

SB2040WT

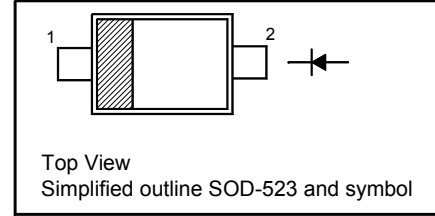
Schottky Barrier Diode

Features

- Very low forward voltage
- Ultra small SMD package

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



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

Parameter	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	V_{RRM}	40	V
Working Peak Reverse Voltage	V_{RWM}	40	V
DC Blocking Voltage	V_R	40	V
RMS Reverse Voltage	V_{RMS}	28	V
Non-repetitive Peak Forward Surge Current at $t \leq 8.3$ ms	I_{FSM}	2	A
Non-Repetitive Peak Forward Current	I_{FM}	250	mA
Power Dissipation	P_{tot}	150	mW
Junction and Storage Temperature Range	T_j, T_{stg}	- 65 to + 125	$^\circ\text{C}$

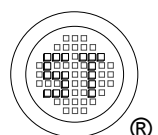
Thermal Characteristics

Parameter	Symbol	Value	Unit
Typical Thermal Resistance Junction to Ambient ¹⁾	$R_{\theta JA}$	667	$^\circ\text{C}/\text{W}$

¹⁾ Device mounted on FR-4 substrate PC board, 2oz copper, with minimum recommended pad layout.

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

Parameter	Symbol	Min.	Typ.	Max.	Unit
Reverse Breakdown Voltage at $I_R = 100 \mu\text{A}$	$V_{(BR)R}$	40	-	-	V
Forward Voltage at $I_F = 20$ mA at $I_F = 200$ mA	V_F	-	-	0.37 0.6	V
Reverse Current at $V_R = 30$ V at $V_R = 10$ V	I_R	-	-	5 1	μA
Diode Capacitance at $V_R = 0$ V, $f = 1$ MHz	C_{tot}	-	-	50	pF
Reverse Recovery Time at $I_F = 1_R = 200$ mA, $I_{rr} = 0.1 \times I_R$, $R_L = 100 \Omega$	t_{rr}	-	10	-	ns



Electrical Characteristics Curves

Fig 1. Reverse Characteristics Curve

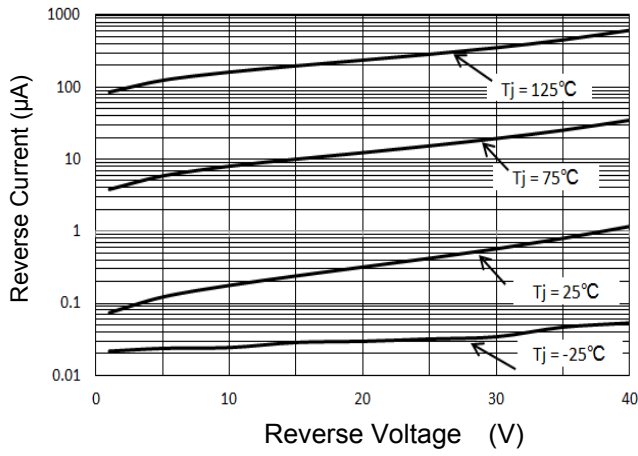


Fig 2. Forward Characteristics Curve

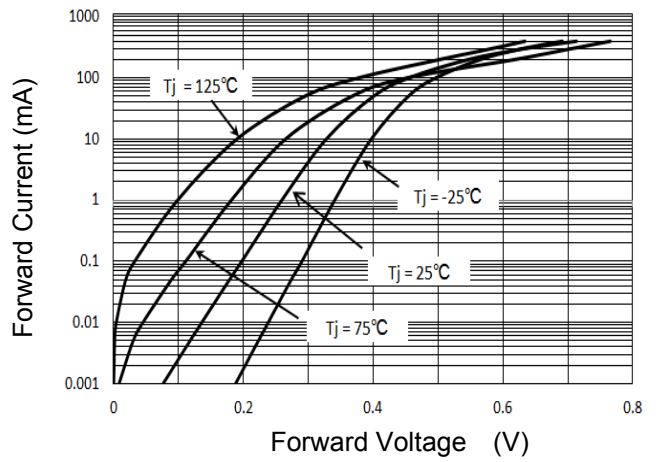


Fig 3. Junction Capacitance

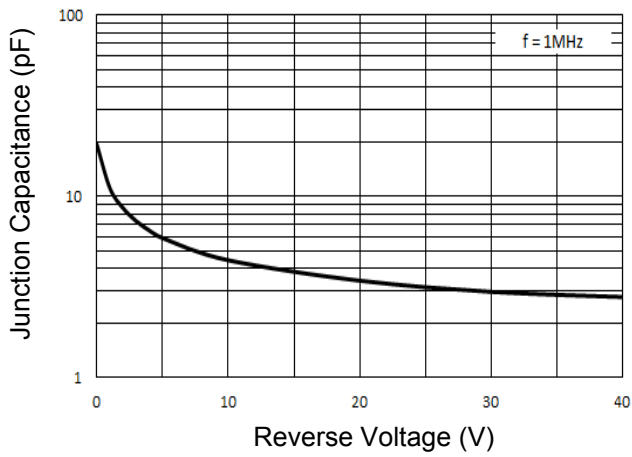
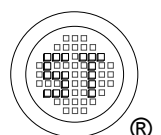
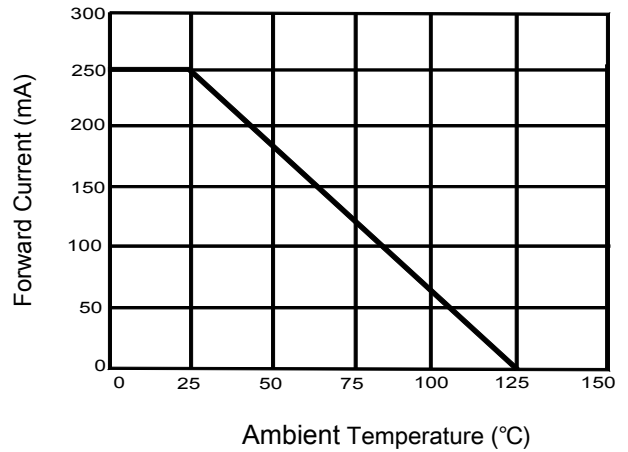


Fig 4. Forward Current Derating Curve

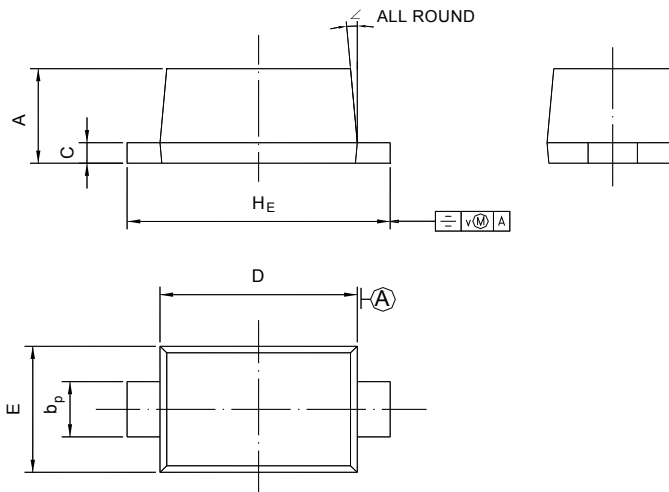


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PACKAGE OUTLINE

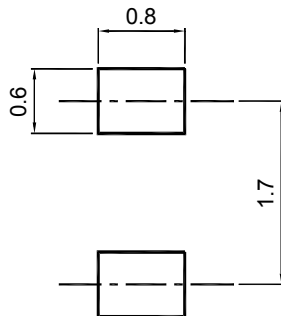
Plastic surface mounted package; 2 leads

SOD-523



UNIT	A	b _p	C	D	E	H _E	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

" J " = Part No.
 " III " = Cathode line
 Font type: Arial

