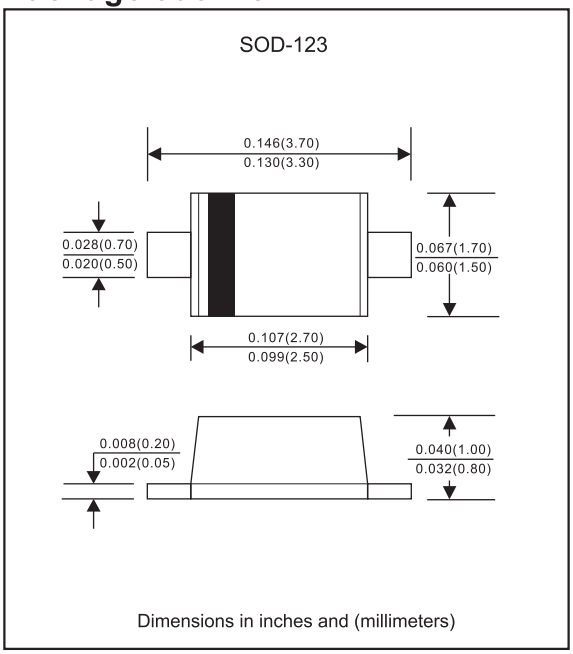
SD103AW / BW / CW

200mA Surface Mount Small Signal Schottky Diode -20V-40V

Features

- Low current rectification and high speed switching.
- Extremely small surface mount type.
- Low forward voltage drop.
- Silicon epitaxial planar chip, metal silicon junction.
- Lead-free parts for green partner, exceeds environmental standards of MIL-STD-19500 /228
- Compliant to Halogen-free

Package outline



Mechanical data

- Epoxy : UL94-V0 rated flame retardant
- Case : Molded plastic, SOD-123
- Terminals :Plated terminals, solderable per MIL-STD-750, Method 2026
- Polarity : Indicated by cathode band
- Mounting Position : Any

Maximum ratings and Electrical Characteristics (AT T_A=25°C unless otherwise noted)

PARAMETER	CONDITIONS	Symbol	SD103AW	SD103BW	SD103CW	UNIT
Peak repetitive reverse voltage Working peak reverse voltage DC blocking voltage		V_{RRM} V_{RWM} V_R	40	30	20	V
RMS reverse voltaget		$V_{R(RMS)}$	28	21	14	V
Average rectified output current		I_{FAV}	200			mA
Non-repetitive peak forward surge current	@ t < 1.0s	I_{FSM}	1.5			A
Total device dissipation		P_D	400			mW
Thermal resistance junction to ambient	junction to ambientrse	$R_{\theta JA}$	300			°C/W
Operating temperature		T_J	-55 ~ +125			°C
Storage temperature		T_{STG}	-65 ~ +125			°C
Minimum Reverse breakdown voltage		$V_{(BR)R}$	40	30	20	V
Forward voltage	I_F = 20mA I_F = 200mA	V_F	0.37 0.60			V
Reverse current	V_R = 30 V, SD103AW V_R = 20 V, SD103BW V_R = 10 V, SD103CW	I_R	5.0			uA
Typical Junction capacitance	V_R = 0 V, f = 1.0MHz	C_J	50			pF
Reverse recover time	I_F = I_R = 200mA, I_{rr} = 0.1 X I_R, R_L = 100 $_{OHM}$	t_{rr}	10			ns

Rating and characteristic curves (SD103AW / BW / CW)

Fig. 1 POWER DERATING CURVE

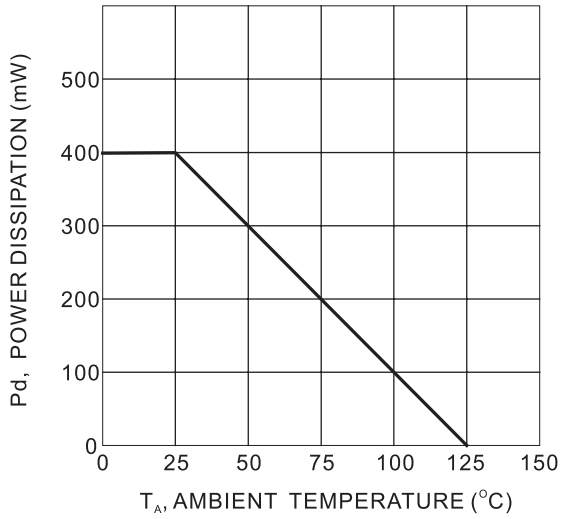


Fig. 2 TYPICAL FORWARD CHARACTERISTIC

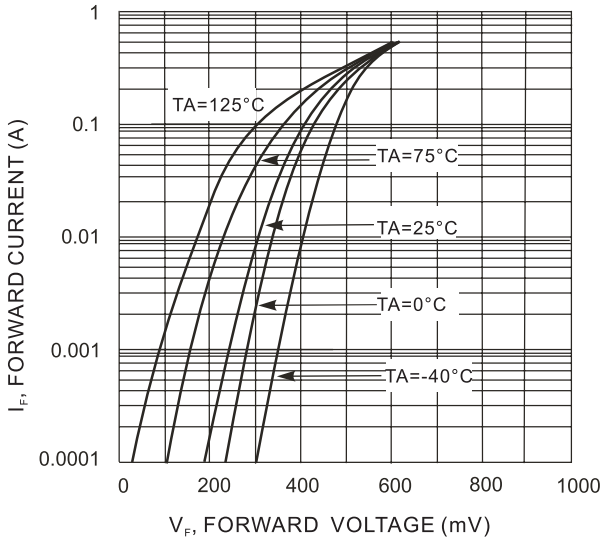


Fig. 3 TYPICAL JUNCTION CAPACITANCE VS REVERSE VOLTAGE

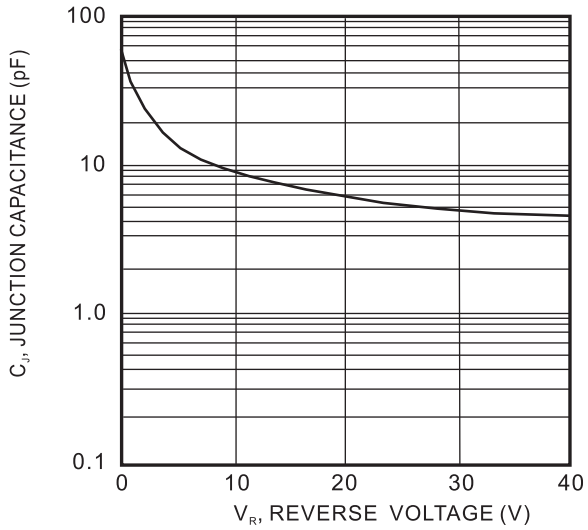
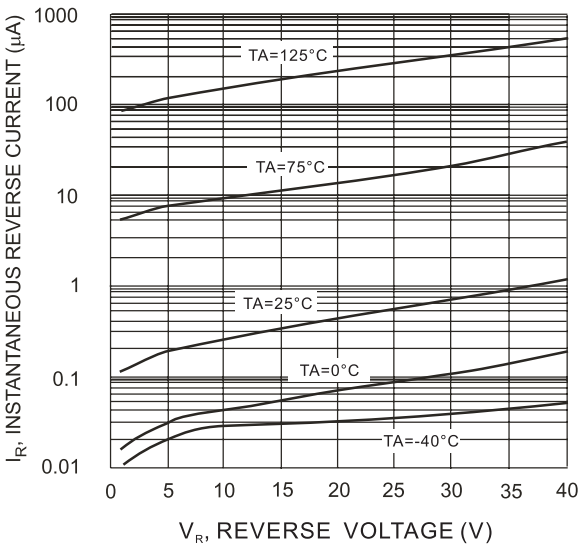


FIG. 4 TYPICAL REVERSE CHARACTERISTICS



SD103AW / BW / CW

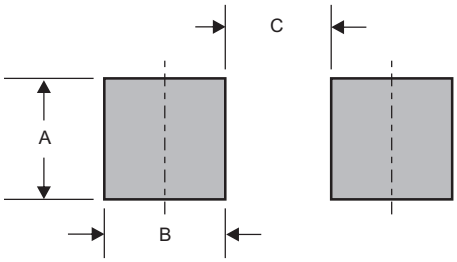
Pinning information

Pin	Simplified outline	Symbol
Pin1 cathode Pin2 anode		

Marking

Type number	Marking code
SD103AW	S4
SD103BW	S5
SD103CW	S6

Suggested solder pad layout



Dimensions in inches and (millimeters)

PACKAGE	A	B	C
SOD-123	0.059 (1.50)	0.059 (1.50)	0.094 (2.40)

Reel packing

PACKAGE	REEL SIZE	REEL (pcs)	COMPONENT SPACING (m/m)	BOX (pcs)	INNER BOX (m/m)	REEL DIA, (m/m)	CARTON SIZE (m/m)	CARTON (pcs)	APPROX. GROSS WEIGHT (kg)
SOD-123	7"	3,000	4.0	30,000	183*183*123	178	382*262*387	240,000	9.5