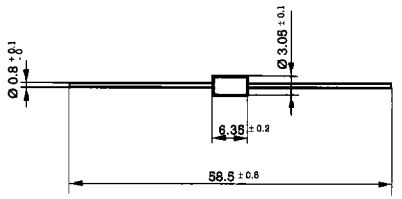
Bidirectional Transient Voltage Suppressor Diodes

Dimensions in mm. DO-15 (Plastic)



Mounting instructions

1. Min. distance from body to soldering point, 4 mm.
2. Max. solder temperature, 300 °C.
3. Max. soldering time, 3.5 sec.
4. Do not bend lead at a point closer than 2 mm. to the body.

Peak Pulse Power Rating At 1 ms. Exp. 600 W

Reverse stand-off Voltage 5.5 ÷ 376 V

HYPERECTIFIER ®

- **Glass passivated junction**
- Low Capacitance AC signal protection
- Molded case
- Difussed junction
- The plastic material carries U/L recognition 94 V-0
- Terminals: Axial leads

Maximum Ratings, according to IEC publication No. 134

P_{pp}	Peak pulse power for 1 msec. exponential pulse	600 W
T_j	Junction temperature	175 °C
T_{stg}	Storage temperature range	– 65 to + 175 °C
$P_{M(AV)}$	Steady state Power Dissipation (l = 10 mm)	5 W

Electrical Characteristics at Tamb = 25 °C

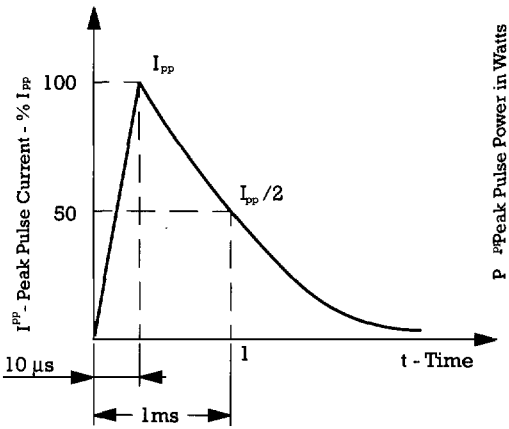
$R_{thj\text{-}a}$	Max. thermal resistance (l = 10 mm.)	60 °C/W

Type	Maximum Reverse Leakage Current I_{RM} at V_{RM}		(1) Breakdown Voltage $V_{(BR)}$ at I_R (V)				Max. Clamping Voltage $V_{(CL)}$ at I_{pp} max. 1 ms. Expo.	
Bidirectional	(μA)	(V)	Min.	Nom.	Max.	(mA)	(V)	(A)
P6KE6.8C	1000	5.50	6.12	6.8	7.48	10	10.8	56
P6KE6.8CA	1000	5.80	6.45	6.8	7.14	10	10.5	57
P6KE7.5C	500	6.05	6.75	7.5	8.25	10	11.7	51
P6KE7.5CA	500	6.40	7.13	7.5	7.88	10	11.3	53
P6KE8.2C	200	6.63	7.38	8.2	9.02	10	12.5	48
P6KE8.2CA	200	7.02	7.79	8.2	8.61	10	12.1	50
P6KE9.1C	50	7.37	8.19	9.1	10.0	1	13.8	44
P6KE9.1CA	50	7.78	8.65	9.1	9.55	1	13.4	45
P6KE10C	10	8.10	9.00	10	11.0	1	15.0	40
P6KE10CA	10	8.55	9.50	10	10.5	1	14.5	41
P6KE11C	5	8.92	9.90	11	12.1	1	16.2	37
P6KE11CA	5	9.40	10.5	11	11.6	1	15.6	38
P6KE12C	5	9.72	10.8	12	13.2	1	17.3	35
P6KE12CA	5	10.2	11.4	12	12.6	1	16.7	36
P6KE13C	5	10.5	11.7	13	14.3	1	19.0	32
P6KE13CA	5	11.1	12.4	13	13.7	1	18.2	33
P6KE15C	5	12.1	13.5	15	16.5	1	22.0	27
P6KE15CA	5	12.8	14.3	15	15.8	1	21.2	28
P6KE16C	5	12.9	14.4	16	17.6	1	23.5	26
P6KE16CA	5	13.6	15.2	16	16.8	1	22.5	27
P6KE18C	5	14.5	16.2	18	19.8	1	26.5	23
P6KE18CA	5	15.3	17.1	18	18.9	1	25.5	24
P6KE20C	5	16.2	18.0	20	22.0	1	29.1	21
P6KE20CA	5	17.1	19.0	20	21.0	1	27.7	22
P6KE22C	5	17.8	19.8	22	24.2	1	31.9	19
P6KE22CA	5	18.8	20.9	22	23.1	1	30.6	20
P6KE24C	5	19.4	21.6	24	26.4	1	34.7	17
P6KE24CA	5	20.5	22.8	24	25.2	1	33.2	18
P6KE27C	5	21.8	24.3	27	29.7	1	39.1	15
P6KE27CA	5	23.1	25.7	27	28.4	1	37.5	16
P6KE30C	5	24.3	27.0	30	33.0	1	43.5	14
P6KE30CA	5	25.6	28.5	30	31.5	1	41.4	14.4
P6KE33C	5	26.8	29.7	33	36.3	1	47.7	12.6
P6KE33CA	5	28.2	31.4	33	34.7	1	45.7	13.2
P6KE36C	5	29.1	32.4	36	39.6	1	52.0	11.6
P6KE36CA	5	30.8	34.2	36	37.8	1	49.9	12
P6KE39C	5	31.6	35.1	39	42.9	1	56.4	10.6
P6KE39CA	5	33.3	37.1	39	41.0	1	53.9	11.2
P6KE43C	5	34.8	38.7	43	47.3	1	61.9	9.6
P6KE43CA	5	36.8	40.9	43	45.2	1	59.3	10.1
P6KE47C	5	38.1	42.3	47	51.7	1	67.8	8.9
P6KE47CA	5	40.2	44.7	47	49.4	1	64.8	9.3
P6KE51C	5	41.3	45.9	51	56.1	1	73.5	8.2
P6KE51CA	5	43.6	48.5	51	53.6	1	70.1	8.6

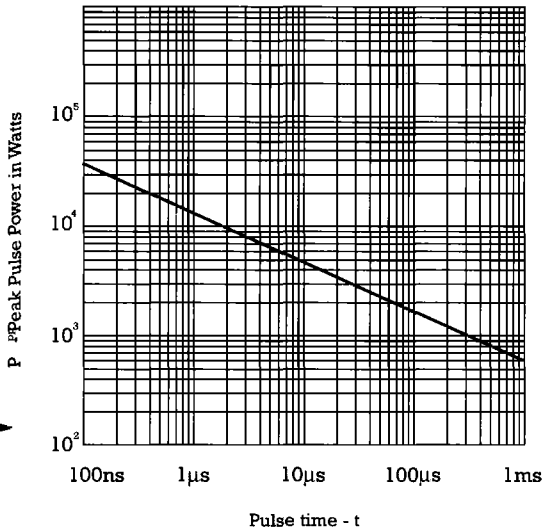
(1) Tested with pulses
Pulse test: tp ≤ 50 ms; δ < 2%

Type	Maximum Reverse Leakage Current I_{RM} at V_{RM}		(1) Breakdown Voltage $V_{(BR)}$ at I_R (V)				Max. Clamping Voltage $V_{(CL)}$ at I_{pp} max. 1 ms. Expo.	
Bidirectional	(μA)	(V)	Min.	Nom.	Max.	(mA)	(V)	(A)
P6KE56C	5	45.4	50.4	56	61.6	1	80.5	7.4
P6KE56CA	5	47.8	53.2	56	58.8	1	77.0	7.8
P6KE62C	5	50.2	55.8	62	68.2	1	89.0	6.8
P6KE62CA	5	53.0	58.9	62	65.1	1	85.0	7.1
P6KE68C	5	55.1	61.2	68	74.8	1	98.0	6.1
P6KE68CA	5	58.1	64.6	68	71.4	1	92.0	6.5
P6KE75C	5	60.7	67.5	75	82.5	1	108	5.5
P6KE75CA	5	64.1	71.3	75	78.8	1	103	5.8
P6KE82C	5	66.4	73.8	82	90.2	1	118	5.1
P6KE82CA	5	70.1	77.9	82	86.1	1	113	5.3
P6KE91C	5	73.7	81.9	91	100	1	131	4.5
P6KE91CA	5	77.8	86.5	91	95.5	1	125	4.8
P6KE100C	5	81.0	90.0	100	110	1	144	4.2
P6KE100CA	5	85.5	95.0	100	105	1	137	4.4
P6KE110C	5	89.2	99.0	110	121	1	158	3.8
P6KE110CA	5	94.0	105	110	116	1	152	4.0
P6KE120C	5	97.2	108	120	132	1	173	3.5
P6KE120CA	5	102	114	120	126	1	165	3.6
P6KE130C	5	105	117	130	143	1	187	3.2
P6KE130CA	5	111	124	130	137	1	179	3.3
P6KE150C	5	121	135	150	165	1	215	2.8
P6KE150CA	5	128	143	150	158	1	207	2.9
P6KE160C	5	130	144	160	176	1	230	2.6
P6KE160CA	5	136	152	160	168	1	219	2.7
P6KE170C	5	138	153	170	187	1	244	2.5
P6KE170CA	5	145	162	170	179	1	234	2.6
P6KE180C	5	146	162	180	198	1	258	2.3
P6KE180CA	5	154	171	180	189	1	246	2.4
P6KE200C	5	162	180	200	220	1	287	2.1
P6KE200CA	5	171	190	200	210	1	274	2.2
P6KE220C	5	175	198	220	242	1	344	1.75
P6KE220CA	5	185	209	220	231	1	328	1.83
P6KE250C	5	202	225	250	275	1	360	1.67
P6KE250CA	5	214	237	250	263	1	344	1.75
P6KE300C	5	243	270	300	330	1	430	1.40
P6KE300CA	5	256	285	300	315	1	414	1.45
P6KE320C	5	259	288	320	352	1	457	1.32
P6KE320CA	5	273	304	320	336	1	438	1.40
P6KE350C	5	284	315	350	385	1	504	1.20
P6KE350CA	5	300	332	350	368	1	482	1.25
P6KE400C	5	324	360	400	440	1	574	1.05
P6KE400CA	5	342	380	400	420	1	548	1.10
P6KE440C	5	356	396	440	484	1	631	0.95
P6KE440CA	5	376	418	440	462	1	602	1.0

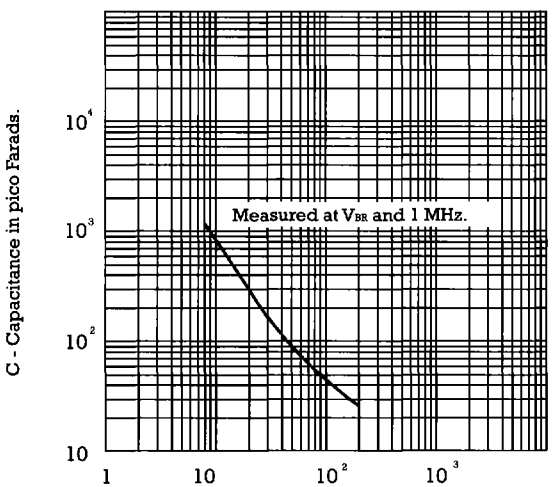
(1) Tested with pulses.
Pulse test: tp ≤ 50 ms; δ < 2%



Pulse wave form 10/1000



Peak Pulse Power vs Pulse Time



V_{BR} - Breakdown voltage in Volts.

Typical Capacitance vs Breakdown voltage.