



ARQSP2527-4

PRODUCT SUMMARY



2.5 – 2.7 GHz 4 W HIGH-EFFICIENCY POWER AMPLIFIER

ARQSP2527-4 is a high-efficiency DPD-friendly Power Amplifier fabricated for 5G NR FR1 bands n7, n38, and n41 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: 2496 – 2690 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 = 100 MHz)
- High output power: P_{SAT} = 36 dBm
- High power gain: 37 dB
- Input and output return loss: > 12 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

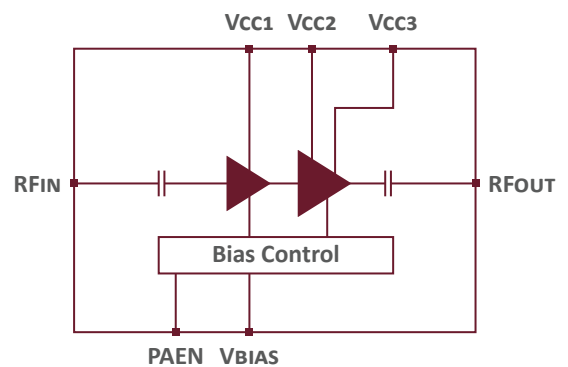
- 3GPP 5G NR FR1 bands n7, n38, and n41
- 3GPP 4G LTE bands 7, 38, 41, and 69
- FDD and TDD systems
- Small cells for wireless communications infrastructure
- Repeaters / DAS
- General purpose wireless

Ordering Guide

| Part Name | Description |
|-----------------|---|
| ARQSP2527-4 | 2.5 – 2.7 GHz 4 W High-Efficiency Power Amplifier |
| ARQSP2527-4-EVB | Evaluation Board for ARQSP2527-4 |



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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