

APPLICATIONS

- ✓ Relay Drives
- ✓ Motor (Start/Stop) Back EMF Protection
- ✓ Module Lightning Protection
- ✓ Secondary Lightning Protection for AC/DC

IEC COMPATIBILITY (EN61000-4)

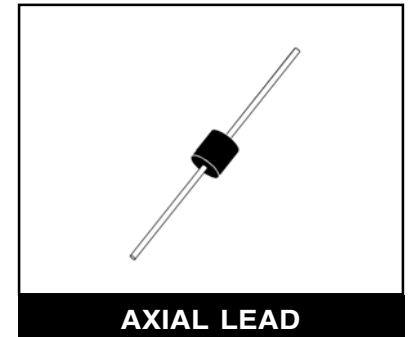
- ✓ 61000-4-5 (Surge): 48A, 8/20 μ s - L3 (Line-Gnd), L4 (Line-Line) & L1 (Power)

FEATURES

- ✓ 30,000 Watts Peak Pulse Power per Line ($t_p=10/1000\mu$ s)
- ✓ Unidirectional & Bidirectional Configurations
- ✓ Easy Mounting to Printed Circuit Board
- ✓ Available in Multiple Voltage Types Ranging From: 30V to 280V
- ✓ RoHS Compliant

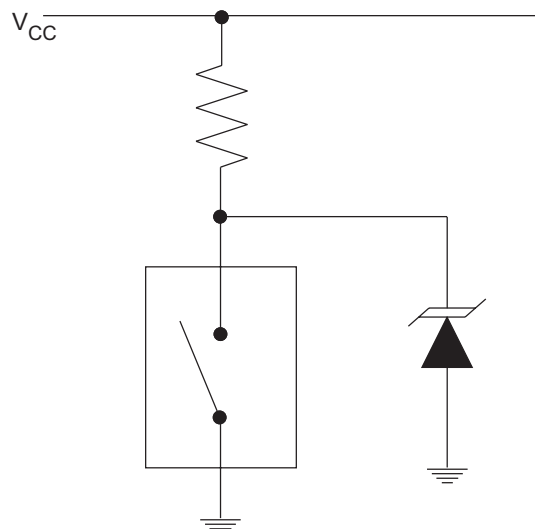
MECHANICAL CHARACTERISTICS

- ✓ Molded Case
- ✓ Weight 5 grams (Approximate)
- ✓ Available in Lead-Free Pure-Tin Plating(Annealed)
- ✓ Solder Reflow Temperature:
Pure-Tin - Sn, 100: 260-270°C
- ✓ Consult Factory for Leaded Device Availability
- ✓ Flammability Rating UL 94V-0
- ✓ Marking: Logo, Part Number & Date Code
- ✓ Positive Terminal Marked with Band - *Unidirectional Only*



APPLICATION

TYPICAL RELAY DRIVE PROTECTION



30KPA30A thru 30KPA280A

DEVICE CHARACTERISTICS

| MAXIMUM RATINGS @ 25°C Unless Otherwise Specified | | | |
|---|------------------|------------|-------|
| PARAMETER | SYMBOL | VALUE | UNITS |
| Peak Pulse Power (tp = 10/1000µs) - See Fig. 1 | P _{PP} | 30,000 | Watts |
| Forward Surge Rating (1/20 seconds) - See Note 2 | I _F | 200 | Amps |
| Steady State Power Dissipation | P _P | 1.0 | Watts |
| Storage Temperature | T _{STG} | -55 to 150 | °C |
| Operating Temperature | T _L | -55 to 150 | °C |

| ELECTRICAL CHARACTERISTICS PER LINE @ 25°C Unless Otherwise Specified | | | | | | |
|---|---|--------------------------------|------------------------|--|---|---|
| PART NUMBER (Notes 1 & 2) | RATED STAND-OFF VOLTAGE V _{WM} VOLTS | BREAKDOWN VOLTAGE | | MAXIMUM LEAKAGE CURRENT @ V _{WM} I _D µA | MAXIMUM CLAMPING VOLTAGE (See Fig. 2) @ 10/1000µs V _C @ I _{PP} | TEMPERATURE COEFFICIENT OF V _(BR) qV _(BR) mV/°C |
| | | MIN V _(BR) VOLTS | @ I _T mA | | | |
| 30KPA30A | 30.0 | 33.3 | 50 | 5000 | 55.2V @ 543.0A | 34 |
| 30KPA36A | 36.0 | 40.0 | 50 | 2000 | 61.8V @ 485.0A | 41 |
| 30KPA43A | 43.0 | 47.8 | 50 | 1000 | 73.0V @ 410.0A | 50 |
| 30KPA48A | 48.0 | 53.3 | 5 | 250 | 77.4V @ 388.0A | 56 |
| 30KPA58A | 58.0 | 64.4 | 5 | 20 | 92.4V @ 325.0A | 68 |
| 30KPA64A | 64.0 | 71.1 | 5 | 10 | 104.0V @ 294.0A | 76 |
| 30KPA70A | 70.0 | 77.8 | 5 | 10 | 109.0V @ 274.0A | 83 |
| 30KPA75A | 75.0 | 83.3 | 5 | 10 | 119.4V @ 251.0A | 89 |
| 30KPA90A | 90.0 | 100.0 | 5 | 10 | 147.0V @ 206.0A | 109 |
| 30KPA160A | 160.0 | 178.0 | 5 | 10 | 252.6V @ 119.0A | 195 |
| 30KPA180A | 180.0 | 200.0 | 5 | 10 | 291.0V @ 104.0A | 230 |
| 30KPA220A | 220.0 | 245.0 | 5 | 10 | 356.0V @ 84.0A | 269 |
| 30KPA260A | 260.0 | 289.0 | 5 | 10 | 416.0V @ 72.0A | 317 |
| 30KPA280A | 280.0 | 311.0 | 5 | 10 | 464.0V @ 65.0A | 342 |

Note 1: Part numbers shown are unidirectional devices. Add a "CA" suffix to specify bidirectional devices, such as 30KPA30CA. Devices shown are preferred voltages. Contact factory for additional voltages.

Note 2: V_F = 15 Volts @ 200A, 8.3ms (1/2 Sine Wave) - unidirectional devices only.

GRAPHS

FIGURE 1
PEAK PULSE POWER VS PULSE TIME

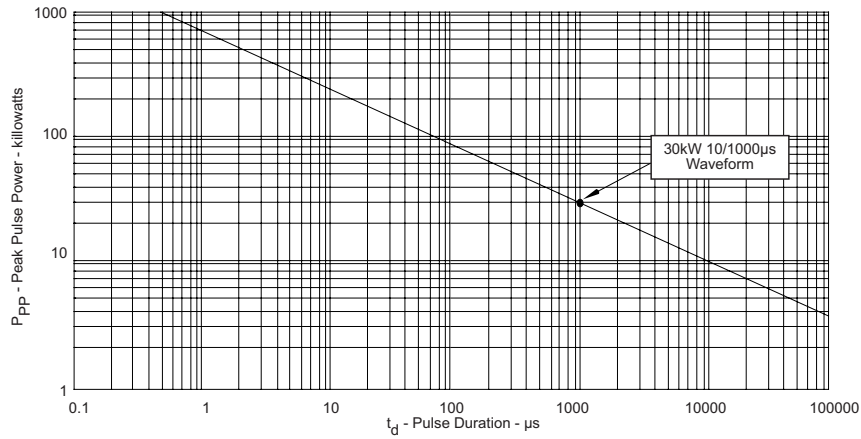


FIGURE 2
PULSE WAVE FORM

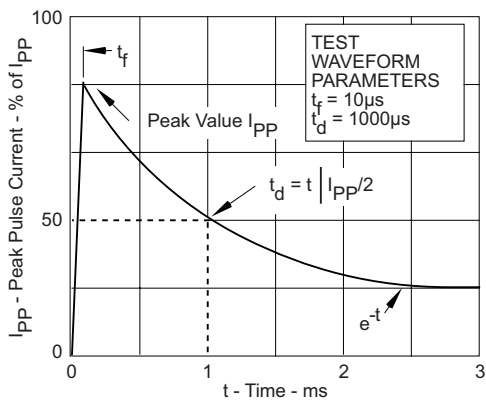
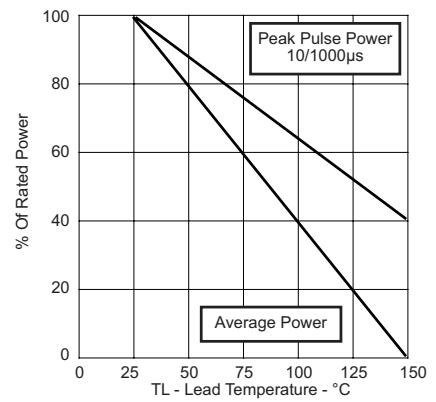
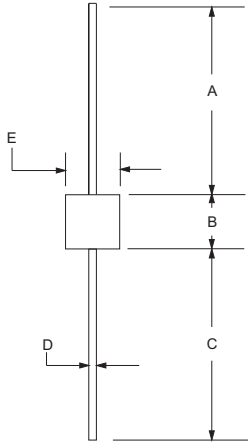
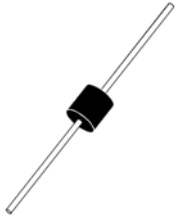


FIGURE 3
POWER DERATING CURVE



30KPA30A thru 30KPA280A

AXIAL LEAD PACKAGE OUTLINE & DIMENSIONS

| PACKAGE OUTLINE | | AXIAL LEAD | | | |
|--|-------------|---|-----------|-----------|--|
|  | |  | | | |
| PACKAGE DIMENSIONS | | | | | |
| DIM | MILLIMETERS | | INCHES | | |
| | MIN | MAX | MIN | MAX | |
| A | 24.5 | - | 1.00 | - | |
| B | 8.60 | 9.10 | 0.34 | 0.36 | |
| C | 24.5 | - | 1.00 | - | |
| D | 1.20 DIA | 1.30 DIA | 0.048 DIA | 0.052 DIA | |
| E | 8.60 | 9.10 | 0.34 | 0.36 | |
| NOTES | | | | | |
| 1. Dimensions are exclusive of mold flash and metal burrs. 2. Suffix -LF = Lead-Free, Pure-Tin Plating, i.e., 30KPA280A-LF. | | | | | |
| Outline & Dimensions: Rev 1 - 7/02, 06028 | | | | | |

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