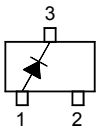
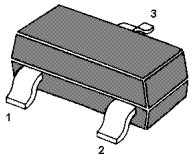
BAS16

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 °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	t = 1 µs t = 1 ms t = 1 s	I_{FSM}	4 1 0.5	A
Power Dissipation		P_{tot}	350	mW
Junction Temperature		T_j	150	°C
Storage Temperature Range		T_{stg}	- 65 to + 150	°C

Characteristics at T_a = 25 °C

Parameter	Symbol	Min.	Max.	Unit
Forward Voltage				
at I_F = 1 mA	V_F	-	715	mV
at I_F = 10 mA	V_F	-	855	mV
at I_F = 50 mA	V_F	-	1	V
at I_F = 150 mA	V_F	-	1.25	V
Reverse Current				
at V_R = 25 V	I_R		30	nA
at V_R = 75 V	I_R	-	1	µA
at V_R = 25 V, T_J = 150 °C	I_R	-	30	µA
at V_R = 75 V, T_J = 150 °C	I_R	-	50	µA
Reverse Breakdown Voltage at I_R = 100 µA	$V_{(BR)R}$	75	-	V
Diode Capacitance at V_R = 0 , f = 1 MHz	C_d	-	2	pF
Reverse Recovery Time at I_F = I_R = 10 mA, R_L = 50 Ω	t_{rr}	-	4	ns

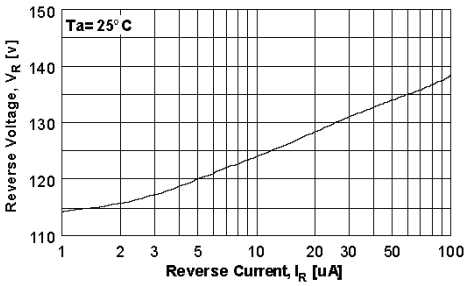


Figure 1. Reverse Voltage vs Reverse Current
BV - 1.0 to 100 uA

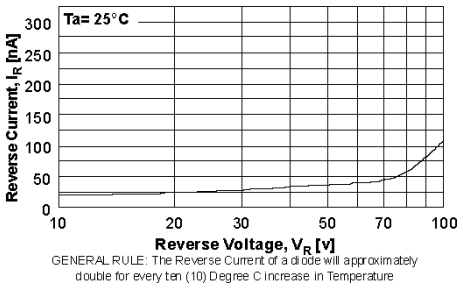


Figure 2. Reverse Current vs Reverse Voltage
IR - 10 to 100 V

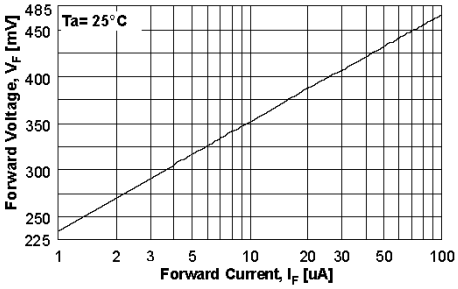


Figure 3. Forward Voltage vs Forward Current
VF - 1.0 to 100 uA

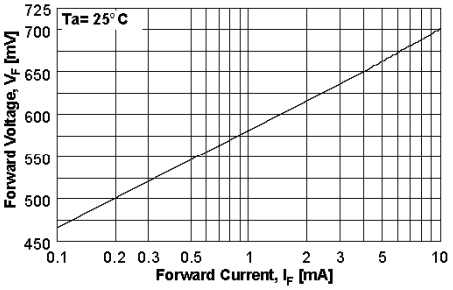


Figure 4. Forward Voltage vs Forward Current
VF - 0.1 to 10 mA

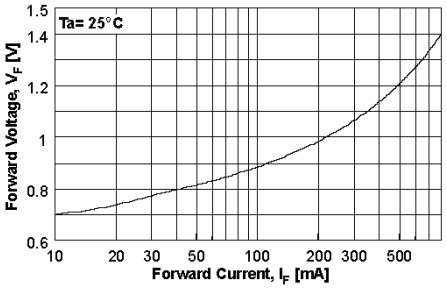


Figure 5. Forward Voltage vs Forward Current
VF - 10 - 800 mA

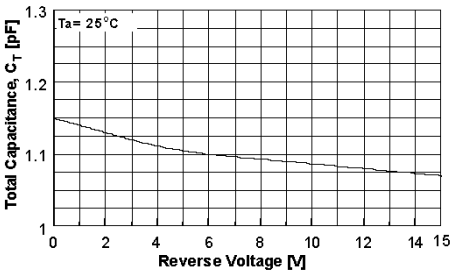


Figure 6. Total Capacitance