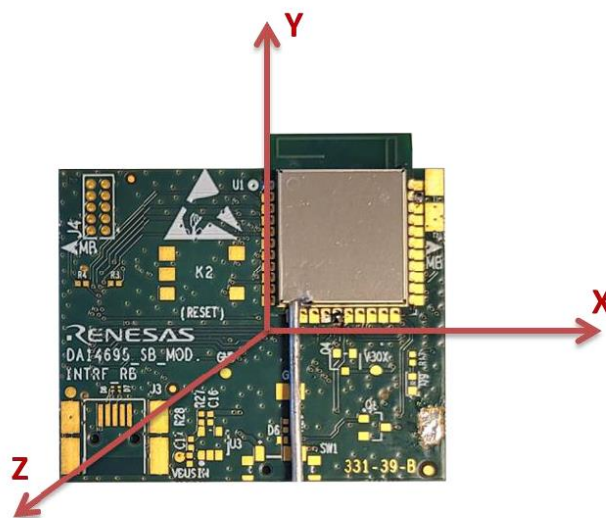


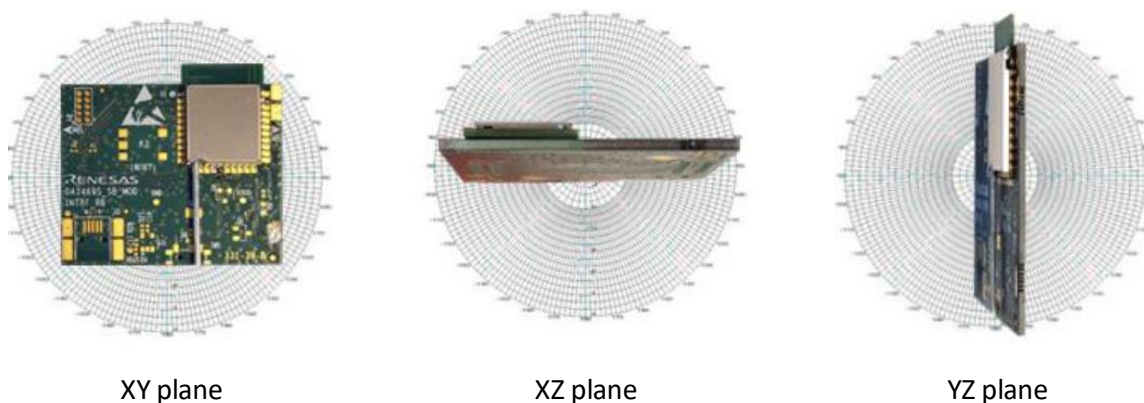
### 8.3 Radiation Pattern

The antenna radiation pattern measurements are carried out in an anechoic chamber. Radiation patterns are presented for three measurement planes: XY-, XZ-, and YZ- planes with horizontal and vertical polarization of the receiving antenna.



**Figure 11: Measurement Plane Definition**

Measurements are carried out for the module installed in the upper right corner on the reference board with no laminate below the antenna trace.



**Figure 12: Board Orientation at Different Planes**

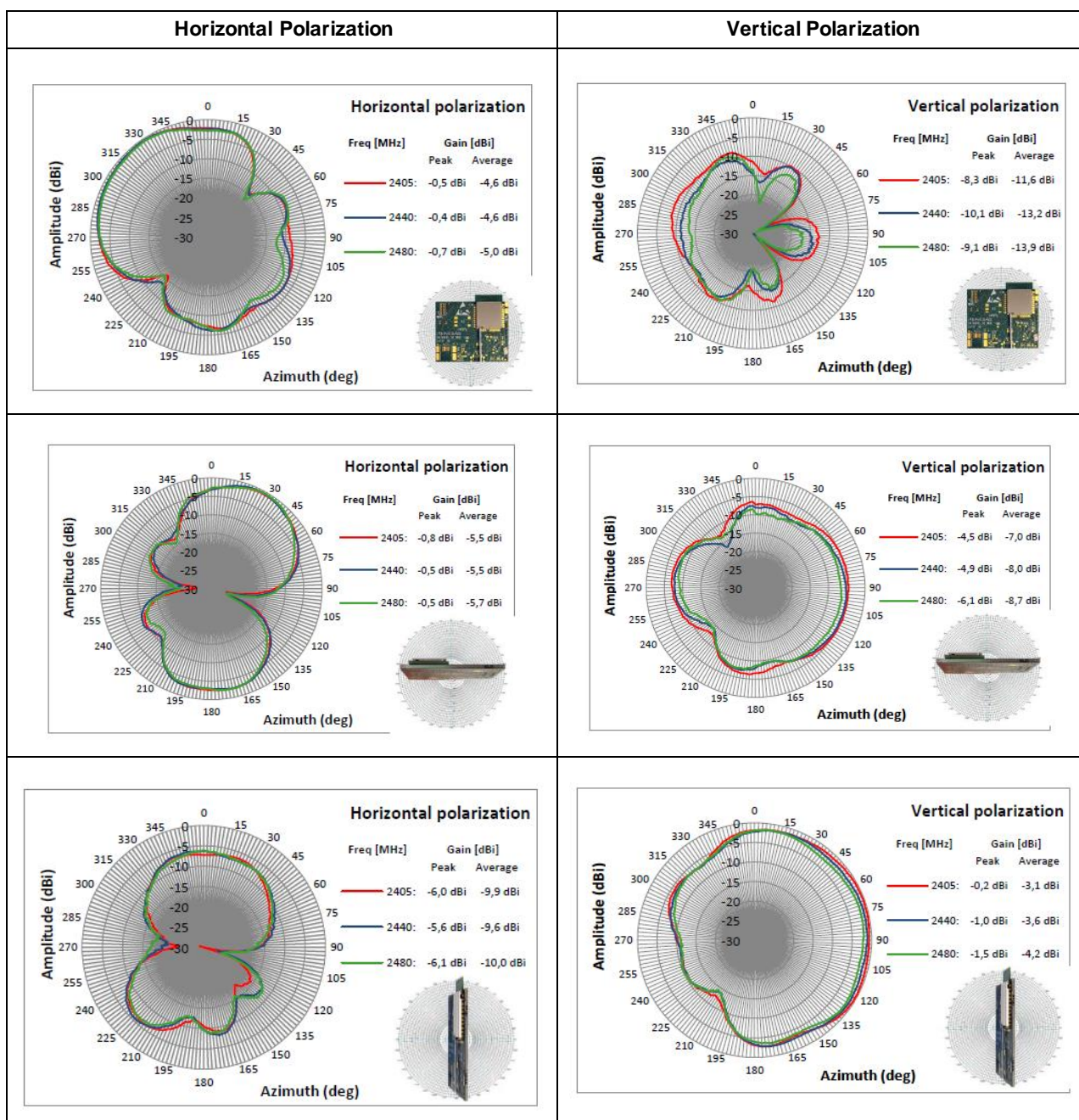


Figure 13: Radiation Pattern for Trace Antenna

Table 15 summarizes antenna peak gain for module mounted on the right corner position of the evaluation board.

Table 15: Antenna Peak Gain for 2.4 GHz Frequency Band

Frequency Band	XY-Plane		YZ-Plane		XZ-Plane	
	Peak gain [dBi]	Polarization	Peak gain [dBi]	Polarization	Peak gain [dBi]	Polarization
2.4 GHz	-0.4	Horizontal	-0.5	Horizontal	-0.2	Vertical