

FAIRCHILD
SEMICONDUCTOR™



Absolute Maximum Ratings*

* These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

NOTES:

- 1) These ratings are based on a maximum junction temperature of 150 degrees C.
- 2) These are steady state limits. The factory should be consulted on applications involving pulsed or low duty cycle operations.

Thermal Characteristics

* Device mounted on FR-4 PCB 1.6" X 1.6" X 0.06."

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2N3904/MMBT3904/PZT3904, Rev. A

NPN General Purpose Amplifier
(continued)

Electrical Characteristics

ON CHARACTERISTICS*

SMALL SIGNAL CHARACTERISTICS

SWITCHING CHARACTERISTICS

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

Spice Model

NPN (ls=6.734f Xti=3 Eg=1.11 Vaf=74.03 Bf=416.4 Ne=1.259 lse=6.734 lkf=66.78m Xtb=1.5 Br=.7371 Nc=2 lsc=0 lkr=0 Rc=1 Cjc=3.638p Mjc=.3085 Vjc=.75 Fc=.5 Cje=4.493p Mje=.2593 Vje=.75 Tr=239.5n Tf=301.2p ltf=.4 Vtf=4 Xtf=2 Rb=10)

Chapter 6

209