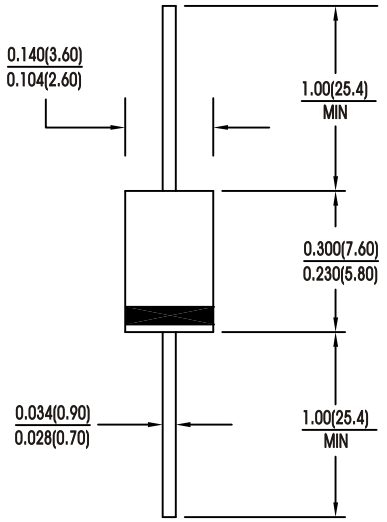
SAC5.0 THRU SAC50

VOLTAGE - 5.0 TO 50 VOLTS 500 WATT PEAK POWER

FEATURES:

- Plastic package has Underwrites Laboratory Flammability Classification 94V-0
- 500W peak pulse power surge capability at 10/1000us
- Excellent clamping capability
- Low indremental surge resistance
- High temperature soldering guaranteed : 260℃ /10 seconds/0.375"(9.5mm) lead length/5lbs(2.3kg) tension

DO-201AC / DO-15



MECHANICAL DATA

Case: Molded plastic
Terminals: Axial leads, Solderable per MIL-STD-202, Method 208
Polarity: Color band denoted positive end except Bidirectionals
Mounting Position: Any
Weight: 0.40 grams

Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25° C ambient temp. unless otherwise specified.
Single phase, half sine wave, 60 Hz, resistive or inductive load.
For capacitive load, derate current by 20 %.

Characteristic	Symbol	T.V.S	DIODE	Units
Maximum surge reverse power (Non-repetitive 10/ 1000us)	P_{RSM}	500	-	W
Maximum leakage current($V_R=V_{RM}$)	I_R	5.0	5.0	Amps
Maximum reverse recovery time(IF/IR=0.1A/0.3A)	T_{rr}	-	500	nS
Maximum junction capacitance at 0 voltage	C_J	50		pF
Operating and Storage temperature range	T_J, Tstg	-55 to+150		℃

RATINGS AND CHARACTERISTIC CURVES SAC5.0 THRU SAC50

Device Type	Stand-off Voltage V_{WM}	Breakdown V_{BR} Voltage at I_T	Test Current I_T	Maximun Reverse Leakage at V_{WM} I_R	Maximmum Clamping Voltage at IPP=5.0A V_C	Maximun Peak Pulse Current I_{PPM}	Inverse Blocking Leakage Current at V_{WIB}	Working Blocking Leakage Voltage V_{WIB}	Peak Inverse Blocking Voltage(V_{PIB})
	Volts	Volts	mA	μA	Volts	Amps	mA	Volts	Volts
SAC5.0	5.00	7.60	1.0	300	10.0	44	1.0	75	100
SAC6.0	6.00	7.90	1.0	300	11.2	41	1.0	75	100
SAC7.0	7.00	8.33	1.0	300	12.6	38	1.0	75	100
SAC8.0	8.00	8.89	1.0	100	13.4	36	1.0	75	100
SAC8.5	8.50	9.44	1.0	50	14.0	34	1.0	75	100
SAC10	10.0	11.10	1.0	5.0	16.3	29	1.0	75	100
SAC12	12.0	13.30	1.0	5.0	19.0	25	1.0	75	100
SAC15	15.0	16.70	1.0	5.0	23.6	20	1.0	75	100
SAC18	18.0	20.00	1.0	5.0	28.8	15	1.0	75	100
SAC22	22.0	24.40	1.0	5.0	35.4	14	1.0	75	100
SAC26	26.0	28.90	1.0	5.0	42.3	11.1	1.0	75	100
SAC30	30.0	33.30	1.0	5.0	48.6	10.0	1.0	75	100
SAC36	36.0	40.00	1.0	5.0	60.0	8.6	1.0	75	100
SAC45	45.0	50.00	1.0	5.0	77.0	6.8	1.0	150	100
SAC50	50.0	55.50	1.0	5.0	88.0	5.8	1.0	150	100

NOTE1:The SAC series is a low capacitance silicon transient voltage suppressor for data or signal line. It is designed for commercial and industrial applications. This series offers pricing,size,and capacitance advantages.This series employs a standard TVS in series with a rectifier which reduces the effective capacitance up through 70MHz with a minimum amount of signal loss or deformation. If bidirectional transient protection capabliity is required, is required,two low capacitance TVS must be used in parallel,opposite in polarity for complete AC protection.

NOTE2:The SAC series of low capacitance silicon transient voltage suppressors,rate at 400 watts,provides board level protection for data or signal lines form the damaging effects of electrostatic discharge(ESD),and electromagnetic pluse(EMP).It will clamp the inductive overshoot voltage caused by very fast impulse rise times. The low capacitance assures minumum signal attenuation.

NOTE3:A TVS is normally selected according to the reverse"Stand Off Voltage"(V_R)which should be equal to or greater than the DC or continuoues peak operating voltage level.

NOTE: EQUIVALENT CIRCUIT

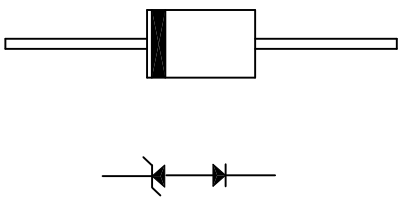
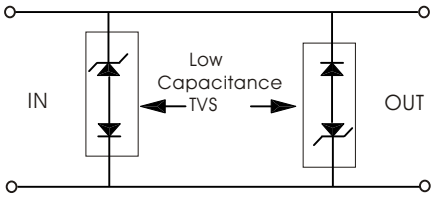


FIGURE.1-AC Line Protection Application



APPLICATION NOTE : Devices must be used with two units in parallel, opposite in polarity as shown in circuit for AC signal line protection

FIGURE 1-PEAK PULSEPOWER RATING VERSUS PULSETIME CURVE

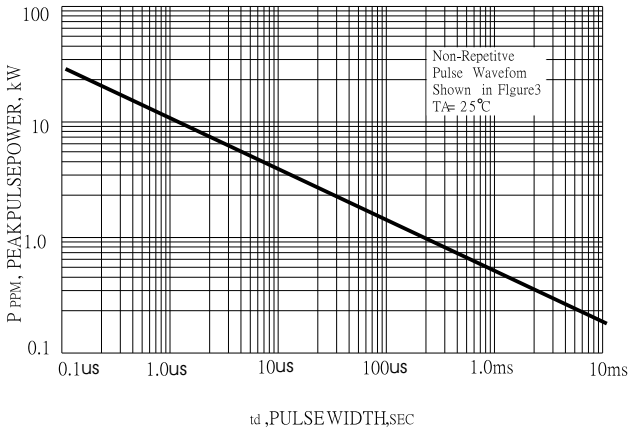


FIGURE2-PULSE DERATING CURVE

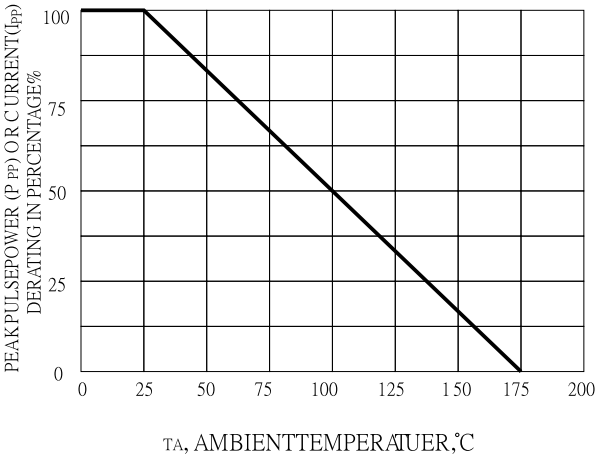


FIGURE 3-PULSE WAVEFORM

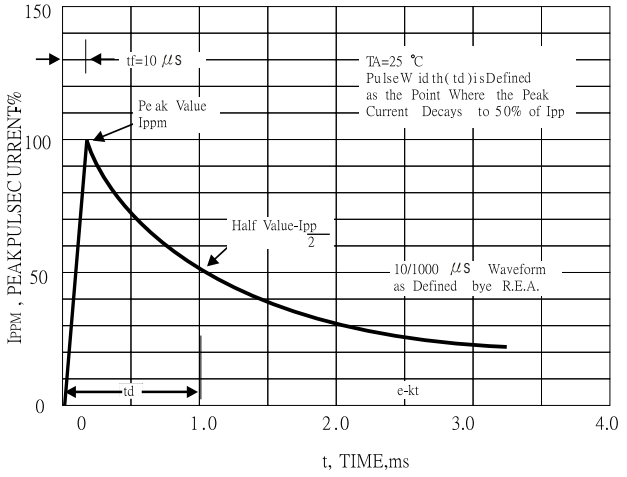


FIG.4-STEADY STATEPOWER DERATING CURVE

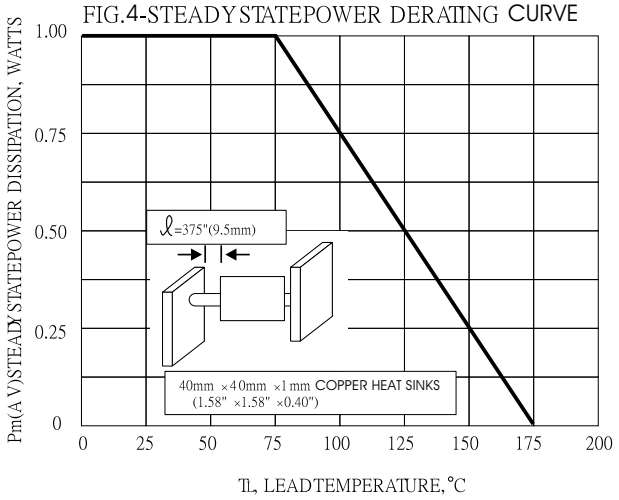


FIGURE6-TYPICAL REVERSE LEAKAGE CHARACTERISTICS

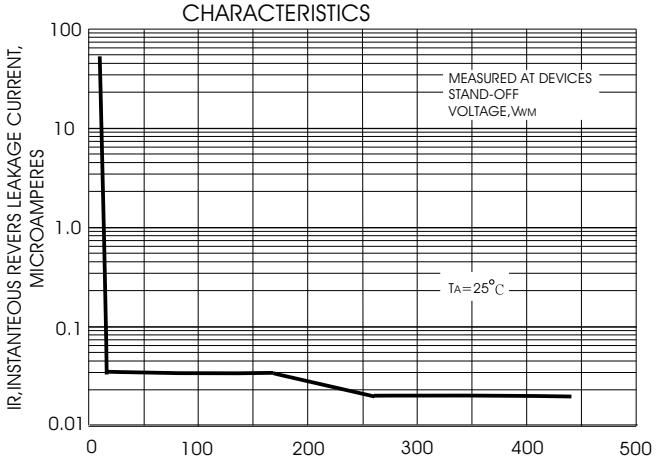


FIG.6-MAXIMUM NON-REPETITEVE PEAKFORW ARD SURGE C URRENT UNIDIRECTIONAL