Micro Commercial Components
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2N3906

PNP General Purpose Amplifier

Features

- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- Capable of 600mW of Power Disspation and 200mA Ic
- Epoxy meets UL 94 V-0 flammability rating
- Moisure Sensitivity Level 1
- Through Hole Package
- Halogen free available upon request by adding suffix "-HF"
- Operating Temperature: -55°C to +150°C
- Storage Temperature: -55°C to +150°C

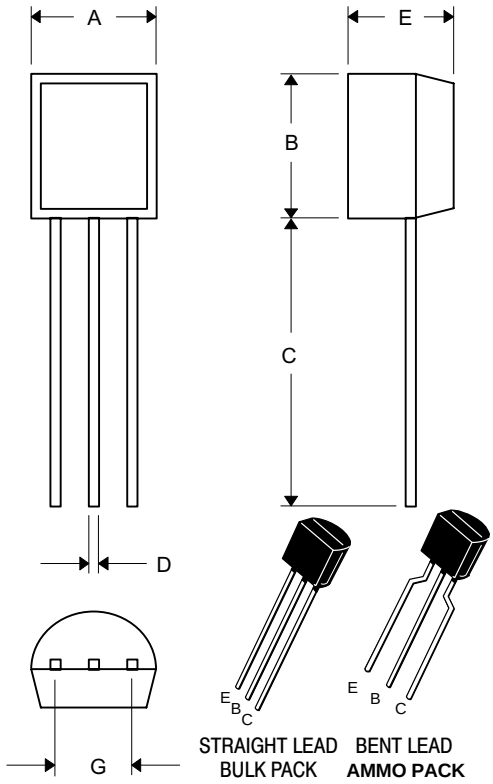
Electrical Characteristics @ 25°C Unless Otherwise Specified

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=100kHz)		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%

TO-92



DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	.175	.185	4.45	4.70	
B	.175	.185	4.45	4.70	
C	.500	---	12.70	---	
D	.016	.020	0.41	0.63	
E	.135	.145	3.43	3.68	
G	.095	.105	2.42	2.67	Straight Lead
	.173	.220	4.40	5.60	Bent Lead

* For ammo packing detailed specification, click here to visit our website of product packaging for details.

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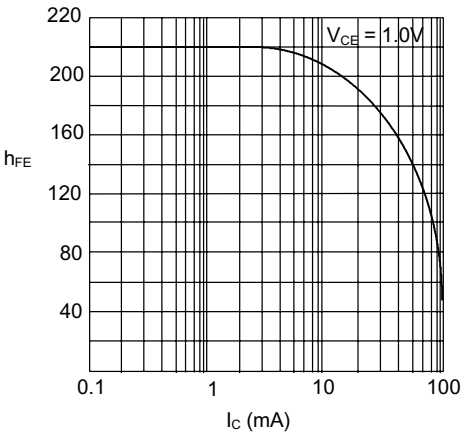
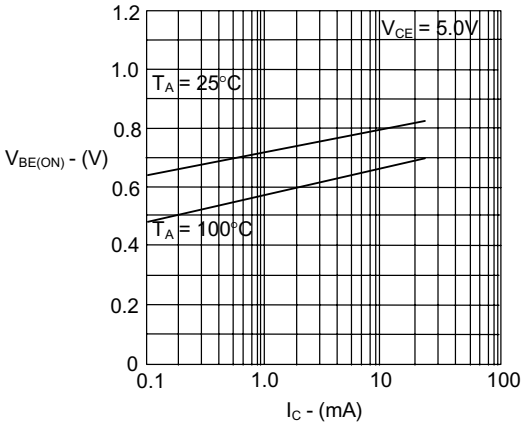
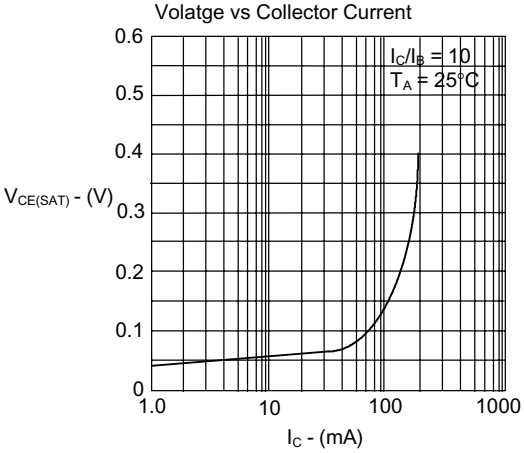
DC Current Gain vs Collector Current



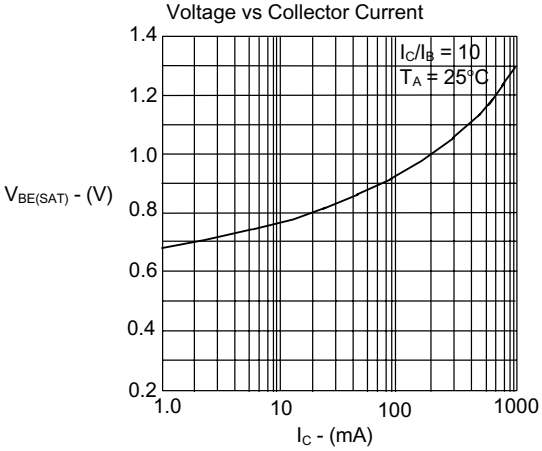
Base-Emitter ON Voltage vs Collector Current



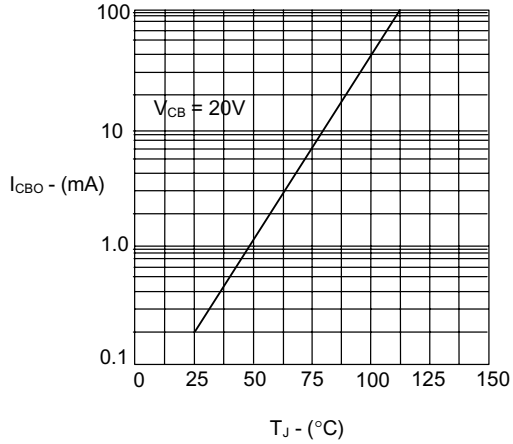
Collector-Emitter Saturation Volatge vs Collector Current



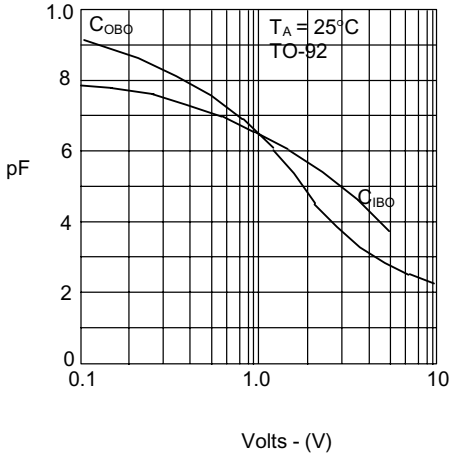
Base-Emitter Saturation Voltage vs Collector Current



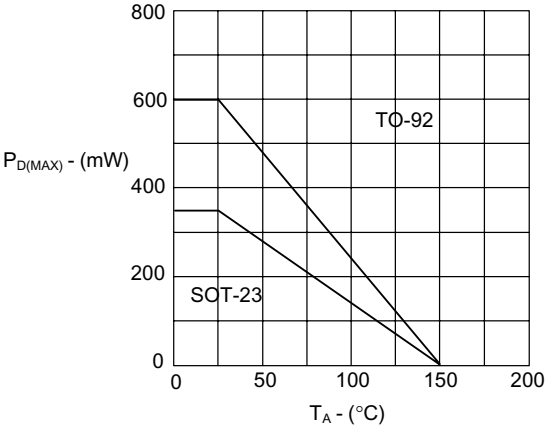
Collector-Base Diode Reverse Current vs Temperature



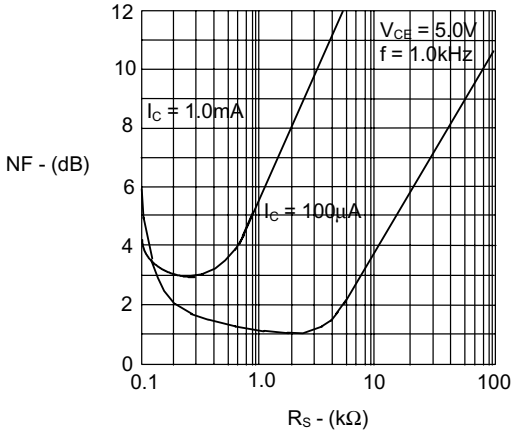
Common Base Open Circuit Input and Output Capacitance vs Reverse Bias Voltage



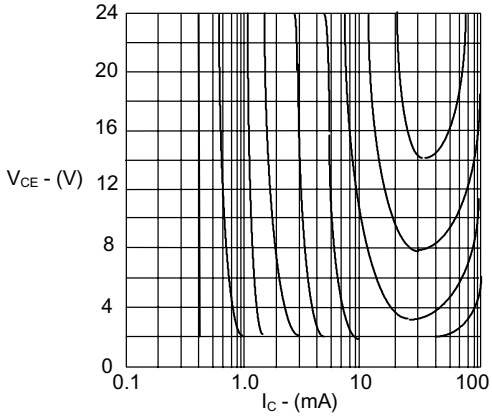
Maximum Power Dissipation vs Ambient Temperature



Noise Figure vs Source Resistance

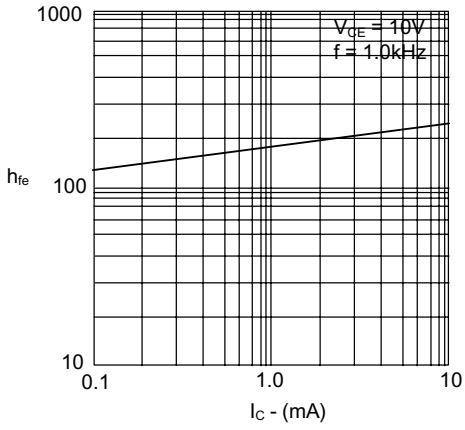


Contours of Constant Gain Bandwidth Product (f_T)

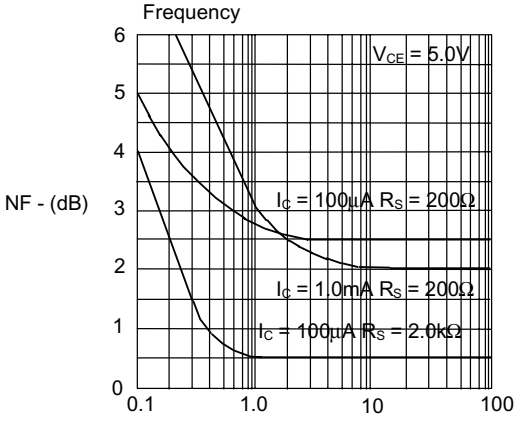


*100MHz increments from 100 to 700, 750 and 800MHz

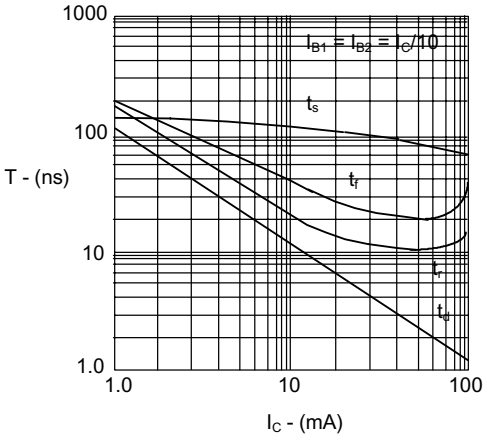
Current Gain



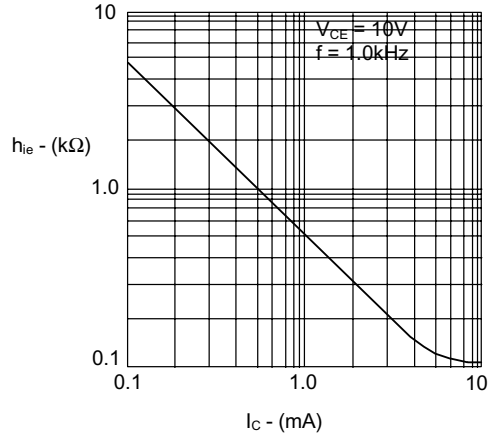
Noise Figure vs Frequency



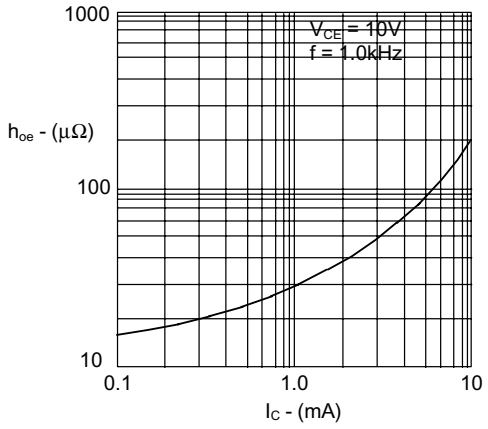
Switching Times vs Collector Current



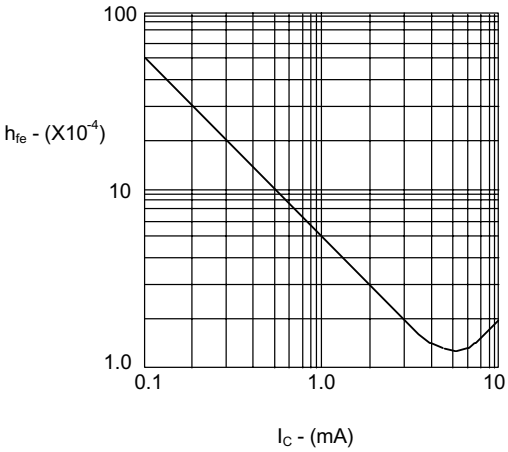
Input Impedance



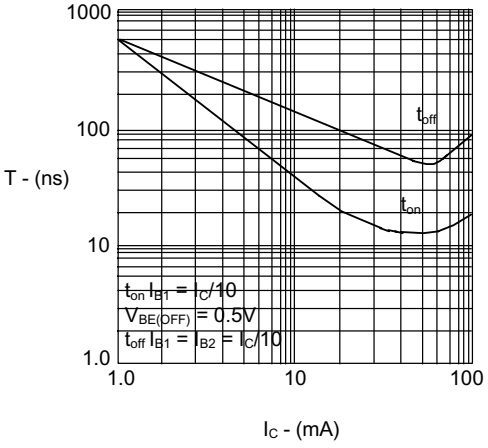
Output Admittance



Voltage Feedback Ratio



Turn On and Turn Off Times vs Collector Current



Ordering Information :

Device	Packing
Part Number-AP	Ammo Packing: 20Kpcs/Carton
Part Number-BP	Bulk: 100Kpcs/Carton

Note : Adding "-HF" suffix for halogen free, eg. Part Number-AP-HF

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