

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

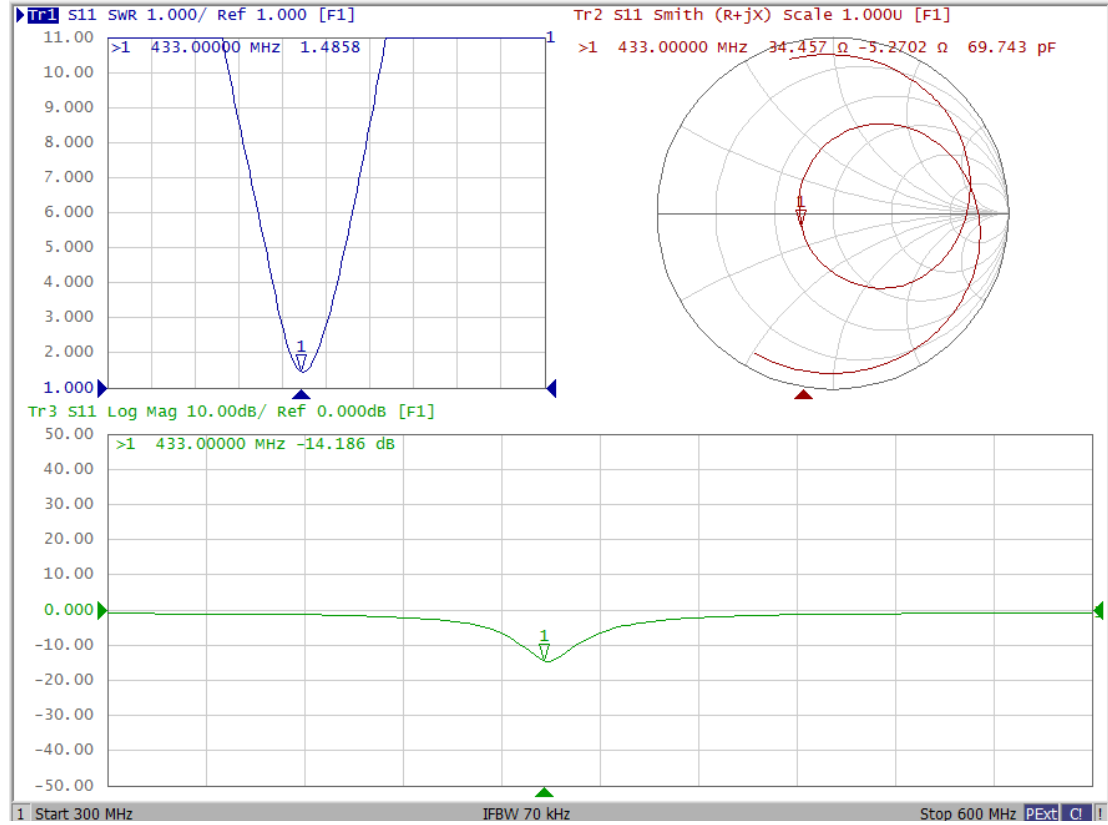
All data displayed in "ELECTRICAL PERFORMANCE" were measured on the water meter as shown below with an 85-mm-long RF 1.13 cable.



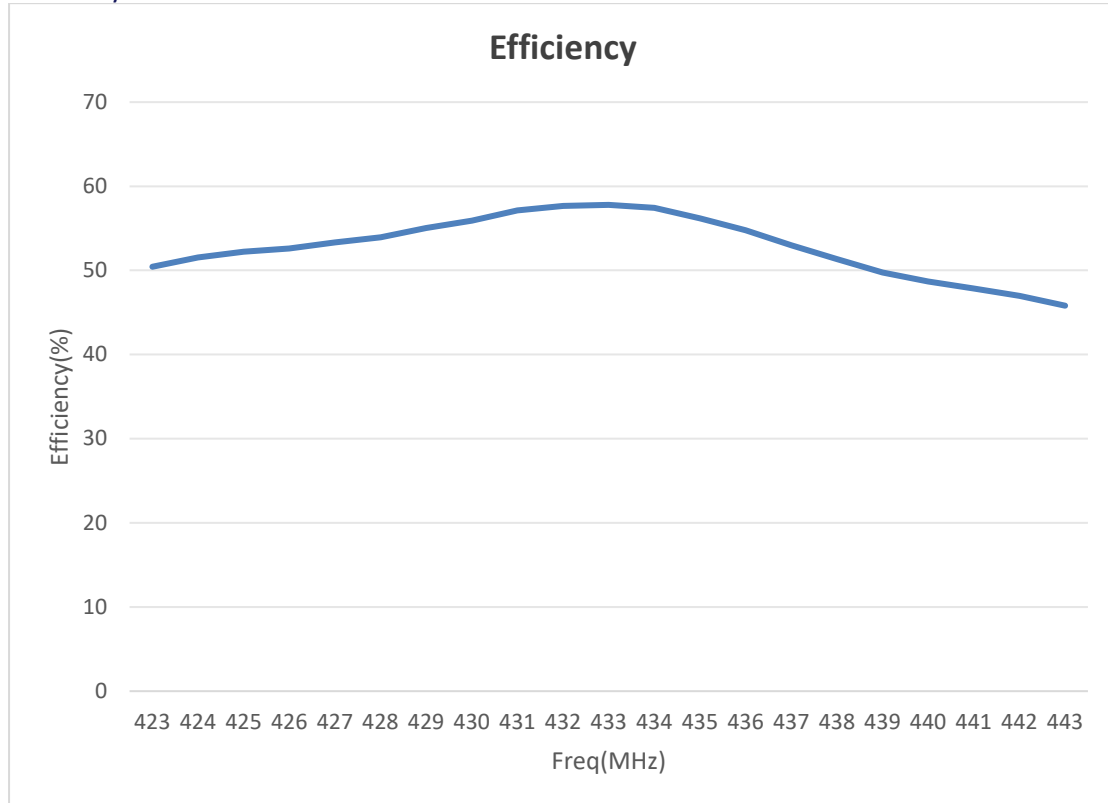
A sample of use cases: Antenna mounted on a water meter

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

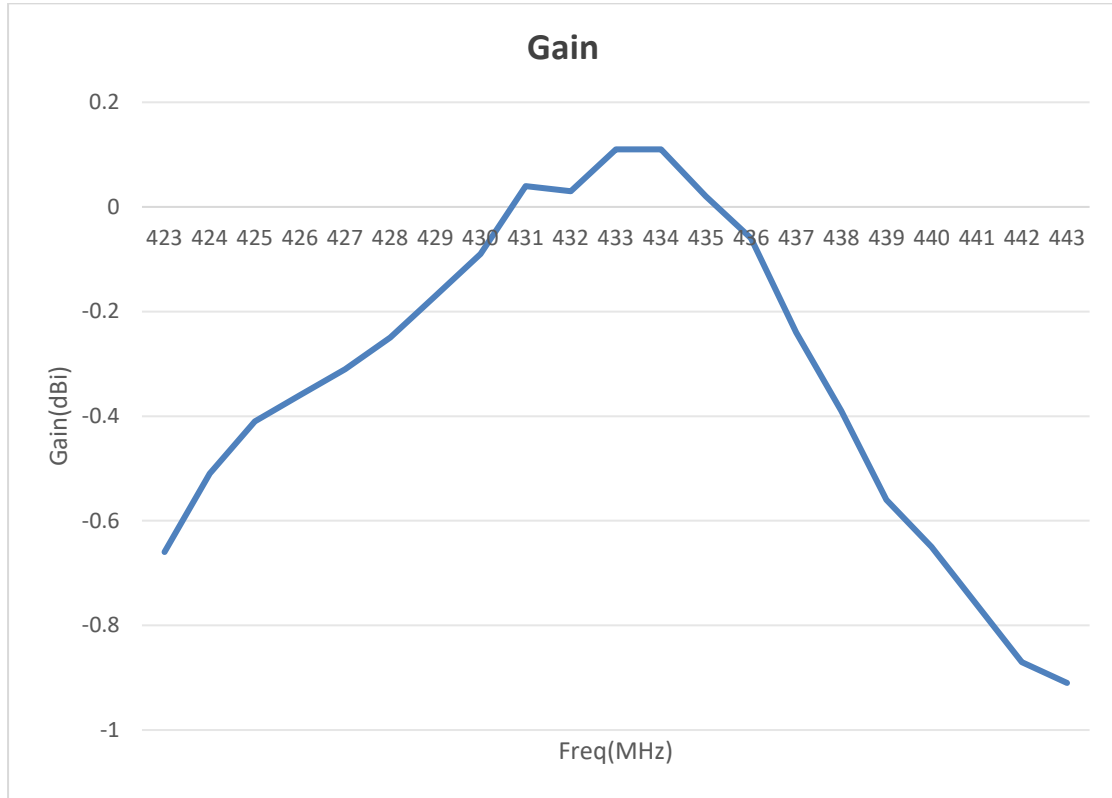
Return Loss



Efficiency (%)

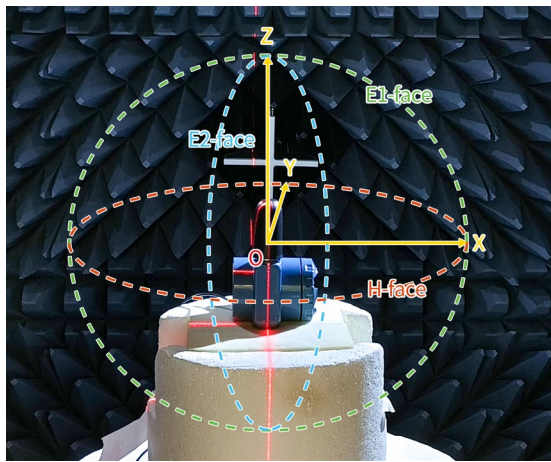


Peak Gain (dBi)

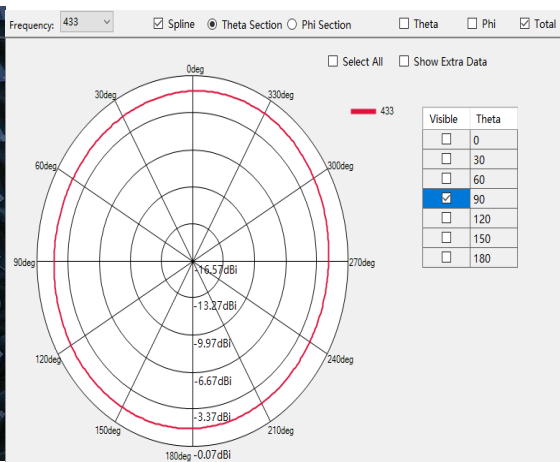


Freq(MHz)	Gain(dBi)	Efficiency (%)	Freq(MHz)	Gain(dBi)	Efficiency (%)	Freq(MHz)	Gain(dBi)	Efficiency (%)
423	-0.66	50.45	430	-0.09	55.92	437	-0.24	52.99
424	-0.51	51.54	431	0.04	57.15	438	-0.39	51.36
425	-0.41	52.21	432	0.03	57.68	439	-0.56	49.76
426	-0.36	52.6	433	0.11	57.79	440	-0.65	48.68
427	-0.31	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

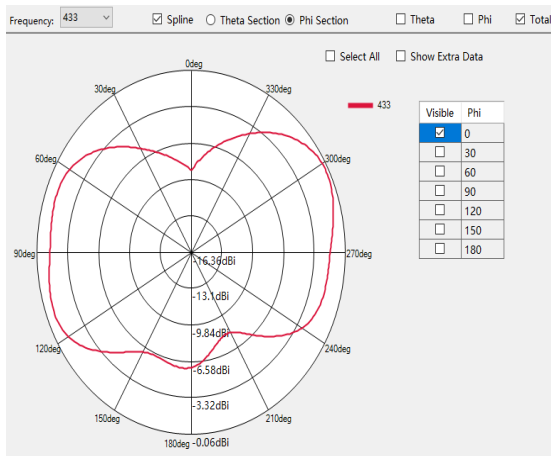
RADIATION PATTERNS(Data tested on a water meter with 172 mm of RF 1.13 cable)



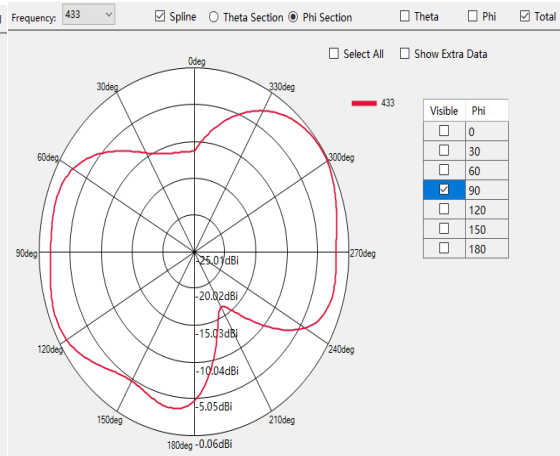
The Antenna in MyAntenna's Anechoic Chamber



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

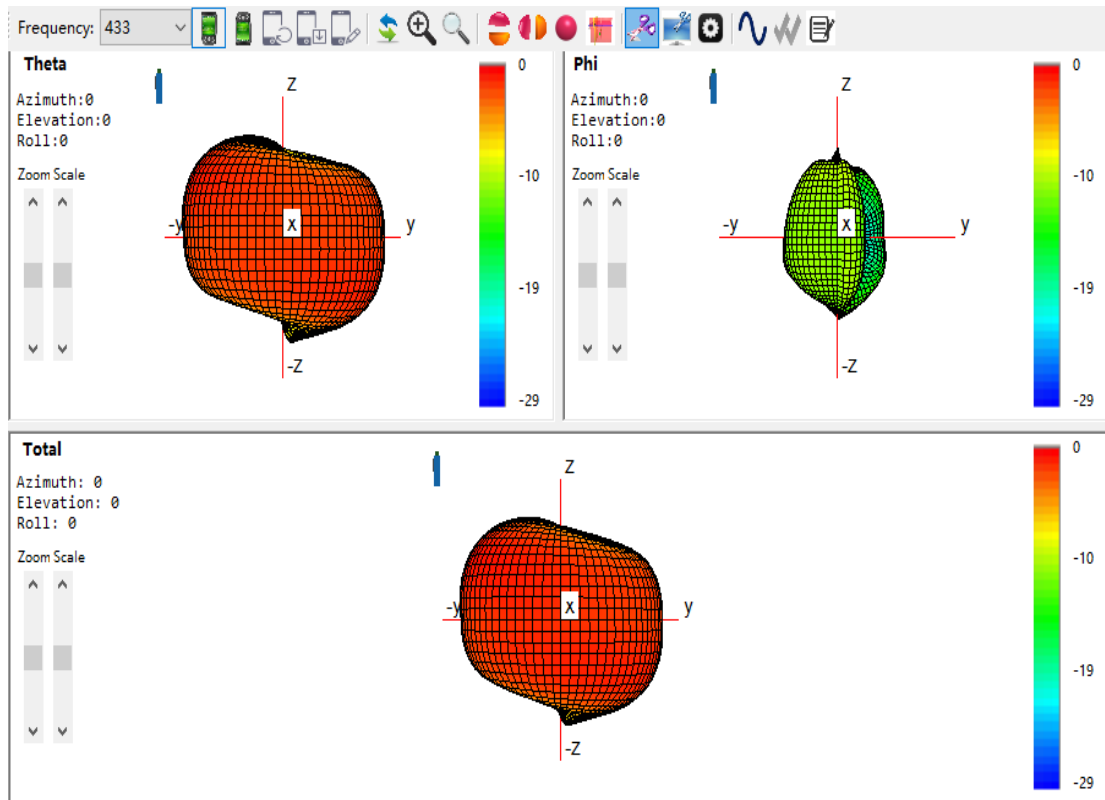


$\Phi = 0^\circ$ Plane XZ at 433MHz

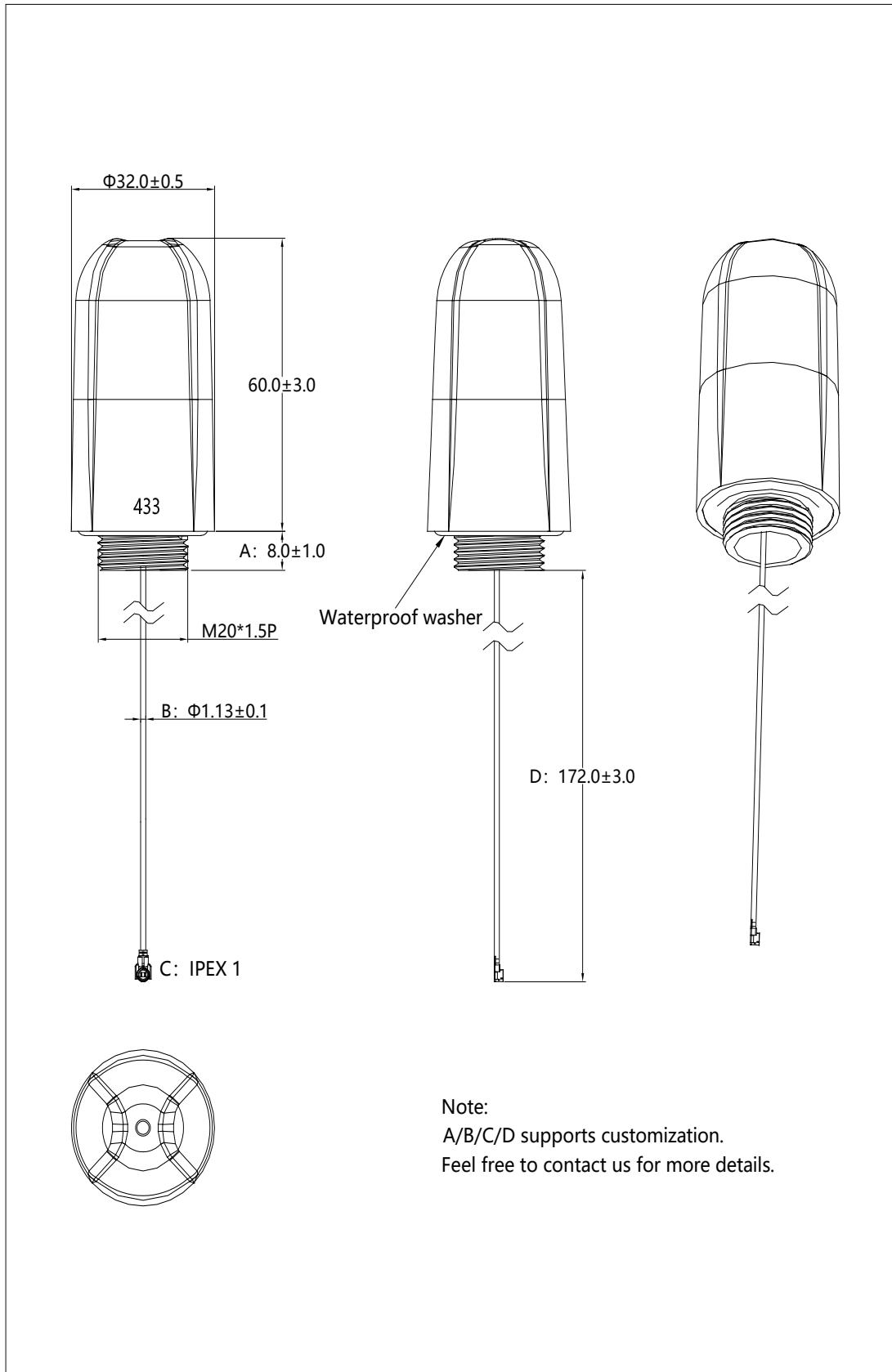


$\Phi = 90^\circ$ Plane YZ at 433MHz

3D Radiation Pattern at 433MHz



HOUSING CONFIGURATIONS



Note:
A/B/C/D supports customization.
Feel free to contact us for more details.

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