



DC COMPONENTS CO., LTD.

DISCRETE SEMICONDUCTORS

TIP41C

TECHNICAL SPECIFICATIONS OF NPN EPITAXIAL PLANAR TRANSISTOR

Description

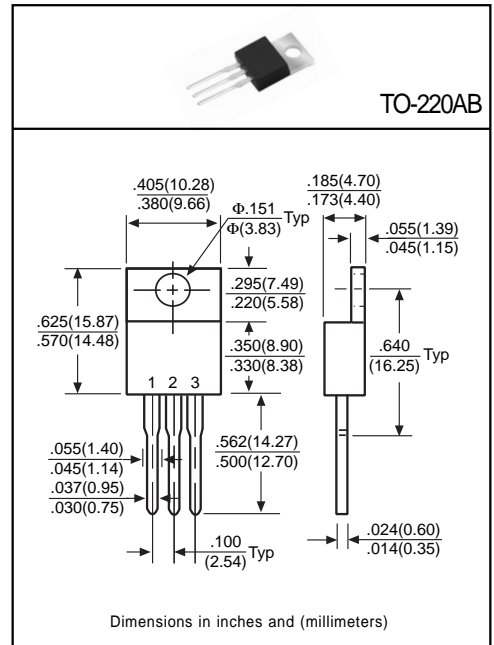
Designed for use in general purpose amplifier and switching applications.

Pinning

- 1 = Base
- 2 = Collector
- 3 = Emitter

Absolute Maximum Ratings(T_A=25°C)

| Characteristic | Symbol | Rating | Unit |
|---|------------------|-------------|------|
| Collector-Base Voltage | V _{CBO} | 100 | V |
| Collector-Emitter Voltage | V _{CEO} | 100 | V |
| Collector Current | I _C | 6 | A |
| Total Power Dissipation(T _C =25°C) | P _D | 65 | W |
| Total Power Dissipation | P _D | 2 | W |
| Junction Temperature | T _J | +150 | °C |
| Storage Temperature | T _{STG} | -55 to +150 | °C |



Electrical Characteristics

(Ratings at 25°C ambient temperature unless otherwise specified)

| Characteristic | Symbol | Min | Typ | Max | Unit | Test Conditions |
|---|----------------------|-----|-----|-----|------|--|
| Collector-Base Breakdown Voltage | BV _{CBO} | 100 | - | - | V | I _C =1mA, I _E =0 |
| Collector-Emitter Breakdown Voltage | BV _{CEO} | 100 | - | - | V | I _C =30mA, I _B =0 |
| Collector Cutoff Current | I _{CES} | - | - | 400 | μA | V _{CE} =100V, I _B =0 |
| | I _{CEO} | - | - | 700 | μA | V _{CE} =60V, I _B =0 |
| Emitter Cutoff Current | I _{EBO} | - | - | 1 | mA | V _{EB} =5V, I _C =0 |
| Collector-Emitter Saturation Voltage ⁽¹⁾ | V _{CE(sat)} | - | - | 1.5 | V | I _C =6A, I _B =0.6A |
| Base-Emitter On Voltage ⁽¹⁾ | V _{BE(on)} | - | - | 2 | V | I _C =6A, V _{CE} =4V |
| DC Current Gain ⁽¹⁾ | hFE1 | 30 | - | - | - | I _C =0.3A, V _{CE} =4V |
| | hFE2 | 15 | - | 75 | - | I _C =3A, V _{CE} =4V |
| Transition Frequency | f _T | 3 | - | - | MHz | I _C =0.5A, V _{CE} =10V, f=1MHz |

(1)Pulse Test: Pulse Width ≤ 380μs, Duty Cycle ≤ 2%

Classification of hFE2

| Rank | A | B |
|-------|-------|-------|
| Range | 15-50 | 40-75 |