

2N5401

PNP EPITAXIAL SILICON TRANSISTOR

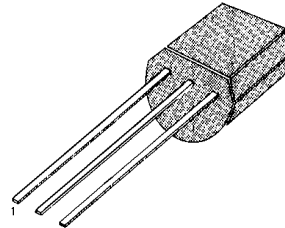
AMPLIFIER TRANSISTOR

- Collector-Emitter Voltage: $V_{CE0} = 150V$
- Collector Dissipation: $P_C(\max) = 625mW$

ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ C$)

Characteristic	Symbol	Rating	Unit
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 ~ 150	$^\circ C$

TO-92



1. Emitter 2. Base 3. Collector

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ C$)

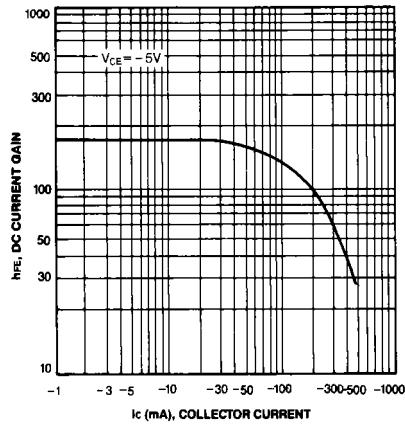
Characteristic	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector-Base Breakdown Voltage	BV_{CBO}	$I_C = -100 \mu A, I_E = 0$	-160			V
* Collector-Emitter Breakdown Voltage	BV_{CEO}	$I_C = -1mA, I_B = 0$	-150			V
Emitter-Base Breakdown Voltage	BV_{EBO}	$I_E = -10 \mu A, I_C = 0$	-5			V
Collector Cut-off 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	$V_{BE(on)}$	$I_C = -10mA, I_B = -1mA$ $I_C = -50mA, I_B = -5mA$			-1 -1	V V
Current Gain Bandwidth Product	f_T	$I_C = -10mA, V_{CE} = -10V$	100		400	MHz
Output Capacitance	C_{OB}	$V_{CB} = -10V, I_E = 0$ $f = 1MHz$			6	pF
Noise Figure	N_F	$I_C = -250 \mu A, V_{CE} = -5V$ $R_S = 1k\Omega$ $f = 10Hz$ to $15.7KHz$			8	dB

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

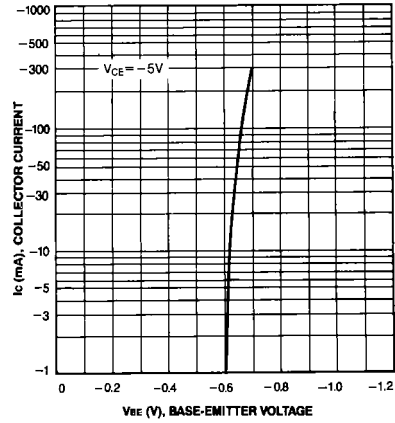
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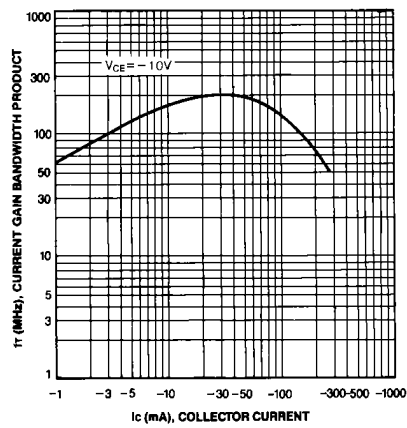
DC CURRENT GAIN



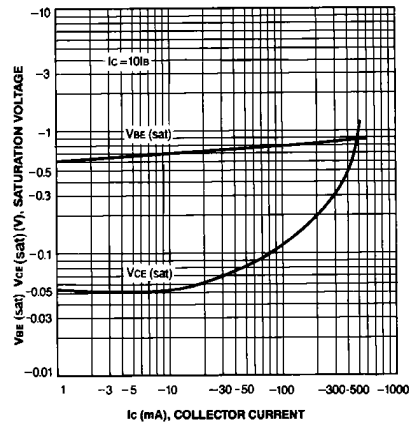
BASE-EMITTER ON VOLTAGE



CURRENT GAIN-BANDWIDTH PRODUCT



BASE-EMITTER SATURATION VOLTAGE
COLLECTOR-EMITTER SATURATION VOLTAGE



OUTPUT CAPACITANCE

