LITE-ON SEMICONDUCTOR

BAS70, BAS70-04 thru 06

SURFACE MOUNT
SCHOTTKY BARRIER DIODE

REVERSE VOLTAGE – 70 Volts
FORWARD CURRENT – 0.07 Ampere

FEATURES

- Low forward current
- High breakdown voltage
- Guard ring protected
- Low diode capacitance

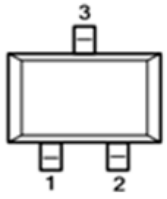
MECHANICAL DATA

- Case: SOT-23 plastic
- Lead free in RoHS 2002/95/EC compliant

APPLICATION

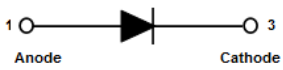
- Ultra high-speed switching
- Voltage clamping
- Protection circuits

SOT-23

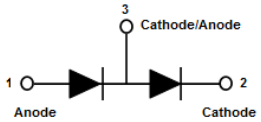


Top View

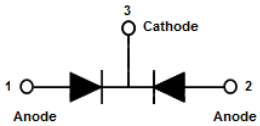
BAS70 single diode



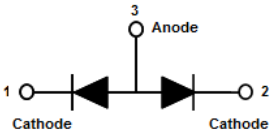
BAS70_04 double diode



BAS70_05 double diode



BAS70_06 double diode



MAXIMUM RATINGS @ TA = 25°C unless otherwise specified

PARAMETER	SYMBOL	BAS70	BAS70-04	BAS70-05	BAS70-06	UNIT
Device marking code	Note	BE	CG	EH	GK	--
Continuous reverse voltage	V_R	70				V
Continuous forward current	I_F	70				mA
Non-repetitive peak forward current @ tp<1s;δ<0.5	I_{FSM}	100				mA
Junction and storage temperature	T_J, T_{STG}	-65 ~ 150				°C

STATIC ELECTRICAL CHARACTERISTICS @ T_A = 25°C unless otherwise specified

PARAMETER	TEST CONDITIONS	SYMBOL	MAX	UNIT
Forward voltage	IF= 1mA IF= 10mA IF= 15mA	V_F	410 750 1000	mV
Reverse current (Note 1)	VR= 70V	I_R	10	uA
Diode capacitance	f = 1 MHz ; VR = 0	C_D	2	pF

THERMAL CHARACTERISTICS @ T_A = 25°C unless otherwise specified

PARAMETER	SYMBOL	VALUE	UNIT
Thermal resistance – junction to ambient (Note 2)	$Rthj_A$	500	°C/W

Note :
(1) Pulse test : tp = 300us ; δ = 0.02
(2) Refer to SOT-23 or SOT-143B standard mounting conditions.

REV.-2, Mar.-2017, KSHR74

RATING AND CHARACTERISTIC CURVES
BAS70, BAS70-04 thru 06

FIG. 1 - FORWARD CURRENT AS A FUNCTION OF FORWARD VOLTAGE; TYPICAL VALUES

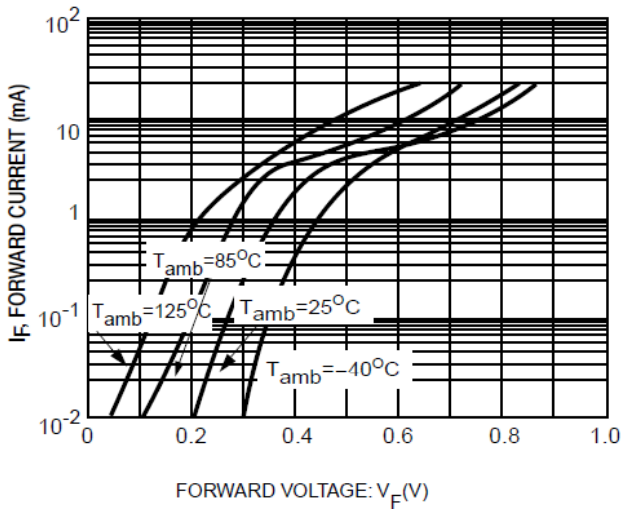


FIG. 2 – REVRSE CURRENT AS A FUNCTION OF REVERSE VOLTAGE; TYPICAL VALUES.

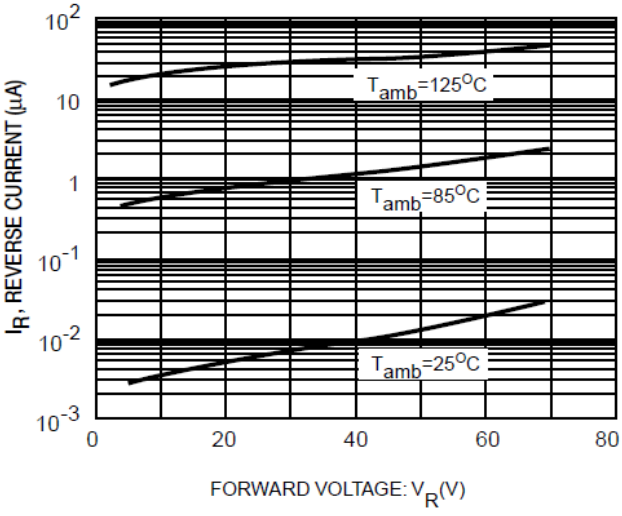


FIG. 3 – DIFFERENTIAL FORWARD RESISTANCE AS A FUNCTION OF FORWARD CURRENT; TYPICAL VALUES.

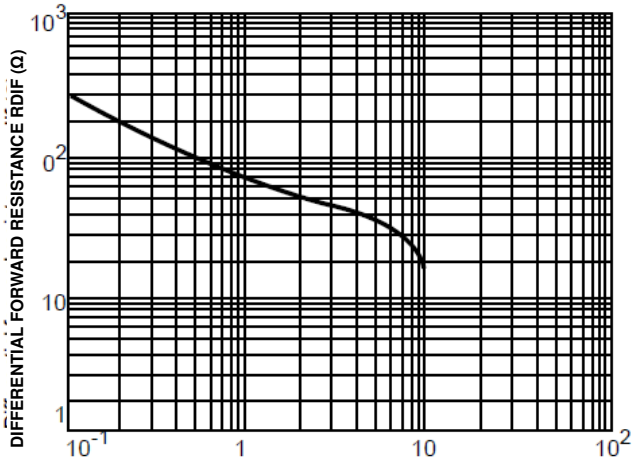
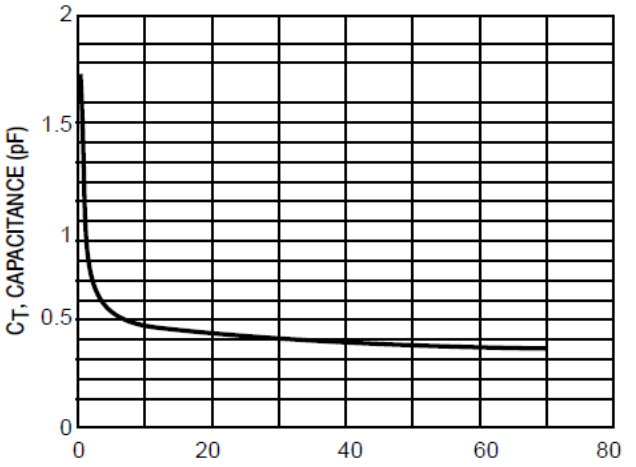


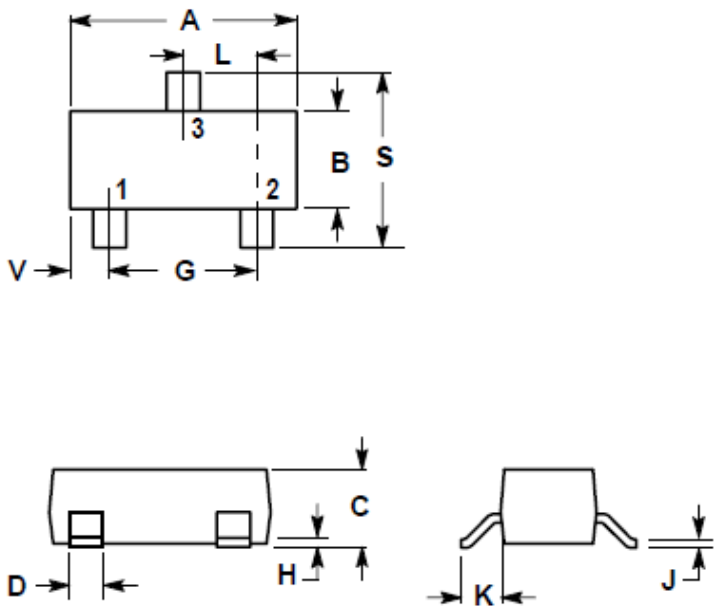
FIG. 4 – DIODE CAPACITANCE AS A FUNCTION OF REVERSE VOLTAGE; TYPICAL VALUES.



MECHANICAL INFORMATION
BAS70, BAS70-04 thru 06

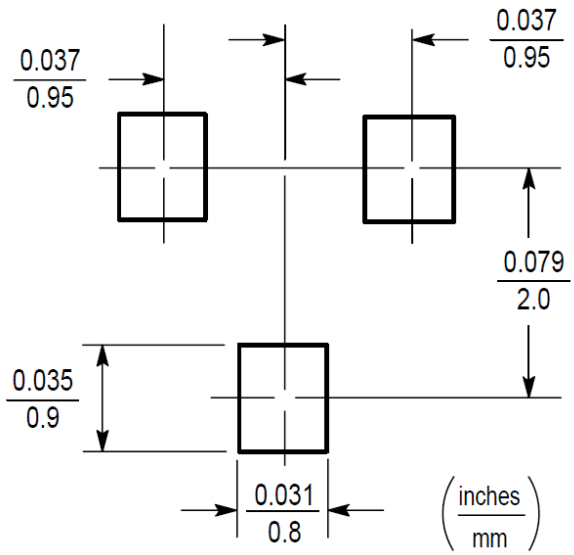
Package Dimensions :

SOT-23



Dim.	INCHES		MILLIMETERS	
	Min.	Max.	Min.	Max.
A	0.1102	0.1197	2.80	3.04
B	0.0472	0.0551	1.20	1.40
C	0.0350	0.0440	0.89	1.11
D	0.0150	0.0200	0.37	0.50
G	0.0701	0.0807	1.78	2.04
H	0.0005	0.0040	0.013	0.100
J	0.0034	0.0070	0.085	0.177
K	0.0140	0.0285	0.35	0.69
L	0.0350	0.0401	0.89	1.02
S	0.0830	0.1039	2.10	2.64
V	0.0177	0.0236	0.45	0.60

Soldering Pad Layout :



Note:
1. **Dimensioning and tolerancing per ansiy14.5m 1982**
2. **Controlling dimension : inch**

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