

# 15KPA17A thru 15KPA280CA

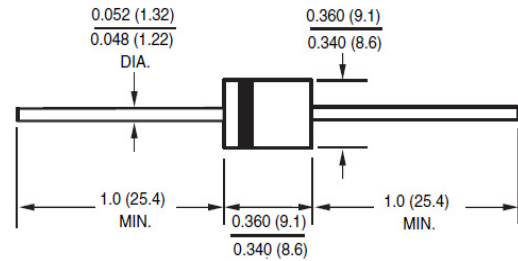
Transient Voltage Suppressors  
 Peak Pulse Power 15KW Stand-off Voltage 17 to 280V

## Features

- Glass passivated chip
- 15000 W peak pulse power capability with a 10/1000  $\mu$ s waveform, repetitive rate (duty cycle):0.01 %
- Low Leakage
- Excellent clamping capability
- Fast response time
- RoHS compliant



Package: P600



Dimensions in inches (millimeters)

## Mechanical Data

- Case: molded plastic
- Epoxy: UL 94V-0 rate flame retardant
- Lead: Solderable per MIL-STD-202, method 208 guaranteed
- Polarity: Color band denotes cathode end except Bipolar
- Mounting position: Any

## Absolute Maximum Ratings ( $T_A=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Value	UNIT
Peak power dissipation with a 10/1000 $\mu$ s waveform <sup>(1)</sup>	$P_{PP}$	15000	W
Peak pulse current with a 10/1000 $\mu$ s waveform <sup>(1)</sup>	$I_{PP}$	See Next Table	A
Power dissipation on infinite heatsink at $T_L = 75^\circ\text{C}$	$P_D$	8.0	W
Peak forward surge current, 8.3 ms single half sine-wave unidirectional only <sup>(2)</sup>	$I_{FSM}$	500	A
Operating junction and storage temperature range	$T_J, T_{STG}$	-55 to +150	$^\circ\text{C}$

Note:

(1)Non-repetitive current pulse per Fig.5 and derated above  $T_A= 25^\circ\text{C}$  per Fig.1

(2)Measured on 8.3 ms single half sine-wave or equivalent square wave, duty cycle = 4 pulses per minute maximum

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## Electrical Characteristics (T<sub>A</sub>=25°C unless otherwise specified)

Part Number (Uni)	Part Number (Bi)	Breakdown Voltage V <sub>BR</sub> @ I <sub>T</sub>		Maximum Reverse Leakage I <sub>R</sub> @V <sub>RWM</sub> ( $\mu$ A)	Working Peak Reverse Voltage V <sub>RWM</sub> (V)	Maximum Reverse Surge Current I <sub>pp</sub> (A)	Maximum Clamping Voltage V <sub>C</sub> @I <sub>pp</sub> (V)
		Min (V)	I <sub>T</sub> (mA)				
15KPA17A	15KPA17CA	18.99	50	5000	17	515.4	29.3
15KPA18A	15KPA18CA	20.11	50	5000	18	488.7	30.9
15KPA20A	15KPA20CA	22.34	20	1500	20	440.2	34.3
15KPA22A	15KPA22CA	24.57	10	500	22	407.0	37.1
15KPA24A	15KPA24CA	26.81	5	150	24	371.0	40.7
15KPA26A	15KPA26CA	29.04	5	50	26	343.2	44.0
15KPA28A	15KPA28CA	31.28	5	25	28	317.9	47.5
15KPA30A	15KPA30CA	33.51	5	15	30	297.8	50.7
15KPA33A	15KPA33CA	36.90	5	2	33	276.1	54.7
15KPA36A	15KPA36CA	40.20	5	2	36	252.5	59.8
15KPA40A	15KPA40CA	44.70	5	2	40	229.5	65.8
15KPA43A	15KPA43CA	48.00	5	2	43	216.3	69.8
15KPA45A	15KPA45CA	50.30	5	2	45	207.4	72.8
15KPA48A	15KPA48CA	53.60	5	2	48	194.3	77.7
15KPA51A	15KPA51CA	57.00	5	2	51	182.1	82.9
15KPA54A	15KPA54CA	60.30	5	2	54	172.2	87.7
15KPA58A	15KPA58CA	64.80	5	2	58	161.0	93.8
15KPA60A	15KPA60CA	67.00	5	2	60	155.0	97.4
15KPA64A	15KPA64CA	71.50	5	2	64	144.9	104.2
15KPA70A	15KPA70CA	78.20	5	2	70	132.9	113.6
15KPA75A	15KPA75CA	83.80	5	2	75	123.8	122.0
15KPA78A	15KPA78CA	87.10	5	2	78	119.7	126.1
15KPA85A	15KPA85CA	94.90	5	2	85	109.7	137.6
15KPA90A	15KPA90CA	100.50	5	2	90	103.7	145.6
15KPA100A	15KPA100CA	111.70	5	2	100	93.6	161.3
15KPA110A	15KPA110CA	122.90	5	2	110	84.5	178.6
15KPA120A	15KPA120CA	134.00	5	2	120	78.5	192.3
15KPA130A	15KPA130CA	145.20	5	2	130	72.5	208.3
15KPA150A	15KPA150CA	167.60	5	2	150	62.4	241.9
15KPA160A	15KPA160CA	178.70	5	2	160	58.4	258.6
15KPA170A	15KPA170CA	189.90	5	2	170	55.4	272.7
15KPA180A	15KPA180CA	201.10	5	2	180	52.3	288.5
15KPA200A	15KPA200CA	223.40	5	2	200	47.3	319.1
15KPA220A	15KPA220CA	245.70	5	2	220	35.2	428.6
15KPA240A	15KPA240CA	268.10	5	2	240	39.3	384.6
15KPA260A	15KPA260CA	290.40	5	2	260	36.2	416.7
15KPA280A	15KPA280CA	312.80	5	2	280	33.2	454.5

**Note:**

1. For Bi-Directional devices having V<sub>R</sub> of 30 volts and under, the I<sub>R</sub> limit is double

## Typical Characteristic Curves

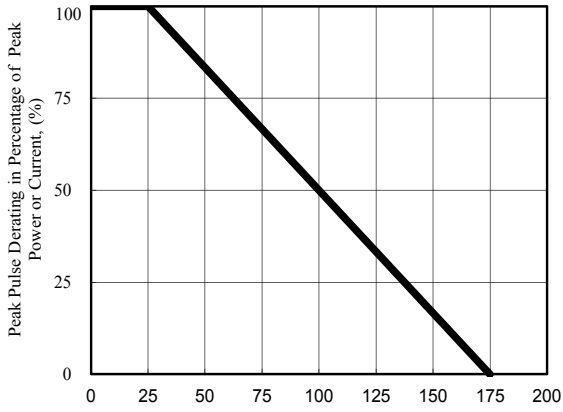


Fig. 1 - Pulse Derating Curve

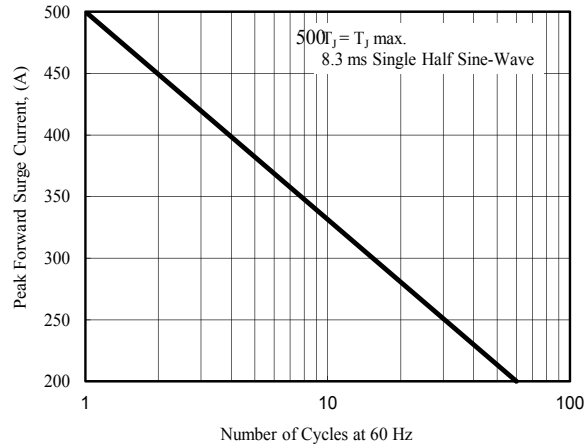


Fig. 2 - Maximum Non-Repetitive Surge Current

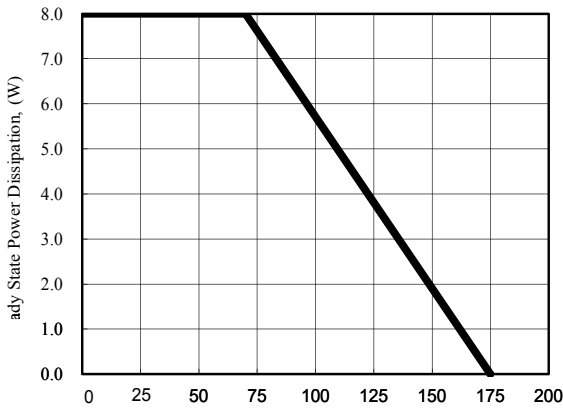


Fig. 3 - Steady State Power Derating Curve

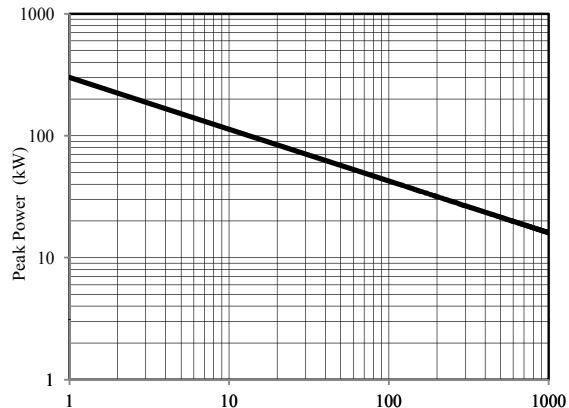


Fig. 4 - Peak Pulse Power Rating Curve

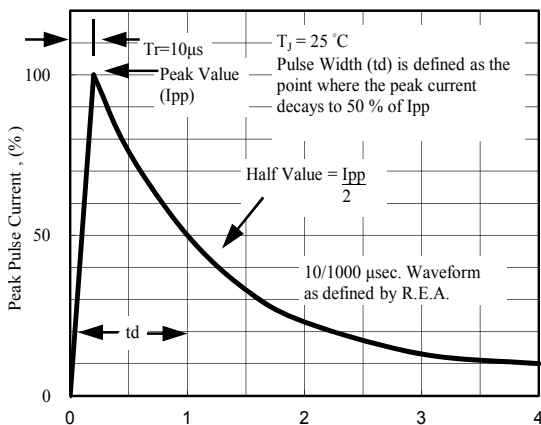


Fig. 5 - Pulse Waveform

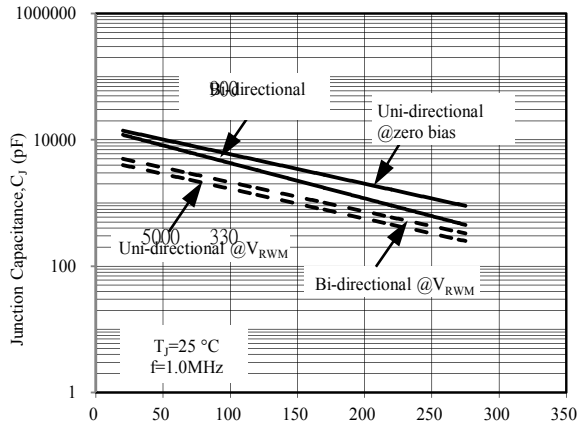


Fig. 6 - Typical Junction Capacitance