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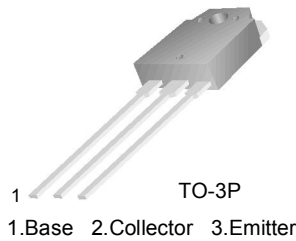
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FJA4210

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

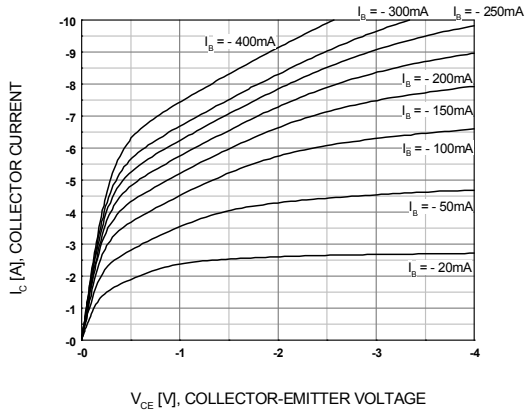


Figure 1. Static Characteristic

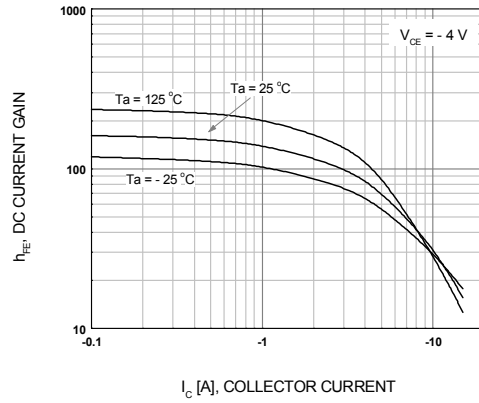


Figure 2. DC current Gain

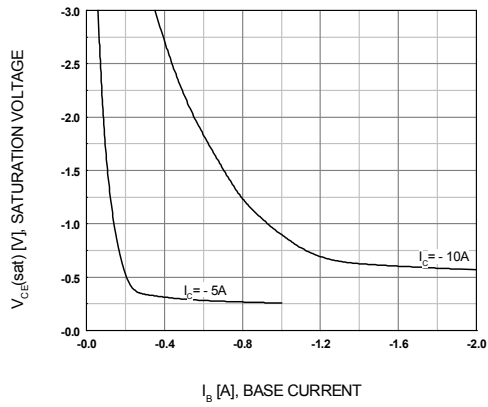


Figure 3. $V_{CE(sat)}$ vs. I_B Characteristics

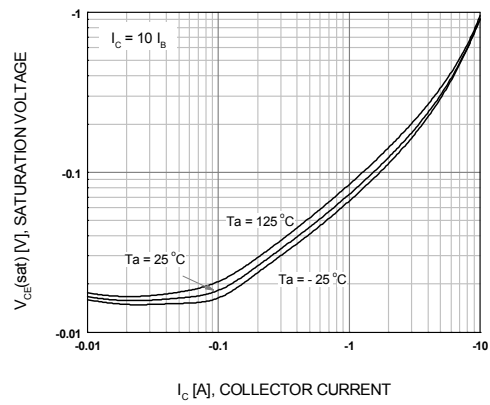


Figure 4. Collector-Emitter Saturation Voltage

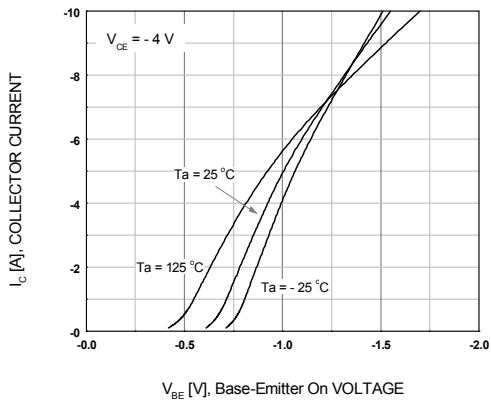


Figure 5. Base-Emitter On Voltage

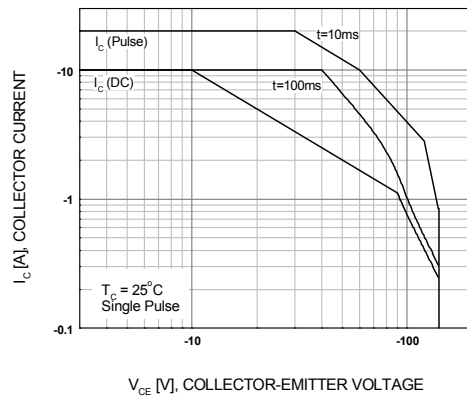


Figure 6. Forward Bias Safe Operating Area

Typical Characteristics (Continued)

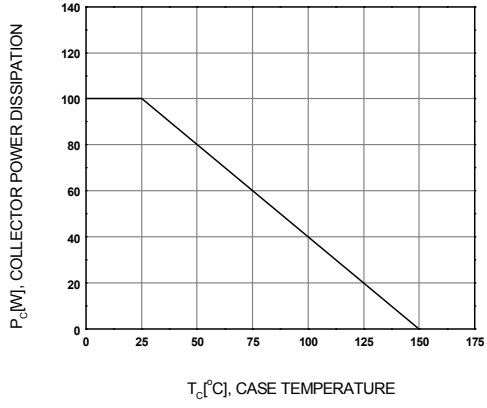
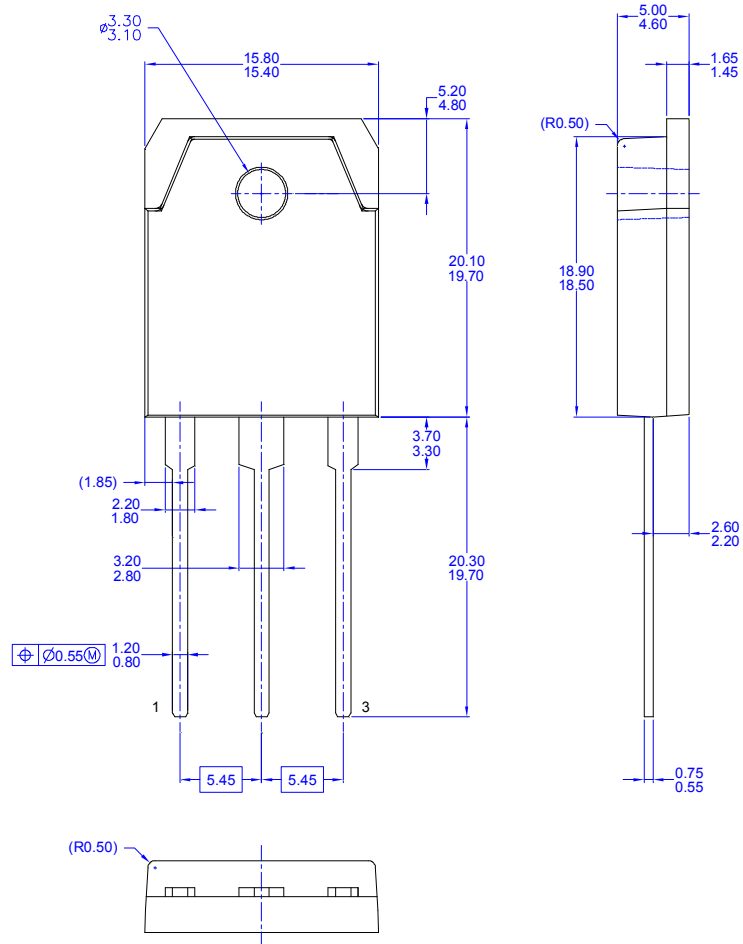


Figure 7. Power Derating

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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|--------------------------|------------------------|--|
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Телефон: 8 (812) 309 58 32 (многоканальный)

Факс: 8 (812) 320-02-42

Электронная почта: org@eplast1.ru

Адрес: 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.