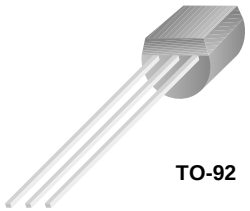
FAIRCHILD
SEMICONDUCTOR®

July 2006

BF494
NPN RF Transistor



TO-92

1. Collector 2. Emitter 3. Base

Absolute Maximum Ratings * T_a = 25°C unless otherwise noted

Symbol	Parameter	Value	Unit
V_{CEO}	Collector-Emitter Voltage	20	V
V_{CBO}	Collector-Base Voltage	30	V
V_{EBO}	Emitter-Base Voltage	5.0	V
I_C	Collector Current - Continuous	30	mA
T_J	Junction Temperature	150	°C
T_{STG}	Storage Temperature Range	- 55 ~ 150	°C

* 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

Symbol	Parameter	Value	Unit
P_D	Total Device Dissipation, by $R_{\theta JA}$ Derate above 25°C	350 2.8	mW mW/°C
$R_{\theta JC}$	Thermal Resistance, Junction to case	125	°C/W
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	357	°C/W

Electrical Characteristics* T_C = 25°C unless otherwise noted

Symbol	Parameter	Conditions	Min.	Max.	Units
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	I_C = 1.0mA, I_B = 0	20		V
$V_{(BR)CBO}$	Collector-Base BreakdownVoltage	I_C = 10μA, I_E = 0	30		V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	I_E = 10μA, I_C = 0	5.0		V
I_{CES}	Collector-Emitter Sustaining Current	V_{CE} = 40V, V_{EB} = 0V		10	nA
h_{FE}	DC Current Gain	V_{CE} = 10V, I_C = 1mA	67	222	
V_{CE}(sat)	Collector-Emitter Saturation Voltage	I_C = 10mA, I_B = 5mA		0.2	V
V_{BE}(sat)	Base-Emitter Saturation Voltage	I_C = 10mA, I_B = 5mA		0.92	V
V_{BE}(ON)	Base-Emitter On Voltage	V_{CE} = 10V, I_C = 10mA	650	740	mV

* DC Item are tested by Pulse Test: Pulse Width≤300us, Duty Cycle≤2%

Package Dimensions

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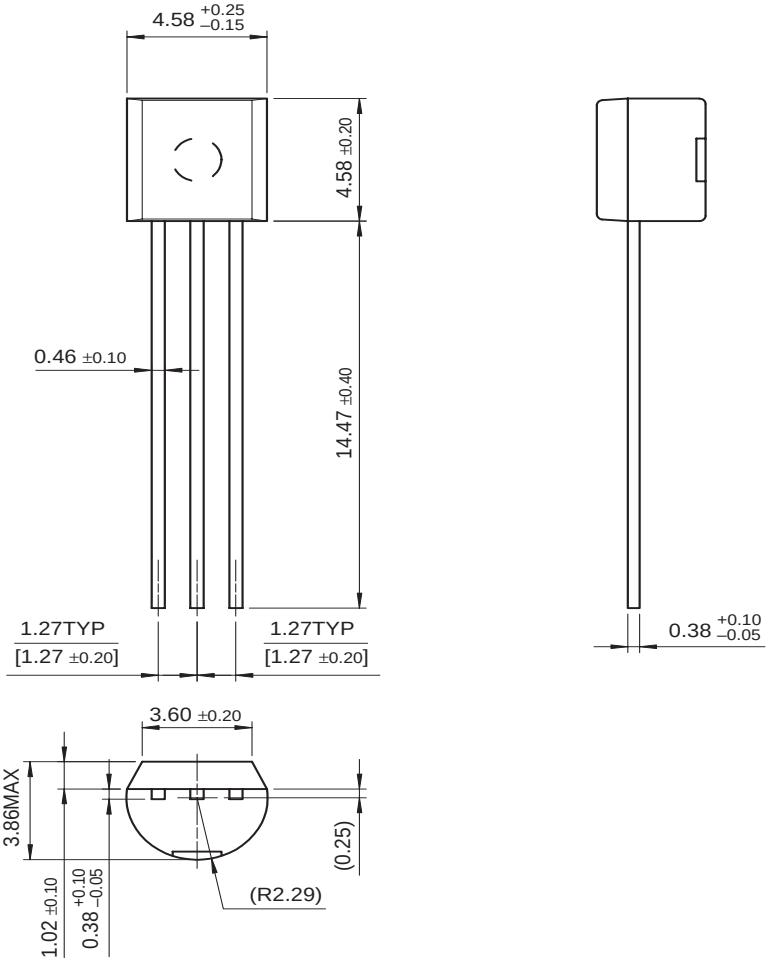

Dimensions in Millimeters

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