



**THE DATASHEET OF
BAS316-AU_R1_000A1**





BAS316-AU

SURFACE MOUNT SWITCHING DIODES

Voltage 100 V **Power** 400 mW

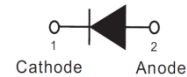
Features

- 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_A = 25 °C unless otherwise noted)

PARAMETER	SYMBOL	LIMIT	UNITS
Reverse Voltage	V _R	100	V
Peak Reverse Voltage	V _{RM}	100	V
Maximum Average Forward Current	I _{F(AV)}	250	mA
Non-repetitive Peak forward current at T _J (init)=25°C	I _{FSM}	tp = 0.001 ms	4
		tp = 1 ms	1
		tp = 1 s	0.5
Repetitive peak forward current tp ≤ 0.5 ms ; D ≤ 0.25	I _{FRM}	500	mA
Power Dissipation	P _D ⁽¹⁾	400	mW
Maximum Junction Capacitance Measured at 1 MHz And Applied V _R = 0 V	C _J	1.5	pF
Typical Thermal Resistance	R _{θJA} ⁽²⁾	500	°C/W
	R _{θJC} ⁽¹⁾	200	
Operating Junction Temperature Range	T _J	-55~150	°C
Storage Temperature Range	T _{STG}	-55~150	°C



BAS316-AU

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, $R_L=100\Omega$.



BAS316-AU

TYPICAL CHARACTERISTIC CURVES

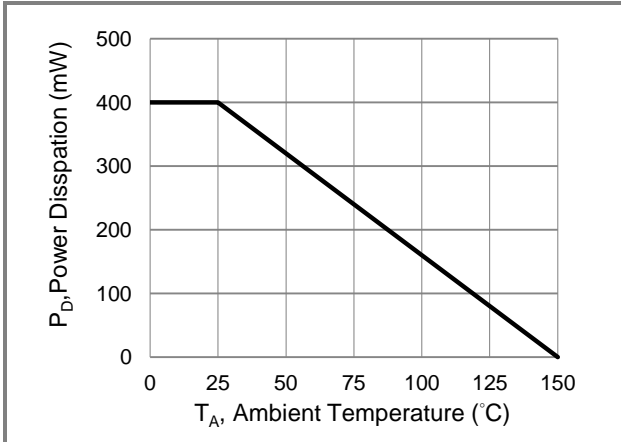


Fig.1 Power Derating Curve

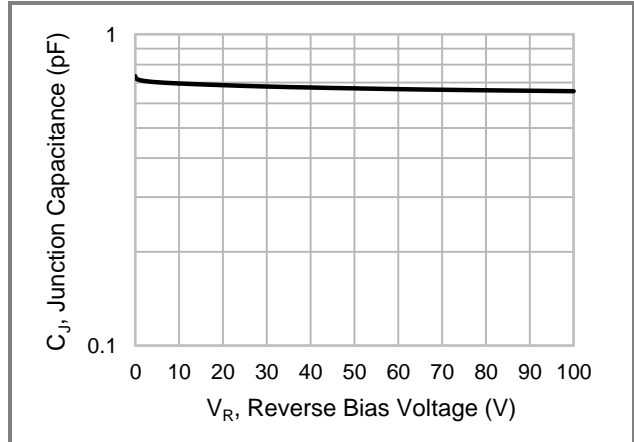


Fig.2 Typical Junction Capacitance

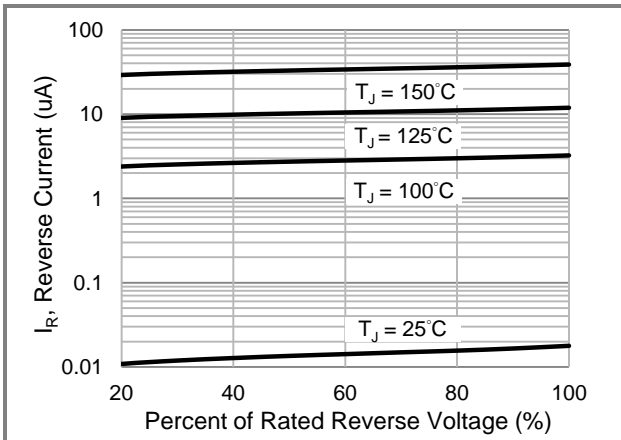


Fig.3 Typical Reverse Characteristics

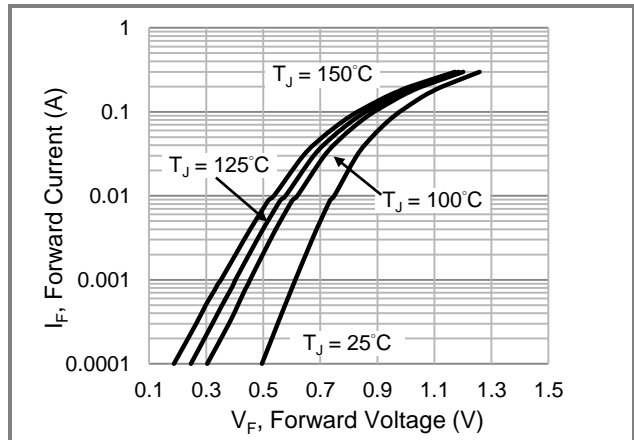


Fig.4 Typical Forward Characteristics

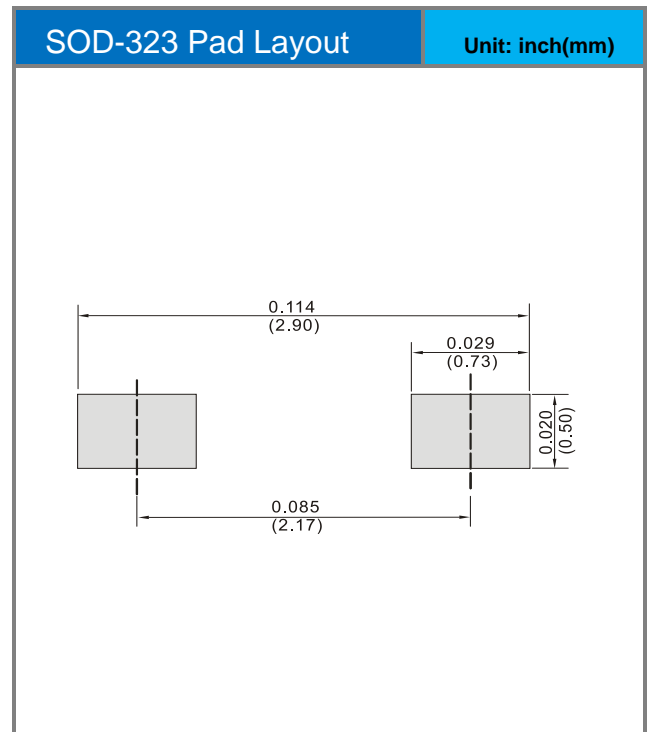
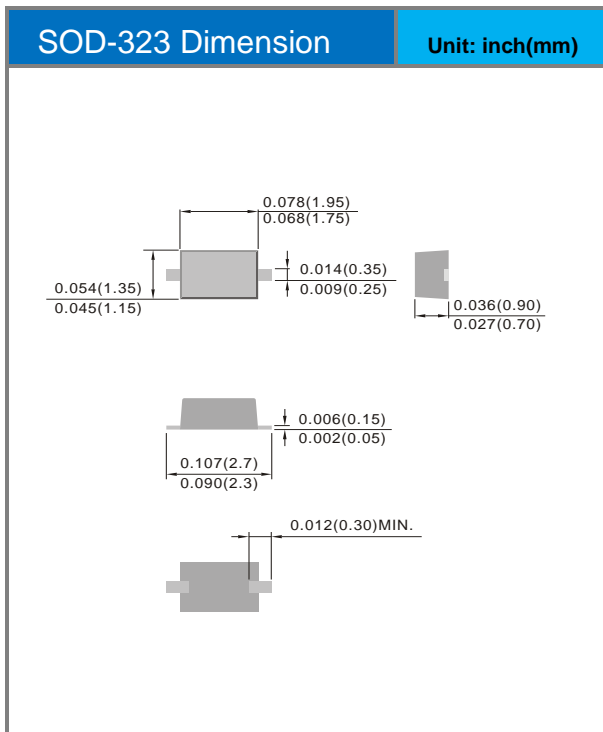


BAS316-AU

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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