

■ Features

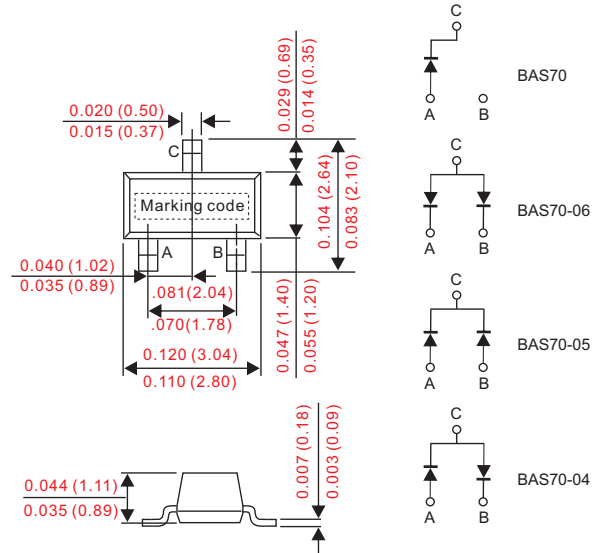
- Low current rectification and high speed switching.
- Small surface mount type.
- Up to 70mA current capability.
- Low forward voltage drop ($V_F = 1.00V$ typ. @15mA)
- Silicon epitaxial planar chip, metal silicon junction.
- High speed ($t_{rr} < 5$ ns)
- Suffix "G" indicates Halogen-free part, ex. BAS70G.
- Lead-free parts for green partner, exceeds environmental standards of MIL-STD-19500 /228

■ 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

■ Outline

SOT-23



■ Maximum ratings and electrical characteristics

Rating at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Characteristic	Symbol	BAS70	BAS70-04	BAS70-05	BAS70-06	UNIT
Marking code		73, BE	74, CG	75, EH	76, GK	
Peak Repetitive Reverse Voltage	V_{RRM}	70				V
Work Peak Reverse Voltage	V_{RRM}					
DC Reverse Voltage	V_R					
RMS Reverse Voltage	$V_{R(RMS)}$	49				
Forward Continuous Current(1)	$I_{F(AV)}$	70				mAdc
Non-Repetitive Peak Forward Surge Current @ $t_p < 1.0s$	I_{FSM}	100				mAdc
Power Dissipation(1)	P_D	200				mW
Thermal Resistance Junction to Ambient Air	$R_{\theta JA}$	625				°C/W
Junction and Storage Temperature	T_J, T_{STG}	-65 ~ +150				°C

Characteristic	Symbol	MIN.	MAX.	UNIT
Reverse Breakdown Voltage	$I_{(BR)} = 10\mu A_{dc}$	$V_{(BR)}$	70	Vdc
Reverse Voltage Leakage Current	$V_R = 50V_{dc}$	I_R	0.1	μA_{dc}
Total Capacitance	$V_R = 0, f = 1.0MHz$	C_D	2.0	pF
Forward Voltage	$I_F = 1.0mAdc$ $I_F = 15mAdc$	V_F	410 1000	mVdc
Reverse Recovery Time $I_F = I_R = 10mAdc, V_R = 5.0V_{dc}, I_{R(REC)} = 1.0mAdc, R_L = 100\Omega$		t_{rr}	5.0	nS

NOTE: 1. Valid provided that terminals are kept at ambient temperature.
2. Test period < 300us.

■ Rating and characteristic curves

FIG.1-TYPICAL FORWARD CHARACTERISTICS

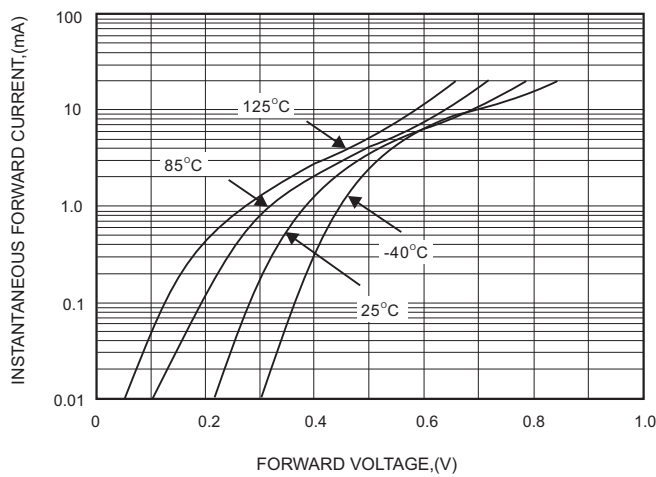


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

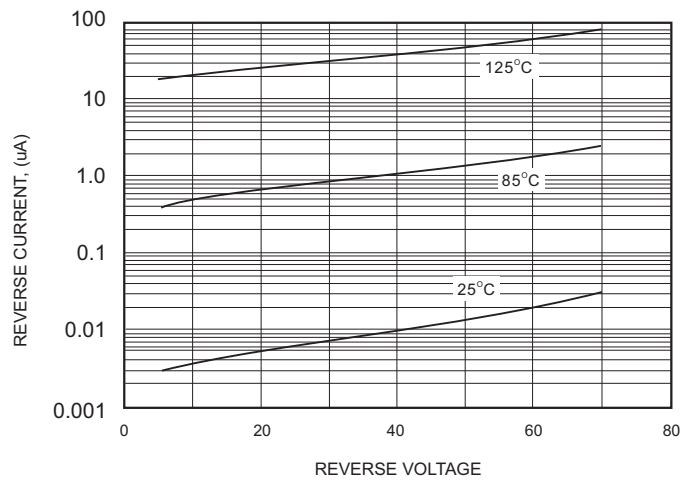


FIG.3-DIFFERENTIAL FORWARD RESISTANCE AS A FUNCTION OF FORWARD CURRENT

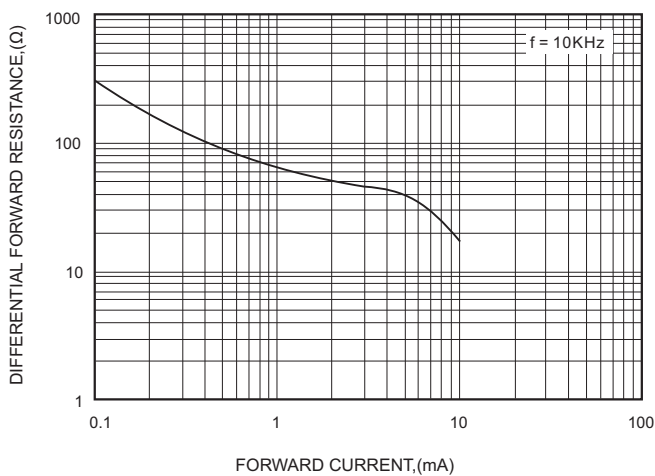
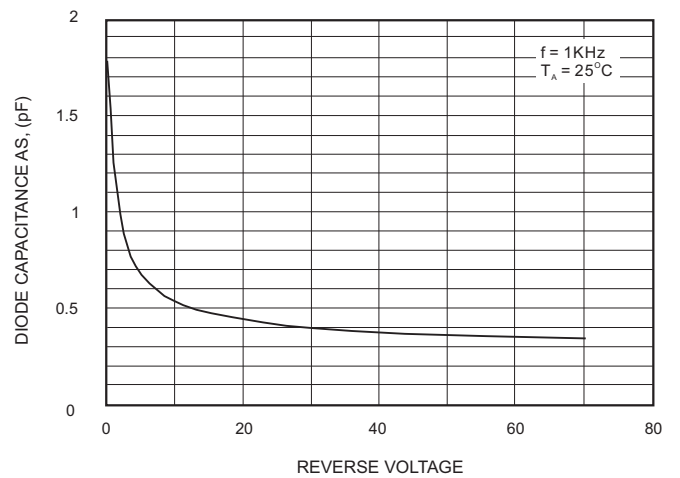
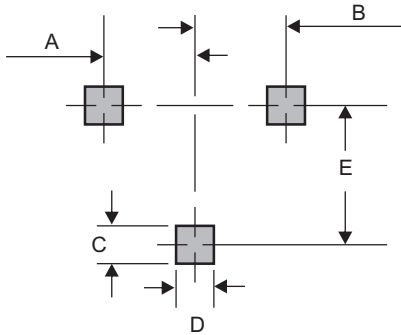


FIG.4 - DIODE CAPACITANCE AS A FUNCTION OF REVERSE VOLTAGE



■ SOT-23 foot print



A	B	C	D	E
0.037 (0.95)	0.037 (0.95)	0.035 (0.90)	0.031 (0.80)	0.079 (2.00)

Dimensions in inches and (millimeters)

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