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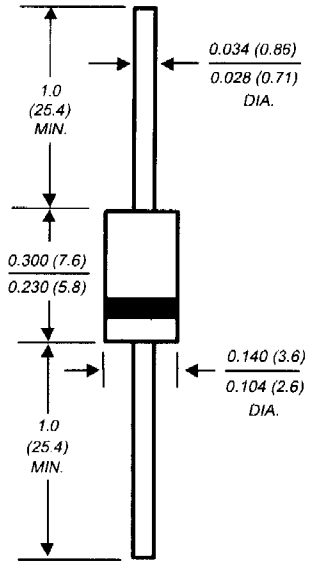
SAB5.0 THRU SAB28 SERIES

UNIDIRECTIONAL TRANSIENT VOLTAGE SUPPRESSOR

Stand-off Voltage *- 5.0 to 28 Volts* ***Peak Pulse Power*** *- 500 Watts*

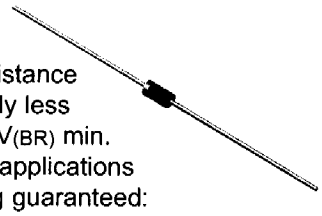
DO-204AC



Dimensions in inches and (millimeters)

FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Glass passivated junction
- 500W peak pulse power surge 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 1.0ps from 0 Volts to $V_{(BR)}$ min.
- Ideal for data and bus 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 a passivated junction
Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026
Polarity: Color band denotes positive end (cathode)
Mounting Position: Any
Weight: 0.015 ounce, 0.4 gram

MAXIMUM RATINGS AND CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

	SYMBOL	VALUE	UNITS
Peak pulse power dissipation with a 10/1000μs waveform (NOTE 1, FIG. 1)	P_{PPM}	Minimum 500	Watts
Steady state power dissipation, T_L= 75°C at lead lengths 0.375" (9.5mm)	$P_{M(AV)}$	1.0	Watts
Peak pulse current at T_A=25°C with a 10/1000μs waveform (NOTE 1, FIG. 3)	I_{PPM}	SEE TABLE 1	Amps
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load for uni-directional only (JEDEC Method) (NOTE 2)	I_{FSM}	70.0	Amps
Operating junction and storage temperature range	T_J, T_{STG}	-55 to +175	°C

ELECTRICAL CHARACTERISTICS at (T_A=25°C UNLESS OTHERWISE NOTED)

PART NUMBER	STAND-OFF VOLTAGE V_{WM} (VOLTS)	MAXIMUM REVERSE LEAKAGE CURRENT I_D at V_{WM} (μA)	MINIMUM BREAKDOWN VOLTAGE $V_{(BR)}$ at 1.0mA (Volts) (NOTE 1)	MAXIMUM CLAMPING VOLTAGE (FIG. 2) V_C at 1A (Volts)	TYPICAL CLAMPING VOLTAGE V_C at 5.0A (Volts)	TYPICAL CLAMPING VOLTAGE V_C at 10.0A (Volts)	MAXIMUM CLAMPING VOLTAGE at I_{PPM} (Volts)	MAXIMUM PEAK PULSE CURRENT I_{PPM} (NOTE 2) (AMPS)
SAB5.0	5.0	30.0	*6.0	7.4	-	7.9	9.3	53.7
SAB10	10.0	3.0	11.1	13.2	-	14.4	16.5	30.3
SAB12	12.0	3.0	13.8	16.5	-	18.5	21.0	23.8
SAB15	15.0	3.0	16.7	19.7	-	22.2	25.2	19.8
SA818	18.0	3.0	20.4	23.8	26.0	-	30.5	16.3
SAB24	24.0	3.0	28.4	32.4	37.0	-	42.0	11.9
SAB28	28.0	3.0	30.0	35.0	41.0	-	46.5	10.7

NOTE:
(1) $V_{(BR)}$ measured at pulse width of 300μs. sq. wave or equivalent

RATINGS AND CHARACTERISTIC CURVES SAB5.0 THRU SAB28 SERIES

FIG. 1 - PEAK PULSE POWER RATING CURVE

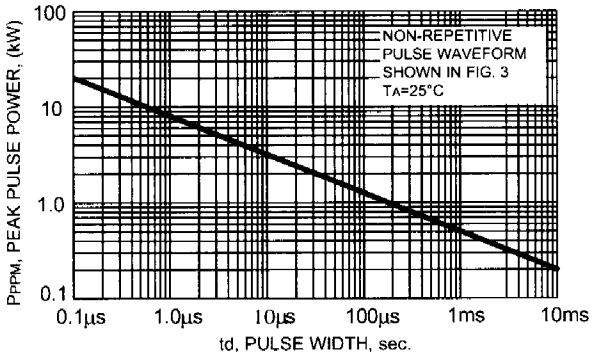


FIG. 2 - POWER DERATING CURVE

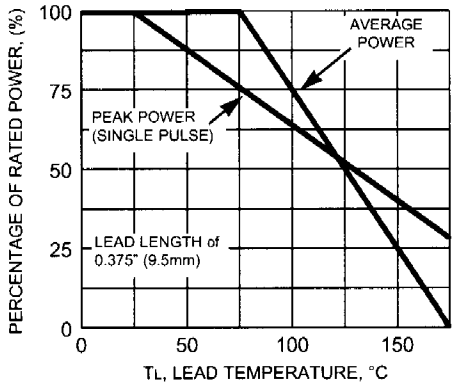


FIG. 3 - PULSE WAVEFORM

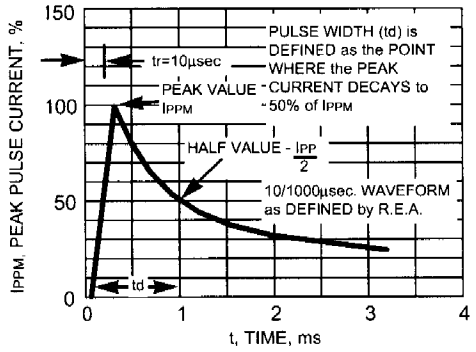


FIG. 4 - TYPICAL JUNCTION CAPACITANCE

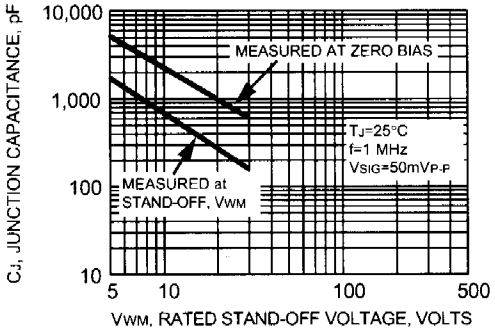


FIG. 5 - TYPICAL INSTANTANEOUS FORWARD VOLTAGE

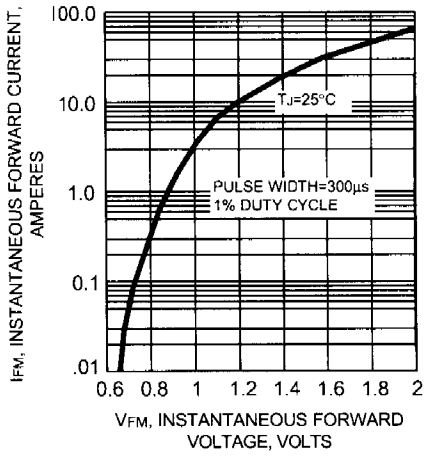


FIG. 6 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT