

Orange County Semiconductor Startup Rattles the RFIC Industry; Meet OctoTech, Inc.

IRVINE, Calif. – June 4, 2018 – Meet OctoTech Inc., an Orange County, California based startup semiconductor company that is shaking up the Radio Frequency Integrated Circuit (RFIC) industry by publicly unveiling its first products to the market.

Only OctoTech has achieved the same, or better performance as GaAs RFICs, using low-cost silicon wafers and process. Created to overcome limitations of existing solutions, OctoTech RFICs enable range extension and performance enhancement for a broad range of popular standards including: Bluetooth, Zigbee, LoRaWAN, Sigfox, Thread, and soon, many others. OctoTech’s silicon RF ICs extend the usable battery life of single-cell powered Internet of Things (IoT) nodes and portable devices. Crafting our circuits in a silicon RF process allows for the integration of numerous passive devices and also supports high-temperature operation, which is critical in applications such as LED lighting, Industrial, and Automotive.

Featured Product:

8TR8211

2.4GHz Front-End RFIC

For ISM, 802.15.4 ZigBee®, Bluetooth®

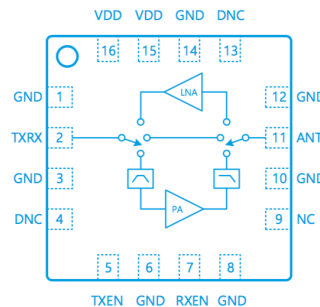


Key Features

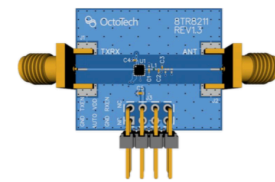
- 2.4 – 2.5 GHz Frequency Range
- High Functionality, Compact Form-Factor
- Low Power Consumption
- RF Integrated Circuit (RFIC) w/ PA, LNA, Ant Switch
- On-Chip Matching Circuitry
- Low Noise Figure
- Low Rx Current
- Optimized for Battery Operated Internet-of-Things IoT

Specifications

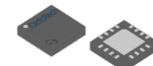
- 23mA at 3V, +13dBm P_{SAT}
- Up to +14dBm P_{SAT}
- 2.3dB LNA Noise Figure
- 8mA @ 13dB Rx LNA Current
- 2.1dB Bi-Directional Bypass Insertion Loss
- -40° to +105°C Operating Temperature Range
- Package Size: 2 x 2 x 0.45mm
- Package Type: 16-Lead QFN



Functional Block Diagram



Evaluation Board



Applications

- Internet-of-Things (IoT)
- Smart Home
- ZigBee® Devices
- Proprietary 2.4GHz ISM
- Home Automation
- Remote Control
- Sensor Networks
- Wireless Toys, Drones

OctoTech CEO, Edward Han said, “By implementing our RF Front-end ICs in silicon, our customers realize higher performance, at lower power consumption, while enjoying component cost savings. Our products represent a paradigm shift in the RFIC marketplace, and the top players in wireless connectivity are aligning with us to pioneer the next advances in silicon RF. We are pleased with the impressive list of top-brand

suppliers of wireless solutions that have engaged with us on product developments, prior to our first public announcement. OctoTech invites the RF Communications industry to visit our website, or contact our sales channels, to request OctoTech evaluation boards (EVB), data sheets, application notes, and product samples.”

OctoTech, Inc. Products Available for Evaluation

Part Number	Family	Production Status
8TR1211	PA, Switch	Samples
8TR2211	LNA, Switch	Samples
8TR8201	LNA, PA, Switch	Mass Production
8TR8202	LNA, PA, Switch	Samples
8TR8210	LNA, PA, Switch	Samples
8TR8211	LNA, PA, Switch	Production
8TR8220	LNA, PA, Switch	Samples

The cost advantages of implementing RFICs in silicon processes result from the combination of: lower wafer costs (Si compared to GaAs, or other III-V compound wafers), lower packaging costs (lead-frame based MSL1 packages, compared to laminate-based MCMs), die-count reduction (a single silicon die, versus multiple dice produced in different process technologies), and from the integration of common RF front-end components (inductors, capacitors, and switches) into a monolithic solution.

About OctoTech, Inc.

Founded in 2016 and based in Irvine, California, OctoTech Inc. is a leading fabless semiconductor company, offering advanced RFIC products and solutions, which leverage proprietary RF silicon technology, meeting the challenging needs of the expanding IoT and 5G convergence systems. OctoTech Inc.’s team of seasoned industry professionals are driven to deliver leading-edge solutions to the high-growth global wireless communications market with innovative, highly efficient and creative RF designs. OctoTech is well positioned to provide high performance, multi-function, ultra-compact RF front-end components and sub-systems for wireless local area, and wide area connectivity, in the emerging IoT markets and their adjacent ecosystems, facilitating and empowering ubiquitous communications. For more information, contact sales@octotechrf.com, or visit www.octotechrf.com.

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