



P6KE6.8A(CA)-P6KE600A(CA)

AXIAL LEADED TRANSIENT VOLTAGE SUPPRESSOR DIODE

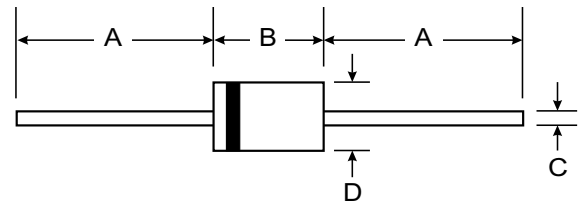
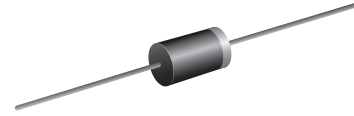
VOLTAGE RANGE: 6.8 - 600V
POWER: 600Watts

Features

- Glass Passivated Die Construction
- Uni- and Bi-Directional Versions Available
- Excellent Clamping Capability
- Fast Response Time
- Plastic Case Material has UL Flammability Classification Rating 94V-O

Mechanical Data

- Case : DO-15 Molded plastic
- Epoxy : UL94V-O rate flame retardant
- Lead : Axial lead solderable per MIL-STD-202, Method 208 guaranteed
- Polarity : Color band denotes cathode end
- Mounting position : Any
- Weight : 0.465 gram



DO-15		
Dim	Min	Max
A	25.40	—
B	5.50	7.62
C	0.686	0.889
D	2.60	3.60
All Dimensions in mm		

Maximum Ratings and Electrical Characteristics @ $T_A=25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	Value	Unit
Peak Pulse Power Dissipation at $T_A = 25^\circ\text{C}$ (Note 1, 2, 5) Figure 3	PPPM	600 Minimum	W
Peak Forward Surge Current (Note 3)	IFSM	100	A
Peak Pulse Current on 10/1000 μS Waveform (Note 1) Figure 1	IPPM	See Table 1	A
Steady State Power Dissipation (Note 2, 4)	PM(AV)	5.0	W
Operating and Storage Temperature Range	T_j, T_{STG}	-65 to +175	$^\circ\text{C}$

- Note:
1. Non-repetitive current pulse, per Figure 1 and derated above $T_A = 25^\circ\text{C}$ per Figure 4.
 2. Mounted on 40mm² copper pad.
 3. 8.3ms single half sine-wave duty cycle = 4 pulses per minutes maximum.
 4. Lead temperature at $75^\circ\text{C} = T_L$.
 5. Peak pulse power waveform is 10/1000 μS .



TYPE		Reverse Stand- Off Voltage	Breakdown Voltage Min. @I _T	Breakdown Voltage Max. @ I _T	Test Current	Maximum Clamping Voltage @I _{PP}	Peak Pulse Current	Reverse Leakage @V _{RWM}
(UNI)	(BI)	V _{RWM} (V)	V _{BR} MIN(V)	V _{BR} MAX(V)	I _T (mA)	V _C (V)	I _{PP} (A)	I _R (uA)
P6KE6.8A	P6KE6.8CA	5.80	6.45	7.25	10.0	10.5	57.1	1000.0
P6KE7.5A	P6KE7.5CA	6.40	7.13	7.88	10.0	11.3	53.1	500.0
P6KE8.2A	P6KE8.2CA	7.02	7.79	8.61	10.0	12.1	49.6	200.0
P6KE9. 1A	P6KE9. 1CA	7.78	8.65	9.55	1.0	13.4	44.8	50.0
P6KE10A	P6KE10CA	8.55	9.50	10.5	1.0	14.5	41.4	10.0
P6KE11A	P6KE11CA	9.40	10.5	11.6	1.0	15.6	38.5	5.0
P6KE12A	P6KE12CA	10.2	11.4	12.6	1.0	16.7	35.9	5.0
P6KE13A	P6KE13CA	11.1	12.4	13.7	1.0	18.2	33.0	5.0
P6KE15A	P6KE15CA	12.8	14.3	15.8	1.0	21.2	28.3	5.0
P6KE16A	P6KE16CA	13.6	15.2	16.8	1.0	22.5	26.7	5.0
P6KE18A	P6KE18CA	15.3	17.1	18.9	1.0	25.2	23.8	5.0
P6KE20A	P6KE20CA	17.1	19.0	21.0	1.0	27.7	21.7	5.0
P6KE22A	P6KE22CA	18.8	20.9	23.1	1.0	30.6	19.6	5.0
P6KE24A	P6KE24CA	20.5	22.8	25.2	1.0	33.2	18.1	5.0
P6KE27A	P6KE27CA	23.1	25.7	28.4	1.0	37.5	16.0	5.0
P6KE30A	P6KE30CA	25.6	28.5	31.5	1.0	41.4	14.5	5.0
P6KE33A	P6KE33CA	28.2	31.4	34.7	1.0	45.7	13.1	5.0
P6KE36A	P6KE36CA	30.8	34.2	37.8	1.0	49.9	12.0	5.0
P6KE39A	P6KE39CA	33.3	37.1	41.0	1.0	53.9	11.1	5.0
P6KE43A	P6KE43CA	36.8	40.9	45.2	1.0	59.3	10.1	5.0
P6KE47A	P6KE47CA	40.2	44.7	49.4	1.0	64.8	9.3	5.0
P6KE51A	P6KE51CA	43.6	48.5	53.6	1.0	70.1	8.6	5.0
P6KE56A	P6KE56CA	47.8	53.2	58.8	1.0	77.0	7.8	5.0
P6KE62A	P6KE62CA	53.0	58.9	65.1	1.0	85.0	7.1	5.0
P6KE68A	P6KE68CA	58.1	64.6	71.4	1.0	92.0	6.5	5.0
P6KE75A	P6KE75CA	64.1	71.3	78.8	1.0	103	5.8	5.0
P6KE82A	P6KE82CA	70.1	77.9	86.1	1.0	113	5.3	5.0
P6KE91A	P6KE91CA	77.8	86.5	95.5	1.0	125	4.8	5.0
P6KE100A	P6KE100CA	85.5	95.0	105	1.0	137	4.4	5.0
P6KE110A	P6KE110CA	94.0	105	116	1.0	152	3.9	5.0
P6KE120A	P6KE120CA	102	114	126	1.0	165	3.6	5.0
P6KE130A	P6KE130CA	111	124	137	1.0	179	3.4	5.0
P6KE150A	P6KE150CA	128	143	158	1.0	207	2.9	5.0
P6KE160A	P6KE160CA	136	152	168	1.0	219	2.7	5.0
P6KE170A	P6KE170CA	145	162	179	1.0	234	2.6	5.0
P6KE180A	P6KE180CA	154	171	189	1.0	246	2.4	5.0



TYPE		Reverse Stand- Off Voltage	Breakdown Voltage Min. @I _T	Breakdown Voltage Max. @ I _T	Test Current	Maximum Clamping Voltage @I _{PP}	Peak Pulse Current	Reverse Leakage @V _{RWM}
(UNI)	(BI)	V _{RWM} (V)	V _{BR} MIN(V)	V _{BR} MAX(V)	I _T (mA)	V _C (V)	I _{PP} (A)	I _R (uA)
P6KE200A	P6KE200CA	171	190	210	1.0	274	2.2	5.0
P6KE220A	P6KE220CA	185	209	231	1.0	328	1.8	5.0
P6KE250A	P6KE250CA	214	237	263	1.0	344	1.7	5.0
P6KE300A	P6KE300CA	256	285	315	1.0	414	1.4	5.0
P6KE350A	P6KE350CA	300	333	368	1.0	482	1.2	5.0
P6KE400A	P6KE400CA	342	380	420	1.0	548	1.1	5.0
P6KE440A	P6KE440CA	376	418	462	1.0	602	1.0	5.0
P6KE480A	P6KE480CA	408	456	504	1.0	658	0.9	5.0
P6KE510A	P6KE510CA	434	485	535	1.0	698	0.9	5.0
P6KE530A	P6KE530CA	451	503.5	556.5	1.0	725	0.8	5.0
P6KE540A	P6KE540CA	460	513	567	1.0	740	0.8	5.0
P6KE550A	P6KE550CA	468	522.5	577.5	1.0	760	0.8	5.0
P6KE600A	P6KE600CA	512	570	630	1.0	828	0.75	5.0

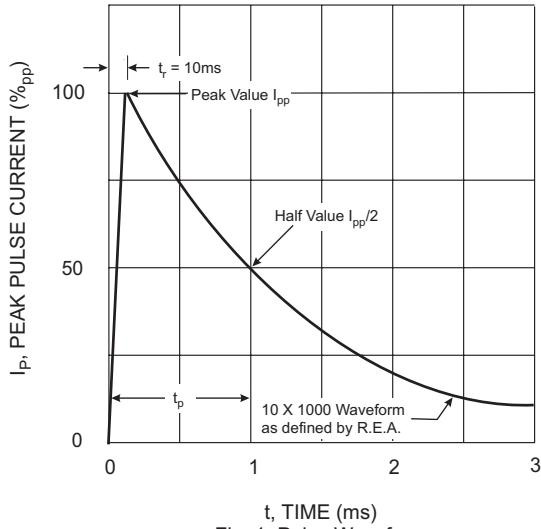


Fig. 1 Pulse Waveform

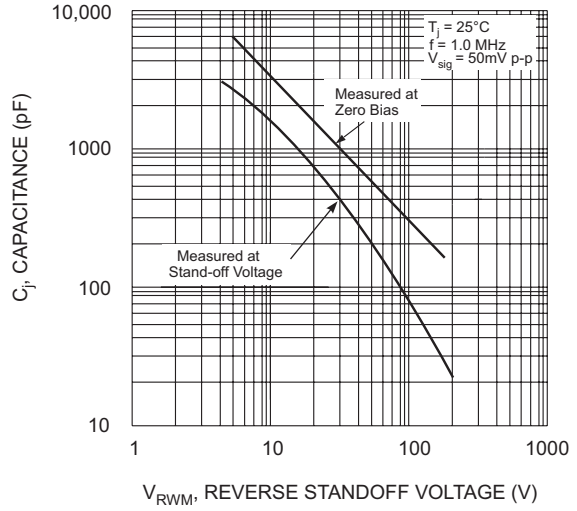


Fig. 2 Typical Junction Capacitance

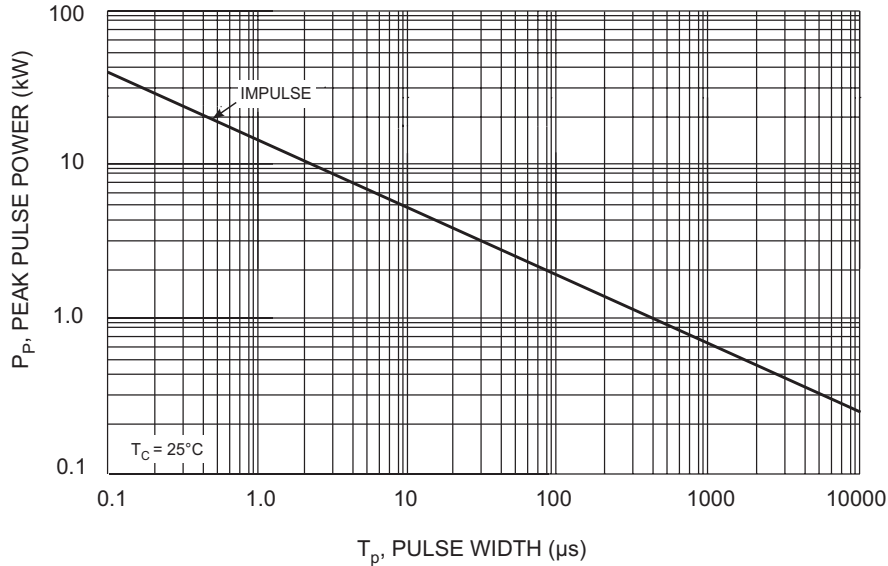


Fig. 3 Pulse Rating Curve

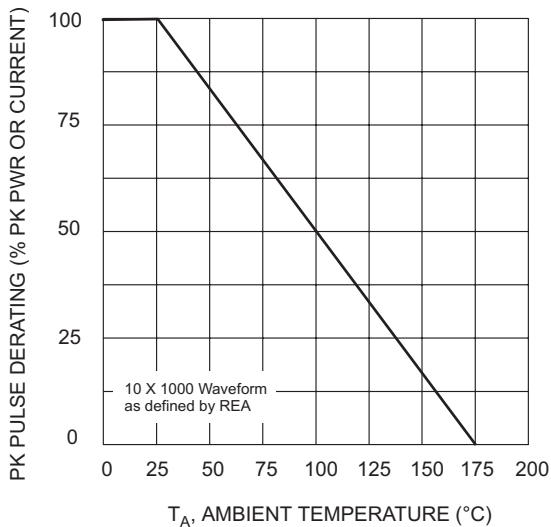


Fig. 4 Pulse Derating Curve

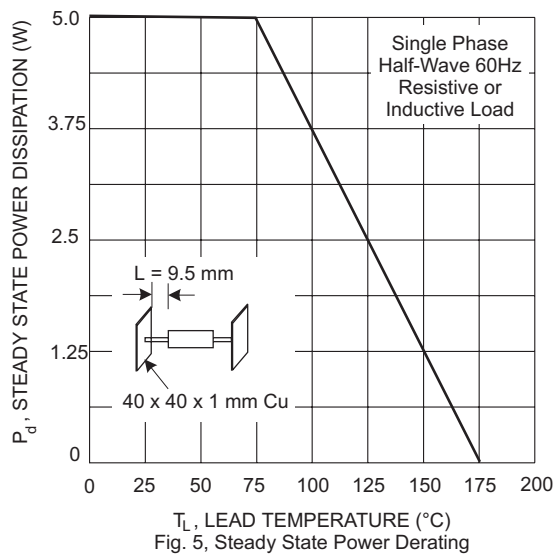


Fig. 5, Steady State Power Derating