LX5540

Co-Package 2.3 – 2.5 GHz HBT Power Amplifier & pHEMT Low Noise Amplifier

PRODUCTION DATA SHEET

DESCRIPTION

LX5540 is a co-package RFIC consisting of an InGaP/GaAs Heterojunction Bipolar Transistor (HBT) power amplifier and a InGaAs Enhancement mode pseudomorphic HEMT (E-pHEMT) low noise amplifier. Both are optimized for WLAN applications in the 2.3-2.5 GHz frequency range. The PA is implemented as a two-stage monolithic microwave integrated circuit (MMIC) with active bias and output pre-matching. The LNA is fully matched internally and no external matching circuit is required.

Both devices operate with single low voltage supply of 3.3V. The PA offers 28 dB power gain between 2.3-2.5GHz, at a low quiescent current of 80mA.

For 20dBm OFDM output power (64QAM, 54Mbps), the PA provides a low EVM (Error-Vector Magnitude) of 3%, and consumes 145 mA total DC current.

The LNA offers 14 dB gain, 1.5 dB noise figure and a high input IP3 of +4 dBm at 10 mA of DC current.

LX5540 is available in a 16-pin 3mmx3mm micro-lead package (MLPQ-16L). The compact footprint, low profile, and thermal capability of the MLP package makes the LX5540 an ideal solution for medium-gain power transmitter and very low noise receiver requirements for IEEE 802.11b/g applications.

IMPORTANT: For the most current data, consult *MICROSEMI*'s website: **http://www.microsemi.com**

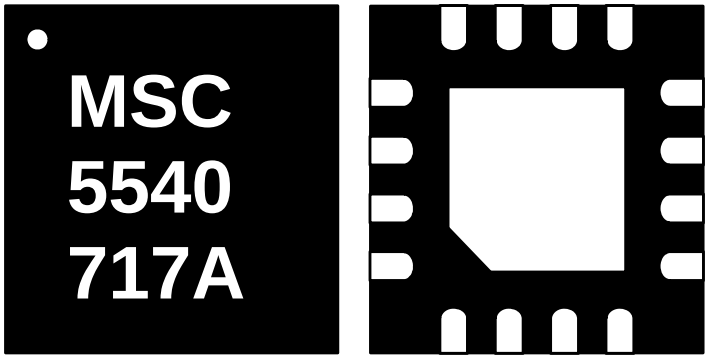
KEY FEATURES

- Advanced InGaP HBT
- 2.3-2.5GHz Operation
- Single-Polarity 3.3V Supply
- Quiescent Current 80mA
- Power Gain 28 dB
- Total Current 145mA for Pout=20 dBm OFDM
- EVM~3% at 20dBm 54Mbps /64QAM
- LNA Gain ~ 14 dB
- LNA Noise Figure ~ 1.5dB
- LNA Input IP3 ~ +4dBm
- On-Chip Bias Circuit
- On-Chip Input/Output Match
- Small Footprint: 3x3mm^2 Low Profile: 0.45mm

APPLICATIONS

- IEEE 802.11b/g

PRODUCT HIGHLIGHT



PACKAGE ORDER INFO

LL	Plastic MLPQ 16 pin 3X3 mm RoHS Compliant / Pb-free
LX5540LL	

Note: Available in Tape & Reel.
Append the letters "TR" to the part number.
(i.e. LX5540LL-TR)

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INFORMATION

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The full data sheet for this device contains proprietary information.

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