

Features:

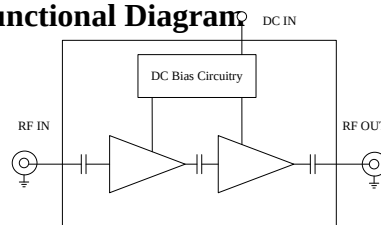
- 2Watt typical P-1dB output Power from 30MHz to 3.0GHz
- high gain with good gain flatness
- Low VSWR, unconditional stable
- Single DC power supply, Integrated internal voltage regulator
- Operating temperature -40~+70°C, storage temperature -55~+125°C

**General Description**

ABP0300-01-3333 is a two-stage pHEMT broadband power amplifier module operating in the frequency of 30MHz to 3GHz. The amplifier provides 33dB of small signal gain, +33dBm of typical output P-1dB power, excellent gain flatness and good VSWR at both input and output. The amplifier requires only a single 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	MHz	30		3000
P-1dB Compression Point @+25°C	dBm	+31.8	+33.0	
Output Psat @+25°C	dBm	+32.8	+33.5	
Output IP3(@Pout/tone=23dBm, Δf=1MHz)	dBm	+36.0	+38.0	
Nominal SS Gain @25°C	dB	30.0	33.0	36.0
Gain flatness	dB		+/-0.8	+/-1.2
Gain Variation Over Operating Temperature	dB		+/-1.0	
Noise Figure @25°C	dB		4.0	5.0
Input VSWR	-		1.6:1	1.8:1
Output VSWR	-		1.7:1	2.0:1
Reverse Isolation	dB	45.0	50.0	
Non-harmonic Spurious	dB			-60.0
Operating Temperature	°C	-40.0		+70.0
Survival Temperature		-55°C		+125°C
DC Voltage		+14.5V	+15 V	+16V
DC Supply Current				
@RF OFF	A	0.2	0.25	0.3
@Output power 2W	A		0.55	0.7
RF In/Out connectors		50 Ohm SMA female		
Outline Dimensions (without heatsink)	inches	2.08"x1.08"x0.50"		
Outline Dimensions (with heatsink)	inches	2.40"x4.60"x1.90"		

0.325 [8.3]

0.435 [11.0]

0.215 [5.5]

0.500 [12.7]

R0.060 [R1.5] THRU 4-PLS

0.900 [22.9]

0.550 [14.0]

WENTEQ MICROWAVE

RF IN ABP0300-01-3333 RF OUT

Freq 0.03-3.0 GHz

SXXXXXXXXXXXXXXXXXXXX

GND +15V

1.900 [48.3]

2.080 [52.8]

0.900 [22.9]

1.080 [27.4]

(a) ADE 0500-01 55W amplifier without heatsink.

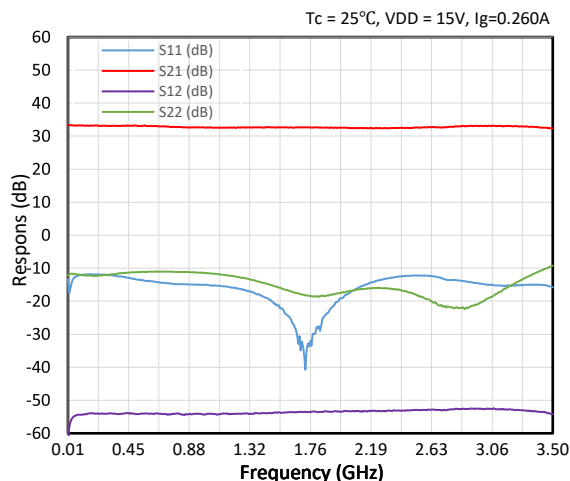
Note: All units are in inches (mm), and all tolerances are +/-0.005 inch unless otherwise specified.

Housing Material and Surface Finish:

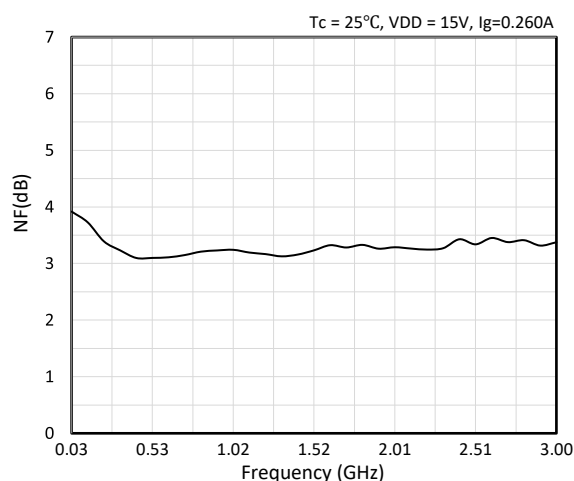
Body and cover material: aluminum
Surface finish: nickel plated
Connector material: Copper
Connector surface finish: gold plated
Heatsink material: Aluminum, surface finish: black anodized

Typical Performance

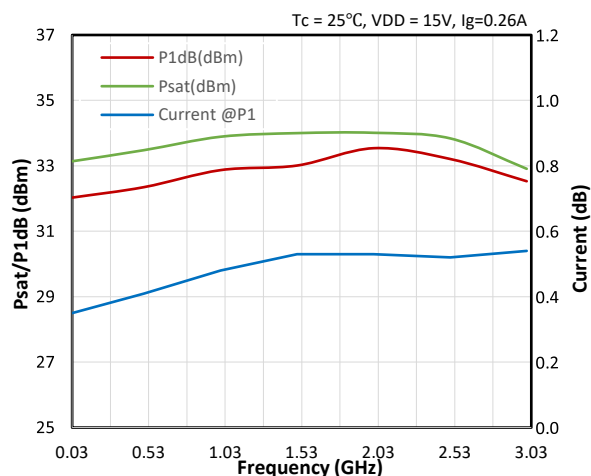
Gain & ReturnLoss



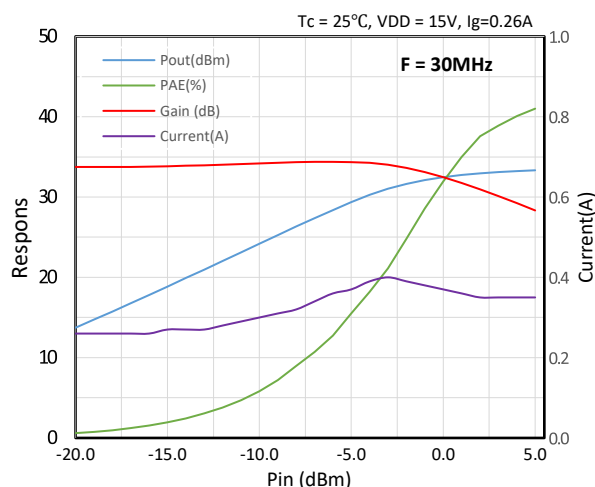
Noise Figure



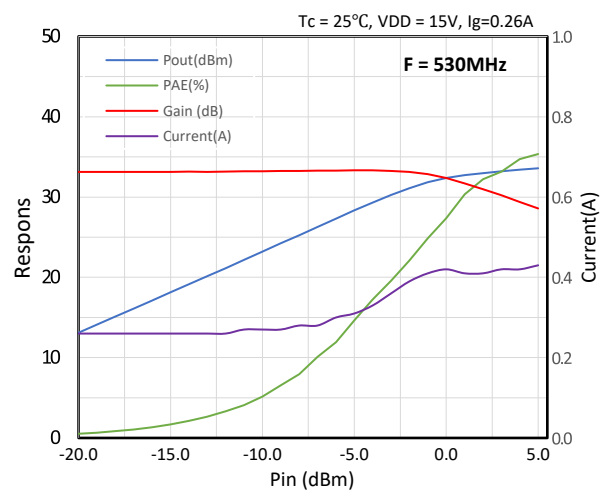
Psat & P1dB & Current vs. Freq.



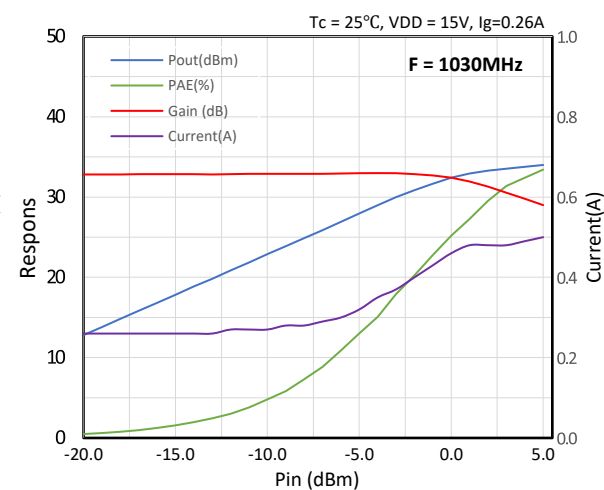
Out Power & Current vs. Input Power

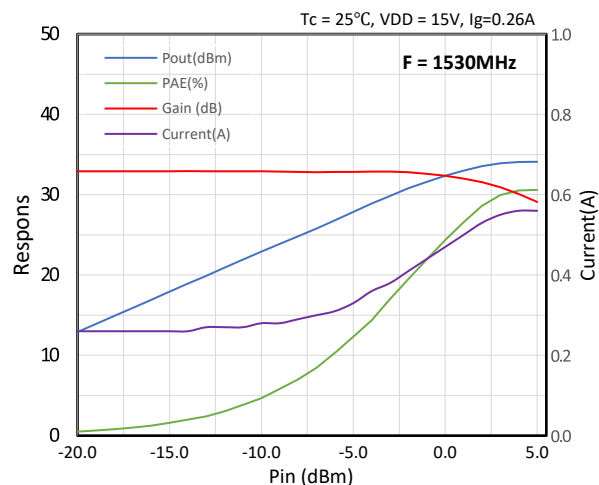
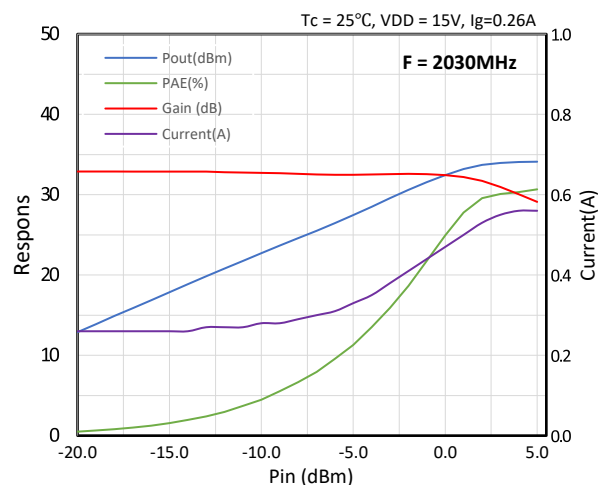
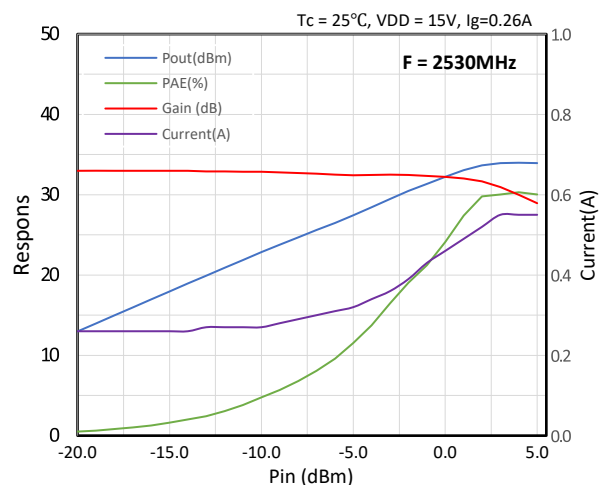
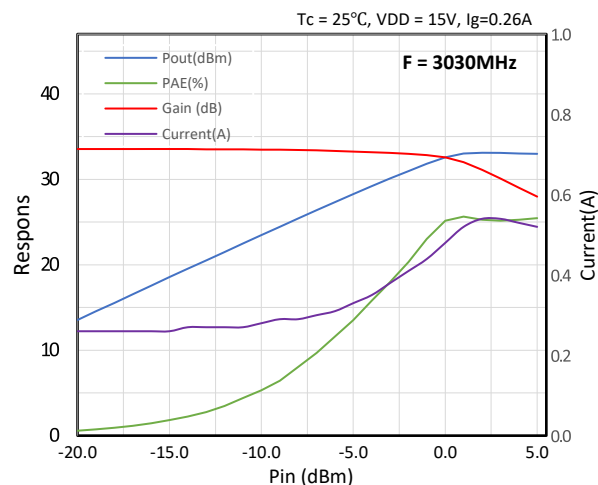
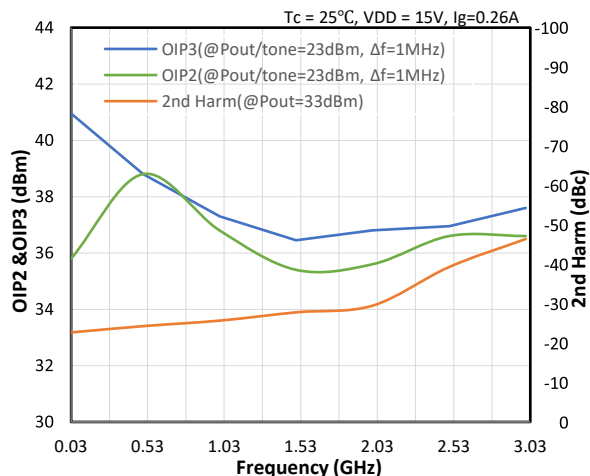


Out Power & Current vs. Input Power



Out Power & Current vs. Input Power



Out Power & Current vs. Input Power**Out Power & Current vs. Input Power****Out Power & Current vs. Input Power****Out Power & Current vs. Input Power****Output IP2 & IP3 & 2nd Harm. vs. Freq.**

Absolute Maximum Ratings

DC Voltage	+16V
RF Input Power	+10dBm
Maximum Load VSWR	3:1
Storage Temperature	-55~+125°C
Operating Temperature	-45~+70°C

Note: External heat sink required for operation

Revision History:

Revision	Date	Description	Comments
A00	07/30/2026	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.