



DC COMPONENTS CO., LTD.

DISCRETE SEMICONDUCTORS

DXTB772

TECHNICAL SPECIFICATIONS OF PNP EPITAXIAL PLANAR TRANSISTOR

Description

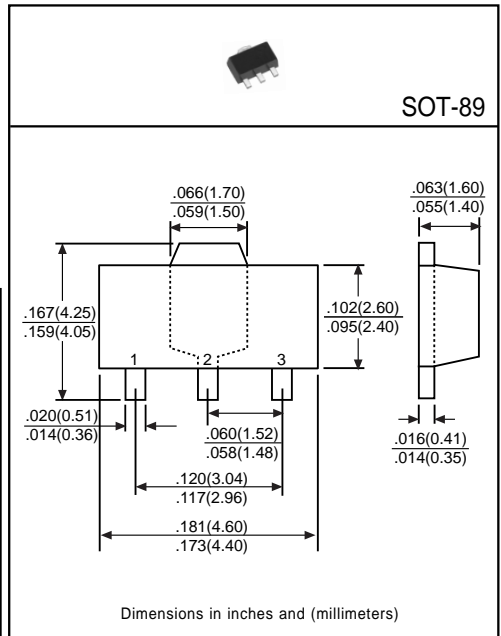
Designed for use in output stage amplifier, voltage regulator, DC-DC converter and driver.

Pinning

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

Absolute Maximum Ratings(T_A=25°C)

| Characteristic | Symbol | Rating | Unit |
|--|------------------|-------------|------|
| Collector-Base Voltage | V _{CB0} | -40 | V |
| Collector-Emitter Voltage | V _{CE0} | -30 | V |
| Emitter-Base Voltage | V _{EBO} | -5 | V |
| Collector Current (continuous) | I _C | -3 | A |
| Collector Current (pulse) ⁽¹⁾ | I _C | -7 | A |
| Total Power Dissipation ⁽²⁾ | P _D | 1 | W |
| Total Power Dissipation ⁽³⁾ | P _D | 2 | W |
| Total Power Dissipation ⁽⁴⁾ | P _D | 1.5 | 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 _{CB0} | -40 | - | - | V | I _C =-100μA |
| Collector-Emitter Breakdown Voltage | BV _{CE0} | -30 | - | - | V | I _C =-1mA |
| Emitter-Base Breakdown Voltage | BV _{EBO} | -5 | - | - | V | I _E =-10μA |
| Collector Cutoff Current | I _{CB0} | - | - | -1 | μA | V _{CB} =-30V |
| Emitter Cutoff Current | I _{EBO} | - | - | -1 | μA | V _{EB} =-3V |
| Collector-Emitter Saturation Voltage ⁽⁵⁾ | V _{CE(sat)} | - | -0.3 | -0.5 | V | I _C =-2A, I _B =-0.2A |
| Base-Emitter Saturation Voltage ⁽⁵⁾ | V _{BE(sat)} | - | -1 | -2 | V | I _C =-2A, I _B =-0.2A |
| DC Current Gain ⁽⁵⁾ | hFE1 | 30 | - | - | - | I _C =-20mA, V _{CE} =-2V |
| | hFE2 | 100 | 160 | 500 | - | I _C =-1A, V _{CE} =-2V |
| Transition Frequency | f _T | - | 80 | - | MHz | I _C =-100mA, V _{CE} =-5V, f=100MHz |
| Output Capacitance | C _{ob} | - | 55 | - | pF | V _{CB} =-10V, f=1MHz |

- (1) Single pulse PW=1ms
- (2) When tested in free air condition, without heat sinking.
- (3) When mounted on a 40x40x1mm ceramic board.
- (4) Printed circuit board 2mm thick, collector plating 1cm square or larger.
- (5) Pulse Test: Pulse Width ≤ 380μs, Duty Cycle ≤ 2%.

Classification of hFE2

| Rank | Q | P | E |
|-------|---------|---------|---------|
| Range | 100~200 | 160~320 | 250~500 |