

# SCHOTTKY BARRIER DIODE

## Features

- Low forward current
- High breakdown voltage
- Guard ring protected
- Low diode capacitance.
- S- Prefix for Automotive and Other Applications Requiring Unique Site and Control Change Requirements; AEC-Q101 Qualified and PPAP Capable.

## APPLICATIONS

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

## DESCRIPTION

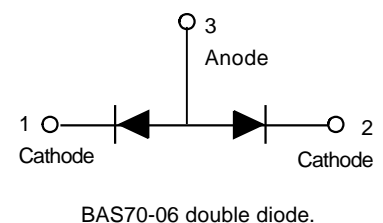
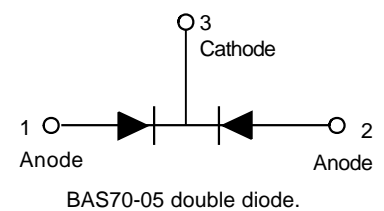
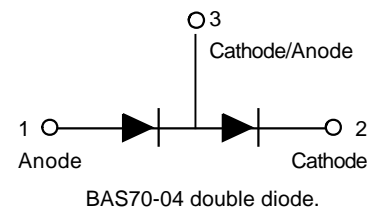
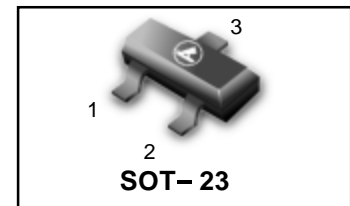
Planar Schottky barrier diodes with an integrated guard ring for stress protection. Single diodes and double diodes with different pinning are available.

We declare that the material of product compliance with RoHS requirements.

## ORDERING INFORMATION

Device	Marking	Shipping
LBAS70LT1G S-LBAS70LT1G	BE	3000 Tape & Reel
LBAS70LT3G S-LBAS70LT3G	BE	10000 Tape & Reel
LBAS70-04LT1G S-LBAS70-04LT1G	CG	3000 Tape & Reel
LBAS70-04LT3G S-LBAS70-04LT3G	CG	10000 Tape & Reel
LBAS70-05LT1G S-LBAS70-05LT1G	EH	3000 Tape & Reel
LBAS70-05LT3G S-LBAS70-05LT3G	EH	10000 Tape & Reel
LBAS70-06LT1G S-LBAS70-06LT1G	GK	3000 Tape & Reel
LBAS70-06LT3G S-LBAS70-06LT3G	GK	10000 Tape & Reel

**LBAS70LT1G  
Series  
S-LBAS70LT1G  
Series**



## LBAS70LT1G Series , S-LBAS70LT1G Series

### MAXIMUM RATINGS ( $T_A = 25^\circ\text{C}$ )

Parameter	Symbol	Min.	Max.	Unit	Conditions
Continuous reverse voltage	$V_R$	-	70	V	
Continuous forward current	$I_F$	-	70	mA	
Repetitive Peak forward surge current	$I_{FSM}$	-	70	mA	$t_p \leq 1\text{s}; \delta \leq 0.5$
Non-repetitive peak forward current	$I_{FSM}$	-	100	mA	$t_p < 10\text{ms}$
Storage temperature	$T_{stg}$	-65	+150	$^\circ\text{C}$	
Junction temperature	$T_j$	-	150	$^\circ\text{C}$	
Operating ambient temperature	$T_{amb}$	-65	+150	$^\circ\text{C}$	

### DEVICE MARKING

LBAS70LT1G=BE LBAS70-04LT1G=CG LBAS70-05LT1G=EH LBAS70-06LT1G=GK

### ELECTRICAL CHARACTERISTICS ( $T_A = 25^\circ\text{C}$ )

Parameter	Symbol	Max.	Unit	Conditions
Forward voltage(Fig.1)	$V_F$	410	mV	$I_F = 1\text{mA}$
		750	mv	$I_F = 10\text{mA}$
		1	v	$I_F = 15\text{mA}$
Reverse current(Fig.2 ;note1)	$I_R$	100	nA	$V_R = 50\text{V}$
		10	$\mu\text{A}$	$V_R = 70\text{V}$
Charge carrier life time (krakauer method)	$\tau$	100	ps	$I_F = 5\text{mA}$
Diode capacitance(Fig.4)	$C_d$	2	pF	$f = 1\text{MHz}; V_R = 0$

Note:

1. Pulse test:  $t_p = 300\mu\text{s}; \delta = 0.02$ .

### THERMAL CHARACTERISTICS

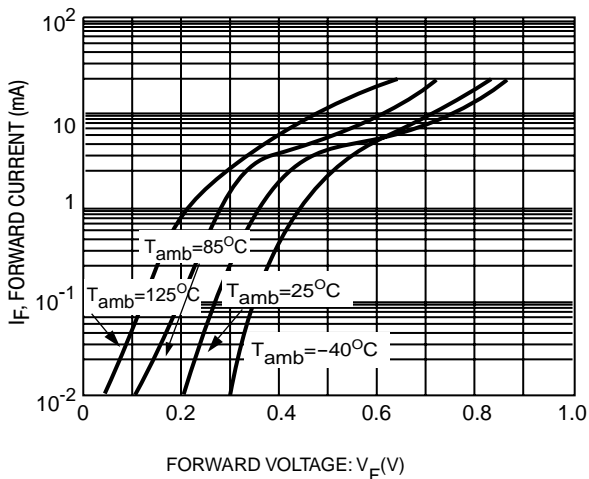
PARAMETER	SYMBOL	VALUE	UNIT	CONDITIONS
Thermal resistance from junction to ambient	$R_{th\ j-a}$	500	k/w	note1

Note

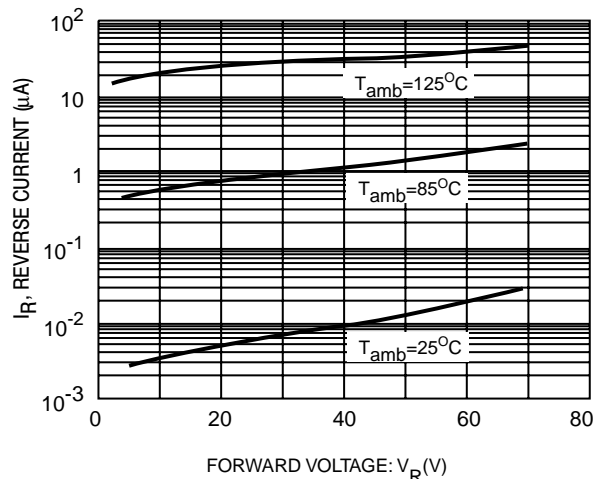
1. Refer to SOT23 or SOT143B standard mounting conditions.

## LBAS70LT1G Series , S-LBAS70LT1G Series

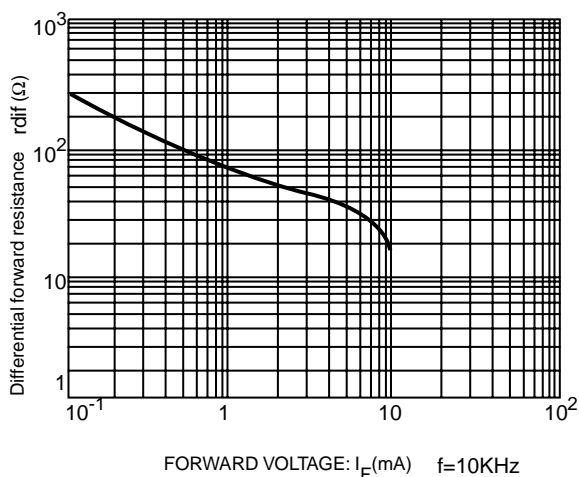
Electrical characteristic curves( $T_A = 25^\circ\text{C}$ )



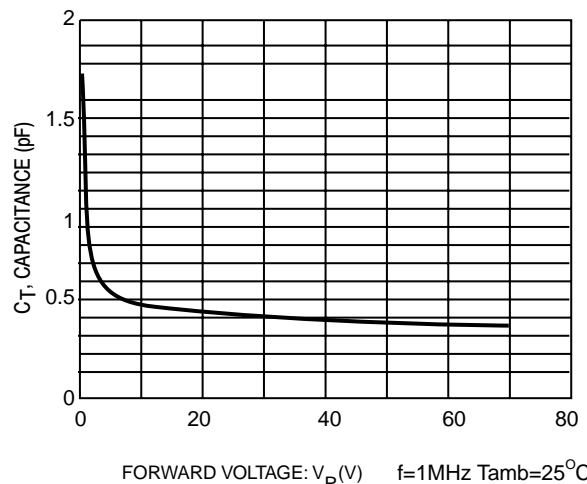
**Fig.1 Forward current as a function of forward voltage; typical values.**



**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.**



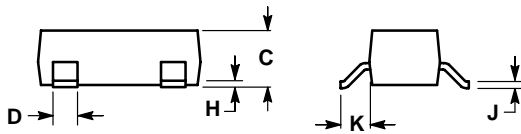
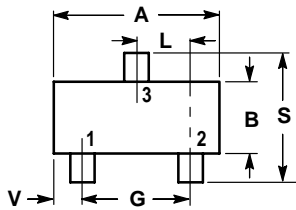
**Fig.4 Diode capacitance as a function of reverse voltage; typical values.**

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### SOT-23

NOTES:

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M,1982
2. CONTROLLING DIMENSION: INCH.



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

