

# LBTN660Z4TZHG

## S-LBTN660Z4TZHG

General Purpose Transistors NPN Silicon

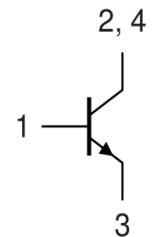
### 1. FEATURES

- 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.



### 2. DEVICE MARKING AND ORDERING INFORMATION

Device	Marking	Shipping
LBTN660Z4TZHG	A7	1000/Tape&Reel



### 3. MAXIMUM RATINGS(Ta = 25°C)

Parameter	Symbol	Limits	Unit
Collector–Emitter Voltage	VCEO	60	V
Collector–Base Voltage	VCBO	100	V
Emitter–Base Voltage	VEBO	6	V
Collector Current — Continuous	IC	6	A
Peak collector current	ICM	12	A
Junction and Storage temperature	TJ,Tstg	-55~+150	°C

### 4. THERMAL CHARACTERISTICS

Parameter	Symbol	Limits	Unit
Total Device Dissipation, FR-4 Board (Note 1) @ TA = 25°C	PD	833	mW
Thermal Resistance, Junction–to–Ambient(Note 1)	RθJA	150	°C/W

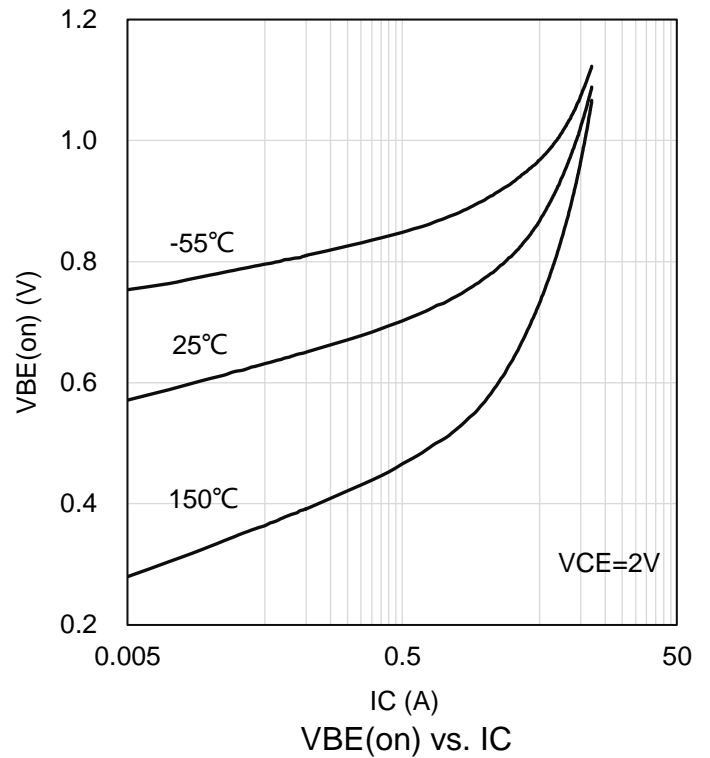
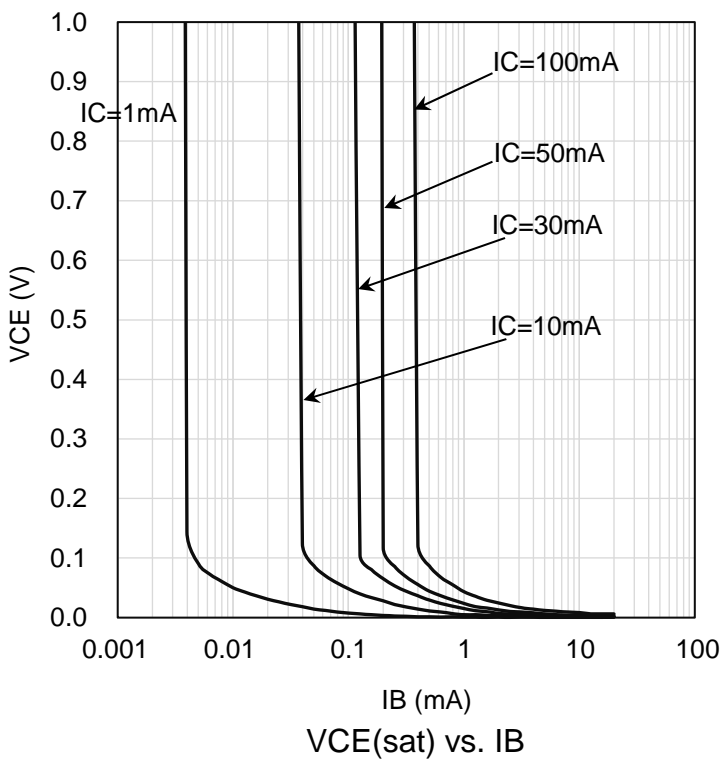
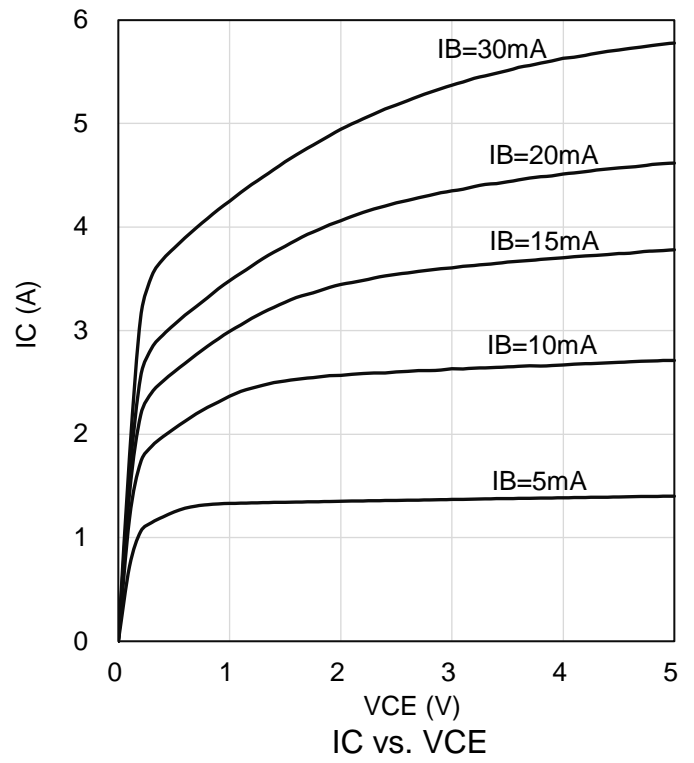
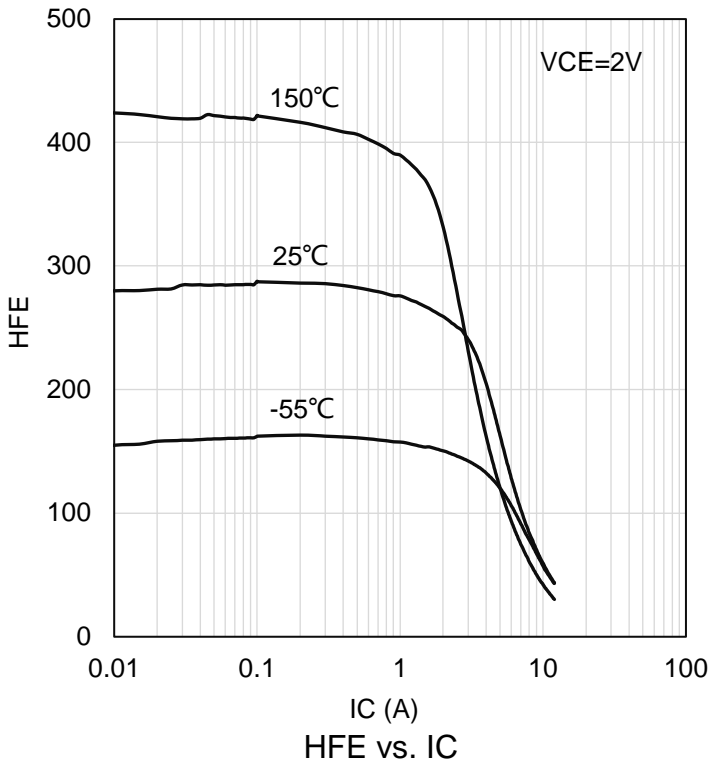
1. FR-4 = 30.0mm×25.0mm×1.6mm.

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

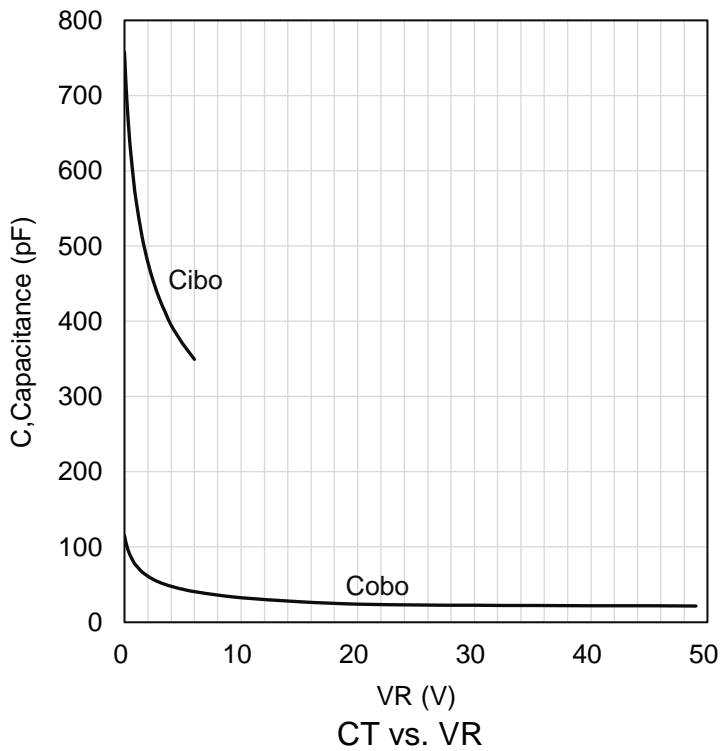
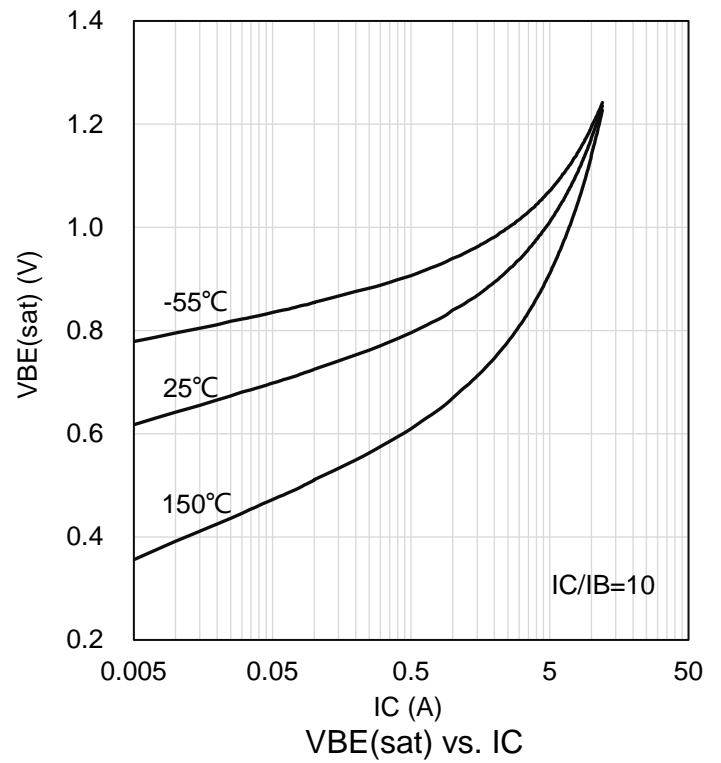
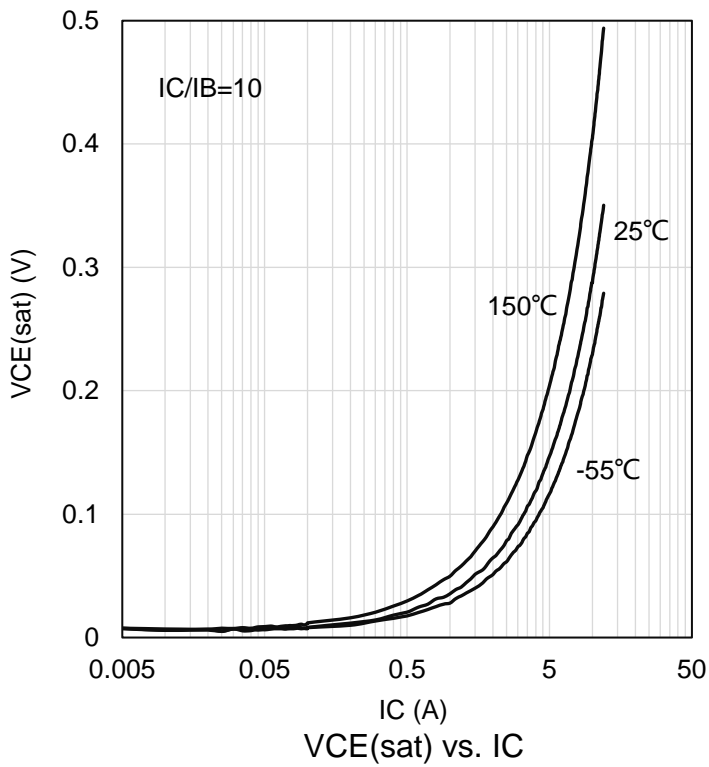
Characteristic	Symbol	Min.	Typ.	Max.	Unit
Collector–Emitter Breakdown Voltage (IC=10mA,IB=0)	VBR(CEO)	60	-	-	V
Collector–Base Breakdown Voltage (IC=100μA,IE=0)	VBR(CBO)	100	-	-	V
Emitter–Base Breakdown Voltage (IE=100μA,IC=0)	VBR(EBO)	6	-	-	V
Collector-Base cut-off current (VCB = 100 V, IE = 0)	ICBO	-	-	100	nA
Emitter-Base cut-off current (VEB =6V, IC =0)	IEBO	-	-	100	nA
Collector-Emitter cutoff Current (IB=0, VCE = 60V)	ICEO	-	-	10	μA
DC Current Gain (VCE = 2 V,IC = 500mA) (VCE = 2 V,IC = 1A) (VCE = 2 V,IC = 2A) (VCE = 2 V,IC = 6A)	HFE	150 120 100 50	- - - -	- 360 - -	
Collector–Emitter Saturation Voltage (IC=100mA,IB=2mA) (IC=1A,IB=100mA) (IC=2A,IB=200mA) (IC=3A,IB=60mA) (IC=6A,IB=600mA)	VCE(sat)	- - - - -	- - - - -	40 60 100 220 300	mV
Base-Emitter saturation voltage(Note 2) (IC=1A, IB=100mA)	VBE(sat)	-	-	0.9	V
Transition Frequency (VCE = 10 V, IC = 500 mA, f = 1 MHz)	fT	100	-	-	MHz
Input Capacitance (VEB = 5.0 V, f = 1.0 MHz)	Cibo	-	400	-	pF
Output Capacitance (VCB = 10 V, f = 1.0 MHz)	Cobo	-	37	-	pF

2.tp ≤ 300 μs, δ ≤ 0.02;

**6.ELECTRICAL CHARACTERISTICS CURVES**

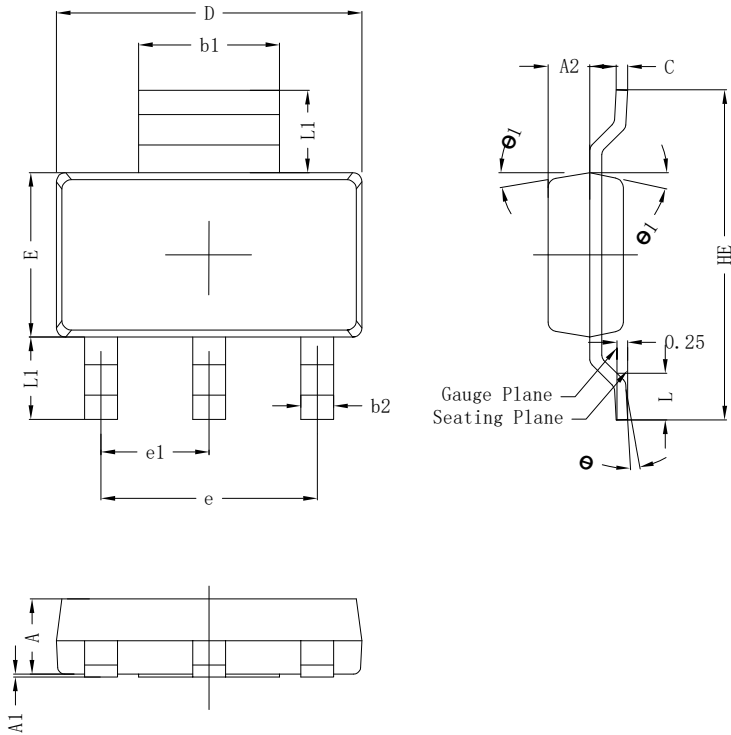


**6.ELECTRICAL CHARACTERISTICS CURVES(Con.)**



## 7.OUTLINE AND DIMENSIONS

### SOT223

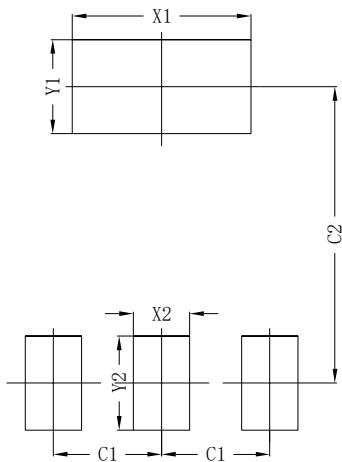


SOT223			
DIM	MIN	NOR	MAX
A	1.50	1.60	1.70
A1	0.00	0.05	0.10
A2	0.80	0.90	1.00
b1	2.90	3.02	3.10
b2	0.60	0.72	0.80
c	0.20	0.27	0.35
D	6.30	6.50	6.70
E	3.30	3.50	3.70
e	4.60BSC		
e1	2.30BSC		
HE	6.80	7.00	7.20
L	0.80	1.00	1.20
L1	1.75(REF)		
θ	0°~8°		
θ 1	8°	10°	12°
All Dimensions in mm			

#### GENERAL NOTES

1. Top package surface finish Ra0.4±0.2um
2. Bottom package surface finish Ra0.7±0.2um
3. Side package surface finish Ra0.4±0.2um
4. Protrusion or Gate Burrs shall not exceed 0.10mm per side.

## 8.SOLDERING FOOTPRINT



SOT223	
DIM	(mm)
X1	3.80
Y1	2.00
X2	1.20
Y2	2.00
C1	2.30
C2	6.30

## **DISCLAIMER**

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