Transient Voltage Suppressors

SAC Series

MERITEK

RoHS

FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O.
- Glass passivated junction.
- 500W peak pulse power capability with a 10/1000μs waveform, repetition rate (duty cycle): 0.01%.
- Excellent clamping capability.
- Low incremental surge resistance.
- Fast response time: typically less than 5.0ns from 0 volt to V_{BR} min.
- Ideal for data line applications.
- High temperature soldering guaranteed: 265℃/10 seconds/.375", (9.5mm) lead length, 5lbs., (2.3kg) tension.

DO-204AC/DO-15

MECHANICAL DATA

- Case: JEDEC DO-15 molded plastic over a passivated junction.
- Terminals: Solder plated axial leads, solderable per MIL-STD-750, Method 2026.
- Polarity: Color band denotes cathode.
- Mounting Position: Any.
- Weight: 0.015 ounce, 0.4 grams.

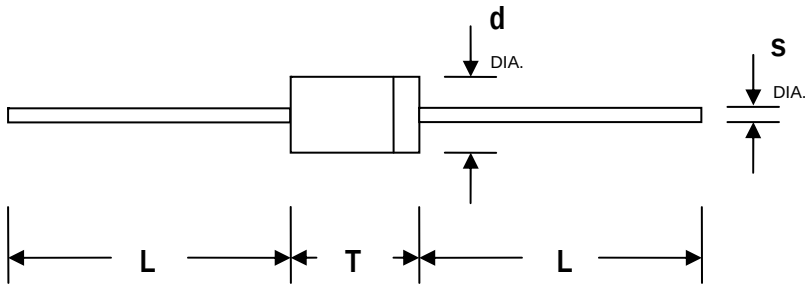
MAXIMUM RATINGS AND CHARACTERISTICS

Ratings at 25℃ ambient temperature unless otherwise specified.

RATING	SYMBOL	VALUE	UNIT
Peak Pulse Power Dissipation on 10/1000μs waveform. (Note 1，Fig. 1)	P_{PPM}	Minimum 500	Watts
Peak Pulse Current on 10/1000μs waveform. (Note 1，Fig. 3)	I_{PPM}	See Table	Amps
Steady State Power Dissipation at T_L =75℃，Lead length .375" (9.5mm). (Fig. 5)	$P_{M(AV)}$	3.0	Watts
Operating junction and Storage Temperature Range.	T_J , T_{STG}	-55 to +175	℃

Note: Non-repetitive current pulse, per Fig. 3 and derated above T_A = 25℃ per Fig. 2.

PACKAGE DIMENSIONS



DO-204AC/DO-15

Item	Millimeters		Inches	
	Min.	Max.	Min.	Max.
L	25.40	-	1.000	-
T	5.80	7.60	0.230	0.300
d	2.60	3.60	0.104	0.140
s	0.71	0.86	0.028	0.034

SPECIFICATIONS

Part Number	Reverse Stand-Off Voltage	Minimum Breakdown Voltage @I_T=1.0mA	Maximum Reverse Leakage @V_{RWM}	Maximum Clamping Voltage @I_{PP}=5.0A	Maximum Peak Pulse Current FIG.3	Maximum Junction Capacitance @0V	Working Inverse Blocking Voltage	Inverse Blocking Leakage Current	Peak Inverse Blocking Voltage
	V_{RWM}(V)	V_{BR}(V)	I_R(μA)	V_C(V)	I_{PP}(A)	pF	V_{WIB}(V)	I_{IB}(mA)	V_{PIB}(V)
SAC5.0	5.0	7.60	300	10.0	44.0	50	75	1.0	100
SAC6.0	6.0	7.90	300	11.2	41.0	50	75	1.0	100
SAC7.0	7.0	8.33	300	12.6	38.0	50	75	1.0	100
SAC8.0	8.0	8.89	100	13.4	36.0	50	75	1.0	100
SAC8.5	8.5	9.44	50	14.0	34.0	50	75	1.0	100
SAC10	10.0	11.10	5	16.3	29.0	50	75	1.0	100
SAC12	12.0	13.30	1	19.0	25.0	50	75	1.0	100
SAC15	15.0	16.70	1	23.6	20.0	50	75	1.0	100
SAC18	18.0	20.00	1	28.8	15.0	50	75	1.0	100
SAC22	22.0	24.40	1	35.4	14.0	50	75	1.0	100
SAC26	26.0	28.90	1	42.3	11.1	50	75	1.0	100
SAC30	30.0	33.30	1	48.6	10.0	50	75	1.0	100
SAC36	36.0	40.00	1	60.0	8.6	50	75	1.0	100
SAC45	45.0	50.00	1	77.0	6.8	50	150	1.0	200
SAC50	50.0	55.50	1	88.0	5.8	50	150	1.0	200

RATING AND CHARACTERISTIC CURVES (TA: 25°C UNLESS OTHERWISE SPECIFIED)

Figure 1 – Peak Pulse Power Rating Curve

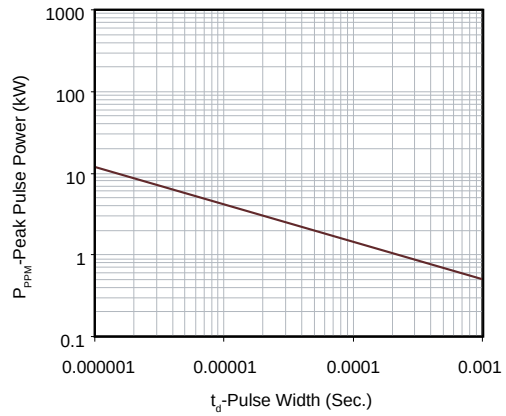


Figure 2 – Pulse Derating Curve

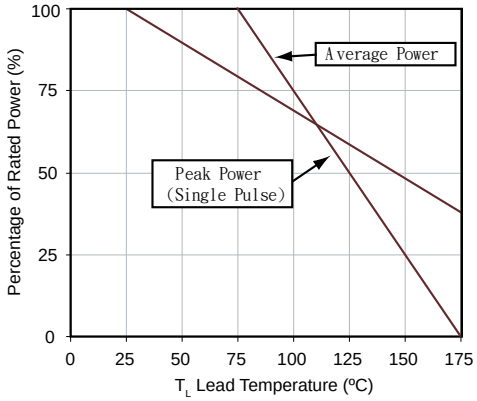


Figure 3 – Pulse Waveform

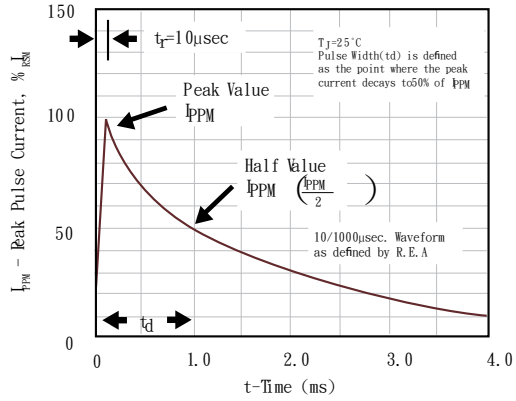
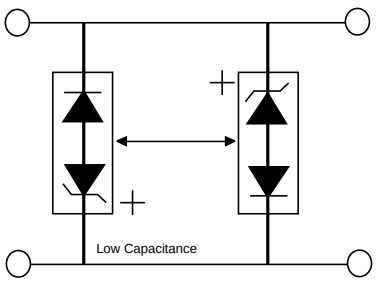


Figure 4 – AC Line Protection Application



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

Figure 5 – Steady State Power Dissipation Derating Curve