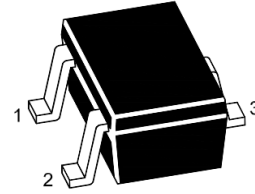


NPN Silicon Epitaxial Planar Transistor

Features

VHF / UHF transistor

MARKING: 3E



1.Base 2.Emitter 3.Collector
SOT-323 Plastic Package

Absolute Maximum Ratings ($T_a = 25\text{ }^\circ\text{C}$)

Parameter	Symbol	Rating	Unit
Collector Base Voltage	V_{CBO}	30	V
Collector Emitter Voltage	V_{CEO}	25	V
Emitter Base Voltage	V_{EBO}	3	V
Collector Current	I_C	50	mA
Total Dissipation	P_{tot}	200	mW
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_s	- 55 to + 150	$^\circ\text{C}$

Characteristics at $T_{amb} = 25\text{ }^\circ\text{C}$

Parameter	Symbol	Min	Max	Unit
DC Current Gain at $V_{CE} = 10\text{ V}$, $I_C = 4\text{ mA}$	h_{FE}	60	-	-
Collector Base Breakdown Voltage at $I_C = 100\text{ }\mu\text{A}$	$V_{(BR)CBO}$	30	-	V
Collector Emitter Breakdown Voltage at $I_C = 1\text{ mA}$	$V_{(BR)CEO}$	25	-	V
Emitter Base Breakdown Voltage at $I_E = 10\text{ }\mu\text{A}$	$V_{(BR)EBO}$	3	-	V
Collector Cutoff Current at $V_{CB} = 25\text{ V}$	I_{CBO}	-	100	nA
Emitter Cutoff Current at $V_{EB} = 2\text{ V}$	I_{EBO}	-	100	nA
Collector Emitter Saturation Voltage at $I_C = 4\text{ mA}$, $I_B = 0.4\text{ mA}$	$V_{CE(sat)}$	-	0.5	V
Base-Emitter On Voltage at $V_{CE} = 10\text{ V}$, $I_C = 4\text{ mA}$	$V_{BE(on)}$	-	0.95	V
Current Gain Bandwidth Product at $V_{CE} = 10\text{ V}$, $I_C = 4\text{ mA}$, $f = 100\text{ MHz}$	f_T	650	-	MHz
Collector Base Capacitance at $V_{CB} = 10\text{ V}$, $f = 1\text{ MHz}$	C_{cb}	-	0.7	pF
Collector Base Feedback Capacitance $V_{CB} = 10\text{ V}$, $f = 1\text{ MHz}$	C_{rb}	0.35	0.65	pF

TYPICAL CHARACTERISTICS

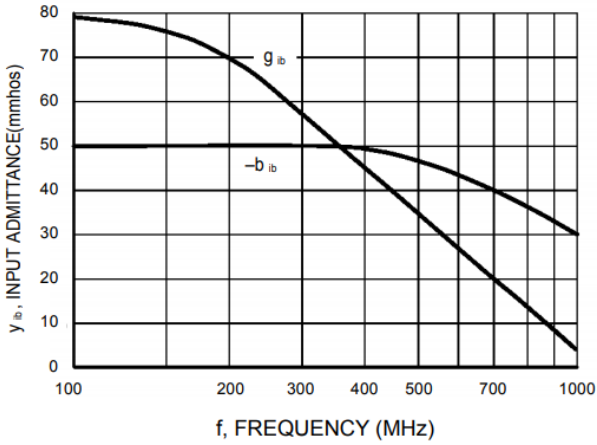


Figure 1. Rectangular Form

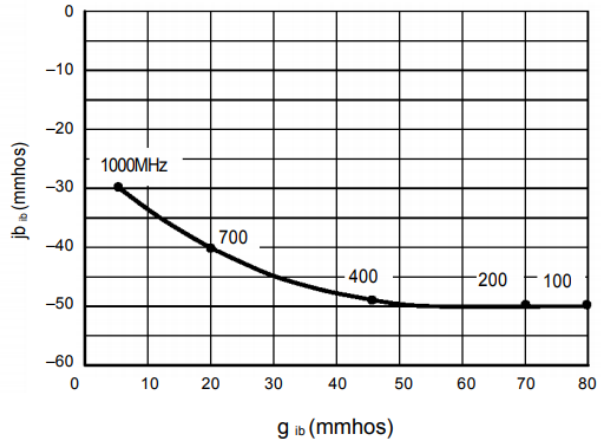


Figure 2. Polar Form

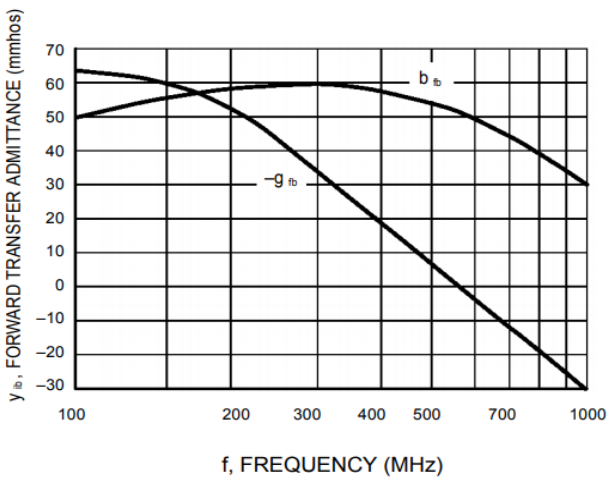


Figure 3. Rectangular Form

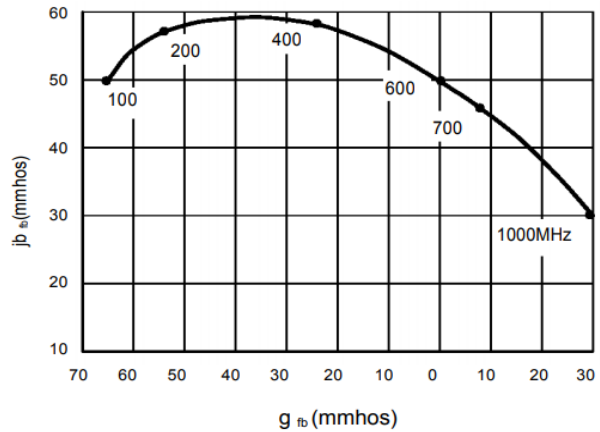


Figure 4. Polar Form

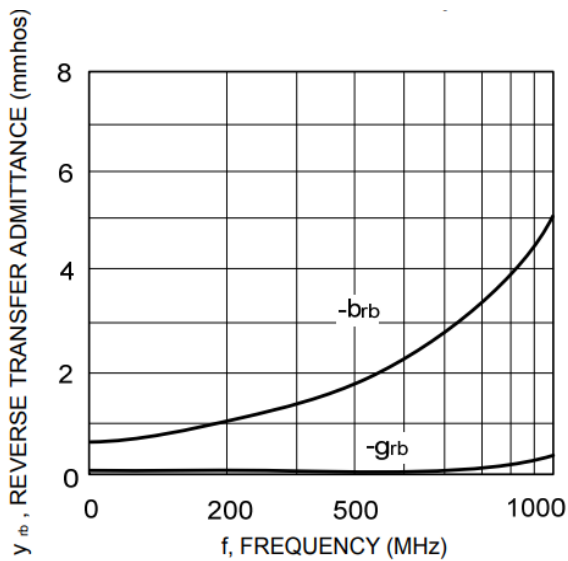


Figure 5. Rectangular Form

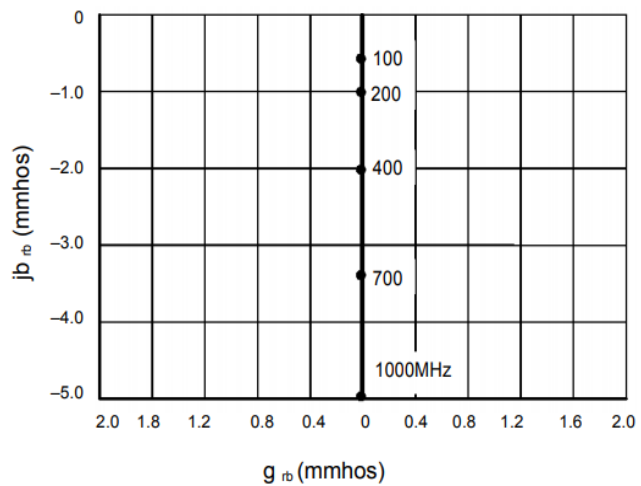


Figure 6. Polar Form

TYPICAL CHARACTERISTICS

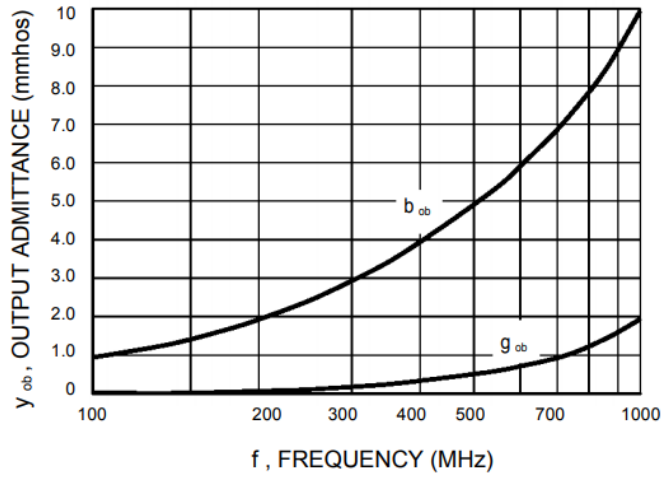


Figure 7. Rectangular Form

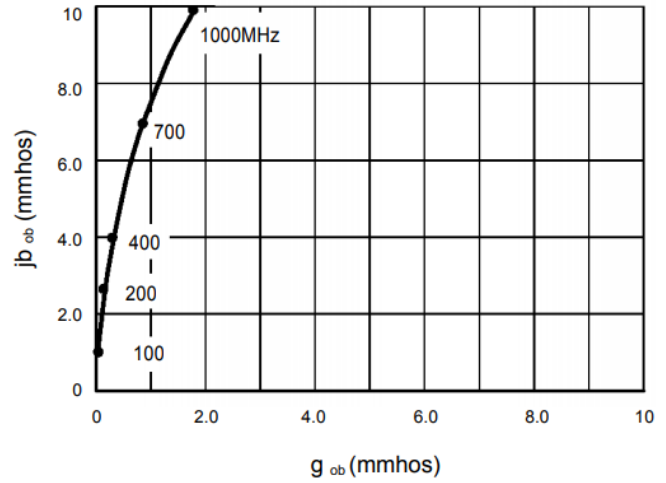
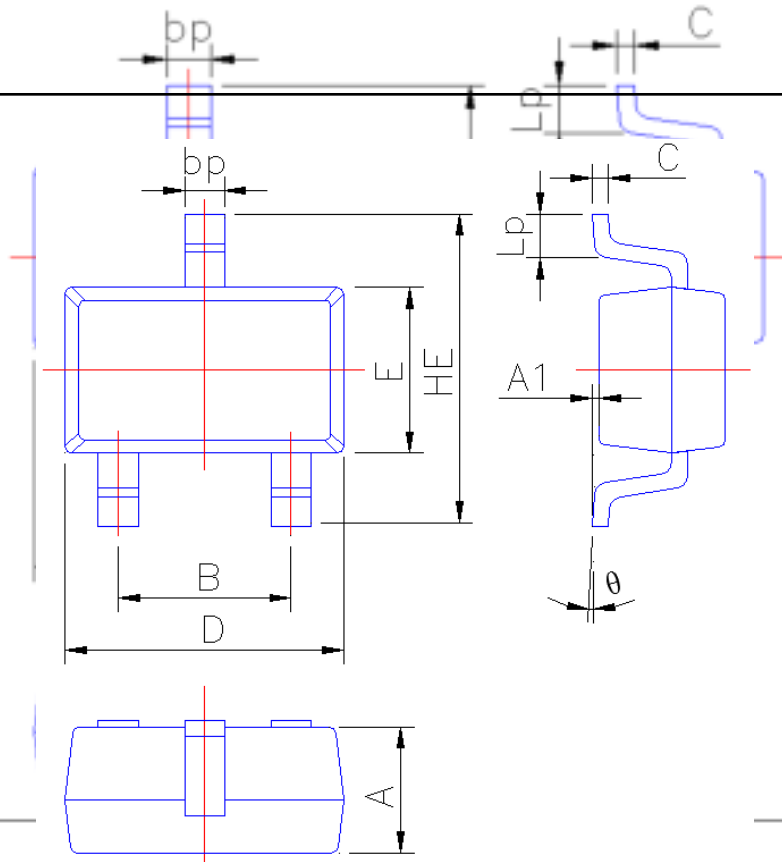


Figure 8. Polar Form

SOT-323 PACKAGE OUTLINE DIMENSIONS



Symbol	Dimension in Millimeters	
	Min	Max
A	0.90	1.00
A1	0.010	0.100
B	1.20	1.40
bp	0.25	0.45
C	0.09	0.15
D	2.00	2.20
E	1.15	1.35
HE	2.15	2.55
Lp	0.25	0.46
θ	0°	6°