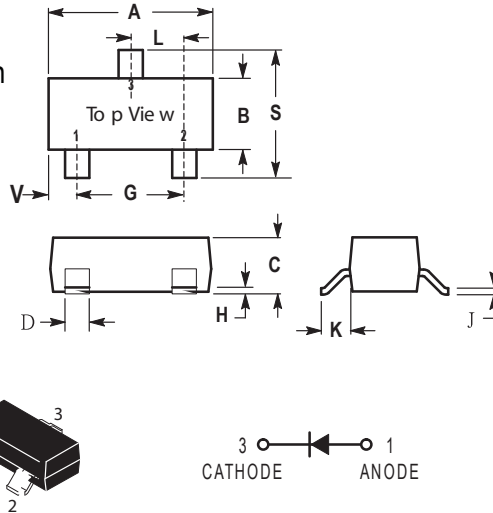


### Features

- Low Turn-on Voltage
- Low Forward Voltage - 0.5V(Max) @  $I_F = 30 \text{ mA}$
- Very Low Capacitance - Less Than 5.0pF @ 1V
- For high speed switching application, circuit protection

### Mechanical Data

- Case: Molded Plastic
- Terminals: Solderable per MIL-STD-202, Method 208
- Polarity: See Diagrams Below
- Weight: 0.008 grams (approx.)
- Mounting Position: Any



SOT-23		
Dim	Min	Max
A	2.800	3.040
B	1.200	1.400
C	0.890	1.110
D	0.370	0.500
G	1.780	2.040
H	0.013	0.100
J	0.085	0.177
K	0.450	0.600
L	0.890	1.020
S	2.100	2.500
V	0.450	0.600
All Dimension in mm		

### MAXIMUM RATINGS ( $T_J = 150^\circ\text{C}$ unless otherwise noted)

Rating	Symbol	Value	Unit
Reverse Voltage	$V_R$	40	Volts
Forward Power Dissipation @ $T_A = 25^\circ\text{C}$ Derate above $25^\circ\text{C}$	$P_F$	225 1.8	mW mW/ $^\circ\text{C}$
Operating Junction and Storage Temperature Range	$T_J, T_{stg}$	-55 to +150	$^\circ\text{C}$

### DEVICE MARKING

BAS40 = B1
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### ELECTRICAL CHARACTERISTICS ( $T_A = 25^\circ\text{C}$ unless otherwise noted)

Characteristic	Symbol	Min	Max	Unit
Reverse Breakdown Voltage ( $I_R = 10 \text{ mA}$ )	$V_{(BR)R}$	40	—	Volts
Total Capacitance ( $V_R = 1.0 \text{ V}, f = 1.0 \text{ MHz}$ )	$C_T$	—	5.0	pF
Reverse Leakage ( $V_R = 25 \text{ V}$ )	$I_R$	—	1.0	mA dc
Forward Voltage ( $I_F = 0.1 \text{ mA dc}$ )	$V_F$	—	380	mV dc
Forward Voltage ( $I_F = 30 \text{ mA dc}$ )	$V_F$	—	500	mV dc
Forward Voltage ( $I_F = 100 \text{ mA dc}$ )	$V_F$	—	1.0	V dc

## RATINGS AND CHARACTERISTIC CURVES BAS40

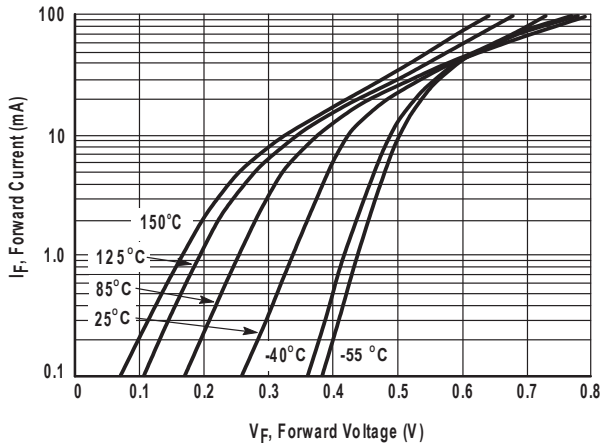


Figure 1. Typical Forward Current versus Forward Voltage

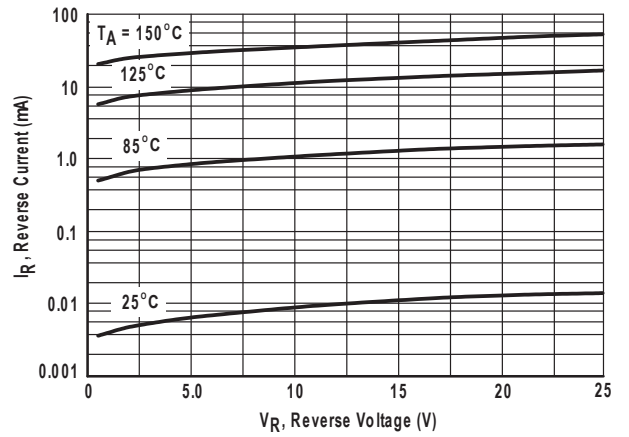


Figure 2. Reverse Current versus Reverse Voltage

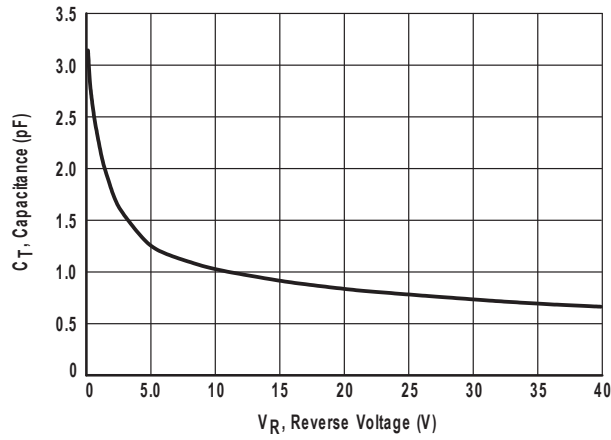


Figure 3. Typical Capacitance