



#### SURFACE MOUNT SWITCHING DIODES

Voltage 100 V Power 400 mW

#### **Features**

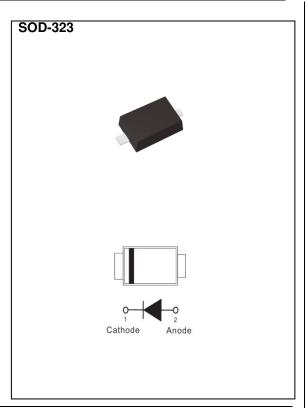
- Fast switching speed.
- · Very low leakage current
- Low capacitance
- Surface mount package Ideally Suited for Automatic insertion
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

#### **Mechanical Data**

• Case: SOD-323 Package

• Terminals: Solderable per MIL-STD-750, Method 2026

• Approx. Weight: 0.00014 ounces, 0.0041 grams



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

PARAMETER	SYMBOL	LIMIT	UNITS		
Reverse Voltage		$V_R$	100	٧	
Peak Reverse Voltage		$V_{RM}$	100	٧	
Maximum Average Forward Current		I <sub>F(AV)</sub>	250	mA	
Non-repetitive Peak forward current at $T_J(init)=25^{\circ}C$	tp = 0.001 ms		4		
	tp = 1 ms	I <sub>FSM</sub>	1	Α	
	tp = 1 s		0.5		
Repetitive peak forward current tp $\leq 0.5 \text{ ms}$ ; D $\leq 0.25$		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 $V_R = 0 \text{ V}$		CJ	1.5	pF	
Typical Thermal Resistance		R <sub>θJA</sub> (2) R <sub>θJC</sub> (1)	500 200	°C/W	
Operating Junction Temperature Range		T <sub>J</sub>	-55~150	°C	
Storage Temperature Range		T <sub>STG</sub>	-55~150	°C	





## **Electrical Characteristics** (T<sub>A</sub> = 25°C unless otherwise noted)

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNITS
Forward Voltage	V <sub>F</sub>	$I_F = 1 \text{ mA}, T_J = 25 ^{\circ}\text{C}$	-	1	0.715	. V
		$I_F = 10 \text{ mA}, T_J = 25 ^{\circ}\text{C}$	-	1	0.855	
		$I_F = 50 \text{ mA}, T_J = 25 ^{\circ}\text{C}$	-	ı	1	
		$I_F = 150 \text{ mA}, T_J = 25 ^{\circ}\text{C}$	-	ı	1.25	
Reverse Current	I <sub>R</sub>	$V_R = 25 \text{ V}, T_J = 25 ^{\circ}\text{C}$	-	1	0.03	uA
		$V_R = 100 \text{ V}, T_J = 25 ^{\circ}\text{C}$	-	-	0.5	
Maximum Reverse Recovery Time	T <sub>RR</sub> (3)		-	-	4	ns

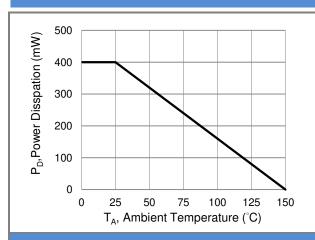
#### NOTES:

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

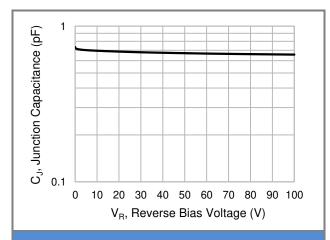




#### **TYPICAL CHARACTERISTIC CURVES**



**Fig.1 Power Derating Curve** 



**Fig.2 Typical Junction Capacitance** 

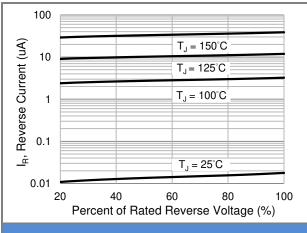


Fig.3 Typical Reverse Characteristics

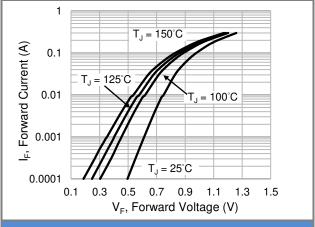


Fig.4 Typical Forward Characteristics

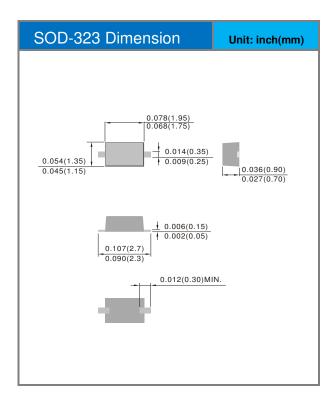


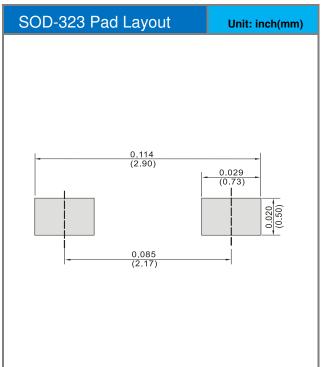


### **Part No Packing Code Version**

Part No Packing Code	Package Type	Packing Type	Marking	Version
BAS316_R1_00001	SOD-323	5K / 7" Reel	A16	Halogen free

### **Packaging Information & Mounting Pad Layout**









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