BROADBAND POWER AMPLIFIER
ABP0600-01-3330 Revision A00

Features:

- Broad band operation from 0.03 GHz to 6.0 GHz
- Low VSWR, unconditional stable
- SMA female connector I/O.
- Operating temperature -40~+75°C, storage temperature -55~+125°C

General Description

ABP0600-01-3330 is a two stage GaAs MMIC HEMT based broadband power amplifier module operating in the frequency from 30MHz to 6.0GHz. The amplifier provides 33dB of small signal gain and 30dBm typical output power at 1 dB gain compression point. The amplifier requires only a single positive DC power supply.

Electrical Specifications

Parameters	Units	Specifications		
		Minimum	Typical	Maximum
Frequency Range	GHz	0.03		6.0
Small Signal Gain @25°C	dB	30.0	33.0	36.0
Noise Figure @25°C 60~100MHz 100~6000MHz	dB		 7.0 2.0	 10.0 3.0
Output Power at 1dB Gain Compression Point 60~400MHz 400~6000MHz	dBm	 +29.0 +30.0	 +30.0 +31.0	
Output Power at 3dB Gain Compression Point 60~400MHz 400~6000MHz	dBm	 +32.0 +33.0	 +33.0 +34.0	
Output Power at Saturation	dBm	+33.0	+34.5	
Output IP3	dBm	+38.0	+42.0	
Gain flatness	dB		+/-1.25	+/-1.75
Gain Variation over temp.	dB		+/-1.75	
Input VSWR			1.8:1	2.5:1
Output VSWR			1.8:1	2.5:1
Reverse Isolation	dB	50.0		
Non-Harmonic Spurious	dBc			-60.0
Operating Temperature	°C	-40		+75
Survival Temperature	°C	-55		+125
DC Voltage	V	+14.0	+15.0	+16.0
DC Supply Current	mA	800 mA	850 mA	1100 mA
In/Out connectors		50 Ohm SMA Female		
Outline Dimensions excluding connectors ABP0600-01-3330	Inches(mm)	1.9(48.3)×1.0(25.4)×0.4(10.2)		
Outline with heatsink ABP0600-01-3330-X	Inches(mm)	3.0(76.2)×5.0(127.0)×2.5(63.5)		

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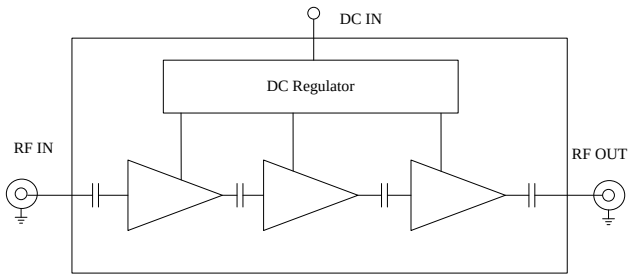
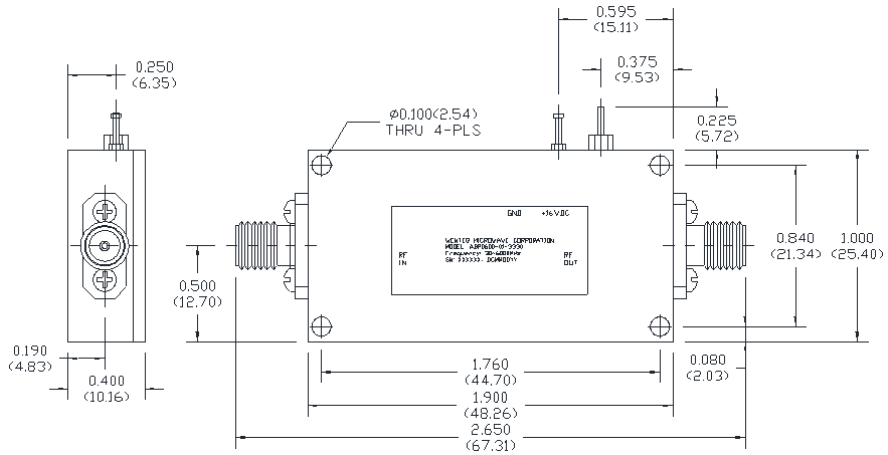
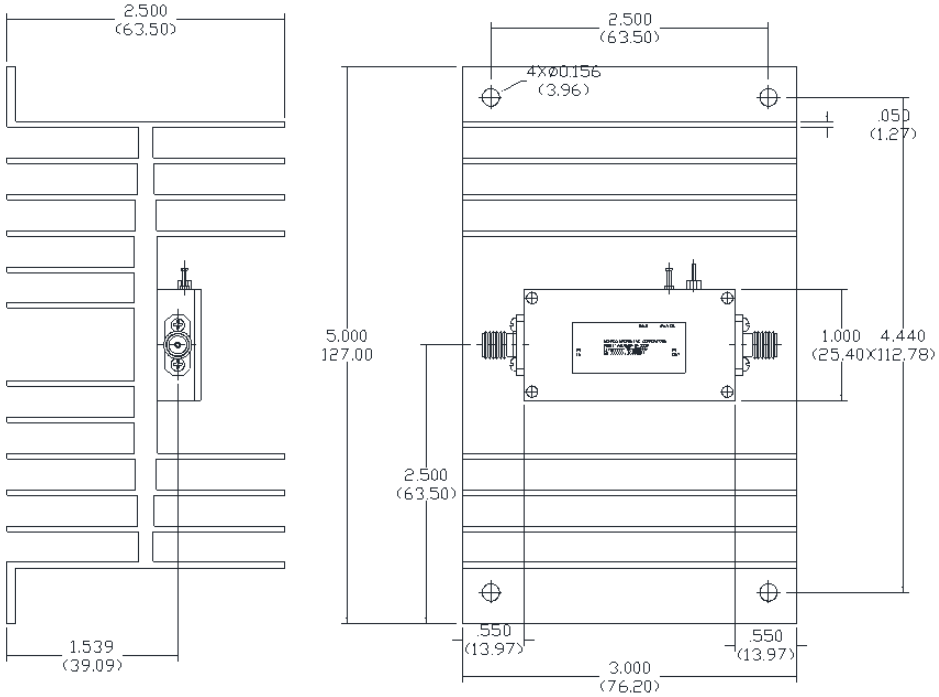
Functional Diagram



Mechanical Structure:



(a) ABP0600-01-3330 Amplifier without heatsink



(b) ABP0600-01-3330-X Amplifier with heatsink

Note: All units are in inches (mm). 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

Absolute Maximum Ratings

DC Voltage	+18V
RF Input Power	10 dBm
Storage Temperature	-55~+125°C
Operating Temperature	-40~+75°C

Revision History:

Revision	Date	Description	Comments
A00	03/11/2025	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**.