

# 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

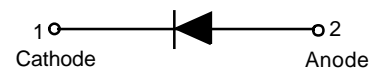
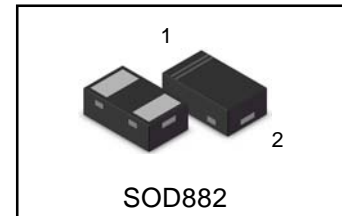
Planar Schottky barrier diodes with an integrated guard ring for stress protection. Single diodes and double diodes with different pinning are available.

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

## ORDERING INFORMATION

Device	Marking	Shipping
LBAS70BST1G S-LBAS70BST1G	R	5000/Tape&Reel
LBAS70BST3G S-LBAS70BST3G	R	8000/Tape&Reel
LBAS70BST5G S-LBAS70BST5G	R	10000/Tape&Reel

LBAS70BST5G  
S-LBAS70BST5G



## LBAS70BST5G , S-LBAS70BST5G

### 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	$^\circ\text{C}$	

### 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

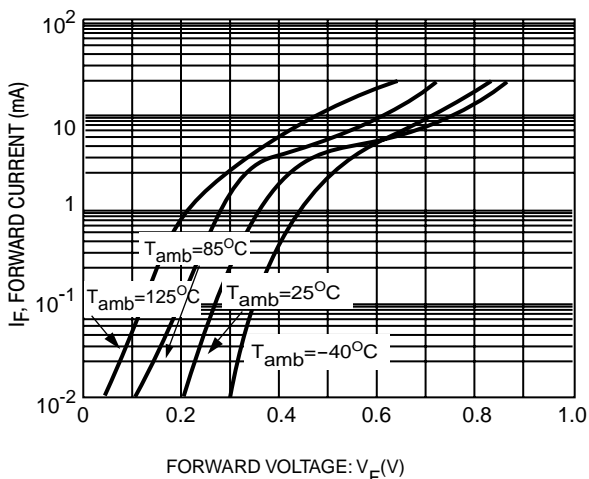
PARAMETER	SYMBOL	VALUE	UNIT	CONDITIONS
Thermal resistance from junction to ambient	$R_{th\ j-a}$	833	k/w	note1

Note

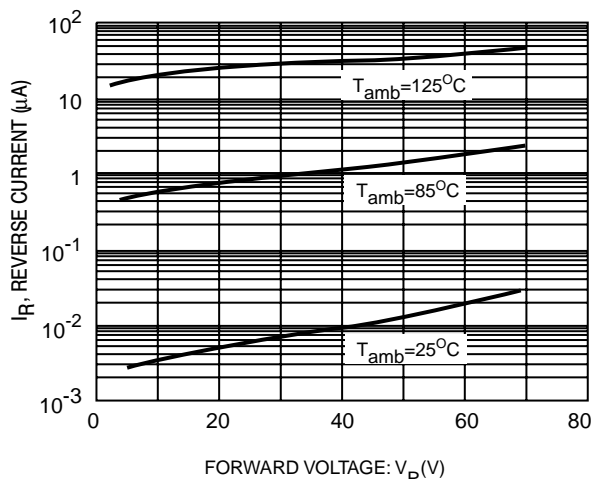
1. FR-4 Minimum Pad.

# LBAS70BST5G , S-LBAS70BST5G

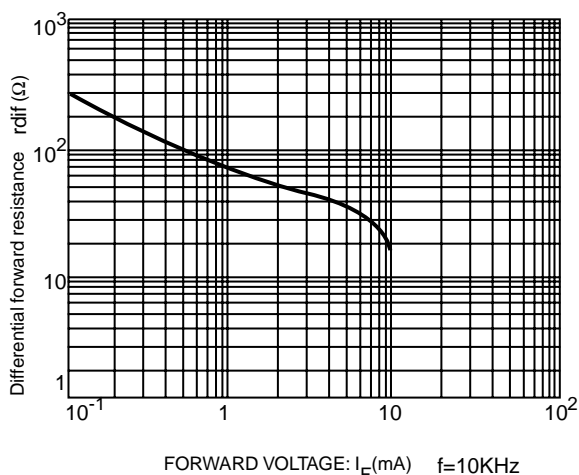
Electrical characteristic curves( $T_A = 25^\circ\text{C}$ )



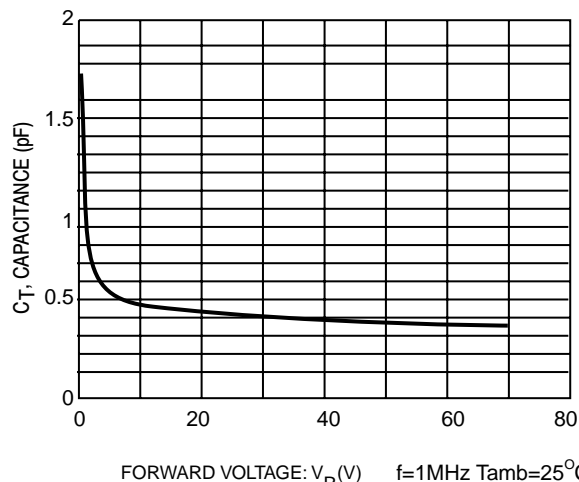
**Fig.1 Forward current as a function of forward voltage; typical values.**



**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.**

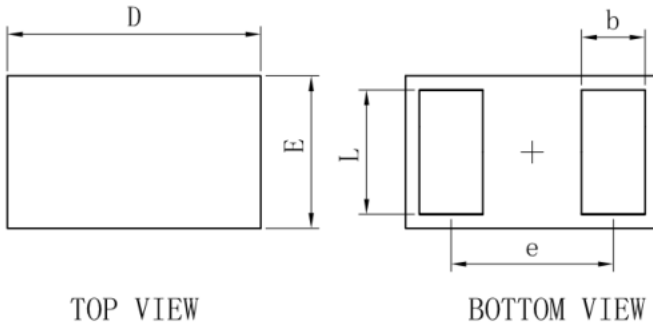


**Fig.4 Diode capacitance as a function of reverse voltage; typical values.**

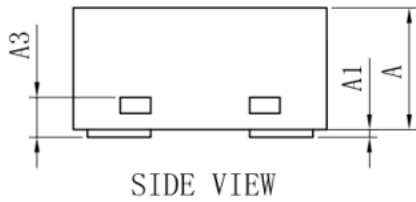
# LBAS70BST5G , S-LBAS70BST5G

## OUTLINE AND DIMENSIONS

### SOD882

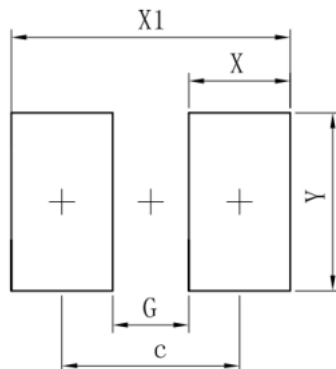


SOD882			
Dim	Min	Typ	Max
D	0.95	1.00	1.05
E	0.55	0.60	0.65
e	-	0.64	-
L	0.44	0.49	0.54
b	0.20	0.25	0.30
A	0.43	0.48	0.53
A1	0	-	0.05
A3	0.127REF.		
All Dimensions in mm			



## SOLDERING FOOTPRINT

### SOD882



Dimensions	(mm)
c	0.70
G	0.30
X	0.40
X1	1.10
Y	0.70