



# BAS316-AU

## SURFACE MOUNT SWITCHING DIODES

**Voltage** 100 V **Power** 400 mW

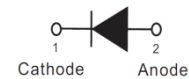
### Features

- Fast switching speed.
- Very low leakage current
- Low capacitance
- Surface mount package Ideally Suited for Automatic insertion
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard
- AEC-Q101 qualified

### Mechanical Data

- Case: SOD-323 Package
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.00014 ounces, 0.0041 grams

SOD-323



## Maximum Ratings and Thermal Characteristics (T<sub>A</sub> = 25 °C unless otherwise noted)

PARAMETER		SYMBOL	LIMIT	UNITS
Reverse Voltage		V <sub>R</sub>	100	V
Peak Reverse Voltage		V <sub>RM</sub>	100	V
Maximum Average Forward Current		I <sub>F(AV)</sub>	250	mA
Non-repetitive Peak forward current at T <sub>J</sub> (init)=25°C	tp = 0.001 ms	I <sub>FSM</sub>	4	A
	tp = 1 ms		1	
	tp = 1 s		0.5	
Repetitive peak forward current tp ≤ 0.5 ms ; D ≤ 0.25		I <sub>FRM</sub>	500	mA
Power Dissipation		P <sub>D</sub> <sup>(1)</sup>	400	mW
Maximum Junction Capacitance Measured at 1 MHz And Applied V <sub>R</sub> = 0 V		C <sub>J</sub>	1.5	pF
Typical Thermal Resistance		R <sub>θJA</sub> <sup>(2)</sup>	500	°C/W
		R <sub>θJC</sub> <sup>(1)</sup>	200	
Operating Junction Temperature Range		T <sub>J</sub>	-55~150	°C
Storage Temperature Range		T <sub>STG</sub>	-55~150	°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	$V_F$	$I_F = 1\text{ mA}, T_J = 25^\circ\text{C}$	-	-	0.715	V
		$I_F = 10\text{ mA}, T_J = 25^\circ\text{C}$	-	-	0.855	
		$I_F = 50\text{ mA}, T_J = 25^\circ\text{C}$	-	-	1	
		$I_F = 150\text{ mA}, T_J = 25^\circ\text{C}$	-	-	1.25	
Reverse Current	$I_R$	$V_R = 25\text{ V}, T_J = 25^\circ\text{C}$	-	-	0.03	uA
		$V_R = 100\text{ V}, T_J = 25^\circ\text{C}$	-	-	0.5	
Maximum Reverse Recovery Time	$T_{RR}^{(3)}$	---	-	-	4	ns

**NOTES:**

1. Mounted on aluminum plate.
2. Mounted on a FR4, single-sided copper, with 114 x 76mm PCB.
3. Test Condition :  $I_F=10\text{mA}$  to  $I_R=10\text{mA}$ , Recovery to 1mA,  $R_L=100\Omega$ .



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## TYPICAL CHARACTERISTIC CURVES

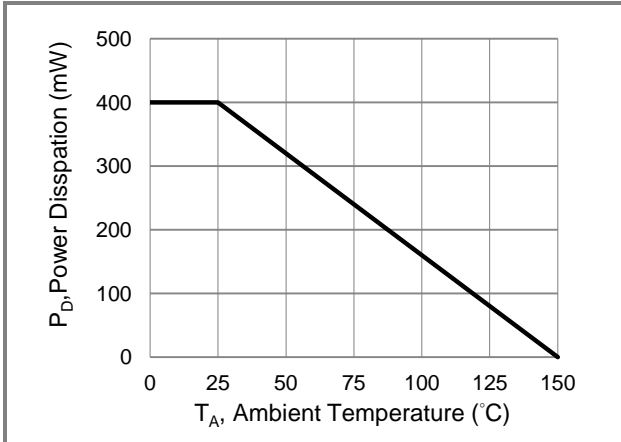


Fig.1 Power Derating Curve

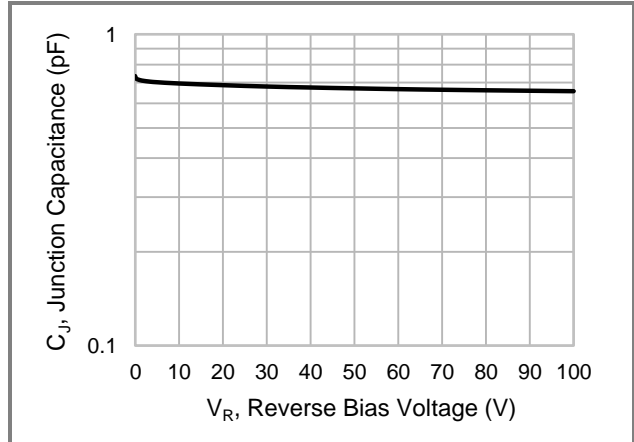


Fig.2 Typical Junction Capacitance

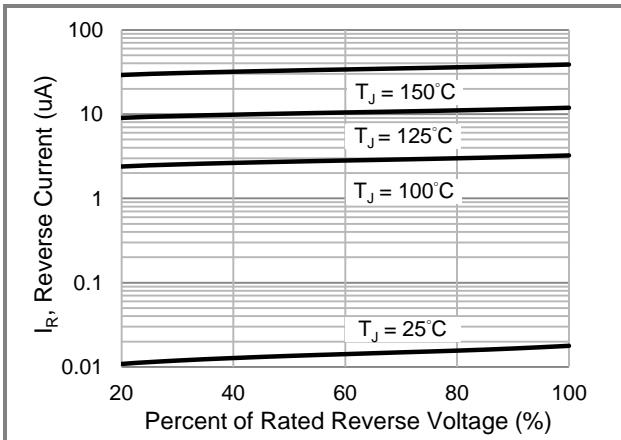


Fig.3 Typical Reverse Characteristics

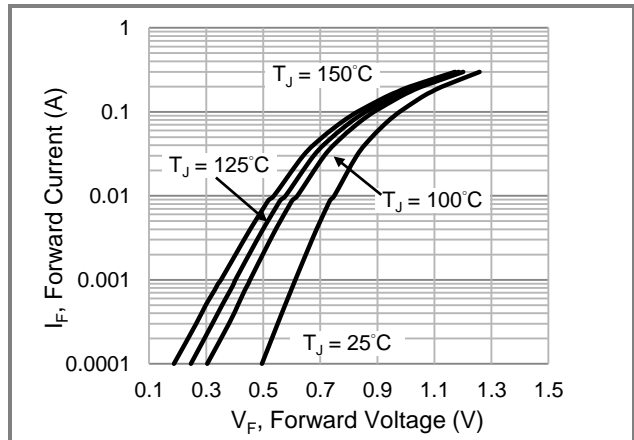


Fig.4 Typical Forward Characteristics

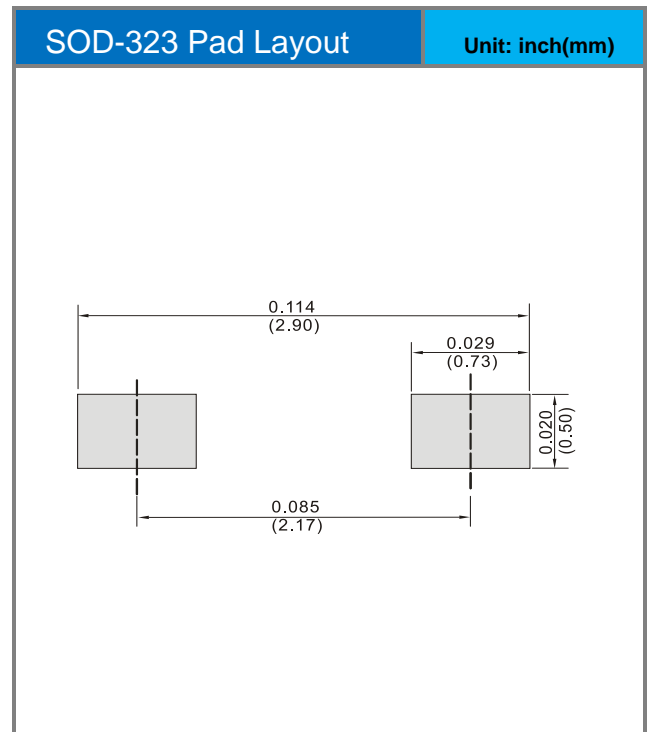
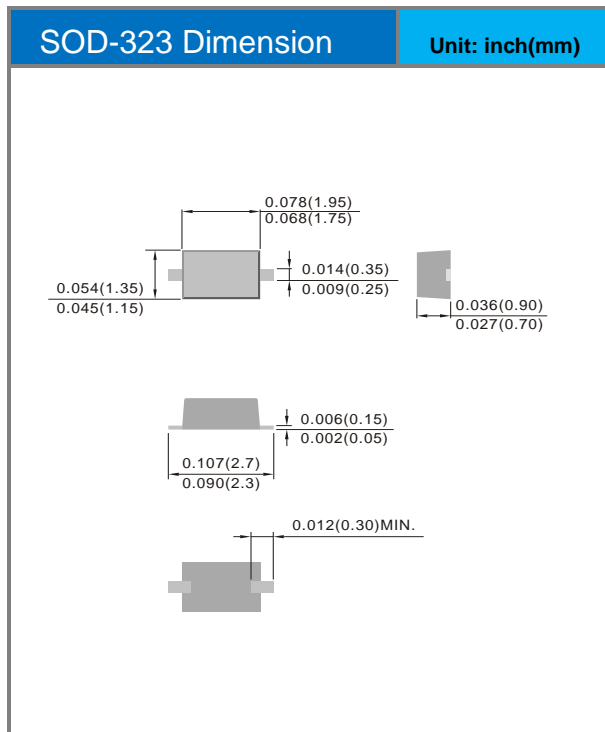


# BAS316-AU

## Part No Packing Code Version

Part No Packing Code	Package Type	Packing Type	Marking	Version
BAS316-AU_R1_000A1	SOD-323	5K / 7" Reel	A16	Halogen free

## Packaging Information & Mounting Pad Layout





## **BAS316-AU**

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