

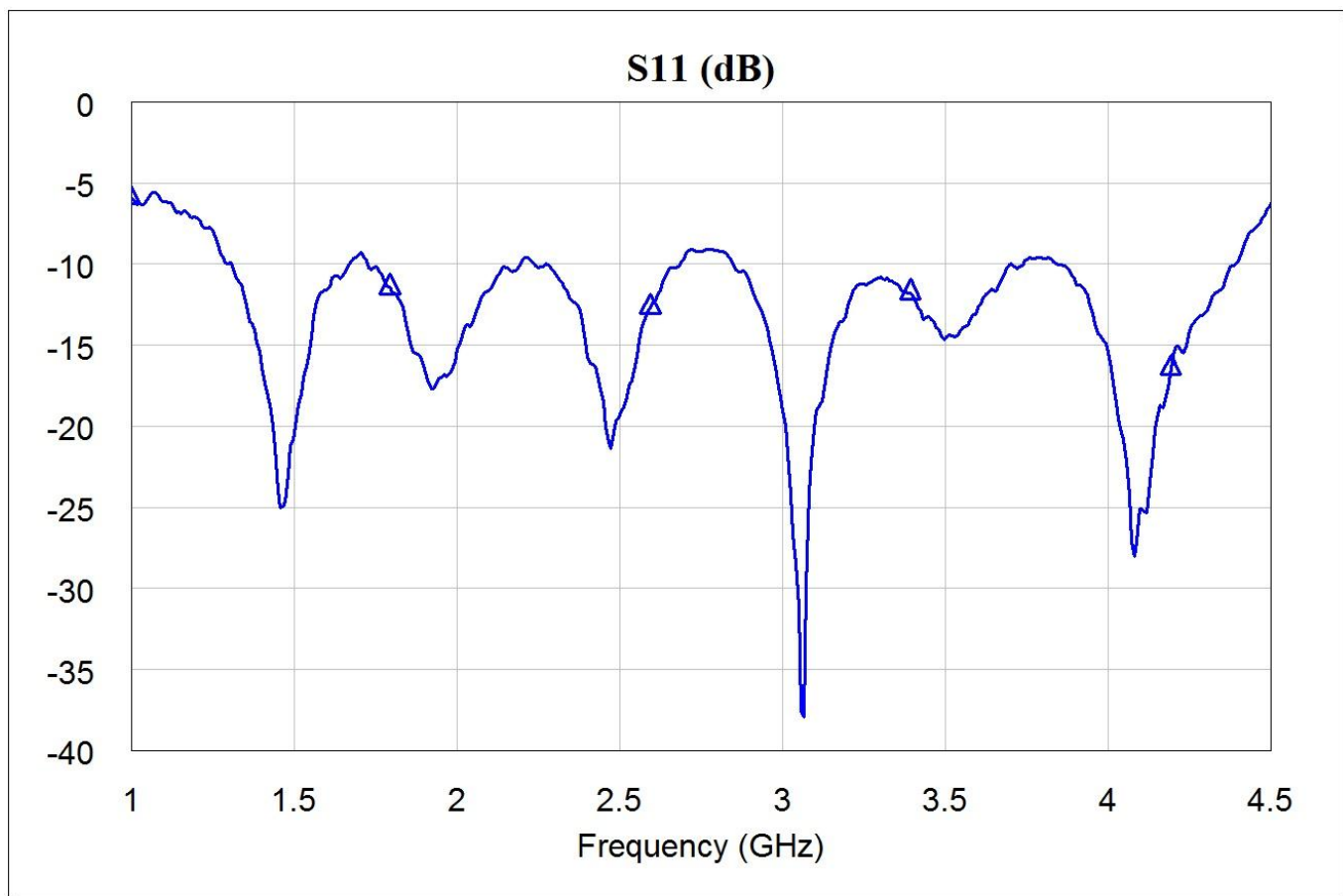
Technical Data

| | |
|------------------|---|
| Antenna Type: | antenna Vivaldi |
| Frequency Range: | 1,3 – 4,4 GHz |
| Gain: | up to 9,15 dBi (at a frequency of 3,4 GHz) |
| Impedance: | 50 Ω , unbalanced |
| VSWR: | < 2,1:1 |
| Size: | 150 × 113 × 1.5 mm without connector |
| Connector: | SMA |
| Material: | FR4 |



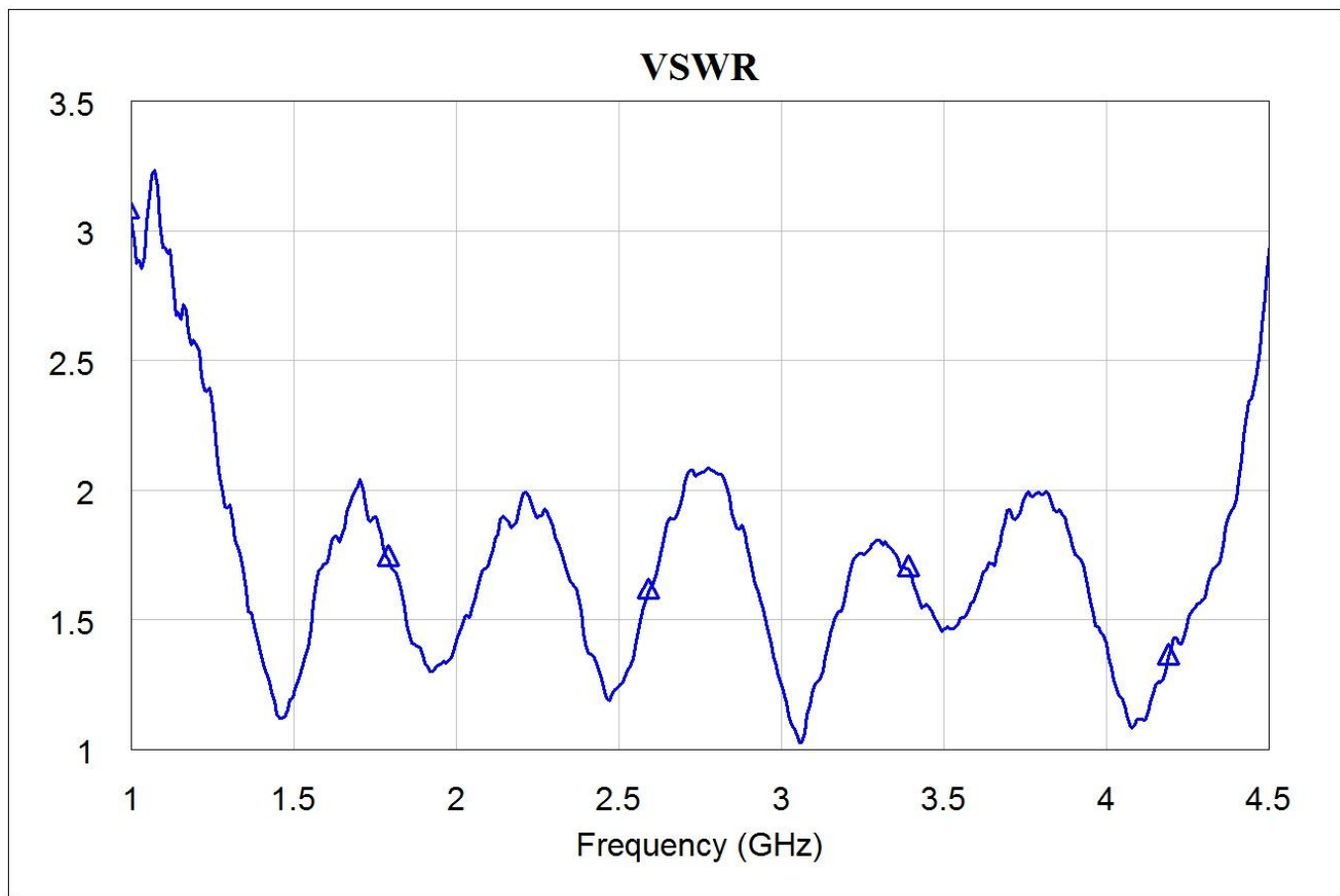
Reflection coefficient

The following picture shows Reflection coefficient S_{11} in dB.



VSWR

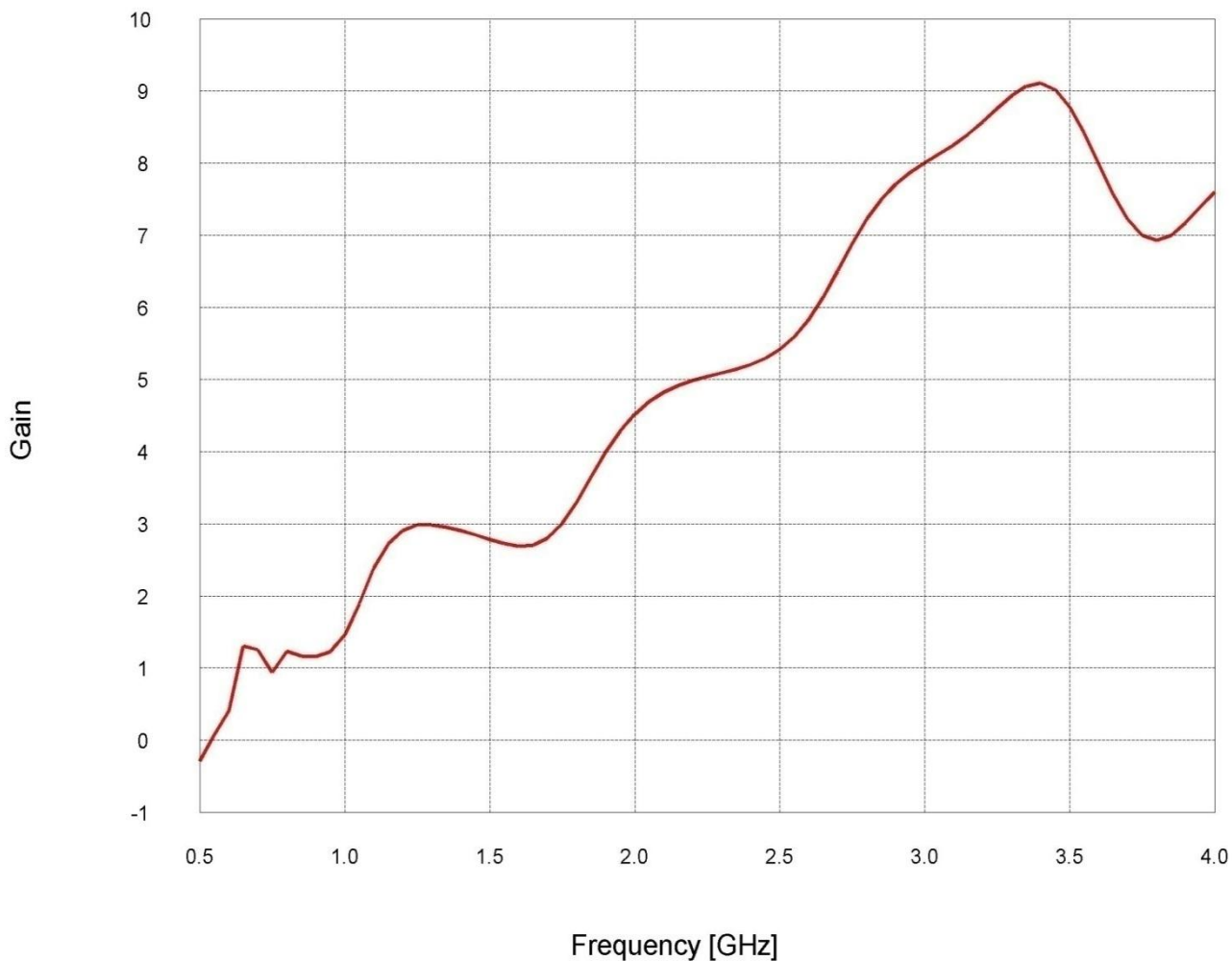
The following picture shows VSWR.



Gain

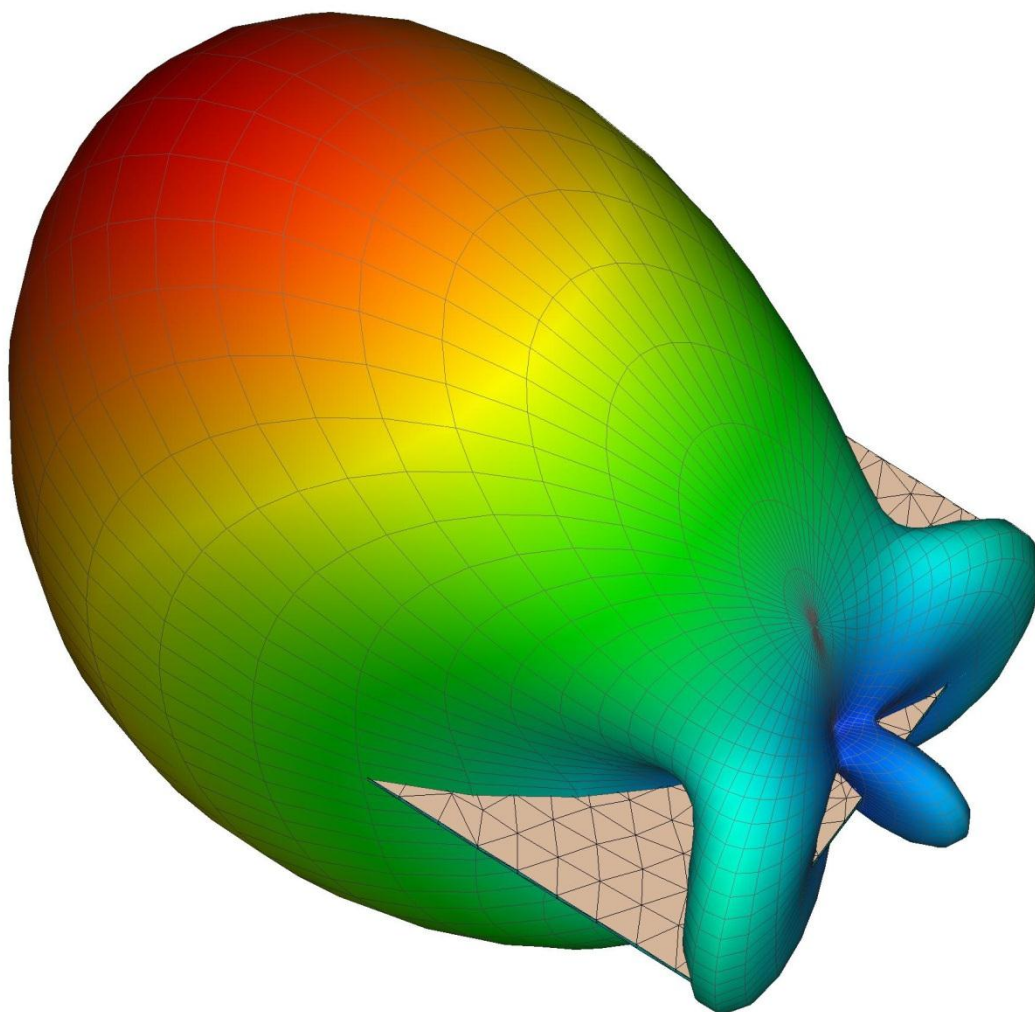
The following picture shows Gain factor.

Directivity



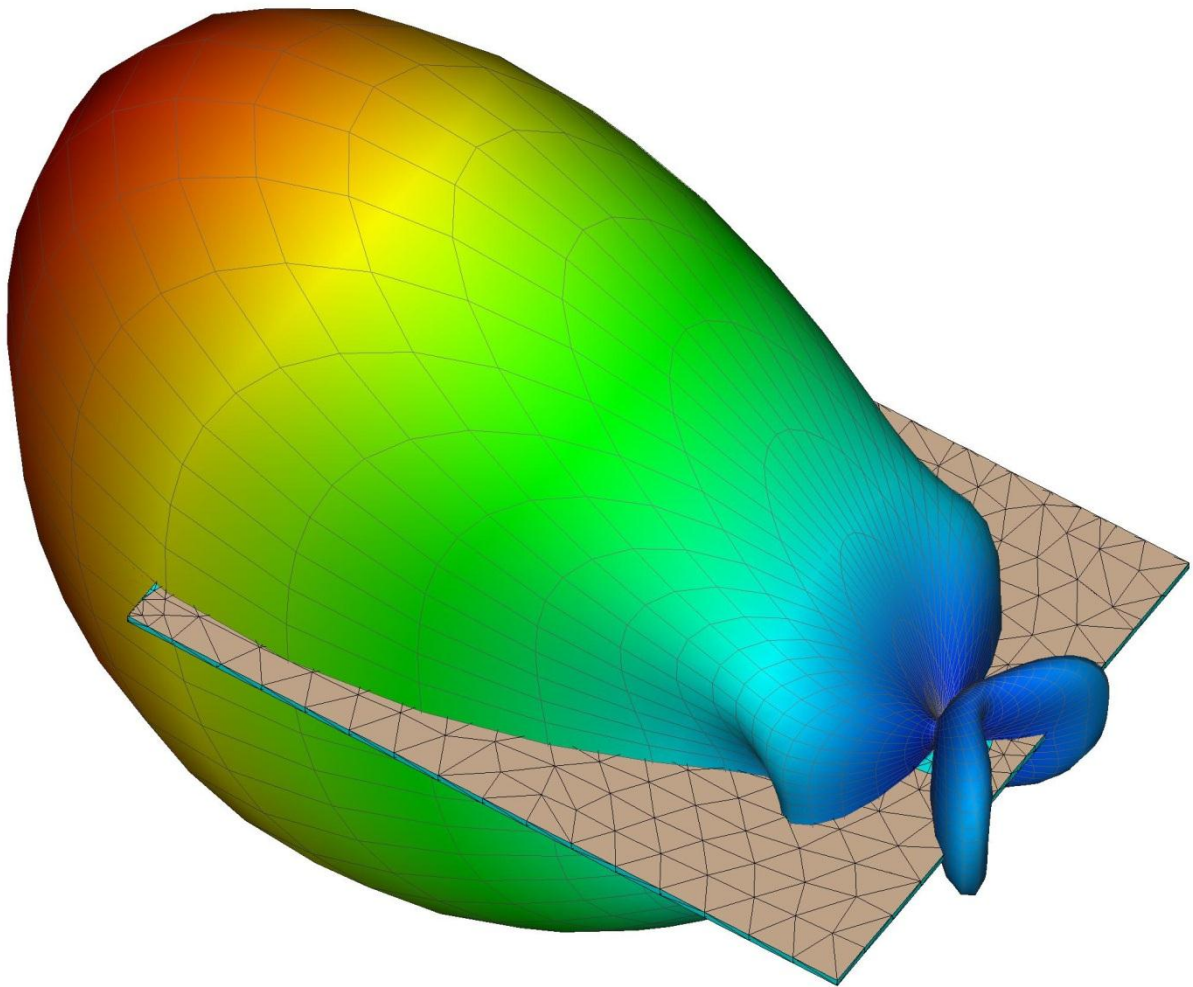
Radiation pattern

The following picture shows Radiation pattern in 3D at a frequency of 1.4 GHz.



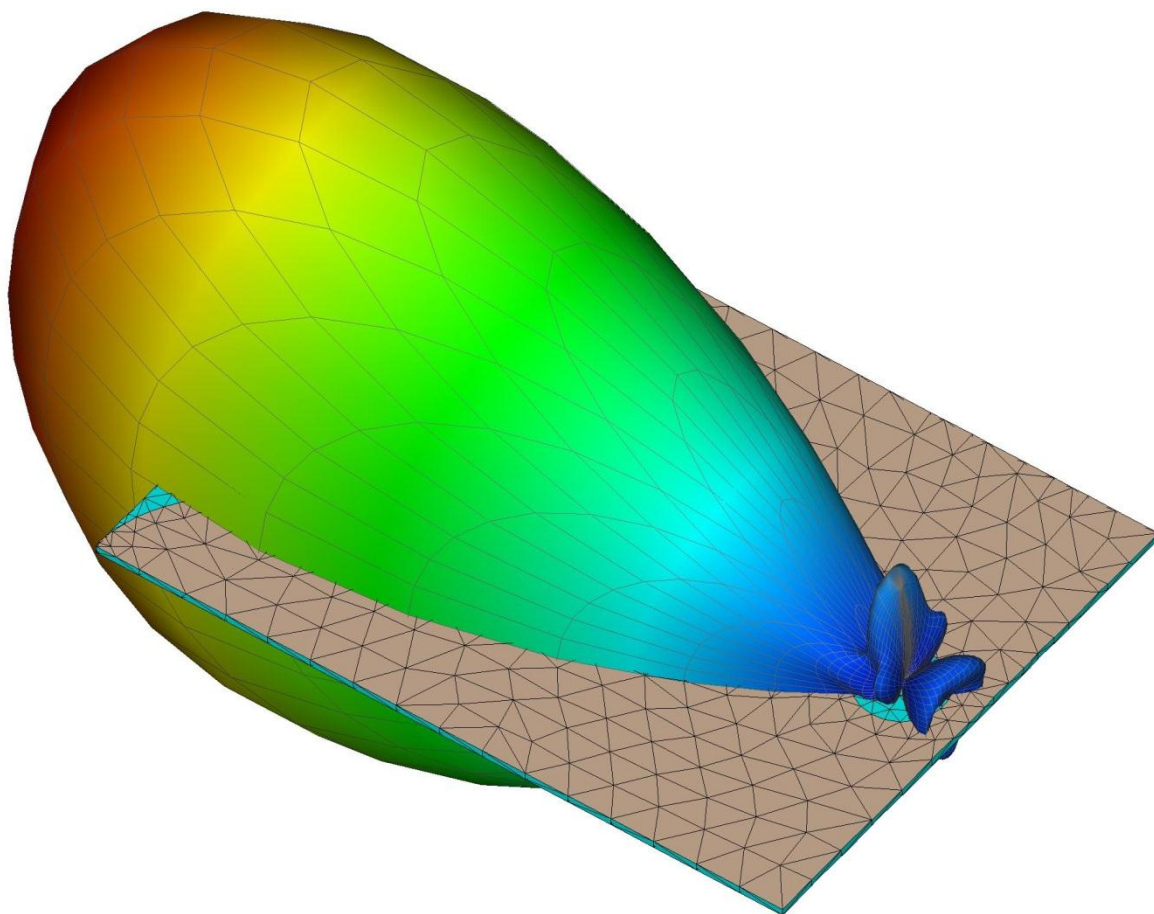
Radiation pattern

The following picture shows Radiation pattern in 3D at a frequency of 2 GHz.



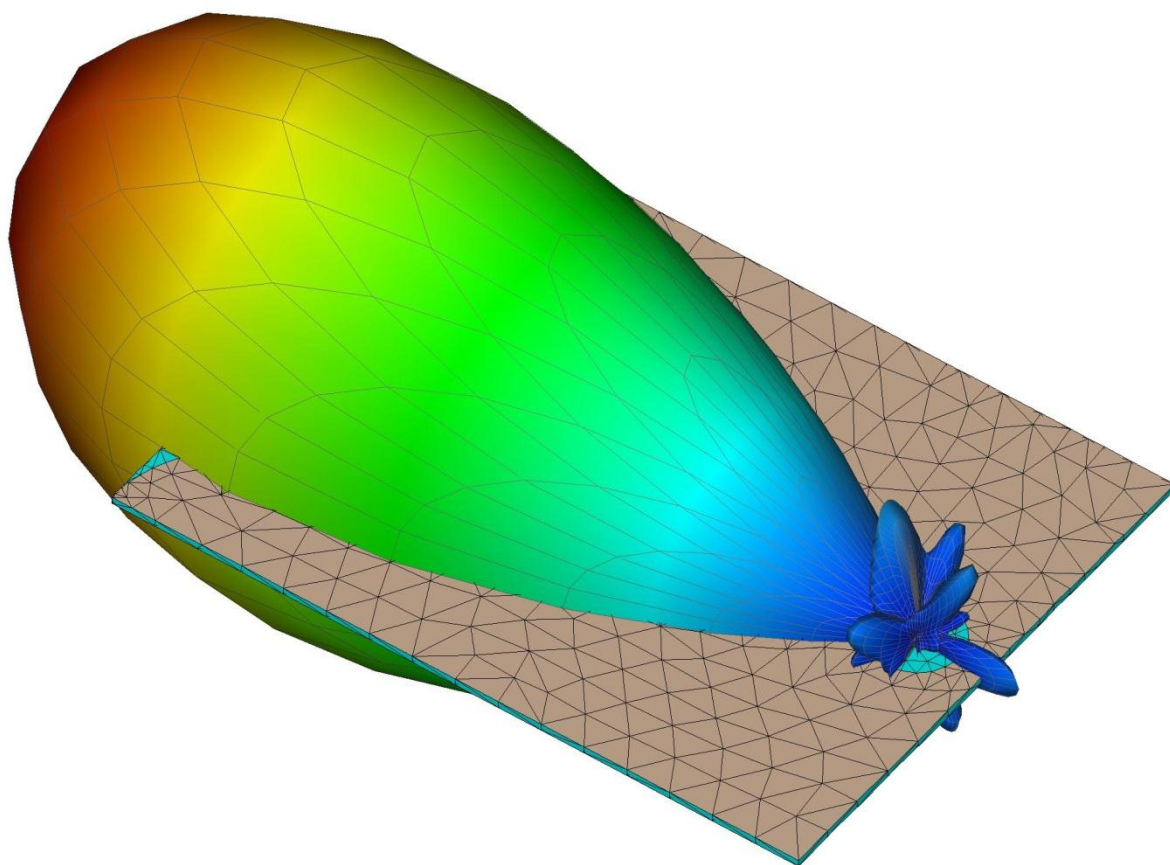
Radiation pattern

The following picture shows Radiation pattern in 3D at a frequency of 3 GHz.



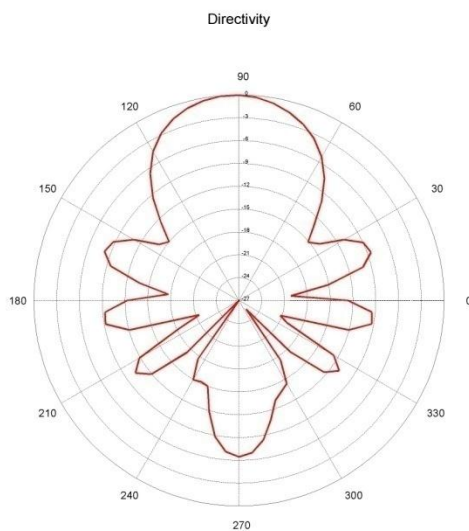
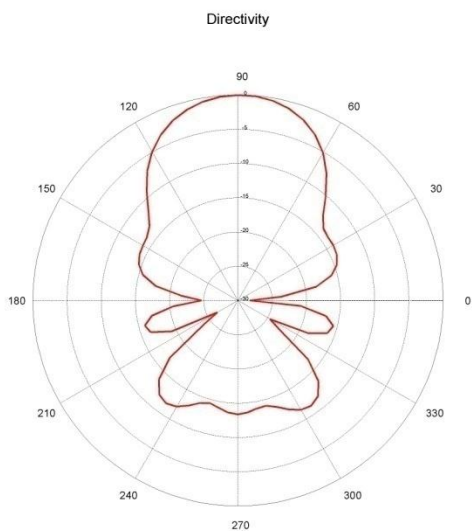
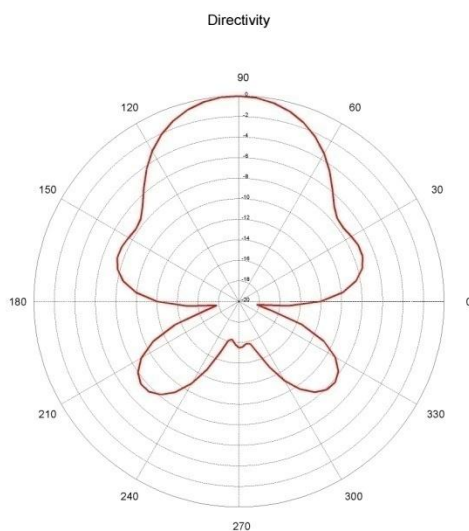
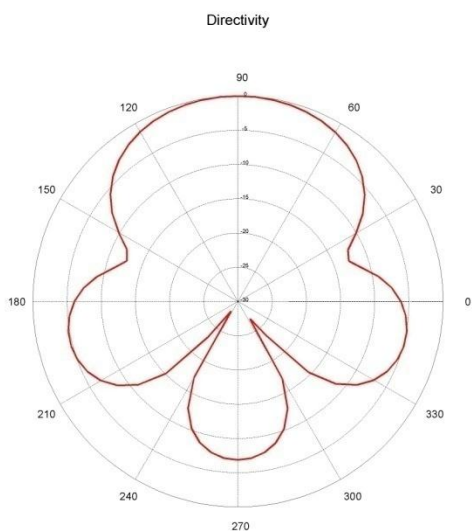
Radiation pattern

The following picture shows Radiation pattern in 3D at a frequency of 3.5 GHz.



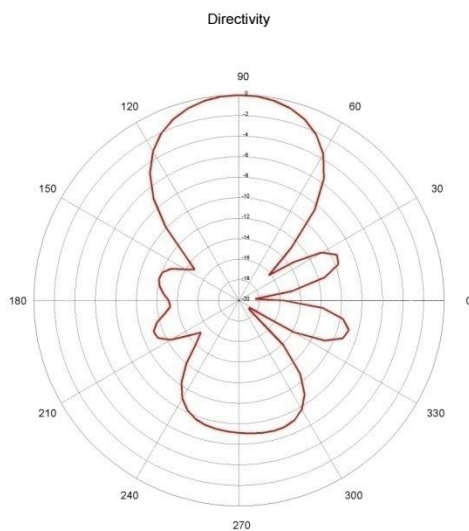
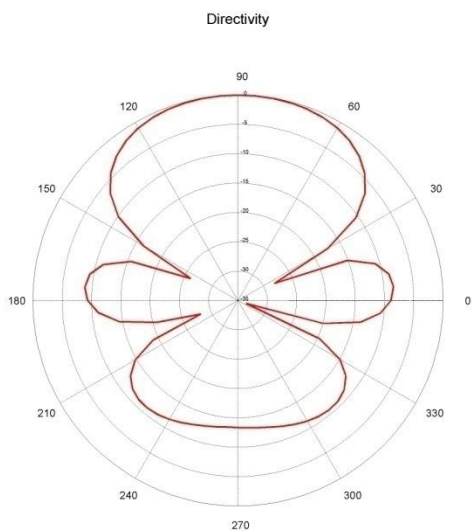
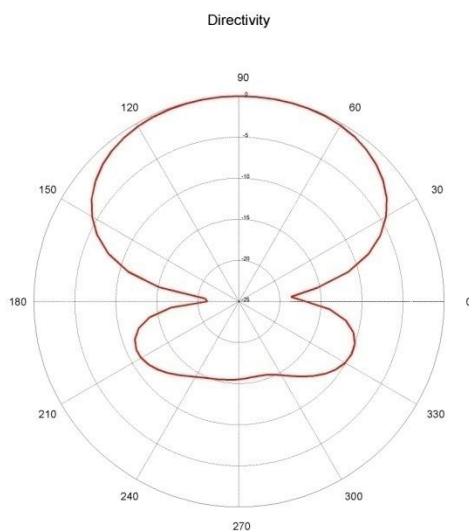
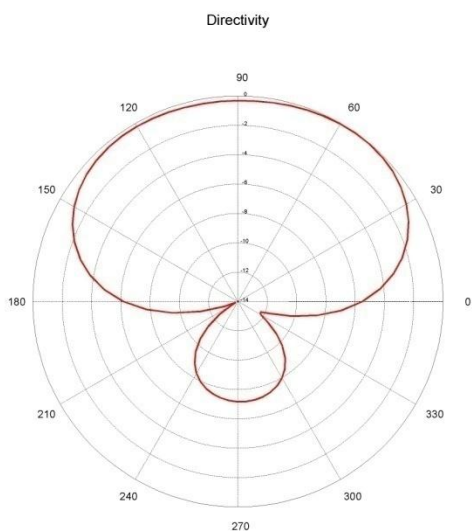
Radiation pattern

The following picture shows normalized radiation pattern in the horizontal plane in dB at frequencies of 1.4, 2, 3, 3.5 GHz accordingly.



Radiation pattern

The following picture shows normalized radiation pattern in the vertical plane in dB at frequencies of 1.4, 2, 3, 3.5 GHz accordingly.



Application note

The highly directional ultra-wideband antenna Antrad-3 can be used for radio communication systems and radar systems operating in different frequency bands from 1 to 3.6 GHz:

- for radio and radar systems on the basis of ultrashort pulses without a carrier;

- for the following data transmission systems:

 - IEEE 802.11 Wi-Fi,

 - IEEE 802.16 WiMAX,

 - IEEE 802.15.4 ZigBee.

The basic modification of the Antrad-3 antenna is performed in the frameless version in order to simplify the antenna integration to radio communication and radar systems.

There is also a modification of the Antrad-3 antenna that allows to use it as a **measuring antenna**.

History

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Date: August 13, 2012

Revision: 3.0

Changes: added material FR4,
added section Application Note