BROADBAND LOW NOISE AMPLIFIER
ABL1800-01-2830

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

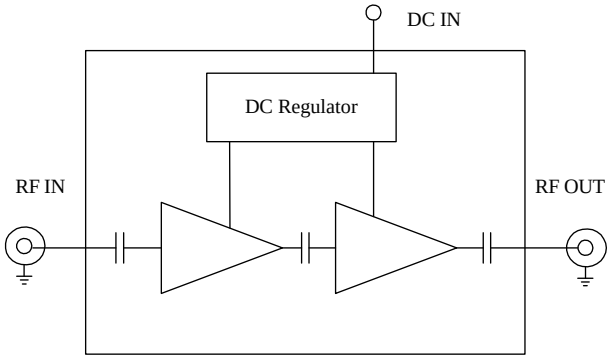
ABL1800-01-2830 is a two GaAs pHEMT MMIC based broadband low noise amplifier module operating in the frequency from 100MHz to 18.0GHz. The amplifier provides 28dB of small signal gain with 3.0dB noise figure. The amplifier offers excellent gain flatness, as well as good VSWR at both input and output. 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

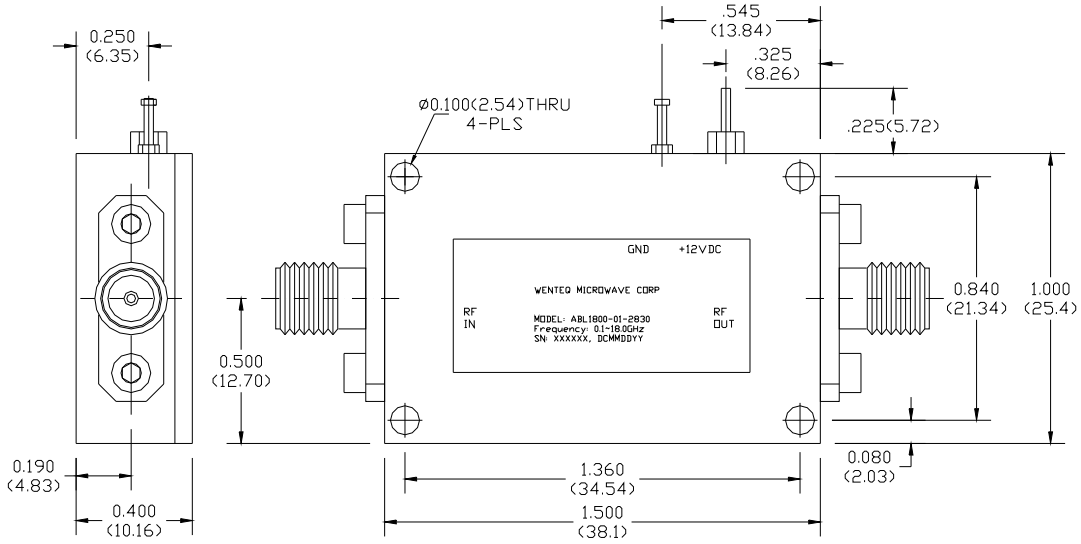
Parameters		Specifications		
		Minimum	Typical	Maximum
Frequency Range	GHz	0.1		18.0
Nominal Gain @25°C base plate temperature	dB	25.0	28.0	31.0
Noise Figure 0.1~0.5 GHz 0.5~2.5GHz 2.5~16.5GHz 16.5~18.0GHz	dB		 4.5 4.0 3.0 3.5	 5.5 5.0 3.5 4.2
P-1dB Compression Point	dBm	14.0	16.0	
Psat at Output	dBm	16.0	18.0	
Output IP3	dB m	27.0	28.0	
Gain flatness	dB		+/-2.5	+/-3.0
Gain Variation over Temp.	dB		+/-1.5	
Reverse Isolation	dB	40.0	50.0	
Input VSWR	-		1.5:1	2.0:1
Output VSWR	-		1.7:1	2.0:1
Spurious	dBc			-60.0
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	130.0	160.0	190.0
RF In/Out connectors		50 ohm SMA female		
DC Input Connector		Feedthru Pin		
Size	inches	1.50×1.0×0.4		

138 W Pomona Ave, Monrovia CA 91016
Phone: (626) 305-6666, Fax: (626) 602-3101, sales@wenteq.com, www.wenteq.com

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