

1.5KE_CA

Transient Voltage Suppressor

Breakdown Voltage : 6.8 - 440 Volts

Peak Pulse Power : 1500 Watts

Features

- Glass passivated junction chip
- 1500W surge capability at 1ms
- Excellent clamping capability
- Low zener impedance
- Fast response time : typically less than 1.0 ns
p.s. from 0 volts to VBR(min.)
- Typical IR less than 1 μ A above 10V
- RoHS compliant package

Applications

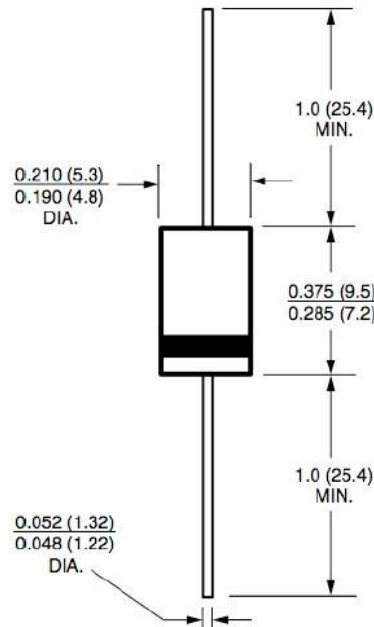
- For Uni-directional without "C"
- Electrical characteristics apply in both directions

Mechanical Data

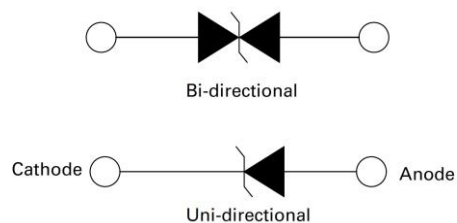
- Case : DO-201 Molded plastic
- Epoxy : UL94V-0 rate flame retardant
- Lead : Axial lead solderable per MIL-STD-202,
method 208 guaranteed
- Mounting position : Any
- Weight : 1.10 gram

Packing & Order Information

1,250/T



Graphic symbol



RoHS
COMPLIANT

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise specified.

Symbol	Parameter	Value	Unit
PPK	Peak Power Dissipation at Ta = 25°C, Tp=1ms (Note1)	Minimum 1500	W
PD	Steady State Power Dissipation at TL = 75 °C Lead Lengths 0.375", (9.5mm) (Note 2)	5.0	W
TJ, TSTG	Operating and Storage Temperature Range	-65 to + 175	°C

Notes:

- (1) Non-repetitive Current pulse, per Fig. 2 and derated above Ta = 25 °C per Fig. 1
- (2) Mounted on Copper Leaf area of 1.57 in² (40mm²).

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Type No.	Breakdown Voltage @ It (Note 1)			Working Peak Reverse Voltage	Maximum Reverse Leakage @ VRWM	Maximum Reverse Current	Maximum Clamping Voltage @ IRSM	Maximum Temperature Co-efficient of VBR
	VBR (V)		It	VRWM	IR	IRSM	VRSM	
	Min	Max	(mA)	(V)	(μA)	(A)	(V)	(% / °C)
1.5KE6.8C	6.12	7.48	10	5.50	1000	38.0	10.8	0.057
1.5KE6.8CA	6.45	7.14	10	5.80	1000	40.0	10.5	0.057
1.5KE7.5C	6.75	8.25	10	6.05	500	36.0	11.7	0.061
1.5KE7.5CA	7.13	7.88	10	6.40	500	37.0	11.3	0.061
1.5KE8.2C	7.38	9.02	10	6.63	200	33.0	12.5	0.065
1.5KE8.2CA	7.79	8.61	10	7.02	200	35.0	12.1	0.065
1.5KE9.1C	8.19	10.0	1.0	7.37	50	30.0	13.8	0.068
1.5KE9.1CA	8.65	9.55	1.0	7.78	50	31.0	13.4	0.068
1.5KE10C	9.00	11.0	1.0	8.10	10	28.0	15.0	0.073
1.5KE10CA	9.50	10.5	1.0	8.55	10	29.0	14.5	0.073
1.5KE11C	9.90	12.1	1.0	8.92	5.0	26.0	16.2	0.075
1.5KE11CA	10.5	11.6	1.0	9.40	5.0	27.0	15.6	0.075
1.5KE12C	10.8	13.2	1.0	9.72	5.0	24.0	17.3	0.078
1.5KE12CA	11.4	12.6	1.0	10.2	5.0	25.0	16.7	0.078
1.5KE13C	11.7	14.3	1.0	10.5	5.0	22.0	19.0	0.081
1.5KE13CA	12.4	13.7	1.0	11.1	5.0	23.0	18.2	0.081
1.5KE15C	13.5	16.5	1.0	12.1	5.0	19.0	22.0	0.084
1.5KE15CA	14.3	15.8	1.0	12.8	5.0	20.0	21.2	0.084
1.5KE16C	14.4	17.6	1.0	12.9	5.0	18.0	23.5	0.086
1.5KE16CA	15.2	16.8	1.0	13.6	5.0	19.0	22.5	0.086
1.5KE17C	15.3	18.7	1.0	13.7	5.0	17.0	25.0	0.087
1.5KE17CA	16.2	17.9	1.0	14.5	5.0	18.0	24.0	0.087
1.5KE18C	16.2	19.8	1.0	14.5	5.0	16.0	26.5	0.088
1.5KE18CA	17.1	18.9	1.0	15.3	5.0	17.0	25.5	0.088
1.5KE20C	18.0	22.0	1.0	16.2	5.0	14.0	29.1	0.090
1.5KE20CA	19.0	21.0	1.0	17.1	5.0	15.0	27.7	0.090

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	VBR (V)		It	VRWM	IR	IRSM	VRSM	
	Min	Max	(mA)	(V)	(µA)	(A)	(V)	(% / °C)
1.5KE22C	19.8	24.2	1.0	17.8	5.0	13.0	31.9	0.092
1.5KE22CA	20.9	23.1	1.0	18.8	5.0	14.0	30.6	0.092
1.5KE24C	21.6	26.4	1.0	19.4	5.0	12.0	34.7	0.094
1.5KE24CA	22.8	25.2	1.0	20.5	5.0	13.0	33.2	0.094
1.5KE27C	24.3	29.7	1.0	21.8	5.0	11.0	39.1	0.096
1.5KE27CA	25.7	28.4	1.0	23.1	5.0	11.2	37.5	0.096
1.5KE30C	27.0	33.0	1.0	24.3	5.0	10.0	43.5	0.097
1.5KE30CA	28.5	31.5	1.0	25.6	5.0	10.0	41.4	0.097
P4KE33C	29.7	36.6	1.0	26.8	5.0	9.0	47.7	0.098
1.5KE33CA	31.4	34.7	1.0	28.2	5.0	9.0	45.7	0.098
1.5KE36C	32.4	39.6	1.0	29.1	5.0	8.0	52.0	0.099
1.5KE36CA	34.2	37.8	1.0	30.8	5.0	8.4	49.9	0.099
1.5KE39C	35.1	42.9	1.0	31.6	5.0	7.4	56.4	0.100
1.5KE39CA	37.1	41.0	1.0	33.3	5.0	7.8	53.9	0.100
1.5KE43C	38.7	47.3	1.0	34.8	5.0	6.8	61.9	0.101
1.5KE43CA	40.9	45.2	1.0	36.8	5.0	7.1	59.3	0.101
1.5KE47C	42.3	51.7	1.0	38.1	5.0	6.2	67.8	0.101
1.5KE47CA	44.7	49.4	1.0	40.2	5.0	6.5	64.8	0.101
1.5KE51C	45.9	56.1	1.0	41.3	5.0	5.7	73.5	0.102
1.5KE51CA	48.5	53.6	1.0	43.6	5.0	6.0	70.1	0.102
1.5KE56C	50.4	61.6	1.0	45.4	5.0	5.2	80.5	0.103
1.5KE56CA	53.2	58.8	1.0	47.8	5.0	5.5	77.0	0.103
1.5KE62C	55.8	68.2	1.0	50.2	5.0	4.7	89.0	0.104
1.5KE62CA	58.9	65.1	1.0	53.0	5.0	5.0	85.0	0.104
1.5KE68C	61.2	74.8	1.0	55.1	5.0	4.3	98.0	0.104
1.5KE68CA	64.6	71.4	1.0	58.1	5.0	4.6	92.0	0.104
1.5KE75C	67.5	82.5	1.0	60.7	5.0	3.9	108	0.105
1.5KE75CA	71.3	78.8	1.0	64.1	5.0	4.1	103	0.105
1.5KE82C	73.8	90.2	1.0	66.4	5.0	3.6	118	0.105

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	VBR (V)		It	VRWM	IR	IRSM	VRSM	(% / °C)
	Min	Max	(mA)	(V)	(µA)	(A)	(V)	
1.5KE82CA	77.9	86.1	1.0	70.1	5.0	3.7	113	0.105
1.5KE91C	81.9	100	1.0	73.7	5.0	3.2	131	0.106
1.5KE91CA	86.5	95.5	1.0	77.8	5.0	3.4	125	0.106
1.5KE100C	90.0	110	1.0	81.0	5.0	2.9	144	0.106
1.5KE100CA	95.0	105	1.0	85.5	5.0	3.1	137	0.106
1.5KE110C	99.0	121	1.0	89.2	5.0	2.7	158	0.107
1.5KE110CA	105	116	1.0	91.0	5.0	2.8	152	0.107
1.5KE120C	108	132	1.0	97.2	5.0	2.4	173	0.107
1.5KE120CA	114	126	1.0	102	5.0	2.5	165	0.107
1.5KE130C	117	143	1.0	105	5.0	2.2	187	0.107
1.5KE130CA	17124	137	1.0	111	5.0	2.3	179	0.107
1.5KE150C	135	165	1.0	121	5.0	2.0	215	0.108
1.5KE150CA	143	158	1.0	128	5.0	2.0	207	0.108
1.5KE160C	144	176	1.0	130	5.0	1.8	230	0.108
1.5KE160CA	152	168	1.0	136	5.0	1.9	219	0.108
1.5KE170C	153	187	1.0	138	5.0	1.7	244	0.108
1.5KE170CA	162	179	1.0	145	5.0	1.8	234	0.108
1.5KE180C	162	198	1.0	146	5.0	1.6	258	0.108
1.5KE180CA	171	189	1.0	154	5.0	1.7	246	0.108
1.5KE200C	180	220	1.0	162	5.0	1.5	287	0.108
1.5KE200CA	190	210	1.0	171	5.0	1.53	274	0.108
1.5KE220C	198	242	1.0	175	5.0	1.16	344	0.108
1.5KE220CA	209	231	1.0	185	5.0	1.22	328	0.108
1.5KE250C	225	275	1.0	202	5.0	1.11	360	0.110
1.5KE250CA	237	263	1.0	214	5.0	1.16	344	0.110
1.5KE300C	270	330	1.0	243	5.0	0.93	430	0.110
1.5KE300CA	285	315	1.0	256	5.0	0.97	414	0.110
1.5KE350C	315	385	1.0	284	5.0	0.79	504	0.110
1.5KE350CA	332	368	1.0	300	5.0	0.83	482	0.110

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	VBR (V)		It	VRWM	IR	IRSM	VRSM	
	Min	Max	(mA)	(V)	(μ A)	(A)	(V)	(% / °C)
1.5KE400C	360	440	1.0	324	5.0	0.70	574	0.110
1.5KE400CA	380	420	1.0	342	5.0	0.73	548	0.110
1.5KE440C	396	484	1.0	356	5.0	0.95	631	0.110
1.5KE440CA	418	462	1.0	376	5.0	1.00	602	0.110

Note:

- (1) VBR measured after It applied for 300 μ s., It = square wave pulse or equivalent
- (2) "1.5" will be omitted in marking on the diode.

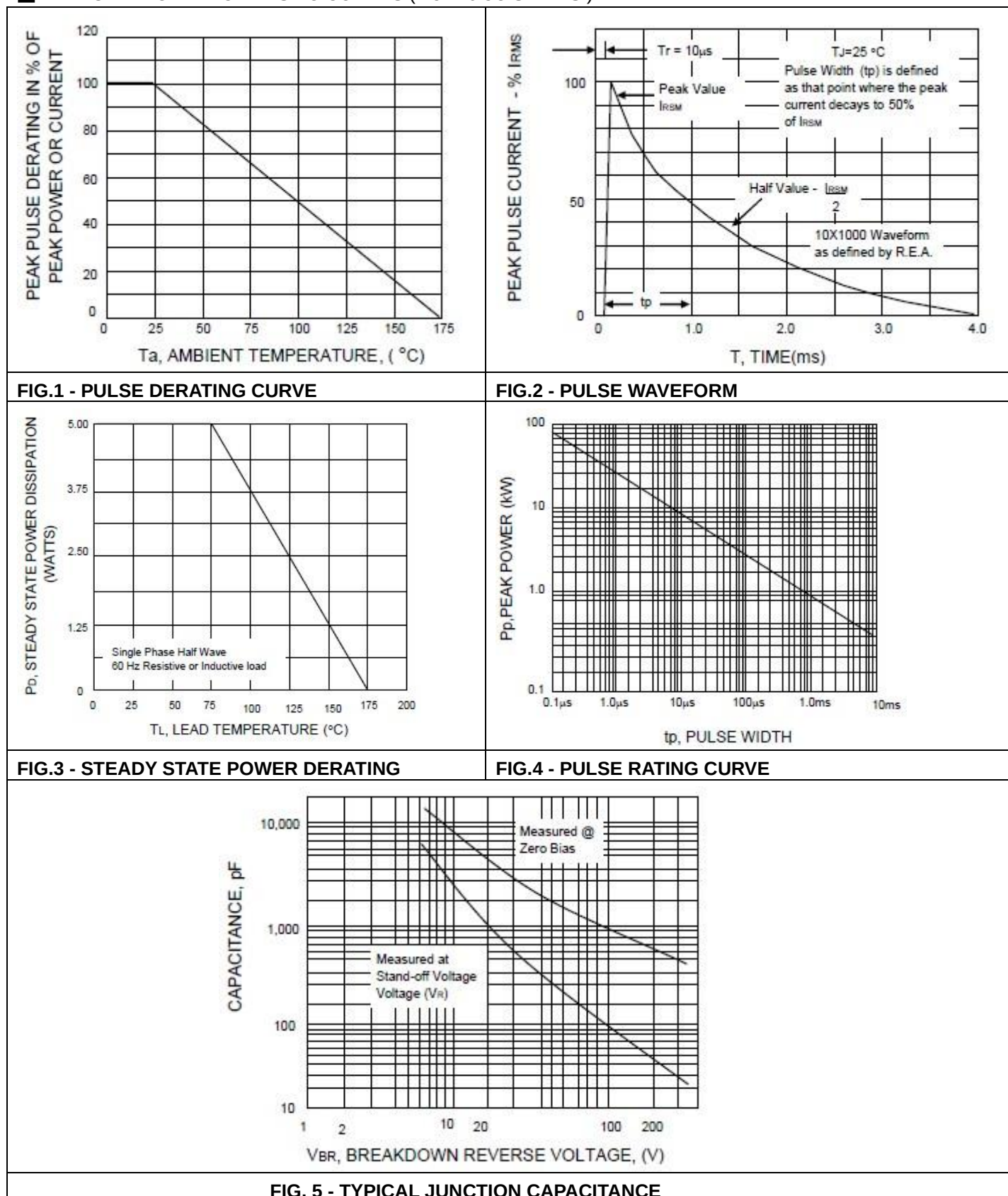
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RATING AND CHARACTERISTIC CURVES (1.5KE6.8C SERIES)



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