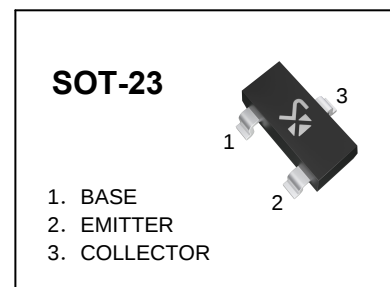


NPN Silicon Epitaxial Planar Transistor

1. Features

- AM/FM Amplifier, Local Oscillator of FM/VHF Tuner High Current Gain Bandwidth Product



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

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	50	V
V_{CEO}	Collector-Emitter Voltage	45	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	$^{\circ}\text{C}$
T_{stg}	Storage Temperature	-55-+150	$^{\circ}\text{C}$

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

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=100\mu\text{A}, I_E=0$	50			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=1\text{mA}, I_B=0$	45			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=100\mu\text{A}, I_C=0$	5			V
Collector cut-off current	I_{CBO}	$V_{CB}=50\text{V}, I_E=0$			0.05	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=5\text{V}, I_C=0$			0.05	μA
DC current gain	h_{FE}	$V_{CE}=5\text{V}, I_C=1\text{mA}$	200		450	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=100\text{mA}, I_B=5\text{mA}$			0.6	V
Transition frequency	f_T	$V_{CE}=5\text{V}, I_C=10\text{mA}$	100			MHz
Collector output capacitance	C_{ob}	$V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$			6	PF
Noise Figure	NF	$V_{CE}=5\text{V}, I_C=200\mu\text{A}, R_s=2\text{K}\Omega, f=1\text{KMHZ}$			10	dB

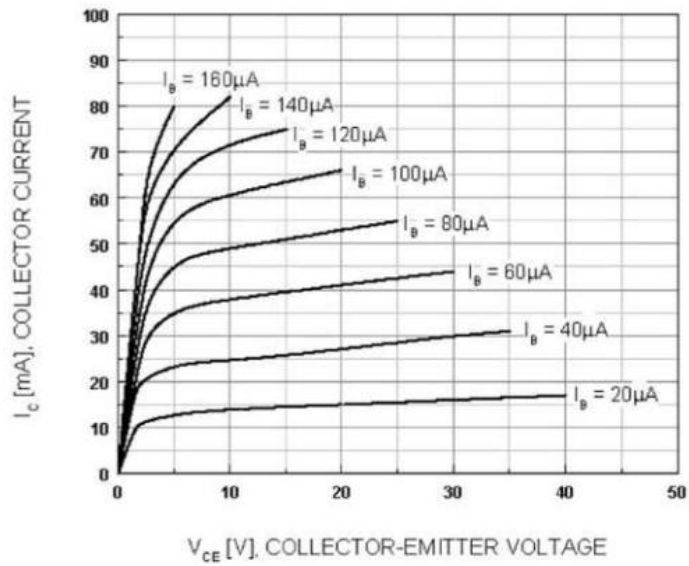


Figure 1. Static Characteristic

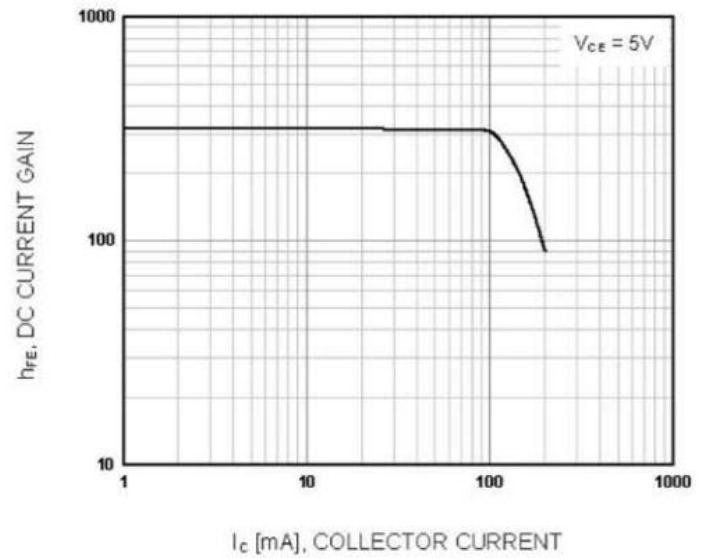


Figure 2. DC current Gain

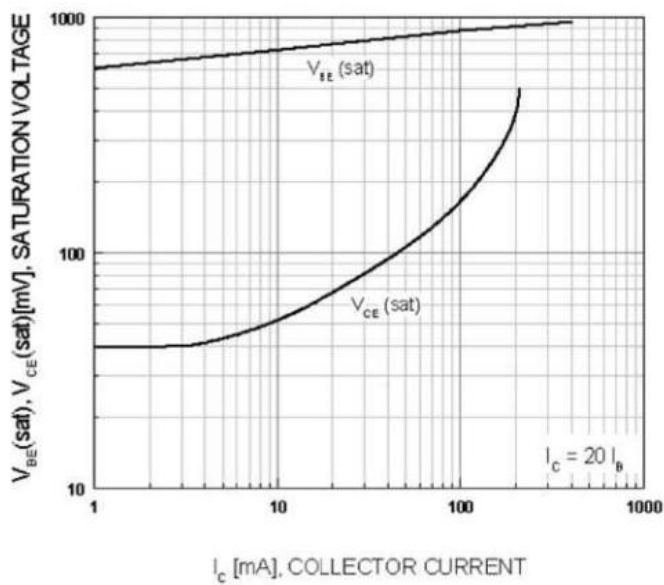


Figure 3. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

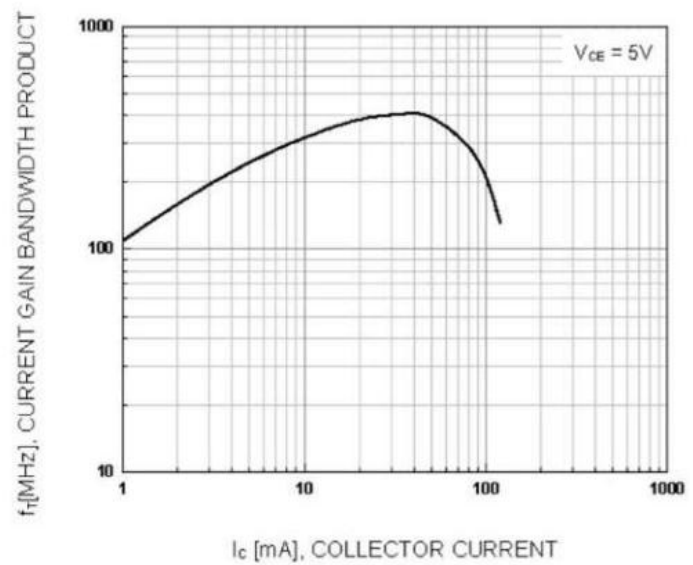


Figure 4. Current Gain Bandwidth Product

PACKAGE OUTLINE

Plastic surface mounted package; 3 leads

SOT-23

