LX5531LQ

Product Status
In Production

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Overview | Diagrams

Description

The LX5531 is a power amplifier optimized for 802.11ac/a/n applications in the 5.15-5.85GHz frequency range. The LX5531 includes a three-stage PA, active bias, input/output matching, and a harmonic filter. The power amplifier operates with a single positive voltage supply of 5V, and provides power gain of 32dB and output powers of 23 and 25dBm at 5V across the frequency band for -35 and -30dB dynamic EVM (DEVM), respectively. It is fully matched to 50 Ohms on both the input and output ports. The 2nd and 3rd harmonics are below -45dBm/MHz over the frequency band due to an integrated harmonic filter. The LX5531 also features an on-chip power detector to help reduce BOM cost and PCB space for implementation of power control in a typical wireless system. The LX5531 is available in a 20-pin 4mm x 4mm quad flat no lead package (QFN 4x4-20L). The compact footprint, low profile, and excellent thermal capability make the LX5531 an ideal solution for 802.11ac/a/n applications.

Features

- 5.15-5.85GHz Operation
- Single-Polarity 5V Supply
- Power Gain ~ 32dB
- 23dBm @ -35dB DEVM for 802.11ac
- 25dBm @ -30dB DEVM for 802.11a
- <-45dBm/MHz for 2nd Harmonic at 23 dBm
- <-45dBm/MHz for 3rd Harmonic at 23 dBm
- Complete Input and Output Match
- On-Chip Output Power Detector
- Small Footprint: 4x4mm2
- Low Profile: 0.9mm
- RoHS Compliant & Halogen Free

ROHS, PB Free

Electrical Rating	Symbol	Min	Typ	Max	Unit
5GHz PA Gain (dB)	5 S21		32.00		dB
5GHz PA Output Power @ 1.8% EVM (dBm)	5 P_{out}		23.00		dB
5GHz PA Output Power @ 3% EVM (dBm)	5 P_{out}		25.00		dB
Input Voltage (Vdc)	V_I	3.00		5.50	V
Operating Frequency (GHz)	F_{OP}		5.00		GHz
Source Input Current (A)	I_{SRC}		0.29	0.32	A

This part can be found in the following product categories:

- RF, Microwave & Millimeter Wave ▸ WLAN RFICs ▸ WLAN Power Amplifiers (PA)

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