

Mobilfunkstoßfängerantenne *Cellular Bumper Antenna*

TE Wireless: **920-654-001**
VW/Audi: **4M0.035.507.A**

5G weltweit
5G worldwide

- Montage auf elektrischem Gegengewicht
- metal mount

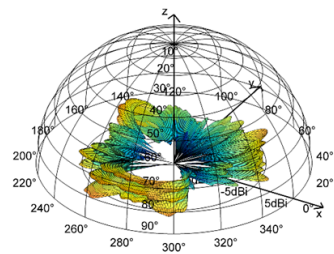


Änderungen vorbehalten / *Subject to alterations*

Technische Daten / *Technical Data*

Impedanz / <i>Impedance</i>	50 Ohm
Anschluss / <i>Connector</i>	FAKRA Kodierung A / <i>code A</i>
Abmessungen / <i>Dimensions</i>	62x46x85 mm ³
Abmessungen ohne Gehäuse (nur Leiterplatte) / <i>Dimensions without casing (only PCB)</i>	1,6x29,1x79,9 mm ³
Hersteller / <i>Manufacturer</i>	Hirschmann Car Communication GmbH Stuttgarter Strasse 45 - 51 D - 72654 Neckartenzlingen
Frequenzbänder / <i>Frequency Bands</i>	617 MHz – 698 MHz 698 MHz – 960 MHz 1427,9 MHz – 1510,9 MHz 1710 MHz – 1990 MHz 1990 MHz – 2170 MHz 2300 MHz – 2690 MHz 3300 MHz – 4200 MHz 4400 MHz – 5000 MHz

Berechnungsvorschrift integraler Antennengewinn / Calculation formula of partial antenna gain



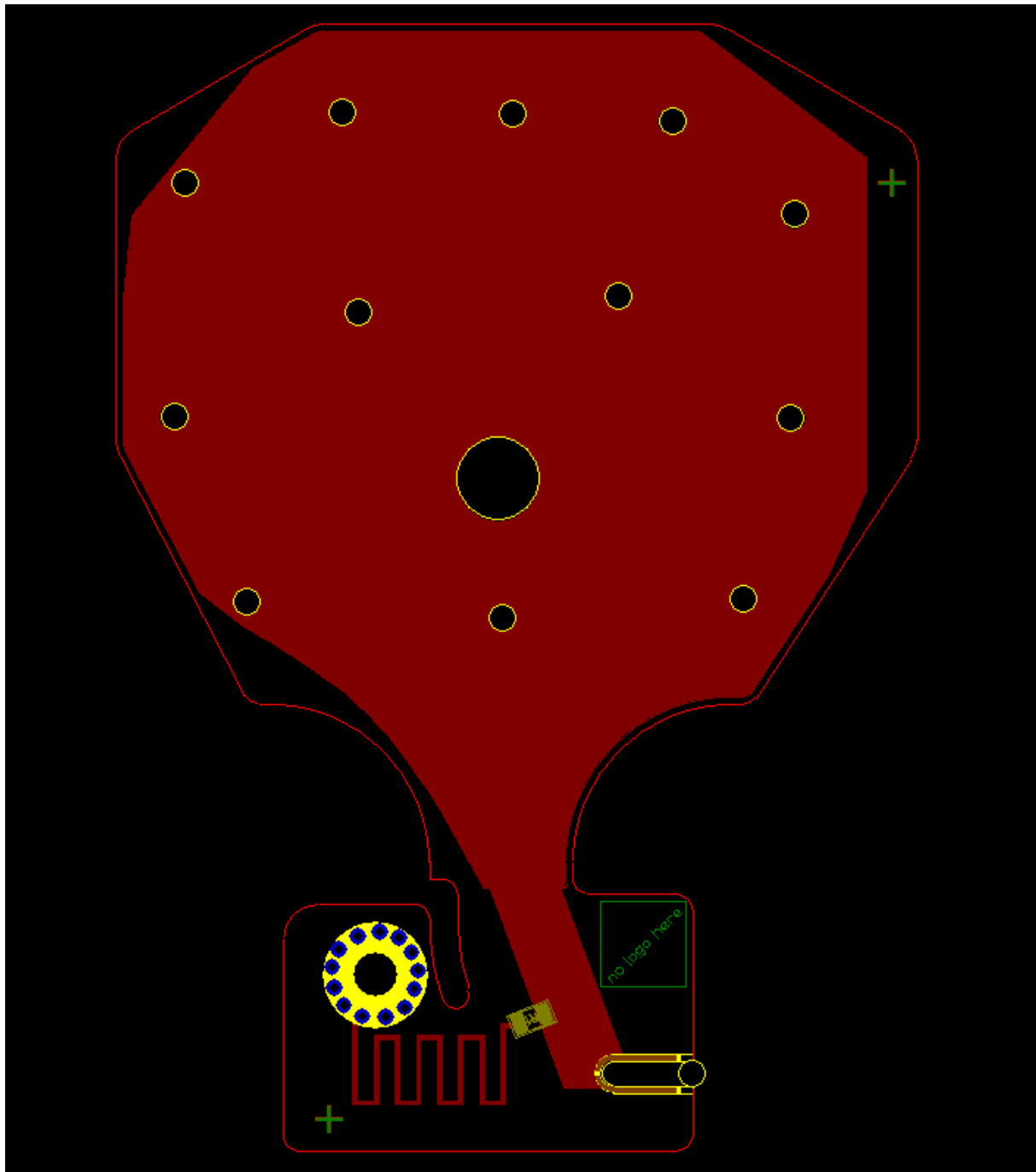
$$\Rightarrow \text{p. ave. gain} = 10 \log \left(\frac{\sum_{iPhi=0^\circ}^{360^\circ} \sum_{iTheta=70^\circ}^{90^\circ} G(iTheta, iPhi) \sin(iTheta)}{nPhi \sum_{iTheta=70^\circ}^{90^\circ} \sin(iTheta)} \right) = x \text{ dBi}$$

$nPhi \Rightarrow$ number of elevation cuts

$G \Rightarrow$ total gain ($G_{Theta} + G_{Phi}$)

p. ave. gain $\Rightarrow$ partial average gain

Antennenlayout / Antenna Layout

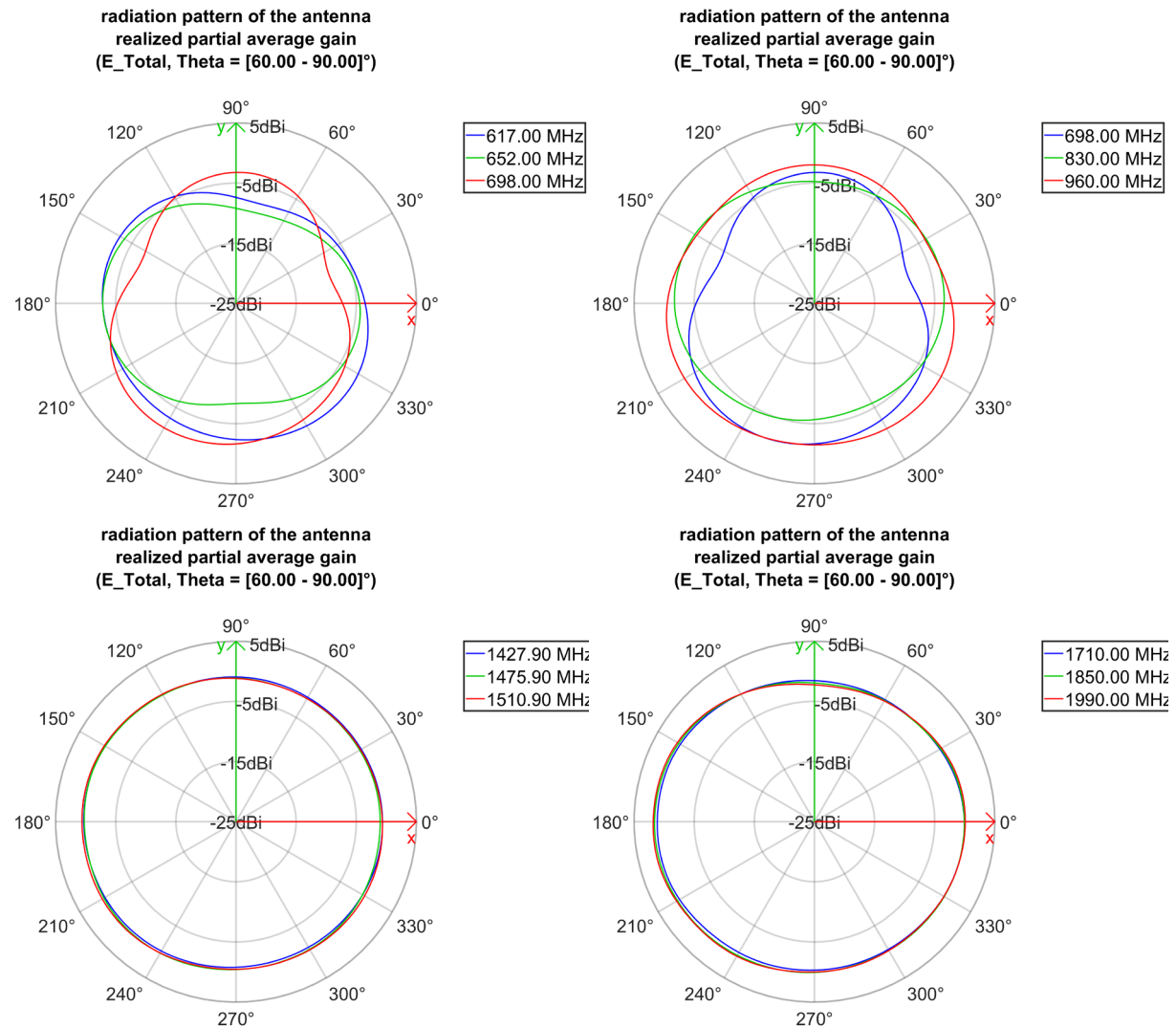


Antennengewinn / Antenna Gain

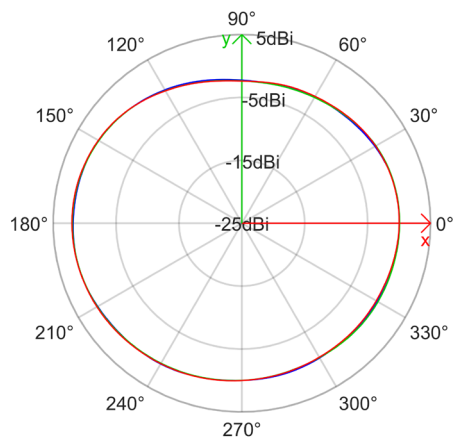
Mounted on rohacell cone, 1,55m RTK 031 coaxial cable included in measurement

frequency band in MHz			partial average gain of freq. band in dBi (Theta=[60-90]°)		max. gain in partial area (Theta=[60-90]°)	absolut maximum gain (Theta=[0-180]°)
begin		end	average	maximum	in freq. band in dBi	in freq. band in dBi
617	-	698	-4,6	-3,4	0,2	0,3
698	-	960	-2,8	-1,2	1,2	1,2
1427,9	-	1510,9	-0,5	-0,3	1,2	1,2
1710	-	1990	0,0	0,3	2,1	2,1
1990	-	2170	0,2	0,3	2,3	2,3
2300	-	2690	-0,1	0,2	2,5	2,5
3300	-	4200	-2,3	-2,0	2,2	2,5
4400	-	4990	-2,6	-2,4	2,1	3,3

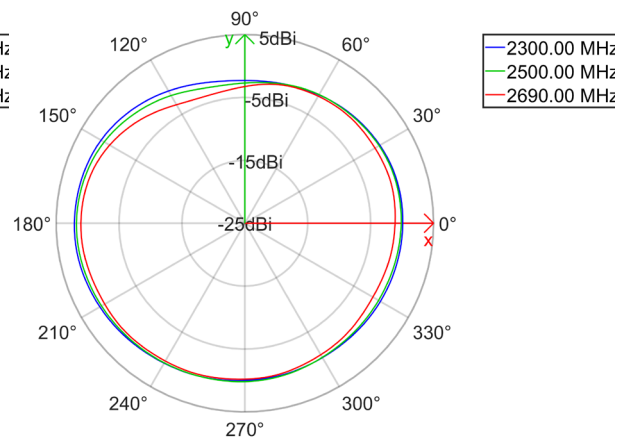
Horizontale Antennendiagramme / Horizontal Radiation Patterns Mounted on rohacell cone, 1,55m RTK 031 coaxial cable included in measurement



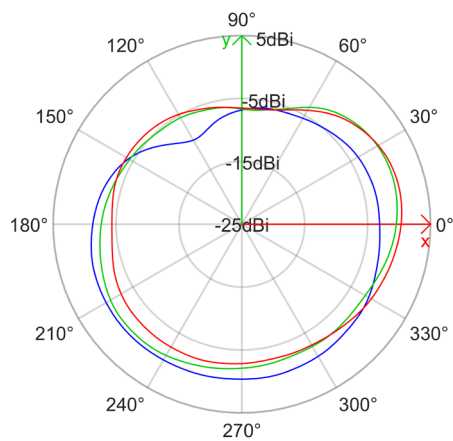
radiation pattern of the antenna
realized partial average gain
(E_Total, Theta = [60.00 - 90.00]°)



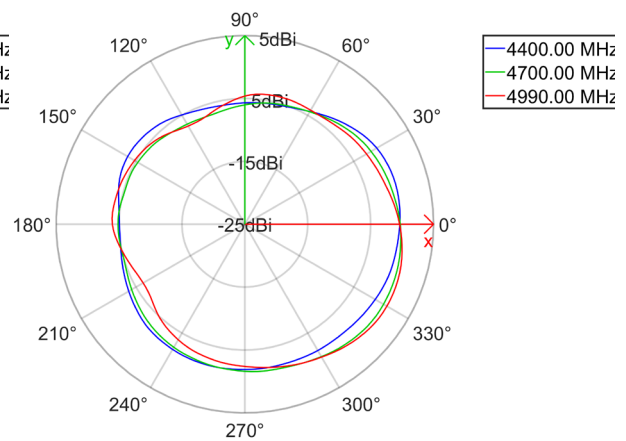
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(E_Total, Theta = [60.00 - 90.00]°)



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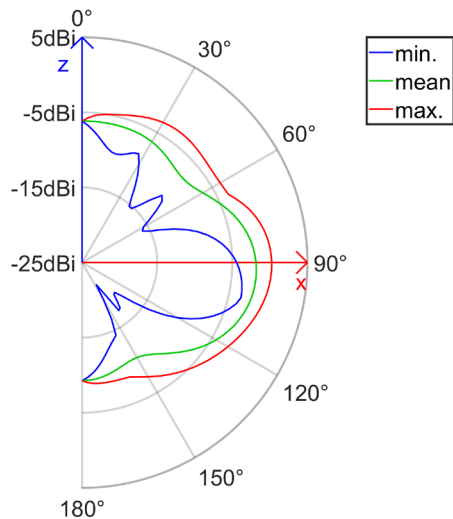
radiation pattern of the antenna
realized partial average gain
(E_Total, Theta = [60.00 - 90.00]°)



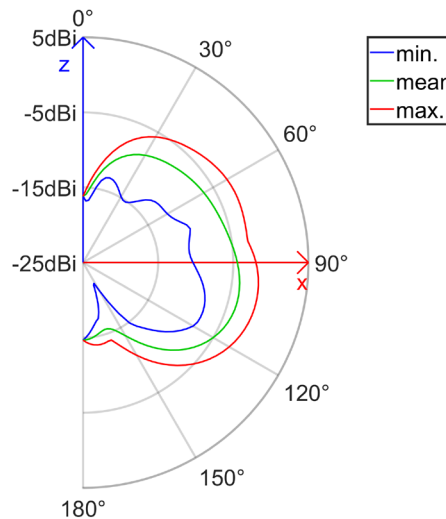
Vertikale Antennendiagramme / Vertical Radiation Patterns

Mounted on rohacell cone, 1,55m RTK 031 coaxial cable included in measurement

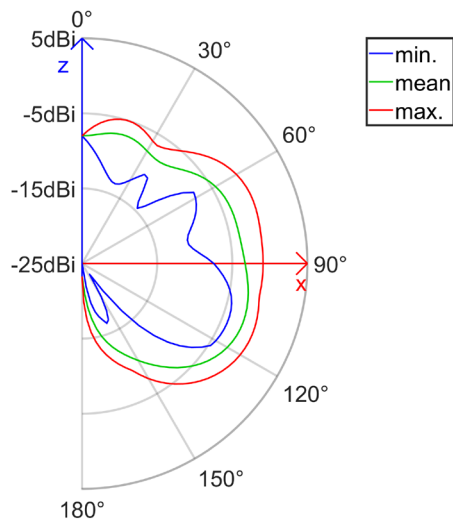
radiation pattern of the antenna (elevation cut)
realized gain (E_Total, Freq = 617.00 MHz)



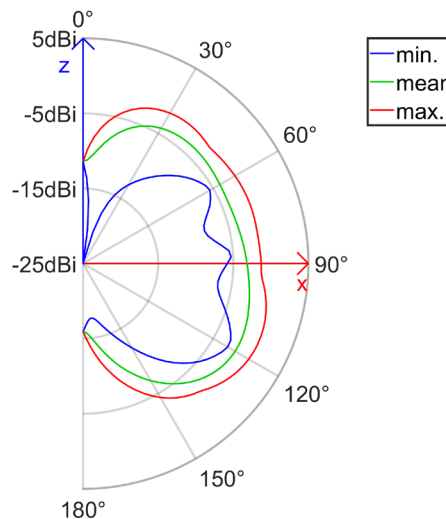
radiation pattern of the antenna (elevation cut)
realized gain (E_Total, Freq = 652.00 MHz)



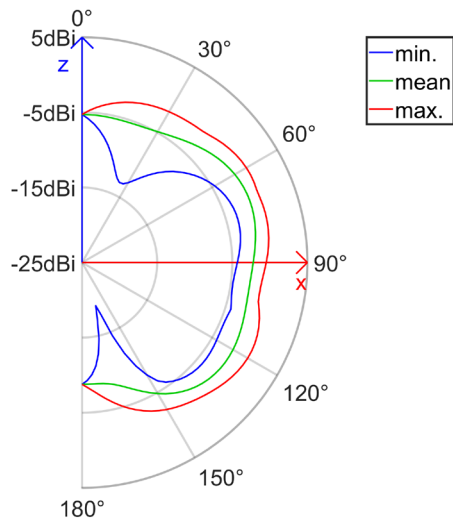
radiation pattern of the antenna (elevation cut)
realized gain (E_Total, Freq = 698.00 MHz)



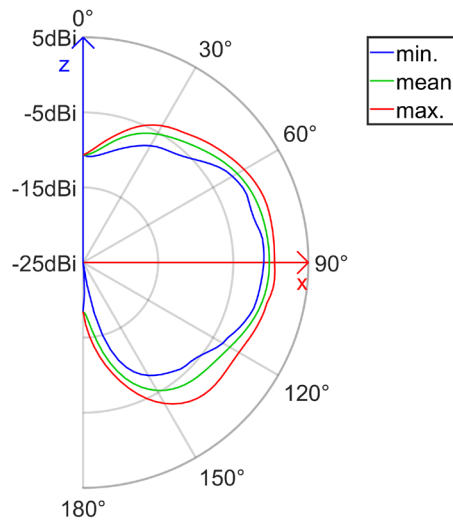
radiation pattern of the antenna (elevation cut)
realized gain (E_Total, Freq = 830.00 MHz)



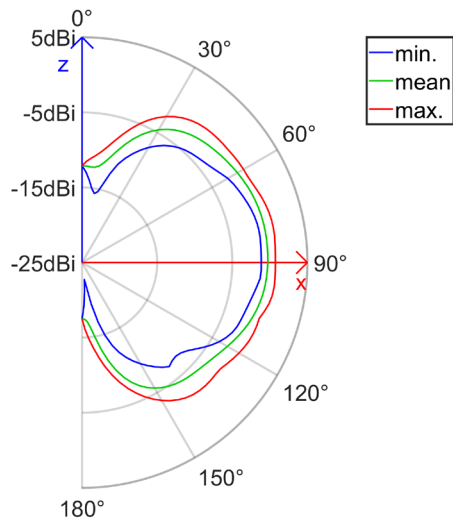
radiation pattern of the antenna (elevation cut)
realized gain (E_Total, Freq = 960.00 MHz)



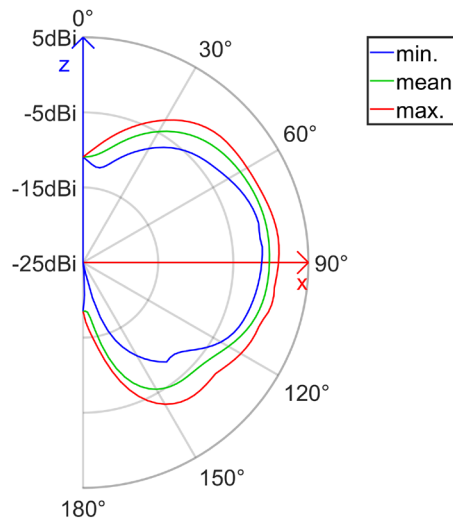
radiation pattern of the antenna (elevation cut)
realized gain (E_Total, Freq = 1427.90 MHz)



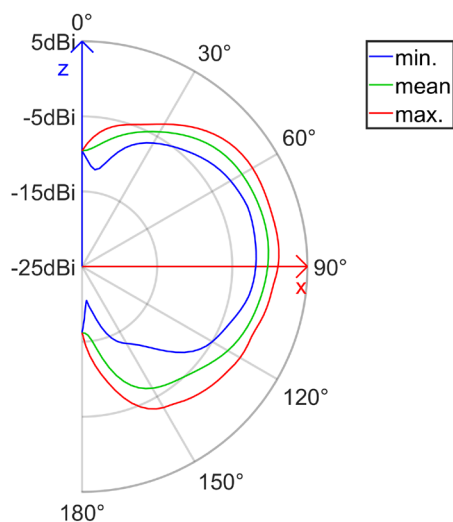
radiation pattern of the antenna (elevation cut)
realized gain (E_Total, Freq = 1475.90 MHz)



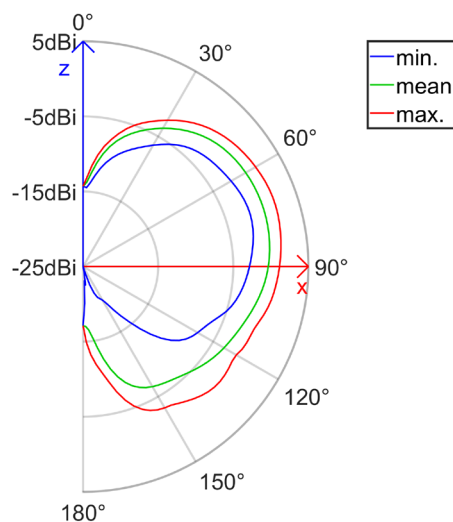
radiation pattern of the antenna (elevation cut)
realized gain (E_Total, Freq = 1510.90 MHz)



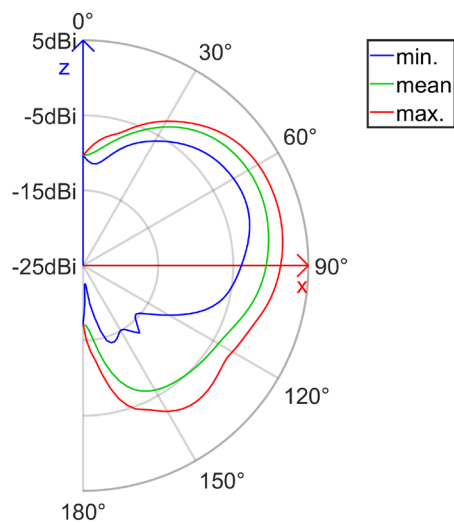
radiation pattern of the antenna (elevation cut)
realized gain (E_Total, Freq = 1710.00 MHz)



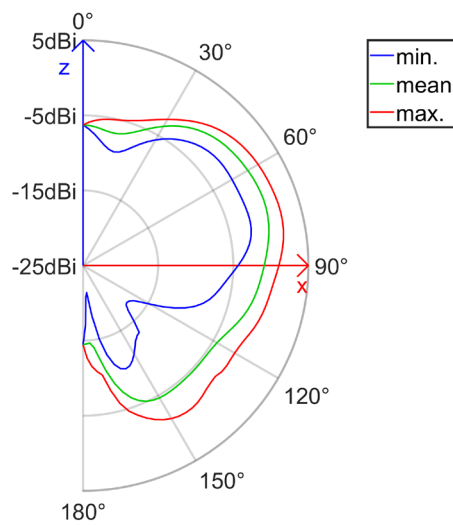
radiation pattern of the antenna (elevation cut)
realized gain (E_Total, Freq = 1850.00 MHz)



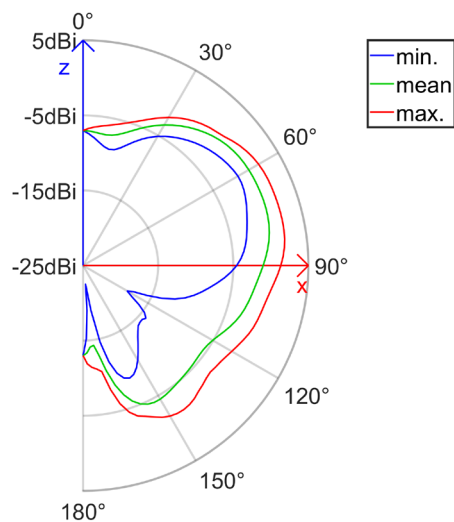
radiation pattern of the antenna (elevation cut)
realized gain (E_Total, Freq = 1990.00 MHz)



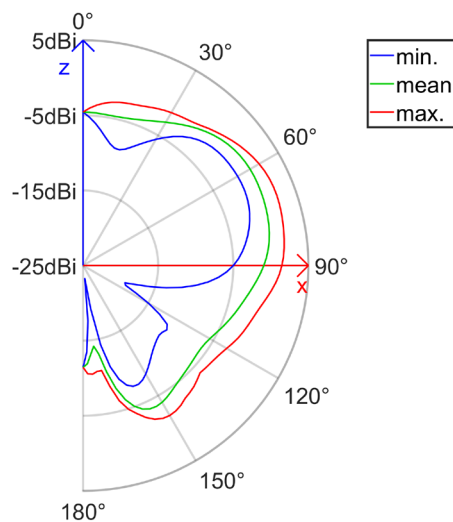
radiation pattern of the antenna (elevation cut)
realized gain (E_Total, Freq = 2080.00 MHz)



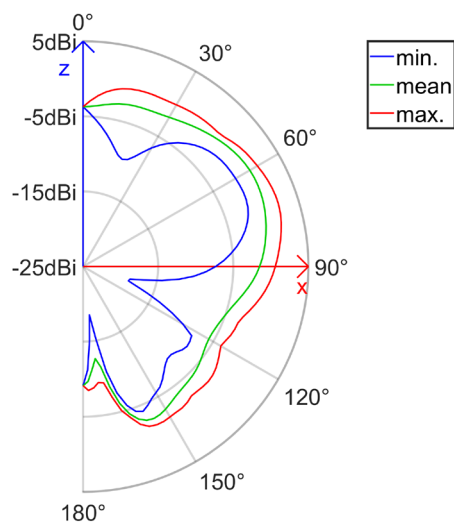
radiation pattern of the antenna (elevation cut)
realized gain (E_Total, Freq = 2170.00 MHz)



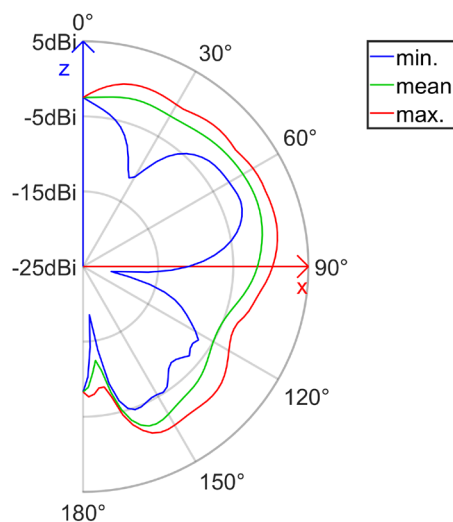
radiation pattern of the antenna (elevation cut)
realized gain (E_Total, Freq = 2300.00 MHz)



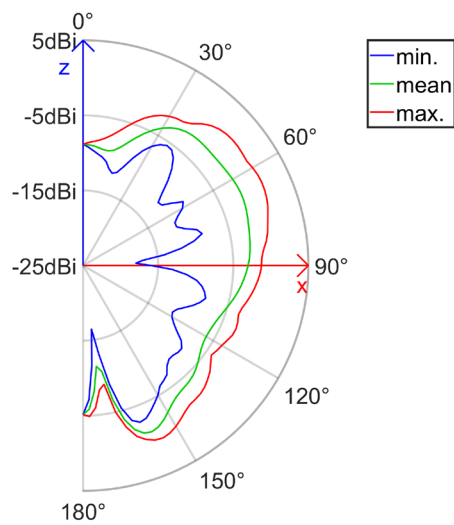
radiation pattern of the antenna (elevation cut)
realized gain (E_Total, Freq = 2500.00 MHz)



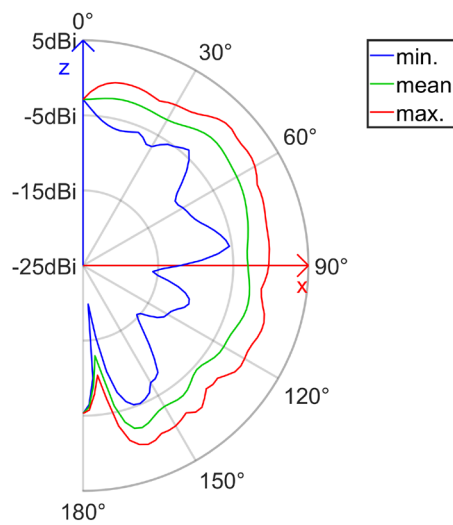
radiation pattern of the antenna (elevation cut)
realized gain (E_Total, Freq = 2690.00 MHz)



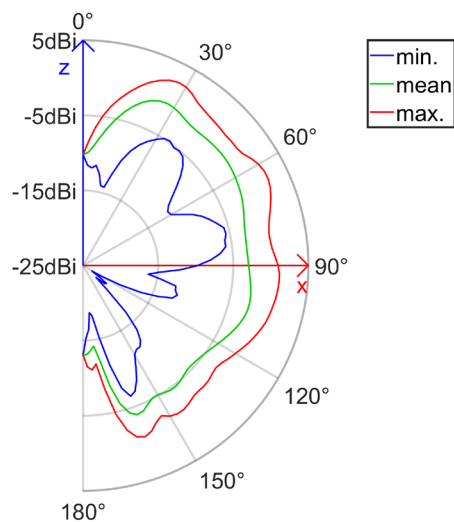
radiation pattern of the antenna (elevation cut)
realized gain (E_Total, Freq = 3300.00 MHz)



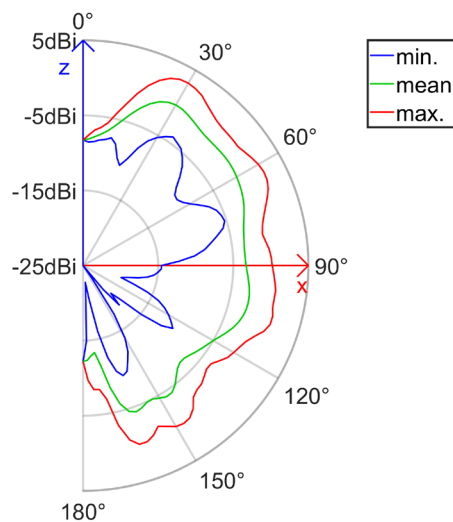
radiation pattern of the antenna (elevation cut)
realized gain (E_Total, Freq = 3750.00 MHz)



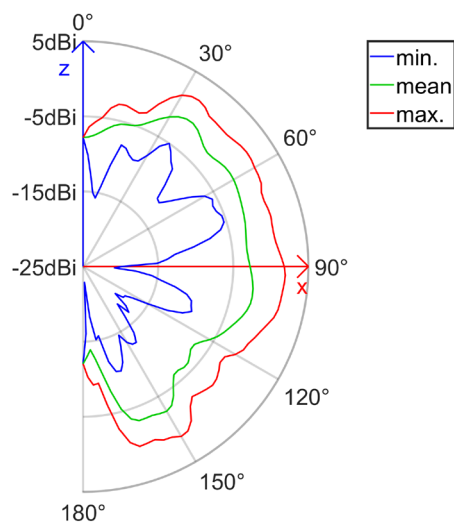
radiation pattern of the antenna (elevation cut)
realized gain (E_Total, Freq = 4200.00 MHz)



radiation pattern of the antenna (elevation cut)
realized gain (E_Total, Freq = 4400.00 MHz)



radiation pattern of the antenna (elevation cut)
realized gain (E_Total, Freq = 4700.00 MHz)



radiation pattern of the antenna (elevation cut)
realized gain (E_Total, Freq = 4990.00 MHz)

