

WBA 612

Innovoi WBA 612 is a wideband antenna with a constant gain optimized for RAIN RFID measurement application. The low profile enables usage in the compact measurement chambers. The antenna has excellent front-to-back ratio and low cross polarization levels. The high isotropic gain over the frequency band improves measurement dynamics and accuracy.

Applications:

- RAIN RFID measurements
- Generic Ultra High Frequency (UHF) measurements

Key features:

- Wide frequency bandwidth
- Low profile for compact measurement chambers
- Constant isotropic gain
- Increased dynamic range of RFID measurements
- Good VSWR
- Excellent front-to-back ratio
- Low cross polarization levels
- Easy polarization change



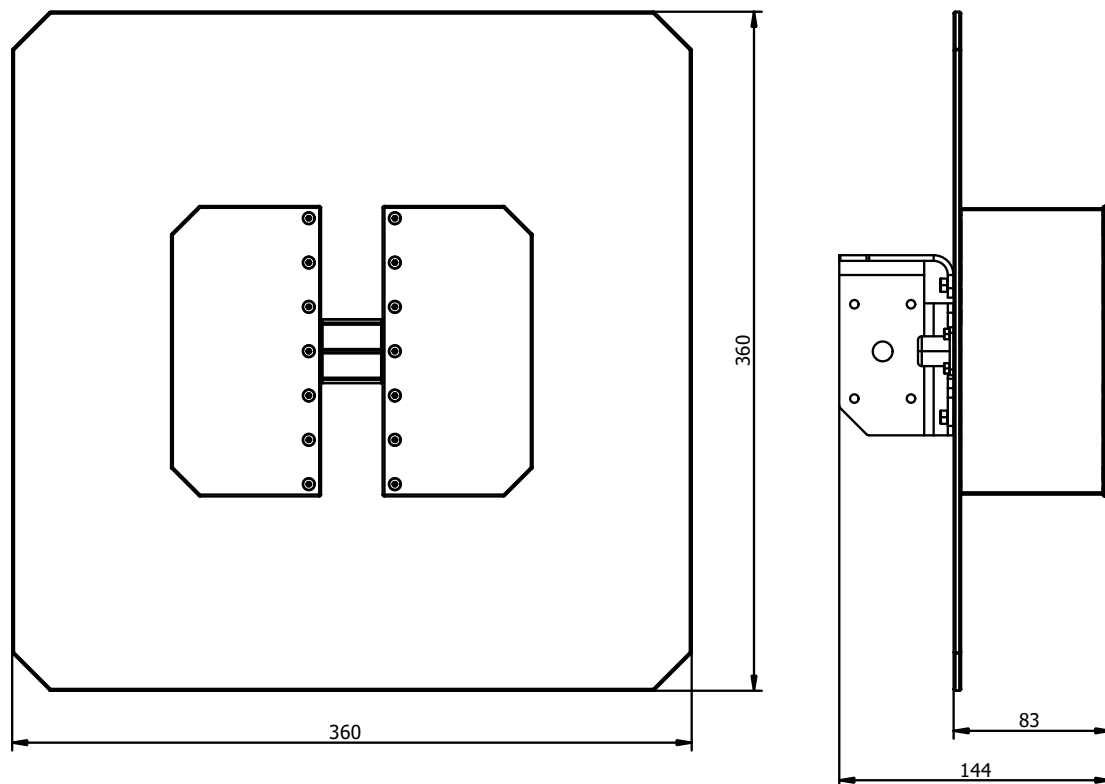
Technical Specification

Electrical Specification

Frequency Range	600 MHz – 1200 MHz
Isotropic Gain	8 dBi
VSWR	< 2:1 (average 1.4:1)
Maximum Continuous Power	10 W
Impedance (Nominal)	50 Ω
Connector	Type N, female
Front-to-Back Ratio	Up to 20 dB
Cross Polarization	> 20 dB

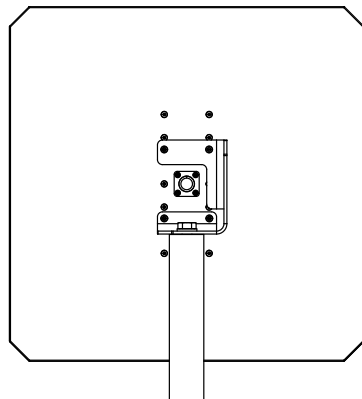
Physical Specification

Width	360 mm
Height	360 mm
Depth	144 mm with mounting bracket
Weight	2.5 kg

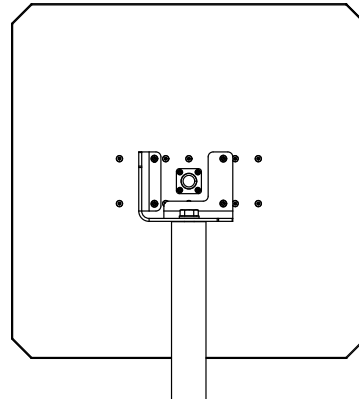


Polarization Change

The mounting bracket of the WBA 612 enables easy polarization change. The polarization can be switched from horizontal to vertical by using another mounting hole of the bracket.



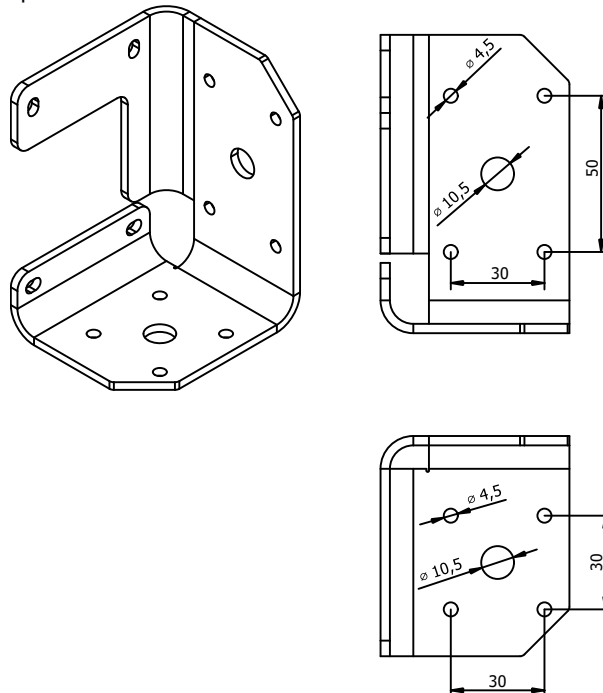
Horizontal polarization



Vertical polarization

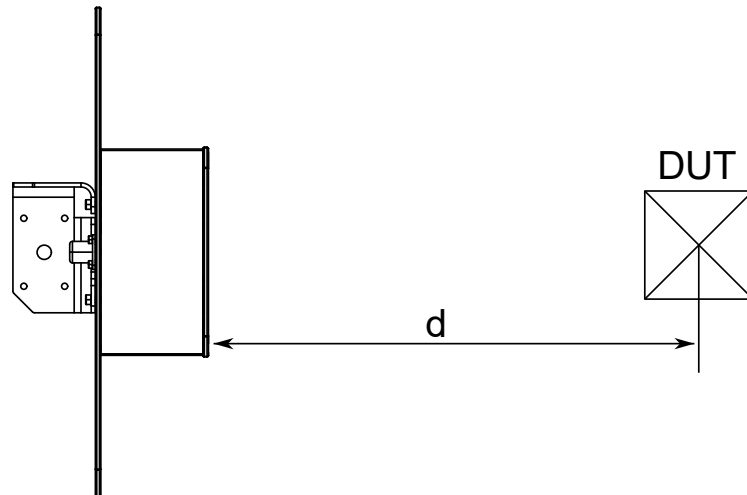
Mounting Bracket

The aluminum mounting bracket has versatile options for antenna mounting. Two larger holes are intended to be used with a M10 or 3/8-inch bolt. Smaller holes are ideal for M4 screws. A customized mounting adapter can be attached with smaller holes.

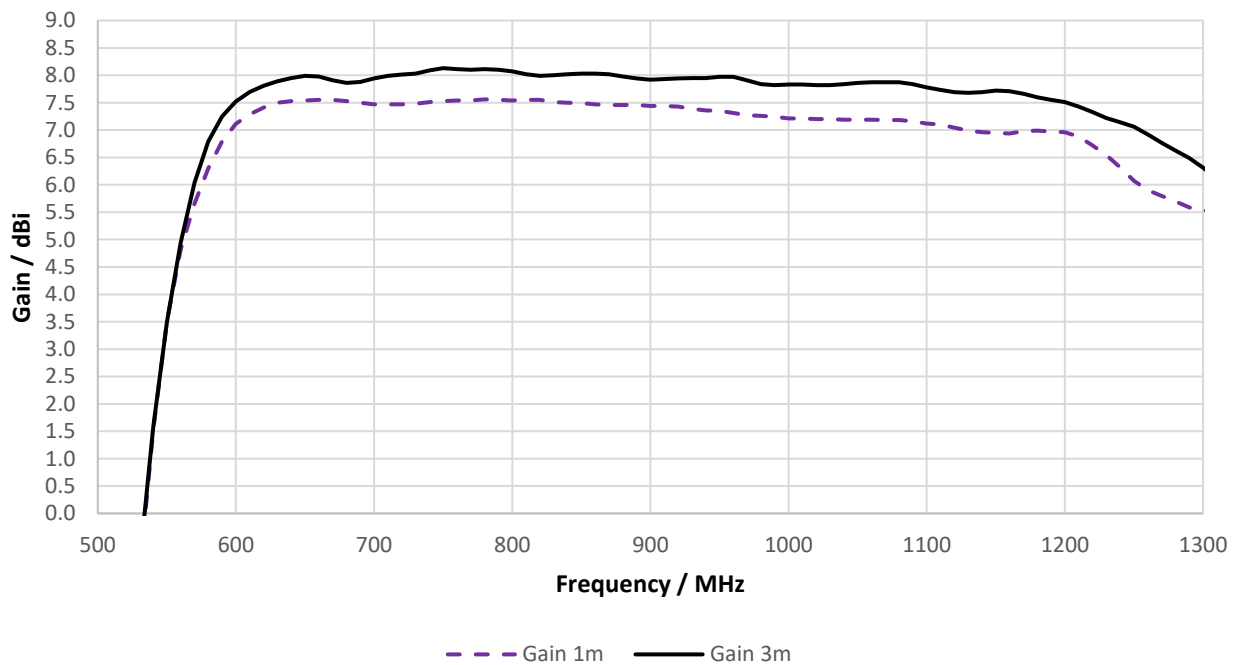


Isotropic Gain

A reference point of the antenna is at the tip of the antenna. Isotropic gain is defined at 1 m and 3 m distance.



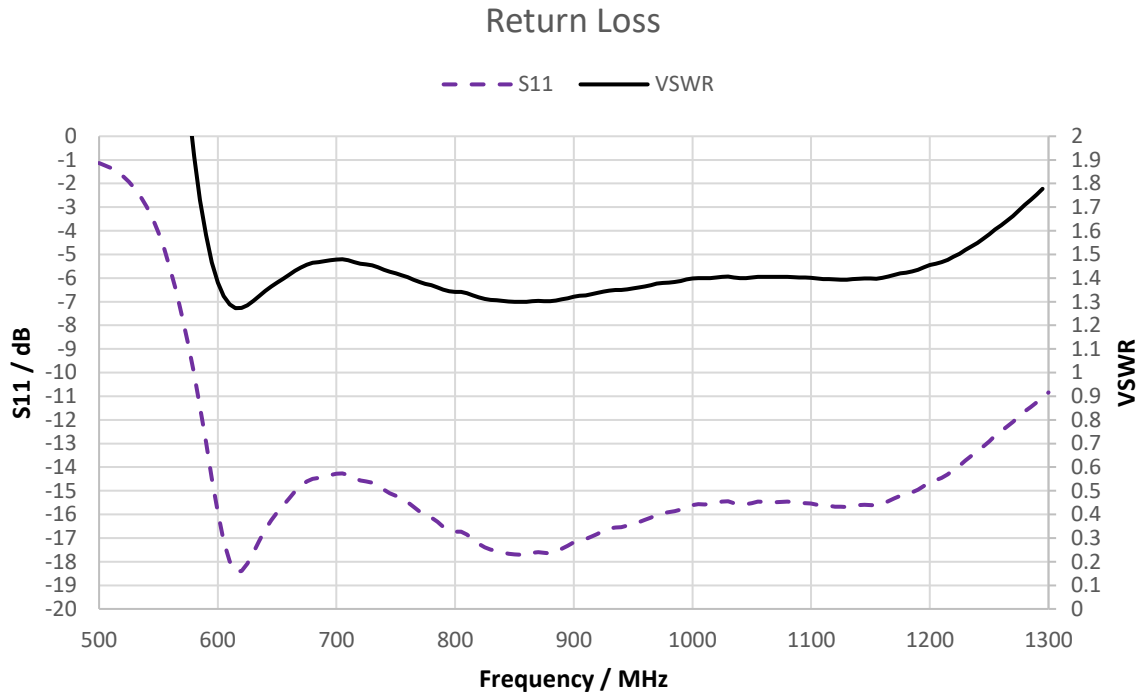
Typical Isotropic Gain



Frequency	Isotropic Gain 1 m	Isotropic Gain 3 m
MHz	dBi	dBi
600	7.11	7.52
610	7.29	7.70
620	7.41	7.81
630	7.50	7.89
640	7.53	7.95
650	7.54	7.99
660	7.55	7.98
670	7.55	7.91
680	7.53	7.86
690	7.50	7.88
700	7.47	7.94
710	7.47	7.99
720	7.47	8.01
730	7.48	8.03
740	7.51	8.09
750	7.53	8.13
760	7.54	8.11
770	7.54	8.10
780	7.56	8.11
790	7.55	8.10
800	7.54	8.07
810	7.55	8.02
820	7.55	7.99
830	7.51	8.00
840	7.50	8.02
850	7.49	8.03
860	7.47	8.03
870	7.46	8.02
880	7.46	7.98
890	7.46	7.94
900	7.44	7.92

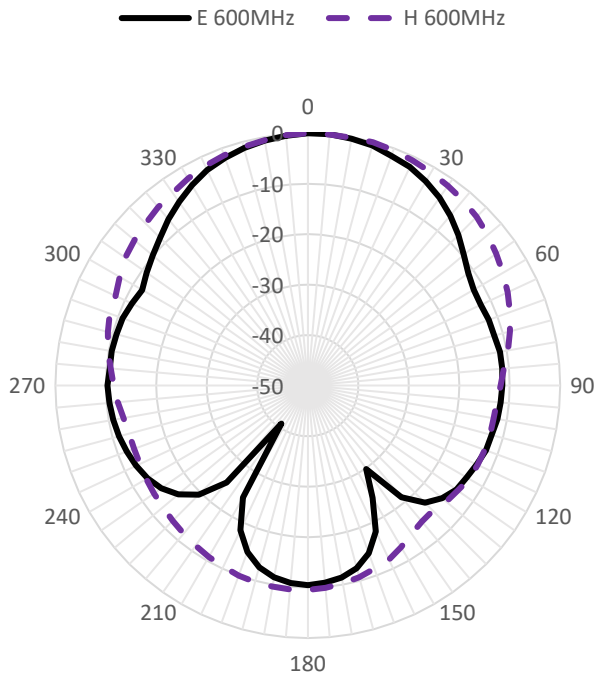
Frequency	Isotropic Gain 1 m	Isotropic Gain 3 m
MHz	dBi	dBi
910	7.44	7.93
920	7.43	7.94
930	7.39	7.95
940	7.36	7.95
950	7.35	7.97
960	7.31	7.97
970	7.27	7.91
980	7.26	7.84
990	7.24	7.82
1000	7.21	7.83
1010	7.21	7.83
1020	7.20	7.82
1030	7.20	7.82
1040	7.19	7.84
1050	7.19	7.86
1060	7.19	7.87
1070	7.18	7.87
1080	7.18	7.87
1090	7.16	7.84
1100	7.12	7.78
1110	7.10	7.73
1120	7.04	7.69
1130	6.99	7.68
1140	6.96	7.69
1150	6.95	7.72
1160	6.94	7.71
1170	6.98	7.66
1180	6.99	7.60
1190	6.97	7.55
1200	6.96	7.51

Typical VSWR

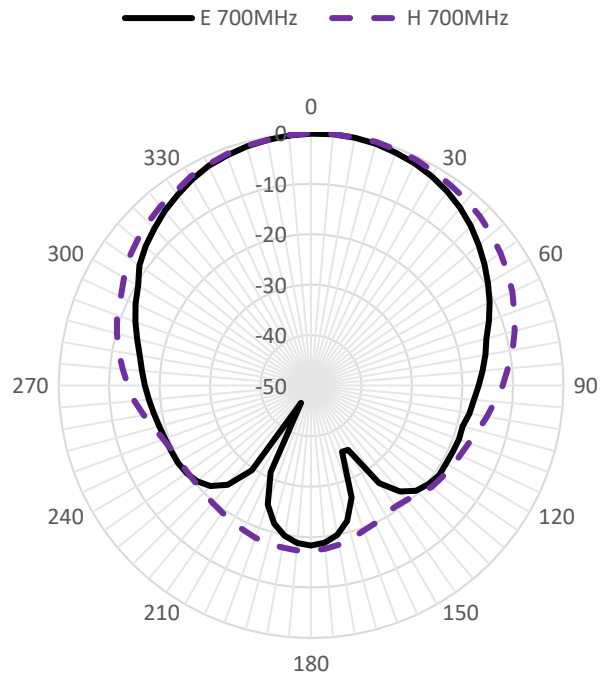


Typical Measured Radiated Patterns

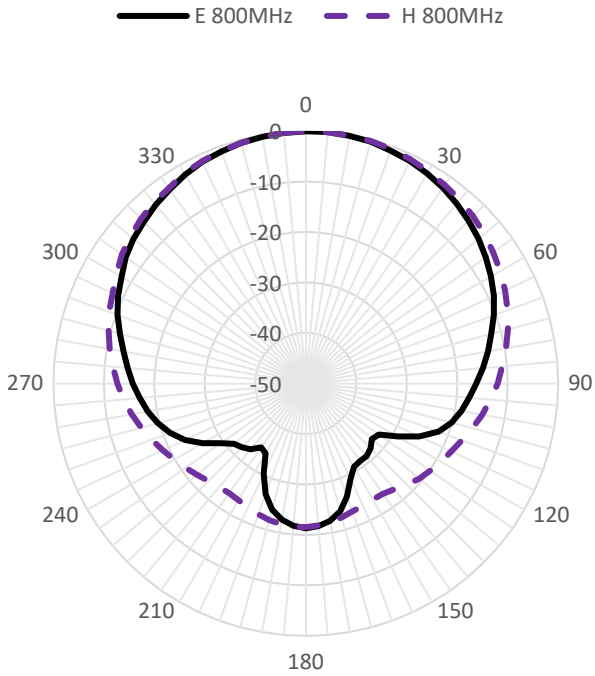
Measured patterns E and H plane (dB)



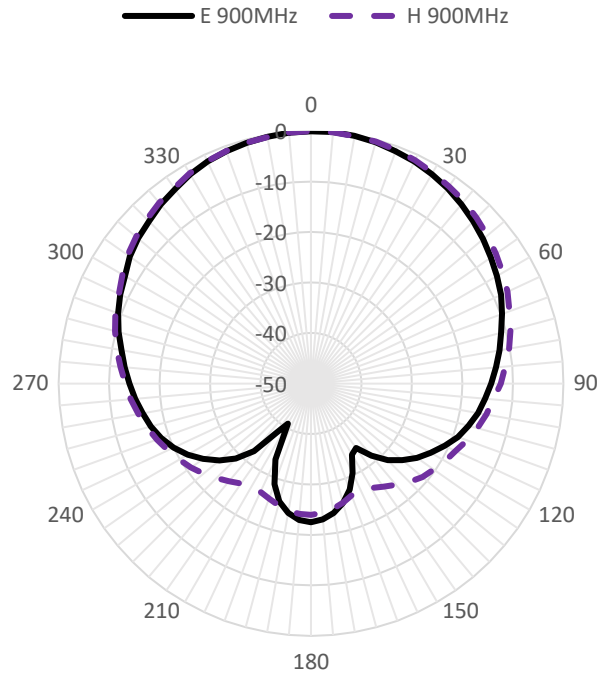
Measured patterns E and H plane (dB)



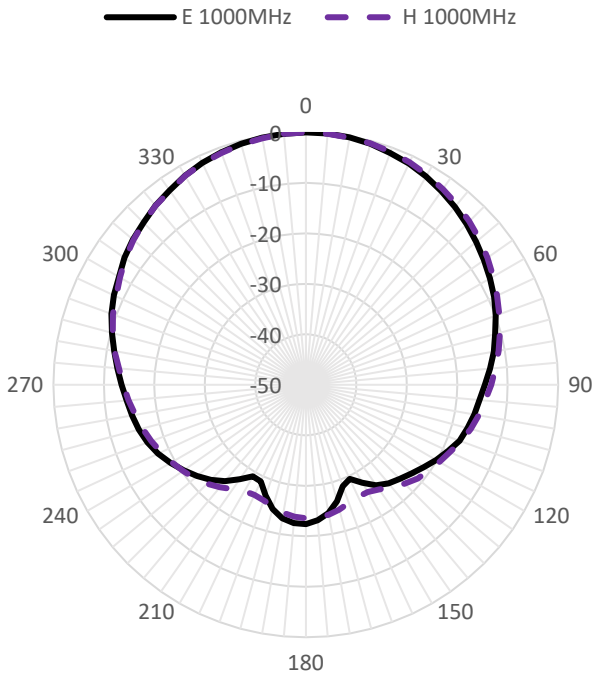
Measured patterns E and H plane (dB)



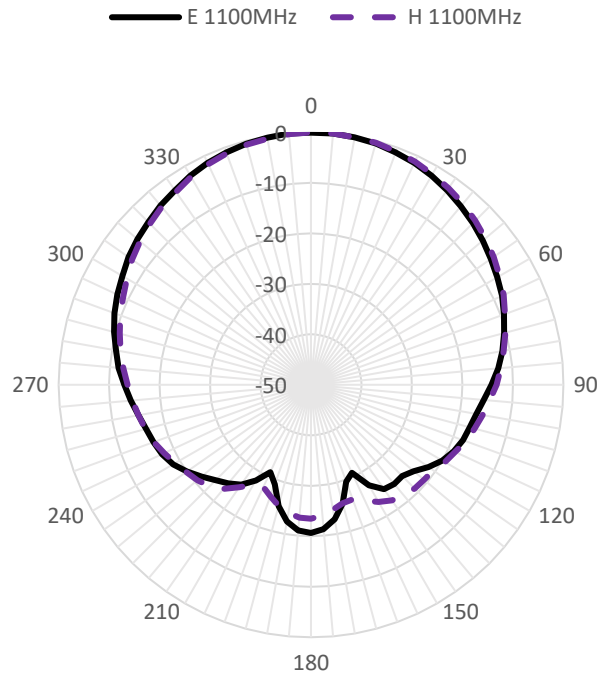
Measured patterns E and H plane (dB)



Measured patterns E and H plane (dB)



Measured patterns E and H plane (dB)



Measured patterns E and H plane (dB)

