

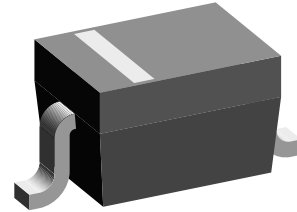
Small Signal Fast Switching Diode

Features

- Silicon epitaxial planar diode
- Fast switching diode
- Also available in case SOT-23 with designation BAS16
- AEC-Q101 qualified
- Compliant to RoHS directive 2002/95/EC and in accordance to WEEE 2002/96/EC



RoHS
COMPLIANT



20145

Mechanical Data

Case: SOD-323

Weight: approx. 4.3 mg

Packaging codes/options:

GS18/10 k per 13" reel (8 mm tape), 10 k/box

GS08/3 k per 7" reel (8 mm tape), 15 k/box

Parts Table

Part	Ordering code	Marking	Remarks
BAS16WS-V	BAS16WS-V-GS18 or BAS16WS-V-GS08	A6	Tape and Reel

Absolute Maximum Ratings

$T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified

Parameter	Test condition	Symbol	Value	Unit
Reverse voltage		V_R	75	V
Peak reverse voltage		V_{RM}	100	V
Forward current (continuous)		I_F	250	mA
Non-repetitive peak forward current	$t = 1\text{ }\mu\text{s}$	I_{FSM}	2	A
	$t = 1\text{ ms}$	I_{FSM}	1	A
	$t = 1\text{ s}$	I_{FSM}	0.5	A
Power dissipation		P_{tot}	200	mW

Thermal Characteristics

$T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified

Parameter	Test condition	Symbol	Value	Unit
Thermal resistance junction to ambient air		R_{thJA}	650	K/W
Maximum junction temperature		T_j	150	$^{\circ}\text{C}$
Storage temperature		T_{stg}	- 65 to + 150	$^{\circ}\text{C}$

Electrical Characteristics

$T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified

Parameter	Test condition	Symbol	Min.	Typ.	Max.	Unit
Forward voltage	$I_F = 1\text{ mA}$	V_F			715	mV
	$I_F = 10\text{ mA}$	V_F			855	mV
	$I_F = 50\text{ mA}$	V_F			1000	mV
	$I_F = 150\text{ mA}$	V_F			1250	mV
Leakage current	$V_R = 25\text{ V}, T_J = 150\text{ }^{\circ}\text{C}$	I_R			30	μA
	$V_R = 75\text{ V}$	I_R			1	μA
	$V_R = 75\text{ V}, T_J = 150\text{ }^{\circ}\text{C}$	I_R			50	μA
Diode capacitance	$V_R = 0; f = 1\text{ MHz}$	C_D			2	pF
Reverse recovery time	$I_F = 10\text{ mA}$ to $I_R = 10\text{ mA}$, $I_R = 1\text{ mA}, R_L = 100\text{ }\Omega$	t_{rr}			6	ns

Typical Characteristics

$T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified

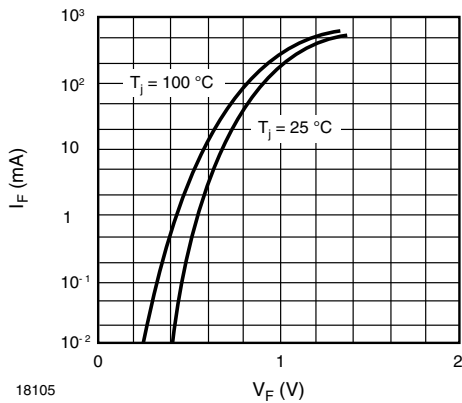


Figure 1. Forward Characteristics

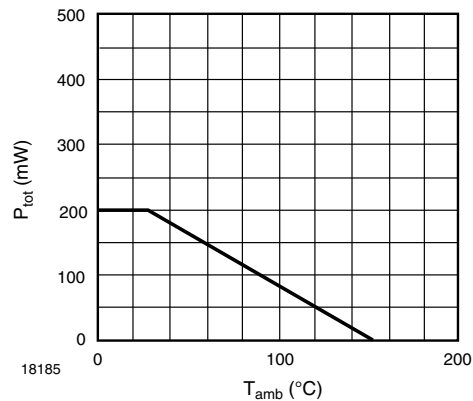


Figure 3. Admissible Power Dissipation vs. Ambient Temperature

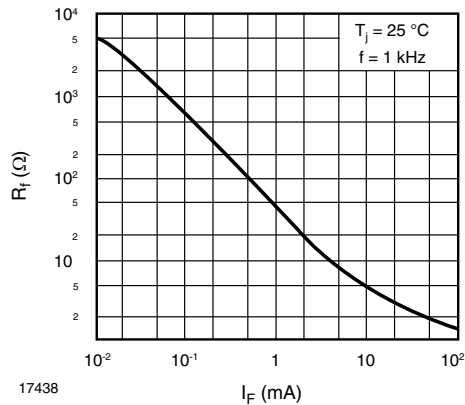


Figure 2. Dynamic Forward Resistance vs. Forward Current

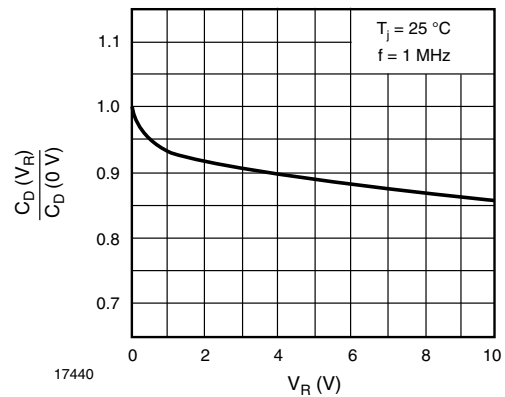


Figure 4. Relative Capacitance vs. Reverse Voltage

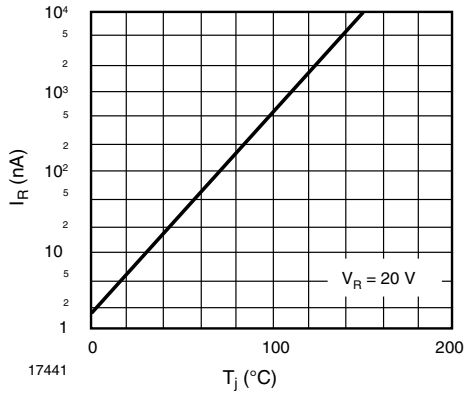
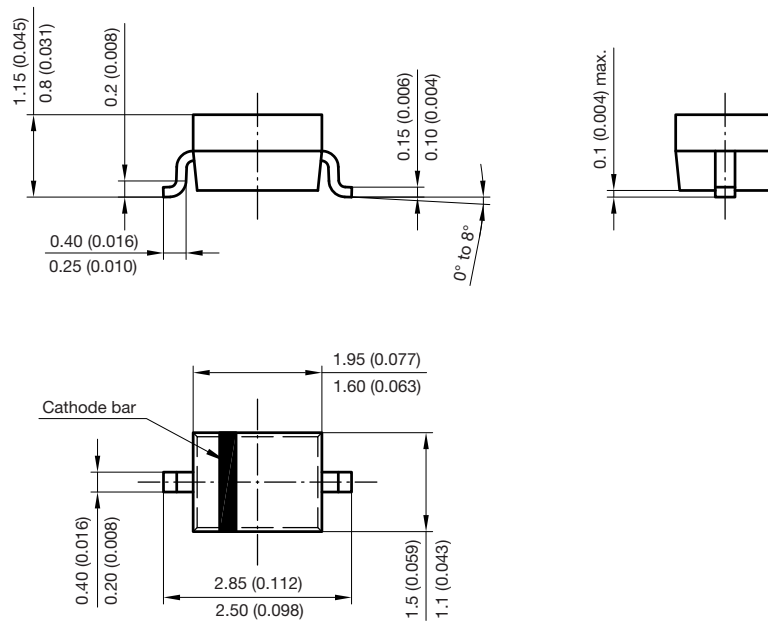
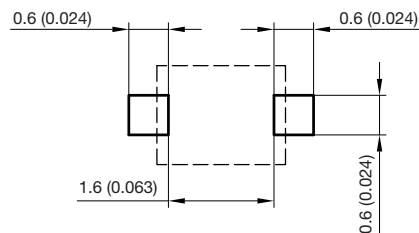


Figure 5. Leakage Current vs. Junction Temperature

Package Dimensions in millimeters (inches): SOD-323



Foot print recommendation:



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 17443



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