

ANTENAS Y PROPAGACION

Laboratorio de medición de antenas



Profesor Alejandro Javier Venere

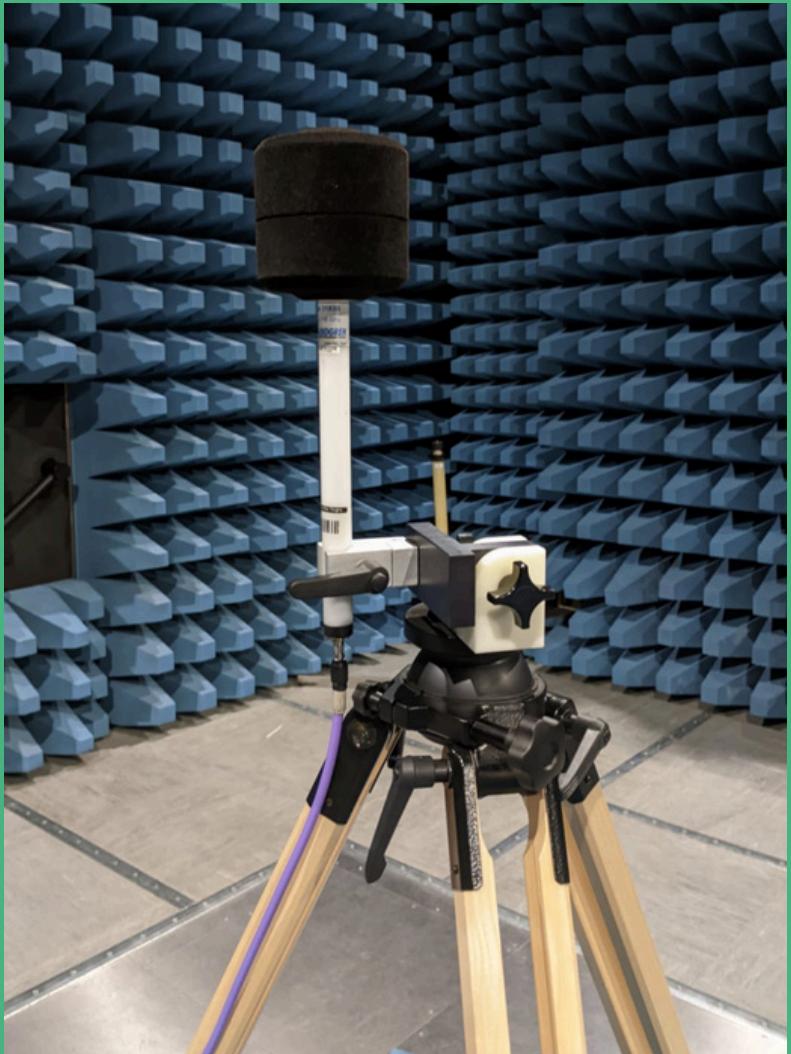


Theo Abbate, Fabio Vidal, Matías
Ramirez y Franco Dal Farra



Descripción de la práctica:

- Se utilizó la cámara semianecoica para realizar las mediciones en condiciones aisladas y sin reflexiones
- Se midieron las características de dos antenas
- Se utilizó un Analizador de Espectros para obtener el diagrama de radiación y un Analizador Vectorial de Redes para obtener la impedancia característica



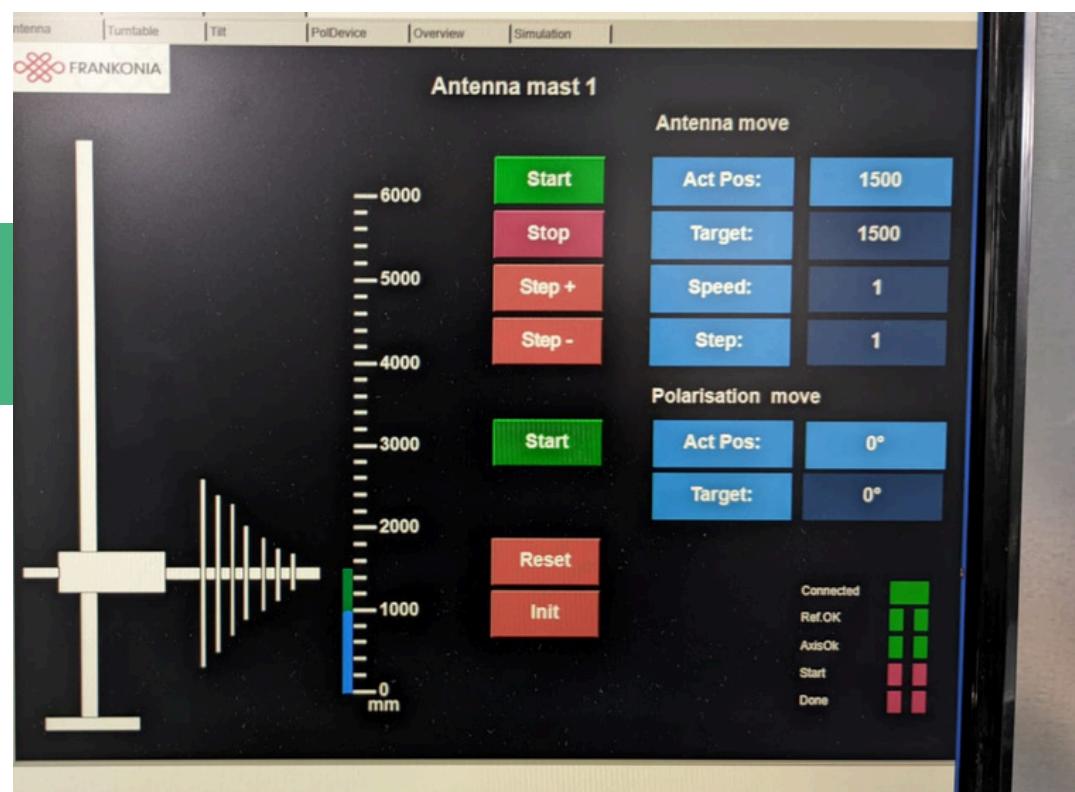
ETS-L 3183B Broadband minibicon



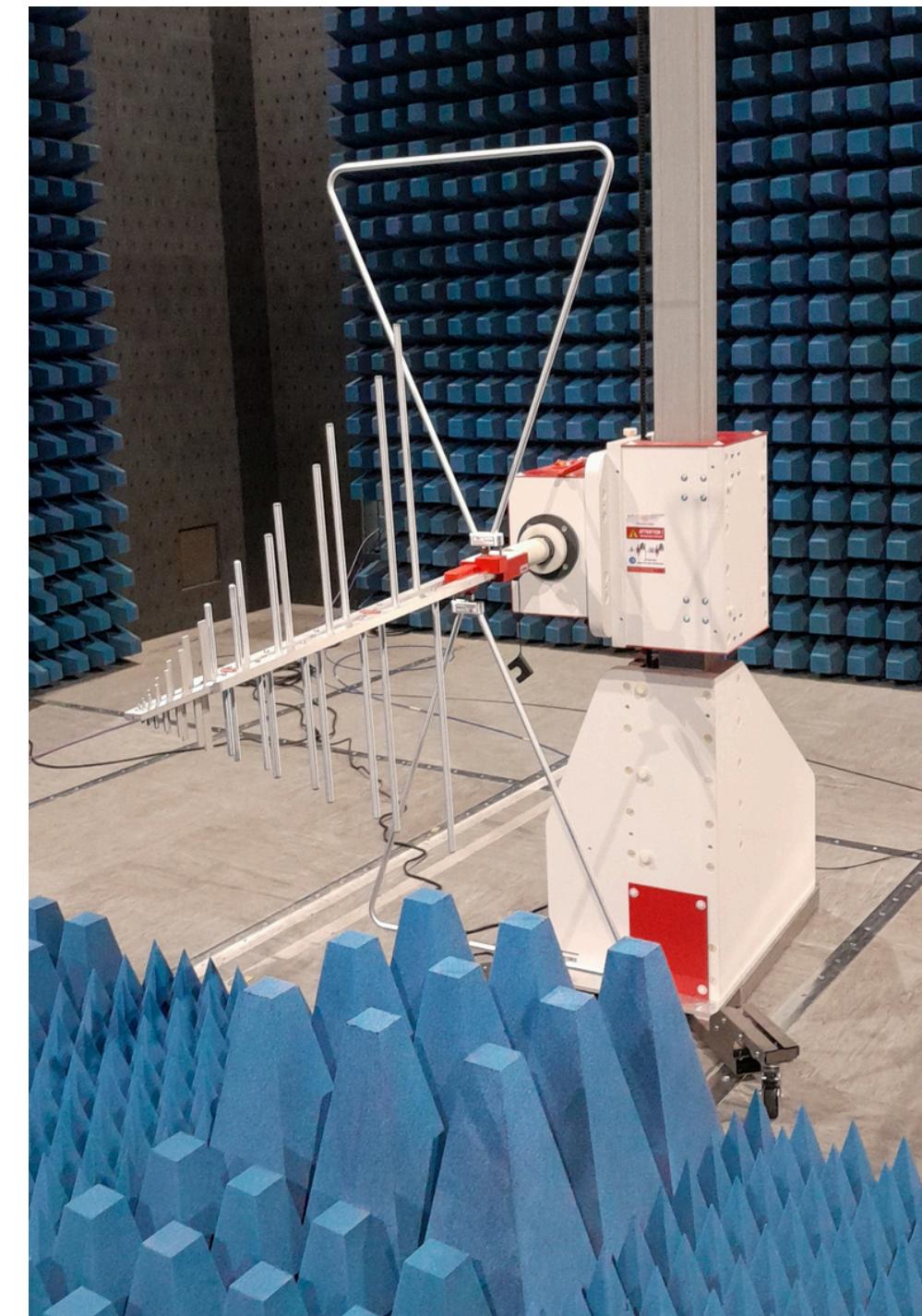
Frankonia PowerLog 70180

Condiciones de medición

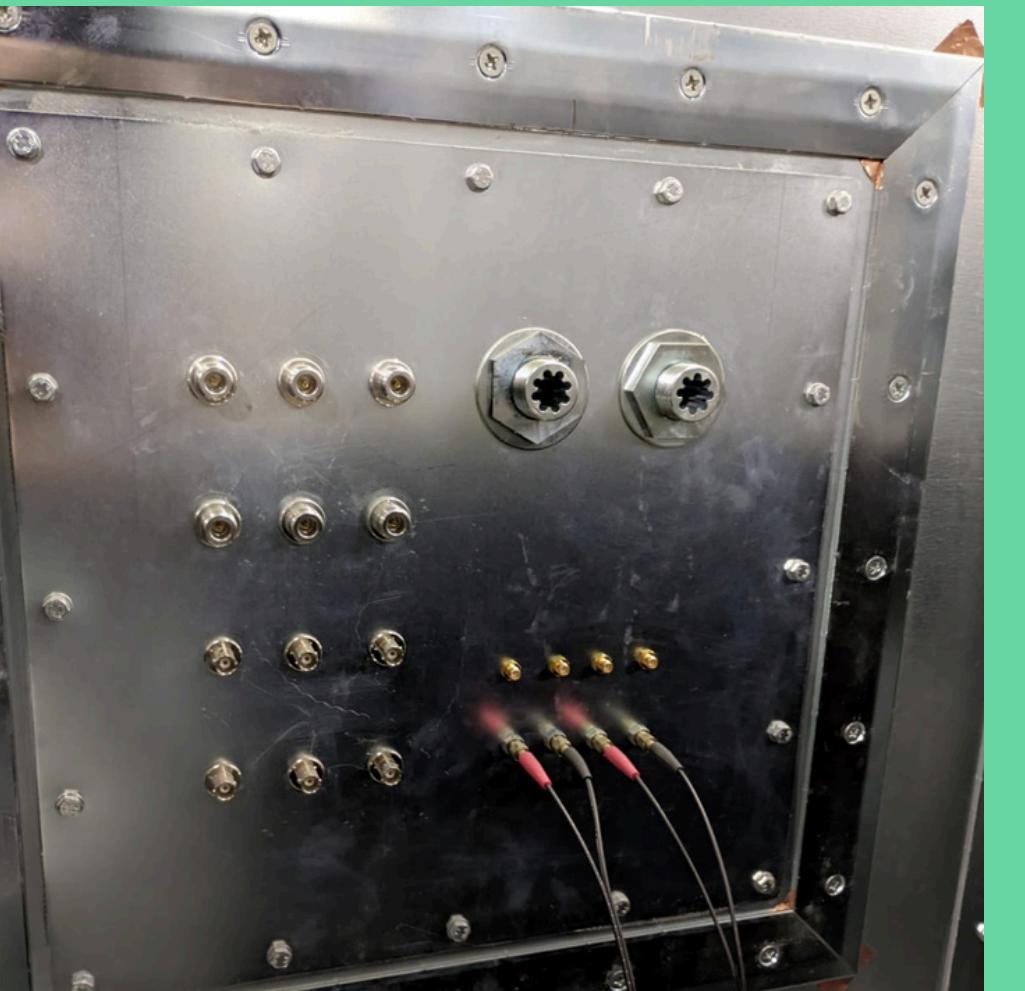
- Frecuencia de medición 1GHz
- Distancia entre las antenas aproximadamente mayor a 10 longitudes de onda (campo lejano)
- Antenas alineadas
- Antena de prueba sobre una torna mesa para capturar las emisiones en 360°
- Fuente transmisora de RF



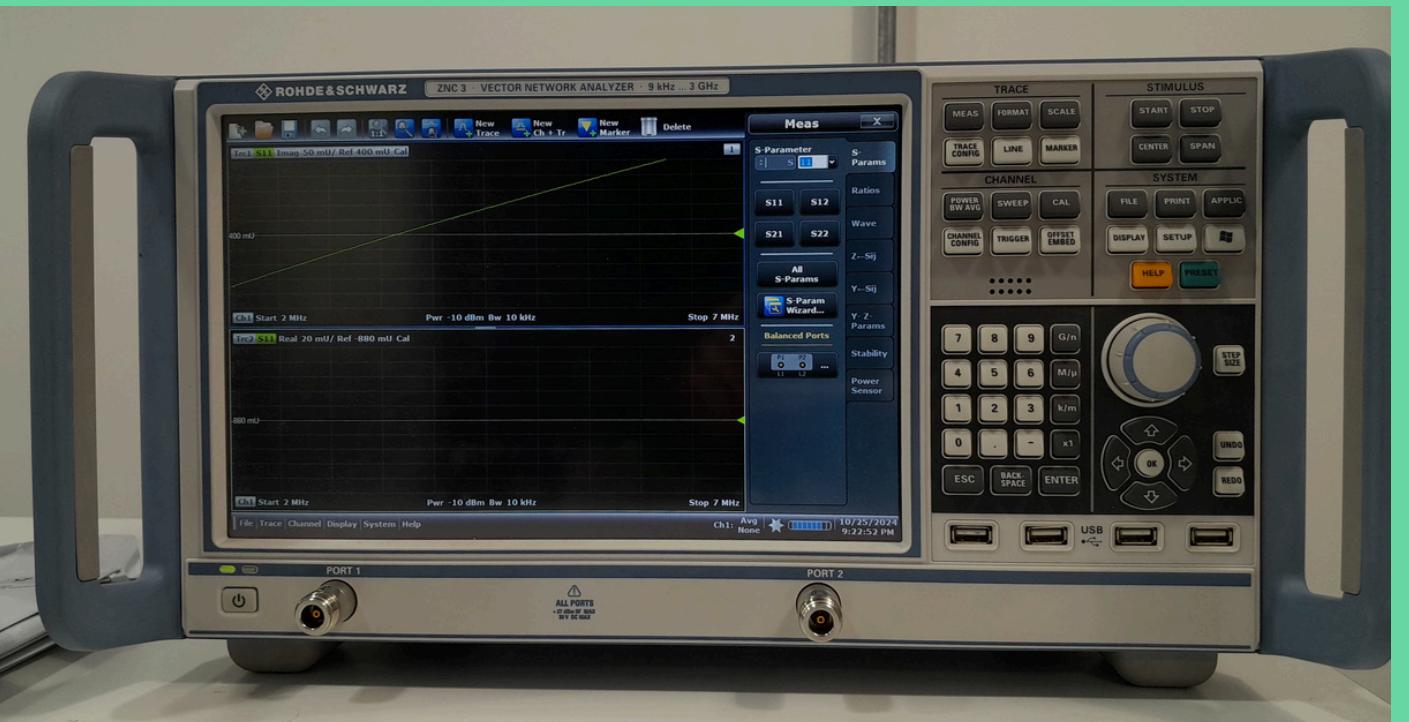
Software Frankonia para control de la cámara de medición



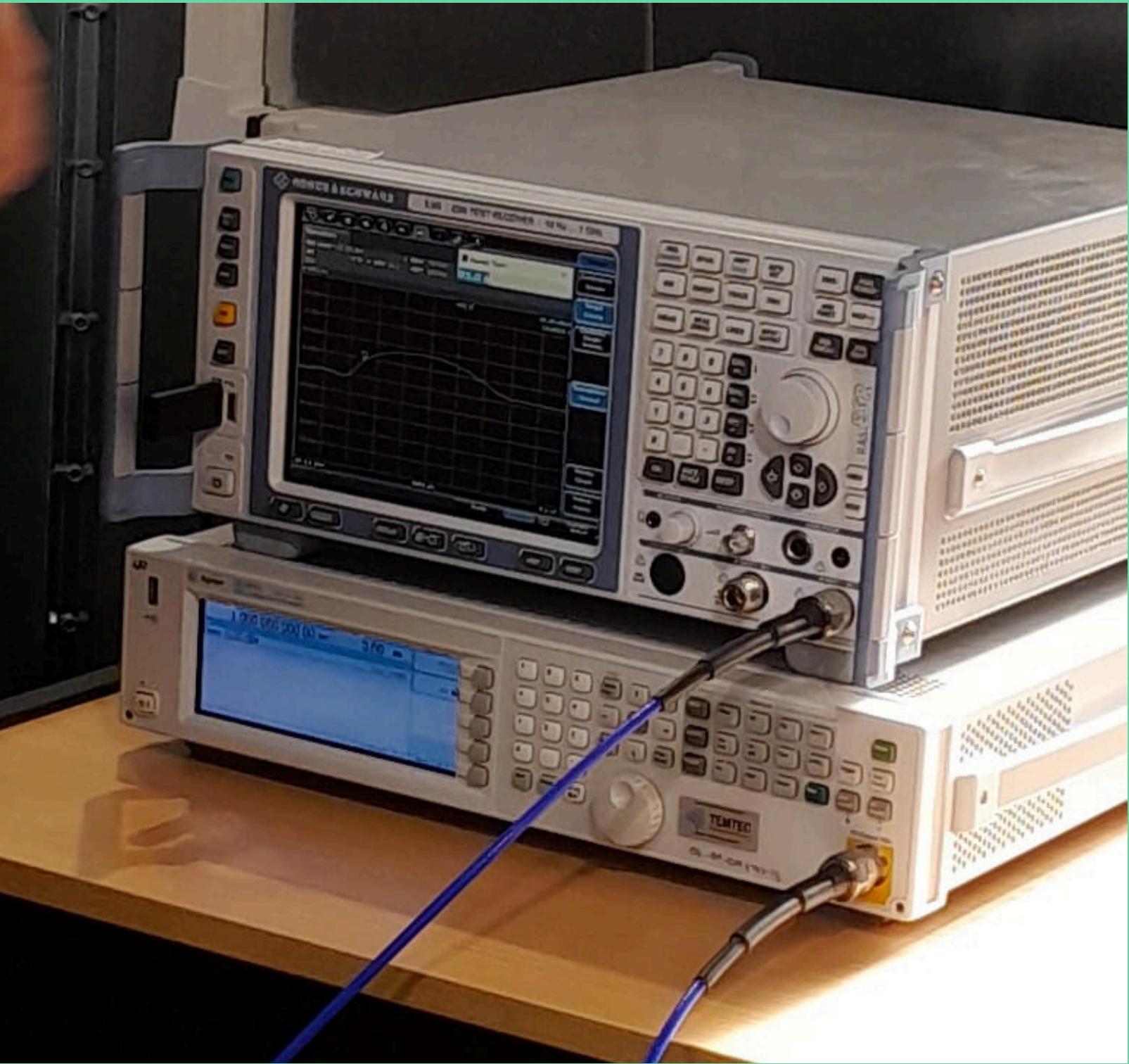
Antena emisora Frankonia BiConicLog AXL8000



Patchera de interfaz cámara-sala de control



ZNC 3 VNA ROHDE&SCHWARZ

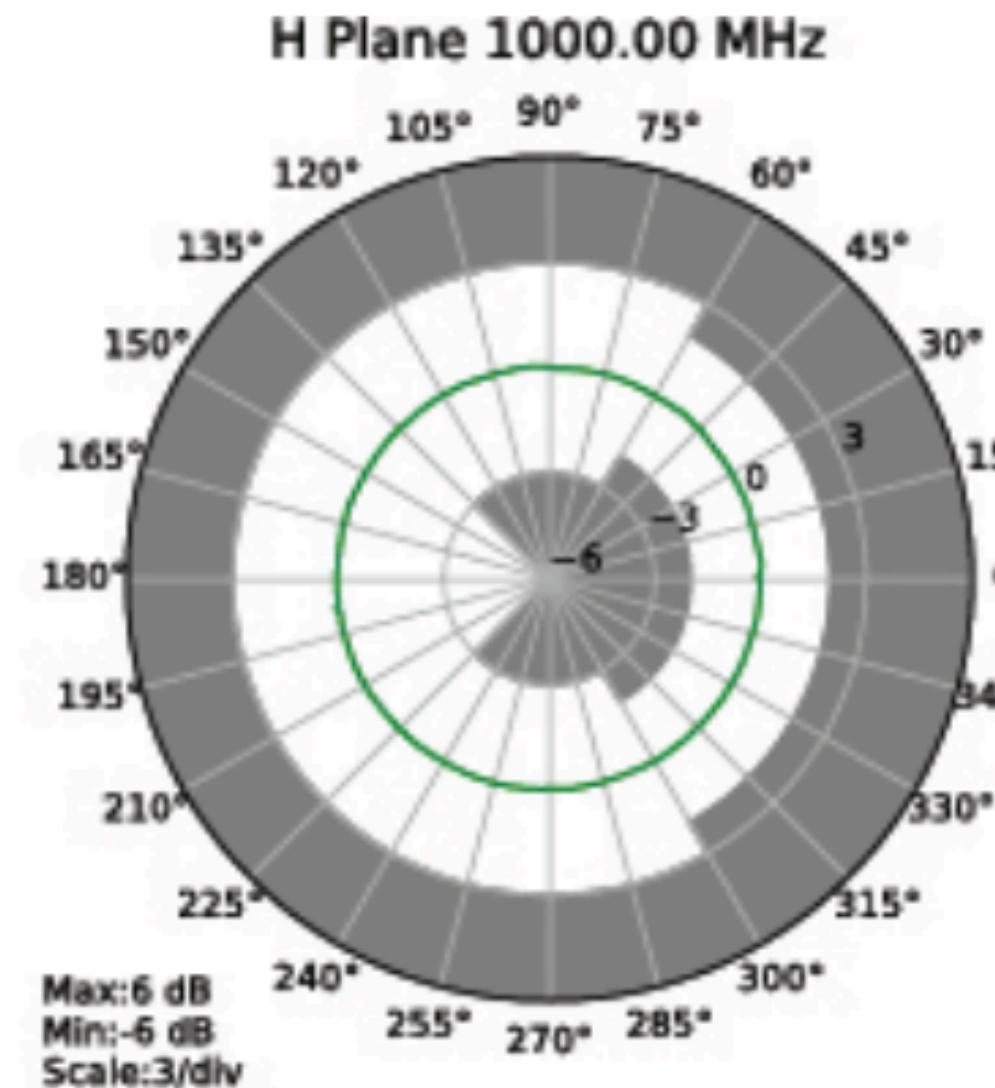
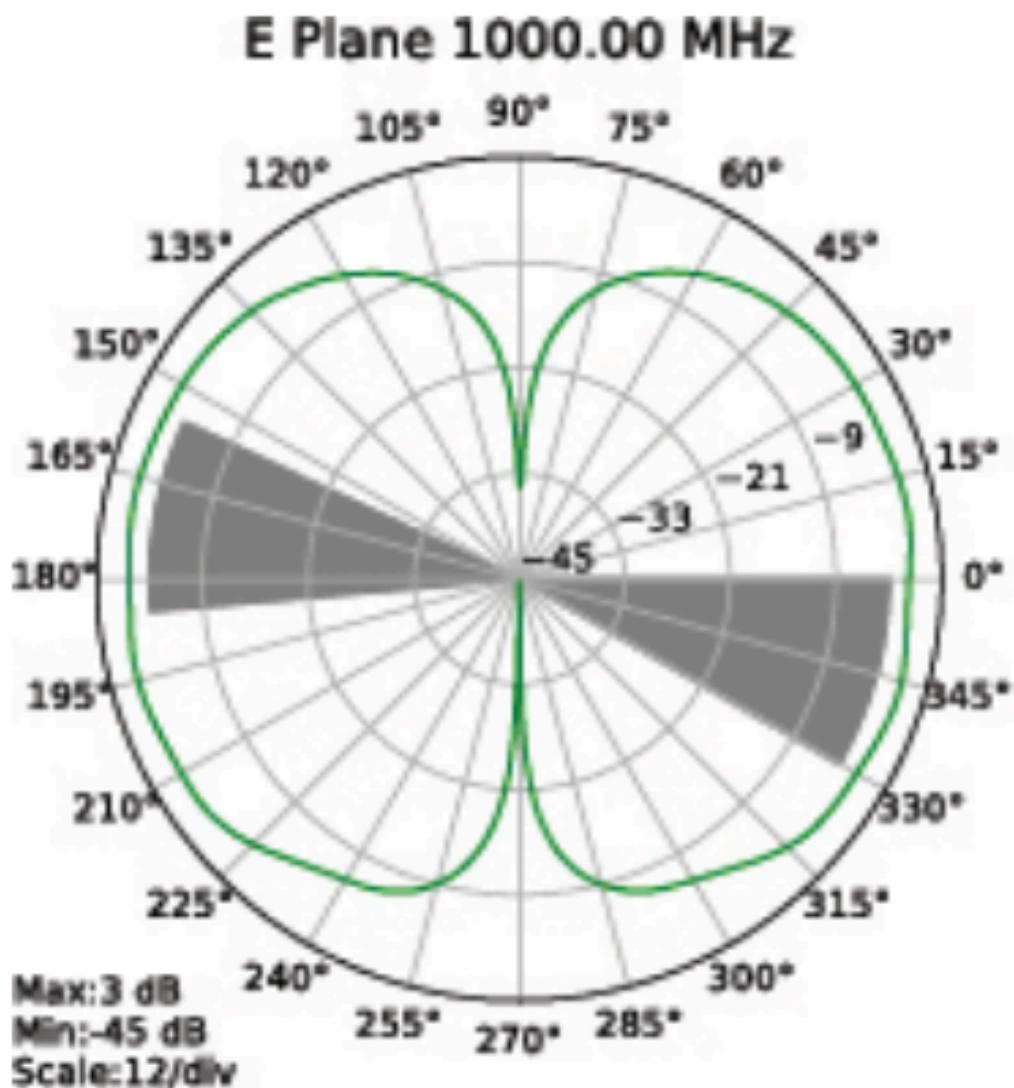


ESR EMI TEST RECEIVER ROHDE&SCHWARZ
y Generador de RF N5181A MXG Agilent

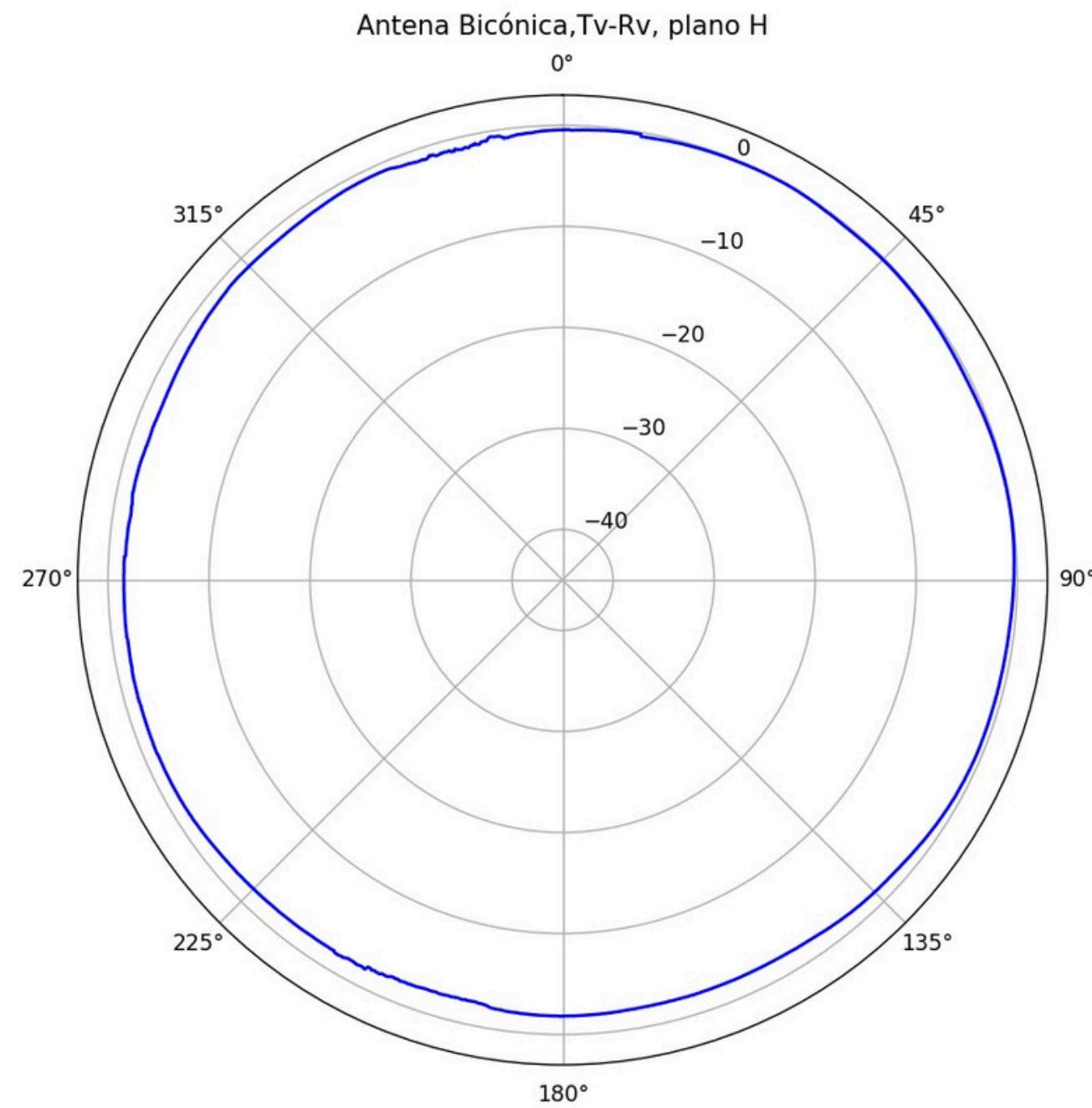
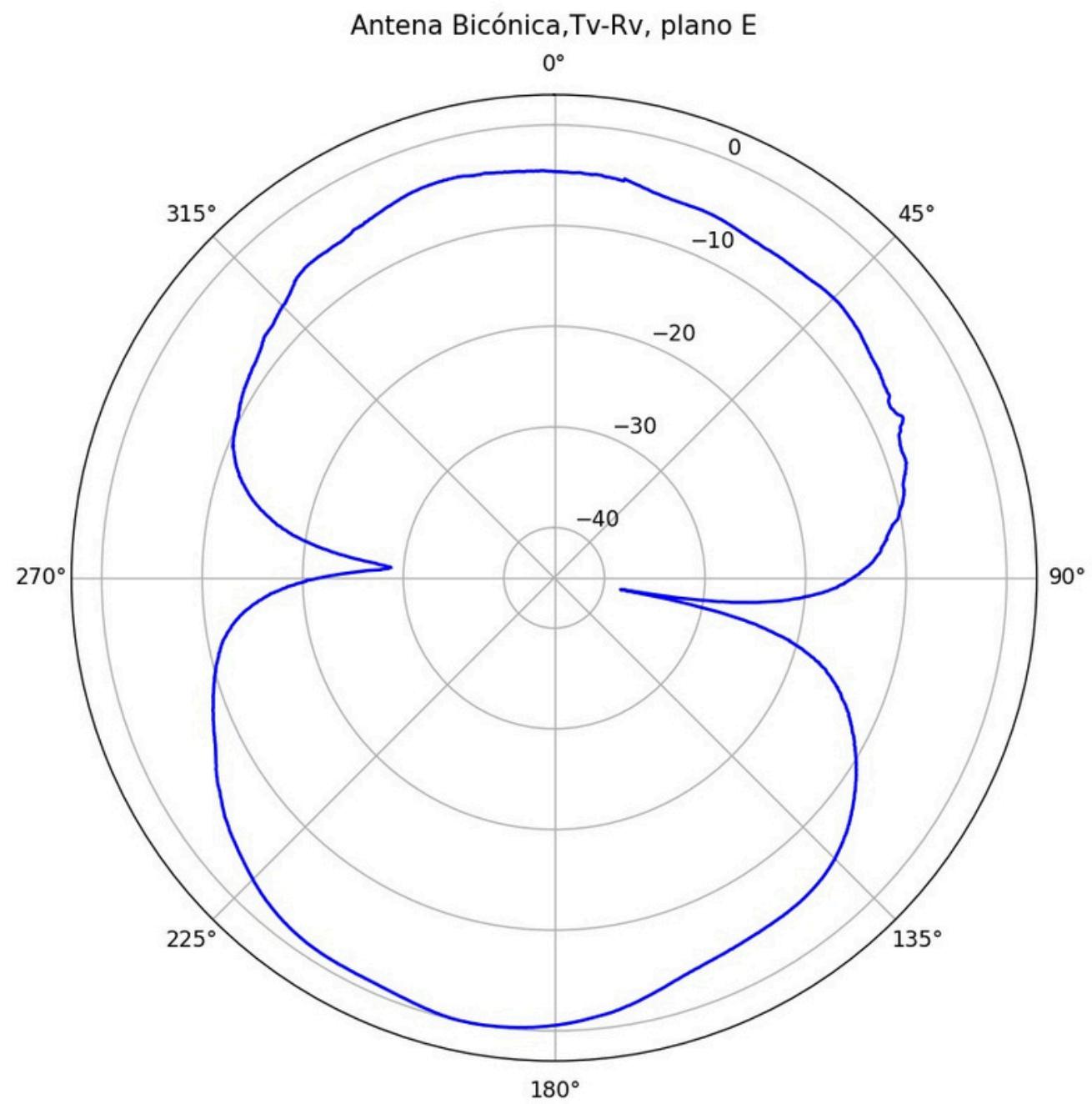
Mini-Bicon Antenna Model 3183B

Características principales

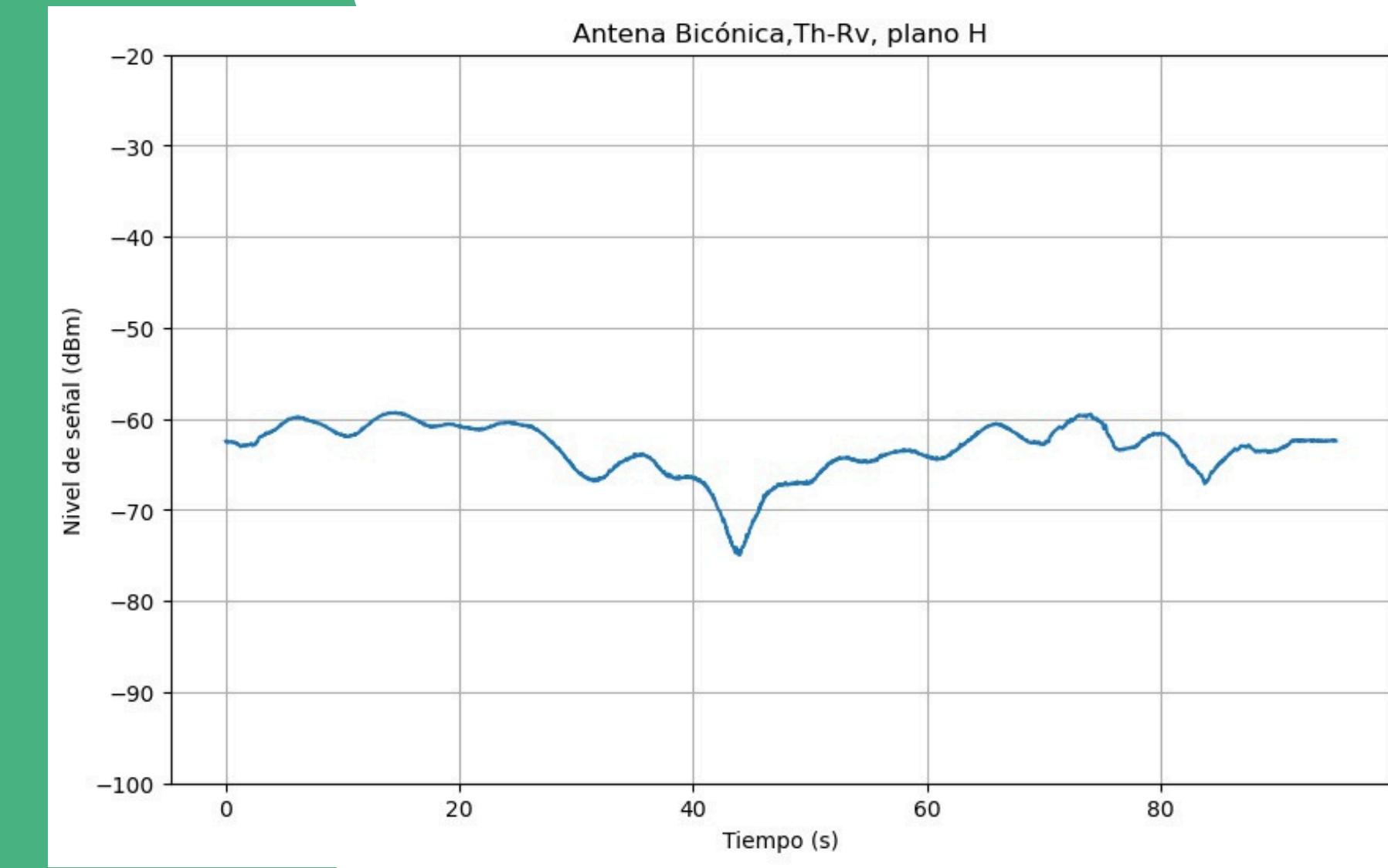
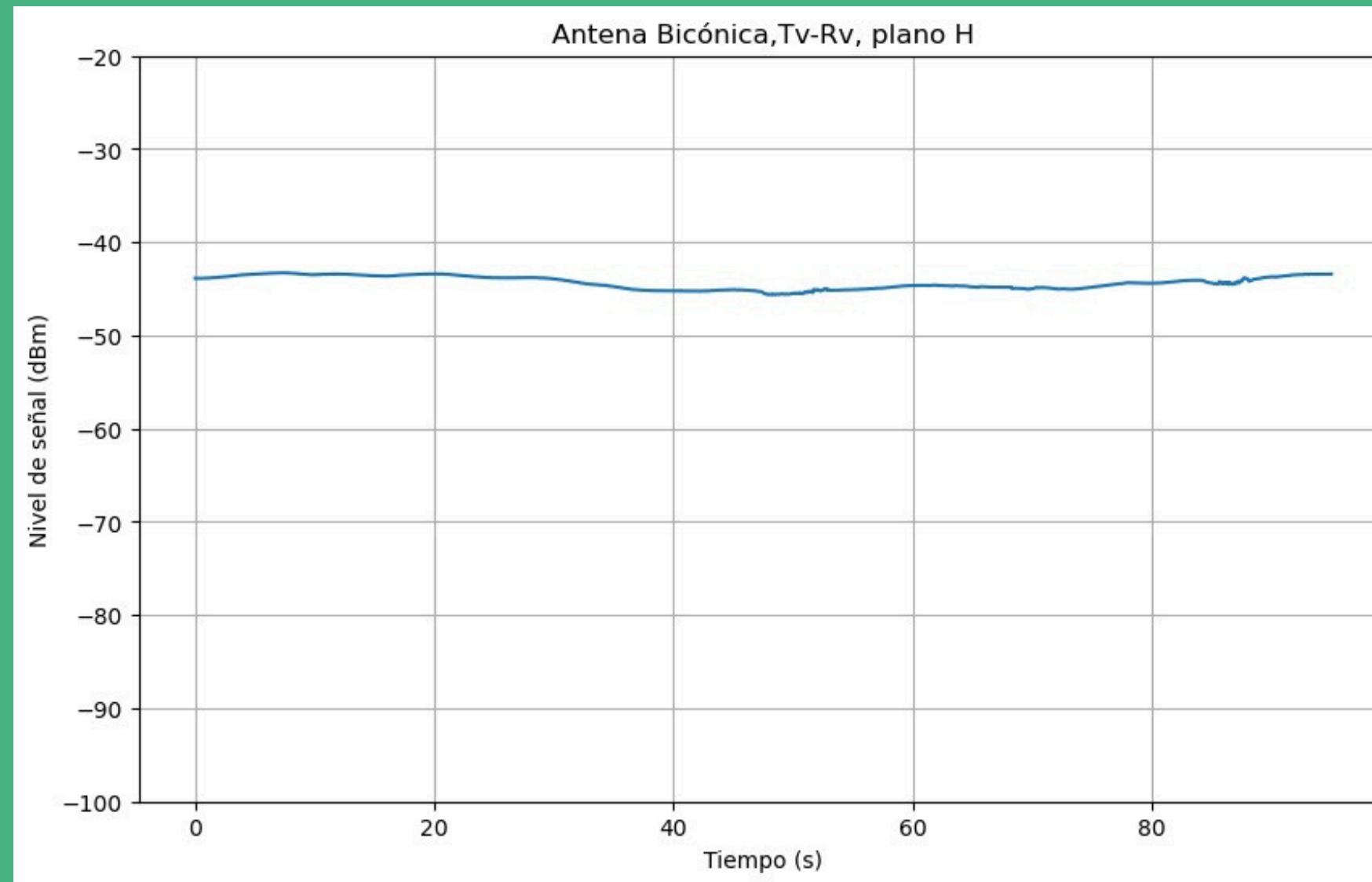
- Rango de frecuencia 1 GHz – 18 GHz
- VSWR Ratio (Promedio) 2:1
- Impedancia 50Ω
- Conector SMA hembra
- Omnidireccional en plano H



Patrones de radiación medidos

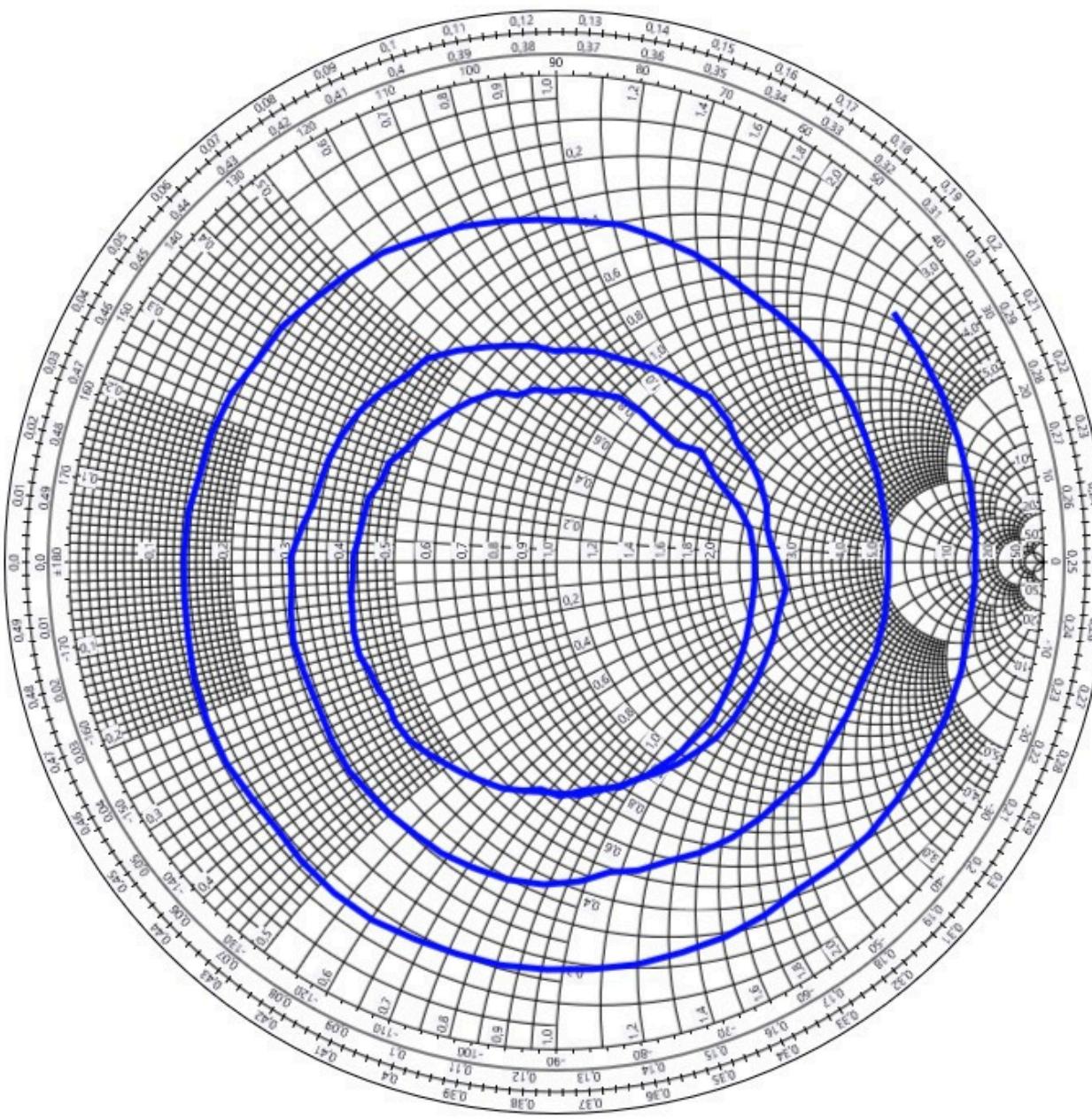


Polarización cruzada

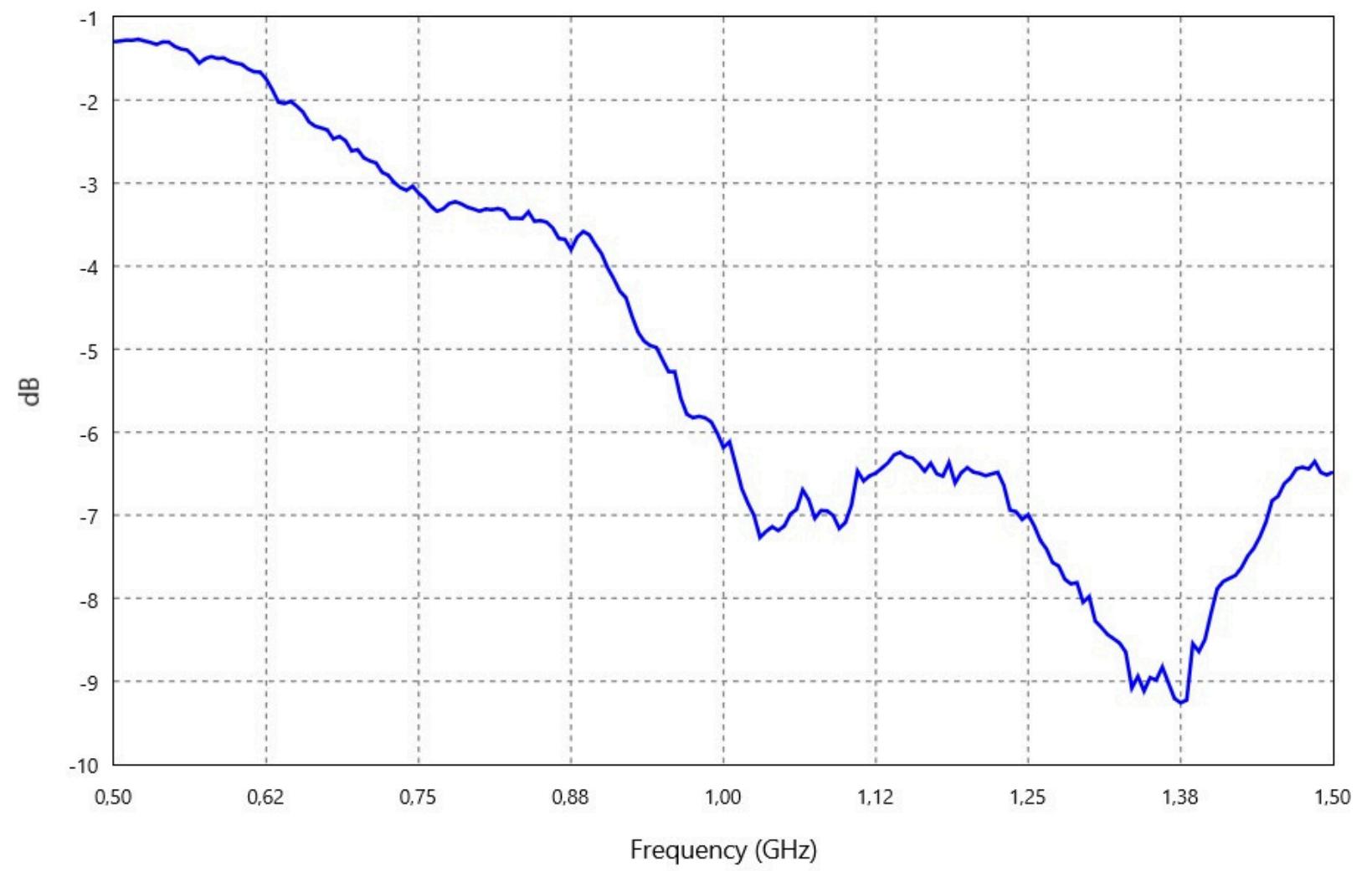


Impedancia (500MHz-1.5GHz)

s11 bic.s1p



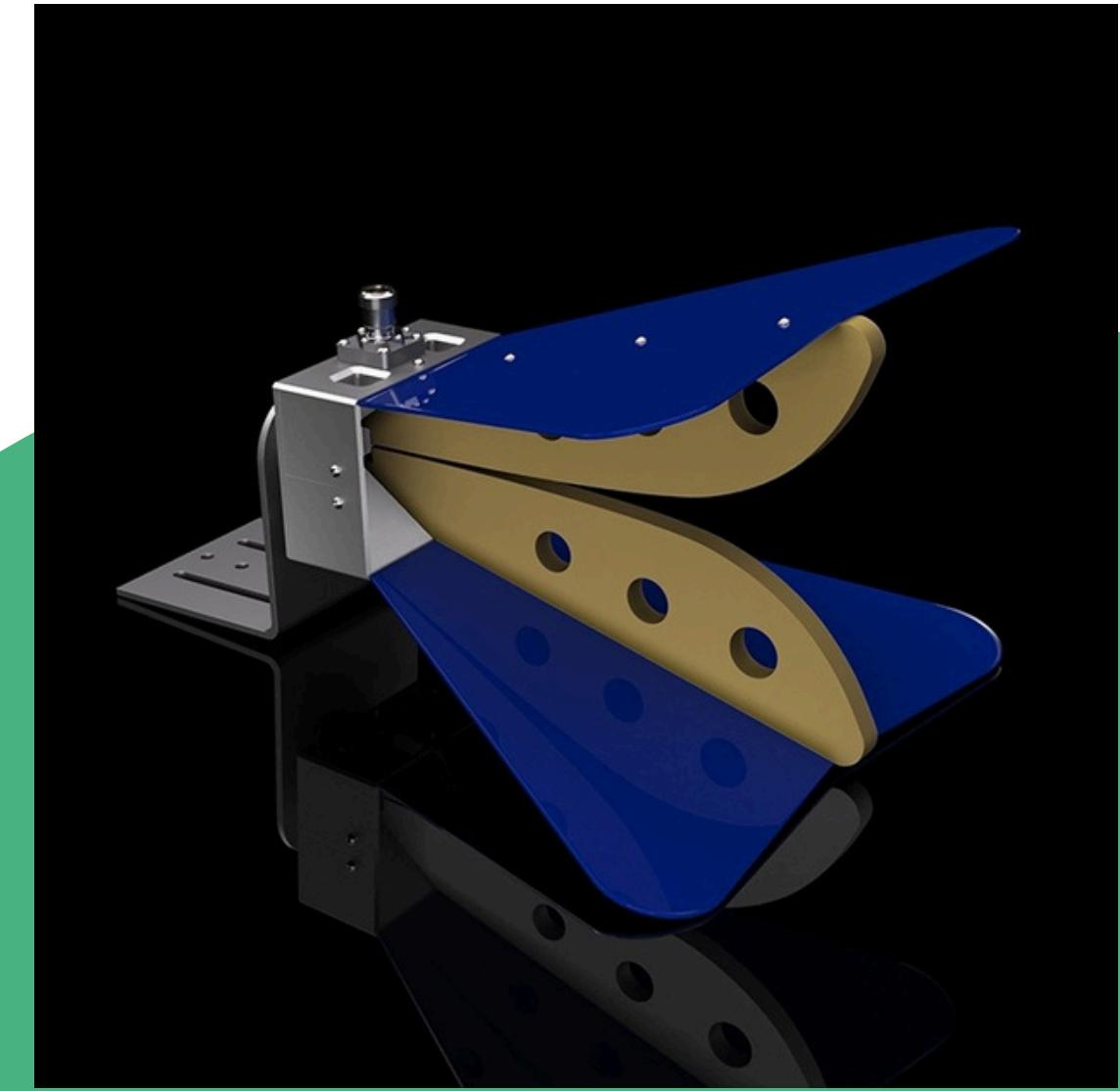
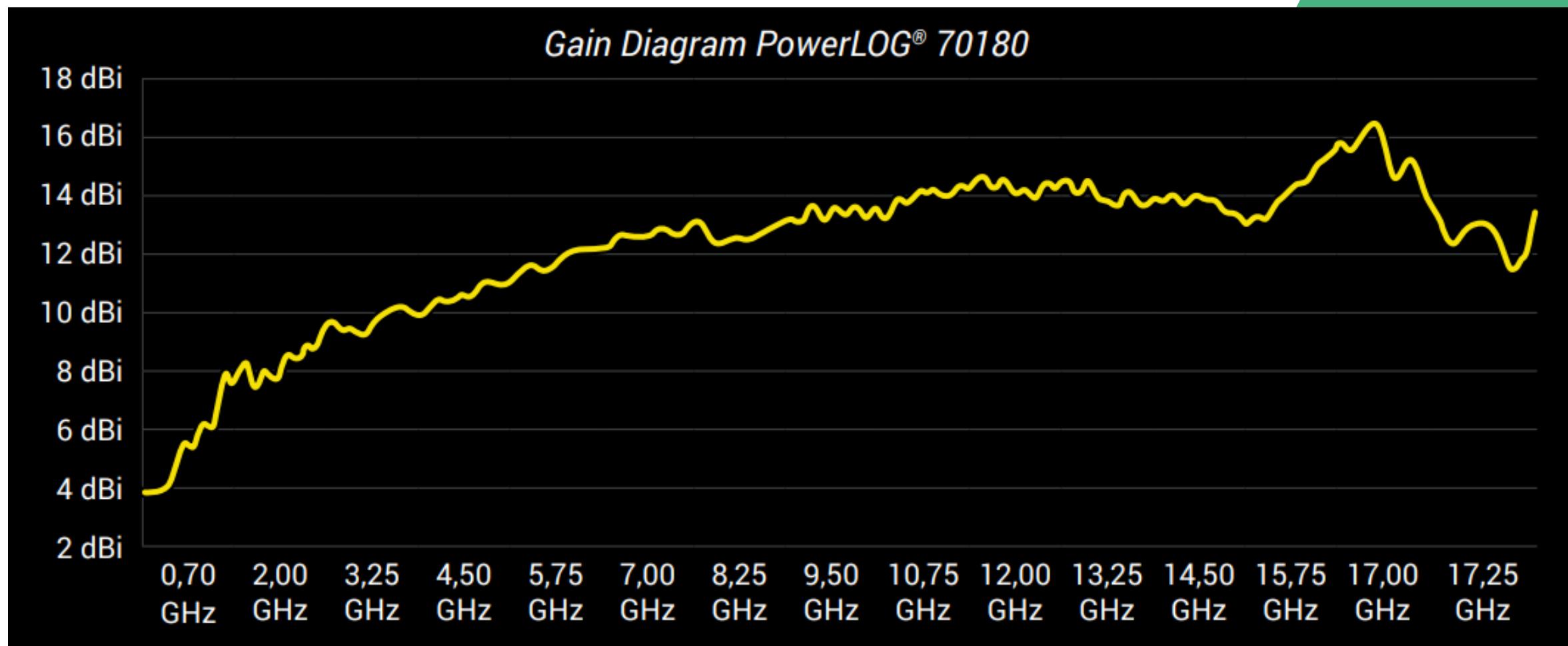
s11 bic.s1p



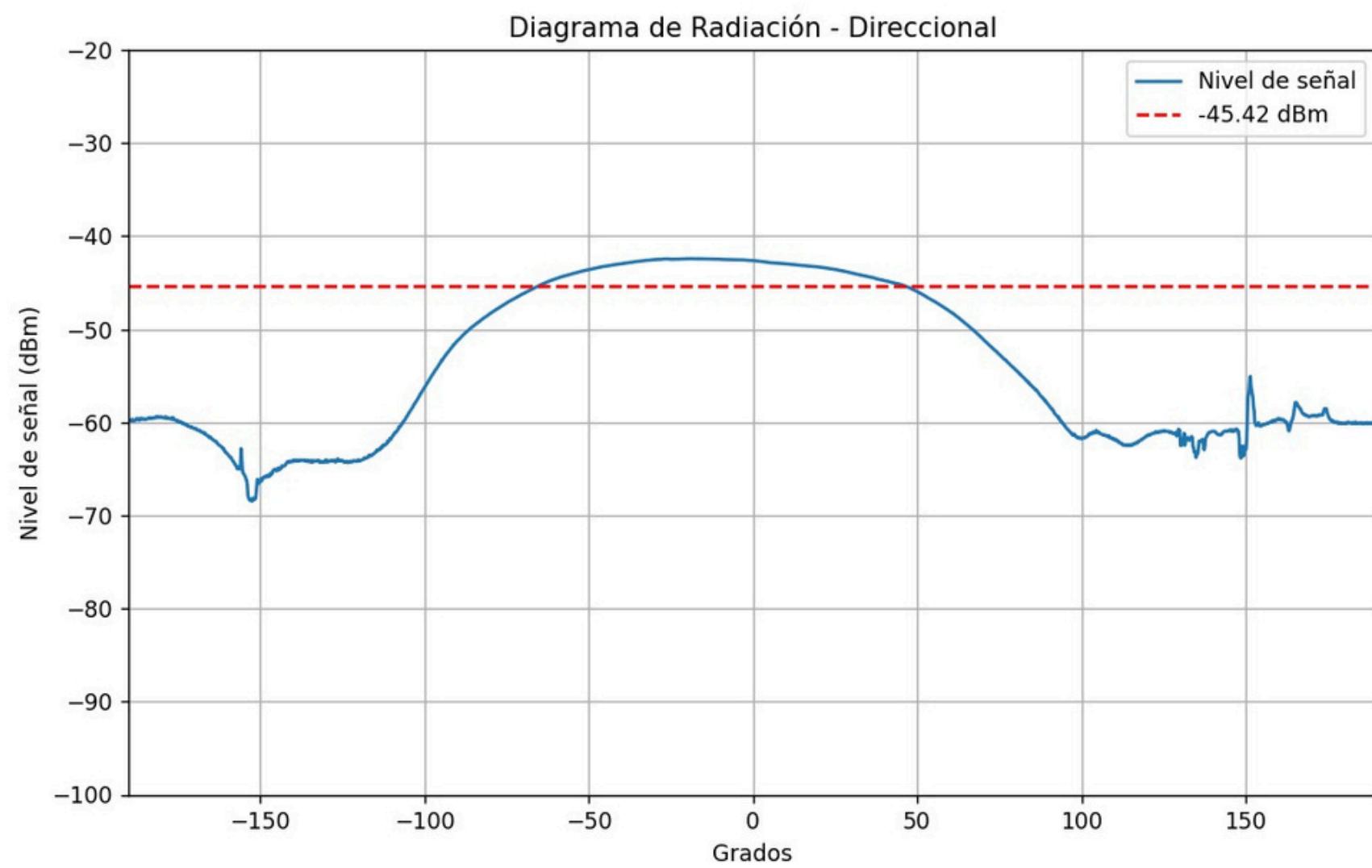
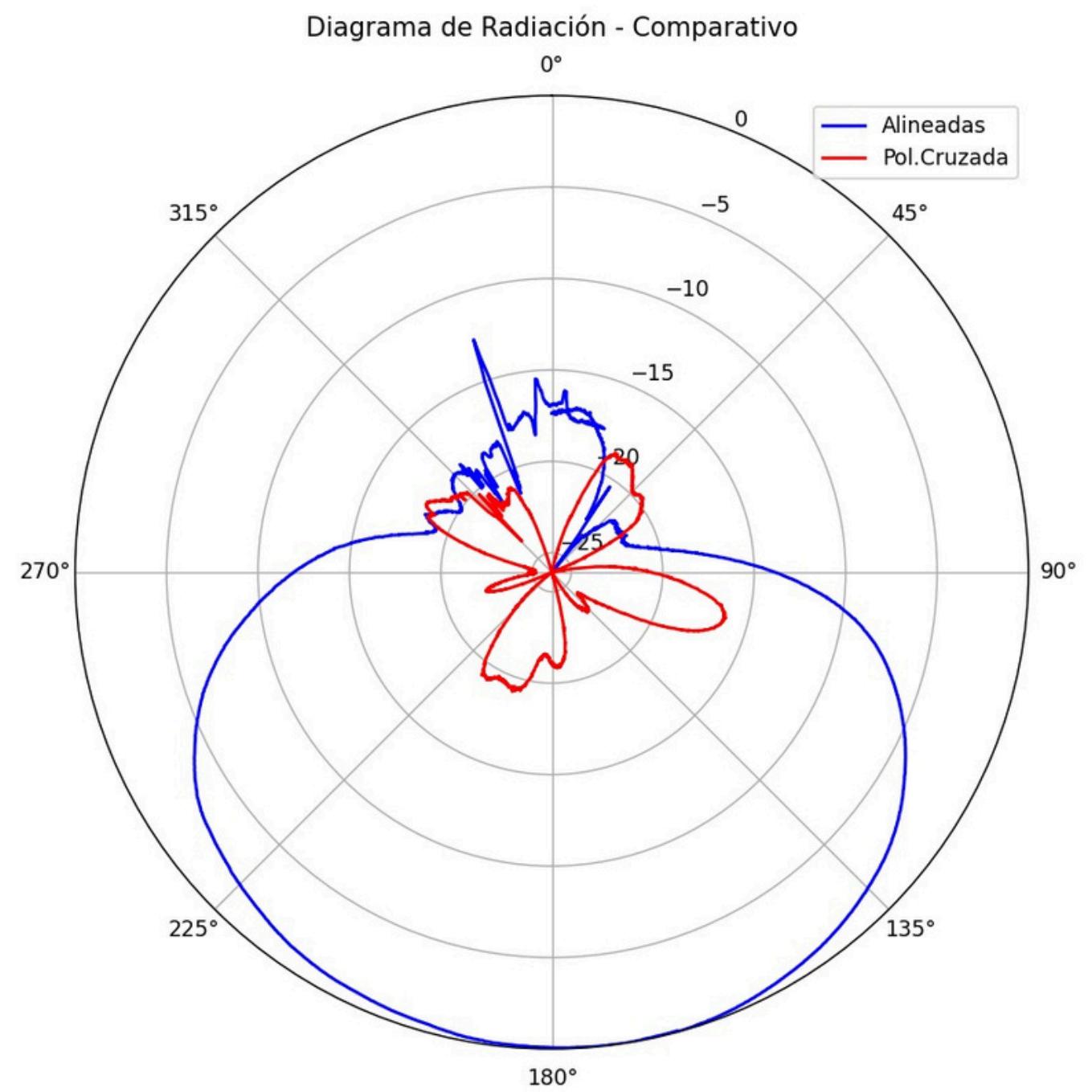
Frankonia PowerLog 70180

Características principales

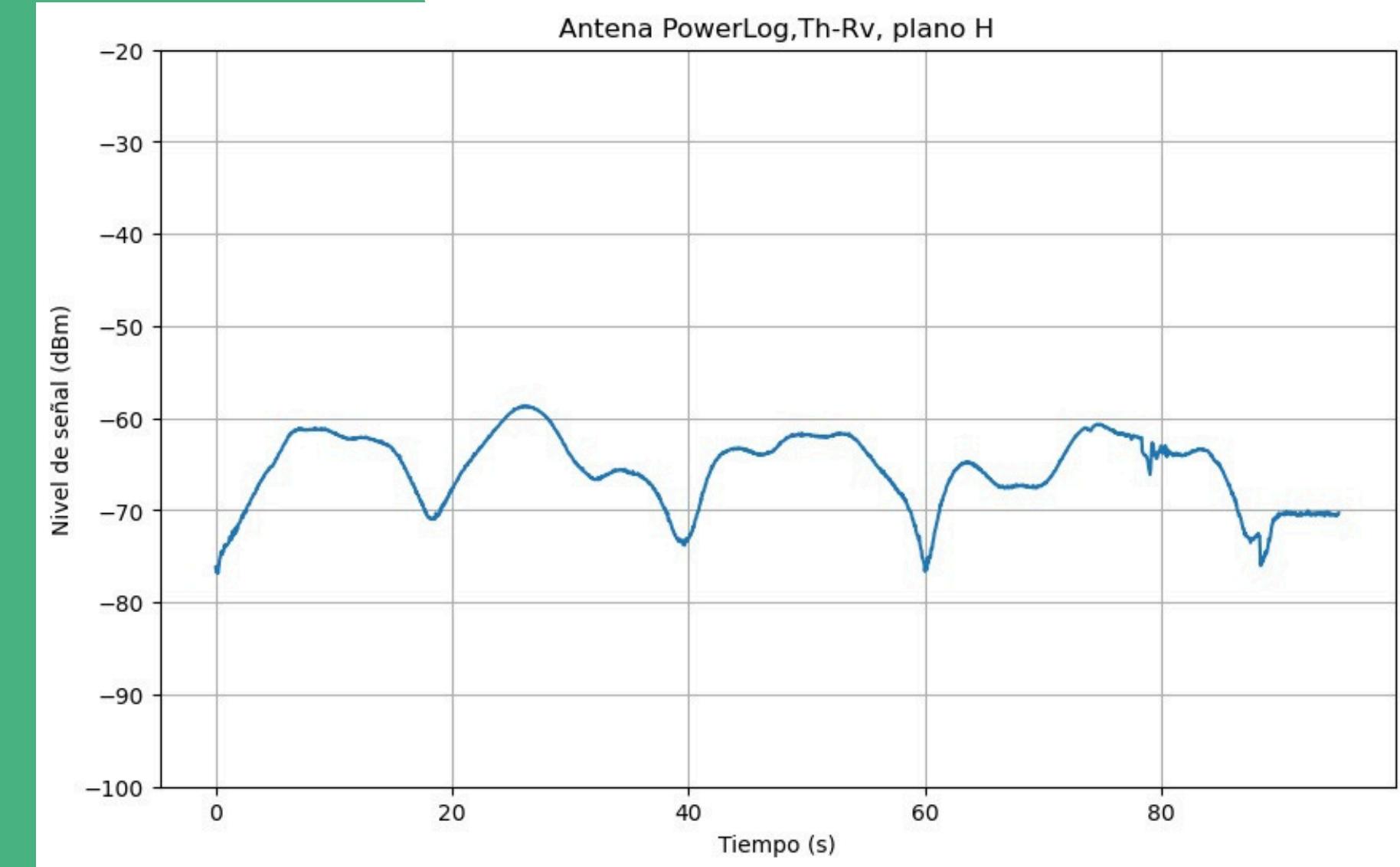
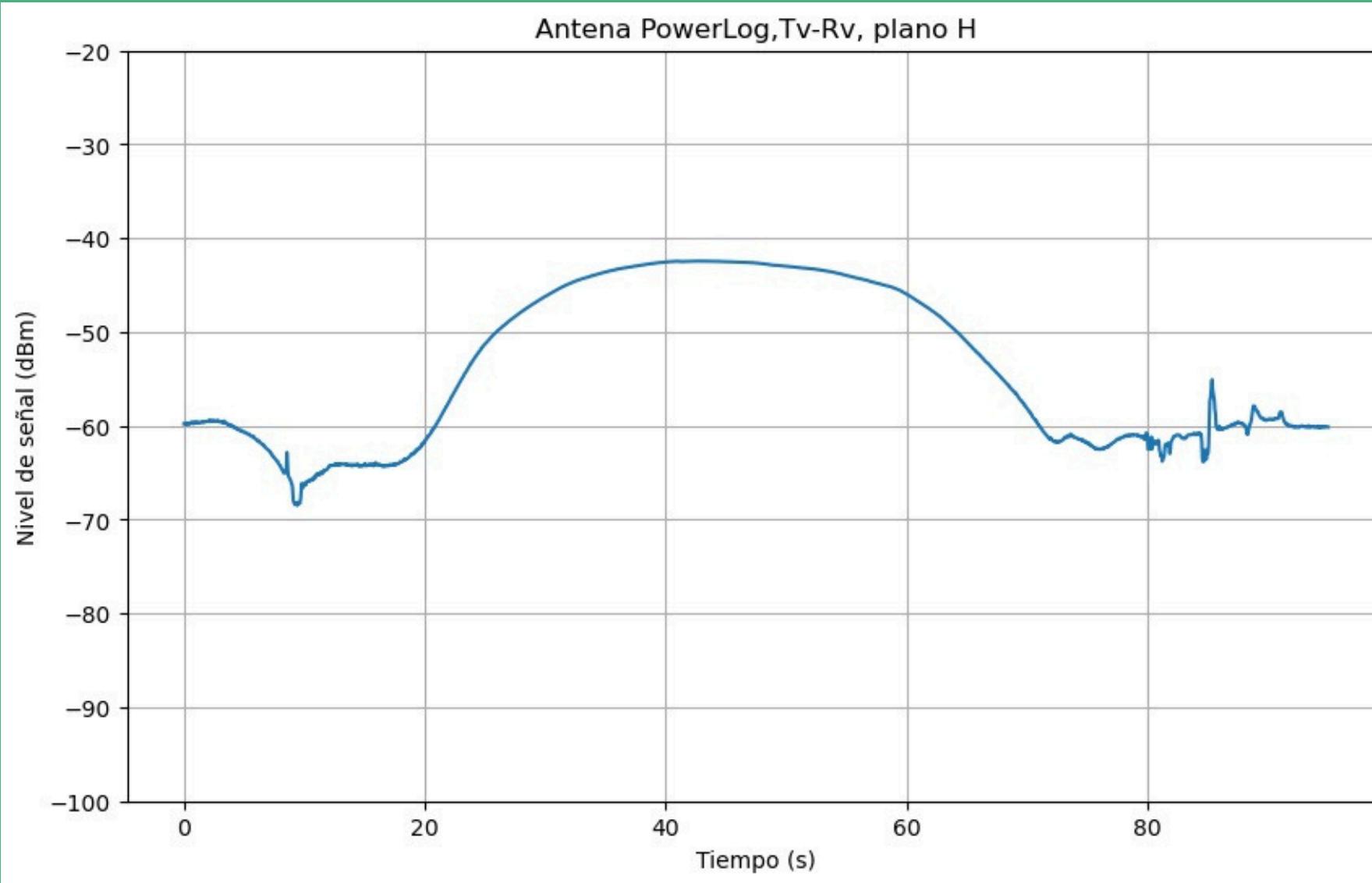
- Impedancia Nominal 50 Ohm
- VSWR (tipico) <3:1
- Diseño Dual-ridged horn
- Ganancia 2 – 17dBi
- Conector RF N (hembra)
- Rango de frecuencias 700MHz – 18GHz



Patrones de radiación medidos

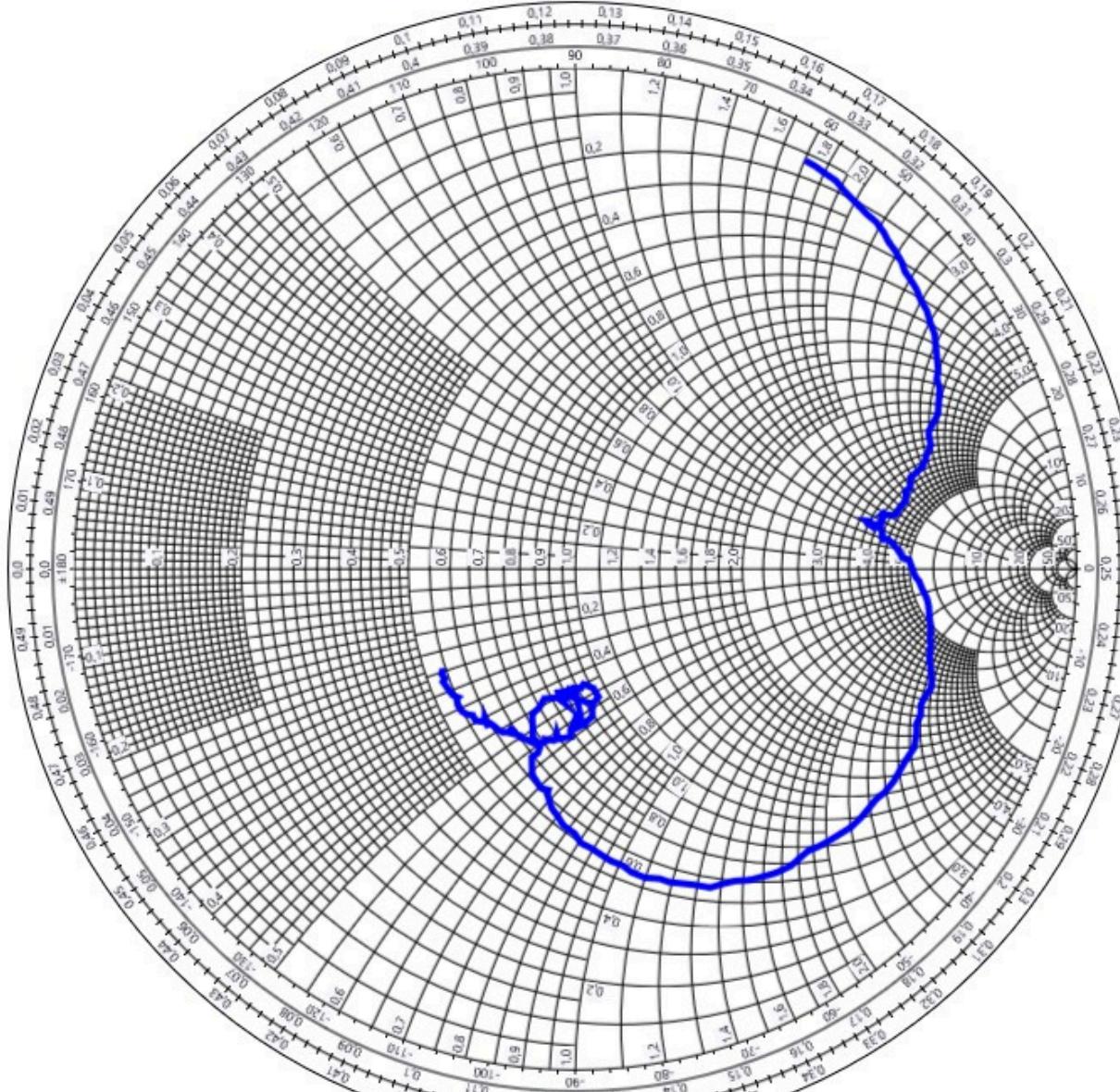


Polarización cruzada



Impedancia (500MHz-1.5GHz)

s11 power mag y faae.s1p



s11 power mag y faae.s1p

