BROADBAND LOW NOISE AMPLIFIER
ABL1800-11-2630

Features:

- Broad band 2-18GHz operation, low noise, and high gain
- Low VSWR, unconditional stable
- Small size, low cost
- SMA female connector I/O
- Operating temperature -40~+85°C, storage temperature -55~+125°C

General Description

ABL1800-11-2630 is a two stage pHEMT based GaAs MMIC broadband low noise amplifier module operating in the frequency of 2.0 to 18.0GHz. The amplifier provides 26dB of small signal gain with 3.0dB typical noise figure and excellent gain flatness, as well as good VSWR at both input and output. The amplifier requires only a single positive DC power supply, its built-in DC voltage regulator allows for different DC voltage supply application. This amplifier is ideal for telecommunication infrastructures, microwave radio, test instrumentation and military applications.

Electrical Specifications

Parameters	Units	Specifications		
		Minimum	Typical	Maximum
Frequency Range	GHz	2.0		18.0
Noise Figure (from 50MHz)	dB		3.0	5.0
Nominal SS Gain @25°C	dB	23.0	26.0	30.5
P-1dB Compression Point	dBm	+12.0	+14.0	
Output IP3	dBm	+20.0	+24.0	
Gain flatness	dB		+/-2.0	+/-2.5
Gain Variation	dB		+/-1.5	
Input VSWR	-		1.8:1	2.5:1
Output VSWR	-		1.8:1	2.8:1
Reverse Isolation	dB	30.0	40.0	
Spurious	dBc			-70.0
Operating Temperature	°C	-40.0		+85.0
Survival Temperature	°C	-55.0		+125.0
DC Voltage	V	+11.0	+12.0	+15.0
DC Supply Current	mA	120.0	150.0	180.0
In/Out connectors	-	SMA female		
Size	inches	1.5×0.85×0.375		

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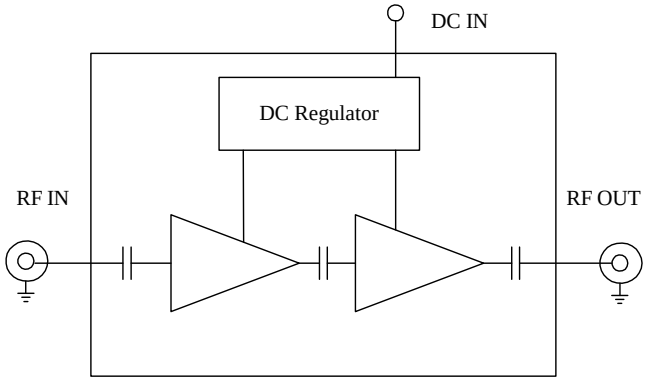
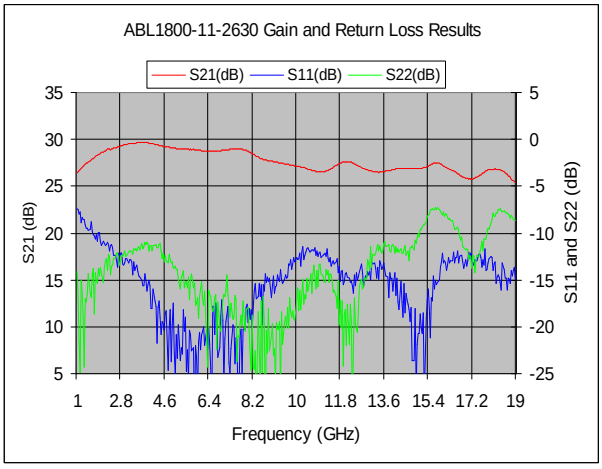
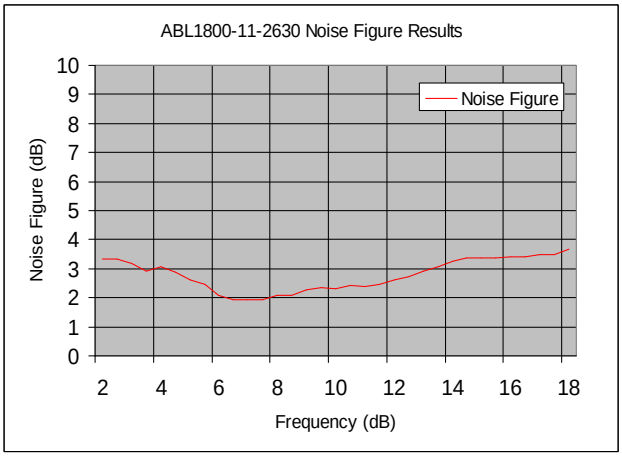
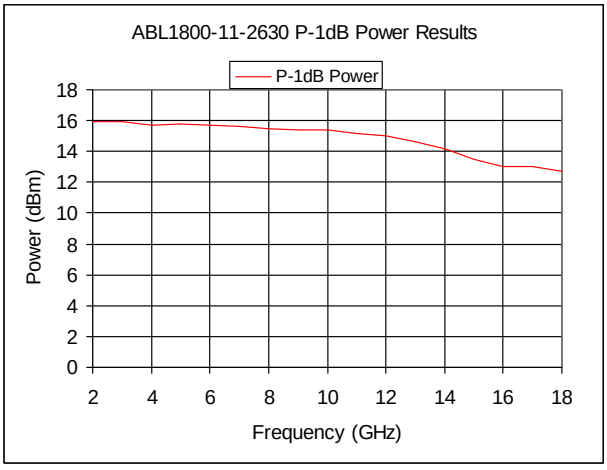
Functional Diagram

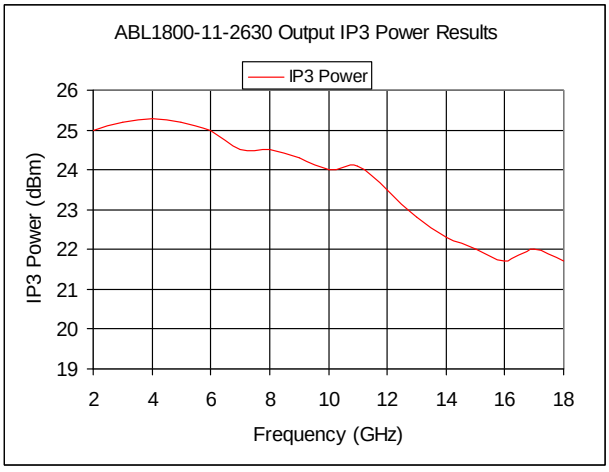


Test Results









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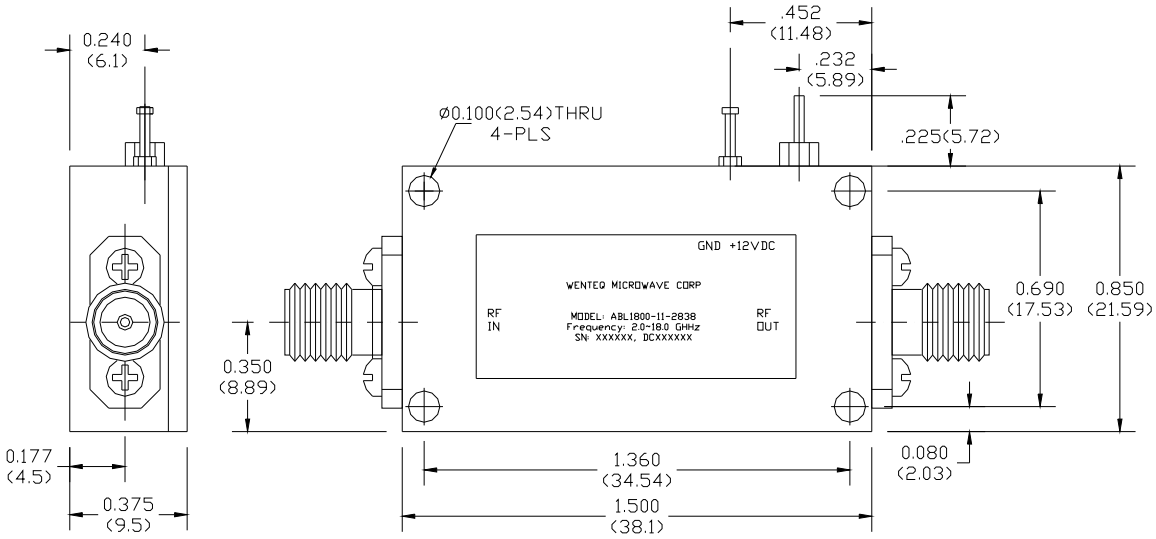
Mechanical Structure:



Note: All units in inches.

Absolute Maximum Ratings

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

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

Revision History:

Revision	Date	Description	Comments
A00	08/07/2013	Initial Release	
A01	02/23/2015	Added test plots, revised gain range	