

## APPLICATIONS

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

## IEC COMPATIBILITY (EN61000-4)

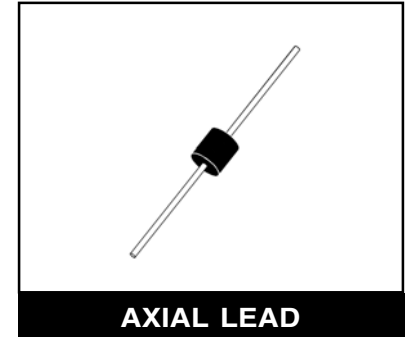
- ✓ 61000-4-5 (Surge): 48A, 8/20 $\mu$ s - L3 (Line-Gnd), L4 (Line-Line) & L1 (Power)

## 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

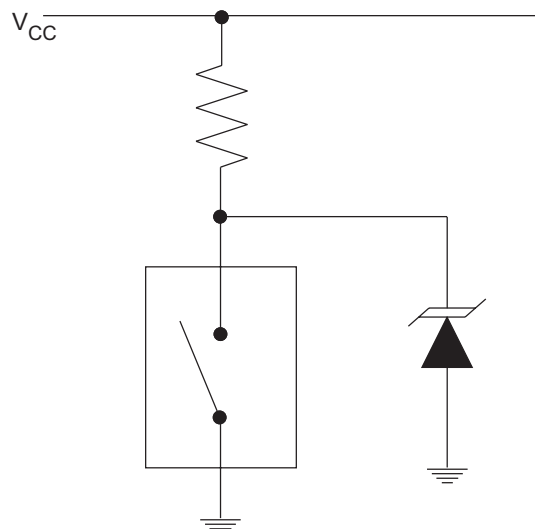
## MECHANICAL CHARACTERISTICS

- ✓ 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 <sub>PP</sub>	30,000	Watts
Forward Surge Rating (1/20 seconds) - See Note 2	I <sub>F</sub>	200	Amps
Steady State Power Dissipation	P <sub>P</sub>	1.0	Watts
Storage Temperature	T <sub>STG</sub>	-55 to 150	°C
Operating Temperature	T <sub>L</sub>	-55 to 150	°C

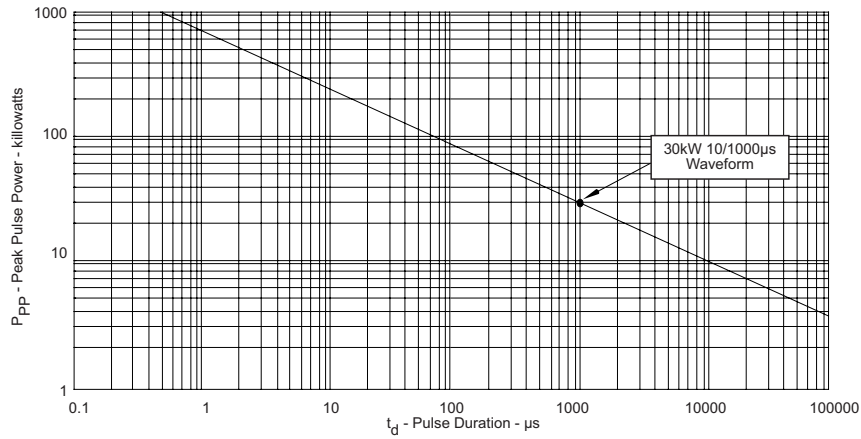
ELECTRICAL CHARACTERISTICS PER LINE @ 25°C Unless Otherwise Specified						
PART NUMBER (Notes 1 & 2)	RATED STAND-OFF VOLTAGE  V <sub>WM</sub> VOLTS	BREAKDOWN VOLTAGE		MAXIMUM LEAKAGE CURRENT  @ V <sub>WM</sub> I <sub>D</sub> µA	MAXIMUM CLAMPING VOLTAGE (See Fig. 2)  @ 10/1000µs V <sub>C</sub> @ I <sub>PP</sub>	TEMPERATURE COEFFICIENT OF V <sub>(BR)</sub>  qV <sub>(BR)</sub> mV/°C
		MIN V <sub>(BR)</sub> VOLTS	@ I <sub>T</sub> 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.*

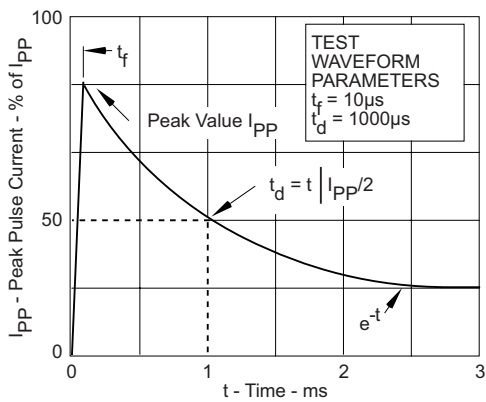
**Note 2:** V<sub>F</sub> = 15 Volts @ 200A, 8.3ms (1/2 Sine Wave) - *unidirectional devices only.*

**GRAPHS**

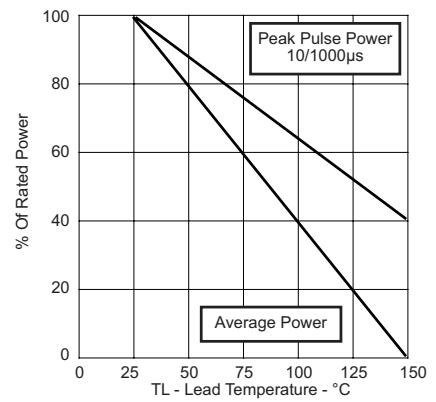
**FIGURE 1  
 PEAK PULSE POWER VS PULSE TIME**



**FIGURE 2  
 PULSE WAVE FORM**

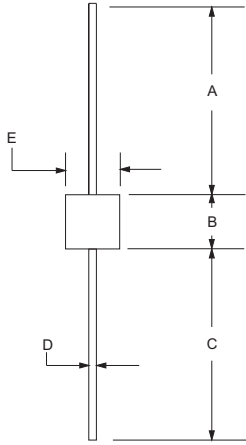
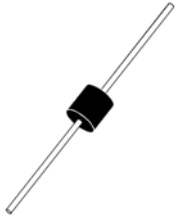


**FIGURE 3  
 POWER DERATING CURVE**



# 30KPA30A thru 30KPA280A

## AXIAL LEAD PACKAGE OUTLINE & DIMENSIONS

PACKAGE OUTLINE		AXIAL LEAD			
					
<b>PACKAGE DIMENSIONS</b>					
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	
<b>NOTES</b>					
1. Dimensions are exclusive of mold flash and metal burrs. 2. Suffix -LF = Lead-Free, Pure-Tin Plating, i.e., 30KPA280A-LF.					
<b>Outline &amp; Dimensions: Rev 1 - 7/02, 06028</b>					

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