

# LMBTA44LT1G

NPN EPITAXIAL PLANAR TRANSISTOR

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

## Description

The LMBTA44LT1G is designed for application that requires high voltage.

## Features

- High Breakdown Voltage:  $V_{CE0}=400(\text{Min.})$  at  $I_C=1\text{mA}$
- Complementary to LMBTA94LT1G

## DEVICE MARKING

LMBTA44LT1G = 3D

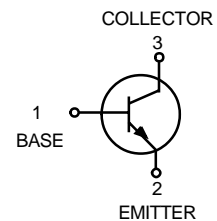
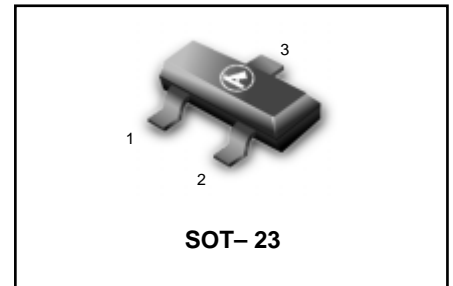
## Absolute Maximum Ratings

- Maximum Temperatures  
 Storage Temperature ..... -55 ~ +150 °C  
 Junction Temperature ..... +150 °C Maximum
- Maximum Power Dissipation  
 Total Power Dissipation ( $T_a=25^\circ\text{C}$ ) ..... 350 mW
- Maximum Voltages and Currents ( $T_a=25^\circ\text{C}$ )  
 VCBO Collector to Base Voltage ..... 400 V  
 VCEO Collector to Emitter Voltage ..... 400 V  
 VEBO Emitter to Base Voltage ..... 5 V  
 IC Collector Current ..... 200 mA

## ELECTRICAL CHARACTERISTICS ( $T_{amb}=25^\circ\text{C}$ unless otherwise specified)

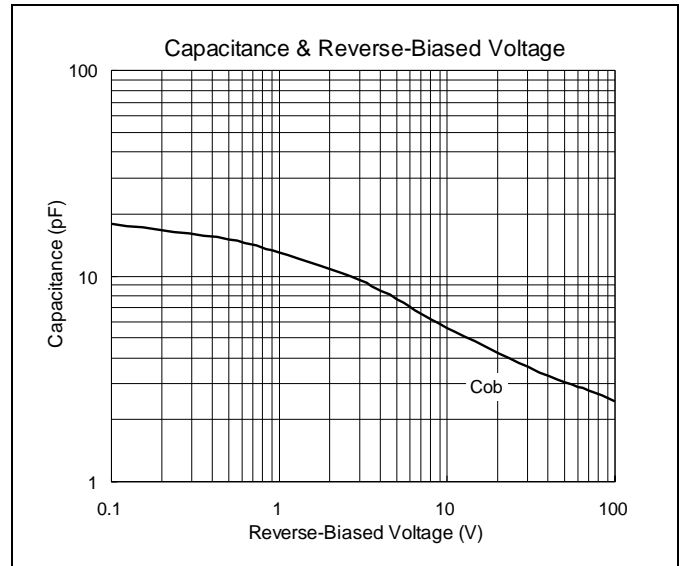
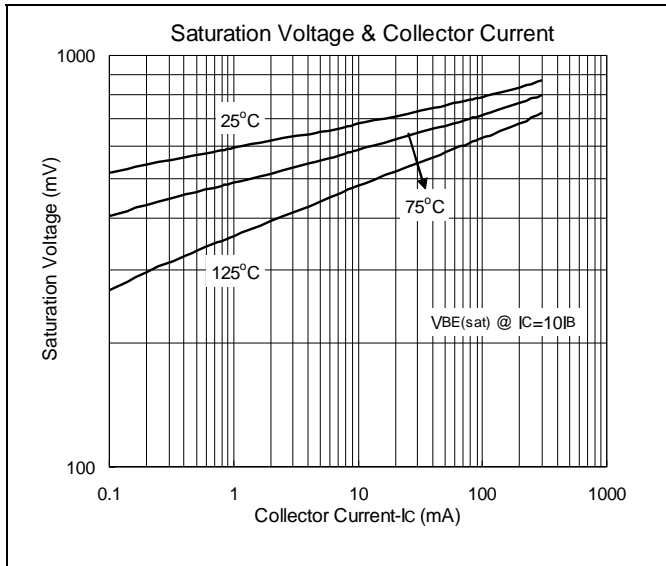
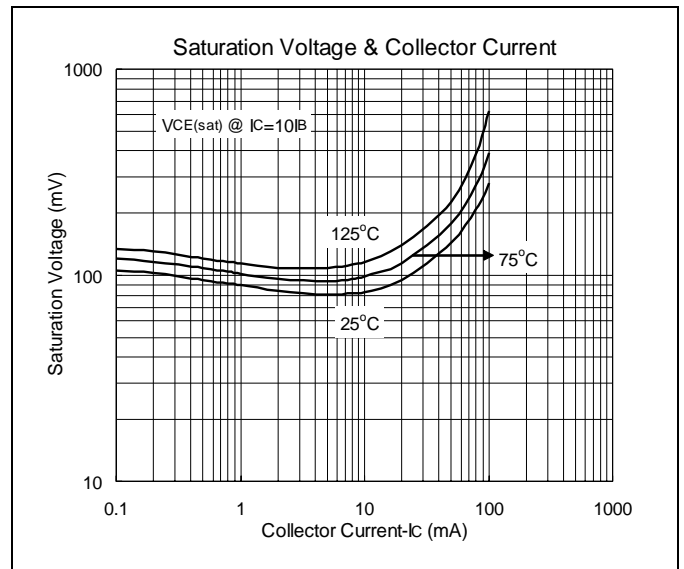
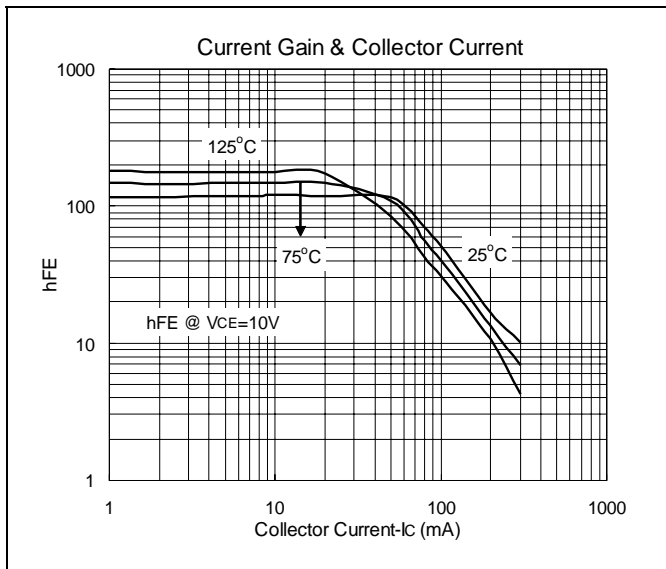
Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=100\mu\text{A}, I_E=0$	400			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=1\text{mA}, I_B=0$	400			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=100\mu\text{A}, I_C=0$	5			V
Collector cut-off current	$I_{CBO}$	$V_{CB}=400\text{V}, I_E=0$			0.1	$\mu\text{A}$
Collector cut-off current	$I_{CEO}$	$V_{CE}=350\text{V}$			5	$\mu\text{A}$
Emitter cut-off current	$I_{EBO}$	$V_{EB}=4\text{V}, I_C=0$			0.1	$\mu\text{A}$
DC current gain	$H_{FE(1)}$	$V_{CE}=10\text{V}, I_C=10\text{mA}$	80		300	
	$H_{FE(2)}$	$V_{CE}=10\text{V}, I_C=1\text{mA}$	50			
	$H_{FE(3)}$	$V_{CE}=10\text{V}, I_C=50\text{mA}$	40			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=10\text{mA}, I_B=1\text{mA}$			0.2	V
	$V_{CE(sat)}$	$I_C=50\text{mA}, I_B=5\text{mA}$			0.3	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=10\text{mA}, I_B=1\text{mA}$			0.9	V
Transition frequency	$f_T$	$V_{CE}=10\text{V}, I_C=20\text{mA}$	50			MHz

# LMBTA44LT1G



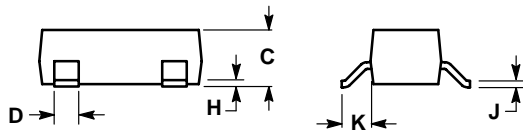
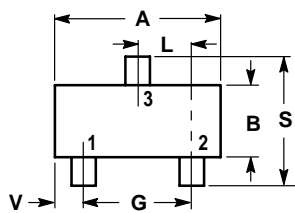
**LMBTA44LT1G**

**Characteristics Curve**



**LMBTA44LT1G**
**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

- PIN 1. BASE  
 2. EMITTER  
 3. COLLECTOR

