

## Broadband Conical Monopole Antenna "BCM40"

### Features

- Ultra broadband 1-40 GHz antenna
- Monopole antenna characteristic
- Robust casing
- Suitable for indoor and outdoor use
- Only one antenna covers all major frequency bands
- Ideal for surveillance applications
- High efficiency by gold plating of the surface
- Made in Germany



Fig. 1: BCM40 Antenna from HHF

### Application

Modern radio communication utilizes different frequency bands. Common antennas provide acceptable performance only in narrow frequency bands, requiring the user to change antennas when changing the frequency band. For broadband monitoring purposes, an array of different antennas is thus required.

The BCM40 antenna eliminates the need for different antennas in a frequency band from 1.2 to 40 GHz, offering solid performance in a frequency band of unprecedented width.

The omnidirectional characteristic of the BCM40 allows the controlling of rooms and outdoor areas in a broadband spectrum.

The antenna can be placed on a table (Fig. 1) as well as on a mast.

## Product description

The BCM40 antenna is a very low loss conical monopole antenna, manufactured precisely enough to operate at frequencies up to 40 GHz, offering good matching and an antenna gain of ca. 0 dBi. The robust casing allows for indoor and outdoor use even in moist conditions.

## Specifications

Parameter	Min	Typ.	Max	Unit	Remarks
Operating frequency	1.2		40	GHz	
Power Handling		100		W	Tested at 2.5 GHz
Matching ( $S_{11}$ )	-6	-12		dB	-6 dB only at 3.3 GHz
Gain		1		dBi	

## Physical properties

Connector: RPC 2.92 female  
 Height x width x depth: 160 x 80 x 80 mm<sup>3</sup>  
 Weight: 500 g

Included with delivery: A detachable multi-functional handle for mast assembly



Fig. 2: Left: accessories for flexible mast assembly; right: golden plated antenna element

**Typical performance data**

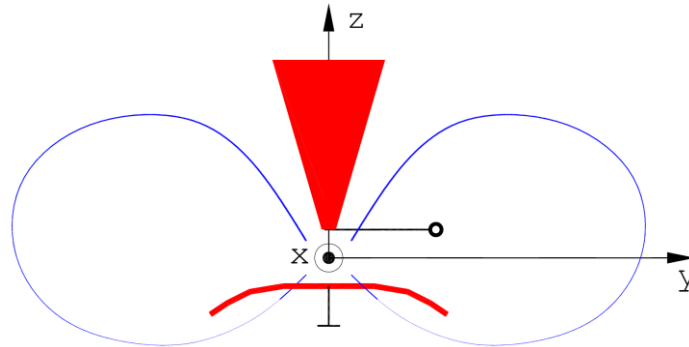


Fig. 3: Reference diagram for directivity plots

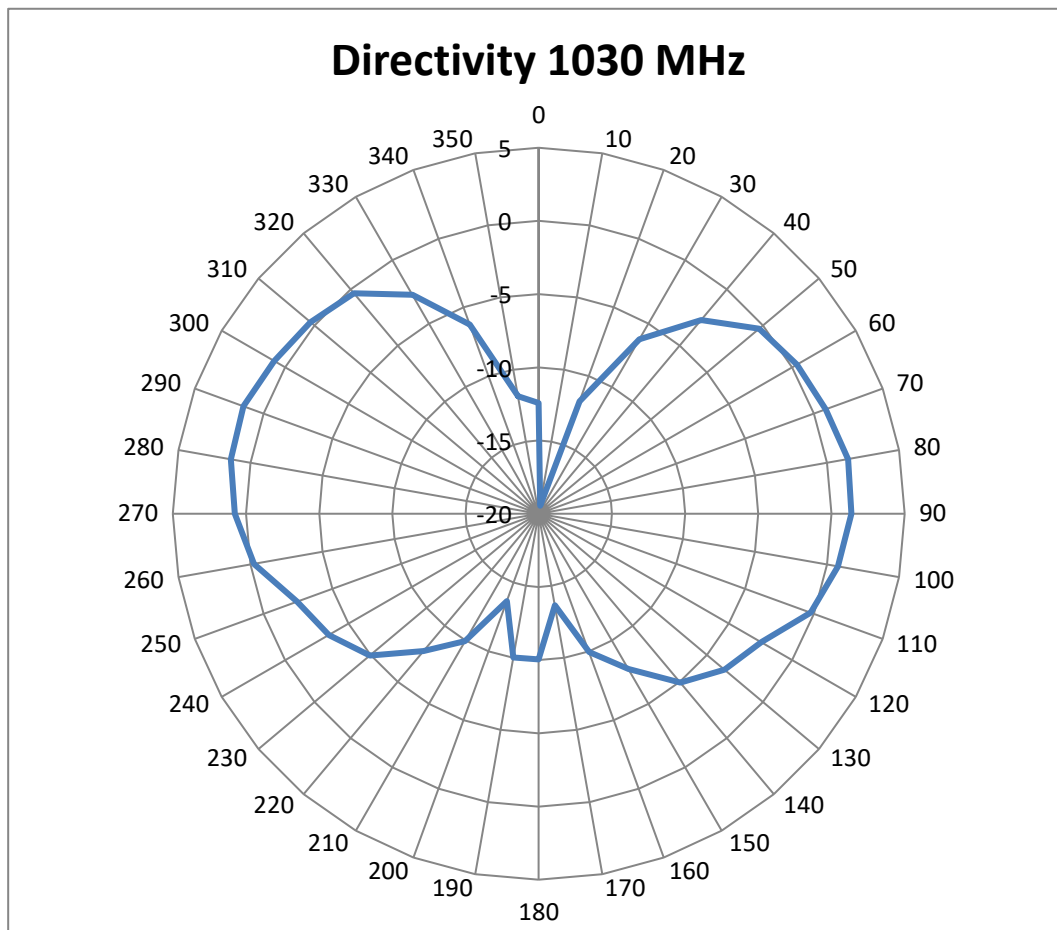


Fig. 4: Directivity plot 1030 MHz

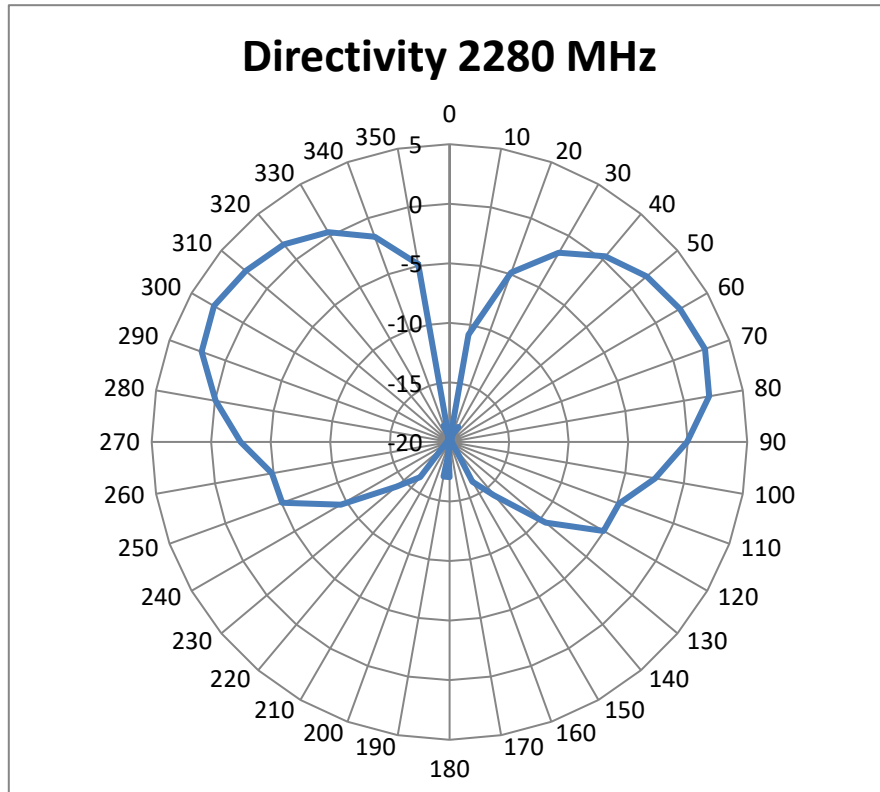


Fig. 5: Directivity plot 2280 MHz

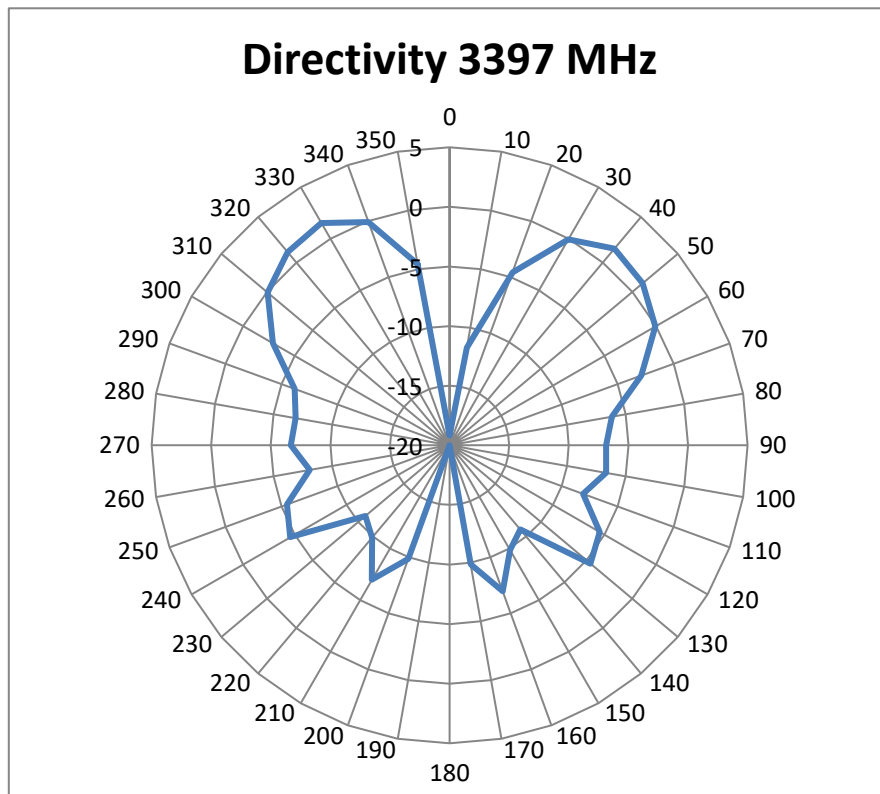


Fig. 6: Directivity plot 3397 MHz

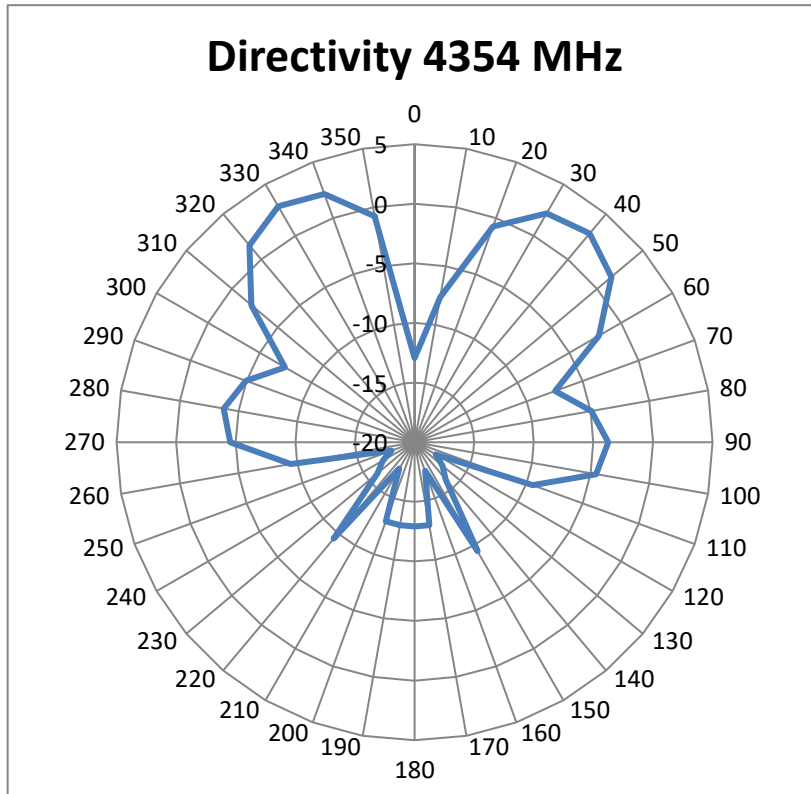


Fig. 7: Directivity plot 4354 MHz

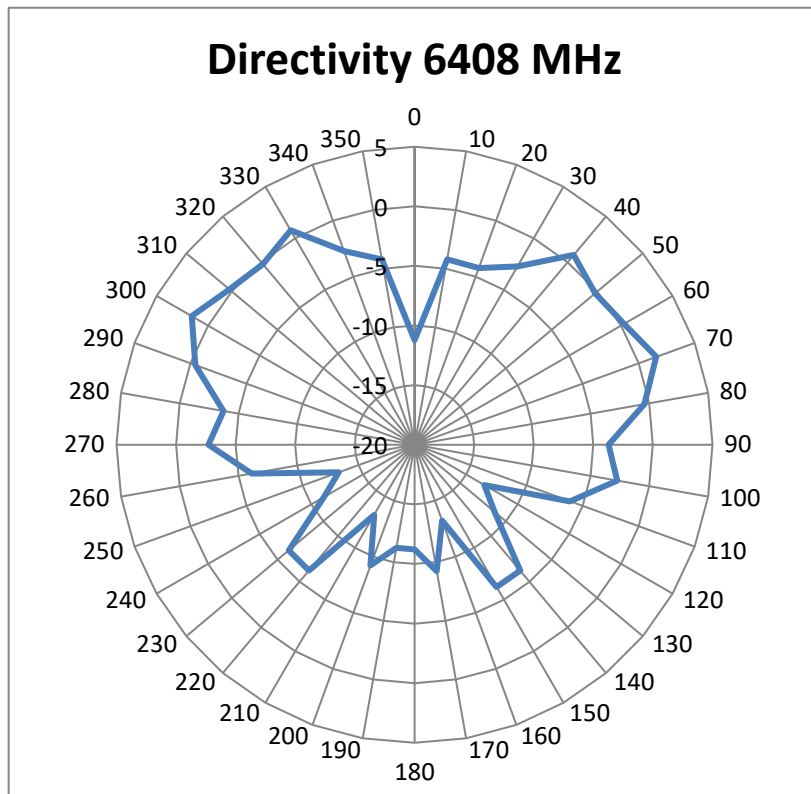


Fig. 8: Directivity plot 6408 MHz

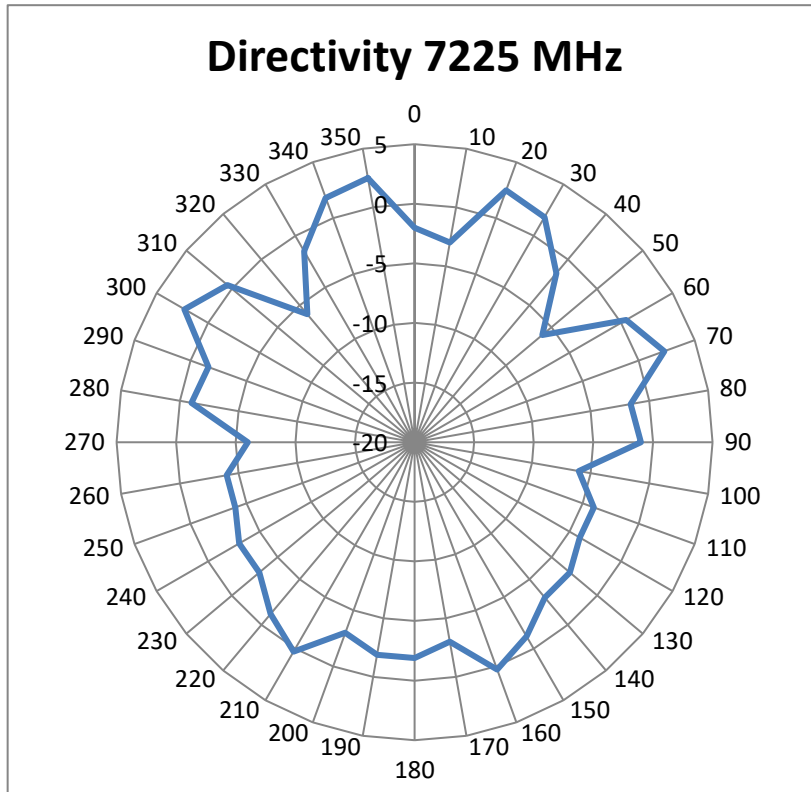


Fig. 9: Directivity plot 7225 MHz

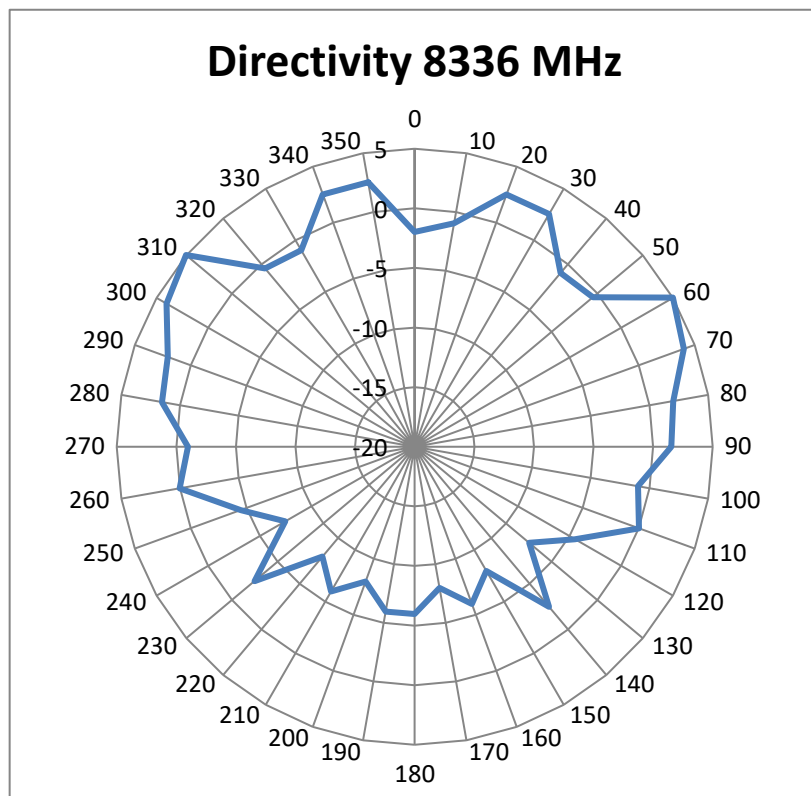


Fig. 10: Directivity plot 8336 MHz

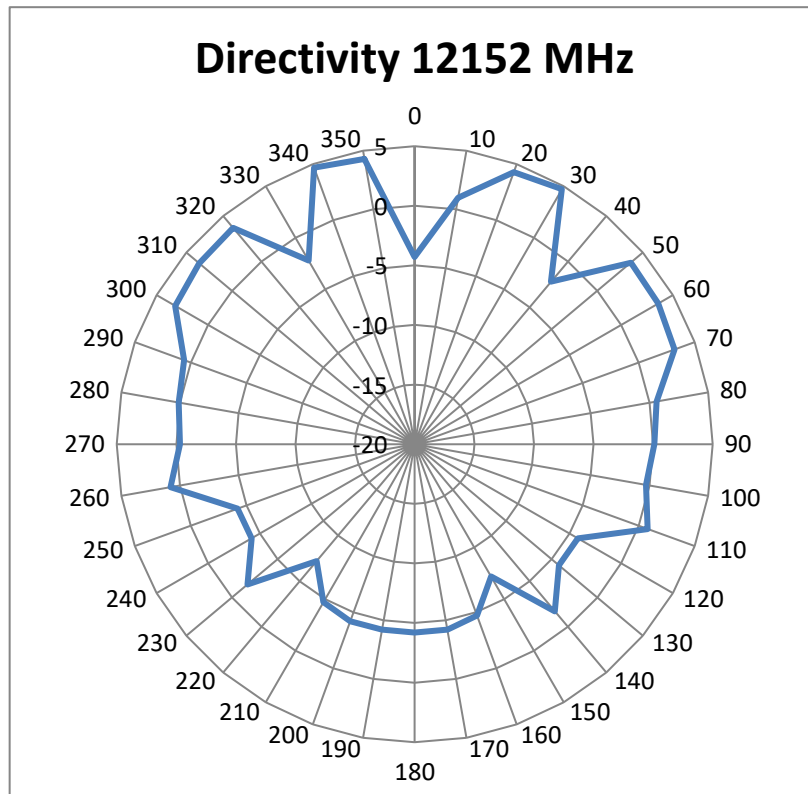


Fig. 11: Directivity plot 12152 MHz

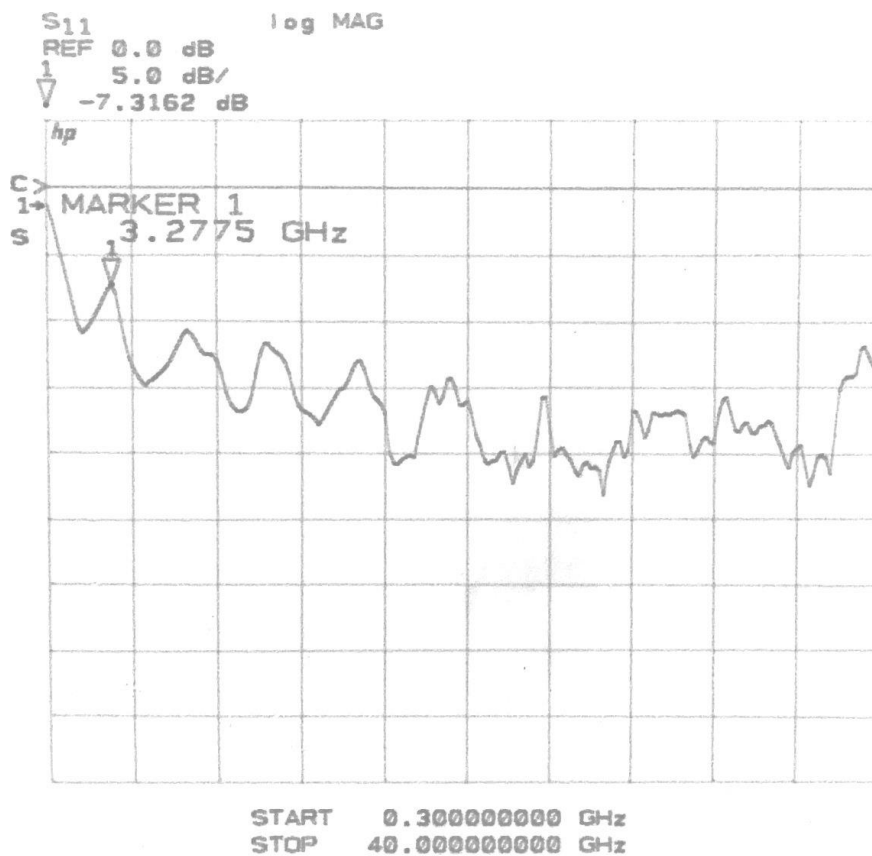


Fig. 12: Broadband matching



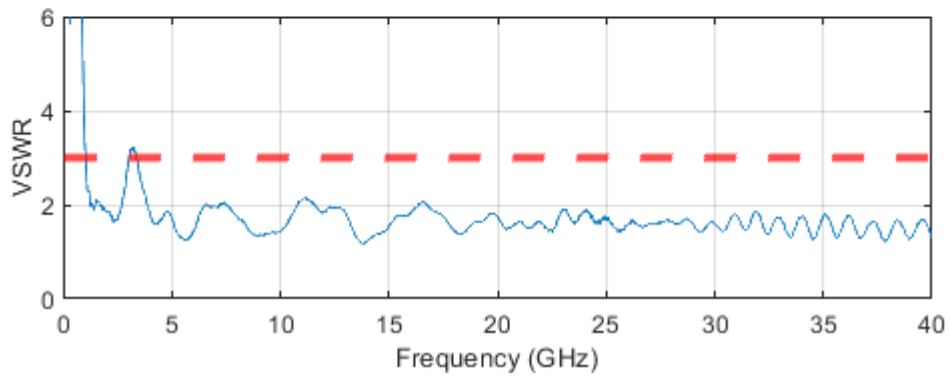
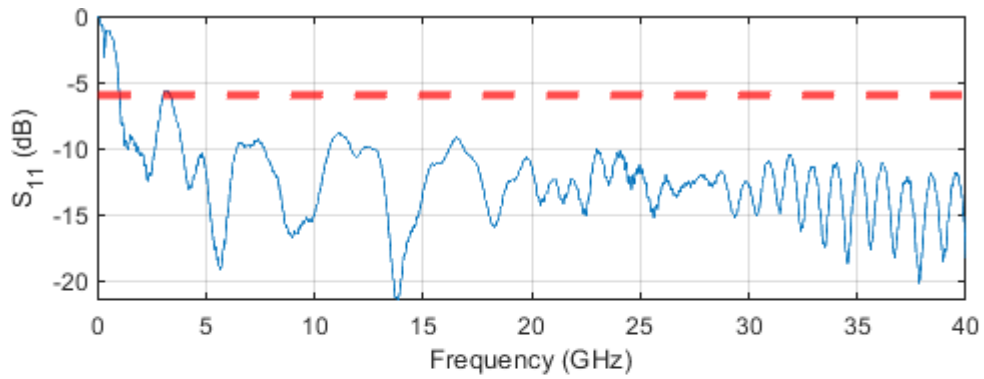


Fig. 13: Broadband matching (newest generation, antenna 1)

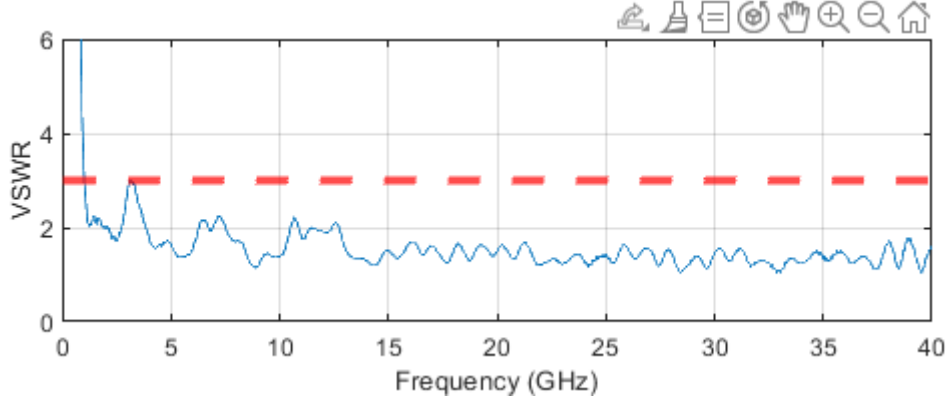
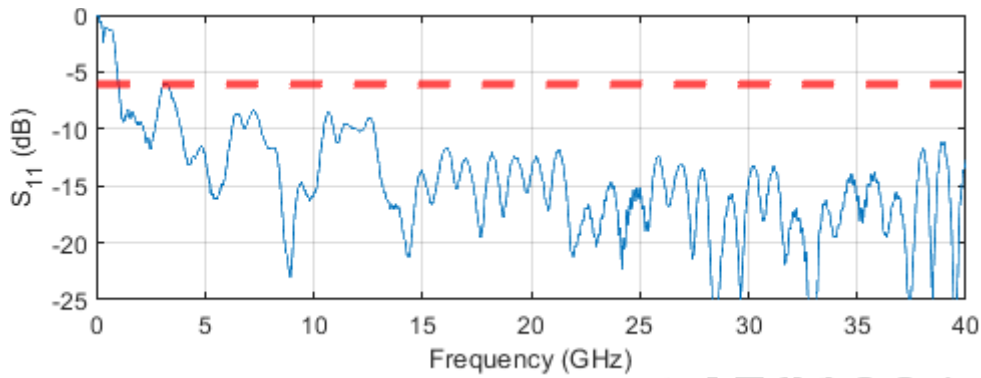


Fig. 13: Broadband matching (newest generation, antenna 2)



## Ordering number

Model: CO-BCM40

## Contact information

Heuermann HF-Technik GmbH  
Auf dem Anger 29, D-52076 Aachen, Germany  
Mail: [info@hhft.de](mailto:info@hhft.de) ; Internet: <http://www.hhft.de/>  
Tel.: +49 2408/9379019 Fax: +49 2408/9379952