



DC COMPONENTS CO., LTD.

DISCRETE SEMICONDUCTORS

BC818

TECHNICAL SPECIFICATIONS OF NPN EPITAXIAL PLANAR TRANSISTOR

Description

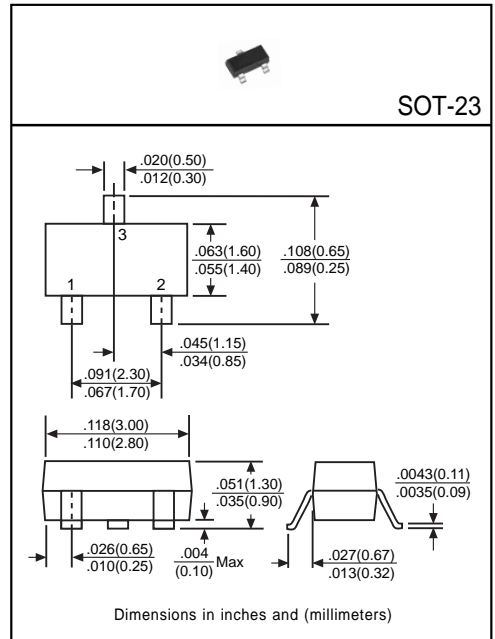
Designed for use in drive and output stages of audio amplifiers.

Pinning

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

Absolute Maximum Ratings(T_A=25°C)

| Characteristic | Symbol | Rating | Unit |
|---------------------------|------------------|-------------|------|
| Collector-Emitter Voltage | V _{CES} | 30 | V |
| | V _{CEO} | 25 | V |
| Emitter-Base Voltage | V _{EBO} | 5 | V |
| Collector Current | I _C | 500 | mA |
| Total Power Dissipation | P _D | 225 | mW |
| 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-Emitter Breakdown Voltage | BV _{CES} | 30 | - | - | V | I _C =10μA |
| | BV _{CEO} | 25 | - | - | V | I _C =10mA |
| Emitter-Base Breakdown Voltage | BV _{EBO} | 5 | - | - | V | I _E =1μA |
| Collector Cutoff Current | I _{CBO} | - | - | 0.1 | μA | V _{CB} =20V |
| Emitter Cutoff Current | I _{EBO} | - | - | 0.1 | μA | V _{EB} =4V |
| Collector-Emitter Saturation Voltage ⁽¹⁾ | V _{CE(sat)} | - | - | 0.7 | V | I _C =500mA, I _B =50mA |
| Base-Emitter On Voltage | V _{BE(on)} | - | - | 1.2 | V | I _C =300mA, V _{CE} =1V |
| DC Current Gain ⁽¹⁾ | h _{FE} | 100 | - | 600 | - | I _C =100mA, V _{CE} =1V |
| Transition Frequency | f _T | - | 100 | - | MHz | I _C =10mA, V _{CE} =5V, f=100MHz |
| Output Capacitance | C _{ob} | - | - | 12 | pF | V _{CB} =10V, f=1MHz, I _E =0 |

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

Classification of h_{FE}

| Rank | 16 | 25 | 40 |
|-------|---------|---------|---------|
| Range | 100~250 | 160~400 | 250~600 |