

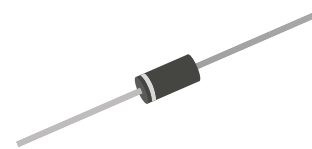
1.5KE-HF Series

Breakdown Voltage: 6.8 to 600 Volts


Peak Pulse Power: 1500 Watts

RoHS Device

Halogen Free

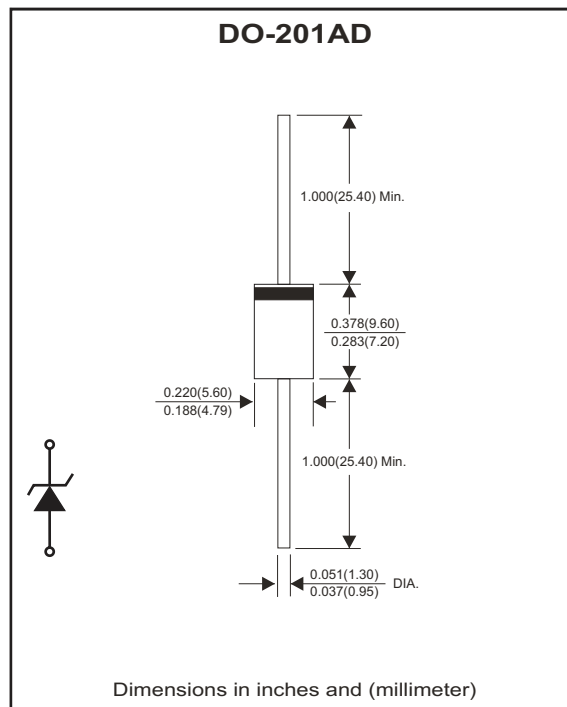


Features

- Glass passivated chip.
- 1500W 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.
- UL recognized file # E349157  Range: 1.5KE6.8(C)A thru. 1.5KE120(C)A

Mechanical Data

- Case: Molded plastic, DO-201
- Epoxy: UL 94V-0 rate flame retardant
- Lead: Solderable per MIL-STD-202, method 208 guranteed.
- Polarity: Color band denotes cathode end except Bipolar.
- Mounting position: Any
- Weight: 0.844 grams(approx.).



Maximum Ratings (TA=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Peak power dissipation with a 10/1000 μ s waveform (Note 1)	PPP	1500	W
Peak pulse current with a 10/1000 μ s waveform (Note 1)	IPP	See Next Table	A
Power dissipation on infinite heatsink at TL=75°C	PD	6.5	W
Peak forward surge current, 8.3ms single half sine-wave unidirectional only (JEDEC method) (Note 2)	IFSM	200	A
Maximum instantaneous forward voltage at 100 A for unidirectional only (Note 3)	VF	3.5/5.0	V
Operating junction and storage temperature range	TJ, TSTG	-55 to +150	°C

NTOES:

(1) Non-repetitive current pulse, per fig.5 and derated above TA=25°C per fig.1

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

(3) VF<3.5V for devices of VBR<200V and VF<5.0V for devices of VBR>201V

Company reserves the right to improve product design , functions and reliability without notice.

REV:D

RATING AND CHARACTERISTIC CURVES (1.5KE6.8-HF Thru. 1.5KE600-HF)

Fig.1 - Pulse Derating Curve

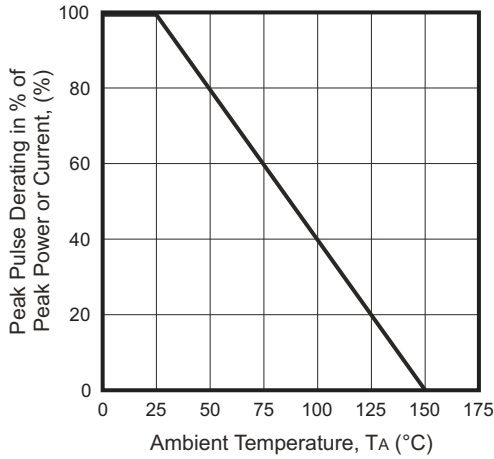


Fig.2 - Max. Non-repetitive Surge Current

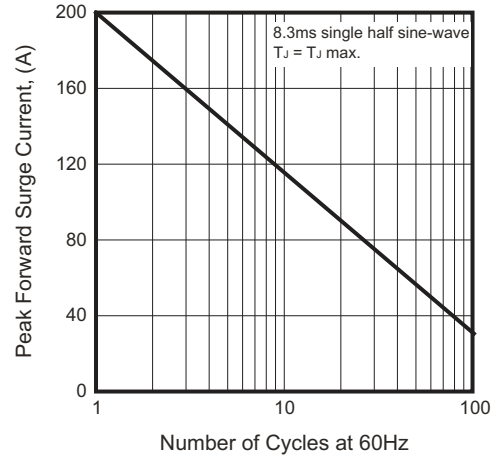


Fig.3 - Steady State Power Derating Curve

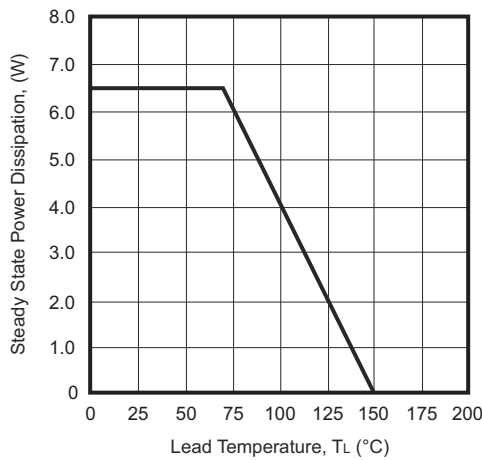


Fig.4 - Peak Pulse Power Rating Curve

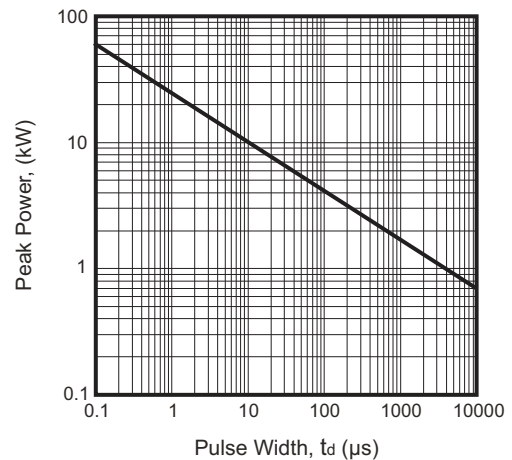


Fig.5 - Pulse Waveform

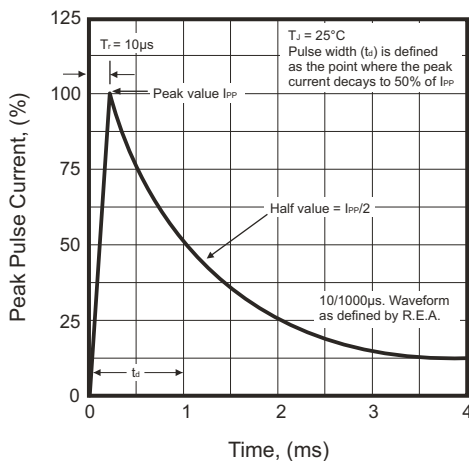
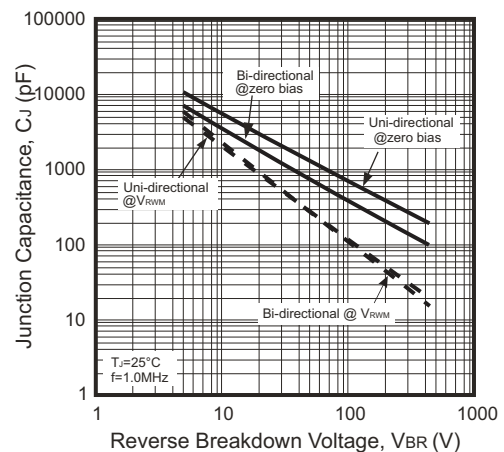


Fig.6 - Typical Junction Capacitance



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1500W Transient Voltage Suppressor



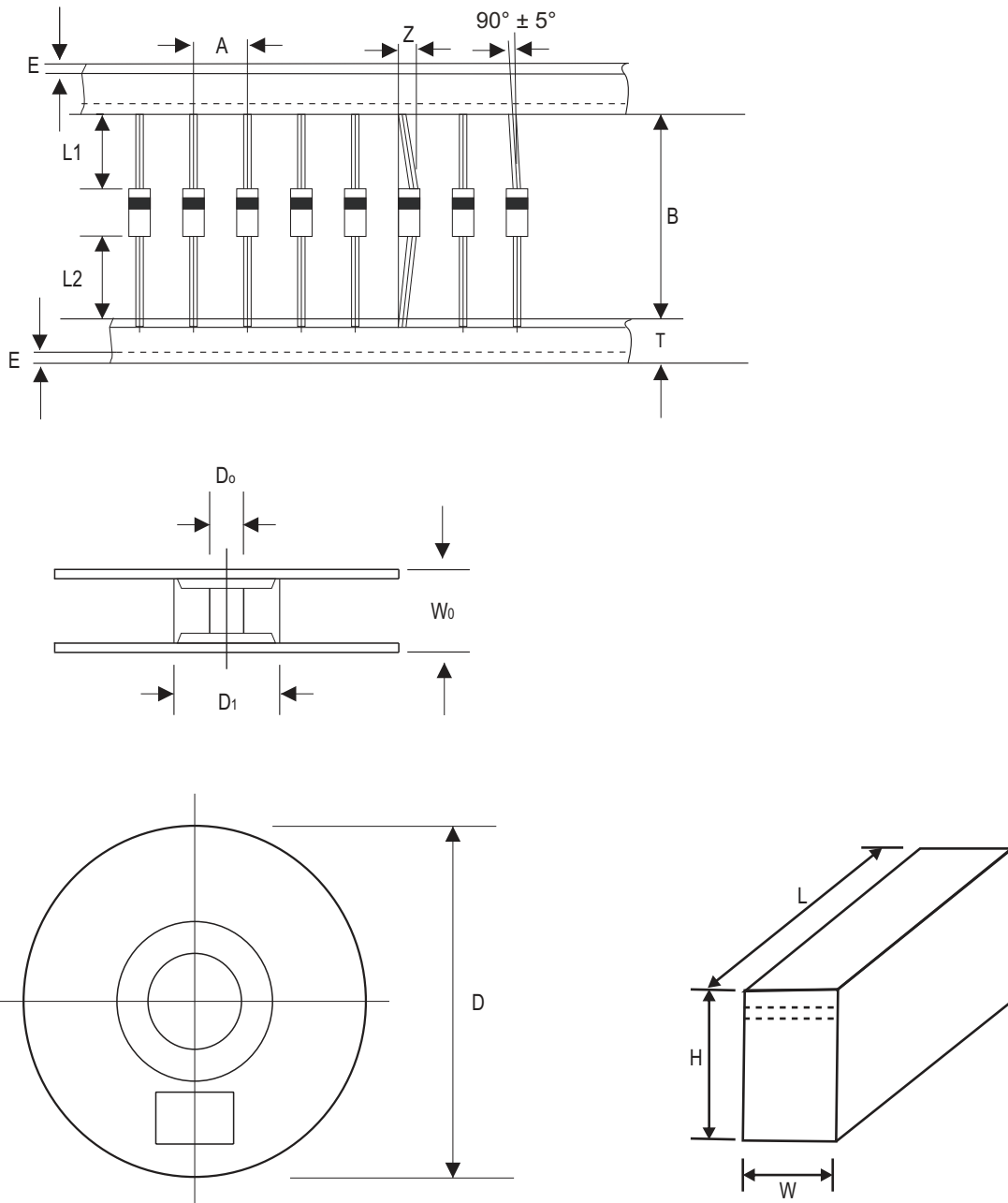
Electrical Characteristics (1.5KE6.8-HF Thru. 1.5KE600-HF)

Part No.	Breakdown voltage VBR @ IT			Maximum Reverse Leakage @VRWM IR (uA)	Working Peak Reverse Voltage VRWM (V)	Maximum Reverse Surge Current IPP (A)	Maximum Clamping Voltage @IPP Vc (V)	Marking Code	
	Min. (V)	Max. (V)	IT (mA)					UNI	BI
1.5KE6.8(C)A-HF	6.46	7.14	10	1000	5.8	142.86	10.5	1.5KE6.8A	1.5KE6.8CA
1.5KE7.5(C)A-HF	7.13	7.88	10	500	6.4	132.74	11.3	1.5KE7.5A	1.5KE7.5CA
1.5KE8.2(C)A-HF	7.79	8.61	10	200	7.0	123.97	12.1	1.5KE8.2A	1.5KE8.2CA
1.5KE9.1(C)A-HF	8.65	9.56	1.0	50	7.8	111.94	13.4	1.5KE9.1A	1.5KE9.1CA
1.5KE10(C)A-HF	9.50	10.50	1.0	10	8.6	103.45	14.5	1.5KE10A	1.5KE10CA
1.5KE11(C)A-HF	10.45	11.55	1.0	5.0	9.4	96.15	15.6	1.5KE11A	1.5KE11CA
1.5KE12(C)A-HF	11.40	12.60	1.0	5.0	10.2	89.82	16.7	1.5KE12A	1.5KE12CA
1.5KE13(C)A-HF	12.35	13.65	1.0	1.0	11.1	82.42	18.2	1.5KE13A	1.5KE13CA
1.5KE15(C)A-HF	14.25	15.75	1.0	1.0	12.8	70.75	21.2	1.5KE15A	1.5KE15CA
1.5KE16(C)A-HF	15.20	16.80	1.0	1.0	13.6	66.67	22.5	1.5KE16A	1.5KE16CA
1.5KE18(C)A-HF	17.10	18.90	1.0	1.0	15.3	59.52	25.2	1.5KE18A	1.5KE18CA
1.5KE20(C)A-HF	19.00	21.00	1.0	1.0	17.1	54.15	27.7	1.5KE20A	1.5KE20CA
1.5KE22(C)A-HF	20.90	23.10	1.0	1.0	18.8	49.02	30.6	1.5KE22A	1.5KE22CA
1.5KE24(C)A-HF	22.80	25.20	1.0	1.0	20.5	45.18	33.2	1.5KE24A	1.5KE24CA
1.5KE27(C)A-HF	25.65	28.35	1.0	1.0	23.1	40.00	37.5	1.5KE27A	1.5KE27CA
1.5KE30(C)A-HF	28.50	31.50	1.0	1.0	25.6	36.23	41.4	1.5KE30A	1.5KE30CA
1.5KE33(C)A-HF	31.35	34.65	1.0	1.0	28.2	32.82	45.7	1.5KE33A	1.5KE33CA
1.5KE36(C)A-HF	34.20	37.80	1.0	1.0	30.8	30.06	49.9	1.5KE36A	1.5KE36CA
1.5KE39(C)A-HF	37.05	40.95	1.0	1.0	33.3	27.83	53.9	1.5KE39A	1.5KE39CA
1.5KE43(C)A-HF	40.85	45.15	1.0	1.0	36.8	25.30	59.3	1.5KE43A	1.5KE43CA
1.5KE47(C)A-HF	44.65	49.35	1.0	1.0	40.2	23.15	64.8	1.5KE47A	1.5KE47CA
1.5KE51(C)A-HF	48.45	53.55	1.0	1.0	43.6	21.40	70.1	1.5KE51A	1.5KE51CA
1.5KE56(C)A-HF	53.20	58.80	1.0	1.0	47.8	19.48	77.0	1.5KE56A	1.5KE56CA
1.5KE62(C)A-HF	58.90	65.10	1.0	1.0	53.0	17.65	85.0	1.5KE62A	1.5KE62CA
1.5KE68(C)A-HF	64.60	71.40	1.0	1.0	58.1	16.30	92.0	1.5KE68A	1.5KE68CA
1.5KE75(C)A-HF	71.25	78.75	1.0	1.0	64.1	14.56	103.0	1.5KE75A	1.5KE75CA
1.5KE82(C)A-HF	77.90	86.10	1.0	1.0	70.1	13.27	113.0	1.5KE82A	1.5KE82CA
1.5KE91(C)A-HF	86.45	95.55	1.0	1.0	77.8	12.00	125.0	1.5KE91A	1.5KE91CA
1.5KE100(C)A-HF	95.00	105.00	1.0	1.0	85.5	10.95	137.0	1.5KE100A	1.5KE100CA
1.5KE110(C)A-HF	104.50	115.50	1.0	1.0	94.0	9.87	152.0	1.5KE110A	1.5KE110CA
1.5KE120(C)A-HF	114.00	126.00	1.0	1.0	102.0	9.09	165.0	1.5KE120A	1.5KE120CA
1.5KE130(C)A-HF	123.50	136.50	1.0	1.0	111.0	8.38	179.0	1.5KE130A	1.5KE130CA
1.5KE150(C)A-HF	142.50	157.50	1.0	1.0	128.0	7.25	207.0	1.5KE150A	1.5KE150CA
1.5KE160(C)A-HF	152.00	168.00	1.0	1.0	136.0	6.85	219.0	1.5KE160A	1.5KE160CA
1.5KE170(C)A-HF	161.50	178.50	1.0	1.0	145.0	6.41	234.0	1.5KE170A	1.5KE170CA
1.5KE180(C)A-HF	171.00	189.00	1.0	1.0	154.0	6.10	246.0	1.5KE180A	1.5KE180CA
1.5KE200(C)A-HF	190.00	210.00	1.0	1.0	171.0	5.47	274.0	1.5KE200A	1.5KE200CA
1.5KE220(C)A-HF	209.00	231.00	1.0	1.0	185.0	4.57	328.0	1.5KE220A	1.5KE220CA
1.5KE250(C)A-HF	237.50	262.50	1.0	1.0	214.0	4.36	344.0	1.5KE250A	1.5KE250CA
1.5KE300(C)A-HF	285.00	315.00	1.0	1.0	256.0	3.62	414.0	1.5KE300A	1.5KE300CA
1.5KE350(C)A-HF	332.50	367.50	1.0	1.0	299.3	3.11	482.0	1.5KE350A	1.5KE350CA
1.5KE380(C)A-HF	361.00	399.00	1.0	1.0	324.9	2.86	524.4	1.5KE380A	1.5KE380CA
1.5KE400(C)A-HF	380.00	420.00	1.0	1.0	342.0	2.72	548.0	1.5KE400A	1.5KE400CA
1.5KE440(C)A-HF	418.00	462.00	1.0	1.0	376.2	2.47	602.0	1.5KE440A	1.5KE440CA
1.5KE500(C)A-HF	475.00	525.00	1.0	1.0	427.5	2.17	690.0	1.5KE500A	1.5KE500CA
1.5KE520(C)A-HF	494.00	546.00	1.0	1.0	444.6	2.09	717.6	1.5KE520A	1.5KE520CA
1.5KE550(C)A-HF	522.50	577.50	1.0	1.0	470.3	1.98	759.0	1.5KE550A	1.5KE550CA
1.5KE600(C)A-HF	570.00	630.00	1.0	1.0	513.0	1.81	828.0	1.5KE600A	1.5KE600CA

- Note: 1) Suffix A denotes 5% tolerance devices.
 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.

Company reserves the right to improve product design, functions and reliability without notice.

Taping Specification For Axial Lead Diodes



DO-201	SYMBOL	A	B	Z	T	E	L1-L2
	(mm)	10.00 ± 0.50	52.40 ± 1.50	1.60 (max)	6.00 ± 0.40	3.00 (max)	1.00 (max)
	(inch)	0.394 ± 0.020	2.063 ± 0.059	0.063 (max)	0.236 ± 0.016	0.118 (max)	0.039 (max)

DO-201	SYMBOL	D1	D0	D	W0	L	W	H
	(mm)	85.70 ± 0.30	16.60 ± 0.40	330.00	72.00 ± 3.00	260 ± 5.00	75 ± 5.00	145 ± 5.00
	(inch)	3.374 ± 0.012	0.654 ± 0.016	13.000	2.835 ± 0.118	10.236 ± 0.197	2.953 ± 0.197	5.709 ± 0.197

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Standard Packaging

Packaging	Code	Part Number
AMMO PACK	NA	1.5KEXXX(C)A-HF
REEL PACK	T	1.5KEXXX(C)AT-HF
BULK PACK	B	1.5KEXXX(C)AB-HF

Note: (1) Suffix code after part number to specify packaging item.
 (2) XXX on behalf of serial products.

Case Type	REEL PACK	
	REEL (pcs)	Reel Size (inch)
DO-201AD	1,200	13

Case Type	AMMO PACK	
	BOX (pcs)	CARTON (pcs)
DO-201AD	1,000	10,000

Case Type	BULK PACK	
	BOX (pcs)	CARTON (pcs)
DO-201AD	200	10,000