

NPN Plastic-Encapsulate Transistors

FEATURES

- High DC Current Gain
- Complementary to 2SA1611
- High Voltage

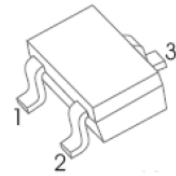
APPLICATIONS

- General Purpose Amplification

MAXIMUM RATINGS (Ta=25°C unless otherwise noted)

Symbol	Parameter	Value	Unit
V _{CB0}	Collector-Base Voltage	60	V
V _{CE0}	Collector-Emitter Voltage	50	V
V _{EB0}	Emitter-Base Voltage	5	V
I _C	Collector Current	100	mA
P _C	Collector Power Dissipation	150	mW
R _{θJA}	Thermal Resistance From Junction To Ambient	833	°C/W
T _J	Junction Temperature	150	°C
T _{stg}	Storage Temperature	-55 ~ +150	°C

SOT - 323



1. BASE
2. EMITTER
3. COLLECTOR

ELECTRICAL CHARACTERISTICS (Ta=25°C unless otherwise specified)

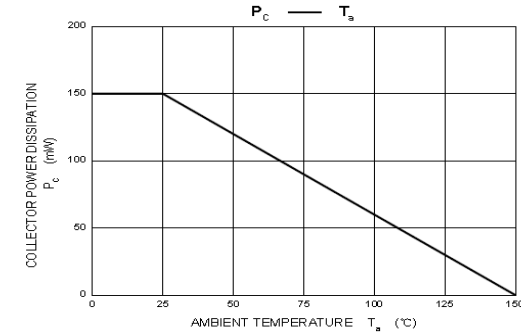
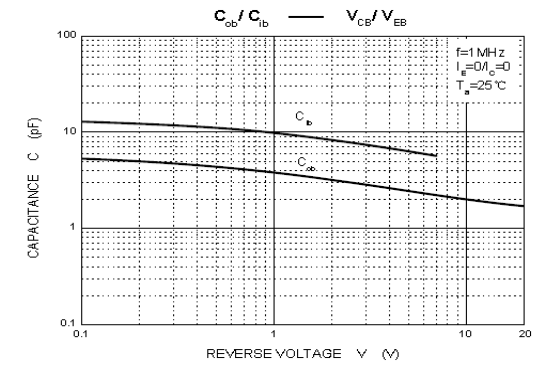
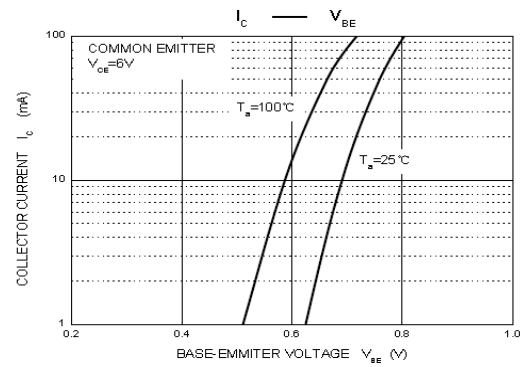
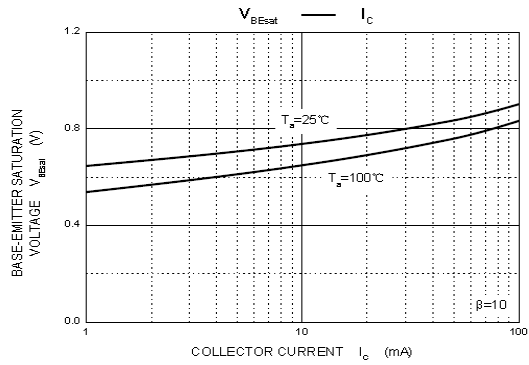
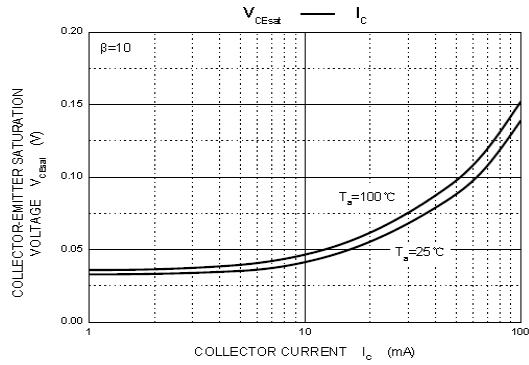
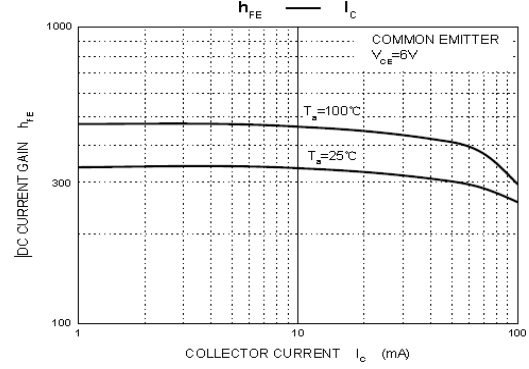
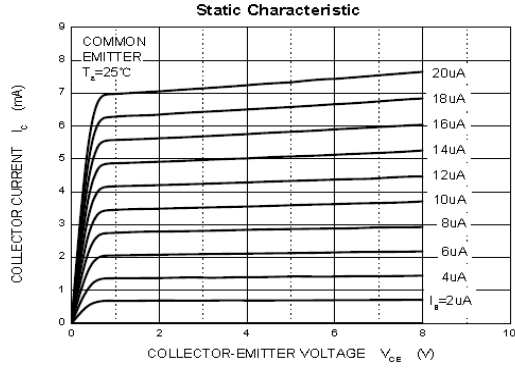
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	V _{(BR)CBO}	I _C =100μA, I _E =0	60			V
Collector-emitter breakdown voltage	V _{(BR)CEO}	I _C =1mA, I _B =0	50			V
Emitter-base breakdown voltage	V _{(BR)EBO}	I _E =100μA, I _C =0	5			V
Collector cut-off current	I _{CBO}	V _{CB} =60V, I _E =0			100	nA
Emitter cut-off current	I _{EBO}	V _{EB} =5V, I _C =0			100	nA
DC current gain	h _{FE} *	V _{CE} =6V, I _C =1mA	90		600	
Collector-emitter saturation voltage	V _{CE(sat)}	I _C =100mA, I _B =10mA			0.3	V
Base-emitter saturation voltage	V _{BE(sat)}	I _C =100mA, I _B =10mA			1	V
Base-emitter voltage	V _{BE}	V _{CE} =6V, I _C =1mA	0.55		0.65	V
Transition frequency	f _T	V _{CE} =6V, I _C =10mA		250		MHz
Collector output capacitance	C _{ob}	V _{CB} =6V, I _E =0, f=1MHz		3		pF

*Pulse test: pulse width ≤350μs, duty cycle ≤2.0%.

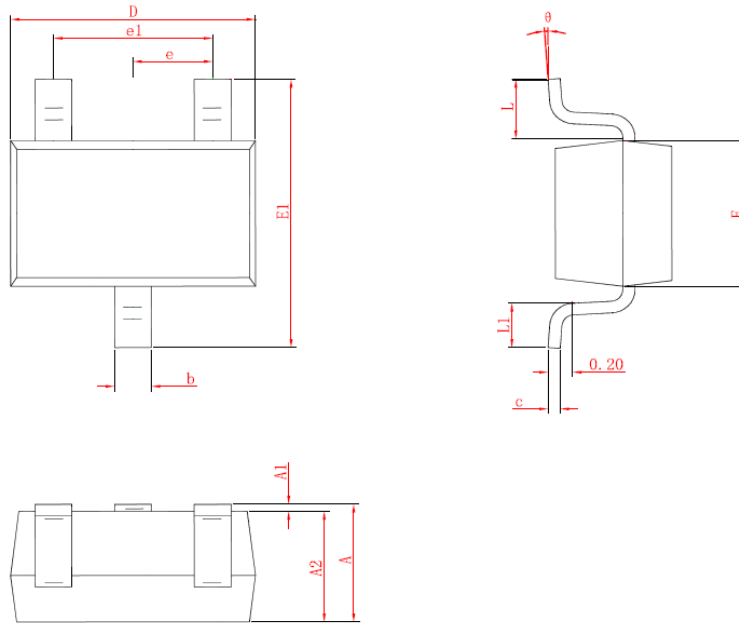
CLASSIFICATION OF h_{FE}

RANK	L4	L5	L6	L7
RANGE	90 - 180	135 - 270	200 - 400	300 - 600
MARKING	L4	L5	L6	L7

Typical Characteristics



SOT-323 PACKAGE OUTLINE DIMENSIONS



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.900	1.100	0.035	0.043
A1	0.000	0.100	0.000	0.004
A2	0.900	1.000	0.035	0.039
b	0.200	0.400	0.008	0.016
c	0.080	0.150	0.003	0.006
D	2.000	2.200	0.079	0.087
E	1.150	1.350	0.045	0.053
E1	2.150	2.450	0.085	0.096
e	0.650 TYP.		0.026 TYP.	
e1	1.200	1.400	0.047	0.055
L	0.525 REF.		0.021 REF.	
L1	0.260	0.460	0.010	0.018
θ	0°	8°	0°	8°