

SIGMa
Connectivity

Characterization of Antennas for Axis Communications AB

ID: SCDC-1050199185-133072

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Status:

Approved

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2025-09-30

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Revision:

1.0

Page:

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1 The Assignment and Setup

Axis Communications AB, Lund, (the customer) requested Sigma Connectivity AB (Lund, Sweden) to characterize the radiated antenna gain of the antennas of their LTE/FR1 camera equipment. The device has two identical antennas for the frequency range 3300-3800MHz. For the US market the frequency range 3550-3700MHz is of interest.

It should be noted that the customer designed the equipment except for the antennas. The antennas, that are of monopole type, were simulated, designed, and verified (with the mechanical parts) by Sigma Connectivity AB (Lund, Sweden).

1.1 Antenna Chamber Description

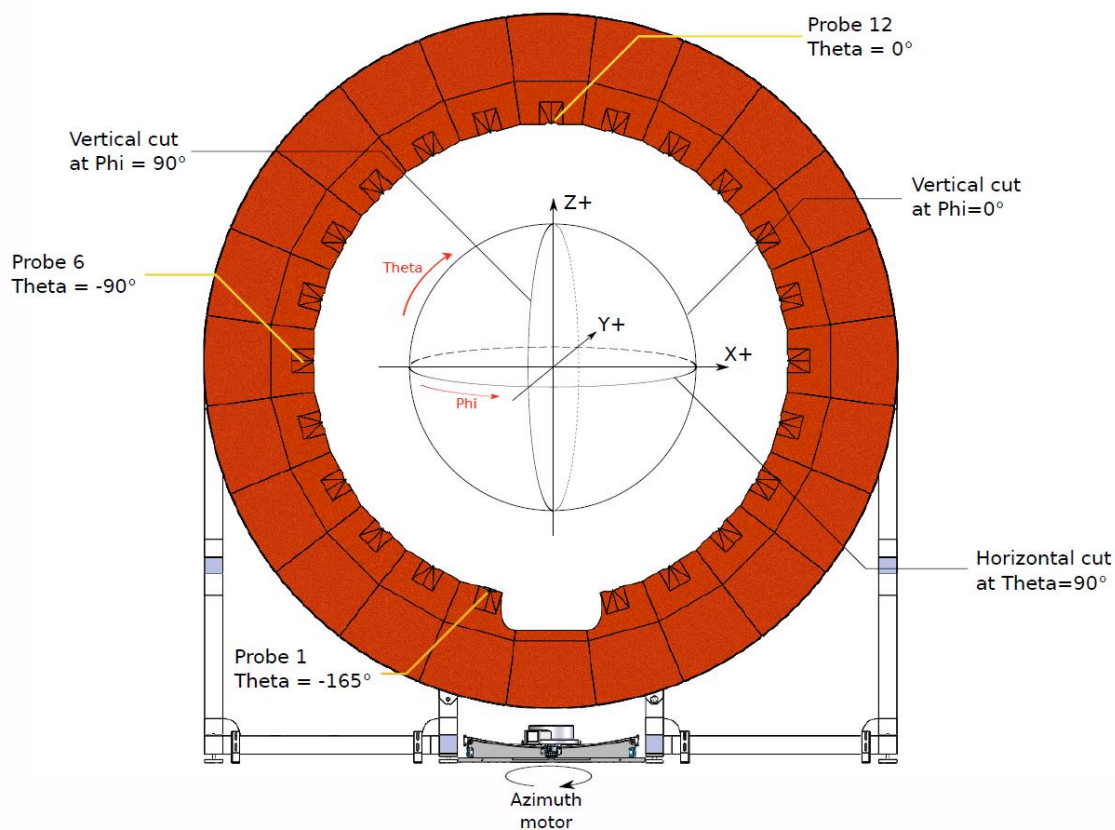
The chamber used for the measurements is SG24L (MVG - Microwave Vision Group). The application-software version used was 24.4.4.



The annual calibration, performed by MVG personal, was performed June 5 2025. Annual calibration technical document, MATR.155.15.25.PAR.A.

Measurement instrument, VNA Agilent Technologies E5071C ENA series.

Chamber orientation as shown below.



1.2 Setup of the DUT in the SG24L Chamber

The placement of the device can be seen in the pictures below.

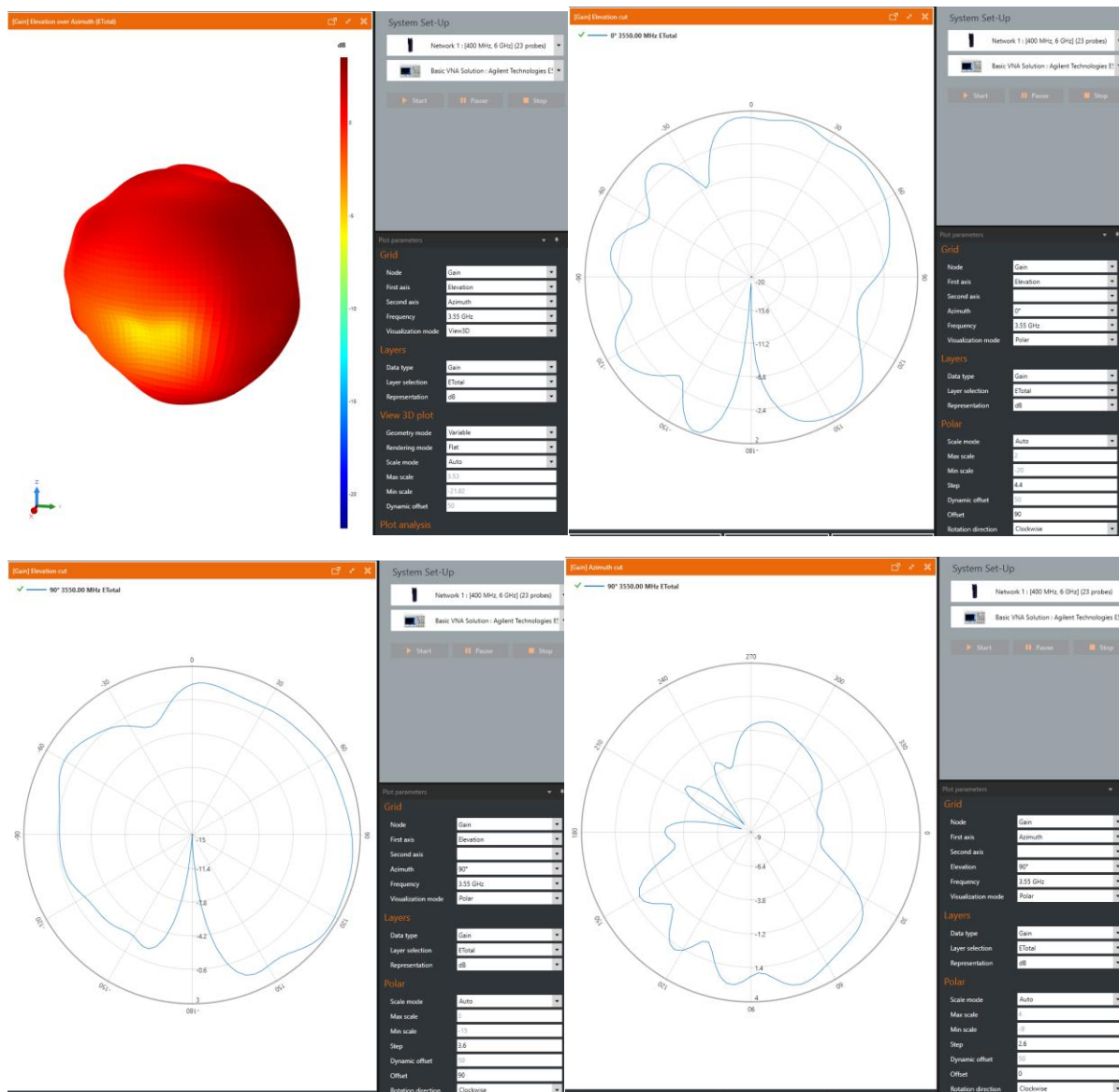


2 Measurement Results and Plots

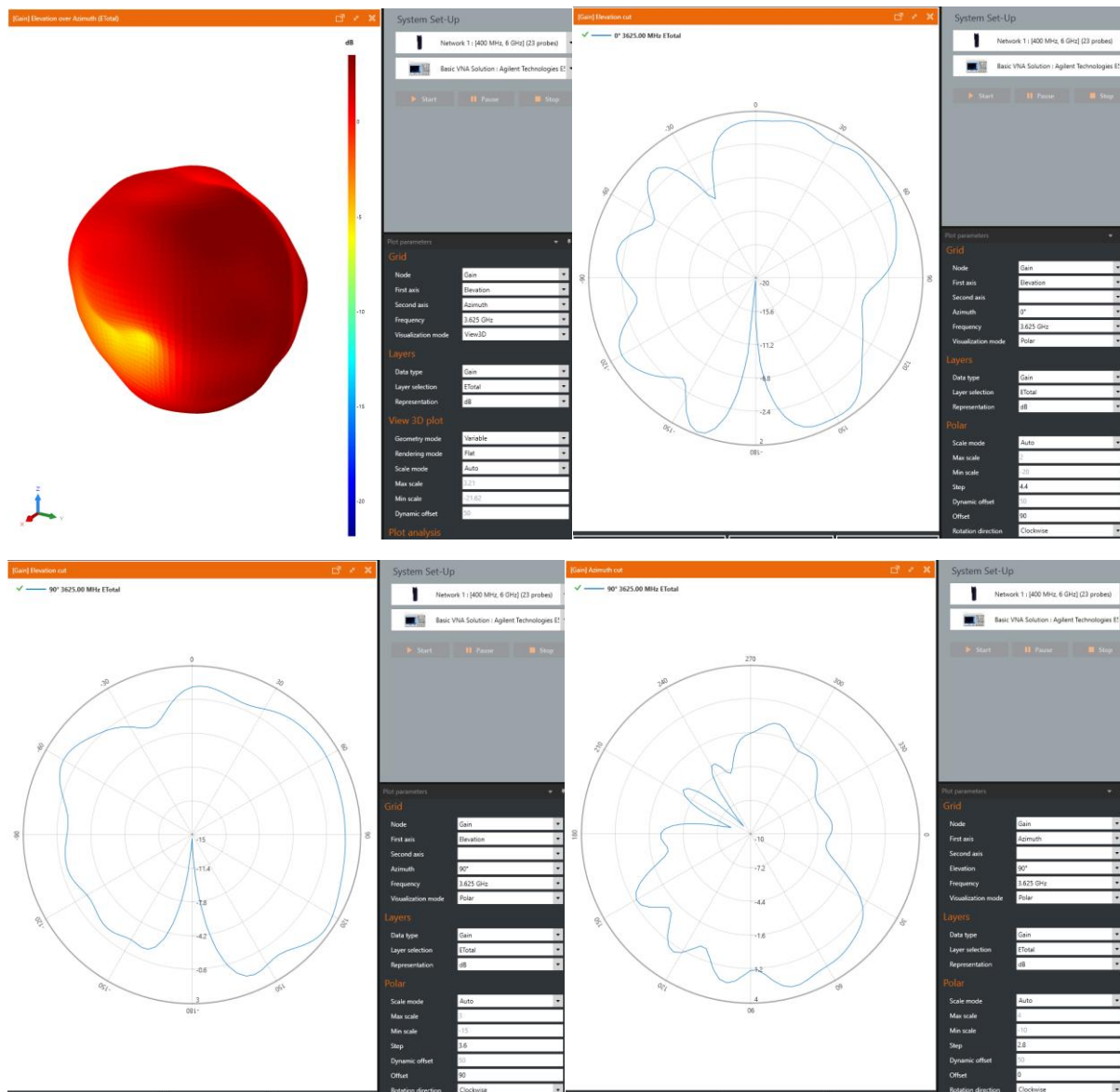
Below is the results of the low, mid, high channels of the B48/n48 band.

Frequency	Gain
3550 MHz	3.53 dB
3625 MHz	3.20 dB
3700 MHz	3.68 dB

Below, 3550 MHz:



Below, 3625 MHz:



Below, 3700 MHz:

