

**Features:**

- 1~2GHz broad band operation with 40dB of gain
- Low noise figure, high dynamic range
- Low VSWR, unconditional stable
- Small size, low cost
- SMA female connector RF I/O, single DC power supply required
- Operating temperature -40~+75°C, storage temperature -55~+85°C

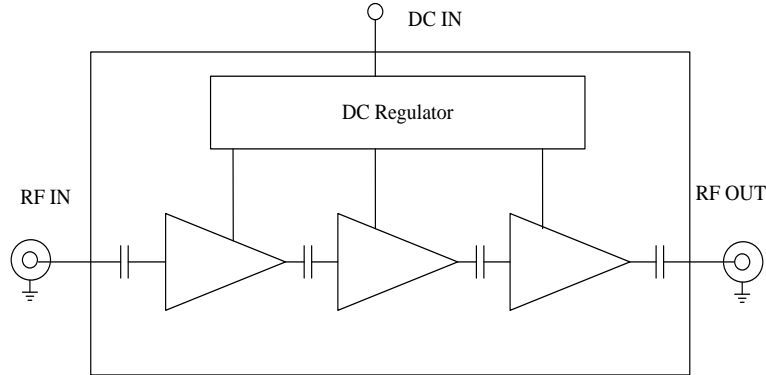
**General Description**

ABL0200-50-4010 is a three 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 40dB of small signal gain with 1.0dB 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 allows the amplifier to functional at different DC supply voltages without affecting the RF performances.

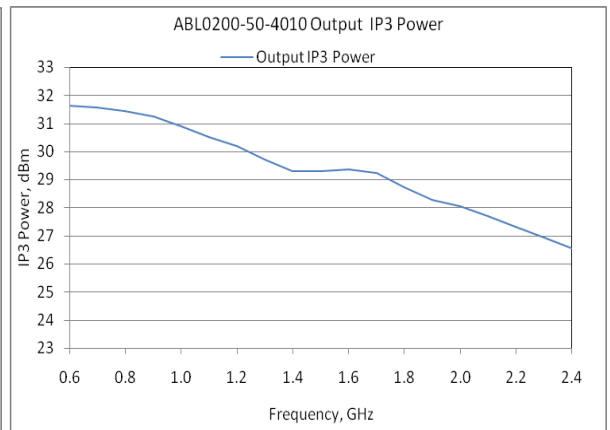
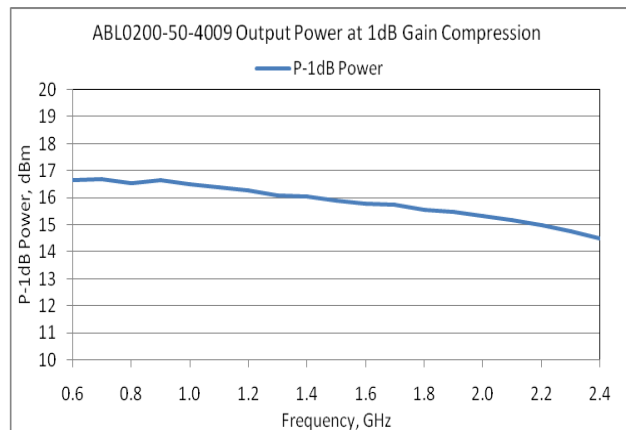
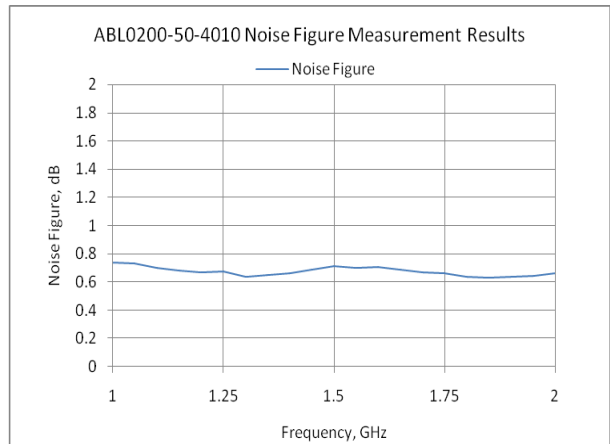
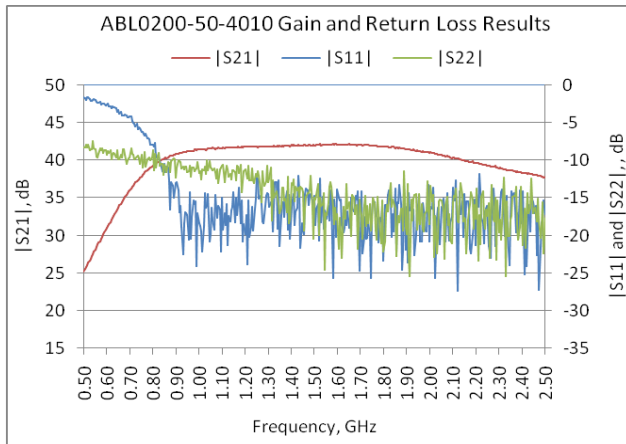
**Electrical Specifications**

Parameters	Units	Specifications		
		Minimum	Typical	Maximum
Frequency Range	MHz	1000		2000
Noise Figure @25°C	dB		0.8	1.0
Small Signal Gain @25°C	dB	37.0	40.0	43.0
Gain flatness	dB		+/-1.0	
Gain Variation	dB		+/-1.0	
P-1dB Compression Point	dBm	+14.0	+16.0	
Output IP3	dBm	+23.0	+29.0	
Input VSWR	-		1.3:1	1.6:1
Output VSWR	-		1.6:1	2.0:1
Spurious	dBc			-70
Operating Temperature	°C	-40.0		+85.0
Survival Temperature	°C	-55.0		+125.0
DC Power Supply Voltage	V	+9.0		+12.0
DC Power Supply Current	mA	100.0	120.0	135.0
In/Out connectors		50 ohm SMA female		
Size	inches	1.5×0.85×0.375		

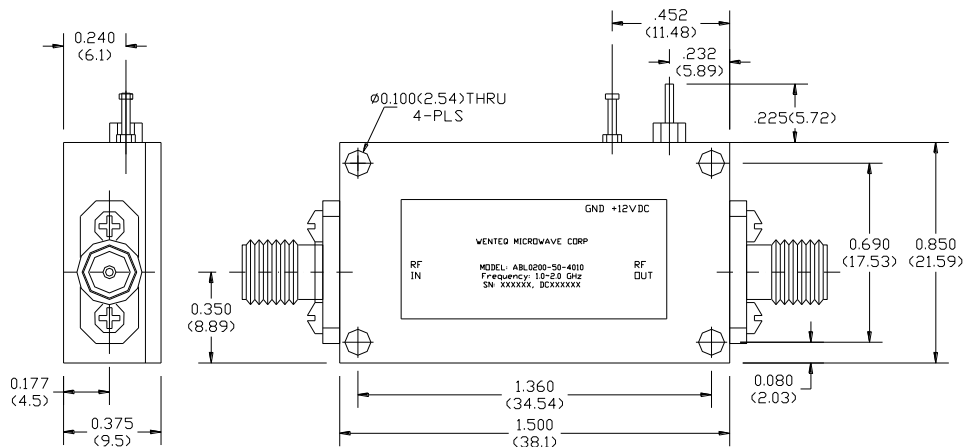
Functional diagram:



Typical 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	+15V
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	9/12/2014	Initial Release	



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