



DATA SHEET

15KP SERIES

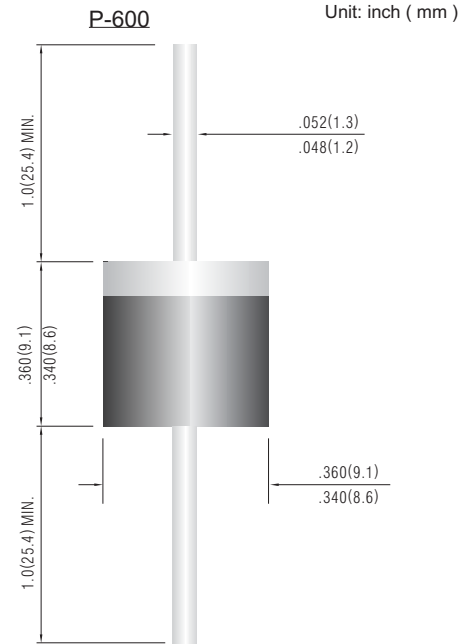
GLASS PASSIVATED JUNCTION TRANSIENT VOLTAGE SUPPRESSOR VOLTAGE- 17 to 220 Volts 15000 Watt Peak Pulse Power

FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- Glass passivated chip junction in P-600 package
- 15000W Peak Pulse Power capability on 10/1000µs waveform
- Excellent clamping capability
- Low incremental surge resistance
- Fast response time: typically less than 1.0 ps from 0 volts to BV min
- High temperature soldering guaranteed: 300°C/10 seconds/.375", (9.5mm) lead length/5lbs., (2.3kg) tension

MECHANICAL DATA

Case: JEDEC P-600 Molded plastic
 Terminals: Axial leads, solderable per MIL-STD-750, Method 2026
 Polarity: Color band denotes positive end (cathode)
 Mounting Position: Any
 Weight: 0.07 ounce, 2.1 gram



DEVICES FOR BIPOLAR APPLICATIONS

For Bidirectional use C or CA Suffix for types
 Electrical characteristics apply in both directions.

MAXIMUM RATINGS AND CHARACTERISTICS

Rating at 25°C ambient temperature unless otherwise specified. Resistive or inductive load, 60Hz.
 For Capacitive load derate current by 20%.

| RATING | SYMBOL | VALUE | UNITS |
|--|----------------|---------------|-------|
| Peak Pulse Power Dissipation on 10/1000µs waveform (Note 1, FIG. 1) | P_{PPM} | Minimum 15000 | Watts |
| Peak Pulse Current on 10/1000µs waveform (Note 1, FIG. 3) | I_{PPM} | SEE TABLE 1 | Amps |
| Steady State Power Dissipation at $T_L=50^\circ\text{C}$ Lead Lengths .375", (9.5mm) (Note 2) | $P_{M(AV)}$ | 10 | Watts |
| Peak Forward Surge Current, 8.3ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method) (Note 3) | I_{FSM} | 400 | Amps |
| Operating and Storage Temperature Range | T_J, T_{STG} | -55 to +175 | °C |

NOTES:

1. Non-repetitive current pulse, per Fig. 3 and derated above $T_A=25^\circ\text{C}$ per Fig.
2. Mounted on Copper Leaf area of 0.79 in² (20mm²).
3. 8.3ms single half sine-wave, duty cycle= 4 pulses per minutes maximum.



| PART NUMBER | VRWM | VBR @ IT | | | IR @ VRWM | | VC @ IPP | | PACKAGE |
|--|------|----------|------|-----|-----------|------|----------|-----|---------|
| | | MIN. | MAX. | IT | UNI- | BI- | V | A | |
| | V | V | MA | UA | UA | | | | |
| 15000W TRANSIENT VOLTAGE SUPPRESSOR | | | | | | | | | |
| 15KPJ17(C) | 17 | 18.9 | 23.9 | 50 | 5000 | 5000 | 30.5 | 520 | P-600 |
| 15KP17(C)A | 17 | 18.9 | 21.7 | 50 | 5000 | 5000 | 27.6 | 543 | P-600 |
| 15KP18(C) | 18 | 20.0 | 25.3 | 50 | 5000 | 5000 | 32.2 | 439 | P-600 |
| 15KP18(C)A | 18 | 20.0 | 23.3 | 50 | 5000 | 5000 | 29.2 | 485 | P-600 |
| 15KP20(C) | 20 | 22.2 | 28.1 | 20 | 1500 | 1500 | 35.8 | 396 | P-600 |
| 15KP20(C)A | 20 | 22.2 | 25.5 | 20 | 1500 | 1500 | 32.4 | 437 | P-600 |
| 15KP22(C) | 22 | 24.4 | 30.9 | 10 | 900 | 900 | 39.4 | 365 | P-600 |
| 15KP22(C)A | 22 | 24.4 | 28.0 | 10 | 900 | 900 | 35.5 | 404 | P-600 |
| 15KP24(C) | 24 | 26.7 | 33.8 | 5.0 | 800 | 800 | 43.0 | 333 | P-600 |
| 15KP24(C)A | 24 | 26.7 | 30.7 | 5.0 | 800 | 800 | 38.9 | 369 | P-600 |
| 15KP26(C) | 26 | 28.9 | 36.6 | 5.0 | 200 | 200 | 46.6 | 308 | P-600 |
| 15KP26(C)A | 26 | 28.9 | 33.2 | 5.0 | 200 | 200 | 42.1 | 341 | P-600 |
| 15KP28(C) | 28 | 31.1 | 39.4 | 5.0 | 125 | 125 | 50.0 | 286 | P-600 |
| 15KP28(C)A | 28 | 31.1 | 35.8 | 5.0 | 125 | 125 | 45.4 | 316 | P-600 |
| 15KP30(C) | 30 | 33.3 | 42.2 | 5.0 | 28 | 28 | 53.5 | 267 | P-600 |
| 15KP30(C)A | 30 | 33.3 | 38.3 | 5.0 | 28 | 28 | 48.4 | 296 | P-600 |
| 15KP33(C) | 33 | 36.7 | 46.5 | 5.0 | 10 | 10 | 59.0 | 248 | P-600 |
| 15KP33(C)A | 33 | 36.7 | 42.2 | 5.0 | 10 | 10 | 53.3 | 274 | P-600 |
| 15KP36(C) | 36 | 40.0 | 50.7 | 5.0 | 10 | 10 | 64.3 | 227 | P-600 |
| 15KP36(C)A | 36 | 40.0 | 46.0 | 5.0 | 10 | 10 | 58.1 | 251 | P-600 |
| 15KP40(C) | 40 | 44.4 | 56.3 | 5.0 | 10 | 10 | 71.4 | 206 | P-600 |
| 15KP40(C)A | 40 | 44.4 | 51.1 | 5.0 | 10 | 10 | 64.5 | 228 | P-600 |
| 15KP43(C) | 43 | 47.8 | 60.5 | 5.0 | 10 | 10 | 76.7 | 195 | P-600 |
| 15KP43(C)A | 43 | 47.8 | 54.9 | 5.0 | 10 | 10 | 69.4 | 215 | P-600 |
| 15KP45(C) | 45 | 50.0 | 63.3 | 5.0 | 10 | 10 | 80.3 | 186 | P-600 |
| 15KP45(C)A | 45 | 50.0 | 57.5 | 5.0 | 10 | 10 | 72.7 | 205 | P-600 |
| 15KP48(C) | 48 | 53.3 | 67.5 | 5.0 | 10 | 10 | 85.5 | 175 | P-600 |
| 15KP48(C)A | 48 | 53.3 | 61.3 | 5.0 | 10 | 10 | 77.4 | 193 | P-600 |
| 15KP51(C) | 51 | 56.7 | 71.8 | 5.0 | 10 | 10 | 91.1 | 164 | P-600 |
| 15KP51(C)A | 51 | 56.7 | 65.2 | 5.0 | 10 | 10 | 82.4 | 181 | P-600 |
| 15KP54(C) | 54 | 60.0 | 76.0 | 5.0 | 10 | 10 | 96.3 | 155 | P-600 |
| 15KP54(C)A | 54 | 60.0 | 69.0 | 5.0 | 10 | 10 | 87.1 | 171 | P-600 |
| 15KP58(C) | 58 | 64.4 | 81.6 | 5.0 | 10 | 10 | 103 | 144 | P-600 |
| 15KP58(C)A | 58 | 64.4 | 74.1 | 5.0 | 10 | 10 | 93.6 | 160 | P-600 |
| 15KP60(C) | 60 | 66.7 | 84.5 | 5.0 | 10 | 10 | 107 | 140 | P-600 |
| 15KP60(C)A | 60 | 66.7 | 76.7 | 5.0 | 10 | 10 | 96.8 | 154 | P-600 |



| PART NUMBER | VRWM | VBR @ IT | | | IR @ VRWM | | VC @ IPP | | PACKAGE |
|--|------|----------|-------|-----|-----------|-----|----------|-----|---------|
| | | MIN. | MAX. | IT | UNI- | BI- | V | A | |
| | V | V | MA | UA | UA | | | | |
| 15000W TRANSIENT VOLTAGE SUPPRESSOR | | | | | | | | | |
| 15KP64(C) | 64 | 71.1 | 90.1 | 5.0 | 10 | 10 | 114 | 130 | P-600 |
| 15KP64(C)A | 64 | 71.1 | 81.8 | 5.0 | 10 | 10 | 103 | 144 | P-600 |
| 15KP70(C) | 70 | 77.8 | 98.6 | 5.0 | 10 | 10 | 125 | 119 | P-600 |
| 15KP70(C)A | 70 | 77.8 | 89.5 | 5.0 | 10 | 10 | 113 | 132 | P-600 |
| 15KP75(C) | 75 | 83.3 | 105.7 | 5.0 | 10 | 10 | 134 | 111 | P-600 |
| 15KP75(C)A | 75 | 83.3 | 95.8 | 5.0 | 10 | 10 | 121 | 123 | P-600 |
| 15KP78(C) | 78 | 86.7 | 109.8 | 5.0 | 10 | 10 | 139 | 107 | P-600 |
| 15KP78(C)A | 78 | 86.7 | 99.7 | 5.0 | 10 | 10 | 126 | 119 | P-600 |
| 15KP85(C) | 85 | 94.4 | 119.2 | 5.0 | 10 | 10 | 151 | 99 | P-600 |
| 15KP85(C)A | 85 | 94.4 | 108.2 | 5.0 | 10 | 10 | 137 | 109 | P-600 |
| 15KP90(C) | 90 | 100 | 126.5 | 5.0 | 10 | 10 | 160 | 94 | P-600 |
| 15KP90(C)A | 90 | 100 | 115.5 | 5.0 | 10 | 10 | 146 | 103 | P-600 |
| 15KP100(C) | 100 | 111 | 141.0 | 5.0 | 10 | 10 | 179 | 84 | P-600 |
| 15KP100(C)A | 100 | 111 | 128.0 | 5.0 | 10 | 10 | 162 | 93 | P-600 |
| 15KP110(C) | 110 | 122 | 154.5 | 5.0 | 10 | 10 | 196 | 77 | P-600 |
| 15KP110(C)A | 110 | 122 | 140.5 | 5.0 | 10 | 10 | 177 | 85 | P-600 |
| 15KP120(C) | 120 | 133 | 169.0 | 5.0 | 10 | 10 | 214 | 70 | P-600 |
| 15KP120(C)A | 120 | 133 | 153.0 | 5.0 | 10 | 10 | 193 | 78 | P-600 |
| 15KP130(C) | 130 | 144 | 182.5 | 5.0 | 10 | 10 | 231 | 65 | P-600 |
| 15KP130(C)A | 130 | 144 | 165.5 | 5.0 | 10 | 10 | 209 | 72 | P-600 |
| 15KP150(C) | 150 | 167 | 211.5 | 5.0 | 10 | 10 | 268 | 56 | P-600 |
| 15KP150(C)A | 150 | 167 | 192.5 | 5.0 | 10 | 10 | 243 | 62 | P-600 |
| 15KP160(C) | 160 | 178 | 226.0 | 5.0 | 10 | 10 | 287 | 52 | P-600 |
| 15KP160(C)A | 160 | 178 | 205.0 | 5.0 | 10 | 10 | 259 | 58 | P-600 |
| 15KP170(C) | 170 | 189 | 239.5 | 5.0 | 10 | 10 | 304 | 49 | P-600 |
| 15KP170(C)A | 170 | 189 | 217.5 | 5.0 | 10 | 10 | 275 | 55 | P-600 |
| 15KP180(C) | 180 | 198 | 253.8 | 1.0 | 5 | 5 | 322 | 47 | P-600 |
| 15KP180(C)A | 180 | 198 | 230.4 | 1.0 | 5 | 5 | 292 | 51 | P-600 |
| 15KP190(C) | 190 | 209 | 267.9 | 1.0 | 5 | 5 | 340 | 44 | P-600 |
| 15KP190(C)A | 190 | 209 | 243.2 | 1.0 | 5 | 5 | 308 | 49 | P-600 |
| 15KP200(C) | 200 | 220 | 282.0 | 1.0 | 5 | 5 | 358 | 42 | P-600 |
| 15KP200(C)A | 200 | 220 | 256.0 | 1.0 | 5 | 5 | 324 | 46 | P-600 |
| 15KP210(C) | 210 | 231 | 296.1 | 1.0 | 5 | 5 | 376 | 40 | P-600 |
| 15KP210(C)A | 210 | 231 | 268.8 | 1.0 | 5 | 5 | 340 | 44 | P-600 |
| 15KP220(C) | 220 | 242 | 310.2 | 1.0 | 5 | 5 | 394 | 38 | P-600 |
| 15KP220(C)A | 220 | 242 | 281.6 | 1.0 | 5 | 5 | 356 | 42 | P-600 |

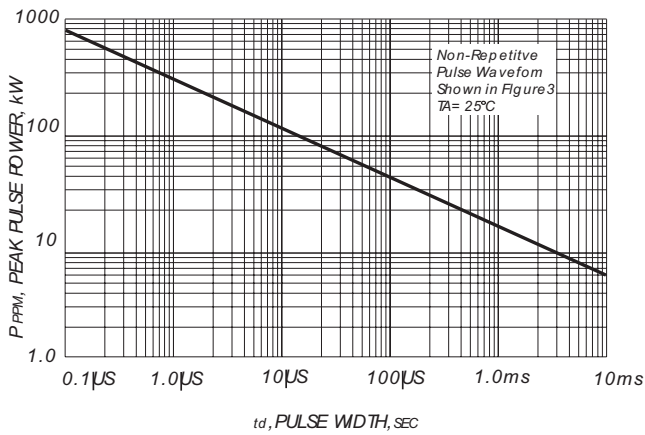


FIGURE 1-PEAK PULSE POWER VS PULSE TIME

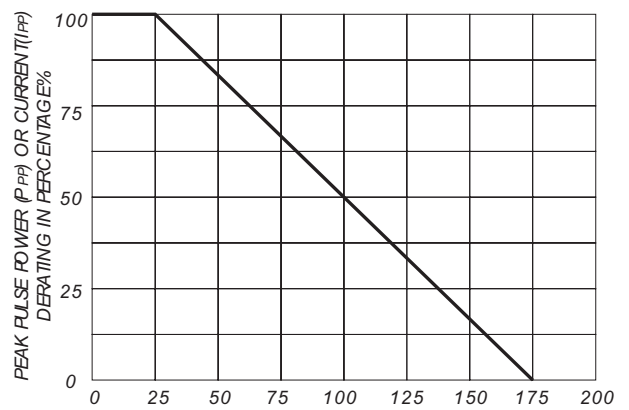


FIGURE 2 DERATING CURVE

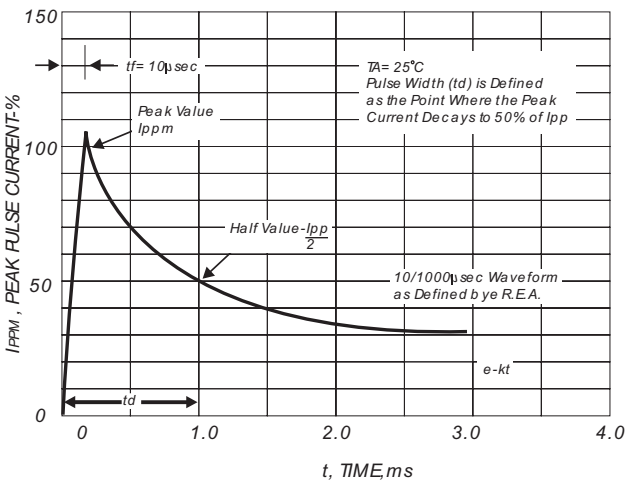


FIGURE 3-PULSE WAVEFORM

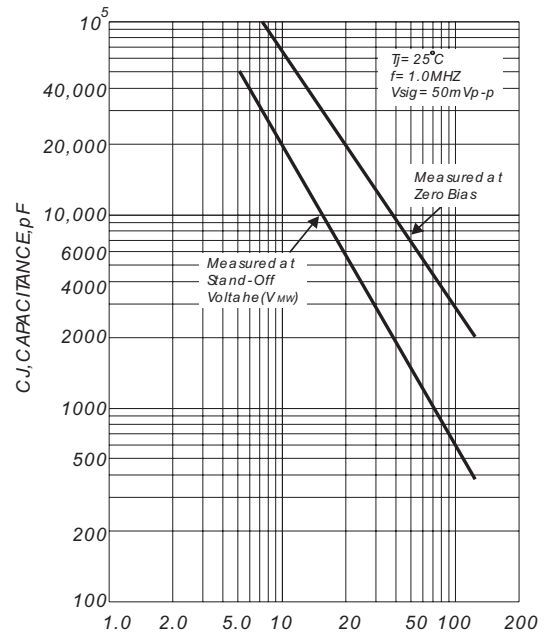


FIGURE 4 TYPICAL CAPACITANCE VS STAND-OFF VOLTAGE

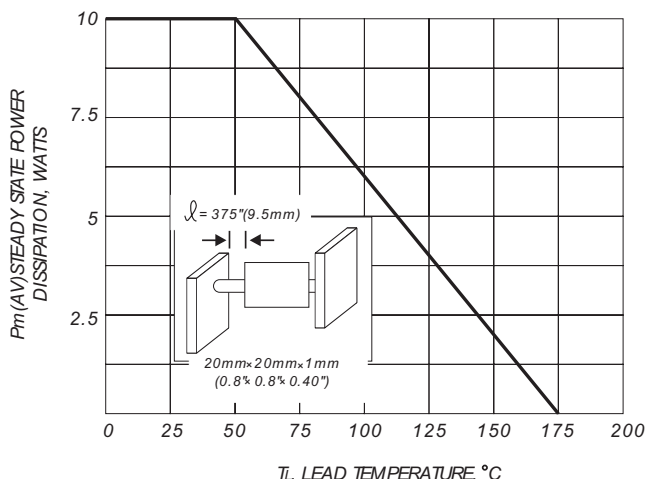


FIG. 5-STEADY STATE POWER DERATING CURVE

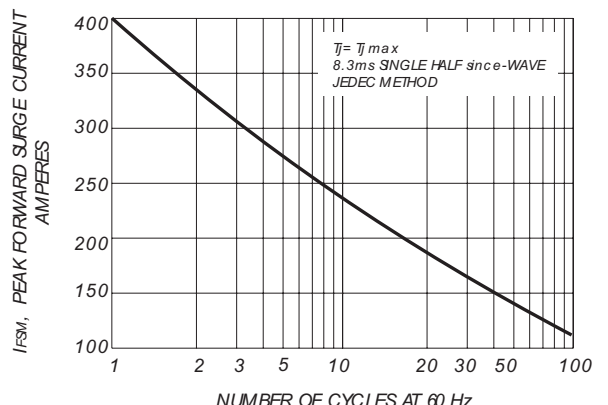


FIG. 6-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT UNIDIRECTIONAL

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