

## 2N6428A

## NPN EPITAXIAL SILICON TRANSISTOR

T-29-21

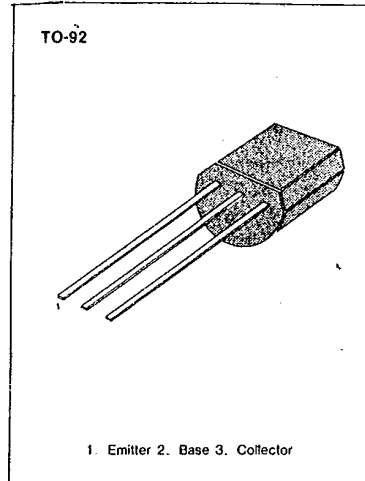
## AMPLIFIER TRANSISTOR

- Collector-Emitter Voltage:  $V_{CE0} = 50V$
- Collector Dissipation:  $P_c (\text{max}) = 625mW$

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

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	$V_{CB0}$	60	V
Collector-Emitter Voltage	$V_{CE0}$	50	V
Emitter-Base Voltage	$V_{EB0}$	6	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	$^\circ C$

- Refer to 2N5088 for graphs



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

Characteristic	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector-Base Breakdown Voltage	$BV_{CB0}$	$I_c = 100\mu A, I_E = 0$	60			V
Collector-Emitter Breakdown Voltage	$BV_{CE0}$	$I_c = 1mA, I_B = 0$	50			V
Collector Cut-off Current	$I_{cbo}$	$V_{CB} = 30V, I_E = 0$			10	nA
Collector Cut-off Current	$I_{ceo}$	$V_{CE} = 30V, I_B = 0$			25	nA
Emitter Cut-off Current	$I_{ebo}$	$V_{BE} = 5V, I_c = 0$			10	nA
DC Current Gain	$h_{FE}$	$I_c = 10\mu A, V_{CE} = 5V$	250			
		$I_c = 100\mu A, V_{CE} = 5V$	250		650	
		$I_c = 1mA, V_{CE} = 5V$	250			
		$I_c = 10mA, V_{CE} = 5V$	250			
Collector-Emitter Saturation Voltage	$V_{CE} (\text{sat})$	$I_c = 10mA, I_B = 0.5mA$			0.2	V
		$I_c = 100mA, I_B = 5mA$			0.6	V
Base-Emitter On Voltage	$V_{BE} (\text{on})$	$I_c = 1mA, V_{CE} = 5V$	0.56		0.66	V
Current Gain Bandwidth Product	$f_T$	$I_c = 1mA, V_{CE} = 5V$ $f = 100MHz$	100		700	MHz
Output Capacitance	$C_{ob}$	$V_{CB} = 10V, I_E = 0$ $f = 1MHz$			3	pF
Noise Figure/Noise Voltage Level	$NF/N_V$	$I_c = 100\mu A, V_{CE} = 5V$ (1) $R_S = 10K\Omega, BW = 1Hz$ $f = 100Hz$			2/16.2	dB/nV
		(2) $R_S = 50K\Omega, BW = 15.7KHz$ $f = 10Hz \sim 10KHz$			4/4.6	dB/ $\mu V$
		(3) $R_S = 50\Omega, BW = 1Hz$ $f = 10Hz$			3/4.1	dB/nV

