Master Thesis

Höchstfrequenz elektronik

RWTH AACHEN UNIVERSITY

500 Watt Broadband Doherty Power Amplifier

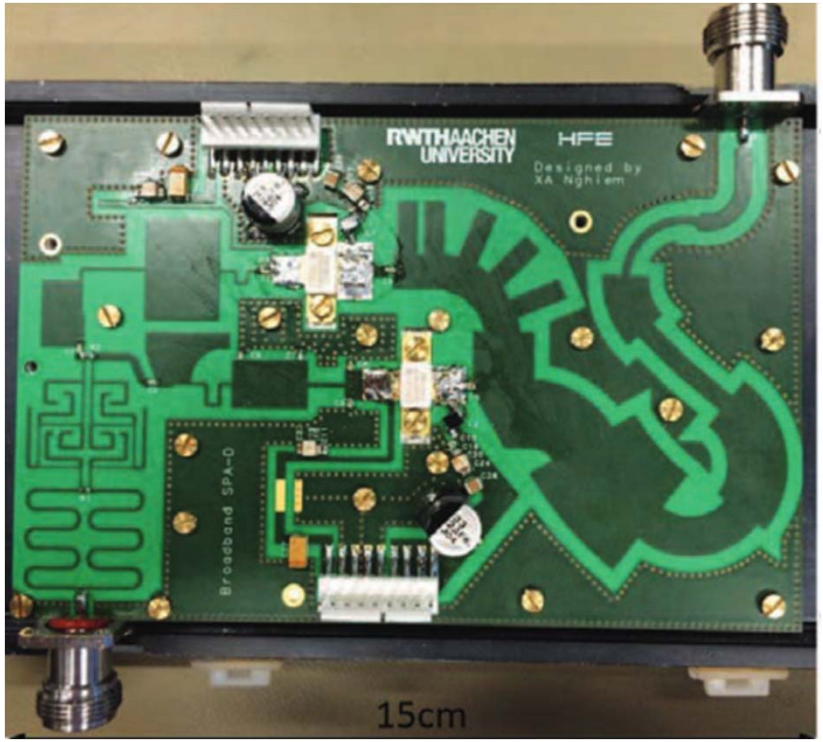
Background

The increasing demand of higher data rates for modern services and applications require more and more bandwidth. The Doherty Power Amplifier (DPA) topology is suitable in terms of efficiency over the required output power range but typical DPAs have a limited relative bandwidth of 10-15%. The targeted applications are mobile base stations for wireless communication with peak output power of at least 500 Watt.
The Chair of High Frequency Electronics is actively researching this field in collaboration with world-leading industrial partners.

Tasks

Your task will be to investigate the sources of bandwidth limitations and explore possible solutions:

- circuit simulations and layout with ADS
- fabricate your own hybrid Doherty PA
- assamble and characterise the Doherty PA performance
- analyse your measurements and verify your simulation results



broadband hybrid power amplifier design

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