

RF transistors

Silicon transistors

| Type | Structure | Fig. Nr. | Maximum ratings | | | Characteristics | | | | | | | | | | | |
|----------------------|-----------|----------|--|----------|------------------|--------------------------------|--------------------|--------------------------|-----------------------------------|---------------|--------------------|----|------------------|----|------------|-------------------|-----|
| | | | P_{tot} at $t_{amb} = +45^\circ\text{C}$ W | I_C mA | U_{CEO} V | h_{FE} at I_C and U_{CE} | f_T at I_C MHz | $C_{üre}$ at U_{CB} pF | γ_{fe} at I_C and f mS | F at f dB | f MHz | | | | | | |
| BF 115 | NPN | 19 | 0.145 | 30 | 30 | 48-167 | 1 | 10 | 230 | 1 | 0.65 | 10 | 35 | 1 | 0.45 | 1.2 | 1 |
| BF 167 ¹⁾ | NPN | 19 | 0.13 | 25 | 30 | ≥ 27 | 4 | 10 | 350 | 4 | 0.15 | 10 | 105 | 4 | 35 | 3 | 35 |
| BF 173 | NPN | 19 | 0.2 | 25 | 25 | ≥ 38 | 7 | 10 | 550 | 5 | 0.23 | 10 | 145 | 7 | 35 | - | - |
| BF 184 ¹⁾ | NPN | 19 | 0.145 | 30 | 20 | 67-220 | 1 | 10 | 260 | 1 | 0.65 | 10 | 35 | 1 | 10.7 | 3.5 | 1 |
| BF 185 | NPN | 19 | 0.145 | 30 | 20 | 36-125 | 1 | 10 | 200 | 1 | 0.65 | 10 | 35 | 1 | 10.7 | 3.5 | 1 |
| BF 198 ¹⁾ | NPN | 20 | 0.3 | 25 | 30 | ≥ 27 | 4 | 10 | 400 | 4 | 0.22 | 10 | 105 | 4 | 35 | 3 | 35 |
| BF 199 | NPN | 20 | 0.3 | 25 | 25 | ≥ 38 | 7 | 10 | 550 | 5 | 0.32 | 10 | 175 | 7 | 35 | - | - |
| BF 240 ¹⁾ | NPN | 20 | 0.3 | 25 | 40 | 67-220 | 1 | 10 | 430 | 1 | 0.27 | 10 | - | - | - | 1.6 | 100 |
| BF 241 | NPN | 20 | 0.3 | 25 | 40 | 36-125 | 1 | 10 | 400 | 1 | 0.27 | 10 | - | - | - | 1.6 | 100 |
| BF 254 ¹⁾ | NPN | 20 | 0.3 | 30 | 20 | 67-220 | 1 | 10 | 260 | 1 | 0.85 | 10 | 35 | 1 | 10.7 | 2 ²⁾ | 1 |
| BF 255 | NPN | 20 | 0.3 | 30 | 20 | 36-125 | 1 | 10 | 200 | 1 | 0.85 | 10 | 35 | 1 | 10.7 | 2.5 ²⁾ | 1 |
| BF 257 | NPN | 14 | 5 ⁶⁾ | 100 | 160 | ≥ 25 | 30 | 10 | 90 | 10 | 4.2 | 30 | - | - | - | - | - |
| BF 258 | NPN | 14 | 5 ⁶⁾ | 100 | 250 | ≥ 25 | 30 | 10 | 90 | 10 | 4.2 | 30 | - | - | - | - | - |
| BF 259 | NPN | 14 | 5 ⁶⁾ | 100 | 300 | ≥ 25 | 30 | 10 | 90 | 10 | 4.2 | 30 | - | - | - | - | - |
| BF 310 | NPN | 15 | 0.3 | 25 | 30 | ≥ 29 | 4 | 10 | ≤ 580 | 1 | $\leq 0.13^3)$ | 10 | $\geq 80^4)$ | 4 | 36 | - | - |
| BF 311 | NPN | 20 | 0.3 | 40 | 25 | ≥ 40 | 15 | 10 | 750 | 5 | 0.35 | 10 | 370 | 15 | 36 | - | - |
| BF 314 | NPN | 15 | 0.3 | 25 | 30 | ≥ 29 | 4 | 10 | 450 | 1 | 0.1 ³⁾ | 10 | 36 ⁴⁾ | 1 | 100 | 3 | 100 |
| BF 362 | NPN | 21 | 0.12 ⁵⁾ | 20 | 20 | ≥ 20 | 3 | 10 | 800 | - | - | - | - | - | 4.5 | 800 | |
| BF 363 | NPN | 21 | 0.12 ⁵⁾ | 20 | 20 | ≥ 20 | 3 | 10 | 700 | - | - | - | - | - | 5 | 800 | |
| BF 414 | PNP | 15 | 0.3 | 25 | 30 | ≥ 30 | 1 | 10 | 400 | 1 | 0.09 ³⁾ | 10 | - | - | 2 | 100 | |
| BF 440 ¹⁾ | PNP | 20 | 0.3 | 25 | 40 | 60-220 | 1 | 10 | 250 | 1 | 0.4 | 10 | ≥ 80 | 4 | 36 | - | - |
| BF 441 | PNP | 20 | 0.3 | 25 | 40 | 30-125 | 1 | 10 | 250 | 1 | 0.4 | 10 | ≥ 80 | 4 | 36 | - | - |
| BF 457 | NPN | 22 | 1.2 ⁶⁾ | 100 | 160 | ≥ 25 | 30 | 10 | 90 | 15 | 4.2 | 30 | - | - | - | - | - |
| BF 458 | NPN | 22 | 1.2 ⁶⁾ | 100 | 250 | ≥ 25 | 30 | 10 | 90 | 15 | 4.2 | 30 | - | - | - | - | - |
| BF 459 | NPN | 22 | 1.2 ⁶⁾ | 100 | 300 | ≥ 25 | 30 | 10 | 90 | 15 | 4.2 | 30 | - | - | - | - | - |
| BF 479 | PNP | 21 | 0.19 ⁵⁾ | 50 | 25 | ≥ 20 | 10 | 10 | 1800 | 10 | - | - | - | - | 4.5 | 800 | |
| BF 506 | PNP | 15 | 0.3 | 30 | 35 | ≥ 25 | 3 | 10 | 550 | 2 | 0.12 ³⁾ | 10 | - | - | 3.0 | 200 | |
| BF 509 | PNP | 15 | 0.3 | 30 | 35 | ≥ 25 | 3 | 10 | 800 | 2 | 0.12 ³⁾ | 10 | - | - | 2.6 | 200 | |
| BF 679 | PNP | 21 | 0.19 ⁵⁾ | 30 | 35 | ≥ 25 | 3 | 10 | 850 | 2 | - | - | - | - | 3.9 | 800 | |
| BF 680 | PNP | 21 | 0.19 ⁵⁾ | 30 | 35 | ≥ 25 | 3 | 10 | 750 | 2 | - | - | - | - | 4.8 | 800 | |
| BFS 20 | NPN | 16 | 0.11 ⁶⁾ | 25 | 20 | ≥ 40 | 7 | 10 | 450 | 5 | 0.3 | 10 | - | - | - | - | - |
| BFS 62 | NPN | 17 | 0.2 | 25 | 25 | ≥ 35 | 7 | 10 | ≥ 580 | 5 | ≤ 0.33 | 10 | ≥ 74 | 5 | 200 | 4 | 200 |
| BFX 89 | NPN | 17 | 0.175 | 25 | 15 | ≥ 20 | 2 | 1 | ≥ 800 | 4 | - | - | - | - | ≤ 6.5 | 500 | |
| BFY 80 | NPN | 13 | 0.26 | 100 | 80 | ≥ 30 | 15 | 2 | ≥ 50 | 10 | - | - | - | - | - | - | - |
| BFY 88 ○ | NPN | 19 | 0.175 | 25 | 25 | ≥ 40 | 5 | 1 | 850 | 5 | 0.2 | 10 | ≥ 160 | 7 | 36 | 3.5 | 200 |
| BFY 90 | NPN | 17 | 0.2 ⁶⁾ | 25 | 15 | ≥ 25 | 2 | 1 | ≥ 1300 | 20 | 0.6 | 5 | 45 | 2 | 500 | ≤ 5 | 500 |
| 2 N 918 | NPN | 17 | 0.2 ⁶⁾ | - | 15 | ≥ 20 | 3 | 1 | ≥ 600 | 4 | - | - | - | - | ≤ 6 | 60 | |
| 2 N 1613 | NPN | 14 | 0.7 | 800 | 50 ⁷⁾ | ≥ 20 | 0,1 | 10 | ≥ 60 | 50 | - | - | - | - | ≤ 12 | 10 ⁻³ | |

Remarks: ¹⁾ controllable; ²⁾ F_C ; ³⁾ $C_{üre}$; ⁴⁾ γ_{fb} ; ⁵⁾ $t_{amb} \leq 55^\circ\text{C}$; ⁶⁾ $t_{amb} \leq 25^\circ\text{C}$; ⁷⁾ $U_{CER}, R_{BE} \leq 10 \Omega$

Data book reference: B 2 D