



SMDB03LCC THRU SMDB24LCC

Technical Data
Data Sheet N0427, Rev. B

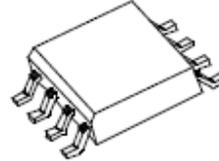
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TVS ARRAY SERIES

FEATURES

- ✓ Protects 3.3, 5, 12, 15, 24 V Components
- ✓ Bidirectional
- ✓ Provides Electrically Isolated Protection
- ✓ 500 W @ 8/20 μ s
- ✓ Protects 4 Lines
- ✓ SO-8 Packaging
- ✓ LOW CAPACITANCE: 5PF
- ✓ This is a Pb - Free Device
- ✓ All SMC parts are traceable to the wafer lot
- ✓ Additional testing can be offered upon request

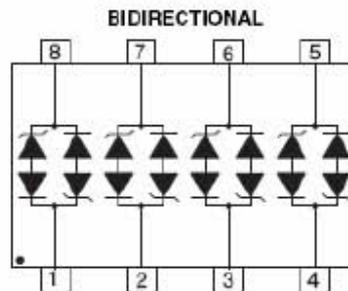
SO-8



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



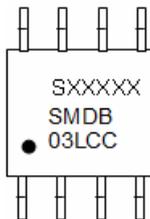
APPLICATION

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

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

MARKING DIAGRAM

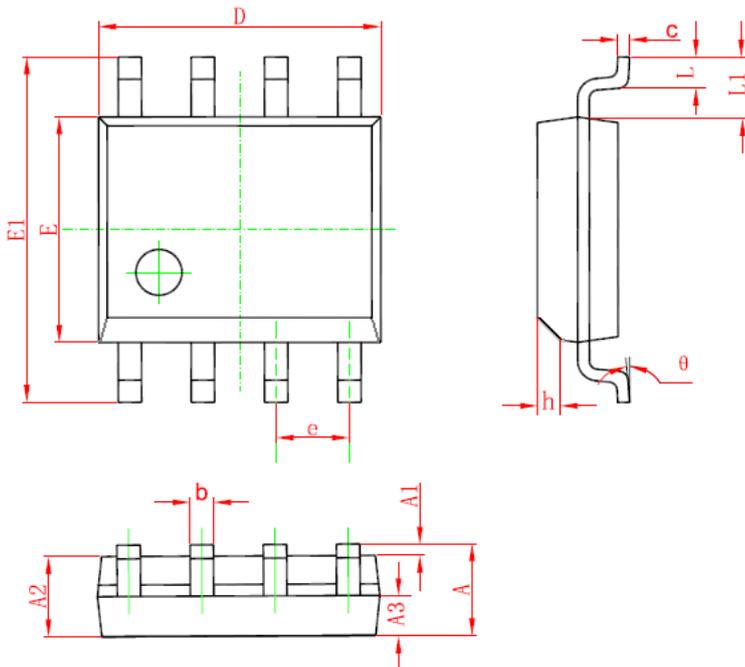


Where XXXXX is YYWWL

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

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

PACKAGE OUTLINES & DEMENSIONS



SYMBOL	MILLMETER		
	MIN.	TYP.	MAX.
A	-	-	1.75
A1	0.10	-	0.225
A2	1.30	1.40	1.50
A3	0.60	0.65	0.70
b	0.39	-	0.48
c	0.21	-	0.26
D	4.70	4.90	5.10
E	3.70	3.90	4.10
E1	5.80	6.00	6.20
e	1.27BSC		
h	0.25	-	0.50
L	0.50	-	0.80
L1	1.05BSC		
Θ1	0	-	8°

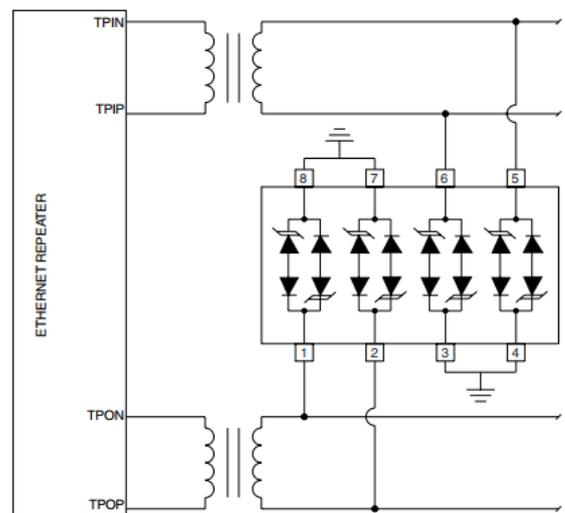
SO-8

Circuit Diagram

Ideal for Ethernet applications, SMDBxxLCC Series provides up to four (4) lines of protection in a common-mode configuration.

Circuit connectivity is as follows:

- ✓ TPIN is connected to Pin 5.
- ✓ TPIP is connected to Pin 6.
- ✓ TPON is connected to Pin 1.
- ✓ TPOP is connected to Pin 2.
- ✓ Pins 3, 4, 7 & 8 are connected to ground.





Ordering Information:

Device	Package	Shipping
SMDB03LCC THRU SMDB24LCC	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.

ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
P	Peak Pulse Power, 8/20 μ s Waveshape	500	W
T _J	Operating Temperature	-55 to +125	$^{\circ}$ C
T _{STG}	Storage Temperature	-55 to +150	$^{\circ}$ C
T _L	Lead Soldering Temperature	260 (10 Sec.)	$^{\circ}$ C

ELECTRICAL CHARACTERISTICS @ 25 $^{\circ}$ C

Part Number	Stand-off Voltage V_{vm} (v) Max	Breakdown Voltage V_{BR} @1mA (V) Min	Clamping Voltage V_c @ 1 A (V) Max	Leakage Current I_R @ V_{vm} (μ A) Max	Capacitance (f = 1MHz) C @ 0V (pF) Max	Temperature Coefficient of V_{BR} $a(V_{BR})$ $mv/^{\circ}C$ 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

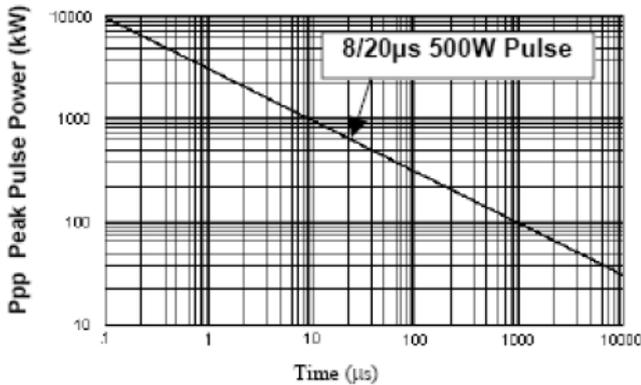


Fig.1- Peak Pulse vs. Pulse Time (µs)

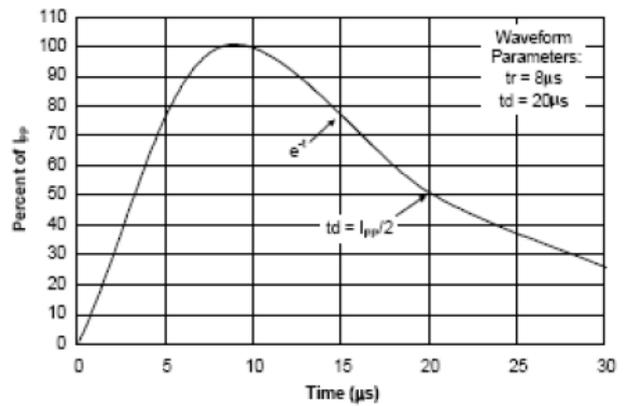


Fig.2- Pulse Waveform (µs)

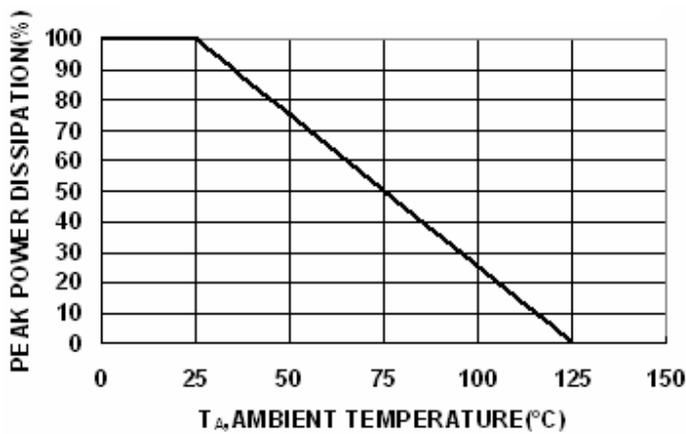


Fig.3- Power Derating Curve

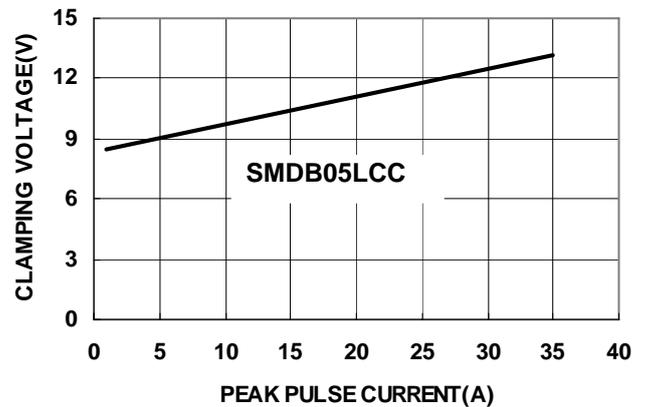


Fig.4- Clamping Voltage vs. Peak Pulse Current



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