



Test Report

for metraTec Echo4 FCC UHF RFID Antenna

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Version: 1.1

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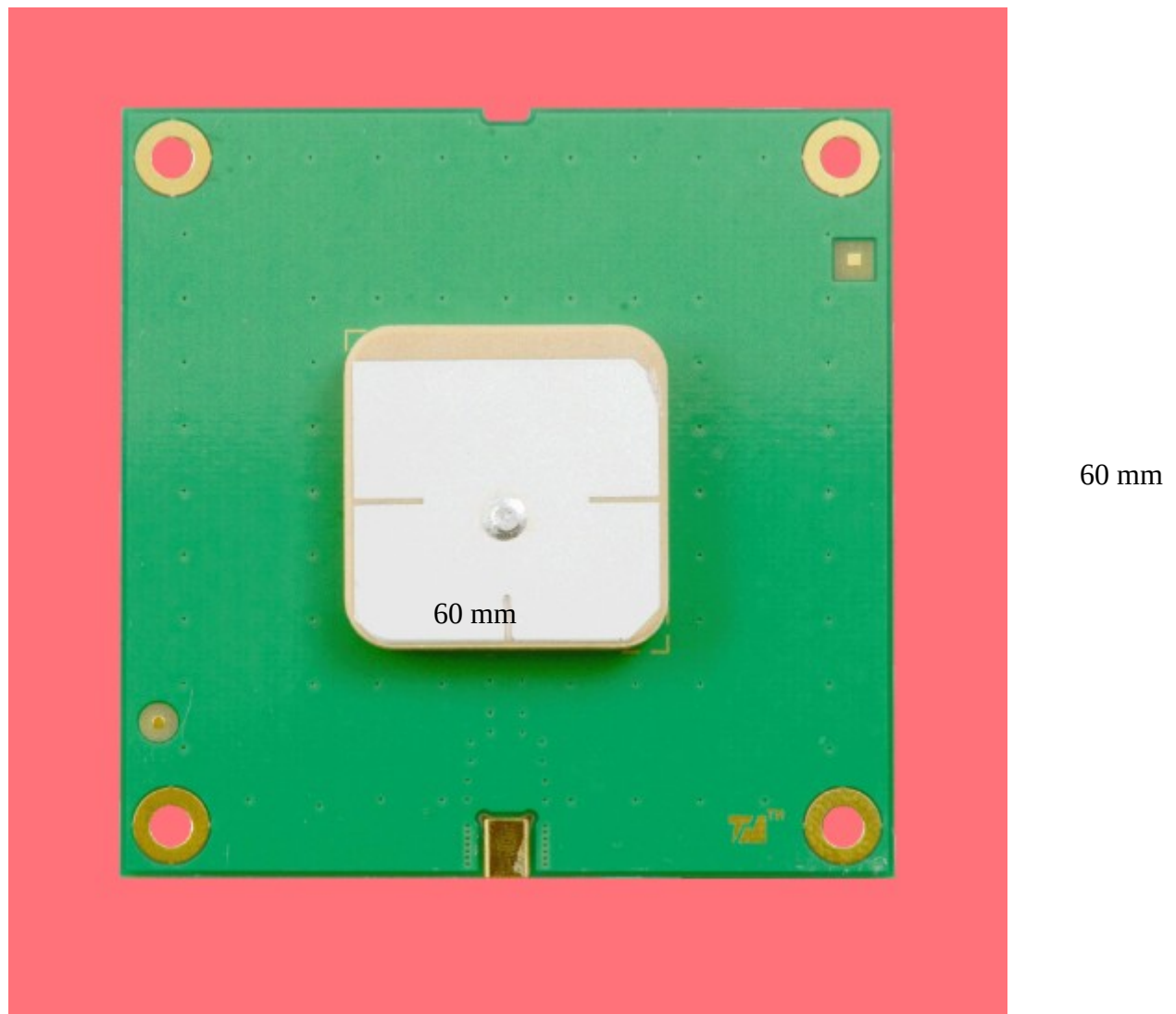
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1 Manufacturer Information

Name	Metrattec GmbH
Street	Niels-Bohr-Str. 5
City	Magdeburg
Postcode	39106
Country	Germany

2 Mechanical Dimensions

The Echo4 FCC is 60 x 60 x 8mm.



3 Peak Gain

The antenna peak gain was measured using a nose to nose test with two Echo4 FCC at 3m distance and using a dipole reference antenna at the same distance.

Both measurements result in:

$G = 2 \text{ dBi}$

This is an equivalent to 5dBic (circular).

4 Radiation Pattern

The directivity pattern in azimuth was measured using a dipole reference antenna. The diagram is shown in Fig. 1. The half power beamwidth was measured to be:

HPBW=120°

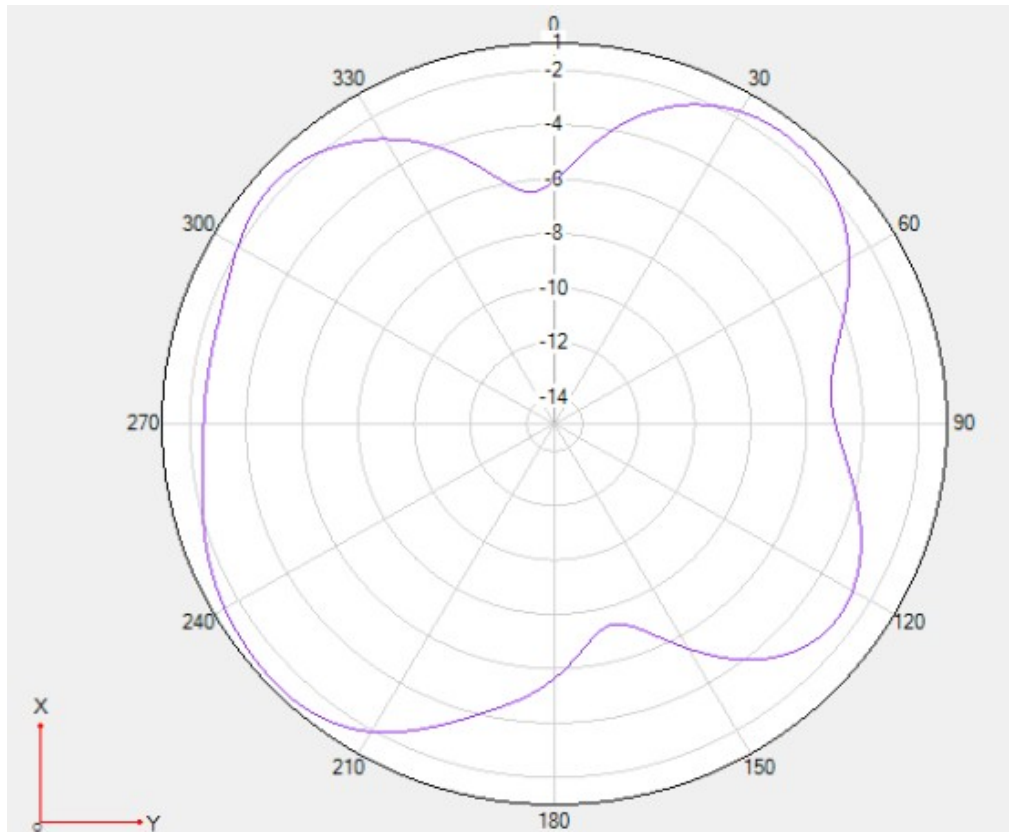


Fig. 1: Echo4 FCC radiation pattern

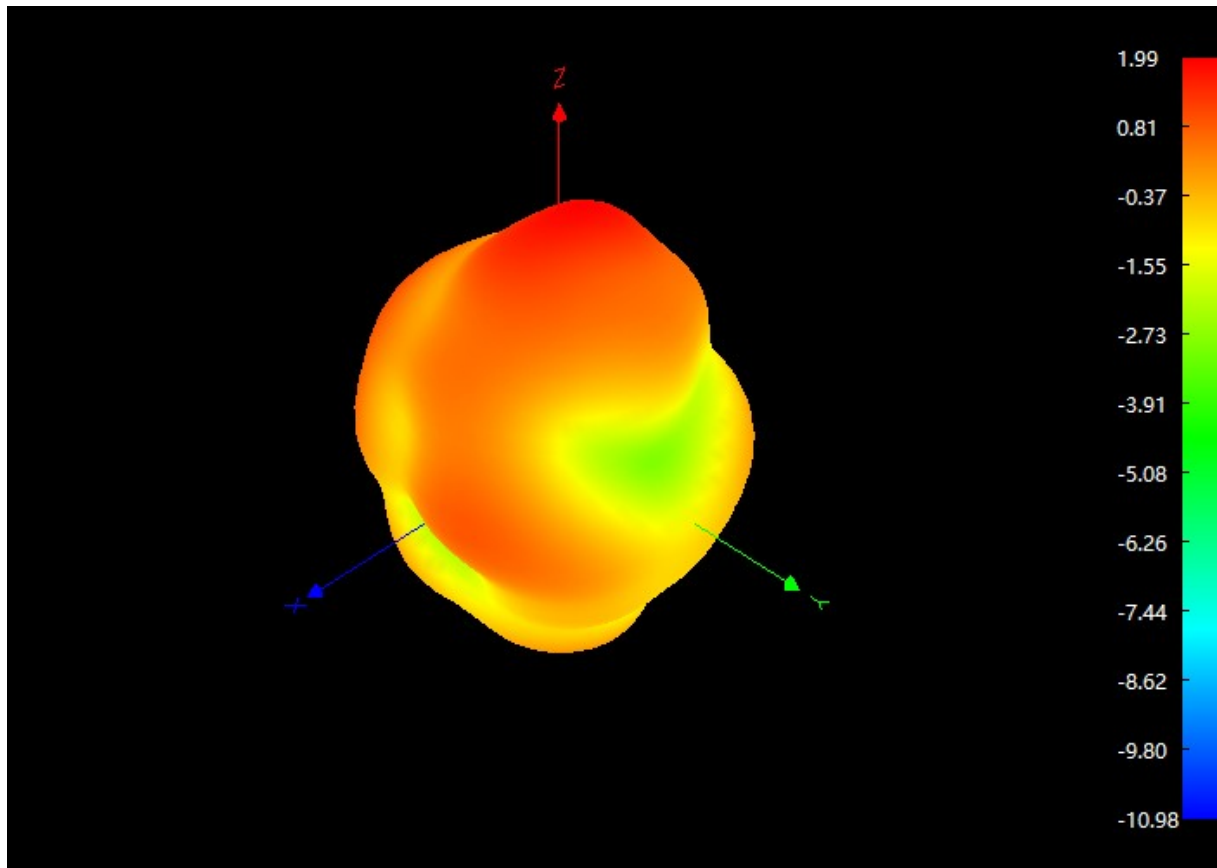
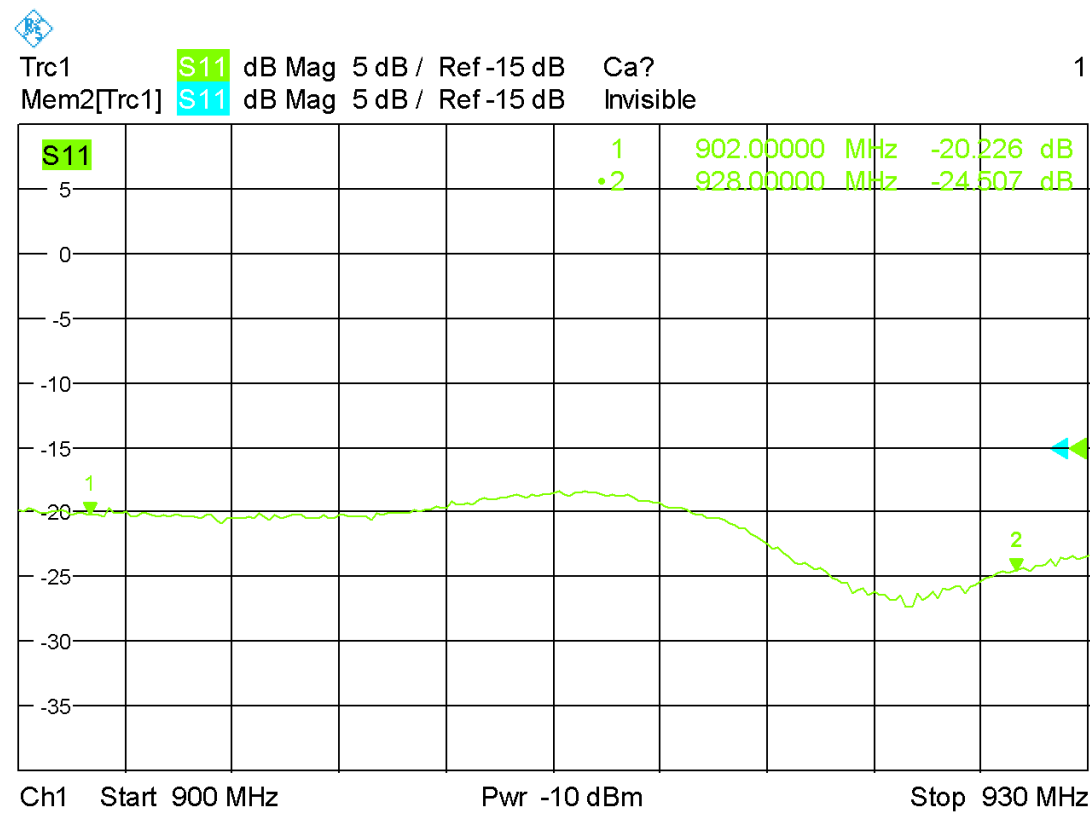


Fig. 2: 3D radiation pattern, antenna pointing into z-Axis

5 Return Loss

The return loss measurement is shown in Fig. 2. The antenna is well matched and better then -15dB for the entire band ranging from 902 to 928 MHz.



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Fig. 3: Echo4_FCC return loss

6 Version Control

<i>Version</i>	<i>Change</i>	<i>by</i>	<i>Date</i>
1.0	created	TM	27.8.2025
1.1	Manufacturer info added	TM	4.9.2025

Contact

metraTec GmbH
Niels-Bohr-Str. 5
39106 Magdeburg, Germany

Tel.: +49 (0)391 251906-00

Fax: +49 (0)391 251906-01

Email: support@metratec.com

Web: <http://www.metratec.com>

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