ICASD4450-S2D

PRODUCT SUMMARY

4.4 – 5.0 GHz SINGLE-ENDED TO DIFFERENTIAL GAIN AMPLIFIER

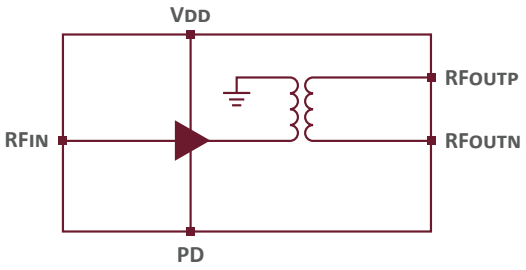
ICASD4450-S2D is a single-ended input, differential output, high-gain RF Amplifier designed for Wireless Infrastructure supporting all 3GPP 5G NR FR1 bands from 4.4 to 5.0 GHz. Based on GaAs technology, the amplifier excels in both low noise figure and high linearity, allowing the device to be used in both receiver and transmitter applications. The device is overmolded in a 2 x 2 mm² LGA package, with 50 Ω input and 100 Ω output impedances.

This amplifier is part of iCana's differential gain amplifier product line designed for wireless infrastructure supporting major 3GPP bands.

12 Pad 2 x 2 mm² SMT Package

Key Features

- Frequency range: 4.4 – 5.0 GHz
- High and flat gain: S21 = 18 dB ± 0.2 dB
- Low noise figure: NF = 2 dB
- Good linearity: OIP3 = 27 dBm
- High power: OP1dB = 15.8 dBm
- Excellent return loss: S11 > 12 dB, S22 > 16 dB
- Single operation voltage ranging from 3.3 V to 5 V
- Low drain current: IDD = 53 mA
- Power down mode: IDD = 1 mA
- Impedance: 50 Ω single ended input, 100 Ω differential output
- No need for external choke inductor
- Package size: 2.0 x 2.0 x 0.75 mm³



Functional Block Diagram

Typical Applications

- 3GPP 5G NR FR1 band n79
- Massive MIMO
- Wireless communications infrastructure

Ordering Guide

Part Name	Description
ICASD4450-S2D	4.4 – 5.0 GHz Single-Ended to Differential Gain Amplifier
ICASD4450-S2D-EVB	Evaluation Board for ICASD4450-S2D

5G NR FR1 SE2D Product Line

Product Name	Description
ICASD1721-S2D	1.7 – 2.1 GHz
ICASD2328-S2D	2.3 – 2.8 GHz
ICASD3338-S2D	3.3 – 3.8 GHz
ICASD4450-S2D	4.4 – 5.0 GHz

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