

Features:

- Broadband operation with flat gain from 2.0~20.0GHz
- Medium power output, low noise figure, good VSWR, unconditional stable
- SMA female connector I/O
- Single DC power supply required, built-in voltage regulator
- Operating temperature -40~+75°C, storage temperature -55~+125°C

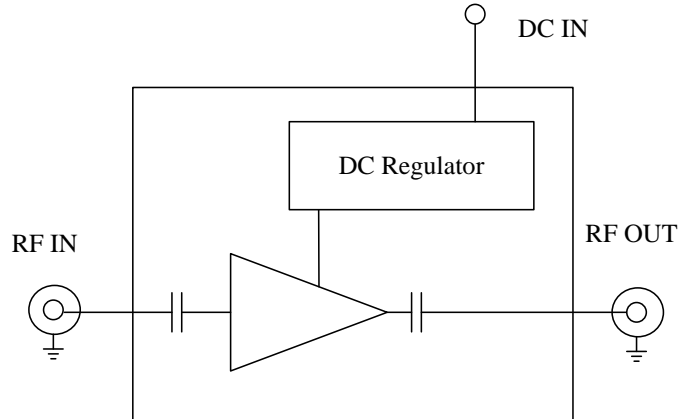
General Description

ABP2000-10-1816 is a one stage MMIC based broadband power amplifier module operating in the frequency of 2.0 to 20.0GHz. The amplifier provides 18dB of flat small signal gain, +16dBm of typical output power at 1dB gain compression. The amplifier requires only a single positive DC power supply, its built-in DC voltage regulator and internal sequencing circuitry makes the application more robust.

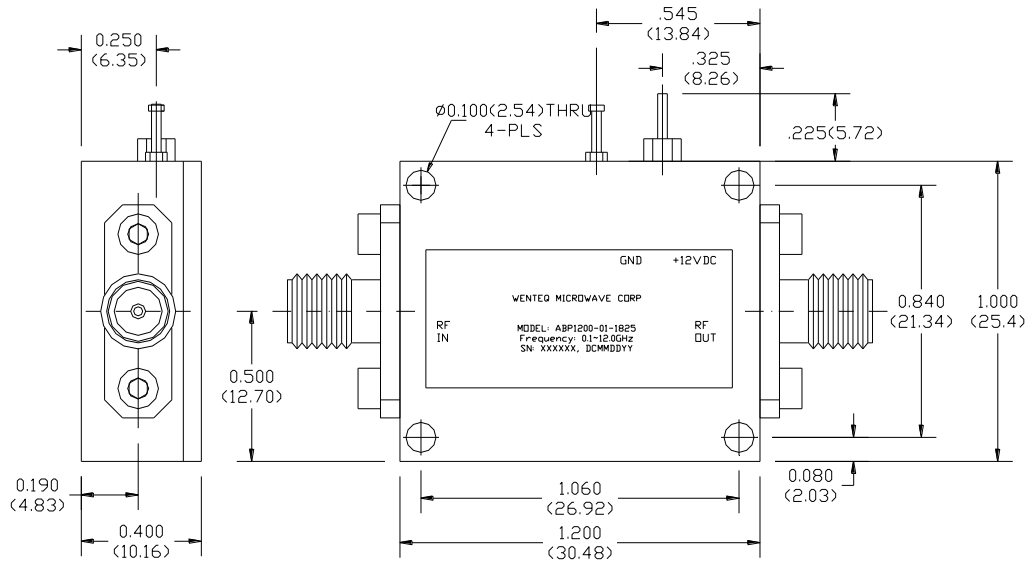
Electrical Specifications

Parameters	Units	Specifications		
		Minimum	Typical	Maximum
Frequency Range	GHz	2.0		20.0
P-1dB Compression Point	dBm	+16.5	+18.0	
Psat at Output	dBm	+18.0	+20.5	
Output IP3	dBm	+18.0	+25.0	
Nominal SS Gain @25°C	dB	14.0	16.0	18.0
Gain flatness	dB		+/-1.0	+/-1.25
Gain Variation over temperature	dB		+2.0/-1.0	+2.5/-1.5
Noise Figure at +25°C 2.0~8.0GHz 8.0~20.0GHz	dB		6.0 5.0	8.5 6.5
Input VSWR	-		1.8:1	2.2:1
Output VSWR	-		1.6:1	2.0:1
Reverse Isolation	dB	35.0		
Spurious	dBc			-70
Operating Temperature	°C	-40.0		+75.0
Survival Temperature	°C	-55.0		+125.0
DC Voltage	V	+8.0	+12.0	+15.0
DC Supply Current	mA	180.0	215.0	250.0
In/Out connectors		SMA female		
Size		1.2"x1.0"x0.4"		

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	+16.0V
RF Input Power	+14 dBm
Storage Temperature	-55~+125°C
Operating Temperature	-40~+75°C

Revision History:

Revision	Date	Description	Comments
A00	09/12/2025	Initial Release	



Electrostatic sensitive device, please observe precautions for handling this amplifier.