

4.5 W Wideband Amplifier 20 ... 2800 MHz, 50 Ω

Features

- output power +36.5 dBm typ.
- high efficiency
- open / short stable
- transient protected
- VLF suppression
- 110 V and 230 V AC mains supply

Applications

- HTOL tests
- GSM / UMTS / LTE
- ISM 433 / 868 / 2400 MHz
- laboratory equipment
- research and development (R&D)



At a Glance

AMP20280035-T from Becker Nachrichtentechnik is a compact wideband power amplifier suitable for frequencies from 20 MHz to 2800 MHz in 50 Ohm technology.

High Efficiency

AMP20280035-T features very high efficiency because it can be operated in A-B mode. The device offers an output power of up to 4.5 watts which makes this amplifier suitable for applications such as HTOL (High Temperature Operating Life) tests. For these tests, AMP20280035-T provides medium output power and ensures high efficiency at the same time. An internal high pass filter at the input of the amplifier avoids influences of signals in the low frequency range. The amplifier can be used in several areas of application, such as GSM / UMTS / LTE and ISM 433 / 868 / 2400 MHz.

Robust Design

AMP20280035-T features a compact design. It is robust against mismatches which can occur when operating with complex loads. The device is supplied by mains voltage and is equipped with N female connectors. This allows for a straightforward connection of the amplifier.

RF Specifications

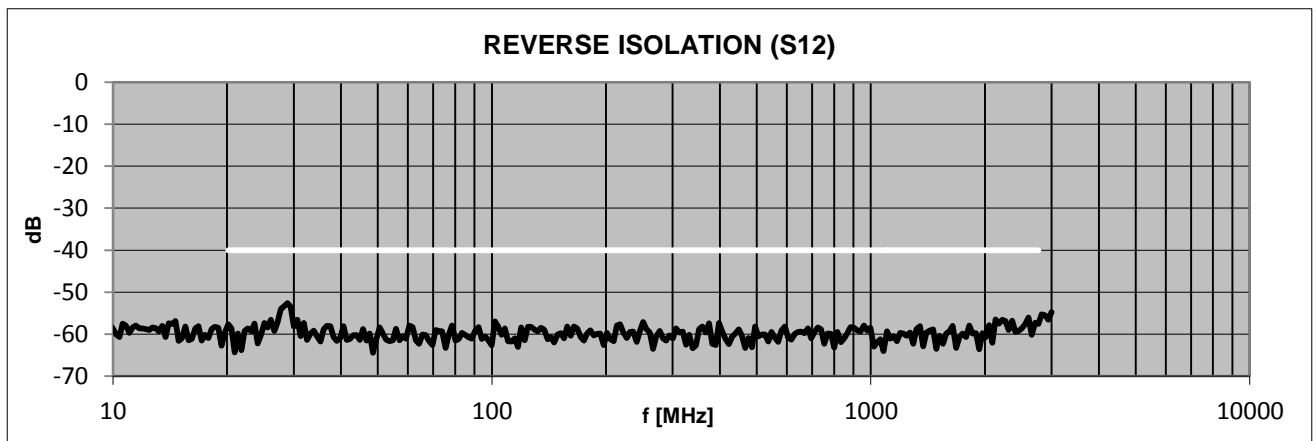
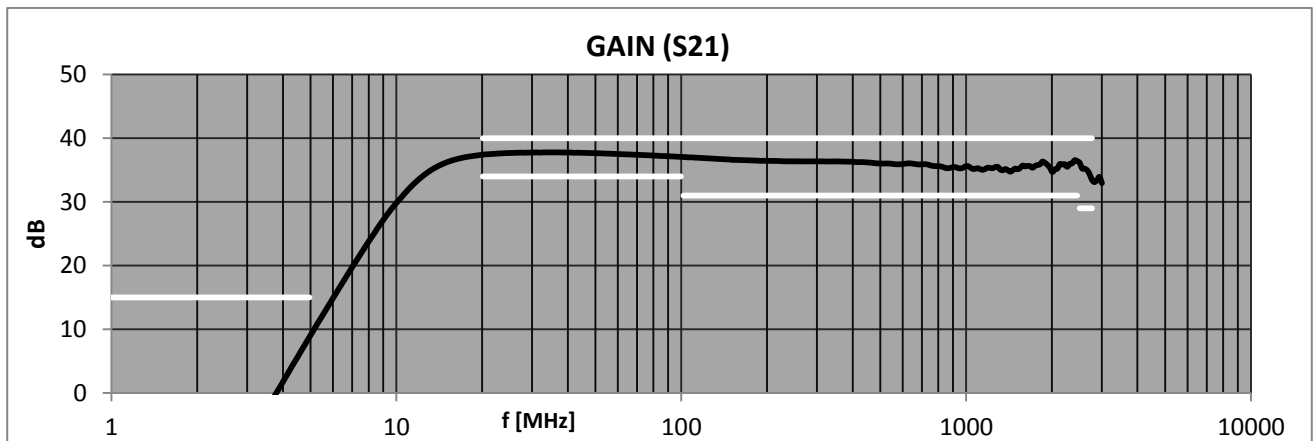
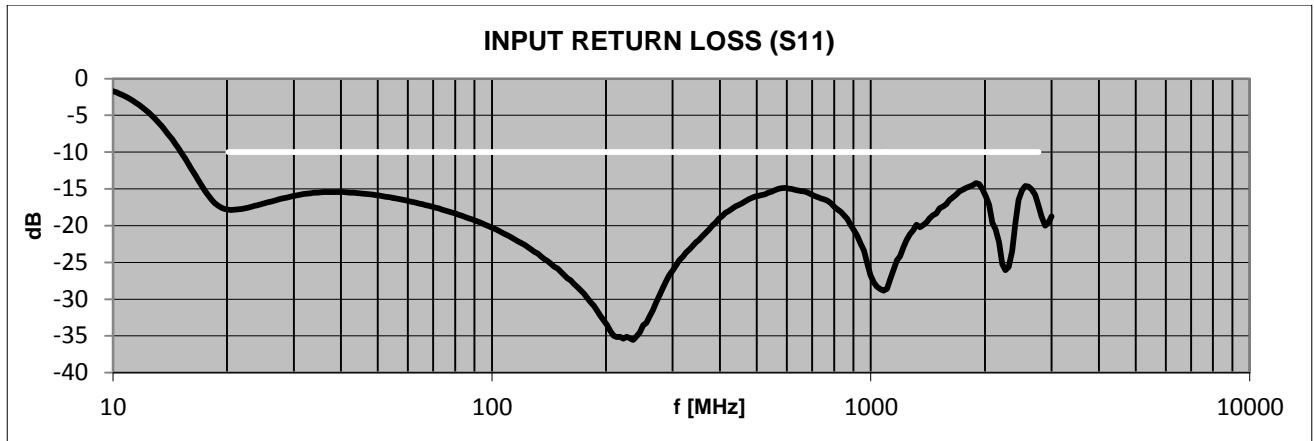
Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
impedance	Z_{in} / Z_{out}		50		Ohm	
low frequency	f_{min}			20	MHz	
high frequency	f_{max}	2800			MHz	
gain	S_{21}	34	38	40	dB	$f < 100$ MHz
	S_{21}	31	36	40	dB	$100 \text{ MHz} \leq f \leq 2500$ MHz
	S_{21}	29	35	40	dB	$f > 2500$ MHz
	S_{21}			-23	dB	$f < 5$ MHz, rel. S_{21} @ 100 MHz
input return loss	S_{11}		-16	-10	dB	
reverse isolation	S_{12}		-60	-40	dB	
3 rd order intercept	OIP3 ¹		39			$f \leq 2000$ MHz
1 dB compression	P_{1dB}	33	35.5		dBm	$f \leq 2000$ MHz
3 dB compression	P_{3dB}	34	36.5		dBm	$f \leq 2500$ MHz
	P_{3dB}	32	34.5		dBm	$f > 2500$ MHz
noise figure	NF		4	7	dB	$f > 50$ MHz
input power				20	dBm	
RF connectors						N female

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

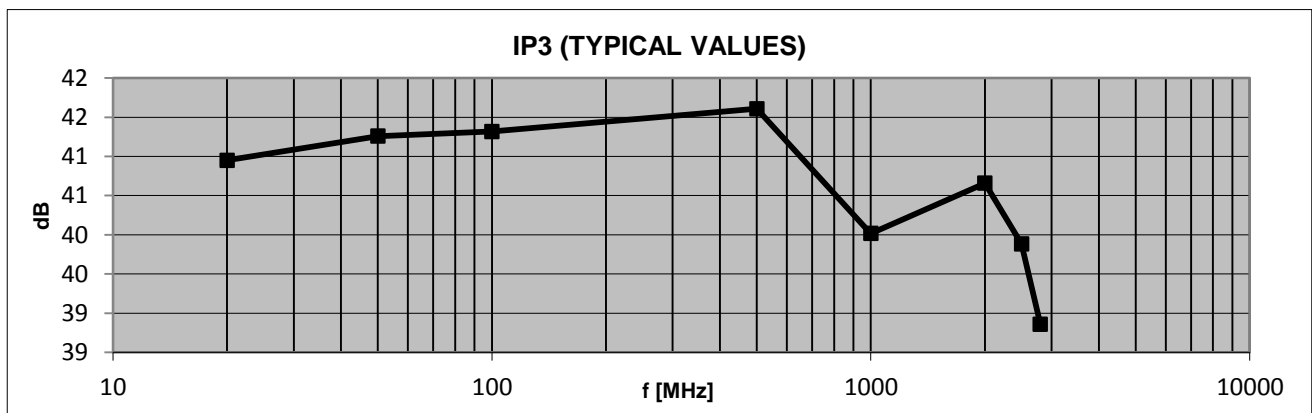
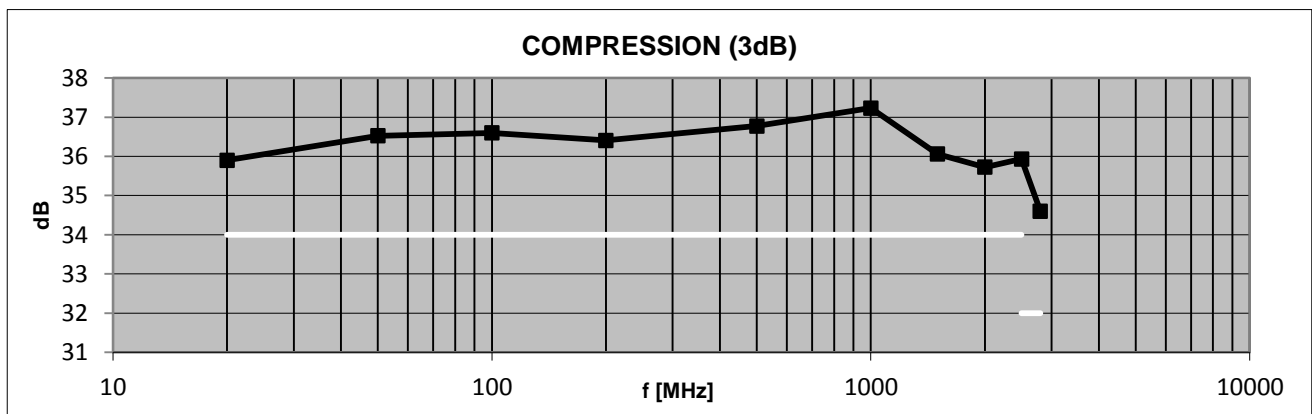
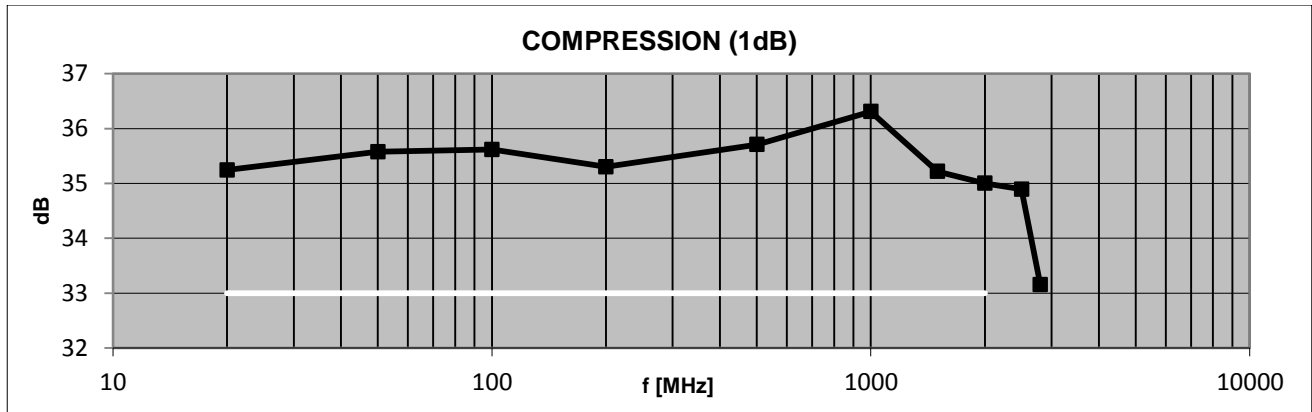
Common Specifications

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
power supply	U	90		260	V	AC
	f	50		400	Hz	
power consumption	P		18		VA	
dimensions	L x W x H	approx. 175 x 115 x 95			mm	length without connectors
weight	m		1500		g	
operating temp. range	T_o	+5		+40	°C	ambiance
storage temp. range	T_s	-40		+70	°C	
ordering information	AMP20280035-T			1209.5003.1		



S-Parameters (typical responses)

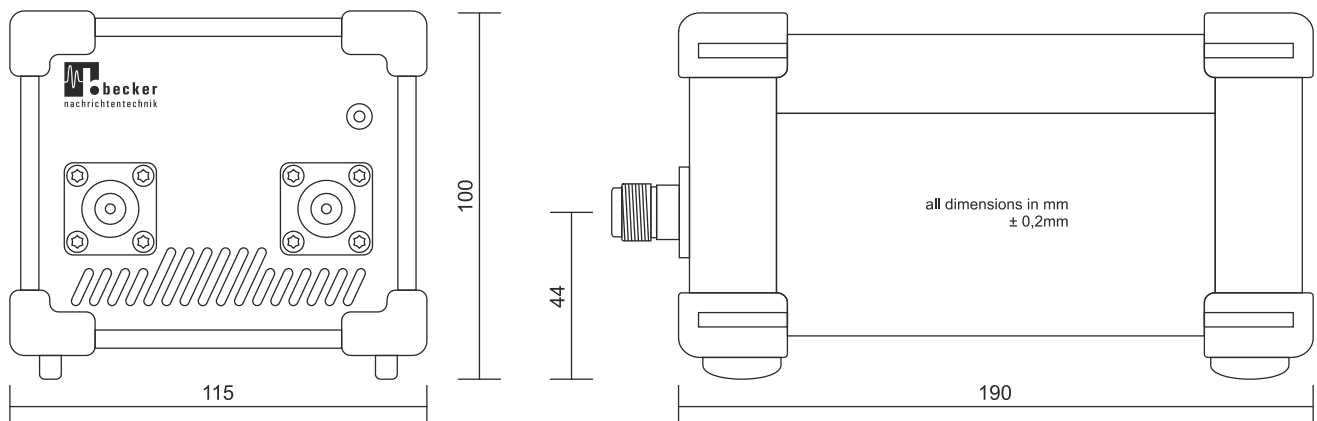
Dynamic Range (typical responses)



Front / Rear View



Dimensions



Related Products

Product	Description	P/N
AMP018032-T	1 W Medium Power Amplifier 100 kHz ... 80 MHz, 50 Ω	1002.5703.1
LNA1080014-T	High Dynamic Range Amplifier 10 ... 800 MHz, 50 Ω	0901.5503.1
AMP590033-T	2 W Booster Amplifier 5 ... 900 MHz, 50 Ω	0901.5013.1
AMP590033H-T	2 W Power Amplifier 5 ... 900 MHz, 50 Ω	0901.5003.1
AMP5270026-T	High Dynamic Amplifier 5 ... 2700 MHz, 50 Ω	1005.5203.1
AMP5220031-T	High Dynamic Amplifier 5 ... 2200 MHz, 50 Ω	1005.5103.1
AMP10850026-T	500 mW Wideband Amplifier 10 ... 8500 MHz, 50 Ω	1305.5003.1

