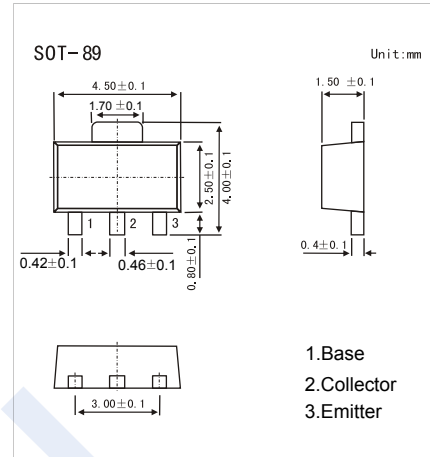


NPN Transistors

2SD1618

■ Features

- Low collector-to-emitter saturation voltage.
- Very small size making it easy to provide highdensity, small-sized hybrid IC's.
- Complementary to 2SB1118



■ Absolute Maximum Ratings Ta = 25°C

| Parameter | Symbol | Rating | Unit |
|---|------------------|------------|------|
| Collector - Base Voltage | V _{CB0} | 20 | V |
| Collector - Emitter Voltage | V _{CE0} | 15 | |
| Emitter - Base Voltage | V _{EBO} | 5 | |
| Collector Current - Continuous | I _C | 0.7 | A |
| Collector Current - Pulse | I _{CP} | 1.5 | |
| Collector Power Dissipation (Note.1) | P _C | 0.5 1.3 | W |
| Junction Temperature | T _J | 150 | |
| Storage Temperature Range | T _{stg} | -55 to 150 | |

Note.1: Mounted on ceramic board (250mm² × 0.8mm)

■ Electrical Characteristics Ta = 25°C

| Parameter | Symbol | Test Conditions | Min | Typ | Max | Unit |
|--------------------------------------|----------------------|---|-----------|----------|----------|------|
| Collector- base breakdown voltage | V _{CB0} | I _C = 100 uA, I _E = 0 | 20 | | | V |
| Collector- emitter breakdown voltage | V _{CE0} | I _C = 1 mA, R _{BE} = ∞ | 15 | | | |
| Emitter - base breakdown voltage | V _{EBO} | I _E = 100 uA, I _C = 0 | 5 | | | |
| Collector-base cut-off current | I _{CB0} | V _{CB} = 15 V, I _E = 0 | | | 0.1 | uA |
| Emitter cut-off current | I _{EBO} | V _{EB} = 4V, I _C =0 | | | 0.1 | |
| Collector-emitter saturation voltage | V _{CE(sat)} | I _C =5 mA, I _B =0.5 mA I _C =100 mA, I _B =10 mA | | 10 30 | 25 80 | mV |
| Base - emitter saturation voltage | V _{BE(sat)} | I _C =100 mA, I _B =10 mA | | 0.8 | 1.2 | |
| DC current gain | h _{FE} | V _{CE} = 2V, I _C = 50 mA V _{CE} = 2V, I _C = 500 mA | 140 60 | | 560 | |
| Collector output capacitance | C _{ob} | V _{CB} = 10V, I _E = 0, f=1MHz | | 8 | | |
| Transition frequency | f _T | V _{CE} = 10V, I _C = 50mA | | 250 | | MHz |

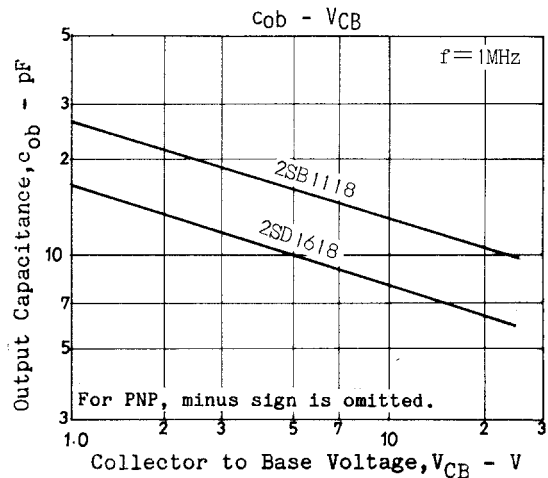
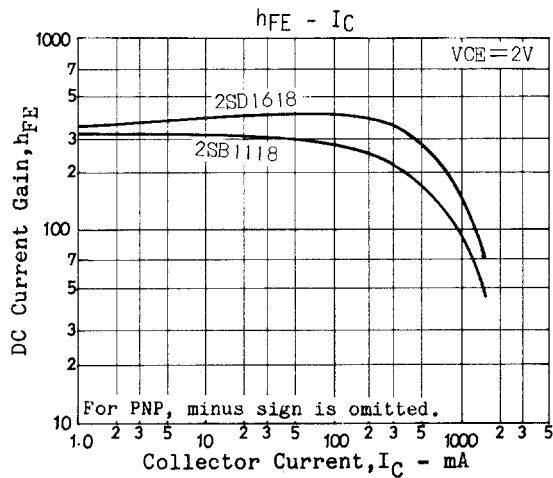
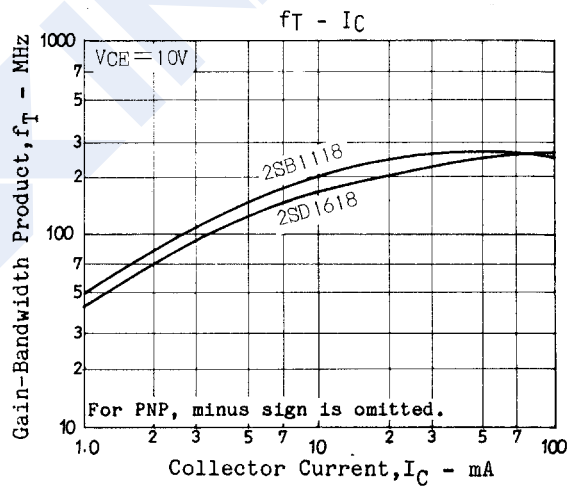
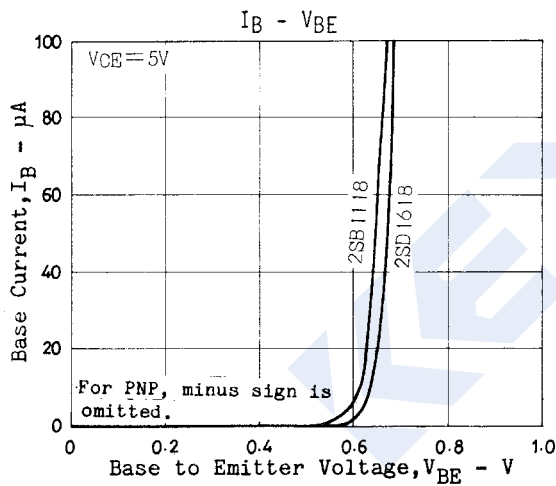
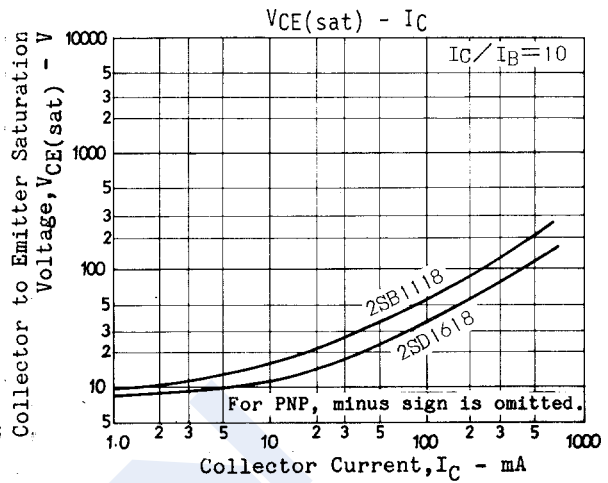
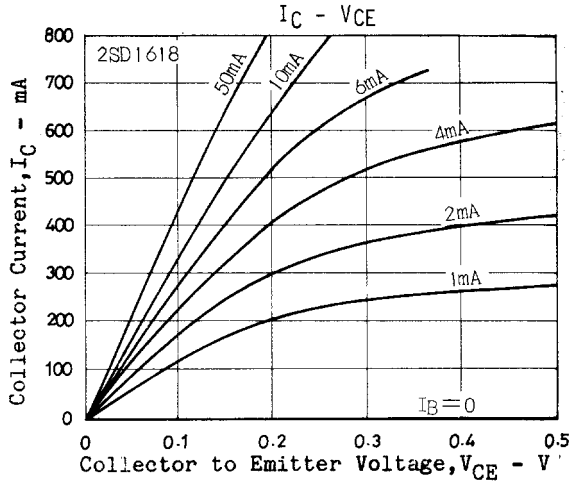
■ Classification of h_{fe}(1)

| Type | 2SD1618-S | 2SD1618-T | 2SD1618-U |
|---------|-----------|-----------|-----------|
| Range | 140-280 | 200-400 | 280-560 |
| Marking | DA S* | DA T* | DA U* |

NPN Transistors

2SD1618

■ Typical Characteristics



NPN Transistors

2SD1618

■ Typical Characteristics

