



# RM022020

## 2 – 20 GHz 20 W Benchtop Power Amplifier

### Product Overview

Qorvo's RM022020 Amplifier utilizes our patented Spatium™ combining technology providing unprecedented performance in a general purpose laboratory bench top amplifier.

Suitable for use as a driver/booster amplifier, enabling more power incident upon the device under test (DUT), this amplifier is an excellent alternative to Traveling Wave Tube Amplifiers (TWTAs). The RM022020 amplifier operates instantaneously across the 2 GHz–20 GHz spectrum achieving saturated output powers (Psat) greater than 20 Watts. Front panel manual gain adjustment enables simple, rapid performance optimization.

Built-In-Test (BIT) monitors continuously evaluate the amplifier performance and provide instant visual indication of anomalous behavior.

Custom configurations and optimized screening conditions are available on request; consult the factory.

### Standard Configuration

- SMA (F) Coaxial Input/Output
- IEC 60320 C14 Compliant AC input
- 2 Meter AC Power Cord with NEMA 5-15P
- Front Panel Gain Adjust
- Air Flow – Side intake – Rear exhaust

### Optional Accessories

- Rack Mount Brackets RMO1.0
- Alternate AC Cord Configurations



### Key Features

- Saturated Power - 20 Watts typical
- Operating Band - 2 GHz to 20 GHz
- Solid State MMIC Reliability
- Multi Element Redundancy
- Instant On (No Warm Up)
- Flat Gain Response
- Excellent Harmonic and Intermodulation Characteristics

### Applications

- Laboratory work
- Test and Measurement
- Load Pull
- EMI Test
- Anechoic Chambers and Test Ranges

### Ordering Information

Part No.	Description
RM022020	2 – 20 GHz 20 W Benchtop Amplifier

## Absolute Maximum Ratings

Parameter	Rating
RF Input	+20 dBm
Load VSWR	3:1
Operating Temperature	-20 to +60 °C
Storage Temperature	-20 to +75 °C

Exceeding any one or a combination of the Absolute Maximum Rating conditions may cause permanent damage to the device. Extended application of Absolute Maximum Rating conditions to the device may reduce device reliability.

## Recommended Operating Conditions

Parameter	Value
AC Input (Rear)	85-264 V <sub>AC</sub> 47-63 Hz 300 VA
Operating Temperature	0 to +50 °C

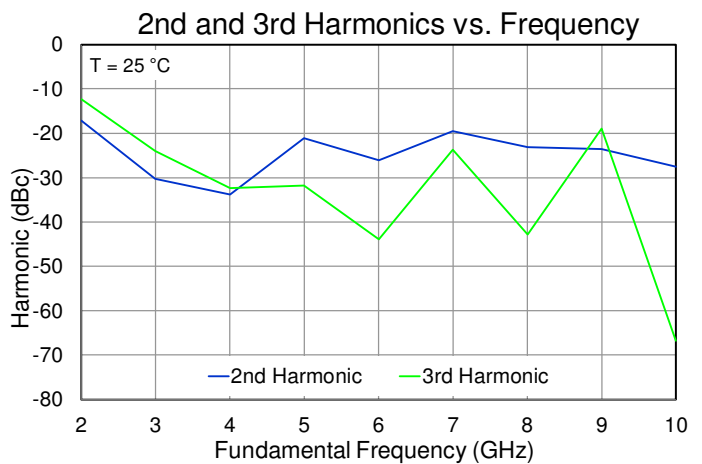
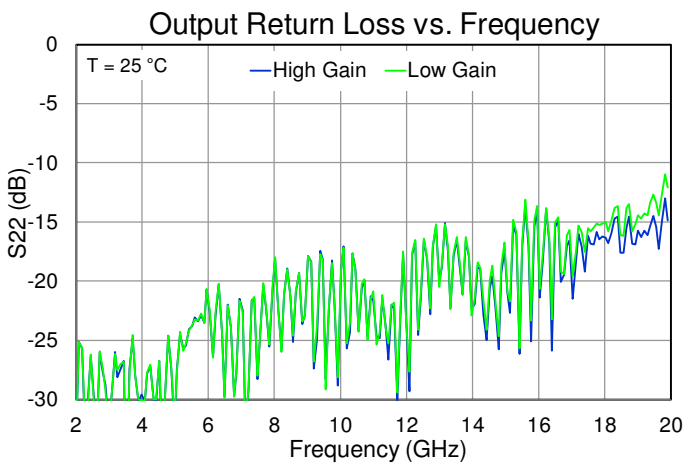
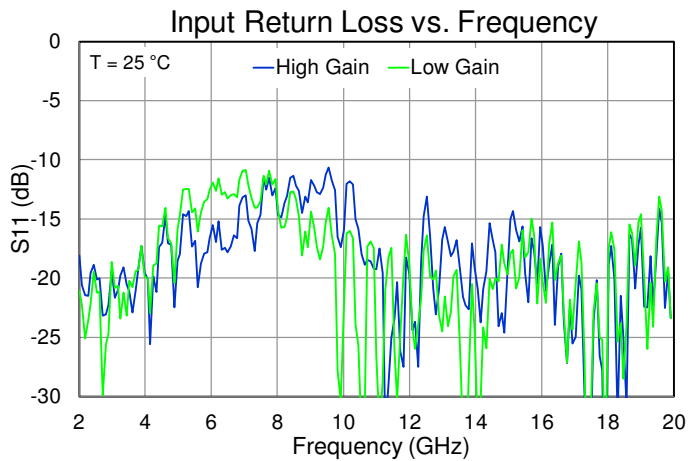
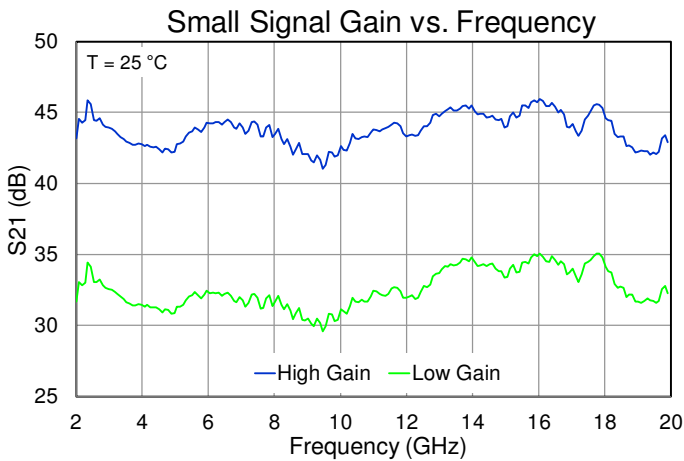
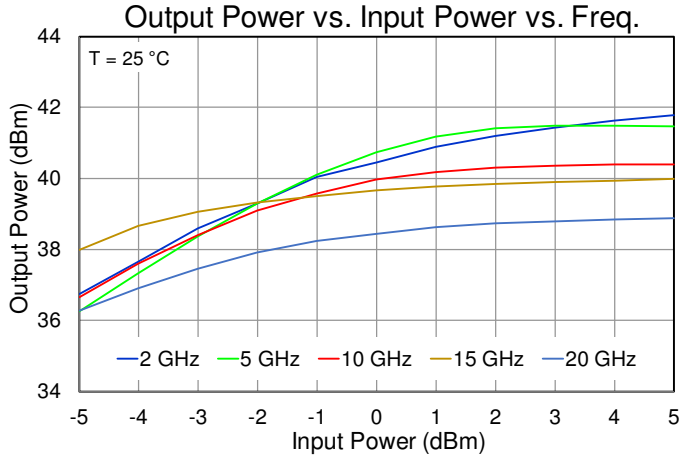
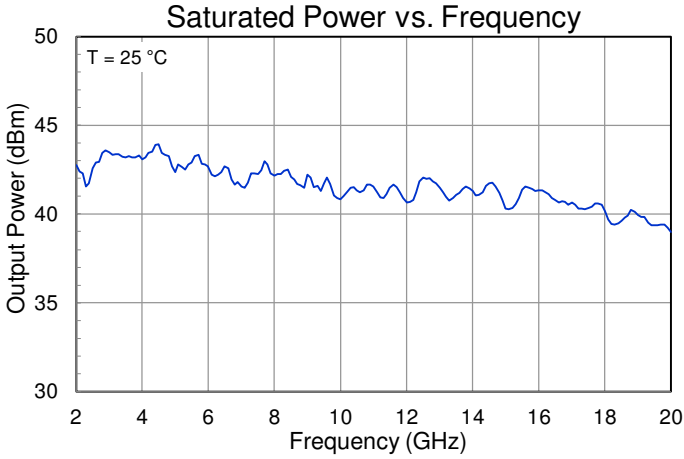
Electrical specifications are measured at specified test conditions. Specifications are not guaranteed over all recommended operating conditions.

## Electrical Specifications

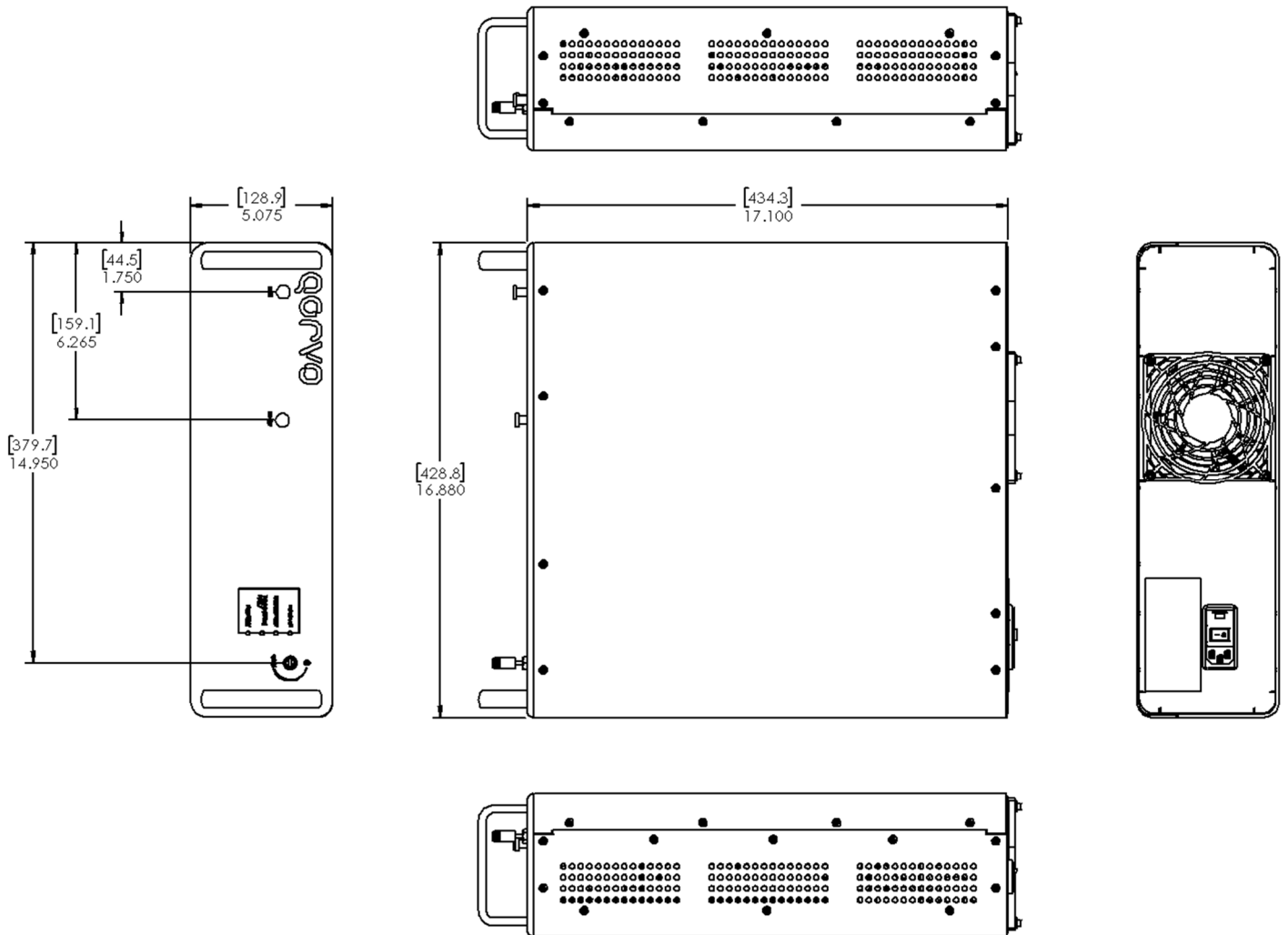
Parameter	Min	Typ	Max	Units
Operational Frequency Range	2		20	GHz
Small Signal Gain	40	43		dB
Gain Adjustment - Manual (Front)	10			dB
Gain Flatness vs. Frequency		± 3		dB
RF Power at 5 dBm input 2 – 10 GHz	40	43		dBm
at 5 dBm input 10 – 18 GHz	39	42		dBm
at 5 dBm input 18 – 20 GHz	38	39		dBm
Input VSWR		1.5:1	2:1	
Output VSWR			2.3:1	
Spurious		-75	-60	dBc
RF I/O (Front)		SMA (F)		
Dimensions (L x W x H)		17.1 x 16.9 x 5.1		inches
		43.4 x 42.9 x 13.0		cm

## Performance Plots

Test conditions unless otherwise noted:



**Package Marking and Dimensions**



## Handling Precautions

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Caution!  
ESD-Sensitive Device

## Contact Information

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

Web: [www.qorvo.com](http://www.qorvo.com)

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Email: [customer.support@qorvo.com](mailto:customer.support@qorvo.com)

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