

CentralTM Semiconductor Corp.

145 Adams Avenue, Hauppauge, NY 11788 USA
Tel: (631) 435-1110 • Fax: (631) 435-1824

Manufacturers of World Class Discrete Semiconductors

P6KE6.8A THRU P6KE440A
P6KE6.8CA THRU P6KE440CA

GLASS PASSIVATED JUNCTION
TRANSIENT VOLTAGE SUPPRESSOR
600 WATTS, 6.8 THRU 440 VOLTS

JEDEC DO-15 CASE

DESCRIPTION

The CENTRAL SEMICONDUCTOR P6KE Series types are Glass Passivated Junction Transient Voltage Suppressors designed to protect voltage sensitive components from high voltage transients. **THIS DEVICE IS MANUFACTURED WITH A GLASS PASSIVATED CHIP FOR OPTIMUM RELIABILITY.** Note: For bi-directional devices use "CA" Suffix, (Example: P6KE7.5CA).

MAXIMUM RATINGS (T_A=25°C unless otherwise noted)

| | SYMBOL | | UNITS |
|---|-----------------------------------|-------------|-------|
| Peak Power Dissipation | P _{DM} | 600 | W |
| Steady State Power Dissipation (T _L =75°C) | P _D | 5.0 | W |
| Peak Forward Surge Current (JEDEC Method) | I _{FSM} | 100 | A |
| Operating and Storage Junction Temperature | T _J , T _{stg} | -65 to +175 | °C |

ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise noted)

| TYPE NO. | BREAKDOWN VOLTAGE | | | | REVERSE STAND-OFF VOLTAGE V _{RWM} VOLTS | MAXIMUM REVERSE LEAKAGE @ V _{RWM} I _R μA | MAXIMUM PEAK PULSE CURRENT I _{PPM} A | MAXIMUM CLAMPING VOLTAGE @ I _{PPM} V _C VOLTS | MAXIMUM TEMPERATURE COEFFICIENT OF V _{BR} %/°C |
|----------|-------------------|-----|------|----------------------------|--|---|---|---|---|
| | V _{BR} | | | @ I _T mA | | | | | |
| | VOLTS | | | | | | | | |
| | MIN | NOM | MAX | | | | | | |
| P6KE6.8A | 6.45 | 6.8 | 7.14 | 10 | 5.80 | 1000 | 57 | 10.5 | 0.057 |
| P6KE7.5A | 7.13 | 7.5 | 7.88 | 10 | 6.40 | 500 | 53 | 11.3 | 0.061 |
| P6KE8.2A | 7.79 | 8.2 | 8.61 | 10 | 7.02 | 200 | 50 | 12.1 | 0.065 |
| P6KE9.1A | 8.65 | 9.1 | 9.55 | 1.0 | 7.78 | 50 | 45 | 13.4 | 0.068 |
| P6KE10A | 9.50 | 10 | 10.5 | 1.0 | 8.55 | 10 | 41 | 14.5 | 0.073 |
| P6KE11A | 10.5 | 11 | 11.6 | 1.0 | 9.40 | 5.0 | 38 | 15.6 | 0.075 |
| P6KE12A | 11.4 | 12 | 12.6 | 1.0 | 10.2 | 5.0 | 36 | 16.7 | 0.078 |
| P6KE13A | 12.4 | 13 | 13.7 | 1.0 | 11.1 | 5.0 | 33 | 18.2 | 0.081 |
| P6KE15A | 14.3 | 15 | 15.8 | 1.0 | 12.8 | 5.0 | 28 | 21.2 | 0.084 |
| P6KE16A | 15.2 | 16 | 16.8 | 1.0 | 13.6 | 5.0 | 27 | 22.5 | 0.086 |

ELECTRICAL CHARACTERISTICS Continued

| TYPE NO. | BREAKDOWN VOLTAGE | | | @ I _T | REVERSE | MAXIMUM | MAXIMUM | MAXIMUM | MAXIMUM |
|----------|-------------------|-----|------|------------------|------------------|--------------------|------------------|----------------|---------|
| | V _{BR} | | | | STAND-OFF | REVERSE | PEAK PULSE | CLAMPING | |
| | VOLTS | | | mA | V _{RWM} | @ V _{RWM} | CURRENT | VOLTAGE | |
| | MIN | NOM | MAX | | VOLTS | I _R | I _{PPM} | V _C | |
| | | | | | μA | A | VOLTS | %/°C | |
| P6KE18A | 17.1 | 18 | 18.9 | 1.0 | 15.3 | 5.0 | 24 | 25.2 | 0.088 |
| P6KE20A | 19.0 | 20 | 21.0 | 1.0 | 17.1 | 5.0 | 22 | 27.7 | 0.090 |
| P6KE22A | 20.9 | 22 | 23.1 | 1.0 | 18.8 | 5.0 | 20 | 30.6 | 0.092 |
| P6KE24A | 22.8 | 24 | 25.2 | 1.0 | 20.5 | 5.0 | 18 | 33.2 | 0.094 |
| P6KE27A | 25.7 | 27 | 28.4 | 1.0 | 23.1 | 5.0 | 16 | 37.5 | 0.096 |
| P6KE30A | 28.5 | 30 | 31.5 | 1.0 | 25.6 | 5.0 | 14.4 | 41.4 | 0.097 |
| P6KE33A | 31.4 | 33 | 34.7 | 1.0 | 28.2 | 5.0 | 13.2 | 45.7 | 0.098 |
| P6KE36A | 34.2 | 36 | 37.8 | 1.0 | 30.8 | 5.0 | 12.0 | 49.9 | 0.099 |
| P6KE39A | 37.1 | 39 | 41.0 | 1.0 | 33.3 | 5.0 | 11.2 | 53.9 | 0.100 |
| P6KE43A | 40.9 | 43 | 45.2 | 1.0 | 36.8 | 5.0 | 10.1 | 59.3 | 0.101 |
| P6KE47A | 44.7 | 47 | 49.4 | 1.0 | 40.2 | 5.0 | 9.3 | 64.8 | 0.101 |
| P6KE51A | 48.5 | 51 | 53.6 | 1.0 | 43.6 | 5.0 | 8.6 | 70.1 | 0.102 |
| P6KE56A | 53.2 | 56 | 58.8 | 1.0 | 47.8 | 5.0 | 7.8 | 77.0 | 0.103 |
| P6KE62A | 58.9 | 62 | 65.1 | 1.0 | 53.0 | 5.0 | 7.1 | 85.0 | 0.104 |
| P6KE68A | 64.6 | 68 | 71.4 | 1.0 | 58.1 | 5.0 | 6.5 | 92.0 | 0.104 |
| P6KE75A | 71.3 | 75 | 78.8 | 1.0 | 64.1 | 5.0 | 5.8 | 103 | 0.105 |
| P6KE82A | 77.9 | 82 | 86.1 | 1.0 | 70.1 | 5.0 | 5.3 | 113 | 0.105 |
| P6KE91A | 86.5 | 91 | 95.5 | 1.0 | 77.8 | 5.0 | 4.8 | 125 | 0.106 |
| P6KE100A | 95.0 | 100 | 105 | 1.0 | 85.5 | 5.0 | 4.4 | 137 | 0.106 |
| P6KE110A | 105 | 110 | 116 | 1.0 | 94.0 | 5.0 | 4.0 | 152 | 0.107 |
| P6KE120A | 114 | 120 | 126 | 1.0 | 102 | 5.0 | 3.6 | 165 | 0.107 |
| P6KE130A | 124 | 130 | 137 | 1.0 | 111 | 5.0 | 3.3 | 179 | 0.107 |
| P6KE150A | 143 | 150 | 158 | 1.0 | 128 | 5.0 | 2.9 | 207 | 0.108 |
| P6KE160A | 152 | 160 | 168 | 1.0 | 136 | 5.0 | 2.7 | 219 | 0.108 |
| P6KE170A | 162 | 170 | 179 | 1.0 | 145 | 5.0 | 2.6 | 234 | 0.108 |
| P6KE180A | 171 | 180 | 189 | 1.0 | 154 | 5.0 | 2.4 | 246 | 0.108 |
| P6KE200A | 190 | 200 | 210 | 1.0 | 171 | 5.0 | 2.2 | 274 | 0.108 |
| P6KE220A | 209 | 220 | 231 | 1.0 | 185 | 5.0 | 2.0 | 328 | 0.108 |
| P6KE250A | 237 | 250 | 263 | 1.0 | 214 | 5.0 | 2.0 | 344 | 0.110 |
| P6KE300A | 285 | 300 | 315 | 1.0 | 256 | 5.0 | 2.0 | 414 | 0.110 |
| P6KE350A | 332 | 350 | 368 | 1.0 | 300 | 5.0 | 2.0 | 482 | 0.110 |
| P6KE400A | 380 | 400 | 420 | 1.0 | 342 | 5.0 | 2.0 | 548 | 0.110 |
| P6KE440A | 418 | 440 | 462 | 1.0 | 376 | 5.0 | 2.0 | 600 | 0.110 |