

BAS316

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

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	tp = 0.001 ms	I _{FSM}	4	A
	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

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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

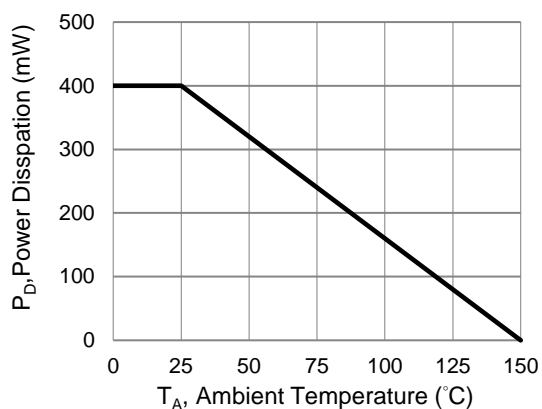


Fig.1 Power Derating Curve

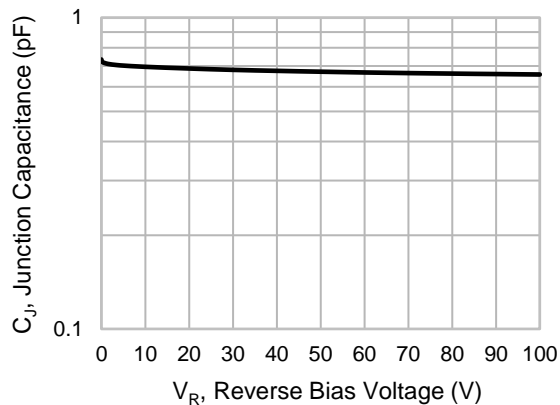


Fig.2 Typical Junction Capacitance

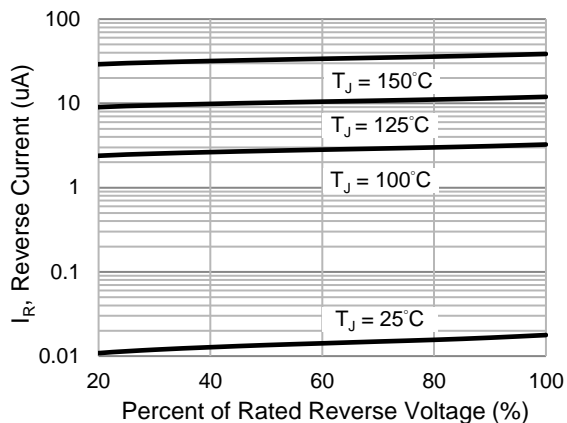


Fig.3 Typical Reverse Characteristics

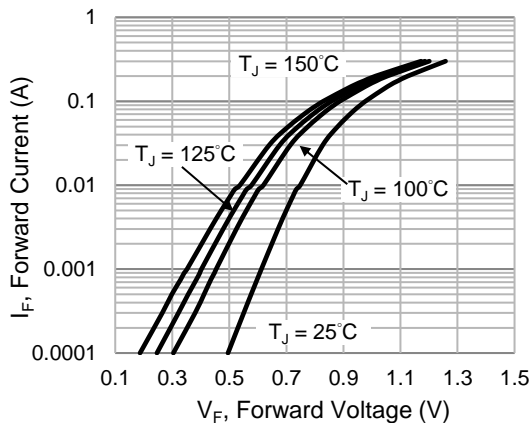


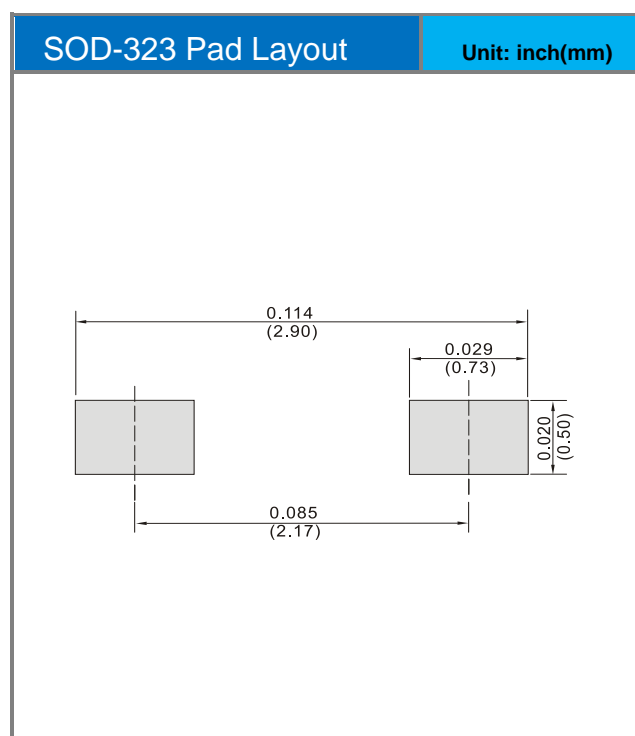
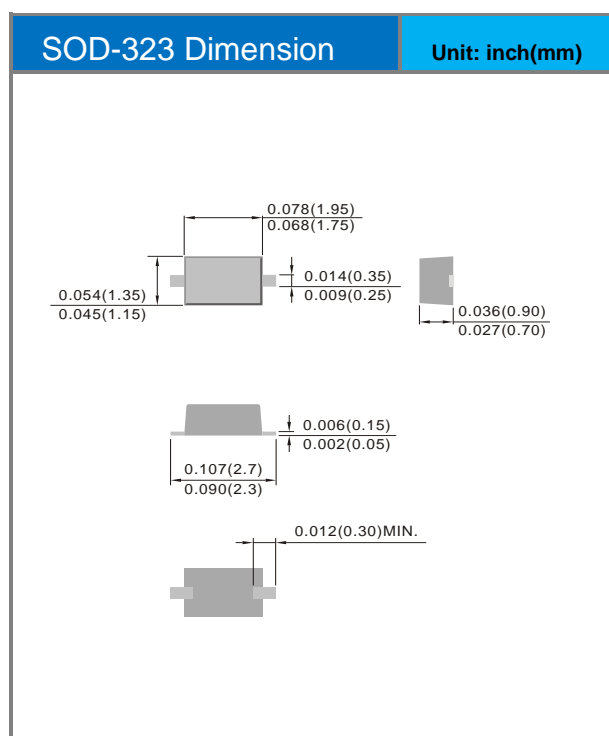
Fig.4 Typical Forward Characteristics

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Product and Packing Information

Part No.	Package Type	Packing Type	Marking
BAS316	SOD-323	5K / 7" Reel	A16

Packaging Information & Mounting Pad Layout



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