NANF50X20AUC0R698G4F

5G NR LTE FPC Antenna

ISO 9001:2015 CERTIFIED

ROHS/REACH COMPLIANT HALOGEN FREE

NIC Components Corp.

Features

- Supports 5G NR LTE in Four Frequency Ranges
- Customizable Cable Length and Type
- Flexible PCB Type Board
- RoHS & REACH Compliant

Applications

- Meters
- Routers / Gateways
- Commercial / Handheld Electronics

Part Number Breakdown

NANF50X20AUC0R698G4X100BHF

- F = RoHs Compliant
- H = Cable Orientation
- B = RF1.37 Cable
- 100= Cable Length (in mm)
- X = IPEX Connector
- 4 = # of Bands
- 0R698G = Center Frequency
- C = Cellular
- U = Production Code
- A= Adhesive Mount
- 50X20 = Size
- NANF = Series

Standard Part Number Breakdowns

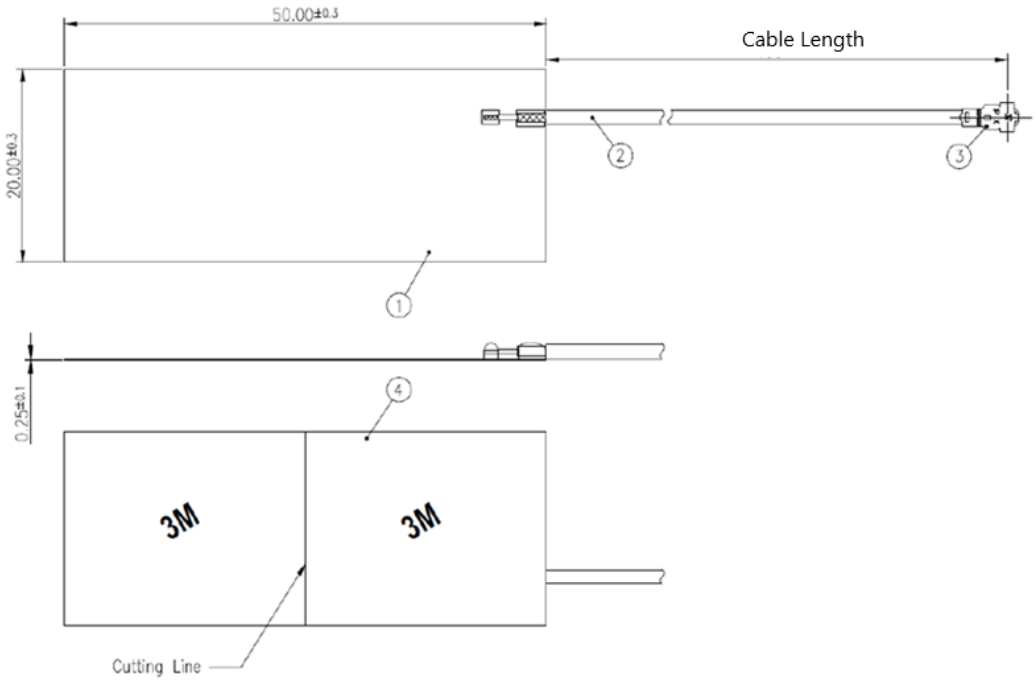
Part Numbers	Connector Type	Cable Length	Cable Type
NANF50X20AUC0R698G4X100BHF	IPEX (X)	100 mm	RF1.37 (B)
NANF50X20AUC0R698G4M250BHF	SMA (M)	250 mm	RF1.37 (B)

The table represents assembled part numbers available on www.niccomp.com from standard connector and cable options. For options not listed above please contact NIC”

Specifications

Electrical									
Application Bands	5G NR Band71	LTE 700	GSM 850/900	DCS	PCS	UMTS1	LTE2600	5G NR Band	LTE5200 Wi-Fi 5800
# Of Frequency Range	Frequency Range 1			Frequency Range 2				Frequency Range 3	Frequency Range 4
Frequency Range	617~698 MHz	698~824 MHz	824~960 MHz	1710~1880 MHz	1850~1990 MHz	1920~2170 MHz	2300~2690 MHz	3300~3800 MHz	5150~5850 MHz
Efficiency (%)	58.01	60.46	51.28	65.56	60.41	61.53	69.69	49.39	41.50
Average Gain (dBi)	-2.37	-2.19	-2.90	-1.83	-2.19	-2.11	-1.57	-3.06	-3.82
Peak Gain (dBi)	3.86	4.10	4.39	4.59	6.04	6.95	7.07	5.70	5.87
V.S.W.R	< 4								
Return Loss	< -5								
Polarization	Linear								
Impedance	50Ω								
Environmental									
Operating Temperature	-40 ~+85 °C								
Storage Temperature	-40 ~+85 °C								
Relative Humidity	95% non-condensing								
RoHS Compliant	Yes								

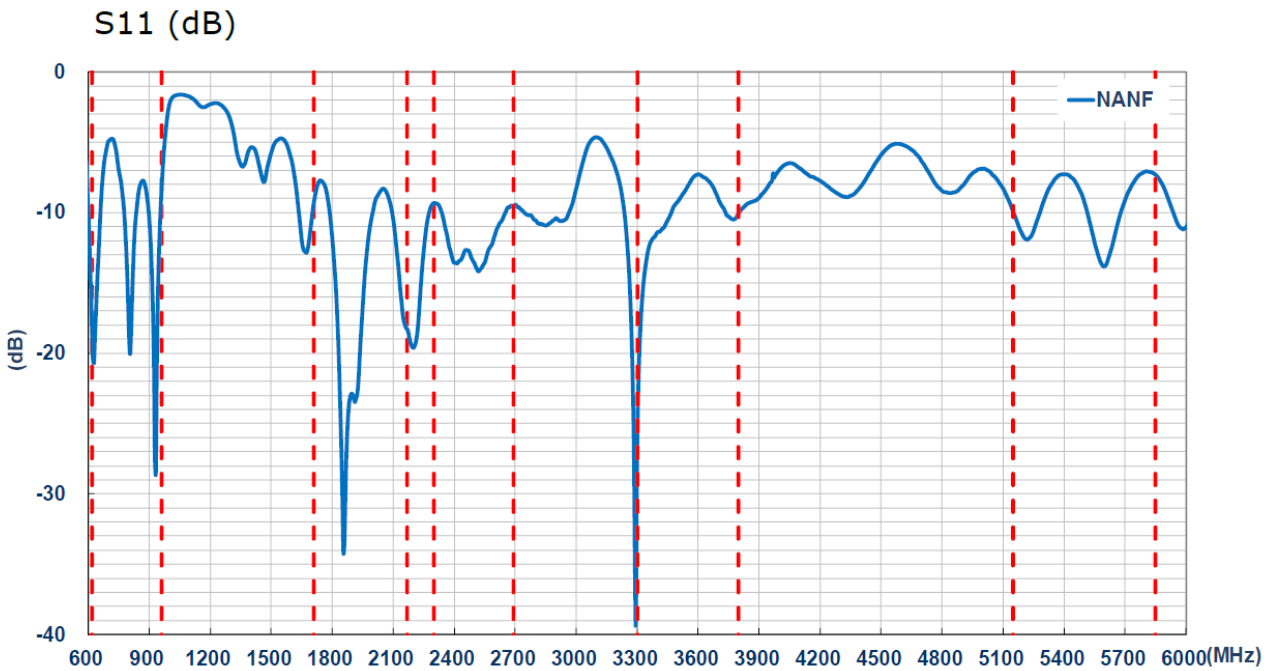
Dimension Drawing

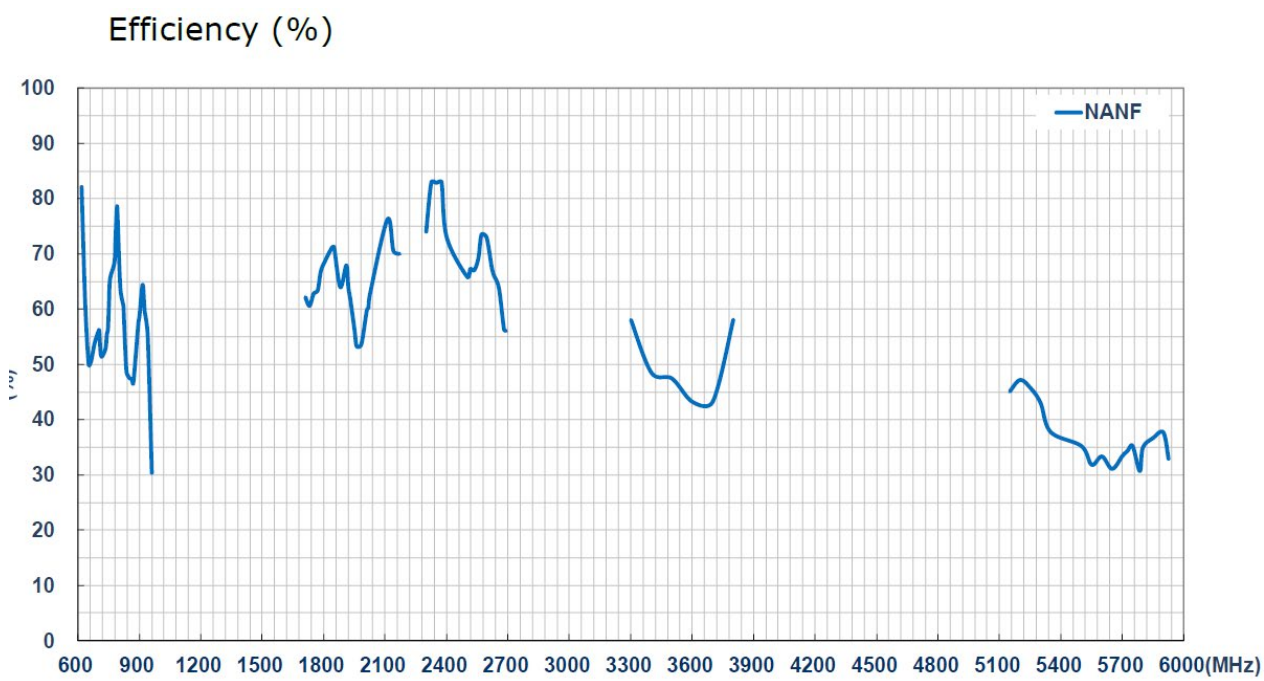


Dimensions (mm) & Mechanical

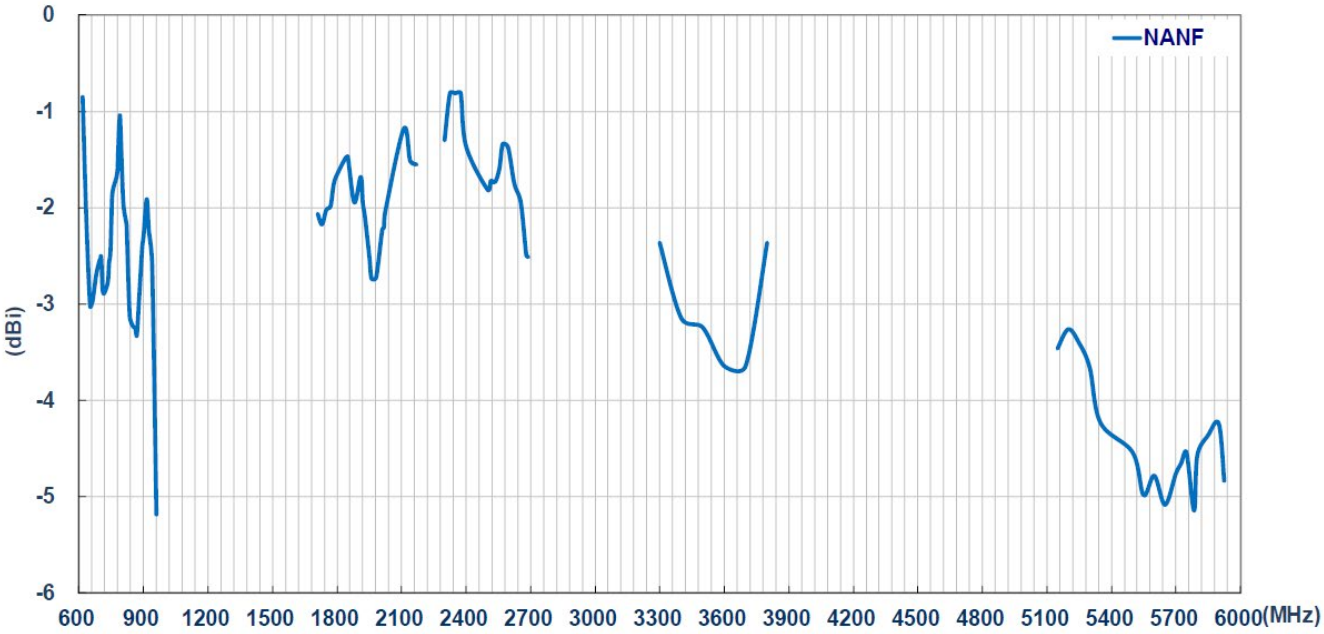
Length	50.0 ± 0.3
Width	20.0 ± 0.3
Thickness	0.25 ± 0.1
Material	Polymer 0.25t
Mounting	Adhesive (3M 467)
Marking	NANF698C4

Antenna Parameters:

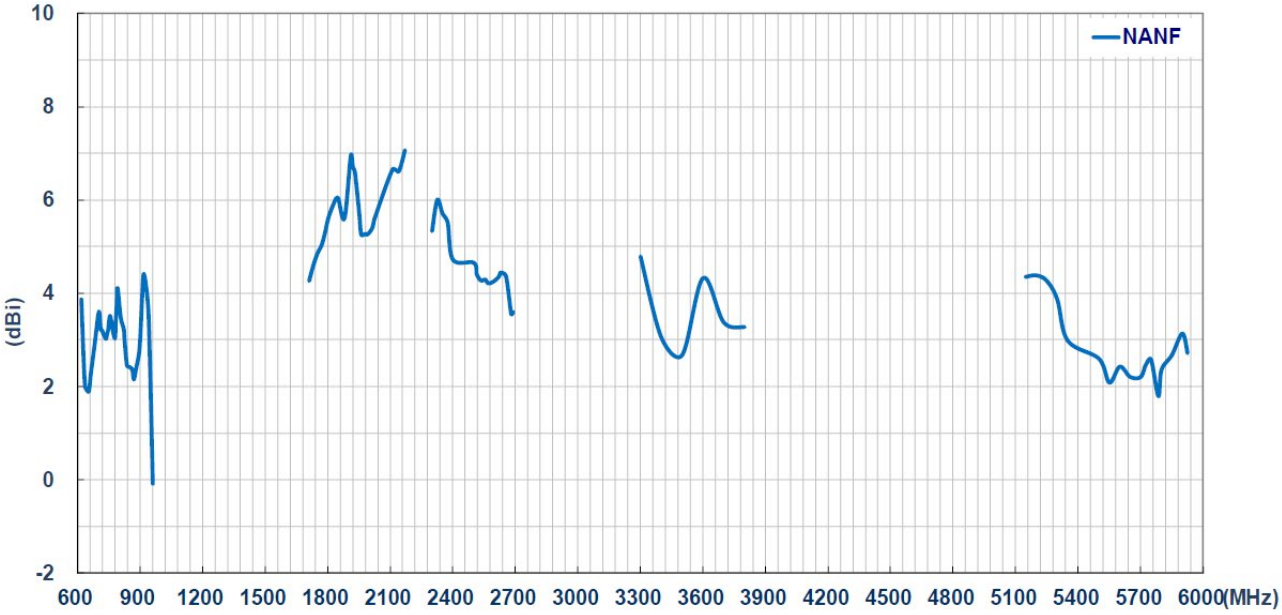




Average Gain (dBi)

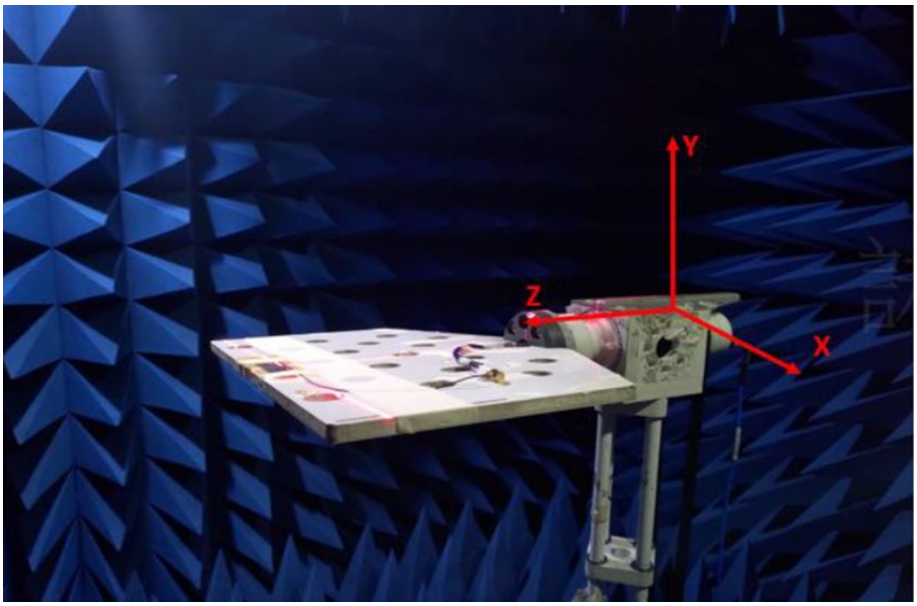


Peak Gain (dBi)



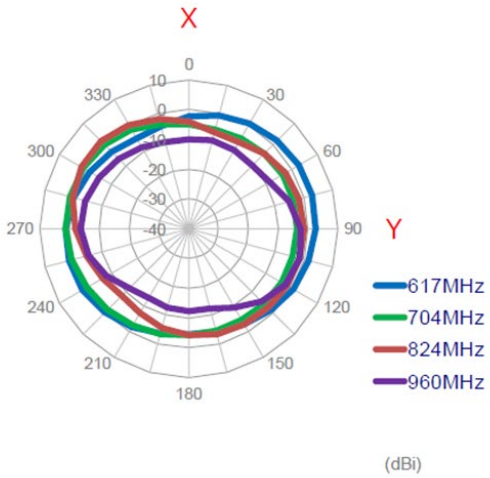
Radiation Patterns:

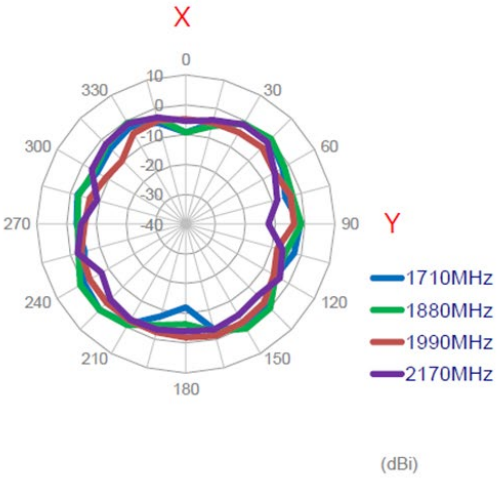
The antenna radiation patterns are measured in a 3D Anechoic Chamber. The measurement setup is as shown below,

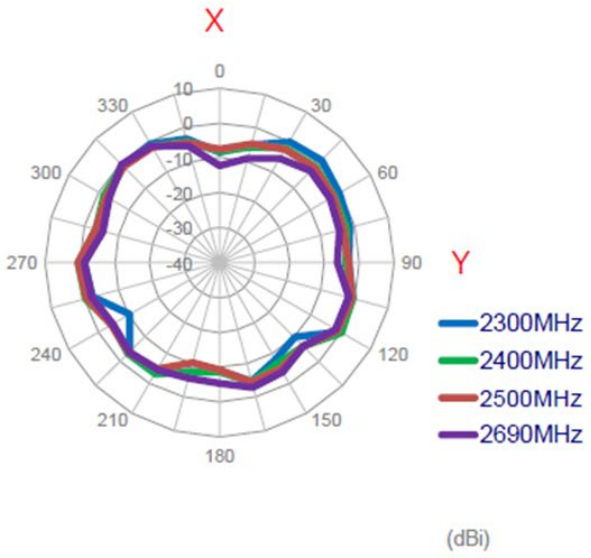


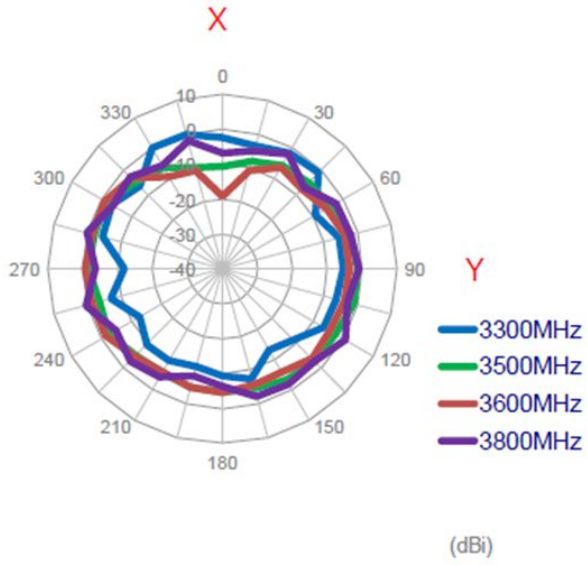
2D Radiation Patterns:

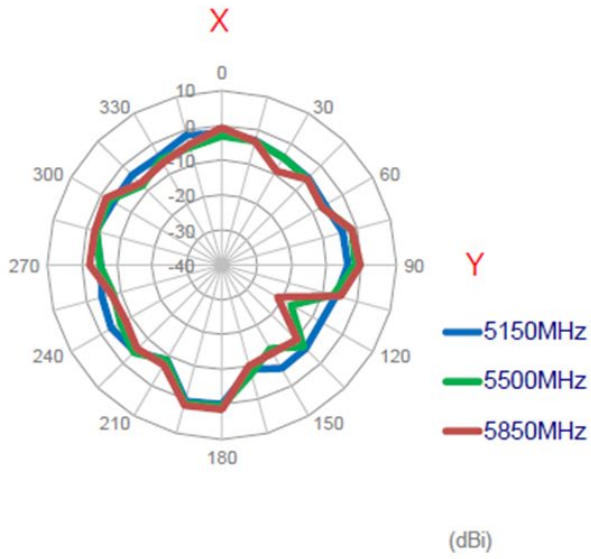
X-Y Plane



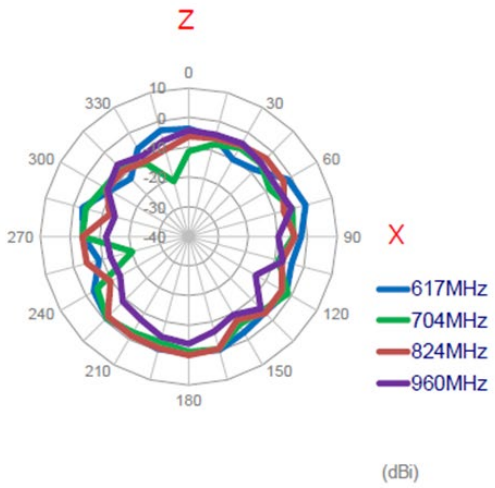


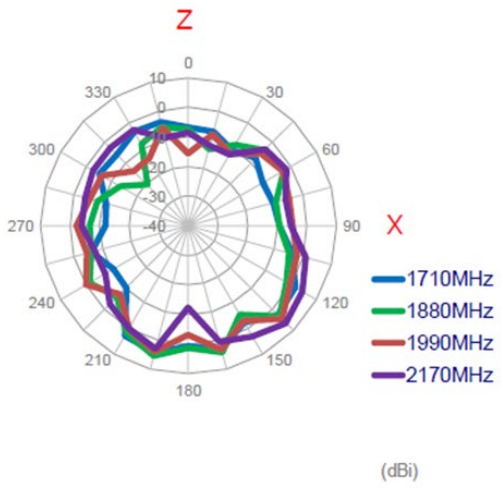

X
Y
0
30
60
90
120
150
180
210
240
270
300
330
10
0
-10
-20
-30
-40
2300MHz
2400MHz
2500MHz
2690MHz
(dBi)

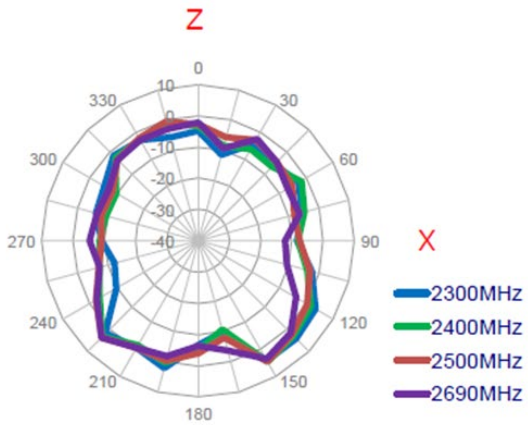

X
Y
0
30
60
90
120
150
180
210
240
270
300
330
10
0
-10
-20
-30
-40
3300MHz
3500MHz
3600MHz
3800MHz
(dBi)

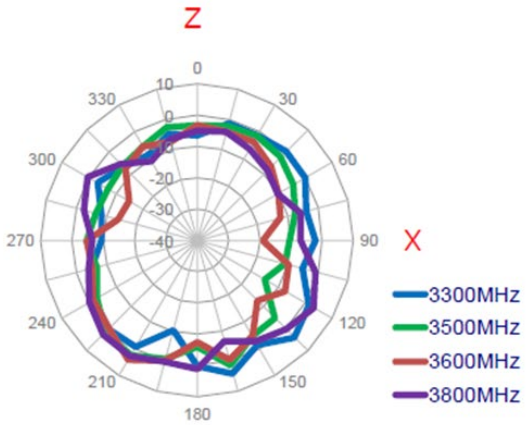

X
Y
0
30
60
90
120
150
180
210
240
270
300
330
10
0
-10
-20
-30
-40
5150MHz
5500MHz
5850MHz
(dBi)

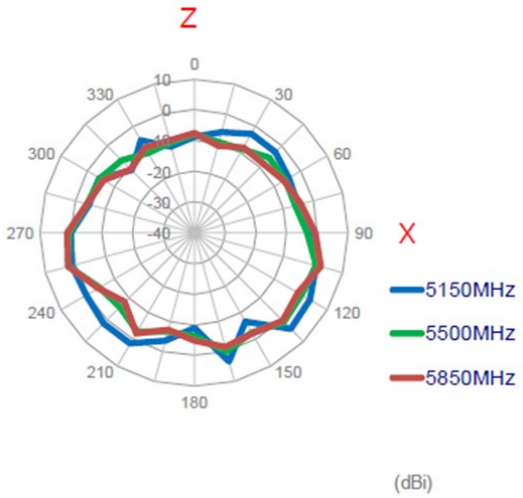
X-Z Plane


Z
X
617MHz
704MHz
824MHz
960MHz
(dBi)

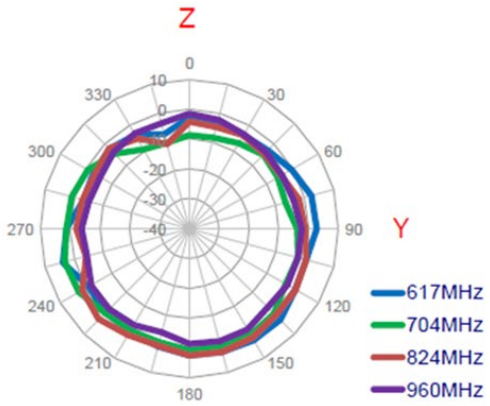

Z
X
1710MHz
1880MHz
1990MHz
2170MHz
(dBi)

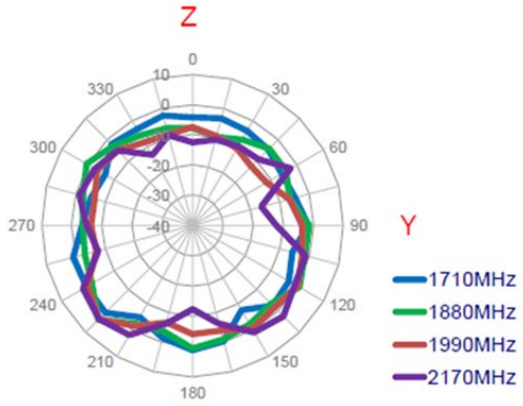

Z
X
2300MHz
2400MHz
2500MHz
2690MHz

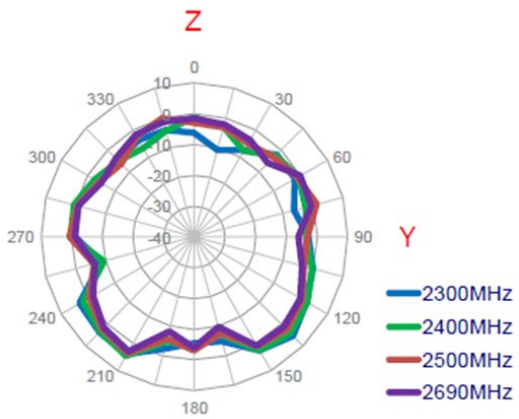

Z
X
3300MHz
3500MHz
3600MHz
3800MHz

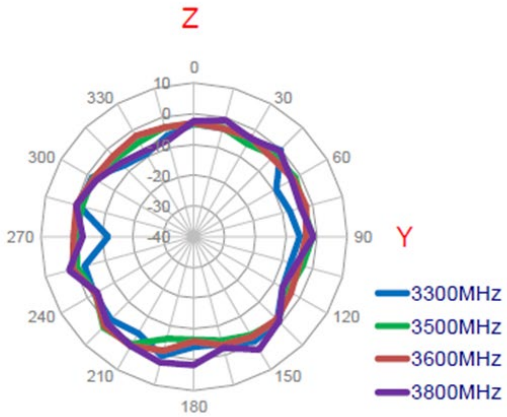

Z
X
5150MHz
5500MHz
5850MHz
(dBi)

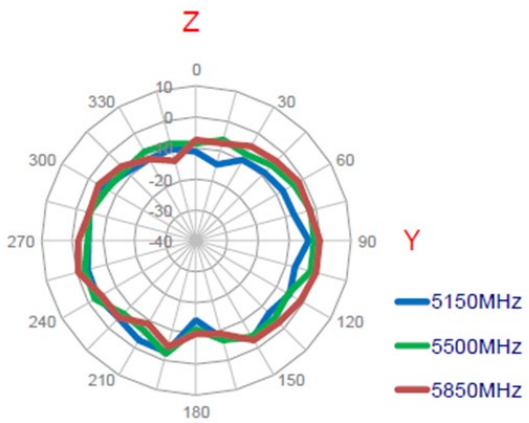
Y-Z Plane


Z
Y
617MHz
704MHz
824MHz
960MHz


Z
Y
1710MHz
1880MHz
1990MHz
2170MHz


Z
Y
2300MHz
2400MHz
2500MHz
2690MHz

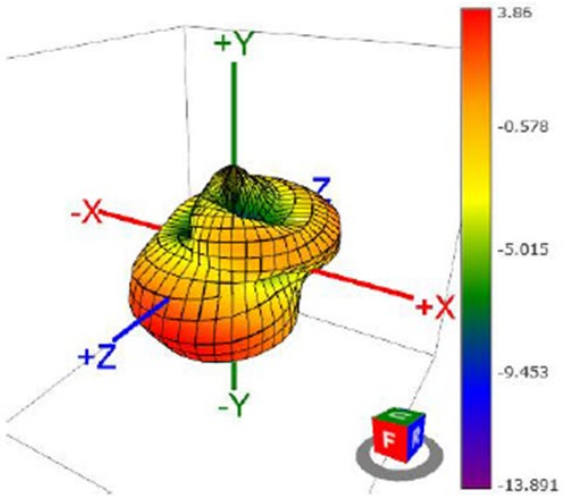

Z
Y
3300MHz
3500MHz
3600MHz
3800MHz


Z
Y
5150MHz
5500MHz
5850MHz

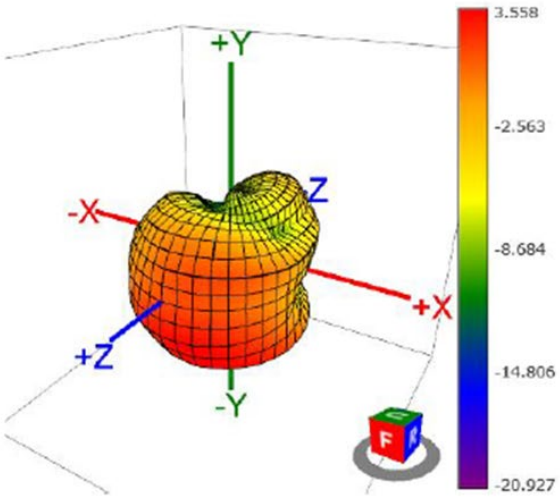
(dBi)

3D Radiation Patterns:

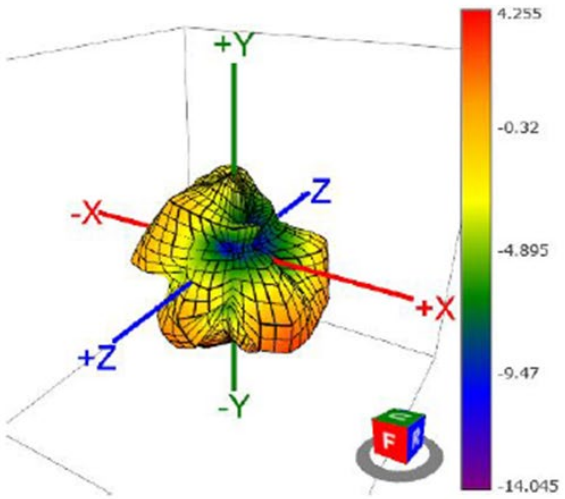
617MHz



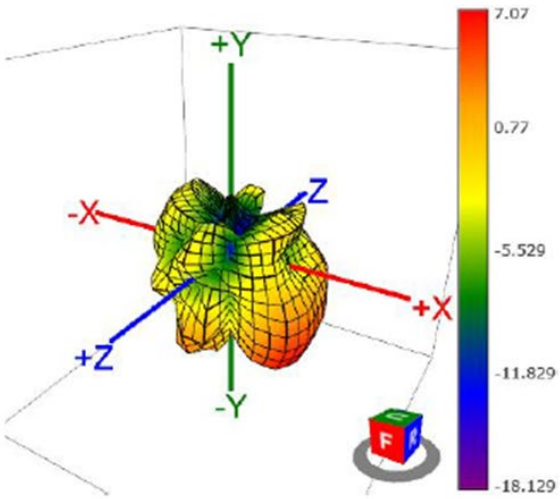
960MHz



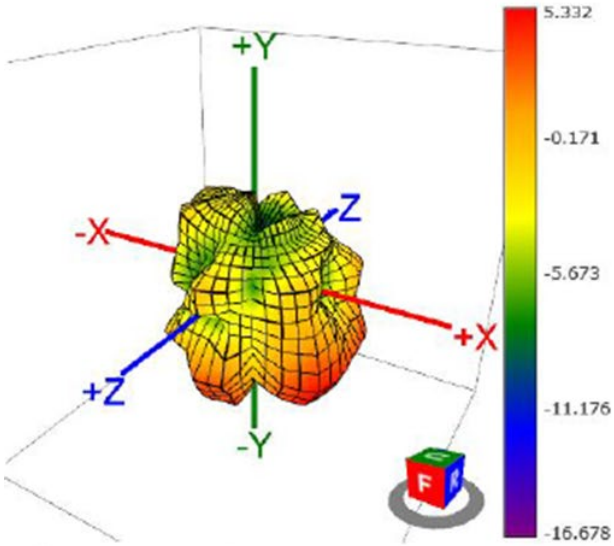
1710MHz



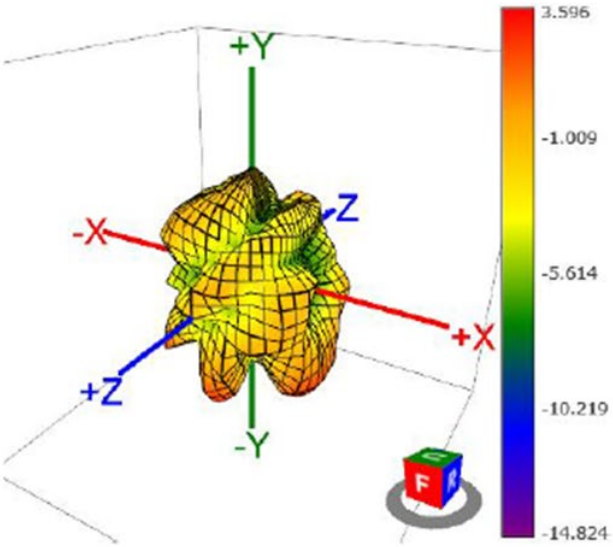
2170MHz



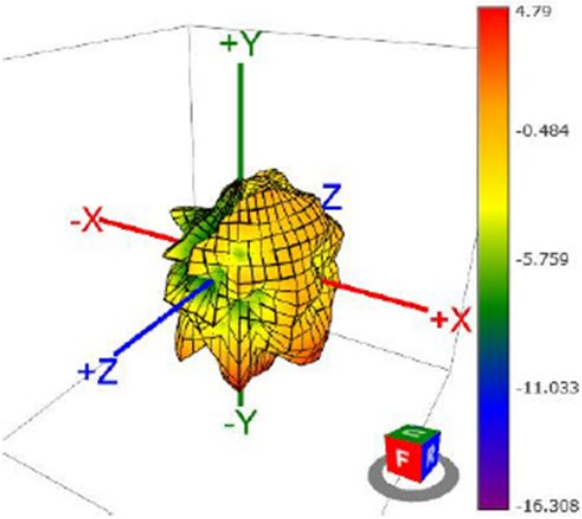
2300MHz



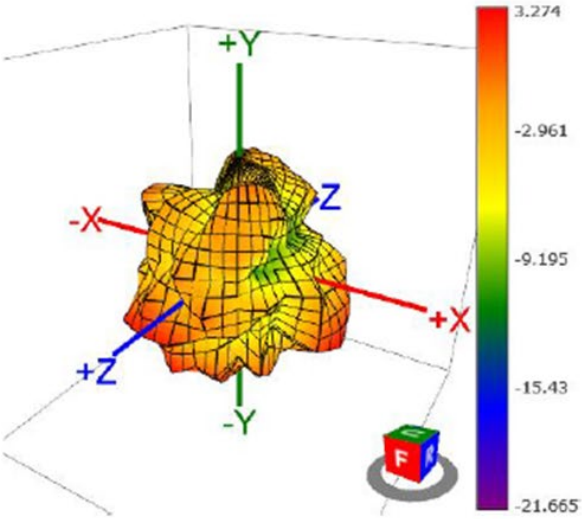
2690MHz



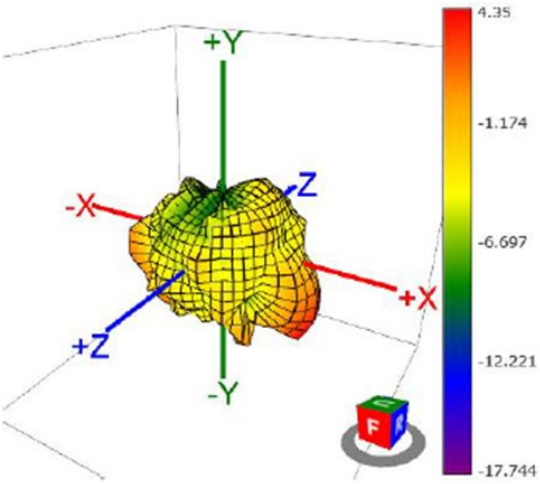
3300MHz



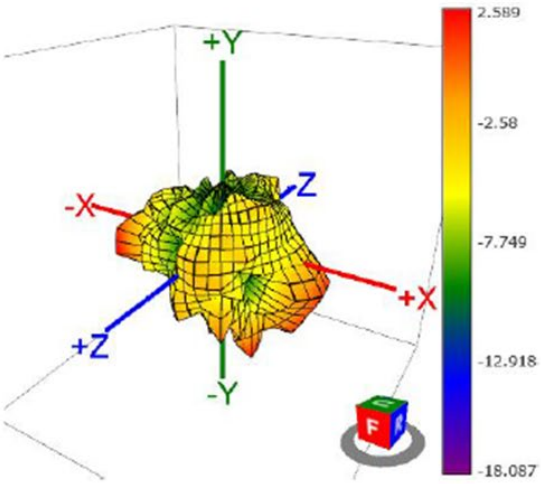
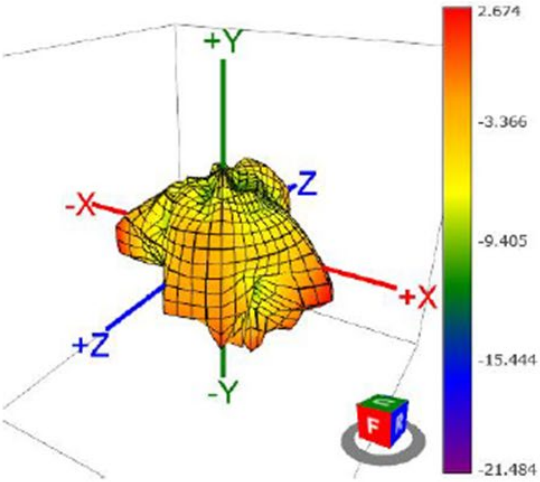
3800MHz



5150MHz



5500MHz



5850MHz