

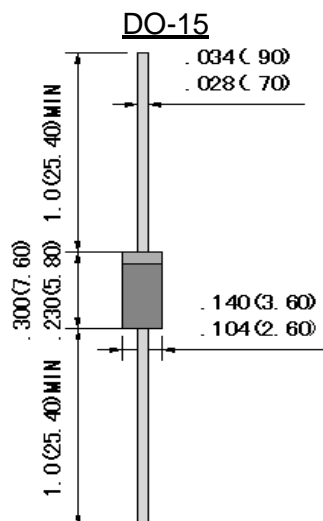
Glass Passivated Junction Transient Voltage Suppressor Rectifiers

Features:

- Glass passivated chip
- 600 W peak pulse power capability with a 10/1000 us waveform, repetitive rate (duty cycle):0.01 %
- Excellent clamping capability
- Low reverse leakage
- Very fast response time
- Lead and body according with RoHS standard

Mechanical Data:

- Case:DO-15 Molded plastic
- Lead: Solderable per MIL-STD-750, method 2026
- Epoxy: UL 94V-0 rate flame retardant
- Polarity: Color band denotes cathode end except Bipolar
- Mounting position: Any



Unit: inch (mm)

Maximum Ratings & Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

| Parameter | Symbols | Value | Unit |
|--|----------------|----------------|------|
| Peak power dissipation with a 10/1000 us waveform ⁽¹⁾ | P_{PP} | 600 | W |
| Peak pulse current with a 10/1000 us waveform ⁽¹⁾ | I_{PP} | See Next Table | A |
| Power dissipation on infinite heatsink at $T_L = 75^\circ\text{C}$ | P_D | 5.0 | W |
| Peak forward surge current, 8.3 ms single half sine wave | I_{FSM} | 60 | A |
| Maximum instantaneous forward voltage at 25 A for unidirectional only ⁽³⁾ | V_F | 3.5/6.5 | V |
| Operating junction and storage temperature range | T_J, T_{STG} | -55 to +150 | °C |

Note:

- 1) Non-repetitive current pulse per Fig.5 and derated above $T_A = 25^\circ\text{C}$ per Fig.1 ;
- 2) Measured on 8.3 ms single half sine-wave or equivalent square wave, duty cycle = 4 pulses per minute maximum ;
- 3) $V_F < 3.5\text{V}$ for devices of $V_{BR} < 200\text{V}$ and $V_F < 6.5\text{V}$ for devices of $V_{BR} > 201\text{V}$.

| Part Number | | Reverse Stand-off Voltage | Breakdown Voltage V_{BR} @ I_T | | Test Current | Max. Clamping Voltage @ I_{PP} | Max. Peak Pulse Current | Max. Reverse Leakage @ V_{RWM} |
|-------------|-----------|---------------------------|------------------------------------|---------|--------------|----------------------------------|-------------------------|----------------------------------|
| UNI-POLAR | BI-POLAR | $V_{RWM}(V)$ | Min.(V) | Max.(V) | $I_T(mA)$ | $V_{C\ MAX.}(V)$ | $I_{PP}(A)$ | $I_R(\mu A)$ |
| P6KE6.8A | P6KE6.8CA | 5.8 | 6.45 | 7.14 | 10 | 10.5 | 58.1 | 1000 |
| P6KE7.5A | P6KE7.5CA | 6.4 | 7.13 | 7.88 | 10 | 11.3 | 54.0 | 500 |
| P6KE8.2A | P6KE8.2CA | 7.0 | 7.79 | 8.61 | 10 | 12.1 | 50.4 | 200 |
| P6KE9.1A | P6KE9.1CA | 7.8 | 8.65 | 9.55 | 1 | 13.4 | 45.5 | 50 |
| P6KE10A | P6KE10CA | 8.6 | 9.50 | 10.50 | 1 | 14.5 | 42.1 | 10 |
| P6KE11A | P6KE11CA | 9.4 | 10.50 | 11.60 | 1 | 15.6 | 39.1 | 5 |
| P6KE12A | P6KE12CA | 10.2 | 11.40 | 12.60 | 1 | 16.7 | 36.5 | 5 |
| P6KE13A | P6KE13CA | 11.1 | 12.40 | 13.70 | 1 | 18.2 | 33.5 | 1 |
| P6KE15A | P6KE15CA | 12.8 | 14.30 | 15.80 | 1 | 21.2 | 28.8 | 1 |
| P6KE16A | P6KE16CA | 13.6 | 15.20 | 16.80 | 1 | 22.5 | 27.1 | 1 |
| P6KE18A | P6KE18CA | 15.3 | 17.10 | 18.90 | 1 | 25.5 | 24.2 | 1 |
| P6KE20A | P6KE20CA | 17.1 | 19.00 | 21.00 | 1 | 27.7 | 22.0 | 1 |
| P6KE22A | P6KE22CA | 18.8 | 20.90 | 23.10 | 1 | 30.6 | 19.9 | 1 |
| P6KE24A | P6KE24CA | 20.5 | 22.80 | 25.20 | 1 | 33.2 | 18.4 | 1 |
| P6KE27A | P6KE27CA | 23.1 | 25.70 | 28.40 | 1 | 37.5 | 16.3 | 1 |
| P6KE30A | P6KE30CA | 25.6 | 28.50 | 31.50 | 1 | 41.4 | 14.7 | 1 |
| P6KE33A | P6KE33CA | 28.2 | 31.40 | 34.70 | 1 | 45.7 | 13.3 | 1 |
| P6KE36A | P6KE36CA | 30.8 | 34.20 | 37.80 | 1 | 49.9 | 12.2 | 1 |
| P6KE39A | P6KE39CA | 33.3 | 37.10 | 41.00 | 1 | 53.9 | 11.3 | 1 |
| P6KE43A | P6KE43CA | 36.8 | 40.90 | 45.20 | 1 | 59.3 | 10.3 | 1 |
| P6KE47A | P6KE47CA | 40.2 | 44.70 | 49.40 | 1 | 64.8 | 9.4 | 1 |
| P6KE51A | P6KE51CA | 43.6 | 48.50 | 53.60 | 1 | 70.1 | 8.7 | 1 |
| P6KE56A | P6KE56CA | 47.8 | 53.20 | 58.80 | 1 | 77.0 | 7.9 | 1 |
| P6KE62A | P6KE62CA | 53.0 | 58.90 | 65.10 | 1 | 85.0 | 7.2 | 1 |
| P6KE68A | P6KE68CA | 58.1 | 64.60 | 71.40 | 1 | 92.0 | 6.6 | 1 |
| P6KE75A | P6KE75CA | 64.1 | 71.30 | 78.80 | 1 | 103.0 | 5.9 | 1 |
| P6KE82A | P6KE82CA | 70.1 | 77.90 | 86.10 | 1 | 113.0 | 5.4 | 1 |
| P6KE91A | P6KE91CA | 77.8 | 86.50 | 95.50 | 1 | 125.0 | 4.9 | 1 |
| P6KE100A | P6KE100CA | 85.5 | 95.0 | 105.0 | 1 | 137.0 | 4.5 | 1 |
| P6KE110A | P6KE110CA | 94.0 | 105.0 | 116.0 | 1 | 152.0 | 4.0 | 1 |
| P6KE120A | P6KE120CA | 102.0 | 114.0 | 126.0 | 1 | 165.0 | 3.7 | 1 |
| P6KE130A | P6KE130CA | 111.0 | 124.0 | 137.0 | 1 | 179.0 | 3.4 | 1 |
| P6KE150A | P6KE150CA | 128.0 | 143.0 | 158.0 | 1 | 207.0 | 2.9 | 1 |
| P6KE160A | P6KE160CA | 136.0 | 152.0 | 168.0 | 1 | 219.0 | 2.8 | 1 |
| P6KE170A | P6KE170CA | 145.0 | 162.0 | 179.0 | 1 | 234.0 | 2.6 | 1 |
| P6KE180A | P6KE180CA | 154.0 | 171.0 | 189.0 | 1 | 246.0 | 2.5 | 1 |
| P6KE200A | P6KE200CA | 171.0 | 190.0 | 210.0 | 1 | 274.0 | 2.2 | 1 |
| P6KE220A | P6KE220CA | 185.0 | 209.0 | 231.0 | 1 | 328.0 | 1.9 | 1 |
| P6KE250A | P6KE250CA | 214.0 | 237.0 | 263.0 | 1 | 344.0 | 1.8 | 1 |
| P6KE300A | P6KE300CA | 256.0 | 285.0 | 315.0 | 1 | 414.0 | 1.5 | 1 |
| P6KE350A | P6KE350CA | 300.0 | 332.0 | 368.0 | 1 | 482.0 | 1.3 | 1 |
| P6KE400A | P6KE400CA | 342.0 | 380.0 | 420.0 | 1 | 548.0 | 1.1 | 1 |
| P6KE440A | P6KE440CA | 376.0 | 418.0 | 462.0 | 1 | 602.0 | 1.0 | 1 |
| P6KE480A | P6KE480CA | 408.0 | 456.0 | 504.0 | 1 | 658.0 | 0.9 | 1 |
| P6KE510A | P6KE510CA | 434.0 | 485.0 | 535.0 | 1 | 698.0 | 0.9 | 1 |
| P6KE520A | P6KE520CA | 442.0 | 494.0 | 546.0 | 1 | 698.0 | 0.9 | 1 |
| P6KE530A | P6KE530CA | 450.0 | 503.0 | 556.0 | 1 | 725.0 | 0.8 | 1 |
| P6KE540A | P6KE540CA | 459.0 | 513.0 | 567.0 | 1 | 740.0 | 0.8 | 1 |
| P6KE550A | P6KE550CA | 467.0 | 522.5 | 577.5 | 1 | 760.0 | 0.8 | 1 |
| P6KE600A | P6KE600CA | 509.0 | 570.0 | 630.0 | 1 | 780.0 | 0.8 | 1 |

Ratings and Characteristics Curves (TA=25°C unless otherwise noted)

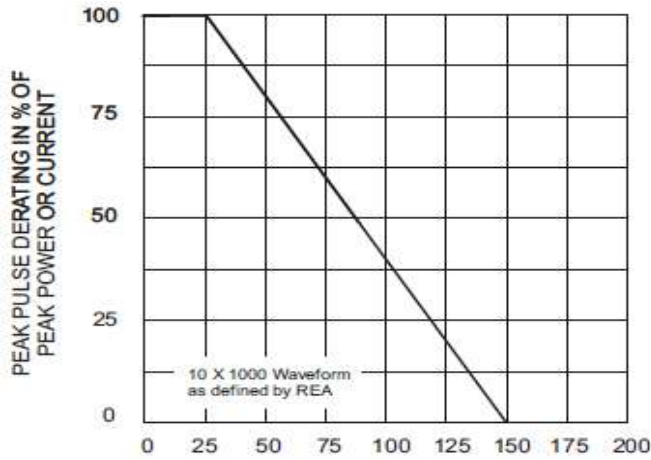


Fig. 1 - Pulse Derating Curve

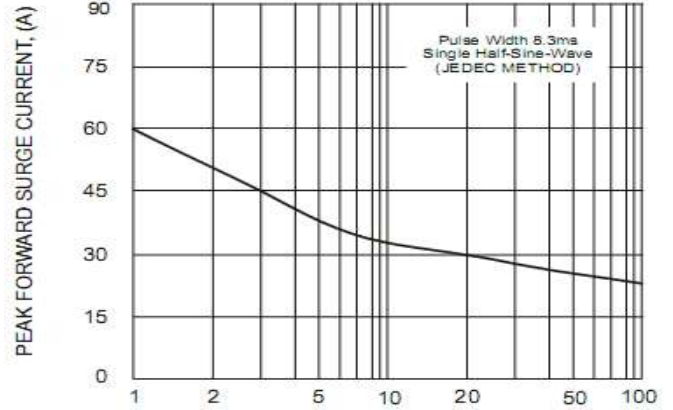


Fig. 2 - Maximum Non-Repetitive Surge Current

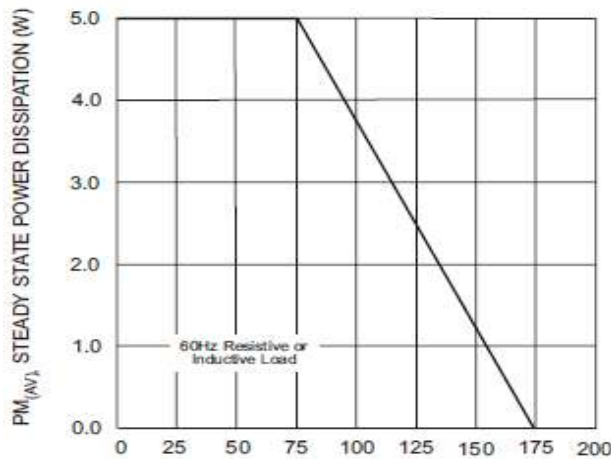


Fig. 3 - Steady State Power Derating Curve

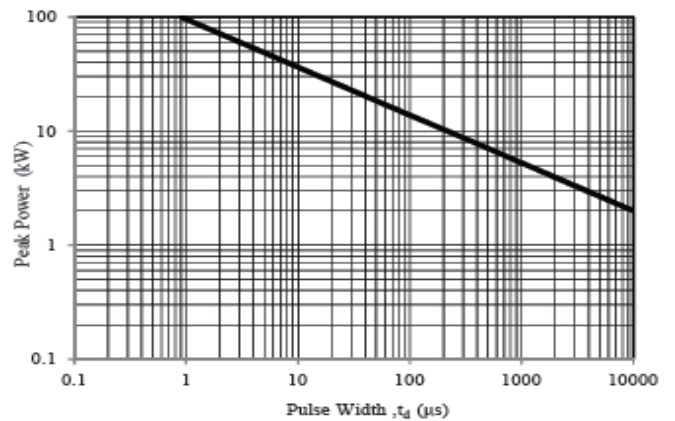


Fig. 4 - Peak Pulse Power Rating Curve

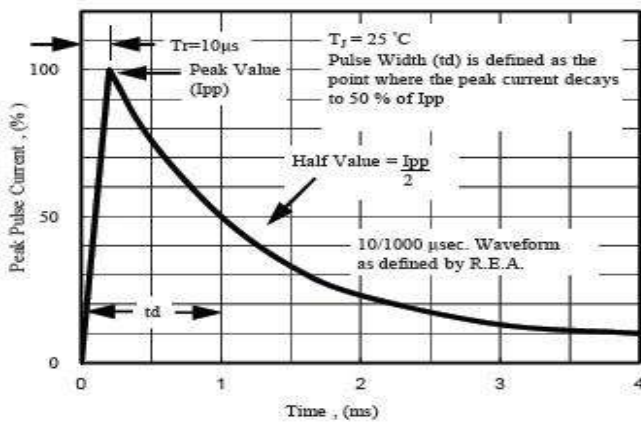


Fig. 5 - Pulse Waveform

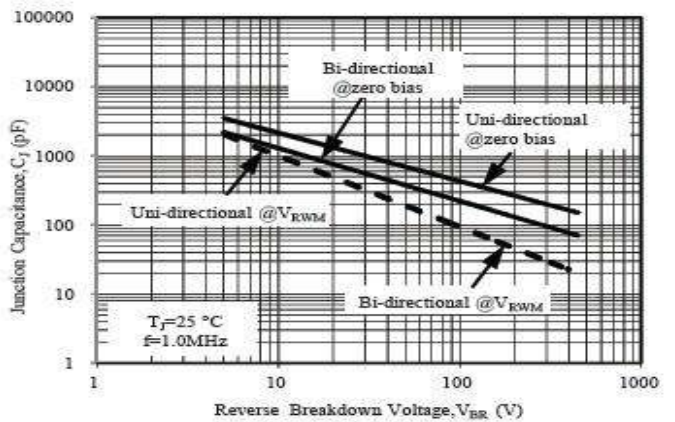


Fig. 6 - Typical Junction Capacitance