SEMICONDUCTOR

DATA SHEET

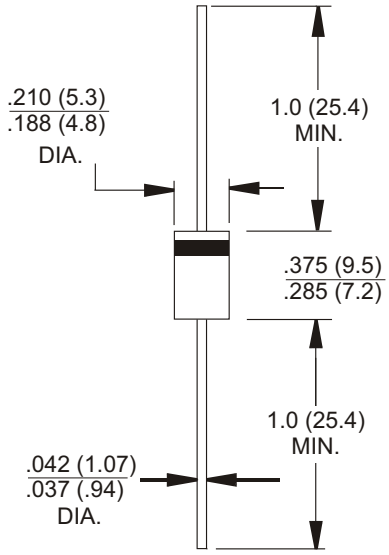
1.5KE SERIES

GLASS PASSIVATED JUNCTION TRANSIENT VOLTAGE SUPPRESSOR
1500 Watt Peak Power VOLTAGE - 6.8 to 540 Volts 5.0 Watt Steady State

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
- High temperature soldering : 260°C / 10 seconds at terminals
- Pb free product at available : 99% Sn above meet RoHS environment substance directive request

DO-201AE Unit:inch(mm)



MECHANICAL DATA

- Case: JEDEC DO-201AE molded plastic
- Terminals: Axial leads, solderable per MIL-STD-202, Method 208
- Polarity: Color band denoted cathode except Bipolar
- Mounting Position: Any
- Weight: 0.045 ounce, 1.2 gram

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 ELECTRICAL 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 TA=25°C, TP=1ms(Note 1)	PPPM	Minimum Max 1500	Watts
Peak Power Current	IPPM	see table	Amps
Steady State Power Dissipation .375 Lead Lengthsat TA=75°C .(Note2)	PD	5.0	Watts
Peak Forward Surge Current, 8.3ms Single Half Sine-Wave Superimposed on Rated Load(JECED Method) (Note 3)	IFSM	200	Amps
Operating and Storage Temperature Range	TJ, TSTG	-55 to +150	°C

NOTES:

1.Non-repetitive current pulse, per Fig. 3 and derated above TA=25°Cper Fig. 2.

2.Mounted on Copper Leaf area of 0.79 in2(20mm2).

3.8.3ms single half sine-wave, duty cycle= 4 pulses per minutes maximum.

Transient Voltage Suppressors

Part Number		Reverse Stand-off Voltage	Breakdown Voltage		Test Current	Reverse Leakage		Max.Clamp Voltage	Peak Pulse Current	Package
			VBR@ I T		I T	I R@ VRWM		Vc@Ipp	Ipp	
		VRWM	Min.	Max.		UNI	BI			
UNI	BI	V	V	V	m A	μA	μA	V	A	
1500W Transient Voltage Suppresor										
1.5KE6.8	1.5KE6.8C	5.5	6.12	7.48	10	1000.0	2000.0	10.8	139.0	DO-201AE
1.5KE6.8A	1.5KE6.8CA	5.8	6.45	7.14	10	1000.0	2000.0	10.5	143.0	DO-201AE
1.5KE7.5	1.5KE7.5C	6.1	6.75	8.25	10	500.0	1000.0	11.7	128.0	DO-201AE
1.5KE7.5A	1.5KE7.5CA	6.4	7.13	7.88	10	500.0	1000.0	11.3	133.0	DO-201AE
1.5KE8.2	1.5KE8.2C	6.6	7.38	9.02	10	200.0	400.0	12.5	120.0	DO-201AE
1.5KE8.2A	1.5KE8.2CA	7.0	7.79	8.61	10	200.0	400.0	12.1	124.0	DO-201AE
1.5KE9.1	1.5KE9.1C	7.4	8.19	10.00	1	50.0	100.0	13.8	109.0	DO-201AE
1.5KE9.1A	1.5KE9.1CA	7.8	8.65	9.55	1	50.0	100.0	13.4	112.0	DO-201AE
1.5KE10	1.5KE10C	8.1	9.00	11.00	1	10.0	20.0	15.0	100.0	DO-201AE
1.5KE10A	1.5KE10CA	8.6	9.50	10.50	1	10.0	20.0	14.5	103.0	DO-201AE
1.5KE11	1.5KE11C	8.9	9.90	12.10	1	5.0	10.0	16.2	92.6	DO-201AE
1.5KE11A	1.5KE11CA	9.4	10.50	11.60	1	5.0	10.0	15.6	96.2	DO-201AE
1.5KE12	1.5KE12C	9.7	10.80	23.20	1	5.0	10.0	17.3	86.7	DO-201AE
1.5KE12A	1.5KE12CA	10.2	11.40	12.60	1	5.0	5.0	16.7	89.8	DO-201AE
1.5KE13	1.5KE13C	10.5	11.70	14.30	1	5.0	5.0	19.0	78.9	DO-201AE
1.5KE13A	1.5KE13CA	11.1	12.40	13.70	1	5.0	5.0	18.2	82.4	DO-201AE
1.5KE15	1.5KE15C	12.1	13.50	16.50	1	5.0	5.0	22.0	68.2	DO-201AE
1.5KE15A	1.5KE15CA	12.8	14.30	15.80	1	5.0	5.0	21.2	70.8	DO-201AE
1.5KE16	1.5KE16C	12.9	14.40	17.60	1	5.0	5.0	23.5	63.8	DO-201AE
1.5KE16A	1.5KE16CA	13.6	15.20	16.80	1	5.0	5.0	22.5	66.7	DO-201AE
1.5KE18	1.5KE18C	14.5	16.20	19.80	1	5.0	5.0	26.5	56.6	DO-201AE
1.5KE18A	1.5KE18CA	15.3	17.10	18.90	1	5.0	5.0	25.2	59.5	DO-201AE
1.5KE20	1.5KE20C	16.2	18.00	22.00	1	5.0	5.0	29.1	51.5	DO-201AE
1.5KE20A	1.5KE20CA	17.1	19.00	21.00	1	5.0	5.0	27.7	54.2	DO-201AE
1.5KE22	1.5KE22	17.8	19.80	24.20	1	5.0	5.0	31.9	47.0	DO-201AE
1.5KE22A	1.5KE22CA	18.8	20.90	23.10	1	5.0	5.0	30.6	49.0	DO-201AE
1.5KE24	1.5KE24C	19.4	21.60	26.40	1	5.0	5.0	34.7	43.2	DO-201AE
1.5KE24A	1.5KE24CA	20.5	22.80	25.20	1	5.0	5.0	33.2	45.2	DO-201AE
1.5KE27	1.5KE27C	21.8	24.30	29.70	1	5.0	5.0	39.1	38.4	DO-201AE
1.5KE27A	1.5KE27CA	23.1	25.70	28.40	1	5.0	5.0	37.5	40.0	DO-201AE
1.5KE30	1.5KE30C	24.3	27.00	33.00	1	5.0	5.0	43.5	34.5	DO-201AE
1.5KE30A	1.5KE30CA	25.6	28.50	31.50	1	5.0	5.0	41.4	36.2	DO-201AE
1.5KE33	1.5KE33C	26.8	29.70	36.30	1	5.0	5.0	47.7	31.4	DO-201AE
1.5KE33A	1.5KE33CA	28.2	31.40	34.70	1	5.0	5.0	45.7	32.8	DO-201AE
1.5KE36	1.5KE36C	29.1	32.40	39.60	1	5.0	5.0	52.0	28.8	DO-201AE
1.5KE36A	1.5KE36CA	30.8	24.20	37.80	1	5.0	5.0	49.9	31.0	DO-201AE
1.5KE39	1.5KE39C	31.6	35.10	42.90	1	5.0	5.0	56.4	26.6	DO-201AE
1.5KE39A	1.5KE39CA	33.3	37.10	41.00	1	5.0	5.0	53.9	27.8	DO-201AE
1.5KE43	1.5KE43C	34.8	38.70	47.30	1	5.0	5.0	61.9	24.2	DO-201AE
1.5KE43A	1.5KE43CA	36.8	40.90	45.20	1	5.0	5.0	59.3	25.3	DO-201AE
1.5KE47	1.5KE47C	38.1	42.30	51.70	1	5.0	5.0	67.8	22.1	DO-201AE
1.5KE47A	1.5KE47CA	40.2	44.70	49.40	1	5.0	5.0	64.8	23.1	DO-201AE
1.5KE51	1.5KE51C	41.3	45.90	56.10	1	5.0	5.0	73.5	20.4	DO-201AE
1.5KE51A	1.5KE51CA	43.6	48.50	53.60	1	5.0	5.0	70.1	21.4	DO-201AE
1.5KE56	1.5KE56C	45.4	50.40	61.60	1	5.0	5.0	80.5	18.6	DO-201AE
1.5KE56A	1.5KE56CA	47.8	53.20	58.80	1	5.0	5.0	77.0	19.5	DO-201AE

Transient Voltage Suppressors

Part Number		Reverse Stand-off Voltage	BreakdownVoltage		Test Current	Reverse Leakage		Max.Clamp Voltage	Peak Pulse Current	Package
			VBR@ＩT		ＩT	ＩR@ VRWM		Vc@Ipp	Ipp	
		VRWM	Min.	Max.		UNI	BI			
UNI	BI	V	V	V	m A	μA	μA	V	A	
1500W Transient Voltage Suppresor										
1.5KE62	1.5KE62C	50.2	55.80	68.20	1	5.0	5.0	89.0	16.9	DO-201AE
1.5KE62A	1.5KE62CA	53.0	58.90	65.10	1	5.0	5.0	85.0	17.6	DO-201AE
1.5KE68	1.5KE68C	55.1	61.20	74.80	1	5.0	5.0	98.0	15.3	DO-201AE
1.5KE68A	1.5KE68CA	58.1	64.40	71.40	1	5.0	5.0	92.0	16.3	DO-201AE
1.5KE75	1.5KE75C	60.7	67.50	82.50	1	5.0	5.0	109.0	13.9	DO-201AE
1.5KE75A	1.5KE75CA	64.1	71.30	78.80	1	5.0	5.0	104.0	14.6	DO-201AE
1.5KE82	1.5KE82C	66.4	73.80	90.20	1	5.0	5.0	118.0	12.7	DO-201AE
1.5KE82A	1.5KE82CA	70.1	77.90	86.10	1	5.0	5.0	113.0	13.3	DO-201AE
1.5KE91	1.5KE91C	73.7	81.90	100.00	1	5.0	5.0	131.0	11.5	DO-201AE
1.5KE91A	1.5KE91CA	77.8	86.50	95.50	1	5.0	5.0	125.0	12.0	DO-201AE
1.5KE100	1.5KE100C	81.0	90.00	110.00	1	5.0	5.0	1444.0	10.4	DO-201AE
1.5KE100A	1.5KE100CA	85.5	95.00	105.00	1	5.0	5.0	137.0	10.9	DO-201AE
1.5KE110	1.5KE110C	89.2	99.00	121.00	1	5.0	5.0	158.0	9.5	DO-201AE
1.5KE110A	1.5KE110CA	94.0	105.00	116.00	1	5.0	5.0	152.0	9.9	DO-201AE
1.5KE120	1.5KE120C	97.2	108.00	132.00	1	5.0	5.0	173.0	8.7	DO-201AE
1.5KE120A	1.5KE120CA	102.0	114.00	126.00	1	5.0	5.0	165.0	9.1	DO-201AE
1.5KE130	1.5KE130C	105.0	117.00	143.00	1	5.0	5.0	187.0	8.0	DO-201AE
1.5KE130A	1.5KE130CA	111.0	124.00	317.00	1	5.0	5.0	179.0	8.4	DO-201AE
1.5KE150	1.5KE150C	121.0	135.00	165.00	1	5.0	5.0	215.0	7.0	DO-201AE
1.5KE150A	1.5KE150CA	128.0	143.00	158.00	1	5.0	5.0	207.0	7.2	DO-201AE
1.5KE160	1.5KE160C	130.0	144.00	176.00	1	5.0	5.0	230.0	6.5	DO-201AE
1.5KE160A	1.5KE160CA	136.0	152.00	168.00	1	5.0	5.0	219.0	6.8	DO-201AE
1.5KE170	1.5KE170C	138.0	153.00	187.00	1	5.0	5.0	244.0	6.1	DO-201AE
1.5KE170A	1.5KE170CA	145.0	162.00	179.00	1	5.0	5.0	234.0	6.4	DO-201AE
1.5KE180	1.5KE180C	146.0	162.00	198.00	1	5.0	5.0	258.0	5.8	DO-201AE
1.5KE180A	1.5KE180CA	154.0	171.00	189.00	1	5.0	5.0	246.0	6.1	DO-201AE
1.5KE200	1.5KE200C	162.0	180.00	220.00	1	5.0	5.0	287.0	5.2	DO-201AE
1.5KE200A	1.5KE200CA	171.0	190.00	210.00	1	5.0	5.0	274.0	5.5	DO-201AE
1.5KE220	1.5KE220C	175.0	198.00	242.00	1	5.0	5.0	344.0	4.4	DO-201AE
1.5KE220A	1.5KE220CA	185.0	209.00	231.00	1	5.0	5.0	328.0	4.6	DO-201AE
1.5KE250	1.5KE250C	202.0	225.00	275.00	1	5.0	5.0	360.0	4.2	DO-201AE
1.5KE250A	1.5KE250CA	214.0	237.00	563.00	1	5.0	5.0	344.0	4.4	DO-201AE
1.5KE300	1.5KE300C	243.0	270.00	330.00	1	5.0	5.0	430.0	3.5	DO-201AE
1.5KE300A	1.5KE300CA	256.0	285.00	315.00	1	5.0	5.0	414.0	3.6	DO-201AE
1.5KE350	1.5KE350C	284.0	315.00	385.00	1	5.0	5.0	504.0	3.0	DO-201AE
1.5KE350A	1.5KE350CA	300.0	333.00	368.00	1	5.0	5.0	482.0	3.1	DO-201AE
1.5KE400	1.5KE400C	324.0	360.00	440.00	1	5.0	5.0	574.0	2.6	DO-201AE
1.5KE400A	1.5KE400CA	342.0	380.00	420.00	1	5.0	5.0	548.0	2.7	DO-201AE
1.5KE440	1.5KE440C	356.0	396.00	484.00	1	5.0	5.0	631.0	2.4	DO-201AE
1.5KE440A	1.5KE440CA	376.0	418.00	462.00	1	5.0	5.0	602.0	2.5	DO-201AE
1.5KE480	1.5KE480C	389.0	432.00	528.00	1	5.0	5.0	686.0	2.2	DO-201AE
1.5KE480A	1.5KE480CA	408.0	456.00	504.00	1	5.0	5.0	658.0	2.3	DO-201AE
1.5KE510	1.5KE510C	413.0	459.00	561.00	1	5.0	5.0	729.0	2.1	DO-201AE
1.5KE510A	1.5KE510CA	434.0	485.00	535.00	1	5.0	5.0	698.0	2.2	DO-201AE
1.5KE540	1.5KE540C	437.0	486.00	594.00	1	5.0	5.0	772.0	1.9	DO-201AE
1.5KE540A	1.5KE540CA	459.0	513.00	567.00	1	5.0	5.0	740.0	2.0	DO-201AE

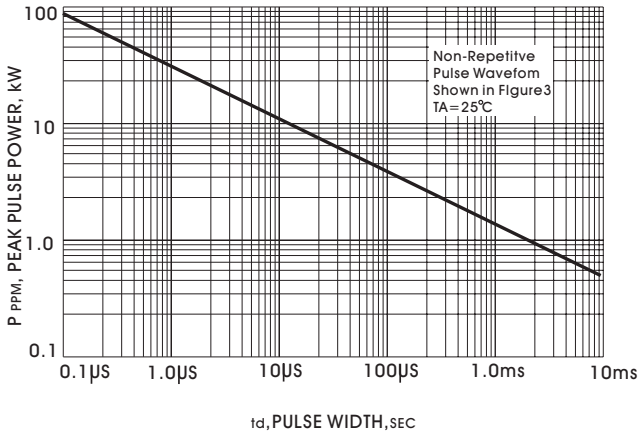


FIGURE 1-PEAK PULSE POWER RATING VERSUS PULSE TIME CURVE

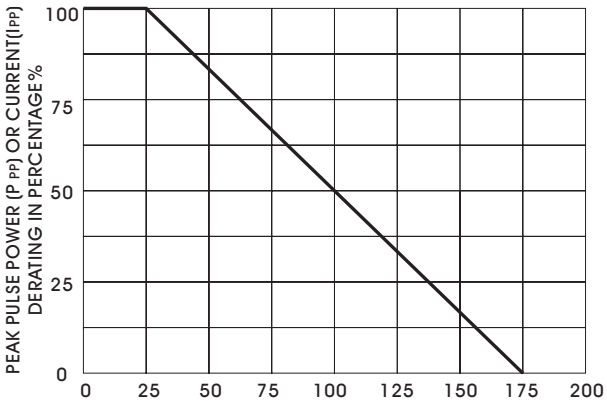


FIGURE2-PULSE DERATING CURVE

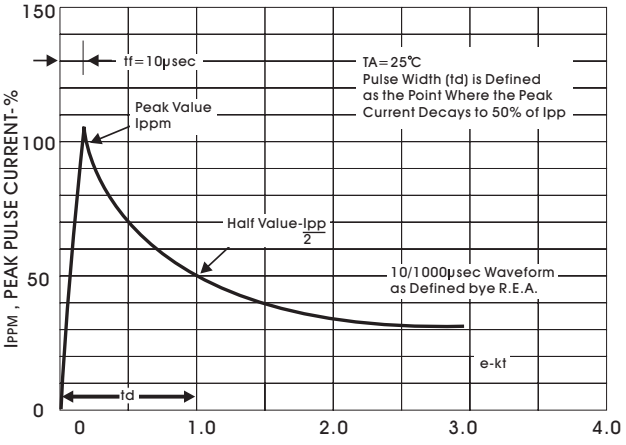


FIGURE 3-PULSE WAVEFORM

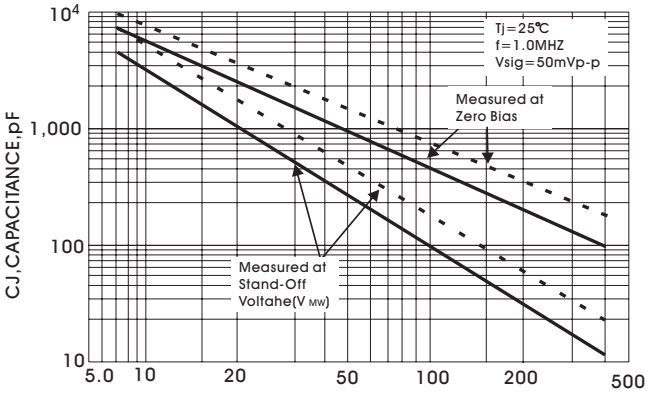


FIG.4-TYPICAL JUNCTION CAPACITANCE

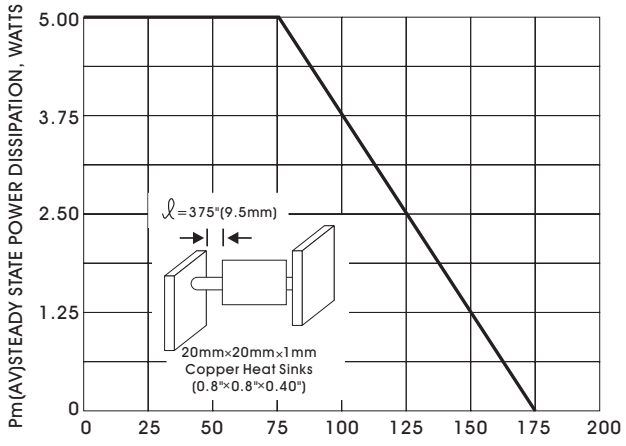


FIG.5-STEADY STATE POWER DERATING

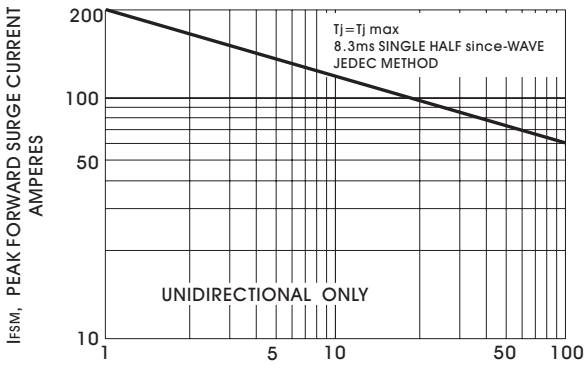


FIG.6-MAXIMUM NON-REPETITEVE PEAK FORWARD SURGE CURRENT UNIDIRECTIONAL