APBT2018-01 Rev A

2-18 GHz 1 W Power Amplifier



Typical Key Parameters at 23°C

Parameters	Unit	Min	Typical	Max	Notes
Frequency	GHz	2	-	18	
Gain	dB	44	47	-	
Gain Flatness	dB	-	± 2.0	± 2.5	
Input VSWR	-	-	1.6 : 1	2.0 : 1	
Output VSWR	-	-	2.5 : 1	3.0 : 1	
P1dB	dBm	+30	+33	-	
VAC Input	VAC	120	-	240	
Noise Figure	dB	-	3	4	
Connectors (In/Out): 2.92 mm					

Absolute Maximum Ratings*

Parameters	Unit	Min	Max	Notes
Operating Temperature (Case)	C	-40	+70	95 % Humidity, non-condensing
Non-Operating Temperature (Case)	C	-50	+120	95 % Humidity, non-condensing
RF Input Power	dBm	-	0	CW

**Stresses above those listed under "Absolute Maximum Rating" may cause permanent damage to the device. This is a stress rating only and functional operation of the device at these or any other conditions above those indicated in the operational sections of this specification is not implied. Exposure to absolute maximum rating conditions for extended periods may affect device reliability. All STANDARD units are packaged in Aluminum housings that are layered with electroless Nickel and then plated with Gold to eliminate contamination of other adjacent electronic components.*

Product Features

- Frequency Range : 2 to 18 GHz
- Typical Noise Figure: 3 dB at 23°C **(Compared to others >5dB)**
- Typical Gain: 47 dB at 23°C
- Connector Type (input/ Output): 2.92 mm Female.
- State-of-the-Art PHEMT Technology.
- 120-240 VAC Input Power Range.
- Compact Size: 6.57" X 6.67"!
- CE Certified.

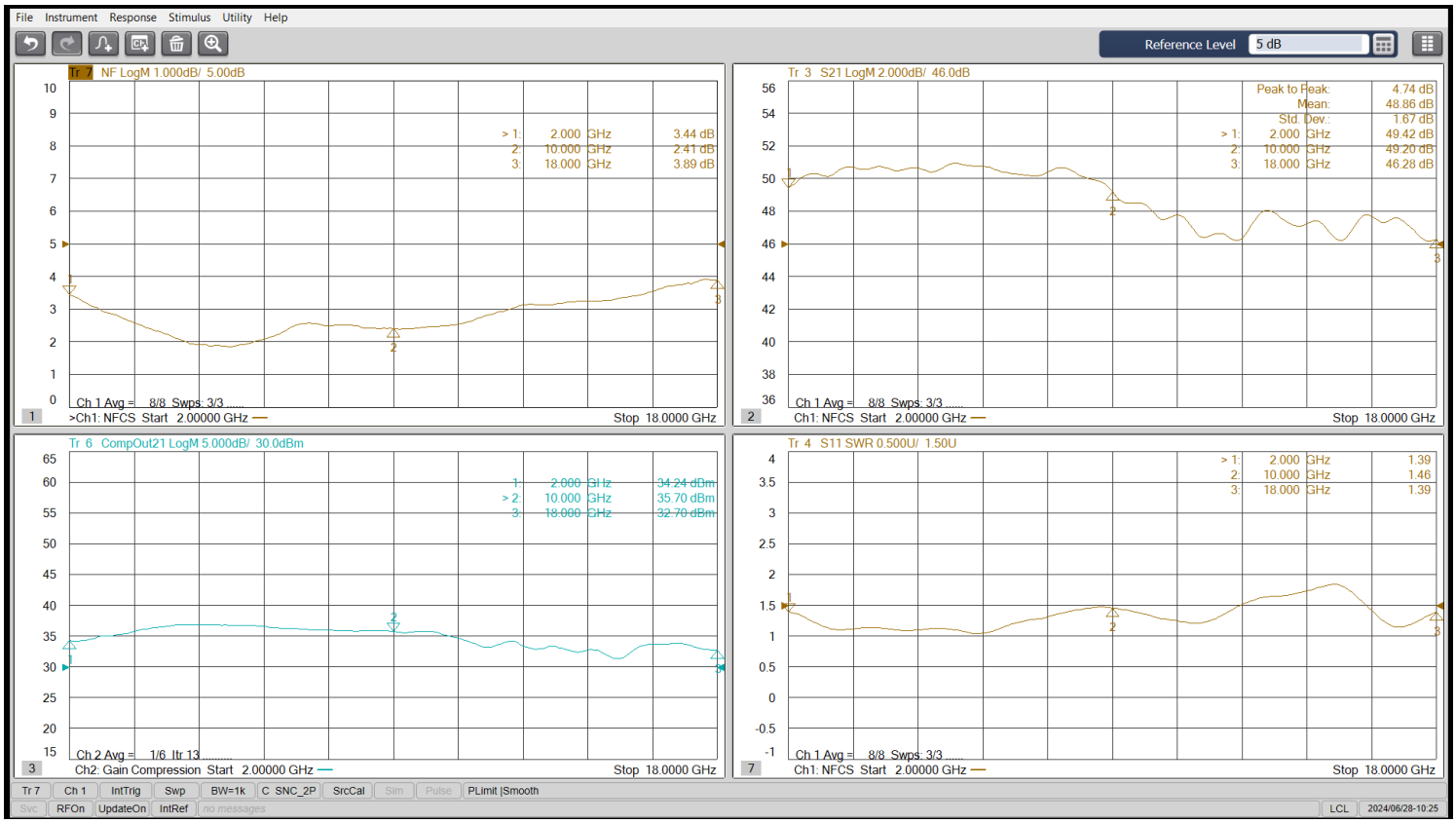
Product Description

The APBT2018-01 is an optimized band HPA which is designed for laboratory testing. The HPA can amplify signals up to 30 dBm in a passband between 2-18 GHz for use in many different testing applications.

Applications

- Wireless Infrastructure
- Power Stress Test
- Military and Aerospace Applications
- Test Instrumentation
- Reliability Testing
- Radar Systems
- 5G Wireless Communications
- Microwave Radio Systems
- TR Modules
- Research and Development
- Cellular Base Stations

Typical Measured Data



Higher than 30 dBM P1dB!

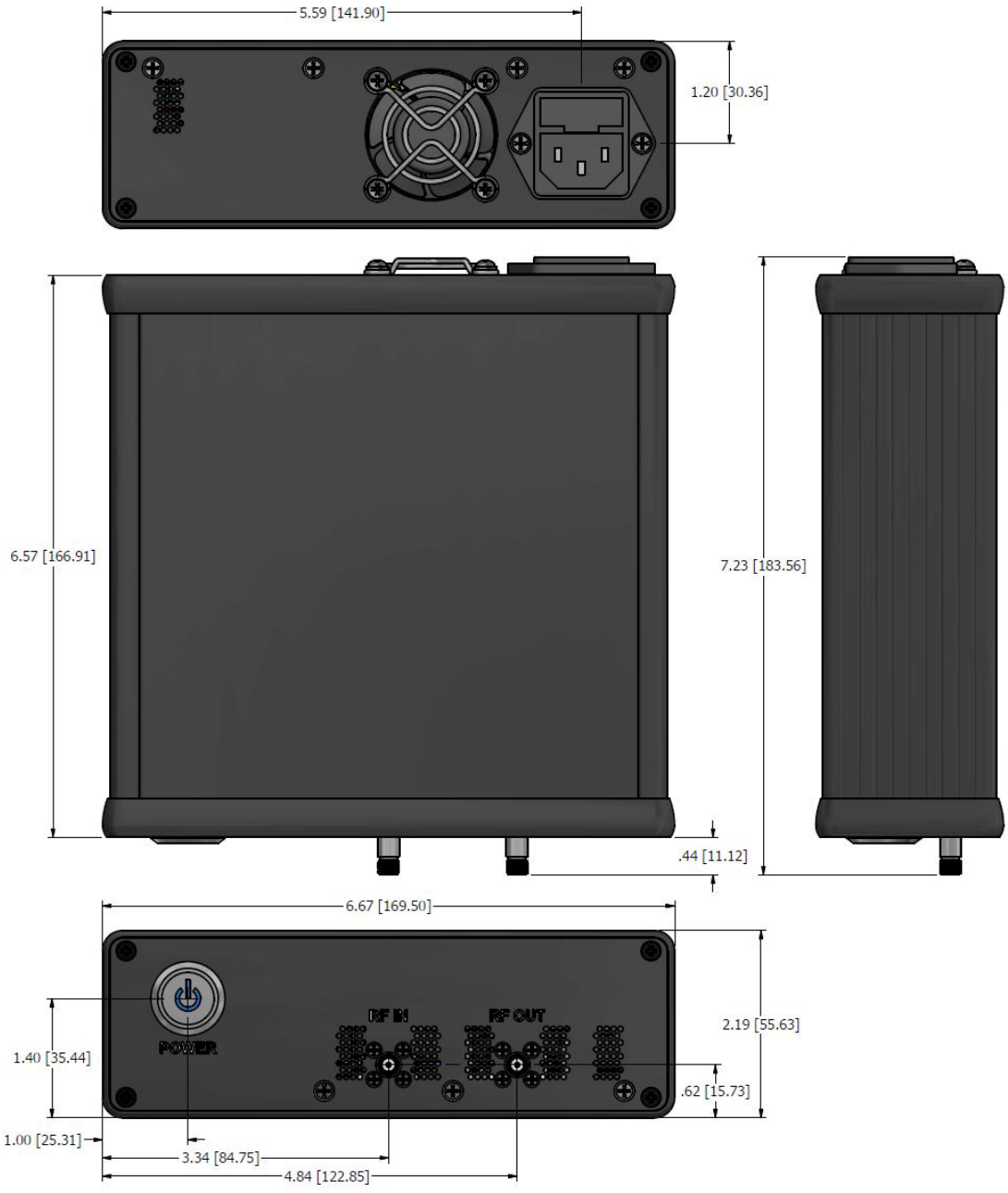
Data taken with Agilent N5242 PNA-X Vector Network Analyzer

Amplifier Use

WARNING: Ensure that the amplifier input and output ports are safely terminated into a proper 50-ohm load before turning on the power. Never operate the amplifier without a load. A proper 50-ohm load is defined as a load with impedance less than 1.9 : 1 or return loss larger than 10 dB relative to 50 Ohm within the specified operating band width.

In most cases, Amplitech benchtop amplifiers will withstand severe mismatches without damage. However, operation with poor loads is discouraged. If prolonged operation with poor or unknown loads is expected, an external device such as an isolator or circulator should be used to protect the amplifier. Ensure that the power is off when connecting or disconnecting the input or output of the amp. Prevent overdriving the amplifier. Do not exceed the recommended input power level. Proper electrostatic discharge (ESD) precautions are recommended to avoid performance degradation or loss of functionality.

Outline Drawing



Dimensions are shown in Inches(Millimeters)