

433 Sensor Antenna

FEATURES & BENEFITS

- Lightweight, low profile and rugged design
- Easy installation with built-in bolt interface, can be directly screwed onto devices without additional screws.
- UV-resistant, Impact-resistant, dustproof and waterproof
- RF cables and connectors customization supported

APPLICATIONS

Various IoT applications, including,

- Smart valves
- Pressure/Level/Flow transmitters
- Temperature transmitters
- Water meters ect.



ORDER INFORMATION

| | |
|------------------|--|
| Product Name | 433 Sensor Antenna |
| Part Number | M02-0400610R0A |
| Dimensions | Ø32 x 68 mm |
| Weight | 30 g |
| Color | Black |
| Mounting | Screw mount |
| 4G Antenna Cable | Default IPEX 1 RF 1.13 black coaxial cable (Ø 1.13 x 172 mm) , customizable. |

REFERENCE GUIDE

| | |
|--|----------------|
| Technical Features (MHz) | 433±10 |
| Max VSWR | 1.5:1 |
| Max Efficiency | 57.79% |
| Peak Gain | 0.11dBi |
| Radiation Pattern | Directional |
| 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) | Ø32 x 68 mm |
| All data were measured on a water meter as shown on cover with an 172-mm-long RF 1.13 cable. | |

Application data might vary.

ELECTRICAL PERFORMANCE

- Note

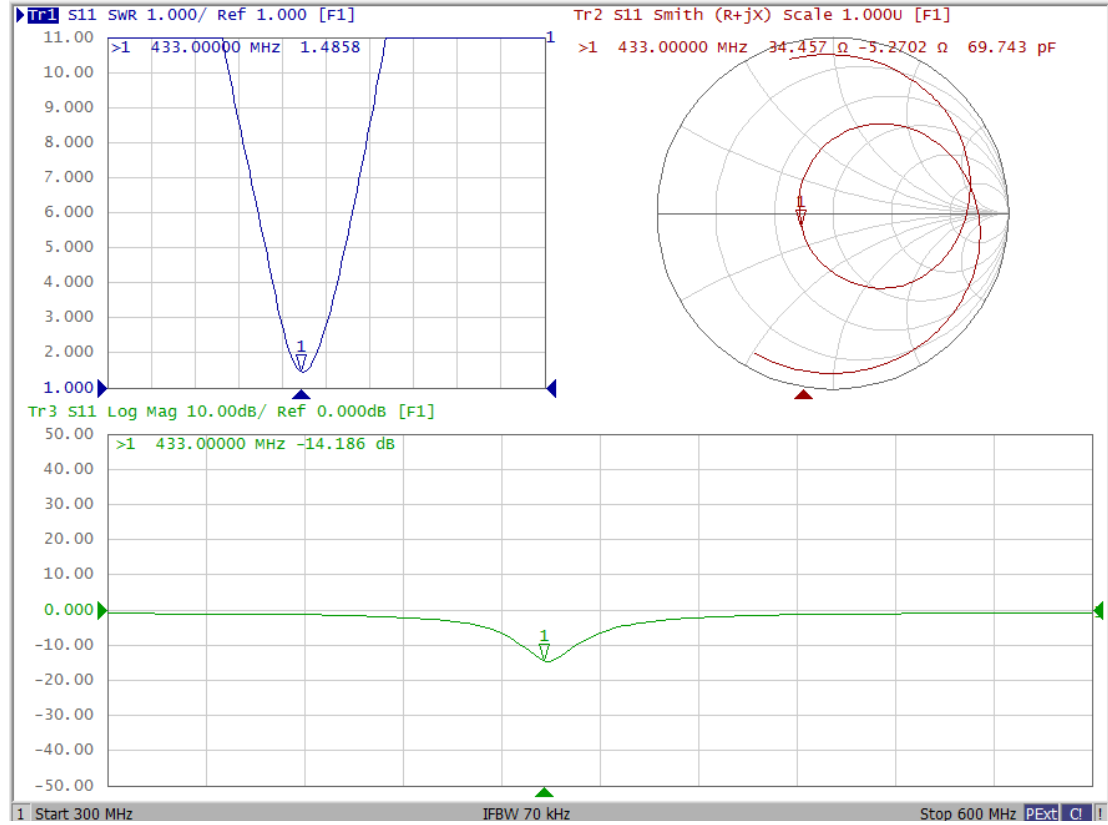
All data displayed in "ELECTRICAL PERFORMANCE" were measured on the water meter as shown below with an 85-mm-long RF 1.13 cable.



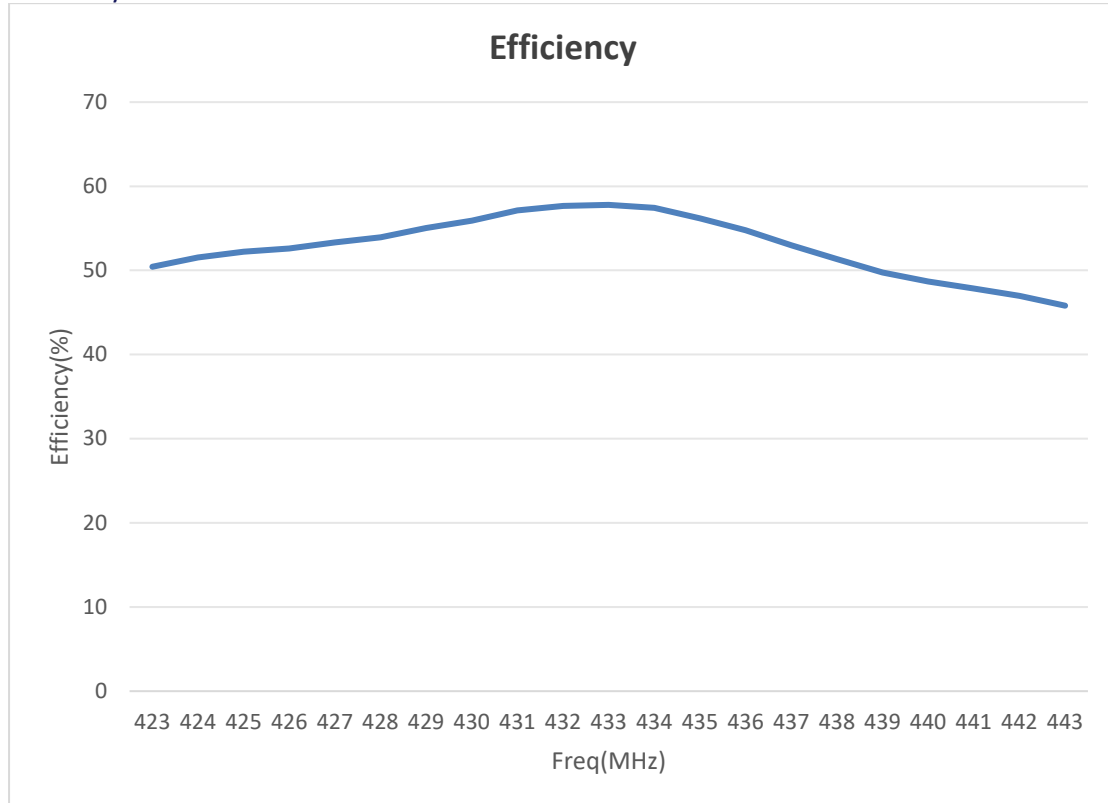
A sample of use cases: Antenna mounted on a water meter

ELECTRICAL DATA (Data tested on a water meter with 172 mm of RF 1.13 cable)

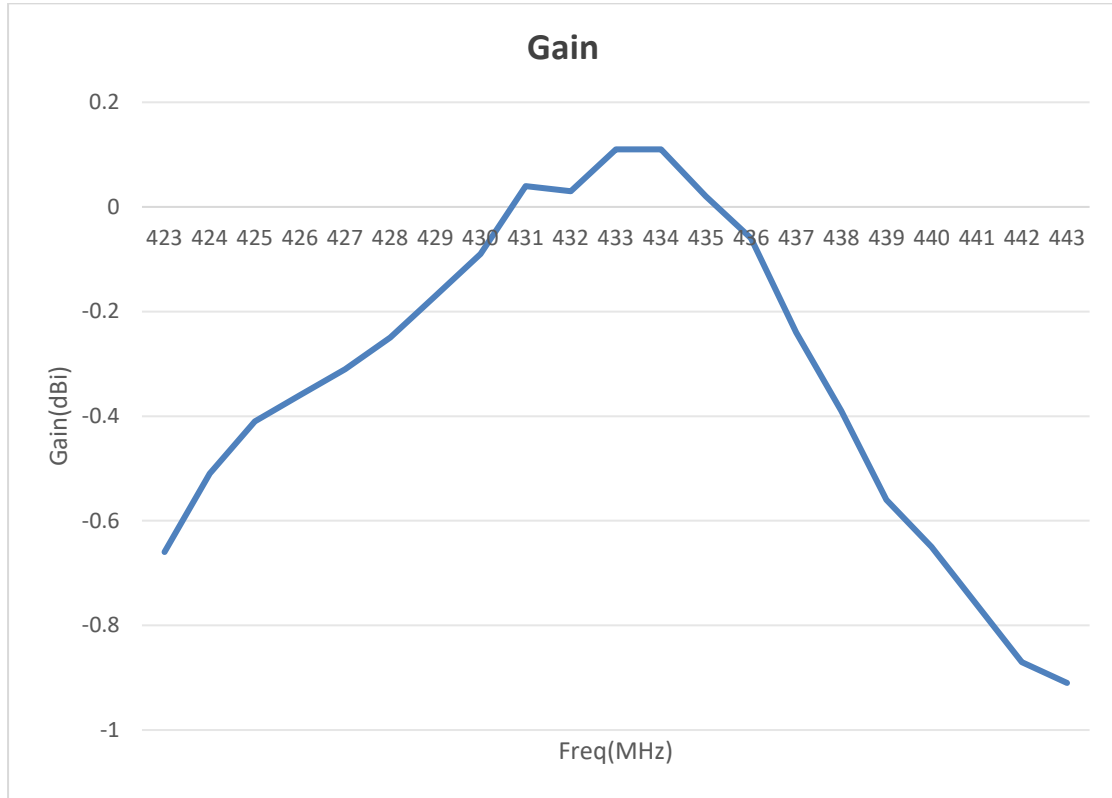
Return Loss



Efficiency (%)

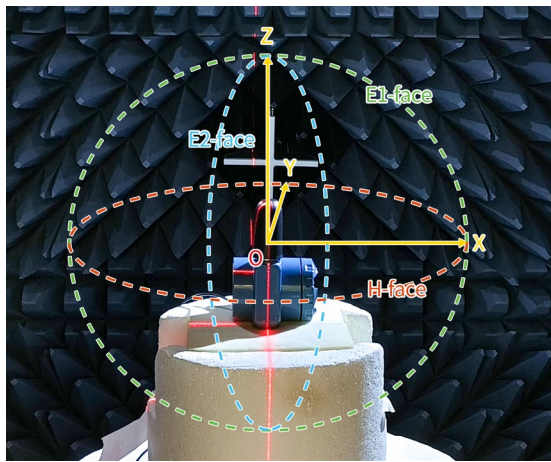


Peak Gain (dBi)

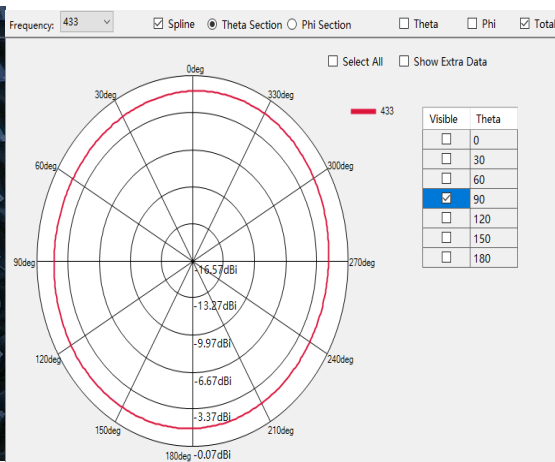


| Freq(MHz) | Gain(dBi) | Efficiency (%) | Freq(MHz) | Gain(dBi) | Efficiency (%) | Freq(MHz) | Gain(dBi) | Efficiency (%) |
|-----------|-----------|----------------|-----------|-----------|----------------|-----------|-----------|----------------|
| 423 | -0.66 | 50.45 | 430 | -0.09 | 55.92 | 437 | -0.24 | 52.99 |
| 424 | -0.51 | 51.54 | 431 | 0.04 | 57.15 | 438 | -0.39 | 51.36 |
| 425 | -0.41 | 52.21 | 432 | 0.03 | 57.68 | 439 | -0.56 | 49.76 |
| 426 | -0.36 | 52.6 | 433 | 0.11 | 57.79 | 440 | -0.65 | 48.68 |
| 427 | -0.31 | 53.32 | 434 | 0.11 | 57.44 | 441 | -0.76 | 47.85 |
| 428 | -0.25 | 53.95 | 435 | 0.02 | 56.2 | 442 | -0.87 | 46.97 |
| 429 | -0.17 | 55.04 | 436 | -0.06 | 54.78 | 443 | -0.91 | 45.81 |

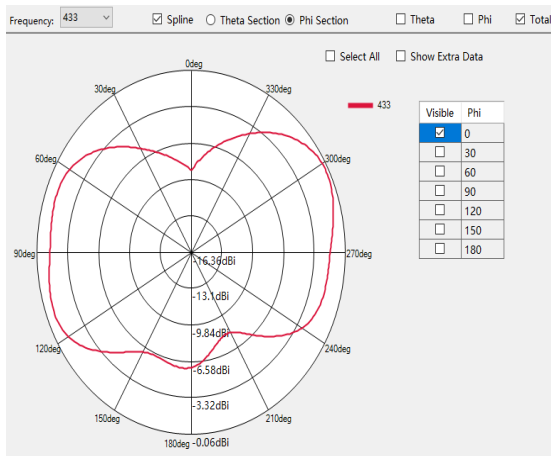
RADIATION PATTERNS(Data tested on a water meter with 172 mm of RF 1.13 cable)



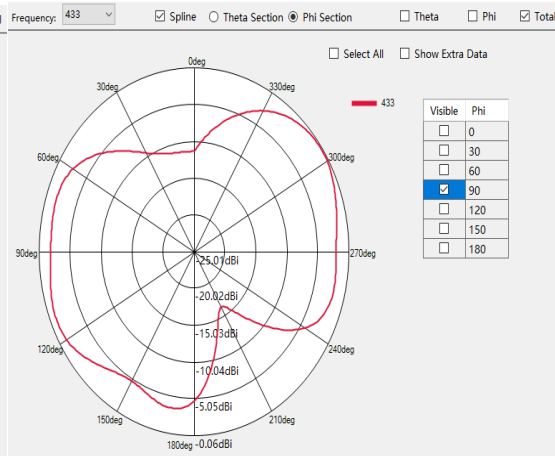
The Antenna in MyAntenna's Anechoic Chamber



$\theta = 90^\circ$ Plane XY at 433MHz

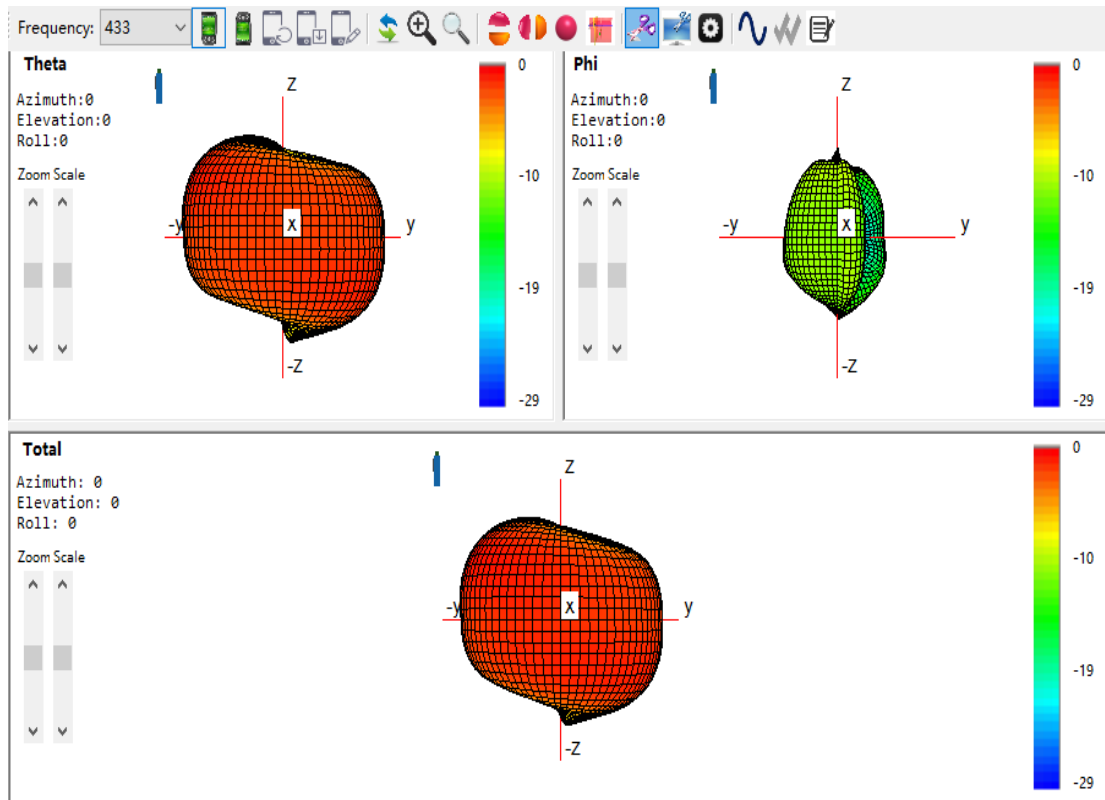


$\Phi = 0^\circ$ Plane XZ at 433MHz

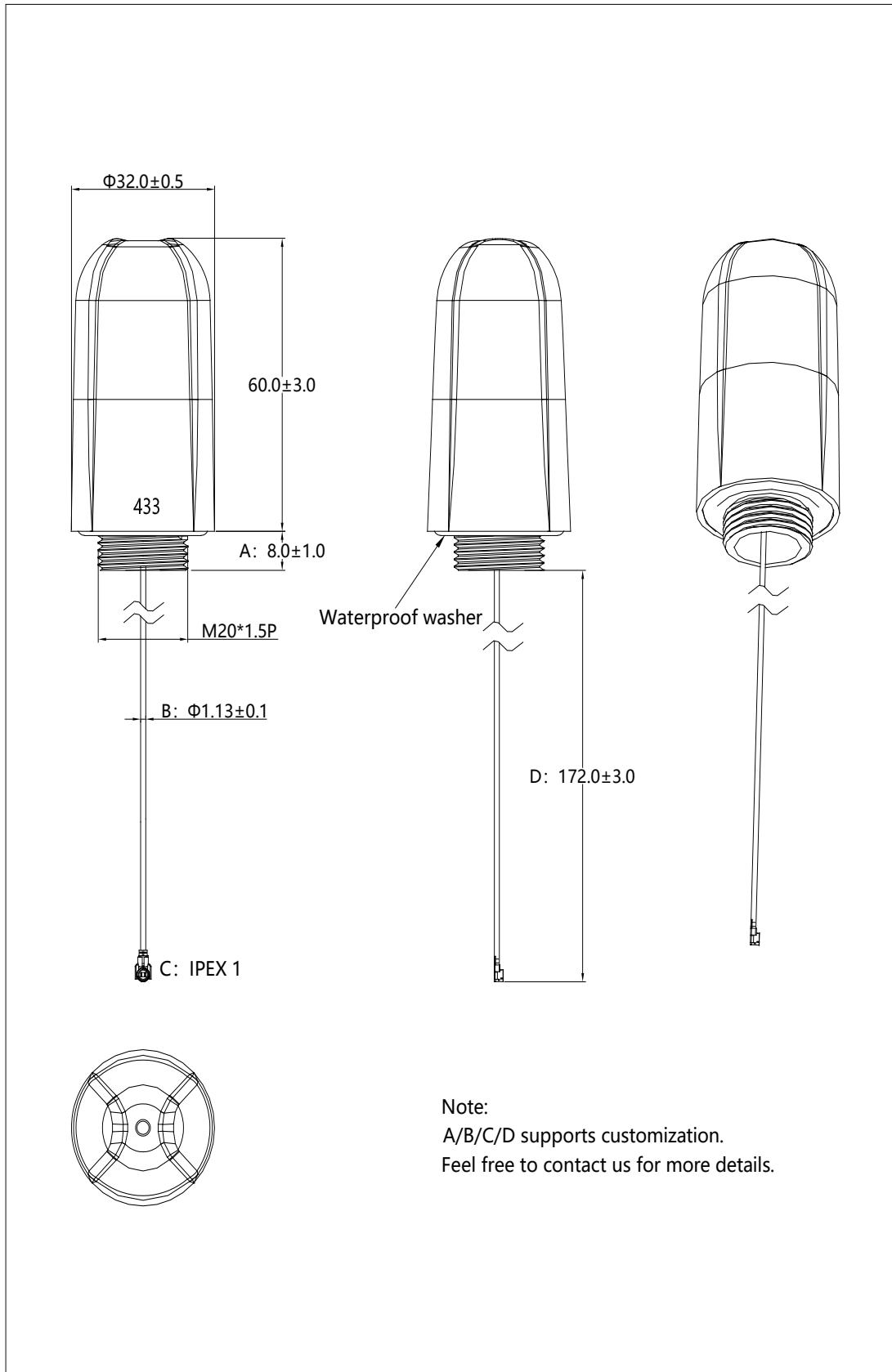


$\Phi = 90^\circ$ Plane YZ at 433MHz

3D Radiation Pattern at 433MHz



HOUSING CONFIGURATIONS



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