

Design of 240 GHz frequency divider in SiGe:BiCMOS Technology for mmW carrier recovery

Master Thesis

Description:

In the frame of ongoing DFG project real100G.COM, synchronization architectures for multi-Gigabit millimeter-wave transmission systems are the main research focus at ILH. In this project we are working on the designing a complete analog receiver for multi-gigabit wireless data transmission.

What we offer:

The possibility to work in a world leading team on the field of mm-wave communication systems. A research environment where you will have freedom to generate and come up with new ideas. This will also help you in applying your theoretical knowledge into practical design.

Goals:

- 1. Circuit design in 130 nm SiGe:BiCMOS Technology
- 2. A minimum of two different topologies. Qualitative study of different topologies.
- 3. Lower power consumption
- 4. Lower phase noise
- 5. Large frequency locking range
- 6. Layout for one selected circuit

Requirements:

- 1. Courses in high frequency circuit design or related courses
- 2. Experience with Agilent's Advance Design Systems (ADS)
- 3. Self-motivation

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