DX7681

6GHz 802.11be High Linear FEM

Key Features

- Frequency Range: 5.945-7.125GHz
- 5.0V/3.3V Wide Supply Voltage
- Output Power
  - 18.0dBm @ -41dB EHT320 MCS13
  - 20.0dBm @ -40dB EHT160 MCS11
  - 22.5dBm @ -35dB VHT80 MCS9
  - 27.0dBm @ HT20 MCS0 Mask
- Current Consumption
  - 235mA Quiescent Current
  - 445mA @ 26dBm HT20 MCS0
- 31.0dB TX Gain
- 14.0dB RX Gain
- 2.0dB Noise Figure
- Superior gain flatness
- Integrated input and output matching circuit
- Small footprint LGA (3.0*3.0*0.684mm package)
- MSL (Moisture Sensitivity Level)= 3

Applications

For devices compliant with IEEE802.11a/n/ac/ax/be WLAN standards:

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

Product Description

The DX7581 is a Wi-Fi 7 (802.11be) RF front-end module (FEM) optimized for 5.9–7.2GHz WLAN systems. It integrates a high-performance power amplifier (PA), RF coupler, low-noise amplifier (LNA), and low-insertion-loss SPDT switch.

The DX7681 provides a comprehensive transmit and receive solution, leveraging its high-efficiency, highly linear PA and low-noise LNA, and low-loss SPDT switch to enhance signal quality, extend communication range, and improve energy efficiency for WLAN devices.

Additionally, the DX7681 integrates an RF power detector with voltage output for accurate RF power monitoring and calibration.

Functional Block Diagram