

Features:

- Broad band, low noise, high gain
- Low VSWR, unconditional stable
- SMA female connector RF I/O
- Single DC power supply required
- Operating temperature -40~+85°C, storage temperature -55~+85°C

General Description

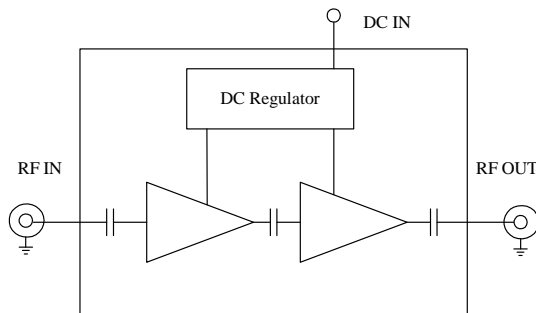
ABL1800-01-3330 is a two stage GaAs pHEMT MMIC based broadband low noise amplifier module operating in the frequency from 100MHz to 18.0GHz. The amplifier provides 33dB of small signal gain with 3.0dB noise figure. The amplifier offers excellent gain flatness, as well as good VSWR at both input and output. It 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

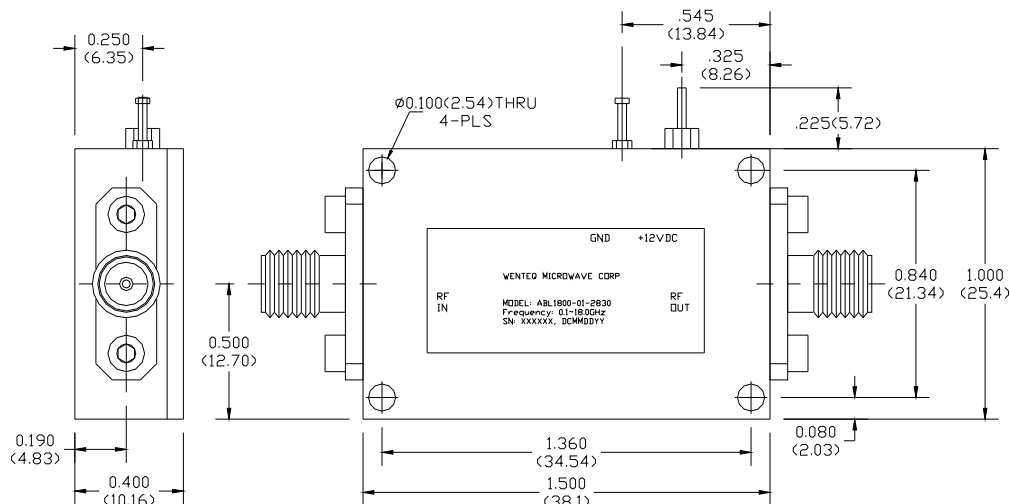
Parameters		Specifications		
		Minimum	Typical	Maximum
Frequency Range	GHz	0.1		18.0
Nominal Gain @25°C base plate temperature	dB	30.0	33.0	36.0
Noise Figure				
0.1~2.5GHz	dB		4.0	5.5
2.5~16.5GHz			3.0	3.5
16.5~18.0GHz			3.5	4.5
P-1dB Compression Point				
0.1~12.0GHz	dBm	22.0	24.0	
12.0~16.0GHz		20.0	22.0	
16.0~18.0GHz		18.0	20.0	
Psat at Output	dBm	23.0	25.0	
Output IP3				
0.1~12.0GHz	dB m	28.0	32.0	
12.0~16.0GHz		26.0	30.0	
16.0~18.0GH		24.0	28.0	
Gain flatness	dB		+/-1.5	+/-2.0
Gain Variation over Temp.	dB		+/-2.0	
Reverse Isolation	dB	40.0	50.0	
Input VSWR	-		1.5:1	2.0:1
Output VSWR	-		1.8:1	2.5:1
Spurious	dBc			-70.0
Operating Temperature	°C	-40.0		+85.0
Survival Temperature	°C	-45.0		+125.0
DC Power Supply Voltage	V	+10.0	+12.0	+15.0
DC Power Supply Current	mA	240.0	280.0	350.0

RF In/Out connectors		50 ohm SMA female
DC Input Connector		Feedthru Pin
Size	inches	1.50×1.0×0.4

Functional Diagram



Mechanical Structure:



Note: All units in inches (mm).

Housing Material and Surface Finish:

- Body and cover material: aluminum
- Surface finish: nickel plated
- Connector material: Stainless Steel
- Connector surface finish: Passivated

Absolute Maximum Ratings

DC Voltage	+18V
RF Input Power	+10 dBm
Storage Temperature	-55~+125°C
Operating Temperature	-40~+85°C