

# SB520WT

## Schottky Barrier Diode

### Features

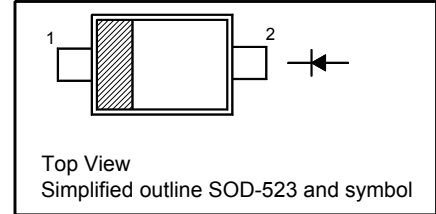
- Ultra small SMD package
- Very low forward voltage

### Applications

- Ultra high speed switching
- Voltage clamping
- Low current rectification

### PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode

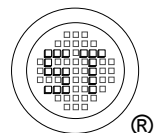


### Absolute Maximum Ratings ( $T_a = 25^\circ\text{C}$ )

Parameter	Symbol	Value	Unit
Reverse Voltage	$V_R$	20	V
Continuous Forward Current	$I_F$	500	mA
Repetitive Peak Forward Current (at $t_p = 1$ ms)	$I_{FRM}$	3.5	A
Non-Repetitive Peak Forward Surge Current ( $t = 8$ ms square wave)	$I_{FSM}$	6	A
Junction Temperature	$T_j$	125	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	- 65 to + 150	$^\circ\text{C}$

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

Parameter	Symbol	Min.	Max.	Unit
Reverse Breakdown Voltage at $I_R = 100 \mu\text{A}$	$V_{(BR)R}$	20	-	V
Forward Voltage at $I_F = 0.1$ mA at $I_F = 1$ mA at $I_F = 10$ mA at $I_F = 100$ mA at $I_F = 500$ mA	$V_F$	- - - - -	180 240 290 380 650	mV
Reverse Current at $V_R = 10$ V	$I_R$	-	30	$\mu\text{A}$
Diode Capacitance at $V_R = 1$ V, $f = 1$ MHz	$C_d$	-	30	pF



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## Electrical Characteristics Curves

Fig 1. Reverse Characteristic Curve

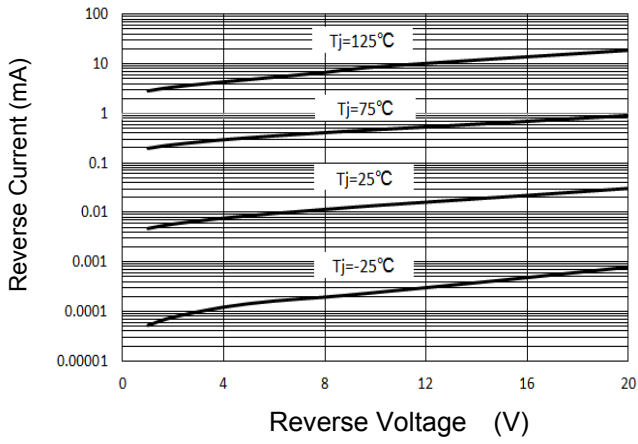


Fig 2. Forward Characteristic Curve

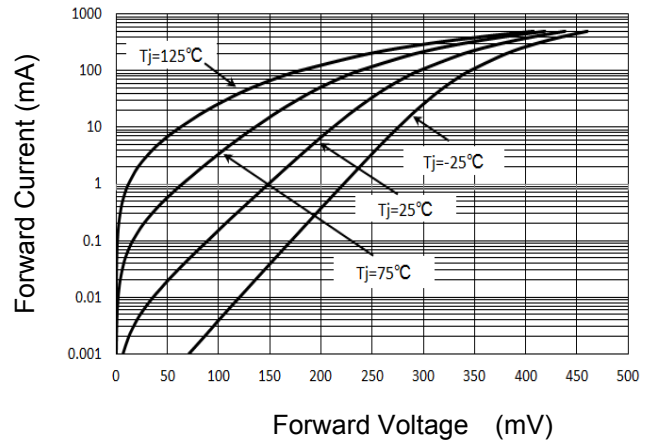


Fig 3. Junction Capacitance

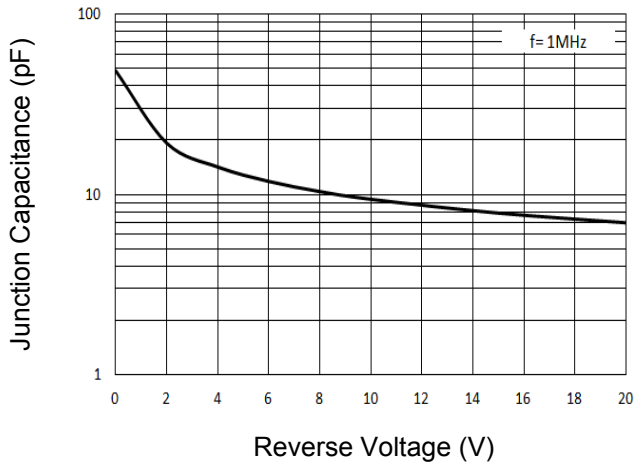
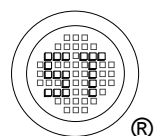
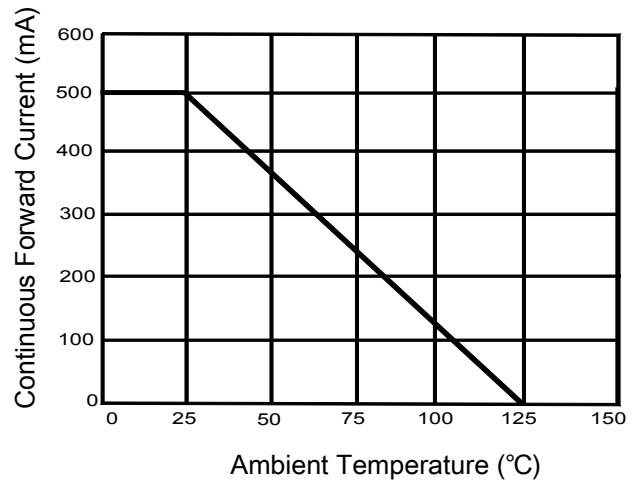


Fig 4. Continuous Forward Current Derating Curve

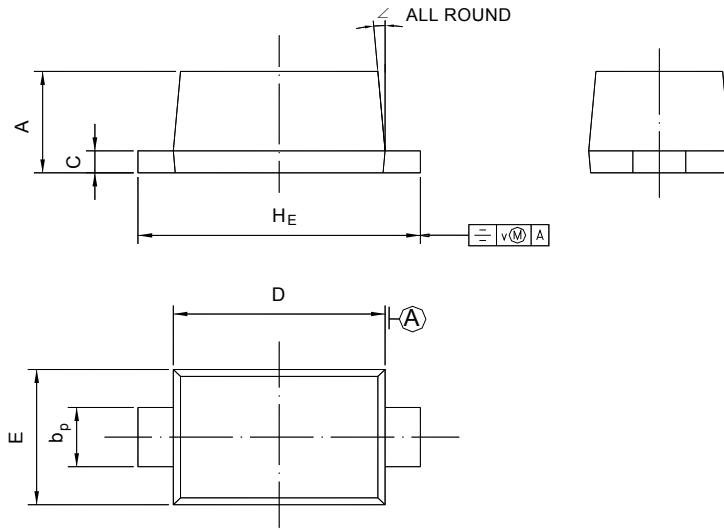


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## PACKAGE OUTLINE

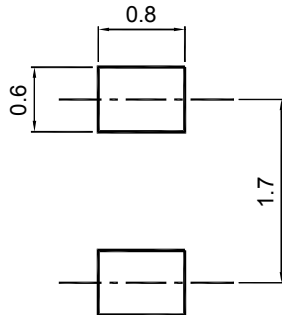
Plastic surface mounted package; 2 leads

SOD-523



UNIT	A	b <sub>p</sub>	C	D	E	H <sub>E</sub>	V	∠
mm	0.70 0.60	0.4 0.3	0.135 0.100	1.25 1.15	0.85 0.75	1.7 1.5	0.1	5°

### Recommended Soldering Footprint



### Packing information

Package	Tape Width (mm)	Pitch		Reel Size		Per Reel Packing Quantity
		mm	inch	mm	inch	
SOD-523	8	4 ± 0.1	0.157 ± 0.004	178	7	4,000

### Marking information

" F " = Part No.

" III " = Cathode line

Font type: Arial

