MDE Semiconductor, Inc.

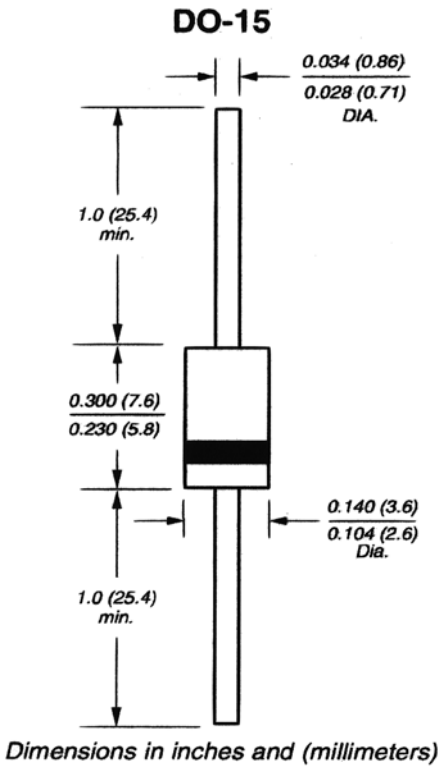
78-150 Calle Tampico, Unit 210, La Quinta, CA. U.S.A. 92253 Tel: 760-564-8656 • Fax: 760-564-2414

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 µs 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



Dimensions in inches and (millimeters)

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 µs waveform (NOTE 1, Fig.1)	P_{ppm}	Minimum 500	Watts
Peak Pulse Current of on 10/1000 µs waveform (Note 1,Fig 3)	Ippm	SEE TABLE 1	Amps
Steady State Power Dissipation at T_L = 75°C Lead lengths .375", 9.5mm	$P_{m(AV)}$	3.0	Watts
Operatings and Storage Temperature Range	Tj, Tstg	-55 +175	°C

NOTES:
1. Non-repetitive current pulse, per Fig.3 and derated above Ta=25 °C per Fig.2.

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Ratings and Characteristic Curves (T_A = 25°C unless otherwise noted)

Fig. 1 – Peak Pulse Power Rating Curve

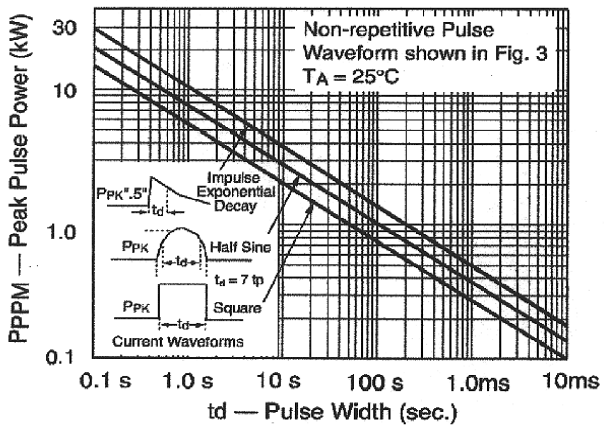


Fig. 2 - Power Derating Curve

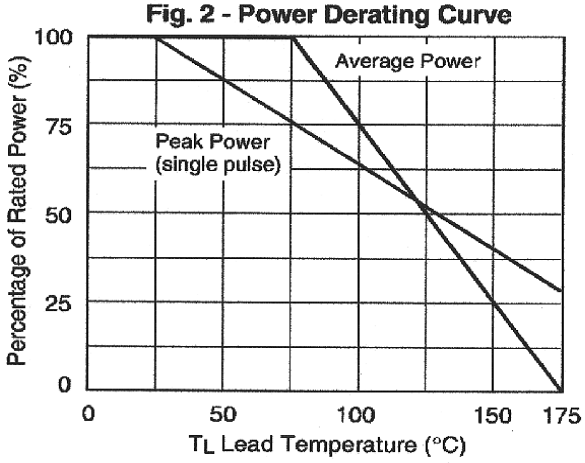


Fig. 3 – Pulse Waveform

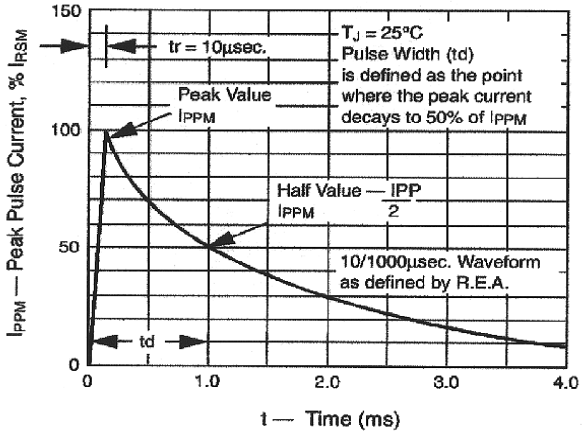
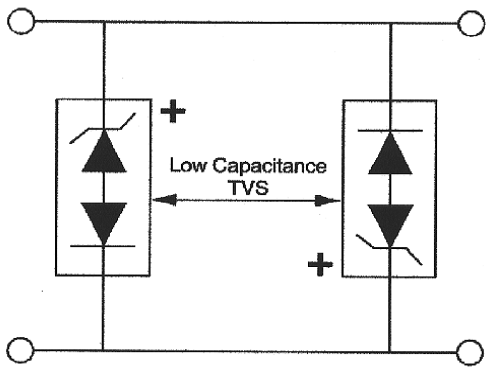


Fig. 4 - AC Line Protection Application



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

PART NUMBER	REVERSE STANDOFF VOLTAGE VRWM (V)	BREAKDOWN VOLTAGE VBR (V) MIN. @ IT	MAXIMUM JUNCTION CAPACITANCE @ 0 VOLTS (pF)	WORKING INVERSE BLOCKING VOLTAGE VWIB (VOLTS)	MAXIMUM CLAMPING VOLTAGE @Ipp=5.0A Vc (V)	PEAK PULSE CURRENT Ipp (A)	REVERSE LEAKAGE @ VRWM IR (µA)	INVERSE BLOCKING LEAKAGE CURRENT @ VWIB IIB (Ma)
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