

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

REVERSE VOLTAGE - **6.8 to 440** Volts  
POWER DISSIPATION - **600** WATTS

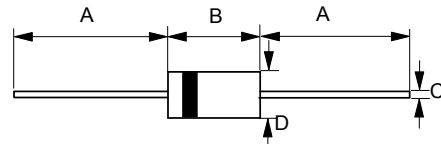
**FEATURES**

- Glass passivated chip
- Low leakage
- Uni and Bidirectional unit
- Excellent clamping capability
- The plastic material has U/L recognition 94V-0
- Fast response time
- For Electric Meter

**MECHANICAL DATA**

- Case : Molded Plastic
- Marking : Unidirectional - type number and cathode band Bidirectional - type number only
- Weight : 0.4 grams

**DO-15**



DO-15		
Dim.	Min.	Max.
A	25.4	-
B	5.80	7.60
C	0.71 $\phi$	0.86 $\phi$
D	2.60 $\phi$	3.60 $\phi$
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	600	WATTS
Peak Forward Surge Current 8.3ms single half sine-wave @ TA = 25°C (Note 2)	IFSM	80	AMPS.
Steady State Power Dissipation at TL =120°C lead lengths 0.375" (9.5mm) , see fig. 4	PM(AV)	2.0	WATTS
Maximum Instantaneous forward voltage at 50A for unidirectional devices only	VF	3.5	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 TJ= 25°C per fig. 1

2. 8.3ms single half sine-wave duty cycle= 4 pulses per minutes maximum (uni-directional units only).

REV. 2, Nov-2010, KDID04

FIG.1 - PULSE DERATING CURVE

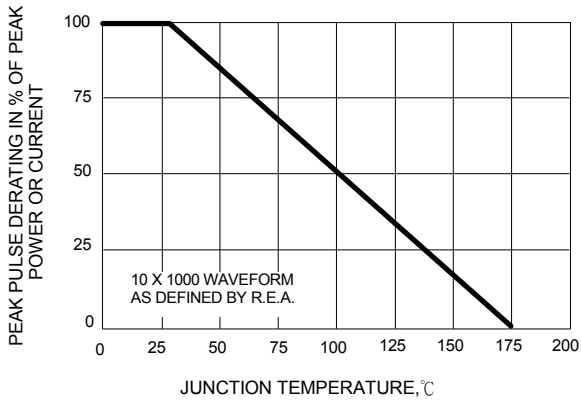


FIG.2 - TYPICAL JUNCTION CAPACITANCE

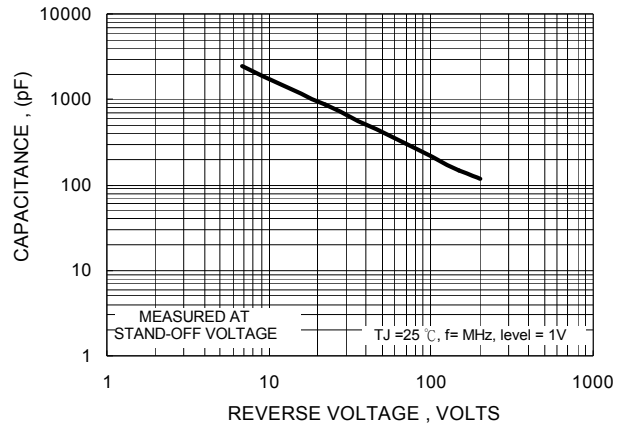


FIG.3 - PULSE RATING CURVE

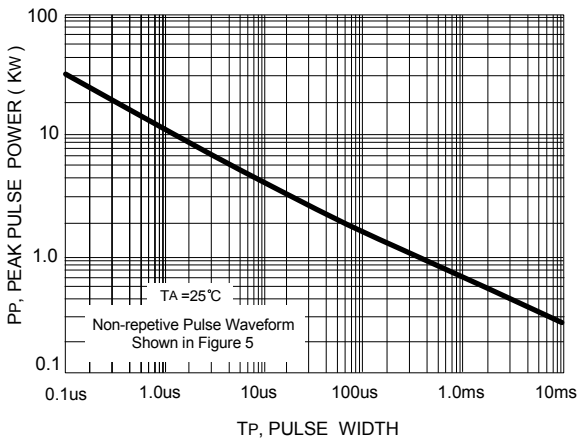


FIG.4 - STEADY STATE POWER DERATING CURVE

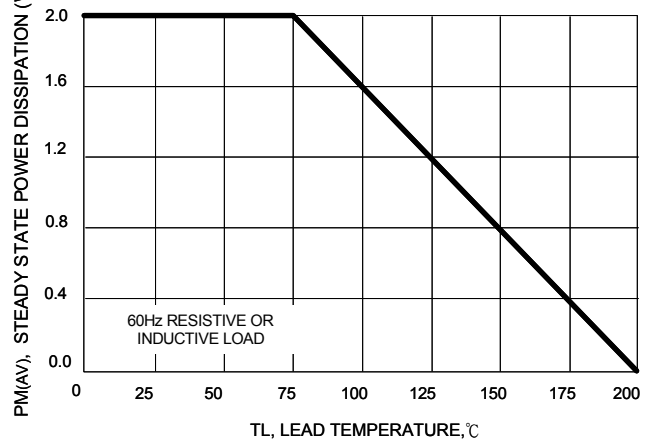
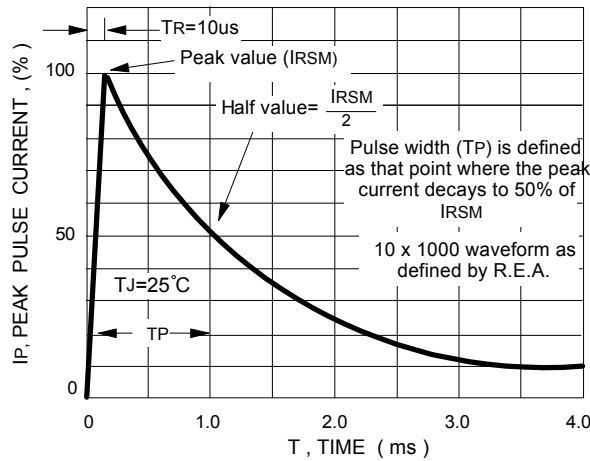


FIG.5 - PULSE WAVEFORM



Type Number	Type Number	Reverse Standoff Voltage	Breakdown Voltage BV Volts @It			Max. Reverse Leakage @VR	Max. Peak Pulse Current	Max. Clamping Voltage @Ipp
			(UNI)	(BI)	VR (V)			
EP6KE6.8A	EP6KE6.8CA	5.8	6.45	7.13	10	1000	57.1	10.5
EP6KE7.5A	EP6KE7.5CA	6.4	7.13	7.88	10	500	53.1	11.3
EP6KE8.2A	EP6KE8.2CA	7.0	7.79	8.61	10	200	49.6	12.1
EP6KE9.1A	EP6KE9.1CA	7.8	8.65	9.56	1	50	44.8	13.4
EP6KE10A	EP6KE10CA	8.6	9.50	10.50	1	10	41.4	14.5
EP6KE11A	EP6KE11CA	9.4	10.5	11.6	1	5	38.5	15.6
EP6KE12A	EP6KE12CA	10.2	11.4	12.6	1	5	35.9	16.7
EP6KE13A	EP6KE13CA	11.1	12.4	13.7	1	5	33.0	18.2
EP6KE15A	EP6KE15CA	12.8	14.3	15.8	1	5	28.3	21.2
EP6KE16A	EP6KE16CA	13.6	15.2	16.8	1	5	26.7	22.5
EP6KE18A	EP6KE18CA	15.3	17.1	18.9	1	5	23.8	25.2
EP6KE20A	EP6KE20CA	17.1	19.0	21.0	1	5	21.7	27.7
EP6KE22A	EP6KE22CA	18.8	20.9	23.1	1	5	19.6	30.6
EP6KE24A	EP6KE24CA	20.5	22.8	25.2	1	5	18.1	33.2
EP6KE27A	EP6KE27CA	23.1	25.7	28.4	1	5	16.0	37.5
EP6KE30A	EP6KE30CA	25.6	28.5	31.5	1	5	14.5	41.4
EP6KE33A	EP6KE33CA	28.2	31.4	34.7	1	5	13.1	45.7
EP6KE36A	EP6KE36CA	30.8	34.2	37.8	1	5	12.0	49.9
EP6KE39A	EP6KE39CA	33.3	37.1	41.0	1	5	11.1	53.9
EP6KE43A	EP6KE43CA	36.8	40.9	45.2	1	5	10.1	59.3
EP6KE47A	EP6KE47CA	40.2	44.7	49.4	1	5	9.3	64.8
EP6KE51A	EP6KE51CA	43.6	48.5	53.6	1	5	8.6	70.1
EP6KE56A	EP6KE56CA	47.8	53.2	58.8	1	5	7.8	77.0
EP6KE62A	EP6KE62CA	53.0	58.9	65.1	1	5	7.1	85.0
EP6KE68A	EP6KE68CA	58.1	64.6	71.4	1	5	6.5	92.0
EP6KE75A	EP6KE75CA	64.7	71.3	78.8	1	5	5.8	103.0
EP6KE82A	EP6KE82CA	70.1	77.9	86.1	1	5	5.3	113.0
EP6KE91A	EP6KE91CA	77.8	86.5	95.6	1	5	4.8	125.0
EP6KE100A	EP6KE100CA	85.5	95.0	105.0	1	5	4.4	137.0
EP6KE110A	EP6KE110CA	94.0	105.0	116.1	1	5	3.9	152.0
EP6KE120A	EP6KE120CA	102.0	114.0	126.0	1	5	3.6	165.0
EP6KE130A	EP6KE130CA	111.0	124.0	137.1	1	5	3.4	179.0
EP6KE150A	EP6KE150CA	128.0	143.0	158.1	1	5	2.9	207.0
EP6KE160A	EP6KE160CA	136.0	152.0	168.0	1	5	2.7	219.0
EP6KE170A	EP6KE170CA	145.0	162.0	179.1	1	5	2.6	234.0
EP6KE180A	EP6KE180CA	154.0	171.0	189.0	1	5	2.4	246.0
EP6KE200A	EP6KE200CA	171.0	190.0	210.0	1	5	2.2	274.0
EP6KE220A	EP6KE220CA	185.0	209.0	231.0	1	5	1.8	328.0
EP6KE250A	EP6KE250CA	214.0	237.0	262.0	1	5	1.7	344.0
EP6KE300A	EP6KE300CA	256.0	285.0	315.0	1	5	1.4	414.0
EP6KE350A	EP6KE350CA	300.0	332.0	367.0	1	5	1.2	482.0
EP6KE400A	EP6KE400CA	342.0	380.0	420.0	1	5	1.1	548.0
EP6KE440A	EP6KE440CA	376.0	418.0	462.0	1	5	1.0	600.0

**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 EP6KE6.8A to EP6KE200A, VFmax = 3.5V at IF=50A 300us square wave pulse.  
For unidirectional devices EP6KE220A to EP6KE440A, VFmax = 5.0V at IF=50A 300us square wave pulse.

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