

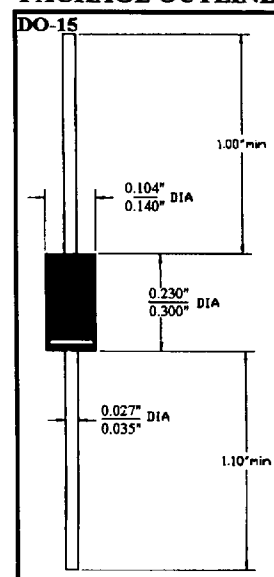
**P6KE6.8A
thru
P6KE200A**

600 WATT SILICON TRANSIENT SUPPRESSOR DIODES

AVAILABLE IN VOLTAGES FROM 6.8 V THRU 200 V

The NES P6KE6.8A to P6KE200A series of Silicon Transient Voltage Suppressor are designed for commercial applications where large voltage transients can permanently damage voltage-sensitive components. It has a peak pulse power rating of 600 watts for one millisecond. The response time of the clamping action is theoretically instantaneous (1×10^{-12} sec.); therefore, they can protect Integrated Circuits, MOS devices, Hybrids, and other voltage-sensitive components. These devices can also be used in series or parallel to increase the peak pulse power ratings.

PACKAGE OUTLINE



MAXIMUM RATINGS:

600 Watts of Peak Pulse Power Dissipation @ 25°C

Steady State Power Dissipation: 5.0 watts @ $T_L = 75^\circ\text{C}$ Lead Length = 3/8"

t_{clamping} (0 volts to BV min): $< 1 \times 10^{-12}$ seconds (theoretical)

Operating and Storage Temperature: -65°C to $+175^\circ\text{C}$

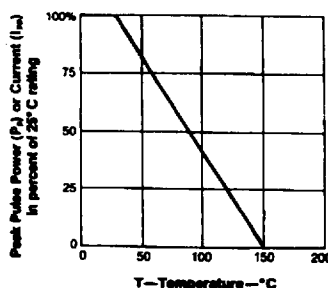
Forward Surge rating: half cycle 100a, 1/120 sec @ 25°C

Repetition rate (duty cycle): 0.01%

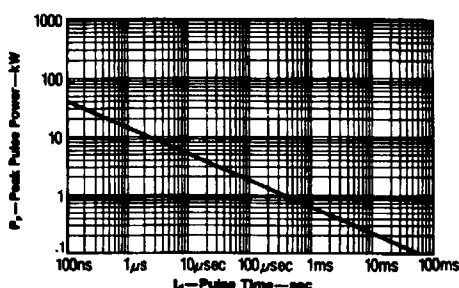
FEATURES:

- 600 WATTS PEAK PULSE POWER DISSIPATION
- AVAILABLE IN RANGES FROM 6.8 TO 200 VOLTS
- MOLDED EPOXY CASE
- MATTE TIN PLATED
- POLARITY BAND DESIGNATES CATHODE
- CUSTOM DESIGNS AVAILABLE ~ CONSULT FACTORY

Power Derating Curve



Peak Pulse Power vs Pulse Time



NE011 1/96

6564993 0000308 2T7 81

NEW ENGLAND SEMICONDUCTOR

P6KE6.8A thru P6KE200A

Part Number*	Reverse Stand-off voltage V _R volts	Breakdown Voltage		Maximum clamping volt @ I _{PP} Vc Volts	Maximum Reverse Leakage I _R @ V _R μA	Maximum Peak Pulse Current I _{PP} A	Maximum Volt. Temp. Var of BV mV/°C
		BV volts	@I _T mA				
P6KE6.8A	5.80	6.8	10	10.5	1000	57.0	5.0
P6KE7.5A	6.40	7.5	10	11.3	500	53.0	5.0
P6KE8.2A	7.02	8.2	10	12.1	200	50.0	6.0
P6KE9.1A	7.78	9.1	1	13.4	50	45.0	7.0
P6KE10A	8.55	10.0	1	14.5	10	41.0	8.0
P6KE11A	9.40	11.0	1	15.6	5	38.0	9.0
P6KE12A	10.20	12.0	1	16.7	5	36.0	10.0
P6KE13A	11.10	13.0	1	18.2	5	33.0	11.0
P6KE15A	12.80	15.0	1	21.2	5	28.0	12.0
P6KE16A	13.60	16.0	1	22.5	5	27.0	14.0
P6KE18A	15.30	18.0	1	25.2	5	24.0	19.0
P6KE20A	17.10	20.0	1	27.7	5	22.0	19.0
P6KE22A	18.80	22.0	1	30.6	5	20.0	20.0
P6KE24A	20.50	24.0	1	33.2	5	18.0	23.0
P6KE27A	23.10	27.0	1	37.5	5	16.0	25.0
P6KE30A	25.60	30.0	1	41.4	5	14.4	28.0
P6KE33A	28.20	33.0	1	45.7	5	13.2	30.0
P6KE36A	30.80	36.0	1	49.9	5	12.0	31.0
P6KE39A	33.30	39.0	1	53.9	5	11.2	36.0
P6KE43A	36.80	43.0	1	59.3	5	10.1	44.0
P6KE47A	40.20	47.0	1	64.8	5	9.0	48.0
P6KE51A	43.60	51.0	1	70.1	5	8.6	51.0
P6KE56A	47.80	56.0	1	77.0	5	7.8	56.0
P6KE62A	53.00	62.0	1	85.0	5	7.1	62.0
P6KE68A	58.10	68.0	1	92.0	5	6.5	69.0
P6KE75A	64.10	75.0	1	103.0	5	5.8	76.0
P6KE82A	70.10	82.0	1	113.0	5	5.3	86.0
P6KE91A	77.80	91.0	1	125.0	5	4.8	94.0
P6KE100A	85.50	100.0	1	137.0	5	4.4	104.0
P6KE110A	94.00	110.0	1	152.0	5	4.0	115.0
P6KE120A	102.00	120.0	1	165.0	5	3.6	125.0
P6KE130A	111.00	130.0	1	179.0	5	3.3	136.0
P6KE150A	128.00	150.0	1	207.0	5	2.9	157.0
P6KE160A	136.00	160.0	1	219.0	5	2.7	167.0
P6KE170A	145.00	170.0	1	234.0	5	2.6	188.0
P6KE180A	154.00	180.0	1	246.0	5	2.4	188.0
P6KE200A	171.00	200.0	1	274.0	5	2.2	209.0

*Suffix 'A' indicates ±5% tolerance

*No Suffix indicates ±10% tolerance