

## 20KP SERIES

**V<sub>R</sub> : 20 - 300Volts**

**P<sub>PK</sub> : 20,000 Watts**

### FEATURES :

- \* Glass passivated junction chip
- \* Excellent Clamping Capability
- \* Fast Response Time
- \* Low Zener Impedance
- \* Low Leakage Current
- \* Fast Response Time : typically less than 1.0ps from 0 volt to BV, Bidirectional less than 10ns
- \* High temperature soldering guaranteed : 265°C/10 second 0.375", (9.5mm) lead length.
- \* Pb / RoHS Free

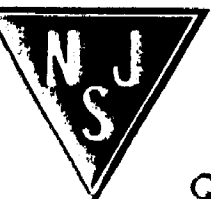
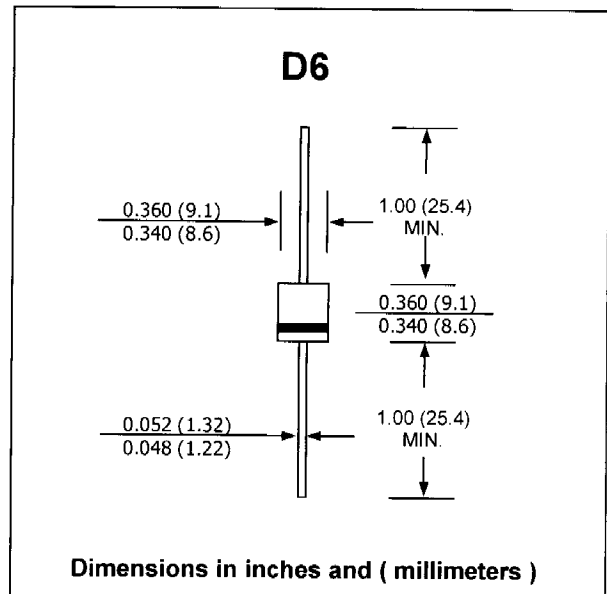
### MECHANICAL DATA

- \* 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
- \* Mounting position : Any
- \* Weight : 2.1 grams

### MAXIMUM RATINGS (T<sub>a</sub> = 25°C)

Rating	Symbol	Value	Unit
Peak Pulse Power Dissipation (10X1000μs, see Fig.1)	P <sub>PK</sub>	20,000	W
Steady State Power Dissipation	P <sub>D</sub>	8.0	W
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	- 55 to + 175	°C

## TRANSIENT VOLTAGE SUPPRESSORS



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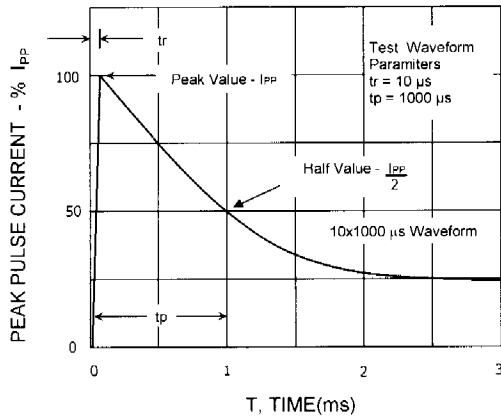
## ELECTRICAL CHARACTERISTICS (Rating at 25 °C ambient temperature unless otherwise specified)

Part Number <small>(Uni-directional)</small>	Part Number <small>(Bi-directional)</small>	Reverse Stand Off Voltage	Breakdown Voltage @ $I_T$		Maximum Reverse Leakage @ $V_R$	Maximum Clamping Voltage @ $I_{PP}$	Maximum Peak Pulse Current
		$V_{WM}$ (V)	$V_{BR}$ (V) Min.	$I_T$ (mA)	$I_R$ ( $\mu A$ )	$V_C$ (V)	$I_{PP}$ (A)
20KP20A	20KP20CA	20	22.34	50	5000	36.8	548.9
20KP24A	20KP24CA	24	26.81	50	5000	41.2	490.3
20KP26A	20KP26CA	26	29.04	50	2000	44.7	451.9
20KP28A	20KP28CA	28	31.28	50	1000	48.0	420.8
20KP30A	20KP30CA	30	33.51	5	250	51.5	392.2
20KP32A	20KP32CA	32	35.74	5	150	54.3	372.0
20KP34A	20KP34CA	34	38.00	5	50	57.5	351.3
20KP36A	20KP36CA	36	40.20	5	20	61.5	328.5
20KP40A	20KP40CA	40	44.70	5	15	67.8	297.9
20KP44A	20KP44CA	44	49.10	5	2	72.7	277.9
20KP48A	20KP48CA	48	53.60	5	2	79.4	254.4
20KP52A	20KP52CA	52	58.10	5	2	85.8	235.4
20KP56A	20KP56CA	56	62.60	5	2	92.6	218.1
20KP60A	20KP60CA	60	67.00	5	2	97.6	207.0
20KP64A	20KP64CA	64	71.50	5	2	104.0	194.2
20KP68A	20KP68CA	68	76.00	5	2	110.0	183.6
20KP70A	20KP70CA	70	77.80	5	2	114.0	177.2
20KP72A	20KP72CA	72	80.40	5	2	116.0	174.1
20KP80A	20KP80CA	80	89.40	5	2	130.0	155.4
20KP88A	20KP88CA	88	98.30	5	2	142.0	142.3
20KP96A	20KP96CA	96	107.20	5	2	155.0	130.3
20KP104A	20KP104CA	104	116.20	5	2	168.0	120.2
20KP112A	20KP112CA	112	125.10	5	2	182.0	111.0
20KP120A	20KP120CA	120	134.00	5	2	194.0	104.1
20KP132A	20KP132CA	132	147.40	5	2	213.0	94.8
20KP144A	20KP144CA	144	160.80	5	2	232.0	87.1
20KP160A	20KP160CA	160	178.70	5	2	258.0	78.3
20KP172A	20KP172CA	172	192.10	5	2	277.0	72.9
20KP180A	20KP180CA	180	201.10	5	2	291.0	69.4
20KP192A	20KP192CA	192	214.50	5	2	309.0	65.4
20KP204A	20KP204CA	204	227.90	5	2	329.0	61.4
20KP216A	20KP216CA	216	241.30	5	2	348.0	58.0
20KP232A	20KP232CA	232	259.10	5	2	374.0	54.0
20KP240A	20KP240CA	240	268.10	5	2	387.0	52.2
20KP256A	20KP256CA	256	286.00	5	2	412.0	49.0
20KP280A	20KP280CA	280	312.80	5	2	451.0	44.8
20KP300A	20KP300CA	300	335.10	5	2	483.0	41.8

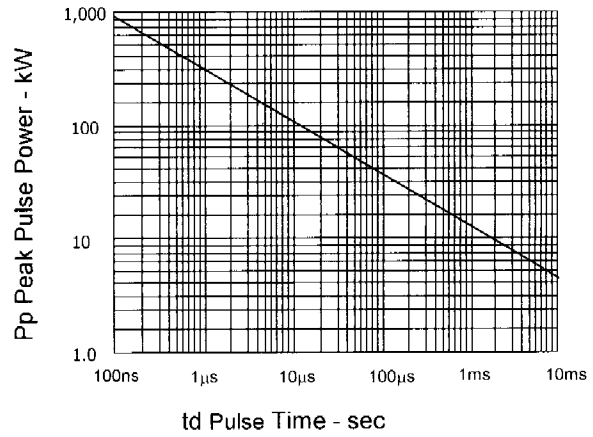
- Note: (1) For parts without A, the  $V_{BR}$  is  $\pm 10\%$  and  $V_C$  is 5% higher than with A parts.  
(2) For bidirectional type having  $V_{WM}$  of 40 volts and less, the  $I_R$  limit is double.

## RATING AND CHARACTERISTIC CURVES ( 20KP SERIES )

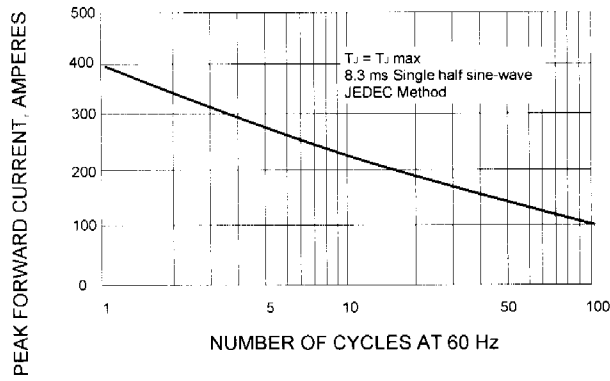
**FIG.1 - PULSE WAVE FORM**



**FIG.2 - PEAK PULSE POWER VS. PULSE TIME**



**FIG.3 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**



**FIG.4 - PULSE DERATING CURVE**

