



FEATURES

- ✧ Plastic package.
- ✧ Glass passivated junction.
- ✧ 15,000W Peak Pulse Power capability on 10/1000µs waveform.
- ✧ Excellent clamping capability.
- ✧ Repetition rate (duty cycle): 0.05%.
- ✧ Low incremental surge resistance.
- ✧ Fast response time: typically less than 1.0ps from 0 volt to BV, Bidirectional less than 10ns.
- ✧ High temperature soldering guaranteed: 265°C/10 seconds/.375", (9.5mm) lead length, 5lbs, (2.3kg) tension.



P600

MECHANICAL DATA

- ✧ Case: Molded plastic over glass passivated junction.
- ✧ Terminals: Plated Axial leads, solderable per MIL-STD-750, Method 2026.
- ✧ Polarity: Color band denotes cathode except Bipolar.
- ✧ Mounting Position: Any.
- ✧ Weight: 0.07 ounce, 2.5 grams.

DEVICES FOR BIPOLAR APPLICATION

For Bidirectional use C or CA suffix for type 15KPA17 through type 15KPA280 (e.g. 15KPA17C, 15KPA280CA); Electrical characteristics apply in both directions.

MAXIMUM RATINGS AND CHARACTERISTICS

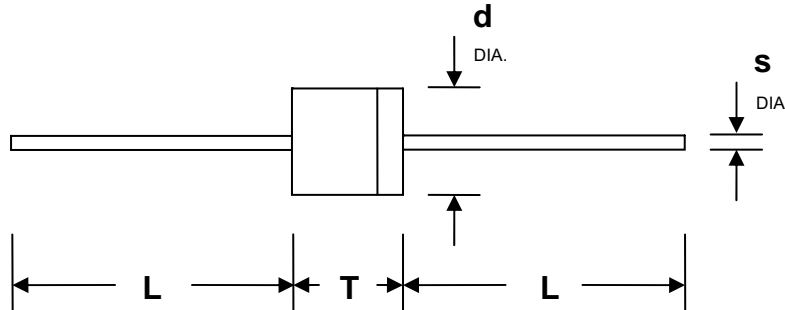
Ratings at 25°C ambient temperature unless otherwise specified.

| RATING | SYMBOL | VALUE | UNIT |
|---|-----------------------------------|----------------|-------|
| Peak Pulse Power Dissipation on 10/1000µs waveform. (Note 1, Fig. 1) | P _{PPM} | Minimum 15,000 | Watts |
| Peak Pulse Current on 10/1000µs waveform. (Note 1, Fig. 3) | I _{PPM} | See Table | Amps |
| Steady State Power Dissipation at T _L = 75°C, Lead length .375" (9.5mm). (Fig. 5) | P _{M(AV)} | 8.0 | Watts |
| Peak Forward Surge Current, 8.3ms Single Half Sine-Wave Superimposed on Rated Load. (JEDEC Method) (Note 2, Fig. 6) | I _{FSM} | 400 | Amps |
| Operating Junction and Storage Temperature Range. | T _J , T _{STG} | -55 to +175 | °C |

- Notes:
1. Non-repetitive current pulse, per Fig. 3 and derated above T_A = 25°C per Fig. 2.
 2. 8.3ms single half sine-wave, or equivalent square wave, Duty cycle = 4 pulses per minute maximum.



PACKAGE DIMENSIONS



P600

| Item | Millimeters | | Inches | |
|------|-------------|------|--------|-------|
| | Min. | Max. | Min. | Max. |
| L | 25.40 | - | 1.000 | - |
| T | 8.60 | 9.10 | 0.340 | 0.360 |
| d | 8.60 | 9.10 | 0.340 | 0.360 |
| s | 1.22 | 1.32 | 0.048 | 0.052 |

SPECIFICATIONS

| Part Number | | Reverse Stand-Off Voltage | Breakdown Voltage MIN. @ I _T | Test Current | Maximum Clamping Voltage @ I _{PP} | Peak Pulse Current | Reverse Leakage @ V _{RWM} |
|-------------|-----------|---------------------------|---|---------------------|--|---------------------|------------------------------------|
| UNI-POLAR | BI-POLAR | V _{RWM} (V) | V _{BR MIN.} (V) | I _T (mA) | V _C (V) | I _{PP} (A) | I _R (μA) |
| 15KPA17A | 15KPA17CA | 17.0 | 18.99 | 50 | 29.3 | 515.4 | 5000 |
| 15KPA18A | 15KPA18CA | 18.0 | 20.11 | 50 | 30.9 | 488.7 | 5000 |
| 15KPA20A | 15KPA20CA | 20.0 | 22.34 | 20 | 34.3 | 440.2 | 1500 |
| 15KPA22A | 15KPA22CA | 22.0 | 24.57 | 10 | 37.1 | 407.0 | 500 |
| 15KPA24A | 15KPA24CA | 24.0 | 26.81 | 5 | 40.7 | 371.0 | 150 |
| 15KPA26A | 15KPA26CA | 26.0 | 29.04 | 5 | 44.0 | 343.2 | 50 |
| 15KPA28A | 15KPA28CA | 28.0 | 31.28 | 5 | 47.5 | 317.9 | 25 |
| 15KPA30A | 15KPA30CA | 30.0 | 33.51 | 5 | 50.7 | 297.8 | 15 |
| 15KPA33A | 15KPA33CA | 33.0 | 36.90 | 5 | 54.7 | 276.1 | 2 |
| 15KPA36A | 15KPA36CA | 36.0 | 40.20 | 5 | 59.8 | 252.5 | 2 |
| 15KPA40CA | 15KPA40CA | 40.0 | 44.70 | 5 | 65.8 | 229.5 | 2 |



SPECIFICATIONS

| Part Number | | Reverse Stand-Off Voltage | Breakdown Voltage MIN.@I _T | Test Current | Maximum Clamping Voltage @I _{PP} | Peak Pulse Current | Reverse Leakage @ V _{RWM} |
|-------------|------------|---------------------------|---------------------------------------|---------------------|---|---------------------|------------------------------------|
| UNI-POLAR | BI-POLAR | V _{RWM} (V) | V _{BR MIN.} (V) | I _T (mA) | V _C (V) | I _{PP} (A) | I _R (μA) |
| 15KPA43A | 15KPA43CA | 43.0 | 48.00 | 5 | 69.8 | 216.3 | 2 |
| 15KPA45A | 15KPA45CA | 45.0 | 50.30 | 5 | 72.8 | 207.4 | 2 |
| 15KPA48A | 15KPA48CA | 48.0 | 53.60 | 5 | 77.7 | 194.3 | 2 |
| 15KPA51A | 15KPA51CA | 51.0 | 57.00 | 5 | 82.9 | 182.1 | 2 |
| 15KPA54A | 15KPA54CA | 54.0 | 60.30 | 5 | 87.7 | 172.2 | 2 |
| 15KPA58A | 15KPA58CA | 58.0 | 64.80 | 5 | 93.8 | 161.0 | 2 |
| 15KPA60A | 15KPA60CA | 60.0 | 67.00 | 5 | 97.4 | 155.0 | 2 |
| 15KPA64A | 15KPA64CA | 64.0 | 71.50 | 5 | 104.2 | 144.9 | 2 |
| 15KPA70A | 15KPA70CA | 70.0 | 78.2 | 5 | 113.6 | 132.9 | 2 |
| 15KPA75A | 15KPA75CA | 75.0 | 83.8 | 5 | 122.0 | 123.8 | 2 |
| 15KPA78A | 15KPA78CA | 78.0 | 87.10 | 5 | 126.1 | 119.7 | 2 |
| 15KPA85A | 15KPA85CA | 85.0 | 94.90 | 5 | 137.6 | 109.7 | 2 |
| 15KPA90A | 15KPA90CA | 90.0 | 100.50 | 5 | 145.6 | 103.7 | 2 |
| 15KPA100A | 15KPA100CA | 100.0 | 111.70 | 5 | 161.3 | 93.6 | 2 |
| 15KPA110A | 15KPA110CA | 110.0 | 122.90 | 5 | 178.6 | 84.5 | 2 |
| 15KPA120A | 15KPA120CA | 120.0 | 134.00 | 5 | 192.3 | 78.5 | 2 |
| 15KPA130A | 15KPA130CA | 130.0 | 145.20 | 5 | 208.3 | 72.5 | 2 |
| 15KPA150A | 15KPA150CA | 150.0 | 167.60 | 5 | 241.9 | 62.4 | 2 |
| 15KPA160A | 15KPA160CA | 160.0 | 178.70 | 5 | 258.6 | 58.4 | 2 |
| 15KPA170A | 15KPA170CA | 170.0 | 189.90 | 5 | 272.7 | 55.4 | 2 |
| 15KPA180A | 15KPA180CA | 180.0 | 201.10 | 5 | 288.5 | 52.3 | 2 |
| 15KPA200A | 15KPA200CA | 200.0 | 223.40 | 5 | 319.1 | 47.3 | 2 |
| 15KPA220A | 15KPA220CA | 220.0 | 245.70 | 5 | 352.5 | 42.8 | 2 |
| 15KPA240A | 15KPA240CA | 240.0 | 268.10 | 5 | 384.6 | 39.3 | 2 |
| 15KPA260A | 15KPA260CA | 260.0 | 290.40 | 5 | 416.7 | 36.2 | 2 |
| 15KPA280A | 15KPA280CA | 280.0 | 312.80 | 5 | 454.5 | 33.2 | 2 |

Note: For Bidirectional type having V_{RWM} of 10 volts and less, the I_R limit doubles.



RATING AND CHARACTERISTIC CURVES (TA: 25°C UNLESS OTHERWISE SPECIFIED)

Figure 1 - Peak Pulse Power Rating Curve

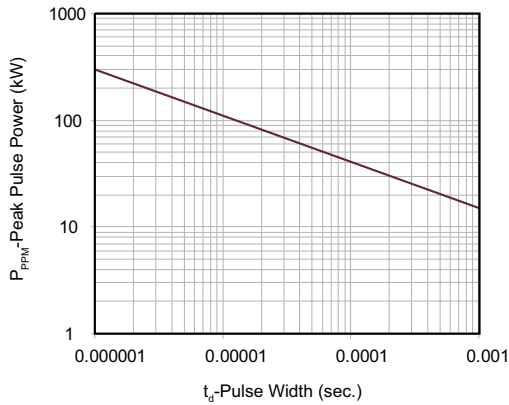


Figure 2 - Pulse Derating Curve

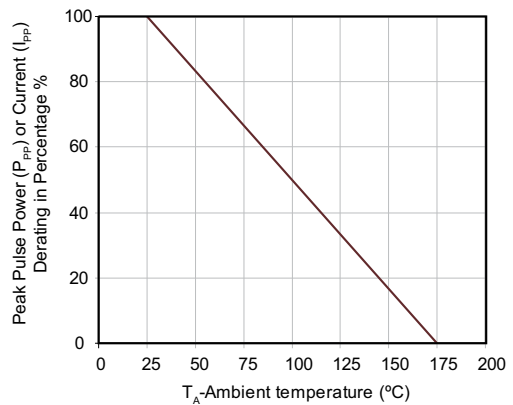


Figure 3 - Pulse Waveform

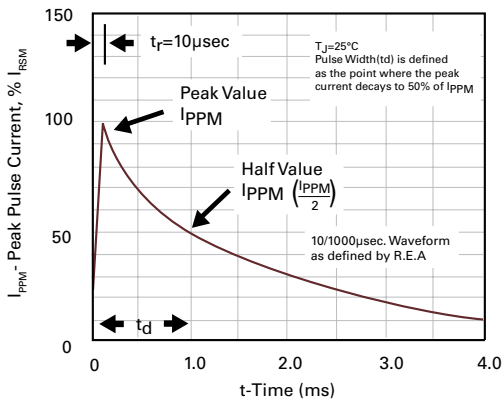


Figure 4 - Typical Junction Capacitance

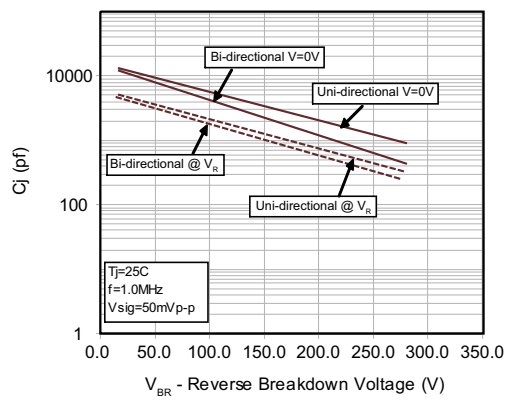


Figure 5 - Steady State Power Dissipation Derating Curve

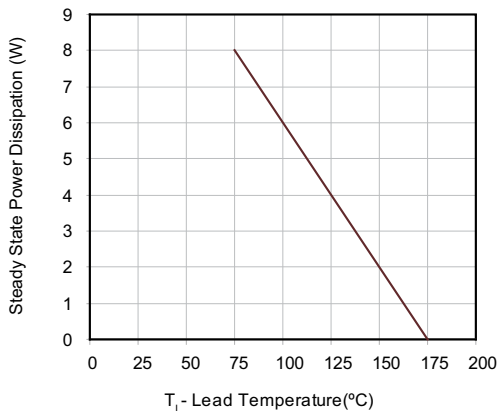


Figure 6 - Maximum Non-Repetitive Forward Surge Current Uni-Directional Only

