



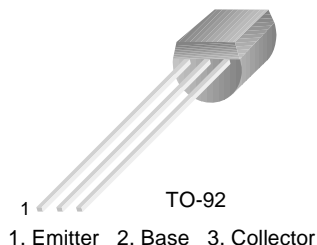
**THE DATASHEET OF
2N5401CTA**



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

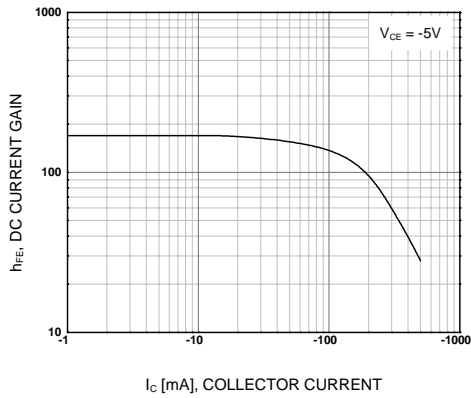


Figure 1. DC current Gain

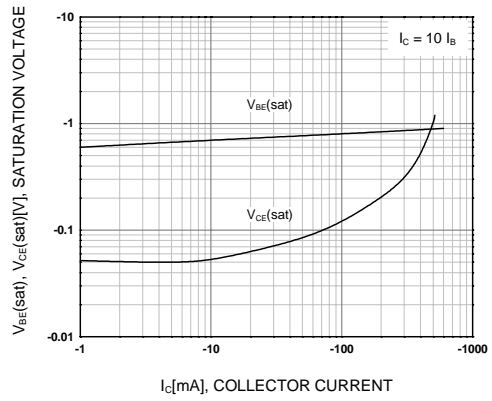


Figure 2. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

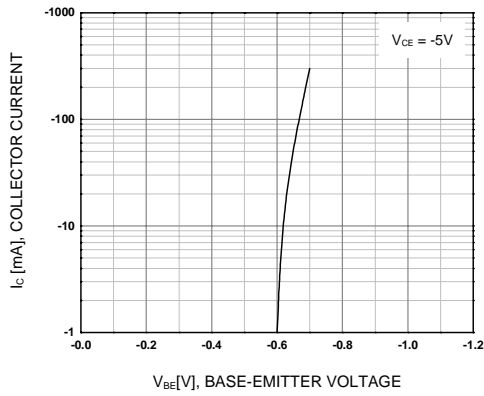


Figure 3. Base-Emitter On Voltage

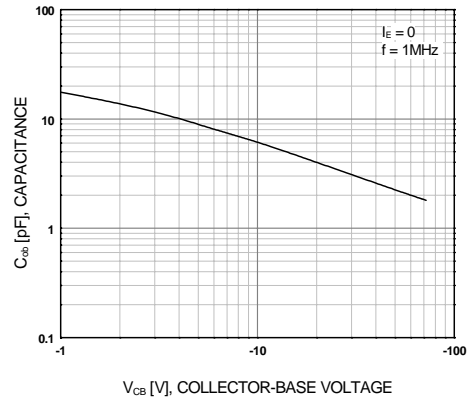


Figure 4. Output Capacitance

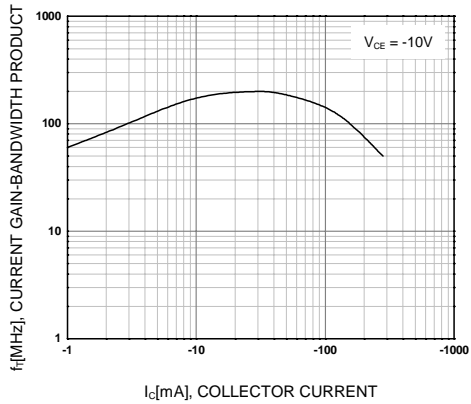
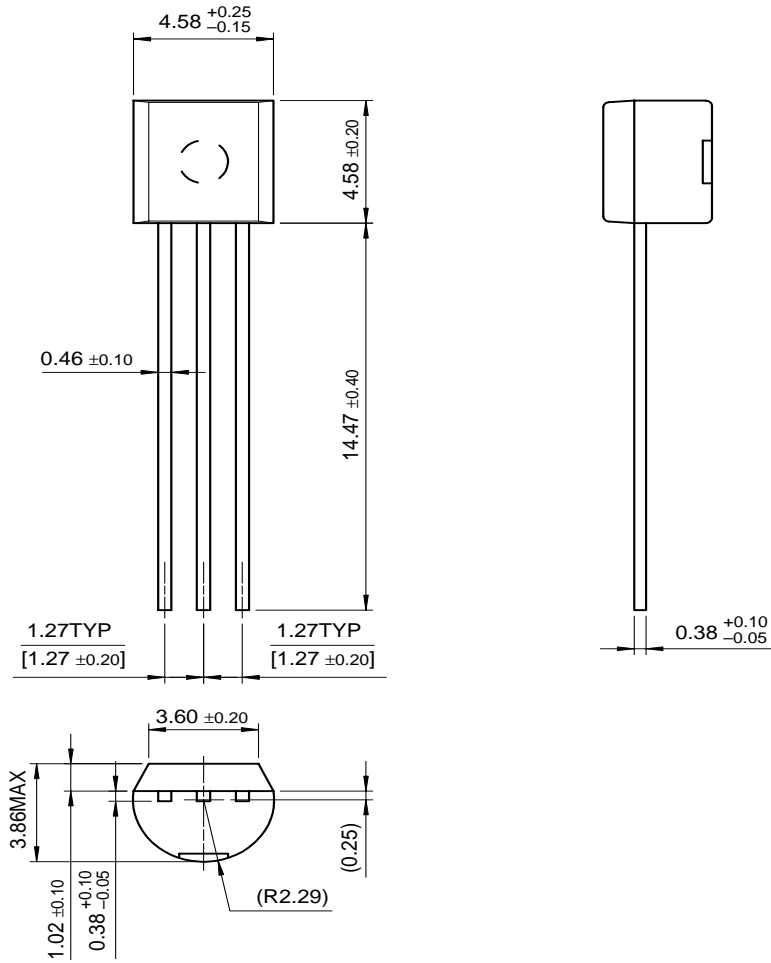


Figure 5. Current Gain Bandwidth Product

Package Dimensions

TO-92



Dimensions in Millimeters

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