

# Schottky Barrier Diodes

These Schottky barrier diodes are designed for high speed switching applications, circuit protection, and voltage clamping. Extremely low forward voltage reduces conduction loss. Miniature surface mount package is excellent for hand held and portable applications where space is limited.

- Extremely Fast Switching Speed
- Low Forward Voltage — 0.35 Volts (Typ) @  $I_F = 10$  mAdc
- 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.

## DEVICE MARKING AND ORDERING INFORMATION

Device	Marking	Shipping
LBAT54WT1G S-LBAT54WT1G	B4	3000/Tape&Reel
LBAT54WT3G S-LBAT54WT3G	B4	10000/Tape&Reel

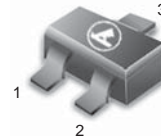
## MAXIMUM RATINGS ( $T_J = 125^\circ\text{C}$ unless otherwise noted)

Rating	Symbol	Max	Unit
Reverse Voltage	$V_R$	30	Volts
Forward Power Dissipation @ $T_A = 25^\circ\text{C}$	$P_F$	200	mW
Derate above $25^\circ\text{C}$		1.6	mW/ $^\circ\text{C}$
Forward Current(DC)	$I_F$	200Max	mA
Junction Temperature	$T_J$	125Max	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	-55 to +150	$^\circ\text{C}$
Thermal Resistance Junction-to-Ambient	$R_{\theta JA}$	625	$^\circ\text{C/W}$

## ELECTRICAL CHARACTERISTICS ( $T_A = 25^\circ\text{C}$ unless otherwise noted)

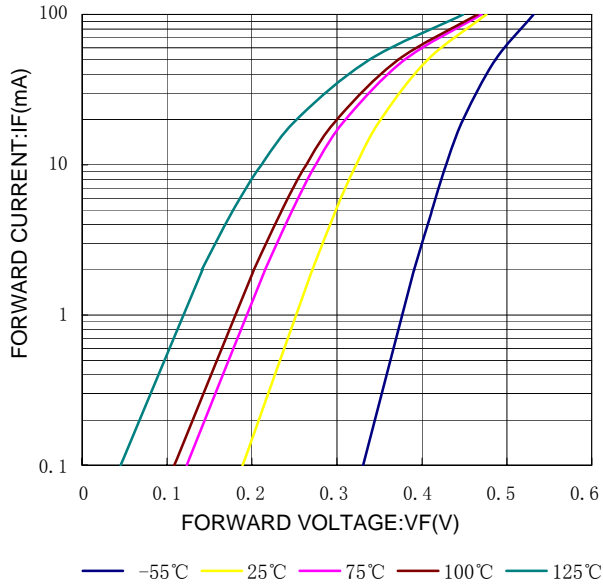
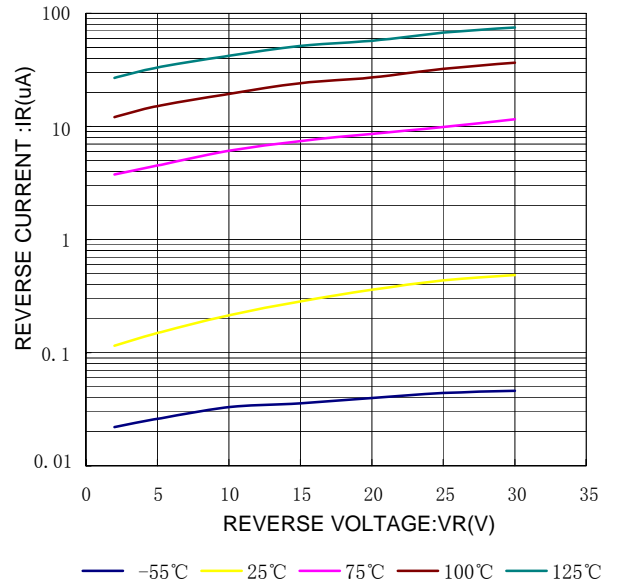
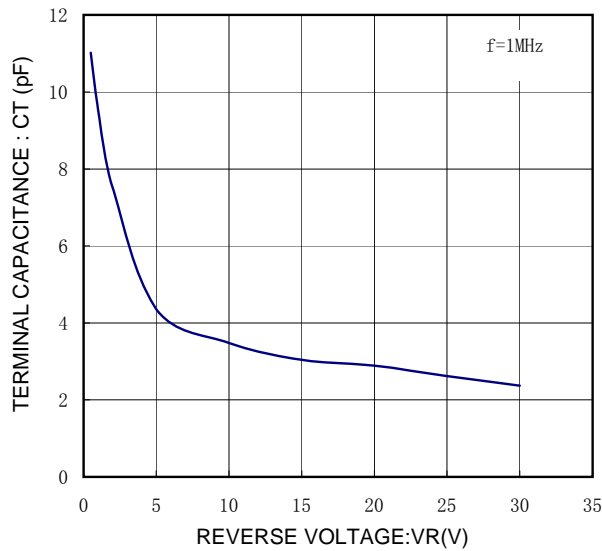
Characteristic	Symbol	Min	Typ	Max	Unit
Reverse Breakdown Voltage ( $I_R = 10 \mu\text{A}$ )	$V_{(BR)R}$	30	—	—	Volts
Total Capacitance ( $V_R = 1.0 \text{V}$ , $f = 1.0 \text{MHz}$ )	$C_T$	—	—	10	pF
Reverse Leakage ( $V_R = 25 \text{V}$ )	$I_R$	—	0.5	2.0	$\mu\text{Adc}$
Forward Voltage ( $I_F = 0.1 \text{mAdc}$ )	$V_F$	—	0.22	0.24	Vdc
Forward Voltage ( $I_F = 30 \text{mAdc}$ )	$V_F$	—	0.41	0.5	Vdc
Forward Voltage ( $I_F = 100 \text{mAdc}$ )	$V_F$	—	0.52	1.0	Vdc
Reverse Recovery Time ( $I_F = I_R = 10 \text{mAdc}$ , $I_{R(REC)} = 1.0 \text{mAdc}$ , Figure 1)	$t_{rr}$	—	—	5.0	ns
Forward Voltage ( $I_F = 1.0 \text{mAdc}$ )	$V_F$	—	0.29	0.32	Vdc
Forward Voltage ( $I_F = 10 \text{mAdc}$ )	$V_F$	—	0.35	0.40	Vdc
Forward Current (DC)	$I_F$	—	—	200	mAdc
Repetitive Peak Forward Current	$I_{FRM}$	—	—	300	mAdc
Non-Repetitive Peak Forward Current ( $t < 1.0 \text{s}$ )	$I_{FSM}$	—	—	600	mAdc

**LBAT54WT1G**  
**S-LBAT54WT1G**



SOT-323 (SC-70)

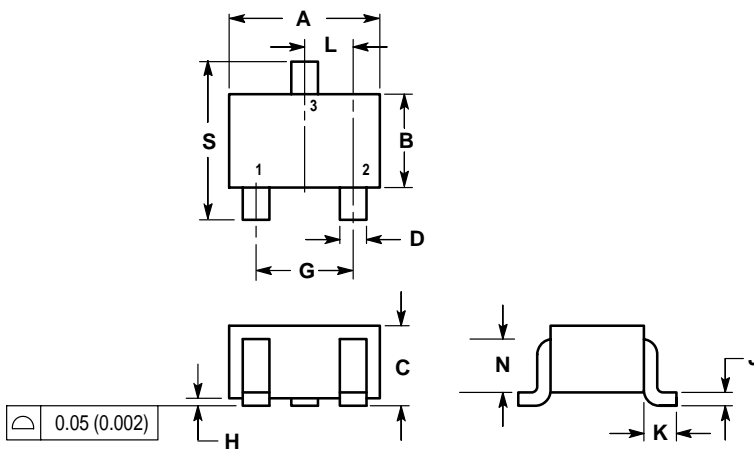


**LBAT54WT1G,S-LBAT54WT1G**
**ELECTRICAL CHARACTERISTIC CURVES**  
**(Ta = 25°C)**

**Fig.1 FORWARD CHARACTERISTICS**

**Fig.2 REVERSE CHARACTERISTICS**

**Fig.3 VR-CT CHARACTERISTICS**

SC-70 / SOT-323

NOTES:

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: INCH.



DIM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.071	0.087	1.80	2.20
B	0.045	0.053	1.15	1.35
C	0.032	0.040	0.80	1.00
D	0.012	0.016	0.30	0.40
G	0.047	0.055	1.20	1.40
H	0.000	0.004	0.00	0.10
J	0.004	0.010	0.10	0.25
K	0.017 REF		0.425 REF	
L	0.026 BSC		0.650 BSC	
N	0.028 REF		0.700 REF	
S	0.079	0.095	2.00	2.40

