Rantelon
RF/Microwave Electronics

AM-43002

LINEAR LOW NOISE AMPLIFIER 50 - 3000MHz

Product Information: Rev 1B, Issue November 2012, Revised June 2013

AM-43002 is designed as compact low noise amplifier. Low noise figure and wide bandwidth make AM-43002 very attractive in low signal receiving applications.

KEY FEATURES

- Wide bandwidth
- Low noise figure <1dB
- High gain
- High output power
- Solid case
- Small dimensions
- Wide voltage range

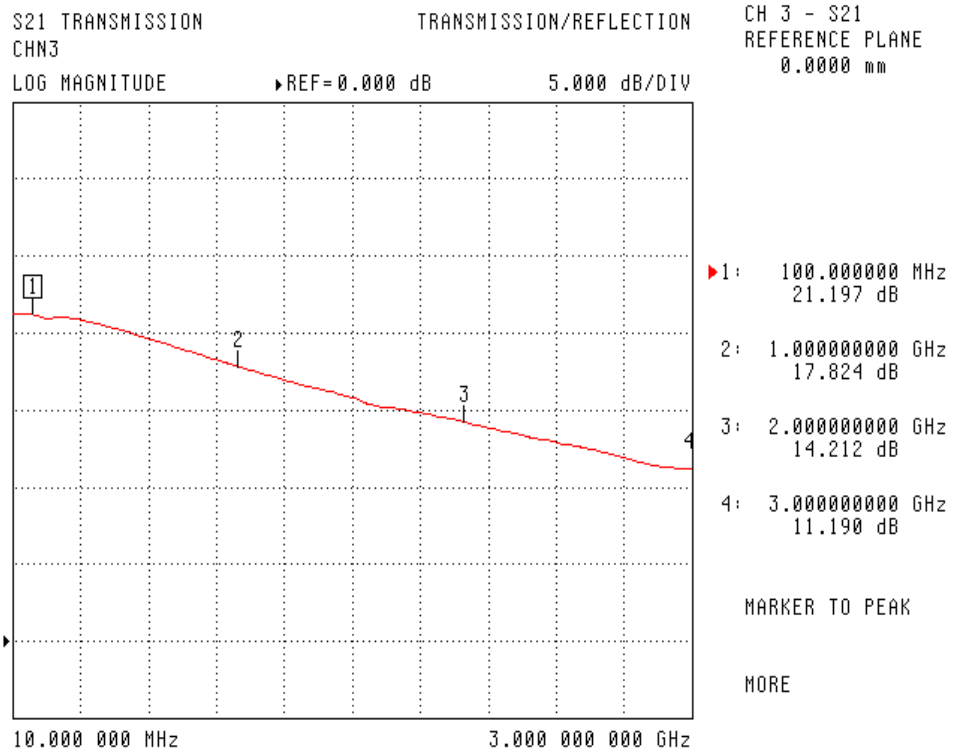
APPLICATIONS

- Radio-monitoring
- Front-end amplifiers
- IF signal amplification
- Cable loss compensation
- Cellular networks
- Laboratories
- Test equipment

Image is for illustrative purposes only.

PRODUCT DESCRIPTION

AM-43002 represents special purpose low noise amplifier. Thanks to well thought-out design the amplifier AM-43002 has very low noise figure and high stable gain. Amplifying input signal approximately by 15dB, AM-43002 contributes very small it's own noise about only 1dB, due to what it can be possible to improve sensitivuty of a receiver siginificatly.
AM-43002 is equipped with SMA-female connectors. The impedance of input/output is 50 Ohm, what is the most commonly used impedance in such type applications.



Gain vs. Frequency

TECHNICAL SPECIFICATIONS

Absolute maximum ratings

Device voltage*	+20	**V**
CW RF input power **	+10	**dBm**
Operating temperature	-40...+85	**°C**
Total power dissipation	0.5	**W**

* Built-in protection transil diode +22V.
** Normal operation: input is below -20dBm!

RF characteristics*

Frequency range	50-3000									**MHz**
IN/OUT impedance	50/50									**Ohm**
	50	**100**	**250**	**500**	**1000**	**1500**	**2000**	**2500**	**3000**	**MHz**
Gain	21.1	21.2	21.0	20.1	17.8	15.8	14.2	12.5	11.0	**dB**
Noise figure	1.1	0.8	0.7	0.7	0.8	0.8	0.9	1.0	1.1	**dB**
Return loss IN	>10	>10	>10	>12	>12	>12	>10	>8	>8	**dB**
Return loss OUT	>12	>17	>19	>19	>19	>19	>19	>19	>19	**dB**
Isolation	25.0	25.0	24.5	24.0	22.5	21.0	20.0	19.0	19.0	**dB**
Output 1dB	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	**dBm**
Output IP3 (Δf=1MHz, +0dBm each)	24.0	24.5	25.0	25.5	26.0	26.5	27.0	27.0	26.5	**dBm**

* Typical values measured at temperature T=+25°C.

DC and mechanical characteristics

Operating device current	32	**mA**
Operating device voltage (DC)	+5…+15	**V**
RF IN/OUT Connector	SMA female/ SMA female	
DC connector	Soldering terminals	
Enclosure type	Indoor**, aluminium	
Dimensions (without connectors)	50x40x13	**mm**

** In case of special need, outdoor type enclosure can be ordered also. Ask Rantelon for more details.

Rantelon reserves the right to change the specification without notice.