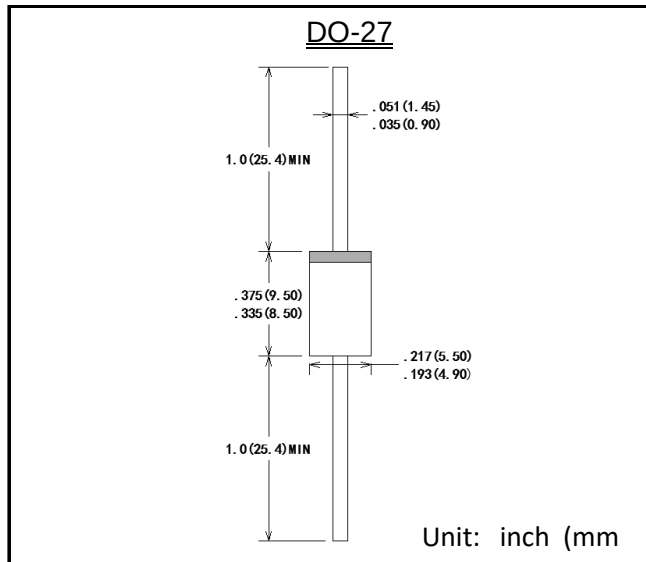




1.5KExx(C)A Series

Glass Passivated Junction Transient Voltage Suppressor Rectifiers
Reverse Voltage 5.8 ~ 509 V
1500 Watt Peak Pulse Power



Features

- Glass passivated chip
- 1500 W peak pulse power capability with a 10/1000 us waveform, repetitive rate (duty cycle):0.01 %
- Excellent clamping capability
- Low reverse leakage
- Very fast response time
- Lead and body according with RoHS standard

Mechanical Data

- Case:DO-27 Molded plastic
- Lead: Solderable per MIL-STD-750, method 2026
- Epoxy: UL 94V-0 rate flame retardant
- Polarity: Color band denotes cathode end except Bipolar
- Mounting position: Any

Maximum Ratings & Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbols	Value	Unit
Peak power dissipation with a 10/1000 us waveform ⁽¹⁾	P_{PP}	1500	W
Peak pulse current with a 10/1000 us waveform ⁽¹⁾	I_{PP}	See Next Table	A
Power dissipation on infinite heatsink at $T_L = 75^\circ\text{C}$	P_D	6.5	W
Peak forward surge current, 8.3 ms single half sinewave	I_{FSM}	200	A
Maximum instantaneous forward voltage at 50 A for unidirectional only ⁽³⁾	V_F	3.5/6.5	V
Operating junction and storage temperature range	T_J, T_{STG}	-55 to +150	°C

Note:

1)Non-repetitive current pulse per Fig.5 and derated above $T_A = 25^\circ\text{C}$ per Fig.1 ;

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

3) $V_F < 3.5\text{V}$ for devices of $V_{BR} < 200\text{V}$ and $V_F < 6.5\text{V}$ for devices of $V_{BR} > 201\text{V}$.



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Part Number		Reverse Stand-off Voltage	Breakdown Voltage V_{BR} @ I_T		Test Current	Max. Clamping Voltage @ I_{PP}	Max. Peak Pulse Current	Max. Reverse Leakage @ V_{RWM}
UNI-POLAR	BI-POLAR	$V_{RWM}(V)$	Min.(V)	Max.(V)	$I_T(mA)$	$V_{C MAX.}(V)$	$I_{PP}(A)$	$I_R(\mu A)$
1.5KE6.8A	1.5KE6.8CA	5.8	6.45	7.14	10	10.5	144.8	1000
1.5KE7.5A	1.5KE7.5CA	6.4	7.13	7.88	10	11.3	134.5	500
1.5KE8.2A	1.5KE8.2CA	7.0	7.79	8.61	10	12.1	125.6	200
1.5KE9.1A	1.5KE9.1CA	7.8	8.65	9.55	1	13.4	113.4	50
1.5KE10A	1.5KE10CA	8.6	9.50	10.50	1	14.5	104.8	10
1.5KE11A	1.5KE11CA	9.4	10.50	11.60	1	15.6	97.4	5
1.5KE12A	1.5KE12CA	10.2	11.40	12.60	1	16.7	91.0	5
1.5KE13A	1.5KE13CA	11.1	12.40	13.70	1	18.2	83.5	1
1.5KE15A	1.5KE15CA	12.8	14.30	15.80	1	21.2	71.7	1
1.5KE16A	1.5KE16CA	13.6	15.20	16.80	1	22.5	67.6	1
1.5KE18A	1.5KE18CA	15.3	17.10	18.90	1	25.5	60.3	1
1.5KE20A	1.5KE20CA	17.1	19.00	21.00	1	27.7	54.9	1
1.5KE22A	1.5KE22CA	18.8	20.90	23.10	1	30.6	49.7	1
1.5KE24A	1.5KE24CA	20.5	22.80	25.20	1	33.2	45.8	1
1.5KE27A	1.5KE27CA	23.1	25.70	28.40	1	37.5	40.5	1
1.5KE30A	1.5KE30CA	25.6	28.50	31.50	1	41.4	36.7	1
1.5KE33A	1.5KE33CA	28.2	31.40	34.70	1	45.7	33.3	1
1.5KE36A	1.5KE36CA	30.8	34.20	37.80	1	49.9	30.5	1
1.5KE39A	1.5KE39CA	33.3	37.10	41.00	1	53.9	28.2	1
1.5KE43A	1.5KE43CA	36.8	40.90	45.20	1	59.3	25.6	1
1.5KE47A	1.5KE47CA	40.2	44.70	49.40	1	64.8	23.5	1
1.5KE51A	1.5KE51CA	43.6	48.50	53.60	1	70.1	21.7	1
1.5KE56A	1.5KE56CA	47.8	53.20	58.80	1	77.0	19.7	1
1.5KE62A	1.5KE62CA	53.0	58.90	65.10	1	85.0	17.9	1
1.5KE68A	1.5KE68CA	58.1	64.60	71.40	1	92.0	16.5	1
1.5KE75A	1.5KE75CA	64.1	71.30	78.80	1	103.0	14.8	1
1.5KE82A	1.5KE82CA	70.1	77.90	86.10	1	113.0	13.5	1
1.5KE91A	1.5KE91CA	77.8	86.50	95.50	1	125.0	12.2	1
1.5KE100A	1.5KE100CA	85.5	95.0	105.0	1	137.0	11.1	1
1.5KE110A	1.5KE110CA	94.0	105.0	116.0	1	152.0	10.0	1
1.5KE120A	1.5KE120CA	102.0	114.0	126.0	1	165.0	9.2	1
1.5KE130A	1.5KE130CA	111.0	124.0	137.0	1	179.0	8.5	1
1.5KE150A	1.5KE150CA	128.0	143.0	158.0	1	207.0	7.3	1
1.5KE160A	1.5KE160CA	136.0	152.0	168.0	1	219.0	6.9	1
1.5KE170A	1.5KE170CA	145.0	162.0	179.0	1	234.0	6.5	1
1.5KE180A	1.5KE180CA	154.0	171.0	189.0	1	246.0	6.2	1
1.5KE200A	1.5KE200CA	171.0	190.0	210.0	1	274.0	5.5	1
1.5KE220A	1.5KE220CA	185.0	209.0	231.0	1	328.0	4.6	1
1.5KE250A	1.5KE250CA	214.0	237.0	263.0	1	344.0	4.4	1
1.5KE300A	1.5KE300CA	256.0	285.0	315.0	1	414.0	3.7	1
1.5KE350A	1.5KE350CA	300.0	332.0	368.0	1	482.0	3.2	1
1.5KE400A	1.5KE400CA	342.0	380.0	420.0	1	548.0	2.8	1
1.5KE440A	1.5KE440CA	376.0	418.0	462.0	1	602.0	2.5	1
1.5KE480A	1.5KE480CA	408.0	456.0	504.0	1	658.0	2.3	1
1.5KE510A	1.5KE510CA	434.0	485.0	535.0	1	698.0	2.1	1
1.5KE530A	1.5KE530CA	450.0	503.0	556.0	1	725.0	2.1	1
1.5KE540A	1.5KE540CA	459.0	513.0	567.0	1	740.0	2.0	1
1.5KE550A	1.5KE550CA	467.0	522.5	577.5	1	760.0	2.0	1
1.5KE600A	1.5KE600CA	509.0	570.0	630.0	1	780.0	1.8	1



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Ratings and Characteristics Curves ($T_A=25^\circ\text{C}$ unless otherwise noted)

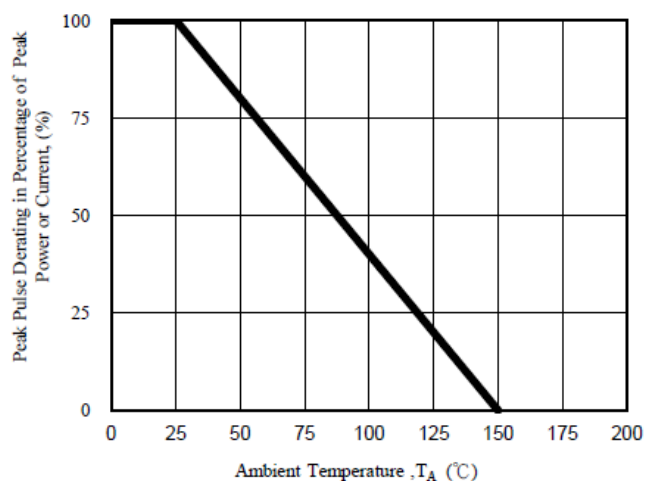


Fig. 1 - Pulse Derating Curve

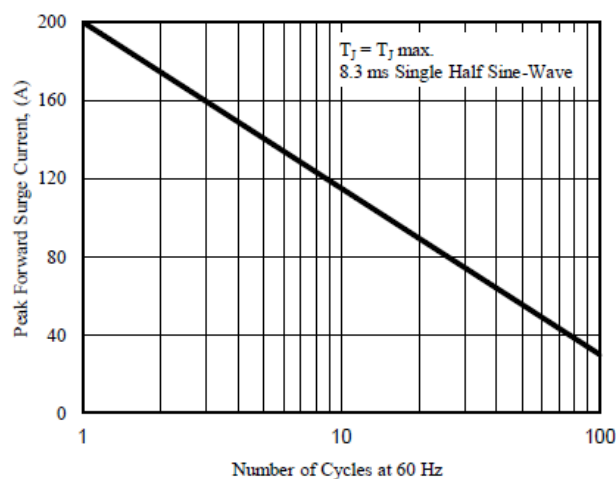


Fig. 2 - Maximum Non-Repetitive Surge Current

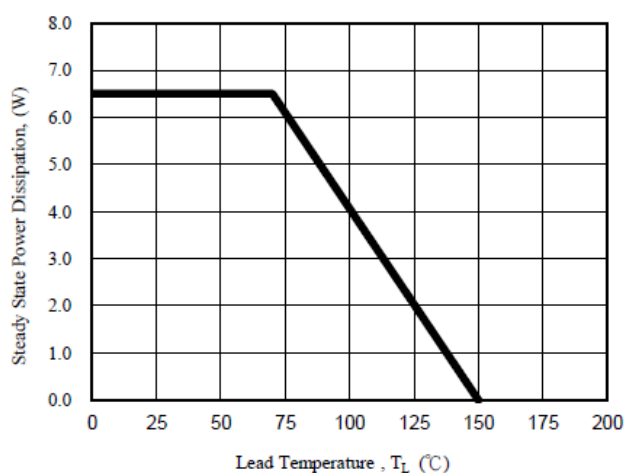


Fig. 3 - Steady State Power Derating Curve

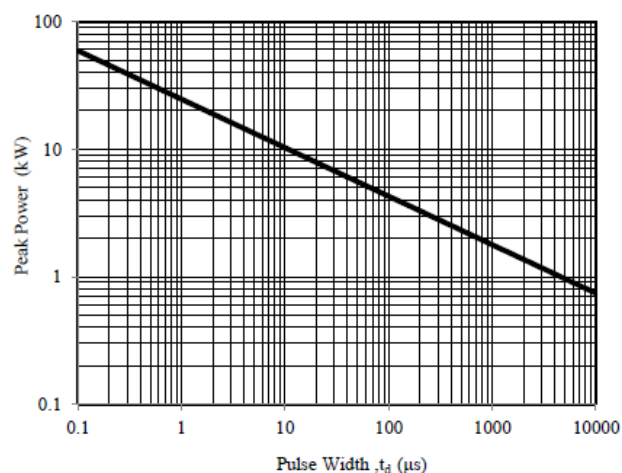


Fig. 4 - Peak Pulse Power Rating Curve

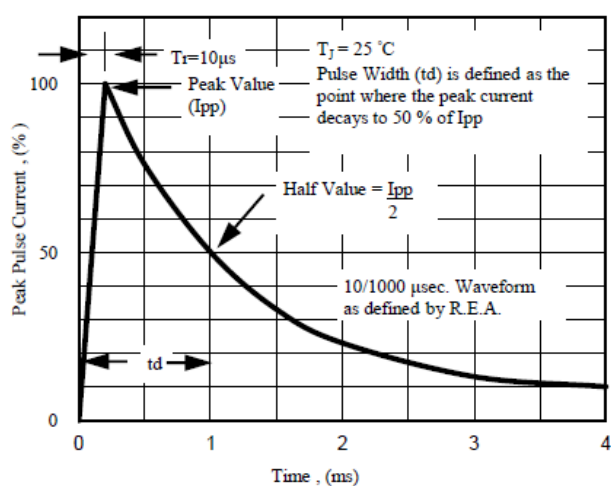


Fig. 5 - Pulse Waveform

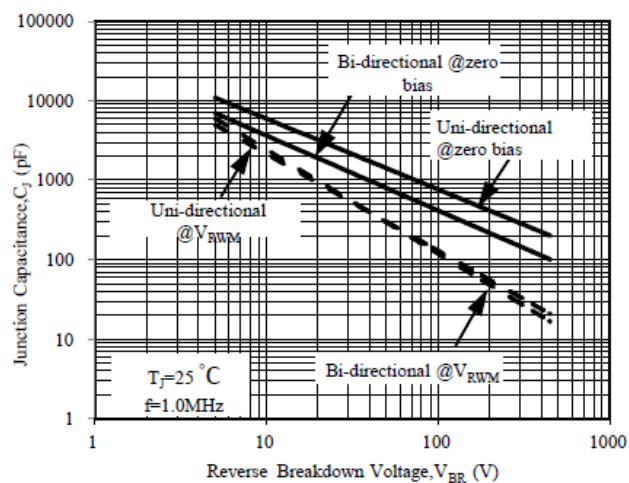


Fig. 6 - Typical Junction Capacitance