

470-510MHz Large Magnetic Mount Antenna

FEATURES & BENEFITS



- **Extremely Easy Installation:** The magnetic suction cup design allows it to be securely attached to smooth, magnetically conductive surfaces like car roofs or metal equipment cabinets, requiring no drilling or complex mounting. Paired with a long cable, it offers highly flexible placement options.
- **Strong Environmental Adaptability:** Products typically feature a wide operating temperature range (e.g., -40°C to +85°C), enabling them to withstand harsh environments outdoors or in vehicles. They are sturdily built for good durability.
- **Optimized Frequency:** Specifically tuned for the 470-510MHz band, ensuring efficient communication within this range.
- **Good Impedance Matching:** Features a standard 50Ω impedance with typically low Voltage Standing Wave Ratio (VSWR) (e.g., <2.5:1), effectively reducing signal reflection and improving transmission efficiency
- **Low-Loss Transmission:** Often uses coaxial cables like RG58, which have low signal attenuation, maintaining signal quality over longer cable runs
- **Universally Compatible Connectivity:** Commonly employs standard RF connectors like SMA male connectors, often with gold plating to prevent oxidation, ensuring direct and reliable connection with most wireless communication devices (e.g., mobile radios, data transmission modules)
- **Omnidirectional Coverage:** The antenna is mostly a vertically polarized omnidirectional type, providing 360-degree uniform signal transmission and reception in the horizontal plane. This is suitable for moving devices (like vehicles) or scenarios where signal direction is unknown
- RF cables and connectors customization supported

APPLICATIONS

Various IoT applications, including,

- IoT and Industrial Applications
- Wireless Communication and Data Acquisition
- Network Access and Hotspot Coverage
- Consumer and Security Electronics.
- Smart City and Outdoor Applications



ORDER INFORMATION

Product Name	470-510MHz Large Magnetic Mount Antenna
Part Number	AELM005
Dimensions	Ø62 x 160 mm
Weight	284.6 g
Color	Black
Mounting	Large Magnetic

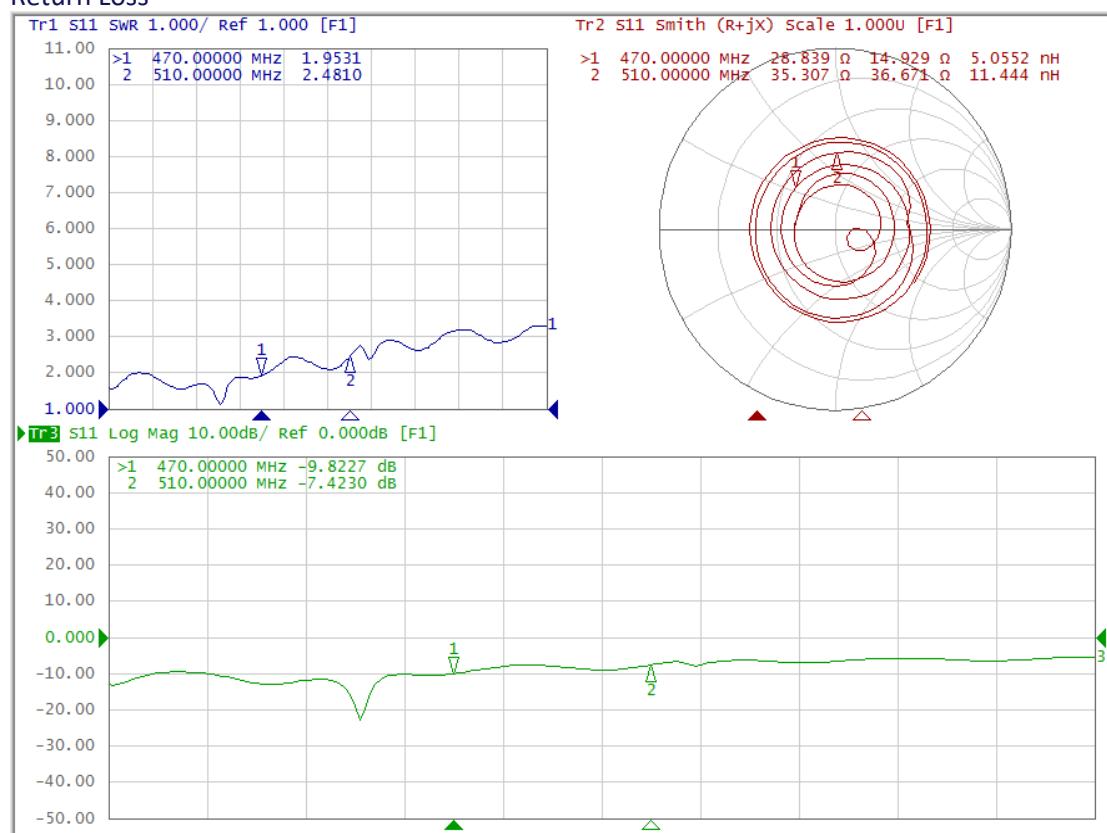
Antenna Cable	Default SMA MALE RF RG58 black coaxial cable (Ø 5.0 x 2500 mm) , customizable.
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REFERENCE GUIDE

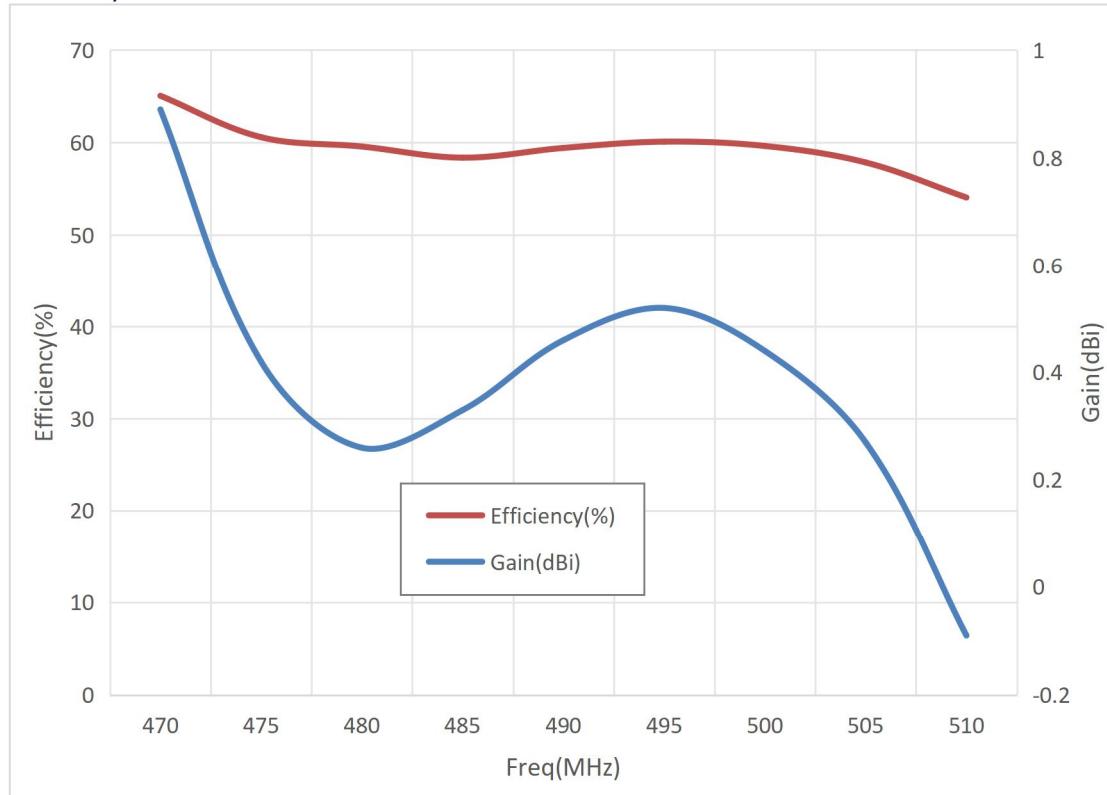
Technical Features (MHz)	470-510
Max VSWR	2.5:1
Max Efficiency	65.06%
Peak Gain	0.89dBi
Radiation Pattern	Omnidirectional
Polarization	Linear
Input Impedance	50 Ω
Operating Temperature	-40°C to +85°C
Storage Temperature	-40°C to +85°C
Relative Humidity	10 to 70%
Material Substance Compliance	RoHS Compliant
Dimensions (L x W x H)	Ø62 x 160 mm
All data were measured on a water meter as shown on cover with an 2500-mm-long RF RG58 cable. Application data might vary.	

ELECTRICAL DATA (Data tested on a water meter with 2500 mm of RF RG58 cable)

Return Loss

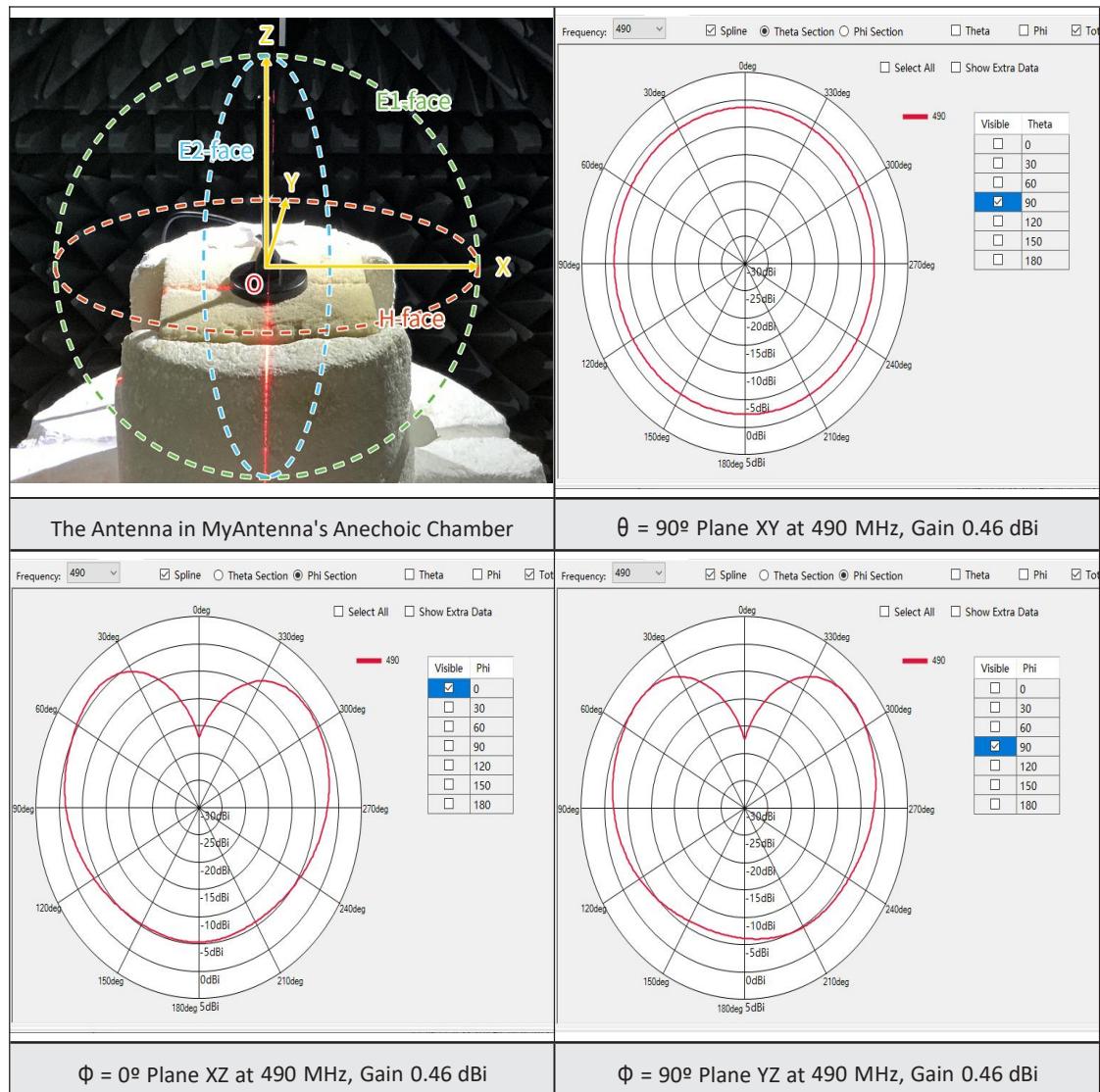


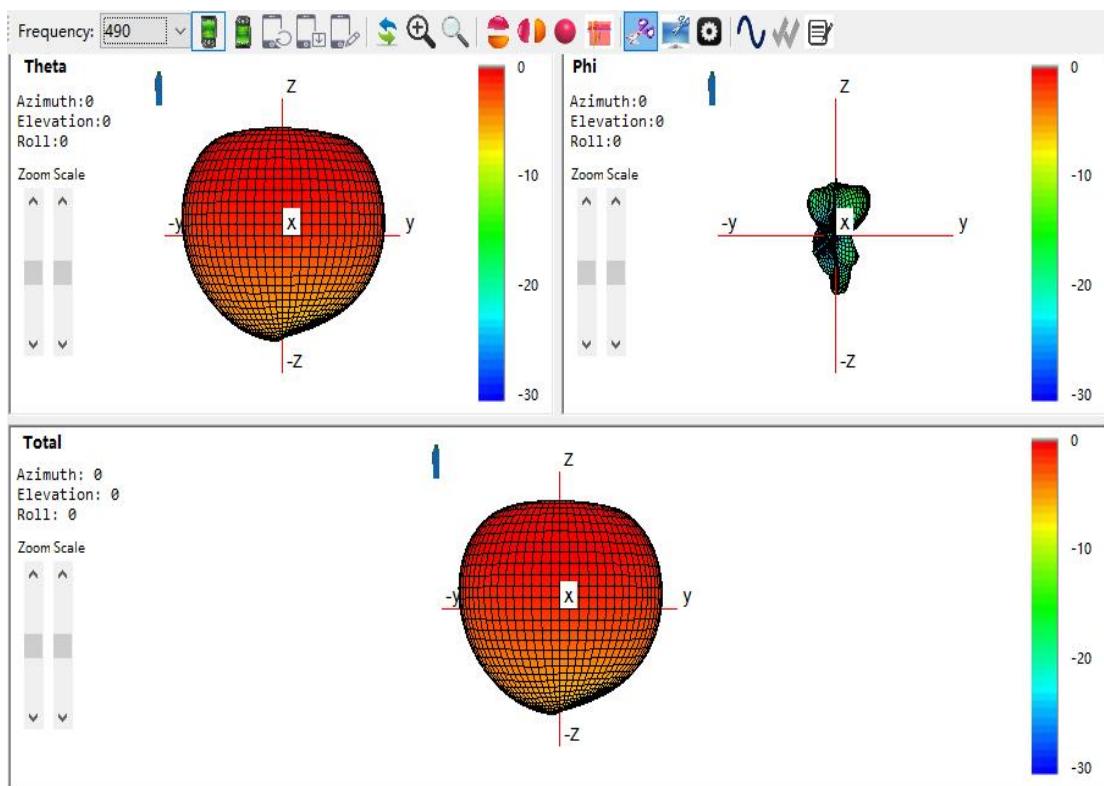
Efficiency (%) And Gain (dBi)

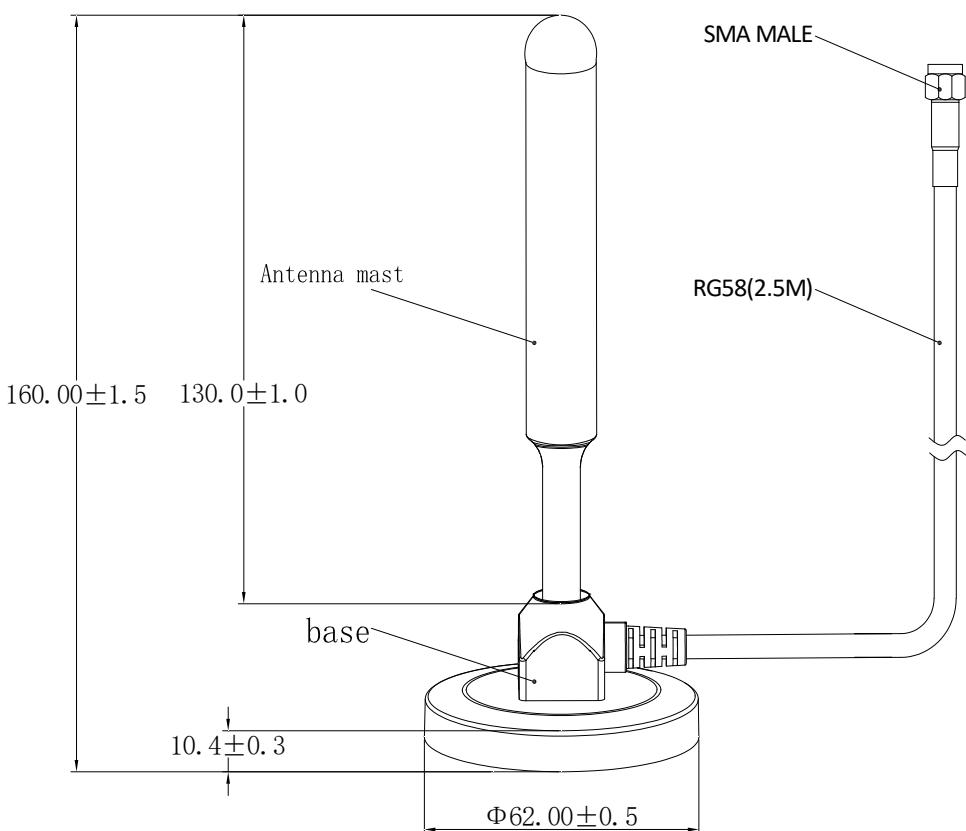


Freq(MHz)	Gain(dBi)	Efficiency(%)
470	0.89	65.06
475	0.42	60.58
480	0.26	59.57
485	0.33	58.37
490	0.46	59.42
495	0.52	60.10
500	0.44	59.63
505	0.27	57.85
510	-0.09	54.06

RADIATION PATTERNS(Data tested on a water meter with 2500 mm of RF RG58 cable)





HOUSING CONFIGURATIONS

Aboosty™ is owned by Shenzhen MyAntenna RF Technology Co., Ltd. (often abbreviated as MyAntenna).