BROADBAND LOW NOISE AMPLIFIER
ABL1800-11-3330

Features:

- Broad band operation from 2 to 18 Ghz
- Low noise, and high gain
- Low VSWR, unconditional stable
- 50 ohm SMA female connector I/O
- Single DC power supply, built-in voltage regulator
- Operating temperature -40~+85°C, storage temperature -55~+85°C

General Description

ABL1800-11-3330 is a two stage GaAs pHEMT MMIC based broadband low noise amplifier module operating in the frequency from 2.0GHz to 18.0GHz. The amplifier provides 33dB of small signal gain with 3.0dB noise figure, excellent gain flatness, and good VSWR at both input and output. The amplifier 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	Units	Specifications		
		Minimum	Typical	Maximum
Frequency Range	GHz	2.0		18.0
Nominal Gain @25°C base plate temperature	dB	30.0	33.0	38.0
Noise Figure	dB		3.0	4.2
P-1dB Compression Point 2.0~14.0GHz, 14.0~18.0GHz	dBm	 13.0 11.0	 15.0 13.0	
Output IP3	dBm	20.0	25.0	
Gain flatness	dB		+/-1.0	+/-1.5
Gain Variation over Temperature Range	dB		+/-1.5	
Reverse Isolation	dB	35.0	55.0	
Input VSWR	-		1.7:1	2.2:1
Output VSWR	-		1.8:1	2.5:1
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	160.0	180.0	220.0
RF In/Out connectors		50 ohm SMA female		
DC Input Connector		Feedthru Pin		
Size	inches	1.50×1.0×0.4		

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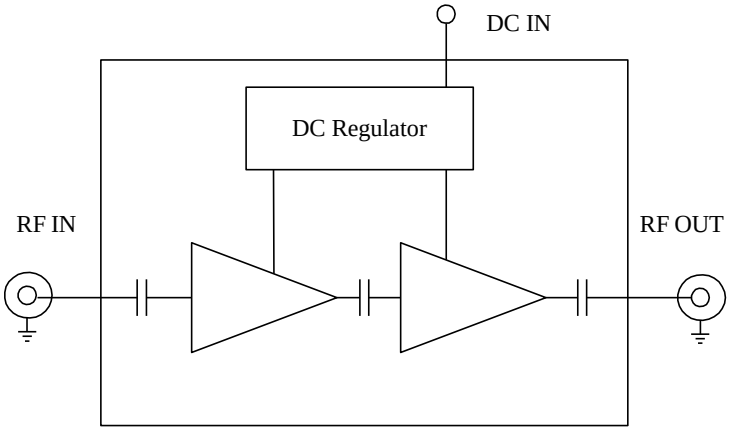
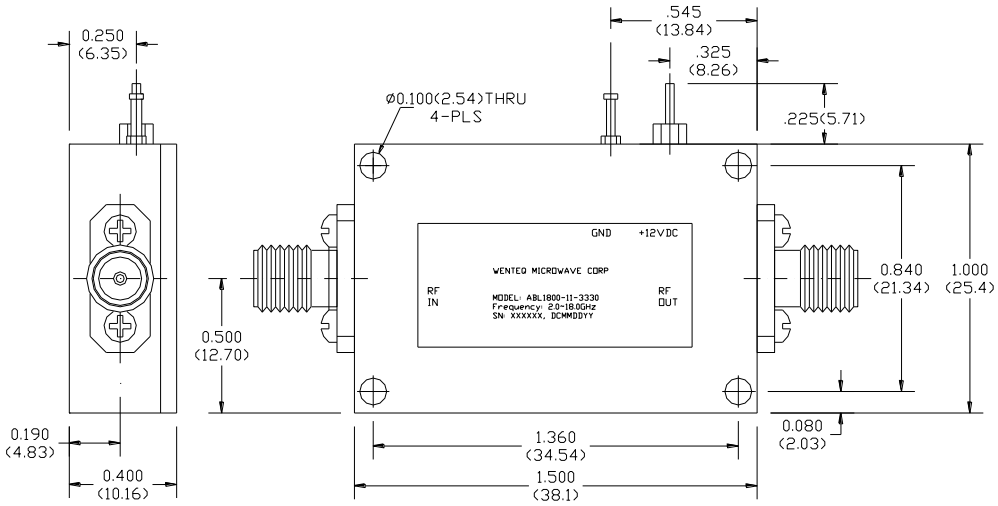
Functional Diagram



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	+15V
RF Input Power	+15 dBm
Storage Temperature	-55~+125°C
Operating Temperature	-40~+85°C