



NXP Aero[®] GSM/GPRS power amplifier AERO4300XC* for dual- and tri-band applications

Industry's smallest, high-performance PA for GSM cellular applications

This compact, highly integrated GSM power amplifier, available in dual- and tri-band versions, is the first to integrate all the PA functions into a single monolithic IC, and the first to be implemented in a standard digital CMOS process.

Key features

- ▶ Small ceramic package (3.9 x 6.4 x 1.3 mm)
- ▶ Single monolithic die on a ceramic substrate
- ▶ Unparalleled integration
 - 76% less board area
 - 80% fewer components
 - Complete power control
 - Protection circuitry for thermal and load mismatches
 - Harmonic filtering
 - I/O matching circuitry
- ▶ Optimal current consumption for all power levels during burst operation
 - Enables longer talk times
- ▶ GPRS Class 12 capable
- ▶ Operation: 3.0 to 4.8 V

Applications

- ▶ AERO4300XC/1: E-GSM 900 and DCS 1800 dual-band cellular handsets
- ▶ AERO4300XC/2: E-GSM 900, DCS 1800, and PCS 1900 tri-band cellular handsets
- ▶ GPRS data terminals

The NXP Aero GSM/GPRS power amplifier AERO4300XC integrates all the functions between the transceiver and the antenna switch module.

It is available in two versions – one for dual-band applications that support E-GSM 900 and DCS 1800, and one for tri-band applications that support E-GSM 900, DCS 1800, and PCS 1900.

Consisting of two amplification paths, the AERO4300XC is compatible with GPRS Class 12 and is suitable for use in GPRS multi-slot applications.

Monolithic IC

Unlike PA modules, which consist of multiple die and numerous discretes, the AERO4300XC is manufactured using a single die, produced in a standard digital CMOS process, attached to a ceramic substrate.

Housed in a small, surface-mount ceramic package that measures only 25 mm², it integrates circuitry for complete power control, protection against thermal and load mismatches, harmonic filtering, and I/O matching networks.

* Formerly available as the Si4300 and Si4300T from Silicon Labs

