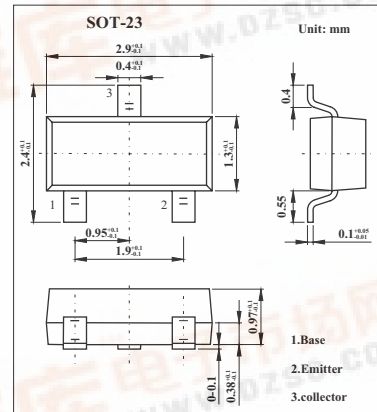


SMD Type Transistors

NPN Epitaxial Planar Silicon Transistor
2SC4104

■ Features

- High fr.
- Small reverse transfer capacitance.
- Adoption of FBET process.



■ Absolute Maximum Ratings Ta = 25°C

| Parameter | Symbol | Rating | Unit |
|---------------------------|------------------|-------------|------|
| Collector-base voltage | V _{CB0} | 70 | V |
| Collector-emitter voltage | V _{CEO} | 60 | V |
| Emitter-base voltage | V _{EBO} | 4 | V |
| Collector current | I _C | 50 | mA |
| Collector current (pulse) | I _{cp} | 100 | mA |
| Collector dissipation | P _C | 200 | mW |
| Junction temperature | T _j | 150 | °C |
| Storage temperature | T _{stg} | -55 to +150 | °C |

■ Electrical Characteristics Ta = 25°C

| Parameter | Symbol | Testconditons | Min | Typ | Max | Unit |
|--------------------------------------|----------------------|--|-----|-----|-----|------|
| Collector cutoff current | I _{CBO} | V _{CB} = 40V, I _E =0 | | | 0.1 | μA |
| Emitter cutoff current | I _{EBO} | V _{EB} = 3V, I _C =0 | | | 1.0 | μA |
| DC current gain | h _{FE} | V _{CE} = 10V, I _C = 10mA | 60 | | 270 | |
| Gain bandwidth product | f _T | V _{CE} = 10V, I _C = 10mA | 350 | 700 | | MHz |
| Base-collector time constant | t _{bb,Cc} | V _{CE} = 10V, I _C = 10mA | | 8 | | ps |
| Output capacitance | C _{ob} | V _{CB} = 10V, f = 1.0MHz | | 1.3 | | pF |
| Reverse transfer capacitance | C _{re} | V _{CB} = 10V, f = 1.0MHz | | 1.0 | | pF |
| Collector-emitter saturation voltage | V _{CE(sat)} | I _C = 20mA, I _B = 2mA | | | 0.5 | V |
| Base-emitter saturation voltage | V _{BE(sat)} | I _C = 20mA, I _B = 2mA | | | 1.0 | V |
| Collector-base breakdown voltage | V _{(BR)CBO} | I _C = 10μA, I _E = 0 | 70 | | | V |
| Collector-emitter breakdown voltage | V _{(BR)CEO} | I _C = 1mA, R _{BE} = ∞ | 60 | | | V |
| Emitter-base breakdown voltage | V _{(BR)EBO} | I _E = 10μA, I _C = 0 | 4 | | | V |

■ hFE Classification

| Marking | YY | | |
|---------|--------|--------|---------|
| Bank | 3 | 4 | 5 |
| hFE | 60~120 | 90~180 | 135~270 |

