

1.5KE SERIES

Breakdown Voltage 6.8 to 600 V
Peak Pulse Power 1500W

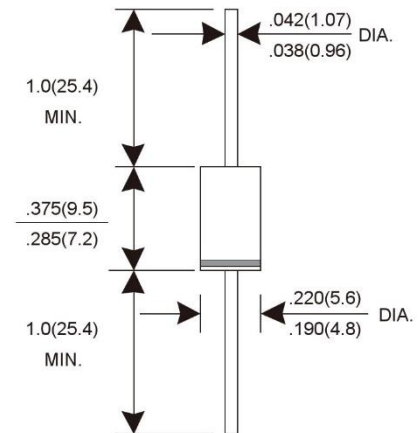
FEATURES

- Glass passivated chip
- 1500W peak pulse power capability at 10/1000 μ s waveform, repetition rate (duty cycles):0.01%
- Low leakage
- Excellent clamping capability
- Very fast response time
- RoHS compliant

MECHANICAL DATA

- Case: Molded plastic, DO-201AE
- Epoxy: UL 94V-0 rate flame retardant
- Terminals: Solderable per MIL-STD-202, method 208
- Polarity: Color band denotes cathode end
- Mounting position: Any

DO-201AE



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND THERMAL CHARACTERISTICS

T_A=25°C unless otherwise noted

Parameter	Symbol	Value	Unit
Peak power dissipation with a 10/1000 μ s waveform (Note 1)	P _{PPM}	1500	W
Peak forward surge current, 8.3 ms single half sine-wave (Note 2)	I _{FSM}	200	A
Power dissipation on infinite heatsink at T _L =75°C	P _D	6.5	W
Maximum instantaneous forward voltage at 100A for unidirectional only (Note 3)	V _F	3.5 / 5.0	V
Typical thermal resistance junction to ambient	R _{θJA}	75	°C/W
Typical thermal resistance junction to lead	R _{θJL}	15	°C/W
Operating junction and storage temperature range	T _J , T _{STG}	-55 to +175	°C

NOTES : (1) Non-repetitive current pulse, per Fig. 3 and derated above T_A=25°C per Fig. 2

(2) Measured on 8.3ms single half sine wave or equivalent square wave for unidirectional device only, duty cycle=4 per minute maximum

(3) V_F<3.5V for devices of V_{BR}<200V and V_F<5.0V for devices of V_{BR}>201V

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Electrical Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

Part Number (Uni)	Part Number (Bi)	Breakdown Voltage $V_{BR}@I_T$			Maximum Reverse Leakage $I_R@V_{RWM}$ (μA)	Working Peak Reverse Voltage V_{RWM} (V)	Maximum Reverse Surge Current I_{PP} (A)	Maximum Clamping Voltage $V_C@I_{PP}$ (V)
		Min (V)	Max (V)	I_T (mA)				
1.5KE6.8A	1.5KE6.8CA	6.45	7.14	10	1000	5.80	144.8	10.5
1.5KE7.5A	1.5KE7.5CA	7.13	7.88	10	500	6.40	134.5	11.3
1.5KE8.2A	1.5KE8.2CA	7.79	8.61	10	200	7.02	125.6	12.1
1.5KE9.1A	1.5KE9.1CA	8.65	9.50	1	50	7.78	113.4	13.4
1.5KE10A	1.5KE10CA	9.50	10.5	1	10	8.55	104.8	14.5
1.5KE11A	1.5KE11CA	10.5	11.6	1	5	9.40	97.4	15.6
1.5KE12A	1.5KE12CA	11.4	12.6	1	5	10.2	91.0	16.7
1.5KE13A	1.5KE13CA	12.4	13.7	1	1	11.1	83.5	18.2
1.5KE15A	1.5KE15CA	14.3	15.8	1	1	12.8	71.7	21.2
1.5KE16A	1.5KE16CA	15.2	16.8	1	1	13.6	67.6	22.5
1.5KE18A	1.5KE18CA	17.1	18.9	1	1	15.3	60.3	25.2
1.5KE20A	1.5KE20CA	19.0	21.0	1	1	17.1	54.9	27.7
1.5KE22A	1.5KE22CA	20.9	23.1	1	1	18.8	49.7	30.6
1.5KE24A	1.5KE24CA	22.8	25.2	1	1	20.5	45.8	33.2
1.5KE27A	1.5KE27CA	25.7	28.4	1	1	23.1	40.5	37.5
1.5KE30A	1.5KE30CA	28.5	31.5	1	1	25.6	36.7	41.4
1.5KE33A	1.5KE33CA	31.4	34.7	1	1	28.2	33.3	45.7
1.5KE36A	1.5KE36CA	34.2	37.8	1	1	30.8	30.5	49.9
1.5KE39A	1.5KE39CA	37.1	41.0	1	1	33.3	28.2	53.9
1.5KE43A	1.5KE43CA	40.9	45.2	1	1	36.8	25.6	59.3
1.5KE47A	1.5KE47CA	44.7	49.4	1	1	40.2	23.5	64.8
1.5KE51A	1.5KE51CA	48.5	53.6	1	1	43.6	21.7	70.1
1.5KE56A	1.5KE56CA	53.2	58.8	1	1	47.8	19.7	77.0
1.5KE62A	1.5KE62CA	58.9	65.1	1	1	53.0	17.9	85.0
1.5KE68A	1.5KE68CA	64.6	71.4	1	1	58.1	16.5	92.0
1.5KE75A	1.5KE75CA	71.3	78.8	1	1	64.1	14.8	103
1.5KE82A	1.5KE82CA	77.9	86.1	1	1	70.1	13.5	113
1.5KE91A	1.5KE91CA	86.5	95.5	1	1	77.8	12.2	125
1.5KE100A	1.5KE100CA	95.0	105.0	1	1	85.5	11.1	137
1.5KE110A	1.5KE110CA	105.0	116.0	1	1	94.0	10.0	152
1.5KE120A	1.5KE120CA	114.0	126.0	1	1	102	9.2	165
1.5KE130A	1.5KE130CA	124.0	137.0	1	1	111	8.5	179
1.5KE150A	1.5KE150CA	143.0	158.0	1	1	128	7.3	207
1.5KE160A	1.5KE160CA	152.0	168.0	1	1	136	6.9	219
1.5KE170A	1.5KE170CA	162.0	179.0	1	1	145	6.5	234
1.5KE180A	1.5KE180CA	171.0	189.0	1	1	154	6.2	246
1.5KE200A	1.5KE200CA	190.0	210.0	1	1	171	5.5	274
1.5KE220A	1.5KE220CA	209.0	231.0	1	1	185	4.6	328
1.5KE250A	1.5KE250CA	237.0	263.0	1	1	214	4.4	344
1.5KE300A	1.5KE300CA	285.0	315.0	1	1	256	3.7	414
1.5KE320A	1.5KE320CA	304.0	336.0	1	1	273	3.5	441
1.5KE350A	1.5KE350CA	332.0	368.0	1	1	300	3.2	482
1.5KE400A	1.5KE400CA	380.0	420.0	1	1	342	2.8	548
1.5KE440A	1.5KE440CA	418.0	462.0	1	1	376	2.5	602
1.5KE480A	1.5KE480CA	456.0	504.0	1	1	408	2.3	658
1.5KE510A	1.5KE510CA	485.0	535.0	1	1	434	2.1	698
1.5KE530A	1.5KE530CA	503.5	556.5	1	1	451	2.1	725
1.5KE540A	1.5KE540CA	513.0	567.0	1	1	460	2.0	740
1.5KE550A	1.5KE550CA	522.5	577.5	1	1	468	2.0	760
1.5KE600A	1.5KE600CA	570.0	630.0	1	1	512	1.8	828

Add suffix "CA" after part number to specify Bi-directional devices.

For Bi-directional type having V_R of 10 volts and less, the I_R limit is double.

All products, product specifications and data are subject to change without notice to improve reliability, function or design or otherwise.

RATINGS AND CHARACTERISTICS CURVES 1.5KE SERIES

Fig.1 - Peak Pulse Power Rating Curve

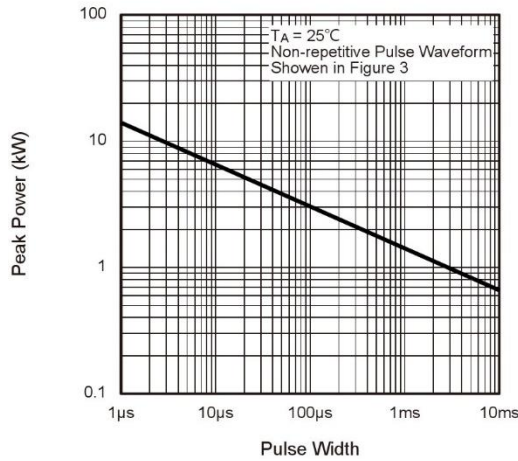


Fig.2 - Pulse Derating Curve

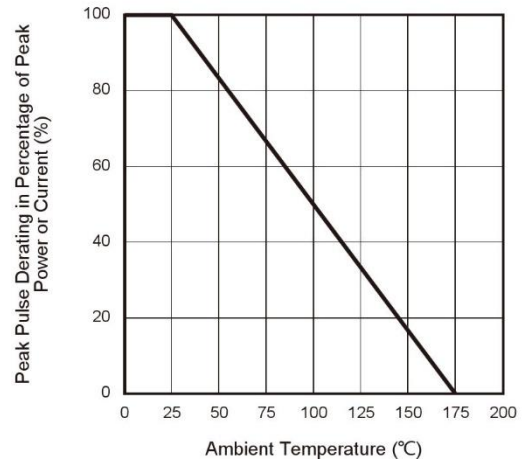


Fig.3 - Pulse Waveform

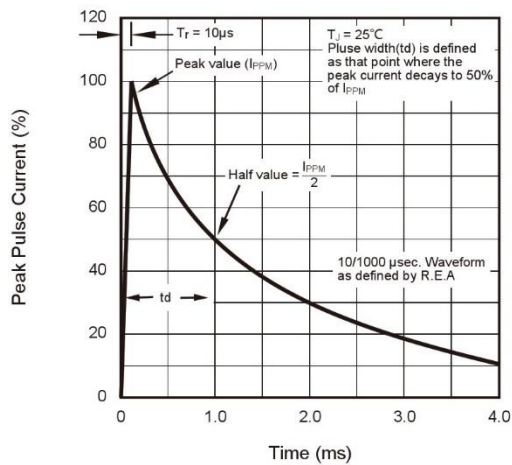


Fig.4 - Typical Junction Capacitance

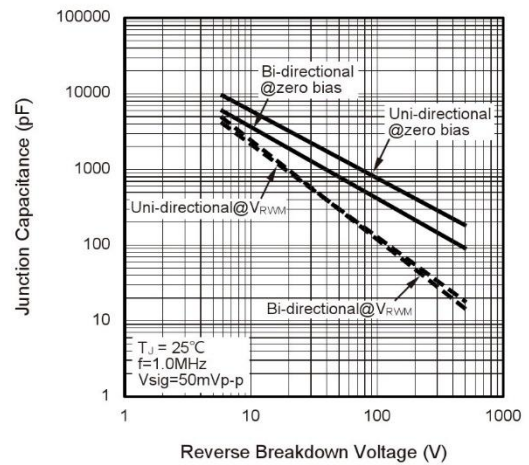


Fig.5 - Steady State Power Derating Curve

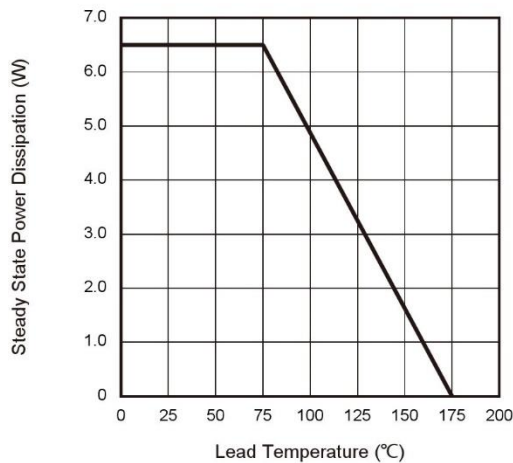
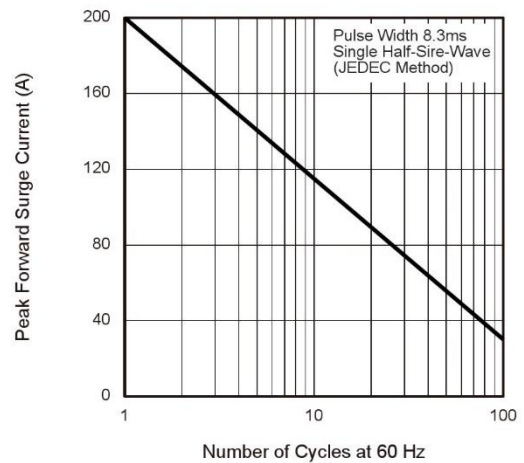


Fig.6 - Maximum Non-Repetitive Surge Current



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