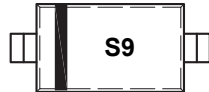


SURFACE MOUNT SCHOTTKY BARRIER DIODE

Features

- ◆ High breakdown voltage
- ◆ Low forward voltage
- ◆ Surface mount device

Marking



Mechanical Data

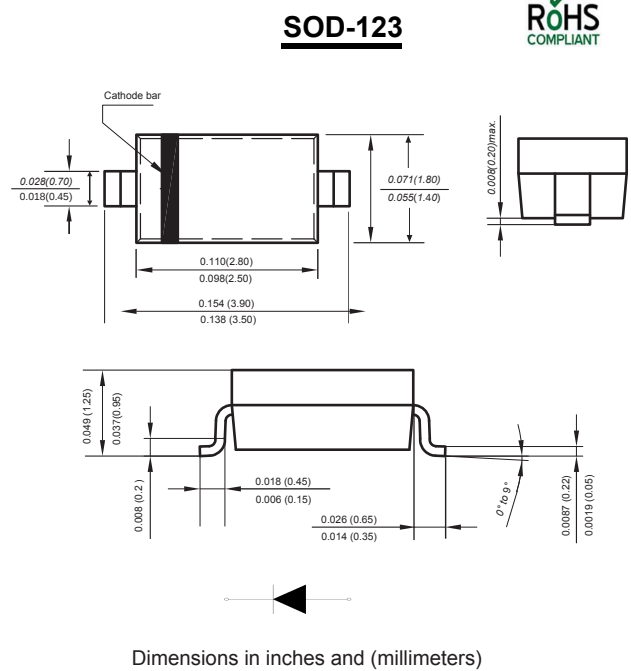
Case : SOD-123

Terminals : Solderable per MIL-STD-750, Method 2026

Polarity : Polarity symbol marking on body

Mounting Position : Any

Weight : 0.00036 ounce, 0.00103 grams



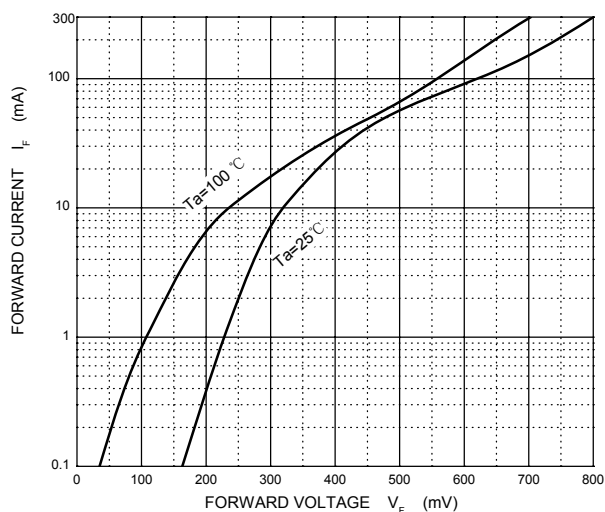
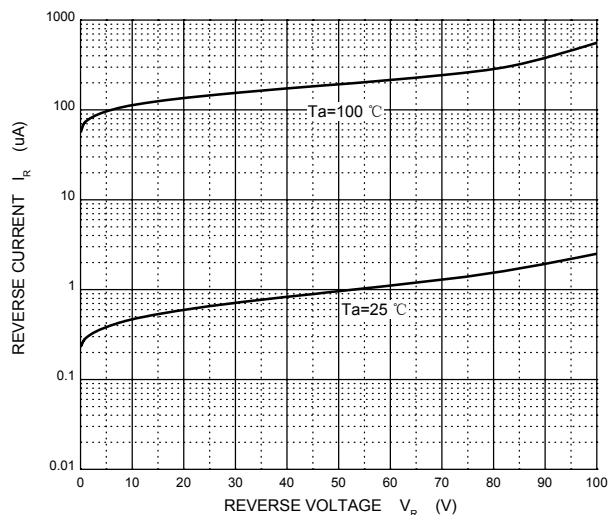
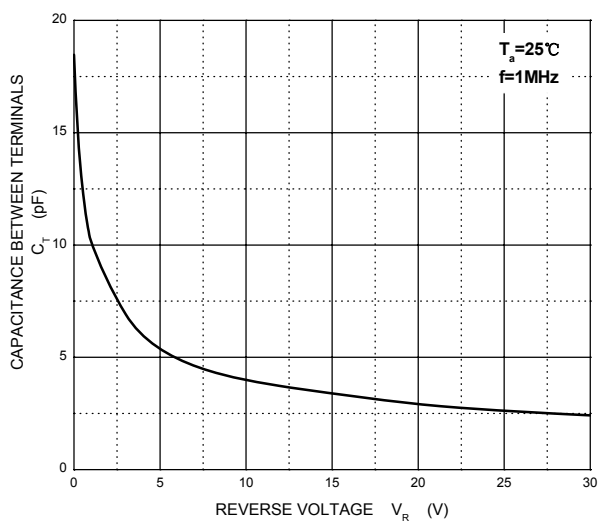
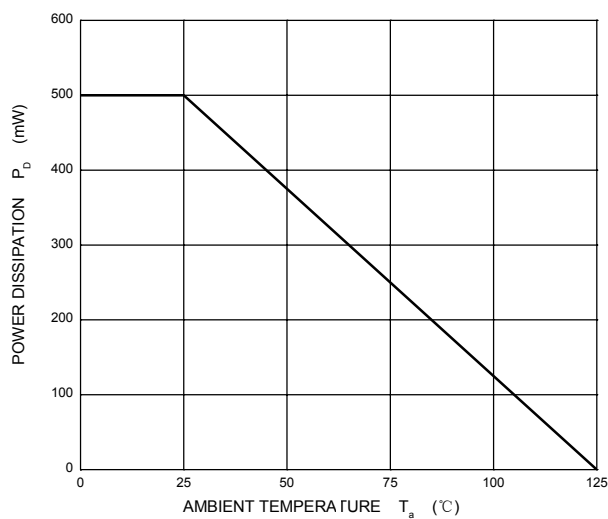
Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Rating	Unit
Repetitive Peak Reverse Voltage	V_{RRM}	100	V
Continuous Forward Current	I_F	150	mA
Repetitive Peak Forward Current (at $t_p < 1\text{s}$), Duty Cycle < 50%	I_{FRM}	350	mA
Surge Forward Current (at $t_p < 10\text{ ms}$)	I_{FSM}	750	mA
Power Dissipation	P_{tot}	200	mW
Thermal Resistance Junction Ambient	R_{thJA}	420	$^\circ\text{C/W}$
Operating Temperature Range	T_J	- 55 to + 150	$^\circ\text{C}$
Storage Temperature Range	T_s	- 55 to + 150	$^\circ\text{C}$

Characteristics at $T_a = 25^\circ\text{C}$

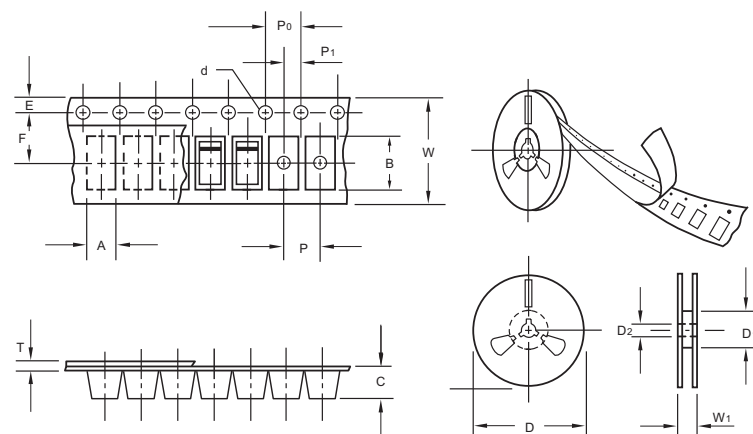
Parameter	Symbol	Min.	Typ.	Max.	Unit
Reverse Breakdown Voltage at $I_R = 100\text{ }\mu\text{A}$	$V_{(BR)R}$	100	-	-	V
Forward Voltage at $I_F = 0.1\text{ mA}$ at $I_F = 10\text{ mA}$ at $I_F = 250\text{ mA}$	V_F	- - -	- - -	0.25 0.45 1	V
Reverse Current at $V_R = 1.5\text{ V}$ at $V_R = 10\text{ V}$ at $V_R = 50\text{ V}$ at $V_R = 75\text{ V}$	I_R	- - - -	- - - -	0.3 0.5 1 2	μA
Total Capacitance at $V_R = 0\text{ V}$, $f = 1\text{ MHz}$ at $V_R = 1\text{ V}$, $f = 1\text{ MHz}$	C_T	- -	20 12	- -	pF

Typical Characteristics

Forward Characteristics

Reverse Characteristics

Capacitance Characteristics

Power Derating Curve


The curve above is for reference only.

Packing information



unit:mm

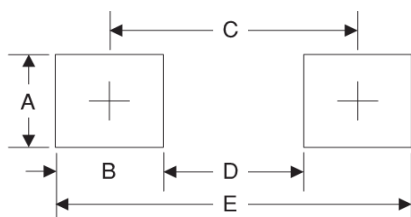
Item	Symbol	Tolerance	SOD-123
Carrier width	A	0.1	1.85
Carrier length	B	0.1	3.94
Carrier depth	C	0.1	1.57
Sprocket hole	d	0.05	1.50
13" Reel outside diameter	D	2.0	330.00
13" Reel inner diameter	D ₁	min	50.00
7" Reel outside diameter	D	2.0	178.00
7" Reel inner diameter	D ₁	min	54.40
Feed hole diameter	D ₂	0.5	13.00
Sprocket hole position	E	0.1	1.75
Punch hole position	F	0.1	3.50
Punch hole pitch	P	0.1	4.00
Sprocket hole pitch	P ₀	0.1	4.00
Embossment center	P ₁	0.1	2.00
Overall tape thickness	T	0.1	0.06
Tape width	W	0.3	8.00
Reel width	W ₁	1.0	12.30

Note: Devices are packed in accordance with EIA standard RS-481-A and specifications listed above.

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	45,000	210*208*203	178	430*430*235	180,000	9.0

Suggested Pad Layout



Symbol	Unit (mm)	Unit (inch)
A	1.2	0.047
B	1.2	0.047
C	3.2	0.126
D	2.0	0.079
E	4.4	0.173