



## Fact Sheet

# Power GaAs pHEMT

### Applications

- Enterprise femtocell, picocell, land mobile, public safety, radar
- Cellular BTS (GSM, LTE, W-CDMA, TD-SCDMA, CDMA)

Freescal's high efficiency power pHEMT transistors are designed for today's demanding, high data rate small cell applications in frequencies ranging from 100 to 5000 MHz. These transistors are available in cost-effective surface mount plastic and air cavity ceramic packages. These transistors can be used in combination with Freescal's general purpose driver amplifiers to build a complete transmit chain.

### GaAs Linear Power Transistors

| Part Number    | Frequency Range (MHz) | Gain (dB) | Test Frequency (MHz) | ACPR (dBc @ Pout) | Eff (%) | P1dB (dBm) | V <sub>DD</sub> (V) | Supply Current (mA) | θ <sub>JC</sub> (°C/W) | Package  |
|----------------|-----------------------|-----------|----------------------|-------------------|---------|------------|---------------------|---------------------|------------------------|----------|
| MRFG35003ANT1  | 100–5000              | 15        | 1960                 | -43 @ 27 dBm      | 25      | 35         | 12                  | 55                  | 15.9                   | PLD 1.5  |
| MRFG35003N6AT1 | 100–5000              | 12        | 2140                 | -43 @ 27 dBm      | 25      | 35         | 6                   | 180                 | 5.9                    | PLD 1.5  |
| MRFG35005ANT1  | 100–5000              | 13        | 1960                 | -45 @ 27 dBm      | 25      | 37         | 12                  | 80                  | 13.7                   | PLD 1.5  |
| MRFG35010ANT1  | 100–5000              | 16        | 750                  | -43 @ 30 dBm      | 25      | 39.5       | 12                  | 120                 | 6.5                    | PLD 1.5  |
| MRFG35010AR1   | 100–5000              | 15        | 2100                 | -43 @ 30 dBm      | 25      | 40         | 12                  | 120                 | 4                      | NI-360HF |

### Driver Amplifiers

| Part Number | Frequency Range (MHz) | Small Signal Gain (dB) | Test Frequency (MHz) | Noise Figure (dB) | OIP3 (dBm) | P1dB (dBm) | θ <sub>JC</sub> (°C/W) | Supply Current (mA) | Package  |
|-------------|-----------------------|------------------------|----------------------|-------------------|------------|------------|------------------------|---------------------|----------|
| MMG15241H   | 500–2800              | 14.4                   | 2600                 | 1.3               | 40.6       | 24         | 59                     | 85                  | SOT-89   |
| MMG20271H   | 1500–2700             | 16                     | 2140                 | 1.7               | 42         | 27.5       | 38                     | 180*                | QFN 3×3  |
| MMG20271H9  | 1500–2700             | 16                     | 2140                 | 1.7               | 43.1       | 27.5       | 29                     | 215                 | SOT-89   |
| MMG3014N    | 40–4000               | 15                     | 2140                 | 5.7               | 40.5       | 25.8       | 27.4                   | 135                 | SOT-89   |
| MMG3004N    | 400–2200              | 17                     | 2140                 | 3.4               | 44         | 27         | 23.2                   | 250*                | PQFN 5×5 |

1. Nominal supply current is fully adjustable

Freescal offers comprehensive global in-region support to help you with your design. Contact your local Freescal sales office or authorized Freescal distributor for additional information and sample availability.

For more information, visit [freescal.com/RFMMIC](http://freescal.com/RFMMIC)