

OPUS

RFIC Consultants LLC

Introduction

We are pleased to present our services to the RF IC design community. We are a small start-up company with a strong background in RF IC design. We are located in the beautiful hill country of Hawaii's Big Island. We find the serenity and clean surroundings an excellent source of inspiration. We are also frequent and enthusiastic travelers to the US main land.

Core strengths

We have about 30 years experience as analog RF IC designers and our team members are responsible, either alone or as part of a larger design group, for around 30 of Maxim Integrated Products wireless receiver IC's, many of them sold in high volume, generating most of the revenue of the cellular product line.

We also have experience with all kinds of process technologies from CMOS to SiGe to high-speed InP technologies and all aspects of the design phase. This starts with the initial specification, then simulation, verification and finally extensive lab evaluation and troubleshooting. Furthermore, a high production environment requires intense in-

teraction with test groups and we have many years experience bringing test platforms up to speed, developing, for example, tests ability to measure noise figure accurately. We know that our success is completely dependent on our customers and we want to walk many extra miles to guarantee your success.

Core designs

As examples of our core design expertise we have: LNAs, Mixers, LO generators, VCO's, bias blocks, filters, PLL's, VGA's, ADC's, DAC's, sample & hold circuits, PA, laser driver, and TIA to name a few. Our experience also helps us to easily adapt to new processes and circuit techniques.



PEOPLE

Hans Hageraats,

Hans has an incredible record of successful IC introductions. But let's start from the beginning. He got his Masters in Electrical Engineering from Delft University in 1991. Since then he has been on the forefront of front-end designs techniques earning a designer of the year award from EDN magazine in 1998 for his novel feedback technique giving unprecedented OIP3 performance. Hans' mixer designs have extremely high IIP2/IIP3 performance, necessary for GSM spec, and impressive noise figure.

He has introduced more than 25 products in the Maxim wireless group, all of them very successful and generating many millions of dollars in revenue. At Maxim he has repeatedly shown his leadership in lab measurement techniques and has trained many engineers. Hans also holds a number of patents.



Mikael Sahrning,

Mikael has a background in theoretical physics, earning a PhD in theoretical astrophysics in 1994. He then spent two years as a post doc in the theory group at California Institute of Technology (Caltech). Feeling a need to contribute to society on a more practical level he decided to switch to integrated circuit design in 1996. Over the years he has been exposed to pretty much every process technology there is, from basic CMOS up to highly experimental InP technologies. He has contributed to many different circuit blocks.

This is one of Mikael's main strengths: he is an incredibly strong all-round designer with experience from RF to digital baseband out and everything in between. His expertise in VCO design has lead to one of the lowest phase noise designs available on a silicon substrate today. Also at Maxim he improved productivity substantially by optimizing simulation scripts and stream lining lab methodology.

