

## AMP018032-T

### 1.3 W High Linearity Table Top Unit 100 kHz...80 MHz

#### Features

- output power +32 dBm typ.
- high OIP3 +55 dBm typ.
- high OIP2 +110 dBm typ.
- open/short stable
- AC mains supply

#### Applications

- amplifier for short wave
- EMC amplifier
- laboratory
- test equipment



#### At a Glance

AMP018032-T from Becker Nachrichtentechnik is a compact amplifier as table top unit in 50 Ohm technology. It is designed for the use in laboratory environments. The robust electric and mechanic design gives solid operations over a long time. The amplifier works stable over a wide frequency range with many octaves. The amplifier offers a wide AC mains supply voltage range. The presence of AC power is indicated by a LED at the front side of the unit. Mounting feet are part of delivery.

#### Push Pull Technology

The internal wideband amplifier stages are designed in push-pull technology. This technology gives the amplifier high linearity performance and wider operation bandwidths. Compared with the linearity of single stage amplifiers the push-pull technology gives much better power efficiency with less heat generation.

#### Special Features

The highest IP2 and IP3 properties makes the device suitable in professional applications where weak RF signals in combination with very strong signals or digital modulated signals must amplified without any distortion effects.

#### Tolerant to Mismatches

Using RF power transistors with enough head room to maximum ratings make the amplifier robust against reverse power and therefore robust against loads at the output which are not matched. The output of the amplifier is robust against open or short load at the output.

#### Rugged Design

The amplifier unit has aluminum housing. The internal amplifier module additional is built in a milled aluminum case to give best shielding for avoiding EMI influences caused by radio signals coming from the environment. The RF connectors on the unit front side are N female type.

**RF Specification**

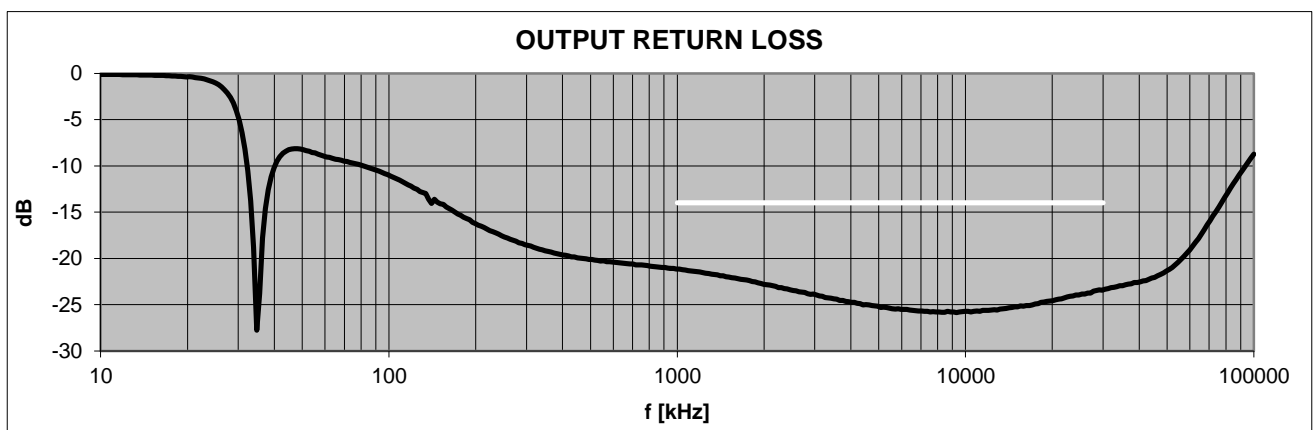
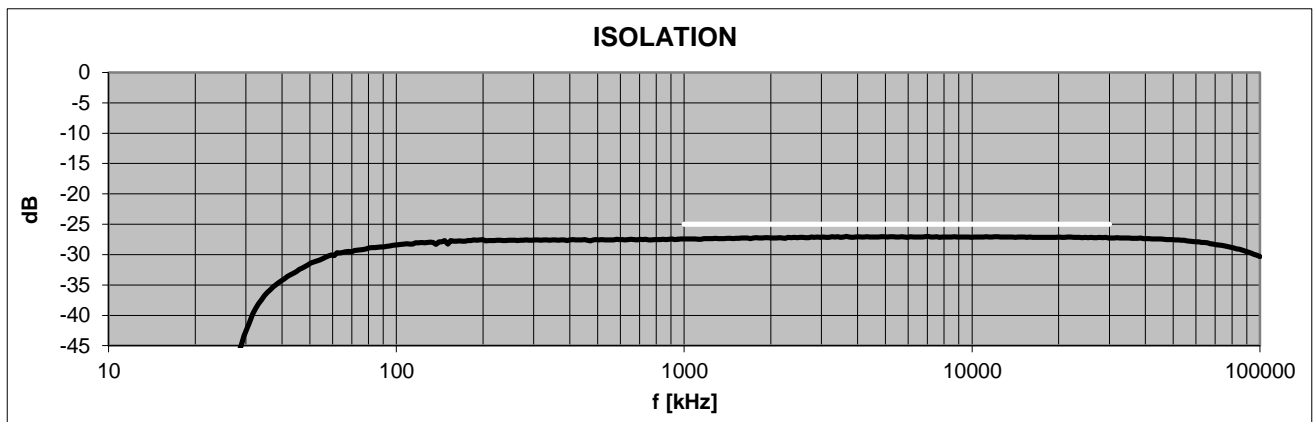
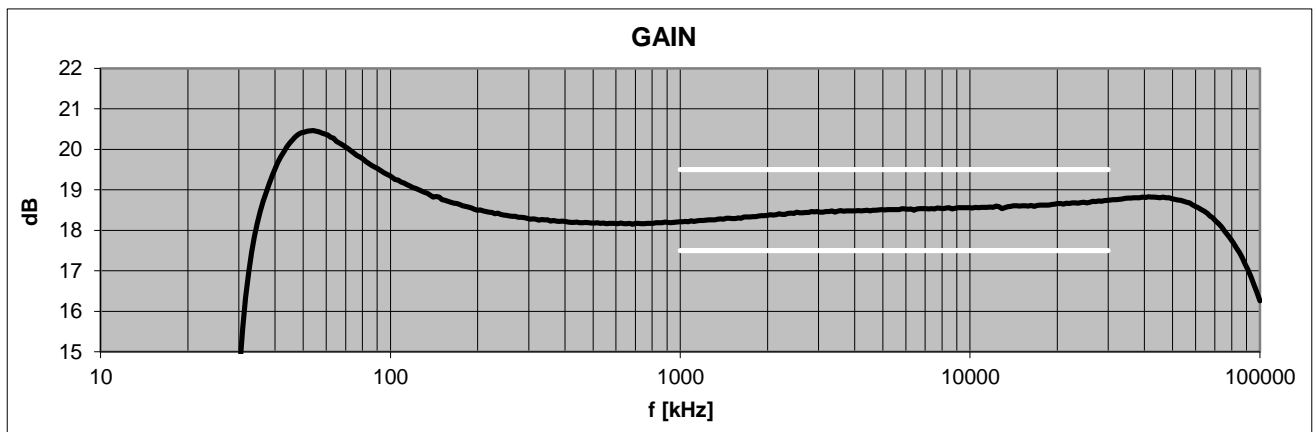
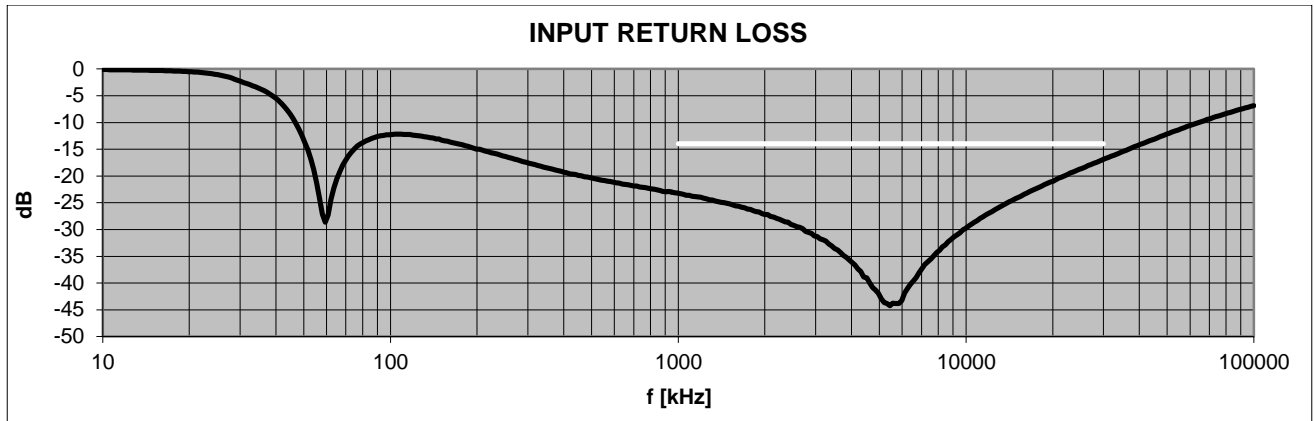
| Parameter                       | Symbol             | Min.     | Typ. | Max.      | Unit     | Condition                         |
|---------------------------------|--------------------|----------|------|-----------|----------|-----------------------------------|
| impedance                       | $Z_{in} / Z_{out}$ |          | 50   |           | $\Omega$ |                                   |
| low frequency                   | $f_{min}$          |          | 50   | 1000      | kHz      |                                   |
| high frequency                  | $f_{max}$          | 30       | 80   |           | MHz      |                                   |
| gain                            | $S_{21}$           | 17.5     | 18.5 | 19.5      | dB       |                                   |
| gain ripple                     | $\Delta S_{21}$    |          |      | $\pm 1.0$ | dB       |                                   |
| input return loss               | $S_{11}$           |          | -25  | -14       | dB       |                                   |
| output return loss              | $S_{22}$           |          | -23  | -14       | dB       |                                   |
| reverse isolation               | $S_{12}$           |          |      | -25       | dB       |                                   |
| 1 dB compression                | $P_{1dB}$          | +30      | +32  |           | dBm      |                                   |
| 3 <sup>rd</sup> order intercept | $OIP3^1$           | +50      | +55  |           | dBm      |                                   |
| 2 <sup>nd</sup> order intercept | $OIP2^1$           | +100     | +110 |           | dBm      |                                   |
| noise figure                    | NF                 |          | 3.8  | 5.0       | dB       |                                   |
| maximum input power             | $P_{in,max}$       |          |      | +20       | dBm      | output terminated with 50 ohms    |
| maximum DC voltage              | $U_{DC}$           |          |      | 0         | V        | RF ports low DC resistance to GND |
| RF connectors                   | $X_{RF}$           | N female |      |           |          |                                   |

Note 1: Tested at  $P_{out} 2 \times +0$  dBm;  $\Delta f = 1$  MHz

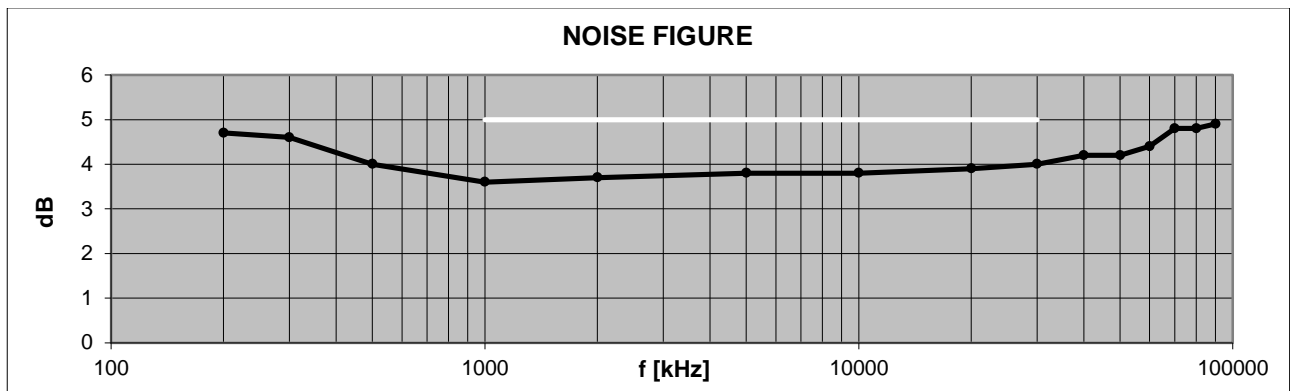
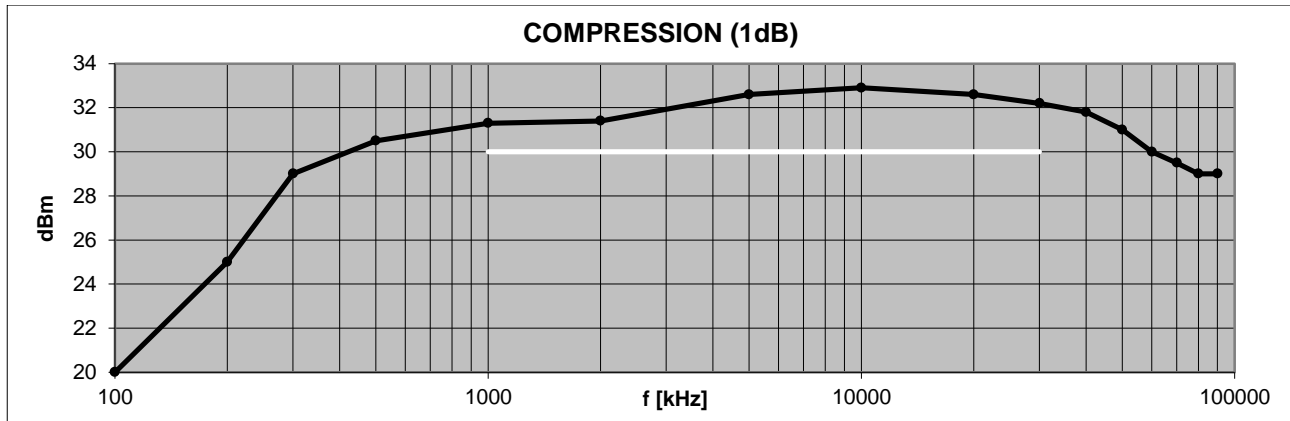
**Common Specification**

| Parameter             | Symbol      | Min.                    | Typ. | Max.        | Unit        | Condition                    |
|-----------------------|-------------|-------------------------|------|-------------|-------------|------------------------------|
| power supply          | $U_{AC}$    | 90                      |      | 260         | V           | AC, 50 ... 400 Hz            |
| power consumption     | $P_{AC}$    |                         | 15   |             | W           |                              |
| power socket          | $X_{AC}$    | IEC-60320 C14           |      |             |             | country specific power cable |
| dimensions            | W x H x D   | approx. 115 x 100 x 190 |      |             | mm          | without connectors           |
| weight                | m           |                         | 1.4  |             | kg          |                              |
| operating temp. range | $T_o$       | +5                      |      | +40         | $^{\circ}C$ | housing surface              |
| storage temp. range   | $T_s$       | -40                     |      | +70         | $^{\circ}C$ |                              |
| ordering information  | AMP018032-T |                         |      | 1002.5703.1 |             |                              |

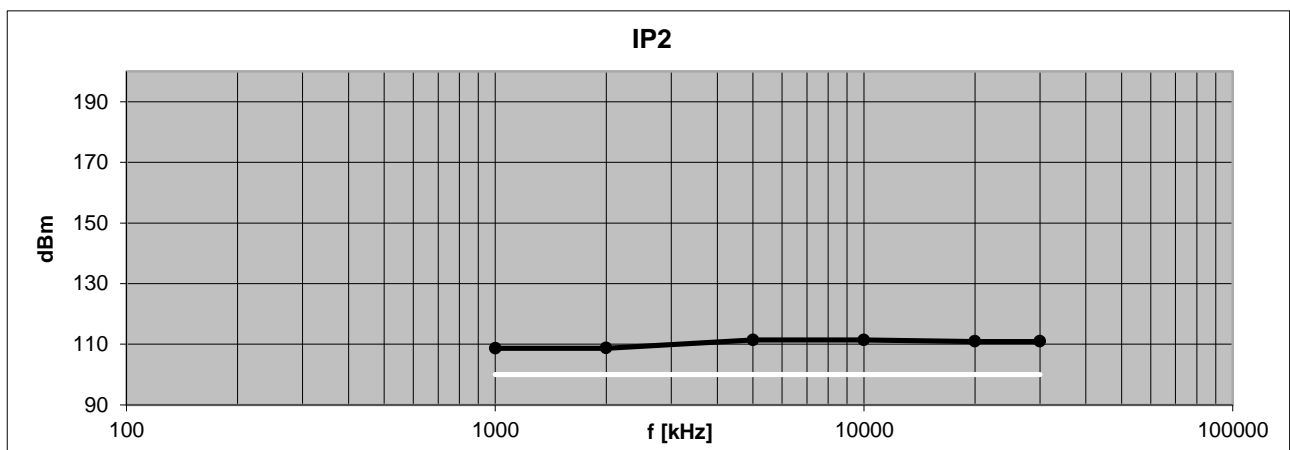
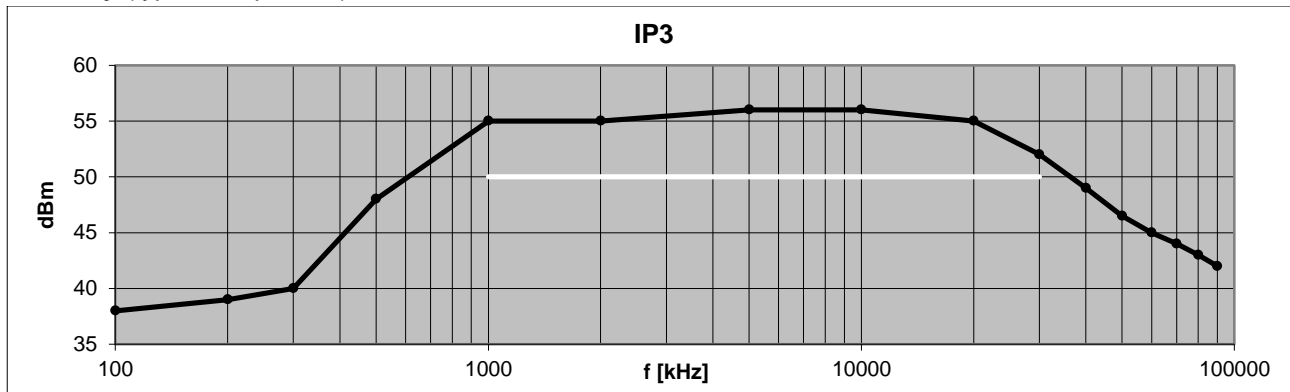


**S-Parameters (typical responses)**

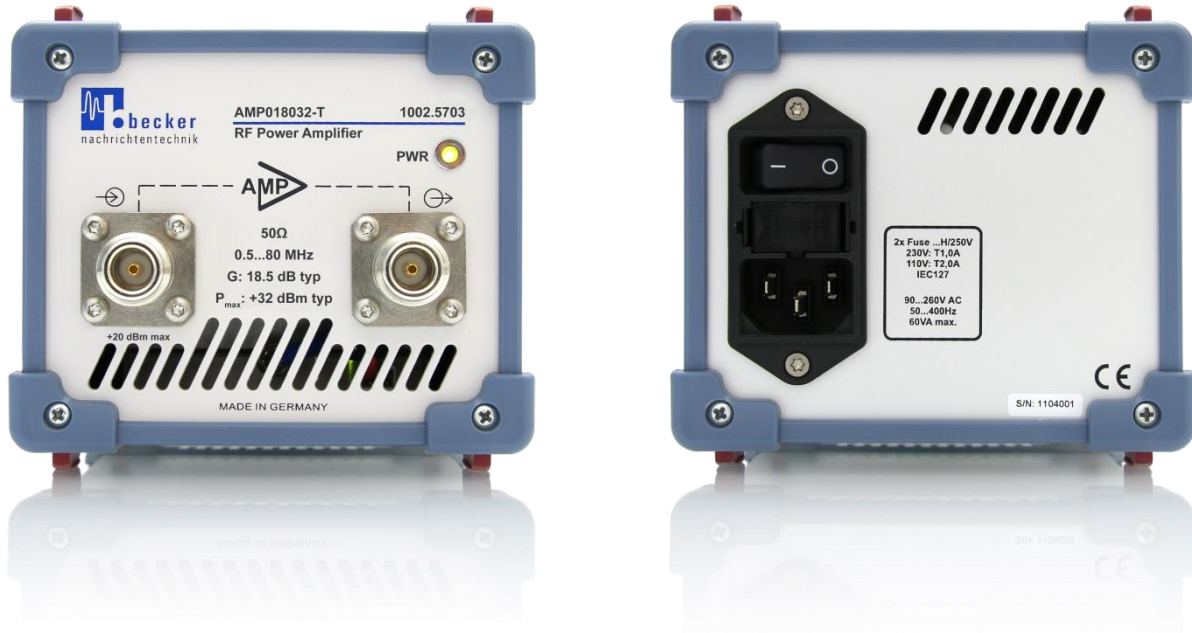
## Dynamic Range (typical responses)



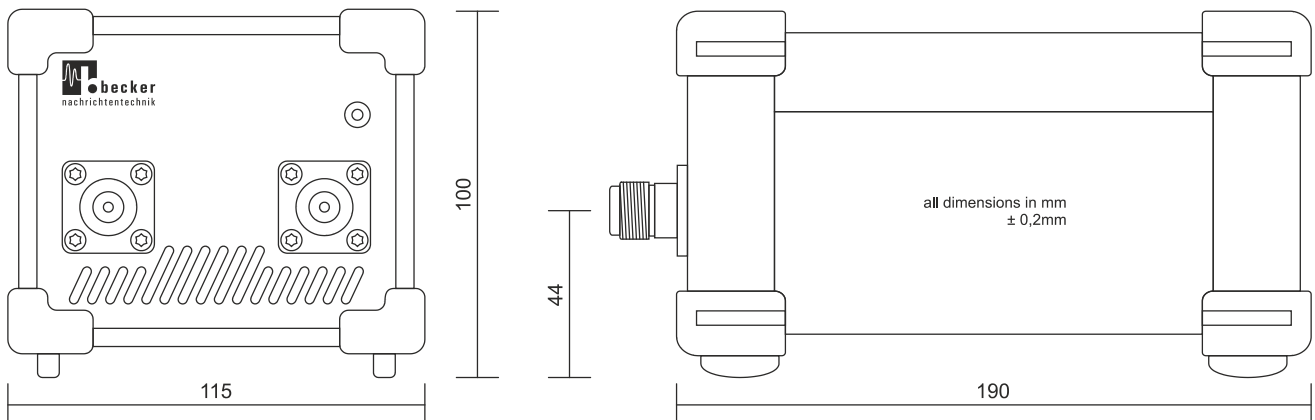
## Linearity (typical responses)



## Appearances



## Dimensions



## Related Products

| Product       | Description  | P/N         |
|---------------|--|-------------|
| AMP20280035-T | 4.5 W Wideband Amplifier Table Top Unit 20 ... 2800 MHz        | 1209.5003.1 |
| AMP590033-T   | 2 W Booster Amplifier Table Top Unit 5 ... 900 MHz             | 0901.5013.1 |
| AMP590033H-T  | 2 W Amplifier Table Top Unit 5 ... 900 MHz                     | 0901.5003.1 |
| AMP018032     | 1.3 W High Linearity Table Top Unit 100 kHz...80 MHz           | 1002.5703.1 |
| AMP5220031    | 1 W High Dynamic Amplifier Table Top Unit 5 ... 2200 MHz       | 1005.5103.1 |
| AMP5270026    | 400 mW High Dynamic Amplifier Table Top Unit 5 ... 2700 MHz    | 1005.5203.1 |
| AMP10850026   | 400 mW Ultra Wideband Amplifier Table Top Unit 10 ... 8500 MHz | 1305.5003.1 |
| LNA1080014    | 400 mW Low Noise Amplifier Table Top Unit 10 ... 800 MHz       | 0901.5503.1 |