

50KP SERIES

V_{WM} : 36 - 400 Volts
P_{PK} : 50,000 Watts

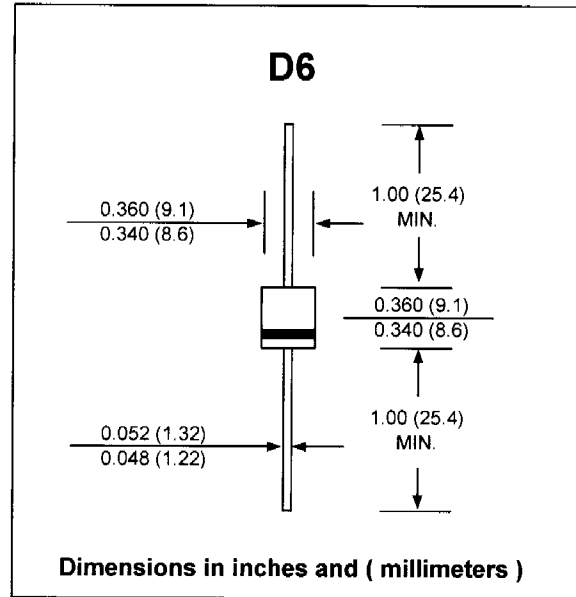
FEATURES :

- * Glass passivated junction chip
- * Excellent Clamping Capability
- * Fast Response Time
- * Low Leakage Current
- * Pb / RoHS Free

MECHANICAL DATA

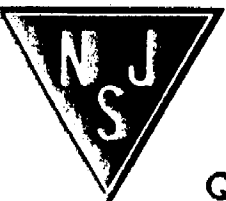
- * Case : Void-free molded plastic body
- * Epoxy : UL94V-0 rate flame retardant
- * Lead : Axial lead solderable per MIL-STD-202, Method 208 guaranteed
- * Polarity : Color band denotes cathode end except Bipolar.
- * Mounting position : Any
- * Weight : 2.1 grams

TRANSIENT VOLTAGE SUPPRESSORS



MAXIMUM RATINGS (Ta = 25 °C)

Rating	Symbol	Value	Unit
Peak Pulse Power Dissipation (10 x 1000µs, see Fig.2)	P _{PK}	50,000	W
Steady State Power Dissipation	P _D	8	W
Peak Forward Surge Current, 8.3ms Single Half Sine Wave (Uni-directional devices only)	I _{FSM}	300	A
Operating and Storage Temperature Range	T _J , T _{STG}	- 55 to + 175	°C



NJ Semi-Conductors reserves the right to change test conditions, parameter limits and package dimensions without notice. Information furnished by NJ Semi-Conductors is believed to be both accurate and reliable at the time of going to press. However, NJ Semi-Conductors assumes no responsibility for any errors or omissions discovered in its use. NJ Semi-Conductors encourages customers to verify that datasheets are current before placing orders.

ELECTRICAL CHARACTERISTICS (Rating at 25 °C ambient temperature unless otherwise specified)

Part Number <small>(Uni-directional)</small>	Part Number <small>(Bi-directional)</small>	Reverse Stand Off Voltage	Breakdown Voltage @ I_{BR}			Maximum Reverse Leakage @ V_{WM}	Maximum Clamping Voltage @ I_{PP}	Maximum Peak Pulse Current
		V_{WM}	V_{BR} (V)		I_{BR}	I_D	V_C	I_{PP}
		(V)	Min.	Max.	(mA)	(μ A)	(V)	(A)
50KP36	50KP36C	36	40.0	48.9	50	10000	68.2	733
50KP36A	50KP36CA	36	40.0	44.2	50	10000	61.8	809
50KP40	50KP40C	40	44.4	54.3	20	10000	75.8	659
50KP40A	50KP40CA	40	44.4	49.1	20	10000	68.6	728
50KP43	50KP43C	43	47.8	58.4	10	10000	79.0	632
50KP43A	50KP43CA	43	47.8	52.8	10	10000	71.0	704
50KP45	50KP45C	45	50.0	61.1	5	8000	80.7	619
50KP45A	50KP45CA	45	50.0	55.3	5	8000	73.0	684
50KP48	50KP48C	48	53.3	65.1	5	8000	85.9	582
50KP48A	50KP48CA	48	53.3	58.9	5	8000	77.7	643
50KP51	50KP51C	51	56.7	69.3	5	5000	91.5	546
50KP51A	50KP51CA	51	56.7	62.7	5	5000	82.8	603
50KP54	50KP54C	54	60.0	73.3	5	5000	96.8	516
50KP54A	50KP54CA	54	60.0	66.3	5	5000	87.5	571
50KP58	50KP58C	58	64.4	78.7	5	1500	104	480
50KP58A	50KP58CA	58	64.4	71.2	5	1500	94	531
50KP60	50KP60C	60	66.7	81.5	5	500	107	467
50KP60A	50KP60CA	60	66.7	73.7	5	500	97.3	513
50KP64	50KP64C	64	71.1	86.9	5	150	115	434
50KP64A	50KP64CA	64	71.1	78.6	5	150	104	480
50KP70	50KP70C	70	77.8	95.1	5	150	126	396
50KP70A	50KP70CA	70	77.8	86.0	5	150	114	438
50KP75	50KP75C	75	83.3	102	5	50	135	370
50KP75A	50KP75CA	75	83.3	92.1	5	50	122	409
50KP78	50KP78C	78	86.7	106	5	25	140	357
50KP78A	50KP78CA	78	86.7	95.8	5	25	126	396
50KP85	50KP85C	85	94.4	115	5	15	152	328
50KP85A	50KP85CA	85	94.4	104	5	15	137	364
50KP90	50KP90C	90	100	122	5	15	160	312
50KP90A	50KP90CA	90	100	111	5	15	146	342
50KP100	50KP100C	100	111	136	5	10	179	279
50KP100A	50KP100CA	100	111	123	5	10	162	308
50KP110	50KP110C	110	122	149	5	10	196	255
50KP110A	50KP110CA	110	122	135	5	10	178	280
50KP120	50KP120C	120	133	163	5	10	214	233
50KP120A	50KP120CA	120	133	147	5	10	193	259
50KP130	50KP130C	130	144	176	5	10	231	216
50KP130A	50KP130CA	130	144	159	5	10	209	239
50KP150	50KP150C	150	167	204	5	10	268	186
50KP150A	50KP150CA	150	167	185	5	10	243	205
50KP160	50KP160C	160	178	218	5	10	287	174
50KP160A	50KP160CA	160	178	197	5	10	259	193
50KP170	50KP170C	170	189	231	5	10	304	164
50KP170A	50KP170CA	170	189	209	5	10	275	181

ELECTRICAL CHARACTERISTICS (Rating at 25 °C ambient temperature unless otherwise specified)

Part Number <small>(Uni-directional)</small>	Part Number <small>(Bi-directional)</small>	Reverse Stand Off Voltage	Breakdown Voltage @ $I_{(BR)}$			Maximum Reverse Leakage @ V_{WM}	Maximum Clamping Voltage @ I_{PP}	Maximum Peak Pulse Current
		V_{WM} (V)	V_{BR} (V)		$I_{(BR)}$ (mA)	I_D (μ A)	V_C (V)	I_{PP} (A)
			Min.	Max.				
50KP180	50KP180C	180	200	244	5	10	321	155
50KP180A	50KP180CA	180	200	221	5	10	291	171
50KP200	50KP200C	200	222	271	5	10	356	140
50KP200A	50KP200CA	200	222	245	5	10	322	155
50KP220	50KP220C	220	245	299	5	10	393	127
50KP220A	50KP220CA	220	245	271	5	10	356	140
50KP250A	50KP250CA	250	278	308	5	10	403	124
50KP260A	50KP260CA	260	289	320	5	10	419	119
50KP280A	50KP280CA	280	311	345	5	10	451	110
50KP300A	50KP300CA	300	333	369	5	10	483	103
50KP350A	50KP350CA	350	389	431	5	10	564	88
50KP400A	50KP400CA	400	444	492	5	10	644	77

Note: (1) For bidirectional type having V_{WM} of 60 volts and less, the I_D limit is double.

Fig. 1 - Pulse Derating Curve

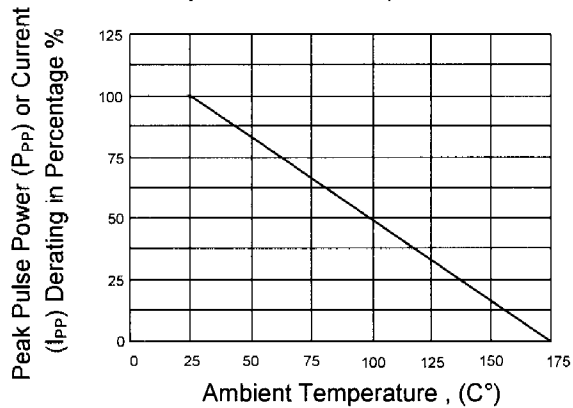


Fig. 2 - Pulse Wave Form

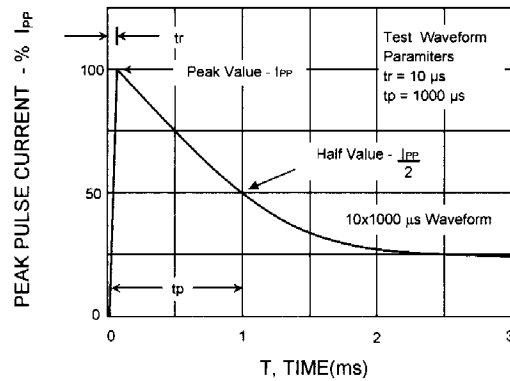


Fig. 3 - Peak Pulse Power vs. Pulse Time

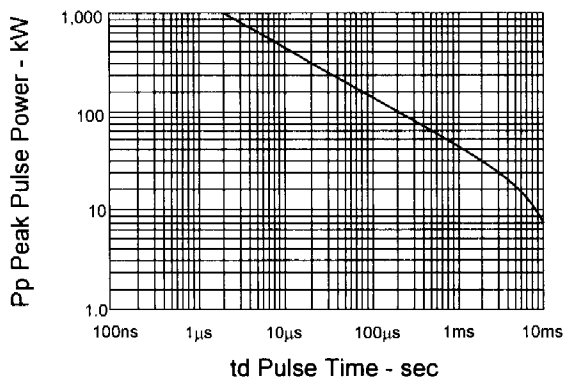


Fig. 4 - Typical Capacitance vs. Breakdown Voltage

