AMP5270026-T

High Dynamic Range Amplifier 5 … 2700 MHz, 50 Ω

Features

- output power +26 dBm typ.
- high IP3
- open/ short stable
- transient protected
- L/HF suppression
- 110 V and 230 V AC mains supply

Applications

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

At a Glance

AMP5270026-T from Becker Nachrichtentechnik is a wideband amplifier 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

The high gain allows maximum output power at 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-T features a compact and robust design. It is resistant 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.
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RF Specifications

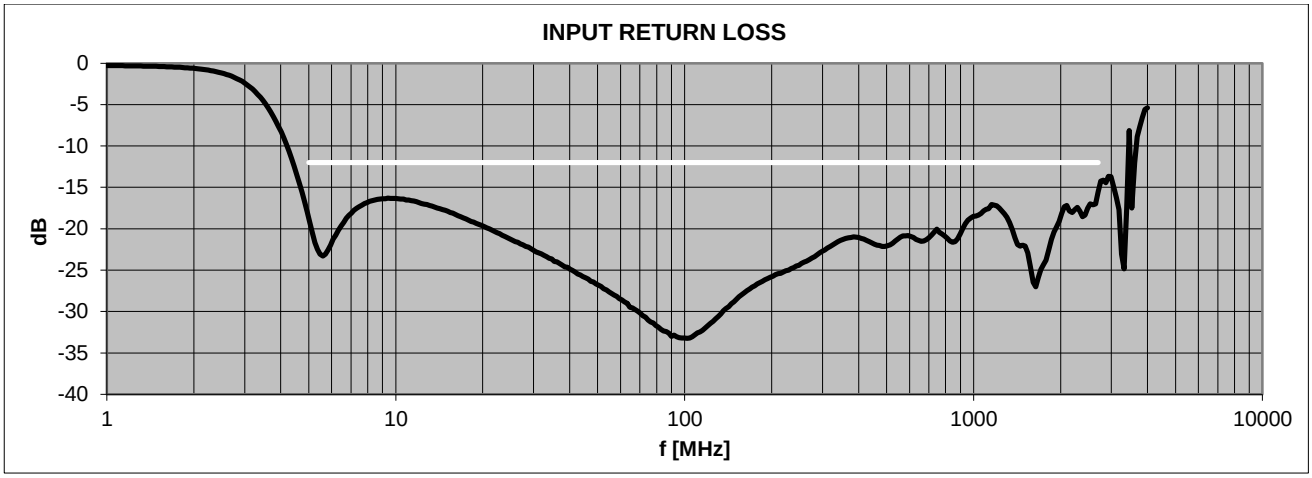
Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
impedance	Z_{in} / Z_{out}		50		Ohm	
low frequency	f_{min}		4	5	MHz	
high frequency	f_{max}	2700	3200		MHz	
gain	S_{21}	22.0	24.0	26.0	dB	
gain ripple	ΔS_{21}		±0.8	±1.3	dB	
low frequency response	S_{21}		-85	-70	dB	100 kHz, rel. 100 MHz
	S_{21}		-40	-25	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}	24.0	26.0		dBm	
3rd order intercept	OPIP3[1]	40	46		dBm	5 MHz ≤ f ≤ 2000 MHz
		37	40		dBm	2000 MHz < f ≤ 2700 MHz
2nd 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						N female

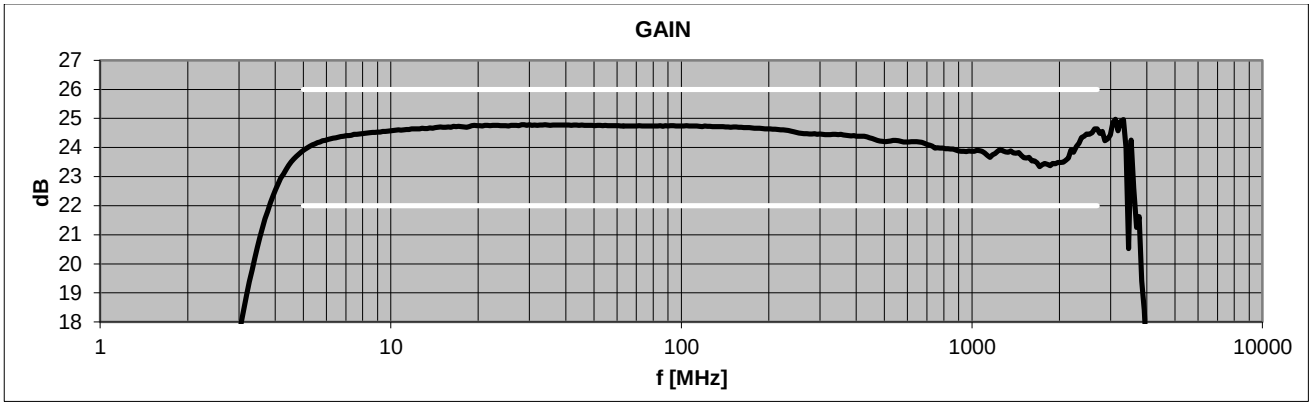
Note 1: Tested at P_{out} 2 x +12 dBm; Δf = 1 MHz

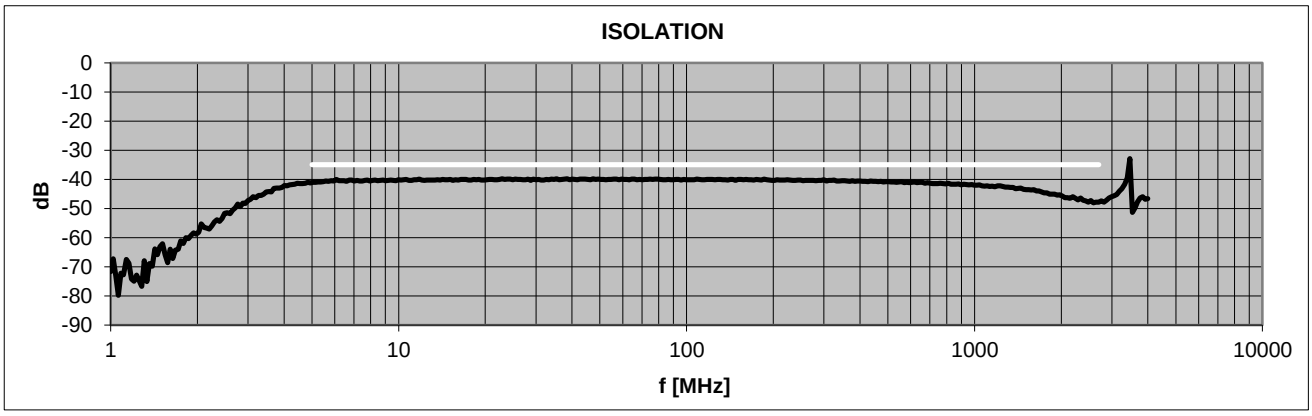
Common Specifications

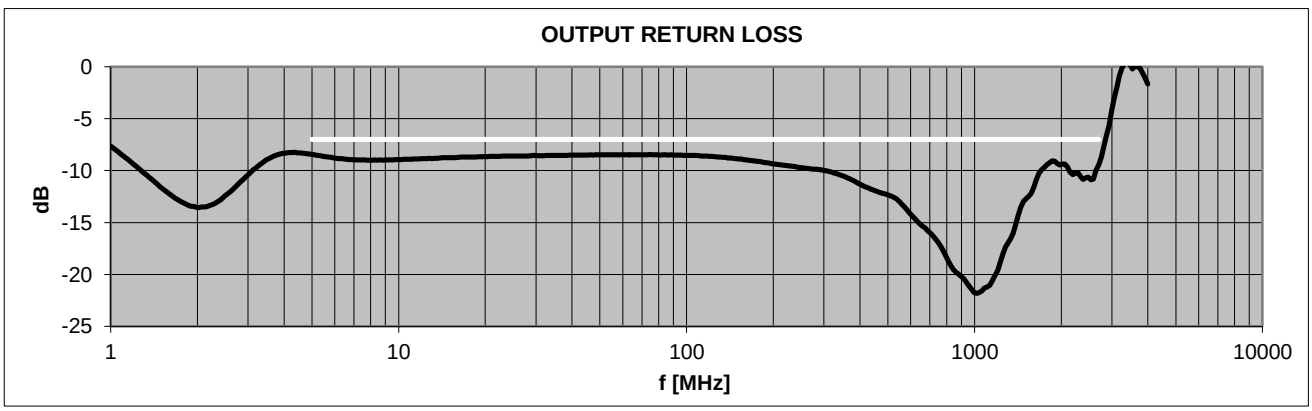
Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
power supply	U	90		260	V	AC
	f	50		400	Hz	
power consumption	P		12		VA	
dimensions	L x W x H	approx. 175 x 115 x 95			mm	length without connectors
weight	m		1500		g	
operating temp. range	T_o	+5		+40	°C	ambiance
storage temp. range	T_s	-40		+70	°C	
ordering information	AMP20270026-T			1005.5203.1		

S-Parameters (typical responses)

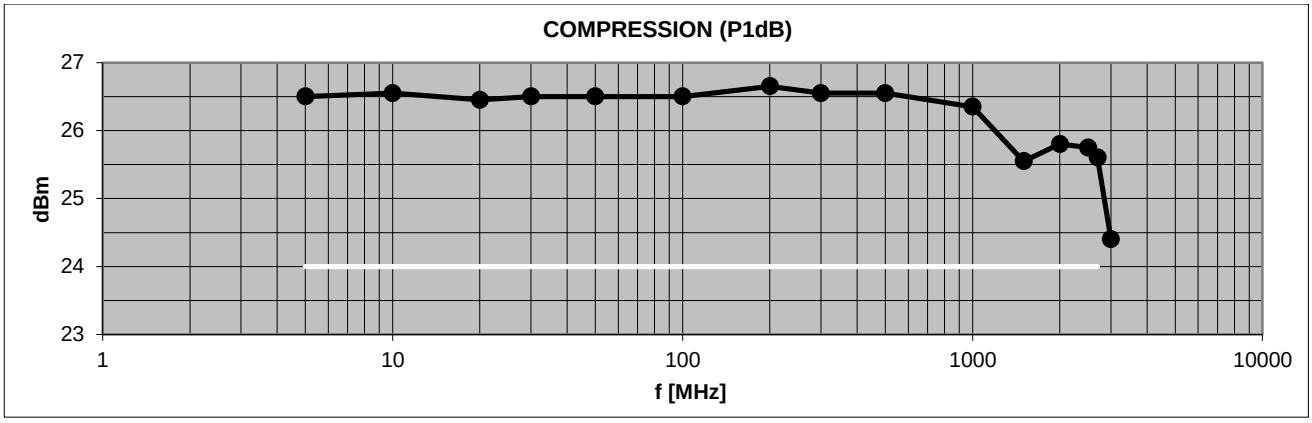


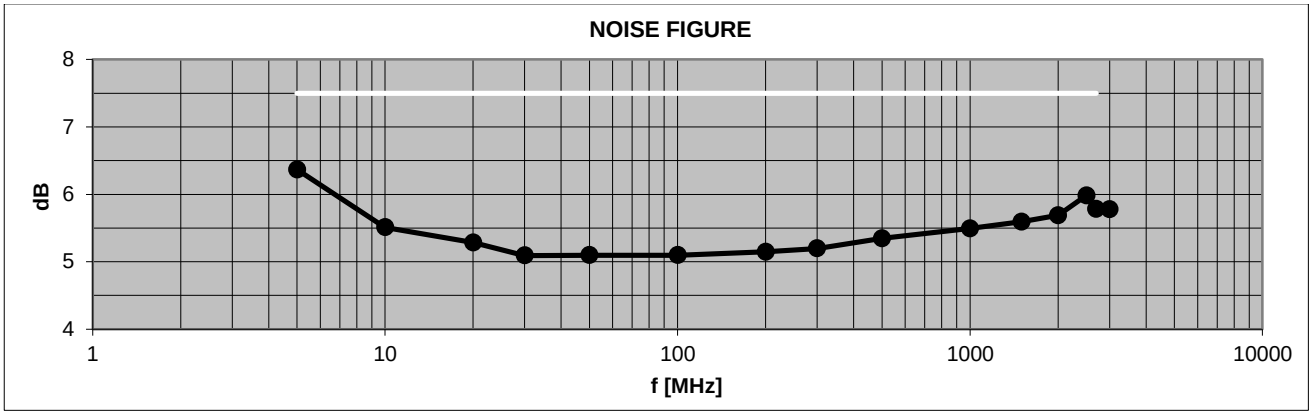




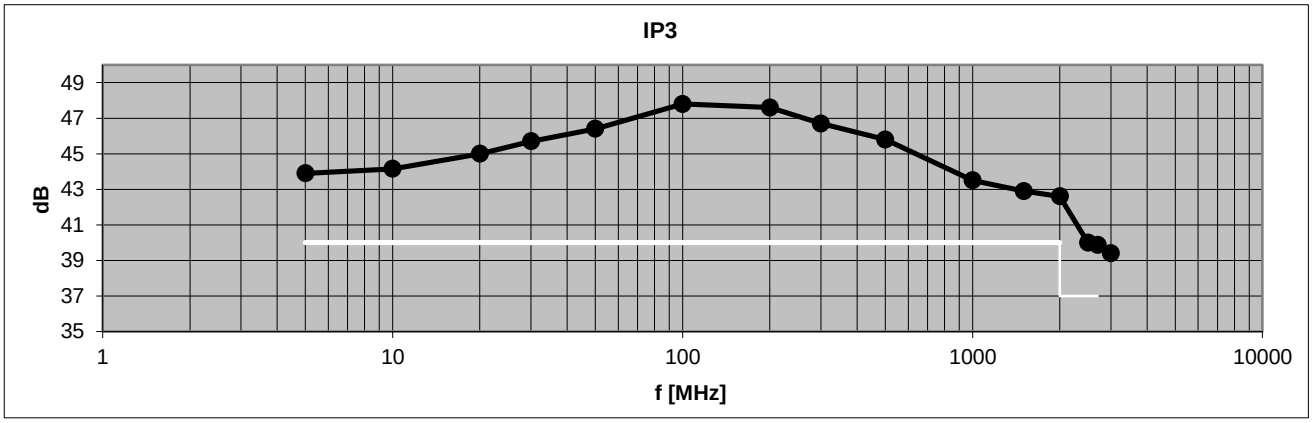


Dynamic Range (typical responses)



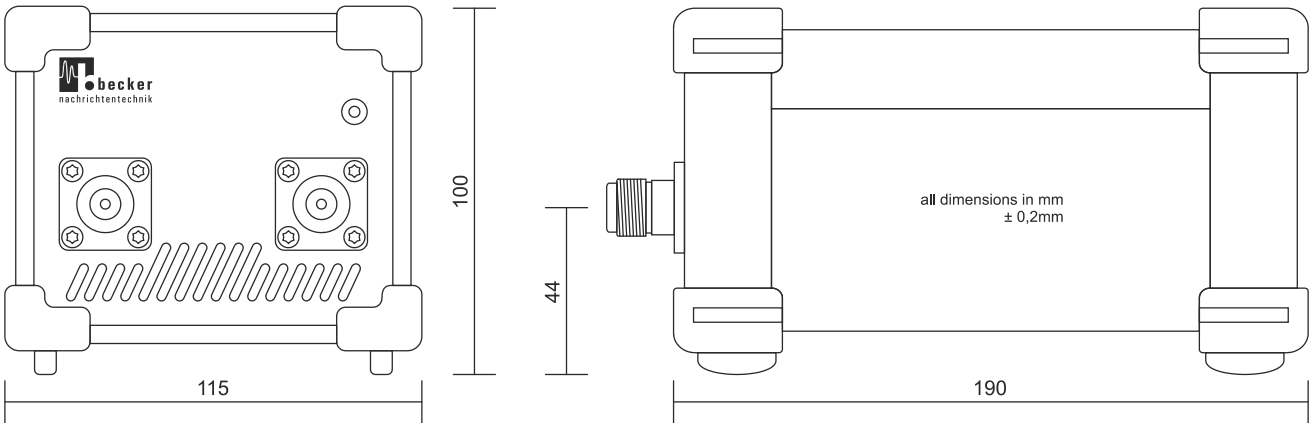


Linearity (typical responses)



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
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
AMP10850026-T	500 mW Wideband Amplifier 10 ... 8500 MHz, 50 Ω	1305.5003.1