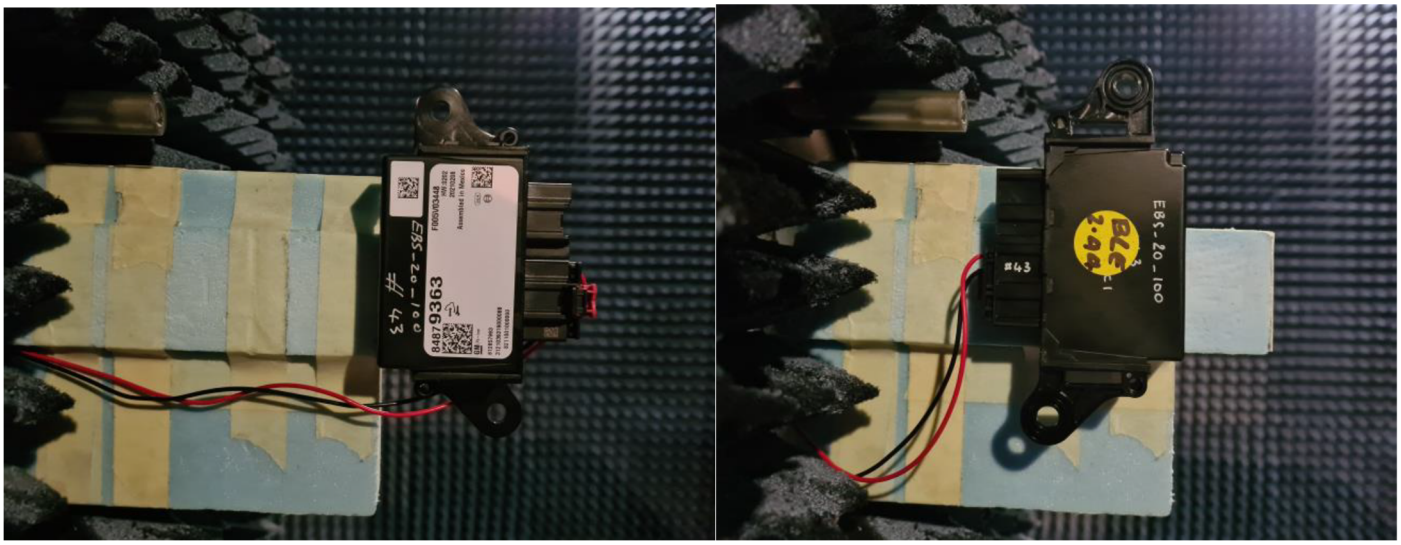
Antenna Exhibit – PCB Trace Antenna (PIFA)

TYPE: PKM2.2

Overview

Title: BLE Antenna Pattern and Gain Characterization
Test Date: August 2021
Data Preparation: Matt Kelly

Test Method: One BLE AUT sample was prepared with a connector for measurement at the following frequencies: 2402 MHz, 2440 MHz and 2480 MHz. A 0 dBm signal is applied to the connector and power is then measured at 3m with an MI-750 advanced receiver connected to a NSI WR430 standard gain horn. The AUT gain is then computed using the FRIIS equation. Gain and pattern data are captured in both H and V polarizations with pattern having an angular resolution of +/-1°.

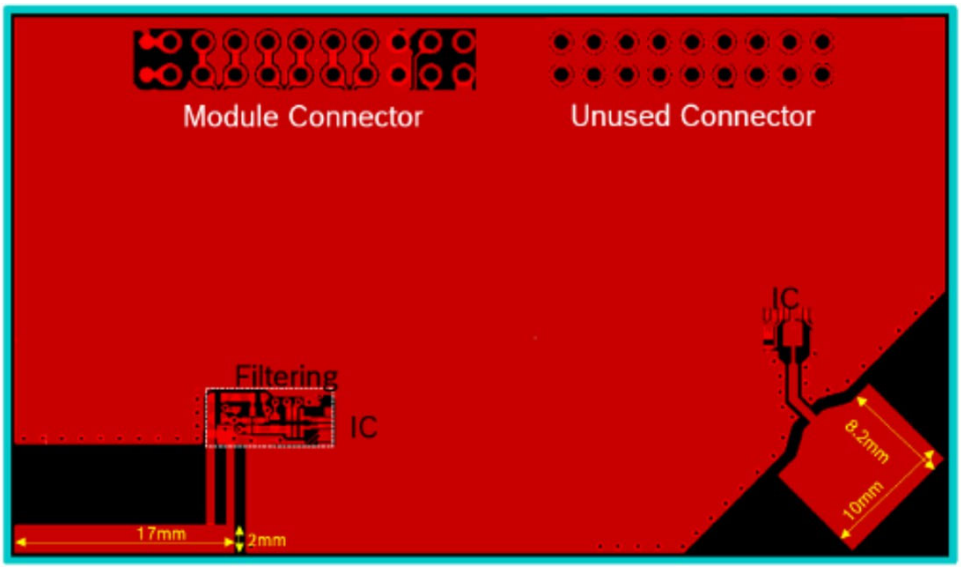


Antenna Exhibit – PCB Trace Antenna (PIFA)

TYPE: PKM2.2

Antenna on the top side of the PCB only

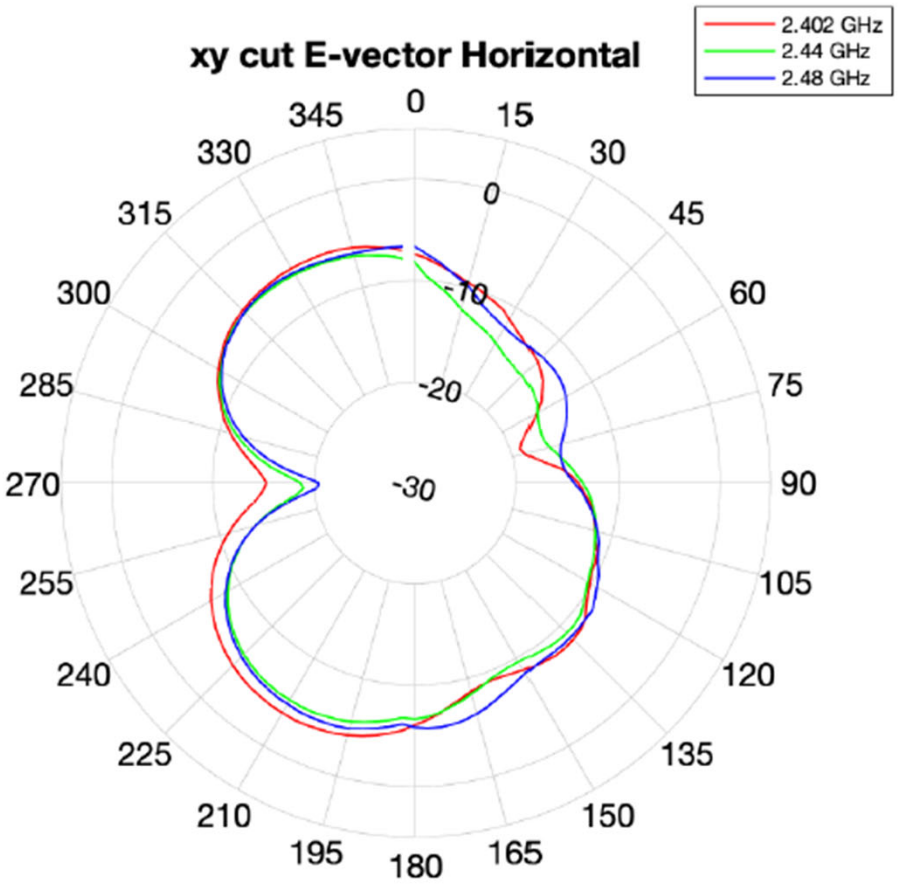
*Max Gain: 0.74dBi

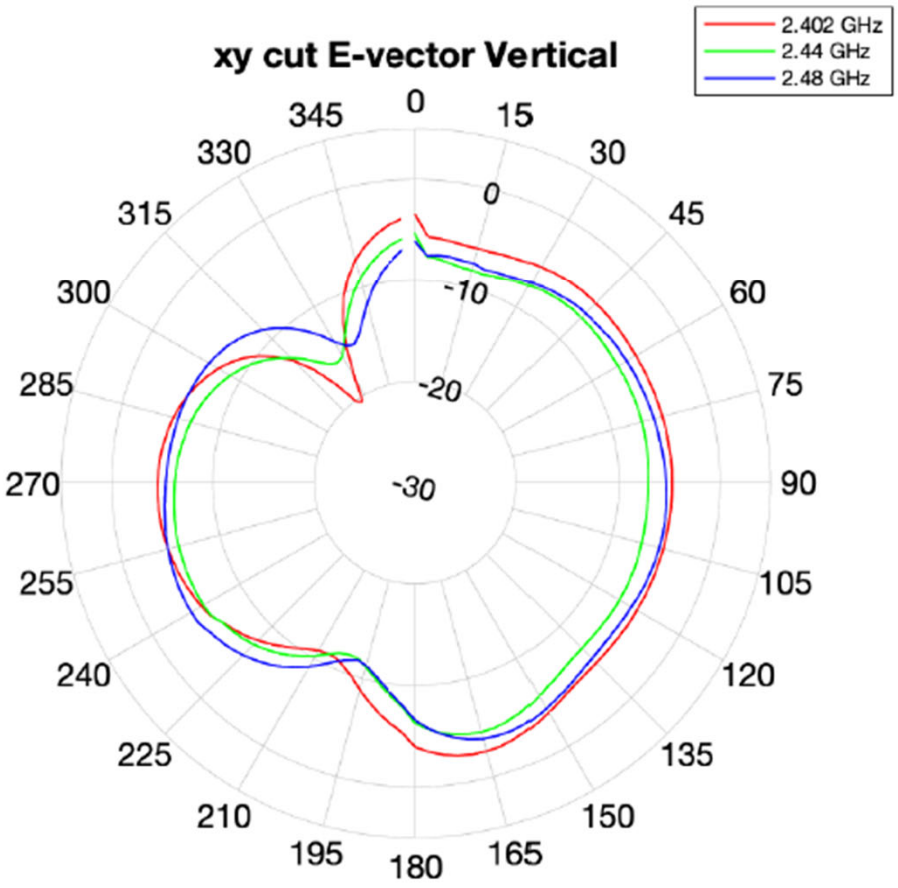


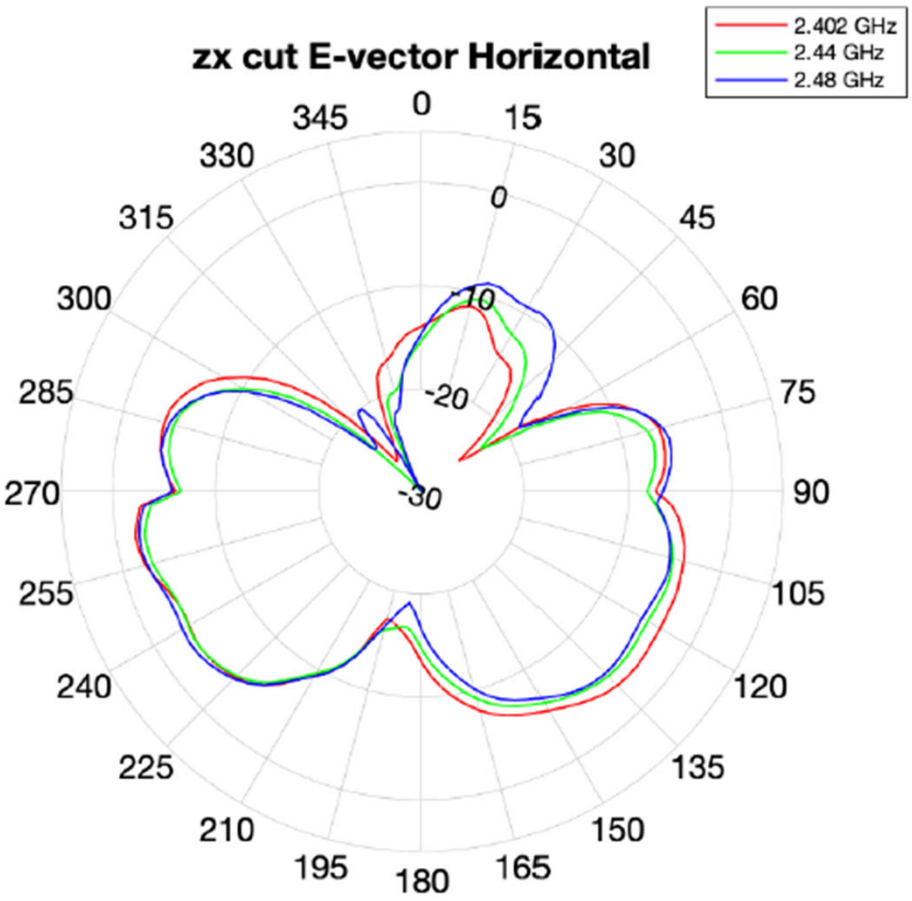
BLE Antenna

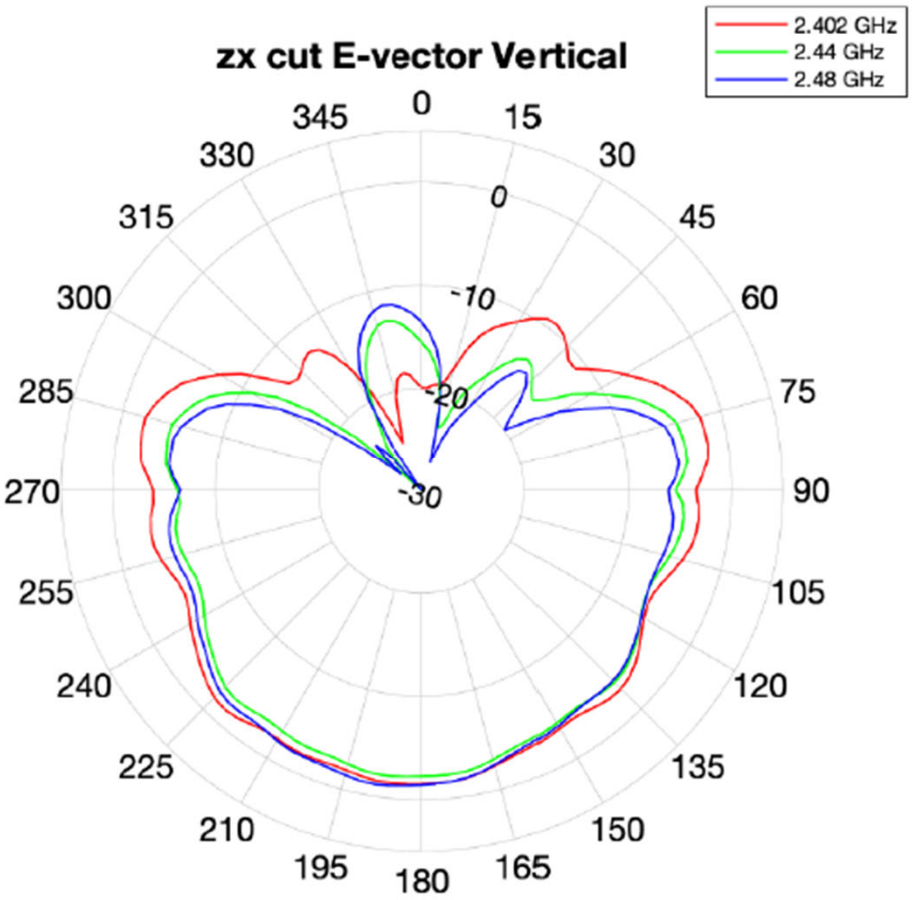
Unused UWB Antenna

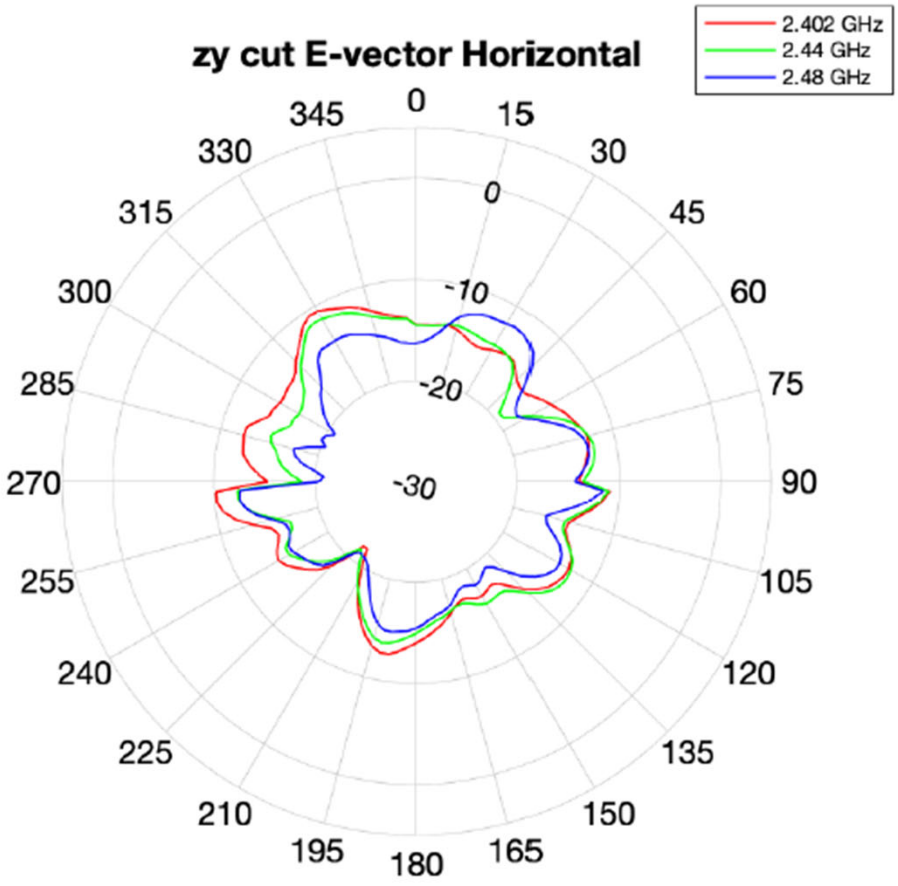
ANTENNA	FREQ (GHZ)		PHI (°)	THETA (°)	GAIN (DBI)
BLE Master	2.402	E-Vector Horizontal	162	102	0.3500
		E-Vector Vertical	207	96	0.7400
	2.44	E-Vector Horizontal	159	105	-1.1400
		E-Vector Vertical	213	129	-0.1800
	2.48	E-Vector Horizontal	156	105	-0.2400
		E-Vector Vertical	207	129	-0.3500

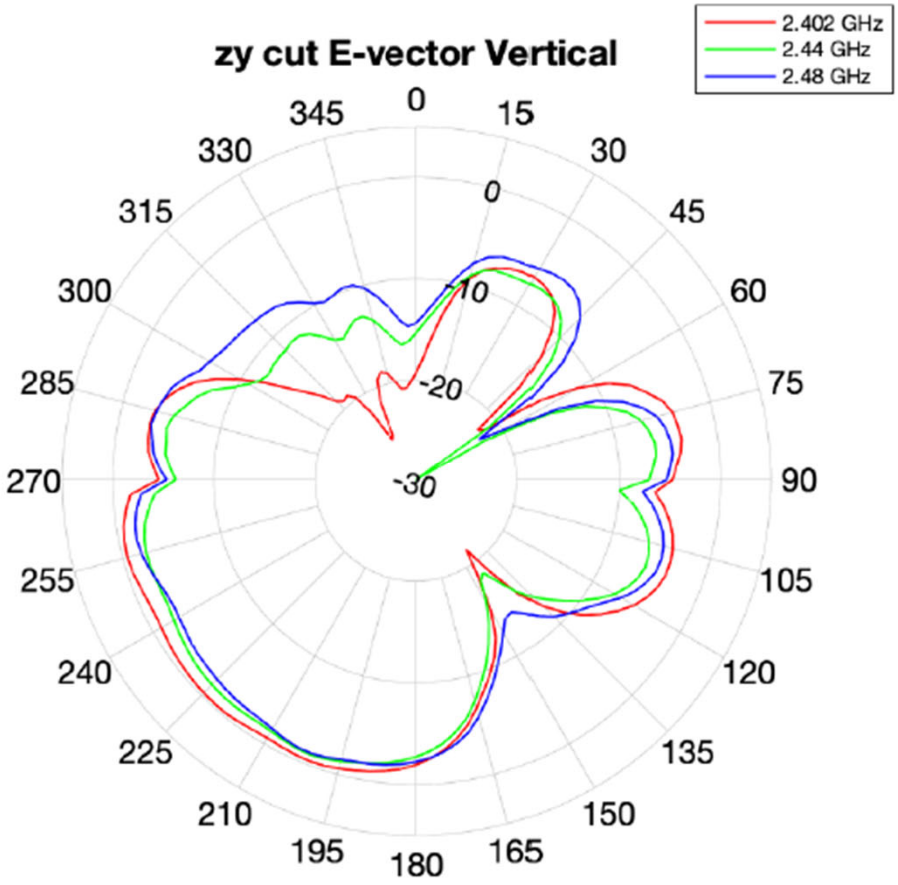

xy cut E-vector Horizontal
2.402 GHz
2.44 GHz
2.48 GHz
0
15
30
45
60
75
90
105
120
135
150
165
180
195
210
225
240
255
270
285
300
315
330
345
0
-10
-20
-30


xy cut E-vector Vertical
2.402 GHz
2.44 GHz
2.48 GHz
0
15
30
45
60
75
90
105
120
135
150
165
180
195
210
225
240
255
270
285
300
315
330
345
0
-10
-20
-30


zx cut E-vector Horizontal
2.402 GHz
2.44 GHz
2.48 GHz
0
15
30
45
60
75
90
105
120
135
150
165
180
195
210
225
240
255
270
285
300
315
330
345
0
-10
-20
-30


zx cut E-vector Vertical
2.402 GHz
2.44 GHz
2.48 GHz
0
15
30
45
60
75
90
105
120
135
150
165
180
195
210
225
240
255
270
285
300
315
330
345
0
-10
-20
-30


zy cut E-vector Horizontal
2.402 GHz
2.44 GHz
2.48 GHz
0
15
30
45
60
75
90
105
120
135
150
165
180
195
210
225
240
255
270
285
300
315
330
345
0
-10
-20
-30


zy cut E-vector Vertical
2.402 GHz
2.44 GHz
2.48 GHz
0
15
30
45
60
75
90
105
120
135
150
165
180
195
210
225
240
255
270
285
300
315
330
345
0
-10
-20
-30