**Technical Data**
**Data Sheet N0289, Rev. -**

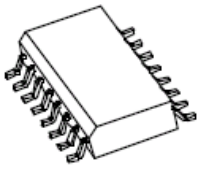
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## TVS ARRAY SERIES

### FEATURES

- ✓ Protects 3.3, 5, 12, 15, 24 V Components
- ✓ Bidirectional
- ✓ 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

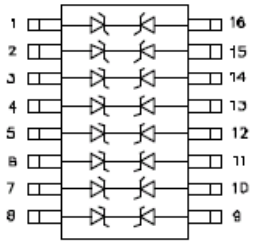
### SO-16



### DESCRIPTION

The S16CXX-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



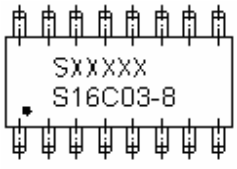

### APPLICATION

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

### 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

| | |
|---|---|
| S16C03-8 | = Part Name |
| S | = S |
| YY | = Year |
| WW | = Week |
| L | = Lot Number |

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

**Technical Data**
**Data Sheet N0289, Rev. -**

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## Ordering Information:

| Device | Package | Shipping |
|---|---|---|
| S16C03-8 THRU S16C24-8 | 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 |

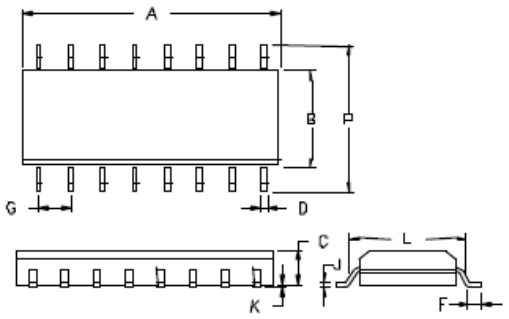
**Technical Data**
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## ELECTRICAL CHARACTERISTICS @ 25 °C

| 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 |
|---|---|---|---|---|---|---|
| S16C03-8 | 3.3 | 4 | 7 | 200 | 425 | -5 |
| S16C05-8 | 5.0 | 6 | 9.8 | 40 | 440 | 1 |
| S16C12-8 | 12.0 | 13.3 | 19 | 1 | 220 | 8 |
| S16C15-8 | 15.0 | 16.7 | 24 | 1 | 200 | 11 |
| S16C24-8 | 24.0 | 26.7 | 43 | 1 | 137 | 28 |

## PACKAGE OUTLINES & DEMENSIONS




| | INCHES | | MILLIMETERS | |
|---|---|---|---|---|
| DIM | MIN. | MAX | MIN. | MAX. |
| A | 0.358 | 0.398 | 9.09 | 10.10 |
| B | 0.150 | 0.157 | 3.8 | 4.0 |
| C | 0.053 | 0.069 | 1.35 | 1.75 |
| D | 0.011 | 0.021 | 0.28 | 0.53 |
| F | 0.016 | 0.050 | 0.41 | 1.27 |
| G | 0.050 BSC | | 1.27 BSC | |
| J | 0.006 | 0.010 | 0.15 | 0.25 |
| K | 0.004 | 0.008 | 0.10 | 0.20 |
| L | 0.189 | 0.206 | 4.80 | 5.23 |
| P | 0.228 | 0.244 | 5.79 | 6.19 |

## TYPICAL CHARACTERISTICS

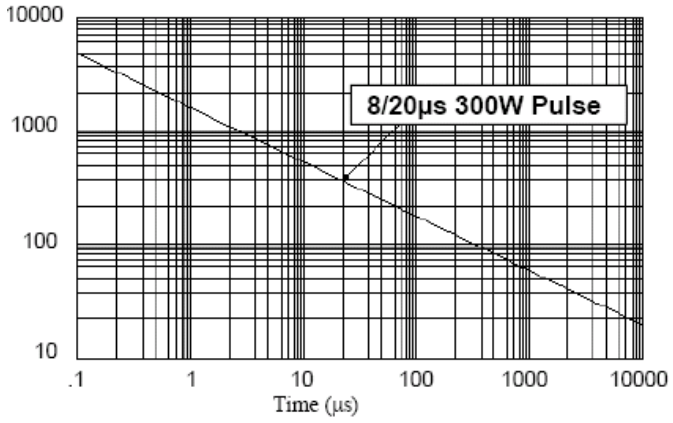



Figure 1. Peak Pulse Power Vs Pulse Time (μs)

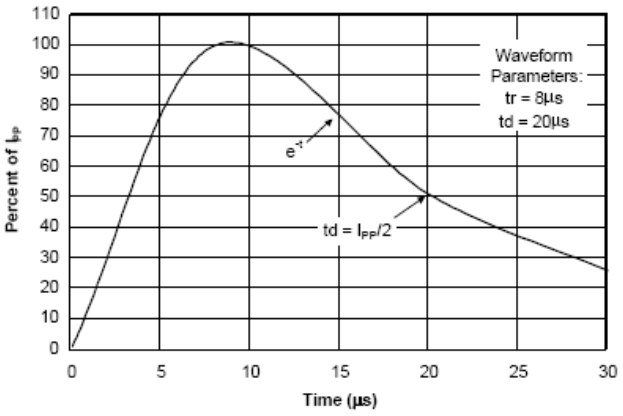



Figure 2. Pulse Wave Form

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