



New Product

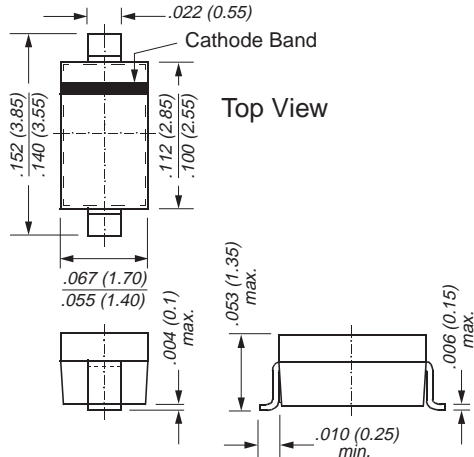
**BAS16D, BAS16WS**

Vishay Semiconductors  
formerly General Semiconductor

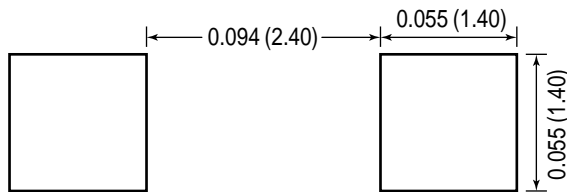
## Small-Signal Diodes



**SOD-123 (BAS16D)**



**Mounting Pad Layout SOD-123**



### Features

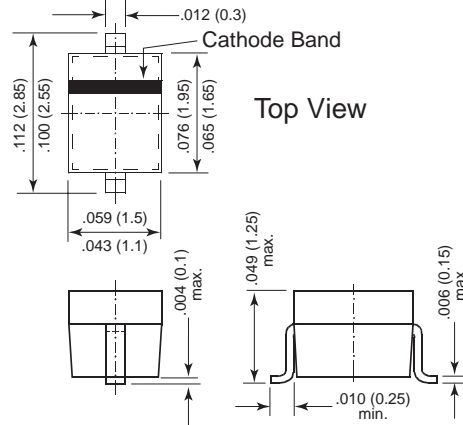
- Silicon Epitaxial Planar Diode
- Fast switching diode
- Also available in case SOT-23 with designation BAS16

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

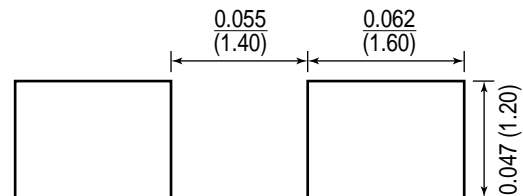
Parameter	Symbol	Value	Unit
Reverse Voltage	V <sub>R</sub>	75	V
Peak Reverse Voltage	V <sub>RM</sub>	100	V
Forward Current (continuous)	I <sub>F</sub>	250	mA
Non-Repetitive Peak Forward Current at t = 1μs at t = 1ms at t = 1s	I <sub>FSM</sub>	2.0 1.0 0.5	A
Power Dissipation at T <sub>amb</sub> = 25°C	P <sub>tot</sub>	350 <sup>(1)</sup> 200 <sup>(1)</sup>	mW
Maximum Junction Temperature	T <sub>j</sub>	150	°C
Storage Temperature Range	T <sub>s</sub>	-65 to +150 <sup>(1)</sup>	°C

**Note:** (1) Valid provided electrodes are kept at ambient temperature

**SOD-323 (BAS16WS)**



**Mounting Pad Layout SOD-323**



### Mechanical Data

**Case:** BAS16D = SOD-123 Plastic Case  
BAS16WS = SOD-323 Plastic Case

**Weight:** BAS16D = approx. 0.01g  
BAS16WS = approx. 0.004g

**Marking Code:** A6

**Packaging Codes/Options:**

- SOD-123: D3/10K per 13" reel (8mm tape), 30K/box  
D4/3K per 7" reel (8mm tape), 30K/box
- SOD-323: D5/10K per 13" reel (8mm tape), 30K/box  
D6/3K per 7" reel (8mm tape), 30K/box

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

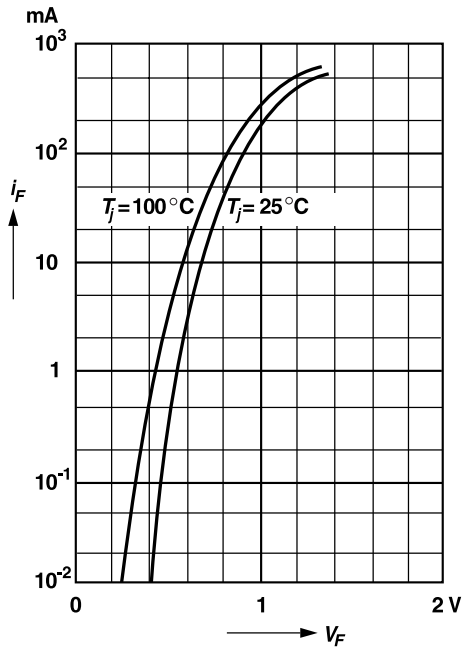
Parameter	Symbol	Min	Typ	Max	Unit
Forward Voltage at I <sub>F</sub> = 1mA	V <sub>F</sub>	–	–	715	mV
I <sub>F</sub> = 10mA		–	–	855	mV
I <sub>F</sub> = 50mA		–	–	1.00	V
I <sub>F</sub> = 150mA		–	–	1.25	V
Leakage Current at V <sub>R</sub> = 25V, T <sub>J</sub> = 150°C	I <sub>R</sub>	–	–	30	μA
at V <sub>R</sub> = 75V		–	–	1	
at V <sub>R</sub> = 75V, T <sub>J</sub> = 150°C		–	–	50	
Capacitance at V <sub>R</sub> = 0; f = 1MHz	C <sub>tot</sub>	–	–	2	pF
Reverse Recovery Time from I <sub>F</sub> = 10mA to I <sub>R</sub> = 10mA I <sub>R</sub> = 1mA, R <sub>L</sub> = 100Ω	t <sub>rr</sub>	–	–	6	ns
Thermal Resistance Junction to Ambient Air	R <sub>θJA</sub>	–	–	375 <sup>(1)</sup> 650 <sup>(1)</sup>	°C/W °C/W

(1) Valid provided that electrodes are kept at ambient temperature

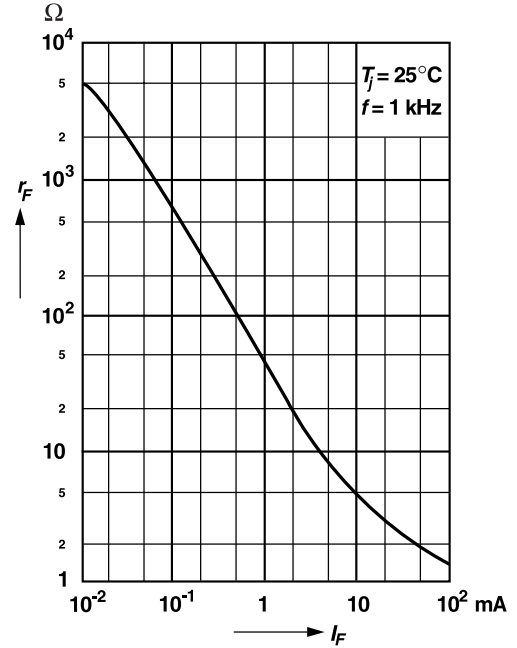


**Ratings and Characteristic Curves** ( $T_A = 25^\circ\text{C}$  unless otherwise noted)

**Forward characteristics**

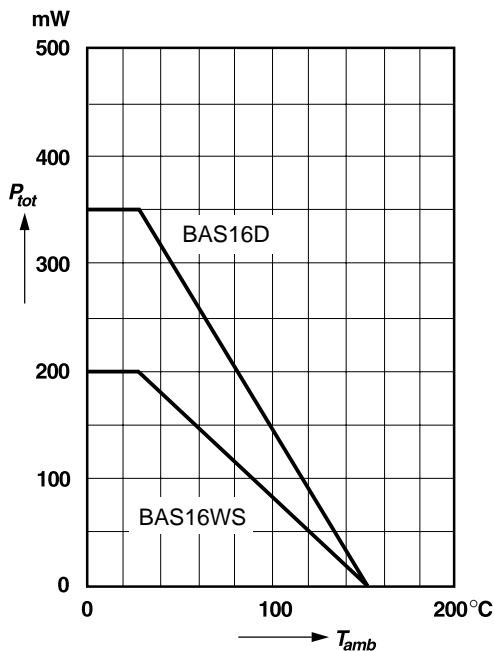


**Dynamic forward resistance versus forward current**

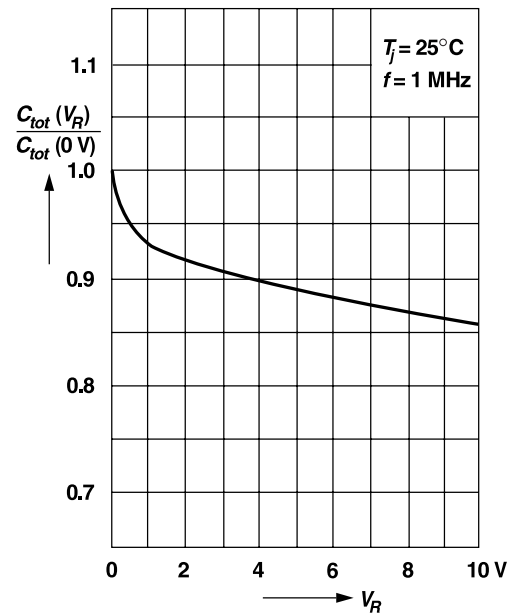


**Admissible power dissipation versus ambient temperature**

For conditions, see footnote in table "Absolute Maximum Ratings"



**Relative capacitance versus reverse voltage**



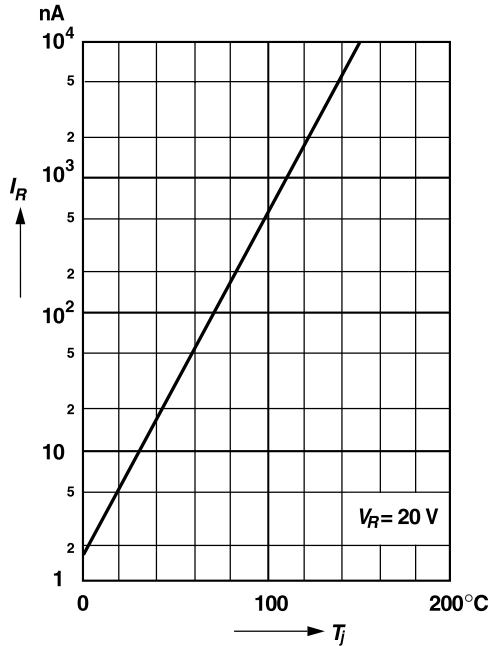
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## Ratings and Characteristic Curves ( $T_A = 25^\circ\text{C}$ unless otherwise noted)

**Leakage current versus junction temperature**



**Admissible repetitive peak forward current versus pulse duration**

For conditions, see footnote in table "Absolute Maximum Ratings"

