HS-MX1100GT

1GHz~10GHz @40dB Wideband LNA

HS-MX1100GT V1.1 (January 2026)
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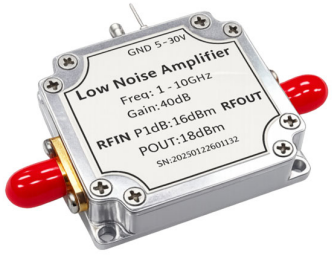
Product Overview

The HS-MX1100GT is a 1GHz to 10GHz ultra-wideband low-noise amplifier featuring a broad frequency range, high gain, and low noise figure. It is suitable for various RF receiving front-ends and finds applications in scientific research, industrial communications, academic studies, and other fields. Additionally, its exceptionally wide bandwidth enables its use in radio management, full-band spectrum reconnaissance testing, and EMC (Electromagnetic Compatibility) receiver testing.

This amplifier is fabricated from CNC-milled aerospace-grade aluminum alloy, featuring high precision and lightweight construction. Its exterior surface undergoes natural conductive oxidation treatment, delivering exceptional conductivity and electromagnetic shielding performance. It effectively blocks internal radiation while isolating external environmental interference. The power supply interface employs an RF through-hole capacitor, which efficiently filters out power supply spikes and other noise components.

1. Main Features

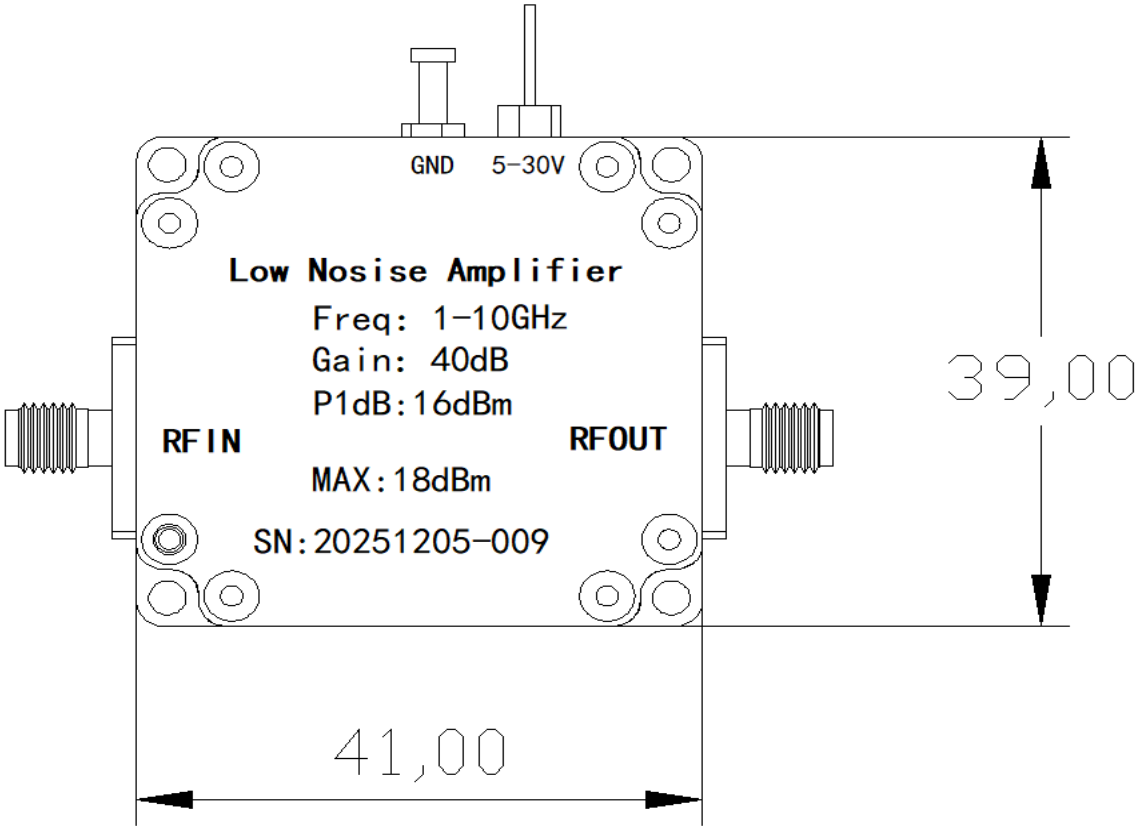
- Frequency Range: 1GHz~10GHz
- Gain: 40dB(Type)
- P1dB: 17dBm
- Noise Figure: 1.0dB(Type)
- Power Supply Voltage: 5V~30V
- Operating Current: 130mA @ 12V (Type)
- RF Connector: SMA-F
- Power Supply Method: 3000pF shunt capacitor



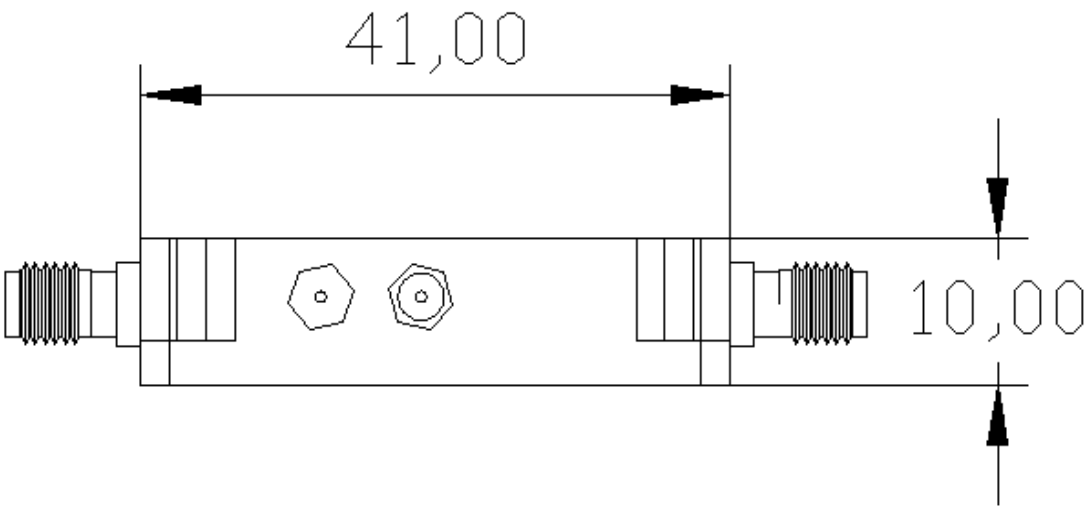
1. Electrical Specifications

Parameters	Min	Typ	Max	Units
Frequency Range	1		10	GHz
Gain	39	40	41	dB
Gain Flatness		±2		dB
Noise Figure	0.8	1.3	2.1\10G	dB
P1dB	16	17	18	dBm
Input Standing Wave Ratio(VSWR)		< 2.0		2:1
Output Standing Wave Ratio(VSWR)		< 2.0		2:1
Characteristic Impedance		50		ohm
Input Power (CW)		-15		dBm
Power Supply Voltage	5	12	30	V
Current Current	0.125	0.13	0.15	A
Operating Temperature	-40	+25	+65	℃
Storage Temperature	-40	+25	+85	℃
Weight				g

2. Dimensions (mm)



Top View



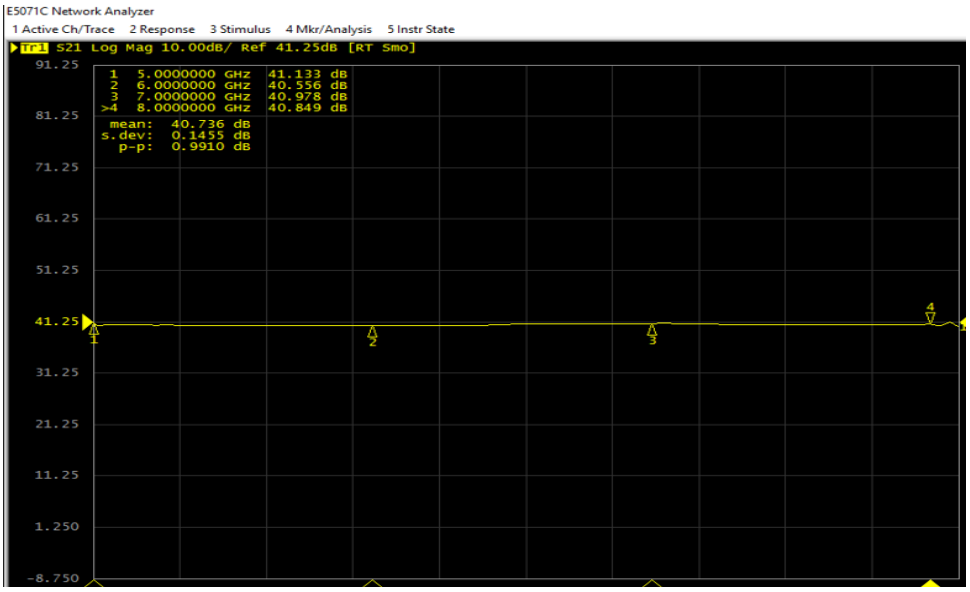
Side View

3. Test Report

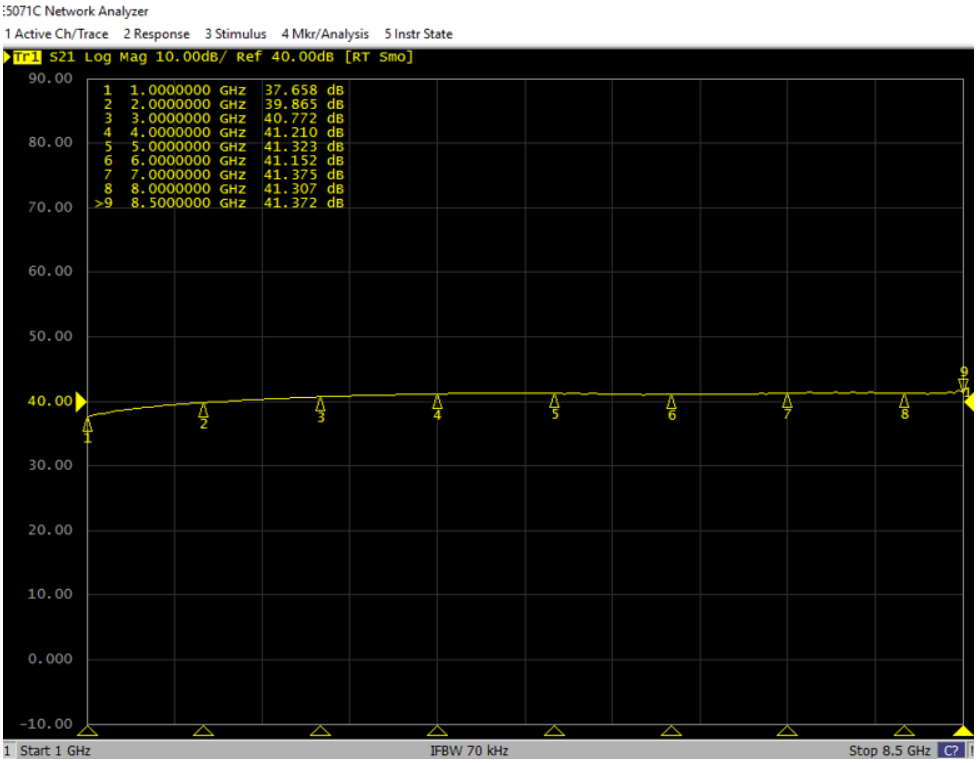
3.1 Test conditions: TA=+25°C, DC=5V~28V,140mA @28V

3.2 Testing instruments: E5071C, Agilent 346A, N5182A, N9020A

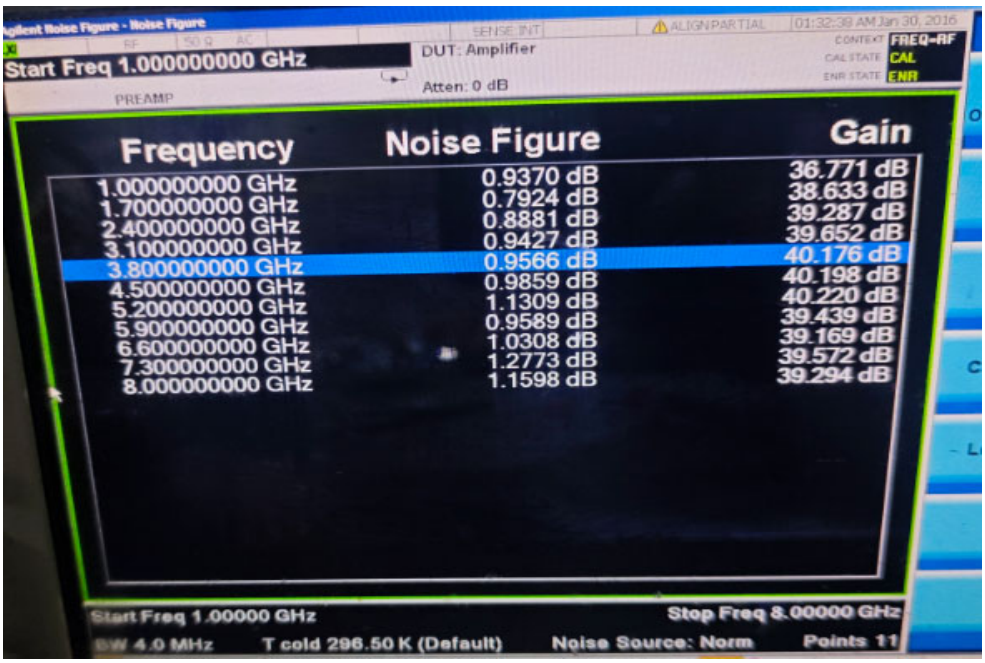
3.3 Test results: Frequency range: 1GHz to 8.5GHz; Gain: 41dB; Noise figure: 1.2dB



5GHz-8GHz Gain Test



Gain Curve Test @1GHz~8.5GHz



Noise Figure Test @1GHz~8GHz

Frequency(MHz)	P1dB(dBm)	Gain (dB)	Noise Figure(dB)
1000	18.5	37.5	0.93
2000	18.4	39.8	0.88
3000	18.3	40.7	0.94
4000	18.4	41.2	0.95
5000	17.5	41.3	1.13
6000	17.5	41.1	0.98
7000	17.3	41.3	1.22
8000	17.3	41.3	1.27
9000	16.8	41.3	1.52
10000	16.2	39.6	2.14

4. RoHS Compliance

The products manufactured by our company do not contain cadmium (Cd), lead (Pb), mercury (Hg), hexavalent chromium, polybrominated biphenyls (PBB), or polybrominated diphenyl ethers (PBDE), and are therefore considered compliant with the RoHS standards.

5. Electrostatic Protection

Although this product is designed to be as robust as possible, static electricity may cause damage to it; therefore, caution should be exercised during operation.

6. Disclaimer

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