



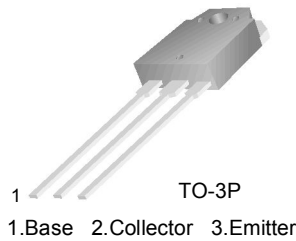
**THE DATASHEET OF
FJA42100TU**



FJA4210

PNP Epitaxial Silicon Transistor

- Audio Power Amplifier
- High Current Capability : $I_C = -10A$
- High Power Dissipation
- Wide S.O.A
- Complement to FJA4310



Absolute Maximum Ratings* $T_a = 25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Ratings	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 ($T_C = 25^\circ\text{C}$)	100	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{STG}	Storage Temperature	- 55 ~ 150	$^\circ\text{C}$

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

Electrical Characteristics* $T_a = 25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
BV_{CBO}	Collector-Base Breakdown Voltage	$I_C = -5\text{mA}, I_E = 0$	-200			V
BV_{CEO}	Collector-Emitter Breakdown Voltage	$I_C = -50\text{mA}, R_{BE} = \infty$	-140			V
BV_{EBO}	Emitter-Base Breakdown Voltage	$I_E = -5\text{mA}, I_C = 0$	-6			V
I_{CBO}	Collector Cut-off Current	$V_{CB} = -200\text{V}, I_E = 0$			-10	μA
I_{EBO}	Emitter Cut-off Current	$V_{EB} = -6\text{V}, I_C = 0$			-10	μA
h_{FE}	* DC Current Gain	$V_{CE} = -4\text{V}, I_C = -3\text{A}$	50		180	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = -5\text{A}, I_B = -0.5\text{A}$			-0.5	V
C_{ob}	Output Capacitance	$V_{CB} = -10\text{V}, f = 1\text{MHz}$		400		pF
f_T	Current Gain Bandwidth Product	$V_{CE} = -5\text{V}, I_C = -1\text{A}$		30		MHz

* Pulse Test: Pulse Width $\leq 300\mu\text{s}$, Duty Cycle $\leq 2\%$

h_{FE} Classification

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

Typical Characteristics

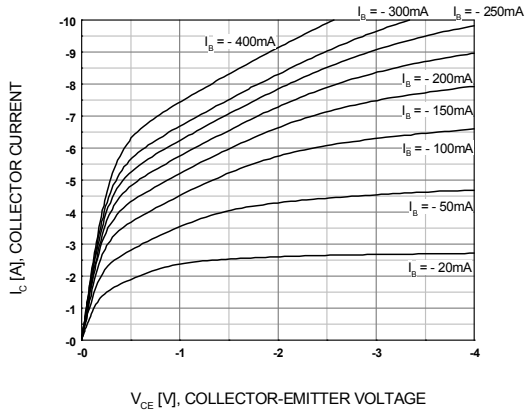


Figure 1. Static Characteristic

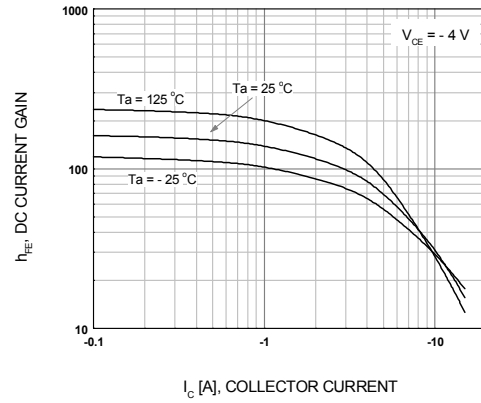


Figure 2. DC current Gain

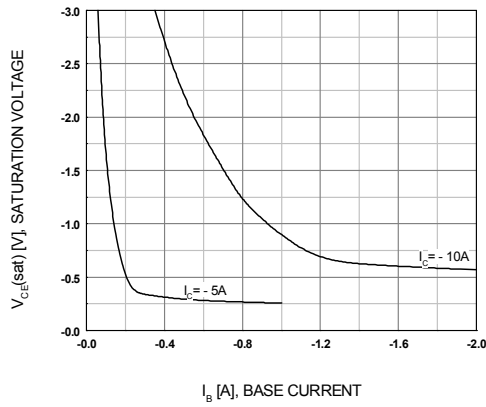


Figure 3. $V_{CE(sat)}$ vs. I_B Characteristics

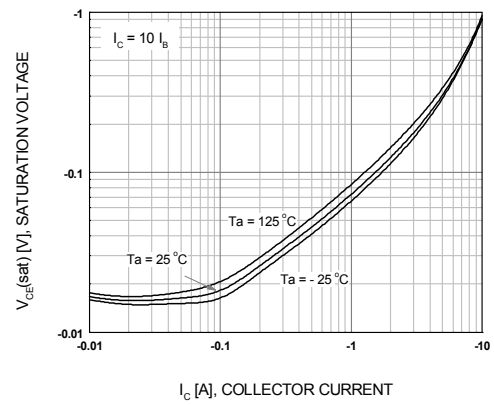


Figure 4. Collector-Emitter Saturation Voltage

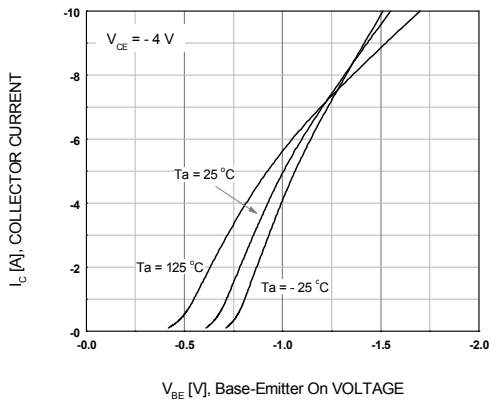


Figure 5. Base-Emitter On Voltage

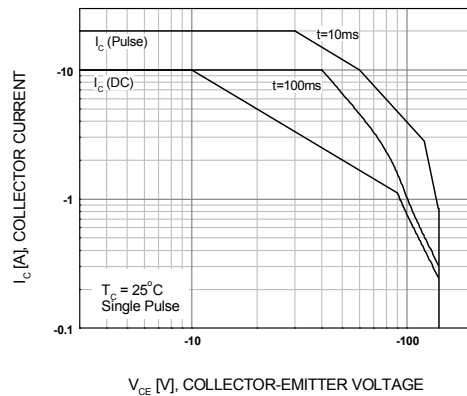


Figure 6. Forward Bias Safe Operating Area

Typical Characteristics (Continued)

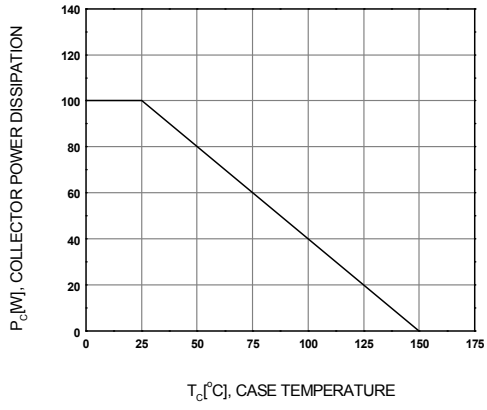


Figure 7. Power Derating



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