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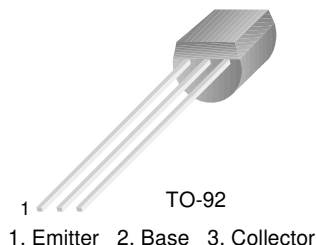
Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



## 2N5401

### Amplifier Transistor

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



### PNP Epitaxial Silicon Transistor

#### Absolute Maximum Ratings $T_a = 25^\circ C$ 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	$^\circ C$
$T_{STG}$	Storage Temperature	-55 ~ 150	$^\circ C$

#### Electrical Characteristics $T_a = 25^\circ C$ unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
$BV_{CBO}$	Collector-Base Breakdown Voltage	$I_C = -100\mu A, I_E = 0$	-160			V
$BV_{CEO}$	* Collector-Emitter Breakdown Voltage	$I_C = -1mA, I_B = 0$	-150			V
$BV_{EBO}$	Emitter-Base Breakdown Voltage	$I_E = -10\mu A, I_C = 0$	-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
$V_{BE(sat)}$	* Base-Emitter Saturation Voltage	$I_C = -10mA, I_B = -1mA$ $I_C = -50mA, I_B = -5mA$			-1 -1	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	$I_C = -250\mu A, V_{CE} = -5V$ $R_S = 1K\Omega$ $f = 10Hz$ to $15.7KHz$			8	dB

\* Pulse Test: Pulse Width  $\leq 300\mu s$ , Duty Cycle  $\leq 2\%$

# Typical Characteristics

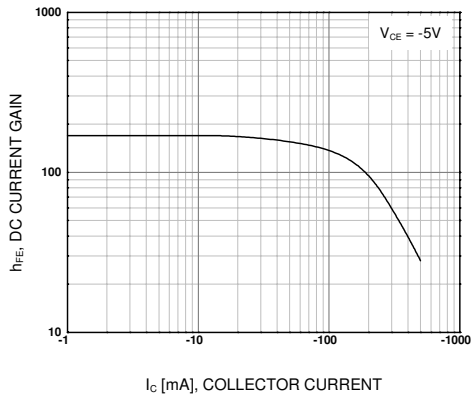


Figure 1. DC current Gain

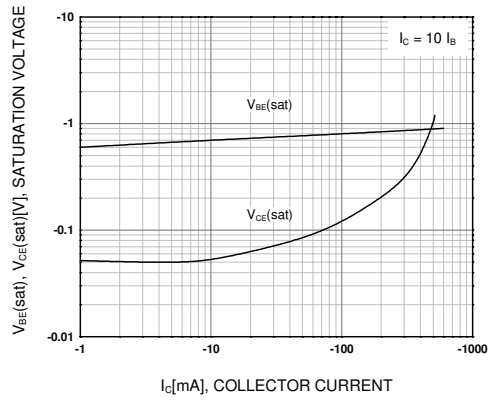


Figure 2. Base-Emitter Saturation Voltage  
Collector-Emitter Saturation Voltage

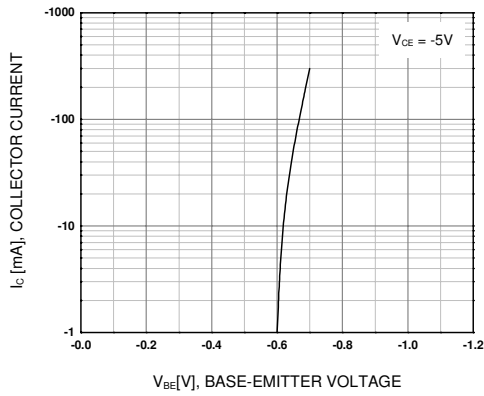


Figure 3. Base-Emitter On Voltage

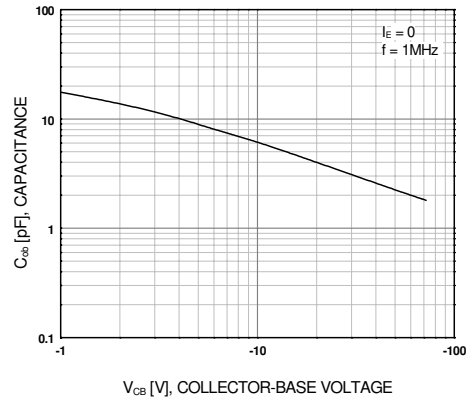


Figure 4. Output Capacitance

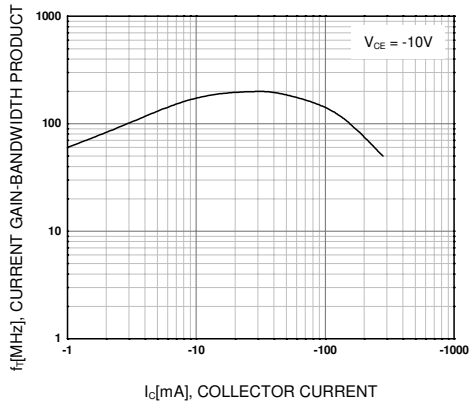
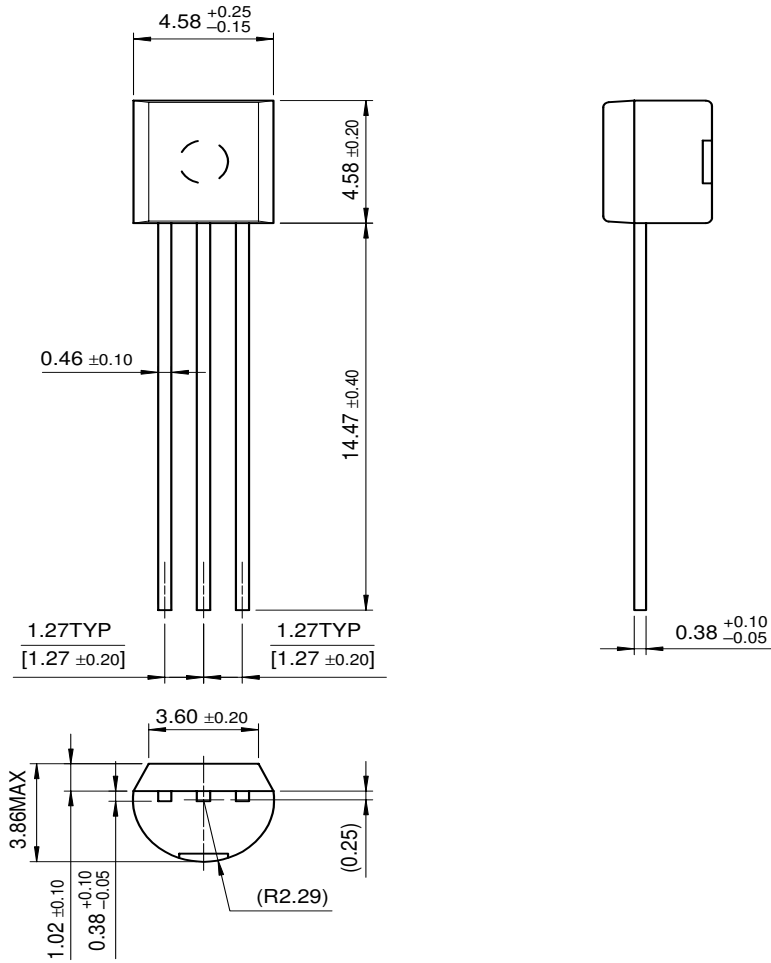


Figure 5. Current Gain Bandwidth Product

# Package Dimensions

2N5401

## TO-92



Dimensions in Millimeters

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Bottomless <sup>™</sup>	FPS <sup>™</sup>	MICROCOUPLER <sup>™</sup>	PowerTrench <sup>®</sup>	SuperSOT <sup>™</sup> -6
CoolFET <sup>™</sup>	FRFET <sup>™</sup>	MicroFET <sup>™</sup>	QFET <sup>®</sup>	SuperSOT <sup>™</sup> -8
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