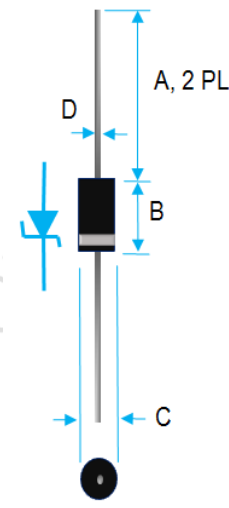


## 600W AXIAL LEADED TRANSIENT VOLTAGE SUPPRESSORS, 6.8V – 480V

 <table border="1" data-bbox="341 441 730 630"> <thead> <tr> <th colspan="3">Value Inch[mm]</th> </tr> <tr> <th>Dim.</th> <th>Min.</th> <th>Max.</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>1.000[25.40]</td> <td>---</td> </tr> <tr> <td>B</td> <td>0.230[5.84]</td> <td>0.300[7.62]</td> </tr> <tr> <td>C</td> <td>0.104[2.64]</td> <td>0.140[3.56]</td> </tr> <tr> <td>D</td> <td>0.028[0.71]</td> <td>0.034[0.86]</td> </tr> </tbody> </table>	Value Inch[mm]			Dim.	Min.	Max.	A	1.000[25.40]	---	B	0.230[5.84]	0.300[7.62]	C	0.104[2.64]	0.140[3.56]	D	0.028[0.71]	0.034[0.86]	<h3>PRODUCT FEATURES</h3> <ol style="list-style-type: none"> <li>1. FLAMMABILITY CLASSIFICATION 94V-0</li> <li>2. GLASS PASSIVATED CHIP JUNCTION</li> <li>3. 600W PEAK PULSE POWER CAPABILITY WITH A 10/1000 <math>\mu</math>S WAVEFORM, REPETITION RATE (DUTY CYCLE): 0.01%.</li> <li>4. EXCELLENT CLAMPING CAPABILITY</li> <li>5. FAST RESPONSE TIME FROM 0V TO <math>V_{BR}</math>, TYPICALLY &lt;1 pS FOR UNI-DIRECTIONAL &amp; &lt;5nS FOR BI-DIRECTIONAL</li> <li>6. POLARITY: INDICATED BY CATHODE BAND</li> <li>7. MOLDED PLASTIC CASE DO-15</li> <li>8. DIMENSIONS IN INCHES AND (MILLIMETERS)</li> <li>9. LEADS: SOLDERABILITY PER MIL-STD-202 METHOD 208</li> <li>10. WEIGHT: 0.40 GRAMS</li> <li>11. RoHS COMPLIANT. ADD SUFFIX "-H" FOR HALOGEN FREE PART. i.e. P6KE6.8A-H.</li> </ol>
Value Inch[mm]																			
Dim.	Min.	Max.																	
A	1.000[25.40]	---																	
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C	0.104[2.64]	0.140[3.56]																	
D	0.028[0.71]	0.034[0.86]																	

## ELECTRICAL CHARACTERISTICS

MAXIMUM RATINGS ( $T_A = 25^\circ\text{C}$  UNLESS OTHERWISE NOTED)

PARAMETER	CONDITIONS	SYMBOL	UNIT
PEAK POWER DISSIPATION	WITH A 10/1000 $\mu$ S WAVEFORM, SEE NOTE 1 & FIG.1	$P_{PPM}$	600 W
PEAK PULSE CURRENT	WITH A 10/1000 $\mu$ S WAVEFORM, SEE NOTE 1 & FIG.1	$I_{PPM}$	SEE TABLE A
STEADY STATE POWER DISSIPATION	AT $T_L = 75^\circ\text{C}$ , LEAD LENGTH 0.375" (9.5mm)	$P_{M(AV)}$	5.0 W
PEAK FORWARD SURGE CURRENT	8.3ms SINGLE HALF SINE-WAVE (JEDEC METHOD), SEE NOTE 2	$I_{FSM}$	100 A
MAXIMUM INSTANTANEOUS FORWARD VOLTAGE	AT 50A FOR UNI-DIRECTIONAL ONLY, SEE NOTE 3	$V_F$	3.5/5.0 V
OPERATING JUNCTION TEMPERATURE RANGE		$T_J$	-55 TO +150 $^\circ\text{C}$
STORAGE TEMPERATURE RANGE		$T_{STG}$	-55 TO +150 $^\circ\text{C}$

Note : 1. Non-repetitive current pulse, per fig. 3 and derated above  $T_A = 25^\circ\text{C}$  per fig. 2

2. Measured on 8.3 ms single half sine-wave or equivalent square wave, duty cycle=4 pulses per minute maximum

3.  $V_F < 3.5\text{V}$  max. for devices of  $V_{BR} < 200\text{V}$ , and  $V_F < 5.0\text{V}$  max. for devices of  $V_{BR} > 201\text{V}$

Part No.	Reverse Stand-off Voltage	Breakdown Voltage @ $I_T$		Test Current	Maximum Clamping Voltage @ $I_{PP}$		Maximum Reverse Leakage Current
	$V_{RWM}$	$V_{BR}$ Min	$V_{BR}$ Max	$I_T$	$V_C @ I_{PP}$		$I_R @ V_{RWM}$
	Volts	Volts	Volts	mA	Volts	$I_{PP}$ (A)	$\mu\text{A}$
P6KE6.8(C)A	5.80	6.45	7.14	10	10.5	57.0	1000
P6KE7.5(C)A	6.40	7.13	7.88	10	11.3	53.0	500
P6KE8.2(C)A	7.02	7.79	8.61	10	12.1	50.0	200



# P6KE\_SERIES SPECIFICATION

Rev. A

Part No.	Reverse Stand-off Voltage	Breakdown Voltage @I <sub>T</sub>		Test Current	Maximum Clamping Voltage @I <sub>PP</sub>		Maximum Reverse Leakage Current
	V <sub>RWM</sub>	V <sub>BR</sub> Min	V <sub>BR</sub> Max	I <sub>T</sub>	V <sub>C</sub> @I <sub>PP</sub>		I <sub>R</sub> @V <sub>RWM</sub>
	Volts	Volts	Volts	mA	Volts	I <sub>PP</sub> (A)	uA
P6KE9.1(C)A	7.78	8.65	9.55	1.0	13.4	45.0	50
P6KE10(C)A	8.55	9.50	10.5	1.0	14.5	41.0	10
P6KE11(C)A	9.40	10.5	11.6	1.0	15.6	38.0	5
P6KE12(C)A	10.2	11.4	12.6	1.0	16.7	36.0	5
P6KE13(C)A	11.1	12.4	13.7	1.0	18.2	33.0	5
P6KE15(C)A	12.8	14.3	15.8	1.0	21.2	28.0	5
P6KE16(C)A	13.6	15.2	16.8	1.0	22.5	27.0	5
P6KE18(C)A	15.3	17.1	18.9	1.0	25.5	24.0	5
P6KE20(C)A	17.1	19.0	21.0	1.0	27.7	22.0	5
P6KE22(C)A	18.8	20.9	23.1	1.0	30.6	20.0	5
P6KE24(C)A	20.5	22.8	25.2	1.0	33.2	18.0	5
P6KE27(C)A	23.1	25.7	28.4	1.0	37.5	16.0	5
P6KE30(C)A	25.6	28.5	31.5	1.0	41.4	14.4	5
P6KE33(C)A	28.2	31.4	34.7	1.0	45.7	13.2	5
P6KE36(C)A	30.8	34.2	37.8	1.0	49.9	12.0	5
P6KE39(C)A	33.3	37.1	41.0	1.0	53.9	11.2	5
P6KE43(C)A	36.8	40.9	45.2	1.0	59.3	10.1	5
P6KE47(C)A	40.2	44.7	49.4	1.0	64.8	9.3	5
P6KE51(C)A	43.6	48.5	53.6	1.0	70.1	8.6	5
P6KE56(C)A	47.8	53.2	58.8	1.0	77.0	7.8	5
P6KE62(C)A	53.0	58.9	65.1	1.0	85.0	7.1	5
P6KE68(C)A	58.1	64.6	71.4	1.0	92.0	6.5	5
P6KE75(C)A	64.1	71.3	78.8	1.0	103.0	5.8	5
P6KE82(C)A	70.1	77.9	86.1	1.0	113.0	5.3	5
P6KE91(C)A	77.8	86.5	95.5	1.0	125.0	4.8	5
P6KE100(C)A	85.5	95.0	105.0	1.0	137.0	4.4	5
P6KE110(C)A	94.0	105.0	116.0	1.0	152.0	4.0	5
P6KE120(C)A	102.0	114.0	126.0	1.0	165.0	3.6	5
P6KE130(C)A	111.0	124.0	137.0	1.0	179.0	3.3	5
P6KE150(C)A	128.0	143.0	158.0	1.0	207.0	2.9	5
P6KE160(C)A	136.0	152.0	168.0	1.0	219.0	2.7	5
P6KE170(C)A	145.0	162.0	179.0	1.0	234.0	2.6	5
P6KE180(C)A	154.0	171.0	189.0	1.0	246.0	2.4	5
P6KE200(C)A	171.0	190.0	210.0	1.0	274.0	2.2	5
P6KE220(C)A	185.0	209.0	231.0	1.0	328.0	1.83	5
P6KE250(C)A	214.0	237.0	263.0	1.0	344.0	1.75	5
P6KE300(C)A	256.0	285.0	315.0	1.0	414.0	1.45	5
P6KE350(C)A	300.0	332.0	368.0	1.0	482.0	1.25	5
P6KE400(C)A	342.0	380.0	420.0	1.0	548.0	1.10	5
P6KE440(C)A	376.0	418.0	462.0	1.0	602.0	1.00	5
P6KE480(C)A	408.0	456.0	504.0	1.0	658.0	0.90	5

Note: 1. V<sub>BR</sub> measured after I<sub>T</sub> applied for 300us, I<sub>T</sub>=square wave pulse or equivalent

- Surge current waveform per Fig. 3 and derated per Fig. 2
- For bi-directional types having  $V_{RWM}$  of 10 volts and less, the  $I_R$  limit is doubled
- Suffix 'C' denotes bi-directional devices. Suffix 'A' denotes 5% tolerance devices, no suffix denotes 10% tolerance devices.
- All terms and symbols are consistent with ANS/IEEE C62.35

## RATINGS AND CHARACTERISTIC CURVES

Fig.1 - PEAK PULSE POWER RATING CURVE

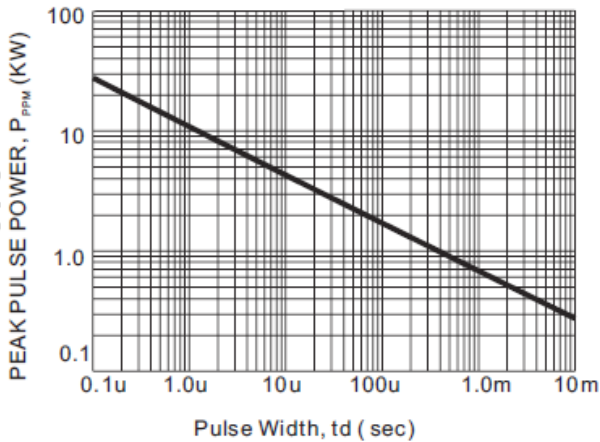


Fig.2 - PULSE DERATING CURVE

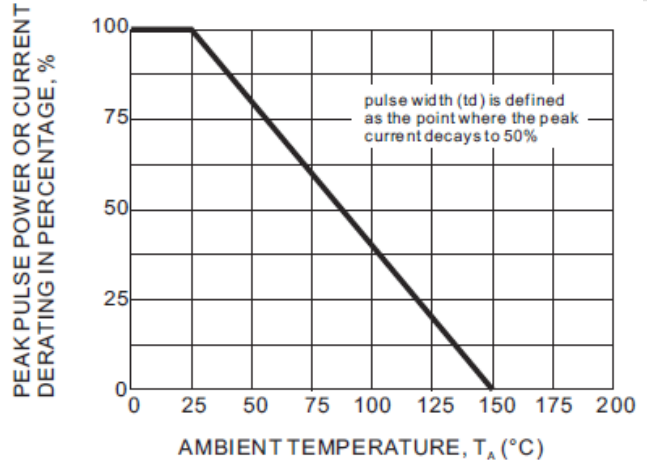


Fig.3 - PULSE WAVEFORM

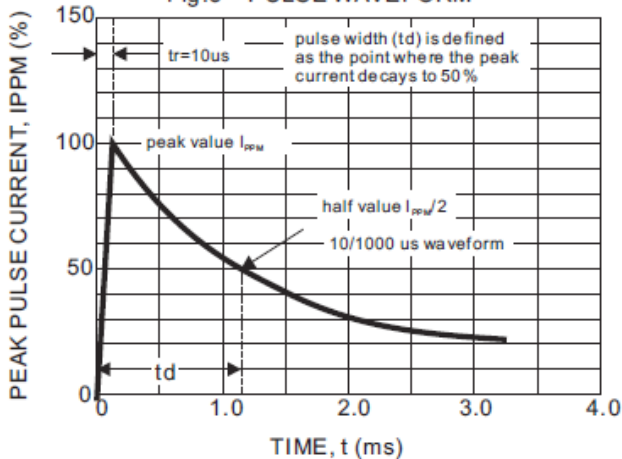


Fig.4 - TYPICAL JUNCTION CAPACITANCE

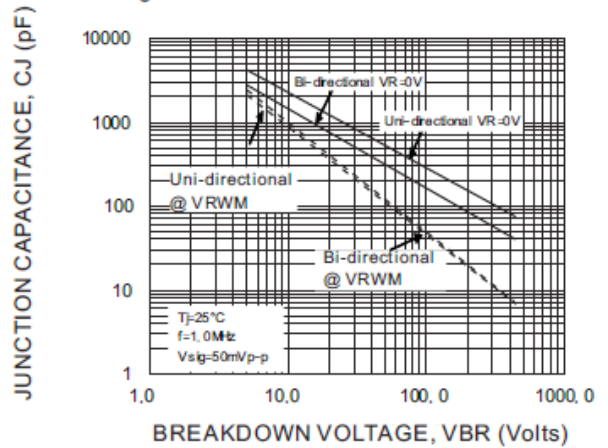


Fig.5 - STEADY STATE POWER DERATING CURVE

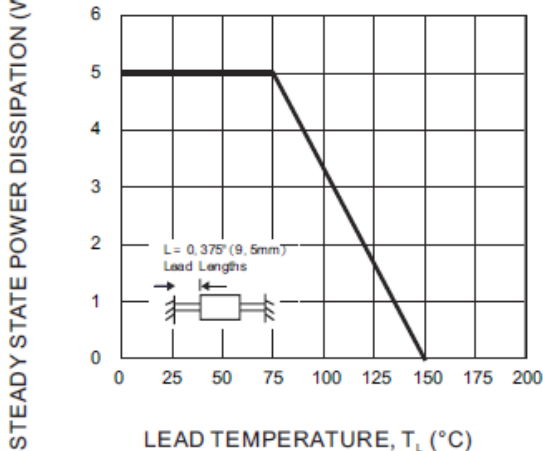


Fig.6 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

