
RFIC DESIGN DEVELOPMENT IN RFIC Technologies

About Us

- The first Indian company in RFIC area...since Jan 2007
- Office Location: Bangalore
- Team :
 - Technical: Two Lead engineers with over 15 years expertise in RFIC design to lead a team of 5 dedicated and innovative design engineers.
 - Business Development: Two business development managers to understand client needs and help build solutions.
- Tools
 - Cadence, ADS, Calibre
- FOUNDRIES
 - TSMC, UMC, TOWER

Expertise

- Transceiver design with CMOS process
 - LNA, PA, mixer, OpAmp, VGA, filter, switch, VCO, PLL, receiver, transmitter.
- Full chip design
 - Pad ring, IO cells, bond pad, package
- Sample testing
 - Measurement of chips after fabrication
- First silicon success

Track Record

Customers

Intel, NXP, Athena , Broadcom, Spacebridge

Chips

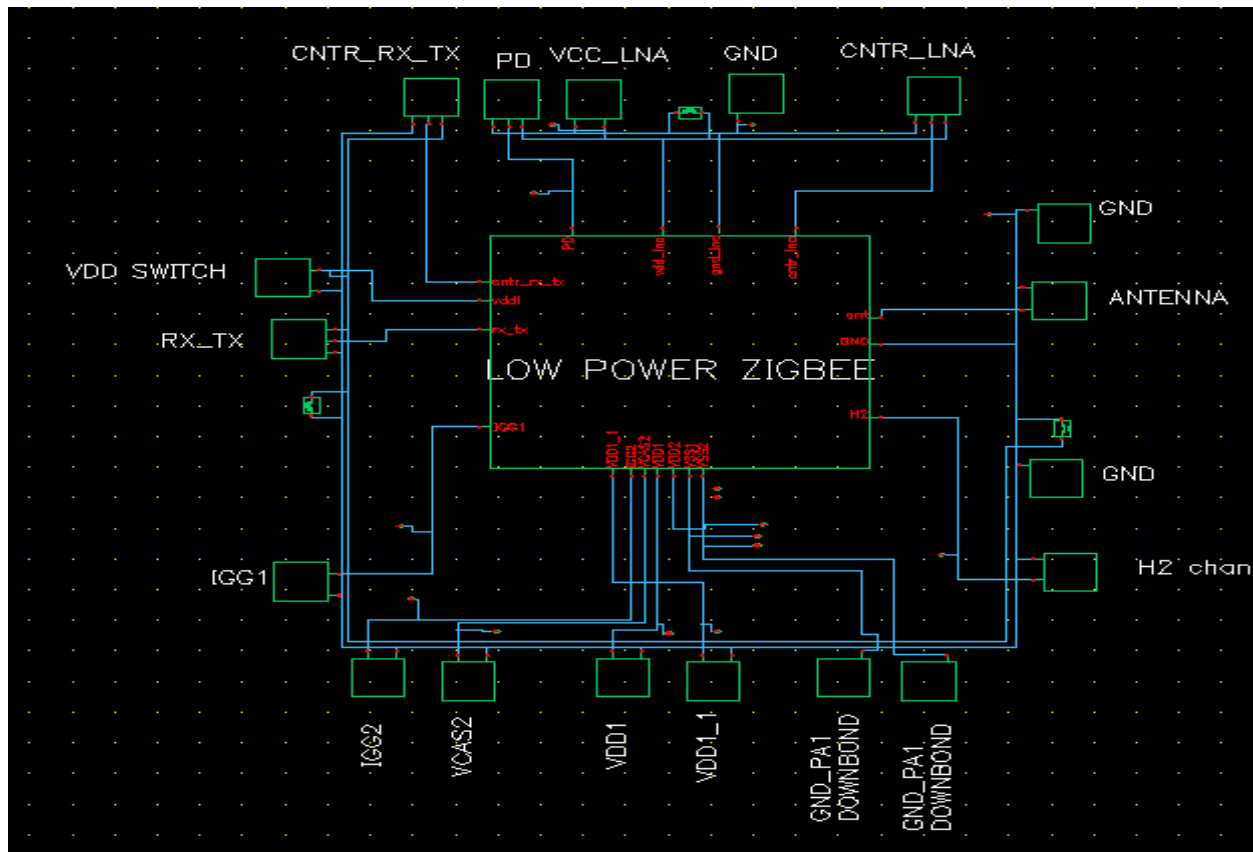
- AERO4223ELC1UM-NXP (now with st-erricsson)-
gsm/gprs/edge transreceiver
- Intel UWB chip (3 to 5 GHz transreceiver)
- WLAN SOC BCM4329 broadcom
- ATS2400 WLAN transceiver RFIC- Athena Semi
- ATS5400 WLAN transceiver RFIC- Athena Semi
- SB7044-Spacebridge modulator

Our Design & Development works

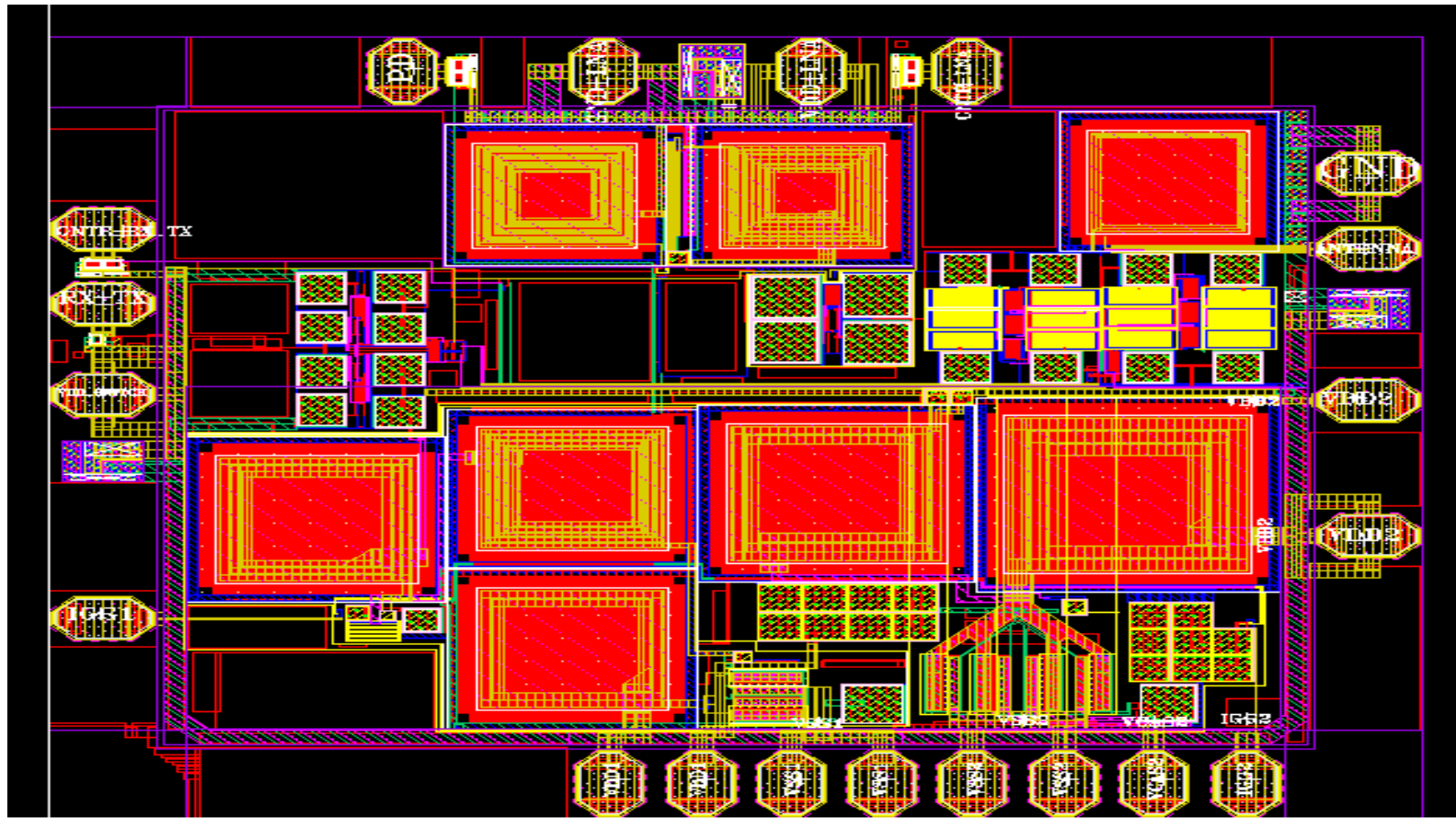
- IP Details : All are silicon proven chips
- RFF-1001:RF Front End PA LNA SWITCH : ZIGBEE APPLICATION
- RFF-1003 : High performance RF front end chip 2.4GHz DPDT switch and LNA in a single chip packaged in 3X3 mm QFN package 16 pin for Zigbee application
- RFM-1007 : Down conversion mixer for Zigbee
- RFS-1004 : LTE switch matrix

More information will be shared after NDA signed

RFF-1001: RF Front End for ZIGBEE-PA, LNA and Switch



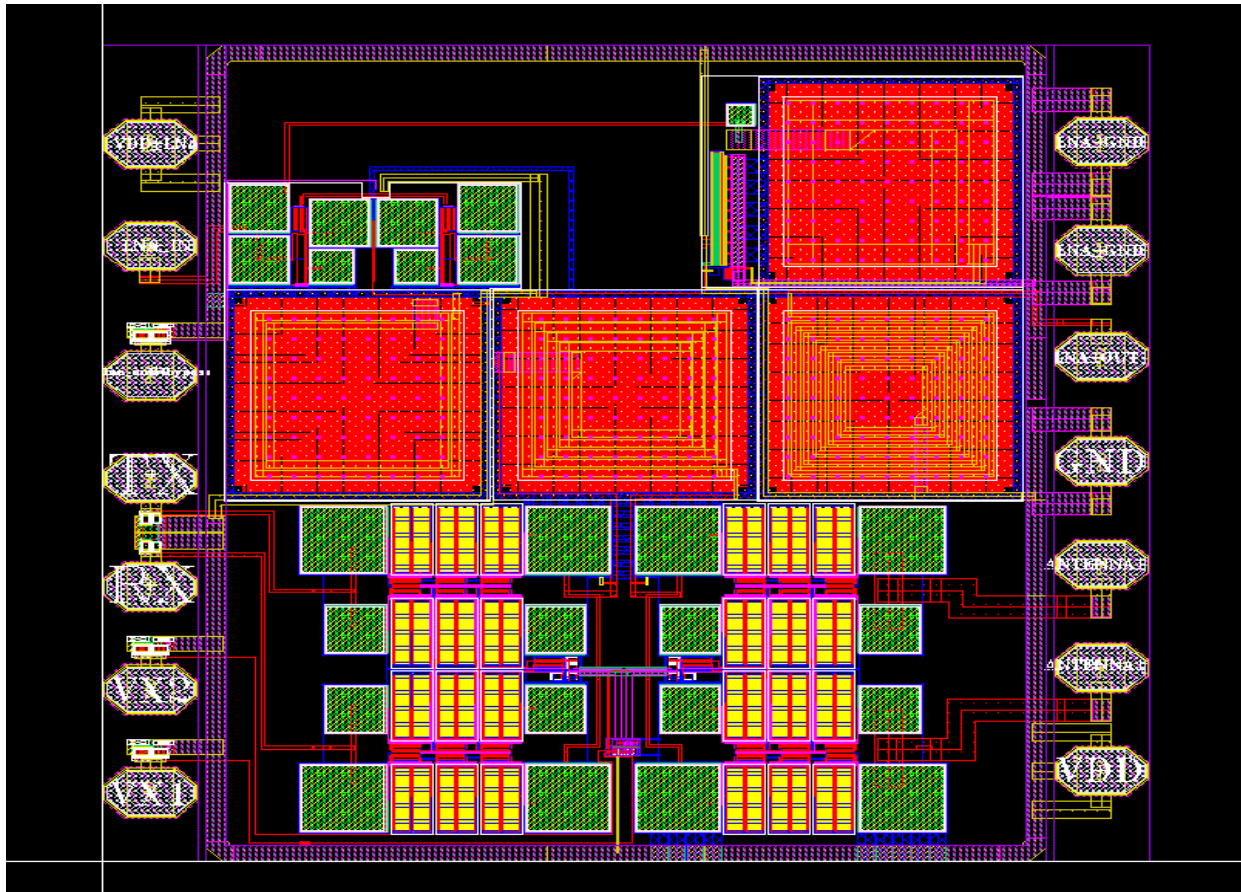
RFF-1001 : The Full Chip Layout



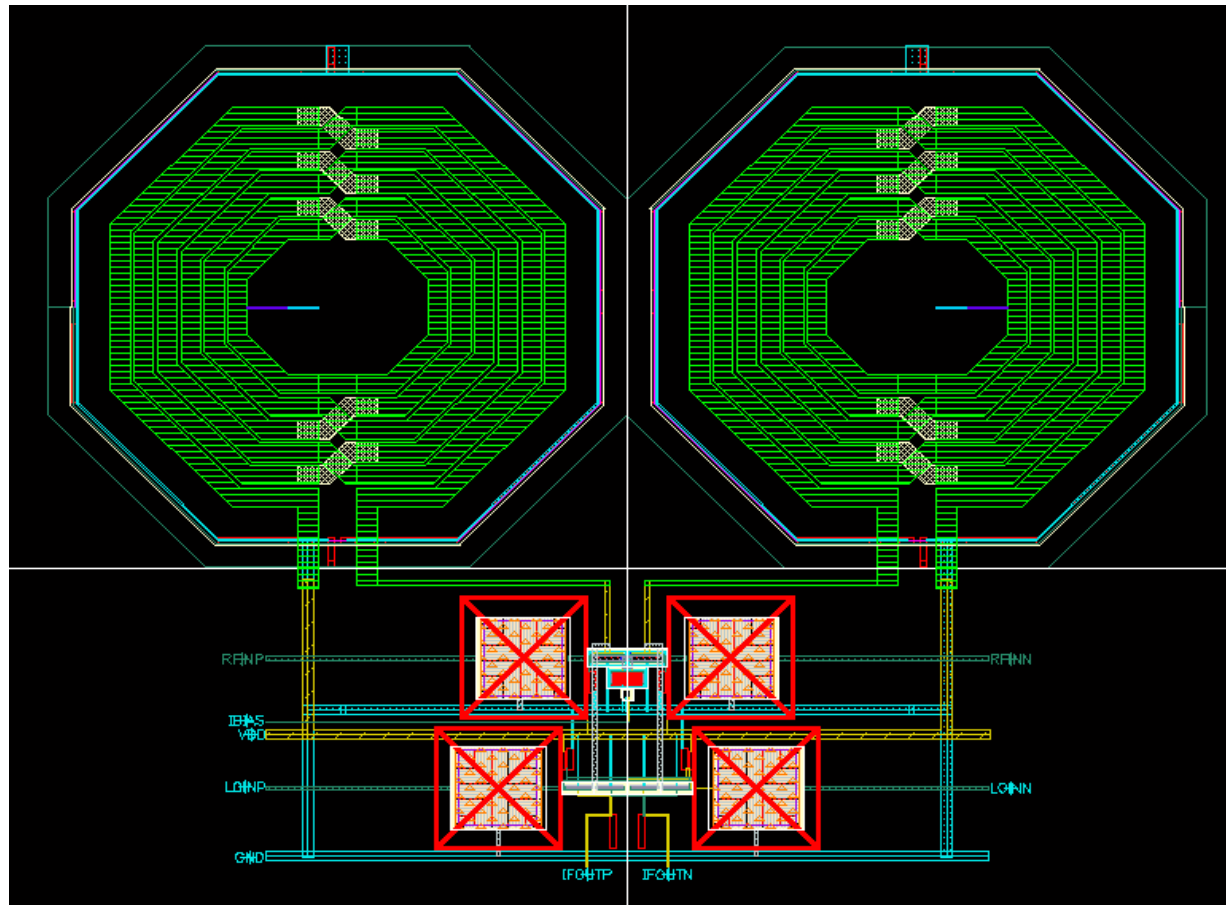
RFF-1001: Test results : 2.4GHz

- PA
 - Gain: 22dB
 - Pout : 23dBm @80mA
- LNA
 - Gain : 15dB @3mA current
 - Noise figure : 1.5 dB
- Switch
 - Insertion loss : 0.6dB
 - Power handling : 30dBm

RFF-1003: RF front end LNA and switch in one chip



RFM-1007:Down Converter Mixer

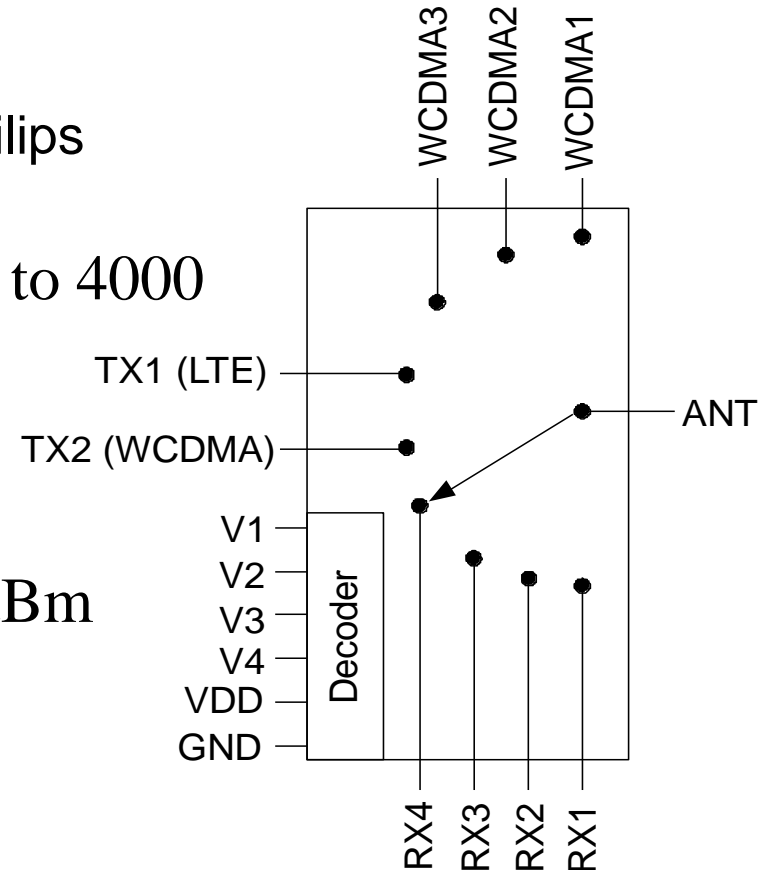


RFM-1007: Test Results

- Gain 20dB
- Noise figure: 15 dB
- IIP3 -2dBm
- Current : 4mA

RFS-1004: 10 Pole Switch in CMOS Process

- Comparison :
 - CXM3555: 10 pole switch from Philips (GaAs)
- Wide frequency range: 400MHz to 4000 MHz
- Insertion loss less than 1 dB
- Isolation 36dB
- Power handling capability : 34 dBm
- On chip DC block capacitor
- LTE switch model
- Tower 180 nm SOI process



Complete RFIC IPS

- See the attachment file for the full list
- Silicon proven RFIC IP
- Contact us for more details
- These IPS are ready to integrate or use as independent chips
- Design service model is available for other foundries and process technologies.
- Full support for the RFIC IPS till your sample test.

What we can do for you

- Complete service for
 - System / circuit / layout of your RFIC
- System level design and verification
 - ADS and cadence
- Circuit design and layout verification
 - Cadence
- Foundry
 - All major CMOS foundries
- Blocks
 - PLL, VCO, LNA, PA, Switch, Mixer, Receiver, Transmitter

The Team

- Alok Kumar Gupta
 - The most experienced CMOS RFIC designer , had experience more than 20 years, Had worked in Broadcom, Athena Semiconductor and Space Bridge
- Suchitav Khadanga
 - Have more than 15 years in RFIC area, had worked in Intel, NXP, Athena semiconductor

Contact alokg@rficdesign.com , suchitav@rficdesign.com for any questions.