



DC COMPONENTS CO., LTD.

DISCRETE SEMICONDUCTORS

MPSA05

TECHNICAL SPECIFICATIONS OF NPN EPITAXIAL PLANAR TRANSISTOR

Description

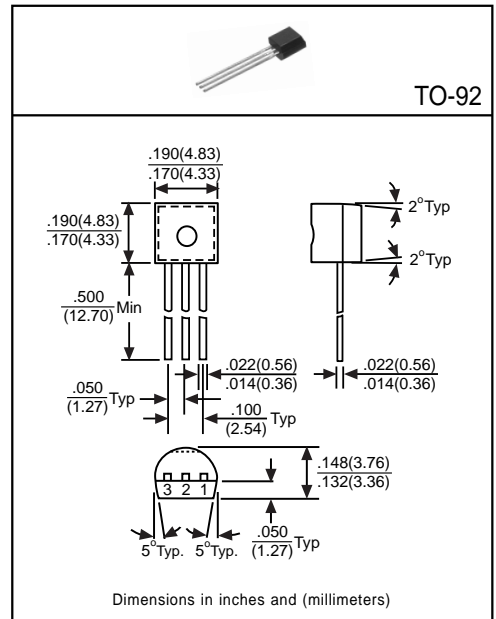
Designed for general purpose amplifier applications.

Pinning

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

Absolute Maximum Ratings (TA=25°C)

| Characteristic            | Symbol | Rating      | Unit |
|---------------------------|--------|-------------|------|
| Collector-Base Voltage    | VCBO   | 60          | V    |
| Collector-Emitter Voltage | VCEO   | 60          | V    |
| Emitter-Base Voltage      | VEBO   | 4           | V    |
| Collector Current         | IC     | 500         | mA   |
| Total Power Dissipation   | PD     | 625         | mW   |
| Junction Temperature      | TJ     | +150        | °C   |
| Storage Temperature       | TSTG   | -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                    | BVCBO    | 60  | -   | -    | V    | IC=100µA, IE=0            |
| Collector-Emitter Breakdown Voltage                 | BVCEO    | 60  | -   | -    | V    | IC=1mA, IB=0              |
| Emitter-Base Breakdown Voltage                      | BVEBO    | 4   | -   | -    | V    | IE=100µA, IC=0            |
| Collector Cutoff Current                            | ICBO     | -   | -   | 0.1  | µA   | VCB=60V, IE=0             |
|   | ICEO     | -   | -   | 0.1  | µA   | VCE=60V, IB=0             |
| Collector-Emitter Saturation Voltage <sup>(1)</sup> | VCE(sat) | -   | -   | 0.25 | V    | IC=100mA, IB=10mA         |
| Base-Emitter On Voltage <sup>(1)</sup>              | VBE(on)  | -   | -   | 1.2  | V    | IC=100mA, VCE=1V          |
| DC Current Gain <sup>(1)</sup>                      | hFE1     | 50  | -   | -    | -    | IC=10mA, VCE=1V           |
|   | hFE2     | 50  | -   | -    | -    | IC=100mA, VCE=1V          |
| Transition Frequency                                | fT       | 100 | -   | -    | MHz  | IC=10mA, VCE=2V, f=100MHz |

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