1.5KE SERIES

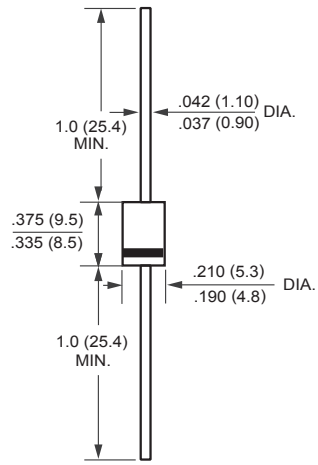
1500 WattsTransient Voltage Suppressor Diodes



DO-27

Features

- ✧ Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- ✧ 1500W surge capability at 10 x 1000 us waveform
- ✧ Excellent clamping capability
- ✧ Low Dynamic impedance
- ✧ Fast response time: Typically less than 1.0ps from 0 volts to VBR for unidirectional and 5.0 ns for bidirectional
- ✧ Typical I_R less than 1uA above 10V
- ✧ High temperature soldering guaranteed: 260°C / 10 seconds / .375",(9.5mm) lead length / 5lbs.,(2.3kg) tension



Dimensions in inches and (millimeters)

Mechanical Data

- ✧ Case: Molded plastic
- ✧ Polarity: Color band denotes cathode except bipolar

Maximum Ratings and Electrical Characteristics

Rating at 25 °C ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%

Type Number	Symbol	Value	Units
Peak Power Dissipation at T_A=25°C, Tp=1ms (Note 1)	P_{PK}	Minimum1500	Watts
Steady State Power Dissipation at T_L=75 °C Lead Lengths .375", 9.5mm (Note 2)	P_D	6.5	Watts
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method) (Note 3)	I_{FSM}	200	Amps
Maximum Instantaneous Forward Voltage at 50.0A for Unidirectional Only (Note 4)	V_F	3.5 / 5.0	Volts
Operating and Storage Temperature Range	T_J, T_{STG}	-55 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 Copper Pad Area of 0.6 x 0.6" (16 x 16 mm) Per Fig. 4.
3. 8.3ms Single Half Sine-wave or Equivalent Square Wave, Duty Cycle=4 Pulses Per Minutes Maximum.
4. V_F=3.5V for Devices of $V_{BR} \leq$ 200V and V_F=5.0V Max. for Devices V_{BR}>200V.

Devices for Bipolar Applications
1. For Bidirectional Use C or CA Suffix for Types 1.5KE6.8 through Types 1.5KE440.
2. Electrical Characteristics Apply in Both Directions.

1.5KE SERIES

1500 WattsTransient Voltage Suppressor Diodes

ELECTRICAL CHARACTERISTICS (TA=25°C unless otherwise noted)

1.5KE SERIES		Breakdown voltage VBR @ IT			Maximum Reverse Leakage **IR(uA)** @VRWM	Working PeakReverse Voltage **VRWM (Volts)**	Maximum Reverse Surge Current **Ipp(A)** @10x1000us sinewave	Maximum Clamping Voltage **Vc (Volts)** @Ipp
Uni-polar	Bi-polar	**Min (V)**	**Max (V)**	**IT (mA)**				
1.5KE6.8	1.5KE6.8C	6.12	7.48	10	1000	5.5	139	10.8
1.5KE6.8A	1.5KE6.8CA	6.46	7.14	10	1000	5.8	143	10.5
1.5KE7.5	1.5KE7.5C	6.75	8.25	10	500	6.1	128	11.7
1.5KE7.5	1.5KE7.5CA	7.13	7.88	10	500	6.4	133	11.3
1.5KE8.2	1.5KE8.2C	7.38	9.02	10	200	6.6	120	12.5
1.5KE8.2A	1.5KE8.2CA	7.79	8.61	10	200	7.0	124	12.1
1.5KE9.1	1.5KE9.1C	8.19	10.01	1	50	7.4	109	13.8
1.5KE9.1A	1.5KE9.1CA	8.65	9.56	1	50	7.8	112	13.4
1.5KE10	1.5KE10C	9.00	11.00	1	10	8.1	100	15.0
1.5KE10A	1.5KE10CA	9.50	10.50	1	10	8.6	103	14.5
1.5KE11	1.5KE11C	9.90	12.10	1	5	8.9	92.6	16.2
1.5KE11A	1.5KE11CA	10.45	11.55	1	5	9.4	96.2	15.6
1.5KE12	1.5KE12C	10.80	13.20	1	5	9.7	86.7	17.3
1.5KE12A	1.5KE12CA	11.40	12.60	1	5	10.2	89.8	16.7
1.5KE13	1.5KE13C	11.70	14.30	1	5	10.5	78.9	19.0
1.5KE13A	1.5KE13CA	12.35	13.65	1	5	11.1	82.4	18.2
1.5KE15	1.5KE15C	13.50	16.50	1	5	12.1	68.2	22.0
1.5KE15A	1.5KE15CA	14.25	15.75	1	5	12.8	70.8	21.2
1.5KE16	1.5KE16C	14.40	17.60	1	5	12.9	63.8	23.5
1.5KE16A	1.5KE16CA	15.20	16.80	1	5	13.6	66.7	22.5
1.5KE18	1.5KE18C	16.20	19.80	1	5	14.5	56.6	26.5
1.5KE18A	1.5KE18CA	17.10	18.90	1	5	15.3	59.5	25.2
1.5KE20	1.5KE20C	18.00	22.00	1	5	16.2	51.5	29.1
1.5KE20A	1.5KE20CA	19.00	21.00	1	5	17.1	54.2	27.7
1.5KE22	1.5KE22C	19.80	24.20	1	5	17.8	47.0	31.9
1.5KE22A	1.5KE22CA	20.90	23.10	1	5	18.8	49.0	30.6
1.5KE24	1.5KE24C	21.60	26.40	1	5	19.4	43.2	34.7
1.5KE24A	1.5KE24CA	22.80	25.20	1	5	20.5	45.2	33.2
1.5KE27	1.5KE27C	24.30	29.70	1	5	21.8	38.4	39.1
1.5KE27A	1.5KE27CA	25.65	28.35	1	5	23.1	40.0	37.5
1.5KE30	1.5KE30C	27.00	33.00	1	5	24.3	34.5	43.5
1.5KE30A	1.5KE30CA	28.50	31.50	1	5	25.6	36.2	41.4
1.5KE33	1.5KE33C	29.70	36.30	1	5	26.8	31.4	47.7
1.5KE33A	1.5KE33CA	31.35	34.65	1	5	28.2	32.8	45.7
1.5KE36	1.5KE36C	32.40	39.60	1	5	29.1	28.8	52.0
1.5KE36A	1.5KE36CA	34.20	37.80	1	5	30.8	30.1	49.9
1.5KE39	1.5KE39C	35.10	42.90	1	5	31.6	26.6	56.4
1.5KE39A	1.5KE39CA	37.05	40.95	1	5	33.3	27.8	53.9
1.5KE43	1.5KE43C	38.70	47.30	1	5	34.8	24.2	61.9
1.5KE43A	1.5KE43CA	40.85	45.15	1	5	36.8	25.3	59.3
1.5KE47	1.5KE47C	42.30	51.70	1	5	38.1	22.1	67.8
1.5KE47A	1.5KE47CA	44.65	49.35	1	5	40.2	23.1	64.8
1.5KE51	1.5KE51C	45.90	56.10	1	5	41.3	20.4	73.5
1.5KE51A	1.5KE51CA	48.45	53.55	1	5	43.6	21.4	70.1
1.5KE56	1.5KE56C	50.40	61.60	1	5	45.4	18.6	80.5
1.5KE56A	1.5KE56CA	53.20	58.80	1	5	47.8	19.5	77.0
1.5KE62	1.5KE62C	55.80	68.20	1	5	50.2	16.9	89.0
1.5KE62A	1.5KE62CA	58.90	65.10	1	5	53.0	17.6	85.0
1.5KE68	1.5KE62C	61.20	74.80	1	5	55.1	15.3	98.0
1.5KE68A	1.5KE62CA	64.60	71.40	1	5	58.1	16.3	92.0
1.5KE75	1.5KE75C	67.50	82.50	1	5	60.7	13.9	108
1.5KE75A	1.5KE75CA	71.25	78.75	1	5	64.1	14.6	103
1.5KE82	1.5KE82C	73.80	90.20	1	5	66.4	12.7	118
1.5KE82A	1.5KE82CA	77.90	86.10	1	5	70.1	13.3	113
1.5KE91	1.5KE91C	81.90	100.10	1	5	73.7	11.5	131
1.5KE91A	1.5KE91CA	86.45	95.55	1	5	77.8	12.0	125
1.5KE100	1.5KE100C	90.00	110.00	1	5	81.0	10.4	144
1.5KE100A	1.5KE100CA	95.00	105.0	1	5	85.5	10.9	137

1.5KE SERIES

1500 WattsTransient Voltage Suppressor Diodes

ELECTRICAL CHARACTERISTICS (TA=25°C unless otherwise noted)

1.5KE SERIES		Breakdown voltage VBR @ **IT**			Maximum Reverse Leakage **IR(uA)** @VRWM	Working PeakReverse Voltage **VRWM (Volts)**	Maximum Reverse Surge Current **Ipp(A)** @10x1000us sinewave	Maximum Clamping Voltage **Vc (Volts)** @Ipp
Uni-polar	Bi-polar	**Min (V)**	**Max (V)**	**IT (mA)**				
1.5KE110	1.5KE110C	99.00	121.0	1	5	89.2	9.49	158
1.5KE110A	1.5KE110CA	104.5	115.5	1	5	94.0	9.87	152
1.5KE120	1.5KE120C	108.0	132.0	1	5	97.2	8.67	173
1.5KE120A	1.5KE120CA	114.0	126.0	1	5	102	9.09	165
1.5KE130	1.5KE130C	117.0	143.0	1	5	105	8.02	187
1.5KE130A	1.5KE130CA	123.5	136.5	1	5	111	8.38	179
1.5KE150	1.5KE150C	135.0	165.0	1	5	121	6.98	215
1.5KE150A	1.5KE150CA	142.5	157.5	1	5	128	7.25	207
1.5KE160	1.5KE160C	144.0	176.0	1	5	130	6.52	230
1.5KE160A	1.5KE160CA	152.0	168.0	1	5	136	6.85	219
1.5KE170	1.5KE170C	153.0	187.0	1	5	138	6.15	244
1.5KE170A	1.5KE170CA	161.5	178.5	1	5	145	6.41	234
1.5KE180	1.5KE180C	162.0	198.0	1	5	146	5.81	258
1.5KE180A	1.5KE180CA	171.0	189.0	1	5	154	6.10	246
1.5KE200	1.5KE200C	180.0	220.0	1	5	162	5.23	287
1.5KE200A	1.5KE200CA	190.0	210.0	1	5	171	5.47	274
1.5KE220	1.5KE220C	198.0	242.0	1	5	175	4.36	344
1.5KE220A	1.5KE220CA	209.0	231.0	1	5	185	4.57	328
1.5KE250	1.5KE250C	225.0	275.0	1	5	202	4.17	360
1.5KE250A	1.5KE250CA	237.5	262.5	1	5	214	4.36	344
1.5KE300	1.5KE300C	270.0	330.0	1	5	243	3.49	430
1.5KE300A	1.5KE300CA	285.0	315.0	1	5	256	3.62	414
1.5KE350	1.5KE350C	315.0	385.0	1	5	284	2.98	504
1.5KE350A	1.5KE350CA	332.5	367.5	1	5	299	3.11	482
1.5KE380	1.5KE380C	342.0	418.0	1	5	309	2.74	547
1.5KE380A	1.5KE380CA	361.0	399.0	1	5	325	2.86	524
1.5KE400	1.5KE400C	360.0	440.0	1	5	325	2.60	576
1.5KE400A	1.5KE400CA	380.0	420.0	1	5	342	2.72	552
1.5KE440	1.5KE440C	396.0	484.0	1	5	357	2.37	634
1.5KE440A	1.5KE440CA	418.0	462.0	1	5	376	2.47	607
1.5KE500	1.5KE500C	450.0	550.0	1	5	406	2.08	720
1.5KE500A	1.5KE500CA	475.0	525.0	1	5	428	2.17	690
1.5KE520	1.5KE520C	468.0	572.0	1	5	422	2.00	749
1.5KE520A	1.5KE520CA	494.0	546.0	1	5	445	2.09	718
1.5KE550	1.5KE550C	495.0	605.0	1	5	447	1.89	792
1.5KE550A	1.5KE550CA	522.5	577.5	1	5	470	1.98	759
1.5KE600	1.5KE600C	540.0	660.0	1	5	487	1.74	864
1.5KE600A	1.5KE600CA	570.0	630.0	1	5	513	1.81	828

Note:

1. Suffix 'A ' denotes 5% tolerance device. Without 'A' denotes 10% tolerance device.
2. Add suffix 'C 'or ' CA ' after part number to specify Bi-directional devices.
3. For Bi-Directional devices having VR of 10 volts and under, the IR limit is double .
4. For Uni-directional devices VF max=3.5v at IF=25 A 300us square wave pulse.

http://www.luguang.cn **mail:lge@luguang.cn**

1.5KE SERIES

1500 WattsTransient Voltage Suppressor Diodes

RATINGS AND CHARACTERISTIC CURVES (1.5KE SERIES)

FIG.1- PEAK PULSE POWER RATING CURVE

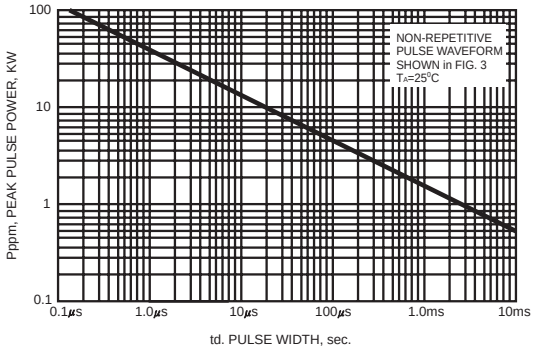


FIG.2- PULSE DERATING CURVE

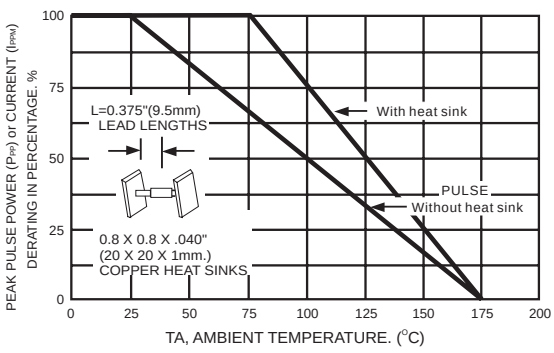


FIG.3- CLAMPING POWER PULSE WAVEFORM

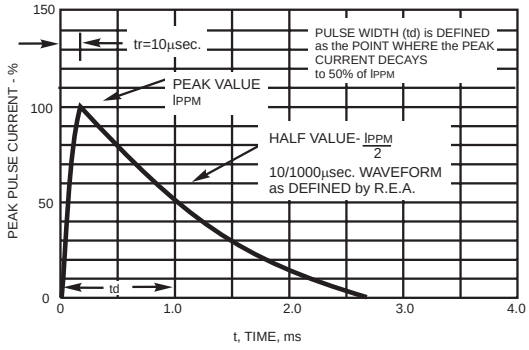


FIG.4- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

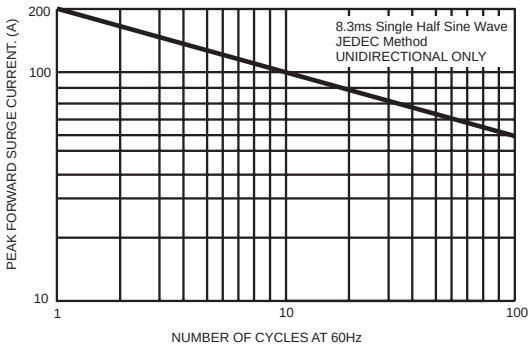


FIG.5- TYPICAL JUNCTION CAPACITANCE
UNIDIRECTIONAL

