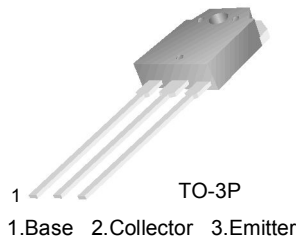


# FJA4210

## 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	$\mu\text{A}$
$I_{EBO}$	Emitter Cut-off Current	$V_{EB} = -6\text{V}, I_C = 0$			-10	$\mu\text{A}$
$h_{FE}$	* 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

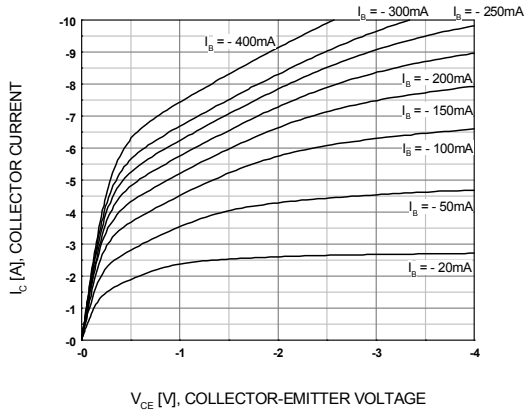


Figure 1. Static Characteristic

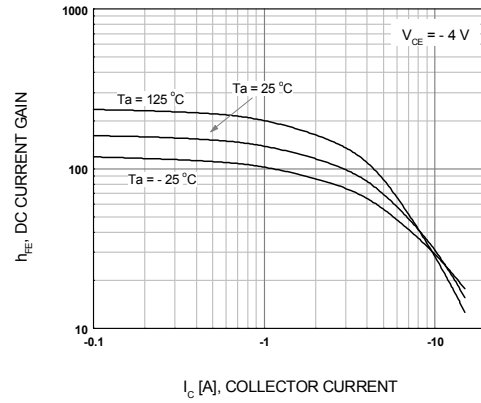


Figure 2. DC current Gain

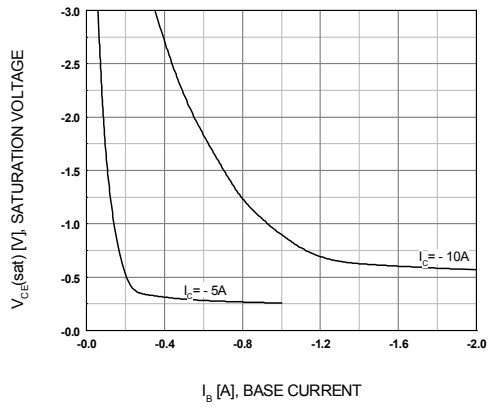


Figure 3.  $V_{CE(sat)}$  vs.  $I_B$  Characteristics

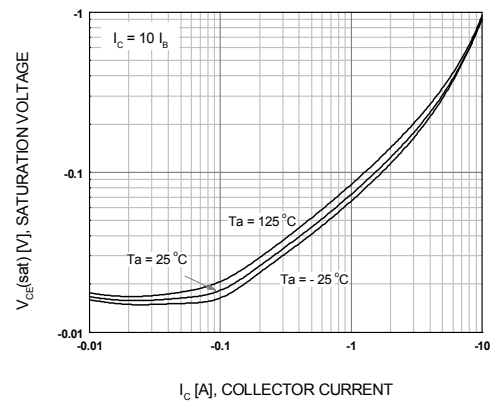


Figure 4. Collector-Emitter Saturation Voltage

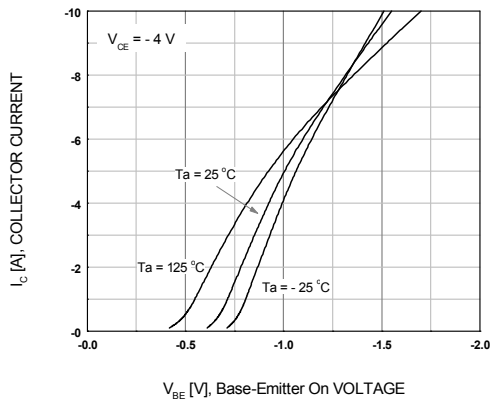


Figure 5. Base-Emitter On Voltage

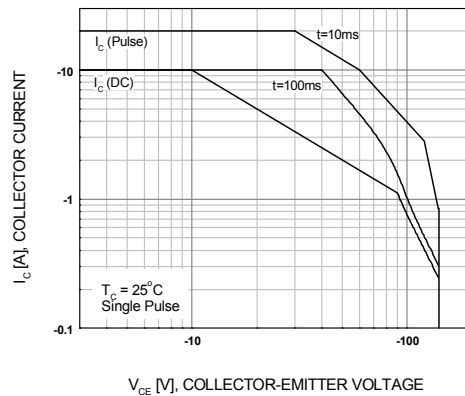


Figure 6. Forward Bias Safe Operating Area

### Typical Characteristics (Continued)

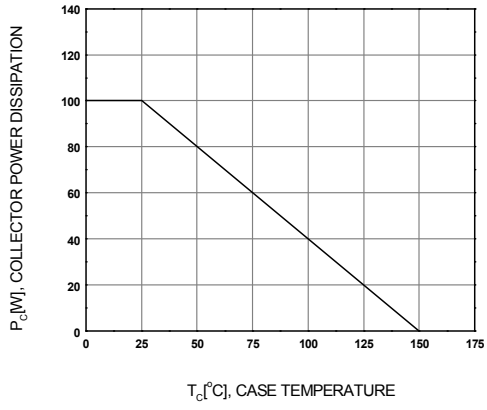
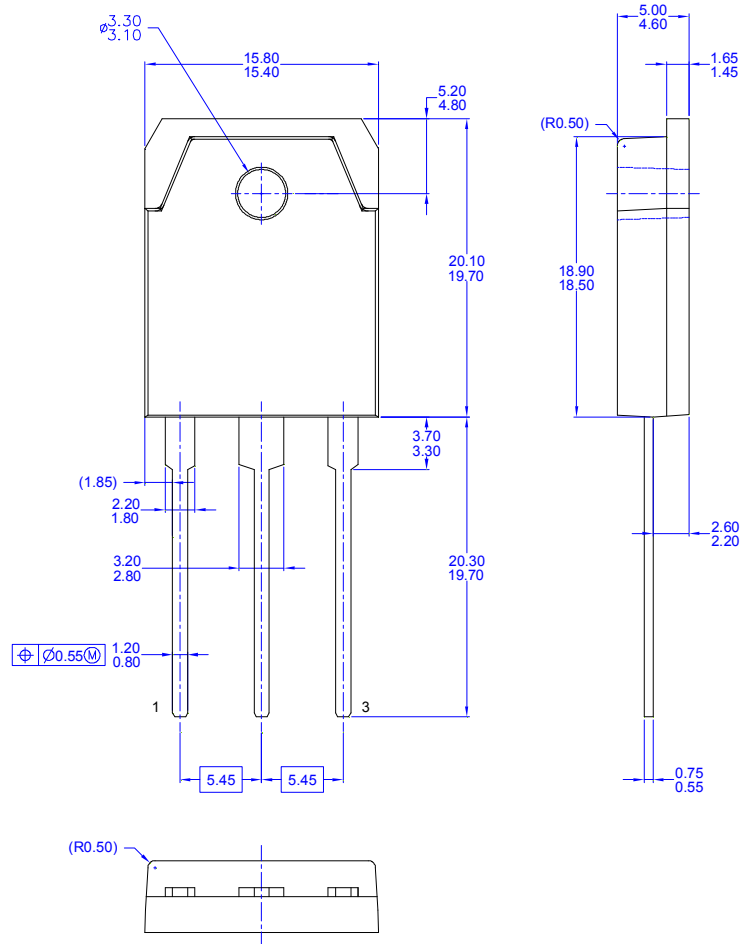


Figure 7. Power Derating

# Package Dimension (TO-3P)



- NOTES:
- A) THIS PACKAGE CONFORMS TO EIAJ SC-65 PACKAGING STANDARD.
  - B) ALL DIMENSIONS ARE IN MILLIMETERS.
  - C) DIMENSIONING AND TOLERANCING PER ASME14.5 1973.
  - D) DIMENSIONS ARE EXCLUSIVE OF BURRS, MOLD FLASH, AND TIE BAR EXTRUSIONS.
  - E) DRAWING FILE NAME: TO3P03AREV2.



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