



SOT-23 Plastic-Encapsulate Transistors

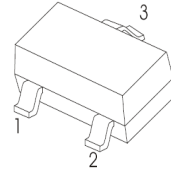
2SC2712 TRANSISTOR (NPN)

FEATURE

- Low Noise: NF=1 dB (Typ),10dB(MAX)
- Complementary to 2SA1162

SOT-23

1. BASE
2. EMITTER
3. COLLECTOR



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

Symbol	Parameter	Value	Unit
V _{CB0}	Collector-Base Voltage	60	V
V _{CEO}	Collector-Emitter Voltage	50	V
V _{EBO}	Emitter-Base Voltage	5	V
I _C	Collector Current -Continuous	150	mA
P _C	Collector Power Dissipation	150	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 =2mA	70		700	
Collector-emitter saturation voltage	V _{CE(sat)}	I _C = 100mA, I _B =10mA		0.1	0.25	V
Transition frequency	f _T	V _{CE} =10V, I _C = 1mA	80			MHz
Output capacitance	C _{ob}	V _{CB} =10V, I _E =0, f=1 MHz		2.0	3.5	pF
Noise Figure	NF	V _{CE} =6V, I _C =0.1mA, f=1kHz, R _g =10kΩ		1.0	10	dB

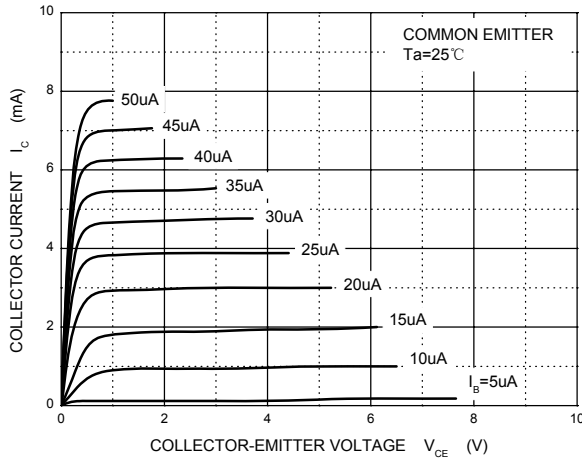
CLASSIFICATION OF h_{FE}

Rank	O	Y	GR	BL
Range	70-140	120-240	200-400	350-700
Marking	LO	LY	LG	LL

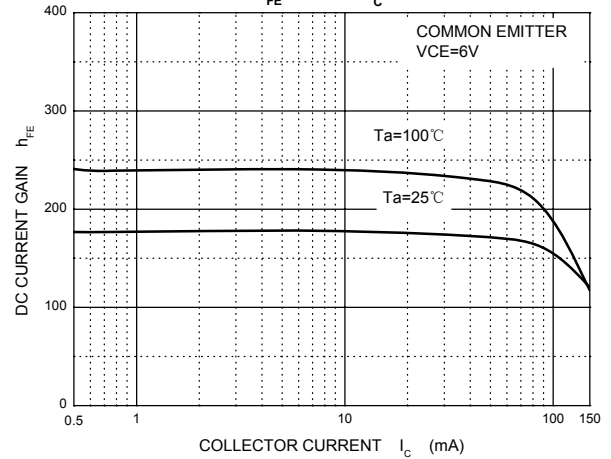
Typical Characteristics

2SC2712

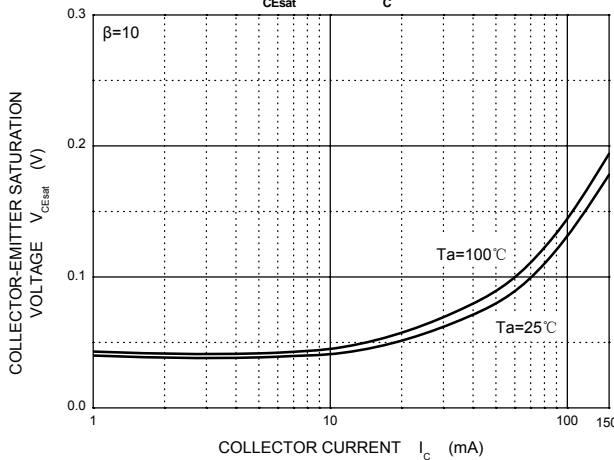
Static Characteristic



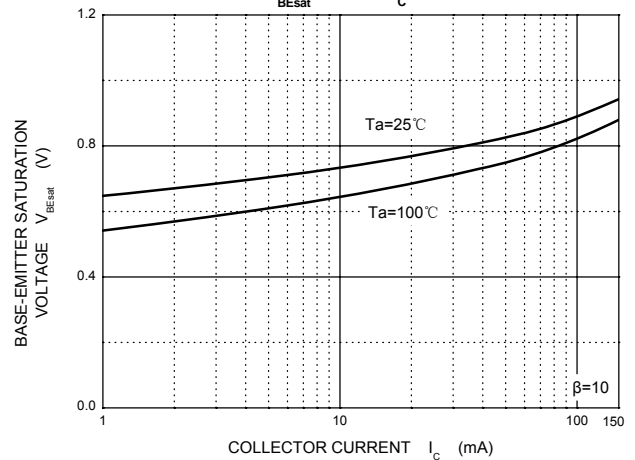
h_{FE} — I_c



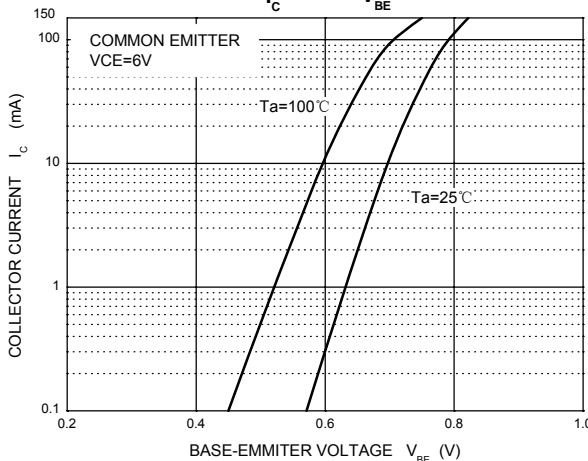
V_{CEsat} — I_c



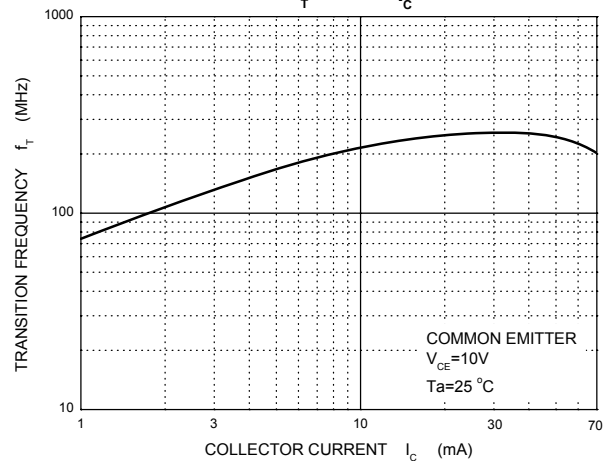
V_{BEsat} — I_c



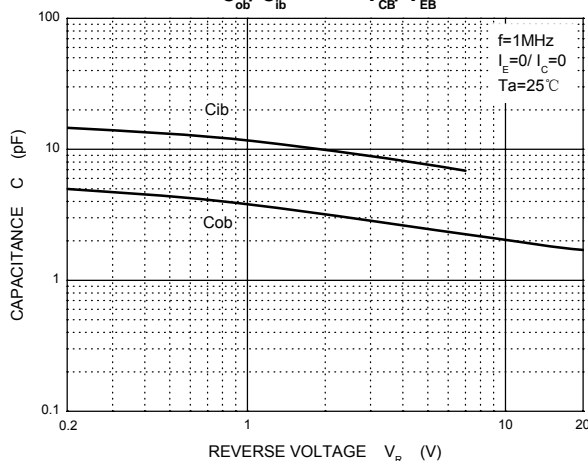
I_c — V_{BE}



f_T — I_c



C_{ob}/C_{ib} — V_{CB}/V_{EB}



P_c — T_a

