

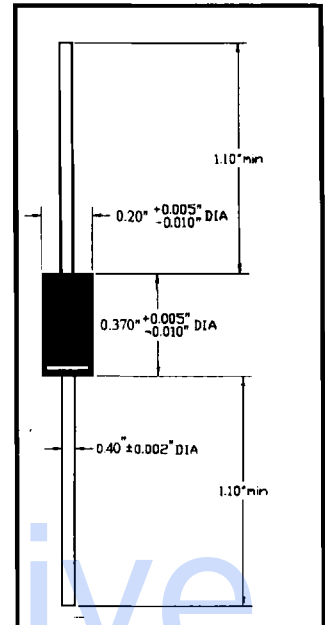
1.5KE6.8A
 thru
 1.5KE400A

1500 WATT SILICON TRANSIENT SUPPRESSOR DIODES

AVAILABLE IN VOLTAGES FROM 6.8 V THRU 400 V

The NES 1.5KE6.8A to 1.5KE400A series of Silicon Transient Voltage Suppressor Diode has a pulse power rating of 1500 watts for one millisecond. The response time of TVS diode clamping action is theoretically instantaneous (1×10^{-12} sec.); therefore, they can protect Integrated Circuits, MOS devices, Hybrids, and other voltage-sensitive semiconductors and components. TVS diodes can also be used in series or parallel to increase the peak power ratings. This series of Silicon Transient Suppressors is used in applications where large voltage transients can permanently damage voltage-sensitive components.

PACKAGE OUTLINE



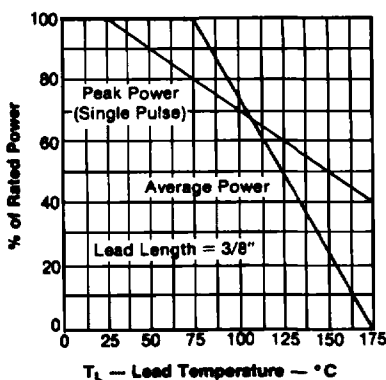
MAXIMUM RATINGS:

- 1500 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"
- Operating and Storage Temperature: -35°C to $+150^\circ\text{C}$
- Forward Surge Current: 200A,
 1/120 sec half cycle @ 25°C (Unidirectional only)
- Repetition rate (duty cycle): 0.01%

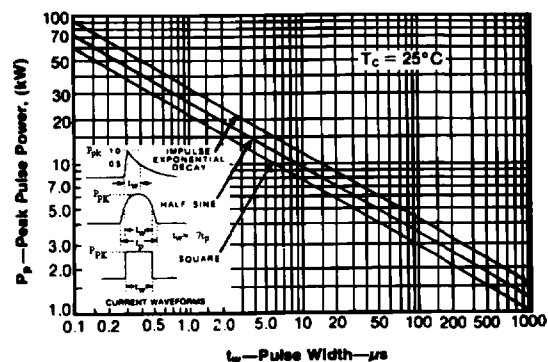
FEATURES:

- 1500 WATTS PEAK POWER DISSIPATION
- AVAILABLE IN RANGES FROM 6.8 TO 400 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



NEW ENGLAND SEMICONDUCTOR

1.5KE6.8A thru 1.5KE400A

| JEDEC Type Number | Part Number* | Reverse Stand-off voltage V_R volts | Breakdown Voltage | | Maximum clamping volt @ I_{PP} V_c Volts | Maximum Reverse Leakage I_R @ V_R μA | Maximum Peak Pulse Current I_{PP} A | Maximum Volt. Temp. Var of BV $mV/^\circ C$ |
|-------------------------|-----------------|---|----------------------|---------------|---|---|---|---|
| | | | BV volts | @ I_T mA | | | | |
| 1N6267A | 1.5KE6.8A | 5.80 | 6.8 | 10 | 10.5 | 1000 | 143.0 | 5.0 |
| 1N6268A | 1.5KE7.5A | 6.40 | 7.5 | 10 | 11.3 | 500 | 132.0 | 5.0 |
| 1N6269A | 1.5KE8.2A | 7.02 | 8.2 | 10 | 12.1 | 200 | 124.0 | 6.0 |
| 1N6270A | 1.5KE9.1A | 7.78 | 9.1 | 1 | 13.4 | 50 | 112.0 | 7.0 |
| 1N6271A | 1.5KE10A | 8.55 | 10.0 | 1 | 14.5 | 10 | 103.0 | 8.0 |
| 1N6272A | 1.5KE11A | 9.40 | 11.0 | 1 | 15.6 | 5 | 96.0 | 9.0 |
| 1N6273A | 1.5KE12A | 10.20 | 12.0 | 1 | 16.7 | 5 | 90.0 | 10.0 |
| 1N6274A | 1.5KE13A | 11.10 | 13.0 | 1 | 18.2 | 5 | 82.0 | 11.0 |
| 1N6275A | 1.5KE15A | 12.80 | 15.0 | 1 | 21.2 | 5 | 71.0 | 12.0 |
| 1N6276A | 1.5KE16A | 13.60 | 16.0 | 1 | 22.5 | 5 | 67.0 | 14.0 |
| 1N6277A | 1.5KE18A | 15.30 | 18.0 | 1 | 25.2 | 5 | 59.5 | 19.0 |
| 1N6278A | 1.5KE20A | 17.10 | 20.0 | 1 | 27.7 | 5 | 54.0 | 19.0 |
| 1N6279A | 1.5KE22A | 18.80 | 22.0 | 1 | 30.6 | 5 | 49.0 | 20.0 |
| 1N6280A | 1.5KE24A | 20.50 | 24.0 | 1 | 33.2 | 5 | 45.0 | 23.0 |
| 1N6281A | 1.5KE27A | 23.10 | 27.0 | 1 | 37.5 | 5 | 40.0 | 25.0 |
| 1N6282A | 1.5KE30A | 25.60 | 30.0 | 1 | 41.4 | 5 | 36.0 | 28.0 |
| 1N6283A | 1.5KE33A | 28.20 | 33.0 | 1 | 45.7 | 5 | 33.0 | 30.0 |
| 1N6284A | 1.5KE36A | 30.80 | 36.0 | 1 | 49.9 | 5 | 30.0 | 31.0 |
| 1N6285A | 1.5KE39A | 33.30 | 39.0 | 1 | 53.9 | 5 | 28.0 | 36.0 |
| 1N6286A | 1.5KE43A | 36.80 | 43.0 | 1 | 59.3 | 5 | 25.3 | 44.0 |
| 1N6287A | 1.5KE47A | 40.20 | 47.0 | 1 | 64.8 | 5 | 23.2 | 48.0 |
| 1N6288A | 1.5KE51A | 43.60 | 51.0 | 1 | 70.1 | 5 | 21.4 | 51.0 |
| 1N6289A | 1.5KE56A | 47.80 | 56.0 | 1 | 77.0 | 5 | 19.5 | 56.0 |
| 1N6290A | 1.5KE62A | 53.00 | 62.0 | 1 | 85.0 | 5 | 17.7 | 62.0 |
| 1N6291A | 1.5KE68A | 58.10 | 68.0 | 1 | 92.0 | 5 | 16.3 | 69.0 |
| 1N6292A | 1.5KE75A | 64.10 | 75.0 | 1 | 103.0 | 5 | 14.6 | 76.0 |
| 1N6293A | 1.5KE82A | 70.10 | 82.0 | 1 | 113.0 | 5 | 13.3 | 86.0 |
| 1N6294A | 1.5KE91A | 77.80 | 91.0 | 1 | 125.0 | 5 | 12.0 | 94.0 |
| 1N6295A | 1.5KE100A | 85.50 | 100.0 | 1 | 137.0 | 5 | 11.0 | 104.0 |
| 1N6296A | 1.5KE110A | 94.00 | 110.0 | 1 | 152.0 | 5 | 9.9 | 115.0 |
| 1N6297A | 1.5KE120A | 102.00 | 120.0 | 1 | 165.0 | 5 | 9.1 | 125.0 |
| 1N6298A | 1.5KE130A | 111.00 | 130.0 | 1 | 179.0 | 5 | 8.4 | 136.0 |
| 1N6299A | 1.5KE150A | 128.00 | 150.0 | 1 | 207.0 | 5 | 7.2 | 157.0 |
| 1N6300A | 1.5KE160A | 136.00 | 160.0 | 1 | 219.0 | 5 | 6.8 | 167.0 |
| 1N6301A | 1.5KE170A | 145.00 | 170.0 | 1 | 234.0 | 5 | 6.4 | 188.0 |
| 1N6302A | 1.5KE180A | 154.00 | 180.0 | 1 | 246.0 | 5 | 6.1 | 188.0 |
| 1N6303A | 1.5KE200A | 171.00 | 200.0 | 1 | 274.0 | 5 | 5.5 | 209.0 |
| | 1.5KE220A | 185.00 | 220.0 | 1 | 328.0 | 5 | 4.6 | 230.0 |
| | 1.5KE250A | 214.00 | 250.0 | 1 | 344.0 | 5 | 5.0 | 260.0 |
| | 1.5KE300A | 256.00 | 300.0 | 1 | 414.0 | 5 | 5.0 | 315.0 |
| 1.5KE350A | 1.5KE350A | 300.00 | 350.0 | 1 | 482.0 | 5 | 4.0 | 368.0 |
| | 1.5KE400A | 342.00 | 400.0 | 1 | 548.0 | 5 | 4.0 | 420.0 |

*Suffix 'A' indicates $\pm 5\%$ tolerance

*No Suffix indicates $\pm 10\%$ tolerance