

**10-1200MHz 13dBm  
High Performance LNA**

- ❖ **Class A 13dBm output LNA**
- ❖ **2.4dB typical noise figure**
- ❖ **10-1200MHz ultra-broadband**
- ❖ **33dB typical gain**
- ❖ **+/- 0.5dB typical gain flatness**
- ❖ **50 ohms input/output**
- ❖ **Available with disable function**



Representative photo

The RFM10-1200-0.02 is a Class A high performance LNA module. It was designed specifically for low noise SATCOM and related communication systems that require bandwidth from HF to microwave frequencies, in a single compact package. Its power supply is internally regulated for maximum performance and consistency.

<b>Specifications</b>				
$V_{sup} = +15VDC, I_{DQ} = 85mA, P_{out} = +13dBm, T_{base} = 25^{\circ}C, Z_{load} = 50\Omega$				
Parameter	Min	Typ	Max	Units
Freq. Range	10		1200	MHz
$P_{1dB}$	13	15		dBm
Input Power		-20	-17	dBm
Gain	30	33		dB
Gain Flatness		+/-0.5	+/-1.0	dB
Noise Figure		2.4	3.0	dB
Supply Current		85	90	mA
VSWR (Input)		1.2	1.5	:1
VSWR (Output)		1.2	1.5	:1
$f_2$ (See Figs. 2 & 3)		-29	-24	dBc
$f_3$ (See Figs. 2 & 3)		-44	-35	dBc
Dimensions	2.55 X 1.32 X 0.75 (64.77 X 33.53 X 19.05)			inch (mm)

<b>Maximum Ratings</b>	
Operation beyond these ratings may damage amplifier.	
Parameter	Value
$V_{supply}$	+15VDC, +/-10%
Bias Current	90mA
Supply Current	95mA
Load Mismatch*	5:1
Housing Base Temperature	75°C
Storage Temp.	-40°C to 85°C

\*All phase angles, +13dBm forward power, current limited to 95mA.

<b>Option Ordering Info</b>	
Disable (TTL, active high)	RFM10-1200-0.02-DIS



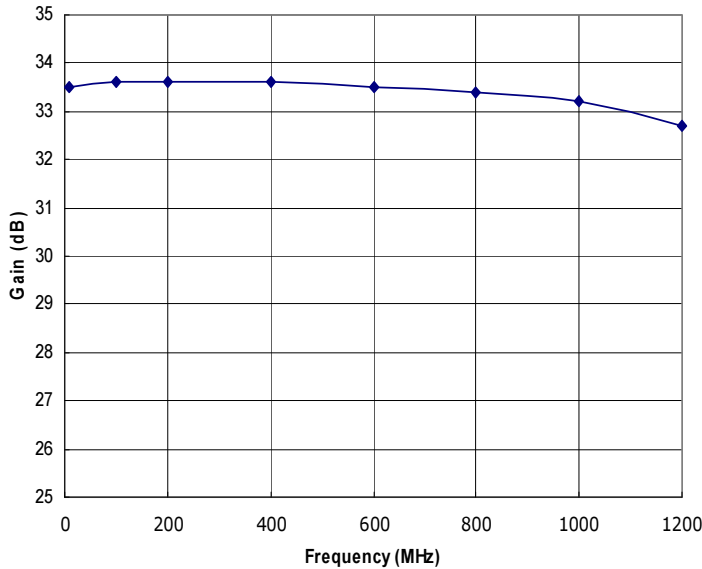
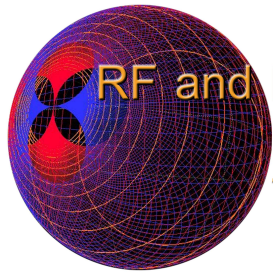


Figure 1: RFM10-1200-0.02 Typical Gain @ P<sub>out</sub> = +13dBm.

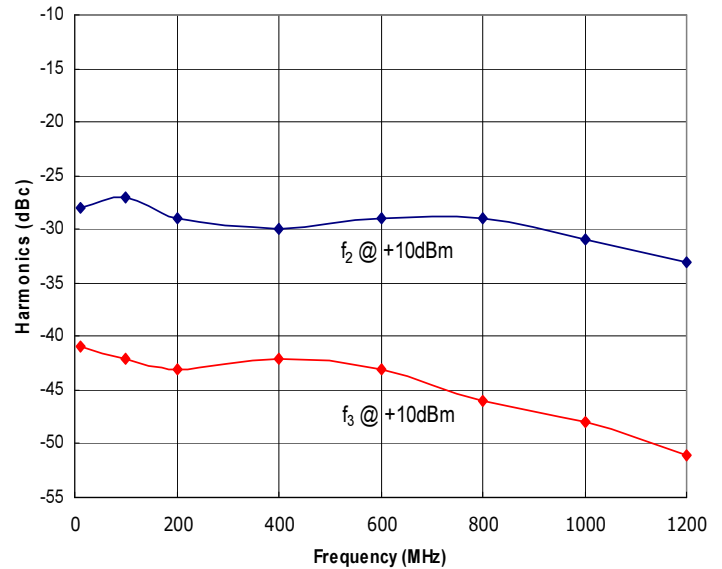


Figure 2: RFM10-1200-0.02 Typical f<sub>2</sub> and f<sub>3</sub> @ P<sub>out</sub> = +10dBm.

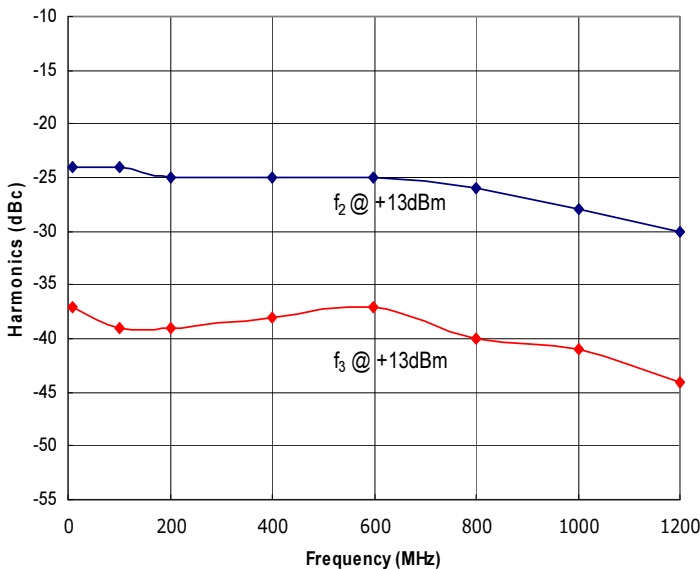


Figure 3: RFM10-1200-0.02 Typical f<sub>2</sub> and f<sub>3</sub> @ P<sub>out</sub> = +13dBm.

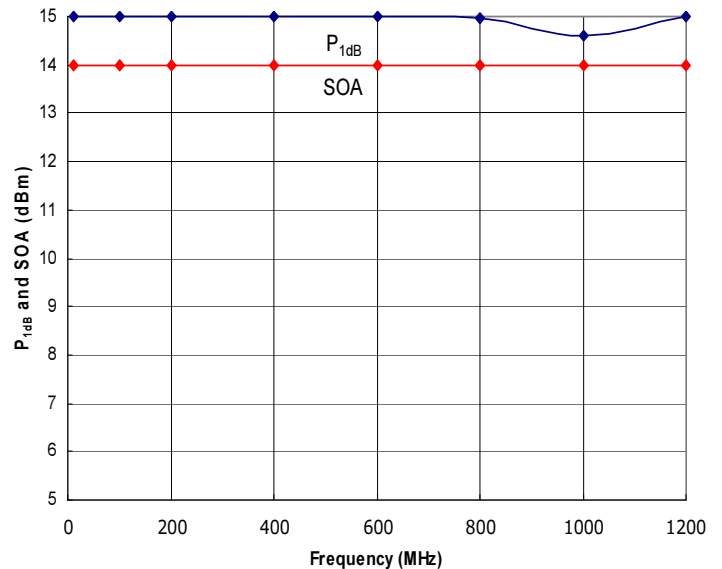
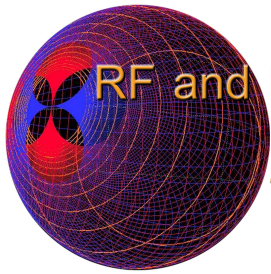
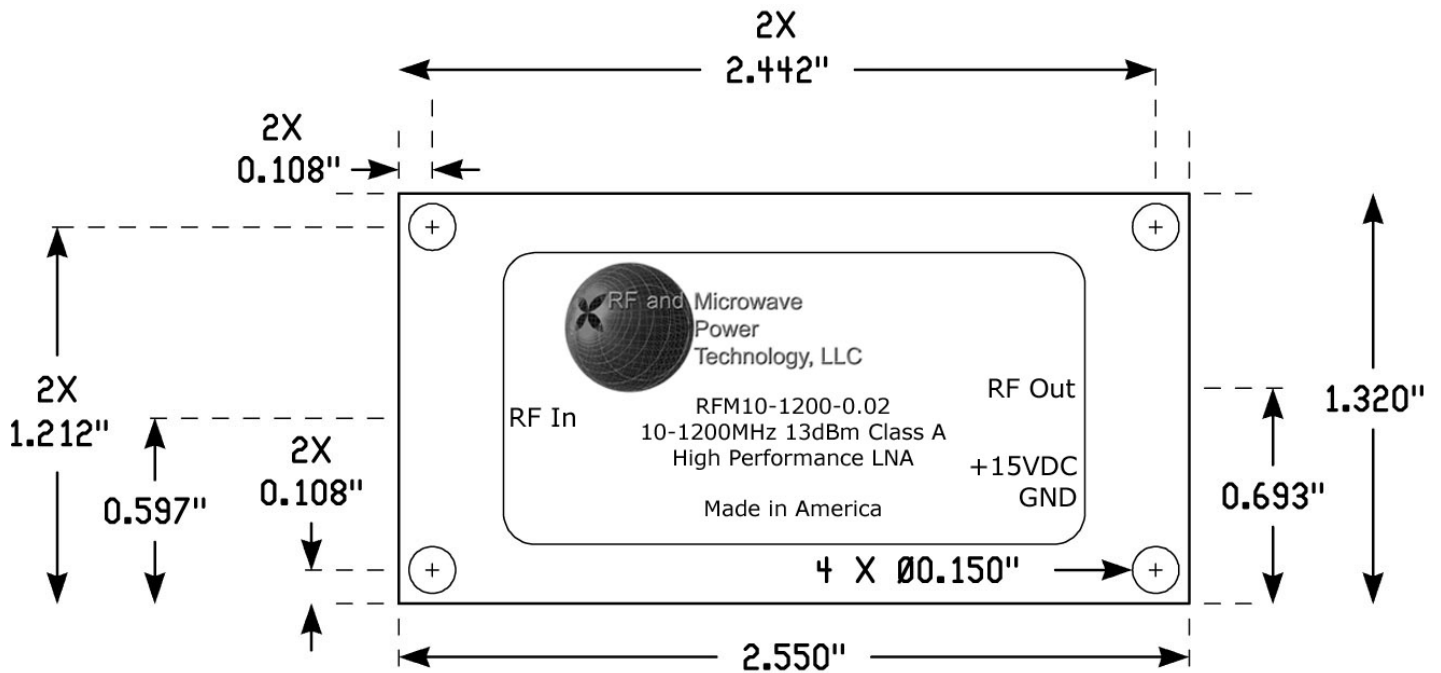


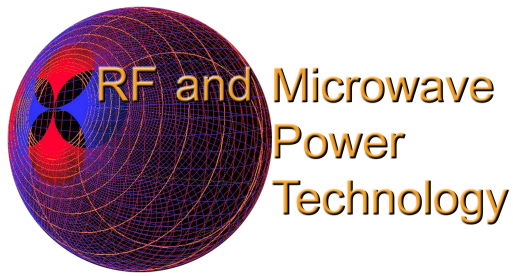
Figure 4: RFM10-1200-0.02 Typical P<sub>1dB</sub> and Safe Operating Area (SOA). Do not exceed the SOA without first contacting RFMPT to discuss your application.





### Amplifier Mounting Hole and RF Locations





**Instructions for Amplifier Use**

- 1) The total power dissipated by the RFM10-1200-0.02 is less than 1.5W. Therefore, formal heatsinking is not required as long as airflow is provided around the amplifier housing. If the use of a heatsink is desired, apply a layer of high quality thermal grease (Wakefield Type 120 or equivalent) to the underside of the amplifier housing. Thinner is better, but ensure that when mounted to your heatsink, contact across the entire housing base is made. Use four #6-32 screws to mount the amplifier to your heatsink.
- 2) Guarantee sufficient airflow through the heatsink fins to keep the maximum housing base temperature at or less than that specified in the Maximum Ratings section. Contact RFMPT for details on how to qualify your heatsink’s performance, if needed.
- 3) Connect a proper signal source to the RF IN connector, and desired load to the RF OUT connector. Torque connectors to industry standards for the type supplied with the amplifier.
- 4) Connect DC  $V_{supply}$  and Ground wires to the terminals provided. Ensure that the connections are of proper polarity, and within the voltage range in the Maximum Ratings section.
- 5) Apply DC power, then sufficient RF drive to achieve desired output level. Ensure that the Safe Operating Area (SOA) power level indicated in Figure 4 is not exceeded, or amplifier damage may occur, and will void the warranty.
- 6) To disconnect the amplifier, first remove the RF drive, then DC power, then the RF connections.

Contact the factory at [sales@rfmpt.com](mailto:sales@rfmpt.com) with any questions, or for special options, testing requirements, and/or operating conditions not specified in this document.

**Document Control**

Revision	Date	Notes
A	7-17-2016	Initial release.

