

FRAUNHOFER INSTITUTE FOR INTEGRATED CIRCUITS IIS

DATASHEET

SIX-ELEMENT GNSS ANTENNA ARRAY

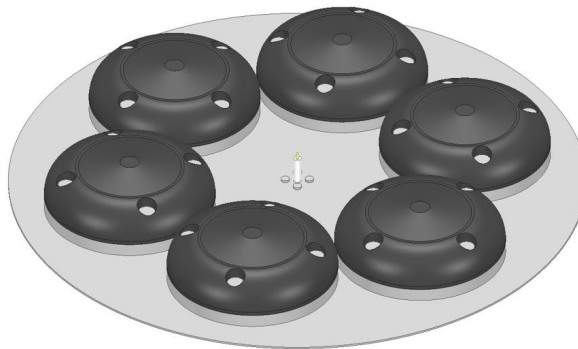


Figure 1.
Prototype

Active Six-Element Antenna Array for Robust GNSS Applications

The antenna array is composed of six active antenna elements and can be used for digital beamforming and null-steering in the entire GNSS frequency range. An integrated calibration antenna enables to compensate any magnitude and phase drift between the channels. The design is customizable and can be tailored to meet specific user requirements.

Fraunhofer Institute for Integrated Circuits IIS
Nordostpark 84
90411 Nuremberg, Germany

Contact
Dr. Alexander Popugaev
Business Development Manager for GNSS Antennas
alexander.popugaev@iis.fraunhofer.de

www.iis.fraunhofer.de

Technical Data

Parameter	Value
Passband	1160–1300 MHz and 1525–1610 MHz
Polarization	RHCP
Element spacing	90 mm
Passive zenith gain (single element)	In array: +1 to +4 dBic
	Stand-alone: +2.5 to +4.5 dBic
Axial ratio (single element, zenith)	In array: <5.5 dB
	Stand-alone: <3 dB
LNA gain	30 dB
Power supply	3.3–24 VDC, <50 mA per antenna element
Connector type RF outputs	TNC female
Impedance	50 Ohms
VSWR output connector	<2:1
Connector type calibration signal input	SMA
Diameter	300 mm
Height (w/o TNC)	33 mm

Table 1.
Specifications

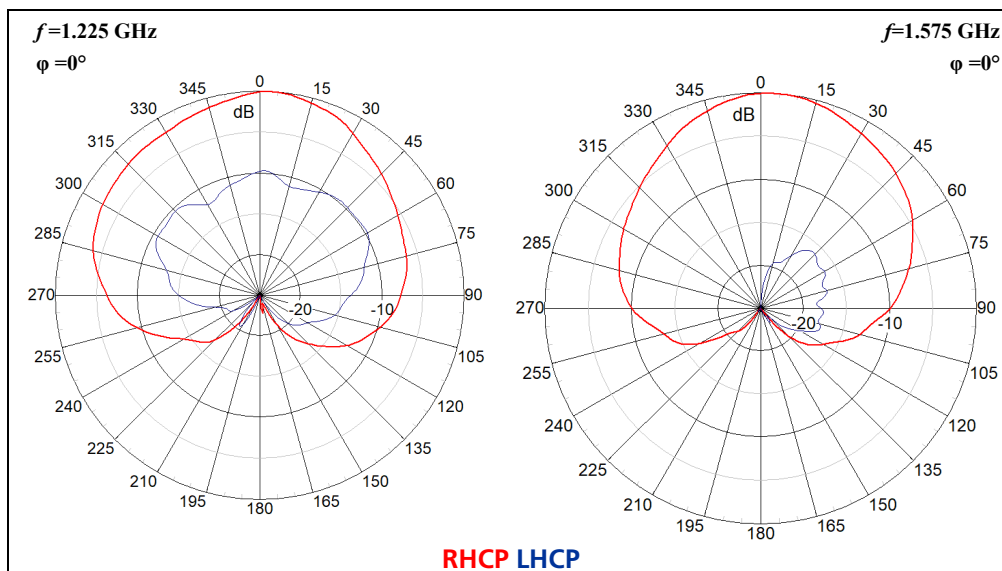


Figure 2.
Measured Radiation Patterns
(normalized):
Element 1 (90;0;0)