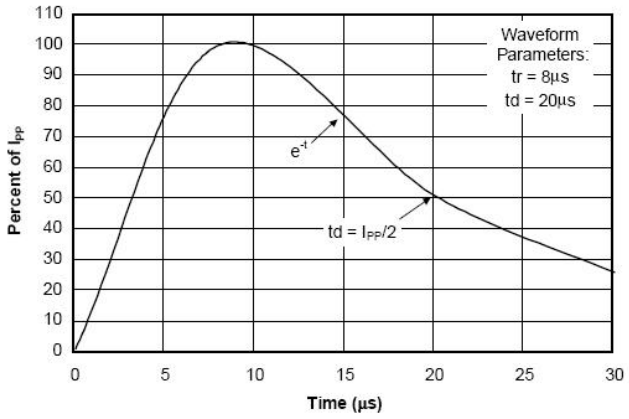


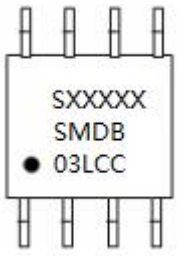
Figure 2. Pulse Wave Form

Ordering Information

Device	Package	Shipping
SMDB03LCC THRU SMDB24LCC	SO-8 (Pb-Free)	2500pcs / reel
SMDB03LCCTR THRU SMDB24LCCTR	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

SMDB03LCC = Part Number
S = S
YY = Year
WW = Week
L = Lot Number

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

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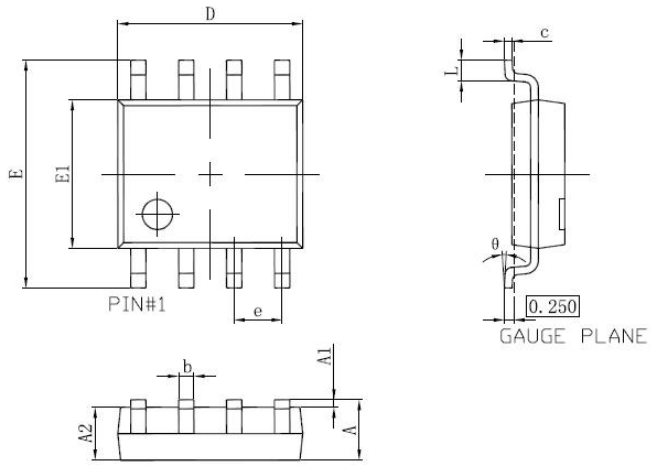
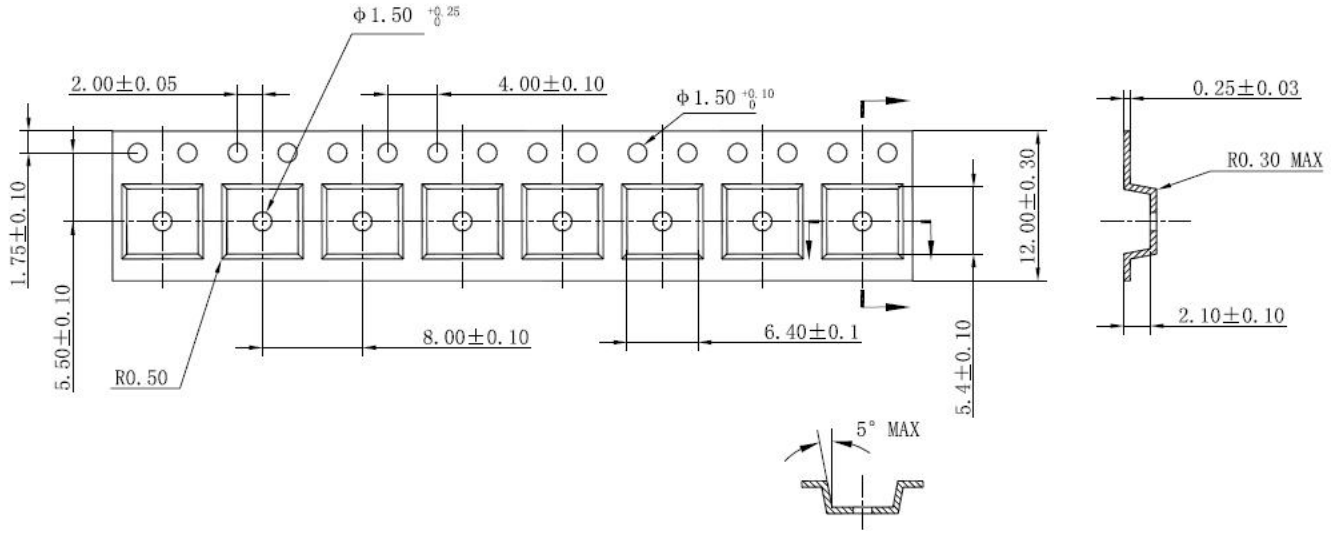
Mechanical Dimensions SO-8



SYMBOL	Millimeters		Inches	
	MIN.	MAX.	MIN.	MAX.
A	1.350	1.800	0.053	0.071
A1	0.100	0.250	0.004	0.010
A2	1.350	1.750	0.053	0.069
b	0.306	0.510	0.012	0.020
c	0.150	0.300	0.006	0.012
D	4.720	5.120	0.186	0.202
e	1.140	1.400	0.045	0.055
E	5.700	6.300	0.224	0.248
E1	3.750	4.150	0.148	0.163
L	0.300	1.270	0.012	0.050
θ	0°	8°	0°	8°

Carrier Tape Specification SO-8



SMDB03LCC
THRU
SMDB24LCC

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