

6 RS9116 CC1 Module Antenna Specifications

6.1 Overview

The sections that follow provide the performance specifications of the dual band PCB Antenna for 9116 M7DB/M7DB6 module used in FCC, IC, ETSI/CE, and other regulatory certifications.

6.2 PCB Antenna Performance Specifications

6.2.1 Return Loss Characteristic of the Antenna

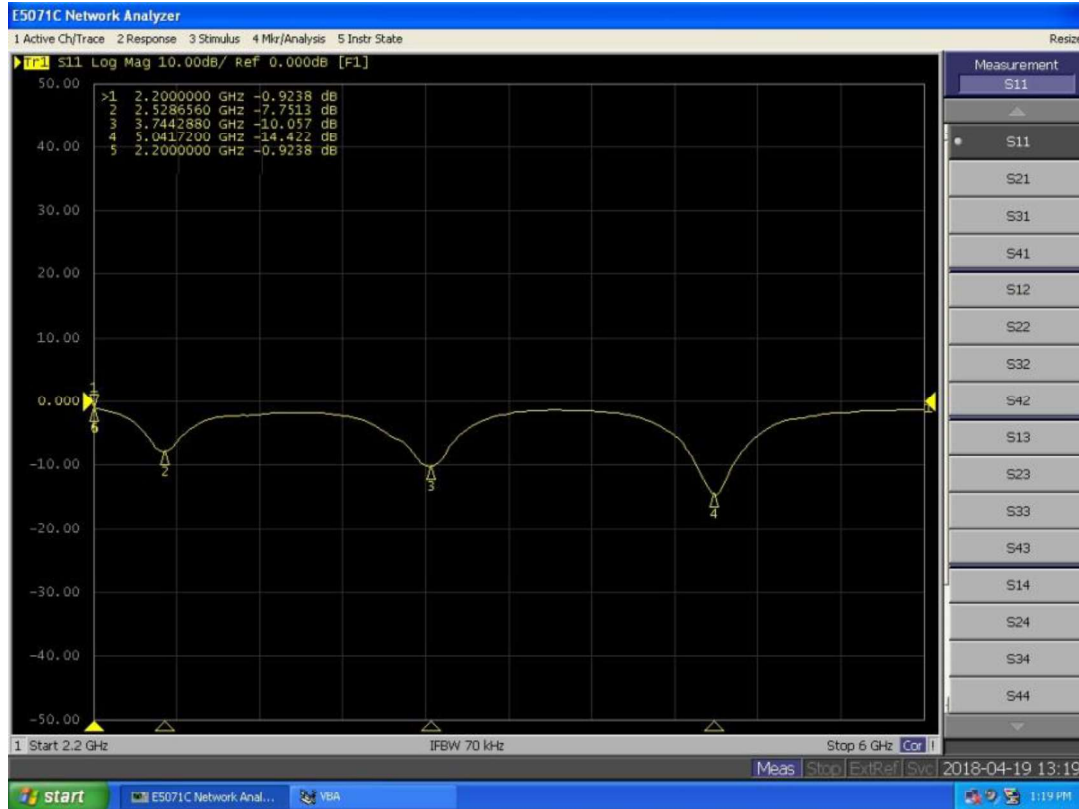


Figure 24. Return Loss Characteristic of the Antenna

6.2.2 Module Reference Orientation

Size of test board is 45 x 30 mm

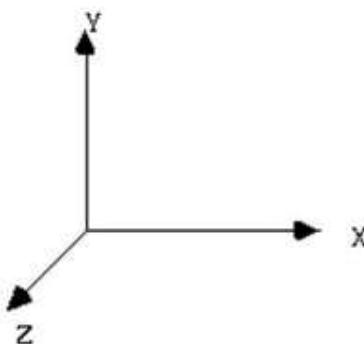
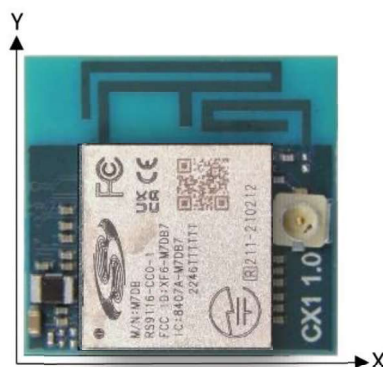


Figure 25. Module Reference Orientation



6.2.3 2D Gain Plots at 2.4 GHz

6.2.3.1 XY at 2.4 GHz

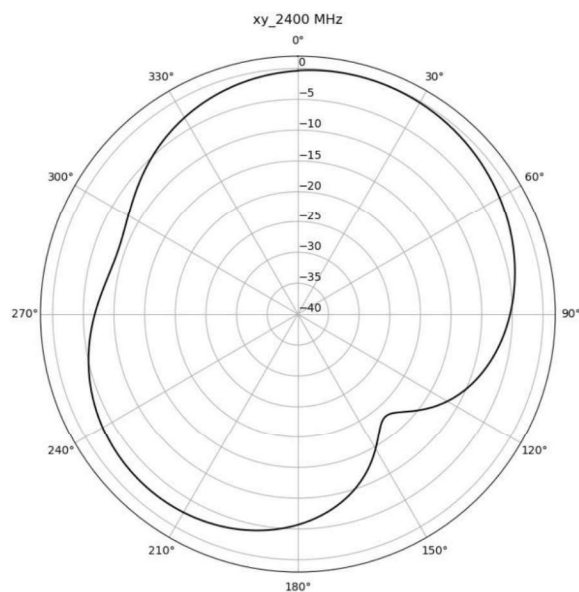


Figure 26. 2D Gain Plot for XY at 2.4 GHz

6.2.3.2 YZ at 2.4 GHz

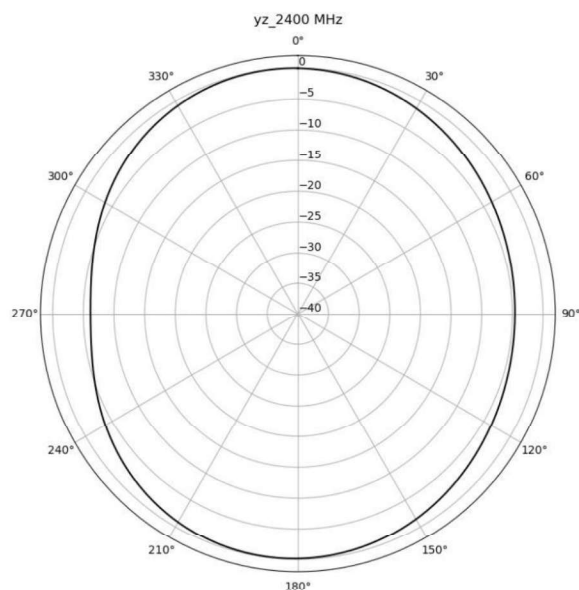
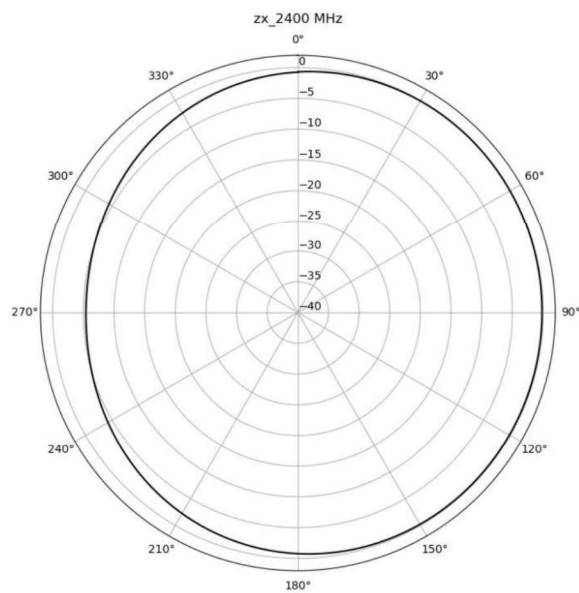


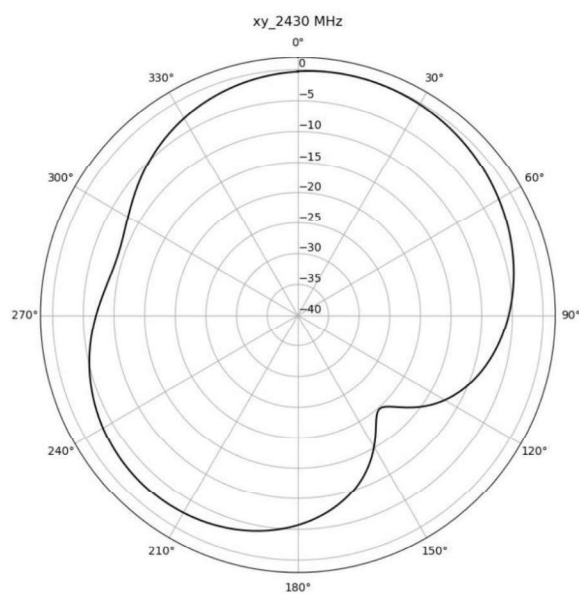
Figure 27. 2D Gain Plot for YZ at 2.4 GHz

6.2.3.3 ZX at 2.4 GHz

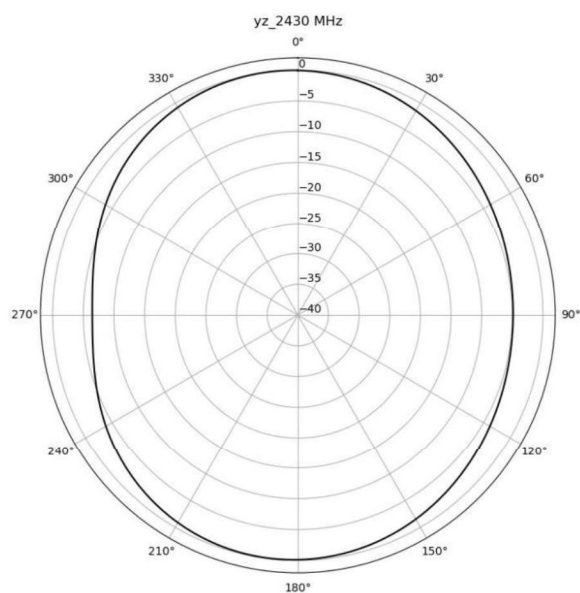
**Figure 28. 2D Gain Plot at ZX at 2.4 GHz**

6.2.4 2D Gain Plots at 2.430 GHz

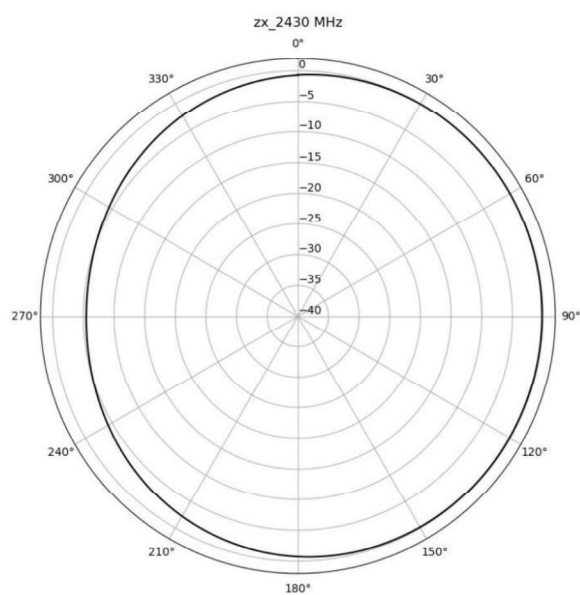
6.2.4.1 XY at 2.43 GHz

**Figure 29. 2D Gain Plot for XY at 2.43 GHz**

6.2.4.2 YZ at 2.43 GHz

**Figure 30. 2D Gain Plot for YZ at 2.43 GHz**

6.2.4.3 ZX at 2.43 GHz

**Figure 31. 2D Gain Plot for ZX at 2.43 GHz**

6.2.5 2D Gain Plots at 2.480 GHz

6.2.5.1 XY at 2.484 GHz

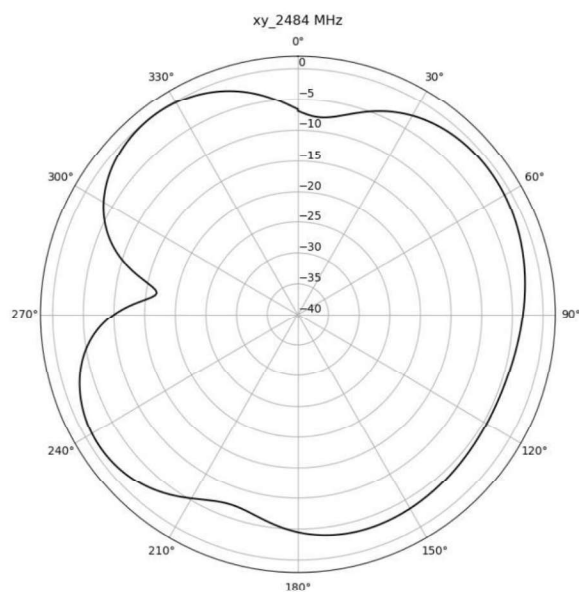


Figure 32. 2D Gain Plot for XY at 2.484 GHz

6.2.5.2 YZ at 2.484 GHz

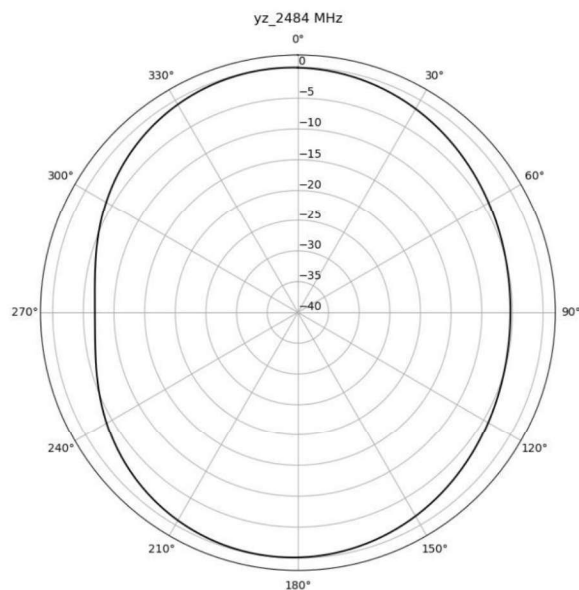


Figure 33. 2D Gain Plot for YZ at 2.484 GHz

6.2.5.3 ZX at 2.484 GHz

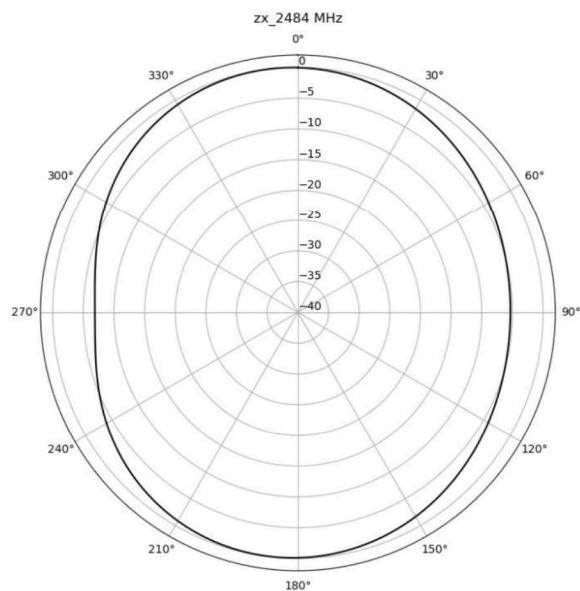


Figure 34. 2D Gain Plot for ZX at 2.484 GHz

6.2.6 2D Gain Plots at 5.1 GHz

6.2.6.1 XY at 5.1 GHz

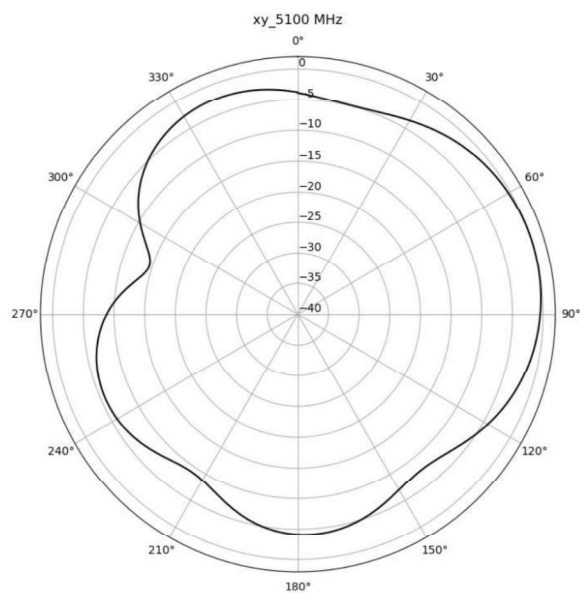


Figure 35. 2D Gain Plot for XY at 5.1 GHz

6.2.6.2 YZ at 5.1 GHz

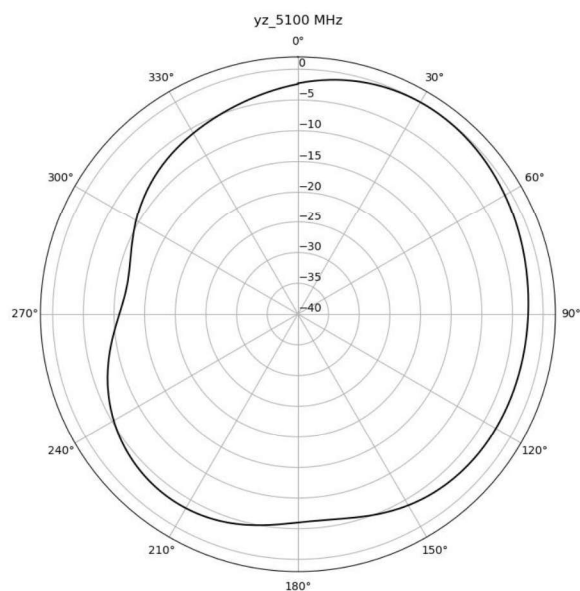


Figure 36. 2D Gain Plot for YZ at 5.1 GHz

6.2.6.3 ZX at 5.1 GHz

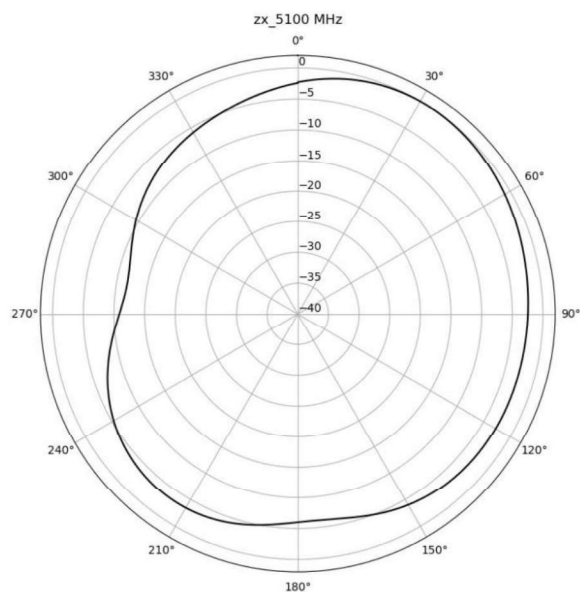


Figure 37. 2D Gain Plot for ZX at 5.1 GHz

6.2.7 2D Gain Plots at 5.5 GHz

6.2.7.1 XY at 5.5 GHz

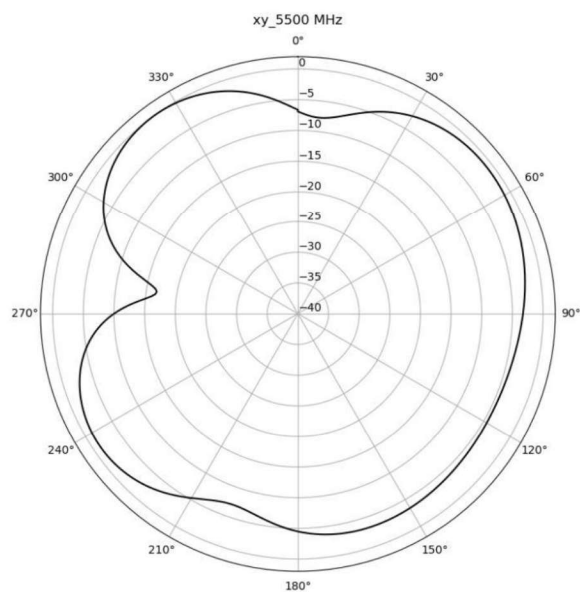


Figure 38. 2D Gain Plot for XY at 5.5 GHz

6.2.7.2 YZ at 5.5 GHz

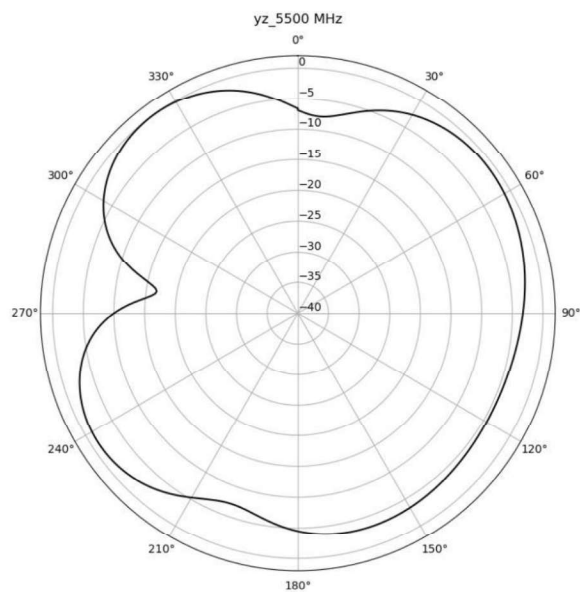
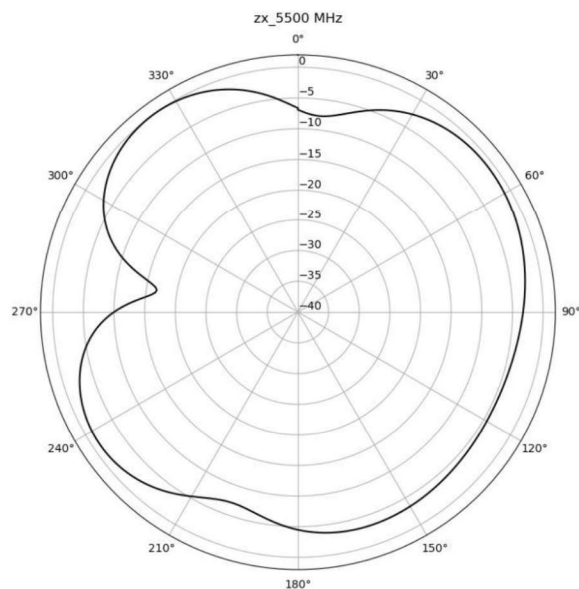


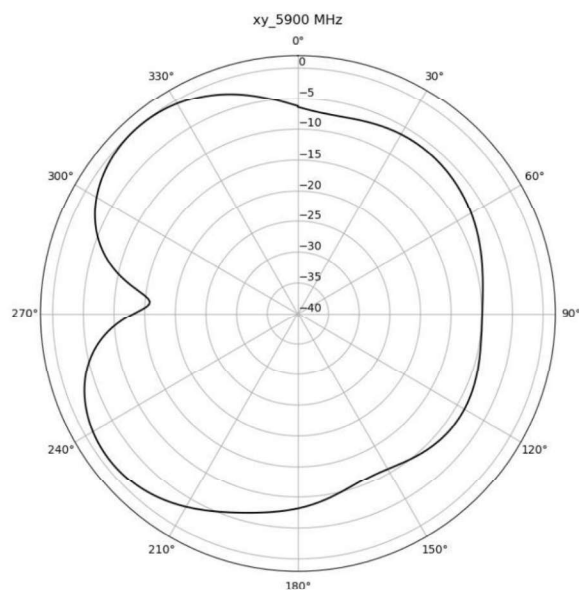
Figure 39. 2D Gain Plot for YZ at 5.5 GHz

6.2.7.3 ZX at 5.5 GHz

**Figure 40. 2D Gain Plot for ZX at 5.5 GHz**

6.2.8 2D Gain Plots at 5.9 GHz

6.2.8.1 XY at 5.9 GHz

**Figure 41. 2D Gain Plot for XY at 5.9 GHz**

6.2.8.2 YZ at 5.750 GHz

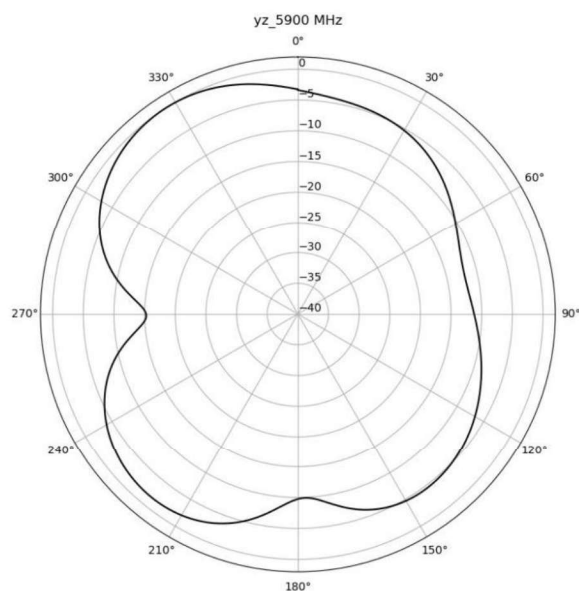


Figure 42. 2D Gain Plot for YZ at 5.9 GHz

6.2.8.3 ZX at 5.9 GHz

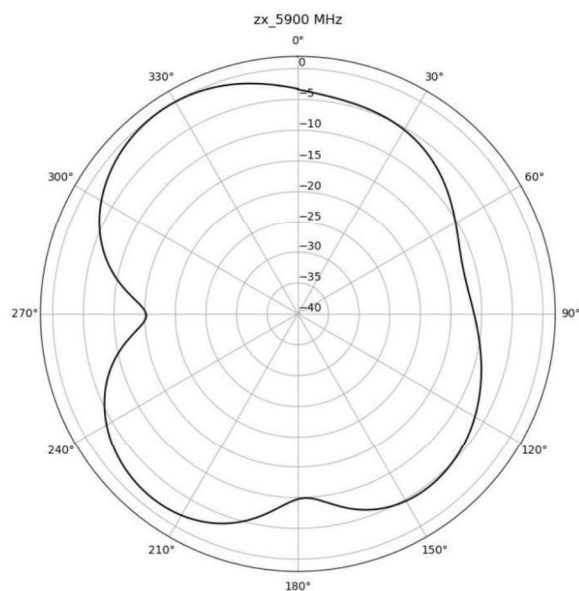


Figure 43. 2D Gain Plot for ZX at 5.9 GHz

6.3 Antenna Parameters

Parameter	2400 - 2500 MHz	5000 - 6000 MHz
Peak Gain	0.712 dBi	1.25 dBi

Table 39. Antenna Parameters

6.4 Mechanical Characteristics

Parameter	Value (L X W)	Units
Module PCB Dimensions	15 x 15.7	mm
Tolerance	±0.2	mm

Table 40. Mechanical Characteristics