



# MIKROTIK

**Mikrotiks SIA (SIA "Mikrotīks")**

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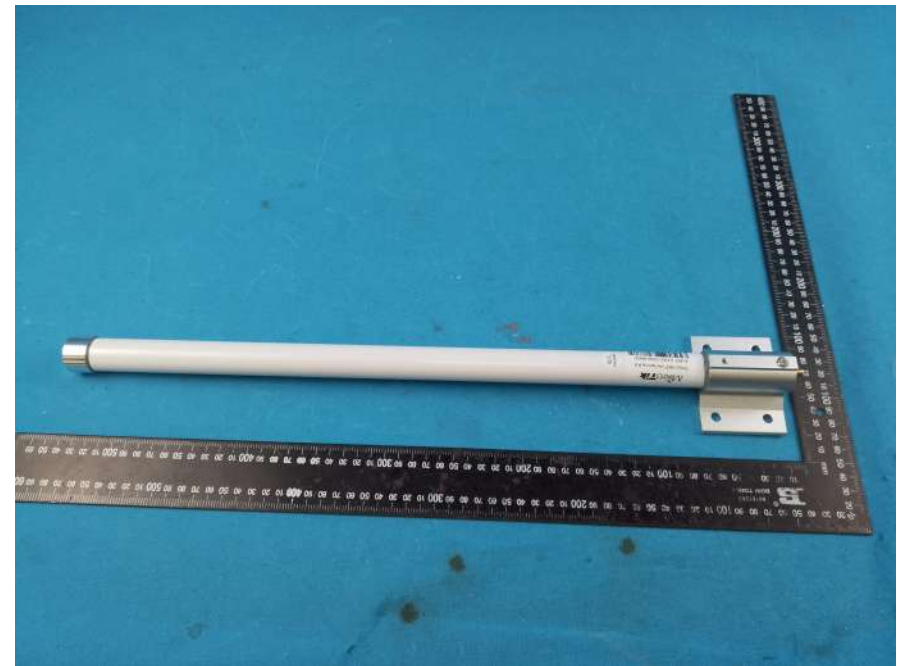
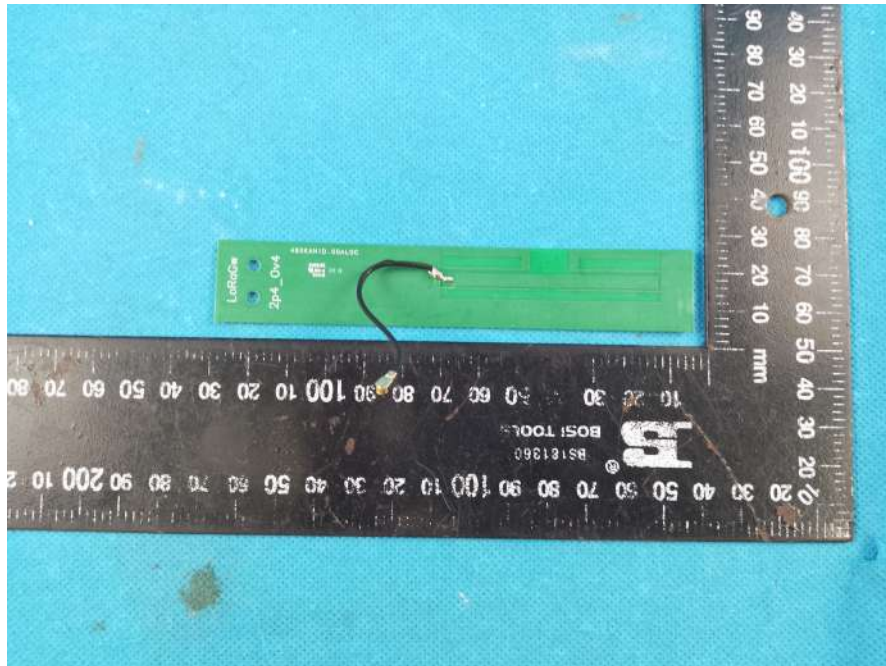
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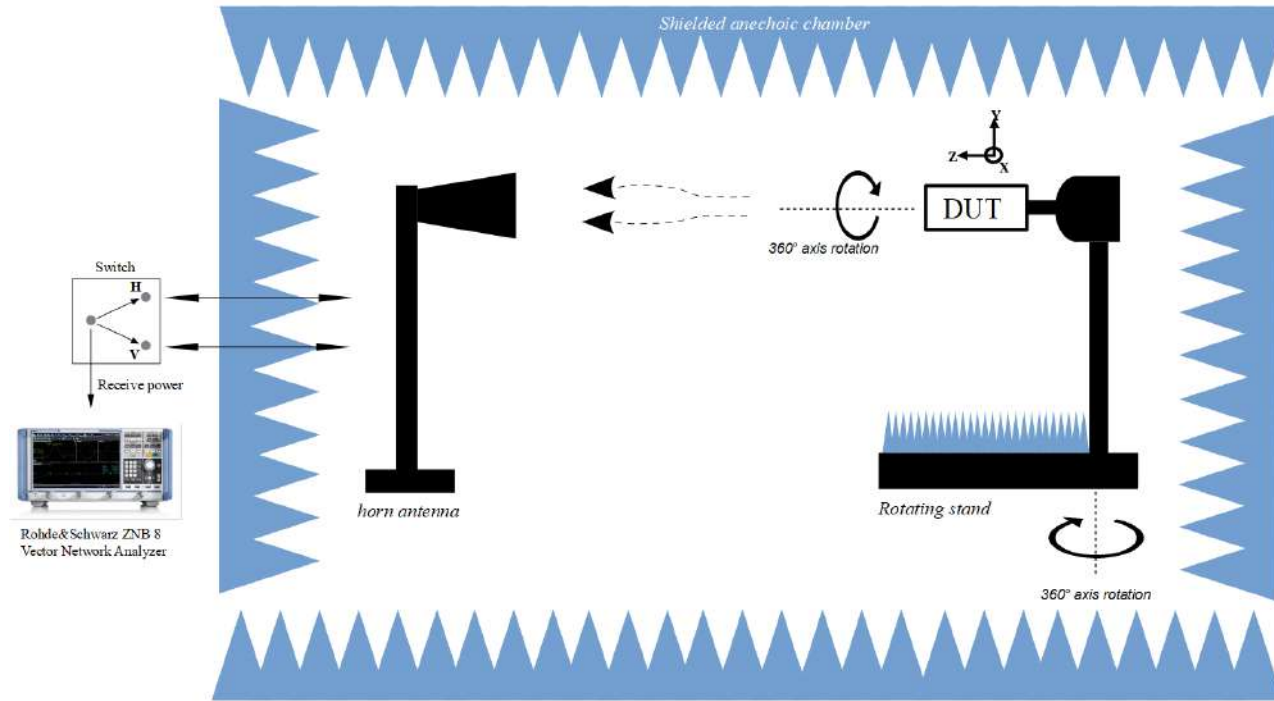
Email: Certification@mikrotik.com

## Antenna details - R11e-LR2

Ant No.	Number of Antennas	Type	Manufacturer	Model	Family	Peak Gain (dBi)	Dir BW	Frequency Band (MHz)
1	1	PCB	MikroTik	95XKAN15.GAE	PCB Omnidirectional	4.84	360	2400-2483.5
2	1	FRP	MikroTik	TOF-2400-8V-4	FRP Omnidirectional	8.8888	360	2400-2483.5



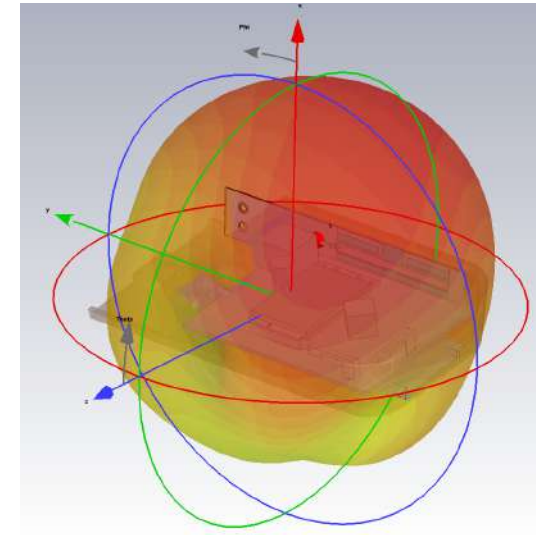
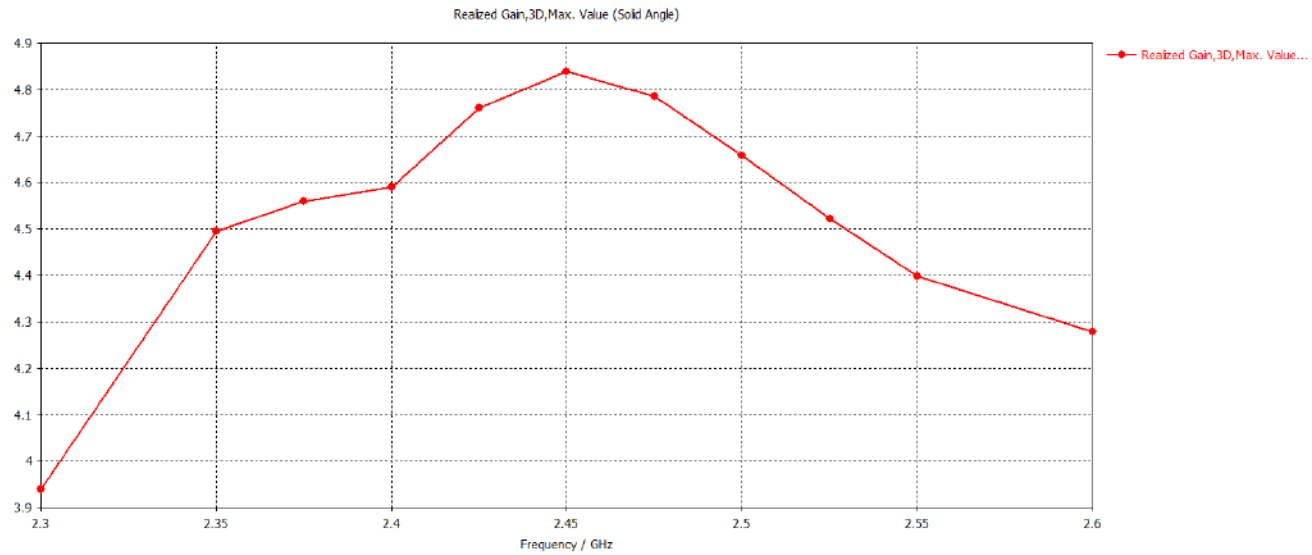
## Antenna Gain Testing Setup



Explanation: Antenna testing is performed using the test setup above. Antenna gain is measured in 3d plane. The measurements are then taken and ran through CST studio Time domain solver simulation system to draw Antenna peak gain diagram. Simulation is performed taking into account pcb with components, case desing, heatsink and etc.

## Realized antenna gain Diagram

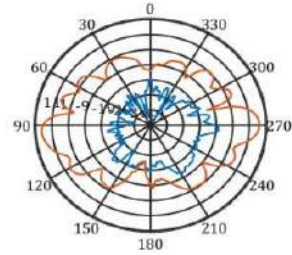
Antenna No. 1



Antenna No. 2

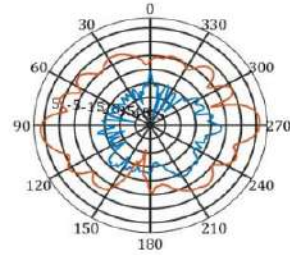
Frequency (MHz)	Gain [dBi]	H BW (°)	V BW (°)	Roundness (dB) (90°)	Roundness (dB) (60°)
2400	8.757	360	14.5144	2.4126	3.1838
2450	8.8888	360	14.386	2.4463	4.6774
2500	8.6843	265	13.4262	2.1889	7.3618

2D Pattern: @phi=90(elevation)



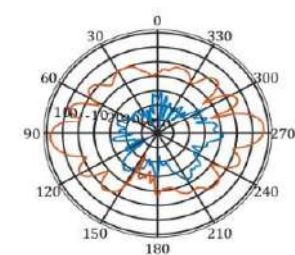
f=2400MHz,@Y-Z plane

2D Pattern: @phi=90(elevation)



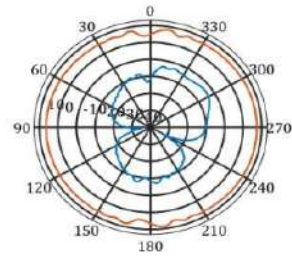
f=2450MHz,@Y-Z plane

2D Pattern: @phi=90(elevation)



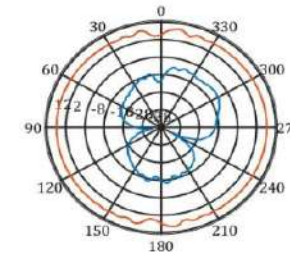
f=2500MHz,@Y-Z plane

2D Pattern: @theta=90+tilt(azimuth)



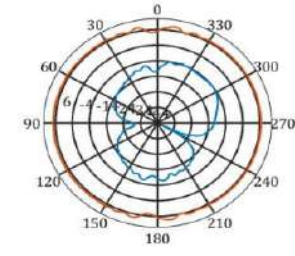
f=2400MHz,X-Y Plane

2D Pattern: @theta=90+tilt(azimuth)



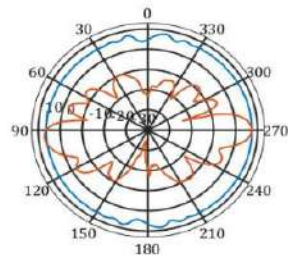
f=2450MHz,X-Y Plane

2D Pattern: @theta=90+tilt(azimuth)



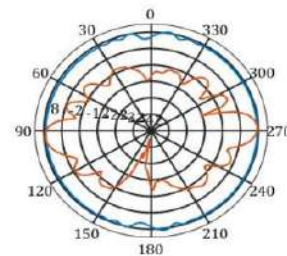
f=2500MHz,X-Y Plane

2D Pattern: Co#2-cuts



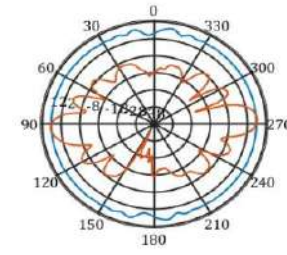
f=2400MHz,Co@2-cuts

2D Pattern: Co#2-cuts



f=2450MHz,Co@2-cuts

2D Pattern: Co#2-cuts



f=2500MHz,Co@2-cuts