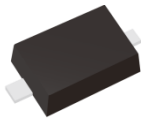
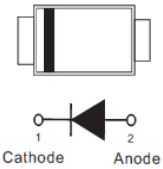
RB520S40-AU

SURFACE MOUNT SCHOTTKY BARRIER DIODES

Voltage	40 V	Current	0.25 A

SOD-523





Features

- Low Forward Voltage Drop
- Negligible Reverse Recovery Time
- Low Reverse Capacitance
- Ultra-Small Mount Package
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard
- AEC-Q101 qualified

Mechanical Data

- Case: SOD-523 Package
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.00005 ounces, 0.0014 grams

Maximum Ratings and Thermal Characteristics (T_A = 25°C unless otherwise noted)

PARAMETER	SYMBOL	LIMIT	UNITS
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	40	V
Maximum Rms Voltage	V_{RMS}	28	V
Maximum Dc Blocking Voltage	V_{DC}	40	V
Maximum Average Forward Current	$I_{F(AV)}$	0.25	A
Peak Forward Surge Current : 1 s Single Half Sine-Wave Superimposed On Rated Load	I_{FSM}	1	A
Typical Junction Capacitance Measured at 1 MHZ And Applied V_R = 0 V	C_J	30	pF
Typical Thermal Resistance	$R_{\theta JA}$ (1)	667	°C/W
Operating Junction Temperature Range	T_J	-55~125	°C
Storage Temperature Range	T_{STG}	-55~125	°C

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Electrical Characteristics (T_A = 25°C unless otherwise noted)

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNITS
Forward Voltage	V_F	I_F = 20 mA, T_J = 25 °C	-	-	0.37	V
		I_F = 200 mA, T_J = 25 °C	-	-	0.6	
		I_F = 20 mA, T_J = 125 °C	-	0.21	-	
		I_F = 200 mA, T_J = 125 °C	-	0.49	-	
Reverse Current	I_R (2)	V_R = 10 V, T_J = 25 °C	-	-	1	uA
		V_R = 30 V, T_J = 25 °C	-	-	5	
		V_R = 40 V, T_J = 125 °C	-	0.6	-	mA
Reverse Recovery Time	T_{RR}	I_F = I_R = 200mA, I_{RR} = 0.1 x I_R, R_L = 100Ω, T_J = 25 °C	-	10	-	ns

NOTES:

1. Mounted on a FR4 PCB, single-sided copper, mini pad.
2. Short duration pulse test used to minimize self-heating effect

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TYPICAL CHARACTERISTIC CURVES

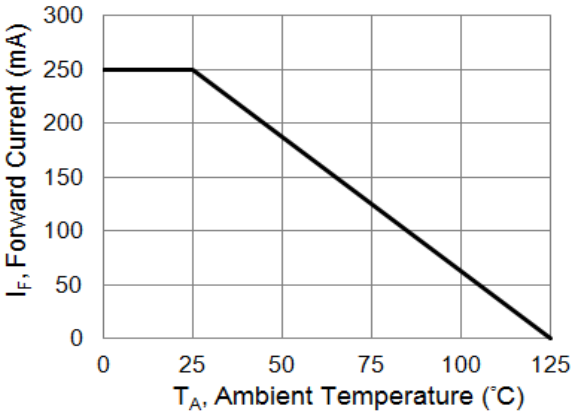

Fig.1 Forward Current Derating Curve

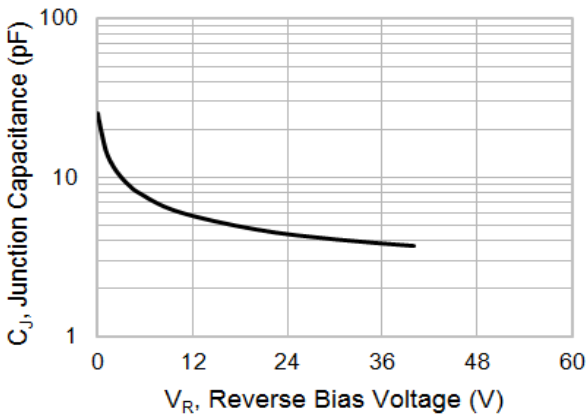

Fig.2 Typical Junction Capacitance

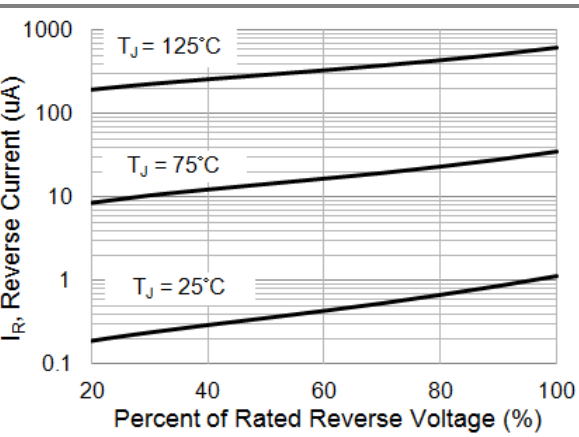

Fig.3 Typical Reverse Characteristics

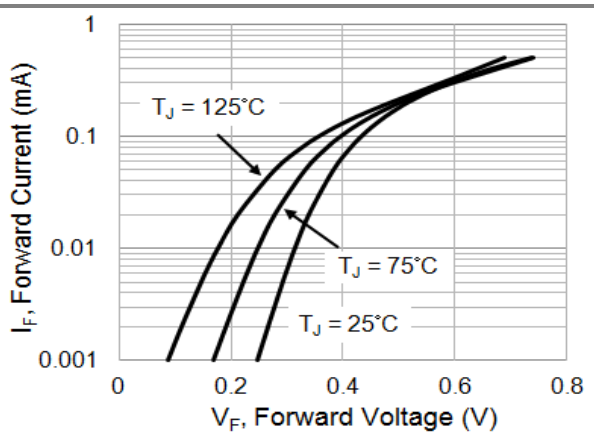

Fig.4 Typical Forward Characteristics

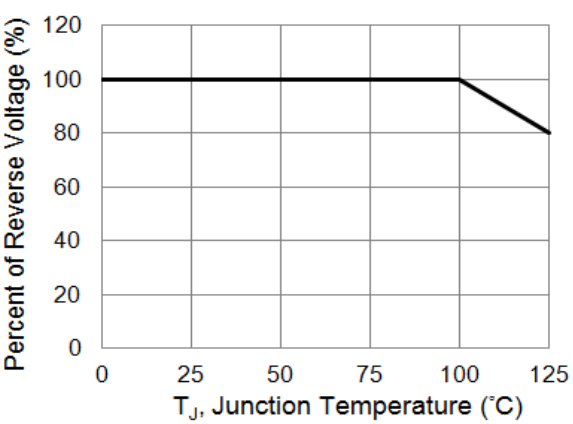

Fig.5 Operating Temperature Derating Curve

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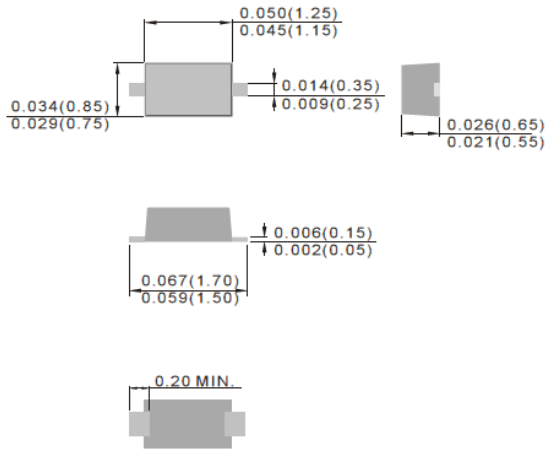
Product and Packing Information

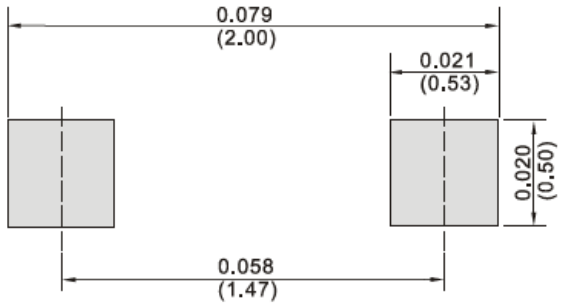
Part No.	Package Type	Packing Type	Marking
RB520S40-AU	SOD-523	5K / 7" Reel	22

Packaging Information & Mounting Pad Layout

SOD-523 Dimension — Unit: inch(mm)



SOD-523 Pad Layout — Unit: inch(mm)



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