The full Datasheet for this device requires an NDA.

QPA4971D

DC – 50 GHz Wideband Amplifier

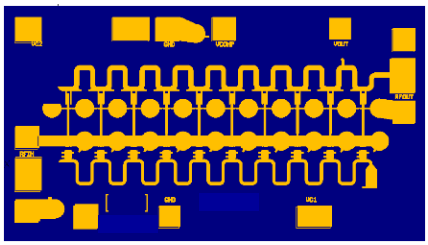
General Description

The Qorvo QPA4971D is a wideband MMIC which can be utilized as a Gain Block Driver or Low Noise Amplifier. Drain bias may be applied through the output port for best efficiency or through the on-chip drain termination. RF ports are DC coupled enabling the user to customize system corner frequencies. The QPA4971D requires off-chip decoupling and blocking components.

The QPA4971D is an excellent choice for wideband communications systems and test equipment.

Bond pad and backside metallization is gold plated for compatibility with eutectic alloy attachment methods as well as the thermocompression and thermosonic wire bonding processes. Each device is 100% DC and RF tested on-wafer to ensure performance compliance. The device is available in die form.

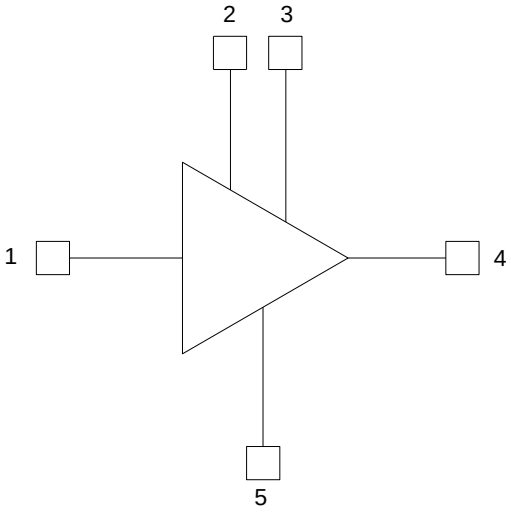
The QPA4971D is RoHS compliant. Evaluation modules are available upon request.



Product Features

- 56Gbaud PAM4 Optical Modulator Driver
- Adjustable Output Amplitude, 1 to 2.2 Vpp
- Gain, 14 dB at DC - 37 GHz
- 3 dB Bandwidth, 50 GHz at RFin & RFout probe pads
- Low DC Power Dissipation, 0.23 W @ 2.0 Vpp at Vd = 3.3 V
- Die Size: 1.8 x 1.0 x 0.1 mm

Functional Block Diagram



Applications

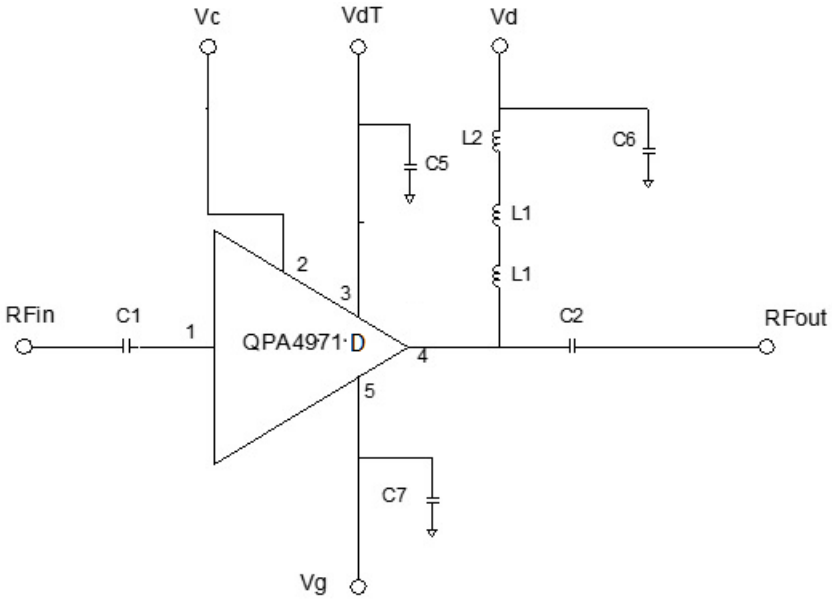
- Test Equipment
- 56 Gbaud PAM4 Driver
- EML Driver
- ECM (Electronic Counter Measures)

Ordering info

Order No.	ECCN	Description
QPA4971D	3A001.b.2.f	DC – 50 GHz Modulator Driver
QPA4971D,EVB	End Use statement Required	Eval Board, QPA4971D

Application Circuit

Recommended Application Circuit



Bill of Material

Ref Des	P/N	Description	Value	Size	Source	Notes
C1 - C2	ATC545L104KT16	Capacitor	100 nF	0201	ATC	Required only if AC coupling desired
C5, C6, C7	0201X105M160SNT	Capacitor	1 uF	0201	Capax	Required
L1	BLM03HG122SN1D	Inductor	3 µH	0402	Murata	Not required if biasing through VdT
L2	CBMF1608T220K	Inductor	22µH	0603	Taiyo Yuden	Not required if biasing through VdT

Note: For C1 and C2, Capax PN: 0201X105M160SNT can be used as alternative.