

## 2N5086

## PNP EPITAXIAL SILICON TRANSISTOR

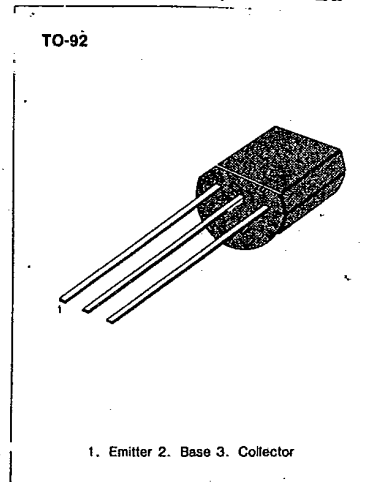
T-29-21

## 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	$V_{CBO}$	50	V
Collector-Emitter Voltage	$V_{CEO}$	50	V
Emitter-Base Voltage	$V_{EBO}$	3	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	$BV_{CBO}$	$I_c = 100\mu A, I_E = 0$	50			V
Collector-Emitter Breakdown Voltage	$BV_{CEO}$	$I_c = 1mA, I_B = 0$	50			V
Collector Cut-off Current	$I_{CBO}$	$V_{CB} = 10V, I_E = 0$			10	nA
		$V_{CB} = 35V, I_E = 0$			50	nA
Emitter Cut-off Current	$I_{EBO}$	$V_{BE} = 3V, I_C = 0$			50	nA
DC Current Gain	$h_{FE}$	$I_c = 100\mu A, V_{CE} = 5V$	150		500	
		$I_c = 1mA, V_{CE} = 5V$	150			
		$*I_c = 10mA, V_{CE} = 5V$	150			
Collector-Emitter Saturation Voltage	$V_{CE} (\text{sat})$	$I_c = 10mA, I_B = 1mA$			0.3	V
Base-Emitter On Voltage	$V_{BE} (\text{on})$	$I_c = 1mA, V_{CE} = 5V$			0.85	V
Current Gain Bandwidth Product	$f_T$	$I_c = 500\mu A, V_{CE} = 5V$	40			MHz
		$f = 20MHz$				
Collector-Base Capacitance	$C_{cb}$	$V_{CB} = 5V, I_E = 0$			4	pF
		$f = 100KHz$				
Noise Figure	NF	$I_c = 20\mu A, V_{CE} = 5V$			3	dB
		$R_S = 10K\Omega$				
		$f = 10Hz \text{ to } 15.7KHz$				
		$I_c = 100\mu A, V_{CE} = 5V$			3	dB
		$R_S = 3K\Omega, f = 1KHz$				

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

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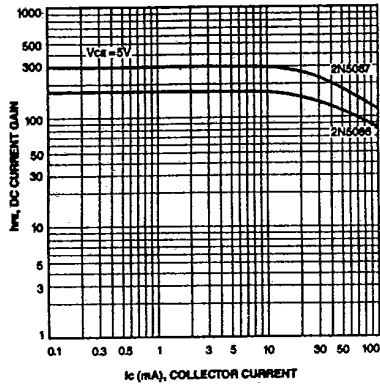


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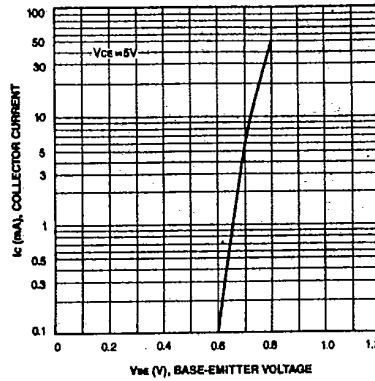
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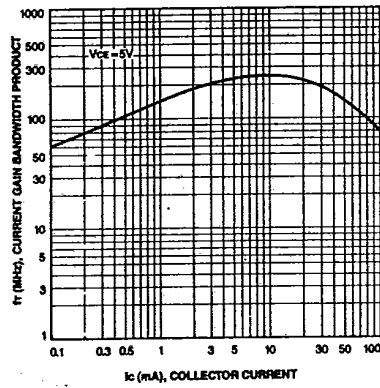
DC CURRENT GAIN



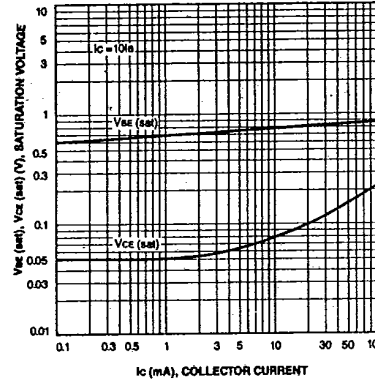
BASE-EMITTER ON VOLTAGE



CURRENT GAIN BANDWIDTH PRODUCT



BASE-EMITTER SATURATION VOLTAGE  
COLLECTOR-EMITTER SATURATION VOLTAGE



COLLECTOR-BASE CAPACITANCE

