

RB551V-30

Surface Mount Schottky Diode

This device is an extremely fast Schottky diode housed in the ultra-small SOD-323 package.

FEATURES

- Ultra low Vf
- Low capacitance for reduced insertion losses
- Reverse voltage rating of 30V
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

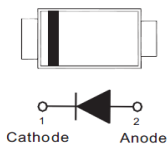
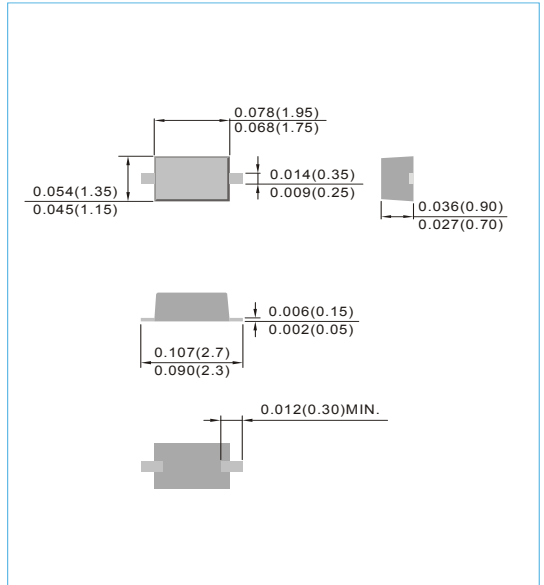
APPLICATIONS

- Mobile phones and accessories
- Hand-held computers
- High speed switching applications

MECHANICAL DATA

- Case : SOD-323, Plastic
- Terminals : Solderable per MIL-STD-750, Method 2026
- Approx. Weight : 0.0041 grams
- Marking Code : 551

SOD-323 Unit : inch(mm)



MAXIMUM RATINGS $T_J=25^{\circ}\text{C}$ unless otherwise noted

Rating	Symbol	Value	Units
Peak Reverse Voltage $I_R=500\mu\text{A}$	V_{RM}	30	V
Continuous Reverse Voltage	V_R	20	V
Average Rectified Forward Current	$I_{F(AV)}$	500	mA
Non-repetitive Peak Forward Current, 60Hz Half Sine-Wave	I_{FSM}	5	A
Total Power Dissipation (Note1)	P_{TOT}	200	mW
Operating Junction Temperature Range	T_J	-55 to + 125	$^{\circ}\text{C}$
Storage Temperature Range	T_{STG}	-55 to + 150	$^{\circ}\text{C}$

Note 1. FR-5 Board 1 x 0.75 x 0.062 in.

THERMAL CHARACTERISTICS

Characteristic	Symbol	Value	Units
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	500	$^{\circ}\text{C}/\text{W}$

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ELECTRICAL CHARACTERISTICS $T_J=25^\circ\text{C}$ unless otherwise noted

Parameter	Symbol	Conditions	Min	Typ	Max	Units
Forward Voltage (Note 2)	V_F	$I_F=100\text{mA}$ $I_F=500\text{mA}$	-	-	0.36 0.47	V
Reverse Leakage Current	I_R	$V_R=20\text{V}$	-	-	100	μA
Total Capacitance	C_T	0Vdc Bias, $f = 1\text{MHz}$ 10Vdc Bias, $f = 1\text{MHz}$	-	-	85 20	pF

Note 2. Short duration pulse test to avoid self-heating effect

TYPICAL CHARACTERISTIC CURVES

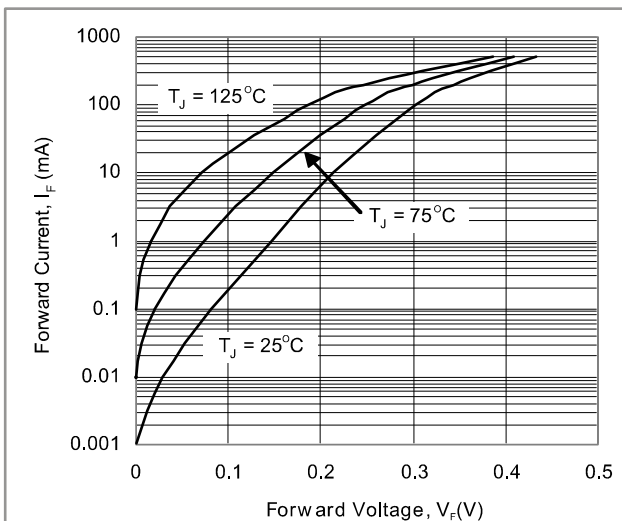


Fig. 1. Typical Forward Characteristics

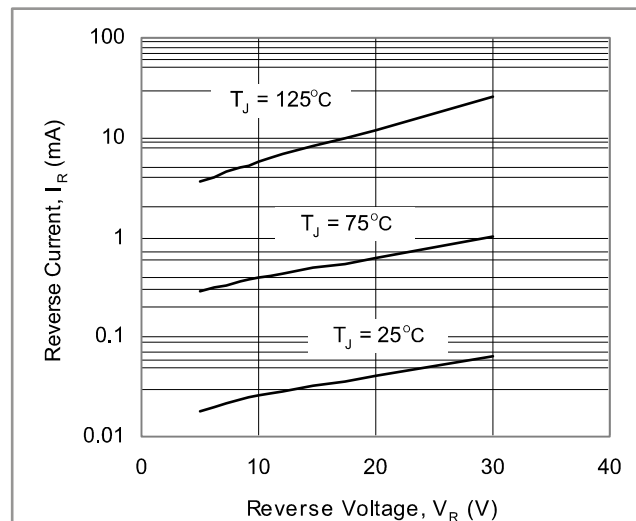


Fig. 2. Typical Reverse Characteristics

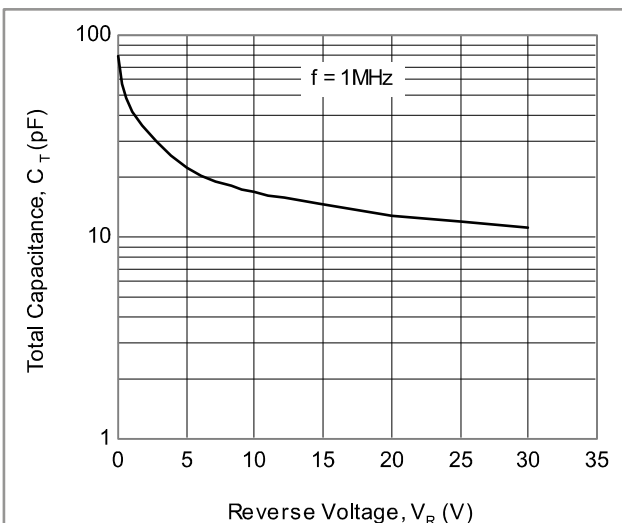


Fig. 3. Typical Capacitance

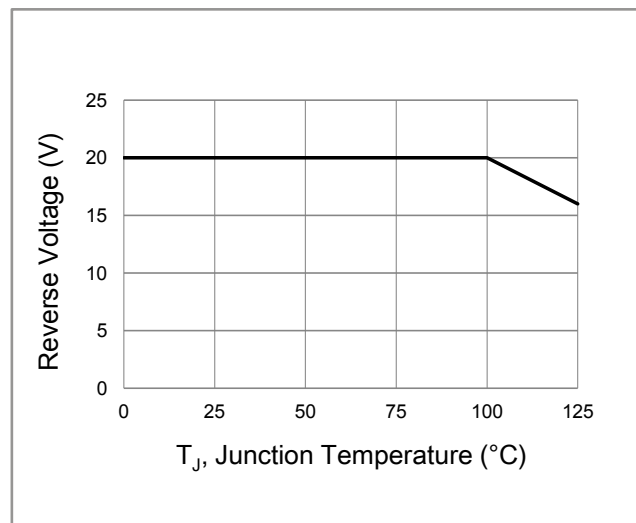


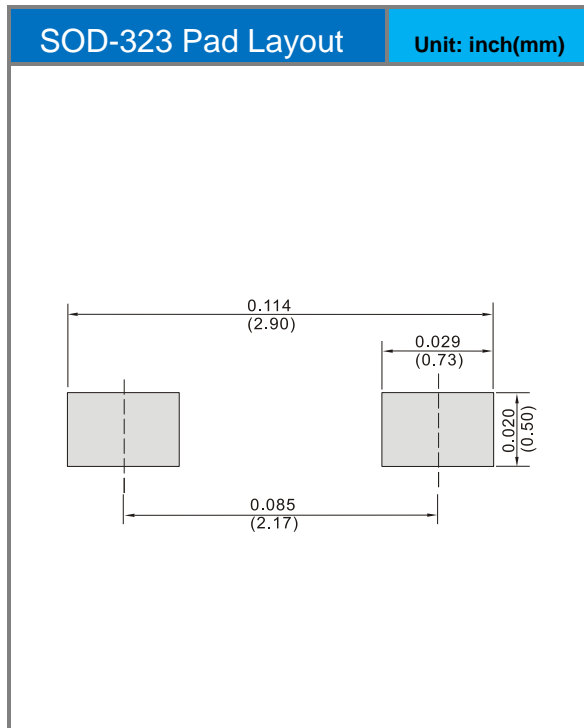
Fig. 4. Operating Temperature Derating Curve

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Product and Packing Information

Part No.	Package Type	Packing Type	Marking
RB551V-30	SOD-323	5K pcs / 7" reel	551
RB551V-30	SOD-323	12K pcs / 13" reel	551

Mounting Pad Layout



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