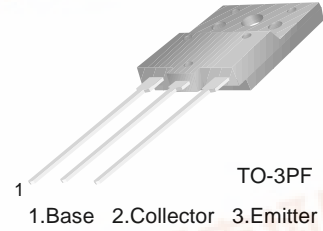


FAIRCHILD
SEMICONDUCTOR®

FJAF4310

Audio Power Amplifier

- High Current Capability : $I_C=10A$
- High Power Dissipation
- Wide S.O.A
- Complement to FJAF4210



NPN Epitaxial Silicon Transistor

Absolute Maximum Ratings $T_C=25^\circ C$ unless otherwise noted

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	200	V
V_{CEO}	Collector-Emitter Voltage	140	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current (DC)	10	A
I_B	Base Current (DC)	1.5	A
P_C	Collector Dissipation ($T_C=25^\circ C$)	80	W
$R_{\theta JC}$	Junction to Case	1.48	$^\circ C/W$
T_J	Junction Temperature	150	$^\circ C$
T_{STG}	Storage Temperature	- 55 ~ 150	$^\circ C$

Electrical Characteristics $T_C=25^\circ C$ unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
BV_{CBO}	Collector-Base Breakdown Voltage	$I_C=5mA, I_E=0$	200			V
BV_{CEO}	Collector-Emitter Breakdown Voltage	$I_C=50mA, R_{BE}=\infty$	140			V
BV_{EBO}	Emitter-Base Breakdown Voltage	$I_E=5mA, I_C=0$	6			V
I_{CBO}	Collector Cut-off Current	$V_{CB}=200V, I_E=0$			10	μA
I_{EBO}	Emitter Cut-off Current	$V_{EB}=6V, I_C=0$			10	μA
h_{FE}	* DC Current Gain	$V_{CE}=4V, I_C=3A$	50		180	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=5A, I_B=0.5A$			0.5	V
C_{ob}	Output Capacitance	$V_{CB}=10V, f=1MHz$		250		pF
f_T	Current Gain Bandwidth Product	$V_{CE}=5V, I_C=1A$		30		MHz

* Pulse Test : $PW=20\mu s$

h_{FE} Classification

Classification	R	O	Y
h_{FE}	50 ~ 100	70 ~ 140	90 ~ 180

Typical Characteristics

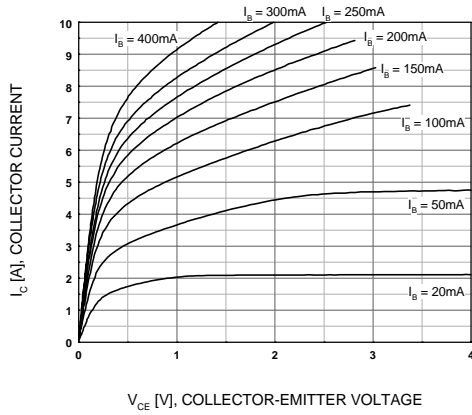


Figure 1. Static Characteristic

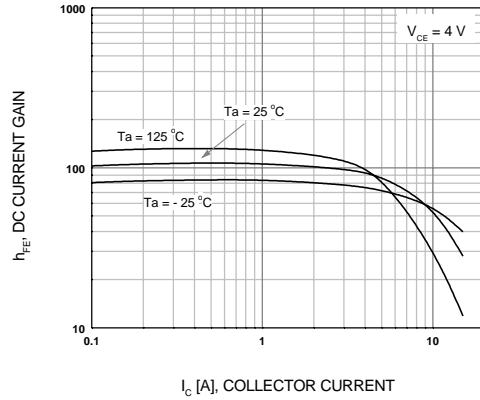


Figure 2. DC current Gain

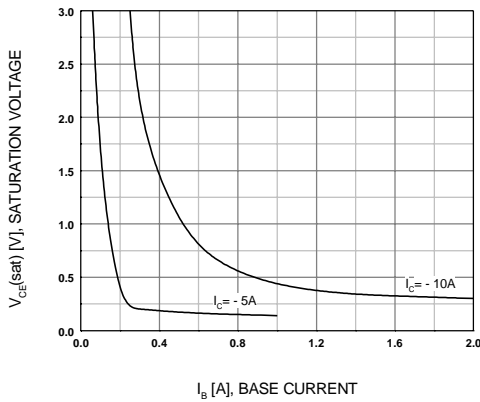


Figure 3. $V_{CE(sat)}$ vs. I_b Characteristics

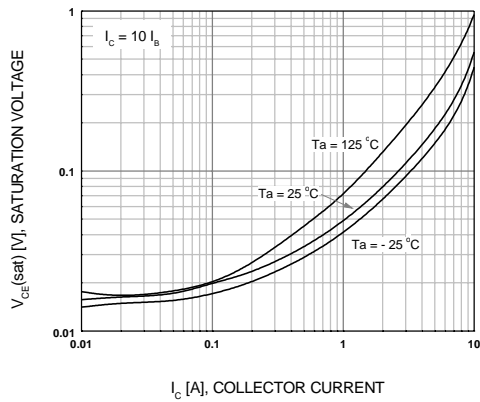


Figure 4. Collector-Emitter Saturation Voltage

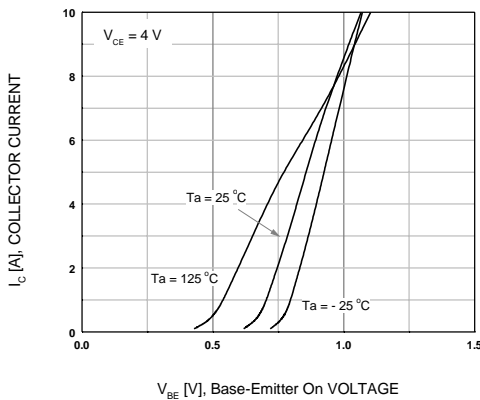


Figure 5. Base-Emitter On Voltage

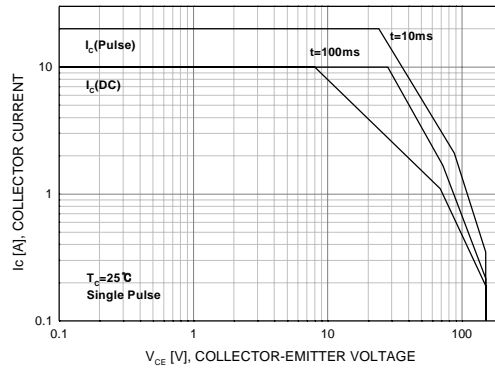


Figure 6. Forward Bias Safe Operating Area

Typical Characteristics (Continued)

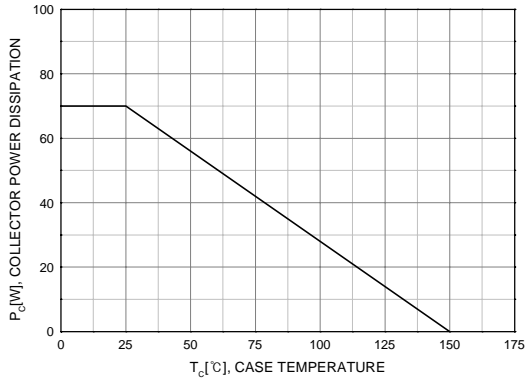
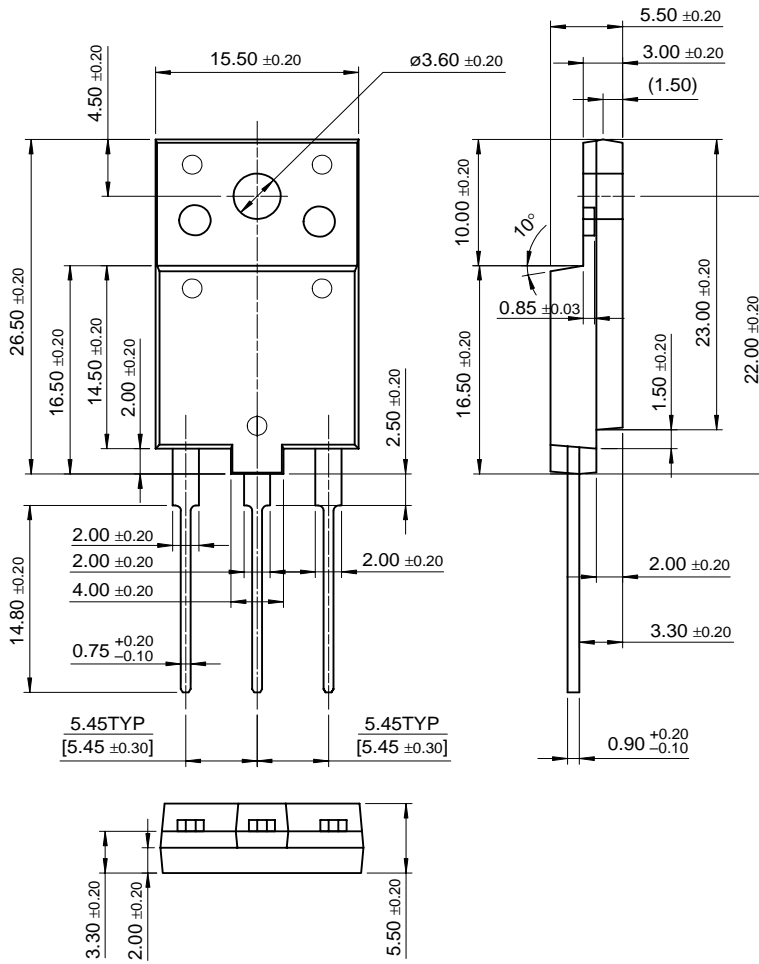


Figure 7. Power Derating

Package Dimensions

FJAF4310

TO-3PF



Dimensions in Millimeters

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CoolFET™	FASTr™	MicroFET™	PowerTrench®	SuperSOT™-6
CROSSVOLT™	FRFET™	MicroPak™	QFET™	SuperSOT™-8
DOMET™	GlobalOptoisolator™	MICROWIRE™	QS™	SyncFET™
EcoSPARK™	GTO™	MSX™	QT Optoelectronics™	TinyLogic™
E ² CMOS™	HiSeC™	MSXPro™	Quiet Series™	TruTranslation™
EnSigna™	I ² C™	OCX™	RapidConfigure™	UHC™
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The Power Franchise™		OPTOLOGIC®	SILENT SWITCHER®	VCX™
Programmable Active Droop™		OPTOPLANAR™	SMART START™	

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2. A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.

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No Identification Needed	Full Production	This datasheet contains final specifications. Fairchild Semiconductor reserves the right to make changes at any time without notice in order to improve design.
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