

MDE Semiconductor, Inc.

78-150 Calle Tampico, Unit 210, La Quinta, CA. U.S.A. 92253 Tel: 760-564-8656 • Fax: 760-564-2414

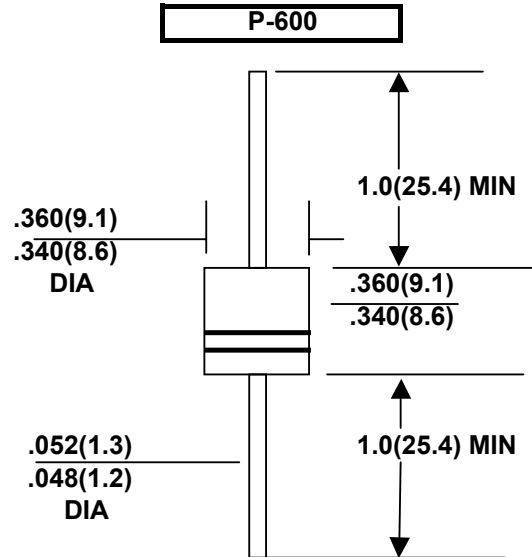
20KW SERIES

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 μ s 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 I_d less than 1 μ A above 10V
- High temperature soldering guaranteed: 265°C/10 seconds/.375", (9.5mm) lead length, 5lbs., (2.3kg) tension



Dimensions in inches (millimeters)

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 20KW30 thru types 20KW288
 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 μ s waveform (NOTE 1)	Pppm	Minimum 20000	Watts
Peak Pulse Current of on 10-1000 μ s waveform (NOTE 1)	lppm	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.

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RATING AND CHARACTERISTICS CURVES 15KW, 20KW, 30KW SERIES

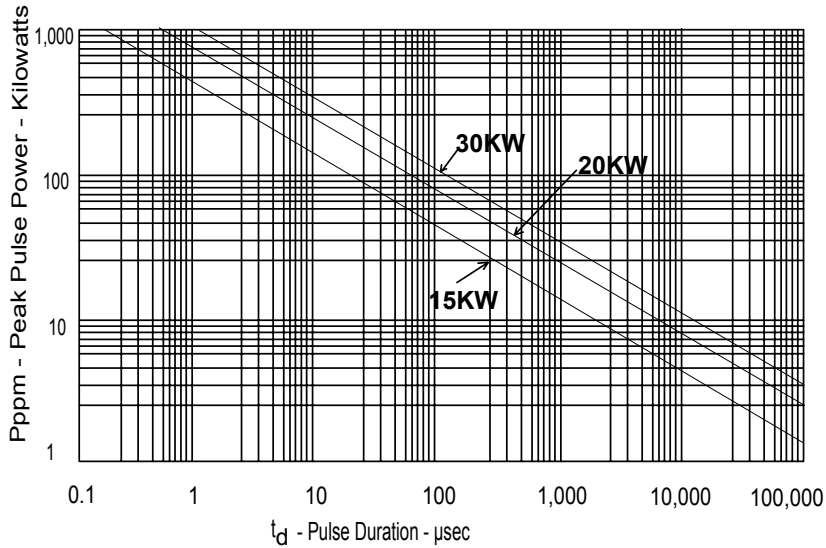


FIG. 1 PEAK PULSE POWER RATING CURVE

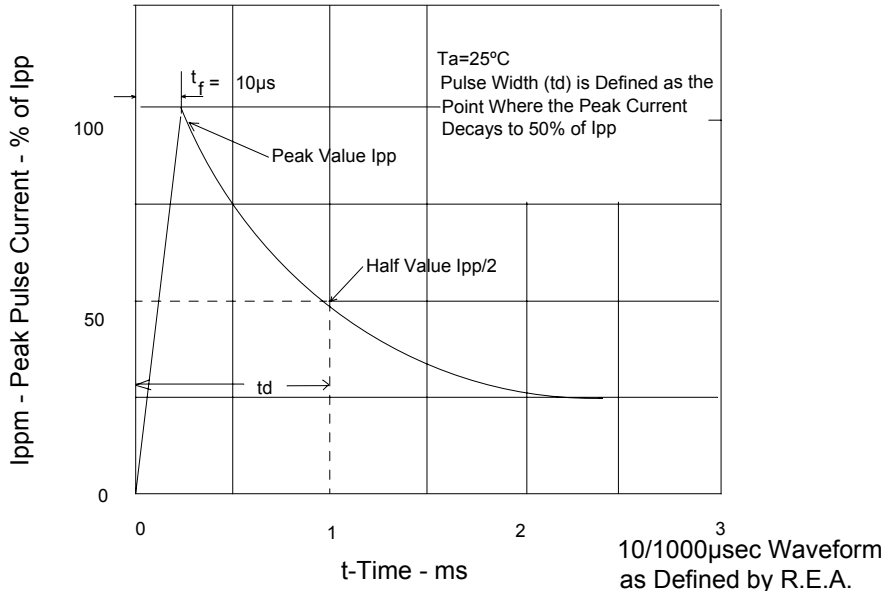


FIG. 2 PULSE WAVE FORM

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20000 Watt TVS

UNI-DIRECTIONAL PART NUMBER	REVERSE STANDOFF VOLTAGE VRWM (V)	BREAKDOWN VOLTAGE VBR (V) MIN. @ IT	BREAKDOWN VOLTAGE VBR (V) MAX. @ IT	TEST CURRENT (It) mA	MAXIMUM CLAMPING VOLTAGE @Ipp Vc (V)	PEAK PULSE CURRENT Ipp (A)	REVERSE LEAKAGE @ VRWM IR (µA)
20KW20	20.00	25.60	29.20	50	38.4	521.0	5000
20KW20A	20.00	25.60	28.00	50	36.8	543.0	5000
20KW24	24.00	26.68	32.60	50	45.6	439.0	5000
20KW24A	24.00	26.68	29.48	50	41.2	485.0	5000
20KW26	26.00	28.88	35.28	50	49.2	407.0	2000
20KW26A	26.00	28.88	31.92	50	44.8	446.0	2000
20KW28	28.00	31.12	38.40	50	53.2	376.0	1000
20KW28A	28.00	31.12	34.40	50	48.0	417.0	1000
20KW30	30.00	33.32	40.80	5	57.2	350.0	250
20KW30A	30.00	33.32	36.84	5	51.6	388.0	250
20KW32	32.00	35.56	43.60	5	60.0	333.0	150
20KW32A	32.00	35.56	39.32	5	54.4	368.0	150
20KW34	34.00	37.76	46.00	5	63.6	314.0	50
20KW34A	34.00	37.76	41.60	5	57.6	347.0	50
20KW36	36.00	40.00	48.80	5	67.6	296.0	20
20KW36A	36.00	40.00	44.40	5	61.6	325.0	20
20KW40	40.00	44.40	54.40	5	75.2	266.0	15
20KW40A	40.00	44.40	49.20	5	68.0	294.0	15
20KW44	44.00	48.80	59.60	5	80.4	249.0	10
20KW44A	44.00	48.80	54.00	5	72.8	275.0	10
20KW48	48.00	53.20	65.20	5	88.0	227.0	10
20KW48A	48.00	53.20	58.80	5	79.6	251.0	10
20KW52	52.00	57.60	70.40	5	95.2	210.0	10
20KW52A	52.00	57.60	63.60	5	86.0	233.0	10
20KW56	56.00	62.40	76.40	5	103.2	194.0	10
20KW56A	56.00	62.40	68.80	5	92.8	216.0	10
20KW60	60.00	66.80	81.60	5	107.6	186.0	10
20KW60A	60.00	66.80	74.00	5	97.6	205.0	10
20KW64	64.00	71.20	87.20	5	115.2	174.0	10
20KW64A	64.00	71.20	78.80	5	104.0	192.0	10
20KW68	68.00	75.60	92.40	5	122.0	164.0	10
20KW68A	68.00	75.60	83.60	5	110.4	181.0	10
20KW72	72.00	80.00	97.60	5	128.8	155.0	10
20KW72A	72.00	80.00	88.40	5	116.8	171.0	10
20KW80	80.00	88.80	108.40	5	143.2	140.0	10
20KW80A	80.00	88.80	98.00	5	129.6	154.0	10
20KW88	88.00	97.60	119.20	5	157.6	127.0	10
20KW88A	88.00	97.60	107.60	5	142.0	141.0	10
20KW96	96.00	106.80	130.40	5	172.0	116.0	10
20KW96A	96.00	106.80	118.00	5	155.6	129.0	10
20KW104	104.00	115.60	141.20	5	186.4	107.0	10
20KW104A	104.00	115.60	127.60	5	168.4	119.0	10
20KW112	112.00	124.40	152.00	5	200.4	100.0	10
20KW112A	112.00	124.40	137.60	5	181.6	110.0	10
20KW120	120.00	133.20	162.80	5	214.0	93.5	10
20KW120A	120.00	133.20	147.20	5	193.6	103.0	10
20KW132	132.00	146.80	179.60	5	236.0	84.7	10
20KW132A	132.00	146.80	162.40	5	213.2	93.8	10

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20KW144	144.00	160.00	195.60	5	257.2	77.8	10
20KW144A	144.00	160.00	176.80	5	232.4	86.1	10
20KW160	160.00	177.60	217.20	5	285.6	70.0	10
20KW160A	160.00	177.60	196.40	5	258.0	77.5	10
20KW172	172.00	191.20	233.60	5	306.8	65.2	10
20KW172A	172.00	191.20	211.20	5	277.6	72.0	10
20KW180	180.00	200.00	244.40	5	321.2	62.3	10
20KW180A	180.00	200.00	221.20	5	290.8	68.8	10
20KW192	192.00	213.20	260.80	5	342.0	58.5	10
20KW192A	192.00	213.20	235.60	5	309.6	64.6	10
20KW204	204.00	226.80	277.20	5	364.4	54.9	10
20KW204A	204.00	226.80	250.80	5	329.6	60.7	10
20KW216	216.00	240.00	293.20	5	385.2	51.9	10
20KW216A	216.00	240.00	265.20	5	348.4	57.4	10
20KW232	232.00	257.60	314.80	5	412.0	48.4	10
20KW232A	232.00	257.60	284.80	5	374.4	53.4	10
20KW240	240.00	266.80	326.00	5	428.0	46.7	10
20KW240A	240.00	266.80	294.80	5	387.2	51.7	10
20KW256	256.00	284.40	347.60	5	456.0	43.9	10
20KW256A	256.00	284.40	314.40	5	412.0	48.5	10
20KW280	280.00	311.20	380.40	5	500.0	40.0	10
20KW280A	280.00	311.20	344.00	5	452.0	44.2	10
20KW300	300.00	333.20	408.00	5	536.0	37.3	10
20KW300	300.00	333.20	368.40	5	484.0	41.3	10

For Bidirectional type having Vrwm of 10volts and less, the IR limit is double.