

# Transistors

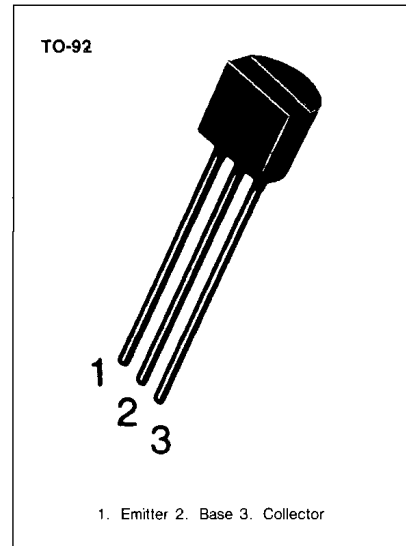
## 2N4125

### AMPLIFIER TRANSISTOR

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

### 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	$V_{CE (sat)}$	$I_C = -50mA, I_B = -5mA$			-0.4	V
* Base-Emitter Saturation Voltage	$V_{BE (sat)}$	$I_C = -50mA, I_B = -5mA$			-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  $\leq 2\%$

