



# PN2222A

## 625mW NPN General Purpose Amplifier

### Features

- Halogen free available upon request by adding suffix "-HF"
- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- ≠ Marking: Type number
- Continuous Collector Current (Ic) =600mA.
- Operating and storage temperature range(Tj&Tstg) from -55°C ~+150 °C
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1

### 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> =10mA, 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)	75		Vdc
V <sub>(BR)EBO</sub>	Emitter-Base Breakdown Voltage (I <sub>E</sub> =10μA, I <sub>C</sub> =0)	6.0		Vdc
I <sub>BL</sub>	Base Cutoff Current (V <sub>CE</sub> =60Vdc, V <sub>BE</sub> =3.0Vdc)		20	nAdc
I <sub>CEX</sub>	Collector Cutoff Current (V <sub>CE</sub> =60Vdc, V <sub>BE</sub> =3.0Vdc)		10	nAdc

### ON CHARACTERISTICS

h <sub>FE</sub>	DC Current Gain* (I <sub>C</sub> =0.1mA, V <sub>CE</sub> =10Vdc) (I <sub>C</sub> =1.0mA, V <sub>CE</sub> =10Vdc) (I <sub>C</sub> =10mA, V <sub>CE</sub> =10Vdc) (I <sub>C</sub> =150mA, V <sub>CE</sub> =10Vdc) (I <sub>C</sub> =150mA, V <sub>CE</sub> =1.0Vdc) (I <sub>C</sub> =500mA, V <sub>CE</sub> =10Vdc)	35 50 75 100 50 40	300	
V <sub>CE(sat)</sub>	Collector-Emitter Saturation Voltage (I <sub>C</sub> =150mA, I <sub>B</sub> =15mA) (I <sub>C</sub> =500mA, I <sub>B</sub> =50mA)		0.3 1.0	Vdc
V <sub>BE(sat)</sub>	Base-Emitter Saturation Voltage (I <sub>C</sub> =150mA, I <sub>B</sub> =15mA) (I <sub>C</sub> =500mA, I <sub>B</sub> =50mA)	0.6	1.2 2.0	Vdc

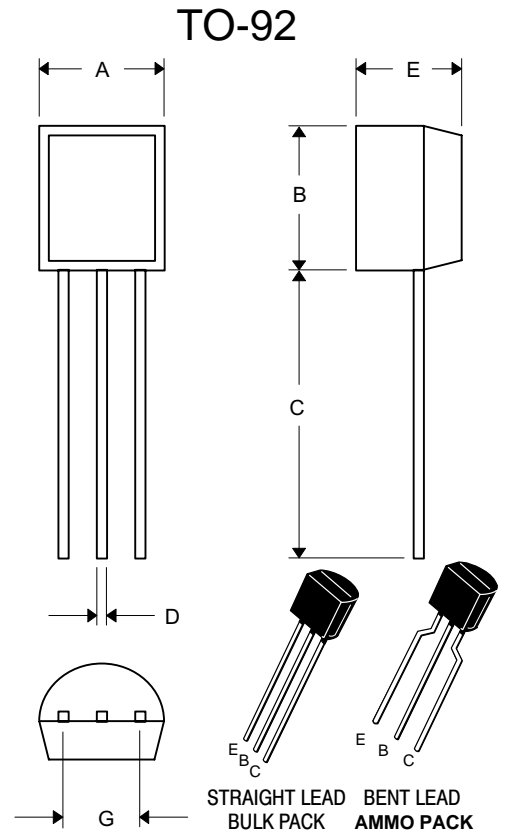
### SMALL-SIGNAL CHARACTERISTICS

f <sub>T</sub>	Current Gain-Bandwidth Product (I <sub>C</sub> =20mA, V <sub>CE</sub> =20Vdc, f=100MHz)	300		MHz
C <sub>obo</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>BE</sub> =0.5Vdc, I <sub>C</sub> =0, f=100kHz)		25	pF
NF	Noise Figure (I <sub>C</sub> =100μA, V <sub>CE</sub> =10Vdc, R <sub>S</sub> =1.0kΩ, f=1.0kHz)		4.0	dB

### SWITCHING CHARACTERISTICS

t <sub>d</sub>	Delay Time	(V <sub>CC</sub> =30Vdc, V <sub>BE</sub> =0.5Vdc, I <sub>C</sub> =150mA, I <sub>B1</sub> =15mA)	10	ns
t <sub>r</sub>	Rise Time	(V <sub>CC</sub> =30Vdc, I <sub>C</sub> =150mA, I <sub>B1</sub> =15mA)	25	ns
t <sub>s</sub>	Storage Time	(V <sub>CC</sub> =30Vdc, I <sub>C</sub> =150mA, I <sub>B1</sub> =I <sub>B2</sub> =15mA)	225	ns
t <sub>f</sub>	Fall Time	(V <sub>CC</sub> =30Vdc, I <sub>C</sub> =150mA, I <sub>B1</sub> =I <sub>B2</sub> =15mA)	60	ns

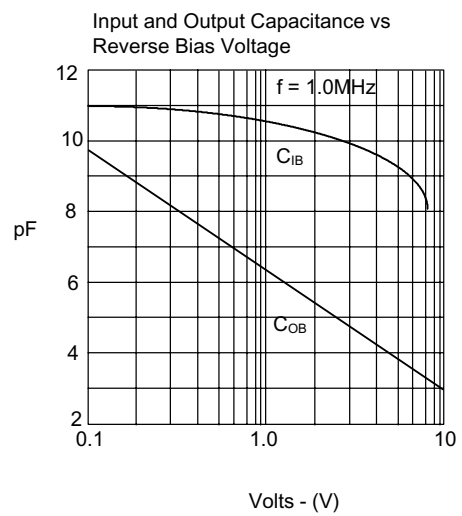
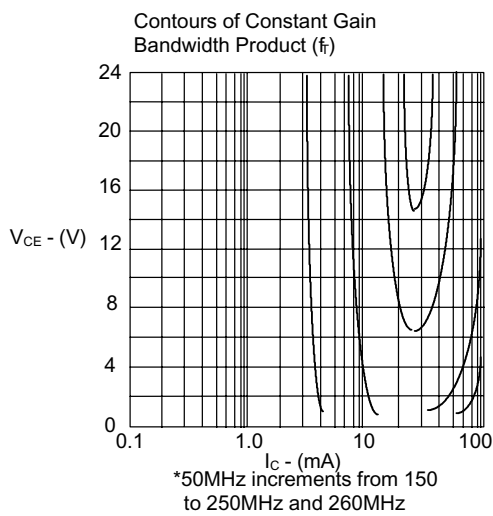
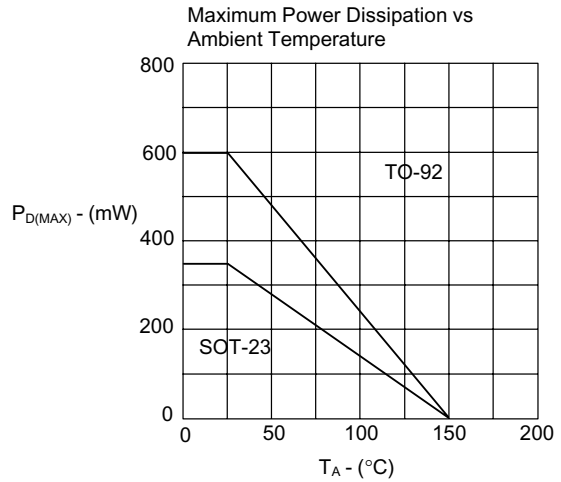
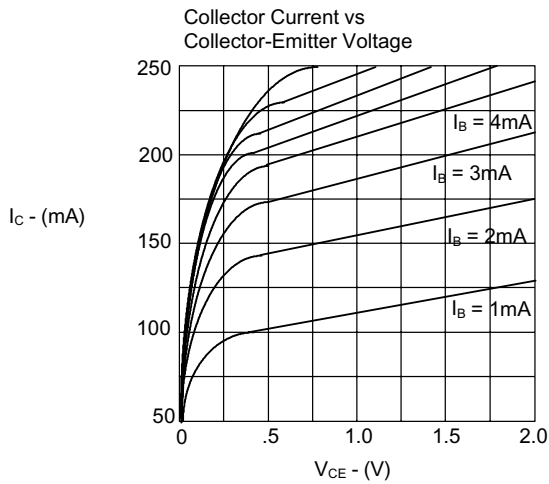
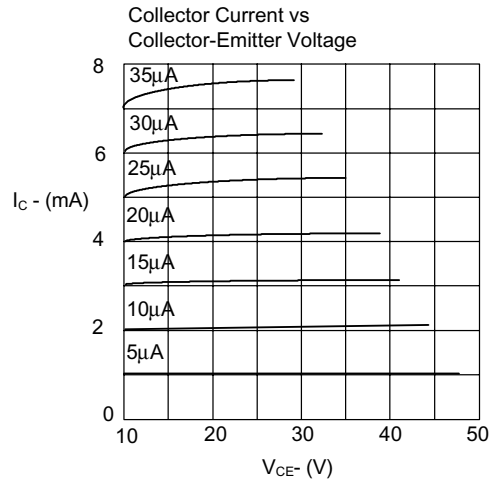
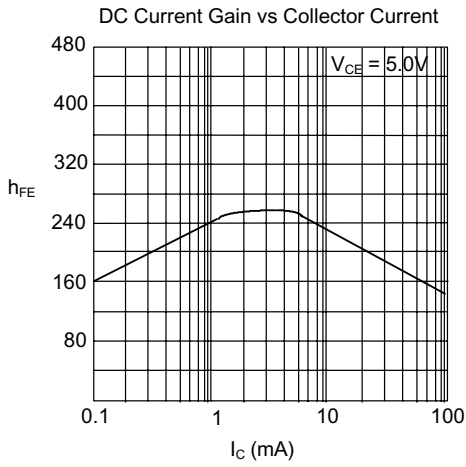
\*Pulse Width ≤ 300μs, Duty Cycle ≤ 2.0%



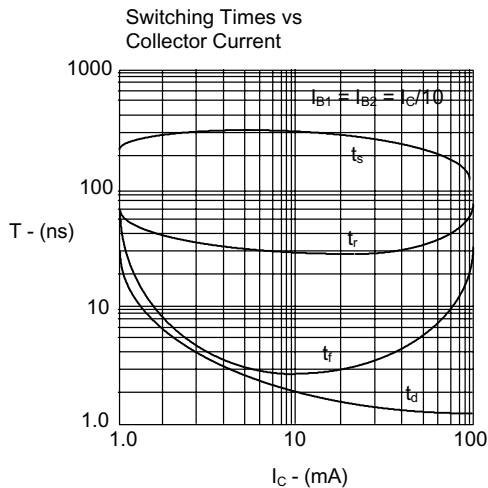
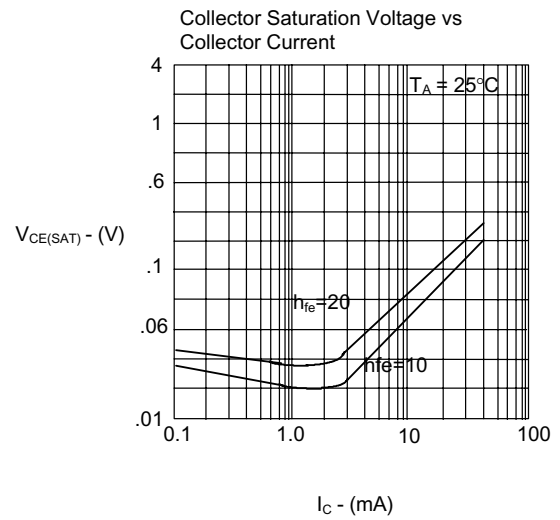
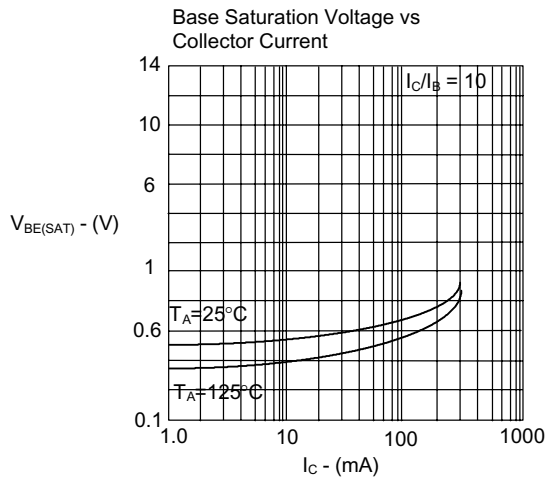
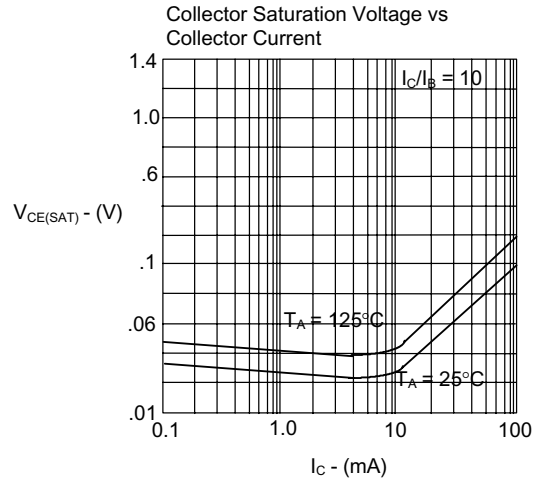
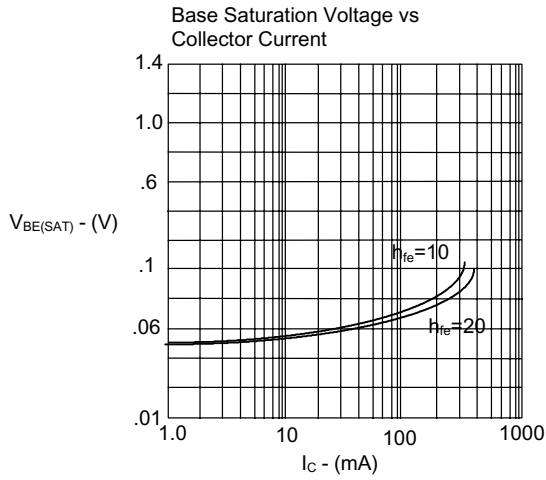
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.175	.185	4.45	4.70	
B	.175	.185	4.45	4.70	
C	.500	---	12.70	---	
D	.016	.020	0.41	0.63	
E	.135	.145	3.43	3.68	
G	.095	.105	2.42	2.67	Straight Lead
	.173	.220	4.40	5.60	Bent Lead

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

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### 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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