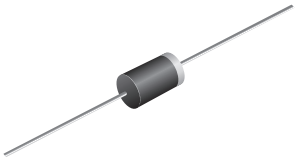
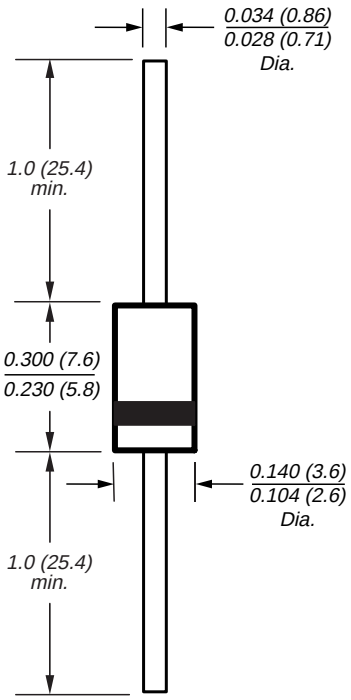
Low Capacitance TRANSZORB® Transient Voltage Suppressors



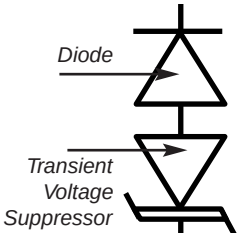
Peak Pulse Power 500W
Stand-off Voltage 5.0 to 50V

DO-204AC (DO-15)



Dimensions in inches and (millimeters)

Schematic



Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Glass passivated junction
- 500W peak pulse power capabililty with a 10/1000µs waveform, repetition rate (duty cycle): 0.01%
- Excellent clamping capability
- Low incremental surge resistance
- Very fast response time
- Ideal for data line applications
- High temperature soldering guaranteed: 265°C/10 seconds, 0.375" (9.5mm) lead length, 5lbs. (2.3 kg) tension

Mechanical Data

Case: JEDEC DO-204AC molded plastic body over passivated junction

Terminals: Solder plated axial leads, solderable per MIL-STD-750, Method 2026

Polarity: Color band denotes TVS cathode

Mounting Position: Any

Weight: 0.015 oz., 0.4 g

Packaging Codes – Options (Antistatic):

51 – 1K per Bulk box, 10K/carton
54 – 4K per 13" paper Reel (52mm horiz. tape), 12K/carton
73 – 2K per horiz. tape & Ammo box, 20K/carton

Maximum Ratings and Thermal Characteristics (T_A = 25°C unless otherwise noted)

Parameter	Symbol	Limit	Unit
Peak pulse power dissipation with a 10/1000µs waveform	P_{PPM}	Minimum 500(1)	W
Steady state power dissipation at T_L = 75°C with lead lengths or 0.375" (9.5mm)	$P_{M(AV)}$	3.0	W
Peak pulse power surge current with a 10/1000µs waveform (Fig. 3)	I_{PPM}	See Next Table(1)	A
Operating junction and storage temperature range	T_J, T_{STG}	–55 to +175	°C

Note: (1) Non-repetitive current pulse, per Fig.3 and derated above T_A = 25°C per Fig. 2

Electrical Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

Part Number	Stand-off Voltage[1] V_{WM} (V)	Minimum Breakdown Voltage at I_T = 1.0mA $V_{(BR)}$ (V)	Maximum Reverse Leakage at V_{WM} I_D (μA)	Maximum Clamping Voltage at I_{PP} = 5.0A V_C (V)	Maximum Peak Pulse Current per Fig. 3 I_{PP} (A)	Maximum Junction Capacitance at 0 Volts (pF)	Working Inverse Blocking Voltage V_{WIB} (V)	Inverse Blocking Leakage Current V_{WIB} I_{IB}(mA)	Peak Inverse Blocking Voltage V_{PIB} (V)
SAC5.0	5.0	7.60	300	10.0	44	50	75	1.0	100
SAC6.0	6.0	7.90	300	11.2	41	50	75	1.0	100
SAC7.0	7.0	8.33	300	12.6	38	50	75	1.0	100
SAC8.0	8.0	8.89	100	13.4	36	50	75	1.0	100
SAC8.5	8.5	9.44	50	14.0	34	50	75	1.0	100
SAC10	10	11.10	5.0	16.3	29	50	75	1.0	100
SAC12	12	13.30	5.0	19.0	25	50	75	1.0	100
SAC15	15	16.70	5.0	23.6	20	50	75	1.0	100
SAC18	18	20.00	5.0	28.8	15	50	75	1.0	100
SAC22	22	24.40	5.0	35.4	14	50	75	1.0	100
SAC26	26	28.90	5.0	42.3	11.1	50	75	1.0	100
SAC30	30	33.30	5.0	48.6	10.0	50	75	1.0	100
SAC36	36	40.00	5.0	60.0	8.6	50	75	1.0	100
SAC45	45	50.00	5.0	77.0	6.8	50	150	1.0	200
SAC50	50	55.50	5.0	88.0	5.8	50	150	1.0	200

Notes: (1) Non-repetitive current pulse, per Fig.3 and derated above T_A = 25°C per Fig. 2

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

Fig. 1 – Peak Pulse Power Rating Curve

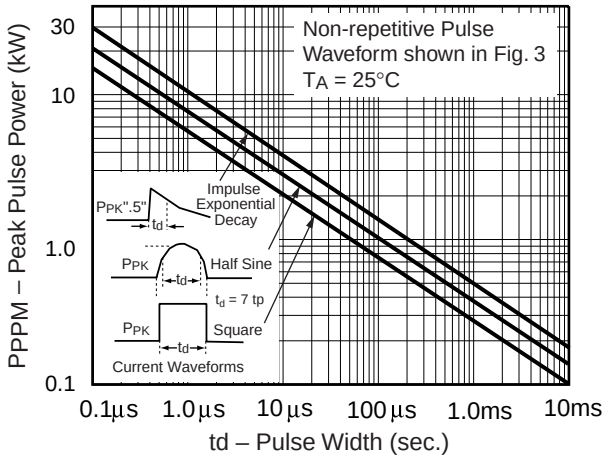


Fig. 2 - Power Derating Curve

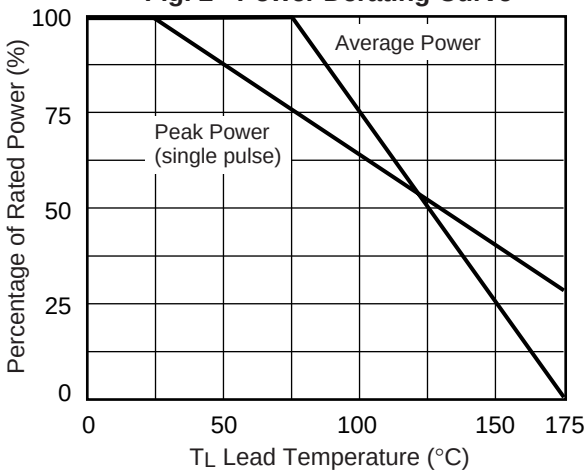


Fig. 3 – Pulse Waveform

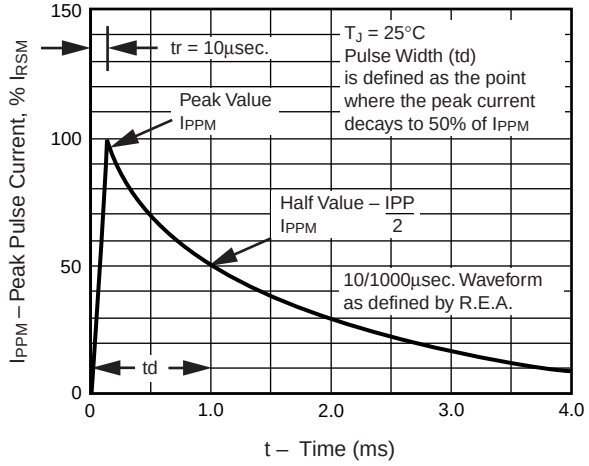
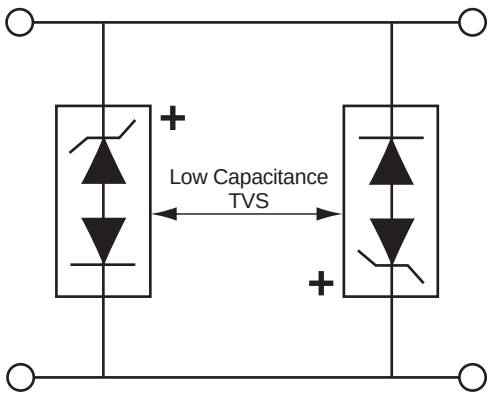


Fig. 4 - AC Line Protection Application



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