Technical Data
Data Sheet N0209, Rev. E

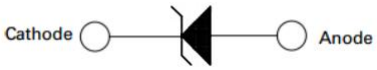
1.5KE SERIES
TRANSIENT VOLTAGE SUPPRESSOR

DO-201AD

Features

- Glass Passivated Die Construction
- 1500W Peak Pulse Power Dissipation
- 6.8V- 550V Standoff Voltage
- Uni- and Bi-Directional Versions Available
- Excellent Clamping Capability
- Fast Response Time
- Plastic Case Material has UL Flammability Classification Rating 94V-O
- This is a Pb – Free Device
- All SMC Parts are Traceable to the Wafer Lot
- Additional testing can be offered upon request

Circuit Diagram



Unipolar

Bipolar

Mechanical Data

- Case: JEDEC DO-201AD Low Profile Molded Plastic
- Terminals: Axial Leads, Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band or Cathode Notch
- Weight: 1.10 grams(approx.)

Maximum Ratings and Thermal Characteristics@T_A=25˚C unless otherwise specified

Parameter	Symbol	Value	Unit
Peak Pulse Power Dissipation at T_A=25˚C (Fig.1)(Note 1, 2, 5)	P_{PPM}	1500	W
Peak Forward Surge Current (Note 3)	I_{FSM}	200	A
Steady State Power Dissipation(Note 2, 4)	$P_{M(AV)}$	5.0	W
Typical Thermal Resistance Junction to Lead	$R_{\theta JL}$	15	˚C/W
Typical Thermal Resistance Junction to Ambient	$R_{\theta JA}$	75	˚C/W
Operating Junction and Storage Temperature Range	T_J,T_{STG}	-65 to 175	˚C

Notes: 1. Non-repetitive current pulse, per Fig. 3 and derated above T_A = 25˚C per Fig. 2.
2. Mounted on 20mm² copper pad.
3. Measured on 8.3ms single half sine wave or equivalent square wavefor unidirectional device only.
4. Lead temperature at 75˚C=T_L.
5. Peak pulse power waveform is 10x1000μs.

Technical Data
Data Sheet N0209, Rev. E

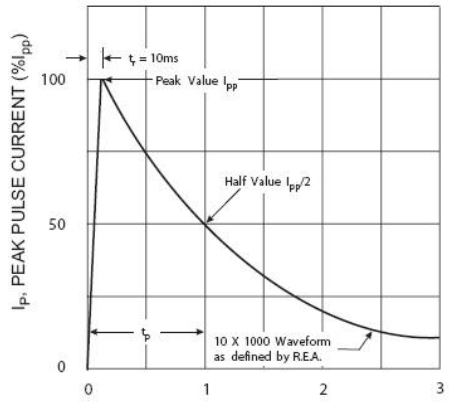
RoHS

Electrical Characteristics @T_A=25°C unless otherwise specified

UNI-POLAR	BI-POLAR	REVERSE STAND-OFF VOLTAGE VRWM (V)	BREAKDOWN VOLTAGE VBR (V) MIN. @IT	BREAKDOWN VOLTAGE VBR (V) MAX. @IT	TEST CURRENT IT(MA)	MAXMUM CLAMPING VOLTAGE @IPP VC(V)	PEAK PULSE CURRENT IPP(A)	REVERSE LEAKAGE @VRWM IR(uA)
1.5KE6.8A	1.5KE6.8CA	5.8	6.45	7.14	10	10.5	144.8	1000
1.5KE7.5A	1.5KE7.5CA	6.4	7.13	7.88	10	11.3	134.5	500
1.5KE8.2A	1.5KE8.2CA	7.02	7.79	8.61	10	12.1	125.6	200
1.5KE9.1A	1.5KE9.1CA	7.78	8.65	9.5	10	13.4	113.4	50
1.5KE10A	1.5KE10CA	8.55	9.5	10.5	1	14.5	104.8	10
1.5KE11A	1.5KE11CA	9.4	10.5	11.6	1	15.6	97.4	5
1.5KE12A	1.5KE12CA	10.2	11.4	12.6	1	16.7	91	5
1.5KE13A	1.5KE13CA	11.1	12.4	13.7	1	18.2	83.5	5
1.5KE15A	1.5KE15CA	12.8	14.3	15.8	1	21.2	71.7	5
1.5KE16A	1.5KE16CA	13.6	15.2	16.8	1	22.5	67.6	5
1.5KE18A	1.5KE18CA	15.3	17.1	18.9	1	25.2	60.3	5
1.5KE20A	1.5KE20CA	17.1	19	21	1	27.7	54.9	5
1.5KE22A	1.5KE22CA	18.8	20.9	23.1	1	30.6	49.7	5
1.5KE24A	1.5KE24CA	20.5	22.8	25.2	1	33.2	45.8	5
1.5KE27A	1.5KE27CA	23.1	25.7	28.4	1	37.5	40.5	5
1.5KE30A	1.5KE30CA	25.6	28.5	31.5	1	41.4	36.7	5
1.5KE33A	1.5KE33CA	28.2	31.4	34.7	1	45.7	33.3	5
1.5KE36A	1.5KE36CA	30.8	34.2	37.8	1	49.9	30.5	5
1.5KE39A	1.5KE39CA	33.3	37.1	41	1	53.9	28.2	5
1.5KE43A	1.5KE43CA	36.8	40.9	45.2	1	59.3	25.6	5
1.5KE47A	1.5KE47CA	40.2	44.7	49.4	1	64.8	23.5	5
1.5KE51A	1.5KE51CA	43.6	48.5	53.6	1	70.1	21.7	5
1.5KE56A	1.5KE56CA	47.8	53.2	58.8	1	77	19.7	5
1.5KE62A	1.5KE62CA	53	58.9	65.1	1	85	17.9	5
1.5KE68A	1.5KE68CA	58.1	64.6	71.4	1	92	16.5	5
1.5KE75A	1.5KE75CA	64.1	71.3	78.8	1	103	14.8	5
1.5KE82A	1.5KE82CA	70.1	77.9	86.1	1	113	13.5	5
1.5KE91A	1.5KE91CA	77.8	86.5	95.5	1	125	12.2	5
1.5KE100A	1.5KE100CA	85.5	95	105	1	137	11.1	5
1.5KE110A	1.5KE110CA	94	105	116	1	152	10	5
1.5KE120A	1.5KE120CA	102	114	126	1	165	9.2	5
1.5KE130A	1.5KE130CA	111	124	137	1	179	8.5	5
1.5KE150A	1.5KE150CA	128	143	158	1	207	7.3	5
1.5KE160A	1.5KE160CA	136	152	168	1	219	6.9	5
1.5KE170A	1.5KE170CA	145	162	179	1	234	6.5	5
1.5KE180A	1.5KE180CA	154	171	189	1	246	6.2	5
1.5KE200A	1.5KE200CA	171	190	210	1	274	5.5	5
1.5KE220A	1.5KE220CA	185	209	231	1	328	4.6	5
1.5KE250A	1.5KE250CA	214	237	263	1	344	4.4	5
1.5KE300A	1.5KE300CA	256	285	315	1	414	3.7	5
1.5KE350A	1.5KE350CA	300	332	368	1	482	3.2	5
1.5KE400A	1.5KE400CA	342	380	420	1	548	2.8	5
1.5KE440A	1.5KE440CA	376	418	462	1	602	2.5	5
1.5KE480A	1.5KE480CA	408	456	504	1	658	2.3	5
1.5KE510A	1.5KE510CA	434	485	535	1	698	2.1	5
1.5KE530A	1.5KE530CA	450	503.5	556.5	1	725	2.1	5
1.5KE540A	1.5KE540CA	459	513	567	1	740	2	5
1.5KE550A	1.5KE550CA	467	522.5	577.5	1	760	2	5

For bidirectional type having Vrwm of 10 volts and less, the IR limit is double.
For parts without A , the VBR is ±10%.

Ratings and Characteristics Curves



t, TIME (ms)
Fig. 1 Pulse Waveform

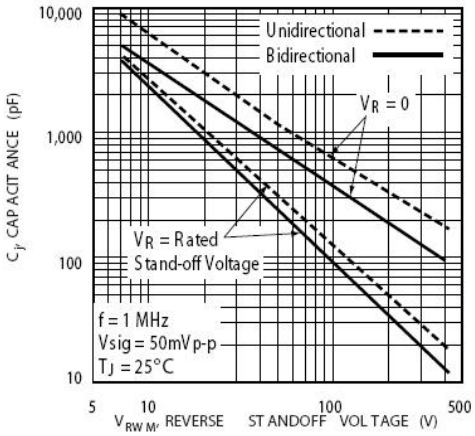


Fig. 2 Typical Junction Capacitance

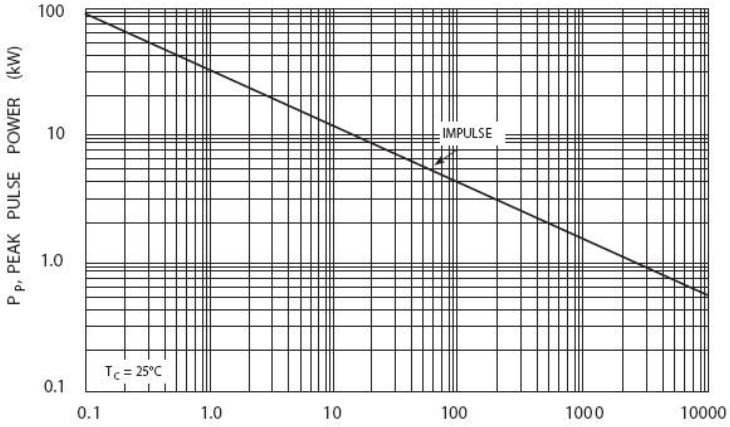


Fig. 3 Pulse Rating Curve

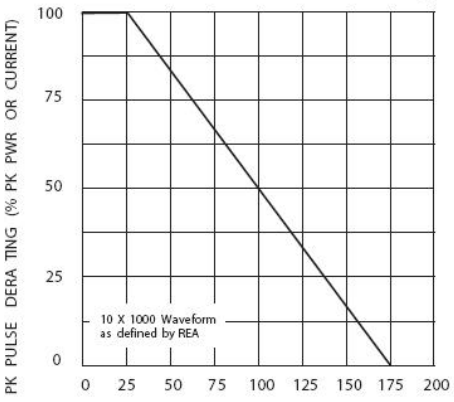


Fig. 4 Pulse Derating Curve

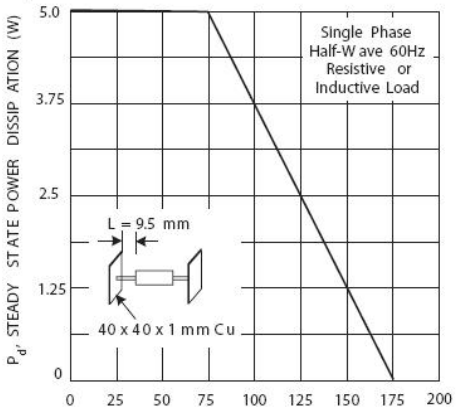
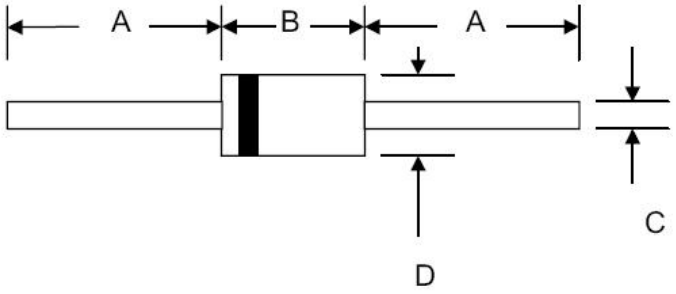


Fig. 5, Steady State Power Derating

Mechanical Dimensions DO-201AD



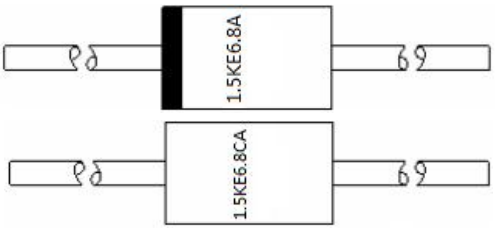
SYMBOL	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	24.0	-	0.945	-
B	7.20	9.50	0.265	0.374
C	0.96	1.07	0.038	0.042
D	4.80	5.30	0.190	0.210

Ordering Information

Device	Package	Shipping
1.5KE SERIES	DO-201AD (Pb-Free)	1250pcs / tape
1.5KE SERIES	DO-201AD (Pb-Free)	1250pcs / tape

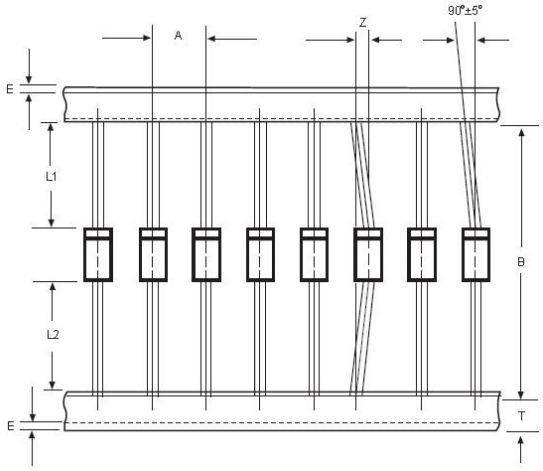
For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

Marking Diagram



1.5KE6.8A/1.5KE6.8CA = Part Name
Note: Starting from the 16XXX will not mark date code.

Carrier Tape Specification DO-201AD



SYMBOL	Millimeters	
	Min.	Max.
A	9.50	10.50
B	50.9	53.9
Z	-	1.20
T	5.60	6.40
E	-	0.80
IL1-L2I	-	1.0

Technical Data
Data Sheet N0209, Rev. E

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