UNIDIRECTIONAL AND BIDIRECTIONAL TRANSIENT VOLTAGE SUPPRESSORS

REVERSE VOLTAGE - **6.8** to **440** Volts
POWER DISSIPATION - **1500** Watts

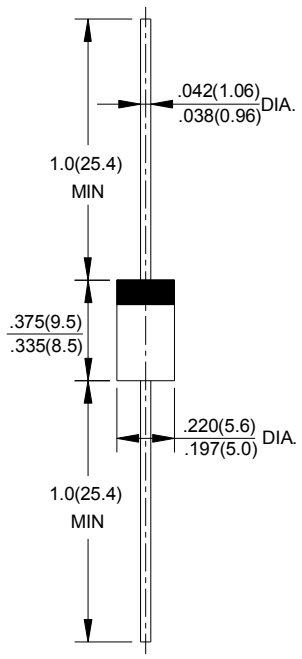
FEATURES

- Glass passivate chip
- Low leakage
- Uni and bidirectional unit
- Excellent clamping capability
- Plastic material has UL recognition 94V-0
- Fast response time

MECHANICAL DATA

- Case : Molded Plastic
- Marking : Unidirectional -type number and cathode band
  Bidirectional-type number only
- Weight :1.2 grams

DO-201



Dimensions in inches and(millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25℃ ambient temperature unless otherwise specified.

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

For capacitive load, derate current by 20%

CHARACTERISTICS	SYMBOL	VALUE	UNIT
Peak Power Dissipation at T_A=25℃ TP=1ms (NOTE1)	P_{PK}	Minimum 1500	WATTS
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Super Imposed on Rated Load (JEDEC Method)	I_{FSM}	200	AMPS
Steady State Power Dissipation at T_L=75℃ Lead Lengths 0.375"(9.5mm),See Fig. 4	$P_{M(AV)}$	5.0	WATTS
Maximum Instantaneous Forward Voltage at 50A for Unidirectional Devices Only (NOTE2)	V_F	See NOTE 3	VOLTS
Operating Temperature Range	T_J	-55 to + 150	℃
Storage Temperature Range	T_{STG}	-55 to + 175	℃

NOTES:1. Non-repetitive current pulse ,per Fig. 5 and derated above T_A=25℃ per Fig. 1 .

2. 8.3ms single half-wave duty cycle=4 pulses per minutes maximum (uni-directional units only).

3. V_F=3.5V on 1.5KE6.8 thru 1.5KE200A devices and V_F=5.0V on 1.5KE1100 thru 1.5KE400A devices.

FIG.1-PULSE DERATING CURVE

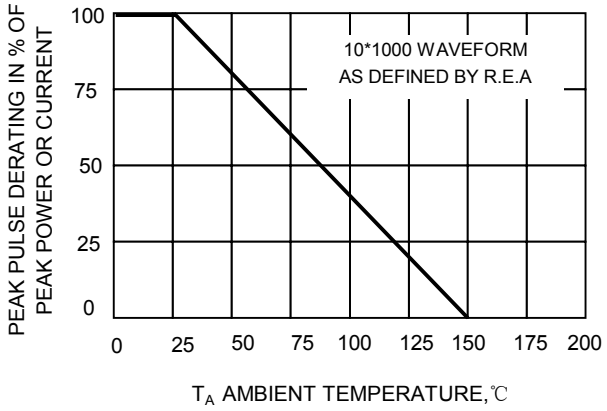


FIG.2-TYPICAL JUNCTION CAPACITANCE

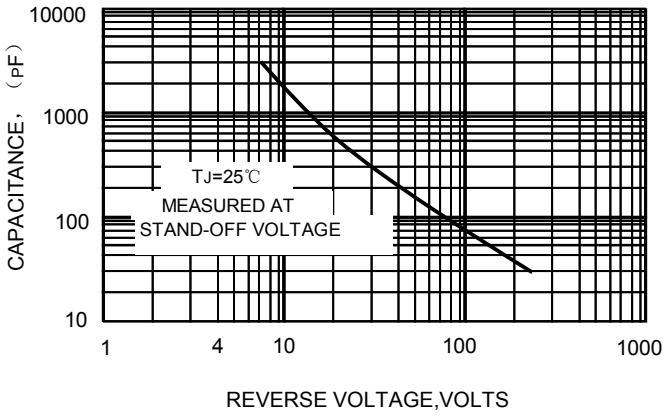


FIG.3-PULSE RATING CURVE

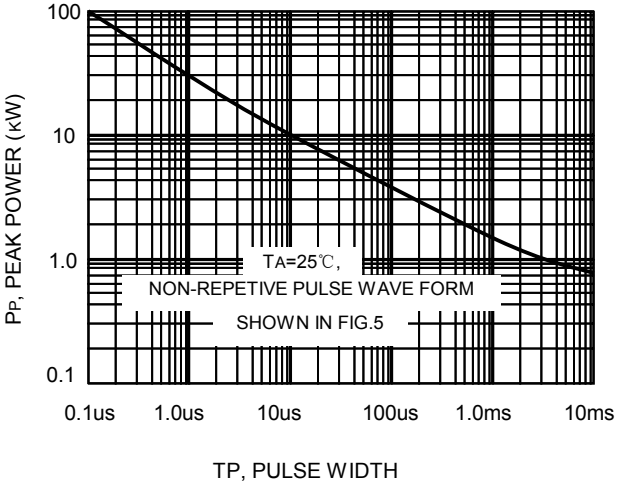


FIG.4-STEADY STATE POWER DERATING CURVE

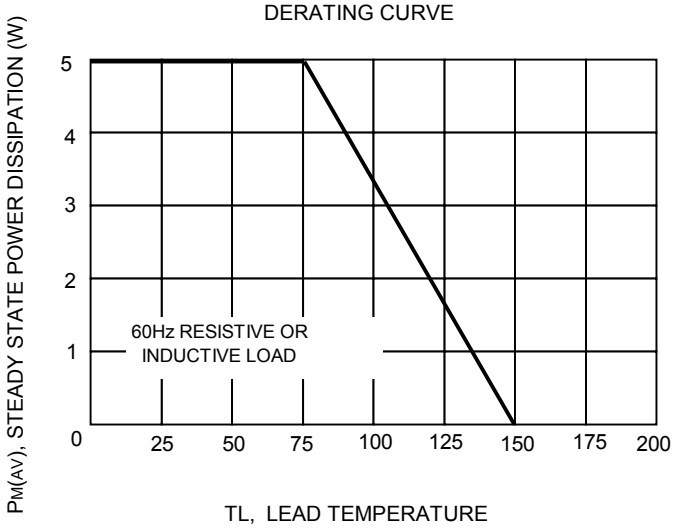
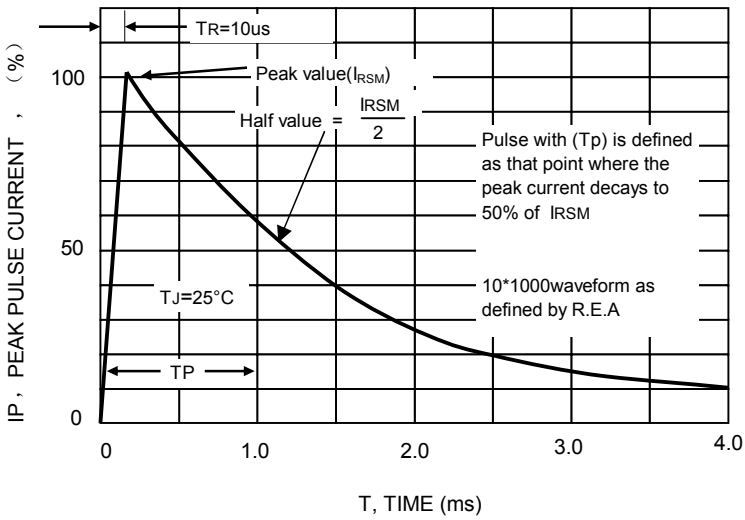


FIG.5-PULSE WAVEFORM



Type Number	Type Number	Reverse Standoff Voltage	Breakdown Voltage BV Lolts@It			Max. Reverse Leakage @ VR	Max. Clamping Voltage @ Ipp	Max. Peak Pulse Current	Max. Voltage Temp. Variation of Bv
(UNI)	(BI)	VR(V)	Min(V)	Max(V)	It(mA)	IR(μA)	Vc(V)	Ipp(A)	mV/℃
1.5KE6.8	1.5KE6.8C	5.50	6.12	7.48	10	1000	10.8	139.0	0.057
1.5KE6.8A	1.5KE6.8CA	5.80	6.45	7.14	10	1000	10.5	143.0	0.057
1.5KE7.5	1.5KE7.5C	6.05	6.75	8.25	10	500	11.7	128.0	0.061
1.5KE7.5A	1.5KE7.5CA	6.40	7.13	7.88	10	500	11.3	132.0	0.061
1.5KE8.2	1.5KE8.2C	6.63	7.38	9.02	10	200	12.5	120.0	0.065
1.5KE8.2A	1.5KE8.2CA	7.02	7.79	8.61	10	200	12.1	124.0	0.065
1.5KE9.1	1.5KE9.1C	7.37	8.19	10.00	1	50	13.8	109.0	0.068
1.5KE9.1A	1.5KE9.1CA	7.78	8.65	9.55	1	50	13.4	112.0	0.068
1.5KE10	1.5KE10C	8.10	9.00	11.00	1	10	15.0	100.0	0.073
1.5KE10A	1.5KE10CA	8.55	9.50	10.50	1	10	14.5	103.0	0.073
1.5KE11	1.5KE11C	8.92	9.90	12.10	1	5	16.2	93.0	0.075
1.5KE11A	1.5KE11CA	9.40	10.50	11.60	1	5	15.6	96.0	0.075
1.5KE12	1.5KE12C	9.72	10.80	13.20	1	5	17.3	87.0	0.078
1.5KE12A	1.5KE12CA	10.20	11.40	12.60	1	5	16.7	90.0	0.078
1.5KE13	1.5KE13C	10.50	11.70	14.30	1	5	19.0	79.0	0.081
1.5KE13A	1.5KE13CA	11.10	12.40	13.70	1	5	18.2	82.0	0.081
1.5KE15	1.5KE15C	12.10	13.50	16.50	1	5	22.0	68.0	0.084
1.5KE15A	1.5KE15CA	12.80	14.30	15.80	1	5	21.2	71.0	0.084
1.5KE16	1.5KE16C	12.90	14.40	17.60	1	5	23.5	64.0	0.086
1.5KE16A	1.5KE16CA	13.60	15.20	16.80	1	5	22.5	67.0	0.086
1.5KE18	1.5KE18C	14.50	16.20	19.80	1	5	26.5	56.5	0.088
1.5KE18A	1.5KE18CA	15.30	17.10	18.90	1	5	25.2	59.5	0.088
1.5KE20	1.5KE20C	16.20	18.00	22.00	1	5	29.1	51.5	0.090
1.5KE20A	1.5KE20CA	17.10	19.00	21.00	1	5	27.7	54.0	0.090
1.5KE22	1.5KE22C	17.80	19.80	24.20	1	5	31.9	47.0	0.092
1.5KE22A	1.5KE22CA	18.80	20.90	23.10	1	5	30.6	49.0	0.092
1.5KE24	1.5KE24C	19.40	21.60	26.40	1	5	34.7	43.0	0.094
1.5KE24A	1.5KE24CA	20.50	22.80	25.20	1	5	33.2	45.0	0.094
1.5KE27	1.5KE27C	21.80	24.30	29.70	1	5	39.1	38.5	0.096
1.5KE27A	1.5KE27CA	23.10	25.70	28.40	1	5	37.5	40.0	0.096
1.5KE30	1.5KE30C	24.30	27.00	33.00	1	5	43.5	34.5	0.097
1.5KE30A	1.5KE30CA	25.60	28.50	31.50	1	5	41.4	36.0	0.097
1.5KE33	1.5KE33C	26.80	29.70	36.30	1	5	47.7	31.5	0.098
1.5KE33A	1.5KE33CA	28.20	31.40	34.70	1	5	45.7	33.0	0.098
1.5KE36	1.5KE36C	29.10	32.40	39.60	1	5	52.0	29.0	0.099
1.5KE36A	1.5KE36CA	30.80	34.20	37.80	1	5	49.9	30.0	0.099
1.5KE39	1.5KE39C	31.60	35.10	42.90	1	5	56.4	26.5	0.100
1.5KE39A	1.5KE39CA	33.30	37.10	41.00	1	5	53.9	28.0	0.100
1.5KE43	1.5KE43C	34.80	38.70	47.30	1	5	61.9	24.0	0.101
1.5KE43A	1.5KE43CA	36.80	40.90	45.20	1	5	59.3	25.3	0.101
1.5KE47	1.5KE47C	38.10	42.30	51.70	1	5	67.8	22.2	0.101
1.5KE47A	1.5KE47CA	40.20	44.70	49.40	1	5	64.8	23.2	0.101
1.5KE51	1.5KE51C	41.30	45.90	56.10	1	5	73.5	20.4	0.102
1.5KE51A	1.5KE51CA	43.60	48.50	53.60	1	5	70.1	21.4	0.102
1.5KE56	1.5KE56C	45.40	50.40	61.60	1	5	80.5	18.6	0.103
1.5KE56A	1.5KE56CA	47.80	53.20	58.80	1	5	77.0	19.5	0.103

1.5KE SERIES

Type Number	Type Number	Reverse Standoff Voltage	Breakdown Voltage BV Lolts@It			Max. Reverse Leakage @ VR	Max. Clamping Voltage @ Ipp	Max. Peak Pulse Current	Max. Voltage Temp. Variation of Bv
(UNI)	(BI)	VR(V)	Min(V)	Max(V)	It(mA)	IR(μA)	Vc(V)	Ipp(A)	mV/℃
1.5KE62	1.5KE62C	50.2	55.8	68.2	1	5	89.0	16.90	0.104
1.5KE62A	1.5KE62CA	53.0	58.9	65.1	1	5	85.0	17.70	0.104
1.5KE68	1.5KE68C	55.1	61.2	74.8	1	5	98.0	15.30	0.104
1.5KE68A	1.5KE68CA	58.1	64.6	71.4	1	5	92.0	16.30	0.104
1.5KE75	1.5KE75C	60.7	67.5	82.5	1	5	108.0	13.90	0.105
1.5KE75A	1.5KE75CA	64.7	71.3	78.8	1	5	103.0	14.60	0.105
1.5KE82	1.5KE82C	66.4	73.8	90.2	1	5	118.0	12.70	0.105
1.5KE82A	1.5KE82CA	70.1	77.9	86.1	1	5	113.0	13.30	0.105
1.5KE91	1.5KE91C	73.7	81.9	100.0	1	5	131.0	11.40	0.106
1.5KE91A	1.5KE91CA	77.8	86.5	95.5	1	5	125.0	12.00	0.106
1.5KE100	1.5KE100C	81.0	90.0	110.0	1	5	144.0	10.40	0.106
1.5KE100A	1.5KE100CA	85.5	95.0	105.0	1	5	137.0	11.00	0.106
1.5KE110	1.5KE110C	89.2	99.0	121.0	1	5	158.0	9.50	0.107
1.5KE110A	1.5KE110CA	94.0	105.0	116.0	1	5	152.0	9.90	0.107
1.5KE120	1.5KE120C	97.2	108.0	132.0	1	5	173.0	8.70	0.107
1.5KE120A	1.5KE120CA	102.0	114.0	126.0	1	5	165.0	9.10	0.107
1.5KE130	1.5KE130C	105.0	117.0	143.0	1	5	187.0	8.00	0.107
1.5KE130A	1.5KE130CA	111.0	124.0	137.0	1	5	179.0	8.40	0.107
1.5KE150	1.5KE150C	121.0	135.0	165.0	1	5	215.0	7.00	0.108
1.5KE150A	1.5KE150CA	128.0	143.0	158.0	1	5	207.0	7.20	0.108
1.5KE160	1.5KE160C	130.0	144.0	176.0	1	5	230.0	6.50	0.108
1.5KE160A	1.5KE160CA	136.0	152.0	168.0	1	5	219.0	6.80	0.108
1.5KE170	1.5KE170C	138.0	153.0	187.0	1	5	244.0	6.20	0.108
1.5KE170A	1.5KE170CA	145.0	162.0	179.0	1	5	234.0	6.40	0.108
1.5KE180	1.5KE180C	146.0	162.0	198.0	1	5	258.0	5.80	0.108
1.5KE180A	1.5KE180CA	154.0	171.0	189.0	1	5	246.0	6.10	0.108
1.5KE200	1.5KE200C	162.0	180.0	220.0	1	5	287.0	5.20	0.108
1.5KE200A	1.5KE200CA	171.0	190.0	210.0	1	5	274.0	5.50	0.108
1.5KE220	1.5KE220C	175.0	198.0	242.0	1	5	344.0	4.30	0.108
1.5KE220A	1.5KE220CA	185.0	209.0	231.0	1	5	328.0	4.60	0.108
1.5KE250	1.5KE250C	202.0	225.0	275.0	1	5	360.0	5.00	0.110
1.5KE250A	1.5KE250CA	214.0	237.0	263.0	1	5	344.4	5.00	0.110
1.5KE300	1.5KE300C	243.0	270.0	330.0	1	5	430.0	5.00	0.110
1.5KE300A	1.5KE300CA	256.0	285.0	315.0	1	5	414.0	5.00	0.110
1.5KE350	1.5KE350C	284.0	315.0	385.0	1	5	504.0	4.00	0.110
1.5KE350A	1.5KE350CA	300.0	332.0	368.0	1	5	482.0	4.00	0.110
1.5KE400	1.5KE400C	324.0	360.0	440.0	1	5	574.0	4.00	0.110
1.5KE400A	1.5KE400CA	342.0	380.0	420.0	1	5	548.0	4.00	0.110

NOTES: Suffix'C' denotes bidirectional device . Suffix'A' denotes 5% tolerance device .no suffix denotes 10% tolerance devive .

1. For bidirectional devices having VR of 10volts and under ,the IR limit is doubled .