

AMP40100034-R

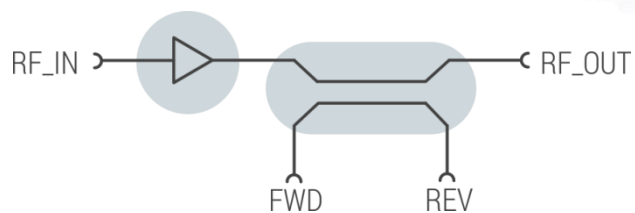
4 W Wideband Amplifier 19" Device 40 ... 1000 MHz

Features

- output power +36 dBm typ.
- high efficiency
- open / short stable
- FWD and REV power ports
- VLF suppression
- AC mains supply

Applications

- research and development (R&D)
- FM, DAB, DVB-T
- ISM315, 434, 868
- laboratory equipment



At a Glance

AMP40100034-R from Becker Nachrichtentechnik is a 19", 1 U amplifier device in 50 Ohm technology. The robust electric and mechanic design gives solid operations over a long time. The amplifier works stable over a wide frequency range with many octaves. The amplifier offers a wide AC mains supply voltage range. The presence of AC power is indicated by a LED at the front side.

Special Features

An internal directional coupler at the output of the amplifier offer power measurements of FWD (forward) and REV (reverse) RF power. The ports of the coupler are available on the rear side of the device. The RF connectors for FWD and REV power are SMA female. A 50 ohms SMA resistor to terminate the REV or FWD port is part of delivery.

Rugged Design

The amplifier device has aluminium housing. The internal amplifier module and the directional coupler are additional built in milled aluminum cases to give best shielding for avoiding EMI influences caused by radio signals coming from the environment. The RF connectors on the unit rear side are N female type.

RF Specification

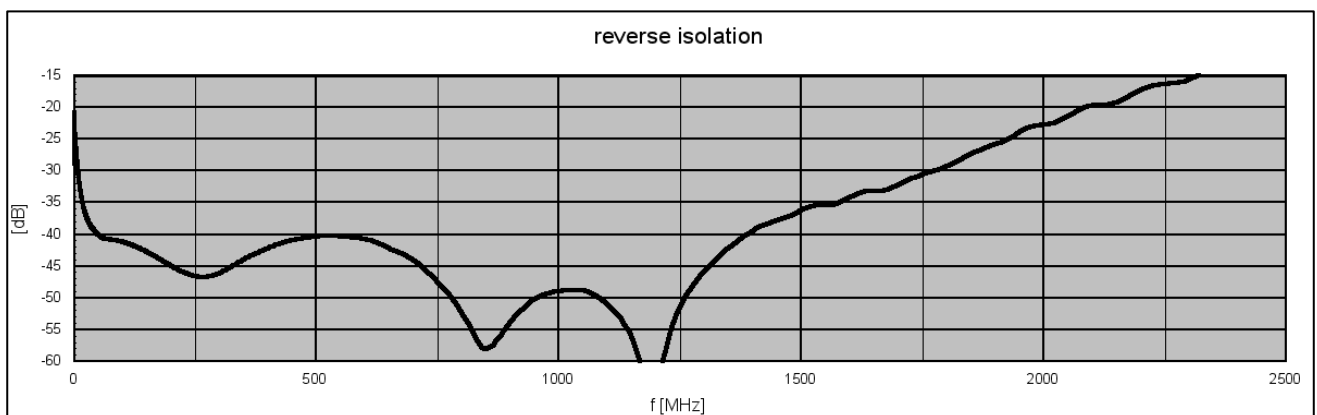
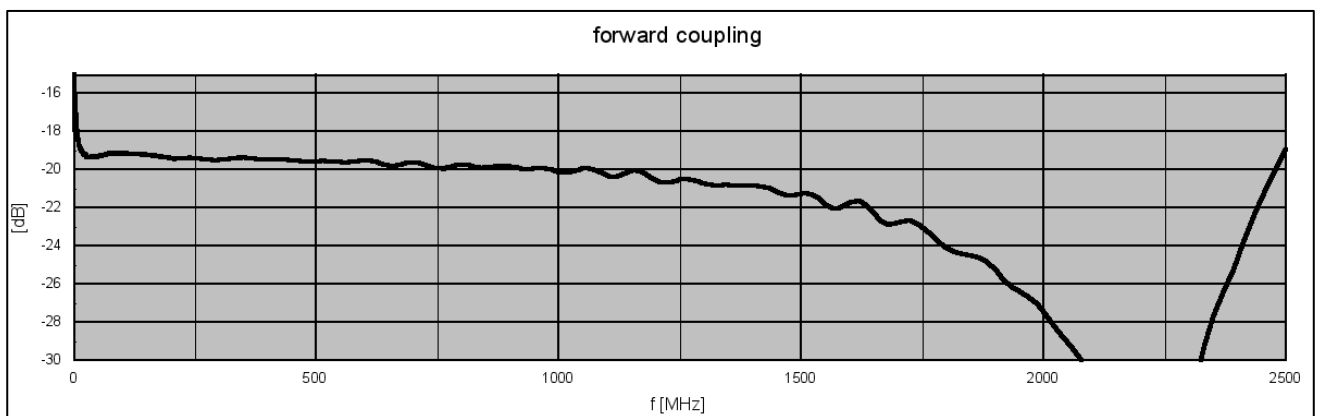
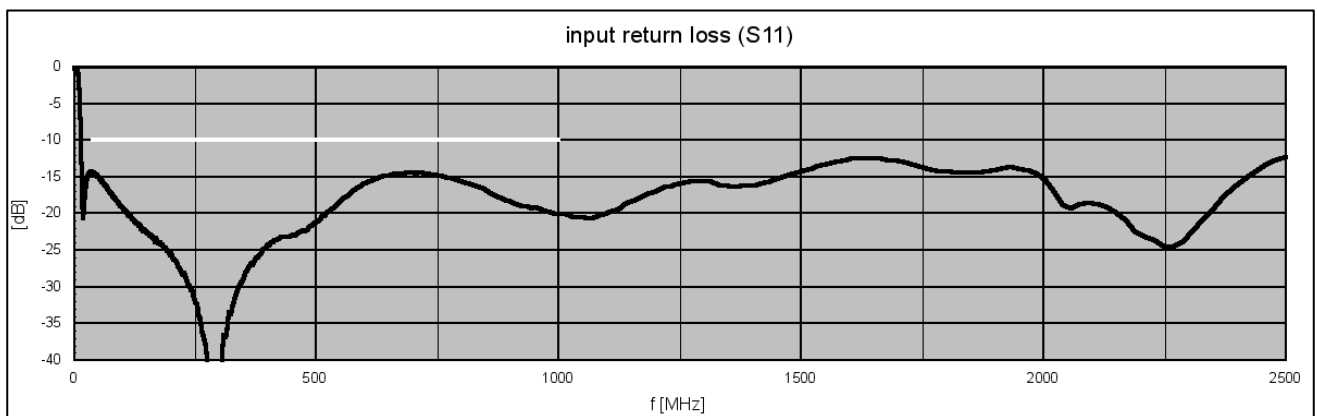
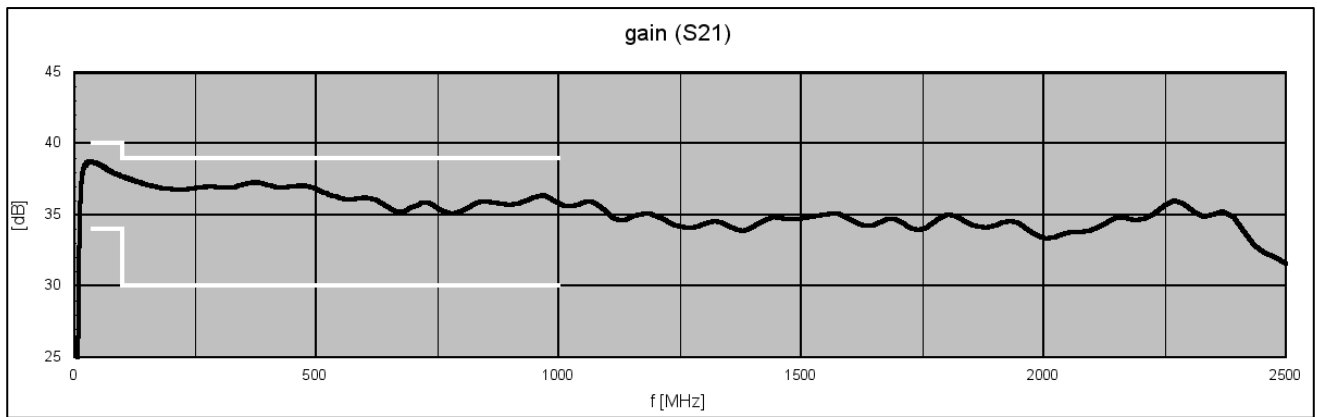
Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
impedance	Z_{in} / Z_{out}		50		Ohm	
low frequency	f_{min}			40	MHz	
high frequency	f_{max}	1000			MHz	
gain	S_{21}	33	37	39	dB	$f < 100$ MHz
	S_{21}	30	35	39	dB	$f \geq 100$ MHz
	S_{21}			-23	dB	$f < 5$ MHz, rel. S_{21} @ 100 MHz
input return loss	S_{11}		-16	-10	dB	
reverse isolation	S_{12}		-60		dB	
3 rd order intercept	OIP3 ¹		37			
3 dB compression	P_{3dB}	34	36		dBm	@ 500 MHz
FWD coupling	S_{32}		-19.5		dB	@ 500 MHz
FWD/REV directivity			21		dB	@ 500 MHz
noise figure	NF		4	7	dB	$f > 50$ MHz
input power				+20	dBm	RF_IN port
DC voltage	U_{DC}			20	V	RF_IN port
ESD discharge resistor	R_{ESD}		4.7		k Ω	
RF connectors	X		N female			

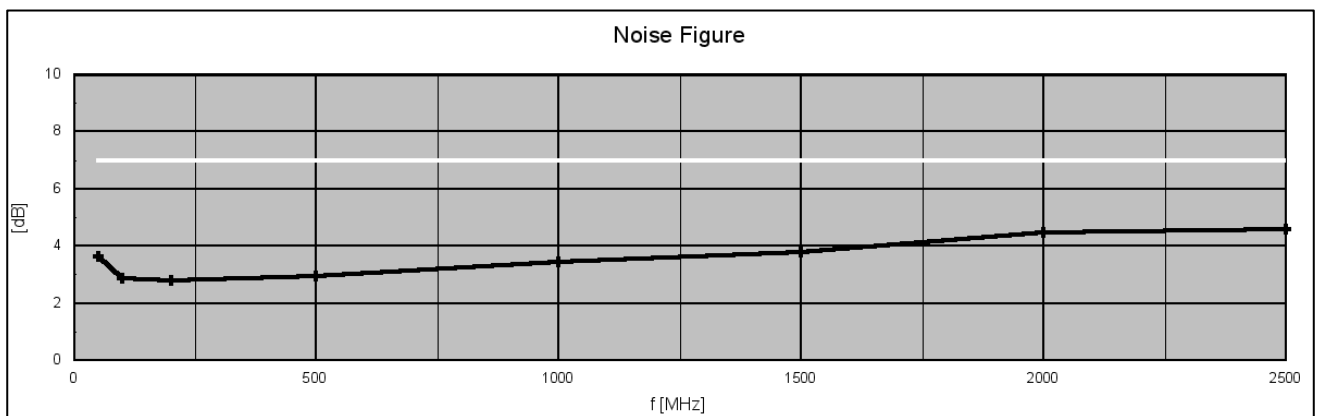
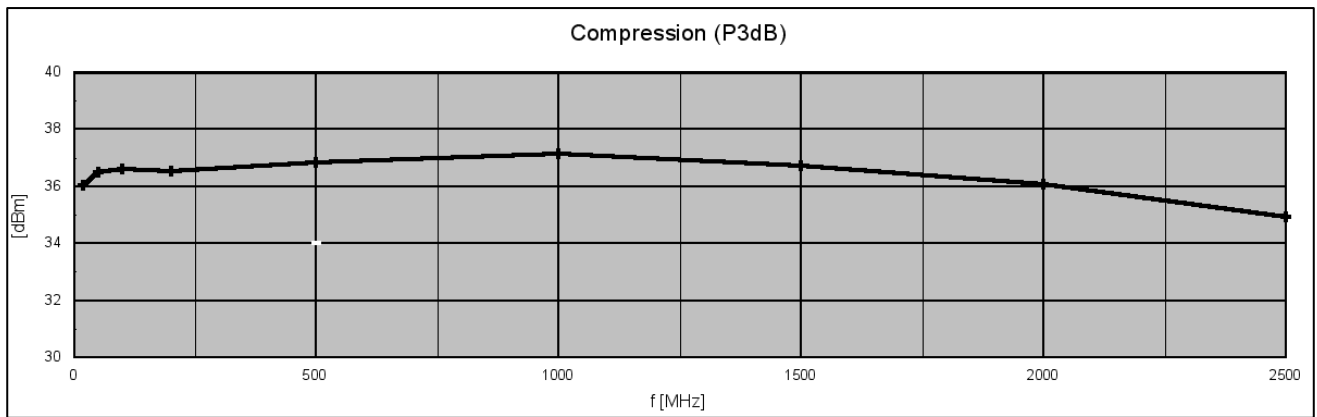
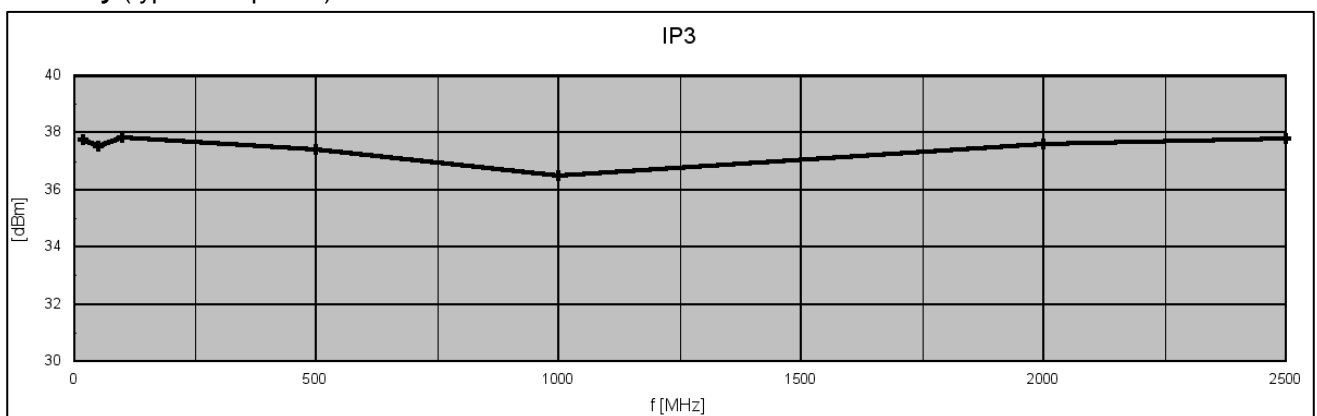
Note 1: Tested at $P_{out} 2 \times +20$ dBm; $\Delta f = 2$ MHz

Common Specification

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
power supply	U_{AC}	90		260	V	AC, 50 ... 400 Hz
power consumption	P_{AC}		14	16	W	
power socket	X_{AC}	IEC-60320 C14				country specific power cable
dimensions	W x H x D	approx. 482 x 44 x 175			mm	
weight	m		2		kg	
operating temp. range	T_o	+5		+40	$^{\circ}C$	housing surface
storage temp. range	T_s	-40		+70	$^{\circ}C$	
ordering information		AMP40100034-R		1209.5002.1		



S-Parameters (typical responses)

Dynamic Range (typical responses)**Linearity (typical response)**

Appearances

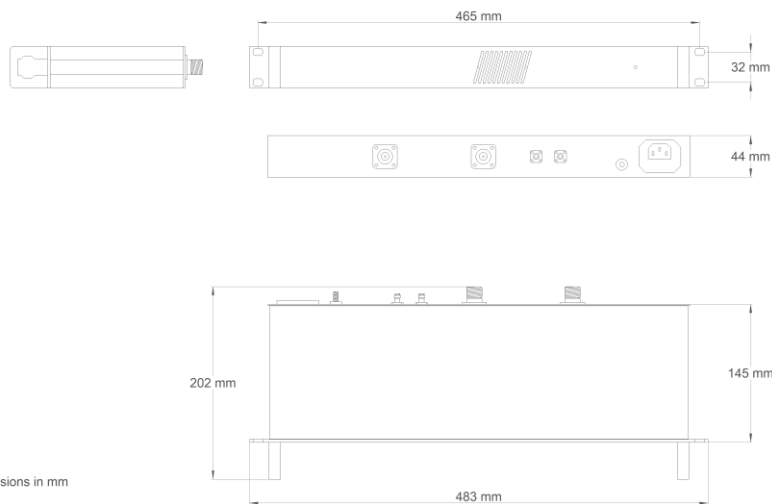


Front view



Rear view

Dimensions



all dimensions in mm
± 2 mm

Related Products

Product	Description	P/N
AMP40100034-R	4 W Wideband Amplifier 19" Device 40 ... 1000 MHz	1209.5002.1
AMP5220031-R	1 W High Dynamic TX Amplifier Device 5 ... 2200 MHz	1404.5102

