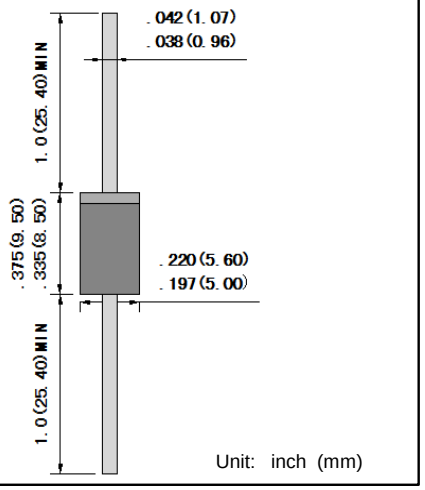
1.5KE SERIES

DO-27



Features

- 塑料封装Plastic package
- 极好的钳位能力 Excellent clamping capability
- 高温焊接保证 High temperature soldering guaranteed:
  265℃/10 秒, 0.375" (9.5mm)引线长度。
  265℃/10 seconds, 0.375" (9.5mm) lead length,
- 引线可承受5 磅 (2.3kg) 拉力。 5 lbs. (2.3kg) tension
- 引线和管体皆符合RoHS标准
  Lead and body according with RoHS standard

Mechanical Data

- 端子: 镀锡轴向引线 Terminals: Plated axial leads
- 极性: 色环端为负极Polarity: Color band denotes cathode end
- 安装位置: 任意Mounting Position: Any

Maximum Ratings & Characteristics

Ratings at 25℃ ambient temperature unless otherwise specified.

Parameter	Symbols	Value	Unit
功率消耗 Power Dissipation	P_{PPM}	1500	W
最大瞬间正向电压 IF = 100A V(BR)≦200V	VF	3.5	V
Maximum Instantaneous Forward Voltage V(BR) >200V		5.0	
峰值正向浪涌电流 8.3ms单一正弦半波 Peak forward surge current 8.3 ms single half sine-wave	IFSM	200	A
工作结温和存储温度 Operating Junction And Storage Temperature Range	Tj, TSTG	-50 --- +150	℃

Electrical Characteristics

Ratings at 25℃ ambient temperature

Type		Breakdown Voltage V_{BR}(V)		Test condition	Working Peak Reverse Voltage V_{RWM}(V)	Maximum Reverse Leakage I_R@V_{RWM} (uA)	Maximum Reverse Surge Current I_{PP}(A)	Maximum Clamping Voltage V_C@I_{PP}(V)
Uni	Bi	MIN.	MAX.	IT(mA)				
1.5KE6.8	1.5KE6.8C	6.12	7.48	10	5.50	1000	138.89	10.8
1.5KE6.8A	1.5KE6.8CA	6.46	7.14	10	5.80	1000	142.86	10.5
1.5KE7.5	1.5KE7.5C	6.75	8.25	10	6.10	500	128.21	11.7
1.5KE7.5A	1.5KE7.5CA	7.13	7.88	10	6.40	500	132.74	11.3
1.5KE8.2	1.5KE8.2C	7.38	9.02	10	6.60	200	120	12.5
1.5KE8.2A	1.5KE8.2CA	7.79	8.61	10	7.00	200	123.97	12.1
1.5KE9.1	1.5KE9.1C	8.19	10.01	1.0	7.40	50	108.7	13.8
1.5KE9.1A	1.5KE9.1CA	8.65	9.56	1.0	7.80	50	111.94	13.4
1.5KE10	1.5KE10C	9.00	11.00	1.0	8.10	10	100	15.0
1.5KE10A	1.5KE10CA	9.50	10.50	1.0	8.60	10	103.45	14.5
1.5KE11	1.5KE11C	9.90	12.10	1.0	8.90	5.0	92.59	16.2
1.5KE11A	1.5KE11CA	10.45	11.55	1.0	9.40	5.0	96.15	15.6

Electrical Characteristics Ratings at 25℃ ambient temperature

Type		Breakdown Voltage			Working Peak Reverse Voltage	Maximum Reverse Leakage	Maximum Reverse Surge Current	Maximum Clamping Voltage
		V_{BR}(V)		Test condition				
Uni	Bi	MIN.	MAX.	IT(mA)	V_{RWM}(V)	I_R@V_{RWM} (uA)	I_{PP}(A)	V_C@I_{PP}(V)
1.5KE12	1.5KE12C	10.80	13.20	1.0	9.7	5.0	86.71	17.3
1.5KE12A	1.5KE12CA	11.40	12.60	1.0	10.2	5.0	89.82	16.7
1.5KE13	1.5KE13C	11.70	14.30	1.0	10.5	5.0	78.95	19.0
1.5KE13A	1.5KE13CA	12.35	13.65	1.0	11.1	5.0	82.42	18.2
1.5KE15	1.5KE15C	13.50	16.50	1.0	12.1	5.0	68.18	22.0
1.5KE15A	1.5KE15CA	14.25	15.75	1.0	12.8	5.0	70.75	21.2
1.5KE16	1.5KE16C	14.40	17.60	1.0	12.9	5.0	63.83	23.5
1.5KE16A	1.5KE16CA	15.20	16.80	1.0	13.6	5.0	66.67	22.5
1.5KE18	1.5KE18C	16.20	19.80	1.0	14.5	5.0	56.60	26.5
1.5KE18A	1.5KE18CA	17.10	18.90	1.0	15.3	5.0	59.52	25.2
1.5KE20	1.5KE20C	18.00	22.00	1.0	16.2	5.0	51.55	29.1
1.5KE20A	1.5KE20CA	19.00	21.00	1.0	17.1	5.0	54.15	27.7
1.5KE22	1.5KE22C	19.80	24.20	1.0	17.8	5.0	47.02	31.9
1.5KE22A	1.5KE22CA	20.90	23.10	1.0	18.8	5.0	49.02	30.6
1.5KE24	1.5KE24C	21.60	26.40	1.0	19.4	5.0	43.23	34.7
1.5KE24A	1.5KE24CA	22.80	25.20	1.0	20.5	5.0	45.18	33.2
1.5KE27	1.5KE27C	24.30	29.70	1.0	21.8	5.0	38.36	39.1
1.5KE27A	1.5KE27CA	25.65	28.35	1.0	23.1	5.0	40.00	37.5
1.5KE30	1.5KE30C	27.00	33.00	1.0	24.3	5.0	34.48	43.5
1.5KE30A	1.5KE30CA	28.50	31.50	1.0	25.6	5.0	36.23	41.4
1.5KE33	1.5KE33C	29.70	36.30	1.0	26.8	5.0	31.45	47.7
1.5KE33A	1.5KE33CA	31.35	34.65	1.0	28.2	5.0	32.82	45.7
1.5KE36	1.5KE36C	32.40	39.60	1.0	29.1	5.0	28.85	52.0
1.5KE36A	1.5KE36CA	34.20	37.80	1.0	30.8	5.0	30.06	49.9
1.5KE39	1.5KE39C	35.10	42.90	1.0	31.6	5.0	26.60	56.4
1.5KE39A	1.5KE39CA	37.05	41.95	1.0	33.3	5.0	27.83	53.9
1.5KE43	1.5KE43C	38.70	47.30	1.0	34.8	5.0	24.23	61.9
1.5KE43A	1.5KE43CA	40.85	45.15	1.0	36.8	5.0	25.30	59.3
1.5KE47	1.5KE47C	42.30	51.70	1.0	38.1	5.0	22.12	67.8
1.5KE47A	1.5KE47CA	44.65	49.35	1.0	40.2	5.0	23.15	64.8
1.5KE51	1.5KE51C	45.90	56.10	1.0	41.3	5.0	20.41	73.5
1.5KE51A	1.5KE51CA	48.50	53.55	1.0	43.6	5.0	21.40	70.1
1.5KE56	1.5KE56C	50.40	61.60	1.0	45.4	5.0	18.63	80.5
1.5KE56A	1.5KE56CA	53.20	58.80	1.0	47.8	5.0	19.48	77.0
1.5KE62	1.5KE62C	55.80	68.20	1.0	50.2	5.0	16.85	89.0
1.5KE62A	1.5KE62CA	58.90	65.10	1.0	53.0	5.0	17.65	85.0
1.5KE68	1.5KE68C	61.20	74.80	1.0	55.1	5.0	15.31	98.0
1.5KE68A	1.5KE68CA	64.60	71.40	1.0	58.1	5.0	16.30	92.0
1.5KE75	1.5KE75C	67.50	82.50	1.0	60.7	5.0	13.89	108
1.5KE75A	1.5KE75CA	71.25	78.75	1.0	64.1	5.0	14.56	103
1.5KE82	1.5KE82C	73.80	90.20	1.0	66.4	5.0	12.71	118
1.5KE82A	1.5KE82CA	77.90	86.10	1.0	70.1	5.0	13.27	113
1.5KE91	1.5KE91C	81.90	100.10	1.0	73.7	5.0	11.45	131
1.5KE91A	1.5KE91CA	86.45	95.55	1.0	77.8	5.0	12.00	125

Electrical Characteristics Ratings at 25℃ ambient temperature

Type		Breakdown Voltage			Working Peak Reverse Voltage	Maximum Reverse Leakage	Maximum Reverse Surge Current	Maximum Clamping Voltage
		V_{BR}(V)		Test condition				
Uni	Bi	MIN.	MAX.	IT(mA)	V_{RWM}(V)	I_R@V_{RWM} (uA)	I_{PP}(A)	V_C@I_{PP}(V)
1.5KE100	1.5KE100C	90.00	110.00	1.0	81.0	5.0	10.42	144
1.5KE100A	1.5KE100CA	95.00	105.00	1.0	85.5	5.0	10.95	137
1.5KE110	1.5KE110C	99.00	121.00	1.0	89.2	5.0	9.49	158
1.5KE110A	1.5KE110CA	104.50	115.50	1.0	94.0	5.0	9.87	152
1.5KE120	1.5KE120C	108.00	132.00	1.0	97.2	5.0	8.67	173
1.5KE120A	1.5KE120CA	114.00	126.00	1.0	102	5.0	9.09	165
1.5KE130	1.5KE130C	117.00	143.00	1.0	105	5.0	8.02	187
1.5KE130A	1.5KE130CA	123.50	136.50	1.0	111	5.0	8.38	179
1.5KE150	1.5KE150C	135.00	165.00	1.0	121	5.0	6.98	215
1.5KE150A	1.5KE150CA	142.50	157.50	1.0	128	5.0	7.25	207
1.5KE160	1.5KE160C	144.00	176.00	1.0	130	5.0	6.52	230
1.5KE160A	1.5KE160CA	152.00	168.00	1.0	136	5.0	6.85	219
1.5KE170	1.5KE170C	153.00	187.00	1.0	138	5.0	6.15	244
1.5KE170A	1.5KE170CA	161.50	178.50	1.0	145	5.0	6.41	234
1.5KE180	1.5KE180C	162.00	198.00	1.0	146	5.0	5.81	258
1.5KE180A	1.5KE180CA	171.00	189.00	1.0	154	5.0	6.10	246
1.5KE200	1.5KE200C	180.00	220.00	1.0	162	5.0	5.23	287
1.5KE200A	1.5KE200CA	190.00	210.00	1.0	171	5.0	5.47	274
1.5KE220	1.5KE220C	198.00	242.00	1.0	175	5.0	4.36	344
1.5KE220A	1.5KE220CA	209.00	231.00	1.0	185	5.0	4.57	328
1.5KE250	1.5KE250C	225.00	275.00	1.0	202	5.0	4.17	360
1.5KE250A	1.5KE250CA	237.50	262.50	1.0	214	5.0	4.36	344
1.5KE300	1.5KE300C	270.00	330.00	1.0	243	5.0	3.49	430
1.5KE300A	1.5KE300CA	285.00	315.00	1.0	256	5.0	3.62	414
1.5KE350	1.5KE350C	315.00	385.00	1.0	284.2	5.0	2.98	504
1.5KE350A	1.5KE350CA	332.50	367.50	1.0	299.3	5.0	3.11	482
1.5KE400	1.5KE400C	360.00	440.00	1.0	324.8	5.0	2.60	574
1.5KE400A	1.5KE400CA	380.00	420.00	1.0	342	5.0	2.72	548
1.5KE440	1.5KE440C	396.00	484.00	1.0	357.3	5.0	2.37	631
1.5KE440A	1.5KE440CA	418.00	462.00	1.0	376.2	5.0	2.47	602

Characteristic Curves

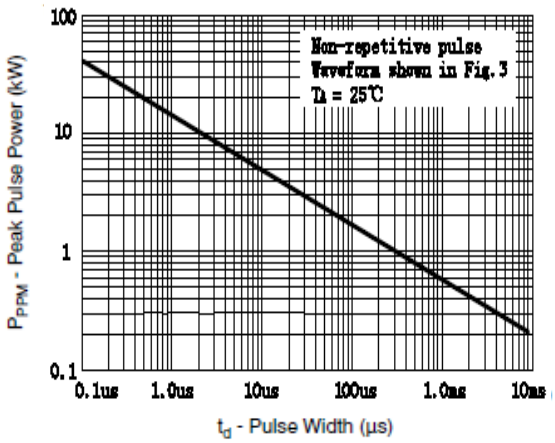


Figure 1. Peak Pulse Power Rating Curve

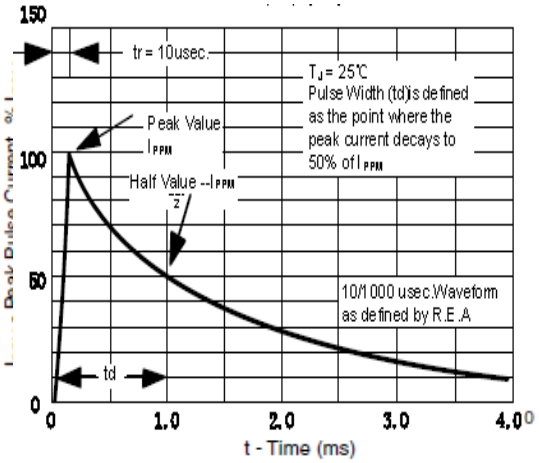


Figure 3. Pulse Waveform

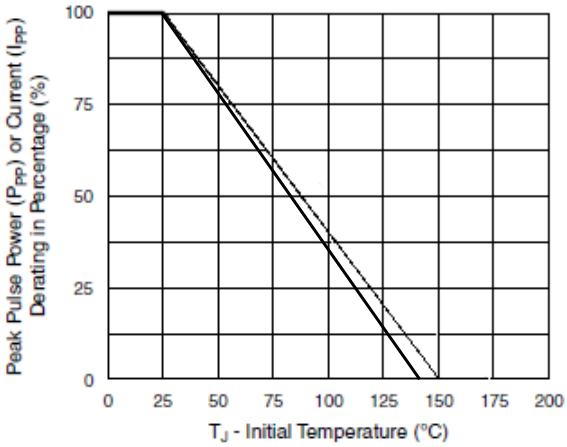


Figure 2. Pulse Power or Current vs. Initial Junction Temperature

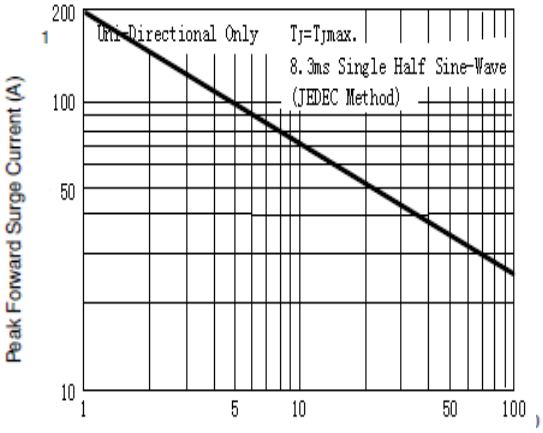


Figure 6. 4lax. Non-Repetitive Forward Surge Current
Uni-Directional Only