

Features:

- Multi-octave bandwidth operation from 10~1000MHz
- Low noise figure, and high gain
- Good VSWR, unconditional stable
- SMA female connector I/O
- Single DC power supply, internal voltage regulator, operating voltage from +10~+15V
- Operating temperature -40~+75°C, storage temperature -55~+125°C

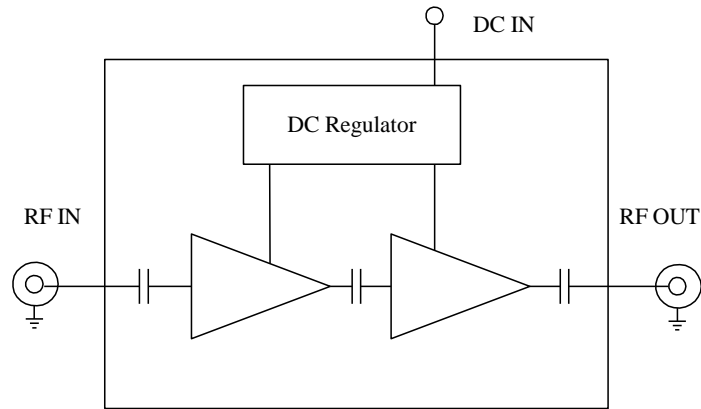
**General Description**

ABL0100-01-3010 is a two-stage enhancement mode pHEMT low noise transistor based broadband low noise amplifier module operating in the frequency from 10MHz to 1.0GHz. The amplifier provides 30dB of small signal gain, 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.

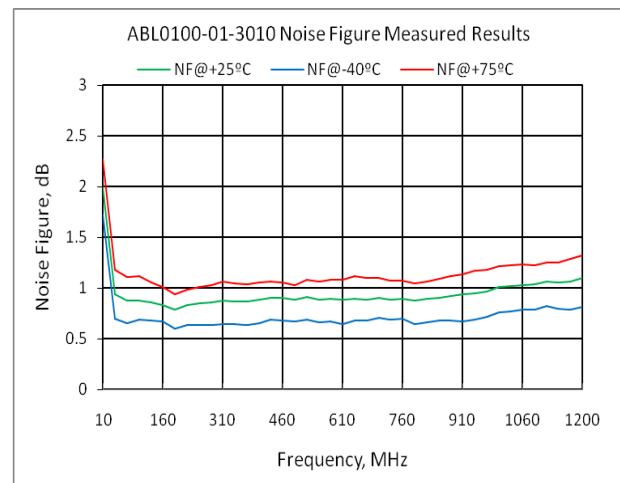
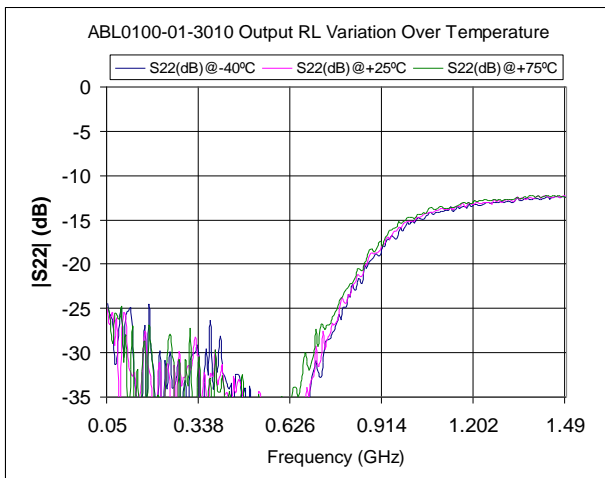
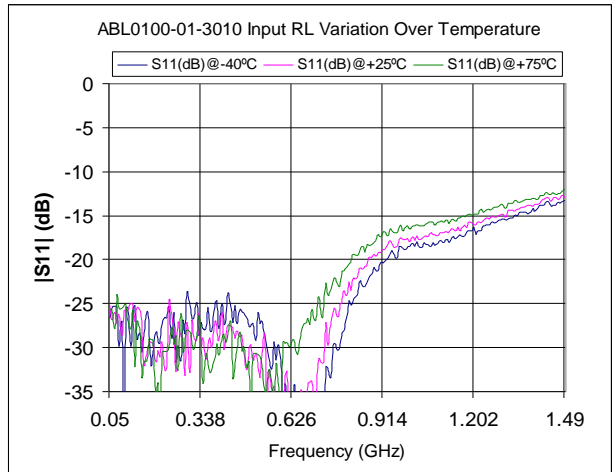
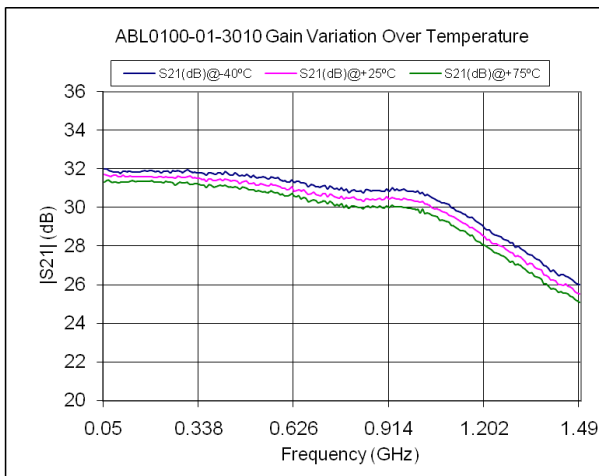
Electrical Specifications

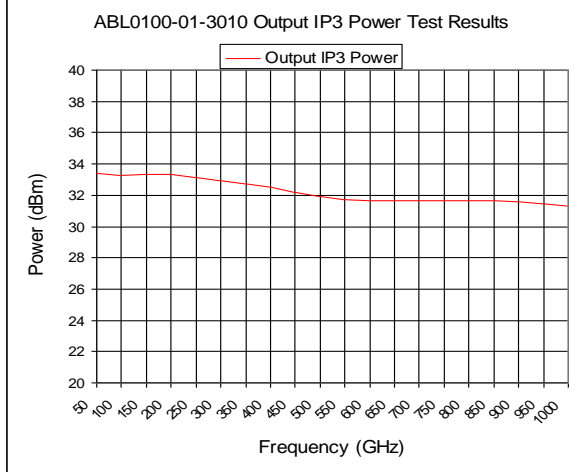
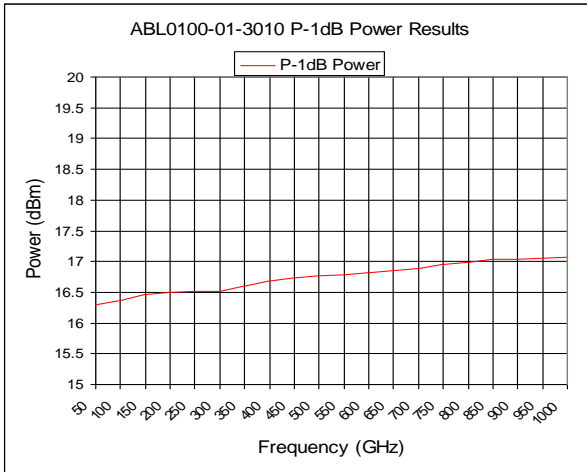
Parameters	Units	Specifications		
		Minimum	Typical	Maximum
Frequency Range	MHz	10.0		1000.0
Noise Figure @25°C Temperature	dB		1.5	3.0
10~50MHz			1.0	1.2
50~1000MHz				
P-1dB Compression Point	dBm	+16.0	+17.0	
Output IP3	dBm	+29.0	+32.0	
Nominal SS Gain @25°C	dB	28.0	30.0	32.0
Gain flatness	dB		+/-0.7	+/-1.0
Gain Variation	dB		+/-1.0	
Input VSWR	-		1.3:1	1.5:1
Output VSWR	-		1.2:1	1.5:1
Reverse Isolation	dB	45.0	50.0	
Spurious	dBc			-70.0
Operating Temperature	°C	-40.0		+75.0
Survival Temperature	°C	-55.0		+125.0
DC Voltage	V	+10.0	+12.0	+15.0
DC Supply Current	mA	90.0	110.0	130.0
In/Out connectors		SMA female		
Outline dimension for ABL0100-01-3010 without heatsink	inches	1.50×0.85×0.375		
Outline dimension for ABL0100-01-3010-X with heatsink	inches	1.50×1.617×1.069		

Functional Diagram

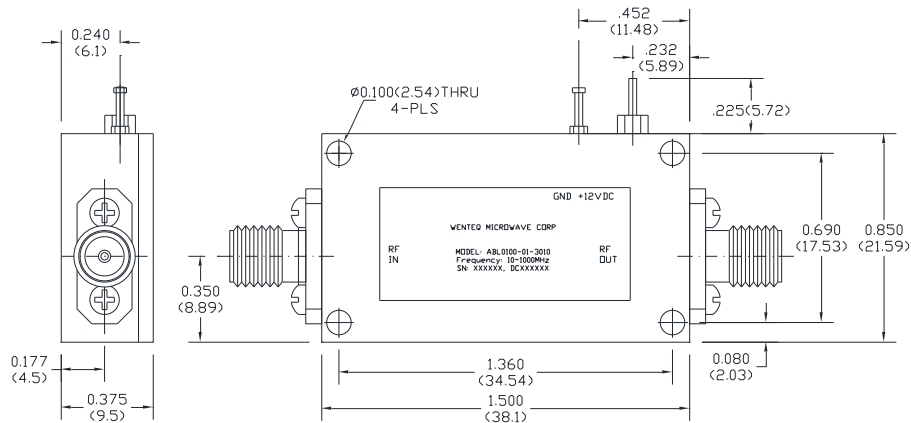


Typical Test Results:

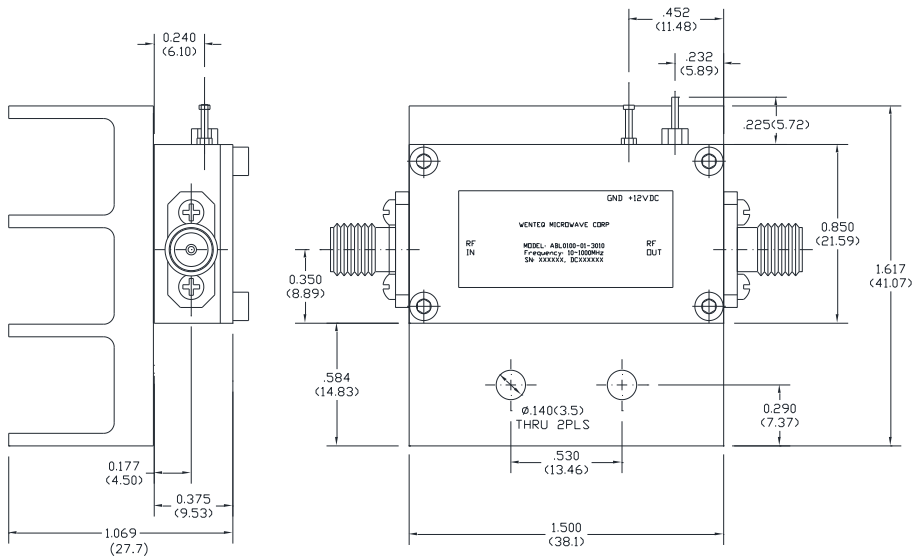




Mechanical Structure:



(a) ABL0100-01-3010 Amplifier without heatsink



(b) ABL0100-01-3010-X amplifier with heatsink

Note: All units are in inches(mm), and all tolerances are +/-0.005 inch unless otherwise specified

Housing Material and Surface Finish:

Body and cover material: aluminum
Surface finish: nickel plated
Connector material: Copper
Connector surface finish: gold plated
Heatsink material: Aluminum, surface finish: Black anodized

Absolute Maximum Ratings

DC Voltage	+15V
RF Input Power	+15dBm
Storage Temperature	-55~+125°C
Operating Temperature	-40~+75°C

Revision History:

Revision	Date	Description	Comments
A00	08/07/2007	Initial Release	
A01	02/27/2015	Added test plots with temperature	



WARNING: This device is electrostatic sensitive, please observe precautions for safe handling this amplifier.

WARNING: This product can expose you to chemicals including Nickel (Metallic) and Gallium Arsenide which are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65warnings.ca.gov.