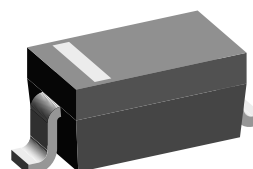


Small Signal Fast Switching Diode

Features

- Silicon Epitaxial Planar Diode
- Fast switching diode
- Also available in case SOT-23 with designation BAS16
- Lead (Pb)-free component
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC



17431

Mechanical Data

Case: SOD-123 Plastic case

Weight: approx. 9.3 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
BAS16D-V	BAS16D-V-GS18 or BAS16D-V-GS08	A6	Tape and Reel

Absolute Maximum Ratings

T_{amb} = 25 °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 µs	I _{FSM}	2.0	A
	t = 1 ms	I _{FSM}	1.0	A
	t = 1 s	I _{FSM}	0.5	A
Power dissipation		P _{tot}	350 ¹⁾	mW

¹⁾ Valid provided electrodes are kept at ambient temperature

Thermal Characteristics

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

Parameter	Test condition	Symbol	Value	Unit
Maximum junction temperature		T_J	150	$^{\circ}\text{C}$
Storage temperature		T_S	- 65 to 150 ¹⁾	$^{\circ}\text{C}$

¹⁾ Valid provided electrodes are kept at ambient temperature

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			1.00	V
	$I_F = 150\text{ mA}$	V_F			1.25	V
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_{tot}			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
Thermal resistance junction to ambient air		R_{thJA}			375 ¹⁾	$^{\circ}\text{C/W}$

¹⁾ Valid provided electrodes are kept at ambient temperature

Typical Characteristics ($T_{amb} = 25\text{ }^{\circ}\text{C}$ unless otherwise specified)

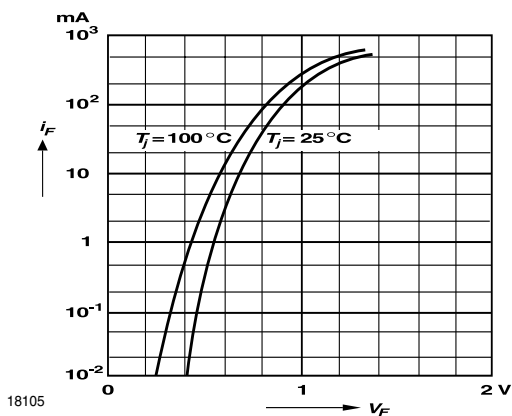


Figure 1. Forward characteristics

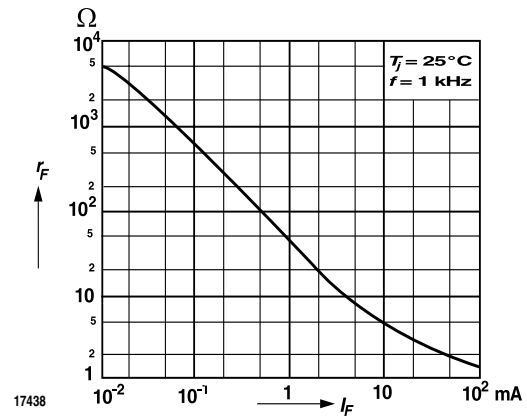
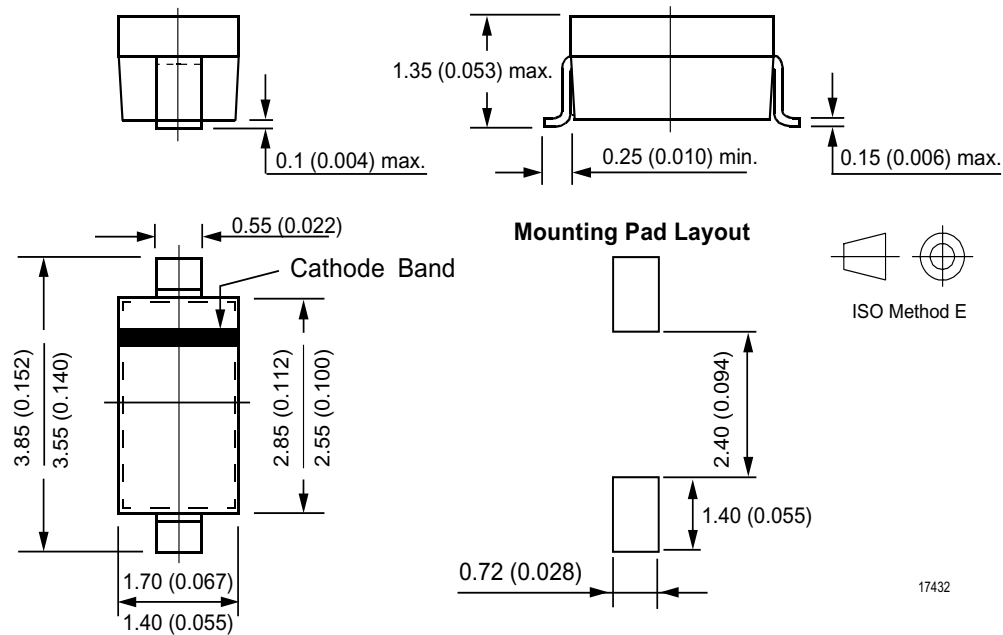


Figure 2. Dynamic Forward Resistance vs. Forward Current

Package Dimensions in mm (Inches)



17432