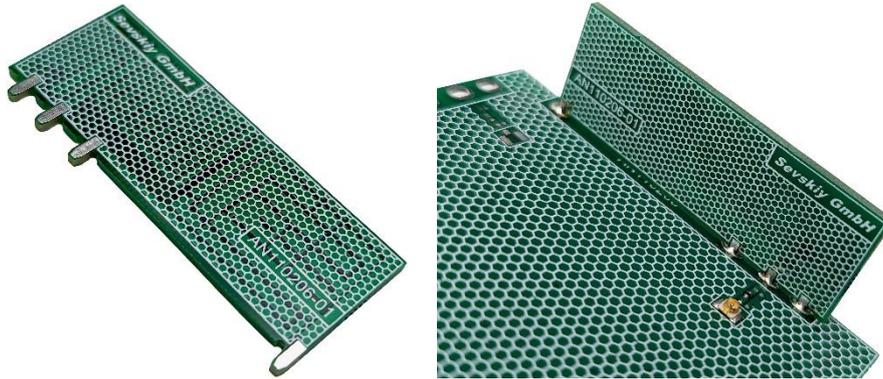


698 MHz / 960 MHz / 1710 MHz / 2700 MHz / 3300 MHz / 5925 MHz PCB Antenna (5G, LTE, Wi-Fi, IoT)



General information

This small antenna is intended to be soldered to the main PCB of a mobile device, a router or a gateway. On request, the antenna geometry can be optimized for customer's housing design and material properties.

Typical applications

5G NR, LTE, 3G, GSM, CDMA, DCS, PCS, WCDMA, UMTS, HSPDA, GPRS, EDGE, IMT, Wi-Fi, IoT

Electrical data

Antenna type	Embedded / internal antenna soldered on the main PCB				
5G bands	1 - 3, 5, 7, 8, 12 - 14, 18, 20, 25, 26, 28 - 30, 34, 38 - 41, 46 - 48, 53, 65, 66, 70, 77 - 84, 86, 89, 90, 91u - 94u, 95, 97, 98				
4G bands	1 - 14, 17 - 20, 22 - 30, 33 - 44, 46 - 49, 52, 53, 65 - 70, 85				
Frequency range [MHz]	698...960	1695...2700	3300...4200	4400...5000	5150...5925
Return loss [dB] ¹⁾	-10	-10	-6	-10	-7
Peak gain [dBi]	-0.3	0.8	3.4	5.1	2.2
Radiation efficiency [%]	46	42	58	53	48
Nominal input impedance [Ohm]	50				
Polarization	linear				
Radiation pattern	omnidirectional				
Maximum input power [W]	5				

Mechanical data

Antenna PCB dimensions [mm]	55 x 22.5 x 1.6
PCB material	FR4
Weight [g]	4

Environmental data

Operating temperature [°C]	-40...+85
Storage temperature [°C]	-40...+85
Ambient relative humidity [%]	0...95
RoHS / REACH compliant	yes / yes

Additional information

All electrical data have been obtained in free space on the reference board (not included) with the following dimensions: 130mm x 65mm x 0.8mm. Please note that the performance in the lower frequency bands is dependent on the ground plane length and may degrade in case of reducing the board size.

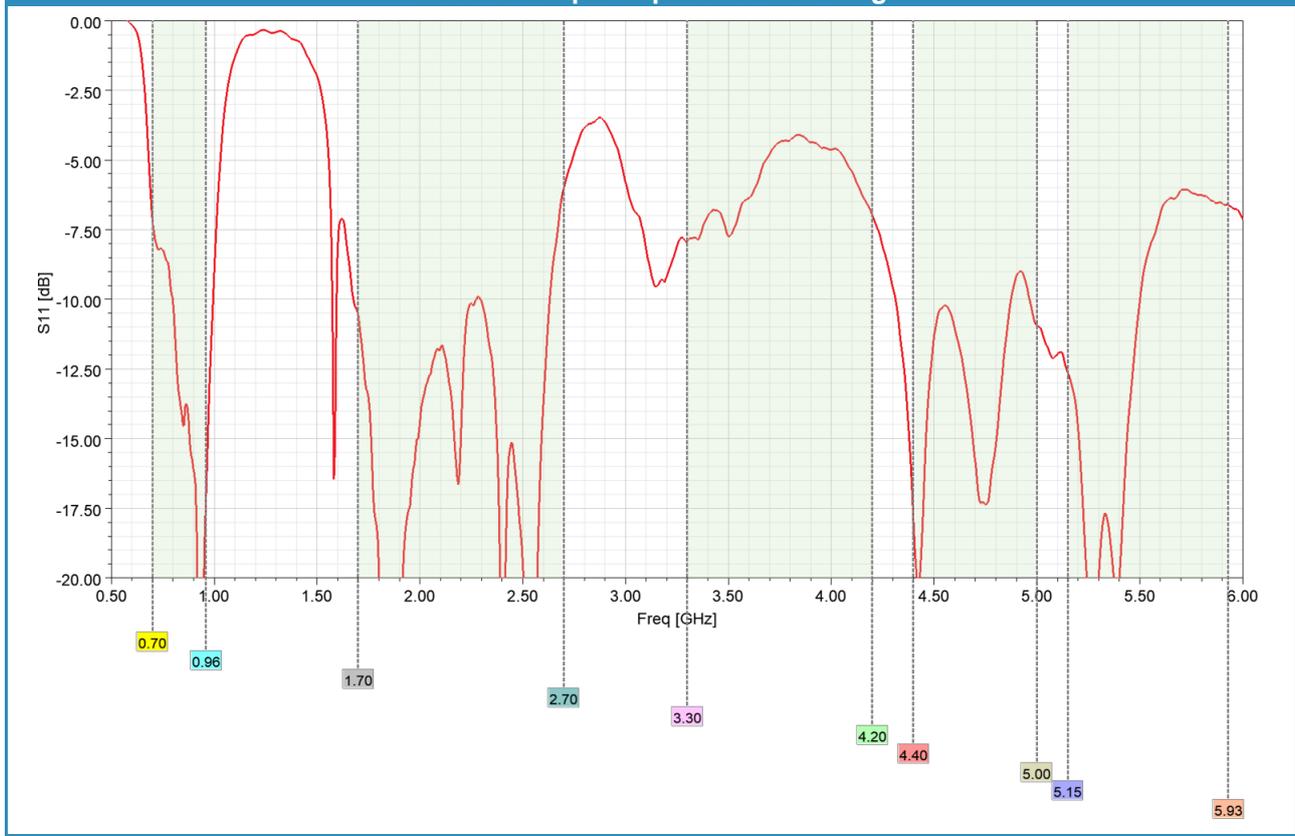
Other mechanical designs, materials or frequency bands are possible on request.

Further customization, electromagnetic simulations and measurements can be offered on request.

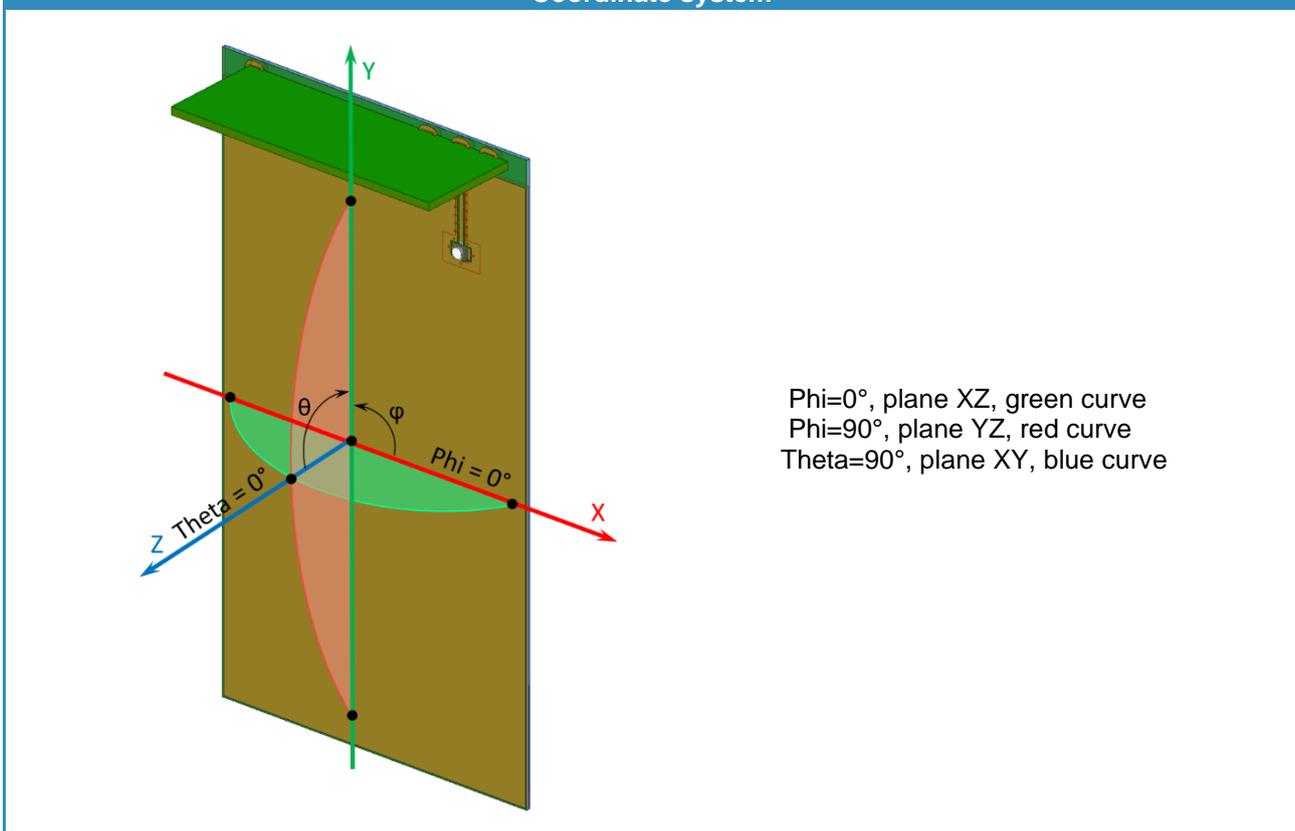
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698 MHz / 960 MHz / 1710 MHz / 2700 MHz / 3300 MHz / 5925 MHz PCB Antenna (5G, LTE, Wi-Fi, IoT)

Measured input impedance matching



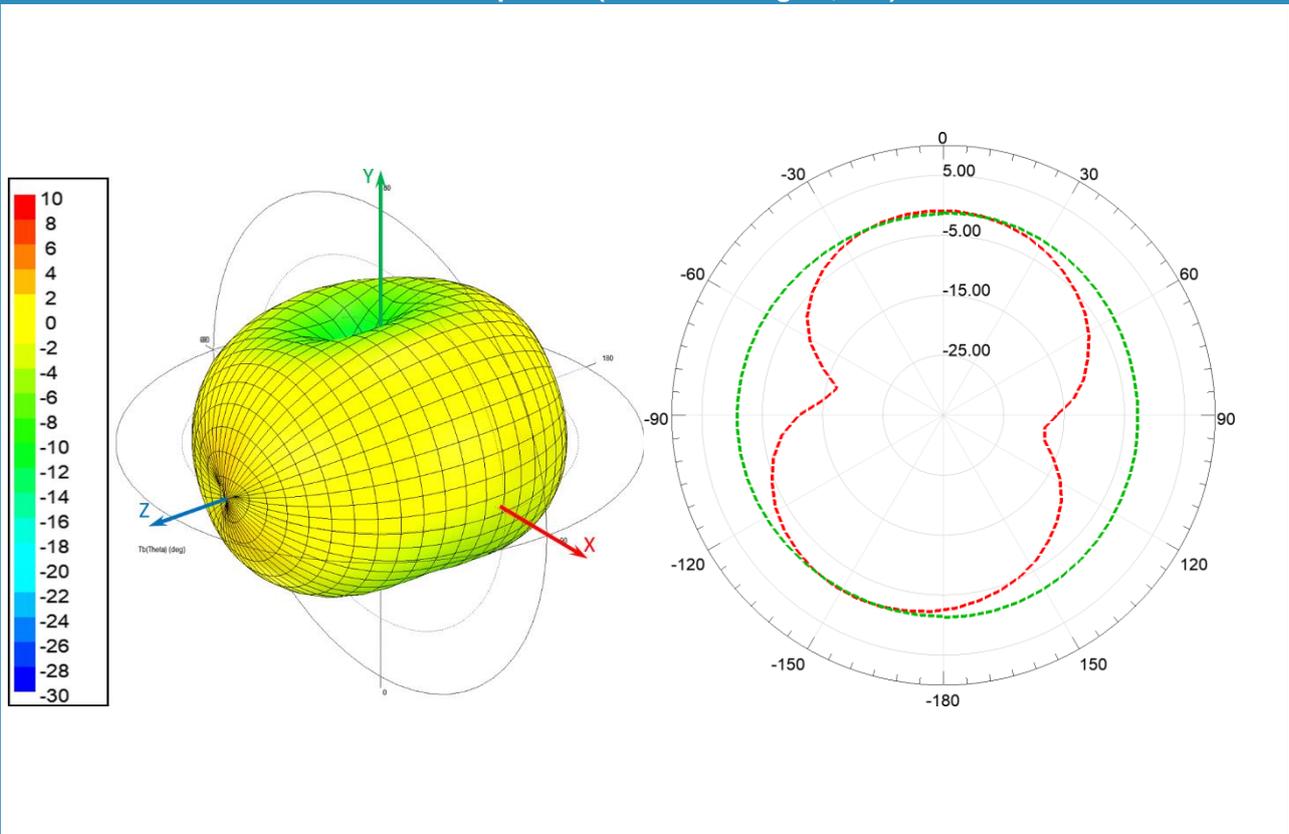
Coordinate system



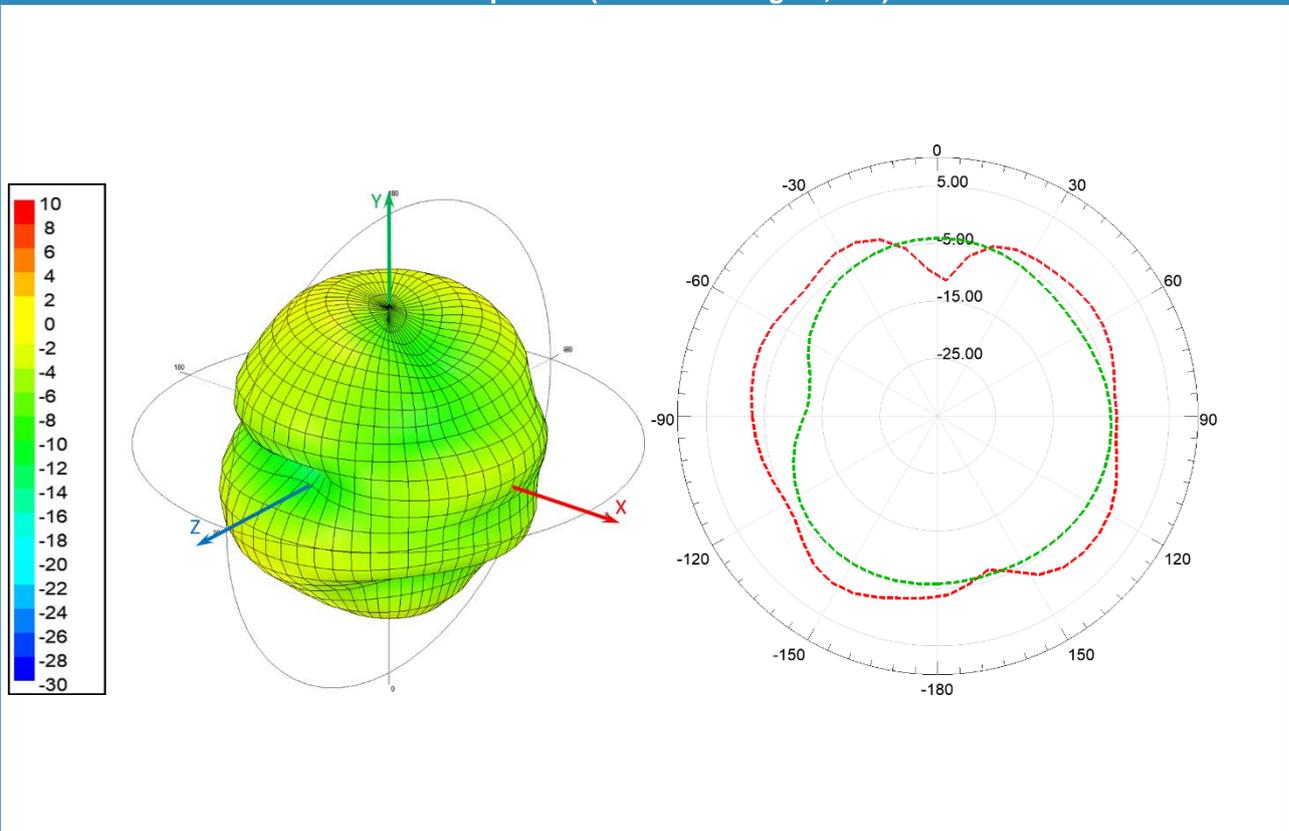
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698 MHz / 960 MHz / 1710 MHz / 2700 MHz / 3300 MHz / 5925 MHz PCB Antenna (5G, LTE, Wi-Fi, IoT)

Measured radiation pattern (total realized gain, dBi) at 780 MHz



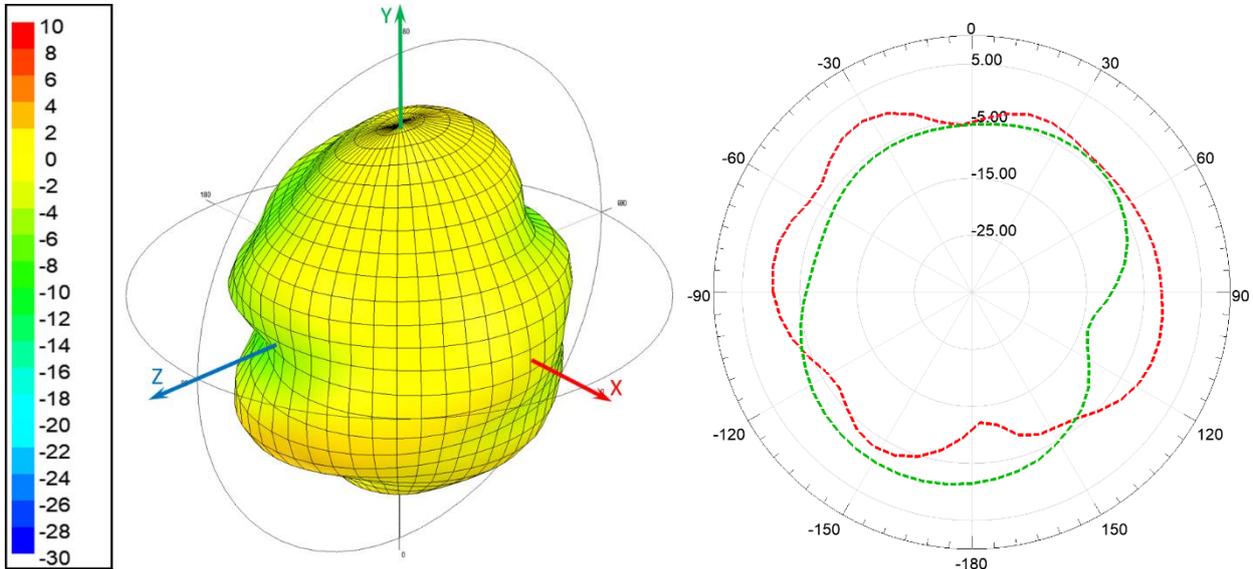
Measured radiation pattern (total realized gain, dBi) at 1800 MHz



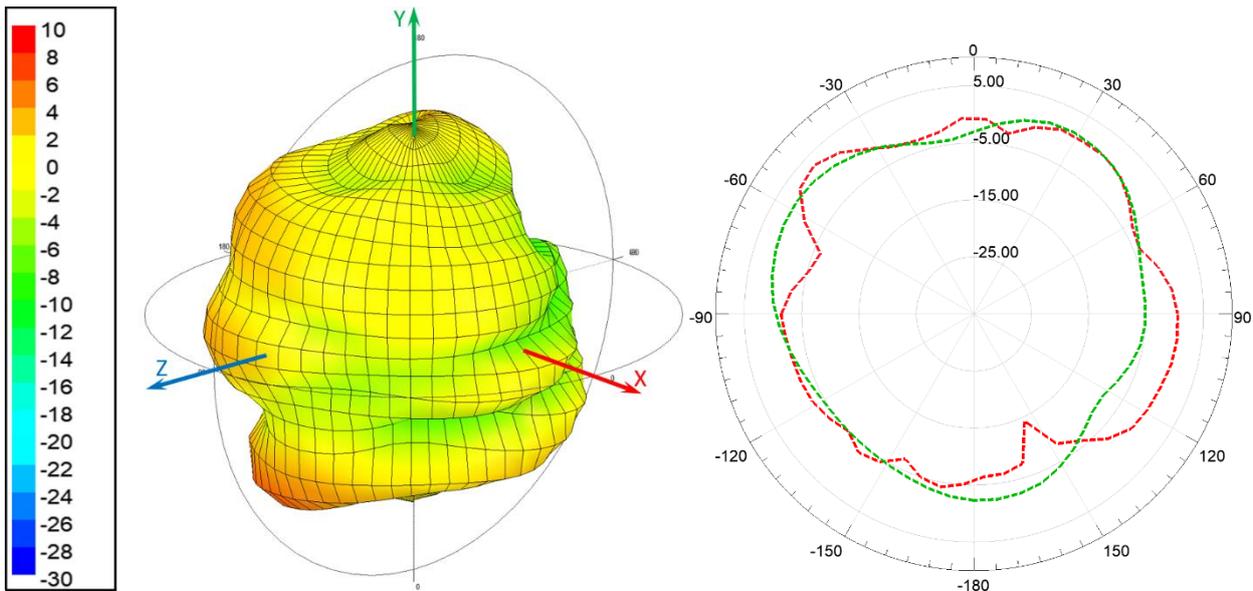
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698 MHz / 960 MHz / 1710 MHz / 2700 MHz / 3300 MHz / 5925 MHz PCB Antenna (5G, LTE, Wi-Fi, IoT)

Measured radiation pattern (total realized gain, dBi) at 2200 MHz



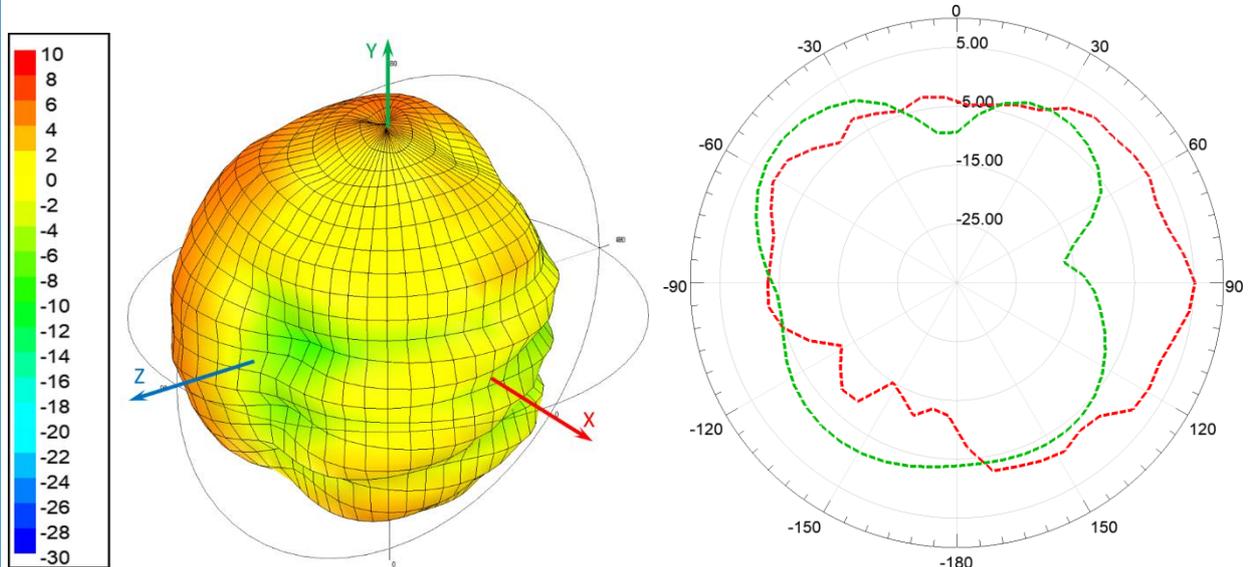
Measured radiation pattern (total realized gain, dBi) at 3650 MHz



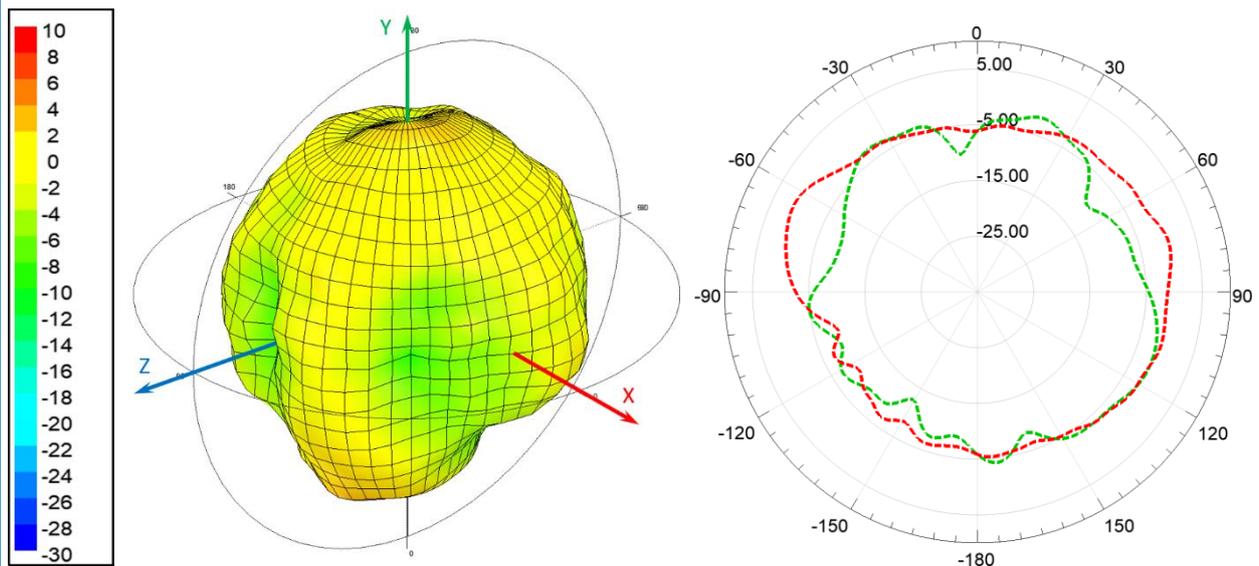
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698 MHz / 960 MHz / 1710 MHz / 2700 MHz / 3300 MHz / 5925 MHz PCB Antenna (5G, LTE, Wi-Fi, IoT)

Measured radiation pattern (total realized gain, dBi) at 4400 MHz



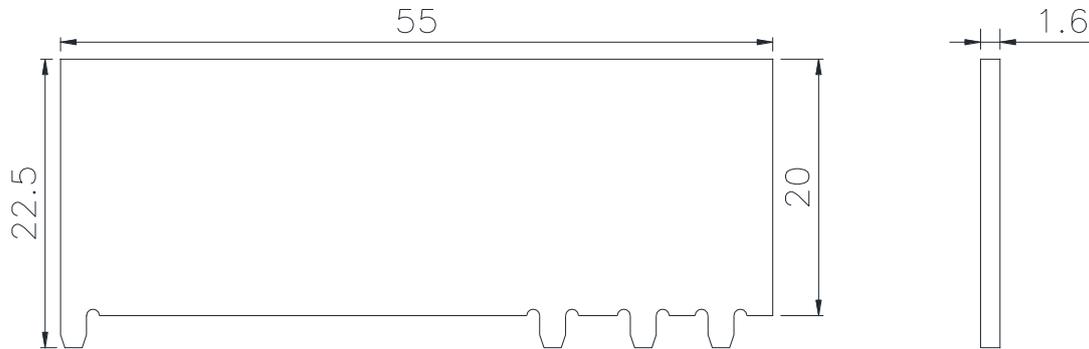
Measured radiation pattern (total realized gain, dBi) at 5500 MHz



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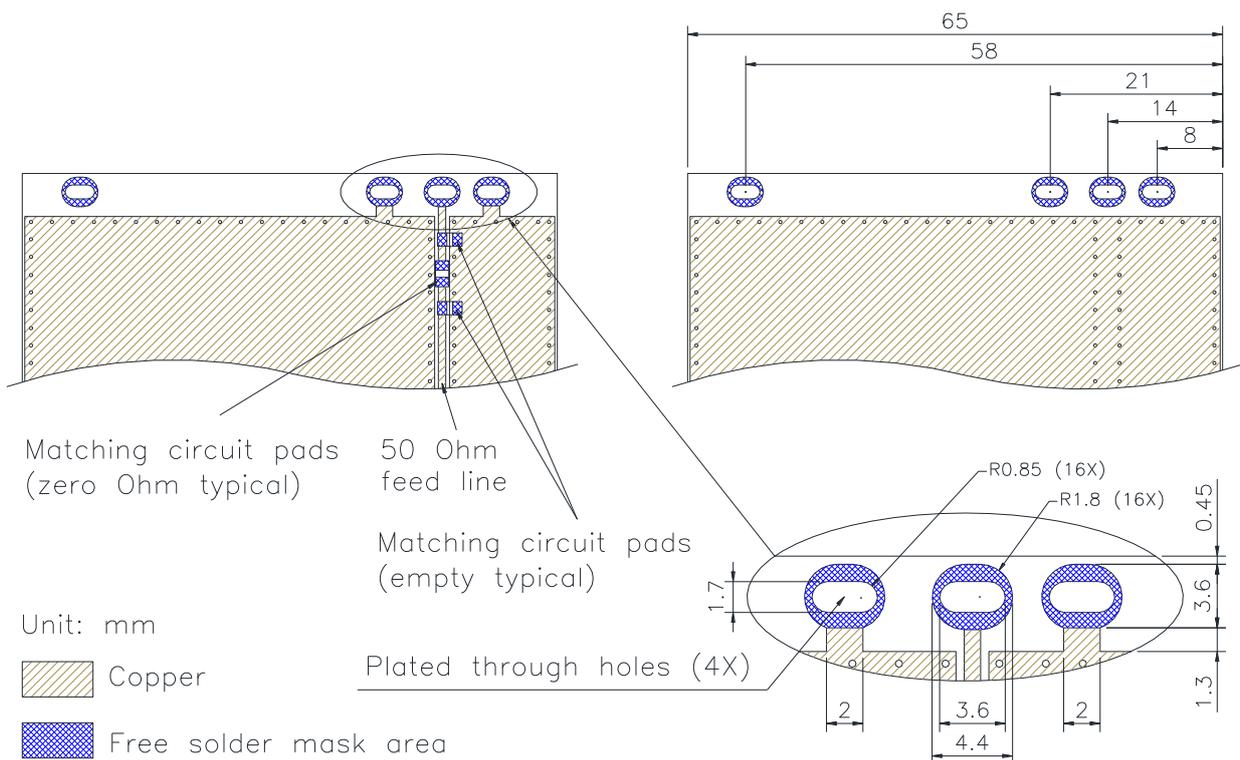
698 MHz / 960 MHz / 1710 MHz / 2700 MHz / 3300 MHz / 5925 MHz PCB Antenna (5G, LTE, Wi-Fi, IoT)

Product dimensions and recommended layout



Top layer

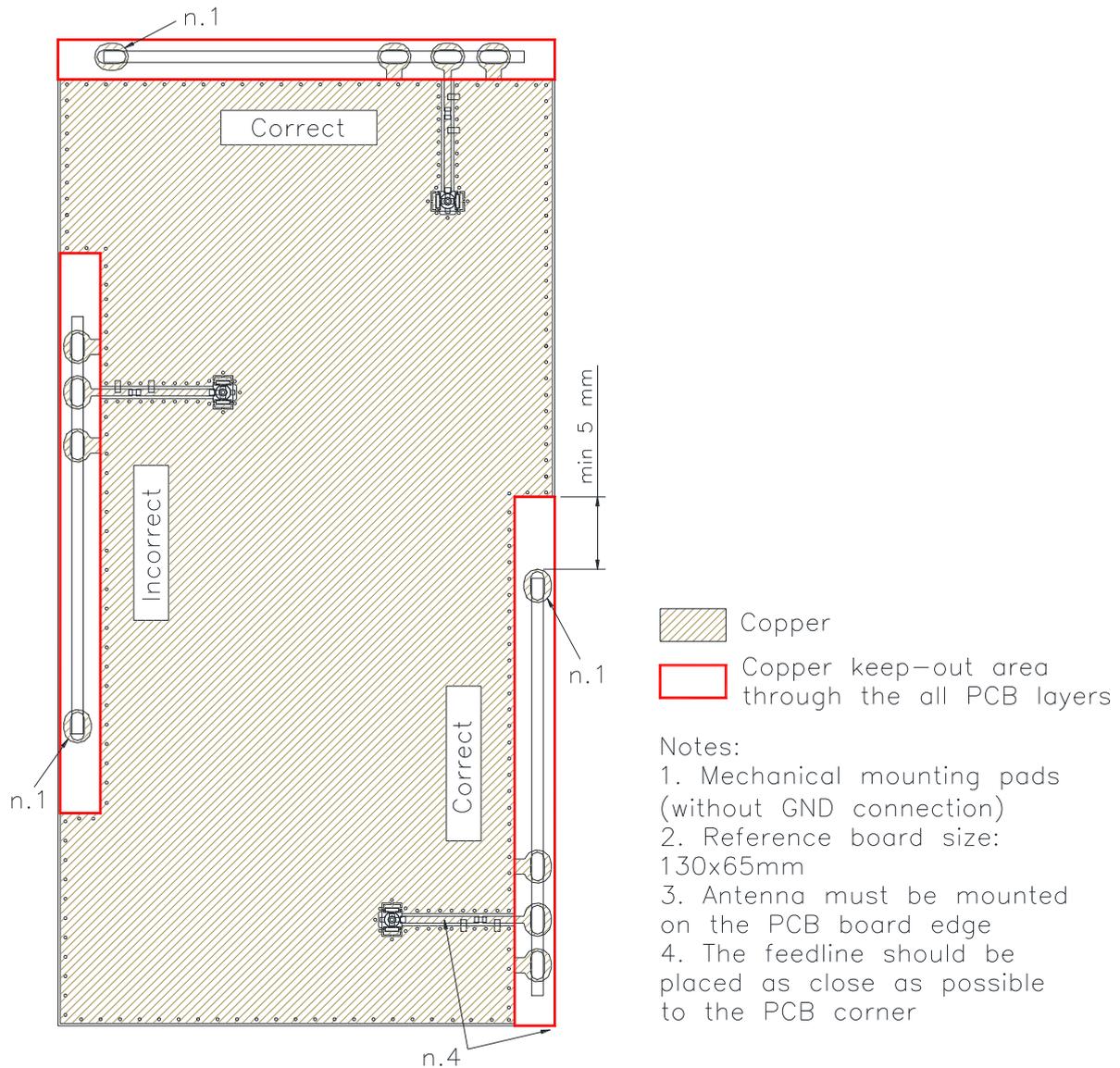
Bottom layer



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698 MHz / 960 MHz / 1710 MHz / 2700 MHz / 3300 MHz / 5925 MHz PCB Antenna (5G, LTE, Wi-Fi, IoT)

Antenna placement



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