

# MDE Semiconductor, Inc.

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

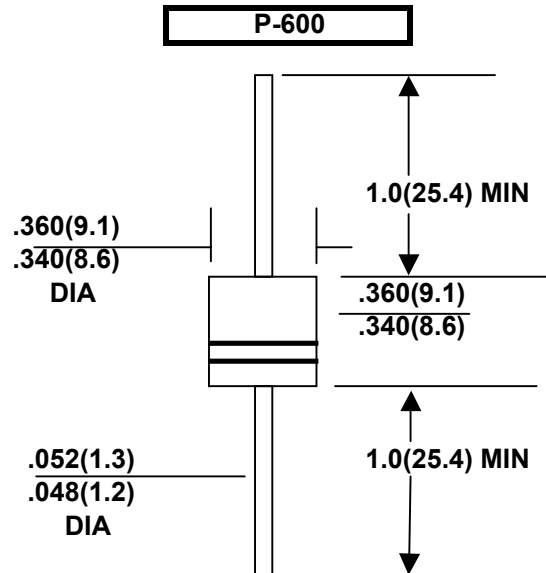
## 15KW SERIES

### GLASS PASSIVATED JUNCTION TRANSIENT VOLTAGE SUPPRESSOR

VOLTAGE-17.0 TO 220 Volts  
15000 Watt Peak Pulse Power

#### FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Glass passivated junction
- 15000W Peak Pulse Power capability on 10/1000  $\mu$ 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 $\mu$ 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 15KW17 thru types 15KW220  
 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 $\mu$ s waveform (NOTE 1)	Pppm	Minimum 15000	Watts
Peak Pulse Current of on 10-1000 $\mu$ s waveform (NOTE 1)	Ippm	SEE TABLE 1	Amps
Steady State Power Dissipation at $T_I=75^\circ\text{C}$ 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  $T_a=25^\circ\text{C}$  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

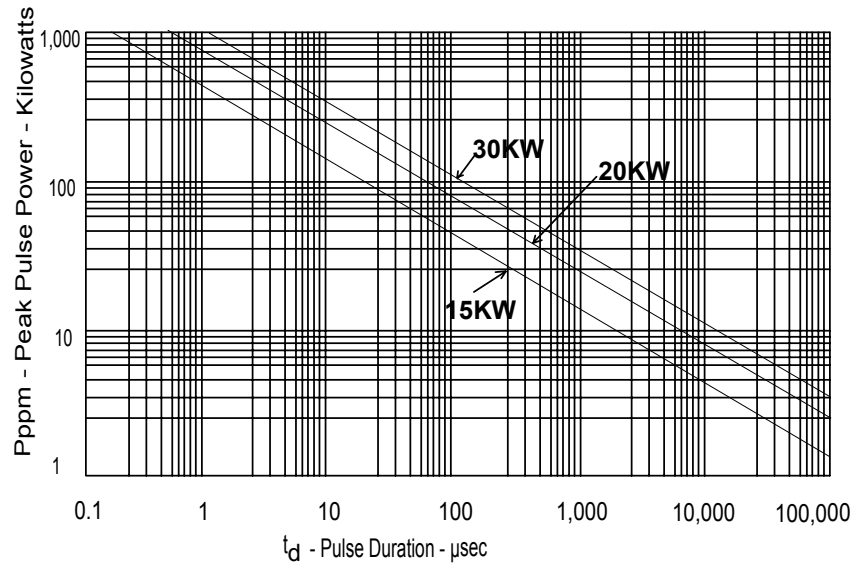


FIG. 1 PEAK PULSE POWER RATING CURVE

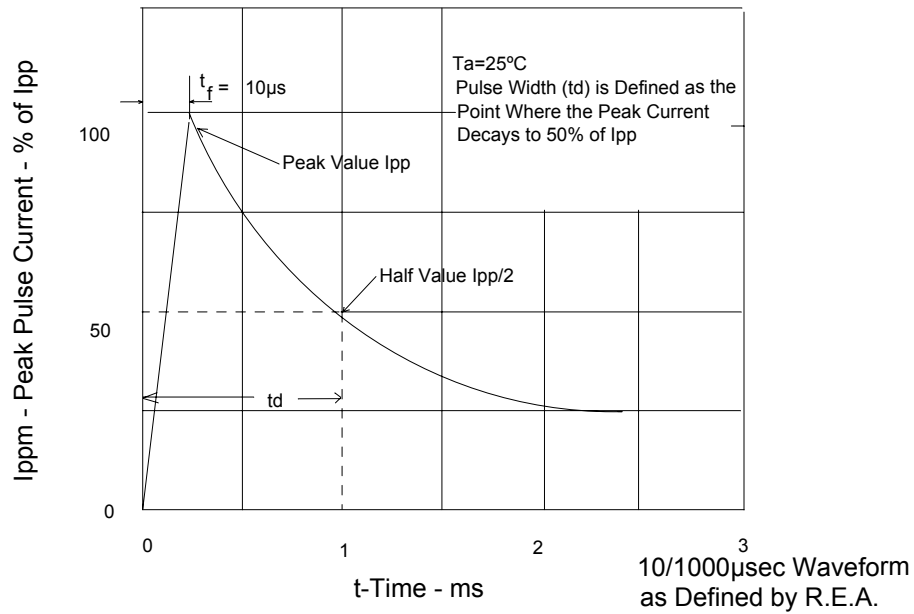


FIG. 2 PULSE WAVE FORM

# **MDE Semiconductor, Inc.**

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## 15000 Watt TVS

UNI-DIRECTIONAL PART NUMBER	REVERSE STANDOFF VOLTAGE VRWM (V)	BREAKDOWN VOLTAGE VBR (V) MIN. @ IT	TEST CURRENT (It) mA	MAXIMUM CLAMPING VOLTAGE @Ipp Vc (V)	PEAK PULSE CURRENT Ipp (A)	REVERSE LEAKAGE @ VRWM IR (µA)
15KW17	17	18.90	50	32.3	464.0	5000
15KW17A	17	18.90	50	29.3	512.0	5000
15KW18	18	20.00	50	34.2	429.0	5000
15KW18A	18	20.00	50	30.9	485.0	5000
15KW20	20	22.20	20	37.9	396.0	1500
15KW20A	20	22.20	20	34.3	437.0	1500
15KW22	22	24.40	10	41.1	365.0	500
15KW22A	22	24.40	10	37.1	404.0	500
15KW24	24	26.70	5	45.0	333.0	150
15KW24A	24	26.70	5	40.7	369.0	150
15KW26	26	28.90	5	48.7	308.0	50
15KW26A	26	28.90	5	44.0	341.0	50
15KW28	28	31.10	5	52.4	286.0	25
15KW28A	28	31.10	5	48.5	316.0	25
15KW30	30	33.30	5	56.2	267.0	15
15KW30A	30	33.30	5	50.7	296.0	15
15KW33	33	36.70	5	60.6	248.0	10
15KW33A	33	36.70	5	54.8	374.0	10
15KW36	36	40.00	5	66.0	227.0	10
15KW36A	36	40.00	5	59.7	251.0	10
15KW40	40	44.40	5	72.8	206.0	10
15KW40A	40	44.40	5	65.8	228.0	10
15KW43	43	47.80	5	77.1	195.0	10
15KW43A	43	47.80	5	69.1	215.0	10
15KW45	45	50.00	5	60.7	186.0	10
15KW45A	45	50.00	5	73.0	205.0	10
15KW48	48	53.30	5	85.9	175.0	10
15KW48A	48	53.30	5	77.7	193.0	10
15KW51	51	56.70	5	91.5	164.0	10
15KW51A	51	56.70	5	92.8	181.0	10
15KW54A	54	60.00	5	96.8	155.0	10
15KW54A	54	60.00	5	87.5	171.0	10
15KW58	58	64.40	5	104.0	144.0	10
15KW58A	58	64.40	5	94.0	160.0	10
15KW60	60	66.70	5	107.0	140.0	10
15KW60A	60	66.70	5	97.3	154.0	10
15KW64	64	71.10	5	115.0	130.0	10
15KW64A	64	71.10	5	104.0	144.0	10
15KW70	70	77.80	5	126.0	119.0	10
15KW70A	70	77.80	5	114.0	132.0	10
15KW75	75	83.30	5	135.0	111.0	10
15KW75A	75	83.30	5	122.0	123.0	10
15KW78	78	86.70	5	140.0	107.0	10
15KW78A	78	86.70	5	126.0	119.0	10

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15KW85	85	94.40	5	152.0	99.0	10
15KW85A	85	94.40	5	137.0	109.0	10
15KW90	90	100.00	5	160.0	94.0	10
15KW90A	90	100.00	5	146.0	103.0	10
15KW100	100	111.00	5	179.0	94.0	10
15KW100A	100	111.00	5	162.0	93.0	10
15KW110	110	122.00	5	196.0	77.0	10
15KW110A	110	122.00	5	178.0	84.0	10
15KW130	130.00	144.00	5	231.0	65.0	10
15KW130A	130.00	144.00	5	209.0	72.0	10
15KW150	150.00	167.00	5	268.0	56.0	10
15KW150A	150.00	167.00	5	243.0	62.0	10
15KW160	160.00	178.00	5	287.0	52.0	10
15KW160A	160.00	178.00	5	259.0	56.0	10
15KW170	170.00	189.00	5	304.0	49.0	10
15KW170A	170.00	189.00	5	275.0	55.0	10
15KW180	180.00	200.00	5	321.0	47.0	10
15KW180A	180.00	200.00	5	291.0	52.0	10
15KW200	200.00	222.00	5	356.0	42.0	10
15KW200A	200.00	222.00	5	322.0	47.0	10
15KW220	220.00	245.00	5	393.0	36.0	10
15KW220A	220.00	245.00	5	356.0	42.0	10
15KW240	240.00	267.00	5	428.0	35.0	10
15KW240A	240.00	267.00	5	388.0	39.0	10
15KW260	260.00	289.00	5	464.0	32.0	10
15KW260A	260.00	289.00	5	419.0	36.0	10
15KW280	280.00	311.00	5	500.0	30.0	10
15KW280A	280.00	311.00	5	452.0	33.0	10

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