Micro Commercial Components
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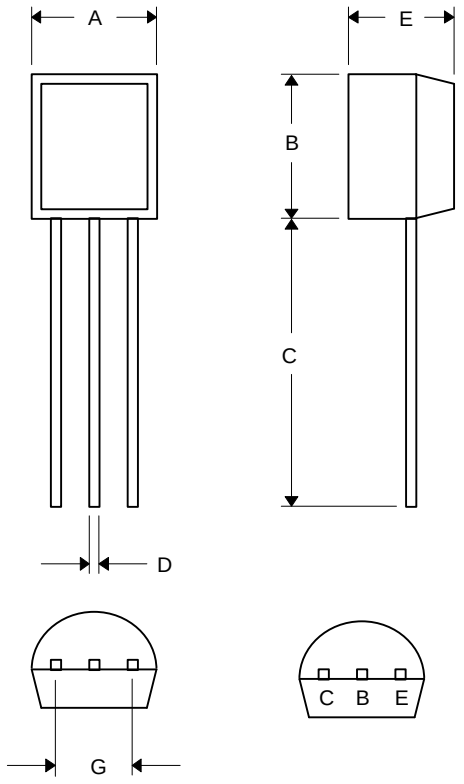
2N3906

PNP General Purpose Amplifier

Features

- Through Hole Package
- Capable of 600mWatts of Power Dissipation
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Marking:Type number

TO-92



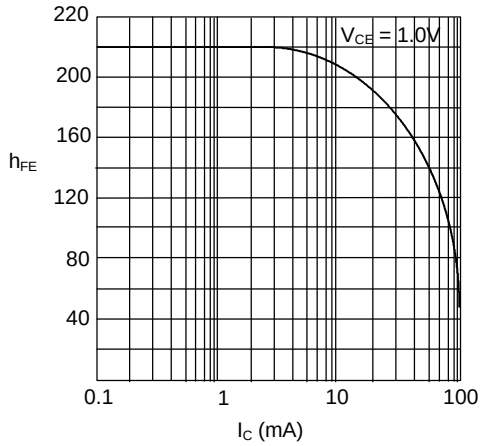
DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	.170	.190	4.33	4.83	
B	.170	.190	4.30	4.83	
C	.550	.590	13.97	14.97	
D	.010	.020	0.36	0.56	
E	.130	.160	3.30	3.96	
G	.010	.104	2.44	2.64	

Electrical Characteristics @ 25°C Unless Otherwise Specified

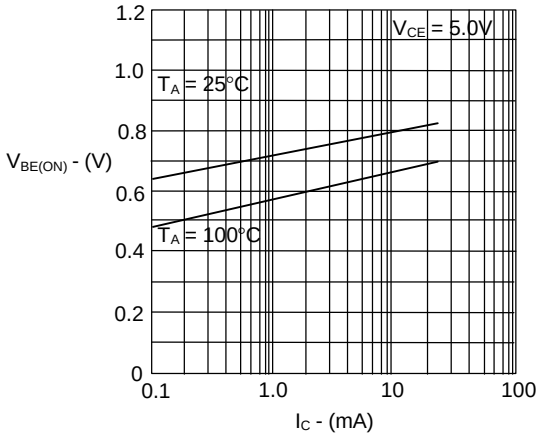
Symbol	Parameter	Min	Max	Units
OFF CHARACTERISTICS				
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage* (I_C=1.0mAdc, I_B=0)	40		Vdc
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage (I_C=10μAdc, I_E=0)	40		Vdc
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage (I_E=10μAdc, I_C=0)	5.0		Vdc
I_{BL}	Base Cutoff Current (V_{CE}=30Vdc, V_{BE}=3.0Vdc)		50	nAdc
I_{CEX}	Collector Cutoff Current (V_{CE}=30Vdc, V_{BE}=3.0Vdc)		50	nAdc
ON CHARACTERISTICS				
h_{FE}	DC Current Gain* (I_C=0.1mAdc, V_{CE}=1.0Vdc) (I_C=1.0mAdc, V_{CE}=1.0Vdc) (I_C=10mAdc, V_{CE}=1.0Vdc) (I_C=50mAdc, V_{CE}=1.0Vdc) (I_C=100mAdc, V_{CE}=1.0Vdc)	60 80 100 60 30	300	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage (I_C=10mAdc, I_B=1.0mAdc) (I_C=50mAdc, I_B=5.0mAdc)		0.25 0.4	Vdc
$V_{BE(sat)}$	Base-Emitter Saturation Voltage (I_C=10mAdc, I_B=1.0mAdc) (I_C=50mAdc, I_B=5.0mAdc)	0.65	0.85 0.95	Vdc
SMALL-SIGNAL CHARACTERISTICS				
f_T	Current Gain-Bandwidth Product (I_C=10mAdc, V_{CE}=20Vdc, f=100MHz)	250		MHz
C_{obo}	Output Capacitance (V_{CB}=5.0Vdec, I_E=0, f=100MHz)		4.5	pF
C_{ibo}	Input Capacitance (V_{BE}=0.5Vdc, I_C=0, f=100kHz)		10.0	pF
NF	Noise Figure (I_C=100μAdc, V_{CE}=5.0Vdc, R_S=1.0kΩ f=10Hz to 15.7kHz)		4.0	dB
SWITCHING CHARACTERISTICS				
t_d	Delay Time (V_{CC}=3.0Vdc, V_{BE}=0.5Vdc		35	ns
t_r	Rise Time I_C=10mAdc, I_{B1}=1.0mAdc)		35	ns
t_s	Storage Time (V_{CC}=3.0Vdc, I_C=10mAdc		225	ns
t_f	Fall Time I_{B1}=I_{B2}=1.0mAdc)		75	ns

*Pulse Width ≤ 300μs, Duty Cycle ≤ 2.0%

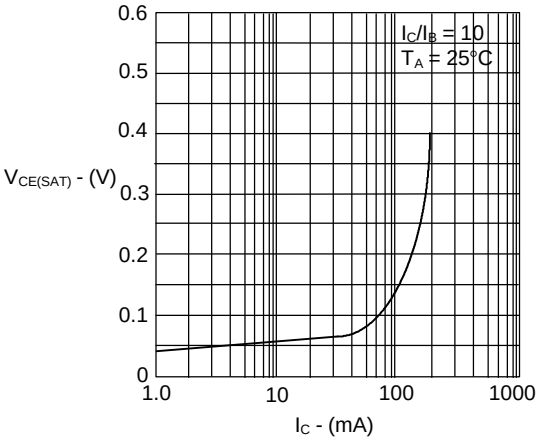
DC Current Gain vs Collector Current



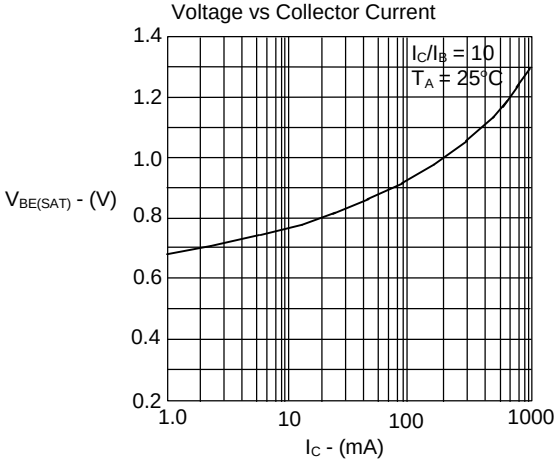
Base-Emitter ON Voltage vs Collector Current



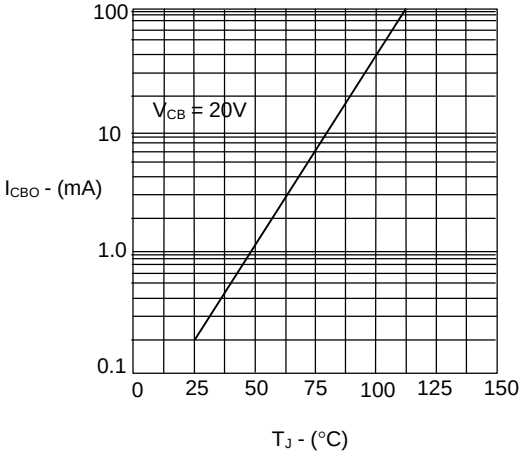
Collector-Emitter Saturation Volatge vs Collector Current



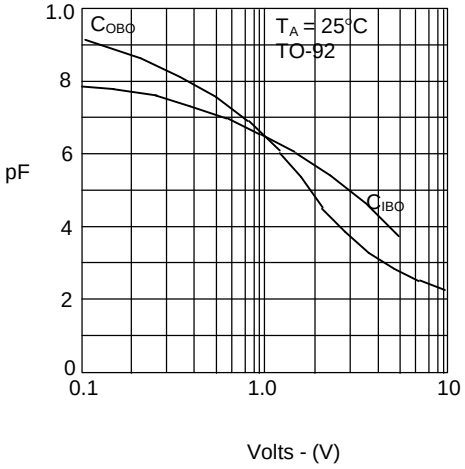
Base-Emitter Saturation Voltage vs Collector Current



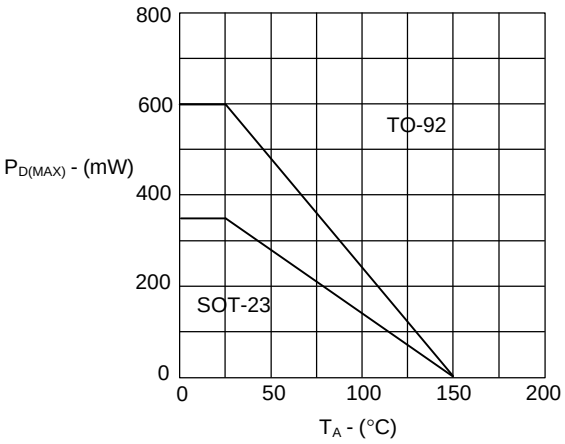
Collector-Base Diode Reverse Current vs Temperature



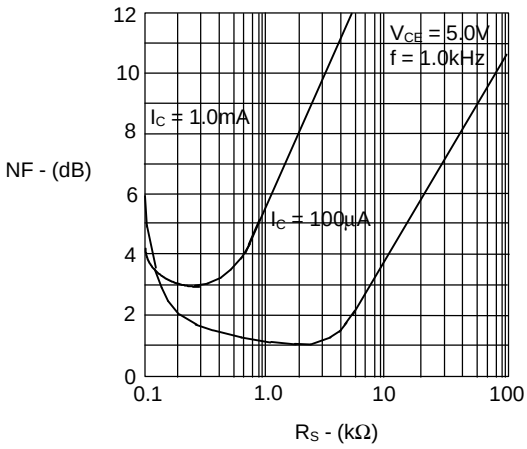
Common Base Open Circuit Input and Output Capacitance vs Reverse Bias Voltage



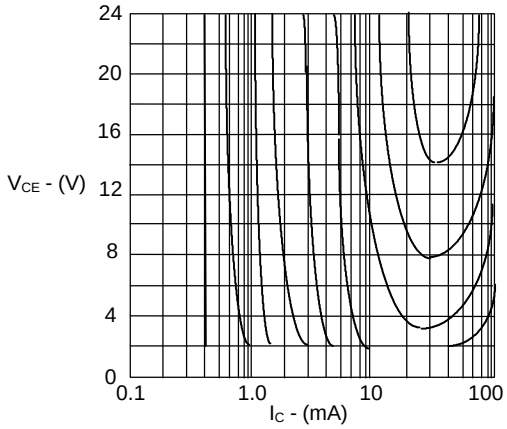
Maximum Power Dissipation vs Ambient Temperature



Noise Figure vs Source Resistance

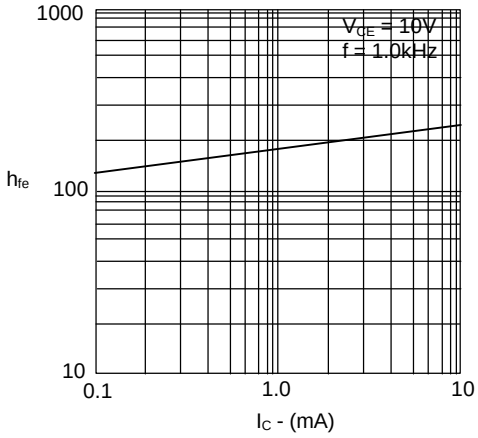


Contours of Constant Gain Bandwidth Product (f_T)

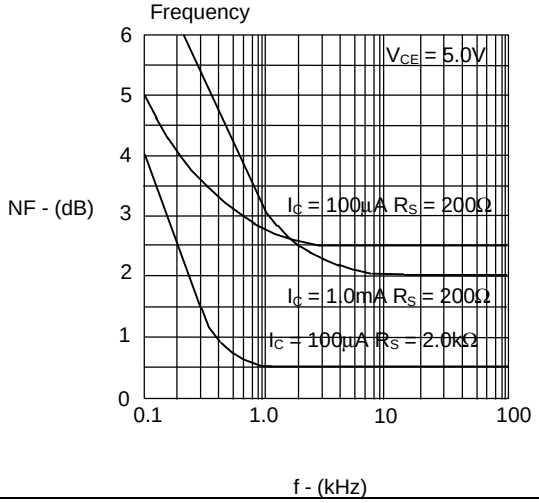


*100MHz increments from 100 to 700, 750 and 800MHz

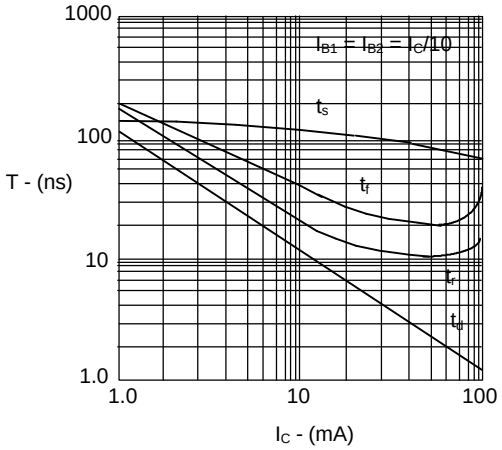
Current Gain



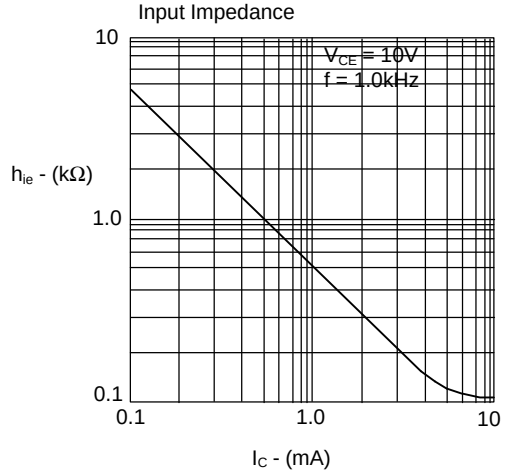
Noise Figure vs Frequency



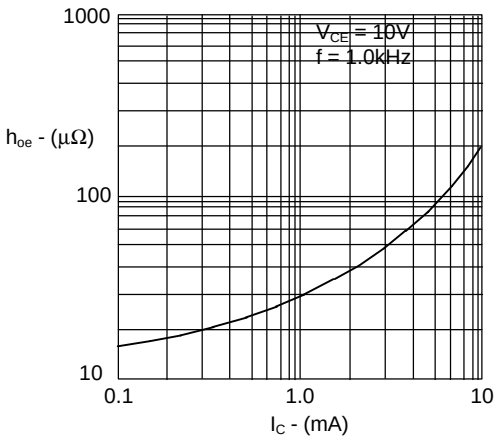
Switching Times vs Collector Current



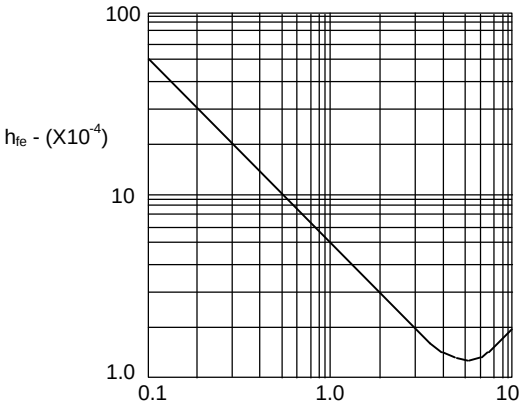
Input Impedance



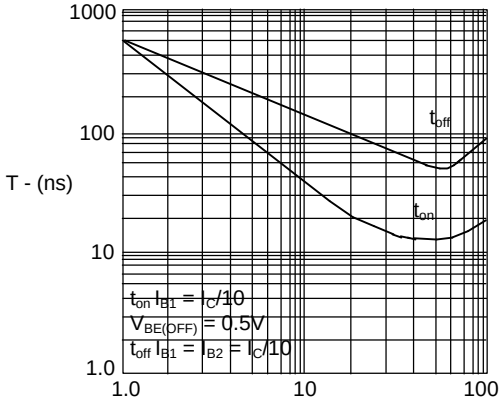
Output Admittance



Voltage Feedback Ratio



Turn On and Turn Off Times vs Collector Current



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