

# Transistors

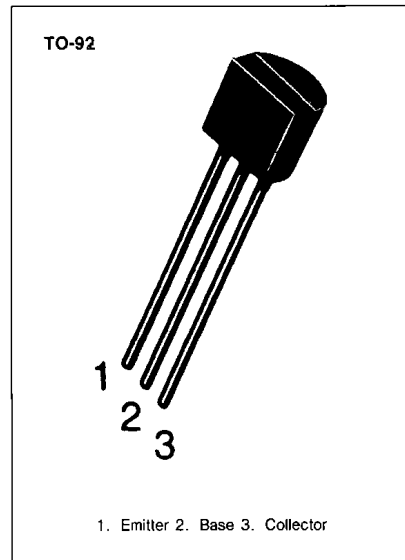
## 2N5088

### AMPLIFIER TRANSISTOR

- Collector-Emitter Voltage:  $V_{CE0} = 2N5088: 30V$
- Collector Dissipation:  $P_C (max) = 625mW$

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

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	$V_{CBO}$	35	V
Collector-Emitter Voltage	$V_{CEO}$	30	V
Emitter-Base Voltage	$V_{EBO}$	4.5	V
Collector Current	$I_C$	50	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	$BV_{CBO}$	$I_C = 100\mu A, I_E = 0$	35			V
* Collector-Emitter Breakdown Voltage	$BV_{CEO}$	$I_C = 1mA, I_B = 0$	30			V
Collector Cut-off Current	$I_{CBO}$	$V_{CB} = 20V, I_E = 0$			50	nA
Base Cut-off Current	$I_{EBO}$	$V_{BE} = 3V, I_C = 0$ $V_{BE} = 4.5V, I_C = 0$			50 100	nA nA
DC Current Gain	$h_{FE}$	$V_{CE} = 5V, I_C = 100\mu A$ $V_{CE} = 5V, I_C = 1mA$ * $V_{CE} = 5V, I_C = 10mA$	300 350 300		900	
Collector-Emitter Saturation Voltage	$V_{CE (sat)}$	$I_C = 10mA, I_B = 1mA$			0.5	V
* Base-Emitter Saturation Voltage	$V_{BE (on)}$	$I_C = 10mA, V_{CE} = 5V$			0.8	V
Collector-Base Capacitance	$C_{CB}$	$V_{CB} = 5V, I_E = 0$ $f = 100KHz$			4	pF
Current Gain Bandwidth Product	$f_T$	$V_{CE} = 5V, I_C = 500\mu A$ $f = 20MHz$	50			MHz
Noise Figure	$N_F$	$V_{CE} = 5V, I_C = 100\mu A$ $R_S = 10K\Omega$ $f = 10Hz$ to $15.7KHz$			3	dB

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

