

High Dynamic Amplifier Module 5 ... 2700 MHz, 50 Ω

Features

- output power +26 dBm typ.
- high IP3
- open/ short stable
- transient protected
- L/HF suppression
- wide DC supply range
- optical supply indication
- reverse polarity protected

Applications

- versatile preamplifier
- GSM / UMTS / LTE
- ISM 433 / 868 / 2400 MHz
- laboratory
- test equipment
- instrumentation



At a Glance

AMP5270026 from Becker Nachrichtentechnik is a wideband amplifier module suitable for frequencies from 5 MHz to 2700 MHz in 50 Ohm technology.

Excellent Dynamic

The high 3rd order intercept point in combination with the low noise figure makes this amplifier suitable for applications with high demands.

Versatile Use

AMP5270026 offers a wide DC supply range for versatile use.

The high gain allows maximum output power with an input power of approximated 0 dBm.

An internal high pass filter at the amplifier's input avoids influences of signals in the low frequency range.

It can be used in several areas of application such as VHF/ UHF, ISM 433 / 868 / 2400 MHz and GSM / UMTS / LTE.

Robust Design

AMP5270026 features a compact module design with integrated passive cooling. It is robust against mismatches which can occur in operation with complex loads. 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 module version 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		Ohm	
low frequency	f_{min}		4	5	MHz	
high frequency	f_{max}	2700	3200		MHz	
gain	S_{21}	22	24	26	dB	
gain ripple	ΔS_{21}		± 0.8	± 1.3	dB	
low frequency response	S_{21}		-85	-70	dB	100 kHz, rel. 100 MHz
	S_{21}		-40	-25	dB	1 MHz, rel. 100 MHz
input return loss	S_{11}		-20	-11	dB	
output return loss	S_{22}		-9	-7	dB	
reverse isolation	S_{12}		-40	-35	dB	
1 dB compression	P_{1dB}	24	26		dBm	
3 rd order intercept	OPIP3 ¹	40	46		dBm	5 MHz \leq f \leq 2000 MHz
		37	40		dBm	2000 MHz < f \leq 2700 MHz
2 nd order intercept	OPIP2 ¹	35	60		dBm	
noise figure	NF		5.5	7.5	dB	
maximum input power	$P_{in max}$			+15	dBm	output terminated with 50 Ohm
RF connectors						SMA female

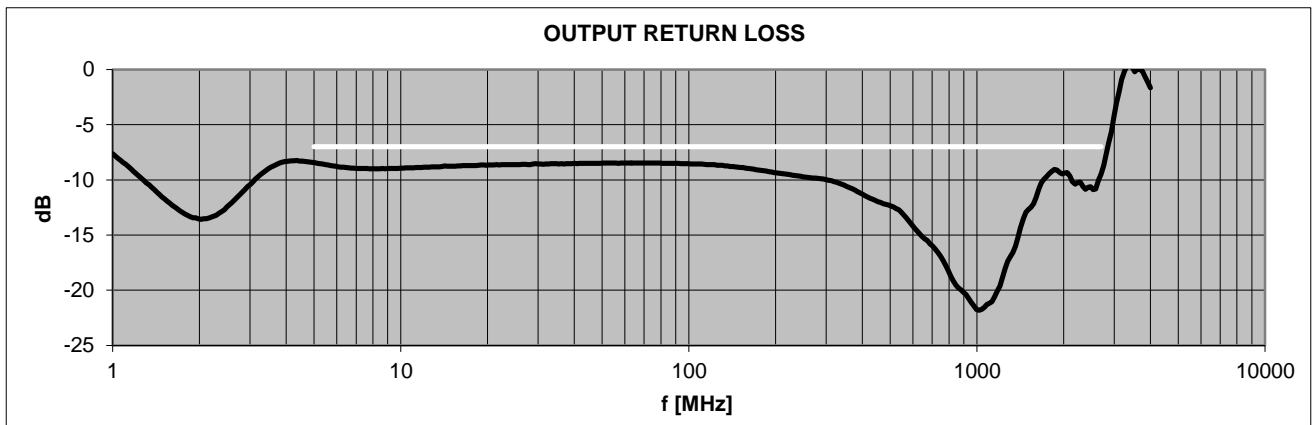
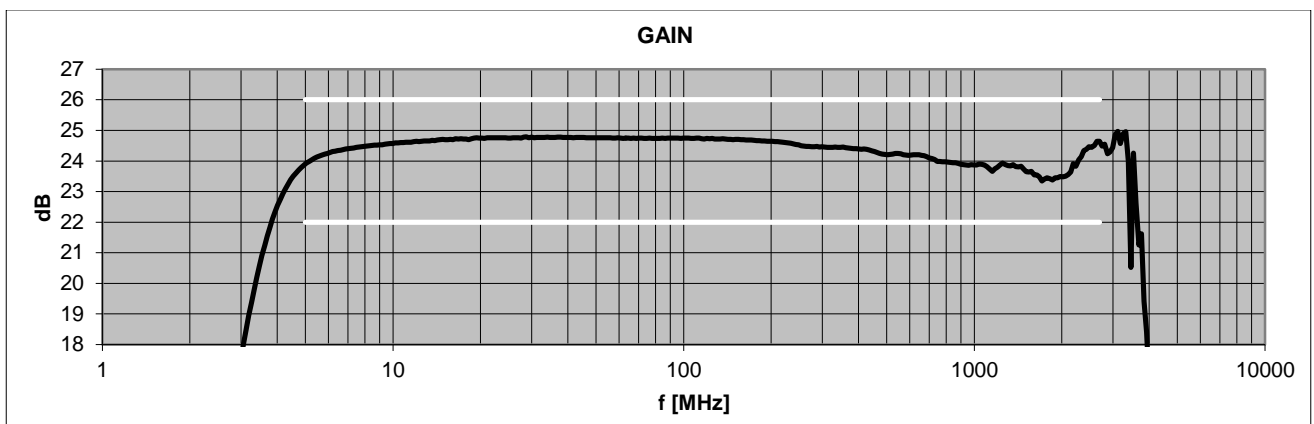
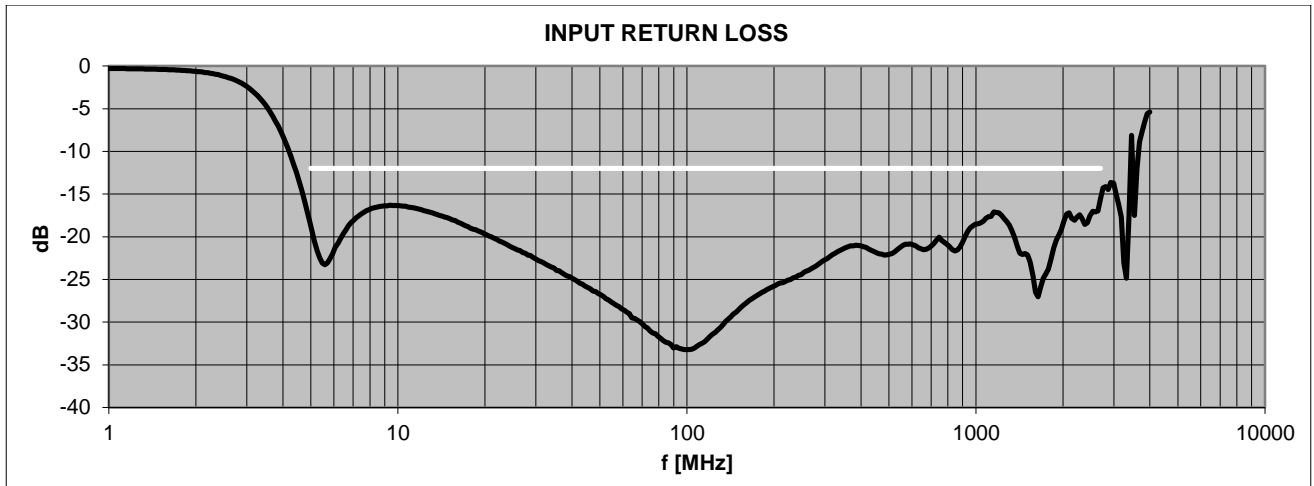
Note 1: Tested at $P_{out} 2 \times +12$ dBm; $\Delta f = 1$ MHz

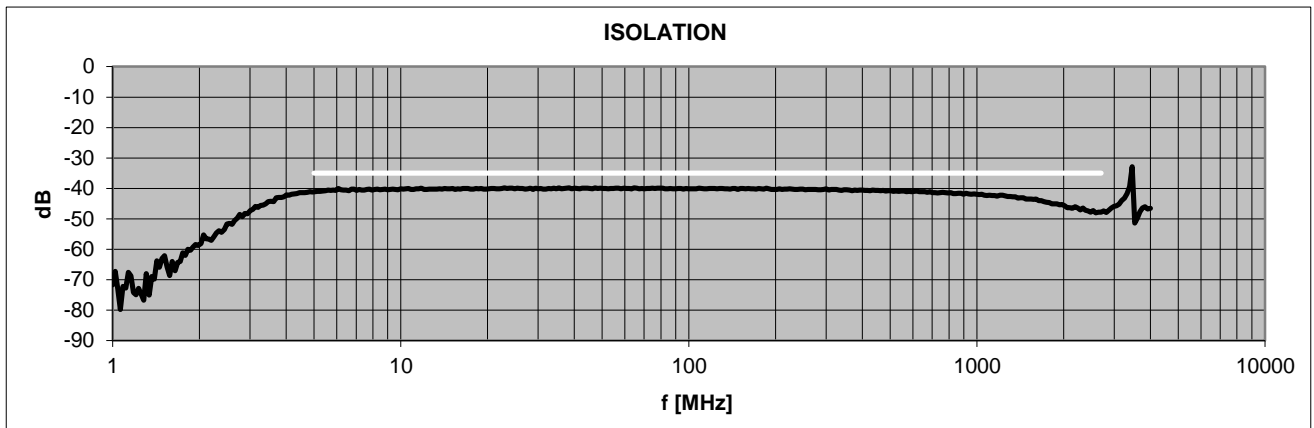
Common Specifications

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
supply voltage	U	11		28	V	DC
current consumption	I	100		300	mA	I_{min} at +28 V
	I	215	235	260	mA	at +12 V
dimensions	L x W x H	approx. 99 x 75 x 36			mm	
weight	m		350		g	
recommend power plug	NSG396M-2					included accessories
operating temp. range	T_o	-20		+65	°C	ambiance
storage temp. range	T_s	-40		+70	°C	
ordering information	AMP5270026			1005.5201.1	straight power connector	
	AMP5270026			1005.5201.2	angled power connector	

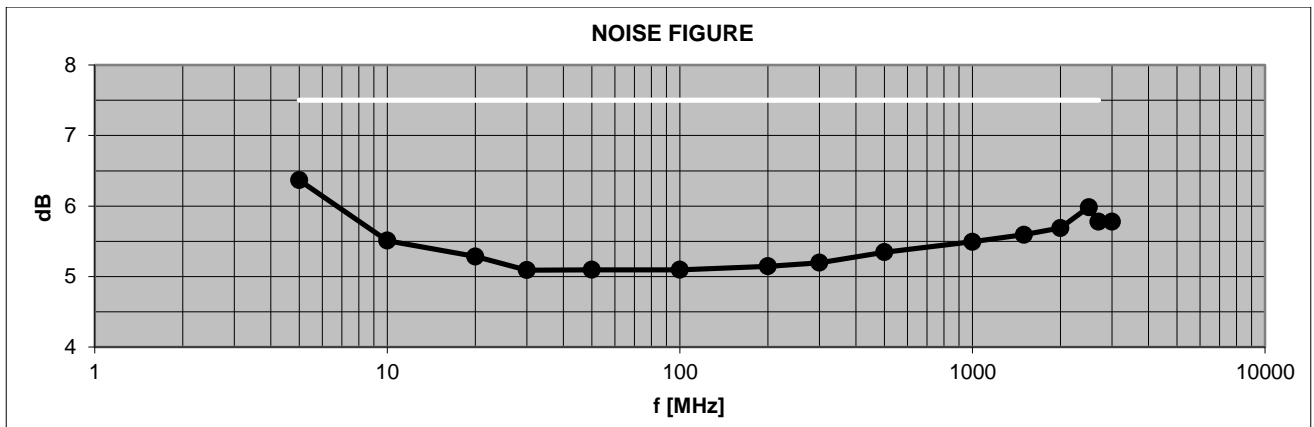
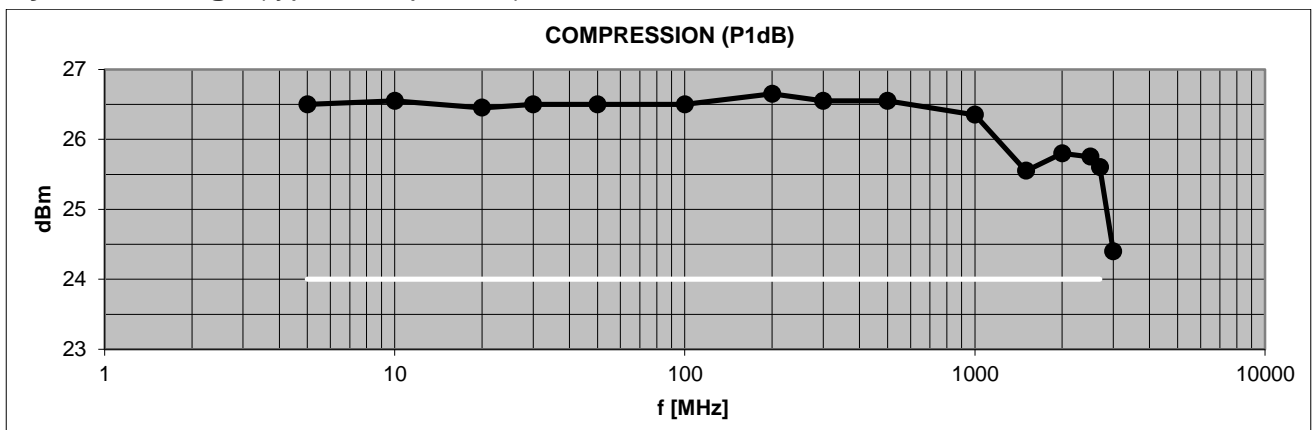


S-Parameters (typical responses)

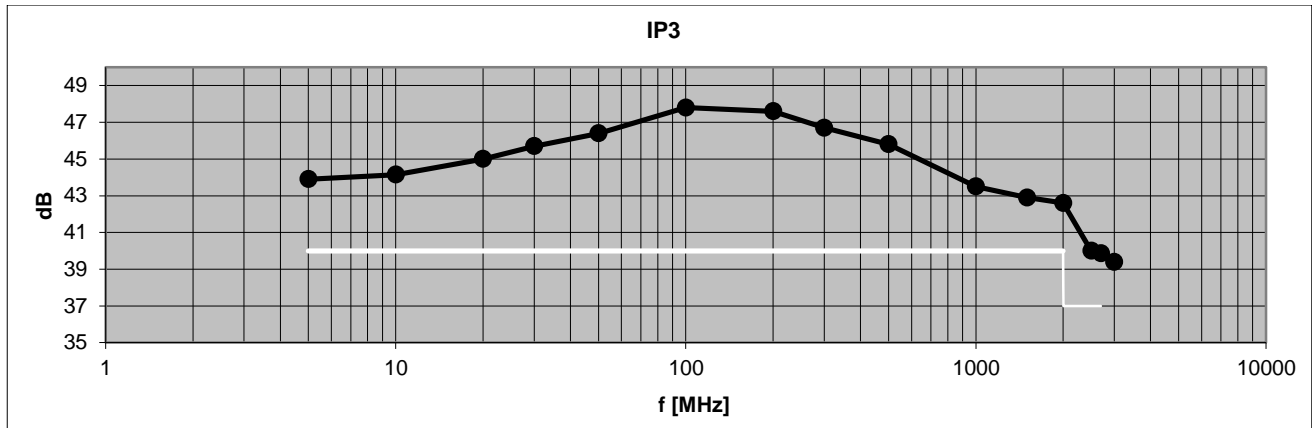




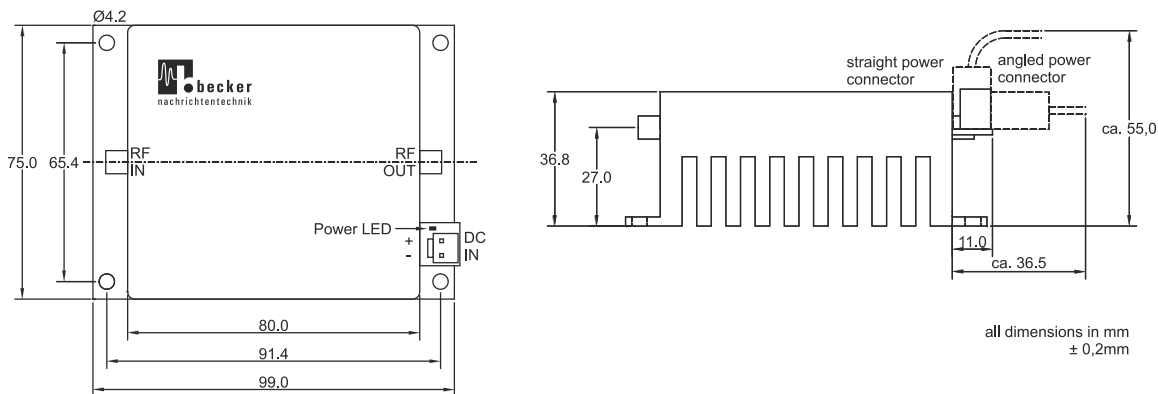
Dynamic Range (typical responses)



Linearity (typical responses)



Dimensions



Related Products

Product	Description	P/N
AMP018032	1 W Medium Power Amplifier Module 100 kHz ... 80 MHz, 50 Ω	1002.5701.1
LNA1080014	High Dynamic Range Amplifier Module 10 ... 800 MHz, 50 Ω	0901.5501.1
AMP590033	2 W Booster Amplifier Module 5 ... 900 MHz, 50 Ω	0901.5011.1
AMP590033H	2 W Power Amplifier Module 5 ... 900 MHz, 50 Ω	0901.5001.1
AMP5220031	High Dynamic Amplifier Module 5 ... 2200 MHz, 50 Ω	1005.5101.1
AMP20280035	4.5 W Wideband Amplifier Module 20 ... 2800 MHz, 50 Ω	1209.5001.1
AMP10850026	500 mW Wideband Amplifier Module 10 ... 8500 MHz, 50 Ω	1305.5001.1
AMP5170033	Extremely High Linearity Amplifier Module 5 ... 1700 MHz, 50 Ω	1401.5011.1
AMP1053043H	20 W Power Amplifier Module 10 ... 530 MHz, 50 Ω	1001.5001.1