

**Micro Commercial Components** 



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## **PN2907A**

## **Features**

- Halogen free available upon request by adding suffix "-HF"
- Through Hole Package
- Capable of 600mWatts of Power Dissipation and 600mA Ic
- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- Marking:MPS2907A
- Epoxy meets UL 94 V-0 flammability rating
- Moisure Sensitivity Level 1

## Electrical Characteristics @ 25°C Unless Otherwise Specified

Symbol	Parameter	Min	Max	Units
OFF CHARACTERISTICS				
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage* (I <sub>C</sub> =10mAdc, I <sub>B</sub> =0)		Vdc	
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage (I <sub>C</sub> =10μAdc, I <sub>E</sub> =0)	60		Vdc
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage (I <sub>E</sub> =10μAdc, I <sub>C</sub> =0)	5.0		Vdc
I <sub>BL</sub>	Base Cutoff Current (V <sub>CE</sub> =30Vdc, V <sub>BE</sub> =0.5Vdc)		50	nAdc
I <sub>CEX</sub>	Collector Cutoff Current (V <sub>CE</sub> =30Vdc, V <sub>BE</sub> =0.5Vdc)		50	nAdc
І <sub>сво</sub>	Collector Cutoff Current (V <sub>CB</sub> =50Vdc, I <sub>E</sub> =0) (V <sub>CB</sub> =50Vdc, I <sub>E</sub> =0, T <sub>A</sub> =150°C)		0.1 10.0	μAdc

### ON CHARACTERISTICS

h <sub>FE</sub>	DC Current Gain*				
	(I <sub>C</sub> =0.1mAdc, V <sub>CE</sub> =10Vdc)	75			
	(I <sub>C</sub> =1.0mAdc, V <sub>CE</sub> =10Vdc)	100			
	(I <sub>C</sub> =10mAdc, V <sub>CE</sub> =10Vdc)	100	300	300	
	$(I_C=150 \text{mAdc}, V_{CE}=10 \text{Vdc})$	100			
	(I <sub>C</sub> =500mAdc, V <sub>CE</sub> =10Vdc)	50			
V <sub>CE(sat)</sub>	Collector-Emitter Saturation Voltage				
	(I <sub>C</sub> =150mAdc, I <sub>B</sub> =15mAdc) 0.4		Vdc		
	(I <sub>C</sub> =500mAdc, I <sub>B</sub> =50mAdc)		1.6		
$V_{BE(sat)}$	Base-Emitter Saturation Voltage				
, ,	(I <sub>C</sub> =150mAdc, I <sub>B</sub> =15mAdc)		1.3	Vdc	
	(I <sub>C</sub> =500mAdc, I <sub>B</sub> =50mAdc)		2.6		

### **SMALL-SIGNAL CHARACTERISTICS**

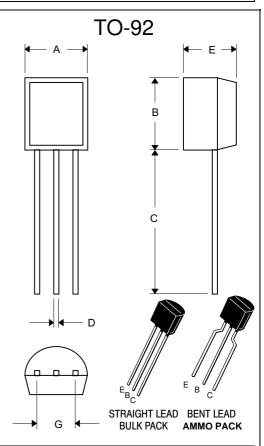
f⊤	Current Gain-Bandwidth Product (I <sub>C</sub> =50mAdc, V <sub>CE</sub> =20Vdc, f=100MHz)	200		MHz
C <sub>cbo</sub>	Output Capacitance (V <sub>CB</sub> =10Vdc, I <sub>E</sub> =0, f=100kHz)		8.0	pF
C <sub>ibo</sub>	Input Capacitance (V <sub>EB</sub> =2.0Vdc, I <sub>C</sub> =0, f=100kHz)		30.0	pF

### **SWITCHING CHARACTERISTICS**

$t_{d}$	Delay Time	$(V_{CC}=3.0Vdc, I_{C}=150mAdc,$	10	ns
t <sub>r</sub>	Rise Time	I <sub>B1</sub> =15mAdc)	40	ns
ts	Storage Time	(V <sub>CC</sub> =3.0Vdc, I <sub>C</sub> =150mAdc	80	ns
t <sub>f</sub>	Fall Time	$I_{B1}=I_{B2}=15$ mAdc)	30	ns

<sup>\*</sup>Pulse Width ≤ 300µs, Duty Cycle ≤ 2.0%

# PNP General Purpose Amplifier



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

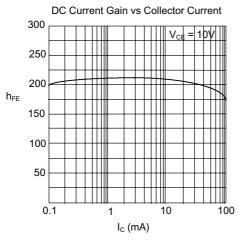
<sup>\*</sup> For ammo packing detailed specification, click here to visit our website of product packaging for details.

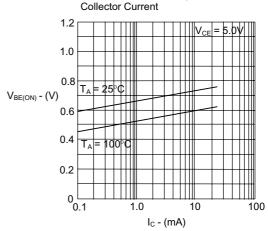
# PN2907A

# $\cdot M \cdot C \cdot C \cdot$

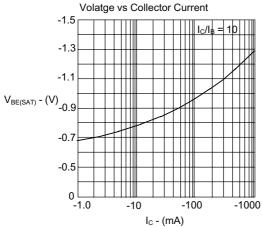
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Base-Emitter ON Voltage vs Collector Current

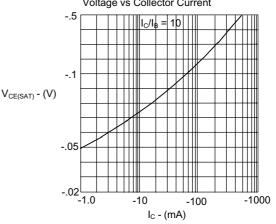




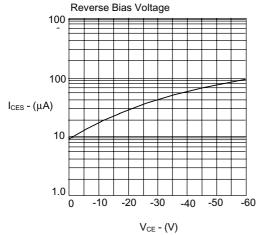
Pulsed Base Saturation



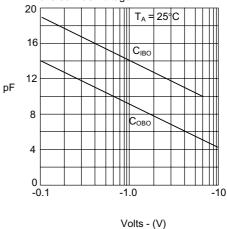




Collector Reverse Current vs Reverse Bias Voltage



Reverse Bias Voltage



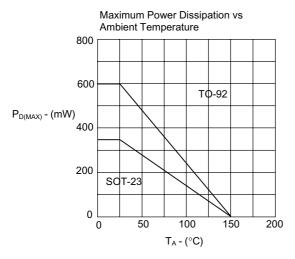
Input and Output Capacitances vs

 $T_A = 25^{\circ}C$ 

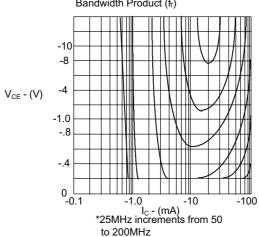
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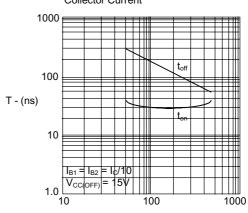
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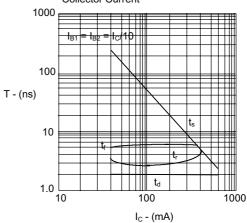


#### Turn On and Turn Off Times vs Collector Current



 $I_C$  - (mA)

Switching Times vs Collector Current





### **Micro Commercial Components**

## **Ordering Information:**

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

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

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