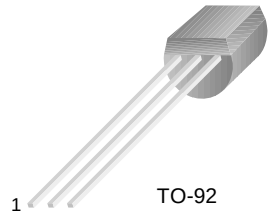
FAIRCHILD
SEMICONDUCTOR®

2N5401

Amplifier Transistor

- Collector-Emitter Voltage: V_{CEO}= 150V
- Collector Dissipation: P_C (max)=625mW
- Suffix “-C” means Conter Collector (1. Emitter 2. Collector 3. Base)



TO-92

1. Emitter 2. Base 3. Collector

PNP Epitaxial Silicon Transistor

Absolute Maximum Ratings T_a=25°C unless otherwise noted

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	-160	V
V_{CEO}	Collector-Emitter Voltage	-150	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current	-600	mA
P_C	Collector Dissipation	625	mW
T_J	Junction Temperature	150	°C
T_{STG}	Storage Temperature	-55 ~ 150	°C

Electrical Characteristics T_a=25°C unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
BV_{CBO}	Collector-Base Breakdown Voltage	I_C= -100μA, I_E=0	-160			V
BV_{CEO}	* Collector-Emitter Breakdown Voltage	I_C= -1mA, I_B=0	-150			V
BV_{EBO}	Emitter-Base Breakdown Voltage	I_E= -10μA, I_C=0	-5			V
I_{CBO}	Collector Cut-off Current	V_{CB}= -120V, I_E=0			-50	nA
I_{EBO}	Emitter Cut-off Current	V_{EB}= -3V, I_C=0			-50	nA
h_{FE}	* DC Current Gain	I_C= -1mA, V_{CE}= -5V I_C= -10mA, V_{CE}= -5V I_C= -50mA, V_{CE}= -5V	30 60 50		 240 	
V_{CE} (sat)	* Collector-Emitter Saturation Voltage	I_C= -10mA, I_B= -1mA I_C= -50mA, I_B= -5mA			-0.2 -0.5	V V
V_{BE} (sat)	* Base-Emitter Saturation Voltage	I_C= -10mA, I_B= -1mA I_C= -50mA, I_B= -5mA			-1 -1	V V
f_T	Current Gain Bandwidth Product	I_C= -10mA, V_{CE}= -10V, f=100MHz	100		400	MHz
C_{ob}	Output Capacitance	V_{CB}= -10V, I_E=0, f=1MHz			6	pF
N_F	Noise Figure	I_C= -250μA, V_{CE}= -5V R_S=1KΩ f=10Hz to 15.7KHz			8	dB

* Pulse Test: Pulse Width≤300μs, Duty Cycle≤2%

Typical Characteristics

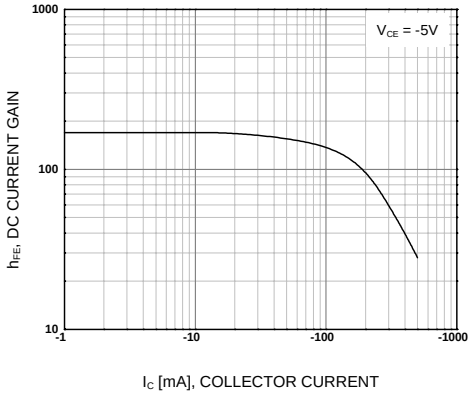


Figure 1. DC current Gain

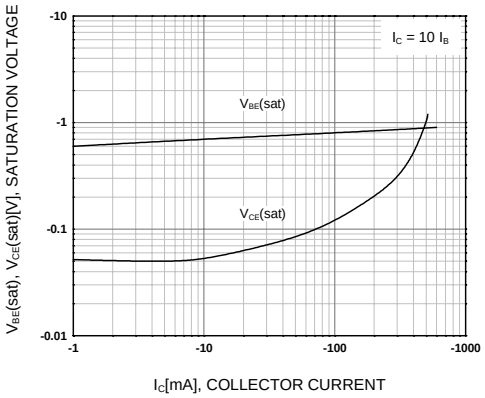


Figure 2. Base-Emitter Saturation Voltage Collector-Emitter Saturation Voltage

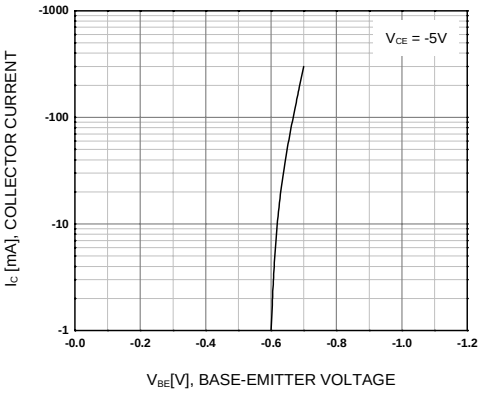


Figure 3. Base-Emitter On Voltage

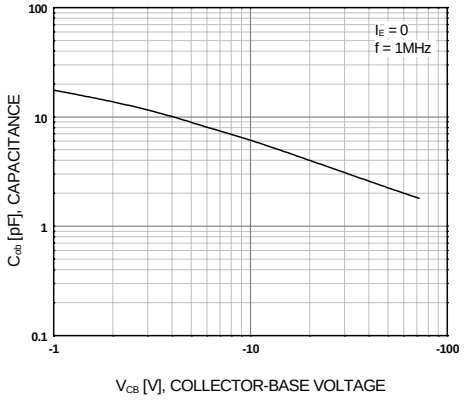


Figure 4. Output Capacitance

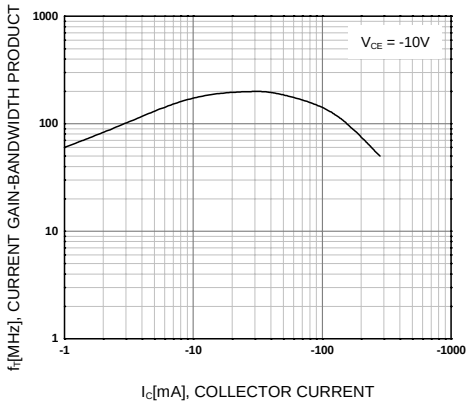
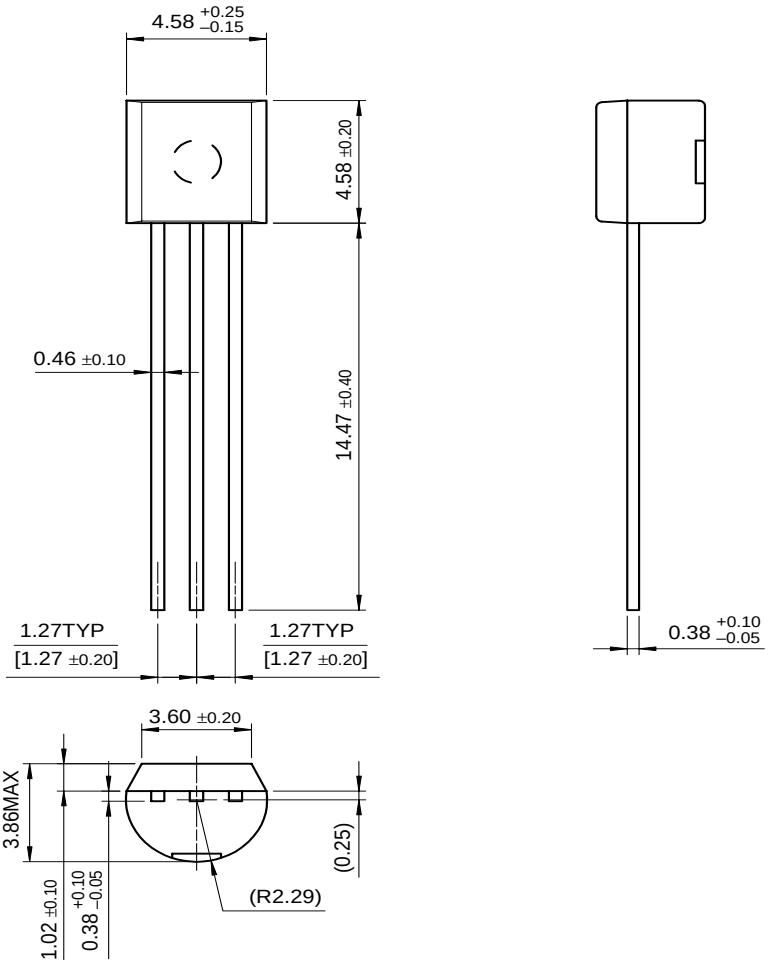


Figure 5. Current Gain Bandwidth Product

Package Dimensions

TO-92



Dimensions in Millimeters

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