Technical Data
Data Sheet N0216, Rev. C

20KPA SERIES GLASS PASSIVATED TRANSIENT VOLTAGE SUPPRESSOR

P-600

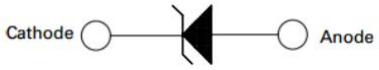
Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- Glass Passivated Junction
- 20000W Peak Pulse Power Capability on 10/1000 μs waveform
- Voltage-20.0 to 300 Volts
- Excellent Clamping Capability
- Repetition rate (duty cycle): 0.05%
- Low incremental surge resistance
- Fast Response Time: typically less than 1.0 ps from volts to BV
- High temperature soldering guaranteed: 265˚C/10 seconds/.375", (9.5mm) lead length, 5lbs., (2.3kg) tension
- This is a Pb – Free Device
- All SMC Parts are Traceable to the Wafer Lot
- Additional testing can be offered upon request

Mechanical Data

- Case: Molded Plastic over glass passivated junction
- Terminals: Plated Axial leads , Solderable per MIL-STD 750, Method 2026
- Polarity: Color Band denoted positive end (cathode) except Bipolar
- Mounting Position: Any
- Weight:2.1 grams(approx.)

Circuit Diagram



Unipolar

Bipolar

Maximum Ratings and Thermal Characteristics@T_A=25˚C unless otherwise specified

Parameter	Symbol	Value	Unit
Peak Pulse Power Dissipation on 10x1000μs Waveform(Note 1)	P_{PPM}	20000	W
Steady State Power Dissipation at T_L=75˚C Lead Lengths .375", (9.5mm)(Note 2)	$P_{M(AV)}$	8.0	W
Peak Forward Surge Current, 8.3ms Sine-Wave Superimposed on Rated Load, (JEDEC Method)(Note 3)	I_{FSM}	400.0	A
Typical Thermal Resistance Junction to Lead	$R_{\theta JL}$	8.0	˚C/W
Typical Thermal Resistance Junction to Ambient	$R_{\theta JA}$	40	˚C/W
Operating Junction and Storage Temperature Range	T_J,T_{STG}	-55 to 150	˚C

Notes: 1. Non-repetitive current pulse, per Fig. 3 and derated above TA = 25˚C per Fig. 2.
2. Mounted on copper pad area of 0.8" × 0.8" (20 × 20mm)
3. 8.3ms single half sine wave, or equivalent square, duty cycle=4 pulses per minute maximum.

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RoHS

Electrical Characteristics @T_A=25°C unless otherwise specified

UNI-POLAR	BI-POLAR	REVERSE STAND-OFF VOLTAGE V_{RWM} (V)	BREAKDOWN VOLTAGE V_{BR} (V) MIN. @I_T	BREAKDOWN VOLTAGE V_{BR} (V) MAX. @I_T	TEST CURRENT I_T(MA)	MAXMUM CLAMPING VOLTAGE @I_{PP} V_C(V)	PEAK PULSE CURRENT I_{PP}(A)	REVERSE LEAKAGE @V_{RWM} I_R(uA)
20KPA20A	20KPA20CA	20	22.34	28	50	36.8	548.9	5000
20KPA24A	20KPA24CA	24	26.81	29.48	50	41.2	490.3	5000
20KPA26A	20KPA26CA	26	29.04	31.92	50	44.7	451.9	2000
20KPA28A	20KPA28CA	28	31.28	34.4	50	48	420.8	1000
20KPA30A	20KPA30CA	30	33.51	36.84	5	51.5	392.2	250
20KPA32A	20KPA32CA	32	35.74	39.32	5	54.3	372	150
20KPA34A	20KPA34CA	34	38	41.6	5	57.5	351.3	50
20KPA36A	20KPA36CA	36	40.2	44.4	5	61.5	328.5	20
20KPA40A	20KPA40CA	40	44.7	49.2	5	67.8	297.9	15
20KPA44A	20KPA44CA	44	49.1	54	5	72.7	277.9	10
20KPA48A	20KPA48CA	48	53.6	58.8	5	79.4	254.4	10
20KPA52A	20KPA52CA	52	58.1	63.6	5	85.8	235.4	10
20KPA56A	20KPA56CA	56	62.6	68.8	5	92.6	218.1	10
20KPA60A	20KPA60CA	60	67	74	5	97.6	207	10
20KPA64A	20KPA64CA	64	71.5	78.8	5	104	194.2	10
20KPA68A	20KPA68CA	68	76	83.6	5	110	183.6	10
20KPA72A	20KPA72CA	72	80.4	88.4	5	116	174.1	10
20KPA80A	20KPA80CA	80	89.4	98	5	130	155.4	10
20KPA88A	20KPA88CA	88	98.3	107.6	5	142	142.3	10
20KPA96A	20KPA96CA	96	107.2	118	5	155	130.3	10
20KPA104A	20KPA104CA	107	116.2	127.6	5	168	120.2	10
20KPA112A	20KPA112CA	112	125.1	137.6	5	182	111	10
20KPA120A	20KPA120CA	120	134	147.2	5	194	104.1	10
20KPA132A	20KPA132CA	132	147.4	162.4	5	213	94.8	10
20KPA144A	20KPA144CA	144	160.8	176.8	5	232	87.1	10
20KPA160A	20KPA160CA	160	178.7	196.4	5	258	78.3	10
20KPA172A	20KPA172CA	172	192.1	211.2	5	277	72.9	10
20KPA180A	20KPA180CA	180	201.1	221.1	5	291	69.4	10
20KPA192A	20KPA192CA	192	214.5	235.6	5	309	65.4	10
20KPA204A	20KPA204CA	204	227.9	250.8	5	329	61.4	10
20KPA216A	20KPA216CA	216	241.3	265.2	5	348	58	10
20KPA232A	20KPA232CA	232	259.1	284.8	5	374	54	10
20KPA240A	20KPA240CA	240	268.1	294.8	5	387	52.2	10
20KPA256A	20KPA256CA	256	286	314.4	5	412	49	10
20KPA280A	20KPA280CA	280	312.8	344	5	451	44.6	10
20KPA300A	20KPA300CA	300	335.1	368.4	5	483	41.8	10

For bidirectional type having V_{RWM} of 40 volts and less, the IR limit is double.
For parts without A, the VBR is + 10%.

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Ratings and Characteristics Curves

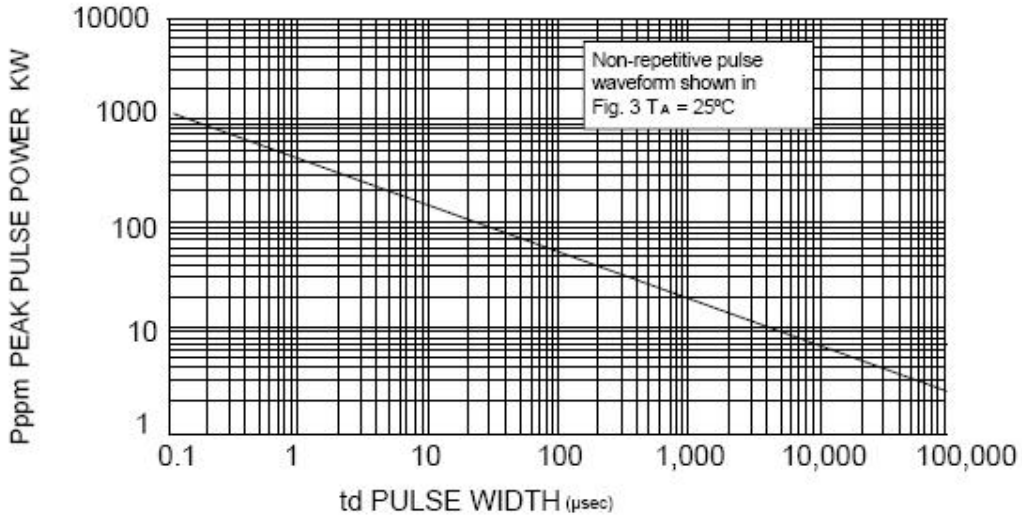


FIG. 1 PEAK PULSE POWER RATING

Fig.2 - Pulse Derating Curve

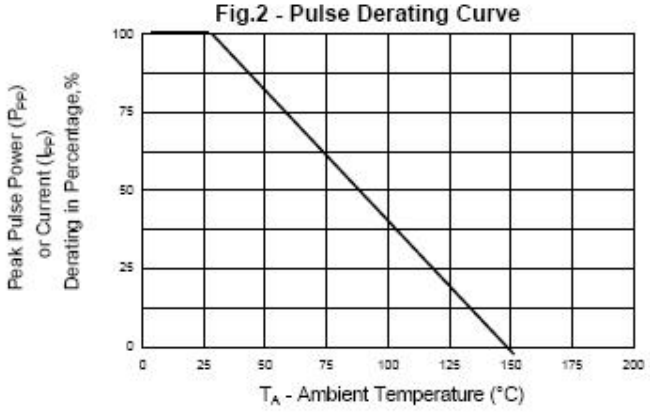
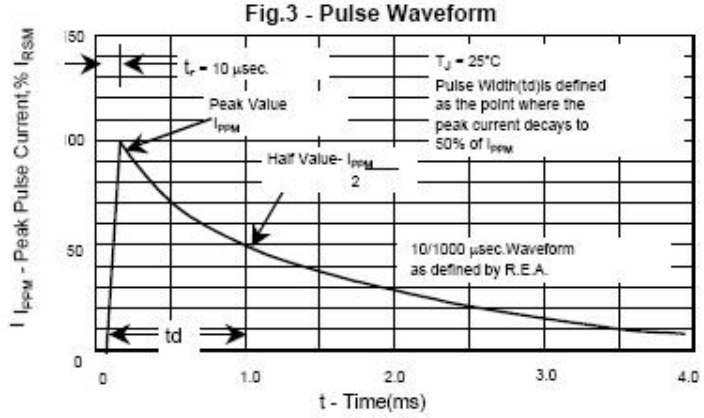


Fig.3 - Pulse Waveform



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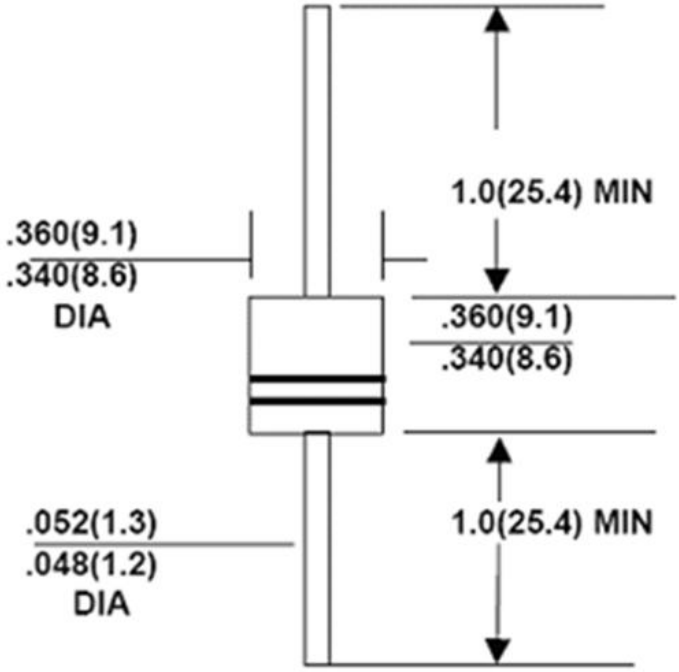
Mechanical Dimensions P-600(Inches/Millimeters)



Ordering Information

Device	Package	Shipping
20KPAxxxXX	P-600(Pb-Free)	300pcs /tape
20KPAxxxXXTR	P-600(Pb-Free)	800pcs / reel

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

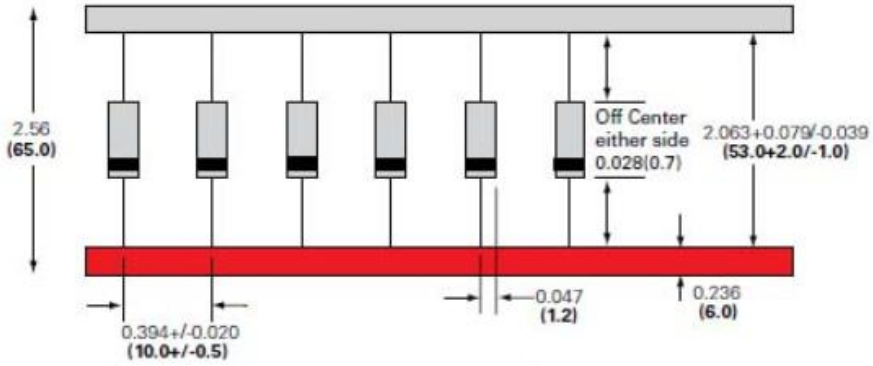
Marking Diagram

Where XXXXX is YYWWL

20KPA20A = Part Name
YY = Year
WW = Week
L = Lot Number

Cautions: Molding resin
Epoxy resin UL:94V-0

Carrier Tape Specification P-600



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