BROADBAND RF POWER AMPLIFIER
ABP0270-15-3533, Revision A00

Features

- 2 Watt typical P-1dB output Power from 0.4GHz to 2.7GHz
- high gain with good gain flatness
- 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~+85°C

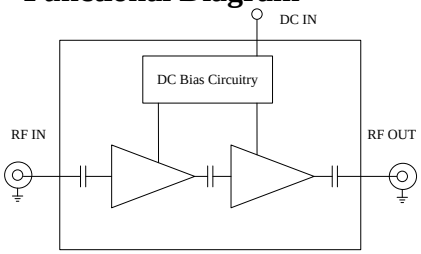
General Description

ABP0270-15-3533 is a two stage pHEMT broadband power amplifier module operating in the frequency of 0.4GHz to 2.7GHz. The amplifier provides 35dB of small signal gain, +33dBm 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.

Typical Applications

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

Functional Diagram



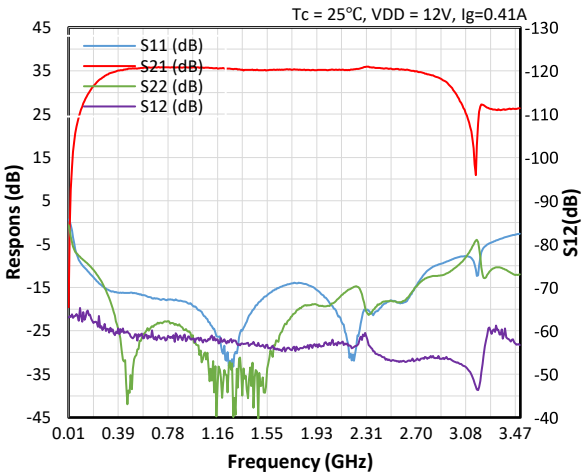
Electrical Specifications

Parameters	Units	Specifications		
		Minimum	Typical	Maximum
Frequency Range	GHz	0.4		2.7
P-1dB Compression Point	dBm	+32.0	+33.0	
Output Power at Saturation	dBm	+32.5	+33.0	
Output IP3	dBm	+38.0	+41.0	
Nominal SS Gain @ 25°C	dB	33.0	35.0	37.0
Gain flatness	dB		+/-0.75	+/-1.0
Gain Variation	dB		+/-1.5	
Noise Figure @ 25°C	dB		4.0	5.0
Input VSWR	-		1.5:1	1.8:1
Output VSWR	-		1.4:1	1.6:1
Reverse Isolation	dB	45.0	60.0	
Non-harmonic Spurious	dBc			-60.0
Operating Temperature	°C	-40.0		+75.0
Storage Temperature	°C	-55.0		+85.0
DC Voltage	V	+11.5	+12.0	+13.0
DC Supply Current @ RF OFF	A		0.4	0.6
DC Supply Current @ 2W	A	0.6		1.2
In/Out connectors	-	50 Ohm SMA female		
Outline Dimensions	Inches[3]	2.4×1.75×0.50		
Outline Dimensions for ABP0270-15-3533-X with heatsink	Inches[3]	3.0×5.0×2.0		

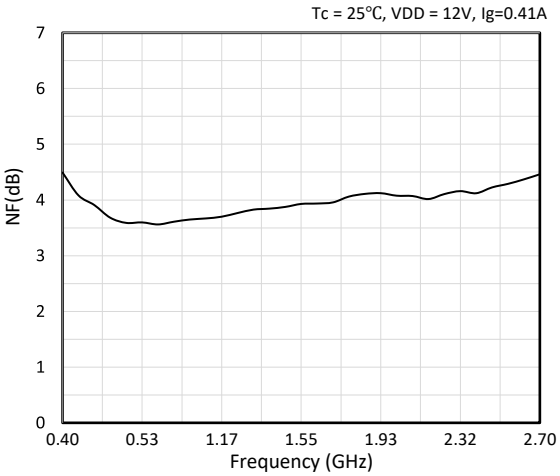
138 W Pomona Ave, Monrovia, CA 91016
Phone: (626) 305-6666, Fax: (626) 602-3101, sales@wenteq.com, www.wenteq.com

ypical Performance:

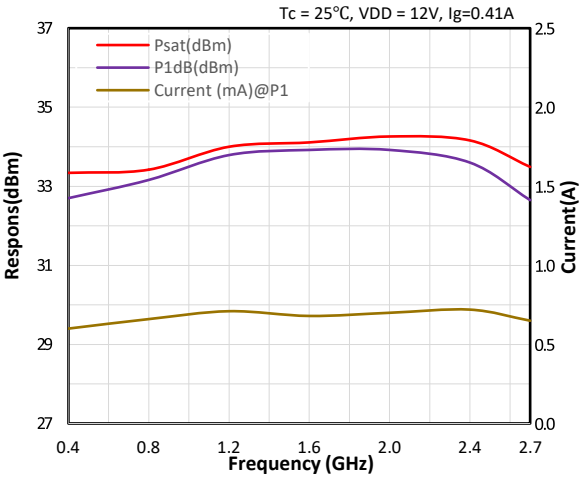
Gain & ReturnLoss vs. Frequency



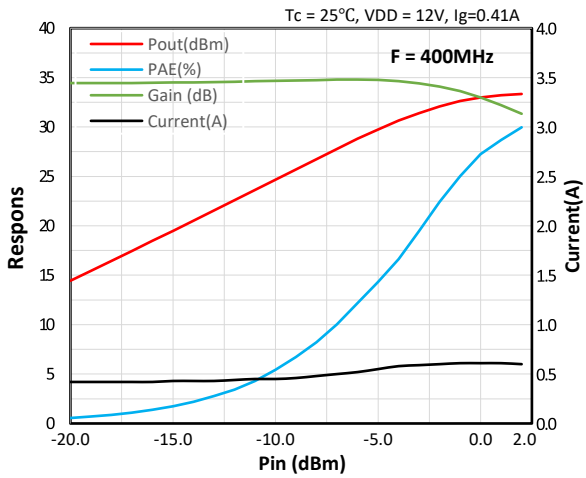
Noise Figure



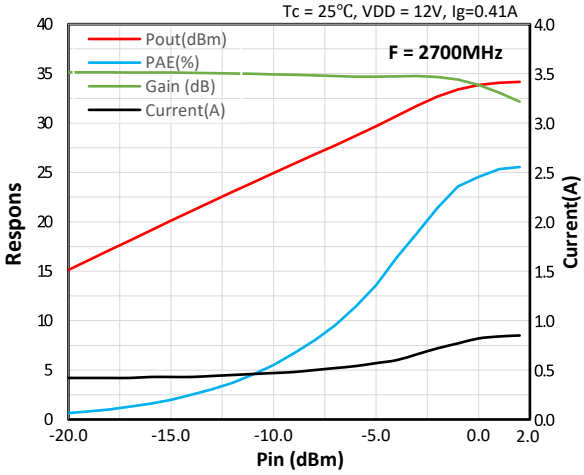
P1dB & Psat& IP3 Current vs. Frequency



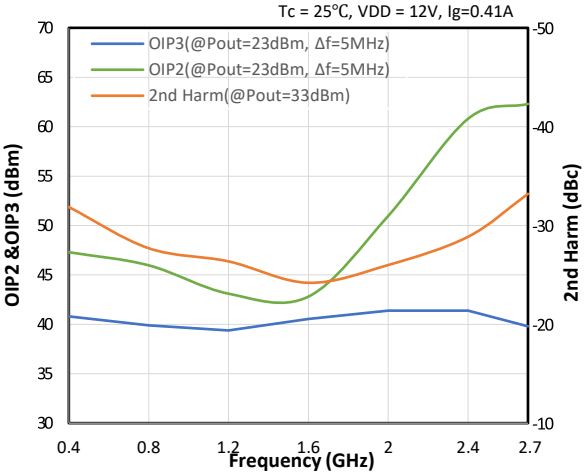
Output Power & Current vs. Input Power



Output Power & Current vs. Input Power



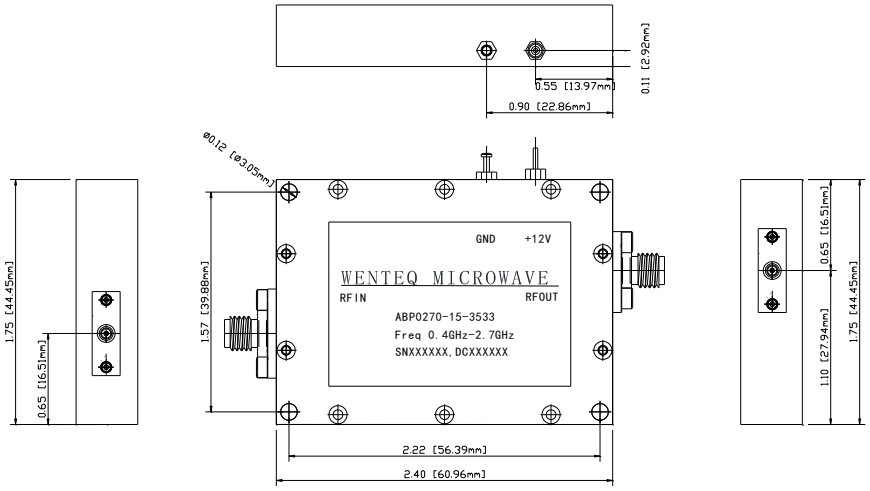
Output IP2 & IP3 & 2nd Harm. vs. Freq.



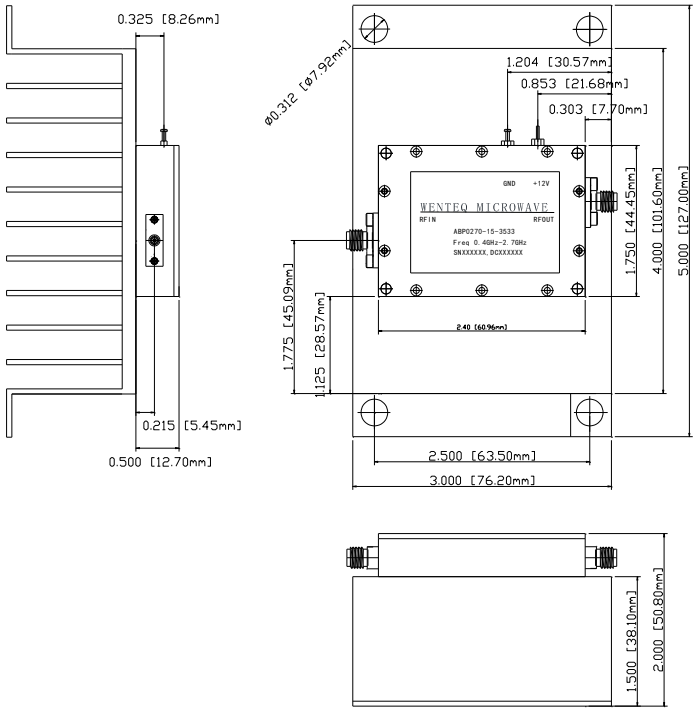
138 W Pomona Ave, Monrovia, CA 91016
Phone: (626) 305-6666, Fax: (626) 602-3101, sales@wenteq.com, www.wenteq.com

Mechanical Structure:

(a) Amplifier



(b) Amplifier with heatsink



Note: All units are in inches (mm). 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

Absolute Maximum Ratings

DC Voltage	+13V
RF Input Power	+10dBm
Maximum Load VSWR	3:1
Operating Temperature	-40~+75°C
Storage Temperature	-55~+85°C

Revision History

Revision	Date	Description	Comments
A00	12/18/2025	Initial Release	

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**.