

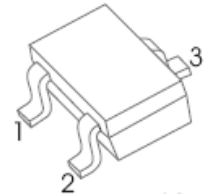
2SA812

TRANSISTOR (PNP)

FEATURES

- Small Surface Mount Package
- High DC Current Gain

SOT - 323



1. BASE
2. EMITTER
3. COLLECTOR

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

Symbol	Parameter	Value	Unit
V _{CB0}	Collector-Base Voltage	-50	V
V _{CEO}	Collector-Emitter Voltage	-45	V
V _{EBO}	Emitter-Base Voltage	-5	V
I _C	Collector Current	-100	mA
P _C	Collector Power Dissipation	200	mW
R _{θJA}	Thermal Resistance From Junction To Ambient	625	°C/W
T _j	Junction Temperature	150	°C
T _{stg}	Storage Temperature	-55~+150	°C

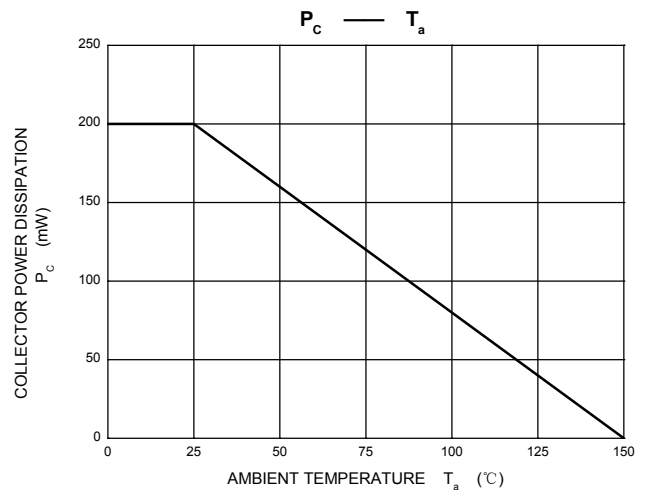
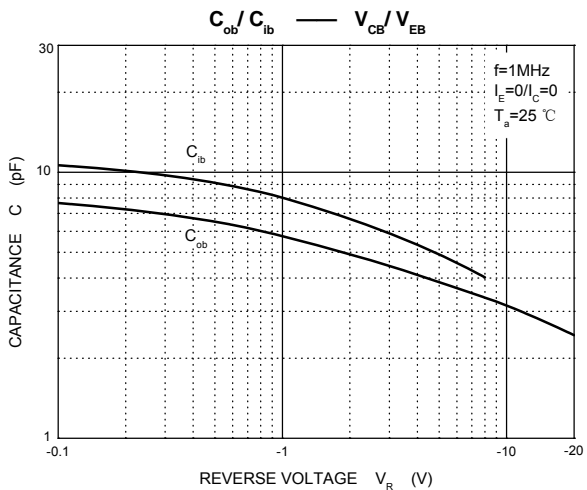
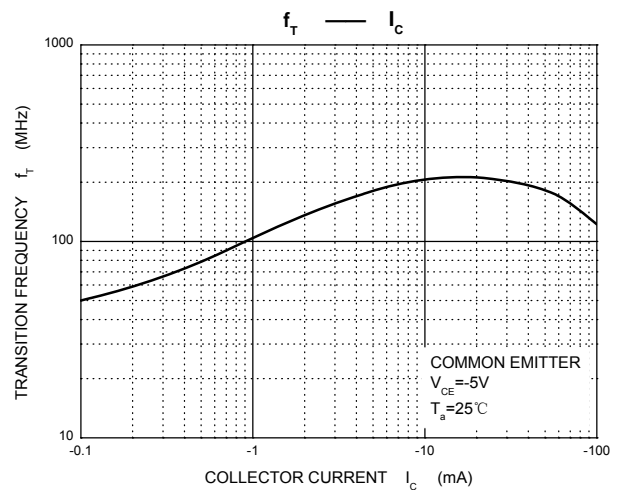
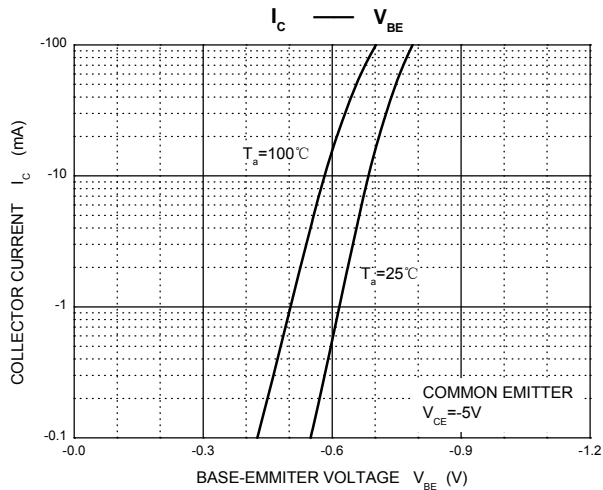
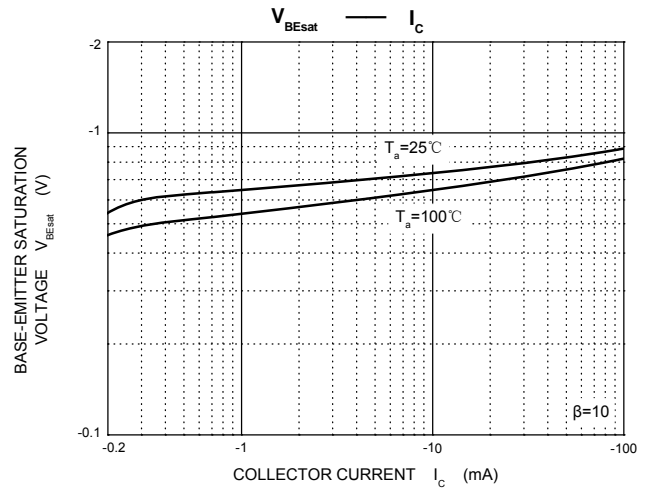
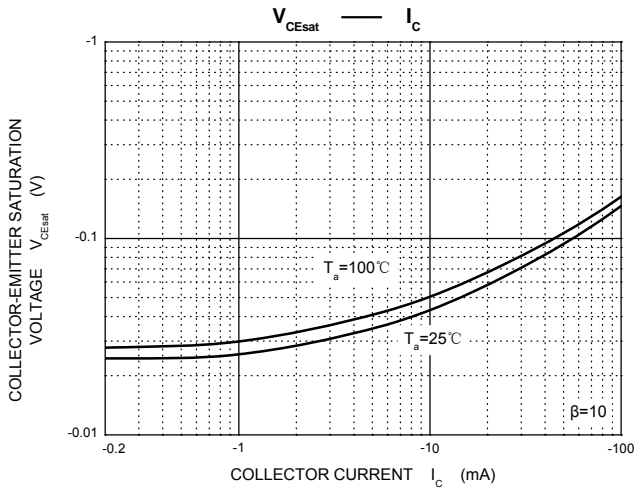
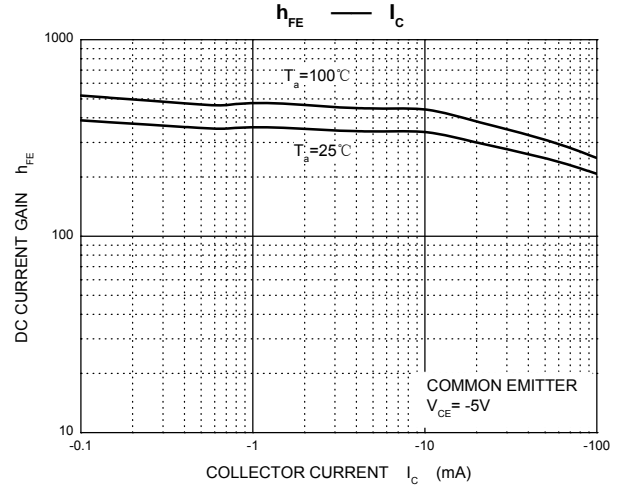
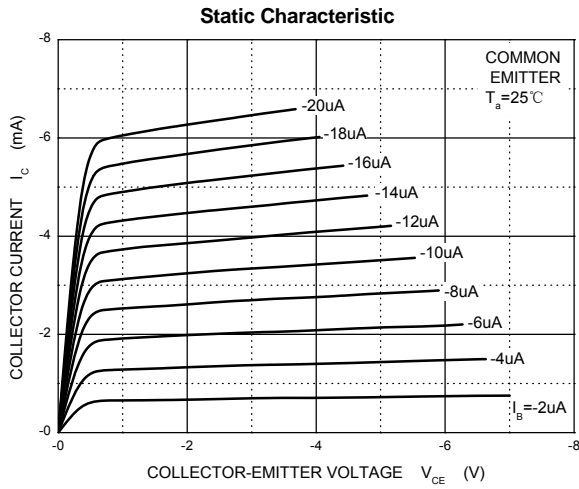
ELECTRICAL CHARACTERISTICS (T_a=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	V _{(BR)CBO}	I _C =-100μA, I _E =0	-50			V
Collector-emitter breakdown voltage	V _{(BR)CEO}	I _C =-100μA, I _B =0	-45			V
Emitter-base breakdown voltage	V _{(BR)EBO}	I _E =-100μA, I _C =0	-5			V
Collector cut-off current	I _{CBO}	V _{CB} =-50V, 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} =-5V, I _C =-1mA	200		1000	
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} =-5V, I _C =-1mA	-0.6		-0.75	V
Transition frequency	f _T	V _{CE} =-5V, I _C =-10mA, f=30MHz	150			MHz
Collector output capacitance	C _{ob}	V _{CB} =-10V, I _E =0, f=1MHz			7	pF

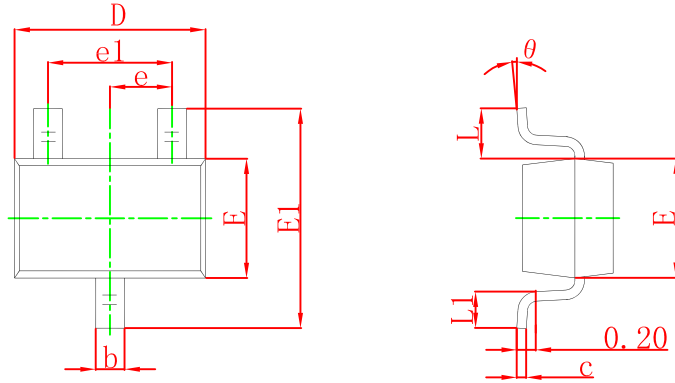
CLASSIFICATION OF h_{FE}

RANK	L	H
RANGE	200 - 450	400 - 1000
MARKING	M6	

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°	

SOT-323 Suggested Pad Layout



Note:

1. Controlling dimension: in millimeters.
2. General tolerance: ± 0.05 mm.
3. The pad layout is for reference purposes only.