1.5KE6V8(C)A - 1.5KE400(C)A

1500W TRANSIENT VOLTAGE SUPPRESSOR

Features

- 1500W Peak Pulse Power Dissipation
- Voltage Range 6.8V to 400V
- Constructed with Glass Passivated Die
- Uni and Bidirectional Versions Available
- Excellent Clamping Capability
- Fast Response Time
- **Lead-Free Finish; RoHS Compliant (Notes 1 & 2)**
- **Halogen and Antimony Free. "Green" Device (Note 3)**
- **For automotive applications requiring specific change control (i.e. parts qualified to AEC-Q100/101/104/200, PPAP capable, and manufactured in IATF 16949 certified facilities), please contact us or your local Diodes representative.**
  https://www.diodes.com/quality/product-definitions/

Mechanical Data

- Package: DO-201
- Package Material: Transfer Molded Epoxy. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminals: Finish - Tin. Leads: Axial, Solderable per MIL-STD-202 Method 208 e3
- Marking: Unidirectional - Type Number and Cathode Band
- Marking: Bidirectional - Type Number Only
- Weight: 1.12 grams (Approximate)

Ordering Information (Notes 4 & 5)

Part Number	Package	Packing	
		Qty.	Carrier
1.5KE6V8(C)A - 1.5KE400(C)A-B*	DO-201	1k	Bulk
1.5KE6V8(C)A - 1.5KE400(C)A-T*	DO-201	1k	13" Tape & Reel

Notes:
1. EU Directive 2002/95/EC (RoHS), 2011/65/EU (RoHS 2) & 2015/863/EU (RoHS 3) compliant. All applicable RoHS exemptions applied.
2. See https://www.diodes.com/quality/lead-free/ for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.
3. Halogen- and Antimony-free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
4. For packaging details, go to our website at https://www.diodes.com/design/support/packaging/diodes-packaging/.
5. *Add "-B" or "-T" to the appropriate type number in Table 1. Example: 6.40 Reverse Standoff Voltage, UNI = 1.5KE7V5A-B.

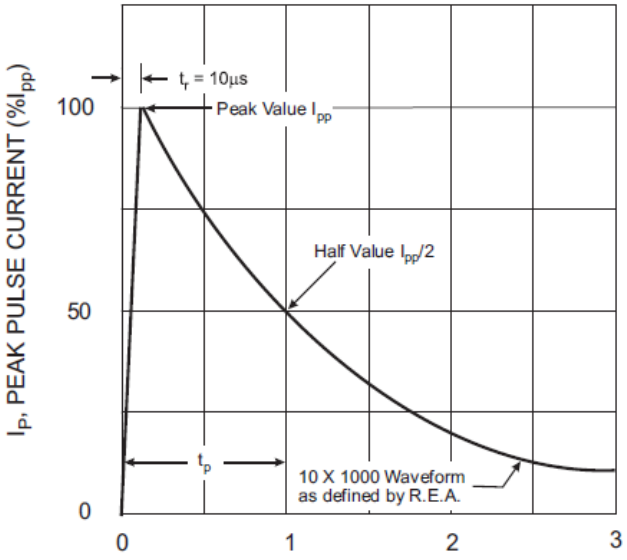
Maximum Ratings (@ T_A = +25°C, unless otherwise specified.)

Characteristic		Symbol	Value	Unit
Peak Power Dissipation at t_P = 1.0ms (Non-repetitive current pulse, derated above T_A = +25°C)		P_{pk}	1500	W
Steady State Power Dissipation at T_L = 75°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 = 50A 300µs Square Wave Pulse, Unidirectional Only	$V_{BR} \le 100V$ $V_{BR} > 100V$	V_F	3.5 5.0	V
Operating and Storage Temperature Range		T_j, T_{STG}	-55 to +175	°C

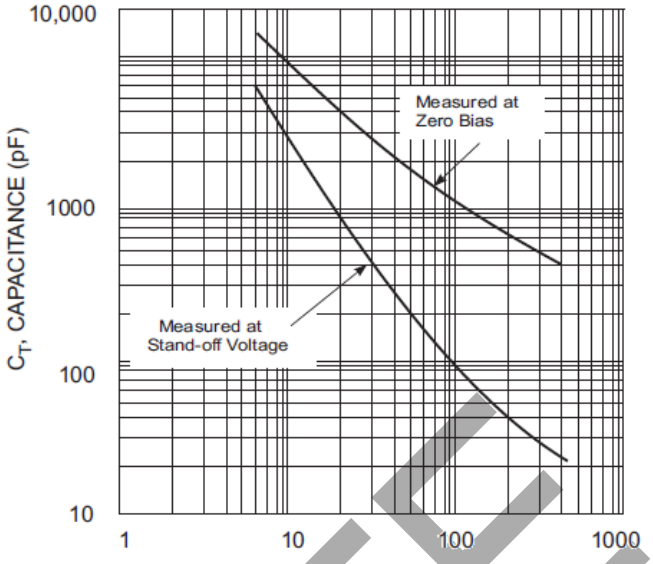
Note: 6. RoHS revision 13.2.2003. Glass and high temperature solder exemptions applied, see *EU Directive Annex Notes 5 and 7.*

Type Number (Note 7)	Type Number (Note 7)	Reverse Standoff Voltage	Breakdown Voltage V_{BR} @ I_T		Test Current	Max. Reverse Leakage (Note 8) @ V_R	Max. Clamping Voltage @ I_{pp}	Max. Peak Pulse Current	Max. Voltage Temp. Variation of V_{BR}
(UNI)	(BI)	V_{RWM} (V)	Min (V)	Max (V)	I_t (mA)	I_R (µA)	V_C (V)	I_{PP} (A)	%/°C
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

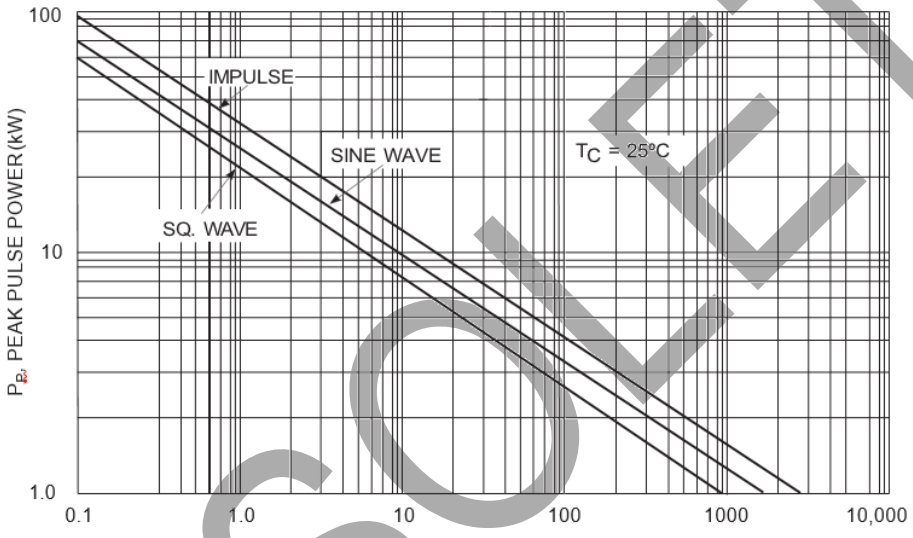
Notes: 7. Suffix 'C' denotes bidirectional device.
8. For bidirectional devices having V_R of 10 volts and under, the I_R limit is doubled.



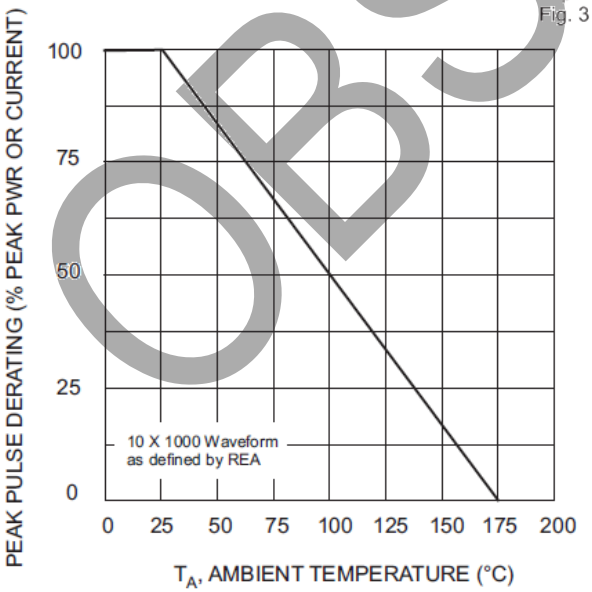
t, TIME (ms)
Fig. 1 Pulse Waveform



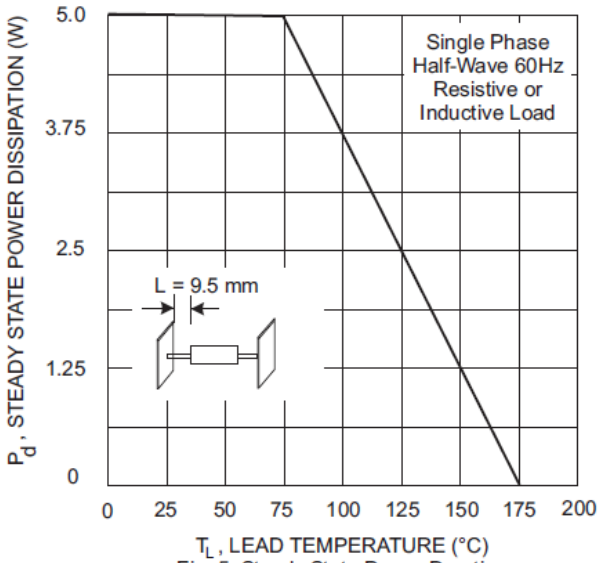
V_{RWM}, REVERSE STANDOFF VOLTAGE (V)
Fig. 2 Typical Total Capacitance



T_p, PULSE WIDTH (µS)
Fig. 3 Pulse Rating Curve



T_A, AMBIENT TEMPERATURE (°C)
Fig. 4 Pulse Derating Curve

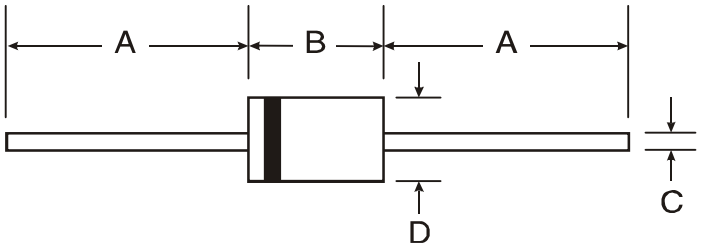


T_L, LEAD TEMPERATURE (°C)
Fig. 5 Steady State Power Derating

Package Outline Dimensions

Please see http://www.diodes.com/package-outlines.html for the latest version.

DO-201



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		

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