



Micro Commercial Components



Micro Commercial Components  
 20736 Marilla Street Chatsworth  
 CA 91311  
 Phone: (818) 701-4933  
 Fax: (818) 701-4939

2N3906

PNP General Purpose Amplifier

Features

- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- € Capable of 600mW of Power Dissipation and 200mA Ic
- € Epoxy meets UL 94 V-0 flammability rating
- € Moisture Sensitivity Level 1
- € Through Hole Package
- € Marking: Type number

Electrical Characteristics @ 25°C Unless Otherwise Specified

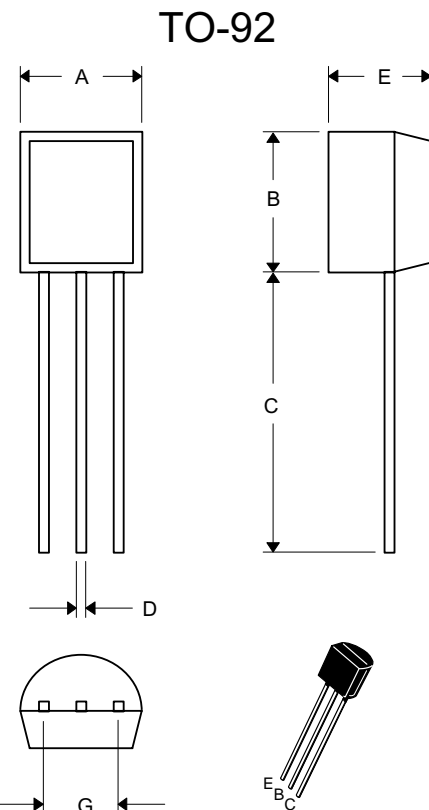
Symbol	Parameter	Min	Max	Units
<b>OFF CHARACTERISTICS</b>				
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage* ( $I_C=1.0mA_{dc}$ , $I_B=0$ )	40		Vdc
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage ( $I_C=10\mu A_{dc}$ , $I_E=0$ )	40		Vdc
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage ( $I_E=10\mu A_{dc}$ , $I_C=0$ )	5.0		Vdc
$I_{BL}$	Base Cutoff Current ( $V_{CE}=30V_{dc}$ , $V_{BE}=3.0V_{dc}$ )		50	nAdc
$I_{CEX}$	Collector Cutoff Current ( $V_{CE}=30V_{dc}$ , $V_{BE}=3.0V_{dc}$ )		50	nAdc

<b>ON CHARACTERISTICS</b>				
$h_{FE}$	DC Current Gain* ( $I_C=0.1mA_{dc}$ , $V_{CE}=1.0V_{dc}$ ) ( $I_C=1.0mA_{dc}$ , $V_{CE}=1.0V_{dc}$ ) ( $I_C=10mA_{dc}$ , $V_{CE}=1.0V_{dc}$ ) ( $I_C=50mA_{dc}$ , $V_{CE}=1.0V_{dc}$ ) ( $I_C=100mA_{dc}$ , $V_{CE}=1.0V_{dc}$ )	60 80 100 60 30	300	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage ( $I_C=10mA_{dc}$ , $I_B=1.0mA_{dc}$ ) ( $I_C=50mA_{dc}$ , $I_B=5.0mA_{dc}$ )		0.25 0.4	Vdc
$V_{BE(sat)}$	Base-Emitter Saturation Voltage ( $I_C=10mA_{dc}$ , $I_B=1.0mA_{dc}$ ) ( $I_C=50mA_{dc}$ , $I_B=5.0mA_{dc}$ )	0.65	0.85 0.95	Vdc

<b>SMALL-SIGNAL CHARACTERISTICS</b>				
$f_T$	Current Gain-Bandwidth Product ( $I_C=10mA_{dc}$ , $V_{CE}=20V_{dc}$ , $f=100MHz$ )	250		MHz
$C_{obo}$	Output Capacitance ( $V_{CB}=5.0V_{dc}$ , $I_E=0$ , $f=100MHz$ )		4.5	pF
$C_{ibo}$	Input Capacitance ( $V_{BE}=0.5V_{dc}$ , $I_C=0$ , $f=100kHz$ )		10.0	pF
NF	Noise Figure ( $I_C=100\mu A_{dc}$ , $V_{CE}=5.0V_{dc}$ , $R_S=1.0k\Omega$ , $f=10Hz$ to $15.7kHz$ )		4.0	dB

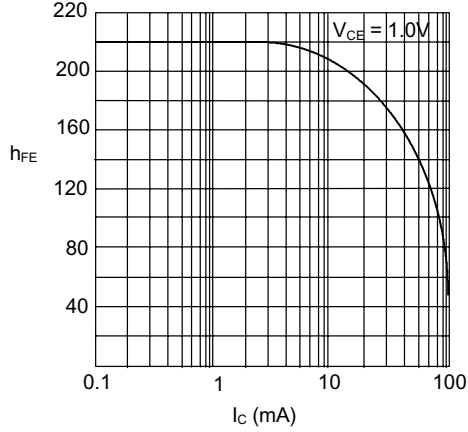
<b>SWITCHING CHARACTERISTICS</b>				
$t_d$	Delay Time	( $V_{CC}=3.0V_{dc}$ , $V_{BE}=0.5V_{dc}$ )	35	ns
$t_r$	Rise Time	( $I_C=10mA_{dc}$ , $I_{B1}=1.0mA_{dc}$ )	35	ns
$t_s$	Storage Time	( $V_{CC}=3.0V_{dc}$ , $I_C=10mA_{dc}$ )	225	ns
$t_f$	Fall Time	( $I_{B1}=I_{B2}=1.0mA_{dc}$ )	75	ns

\*Pulse Width  $\leq 300\mu s$ , Duty Cycle  $\leq 2.0\%$

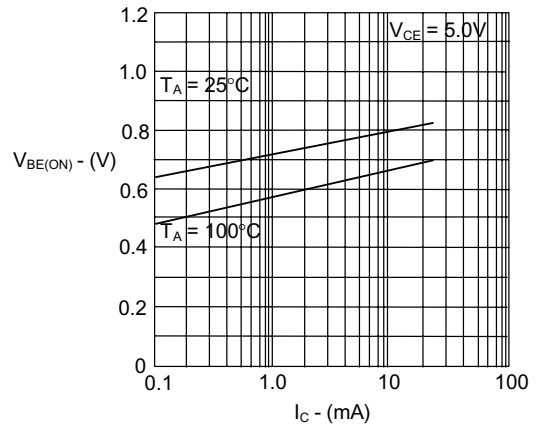


DIM	DIMENSIONS				NOTE
	INCHES		MM		
A	.170	.190	4.33	4.83	
B	.170	.190	4.30	4.83	
C	.550	.590	13.97	14.97	
D	.010	.020	0.36	0.56	
E	.130	.160	3.30	3.96	
G	.096	.104	2.44	2.64	

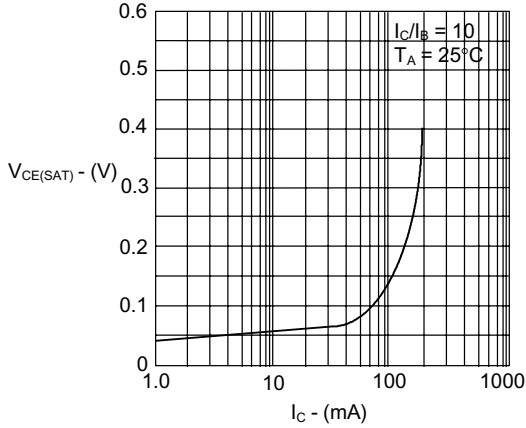
DC Current Gain vs Collector Current



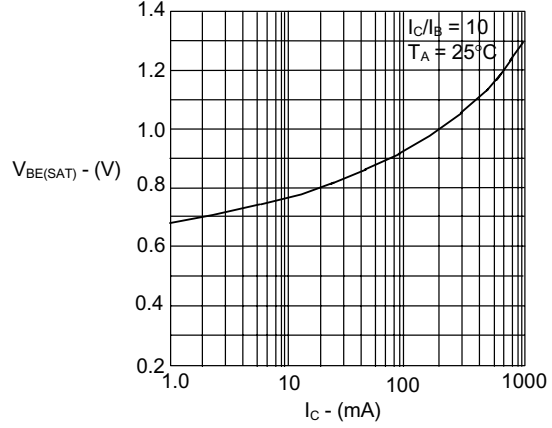
Base-Emitter ON Voltage vs Collector Current



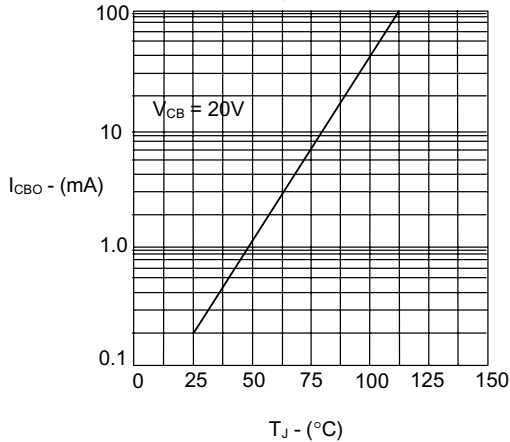
Collector-Emitter Saturation Voltage vs Collector Current



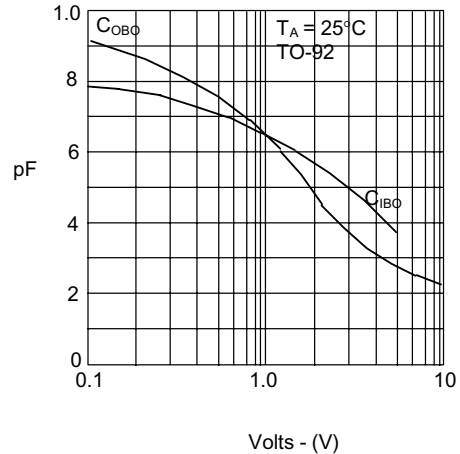
Base-Emitter Saturation Voltage vs Collector Current



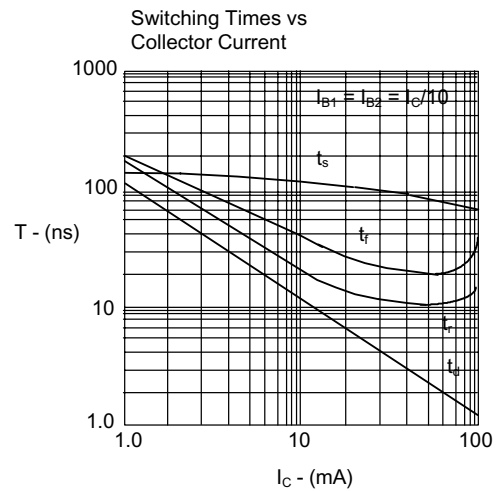
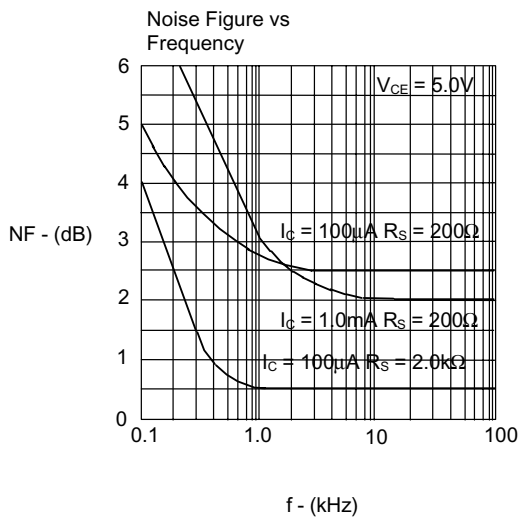
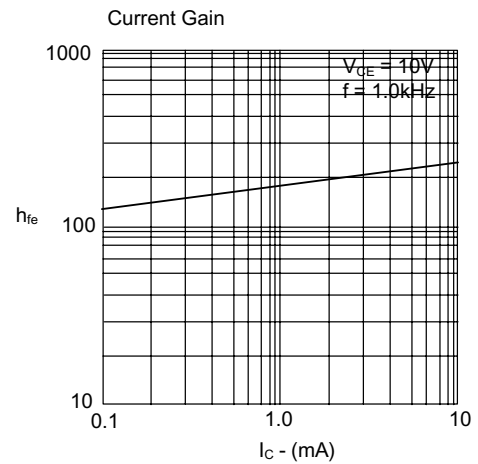
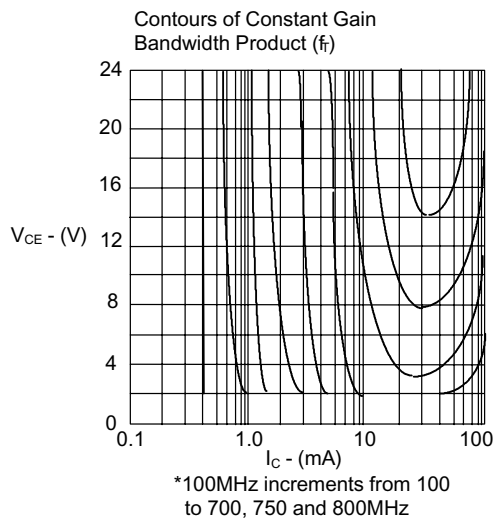
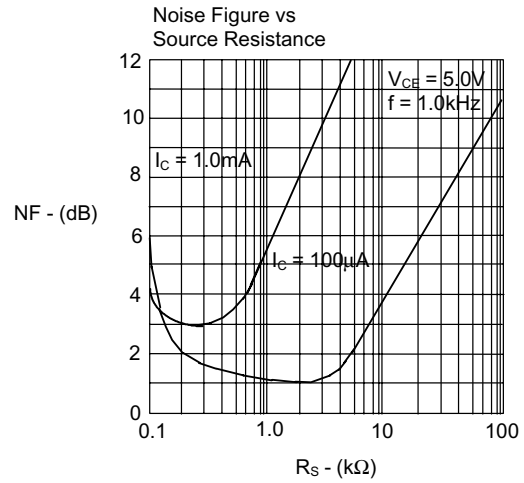
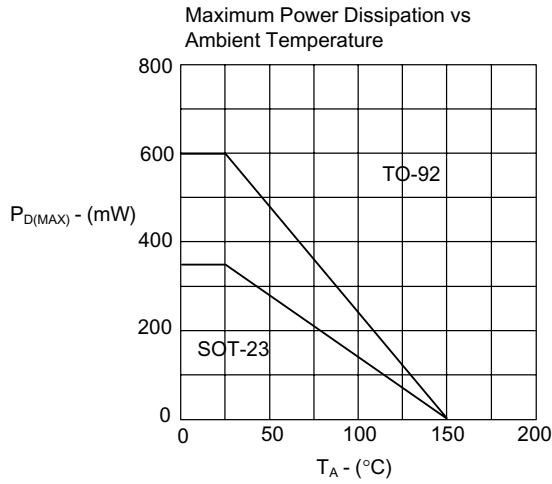
Collector-Base Diode Reverse Current vs Temperature



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



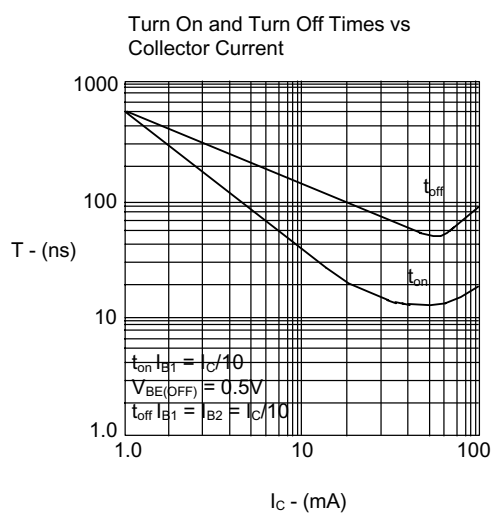
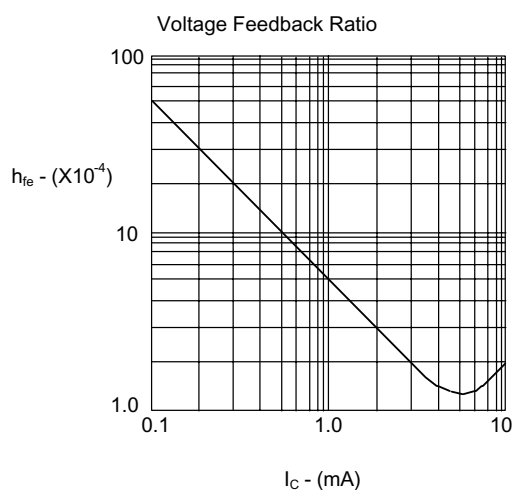
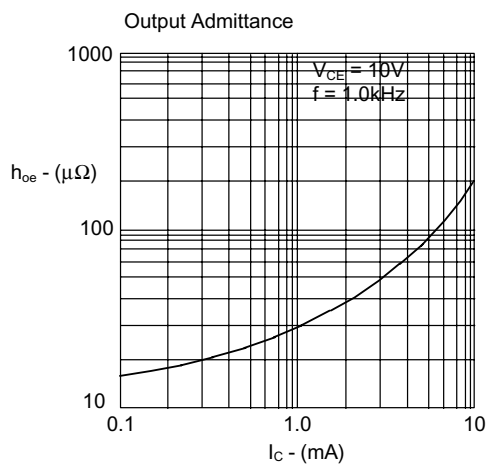
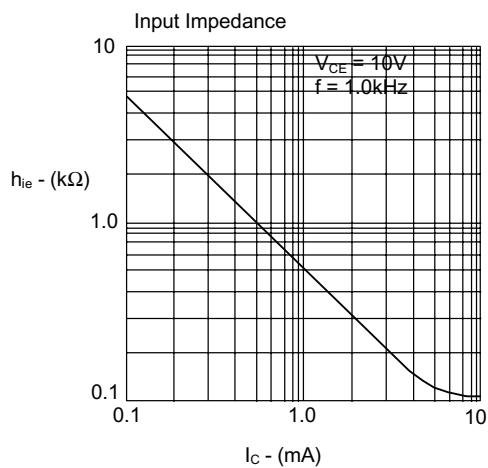
# 2N3906



2N3906



Micro Commercial Components



**Ordering Information :**

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

**\*\*\*IMPORTANT NOTICE\*\*\***

**Micro Commercial Components Corp.** reserves the right to make changes without further notice to any product herein to make corrections, modifications, enhancements, improvements, or other changes. **Micro Commercial Components Corp.** does not assume any liability arising out of the application or use of any product described herein; neither does it convey any license under its patent rights, nor the rights of others. The user of products in such applications shall assume all risks of such use and will agree to hold **Micro Commercial Components Corp.** and all the companies whose products are represented on our website, harmless against all damages.

**\*\*\*LIFE SUPPORT\*\*\***

MCC's products are not authorized for use as critical components in life support devices or systems without the express written approval of Micro Commercial Components Corporation.

**\*\*\*CUSTOMER AWARENESS\*\*\***

Counterfeiting of semiconductor parts is a growing problem in the industry. Micro Commercial Components (MCC) is taking strong measures to protect ourselves and our customers from the proliferation of counterfeit parts. MCC strongly encourages customers to purchase MCC parts either directly from MCC or from Authorized MCC Distributors who are listed by country on our web page cited below. Products customers buy either from MCC directly or from Authorized MCC Distributors are genuine parts, have full traceability, meet MCC's quality standards for handling and storage. **MCC will not provide any warranty coverage or other assistance for parts bought from Unauthorized Sources.** MCC is committed to combat this global problem and encourage our customers to do their part in stopping this practice by buying direct or from authorized distributors.