

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

120mA Surface Mount Small Signal Schottky Diodes- 40V

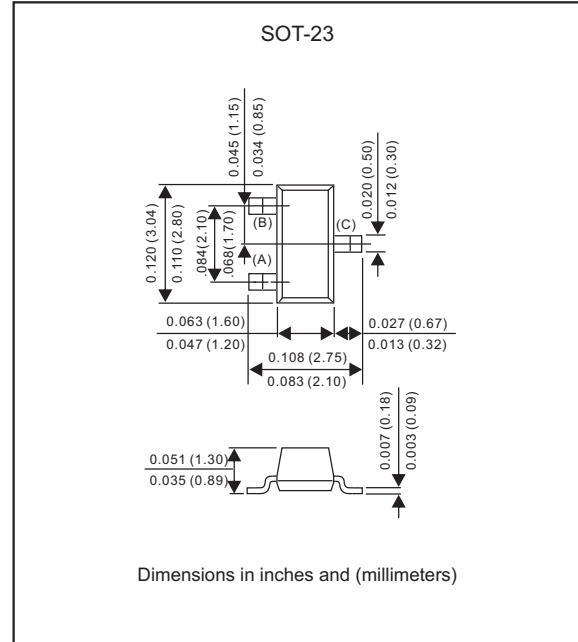
Features

- 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°C unless otherwise noted)

PARAMETER	CONDITIONS	Symbol	MIN.	TYP.	MAX.	UNIT
Continuous reverse voltage		V _R			40	V
Repetitive Peak forward surge current	tp<1s	I _{FSM}			120	mA
Non-repetitive peak forward current	tp<10ms	I _{FSM}			200	mA
Continuous Forward current		I _F			120	mA
Thermal Resistance	Junction to ambient	R _{θJA}		500		°C/W
Operating junction temperature range		T _J	-55		+125	°C
Storage temperature range		T _{STG}	-55		+125	°C
Forward voltage	I _F = 1 mA	V _F			0.40	V
	I _F = 10 mA	V _F			0.56	V
	I _F = 40 mA	V _F			1.0	V
Reverse current	V _R = 30 V	I _R			1.0	uA
	V _R = 40 V	I _R			10	uA
Diode capacitance	V _R = 0 V, f = 1MHz	C _D			5.0	pF

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

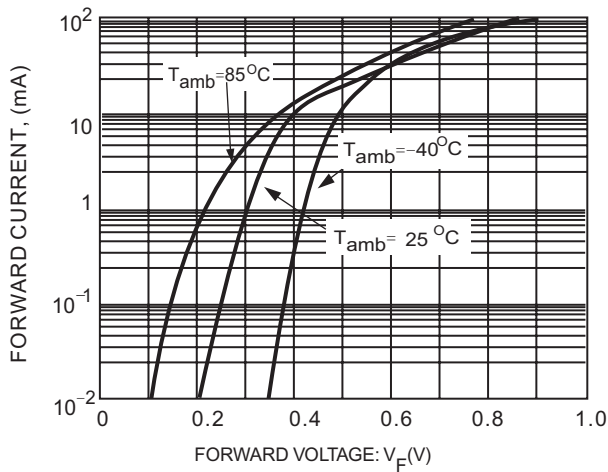


Fig. 1 Forward current as a function of forward voltage; typical values.

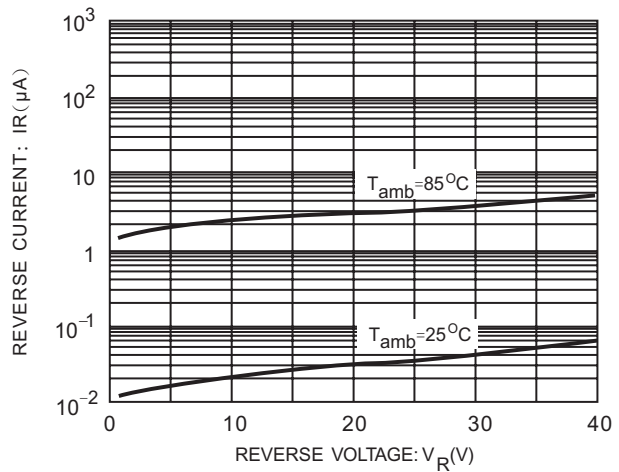


Fig. 2 Reverse current as a function of reverse voltage; typical values.

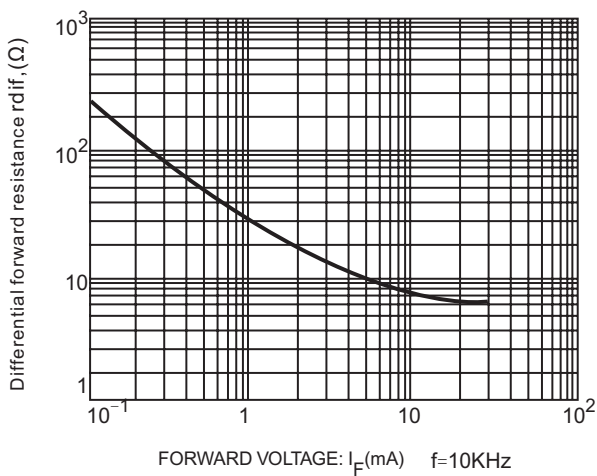


Fig. 3 Differential forward resistance as a function of forward current; typical values.

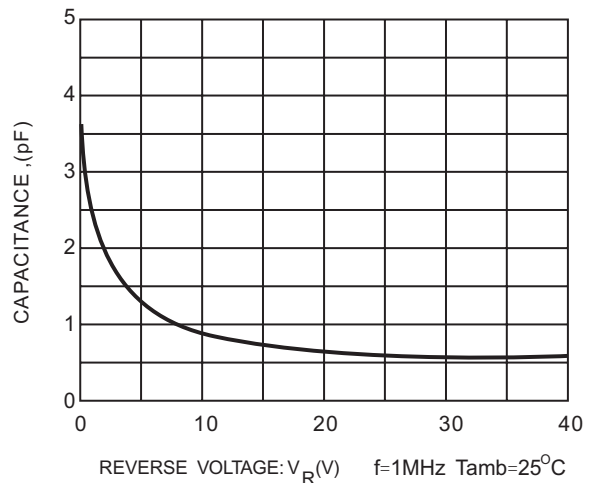
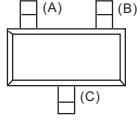
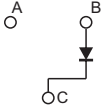
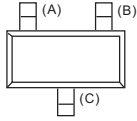
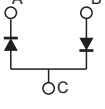
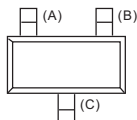
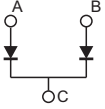
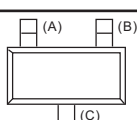
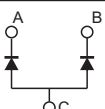


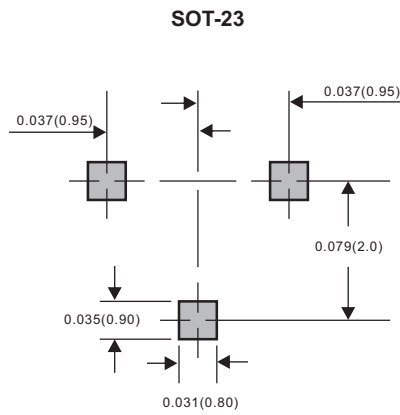
Fig. 4 Diode capacitance as a function of reverse voltage; typical values.

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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