

LBTP01500Z4TZHG

S-LBTP01500Z4TZHG

500V PNP Power Transistor

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
LBTP01500Z4TZHG	A15	1000/Tape&Reel

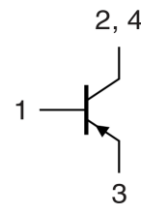
3. MAXIMUM RATINGS(Ta = 25°C)

Parameter	Symbol	Limits	Unit
Collector–Emitter Voltage	VCEO	-500	V
Collector–Base Voltage	VCBO	-500	V
Emitter–Base Voltage	VEBO	-7	V
Collector Current — Continuous	IC	-150	mA
Peak collector current	ICM	-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 = -1 mA, IB = 0)	VBR(CEO)	-500	-	-	V
Collector–Base Breakdown Voltage (IC = -100 μA, IE = 0)	VBR(CBO)	-500	-	-	V
Emitter–Base Breakdown Voltage (IE = -100 μA, IC = 0)	VBR(EBO)	-7	-	-	V
Collector Cutoff Current (VCB = -500V, IE = 0)	ICBO	-	-	-100	nA
Emitter CutOff Current (VEB = -5.6 V, IC = 0)	IEBO	-	-	-100	nA
Collector-Emitter cutoff Current (VCE = -500V, IB=0)	ICEO	-	-	-5	μA

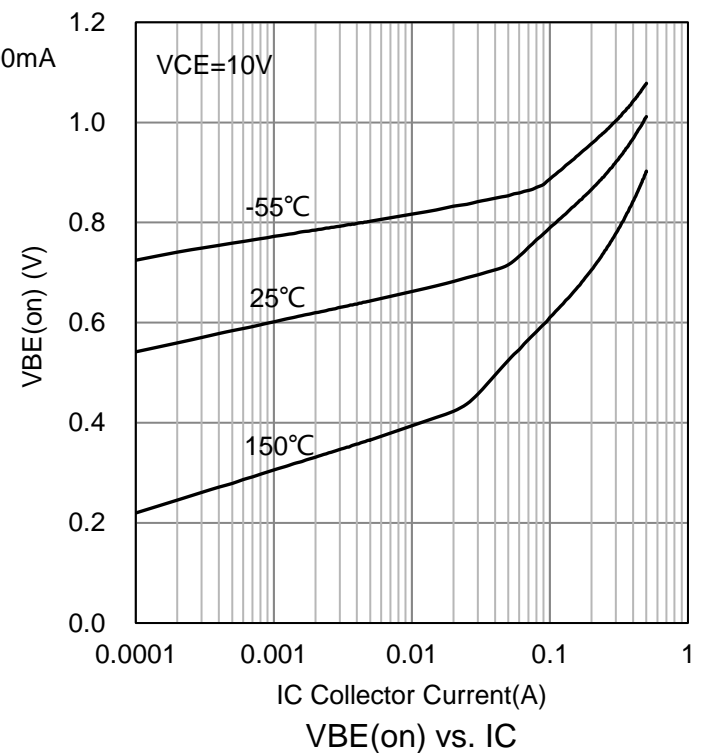
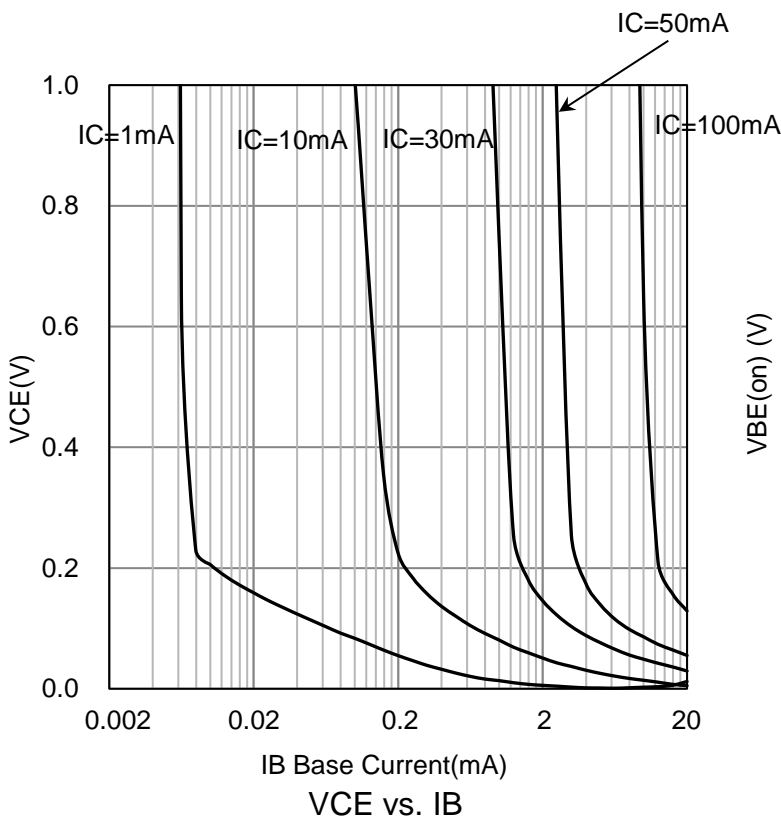
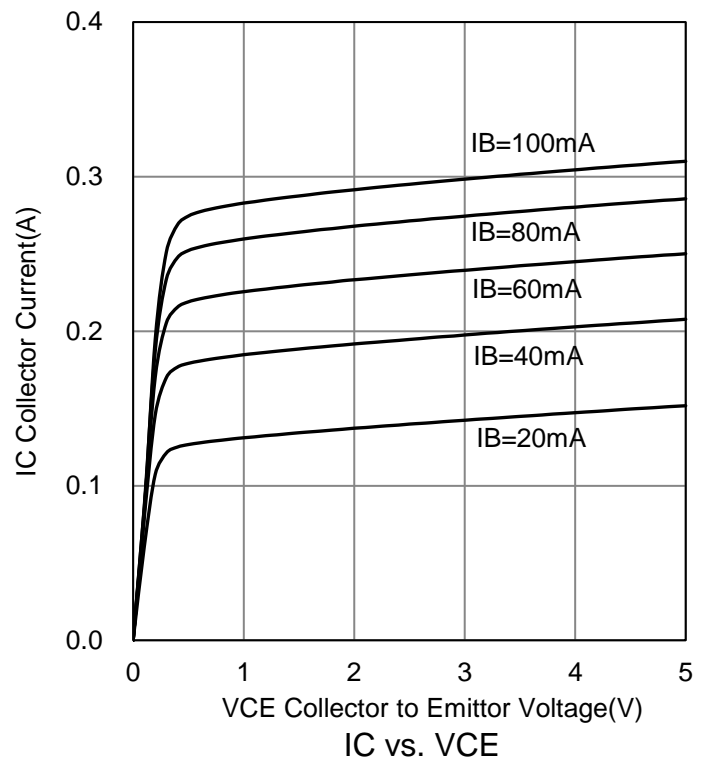
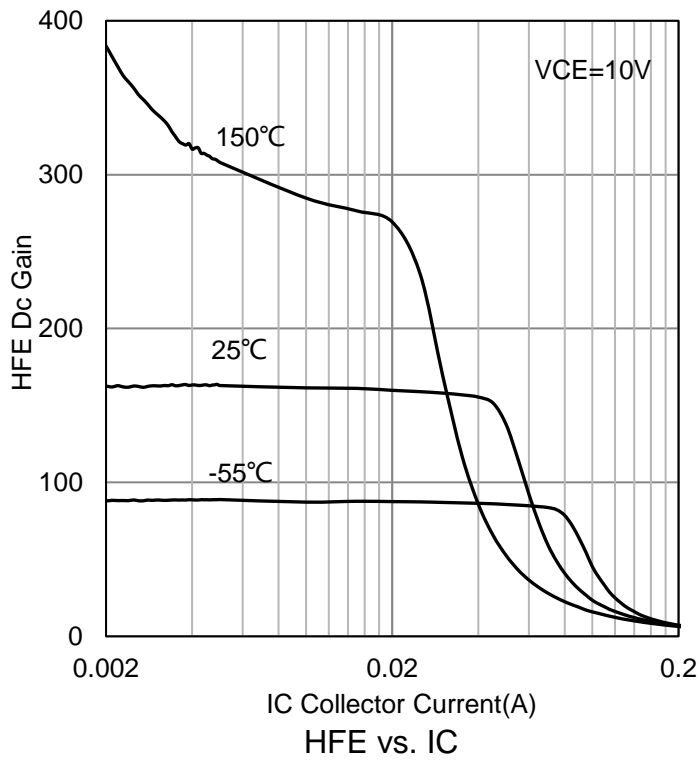
ON CHARACTERISTICS (Note 2)

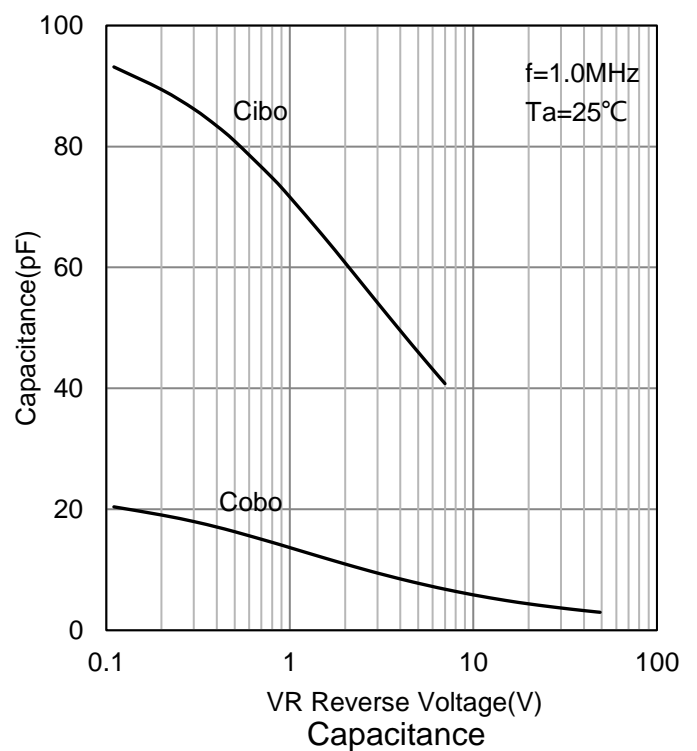
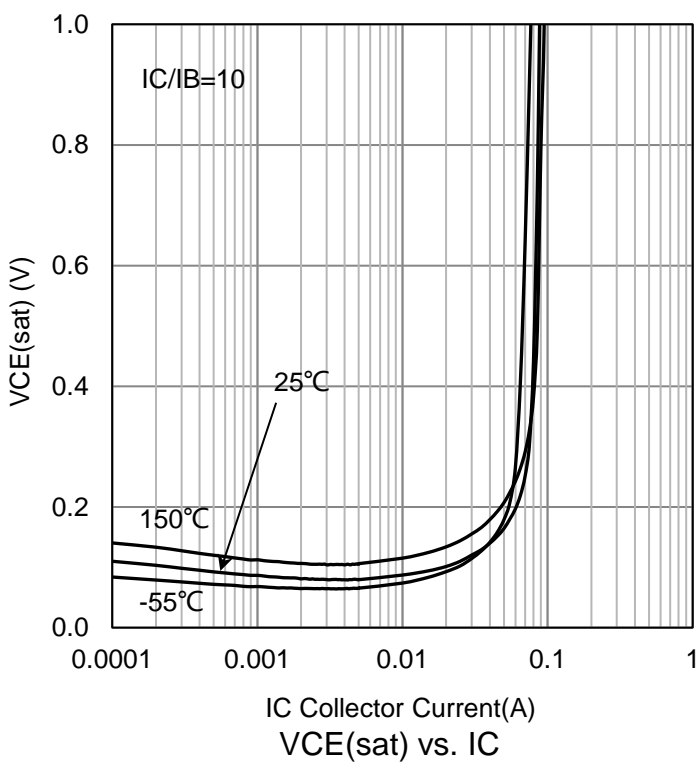
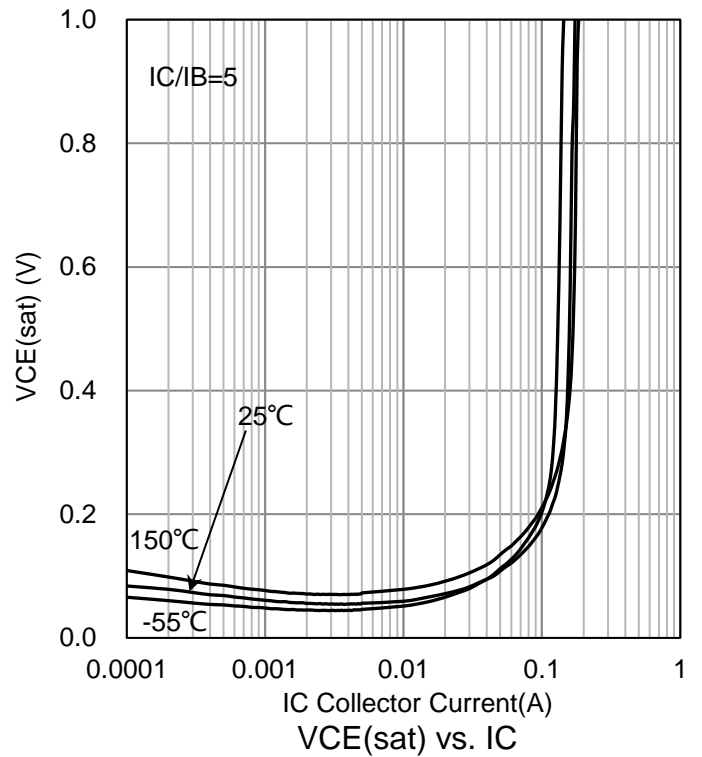
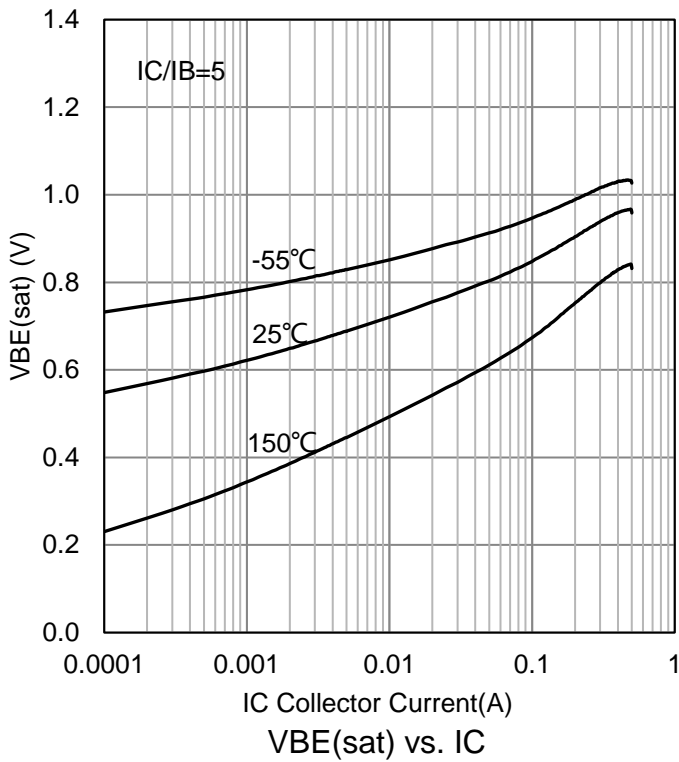
DC Current Gain (IC= -1mA, VCE= -10V) (IC= -50mA, VCE= -10V) (IC= -100mA, VCE= -10V)	HFE	100 80 -	- - 15	300 300 -	
Collector–Emitter Saturation Voltage (IC = -20mA, IB = -2mA) (IC = -50mA, IB = -10mA)	VCE(sat)	- -	- -	-0.2 -0.5	V
Base–Emitter Saturation Voltage (IC = -50mA, IB = -10mA)	VBE(sat)	-	-	-0.9	V

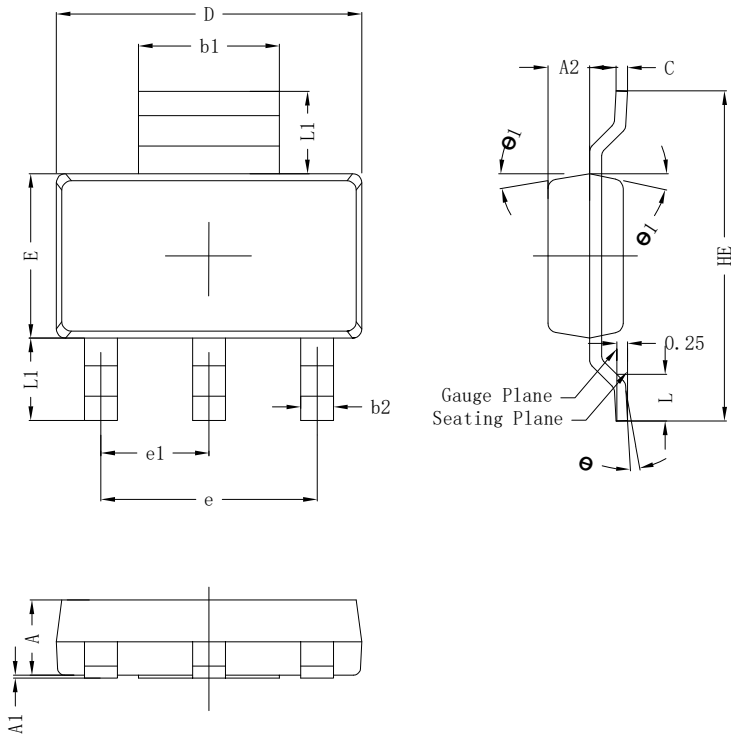
SMALL–SIGNAL CHARACTERISTICS

Transitional Frequency (IC = -10 mA, VCE = -20 V, f = 50 MHz)	fT	60	-	-	MHz
Output Capacitance (VCB = -20 V, f = 1 MHz)	Cobo	-	-	8	pF

2.Pulse Test: Pulse Width $\leq 300 \mu s$, Duty Cycle $\leq 2.0\%$.

6.ELECTRICAL CHARACTERISTICS CURVES


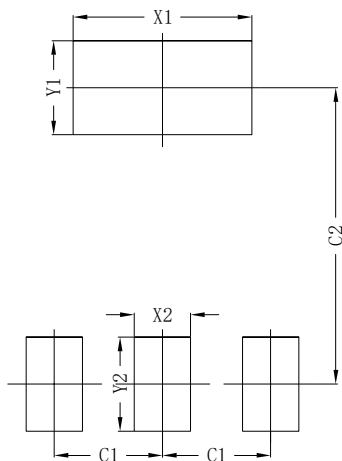
6.ELECTRICAL CHARACTERISTICS CURVES(Con.)


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°		
$\theta 1$	8°	10°	12°
All Dimensions in mm			

GENERAL NOTES

1. Top package surface finish $Ra0.4 \pm 0.2\mu m$
2. Bottom package surface finish $Ra0.7 \pm 0.2\mu m$
3. Side package surface finish $Ra0.4 \pm 0.2\mu m$
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

- Curve guarantee in the specification. The curve of test items with electric parameter is used as quality guarantee. The curve of test items without electric parameter is used as reference only.
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