

15KP12A(CA) - 15KP240A(CA)

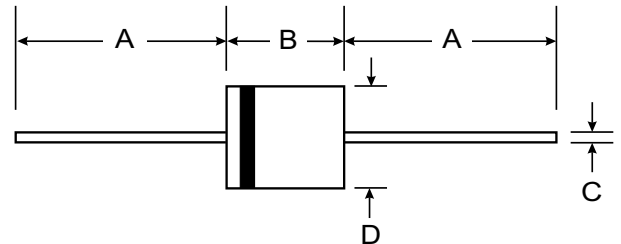
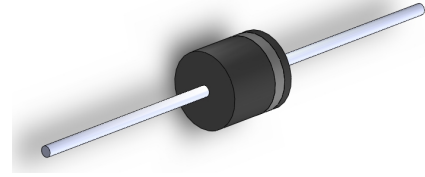
AXIAL LEAD TRANSIENT VOLTAGE SUPPRESSOR DIODE

VOLTAGE RANGE: 12 - 240V

POWER: 15000Watts

Features

- Glass passivated junction
- 15000W Peak Pulse Power capability on 10/1000 μ s waveform
- Excellent clamping capability
- Repetition rate (duty cycle):0.05%
- Low incremental surge resistance
- Fast response time: typically less 0 volts to BV
- Typical I_d less than 1 μ A above 10V than 1.0 ps from
- High temperature soldering guaranteed: 265°C/10 seconds/.375", (9.5mm) lead length, 5lbs., (2.3kg) tension



Mechanical Data

- Case: JEDEC R-6 Molded Plastic
- Terminals: Axial Leads, Solderable per MIL-STD-750, Method 2026
- Polarity: Cathode Band or Cathode Notch
- Weight: 2.10 grams (approx.)

| R-6 | | |
|----------------------|------|-----|
| Dim | Min | Max |
| A | 25.4 | — |
| B | 8.6 | 9.1 |
| C | 1.2 | 1.3 |
| All Dimensions in mm | | |



Maximum Ratings and Electrical Characteristics T_A = 25°C unless otherwise specified

| Characteristic | Symbol | Value | Unit |
|--|----------------|---------------|-------|
| | P_{PK} | 15,000 | Watts |
| Steady State Power Dissipation | P_D | 7.0 | Watts |
| Peak Forward Surge Current, 8.3ms Single Half Sine Wave (Uni-directional devices only) | I_{FSM} | 200 | Amps. |
| Operating and Storage Temperature Range | T_J, T_{STG} | - 55 to + 150 | °C |

| TYPE | | Reverse Stand-Off Voltage | Breakdown Voltage Min. @I _T | Test Current | Reverse Leakage @V _{RWM} | Maximum Clamping Voltage @I _{PP} | Peak Pulse Current | Max. Voltage Temperature Variation of V _{BR} |
|---------|----------|---------------------------|--|---------------------|-----------------------------------|---|---------------------|---|
| (UNI) | (BI) | V _{RWM} (V) | V _{BR MIN} (V) | I _T (mA) | I _R (uA) | V _C (V) | I _{PP} (A) | (mV/°C) |
| 15KP12 | 15KP12C | 12 | 13.3 | 50.0 | 10,000 | 22.0 | 658 | 12 |
| 15KP12A | 15KP12CA | 12 | 13.3 | 50.0 | 10,000 | 19.9 | 725 | 12 |
| 15KP13 | 15KP13C | 13 | 14.4 | 50.0 | 10,000 | 23.8 | 607 | 13 |
| 15KP13A | 15KP13CA | 13 | 14.4 | 50.0 | 10,000 | 21.5 | 669 | 13 |
| 15KP14 | 15KP14C | 14 | 15.6 | 50.0 | 8,000 | 25.8 | 564 | 14 |
| 15KP14A | 15KP14CA | 14 | 15.6 | 50.0 | 8,000 | 23.2 | 622 | 14 |
| 15KP15 | 15KP15C | 15 | 16.7 | 50.0 | 8,000 | 26.9 | 526 | 16 |
| 15KP15A | 15KP15CA | 15 | 16.7 | 50.0 | 8,000 | 24.4 | 580 | 16 |
| 15KP16 | 15KP16C | 16 | 17.8 | 50.0 | 8,000 | 28.8 | 493 | 19 |
| 15KP16A | 15KP16CA | 16 | 17.8 | 50.0 | 8,000 | 26.0 | 544 | 17 |
| 15KP17 | 15KP17C | 17 | 18.9 | 50.0 | 5,000 | 32.2 | 464 | 19 |
| 15KP17A | 15KP17CA | 17 | 18.9 | 50.0 | 5,000 | 29.3 | 512 | 17 |
| 15KP18 | 15KP18C | 18 | 20.0 | 50.0 | 5,000 | 34.2 | 439 | 20 |
| 15KP18A | 15KP18CA | 18 | 20.0 | 50.0 | 5,000 | 30.9 | 485 | 18 |
| 15KP20 | 15KP20C | 20 | 22.2 | 20.0 | 1,500 | 37.9 | 396 | 24 |
| 15KP20A | 15KP20CA | 20 | 22.2 | 20.0 | 1,500 | 34.3 | 437 | 21 |
| 15KP22 | 15KP22C | 22 | 24.4 | 10.0 | 500 | 41.1 | 365 | 27 |
| 15KP22A | 15KP22CA | 22 | 24.4 | 10.0 | 500 | 37.1 | 404 | 24 |
| 15KP24 | 15KP24C | 24 | 26.7 | 5.0 | 150 | 45.0 | 333 | 30 |
| 15KP24A | 15KP24CA | 24 | 26.7 | 5.0 | 150 | 40.7 | 369 | 27 |
| 15KP26 | 15KP26C | 26 | 28.9 | 5.0 | 50 | 48.7 | 308 | 32 |
| 15KP26A | 15KP26CA | 26 | 28.9 | 5.0 | 50 | 44.0 | 341 | 29 |
| 15KP28 | 15KP28C | 28 | 31.1 | 5.0 | 25 | 52.4 | 286 | 35 |
| 15KP28A | 15KP28CA | 28 | 31.1 | 5.0 | 25 | 47.5 | 316 | 31 |
| 15KP30 | 15KP30C | 30 | 33.3 | 5.0 | 15 | 56.2 | 267 | 37 |
| 15KP30A | 15KP30CA | 30 | 33.3 | 5.0 | 15 | 50.7 | 296 | 33 |
| 15KP33 | 15KP33C | 33 | 36.7 | 5.0 | 10 | 60.6 | 248 | 42 |
| 15KP33A | 15KP33CA | 33 | 36.7 | 5.0 | 10 | 54.8 | 274 | 38 |
| 15KP36 | 15KP36C | 36 | 40.0 | 5.0 | 10 | 66.0 | 227 | 46 |
| 15KP36A | 15KP36CA | 36 | 40.0 | 5.0 | 10 | 59.7 | 251 | 41 |
| 15KP40 | 15KP40C | 40 | 44.4 | 5.0 | 10 | 72.8 | 206 | 51 |
| 15KP40A | 15KP40CA | 40 | 44.4 | 5.0 | 10 | 65.8 | 228 | 46 |
| 15KP43 | 15KP43C | 43 | 47.8 | 5.0 | 10 | 77.1 | 195 | 55 |
| 15KP43A | 15KP43CA | 43 | 47.8 | 5.0 | 10 | 69.7 | 215 | 50 |
| 15KP45 | 15KP45C | 45 | 50.0 | 5.0 | 10 | 80.7 | 186 | 57 |
| 15KP45A | 15KP45CA | 45 | 50.0 | 5.0 | 10 | 73.0 | 205 | 52 |
| 15KP48 | 15KP48C | 48 | 53.3 | 5.0 | 10 | 85.9 | 175 | 62 |
| 15KP48A | 15KP48CA | 48 | 53.3 | 5.0 | 10 | 77.7 | 193 | 56 |
| 15KP51 | 15KP51C | 51 | 56.7 | 5.0 | 10 | 91.5 | 164 | 66 |
| 15KP51A | 15KP51CA | 51 | 56.7 | 5.0 | 10 | 82.5 | 181 | 60 |
| 15KP54 | 15KP54C | 54 | 60.0 | 5.0 | 10 | 96.8 | 155 | 70 |
| 15KP54A | 15KP54CA | 54 | 60.0 | 5.0 | 10 | 87.5 | 171 | 63 |
| 15KP58 | 15KP58C | 58 | 64.4 | 5.0 | 10 | 104 | 144 | 76 |
| 15KP58A | 15KP58CA | 58 | 64.4 | 5.0 | 10 | 94 | 160 | 68 |
| 15KP60 | 15KP60C | 60 | 66.7 | 5.0 | 10 | 107 | 140 | 78 |
| 15KP60A | 15KP60CA | 60 | 66.7 | 5.0 | 10 | 97.3 | 154 | 70 |
| 15KP64 | 15KP64C | 64 | 71.1 | 5.0 | 10 | 115 | 130 | 84 |
| 15KP64A | 15KP64CA | 64 | 71.1 | 5.0 | 10 | 104 | 144 | 76 |
| 15KP70 | 15KP70C | 70 | 77.8 | 5.0 | 10 | 126 | 119 | 92 |
| 15KP70A | 15KP70CA | 70 | 77.8 | 5.0 | 10 | 114 | 132 | 83 |

| TYPE | | Reverse Stand-Off Voltage | Breakdown Voltage Min. @I _T | Test Current | Reverse Leakage @V _{RWM} | Maximum Clamping Voltage @I _{PP} | Peak Pulse Current | Max. Voltage Temperature Variation of V _{BR} |
|----------|-----------|---------------------------|--|---------------------|-----------------------------------|---|---------------------|---|
| (UNI) | (BI) | V _{RWM} (V) | V _{BR MIN} (V) | I _T (mA) | I _R (uA) | V _C (V) | I _{PP} (A) | (mV/°C) |
| 15KP75 | 15KP75C | 75 | 83.3 | 5.0 | 10 | 135 | 111 | 100 |
| 15KP75A | 15KP75CA | 75 | 83.3 | 5.0 | 10 | 122 | 123 | 89 |
| 15KP78 | 15KP78C | 78 | 86.7 | 5.0 | 10 | 140 | 107 | 104 |
| 15KP78A | 15KP78CA | 78 | 86.7 | 5.0 | 10 | 126 | 119 | 93 |
| 15KP85 | 15KP85C | 85 | 94.4 | 5.0 | 10 | 152 | 99 | 113 |
| 15KP85A | 15KP85CA | 85 | 94.4 | 5.0 | 10 | 137 | 109 | 102 |
| 15KP90 | 15KP90C | 90 | 100 | 5.0 | 10 | 160 | 94 | 120 |
| 15KP90A | 15KP90CA | 90 | 100 | 5.0 | 10 | 146 | 103 | 110 |
| 15KP100 | 15KP100C | 100 | 111 | 5.0 | 10 | 179 | 84 | 134 |
| 15KP100A | 15KP100CA | 100 | 111 | 5.0 | 10 | 162 | 93 | 123 |
| 15KP110 | 15KP110C | 110 | 122 | 5.0 | 10 | 196 | 77 | 147 |
| 15KP110A | 15KP110CA | 110 | 122 | 5.0 | 10 | 178 | 84 | 133 |
| 15KP120 | 15KP120C | 120 | 133 | 5.0 | 10 | 214 | 70 | 161 |
| 15KP120A | 15KP120CA | 120 | 133 | 5.0 | 10 | 193 | 78 | 146 |
| 15KP130 | 15KP130C | 130 | 144 | 5.0 | 10 | 231 | 65 | 174 |
| 15KP130A | 15KP130CA | 130 | 144 | 5.0 | 10 | 209 | 72 | 158 |
| 15KP150 | 15KP150C | 150 | 167 | 5.0 | 10 | 268 | 56 | 202 |
| 15KP150A | 15KP150CA | 150 | 167 | 5.0 | 10 | 243 | 62 | 184 |
| 15KP160 | 15KP160C | 160 | 178 | 5.0 | 10 | 287 | 52 | 216 |
| 15KP160A | 15KP160CA | 160 | 178 | 5.0 | 10 | 259 | 58 | 196 |
| 15KP170 | 15KP170C | 170 | 189 | 5.0 | 10 | 304 | 49 | 229 |
| 15KP170A | 15KP170CA | 170 | 189 | 5.0 | 10 | 275 | 55 | 208 |
| 15KP180 | 15KP180C | 180 | 200 | 5.0 | 10 | 321 | 47 | 242 |
| 15KP180A | 15KP180CA | 180 | 200 | 5.0 | 10 | 287 | 52 | 220 |
| 15KP200 | 15KP200C | 200 | 222 | 5.0 | 10 | 356 | 42 | 296 |
| 15KP200A | 15KP200CA | 200 | 222 | 5.0 | 10 | 325 | 46 | 274 |
| 15KP220 | 15KP220C | 220 | 245 | 5.0 | 10 | 393 | 38 | 297 |
| 15KP220A | 15KP220CA | 220 | 245 | 5.0 | 10 | 347 | 43 | 273 |
| 15KP240 | 15KP240C | 240 | 267 | 5.0 | 10 | 428 | 35 | 324 |
| 15KP240A | 15KP240CA | 240 | 267 | 5.0 | 10 | 387 | 39 | 300 |

Note: Suffix " A " denotes 5% tolerance device , no suffix denotes a 10% tolerance device. * Preferred Voltages.

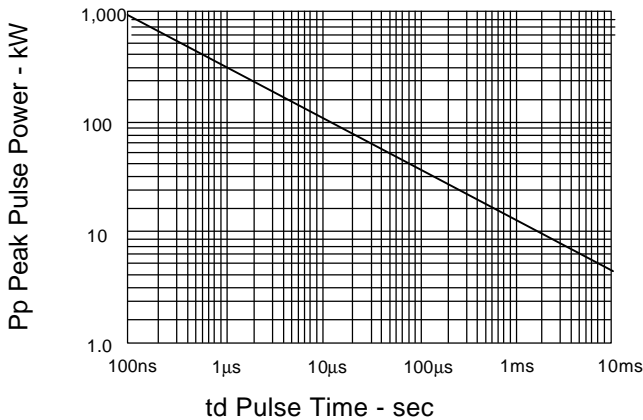


Fig. 2 - Peak Pulse Power vs. Pulse Time

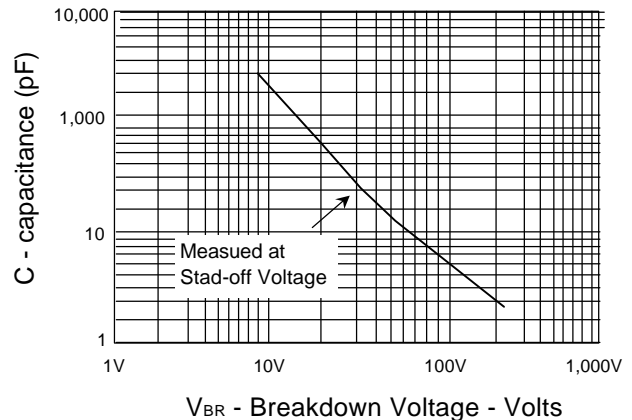


Fig. 3 - Typical Capacitance vs. Breakdown Voltage