



Micro Commercial Components



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

2N4403

PNP General Purpose Amplifier

Features

- Halogen free available upon request by adding suffix "-HF"
- Capable of 625mWatts of Power Dissipation
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Marking: Type number
- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- 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* ($I_C = -1.0\text{mA}$, $I_B = 0$)	-40		Vdc
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage ($I_C = -100\mu\text{A}$, $I_E = 0$)	-40		Vdc
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage ($I_E = -100\mu\text{A}$, $I_C = 0$)	-5.0		Vdc
I_{CBO}	Collector Cut-off Current ($V_{CE} = -35\text{Vdc}$, $I_E = 0$)		-0.1	μA
I_{EBO}	Emitter Cut-off Current ($V_{EB} = -5\text{Vdc}$, $I_C = 0$)		-0.1	μA

ON CHARACTERISTICS

h_{FE}	DC Current Gain* ($I_C = -0.1\text{mA}$, $V_{CE} = -1.0\text{Vdc}$) ($I_C = -1.0\text{mA}$, $V_{CE} = -1.0\text{Vdc}$) ($I_C = -10\text{mA}$, $V_{CE} = -1.0\text{Vdc}$) ($I_C = -150\text{mA}$, $V_{CE} = -1.0\text{Vdc}$) ($I_C = -500\text{mA}$, $V_{CE} = -2.0\text{Vdc}$)	30 60 100 100 20	300	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage ($I_C = -150\text{mA}$, $I_B = -15\text{mA}$) ($I_C = -500\text{mA}$, $I_B = -50\text{mA}$)		-0.4 -0.75	Vdc
$V_{BE(sat)}$	Base-Emitter Saturation Voltage ($I_C = -150\text{mA}$, $I_B = -15\text{mA}$) ($I_C = -500\text{mA}$, $I_B = -50\text{mA}$)	-0.75	-0.95 -1.30	Vdc

SMALL-SIGNAL CHARACTERISTICS

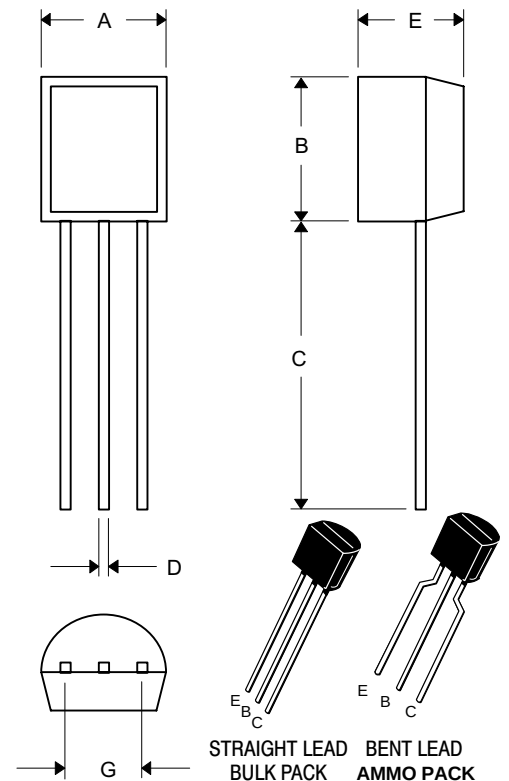
f_T	Current Gain-Bandwidth Product ($I_C = -20\text{mA}$, $V_{CE} = -10\text{Vdc}$, $f = 100\text{MHz}$)	200		MHz
C_{cb}	Output Capacitance ($V_{CB} = -10\text{Vdc}$, $I_E = 0$, $f = 140\text{kHz}$)		8.5	pF
C_{eb}	Input Capacitance ($V_{EB} = -0.5\text{Vdc}$, $I_C = 0$, $f = 140\text{kHz}$)		30.0	pF

SWITCHING CHARACTERISTICS

t_d	Delay Time	($V_{CC} = -3.0\text{Vdc}$, $V_{BE} = -2.0\text{Vdc}$)	15	ns
t_r	Rise Time	($I_C = -150\text{mA}$, $I_{B1} = -15\text{mA}$)	20	ns
t_s	Storage Time	($V_{CC} = -3.0\text{Vdc}$, $I_C = -150\text{mA}$)	225	ns
t_f	Fall Time	($I_{B1} = I_{B2} = -15\text{mA}$)	30	ns

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

TO-92



DIMENSIONS

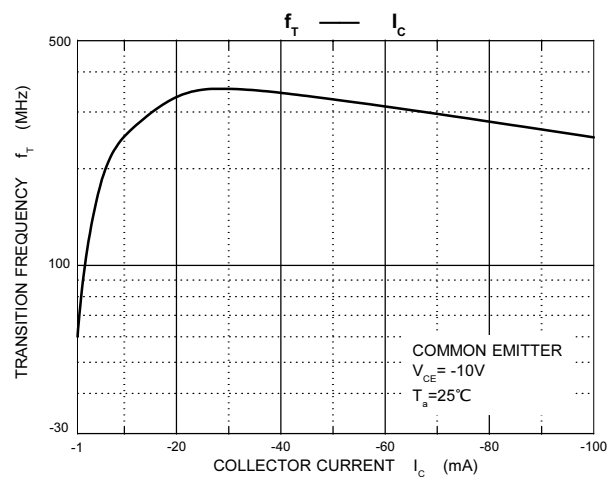
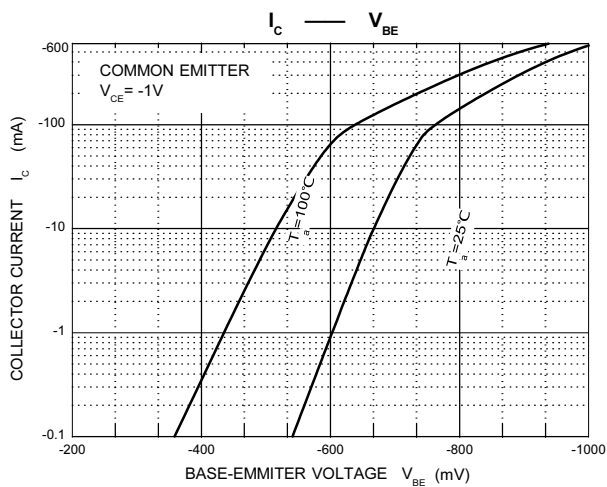
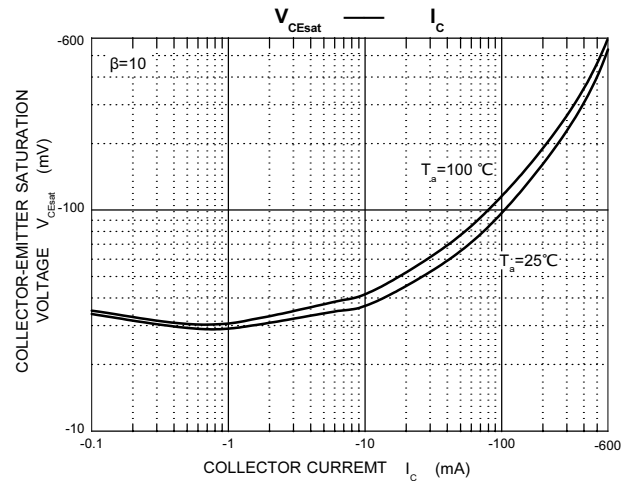
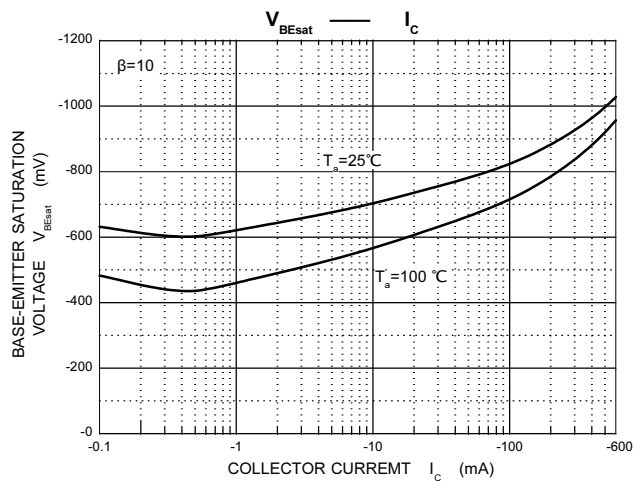
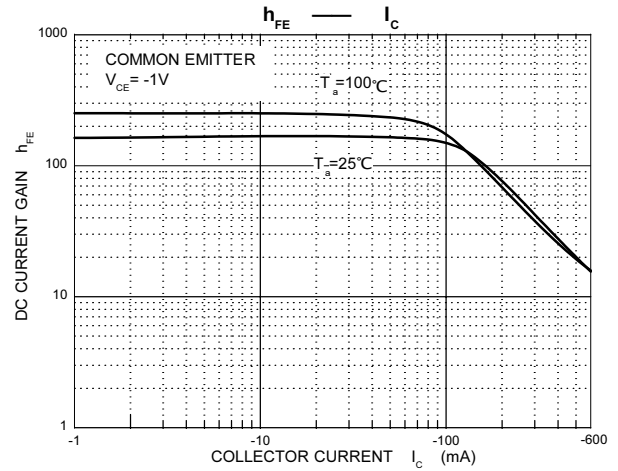
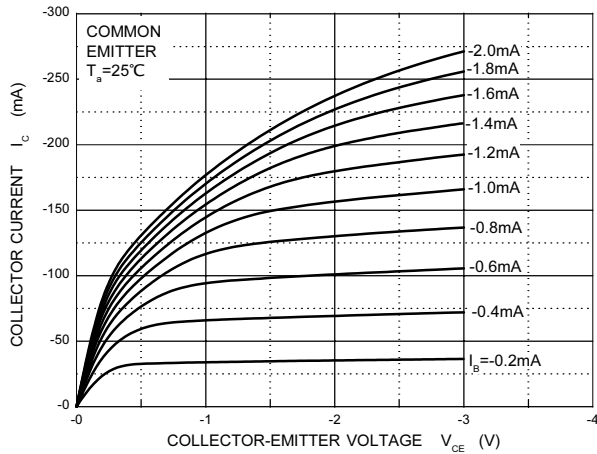
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.175	.185	4.45	4.70	
B	.175	.185	4.45	4.70	
C	.500	---	12.70	---	
D	.016	.020	0.41	0.63	
E	.135	.145	3.43	3.68	
G	.095	.105	2.42	2.67	Straight Lead
	.173	.220	4.40	5.60	Bent Lead

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

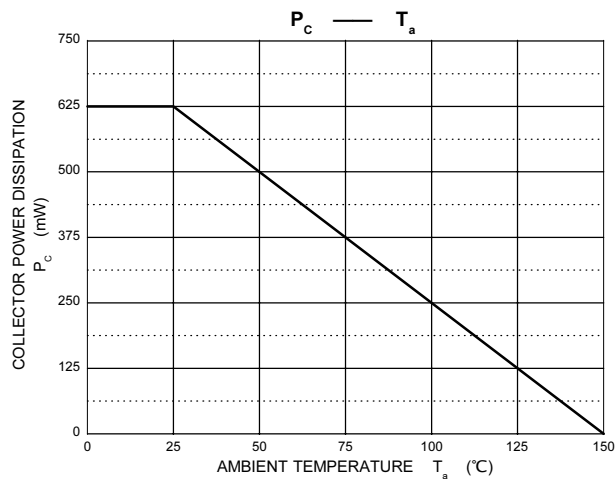
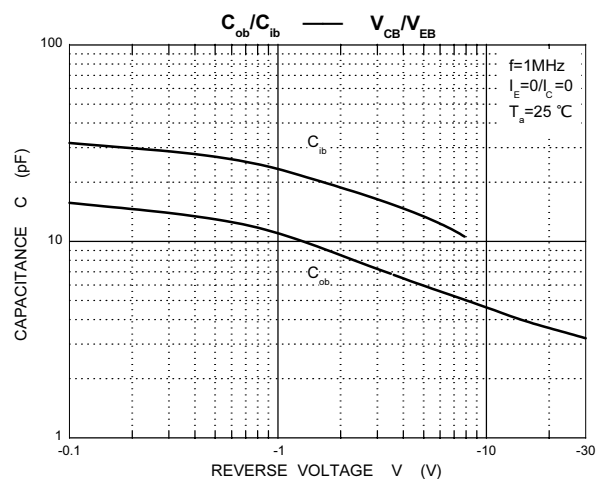
www.mccsemi.com

Typical Characteristics

Static Characteristic



Typical Characteristics



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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