

# Low-Noise

The low-noise devices listed are produced with carefully controlled  $r_b$  and  $f_T$  to optimize device noise performance. Devices listed in the matrix are classified according to noise figure performance versus frequency.

| NF<br>dB | FREQUENCY MHz |        |        |        |        |        | Polarity |
|----------|---------------|--------|--------|--------|--------|--------|----------|
|          | 60            | 100    | 200    | 450    | 1000   | 2000   |          |
| 1.5      | 2N5829        | 2N5829 | MRF904 |        |        |        | PNP      |
|          | 2N5031        | 2N5031 |        |        |        |        | NPN      |
| 2.0      | 2N4957        | 2N4957 | 2N5829 | MRF904 | MRF901 |        | PNP      |
|          | 2N5032        | 2N5032 | 2N5031 |        |        |        | NPN      |
| 2.5      | 2N4958        | 2N4958 | 2N4957 | 2N5829 | MRF901 |        | PNP      |
|          | 2N5032        | 2N5032 | 2N5032 | 2N5031 |        |        | NPN      |
| 3.0      | 2N4959        | 2N4959 | 2N4958 | 2N4957 | 2N5829 | MRF902 | PNP      |
|          | 2N2857        | 2N2857 | 2N5032 | 2N5032 | MRF901 |        | NPN      |
| 3.5      | 2N4959        | 2N4959 | 2N4959 | 2N4958 | 2N4957 | MRF902 | PNP      |
|          | 2N5179        | 2N5179 | 2N2857 | 2N5032 | 2N5031 |        | NPN      |
| 4.0      | 2N4959        | 2N4959 | 2N4959 | 2N4959 | 2N4958 | MRF911 | PNP      |
|          | 2N5179        | 2N5179 | 2N5179 | 2N2857 | 2N5031 |        | NPN      |
| 4.5      | 2N4959        | 2N4959 | 2N4959 | 2N4959 | 2N4959 |        | PNP      |
|          | 2N5179        | 2N5179 | 2N5179 | 2N2857 | 2N5032 |        | NPN      |

# General-Purpose Amplifier

The behaviour of  $f_T$  as a function of  $I_C$  is critical in most Class A amplifier applications. The devices listed in the matrix form below are classified according to  $f_T$  versus  $I_C$ .

| $f_T$<br>GHz<br>Min. | COLLECTOR CURRENT mA |     |                 |                 |          |        |                  | Polarity |
|----------------------|----------------------|-----|-----------------|-----------------|----------|--------|------------------|----------|
|                      | 2.0                  | 5.0 | 10              | 20              | 50       | 100    | 200              |          |
| 5.0                  | MFR901               |     | BFR90           | BFR91           | BFR96    |        |                  | NPN      |
| 4.5                  |                      |     | BFR90           | MM4049<br>BFR91 | BFR96    |        |                  | PNP      |
| 4.0                  |                      |     |                 | MM4049<br>BFR91 |          | BFR96  |                  | NPN      |
| 3.5                  |                      |     | MM4049<br>BFR90 | MM4049<br>BFR91 |          |        |                  | PNP      |
| 3.0                  |                      |     | MM4049<br>BFR90 | MM4049<br>BFR91 | BFR91    |        |                  | NPN      |
| 2.5                  |                      |     | 2N5835          | 2N5835          | 2N5836   |        |                  | PNP      |
| 2.0                  |                      |     | 2N5031          | 2N5841          | 2N5836   | 2N5837 | 2N5837           | NPN      |
| 1.5                  |                      |     |                 |                 |          |        |                  | PNP      |
| 1.2                  |                      |     | 2N4957          | 2N6304          | 2N5583   | 2N5583 | 2N5837           | NPN      |
| 1.0                  |                      |     | 2N3960          | 2N6304          | 2N5943   | 2N5109 | 2N5583           | PNP      |
| 0.8                  |                      |     | 2N4959          | 2N6305          | 2N5583   | 2N5583 | 2N5583           | NPN      |
| 0.6                  |                      |     | 2N2857          | 2N6305          | 2N5943   | 2N5109 | 2N5583           | PNP      |
| 0.5                  |                      |     | MRF501          | 2N5179          | 2N5160   | 2N5160 |                  | NPN      |
| 0.4                  |                      |     |                 | 2N2857          | 2N5943   | MM8001 | 2N5108           | PNP      |
| 0.3                  |                      |     | MRF502          | 2N5160          | 2N5160   | 2N5160 | 2N5583           | NPN      |
| 0.2                  |                      |     | MRF501          | 2N3866          | 2N3866   | 2N4428 | MM4019<br>2N3553 | PNP      |
| 0.1                  |                      |     | MRF501          | 2N3866          | 2N4073   | 2N3553 |                  | NPN      |
| 0.05                 |                      |     | MRF501          | MRF532*         | MRF532*  |        |                  | PNP      |
| 0.02                 |                      |     |                 | MRF531**        | MRF531** |        |                  | NPN      |

\*BV<sub>CEO</sub> = 80 Vdc  
\*\*BV<sub>CEO</sub> = 100 Vdc.