

## Low Capacitance TVS and Diode Array

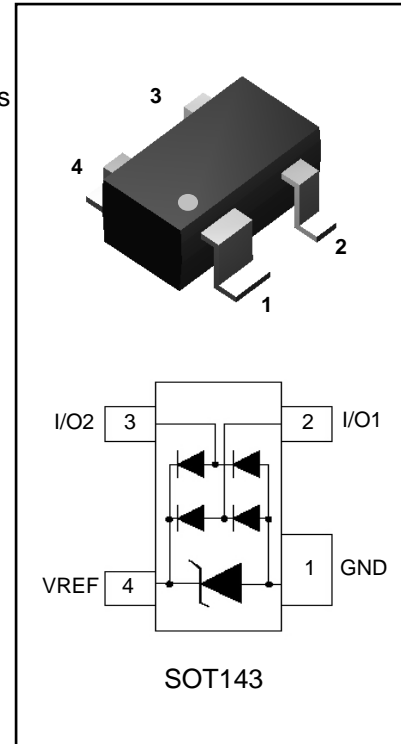
This diode array is configured to protect up to two data transmission lines acting as a line terminator, minimizing overshoot and undershoot conditions due to bus impedance as well as protect against over-voltage events as electrostatic discharges. Additionally the TVS Device offers overvoltage transient protection between the operating voltage bus and ground plane.

### SPECIFICATION FEATURES

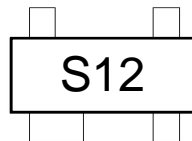
- Peak Power Dissipation of 500W 8/20 $\mu$ s
- Maximum Capacitance of 5.0pF at 0Vdc 1MHz Line-to-Ground
- Maximum Leakage Current of 1 $\mu$ A @ VRWM
- Industry Standard SMT Package SOT143
- IEC61000-4-2, IEC61000-4-4 and IEC61000-4-5 Full Compliance
- 100% Tin Matte finish (LEAD-FREE PRODUCT)

### APPLICATIONS

- RS422 Interface
- LAN/WLAN Access Point terminals
- Industrial control communication ports
- I<sup>2</sup>C Bus Protection



Marking Code:



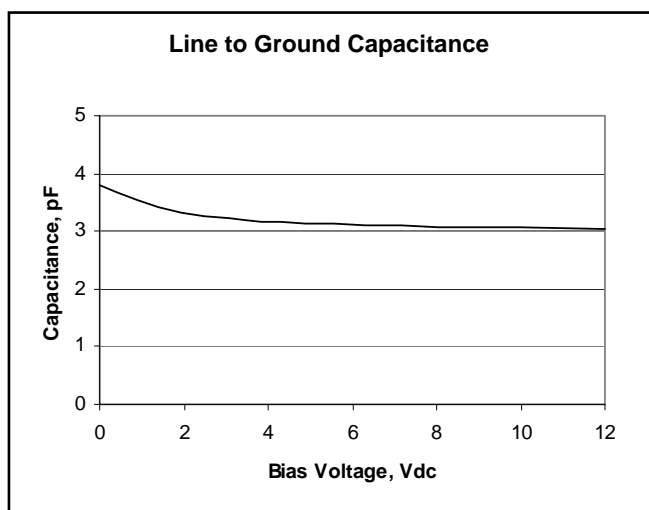
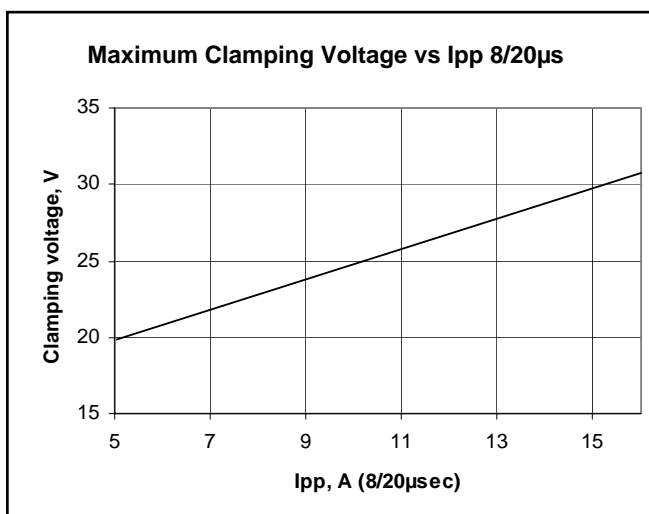
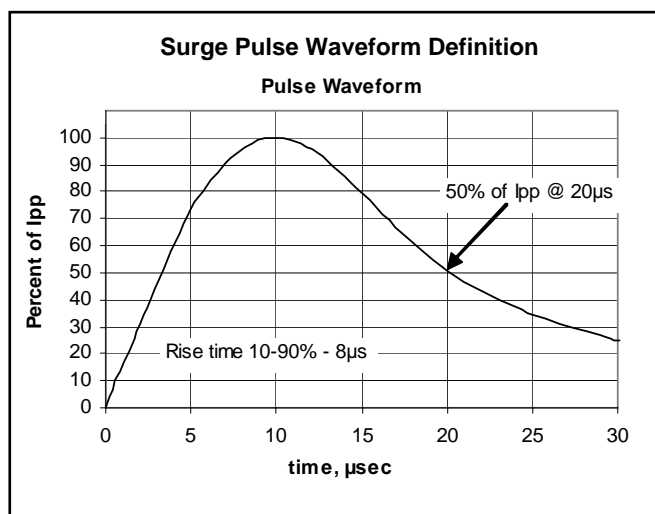
### MAXIMUM RATINGS $T_j = 25^\circ\text{C}$ Unless otherwise noted

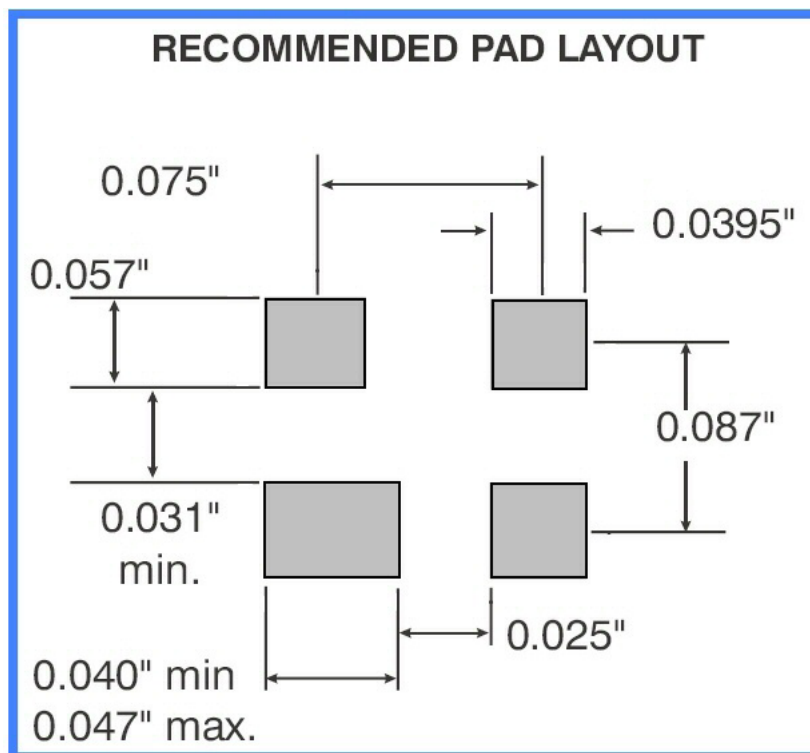
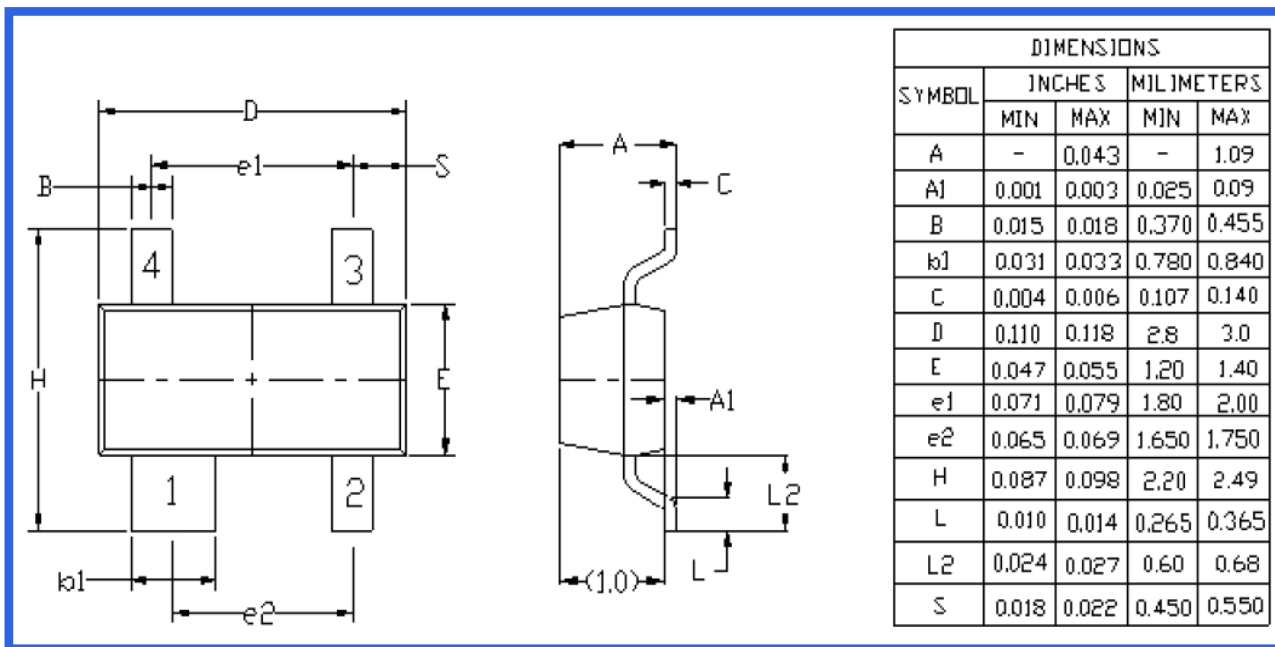
Rating	Symbol	Value	Units
Peak Pulse Power (8/20 $\mu$ s Waveform)	$P_{PPM}$	500	W
Peak Pulse Current (8/20 $\mu$ s Waveform)	$I_{PP}$	16	A
Operating Junction Temperature Range	$T_J$	-55 to +125	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	-55 to +150	$^\circ\text{C}$
Soldering Temperature, t max = 10s	$T_L$	260	$^\circ\text{C}$

## ELECTRICAL CHARACTERISTICS $T_j = 25^\circ\text{C}$ unless otherwise noted

Parameter	Symbol	Conditions	Min	Typical	Max	Units
Reverse Stand-Off Voltage	$V_{WRM}$				12	V
Reverse Breakdown Voltage	$V_{BR}$	$I_{BR} = 1\text{mA}$	13.3			V
Reverse Leakage Current	$I_R$	$V_R = 12\text{V}$			1	$\mu\text{A}$
Clamping Voltage (8/20 $\mu\text{s}$ )	$V_c$	$I_{pp} = 5\text{A}$			22	V
Clamping Voltage (8/20 $\mu\text{s}$ )	$V_c$	$I_{pp} = 10\text{A}$			27	V
Clamping Voltage (8/20 $\mu\text{s}$ )	$V_c$	$I_{pp} = 16\text{A}$			31	V
Off State Junction Capacitance	$C_j$	0 Vdc Bias $f = 1\text{MHz}$ Between I/O pins and GND		3.8	5	pF
		0 Vdc Bias $f = 1\text{MHz}$ Between I/O pins		1.4	3	pF

## TYPICAL CHARACTERISTIC CURVES



**PACKAGE DIMENSIONS - SOT143****© Copyright PanJit International, Inc 2006**

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