

## 18 to 40 GHz Wide Band Low Noise Amplifier APT4-18004000-4008-D20



### Features

- 18.0 to 40.0 GHz Frequency Range
- 3 dB typical N.F.
- 41 dB typical Gain
- Gain Flatness  $\pm 3.0$  dB typ
- Internal DC Regulator
- Reverse Voltage Protection
- MIL-883, MIL-45208 construction and reliability

### Applications

- Wideband Communication Systems
- Military & Space
- Point-to-Multi-Point Radios
- Test Instrumentation

### Product Description

The APT4-18004000-4008-D20 is a wideband, medium gain low noise amplifier with good Flatness across the band. It is designed mainly for wideband telecommunications, such as for Military and Space, Point-to-Point Radios and Test Equipment. The input signal can be as large as +16 dBm.

### Key Specifications at 23°C

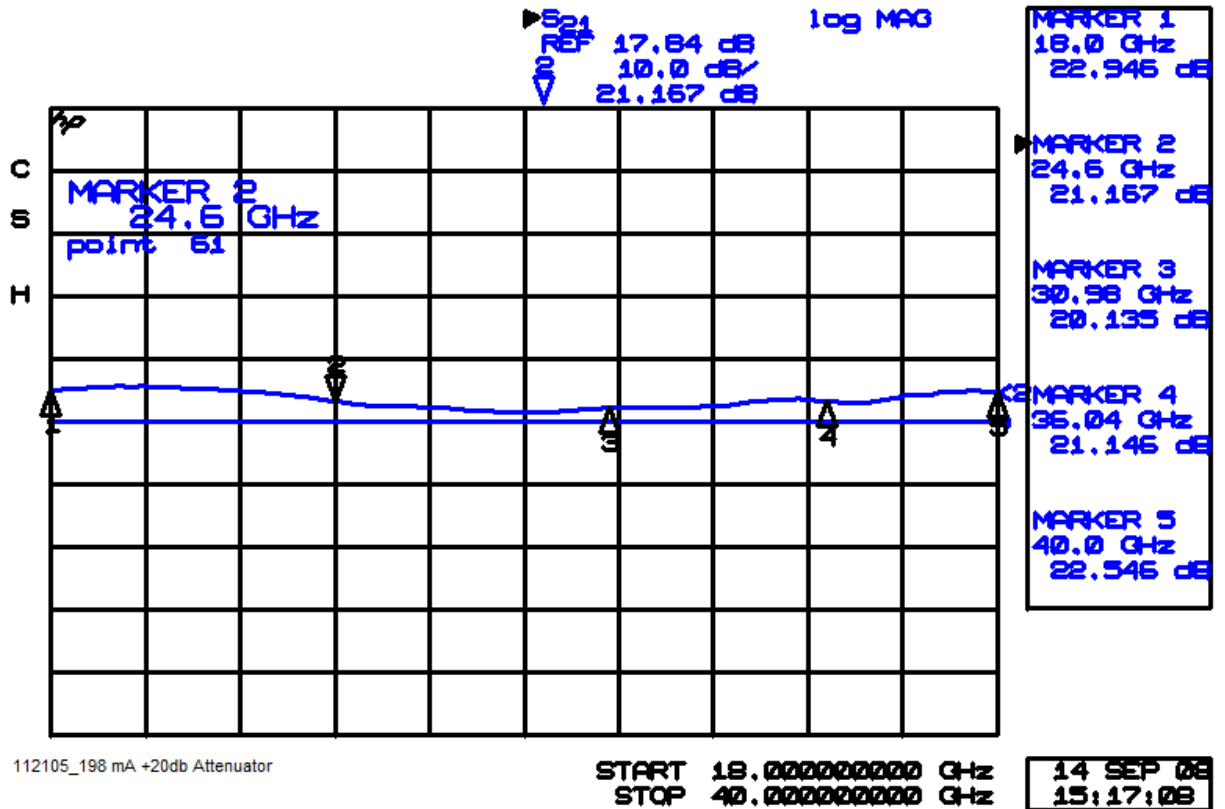
Parameter	Unit	Minimum	Typical	Maximum	Notes
Frequency	GHz	18.0	-	40.0	Customizable
Gain	dB	37	41	45	Customizable
Gain Flatness	dB	-	$\pm 3.0$		Customizable
In/Out VSWR	-	2.1	2.3	2.5	Customizable
P@1dB	dBm	+8	+12	-	Customizable
Input Power	dBm	-50		+10	
DC Power	V@mA	+11	+12	+16	@145mA
Noise Figure	dB	-	3.0	3.5	@23°C
Outline/Package	-	-	-	-	D20

## Absolute Maximum Ratings\*

Parameter	Unit	Minimum	Maximum	Notes
Operating Temperature (Case)	°C	-40	+70	95% humidity, non-condensing
Storage Temperature (Case)	°C	-54	+85	95% humidity, non-condensing
RF Input Power	dBm	-	+16	CW
Die Junction Temp (Tj)	°C	-	+150	For GaAs devices
Positive Supply Voltage	V	-	+16	At +V DC terminal
Negative Voltage	V	-	-10	Reverse Voltage

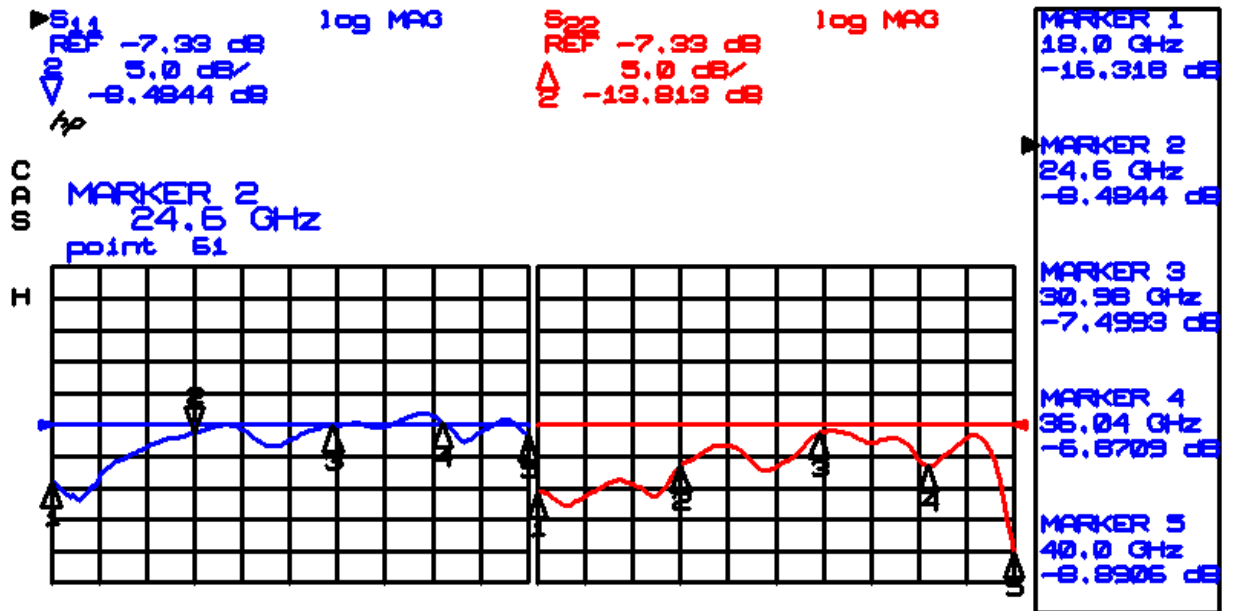
\*Stresses above those listed under "Absolute Maximum Rating" may cause permanent damage to the device. This is a stress rating only and functional operation of the device at these or any other conditions above those indicated in the operational sections of this specification is not implied. Exposure to absolute maximum rating conditions for extended periods may affect device reliability.

## Typical Measured Data -GAIN



20 attenuator was used at input

## Typical Measured Data –RETURN LOSS



112105 198mA

START 18.00000000 GHz  
STOP 40.00000000 GHz

START 18.00000000 GHz  
STOP 40.00000000 GHz

14 SEP 06  
15:13:06

## Typical Measured Data –NOISE FIGURE

Frequency	Noise Figure	Gain
18.00000000 GHz	2.7598 dB	30.706 dB
20.20000000 GHz	2.0308 dB	32.233 dB
22.40000000 GHz	2.1587 dB	33.402 dB
24.60000000 GHz	2.4769 dB	31.718 dB
26.80000000 GHz	2.8316 dB	28.993 dB
29.00000000 GHz	2.6186 dB	28.110 dB
31.20000000 GHz	2.6432 dB	29.271 dB
33.40000000 GHz	2.7593 dB	31.924 dB
35.60000000 GHz	3.1485 dB	30.873 dB
37.80000000 GHz	3.2885 dB	34.985 dB
40.00000000 GHz	3.1226 dB	32.912 dB

## Outline Drawing

