

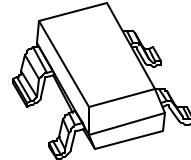
TECHNICAL DATA
DATA SHEET 1922, REV. -

TVS ARRAY SERIES

FEATURES

- ✓ Protects 3.3, 5, 12, 15, 24 V Components
- ✓ Unidirectional
- ✓ Ultra Low Capacitance 3 pF
- ✓ Ultra Low Leakage
- ✓ Provides Electrically Isolated Protection
- ✓ 500 W @ 8/20 μ s
- ✓ Protects 1 line
- ✓ SOT-143 Packaging

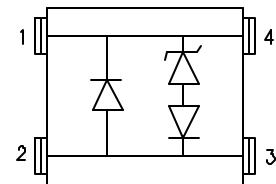
SOT-143



DESCRIPTION

The S43LC04XX series of TVS array have been designed to provide unidirectional protection for sensitive electronics from damage due to voltage transients caused by electrostatic discharge (ESD), electrical fast transients (EFT), secondary lightning and other voltage-induced transient events. The device can be used to protect 1 unidirectional data line or interface line.

SCHEMATIC & PIN CONFIGURATION



APPLICATION

- ✓ WAN/LAN Equipment
- ✓ Cellular phone
- ✓ Notebooks, Desktops, & Servers
- ✓ Audio/Video Inputs
- ✓ Handheld Electronics
- ✓ FireWire, SCSI & **USB** interfaces

MECHANICAL CHARACTERISTICS

- ✓ SOT-143 Surface Mount Package
- ✓ Approximate Weight: 0.03 grams
- ✓ Marking: Device Marking Code
- ✓ PIN #1 Indicator: DOT on top of package
- ✓ Packaging: Tape and Reel Per EIA 481

ABSOLUTE MAXIMUM RATINGS

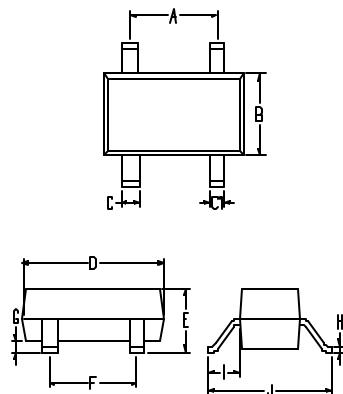
| Symbol | Parameter | Value | Unit |
|------------------|------------------------------------------|---------------|------|
| P | Peak Pulse Power, 8/20 μ s Waveshape | 500 | W |
| T _J | Operating Temperature | -55 to +125 | °C |
| T _{STG} | Storage Temperature | -55 to +150 | °C |
| T _L | Lead Soldering 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} (μ A) Max | Capacitance ($f = 1$ MHz) C @ 0V (pF) Max | Temperature Coefficient of V_{BR} $a(V_{BR})$ mv/°C Max |
|-------------|---------------------------------------------|------------------------------------------------------|--------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|--------------------------------------------------------------------|
| S43LC0403 | 3.3 | 4 | 8 | 200 | 3 | -5 |
| S43LC0405 | 5.0 | 6 | 10.8 | 20 | 3 | 1 |
| S43LC0412 | 12.0 | 13.3 | 19 | 1 | 3 | 8 |
| S43LC0415 | 15.0 | 16.7 | 24 | 1 | 3 | 11 |
| S43LC0424 | 24.0 | 26.7 | 43 | 1 | 3 | 28 |

PACKAGE OUTLINES & DIMENSIONS



| DIM | INCHES | | MILLIMETERS | |
|-----|--------|-------|-------------|-------|
| | MIN. | MAX | MIN. | MAX. |
| A | 0.070 | 0.080 | 1.778 | 2.032 |
| B | 0.047 | 0.055 | 1.194 | 1.397 |
| C | 0.030 | 0.037 | 0.762 | 0.940 |
| C1 | 0.015 | 0.020 | 0.381 | 0.508 |
| D | 0.110 | 0.119 | 2.794 | 3.023 |
| E | 0.035 | 0.044 | 0.889 | 1.118 |
| F | 0.071 | 0.079 | 1.803 | 2.007 |
| G | 0.0006 | 0.006 | 0.015 | 0.152 |
| H | 0.003 | 0.007 | 0.076 | 0.178 |
| I | 0.018 | 0.023 | 0.457 | 0.584 |
| J | 0.083 | 0.093 | 2.108 | 2.362 |

TYPICAL CHARACTERISTICS

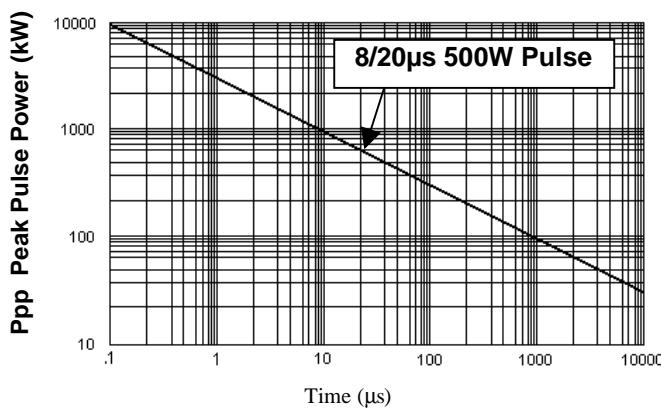


Figure 1. Peak Pulse Power Vs Pulse Time (μs)

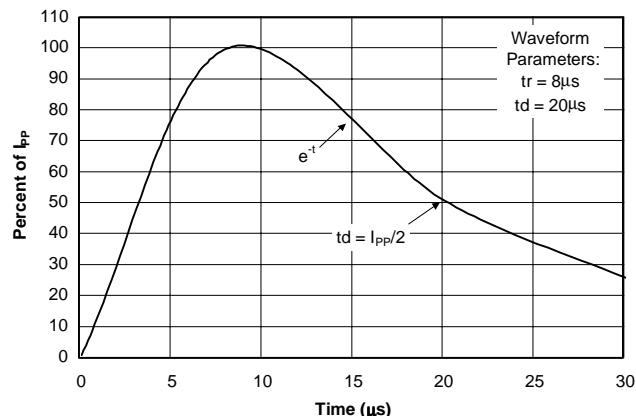


Figure 2. Pulse Wave Form

TECHNICAL DATA

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