

# 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

## 15KW SERIES

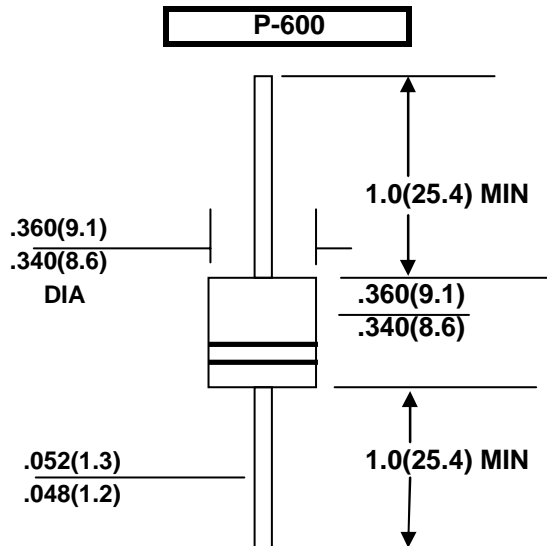
### GLASS PASSIVATED JUNCTION TRANSIENT VOLTAGE SUPPRESSOR VOLTAGE-17.0 TO 280 Volts 15000 Watt Peak Pulse Power

#### 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

#### 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



Dimensions in inches (millimeters)

#### DEVICES FOR BIPOLAR APPLICATIONS

For Bidirectional use C or CA Suffix for types 15KW17 thru types 15KW280  
 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)	$P_{PPM}$	Minimum 15000	Watts
Peak Pulse Current of on 10-1000 $\mu$ s waveform (NOTE 1)	$I_{PPM}$	SEE TABLE 1	Amps
Steady State Power Dissipation at $T_I=75^\circ\text{C}$ Lead Lengths .375", (9.5mm)(NOTE 2)	$P_M(AV)$	8.0	Watts
Peak Forward Surge Current, 8.3ms Sine-Wave Superimposed on Rated Load, (JEDEC Method) (NOTE 3)	$I_{FSM}$	400.0	Amps
Operating and Storage Temperature Range	$T_J, T_{STG}$	-55 to +175	°C

**NOTES:**

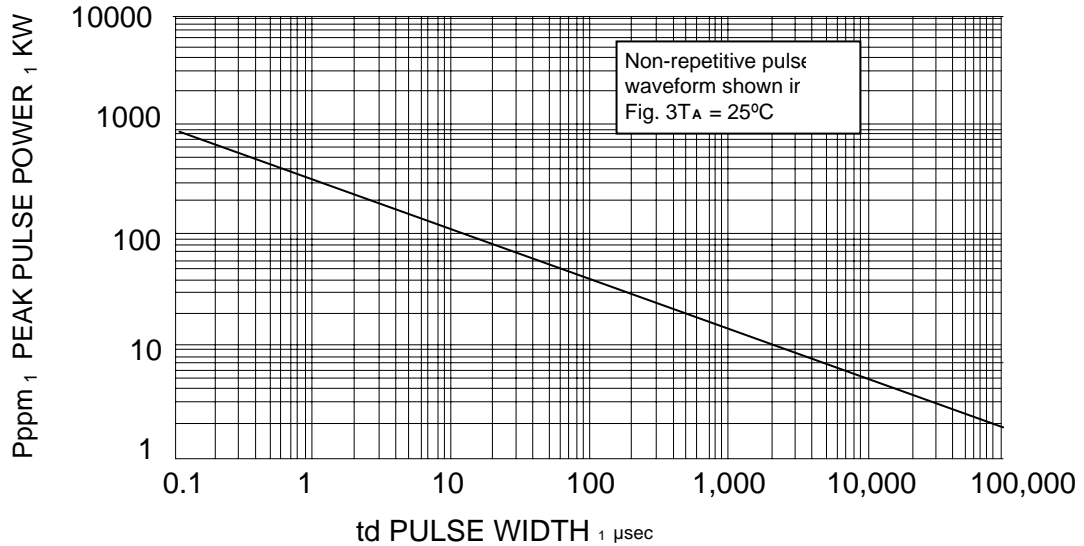
1. Non-repetitive current pulse, per Fig.3 and derated above  $T_a=25^\circ\text{C}$  per Fig.2.
2. Mounted on Copper Pad area of 0.8x0.8" (20x20mm) per Fig.5.
3. 8.3ms single half sine-wave, or equivalent square wave, Duty cycle=4 pulses per minutes maximum

Certified RoHS Compliant  
 UL File # E223026

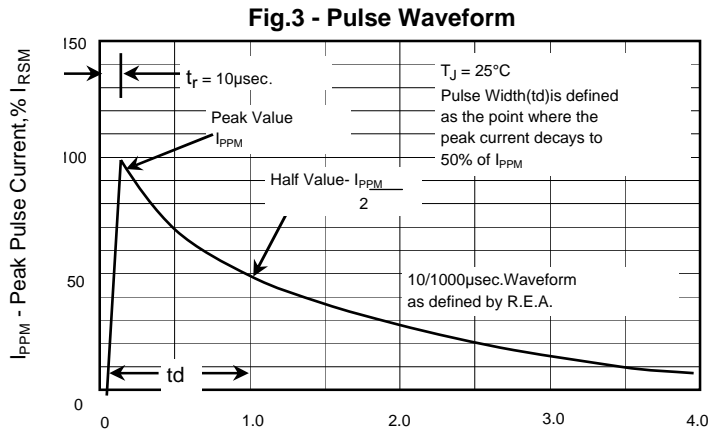
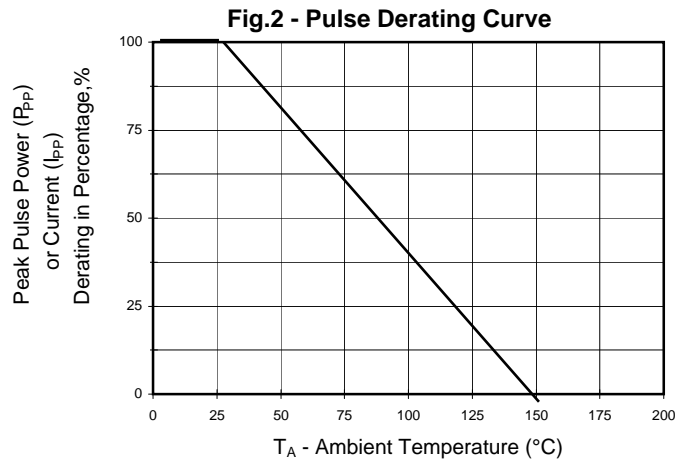
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## 15KW Series Rating and Characteristics



**FIG. 1 PEAK PULSE POWER RATING**



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## **15000 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 @ $I_{PP}$ $V_C$ (V)	PEAK PULSE CURRENT $I_{PP}$ (A)	REVERSE LEAKAGE @ $V_{RWM}$ $I_R$ ( $\mu$ A)
15KW17A	15KW17CA	17	18.99	50	29.3	515.4	5000
15KW18A	15KW18CA	18	20.11	50	30.9	488.7	5000
15KW20A	15KW20CA	20	22.34	20	34.3	440.2	1500
15KW22A	15KW22CA	22	24.57	10	37.1	407.0	500
15KW24A	15KW24CA	24	26.81	5	40.7	371.0	150
15KW26A	15KW26CA	26	29.04	5	44.0	343.2	50
15KW28A	15KW28CA	28	31.28	5	47.5	317.9	25
15KW30A	15KW30CA	30	33.51	5	50.7	297.8	15
15KW33A	15KW33CA	33	36.90	5	54.7	276.1	10
15KW36A	15KW36CA	36	40.20	5	59.8	252.5	10
15KW40A	15KW40CA	40	44.70	5	65.8	229.5	10
15KW43A	15KW43CA	43	48.00	5	69.8	216.3	10
15KW45A	15KW45CA	45	50.30	5	72.8	207.4	10
15KW48A	15KW48CA	48	53.60	5	77.7	194.3	10
15KW51A	15KW51CA	51	57.00	5	82.8	182.1	10
15KW54A	15KW54CA	54	60.30	5	87.7	172.2	10
15KW58A	15KW58CA	58	64.80	5	93.8	161.0	10
15KW60A	15KW60CA	60	67.00	5	97.4	155.0	10
15KW64A	15KW64CA	64	71.50	5	104.2	144.9	10
15KW70A	15KW70CA	70	78.20	5	113.6	132.9	10
15KW75A	15KW75CA	75	83.80	5	122.0	123.8	10
15KW78A	15KW78CA	78	87.10	5	126.1	119.7	10
15KW85A	15KW85CA	85	94.90	5	137.6	109.7	10
15KW90A	15KW90CA	90	100.50	5	145.6	103.7	10
15KW100A	15KW100CA	100	111.70	5	161.3	93.6	10
15KW110A	15KW110CA	110	122.90	5	178.6	84.5	10
15KW120A	15KW120CA	120	134.00	5	192.3	78.5	10
15KW130A	15KW130CA	130	145.20	5	208.3	72.5	10
15KW150A	15KW150CA	150	167.60	5	241.9	62.4	10
15KW160A	15KW160CA	160	178.70	5	258.6	58.4	10
15KW170A	15KW170CA	170	189.90	5	272.7	55.4	10
15KW180A	15KW180CA	180	201.10	5	288.5	52.3	10
15KW200A	15KW200CA	200	223.40	5	319.1	47.3	10
15KW220A	15KW220CA	220	245.70	5	428.6	35.2	10
15KW240A	15KW240CA	240	268.10	5	384.6	39.3	10
15KW260A	15KW260CA	260	290.40	5	416.7	36.2	10
15KW280A	15KW280CA	280	312.80	5	454.5	33.2	10

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  $\pm 10\%$

**Certified RoHS Compliant**  
**UL File # E223026**