



Results are measured at anechoic chamber in R&D laboratory.

ELECTRICAL SPECIFICATION

Frequency Range

2400-2485 MHz

Antenna Efficiency

> 55%

Peak Gain

2.12 dBi @2402 MHz

Feed Impedance

50 Ω

MANUFACTURER:

Digital Matter
Embedded South
Africa

Second Floor, Flushing
Meadows,
The Campus, 57 Sloane
Street Bryanston 2191

PUT ANTENNA NAME

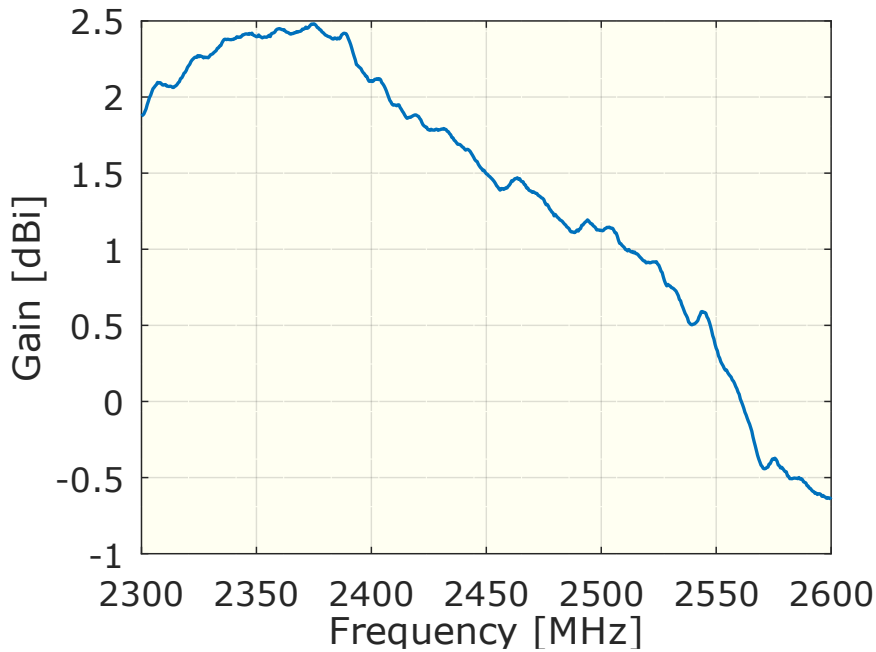
L-type PCB antenna

Approved by: Matti Lahdenperä RF Lab Lead

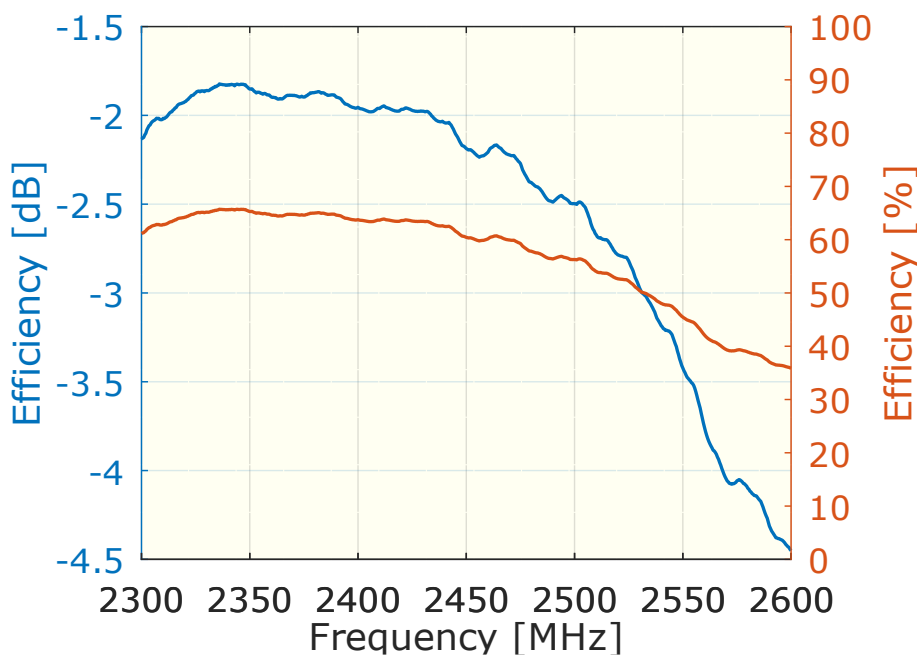
23.12.2025

GAIN & EFFICIENCY

Realized Gain

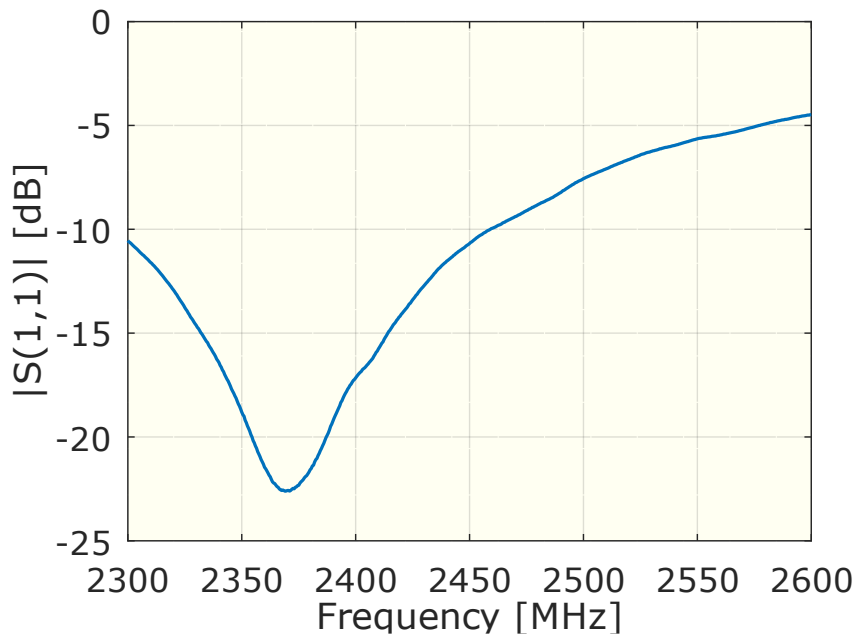


Efficiency

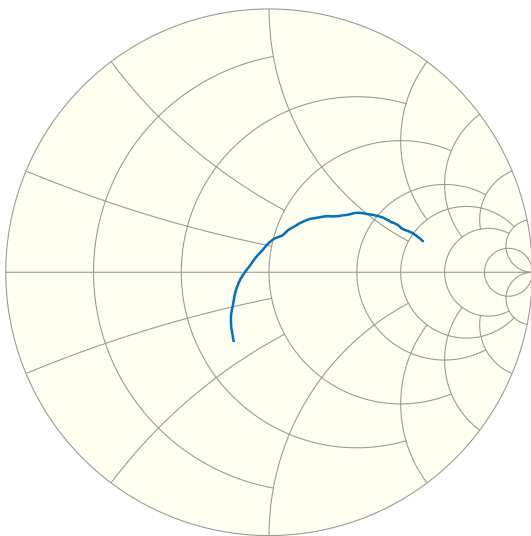


IMPEDANCE

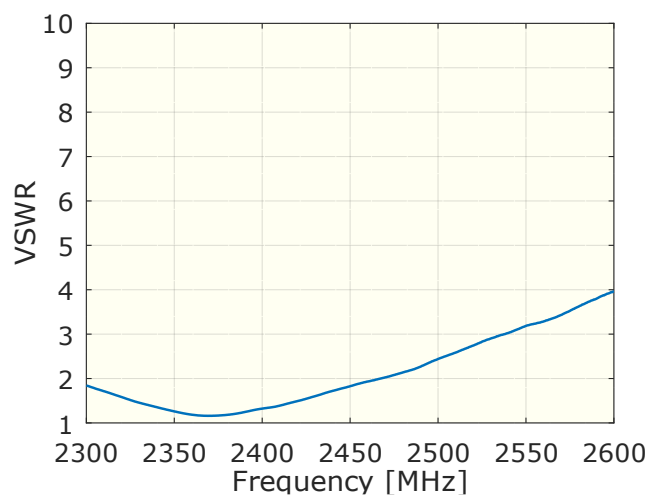
dB $|S_{11}|$



Smith Chart



VSWR



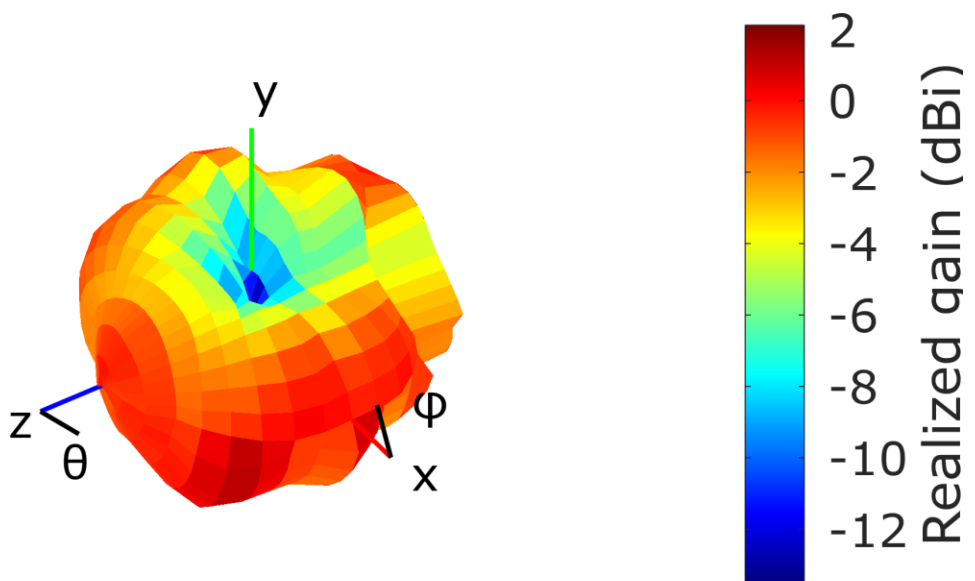
BLUETOOTH GAINS

BLE Channel	Frequency	Max Gain
0	2404 MHz	2.11 dBi
1	2406 MHz	2.06 dBi
2	2408 MHz	1.98 dBi
3	2410 MHz	1.95 dBi
4	2412 MHz	1.95 dBi
5	2414 MHz	1.90 dBi
6	2416 MHz	1.86 dBi
7	2418 MHz	1.88 dBi
8	2420 MHz	1.88 dBi
9	2422 MHz	1.83 dBi
10	2424 MHz	1.80 dBi
11	2426 MHz	1.79 dBi
12	2428 MHz	1.79 dBi
13	2430 MHz	1.79 dBi
14	2432 MHz	1.79 dBi
15	2434 MHz	1.76 dBi
16	2436 MHz	1.72 dBi
17	2438 MHz	1.69 dBi
18	2440 MHz	1.67 dBi
19	2442 MHz	1.66 dBi

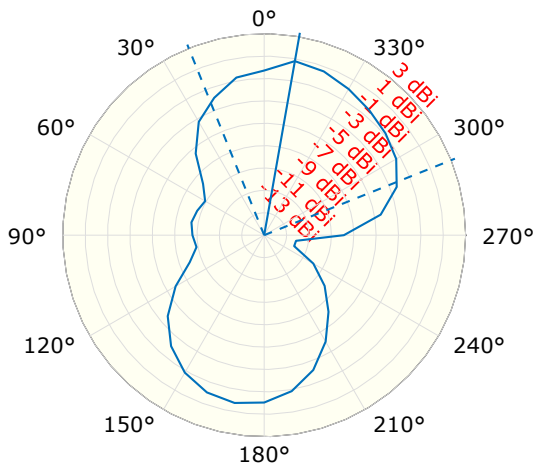
BLUETOOTH GAINS

BLE Channel	Frequency	Max Gain
20	2444 MHz	1.62 dBi
21	2446 MHz	1.58 dBi
22	2448 MHz	1.53 dBi
23	2450 MHz	1.50 dBi
24	2452 MHz	1.47 dBi
25	2454 MHz	1.43 dBi
26	2456 MHz	1.39 dBi
27	2458 MHz	1.40 dBi
28	2460 MHz	1.42 dBi
29	2462 MHz	1.46 dBi
30	2464 MHz	1.46 dBi
31	2466 MHz	1.44 dBi
32	2468 MHz	1.40 dBi
33	2470 MHz	1.37 dBi
34	2472 MHz	1.37 dBi
35	2474 MHz	1.34 dBi
36	2476 MHz	1.29 dBi
37	2402 MHz	2.12 dBi
38	2426 MHz	1.79 dBi
39	2480 MHz	1.23 dBi

2402 MHZ 3D



2402 MHZ PATTERN CUTS

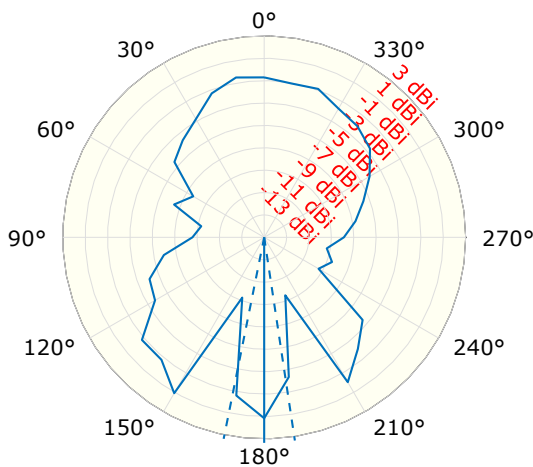


XY-Cut

3.0 dB BW: 90.1°

291.9°—22.0°

Max Gain: 0.79 dBi at 350.0°

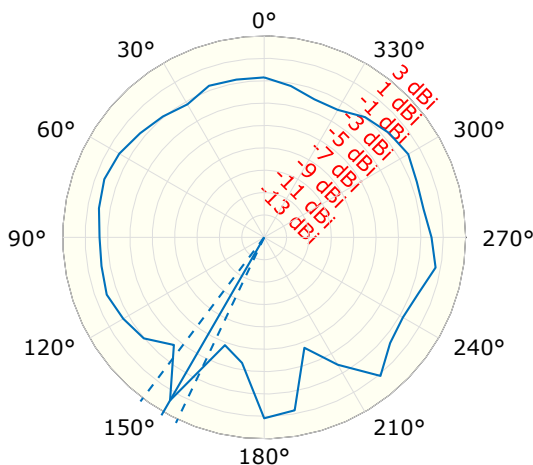


ZY-Cut

3.0 dB BW: 20.0°

168.6°—188.6°

Max Gain: 1.16 dBi at 180.0°



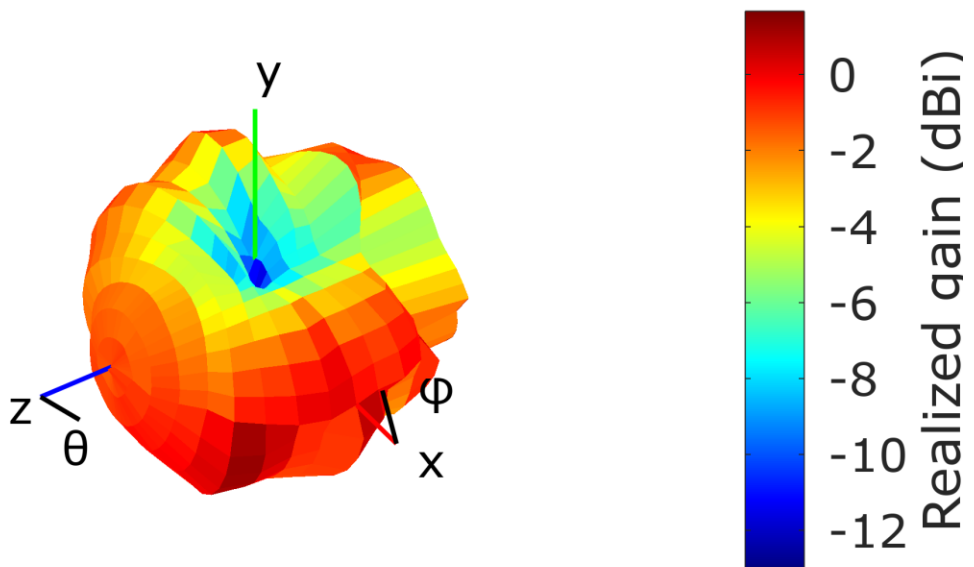
ZX-Cut

3.0 dB BW: 11.6°

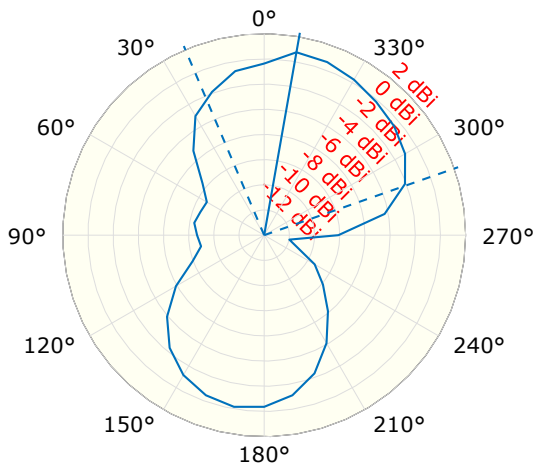
143.0°—154.6°

Max Gain: 1.82 dBi at 150.0°

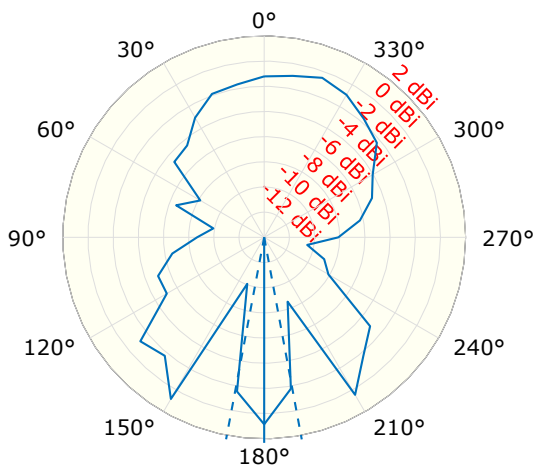
2440 MHZ 3D



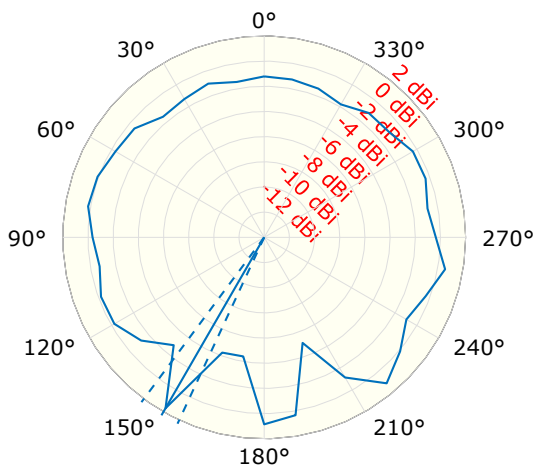
2440 MHZ PATTERN CUTS



XY-Cut
 3.0 dB BW: 93.7°
 289.3°—23.0°
 Max Gain: 0.75 dBi at 350.0°

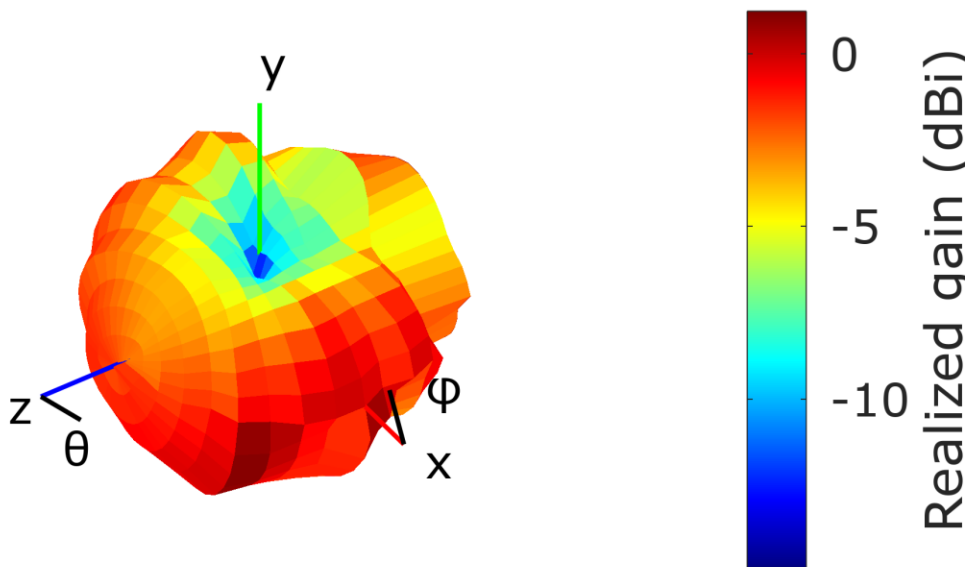


ZY-Cut
 3.0 dB BW: 21.2°
 169.3°—190.5°
 Max Gain: 0.85 dBi at 180.0°

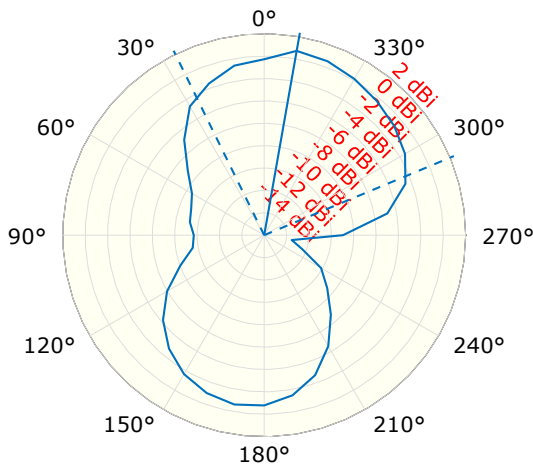


ZX-Cut
 3.0 dB BW: 11.7°
 143.3°—155.1°
 Max Gain: 1.67 dBi at 150.0°

2480 MHZ 3D



2480 MHZ PATTERN CUTS

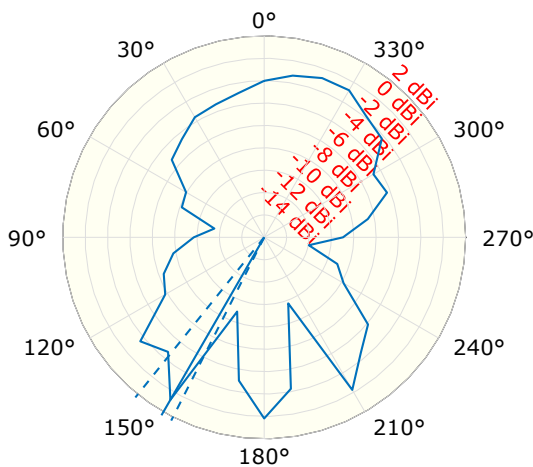


XY-Cut

3.0 dB BW: 93.5°

292.6°—26.1°

Max Gain: 0.72 dBi at 350.0°

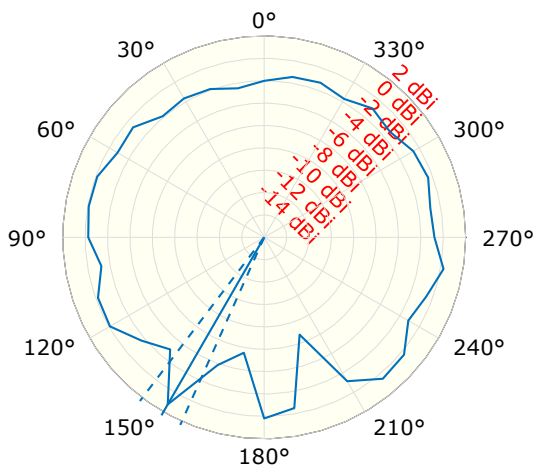


ZY-Cut

3.0 dB BW: 11.9°

141.2°—153.1°

Max Gain: 0.76 dBi at 150.0°



ZX-Cut

3.0 dB BW: 13.1°

142.8°—155.9°

Max Gain: 1.23 dBi at 150.0°