

AMP20280035-T

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

Features

- output power +36.5 dBm typ.
- high efficiency
- VLF suppression
- AC mains supply

Applications

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



At a Glance

AMP20280035-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 AMP20280035-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.

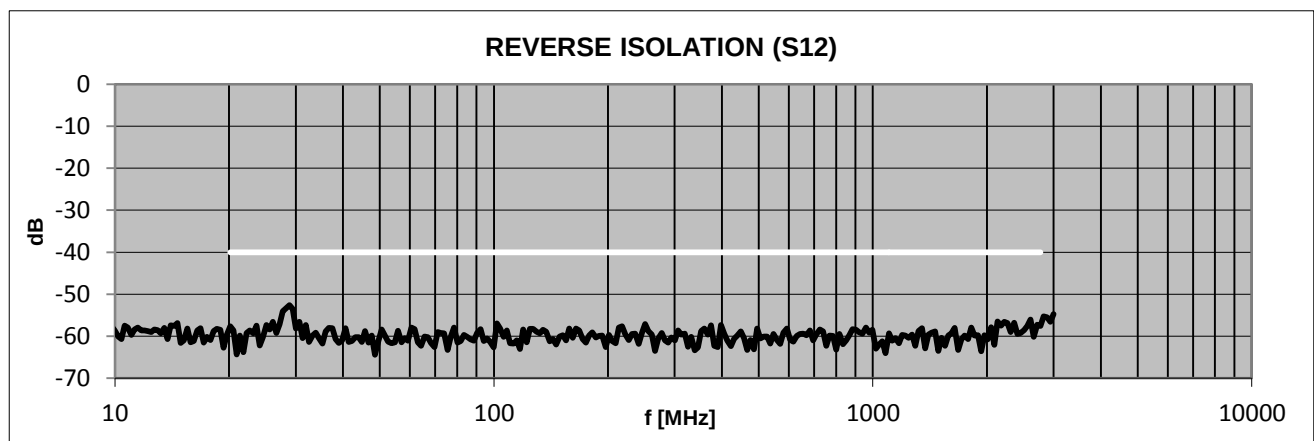
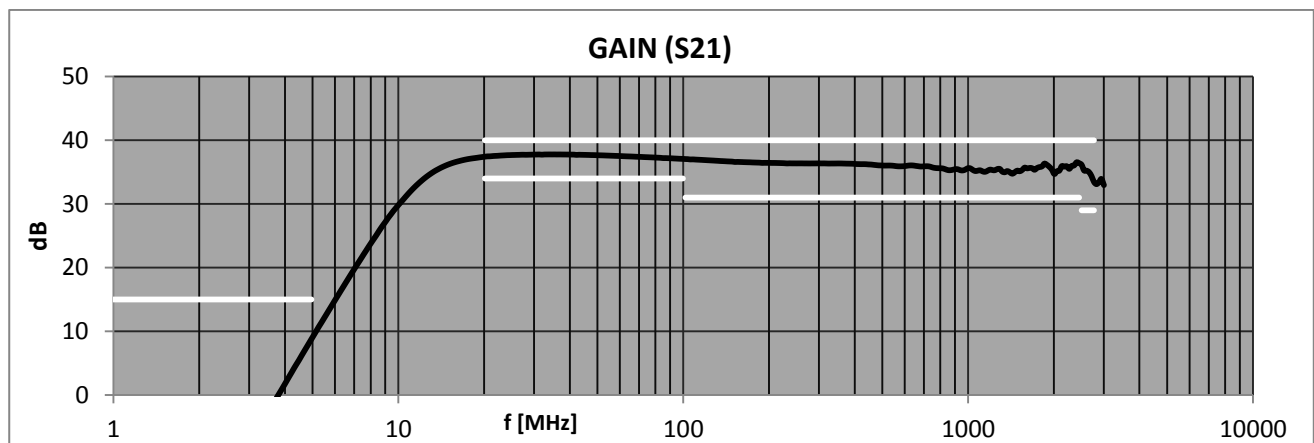
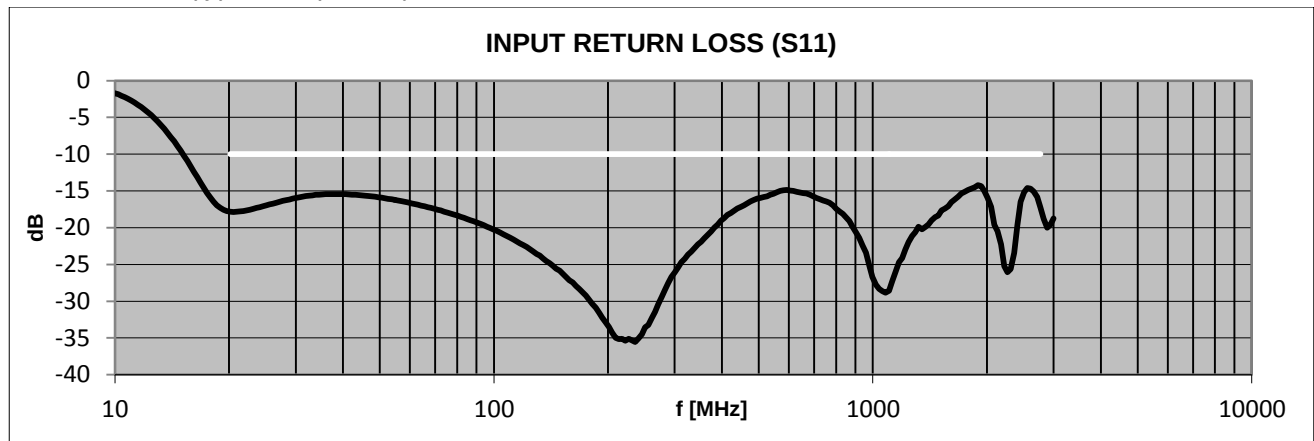
RF Specification

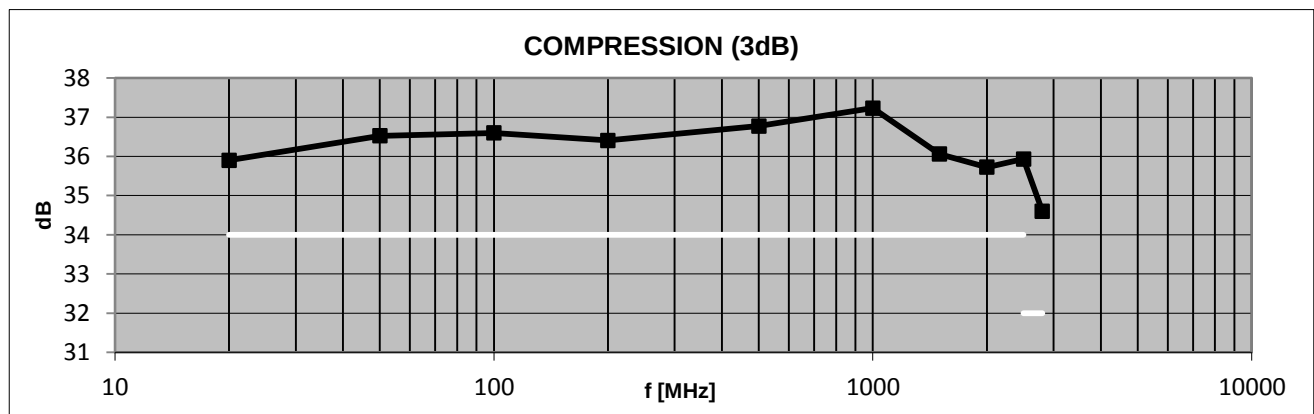
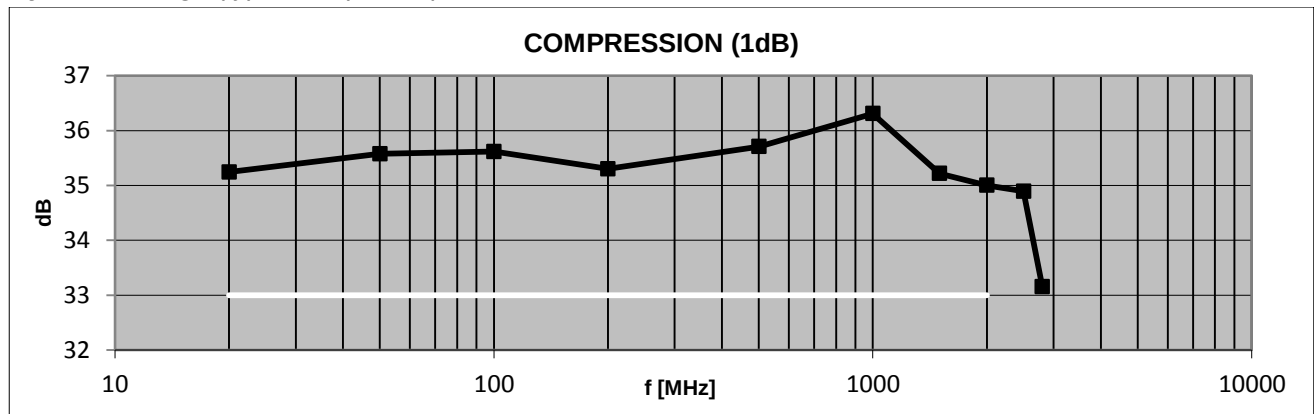
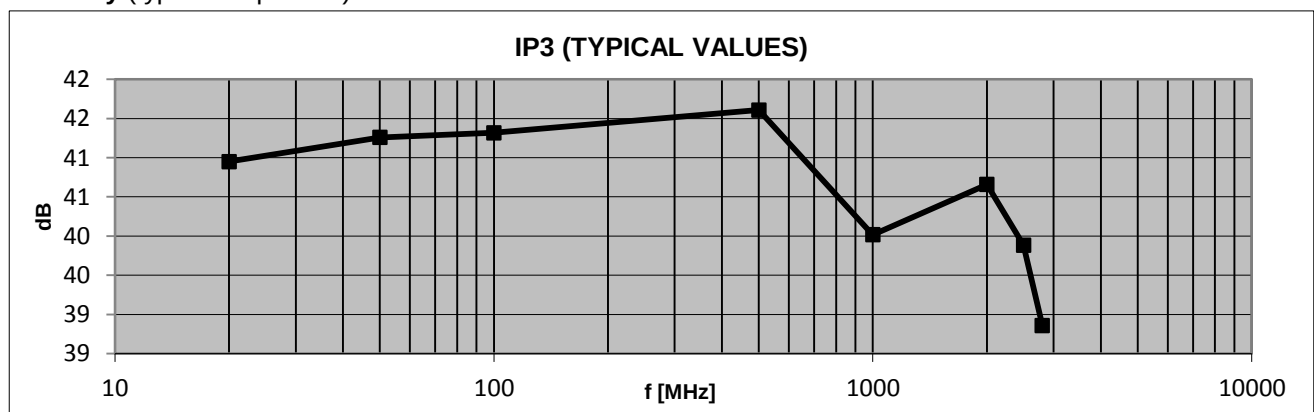
Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
impedance	Z_{in} / Z_{out}		50		Ω	
low frequency	f_{min}			20	MHz	
high frequency	f_{max}	2800			MHz	
gain	S_{21}	34	38	40	dB	$f < 100 \text{ MHz}$
	S_{21}	31	36	40	dB	$100 \text{ MHz} \leq f \leq 2500 \text{ MHz}$
	S_{21}	29	35	40	dB	$f > 2500 \text{ MHz}$
VLF suppression	S_{21}			-23	dB	$< 5 \text{ MHz, rel. } 100 \text{ MHz}$
input return loss	S_{11}		-16	-10	dB	$f < 500 \text{ MHz}$
reverse isolation	S_{12}		-60	-40	dB	
1 dB compression	P_{1dB}	+33.0	+35.5		dBm	$f \leq 2000 \text{ MHz}$
3 dB compression	P_{3dB}	+34.0	+36.5		dBm	$f \leq 2500 \text{ MHz}$
	P_{3dB}	+32.0	+34.5		dBm	$f > 2500 \text{ MHz}$
3 rd order intercept	OIP3 ¹		+39		dBm	$f \leq 2000 \text{ MHz}$
noise figure	NF		4	7	dB	$f > 50 \text{ MHz}$
maximum input power	$P_{in max}$			+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 $P_{out} 2 \times +20 \text{ dBm}$; $\Delta f = 2 \text{ MHz}$

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	°C	housing surface
storage temp. range	T_s	-40		+70	°C	
ordering information	AMP20280035-T			1209.5003.1		

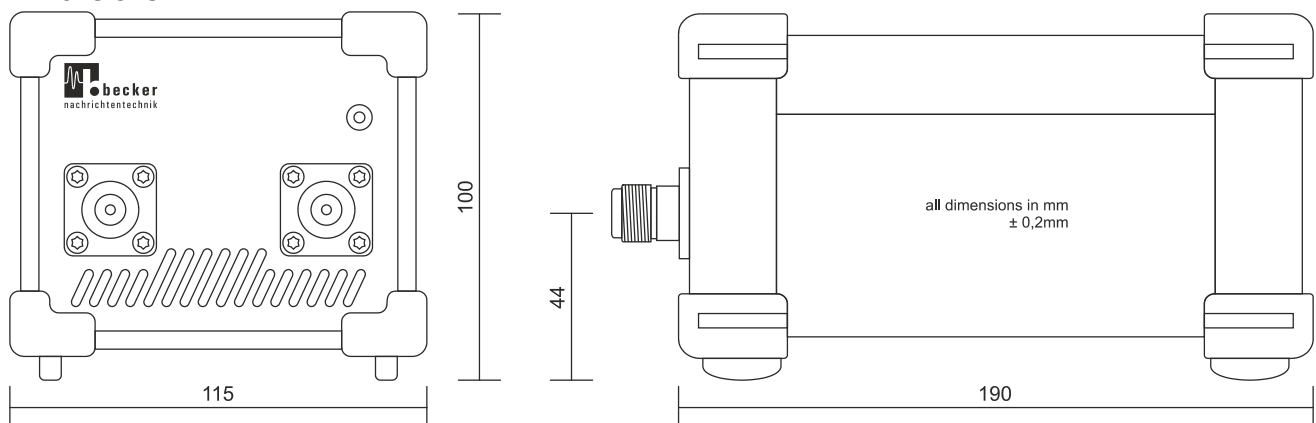
S-Parameters (typical responses)

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

Appearances



Dimensions



Related Products

Product	Description	P/N
AMP20280035-T	4.5 W Wideband Amplifier Table Top Unit 20 ... 2800 MHz	1209.5003.1
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
AMP018032	1.3 W High Linearity Table Top Unit 100 kHz...80 MHz	1002.5703.1
AMP5220031	1 W High Dynamic Amplifier Table Top Unit 5 ... 2200 MHz	1005.5103.1
AMP5270026	400 mW High Dynamic Amplifier Table Top Unit 5 ... 2700 MHz	1005.5203.1
AMP10850026	400 mW Ultra Wideband Amplifier Table Top Unit 10 ... 8500 MHz	1305.5003.1
LNA1080014	400 mW Low Noise Amplifier Table Top Unit 10 ... 800 MHz	0901.5503.1