



ARQSP3742-4

PRODUCT SUMMARY



16 Pad 5 × 5 mm² LGA Package

3.7 – 4.2 GHz 4 W

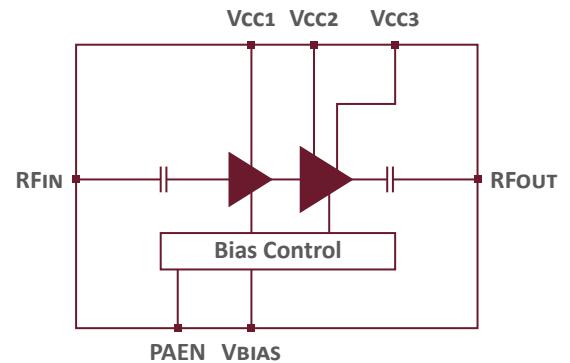
HIGH-EFFICIENCY POWER AMPLIFIER

ARQSP3742-4 is a wide-operational-bandwidth, high-efficiency, DPD-friendly, robust power amplifier designed for 5G NR FR1 band n77. 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 pin-to-pin compatible high-efficiency 4 W PA product family designed for wireless infrastructure supporting major 3GPP bands.

Key Features

- Wide-operational frequency range: 3700 – 4200 MHz
- High efficiency: PAE = 20.5% at POUT = 28 dBm
- High linearity: ACLR < -50 dBc at POUT = 28 dBm with digital pre-distortion (5G signal, BW = 100 MHz)
- High output power: PSAT = 35.6 dBm
- High power gain: 37 dB
- Input return loss: > 15 dB
- Output return loss: > 10 dB
- 50 Ω matched input and output
- Single supply voltage: Vcc = 5.0 V
- Output VSWR = 10:1
- 5.0 × 5.0 mm² pin-to-pin compatible PA family



Functional Block Diagram

Typical Applications

- FDD and TDD systems
- Small cells for wireless communications infrastructure
- Repeaters / DAS
- General purpose wireless

Ordering Guide

Part Name	Description
ARQSP3742-4	3.7 – 4.2 GHz 4 W High-Efficiency Power Amplifier
ARQSP3742-4-EVB	Evaluation Board for ARQSP3742-4

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, n90
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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