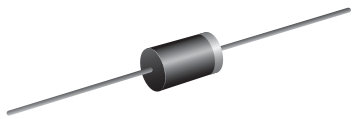
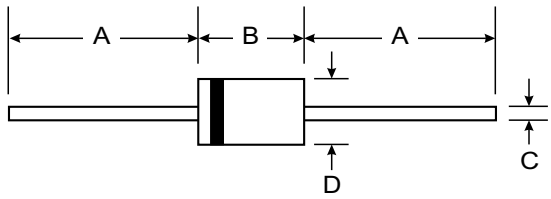
1.5KE6.8A(CA) - 1.5KE600A(CA)

AXIAL LEADED TRANSIENT VOLTAGE SUPPRESSOR DIODE

VOLTAGE RANGE: 6.8 - 600 V
POWER: 1500Watts





Features

- Glass Passivated Die Construction
  6.8V – 6 0 0 V Standoff Voltage
- Uni- and Bi-Directional Versions Available
- Excellent Clamping Capability
- Fast Response Time
- Plastic Case Material has UL Flammability

Mechanical Data

- Case: DO-201AD Molded Plastic
- Terminals: Axial Leads, Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band or Cathode Notch
- Unidirectional – Device Code and Cathode Band
- Bidirectional – Device Code Only
- Weight: 1.20 grams (approx.)

RoHS COMPLIANT

DO-201AD		
Dim	**Min**	**Max**
A	25.40	—
B	7.20	9.50
C	1.00	1.20
D	4.80	5.30
All Dimensions in mm		

Maximum Ratings and Electrical Characteristics @T_A=25°C unless otherwise specified

Characteristic	Symbol	Value	Unit
Peak Pulse Power Dissipation at T_A = 25°C (Note 1, 2, 5) Figure 3	P_{PPM}	1500 Minimum	W
Peak Forward Surge Current (Note 3)	I_{FSM}	200	A
Peak Pulse Current on 10/1000µS Waveform (Note 1) Figure 1	I_{PPM}	See Table 1	A
Steady State Power Dissipation (Note 2, 4)	$P_{M(AV)}$	5.0	W
Operating and Storage Temperature Range	T_j, T_{STG}	-65 to +175	°C

Note: 1. Non-repetitive current pulse, per Figure 1 and derated above T_A = 25°C per Figure 4.
2. Mounted on 40mm^2 copper pad.
3. 8.3ms single half sine-wave duty cycle = 4 pulses per minutes maximum.
4. Lead temperature at 75°C = T_L.
5. Peak pulse power waveform is 10/1000µS.

TYPE		Reverse Stand- Off Voltage	Breakdown Voltage Min. @I_T	Breakdown Voltage Max. @ I_T	Test Current	Maximum Clamping Voltage @I_{PP}	Peak Pulse Current	Reverse Leakage @V_{RWM}
(UNI)	(BI)	V_{RWM} (V)	$V_{BR\ MIN}$(V)	$V_{BR\ MAX}$(V)	I_T (mA)	V_C(V)	I_{PP}(A)	I_R(uA)
1.5KE6.8A	1.5KE6.8CA	5.80	6.45	7.14	10	10.5	144.8	1000.0
1.5KE7.5A	1.5KE7.5CA	6.40	7.13	7.88	10	11.3	134.5	500.0
1.5KE8.2A	1.5KE8.2CA	7.02	7.79	8.61	10	12.1	125.6	200.0
1.5KE9.1A	1.5KE9. 1CA	7.78	8.65	9.55	1.0	13.4	113.4	50.0
1.5KE10A	1.5KE10CA	8.55	9.50	10.5	1.0	14.5	104.8	10.0
1.5KE11A	1.5KE11CA	9.40	10.5	11.6	1.0	15.6	97.4	5.0
1.5KE12A	1.5KE12CA	10.2	11.4	12.6	1.0	16.7	91.0	5.0
1.5KE13A	1.5KE13CA	11.1	12.4	13.7	1.0	18.2	83.5	5.0
1.5KE15A	1.5KE15CA	12.8	14.3	15.8	1.0	21.2	71.7	5.0
1.5KE16A	1.5KE16CA	13.6	15.2	16.8	1.0	22.5	67.6	5.0
1.5KE18A	1.5KE18CA	15.3	17.1	18.9	1.0	25.2	60.3	5.0
1.5KE20A	1.5KE20CA	17.1	19.0	21.0	1.0	27.7	54.9	5.0
1.5KE22A	1.5KE22CA	18.8	20.9	23.1	1.0	30.6	49.7	5.0
1.5KE24A	1.5KE24CA	20.5	22.8	25.2	1.0	33.2	45.8	5.0
1.5KE27A	1.5KE27CA	23.1	25.7	28.4	1.0	37.5	40.5	5.0
1.5KE30A	1.5KE30CA	25.6	28.5	31.5	1.0	41.4	36.7	5.0
1.5KE33A	1.5KE33CA	28.2	31.4	34.7	1.0	45.7	33.3	5.0
1.5KE36A	1.5KE36CA	30.8	34.2	37.8	1.0	49.9	30.5	5.0
1.5KE39A	1.5KE39CA	33.3	37.1	41.0	1.0	53.9	28.2	5.0
1.5KE43A	1.5KE43CA	36.8	40.9	45.2	1.0	59.3	25.6	5.0
1.5KE47A	1.5KE47CA	40.2	44.7	49.4	1.0	64.8	23.5	5.0
1.5KE51A	1.5KE51CA	43.6	48.5	53.6	1.0	70.1	21.7	5.0
1.5KE56A	1.5KE56CA	47.8	53.2	58.8	1.0	77.0	19.7	5.0
1.5KE62A	1.5KE62CA	53.0	58.9	65.1	1.0	85.0	17.9	5.0
1.5KE68A	1.5KE68CA	58.1	64.6	71.4	1.0	92.0	16.5	5.0
1.5KE75A	1.5KE75CA	64.1	71.3	78.8	1.0	103	14.8	5.0
1.5KE82A	1.5KE82CA	70.1	77.9	86.1	1.0	113	13.5	5.0
1.5KE91A	1.5KE91CA	77.8	86.5	95.5	1.0	125	12.2	5.0
1.5KE100A	1.5KE100CA	85.5	95.0	105	1.0	137	11.1	5.0
1.5KE110A	1.5KE110CA	94.0	105	116	1.0	152	10.0	5.0
1.5KE120A	1.5KE120CA	102	114	126	1.0	165	9.2	5.0
1.5KE130A	1.5KE130CA	111	124	137	1.0	179	8.5	5.0
1.5KE150A	1.5KE150CA	128	143	158	1.0	207	7.3	5.0

For Bi-directional type having VRWM of 10 Volts and less, the IR limit is double

TYPE		Reverse Stand- Off Voltage	Breakdown Voltage Min. @I_T	Breakdown Voltage Max. @ I_T	Test Current	Maximum Clamping Voltage @I_{PP}	Peak Pulse Current	Reverse Leakage @V_{RWM}
(UNI)	(BI)	V_{RWM} (V)	$V_{BR\ MIN}$(V)	$V_{BR\ MAX}$(V)	I_T (mA)	V_C(V)	I_{PP}(A)	I_R(uA)
1.5KE160A	1.5KE160CA	136	152	168	1.0	219	6.9	5.0
1.5KE170A	1.5KE170CA	145	162	179	1.0	234	6.5	5.0
1.5KE180A	1.5KE180CA	154	171	189	1.0	246	6.2	5.0
1.5KE200A	1.5KE200CA	171	190	210	1.0	274	5.5	5.0
1.5KE220A	1.5KE220CA	185	209	231	1.0	328	4.6	5.0
1.5KE250A	1.5KE250CA	214	237	263	1.0	344	4.4	5.0
1.5KE300A	1.5KE300CA	256	285	315	1.0	414	3.7	5.0
1.5KE350A	1.5KE350CA	300	333	368	1.0	482	3.2	5.0
1.5KE400A	1.5KE400CA	342	380	420	1.0	548	2.8	5.0
1.5KE440A	1.5KE440CA	376	418	462	1.0	600	2.5	5.0
1.5KE500A	1.5KE500CA	427.5	475	525	1.0	690	2.17	5.0
1.5KE520A	1.5KE520CA	444.6	494	546	1.0	717.6	2.09	5.0
1.5KE550A	1.5KE550CA	470.3	522.5	577.5	1.0	759	1.98	5.0
1.5KE600A	1.5KE600CA	513	570	630	1.0	828	1.81	5.0

Ratings and Characteristic Curves T_A=25°C unless otherwise noted

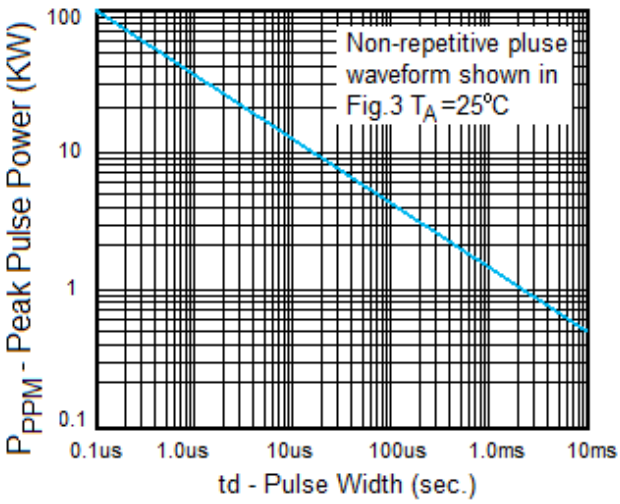


Fig. 1 Peak Pulse Power Rating

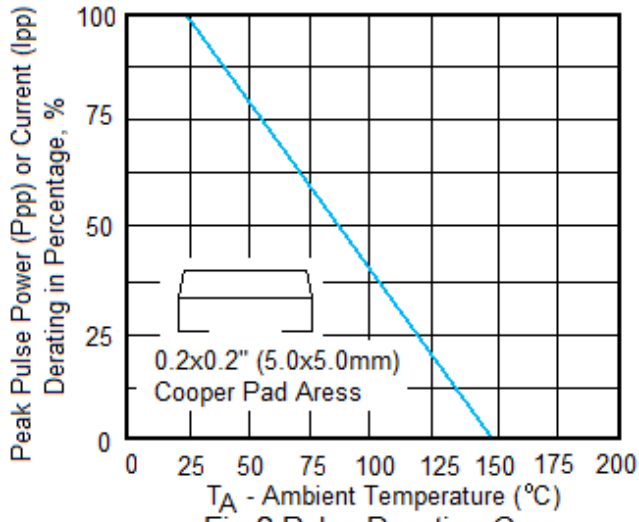


Fig.2 Pulse Derating Cure

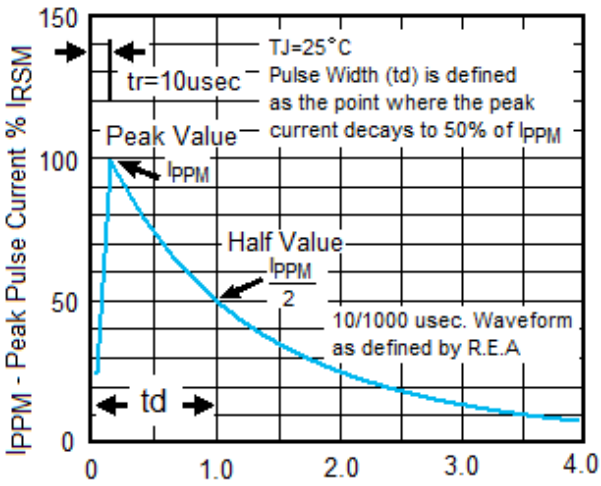


Fig.3 Pulse Waveform

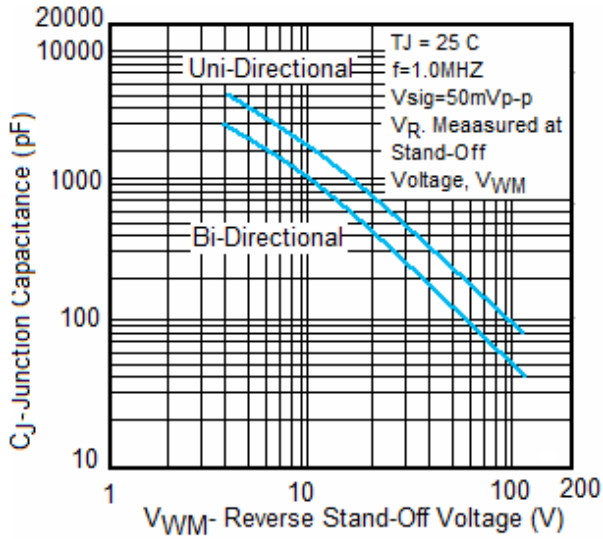


Fig. 4- Typical Junction Capacitance