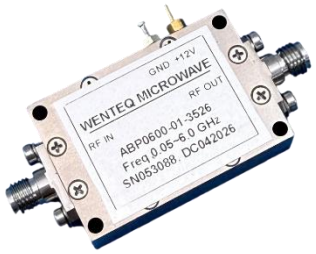
BROADBAND RF POWER AMPLIFIER
ABP0600-01-3526 Revision A00

Features

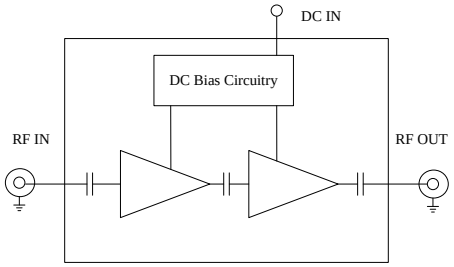


- Broad band operation from 0.05GHz to 6.0GHz
- Low VSWR, unconditional stable
- SMA female connector I/O
- Single DC power supply, internal voltage regulator, operating voltage from +10V~+13V
- Operating temperature -40~+75°C, storage temperature -50~+85°C

General Description

ABP0600-01-3526 is a two stage pHEMT broadband power amplifier module operating in the frequency of 0.05GHz to 6GHz. The amplifier provides 35dB of small signal gain, +26dBm of typical output power at 1dB gain compression, excellent gain flatness and good VSWR at both input and output. The amplifier requires only a positive DC power supply; its built-in DC voltage regulator and internal sequencing circuitry makes the application more robust.

Functional Diagram



Electrical Specifications

Parameters	Units	Specifications		
		Minimum	Typical	Maximum
Frequency Range	GHz	0.05		6.0
Small Signal Gain @25°C	dB	32.0	35.0	38.0
Noise Figure @0.05-0.5GHz @0.5-6.0GHz	 dB dB		 3.5 1.5	 7.0 2.5
P-1dB Compression Point	dBm	+25.0	+26.0	
Output IP3	dBm	+30.0	+35.0	
Gain flatness	dB		+/-1.0	+/-1.5
Gain Variation	dB		+/-2.0	
Input VSWR	-		1.8:1	2.5:1
Output VSWR	-		2.0:1	2.5:1
Reverse Isolation	dB	50.0	70.0	
Non-harmonic Spurious	dBc			-60.0
Operating Temperature	°C	-40.0		+75.0
Survival Temperature	°C	-50.0		+85.0
Recommended DC Voltage	V	+11.0	+12.0	+13.0
DC Supply Current	mA	350	385	550
In/Out connectors	-	50Ω SMA female		
Outline Dimensions (not including SMA and feed pin)	inches	1.5”x1.0”x0.40”		

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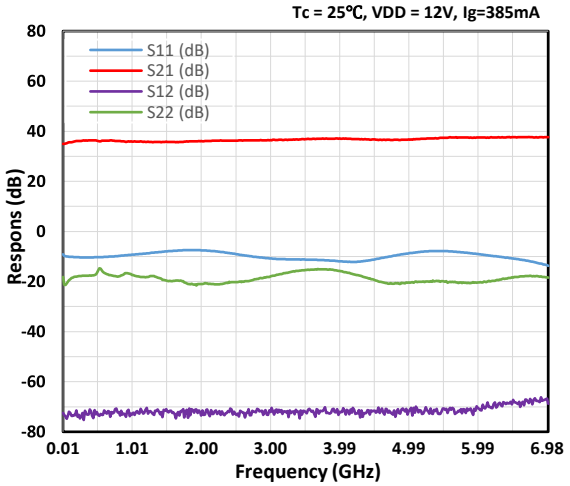
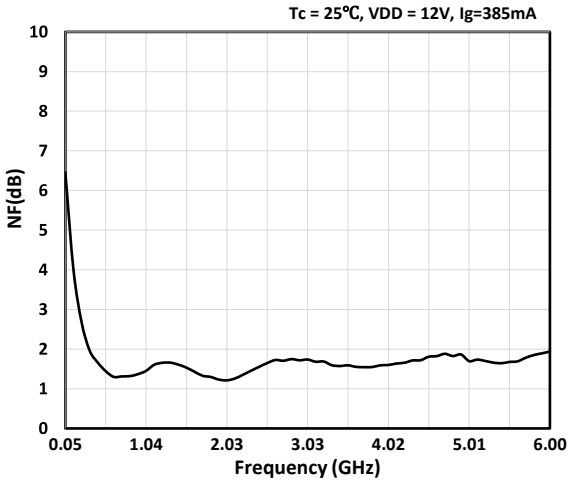
Typical Test Results

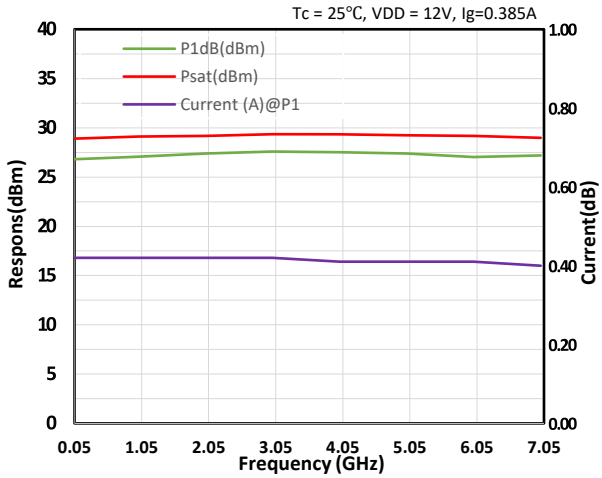
Gain & ReturnLoss



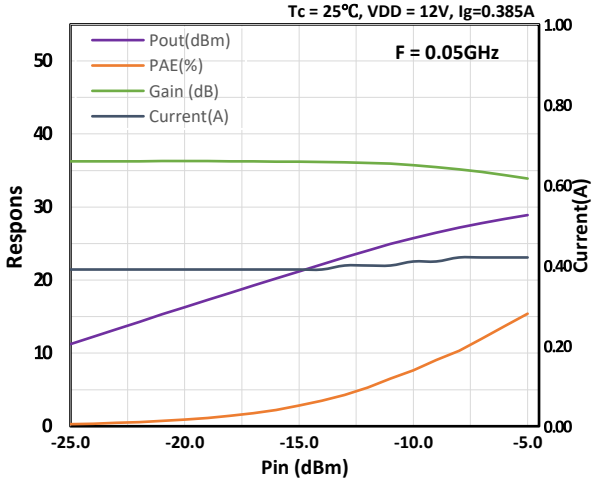
Noise Figure



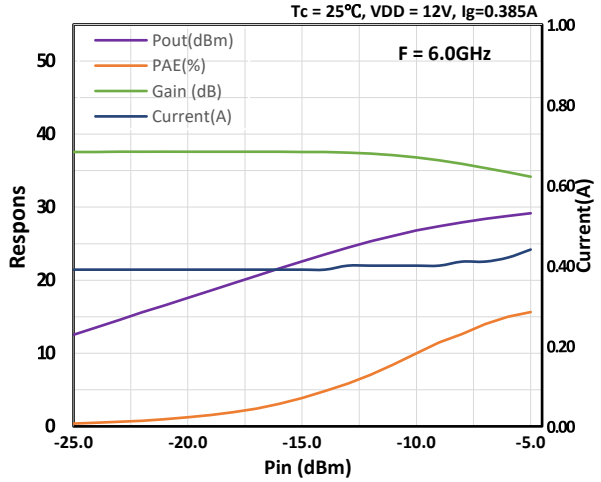
P1dB, Psat & Current vs. Frequency



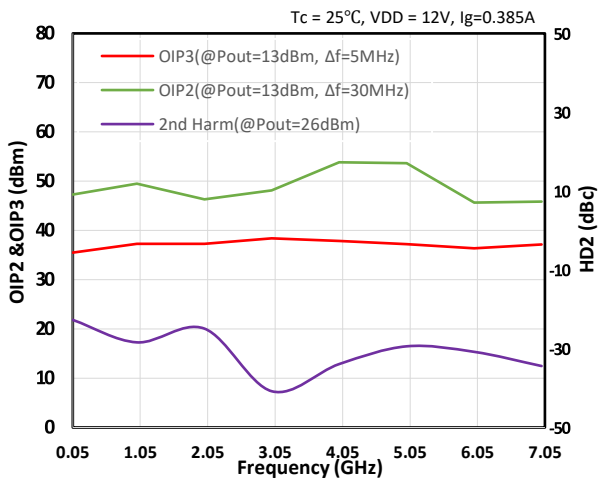
Output Power & Current vs. Input Power



Output Power & Current vs. Input Power



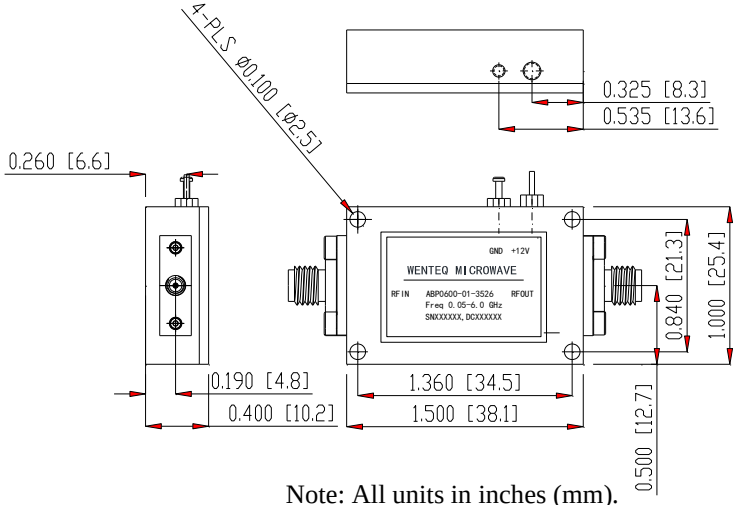
P1dB, Psat & Current vs. Frequency



Absolute Maximum Ratings

DC Voltage	+13V
RF Input Power	+10dBm
Maximum Load VSWR	3:1
Operating Temperature	-40~+70°C
Storage Temperature	-50~+85°C

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

Revision History

Revision		Date	Description	Comments
A00		04/16/2026	Initial Release	

WARNING: This device is electrostatic sensitive, please observe precautions for safe handling 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**.