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1 Acronyms, Glossary, Conventions

Table 1-1 introduces the acronyms used inside the document:

Acronym	Meaning
EIRP	Effective Isotropic Radiated Power
RF	Radio Frequency

Table 1-1

Table 1-2 introduces the Glossary of terms used inside the document:

Term	Meaning

Table 1-2

Table 1-3 introduces the conventions list adopted by the document:

Convention	Meaning

Table 1-3

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2 Bibliography and Reference Documents

Table 2-1 shows the list of books, articles and documents cited within the document and the correlation with the code used for their citation:

Citation Data	Code
"Test Report nr. R25159501 Radio Spectrum Matters"; Dekra Testing and Certifications S.r.l.	[1]

Table 2-1

3 Document Subject

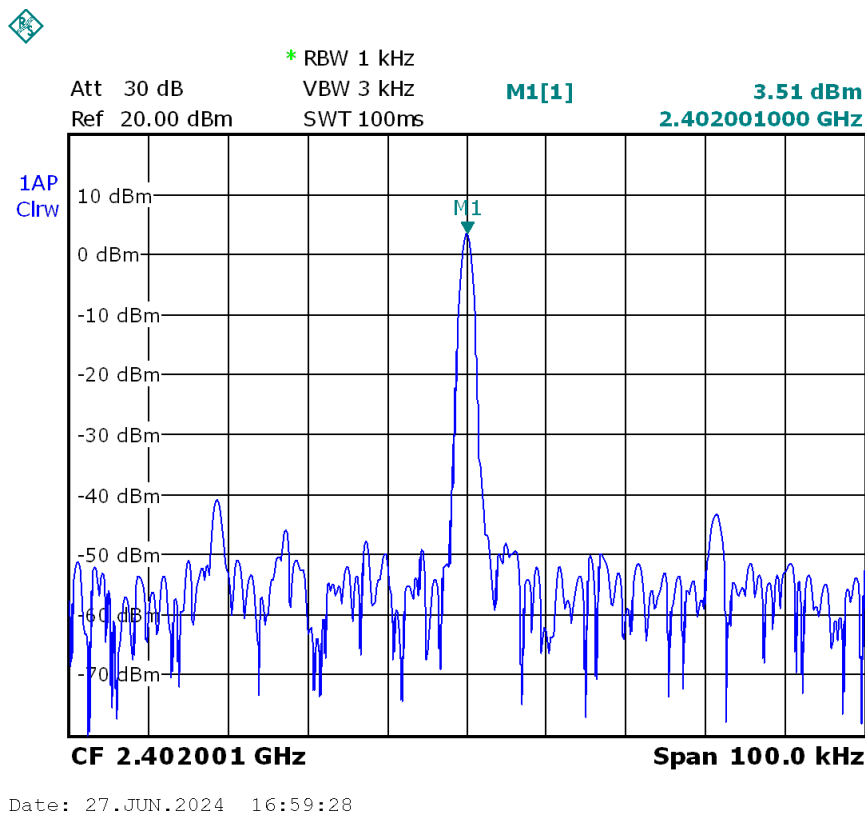
The document reports the radiation lobes of Vimar Pixel.
In detail the document reports:

- RF Conducted measures
- Relevant radiation lobes for FCC/ISED

4 RF Conducted measures

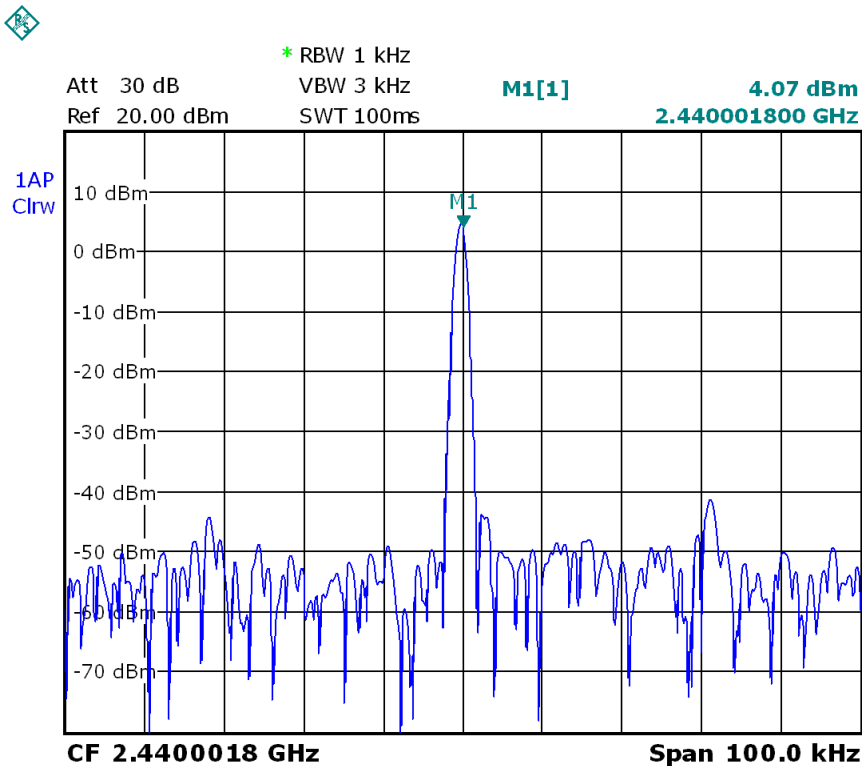
The peak conducted measures are realized removing the BALUN circuit and changing the value of C34 (part the antenna matching circuit to 50Ω) with and inductance with the value of 2.4nH (50Ω impedance matching with the instrument).

The results are reported below:



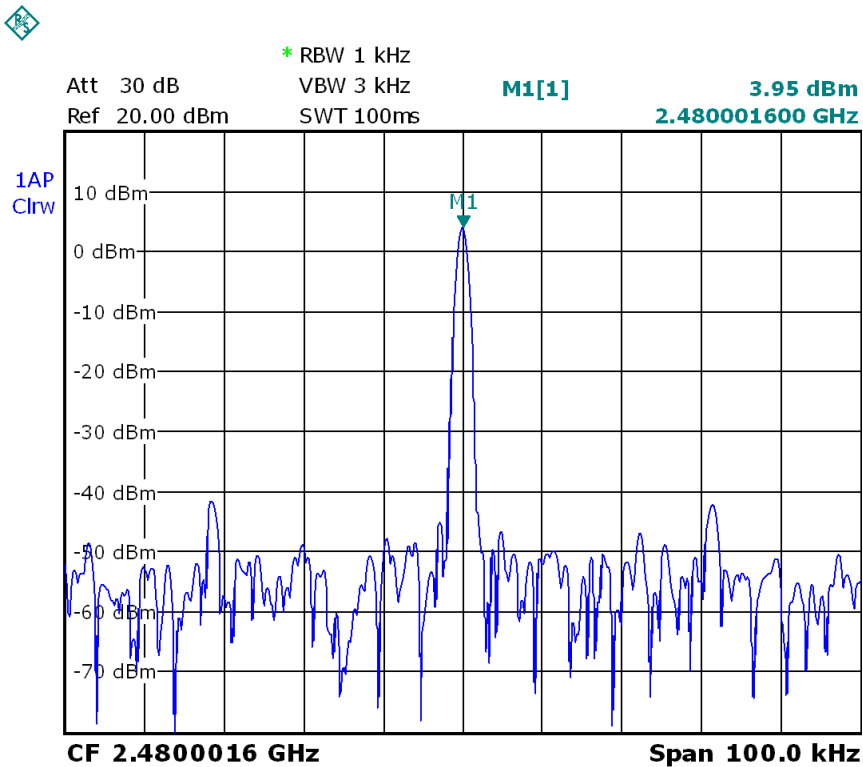
Date: 27.JUN.2024 16:59:28

Figure 4-1



Date: 27.JUN.2024 17:03:43

Figure 4-2



Date: 27.JUN.2024 17:07:34

Figure 4-3

5 Relevant Radiation Lobes for FCC/ISED Regulations

All the measures are realized with compensation related to the peak radiated measures realized in the Dekra chamber used for [1] compliance measures.

Specifically:

Peak power at 2402MHz: 2,16dBm EIRP (20°C)

Peak power at 2444MHz: 1,70dBm EIRP (20°C)

Peak power at 2480MHz: 1,99dBm EIRP (20°C)

The nominal RF conducted output power adopted is derived from the measures documented in chapter 4.

The measure set up is shown in Figure 5-1:

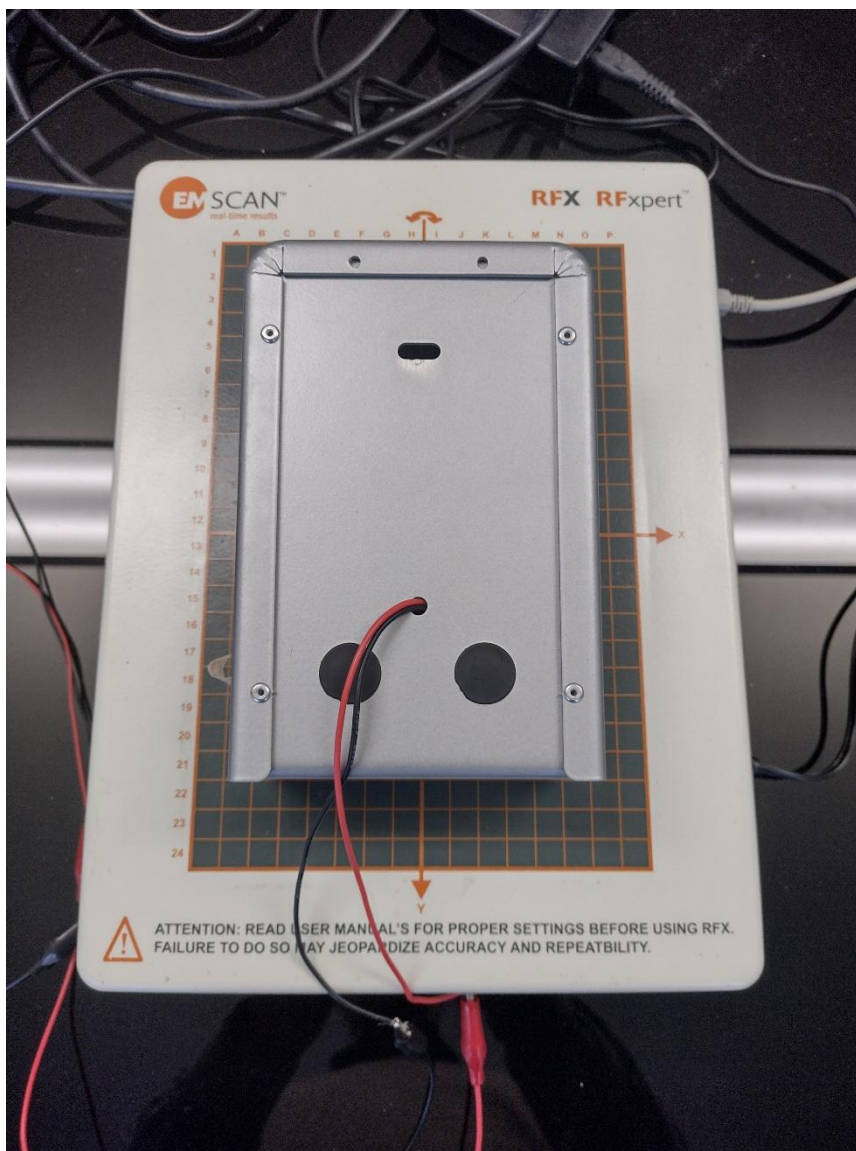


Figure 5-1

5.1 2402MHz

Without any compensation the EIRP peak measured is **2,99dBm**.

To calibrate the measure with the EIRP peak reported in [1], a correction of -0,83dB (offset 0,83dB) is applied.

The final results are shown in Figure 5-2, Figure 5-3, Figure 5-4, Figure 5-5:

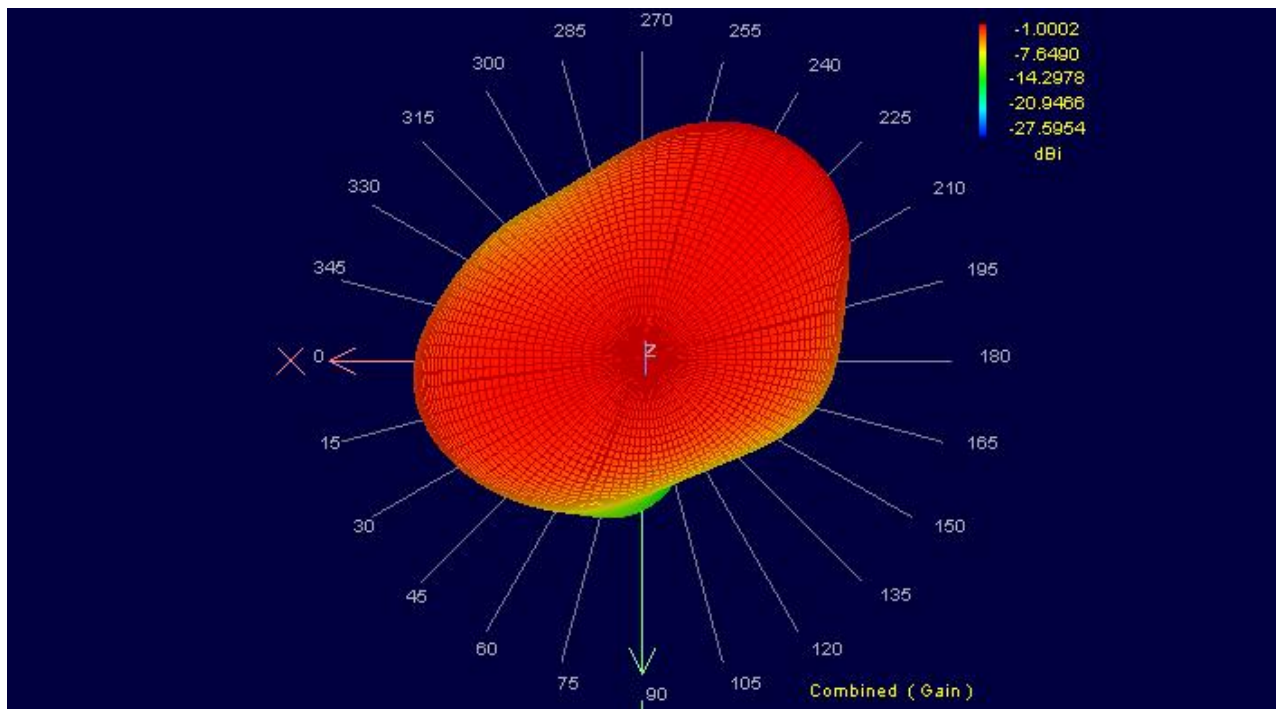


Figure 5-2

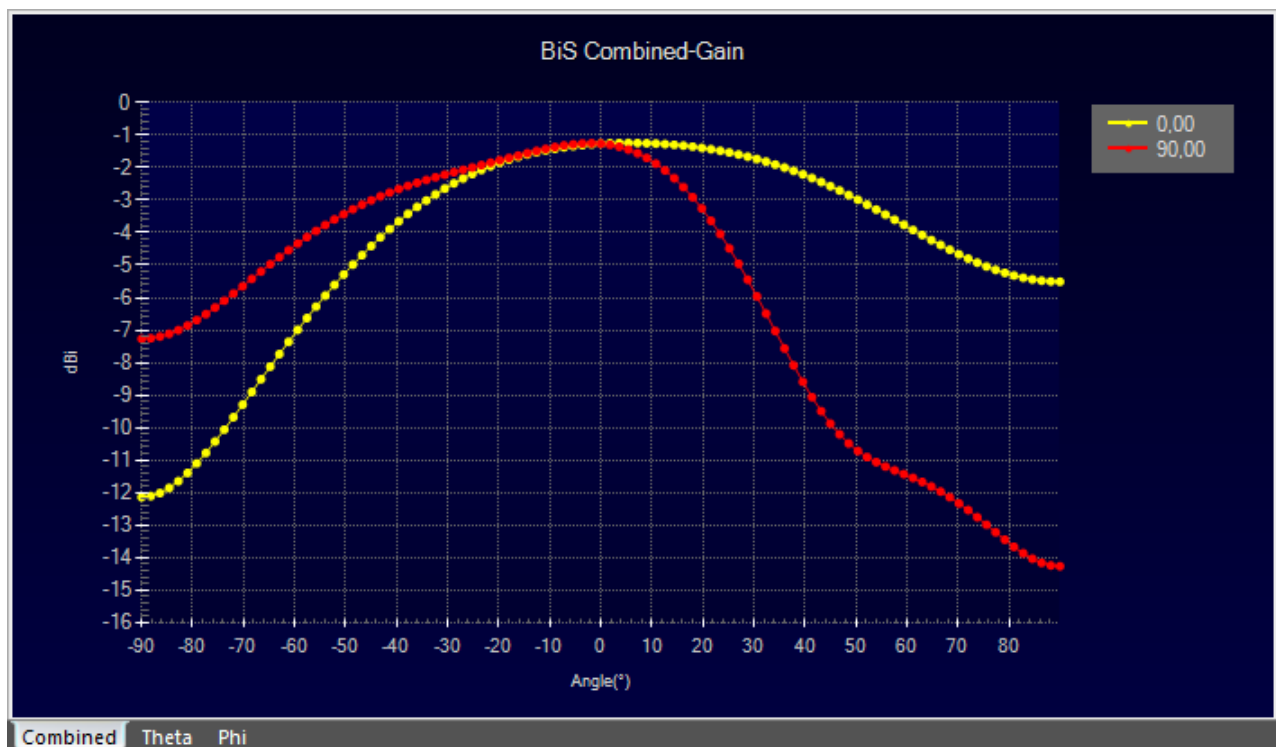


Figure 5-3

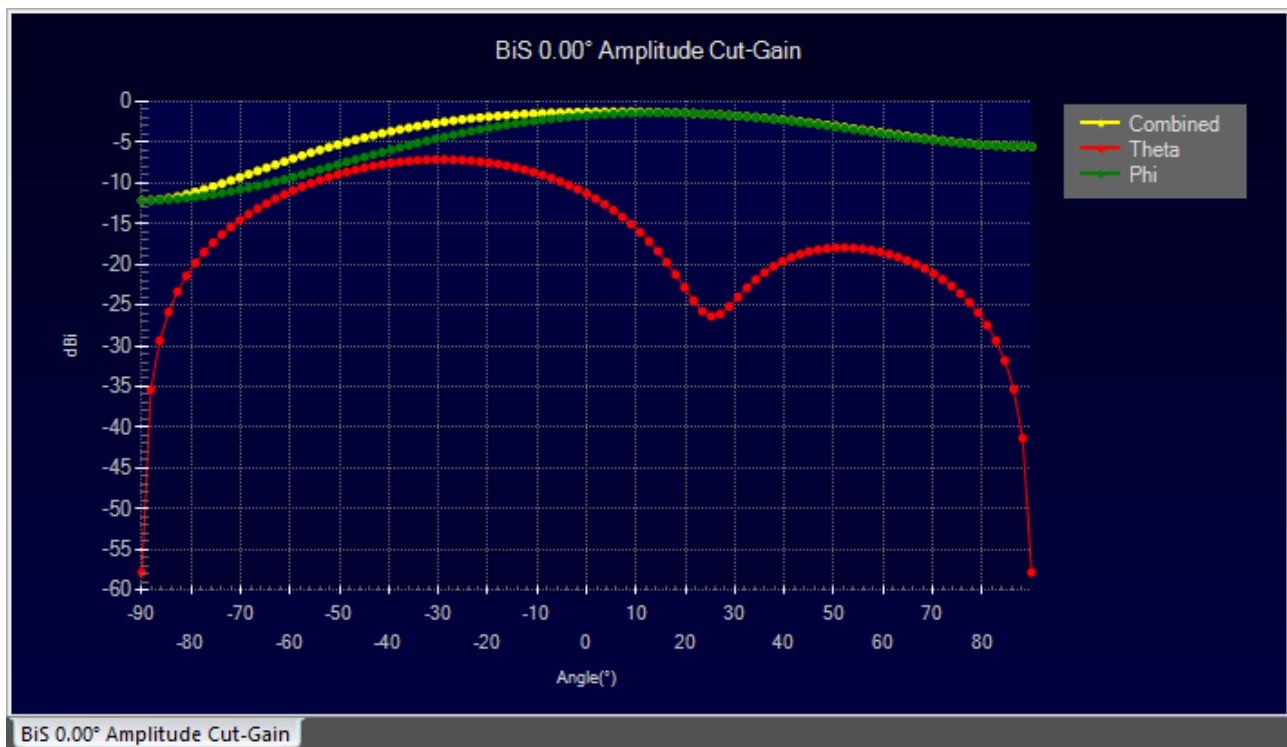


Figure 5-4

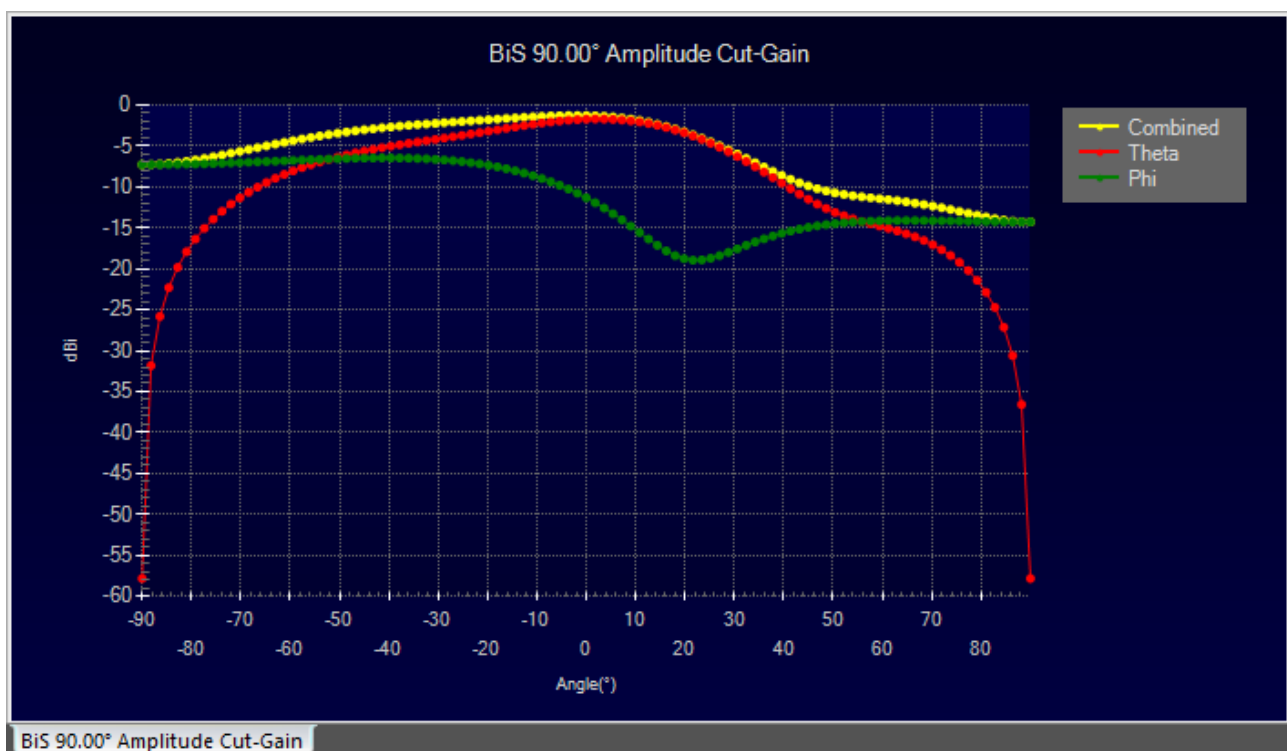


Figure 5-5

5.2 2440MHz

Without any compensation the EIRP peak measured is **7,68dBm**.

To calibrate the measure with the EIRP peak reported in [1], a correction of -5,98dB (offset 5,98dB) is applied.

The final results are shown in Figure 5-6, Figure 5-7, Figure 5-8, Figure 5-9:

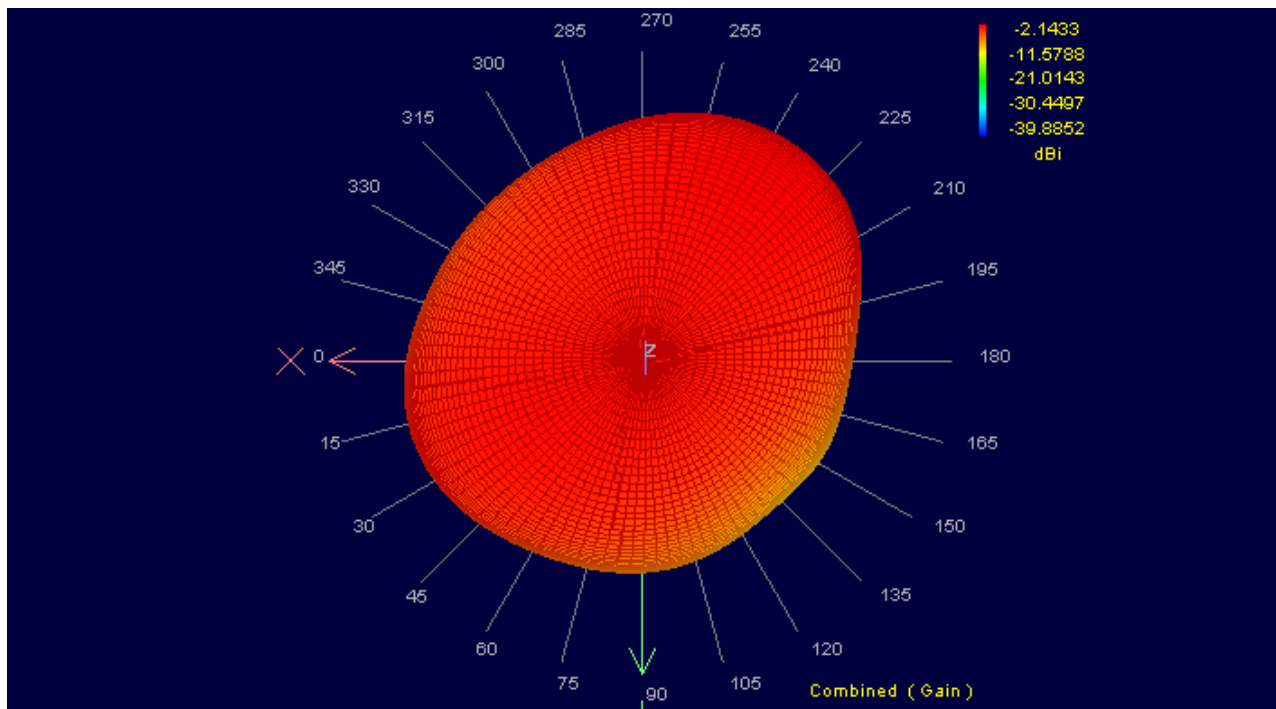


Figure 5-6

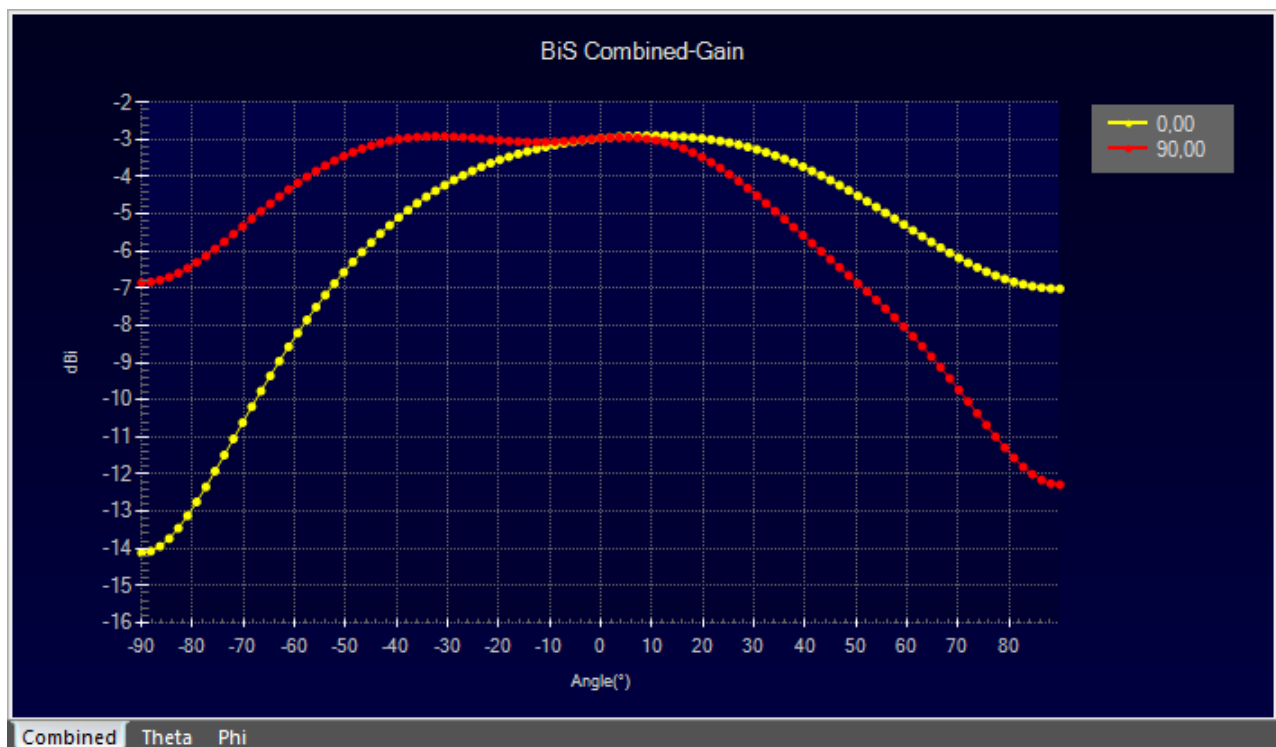


Figure 5-7

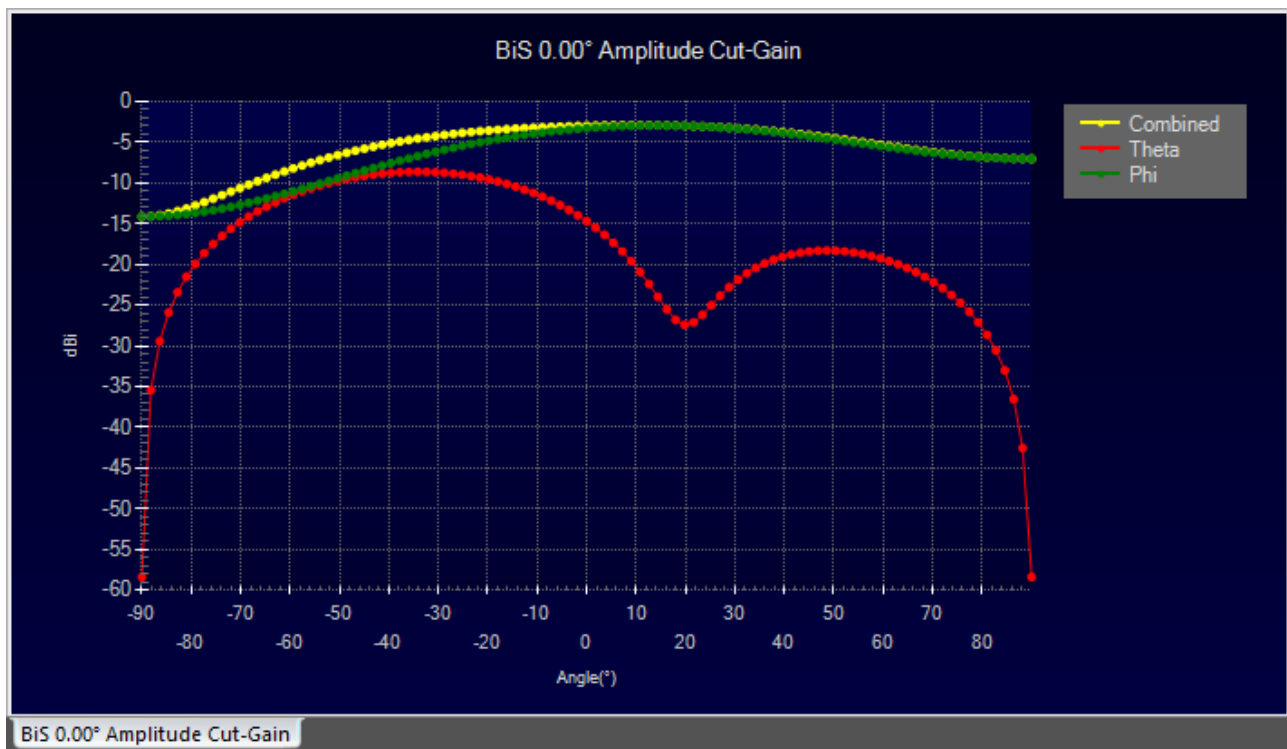


Figure 5-8

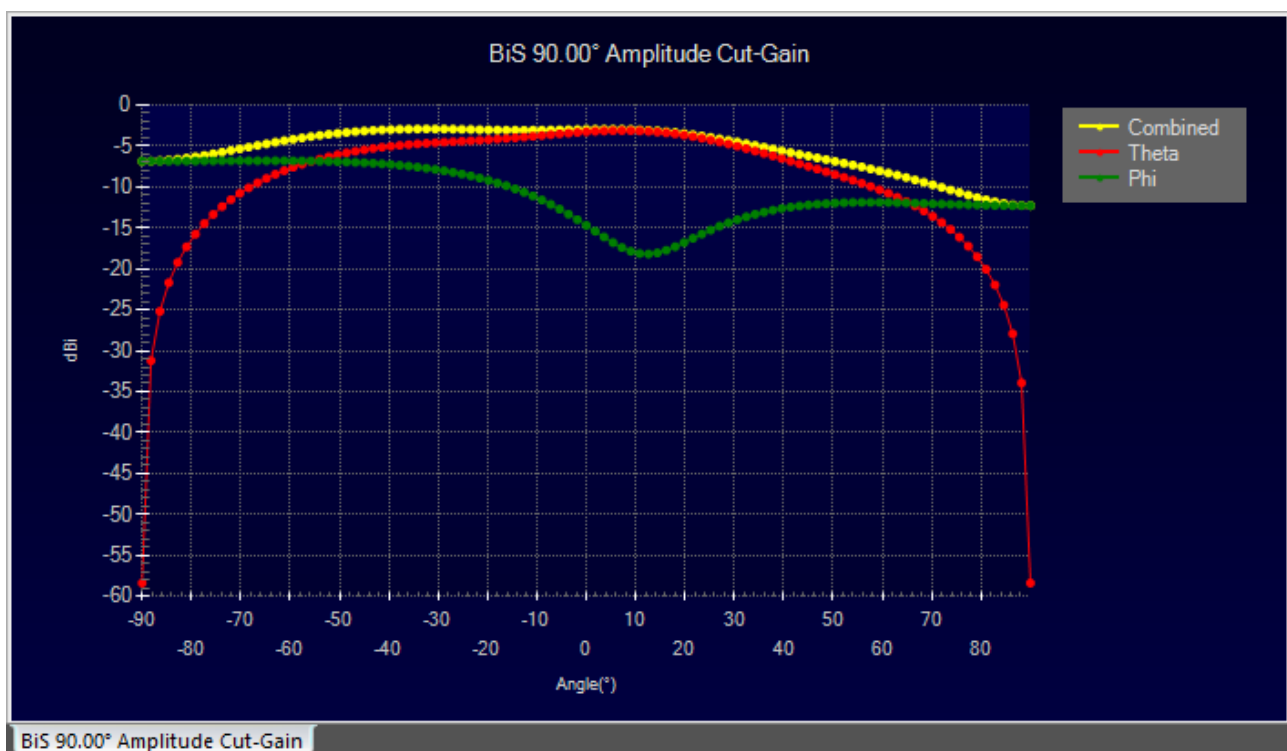


Figure 5-9

5.3 2480MHz

Without any compensation the EIRP peak measured is **7,84dBm**.

To calibrate the measure with the EIRP peak reported in [1], a correction of -5,85dB (offset 5,85dB) is applied.

The final results are shown in Figure 5-10, Figure 5-11, Figure 5-12, Figure 5-13:

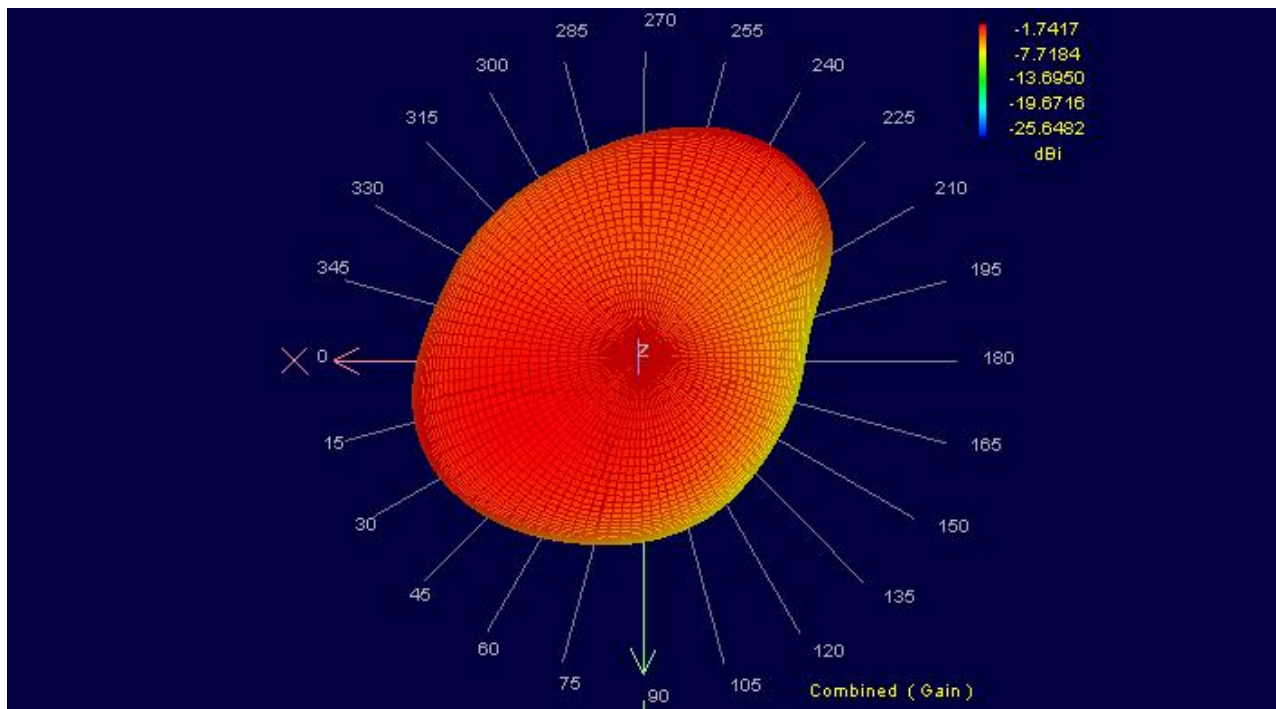


Figure 5-10



Figure 5-11

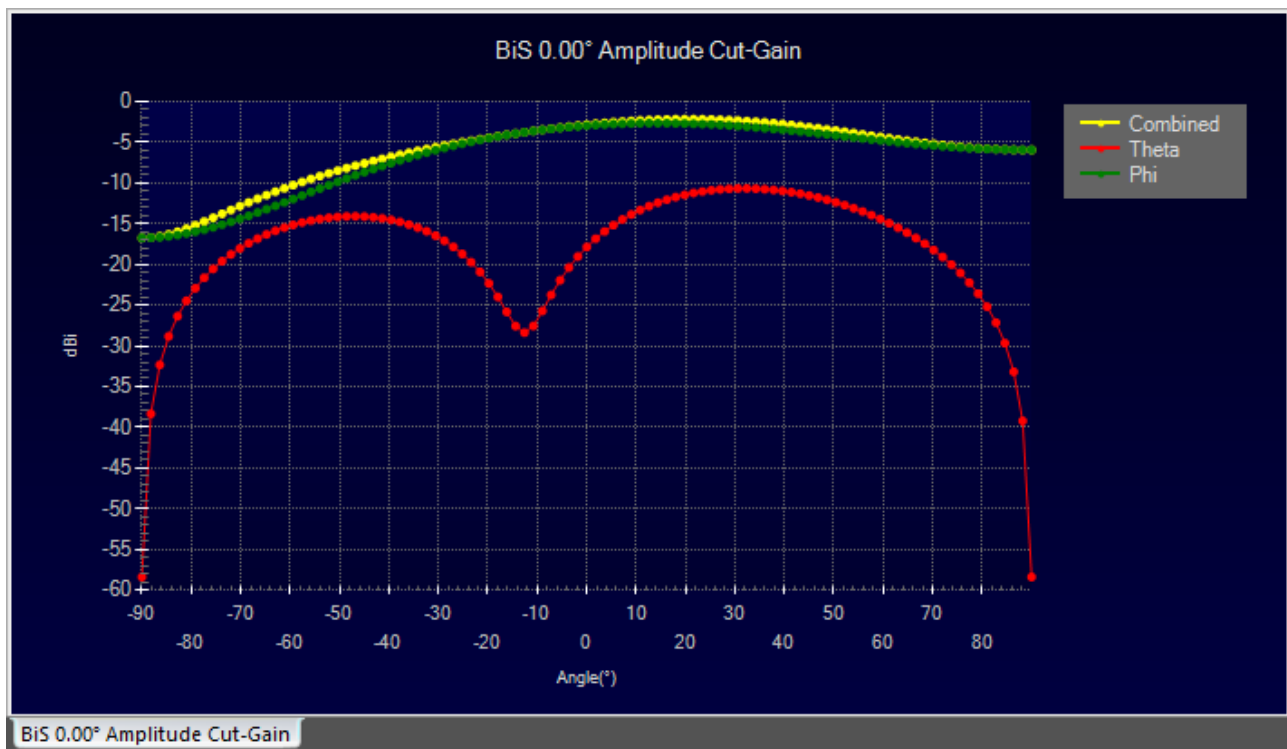


Figure 5-12

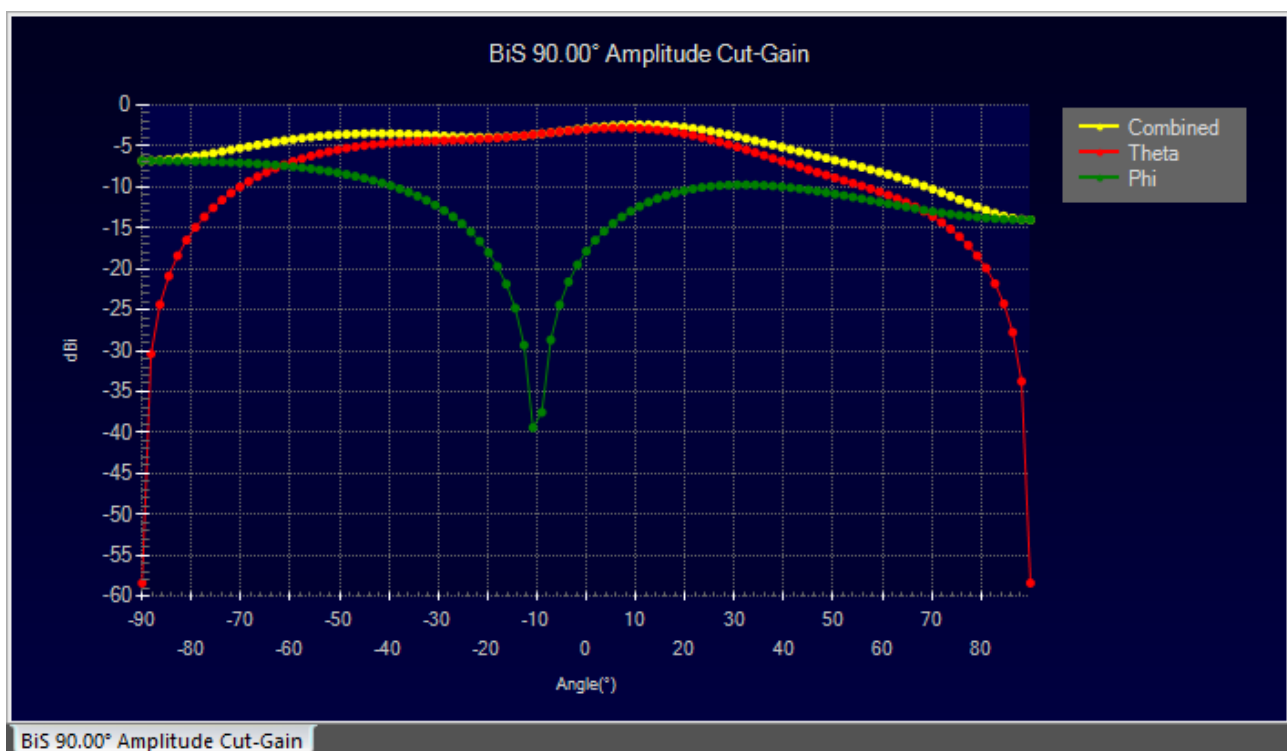


Figure 5-13

6 Antenna Gains

The antenna peak gains are synthetically reported:

- 2402MHz: -1dBi
- 2440MHz: -2.1dBi
- 2480MHz: -1.7dBi