BROADBAND LOW NOISE AMPLIFIER
ABL0600-01-3040

Features:

- Broad bandwidth, specification from 10~6000MHz, usable from 10MHz to 7GHz
- Low VSWR, unconditional stable
- SMA female connector I/O
- Single DC power supply, internal voltage regulator, operating voltage from +9~+15V
- Operating temperature -40~+75°C, storage temperature -45~+125°C

General Description

ABL0600-01-3040 is a two stage InGaP/GaAs HBT based broadband low noise amplifier module operating in the frequency from 10MHz to 6.0 GHz. The amplifier provides 30dB of typical small signal gain with 3.0dB 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	10.0		6000.0
Noise Figure @25°C	dB		3.0	4.0
Nominal SS Gain @25°C	dB	27.0	30.0	33.0
Gain flatness	dB		+/-1.0	+/-1.25
Gain Variation over temperature range	dB		+/-1.0	
P-1dB Compression Point	dBm	+13.0	+14.5	
Output Saturated Power	dBm	+15.5	+16.5	
Output 3rd Order Intercept Point, tested with two tones spaced at 1MHz	dB	22.0	+24.5	
Input VSWR	-		1.5:1	2.0:1
Output VSWR	-		1.5:1	2.0:1
Reverse Isolation	dB	37.0		
Spurious	dBc			-70.0
Operating Temperature	°C	-40.0		+75.0
Survival Temperature	°C	-45.0		+125.0
DC Voltage	V	+9.0	+12.0	+15.0
DC Supply Current	mA	80.0	100 mA	120.0
In/Out connectors		SMA female		
Size		1.5”x0.85”x0.375		

138 W Pomona Ave, Monrovia, CA 91016
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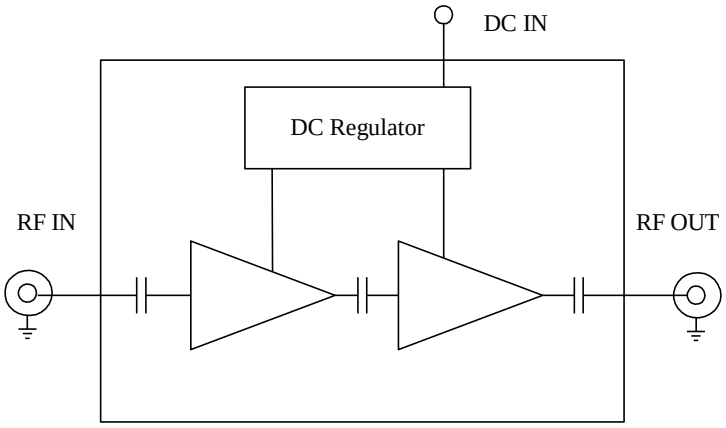
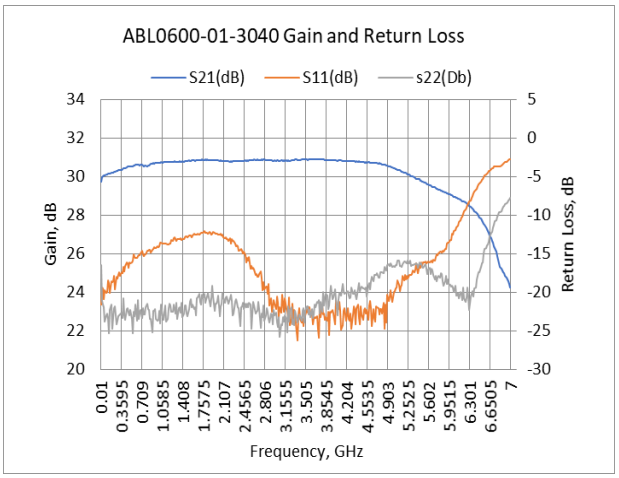
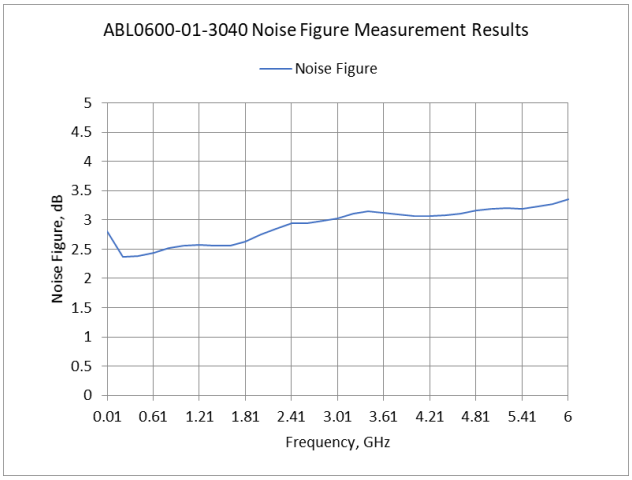
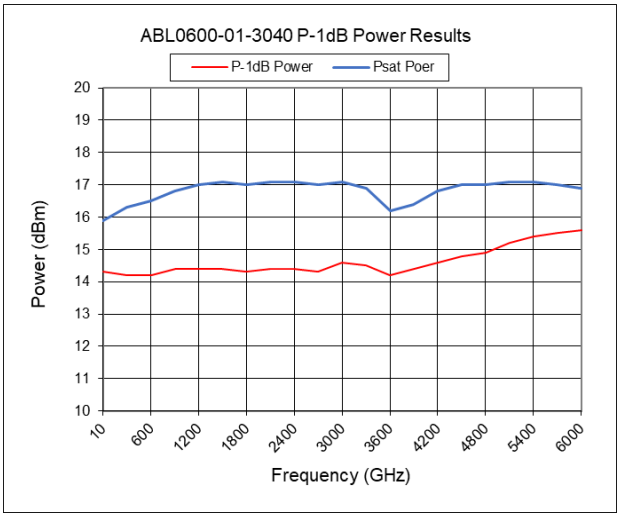
Functional Diagram

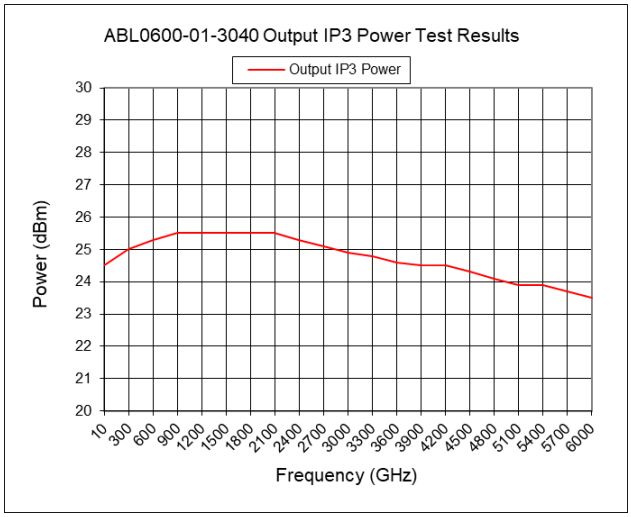


Typical Test Results









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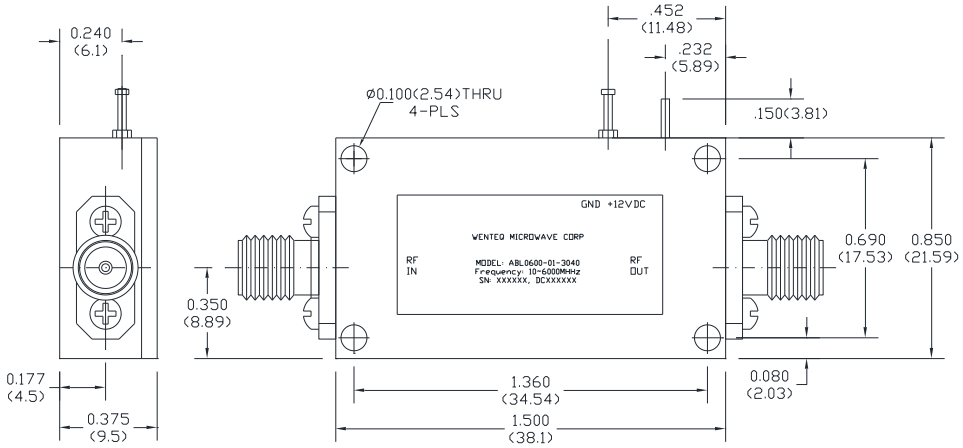
Mechanical Structure:



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
Storage Temperature	-55~+125°C
Operating Temperature	-40~+75°C

Revision History:

Revision	Date	Description	Comments
A00	12/22/2019	Initial Release	

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