

Wideband 5G/4G Cellular Flexible PCB Antenna



ABB1102L

Request Samples



Check Inventory



115 x 21.75 x 0.15 mm
RoHS/RoHS II Compliant
MSL Level = N/A

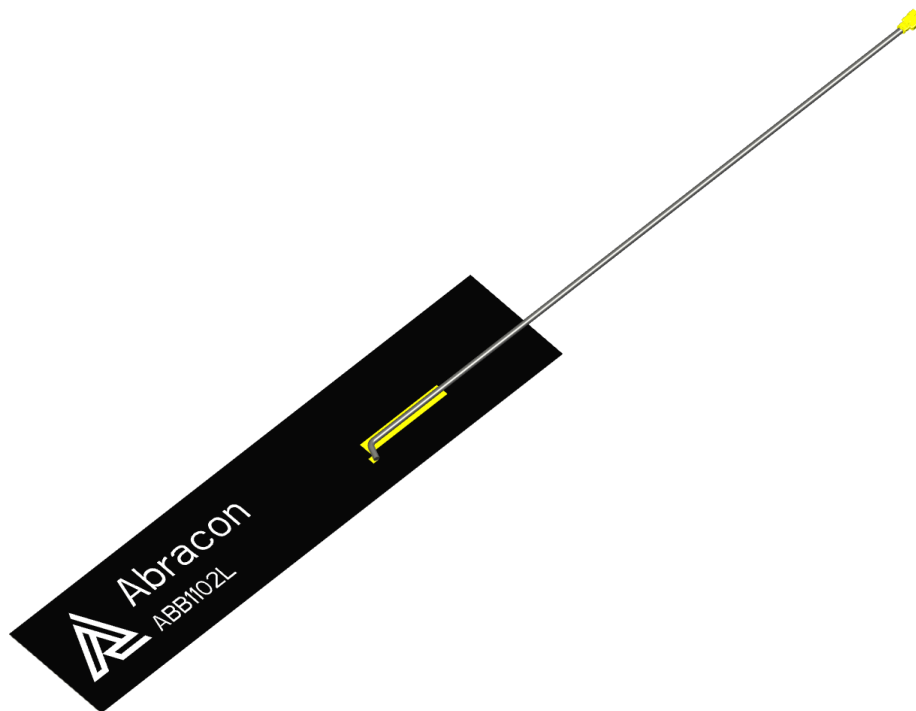
Features

- LTE 600 – 6000MHz
- Flexible Design with a Low Profile (0.15 mm)
- Optimized Performance for All 5G/4G Bands
- Peak Gain: up to 4.9 dBi
- Efficiency: > 50%
- Customizable Cable and Connector Options

Applications

- Internet of Things (IoT) Devices
- LTE-M, Cat M, Cat M1, NB-IoT
- LTE CAT 1 up to CAT 20 Supported
- CBRS and 5G Bands Supported
- Smart Home Networking
- Networking & Telecommunication

Product Image



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Electrical Specification

Parameter	Specification				Unit
Operating Frequency	600-698	698-960	1710-2690	2690-6000	MHz
VSWR	2.0	2.0	1.6	1.6	
Peak Gain	-1.0	2.0	3.7	4.9	dBi
Efficiency	41.2	67.1	80.5	68.1	%
Polarization	Linear				-
Impedance	50				Ω

Mechanical Specification

Parameter	Specification
Dimension	115 x 21.75 x 0.15 mm
Material	Flexible PCB
Mounting Type	Adhesive Mount
RF Connector	u.FL/IPEX-1/MHF1
RF Cable Type	Ø1.13 mm, fully customizable
RF Cable Length	100 mm, fully customizable

Environmental Specification

Parameter	Specification
Operating Temperature	-40°C to +85°C
Storage Temperature	-40°C to +85°C
RoHS Compliance	Yes



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Ordering Information

Part Number	Description	Connector Option
ABB1102L-0100I	Wideband 5G/4G Cellular Flexible PCB Antenna with IPEX-1 connector with 100mm cable length	u.FL/IPEX-1/MHF1
ABB1102L-0100W	Wideband 5G/4G Cellular Flexible PCB Antenna with IPEX-4 connector with 100mm cable length	w.FL/IPEX-4/MHF4

Note: Different cable and connector configurations that are not listed may be available upon request via [Abracon online support](#)



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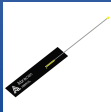


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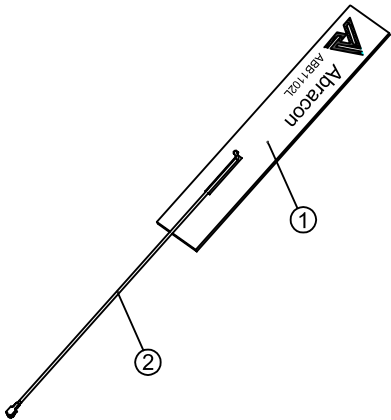
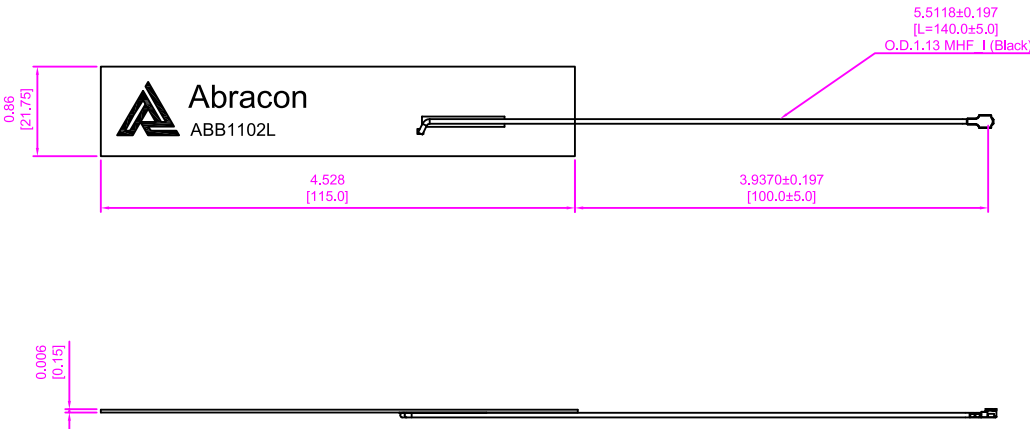


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Product Dimensions



Unit: Inches[mm]

No.	Description
1	FPCB 115 x 21.75 x 0.15 mm
2	O.D. 1.13 mm MHF1; Length = 100 mm (Black)

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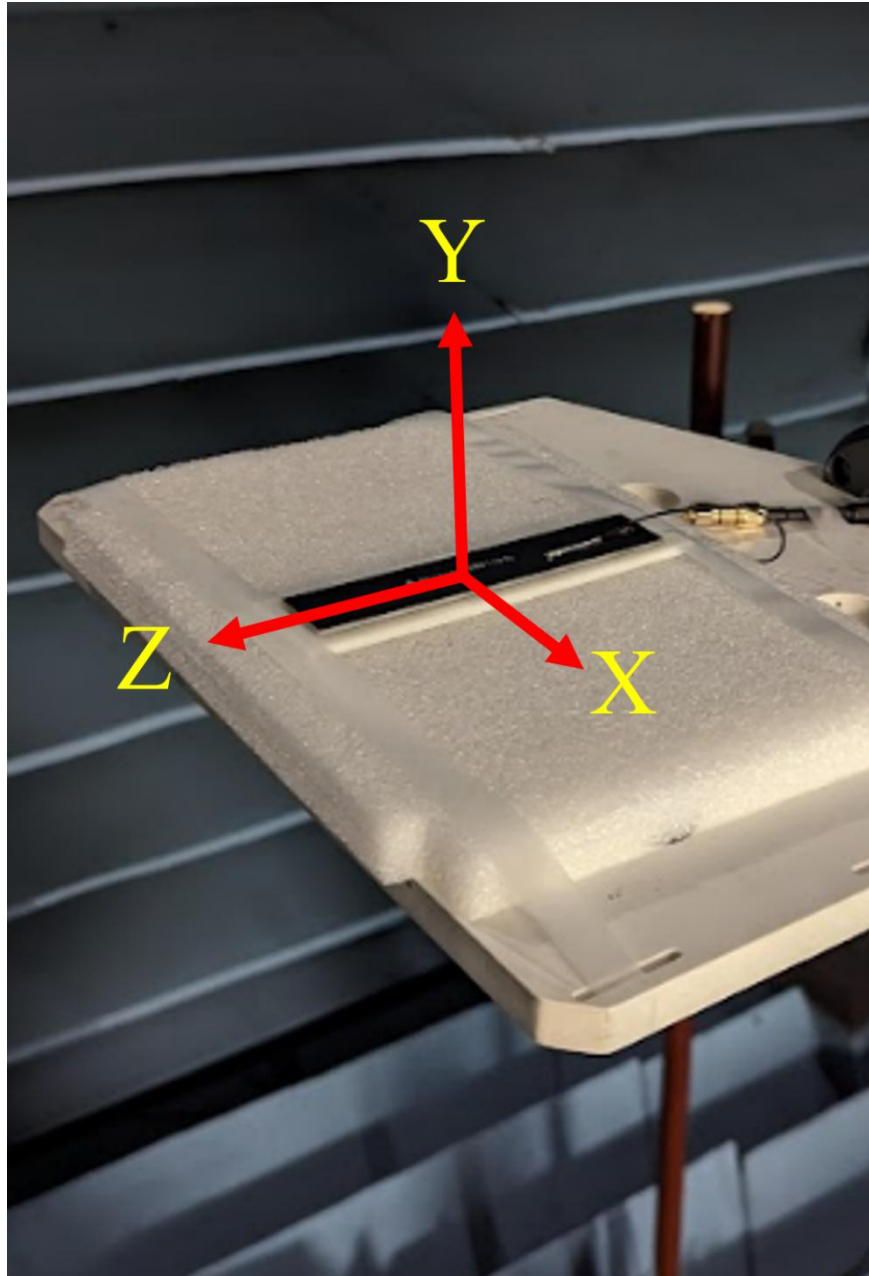


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Measurement Setup photo



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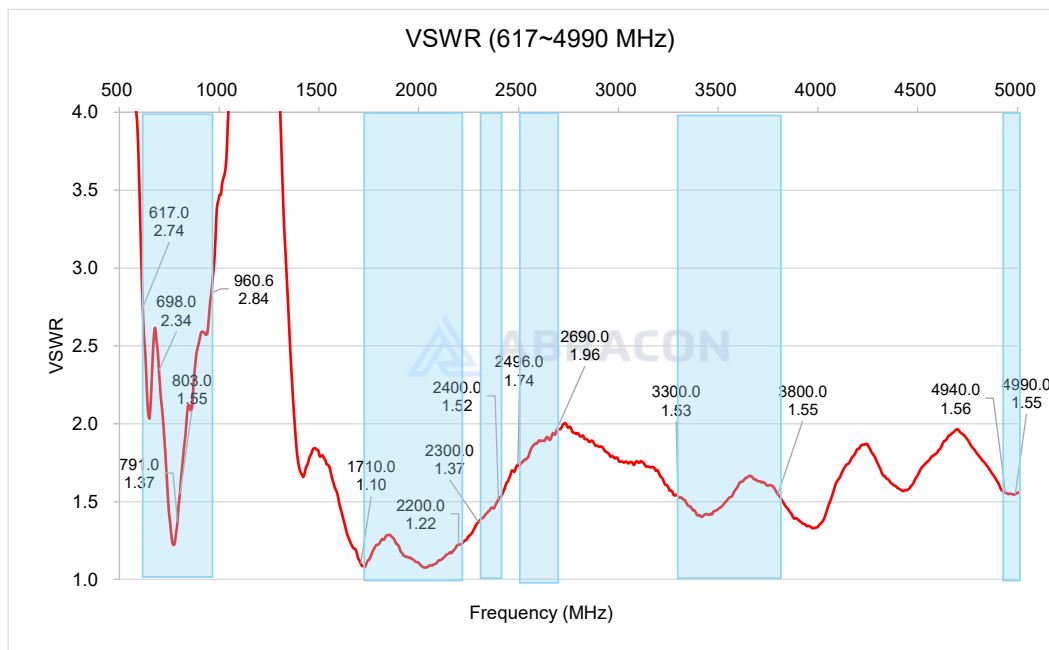
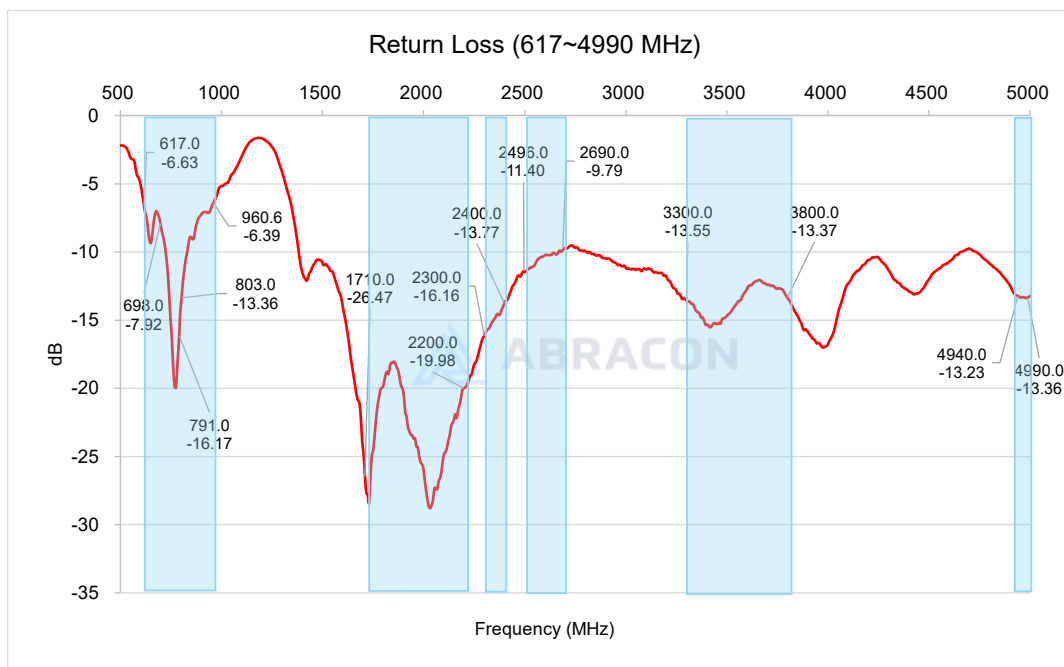


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Reflection Characteristics – Return Loss & VSWR



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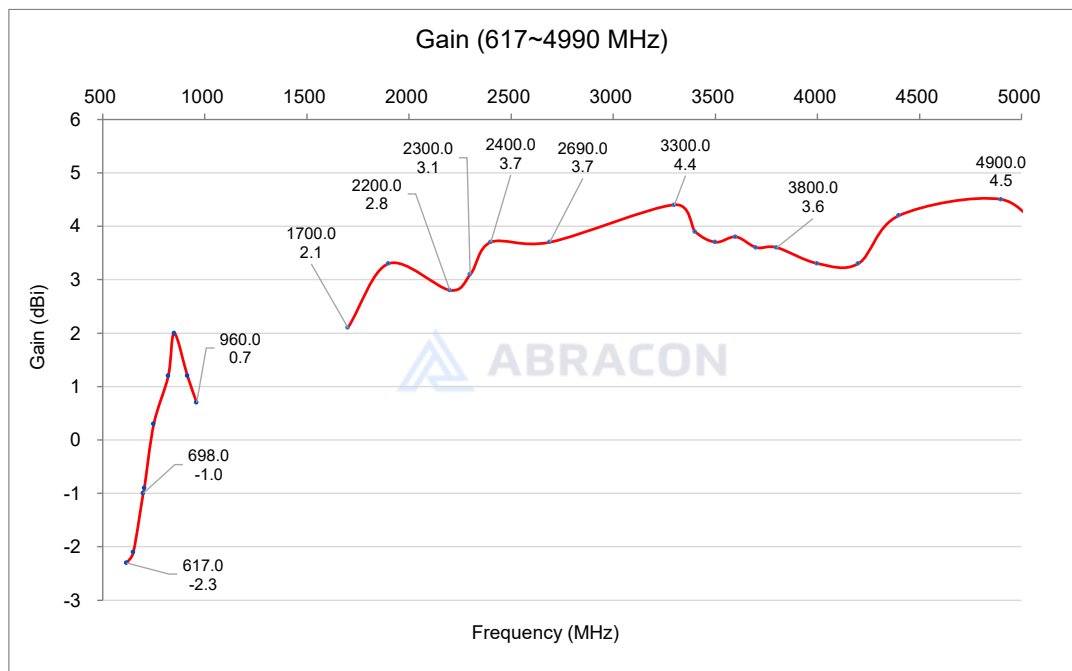


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Radiation Characteristics – Peak Gain



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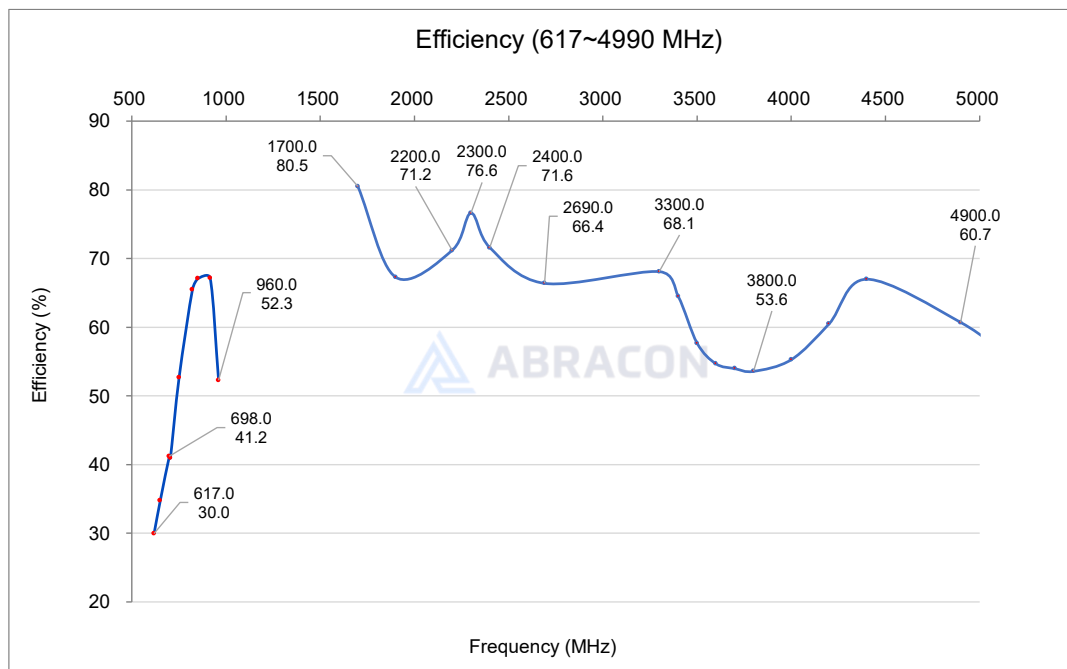


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Radiation Characteristics – Total Efficiency (%)



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Frequency (MHz)	Gain (dBi)	Directivity (dBi)	Efficiency (dB)	Efficiency (%)
617	-2.3	2.9	-5.2	30.0
650	-2.1	2.4	-4.6	34.8
698	-1.0	2.8	-3.9	41.2
704	-0.9	3.0	-3.9	41.0
750	0.3	3.1	-2.8	52.7
821	1.2	3.0	-1.8	65.5
850	2.0	3.7	-1.7	67.1
915	1.2	2.9	-1.7	67.2
960	0.7	3.5	-2.8	52.3
1700	2.1	3.1	-0.9	80.5
1900	3.3	5.0	-1.7	67.3
2100	2.8	4.3	-1.5	71.2
2300	3.1	4.3	-1.2	76.6
2500	3.7	5.1	-1.5	71.6
2700	3.7	5.5	-1.8	66.4
3300	4.4	6.1	-1.7	68.1
3400	3.9	5.8	-1.9	64.5
3500	3.7	6.1	-2.4	57.7
3600	3.8	6.4	-2.6	54.7
3700	3.6	6.3	-2.7	54.0
3800	3.6	6.3	-2.7	53.6
4000	3.3	5.9	-2.6	55.3
4200	3.3	5.5	-2.2	60.5
4400	4.2	5.9	-1.7	67.0
4900	4.5	6.7	-2.2	60.7
5200	3.7	6.3	-2.6	54.9
5500	4.9	7.9	-3.0	50.2
5925	4.1	6.9	-2.8	52.6

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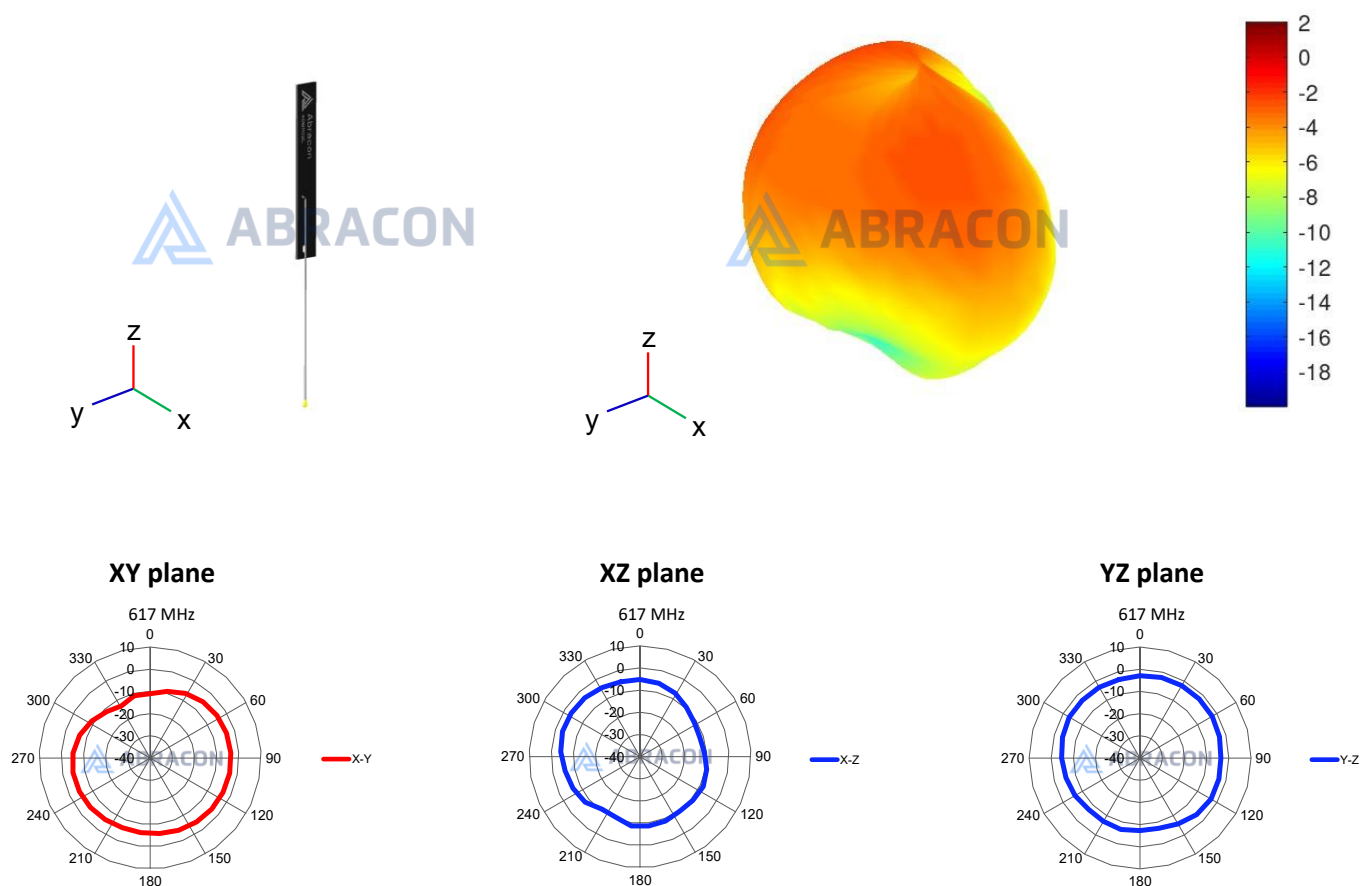
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115 x 21.75 x 0.15 mm
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Radiation Characteristics – 3D & 2D pattern

3D & 2D Pattern @ 617 MHz



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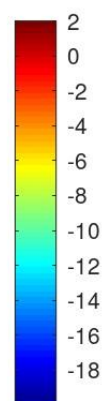
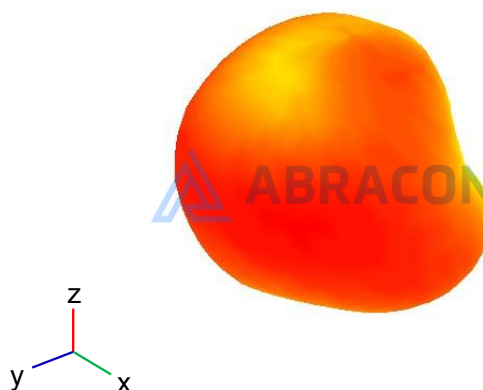


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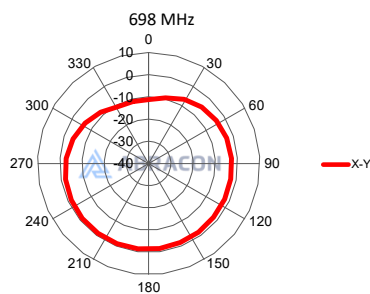


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MSL Level = N/A

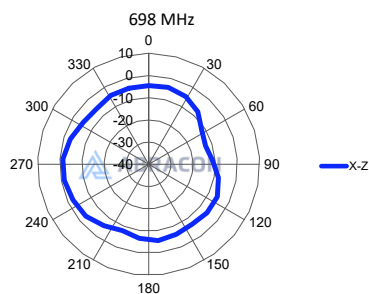
3D & 2D Pattern @ 698 MHz



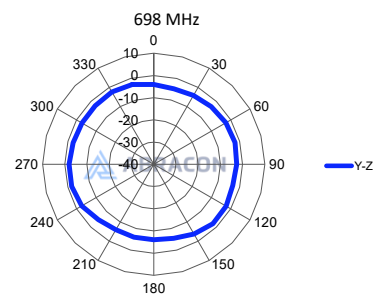
XY plane



XZ plane



YZ plane



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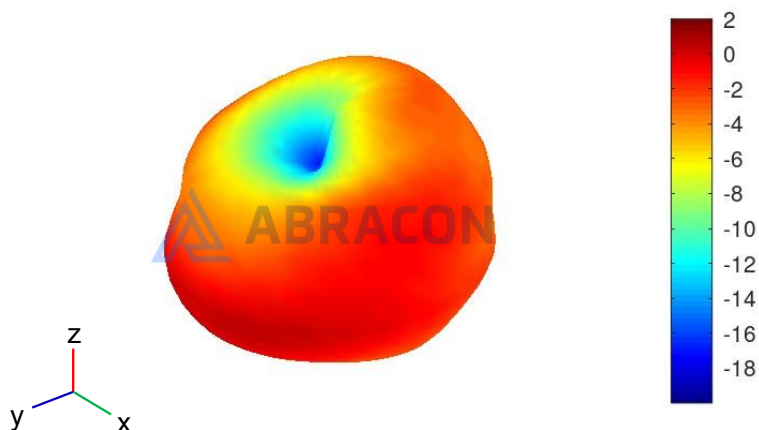


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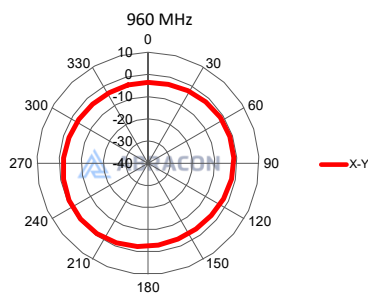


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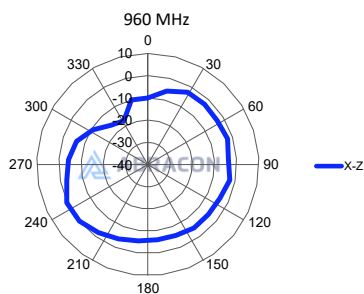
3D & 2D Pattern @ 960 MHz



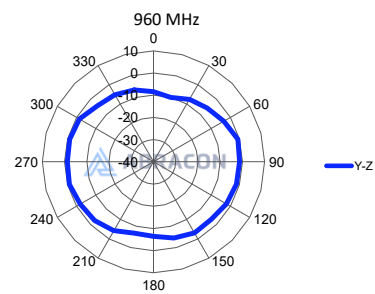
XY plane



XZ plane



YZ plane



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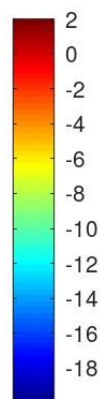
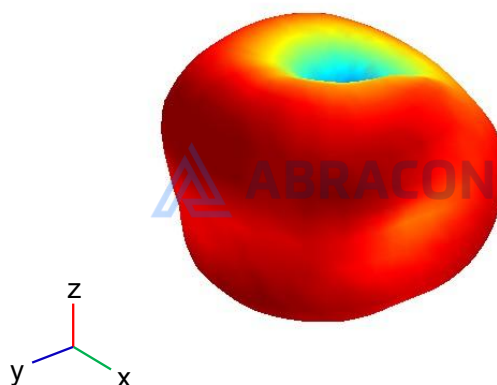


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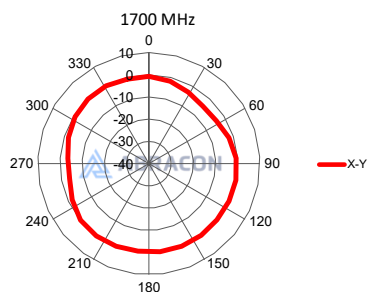


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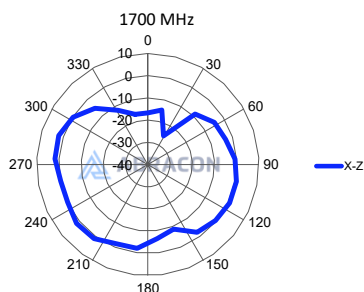
3D & 2D Pattern @ 1700 MHz



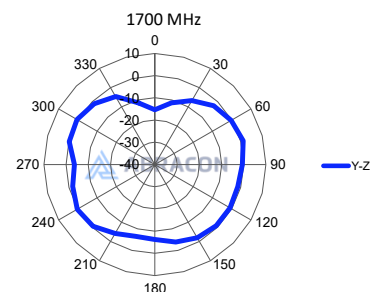
XY plane



XZ plane



YZ plane



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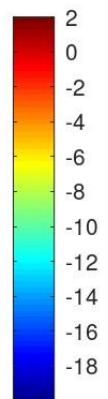
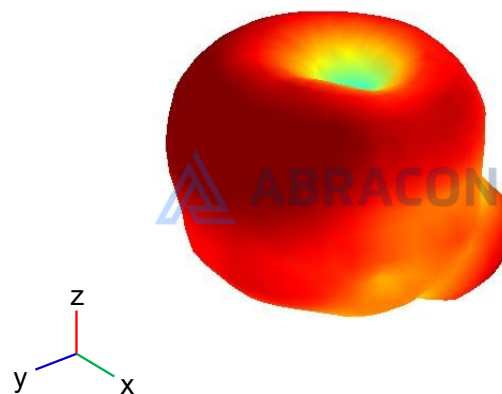


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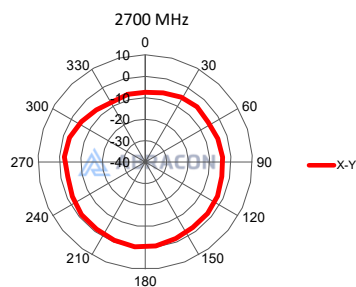


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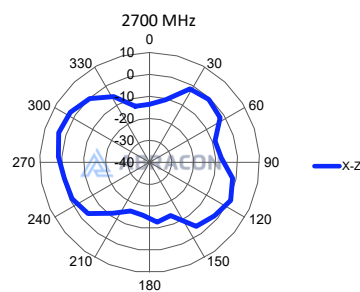
3D & 2D Pattern @ 2700 MHz



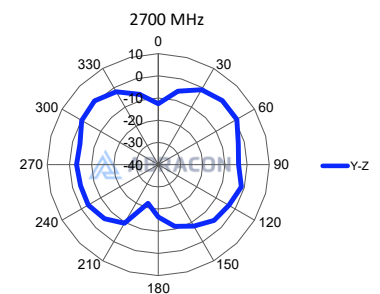
XY plane



XZ plane



YZ plane



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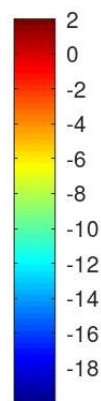
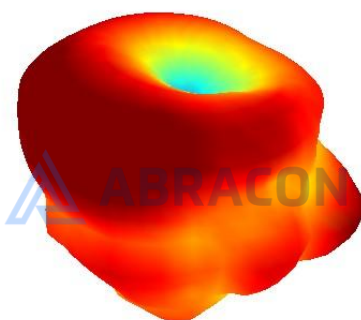


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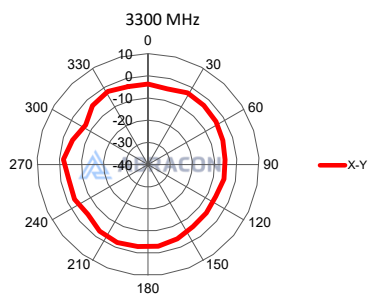


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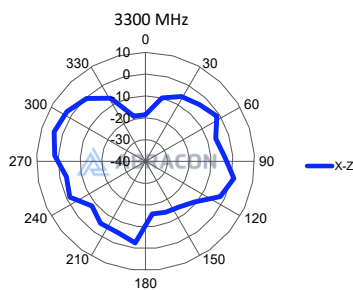
3D & 2D Pattern @ 3300 MHz



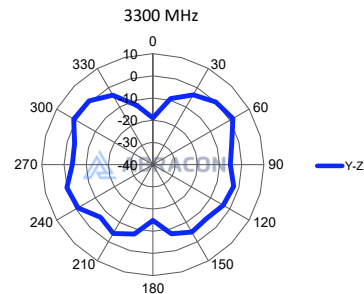
XY plane



XZ plane



YZ plane



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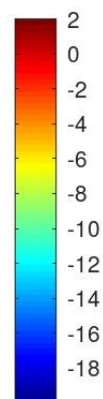
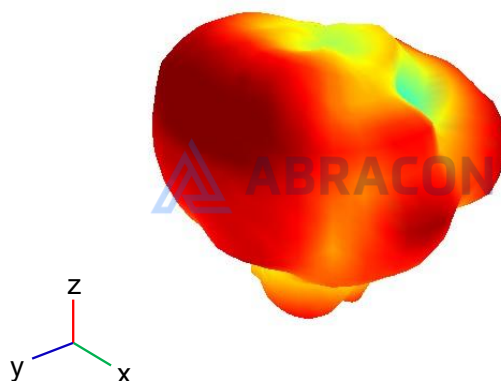


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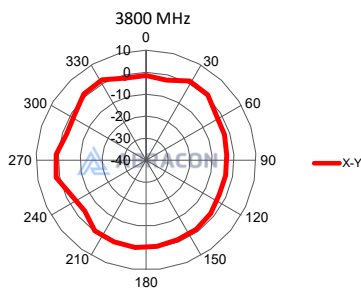


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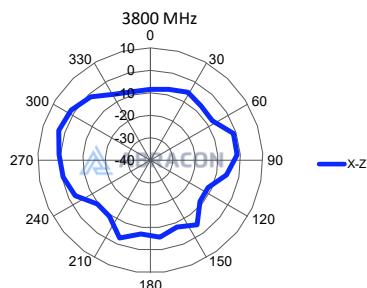
3D & 2D Pattern @ 3800 MHz



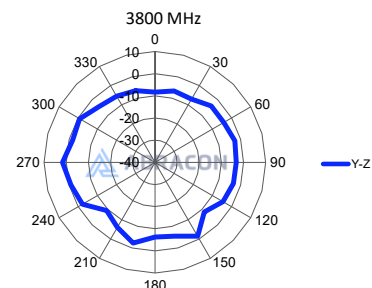
XY plane



XZ plane



YZ plane



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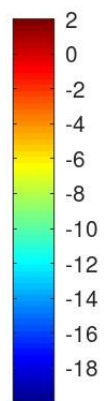
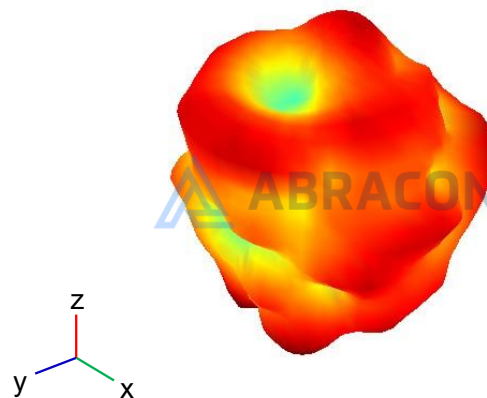


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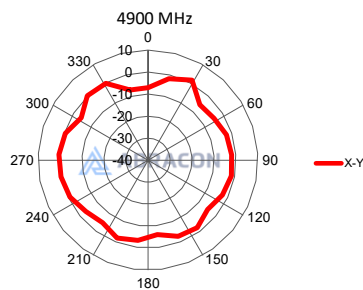


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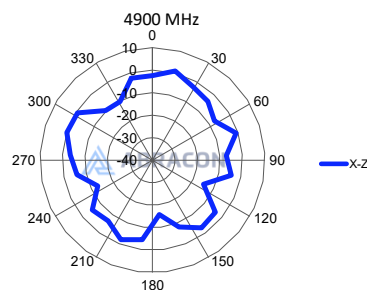
3D & 2D Pattern @ 4900 MHz



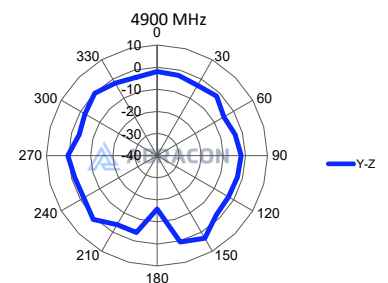
XY plane



XZ plane



YZ plane



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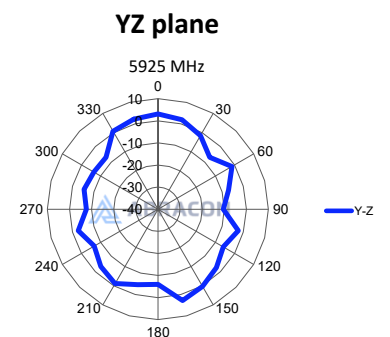
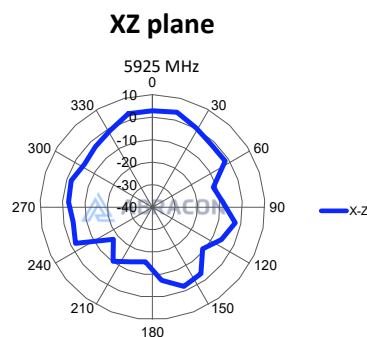
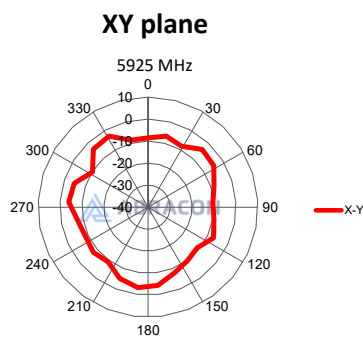
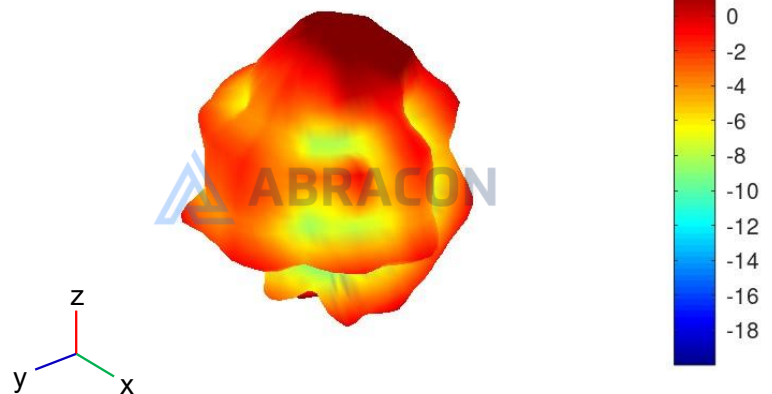


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3D & 2D Pattern @ 5925 MHz



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Packaging

1. 4 sets x 25 pcs / per set = 100 pcs in one bag
2. 20 bags x 100 pcs / per bag
3. Total: 2000 pcs in one package

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