

POWER TVS COMPONENT

APPLICATIONS

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

IEC COMPATIBILITY (EN61000-4)

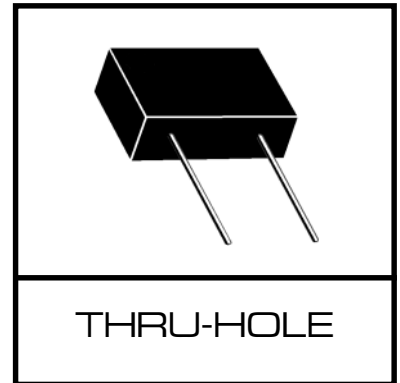
- ✓ 61000-4-5 (Surge): 48A, 8/20 μ s - L3(Line-Gnd), L1(Power) & L4 (Line-Line)

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

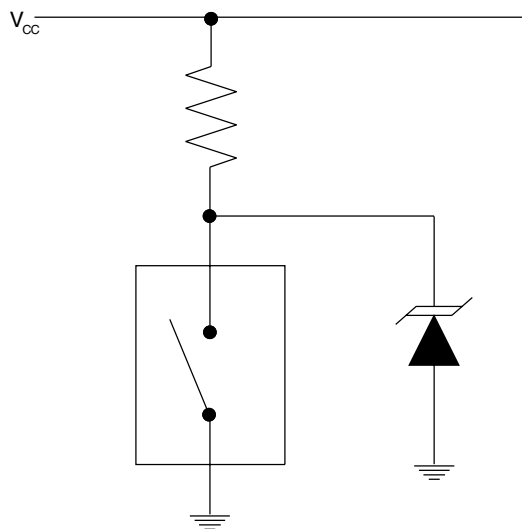
MECHANICAL CHARACTERISTICS

- ✓ Molded Case
- ✓ Weight 13 grams (Approximate)
- ✓ Flammability Rating UL 94V-0
- ✓ Positive Terminal Marked with Dot - *Unidirectional Devices Only*
- ✓ Marking: Logo & Part Number



APPLICATION

TYPICAL RELAY DRIVE PROTECTION



15KP17A thru 15KP220A

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

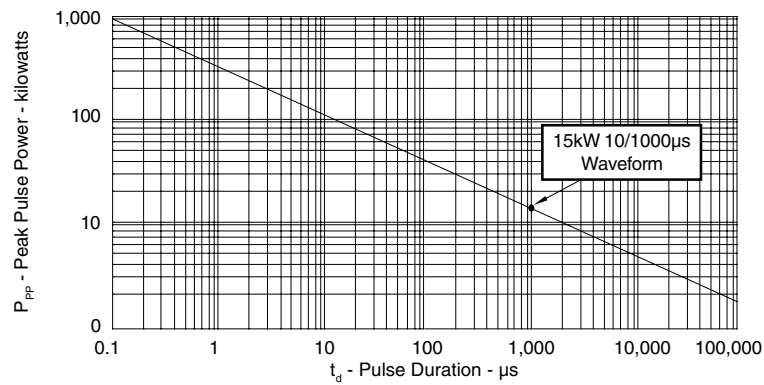
ELECTRICAL CHARACTERISTICS @ 25°C Unless Otherwise Specified						
PART NUMBER (Notes 1 & 2)	RATED STAND-OFF VOLTAGE V_{WM} VOLTS	BREAKDOWN VOLTAGE		MAXIMUM LEAKAGE CURRENT @ V_{WM} I_D μA	MAXIMUM CLAMPING VOLTAGE (See Fig. 2) @ 10/1000 μs V_C @ I_{PP}	TEMPERATURE COEFFICIENT OF $V_{(BR)}$ $\theta V_{(BR)}$ mV/°C
		MIN $V_{(BR)}$ VOLTS	@ I_T mA			
15KP17A	17.0	18.9	50	5000	29.3V @ 512.0A	17
15KP20A	20.0	22.2	20	1500	34.3V @ 437.0A	21
15KP28A	28.0	31.1	5	25	47.5V @ 316.0A	31
15KP30A	30.0	33.3	5	15	50.7V @ 296.0A	34
15KP33A	33.0	36.7	5	10	54.8V @ 274.0A	38
15KP36A	36.0	40.0	5	10	59.7V @ 251.0A	41
15KP48A	48.0	53.3	5	10	77.7V @ 193.0A	56
15KP54A	54.0	60.0	5	10	87.5V @ 171.0A	63
15KP60A	60.0	66.7	5	10	97.3V @ 154.0A	71
15KP70A	70.0	77.8	5	10	114.0V @ 132.0A	83
15KP75A	75.0	83.3	5	10	122.0V @ 123.0A	89
15KP85A	85.0	94.4	5	10	137.0V @ 109.0A	102
15KP90A	90.0	100.0	5	10	146.0V @ 103.0A	109
15KP160A	160.0	178.0	5	10	259.0V @ 58.0A	195
15KP170A	170.0	189.0	5	10	275.0V @ 55.0A	207
15KP180A	180.0	200.0	5	10	291.0V @ 52.0A	219
15KP220A	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 15KP20CA. Devices shown are preferred voltages. Contact factory for additional voltages.

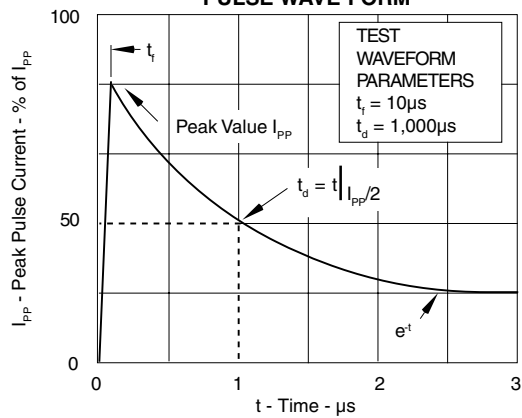
Note 2: $V_F = 7.5$ Volts @ 200A, 8.3ms (1/2 Sine Wave) - unidirectional devices only.

GRAPHS

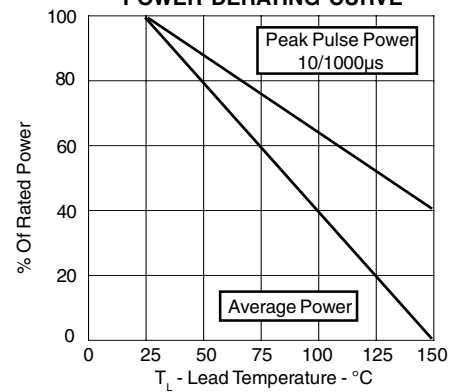
**FIGURE 1
PEAK PULSE POWER VS PULSE TIME**



**FIGURE 2
PULSE WAVE FORM**



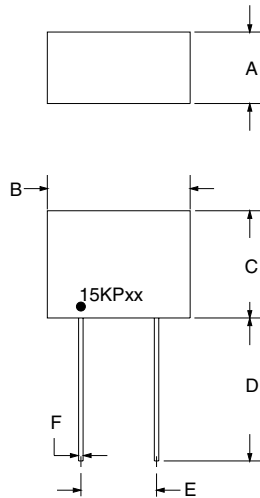
**FIGURE 3
POWER DERATING CURVE**



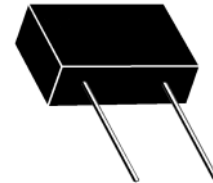
15KP17A thru 15KP220A

PACKAGE OUTLINE & DIMENSIONS

PACKAGE OUTLINE



15KP



PACKAGE DIMENSIONS

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	9.18	11.22	0.36	0.44
B	24.38	26.42	0.96	1.04
C	15.75	17.27	0.62	0.68
D	16.51	-	0.65	-
E	14.74	15.75	0.58	0.62
F	1.19	1.35	0.047	0.053

NOTES:

1. Dimensions are exclusive of mold flash and metal burrs.

06027 Rev 0 - 12/01

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