Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

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LX5530

InGaP HBT 4.5 – 6.0GHz Power Amplifier

PRODUCTION DATA SHEET

DESCRIPTION

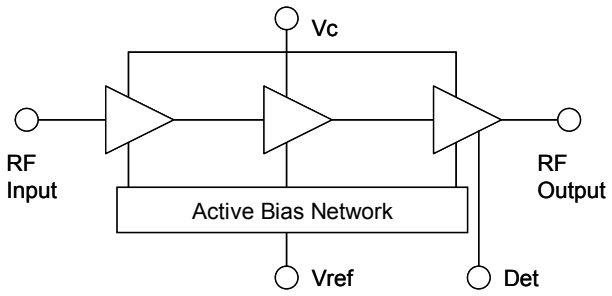
The LX5530 is a power amplifier optimized for the FCC Unlicensed National Information Infrastructure (U-NII) band, HyperLAN2 and Japan WLAN applications in the 4.9 – 5.9 GHz frequency range. The PA is implemented as a three-stage monolithic microwave integrated circuit (MMIC) with active bias, on-chip input matching and output pre-matching. The device is manufactured with an InGaP/GaAs Heterojunction Bipolar Transistor (HBT) IC process (MOCVD). It operates with a single positive voltage supply of 3 – 5V, with high power gain of up to 33dB. When operated at 5V supply voltage, it provides up to +25dBm linear output power for 802.11a OFDM spectrum mask compliance, and low EVM of 3% for up to +23dBm output power in the 4.9-5.9GHz band.

The LX5530 also features an on-chip power detector at the output port of the PA to help reduce BOM cost and PCB space for implementation of power control in a typical wireless system. The power detector is integrated with a temperature-compensated bias network and provides very stable response across a wide range of output power levels, over temperature extremes from -40 to +85°C.

The LX5530 is available in a 16-pin 3mmx3mm micro-lead package (MLP). The compact footprint, low profile, and excellent thermal capability makes the LX5530 an ideal solution for broadband, high-gain power amplifier requirements for IEEE 802.11a, and Hiperlan2 portable WLAN, as well as the emerging 802.16 WiMAX applications.

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

BLOCK DIAGRAM



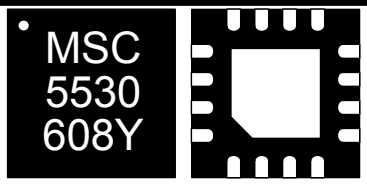
KEY FEATURES

- Broadband 4.9 – 5.9GHz Operation
- Advanced InGaP HBT
- Single-Polarity 3 – 5V Supply
- Power Gain up to ~ 33dB for V_C=5V, Icq = 250mA
- Power Gain > ~28dB across 4.9-5.85GHz
- OFDM Mask Compliance Power Pout ~ +25dBm over 4.9-5.85GHz (ACPR ~ -50dBc @ ±30MHz Offset)
- Pout up to +23dBm with EVM ~3% (V_C = 5V)
- EVM < ~2.5% for Pout=+21dBm across 4.9-5.85GHz (V_C = 5V)
- EVM < ~2.5% for Pout=+19dBm across 4.9-5.85GHz (V_C = 4V)
- Total Current ~250mA for Pout = +20dBm, Duty Cycle = 99% (V_C= 4V)
- Complete On-Chip Input Match
- Simple Output Match for Optimal Broadband EVM
- On-Chip RF Decoupling
- Temperature-Compensated On-Chip Output Power Detector with Wide Dynamic Range
- Small Footprint: 3x3mm
- Low Profile: 0.9mm

APPLICATIONS

- FCC U-NII Wireless
- IEEE 802.11a
- HiperLAN2
- 5GHz Cordless Phone
- IEEE 802.16 WiMAX

3X3MM MLP PACKAGE



PACKAGE ORDER INFO

LQ	Plastic MLPQ 16 pin RoHS Compliant / Pb-free
LX5530LQ	

Note: Available in Tape & Reel. Append the letters "TR" to the part number. (i.e. LX5530LQ-TR)

Microsemi
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Microsemi

INFORMATION

Thank you for your interest in Microsemi® IPG products.

The full data sheet for this device contains proprietary information.

To obtain a copy, please contact your local Microsemi sales representative. The name of your local representative can be obtained at the following link
http://www.microsemi.com/contact/contactfind.asp

or

Contact us directly by sending an email to:
IPGdatasheets@microsemi.com
Be sure to specify the data sheet you are requesting and include your company name and contact information and or vcard.

We look forward to hearing from you.

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