BROADBAND LOW NOISE AMPLIFIER
ABL0600-01-1640

Features:

- Broad band operation from 30MHz to 6 GHz
- Low VSWR, unconditional stable
- SMA female connector I/O
- Single DC power supply required, internal voltage regulator, operating voltage from +9.5~+15V
- Operating temperature -40~+85°C, storage temperature -55~+125°C

General Description

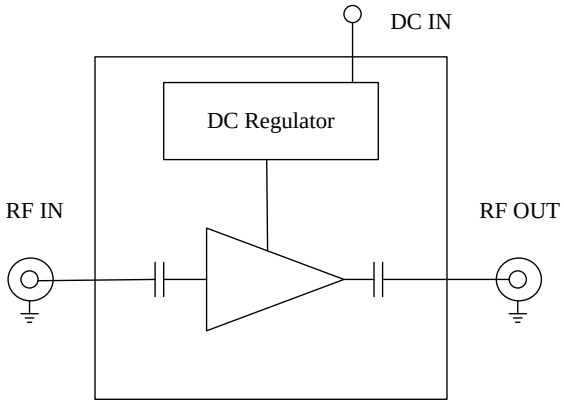
ABL0600-01-1640 is a GaAs HBT technology based broadband low noise MMIC amplifier module operating in the frequency from 10MHz to 6.0 GHz. The amplifier provides 16dB of typical small signal gain with 4.0dB typical noise figure, excellent gain flatness, as well as good VSWR at both input and output. The amplifier requires only a single DC power supply. Its built-in voltage regulator allows the amplifier being used at DC voltage as low as 9.5V to as high as +15V.

Electrical Specifications

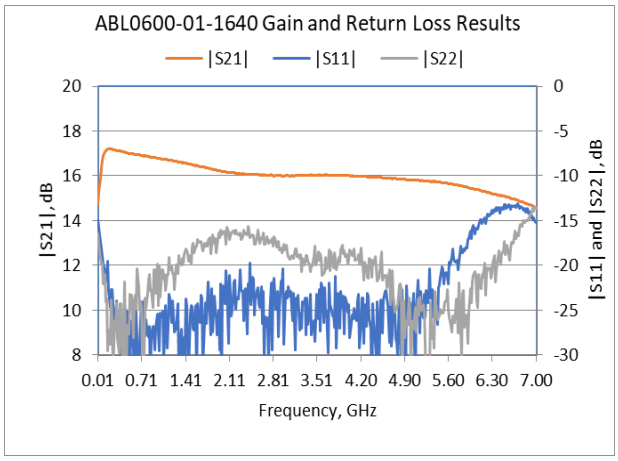
Parameters	Units	Specifications		
		Minimum	Typical	Maximum
Frequency Range	MHz	30.0		6000.0
Noise Figure (from 100MHz) @25°C	dB		4.0	4.8
Nominal SS Gain @25°C	dB	14.0	16.0	18.0
P-1dB Compression Point	dBm	+12.5	+16.0	
Saturated Output Power	dBm	+13.5	17.5	
Output IP3. Tested with two tones with 1MHz spacing	dBm	+20.0	25.0	
Gain flatness	dB		+/-1.25	+/-1.5
Gain Variation	dB		+/-1.0	
Input VSWR	-		1.35:1	1.65:1
Output VSWR	-		1.35:1	1.65:1
Reverse Isolation	dB	18.0	20.0	
Spurious	dBc			-70.0
Operating Temperature	°C	-45.0		+85.0
Survival Temperature	°C	-55.0		+125.0
DC Voltage	V	+9.5	+12.0	+15.0
DC Supply Current	mA	55.0	60.0	65.0
In/Out connectors	-	50 ohm SMA female		
Size	inches	1.20×0.85×0.375		

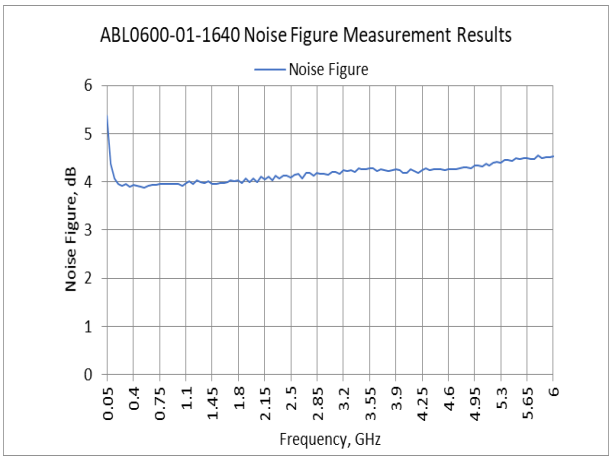
138 W Pomona Ave, Monrovia, CA 91016
Phone: (626) 305-6666, Fax: (626) 602-3101, sales@wenteq.com, www.wenteq.com

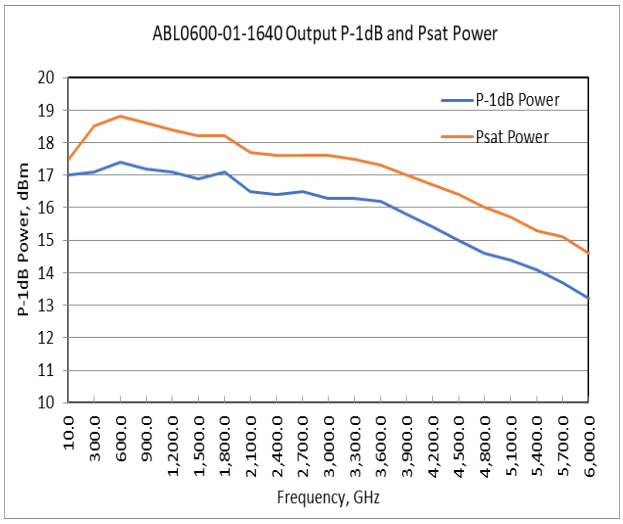
Functional Diagram

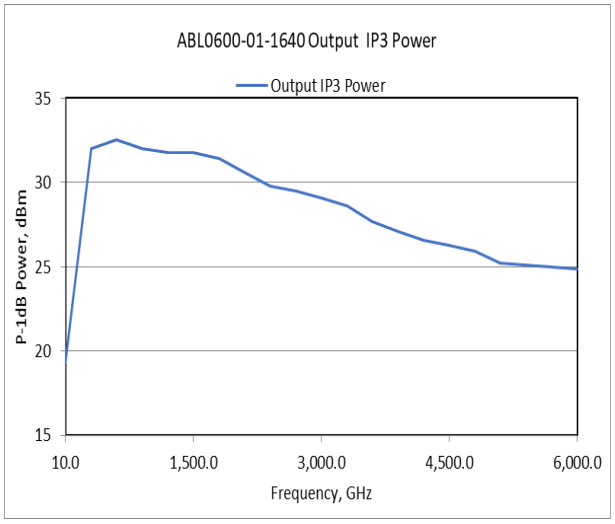


Typical Test Results:





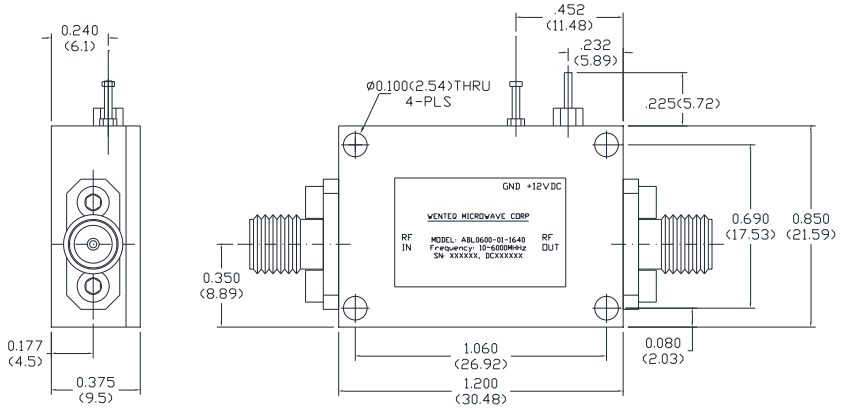




138 W Pomona Ave, Monrovia, CA 91016
Phone: (626) 305-6666, Fax: (626) 602-3101, sales@wenteq.com, www.wenteq.com

BROADBAND LOW NOISE AMPLIFIER
ABL0600-01-1640

Mechanical Structure:



Note: All units in inches(mm).

Housing Material and Surface Finish:

Body and cover material: aluminum
Surface finish: nickel plated
Connector material: Copper
Connector surface finish: gold plated

Absolute Maximum Ratings

DC Voltage	+15V
RF Input Power	+10 dBm
DC Voltage at RF I/O	±25V
Storage Temperature	-55~+125°C
Operating Temperature	-40~+85°C

Ordering information::

ABL0600-01-1640: SMA female connector for both RF input and output
ABL0600-01-1640SMF: SMA male input, SMA female output connectors
ABL0600-01-1640SFM: SMA female input, SMA male output connectors
ABL0600-01-1640SMM: SMA male connectors for both input and output

Revision History:

Revision	Date	Description	Comments
A00	11/18/2007	Initial Release	
A01	10/25/2019	Performance update	BOM Change

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

138 W Pomona Ave, Monrovia, CA 91016
Phone: (626) 305-6666, Fax: (626) 602-3101, sales@wenteq.com, www.wenteq.com