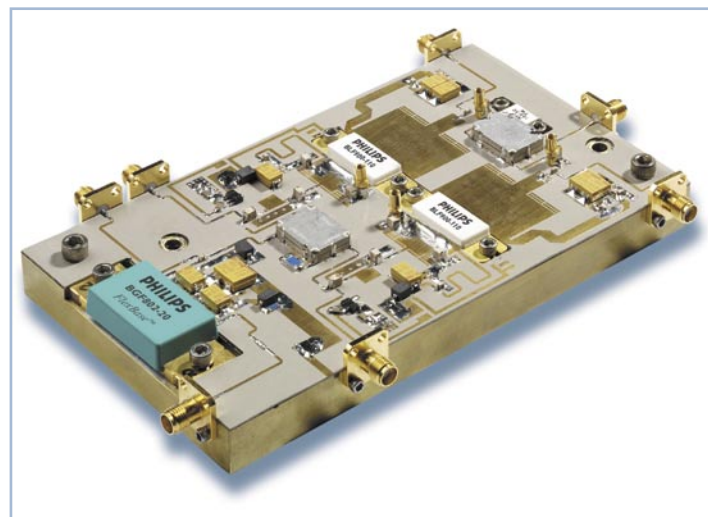


50 W, CDMA amplifier solution

Combining our most advanced LDMOS ultra-linear driver module (BGF802-20) with two high power single-ended transistors (2 x BLF900-110), our 50 W CDMA amplifier solution offers an outstanding performance. Its high level of integration makes it significantly less expensive to mass produce.



Customer benefits

- Low-cost, high-performance solution for CDMA base stations
- High level of integration (low component count)
- Uses two BLF900-110 transistors
- Excellent power-per-package ratio.

Performance overview

- Driver: BGF802-20 integrated 2-stage 50 Ω module (3 W, IS95, -55 dBc ACPR)
- Output stage: two BLF900-110 high-power CDMA transistors (25 W, IS95, -45 dBc ACPR)
- Output power: 50 W
- Frequency range: 869 – 894 MHz cellular band
- Operating bandwidth: 25 MHz
- Gain: 45 dB
- Supply voltage: 26–28 V
- ACPR @ ± 750 kHz: -45 dBc
- Efficiency: 27% @ 50 W.

Low-cost, high-performance RF solution for CDMA base stations

Semiconductors

Key RF power capabilities

As the latest in Philips Semiconductors' complete range of RF solutions for CDMA, GSM/EDGE and UMTS base stations, our 50 W, CDMA amplifier solution is an unrivalled demonstration of advanced LDMOS technology. Operating in the 869-894 MHz cellular band, this reference design shows a solution that is one of the most competitive in the market regarding cost, performance and size of a CDMA amplifier. The BLF900-110 combines a high CDMA power per package with excellent back-off linearity required for CDMA Multi Carrier Power Amplifiers (MCPAs).

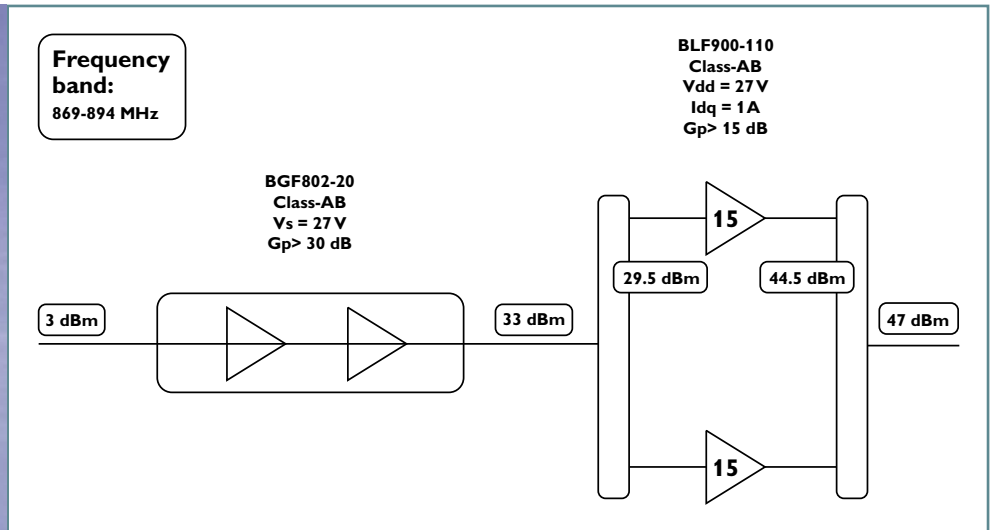
Most RF Power Amplifiers (RFPAs) used in cellular base stations consist of 3 amplifying stages: the first 2 being drivers and the last one a final output stage, delivering the necessary transmitter power to connect to many mobile handsets over a long distance. The competitiveness of our CDMA solution comes from a high level of integration in the driver stages (a single BGF802 - 20 LDMOS module with unprecedented performance), and the integration of two very high power CDMA transistors (each >25 W, in a small standard LDMOS transistor package). These are used to achieve the 50 W CDMA output power. A comparable lineup built from competitor parts would easily need twice the number of components, would be a larger size and would be significantly more expensive.

This solution is a classic example of Philips Semiconductors' capabilities in RF power amplifier integration, offering easy-to-assemble and low-cost solutions to customers. Future Philips Semiconductors products will show an even higher level of integration by going to 3 or 4 amplifier stages in a single module and offering power levels up to 300 W.

PHILIPS

50 W, CDMA amplifier solution

Low-cost, high-performance RF solution for CDMA base stations



CDMA amplifier demonstration (driver module and double transistor output stage)

Philips Semiconductors

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