

# TRANSIENT VOLTAGE SUPPRESSOR

EPS5 Series

## Bidirectional, 5 to 48V, 1000 Watts Peak

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### FEATURES

- Bidirectional
- 1000W for 8 x 20 microsec pulse
- Clamping time in pico seconds
- Extremely low leakage current
- Voidless hermetically sealed glass package
- Metallurgically bonded construction

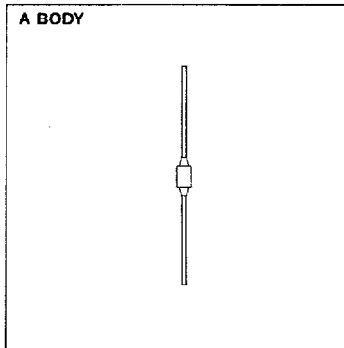
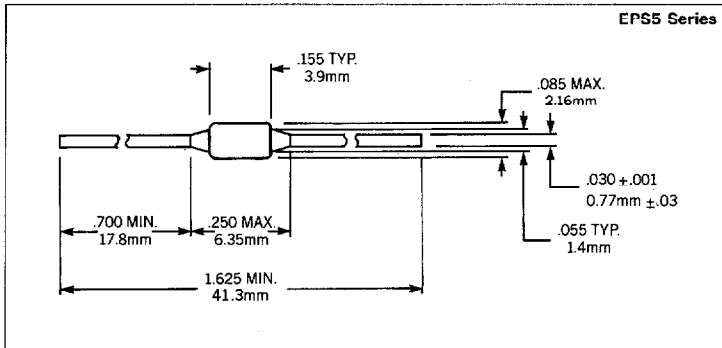
### DESCRIPTION

These bidirectional, high speed, voltage protection devices are ideally suited for applications where fast response is essential. The use of passivated die metallurgically bonded on both sides assures long term reliability. This series is especially useful in protecting microprocessor, MOS, CMOS, TTL, Schottky TTL, ECL, I<sup>2</sup>L and linear integrated circuits from spurious transient disturbances including NEMP (Nuclear Electromagnetic Pulse) and electrostatic discharge.

### ABSOLUTE MAXIMUM RATINGS AT 25°C (PER LEG)

Stand-Off Voltage . . . . . 5 to 48V (See Characteristics Table)  
Peak Pulse Power . . . . . 1000W (See Figure 1)  
(8 x 20 microsec pulse)  
Peak Pulse Power (1 millisc pulse) . . . . . 150W (See Figure 2)  
Peak Pulse Current . . . . . See Characteristics Table  
Breakdown Voltage . . . . . See Characteristics Table  
Power Continuous  
(T<sub>L</sub> = 75°C, L = 1/8") . . . . . 2.5W  
Storage and Operating Temperature . . . . . -65°C to +175°C

### MECHANICAL SPECIFICATIONS



THESE DEVICES ALSO AVAILABLE IN SURFACE MOUNT PACKAGE. SEE SECTION 10

**Microsemi Corp.**  
**Watertown**  
The diode experts

ELECTRICAL CHARACTERISTICS AT 25°C

Type	Stand-Off Voltage $V_K$	Minimum Breakdown Voltage BV(min) @ 1mA	Maximum Leakage Current $I_K @ V_K$	Maximum Peak Current* $I_P$	Maximum Clamping Voltage* $V_C @ 10A$	Maximum Temp. Coef. of BV
	(V)	(V)	( $\mu A$ )	(A)	(V)	(%/°C)
EPS5	5	6.0	50	89.4	9.5	.030
EPS8	8	9.0	2	62.1	13.7	.040
EPS12	12	13.8	1	40.3	21.6	.050
EPS15	15	16.7	1	33.9	26.0	.055
EPS17	17	19.0	1	30.8	29.2	.060
EPS24	24	28.4	1	22.0	43.2	.070
EPS28	28	31.0	1	19.2	47.8	.075
EPS33	33	36.8	1	16.4	56.7	.080
EPS48	48	54.0	1	11.2	84.3	.090

\*See Figure 1.

