

BAS70 / BAS70-04 / BAS70-05 / BAS70-06

70mA Surface Mount Small Signal Schottky Diodes 70V

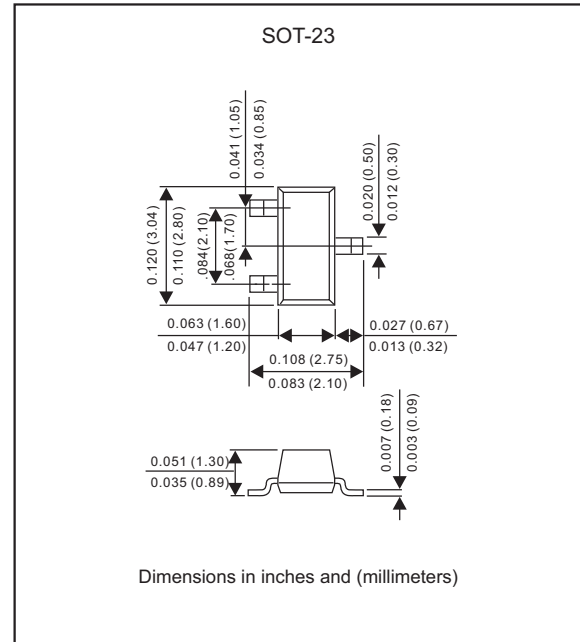
Features

- Low forward current
- High breakdown voltage
- Guard ring protected
- Low diode capacitance
- High speed ($t_{rr} < 5 \text{ ns}$)
- Lead-free parts meet RoHS requirements
- Suffix "-H" indicates Halogen-free part, ex. BAS70-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 (AT $T_A = 25^\circ\text{C}$ unless otherwise noted)

Parameter	Conditions	Symbol	MIN.	TYP.	MAX.	Unit
Continuous reverse voltage		V_R			70	V
Forward current		I_F			70	mA
Repetitive peak forward surge current	$t_p < 1\text{s}$	I_{FSM}			70	mA
Non-repetitive peak forward current	$t_p < 10\text{ms}$	I_{FSM}			100	mA
Operating junction temperature range		T_J	-55		+125	$^\circ\text{C}$
Storage temperature range		T_{STG}	-55		+125	$^\circ\text{C}$

Electrical characteristics (AT $T_A = 25^\circ\text{C}$ unless otherwise noted)

Parameter	Conditions	Symbol	MIN.	TYP.	MAX.	Unit
Forward voltage	$I_F = 1\text{mA}$	V_F			0.41	V
	$I_F = 10\text{mA}$	V_F			0.75	V
	$I_F = 15\text{mA}$	V_F			1.00	V
Reverse current	$V_R = 50\text{V}$	I_R			0.1	μA
	$V_R = 70\text{V}$				10	
Diode capacitance	$V_R = 0\text{V}$, $f = 1\text{MHz}$	C_T			2.0	pF
Reverse recovery time	$I_F = I_R = 10\text{mA}$, $I_{rr} = 0.1 I_R$, $R_L = 100\Omega$	t_{rr}			5.0	ns

Rating and characteristic curves for each diode (BAS70 / BAS70-04 / BAS70-05 / BAS70-06)

FIG.1-FORWARD CHARACTERISTICS

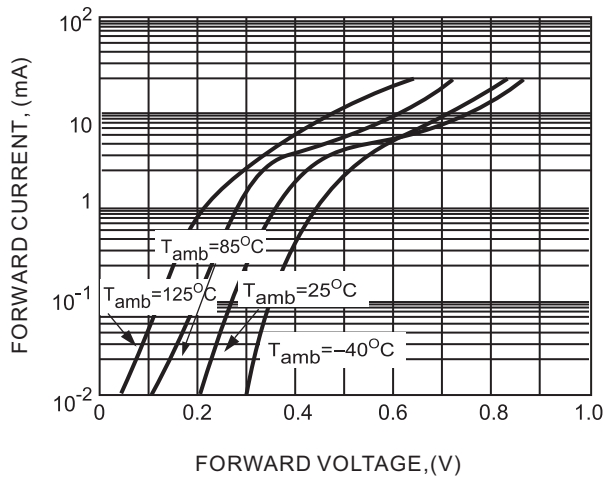


FIG.2-REVERSE CHARACTERISTICS

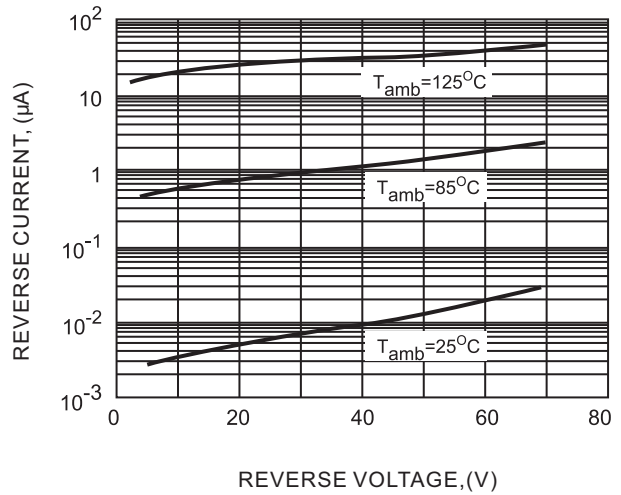


FIG.3 Differential forward resistance as a function of forward current; typical values.

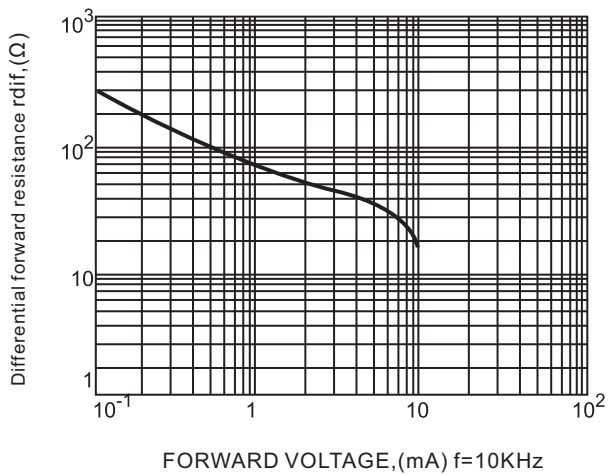
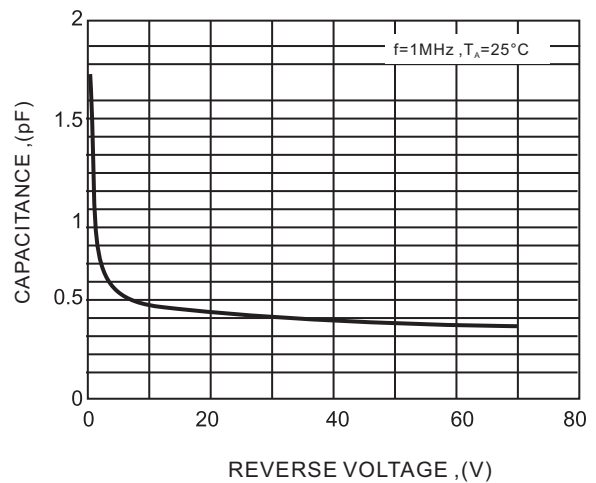
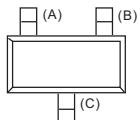
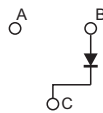
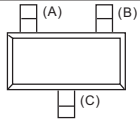
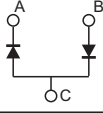
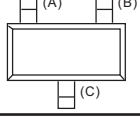
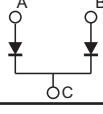
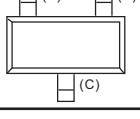
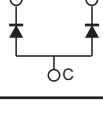


FIG.4-CAPACITANCE CHARACTERISTICS



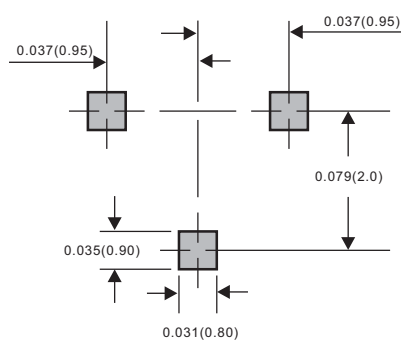
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Pinning information

Type number	Marking code	Simplified outline	Symbol
BAS70	73,BE		
BAS70-04	74,CG		
BAS70-05	75,EH		
BAS70-06	76,GK		

Suggested solder pad layout

SOT-23



Dimensions in inches and (millimeters)