

P4KE-G Series

Stand-off Voltage: 6.8 ~ 600V

Power Dissipation: 400 Watts

RoHS Device

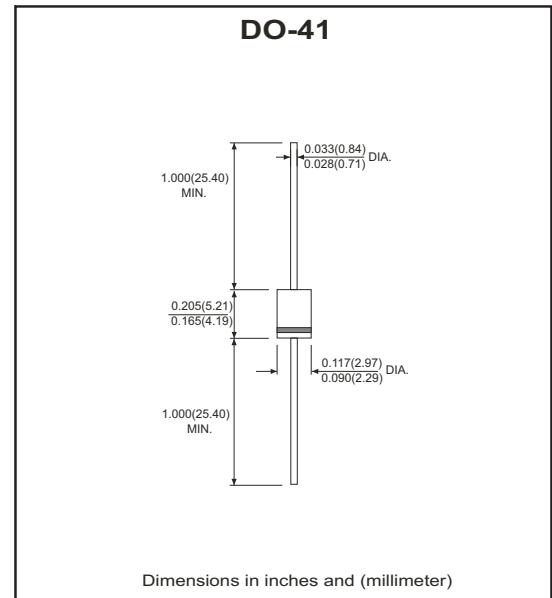


Features

- Glass passivated chip
- Low leakage
- Uni and Bidirection unit
- Excellent clamping capability
- The plastic material has UL recognition 94V-0
- Very fast response time

Mechanical Data

- Case: Molded plastic DO-41
- Lead: Solderable per MIL-STD-202, method 208 guranteed
- Polarity: Color band denotes cathode end except Bipolar.
- Mounting position: Any
- Weight: 0.34 grams



Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

Parameter	Symbol	Value	Unit
Peak power dissipation a 10/1000μs waveform (Note 1)	P _{PP}	400	W
Peak pulse current with a 10/1000μs waveform (Note 1)	I _{PP}	See Next Table	A
Power dissipation on infinite heatsink at T _L =75°C	P _D	1.0	W
Peak forward surge current, 8.3ms single half sine-wave unidirectional only(Note 2)	I _{FSM}	40	A
Maximum instantaneous forward voltage at 25A for unidirectional only (Note 3)	V _F	3.5/5.0	V
Operating junction and storage temperature range	T _J , T _{STG}	-55 to +150	°C

NTOES:

- (1) Non-repetitive current pulse, per fig.5 and derated above T_A=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) V_F<3.5V for devices of V_{BR}<200V and V_F<5.0V for devices of V_{BR}>201V.

RATING AND CHARACTERISTIC CURVES (P4KE-G Series)

Fig.1- Pulse Derating Curve

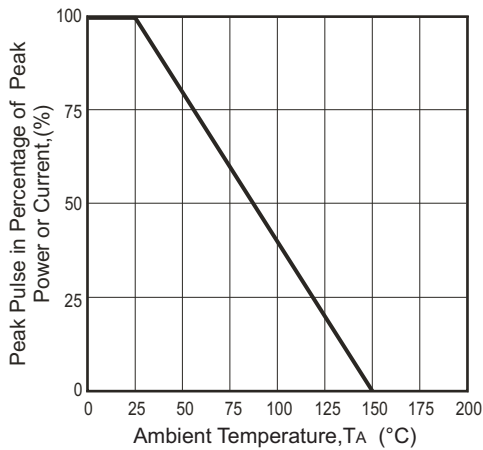


Fig.2- Maximum Non-Repetitive Surge Current

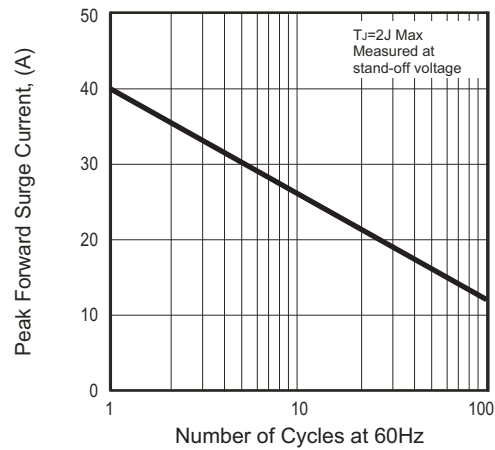


Fig.3- Steady State Power Derating Curve

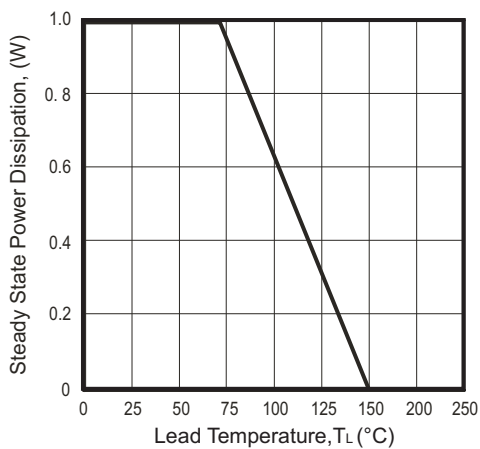


Fig.4- Peak Pulse Power Rating Curve

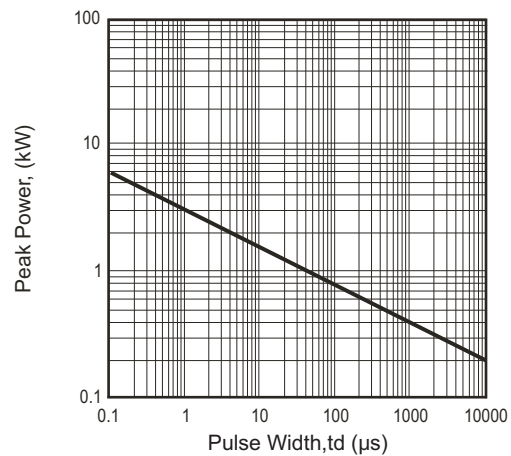


Fig.5- Pulse Waveform

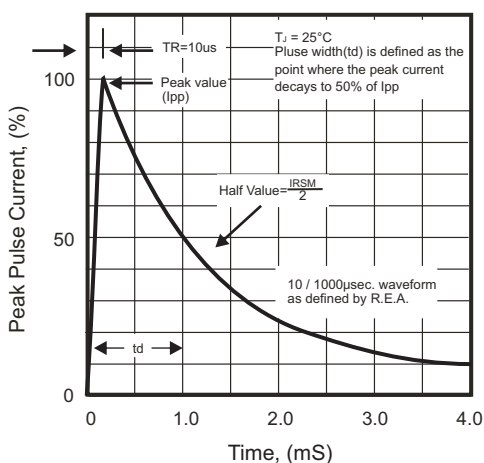
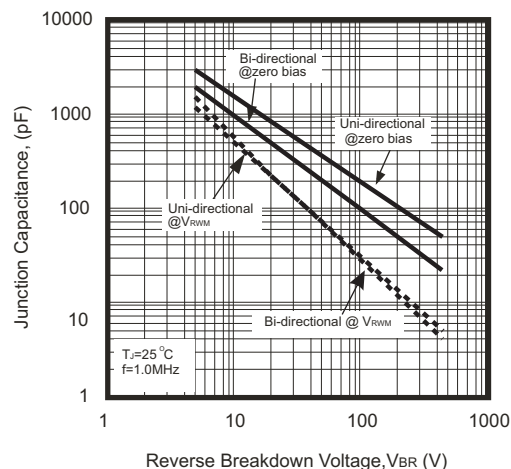


Fig.6- Typical Junction Capacitance



400W Transient Voltage Suppressor

RATING AND CHARACTERISTIC (P4KE-G Series)

Part No.		Absolute Maximum Rating (Ta=25°C)					Electrical Characteristics (Ta=25°C)			Marking Code.	
Uni	Bi	VRWM	VBR Min.	VBR Max.	IT	IFSM	Max. Vc @IPPM		Max. IR @VRWM	Uni	Bi
		(V)	(V)	(V)	(mA)	(A)@8.3mS	(V)	IPPM (A)	uA		
P4KE6.8A-G	P4KE6.8CA-G	5.8	6.46	7.14	10	40	10.5	38.10	1000	P4KE6.8A	P4KE6.8CA
P4KE7.5A-G	P4KE7.5CA-G	6.4	7.13	7.88	10	40	11.3	35.40	500	P4KE7.5A	P4KE7.5CA
P4KE8.2A-G	P4KE8.2CA-G	7.0	7.79	8.61	10	40	12.1	33.06	200	P4KE8.2A	P4KE8.2CA
P4KE9.1A-G	P4KE9.1CA-G	7.8	8.65	9.56	1	40	13.4	29.85	50	P4KE9.1	P4KE9.1CA
P4KE10A-G	P4KE10CA-G	8.6	9.50	10.50	1	40	14.5	27.59	10	P4KE10A	P4KE10CA
P4KE11A-G	P4KE11CA-G	9.4	10.45	11.55	1	40	15.6	25.64	5	P4KE11A	P4KE11CA
P4KE12A-G	P4KE12CA-G	10.2	11.40	12.60	1	40	16.7	23.95	5	P4KE12A	P4KE12CA
P4KE13A-G	P4KE13CA-G	11.1	12.35	13.65	1	40	18.2	21.98	1	P4KE13A	P4KE13CA
P4KE15A-G	P4KE15CA-G	12.8	14.25	15.75	1	40	21.2	18.87	1	P4KE15A	P4KE15CA
P4KE16A-G	P4KE16CA-G	13.6	15.20	16.80	1	40	22.5	17.78	1	P4KE16A	P4KE16CA
P4KE18A-G	P4KE18CA-G	15.3	17.10	18.90	1	40	25.2	15.87	1	P4KE18A	P4KE18CA
P4KE20A-G	P4KE20CA-G	17.1	19.00	21.00	1	40	27.7	14.44	1	P4KE20A	P4KE20CA
P4KE22A-G	P4KE22CA-G	18.8	20.90	23.10	1	40	30.6	13.07	1	P4KE22A	P4KE22CA
P4KE24A-G	P4KE24CA-G	20.5	22.80	25.20	1	40	33.2	12.05	1	P4KE24A	P4KE24CA
P4KE27A-G	P4KE27CA-G	23.1	25.65	28.35	1	40	37.5	10.67	1	P4KE27A	P4KE27CA
P4KE30A-G	P4KE30CA-G	25.6	28.50	31.50	1	40	41.4	9.66	1	P4KE30A	P4KE30CA
P4KE33A-G	P4KE33CA-G	28.2	31.35	34.65	1	40	45.7	8.75	1	P4KE33A	P4KE33CA
P4KE36A-G	P4KE36CA-G	30.8	34.20	37.80	1	40	49.9	8.02	1	P4KE36A	P4KE36CA
P4KE39A-G	P4KE39CA-G	33.3	37.05	40.95	1	40	53.9	7.42	1	P4KE39A	P4KE39CA
P4KE43A-G	P4KE43CA-G	36.8	40.85	45.15	1	40	59.3	6.75	1	P4KE43A	P4KE43CA
P4KE47A-G	P4KE47CA-G	40.2	44.65	49.35	1	40	64.8	6.17	1	P4KE47A	P4KE47CA
P4KE51A-G	P4KE51CA-G	43.6	48.45	53.55	1	40	70.1	5.71	1	P4KE51A	P4KE51CA
P4KE56A-G	P4KE56CA-G	47.8	53.20	58.80	1	40	77.0	5.19	1	P4KE56A	P4KE56CA
P4KE62A-G	P4KE62CA-G	53.0	58.90	65.10	1	40	85.0	4.71	1	P4KE62A	P4KE62CA
P4KE68A-G	P4KE68CA-G	58.1	64.60	74.40	1	40	92.0	4.35	1	P4KE68A	P4KE68CA
P4KE75A-G	P4KE75CA-G	64.1	71.25	78.75	1	40	103.0	3.88	1	P4KE75A	P4KE75CA
P4KE82A-G	P4KE82CA-G	70.1	77.90	86.10	1	40	113.0	3.54	1	P4KE82A	P4KE82CA
P4KE91A-G	P4KE91CA-G	77.8	86.45	95.55	1	40	125.0	3.20	1	P4KE91A	P4KE91CA
P4KE100A-G	P4KE100CA-G	85.5	95.00	105.00	1	40	137.0	2.92	1	P4KE100A	P4KE100CA
P4KE110A-G	P4KE110CA-G	94.0	104.5	115.50	1	40	152.0	2.63	1	P4KE110A	P4KE110CA
P4KE120A-G	P4KE120CA-G	102.0	114.00	126.00	1	40	165.0	2.42	1	P4KE120A	P4KE120CA
P4KE130A-G	P4KE130CA-G	111.0	123.50	136.50	1	40	179.0	2.23	1	P4KE130A	P4KE130CA
P4KE150A-G	P4KE150CA-G	128.0	142.50	157.50	1	40	207.0	1.93	1	P4KE150A	P4KE150CA
P4KE160A-G	P4KE160CA-G	136.0	152.00	168.00	1	40	219.0	1.83	1	P4KE160A	P4KE160CA
P4KE170A-G	P4KE170CA-G	145.0	161.50	178.50	1	40	234.0	1.71	1	P4KE170A	P4KE170CA
P4KE180A-G	P4KE180CA-G	154.0	171.00	189.00	1	40	246.0	1.63	1	P4KE180A	P4KE180CA
P4KE200A-G	P4KE200CA-G	171.0	190.00	210.00	1	40	274.0	1.46	1	P4KE200A	P4KE200CA
P4KE220A-G	P4KE220CA-G	185.0	209.00	231.00	1	40	328.0	1.22	1	P4KE220A	P4KE220CA
P4KE250A-G	P4KE250CA-G	214.0	237.50	262.50	1	40	344.0	1.16	1	P4KE250A	P4KE250CA
P4KE300A-G	P4KE300CA-G	256.0	285.00	315.00	1	40	414.0	0.97	1	P4KE300A	P4KE300CA
P4KE350A-G	P4KE350CA-G	299.3	332.50	367.50	1	40	482.0	0.83	1	P4KE350A	P4KE350CA
P4KE380A-G	P4KE380CA-G	324.9	361.00	399.00	1	40	524.4	0.76	1	P4KE380A	P4KE380CA
P4KE400A-G	P4KE400CA-G	342.0	380.00	420.00	1	40	552.0	0.72	1	P4KE400A	P4KE400CA
P4KE440A-G	P4KE440CA-G	376.2	418.00	462.00	1	40	607.2	0.66	1	P4KE440A	P4KE440CA

Company reserves the right to improve product design , functions and reliability without notice.

REV:C

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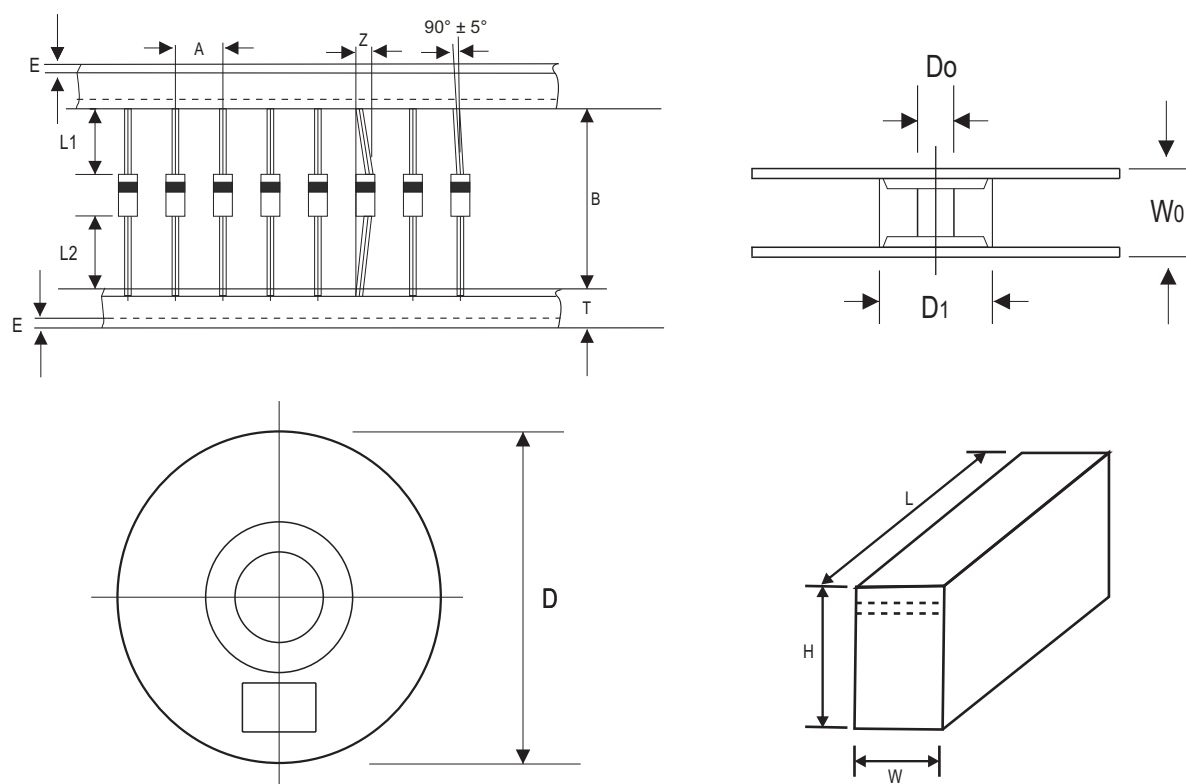
RATING AND CHARACTERISTIC (P4KE-G Series)

Part No.		Absolute Maximum Rating (Ta=25°C)					Electrical Characteristics (Ta=25°C)			Marking Code.	
Uni	Bi	V _{RWM}	V _{BR} Min.	V _{BR} Max.	I _T	I _{FSM}	Max. V _C @I _{PPM}		Max. I _R @V _{RWM}	Uni	Bi
		(V)	(V)	(V)	(mA)	(A)@8.3ms	(V)	I _{PPM} (A)	uA		
P4KE500A-G	P4KE500CA-G	427.5	475.00	525.00	1	40	690.0	0.58	1	P4KE500A	P4KE500CA
P4KE520A-G	P4KE520CA-G	444.6	494.00	546.00	1	40	717.6	0.56	1	P4KE520A	P4KE520CA
P4KE550A-G	P4KE520CA-G	470.3	522.50	577.50	1	40	759.0	0.53	1	P4KE550A	P4KE550CA
P4KE600A-G	P4KE520CA-G	513.0	570.00	630.0	1	40	828.0	0.48	1	P4KE600A	P4KE600CA

NOTES:

- Suffix 'A' denotes 5% tolerance device.
- Add suffix 'C' or 'CA' after part number to specify Bi-directional devices
- For Bi-Directional devices having V_R of 10 Volts and under, the I_R Limit is double

Taping Specification For Axial Lead Diodes(For Reel Package)



DO-41	SYMBOL	A	B	Z	T	E	L1-L2	D
	(mm)	5.00 ± 0.5	52.0 ± 0.5	1.2 (max)	6.0 ± 0.4	3 (max)	1.0 (max)	330
	(inch)	0.197 ± 0.020	2.047 ± 0.020	0.047 (max)	0.236 ± 0.016	0.118 (max)	0.039 (max)	13

DO-41	SYMBOL	D1	D0	W				
	(mm)	85.7 ± 0.3	16.6 ± 0.4	72.0 ± 3.0				
	(inch)	3.374 ± 0.012	0.654 ± 0.016	2.835 ± 0.118				

Standard Packaging

Case Type	AMMO PACK	
	BOX (pcs)	CARTON (pcs)
DO-41	5,000	50,000