



# RB551V-30

## SURFACE MOUNT SCHOTTKY DIODE

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

### FEATURES

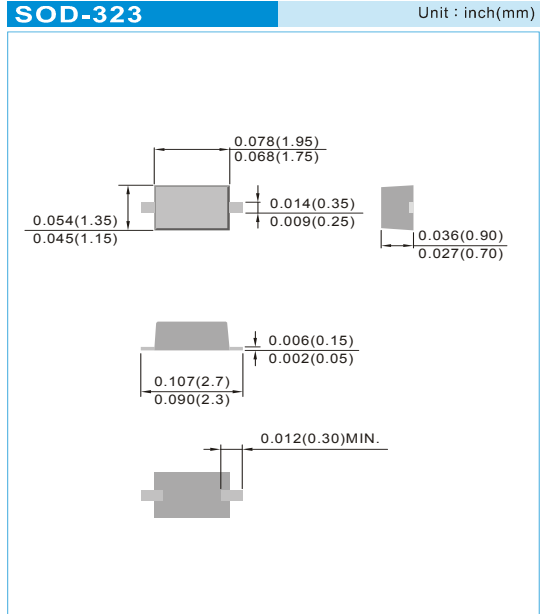
- Ultra low Vf
- Low capacitance for reduced insertion losses
- Reverse voltage rating of 30V
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

### 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: 0.0001 ounces, 0.004 grams
- Marking Code : 551



### 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	A
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

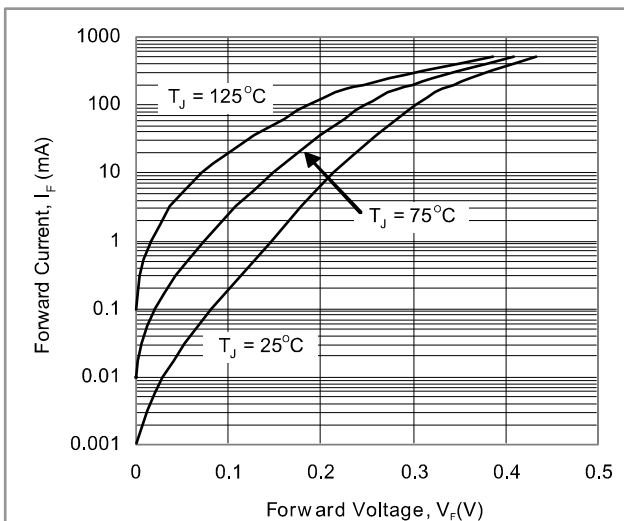


Fig. 1. Typical Forward Characteristics

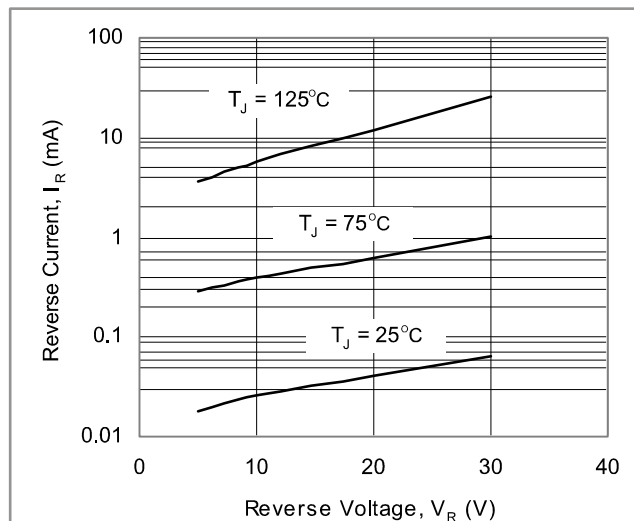


Fig. 2. Typical Reverse Characteristics

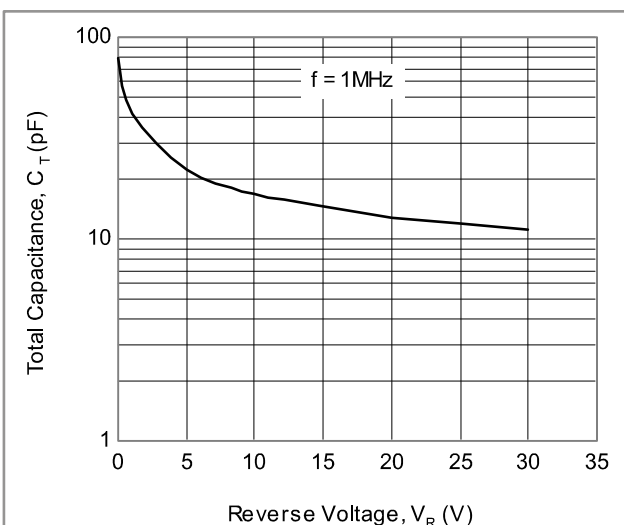


Fig. 3. Typical Capacitance

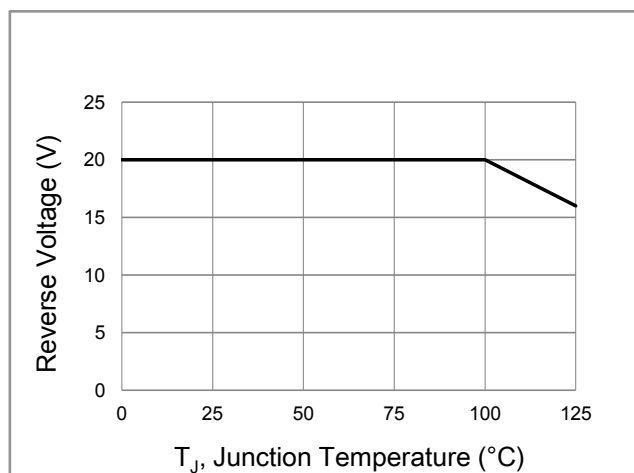
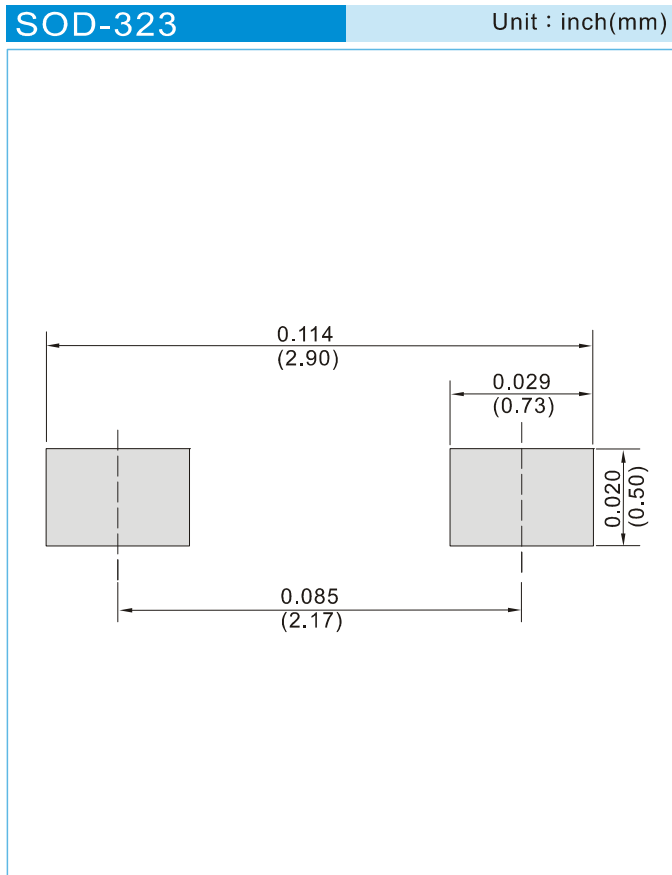


Fig. 4. Operating Temperature Derating Curve



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## MOUNTING PAD LAYOUT



## ORDER INFORMATION

- Packing information  
T/R - 12K per 13" plastic Reel  
T/R - 5K per 7" plastic Reel



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**Part No\_packing code\_Version**

RB551V-30\_R1\_00001

RB551V-30\_R2\_00001

**For example :**

**RB500V-40 R2 00001**



Packing Code <b>XX</b>				Version Code <b>XXXXX</b>		
Packing type	1 <sup>st</sup> Code	Packing size code	2 <sup>nd</sup> Code	HF or RoHS	1 <sup>st</sup> Code	2 <sup>nd</sup> ~5 <sup>th</sup> Code
Tape and Ammunition Box (T/B)	<b>A</b>	N/A	<b>0</b>	<b>HF</b>	<b>0</b>	serial number
Tape and Reel (T/R)	<b>R</b>	7"	<b>1</b>	<b>RoHS</b>	<b>1</b>	serial number
Bulk Packing (B/P)	<b>B</b>	13"	<b>2</b>			
Tube Packing (T/P)	<b>T</b>	26mm	<b>X</b>			
Tape and Reel (Right Oriented) (TRR)	<b>S</b>	52mm	<b>Y</b>			
Tape and Reel (Left Oriented) (TRL)	<b>L</b>	PANASERT T/B CATHODE UP (PBCU)	<b>U</b>			
FORMING	<b>F</b>	PANASERT T/B CATHODE DOWN (PBCD)	<b>D</b>			



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