

2N6428

NPN EPITAXIAL SILICON TRANSISTOR

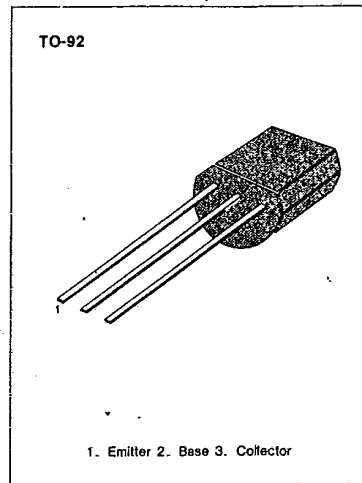
AMPLIFIER TRANSISTOR

- 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_{CBO}	60	V
Collector-Emitter Voltage	V_{CEO}	50	V
Emitter-Base Voltage	V_{EBO}	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

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

Characteristic	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector-Base Breakdown Voltage	BV_{CBO}	$I_C = 100\mu A, I_E = 0$	60			V
Collector-Emitter Breakdown Voltage	BV_{CEO}	$I_C = 1mA, I_B = 0$	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	$I_C = 1mA, V_{CE} = 5V$	100		700	MHz
		$f = 100MHz$				
Output Capacitance	C_{ob}	$V_{CB} = 10V, I_E = 0$			3	pF
		$f = 1MHz$				
Noise Figure/Noise Voltage Level	NF/N_v	$I_C = 100\mu A, V_{CE} = 5V$				
		(1) $R_S = 10K\Omega, BW = 1Hz$			3/18.1	dB/nV
		$f = 100Hz$				
		(2) $R_S = 50K\Omega, BW = 15.7KHz$			6/5.7	dB/ μV
		$f = 10Hz - 10KHz$				
		(3) $R_S = 500\Omega, BW = 1Hz$			3.5/4.3	dB/nV
		$f = 10Hz$				



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