

SOT-323 Plastic-Encapsulate Transistors

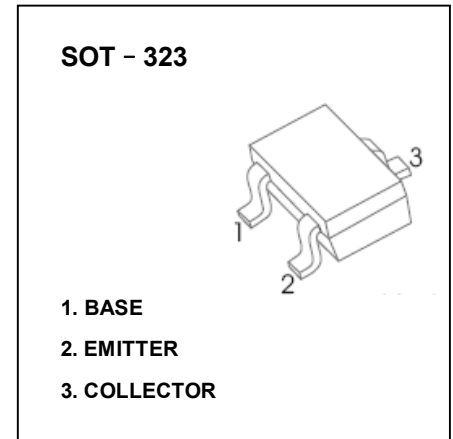
TRANSISTOR (PNP)

FEATURES

- High DC Current Gain
- High Voltage
- Complementary to 2SC4177

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

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	-60	V
V_{CEO}	Collector-Emitter Voltage	-50	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current	-100	mA
P_C	Collector Power Dissipation	150	mW
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	833	$^\circ\text{C/W}$
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)

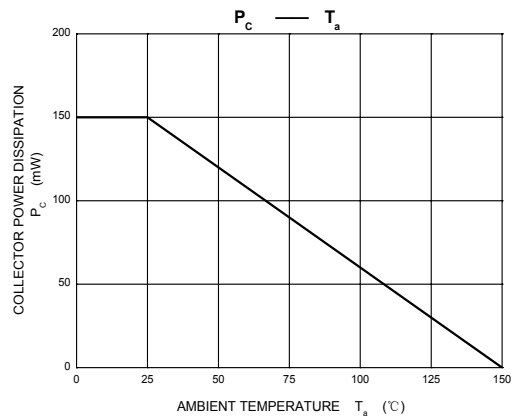
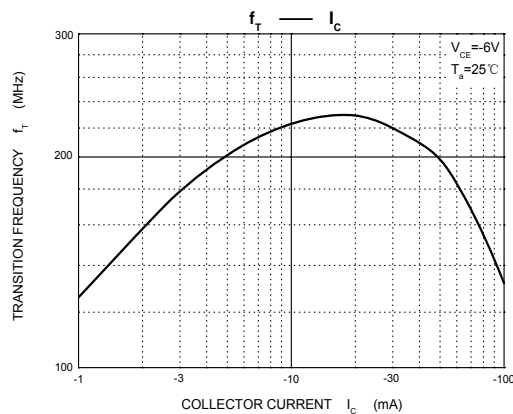
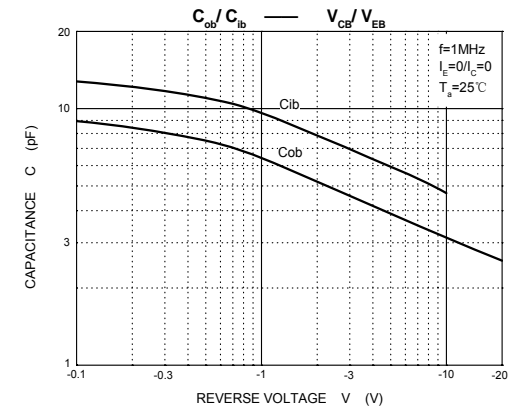
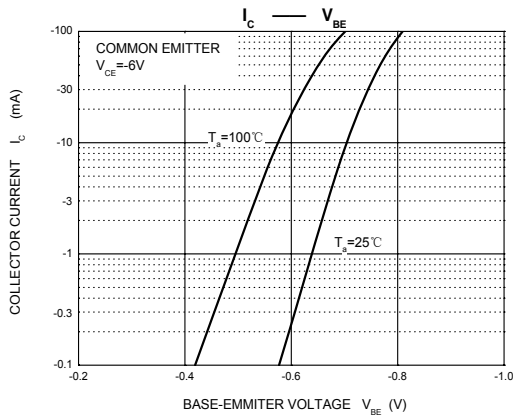
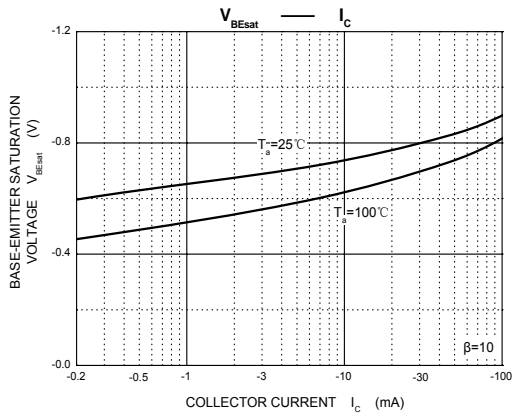
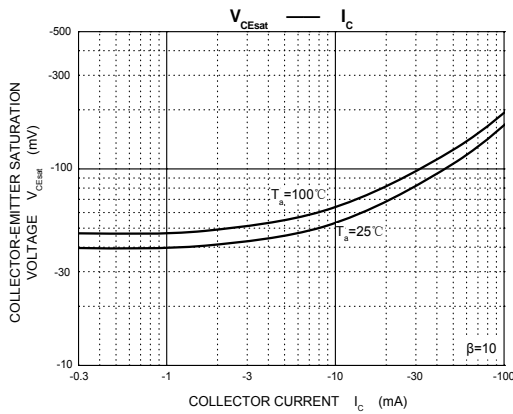
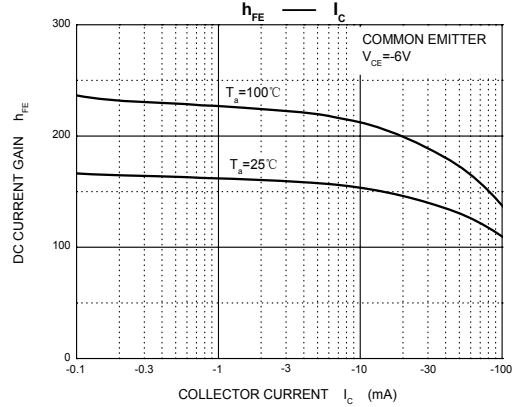
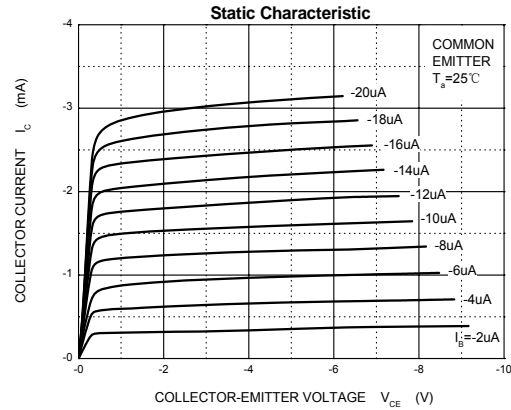
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=-100\mu\text{A}, I_E=0$	-60			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=-1\text{mA}, I_B=0$	-50			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=-100\mu\text{A}, I_C=0$	-5			V
Collector cut-off current	I_{CBO}	$V_{CB}=-60\text{V}, I_E=0$			-100	nA
Emitter cut-off current	I_{EBO}	$V_{EB}=-5\text{V}, I_C=0$			-100	nA
DC current gain	h_{FE}^*	$V_{CE}=-6\text{V}, I_C=-1\text{mA}$	90		600	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=-100\text{mA}, I_B=-10\text{mA}$			-0.3	V
Collector-emitter voltage	V_{BE}	$V_{CE}=-6\text{V}, I_C=-1\text{mA}$	-0.58		-0.68	V
Transition frequency	f_T	$V_{CE}=-6\text{V}, I_C=-10\text{mA}$		180		MHz
Collector output capacitance	C_{ob}	$V_{CB}=-10\text{V}, I_E=0, f=1\text{MHz}$		4.5		pF

*Pulse test: pulse width $\leq 350\mu\text{s}$, duty cycle $\leq 2.0\%$.

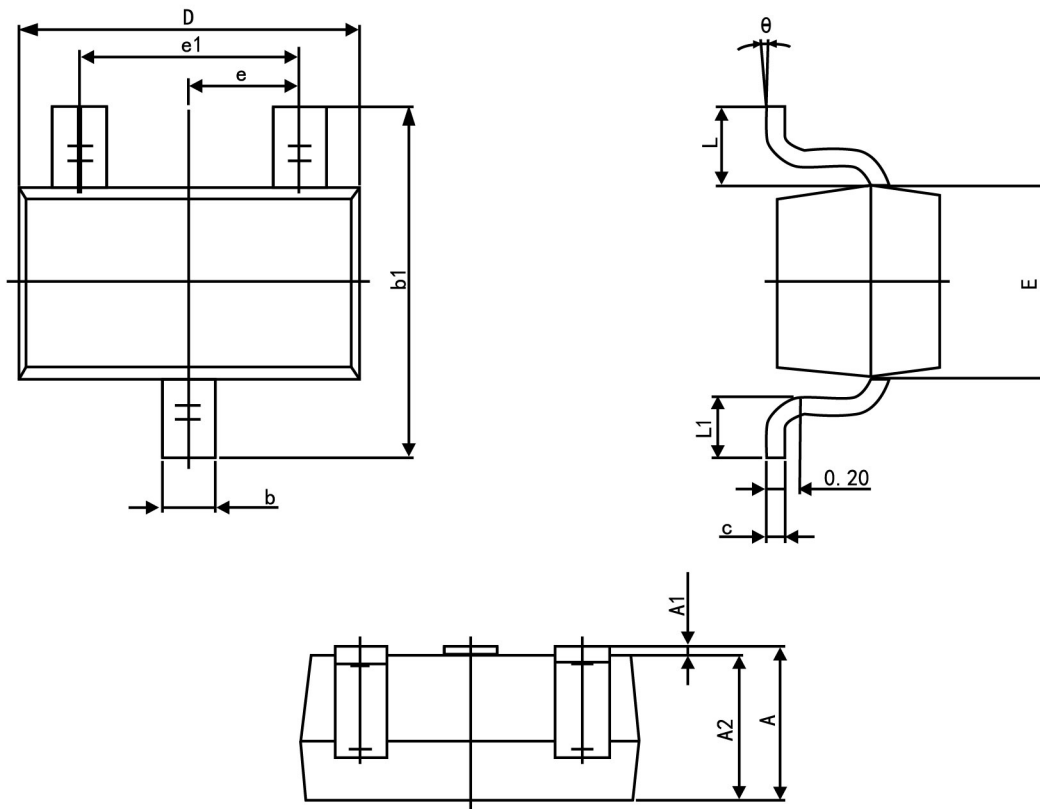
CLASSIFICATION OF h_{FE}

RANK	M4	M5	M6	M7
RANGE	90 - 180	135 - 270	200 - 400	300 - 600
MARKING	M4	M5	M6	M7

Typical Characteristics



SOT-323 Package Outline Dimensions



Symbol	Dimension in Millimeters	
	Min	Max
A	0.900	1.100
A1	0.000	0.100
A2	0.900	1.000
b	0.200	0.400
c	0.080	0.150
D	2.000	2.200
E	1.150	1.350
E1	2.150	2.450
e	0.650 TYP.	
e1	1.200	1.400
L	0.525 REF.	
L1	0.260	0.460
θ	0°	8°