Micro Commercial Components

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PN2222A

600mW NPN General Purpose Amplifier

Features

- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- ∉ Marking:Type number
- Continuous Collector Current (Ic) =600mA.
- Operating and storange temperature range(Tj&Tstg) from -55°C ~+150 °C
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0 and MSL Rating 1

Electrical Characteristics @ 25°C Unless Otherwise Specified

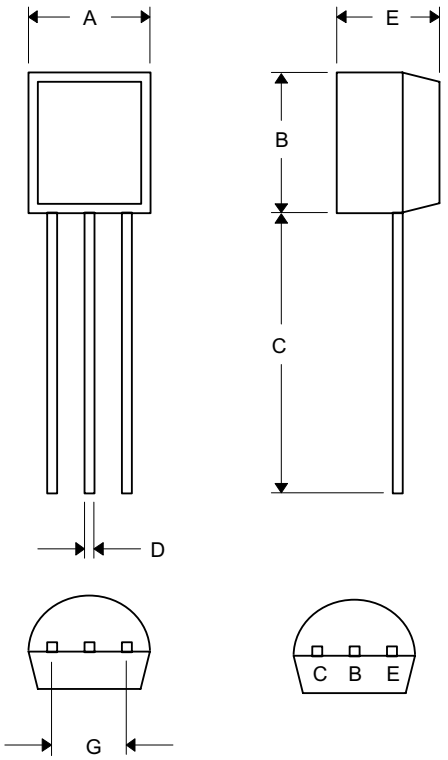
Symbol	Parameter	Min	Max	Units
OFF CHARACTERISTICS				
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage* (I_C=10mAdc, I_B=0)	40		Vdc
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage (I_C=10μAdc, I_E=0)	75		Vdc
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage (I_E=10μAdc, I_C=0)	6.0		Vdc
I_{BL}	Base Cutoff Current (V_{CE}=60Vdc, V_{BE}=3.0Vdc)		20	nAdc
I_{CEX}	Collector Cutoff Current (V_{CE}=60Vdc, V_{BE}=3.0Vdc)		10	nAdc
ON CHARACTERISTICS				
h_{FE}	DC Current Gain* (I_C=0.1mAdc, V_{CE}=10Vdc) (I_C=1.0mAdc, V_{CE}=10Vdc) (I_C=10mAdc, V_{CE}=10Vdc) (I_C=150mAdc, V_{CE}=10Vdc) (I_C=150mAdc, V_{CE}=1.0Vdc) (I_C=500mAdc, V_{CE}=10Vdc)	35 50 75 100 50 40	300	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage (I_C=150mAdc, I_B=15mAdc) (I_C=500mAdc, I_B=50mAdc)		0.3 1.0	Vdc
$V_{BE(sat)}$	Base-Emitter Saturation Voltage (I_C=150mAdc, I_B=15mAdc) (I_C=500mAdc, I_B=50mAdc)	0.6	1.2 2.0	Vdc
SMALL-SIGNAL CHARACTERISTICS				
f_T	Current Gain-Bandwidth Product (I_C=20mAdc, V_{CE}=20Vdc, f=100MHz)	300		MHz
C_{obo}	Output Capacitance (V_{CB}=10Vdec, I_E=0, f=100kHz)		8.0	pF
C_{ibo}	Input Capacitance (V_{BE}=0.5Vdc, I_C=0, f=100kHz)		25	pF
NF	Noise Figure (I_C=100μAdc, V_{CE}=10Vdc, R_S=1.0kΩ f=1.0kHz)		4.0	dB

SWITCHING CHARACTERISTICS

t_d	Delay Time	(V_{CC}=30Vdc, V_{BE}=0.5Vdc	10	ns
t_r	Rise Time	I_C=150mAdc, I_{B1}=15mAdc)	25	ns
t_s	Storage Time	(V_{CC}=30Vdc, I_C=150mAdc	225	ns
t_f	Fall Time	I_{B1}=I_{B2}=15mAdc)	60	ns

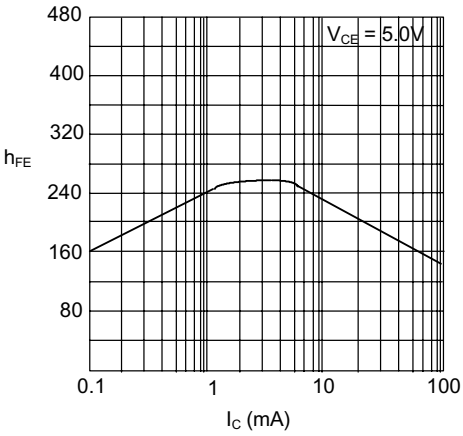
*Pulse Width ≤ 300μs, Duty Cycle≤ 2.0%

TO-92

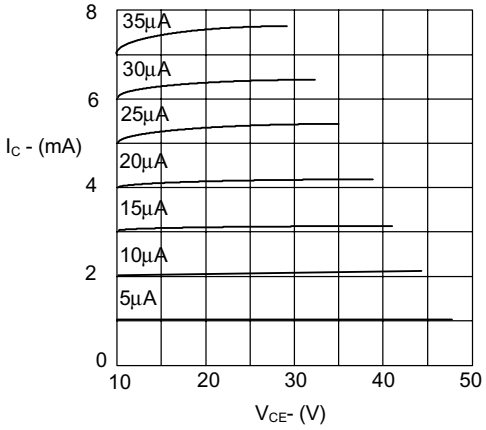


DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	.175	.185	4.45	4.70	
B	.175	.185	4.45	4.70	
C	.500	-------	12.70	--------	
D	.016	.020	0.41	0.56	
E	.135	.145	3.43	3.68	
G	.095	.105	2.42	2.67	

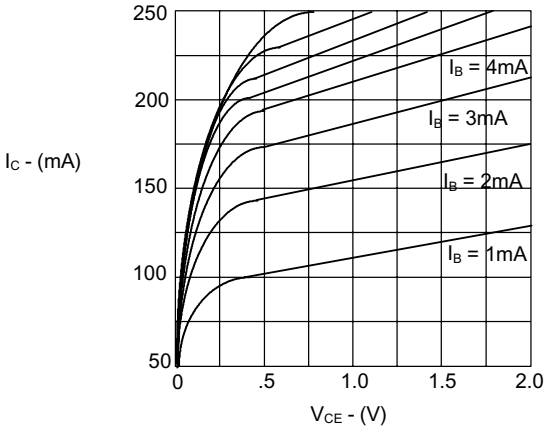
DC Current Gain vs Collector Current



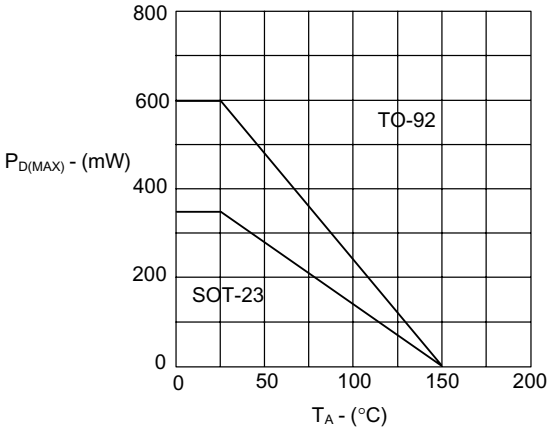
Collector Current vs
Collector-Emitter Voltage



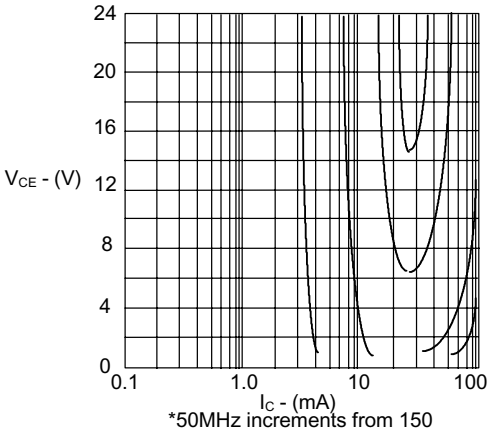
Collector Current vs
Collector-Emitter Voltage



Maximum Power Dissipation vs
Ambient Temperature

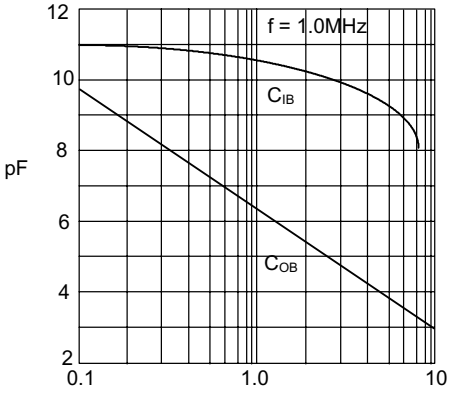


Contours of Constant Gain
Bandwidth Product (ft)

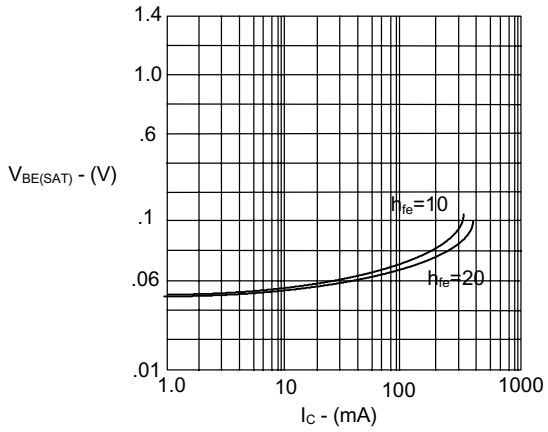


*50MHz increments from 150
to 250MHz and 260MHz

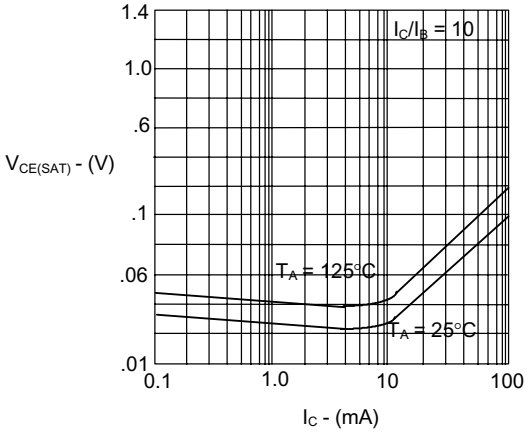
Input and Output Capacitance vs
Reverse Bias Voltage



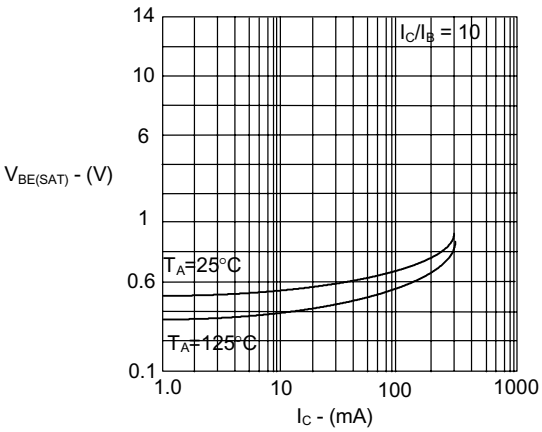
Base Saturation Voltage vs
Collector Current



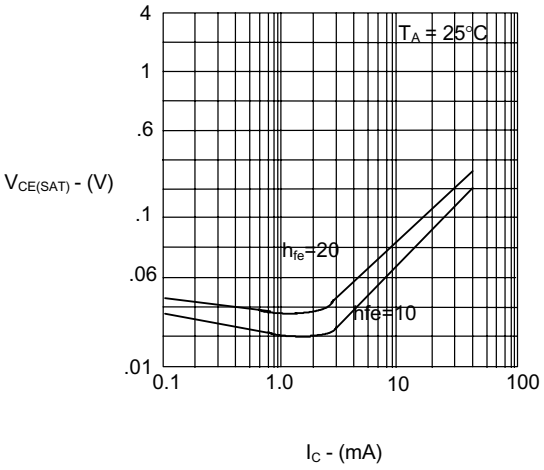
Collector Saturation Voltage vs
Collector Current



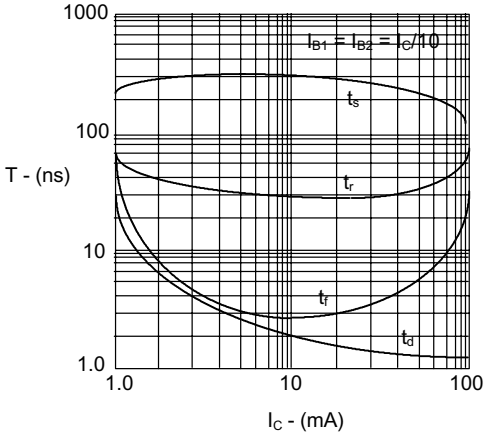
Base Saturation Voltage vs
Collector Current



Collector Saturation Voltage vs
Collector Current



Switching Times vs
Collector Current



Ordering Information

Device	Packing
(Part Number)-AP	Tape&Reel;2Kpcs/Box
(Part Number)-BP	Bulk;1Kpcs/Bag