



# MEASUREMENTS OF SHURE MXW1X ANTENNAS FOR REGULATORY APPROVAL

**1.9GHZ ANTENNA A**

**1.9GHZ ANTENNA B**

**2.4GHZ BLUETOOTH ANTENNA**

**Project:** Double Stuff

**Revision:** 1.0

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# 1. Overview and Reference Angles

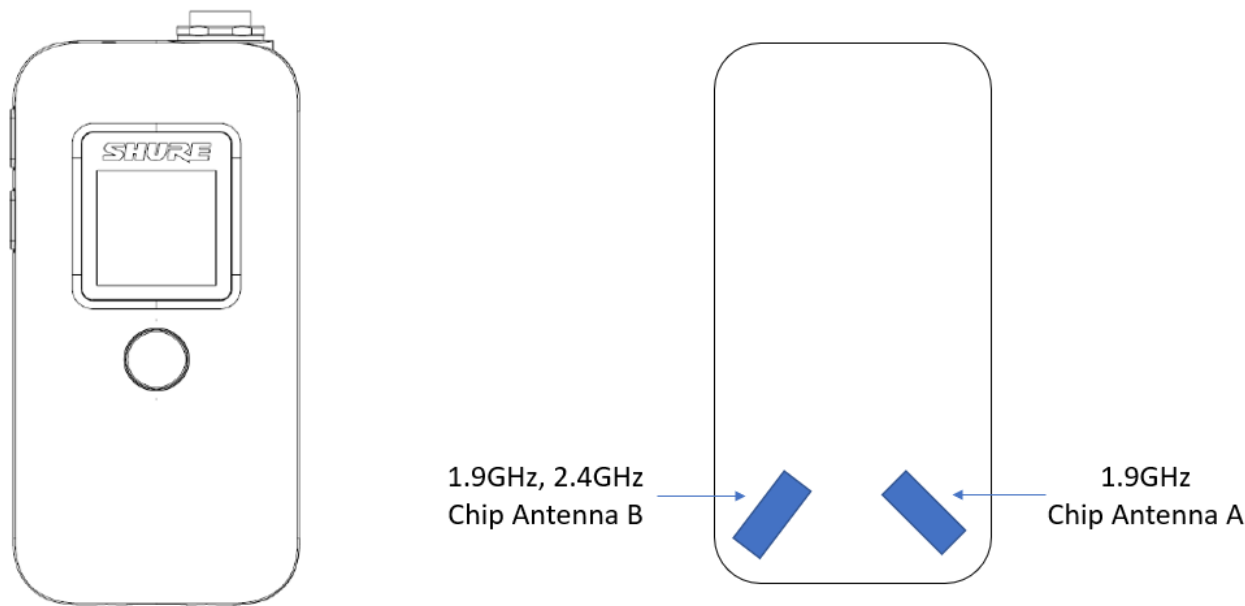


Figure 1-1. Shure MXW1X Internal Antennas Overview

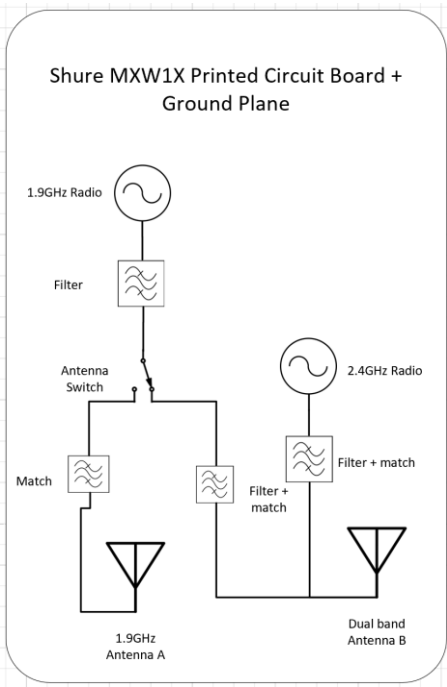


Figure 1-2. Shure MXW1X Antennas Block Diagram

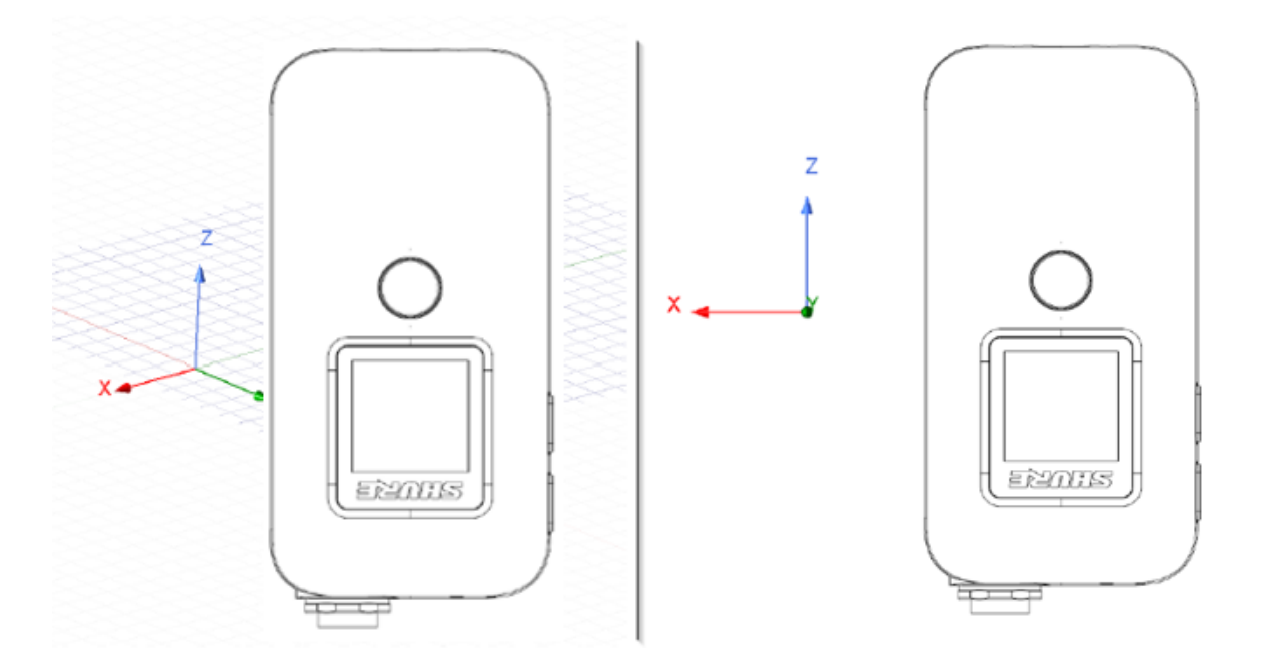


Figure 1-3. MXW1X Reference Angles



2. 1.9GHz Antenna A

Peak Gain					
Parameter	Type	Pattern	1880 MHz	1905 MHz	1930 MHz
Antenna A	Internal Chip Antenna	Omni	1.05 dBi	1.27 dBi	0.23 dBi

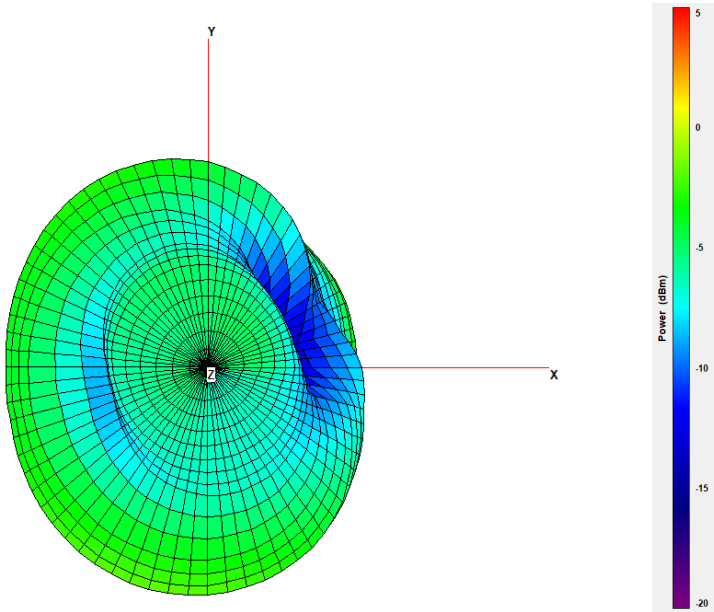


Figure 2-1. 1.9GHz Antenna A X-Y Plane.

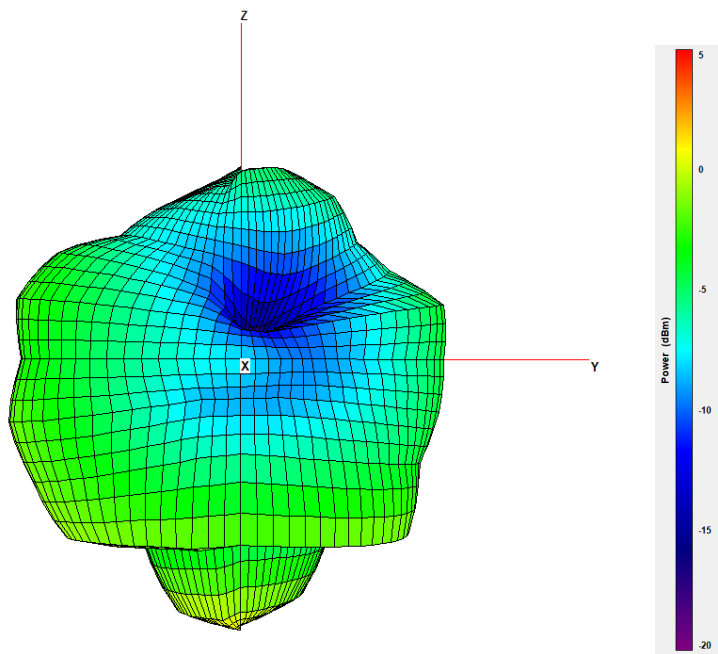


Figure 2-2. 1.9GHz Antenna A Y-Z Plane

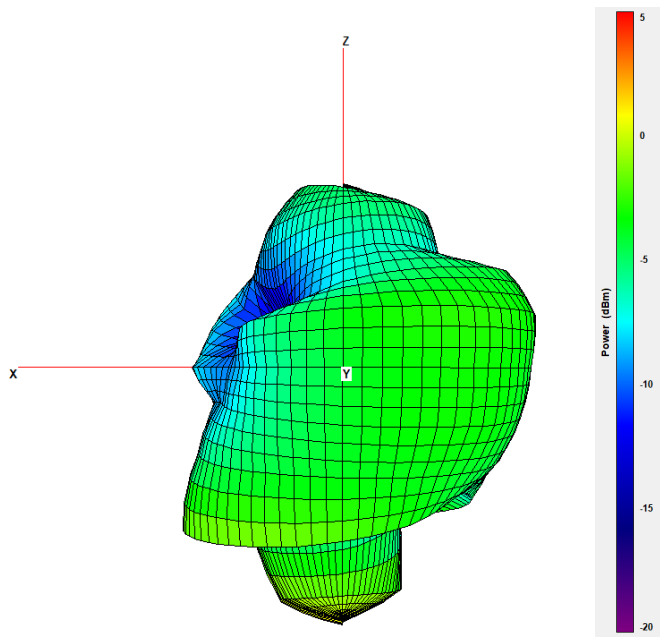


Figure 2-3. 1.9GHz Antenna A X-Z plane



Shure MXW1X Antenna Measurements

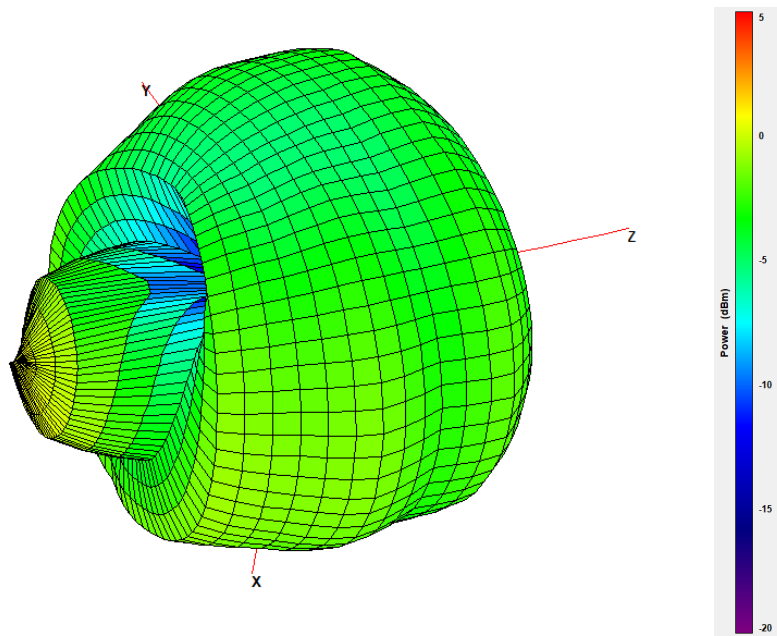


Figure 2-4. 1.9GHz Antenna A 3D



3. 1.9GHz Antenna B

Peak Gain					
Parameter	Type	Pattern	1880 MHz	1905 MHz	1930 MHz
Antenna B	Internal Chip Antenna	Omni	-0.80 dBi	-0.16 dBi	-0.29 dBi

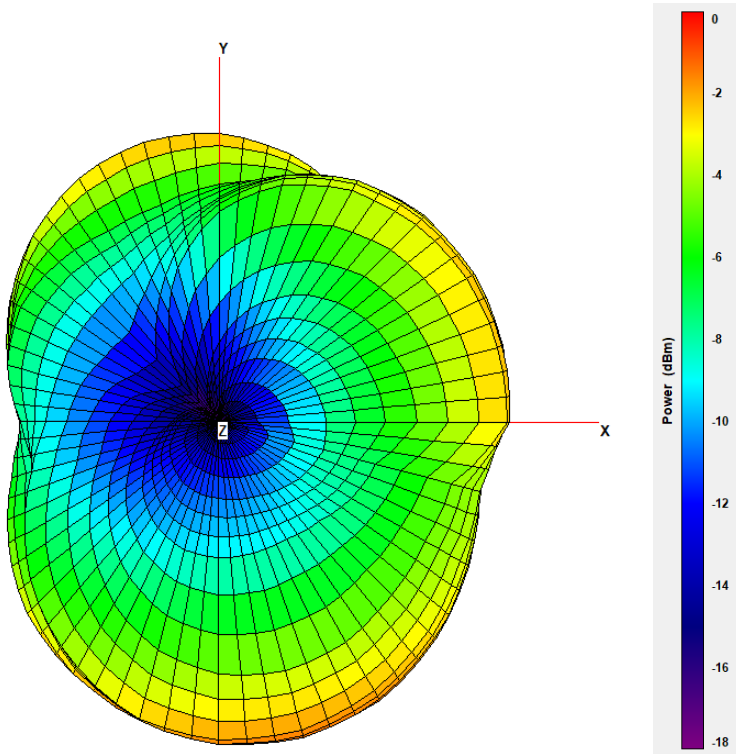


Figure 3-1. 1.9GHz Antenna B X-Y Plane.



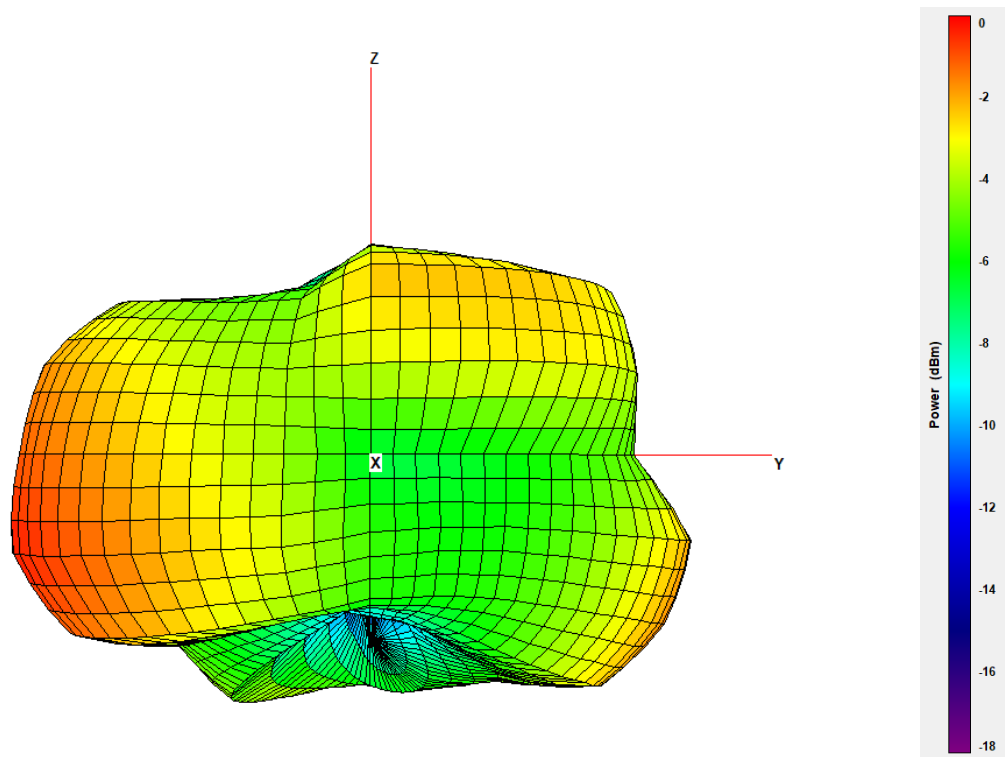


Figure 3-2. 1.9GHz Antenna B Y-Z Plane.

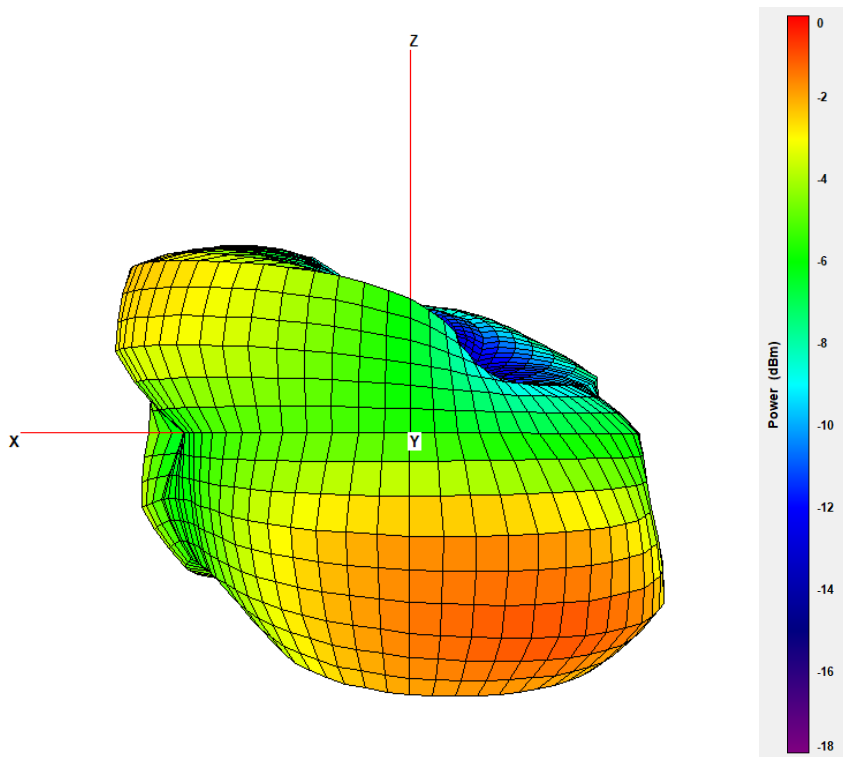




Figure 3-3. 1.9GHz Antenna B X-Z Plane.

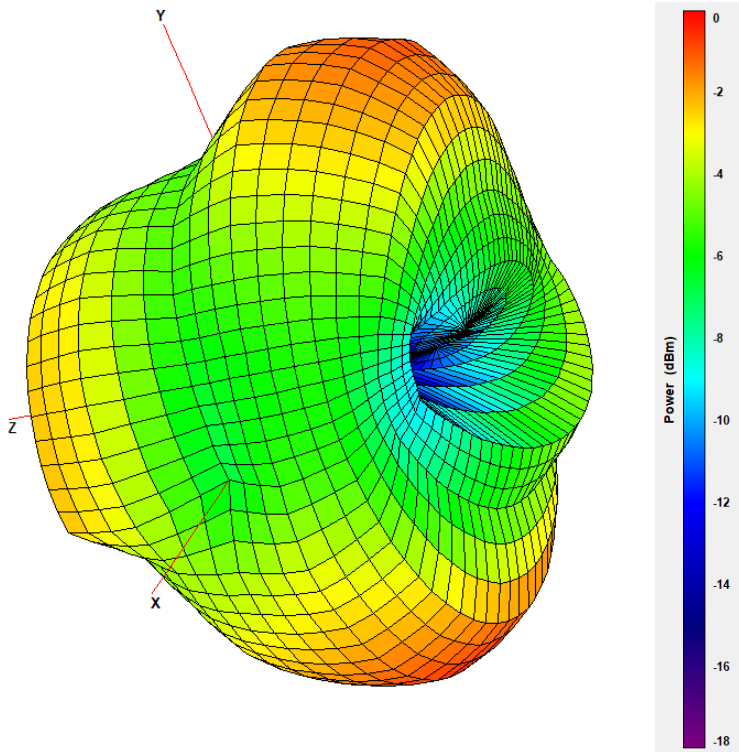


Figure 3-4. 1.9GHz Antenna B 3D



4. 2.4GHz Bluetooth Antenna

Peak Gain					
Parameter	Type	Pattern	2412 MHz	2442 MHz	2482 MHz
2.4GHz Antenna	Internal Chip	Omni	1.99 dBi	1.95 dBi	1.85 dBi

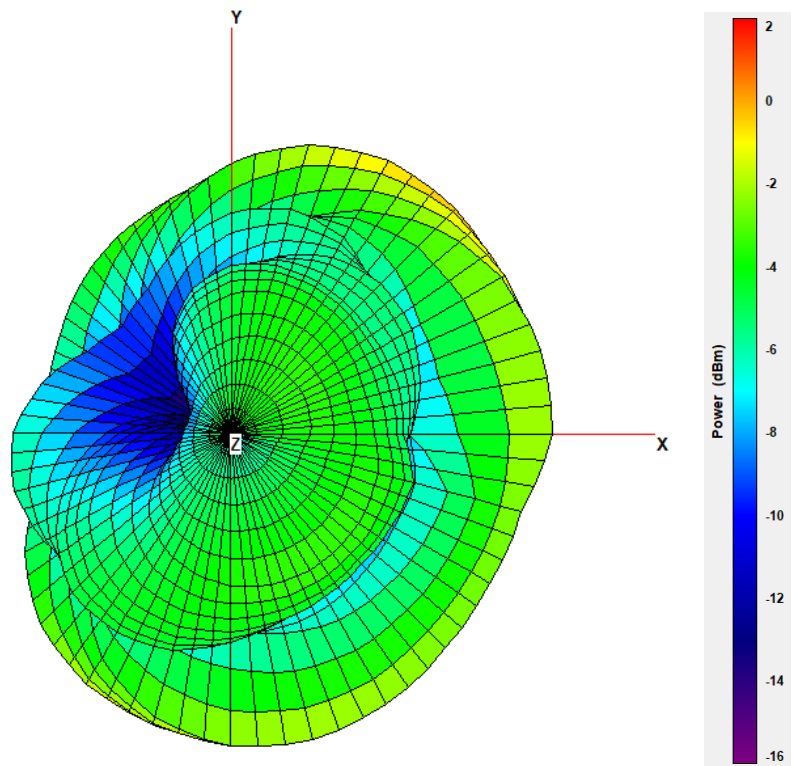


Figure 4-1. 2.4GHz Antenna X-Y plane. 2442MHz.

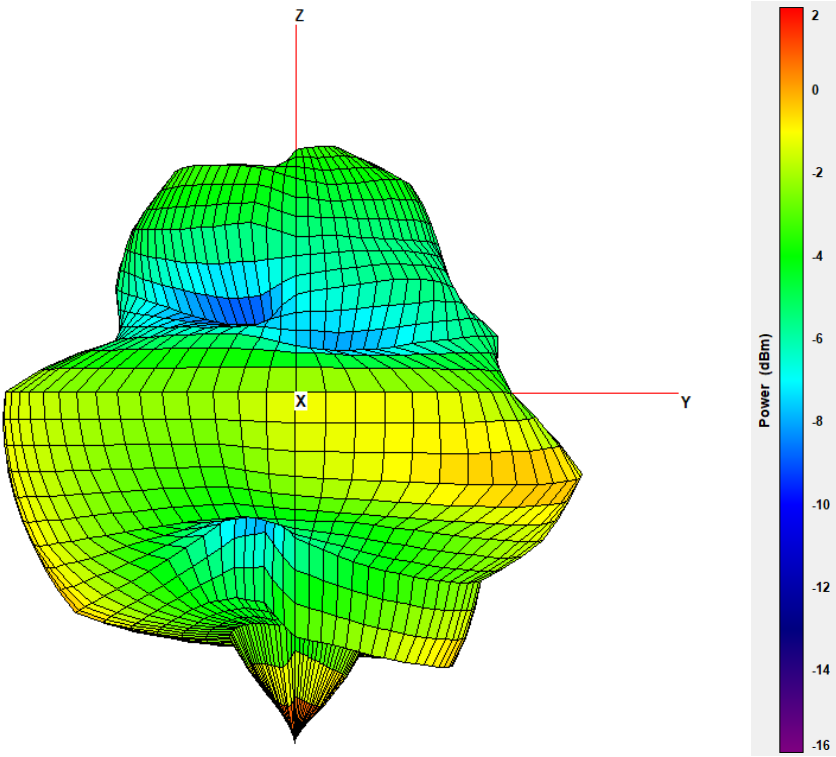


Figure 4-2. 2.4GHz Antenna Y-Z plane. 2442MHz

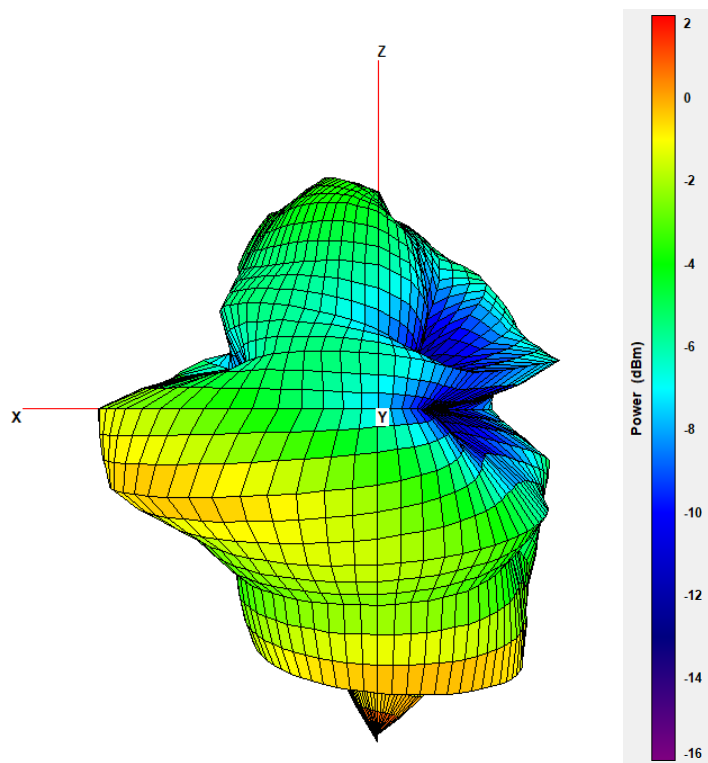


Figure 4-3. 2.4GHz Antenna X-Z plane. 2442MHz



Shure MXW1X Antenna Measurements

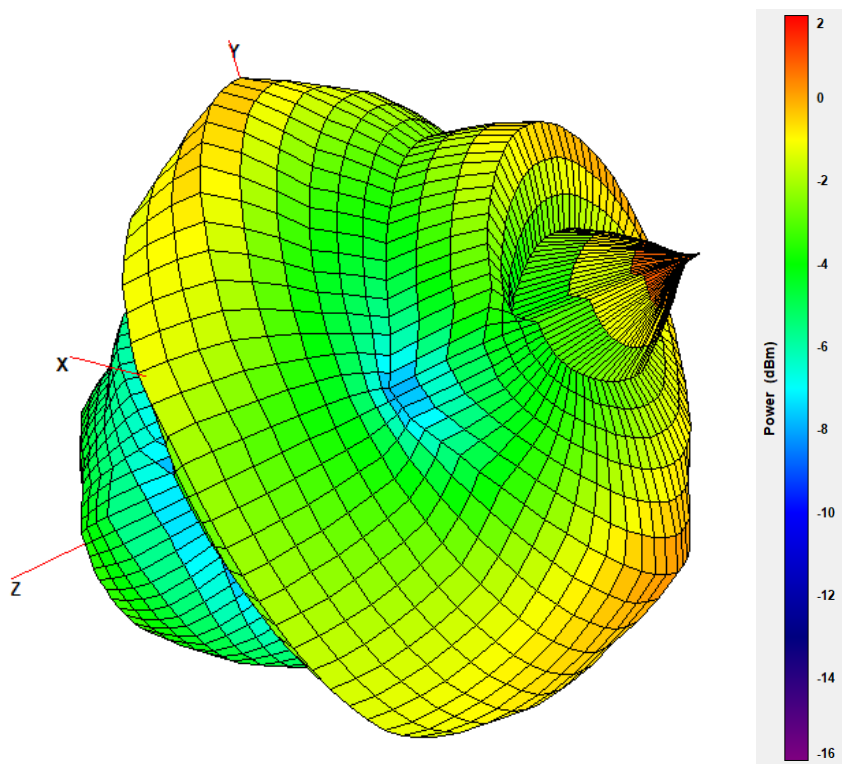


Figure 4-4. 2.4GHz Antenna 3D. 2442MHz