

SOT-523 Plastic-Encapsulate Transistors

TRANSISTOR (NPN)

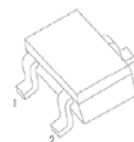
FEATURES

- High current.
- Low $V_{CE(sat)}$. $V_{CE(sat)} \leq 250\text{mV}$ at $I_C = 200\text{mA}$ / $I_B = 10\text{mA}$

MARKING: BX

SOT-523

1. BASE
2. EMITTER
3. COLLECTOR

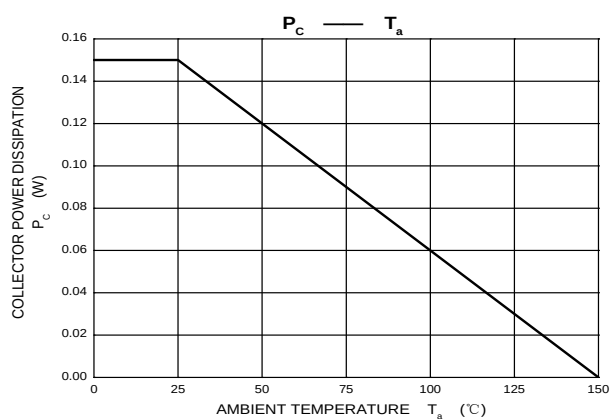
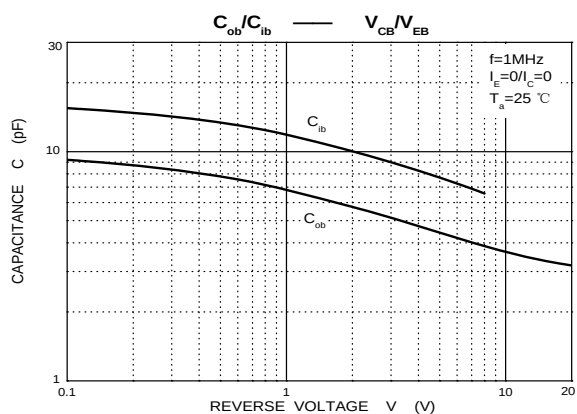
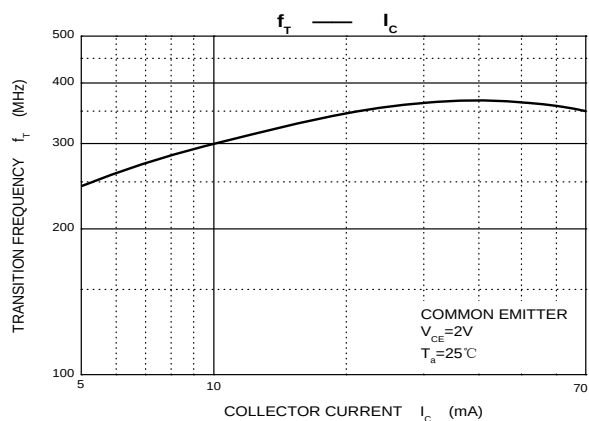
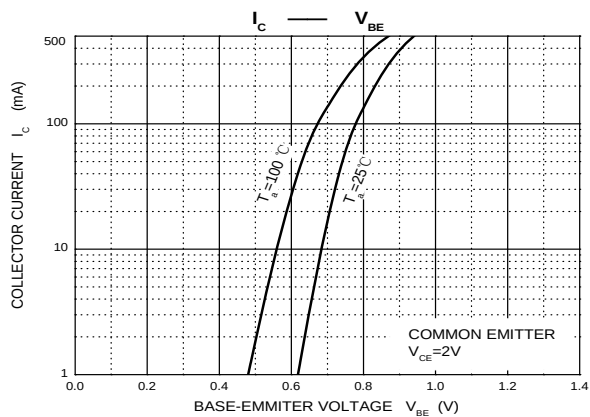
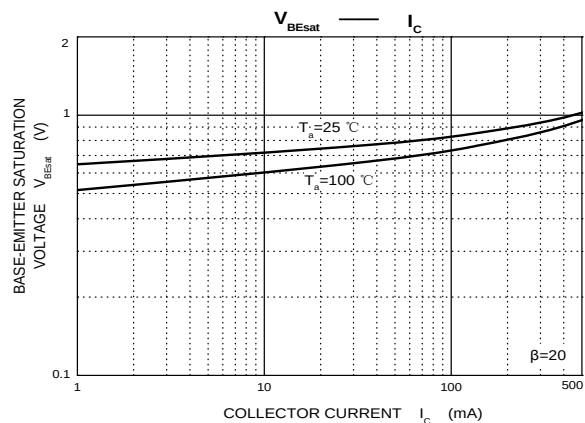
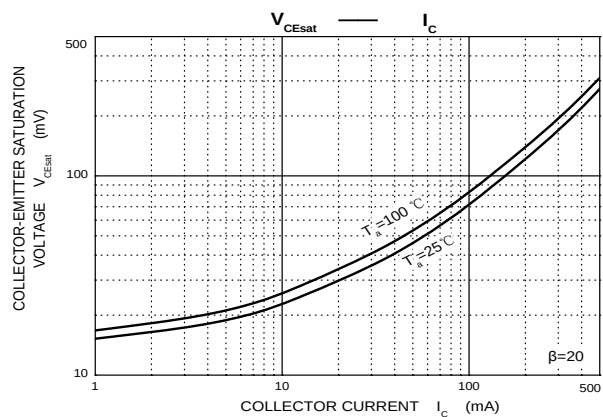
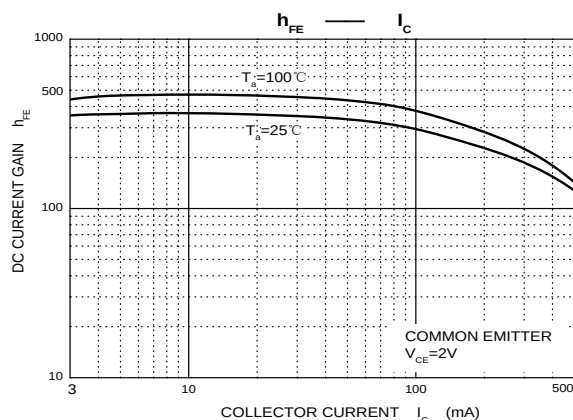
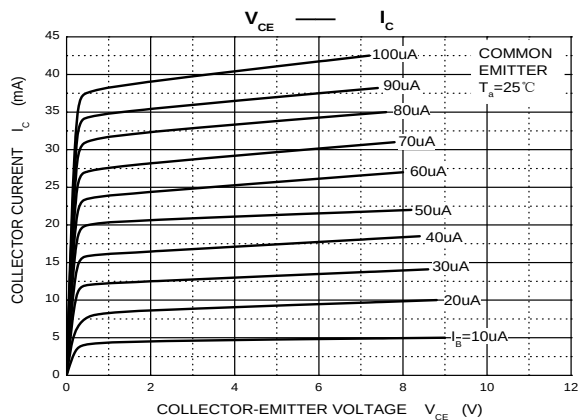


MAXIMUM RATINGS ($T_a=25^\circ\text{C}$ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector- Base Voltage	15	V
V_{CEO}	Collector-Emitter Voltage	12	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current -Continuous	0.5	A
P_C	Collector Power Dissipation	0.15	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature	-55-150	$^\circ\text{C}$

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

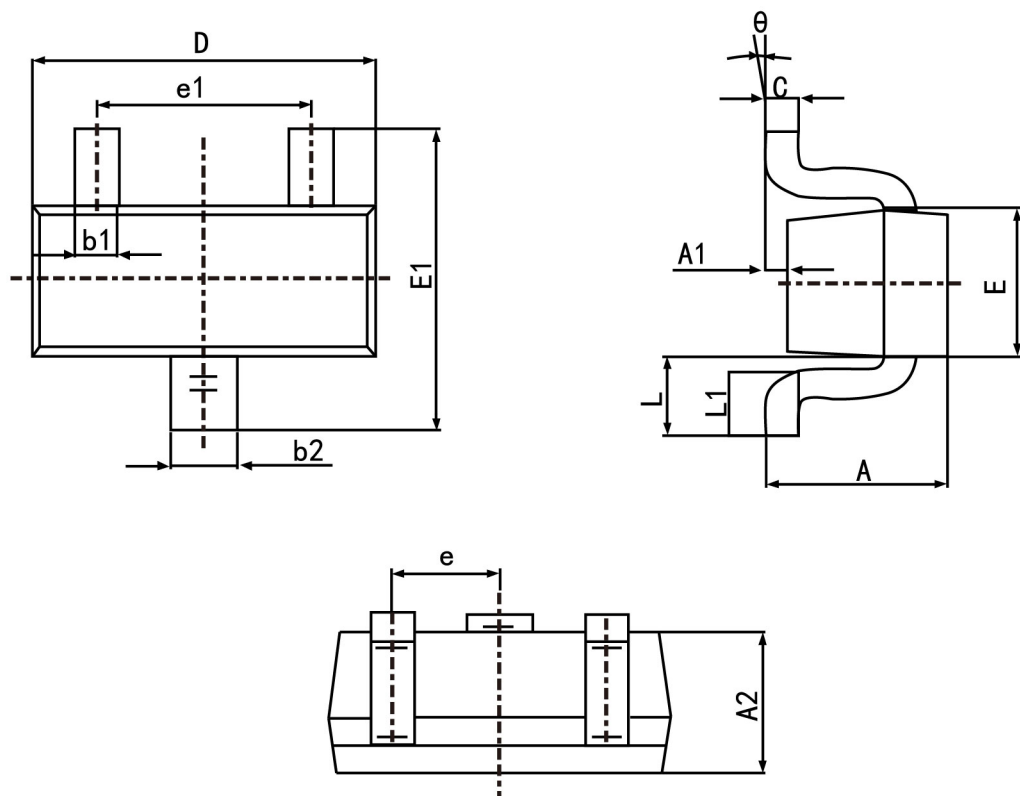
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=10\mu\text{A}$, $I_E=0$	15			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=1\text{mA}$, $I_B=0$	12			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=10\mu\text{A}$, $I_C=0$	6			V
Collector cut-off current	I_{CBO}	$V_{CB}=15\text{V}$, $I_E=0$			0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=6\text{V}$, $I_C=0$			0.1	μA
DC current gain	h_{FE}	$V_{CE}=2\text{V}$, $I_C=10\text{mA}$	270		680	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=200\text{mA}$, $I_B=10\text{mA}$			0.25	V
Transition frequency	f_T	$V_{CE}=2\text{V}$, $I_C=10\text{mA}$, $f=100\text{MHz}$		320		MHz
Collector output capacitance	C_{ob}	$V_{CB}=10\text{V}$, $I_E=0$, $f=1\text{MHz}$		7.5		pF



PACKAGE OUTLINE

Plastic surface mounted package; 3 leads

SOT-523



Symbol	Dimension in Millimeters	
	Min	Max
A	0.700	0.900
A1	0.000	0.100
A2	0.700	0.800
b1	0.150	0.250
b2	0.250	0.350
c	0.100	0.200
D	1.500	1.700
E	0.700	0.900
E1	1.450	1.750
e	0.500	TYP.
e1	0.900	1.100
L	0.400 REF.	
L1	0.260	0.460
θ	0°	8°