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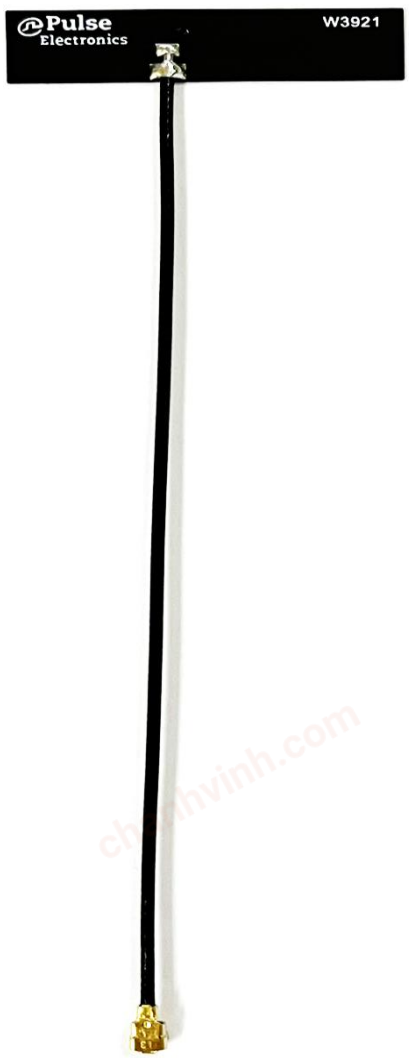
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TECHNICAL DATA SHEET

Series: Internal Antenna

Description: FPC 2.4G antenna

PART NUMBER: W3921XXXXX



Features:

- 2400-2500MHz FPC dipole
- Efficiency >50%
- Gain +1dBi
- 100mm cable length and U.FL compatible connector as standard setup, P/N W3921B0100
- Custom configurations upon request

Applications:

- Bluetooth, Zigbee, WiFi, BLE
- ISM 2.4GHz band radios
- Set top boxes,
- Security
- Transportation

All dimensions are in mm / inches

Issue: 2330

RoHS COMPLIANT

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TECHNICAL DATA SHEET

Description: FPC 2.4G antenna

Series: Internal Antenna

PART NUMBER: W3921XXXXX

This document covers all product variants of the following product family:

W3921B0039	39mm 1.13mm OD cable	U.FL compatible connector
W3921B0050	50mm 1.13mm OD cable	U.FL compatible connector
W3921B0100	100mm 1.13mm OD cable	U.FL compatible connector
W3921T0150	150mm 0.81mm OD cable	W.FL compatible connector
W3921B0150	150mm 1.13mm OD cable	U.FL compatible connector
W3921B0120	120mm 1.13mm OD cable	U.FL compatible connector
W3921B0200	200mm 1.13mm OD cable	U.FL compatible connector
W3921B0450	450mm 1.13mm OD cable	U.FL compatible connector

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TECHNICAL DATA SHEET

Series: Internal Antenna

Description: FPC 2.4G antenna

PART NUMBER: W3921XXXXX

ELECTRICAL SPECIFICATIONS

Frequency	2400-2500MHz
Nominal Impedance	50Ω
VSWR	< 2
Gain	1dBi +/- 1 dB
Efficiency	50%
Radiation Pattern	Omni
Polarization	Linear
Power withstanding	2 W

(*) All RF parameters measured on 2mm thick PC plate

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TECHNICAL DATA SHEET

Description: FPC 2.4G antenna

Series: Internal Antenna

PART NUMBER: W3921XXXXX

MECHANICAL SPECIFICATIONS

PCB type	Flexible
Radiator size	33[1.3] x 7.7[0.3] mm[inch]
Adhesive	3M467
Total thickness (Radiator + adhesive)	0.15[0.006] mm[inch]
Weight	about 0.37 g
Cable type	OD 1.13mm/0.81mm coaxial cable
Cable length	Optional mm[inch]
Connector	U.FL/W.FL compatible

ENVIRONMENTAL SPECIFICATIONS

Operating temperature	-40/+85° C

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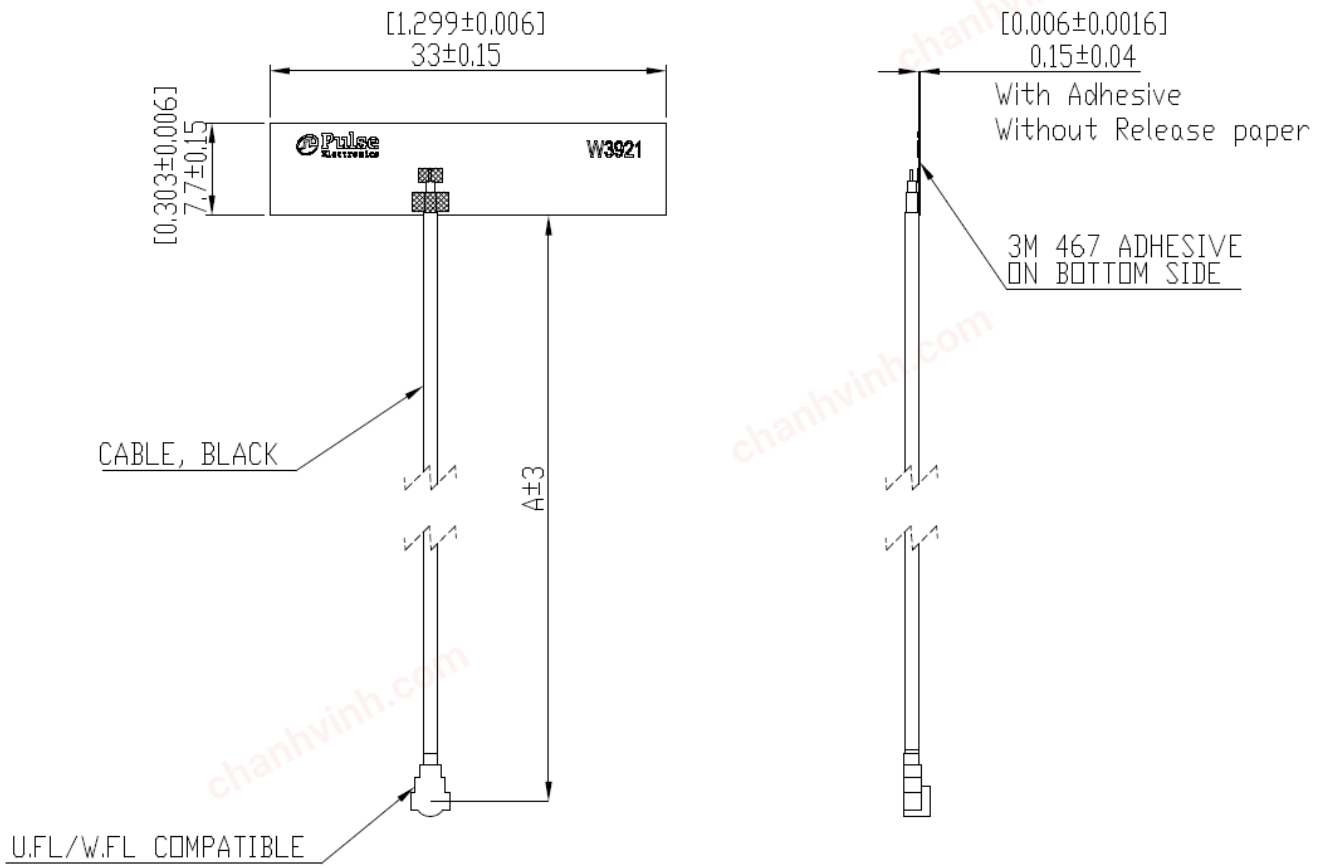
TECHNICAL DATA SHEET

Description: FPC 2.4G antenna

Series: Internal Antenna

PART NUMBER: W3921XXXXX

MECHANICAL DRAWING



ITEM	PROJECTA LENGTH	A LENGTH MM	CABLE P/N	Cable Diameter	CONNECTOR
1	W3921B0050	50	055-2248.001	1.13mm	U.FL COMPATIBLE
2	W3921B0100	100	055-2248.002	1.13mm	U.FL COMPATIBLE
3	W3921T0150	150	055-2248.003	0.81mm	WFL COMPATIBLE
4	W3921B0039	39	055-2248.004	1.13mm	U.FL COMPATIBLE
5	W3921B0150	150	055-2248.005	1.13mm	U.FL COMPATIBLE
6	W3921B0200	200	055-2248.006	1.13mm	U.FL COMPATIBLE
7	W3921B0120	120	055-2248.007	1.13mm	U.FL COMPATIBLE
8	W3921B0450	450	055-2248.008	1.13mm	U.FL COMPATIBLE

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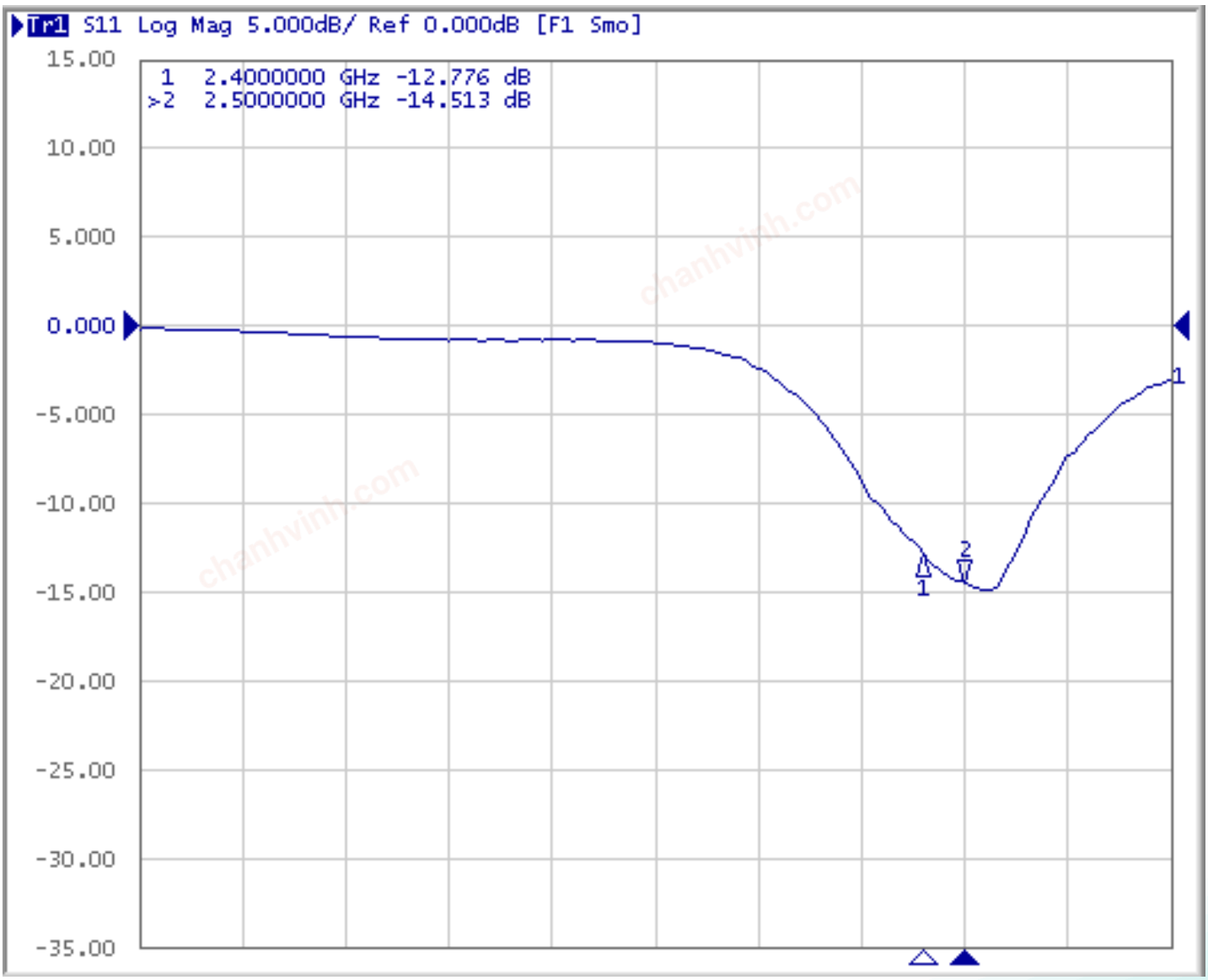
Series: Internal Antenna

PART NUMBER: W3921XXXXX

CHARTS

(*) All RF parameters measured on 2mm thick PC plate

Return Loss



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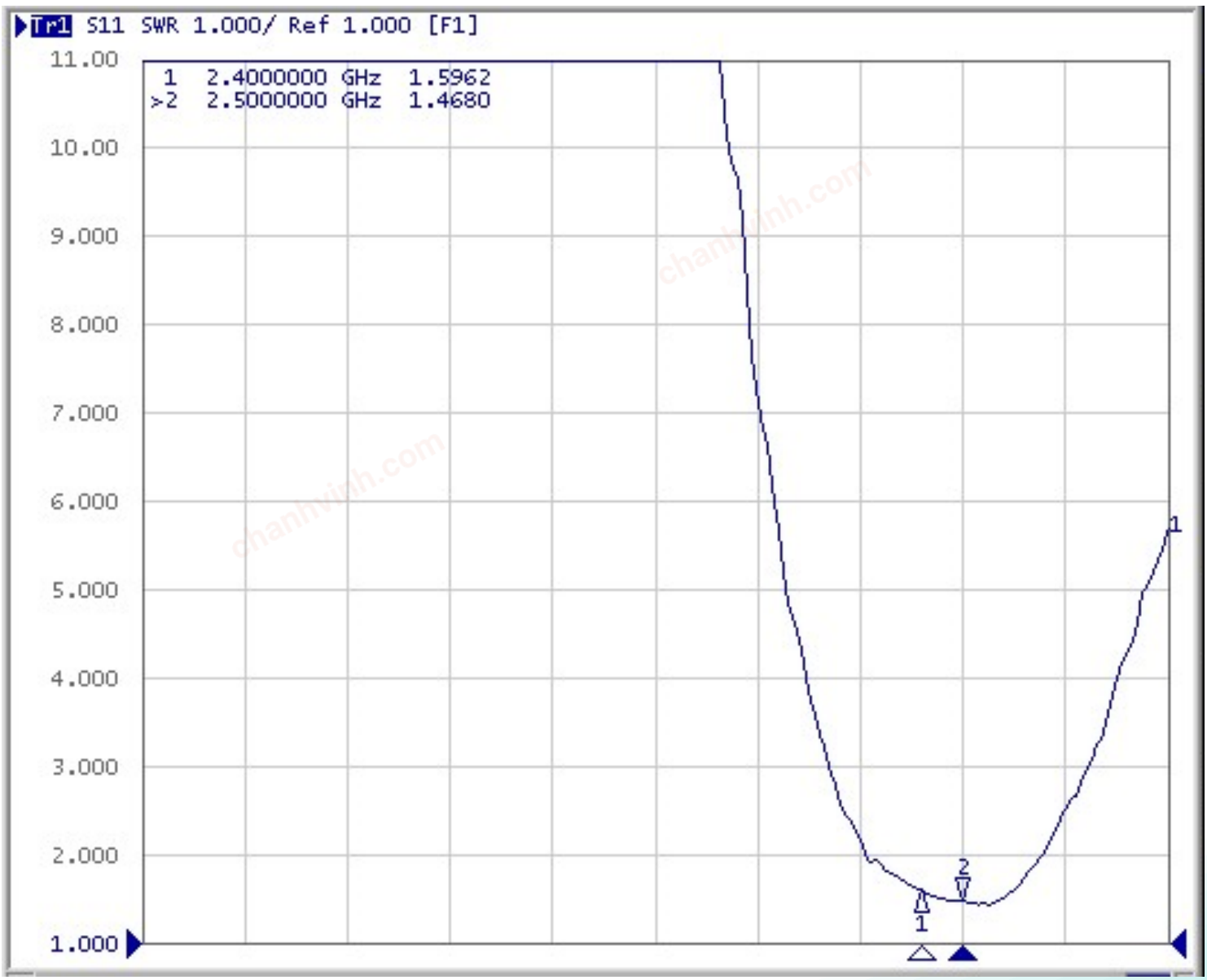
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PART NUMBER: W3921XXXXX

CHARTS

(*) All RF parameters measured on 2mm thick PC plate

VSWR



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TECHNICAL DATA SHEET

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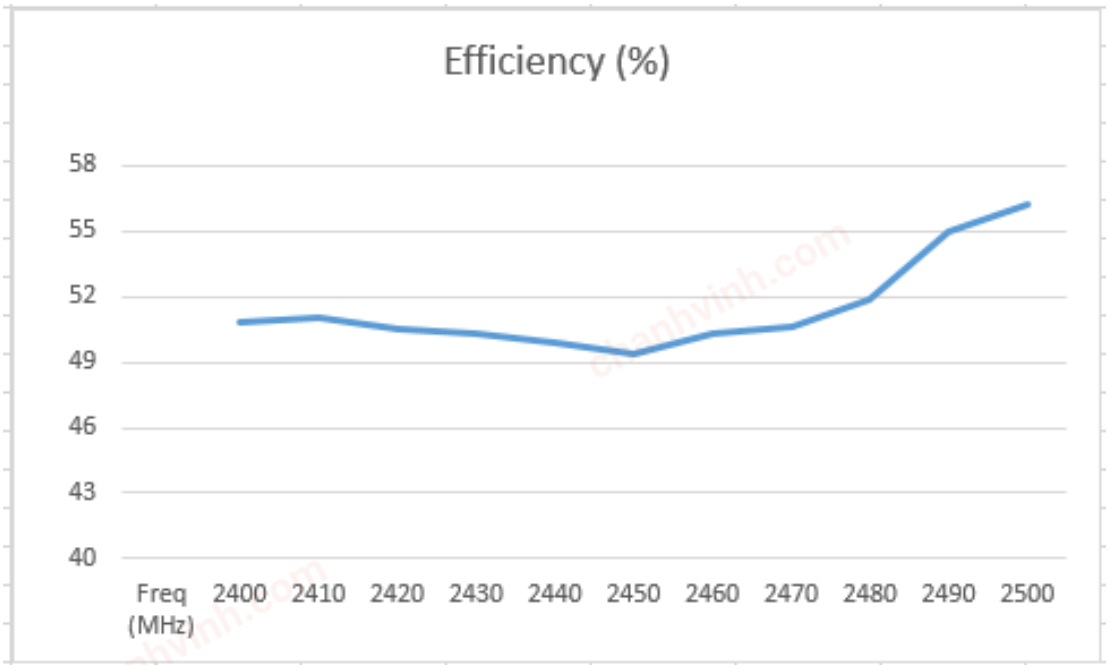
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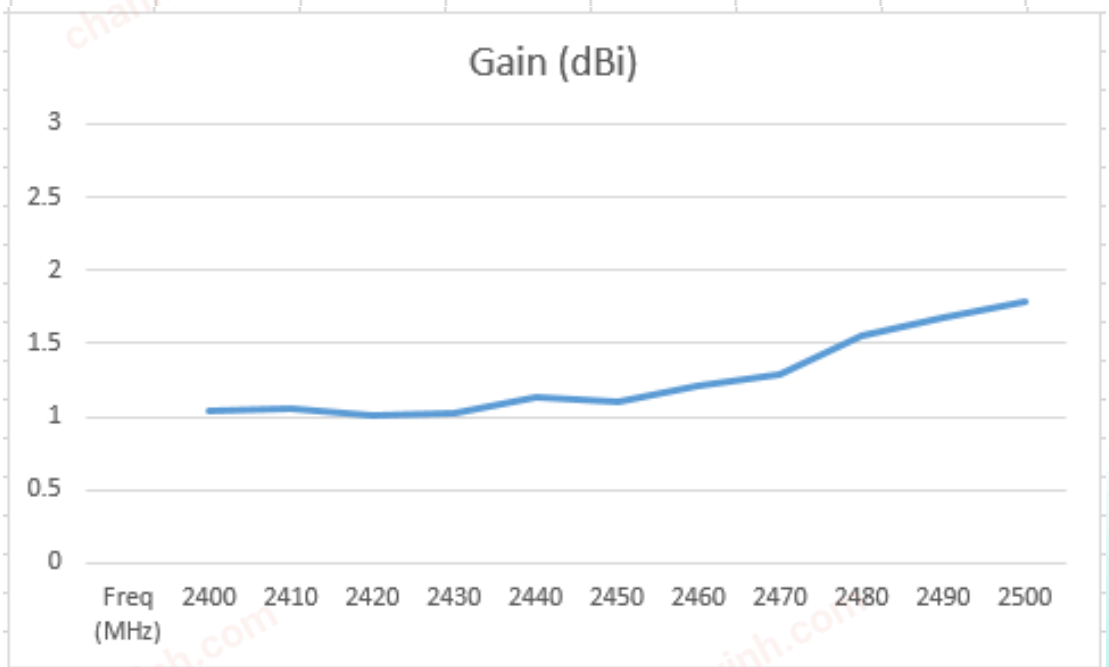
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CHARTS

(*) All RF parameters measured on 2mm thick PC plate

Efficiency(%) & Gain (dBi)





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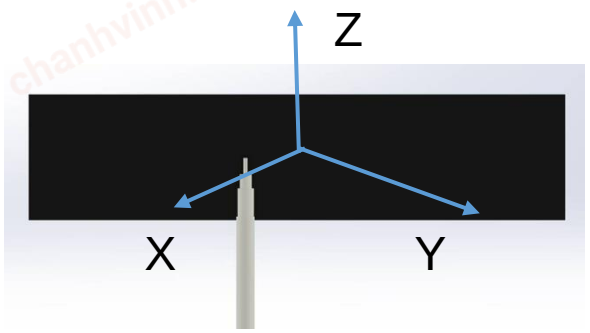
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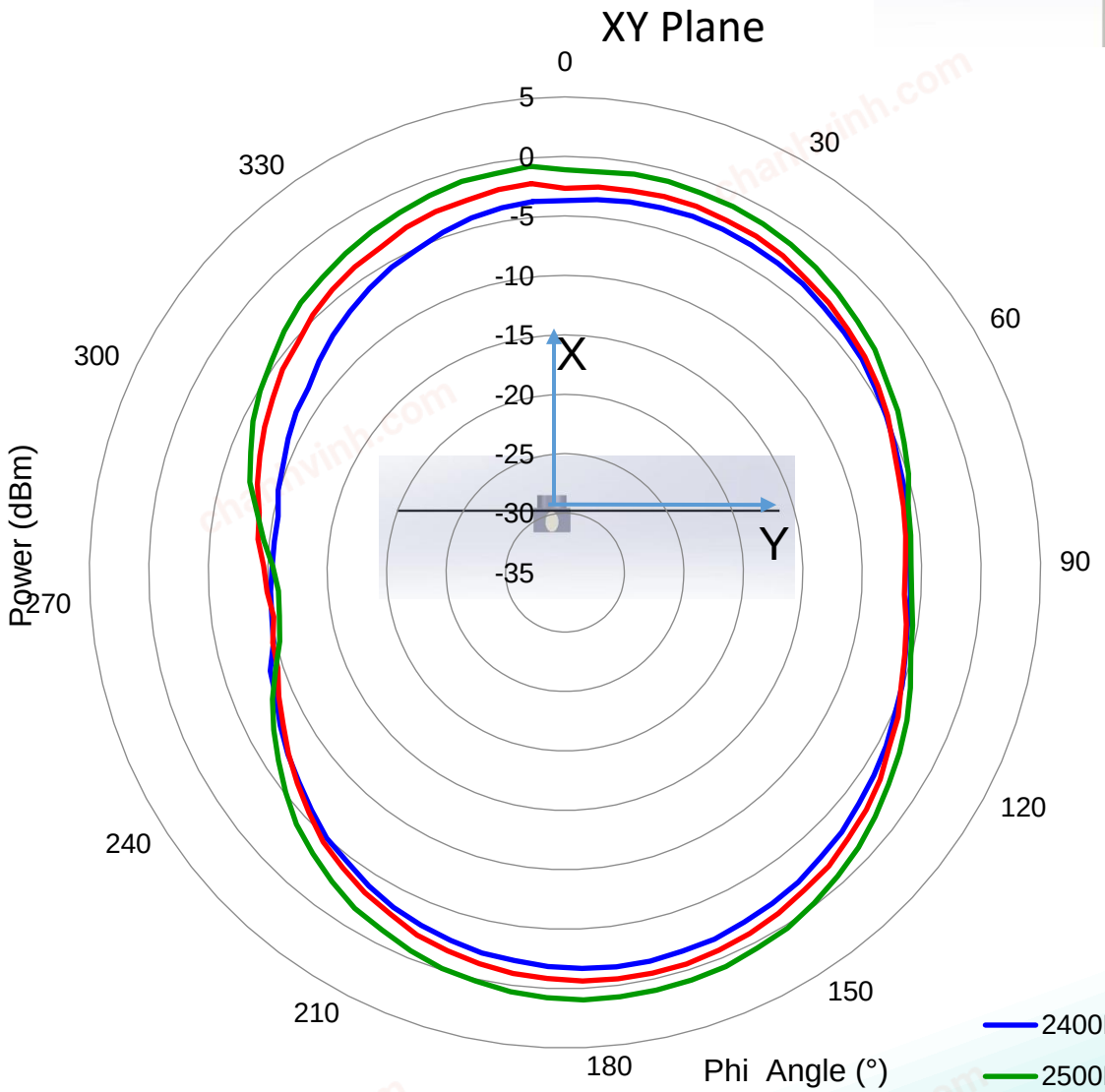
Description: FPC 2.4G antenna

PART NUMBER: W3921XXXXX

CHARTS

Typical free space radiation pattern
WIFI2.4GHz
(*) All RF parameters measured on 2mm thick PC plate





2400MHz

Avg (dBi) =	-5.13
Peak (dBi) =	-1.55
Avg -3 (deg) =	175

2450MHz

Avg (dBi) =	-4.30
Peak (dBi) =	-0.51
Avg -3 (deg) =	215

2500MHz

Avg (dBi) =	-3.27
Peak (dBi) =	0.98
Avg -3 (deg) =	155

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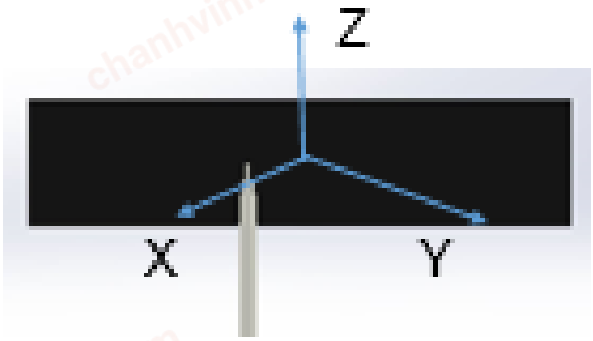
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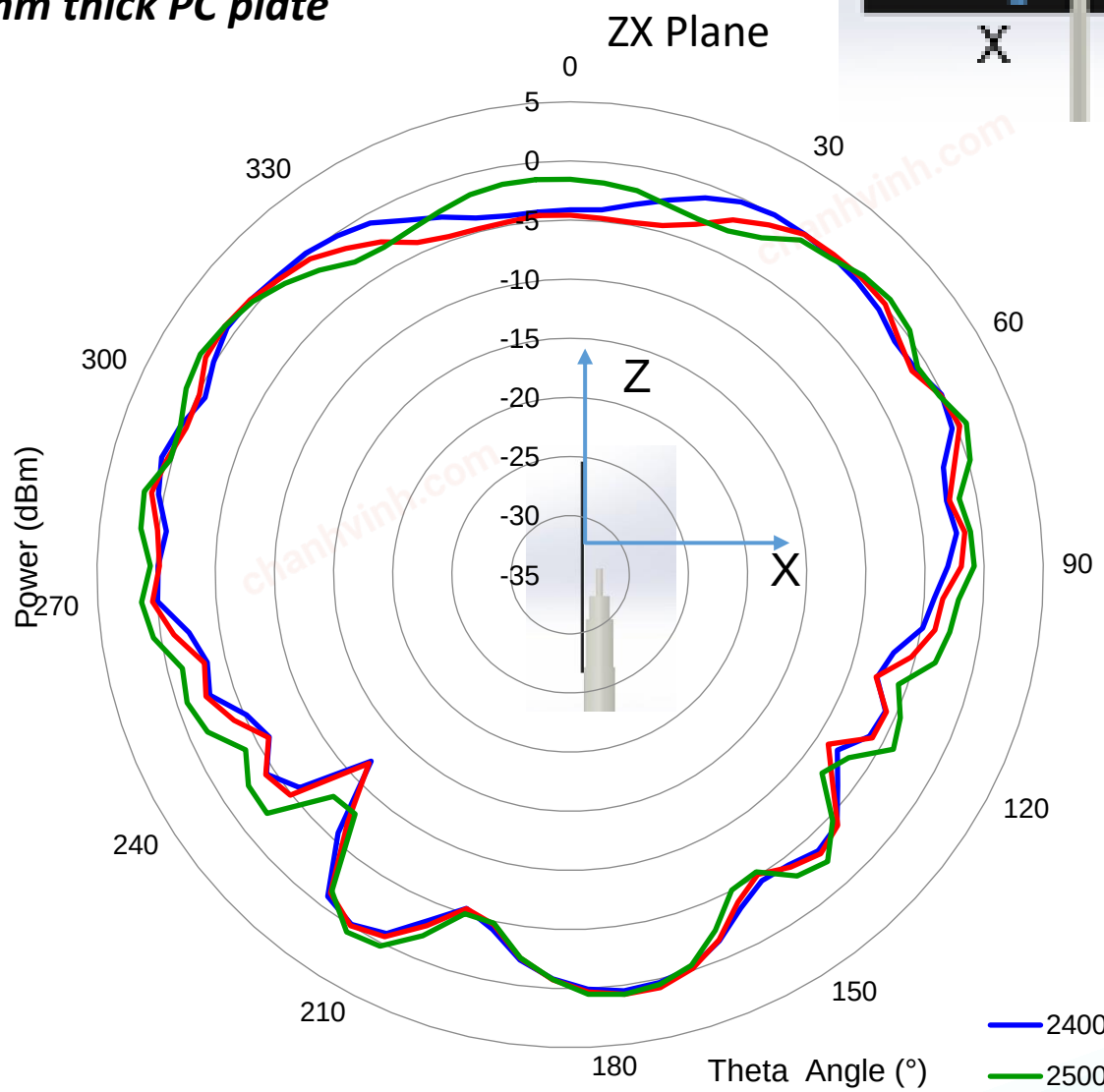
Description: FPC 2.4G antenna

PART NUMBER: W3921XXXXX

CHARTS

Typical free space radiation pattern
WIFI2.4GHz
(*) All RF parameters measured on 2mm thick PC plate





2400MHz

Avg (dBi) =	-2.49
Peak (dBi) =	0.92
Avg -3 (deg) =	85

2450MHz

Avg (dBi) =	-2.57
Peak (dBi) =	1.05
Avg -3 (deg) =	85

2500MHz

Avg (dBi) =	-1.77
Peak (dBi) =	1.68
Avg -3 (deg) =	77.5

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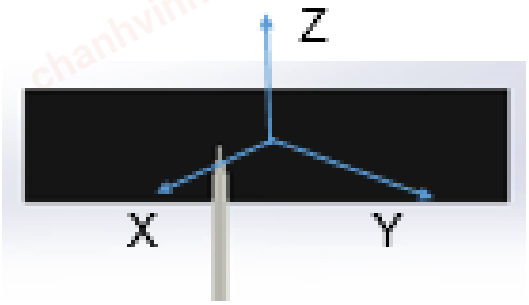
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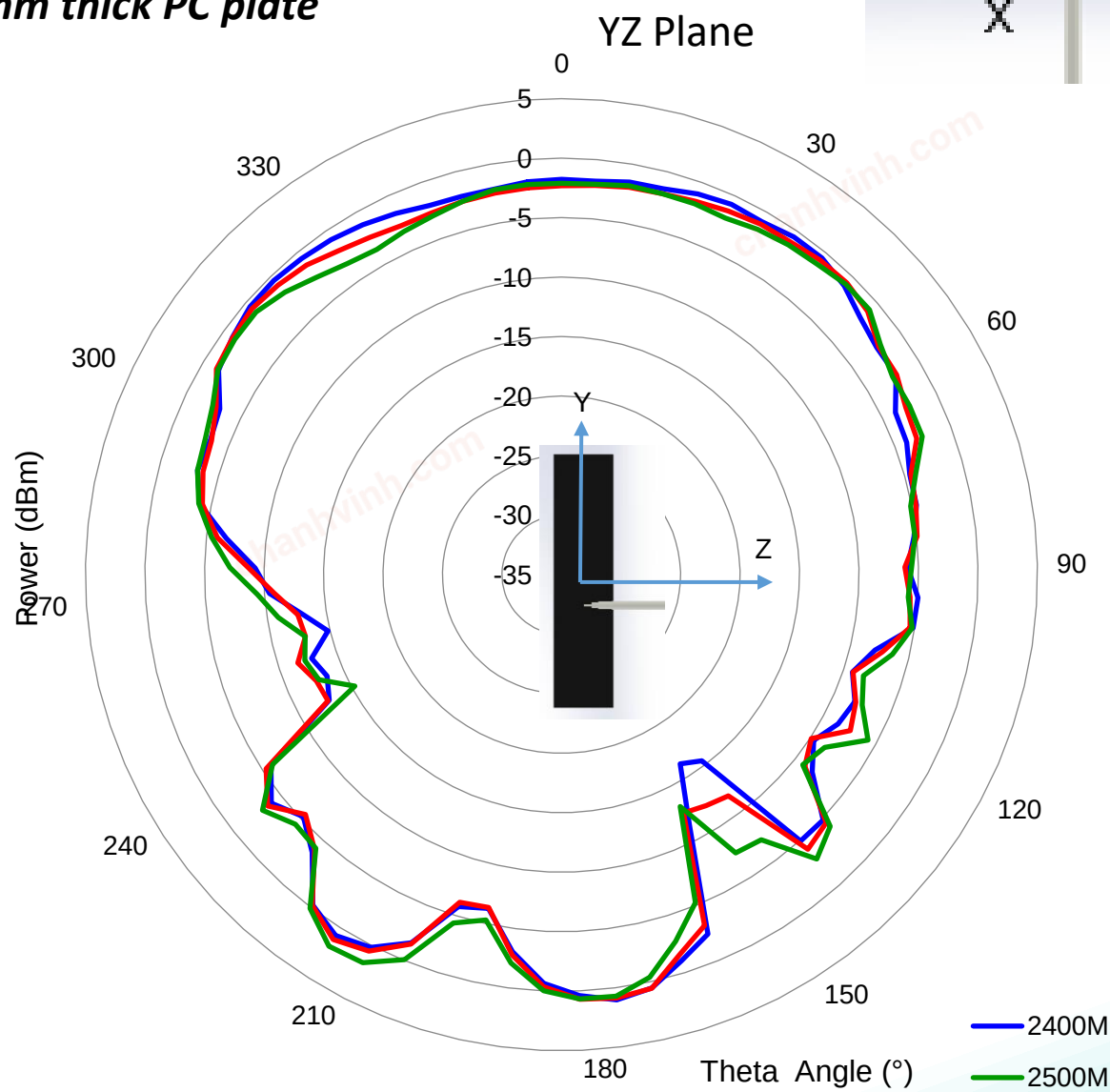
Description: FPC 2.4G antenna

PART NUMBER: W3921XXXXX

CHARTS

Typical free space radiation pattern
WIFI2.4GHz
(*) All RF parameters measured on 2mm thick PC plate





2400MHz

Avg (dBi) =	-4.38
Peak (dBi) =	1.02
Avg -3 (deg) =	70

2450MHz

Avg (dBi) =	-4.30
Peak (dBi) =	1.17
Avg -3 (deg) =	50

2500MHz

Avg (dBi) =	-4.08
Peak (dBi) =	1.83
Avg -3 (deg) =	27.5

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PACKAGING

10PCS/PE bag
10 PE bag/foam bag
50 foam bag/ carton box

Total 5000PCS/Carton box





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