DX7281

2.4GHz 802.11be High Linear FEM

Key Features

- Frequency Range: 2.4- 2.5GHz
- 5.0V/3.3V Wide Supply Voltage
- Output Power
  - · 20.5dBm @ -45dB HE40 MCS13
  - · 22.0dBm @ -43dB HE40 MCS11
  - · 24.0dBm @ -35dB VHT40 MCS9
  - · 27.5dBm @ HT20 MCS0 Mask
- Current Consumption
  - · 215mA Quiescent Current
  - · 465mA @ 28.0dBm HT20 MCS0
- 31.0dB TX Gain
- 14.0dB RX Gain
- 1.8dB Noise Figure
- Superior gain flatness
- Integrated input and output matching circuit
- Small footprint LGA (3.0 x 3.0 x 0.684mm package)
- MSL (Moisture Sensitivity Level)= 3

Applications

For devices compliant with IEEE802.11b/g/n/ax/be WLAN standards:

- Access Points
- Wireless Routers
- Residential Gateways
- Customer Premise Equipment
- Internet of Things

Product Description

The DX7281 is a Wi-Fi 7 (802.11be) RF front-end module (FEM) optimized for 2.4GHz WLAN systems. It integrates a high-performance 2.4GHz power amplifier (PA), RF coupler, and a low-insertion-loss SPDT switch. The DX7281 provides a comprehensive transmit and receive solution, leveraging its high-efficiency, highly linear PA, low-noise LNA, and low-loss SPDT switch to enhance signal quality, extend communication range, and improve energy efficiency for WLAN devices.

The DX7281 also integrates an RF power detector with voltage output, enabling precise RF power monitoring and calibration.

Functional Block Diagram