DO-27

Features

- P_{PP} 1500W
- V_{RWM} 5.5V- 459V
- Glass passivated chip

Applications

- Clamping Voltage

Bi-directional

Uni-direction

Marking:

1.5KE XXA/CA

XX： 6.8 To 540

Limiting values (Absolute Maximum Rating)

Item	Symbol	Unit	Conditions	Max
Peak pulse power dissipation	P_{PPM}	W	with a 10/1000us waveform	1500
Peak pulse current (1)	I_{PPM}	A	with a 10/1000us waveform	See Next Table
Power dissipation	P_D	W	On infinite heat sink at T_L=75℃	6.5
Peak forward surge current(2)	I_{FSM}	A	8.3 ms single half sine-wave unidirectional only	200
Operation Junction and Storage Temperature Range	T_J,T_{STG}	℃		-55 ~ +150

Electrical Characteristics（Ta=25℃ Unless otherwise specified）

Item	Symbol	Unit	Conditions	Max
Maximum instantaneous forward Voltage (3)	V_F	V	at 25A for unidirectional only	3.5/5.0
Thermal resistance	$R_{\theta JA}$	℃/W	junction to ambient	75
	$R_{\theta JL}$	℃/W	junction to lead	15.4

Notes:

(1) Non-repetitive current pulse, per Fig. 3 and derated above T_A= 25℃per Fig.2.

(2) Mounted on 0.2 x 0.2" (5.0 x 5.0 mm) copper pads to each terminal

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

Electrical Characteristics (T_A=25℃ unless otherwise noted)

Number	Number	Breakdown Voltage V_{BR}@I_T			Reverse Leakage I_R @ V_{WM} (μA)	Working Peak Reverse Voltage V_{RWM} (V)	Reverse Surge Current IPP (A)	Clamping Voltage Vc @ I_{PP} (V)	Temperature Coefficient of V_{BR} (%/°C)
		Min(V)	Max (V)	IT(mA)					
1.5KE6.8A	1.5KE6.8CA	6.45	7.14	10	1000	5.80	143	10.5	0.057
1.5KE7.5A	1.5KE7.5CA	7.13	7.88	10	500	6.40	133	11.3	0.061
1.5KE8.2A	1.5KE8.2CA	7.79	8.61	10	200	7.02	124	12.1	0.065
1.5KE9.1A	1.5KE9.1CA	8.65	9.55	1.0	50	7.78	112	13.4	0.068
1.5KE10A	1.5KE10CA	9.50	10.5	1.0	10	8.55	103	14.5	0.073
1.5KE11A	1.5KE11CA	10.5	11.6	1.0	5.0	9.40	96.2	15.6	0.075
1.5KE12A	1.5KE12CA	11.4	12.6	1.0	5.0	10.2	89.8	16.7	0.078
1.5KE13A	1.5KE13CA	12.4	13.7	1.0	5.0	11.1	82.4	18.2	0.081
1.5KE15A	1.5KE15CA	14.3	15.8	1.0	1.0	12.8	70.8	21.2	0.084
1.5KE16A	1.5KE16CA	15.2	16.8	1.0	1.0	13.6	66.7	22.5	0.086
1.5KE18A	1.5KE18CA	17.1	18.9	1.0	1.0	15.3	59.5	25.2	0.089
1.5KE20A	1.5KE20CA	19.0	21.0	1.0	1.0	17.1	54.2	27.7	0.090
1.5KE22A	1.5KE22CA	20.9	23.1	1.0	1.0	18.8	49.0	30.6	0.092
1.5KE24A	1.5KE24CA	22.8	25.2	1.0	1.0	20.5	45.2	33.2	0.094
1.5KE27A	1.5KE27CA	25.7	28.4	1.0	1.0	23.1	40.0	37.5	0.096
1.5KE30A	1.5KE30CA	28.5	31.5	1.0	1.0	25.6	36.2	41.4	0.097
1.5KE33A	1.5KE33CA	31.4	34.7	1.0	1.0	28.2	32.8	45.7	0.098
1.5KE36A	1.5KE36CA	34.2	37.8	1.0	1.0	30.8	30.1	49.9	0.099
1.5KE39A	1.5KE39CA	37.1	41.0	1.0	1.0	33.3	27.8	53.9	0.100
1.5KE43A	1.5KE43CA	40.9	45.2	1.0	1.0	36.8	25.3	59.3	0.101
1.5KE47A	1.5KE47CA	44.7	49.4	1.0	1.0	40.2	23.1	64.8	0.101
1.5KE51A	1.5KE51CA	48.5	53.6	1.0	1.0	43.6	21.4	70.1	0.102
1.5KE56A	1.5KE56CA	53.2	58.8	1.0	1.0	47.8	19.5	77.0	0.103
1.5KE62A	1.5KE62CA	58.9	65.1	1.0	1.0	53.0	17.6	85.0	0.104
1.5KE68A	1.5KE68CA	64.6	71.4	1.0	1.0	58.1	16.3	92.0	0.104
1.5KE75A	1.5KE75CA	71.3	78.8	1.0	1.0	64.1	14.6	104	0.105
1.5KE82A	1.5KE82CA	77.9	86.1	1.0	1.0	70.1	13.3	113	0.105
1.5KE91A	1.5KE91CA	86.5	95.5	1.0	1.0	77.8	12.0	125	0.106
1.5KE100A	1.5KE100CA	95.0	105	1.0	1.0	85.5	10.9	137	0.106
1.5KE110A	1.5KE110CA	105	116	1.0	1.0	94.0	9.9	152	0.107
1.5KE120A	1.5KE120CA	114	126	1.0	1.0	102	9.1	165	0.107
1.5KE130A	1.5KE130CA	124	137	1.0	1.0	111	8.4	179	0.107
1.5KE150A	1.5KE150CA	143	158	1.0	1.0	128	7.2	207	0.106
1.5KE160A	1.5KE160CA	152	168	1.0	1.0	136	6.8	219	0.108
1.5KE170A	1.5KE170CA	162	179	1.0	1.0	145	6.4	234	0.108
1.5KE180A	1.5KE180CA	171	189	1.0	1.0	154	6.1	246	0.108

Electrical Characteristics (T_A=25℃ unless otherwise noted)

Number	Number	Breakdown Voltage V_{BR}@I_T			Reverse Leakage I_R @ V_{WM} (μA)	Working Peak Reverse Voltage V_{RWM} (V)	Reverse Surge Current IPP (A)	Clamping Voltage Vc @ I_{PP} (V)	Temperature Coefficient of V_{BR} (%/°C)
		Min(V)	Max (V)	IT(mA)					
1.5KE200A	1.5KE200CA	190	210	1.0	1.0	171	5.5	274	0.108
1.5KE220A	1.5KE220CA	209	231	1.0	1.0	185	4.6	328	0.108
1.5KE250A	1.5KE250CA	237	263	1.0	1.0	214	4.4	344	0.110
1.5KE300A	1.5KE300CA	285	315	1.0	1.0	256	3.6	414	0.110
1.5KE350A	1.5KE350CA	333	368	1.0	1.0	300	3.1	482	0.110
1.5KE400A	1.5KE400CA	380	420	1.0	1.0	342	2.7	548	0.110
1.5KE440A	1.5KE440CA	418	462	1.0	1.0	376	2.5	602	0.110
1.5KE480A	1.5KE480CA	456	504	1.0	1.0	408	2.28	658	0.110
1.5KE510A	1.5KE510CA	485	535	1.0	1.0	434	2.15	698	0.110
1.5KE540A	1.5KE540CA	513	567	1.0	1.0	459	2.03	740	0.110

Typical Characteristics

FIG1:Peak Pulse Power Rating Curve

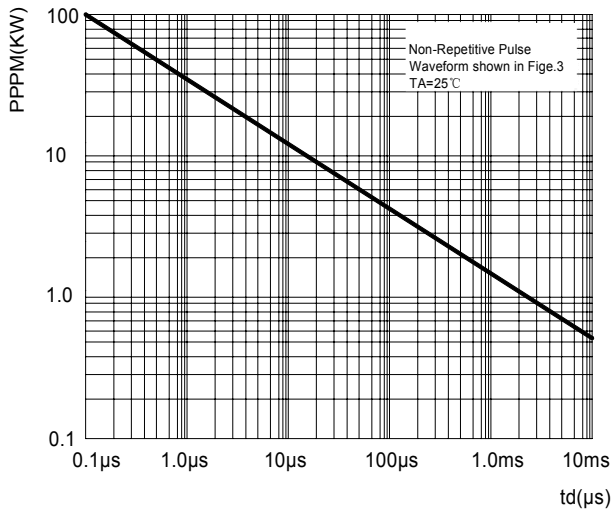


FIG2: Pulse Power or Current vs. Initial Junction Temperature

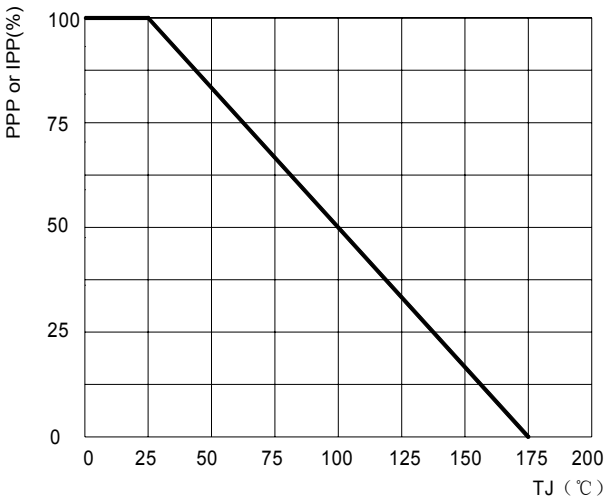


FIG3: Pulse Waveform

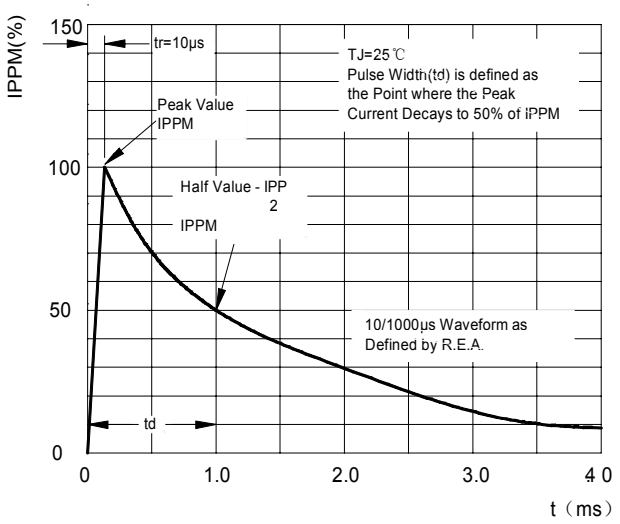


FIG4: Power Derating Curve

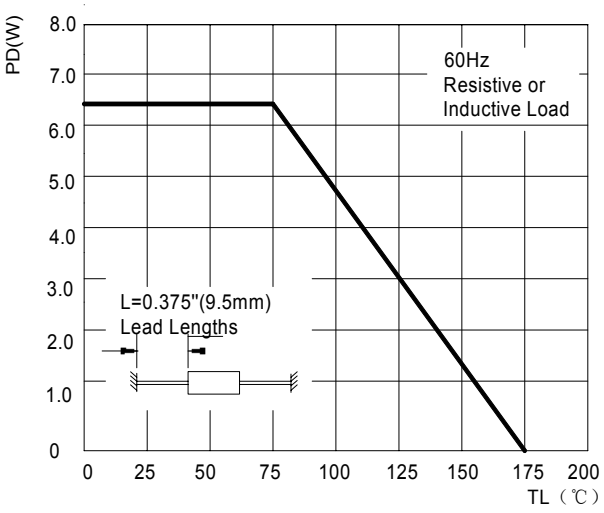


FIG5: Maximum Non-Repetitive Surge Current

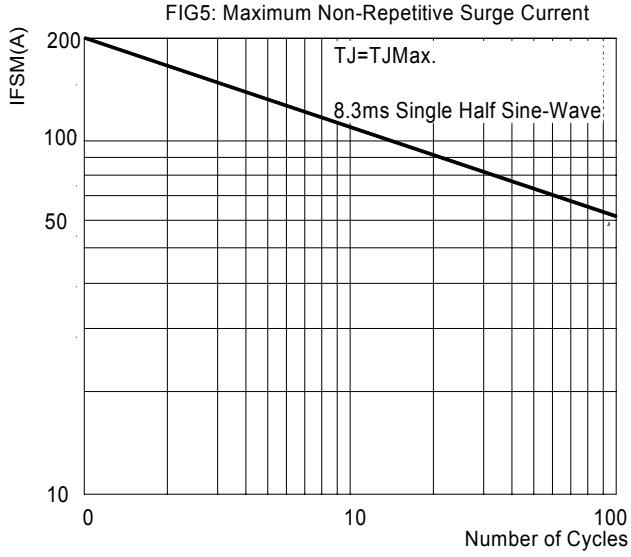
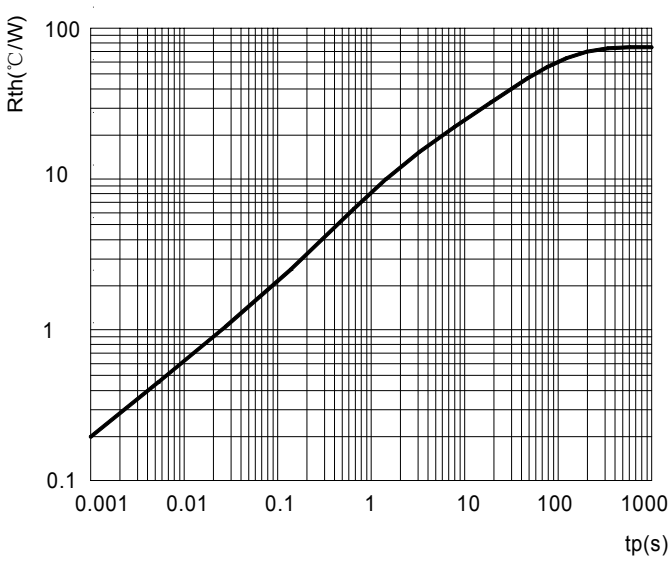
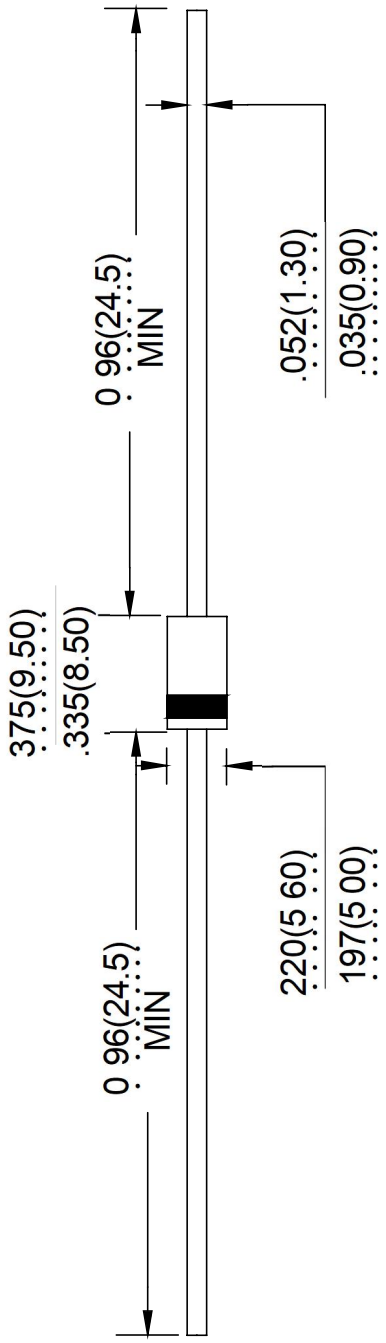


FIG6:Typical Transient Thermal Impedance



DO-27 package outline Dimensions



Unit: in inches (millimeters)