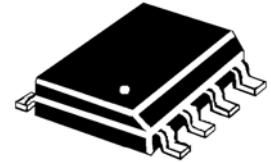


**DESCRIPTION**

These low capacitance diode arrays are multiple, discrete, isolated junctions fabricated by a planar process and mounted in a SO-8 package for use as steering diodes protecting up to four I/O ports from ESD, EFT, or surge by directing them either to the positive side of the power supply line or to ground (see schematic, page 2). An external TVS diode may be added between the positive supply line and ground to prevent overvoltage on the supply rail. These arrays offer many advantages of integrated circuits such as high-density packaging and improved reliability. This is a result of fewer pick and place operations, smaller footprint, smaller weight, and elimination of various discrete packages that may not be as user friendly in PC board mounting.

**TVS array™ SERIES**



**IMPORTANT:** For the most current data, consult MICROSEMI's website: <http://www.microsemi.com>

**FEATURES**

- Diode Array to Protect Four I/O Lines
- Surge protection per IEC 61000-4-2, IEC 61000-4-4 and IEC61000-4-5 (1 kV, 24 A at 8/20 μs)
- UL 94V-0 Flammability Classification
- Low Capacitance for High-Speed Interfaces

**APPLICATIONS / BENEFITS**

- Data Line Protection
- Latch-Up Protection
- RS-232 & RS-422 Interface Networks
- Computer I/O Ports
- LAN

**MAXIMUM RATINGS**

- Operating Temperature: -55°C to +150°C
- Storage Temperature: -55°C to +150°C
- Peak Pulse Power : 500 Watts (8/20 μs, Figure 1)
- Peak Pulse Current : 24 Amps (8/20 μs, Figure 1)
- Pulse Repetition Rate: < .01%
- Lead Soldering Temperature: 260°C for 10 seconds

**MECHANICAL AND PACKAGING**

- Molded SO-8 Surface Mount
- Weight 0.066 grams (approximate)
- Marking: Logo, device marking code, date code
- Pin #1 defined by dot on top of package
- Tape & Reel per EIA Standard 481
- 13 inch reel; 2,500 pieces (OPTIONAL)
- Carrier tubes; 95 pcs (STANDARD)

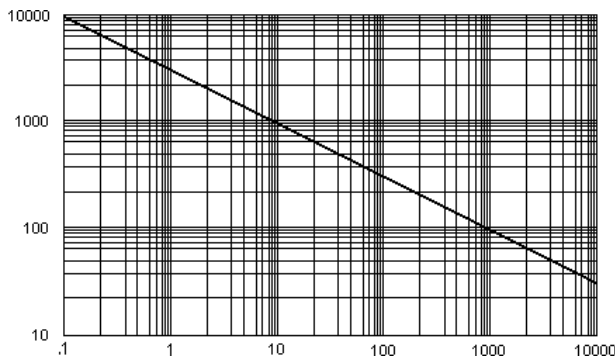
**ELECTRICAL CHARACTERISTICS**

PART NUMBER	DEVICE MARKING	PEAK REVERSE VOLTAGE $V_{RWM}$	BREAKDOWN VOLTAGE $V_{BR}$	FORWARD CLAMPING VOLTAGE $V_{FC}$ @ 1 Amp (Figure 2)	FORWARD CLAMPING VOLTAGE $V_{FC}$ @ 10 Amp (Figure 2)	REVERSE LEAKAGE CURRENT $I_R$	CAPACITANCE (f=1 MHz) C @ 0V	CAPACITANCE (f=1 MHz) C @ 0V
		VOLTS	VOLTS	VOLTS	VOLTS	μA	Between I/O pins and ground pF	Between I/O pins pF
		MAX	MIN	MAX	MAX	MAX	MAX	TYP
SRDA70-4	SM70-4	70	85	1.3	3.3	5	15	4

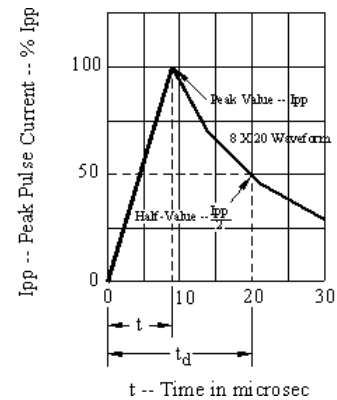
**SYMBOLS & DEFINITIONS**

Symbol	Definition
$V_{BR}$	Minimum Breakdown Voltage: The minimum voltage the device will exhibit at a specified current.
$V_{RWM}$	Working Peak Reverse Voltage: The maximum peak voltage that can be applied over the operating temperature range.
$V_{FC}$	Forward Clamping Voltage: The maximum forward clamping voltage across the device when subjected to a given current at a pulse time of 20 $\mu$ s.
$I_R$	Maximum Leakage Current: The maximum leakage current at $V_{RWM}$ .
C	Capacitance: The capacitance of the TVS as defined @ 0 volts at a frequency of 1 MHz and stated in picofarads.

**GRAPHS**

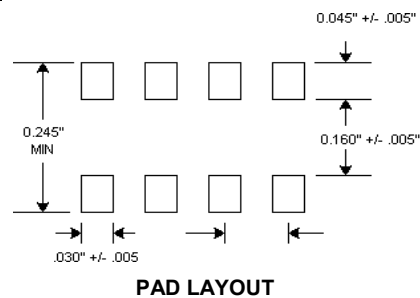
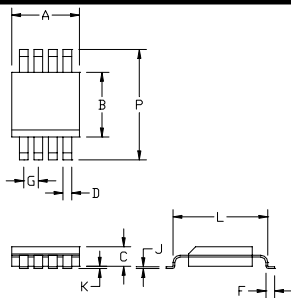


**Figure 1**  
Peak Pulse Power Vs Pulse Time  $t = \mu$ sec



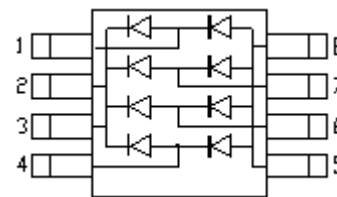
**Figure 2**  
Pulse Wave Form

**OUTLINE AND SCHEMATIC**



DIM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.188	0.197	4.77	5.00
B	0.150	0.158	3.81	4.01
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

**OUTLINE**



**SCHEMATIC**