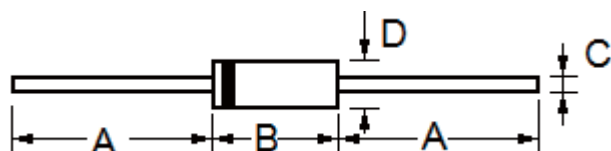


## Transient Voltage Suppression Diodes

### 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.



DO-41

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

### 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	$^\circ\text{C/W}$
Operating & 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 (μ A)
			MIN	MAX				
P4KE6.8A	P4KE6.8CA	5.8	6.45	7.14	10	10.5	39	300
P4KE7.5A	P4KE7.5CA	6.4	7.13	7.88	10	11.3	36.3	200
P4KE8.2A	P4KE8.2CA	7.02	7.79	8.61	10	12.1	33.9	100
P4KE9.1A	P4KE9.1CA	7.78	8.65	9.55	1	13.4	30.6	50
P4KE10A	P4KE10CA	8.55	9.5	10.5	1	14.5	28.3	10
P4KE11A	P4KE11CA	9.87	10.5	11.6	1	15.6	26.3	1
P4KE12A	P4KE12CA	10.71	11.4	12.6	1	16.7	24.6	1
P4KE13A	P4KE13CA	11.66	12.4	13.7	1	18.2	22.5	1
P4KE15A	P4KE15CA	13.44	14.3	15.8	1	21.2	19.3	1
P4KE16A	P4KE16CA	14.28	15.2	16.8	1	22.5	18.2	1
P4KE18A	P4KE18CA	16.07	17.1	18.9	1	25.5	16.1	1
P4KE20A	P4KE20CA	17.96	19	21	1	27.7	14.8	1
P4KE22A	P4KE22CA	19.74	20.9	23.1	1	30.6	13.4	1
P4KE24A	P4KE24CA	21.53	22.8	25.2	1	33.2	12.3	1
P4KE27A	P4KE27CA	24.26	25.7	28.4	1	37.5	10.9	1
P4KE30A	P4KE30CA	26.88	28.5	31.5	1	41.4	9.9	1
P4KE33A	P4KE33CA	29.61	31.4	34.7	1	45.7	9	1
P4KE36A	P4KE36CA	32.34	34.2	37.8	1	49.9	8.2	1
P4KE39A	P4KE39CA	34.97	37.1	41	1	53.9	7.6	1
P4KE43A	P4KE43CA	38.64	40.9	45.2	1	59.3	6.9	1
P4KE47A	P4KE47CA	42.21	44.7	49.4	1	64.8	6.3	1
P4KE51A	P4KE51CA	45.78	48.5	53.6	1	70.1	5.8	1
P4KE56A	P4KE56CA	50.19	53.2	58.8	1	77	5.3	1
P4KE62A	P4KE62CA	55.65	58.9	65.1	1	85	4.8	1
P4KE68A	P4KE68CA	61.01	64.6	71.4	1	92	4.5	1
P4KE75A	P4KE75CA	67.31	71.3	78.8	1	103	4	1
P4KE82A	P4KE82CA	73.61	77.9	86.1	1	113	3.6	1
P4KE91A	P4KE91CA	81.69	86.5	95.5	1	125	3.3	1
P4KE100A	P4KE100CA	89.78	95	105	1	137	3	1
P4KE110A	P4KE110CA	98.7	105	116	1	152	2.7	1
P4KE120A	P4KE120CA	107.1	114	126	1	165	2.5	1
P4KE130A	P4KE130CA	116.55	124	137	1	179	2.3	1
P4KE150A	P4KE150CA	134.4	143	158	1	207	2	1
P4KE160A	P4KE160CA	142.8	152	168	1	219	1.9	1
P4KE170A	P4KE170CA	152.25	162	179	1	234	1.8	1
P4KE180A	P4KE180CA	161.7	171	189	1	246	1.7	1
P4KE200A	P4KE200CA	179.55	190	210	1	274	1.5	1
P4KE220A	P4KE220CA	194.25	209	231	1	328	1.3	1

**Typical Characteristics**

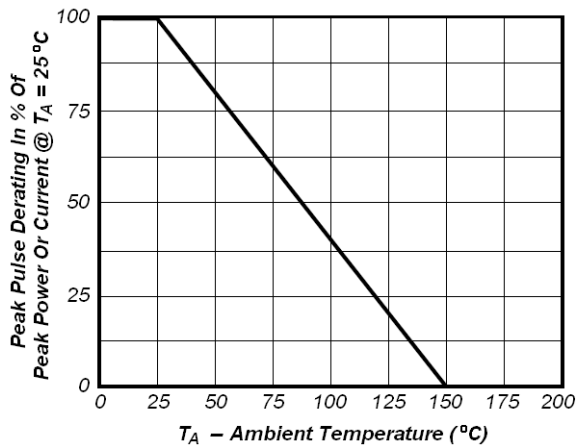


Fig1. Pulse Dearing Curve

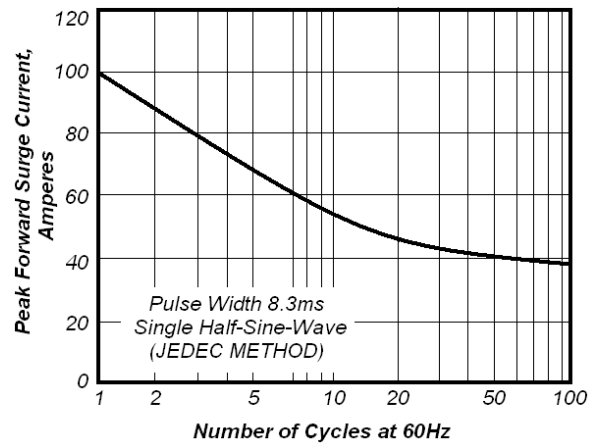


Fig2. Maximum Non-Repetitive Peak Forward Surge Current

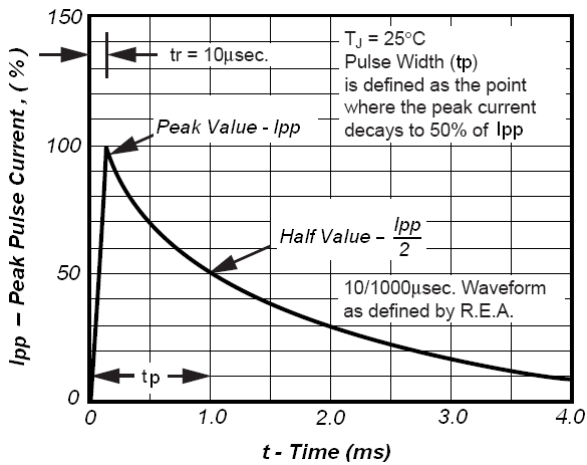


Fig3. Pulse Waveform

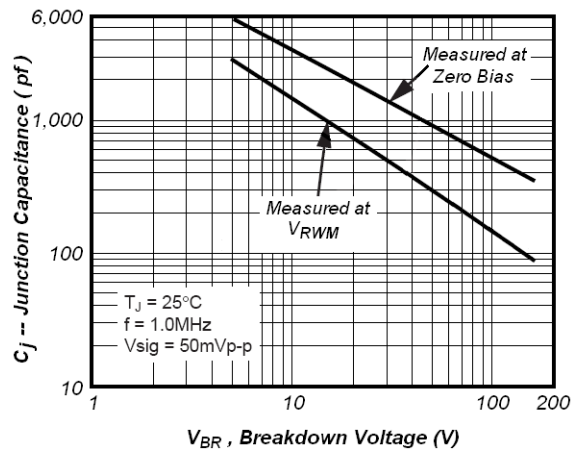


Fig4. Typical Junction Capacitance

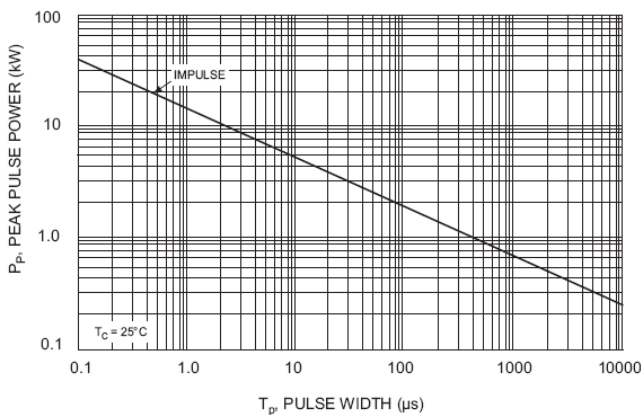


Fig5. Peak Pulse Power Rating curve

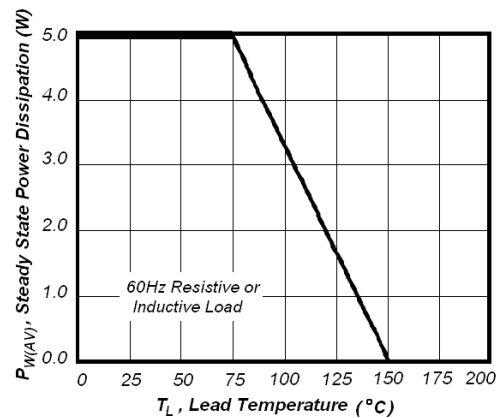


Fig6. Steady State Power Derating Curv