

P4KE SERIES

GLASS PASSIVATED JUNCTION TRANSIENT VOLTAGE SUPPRESSOR

VOLTAGE - 6.8 to 440 Volts

400 Watts Peak Power 1.0 Watt Steady State

P4KE PART NUMBER		REVERSE STAND- OFF VOLTAGE $V_{RWM}(V)$	BREAKDOWN VOLTAGE $V_{BR}(V)$ MIN.@ I_T	BREAKDOWN VOLTAGE $V_{BR}(V)$ MAX.@ I_T	TEST CURRENT I_T (mA)	MAXIMUM CLAMPING VOLTAGE @ I_{pp} $V_c(V)$	PEAK PULSE CURRENT I_{pp} (A)	REVERSE LEAKAGE @ V_{RWM} $I_R(\mu A)$
UNI- POLAR	BI-POLAR							
P4KE6.8A	P4KE6.8CA	5.80	6.45	7.14	10	10.5	39.00	1000
P4KE7.5A	P4KE7.5CA	6.40	7.13	7.88	10	11.3	36.30	500
P4KE8.2A	P4KE8.2CA	7.02	7.79	8.61	10	12.1	33.90	200
P4KE9.1A	P4KE9.1CA	7.78	8.65	9.55	1	13.4	30.60	50
P4KE10A	P4KE10CA	8.55	9.50	10.50	1	14.5	28.30	10
P4KE11A	P4KE11CA	9.40	10.50	11.60	1	15.6	26.30	5
P4KE12A	P4KE12CA	10.20	11.40	12.60	1	16.7	24.60	5
P4KE13A	P4KE13CA	11.10	12.40	13.70	1	18.2	22.50	5
P4KE15A	P4KE15CA	12.80	14.30	15.80	1	21.2	19.30	5
P4KE16A	P4KE16CA	13.60	15.20	16.80	1	22.5	18.20	5
P4KE18A	P4KE18CA	15.30	17.10	18.90	1	25.5	16.10	5
P4KE20A	P4KE20CA	17.10	19.00	21.00	1	27.7	14.80	5
P4KE22A	P4KE22CA	18.80	20.90	23.10	1	30.6	13.40	5
P4KE24A	P4KE24CA	20.50	22.80	25.20	1	33.2	12.30	5
P4KE27A	P4KE27CA	23.10	25.70	28.40	1	37.5	10.90	5
P4KE30A	P4KE30CA	25.60	28.50	31.50	1	41.4	9.90	5
P4KE33A	P4KE33CA	28.20	31.40	34.70	1	45.7	9.00	5
P4KE36A	P4KE36CA	30.80	34.20	37.80	1	49.9	8.20	5
P4KE39A	P4KE39CA	33.30	37.10	41.00	1	53.9	7.60	5
P4KE43A	P4KE43CA	36.80	40.90	45.20	1	59.3	6.90	5
P4KE47A	P4KE47CA	40.20	44.70	49.40	1	64.8	6.30	5
P4KE51A	P4KE51CA	43.60	48.50	53.60	1	70.1	5.80	5
P4KE56A	P4KE56CA	47.80	53.20	58.80	1	77.0	5.30	5
P4KE62A	P4KE62CA	53.00	58.90	65.10	1	85.0	4.80	5
P4KE68A	P4KE68CA	58.10	64.60	71.40	1	92.0	4.50	5
P4KE75A	P4KE75CA	64.10	71.30	78.80	1	103.0	4.00	5
P4KE82A	P4KE82CA	70.10	77.90	86.10	1	113.0	3.60	5
P4KE91A	P4KE91CA	77.80	86.50	95.50	1	125.0	3.30	5
P4KE100A	P4KE100C	85.50	95.00	105.00	1	137.0	3.00	5
P4KE110A	P4KE110C	94.00	105.00	116.00	1	152.0	2.70	5
P4KE120A	P4KE120C	102.00	114.00	126.00	1	165.0	2.50	5
P4KE130A	P4KE130C	111.00	124.00	137.00	1	179.0	2.30	5
P4KE150A	P4KE150C	128.00	143.00	158.00	1	207.0	2.00	5
P4KE160A	P4KE160C	136.00	152.00	168.00	1	219.0	1.90	5
P4KE170A	P4KE170C	145.00	162.00	179.00	1	234.0	1.80	5
P4KE180A	P4KE180C	154.00	171.00	189.00	1	246.0	1.70	5
P4KE200A	P4KE200C	171.00	190.00	210.00	1	274.0	1.50	5
P4KE220A	P4KE220C	185.00	209.00	231.00	1	328.0	1.30	5
P4KE250A	P4KE250C	214.00	237.00	263.00	1	344.0	1.20	5
P4KE300A	P4KE300C	256.00	285.00	315.00	1	414.0	1.00	5
P4KE350A	P4KE350C	300.00	332.00	368.00	1	482.0	0.85	5
P4KE400A	P4KE400C	342.00	380.00	420.00	1	548.0	0.75	5
P4KE440A	P4KE440C	376.00	418.00	462.00	1	602.0	0.68	5

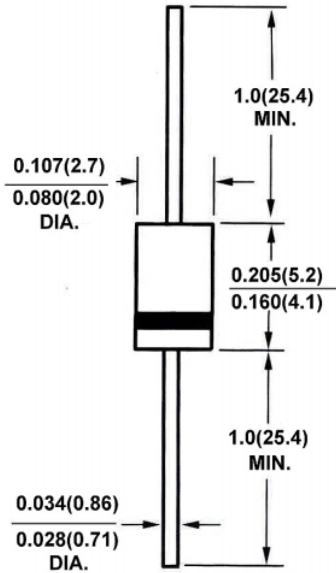
For bidirectional type having V_{RWM} of 10 volts and less, the I_R limit is double.

For parts without A, the V_{BR} is $\pm 10\%$

P4KE SERIES

GLASS PASSIVATED JUNCTION TRANSIENT VOLTAGE SUPPRESSOR VOLTAGE-6.8 to 440 Volts 400 watt Peak Power / 1.0 Watt Steady State

DO-204AL (DO-41 Plastic) FEATURES



- Plastic package
- Glass passivated chip junction in DO-41 Package
- 400W surge capability at 10/1000 μ s wave from
- Excellent clamping capability
- Low zener impedance
- Fast response time: typically less than 1.0ps from 0 Volts to BV min.
- Typical IR less than 1mA above 10V
- High temperature soldering guaranteed: 265°C/10 seconds/.375", (9.5mm) lead length, 5lbs., (2.3kg) tension

MECHANICAL DATA

- Case:** JEDEC DO-41 Molded Plastic
- Terminal:** Axial leads, solderable per MIL-STD-750, Method 2026
- Polarity:** Color band denotes cathode except Bipolar
- Mounting Position:** Any
- Weight:** 0.012 ounce, 0.3 grams

Dimensions in inches and (millimeters)

DEVICES FOR BIPOLAR APPLICATION

For Bidirectional use C or CA Suffix for types P4KE 6.8 thru types P4KE440 (e.g. P4KE6.8C , P4KE440CA)
Electrical characteristics apply in both directions

MAXIMUM RATINGS AND CHARACTERISTICS

Ratings at 25 ambient temperature unless otherwise specified.

RATING	SYMBOL	VALUE	UNITS
Peak Pulse Power Dissipation at $T_A = 25$, $T_P = 1$ ms (Note 1)	P_{PPM}	Minimum 400	Watts
Steady State Power Dissipation at $T_L = 75$, Lead lengths.375", (9.5mm) (Note 2)	$P_{M(AV)}$	1	Watts
Peak Forward Surge Current, 8.3ms Single Half Sine-Wave Superimposed on Rated Load, (JEDEC Method) (Note 3)	I_{FSM}	40	Amps
Operating junction and Storage Temperature Range	T_J, T_{STG}	-55 to + 175	

Notes :

1. Non-repetitive current pulse , per Fig. 3 and derated above $T_A = 25$ per Fig. 2 .
2. Mounted on Copper Pad area of 1.6×1.6" (40×40mm) per Fig. 5.
3. 8.3ms single half sine-wave , or equivalent square wave, Duty cycle = 4 pulses per minutes maximum.

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RATINGS AND CHARACTERISTIC CURVES

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

Fig. 1 - Peak Pulse Power Rating Curve

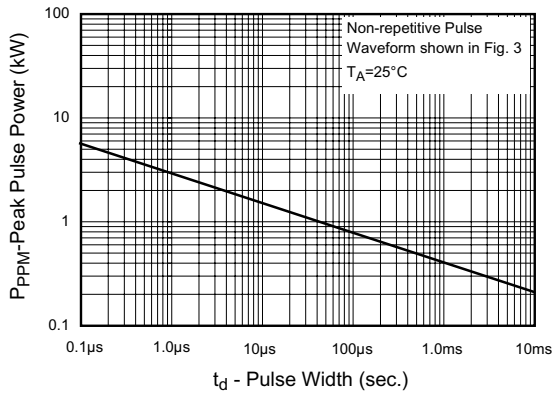


Fig.2 - Pulse Derating Curve

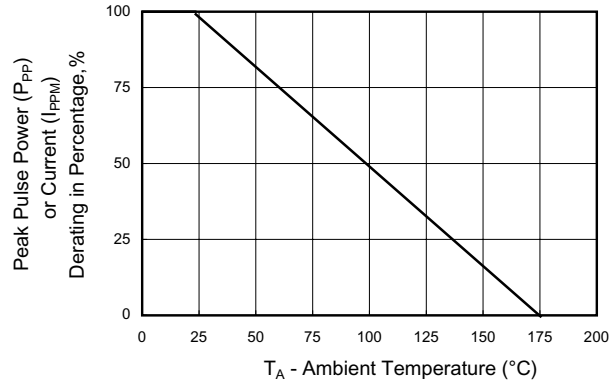


Fig.3 - Pulse Waveform

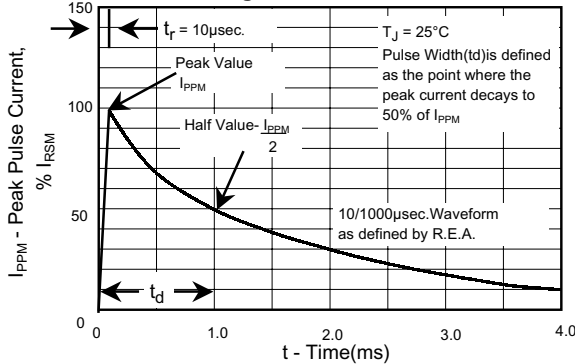


Fig.4 - Typ. Junction Capacitance Uni-Directional

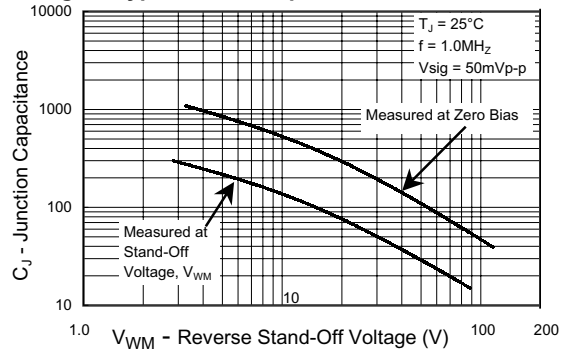


Fig.5 - steady State Power Derating Curve

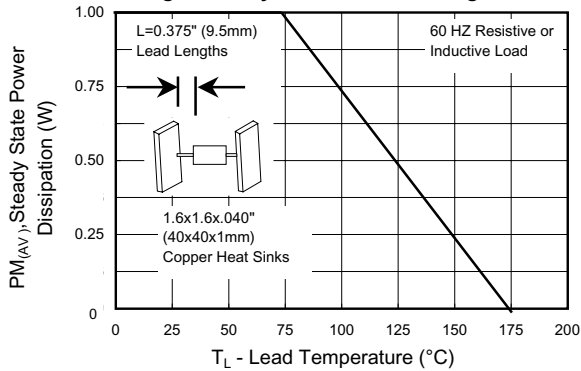


Fig.6 - Maximum Non-Repetitive Forward Surge Current Uni-Directional Only

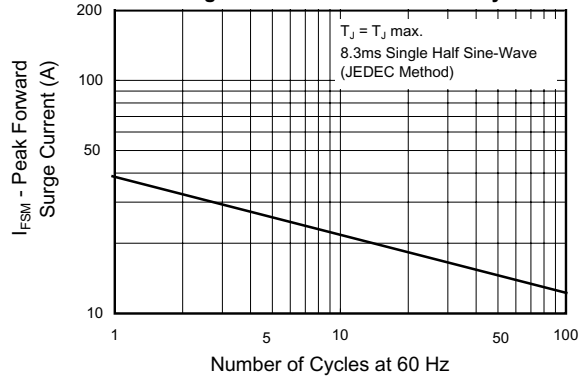


Fig.7 - Typical Reverse Leakage Characteristics

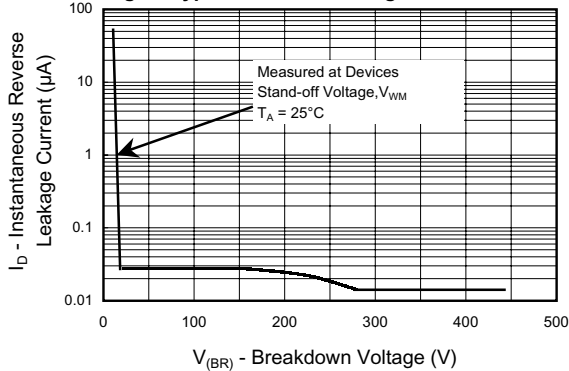


Fig. 8 - Typ. Transient Thermal Impedance

