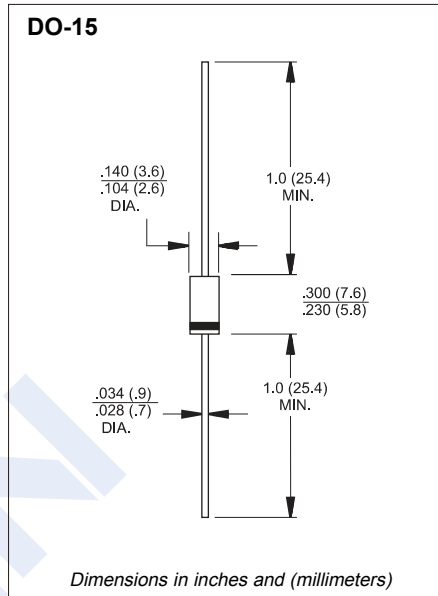
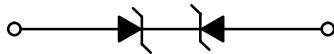


Zener Diodes

P6KE6.8CA ~ P6KE200CA (K6KE6.8CA ~ K6KE200CA)

■ Features

- Working Peak Reverse Voltage Range – 5.8 to 171 V
- Peak Power – 600 W @ 1 ms
- ESD Rating of class 3 (>16 KV) per Human Body Model
- Low Leakage < 5uA above 10 V
- Maximum Clamp Voltage @ Peak Pulse Current

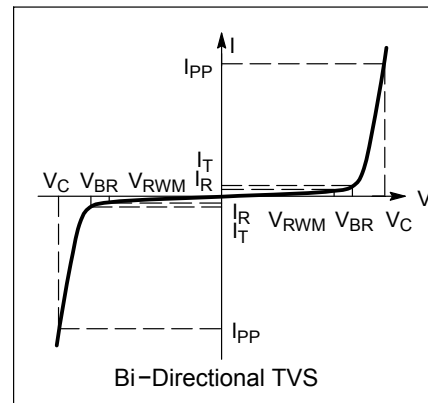


■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
Peak Power Dissipation	P_{PK}	600	W
Steady State Power Dissipation @ $T_L \leq 75^\circ\text{C}$, Lead Length = 3/8"	P_D	5	
Derated above $T_L = 75^\circ\text{C}$		50	mW/°C
Thermal Resistance Junction to Lead	$R_{\theta JL}$	20	°C/W
Junction Temperature	T_J	175	°C
Storage Temperature range	T_{stg}	-55 to 175	

■ ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Symbol	Parameter
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
V_{RWM}	Working Peak Reverse Voltage
I_R	Maximum Reverse Leakage Current @ V_{RWM}
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current
ΘV_{BR}	Maximum Temperature Variation of V_{BR}



Zener Diodes

P6KE6.8CA ~ P6KE200CA

(K6KE6.8CA ~ K6KE200CA)

■ Electrical Characteristics Ta = 25°C

Device	Device Marking	V _{RWM} (Note 1) (Volts)	I _R @ V _{RWM} (μA)	Breakdown Voltage				V _C @ I _{PP} (Note 3)		θV _{BR} (%/°C)
				V _{BR} (Note 2) (Volts)			@ I _T (mA)	V _C (Volts)	I _{PP} (A)	
				Min	Nom	Max				
P6KE6.8CA	P6KE6.8CA	5.8	1000	6.45	6.80	7.14	10	10.5	57	0.057
P6KE7.5CA	P6KE7.5CA	6.4	500	7.13	7.51	7.88	10	11.3	53	0.061
P6KE8.2CA	P6KE8.2CA	7.02	200	7.79	8.2	8.61	10	12.1	50	0.065
P6KE9.1CA	P6KE9.1CA	7.78	50	8.65	9.1	9.55	1	13.4	45	0.068
P6KE10CA	P6KE10CA	8.55	10	9.5	10	10.5	1	14.5	41	0.073
P6KE11CA	P6KE11CA	9.4	5	10.5	11.05	11.6	1	15.6	38	0.075
P6KE12CA	P6KE12CA	10.2	5	11.4	12	12.6	1	16.7	36	0.078
P6KE13CA	P6KE13CA	11.1	5	12.4	13.05	13.7	1	18.2	33	0.081
P6KE15CA	P6KE15CA	12.8	5	14.3	15.05	15.8	1	21.2	28	0.084
P6KE16CA	P6KE16CA	13.6	5	15.2	16	16.8	1	22.5	27	0.086
P6KE18CA	P6KE18CA	15.3	5	17.1	18	18.9	1	25.2	24	0.088
P6KE20CA	P6KE20CA	17.1	5	19	20	21	1	27.7	22	0.09
P6KE22CA	P6KE22CA	18.8	5	20.9	22	23.1	1	30.6	20	0.092
P6KE24CA	P6KE24CA	20.5	5	22.8	24	25.2	1	33.2	18	0.094
P6KE27CA	P6KE27CA	23.1	5	25.7	27.05	28.4	1	37.5	16	0.096
P6KE30CA	P6KE30CA	25.6	5	28.5	30	31.5	1	41.4	14.4	0.097
P6KE33CA	P6KE33CA	28.2	5	31.4	33.05	34.7	1	45.7	13.2	0.098
P6KE36CA	P6KE36CA	30.8	5	34.2	36	37.8	1	49.9	12	0.099
P6KE39CA	P6KE39CA	33.3	5	37.1	39.05	41	1	53.9	11.2	0.1
P6KE43CA	P6KE43CA	36.8	5	40.9	43.05	45.2	1	59.3	10.1	0.101
P6KE47CA	P6KE47CA	40.2	5	44.7	47.05	49.4	1	64.8	9.3	0.101
P6KE51CA	P6KE51CA	43.6	5	48.5	51.05	53.6	1	70.1	8.6	0.102
P6KE56CA	P6KE56CA	47.8	5	53.2	56	58.8	1	77	7.8	0.103
P6KE62CA	P6KE62CA	53	5	58.9	62	65.1	1	85	7.1	0.104
P6KE68CA	P6KE68CA	58.1	5	64.6	68	71.4	1	92	6.5	0.104
P6KE75CA	P6KE75CA	64.1	5	71.3	75.05	78.8	1	103	5.8	0.105
P6KE82CA	P6KE82CA	70.1	5	77.9	82	86.1	1	113	5.3	0.105
P6KE91CA	P6KE91CA	77.8	5	86.5	91	95.5	1	125	4.8	0.106
P6KE100CA	P6KE100CA	85.5	5	95	100	105	1	137	4.4	0.106
P6KE110CA	P6KE110CA	94	5	105	110.5	116	1	152	4	0.107
P6KE120CA	P6KE120CA	102	5	114	120	126	1	165	3.6	0.107
P6KE130CA	P6KE130CA	111	5	124	130.5	137	1	179	3.3	0.107
P6KE150CA	P6KE150CA	128	5	143	150.5	158	1	207	2.9	0.108
P6KE160CA	P6KE160CA	136	5	152	160	168	1	219	2.7	0.108
P6KE170CA*	P6KE170CA*	145	5	162	170.5	179	1	234	2.6	0.108
P6KE180CA	P6KE180CA	154	5	171	180	189	1	246	2.4	0.108
P6KE200CA	P6KE200CA	171	5	190	200	210	1	274	2.2	0.108

1. A transient suppressor is normally selected according to the maximum working peak reverse voltage (V_{RWM}), which should be equal to or greater than the dc or continuous peak operating voltage level.

2. V_{BR} measured at pulse test current I_T at an ambient temperature of 25°C.

3. Surge current waveform per Figure 3 and derate per Figures 1 and 2.

*Not Available in the 4,000/Tape & Reel.

Zener Diodes

P6KE6.8CA ~ P6KE200CA (K6KE6.8CA ~ K6KE200CA)

■ Typical Characteristics

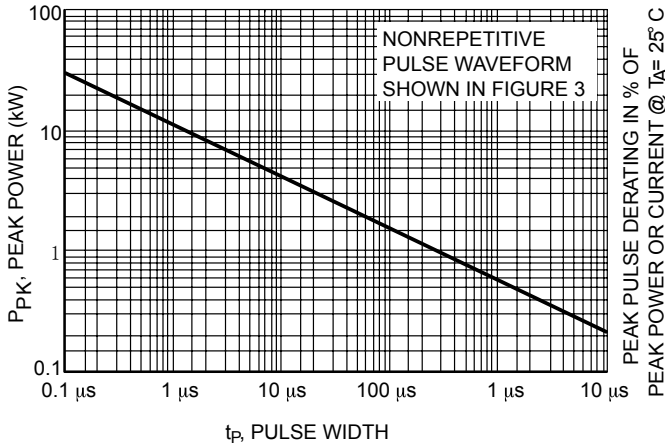


Figure 1. Pulse Rating Curve

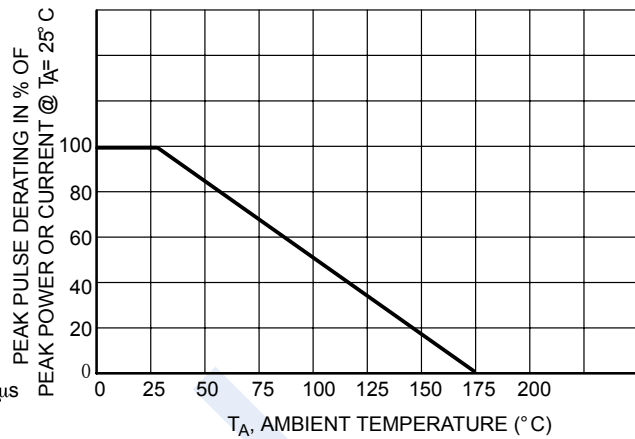


Figure 2. Pulse Derating Curve

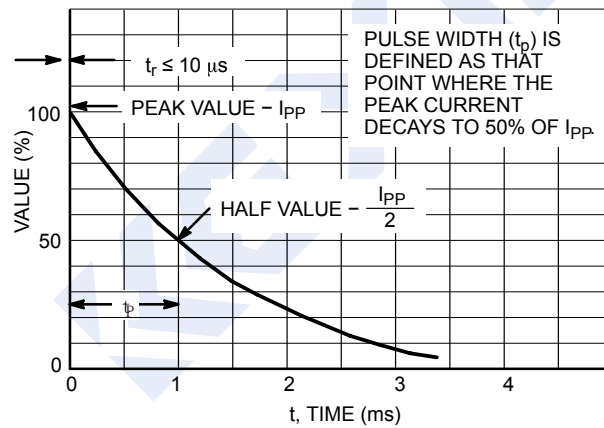


Figure 3. Pulse Waveform

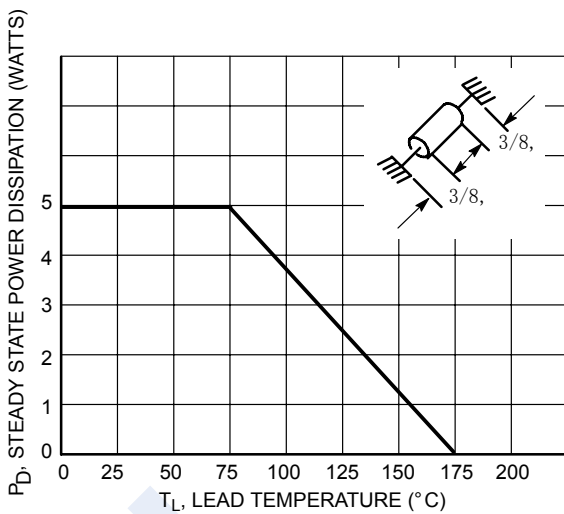


Figure 4. Steady State Power Derating

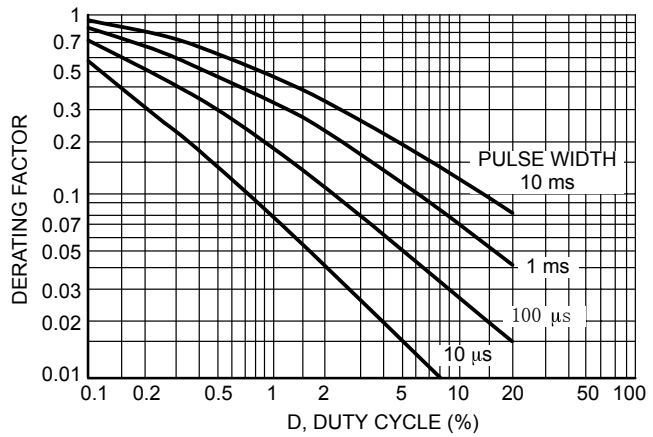


Figure 5. Typical Derating Factor for Duty Cycle