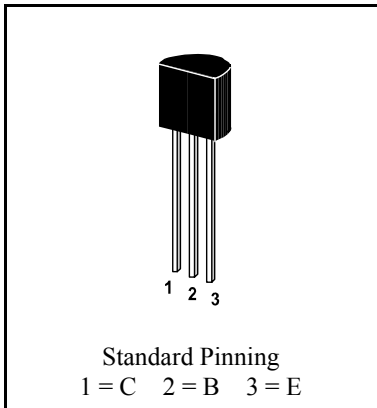


PNP

Si-Epitaxial Planar Transistors

PNP



Power dissipation – Verlustleistung 500 mW

Plastic case TO-92
Kunststoffgehäuse (10D3)

Weight approx. – Gewicht ca. 0.18 g

Plastic material has UL classification 94V-0
Gehäusematerial UL94V-0 klassifiziertStandard packaging taped in ammo pack
Standard Lieferform gegurtet in Ammo-PackMaximum ratings ($T_A = 25^\circ\text{C}$)Grenzwerte ($T_A = 25^\circ\text{C}$)

| | | | BC 556 | BC 557 | BC 558/559 |
|---|--------|------------|----------------------|--------|------------|
| Collector-Emitter-voltage | B open | $-V_{CE0}$ | 65 V | 45 V | 30 V |
| Collector-Base-voltage | E open | $-V_{CB0}$ | 80 V | 50 V | 30 V |
| Emitter-Base-voltage | C open | $-V_{EB0}$ | 5 V | | |
| Power dissipation – Verlustleistung | | P_{tot} | 500 mW ¹⁾ | | |
| Collector current – Kollektorstrom (DC) | | $-I_C$ | 100 mA | | |
| Junction temp. – Sperrschichttemperatur | | T_j | 150°C | | |
| Storage temperature – Lagerungstemperatur | | T_S | - 55...+ 150°C | | |

Characteristics ($T_j = 25^\circ\text{C}$)Kennwerte ($T_j = 25^\circ\text{C}$)

| | | Group A | Group B | Group C |
|--|--------------|-----------------------------|---------------------------|---------------------------|
| DC current gain – Kollektor-Basis-Stromverhältnis | | | | |
| $-V_{CE} = 5\text{ V}, -I_C = 2\text{ mA}$ | h_{FE} | 110...220 | 200...460 | 420...800 |
| h-Parameters at $-V_{CE} = 5\text{ V}, -I_C = 2\text{ mA}, f = 1\text{ kHz}$ | | | | |
| Small signal current gain Stromverstärkung | h_{fe} | typ. 220 | typ. 330 | typ. 600 |
| Input impedance – Eingangsimpedanz | h_{ie} | 1.6...4.5 k Ω | 3.2...8.5 k Ω | 6...15 k Ω |
| Output admittance – Ausg.-Leitwert | h_{oe} | 18 < 30 μS | 30 < 60 μS | 60 < 110 μS |
| Reverse voltage transfer ratio Spannungsrückwirkung | h_{re} | typ. 1.5 * 10 ⁻⁴ | typ. 2 * 10 ⁻⁴ | typ. 3 * 10 ⁻⁴ |
| Collector saturation voltage – Kollektor-Sättigungsspg. | | | | |
| $-I_C = 100\text{ mA}, -I_B = 5\text{ mA}$ | $-V_{CEsat}$ | – | – | 300 mV |

¹⁾ Valid, if leads are kept at ambient temperature at a distance of 2 mm from case

Gültig, wenn die Anschlußdrähte in 2 mm Abstand von Gehäuse auf Umgebungstemperatur gehalten werden

Characteristics ($T_j = 25^\circ\text{C}$)Kennwerte ($T_j = 25^\circ\text{C}$)

| | Min. | Typ. | Max. |
|---|------------------|-------------------|--|
| Base saturation voltage – Basis-Sättigungsspannung - $I_C = 100\text{ mA}$, - $I_B = 5\text{ mA}$ | - | - | 1 V |
| Base-Emitter voltage – Basis-Emitter-Spannung - $V_{CE} = 5\text{ V}$, - $I_C = 2\text{ mA}$ | 580 mV | 660 mV | 700 mV |
| Collector-Emitter cutoff current – Kollektorreststrom - $V_{CE} = 60\text{ V}$ BC 556 - $V_{CE} = 40\text{ V}$ BC 557 - $V_{CE} = 25\text{ V}$ BC 558 - $V_{CE} = 25\text{ V}$ BC 559 | - - - - | - - - - | 0.1 μA 0.1 μA 0.1 μA 0.1 μA |
| Gain-Bandwidth Product – Transitfrequenz - $V_{CE} = 5\text{ V}$, - $I_C = 10\text{ mA}$, $f = 100\text{ MHz}$ | 150 MHz | - | - |
| Collector-Base Capacitance – Kollektor-Basis-Kapazität - $V_{CB} = 10\text{ V}$, $I_E = i_e = 0$, $f = 1\text{ MHz}$ | - | - | 6 pF |
| Emitter-Base Capacitance – Emitter-Basis-Kapazität - $V_{EB} = 0.5\text{ V}$, $f = 1\text{ MHz}$ | - | 9 pF | - |
| Noise figure – Rauschzahl - $V_{CE} = 5\text{ V}$, - $I_C = 200\text{ }\mu\text{A}$ BC 556... $R_G = 2\text{ k}\Omega$ $f = 1\text{ kHz}$, BC 558 $\Delta f = 200\text{ Hz}$ BC 559 | - - - | 2 dB 1 dB | 10 dB 4 dB |
| Thermal resistance junction to ambient air Wärmewiderstand Sperrschicht – umgebende Luft | R_{thA} | | 200 K/W ¹⁾ |
| Recommended complementary PNP transistors Empfohlene komplementäre PNP-Transistoren | | BC 546 ... BC 549 | |

| | | | |
|---|-------------------------------|--|-------------------------------|
| Available current gain groups per type Lieferbare Stromverstärkungsgruppen pro Typ | BC 556A BC 557A BC 558A | BC 556B BC 557B BC 558B BC 559B | BC 557C BC 558C BC 559C |
|---|-------------------------------|--|-------------------------------|

¹⁾ Valid, if leads are kept at ambient temperature at a distance of 2 mm from case

Gültig, wenn die Anschlußdrähte in 2 mm Abstand von Gehäuse auf Umgebungstemperatur gehalten werden

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