

2N4125

PNP EPITAXIAL SILICON TRANSISTOR

T-29-21

AMPLIFIER TRANSISTOR

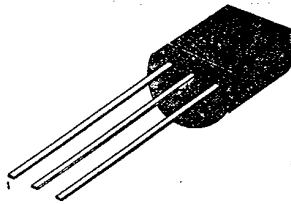
- Collector-Emitter Voltage: $V_{CE0} = 30\text{ V}$
- Collector Dissipation: $P_C(\text{max}) = 625\text{ mW}$

ABSOLUTE MAXIMUM RATINGS ($T_a = 25^\circ\text{C}$)

Characteristic	Symbol	Rating	Unit
Collector-Emitter Voltage	V_{CE0}	30	V
Collector-Base Voltage	V_{CBO}	30	V
Emitter-Base Voltage	V_{EBO}	4	V
Collector Current	I_C	200	mA
Collector Dissipation	P_C	625	mW
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55 ~ 150	$^\circ\text{C}$

* Refer to 2N3906 for graphs

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1. Emitter 2. Base 3. Collector

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ELECTRICAL CHARACTERISTICS ($T_a = 25^\circ\text{C}$)

Characteristic	Symbol	Test Conditions	Min	Typ	Max	Unit
*Collector-Emitter Breakdown Voltage ¹	BV_{CE0}	$I_C = 1\text{ mA}, I_B = 0$	30			V
Collector-Base Breakdown Voltage	BV_{CBO}	$I_C = 10\text{ }\mu\text{A}, I_E = 0$	30			V
Emitter-Base Breakdown Voltage	BV_{EBO}	$I_E = 10\text{ }\mu\text{A}, I_C = 0$	4			V
Collector Cut-off Current	I_{CBO}	$V_{CB} = 20\text{ V}, I_E = 0$			50	nA
Emitter Cut-off Current	I_{EBO}	$V_{BE} = 3\text{ V}, I_C = 0$			50	nA
*DC Current Gain	h_{FE}	$I_C = 2\text{ mA}, V_{CE} = 1\text{ V}$	50		150	
		$I_C = 50\text{ mA}, V_{CE} = 1\text{ V}$	25			
*Collector-Emitter Saturation Voltage	$V_{CE}(\text{sat})$	$I_C = 50\text{ mA}, I_B = 5\text{ mA}$			0.4	V
*Base-Emitter Saturation Voltage	$V_{BE}(\text{sat})$	$I_C = 50\text{ mA}, I_B = 5\text{ mA}$			0.95	
Current Gain Bandwidth Product	f_T	$I_C = 10\text{ mA}, V_{CE} = 20\text{ V}$ $f = 100\text{ MHz}$	200			MHz
Collector Base Capacitance	C_{cb}	$V_{CB} = 5\text{ V}, I_E = 0, f = 1\text{ MHz}$			4.5	pF
Noise Figure	NF	$I_C = 100\text{ }\mu\text{A}, V_{CE} = 5\text{ V}$ $R_G = 1\text{ K}\Omega$ Noise Bandwidth = 10Hz to 15.7KHz			5	dB

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