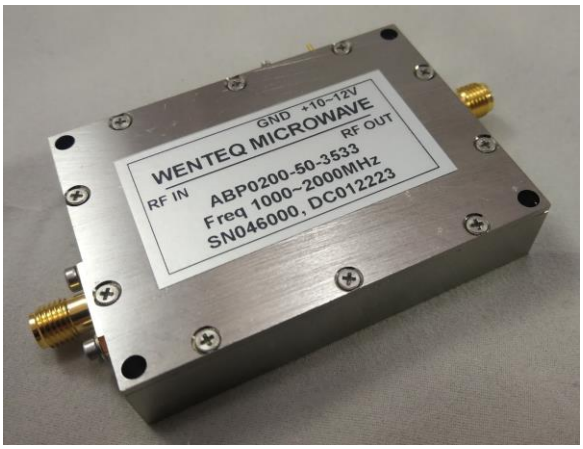
BROADBAND RF POWER AMPLIFIER
ABP0200-50-3533, Revision A01

Features:



- 2 Watt output Power from 1.0GHz to 2.0 GHz
- high gain with good gain flatness
- Low noise figure, high dynamic range
- Low VSWR, unconditional stable
- SMA female connector I/O
- Single DC power supply, Integrated internal voltage regulator
- Operating temperature -40~+75°C, storage temperature -55~+125°C

General Description

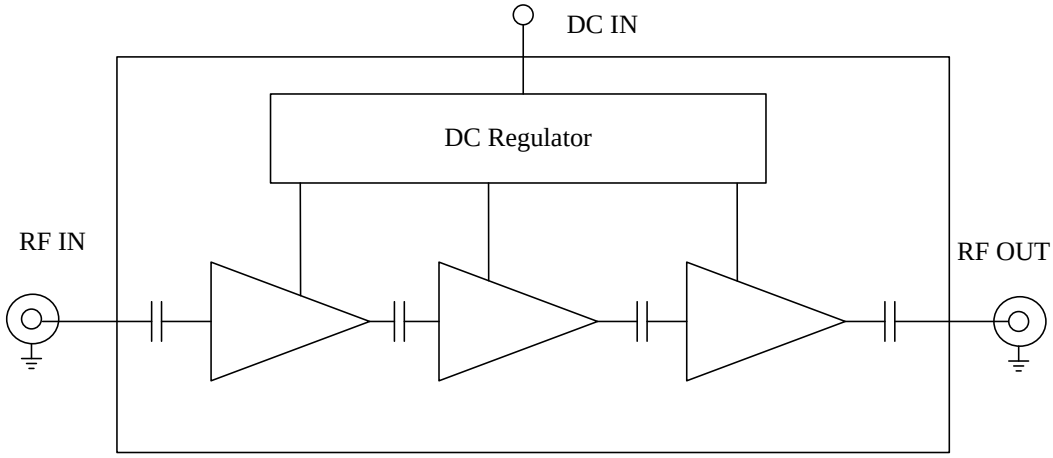
ABP0200-50-3533 is a three stage two way pHEMT broadband power combining amplifier module operating in the frequency range of 1.0GHz to 2.0GHz. The amplifier provides 35dB of small signal gain, +33dBm of typical output power with excellent gain flatness and VSWR at both input and output ports. The amplifier requires only a positive DC power supply, its built-in DC voltage regulator and internal sequencing circuitry makes the application more robust.

Typical Applications

ABP0200-50-3533 is ideal for:

- General laboratory test application
- Academic research
- Defense industry
- Communication systems

Functional Diagram



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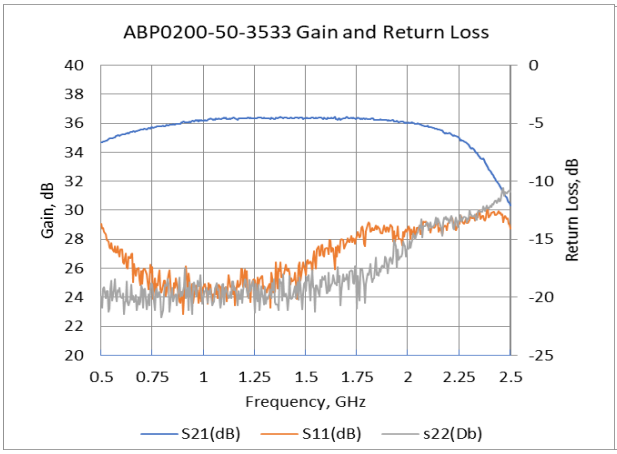
Electrical Specifications

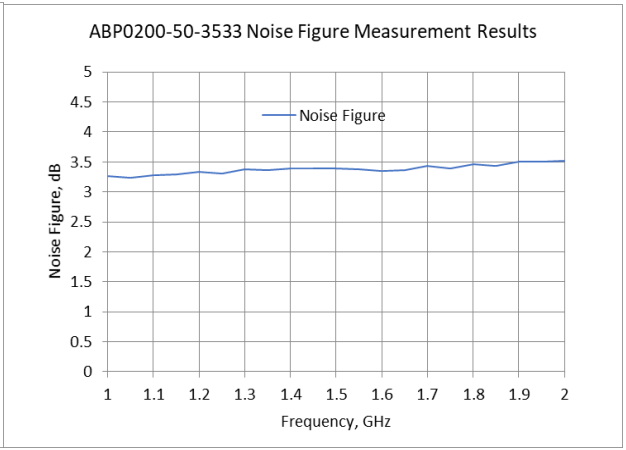
Parameters	Specifications		
	Minimum	Typical	Maximum
Frequency Range	1.0 GHz		2.0GHzz
P-1dB Compression Point	+32dBm	+33dBm	
Output Power at Saturation	+32.5dBm	+33.5dBm	
Output IP3	+38 dBm	+42 dBm	
Nominal SS Gain @25°C	33 dB	35dB	37 dB
Gain flatness		+/-0.75 dB	+/-1.0 dB
Gain Variation		+/-1.5 dB	
Noise Figure @25°C		3.5dB	4.0dB
Input VSWR		1.5:1	1.8:1
Output VSWR		1.4:1	1.6:1
Reverse Isolation	45 dB	55dB	
Non-harmonic Spurious			-60 dBc
Operating Housing Temperature	-40°C		+75°C
Storage Temperature	-55°C		+85°C
DC Voltage	+11.5V	+12 V	+13.0 V
DC Supply Current	800mA	1000 mA	1200 mA
In/Out connectors	SMA female		
Outline Dimensions for ABP0200-50-3533 (without heatsink)	2.4”x1.75”x0.50”		
Outline Dimensions for ABP0200-50-3533-X (with heatsink)	3.0”x5.0”x2.0”		

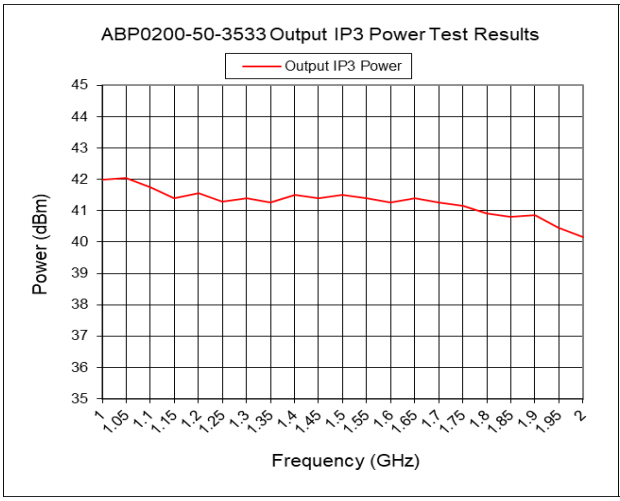
Absolute Maximum Ratings

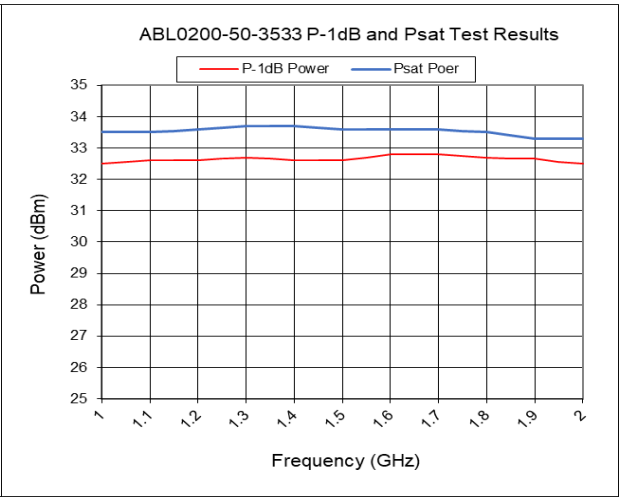
DC Voltage	+15V
RF Input Power	+10dBm
Maximum Load VSWR	3:1
Storage Temperature	-55~+85°C
Operating Housing Temperature	-40~+75°C

Test Results:

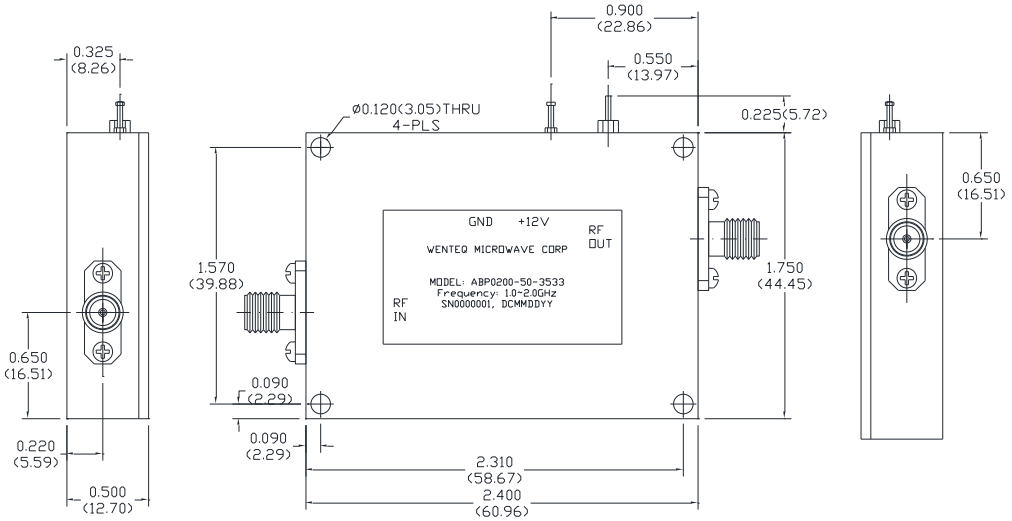




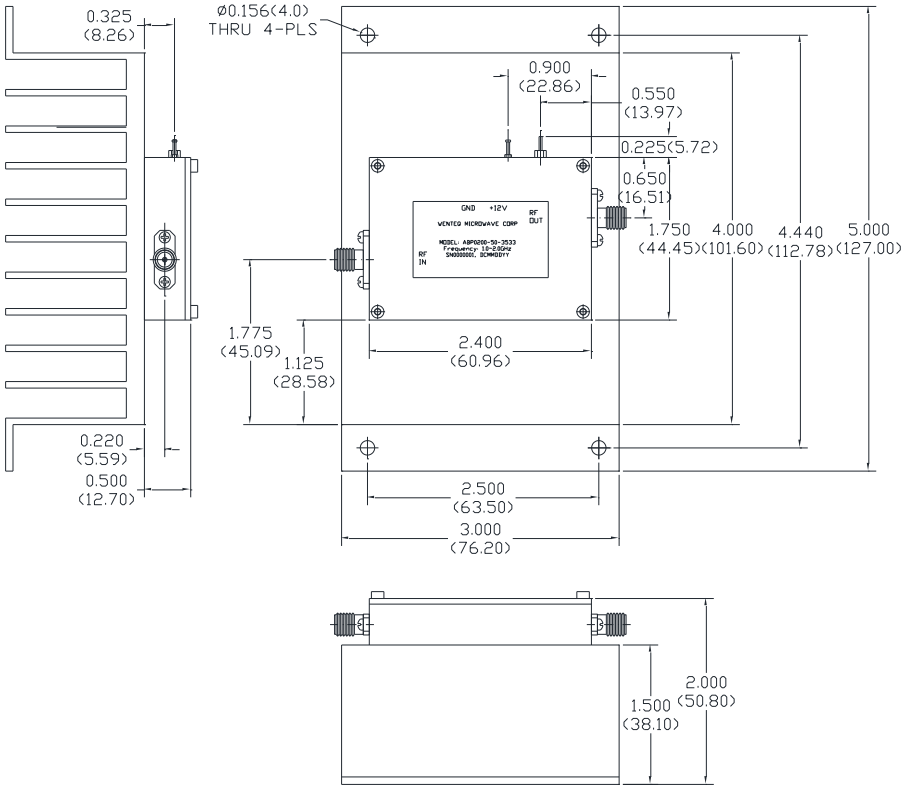




Mechanical Structure:



(a) ABP0200-50-3533 amplifier without heatsink.



(b) ABP0200-50-3533-X amplifier with heatsink.

Note: All units are in inches (mm), and all tolerances are +/-0.005 inch unless otherwise specified.

Housing Material and Surface Finish:

Body and cover material: aluminum
Surface finish: nickel plated
Connector material: Copper
Connector surface finish: gold plated
Heatsink material: Aluminum, surface finish: black anodized

Revision History:

Revision	Date	Description	Comments
A00	06/15/2015	Initial Release	
A01	12/16/2022	Performances change due to transistor change	

WARNING: This device is electrostatic sensitive, please observe precautions for safe handling of this amplifier.

WARNING: This product can expose you to chemicals including Nickel (Metallic) and Gallium Arsenide which are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to **www.P65warnings.ca.gov**.