

Amplifier Transistor

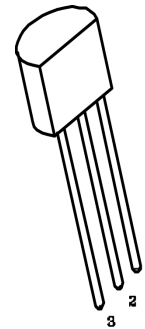


RoHS
Compliant

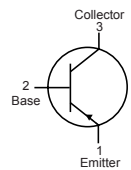


Features:

- Collector-Emitter Voltage: $V_{CE0} = 150V$
- Collector Dissipation: $P_C (\text{max}) = 625mW$
- Suffix "C" means Conter Collector (1. Emitter 2. Collector 3. Base)



TO-92



Absolute Max. Ratings $T_A=25^{\circ}C$ unless otherwise noted

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

Electrical Characteristics $T_A = 25^{\circ}C$ unless otherwise noted

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

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

Typical Characteristics

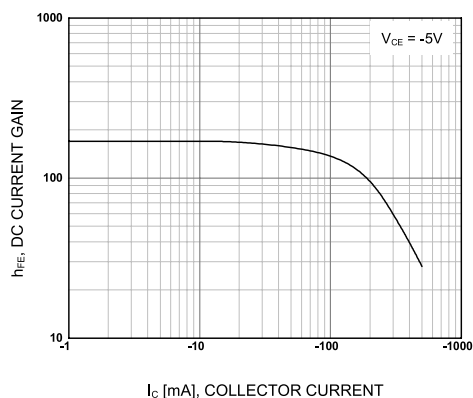


Figure 1. DC current Gain

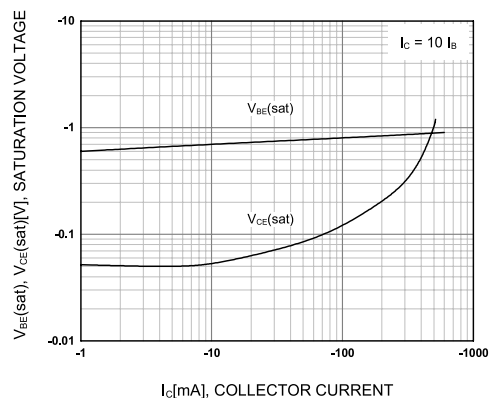


Figure 2. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

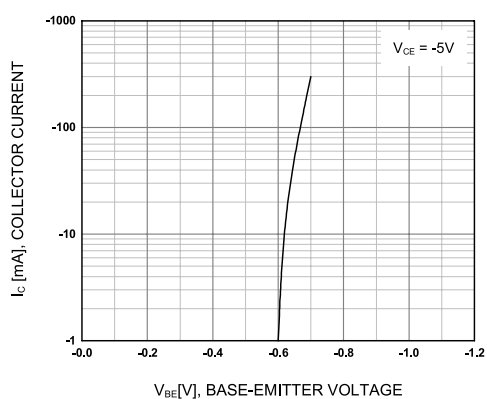


Figure 3. Base-Emitter On Voltage

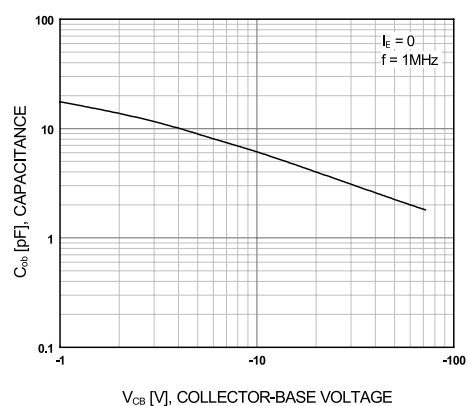


Figure 4. Output Capacitance

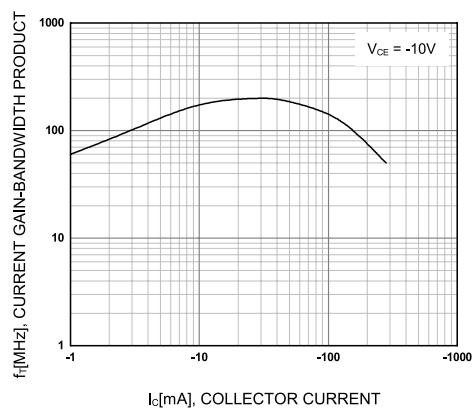
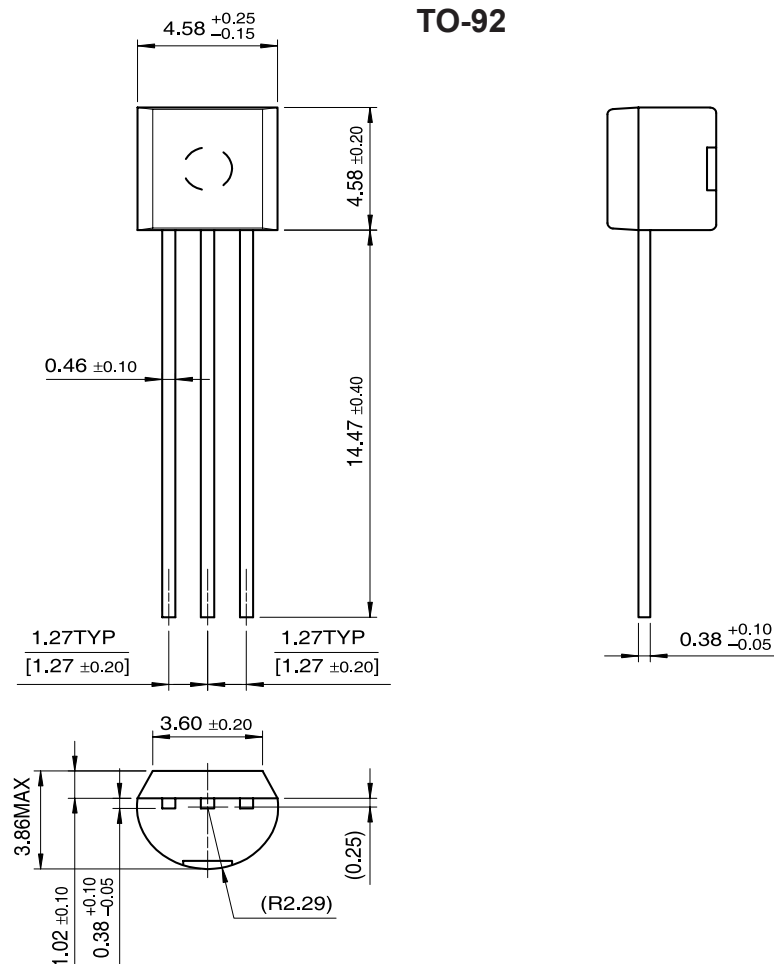


Figure 5. Current Gain Bandwidth Product

Package Dimensions:



Dimensions : Millimetres

Part Number Table

Description	Part Number
PNP Epitaxial Silicon Transistor	2N5401

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