

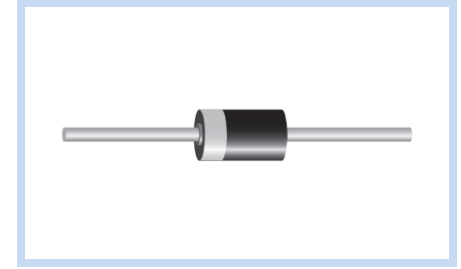
# Transient Voltage Suppressors 1500W DO-201

1.5KE Series

MERITEK

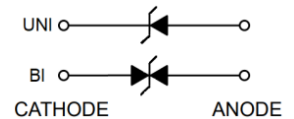
## FEATURE

- 1500W Peak Pulse Power (10/1000µs Waveform)
- 6.8V to 600V Standoff Voltage
- Excellent Clamping Capability
- Glass Passivated Junction
- UL Flammability Classification Rating 94V-0
- UL Safety Approved Certification No: E223045



## MECHANICAL DATA

- Case: DO-201, Molded Plastic
- Terminals: Solder Plated, Solderable per MIL-STD-202, Method 208
- Polarity: Color Band Denotes Cathode End Except Bipolar



## MAXIMUM RATINGS

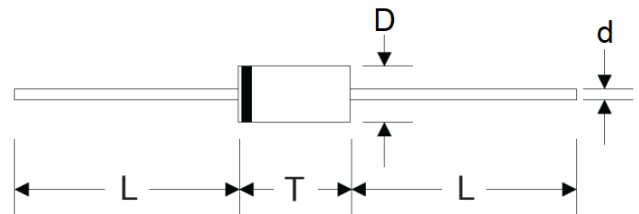


Parameter	Symbol	Value	Unit
Peak Pulse Power Dissipation on 10/1000µs waveform	$P_{PPM}$	Minimum 1500	W
Peak Pulse Current on 10/1000µs waveform	$I_{PPM}$	See Table	A
Steady State Power Dissipation at $T_L = 75^\circ\text{C}$	$P_D$	6.5	W
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load	$I_{FSM}$	200	A
Maximum Instantaneous Forward Voltage at 100A For Unidirectional Only	$V_F$	3.5/5.0	V
Operating Junction And Storage Temperature Range	$T_J, T_{STG}$	-55 to +175	$^\circ\text{C}$

1.  $T_A = 25^\circ\text{C}$  Ambient temperature unless otherwise specified.
2. Non-repetitive current pulse, and derated above  $T_A = 25^\circ\text{C}$ .
3. 8.3ms single half sine-wave, or equivalent square wave, Duty cycle = 4 pulses per minute maximum.
4.  $V_F < 3.5\text{V}$  for devices of  $V_{BR} < 200\text{V}$  and  $V_F < 5.0\text{V}$  for devices of  $V_{BR} > 201\text{V}$ .

## DIMENSIONS

DO-201	Min(mm)	Max(mm)
D	4.79	5.03
T	7.24	9.53
L	25.4	-
d	0.97	1.07



# Transient Voltage Suppressors 1500W DO-201

1.5KE Series

**MERITEK**

## ELECTRICAL CHARACTERISTICS

Part Number		Working Reverse Voltage	Reverse Breakdown Voltage		Test Current	Max Reverse Leakage Current	Max Clamping Voltage	Reverse Surge Current
Uni-Polar	Bi-Polar	V <sub>RWM</sub> (V)	V <sub>BR</sub> Min(V)	V <sub>BR</sub> Max(V)	I <sub>T</sub> (mA)	I <sub>R</sub> (uA) @ V <sub>RWM</sub>	V <sub>C</sub> (V) @ I <sub>PP</sub>	I <sub>PP</sub> (A) Max
1.5KE6.8	1.5KE6.8C	5.5	6.12	7.48	10	1000	10.8	138.89
1.5KE6.8A	1.5KE6.8CA	5.8	6.46	7.14	10	1000	10.5	142.86
1.5KE7.5	1.5KE7.5C	6.1	6.75	8.25	10	500	11.7	128.21
1.5KE7.5A	1.5KE7.5CA	6.4	7.13	7.88	10	500	11.3	132.74
1.5KE8.2	1.5KE8.2C	6.6	7.38	9.02	10	200	12.5	120.00
1.5KE8.2A	1.5KE8.2CA	7.0	7.79	8.61	10	200	12.1	123.97
1.5KE9.1	1.5KE9.1C	7.4	8.19	10.01	1	50	13.8	108.70
1.5KE9.1A	1.5KE9.1CA	7.8	8.65	9.56	1	50	13.4	111.94
1.5KE10	1.5KE10C	8.1	9.00	11.00	1	10	15.0	100.00
1.5KE10A	1.5KE10CA	8.6	9.50	10.50	1	10	14.5	103.45
1.5KE11	1.5KE11C	8.9	9.90	12.10	1	5	16.2	92.59
1.5KE11A	1.5KE11CA	9.4	10.45	11.55	1	5	15.6	96.15
1.5KE12	1.5KE12C	9.7	10.80	13.20	1	5	17.3	86.71
1.5KE12A	1.5KE12CA	10.2	11.40	12.60	1	5	16.7	89.82
1.5KE13	1.5KE13C	10.5	11.70	14.30	1	1	19.0	78.95
1.5KE13A	1.5KE13CA	11.1	12.35	13.65	1	1	18.2	82.42
1.5KE15	1.5KE15C	12.1	13.50	16.50	1	1	22.0	68.18
1.5KE15A	1.5KE15CA	12.8	14.25	15.75	1	1	21.2	70.75
1.5KE16	1.5KE16C	12.9	14.40	17.60	1	1	23.5	63.83
1.5KE16A	1.5KE16CA	13.6	15.20	16.80	1	1	22.5	66.67
1.5KE18	1.5KE18C	14.5	16.20	19.80	1	1	26.5	56.60
1.5KE18A	1.5KE18CA	15.3	17.10	18.90	1	1	25.2	59.52
1.5KE20	1.5KE20C	16.2	18.00	22.00	1	1	29.1	51.55
1.5KE20A	1.5KE20CA	17.1	19.00	21.00	1	1	27.7	54.15
1.5KE22	1.5KE22C	17.8	19.80	24.20	1	1	31.9	47.02
1.5KE22A	1.5KE22CA	18.8	20.90	23.10	1	1	30.6	49.02
1.5KE24	1.5KE24C	19.4	21.60	26.40	1	1	34.7	43.23
1.5KE24A	1.5KE24CA	20.5	22.80	25.20	1	1	33.2	45.18
1.5KE27	1.5KE27C	21.8	24.30	29.70	1	1	39.1	38.36
1.5KE27A	1.5KE27CA	23.1	25.65	28.35	1	1	37.5	40.00
1.5KE30	1.5KE30C	24.3	27.00	33.00	1	1	43.5	34.48
1.5KE30A	1.5KE30CA	25.6	28.50	31.50	1	1	41.4	36.23
1.5KE33	1.5KE33C	26.8	29.70	36.30	1	1	47.7	31.45
1.5KE33A	1.5KE33CA	28.2	31.35	34.65	1	1	45.7	32.82
1.5KE36	1.5KE36C	29.1	32.40	39.60	1	1	52.0	28.85
1.5KE36A	1.5KE36CA	30.8	34.20	37.80	1	1	49.9	30.06
1.5KE39	1.5KE39C	31.6	35.10	42.90	1	1	56.4	26.60
1.5KE39A	1.5KE39CA	33.3	37.05	40.95	1	1	53.9	27.83
1.5KE43	1.5KE43C	34.8	38.70	47.30	1	1	61.9	24.23
1.5KE43A	1.5KE43CA	36.8	40.85	45.15	1	1	59.3	25.30
1.5KE47	1.5KE47C	38.1	42.30	51.70	1	1	67.8	22.12
1.5KE47A	1.5KE47CA	40.2	44.65	49.35	1	1	64.8	23.15
1.5KE51	1.5KE51C	41.3	45.90	56.10	1	1	73.5	20.41
1.5KE51A	1.5KE51CA	43.6	48.45	53.55	1	1	70.1	21.40
1.5KE56	1.5KE56C	45.4	50.40	61.60	1	1	80.5	18.63
1.5KE62	1.5KE62C	50.2	55.80	68.20	1	1	89.0	16.85
1.5KE62A	1.5KE62CA	53.0	58.90	65.10	1	1	85.0	17.65
1.5KE68	1.5KE68C	55.1	61.20	74.80	1	1	98.0	15.31
1.5KE68A	1.5KE68CA	58.1	64.60	71.40	1	1	92.0	16.30

# Transient Voltage Suppressors 1500W DO-201

1.5KE Series

MERITEK

## ELECTRICAL CHARACTERISTICS

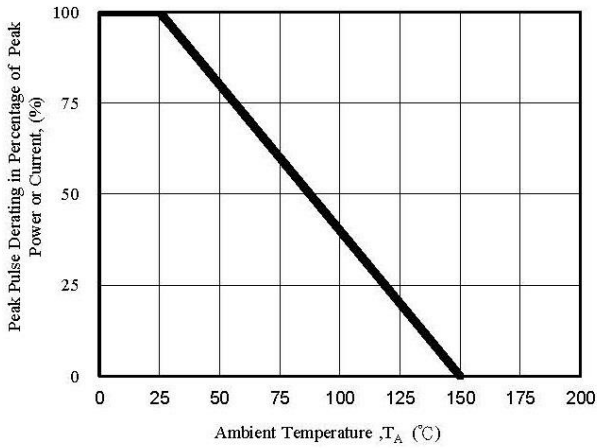
Part Number		Working Reverse Voltage	Reverse Breakdown Voltage		Test Current	Max Reverse Leakage Current	Max Clamping Voltage	Reverse Surge Current
Uni-Polar	Bi-Polar	V <sub>RWM</sub> (V)	V <sub>BR</sub> Min(V)	V <sub>BR</sub> Max(V)	I <sub>T</sub> (mA)	I <sub>R</sub> (uA) @ V <sub>RWM</sub>	V <sub>C</sub> (V) @ I <sub>PP</sub>	I <sub>PP</sub> (A) Max
1.5KE75	1.5KE75C	60.7	67.50	82.50	1	1	108	13.89
1.5KE75A	1.5KE75CA	64.1	71.25	78.75	1	1	103	14.56
1.5KE82	1.5KE82C	66.4	73.80	90.20	1	1	118.0	12.71
1.5KE82A	1.5KE82CA	70.1	77.90	86.10	1	1	113.0	13.27
1.5KE91	1.5KE91C	73.7	81.90	100.1	1	1	131.0	11.45
1.5KE91A	1.5KE91CA	77.8	86.45	95.55	1	1	125.0	12.00
1.5KE100	1.5KE100C	81.0	90.0	110.0	1	1	144.0	10.42
1.5KE100A	1.5KE100CA	85.5	95.0	105.0	1	1	137.0	10.95
1.5KE110	1.5KE110C	89.2	99.0	121.0	1	1	158.0	9.49
1.5KE110A	1.5KE110CA	94.0	104.5	115.5	1	1	152.0	9.87
1.5KE120	1.5KE120C	97.2	108.0	132.0	1	1	173.0	8.67
1.5KE120A	1.5KE120CA	102.0	114.0	126.0	1	1	165.0	9.09
1.5KE130	1.5KE130C	105.0	117.0	143.0	1	1	187.0	8.02
1.5KE130A	1.5KE130CA	111.0	123.5	136.5	1	1	179.0	8.38
1.5KE150	1.5KE150C	121.0	135.0	165.0	1	1	215.0	6.98
1.5KE150A	1.5KE150CA	128.0	142.5	157.5	1	1	207.0	7.25
1.5KE160	1.5KE160C	130.0	144.0	176.0	1	1	230.0	6.52
1.5KE160A	1.5KE160CA	136.0	152.0	168.0	1	1	219.0	6.85
1.5KE170	1.5KE170C	138.0	153.0	187.0	1	1	244.0	6.15
1.5KE170A	1.5KE170CA	145.0	161.5	178.5	1	1	234.0	6.41
1.5KE180	1.5KE180C	146.0	162.0	198.0	1	1	258.0	5.81
1.5KE180A	1.5KE180CA	154.0	171.0	189.0	1	1	246.0	6.10
1.5KE200	1.5KE200C	162.0	180.0	220.0	1	1	287.0	5.23
1.5KE200A	1.5KE200CA	171.0	190.0	210.0	1	1	274.0	5.47
1.5KE220	1.5KE220C	175.0	198.0	242.0	1	1	344.0	4.36
1.5KE220A	1.5KE220CA	185.0	209.0	231.0	1	1	328.0	4.57
1.5KE250	1.5KE250C	202.0	225.0	275.0	1	1	360.0	4.17
1.5KE250A	1.5KE250CA	214.0	237.5	262.5	1	1	344.0	4.36
1.5KE300	1.5KE300C	243.0	270.0	330.0	1	1	430.0	3.49
1.5KE300A	1.5KE300CA	256.0	285.0	315.0	1	1	414.0	3.62
1.5KE350	1.5KE350C	284.2	315.0	385.0	1	1	504.0	2.98
1.5KE350A	1.5KE350CA	299.3	332.5	367.5	1	1	482.0	3.11
1.5KE380	1.5KE380C	308.6	342.0	418.0	1	1	547.2	2.74
1.5KE380A	1.5KE380CA	324.9	361.0	399.0	1	1	524.4	2.86
1.5KE400	1.5KE400C	324.8	360.0	440.0	1	1	574.0	2.60
1.5KE400A	1.5KE400CA	342	380.0	420.0	1	1	548.0	2.72
1.5KE440	1.5KE440C	357.3	396.0	484.0	1	1	631.0	2.37
1.5KE440A	1.5KE440CA	376.2	418.0	462.0	1	1	602.0	2.47
1.5KE500	1.5KE500C	406.0	450.0	550.0	1	1	720.0	2.08
1.5KE500A	1.5KE500CA	427.5	475.0	525.0	1	1	690.0	2.17
1.5KE520	1.5KE520C	422.2	468.0	572.0	1	1	748.8	2.00
1.5KE520A	1.5KE520CA	444.6	494.0	546.0	1	1	717.6	2.09
1.5KE550	1.5KE550C	446.6	495.0	605.0	1	1	792.0	1.89
1.5KE550A	1.5KE550CA	470.3	522.5	577.5	1	1	759.0	1.98
1.5KE600	1.5KE600C	487.2	540.0	660.0	1	1	864.0	1.74
1.5KE600A	1.5KE600CA	513.0	570.0	630.0	1	1	828.0	1.81

Note:

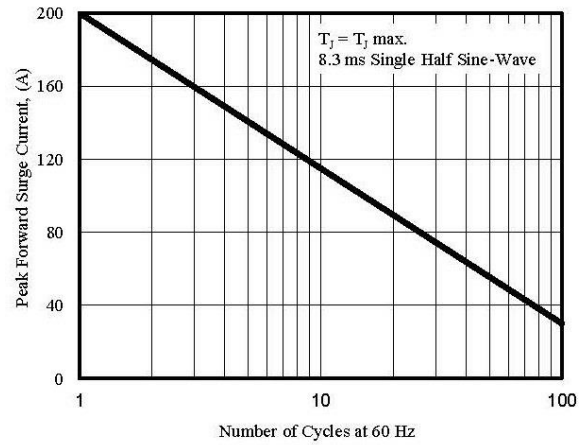
1. T<sub>A</sub> = 25°C ambient temperature unless otherwise specified.
2. Suffix 'A' denotes 5% tolerance device. Without 'A' denotes 10% tolerance device.
3. Add suffix 'C' or 'CA' after part number to specify Bi-directional devices.
4. For Bi-Directional devices having V<sub>R</sub> of 10 volts and under, the I<sub>R</sub> limit is double.

### CHARACTERISTIC CURVES

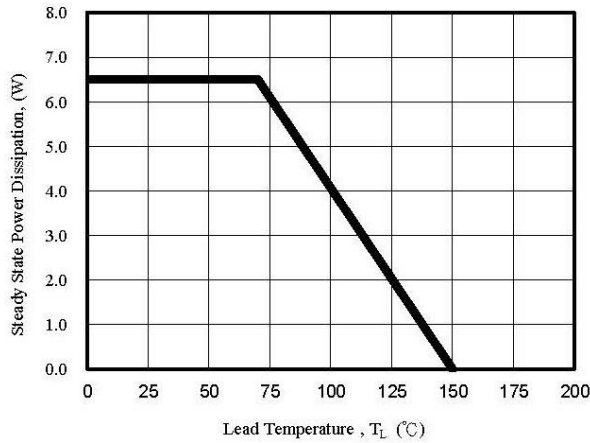
Pulse Derating Curve



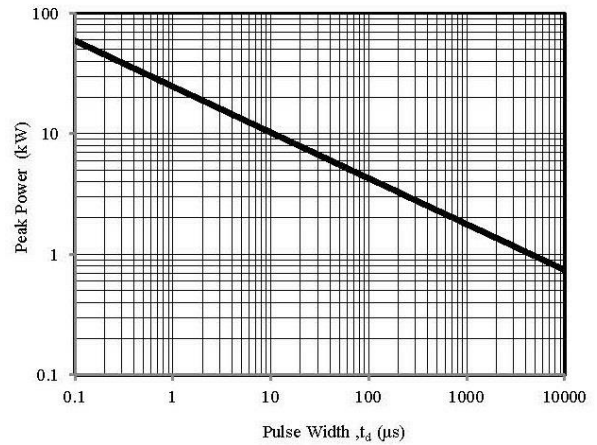
Maximum Non-Repetitive Surge Current



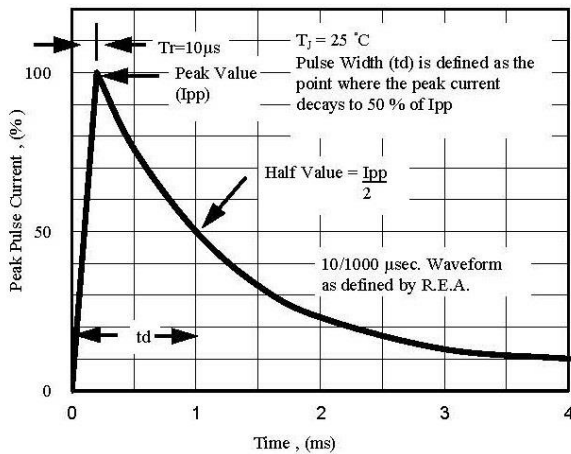
Steady State Power Derating Curve



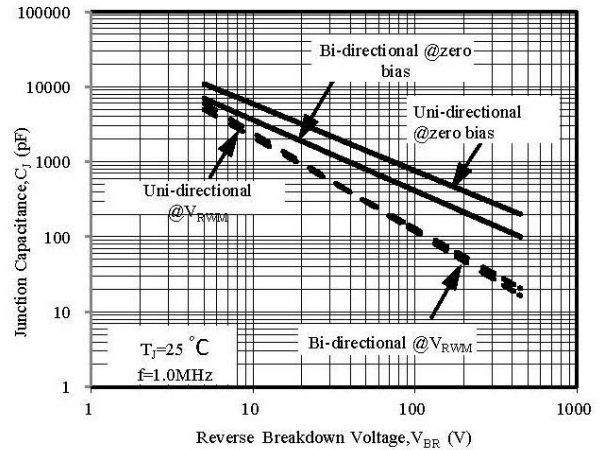
Peak Pulse Power Rating Curve



Pulse Waveform



Typical Junction Capacitance



\*Specifications subject to change without notice.