



THE DATASHEET OF PLVA653A-QR



RB520S40-AU

SURFACE MOUNT SCHOTTKY BARRIER DIODES

Voltage

40 V

Current

0.25 A

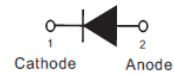
Features

- 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

SOD-523



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 _{θJA} ⁽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 ($T_A = 25^\circ\text{C}$ unless otherwise noted)

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNITS
Forward Voltage	V_F	$I_F = 20\text{ mA}, T_J = 25^\circ\text{C}$	-	-	0.37	V
		$I_F = 200\text{ mA}, T_J = 25^\circ\text{C}$	-	-	0.6	
		$I_F = 20\text{ mA}, T_J = 125^\circ\text{C}$	-	0.21	-	
		$I_F = 200\text{ mA}, T_J = 125^\circ\text{C}$	-	0.49	-	
Reverse Current	$I_R^{(2)}$	$V_R = 10\text{ V}, T_J = 25^\circ\text{C}$	-	-	1	μA
		$V_R = 30\text{ V}, T_J = 25^\circ\text{C}$	-	-	5	
		$V_R = 40\text{ V}, T_J = 125^\circ\text{C}$	-	0.6	-	mA
Reverse Recovery Time	T_{RR}	$I_F = I_R = 200\text{ mA},$ $I_{RR} = 0.1 \times I_R,$ $R_L = 100\Omega, T_J = 25^\circ\text{C}$	-	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

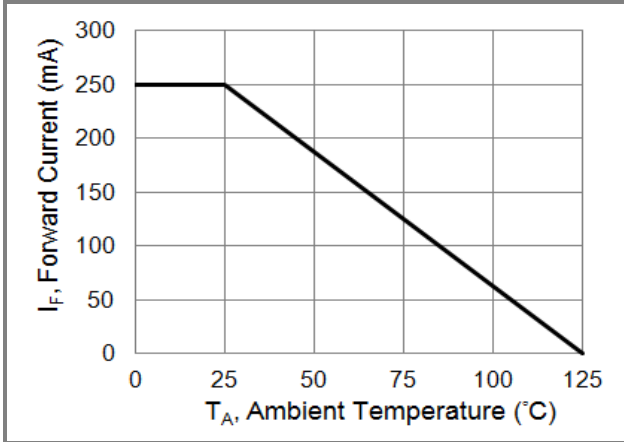


Fig.1 Forward Current Derating Curve

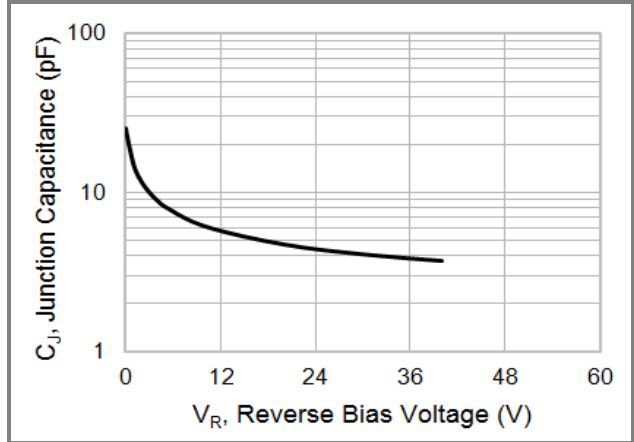


Fig.2 Typical Junction Capacitance

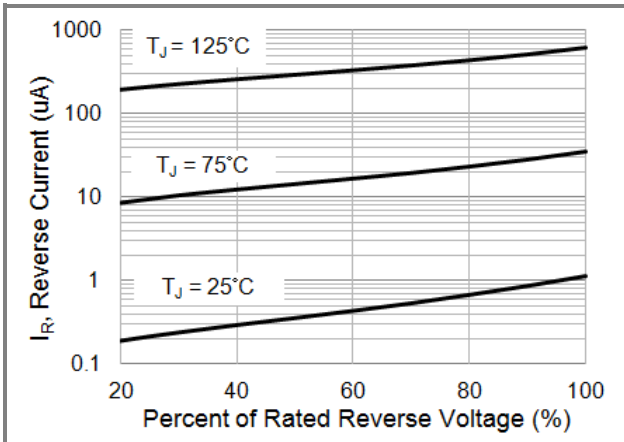


Fig.3 Typical Reverse Characteristics

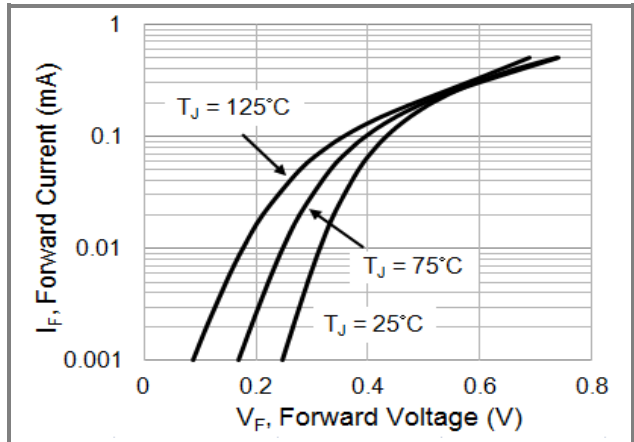


Fig.4 Typical Forward Characteristics

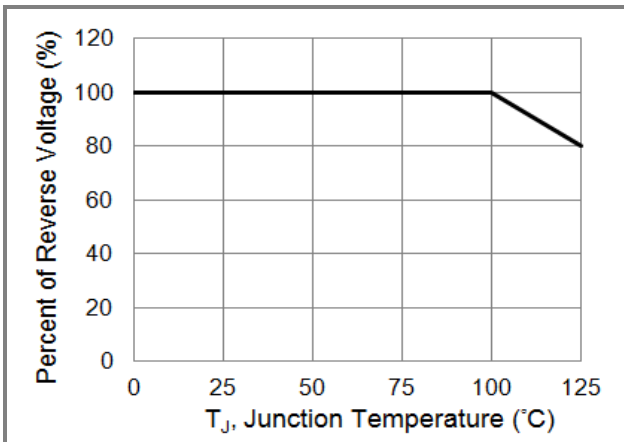


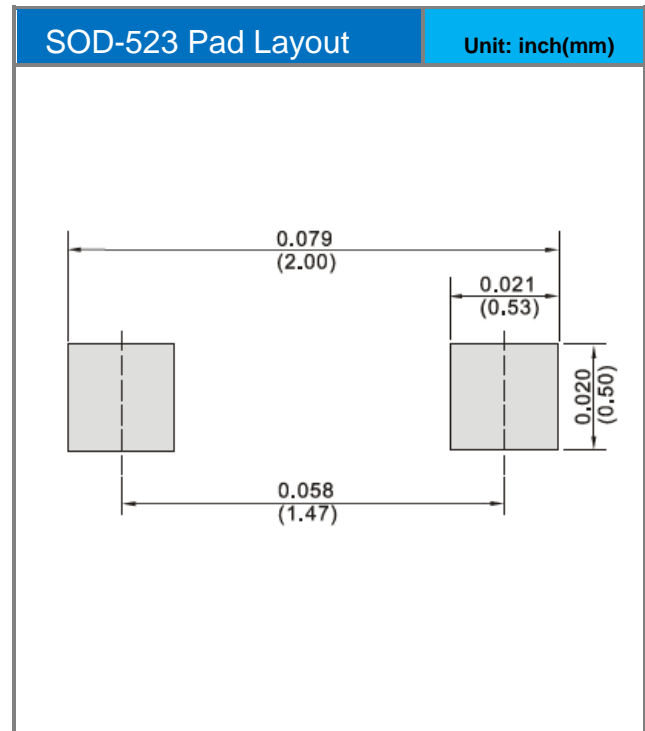
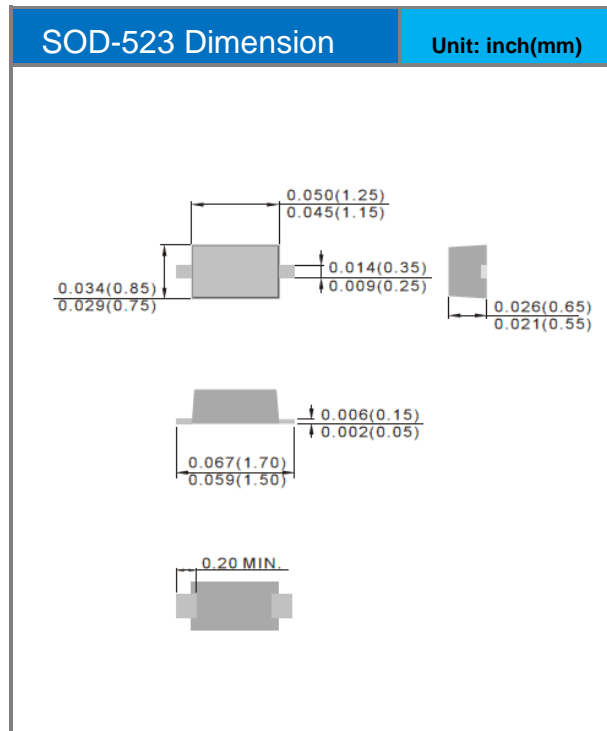
Fig.5 Operating Temperature Derating Curve

RB520S40-AU

Product and Packing Information

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

Packaging Information & Mounting Pad Layout





RB520S40-AU

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