

POWER TVS COMPONENT

APPLICATIONS

- ✓ Relay Drives
- ✓ Motor (Start/Stop) Back EMF Protection
- ✓ Module Lightning Protection

IEC COMPATIBILITY (EN61000-4)

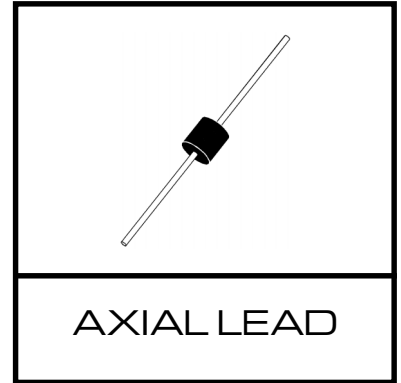
- ✓ 61000-4-5 (Surge): 48A, 8/20 μ s - L3(Line-Gnd), L1(Power) & L4 (Line-Line)

FEATURES

- ✓ 15,000 Watts Peak Pulse Power Dissipation per Line (10/1000 μ s)
- ✓ Unidirectional & Bidirectional Configurations
- ✓ Easy Mounting to Printed Circuit Boards
- ✓ Available in Voltage Types Ranging From: 17V to 220V

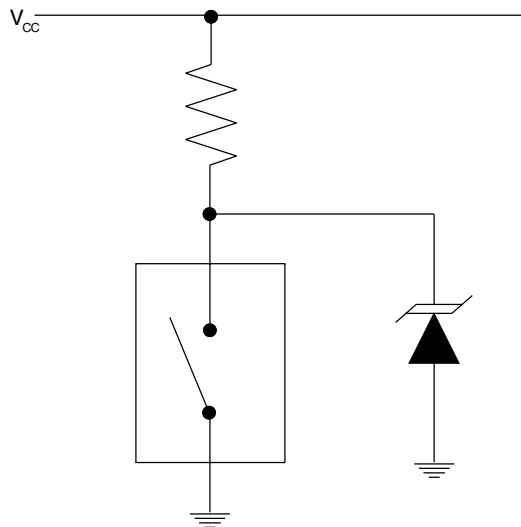
MECHANICAL CHARACTERISTICS

- ✓ Molded Case
- ✓ Weight 5 grams (Approximate)
- ✓ Flammability Rating UL 94V-0
- ✓ Positive Terminal Marked with Band - *Unidirectional Devices*
- ✓ Marking: Logo, Part Number & Date Code



APPLICATION

TYPICAL RELAY DRIVE PROTECTION



15KPA17A thru 15KPA220A

DEVICE CHARACTERISTICS

MAXIMUM RATINGS @ 25°C Unless Otherwise Specified			
PARAMETER	SYMBOL	VALUE	UNITS
Peak Pulse Power Dissipation ($t_p = 10/1000\mu s$) - See Fig. 1	P_{PP}	15,000	Watts
Forward Surge Rating (1/20 seconds) - See Note 2	I_F	200	Amps
Steady State Power Dissipation	P_D	1.0	Watts
Storage Temperature	T_{STG}	-55 to +150	°C
Operating Temperature	T_J	-55 to +150	°C

ELECTRICAL CHARACTERISTICS @ 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) @ 10/1000 μs V_C @ I_{PP}	TEMPERATURE COEFFICIENT OF $V_{(BR)}$ $\theta V_{(BR)}$ mV/°C
		MIN $V_{(BR)}$ VOLTS	@ I_T mA			
15KPA17A	17.0	18.9	50	5000	29.3V @ 512.0A	17
15KPA20A	20.0	22.2	20	1500	34.3V @ 437.0A	21
15KPA28A	28.0	31.1	5	25	47.5V @ 316.0A	31
15KPA30A	30.0	33.3	5	15	50.7V @ 296.0A	34
15KPA33A	33.0	36.7	5	10	54.8V @ 274.0A	38
15KPA36A	36.0	40.0	5	10	59.7V @ 251.0A	41
15KPA48A	48.0	53.3	5	10	77.7V @ 193.0A	56
15KPA54A	54.0	60.0	5	10	87.5V @ 171.0A	63
15KPA60A	60.0	66.7	5	10	97.3V @ 154.0A	71
15KPA70A	70.0	77.8	5	10	114.0V @ 132.0A	83
15KPA75A	75.0	83.3	5	10	122.0V @ 123.0A	89
15KPA85A	85.0	94.4	5	10	137.0V @ 109.0A	102
15KPA90A	90.0	100.0	5	10	146.0V @ 103.0A	109
15KPA160A	160.0	178.0	5	10	259.0V @ 58.0A	195
15KPA170A	170.0	189.0	5	10	275.0V @ 55.0A	207
15KPA180A	180.0	200.0	5	10	291.0V @ 52.0A	219
15KPA220A	220.0	245.0	5	10	356.0V @ 42.0A	269

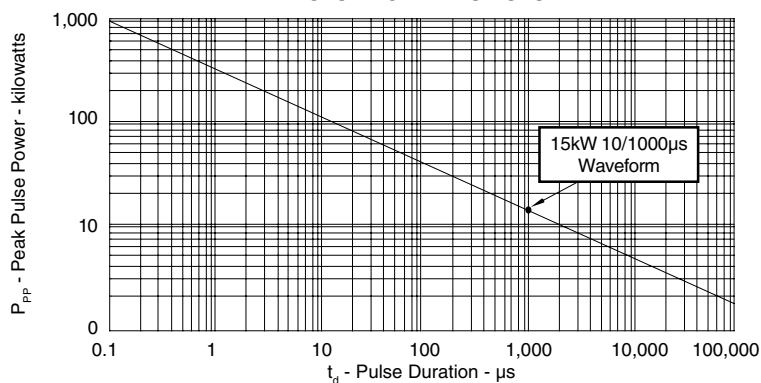
Note 1: Part numbers shown are unidirectional devices. Add a "CA" suffix to specify bidirectional devices, such as 15KPA20CA. Devices shown are preferred voltages. Contact factory for additional voltages.

Note 2: $V_F = 7.5$ Volts @ 200A, 8.3ms (1/2 Sine Wave) - unidirectional devices only.

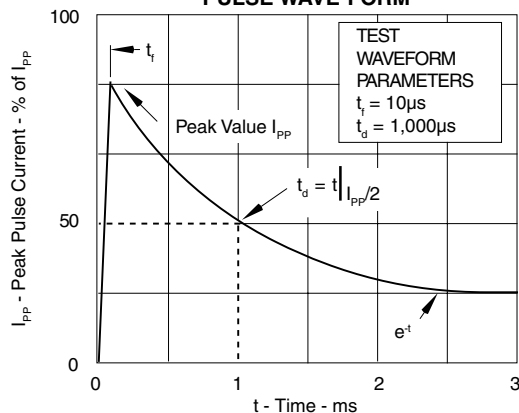
15KPA17A thru 15KPA220A

GRAPHS

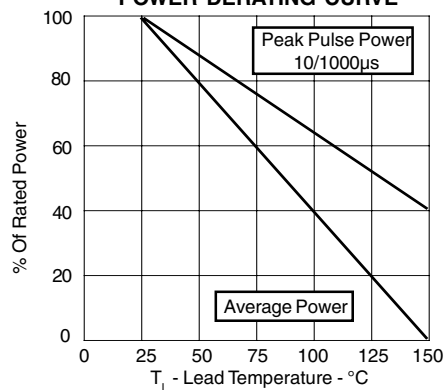
**FIGURE 1
PEAK PULSE POWER VS PULSE TIME**



**FIGURE 2
PULSE WAVE FORM**

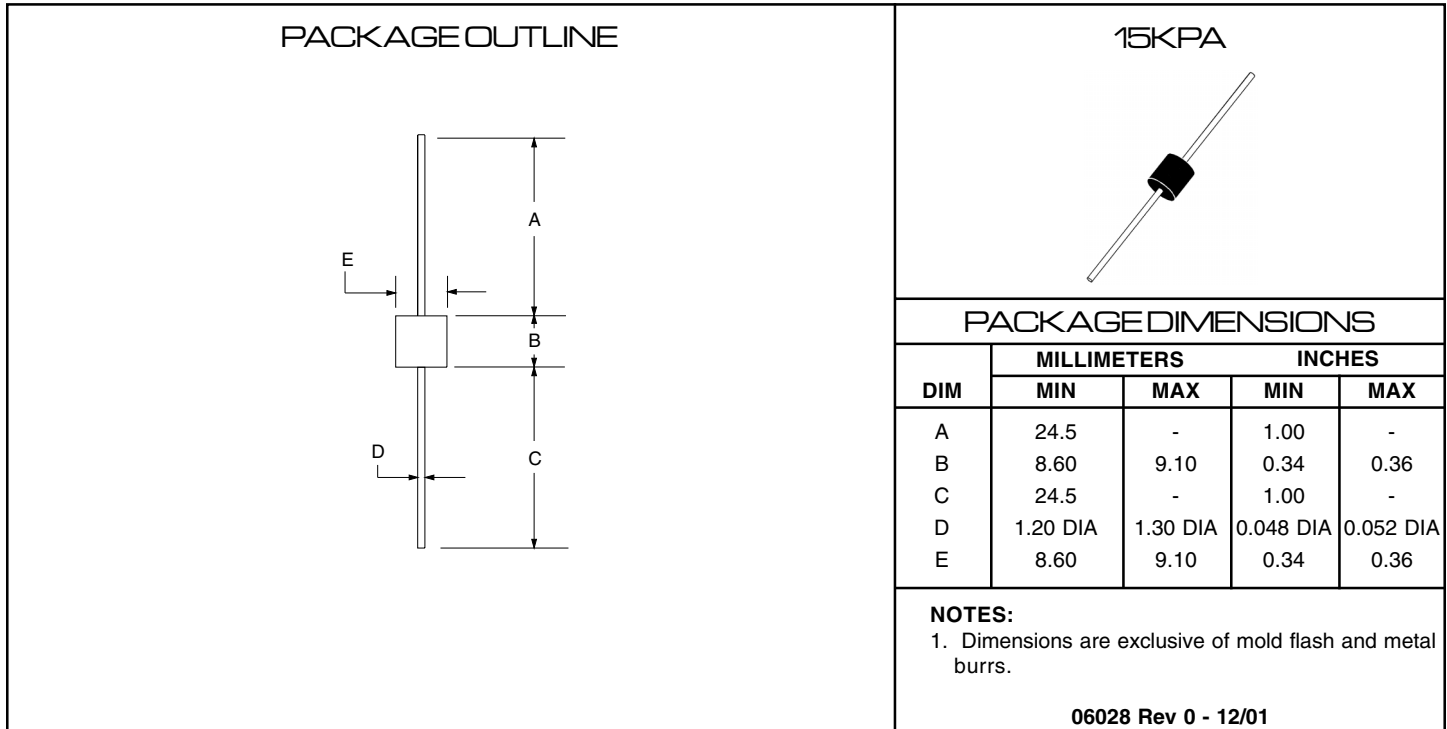


**FIGURE 3
POWER DERATING CURVE**



15KPA17A thru 15KPA220A

PACKAGE OUTLINE & DIMENSIONS



Protek Devices
 2929 South Fair Lane, Tempe, AZ 85282
 Tel: 602-431-8101 Fax: 602-431-2288
 E-Mail: sales@protekdevices.com
 Web Site: www.protekdevices.com

COPYRIGHT © ProTek Devices 2001

SPECIFICATIONS: ProTek reserves the right to change the electrical and or mechanical characteristics described herein without notice (except JEDEC).

DESIGN CHANGES: ProTek reserves the right to discontinue product lines without notice, and that the final judgement concerning selection and specifications is the buyer's and that in furnishing engineering and technical assistance, ProTek assumes no responsibility with respect to the selection or specifications of such products.