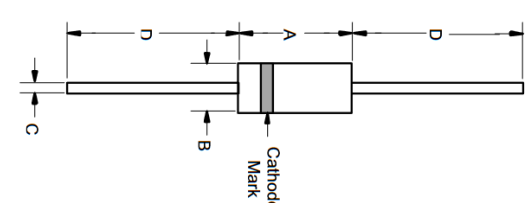


## Transient Voltage Suppressor Diodes

Primary characteristics		
Parameter	Value	Unit
Average $V_{BR}$ range	6.8 to 540	V
Peak power	1500	W

## Features

- Pb-free and RoHS compliant
- Approx. weight: 0.98g / 0.0345oz
- Glass passivated chip
- Solderable per MIL-STD-750, Method 2026

Case dimensions				
				
DO-201AD/DO-27				
Unit	A	B	C	D
mm	9.5 MAX	6.4 MAX	1.25 ±0.05	25.4 MIN

Part numbering system		
1.5KE ↓ Series code	24 ↓ Reverse standoff voltage marking (see: <a href="#">Characteristics table</a> )	A ↓ Unidirectional: A Bidirectional: CA

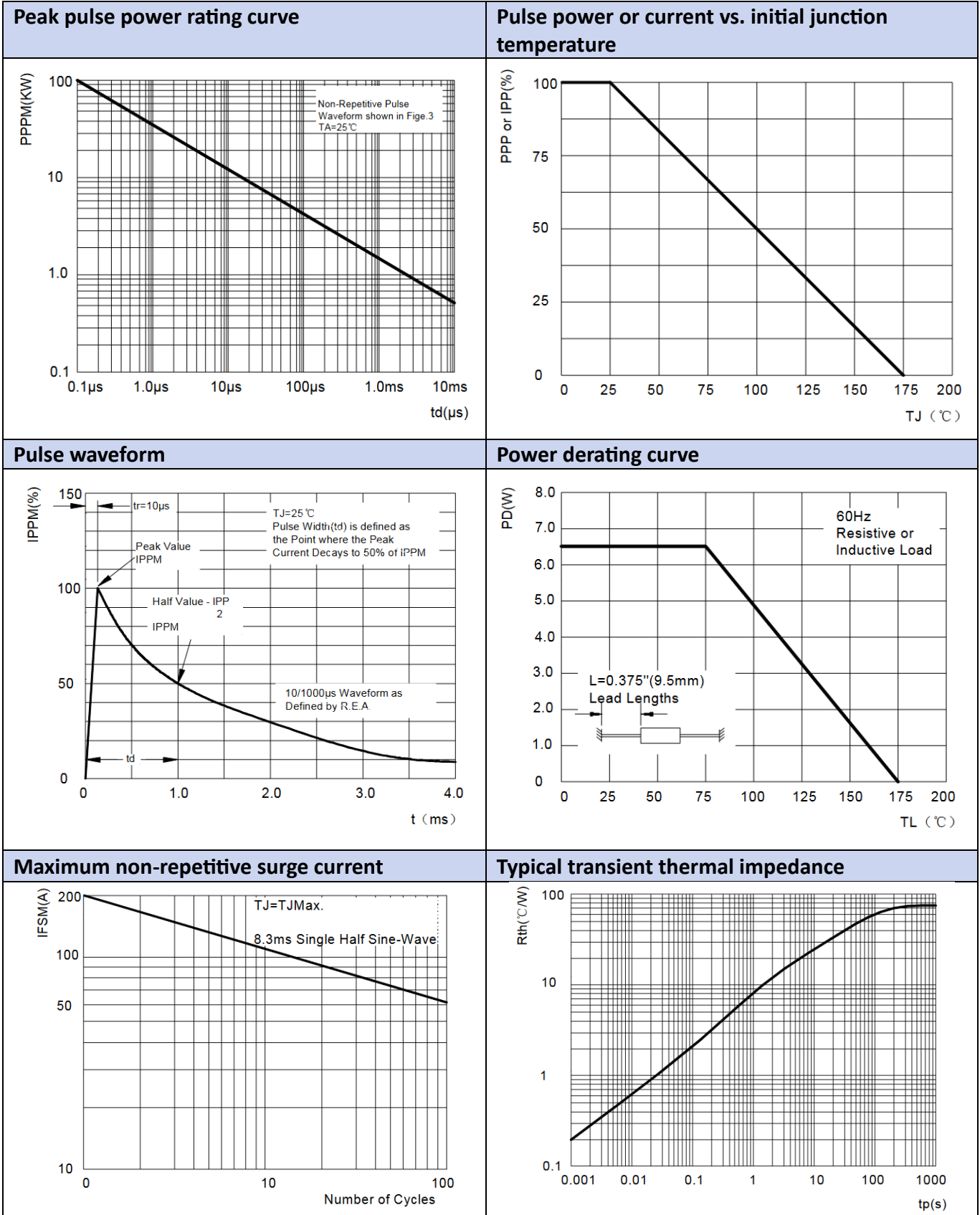
Absolute maximum ratings and general electrical characteristics ( $T_a = 25^\circ\text{C}$ )			
Parameter	Symbol	Value	Unit
Peak power dissipation	$P_{PPM}$	1500	W
Peak forward surge current <sup>1)</sup>	$I_{FSM}$	200	A
Peak pulse current on 10/1000 $\mu\text{s}$ waveform	$I_{PPM}$	<a href="#">Characteristics table</a>	A
Power dissipation on infinite heat sink @ $T_L=75^\circ\text{C}$	$P_D$	6.5	W
Maximum instantaneous forward voltage @25A (unidirectional only)	$V_F$	1.5KE220(A) and below	3.5
		1.5KE250(A) and above	5.0
Typical thermal resistance junction to ambient	$R_{\theta JA}$	15.4	$^\circ\text{C/W}$
Typical thermal resistance junction to lead	$R_{\theta JL}$	75	$^\circ\text{C/W}$
Operating junction temperature and storage temperature range	$T_j, T_{stg}$	-55 ~ 175	$^\circ\text{C}$
Notes:			
1) Peak forward surge current : 8.3ms single half sine-wave superimposed on rated load (JEDEC method)			

**Characteristics table (T<sub>a</sub> = 25°C)**

Part number (UNI)	Part number (BI)	Breakdown voltage @I <sub>T</sub>		Test current	Maximum clamping voltage @I <sub>PP</sub>	Maximum reverse surge current	Working peak reverse voltage	Maximum reverse leakage @V <sub>RWM</sub>	Maximum temperature coefficient of V <sub>BR</sub>					
		V <sub>BR</sub>												
		MIN	MAX							I <sub>T</sub>	V <sub>C</sub>	I <sub>PP</sub>	V <sub>RWM</sub>	I <sub>R</sub>
		V	V							mA	V	A	V	μA
1.5KE6.8	1.5KE6.8C	6.12	7.48	10	10.8	139	5.50	1000	0.057					
1.5KE6.8A	1.5KE6.8CA	6.45	7.14	10	10.5	143	5.80	1000	0.057					
1.5KE7.5	1.5KE7.5C	6.75	8.25	10	11.7	128	6.05	500	0.061					
1.5KE7.5A	1.5KE7.5CA	7.13	7.88	10	11.3	133	6.40	500	0.061					
1.5KE8.2	1.5KE8.2C	7.38	9.02	10	12.5	120	6.63	200	0.065					
1.5KE8.2A	1.5KE8.2CA	7.79	8.61	10	12.1	124	7.02	200	0.065					
1.5KE9.1	1.5KE9.1C	8.19	10.0	1.0	13.8	109	7.37	50	0.068					
1.5KE9.1A	1.5KE9.1CA	8.65	9.55	1.0	13.4	112	7.78	50	0.068					
1.5KE10	1.5KE10C	9.00	11.0	1.0	15.0	100	8.10	10	0.073					
1.5KE10A	1.5KE10CA	9.50	10.5	1.0	14.5	103	8.55	10	0.073					
1.5KE11	1.5KE11C	9.90	12.1	1.0	16.2	92.6	8.92	5.0	0.075					
1.5KE11A	1.5KE11CA	10.5	11.6	1.0	15.6	96.2	9.40	5.0	0.075					
1.5KE12	1.5KE12C	10.8	13.2	1.0	17.3	86.7	9.72	5.0	0.076					
1.5KE12A	1.5KE12CA	11.4	12.6	1.0	16.7	89.8	10.2	5.0	0.078					
1.5KE13	1.5KE13C	11.7	14.3	1.0	19.0	78.9	10.5	5.0	0.081					
1.5KE13A	1.5KE13CA	12.4	13.7	1.0	18.2	82.4	11.1	5.0	0.081					
1.5KE15	1.5KE15C	13.5	16.5	1.0	22.0	68.2	12.1	1.0	0.084					
1.5KE15A	1.5KE15CA	14.3	15.8	1.0	21.2	70.8	12.8	1.0	0.084					
1.5KE16	1.5KE16C	14.4	17.6	1.0	23.5	63.8	12.9	1.0	0.086					
1.5KE16A	1.5KE16CA	15.2	16.8	1.0	22.5	66.7	13.6	1.0	0.086					
1.5KE18	1.5KE18C	16.2	19.8	1.0	26.5	56.6	14.5	1.0	0.088					
1.5KE18A	1.5KE18CA	17.1	18.9	1.0	25.2	59.5	15.3	1.0	0.089					
1.5KE20	1.5KE20C	18.0	22.0	1.0	29.1	51.5	16.2	1.0	0.090					
1.5KE20A	1.5KE20CA	19.0	21.0	1.0	27.7	54.2	17.1	1.0	0.090					
1.5KE22	1.5KE22C	19.8	24.2	1.0	31.9	47.0	17.8	1.0	0.092					
1.5KE22A	1.5KE22CA	20.9	23.1	1.0	30.6	49.0	18.8	1.0	0.092					
1.5KE24	1.5KE24C	21.6	26.4	1.0	34.7	43.2	19.4	1.0	0.094					
1.5KE24A	1.5KE24CA	22.8	25.2	1.0	33.2	45.2	20.5	1.0	0.094					
1.5KE27	1.5KE27C	24.3	29.7	1.0	39.1	38.4	21.8	1.0	0.096					
1.5KE27A	1.5KE27CA	25.7	28.4	1.0	37.5	40.0	23.1	1.0	0.096					
1.5KE30	1.5KE30C	27.0	33.0	1.0	43.5	34.5	24.3	1.0	0.097					
1.5KE30A	1.5KE30CA	28.5	31.5	1.0	41.4	36.2	25.6	1.0	0.097					
1.5KE33	1.5KE33C	29.7	36.3	1.0	47.7	31.4	26.8	1.0	0.098					
1.5KE33A	1.5KE33CA	31.4	34.7	1.0	45.7	32.8	28.2	1.0	0.098					
1.5KE36	1.5KE36C	32.4	39.6	1.0	52.0	28.8	29.1	1.0	0.099					
1.5KE36A	1.5KE36CA	34.2	37.8	1.0	49.9	30.1	30.8	1.0	0.099					
1.5KE39	1.5KE39C	35.1	42.9	1.0	56.4	26.6	31.6	1.0	0.100					

Characteristics table (T <sub>a</sub> = 25°C)									
Part number (UNI)	Part number (BI)	Breakdown voltage @I <sub>T</sub>		Test current	Maximum clamping voltage @I <sub>PP</sub>	Maximum reverse surge current	Working peak reverse voltage	Maximum reverse leakage @V <sub>RWM</sub>	Maximum temperature coefficient of V <sub>BR</sub>
		V <sub>BR</sub>							
		MIN	MAX	I <sub>T</sub>	V <sub>C</sub>	I <sub>PP</sub>	V <sub>RWM</sub>	I <sub>R</sub>	
		V	V	mA	V	A	V	μA	%/°C
1.5KE39A	1.5KE39CA	37.1	41.0	1.0	53.9	27.8	33.3	1.0	0.100
1.5KE43	1.5KE43C	38.7	47.3	1.0	61.9	24.2	34.8	1.0	0.101
1.5KE43A	1.5KE43CA	40.9	45.2	1.0	59.3	25.3	36.8	1.0	0.101
1.5KE47	1.5KE47C	42.3	51.7	1.0	67.8	22.1	38.1	1.0	0.101
1.5KE47A	1.5KE47CA	44.7	49.4	1.0	64.8	23.1	40.2	1.0	0.101
1.5KE51	1.5KE51C	45.9	56.1	1.0	73.5	20.4	41.3	1.0	0.102
1.5KE51A	1.5KE51CA	48.5	53.6	1.0	70.1	21.4	43.6	1.0	0.102
1.5KE56	1.5KE56C	50.4	61.8	1.0	80.5	18.6	45.4	1.0	0.103
1.5KE56A	1.5KE56CA	53.2	58.8	1.0	77.0	19.5	47.8	1.0	0.103
1.5KE62	1.5KE62C	55.8	68.2	1.0	89.0	16.9	50.2	1.0	0.104
1.5KE62A	1.5KE62CA	58.9	65.1	1.0	85.0	17.6	53.0	1.0	0.104
1.5KE68	1.5KE68C	61.2	74.8	1.0	98.0	15.3	55.1	1.0	0.104
1.5KE68A	1.5KE68CA	64.6	71.4	1.0	92.0	16.3	58.1	1.0	0.104
1.5KE75	1.5KE75C	67.5	82.5	1.0	109	13.9	60.7	1.0	0.105
1.5KE75A	1.5KE75CA	71.3	78.8	1.0	104	14.6	64.1	1.0	0.105
1.5KE82	1.5KE82C	73.8	90.2	1.0	118	12.7	66.4	1.0	0.105
1.5KE82A	1.5KE82CA	77.9	86.1	1.0	113	13.3	70.1	1.0	0.105
1.5KE91	1.5KE91C	81.9	100.0	1.0	131	11.5	73.7	1.0	0.106
1.5KE91A	1.5KE91CA	86.5	95.5	1.0	125	12.0	77.8	1.0	0.106
1.5KE100	1.5KE100C	90.0	110	1.0	144	10.4	81.0	1.0	0.106
1.5KE100A	1.5KE100CA	95.0	105	1.0	137	10.9	85.5	1.0	0.106
1.5KE110	1.5KE110C	99.0	121	1.0	158	9.5	89.2	1.0	0.107
1.5KE110A	1.5KE110CA	105	116	1.0	152	9.9	94.0	1.0	0.107
1.5KE120	1.5KE120C	108	132	1.0	173	8.7	97.2	1.0	0.107
1.5KE120A	1.5KE120CA	114	126	1.0	165	9.1	102	1.0	0.107
1.5KE130	1.5KE130C	117	143	1.0	187	8.0	105	1.0	0.107
1.5KE130	1.5KE130CA	124	137	1.0	179	8.4	111	1.0	0.107
1.5KE150	1.5KE150C	136	165	1.0	215	7.0	121	1.0	0.108
1.5KE150A	1.5KE150CA	143	158	1.0	207	7.2	128	1.0	0.106
1.5KE160	1.5KE160C	144	176	1.0	230	6.5	130	1.0	0.106
1.5KE160A	1.5KE160CA	152	168	1.0	219	6.8	136	1.0	0.108
1.5KE170	1.5KE170C	153	187	1.0	244	6.1	138	1.0	0.108
1.5KE170A	1.5KE170CA	162	179	1.0	234	6.4	145	1.0	0.108
1.5KE180	1.5KE180C	162	198	1.0	258	5.8	146	1.0	0.108
1.5KE180A	1.5KE180CA	171	189	1.0	246	6.1	154	1.0	0.108
1.5KE200	1.5KE200C	180	220	1.0	287	5.2	162	1.0	0.108
1.5KE200A	1.5KE200CA	190	210	1.0	274	5.5	171	1.0	0.108

Characteristics table ( $T_a = 25^\circ\text{C}$ )									
Part number (UNI)	Part number (BI)	Breakdown voltage @ $I_T$		Test current	Maximum clamping voltage @ $I_{PP}$	Maximum reverse surge current	Working peak reverse voltage	Maximum reverse leakage @ $V_{RWM}$	Maximum temperature coefficient of $V_{BR}$
		MIN	MAX						
		V	V	mA	$V_C$	$I_{PP}$	$V_{RWM}$	$I_R$	
					V	A	V	$\mu\text{A}$	%/ $^\circ\text{C}$
1.5KE220	1.5KE220C	198	242	1.0	344	4.4	175	1.0	0.108
1.5KE220A	1.5KE220CA	209	231	1.0	328	4.6	185	1.0	0.108
1.5KE250	1.5KE250C	225	275	1.0	360	4.2	202	1.0	0.110
1.5KE250A	1.5KE250CA	237	263	1.0	344	4.4	214	1.0	0.110
1.5KE300	1.5KE300C	270	330	1.0	430	3.5	243	1.0	0.110
1.5KE300A	1.5KE300CA	285	315	1.0	414	3.6	256	1.0	0.110
1.5KE350	1.5KE350C	315	385	1.0	504	3.0	284	1.0	0.110
1.5KE350A	1.5KE350CA	333	368	1.0	482	3.1	300	1.0	0.110
1.5KE400	1.5KE400C	360	440	1.0	574	2.6	324	1.0	0.110
1.5KE400A	1.5KE400CA	380	420	1.0	548	2.7	342	1.0	0.110
1.5KE440	1.5KE440C	396	484	1.0	631	2.4	356	1.0	0.110
1.5KE440A	1.5KE440CA	418	462	1.0	602	2.5	376	1.0	0.110
1.5KE480	1.5KE480C	432	528	1.0	686	2.19	389	1.0	0.110
1.5KE480A	1.5KE480CA	456	504	1.0	658	2.28	408	1.0	0.110
1.5KE510	1.5KE510C	459	561	1.0	729	2.06	413	1.0	0.110
1.5KE510A	1.5KE510CA	485	535	1.0	698	2.15	434	1.0	0.110
1.5KE540	1.5KE540C	486	594	1.0	772	1.94	437	1.0	0.110
1.5KE540A	1.5KE540CA	513	567	1.0	740	2.03	459	1.0	0.110



Ordering information			
Part number	Package	Shipping quantity	Dimensions
1.5KE6.8A(CA) – 1.5KE6.8A(CA)	DO-201AD (DO-27)	250 pcs / bulk – small box	---
		1250 pcs / taped – small box	---
		10000 pcs / bulk – big box	443 x 215 x 250 mm
		12500 pcs / taped – big box	420 x 280 x 310 mm

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