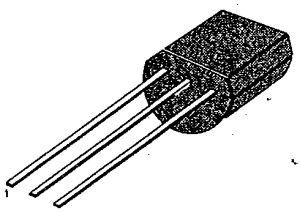
2N5086 PNP EPITAXIAL SILICON TRANSISTOR

T-29-21

AMPLIFIER TRANSISTOR

- Collector-Emitter Voltage: V_{CEO}=50V
- Collector Dissipation: P_C (max)=625mW

TO-92



1. Emitter 2. Base 3. Collector

ABSOLUTE MAXIMUM RATINGS (T_a=25°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	°C
Storage Temperature	Tstg	−55 ~ 150	°C

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ELECTRICAL CHARACTERISTICS (T_a=25°C)

Characteristic	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector-Base Breakdown Voltage	BV_{CBO}	I_C=100μA, 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=100μA, 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} (sat)	I_C=10mA, I_B=1mA			0.3	V
Base-Emitter On Voltage	V_{BE} (on)	I_C=1mA, V_{CE}=5V			0.85	V
Current Gain Bandwidth Product	f_T	I_C=500μA, V_{CE}=5V f=20MHz	40			MHz
Collector-Base Capacitance	Ccb	V_{CB}=5V, I_E=0 f=100KHz			4	pF
Noise Figure	NF	I_C=20μA, V_{CE}=5V R_S=10KΩ f=10Hz to 15.7KHz			3	dB
		I_C=100μA, V_{CE}=5V R_S=3KΩ, f=1KHz			3	dB

• Pulse Test: Pulse Width ≤ 300μs, Duty Cycle ≤ 2%

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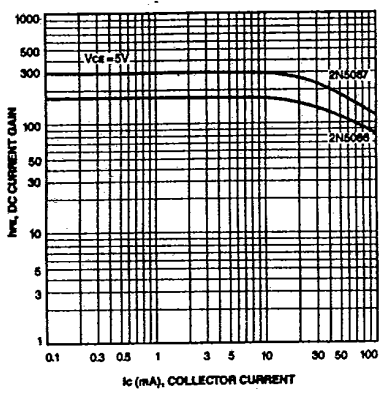
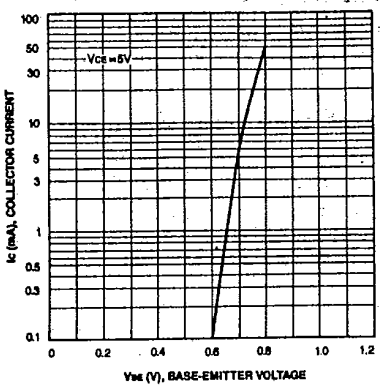
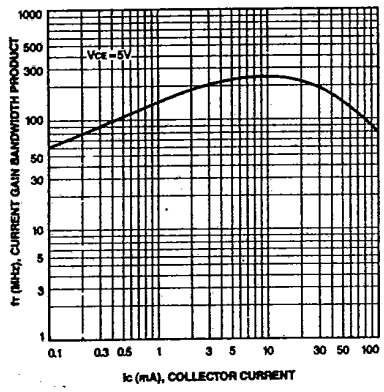
DC CURRENT GAIN



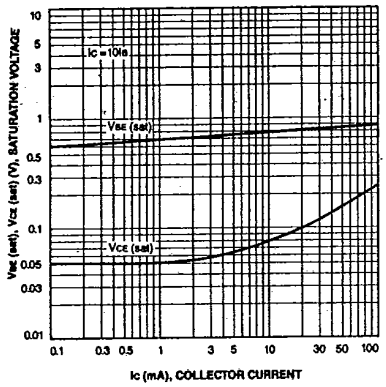
BASE-EMITTER ON VOLTAGE



CURRENT GAIN BANDWIDTH PRODUCT



BASE-EMITTER SATURATION VOLTAGE
COLLECTOR-EMITTER SATURATION VOLTAGE



COLLECTOR-BASE CAPACITANCE