

Product Overview

The QPA9822 is a wideband, high gain and high linearity driver amplifier. It provides 38dB gain at 3.6GHz and achieves a P3dB of 29dBm. The amplifier is designed to handle wideband 5G NR instantaneous signal bandwidths, making it perfectly suited for m-MIMO applications.

The QPA9822 is internally match to 50Ω over the entire operating frequency band of 3.3 – 4.2 GHz and incorporates a fast enable/disable function through the V_{EN} pin. QPA9822 also has external bias control capability for linearity optimization.

The QPA9822 is housed in a 16-pin 3X3mm SMT package and is footprint and pin-compatible to QPA9120, QPA9121 and QPA9122M.

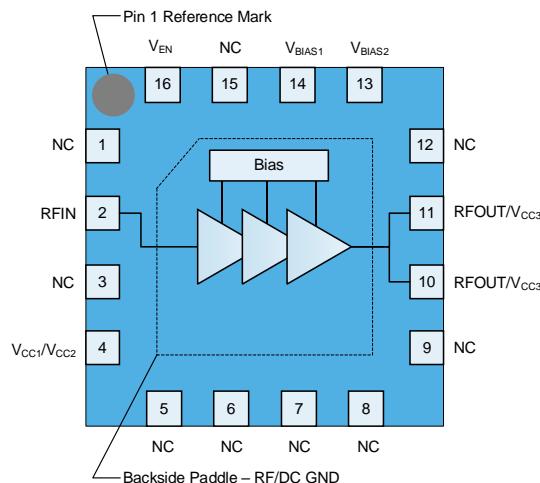


16 Pad 3 x 3 mm QFN Package

Key Features

- 3.3 – 4.2 GHz Operational Frequency
- 50Ω Matched RF Input and Output
- +29 dBm P3dB
- 38 dB Gain at 3.6 GHz
- ACP -43dBc with 1C100MHz at Pout = 16dBm
- +5 V Single Supply, I_{CQ} adjustable
- Fast Enable/Disable for TDD Operation
- DC Power Shutdown Feature

Functional Block Diagram



Top View

Applications

- 5G m-MIMO
- Mobile Infrastructure
- General Purpose Wireless
- TDD / FDD System

Ordering Information

Part No.	Description
QPA9822TR7	2,500 pieces on a 7" reel (standard)
QPA9822EVB01	Evaluation Board

Handling Precautions

Parameter	Rating	Standard
ESD – Human Body Model (HBM)	1C	ESDA / JEDEC JS-001-2017
ESD – Charged Device Model (CDM)	C3	JEDEC JESD22-C101F
MSL – Moisture Sensitivity Level	MSL3	IPC/JEDEC J-STD-020



Caution!
ESD-Sensitive Device

Solderability

Compatible with both lead-free (260°C max. reflow temperature) and tin/lead (245°C max. reflow temperature) soldering processes.
Solder profiles available upon request.

Contact plating: ENEPIG

RoHS Compliance

This part is compliant with 2011/65/EU RoHS directive (Restrictions on the Use of Certain Hazardous Substances in Electrical and Electronic Equipment) as amended by Directive 2015/863/EU.

This product also has the following attributes:

- Lead Free
- Halogen Free (Chlorine, Bromine)
- Antimony Free
- TBBP-A ($C_{15}H_{12}Br_4O_2$) Free
- PFOS Free
- SVHC Free

Contact Information

For the latest specifications, additional product information, worldwide sales and distribution locations:

Web: www.qorvo.com

Tel: 1-844-890-8163

Email: customer.support@qorvo.com

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