MDE Semiconductor, Inc.

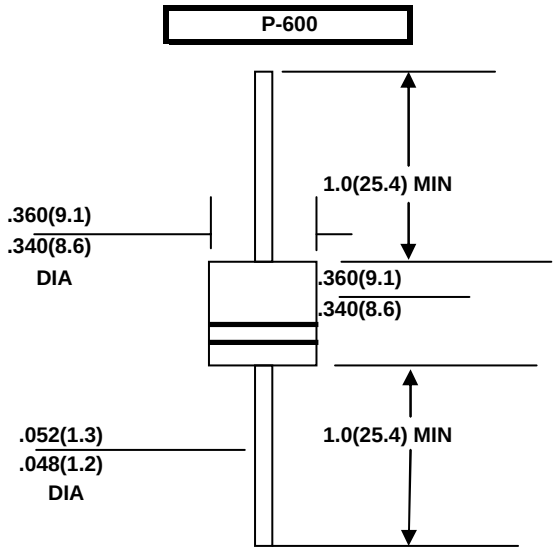
78-150 Calle Tampico, Unit 210, La Quinta, CA., USA 92253 Tel : 760-564-8656 • Fax : 760-564-2414
1-800-831-4881 Email: sales@mdesemiconductor.com Web: www.mdesemiconductor.com

20KW SERIES

GLASS PASSIVATED JUNCTION TRANSIENT VOLTAGE SUPPRESSOR
VOLTAGE-20.0 TO 300 Volts
20000 Watt Peak Pulse Power

FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Glass passivated junction
- 20000W Peak Pulse Power capability on 10/1000 µs waveform
- Excellent clamping capability
- Repetition rate (duty cycle):0.05%
- Low incremental surge resistance
- Fast response time: typically less than 1.0 ps from 0 volts to BV
- Typical Id less than 1µA above 10V
- High temperature soldering guaranteed: 265°C/10 seconds/.375", (9.5mm) lead length, 5lbs., (2.3kg) tension



Dimensions in inches (milimeters)

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: 0.07 ounce, 2.1 gram

DEVICES FOR BIPOLAR APPLICATIONS

For Bidirectional use C or CA Suffix for types 20KW20 thru types 20KW300
Electrical characteristics apply in both directions.

MAXIMUM RATINGS AND CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

RATING	SYMBOL	VALUE	UNITS
Peak Pulse Power Dissipation on 10/1000 µs waveform (NOTE 1)	Pppm	Minimum 20000	Watts
Peak Pulse Current of on 10-1000 µs waveform (NOTE 1)	Ippm	SEE TABLE 1	Amps
Steady State Power Dissipation at Tl=75 °C Lead Lengths.375", (9.5mm)(NOTE 2)	Pm(AV)	8.0	Watts
Peak Forward Surge Current, 8.3ms Sine-Wave Superimposed on Rated Load, (JEDEC Method) (NOTE 3)	IFSM	400.0	Amps
Operatings and Storage Temperature Range	Tj, Tstg	-55 to +175	°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 0.8x0.8" (20x20mm) per Fig.5.
3.8.3ms single half sine-wave, or equivalent square wave, Duty cycle=4 pulses per minutes maximum

Certified RoHS Compliant

UL File # E223026

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20KW Series Rating and Characteristics

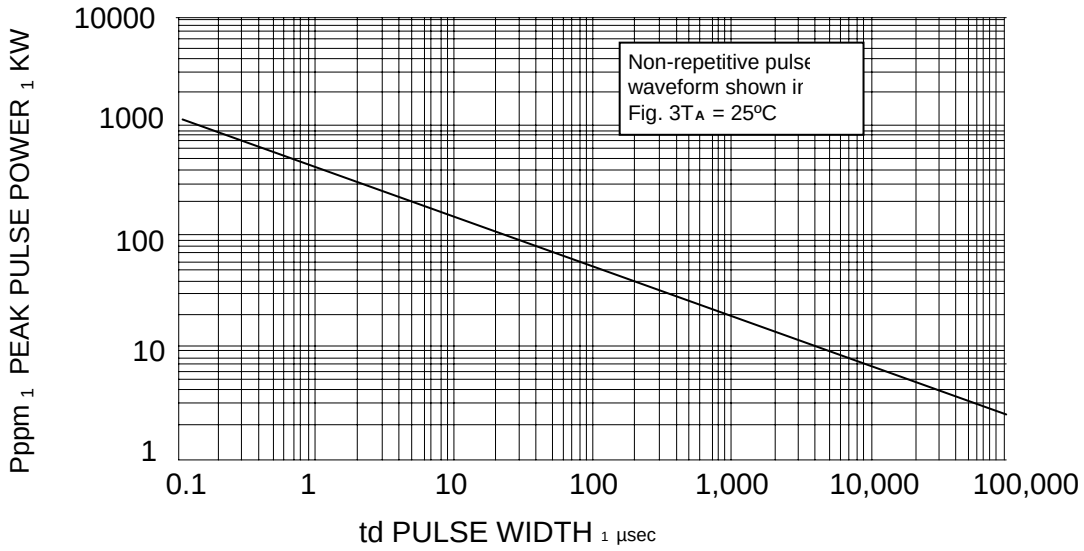


FIG. 1 PEAK PULSE POWER RATING

Fig.2 - Pulse Derating Curve

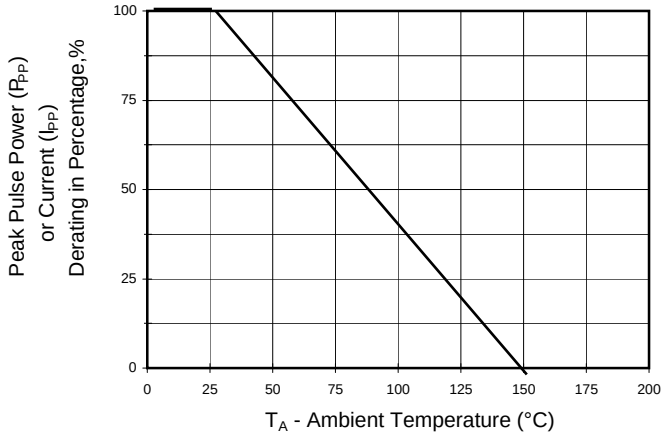
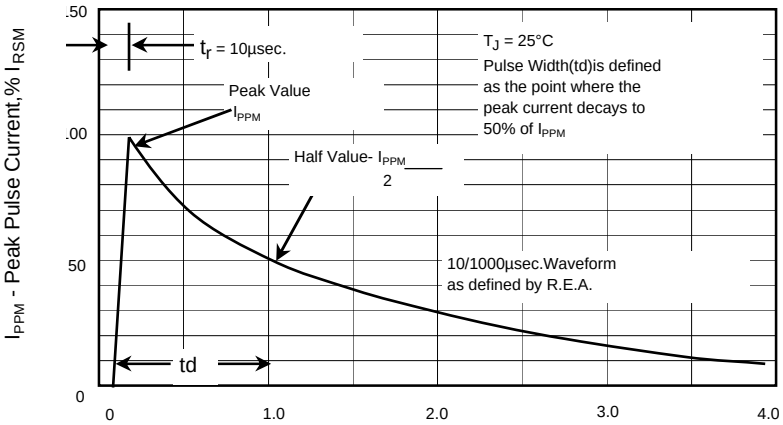


Fig.3 - Pulse Waveform



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20000 Watt TVS

UNI-POLAR	BI-POLAR	REVERSE STANDOFF VOLTAGE V_{RWM} (V)	BREAKDOWN VOLTAGE V_{BR} (V) MIN. @ I_T	TEST CURRENT (I_T) mA	MAXIMUM CLAMPING VOLTAGE @I_{PP} Vc (V)	PEAK PULSE CURRENT I_{PP} (A)	REVERSE LEAKAGE @ V_{RWM} I_R (µA)
20KW20A	20KW20CA	20.00	22.34	50	36.8	548.9	5000
20KW24A	20KW24CA	24.00	26.81	50	41.2	490.3	5000
20KW26A	20KW26CA	26.00	29.04	50	44.7	451.9	2000
20KW28A	20KW28CA	28.00	31.28	50	48.0	420.8	1000
20KW30A	20KW30CA	30.00	33.51	5	51.5	392.2	250
20KW32A	20KW32CA	32.00	35.74	5	54.3	372.0	150
20KW34A	20KW34CA	34.00	38.00	5	57.5	351.3	50
20KW36A	20KW36CA	36.00	40.20	5	61.5	328.5	20
20KW40A	20KW40CA	40.00	44.70	5	67.8	297.9	15
20KW44A	20KW44CA	44.00	49.10	5	72.7	277.9	10
20KW48A	20KW48CA	48.00	53.60	5	79.4	254.4	10
20KW52A	20KW52CA	52.00	58.10	5	85.8	235.4	10
20KW56A	20KW56CA	56.00	62.60	5	92.6	218.1	10
20KW60A	20KW60CA	60.00	67.00	5	97.6	207.0	10
20KW64A	20KW64CA	64.00	71.50	5	104.0	194.2	10
20KW68A	20KW68CA	68.00	76.00	5	110.0	183.6	10
20KW72A	20KW72CA	72.00	80.40	5	116.0	174.1	10
20KW80A	20KW80CA	80.00	89.40	5	130.0	155.4	10
20KW88A	20KW88CA	88.00	98.30	5	142.0	142.3	10
20KW96A	20KW96CA	96.00	107.20	5	155.0	130.3	10
20KW104A	20KW104CA	104.00	116.20	5	168.0	120.2	10
20KW112A	20KW112CA	112.00	125.10	5	182.0	111.0	10
20KW120A	20KW120CA	120.00	134.00	5	194.0	104.1	10
20KW132A	20KW132CA	132.00	147.40	5	213.0	94.8	10
20KW144A	20KW144CA	144.00	160.80	5	232.0	87.1	10
20KW160A	20KW160CA	160.00	178.70	5	258.0	78.3	10
20KW172A	20KW172CA	172.00	192.10	5	277.0	72.9	10
20KW180A	20KW180CA	180.00	201.10	5	291.0	69.4	10
20KW192A	20KW192CA	192.00	214.50	5	309.0	65.4	10
20KW204A	20KW204CA	204.00	227.90	5	329.0	61.4	10
20KW216A	20KW216CA	216.00	241.30	5	348.0	58.0	10
20KW232A	20KW232CA	232.00	259.10	5	374.0	54.0	10
20KW240A	20KW240CA	240.00	268.10	5	387.0	52.2	10
20KW256A	20KW256CA	256.00	286.00	5	412.0	49.0	10
20KW280A	20KW280CA	280.00	312.80	5	451.0	44.6	10
20KW300A	20KW300CA	300.00	335.10	5	483.0	41.8	10

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

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