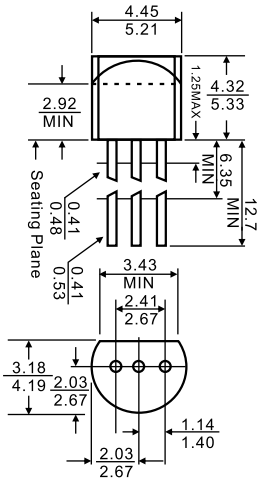
2N5550(NPN)

TO-92 Bipolar Transistors

1. EMITTER
2. BASE
3. COLLECTOR

TO-92



Dimensions in inches and (millimeters)

Features

- ✧ **Switching and amplification in high voltage**
- ✧ **Applications such as telephony**
- ✧ **Low current(max. 600mA)**
- ✧ **High voltage(max.160V)**

MAXIMUM RATINGS (T_A=25℃ unless otherwise noted)

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	160	V
V_{CEO}	Collector-Emitter Voltage	140	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current -Continuous	0.6	A
P_C	Collector Power Dissipation	0.625	W
T_j	Junction Temperature	150	℃
T_{stg}	Storage Temperature	-55-150	℃

ELECTRICAL CHARACTERISTICS (Tamb=25℃ unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=100μA,I_E=0	160			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C=1mA, I_B=0	140			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=10μA, I_C=0	6			V
Collector cut-off current	I_{CBO}	V_{CB}=100V,I_E=0			0.1	μA
Emitter cut-off current	I_{EBO}	V_{EB}=4V, I_C=0			0.05	μA
DC current gain	$h_{FE(1)}$	V_{CE}=5V,I_C=1mA	60			
	$h_{FE(2)}$	V_{CE}=5V,I_C =10mA	60		250	
	$h_{FE(3)}$	V_{CE}=5V,I_C=50mA	20			
Collector-emitter saturation voltage	V_{CEsat}	I_C= 10mA, I_B=1mA I_C= 50mA, I_B=5mA			0.15 0.25	V
Base-emitter saturation voltage	V_{BEsat}	I_C= 10mA, I_B=1mA I_C= 50mA, I_B=5 mA			1 1.2	V
Transition frequency	f_T	V_{CE}=10V,I_C=10mA,,f=100MHz	100		300	MHz
Collector output capacitance	C_{ob}	V_{CB}=10V,I_E=0,f=1MHz			6	pF
Noise figure	NF	V_{CE}=5V,I_c=0.25mA, f=1KHZ,Rs=1kΩ			10	dB

Typical Characteristics

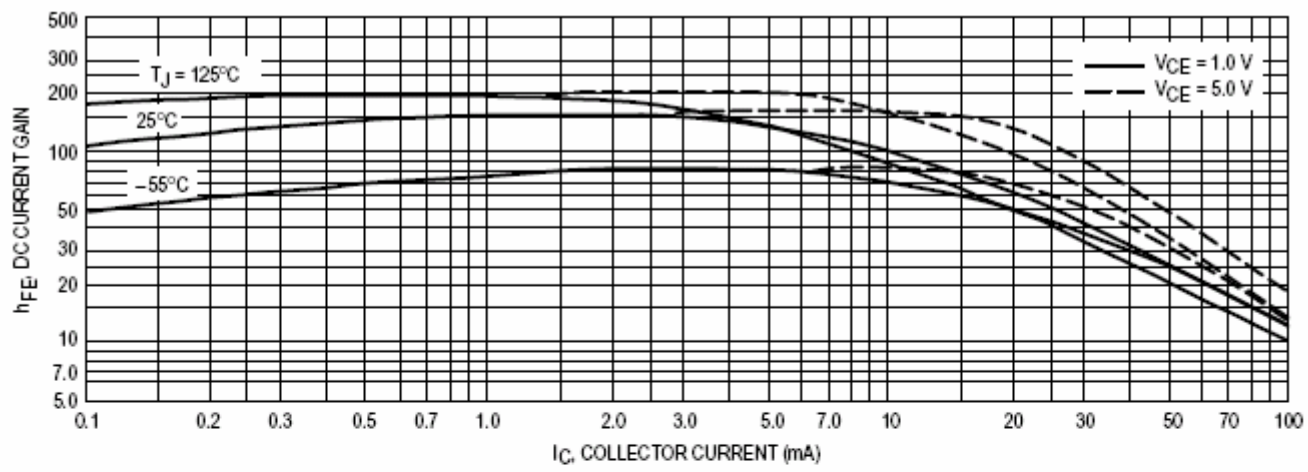


Figure 1. DC Current Gain