

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



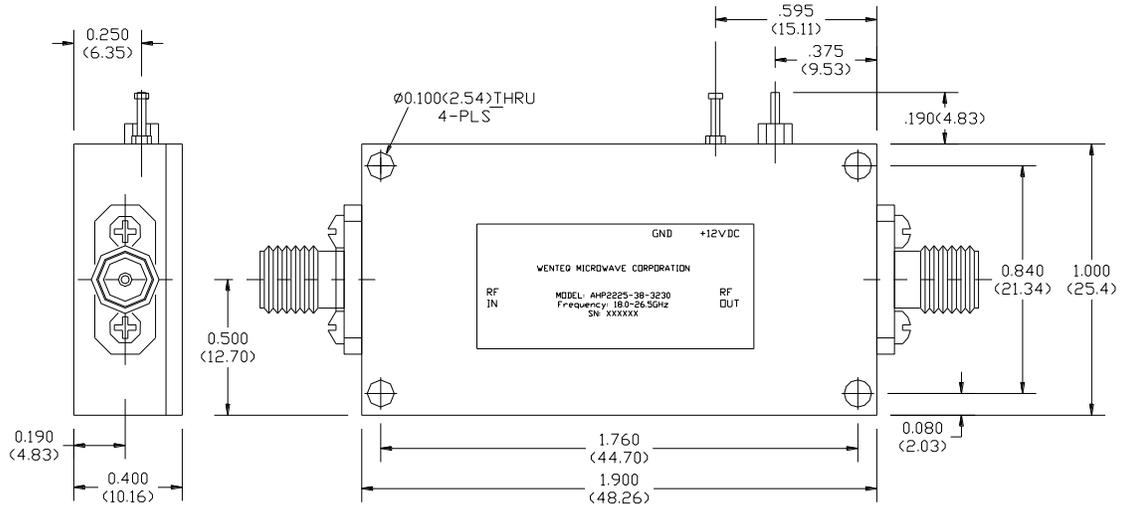
General Description

ABL1800-01-4530DP is a three stage GaAs pHEMT MMIC based broadband low noise amplifier module with input PIN diode limiter protection. The amplifier operates in the frequency range from 0.1 to 18.0GHz and provides 45dB of small signal gain with 3.0dB noise figure. It offers excellent gain flatness, as well as good VSWR at both input and output and requires only a single positive DC power supply and can at a wide range of DC supply voltages without affecting the RF performances.

Electrical Specifications

Parameters	Units	Specifications		
		Minimum	Typical	Maximum
Frequency Range	GHz	0.1		18.0
Nominal Gain @25°C base plate temperature	dB	41.5	45.0	48.5
Noise Figure	dB			
0.1~0.5GHz			4.0	7.0
0.5~15GHz			3.0	4.0
15.0~18.0GHz			4.0	5.0
P-1dB Compression Point	dBm	+18.0	+20.0	
Psat at Output	dBm	+19.0	+22.0	
Output IP3	dB m	+25.0	+30.0	
Gain flatness	dB		+/-1.75	+/-2.5
Gain Variation over Temp.	dB		+/-2.5	
Reverse Isolation	dB	55.0		
Input No Damage Power	dBm	+30.0		
Input VSWR	-		1.8:1	2.5:1
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	250.0	350.0	450.0
RF In/Out connectors		50 ohm SMA female		
DC Input Connector		Feedthru Pin		
Size	inches	1.90×1.0×0.4		

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	+30 dBm
Storage Temperature	-55~+125°C
Operating Temperature	-40~+85°C



WARNING: This device is electrostatic sensitive, please observe precautions for safe handling of this amplifier.

WARNING: This product can expose you to chemicals including Nickel (Metallic) and Gallium Arsenide which are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65warnings.ca.gov.