



JIANGSU CHANGJIANG ELECTRONICS TECHNOLOGY CO., LTD

TO-251/TO-252-2L Plastic-Encapsulate Transistors

2SB1412 TRANSISTOR (PNP)

FEATURES

Power amplifier applications

MAXIMUM RATINGS* $T_A=25^{\circ}\text{C}$ unless otherwise noted

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	-30	V
V_{CEO}	Collector-Emitter Voltage	-20	V
V_{EBO}	Emitter-Base Voltage	-6	V
I_C	Collector Current –Continuous	-5	A
P_C	Collector Dissipation	1000	mW
T_J	Junction Temperature	150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature	-55-150	$^{\circ}\text{C}$

TO-251
TO-252-2L



1.BASE

2.COLLECTOR

3.EMITTER



ELECTRICAL CHARACTERISTICS($T_{amb}=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=-50\mu\text{A}, I_E=0$	-30			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=-1\text{mA}, I_B=0$	-20			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=-50\mu\text{A}, I_C=0$	-6			V
Collector cut-off current	I_{CBO}	$V_{CB}=-20\text{V}, I_E=0$			-0.5	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=-5\text{V}, I_C=0$			-0.5	μA
DC current gain	h_{FE}	$V_{CE}=-2\text{V}, I_C=-500\text{mA}$	82		390	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=-4\text{A}, I_B=-100\text{mA}$			-1	V
Transition frequency	f_T	$V_{CE}=-6\text{V}, I_C=-50\text{mA}, f=30\text{MHz}$		120		MHz
Collector output capacitance	C_{ob}	$V_{CB}=-20\text{V}, I_E=0, f=1\text{MHz}$		60		pF

CLASSIFICATION OF $h_{FE(1)}$

Rank	P	Q	R
Range	82-180	120-270	180-390

Typical Characteristics

2SB1412

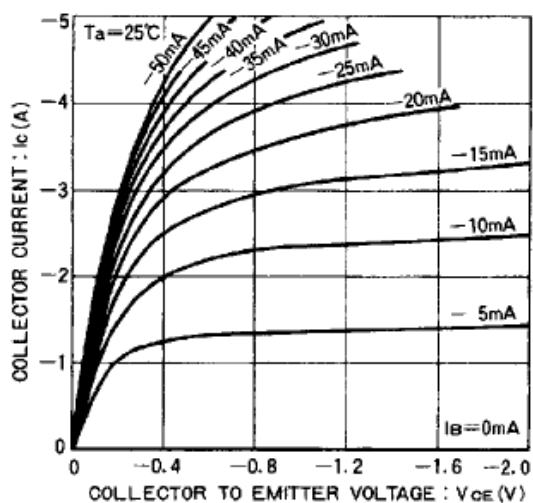


Figure 1

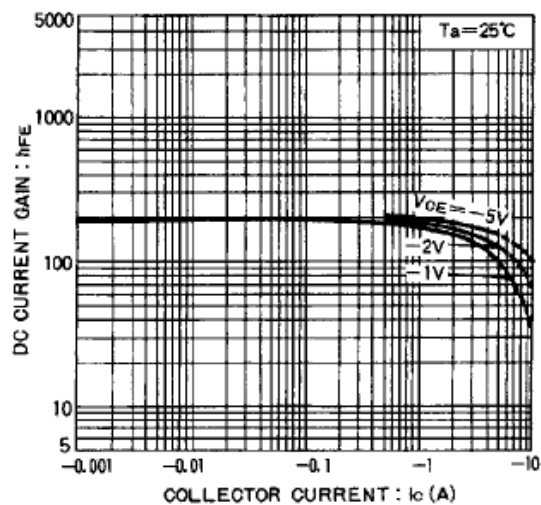


Figure 2

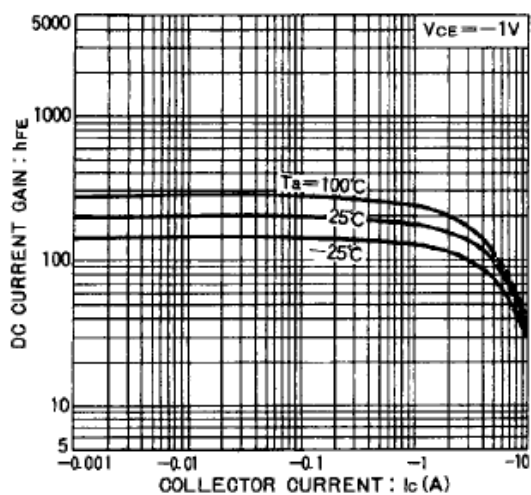


Figure 3

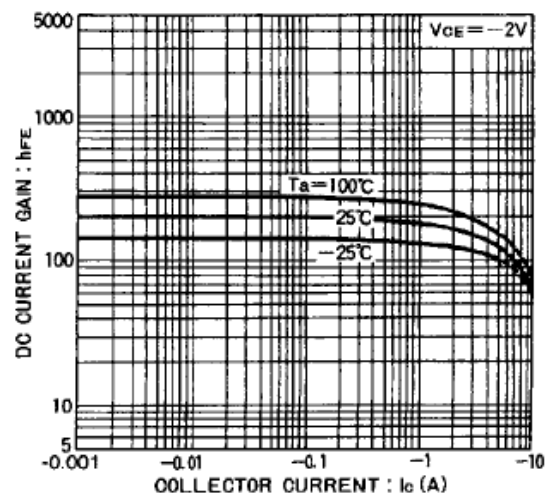


Figure 4

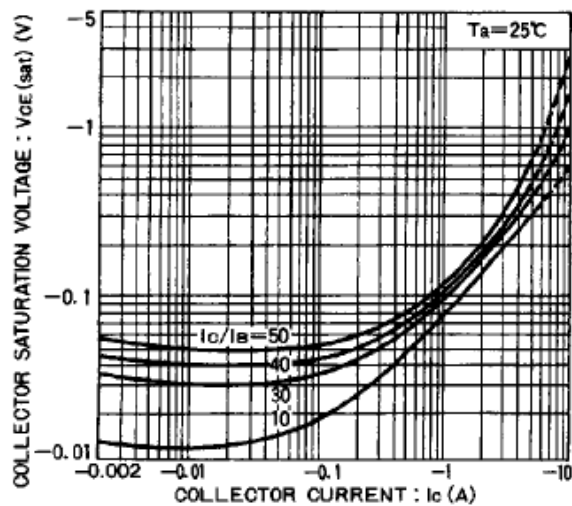


Figure 5

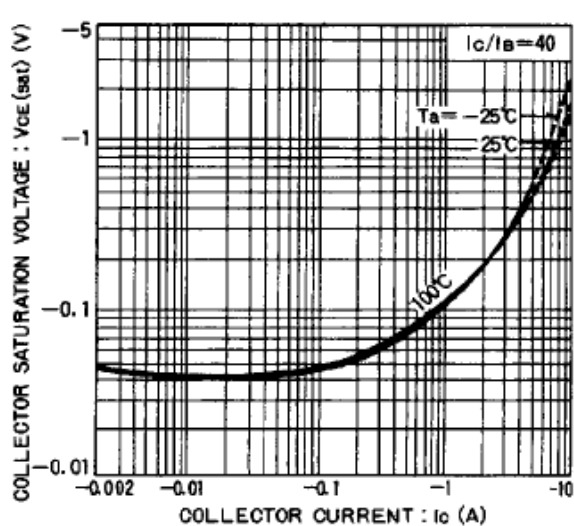


Figure 6

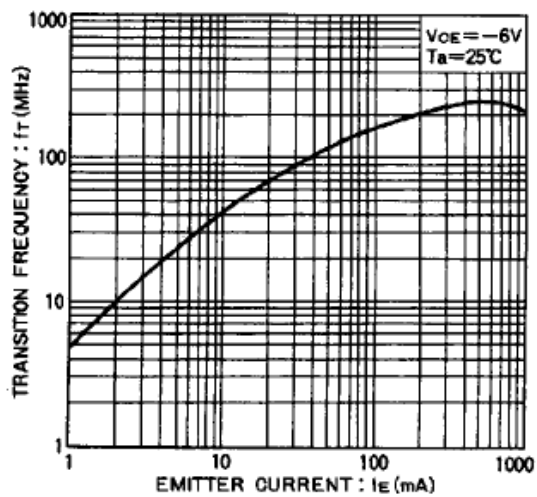


Figure 7

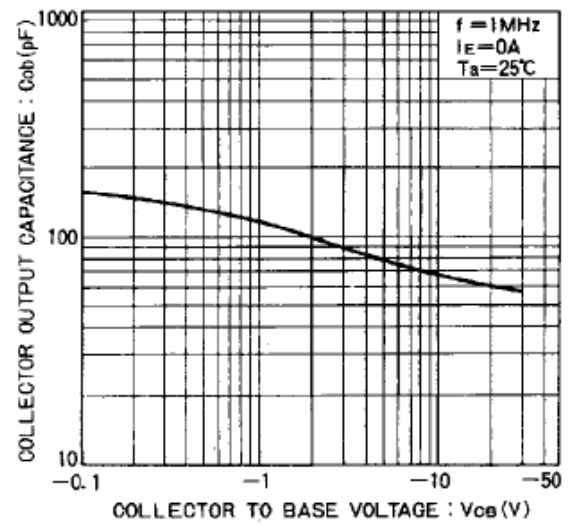


Figure 8

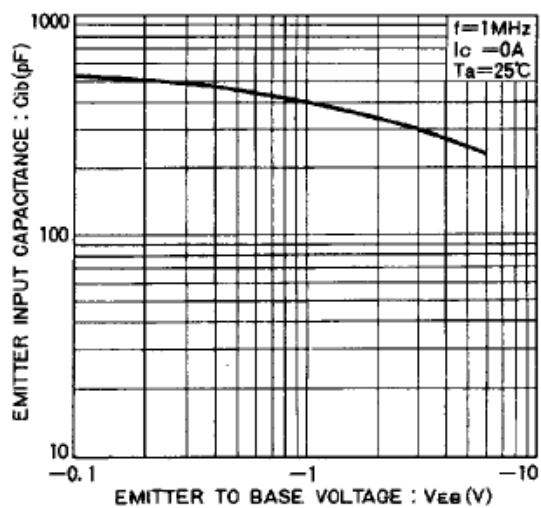


Figure 9