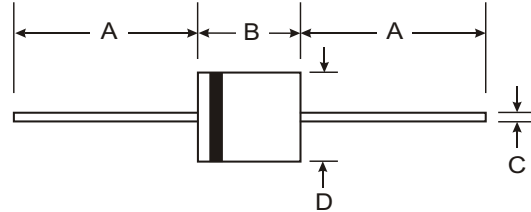


### Features

- 5000W Peak Pulse Power Dissipation
- 5.0V - 170V Standoff Voltages
- Glass Passivated Die Construction
- Uni- and Bi-directional Version Available
- Excellent Clamping Capability
- Fast Response Time
- Plastic Case Material has UL Flammability Classification Rating 94V-0



### Mechanical Data

- Case: 5KP/5KW, Transfer Molded Epoxy
- Terminals: Solderable per MIL-STD-202, Method 208
- Polarity Indicator: Cathode Band (Note: Bi-directional devices have no polarity indicator.)
- Marking: Type Number
- Weight: 2.1 grams (approx.)

Dim	5KP		5KW	
	Min	Max	Min	Max
A	25.40	—	25.40	—
B	—	8.60	—	9.00
C	0.95	1.07	1.20	1.30
D	—	9.53	—	8.00
All Dimensions in mm				

“S” Suffix Designates 5KW Package  
No “S” Designates 5KP Package

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

Characteristic	Symbol	Value	Unit
Peak Pulse Power Dissipation (Non repetitive current pulse derated above T <sub>A</sub> = 25°C) (Note 1)	P <sub>PK</sub>	5000	W
Peak Forward Surge Current, 8.3ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method) (Notes 1, 2, & 3)	I <sub>FSM</sub>	400	A
Steady State Power Dissipation at T <sub>L</sub> = 75°C, Lead Lengths @ 9.5mm (Note 1)	P <sub>D</sub>	8.0	W
Instantaneous Forward Voltage @ I <sub>PP</sub> = 100A (Notes 1, 2, & 3)	V <sub>F</sub>	3.5	V
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-55 to +150	°C

- Notes:
1. Valid provided that the terminals are maintained at a distance of 10mm from case at 25°C.
  2. Measured with 8.3ms single half sine-wave. Duty cycle = 4 pulses per minute maximum.
  3. Unidirectional units only.

Type Number Add C For Bi-Directional (Note 4)	Reverse Standoff Voltage $V_{RWM}$ (V)	Breakdown Voltage $V_{BR}$ @ $I_T$ (Note 5)		Test Current $I_T$ (mA)	Max. Reverse Leakage @ $V_{RWM}$ (Note 6) $I_R$ ( $\mu$ A)	Max. Clamping Voltage @ $I_{PP}$ $V_C$ (V)	Max. Peak Pulse Current $I_{PP}$ (A)	Max. Voltage Temp. Variation of $V_{BR}$ mV/ $^{\circ}$ C
		Min (V)	Max (V)					
5KP5.0(C)A	5.0	6.40	7.00	50	5000	9.2	543.0	4.0
5KP6.0(C)A	6.0	6.67	7.37	50	5000	10.3	485.0	4.0
5KP6.5(C)A	6.5	7.22	7.98	50	2000	11.2	447.0	4.0
5KP7.0(C)A	7.0	7.78	8.60	50	1000	12.0	417.0	5.0
5KP7.5(C)A	7.5	8.33	9.21	5.0	250	12.9	388.0	6.0
5KP8.0(C)A	8.0	8.89	9.83	5.0	150	13.6	367.0	6.0
5KP8.5(C)A	8.5	9.44	10.40	5.0	50	14.4	347.0	7.0
5KP9.0(C)A	9.0	10.00	11.10	5.0	20	15.4	325.0	8.0
5KP10(C)A	10.0	11.10	12.30	5.0	15	17.0	294.0	9.0
5KP11(C)A	11.0	12.20	13.50	5.0	10	18.2	274.0	10
5KP12(C)A	12.0	13.30	14.70	5.0	10	19.9	251.0	11
5KP13(C)A	13.0	14.40	15.90	5.0	10	21.5	232.0	12
5KP14(C)A	14.0	15.60	17.20	5.0	10	23.2	215.0	13
5KP15(C)A	15.0	16.70	18.50	5.0	10	24.4	206.0	15
5KP16(C)A	16.0	17.80	19.70	5.0	10	26.0	192.0	16
5KP17(C)A	17.0	18.90	20.90	5.0	10	27.6	181.0	18
5KP18(C)A	18.0	20.00	22.10	5.0	10	29.2	172.0	19
5KP20(C)A	20.0	22.20	24.50	5.0	10	32.4	154.0	22
5KP22(C)A	22.0	24.40	26.90	5.0	10	35.5	141.0	24
5KP24(C)A	24.0	26.70	29.50	5.0	10	38.9	128.0	27
5KP26(C)A	26.0	28.90	31.90	5.0	10	42.1	119.0	29
5KP28(C)A	28.0	31.10	34.40	5.0	10	45.5	110.0	30
5KP30(C)A	30.0	33.30	36.80	5.0	10	48.4	103.0	35
5KP33(C)A	33.0	36.70	40.60	5.0	10	53.3	94.0	38
5KP36(C)A	36.0	40.00	44.20	5.0	10	58.1	86.0	40
5KP40(C)A	40.0	44.40	49.10	5.0	10	64.5	78.0	45
5KP43(C)A	43.0	47.80	52.80	5.0	10	69.4	72.0	49
5KP45(C)A	45.0	50.00	55.30	5.0	10	72.7	69.0	51
5KP48(C)A	48.0	53.30	58.90	5.0	10	77.4	65.0	55
5KP51(C)A	51.0	56.70	62.70	5.0	10	82.4	61.0	60
5KP54(C)A	54.0	60.00	66.30	5.0	10	87.1	57.0	64
5KP58(C)A	58.0	64.40	71.20	5.0	10	93.6	53.0	69
5KP60(C)A	60.0	66.70	73.70	5.0	10	96.8	52.0	70
5KP64(C)A	64.0	71.10	78.60	5.0	10	103.0	49.0	75
5KP70(C)A	70.0	77.80	86.00	5.0	10	113.0	44.0	84
5KP75(C)A	75.0	83.30	92.10	5.0	10	121.0	41.0	90
5KP78(C)A	78.0	86.70	95.80	5.0	10	126.0	40.0	94
5KP85(C)A	85.0	94.40	104.00	5.0	10	137.0	36.0	102
5KP90(C)A	90.0	100.00	111.00	5.0	10	146.0	34.0	109
5KP100(C)A	100.0	111.00	123.00	5.0	10	162.0	31.0	122
5KP110(C)A	110.0	122.00	135.00	5.0	10	177.0	28.0	132
5KP120(C)A	120.0	133.00	148.00	5.0	10	194.0	25.0	140
5KP150(C)A	150.0	166.00	184.00	5.0	10	242.0	20.0	180
5KP180(C)A	180.0	200.00	222.00	5.0	10	292.0	17.0	218
5KP240(C)A	240.0	266.00	296.00	5.0	10	388.0	12.5	280

Notes: 4. Suffix C denotes Bi-directional device.  
5.  $V_{BR}$  measured with  $I_T$  current pulse = 300 $\mu$ s  
6. For Bi-Directional devices having  $V_{RWM}$  of 10V and under, the  $I_R$  is doubled.

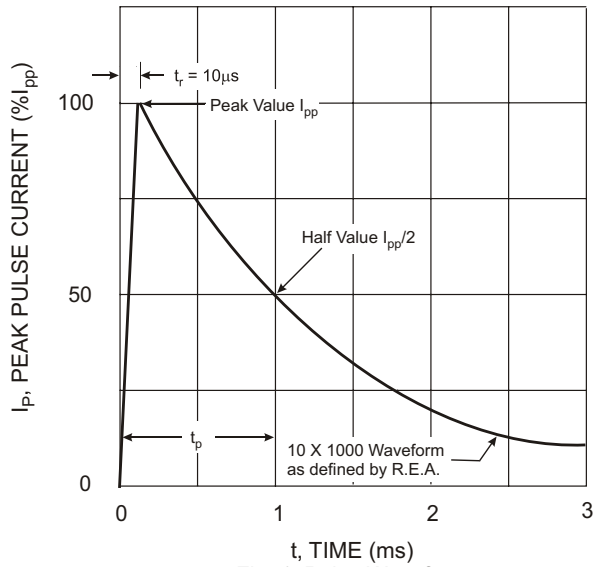


Fig. 1 Pulse Waveform

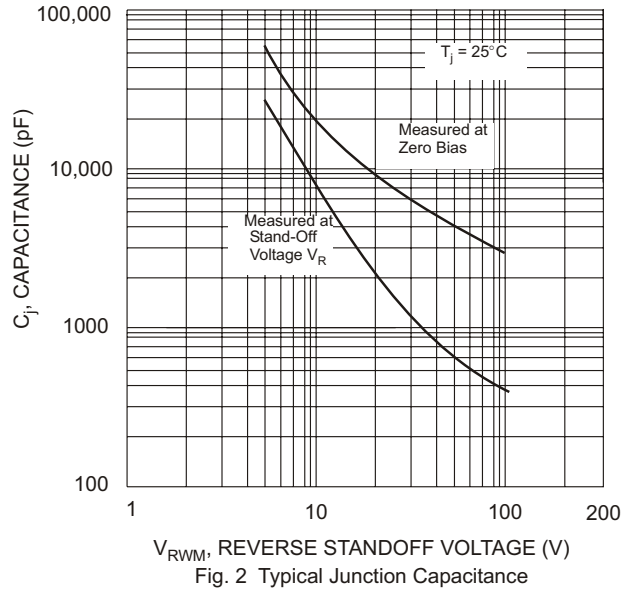


Fig. 2 Typical Junction Capacitance

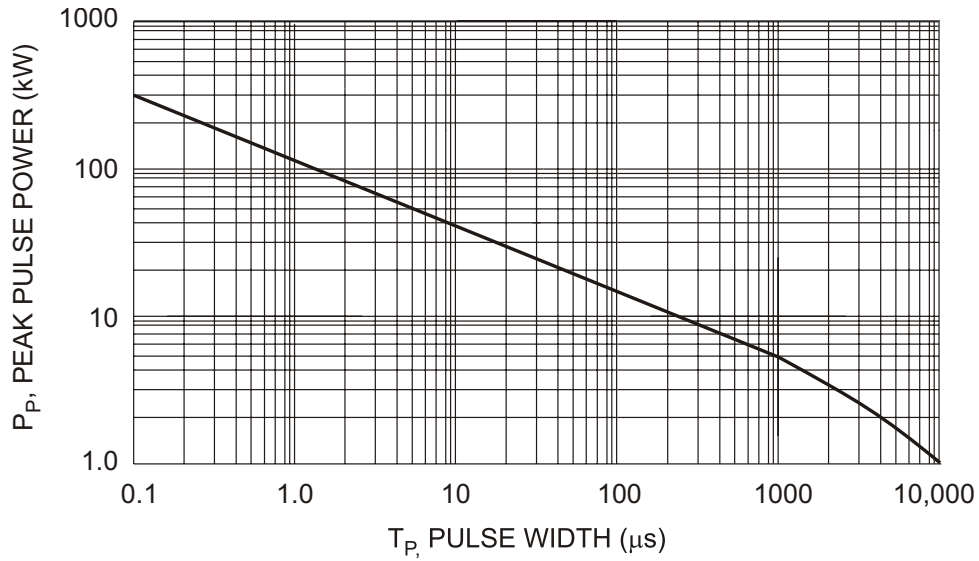


Fig. 3 Pulse Derating Curve

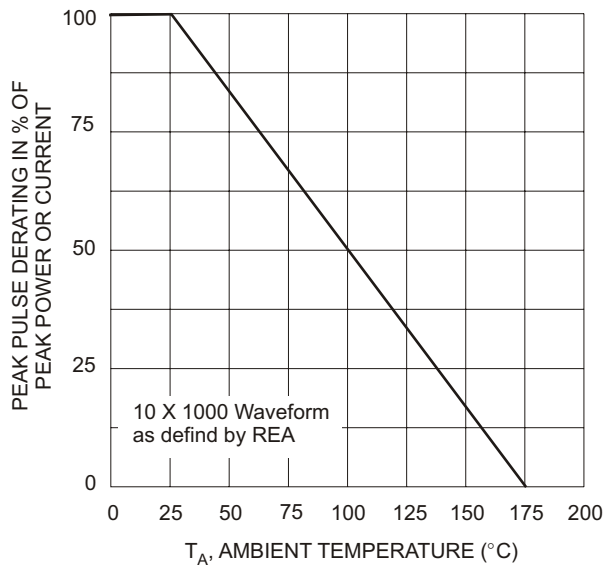


Fig. 4 Pulse Derating Curve

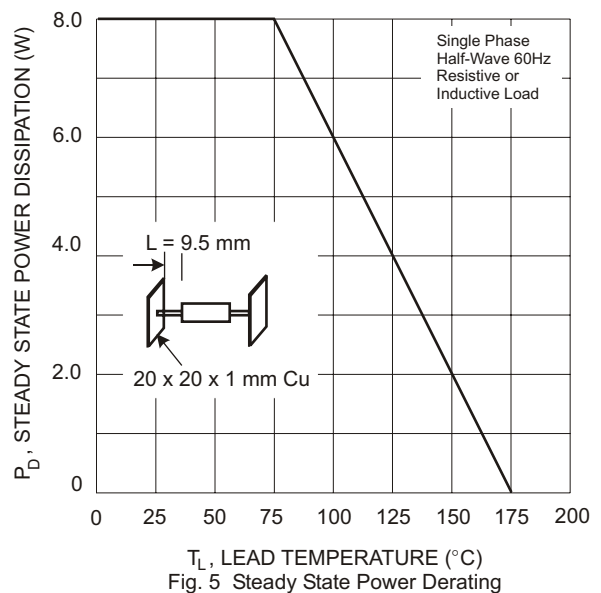


Fig. 5 Steady State Power Derating