

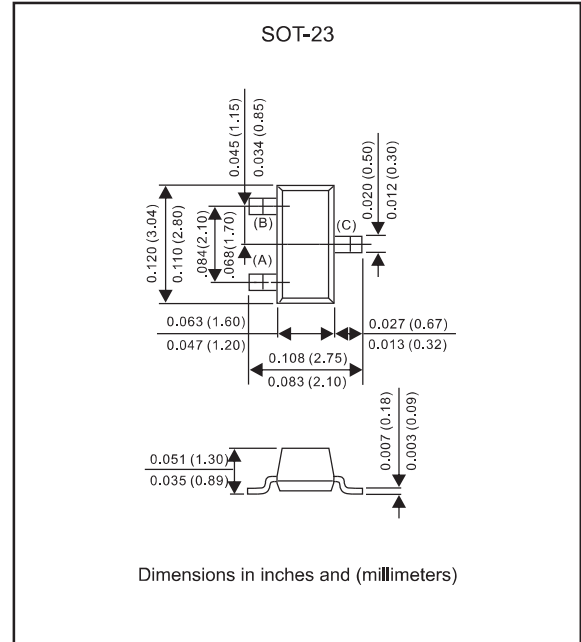
### Features

- Low forward current
- Guard ring protected
- Low diode capacitance
- Lead-free parts for green partner, exceeds environmental standards of MIL-STD-19500 /228
- Compliant to Halogen-free

### 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

### 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		$^\circ\text{C/W}$
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)

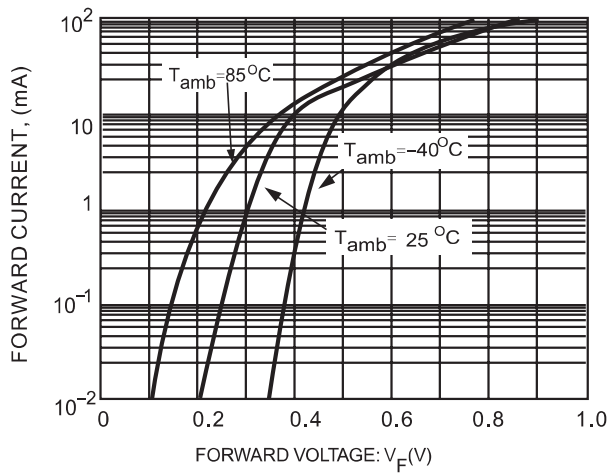


Fig. 1 Forward current as a function of forward voltage; typical values.

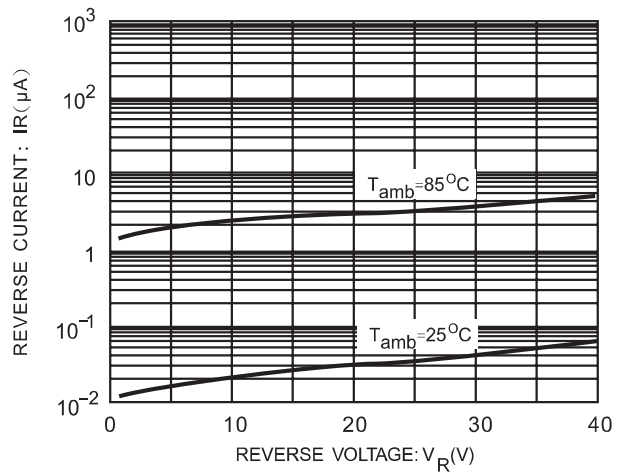


Fig. 2 Reverse current as a function of reverse voltage; typical values.

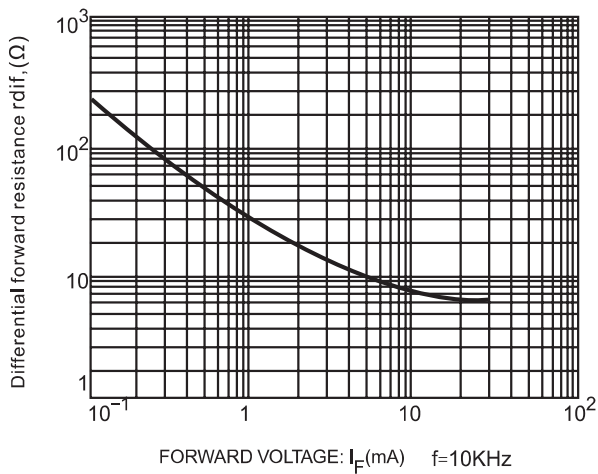


Fig. 3 Differential forward resistance as a function of forward current; typical values.

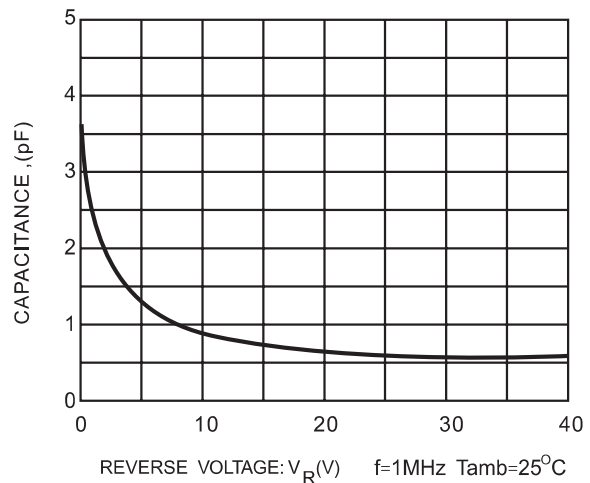
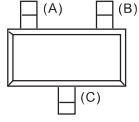
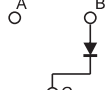
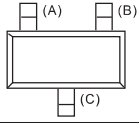
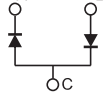
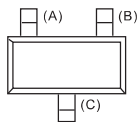
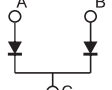
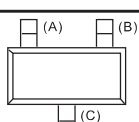
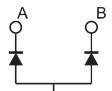


Fig. 4 Diode capacitance as a function of reverse voltage; typical values.

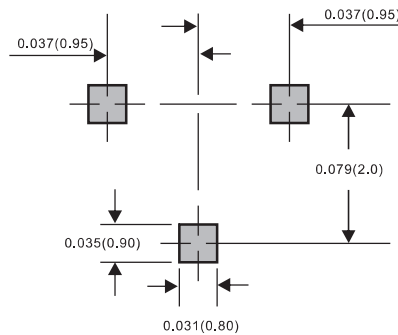


### Pinning information

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

#### SOT-23



Dimensions in inches and (millimeters)