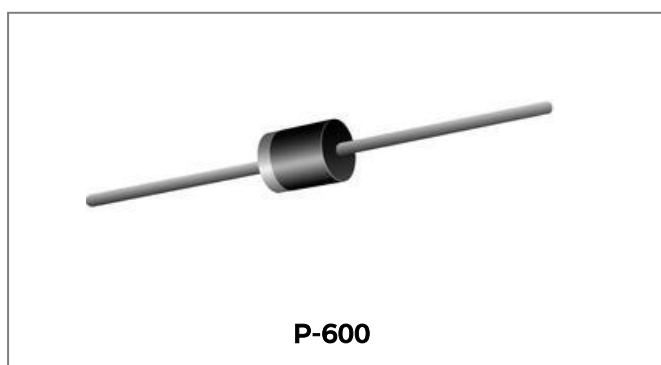


## 3KP SERIES GLASS PASSIVATED TRANSIENT VOLTAGE SUPPRESSOR



### Features

- Glass Passivated Die Construction
- 3000W Peak Pulse Power Dissipation
- 5.0- 170V Standoff Voltage
- Uni- and Bi-Directional Versions Available
- Excellent Clamping Capability
- Fast Response Time
- Plastic Case Material has UL Flammability Classification Rating 94V-O
- This is a Pb - Free Device
- All SMC Parts are Traceable to the Wafer Lot
- Additional testing can be offered upon request

### Circuit Diagram



**Unipolar**



**Bipolar**

### Mechanical Data

- Case: Molded Plastic over glass passivated junction
- Terminals: Axial leads , Solderable per MIL-STD 750, Method 2026
- Polarity: Cathode Band or Cathode Notch
- Mounting Position: Any
- Weight:2.1 grams(approx.)

### Maximum Ratings and Thermal Characteristics@T<sub>A</sub>=25°C unless otherwise specified

Parameter	Symbol	Value	Unit
Peak Pulse Power Dissipation at T <sub>A</sub> =25°C (Note 1,2,5) Figure 1	P <sub>PPM</sub>	3000	W
Steady State Power Dissipation (Note 2, 4)	P <sub>M(AV)</sub>	8.0	W
Peak Forward Surge Current, 8.3ms Single Half Sine Wave Unidirectional Only(Note 3)	I <sub>FSM</sub>	250	A
Typical Thermal Resistance Junction to Lead	R <sub>θJL</sub>	8	°C/W
Typical Thermal Resistance Junction to Ambient	R <sub>θJA</sub>	40	°C/W
Operating Junction and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-55 to 175	°C

- Notes:**
1. Non-repetitive current pulse, per Fig. 3 and derated above T<sub>A</sub> = 25°C per Fig. 2.
  2. Mounted on 20 mm<sup>2</sup> copper pad
  3. 8.3ms single half sine wave, or equivalent square, duty cycle=4 pulses per minute maximum.
  4. Lead temperature at 75 °C = T<sub>L</sub>
  5. Peak Pulse power waveform is 10x1000μs

Technical Data  
Data Sheet N0212, Rev. A



**Electrical Characteristics @T<sub>A</sub>=25°C unless otherwise specified**

UNI-POLAR	BI-POLAR	REVERSE STAND-OFF VOLTAGE V <sub>RWM</sub> (V)	BREAKDOWN VOLTAGE V <sub>BR</sub> (V) MIN. @I <sub>T</sub>	BREAKDOWN VOLTAGE V <sub>BR</sub> (V) MAX. @I <sub>T</sub>	TEST CURRENT I <sub>T</sub> (MA)	MAXIMUM CLAMPING VOLTAGE @I <sub>PP</sub> V <sub>C</sub> (V)	PEAK PULSE CURRENT I <sub>PP</sub> (A)	REVERSE LEAKAGE @V <sub>RWM</sub> I <sub>R</sub> (uA)
3KP5.0A	3KP5.0CA	5	6.4	7	50	9.2	326.1	2000
3KP6.0A	3KP6.0CA	6	6.67	7.37	50	10.3	291.3	2000
3KP6.5A	3KP6.5CA	6.5	7.22	7.98	50	11.2	267.9	1000
3KP7.0A	3KP7.0CA	7	7.78	8.6	50	12	250	400
3KP7.5A	3KP7.5CA	7.5	8.33	9.21	5	12.9	232.6	200
3KP8.0A	3KP8.0CA	8	8.89	9.83	5	13.6	220.6	100
3KP8.5A	3KP8.5CA	8.5	9.44	10.4	5	14.4	208.3	50
3KP9.0A	3KP9.0CA	9	10	11.1	5	15.4	194.8	20
3KP10A	3KP10CA	10	11.1	12.3	5	17	176.5	15
3KP11A	3KP11CA	11	12.2	13.5	5	18.2	164.8	10
3KP12A	3KP12CA	12	13.3	14.7	5	19.9	150.8	10
3KP13A	3KP13CA	13	14.4	15.9	5	21.5	139.5	10
3KP14A	3KP14CA	14	15.6	17.2	5	23.2	129.3	10
3KP15A	3KP15CA	15	16.7	18.5	5	24.4	123	10
3KP16A	3KP16CA	16	17.8	19.7	5	26	115.4	10
3KP17A	3KP17CA	17	18.9	20.9	5	27.6	108.7	10
3KP18A	3KP18CA	18	20	22.1	5	29.2	102.7	10
3KP20A	3KP20CA	20	22.2	24.5	5	32.4	92.6	10
3KP22A	3KP22CA	22	24.4	26.9	5	35.5	84.5	10
3KP24A	3KP24CA	24	26.7	29.5	5	38.9	77.1	10
3KP26A	3KP26CA	26	28.9	31.9	5	42.1	71.3	10
3KP28A	3KP28CA	28	31.1	34.4	5	45.4	66.1	10
3KP30A	3KP30CA	30	33.3	36.8	5	48.4	62	10
3KP33A	3KP33CA	33	36.7	40.6	5	53.3	56.3	10
3KP36A	3KP36CA	36	40	44.2	5	58.1	51.6	10
3KP40A	3KP40CA	40	44.4	49.1	5	64.5	46.5	10
3KP43A	3KP43CA	43	47.8	52.8	5	69.4	43.2	10
3KP45A	3KP45CA	45	50	55.3	5	72.7	41.3	10
3KP48A	3KP48CA	48	53.3	58.9	5	77.4	38.8	10
3KP51A	3KP51CA	51	56.7	62.7	5	82.4	36.4	10
3KP54A	3KP54CA	54	60	66.3	5	87.1	34.4	10
3KP58A	3KP58CA	58	64.4	71.2	5	93.6	32.1	10
3KP60A	3KP60CA	60	66.7	73.7	5	96.8	31	10
3KP64A	3KP64CA	64	71.1	78.6	5	103	29.1	10
3KP70A	3KP70CA	70	77.8	86	5	113	26.5	10
3KP75A	3KP75CA	75	83.3	92.1	5	121	24.8	10
3KP78A	3KP78CA	78	86.7	95.8	5	126	23.8	10
3KP85A	3KP85CA	85	94.4	104	5	137	21.9	10
3KP90A	3KP90CA	90	100	111	5	146	20.5	10
3KP100A	3KP100CA	100	111	123	5	162	18.5	10
3KP110A	3KP110CA	110	122	135	5	177	16.9	10
3KP120A	3KP120CA	120	133	147	5	193	15.5	10
3KP130A	3KP130CA	130	144	159	5	209	14.4	10
3KP150A	3KP150CA	150	167	185	5	243	12.3	10
3KP160A	3KP160CA	160	178	197	5	259	11.6	10
3KP170A	3KP170CA	170	189	209	5	275	10.9	10

For parts without A, the VBR is + 10% and VC is 5% higher than with A parts  
For bidirectional type having VR of 10 volts and less, the IR limit is double.

**Ratings and Characteristics Curves**

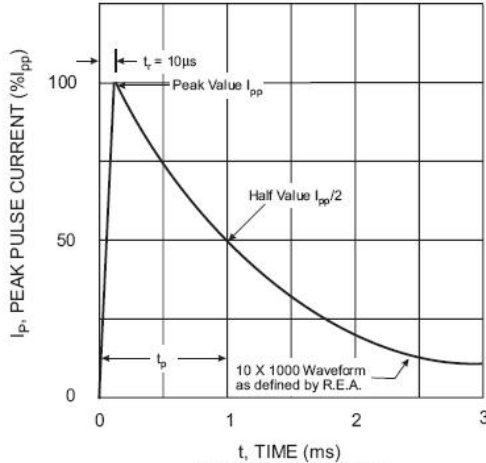


Fig. 1 Pulse Waveform

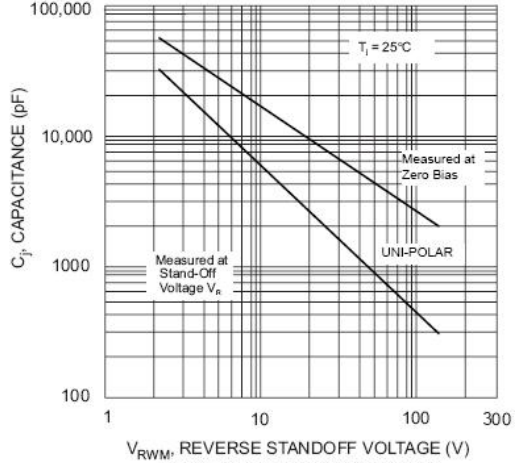


Fig. 2 Typical Junction Capacitance

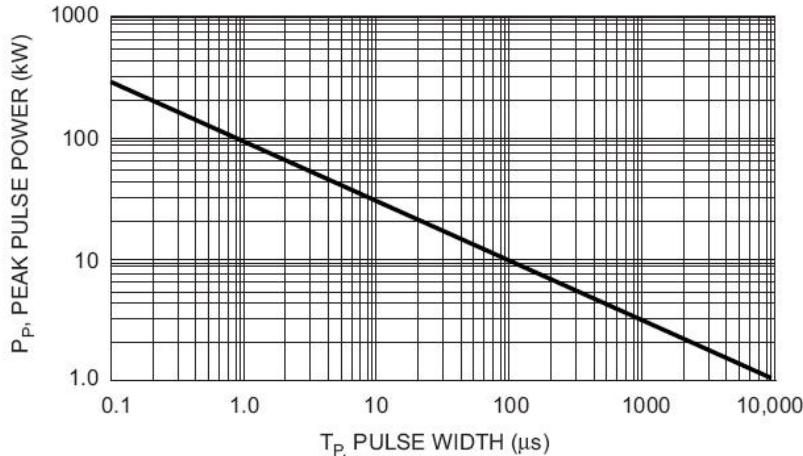


Fig. 3 Pulse Derating Curve

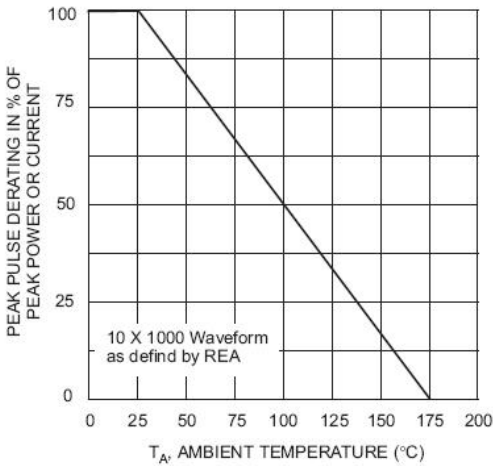


Fig. 4 Pulse Derating Curve

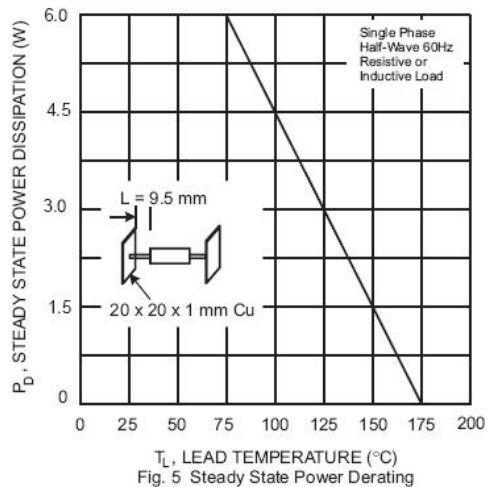
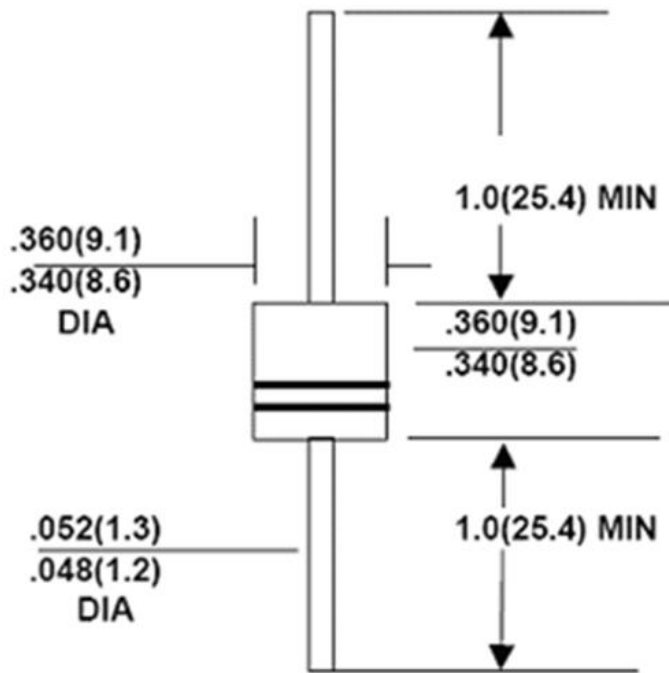


Fig. 5 Steady State Power Derating

**Mechanical Dimensions P-600(Inches/Millimeters)**

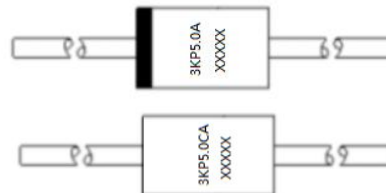


**Ordering Information**

Device	Package	Shipping
3KP SERIES	P-600(Pb-Free)	300pcs /tape
3KP SERIES TA	P-600(Pb-Free)	300pcs /tape

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

**Marking Diagram**

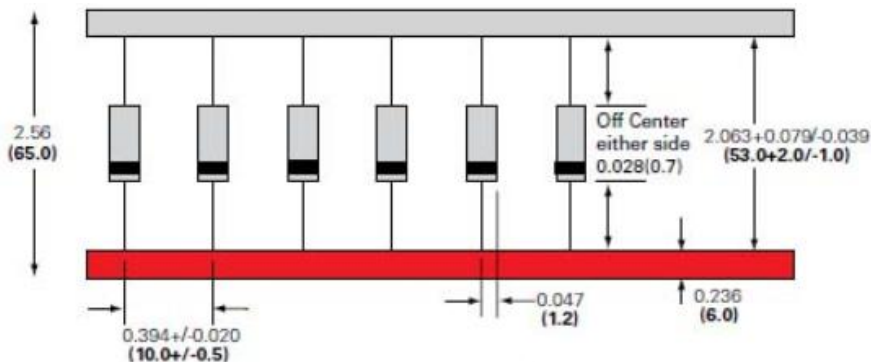


Where XXXXX is YYWWL

3KP5.0A/3KP5.0CA = Part Name  
YY = Year  
WW = Week  
L = Lot Number

**Cautions:** Molding resin  
Epoxy resin UL94V-0

**Carrier Tape Specification P-600**





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