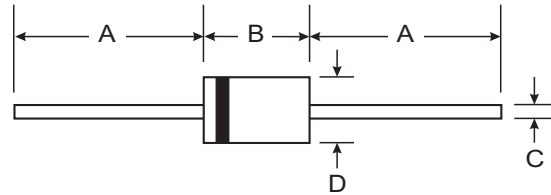


Features

- Constructed with Glass Passivated Die
- Excellent Clamping Capability
- 500W Peak Pulse Power Dissipation
- Fast Response Time
- 100% Tested at Rated Peak Pulse Power
- Voltage Range 5.0 - 170 Volts
- Unidirectional and Bi-directional Versions Available (Note 1)
- Available in Lead Free Finish/RoHS Compliant Version (Note 3)

NOT RECOMMENDED FOR NEW DESIGN
SUGGESTED REPLACEMENT P6KE6V8A - P6KE200A



Mechanical Data

- Case: DO-15
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020C
- Leads: Plated Leads, Solderable per MIL-STD-202, Method 208
- Also Available in Lead Free Plating (Matte Tin Finish).
- Marking: Unidirectional: Type Number and Cathode Band
- Marking Bi-directional: Type Number Only
- Weight: 0.4 grams (approximate)

| DO-15 | | |
|----------------------|-------|-------|
| Dim | Min | Max |
| A | 25.40 | — |
| B | 5.50 | 7.62 |
| C | 0.686 | 0.889 |
| D | 2.60 | 3.6 |
| All Dimensions in mm | | |

Maximum Ratings @ $T_A = 25^\circ\text{C}$ unless otherwise specified

| Characteristic | Symbol | Value | Unit |
|---|----------------|-------------|------------------|
| Peak Power Dissipation, $T_p = 1.0\text{ms}$ (Non repetitive current pulse, derated above $T_A = 25^\circ\text{C}$) | P_{pk} | 500 | W |
| Steady State Power Dissipation at $T_L = 75^\circ\text{C}$ Lead Lengths 9.5 mm (Board mounted) | P_d | 1.0 | W |
| Peak Forward Surge Current, 8.3 Single Half Sine Wave Superimposed on Rated Load Duty Cycle = 4 pulses per minute maximum | I_{FSM} | 70 | A |
| Forward Voltage @ $I_F = 35\text{A}$ 300 μs Square Wave Pulse, Unidirectional Only | V_F | 3.5 | V |
| Operating and Storage Temperature Range | T_J, T_{STG} | -65 to +175 | $^\circ\text{C}$ |

- Notes:
1. Suffix "A" denotes unidirectional, suffix "CA" denotes bi-directional device.
 2. For bi-directional devices having V_R of 10 volts and under, the I_R limit is doubled.
 3. RoHS revision 13.2.2003. Glass and High Temperature Solder Exemptions Applied, see *EU Directive Annex Notes 5 and 7*.

| Type Number (Suffix C = Bidirectional) (Note 1) | Reverse Standoff Voltage | Breakdown Voltage V_{BR} @ I_t | | Test Current | Max. Clamping Voltage @ I_{PP} | Max. Peak Pulse Current | Max. Reverse Leakage @ V_R (Note 2) | Max. Voltage Temp. Variation of V_{BR} |
|--|--------------------------------|---------------------------------------|---------|-----------------|---|-------------------------------|---|---|
| | V_R (V) | Min (V) | Max (V) | I_t (mA) | V_C (V) | I_{PP} (A) | I_R (A) | mV/°C |
| SA5V0(C)A | 5.0 | 6.40 | 7.00 | 10 | 9.2 | 54.3 | 600 | 5.0 |
| SA6V0(C)A | 6.0 | 6.67 | 7.37 | 10 | 10.3 | 48.5 | 600 | 5.0 |
| SA6V5(C)A | 6.5 | 7.22 | 7.98 | 10 | 11.2 | 44.7 | 400 | 5.0 |
| SA7V0(C)A | 7.0 | 7.78 | 8.60 | 10 | 12.0 | 41.7 | 150 | 6.0 |
| SA7V5(C)A | 7.5 | 8.33 | 9.21 | 1.0 | 12.9 | 38.8 | 50 | 7.0 |
| SA8V0(C)A | 8.0 | 8.89 | 9.83 | 1.0 | 13.6 | 36.7 | 25 | 7.0 |
| SA8V5(C)A | 8.5 | 9.44 | 10.4 | 1.0 | 14.4 | 34.7 | 10 | 8.0 |
| SA9V0(C)A | 9.0 | 10.0 | 11.1 | 1.0 | 15.4 | 32.5 | 5.0 | 9.0 |
| SA10(C)A | 10 | 11.1 | 12.3 | 1.0 | 17.0 | 29.4 | 3.0 | 10 |
| SA11(C)A | 11 | 12.2 | 13.5 | 1.0 | 18.2 | 27.4 | 3.0 | 11 |
| SA12(C)A | 12 | 13.3 | 14.7 | 1.0 | 19.9 | 25.1 | 3.0 | 12 |
| SA13(C)A | 13 | 14.4 | 15.9 | 1.0 | 21.5 | 23.2 | 3.0 | 13 |
| SA14(C)A | 14 | 15.6 | 17.2 | 1.0 | 23.2 | 21.5 | 3.0 | 14 |
| SA15(C)A | 15 | 16.7 | 18.5 | 1.0 | 24.4 | 20.6 | 3.0 | 16 |
| SA16(C)A | 16 | 17.8 | 19.7 | 1.0 | 26.0 | 19.2 | 3.0 | 17 |
| SA17(C)A | 17 | 18.9 | 20.9 | 1.0 | 27.6 | 18.1 | 3.0 | 19 |
| SA18(C)A | 18 | 20.0 | 22.1 | 1.0 | 29.2 | 17.2 | 3.0 | 20 |
| SA20(C)A | 20 | 22.2 | 24.5 | 1.0 | 32.4 | 15.4 | 3.0 | 23 |
| SA22(C)A | 22 | 24.4 | 26.9 | 1.0 | 35.5 | 14.1 | 3.0 | 25 |
| SA24(C)A | 24 | 26.7 | 29.5 | 1.0 | 38.9 | 12.8 | 3.0 | 28 |
| SA26(C)A | 26 | 28.9 | 31.9 | 1.0 | 42.1 | 11.9 | 3.0 | 30 |
| SA28(C)A | 28 | 31.1 | 34.4 | 1.0 | 45.4 | 11.0 | 3.0 | 31 |
| SA30(C)A | 30 | 33.3 | 36.8 | 1.0 | 48.4 | 10.3 | 3.0 | 36 |
| SA33(C)A | 33 | 36.7 | 40.6 | 1.0 | 53.3 | 9.4 | 3.0 | 39 |
| SA36(C)A | 36 | 40.0 | 44.2 | 1.0 | 58.1 | 8.6 | 3.0 | 41 |
| SA40(C)A | 40 | 44.4 | 49.1 | 1.0 | 64.5 | 7.8 | 3.0 | 46 |
| SA43(C)A | 43 | 47.8 | 52.8 | 1.0 | 69.4 | 7.2 | 3.0 | 50 |
| SA45(C)A | 45 | 50.0 | 55.3 | 1.0 | 72.7 | 6.9 | 3.0 | 52 |
| SA48(C)A | 48 | 53.3 | 58.9 | 1.0 | 77.4 | 6.5 | 3.0 | 56 |
| SA51(C)A | 51 | 56.7 | 62.7 | 1.0 | 82.4 | 6.1 | 3.0 | 61 |
| SA54(C)A | 54 | 60.0 | 66.3 | 1.0 | 87.1 | 5.7 | 3.0 | 65 |
| SA58(C)A | 58 | 64.4 | 71.2 | 1.0 | 93.6 | 5.3 | 3.0 | 70 |
| SA60(C)A | 60 | 66.7 | 73.7 | 1.0 | 96.8 | 5.2 | 3.0 | 71 |
| SA64(C)A | 64 | 71.1 | 78.6 | 1.0 | 103.0 | 4.9 | 3.0 | 76 |
| SA70(C)A | 70 | 77.8 | 86.0 | 1.0 | 113.0 | 4.4 | 3.0 | 85 |
| SA75(C)A | 75 | 83.3 | 92.1 | 1.0 | 121.0 | 4.1 | 3.0 | 91 |
| SA78(C)A | 78 | 86.7 | 95.8 | 1.0 | 126.0 | 4.0 | 3.0 | 95 |
| SA85(C)A | 85 | 94.4 | 104.0 | 1.0 | 137.0 | 3.6 | 3.0 | 103 |
| SA90(C)A | 90 | 100 | 111.0 | 1.0 | 146.0 | 3.4 | 3.0 | 110 |
| SA100(C)A | 100 | 111 | 123.0 | 1.0 | 162.0 | 3.1 | 3.0 | 123 |
| SA110(C)A | 110 | 122 | 135.0 | 1.0 | 177.0 | 2.8 | 3.0 | 133 |
| SA120(C)A | 120 | 133 | 147.0 | 1.0 | 193.0 | 2.6 | 3.0 | 146 |
| SA130(C)A | 130 | 144 | 159.0 | 1.0 | 209.0 | 2.4 | 3.0 | 158 |
| SA150(C)A | 150 | 167 | 185.0 | 1.0 | 243.0 | 2.1 | 3.0 | 184 |
| SA160(C)A | 160 | 178 | 197.0 | 1.0 | 259.0 | 1.9 | 3.0 | 196 |
| SA170(C)A | 170 | 189 | 209.0 | 1.0 | 275.0 | 1.8 | 3.0 | 208 |

Notes: 1. Suffix "A" denotes unidirectional, suffix "CA" denotes bi-directional device.
 2. For bi-directional devices having V_R of 10 volts and under, the I_R limit is doubled.

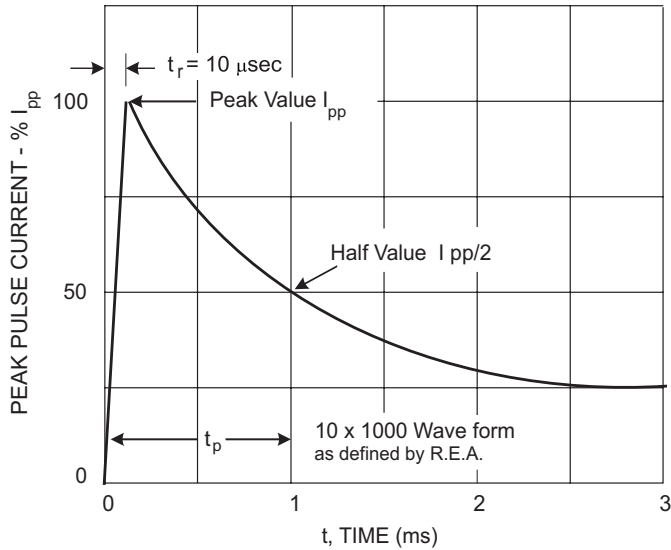


Fig. 1, Pulse Waveform

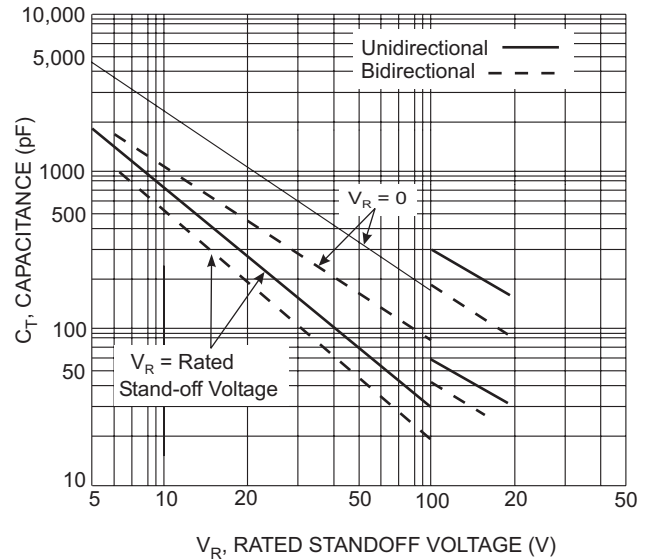


Fig. 2, Typical Total Capacitance

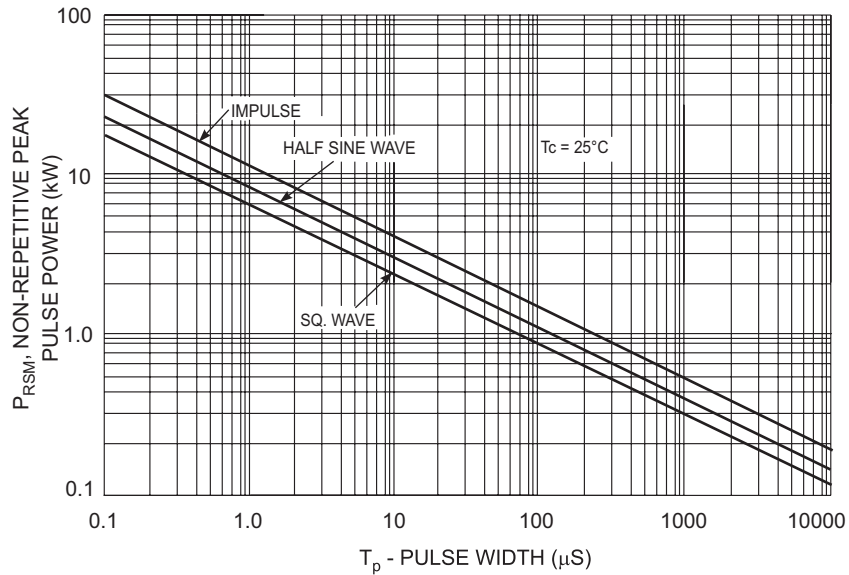


Fig. 3, Peak Pulse Power Derating

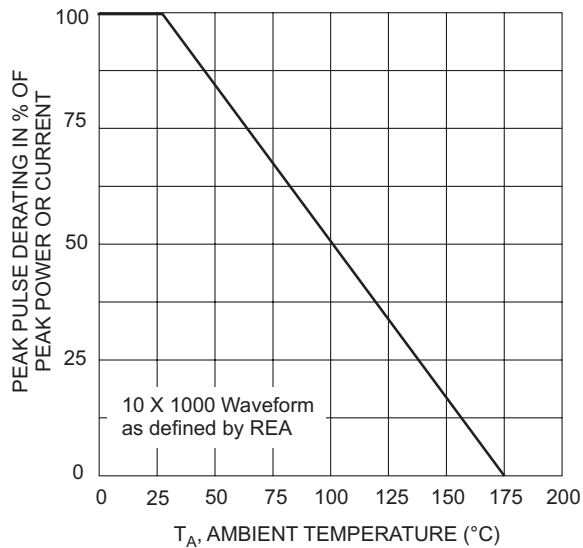


Fig. 4, Derating Curve

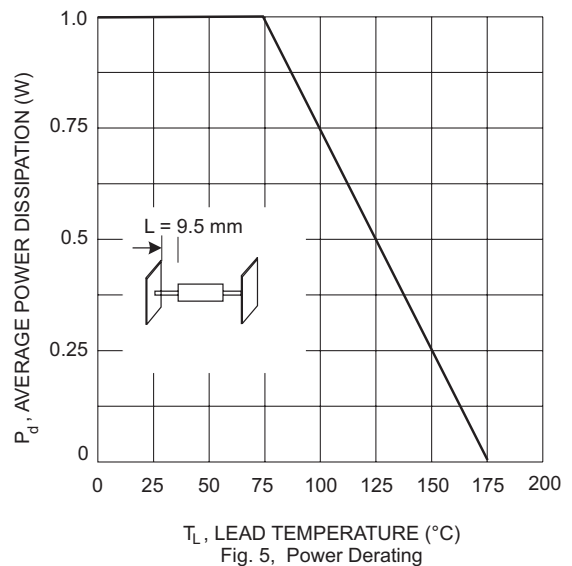


Fig. 5, Power Derating

Ordering Information (Note 5)

| Device | Packaging | Shipping |
|------------------|-----------|-------------------------|
| (Type Number)-B* | DO-15 | 1K/Bulk |
| (Type Number)-T* | DO-15 | 4K/Tape & Reel, 13-inch |

- Notes:
- *Add "-B" or "-T" to the appropriate type number in Table 1 on Page 2. Example: 6.5V TVS = SA6V5(C)A-B.
 - For packaging details, visit our website at <http://www.diodes.com/datasheets/ap02008.pdf>.

单击下面可查看定价，库存，交付和生命周期等信息

[>>Diodes Incorporated\(达达科技\(美台\)\)](#)