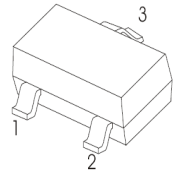




SOT-23 Plastic-Encapsulate Transistors

2SA812 TRANSISTOR (PNP)

SOT-23



- 1. BASE
- 2. EMITTER
- 3. COLLECTOR

FEATURES

- Complementary to 2SC1623
- High DC Current Gain: $h_{FE}=200$ TYP.($V_{CE}=-6V, I_C=-1mA$)
- High Voltage: $V_{ceo}=-50V$

MAXIMUM RATINGS (T_a=25°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 -Continuous	-100	mA
P _C	Collector Power Dissipation	200	mW
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	-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} =- 60 V, I _E =0			-0.1	μA
Emitter cut-off current	I _{EBO}	V _{EB} = -5V, I _C =0			-0.1	μA
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 voltage	V _{BE}	I _C =-1mA, V _{CE} =-6V	-0.58		-0.68	V
Transition frequency	f _T	V _{CE} =-6V, I _C = -10mA		180		MHz
Collector output capacitance	C _{ob}	V _{CB} =-10V, I _E =0, f=1MHz		4.5		pF

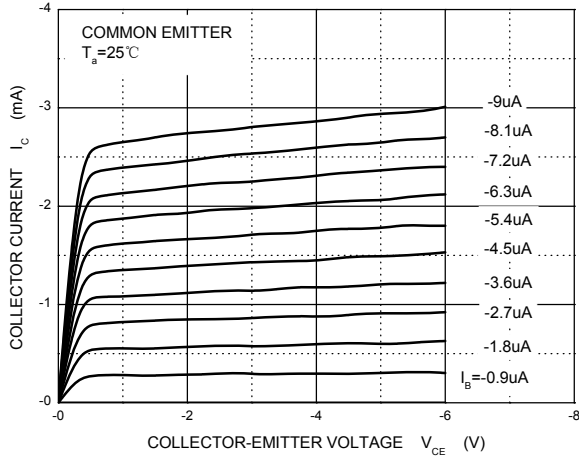
CLASSIFICATION OF h_{FE}

Rank	M4	M5	M6	M7
Range	90-180	135-270	200-400	300-600
Marking	M4	M5	M6	M7

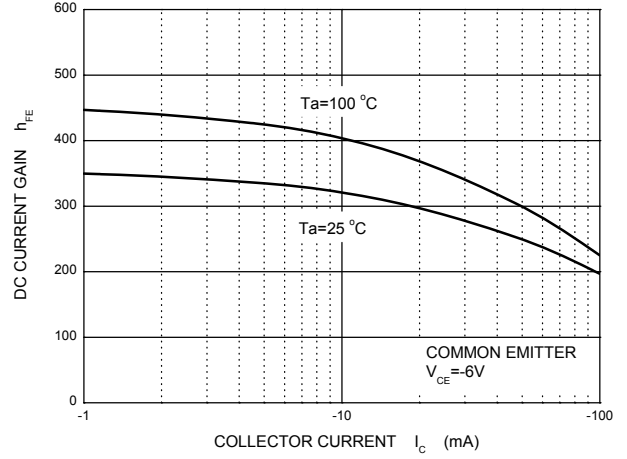
Typical Characteristics

2SA812

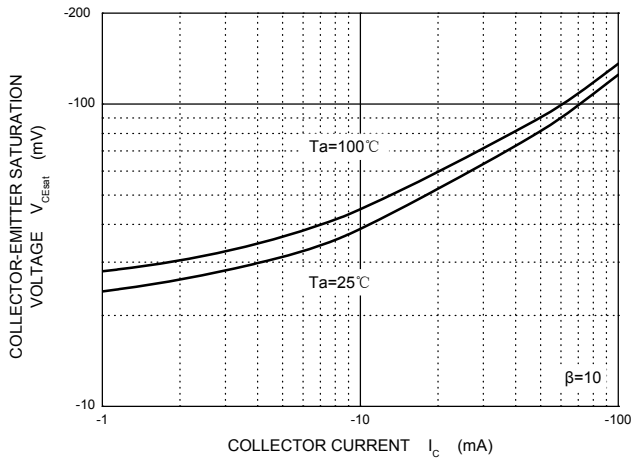
Static Characteristic



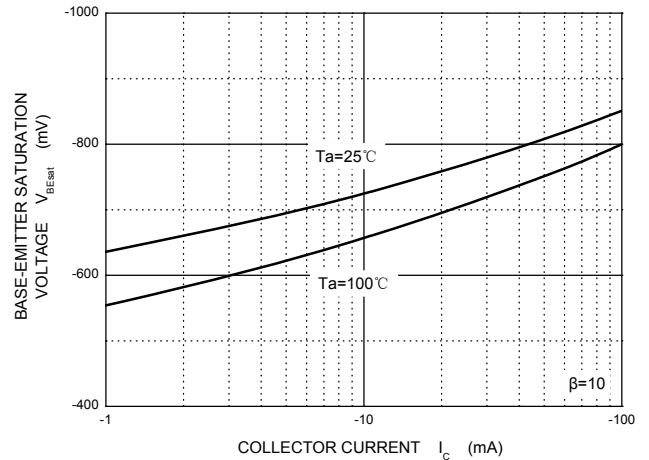
h_{FE} — I_C



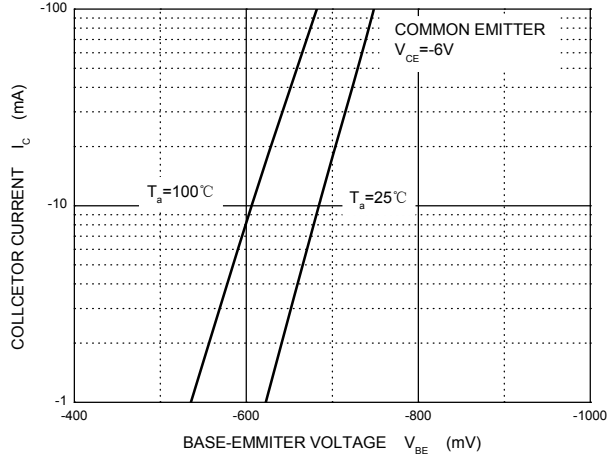
V_{CEsat} — I_C



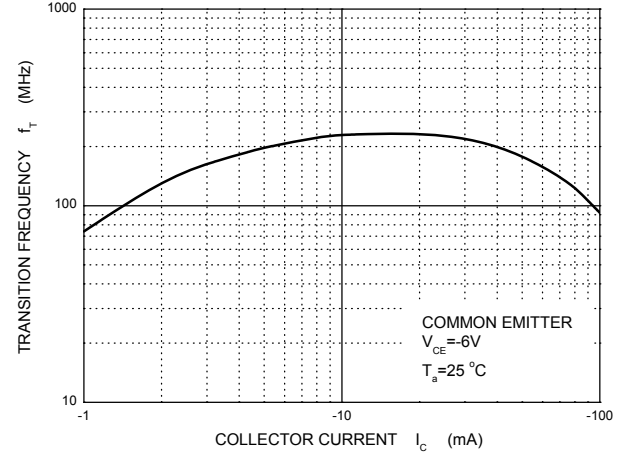
V_{BEsat} — I_C



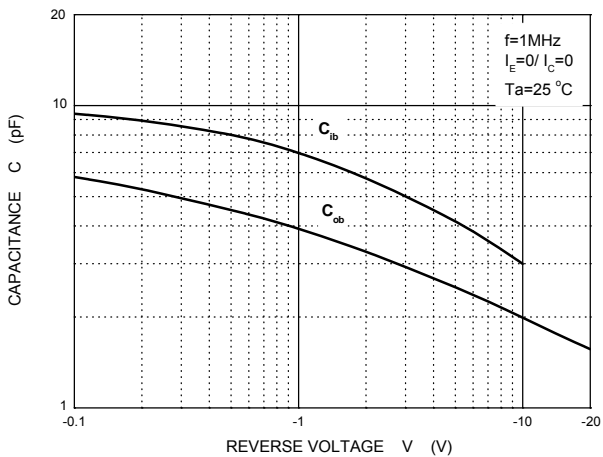
I_C — V_{BE}



f_T — I_C



C_{ob}/C_{ib} — V_{CB}/V_{EB}



P_c — T_a

