Low-Power Linear Power Amplifier Chip

AAS3109

Product Specification

V1.0

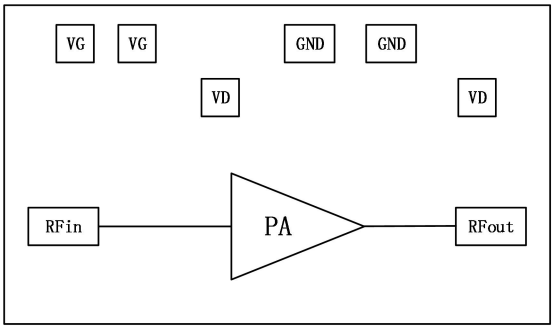
1. 产品特性

Operating Frequency: 17.5~21.5 GHzOutput **1dB Compression Point:** 23.8 dBmOutput 5dB **Compression Point:** 24.9 dBmPower Added **Efficiency (PAE):** 21.2% @ Pout = 19 **dBmDynamic Drain Current:** 173 mA @ **P5dBOperating Current:** 74.0 mA @ Pout = 19 **dBmPower Gain:** 17.3 dB @ Pout = 19 **dBmIMD3:** -27 dBc @ Pout = 16 dBm/tone, Δf = 10 MHzIMD3: -27 dBc @ Pout = 16 dBm/tone, Δf = 400 **MHzInput Return Loss:** 10 **dBSmall-Signal Gain:** 17.9 dB (Typical) @ VD = 5V, IDQ = 27mA, VG = -5VChip **Dimensions:** 1.80mm × 1.16mm × 0.05mm

2. 功能概述

he AAS3109 is a GaAs low-power linear power amplifier chip operating from 17.5 GHz to 21.5 GHz. Tested under continuous wave (CW) conditions at a supply voltage of +5V, it provides a power gain of 17.3 dB with IMD3 performance of -27 dBc at an output power of 16 dBm per tone. The chip features a 50 Ω port impedance and adopts backside metal grounding.

3. Block Diagram



4. Typical Applications

Applicable to communication, radar, electronic countermeasure (ECM) and other related fields.