1.5KE6.8 THRU 1.5KE440CA

Breakdown Voltage:6.8-440 Volts Pesk Pulse Power:1500 Watts

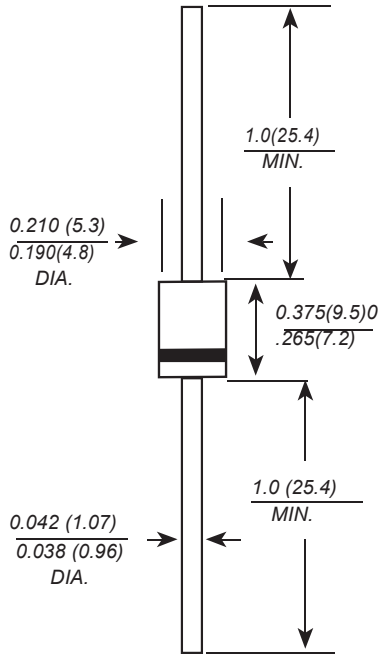
GLASS PASSIVAED JUNCTION TRANSIENT VOLTAGE SUPPRESSOR

Features

- 1500w peak pulse power capability
- Excellent clamping capability
- Low incremental surge resistance
- Fast response time:typically less than 1.0ps from 0v to VBR for unidirectional and 5.0ns ror bidirectional types.
- High temperature soldering guaranteed: 265°C/10S/9.5mm lead length at 5 lbs tension

DO-201AD

RoHS COMPLIANT



Dimensions in inches and (millimeters)

MechanicalData

Case : JEDEC DO-201AD Molded plastic body
Terminals : Solder plated, solderable per MIL-STD-750,Method 2026
Polarity : Polarity symbol marking on body
Mounting Position : Any
Weight : 0.014 ounce, 0.40 grams

MaximumRatingsAndElectricalCharacteristics

Ratings at 25°C ambient temperature unlss otherwise specified.

Single phase half-wave 60Hz,resistive or inductive load,for capacitive load current derate by 20%.

	SYMBOLS	*VALUE*	*UNITS*
Peak power dissipation	P_{PPM}	Minimum 1500	Watts
Peak pulse reverse current	I_{PPM}	See Table 1	Amps
Steady state power dissapation (Note 2)	$P_{M(AV)}$	5.0	Watts
Peak forward sur e current	I_{FSM}	200	Amps
Maximum instantaneous forward voltage at 100A for unidirectional only (Note 4)	V_F	3.5/5.0	Volts
Operating junction and storage temperature range	T_{STG},T_J	-55 to + 175	℃

Notes:

1.10/1000μs waveform non-repetitive current pulse,per Fig.3 and derated above Ta=25℃ per Fig.2
2.T_L=75°C,lead lengths 9.5mm,Mounted on copper pad atea of(20x20mm)Fig.5
3.Measured on 8.3ms single half sine-wave or equivalent square wave,duty cycle=4 pulses per minute maximum.**4**.VF=3.5V max.for devices of $V_{(BR)}$<200V,and VF=5.0V max.for devices of $V_{(BR)}$>200V

ELECTRICAL CHARACTERISTICS (at T_A=25 ℃ unless otherwise noted)

Device Type	Breakdown Voltage $V_{(BR)}$ (Volts)(NOTES 1)		Test Current I_T(mA)	Stand-off Voltage V_{WM} (Volts)	Maximum Reverse Leakage atV_{WM} $I_{D(NOTE3)}$(μA)	Maximum Peak Pulse Reverse Current $I_{PPM(NOTE2)}$ (Amps)	Maximum Clamping Voltage at I_{PPM} Vc(Volts)	Maximum Temperature Coefficient of $V_{(BR)}$ (%/ ℃)
	MIN	MAX						
1.5KE6.8	6.126	7.487	10.0	5.505	1000.	139	10.8	0.0570
1.5KE6.8A	.456.	.148.	10.0	.806.	01000.0	143	10.5	.0570.
1.5KE7.5	757.	257.	10.0	056.	500.0	128	11.7	0610.
1.5KE7.5A	137.	889.	10.0	406.	500.0	133	11.3	0610.
1.5KE8.2	387.	028.	10.0	637.	200.0	120	12.5	0650.
1.5KE8.2A	798.	6110.	10.0	027.	200.0	124	12.1	0650.
1.5KE9.1	198.	09.55	1.0	377.	50.0	109	13.8	0680.
1.5KE9.1A	659.	11.0	1.0	788.	50.0	112	13.4	0680.
1.5KE10	009.	10.5	1.0	108.	10.0	100	15.0	0730.
1.5KE10A1	509.	12.1	1.0	558.	10.0	103	14.5	0730.
.5KE11	9010.	11.6	1.0	929.	5.0	92.6	16.2	0750.
1.5KE11A1	510.8	13.2	1.0	409.	5.0	96.2	15.6	0750.
.5KE12	11.4	12.6	1.0	7210.	5.0	86.7	17.3	0780.
1.5KE12A1	11.7	14.3	1.0	210.5	5.0	89.8	16.7	0780.
.5KE13	12.4	13.7	1.0	11.1	5.0	78.9	19.0	0810.
1.5KE13A1	13.5	16.5	1.0	12.1	5.0	82.4	18.2	0810.
.5KE15	14.3	15.8	1.0	12.8	5.0	68.2	22.0	0840.
1.5KE15A1	14.4	17.6	1.0	12.9	5.0	70.8	21.2	0840.
.5KE16	15.2	16.8	1.0	13.6	5.0	63.8	23.5	0860.
1.5KE16A1	16.2	19.8	1.0	14.5	5.0	66.7	22.5	0860.
.5KE18	17.1	18.9	1.0	15.3	5.0	56.6	26.5	0880.
1.5KE18A1	18.0	22.0	1.0	16.2	5.0	59.5	25.5	0880.
.5KE20	19.0	21.0	1.0	17.1	5.0	51.5	29.1	0900.
1.5KE20A1	19.8	24.2	1.0	17.8	5.0	54.2	27.7	0900.
.5KE22	20.9	23.1	1.0	18.8	5.0	47.0	31.9	0920.
1.5KE22A1	21.6	26.4	1.0	19.4	5.0	49.0	30.6	0920.
.5KE24	22.8	25.2	1.0	20.5	5.0	43.2	34.7	0940.
1.5KE24A1	24.3	29.7	1.0	21.8	5.0	45.2	33.2	0940.
.5KE27	25.7	28.4	1.0	23.1	5.0	38.4	39.1	0960.
1.5KE27A1	27.0	33.0	1.0	24.3	5.0	40.0	37.5	0960.
.5KE30	28.5	31.5	1.0	25.6	5.0	34.5	43.5	0970.
1.5KE30A1	29.7	36.3	1.0	26.8	50.	36.2	41.4	0970.
.5KE33	31.4	34.7	1.0	28.2	5.0	31.4	47.7	0980.
1.5KE33A1	32.4	39.6	1.0	29.1	5.0	32.8	45.7	0980.
.5KE36	34.2	37.8	1.0	30.8	5.0	28.8	52.0	0990.
1.5KE36A1	35.1	42.9	1.0	31.6	5.0	30.1	49.9	0990.
.5KE39	37.1	41.0	1.0	33.3	5.0	26.6	56.4	1000.
1.5KE39A1	38.7	47.3	1.0	34.8	5.0	27.8	53.9	1000.
.5KE43	40.9	45.2	1.0	36.8	5.0	24.2	61.9	1010.
1.5KE43A1	42.3	51.7	1.0	38.1	5.0	25.3	59.3	1010.
.5KE47	44.7	49.4	1.0	40.2	5.0	22.1	67.8	1010.
1.5KE47A1	45.9	56.1	1.0	41.3	5.0	23.1	64.8	1010.
.5KE51	48.5	53.6	1.0	43.6	5.0	20.4	73.5	1020.
1.5KE51A1	50.4	61.6	1.0	45.4	5.0	21.4	70.1	1020.
.5KE56	53.2	58.8	1.0	47.8	5.0	18.6	80.5	1030.
1.5KE56A			1.0		5.0	19.5	77.0	103

The electrical characteristics above is for reference only.

ELECTRICAL CHARACTERISTICS (at T_A=25 ℃ unless otherwise noted)

Device Type	Breakdown Voltage $V_{(BR)}$ (Volts)(NOTES 1)		Test Current I_T(mA)	Stand-off Voltage V_{WM} (Volts)	Maximum Reverse Leakage atV_{WM} I_D(NOTE3)(μA)	Maximum Peak Pulse Reverse Current I_{PPM}(NOTE2) (Amps)	Maximum Clamping Voltage at I_{PPM} Vc(Volts)	Maximum Temperature Coefficient of $V_{(BR)}$ (%/ ℃)
	MIN	MAX						
1.5KE62	55.8	66.8	1.0	50.2	5.0	16.	89.0	0.104
1.5KE62A	58.9	65.1	1.0	53.0	5.0	917.	85.0	0.104
1.5KE68	61.2	74.8	1.0	55.1	5.0	615.	98.0	0.104
1.5KE68A	64.6	71.4	1.0	58.1	5.0	316.	92.0	0.104
1.5KE75	67.5	82.5	1.0	60.7	5.0	313.	108	0.105
1.5KE75A	71.3	78.8	1.0	64.1	5.0	914.	103	0.105
1.5KE82	73.8	90.2	1.0	66.4	5.0	612.	118	0.105
1.5KE82A	77.9	86.1	1.0	70.1	5.0	713.	113	0.105
1.5KE91	81.9	100	1.0	73.7	5.0	311.	131	0.106
1.5KE91A	86.5	95.5	1.0	77.8	5.0	512.	125	0.106
1.5KE100	90.0	110	1.0	81.0	5.0	010.	144	0.106
1.5KE100A	95.0	105	1.0	85.5	5.0	410.9	137	0.106
1.5KE110	99.0	121	1.0	89.2	5.0	9.5	158	0.107
1.5KE110A	105	116	1.0	94.0	5.0	9.9	152	0.107
1.5KE120	108	132	1.0	97.2	5.0	8.7	173	0.107
1.5KE120A	114	126	1.0	102	5.0	9.1	165	0.107
1.5KE130	117	143	1.0	105	5.0	8.0	187	0.107
1.5KE130A	124	137	1.0	111	5.0	8.4	179	0.107
1.5KE150	135	165	1.0	121	5.0	7.0	215	0.108
1.5KE150A	143	158	1.0	128	5.0	7.2	207	0.108
1.5KE160	144	176	1.0	130	5.0	6.5	230	0.108
1.5KE160A	152	168	1.0	136	5.0	6.8	219	0.108
1.5KE170	153	187	1.0	138	5.0	6.1	244	0.108
1.5KE170A	162	179	1.0	145	5.0	6.4	234	0.108
1.5KE180	162	198	1.0	146	5.0	5.8	258	0.108
1.5KE180A	171	189	1.0	154	5.0	6.1	246	0.108
1.5KE200	180	220	1.0	162	5.0	5.2	287	0.108
1.5KE200A	190	210	1.0	171	5.0	5.5	274	0.108
1.5KE220	198	242	1.0	175	5.0	4.4	344	0.108
1.5KE220A	209	231	1.0	185	5.0	4.6	328	0.108
1.5KE250	225	275	1.0	202	5.0	4.2	360	0.110
1.5KE250A	237	263	1.0	214	5.0	4.4	344	0.110
1.5KE300	270	330	1.0	243	5.0	3.5	430	0.110
1.5KE300A	285	315	1.0	256	5.0	3.6	414	0.110
1.5KE350	315	385	1.0	284	5.0	3.0	504	0.110
1.5KE350A	332	368	1.0	300	5.0	3.1	482	0.110
1.5KE400	360	440	1.0	324	5.0	2.6	574	0.110
1.5KE400A	380	420	1.0	342	5.0	2.7	548	0.110
1.5KE440	396	484	1.0	356	5.0	2.4	631	0.110
1.5KE440A	418	462	1.0	376	5.0	2.5	602	0.110

NOTES:

1.$V_{(BR)}$measured after I_T applied for 300μs,I_T=square wave pulse or equivalent2
.Surge current waveform per Fig.3 and derated per Fig.2
3.For bidirectional types having V_{WM} of 10 volts and less,the I_D limit is doubled
4.All items and symbols are consistent with ANSI/IEEE C62.35

The electrical characteristics above is for reference only.

FIG. 1-PEAK PULSE POWER RATING CURVE

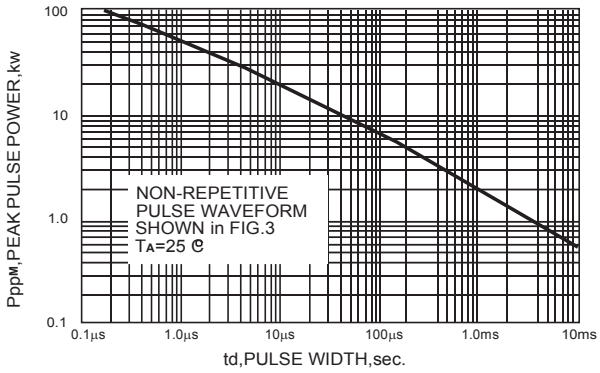


FIG. 2-PULSE DERATING CURVE

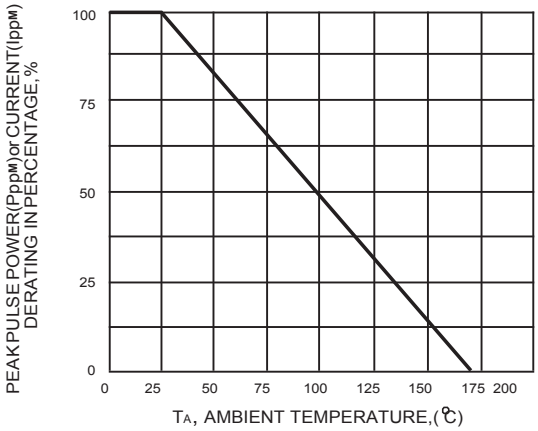


FIG.3-PULSE WAVEFORM

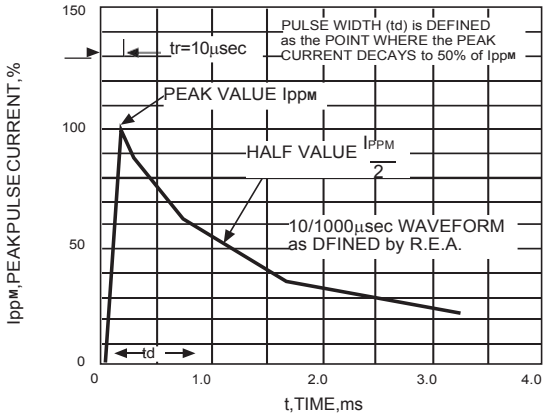


FIG. 4-TYPICAL JUNCTIONAL CAPACITANCE
UNIDIRECTIONAL

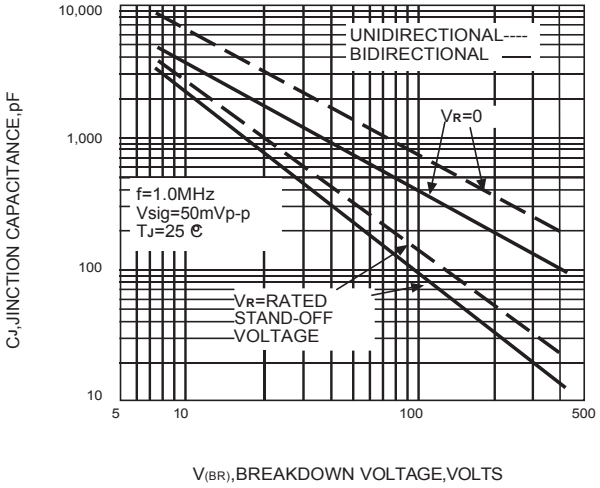


FIG.5-STEADY STATE POWER DERATING CURVE

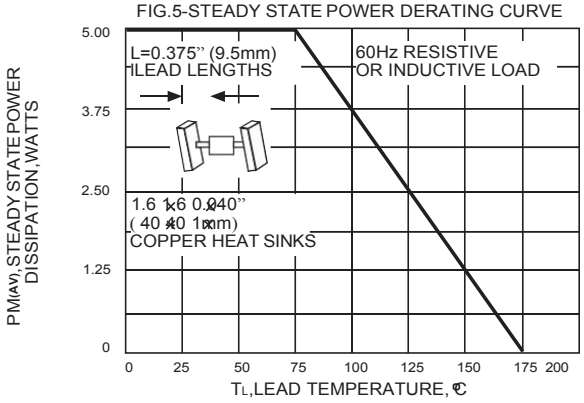


FIG.6-MAXIMUM NON-REPETITIVE FORWARD SURGE
CURRENT UNIDIRECTIONAL ONLY

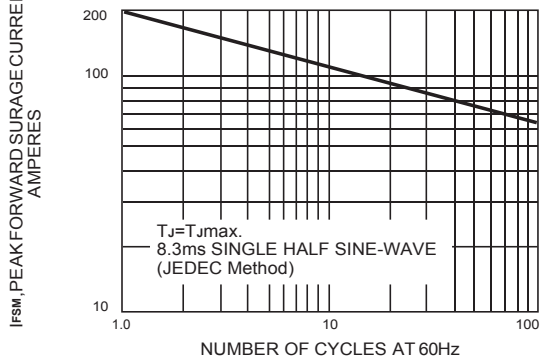
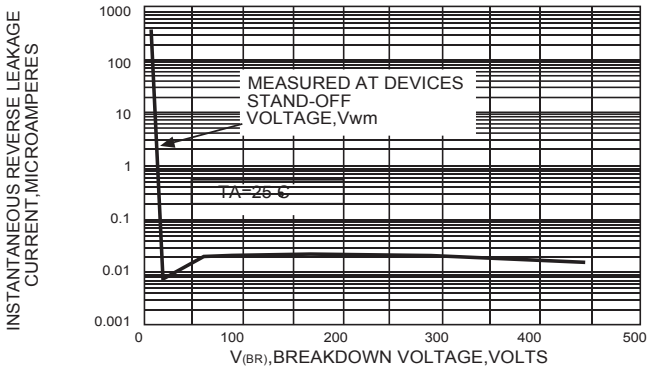
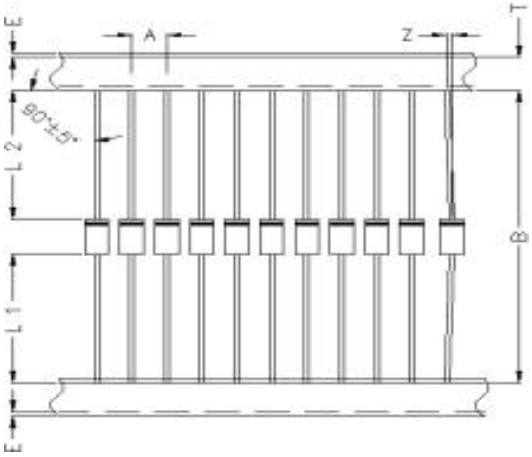


FIG.7-TYPICAL REVERSE LEAKAGE CHARCTERISTICS



The curve characteristics above is for reference only.

TapingSpecifications



Item	Symbol	Specifications(mm)
Component Pitch	A	10.0±0.5
Inner Tape Pitch	B	52.4±1.5
Component alignment	Z	1.2 Max
Tape width	T	6.0±0.5
Exposed adhesive	E	0.8 Max
Body eccentricity	L1-L2	1.0 Max

AmmunitionPackageSpecifications

Package	Inner Box Size (mm)	QTY/Box (pcs)	Carton Size (mm)	Q'TY/Carton (pcs)
DO-201AD	255*74*145	1000	410*275*340	10000

BulkPackageSpecifications

Package	Inner Box Size (mm)	QTY/Box (pcs)	Carton Size (mm)	Q'TY/Carton (pcs)
DO-201AD	198*86*21	200	460*220*250	10000