



# Part No. X1006059-W1DRMB

## Compact External 2.4 GHz Antenna

2400 – 2485 MHz

Supports: Wi-Fi applications, Bluetooth, BLE, ISM, ZigBee, WLAN, Matter, Thread



KYOCERA AVX series of External Antennas deliver on the key needs of device designers for higher functionality and performance in IoT environment.

This 2.4GHz terminal antenna offers high performance in small form factor ideal to use for reference kits and demo boards. The antenna can be mounted easily to the device via RP-SMA for indoor applications.

This antenna is measured in Free Space and with 50 x 100 mm PCB.

### External 2.4 GHz Antenna

2400 – 2485 MHz

#### KEY BENEFITS

##### Reduced Costs and Time-to-Market

Standard antenna eliminates design fees and cycle time associated with a custom solution; getting products to market faster.

##### Quicker Time-to-Market

By optimizing antenna size, performance and emissions, customer and regulatory specifications are more easily met. A variety of standard connectors are available upon request

##### Environmental Compliance

Comply with latest RoHS requirements

#### APPLICATIONS

- Healthcare (FDA Class I) Applications
- Smart Home networking / Gateway
- IoT, Industrial devices
- Tracking
- Sensing and Remote monitoring

### Electrical Specifications

Typical Characteristics, antenna measured in Free Space and with a 50 x 100 mm PCB

Frequency (MHz)	2400 - 2485	
	Free Space	With 50 x 100 mm PCB
VSWR	< 2:1	< 2:1
Average Efficiency	45%	64%
Peak Gain	2.3 dBi	3.1 dBi
Polarization	Linear	
Feed Point Impedance	50 ohm	

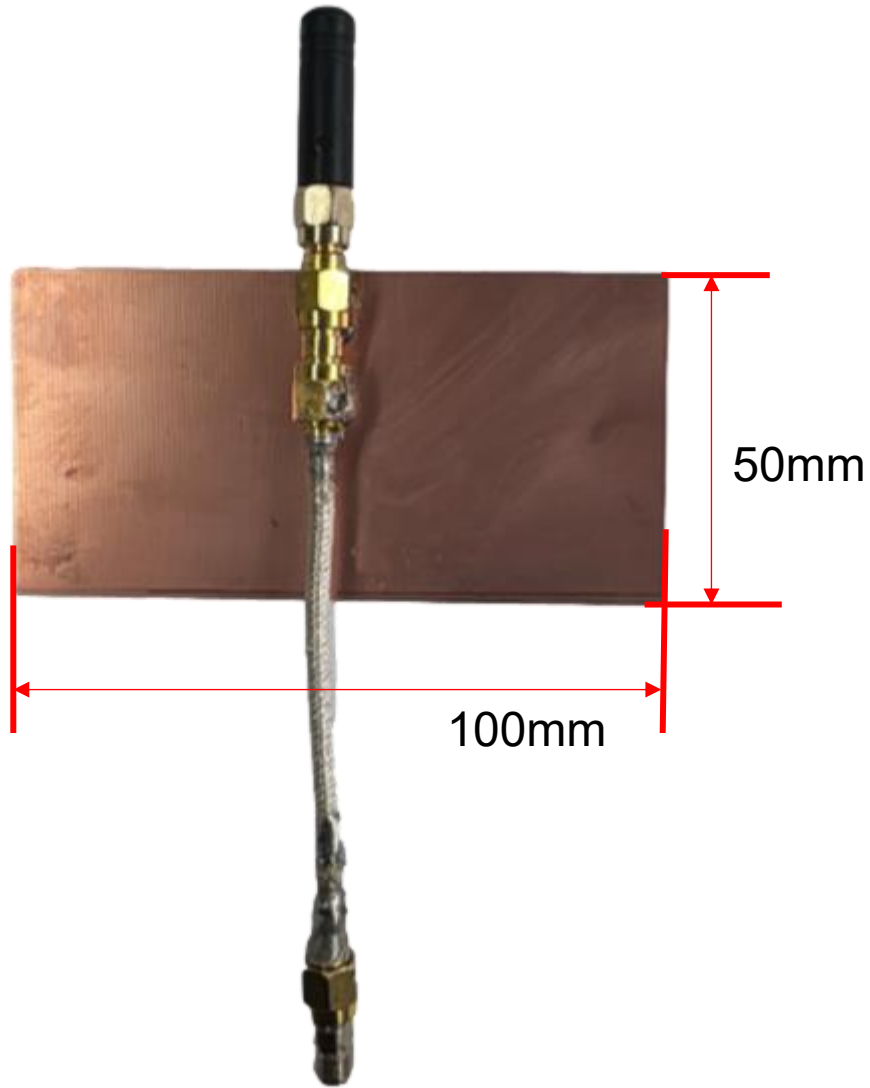
### Mechanical Specifications & Ordering Part Number

Ordering Part Number	X1006059-W1DRMB
Dimensions (mm)	35.0 height 8.25 diameter (Ø)
Connector Type	RP-SMA Connector Male
Weight (grams)	3.2
Color	Black
Operating Temperature (°C)	-30 to +70
Radome Material	PBT

Compact External Wi-Fi 2.4 GHz KYOCERA AVX Antenna Specifications.  
KYOCERA AVX produces a wide variety of standard and custom antennas to meet user needs.

**Test Setup**

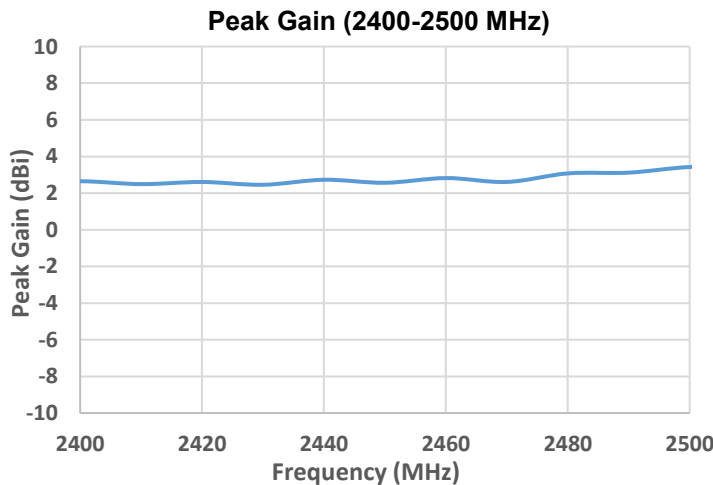
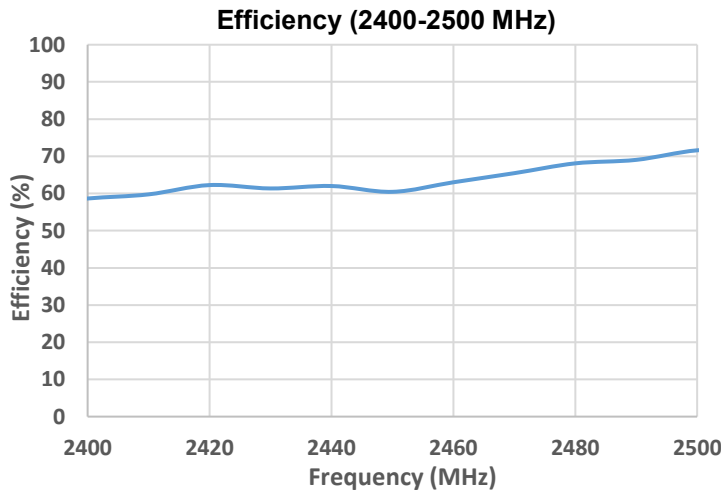
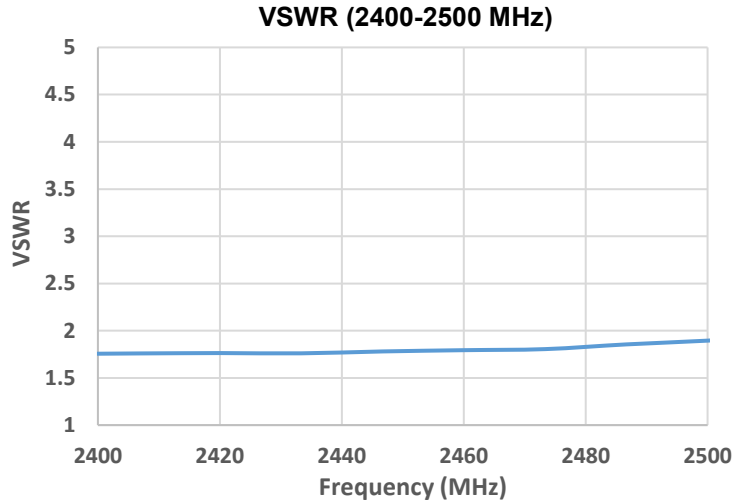
Antenna with 50 x 100 mm PCB



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### VSWR, Efficiency and Peak Gain Plots

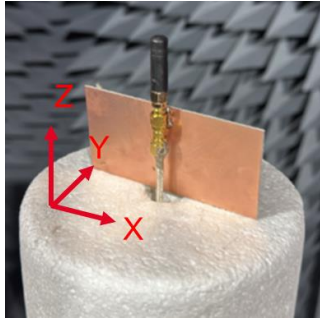
Typical performance measured with 50 x 100 mm PCB



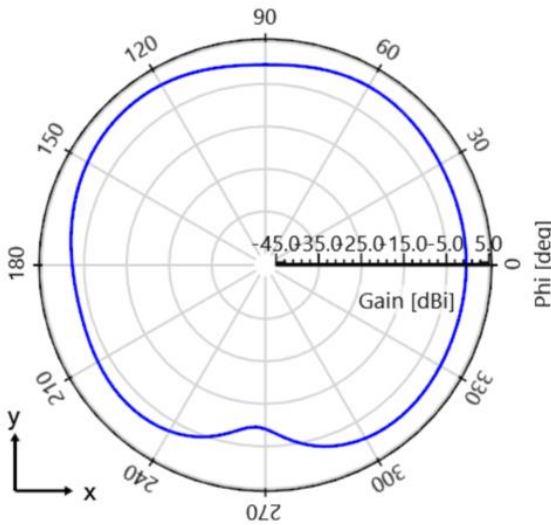
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**Antenna Radiation Patterns**

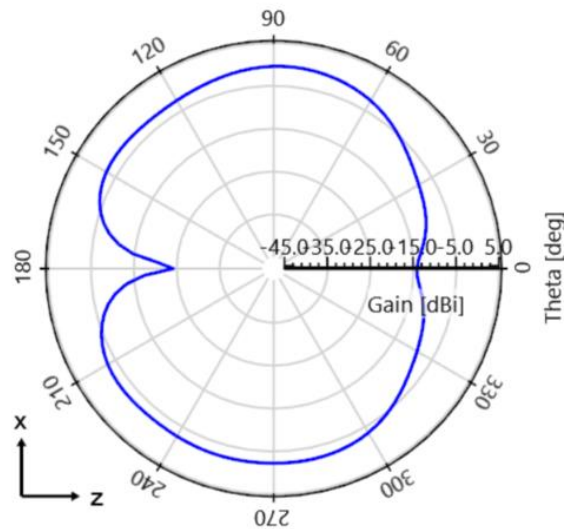
Typical performance of X9006059 performance with 50 x 100 mm PCB.  
 Measured at 2440 MHz



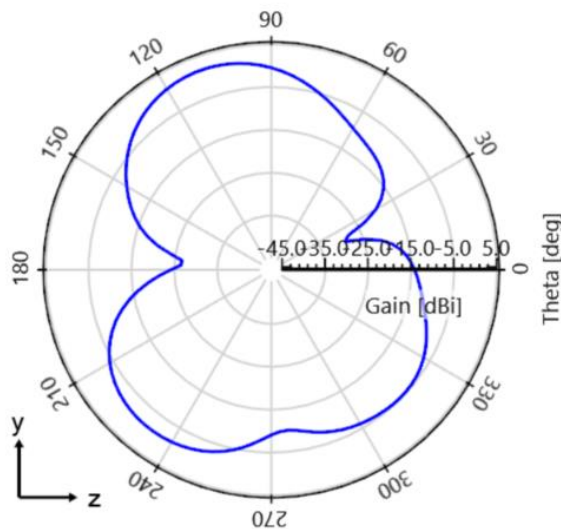
Gain (Total) -  $\theta = 90$  deg - 2440 MHz [Plane XY]



Gain (Total) -  $\phi = 0$  deg - 2440 MHz [Plane XZ]



Gain (Total) -  $\phi = 90$  deg - 2440 MHz [Plane YZ]



Compact External Wi-Fi 2.4 GHz KYOCERA AVX Antenna Specifications.  
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**Mechanical Specifications**

Typical antenna dimensions in mm

Part Number	A	Ø	Connector
X1006059-W1DRMB	35.0 ± 2.0	8.25	RP-SMA MALE

