

500 mW Wideband Amplifier 10 ... 8500 MHz, 50 Ω

Features

- output power +27 dBm typ.
- extremely wideband
- high efficiency
- 110 V and 230 V AC mains supply

Applications

- research and development (R&D)
- WiMAX
- ISM 433 / 868 / 2400 / 5800 MHz
- laboratory
- test equipment



At a Glance

AMP10850026-T from Becker Nachrichtentechnik is a compact, extremely wideband and very high dynamic amplifier. It is suitable for frequencies from 10 MHz to 8500 MHz and designed in 50 Ohm technology.

High Dynamic

The high output power, an excellent 3rd order intercept point and a low noise figure in combination with an extremely high bandwidth make this amplifier suitable for demanding applications.

Versatile Use

The high gain allows full output power by approximate 0 dBm input level. AMP10850026-T can be used in several areas of application such as VHF/ UHF, ISM 433 / 868 / 2400 / 5800 MHz and GSM / UMTS / LTE.

Due to its high bandwidth, this amplifier is also suitable for Wi-Fi IEEE 802.11 a/b/g/n/ac.

Robust Design

AMP10850026-T features a compact and robust design. 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		Ω	
low frequency	f_{min}			10	MHz	
high frequency	f_{max}	8500			MHz	
gain	S_{21}	22	25	28	dB	$f < 50$ MHz
	S_{21}	23	25.5	28	dB	$50 \text{ MHz} \leq f \leq 7000$ MHz
	S_{21}	22	25	28	dB	$f > 7000$ MHz
input return loss	S_{11}		-10	-8	dB	$f < 500$ MHz
	S_{11}		-17	-10	dB	$f \geq 500$ MHz
output return loss	S_{22}		-15	-8	dB	$f \leq 6500$ MHz
	S_{22}		-8	-4	dB	$f > 6500$ MHz
reverse isolation	S_{12}		-70	-45	dB	
3 rd order intercept	$OIP3^1$	+26	+30		dBm	$f < 500$ MHz
	$OIP3^1$	+33	+35		dBm	$500 \text{ MHz} \leq f \leq 6000$ MHz
	$OIP3^1$	+30	+33		dBm	$6000 \text{ MHz} < f \leq 8000$ MHz
1 dB compression	P_{1dB}	+19	+21		dBm	$f < 500$ MHz
	P_{1dB}	+24	+26		dBm	$500 \text{ MHz} \leq f \leq 6000$ MHz
	P_{1dB}	+23	+25		dBm	$f > 6000$ MHz
3 dB compression	P_{3dB}	+22	+24		dBm	$f < 500$ MHz
	P_{3dB}	+26	+27		dBm	$f \geq 500$ MHz
noise figure	NF		4.5	6	dB	$500 \text{ MHz} \leq f < 6500$ MHz
	NF		2.5	4	dB	$6500 \text{ MHz} \leq f \leq 8000$ MHz
input power	P_{in}			+15	dBm	
RF connectors						N female

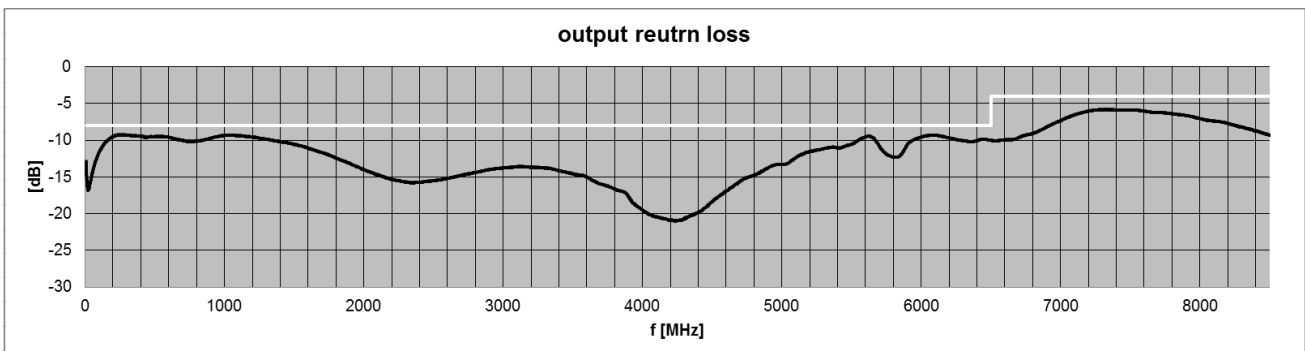
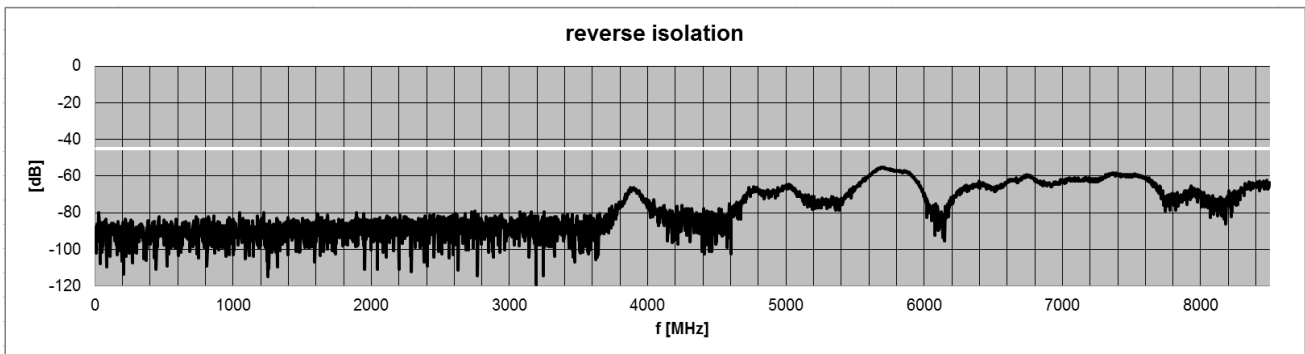
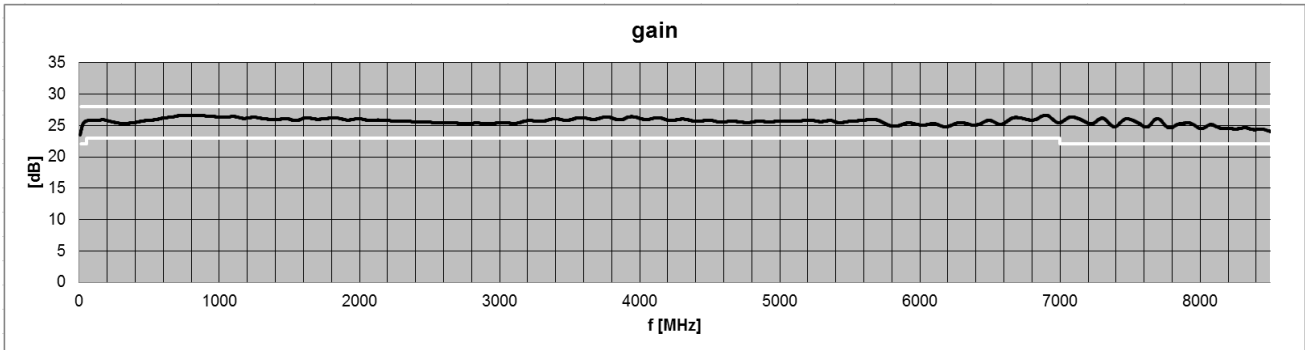
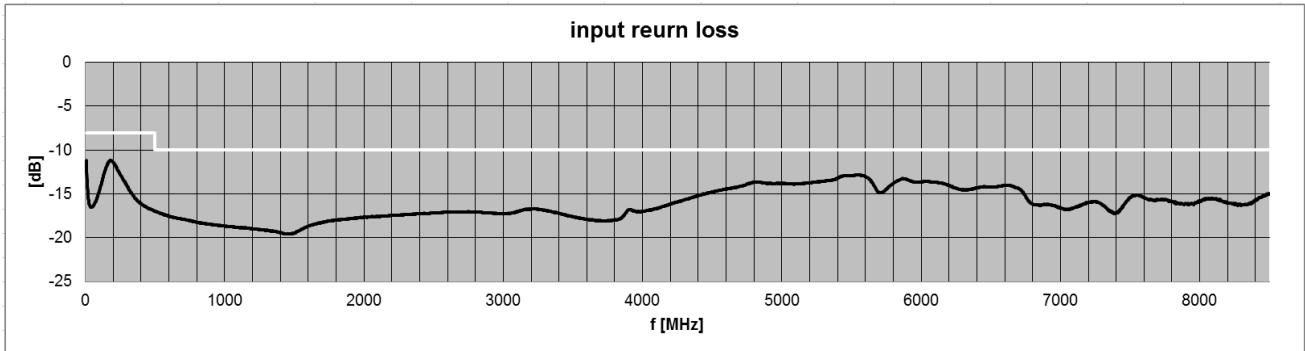
Note 1: Tested at $P_{out} 2 \times +16$ dBm; $\Delta f = 2$ MHz

Common Specifications

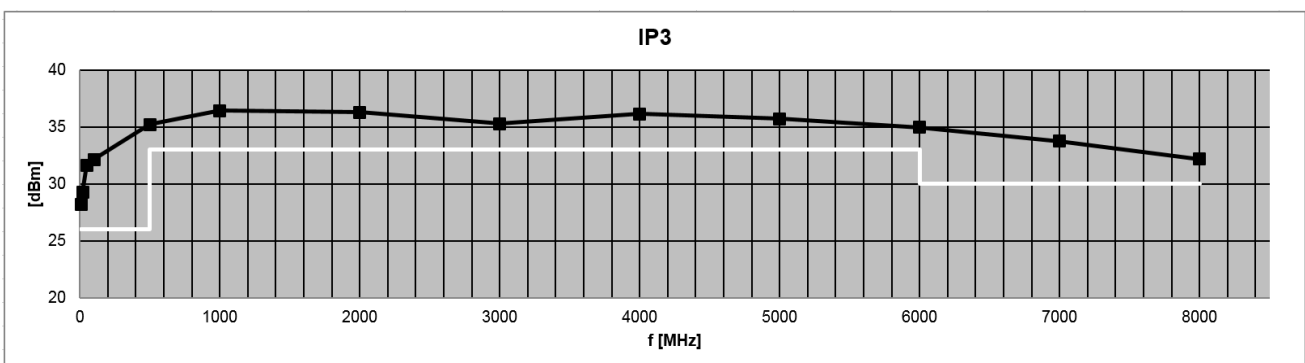
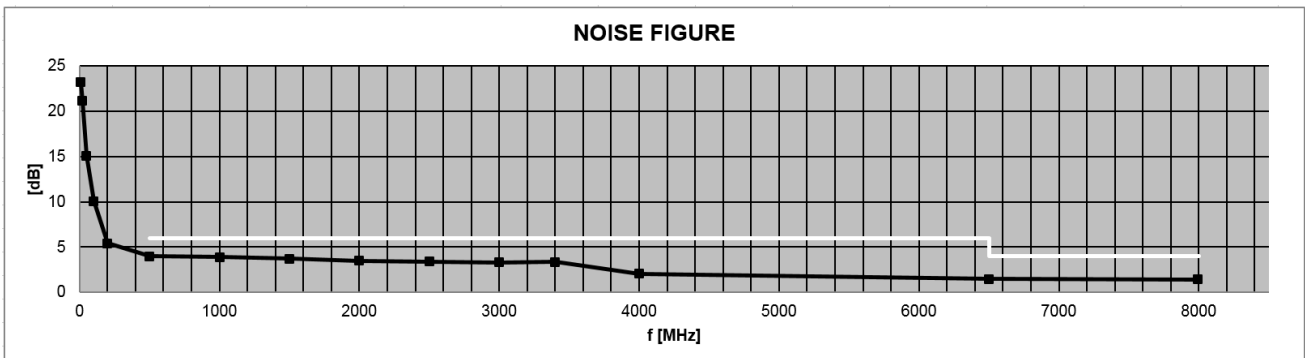
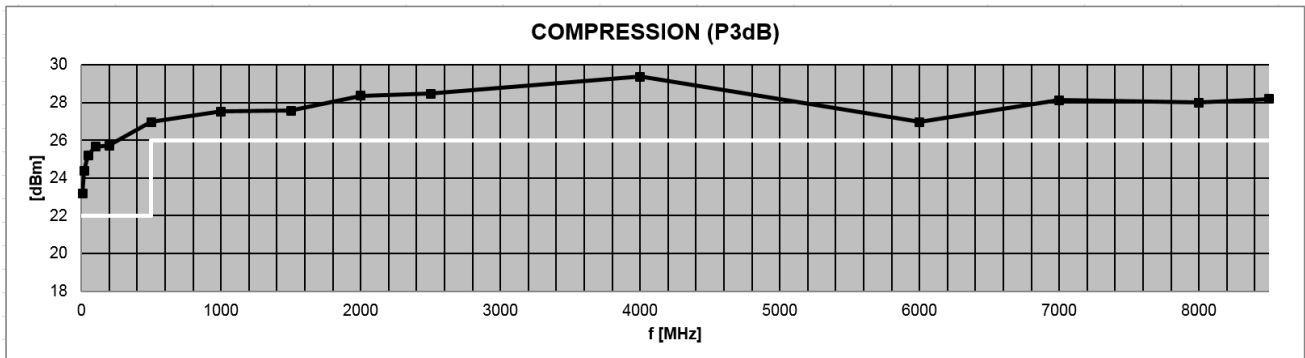
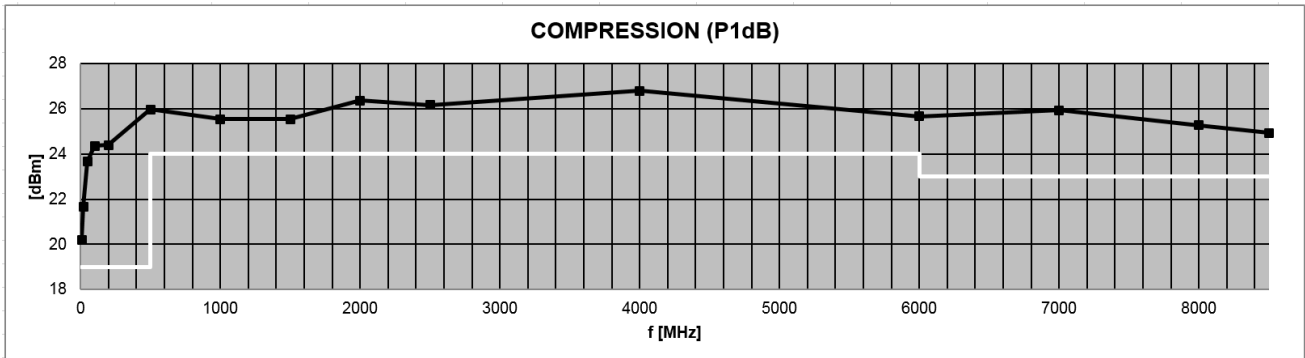
Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
supply voltage	U	90		260	V	AC
	f	50		400	Hz	
power consumption	P		18		VA	
dimensions	L x W x H	approx. 175 x 115 x 95			mm	length without connectors
weight	m		1500		g	
operating temp. range	T_o	+5		+40	°C	ambiance
storage temp. range	T_s	-40		+70	°C	
ordering information	AMP10850026-T			1305.5003.1		



S-Parameters (typical responses)



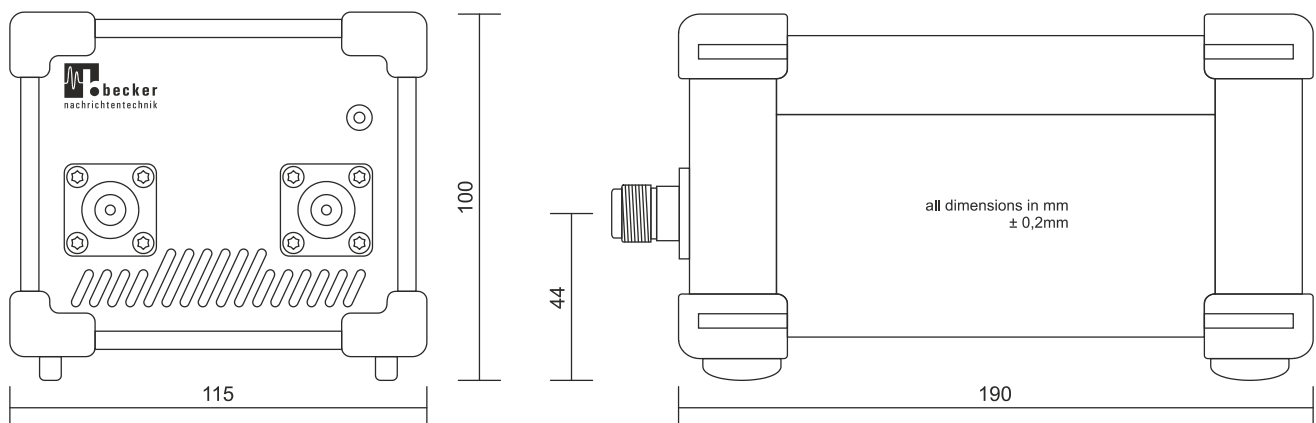
Dynamic Range (typical responses)



Font / 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
AMP20280035-T	4.5 W Wideband Amplifier 20 ... 2800 MHz, 50 Ω	1209.5003.1

