05024

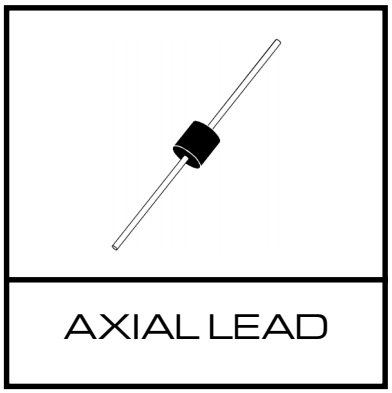
PROTEK DEVICES
. . . engineered solutions for the transient environment™

15KPA17A thru 15KPA220A

POWER TVS COMPONENT

APPLICATIONS

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



AXIAL LEAD

IEC COMPATIBILITY (EN61000-4)

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

FEATURES

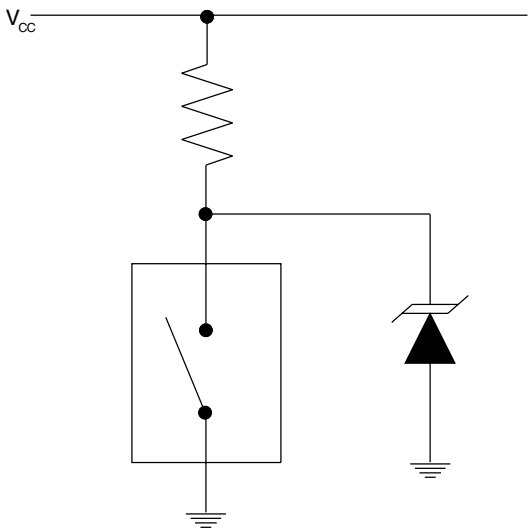
✔ 15,000 Watts Peak Pulse Power Dissipation per Line (10/1000µs)
✔ Unidirectional & Bidirectional Configurations
✔ Easy Mounting to Printed Circuit Boards
✔ Available in Voltage Types Ranging From: 17V to 220V

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



DEVICE CHARACTERISTICS

MAXIMUM RATINGS @ 25°C Unless Otherwise Specified			
PARAMETER	SYMBOL	VALUE	UNITS
Peak Pulse Power Dissipation (t_p =10/1000µs) - 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	^{0}C
Operating Temperature	T_J	-55 to +150	^{0}C

ELECTRICAL CHARACTERISTICS @ 25°C Unless Otherwise Specified						
PART NUMBER (Notes 1 & 2)	RATED STAND-OFF VOLTAGE	BREAKDOWN VOLTAGE		MAXIMUM LEAKAGE CURRENT	MAXIMUM CLAMPING VOLTAGE (See Fig. 2)	TEMPERATURE COEFFICIENT OF $V_{(BR)}$
	V_{WM} VOLTS	MIN $V_{(BR)}$ VOLTS	@I_T mA	@V_{WM} I_D µA	@ 10/1000µs V_C @ I_{PP}	$\theta V_{(BR)}$ mV/°C
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.*

GRAPHS

FIGURE 1
PEAK PULSE POWER VS PULSE TIME

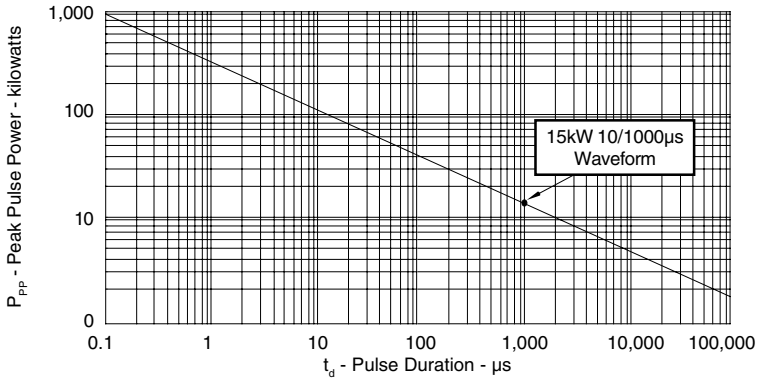


FIGURE 2
PULSE WAVE FORM

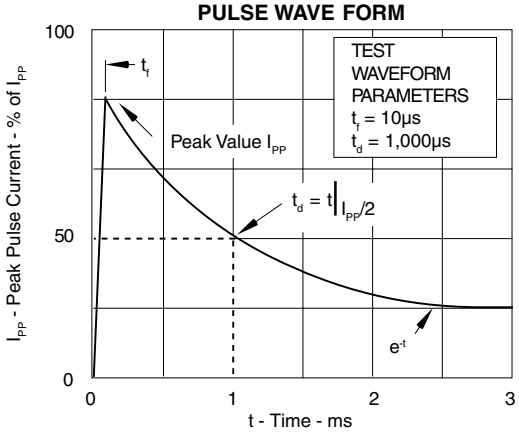
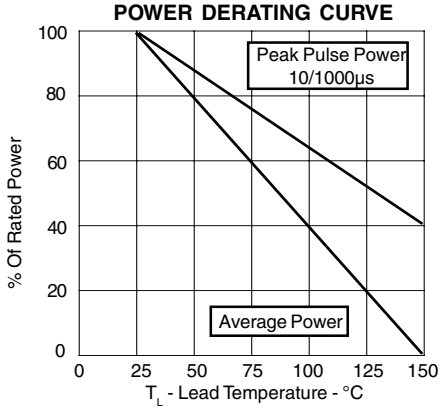
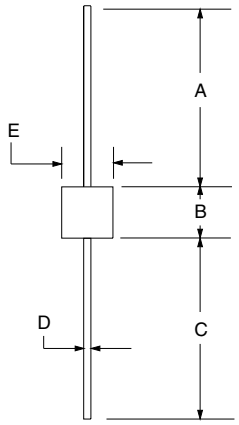


FIGURE 3
POWER DERATING CURVE

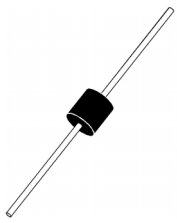


PACKAGE OUTLINE & DIMENSIONS

PACKAGE OUTLINE



15KPA



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.

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