

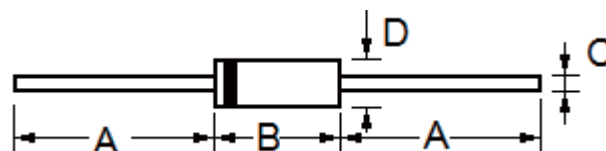
## Transient Voltage Suppression Diodes

### Axial Leaded 400W TVS Diode P4KE series

The P4KE Series is designed specifically to protect sensitive electronic equipment from voltage transients induced by lightning and other transient voltage events.

#### Dimension

Dim	Millimeters		Inches	
	Min	Max	Min	Max
A	25.4	---	1.000	---
B	4.20	5.20	0.165	0.205
C	0.70	0.90	0.028	0.034
D	2.00	2.70	0.080	0.107



DO-41

#### Maximum Ratings And Thermal Characteristics

Rating at 25°C ambient temperature unless otherwise specified

Parameter	Symbol	Value	Units
Peak Power Dissipation (Note 1.) @ $T_L = 25^\circ\text{C}$ , Pulse Width = 1 ms	$P_{PK}$	400	W
Forward Surge Current (Note 2.) @ $T_A = 25^\circ\text{C}$	$I_{FSM}$	100	A
Power Dissipation On Infinite Heatsink, @ $T_A = 50^\circ\text{C}$	$P_{M(AV)}$	5.0	W
Thermal Resistance Junction To Ambient Air (Note 3.)	$R_{\theta JA}$	100	$^\circ\text{C/W}$
Thermal Resistance Junction To Leads	$R_{\theta JL}$	20	$^\circ\text{C/W}$
Storage Temperature Range	$T_{STG}$	-55 to 150	$^\circ\text{C}$
Operating Junction Temperature Range	$T_J$	-55 to 150	$^\circ\text{C}$

- 1) 10 X 1000 us, non-repetitive
- 2) 1/2 sine wave (or equivalent square wave), PW = 8.3 ms, duty cycle = 4 pulses per minute maximum
- 3) Mounted on minimum recommended pad layout

#### Electrical Characteristics

(Ratings at 25°C ambient temperature unless otherwise specified).

Part Number (Uni)	Part Number (Bi)	Reverse Stand off Voltage VRWM (Volts)	Breakdown Voltage VBR (Volts) MIN. @ IT		Test Current IT (mA)	Maximum Clamping Voltage VC @ IPP (Volts)	Maximum Peak Pulse Current IPP (A)	Maximum Reverse Leakage IR @ VRWM ( $\mu\text{A}$ )
			MIN	MAX				
P4KE6.8A	P4KE6.8CA	5.8	6.45	7.14	10	10.5	39.00	300
P4KE7.5A	P4KE7.5CA	6.4	7.13	7.88	10	11.3	36.30	200



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			MIN	MAX				
			P4KE8.2A	P4KE8.2CA				
P4KE9.1A	P4KE9.1CA	7.78	8.65	9.55	1	13.4	30.60	50
P4KE10A	P4KE10CA	8.55	9.50	10.50	1	14.5	28.30	10
P4KE11A	P4KE11CA	9.87	10.50	11.60	1	15.6	26.30	1
P4KE12A	P4KE12CA	10.71	11.40	12.60	1	16.7	24.60	1
P4KE13A	P4KE13CA	11.66	12.40	13.70	1	18.2	22.50	1
P4KE15A	P4KE15CA	13.44	14.30	15.80	1	21.2	19.30	1
P4KE16A	P4KE16CA	14.28	15.20	16.80	1	22.5	18.20	1
P4KE18A	P4KE18CA	16.07	17.10	18.90	1	25.5	16.10	1
P4KE20A	P4KE20CA	17.96	19.00	21.00	1	27.7	14.80	1
P4KE22A	P4KE22CA	19.74	20.90	23.10	1	30.6	13.40	1
P4KE24A	P4KE24CA	21.53	22.80	25.20	1	33.2	12.30	1
P4KE27A	P4KE27CA	24.26	25.70	28.40	1	37.5	10.90	1
P4KE30A	P4KE30CA	26.88	28.50	31.50	1	41.4	9.90	1
P4KE33A	P4KE33CA	29.61	31.40	34.70	1	45.7	9.00	1
P4KE36A	P4KE36CA	32.34	34.20	37.80	1	49.9	8.20	1
P4KE39A	P4KE39CA	34.97	37.10	41.00	1	53.9	7.60	1
P4KE43A	P4KE43CA	38.64	40.90	45.20	1	59.3	6.90	1
P4KE47A	P4KE47CA	42.21	44.70	49.40	1	64.8	6.30	1
P4KE51A	P4KE51CA	45.78	48.50	53.60	1	70.1	5.80	1
P4KE56A	P4KE56CA	50.19	53.20	58.80	1	77.0	5.30	1
P4KE62A	P4KE62CA	55.65	58.90	65.10	1	85.0	4.80	1
P4KE68A	P4KE68CA	61.01	64.60	71.40	1	92.0	4.50	1
P4KE75A	P4KE75CA	67.31	71.30	78.80	1	103.0	4.00	1
P4KE82A	P4KE82CA	73.61	77.90	86.10	1	113.0	3.60	1
P4KE91A	P4KE91CA	81.69	86.50	95.50	1	125.0	3.30	1
P4KE100A	P4KE100CA	89.78	95.00	105.00	1	137.0	3.00	1
P4KE110A	P4KE110CA	98.70	105.00	116.00	1	152.0	2.70	1
P4KE120A	P4KE120CA	107.10	114.00	126.00	1	165.0	2.50	1
P4KE130A	P4KE130CA	116.55	124.00	137.00	1	179.0	2.30	1
P4KE150A	P4KE150CA	134.40	143.00	158.00	1	207.0	2.00	1
P4KE160A	P4KE160CA	142.80	152.00	168.00	1	219.0	1.90	1



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			MIN	MAX				
P4KE170A	P4KE170CA	152.25	162.00	179.00	1	234.0	1.80	1
P4KE180A	P4KE180CA	161.70	171.00	189.00	1	246.0	1.70	1
P4KE200A	P4KE200CA	179.55	190.00	210.00	1	274.0	1.50	1
P4KE220A	P4KE220CA	194.25	209.00	231.00	1	328.0	1.30	1
P4KE250A	P4KE250CA	224.70	237.00	263.00	1	344.0	1.20	1
P4KE300A	P4KE300CA	268.80	285.00	315.00	1	414.0	1.00	1
P4KE350A	P4KE350CA	315.00	332.00	368.00	1	482.0	0.85	1
P4KE400A	P4KE400CA	359.10	380.00	420.00	1	548.0	0.75	1
P4KE440A	P4KE440CA	394.80	418.00	462.00	1	602.0	0.68	1

Typical Characteristics

Fig1. Pulse Dearting Curve

Fig2. Maximum Non-Repetitive Peak Forward Surge Current

Fig3. Pulse Waveform

Fig4. Typical Junction Capacitance

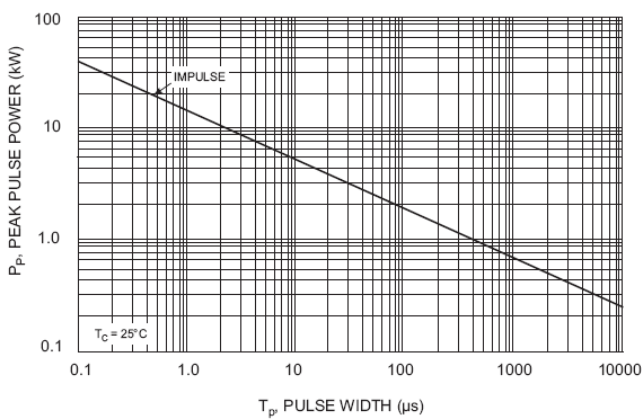


Fig5. Peak Pulse Power Rating curve

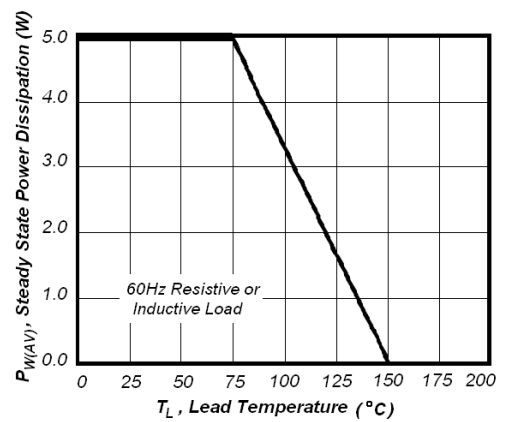


Fig6. Steady State Power Derating Curve