

SOT-89-3L Plastic-Encapsulate Transistors

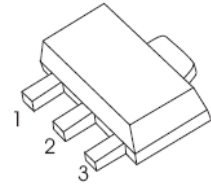
2SA1213 TRANSISTOR (PNP)

FEATURES

- Complementary to 2SC2873
- Small Flat Package
- Power Amplifier and Switching Applications
- Low Saturation Voltage
- High Speed Switching Time

SOT-89-3L

1. BASE
2. COLLECTOR
3. EMITTER



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

Symbol	Parameter	Value	Unit
V _{CBO}	Collector-Base Voltage	-50	V
V _{CEO}	Collector-Emitter Voltage	-50	V
V _{EBO}	Emitter-Base Voltage	-5	V
I _C	Collector Current	-2	A
P _C	Collector Power Dissipation	500	mW
R _{θJA}	Thermal Resistance From Junction To Ambient	250	°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 = -0.1mA, I _E =0	-50			V
Collector-emitter breakdown voltage	V _{(BR)CEO}	I _C =-10mA, I _B =0	-50			V
Emitter-base breakdown voltage	V _{(BR)EBO}	I _E =-0.1mA, 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} =-2V, I _C =-500mA	70		240	
		V _{CE} =-2V, I _C =-2A	20			
Collector-emitter saturation voltage	V _{CE(sat)}	I _C =-1A, I _B =-50mA			-0.5	V
Base-emitter saturation voltage	V _{BE(sat)}	I _C =-1A, I _B =-50mA			-1.2	V
Collector output capacitance	C _{ob}	V _{CB} =-10V, I _E =0, f=1MHz		40		pF
Transition frequency	f _T	V _{CE} =-2V, I _C = -0.5A	100			MHz

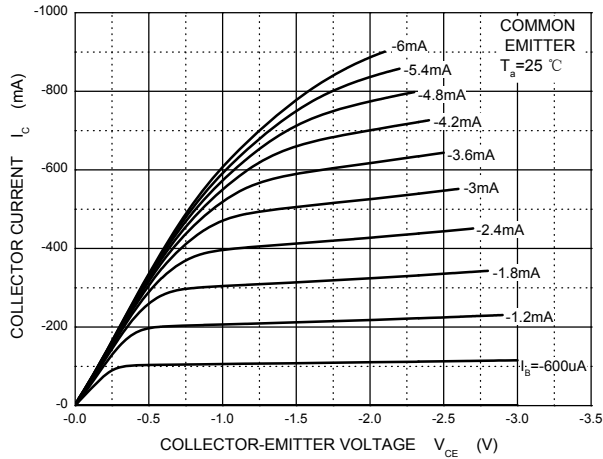
CLASSIFICATION OF h_{FE}

RANK	O	Y
RANGE	70 - 140	120 - 240
MARKING	NO	NY

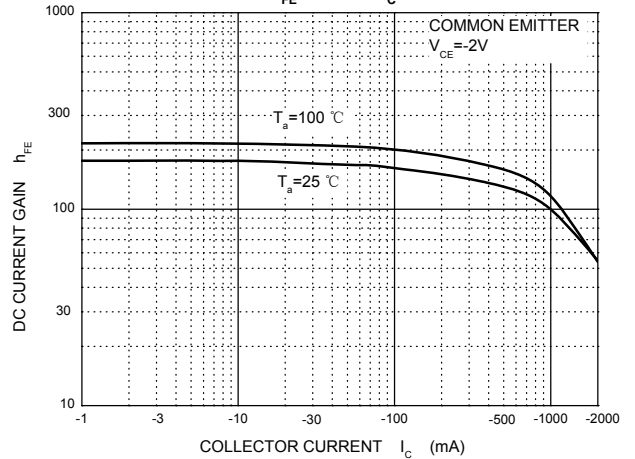
Typical Characteristics

2SA1213

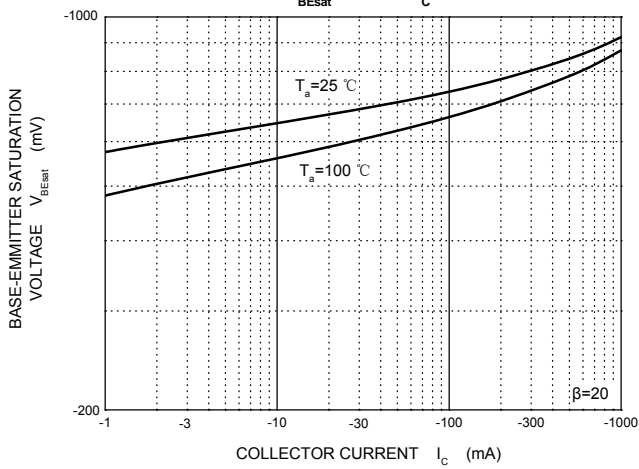
Static Characteristic



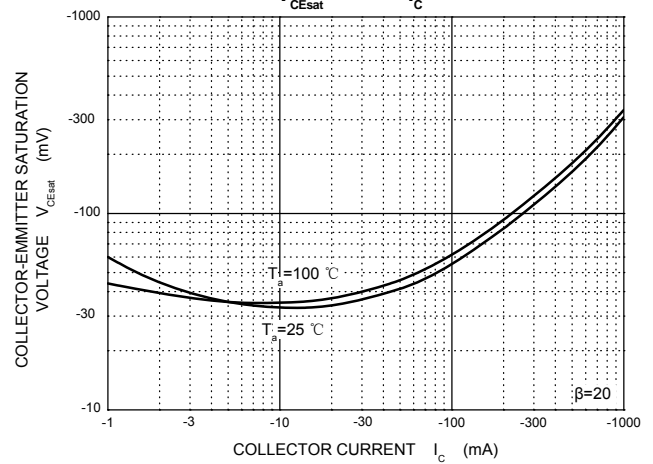
$h_{FE} - I_c$



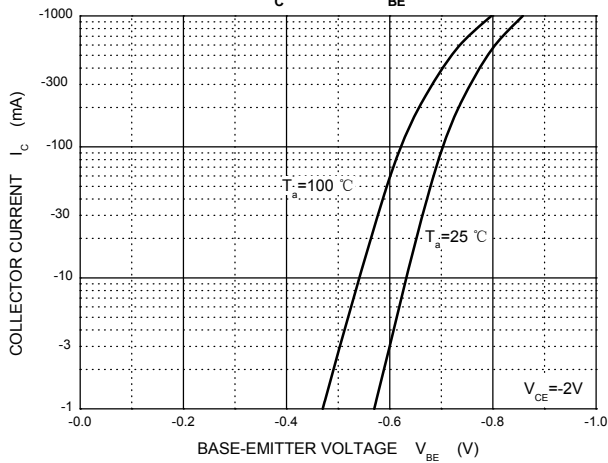
$V_{BEsat} - I_c$



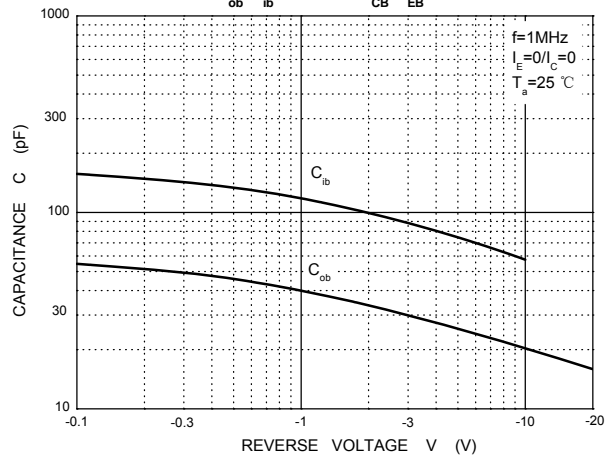
$V_{CEsat} - I_c$



$I_c - V_{BE}$



$C_{ob}/C_{ib} - V_{CE}/V_{EB}$



$P_c - T_a$

