

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

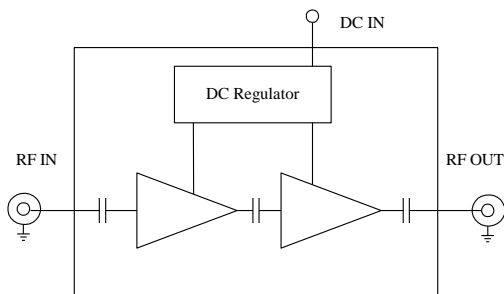
ABL1800-01-3325 is a two stage GaAs pHEMT MMIC based broadband low noise amplifier module operating in the frequency from 100MHz to 18.0GHz. The amplifier provides 33dB of small signal gain with 2.5dB noise figure at 10GHz. The amplifier offers excellent gain flatness, as well as good VSWR at both input 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

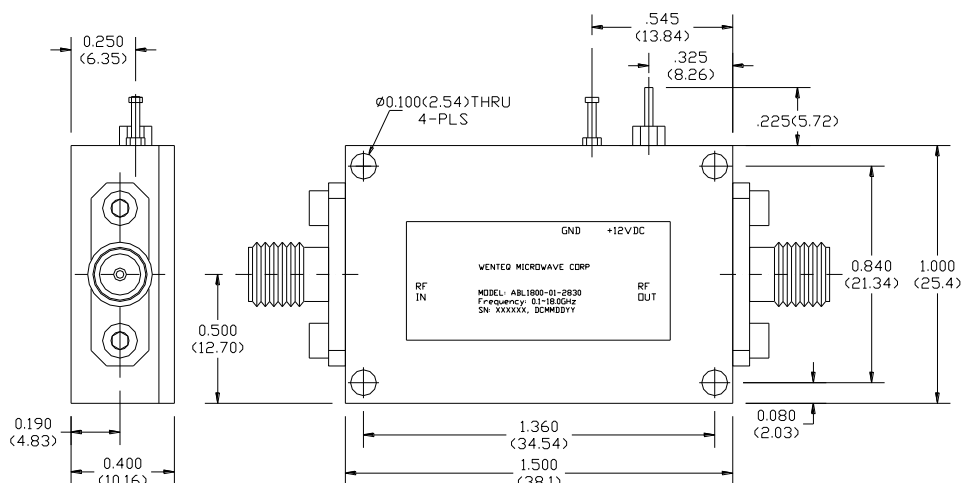
Parameters		Specifications		
		Minimum	Typical	Maximum
Frequency Range	GHz	0.1		18.0
Nominal Gain @25°C base plate temperature	dB	30.0	33.0	36.0
Noise Figure @25°C base plate temperature	dB		4.0	5.0
0.1~2.0GHz		3.0	4.0	
2.0~3.0GHz		2.5	3.5	
3.0~15.0GHz		3.0	4.0	
15.0~18.0GHz				
P-1dB Power at Output	dBm			
0.1~10.0 GHz		+22.0	+25.0	
10.0~18.0 GHz		+20.0	+22.0	
Output Saturated Power	dBm			
0.1~10.0 GHz		+23.0	+27.0	
10.0~18.0 GHz		+21.0	+24.0	
Output IP3	dB m			
0.1~10.0 GHz		+28.0	+32.0	
10.0~18.0 GHz		+23.0	+26.0	
Gain flatness	dB		+/-1.5	+/-2.0
Gain Variation over Temp.	dB		+/-2.0	
Reverse Isolation	dB	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	200.0	260.0	300.0
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