

## Product Datasheet - Technical Specifications



More information in our Web-Shop at ► [www.meilhaus.com](http://www.meilhaus.com)

### Your contact

Technical and commercial sales, price information,  
quotations, demo/test equipment, consulting:

Tel.: +49 - (0)81 41 - 52 71-0

E-Mail: [sales@meilhaus.com](mailto:sales@meilhaus.com)

**Meilhaus Electronic GmbH**  
Am Sonnenlicht 2  
82239 Alling/Germany

Tel. +49 - (0)81 41 - 52 71-0 E-  
Mail [sales@meilhaus.com](mailto:sales@meilhaus.com)

Mentioned company and product names may be registered trademarks of the respective companies. Errors and omissions excepted. © Meilhaus Electronic.

# DC-coupled driver amplifier

## 1 Introduction

The TBCS101-TGA is a DC-coupled amplifier with a flat gain from DC – 20 MHz, a 3 dB bandwidth of 40 MHz, a gain of 20 dB and an output power of + 15 dBm

### Application:

Driver amplifier for high power DC coupled amplifiers such as required for CS101 testing

General-purpose amplifier to boost the tracking generator signal of the TBMR-110M measurement receiver



## 2 Specification

### General specification

Frequency range:	DC – 40 MHz, 3 dB band width, typical
Gain:	20 dB, typ. ( $\cong$ linear voltage gain 10) with 50 Ohm load impedance
RF-connectors:	BNC-female

### Input specification

Input impedance:	50 $\Omega$
Input return loss:	> 30 dB, typ.
Maximum input level:	-5 dBm ( $\cong$ 0.35 V <sub>pp</sub> ); for output saturation
Maximum ratings:	+20 dBm in a 50 Ohm system / $\pm$ 1.5V DC max. input rating

### Output specification

Output impedance:	50 $\Omega$
Output return loss:	> 20 dB, typ.
P1dB <sub>out</sub> :	+15 dBm ( $\cong$ 3.5 V <sub>pp</sub> ); output saturation

## DC-coupled driver amplifier

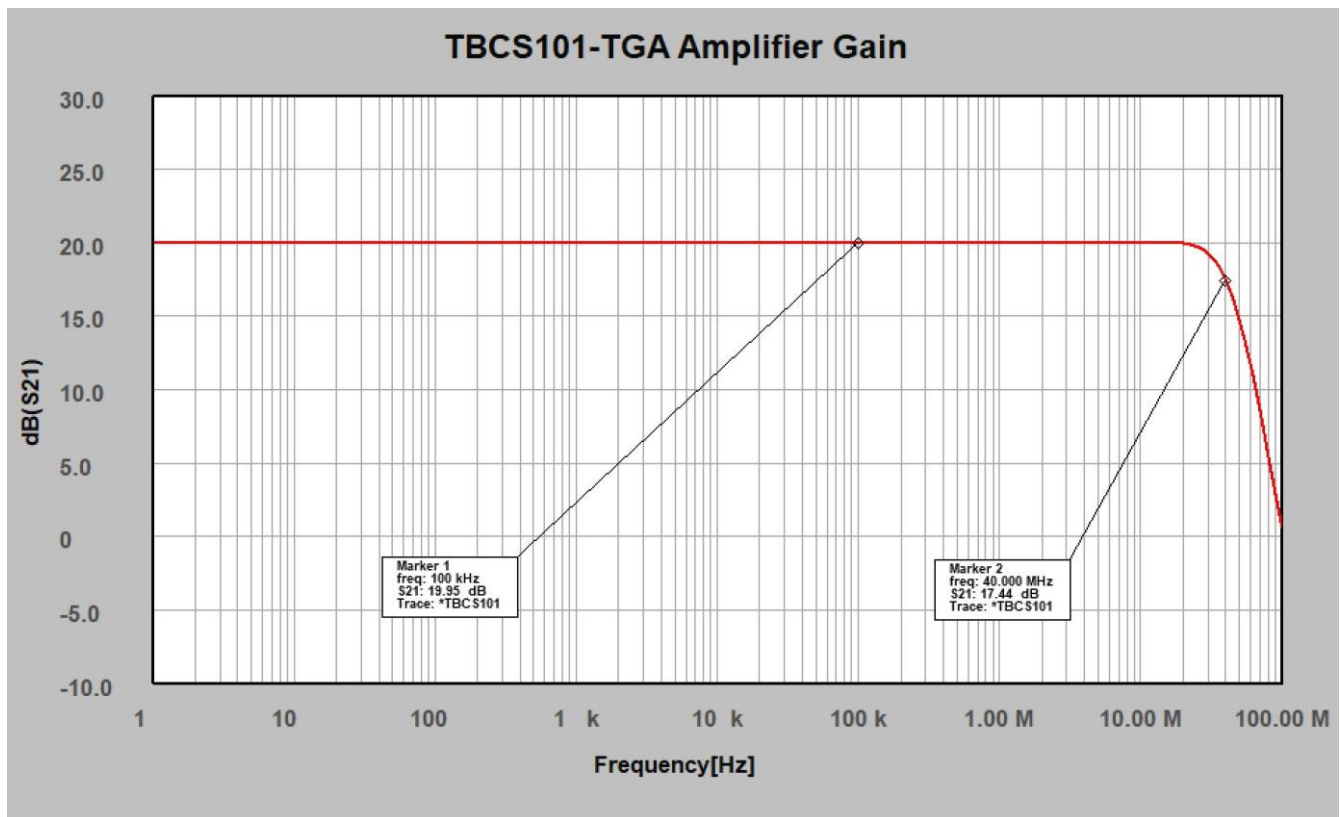
IP<sub>3out</sub>: +25 dBm  
DC offset: < 100mV at output; input terminated with 50 Ohm

### Supply specification

Power-connector: USB-C  
Indicator LEDs: Power ON,  
Operating voltage: 5 V DC  
Current consumption: 90 mA  
Operating temperature range: -20°C to +50°C  
Dimensions: W 82 mm x H 33 mm x L 80 mm;  
Weight: 100 g

## 3 Measurement Plots

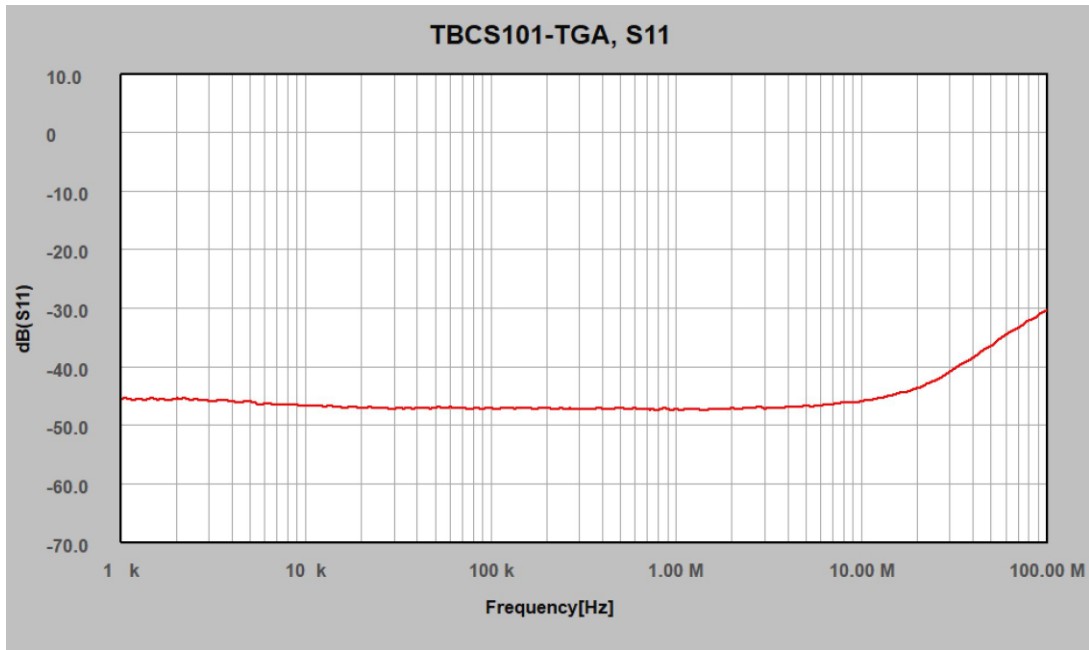
### 3.1 Gain



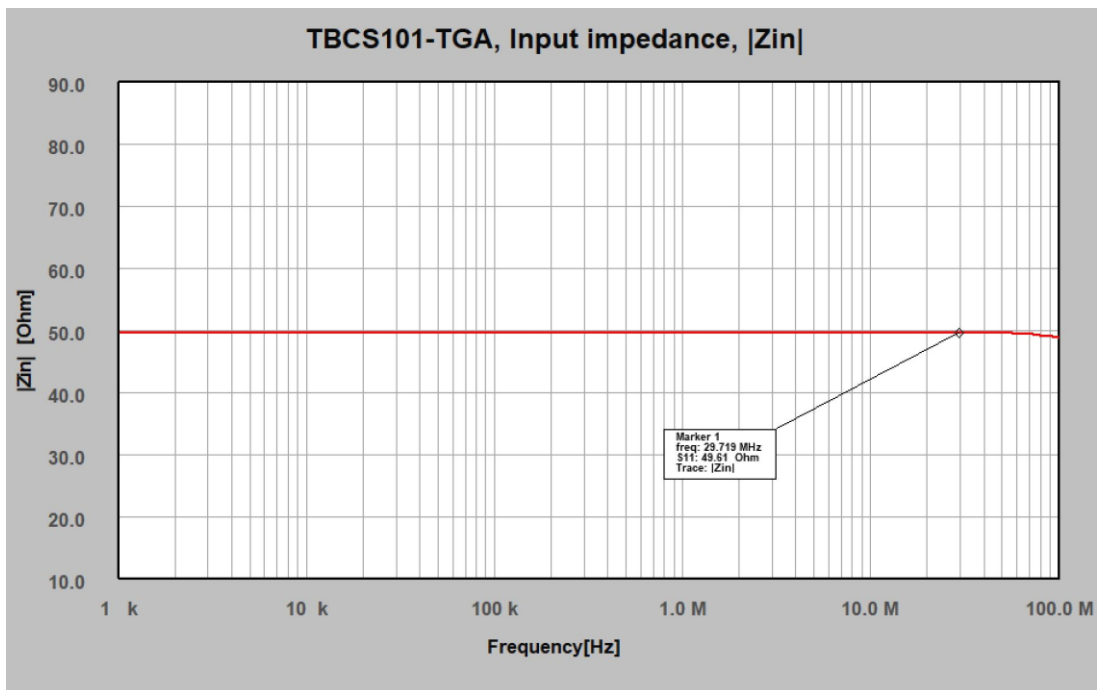
TBCS101-TGA, Gain, DC – 100 MHz, typ.

## DC-coupled driver amplifier

### 3.2 Input return loss and impedance



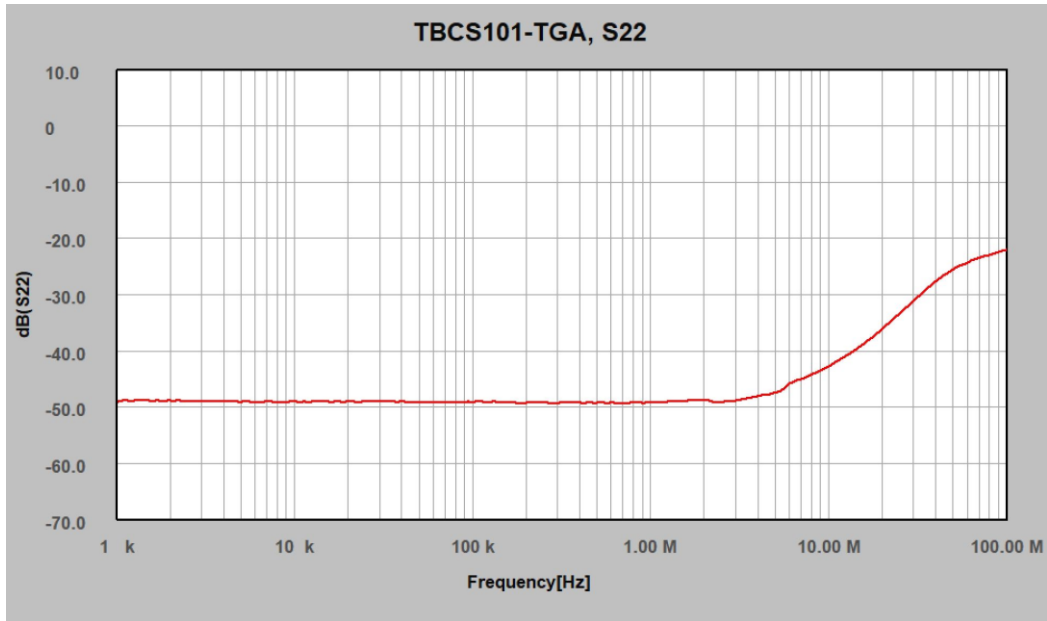
TBCS101-TGA, S11, 1 kHz – 100 MHz, typ.



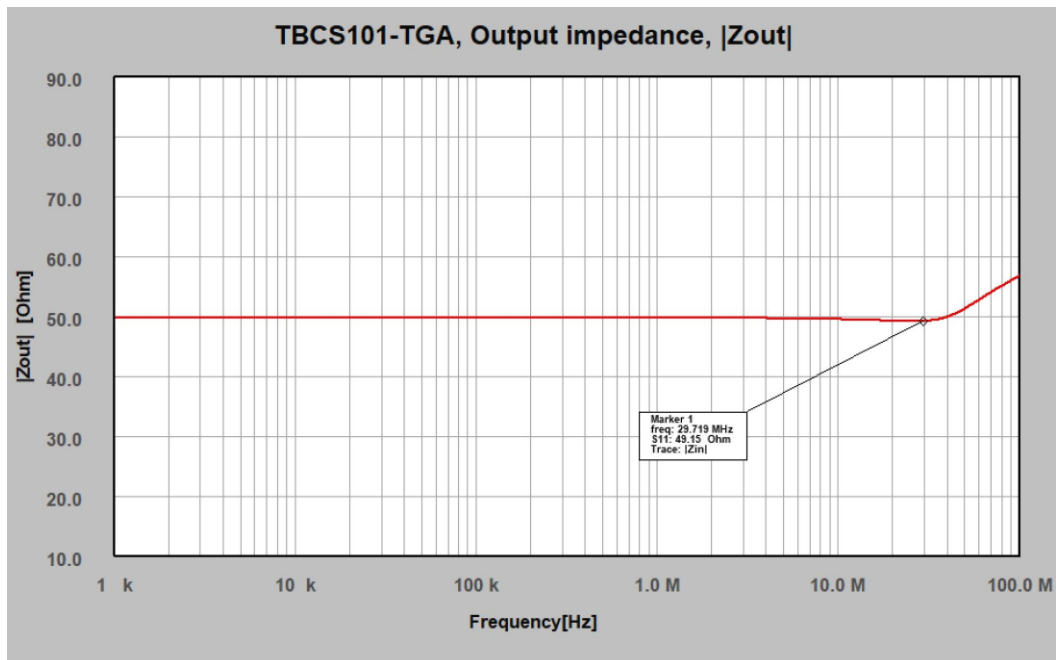
TBCS101-TGA, Input Impedance, 1 kHz – 100 MHz, typ.

## DC-coupled driver amplifier

### 3.3 Output return loss and impedance



TBCS101-TGA, S22, 1 kHz – 100 MHz, typ.



TBCS101-TGA, Output Impedance, 1 kHz – 100 MHz, typ.

## DC-coupled driver amplifier

### 4 Ordering Information

Part Number	Description
TBCS101-TGA	DC-coupled driver amplifier, USB-C cable

### 5 History

Version	Date	Author	Changes
V1.0	17. 2.2025	Mayerhofer	Creation of the document