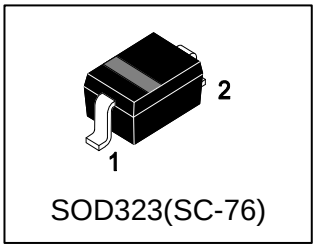
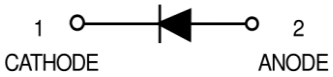
# LBAS316T1G
# S-LBAS316T1G

High-speed Diode




## 1. FEATURES

- We declare that the material of product compliance with RoHS requirements and Halogen Free.
- S- prefix for automotive and other applications requiring unique site and control change requirements; AEC-Q101 qualified and PPAP capable.
- Ultra small plastic SMD package
- High switching speed: max. 4 ns
- Continuous reverse voltage: max. 100 V
- Repetitive peak reverse voltage: max. 100 V
- Repetitive peak forward current: max. 500 mA.

## 2. APPLICATIONS

- High-speed switching diode fabricated in planar technology.

## 3. DEVICE MARKING AND ORDERING INFORMATION

| Device | Marking | Shipping |
|---|---|---|
| LBAS316T1G | Z9 | 3000/Tape&Reel |
| LBAS316T3G | Z9 | 10000/Tape&Reel |

## 4. MAXIMUM RATINGS(In accordance with the Absolute Maximum Rating System IEC134)

| Parameter | Symbol | Limit | Unit |
|---|---|---|---|
| repetitive peak reverse voltage | VRRM | 100 | V |
| continuous reverse voltage | VR | 100 | V |
| RMS reverse voltage | VR(RMS) | 70 | V |
| continuous forward current | IF | 250 | mA |
| repetitive peak forward current | IFRM | 500 | mA |
| non-repetitive peak forward current(square wave; Tj=25°C prior to surge)<br>(t =1μs)<br>(t =1ms )<br>(t =1s) | IFSM | <br>5<br>1<br>0.5 | <br>A<br>A<br>A |
| total power dissipation | Ptot | 200 | mW |
| storage temperature | Tstg | -55~+150 | ℃ |
| junction temperature | Tj | 150 | ℃ |

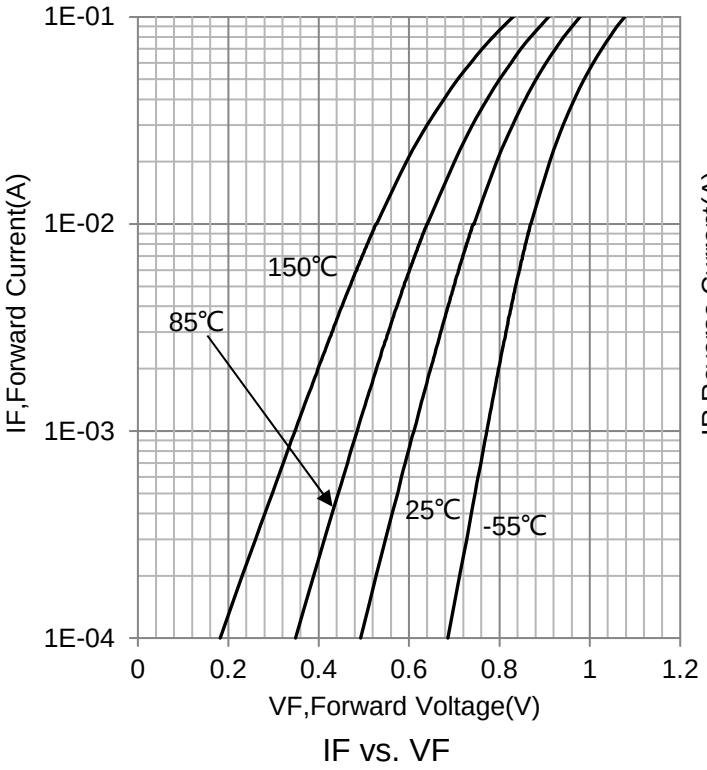
## 5. THERMAL CHARACTERISTICS

| Parameter | Symbol | Max | Unit |
|---|---|---|---|
| Thermal resistance junction to ambient air | Rθja | 625 | ℃/W |

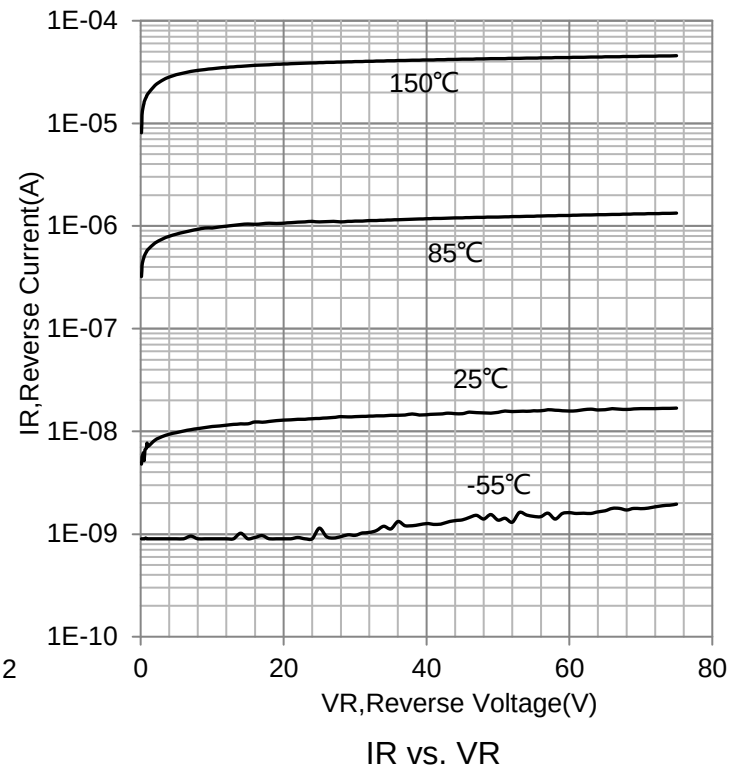
## 6. ELECTRICAL CHARACTERISTICS (Tj =25°C unless otherwise specified.)

| Parameter | Symbol | MIN | MAX | Unit |
|---|---|---|---|---|
| Forward Voltage | | | | |
| (IF= 1mA) | VF | - | 715 | mV |
| (IF= 10mA) | | - | 855 | mV |
| (IF= 50mA) | | - | 1 | V |
| (IF= 150mA) | | - | 1.25 | V |
| Reverse Current | | | | |
| (VR = 25 V) | IR | - | 30 | nA |
| (VR = 75 V) | | - | 1 | μA |
| (VR = 80 V) | | - | 0.5 | μA |
| (VR = 25 V,Tj = 150°C) | | - | 30 | μA |
| (VR = 75 V,Tj = 150°C) | | - | 50 | μA |
| Diode Capacitance (f=1MHz, VR = 0) | Cd | - | 2 | pF |
| Reverse Recovery Time (When switched from IF=10mA to IR = 10mA;RL=100Ohm; measured at IR = 1mA) | trr | - | 4 | nS |
| Forward Recovery Voltage (when switched from IF=10mA; tr=20 ns) | Vfr | - | 1.75 | V |

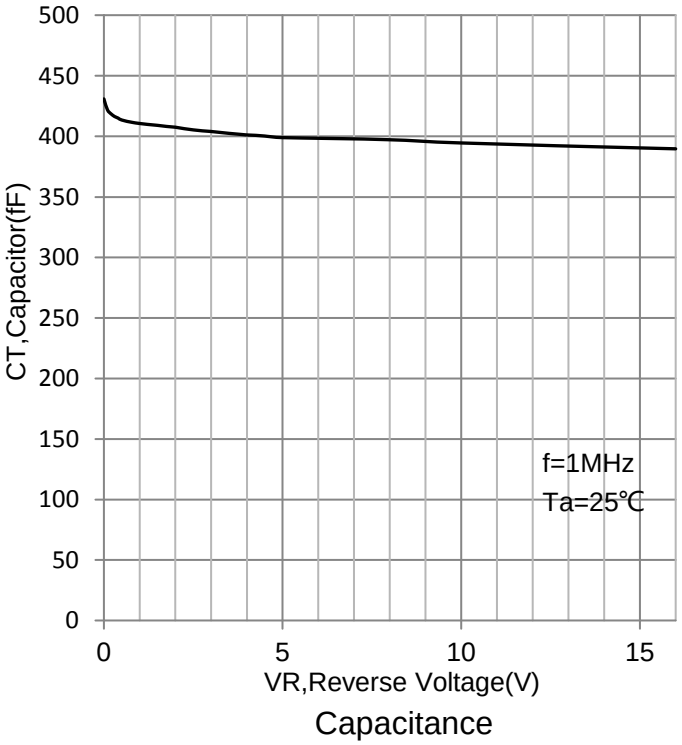
## 7.ELECTRICAL CHARACTERISTICS CURVES




IF vs. VF

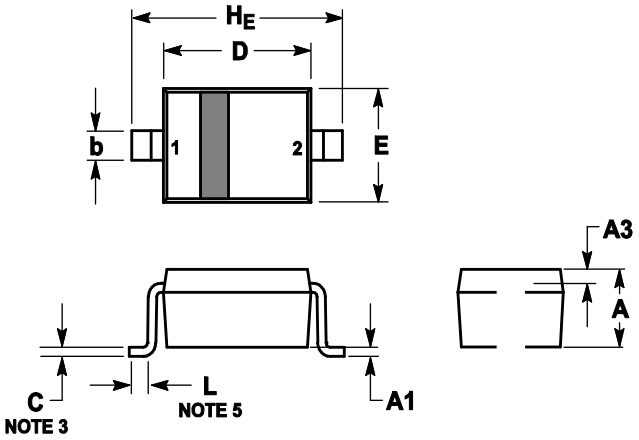



IR vs. VR




Capacitance

## 8.OUTLINE AND DIMENSIONS

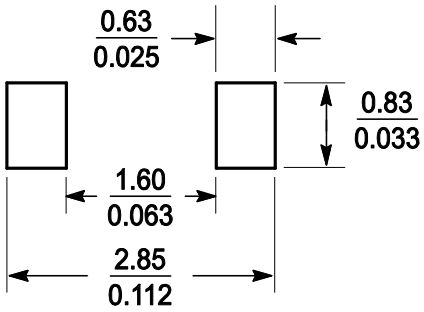



Notes:

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: MILLIMETERS.
3. MAXIMUM LEAD THICKNESS INCLUDES LEAD FINISH. MINIMUM LEAD THICKNESS IS THE MINIMUM THICKNESS OF BASE MATERIAL.
4. DIMENSIONS D AND E DO NOT INCLUDE MOLD FLASH, PROTRUSIONS OR GATE BURRS.

| | MILLIMETERS | | | INCHES | | |
|---|---|---|---|---|---|---|
| DIM | MIN | NOM | MAX | MIN | NOM | MAX |
| A | 0.8 | 0.9 | 1 | 0.031 | 0.035 | 0.04 |
| A1 | 0 | 0.05 | 0.1 | 0 | 0.002 | 0.004 |
| A3 | 0.15REF | | | 0.006REF | | |
| b | 0.25 | 0.32 | 0.4 | 0.01 | 0.012 | 0.016 |
| C | 0.089 | 0.12 | 0.177 | 0.003 | 0.005 | 0.007 |
| D | 1.6 | 1.7 | 1.8 | 0.062 | 0.066 | 0.07 |
| E | 1.15 | 1.25 | 1.35 | 0.045 | 0.049 | 0.053 |
| L | 0.08 | | | 0.003 | | |
| $H_E$ | 2.3 | 2.5 | 2.7 | 0.09 | 0.098 | 0.105 |

## 9.SOLDERING FOOTPRINT



## DISCLAIMER

- Curve guarantee in the specification. The curve of test items with electric parameter is used as quality guarantee. The curve of test items without electric parameter is used as reference only.

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