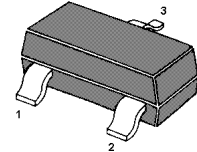
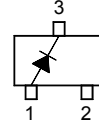


BAS16

Silicon Epitaxial Planar Switching Diode

Features

- Small package
- Low forward voltage
- Fast reverse recovery time
- Small total capacitance



Marking Code: **5D**
SOT-23 Plastic Package

Applications

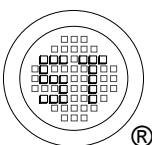
- Ultra high speed switching application

Absolute Maximum Ratings ($T_a = 25\text{ }^\circ\text{C}$)

Parameter	Symbol	Value	Unit	
Repetitive Peak Reverse Voltage	V_{RRM}	85	V	
Continuous Reverse Voltage	V_R	75	V	
Continuous Forward Current	I_F	215	mA	
Repetitive Peak Forward Current	I_{FRM}	500	mA	
Non-Repetitive Peak Forward Surge Current	I_{FSM}	$t = 1\ \mu\text{s}$	4	A
		$t = 1\ \text{ms}$	1	
		$t = 1\ \text{s}$	0.5	
Power Dissipation	P_{tot}	350	mW	
Junction Temperature	T_j	150	$^\circ\text{C}$	
Storage Temperature Range	T_{stg}	- 65 to + 150	$^\circ\text{C}$	

Characteristics at $T_a = 25\text{ }^\circ\text{C}$

Parameter	Symbol	Min.	Max.	Unit	
Forward Voltage	V_F	-	at $I_F = 1\ \text{mA}$	715	mV
			at $I_F = 10\ \text{mA}$	855	mV
			at $I_F = 50\ \text{mA}$	1	V
			at $I_F = 150\ \text{mA}$	1.25	V
Reverse Current	I_R	-	at $V_R = 25\ \text{V}$	30	nA
			at $V_R = 75\ \text{V}$	1	μA
			at $V_R = 25\ \text{V}, T_J = 150\text{ }^\circ\text{C}$	30	μA
			at $V_R = 75\ \text{V}, T_J = 150\text{ }^\circ\text{C}$	50	μA
Reverse Breakdown Voltage	$V_{(BR)R}$	75	-	V	
Diode Capacitance	C_d	-	2	pF	
Reverse Recovery Time	t_{rr}	-	4	ns	



SEMTECH ELECTRONICS LTD.
Subsidiary of Sino-Tech International (BVI) Limited



Dated : 15/06/2009

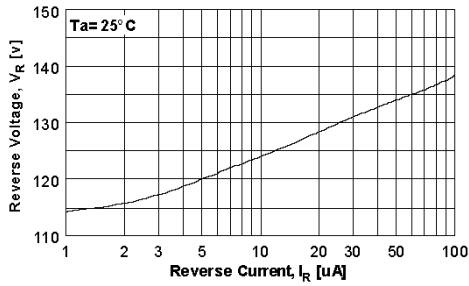


Figure 1. Reverse Voltage vs Reverse Current
BV - 1.0 to 100 uA

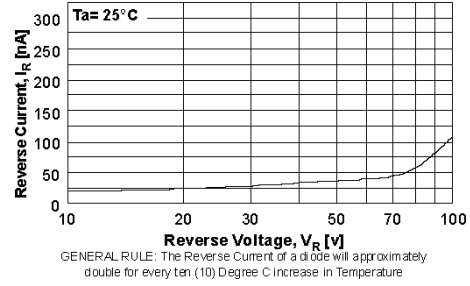


Figure 2. Reverse Current vs Reverse Voltage
IR - 10 to 100 V

GENERAL RULE: The Reverse Current of a diode will approximately double for every ten (10) Degree C increase in Temperature

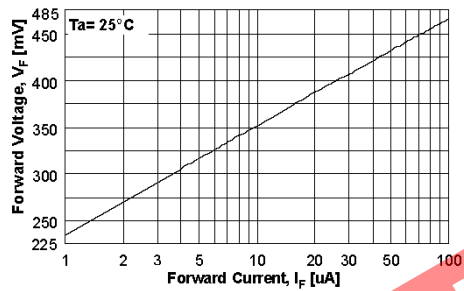


Figure 3. Forward Voltage vs Forward Current
VF - 1.0 to 100 uA

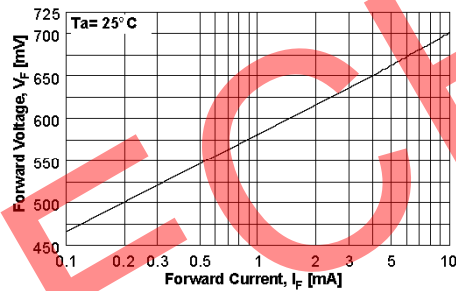


Figure 4. Forward Voltage vs Forward Current
VF - 0.1 to 10 mA

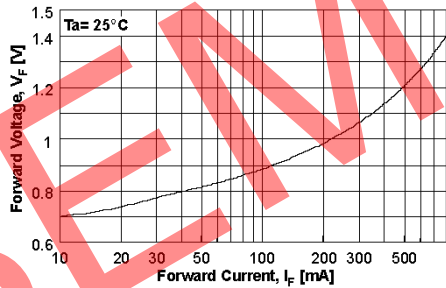


Figure 5. Forward Voltage vs Forward Current
VF - 10 - 800 mA

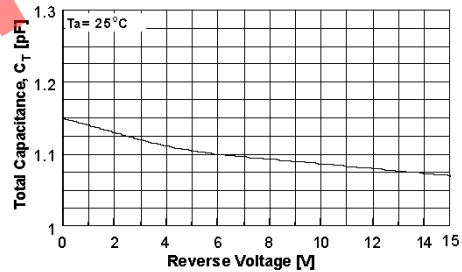


Figure 6. Total Capacitance

