



THDR98PP

Thunder Series

Integrated 5G/LTE Directional Antenna
for Ericsson (Cradlepoint) R980

- Integrated Multi-Band LTE & 5G Panel Antenna
- Wi-Fi Omni Antenna + GNSS
- Cavity to install Ericsson (Cradlepoint) R980 Router

Contents

Page:	Section:
3	Introduction
4	Specifications
7	Plots
19	Dimensions



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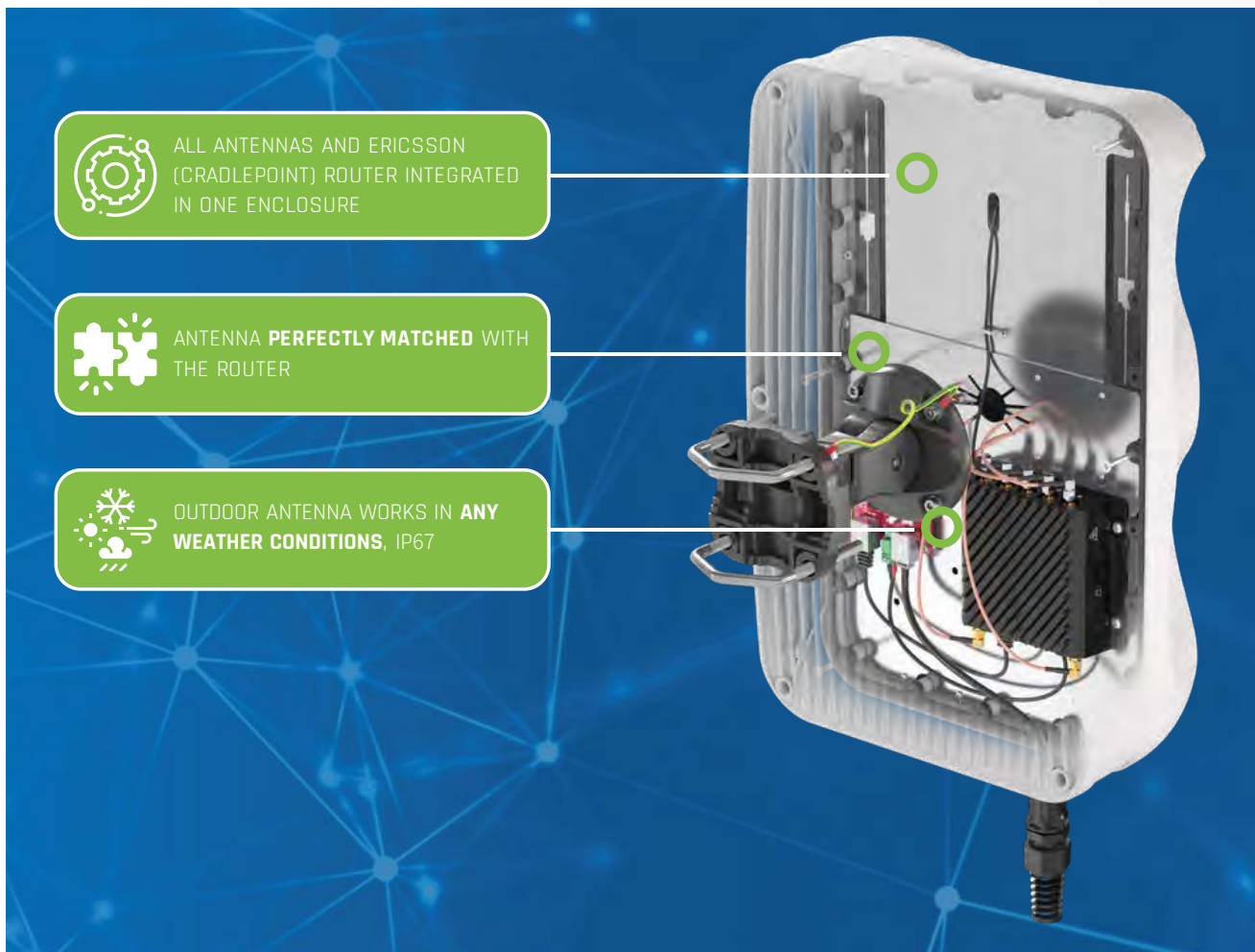
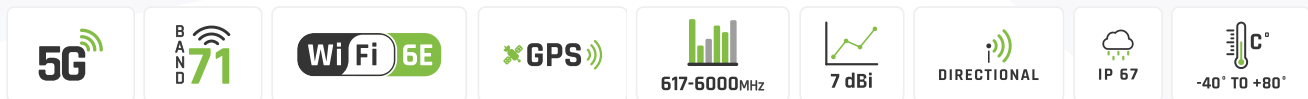
Thunder Series THDR98PP

Integrated 5G/LTE Direction Antenna for Ericsson (Cradlepoint) R980

INTEGRATED MULTI-BAND LTE & 5G PANEL ANTENNA + WI-FI OMNI ANTENNA + GNSS ANTENNA + PLACE TO INSTALL ERICSSON (CRADLEPOINT) R980 (ALL-IN-ONE)

The Taoglas **THDR98** Integrated Directional all-in-one antenna for Ericsson R980 routers is ideal for connections with long distance to base station. It has embedded directional 5G, Wi-Fi®, and GNSS antennas. If you use the Ericsson R980 router with the THDR98 Thunder Integrated Directional antenna, you get a complete integrated solution with embedded router and multi-band antennas in one enclosure. It is the first choice for fixed installations in industrial environment.

The set contains a Passive PoE splitter, allowing you to split data and power from a single Ethernet cable and maintain gigabit transfer speeds while protecting the LAN port from damage caused by over-voltage, short circuit or improper connection.





5G / LTE ANTENNA SPECIFICATION

FREQUENCY	0.617 - 0.96 GHz 1.7 - 2.7 GHz 3.3 - 4.6 GHz 4.7 - 6.0 GHz
GAIN	0.617 - 0.96 GHz: 6 dBi 1.7 - 2.7 GHz: 7 dBi 3.3 - 4.6 GHz: 7 dBi 4.7 - 6.0 GHz: 5.5 dBi
SUPPORTED LTE BANDS	1, 2, 3, 4, 5, 7, 8, 9, 10, 12, 13, 14, 17, 18, 19, 20, 22, 25, 26, 27, 28, 29, 30, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 46, 47, 48, 49, 52, 53, 65, 66, 67, 68, 69, 71, 85, 103, 106
SUPPORTED 5G BANDS	n1, n2, n3, n5, n7, n8, n12, n13, n14, n18, n20, n25, n26, n28, n29, n30, n34, n38, n39, n40, n41, n46, n47, n48, n53, n65, n66, n67, n71, n77, n78, n80, n81, n82, n83, n84, n85, n86, n89, n90, n95, n97, n98, n100, n101, n256
VSWR	<2.00, max <3.00
BEAMWIDTH	80°/80° ±15°
POLARIZATION	X (+45degrees)
IMPEDANCE	50 Ω



WI-FI ANTENNA SPECIFICATION

FREQUENCY	2.40 - 2.50 GHz 5.0 - 7.125 GHz
GAIN	2.40 - 2.50 GHz : 6 dBi 5.0 - 7.125 GHz : 7.5 dBi
VSWR	<1.70, max <2.00
BEAMWIDTH	360°/25° ±5°
POLARIZATION	Vertical
IMPEDANCE	50Ω

MECHANICAL SPECIFICATION

MATERIALS	ABS, aluminum, PTFE, Fiberglass
CONNECTOR TYPE	RJ45
INGRESS PROTECTION	IP67
DIMENSIONS	486 x 292 x 210 mm 19.13 x 11.50 x 8.25 inch
WEIGHT	2.8 kg 6.17 lbs
OPERATING TEMPERATURE	From -40°C to 80°C From -40°F to 176°F
ENCLOSURE RECOMMENDED TIGHTENING TORQUE	0,6 - 0,8 Nm
MAST DIAMETER	25-66mm 0.98-2.60 inch



FREQUENCY BANDS

LTE / 4G

1	2	3	4	5	7	8
9	10	12	13	14	17	18
19	20	22	25	26	27	28
29	30	33	34	35	36	37
38	39	40	41	42	43	44
46	47	48	49	52	53	65
66	67	68	69	71	85	103
106						

617 MHz

6000M Hz

5G

n1	n2	n3	n5	n7	n8	n12
n13	n14	n18	n20	n25	n26	n28
n29	n30	n34	n38	n39	n40	n41
n46	n47	n48	n53	n65	n66	n67
n71	n77	n78	n80	n81	n82	n83
n84	n85	n86	n89	n90	n95	n97
n98	n100	n101	n256			

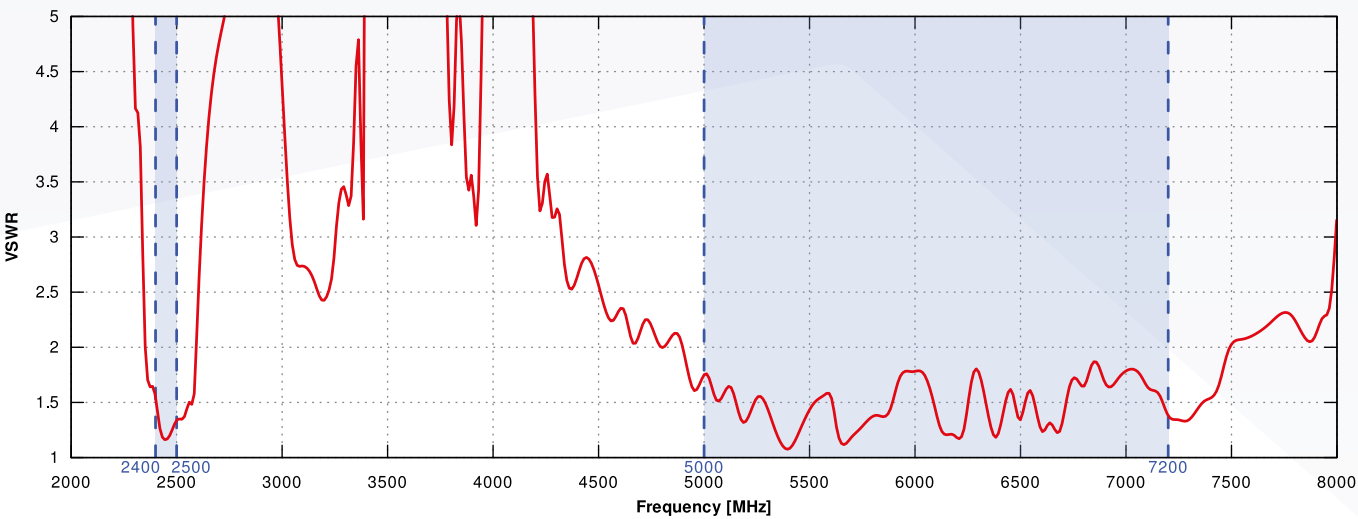
617 MHz

6000 MHz

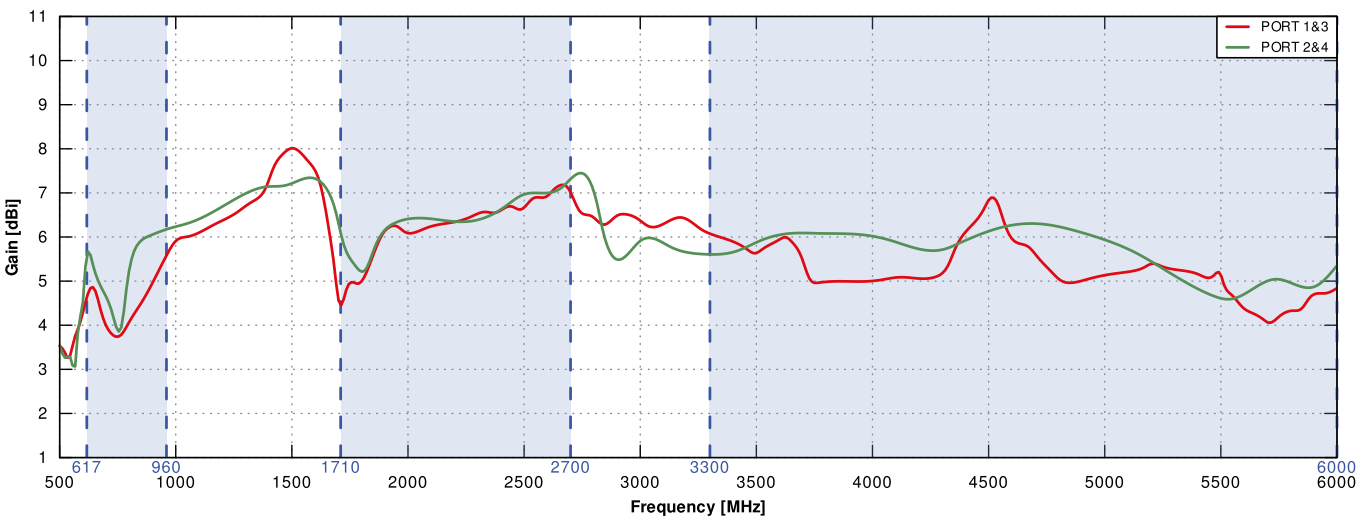


PLOTS

VSWR for Wi-Fi antenna

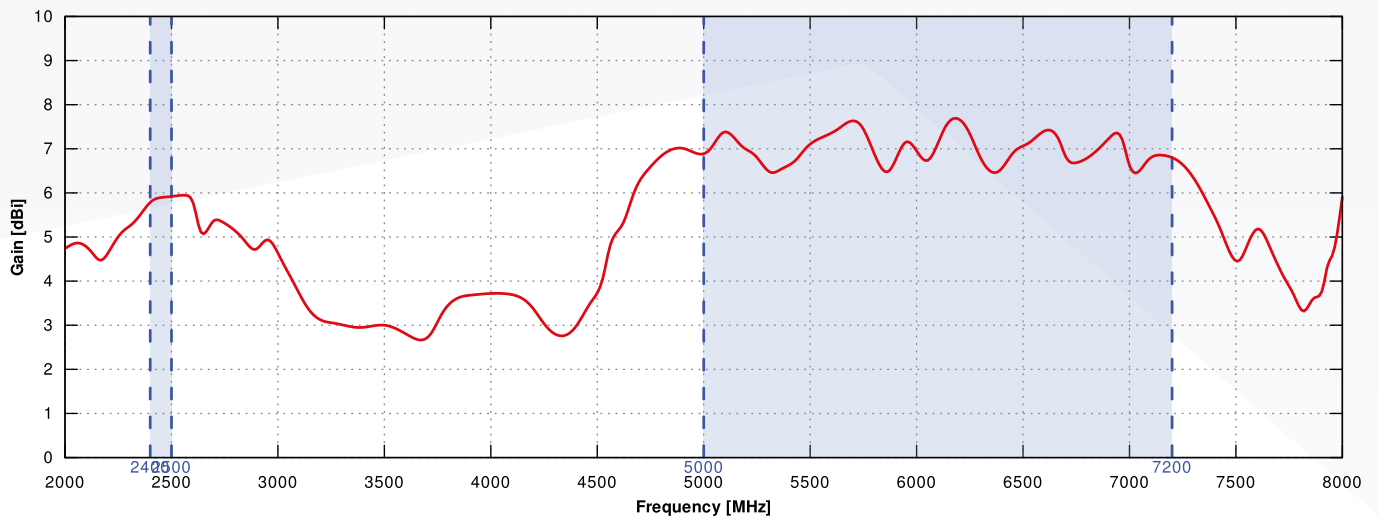


Gain for 5G/LTE antenna

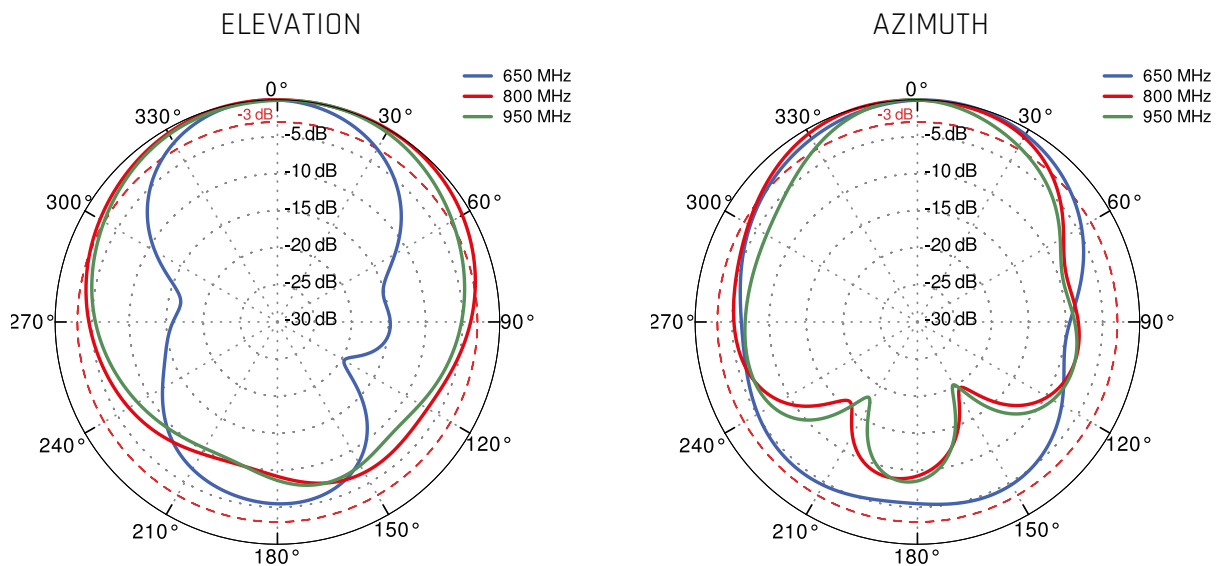




Gain for Wi-Fi antenna

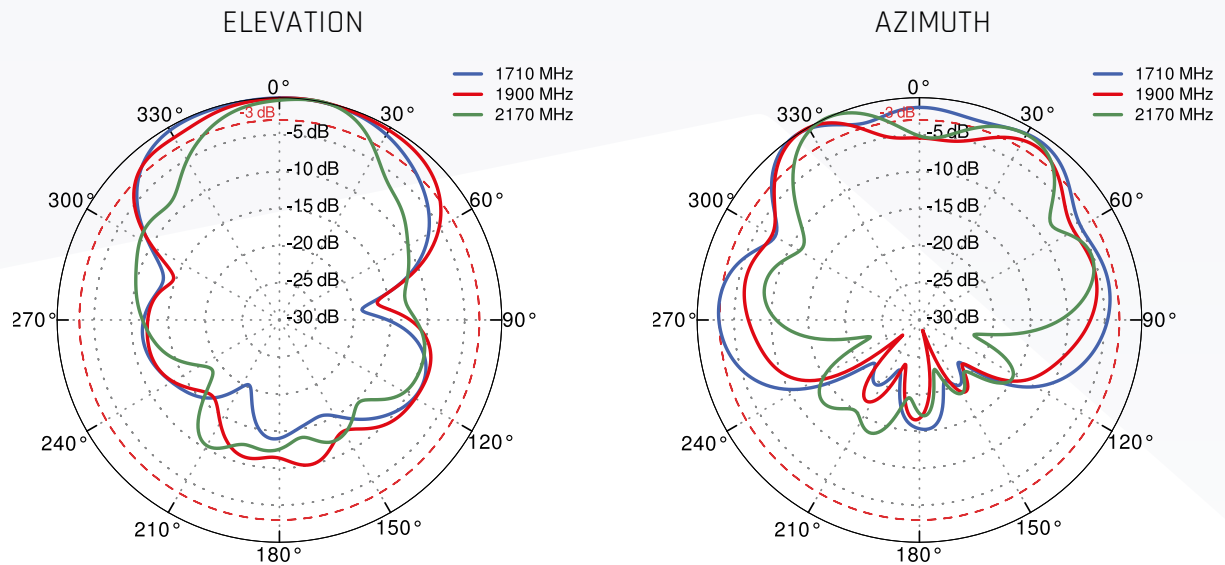


PORT 1&3 - 5G/LTE from 650MHz to 950MHz

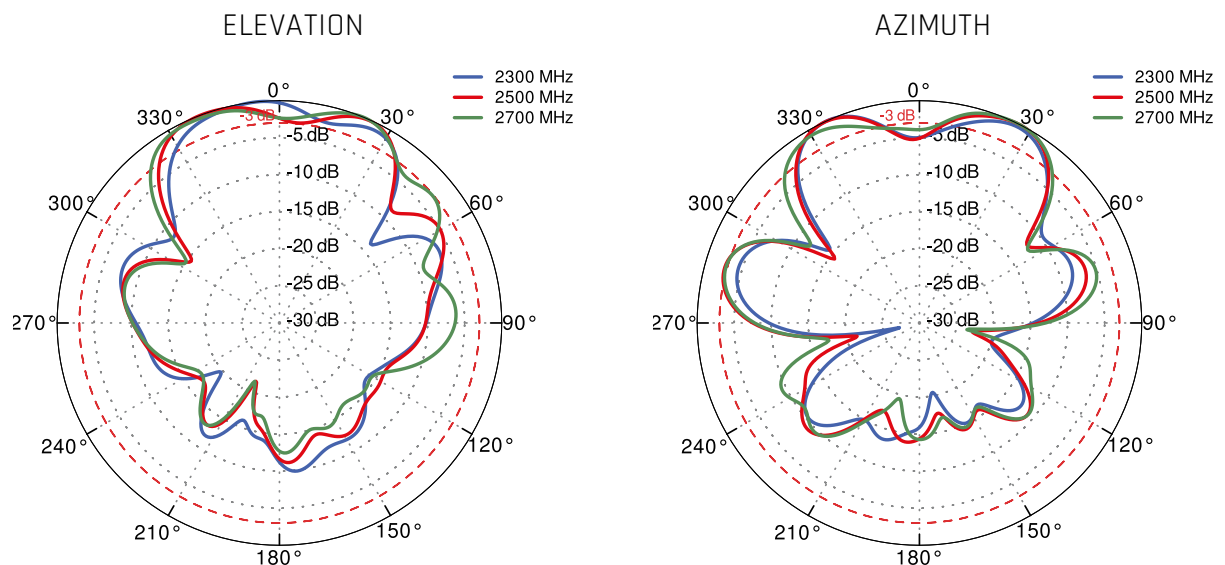




PORT 1&3 - 5G/LTE from 1.71GHz to 2.17GHz

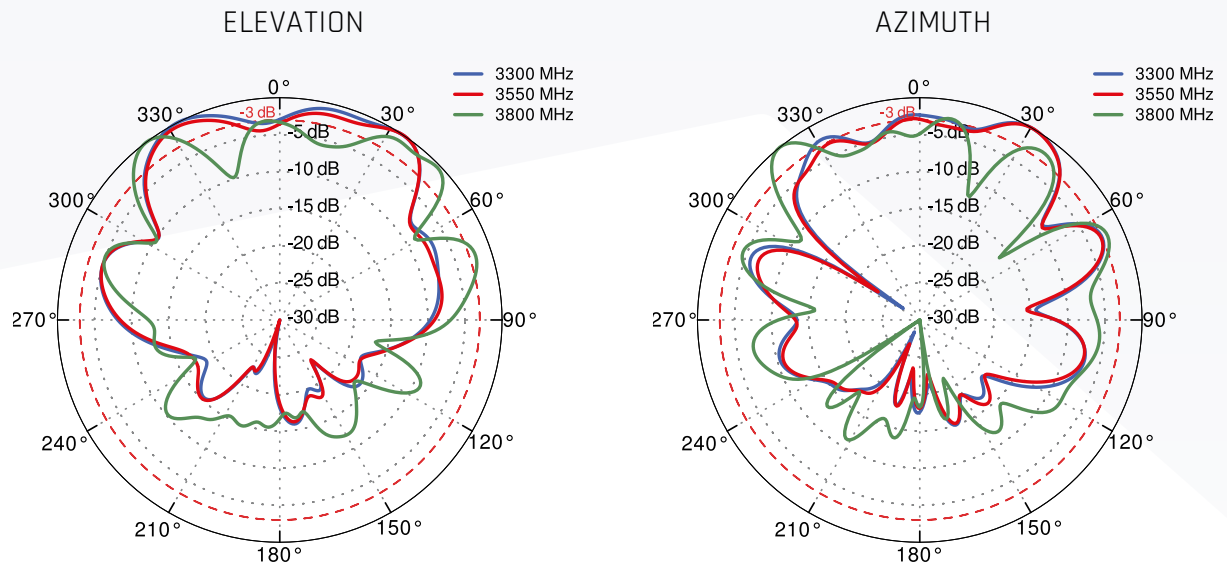


PORT 1&3 - 5G/LTE from 2.3GHz to 2.7GHz

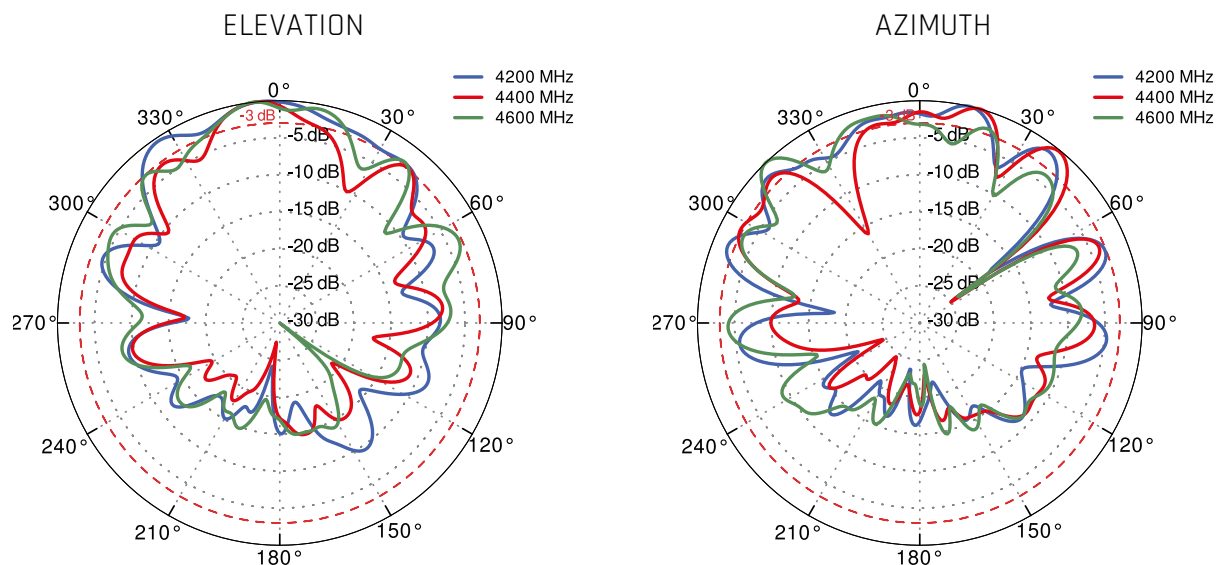




PORT 1&3 - 5G/LTE from 3.3GHz to 3.8GHz

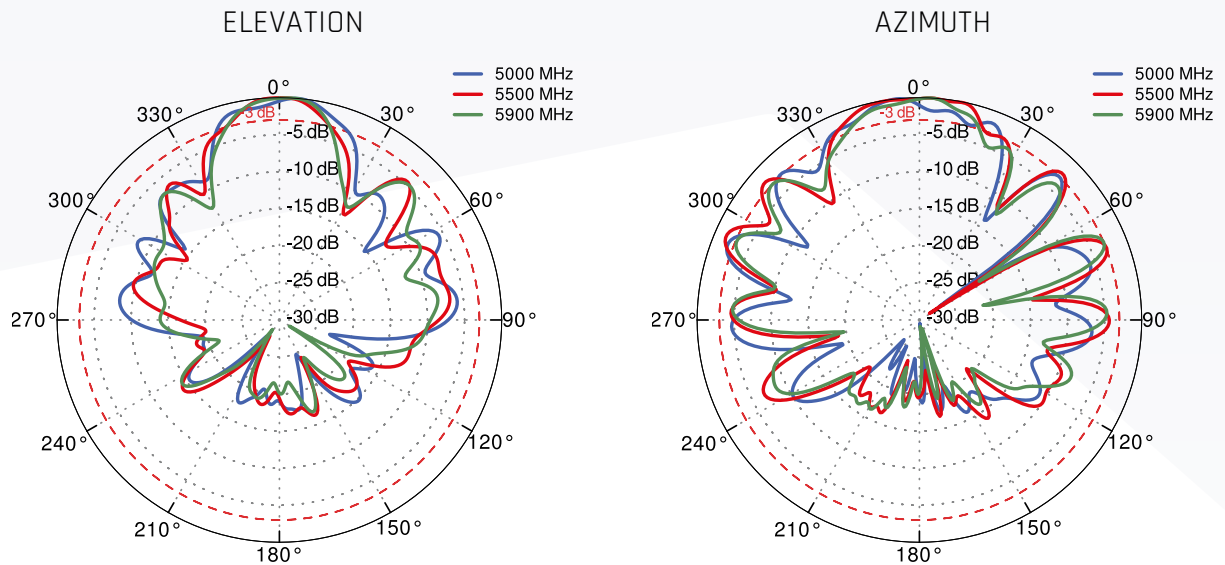


PORT 1&3 - 5G/LTE from 4.2GHz to 4.6GHz

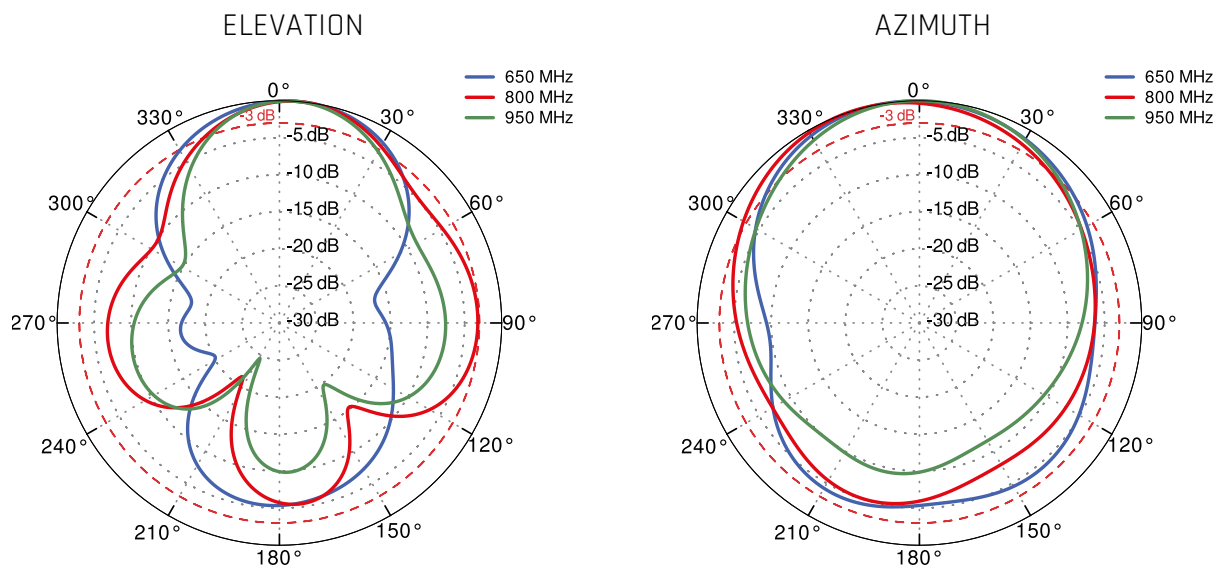




PORT 1&3 - 5G/LTE from 5.0GHz to 5.9GHz

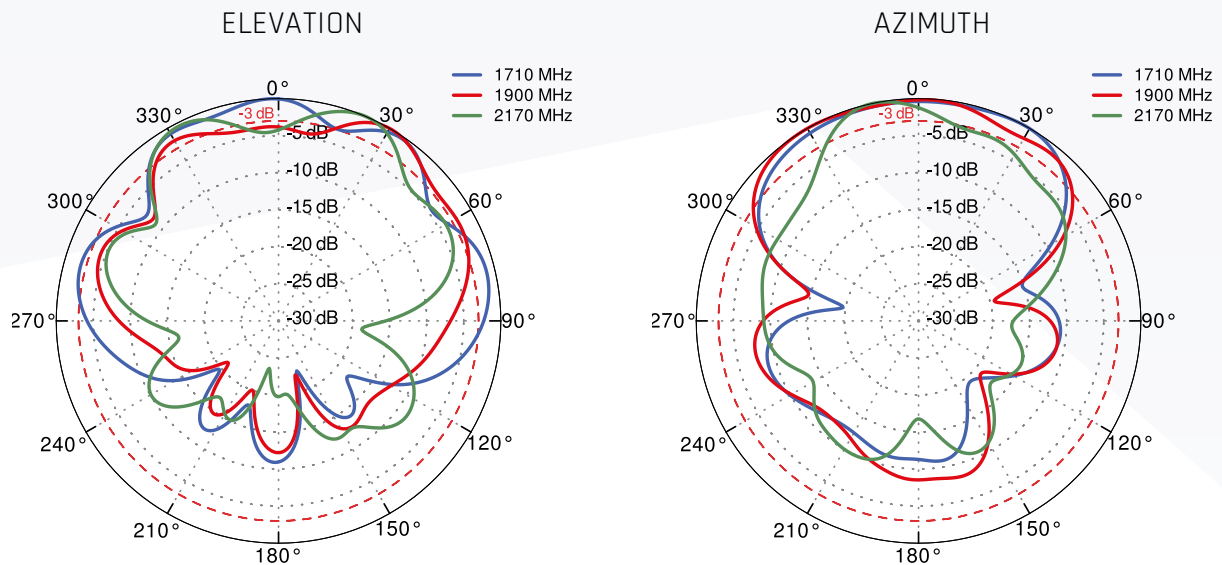


PORT 2&4 - 5G/LTE from 650MHz to 950MHz

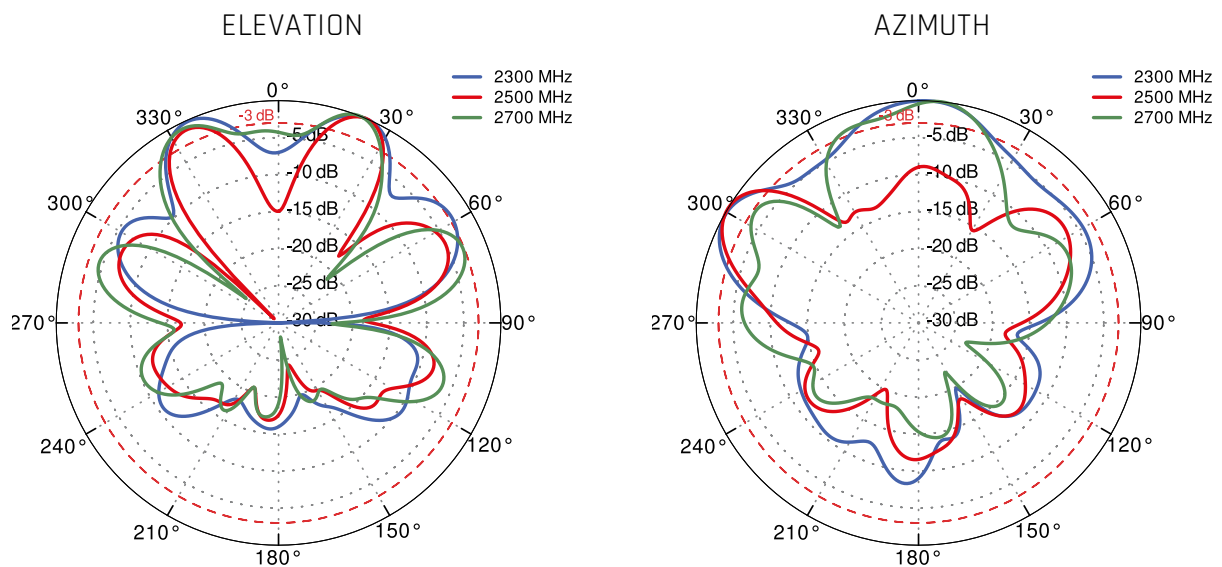




PORT 2&4 - 5G/LTE from 1.71GHz to 2.17GHz

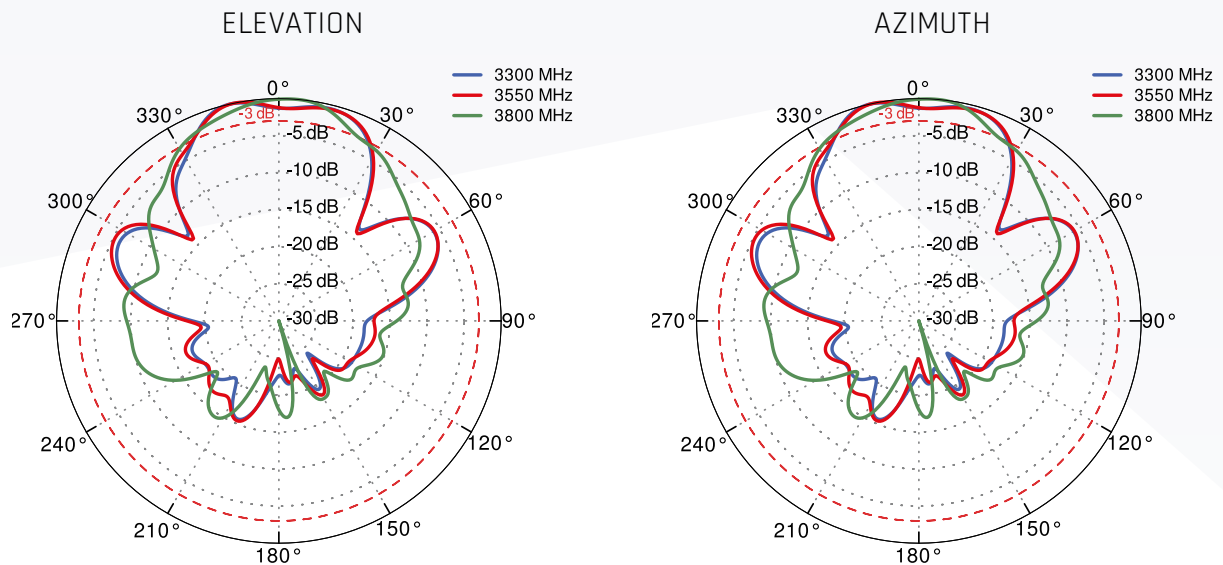


PORT 2&4 - 5G/LTE from 2.3GHz to 2.7GHz

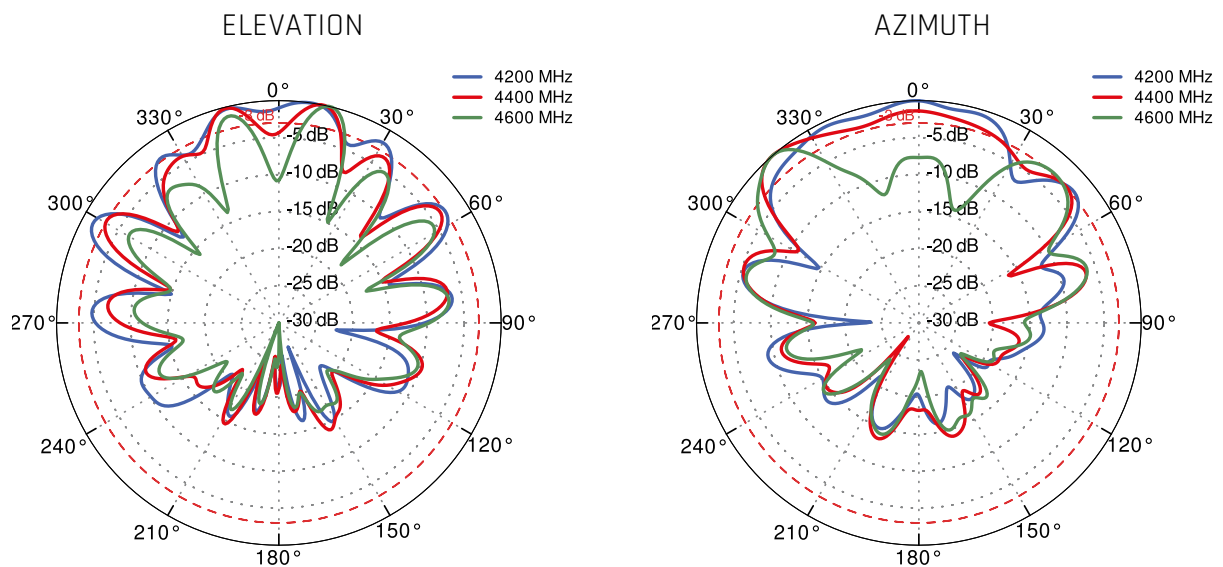




PORT 2&4 - 5G/LTE from 3.3GHz to 3.8GHz

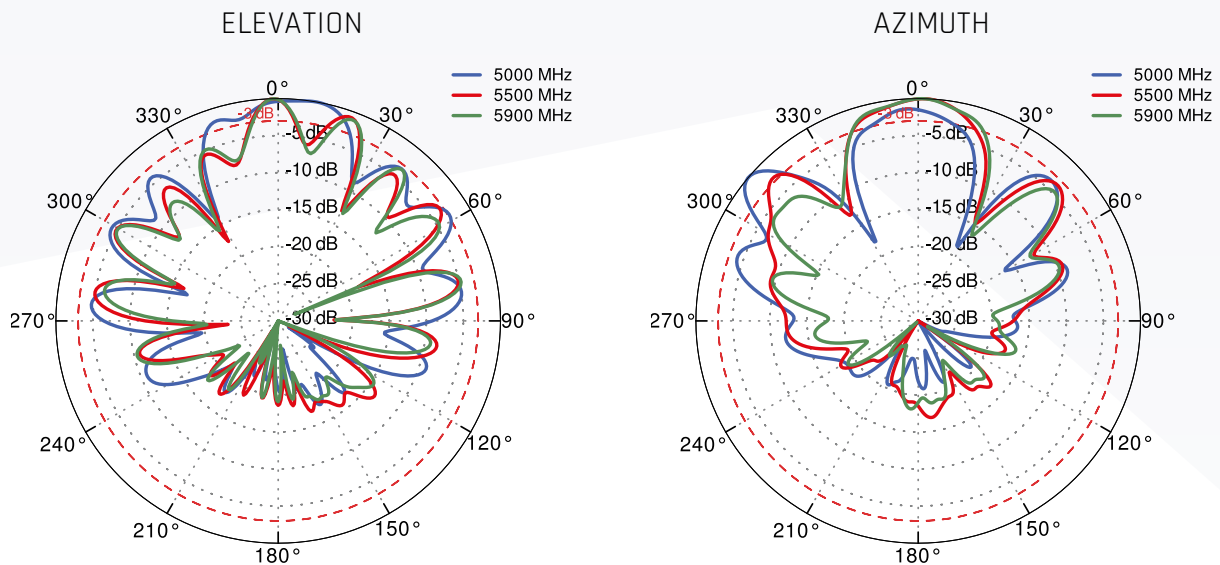


PORT 2 - 5G/LTE from 4.2GHz to 4.6GHz

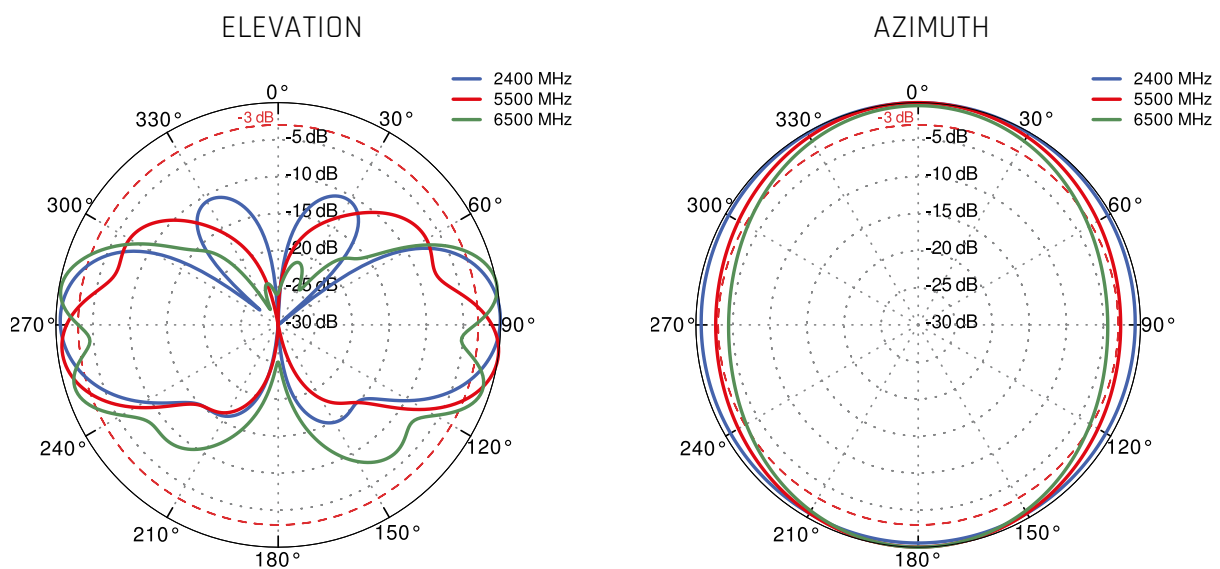




PORT 2 - 5G/LTE from 5.0GHz to 5.9GHz



Wi-Fi 2.4GHz and 5GHz and 6GHz





GNSS Specifications

GNSS Frequency Band							
GPS/QZSS	L1 1575.42MHz	L2 1227.6MHz	L5 1176.45MHz	L6 1278.75MHz			
	☒	☐	☐	☐			
GLONASS	L5R 1176.45MHz	L3PT 1201.5MHz	L2PT 1246MHz	L1CR 1575.42MHz	L1PT 1602MHz		
	☐	☐	☐	☒	☒		
Galileo	E5a 1176.45MHz	E5b 1201.5MHz	E4 1215MHz	E3 1256MHz	E6 1278.75MHz	E2 1561MHz	E1 1575.42MHz
	☐	☐	☐	☐	☐	☐	☒
BeiDou	B1 1561MHz	B2 1207.14MHz	B3 1268.52MHz				
	☒	☐	☐				
Compass	E5B(B2)/ E6(B3) 1268.56MHz	E2(B1) 1561MHz					
	☐	☒					
SBAS	Omnistar 1542.5MHz	WAAS/EGN OS 1575.42MHz					
	☐	☒					

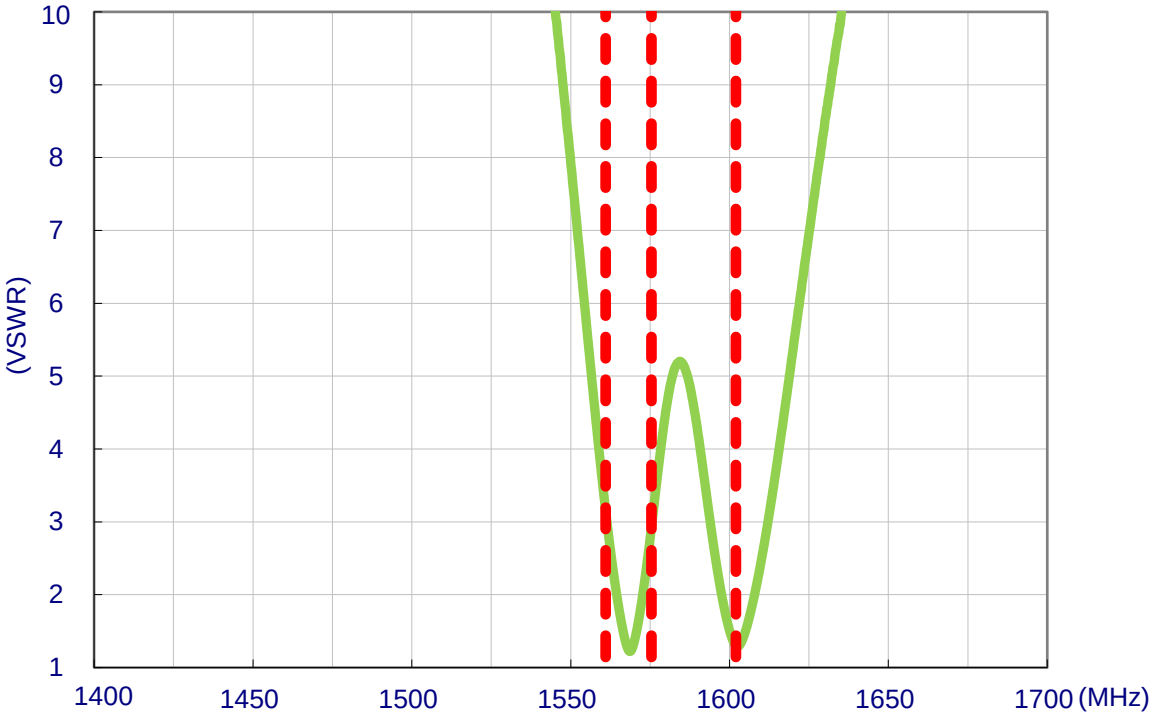
Electrical			
Frequency	BeiDou	GPS/GALILEO	GLONASS
	1561MHz	1575.42MHz	1602MHz
Efficiency (%)	49.8	46.5	60.1
Average Gain (dBi)	-3.03	-3.33	-2.21
Peak Gain (dBi)	2.44	1.72	1.67
Impedance	50Ω		
Polarization	RHCP		



LNA Specification			
Gain (dB)	14.8 ± 1	15.0 ± 1	15.0 ± 1
NF (dB)	2.4 ± 0.2	1.9 ± 0.2	2.2 ± 0.2
Input Voltage	+1.8 to +5 VDC		
Power Consumption	3 to 24.5mA typical		
Out-Of-Band Attenuation (dB)	10-500MHz	> 60	
	500-850MHz	> 40	
	850-1000MHz	> 35	
	1000-1500MHz	> 25	
	1700-2300MHz	> 19	
	2300-5000MHz	> 30	
	5000-6000MHz	> 25	

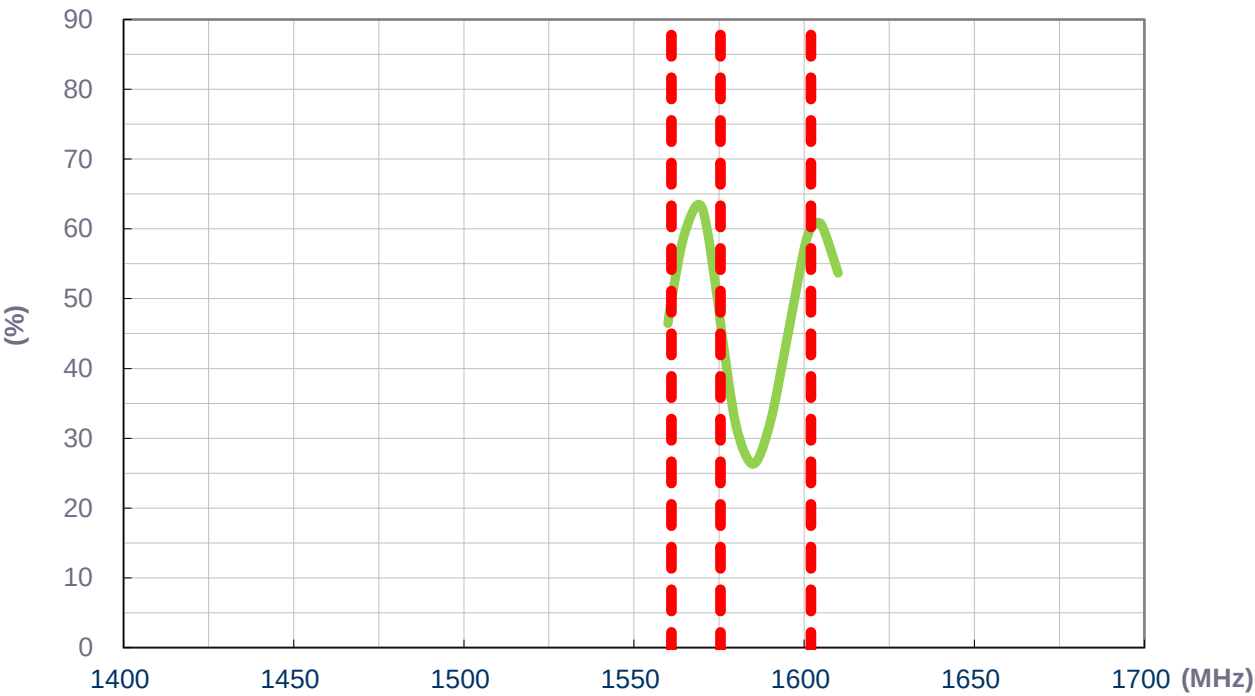
PLOTS

VSWR



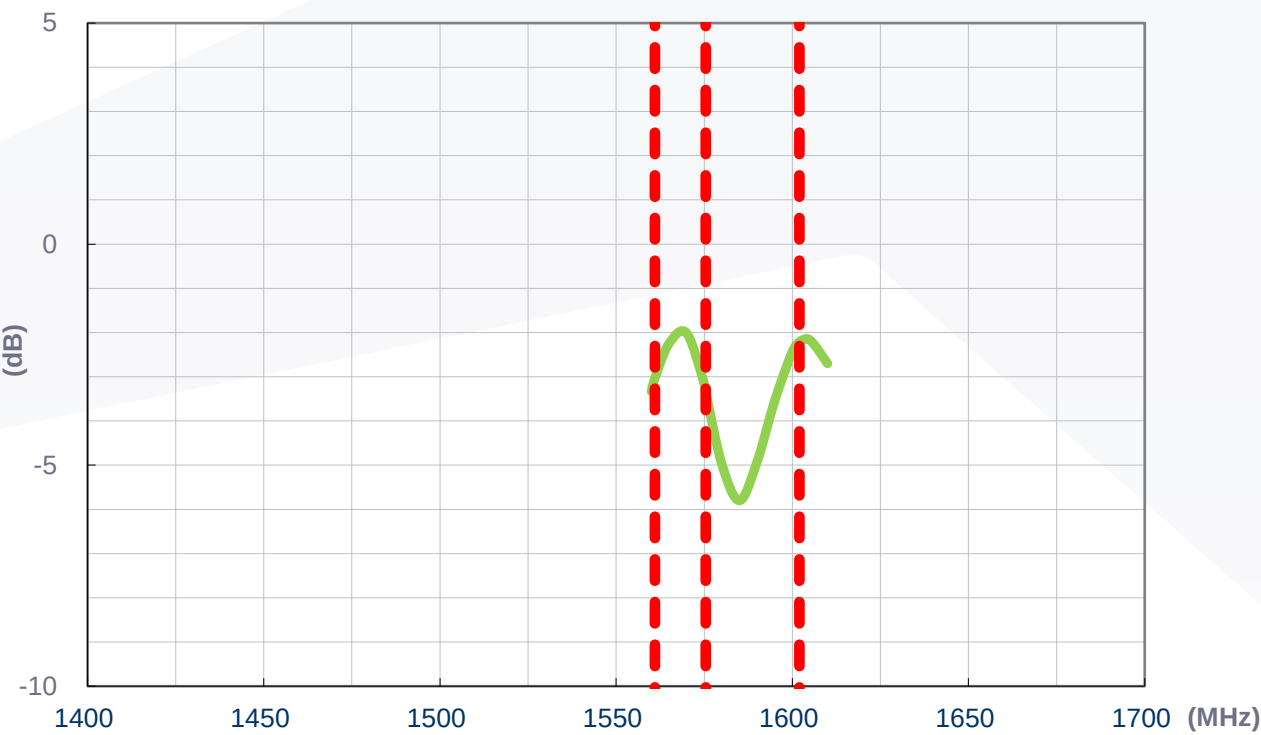


Efficiency

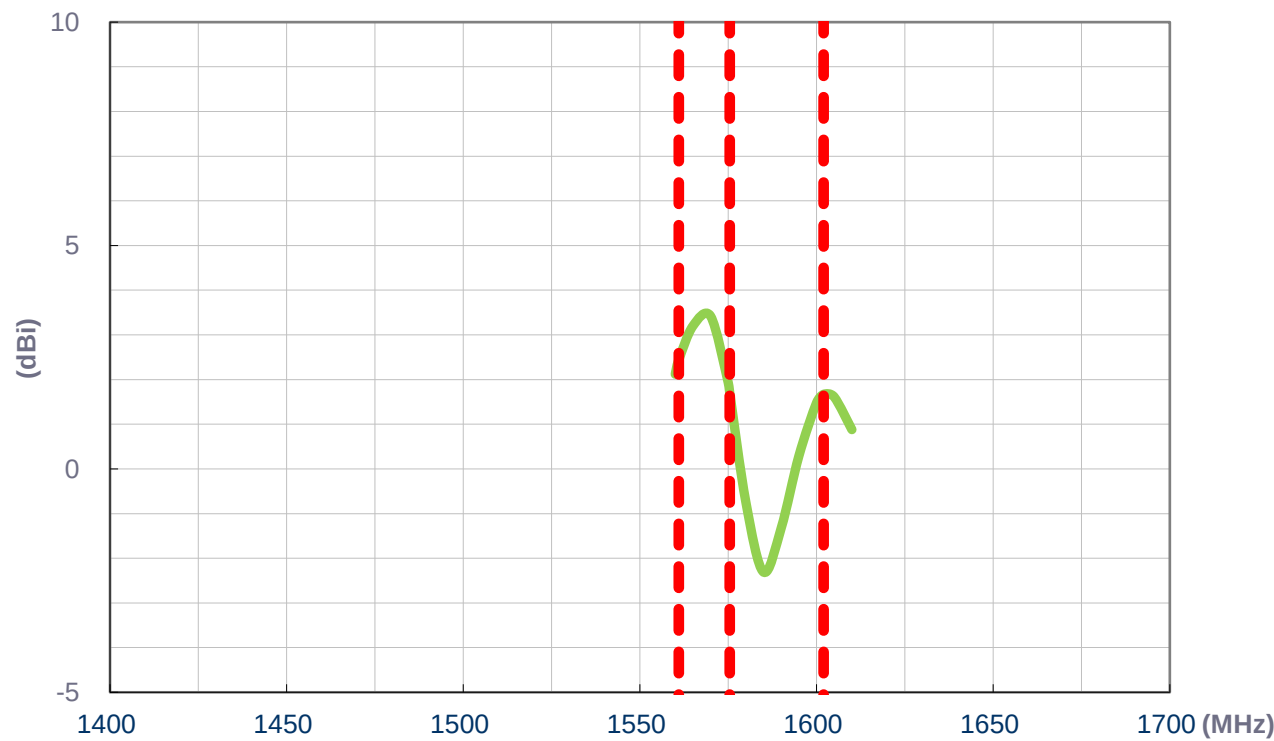




Average Gain



Peak Gain





DIMENSIONS

