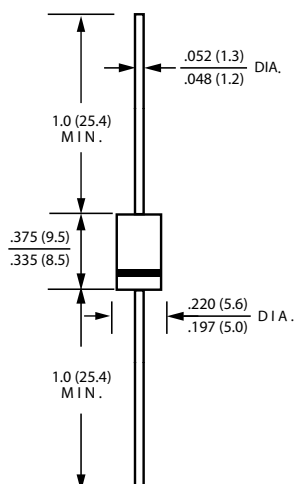


Transient Voltage Suppressors(1500W)



DO-201AD

Dimensions in inches and (millimeters)



Ordering Information

Part Number	Compound
1.5KE SERIES	General
1.5KE SERIES-H	Halogen Free

PRIMARY CHARACTERISTICS

V _{BR}	6.8~600V
P _{PPM}	1500W
P _D	6.5W
T _J max	150°C

Features

- Glass passivated chip
- 1500 W peak pulse power capability with a 10/1000 μ s waveform, repetitive rate (duty cycle):0.01 %
- Low leakage
- Uni and Bidirectional unit
- Excellent clamping capability
- Very fast response time

Mechanical Data

- Cases: DO-201AD
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Terminals: Lead free Plating (Tin Finish)
Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Weight: 1.071 grams (approximate)

MAXIMUM RATINGS (TA=25°C unless otherwise noted)

PARAMETER	SYMBOL	VALUE	UNIT
Peak power dissipation with a 10/1000 μ s waveform	P _{PP}	Minimum 1500	W
Power dissipation on infinite heatsink at T _L =75°C	P _D	6.5	W
Peak forward surge current, 8.3ms single half sine-wave unidirectional only(1)	I _{FSM}	200	A
Maximum instantaneous forward voltage at 100A for unidirectional only(2)	V _F	3.5/5.0	V
Operating and Storage Temperature Range	T _J , T _{STG}	-55 ~ +150	°C

Note:

(1)Measured on 8.3 ms single half sine-wave or equivalent square wave, duty cycle = 4 pulses per minute maximum.

(2)V_F<3.5V for devices of V_{BR}<200V and V_F<5.0V for devices of V_{BR}>201V

Transient Voltage Suppressors(1500W)

Part Number		Reverse Stand-off Voltage	Breakdown Voltage Min@I _T	Breakdown Voltage Max@I _T	Test Current	Max Clamping Voltage V _C @I _{PP}	Peak Pulse Current	Reverse Leakage I _R @V _{RRM}
DIRECTIONAL		V _{RRM}	V _{BR}	V _{BR}	I _T	V _C	I _{PP}	I _R
UNI	BI	V	V	V	mA	V	A	uA
1.5KE6.8A	1.5KE6.8CA	5.80	6.46	7.14	10.0	10.5	142.86	1000
1.5KE7.5A	1.5KE7.5CA	6.40	7.13	7.88	10.0	11.3	132.74	500
1.5KE8.2A	1.5KE8.2CA	7.00	7.79	8.61	10.0	12.1	123.97	200
1.5KE9.1A	1.5KE9.1CA	7.80	8.65	9.56	1.0	13.4	111.94	50
1.5KE10A	1.5KE10CA	8.60	9.50	10.50	1.0	14.5	103.45	10
1.5KE11A	1.5KE11CA	9.40	10.45	11.55	1.0	15.6	96.15	5
1.5KE12A	1.5KE12CA	10.20	11.40	12.60	1.0	16.7	89.82	5
1.5KE13A	1.5KE13CA	11.10	12.35	13.65	1.0	18.2	82.42	5
1.5KE15A	1.5KE15CA	12.80	14.25	15.75	1.0	21.2	70.75	5
1.5KE16A	1.5KE16CA	13.60	15.20	16.80	1.0	22.5	66.67	5
1.5KE18A	1.5KE18CA	15.30	17.10	18.90	1.0	25.2	59.52	5
1.5KE20A	1.5KE20CA	17.10	19.00	21.00	1.0	27.7	54.15	5
1.5KE22A	1.5KE22CA	18.80	20.90	23.10	1.0	30.6	49.02	5
1.5KE24A	1.5KE24CA	20.50	22.80	25.20	1.0	33.2	45.18	5
1.5KE27A	1.5KE27CA	23.10	25.65	28.35	1.0	37.5	40.00	5
1.5KE30A	1.5KE30CA	25.60	28.50	31.50	1.0	41.4	36.23	5
1.5KE33A	1.5KE33CA	28.20	31.35	34.65	1.0	45.7	32.82	5
1.5KE36A	1.5KE36CA	30.80	34.20	37.80	1.0	49.9	30.80	5
1.5KE39A	1.5KE39CA	33.30	37.05	40.95	1.0	53.9	27.83	5
1.5KE43A	1.5KE43CA	36.80	40.85	45.15	1.0	59.3	25.30	5
1.5KE47A	1.5KE47CA	40.20	44.65	49.35	1.0	64.8	23.15	5
1.5KE51A	1.5KE51CA	43.60	48.45	53.55	1.0	70.1	21.40	5
1.5KE56A	1.5KE56CA	47.80	53.20	58.80	1.0	77.0	19.48	5
1.5KE62A	1.5KE62CA	53.00	58.90	65.10	1.0	85.0	17.65	5
1.5KE68A	1.5KE68CA	58.10	64.60	71.40	1.0	92.0	16.30	5
1.5KE75A	1.5KE75CA	64.10	71.25	78.75	1.0	103.0	14.56	5
1.5KE82A	1.5KE82CA	70.10	77.90	86.10	1.0	113.0	13.27	5
1.5KE91A	1.5KE91CA	77.80	86.45	95.55	1.0	125.0	12.00	5
1.5KE100A	1.5KE100CA	85.50	95.00	105.00	1.0	137.0	10.95	5
1.5KE110A	1.5KE110CA	94.00	104.50	115.50	1.0	152.0	9.87	5
1.5KE120A	1.5KE120CA	102.00	114.00	126.00	1.0	165.0	9.09	5
1.5KE130A	1.5KE130CA	111.00	123.50	136.50	1.0	179.0	8.38	5
1.5KE150A	1.5KE150CA	128.00	142.50	157.50	1.0	207.0	7.25	5
1.5KE160A	1.5KE160CA	136.00	152.00	168.00	1.0	219.0	6.85	5
1.5KE170A	1.5KE170CA	145.00	161.50	178.50	1.0	234.0	6.41	5
1.5KE180A	1.5KE180CA	154.00	171.00	189.00	1.0	246.0	6.10	5
1.5KE200A	1.5KE200CA	171.00	190.00	210.00	1.0	274.0	5.47	5
1.5KE220A	1.5KE220CA	185.00	209.00	231.00	1.0	328.0	4.57	5
1.5KE250A	1.5KE250CA	214.00	237.50	262.50	1.0	344.0	4.36	5
1.5KE300A	1.5KE300CA	256.00	285.00	315.00	1.0	414.0	3.62	5
1.5KE350A	1.5KE350CA	299.30	332.50	367.50	1.0	482.0	3.11	5
1.5KE380A	1.5KE380CA	324.90	361.00	399.00	1.0	524.4	2.86	5

Transient Voltage Suppressors(1500W)

Part Number		Reverse Stand-off Voltage	Breakdown Voltage Min@I _T	Breakdown Voltage Max@I _T	Test Current	Max Clamping Voltage V _C @I _{PP}	Peak Pulse Current	Reverse Leakage I _R @V _{RRM}
DIRECTIONAL		V _{RRM}	V _{BR}	V _{BR}	I _T	V _C	I _{PP}	I _R
UNI	BI	V	V	V	mA	V	A	uA
1.5KE400A	1.5KE400CA	342.00	380.00	420.00	1.0	548.0	2.72	5
1.5KE440A	1.5KE440CA	376.20	418.00	462.00	1.0	602.0	2.47	5
1.5KE480A	1.5KE480CA	411.00	456.00	504.00	1.0	656.1	2.29	5
1.5KE500A	1.5KE500CA	427.50	475.00	525.00	1.0	690.0	2.17	5
1.5KE520A	1.5KE520CA	444.60	494.00	546.00	1.0	717.6	2.09	5
1.5KE550A	1.5KE550CA	470.30	522.50	577.50	1.0	759.0	1.98	5
1.5KE600A	1.5KE600CA	513.00	570.00	630.00	1.0	828.0	1.81	5

Note:

1. Suffix 'A ' denotes 5% tolerance device.
2. For Bi-Directional devices having VR of 10volts and under, the IR limit is double.
3. Add suffix 'CA' after part number to specify Bi-directional devices.

Transient Voltage Suppressors(1500W)

Fig. 1 - Pulse Derating Curve

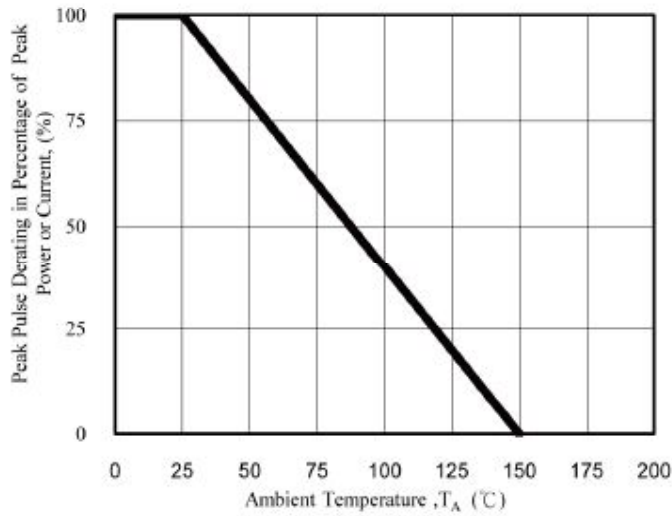


Fig. 2 - Maximum Non-Repetitive Surge Current

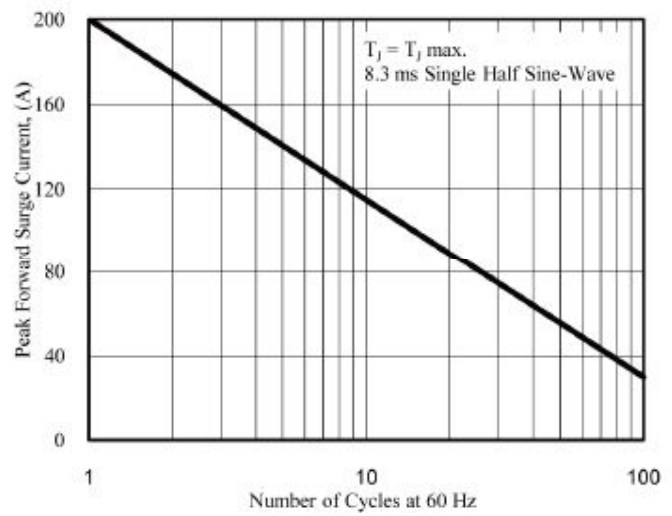


Fig. 3 - Steady State Power Derating Curve

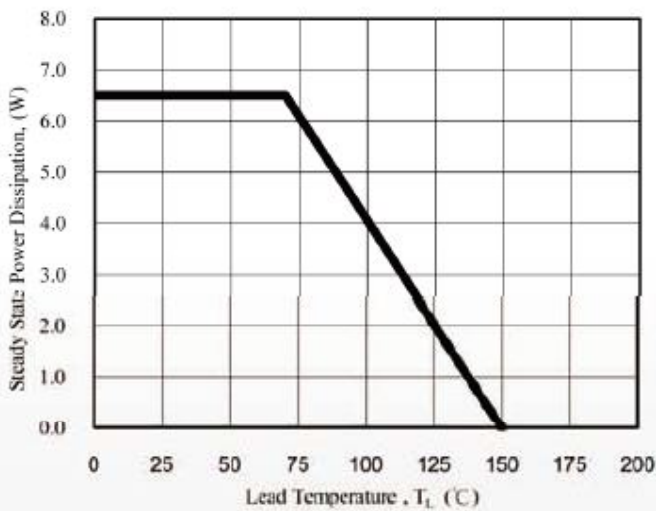


Fig. 4 - Peak Pulse Power Rating Curve

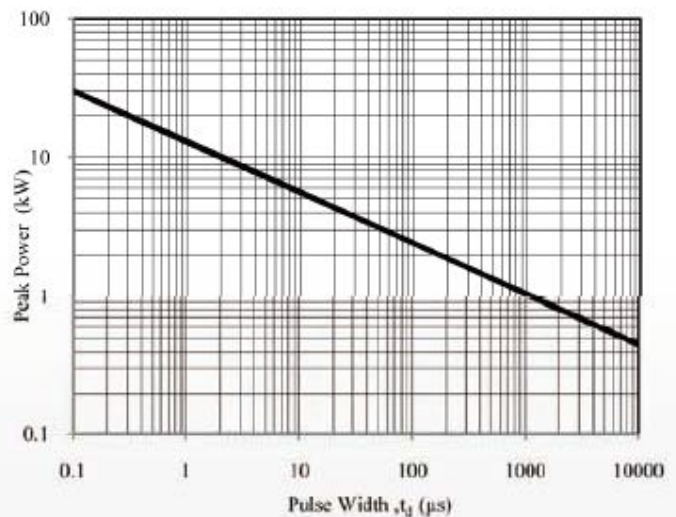


Fig. 5 - Pulse Waveform

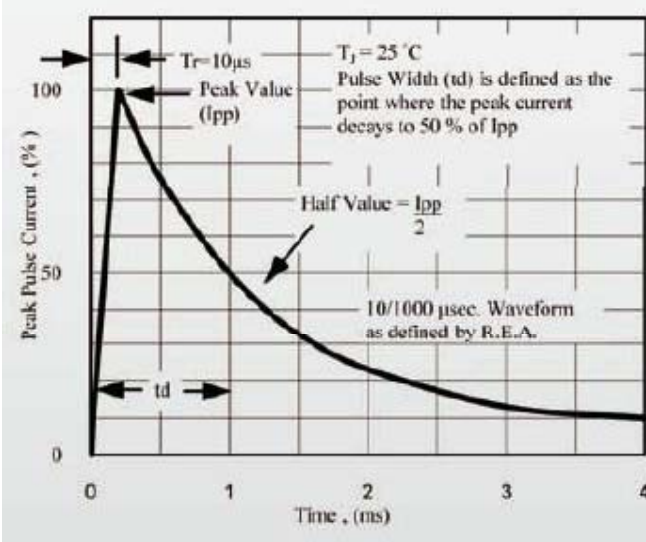


Fig. 6 - Typical junction Capacitance

