SD1020T Thru SD10100T

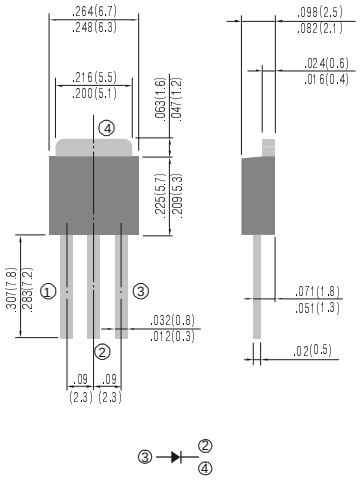
SCHOTTKY BARRIER RECTIFIER

VOLTAGE - 20 to 100 Volts CURRENT - 10.0 Amperes

FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- For thorough hole applications
- Low profile package
- Built-in strain relief
- Metal to silicon rectifier majority carrier conduction
- Low power loss, High efficiency
- High current capability, low V_F
- High surge capacity
- For use in low voltage high frequency inverters, free wheeling, and polarity protection applications
- High temperature soldering guaranteed:260°C/10 seconds at terminals

TO-251AB



MECHANICAL DATA

Case: TO-251AB molded plastic

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

Polarity: Color band denotes cathode

Weight: 0.015 ounce, 0.4 gram.

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.
Resistive or inductive load.

	SYMBOLS	SD1020T	SD1030T	SD1040T	SD1050T	SD1060T	SD1080T	SD10100T	UNITS
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	20	30	40	50	60	80	100	Volts
Maximum RMS Voltage	V_{RMS}	14	21	28	35	42	56	70	Volts
Maximum DC Blocking Voltage	V_{DC}	20	30	40	50	60	80	100	Volts
Maximum Average Forward Rectified Current at T_C=75°C	$I_{(AV)}$	10.0	10.0	10.0	10.0	10.0	10.0	10.0	Amps
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load(JEDEC method)	I_{FSM}	200	200	200	200	200	200	200	Amps
Maximum Instantaneous Forward Voltage at 10.0A (Note 1)	V_F	0.55	0.55	0.55	0.75	0.75	0.85	0.85	Volts
Maximum DC Reverse Current (Note 1) T_A=25°C at Rated DC Blocking Voltage T_A=100°C	I_R	0.2 20	0.2 20	0.2 20	0.2 20	0.2 20	0.2 20	0.2 20	mA
Maximum Thermal Resistance (Note 2)	RθJC RθJA	6 80	6 80	6 80	6 80	6 80	6 80	6 80	°C / W
Operating Junction Temperature Range	T_J	-55 to +125							°C
Storage Temperature Range	T_{STG}	-65 to +150							°C

NOTES:

1. Pulse Test with PW=300μsec, 2% Duty Cycle.
2. Mounted on P.C. Board with 14mm^2 (.013mm thick) copper pad areas.

RATING AND CHARACTERISTIC CURVES

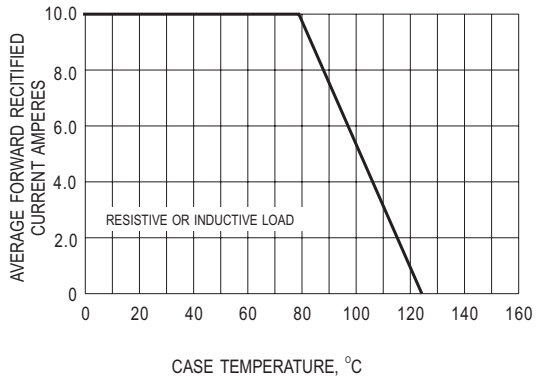


Fig.1- FORWARD CURRENT DERATING CURVE

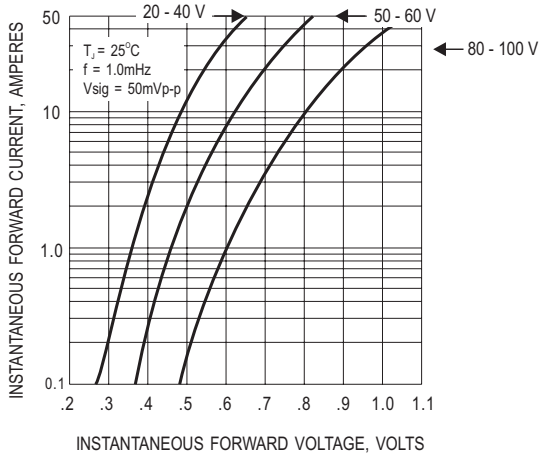


Fig.2- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTIC

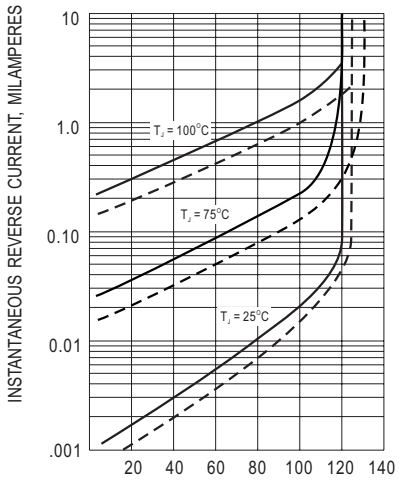


Fig.3- TYPICAL REVERSE CHARACTERISTIC

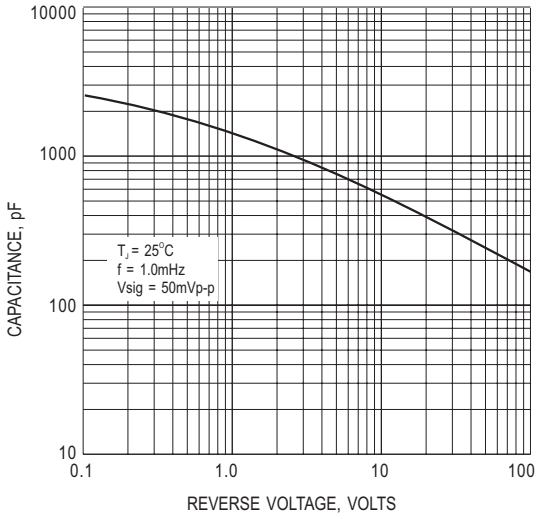


Fig.4- TYPICAL JUNCTION CAPACITANCE

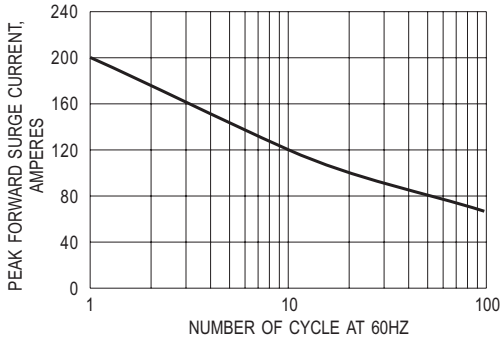


Fig.5- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT