



SEMICONDUCTOR

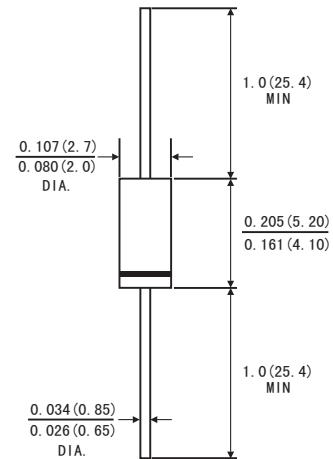
# P4KE6.8(C) A THRU P4KE600(C) A

TRANSIENT VOLTAGE SUPPRESSOR  
PEAK PULSE POWER-400 Watts

## FEATURES

- 400 Watts Pulse capability
- Excellent clamping capability
- Low incremental surge resistance
- Fast response time
- High temperature soldering guaranteed: 260°C/10 seconds at terminals
- Component in accordance to RoHS 2011/65/EU

### DO-41



Dimensions in inches and (millimeters)

## MECHANICAL DATA

- Case: JEDEC DO-41 molded plastic body
- Terminals: Solder Plated
- Polarity: By cathode band denotes uni-directional device, none cathode band denotes bi-directional device.

## DEVICES FOR BIDIRECTIONAL APPLICATIONS

1. For bi-directional use C suffix for Types .
2. Electrical characteristics apply in both directions.

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(Rating at 25°C ambient temperature unless otherwise specified)

	Symbols	Value	Units
Peak Pulse Power Dissipation at on 10/1000µs Waveform (Note 1, 2)	P <sub>PK</sub>	400	Watts
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load (JEDEC method) (Note 2, 3)	I <sub>FSM</sub>	40	Amps
Operating junction and storage temperature range	T <sub>J</sub> , T <sub>STG</sub>	-55 to 150	°C

- Note:** 1. Non repetitive current pulse and derated above T<sub>A</sub>=25°C  
2. Measured on 8.3ms single half sine-wave or equivalent square wave, duty cycle=4 pulses per minute maximum

## RATINGS AND CHARACTERISTIC CURVES (P4KE SERIES)

Part number		Reverse Standoff Voltage VRWM (Volts)	Breakdown Voltage VBR (Volts)		Test Current (mA)	Maximum Clamping Voltage VC@Ipp (Volts)	Maximum Peak Pulse Current Ipp(A)	Maximum Reverse Leakage IR@VRWM (μA)
UNI	BI		MIN	MAX				
P4KE6.8A	P4KE6.8CA	5.8	6.45	7.14	10	10.5	39.00	300
P4KE7.5A	P4KE7.5CA	6.4	7.13	7.88	10	11.3	36.30	200
P4KE8.2A	P4KE8.2CA	7.02	7.79	8.61	10	12.1	33.90	100
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	9.87	10.50	11.60	1	15.6	26.30	1
P4KE12A	P4KE12CA	10.71	11.40	12.60	1	16.7	24.60	1
P4KE13A	P4KE13CA	11.66	12.40	13.70	1	18.2	22.50	1
P4KE15A	P4KE15CA	13.44	14.30	15.80	1	21.2	19.30	1
P4KE16A	P4KE16CA	14.28	15.20	16.80	1	22.5	18.20	1
P4KE18A	P4KE18CA	16.07	17.10	18.90	1	25.5	16.10	1
P4KE20A	P4KE20CA	17.96	19.00	21.00	1	27.7	14.80	1
P4KE22A	P4KE22CA	19.74	20.90	23.10	1	30.6	13.40	1
P4KE24A	P4KE24CA	21.53	22.80	25.20	1	33.2	12.30	1
P4KE27A	P4KE27CA	24.26	25.70	28.40	1	37.5	10.90	1
P4KE30A	P4KE30CA	26.88	28.50	31.50	1	41.4	9.90	1
P4KE33A	P4KE33CA	29.61	31.40	34.70	1	45.7	9.00	1
P4KE36A	P4KE36CA	32.34	34.20	37.80	1	49.9	8.20	1
P4KE39A	P4KE39CA	34.97	37.10	41.00	1	53.9	7.60	1
P4KE43A	P4KE43CA	38.64	40.90	45.20	1	59.3	6.90	1
P4KE47A	P4KE47CA	42.21	44.70	49.40	1	64.8	6.30	1
P4KE51A	P4KE51CA	45.78	48.50	53.60	1	70.1	5.80	1
P4KE56A	P4KE56CA	50.19	53.20	58.80	1	77.0	5.30	1
P4KE62A	P4KE62CA	55.65	58.90	65.10	1	85.0	4.80	1
P4KE68A	P4KE68CA	61.01	64.60	71.40	1	92.0	4.50	1
P4KE75A	P4KE75CA	67.31	71.30	78.80	1	103.0	4.00	1
P4KE82A	P4KE82CA	73.61	77.90	86.10	1	113.0	3.60	1
P4KE91A	P4KE91CA	81.69	86.50	95.50	1	125.0	3.30	1
P4KE100A	P4KE100CA	89.78	95.00	105.00	1	137.0	3.00	1
P4KE110A	P4KE110CA	98.70	105.00	116.00	1	152.0	2.70	1
P4KE120A	P4KE120CA	107.10	114.00	126.00	1	165.0	2.50	1
P4KE130A	P4KE130CA	116.55	124.00	137.00	1	179.0	2.30	1
P4KE150A	P4KE150CA	134.40	143.00	158.00	1	207.0	2.00	1
P4KE160A	P4KE160CA	142.80	152.00	168.00	1	219.0	1.90	1
P4KE170A	P4KE170CA	152.25	162.00	179.00	1	234.0	1.80	1

## RATINGS AND CHARACTERISTIC CURVES (P4KE SERIES)

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P4KE180A	P4KE180CA	161.70	171.00	189.00	1	246.0	1.70	1
P4KE200A	P4KE200CA	179.55	190.00	210.00	1	274.0	1.50	1
P4KE220A	P4KE220CA	194.25	209.00	231.00	1	328.0	1.30	1
P4KE250A	P4KE250CA	224.70	237.00	263.00	1	344.0	1.20	1
P4KE300A	P4KE300CA	268.80	285.00	315.00	1	414.0	1.00	1
P4KE350A	P4KE350CA	315.00	332.00	368.00	1	482.0	0.85	1
P4KE400A	P4KE400CA	359.10	380.00	420.00	1	548.0	0.75	1
P4KE440A	P4KE440CA	394.80	418.00	462.00	1	602.0	0.68	1
P4KE500A	P4KE500CA	427.50	475.00	525.00	1	690.0	0.58	1
P4KE520A	P4KE520CA	444.60	494.00	546.00	1	717.6	0.56	1
P4KE550A	P4KE550CA	470.30	522.50	577.50	1	759.0	0.53	1
P4KE600A	P4KE600CA	513.00	570.00	630.00	1	828.0	0.48	1

For Bi-directional type having VRWM of 10 Volts and less, the IR limit is double

1.A transient suppressor is normally selected according to the working peak reverse voltage (VRWM), which should be equal to or greater than the DC or continuous peak operating voltage level.

2.VBR measured at pulse test current IT at an ambient temperature of 25°C.

3.Surge current waveform per Figure 2 and derate per Figure 3

# RATINGS AND CHARACTERISTIC CURVES (P4KE SERIES)

FIG. 1-PEAK PULSE POWER CURVE

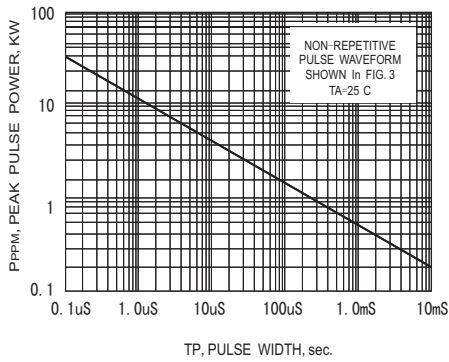


FIG. 2-PULSE DERATING CURVE

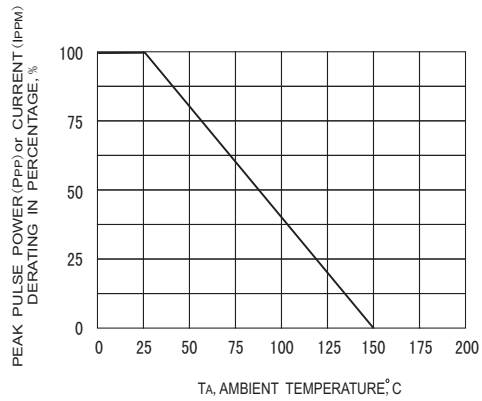


FIG. 3-PULSE WAVEFORM

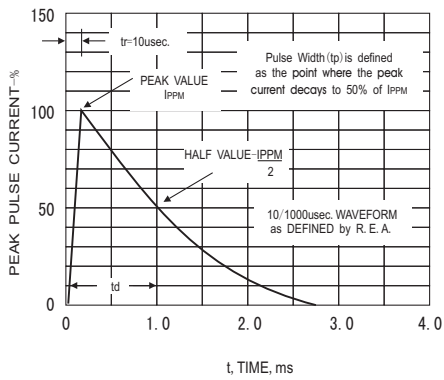


FIG. 4-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

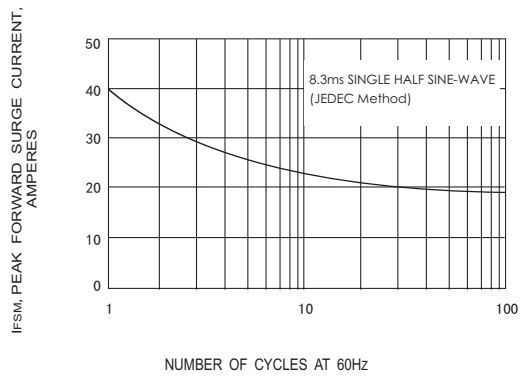


FIG. 5-Steady State Power Derating Curve

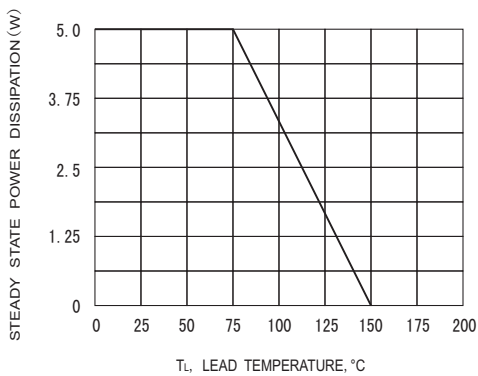


FIG. 6-TYPICAL JUNCTION CAPACITANCE

