

Transistors

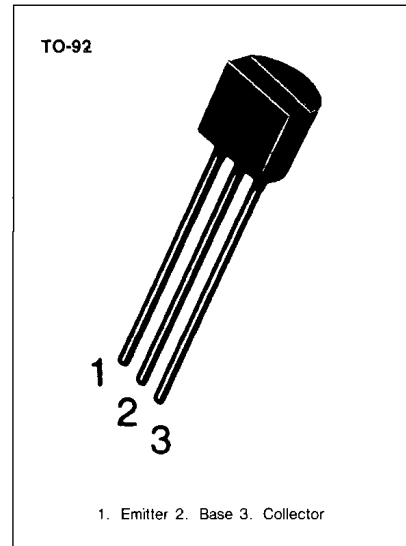
2N4125

AMPLIFIER TRANSISTOR

- Collector-Emitter Voltage: $V_{CE0} = 2N4125: 30V$
- Collector Dissipation: $P_C (\text{max}) = 625mW$

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

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V_{CBO}	-30	V
Collector-Emitter Voltage	V_{CEO}	-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	$^\circ C$
Storage Temperature	T_{STG}	-55~150	$^\circ C$



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

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

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

