

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

## Features

- output power +27 dBm typ.
- extremely wideband
- passive cooled
- wide DC supply range
- optical supply indication
- reverse polarity protected

## Applications

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



## At a Glance

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

## High Dynamic

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

## Versatile Use

AMP10850026 features a wide DC supply range which enables versatile use.

The high gain allows full output power at approximate 0 dBm input level. AMP10850026 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 features a compact and robust module design with integrated passive cooling. The DC supply input is reverse polarity protected; thereby inadvertently damage of the module is prevented.

This product is available in two different versions. They differ in the type of the power connector (straight or angled). The type with angled power connector fits into typical 1 U enclosures.

## RF Specifications

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
impedance	$Z_{in} / Z_{out}$		50		$\Omega$	
low frequency	$f_{min}$			10	MHz	
high frequency	$f_{max}$	8500			MHz	
gain	$S_{21}$	22	25	28	dB	$f < 50$ MHz
	$S_{21}$	23.0	25.5	28.0	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 <sup>rd</sup> 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	6.0	dB	$500 \text{ MHz} \leq f < 6500$ MHz
	NF		2.5	4.0	dB	$6500 \text{ MHz} \leq f \leq 8000$ MHz
input power	$P_{in}$			+15	dBm	
RF connectors						SMA female

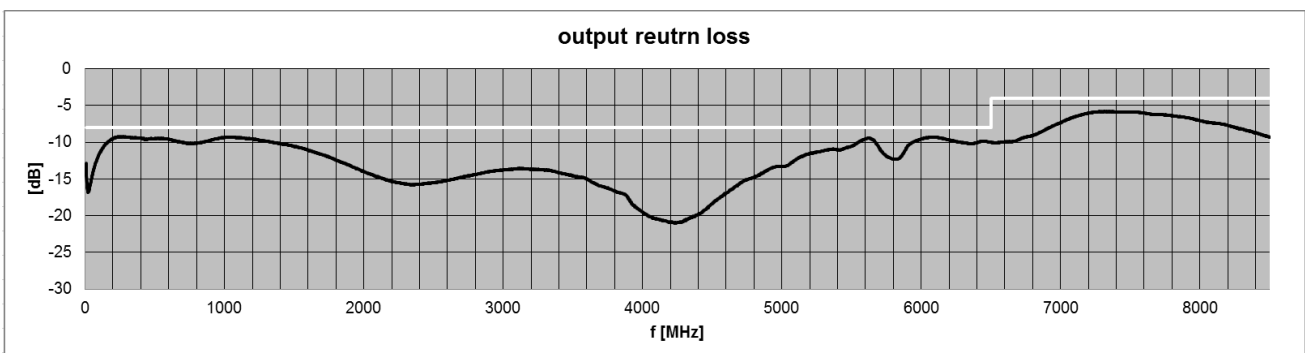
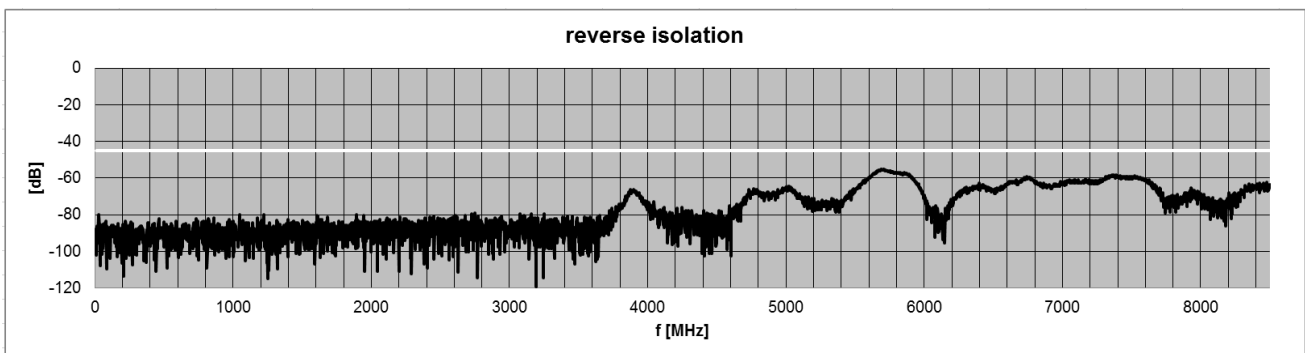
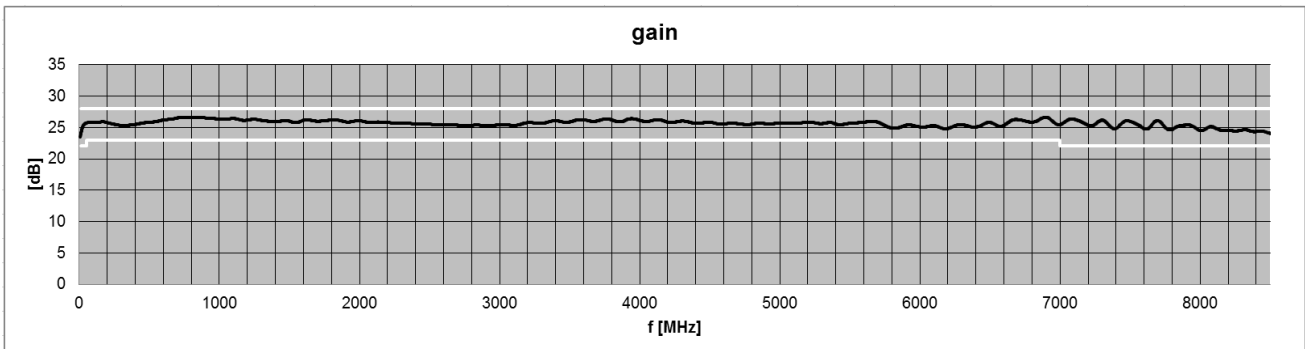
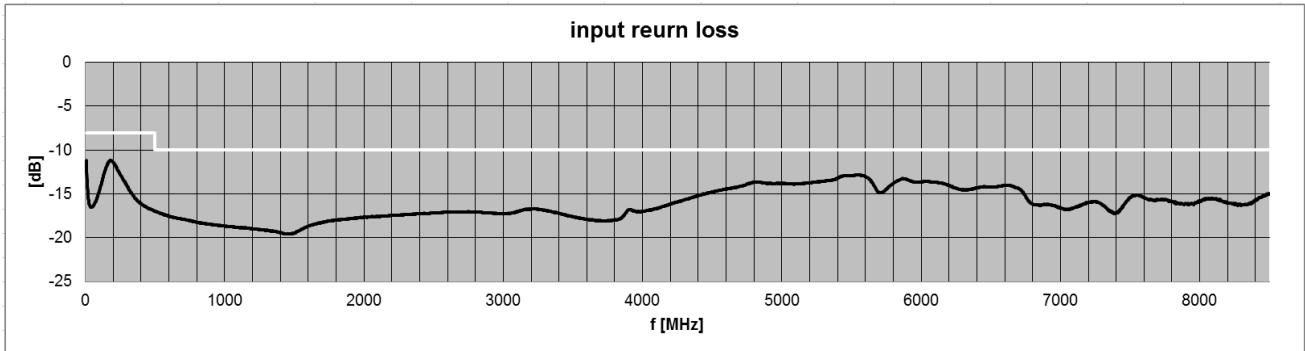
Note 1: tested at  $P_{out} 2 \times +16$  dBm;  $\Delta f = 2$  MHz

## Common Specifications

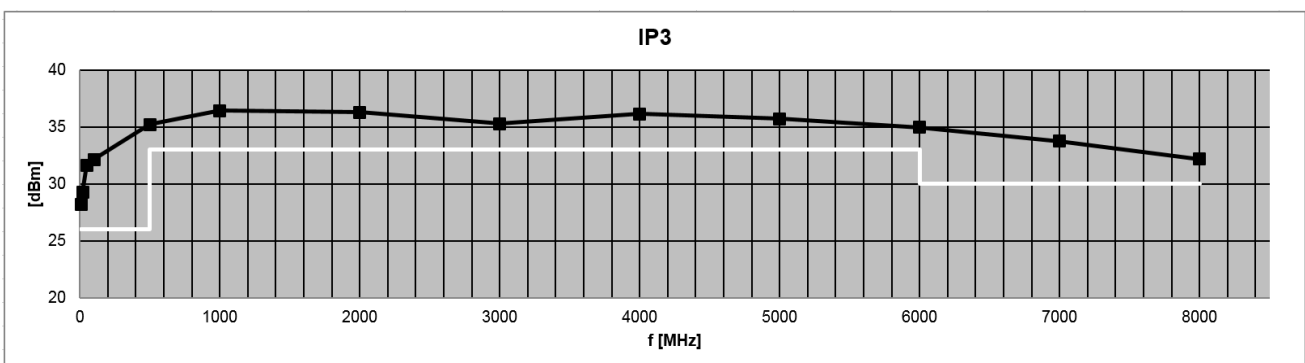
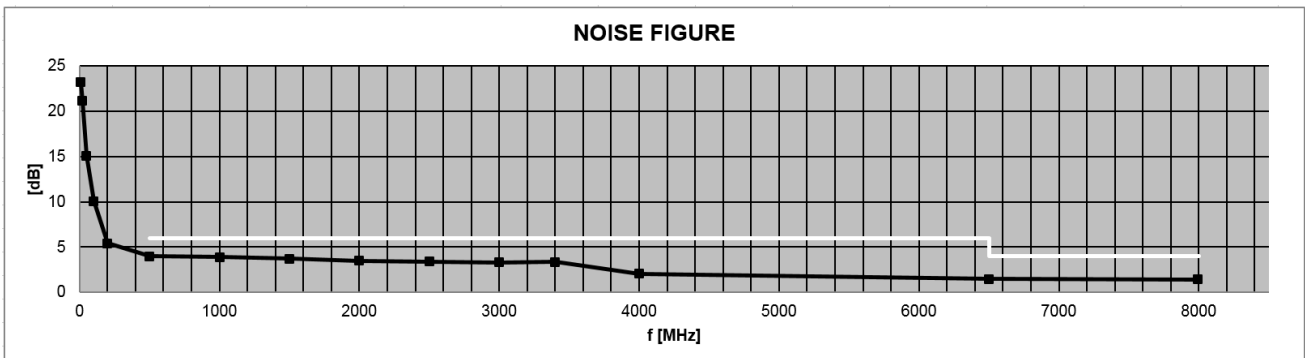
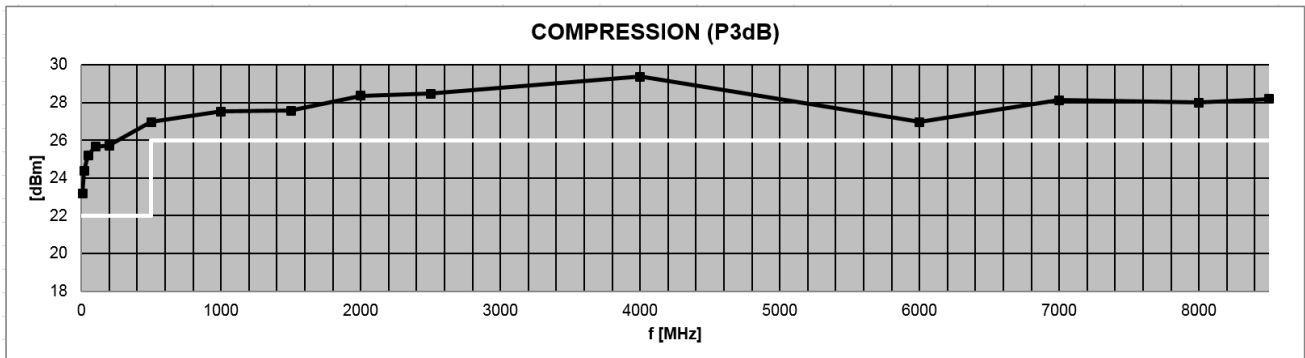
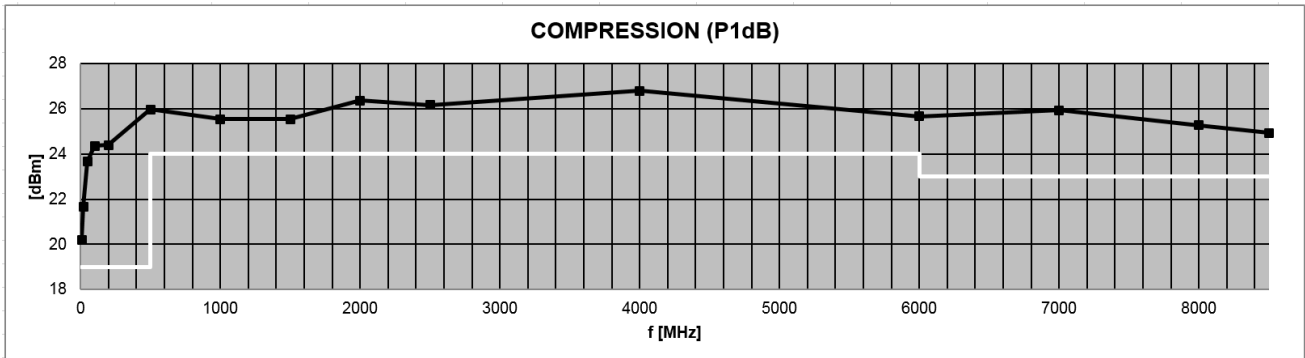
Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
supply voltage	U	12		28	V	DC
power consumption	$P_Q$	5.8	6.5*	6.8	W	no input signal, *) 24V
	$P_{max}$		7.5	8.5		maximum RF output power
dimensions	L x W x H	approx. 99 x 75 x 36			mm	
weight	m		350		g	
recommend power plug	GSN 87H391X1F-02 + 87C39FL-R50					included accessories
operating temp. range	$T_o$	-20		+65	°C	ambiance
storage temp. range	$T_s$	-40		+70	°C	
ordering information	AMP10850026			1305.5001.1		straight power connector
	AMP10850026			1305.5001.2		angled power connector



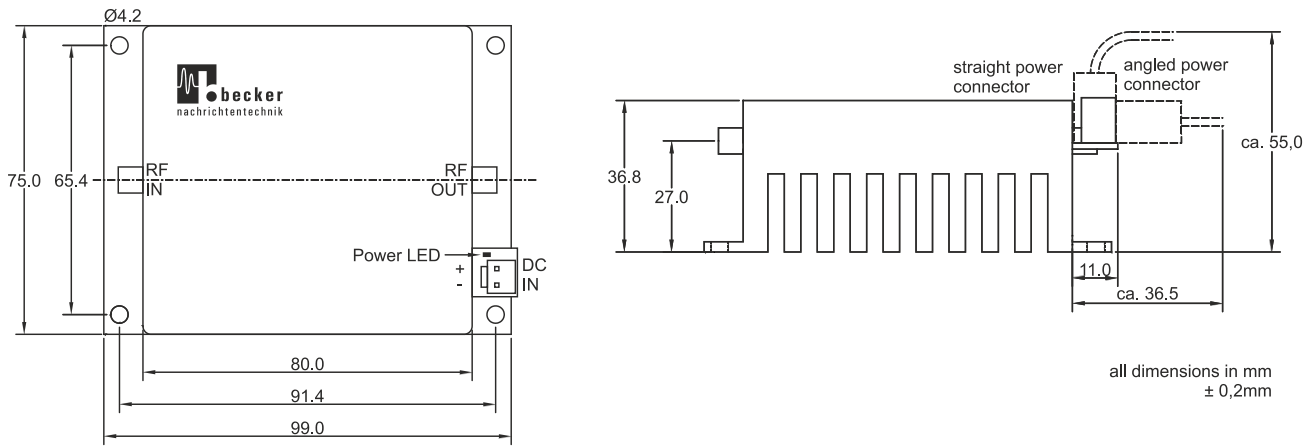
## S-Parameters (typical responses)



## Dynamic Range (typical responses)



## Dimensions



## Related Products

Product	Description	P/N
AMP018032	1 W Medium Power Amplifier Module 100 kHz ... 80 MHz, 50 $\Omega$	1002.5701.1
LNA1080014	High Dynamic Range Amplifier Module 10 ... 800 MHz, 50 $\Omega$	0901.5501.1
AMP590033	2 W Booster Amplifier Module 5 ... 900 MHz, 50 $\Omega$	0901.5011.1
AMP590033H	2 W Power Amplifier Module 5 ... 900 MHz, 50 $\Omega$	0901.5001.1
AMP5270026	High Dynamic Amplifier Module 5 ... 2700 MHz, 50 $\Omega$	1005.5201.1
AMP5220031	High Dynamic Amplifier Module 5 ... 2200 MHz, 50 $\Omega$	1005.5101.1
AMP20280035	4.5 W Wideband Amplifier Module 20 ... 2800 MHz, 50 $\Omega$	1209.5001.1
AMP5170033	Extremely High Linearity Amplifier Module 5 ... 1700 MHz, 50 $\Omega$	1401.5011.1
AMP1053043H	20 W Power Amplifier Module 10 ... 530 MHz, 50 $\Omega$	1001.5001.1