P6KE*** Series

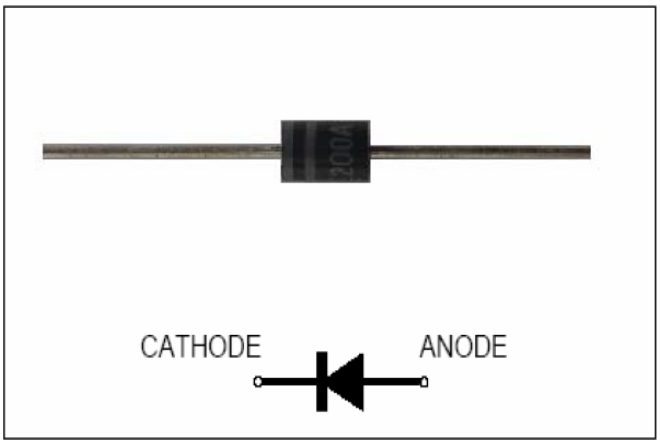
GLASS PASSIVATED JUNCTION TRANSIENT VOLTAGE SUPPRESSOR

VOLTAGE - 6.8 TO 550 Volts

600Watt Peak Power 5.0 Watt Steady State

Feature

* Plastic package has Underwriters Laboratory Flammability Classification 94V-O
* Glass passivated chip junction in DO-15 package
* 600W surge capability at 1ms
* Excellent clamping capability
* Low zener impedance
* Fast response time: typically less than 1.0 ps from 0 volts to BV min
* Typical IR less than 1μA above 10V
* High temperature soldering guaranteed: 260 /10 seconds/.375",(9.5mm) lead length/5lbs., (2.3kg) tension



we declare that the material of product is halogen free (green epoxy compound).

Mechanical Data

Case: JEDEC DO-15 molded plastic
Terminals: Axial leads, solderable per MIL-STD-202, Method 208
Polarity: Color band denoted cathode except Bipolar
Mounting Position: Any
Weight: 0.015 ounce, 0.4 gram

DEVICES FOR BIPOLAR APPLICATIONS

For Bidirectional use C or CA Suffix for types P6KE6.8 thru types P6KE550

Electrical characteristics apply in both directions.

1.Electrical Characteristic

Ratings at 25°C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

RATING	SYMBOL	VALUE	UNITS
Peak Power Dissipation at T_A=25°C, T_P=1ms(Note 1)	P_{PPM}	Minimum 600	Watts
Steady State Power Dissipation at T_L=75°C Lead Lengths .375",(9.5mm) (Note 2)	$P_{M(AV)}$	5.0	Watts
Peak Forward Surge Current, 8.3ms Single Half Sine-Wave Superimposed on Rated Load(JECED Method) (Note 3)	I_{FSM}	100	Amps
Operating and Storage Temperature Range	T_J,T_{STG}	-50 to +150	°C

NOTES:
1. Non-repetitive current pulse, per Fig. 3 and derated above TA=25°C per Fig. 2.
2. Mounted on Copper Leaf area of 1.57in2(40mm2).
3. 8.3ms single half sine-wave, duty cycle= 4 pulses per minutes maximum.

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UNI-DIRECTIONAL PART NUMBER	REVERSE STAND-OFF VOLTAGE VRWM (V)	BREAKDOWN VOLTAGE VBR (V) MIN. @IT	BREAKDOWN VOLTAGE VBR (V) MAX. @IT	TEST CURRENT IT (mA)	MAXIMUM CLAMPING VOLTAGE @IPP VC (V)	REVERSE LEAKAGE @VRWM IR (uA)	Maximun Temperature Coefficient of V_{BR}(%/℃)
P6KE6.8	5.5	6.12	7.48	10	10.8	1000	0.057
P6KE6.8A	5.8	6.45	7.14	10	10.5	1000	0.057
P6KE7.5	6.05	6.75	8.25	10	11.7	500	0.061
P6KE7.5A	6.4	7.13	7.88	10	11.3	500	0.061
P6KE8.2	6.63	7.38	9.02	10	12.5	200	0.065
P6KE8.2A	7.02	7.79	8.61	10	12.1	200	0.065
P6KE9.1	7.37	8.19	10	1	13.8	50	0.068
P6KE9.1A	7.78	8.65	9.5	1	13.4	50	0.068
P6KE10	8.1	9	11	1	15	10	0.073
P6KE10A	8.55	9.5	10.5	1	14.5	10	0.073
P6KE11	8.92	9.9	12.1	1	16.2	1	0.075
P6KE11A	9.4	10.5	11.6	1	15.6	1	0.075
P6KE12	9.72	10.8	13.2	1	17.3	1	0.076
P6KE12A	10.2	11.4	12.6	1	16.7	1	0.078
P6KE13	10.5	11.7	14.3	1	19	1	0.081
P6KE13A	11.1	12.4	13.7	1	18.2	1	0.081
P6KE15	12.1	13.5	16.5	1	22	1	0.084
P6KE15A	12.8	14.3	15.8	1	21.2	1	0.084
P6KE16	12.9	14.4	17.6	1	23.5	1	0.086
P6KE16A	13.6	15.2	16.8	1	22.5	1	0.086
P6KE18	14.5	16.2	19.8	1	26.5	1	0.088
P6KE18A	15.3	17.1	18.9	1	25.2	1	0.088
P6KE20	16.2	18	22	1	29.1	1	0.090
P6KE20A	17.1	19	21	1	27.7	1	0.090
P6KE22	17.8	19.8	24.2	1	31.9	1	0.092
P6KE22A	18.8	20.9	23.1	1	30.6	1	0.092
P6KE24	19.4	21.6	26.4	1	34.7	1	0.094
P6KE24A	20.5	22.8	25.2	1	33.2	1	0.094
P6KE27	21.8	24.3	29.7	1	39.1	1	0.096
P6KE27A	23.1	25.7	28.4	1	37.5	1	0.096
P6KE30	24.3	27	33	1	43.5	1	0.097
P6KE30A	25.6	28.5	31.5	1	41.4	1	0.097
P6KE33	26.8	29.7	36.3	1	47.7	1	0.098
P6KE33A	28.2	31.4	34.7	1	45.7	1	0.098
P6KE36	29.1	32.4	39.6	1	52	1	0.099
P6KE36A	30.8	34.2	37.8	1	49.9	1	0.099
P6KE39	31.6	35.1	42.9	1	56.4	1	0.100
P6KE39A	33.3	37.1	41	1	53.9	1	0.100
P6KE43	34.8	38.7	47.3	1	61.9	1	0.101
P6KE43A	36.8	40.9	45.2	1	59.3	1	0.101
P6KE47	38.1	42.3	51.7	1	67.8	1	0.101
P6KE47A	40.2	44.7	49.4	1	64.8	1	0.101
P6KE51	41.3	45.9	56.1	1	73.5	1	0.102
P6KE51A	43.6	48.5	53.6	1	70.1	1	0.102
P6KE56	45.6	50.4	61.6	1	80.5	1	0.103
P6KE56A	47.8	53.2	58.8	1	77	1	0.103
P6KE62	50.2	55.8	68.2	1	89	1	0.104
P6KE62A	53	58.9	65.1	1	85	1	0.104
P6KE68	55.1	61.2	74.8	1	98	1	0.104

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P6KE68A	58.1	64.6	71.4	1	92	1	0.104
P6KE75	60.7	67.5	82.5	1	108	1	0.105
P6KE75A	64.1	71.3	78.8	1	103	1	
P6KE82	66.4	73.8	90.2	1	118	1	
P6KE82A	70.1	77.9	86.1	1	113	1	
P6KE91	73.7	81.9	100	1	131	1	0.106
P6KE91A	77.8	86.5	95.5	1	125	1	
P6KE100	81	90	110	1	144	1	
P6KE100A	85.5	95	105	1	137	1	
P6KE110	89.2	99	121	1	158	1	0.107
P6KE110A	94	105	116	1	152	1	
P6KE120	97.2	108	132	1	173	1	
P6KE120A	102	114	126	1	165	1	
P6KE130	105	117	143	1	187	1	
P6KE130A	111	124	137	1	179	1	
P6KE150	121	135	165	1	215	1	0.108
P6KE150A	128	143	158	1	207	1	
P6KE160	130	144	176	1	230	1	
P6KE160A	136	152	168	1	219	1	
P6KE170	138	153	187	1	244	1	
P6KE170A	145	162	179	1	234	1	
P6KE180	146	162	198	1	258	1	
P6KE180A	154	171	189	1	246	1	
P6KE200	162	180	220	1	287	1	
P6KE200A	171	190	210	1	274	1	
P6KE220	175	198	242	1	344	1	
P6KE220A	185	209	231	1	328	1	
P6KE250	202	225	275	1	360	1	0.110
P6KE250A	214	237	263	1	344	1	
P6KE300	243	270	330	1	430	1	
P6KE300A	256	285	315	1	414	1	
P6KE350	284	315	385	1	504	1	
P6KE350A	300	332	368	1	482	1	
P6KE400	324	360	440	1	574	1	
P6KE400A	342	380	420	1	548	1	
P6KE440	356	396	484	1	631	1	
P6KE440A	376	418	462	1	600	1	
P6KE550	445	495	605	1	791	1	
P6KE550A	467	522.5	577.5	1	760	1	

NOTES:

1. Non-repetitive current pulse, per Fig. 3 and derated above TA=25°Cper Fig. 2.
2. Mounted on Copper Leaf area of 1.57in2(40mm2).
3. 8.3ms single half sine-wave, duty cycle= 4 pulses per minutes maximum.

P6KE ***Series

2. Characteristic Curves (TA = 25°C unless otherwise noted)

Fig. 1-Peak Pulse Power Rating Curve

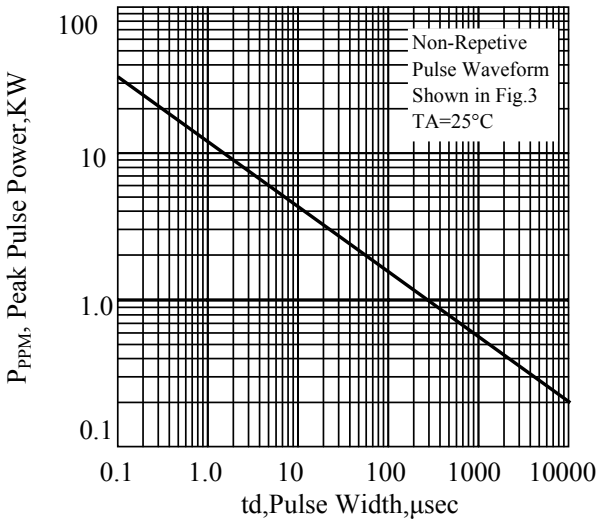


Fig. 2-Pulse Derating Curve

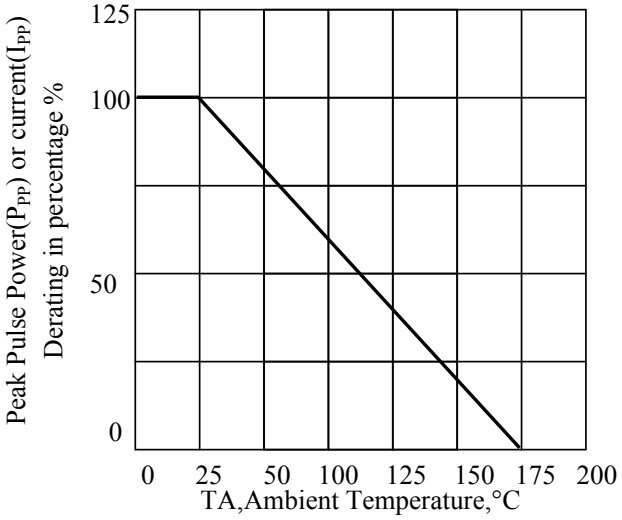


Fig. 3-Pulse Waveform

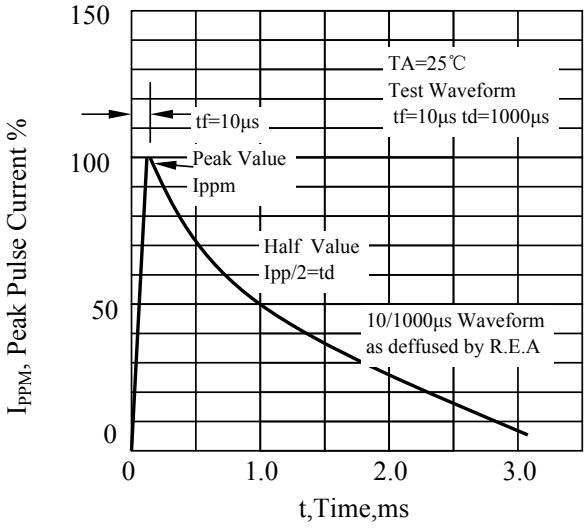


Fig. 4-Typical Junction Capacitance
Unidirectional

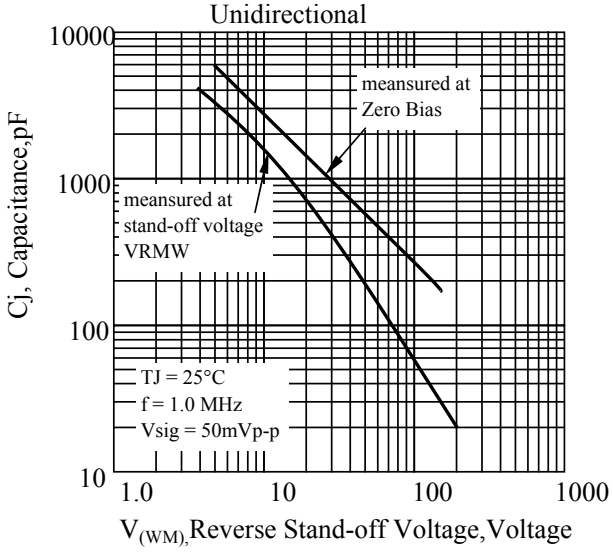


Fig. 5-Steady State Power
Derating Curve

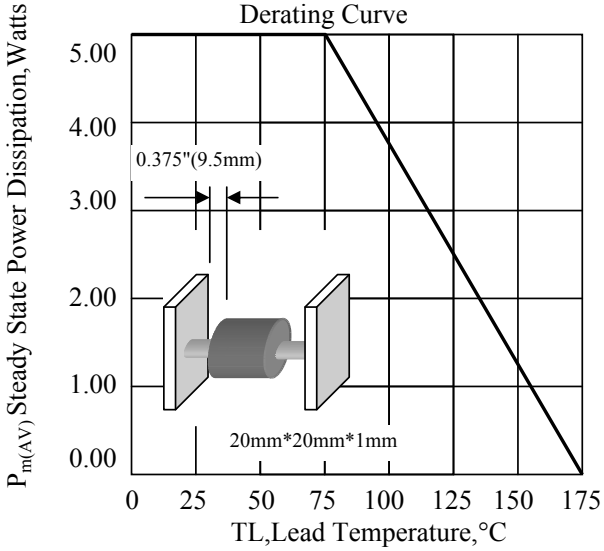
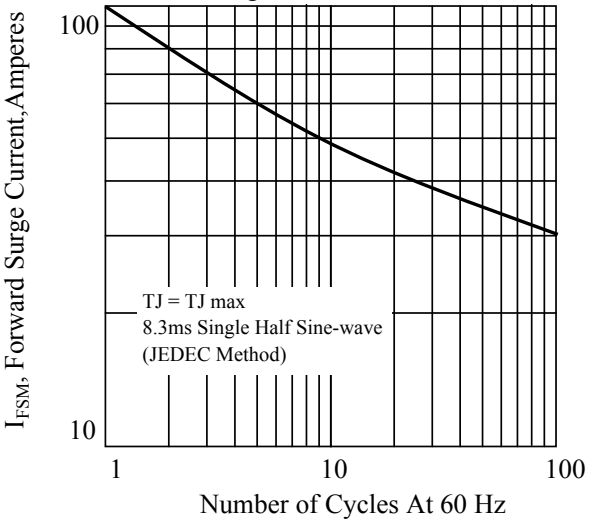


Fig. 6-Maximum Non-Repetitive Peak
Forward Surge Current Unidirectional



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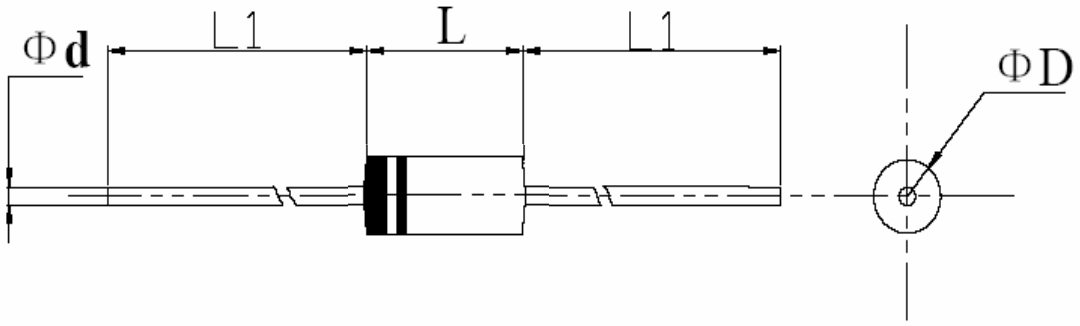
3. dimension:

Package outline



Dimensions					Note:
	inches		mm		DO-15
	Min.	Max.	Min.	Max.	molded plastic case
L	0.230	0.300	5.8	7.6	The marking band indicates the
L1	1.0	-	25.4	-	cathode
ΦD	0.104	0.140	2.6	3.6	
Φd	0.028	0.034	0.7	0.9	

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4. Update Record

版次	更新记录	更新作者	更新日期
1	第一版	周杰	2010-5-4
2	将反向漏电流由5uA调整为1uA;	周杰	2010-9-15