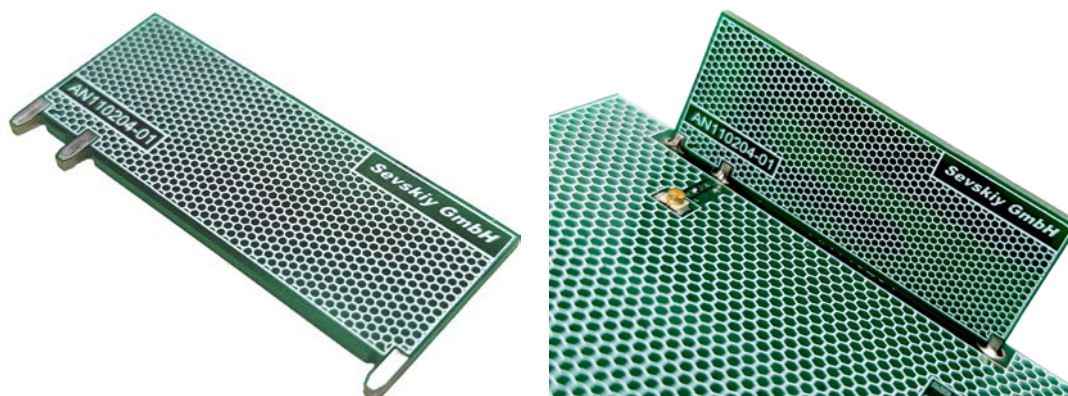


824...960 MHz / 1710...2170 MHz PCB Antenna (5G, LTE, IoT, GSM, CDMA, UMTS, EDGE)



General information

This high-performance PCB antenna provides reliable multi-band operation across 824...960 MHz and 1710...2170 MHz, supporting a wide range of 5G, LTE/4G, GSM, UMTS, CDMA, and EDGE networks. Its wideband design ensures stable connectivity for mobile devices, routers, gateways, tracking modules, and advanced IoT/M2M equipment. It offers excellent compatibility with modern wireless platforms, making it a versatile choice for multi-standard applications. Thanks to its compact size and easy integration, the antenna is well suited for space-constrained products requiring robust cellular links.

The antenna is manufactured on a PCB and equipped with three contacts for vertical solder mounting along the edge of the device's primary circuit board. A corresponding footprint must be included to provide both mechanical stability and proper electrical connection. Once installed, the antenna stands perpendicular to the main board, ensuring reliable performance even in compact enclosures.

Electrical data

Antenna type	Embedded / internal antenna soldered on the main PCB	
5G bands	1, 2, 3, 5, 8, 18, 25, 26, 34, 39, 65, 66, 70, 80 - 82, 84, 86, 89, 95, 98	
4G bands	1 - 6, 8 -10, 18 - 20, 23, 25 - 27, 33 - 37, 39, 65, 66, 70	
Frequency range [MHz]	824...960	1710...2170
Return loss [dB] ¹⁾	-8	-10
Peak gain [dBi]	1.9	3.6
Radiation efficiency [%]	80	70
Nominal input impedance [Ohm]	50	
Polarization	linear	
Radiation pattern	omnidirectional	
Maximum input power [W]	5	

Mechanical data

Antenna PCB dimensions [mm]	47.7 x 21.4 x 1.6
PCB material	FR4
Weight [g]	3

Additional information

All electrical data have been obtained in free space on the reference board (not included) with the following dimensions: 125mm x 60mm 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.

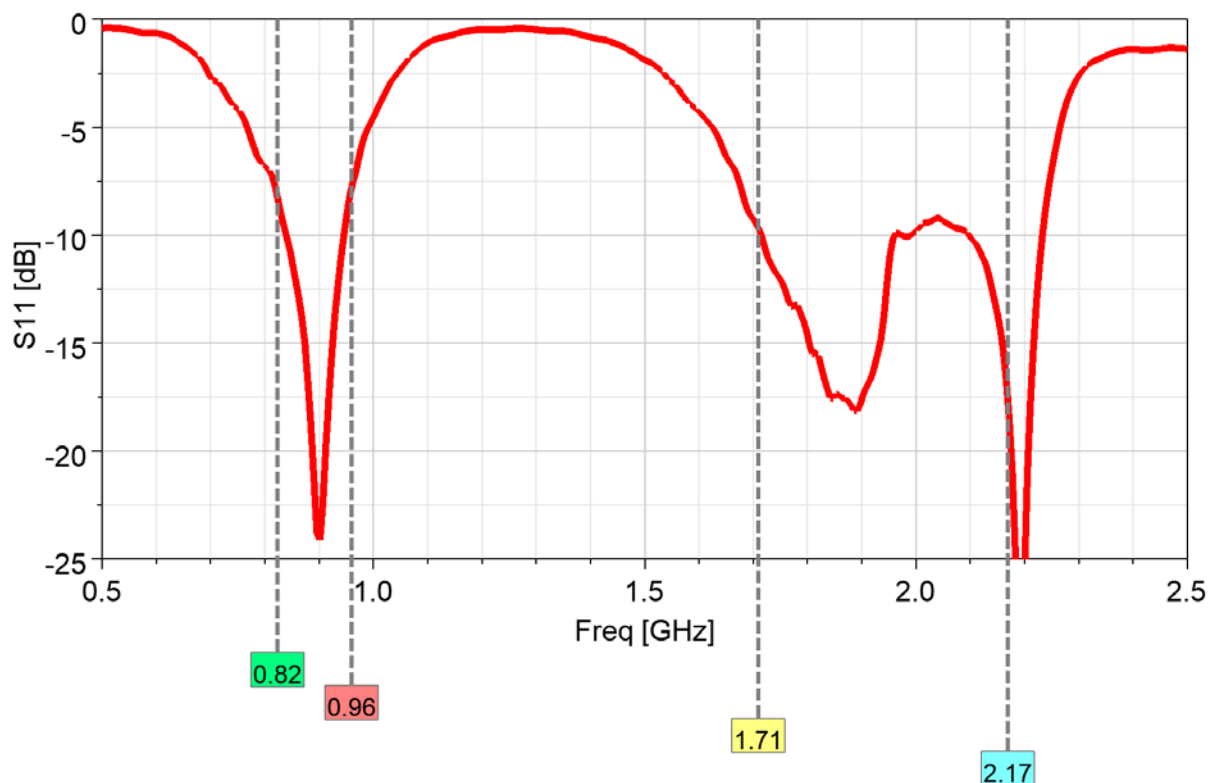
Other mechanical designs, materials or frequency bands are possible on request.

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

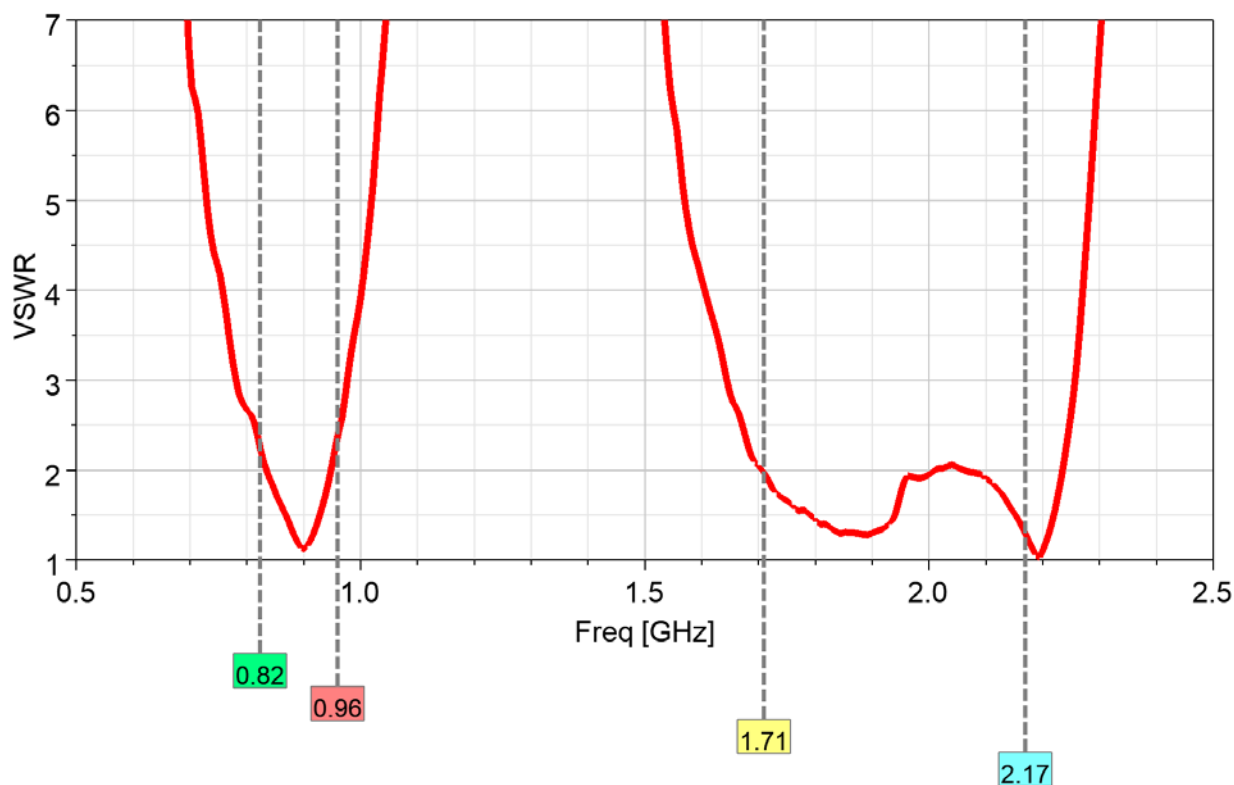
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824...960 MHz / 1710...2170 MHz PCB Antenna (5G, LTE, IoT, GSM, CDMA, UMTS, EDGE)

Measured input impedance matching



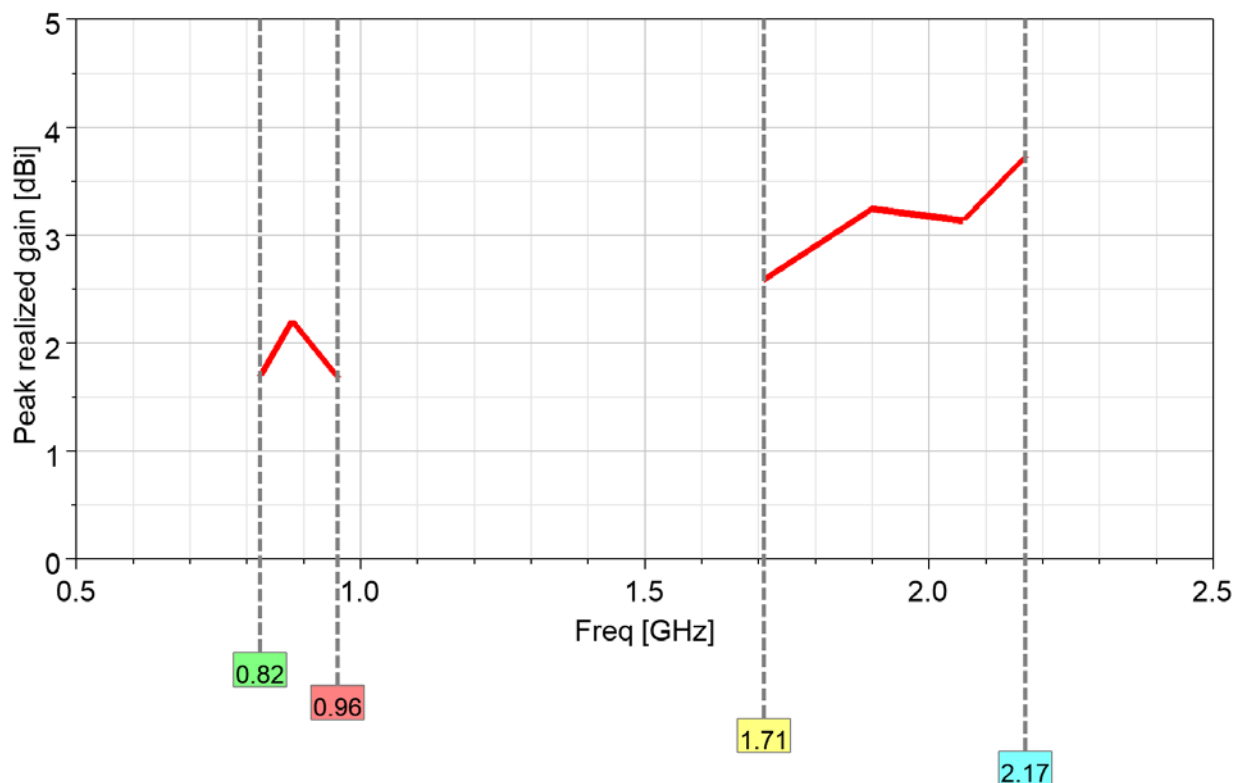
VSWR



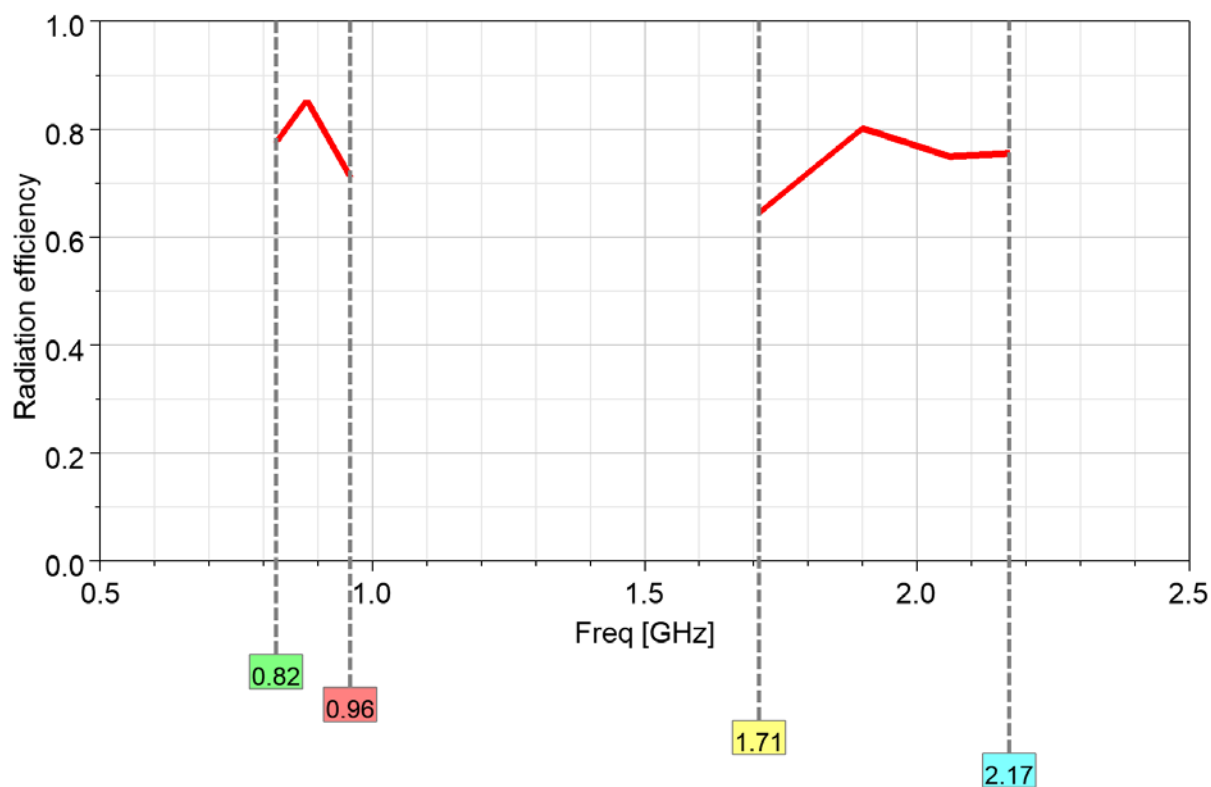
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Peak realized gain



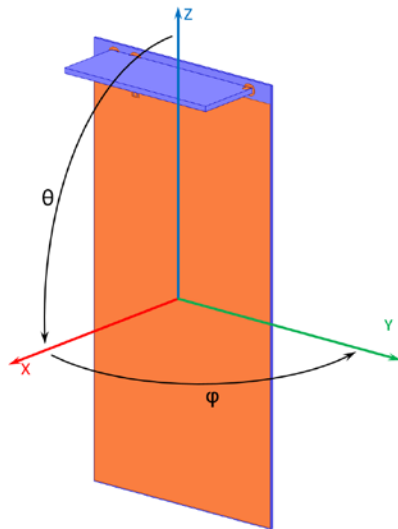
Radiation efficiency



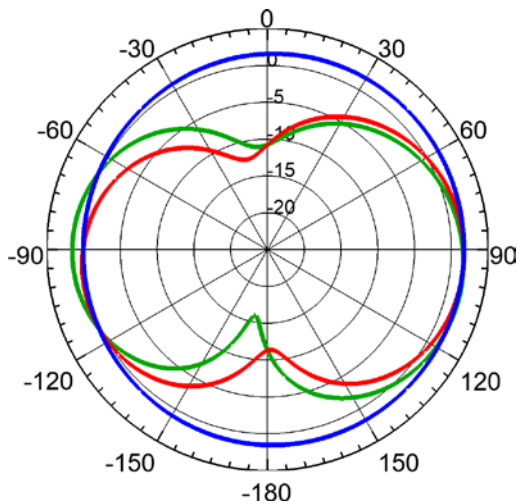
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824...960 MHz / 1710...2170 MHz PCB Antenna (5G, LTE, IoT, GSM, CDMA, UMTS, EDGE)

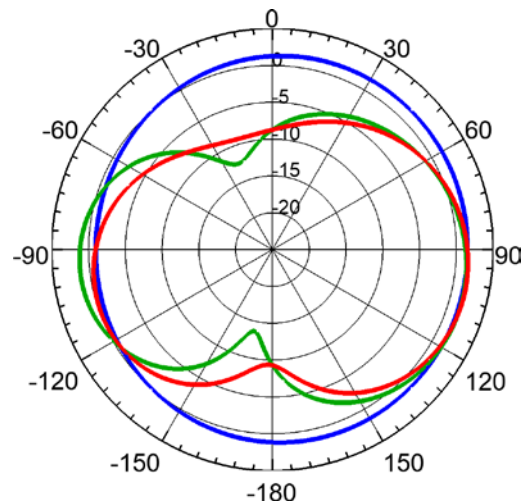
Radiation pattern



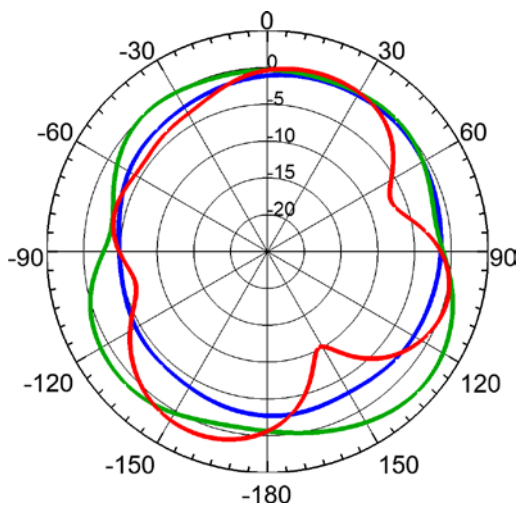
Total realized gain [dBi]
Phi=0°, plane XZ, green curve
Phi=90°, plane YZ, red curve
Theta=90°, plane XY, blue curve



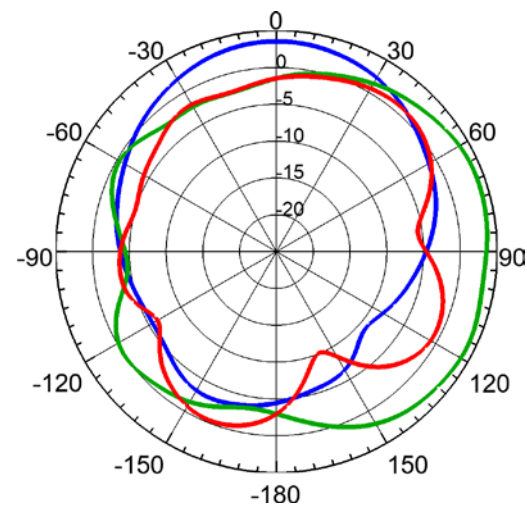
824 MHz



960 MHz



1710 MHz

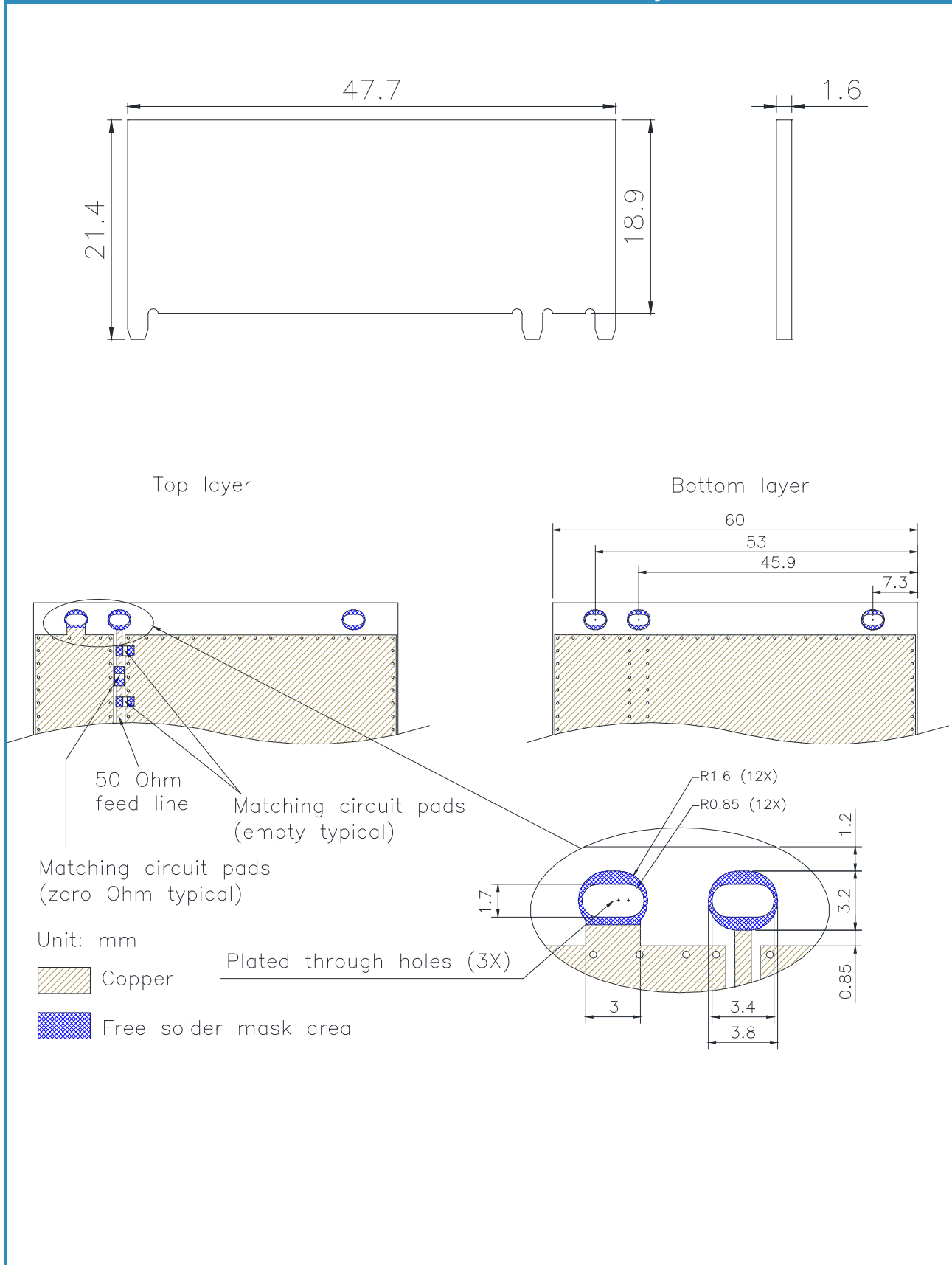


2170 MHz

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824...960 MHz / 1710...2170 MHz PCB Antenna (5G, LTE, IoT, GSM, CDMA, UMTS, EDGE)

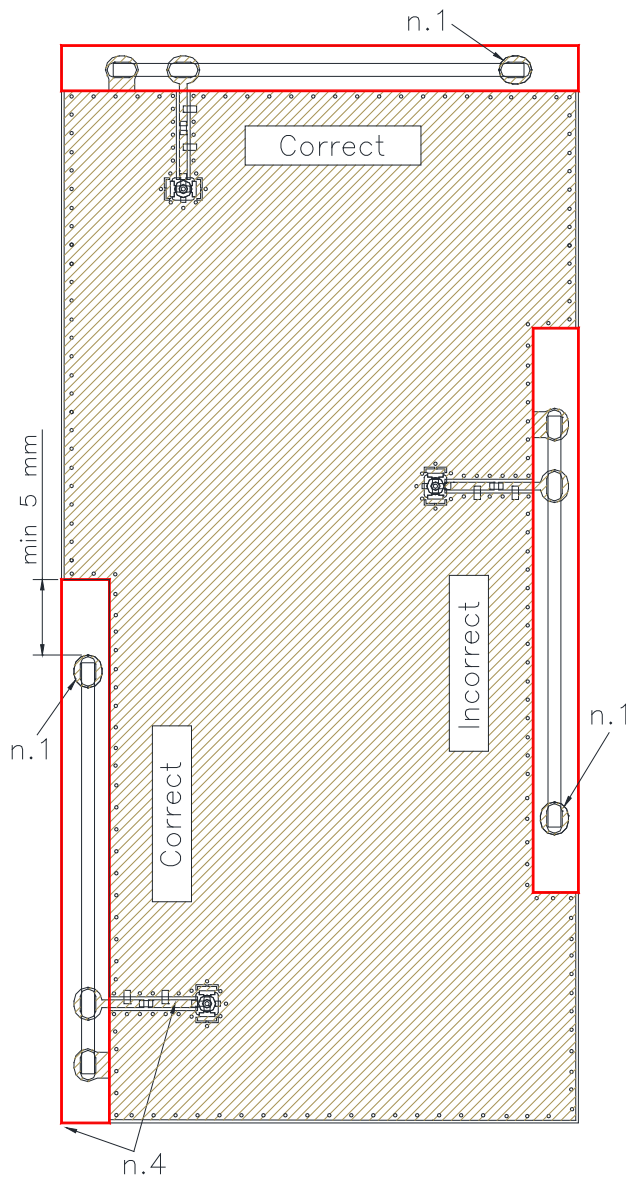
Product dimensions and recommended layout



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824...960 MHz / 1710...2170 MHz PCB Antenna (5G, LTE, IoT, GSM, CDMA, UMTS, EDGE)

Antenna placement



-  Copper
-  Copper keep-out area through the all PCB layers

Notes:

1. Mechanical mounting pads (without GND connection)
2. Reference board size: 125x60mm
3. Antenna must be mounted on the PCB board edge
4. The feedline should be placed as close as possible to the PCB corner

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