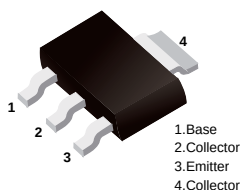


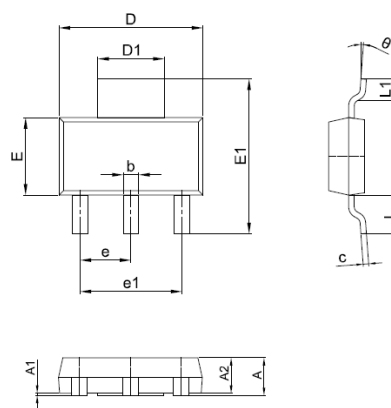
### ■ Features

- For AF driver and output stages
- High collector current
- Low collector-emitter saturation voltage
- Complementary to BCP51,BCP52,BCP53



■ Simplified outline(SOT-223)

### SOT-223



| Symbol | Min. | Typ  | Max. |
|--------|------|------|------|
| A      | 1.52 | 1.62 | 1.80 |
| A1     | 0.00 | 0.05 | 0.10 |
| A2     | 1.50 | 1.60 | 1.70 |
| b      | 0.65 | 0.70 | 0.75 |
| c      | 0.20 | 0.25 | 0.30 |
| D      | 6.40 | 6.50 | 6.60 |
| D1     | 2.90 | 3.00 | 3.10 |
| E      | 3.30 | 3.50 | 3.70 |
| E1     | 6.85 | 7.00 | 7.15 |
| e      | 2.20 | 2.30 | 2.40 |
| e1     | 4.40 | 4.60 | 4.80 |
| L      | 1.65 | 1.75 | 1.85 |
| L1     | 0.90 | 1.00 | 1.10 |
| θ      | 0°   | 5°   | 10°  |

### ■ Absolute Maximum Ratings Ta = 25°C

| Parameter                              | Symbol           | BCP54      | BCP55 | BCP56 | Unit |
|----------------------------------------|------------------|------------|-------|-------|------|
| Collector - Base Voltage               | V <sub>CB0</sub> | 45         | 60    | 100   | V    |
| Collector - Emitter Voltage            | V <sub>CE0</sub> | 45         | 60    | 80    |      |
| Emitter - Base Voltage                 | V <sub>EB0</sub> | 5          |       |       |      |
| Collector Current - Continuous         | I <sub>C</sub>   | 1          |       |       | A    |
| Collector Power Dissipation            | P <sub>C</sub>   | 1.5        |       |       | W    |
| Thermal Resistance Junction to Ambient | R <sub>θJA</sub> | 83.3       |       |       | °C/W |
| Junction Temperature                   | T <sub>J</sub>   | 150        |       |       | °C   |
| Storage Temperature Range              | T <sub>stg</sub> | -65 to 150 |       |       |      |

## BCP54/BCP55/BCP56

### ■ Electrical Characteristics Ta = 25°C

| Parameter                            |        | Symbol   | Test Conditions             | Min | Typ | Max | Unit    |
|--------------------------------------|--------|----------|-----------------------------|-----|-----|-----|---------|
| Collector- base breakdown voltage    | BCP54  | VCBO     | Ic= 100 $\mu$ A, IE= 0      | 45  |     |     | V       |
|                                      | BCP55  |          |                             | 60  |     |     |         |
|                                      | BCP56  |          |                             | 100 |     |     |         |
| Collector- emitter breakdown voltage | BCP54  | VCEO     | Ic= 10 mA, IB= 0            | 45  |     |     |         |
|                                      | BCP55  |          |                             | 60  |     |     |         |
|                                      | BCP56  |          |                             | 80  |     |     |         |
| Emitter - base breakdown voltage     |        | VEBO     | IE= 100 $\mu$ A, IC= 0      | 5   |     |     |         |
| Collector-base cut-off current       | BCP54  | ICBO     | VCB= 45 V , IE= 0           |     |     | 0.1 | $\mu$ A |
|                                      | BCP55  |          | VCB= 60 V , IE= 0           |     |     |     |         |
|                                      | BCP56  |          | VCB= 100 V , IE= 0          |     |     |     |         |
| Emitter cut-off current              |        | IEBO     | VEB= 5V , IC=0              |     |     | 0.1 |         |
| Collector-emitter saturation voltage |        | VCE(sat) | IC=500 mA, IB=50mA          |     |     | 0.5 | V       |
| Base - emitter saturation voltage    |        | VBE(sat) | IC=500 mA, IB=50mA          |     |     | 1.2 |         |
| Base-emitter voltage                 |        | VBE      | VCE= 2V, IC= 500mA          |     |     | 1   |         |
| DC current gain                      | hFE(1) |          | VCE= 2V, IC= 5mA            | 25  |     |     |         |
|                                      | hFE(2) |          | VCE= 2V, IC= 150mA          | 63  |     | 250 |         |
|                                      | hFE(3) |          | VCE= 2V, IC= 500mA          | 25  |     |     |         |
| Transition frequency                 |        | fr       | VCE= 10V, IC= 50mA,f=100MHz | 100 |     |     | MHz     |

# RATING AND CHARACTERISTIC CURVES (BCP54/BCP55/BCP56)

