



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.



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

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

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	+10 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 _{AC} 47-63 Hz 300 VA
Operating Temperature	0 to +50 °C

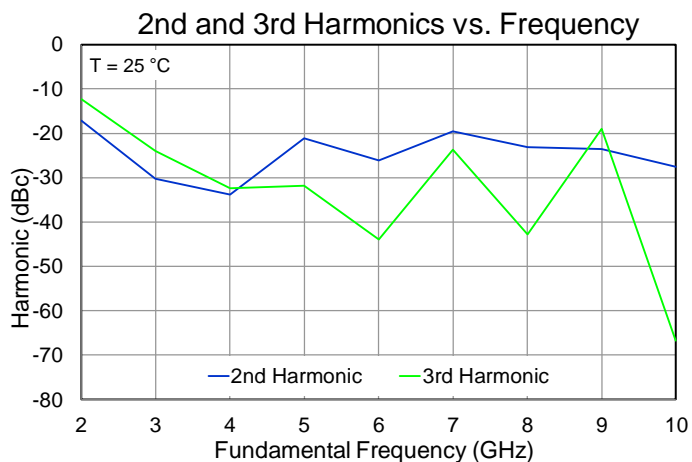
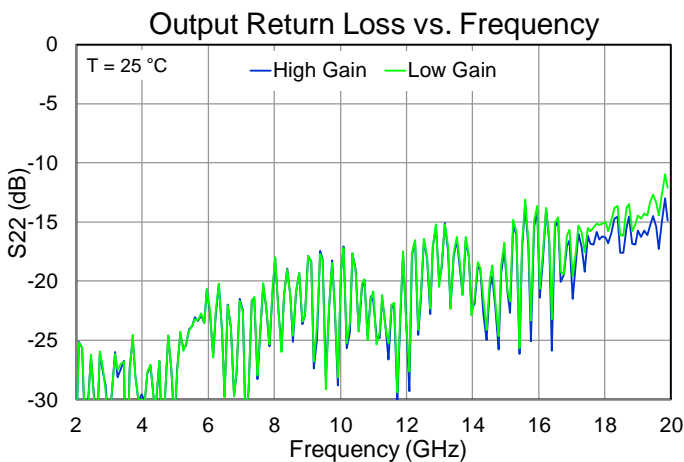
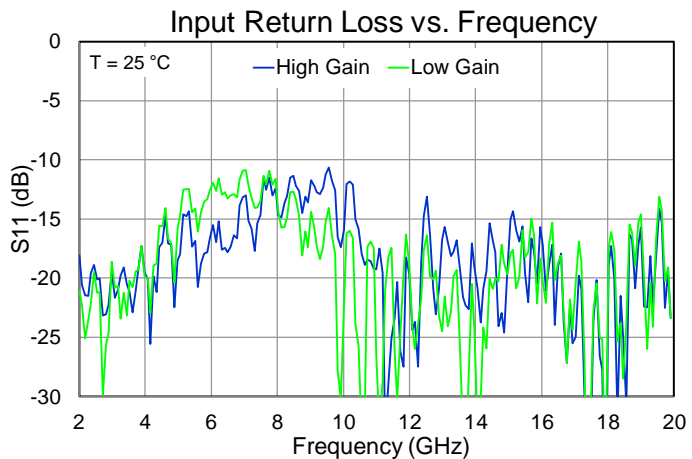
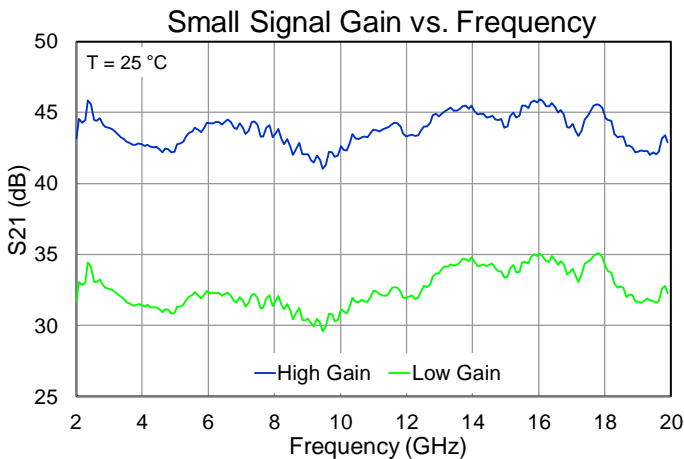
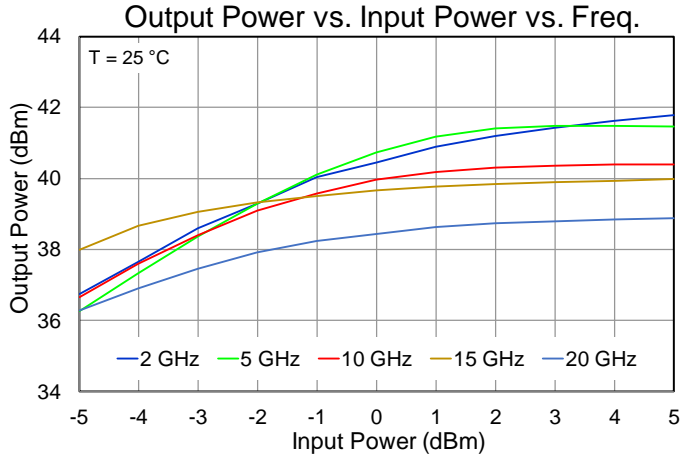
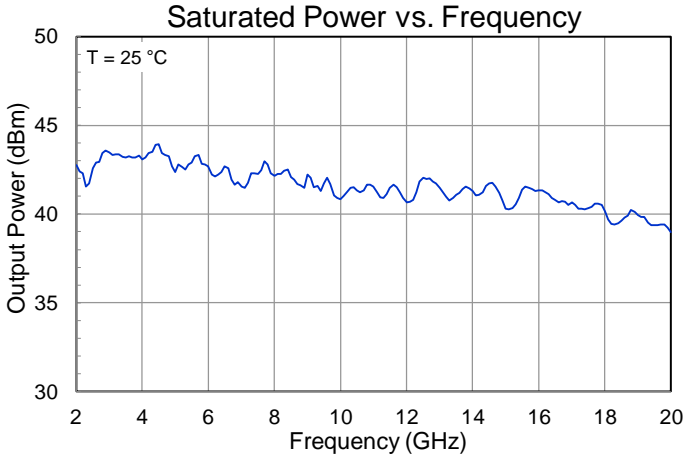
Electrical specifications are measured at specified test conditions. Specifications are not guaranteed over all recommended operating conditions.

Electrical Specifications

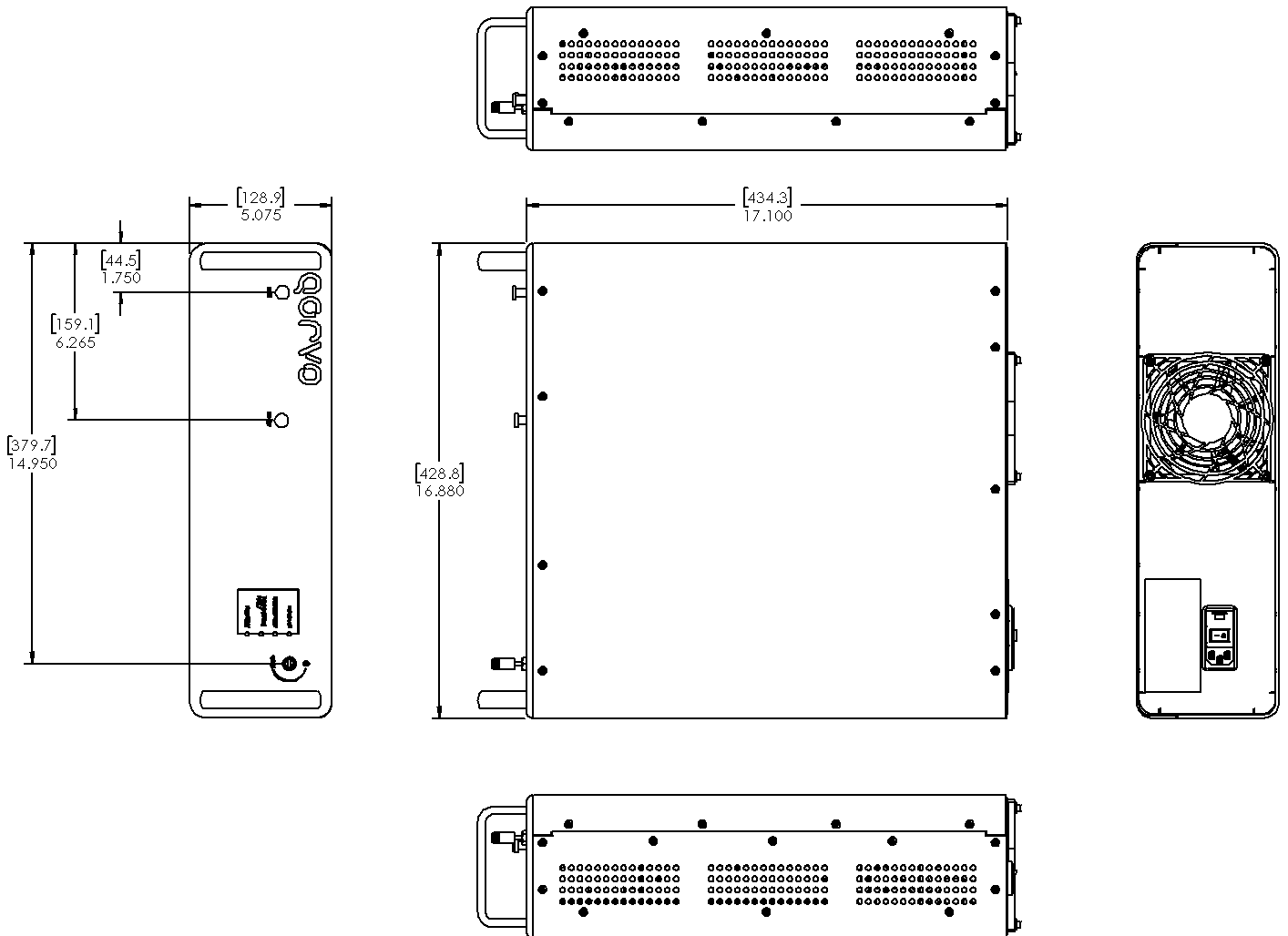
Parameter	Min	Typ	Max	Units
Operational Frequency Range	2		20	GHz
Small Signal Gain	40	43		dB
Gain Adjustment - Manual (Front)	10			dB
Gain Flatness vs. Frequency		± 3		dB
RF Power at 5 dBm input 2 – 10 GHz	40	43		dBm
at 5 dBm input 10 – 18 GHz	39	42		dBm
at 5 dBm input 18 – 20 GHz	38	39		dBm
Input VSWR		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



Caution!
ESD-Sensitive Device

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

Important Notice

The information contained herein is believed to be reliable; however, Qorvo makes no warranties regarding the information contained herein and assumes no responsibility or liability whatsoever for the use of the information contained herein. All information contained herein is subject to change without notice. Customers should obtain and verify the latest relevant information before placing orders for Qorvo products. The information contained herein or any use of such information does not grant, explicitly or implicitly, to any party any patent rights, licenses, or any other intellectual property rights, whether with regard to such information itself or anything described by such information. **THIS INFORMATION DOES NOT CONSTITUTE A WARRANTY WITH RESPECT TO THE PRODUCTS DESCRIBED HEREIN, AND QORVO HEREBY DISCLAIMS ANY AND ALL WARRANTIES WITH RESPECT TO SUCH PRODUCTS WHETHER EXPRESS OR IMPLIED BY LAW, COURSE OF DEALING, COURSE OF PERFORMANCE, USAGE OF TRADE OR OTHERWISE, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.**

Without limiting the generality of the foregoing, Qorvo products are not warranted or authorized for use as critical components in medical, life-saving, or life-sustaining applications, or other applications where a failure would reasonably be expected to cause severe personal injury or death.

© 2020 Qorvo US, Inc. All rights reserved. This document is subject to copyright laws in various jurisdictions worldwide and may not be reproduced or distributed, in whole or in part, without the express written consent of Qorvo US, Inc. | Qorvo is a registered trademark of Qorvo, Inc.

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[Qorvo:](#)

[RM022020](#)