



**Micro Commercial Components**



Micro Commercial Components  
20736 Marilla Street Chatsworth  
CA 91311  
Phone: (818) 701-4933  
Fax: (818) 701-4939

**P4KE6.8(C)A  
THRU  
P4KE550(C)A**

## Features

- Halogen free available upon request by adding suffix "-HF"
- Unidirectional And Bidirectional
- Low Zener Imdepance
- High Temp Soldering: 260°C for 10 Seconds At Terminals
- For Bidirectional Devices Add "C" To The Suffix Of The Part Number: i.e. P4KE6.8C or P4KE6.8CA for 5% Tolerance Devices
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Lead Free Finish/RoHS Compliant (Note1) ("P"Suffix designates Compliant. See ordering information)

**400 Watt  
Transient Voltage  
Suppressors  
6.8 to 550 Volts**

## Maximum Ratings

- Operating Temperature: -55°C to +175°C
- Storage Temperature: -55°C to +175°C
- P<sub>PPM</sub>=400 Watt (Peak Pulse Power Dissipation at Ta=25 °C)
- Response Time 1 x 10<sup>-12</sup> Seconds For Unidirectional and 5 x 10<sup>-9</sup> For Bidirectional
- P<sub>M(AV)</sub>=1W(Steady state Power Dissipation at TL=75°C)
- IFSM=40A(Peak Forward Surge Current,8.3ms Single Half Sine-Wave Superimposed On Rated Load.

**DO-41**

**DIMENSIONS**

DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.166	.205	4.10	5.20	
B	.080	.107	2.00	2.70	
C	.028	.034	.70	.90	
D	1.000	---	25.40	---	

## Mechanical Data

- UL Recognized File # E331408
- Polarity :Color band denotes cathodes except Bipolar
- Mounting position :Any
- Weight :0.012ounce,0.3grams

Note: 1. High Temperature Solder Exemption Applied, see EU Directive Annex 7.

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

Fig. 1 - Peak Pulse Power Rating Curve

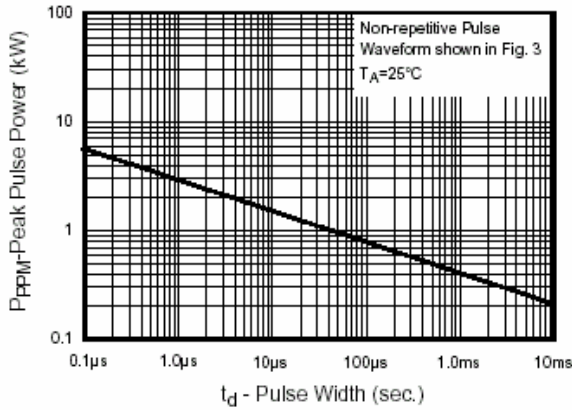


Fig.2 - Pulse Derating Curve

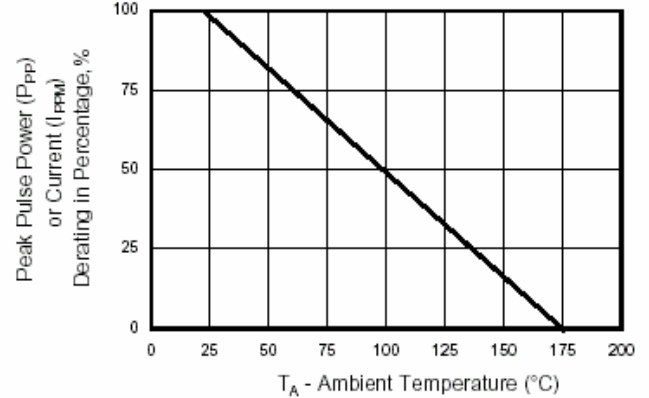


Fig.3 - Pulse Waveform

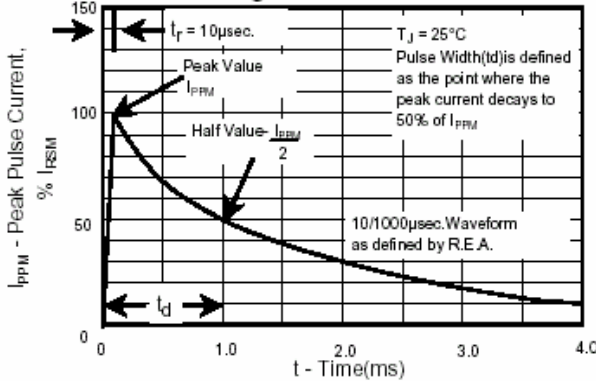


Fig.4 - Typ. Junction Capacitance Uni-Directional

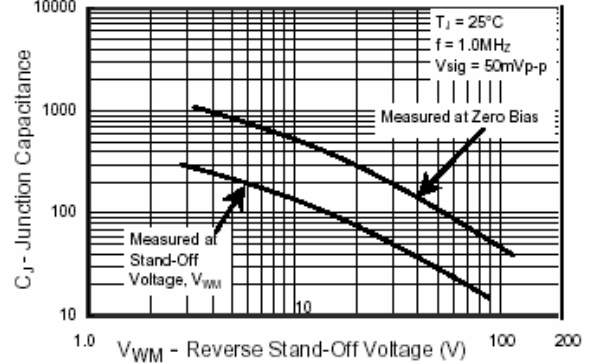


Fig.5 - steady State Power Derating Curve

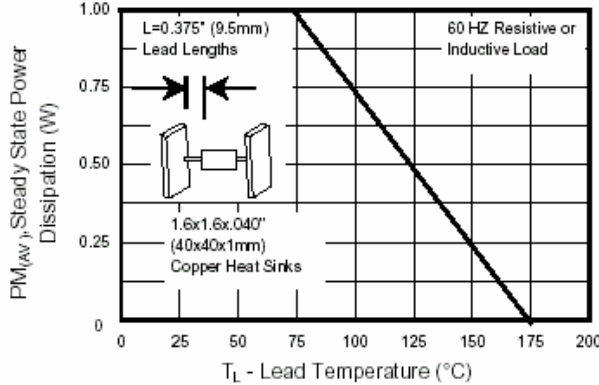


Fig.6 - Maximum Non-Repetitive Forward Surge Current Uni-Directional Only

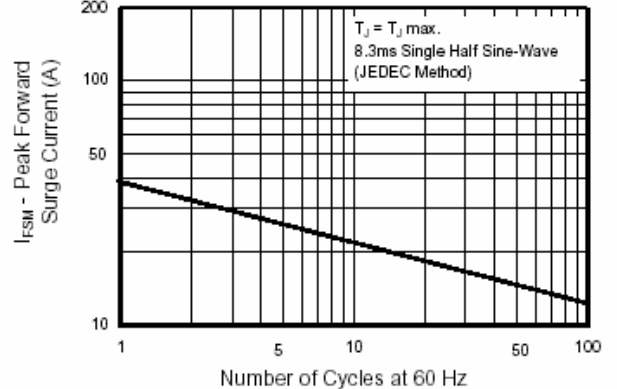


Fig.7 - Typical Reverse Leakage Characteristics

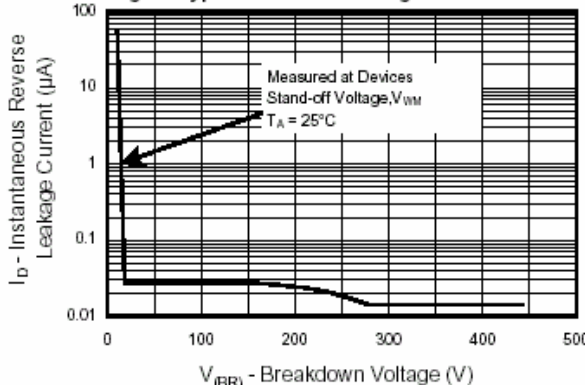
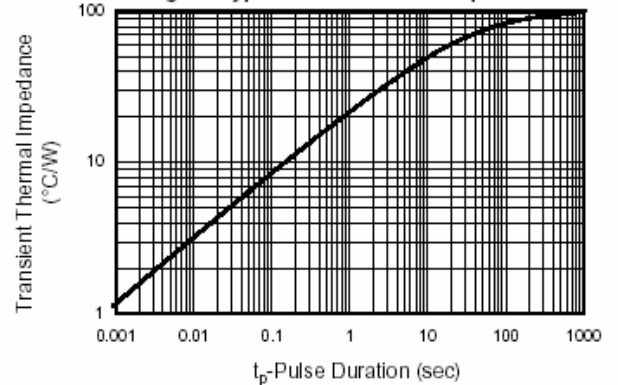


Fig. 8 - Typ. Transient Thermal Impedance



# P4KE6.8A thru P4KE550A



## ELECTRICAL CHARACTERISTICS (TA=25°C unless otherwise noted)

MCC		Breakdown Voltage		TEST Current I <sub>T</sub>	Reverse Standoff Voltage V <sub>WM</sub>	Maximum Reverse Leakage I <sub>R</sub> @V <sub>WM</sub>	Maximum Clamping Voltage V <sub>c</sub> @I <sub>pp</sub>	Maximum Peak Pluse Current (I <sub>pp</sub> )	Maximum Temperature Coefficient Of V <sub>(BR)</sub>
Part Number		V <sub>(BR)</sub> @I <sub>T</sub> (Volts)							
Uni-Polar	Bi-Polar	Min	Max	mA(DC)	V	uA	V	A	(%/°C)
P4KE6.8A	P4KE6.8CA	6.45	7.14	10	5.8	1000	10.5	39	0.057
P4KE7.5A	P4KE7.5CA	7.13	7.88	10	6.4	500	11.3	36.3	0.061
P4KE8.2A	P4KE8.2CA	7.79	8.61	10	7.02	200	12.1	33.9	0.060
P4KE9.1A	P4KE9.1CA	8.65	9.55	1	7.78	50	13.4	30.6	0.068
P4KE10A	P4KE10CA	9.5	10.5	1	8.55	10	14.5	28.3	0.073
P4KE11A	P4KE11CA	10.5	11.6	1	9.4	5	15.6	26.3	0.075
P4KE12A	P4KE12CA	11.4	12.6	1	10.2	5	16.7	24.6	0.078
P4KE13A	P4KE13CA	12.4	13.7	1	11.1	1	18.2	22.5	0.081
P4KE15A	P4KE15CA	14.3	15.8	1	12.8	1	21.2	19.3	0.084
P4KE16A	P4KE16CA	15.2	16.8	1	13.6	1	22.5	18.2	0.086
P4KE18A	P4KE18CA	17.1	18.9	1	15.3	1	25.5	16.1	0.088
P4KE20A	P4KE20CA	19	21	1	17.1	1	27.7	14.8	0.090
P4KE22A	P4KE22CA	20.9	23.1	1	18.8	1	30.6	13.4	0.092
P4KE24A	P4KE24CA	22.8	25.2	1	20.5	1	33.2	12.3	0.094
P4KE27A	P4KE27CA	25.7	28.4	1	23.1	1	37.5	10.9	0.096
P4KE30A	P4KE30CA	28.5	31.5	1	25.6	1	41.4	9.9	0.097
P4KE33A	P4KE33CA	31.4	34.7	1	28.2	1	45.7	9	0.098
P4KE36A	P4KE36CA	34.2	37.8	1	30.8	1	49.9	8.2	0.099
P4KE39A	P4KE39CA	37.1	41	1	33.3	1	53.9	7.6	0.100
P4KE43A	P4KE43CA	40.9	45.2	1	36.8	1	59.3	6.9	0.101
P4KE47A	P4KE47CA	44.7	49.4	1	40.2	1	64.8	6.3	0.101
P4KE51A	P4KE51CA	48.5	53.6	1	43.6	1	70.1	5.8	0.102
P4KE56A	P4KE56CA	53.2	58.8	1	47.8	1	77	5.3	0.103
P4KE62A	P4KE62CA	58.9	65.1	1	53	1	85	4.8	0.104
P4KE68A	P4KE68CA	64.6	71.4	1	58.1	1	92	4.5	0.104
P4KE75A	P4KE75CA	71.3	78.8	1	64.1	1	103	4	0.105
P4KE82A	P4KE82CA	77.9	86.1	1	70.1	1	113	3.6	0.105
P4KE91A	P4KE91CA	86.5	95.5	1	77.8	1	125	3.3	0.106
P4KE100A	P4KE100CA	95	105	1	85.5	1	137	3	0.106
P4KE110A	P4KE110CA	105	116	1	94	1	152	2.7	0.107
P4KE120A	P4KE120CA	114	126	1	102	1	165	2.5	0.107
P4KE130A	P4KE130CA	124	137	1	111	1	179	2.3	0.107
P4KE150A	P4KE150CA	143	158	1	128	1	207	2	0.108
P4KE160A	P4KE160CA	152	168	1	136	1	219	1.9	0.108
P4KE170A	P4KE170CA	162	179	1	145	1	234	1.8	0.108
P4KE180A	P4KE180CA	171	189	1	154	1	246	1.7	0.108
P4KE200A	P4KE200CA	190	210	1	171	1	274	1.5	0.108
P4KE220A	P4KE220CA	209	231	1	185	1	328	1.3	0.108
P4KE250A	P4KE250CA	237	263	1	214	1	344	1.2	0.110
P4KE300A	P4KE300CA	285	315	1	256	1	414	1	0.110
P4KE350A	P4KE350CA	332	368	1	300	1	482	0.85	0.110
P4KE400A	P4KE400CA	380	420	1	342	1	548	0.75	0.110
P4KE440A	P4KE440CA	418	462	1	376	1	602	0.68	0.110
P4KE480A	P4KE480CA	456	504	1	408	1	658	0.61	0.110
P4KE510A	P4KE510CA	485	535	1	434	1	698	0.57	0.110
P4KE530A	P4KE530CA	503.5	556.5	1	477	1	725	0.55	0.110
P4KE540A	P4KE540CA	513	567	1	459	1	740	0.54	0.110
P4KE550A	P4KE550CA	522.5	577.5	1	495	1	760	0.52	0.110

Notes: For bidirectional types having V<sub>wm</sub> of 10 Volts and less, the I<sub>R</sub> limit is double.  
For parts without A, the V<sub>BR</sub> is +/- 10%.



TM

Micro Commercial Components

### Ordering Information :

Device	Packing
Part Number-TP	Tape&Reel: 5Kpcs/Reel
Part Number-AP	Ammo Packing: 5Kpcs/Ammo Box
Part Number-BP	Bulk: 50Kpcs/Carton

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

#### \*\*\*IMPORTANT NOTICE\*\*\*

**Micro Commercial Components Corp.** reserves the right to make changes without further notice to any product herein to make corrections, modifications , enhancements , improvements , or other changes . **Micro Commercial Components Corp .** does not assume any liability arising out of the application or use of any product described herein; neither does it convey any license under its patent rights ,nor the rights of others . The user of products in such applications shall assume all risks of such use and will agree to hold **Micro Commercial Components Corp .** and all the companies whose products are represented on our website, harmless against all damages.

#### \*\*\*LIFE SUPPORT\*\*\*

MCC's products are not authorized for use as critical components in life support devices or systems without the express written approval of Micro Commercial Components Corporation.

#### \*\*\*CUSTOMER AWARENESS\*\*\*

Counterfeiting of semiconductor parts is a growing problem in the industry. Micro Commercial Components (MCC) is taking strong measures to protect ourselves and our customers from the proliferation of counterfeit parts. MCC strongly encourages customers to purchase MCC parts either directly from MCC or from Authorized MCC Distributors who are listed by country on our web page cited below. Products customers buy either from MCC directly or from Authorized MCC Distributors are genuine parts, have full traceability, meet MCC's quality standards for handling and storage. **MCC will not provide any warranty coverage or other assistance for parts bought from Unauthorized Sources.** MCC is committed to combat this global problem and encourage our customers to do their part in stopping this practice by buying direct or from authorized distributors.

[www.mccsemi.com](http://www.mccsemi.com)



Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



#### Как с нами связаться

**Телефон:** 8 (812) 309 58 32 (многоканальный)

**Факс:** 8 (812) 320-02-42

**Электронная почта:** [org@eplast1.ru](mailto:org@eplast1.ru)

**Адрес:** 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.