BROADBAND LOW NOISE AMPLIFIER
ABL0200-50-5208

Features:

- Broad band operation from 1~2GHz
- High gain, Low noise figure,
- high dynamic range
- Low VSWR, unconditional stable
- SMA female connector RF I/O,
- Single DC power supply required, built-in voltage regulator
- Operating temperature -40~+75°C, storage temperature -55~+85°C

General Description

ABL0200-50-5208 is a four stage enhancement mode pHEMT low noise transistor based broadband low noise amplifier module operating in the frequency from 1.0 to 2.0GHz. The amplifier provides 52dB of typical small signal gain with 0.8 dB maximum noise figure and excellent gain flatness, as well as good VSWR at both input and output. The amplifier requires only a single positive DC power supply. Its built-in DC voltage regulator and reverse polarity protection circuitry allows the amplifier to functional at different DC supply voltages without affecting the RF performances.

Electrical Specifications

Parameters	Units	Specifications		
		Minimum	Typical	Maximum
Frequency Range	MHz	1000		2000
Noise Figure @25°C	dB		0.65	0.80
Small Signal Gain @25°C	dB	49.0	52.0	55.0
Gain flatness	dB		+/-0.5	+/-1.0
Gain Variation	dB		+/-1.0	
P-1dB Compression Point	dBm	+19.0	+20.0	
Output IP3	dBm	+33.0	+37.0	
Input VSWR	-		1.4:1	1.6:1
Output VSWR	-		1.5:1	1.8:1
Spurious	dBc			-70
Operating Temperature	°C	-40.0		+85.0
Survival Temperature	°C	-55.0		+125.0
DC Power Supply Voltage	V	+10.0	+12.0	+15.0
DC Power Supply Current	mA	150.0	180.0	200.0
In/Out connectors	-	50 ohm SMA female		
Size	inches	1.7×0.95×0.375		

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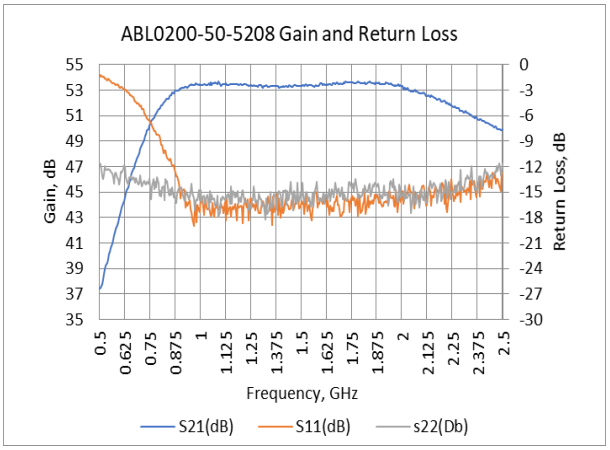
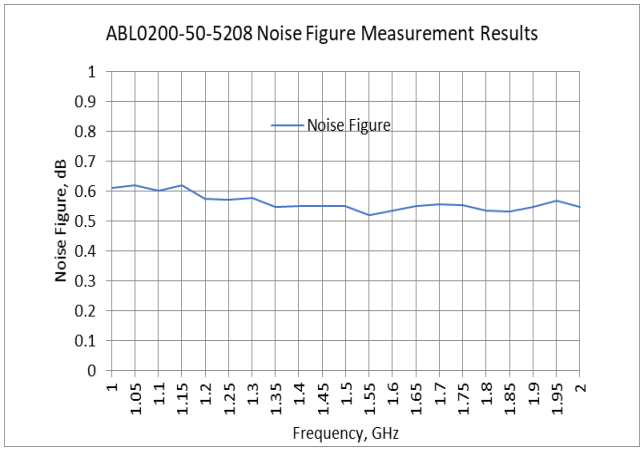
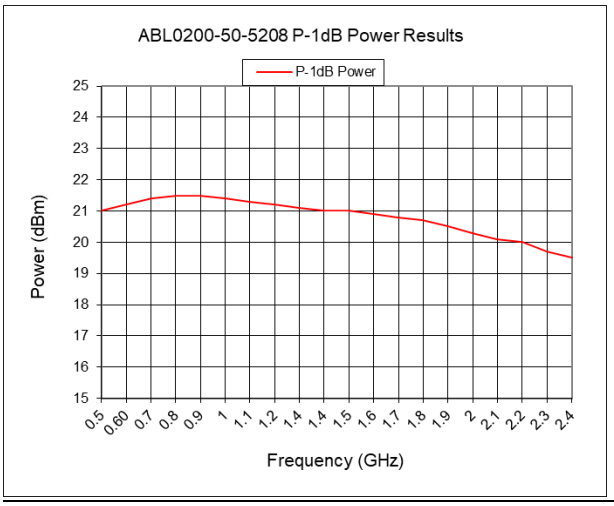
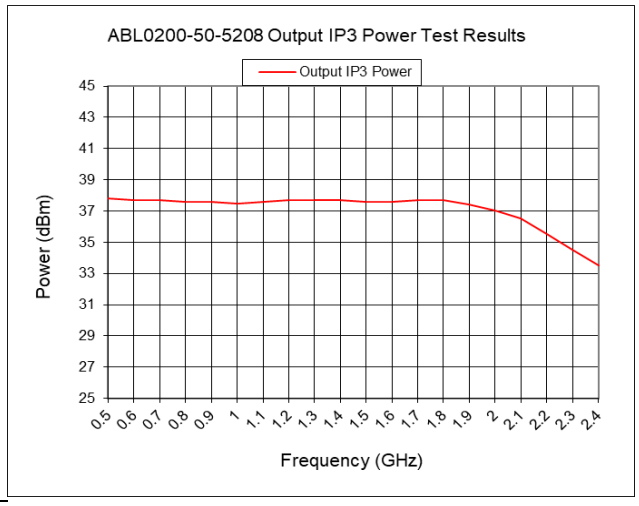
Test Results:

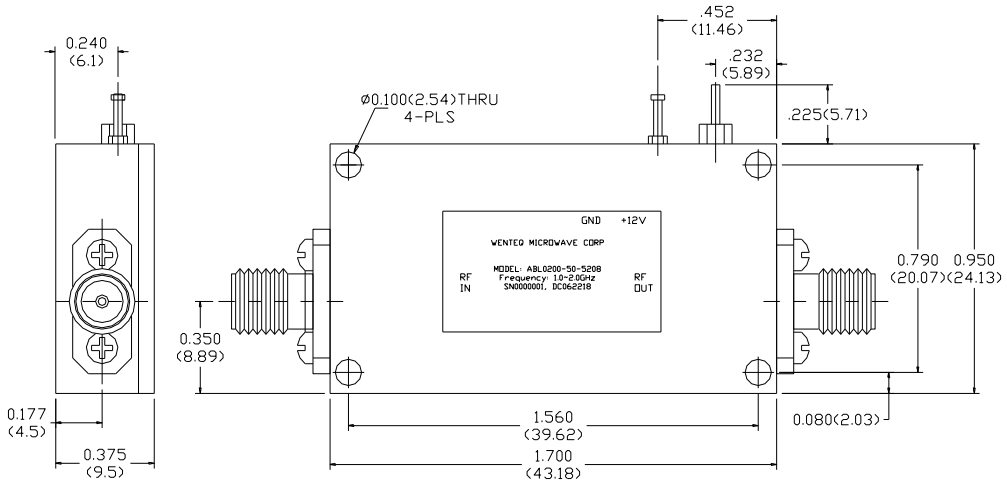








Mechanical Structure:



Note: All units in inches (mm).

Housing Material and Surface Finish:

Body and cover material: aluminum
Surface finish: nickel plated
Connector material: Copper
Connector surface finish: gold plated

Absolute Maximum Ratings

DC Voltage	+17.5V
RF Input Power	+13 dBm
DC Voltage at RF I/O	+25V
Storage Temperature	-55~+125°C
Operating Temperature	-40~+85°C

Revision History:

Revision	Date	Description	Comments
A00	06/21/2019	Initial Release	

Electrostatic sensitive device, please observe precautions for handling this amplifier.