

Test report

Anisotropic performance

RadiSense models RSS2010I and RSS2010S

Issued by	Raditeq B.V. Vijzelmolenlaan 3 3447GX, Woerden The Netherlands
Product description	Electrical Field probe
Brand	Raditeq BV
Model	RS2010I
Serial number	2201038
Measurement date	29-02-2024

Measurement procedure

The anisotropy calibration is carried out in accordance to IEEE-std 1309 (2013). In the frequency range of 1 GHz to 12 GHz, measurements are performed in an anechoic chamber.

To measure the anisotropy of the RSS2010 probe, the probe is rotated over its orthogonal axis with a probe rotator. As a result, the X-axis is in line with the applied E-field at 0 degrees, the Y-axis is in line with the applied E-field at 120 degrees and the Z-axis is in line with the applied E-field at 240 degrees. For all tests, a step resolution of one (1) degree is used.

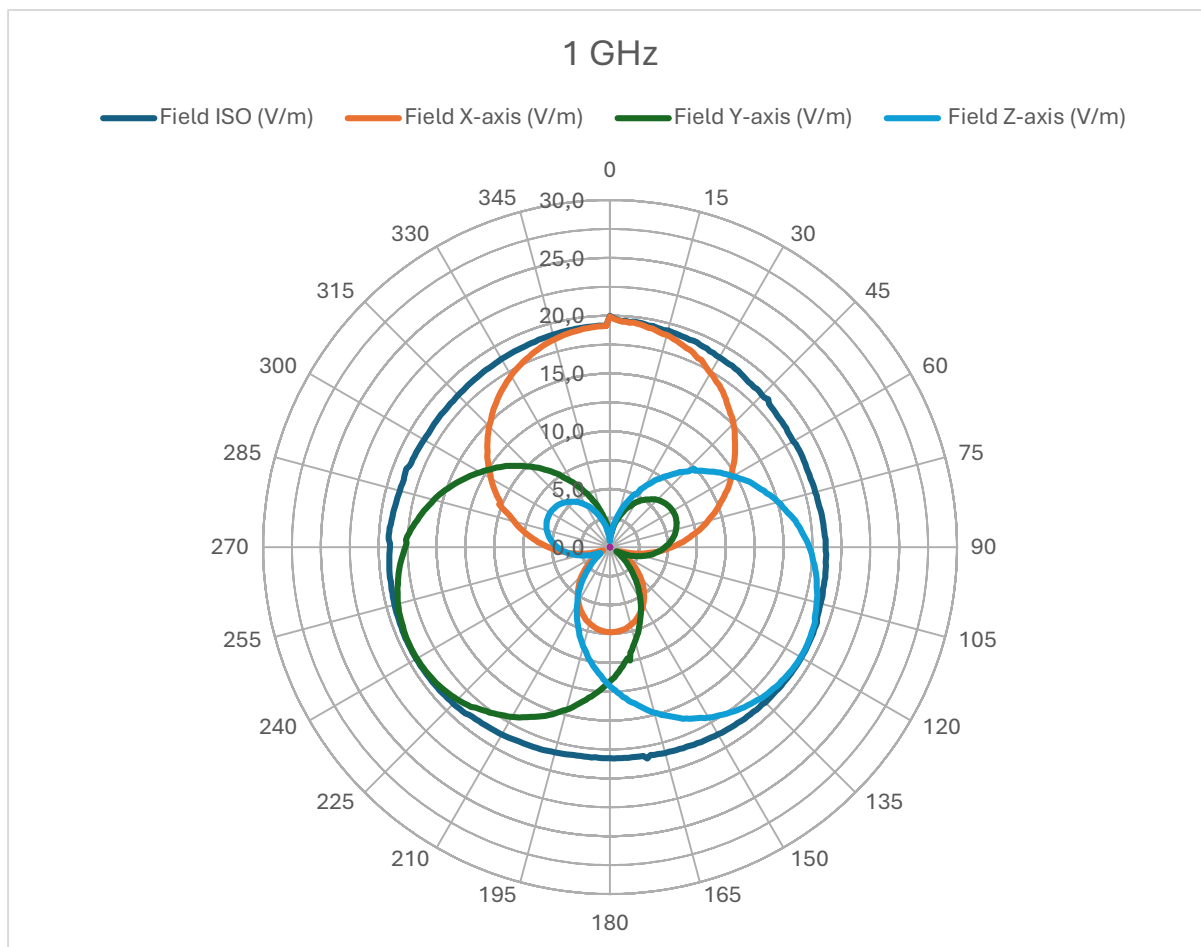
During the tests, a nominal fieldstrength of 20 V/m is applied. The reported fieldstrength values are corrected (scaled) for an indication of 20 V/m at an angle of zero (0) degrees (X-axis on top).

The anisotropy [A] is defined as:

$$A = 20 \log \left(\frac{S_{max}}{\sqrt{S_{max} * S_{min}}} \right)$$

Environmental conditions	Temperature	23°C ± 3°C
	Relative humidity	50% ± 25%

Uncertainty	The measurement uncertainty of the anisotropic measurements is ± 0.59 dB. This reported expanded uncertainty of measurement results is stated as the standard uncertainty of the measurement multiplied by a coverage factor (k = 2), which, for a normal distribution corresponds to a coverage probability of approximately 95 %. The standard uncertainty of measurement has been determined in accordance with EAL publication EA-4/02 (2022).
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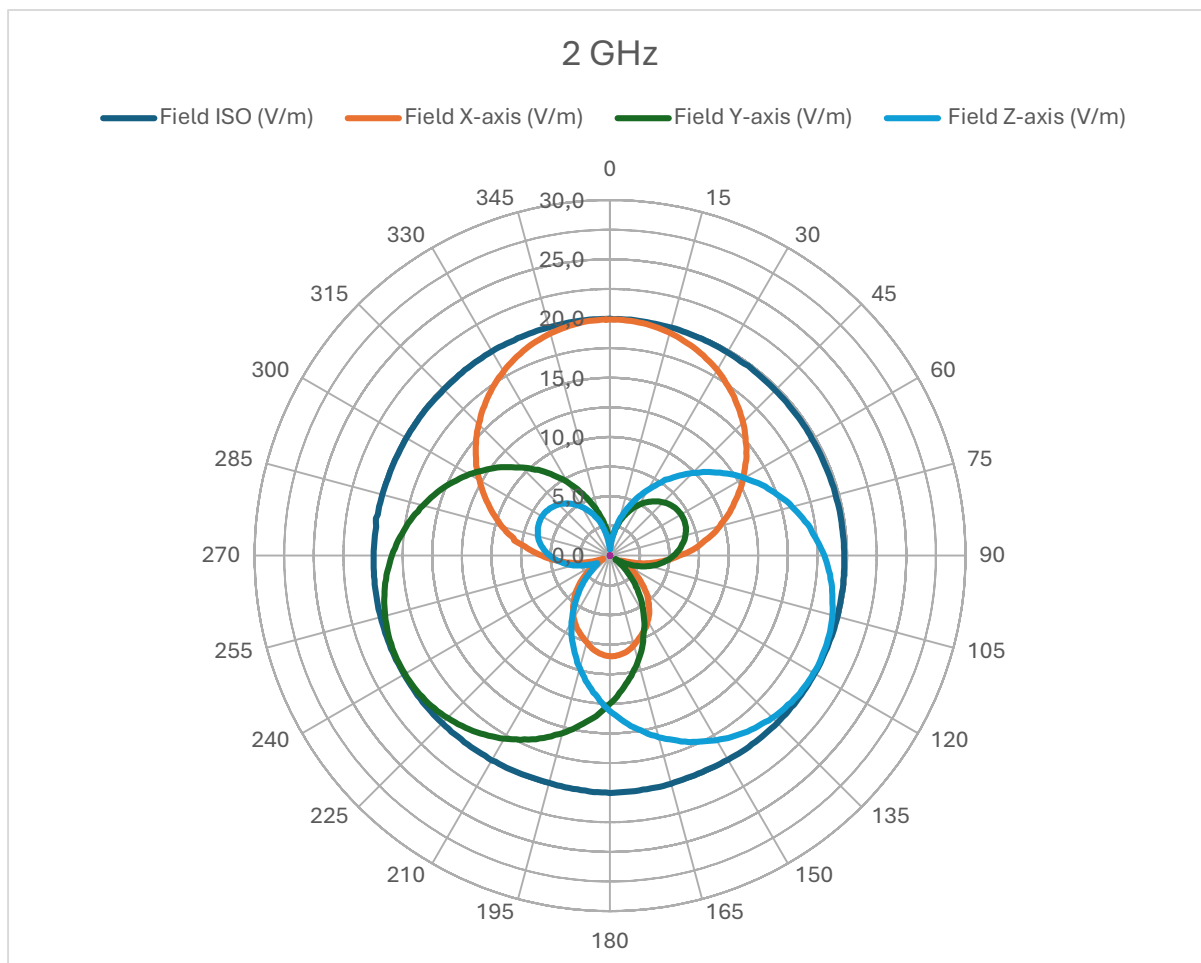


$$A = 20 \log \left(\frac{S_{max}}{\sqrt{S_{max} * S_{min}}} \right)$$

Minimum 18.34 V/m

Maximum 19.78 V/m

Anisotropy ± 0.35 dB

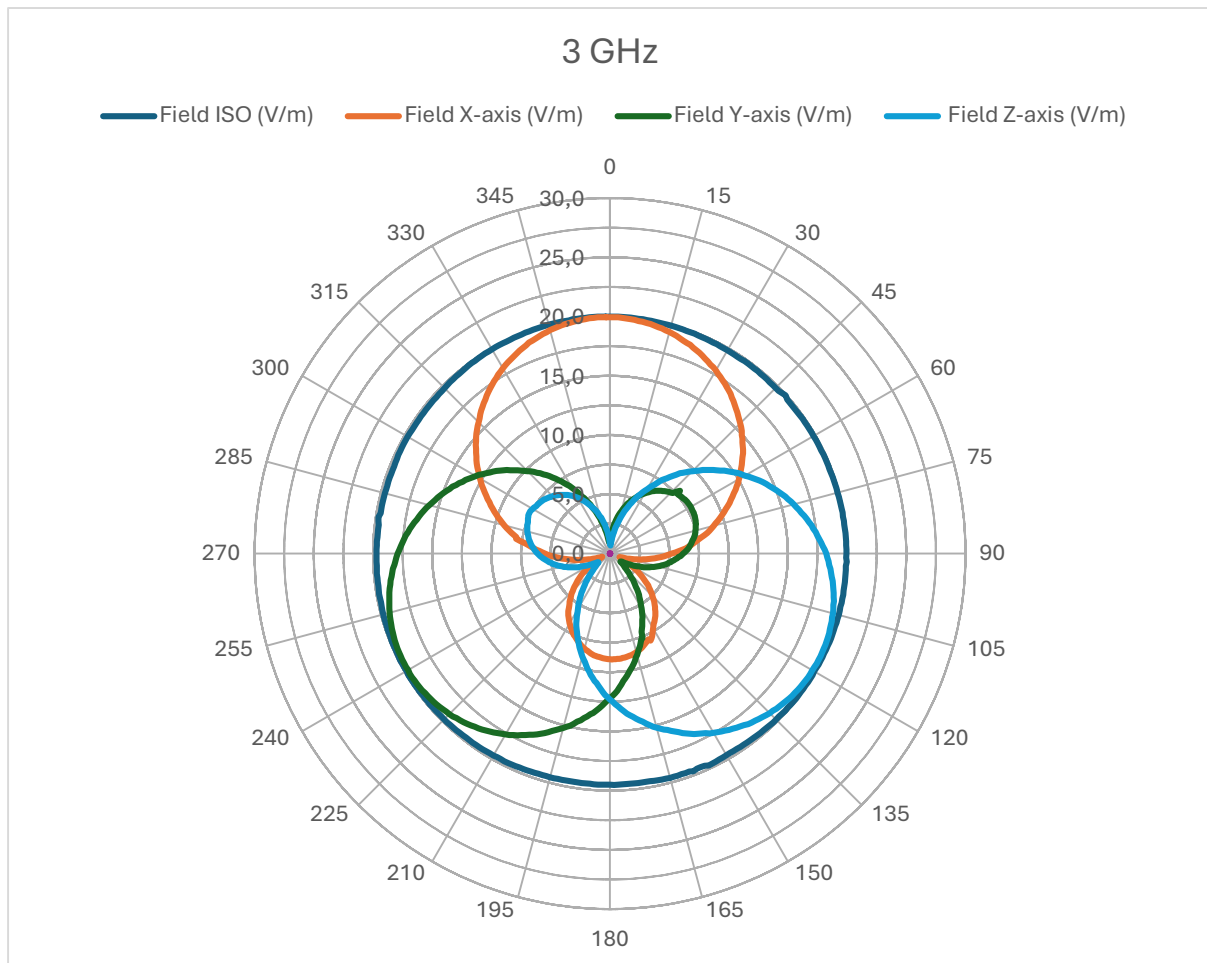


$$A = 20 \log \left(\frac{S_{max}}{\sqrt{S_{max} * S_{min}}} \right)$$

Minimum 19.67 V/m

Maximum 20.09 V/m

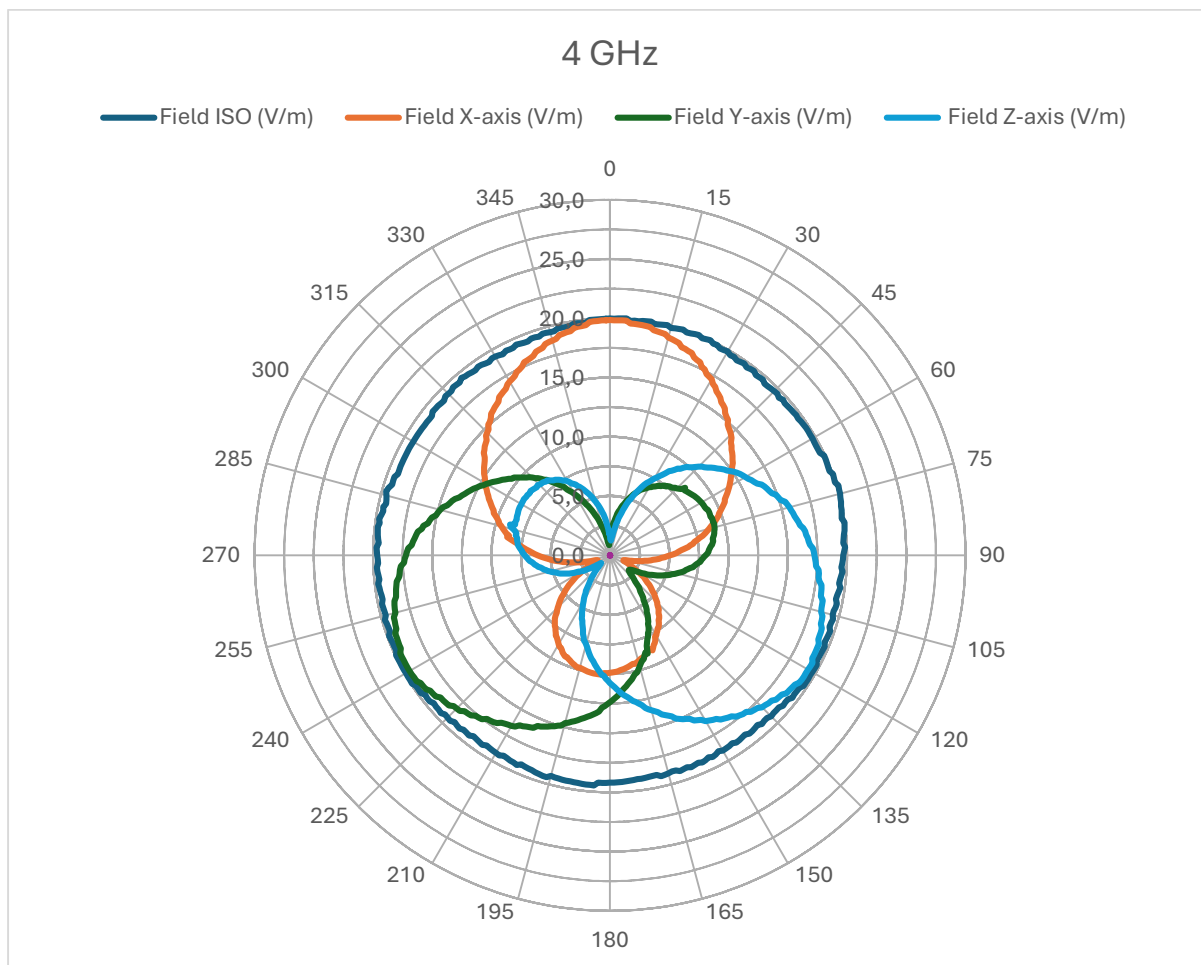
Anisotropy ± 0.09 dB



$$A = 20 \log \left(\frac{S_{max}}{\sqrt{S_{max} * S_{min}}} \right)$$

Minimum	19.49	V/m
Maximum	20.02	V/m

Anisotropy	±	0.12	dB
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$$A = 20 \log \left(\frac{S_{max}}{\sqrt{S_{max} * S_{min}}} \right)$$

Minimum	18.90	V/m
Maximum	20.17	V/m

Anisotropy	±	0.28	dB
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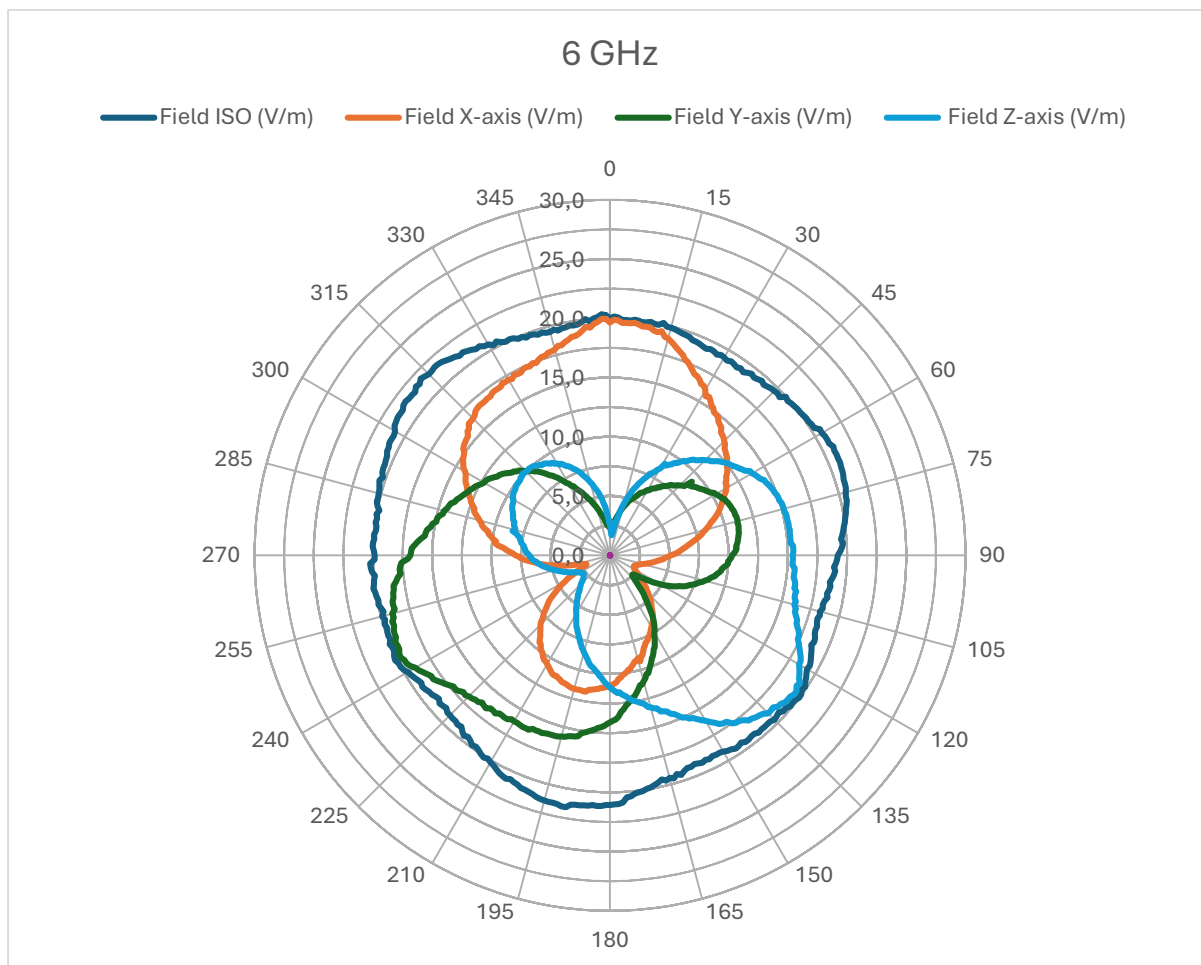


$$A = 20 \log \left(\frac{S_{max}}{\sqrt{S_{max} * S_{min}}} \right)$$

Minimum 17.86 V/m

Maximum 21.37 V/m

Anisotropy ± 0.78 dB

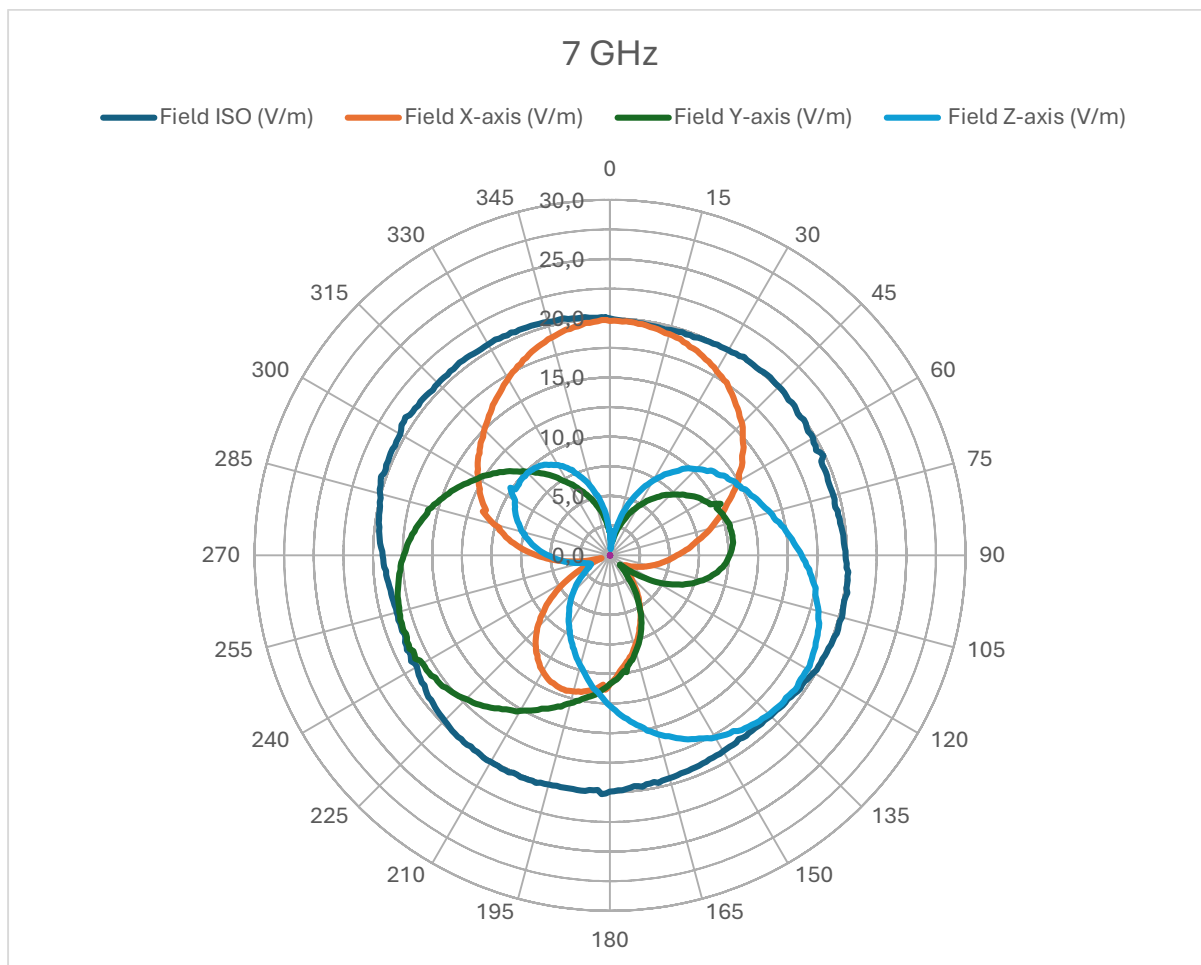


$$A = 20 \log \left(\frac{S_{max}}{\sqrt{S_{max} * S_{min}}} \right)$$

Minimum 18.29 V/m

Maximum 21.86 V/m

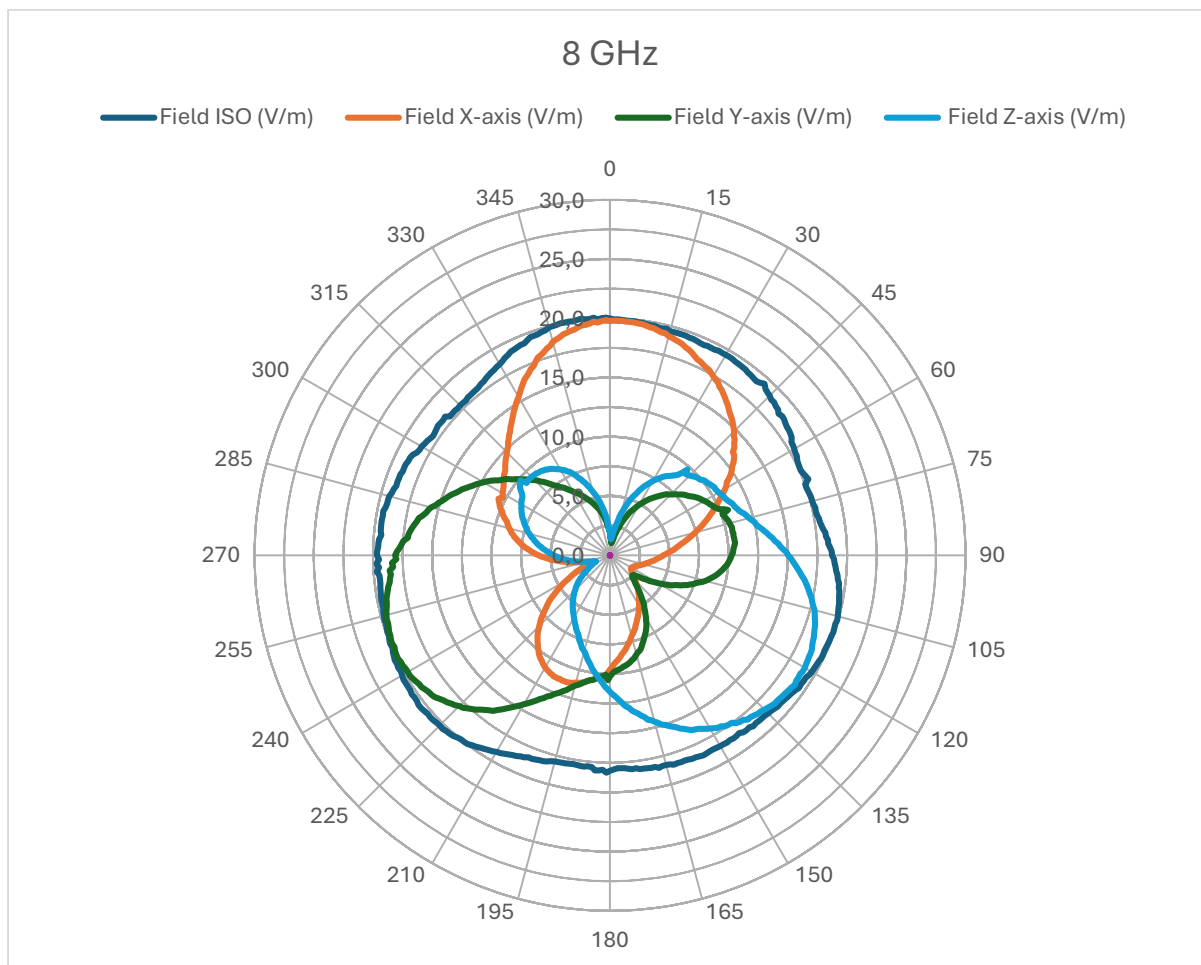
Anisotropy ± 0.77 dB



$$A = 20 \log \left(\frac{S_{max}}{\sqrt{S_{max} * S_{min}}} \right)$$

Minimum	18.57	V/m
Maximum	20.82	V/m

Anisotropy	±	0.50	dB
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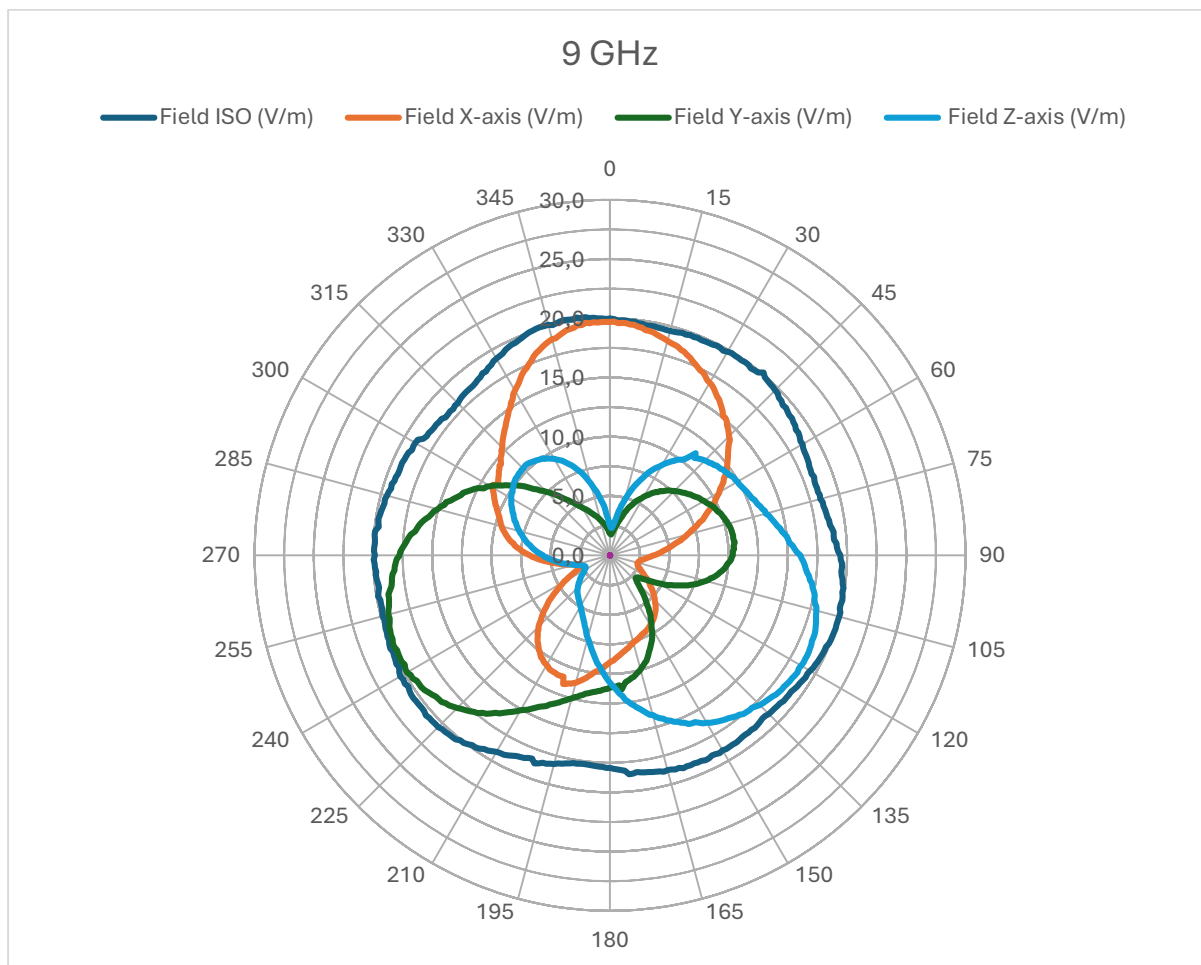


$$A = 20 \log \left(\frac{S_{max}}{\sqrt{S_{max} * S_{min}}} \right)$$

Minimum 17.53 V/m

Maximum 20.50 V/m

Anisotropy ± 0.68 dB

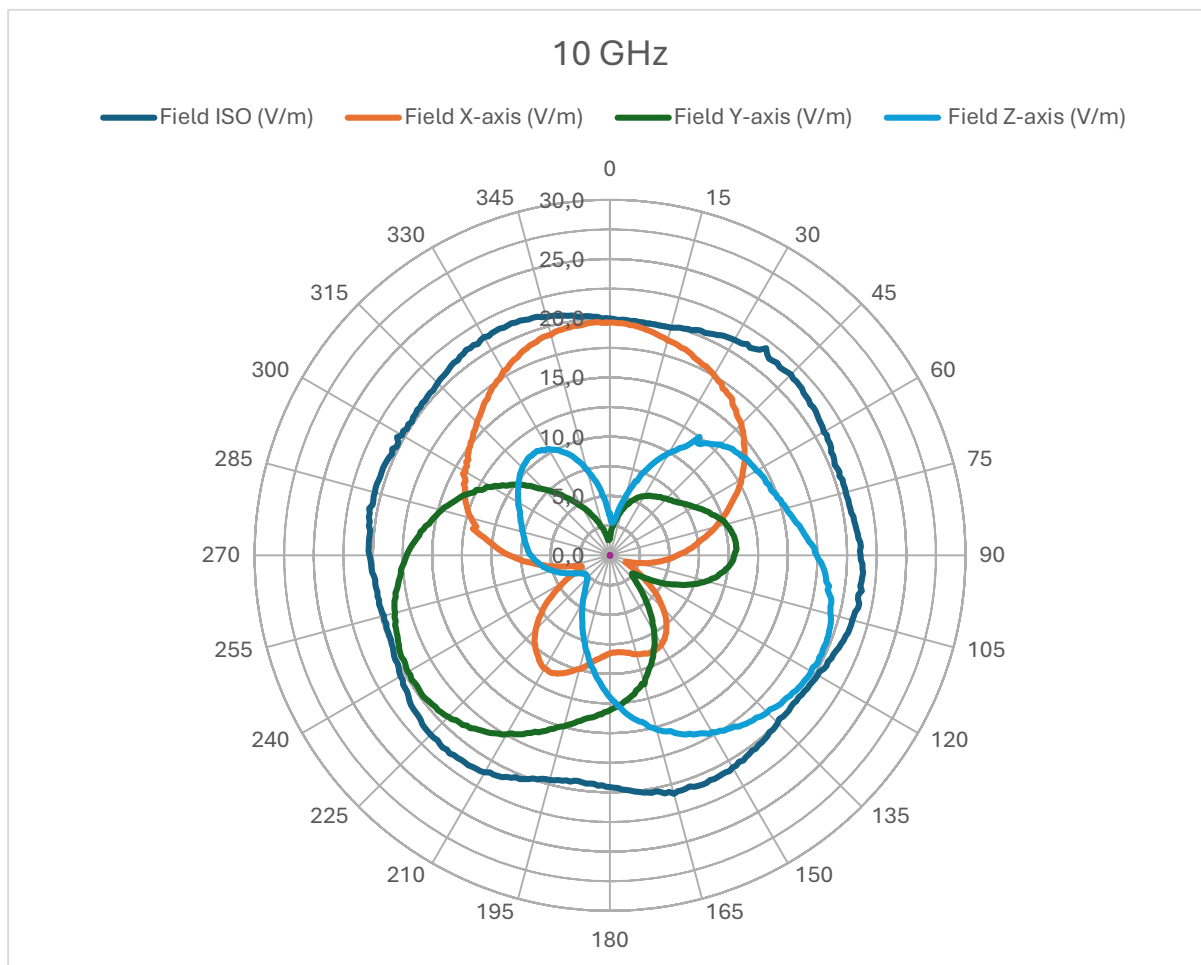


$$A = 20 \log \left(\frac{S_{max}}{\sqrt{S_{max} * S_{min}}} \right)$$

Minimum 17.75 V/m

Maximum 20.59 V/m

Anisotropy ± 0.65 dB

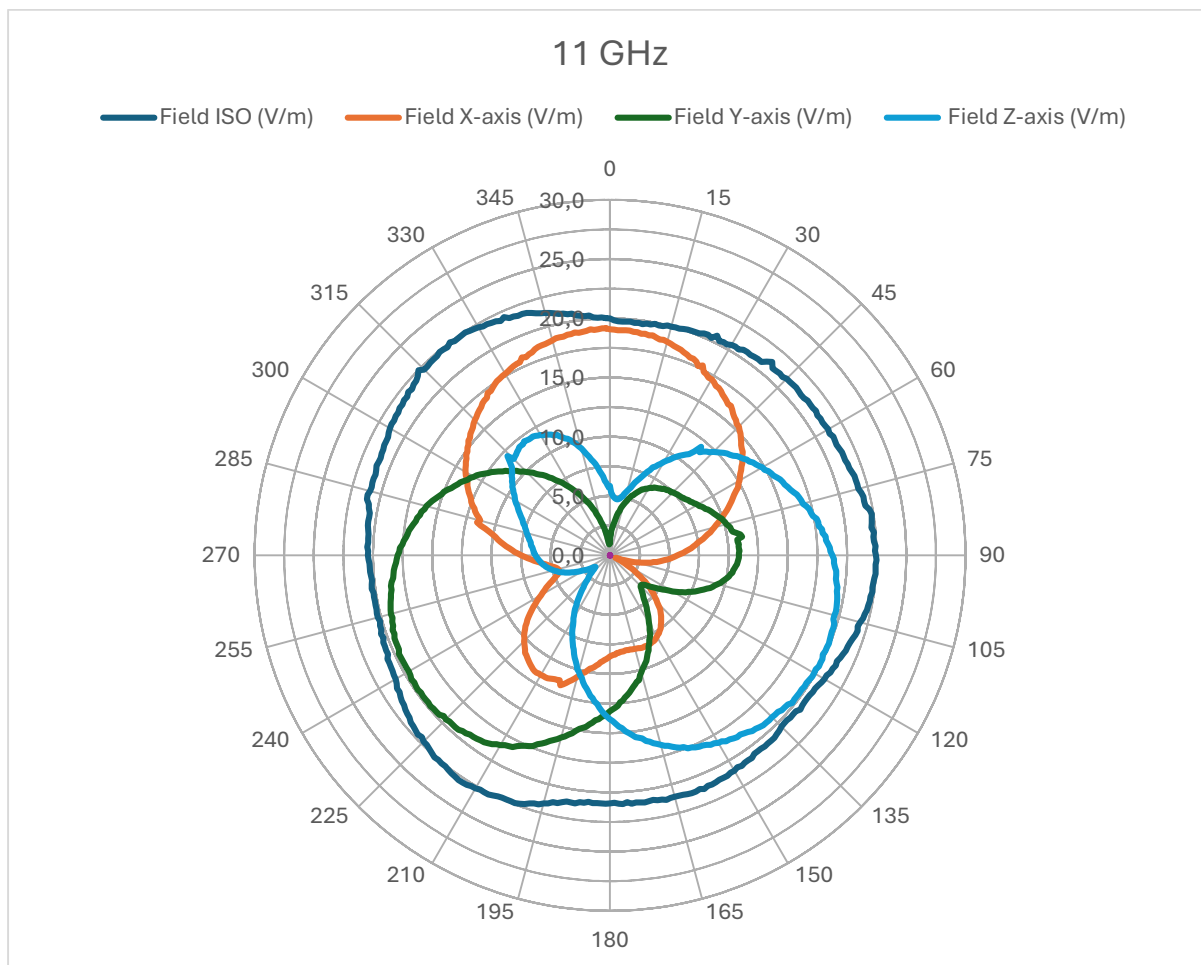


$$A = 20 \log \left(\frac{S_{max}}{\sqrt{S_{max} * S_{min}}} \right)$$

Minimum 19.23 V/m

Maximum 21.88 V/m

Anisotropy ± 0.56 dB

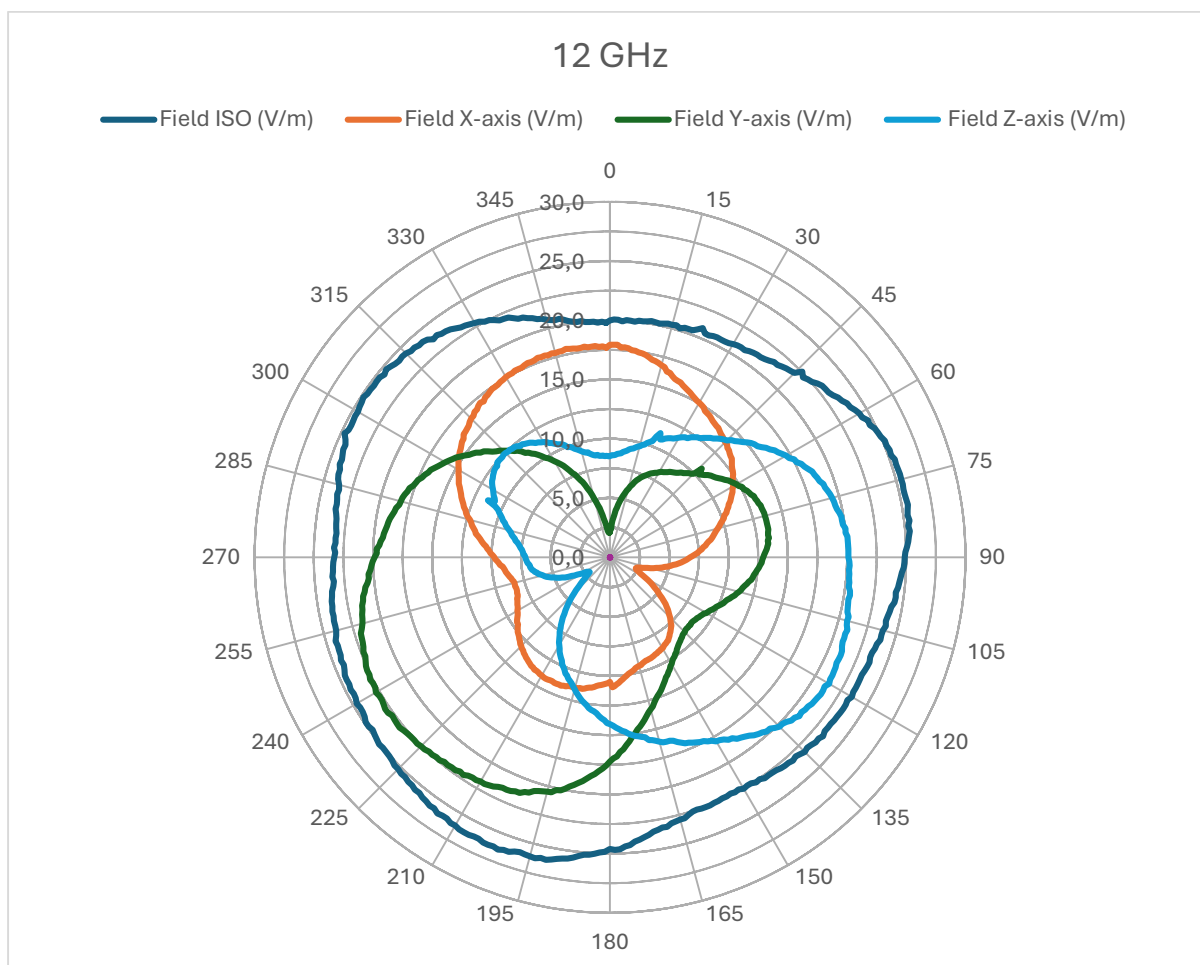


$$A = 20 \log \left(\frac{S_{max}}{\sqrt{S_{max} * S_{min}}} \right)$$

Minimum 19.71 V/m

Maximum 22.86 V/m

Anisotropy ± 0.64 dB



$$A = 20 \log \left(\frac{S_{max}}{\sqrt{S_{max} * S_{min}}} \right)$$

Minimum 19.77 V/m

Maximum 26.42 V/m

Anisotropy ± 1.26 dB