

## Novelda Sinuous-Antenna

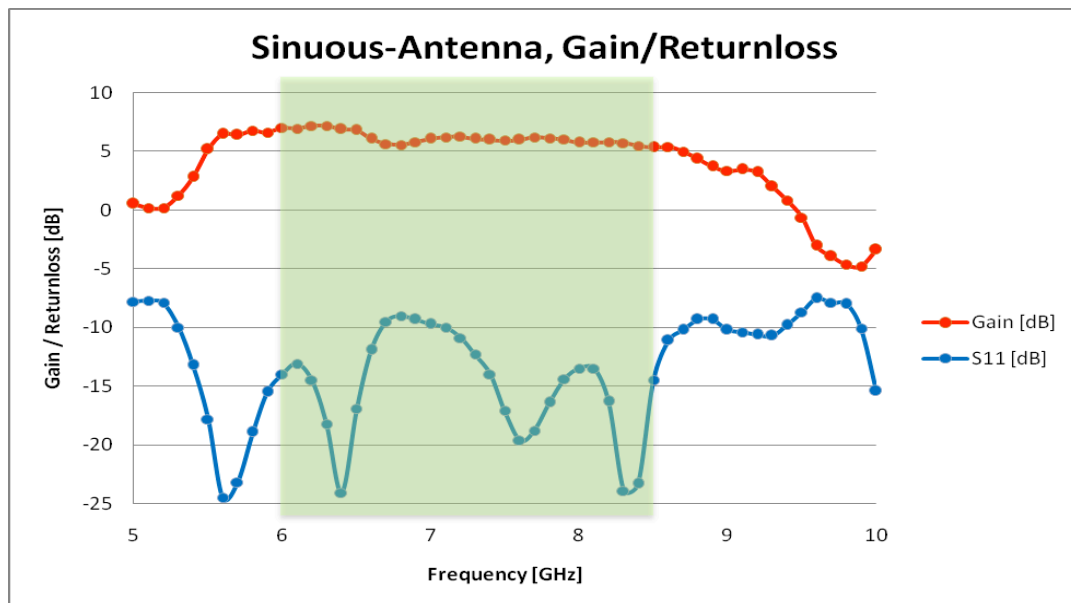
### Technical Data

Antenna Type:	2-Arm Sinuous
Frequency Range:	6.00 – 8.50 GHz
Opening Angle:	typ. 65° (Vertical) x 85° (Horizontal)
	Connector on right side
Gain:	typ. 6.0dBi
Polarisation:	Linear
Impedance:	50Ω, unbalanced
VSWR:	typ. < 2.1:1
Max. Power:	1W EIRP
Size:	45 x 45 x 14mm without connector
Connector:	SMA



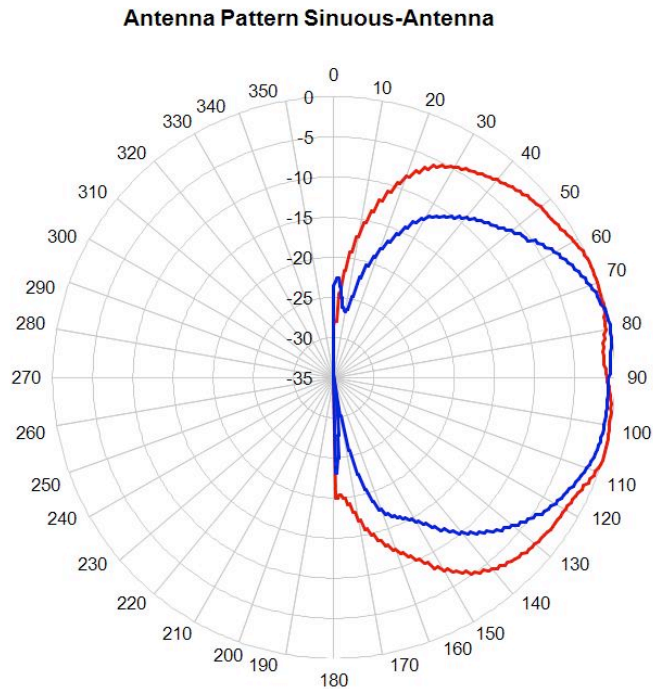
### Measurements

The following picture shows Antenna Gain in dBi (red) and Returnloss in dB (blue). The green marked area is the recommended operating frequency range for this antenna:



## Novelda Sinuous-Antenna

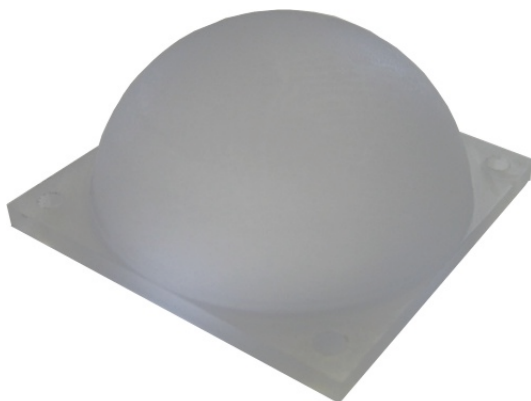
Radiation pattern was measured in an anechoic chamber at a frequency of 7.25GHz. The blue curve shows the vertical pattern, the red curve the horizontal one (SMA connector is located on the right side). Radiation pattern is only displayed from 0° to 180° (no backscattering).



## Dielectric Lens

A dielectric lens can be mounted on the antenna to narrow the radiation pattern. The 4 screws on the topside of the antenna have to be replaced by (longer) M3x16 ones. The plastic lens is mounted with 6mm spacers on top of the antenna. The lens increases the total gain to about 6.7dBi and the opening angle is reduced to typ. 40° (Vertical) x 35° (Horizontal).

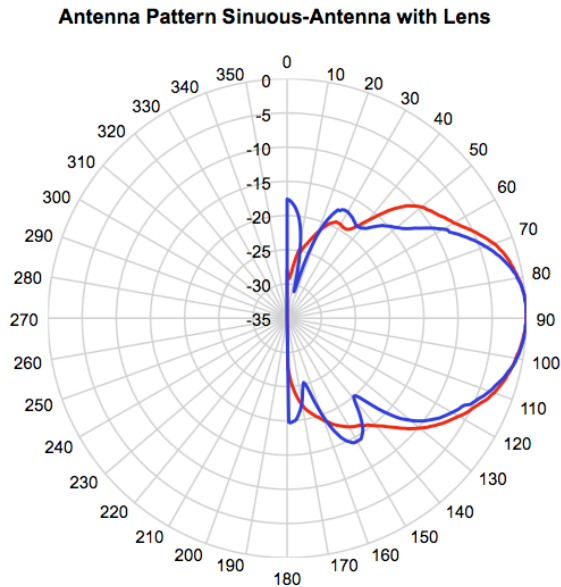
The following picture shows the plastic lens:



## Novelda Sinuous-Antenna

---

The radiation pattern was measured at a frequency of 7.25GHz. The blue curve shows the vertical pattern, the red curve the horizontal one (SMA connector is located on the right side). Radiation pattern is only displayed from 0° to 180° (no backscattering).



## History

Author: Léon Audergon, RFbeam Microwave GmbH, CH-9008 St. Gallen  
Date: June 19<sup>th</sup>, 2010  
Revision: 1.1  
Changes: Dielectric Lens added