

# BAS16

## HIGH - SPEED SWITCHING

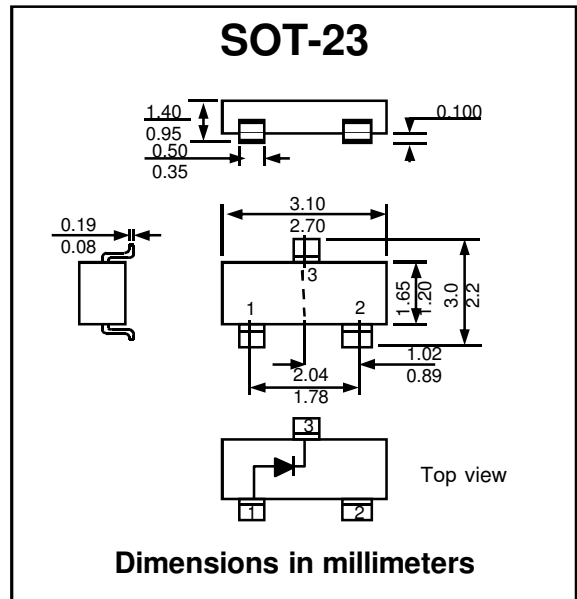
**PRV : 85 Volts**  
**Io : 215 mA**

**FEATURES :**

- \* Small plastic SMD package
- \* High switching speed: max. 4 ns
- \* Continuous reverse voltage: max. 75 V
- \* Repetitive peak reverse voltage: max. 85 V
- \* Repetitive peak forward current: max. 500 mA
- \* **Pb / RoHS Free**

**MECHANICAL DATA :**

- \* Case : SOT-23 plastic Case
- \* Marking code : 5D



**ABSOLUTE MAXIMUM RATING** (Ta = 25 °C)

Parameter	Symbol	Value	Unit
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	85	V
Maximum Continuous Reverse Voltage	$V_R$	75	V
Maximum Continuous Forward Current	$I_F$	215	mA
Maximum Repetitive Peak Forward Current	$I_{FRM}$	500	mA
Maximum Non-repetitive Peak Forward Surge Current	$I_{FSM}$	4.0	A
Forward Surge Current		1.0	
		0.5	
Power Dissipation	$P_{tot}$	350	mW
Junction Temperature	$T_J$	150	°C
Storage Temperature Range	$T_{STG}$	-65 to +150	°C

**ELECTRICAL CHARACTERISTICS** (Ta = 25 °C)

Parameter	Test Condition	Symbol	Min.	Typ.	Max.	Unit
Forward Voltage	$I_F = 1 \text{ mA}$	$V_F$	-	-	715	mV
	$I_F = 10 \text{ mA}$		-	-	855	mV
	$I_F = 50 \text{ mA}$		-	-	1.00	V
	$I_F = 150 \text{ mA}$		-	-	1.25	V
Reverse Current	$V_R = 25 \text{ V}$	$I_R$	-	-	30	nA
	$V_R = 75 \text{ V}$		-	-	1.0	μA
	$V_R = 25 \text{ V}, T_j = 150 \text{ °C}$		-	-	30	μA
	$V_R = 75 \text{ V}, T_j = 150 \text{ °C}$		-	-	50	μA
Reverse Breakdown Voltage	$I_R = 100 \text{ μA}$	$V_{(BR)R}$	75	-	-	V
Diode Capacitance	$V_R = 0 \text{ V}, f = 1 \text{ MHz}$	$C_D$	-	-	2	pF
Reverse Recovery Time	$I_F = I_R = 10 \text{ mA}, R_L = 50 \text{ Ω}$	$T_{rr}$	-	-	4	ns

RATINGS AND CHARACTERISTIC CURVES ( BAS16 )

FIG.1 - REVERSE VOLTAGE VS. REVERSE CURRENT ; BV - 1.0 to 100  $\mu$ A

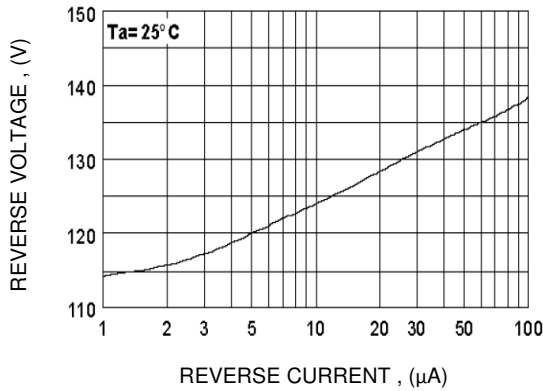


FIG.2 - REVERSE CURRENT VS. REVERSE VOLTAGE ; BV - 1.0 to 100  $\mu$ A

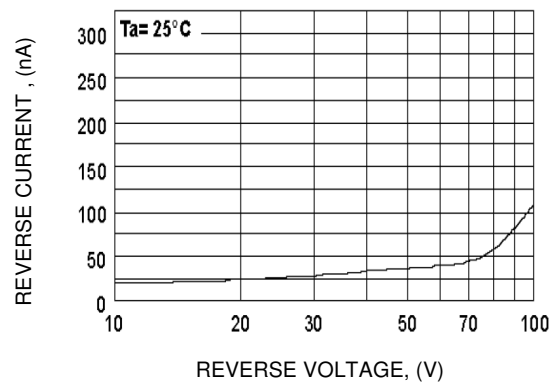


FIG.3 - FORWARD VOLTAGE VS. FORWARD CURRENT ; VF - 1.0 to 100  $\mu$ A

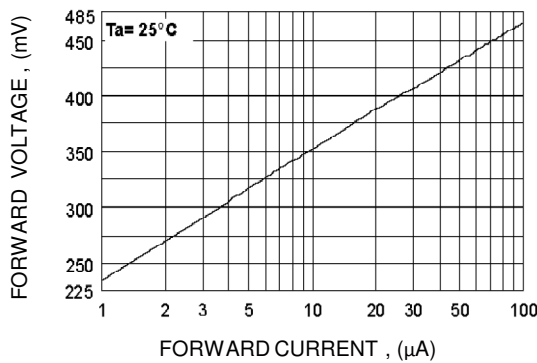


FIG.4 - FORWARD VOLTAGE VS. FORWARD CURRENT ; VF - 0.1 to 10 mA

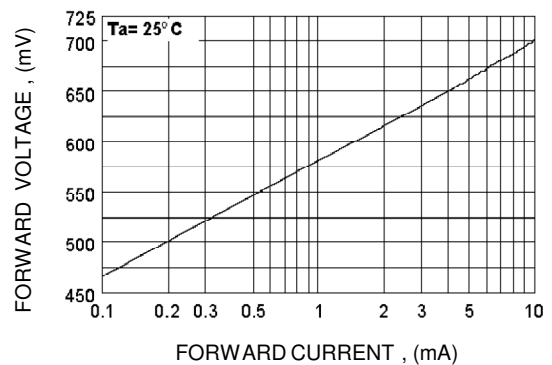


FIG.5 - FORWARD VOLTAGE VS. FORWARD CURRENT ; VF - 10 to 800 mA

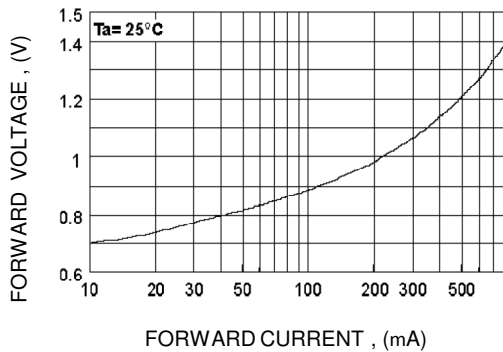


FIG.6 - TOTAL CAPACITANCE

