

Breakdown Voltage: 6.8 to 600 V

Peak Pulse Power: 400 W

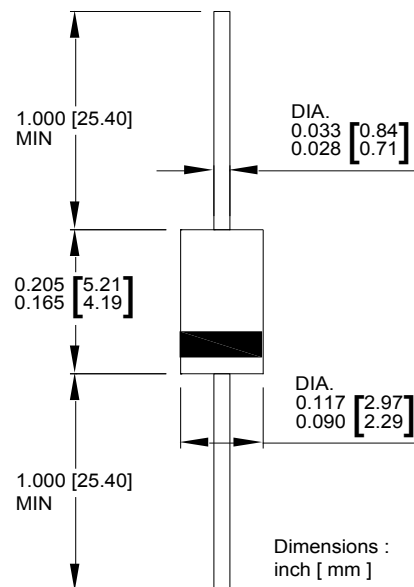
DO-41

Features

- Glass passivated chip
- 400 W peak pulse power capability with a 10/1000 μ s waveform, repetitive rate (duty cycle):0.01 %
- Low leakage
- Bidirectional unit
- Excellent clamping capability
- Very fast response time
- RoHS compliant

Mechanical Data

- Case: Molded plastic
- Epoxy: UL 94V-0 rate flame retardant
- Lead: Solderable per MIL-STD-202, method 208 guranteed
- Polarity: Color band denotes cathode end except Bipolar
- Mounting position: Any



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

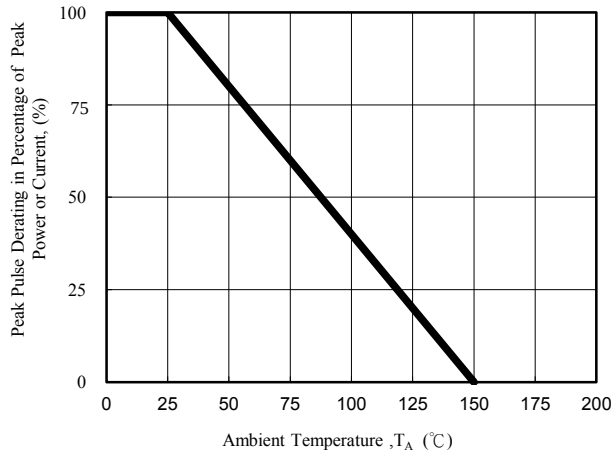
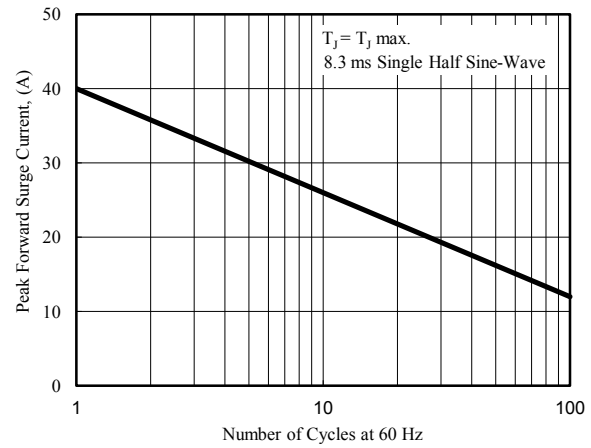
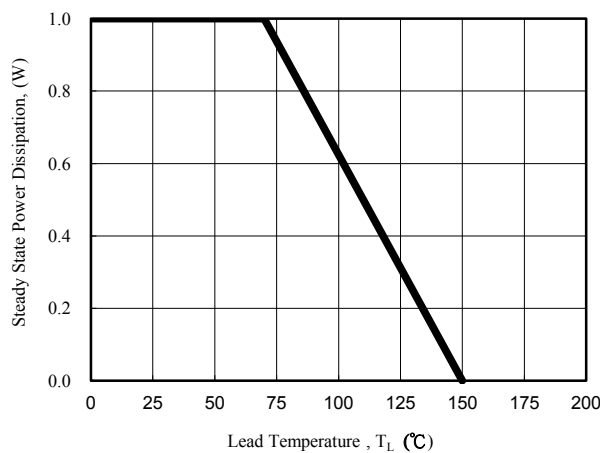
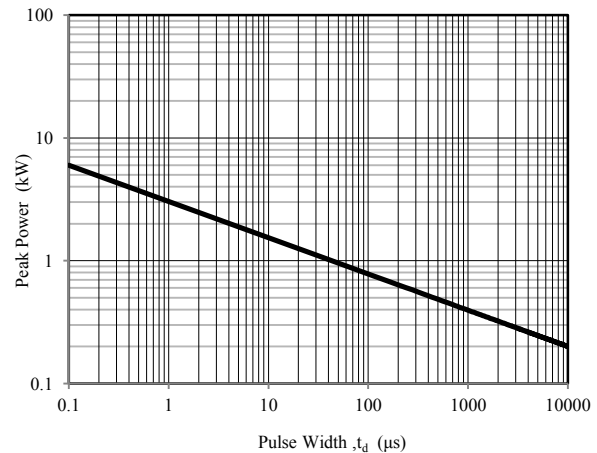
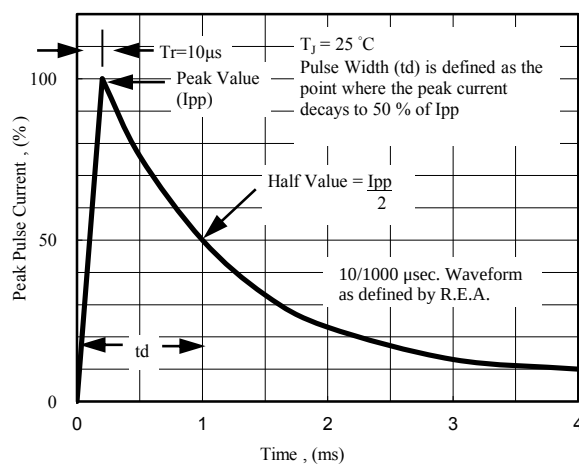
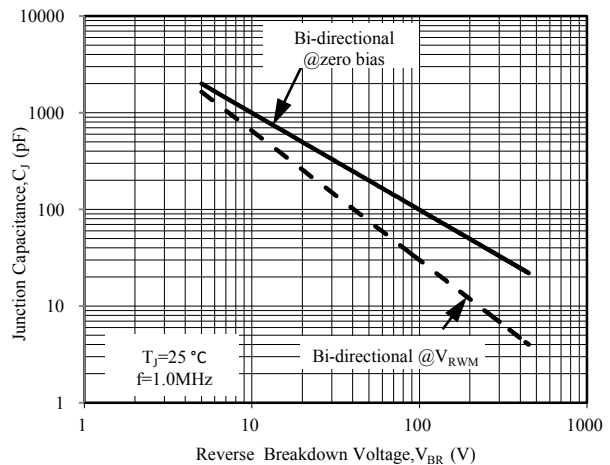
Parameter	Symbol	Value	Unit
Peak power dissipation with a 10/1000 μ s waveform ⁽¹⁾	P_{PP}	400	W
Peak pulse current with a 10/1000 μ s waveform ⁽¹⁾	I_{PP}	See Next Table	A
Power dissipation on infinite heatsink at $T_L = 75^{\circ}\text{C}$	P_D	1.0	W
Peak forward surge current, 8.3 ms single half sine-wave unidirectional only ⁽²⁾	I_{FSM}	40	A
Maximum instantaneous forward voltage at 25 A for unidirectional only ⁽³⁾	V_F	3.5/5.0	V
Operating junction and storage temperature range	T_J, T_{STG}	- 55 to +150	$^{\circ}\text{C}$

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 $V_F < 5.0\text{V}$ for devices of $V_{BR} > 201\text{V}$

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

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

Part Number (Bi)	Breakdown Voltage V_{BR} @ I_T			Maximum Reverse Leakage I_R @ V_{RWM} (μA)	Working Peak Reverse Voltage V_{RWM} (V)	Maximum Reverse Surge Current I_{PP} (A)	Maximum Clamping Voltage V_C @ I_{PP} (V)
	Min (V)	Max (V)	I_T (mA)				
P4KE6.8CA	6.46	7.14	10	1000	5.8	38.10	10.5
P4KE7.5CA	7.13	7.88	10	500	6.4	35.40	11.3
P4KE8.2CA	7.79	8.61	10	200	7.0	33.06	12.1
P4KE9.1CA	8.65	9.56	1	50	7.8	29.85	13.4
P4KE10CA	9.50	10.50	1	10	8.6	27.59	14.5
P4KE11CA	10.45	11.55	1	5	9.4	25.64	15.6
P4KE12CA	11.40	12.60	1	5	10.2	23.95	16.7
P4KE13CA	12.35	13.65	1	1	11.1	21.98	18.2
P4KE15CA	14.25	15.75	1	1	12.8	18.87	21.2
P4KE16CA	15.20	16.80	1	1	13.6	17.78	22.5
P4KE18CA	17.10	18.90	1	1	15.3	15.87	25.2
P4KE20CA	19.00	21.00	1	1	17.1	14.44	27.7
P4KE22CA	20.90	23.10	1	1	18.8	13.07	30.6
P4KE24CA	22.80	25.20	1	1	20.5	12.05	33.2
P4KE27CA	25.65	28.35	1	1	23.1	10.67	37.5
P4KE30CA	28.50	31.50	1	1	25.6	9.66	41.4
P4KE33CA	31.35	34.65	1	1	28.2	8.75	45.7
P4KE36CA	34.20	37.80	1	1	30.8	8.02	49.9
P4KE39CA	37.05	40.95	1	1	33.3	7.42	53.9
P4KE43CA	40.85	45.15	1	1	36.8	6.75	59.3
P4KE47CA	44.65	49.35	1	1	40.2	6.17	64.8
P4KE51CA	48.45	53.55	1	1	43.6	5.71	70.1
P4KE56CA	53.20	58.80	1	1	47.8	5.19	77.0

Note:

1. Suffix 'A' denotes 5% tolerance device. Without 'A' denotes 10% tolerance device
2. Add suffix 'CA' after part number to specify Bi-directional devices
3. For Bi-Directional devices having V_R of 10 volts and under, the I_R limit is double

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

Part Number (Bi)	Breakdown Voltage V_{BR} @ I_T			Maximum Reverse Leakage I_R @ V_{RWM} (μA)	Working Peak Reverse Voltage V_{RWM} (V)	Maximum Reverse Surge Current I_{PP} (A)	Maximum Clamping Voltage V_C @ I_{PP} (V)
	Min (V)	Max (V)	I_T (mA)				
P4KE62CA	58.90	65.10	1	1	53.0	4.71	85.0
P4KE68CA	64.60	71.40	1	1	58.1	4.35	92.0
P4KE75CA	71.25	78.75	1	1	64.1	3.88	103.0
P4KE82CA	77.90	86.10	1	1	70.1	3.54	113.0
P4KE91CA	86.45	95.55	1	1	77.8	3.20	125.0
P4KE100CA	95.00	105.00	1	1	85.5	2.92	137.0
P4KE110CA	104.50	115.50	1	1	94.0	2.63	152.0
P4KE120CA	114.00	126.00	1	1	102.0	2.42	165.0
P4KE130CA	123.50	136.50	1	1	111.0	2.23	179.0
P4KE150CA	142.50	157.50	1	1	128.0	1.93	207.0
P4KE160CA	152.00	168.00	1	1	136.0	1.83	219.0
P4KE170CA	161.50	178.50	1	1	145.0	1.71	234.0
P4KE180CA	171.00	189.00	1	1	154.0	1.63	246.0
P4KE200CA	190.00	210.00	1	1	171.0	1.46	274.0
P4KE220CA	209.00	231.00	1	1	185.0	1.22	328.0
P4KE250CA	237.50	262.50	1	1	214.0	1.16	344.0
P4KE300CA	285.00	315.00	1	1	256.0	0.97	414.0
P4KE350CA	332.50	367.50	1	1	299.3	0.83	482.0
P4KE380CA	361.00	399.00	1	1	324.9	0.76	524.4
P4KE400CA	380.00	420.00	1	1	342.0	0.72	552.0
P4KE440CA	418.00	462.00	1	1	376.2	0.66	607.2
P4KE500CA	475.00	525.00	1	1	427.5	0.58	690.0
P4KE520CA	494.00	546.00	1	1	444.6	0.56	717.6
P4KE550CA	522.50	577.50	1	1	470.3	0.53	759.0
P4KE600CA	570.00	630.00	1	1	513.0	0.48	828.0

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