

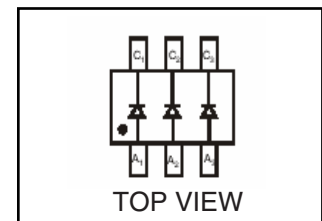
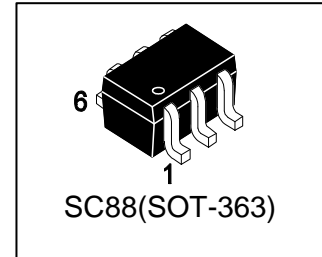
# LBAT54TW1T1G

## S-LBAT54TW1T1G

### SURFACE MOUNT SCHOTTKY BARRIER DIODE ARRAY

#### 1. FEATURES

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



#### 2. DEVICE MARKING AND ORDERING INFORMATION

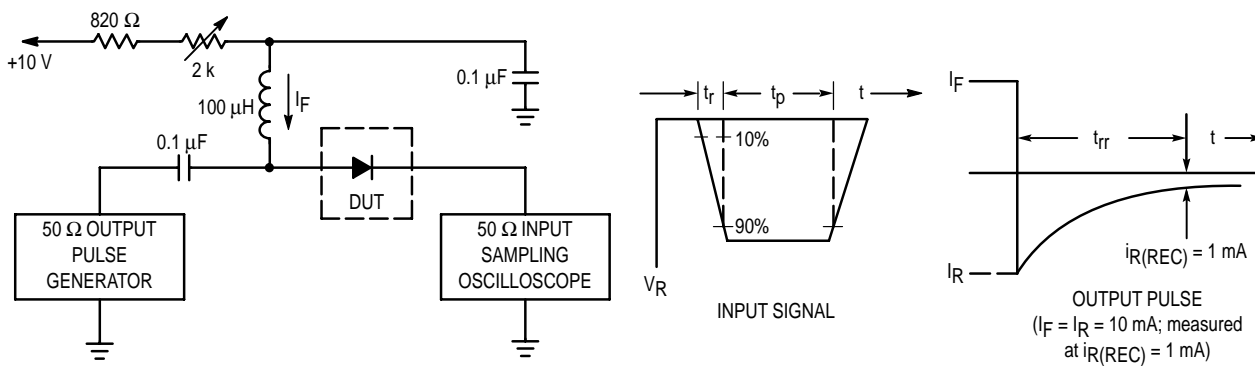
| Device       | Marking | Shipping        |
|--------------|---------|-----------------|
| LBAT54TW1T1G | KLA     | 3000/Tape&Reel  |
| LBAT54TW1T3G | KLA     | 10000/Tape&Reel |

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

| Parameter   | Symbol    | Limits   | Unit                 |
|---|-----------|----------|----------------------|
| Reverse voltage   | VR        | 30       | V                    |
| Forward Power Dissipation<br>@ $T_A = 25^\circ\text{C}$ | PD        | 225      | mW                   |
| Derate above $25^\circ\text{C}$                         |           | 2        | mW/ $^\circ\text{C}$ |
| Forward Current (DC)                                    | $I_F$     | 200      | mA                   |
| Junction temperature                                    | $T_j$     | 125      | $^\circ\text{C}$     |
| Storage Temperature Range                               | $T_{stg}$ | -55~+150 | $^\circ\text{C}$     |

#### 4. ELECTRICAL CHARACTERISTICS (Ta= 25°C)

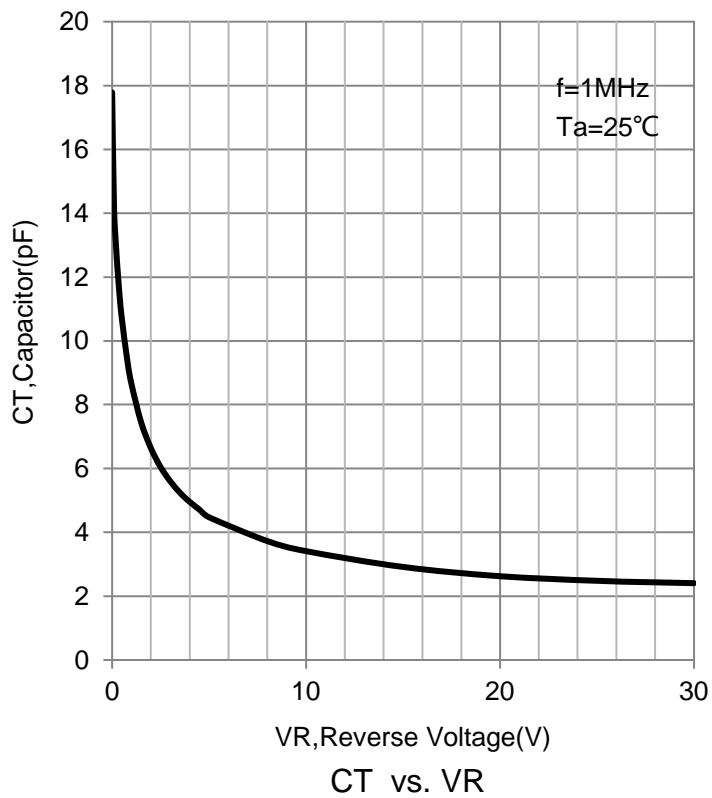
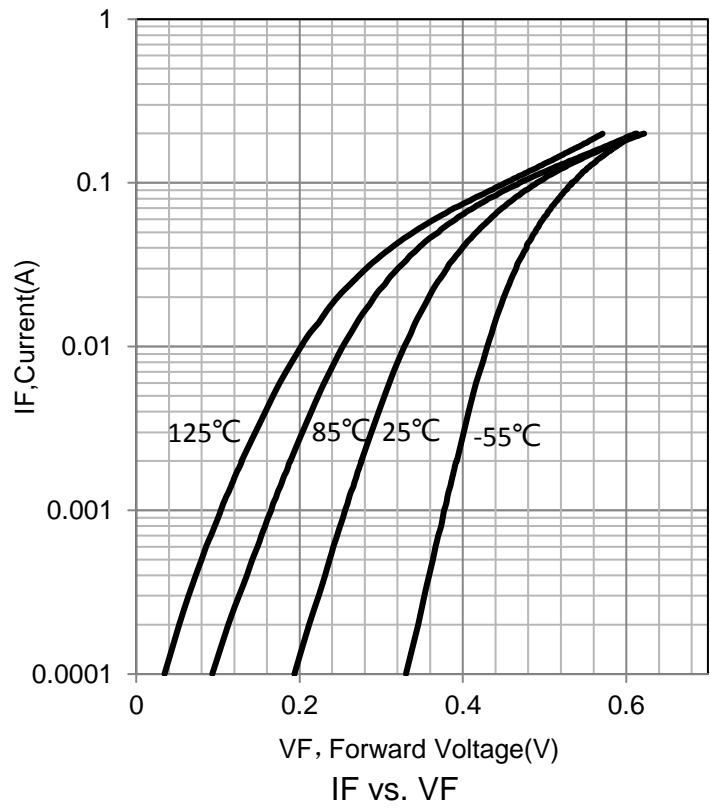
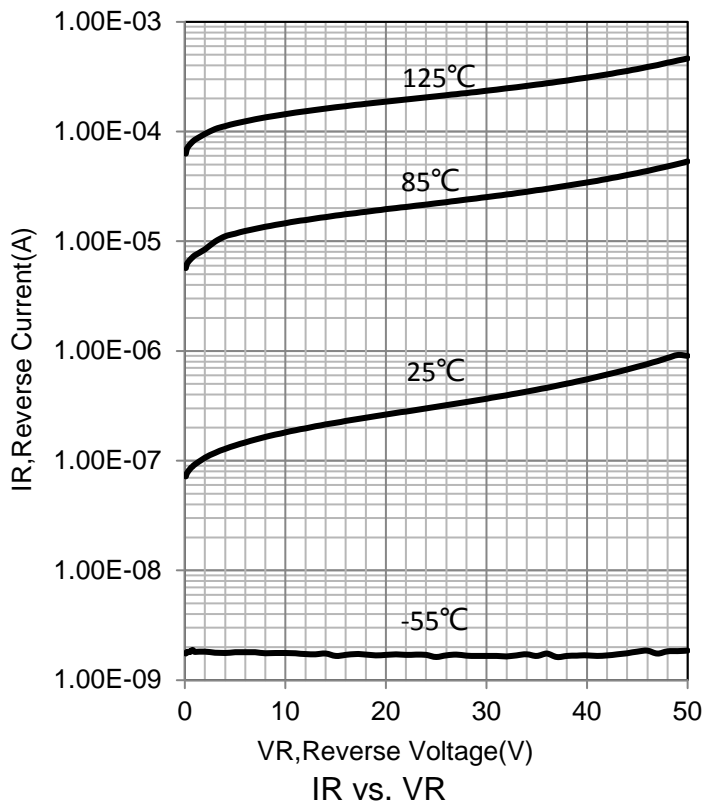
| Characteristic   | Symbol | Min | Typ                                  | Max                             | Unit |
|--|--------|-----|--------------------------------------|---------------------------------|------|
| Reverse Breakdown Voltage (IR = 10 μA)   | V(BR)R | 30  |                                      |                                 | V    |
| Total Capacitance (VR = 1.0 V, f = 1.0 MHz)  | CT     |     |                                      | 10                              | pF   |
| Reverse Leakage (VR = 25 V)  | IR     |     | 0.5                                  | 2                               | μA   |
| Forward Voltage<br>(IF = 0.1 mA)<br>(IF = 1.0 mA)<br>(IF = 10 mA)<br>(IF = 30 mA)<br>(IF = 100 mA) | VF     |     | 0.22<br>0.29<br>0.35<br>0.41<br>0.52 | 0.24<br>0.32<br>0.4<br>0.5<br>1 | V    |
| Reverse Recovery Time<br>(IF = IR = 10 mA, IR(REC) = 1.0 mA) Figure 1                              | trr    |     |                                      | 5                               | ns   |
| Forward Current (DC)   | IF     |     |                                      | 200                             | mA   |
| Repetitive Peak Forward Current  | IFRM   |     |                                      | 300                             |      |
| Non-Repetitive Peak Forward Current (t< 1.0 s)   | IFSM   |     |                                      | 600                             |      |



- Notes: 1. A 2.0 kΩ variable resistor adjusted for a Forward Current (IF) of 10 mA.  
 2. Input pulse is adjusted so IR(peak) is equal to 10 mA.  
 3. tp >> trr

RECOVERY TIME EQUIVALENT TEST CIRCUIT

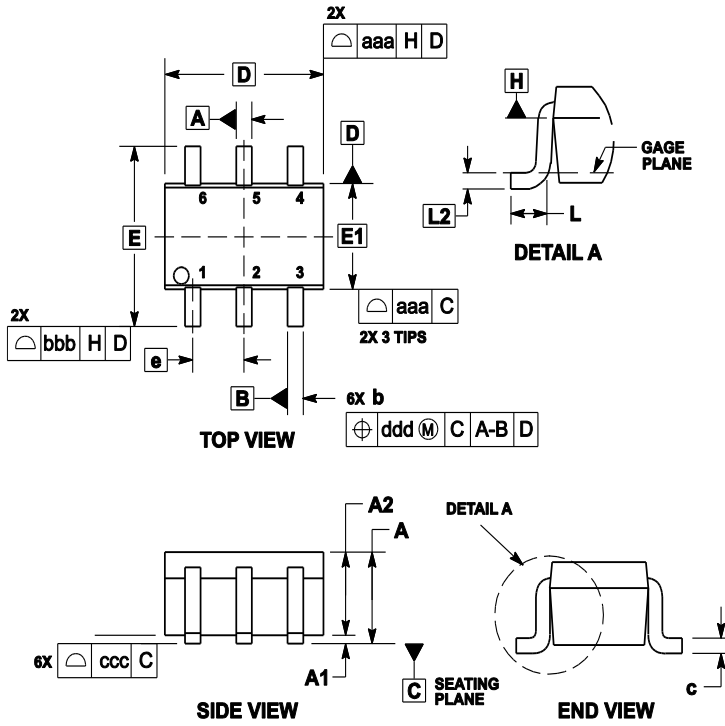
**5. ELECTRICAL CHARACTERISTICS CURVES**



### 6. 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 E1 DO NOT INCLUDE MOLD FLASH, PROTRUSIONS OR GATE BURRS.



| DIM | MILLIMETERS |      |      | INCHES    |       |       |
|-----|-------------|------|------|-----------|-------|-------|
|     | MIN         | NOM  | MAX  | MIN       | NOM   | MAX   |
| A   | ---         | ---  | 1.10 | ---       | ---   | 0.043 |
| A1  | 0.00        | ---  | 0.10 | 0         | ---   | 0.004 |
| A2  | 0.70        | 0.90 | 1.00 | 0.027     | 0.035 | 0.039 |
| b   | 0.15        | 0.20 | 0.25 | 0.006     | 0.008 | 0.01  |
| C   | 0.08        | 0.15 | 0.22 | 0.003     | 0.006 | 0.009 |
| D   | 1.80        | 2.00 | 2.20 | 0.07      | 0.078 | 0.086 |
| E   | 2.00        | 2.10 | 2.20 | 0.078     | 0.082 | 0.086 |
| E1  | 1.15        | 1.25 | 1.35 | 0.045     | 0.049 | 0.053 |
| e   | 0.65 BSC    |      |      | 0.026 BSC |       |       |
| L   | 0.26        | 0.36 | 0.46 | 0.010     | 0.014 | 0.018 |
| L2  | 0.15 BSC    |      |      | 0.006 BSC |       |       |
| aaa | 0.15        |      |      | 0.01      |       |       |
| bbb | 0.30        |      |      | 0.01      |       |       |
| ccc | 0.10        |      |      | 0.00      |       |       |
| ddd | 0.10        |      |      | 0.00      |       |       |

### 7. SOLDERING FOOTPRINT

