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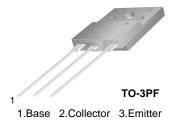


October 2009

# FJAF4210 PNP Epitaxial Silicon Transistor

#### **Features**

- Audio Power Amplifier
- High Current Capability : I<sub>C</sub>= -10A
- High Power Dissipation
- Wide S.O.A
- Complement to FJAF4310



#### Absolute Maximum Ratings\* T<sub>A</sub>=25°C unless otherwise noted

Symbol	Parameter	Value	Units
V <sub>CBO</sub>	Collector-Base Voltage	-200	V
V <sub>CEO</sub>	Collector-Emitter Voltage	-140	V
V <sub>EBO</sub>	Emitter-Base Voltage	-6	V
I <sub>C</sub>	Collector Current (DC)	-10	Α
I <sub>B</sub>	Base Current (DC)	-1.5	Α
P <sub>C</sub>	Collector Dissipation (T <sub>C</sub> =25°C)	80	W
$R_{\theta JC}$	Junction to Case	1.33	°C/W
TJ	Junction Temperature	150	°C
$T_{STG}$	Storage Temperature	- 55 ~ 150	°C

#### **Electrical Characteristics** T<sub>A</sub>=25°C unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Тур.	Max.	Units
BV <sub>CBO</sub>	Collector-Base Breakdown Voltage	$I_C$ =-5mA, $I_E$ =0	-200			V
BV <sub>CEO</sub>	Collector-Emitter Breakdown Voltage	I <sub>C</sub> =-50mA, R <sub>BE</sub> =∞	-140			V
BV <sub>EBO</sub>	Emitter-Base Breakdown Voltage	I <sub>E</sub> =-5mA, I <sub>C</sub> =0	-6			V
I <sub>CBO</sub>	Collector Cut-off Current	V <sub>CB</sub> =-200V, I <sub>E</sub> =0			-10	μΑ
I <sub>EBO</sub>	Emitter Cut-off Current	V <sub>EB</sub> =-6V, I <sub>C</sub> =0			-10	μΑ
h <sub>FE</sub>	* DC Current Gain	$V_{CE}$ =-4V, $I_{C}$ =-3A	50		180	
V <sub>CE</sub> (sat)	Collector-Emitter Saturation Voltage	I <sub>C</sub> =-5A, I <sub>B</sub> =-0.5A			-0.5	V
C <sub>ob</sub>	Output Capacitance	V <sub>CB</sub> =-10V, f=1MHz		400		pF
f <sub>T</sub>	Current Gain Bandwidth Product	V <sub>CE</sub> =-5V, I <sub>C</sub> =-1A		30		MHz

<sup>\*</sup> Pulse Test : PW=20µs

## **h**<sub>FE</sub> Classification

Classification	R	0	Y
h <sub>FE</sub>	50 ~ 100	70 ~ 140	90 ~ 180

### **Typical Perpormance Characteristics**

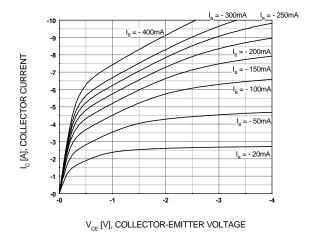


Figure 1. Static Characterstic

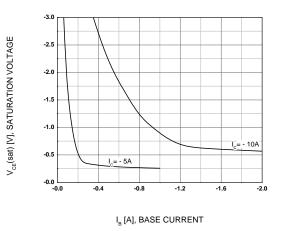


Figure 3. V<sub>CE</sub>(sat) vs. I<sub>B</sub> Characteristics

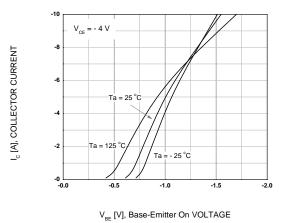


Figure 5. Base-Emitter On Voltage

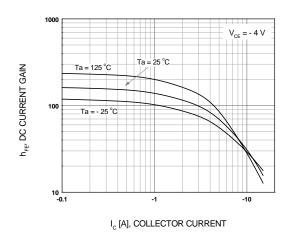


Figure 2. DC current Gain

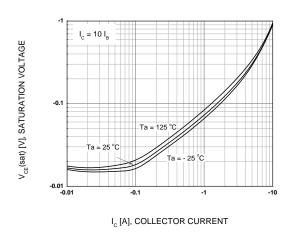


Figure 4. Collector-Emitter Saturation Voltage

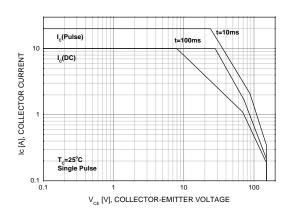


Figure 6. Forward Bias Safe Operating Area

# **Typical Perpormance Characteristics**

(Continued)

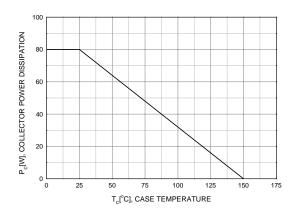
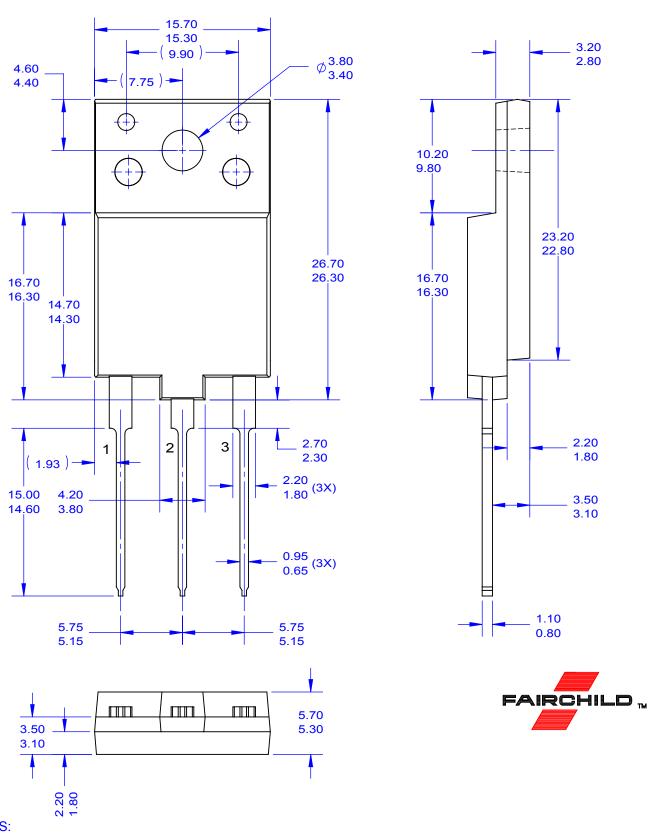


Figure 7. Power Derating



#### **NOTES**:

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- JEITA PACKAGING STANDARD.

  B. ALL DIMENSIONS ARE IN MILLIMETERS.

  C. DIMENSIONS ARE EXCLUSIVE OF BURRS. MOLD FLASH AND TIE BAR PROTRUSIÓNS.
- D. PIN 2 CONNECTS TO DAP. E. DRAWING FILE NAME: TO3PFA03REV2

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