



## SCHOTTKY DIODES

### Features

- ◆ Low conduction losses
- ◆ Very low reverse current
- ◆ Negligible switching losses
- ◆ Low capacitance diode
- ◆ Low forward and reverse recovery times
- ◆ Extremely fast switching
- ◆ Surface mount device

**SOD-323**



### Mechanical Data

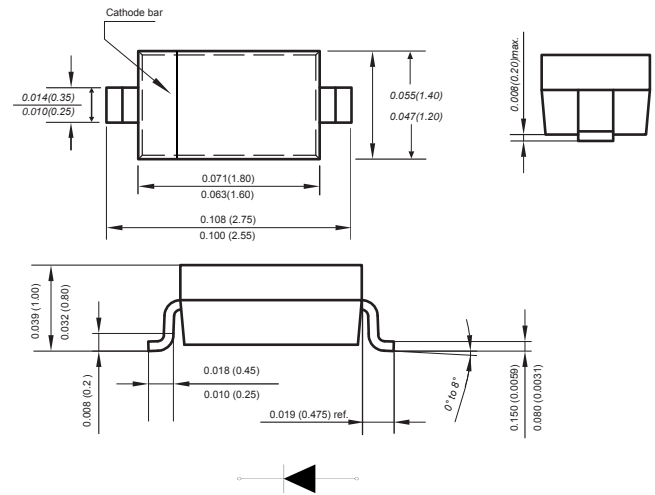
Case: JEDEC SOD-323 molded plastic body

Terminals: Plated leads solderable per MIL-STD-750, Method 2026

Polarity: Polarity symbols marked on case

Weight : 0.0007 ounce, 0.02 grams

Marking: 20



Dimensions in inches and (millimeters)

### Absolute Maximum Ratings at 25 °C

Parameter	Symbols	BAT20J	Units
Non-repetitive Peak Reverse Voltage	$V_{RRM}$	10	V
Average forward current	$I_{F(AV)}$	1	A
Repetitive peak forward current	$I_{F(RMS)}$	2	A
Surge non repetitive forward current at 10ms	$I_{FSM}$	5	A
Operating and Storage Temperature Range	$T_j, T_{stg}$	-55 ~ +150	°C

### Characteristics at $T_a = 25\text{ °C}$

Parameter	Symbols	BAT20J	Units
Maximum Forward Voltage $I_F = 10\text{ mA}$ $I_F = 100\text{ mA}$ $I_F = 1.0\text{ A}$	$V_F$	0.31 0.40 0.62	V
Reverse leakage current $V_{R1} = 5\text{ V}$ $V_{R2} = 8\text{ V}$ $V_{R3} = 15\text{ V}$	$I_R$	2 3 12	$\mu\text{A}$
Diodes Capacitance $V_R = 5\text{ V}, f = 1\text{ MHz}$	$C_T$	30	pF



## Typical Characteristics

Fig.1 Power Derating Curve

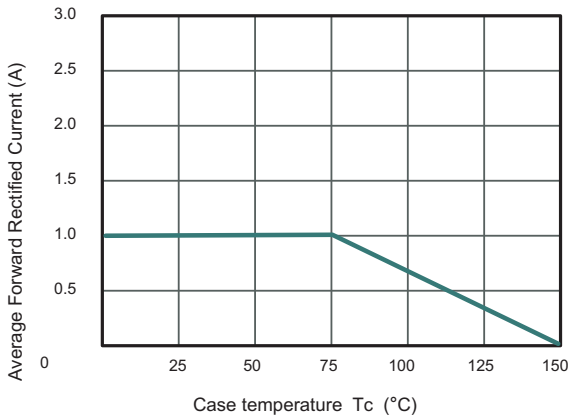


Fig.2 Typical Reverse Characteristics

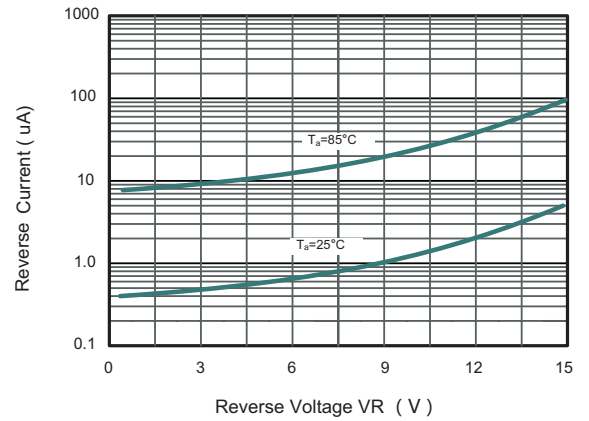


Fig.3 Typical Junction Capacitance

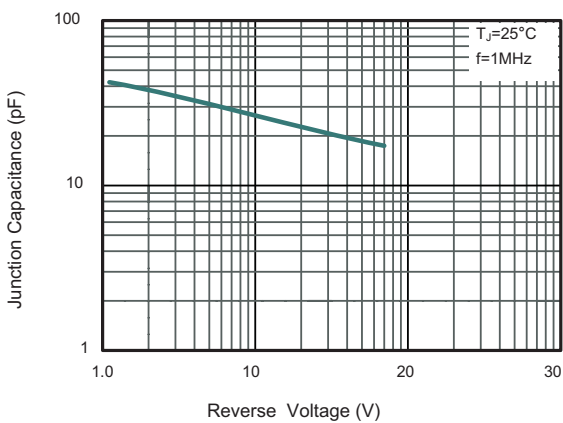
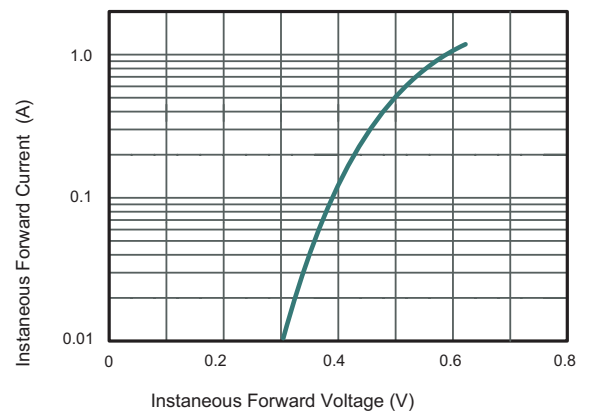
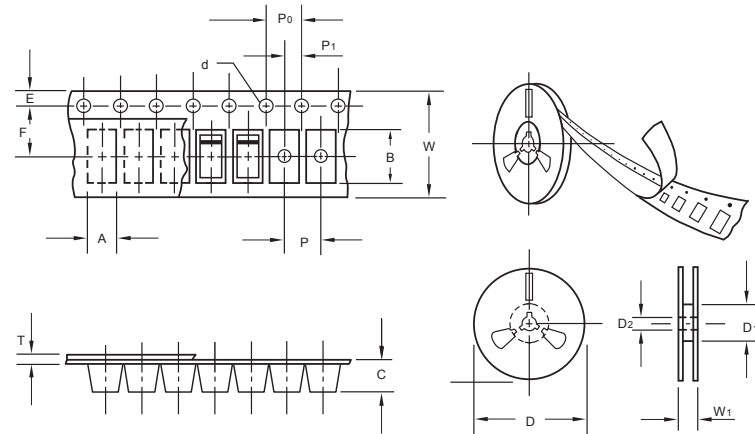


Fig.4 Typical Forward Characteristic



The curve above is for reference only.

## Packing information



unit:mm

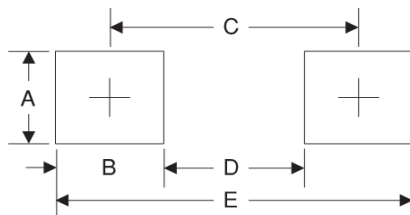
Item	Symbol	Tolerance	SOD-323
Carrier width	A	0.1	2.1
Carrier length	B	0.1	4.0
Carrier depth	C	0.1	1.60
Sprocket hole	d	0.05	1.55
7" Reel outside diameter	D	2.0	178.00
7" Reel inner diameter	D <sub>1</sub>	min	50.0
Feed hole diameter	D <sub>2</sub>	0.5	13.00
Sprocket hole position	E	0.1	1.75
Punch hole position	F	0.1	3.50
Punch hole pitch	P	0.1	4.00
Sprocket hole pitch	P <sub>0</sub>	0.1	4.00
Embossment center	P <sub>1</sub>	0.1	2.00
Overall tape thickness	T	0.1	0.25
Tape width	W	0.3	8.15
Reel width	W <sub>1</sub>	1.0	10.5

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-323	7"	3,000	4.0	45,000	210*208*203	178	430*430*235	180,000	

## Suggested Pad Layout



Symbol	Unit (mm)	Unit (inch)
A	0.7	0.028
B	0.7	0.028
C	2.15	0.085
D	1.8	0.071
E	2.85	0.112