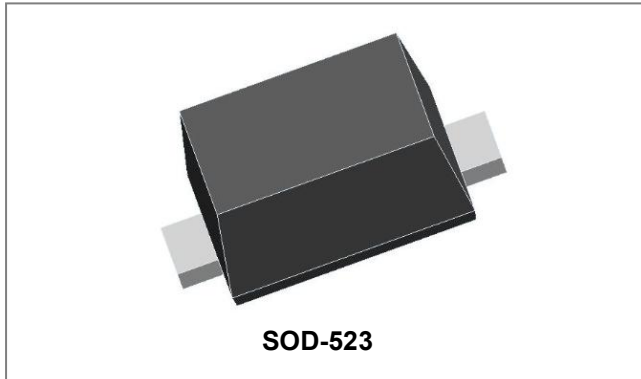


RB520S-40 Schottky Barrier Diode



Features

- Low Forward Voltage Drop
- Flat Lead SOD-523 Small Outline Plastic Package
- Extremely Small SOD-523 Package
- Surface Device Type Mounting
- RoHS Compliant
- Green EMC
- Matte Tin(Sn) Lead Finish
- Band Indicates Cathode

Circuit Diagram



Applications

- Switching power supply
- Converters
- Free-Wheeling diodes
- Reverse battery protection
- Disk drives
- Battery charging

Maximum Ratings@T_A=25°C unless otherwise specified

Characteristics	Symbol	Condition	Max.	Units
Peak Repetitive Reverse Voltage	V _{RRM}	-	40	V
Working Peak Reverse Voltage	V _{RWM}			
DC Blocking Voltage	V _R			
Average Forward Current	I _{F(AV)}	50% duty cycle, rectangular wave form	200	mA
Peak One Cycle Non-Repetitive Surge Current	I _{FSM}	8.3 ms, half Sine pulse	1	A
Power Dissipation	P _d	-	200	mW

Electrical Characteristics@T_A=25°C unless otherwise specified

Characteristics	Symbol	Condition	Min.	Typ.	Max.	Units
Breakdown Voltage*	V _{BR}	@ I _R = 10uA, T _J = 25 °C	40	-	-	V
Forward Voltage Drop*	V _{F1}	@ 200mA, Pulse, T _J = 25 °C	-	0.56	0.6	V
Reverse Current*	I _{R1}	@ V _R = 10V, T _J = 25 °C	-	0.15	1	uA
Junction Capacitance	C _T	@ V _R = 4V, T _C = 25 °C, f _{SIG} = 1MHz	-	8	15	pF

* Pulse width < 300 μs, duty cycle < 2%

Ratings and Characteristics Curves

Characteristics	Symbol	Condition	Specification	Units
Junction Temperature	T_J	-	-55 to +125	°C
Storage Temperature	T_{stg}	-	-55 to +125	°C

Ratings and Characteristics Curves

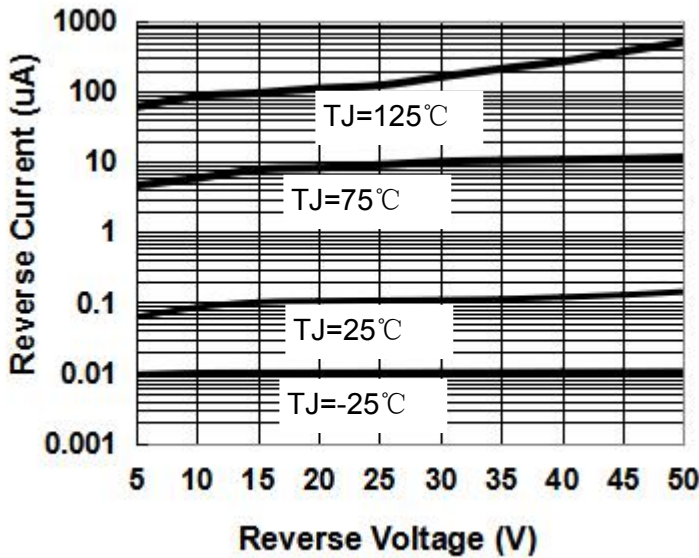


Fig.1-Typical Junction Capacitance

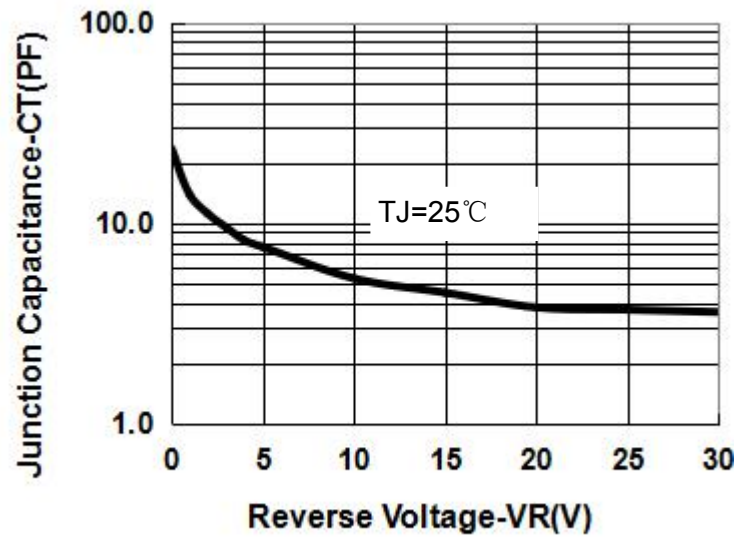


Fig.2-Typical Reverse Characteristics

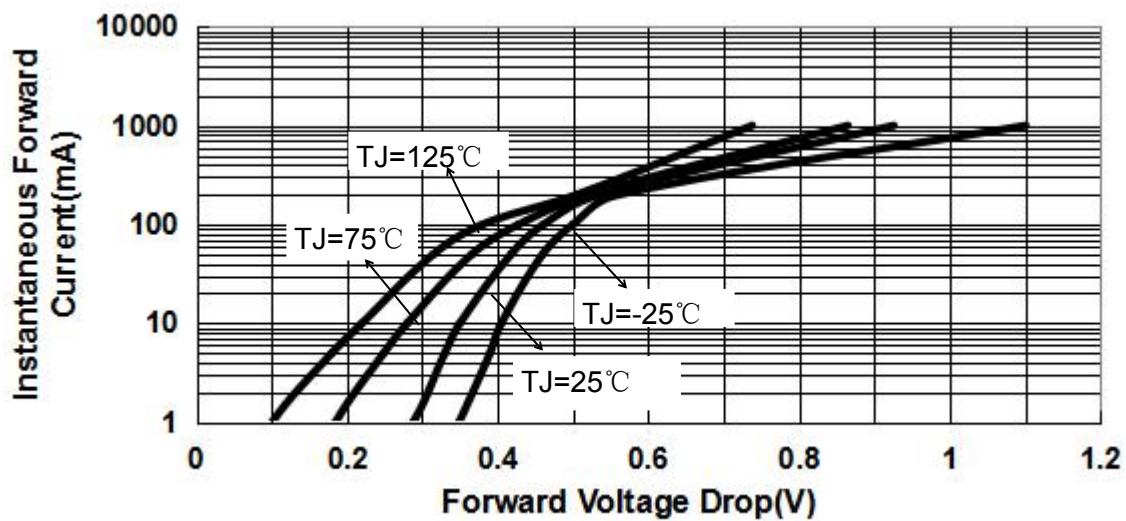
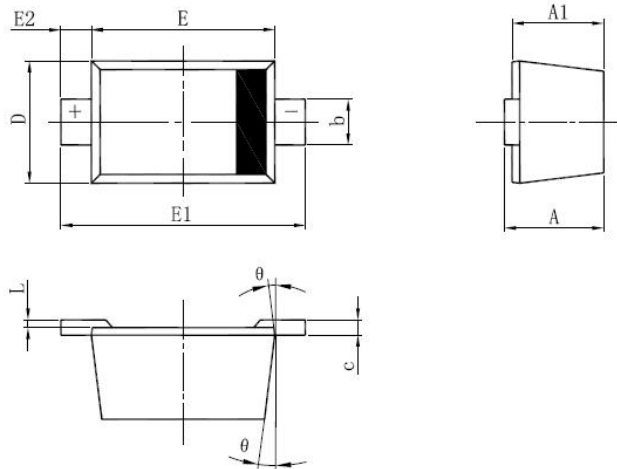


Fig.3-Typical Forward Voltage Characteristics

Mechanical Dimensions SOD-523


SYMBOL	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	0.510	0.770	0.020	0.031
A1	0.500	0.700	0.020	0.028
b	0.250	0.350	0.010	0.014
c	0.080	0.200	0.003	0.008
D	0.700	0.850	0.028	0.033
E	1.100	1.300	0.043	0.051
E1	1.500	1.700	0.059	0.067
E2	0.200 REF		0.008 REF.	
L	0.010	0.070	0.001	0.003
θ	7° REF		7° REF	

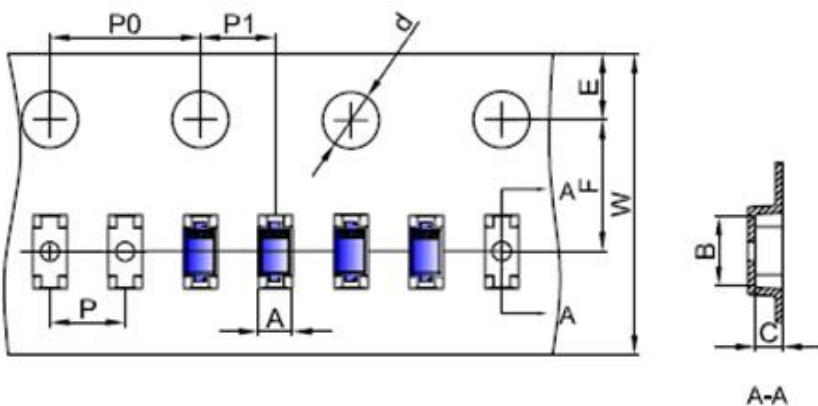
Ordering Information

Device	Package	Shipping
RB520S-40	SOD-523 (Pb-Free)	3000pcs / reel

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

Marking Diagram


3B =Marking code

Carrier Tape & Reel Specification SOD-523


SYMBOL	Millimeters	
	Min.	Max.
A	0.85	0.95
B	1.89	1.99
C	0.68	0.78
d	1.40	1.60
E	1.65	1.85
F	3.40	3.60
P	1.90	2.10
P0	3.90	4.10
P1	1.90	2.10
W	7.90	8.30

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