

### Features

- 1500W Peak Pulse Power Dissipation
- Voltage Range 6.8V - 400V
- Constructed with Glass Passivated Die
- Uni and Bidirectional Versions Available
- Excellent Clamping Capability
- Fast Response Time
- Lead Free Finish, RoHS Compliant (Note 3)**



### Mechanical Data

- Case: DO-201
- Case Material: Transfer Molding Epoxy. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020C
- Terminals: Finish - Tin. Leads: Axial, Solderable per MIL-STD-202 Method 208
- Ordering Information: See Page 4
- Marking: Unidirectional - Type Number and Cathode Band
- Marking: Bidirectional - Type Number Only
- Weight: 1.12 grams (approximate)

DO-201		
Dim	Min	Max
A	25.40	—
B	8.50	9.53
C	0.96	1.06
D	4.80	5.21
All Dimensions in mm		

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

Characteristic	Symbol	Value	Unit
Peak Power Dissipation at $t_p = 1.0\text{ms}$ (Non-repetitive current pulse, derated above $T_A = 25^\circ\text{C}$ )	$P_{pk}$	1500	W
Steady State Power Dissipation at $T_L = 75^\circ\text{C}$ Lead Lengths 9.5 mm	$P_d$	5.0	W
Peak Forward Surge Current, 8.3 Single Half Sine Wave Superimposed on Rated Load (8.3ms Single Half Sine Wave, Duty Cycle = 4 pulses per minute maximum)	$I_{FSM}$	200	A
Forward Voltage @ $I_F = 50\text{A}$ 300 $\mu\text{s}$ Square Wave Pulse, Unidirectional Only	$V_F$	3.5 5.0	V
Operating and Storage Temperature Range	$T_j, T_{STG}$	-55 to +175	$^\circ\text{C}$

- Notes:
1. Suffix 'C' denotes bidirectional device.
  2. For bidirectional devices having  $V_R$  of 10 volts and under, the  $I_R$  limit is doubled.
  3. RoHS revision 13.2.2003. Glass and high temperature solder exemptions applied, see *EU Directive Annex Notes 5 and 7*.

Type Number (Note 1)	Type Number (Note 1)	Reverse Standoff Voltage	Breakdown Voltage $V_{BR}$ @ $I_T$		Test Current	Max. Reverse Leakage (Note 2) @ $V_R$	Max. Clamping Voltage @ $I_{PP}$	Max. Peak Pulse Current	Max. Voltage Temp. Variation of $V_{BR}$
			(UNI)	(BI)					
1.5KE6V8A	1.5KE6V8CA	5.80	6.45	7.14	10	1000	10.5	143.0	0.057
1.5KE7V5A	1.5KE7V5CA	6.40	7.13	7.88	10	500	11.3	132.0	0.061
1.5KE8V2A	1.5KE8V2CA	7.02	7.79	8.61	10	200	12.1	124.0	0.065
1.5KE9V1A	1.5KE9V1CA	7.78	8.65	9.55	1.0	50	13.4	112.0	0.068
1.5KE10A	1.5KE10CA	8.55	9.50	10.50	1.0	10	14.5	103.0	0.073
1.5KE11A	1.5KE11CA	9.40	10.50	11.60	1.0	5.0	15.6	96.0	0.075
1.5KE12A	1.5KE12CA	10.20	11.40	12.60	1.0	5.0	16.7	90.0	0.078
1.5KE13A	1.5KE13CA	11.10	12.40	13.70	1.0	5.0	18.2	82.0	0.081
1.5KE15A	1.5KE15CA	12.80	14.30	15.80	1.0	5.0	21.2	71.0	0.084
1.5KE16A	1.5KE16CA	13.60	15.20	16.80	1.0	5.0	22.5	67.0	0.086
1.5KE18A	1.5KE18CA	15.30	17.10	18.90	1.0	5.0	25.2	59.5	0.088
1.5KE20A	1.5KE20CA	17.10	19.00	21.00	1.0	5.0	27.7	54.0	0.090
1.5KE22A	1.5KE22CA	18.80	20.90	23.10	1.0	5.0	30.6	49.0	0.092
1.5KE24A	1.5KE24CA	20.50	22.80	25.20	1.0	5.0	33.2	45.0	0.094
1.5KE27A	1.5KE27CA	23.10	25.70	28.40	1.0	5.0	37.5	40.0	0.096
1.5KE30A	1.5KE30CA	25.60	28.50	31.50	1.0	5.0	41.4	36.0	0.097
1.5KE33A	1.5KE33CA	28.20	31.40	34.70	1.0	5.0	45.7	33.0	0.098
1.5KE36A	1.5KE36CA	30.80	34.20	37.80	1.0	5.0	49.9	30.0	0.099
1.5KE39A	1.5KE39CA	33.30	37.10	41.00	1.0	5.0	53.9	28.0	0.100
1.5KE43A	1.5KE43CA	36.80	40.90	45.20	1.0	5.0	59.3	25.3	0.101
1.5KE47A	1.5KE47CA	40.20	44.70	49.40	1.0	5.0	64.8	23.2	0.101
1.5KE51A	1.5KE51CA	43.60	48.50	53.60	1.0	5.0	70.1	21.4	0.102
1.5KE56A	1.5KE56CA	47.80	53.20	58.80	1.0	5.0	77.0	19.5	0.103
1.5KE62A	1.5KE62CA	53.00	58.90	65.10	1.0	5.0	85.0	17.7	0.104
1.5KE68A	1.5KE68CA	58.10	64.60	71.40	1.0	5.0	92.0	16.3	0.104
1.5KE75A	1.5KE75CA	64.10	71.30	78.80	1.0	5.0	103.0	14.6	0.105
1.5KE82A	1.5KE82CA	70.10	77.90	86.10	1.0	5.0	113.0	13.3	0.105
1.5KE91A	1.5KE91CA	77.80	86.50	95.50	1.0	5.0	125.0	12.0	0.106
1.5KE100A	1.5KE100CA	85.50	95.00	105.00	1.0	5.0	137.0	11.0	0.106
1.5KE110A	1.5KE110CA	94.00	105.00	116.00	1.0	5.0	152.0	9.9	0.107
1.5KE120A	1.5KE120CA	102.00	114.00	126.00	1.0	5.0	165.0	9.1	0.107
1.5KE130A	1.5KE130CA	111.00	124.00	137.00	1.0	5.0	179.0	8.4	0.107
1.5KE150A	1.5KE150CA	128.00	143.00	158.00	1.0	5.0	207.0	7.2	0.108
1.5KE160A	1.5KE160CA	136.00	152.00	168.00	1.0	5.0	219.0	6.8	0.108
1.5KE170A	1.5KE170CA	145.00	162.00	179.00	1.0	5.0	234.0	6.4	0.108
1.5KE180A	1.5KE180CA	154.00	171.00	189.00	1.0	5.0	246.0	6.1	0.108
1.5KE200A	1.5KE200CA	171.00	190.00	210.00	1.0	5.0	274.0	5.5	0.108
1.5KE220A	1.5KE220CA	185.00	209.00	231.00	1.0	5.0	328.0	4.6	0.108
1.5KE250A	1.5KE250CA	214.00	237.00	263.00	1.0	5.0	344.0	5.0	0.110
1.5KE300A	1.5KE300CA	256.00	285.00	315.00	1.0	5.0	414.0	5.0	0.110
1.5KE350A	1.5KE350CA	300.00	332.00	368.00	1.0	5.0	482.0	4.0	0.110
1.5KE400A	1.5KE400CA	342.00	380.00	420.00	1.0	5.0	548.0	4.0	0.110

Notes: 1. Suffix 'C' denotes bidirectional device.  
2. For bidirectional devices having  $V_R$  of 10 volts and under, the  $I_R$  limit is doubled.



Fig. 1 Pulse Waveform



Fig. 2 Typical Total Capacitance



Fig. 3 Pulse Rating Curve



Fig. 4 Pulse Derating Curve

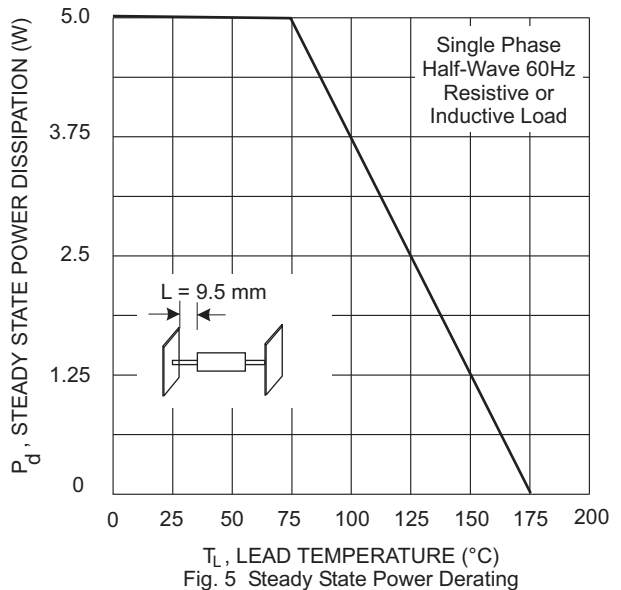


Fig. 5 Steady State Power Derating

**Ordering Information** (Note 4 & 5)

Device	Packaging	Shipping
(Type Number)-B*	DO-201	1K/Bulk
(Type Number)-T*	DO-201	1K/Tape & Reel, 13-inch

- Notes:
- \*Add "-B" or "-T" to the appropriate type number in Table 1. Example: 6.40 Reverse Standoff Voltage, UNI = 1.5KE7V5A-B.
  - For packaging details, visit our website at <http://www.diodes.com/datasheets/ap02008.pdf>.

**IMPORTANT NOTICE**

Diodes Incorporated and its subsidiaries reserve the right to make modifications, enhancements, improvements, corrections or other changes without further notice to any product herein. Diodes Incorporated does not assume any liability arising out of the application or use of any product described herein; neither does it convey any license under its patent rights, nor the rights of others. The user of products in such applications shall assume all risks of such use and will agree to hold Diodes Incorporated and all the companies whose products are represented on our website, harmless against all damages.

**LIFE SUPPORT**

Diodes Incorporated products are not authorized for use as critical components in life support devices or systems without the expressed written approval of the President of Diodes Incorporated.