

6.4.5 Antenna Radiation Patterns

This section details UWB antenna radiation patterns for the QPK3000 with V and H plots representing perpendicular vertical and horizontal components.

The radiation patterns of the BLE antenna of the QPK3000 module are shown in Figure 18. During measurement the radio board with the module was mounted on a QPG6200L IoT carrier board with 138 mm x 68 mm size.

Table 10: Antenna Characteristics

Antenna Model	QPK3000 UWB Antenna	QPK3000 BLE Antenna
Antenna Type	PCB Trace Antenna	PCB Trace Antenna
Peak Gain (on 40 x 65mm radio board)	Ch5: 3.3 dBi Ch9: 3.3 dBi	2450 MHz: 0 dBi
Frequency Range	6000 – 9000 MHz	2400 – 2480 MHz

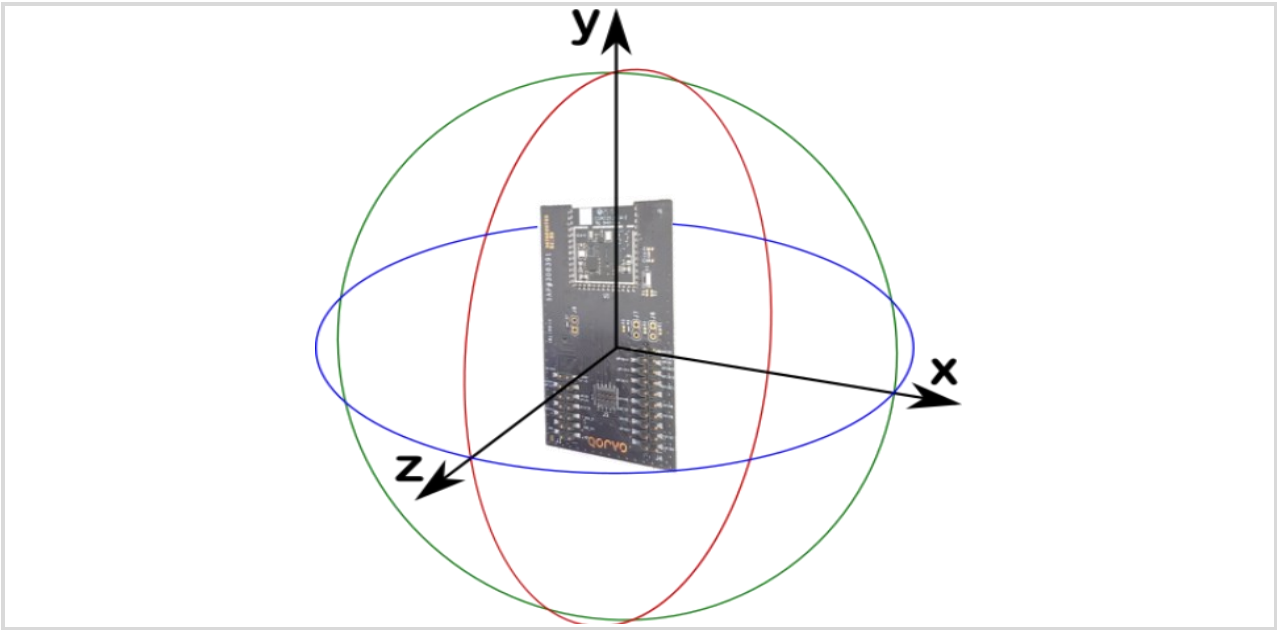


Figure 15: General Antenna Radiation Pattern Planes

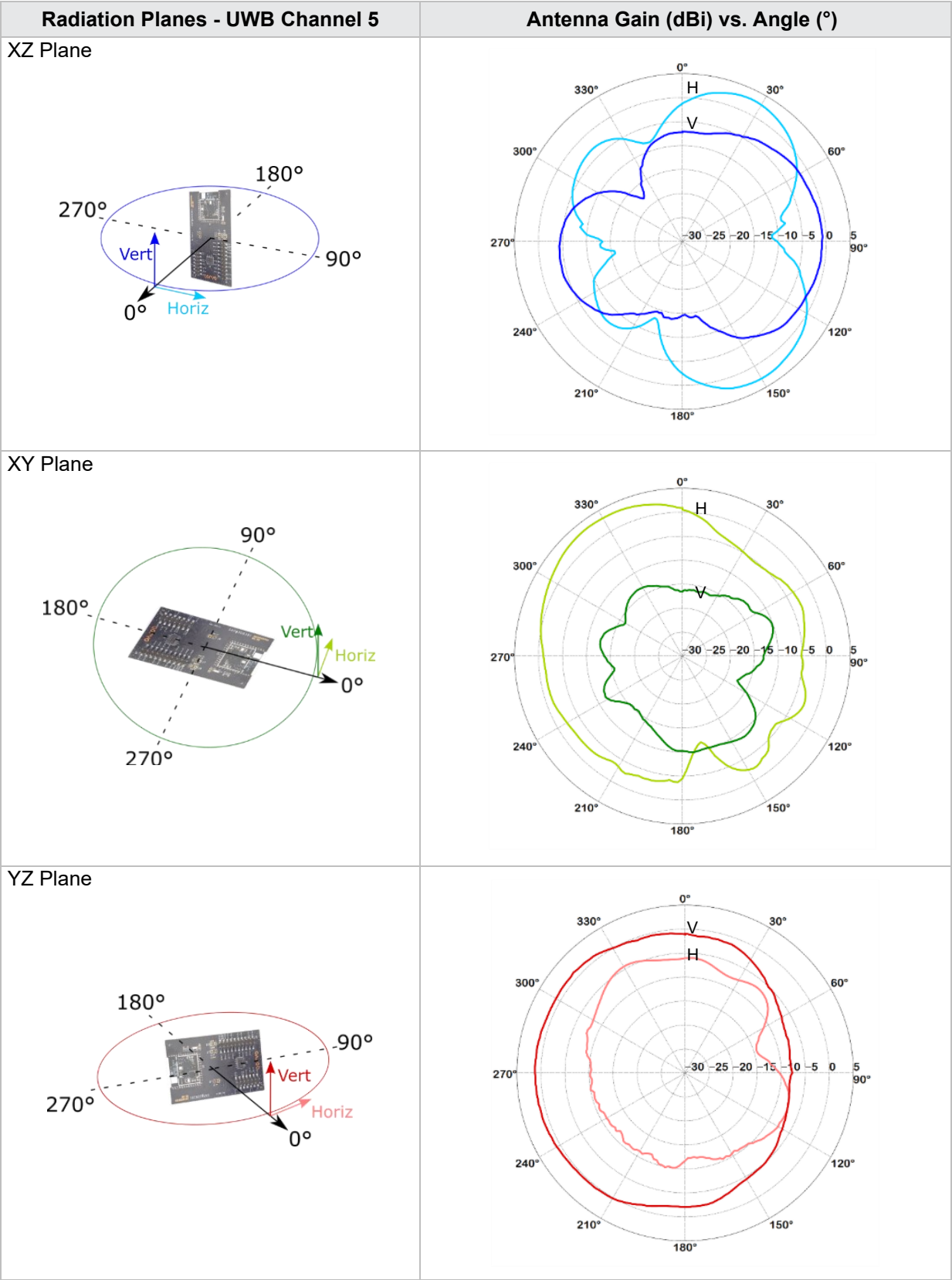


Figure 16: UWB Channel 5 Radiation Patterns

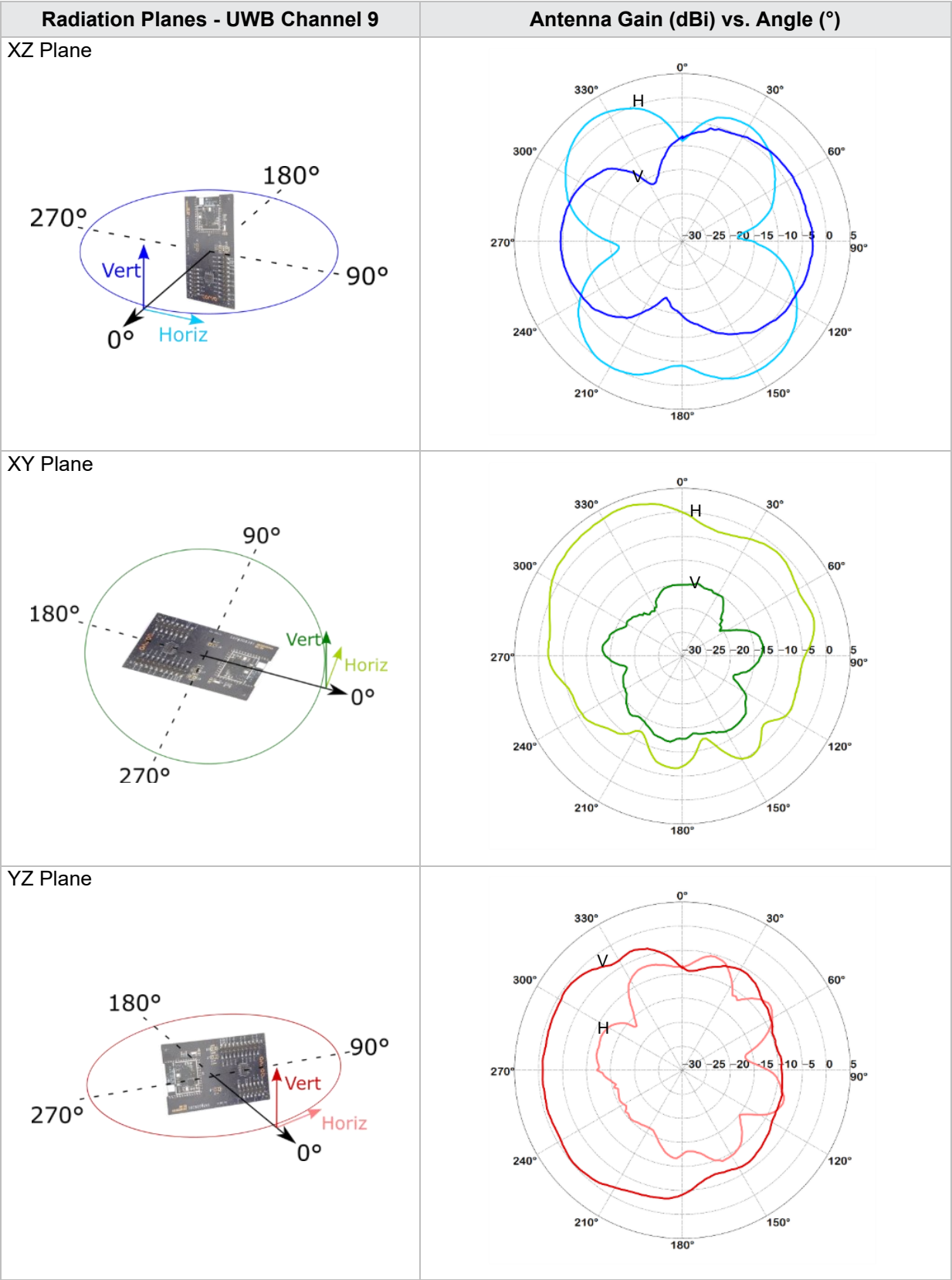


Figure 17: UWB Channel 9 Radiation Patterns

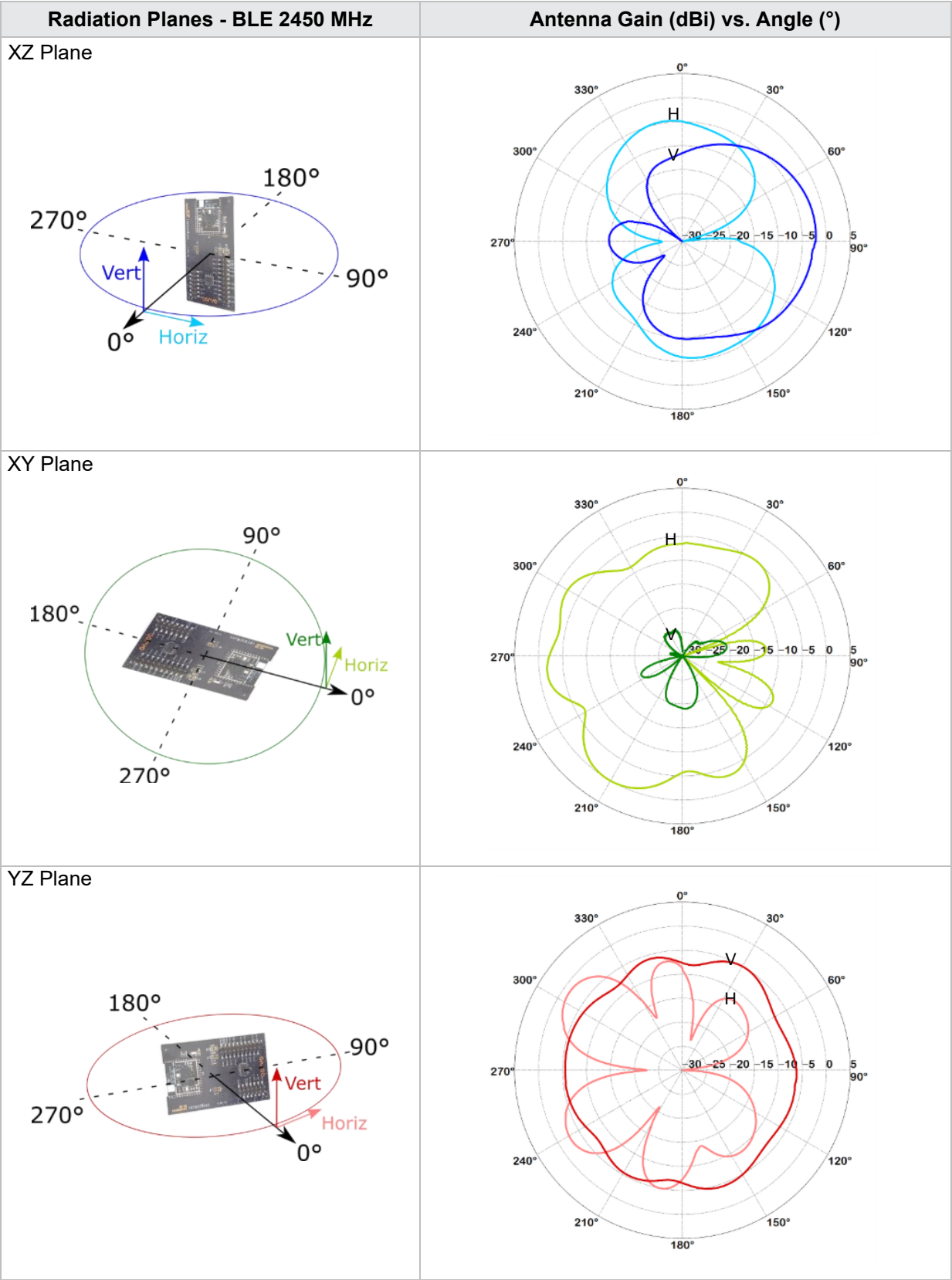


Figure 18: BLE 2450 MHz Radiation Patterns