



30KPA30A thru 30KPA280A

POWER TVS COMPONENT

APPLICATIONS

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

IEC COMPATIBILITY (EN61000-4)

- ✓ 61000-4-5 (Surge): 8/20 μ s - 95A, L4 (Line-Gnd), 167A, L3 (Power) & 48A, L4 (Line-Line)

FEATURES

- ✓ 30,000 Watts Peak Pulse Power per Line (10/1000 μ s)
- ✓ Unidirectional & Bidirectional Configurations
- ✓ Easy Mounting to Printed Circuit Boards
- ✓ Available in Voltage Types Ranging From: 30V to 280V

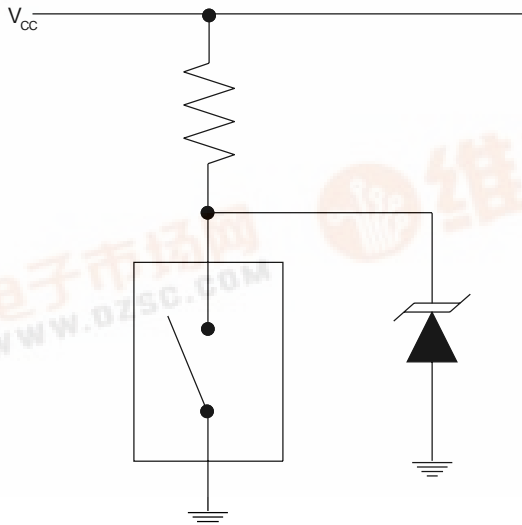
MECHANICAL CHARACTERISTICS

- ✓ Molded Case
- ✓ Weight 2.5 grams (Approximate)
- ✓ Flammability Rating UL 94V-0
- ✓ Positive Terminal Marked with Band - *Unidirectional Devices*
- ✓ Marking: Logo & Part Number



APPLICATION

TYPICAL RELAY DRIVE PROTECTION



30KPA30A thru 30KPA280A

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}	30,000	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						
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			
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
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 @ 104A	230
30KPA260A	260.0	289.0	5	10	416.0V @ 72.0A	317
30KPA280A	280.0	311.0	5	10	464.0V @ 65.0A	342

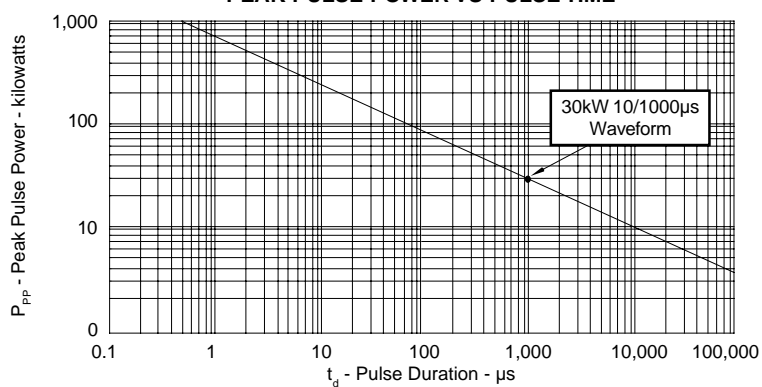
Note 1: Part numbers shown are unidirectional devices. Add a "CA" suffix to specify bidirectional devices, such as 30KPA30CA. Devices shown are preferred voltages. Contact factory for additional voltages.

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

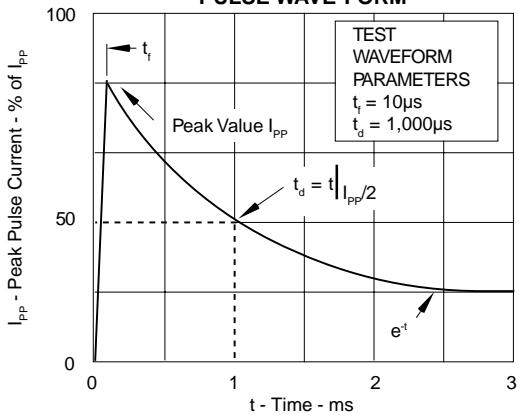
30KPA30A thru 30KPA280A

GRAPHS

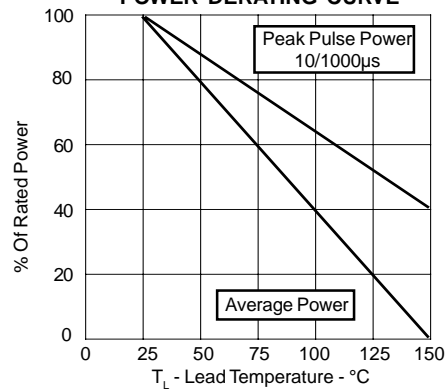
**FIGURE 1
PEAK PULSE POWER VS PULSE TIME**



**FIGURE 2
PULSE WAVE FORM**

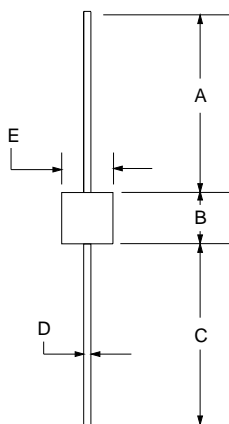
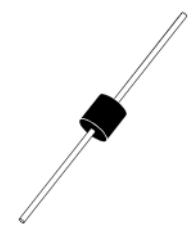


**FIGURE 3
POWER DERATING CURVE**



30KPA30A thru 30KPA280A

PACKAGE OUTLINE & DIMENSIONS

<p>PACKAGE OUTLINE</p> 	<p>30KPA</p> 																																		
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	<table border="1" style="margin: auto; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">DIM</th> <th colspan="2">MILLIMETERS</th> <th colspan="2">INCHES</th> </tr> <tr> <th>MIN</th> <th>MAX</th> <th>MIN</th> <th>MAX</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>24.5</td> <td>-</td> <td>1.00</td> <td>-</td> </tr> <tr> <td>B</td> <td>8.60</td> <td>9.10</td> <td>0.34</td> <td>0.36</td> </tr> <tr> <td>C</td> <td>24.5</td> <td>-</td> <td>1.00</td> <td>-</td> </tr> <tr> <td>D</td> <td>1.20 DIA</td> <td>1.30 DIA</td> <td>0.048 DIA</td> <td>0.052 DIA</td> </tr> <tr> <td>E</td> <td>8.60</td> <td>9.10</td> <td>0.34</td> <td>0.36</td> </tr> </tbody> </table>	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
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<p>NOTES: 1. Dimensions are exclusive of mold flash and metal burrs.</p>																																			
<p>06028 Rev 0 - 12/01</p>																																			

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