

1.5KE SERIES

GLASS PASSIVATED JUNCTION TRANSIENT VOLTAGE SUPPRESSOR

VOLTAGE - 6.8 TO 440 Volts

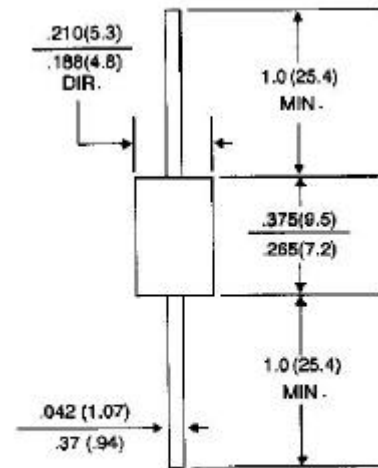
1500 Watt Peak Power

5.0 Watt Steady State

FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- Glass passivated chip junction in Molded Plastic package
- 1500W surge capability at 1ms
- Excellent clamping capability
- Low zener impedance
- Fast response time: typically less than 1.0 ps from 0 volts to BV min
- Typical I_R less than 1 A above 10V
- High temperature soldering guaranteed: 260 °C/10 seconds/.375", (9.5mm) lead length/5lbs., (2.3kg) tension

DO-201AE



Dimensions in inches and (millimeters)

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 grams

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

Ratings at 25 °C ambient temperature unless otherwise specified.

RATING	SYMBOL	VALUE	UNITS
Peak Power Dissipation at $T_A=25^\circ\text{C}$, $T_P=1\text{ms}$ (Note 1)	P_{PK}	Minimum 1500	Watts
Steady State Power Dissipation at $T_L=75^\circ\text{C}$ Lead Lengths .375", (9.5mm) (Note 2)	PD	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 and Storage Temperature Range	T_J, T_{STG}	-65 to +175	

NOTES:

Non-repetitive current pulse, per Fig. 3 and derated above $T_A=25^\circ$ per Fig. 2.

Mounted on Copper Leaf area of $0.79\text{in}^2 (20\text{mm}^2)$.

8.3ms single half sine-wave, duty cycle= 4 pulses per minutes maximum.

RATING AND CHARACTERISTIC CURVES

1.5KE SERIES

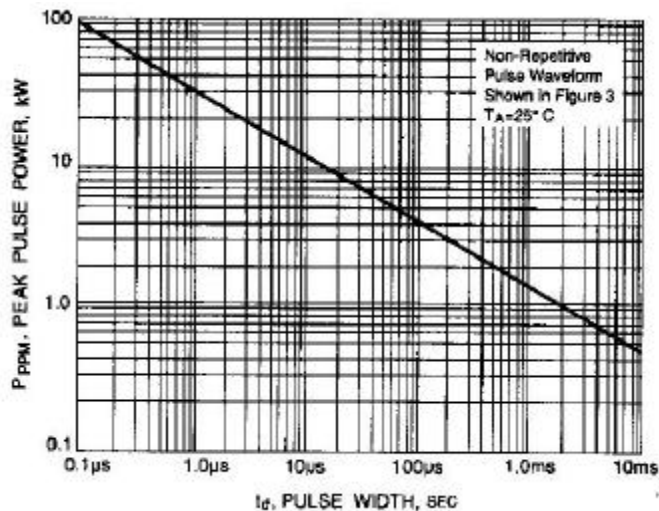


Fig. 1-PEAK PULSE POWER RATING CURVE

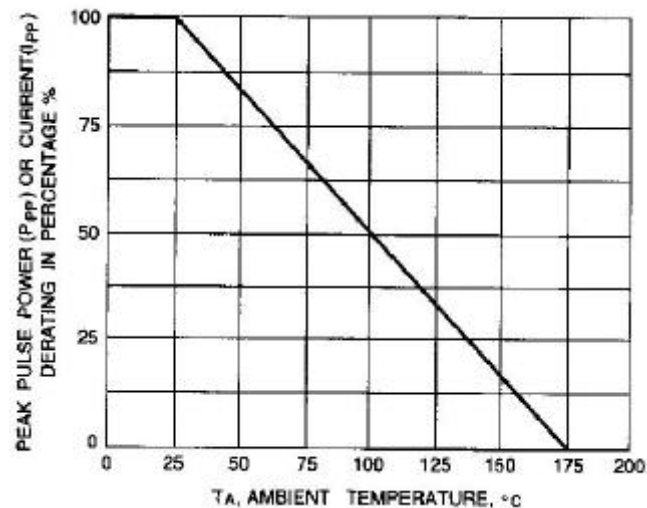


Fig. 2-PULSE DERATING CURVE

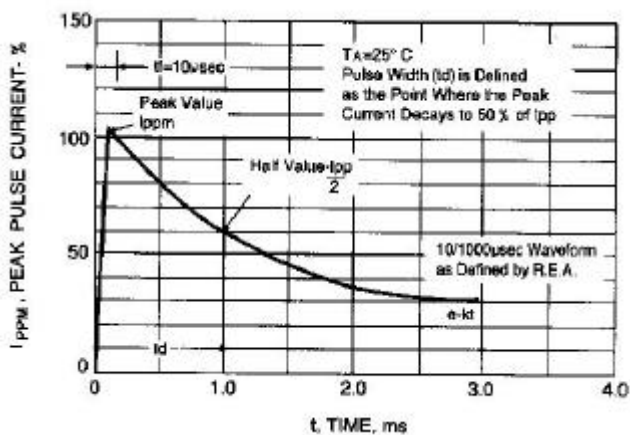


Fig. 3-PULSE WAVEFORM

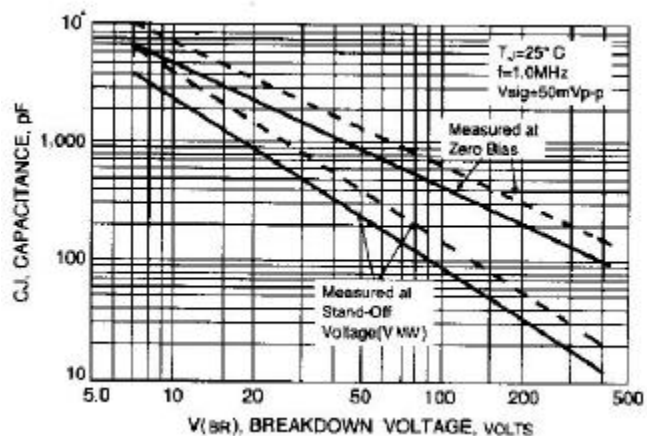


Fig. 4-TYPICAL JUNCTION CAPACITANCE

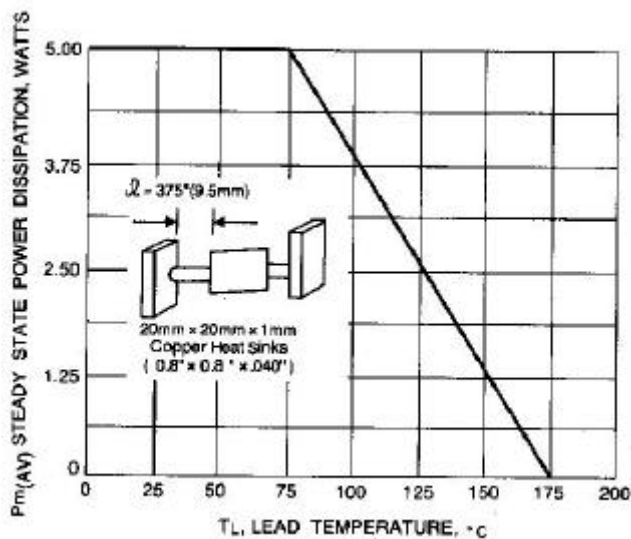


Fig. 5-STEADY STATE POWER DERATING CURVE

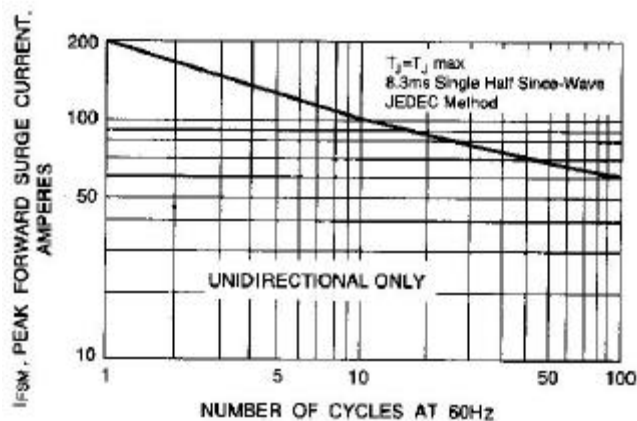


Fig. 6-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT UNIDIRECTIONAL

UNI-DIRECTIONAL 1500 Watt Axial Lead TVS

UNI-DIRECTIONAL PART NUMBER	JEDEC PART NUMBER	REVERSE STAND-OFF VOLTAGE VRWM (V)	BREAKDOWN VOLTAGE VBR (V) MIN. @IT	BREAKDOWN VOLTAGE VBR (V) MAX. @IT	TEST CURRENT IT (mA)	MAXIMUM CLAMPING VOLTAGE @IPP VC (V)	PEAK PULSE CURRENT IPP (A)	REVERSE LEAKAGE @VRWM IR (uA)
1.5KE6.8	1N6267	5.50	6.12	7.48	10	10.8	139.0	1000.0
1.5KE6.8A	1N6267A	5.80	6.45	7.14	10	10.5	143.0	1000.0
1.5KE7.5	1N6268	6.05	6.75	8.25	10	11.7	128.0	500.0
1.5KE7.5A	1N6268A	6.40	7.13	7.88	10	11.3	132.0	500.0
1.5KE8.2	1N6269	6.63	7.38	9.02	10	12.5	120.0	200.0
1.5KE8.2A	1N6269A	7.02	7.79	8.61	10	12.1	124.0	200.0
1.5KE9.1	1N6270	7.37	8.19	10.00	1	13.8	109.0	50.0
1.5KE9.1A	1N6270A	7.78	8.65	9.50	1	13.4	112.0	50.0
1.5KE10	1N6271	8.10	9.00	11.00	1	15.0	100.0	10.0
1.5KE10A	1N6271A	8.55	9.50	10.50	1	14.5	103.0	10.0
1.5KE11	1N6272	8.92	9.90	12.10	1	16.2	93.0	5.0
1.5KE11A	1N6272A	9.40	10.50	11.60	1	15.6	96.0	5.0
1.5KE12	1N6273	9.72	10.80	13.20	1	17.3	87.0	5.0
1.5KE12A	1N6273A	10.20	11.40	12.60	1	16.7	90.0	5.0
1.5KE13	1N6274	10.50	11.70	14.30	1	19.0	79.0	5.0
1.5KE13A	1N6274A	11.10	12.40	13.70	1	18.2	82.0	5.0
1.5KE15	1N6275	12.10	13.50	16.50	1	22.0	68.0	5.0
1.5KE15A	1N6275A	12.80	14.30	15.80	1	21.2	71.0	5.0
1.5KE16	1N6276	12.90	14.40	17.60	1	23.5	64.0	5.0
1.5KE16A	1N6276A	13.60	15.20	16.80	1	22.5	67.0	5.0
1.5KE18	1N6277	14.50	16.20	19.80	1	26.5	56.5	5.0
1.5KE18A	1N6277A	15.30	17.10	18.90	1	25.2	59.5	5.0
1.5KE20	1N6278	16.20	18.00	22.00	1	29.1	51.5	5.0
1.5KE20A	1N6278A	17.10	19.00	21.00	1	27.7	54.0	5.0
1.5KE22	1N6279	17.80	19.80	24.20	1	31.9	47.0	5.0
1.5KE22A	1N6279A	18.80	20.90	23.10	1	30.6	49.0	5.0
1.5KE24	1N6280	19.40	21.60	26.40	1	34.7	43.0	5.0
1.5KE24A	1N6280A	20.50	22.80	25.20	1	33.2	45.0	5.0
1.5KE27	1N6281	21.80	24.30	29.70	1	39.1	38.5	5.0
1.5KE27A	1N6281A	23.10	25.70	28.40	1	37.5	40.0	5.0
1.5KE30	1N6282	24.30	27.00	33.00	1	43.5	34.5	5.0
1.5KE30A	1N6282A	25.60	28.50	31.50	1	41.4	36.0	5.0
1.5KE33	1N6283	26.80	29.70	36.30	1	47.7	31.5	5.0
1.5KE33A	1N6283A	28.20	31.40	34.70	1	45.7	33.0	5.0
1.5KE36	1N6284	29.10	32.40	39.60	1	52.0	29.0	5.0
1.5KE36A	1N6284A	30.80	34.20	37.80	1	49.9	30.0	5.0
1.5KE39	1N6285	31.60	35.10	42.90	1	56.4	26.5	5.0
1.5KE39A	1N6285A	33.30	37.10	41.00	1	53.9	28.0	5.0
1.5KE43	1N6286	34.80	38.70	47.30	1	61.9	24.0	5.0
1.5KE43A	1N6286A	36.80	40.90	45.20	1	59.3	25.3	5.0
1.5KE47	1N6287	38.10	42.30	51.70	1	67.8	22.2	5.0
1.5KE47A	1N6287A	40.20	44.70	49.40	1	64.8	23.2	5.0
1.5KE51	1N6288	41.30	45.90	56.10	1	73.5	20.4	5.0
1.5KE51A	1N6288A	43.60	48.50	53.60	1	70.1	21.4	5.0

1.5KE56	1N6289	45.60	50.40	61.60	1	80.5	18.6	5.0
1.5KE56A	1N6289A	47.80	53.20	58.80	1	77.0	19.5	5.0
1.5KE62	1N6290	50.20	55.80	68.20	1	89.0	16.9	5.0
1.5KE62A	1N6290A	53.00	58.90	65.10	1	85.0	17.7	5.0
1.5KE68	1N6291	55.10	61.20	74.80	1	98.0	15.3	5.0
1.5KE68A	1N6291A	58.10	64.60	71.40	1	92.0	16.3	5.0
1.5KE75	1N6292	60.70	67.50	82.50	1	108.0	13.9	5.0
1.5KE75A	1N6292A	64.10	71.30	78.80	1	103.0	14.6	5.0
1.5KE82	1N6293	66.40	73.80	90.20	1	118.0	12.7	5.0
1.5KE82A	1N6293A	70.10	77.90	86.10	1	113.0	13.3	5.0
1.5KE91	1N6294	73.70	81.90	100.00	1	131.0	11.4	5.0
1.5KE91A	1N9294A	77.80	86.50	95.50	1	125.0	12.0	5.0
1.5KE100	1N6295	81.00	90.00	110.00	1	144.0	10.4	5.0
1.5KE100A	1N6295A	85.50	95.00	105.00	1	137.0	11.0	5.0
1.5KE110	1N6296	89.20	99.00	121.00	1	158.0	9.5	5.0
1.5KE110A	1N6296A	94.00	105.00	116.00	1	152.0	9.9	5.0
1.5KE120	1N6297	97.20	108.00	132.00	1	173.0	8.7	5.0
1.5KE120A	1N6297A	102.00	114.00	126.00	1	165.0	9.1	5.0
1.5KE130	1N6298	105.00	117.00	143.00	1	187.0	8.0	5.0
1.5KE130A	1N6298A	111.00	124.00	137.00	1	179.0	8.4	5.0
1.5KE150	1N6299	121.00	135.00	165.00	1	215.0	7.0	5.0
1.5KE150A	1N6299A	128.00	143.00	158.00	1	207.0	7.2	5.0
1.5KE160	1N6300	130.00	144.00	176.00	1	230.0	6.5	5.0
1.5KE160A	1N6300A	136.00	152.00	168.00	1	219.0	6.8	5.0

UNI-DIRECTIONAL 1500 Watt Axial Lead TVS

UNI-DIRECTIONAL PART NUMBER	JEDEC PART NUMBER	REVERSE STAND-OFF VOLTAGE VRWM (V)	BREAKDOWN VOLTAGE VBR (V) MIN. @IT	BREAKDOWN VOLTAGE VBR (V) MAX. @IT	TEST CURRENT IT (mA)	MAXIMUM CLAMPING VOLTAGE @I _{PP} VC (V)	PEAK PULSE CURRENT I _{PP} (A)	REVERSE LEAKAGE @VRWM IR (uA)
1.5KE170	1N6301	138.00	153.00	187.00	1	244.0	6.2	5.0
1.5KE170A	1N6301A	145.00	162.00	179.00	1	234.0	6.4	5.0
1.5KE180	1N6302	146.00	162.00	198.00	1	258.0	5.8	5.0
1.5KE180A	1N6302A	154.00	171.00	189.00	1	246.0	6.1	5.0
1.5KE200	1N6303	162.00	180.00	220.00	1	287.0	5.2	5.0
1.5KE200A	1N6303A	171.00	190.00	210.00	1	274.0	5.5	5.0
1.5KE220		175.00	198.00	242.00	1	344.0	4.3	5.0
1.5KE220A		185.00	209.00	231.00	1	328.0	4.6	5.0
1.5KE250		202.00	225.00	275.00	1	360.0	4.3	5.0
1.5KE250A		214.00	237.00	263.00	1	344.0	4.5	5.0
1.5KE300		243.00	270.00	330.00	1	430.0	3.6	5.0
1.5KE300A		256.00	285.00	315.00	1	414.0	3.8	5.0
1.5KE350		284.00	315.00	385.00	1	504.0	3.1	5.0
1.5KE350A		300.00	332.00	368.00	1	482.0	3.2	5.0
1.5KE400		324.00	360.00	440.00	1	574.0	2.7	5.0
1.5KE400A		342.00	380.00	420.00	1	548.0	2.8	5.0
1.5KE440		356.00	396.00	484.00	1	631.0	2.4	5.0
1.5KE440A		376.00	418.00	462.00	1	600.0	2.6	5.0

BI-DIRECTIONAL 1500 Watt Axial Lead TVS

BI-DIRECTIONAL PART NUMBER	JEDEC PART NUMBER	REVERSE STAND-OFF VOLTAGE VRWM (V)	BREAKDOWN VOLTAGE VBR (V) MIN. @IT	BREAKDOWN VOLTAGE VBR (V) MAX. @IT	TEST CURRENT IT (mA)	MAXIMUM CLAMPING VOLTAGE @I _{PP} VC (V)	PEAK PULSE CURRENT I _{PP} (A)	REVERSE LEAKAGE @VRWM IR (uA)
1.5KE6.8C	1N6267C	5.50	6.12	7.48	10	10.8	139.0	2000.0
1.5KE6.8CA	1N6267CA	5.80	6.45	7.14	10	10.5	143.0	2000.0
1.5KE7.5C	1N6268C	6.05	6.75	8.25	10	11.7	128.0	1000.0
1.5KE7.5CA	1N6268CA	6.40	7.13	7.88	10	11.3	132.0	1000.0
1.5KE8.2C	1N6269C	6.63	7.38	9.02	10	12.5	120.0	400.0
1.5KE8.2CA	1N6269CA	7.02	7.79	8.61	10	12.1	124.0	400.0
1.5KE9.1C	1N6270C	7.37	8.19	10.00	1	13.8	109.0	100.0
1.5KE9.1CA	1N6270CA	7.38	8.65	9.50	1	13.4	112.0	100.0
1.5KE10C	1N62701C	8.10	9.00	11.00	1	15.0	100.0	20.0
1.5KE10CA	1N6271CA	8.55	9.50	10.50	1	14.5	103.0	20.0
1.5KE11C	1N6272C	8.92	9.90	12.10	1	16.2	93.0	10.0
1.5KE11CA	1N6272CA	9.40	10.50	11.60	1	15.6	96.0	10.0
1.5KE12C	1N6273C	9.72	10.80	13.20	1	17.3	87.0	5.0
1.5KE12CA	1N6273CA	10.20	11.40	12.60	1	16.7	90.0	5.0
1.5KE13C	1N6274C	10.50	11.70	14.30	1	19.0	79.0	5.0
1.5KE13CA	1N6274CA	11.10	12.40	13.70	1	18.2	82.0	5.0
1.5KE15C	1N6275C	12.10	13.50	16.50	1	22.0	68.0	5.0
1.5KE15CA	1N6275CA	12.80	14.30	15.80	1	21.2	71.0	5.0
1.5KE16C	1N6276C	12.90	14.40	17.60	1	23.5	64.0	5.0
1.5KE16CA	1N6276CA	13.60	15.20	16.80	1	22.5	67.0	5.0
1.5KE18C	1N6277C	14.50	16.20	19.80	1	26.5	56.5	5.0
1.5KE18CA	1N6277CA	15.30	17.10	18.90	1	25.2	59.5	5.0

1.5KE20C	1N6278C	16.20	18.00	22.00	1	29.1	51.5	5.0
1.5KE20CA	1N6278CA	17.10	19.00	21.00	1	27.7	54.0	5.0
1.5KE22C	1N6279C	17.80	19.80	24.20	1	31.9	47.0	5.0
1.5KE22CA	1N6279CA	18.80	20.90	23.10	1	30.6	49.0	5.0
1.5KE24C	1N6280C	19.40	21.60	26.40	1	34.7	43.0	5.0
1.5KE24CA	1N6280CA	20.50	22.80	25.20	1	33.2	45.0	5.0
1.5KE27C	1N6281C	21.80	24.30	29.70	1	39.1	38.5	5.0
1.5KE27CA	1N6281CA	23.10	25.70	28.40	1	37.5	40.0	5.0
1.5KE30C	1N6282C	24.30	27.00	33.00	1	43.5	34.5	5.0
1.5KE30CA	1N6282CA	25.60	28.50	31.50	1	41.4	36.0	5.0
1.5KE33C	1N6283C	26.80	29.70	36.30	1	47.7	31.5	5.0
1.5KE33CA	1N6283CA	28.20	31.40	34.70	1	45.7	33.0	5.0
1.5KE36C	1N6284C	29.10	32.40	39.60	1	52.0	29.0	5.0
1.5KE36CA	1N6284CA	30.80	34.20	37.80	1	49.9	30.0	5.0
1.5KE39C	1N6285C	31.60	35.10	42.90	1	56.4	26.5	5.0
1.5KE39CA	1N6285CA	33.30	37.10	41.00	1	53.9	28.0	5.0
1.5KE43C	1N6286C	34.80	38.70	47.30	1	61.9	24.0	5.0
1.5KE43CA	1N6286CA	36.80	40.90	45.20	1	59.3	25.3	5.0
1.5KE47C	1N6287C	38.10	42.30	51.70	1	67.8	22.2	5.0
1.5KE47CA	1N6287CA	40.20	44.70	49.40	1	64.8	23.2	5.0
1.5KE51C	1N6288C	41.30	45.90	56.10	1	73.5	20.4	5.0
1.5KE51CA	1N6288CA	43.60	48.50	53.60	1	70.1	21.4	5.0
1.5KE56C	1N6289C	45.60	50.40	61.60	1	80.5	18.6	5.0
1.5KE56CA	1N6289CA	47.80	53.20	58.80	1	77.0	19.5	5.0
1.5KE62C	1N6290C	50.20	55.80	68.20	1	89.0	16.9	5.0
1.5KE62CA	1N6290CA	53.00	58.90	65.10	1	85.0	17.7	5.0
1.5KE68C	1N6291C	55.10	61.20	74.80	1	98.0	15.3	5.0
1.5KE68CA	1N6291CA	58.10	64.60	71.40	1	92.0	16.3	5.0
1.5KE75C	1N6292C	60.70	67.50	82.50	1	108.0	13.9	5.0
1.5KE75CA	1N6292CA	64.10	71.30	78.80	1	103.0	14.6	5.0
1.5KE82C	1N6293C	66.40	73.80	90.20	1	118.0	12.7	5.0
1.5KE82CA	1N6293CA	70.10	77.90	86.10	1	113.0	13.3	5.0
1.5KE91C	1N6294C	73.70	81.90	100.00	1	131.0	11.4	5.0
1.5KE91CA	1N9294CA	77.80	86.50	95.50	1	125.0	12.0	5.0
1.5KE100C	1N6295C	81.00	90.00	110.00	1	144.0	10.4	5.0
1.5KE100CA	1N6295CA	85.50	95.00	105.00	1	137.0	11.0	5.0
1.5KE110C	1N6296C	89.20	99.00	121.00	1	158.0	9.5	5.0
1.5KE110CA	1N6296CA	94.00	105.00	116.00	1	152.0	9.9	5.0
1.5KE120C	1N6297C	97.20	108.00	132.00	1	173.0	8.7	5.0
1.5KE120CA	1N6297CA	102.00	114.00	126.00	1	165.0	9.1	5.0
1.5KE130C	1N6298C	105.00	117.00	143.00	1	187.0	8.0	5.0
1.5KE130CA	1N6298CA	111.00	124.00	137.00	1	179.0	8.4	5.0
1.5KE150C	1N6299C	121.00	135.00	165.00	1	215.0	7.0	5.0
1.5KE150CA	1N6299CA	128.00	143.00	158.00	1	207.0	7.2	5.0
1.5KE160C	1N6300C	130.00	144.00	176.00	1	230.0	6.5	5.0
1.5KE160CA	1N6300CA	136.00	152.00	168.00	1	219.0	6.8	5.0

BI-DIRECTIONAL 1500 Watt Axial Lead TVS

BI-DIRECTIONAL PART NUMBER	JEDEC PART NUMBER	REVERSE STAND-OFF VOLTAGE VRWM (V)	BREAKDOWN VOLTAGE VBR (V) MIN. @IT	BREAKDOWN VOLTAGE VBR (V) MAX. @IT	TEST CURRENT IT (mA)	MAXIMUM CLAMPING VOLTAGE @I _{PP} VC (V)	PEAK PULSE CURRENT I _{PP} (A)	REVERSE LEAKAGE @VRWM IR (uA)
1.5KE170C	1N6301C	138.00	153.00	187.00	1	244.0	6.2	5.0
1.5KE170CA	1N6301CA	145.00	162.00	179.00	1	234.0	6.4	5.0
1.5KE180C	1N6302C	146.00	162.00	198.00	1	258.0	5.8	5.0
1.5KE180CA	1N6302CA	154.00	171.00	189.00	1	246.0	6.1	5.0
1.5KE200C	1N6303C	162.00	180.00	220.00	1	287.0	5.2	5.0
1.5KE200CA	1N6303CA	171.00	190.00	210.00	1	274.0	5.5	5.0
1.5KE220C		175.00	198.00	242.00	1	344.0	4.3	5.0
1.5KE220CA		185.00	209.00	231.00	1	328.0	4.6	5.0
1.5KE250C		202.00	225.00	275.00	1	360.0	4.3	5.0
1.5KE250CA		214.00	237.00	263.00	1	344.0	4.5	5.0
1.5KE300C		243.00	270.00	330.00	1	430.0	3.6	5.0
1.5KE300CA		256.00	285.00	315.00	1	414.0	3.8	5.0
1.5KE350C		284.00	315.00	385.00	1	504.0	3.1	5.0
1.5KE350CA		300.00	332.00	368.00	1	482.0	3.2	5.0
1.5KE400C		324.00	360.00	440.00	1	574.0	2.7	5.0
1.5KE400CA		342.00	380.00	420.00	1	548.0	2.8	5.0
1.5KE440C		356.00	396.00	484.00	1	631.0	2.4	5.0
1.5KE440CA		376.00	418.00	462.00	1	600.0	2.6	5.0