



ARQSP1819-4

PRODUCT SUMMARY



1.8 – 1.9 GHz 4 W HIGH-EFFICIENCY POWER AMPLIFIER

ARQSP1819-4 is a high-efficiency DPD-friendly Power Amplifier fabricated for 5G NR FR1 bands n3 and n39 Wireless Infrastructure. This Power Amplifier is fully matched at input and output. It is realized in GaAs technology and overmolded in a compact 16-pin 5 × 5 mm² LGA package.

This amplifier is part of iCana's high-efficiency 4 W PA RF product line designed for Wireless Infrastructure supporting major 3GPP bands.

Key Features

- Frequency range: 1805 – 1920 MHz
- 50 Ω matched input and output
- High efficiency: PAE = 30% @ P_{OUT} = 28 dBm
- High linearity: ACLR < -50 dBc @ P_{OUT} = 28 dBm with digital pre-distortion (5G signal, BW = 4×20 MHz)
- High output power: P_{SAT} = 36 dBm
- High power gain: 39.5 dB
- Single supply voltage: V_{CC} = 5.0 V
- Pin-to-pin compatible PA family for 3GPP 5G NR FR1
- Compact package size: 5.0 × 5.0 × 1.1 mm³

Typical Applications

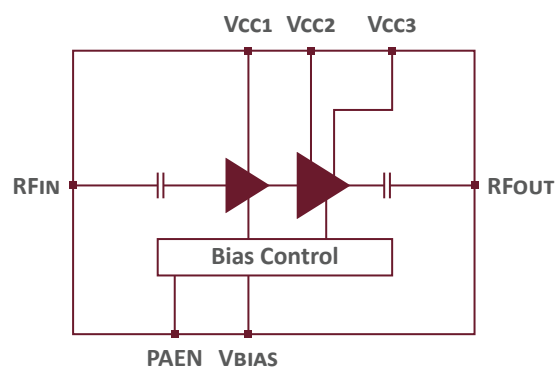
- 3GPP 5G NR FR1 bands n3 and n39
- 3GPP 4G LTE bands 3, 35, and 39
- FDD and TDD systems
- Small cells for wireless communications infrastructure
- Repeaters / DAS
- General purpose wireless

Ordering Guide

Part Name	Description
ARQSP1819-4	1.8 – 1.9 GHz 4 W High-Efficiency Power Amplifier
ARQSP1819-4-EVB	Evaluation Board for ARQSP1819-4



16 Pad 5 × 5 mm² LGA Package



Functional Block Diagram

5G NR FR1 4 W PA Product Line

Product Name	Frequency Range (GHz)	5G Bands
ARQSP1819-4	1.8 – 1.9	n3, n39
ARQSP2122-4	2.1 – 2.2	n1
ARQSP2324-4	2.3 – 2.4	n30, n40
ARQSP2527-4	2.5 – 2.7	n7, n38, n41
ARQSP3336-4	3.3 – 3.6	n77, n78
ARQSP3437-4	3.4 – 3.7	n48, n77, n78
ARQSP3742-4	3.7 – 4.2	n77
ARQSP4450-4	4.4 – 5.0	n79

REV 1.0

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