

AMP20280035B-T

4.5 W Wideband Amplifier Table Top Unit 20 ... 2800 MHz

Features

- compact rugged design
- output power +35.5 dBm typ.
- high efficiency
- VLF suppression
- AC mains supply

Applications

- cellular GSM, UMTS, LTE
- wireless communication
- laboratory
- test equipment



At a Glance

AMP20280035B-T from Becker Nachrichtentechnik is a compact amplifier as table top unit in 50 Ohm technology. It is designed for the use in laboratory environments. 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 of the unit. Mounting feet are part of delivery.

Special Features

The AMP20280035B-T offers 4.5 watts RF output power with a good efficiency. An integrated high pass filter in the input suppresses unwanted signals in the VLF and HF range.

Rugged Design

The amplifier unit has aluminum housing. The internal amplifier module additional is built in a milled aluminum case to give best shielding for avoiding EMI influences caused by radio signals coming from the environment. The RF connectors on the unit front side are N female type.

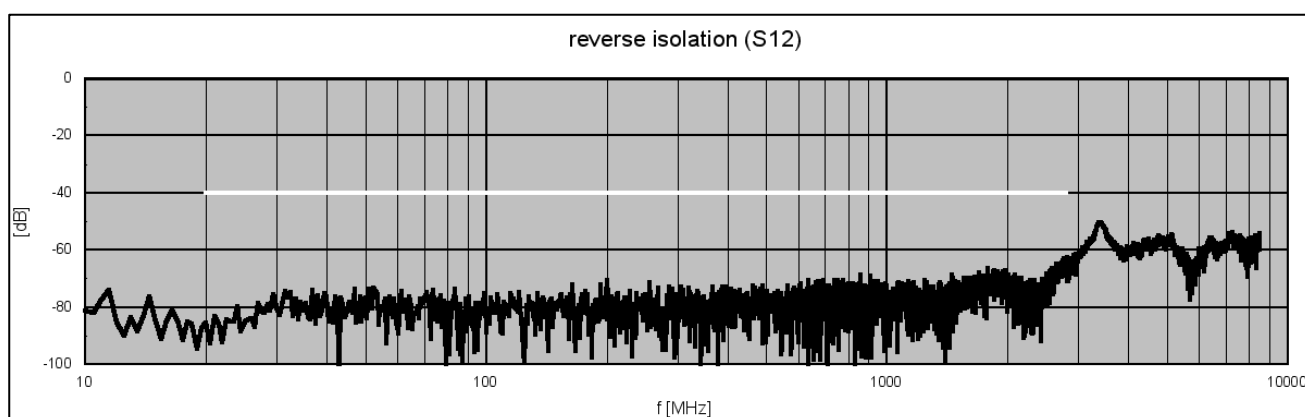
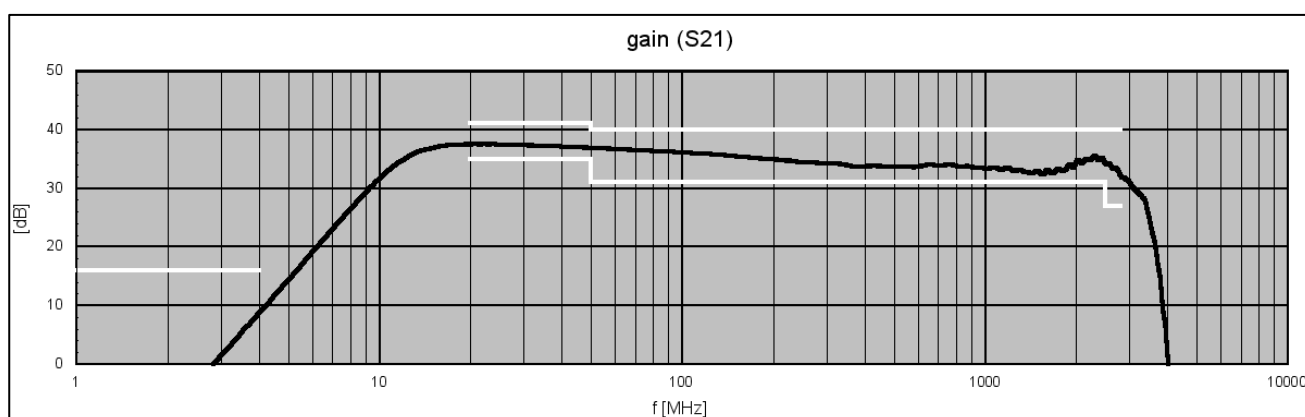
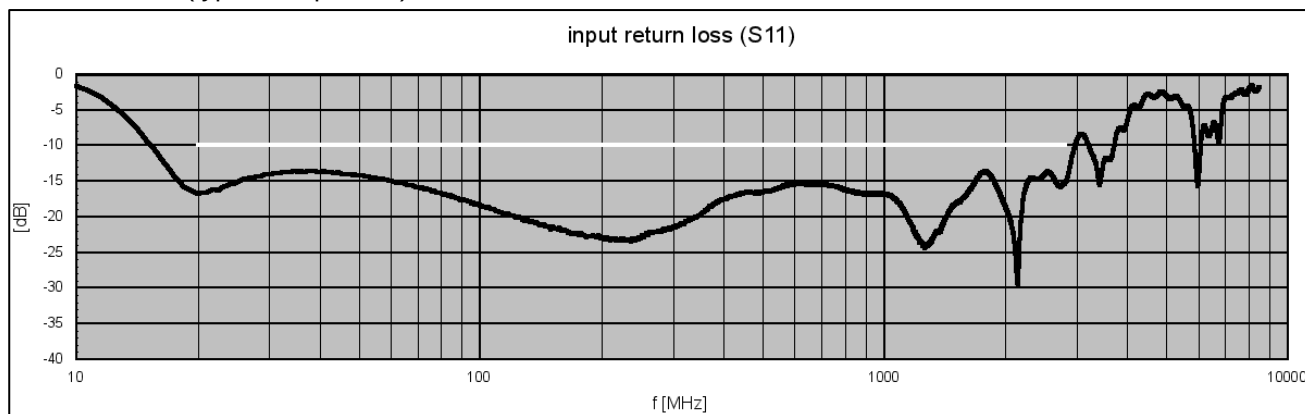
RF Specification

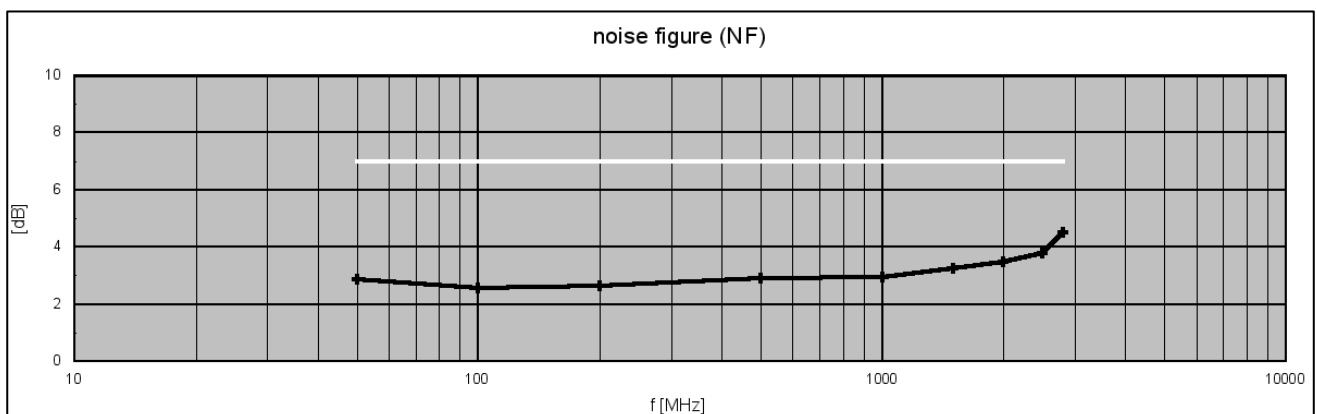
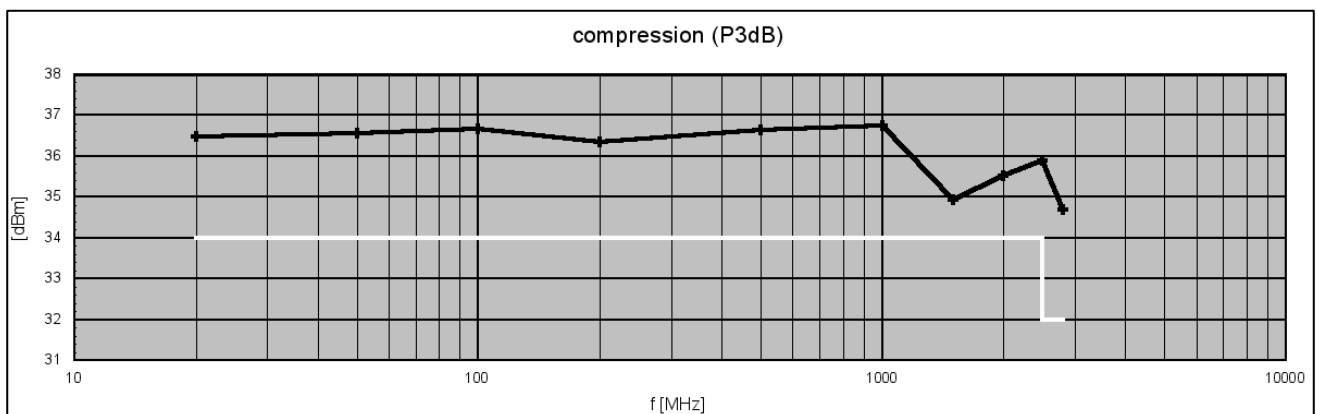
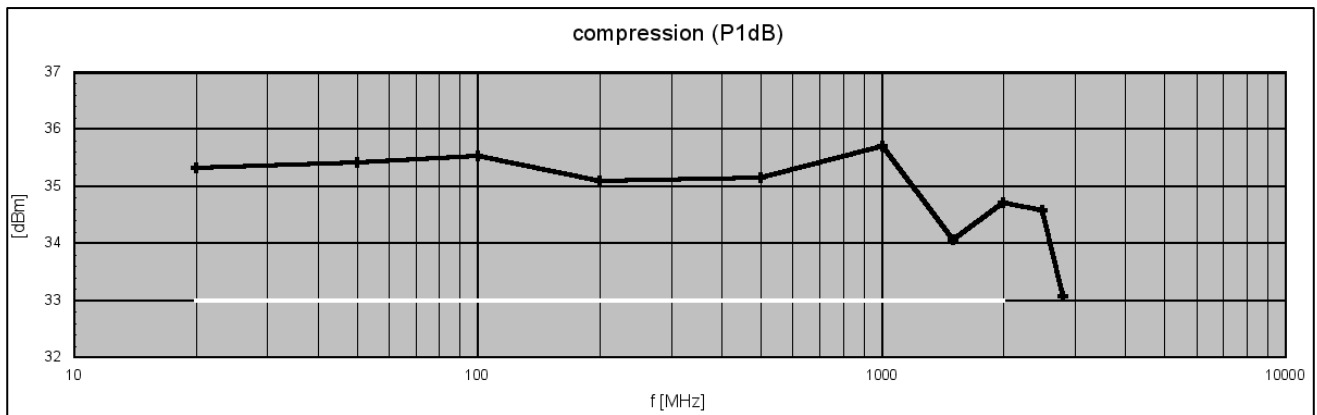
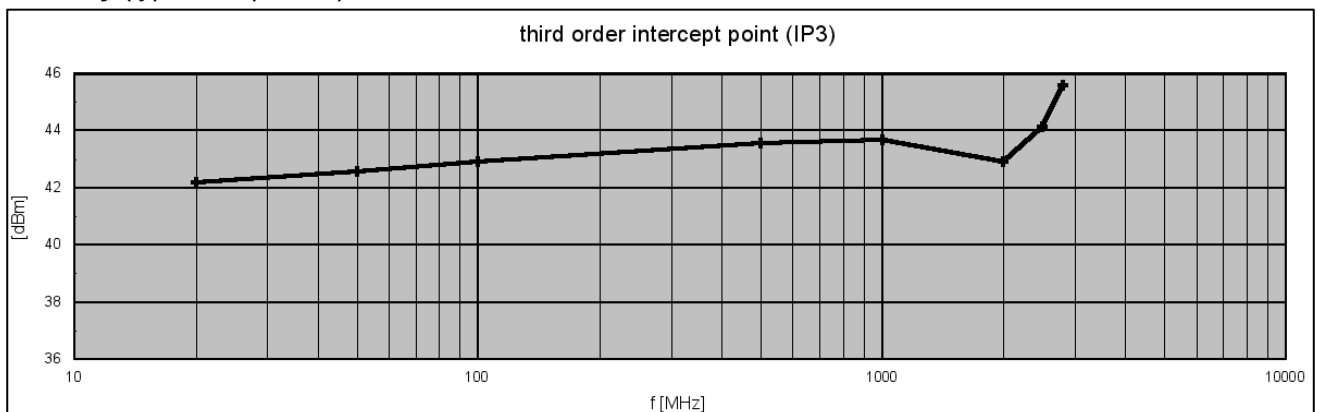
Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
impedance	Z_{IN}/Z_{OUT}		50		Ω	
low frequency	f_{MIN}			20	MHz	
high frequency	f_{MAX}	2800			MHz	
gain	S_{21}	35	39	41	dB	$f < 50 \text{ MHz}$
	S_{21}	32	36	41	dB	$50 \text{ MHz} \leq f \leq 2500 \text{ MHz}$
	S_{21}	28	34	41	dB	$f > 2500 \text{ MHz}$
VLF suppression	S_{21}			-23	dB	$< 5 \text{ MHz}$, rel. 100 MHz
input return loss	S_{11}		-16	-10	dB	$f < 500 \text{ MHz}$
reverse isolation	S_{12}		-70	-40	dB	
3 rd order intercept	$OIP3^1$		+43		dBm	$f \leq 2000 \text{ MHz}$
1 dB compression	P_{1dB}	+33	+35		dBm	$f \leq 2000 \text{ MHz}$
3 dB compression	P_{3dB}	+34	+36		dBm	$f \leq 2500 \text{ MHz}$
	P_{3dB}	+32	+34		dBm	$f > 2500 \text{ MHz}$
noise figure	NF		4	7	dB	$f > 50 \text{ MHz}$
maximum input power	$P_{IN \text{ max}}$			+20	dBm	output terminated with 50 ohms
maximum DC Voltage	U_{DC}			20	V	RF ports
ESD discharge resistor	R_{ESD}		4.7		k Ω	RF ports
RF connectors	X_{RF}	N female				

Note 1: Tested at $P_{out} 2 \times +25 \text{ dBm}$; $\Delta f = 2 \text{ MHz}$

Common Specification

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
power supply	U_{AC}	90		260	V	AC, 50 ... 400 Hz
power consumption	P_{AC}		18		W	
power socket	X_{AC}	IEC-60320 C14				country specific power cable
dimensions	W x H x D	approx. 115 x 100 x 190			mm	without connectors
weight	m		1.5		kg	
operating temp. range	T_o	+5		+40	$^{\circ}\text{C}$	housing surface
storage temp. range	T_s	-40		+70	$^{\circ}\text{C}$	
ordering information	AMP20280035B-T			1209.5203.1		

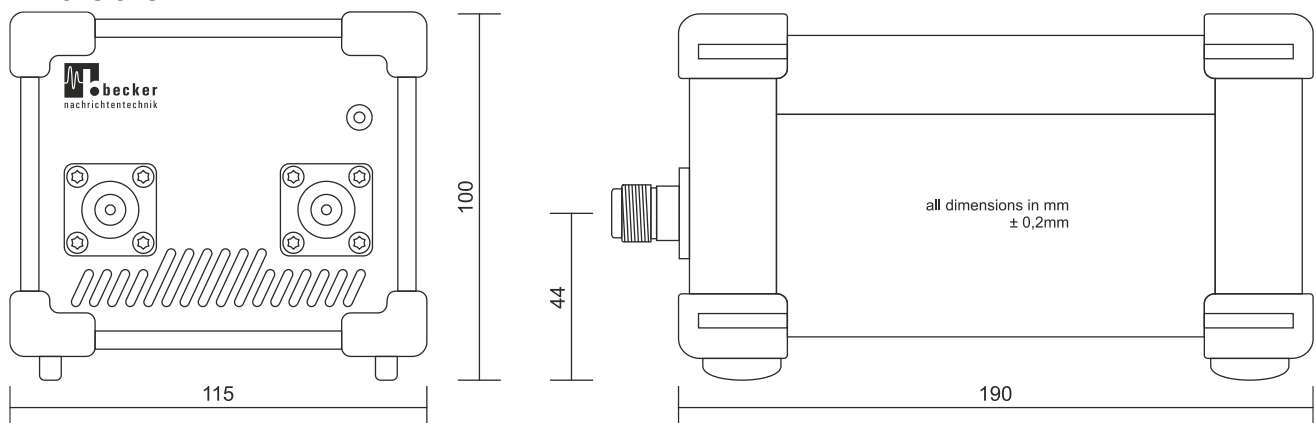
S-Parameters (typical responses)

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

Appearances



Dimensions



Related Products

Product	Description	P/N
AMP20280035B-T	4.5 W Wideband Amplifier Table Top Unit 20 ... 2800 MHz	1209.5203.1
AMP590033-T	2 W Booster Amplifier Table Top Unit 5 ... 900 MHz	0901.5013.1
AMP590033H-T	2 W Amplifier Table Top Unit 5 ... 900 MHz	0901.5003.1
AMP5220031-T	1 W High Dynamic Range Amplifier Table Top Unit 5 ... 2200 MHz	1005.5103.1
AMP5270026-T	400 mW High Dynamic Amplifier Table Top Unit 5 ... 2700 MHz	1005.5203.1
AMP018032-T	1.3 W High Linearity Table Top Unit 100 kHz...80 MHz	1002.5703.1
LNA1080014-T	400 mW Low Noise Amplifier Table Top Unit 10 ... 800 MHz	0901.5503.1
AMP40100034-R	4 W Wideband Amplifier 19" Device 40 ... 1000 MHz	1209.5002.1
AMP5220031H-R	1 W High Dynamic TX Amplifier 19" Device 5 ... 2200 MHz	1404.5102.1
AMP101800030-R	1 W Ultra-Wideband Linear Amplifier 19" Device 10 ... 18000 MHz	2106.5002.1
AMP20280035B-R	4.5 W Wideband Amplifier 19" Device 20 ... 2800 MHz	1209.5202.1
AMP590033H-R	2 W Power Amplifier 19" Device 5 ... 900 MHz	0901.5002.1
AMP018032-R	1.3 W High Linearity Amplifier 19" Device 100 kHz ... 80 MHz	1002.5702.1