

**Features:**

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

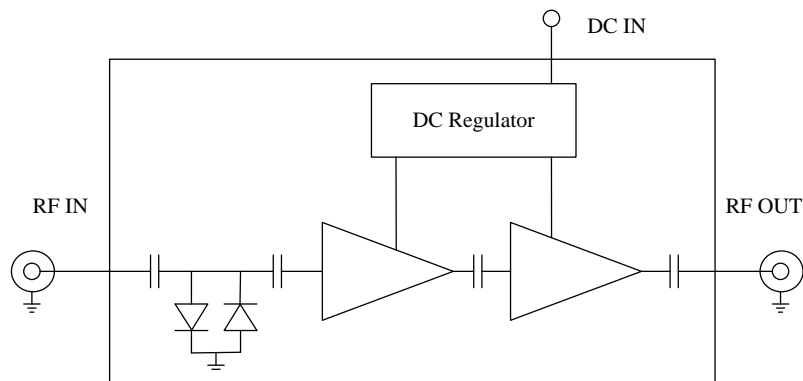
**General Description**

ABL0100-01-3010DP is an input PIN diode protected 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.

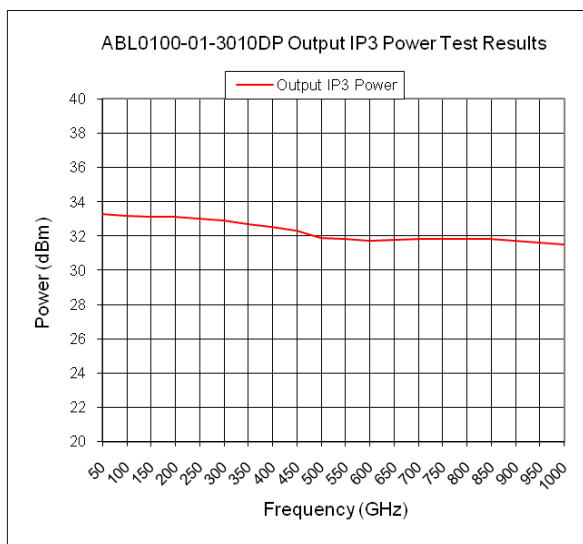
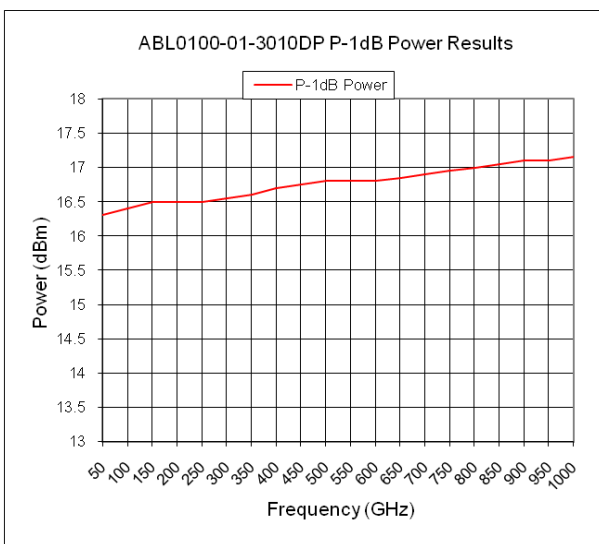
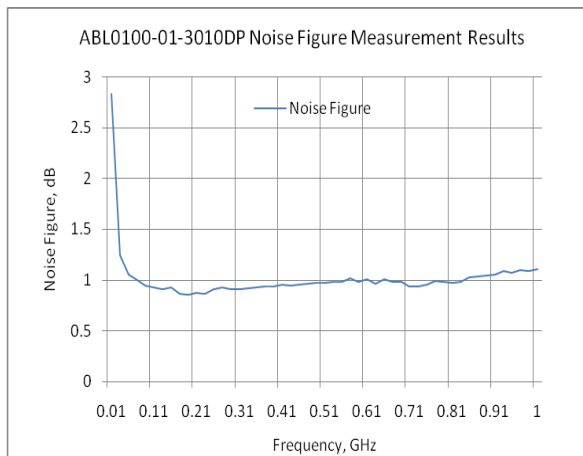
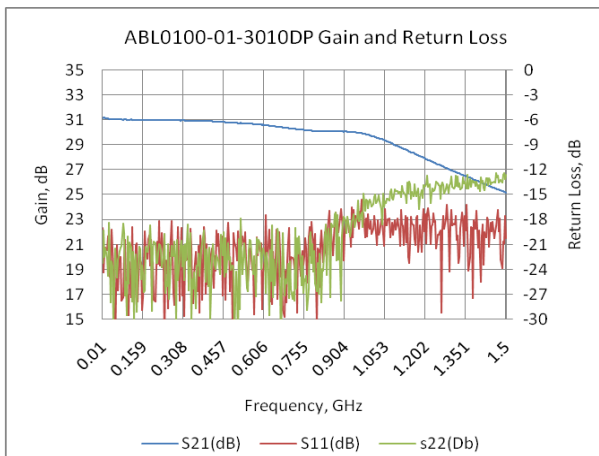
**Electrical Specifications**

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	1.3
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	-		1.30:1	1.5:1
Output VSWR	-		1.30:1	1.5:1
Reverse Isolation	dB	45.0	50.0	
Spurious	dBc			-70.0
Input no damage power	dBm	+30.0		
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	120.0	130.0
In/Out connectors		SMA female		
Size	inches	1.5×0.85×0.375		

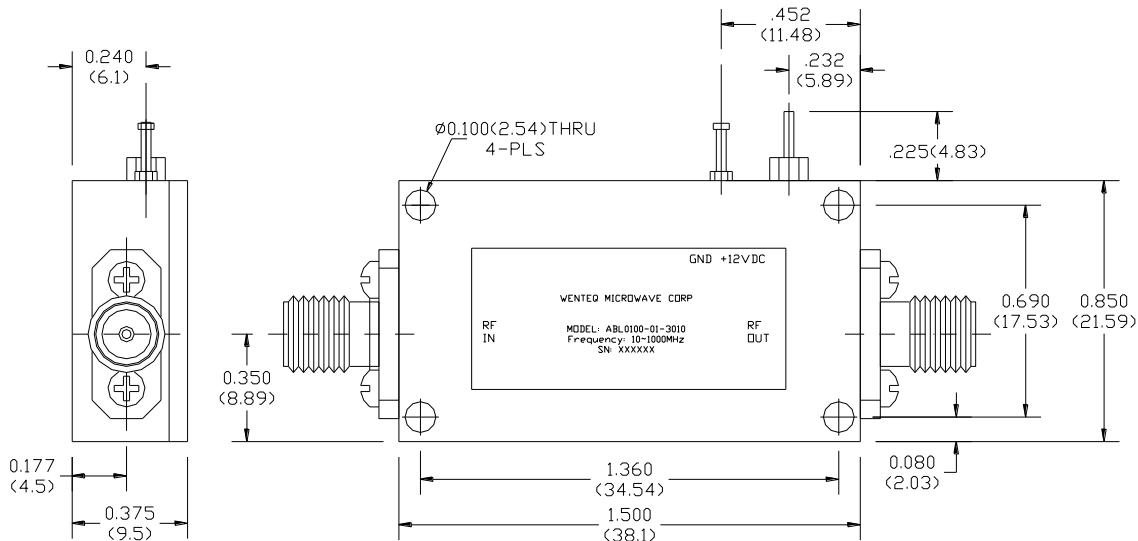
Functional Diagram



Typical Test Results:



Mechanical Structure:



Note: All units in inches (mm).

Absolute Maximum Ratings

DC Voltage	+15V
RF Input Power	+30dBm
Storage Temperature	-55~+125°C
Operating Temperature	-40~+75°C

Revision History:

Revision	Date	Description	Comments
A00	10/20/2016	Initial Release	



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