

# 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@mde semiconductor.com Web: www.mde semiconductor.com

## SAC SERIES

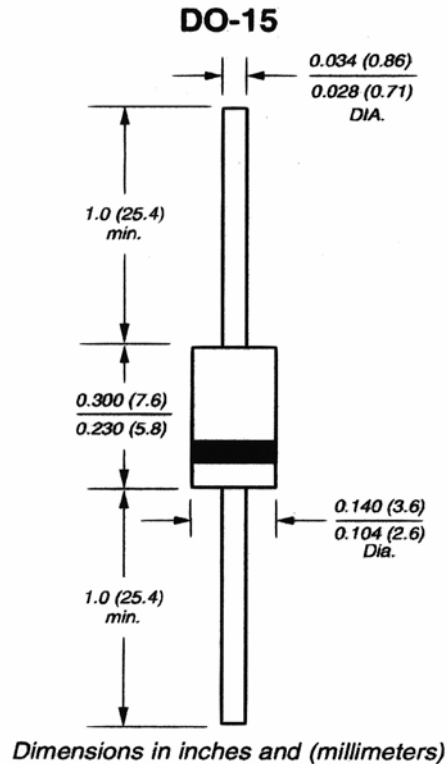
### LOW CAPACITANCE TRANSIENT VOLTAGE SUPPRESSOR VOLTAGE- 5.0 TO 50 Volts 500 Watt Peak Pulse Power

#### FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94 V-O
- Glass passivated junction
- 500W Peak Pulse Power capability on 10/1000  $\mu$ s waveform
- Glass passivated junction
- Low incremental surge resistance
- Excellent clamping capability
- Repetition rate (duty cycle): 0.01%
- Fast response time: typically less than 1.0 ns from 0 volts to V(BV)
- Ideal for data line applications
- High temperature soldering guaranteed: 265°C/10 seconds/ .375", (9.5mm) lead length, 5lbs., (2.3kg) tension

#### MECHANICAL DATA

Case: JEDEC DO-15 Molded plastic over glass passivated junction  
 Terminals: Solder plated axial leads, solderable per MIL-STD-750, Method 2026  
 Polarity: Color band denoted positive end (cathode) except Bipolar  
 Mounting Position: Any  
 Weight: 0.015 ounces, 0.4 grams



#### 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, Fig.1)	$P_{PPM}$	Minimum 500	Watts
Peak Pulse Current of on 10/1000 $\mu$ s waveform (Note 1, Fig 3)	$I_{PPM}$	SEE TABLE 1	Amps
Steady State Power Dissipation at $T_L = 75^\circ\text{C}$ Lead lengths .375", 9.5mm	$P_M(AV)$	3.0	Watts
Operating and Storage Temperature Range	$T_J, T_{STG}$	-55 +175	$^\circ\text{C}$

**NOTES:**

1. Non-repetitive current pulse, per Fig.3 and derated above  $T_a=25^\circ\text{C}$  per Fig.2.

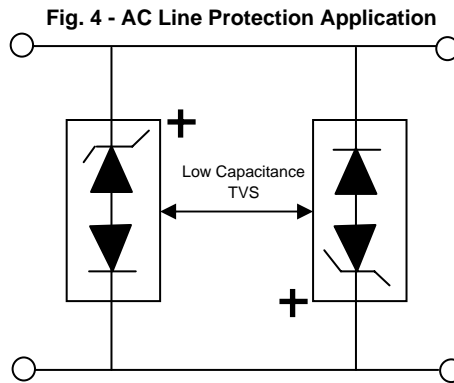
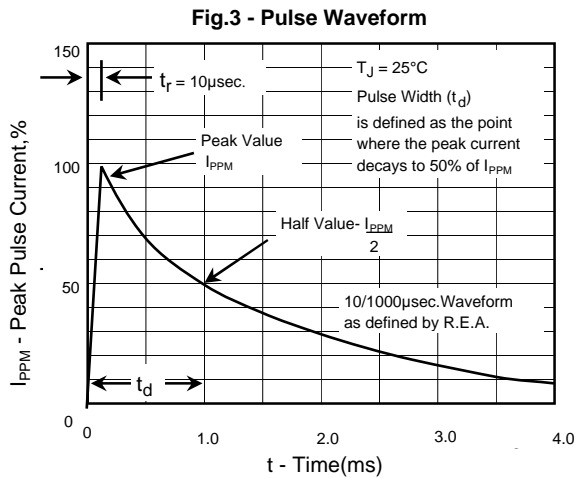
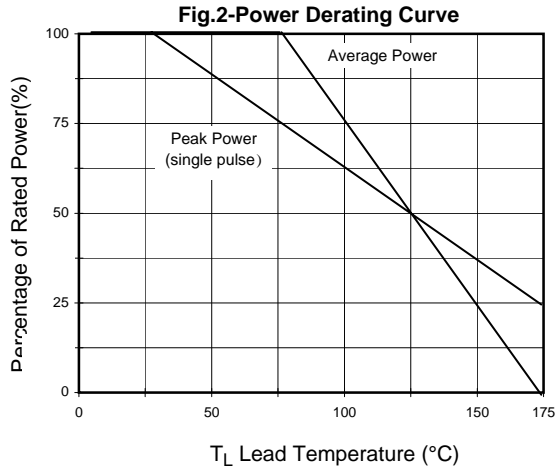
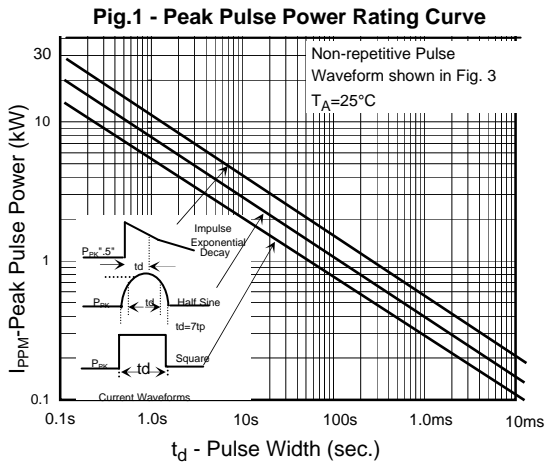
Certified RoHS Compliant  
UL File # E223026

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## RATINGS AND CHARACTERISTIC CURVES SAC SERIES

$T_A=25^\circ\text{C}$  unless otherwise noted



**Application Note:** Device must be used with two units in parallel, opposite in polarity as shown in circuit for AC signal line protection.

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## **500 Watt Low Capacitance TVS**

<b>PART NUMBER</b>	<b>REVERSE STANDOFF VOLTAGE VRWM (V)</b>	<b>BREAKDOWN VOLTAGE VBR (V) MIN. @ IT</b>	<b>MAXIMUM JUNCTION CAPACITANCE @ 0 VOLTS (pF)</b>	<b>WORKING INVERSE BLOCKING VOLTAGE VWIB (VOLTS)</b>	<b>MAXIMUM CLAMPING VOLTAGE @Ipp=5.0A Vc (V)</b>	<b>PEAK PULSE CURRENT Ipp (A)</b>	<b>REVERSE LEAKAGE @ VRWM IR (µA)</b>	<b>INVERSE BLOCKING LEAKAGE CURRENT @ VWIB IIB (Ma)</b>
SAC5.0	5.00	7.60	50	75	10.0	44.0	300	1
SAC6.0	6.00	7.90	50	75	11.2	41.0	300	1
SAC7.0	7.00	8.33	50	75	12.6	38.0	300	1
SAC8.0	8.00	8.89	50	75	13.4	36.0	100	1
SAC8.5	8.50	9.44	50	75	14.0	34.0	50	1
SAC10	10.00	11.10	50	75	16.3	29.0	5	1
SAC12	12.00	13.30	50	75	19.0	25.0	5	1
SAC15	15.00	16.70	50	75	23.6	20.0	5	1
SAC18	18.00	20.00	50	75	28.8	15.0	5	1
SAC22	22.00	24.40	50	75	35.4	14.0	5	1
SAC26	26.00	28.90	50	75	42.3	11.1	5	1
SAC30	30.00	33.30	50	75	48.6	10.0	5	1
SAC36	36.00	40.00	50	75	60.0	8.6	5	1
SAC45	45.00	50.00	50	150	77.0	6.8	5	1
SAC50	51.00	55.50	50	150	88.0	5.8	5	1

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