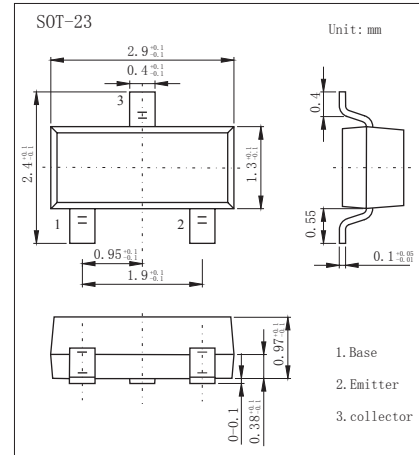


NPN Transistors

BCW66

■ Features

- BCW66 is subdivided into three groups F,G and H according to DC current gain
- Complementary to BCW68



■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

| Parameter | Symbol | Rating | Unit |
|--------------------------------|-----------|------------|------------------|
| Collector - Base Voltage | V_{CB0} | 75 | V |
| Collector - Emitter Voltage | V_{CE0} | 45 | |
| Emitter - Base Voltage | V_{EB0} | 5 | |
| Collector Current - Continuous | I_C | 800 | mA |
| Collector Power Dissipation | P_C | 200 | mW |
| Junction Temperature | T_J | 150 | $^\circ\text{C}$ |
| Storage Temperature Range | T_{stg} | -55 to 150 | |

NPN Transistors

BCW66

■ Electrical Characteristics Ta = 25°C

| Parameter | Symbol | Test Conditions | Min | Typ | Max | Unit |
|---|----------------------|---|-----|-----|-----|------|
| Collector- base breakdown voltage | V _{CB0} | I _c = 100 μA, I _E = 0 | 75 | | | V |
| Collector- emitter breakdown voltage | V _{CEO} | I _c = 10 mA, I _B = 0 | 45 | | | |
| Emitter - base breakdown voltage | V _{EB0} | I _E = 100 μA, I _c = 0 | 5 | | | |
| Collector-base cut-off current | I _{CB0} | V _{CB} = 45 V, I _E = 0 | | | 20 | nA |
| Emitter cut-off current | I _{EB0} | V _{EB} = 4V, I _c =0 | | | 20 | |
| Collector-emitter saturation voltage (Note.1) | V _{CE(sat)} | I _c =100 mA, I _B =10mA | | | 0.3 | V |
| | | I _c = 500 mA, I _B = 50mA | | | 0.7 | |
| Base - emitter saturation voltage (Note.1) | V _{BE(sat)} | I _c = 500 mA, I _B = 50mA | | | 2 | |
| DC current gain | h _{FE(1)} | V _{CE} = 10V, I _c = 100uA | F | 35 | | |
| | | | G | 50 | | |
| | | | H | 80 | | |
| | h _{FE(2)} | V _{CE} = 1V, I _c = 10mA | F | 75 | | |
| | | | G | 110 | | |
| | | | H | 180 | | |
| | h _{FE(3)} | V _{CE} = 1V, I _c = 100mA | F | 100 | | 250 |
| | | | G | 160 | | 400 |
| | | | H | 250 | | 630 |
| | h _{FE(4)} | V _{CE} = 2V, I _c = 500mA | F | 35 | | |
| | | | G | 60 | | |
| | | | H | 100 | | |
| Collector output capacitance | C _{ob} | V _{CB} = 10V, I _E = 0, f=1MHz | | | 12 | pF |
| Collector input capacitance | C _{ib} | V _{EB} = 0.5V, I _c = 0, f=1MHz | | | 80 | |
| Noise figure | NF | V _{CE} = 5V, I _c = 0.2mA R _S =1KΩ, BW=200Hz | | | 10 | dB |
| Transition frequency | f _T | V _{CE} = 10V, I _c = 20mA, f=100MHz | 100 | | | MHz |

■ Classification of h_{FE(3)}

| Type | BCW66F | BCW66G | BCW66H |
|---------|---------|---------|---------|
| Range | 100-250 | 160-400 | 250-630 |
| Marking | EF | EG | EH |

NPN Transistors

BCW66

■ Typical Characteristics

