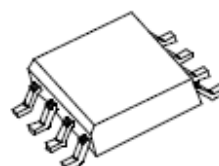


TVS ARRAY SERIES

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

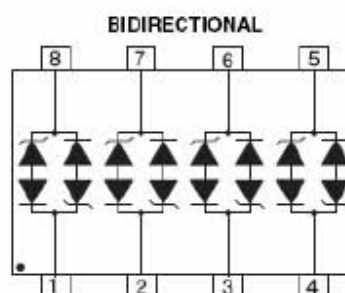
SO-8



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



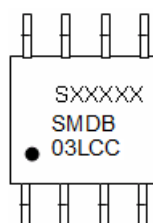
APPLICATION

- ✓ 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

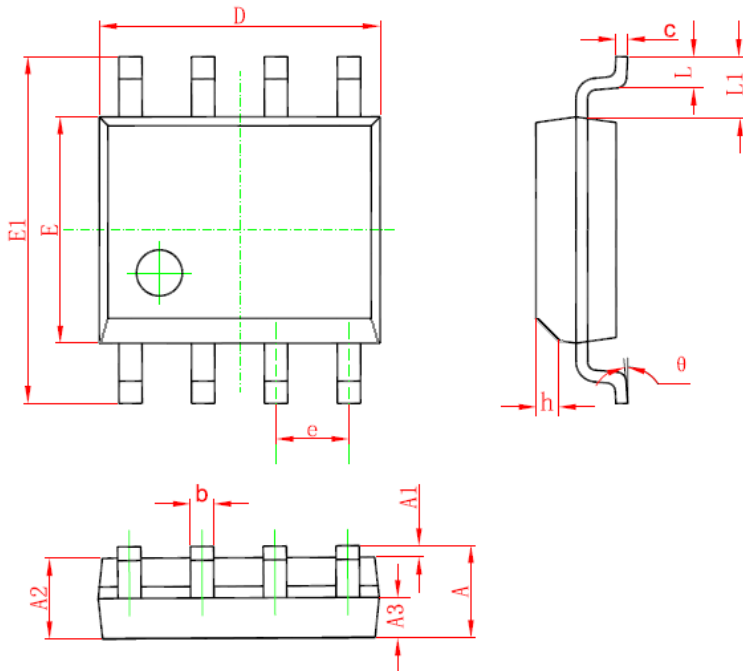


Where XXXXX is YYWWL

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

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 |

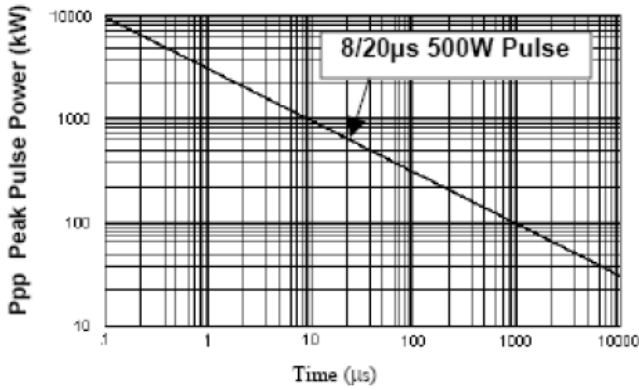


Fig.1- Peak Pulse vs. Pulse Time (μs)

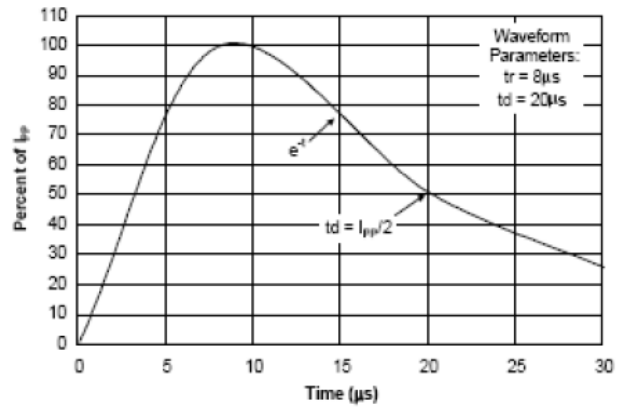


Fig.2- Pulse Waveform (μs)

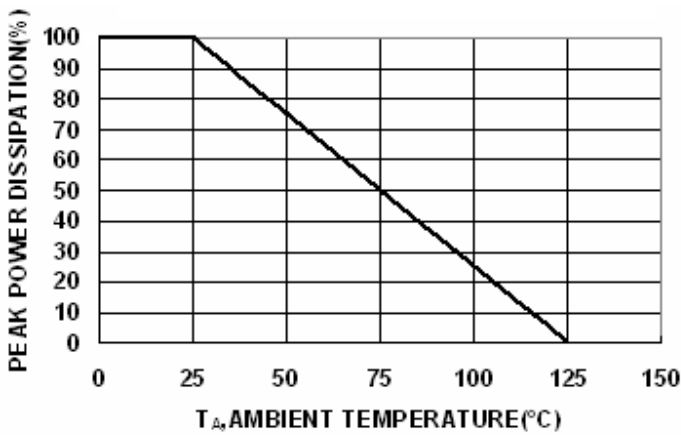


Fig.3- Power Derating Curve

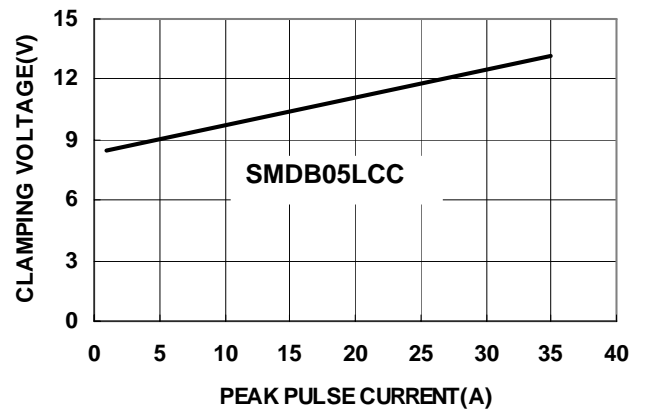


Fig.4- Clamping Voltage vs. Peak Pulse Current

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