

SCHOTTKY BARRIER DIODE

Features

- Low forward current
- 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.
- Blocking diodes.

DESCRIPTION

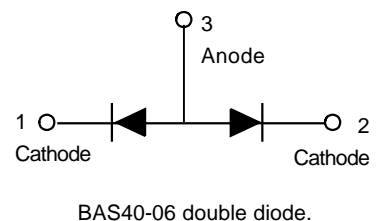
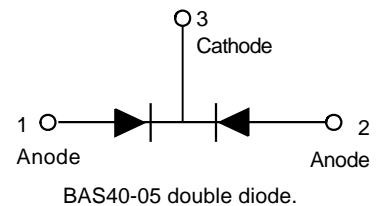
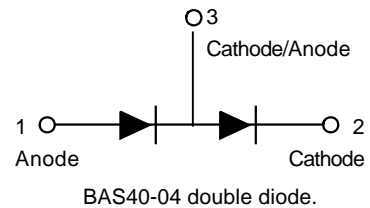
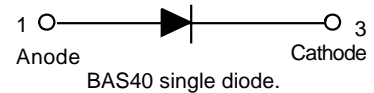
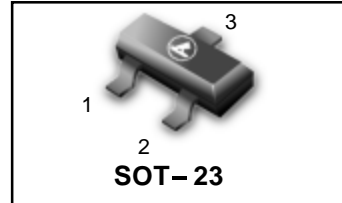
Planar Schottky barrier diodes with an integrated guard ring for stress protection.

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

ORDERING INFORMATION

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

LBAS40LT1G
Series
S-LBAS40LT1G
Series



LBAS40LT1G Series , S-LBAS40LT1G Series

MAXIMUM RATINGS (T_A = 25°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 ≤ 1s; δ ≤ 0.5
Non-repetitive peak forward current	I _{FSM}	-	200	mA	t _p < 10ms
Storage temperature	T _{stg}	-65	+150	°C	
Junction temperature	T _j	-	150	°C	
Operating ambient temperature	T _{amb}	-65	+150	°C	

DEVICE MARKING

LBAS40LT1G=B1 LBAS40-04LT1G=CB LBAS40-05LT1G=45 LBAS40-06LT1G=L2

ELECTRICAL CHARACTERISTICS(T_A = 25°C)

Parameter	Symbol	Max.	Unit	Conditions
Forward voltage(Fig.1)	V _F	400	mV	I _F =1mA
		560	mv	I _F =10mA
		1	v	I _F =40mA
Reverse current(Fig.2 :note1)	I _R	1	μA	V _R =30V
		10	μA	V _R =40V
Diode capacitance(Fig.4)	C _d	5	pF	f=1MHz; V _R =0

Note:

1. Pulse test;t_p=300μs;δ=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.

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

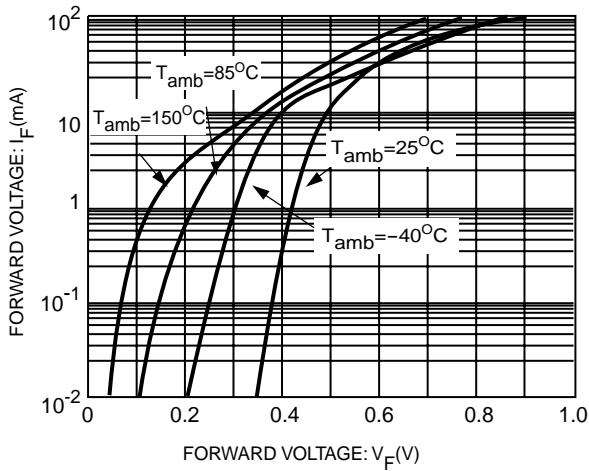


Fig.1 Forward current as a function of forward voltage; typical values.

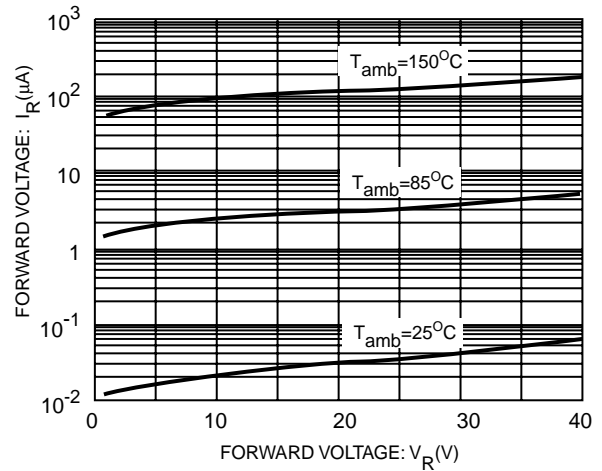


Fig.2 Reverse current as a function of reverse voltage; typical values.

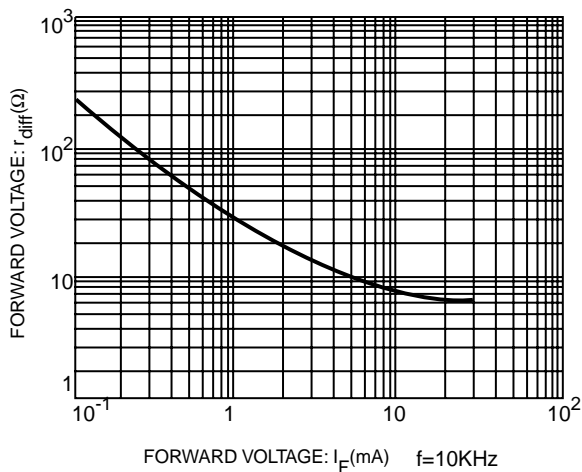


Fig.3 Differential forward resistance as a function of forward current; typical values.

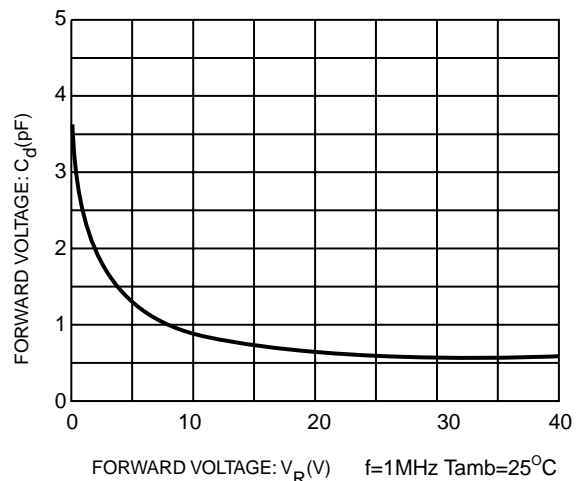
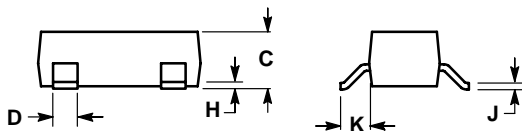
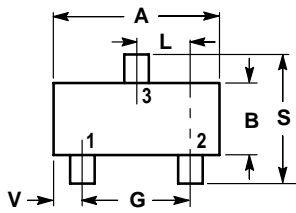


Fig.4 Diode capacitance as a function of reverse voltage; typical values.

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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

