

**GLASS PASSIVATED UNIDIRECTIONAL AND BIDIRECTIONAL TRANSIENT VOLTAGE SUPPRESSORS**

REVERSE VOLTAGE - **6.8 to 440** Volts  
POWER DISSIPATION - **400** WATTS

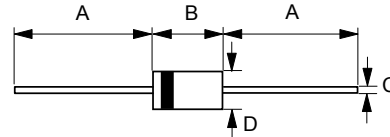
**FEATURES**

- Glass passivated chip
- Low leakage
- Uni and Bidirectional unit
- Excellent clamping capability
- The plastic material has U/L recognition 94V-O
- Fast response time

**MECHANICAL DATA**

- Case : Molded Plastic
- Marking : Unidirectional - type number and cathode band Bidirectional - type number only
- Weight : 0.34 grams

**DO-41**



DO-41		
Dim.	Min.	Max.
A	25.4	-
B	4.10	5.20
C	0.71 $\varnothing$	0.86 $\varnothing$
D	2.00 $\varnothing$	2.70 $\varnothing$
All Dimensions in millimeter		

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

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

CHARACTERISTICS	SYMBOLS	VALUE	UNIT
PEAK POWER DISSIPATION AT TA = 25 °C , TP = 1ms (Note 1)	PPK	400	WATTS
Peak Forward Surge Current 8.3ms single half sine-wave @TJ = 25 °C (Note 2)	IFSM	40	AMPS.
Steady State Power Dissipation at TL =120 °C lead lengths 0.375" (9.5mm) , see fig. 4	PM(AV)	1.5	WATTS
Maximum Instantaneous forward voltage at 25A for unidirectional devices only (Note 3)	VF	SEE NOTE 3	Volts
Operating Temperature Range	TJ	-55 to +175	°C
Storage Temperature Range	TSTG	-55 to +175	°C

NOTES : 1. Non-repetitive current pulse, per fig. 5 and derated above TA= 25 °C per fig. 1  
2. 8.3ms single half sine-wave duty cycle= 4 pulses per minutes maximum (uni-directional units only).  
3. VF= 3.5V on P4KE6.8 thru P4KE200A devices and VF= 5.0V on P4KE220 thru P4KE440A devices.

FIG.1 - PULSE DERATING CURVE

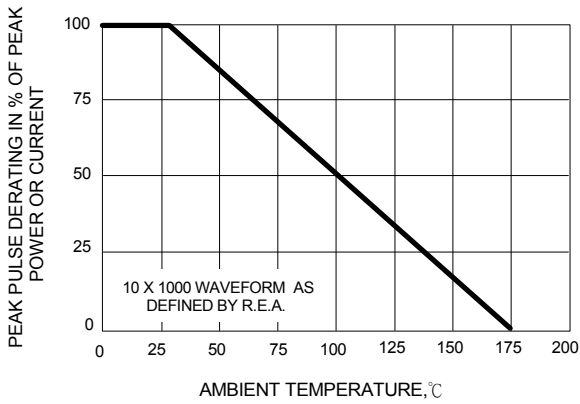


FIG.2 - TYPICAL JUNCTION CAPACITANCE

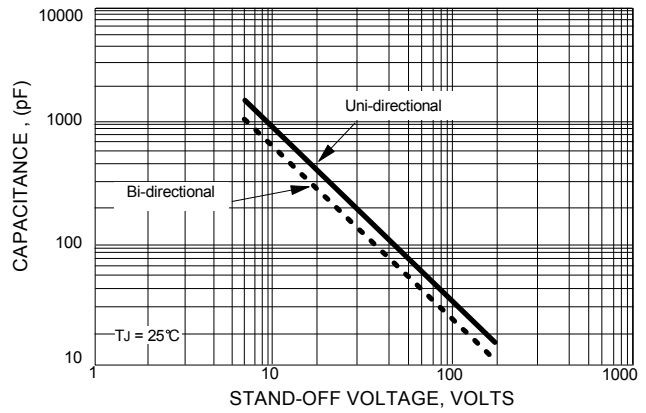


FIG.3 - PULSE RATING CURVE

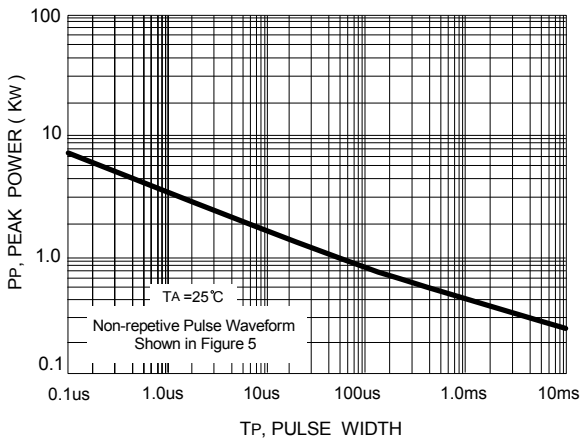


FIG.4 - STEADY STATE POWER DERATING CURVE

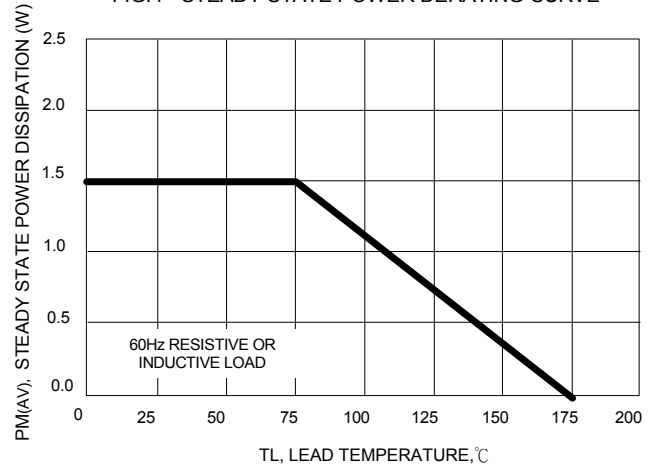
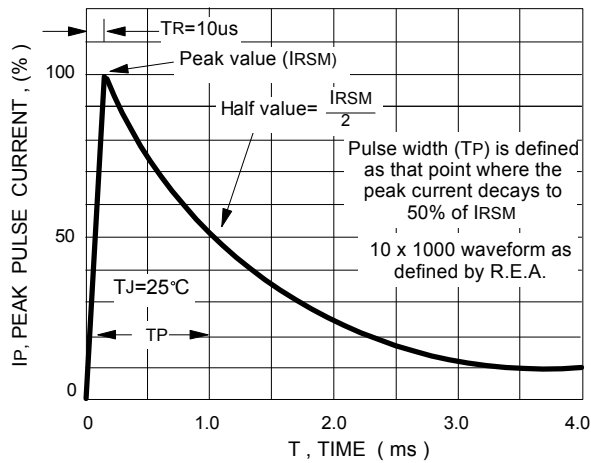


FIG.5 - PULSE WAVEFORM



Type Number	Type Number	Reverse Standoff Voltage	Breakdown Voltage BV Volts @It			Max. Reverse Leakage @VR	Max. Clamping Voltage @Ipp	Max. Peak Pulse Current
			(UNI)	(BI)	VR (V)			
P4KE6.8A	P4KE6.8CA	5.80	6.45	7.13	10	1000	10.5	38.1
P4KE7.5A	P4KE7.5CA	6.40	7.13	7.88	10	500	11.3	35.4
P4KE8.2A	P4KE8.2CA	7.02	7.79	8.61	10	200	12.1	33.1
P4KE9.1A	P4KE9.1CA	7.78	8.65	9.56	1	50	13.4	29.9
P4KE10A	P4KE10CA	8.55	9.50	10.50	1	10	14.5	27.6
P4KE11A	P4KE11CA	9.40	10.5	11.6	1	5	15.6	25.6
P4KE12A	P4KE12CA	10.20	11.40	12.6	1	5	16.7	24.0
P4KE13A	P4KE13CA	11.1	12.4	13.7	1	5	18.2	22.0
P4KE15A	P4KE15CA	12.8	14.3	15.8	1	5	21.2	18.9
P4KE16A	P4KE16CA	13.6	15.2	16.8	1	5	22.5	17.8
P4KE18A	P4KE18CA	15.3	17.1	18.9	1	5	25.2	15.9
P4KE20A	P4KE20CA	17.1	19.0	21.0	1	5	27.7	14.4
P4KE22A	P4KE22CA	18.8	20.9	23.1	1	5	30.6	13.1
P4KE24A	P4KE24CA	20.5	22.8	25.2	1	5	33.2	12.0
P4KE27A	P4KE27CA	23.1	25.7	28.4	1	5	37.5	10.7
P4KE30A	P4KE30CA	25.6	28.5	31.5	1	5	41.4	9.7
P4KE33A	P4KE33CA	28.2	31.4	34.7	1	5	45.7	8.8
P4KE36A	P4KE36CA	30.8	34.2	37.8	1	5	49.9	8.0
P4KE39A	P4KE39CA	33.3	37.1	41.0	1	5	53.9	7.4
P4KE43A	P4KE43CA	36.8	40.9	45.2	1	5	59.3	6.7
P4KE47A	P4KE47CA	40.2	44.7	49.4	1	5	64.8	6.2
P4KE51A	P4KE51CA	43.6	48.5	53.6	1	5	70.1	5.7
P4KE56A	P4KE56CA	47.8	53.2	58.8	1	5	77.0	5.2
P4KE62A	P4KE62CA	53.0	58.9	65.1	1	5	85.0	4.7
P4KE68A	P4KE68CA	58.1	64.6	71.4	1	5	92.0	4.3
P4KE75A	P4KE75CA	64.7	71.3	78.8	1	5	103.0	3.9
P4KE82A	P4KE82CA	70.1	77.9	86.1	1	5	113.0	3.5
P4KE91A	P4KE91CA	77.8	86.5	95.6	1	5	125.0	3.2
P4KE100A	P4KE100CA	85.5	95.0	105.0	1	5	137.0	2.9
P4KE110A	P4KE110CA	94.0	105.0	116.1	1	5	152.0	2.6
P4KE120A	P4KE120CA	102.0	114.0	126.0	1	5	165.0	2.4
P4KE130A	P4KE130CA	111.0	124.0	137.1	1	5	179.0	2.2
P4KE150A	P4KE150CA	128.0	143.0	158.1	1	5	207.0	1.9
P4KE160A	P4KE160CA	136.0	152.0	168.0	1	5	219.0	1.8
P4KE170A	P4KE170CA	145.0	162.0	179.1	1	5	234.0	1.7
P4KE180A	P4KE180CA	154.0	171.0	189.0	1	5	246.0	1.6
P4KE200A	P4KE200CA	171.0	190.0	210.0	1	5	274.0	1.5
P4KE220A	P4KE220CA	185.0	209.0	231.0	1	5	328.0	1.2
P4KE250A	P4KE250CA	214.0	237.0	262.0	1	5	344.0	1.2
P4KE300A	P4KE300CA	256.0	285.0	315.0	1	5	414.0	1.0
P4KE350A	P4KE350CA	300.0	332.0	367.0	1	5	482.0	0.83
P4KE400A	P4KE400CA	342.0	380.0	420.0	1	5	548.0	0.73
P4KE440A	P4KE440CA	376.0	418.0	462.0	1	5	602.0	0.66

**NOTE :**

Suffix 'C' denotes bidirectional device. Suffix 'A' denotes 5% tolerance device.

1. For bidirectional devices having VR of 10 volts and under, the IR limit is doubled .

2. For unidirectional devices P4KE6.8 to P4KE200A, VFmax = 3.5V at IF=25A 300us square wave pulse.

For unidirectional devices P4KE220 to P4KE440A, VFmax = 5.0V at IF=25A 300us square wave pulse.