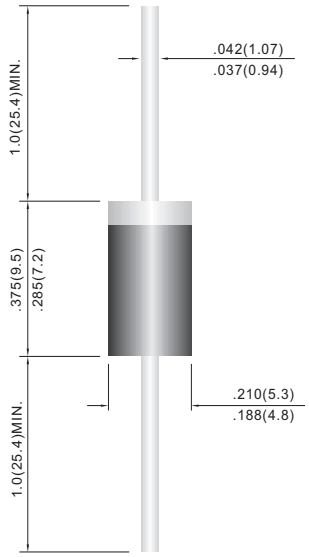
DATA SHEET

1.5KE SERIES

GLASS PASSIVATED JUNCTION TRANSIENT VOLTAGE SUPPRESSOR

VOLTAGE 6.8 to 440 Volts **PEAK PULSE POWER** 1500 Watts

DO-201AE Unit: inch(mm)



FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- Glass passivated chip junction in DO-201AE package
- 1500W surge capability at 1.0ms
- Excellent clamping capability
- Low zener impedance
- Fast response time: typically less than 1.0 ps from 0 volts to BV min
- Typical IR less than 1μA above 10V
- High temperature soldering guaranteed: 260°C/10 seconds/.375" ,(9.5mm) lead length/5lbs., (2.3kg) tension
- Pb free product are available : 99% Sn above can meet Rohs environment substance directive request

MECHANICALDATA

Case: JEDEC DO-201AE molded plastic

Terminals: Axial leads, solderable per MIL-STD-202G, Method 208

Polarity: Color band denoted cathode except Bipolar

Mounting Position: Any

Weight: 0.045 ounces, 1132mg

DEVICES FOR BIPOLAR APPLICATIONS

For Bidirectional use C or CA Suffix for types 1.5KE6.8 thru types 1.5KE440.
Electrical characteristics apply in both directions.

MAXIMUM RATINGS AND CHARACTERISTICS

Rating at 25°Cambient temperature unless otherwise specified. Resistive or inductive load, 60Hz.
For Capacitive load derate current by 20%.

Rating	Symbol	Value	Units
Peak Power Dissipation at T A=25^{O}C, T P=1ms(Note 1)	P_{PK}	1500	Watts
Steady State Power dissipation at TL = 75^{O}C Lead Lengths .375", (95mm) (Note 2)	P_{D}	5.0	Watts
Peak Forward Surge Current, 8.3ms Single Half Sine-Wave Superimposed on Rated Load (JECED Method) (Note 3)	I_{FSM}	200	Amps
Operating Junction and Storage Temperature Range	T_J,T_{STG}	-65 to +175	^{O}C

NOTES:

1. Non-repetitive current pulse, per Fig. 3 and derated above T_A=25°C per Fig. 2.
2. Mounted on Copper Leaf area of 0.79 in^2(20mm^2).
3. 8.3ms single half sine-wave, duty cycle= 4 pulses per minutes maximum.

Part Number	Part Number	V_{RWM}	V_{BR} @ I_T			I_R @ V_{RWM}		V_C @ I_{PP}		PACKAGE
			Min.	Max.	I_T	UNI-	BI-			
UNI-	BI-	V	V	V	mA	uA	uA	V	A	
1500W Transient Voltage Suppressor										
1.5KE6.8	1.5KE6.8C	5.50	6.12	7.48	10	1000	2000	10.8	139	DO-201AE
1.5KE6.8A	1.5KE6.8CA	5.80	6.45	7.14	10	1000	2000	10.5	143	DO-201AE
1.5KE7.5	1.5KE7.5C	6.05	6.75	8.25	10	500	1000	11.7	128	DO-201AE
1.5KE7.5A	1.5KE7.5CA	6.40	7.13	7.88	10	500	1000	11.3	132	DO-201AE
1.5KE8.2	1.5KE8.2C	6.63	7.38	9.02	10	200	400	12.5	120	DO-201AE
1.5KE8.2A	1.5KE8.2CA	7.02	7.79	8.61	10	200	400	12.1	124	DO-201AE
1.5KE9.1	1.5KE9.1C	7.37	8.19	10.0	1.0	50	100	13.8	109	DO-201AE
1.5KE9.1A	1.5KE9.1CA	7.78	8.65	9.50	1.0	50	100	13.4	112	DO-201AE
1.5KE10	1.5KE10C	8.10	9.00	11.0	1.0	10	20	15.0	100	DO-201AE
1.5KE10A	1.5KE10CA	8.55	9.50	10.5	1.0	10	20	14.5	103	DO-201AE
1.5KE11	1.5KE11C	8.92	9.90	12.1	1.0	5	10	16.2	93	DO-201AE
1.5KE11A	1.5KE11CA	9.40	10.5	11.6	1.0	5	10	15.6	96	DO-201AE
1.5KE12	1.5KE12C	9.72	10.8	13.2	1.0	5	5	17.3	87	DO-201AE
1.5KE12A	1.5KE12CA	10.2	11.4	12.6	1.0	5	5	16.7	90	DO-201AE
1.5KE13	1.5KE13C	10.5	11.7	14.3	1.0	5	5	19.0	79	DO-201AE
1.5KE13A	1.5KE13CA	11.1	12.4	13.7	1.0	5	5	18.2	82	DO-201AE
1.5KE15	1.5KE15C	12.1	13.5	16.5	1.0	1	1	22.0	68	DO-201AE
1.5KE15A	1.5KE15CA	12.8	14.3	1.8	1.0	1	1	21.2	71	DO-201AE
1.5KE16	1.5KE16C	12.9	14.4	17.6	1.0	1	1	23.5	64	DO-201AE
1.5KE16A	1.5KE16CA	13.6	15.2	16.8	1.0	1	1	22.5	67	DO-201AE
1.5KE18	1.5KE18C	14.5	16.2	19.8	1.0	1	1	26.5	56.5	DO-201AE
1.5KE18A	1.5KE18CA	15.3	17.1	18.9	1.0	1	1	25.2	59.5	DO-201AE
1.5KE20	1.5KE20C	16.2	18.0	22.0	1.0	1	1	29.1	51.5	DO-201AE
1.5KE20A	1.5KE20CA	17.1	19.0	21.0	1.0	1	1	27.7	54	DO-201AE
1.5KE22	1.5KE22C	17.8	19.8	24.2	1.0	1	1	31.9	47	DO-201AE
1.5KE22A	1.5KE22CA	18.8	20.9	23.1	1.0	1	1	30.6	49	DO-201AE
1.5KE24	1.5KE24C	19.4	21.6	26.4	1.0	1	1	34.7	43	DO-201AE
1.5KE24A	1.5KE24CA	20.5	22.8	25.2	1.0	1	1	33.2	45	DO-201AE
1.5KE27	1.5KE27C	21.8	24.3	29.7	1.0	1	1	39.1	38.5	DO-201AE
1.5KE27A	1.5KE27CA	23.1	25.7	28.4	1.0	1	1	37.5	40	DO-201AE
1.5KE30	1.5KE30C	24.3	27.0	33.0	1.0	1	1	43.5	34.5	DO-201AE
1.5KE30A	1.5KE30CA	25.6	28.5	31.5	1.0	1	1	41.4	36	DO-201AE
1.5KE33	1.5KE33C	26.8	29.7	36.3	1.0	1	1	47.7	31.5	DO-201AE
1.5KE33A	1.5KE33CA	28.2	31.4	34.7	1.0	1	1	45.7	33	DO-201AE
1.5KE36	1.5KE36C	29.1	32.4	39.6	1.0	1	1	52.0	29	DO-201AE
1.5KE36A	1.5KE36CA	30.8	34.2	37.8	1.0	1	1	49.9	30	DO-201AE
1.5KE39	1.5KE39C	31.6	35.1	42.9	1.0	1	1	56.4	26.5	DO-201AE
1.5KE39A	1.5KE39CA	33.3	37.1	41.0	1.0	1	1	53.9	28	DO-201AE
1.5KE43	1.5KE43C	34.8	38.7	47.3	1.0	1	1	61.9	24	DO-201AE
1.5KE43A	1.5KE43CA	36.8	40.9	45.2	1.0	1	1	59.3	25.3	DO-201AE
1.5KE47	1.5KE47C	38.1	42.3	51.7	1.0	1	1	67.8	22.2	DO-201AE
1.5KE47A	1.5KE47CA	40.2	44.7	49.4	1.0	1	1	64.8	23.2	DO-201AE

Part Number	Part Number	V_{RWM}	V_{BR} @ I_T			I_R @ V_{RWM}		V_C @ I_{PP}		PACKAGE
			Min.	Max.	I_T	UNI-	BI-			
UNI-	BI-	V	V	V	mA	uA	uA	V	A	
1500W Transient Voltage Suppressor										
15KE51	15KE51C	41.3	45.9	56.1	10	1	1	73.5	20.4	DO-201AE
15KE51A	15KE51CA	43.6	48.5	53.6	10	1	1	70.1	21.4	DO-201AE
15KE56	15KE56C	45.6	50.4	61.6	10	1	1	80.5	18.6	DO-201AE
15KE56A	15KE56CA	47.8	53.2	58.8	10	1	1	77.0	19.5	DO-201AE
15KE62	15KE62C	50.2	55.8	68.2	10	1	1	89.0	16.9	DO-201AE
15KE62A	15KE62CA	53.0	58.9	65.1	10	1	1	85.0	17.7	DO-201AE
15KE68	15KE68C	55.1	61.2	74.8	10	1	1	98.0	15.3	DO-201AE
15KE68A	15KE68CA	58.1	64.6	71.4	10	1	1	92.0	16.3	DO-201AE
15KE75	15KE75C	60.7	67.5	82.5	10	1	1	108	13.9	DO-201AE
15KE75A	15KE75CA	64.1	71.3	78.8	10	1	1	103	14.6	DO-201AE
15KE82	15KE82C	66.4	73.8	90.2	10	1	1	118	12.7	DO-201AE
15KE82A	15KE82CA	70.1	77.9	86.1	10	1	1	113	13.3	DO-201AE
15KE91	15KE91C	73.7	81.9	100	10	1	1	131	11.4	DO-201AE
15KE91A	15KE91CA	77.8	86.5	95.5	10	1	1	125	12.0	DO-201AE
15KE100	15KE100C	81.0	90.0	110	10	1	1	144	10.4	DO-201AE
15KE100A	15KE100CA	85.5	95.0	105	10	1	1	137	11.0	DO-201AE
15KE110	15KE110C	89.2	99.0	121	10	1	1	158	9.5	DO-201AE
15KE110A	15KE110CA	94.0	105	116	10	1	1	152	9.9	DO-201AE
15KE120	15KE120C	97.2	108	132	10	1	1	173	8.7	DO-201AE
15KE120A	15KE120CA	102	114	126	10	1	1	165	9.1	DO-201AE
15KE130	15KE130C	105	117	143	10	1	1	187	8.0	DO-201AE
15KE130A	15KE130CA	111	124	137	10	1	1	179	8.4	DO-201AE
15KE150	15KE150C	121	135	165	10	1	1	215	7.0	DO-201AE
15KE150A	15KE150CA	128	143	158	10	1	1	207	7.2	DO-201AE
15KE160	15KE160C	130	144	176	10	1	1	230	6.5	DO-201AE
15KE160A	15KE160CA	136	152	168	10	1	1	219	6.8	DO-201AE
15KE170	15KE170C	138	153	187	10	1	1	244	6.2	DO-201AE
15KE170A	15KE170CA	145	162	179	10	1	1	234	6.4	DO-201AE
15KE180	15KE180C	146	162	198	10	1	1	258	5.8	DO-201AE
15KE180A	15KE180CA	154	171	189	10	1	1	246	6.1	DO-201AE
15KE200	15KE200C	162	180	220	10	1	1	287	5.2	DO-201AE
15KE200A	15KE200CA	171	190	210	10	1	1	274	5.5	DO-201AE
15KE220	15KE220C	175	198	242	10	1	1	344	4.3	DO-201AE
15KE220A	15KE220CA	185	209	231	10	1	1	328	4.6	DO-201AE
15KE250	15KE250C	202	225	275	10	1	1	360	4.3	DO-201AE
15KE250A	15KE250CA	214	237	263	10	1	1	344	4.6	DO-201AE
15KE300	15KE300C	243	270	330	10	1	1	430	3.6	DO-201AE
15KE300A	15KE300CA	256	285	315	10	1	1	414	3.8	DO-201AE
15KE350	15KE350C	284	315	385	10	1	1	504	3.1	DO-201AE
15KE350A	15KE350CA	300	332	368	10	1	1	482	3.2	DO-201AE
15KE400	15KE400C	324	360	440	10	1	1	574	2.7	DO-201AE
15KE400A	15KE400CA	342	380	420	10	1	1	548	2.8	DO-201AE
15KE440	15KE440C	356	396	484	10	1	1	631	2.4	DO-201AE
15KE440A	15KE440CA	376	418	462	10	1	1	600	2.6	DO-201AE

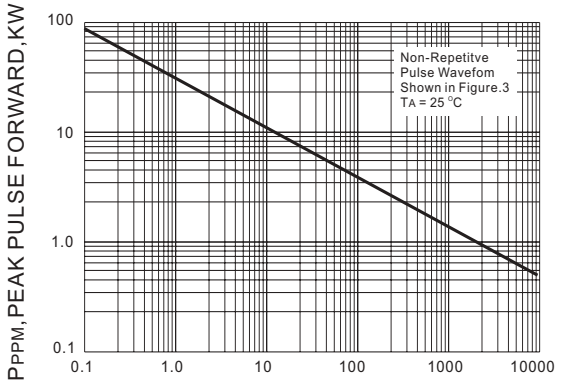


Fig. 1 PEAK PULSE POWER RATING VERSUS PULSE TIME CURVE

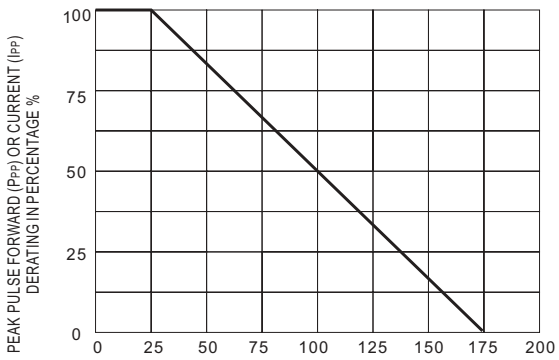


Fig.2 PULSE DERATING CURVE

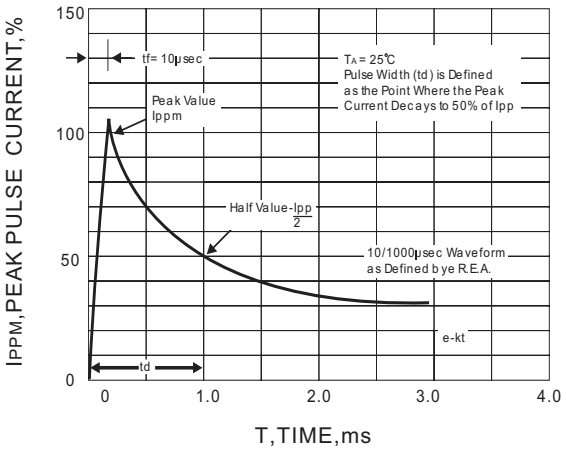


Fig.3 PULSE WAVEFORM

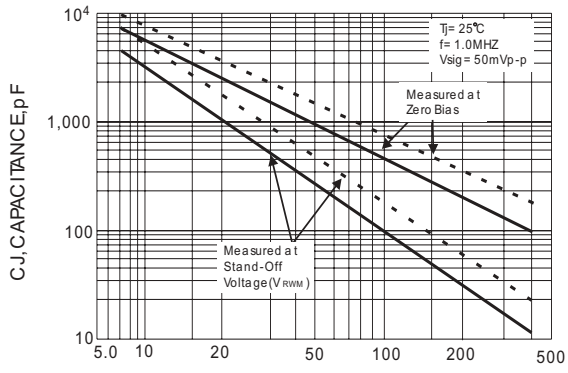


Fig.4 TYPICAL JUNCTION CAPACITANCE

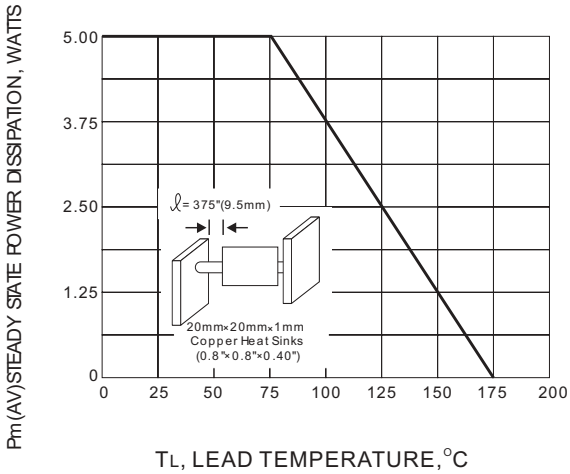


Fig.5 STEADY STATE POWER DERATING

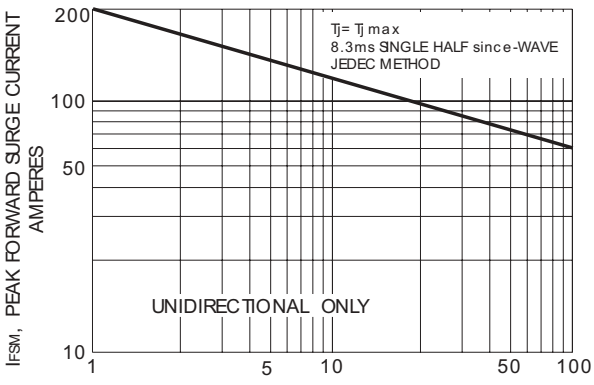


Fig.6 MAXIMUN NON-REPETITEVE PEAK FORWARD SURGE CURRENT UNIDIRECTIONAL