

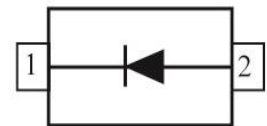
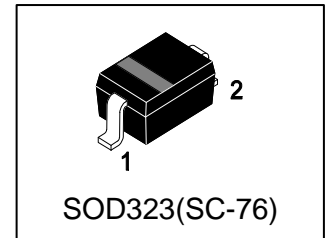
# LBAT54HT1G

## S-LBAT54HT1G

Schottky Barrier 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.
- Extremely Fast Switching Speed
- Low Forward Voltage — 0.35 Volts (Typ) @  $I_F = 10 \text{ mA}$



### 2. DEVICE MARKING AND ORDERING INFORMATION

| Device     | Marking | Shipping        |
|------------|---------|-----------------|
| LBAT54HT1G | JV      | 3000/Tape&Reel  |
| LBAT54HT3G | JV      | 10000/Tape&Reel |

### 3. MAXIMUM RATINGS( $T_a = 25^\circ\text{C}$ )

| Parameter       | Symbol | Limits | Unit |
|-----------------|--------|--------|------|
| Reverse Voltage | VR     | 30     | V    |
| Forward Current | IF     | 200    | mA   |

### 4. THERMAL CHARACTERISTICS

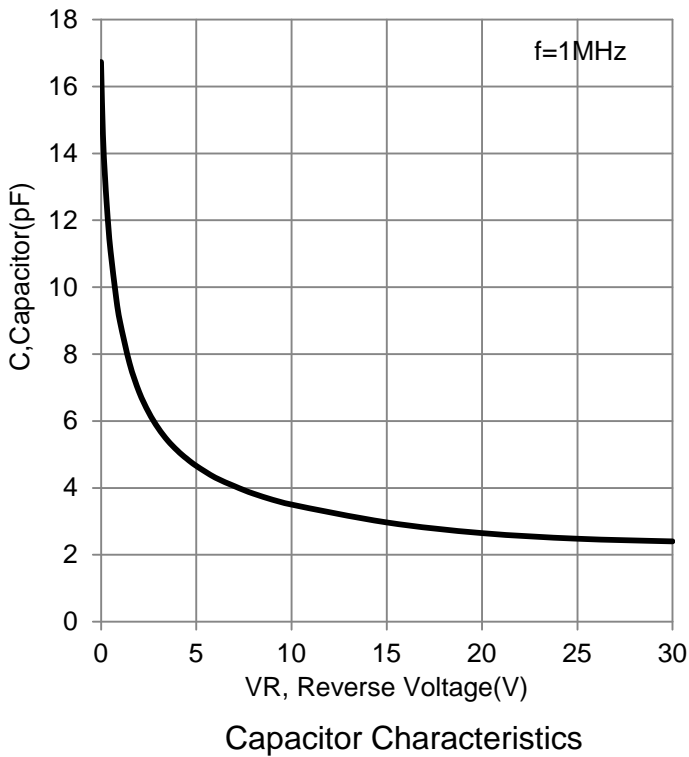
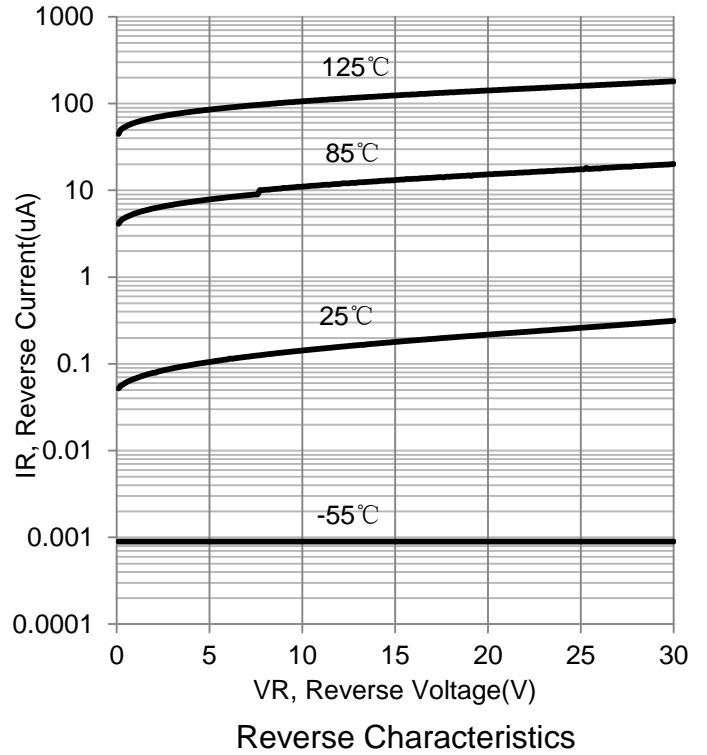
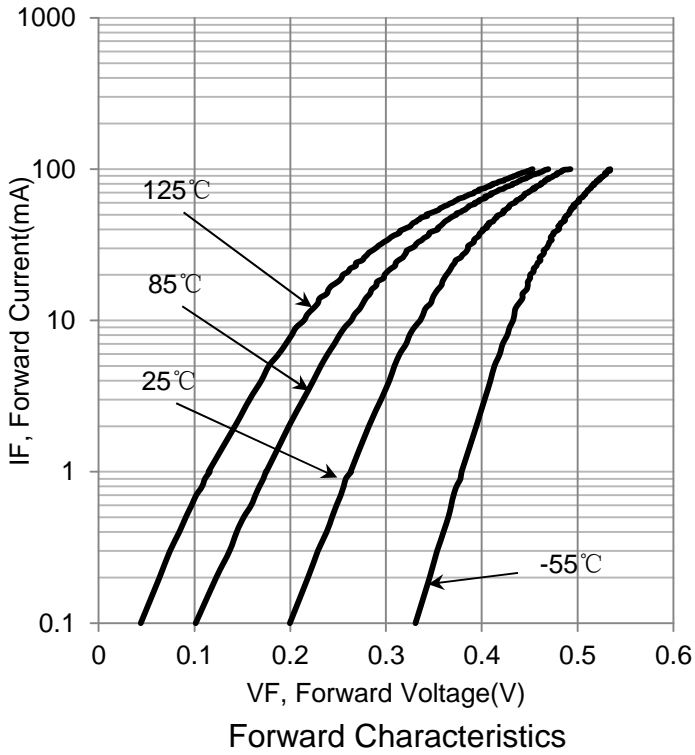
| Parameter  | Symbol                         | Limits      | Unit                       |
|--|--------------------------------|-------------|----------------------------|
| Total Device Dissipation,<br>FR-5 Board (Note 1) @ $T_A = 25^\circ\text{C}$<br>Derate above $25^\circ\text{C}$ | PD                             | 200<br>1.57 | mW<br>mW/ $^\circ\text{C}$ |
| Thermal Resistance   | R $\theta$ JA<br>R $\theta$ JC | 635<br>350  | $^\circ\text{C}/\text{W}$  |
| Junction and Storage temperature   | TJ, Tstg                       | -55~+125    | $^\circ\text{C}$           |

1. FR-5 = 1.0×0.75×0.062 in.

**5. ELECTRICAL CHARACTERISTICS (Ta= 25°C)**

| Characteristic   | Symbol | Min. | Typ. | Max. | Unit |
|--|--------|------|------|------|------|
| Reverse Breakdown Voltage<br>(IR = 10μA)                     | VBR    | 30   | -    | -    | V    |
| Reverse Voltage Leakage Current<br>(VR = 25V)                | IR     | -    | 0.5  | 2    | μA   |
| Diode Capacitance<br>(VR = 1.0V , f = 1.0 MHz)               | CT     | -    | -    | 10   | pF   |
| Forward Voltage<br>(IF = 0.1 mA)                             | VF     | -    | 0.22 | 0.24 | V    |
| (IF = 1 mA)  |        | -    | 0.29 | 0.32 |      |
| (IF = 10 mA)   |        | -    | 0.35 | 0.4  |      |
| (IF = 30 mA)   |        | -    | 0.41 | 0.5  |      |
| (IF = 100 mA)  |        | -    | 0.52 | 1    |      |
| Reverse Recovery Time<br>(IF = IR = 10 mA, IR(REC) = 1.0 mA) | trr    | -    | -    | 5    | ns   |
| Repetitive Peak Forward Current                              | IFRM   | -    | -    | 300  | mA   |
| Non-Repetitive Peak Forward Current<br>(t < 1.0 s)           | IFSM   | -    | -    | 600  | mA   |

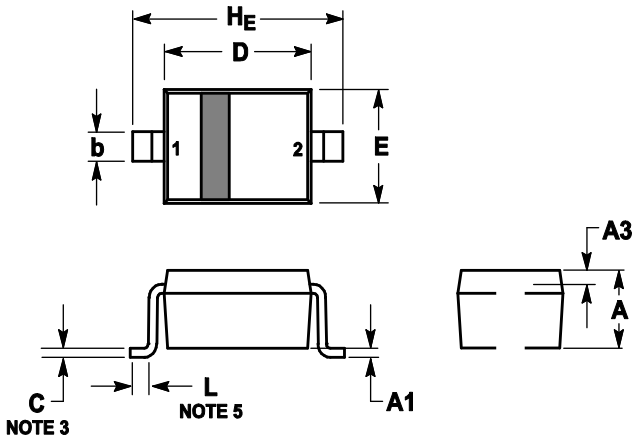
**6. ELECTRICAL CHARACTERISTICS CURVES**



### 7. OUTLINE AND DIMENSIONS

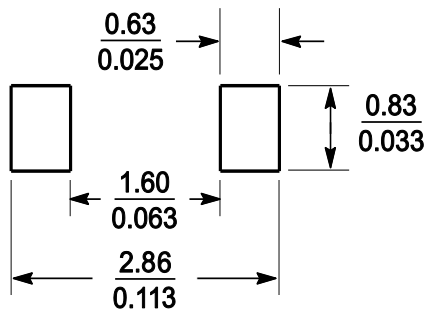
Notes:

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.



| DIM | MILLIMETERS |      |       | INCHES   |       |       |
|-----|-------------|------|-------|----------|-------|-------|
|     | 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    |       |       |
| HE  | 2.3         | 2.5  | 2.7   | 0.09     | 0.098 | 0.105 |

### 8. 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.
- Before you use our Products for new Project, you are requested to carefully read this document and fully understand its contents. LRC shall not be in any way responsible or liable for failure, malfunction or accident arising from the use of any LRC's Products against warning, caution or note contained in this document.
- All information contained in this document is current as of the issuing date and subject to change without any prior notice. Before purchasing or using LRC's Products, please confirm the latest information with a LRC sales representative.