

SCHOTTKY BARRIER RECTIFIERS

Features

- ◆ Low forward voltage drop
- ◆ Guard ring construction for transient protection
- ◆ High conductance
- ◆ Also available in lead free version

SOD-323



Mechanical Data

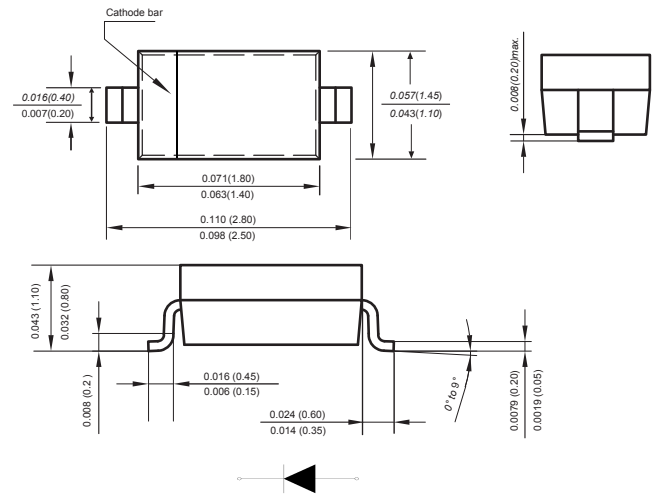
Case: JEDEC SOD-323 molded plastic body

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

Polarity: Polarity symbols marked on case

Weight : 0.00019 ounce, 0.00548 grams

Marking: B0520WS:SD, B0530WS:SE, B0540WS:SF



Dimensions in inches and (millimeters)

Absolute Maximum Ratings at 25 °C

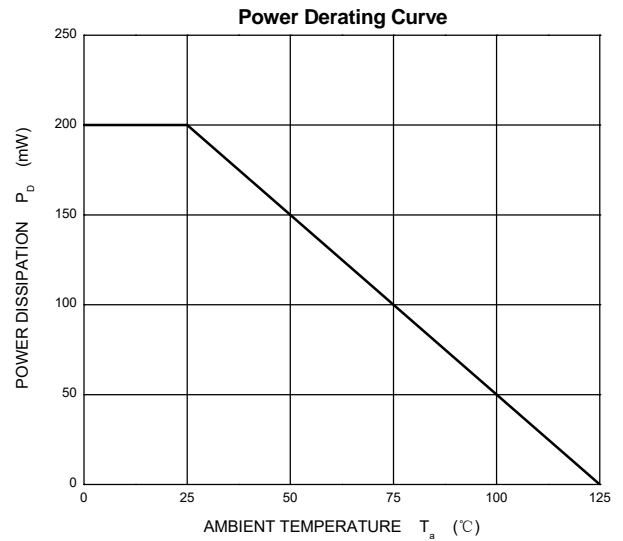
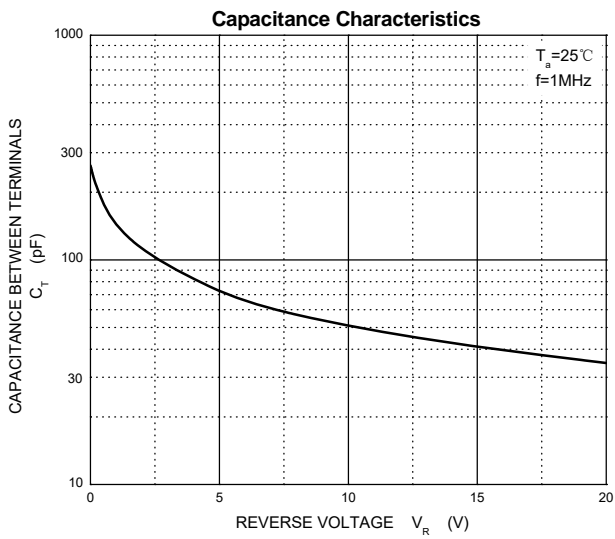
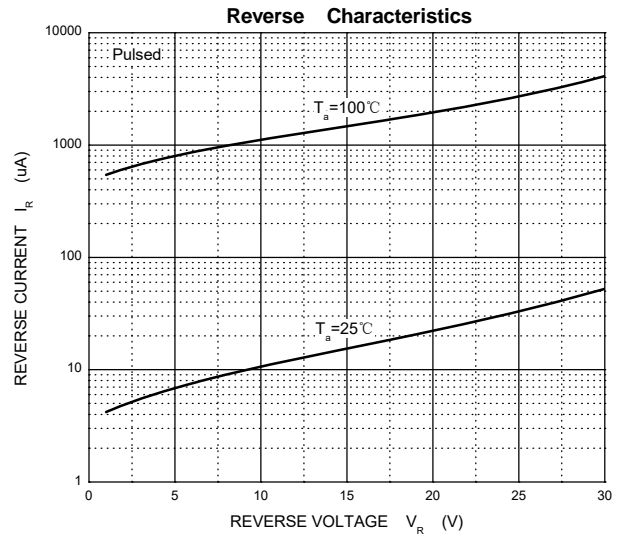
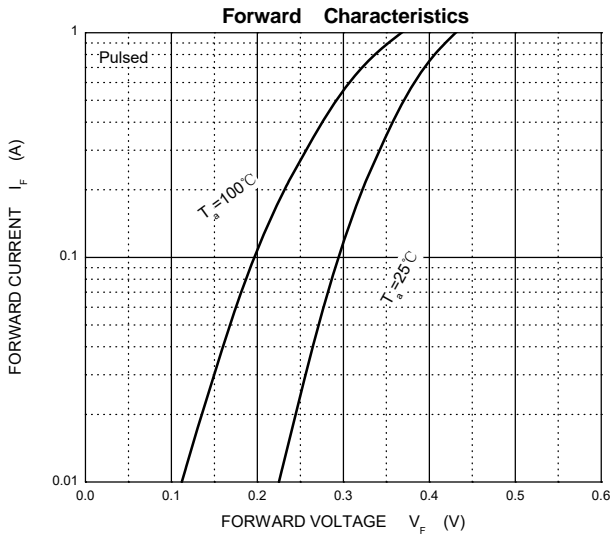
Parameter	Symbols	B0520WS	B0530WS	B0540WS	Units
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	20	30	40	V
Maximum RMS voltage	V_{RMS}	14	21	28	V
Maximum DC Blocking Voltage	V_{DC}	20	30	40	
Average rectified output current	I_o	0.5			A
Non-repetitive Peak Forward Surge Current at 8.3ms	I_{FSM}	22			A
Typical Thermal Resistance (1)	$R_{\theta JA}$	500			°C/W
Operating Temperature Range	T_j	-55 ~ +125			°C
Storage Temperature Range	T_{stg}	-55 ~ +150			°C

(1) P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper pad areas.

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

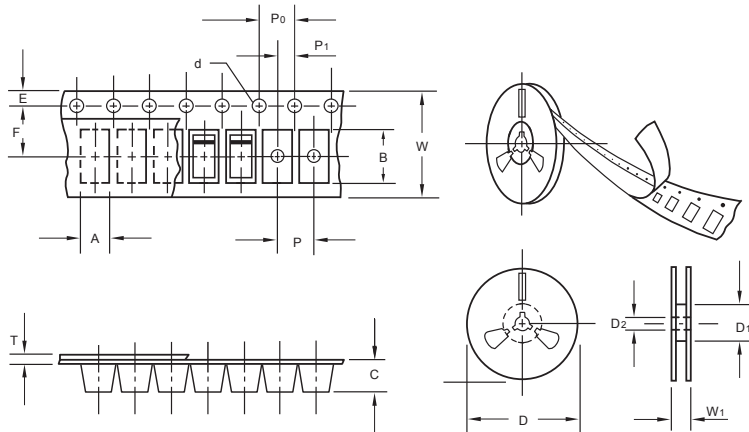
Parameter	Symbols	B0520WS	B0530WS	B0540WS	Units
Maximum Forward Voltage at I_f	V_F	at 0.1A	0.33	0.36	V
		at 0.5A	0.39	0.45	
		at 1.0A	—	—	
Peak Reverse Current at V_R	I_R	at 10V	75	—	uA
		at 15V	—	75	
		at 20V	250	100	
		at 30V	—	500	
		at 40V	—	—	

Typical Characteristics



The curve above is for reference only.

Packing information



unit:mm

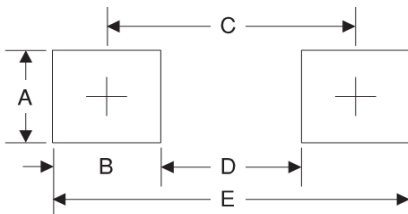
Item	Symbol	Tolerance	SOD-323
Carrier width	A	0.1	2.1
Carrier length	B	0.1	4.0
Carrier depth	C	0.1	1.60
Sprocket hole	d	0.05	1.55
7" Reel outside diameter	D	2.0	178.00
7" Reel inner diameter	D ₁	min	50.0
Feed hole diameter	D ₂	0.5	13.00
Sprocket hole position	E	0.1	1.75
Punch hole position	F	0.1	3.50
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	0.25
Tape width	W	0.3	8.15
Reel width	W ₁	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	190*190*190	178	400*400*220	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	1.45	0.071
E	2.85	0.112

Important Notice and Disclaimer

Microdiode Semiconductor (Shenzhen) reserves the right to make changes to this document and its products and specifications at any time without notice. Customers should obtain and confirm the latest product information and specifications before final design, purchase or use.

Microdiode Semiconductor (Shenzhen) makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does Microdiode Semiconductor (Shenzhen) assume any liability for application assistance or customer product design. Microdiode Semiconductor (Shenzhen) does not warrant or accept any liability with products which are purchased or used for any unintended or unauthorized application.

No license is granted by implication or otherwise under any intellectual property rights of Microdiode Semiconductor (Shenzhen). Microdiode Semiconductor (Shenzhen) products are not authorized for use as critical components in life support devices or systems without express written approval of Microdiode Semiconductor (Shenzhen).