

## BAS40 / BAS40-04 / BAS40-05 / BAS40-06

### 120mA Surface Mount Small Signal Schottky Diodes- 40V

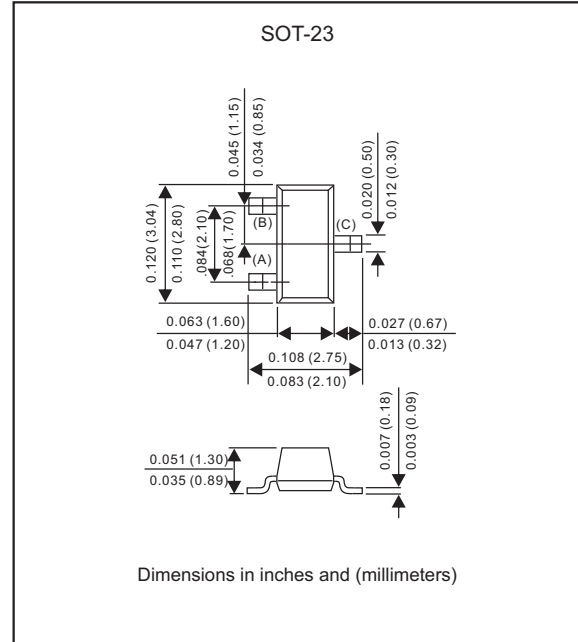
#### Features

- Low forward current
- Guard ring protected
- Low diode capacitance
- Lead-free parts for green partner, exceeds environmental standards of MIL-STD-19500 /228
- Suffix "-H" indicates Halogen-free part, ex. BAS40-H.

#### Mechanical data

- Epoxy:UL94-V0 rated flame retardant
- Case : Molded plastic, SOT-23
- Terminals : Solder plated, solderable per MIL-STD-750, Method 2026
- Mounting Position : Any
- Weight : Approximated 0.008 gram

#### Package outline



#### Maximum ratings and Electrical Characteristics (AT $T_A=25^{\circ}\text{C}$ unless otherwise noted)

PARAMETER	CONDITIONS	Symbol	MIN.	TYP.	MAX.	UNIT
Continuous reverse voltage		$V_R$			40	V
Repetitive Peak forward surge current	$t_p < 1\text{s}$	$I_{FSM}$			120	mA
Non-repetitive peak forward current	$t_p < 10\text{ms}$	$I_{FSM}$			200	mA
Continuous Forward current		$I_F$			120	mA
Thermal Resistance	Junction to ambient	$R_{\theta JA}$		500		$^{\circ}\text{C}/\text{W}$
Operating junction temperature range		$T_J$	-55		+125	$^{\circ}\text{C}$
Storage temperature range		$T_{STG}$	-55		+125	$^{\circ}\text{C}$
Forward voltage	$I_F = 1\text{ mA}$	$V_F$			0.40	V
	$I_F = 10\text{ mA}$	$V_F$			0.56	V
	$I_F = 40\text{ mA}$	$V_F$			1.0	V
Reverse current	$V_R = 30\text{ V}$	$I_R$			1.0	$\mu\text{A}$
	$V_R = 40\text{ V}$	$I_R$			10	$\mu\text{A}$
Diode capacitance	$V_R = 0\text{ V}, f = 1\text{MHz}$	$C_D$			5.0	pF

Rating and characteristic curves for each diode (BAS40 / BAS40-04 / BAS40-05 / BAS40-06)

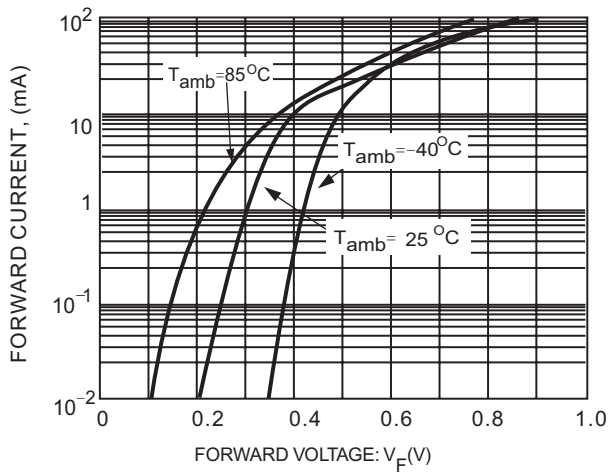


Fig. 1 Forward current as a function of forward voltage; typical values.

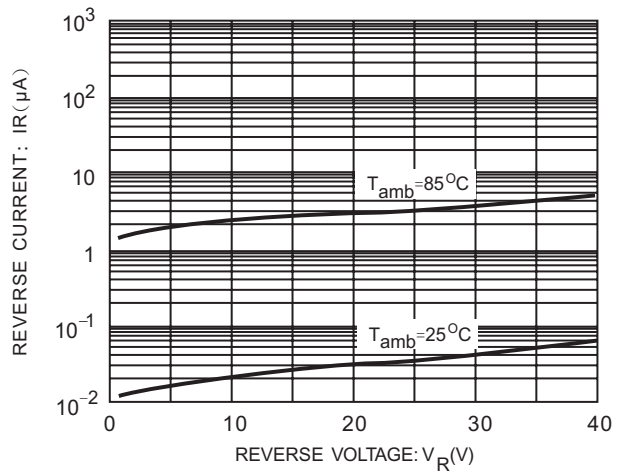


Fig. 2 Reverse current as a function of reverse voltage; typical values.

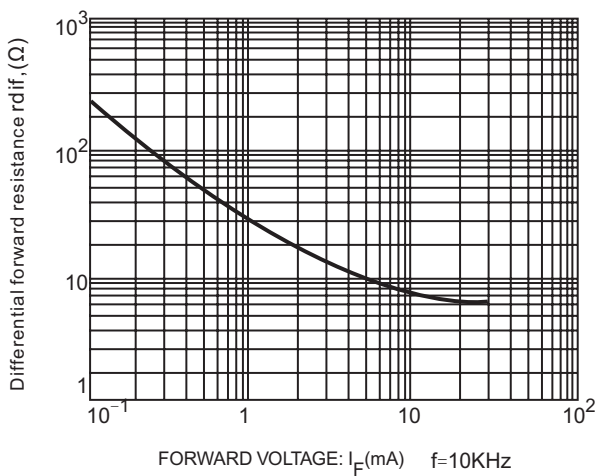


Fig. 3 Differential forward resistance as a function of forward current; typical values.

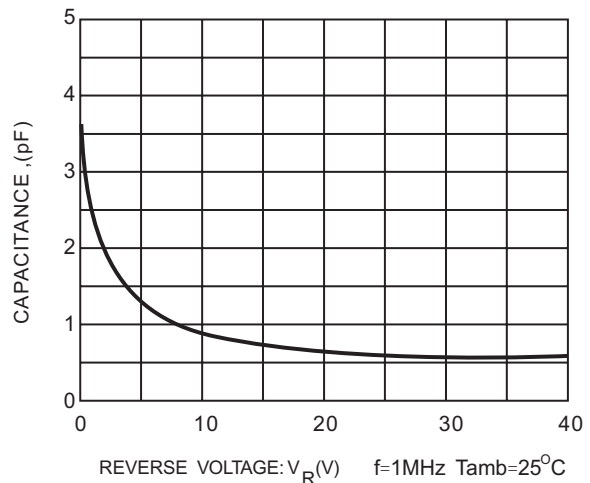
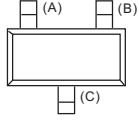
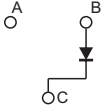
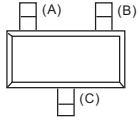
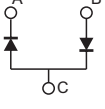
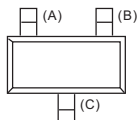
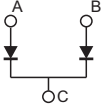
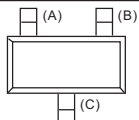
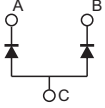


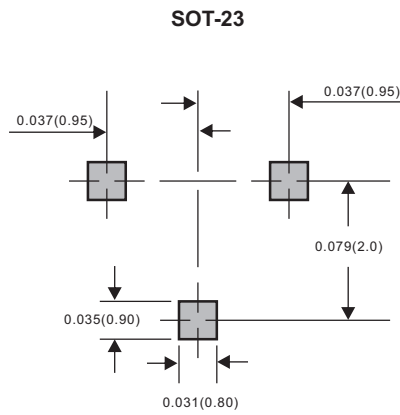
Fig. 4 Diode capacitance as a function of reverse voltage; typical values.

# BAS40 / BAS40-04 / BAS40-05 / BAS40-06

## Pinning information

Type number	Marking code	Simplified outline	Symbol
BAS40	43, B1		
BAS40-04	44, CB		
BAS40-05	45		
BAS40-06	46, L2		

## Suggested solder pad layout



Dimensions in inches and (millimeters)

## Reel packing

PACKAGE	REEL SIZE	REEL (pcs)	COMPONENT SPACING (m/m)	BOX (pcs)	INNER BOX (m/m)	REEL DIA, (m/m)	CARTON SIZE (m/m)	CARTON (pcs)	APPROX. GROSS WEIGHT (kg)
SOT-23	7"	3,000	4.0	30,000	183*183*123	178	382*262*387	240,000	11.6