20KPA Series

Axial Lead Transient Voltage Suppressors

Reverse Voltage: 28 to 320 V

Peak Pulse Power: 20000 W

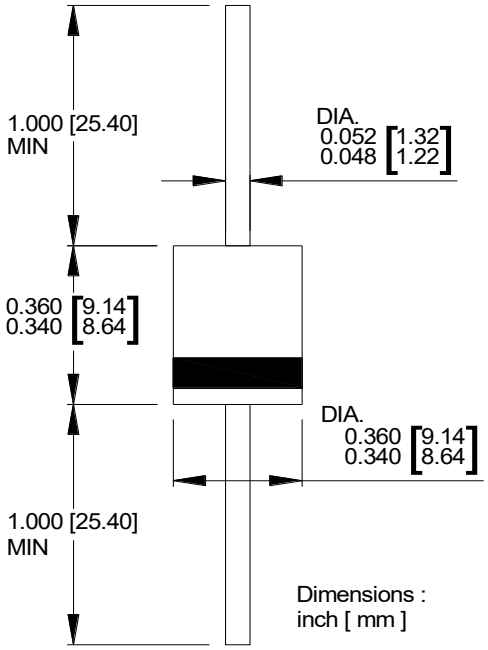
Features

- Glass passivated chip
- 20000 W peak pulse power capability with a 10/1000 μs 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℃ unless otherwise noted)

Parameter	Symbol	Value	Unit
Peak power dissipation with a 10/1000μs waveform(1)	P_{PP}	20000	W
Peak pulse current with a 10/1000μs waveform(1)	I_{PP}	See Next Table	A
Power dissipation on infinite heatsink at T_L = 75 °C	P_D	8.0	W
Peak forward surge current, 8.3 ms single half sine-wave unidirectional only(2)	I_{FSM}	400	A
Operating junction and storage temperature range	T_J, T_{STG}	- 55 to +175	°C

Note:

(1)Non-repetitive current pulse per Fig.5 and derated above T_A= 25 °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

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Electrical Characteristics(T_A=25℃ unless otherwise noted)

Part Number (Uni)	Part Number (Bi)	Reverse Stand off Voltage V_R (Volts)	Breakdown Voltage V_{BR} (Volts) @ I_T		Test Current I_T (mA)	Maximum Peak Pulse Current I_{pp} (A)	Maximum Reverse Leakage I_R @ V_R (μ A)	Maximum Clamping Voltage V_C @ I_{PP} (V)
			MIN	MAX				
20KPA20A	20KPA20CA	20	22.34	24.57	50	548.9	5000	36.8
20KPA24A	20KPA24CA	24	26.81	29.49	50	490.3	5000	41.2
20KPA26A	20KPA26CA	26	29.04	31.94	50	451.9	2000	44.7
20KPA28A	20KPA28CA	28	31.28	34.41	50	420.8	1000	48.0
20KPA30A	20KPA30CA	30	33.51	36.86	5	392.2	250	51.5
20KPA32A	20KPA32CA	32	35.74	39.31	5	372.0	150	54.3
20KPA34A	20KPA34CA	34	38.00	41.80	5	351.3	50	57.5
20KPA36A	20KPA36CA	36	40.20	44.22	5	328.5	20	61.5
20KPA40A	20KPA40CA	40	44.70	49.17	5	297.9	15	67.8
20KPA44A	20KPA44CA	44	49.10	54.01	5	277.9	2	72.7
20KPA48A	20KPA48CA	48	53.60	58.96	5	254.4	2	79.4
20KPA52A	20KPA52CA	52	58.10	63.91	5	235.4	2	85.8
20KPA56A	20KPA56CA	56	62.60	68.86	5	218.1	2	92.6
20KPA60A	20KPA60CA	60	67.00	73.70	5	207.0	2	97.6
20KPA64A	20KPA64CA	64	71.50	78.65	5	194.2	2	104.0
20KPA68A	20KPA68CA	68	76.00	83.60	5	183.6	2	110.0
20KPA72A	20KPA72CA	72	80.40	88.44	5	174.1	2	116.0
20KPA80A	20KPA80CA	80	89.40	98.34	5	155.4	2	130.0
20KPA88A	20KPA88CA	88	98.30	108.13	5	142.3	2	142.0
20KPA96A	20KPA96CA	96	107.20	117.92	5	130.3	2	155.0
20KPA104A	20KPA104CA	104	116.20	127.82	5	120.2	2	168.0
20KPA112A	20KPA112CA	112	125.10	137.61	5	111.0	2	182.0
20KPA120A	20KPA120CA	120	134.00	147.40	5	104.1	2	194.0
20KPA132A	20KPA132CA	132	147.40	162.14	5	94.8	2	213.0
20KPA144A	20KPA144CA	144	160.80	176.88	5	87.1	2	232.0
20KPA160A	20KPA160CA	160	178.70	196.57	5	78.3	2	258.0
20KPA172A	20KPA172CA	172	192.10	211.31	5	72.9	2	277.0
20KPA180A	20KPA180CA	180	201.10	221.21	5	69.4	2	291.0
20KPA192A	20KPA192CA	192	214.50	235.95	5	65.4	2	309.0
20KPA204A	20KPA204CA	204	227.90	250.69	5	61.4	2	329.0
20KPA216A	20KPA216CA	216	241.30	265.43	5	58.0	2	348.0
20KPA232A	20KPA232CA	232	259.10	285.01	5	54.0	2	374.0
20KPA240A	20KPA240CA	240	268.10	294.91	5	52.2	2	387.0
20KPA256A	20KPA256CA	256	286.00	314.60	5	49.0	2	412.0
20KPA280A	20KPA280CA	280	312.80	344.08	5	44.8	2	451.0
20KPA300A	20KPA300CA	300	335.10	368.61	5	41.8	2	483.0

For bidirectional type having V_{RWM} of 40 volts and less, the I_R limit is double.

For parts without A , the V_{BR} is ± 10% and V_C is 5% higher than with A parts.

Ratings and Characteristics Curves (T_A=25℃ unless otherwise noted)

Figure 1 - Peak Pulse Power Derating Curve

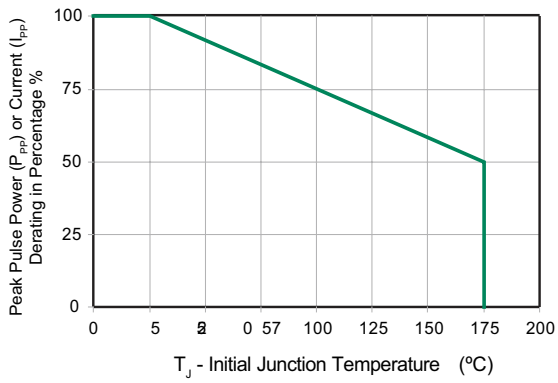


Figure 2 - Pulse Waveform

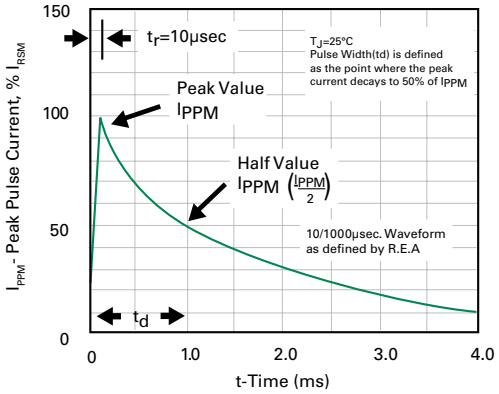


Figure 3 - Typical Junction Capacitance

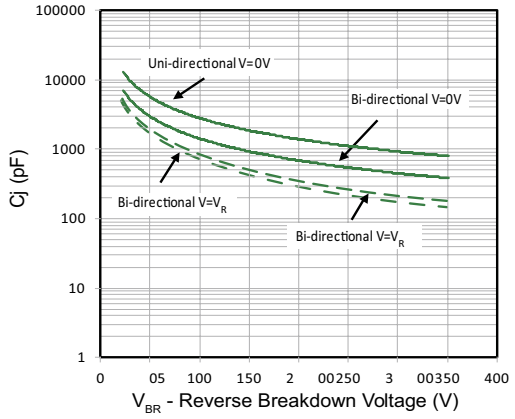


Figure 4 - Typical Transient Thermal Impedance

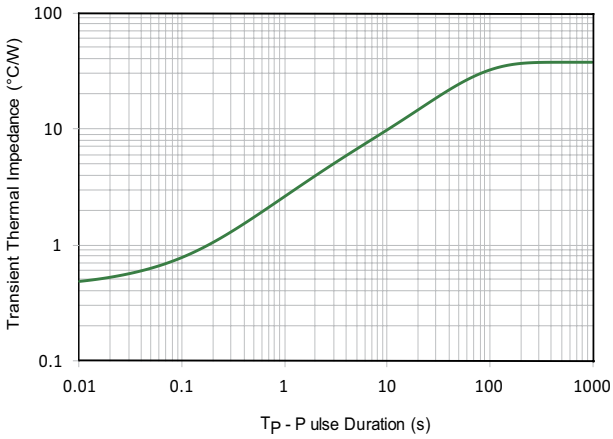


Figure 5 - Maximum Non-Repetitive Peak Forward Surge Current Uni-Directional Only

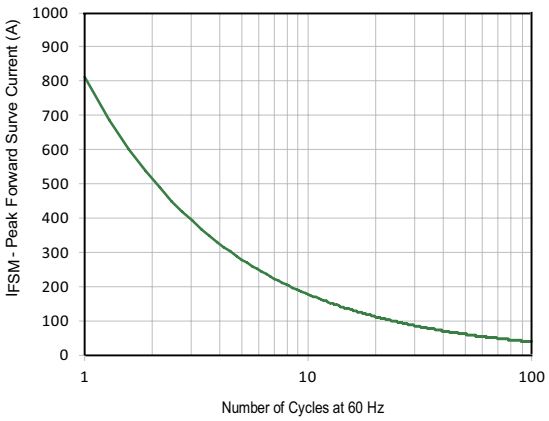
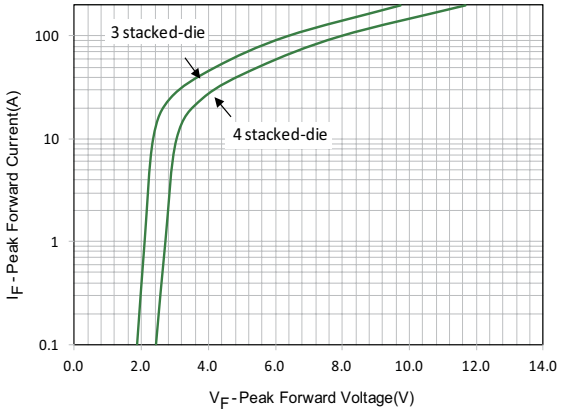


Figure 6 - Peak Forward Voltage Drop vs Peak Forward Current (Typical Values)



PACKAGE	SPQ/PCS	CARTON SPQ/PCS	CARTON SIZE/CM	CARTON GW/KG	CARTON NW/KG
R-6	500/AMMO	5000	44X28X31	12.00	10.00