HIGH POWER RF AMPLIFIER
50-2500 MHz, 37 dBm (5W)
ABP0250-02-5037

Rev. A00

Features

- 5W output Power over 50~2500MHz
- Low VSWR, unconditional stable
- SMA(F) connector
- Single +28V power supply, Integrated internal voltage regulator
- Operating temperature -40~+60°C, storage temperature -50~+80°C

Electrical Specifications, T_A=25°C, Vdc=28V.

Parameters	Units	Specifications		
		Minimum	Typical	Maximum
RF Frequency Range	MHz	50		2500
Nominal SS Gain @25°C	dB	46	50	54
Output Power for 4dB Compression (P4dB)	W		5	
Gain Flatness	dB		+-2	
Input Return Loss	dB	-10		
Operating Temperature	°C	-40		+60
Survival Temperature	°C	-50		+80
DC Voltage	V		+28	
Total Supply Current	mA		200	
IN/OUT connections		SMA female		
Outline Dimension (exclude connectors)	Inch	4.00”x2.00”x0.875”		

Absolute Maximum Ratings

DC Voltage	V	+30
RF Input Power	dBm	0
Maximum Load VSWR		3:1
Operating Temperature	°C	-40 ~ +60
Storage Temperature	°C	-50 ~ +80

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Typical Performance

Gain & Input Return Loss vs. Freq

Figure 1. Small Signal Gain S21 and Return Loss S11 vs. Frequency @VDC= 28V.

Output Return Loss vs. Freq

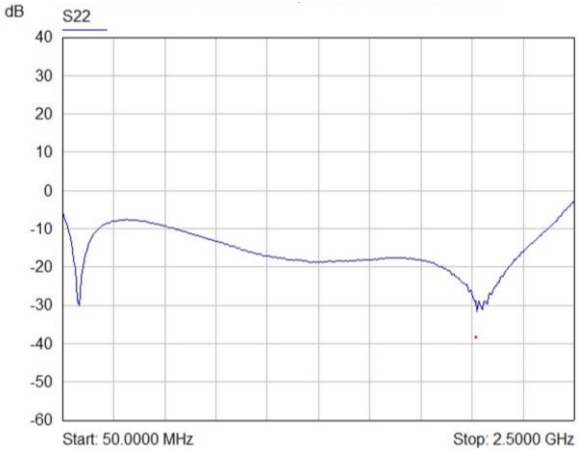

Figure 2. Out Return Loss @ VDC=28V test.

Out Power & Current vs. In Power @Freq=2.5Ghz, VCC=28V

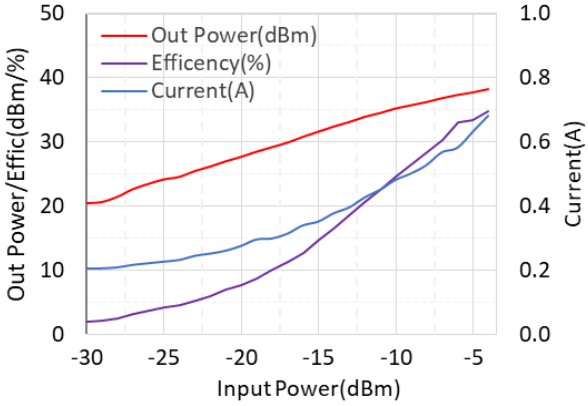

Figure 3. Out Power & Current vs. Input power @ Freq=2.5Ghz, VDC=28V test.

Out Power & Current vs. Frequency

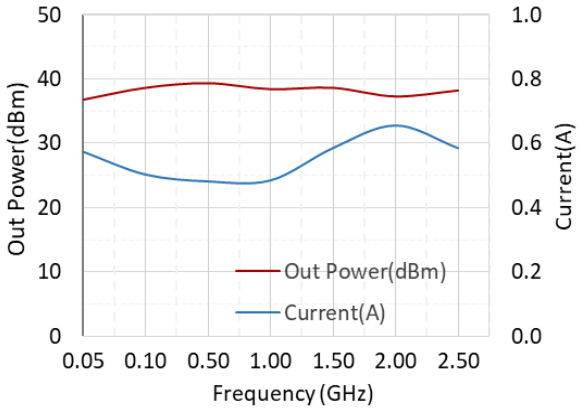

Figure 4. Large Signal Out Power and Large Current vs. Frequency @VDC= 28V, Large Current @ Pout=37dBm test.

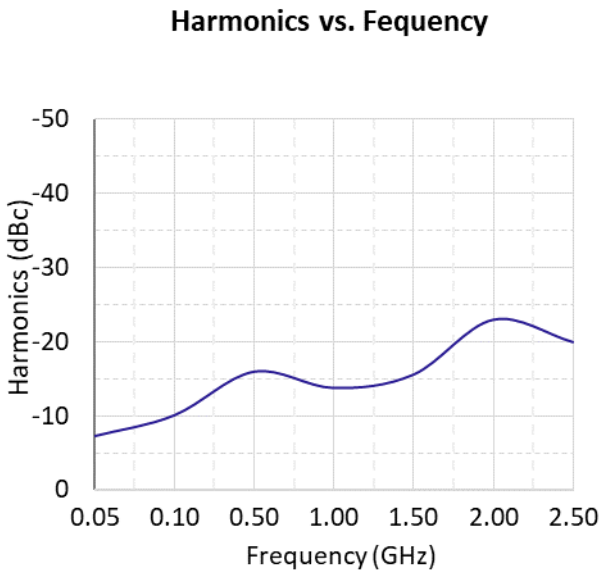

Figure 5. Harmonics vs. Freq @ VDC=28V & Pout=37dBm test

Mechanical Structure

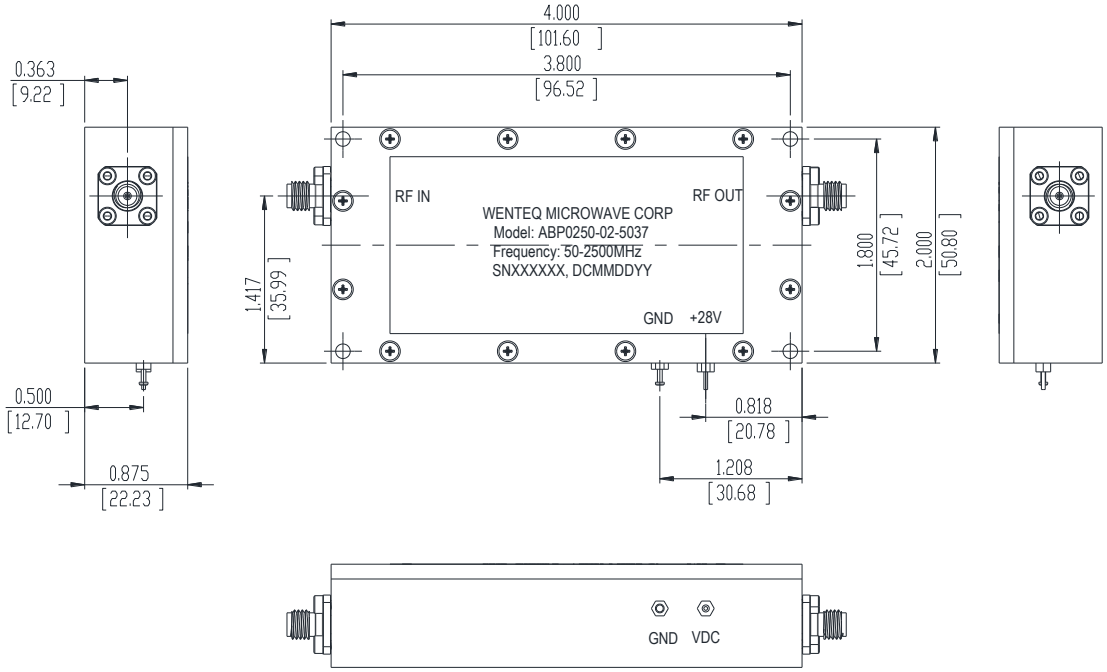

Fig 5. ABP0250-02-5037 broadband mixer outline

Note: All units in inches [mm]

Housing Material and Surface Finish

Body and cover material: aluminum
Surface finish: nickel plated
Connector material: Stairless Steel
Connector surface finish: Passivation

Revision History

Revision	Date	Description	Comments
A00	01/19/2024	Initial Release	