

Reverse Voltage: 28 to 320 V
Peak Pulse Power: 30000 W

Axial Lead Transient Voltage Suppressors

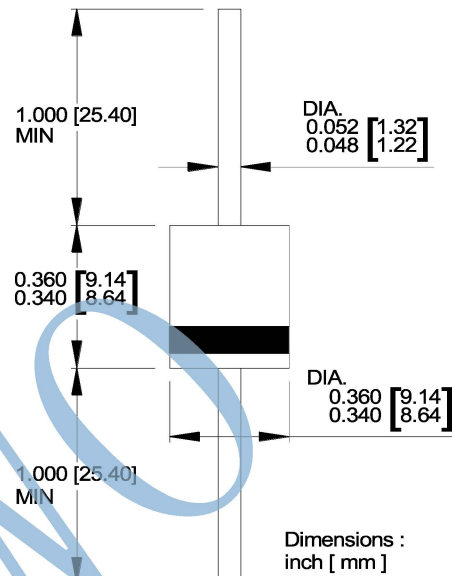
Features

- Glass passivated chip
- 30000 W peak pulse power capability with a 10/1000 μ s waveform, repetitive rate (duty cycle):0.01 %
- Low leakage
- Uni and Bidirectional unit
- Excellent clamping capability
- Very fast response time
- RoHS compliant

Mechanical Data

- Case: Molded plastic
- Epoxy: UL 94V-0 rate flame retardant
- Lead: Solderable per MIL-STD-202, method 208 guranteed
- Polarity: Color band denotes cathode end except Bipolar
- Mounting position: Any

R-6/P600



Maximum Ratings($T_A=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Value	UNIT
Peak power dissipation with a 10/1000 μ s waveform ⁽¹⁾	P_{PP}	30000	W
Peak pulse current with a 10/1000 μ s waveform ⁽¹⁾	I_{PP}	See Next Table	A
Power dissipation on infinite heatsink at $T_L = 75^\circ\text{C}$	P_D	8.0	W
Peak forward surge current, 8.3 ms single half sine-wave unidirectional only ⁽²⁾	I_{FSM}	500	A
Operating junction and storage temperature range	T_J, T_{STG}	-55 to +150	$^\circ\text{C}$

Note:

(1)Non-repetitive current pulse per Fig.5 and derated above $T_A = 25^\circ\text{C}$ per Fig.1

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

Ratings and Characteristics Curves ($T_A=25^\circ\text{C}$ unless otherwise noted)

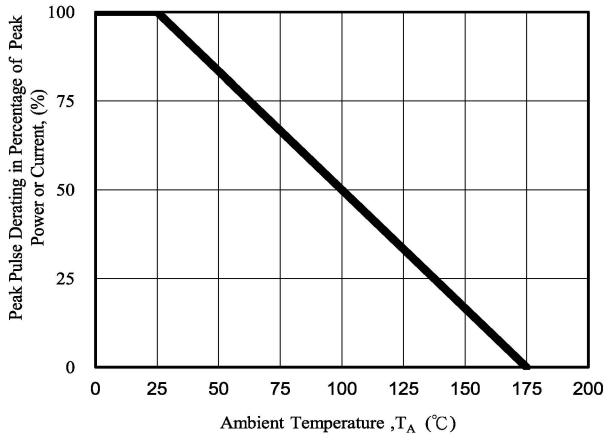


Fig. 1 - Pulse Derating Curve

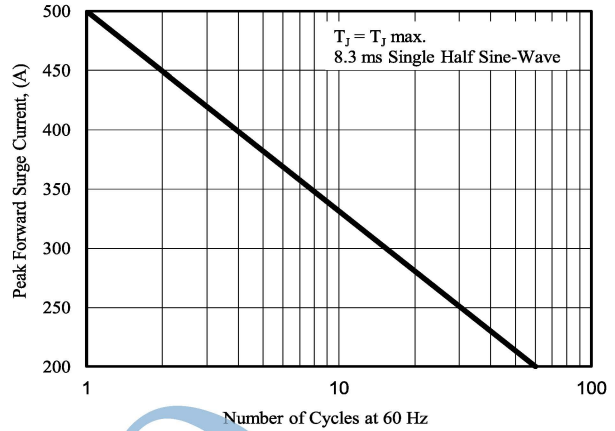


Fig. 2 - Maximum Non-Repetitive Surge Current

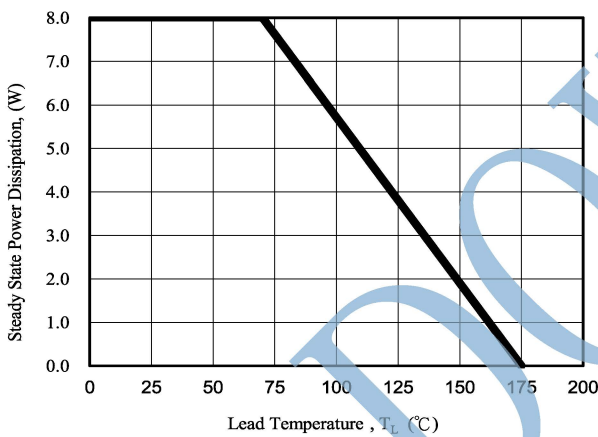


Fig. 3 - Steady State Power Derating Curve

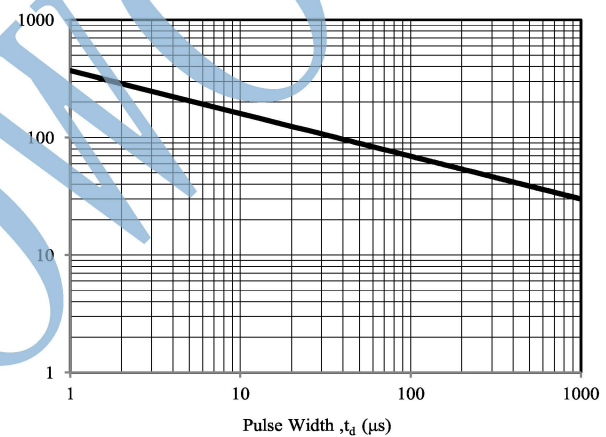


Fig. 4 - Peak Pulse Power Rating Curve

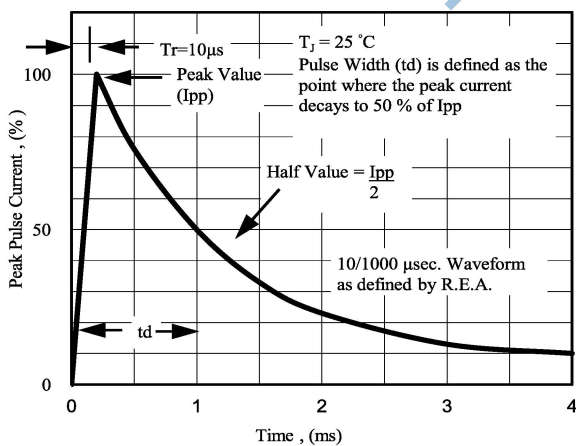


Fig. 5 - Pulse Waveform

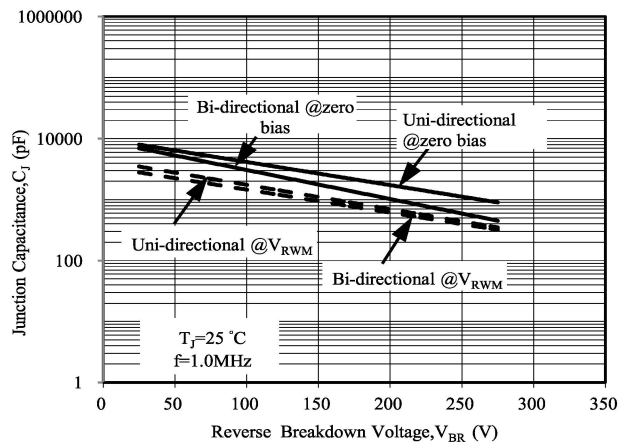


Fig. 6 - Typical Junction Capacitance

Electrical Characteristics($T_A=25^\circ\text{C}$ unless otherwise noted)

Part Number (Uni)	Part Number (Bi)	Breakdown Voltage V_{BR} @ I_T			Maximum Reverse Leakage I_R @ V_{RWM} (μA)	Working Peak Reverse Voltage V_{RWM} (V)	Maximum Reverse Surge Current I_{PP} (A)	Maximum Clamping Voltage V_C @ I_{PP} (V)
		Min (V)	Max(V)	I_T (mA)				
30KP28A	30KP28CA	31.28	34.41	50	5000	28	606.0	50.0
30KP30A	30KP30CA	33.51	36.86	50	5000	30	548.9	55.2
30KP33A	30KP33CA	36.90	40.59	50	5000	33	517.9	58.5
30KP36A	30KP36CA	40.20	44.22	50	5000	36	490.3	61.8
30KP39A	30KP39CA	43.60	47.96	20	2000	39	450.9	67.2
30KP42A	30KP42CA	46.90	51.59	10	1000	42	420.8	72.0
30KP43A	30KP43CA	48.00	52.80	10	1000	43	415.1	73.0
30KP45A	30KP45CA	50.30	55.33	5	250	45	391.5	77.4
30KP48A	30KP48CA	53.60	58.96	5	150	48	371.3	81.6
30KP51A	30KP51CA	57.00	62.70	5	50	51	350.7	86.4
30KP54A	30KP54CA	60.30	66.33	5	20	54	331.5	91.4
30KP58A	30KP58CA	64.80	71.28	5	20	58	327.9	92.4
30KP60A	30KP60CA	67.00	73.70	5	15	60	297.1	102.0
30KP64A	30KP64CA	71.50	78.65	5	10	64	291.3	104.0
30KP66A	30KP66CA	73.70	81.07	5	2	66	283.2	107.0
30KP70A	30KP70CA	78.20	86.02	5	2	70	278.0	109.0
30KP71A	30KP71CA	79.30	87.23	5	2	71	271.7	111.5
30KP72A	30KP72CA	80.40	88.44	5	2	72	265.8	114.0
30KP75A	30KP75CA	83.80	92.18	5	2	75	253.8	119.4
30KP78A	30KP78CA	87.10	95.81	5	2	78	234.9	129.0
30KP84A	30KP84CA	93.80	103.18	5	2	84	217.7	139.2
30KP90A	30KP90CA	100.50	110.55	5	2	90	207.0	146.4
30KP96A	30KP96CA	107.20	117.92	5	2	96	194.2	156.0
30KP102A	30KP102CA	113.90	125.29	5	2	102	183.0	165.6
30KP108A	30KP108CA	120.60	132.66	5	2	108	172.9	175.2
30KP120A	30KP120CA	134.00	147.40	5	2	120	155.9	194.4
30KP132A	30KP132CA	147.40	162.14	5	2	132	142.3	213.0
30KP144A	30KP144CA	160.80	176.88	5	2	144	135.8	223.2
30KP150A	30KP150CA	167.60	184.36	5	2	150	129.8	233.4
30KP156A	30KP156CA	174.30	191.73	5	2	156	123.7	245.0
30KP160A	30KP160CA	178.70	196.57	5	2	160	120.0	252.6
30KP168A	30KP168CA	187.70	206.47	5	2	168	111.2	272.4
30KP170A	30KP170CA	189.90	208.89	5	2	170	110.2	275.0
30KP180A	30KP180CA	201.10	221.21	5	2	180	104.3	290.4
30KP198A	30KP198CA	221.20	243.32	5	2	198	94.7	319.8
30KP216A	30KP216CA	241.30	265.43	5	2	216	86.9	348.6
30KP240A	30KP240CA	268.10	294.91	5	2	240	78.3	387.0
30KP258A	30KP258CA	288.20	317.02	5	2	258	72.8	416.4
30KP260A	30KP260CA	290.40	319.44	5	2	260	72.8	416.0
30KP270A	30KP270CA	301.60	331.76	5	2	270	69.5	436.2
30KP280A	30KP280CA	312.80	344.08	5	2	280	65.3	464.0
30KP288A	30KP288CA	321.70	353.87	5	2	288	64.5	469.9
30KP300A	30KP300CA	334.00	367.40	5	2	300	62.0	484.0
30KP320A	30KP320CA	356.00		5	2	320	57.0	530.0

Note:

1. For Bi-Directional devices having V_R of 60 volts and under, the I_R limit is double