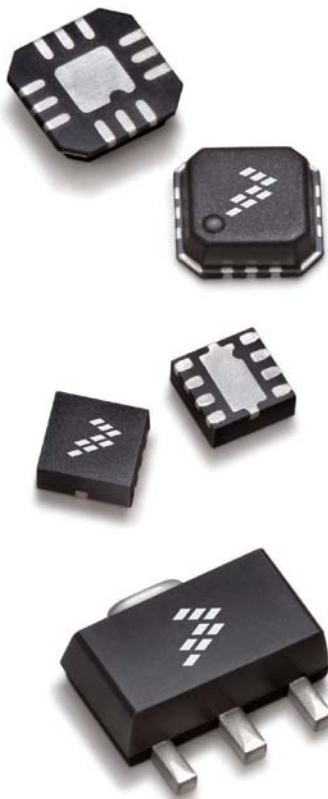


Fact Sheet

GaAs MMICs for Femtocells

Freescale RF femtocell solutions provide high-bandwidth, high-linearity optimized MMICs for LTE (FDD/TDD) and W-CDMA SOHO femtocell base station applications. Our MMICs are comprised of linear amplifiers and low-noise amplifiers. Based on InGaP HBT technology, the linear amplifiers contain active bias networks for excellent over temperature performance and require minimal impedance matching for ease of use over a broad frequency range. The GaAs E-pHEMT low-noise amplifiers provide excellent noise figures for optimum receiver sensitivity.



High-Performance Amplifiers

Part Number	Frequency Range (MHz)	Test Frequency (MHz)	Small Signal Gain (dB)	Gain Stages	P1dB (dBm)	OIP3 (dBm)	Supply Voltage (V)	Supply Current (mA)	Package
MMZ09312B ⁽¹⁾	400–1000	900	31.7	2	29.6	42	3–5	74	QFN 3×3
MMA25312B ^{(1)*}	2300–2700	2500	25.5	2	30	43	3–5	80	QFN 3×3
MMA20312BV	1800–2200	2140	27.2	2	30.5	44.5	3–5	70	QFN 3×3
MMA20312B	1800–2200	2140	27.2	2	30.5	44.5	5	70	QFN 3×3
MMZ25332B ⁽¹⁾	1800–2800	2500	26.5	2	33	48	3–5	390	QFN 3×3

⁽¹⁾ On chip power detector * Preliminary Data

Low-Noise Amplifiers

Part Number	Frequency Range (MHz)	Test Frequency (MHz)	Small Signal Gain (dB)	Noise Figure (dB)	P1dB (dBm)	OIP3 (dBm)	Supply Voltage (V)	Supply Current (mA)	Package
MML20211H	1400–2800	2140	18.6	0.65	21.3	33	5	60	DFN 2×2
MML09211H	400–1400	900	21.3	0.52	22	32.6	5	60	DFN 2×2
MML09212H*	400–1400	900	38.5	0.55	22.5	37	5	150	QFN 3×3
MML20242H*	1400–2800	2140	33	0.7	24	39.5	5	170	QFN 3×3

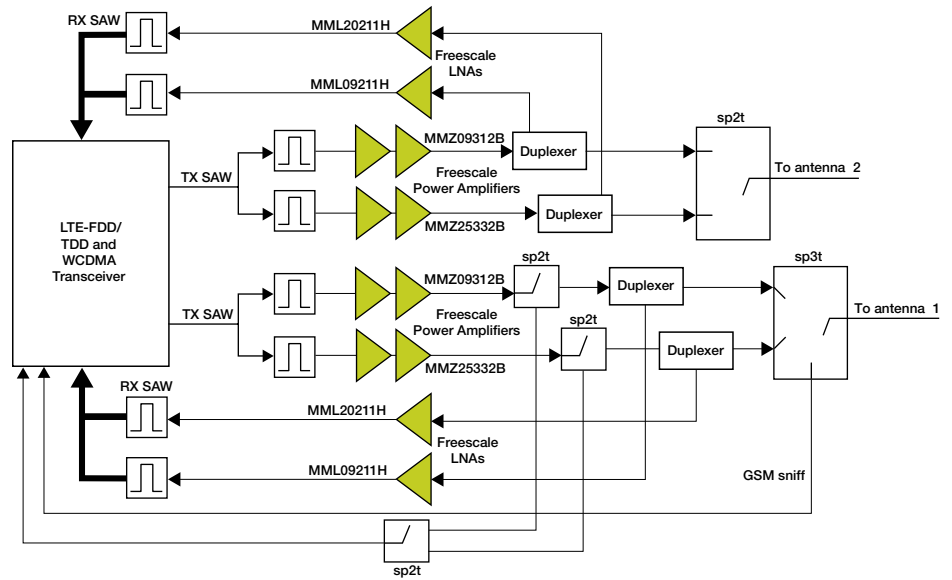
* Preliminary Data

Freescale offers comprehensive global in-region support to help you with your design. Contact your local Freescale sales office or authorized Freescale distributor for additional information and sample availability.

Our Comprehensive Solution

We offer complete femtocell solutions based on the QorIQ Qonverge BSC913X-based development platform. A dual band RF module, designed by Benetel, featuring Freescale linear amplifiers and low-noise amplifiers is available (see block diagram). This module is capable of operating over all UMTS frequency bands of interest (700–1000 MHz and 1700–2700 MHz), features antenna port output power of 13 dBm in a 2x2 MIMO configuration and is designed with a JESD207 interface to the BSC9131 reference design board. A high-performance 3G/4G transceiver chip completes the end-to-end development system for LTE (FDD/TDD) and W-CDMA air interfaces.

RF Module Block Diagram



LTE-FDD/TDD and W-CDMA (HSPA+)
Capable RF Module

For more information on the RF module or to order, visit freescale.com/BSC913XRF

For more information on the RF MMIC portfolio, visit freescale.com/RFMMIC

For more information on the QorIQ Qonverge platform, visit freescale.com/QorIQQonverge



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Document Number: RFFEMTOCELLFS REV 0
5/2012