



Micro Commercial Components



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 Dissipation and 200mA I<sub>c</sub>
- € Epoxy meets UL 94 V-0 flammability rating
- € Moisture 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
<b>OFF CHARACTERISTICS</b>				
V <sub>(BR)CEO</sub>	Collector-Emitter Breakdown Voltage* (I <sub>C</sub> =1.0mA, I <sub>B</sub> =0)	40		Vdc
V <sub>(BR)CBO</sub>	Collector-Base Breakdown Voltage (I <sub>C</sub> =10μA, I <sub>E</sub> =0)	40		Vdc
V <sub>(BR)EBO</sub>	Emitter-Base Breakdown Voltage (I <sub>E</sub> =10μA, I <sub>C</sub> =0)	5.0		Vdc
I <sub>BL</sub>	Base Cutoff Current (V <sub>CE</sub> =30Vdc, V <sub>BE</sub> =3.0Vdc)		50	nA
I <sub>CEX</sub>	Collector Cutoff Current (V <sub>CE</sub> =30Vdc, V <sub>BE</sub> =3.0Vdc)		50	nA

ON CHARACTERISTICS

h <sub>FE</sub>	DC Current Gain* (I <sub>C</sub> =0.1mA, V <sub>CE</sub> =1.0Vdc) (I <sub>C</sub> =1.0mA, V <sub>CE</sub> =1.0Vdc) (I <sub>C</sub> =10mA, V <sub>CE</sub> =1.0Vdc) (I <sub>C</sub> =50mA, V <sub>CE</sub> =1.0Vdc) (I <sub>C</sub> =100mA, V <sub>CE</sub> =1.0Vdc)	60 80 100 60 30	300	
V <sub>CE(sat)</sub>	Collector-Emitter Saturation Voltage (I <sub>C</sub> =10mA, I <sub>B</sub> =1.0mA) (I <sub>C</sub> =50mA, I <sub>B</sub> =5.0mA)		0.25 0.4	Vdc
V <sub>BE(sat)</sub>	Base-Emitter Saturation Voltage (I <sub>C</sub> =10mA, I <sub>B</sub> =1.0mA) (I <sub>C</sub> =50mA, I <sub>B</sub> =5.0mA)	0.65	0.85 0.95	Vdc

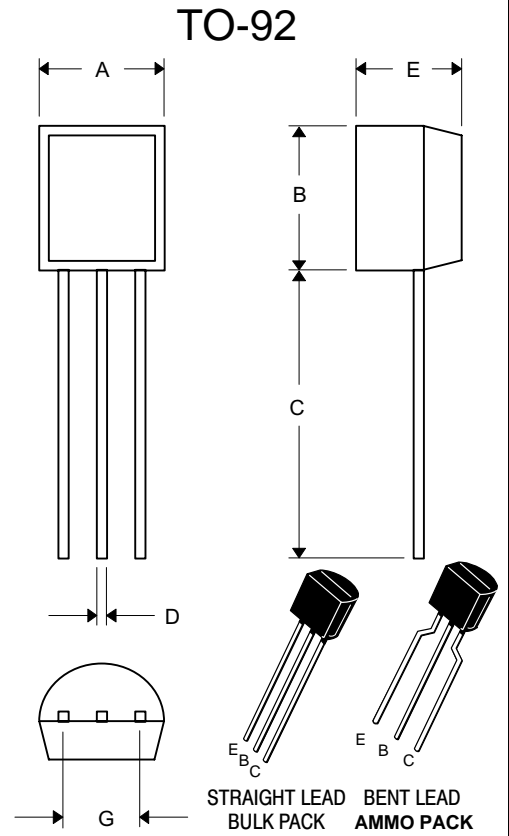
SMALL-SIGNAL CHARACTERISTICS

f <sub>T</sub>	Current Gain-Bandwidth Product (I <sub>C</sub> =10mA, V <sub>CE</sub> =20Vdc, f=100MHz)	250		MHz
C <sub>obo</sub>	Output Capacitance (V <sub>CB</sub> =5.0Vdc, I <sub>E</sub> =0, f=100kHz)		4.5	pF
C <sub>ibo</sub>	Input Capacitance (V <sub>BE</sub> =0.5Vdc, I <sub>C</sub> =0, f=100kHz)		10.0	pF
NF	Noise Figure (I <sub>C</sub> =100μA, V <sub>CE</sub> =5.0Vdc, R <sub>S</sub> =1.0kΩ, f=10Hz to 15.7kHz)		4.0	dB

SWITCHING CHARACTERISTICS

t <sub>d</sub>	Delay Time	(V <sub>CC</sub> =3.0Vdc, V <sub>BE</sub> =0.5Vdc, I <sub>C</sub> =10mA, I <sub>B1</sub> =1.0mA)	35	ns
t <sub>r</sub>	Rise Time	(V <sub>CC</sub> =3.0Vdc, V <sub>BE</sub> =0.5Vdc, I <sub>C</sub> =10mA, I <sub>B1</sub> =1.0mA)	35	ns
t <sub>s</sub>	Storage Time	(V <sub>CC</sub> =3.0Vdc, I <sub>C</sub> =10mA)	225	ns
t <sub>f</sub>	Fall Time	(I <sub>B1</sub> =I <sub>B2</sub> =1.0mA)	75	ns

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

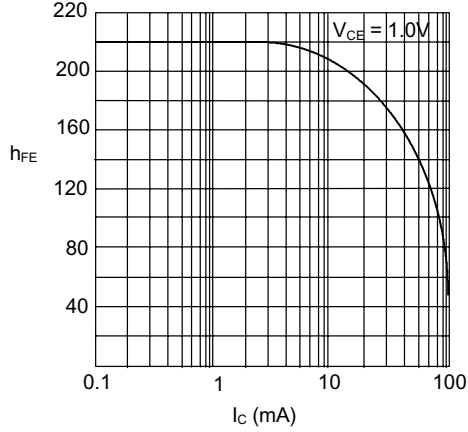


DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.175	.185	4.45	4.70	
B	.175	.185	4.45	4.70	
C	.500	---	12.70	---	
D	.016	.020	0.41	0.63	
E	.135	.145	3.43	3.68	
G	.095	.105	2.42	2.67	Straight Lead
	.173	.220	4.40	5.60	Bent Lead

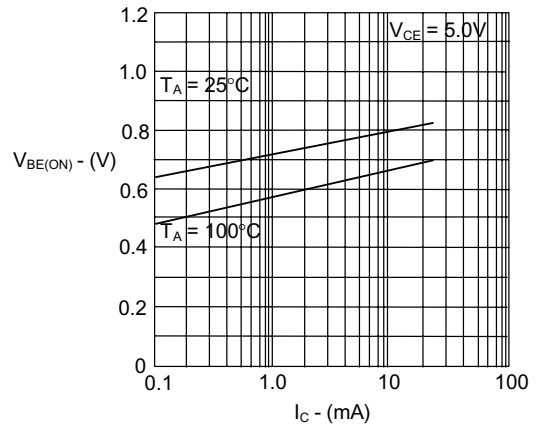
\* For ammo packing detailed specification, click here to visit our website of product packaging for details.

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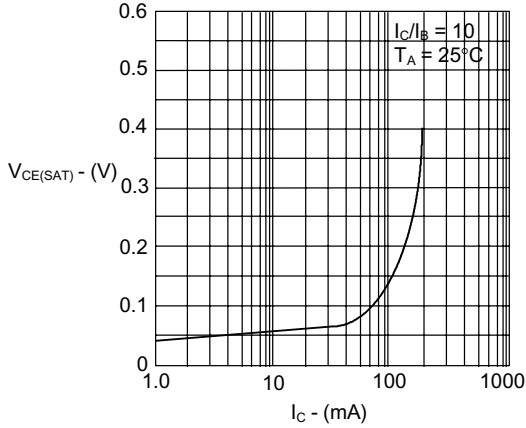
DC Current Gain vs Collector Current



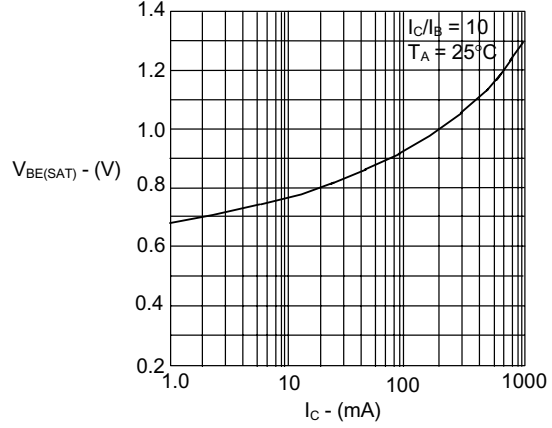
Base-Emitter ON Voltage vs Collector Current



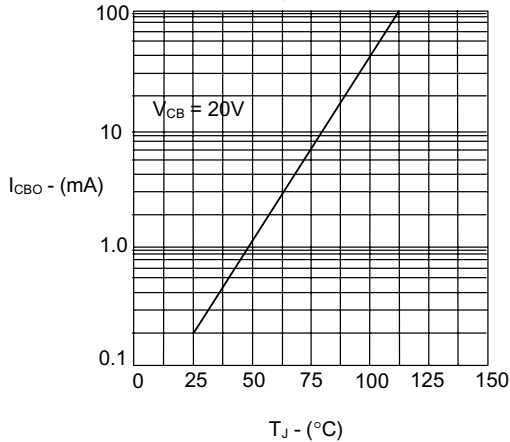
Collector-Emitter Saturation Voltage vs Collector Current



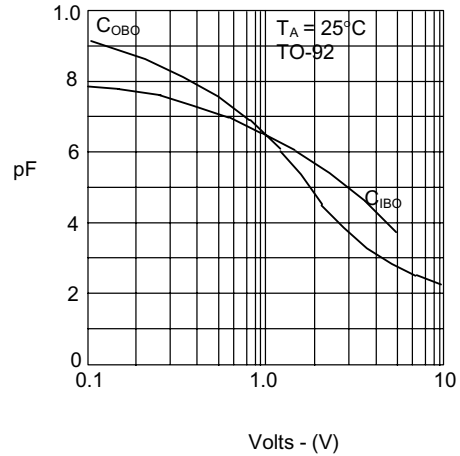
Base-Emitter Saturation Voltage vs Collector Current



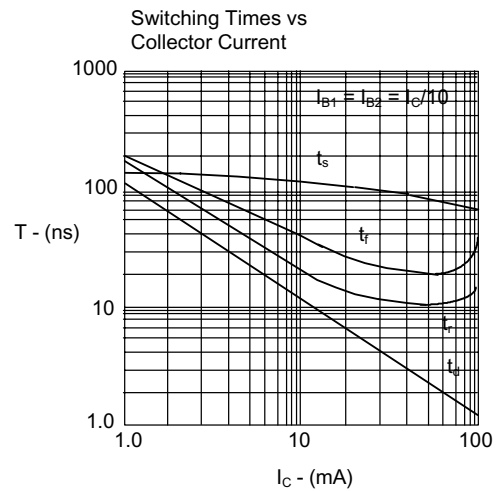
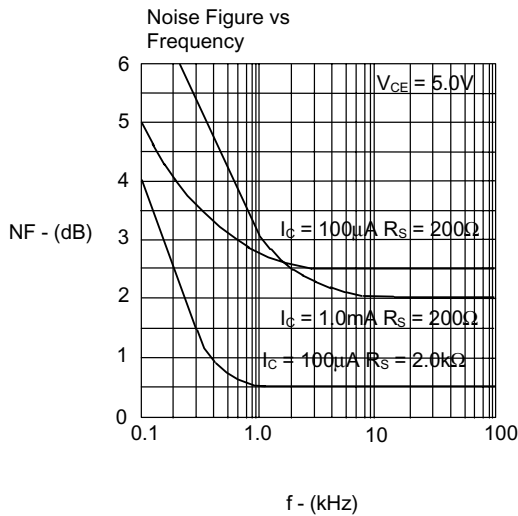
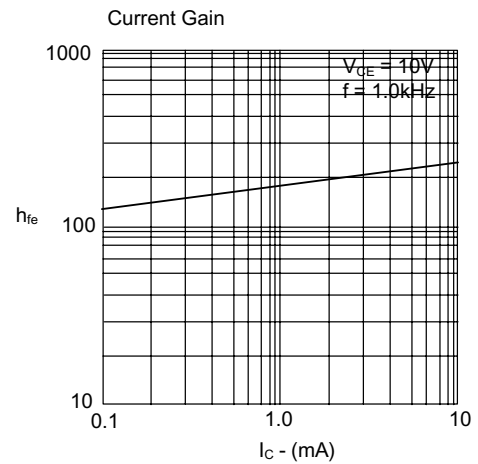
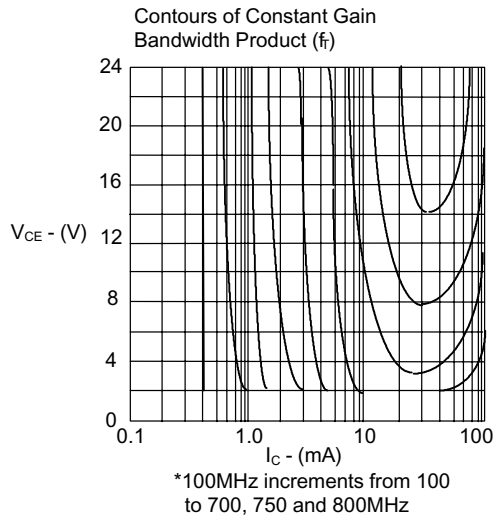
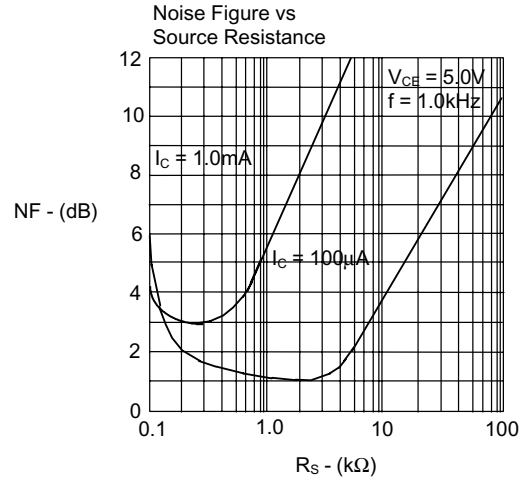
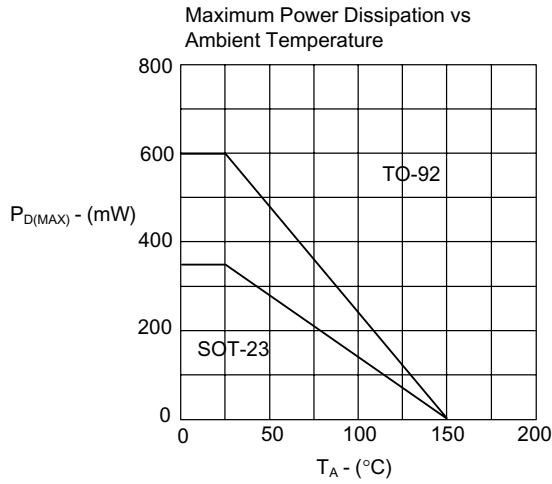
Collector-Base Diode Reverse Current vs Temperature



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



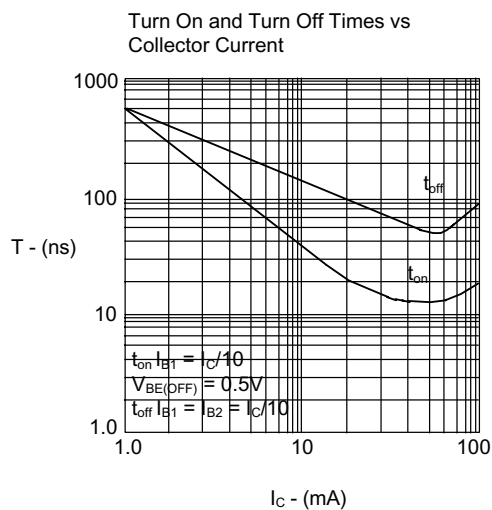
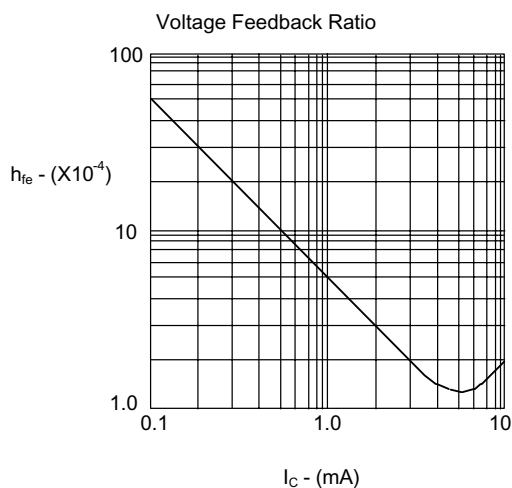
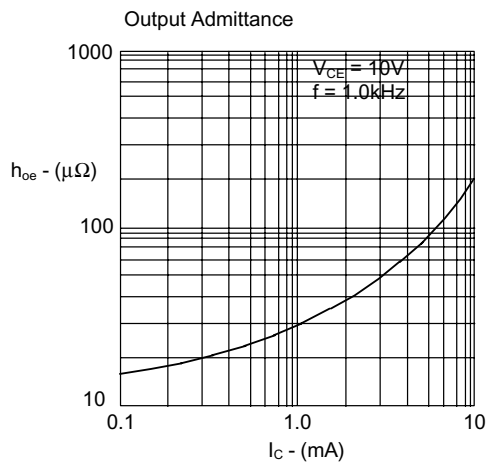
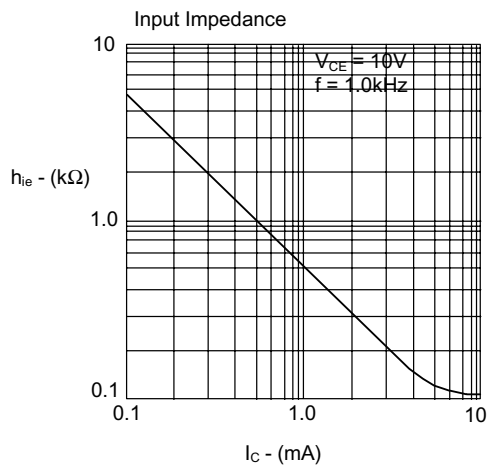
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## Ordering Information :

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

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

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### \*\*\*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.

[www.mccsemi.com](http://www.mccsemi.com)

Компания «Life Electronics» занимается поставками электронных компонентов импортного и отечественного производства от производителей и со складов крупных дистрибьюторов Европы, Америки и Азии.

С конца 2013 года компания активно расширяет линейку поставок компонентов по направлению коаксиальный кабель, кварцевые генераторы и конденсаторы (керамические, пленочные, электролитические), за счёт заключения дистрибьюторских договоров

Мы предлагаем:

- Конкурентоспособные цены и скидки постоянным клиентам.
- Специальные условия для постоянных клиентов.
- Подбор аналогов.
- Поставку компонентов в любых объемах, удовлетворяющих вашим потребностям.
- Приемлемые сроки поставки, возможна ускоренная поставка.
- Доставку товара в любую точку России и стран СНГ.
- Комплексную поставку.
- Работу по проектам и поставку образцов.
- Формирование склада под заказчика.
- Сертификаты соответствия на поставляемую продукцию (по желанию клиента).
- Тестирование поставляемой продукции.
- Поставку компонентов, требующих военную и космическую приемку.
- Входной контроль качества.
- Наличие сертификата ISO.

В составе нашей компании организован Конструкторский отдел, призванный помогать разработчикам, и инженерам.

Конструкторский отдел помогает осуществить:

- Регистрацию проекта у производителя компонентов.
- Техническую поддержку проекта.
- Защиту от снятия компонента с производства.
- Оценку стоимости проекта по компонентам.
- Изготовление тестовой платы монтаж и пусконаладочные работы.



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