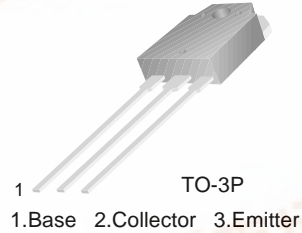


FAIRCHILD
SEMICONDUCTOR®

FJA4313

Audio Power Amplifier

- High Current Capability : $I_C=15A$
- High Power Dissipation
- Wide S.O.A
- Complement to FJA4213



NPN Epitaxial Silicon Transistor

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

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	230	V
V_{CEO}	Collector-Emitter Voltage	230	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current(DC)	15	A
I_B	Base Current	1.5	A
P_C	Collector Dissipation ($T_C=25^\circ C$)	130	W
T_J	Junction Temperature	150	$^\circ C$
T_{STG}	Storage Temperature	- 50 ~ 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	$I_C=5mA, I_E=0$	230			V
BV_{CEO}	Collector-Emitter Breakdown Voltage	$I_C=10mA, R_{BE}=\infty$	230			V
BV_{EBO}	Emitter-Base Breakdown Voltage	$I_E=5mA, I_C=0$	5			V
I_{CBO}	Collector Cut-off Current	$V_{CB}=230V, I_E=0$			5.0	μA
I_{EBO}	Emitter Cut-off Current	$V_{EB}=5V, I_C=0$			5.0	μA
h_{FE1}	* DC Current Gain	$V_{CE}=5V, I_C=1A$	55		160	
h_{FE2}	DC Current Gain	$V_{CE}=5V, I_C=7A$	35	60		
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=8A, I_B=0.8A$		0.4	3.0	V
$V_{BE(on)}$	Base-Emitter On Voltage	$V_{CE}=5V, I_C=7A$		1.0	1.5	V
f_T	Current Gain Bandwidth Product	$V_{CE}=5V, I_C=1A$		30		MHz
C_{ob}	Output Capacitance	$V_{CB}=10V, f=1MHz$		200		pF

* Pulse Test : PW=20us

h_{FE} Classification

Classification	R	O
h_{FE1}	55 ~ 110	80 ~ 160

Typical Characteristics

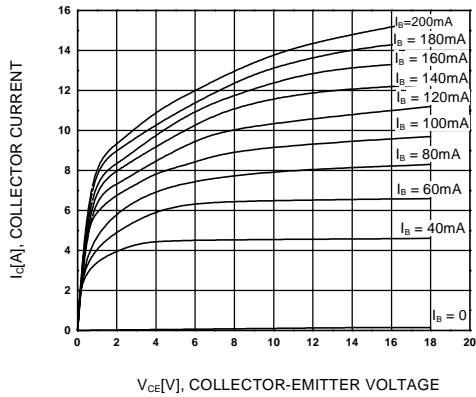


Figure 1. Static Characteristic

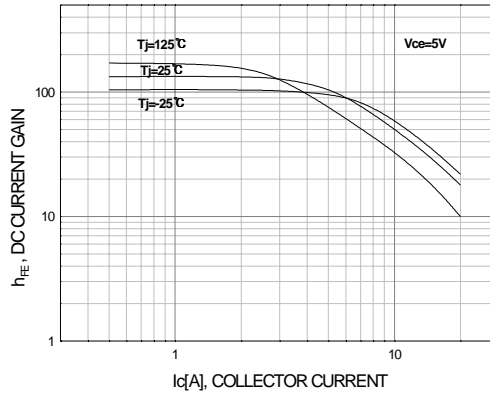


Figure 2. DC current Gain

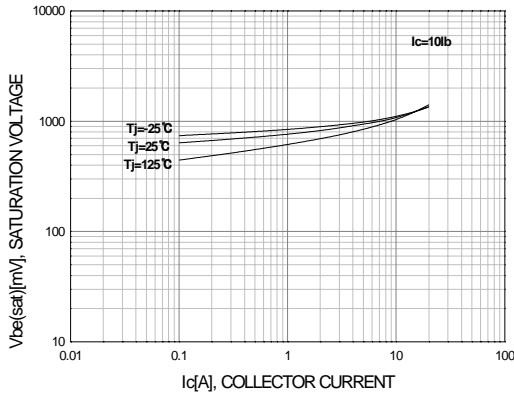


Figure 3. Base-Emitter Saturation Voltage

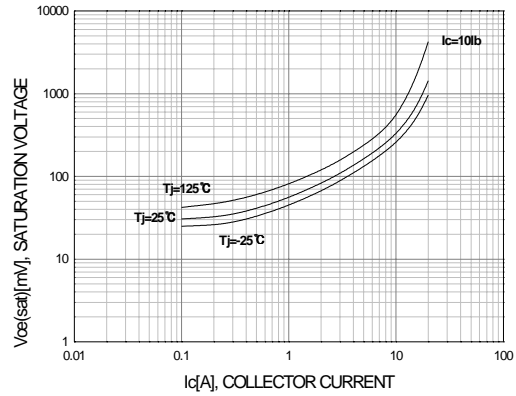


Figure 4. Collector-Emitter Saturation Voltage

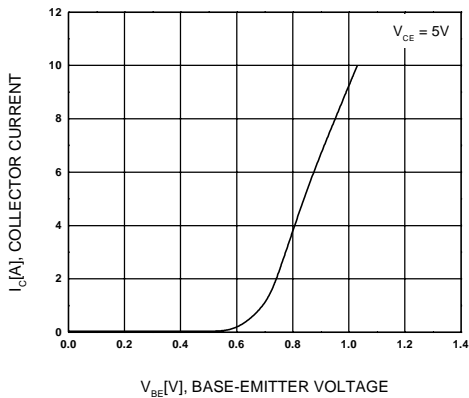


Figure 5. Base-Emitter On Voltage

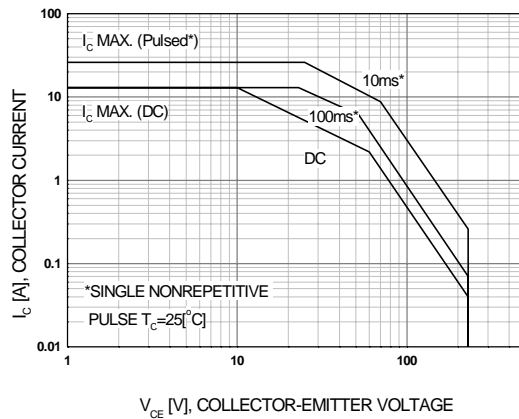


Figure 6. Safe Operating Area

Typical Characteristics

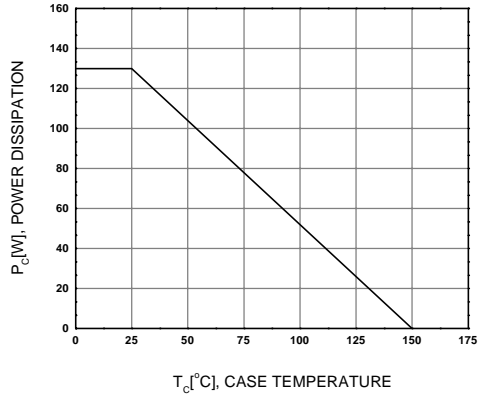
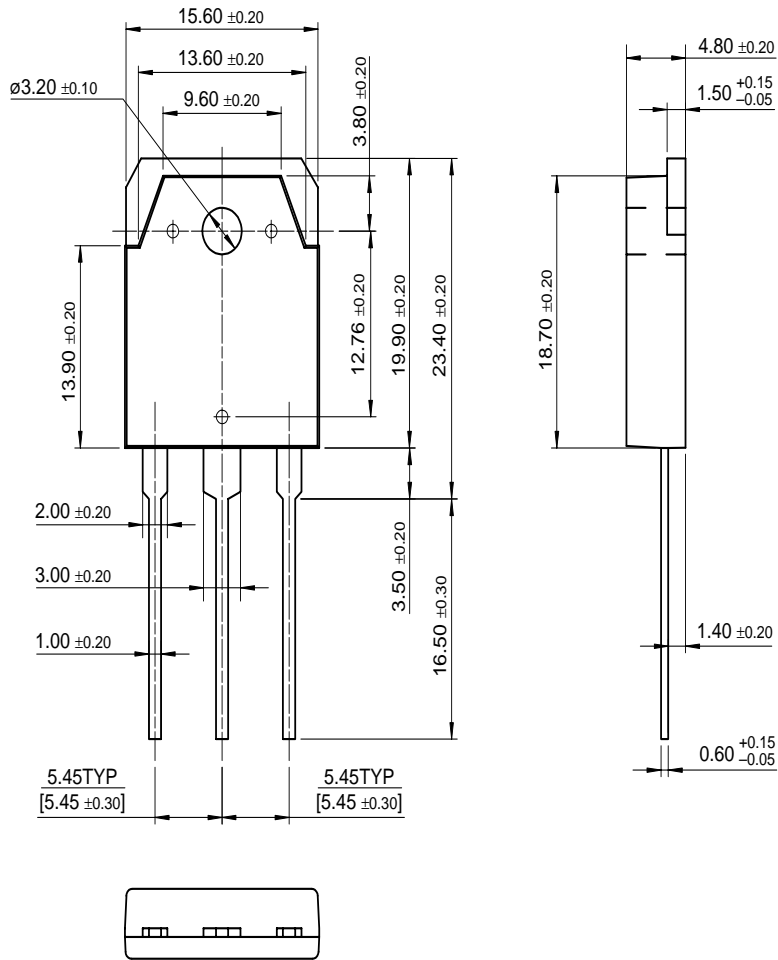


Figure 7. Power Derating

Package Dimensions

TO-3P



Dimensions in Millimeters

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Bottomless™	FAST®	LittleFET™	Power247™	SuperSOT™-3
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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Programmable Active Droop™		OPTOPLANAR™	SMART START™	

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