



Micro Commercial Components



Micro Commercial Components  
20736 Marilla Street Chatsworth  
CA 91311

Phone: (818) 701-4933

Fax: (818) 701-4939

# PXT3904

## NPN General Purpose Amplifier

### Features

- Capable of 500mWatts of Power Dissipation and 200mA  $I_C$ .
- Operating and Storage Junction Temperatures:  $-55^{\circ}\text{C}$  to  $150^{\circ}\text{C}$
- Compliment to PXT3906
- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- Epoxy meets UL 94 V-0 flammability rating
- Moisure Sensitivity Level 1
- Marking: 1A

### Electrical Characteristics @ $25^{\circ}\text{C}$ Unless Otherwise Specified

Symbol	Parameter	Min	Max	Units
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#### 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 ( $I_C=10\mu\text{A}$ , $I_E=0$ )	60		Vdc
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage ( $I_E=10\mu\text{A}$ , $I_C=0$ )	6.0		Vdc
$I_{CBO}$	Collector Cutoff Current ( $V_{CB}=30\text{Vdc}$ , $I_E=0$ )		50	nAdc
$I_{EBO}$	Cutoff Current ( $V_{EB}=6\text{Vdc}$ , $I_C=0$ )		50	nAdc

#### ON CHARACTERISTICS

$h_{FE}$	DC Current Gain* ( $I_C=0.1\text{mA}$ , $V_{CE}=1.0\text{Vdc}$ ) ( $I_C=1.0\text{mA}$ , $V_{CE}=1.0\text{Vdc}$ ) ( $I_C=10\text{mA}$ , $V_{CE}=1.0\text{Vdc}$ ) ( $I_C=50\text{mA}$ , $V_{CE}=1.0\text{Vdc}$ ) ( $I_C=100\text{mA}$ , $V_{CE}=1.0\text{Vdc}$ )	60 80 100 60 30	300	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage ( $I_C=10\text{mA}$ , $I_B=1.0\text{mA}$ ) ( $I_C=50\text{mA}$ , $I_B=5.0\text{mA}$ )		0.2 0.3	Vdc
$V_{BE(sat)}$	Base-Emitter Saturation Voltage ( $I_C=10\text{mA}$ , $I_B=1.0\text{mA}$ ) ( $I_C=50\text{mA}$ , $I_B=5.0\text{mA}$ )	0.65	0.85 0.95	Vdc

#### SMALL-SIGNAL CHARACTERISTICS

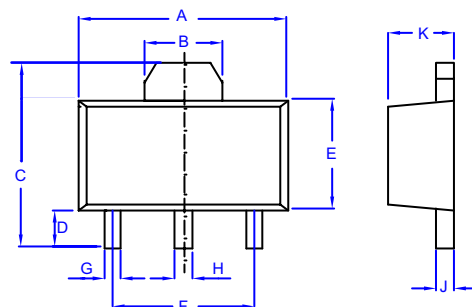
$f_T$	Current Gain-Bandwidth Product ( $I_C=10\text{mA}$ , $V_{CE}=20\text{Vdc}$ , $f=100\text{MHz}$ )	300		MHz
$C_{obo}$	Output Capacitance ( $V_{CB}=5.0\text{Vdc}$ , $I_E=0$ , $f=1.0\text{MHz}$ )		4.0	pF
$C_{ibo}$	Input Capacitance ( $V_{BE}=0.5\text{Vdc}$ , $I_C=0$ , $f=1.0\text{MHz}$ )		8.0	pF
NF	Noise Figure ( $I_C=100\mu\text{A}$ , $V_{CE}=5.0\text{Vdc}$ , $R_S=1.0\text{k}\Omega$ , $f=10\text{Hz}$ to $15.7\text{kHz}$ )		5.0	dB

#### SWITCHING CHARACTERISTICS

$t_d$	Delay Time	( $V_{CC}=3.0\text{Vdc}$ , $V_{BE}=0.5\text{Vdc}$ )	35	ns
$t_r$	Rise Time	( $I_C=10\text{mA}$ , $I_{B1}=1.0\text{mA}$ )	35	ns
$t_s$	Storage Time	( $V_{CC}=3.0\text{Vdc}$ , $I_C=10\text{mA}$ )	200	ns
$t_f$	Fall Time	( $I_{B1}=I_{B2}=1.0\text{mA}$ )	50	ns

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

### SOT-89



- Base
- Collector
- Emitter

DIMENSINS					
DIM	INCHES		MM		NOTES
	MIN	MAX	MIN	MAX	
A	.173	.181	4.39	4.60	
B	.063	.071	1.60	1.80	
C	.154	.165	3.91	4.19	
D	.031	.039	0.80	1.00	
E	.092	.100	2.34	2.54	
F	.118	----	3.00	----	TYP
G	.013	.019	0.33	0.48	
H	.015	.021	0.38	0.53	
J	.015	.016	0.38	0.41	
K	.055	.063	1.40	1.60	

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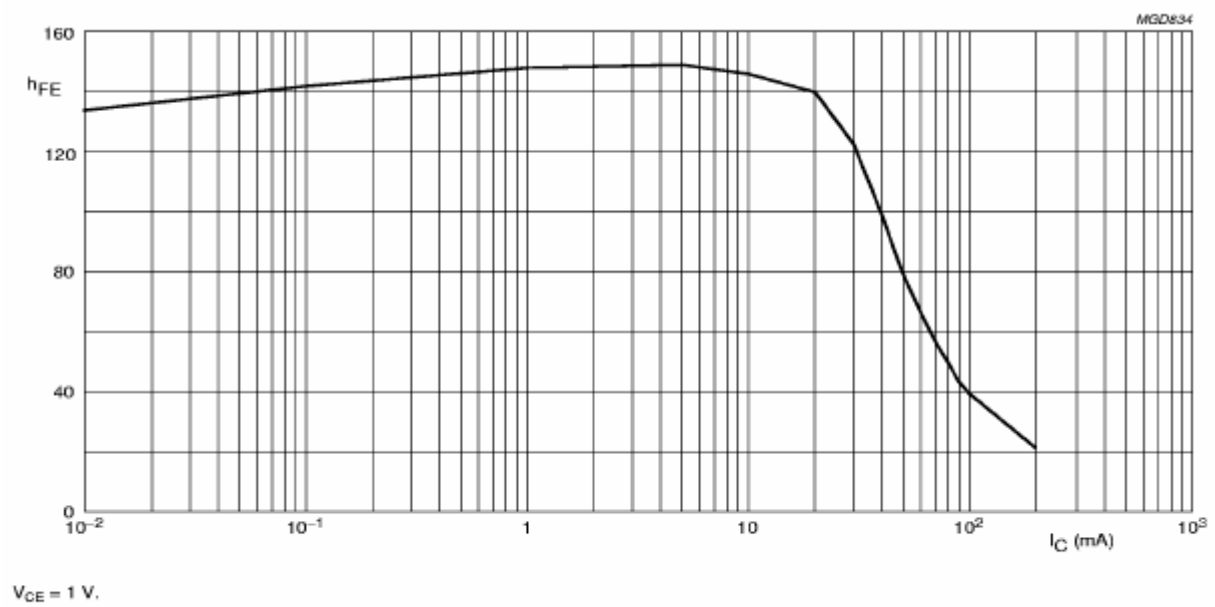


Fig.2 DC current gain; typical values.

Ordering Information :

Device	Packing
Part Number-TP	Tape&Reel; 1Kpcs/Reel

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