

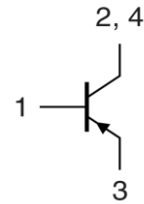
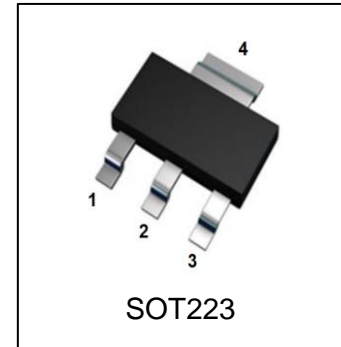
LBTP3100Z4TZHG

S-LBTP3100Z4TZHG

PNP Silicon AF Power Transistors

1. FEATURES

- For AF driver and output stages
- High collector current
- High current gain
- Low collector-emitter saturation voltage
- 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.

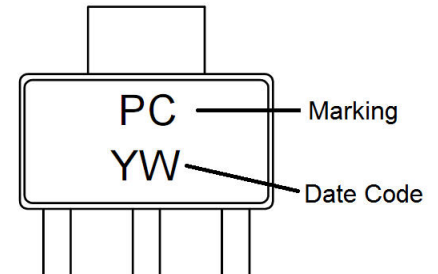


2. DEVICE MARKING AND ORDERING INFORMATION

Device	Marking	Shipping
LBTP3100Z4TZHG	PC	1000/Tape&Reel

3. MAXIMUM RATINGS(Ta = 25°C)

Parameter	Symbol	Limits	Unit
Collector–Emitter Voltage	VCEO	-100	V
Collector–Base Voltage	VCBO	-120	V
Emitter–Base Voltage	VEBO	-7	V
Collector Current — Continuous	IC	-3	A
Peak collector current (tp ≤ 10 ms)	ICM	-5	A
Base current	IB	-200	mA
Peak base current	IBM	-500	mA
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	1	W
Thermal Resistance, Junction–to–Ambient(Note 1)	ROJA	125	°C/W

1. FR-4 = 30.0mm×25.0mm×1.6mm.

5. ELECTRICAL CHARACTERISTICS (Ta= 25°C)

OFF CHARACTERISTICS

Characteristic	Symbol	Min.	Typ.	Max.	Unit
Collector–Emitter Breakdown Voltage (IC = -10 mA, IB = 0)	VBR(CEO)	-100	-	-	V
Collector–Base Breakdown Voltage (IC = -100 μA, IE = 0)	VBR(CBO)	-120	-	-	V
Emitter–Base Breakdown Voltage (IE = -10 μA, IC = 0)	VBR(EBO)	-7	-	-	V
Collector Cutoff Current (VCB = -45V, IE = 0) (VCB = -45V, IE = 0, Ta = 150°C)	ICBO	-	-	-0.1 -20	μA
Emitter CutOff Current (VEB = -4 V, IC = 0)	IEBO	-	-	-100	nA

ON CHARACTERISTICS (Note 2)

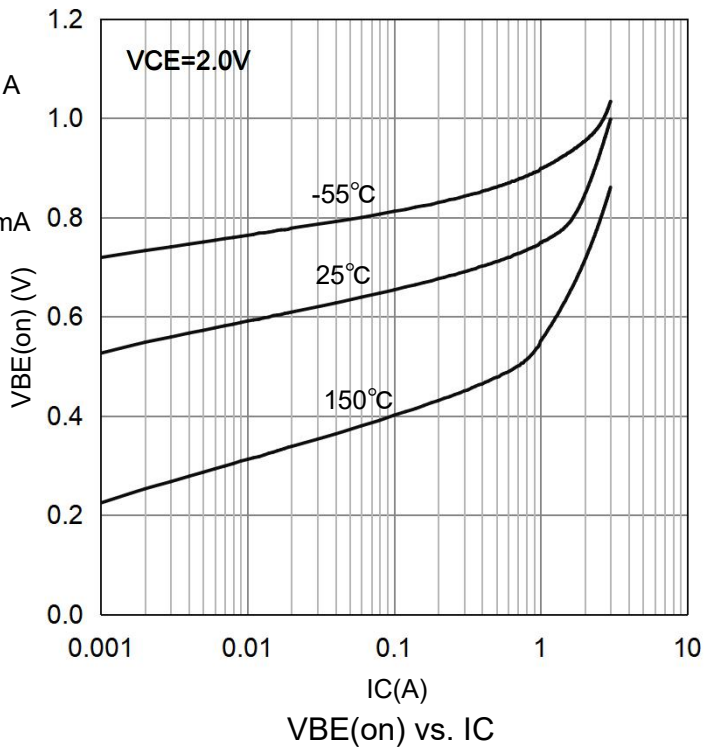
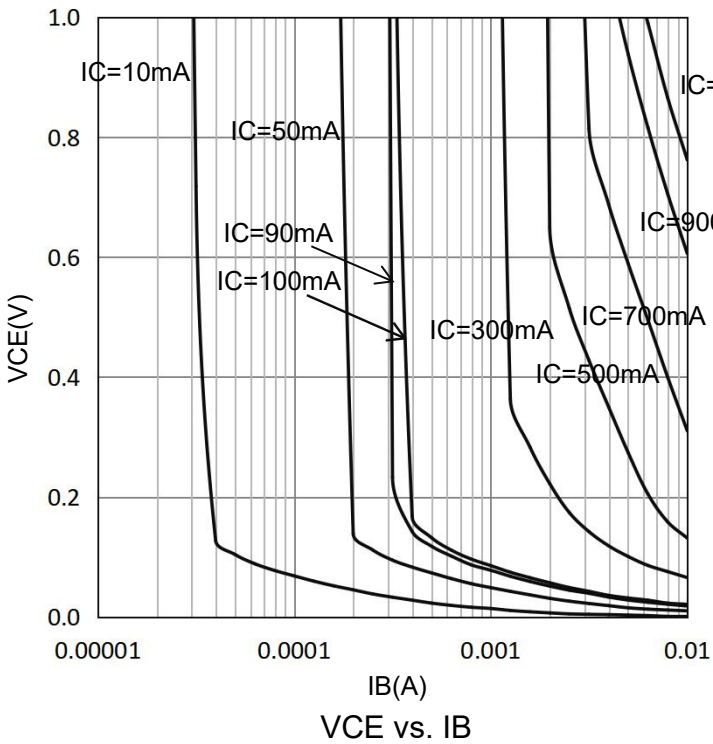
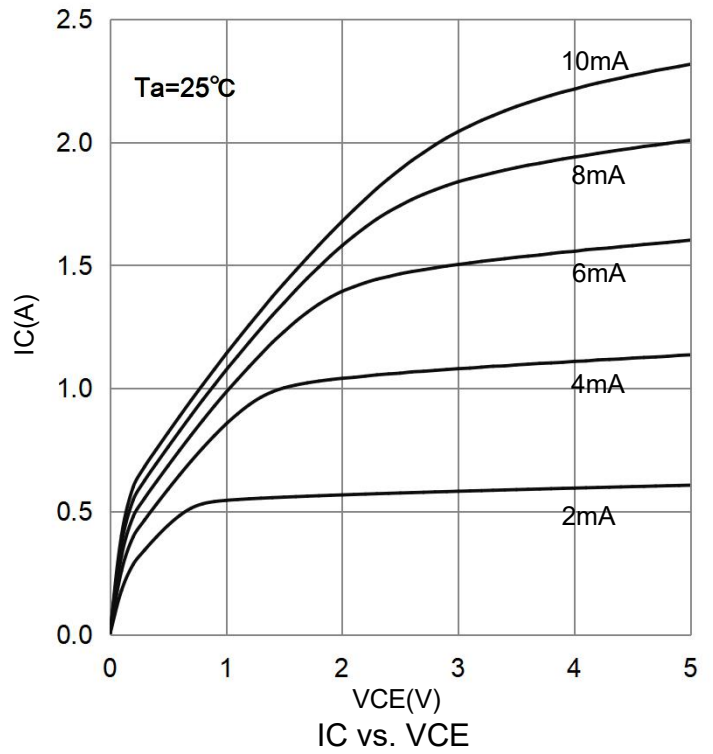
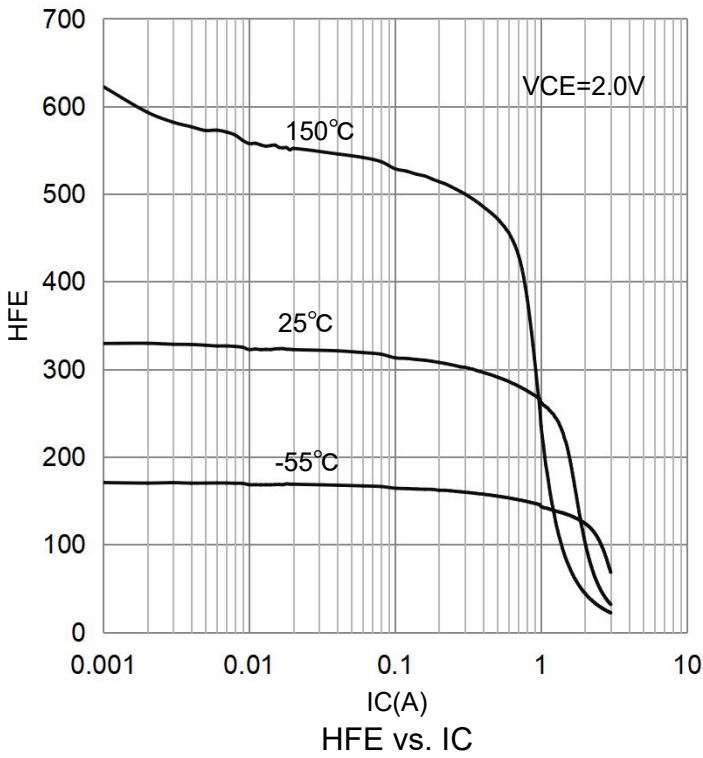
DC Current Gain (IC = -10mA, VCE = -5V) (IC = -500mA, VCE = -1V) (IC = -1A, VCE = -2V)	HFE	25 85 15	- - -	- 475 -	
Collector–Emitter Saturation Voltage (IC = -2A, IB = -0.2A)	VCE(sat)	-	-	-0.5	V
Base–Emitter Saturation Voltage (IC = -2A, IB = -0.2A)	VBE(sat)	-	-	-1.3	V

SMALL–SIGNAL CHARACTERISTICS

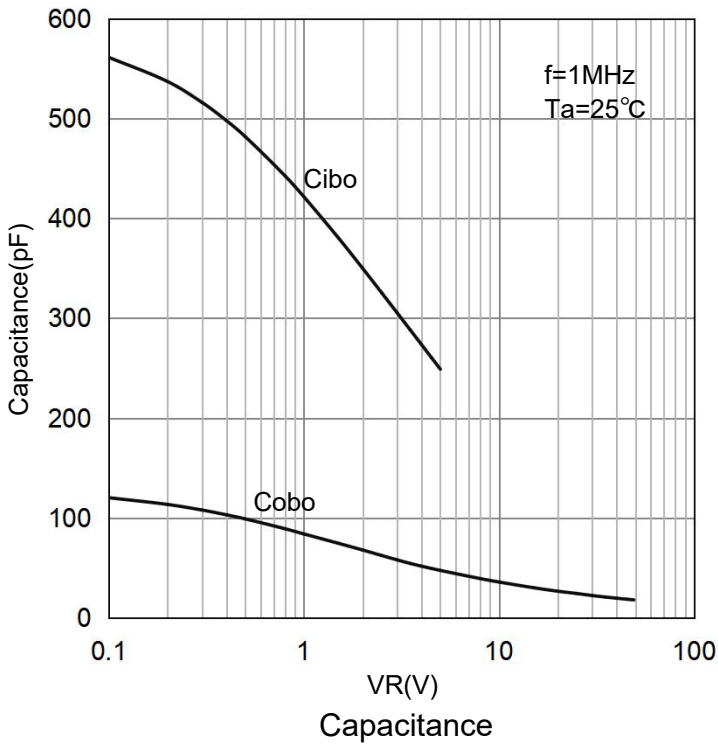
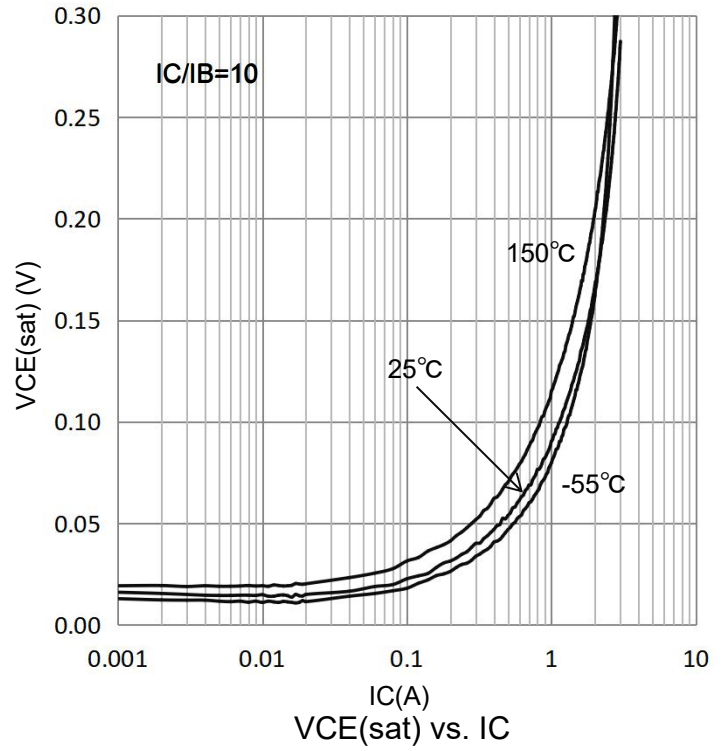
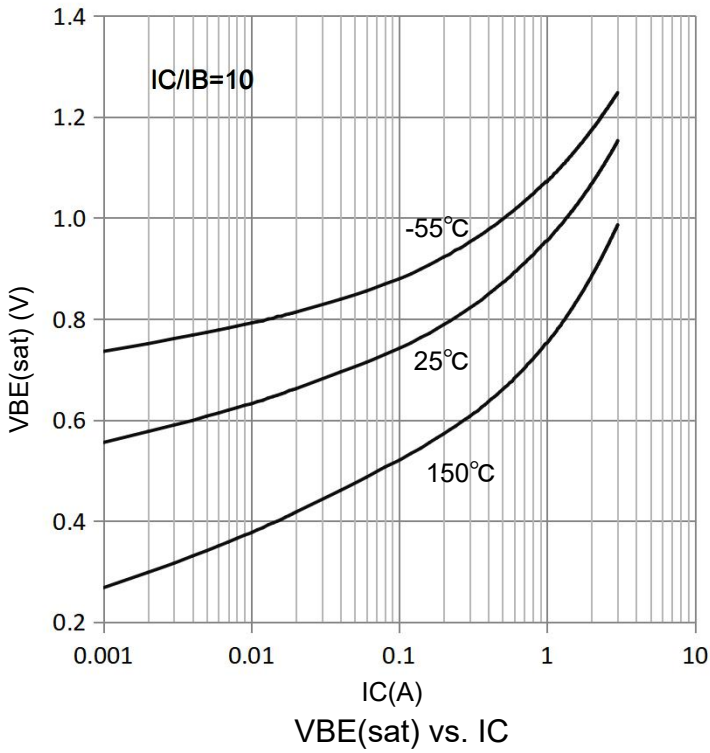
Transitional Frequency (IC = -50 mA, VCE = -10 V, f = 100 MHz)	fT	-	100	-	MHz
Collector-base capacitance (VCB = -10 V, f = 100 MHz)	Ccb	-	40	-	pF

2.Pulse Test: Pulse Width ≤300 μs, Duty Cycle ≤2.0%.

6. ELECTRICAL CHARACTERISTICS CURVES

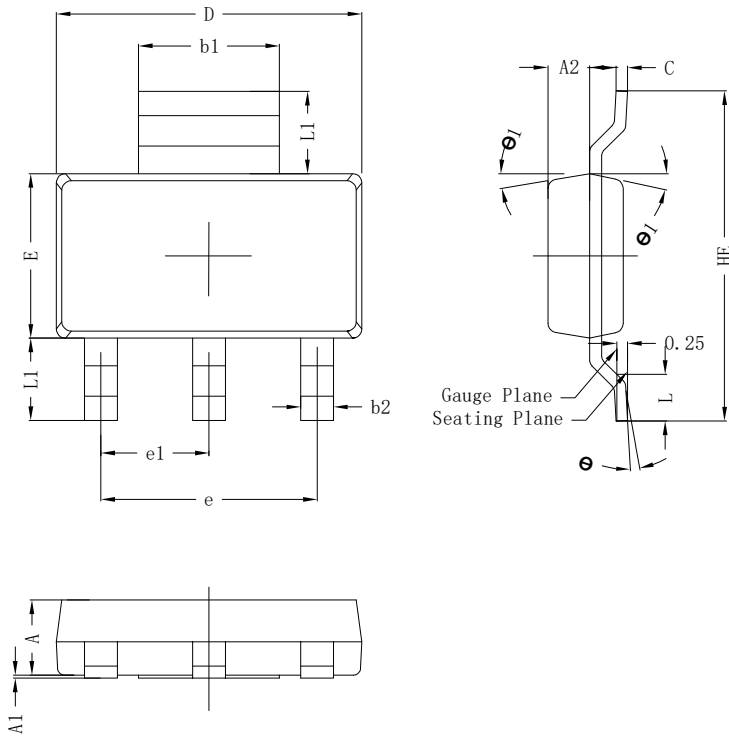


6. ELECTRICAL CHARACTERISTICS CURVES(Con.)



7.OUTLINE AND DIMENSIONS

SOT223

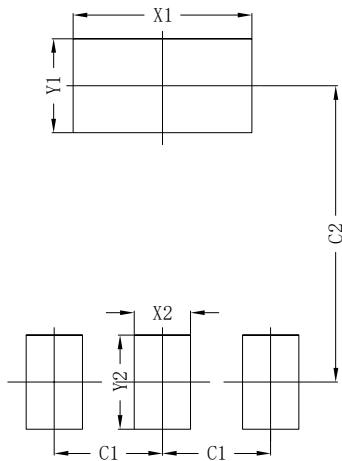


SOT223			
DIM	MIN	NOR	MAX
A	1.50	1.60	1.70
A1	0.00	0.05	0.10
A2	0.80	0.90	1.00
b1	2.90	3.02	3.10
b2	0.60	0.72	0.80
c	0.20	0.27	0.35
D	6.30	6.50	6.70
E	3.30	3.50	3.70
e	4.60BSC		
e1	2.30BSC		
HE	6.80	7.00	7.20
L	0.80	1.00	1.20
L1	1.75(REF)		
θ	0°~8°		
θ 1	8°	10°	12°
All Dimensions in mm			

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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