

# SCHOTTKY BARRIER DIODE

## FEATURES

- Low forward current
- Guard ring protected
- Low diode capacitance.

## APPLICATIONS

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

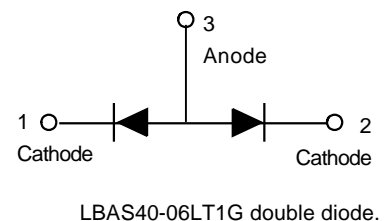
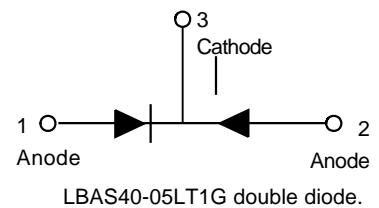
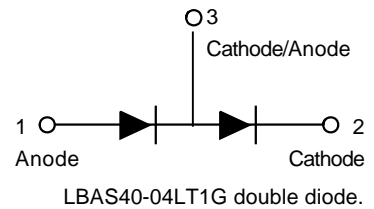
## DESCRIPTION

- Planar Schottky barrier diodes with an integrated guard ring for stress protection.
- We declare that the material of product compliance with RoHS requirements.
- S- Prefix for Automotive and Other Applications Requiring Unique Site and Control Change Requirements;AEC-Q101 Qualified and PPAP Capable.

## ORDERING INFORMATION

Device	Marking	Shipping
LBAS40LT1G	B1	3000 Tape & Reel
LBAS40LT3G	B1	10000 Tape & Reel
LBAS40-04LT1G	CB	3000 Tape & Reel
LBAS40-04LT3G	CB	10000 Tape & Reel
LBAS40-05LT1G	45	3000 Tape & Reel
LBAS40-05LT3G	45	10000 Tape & Reel
LBAS40-06LT1G	L2	3000 Tape & Reel
LBAS40-06LT3G	L2	10000 Tape & Reel

**LBAS40LT1G**  
Series  
**S-LBAS40LT1G**  
Series



## LBAS40LT1G Series, S-LBAS40LT1G Series

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

Parameter	Symbol	Min.	Max.	Unit	Conditions
Continuous reverse voltage	$V_R$	-	40	V	
Continuous forward current	$I_F$	-	120	mA	
Repetitive Peak forward surge current	$I_{FSM}$	-	120	mA	$t_p \leq 1\text{s}; \delta \leq 0.5$
Non-repetitive peak forward current	$I_{FSM}$	-	200	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)	$V_F$	400	mV	$I_F = 1\text{mA}$
		560	mv	$I_F = 10\text{mA}$
		1	v	$I_F = 40\text{mA}$
Reverse current(Fig.2 ;note1)	$I_R$	1	$\mu\text{A}$	$V_R = 30\text{V}$
		10	$\mu\text{A}$	$V_R = 40\text{V}$
Diode capacitance(Fig.4)	$C_d$	5	pF	$f = 1\text{MHz}; V_R = 0$

Note:

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

### THERMAL CHARACTERISTICS

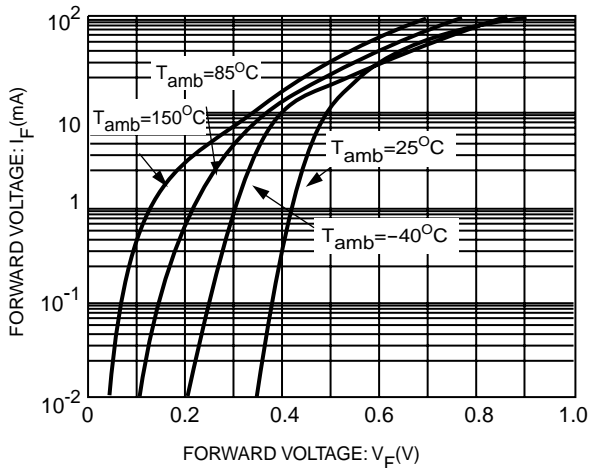
PARAMETER	SYMBOL	VALUE	UNIT	CONDITIONS
Thermal resistance from junction to ambient	$R_{th\ j-a}$	500	k/w	note2

Note

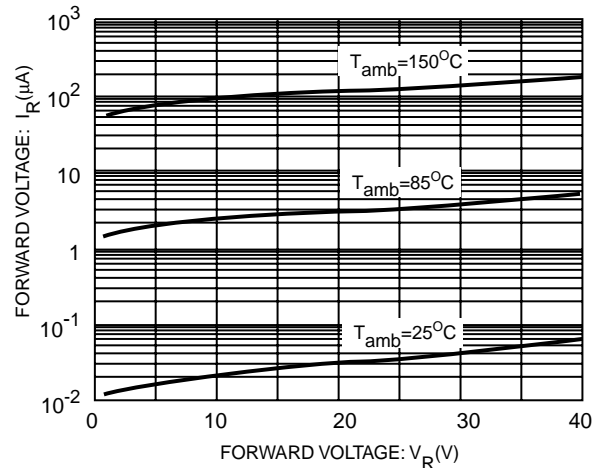
2. Refer to SOT23 or SOT143B standard mounting conditions.

## LBAS40LT1G Series, S-LBAS40LT1G Series

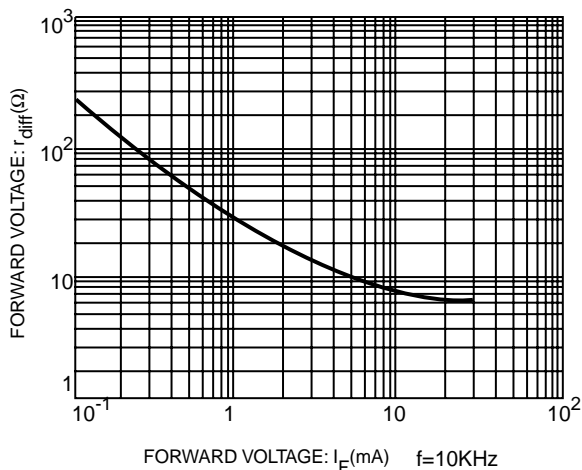
Electrical characteristic curves ( $T_A = 25^\circ\text{C}$ )



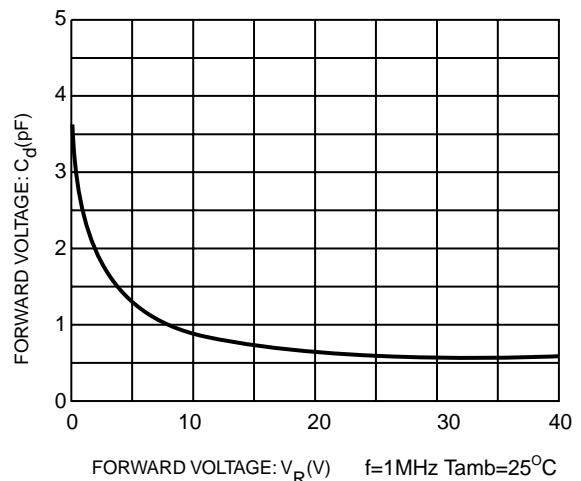
**Fig.1 Forward current as a function of forward voltage; typical values.**



**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.**

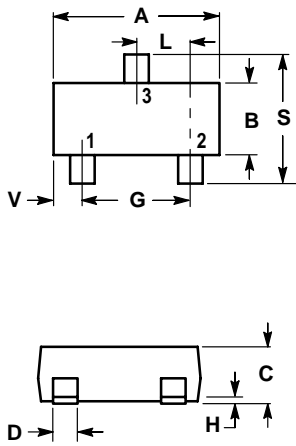


**Fig.4 Diode capacitance as a function of reverse voltage; typical values.**

# LBAS40LT1G Series, S-LBAS40LT1G Series

## SOT-23

Dimension Outline:



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

Soldering Footprint:

