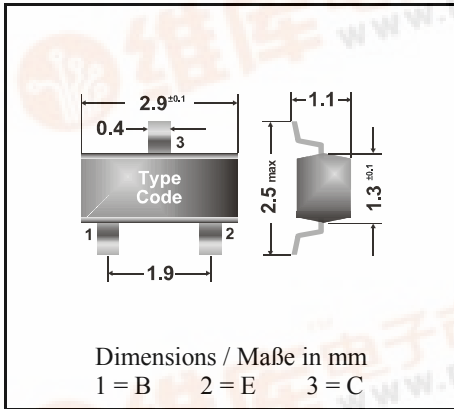


NPN

Surface mount Si-Epitaxial Planar Transistors
Si-Epitaxial Planar Transistoren für die Oberflächenmontage

NPN



Power dissipation – Verlustleistung 250 mW

Plastic case SOT-23
Kunststoffgehäuse (TO-236)

Weight approx. – Gewicht ca. 0.01 g

Plastic material has UL classification 94V-0
Gehäusematerial UL94V-0 klassifiziert

Standard packaging taped and reeled
Standard Lieferform gegurtet auf Rolle

Maximum ratings (T_A = 25°C)

Grenzwerte (T_A = 25°C)

| | | | BFN 22 |
|---|--------------------------|------------------|----------------------|
| Collector-Emitter-voltage | B open | V _{CE0} | 250 V |
| Collector-Base-voltage | E open | V _{CB0} | 250 V |
| Collector-Emitter-voltage | R _{BE} = 2.7 kΩ | V _{CER} | 250 V |
| Emitter-Base-voltage | C open | V _{EB0} | 5 V |
| Power dissipation – Verlustleistung | | P _{tot} | 250 mW ¹⁾ |
| Collector current – Kollektorstrom (dc) | | I _C | 50 mA |
| Peak Collector current – Kollektor-Spitzenstrom | | I _{CM} | 100 mA |
| Junction temperature – Sperrschichttemperatur | | T _j | 150°C |
| Storage temperature – Lagerungstemperatur | | T _s | - 65...+ 150°C |

Characteristics (T_j = 25°C)

Kennwerte (T_j = 25°C)

| | | Min. | Typ. | Max. |
|---|--------------------|-------------|-------------|-------------|
| Collector-Base cutoff current – Kollektorreststrom | | | | |
| I _E = 0, V _{CB} = 200 V | I _{CB0} | – | – | 100 nA |
| I _E = 0, V _{CB} = 200 V, T _j = 150°C | I _{CB0} | – | – | 20 μA |
| Emitter-Base cutoff current – Emitterreststrom | | | | |
| I _C = 0, V _{EB} = 5 V | I _{EB0} | – | – | 100 nA |
| Collector saturation volt. – Kollektor-Sättigungsspg. ²⁾ | | | | |
| I _C = 10 mA, I _B = 1 mA | V _{CEsat} | – | – | 500 mV |



¹⁾ Mounted on P.C. board with 3 mm² copper pad at each terminal

Montage auf Leiterplatte mit 3 mm² Kupferbelag (Löt-pad) an jedem Anschluß

²⁾ Tested with pulses t = 300 μs, duty cycle < 2% – Gemessen mit Impulsen t = 300 μs, Schaltverhältnis < 2%

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

| | Min. | Typ. | Max. |
|---|------------------|---------|-----------------------|
| Base saturation voltage – Basis-Sättigungsspannung ¹⁾ $I_C = 10\text{ mA}, I_B = 1\text{ mA}$ V_{BEsat} | – | – | 1 V |
| DC current gain – Kollektor-Basis-Stromverhältnis ¹⁾ $V_{\text{CE}} = 20\text{ V}, I_C = 25\text{ mA}$ h_{FE} | 50 | – | – |
| Gain-Bandwidth Product – Transitfrequenz $V_{\text{CE}} = 10\text{ V}, I_C = 10\text{ mA}, f = 100\text{ MHz}$ f_{T} | – | 100 MHz | – |
| Collector-Base Capacitance – Kollektor-Basis-Kapazität $V_{\text{CB}} = 30\text{ V}, I_E = i_e = 0, f = 1\text{ MHz}$ C_{CB0} | – | 0.8 pF | – |
| Thermal resistance junction to ambient air Wärmewiderstand Sperrschicht – umgebende Luft | R_{thA} | | 420 K/W ²⁾ |
| Recommended complementary PNP transistors Empfohlene komplementäre PNP-Transistoren | | BFN 23 | |

Marking - Stempelung

BFN 22 = HB

¹⁾ Tested with pulses $t_p = 300\ \mu\text{s}$, duty cycle $\leq 2\%$ – Gemessen mit Impulsen $t_p = 300\ \mu\text{s}$, Schaltverhältnis $\leq 2\%$

²⁾ Mounted on P.C. board with 3 mm^2 copper pad at each terminal
Montage auf Leiterplatte mit 3 mm^2 Kupferbelag (Lötpad) an jedem Anschluß