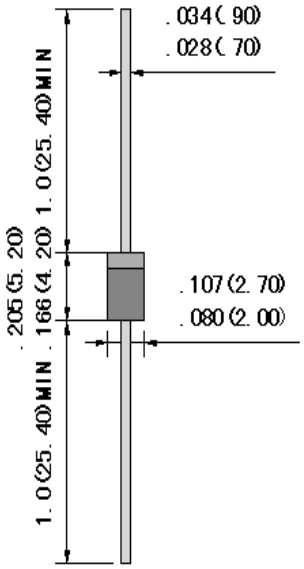
P4KExx(C)A Series

Glass Passivated Junction Transient Voltage Suppressor Rectifiers

Reverse Voltage 5.8 ~ 509 V

400 Watt Peak Pulse Power

DO-41



Unit: inch (mm)

Features

- Glass passivated chip
- 400 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-41 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℃ ambient temperature unless otherwise specified.

Parameter	Symbols	Value	Unit
Peak power dissipation with a 10/1000 us waveform(1)	P_{PP}	400	W
Peak pulse current wih a 10/1000 us waveform(1)	I_{PP}	See Next Table	A
Power dissipation on infinite heatsink at TL = 75 °C	P_D	3.0	W
Peak forward surge current, 8.3 ms single half sinewave	I_{FSM}	40	A
Maximum instantaneous forward voltage at 15 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	℃

Note:

1)Non-repetitive current pulse per Fig.5 and derated above TA= 25 °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)VF<3.5V for devices of VBR<200V and VF<6.5V for devices of VBR>201V。

P4KExx(C)A Series

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(uA)
P4KE6.8A	P4KE6.8CA	5.8	6.45	7.14	10	10.5	39.0	1000
P4KE7.5A	P4KE7.5CA	6.4	7.13	7.88	10	11.3	36.3	500
P4KE8.2A	P4KE8.2CA	7.0	7.79	8.61	10	12.1	33.9	200
P4KE9.1A	P4KE9.1CA	7.8	8.65	9.55	1	13.4	30.6	50
P4KE10A	P4KE10CA	8.6	9.50	10.50	1	14.5	28.3	10
P4KE11A	P4KE11CA	9.4	10.50	11.60	1	15.6	26.3	5
P4KE12A	P4KE12CA	10.2	11.40	12.60	1	16.7	24.6	5
P4KE13A	P4KE13CA	11.1	12.40	13.70	1	18.2	22.5	1
P4KE15A	P4KE15CA	12.8	14.30	15.80	1	21.2	19.3	1
P4KE16A	P4KE16CA	13.6	15.20	16.80	1	22.5	18.2	1
P4KE18A	P4KE18CA	15.3	17.10	18.90	1	25.5	16.1	1
P4KE20A	P4KE20CA	17.1	19.00	21.00	1	27.7	14.8	1
P4KE22A	P4KE22CA	18.8	20.90	23.10	1	30.6	13.4	1
P4KE24A	P4KE24CA	20.5	22.80	25.20	1	33.2	12.3	1
P4KE27A	P4KE27CA	23.1	25.70	28.40	1	37.5	10.9	1
P4KE30A	P4KE30CA	25.6	28.50	31.50	1	41.4	9.9	1
P4KE33A	P4KE33CA	28.2	31.40	34.70	1	45.7	9.0	1
P4KE36A	P4KE36CA	30.8	34.20	37.80	1	49.9	8.2	1
P4KE39A	P4KE39CA	33.3	37.10	41.00	1	53.9	7.6	1
P4KE43A	P4KE43CA	36.8	40.90	45.20	1	59.3	6.9	1
P4KE47A	P4KE47CA	40.2	44.70	49.40	1	64.8	6.3	1
P4KE51A	P4KE51CA	43.6	48.50	53.60	1	70.1	5.8	1
P4KE56A	P4KE56CA	47.8	53.20	58.80	1	77.0	5.3	1
P4KE62A	P4KE62CA	53.0	58.90	65.10	1	85.0	4.8	1
P4KE68A	P4KE68CA	58.1	64.60	71.40	1	92.0	4.5	1
P4KE75A	P4KE75CA	64.1	71.30	78.80	1	103.0	4.0	1
P4KE82A	P4KE82CA	70.1	77.90	86.10	1	113.0	3.6	1
P4KE91A	P4KE91CA	77.8	86.50	95.50	1	125.0	3.3	1
P4KE100A	P4KE100CA	85.5	95.0	105.0	1	137.0	3.0	1
P4KE110A	P4KE110CA	94.0	105.0	116.0	1	152.0	2.7	1
P4KE120A	P4KE120CA	102.0	114.0	126.0	1	165.0	2.5	1
P4KE130A	P4KE130CA	111.0	124.0	137.0	1	179.0	2.3	1
P4KE150A	P4KE150CA	128.0	143.0	158.0	1	207.0	2.0	1
P4KE160A	P4KE160CA	136.0	152.0	168.0	1	219.0	1.9	1
P4KE170A	P4KE170CA	145.0	162.0	179.0	1	234.0	1.8	1
P4KE180A	P4KE180CA	154.0	171.0	189.0	1	246.0	1.7	1
P4KE200A	P4KE200CA	171.0	190.0	210.0	1	274.0	1.5	1
P4KE220A	P4KE220CA	185.0	209.0	231.0	1	328.0	1.3	1
P4KE250A	P4KE250CA	214.0	237.0	263.0	1	344.0	1.2	1
P4KE300A	P4KE300CA	256.0	285.0	315.0	1	414.0	1.0	1
P4KE350A	P4KE350CA	300.0	332.0	368.0	1	482.0	0.9	1
P4KE400A	P4KE400CA	342.0	380.0	420.0	1	548.0	0.8	1
P4KE440A	P4KE440CA	376.0	418.0	462.0	1	602.0	0.7	1
P4KE480A	P4KE480CA	408.0	456.0	504.0	1	658.0	0.6	1
P4KE510A	P4KE510CA	434.0	485.0	535.0	1	698.0	0.6	1
P4KE530A	P4KE530CA	450.0	503.0	556.0	1	725.0	0.6	1
P4KE540A	P4KE540CA	459.0	513.0	567.0	1	740.0	0.5	1
P4KE550A	P4KE550CA	467.0	522.5	577.5	1	760.0	0.5	1
P4KE600A	P4KE600CA	509.0	570.0	630.0	1	780.0	0.5	1

Ratings and Characteristics Curves (TA=25℃ unless otherwise noted)

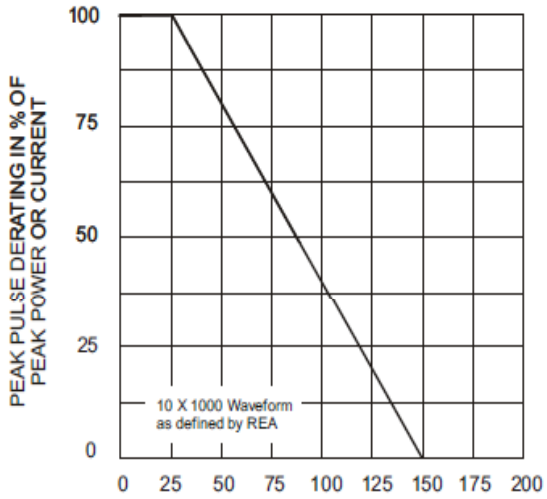


Fig. 1 - Pulse Derating Curve

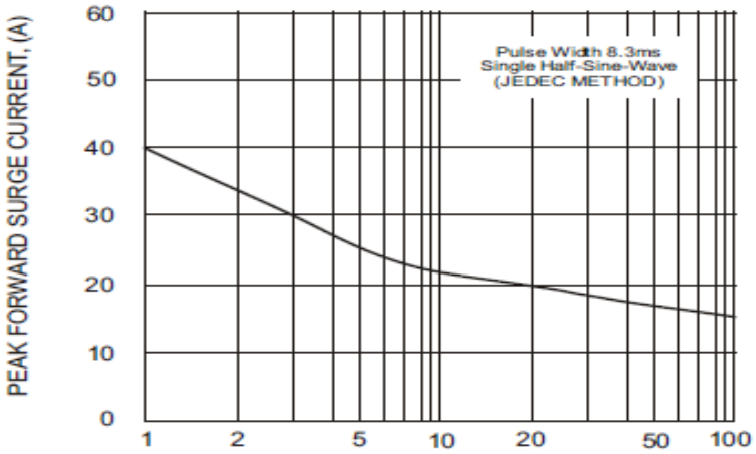


Fig. 2 - Maximum Non-Repetitive Surge Current

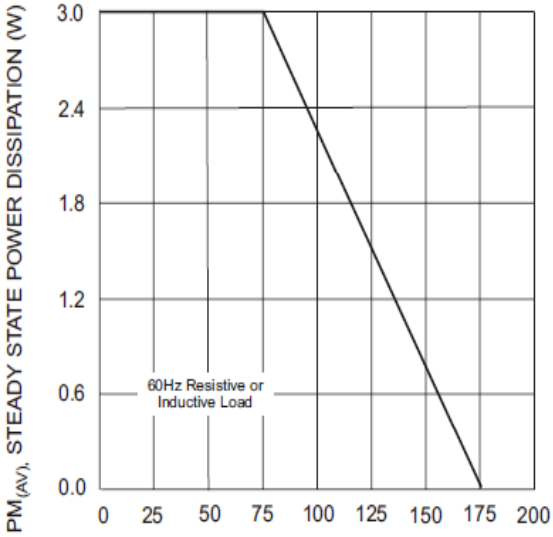


Fig. 3 - Steady State Power Derating Curve

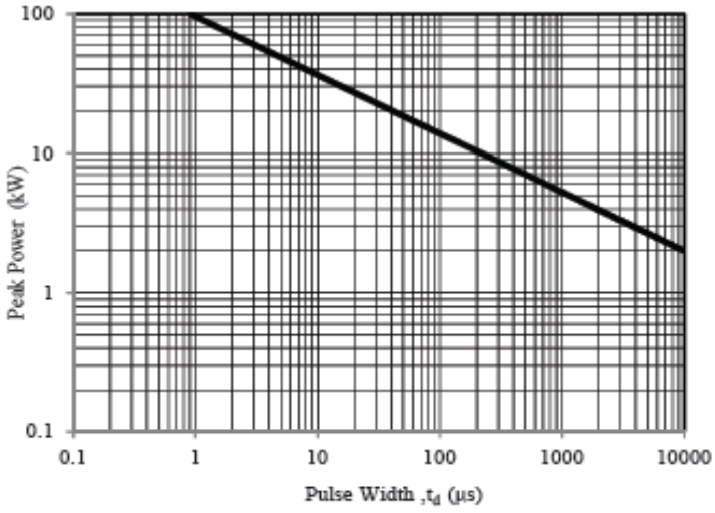


Fig. 4 - Peak Pulse Power Rating Curve

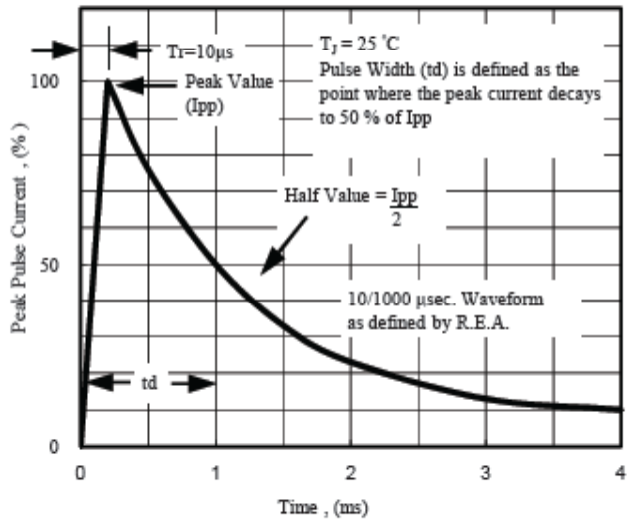


Fig. 5 - Pulse Waveform

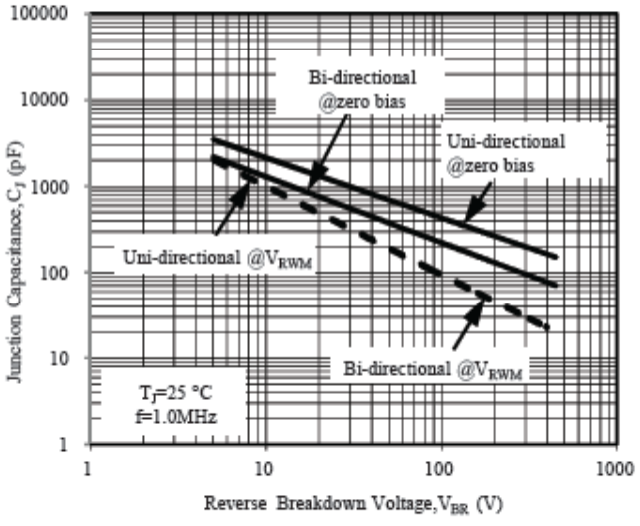


Fig. 6 - Typical Junction Capacitance

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