

Features:

- Broad band operation from 0.1 to 18GHz, low noise, high gain
- Input PIN diode limiter protected to avoid accidental input over drive damage
- SMA female connector RF I/O
- Single DC power supply required, built-in voltage regulator and reverse polarity protection circuitry
- Operating temperature -40~+85°C, storage temperature -55~+125°C

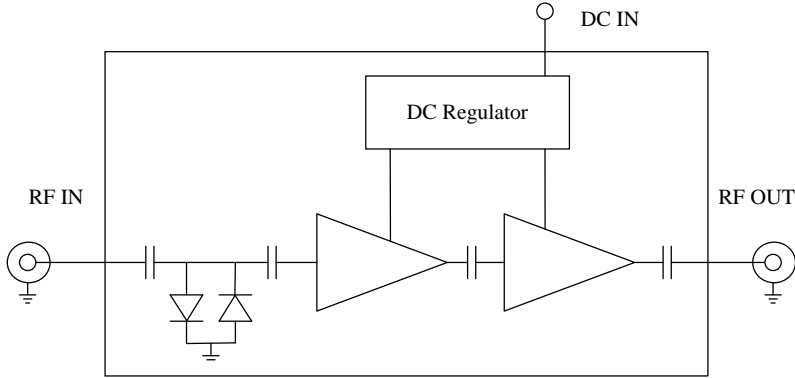
General Description

ABL1800-01-3635DP is a two stage GaAs pHEMT MMIC based broadband low noise amplifier module with input PIN diode limiter protection. The amplifier operates in the frequency range from 100MHz to 18.0GHz and provides 36dB of small signal gain, 3.5dB typical noise figure. It requires only a single positive DC power supply to function. Its built-in DC voltage regulator and reverse polarity protection circuitry allows the amplifier to functional at different DC supply voltages without affecting the RF performances.

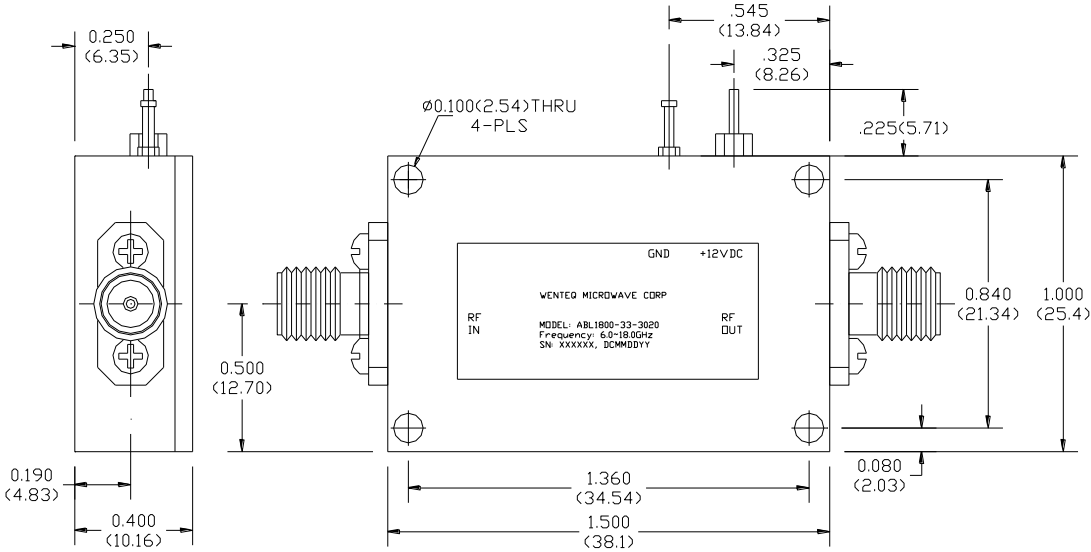
Electrical Specifications

Parameters		Specifications		
		Minimum	Typical	Maximum
Frequency Range	GHz	0.1		18.0
Nominal Gain @25°C base plate temperature	dB	33.0	36.0	40.0
Noise Figure	dB			
0.1~1.0 GHz			6.0	9.0
1.0~2.0GHz			5.0	6.0
2.0~18.0 GHz		3.5	5.5	
P-1dB Power at Output	dBm			
0.1~10.0 GHz		+22.0	+25.0	
10.0~18.0 GHz		+19.0	+22.0	
Output Saturated Power	dBm			
0.1~10.0 GHz		+21.0	+27.0	
10.0~18.0 GHz		+20.0	+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		+/-1.75	+/-2.5
Gain Variation over Temperature Range	dB		+/-2.0	+/-3.5
Reverse Isolation	dB	45.0	55.0	
Input No Damage Power	dBm	+30.0		
Input VSWR	-		1.6:1	2.2:1
Output VSWR	-		1.7:1	2.2:1
Spurious	dBc			-70.0
Operating Temperature	°C	-40.0		+75.0
Survival Temperature	°C	-45.0		+125.0
DC Power Supply Voltage	V	+10.0	+12.0	+15.0
DC Power Supply Current	mA	300.0	350.0	380.0
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).

Absolute Maximum Ratings

DC Voltage	+15V
RF Input Power	+30 dBm
Storage Temperature	-45~+125°C
Operating Temperature	-40~+75°C