

CU23002-1
Product Specification
Rev.01

For Antenova					
Author	Signature	Date	Approved by	Signature	Date
Tim Lin	<i>Tim Lin</i>	14-Aug-2023			14-Aug-2023

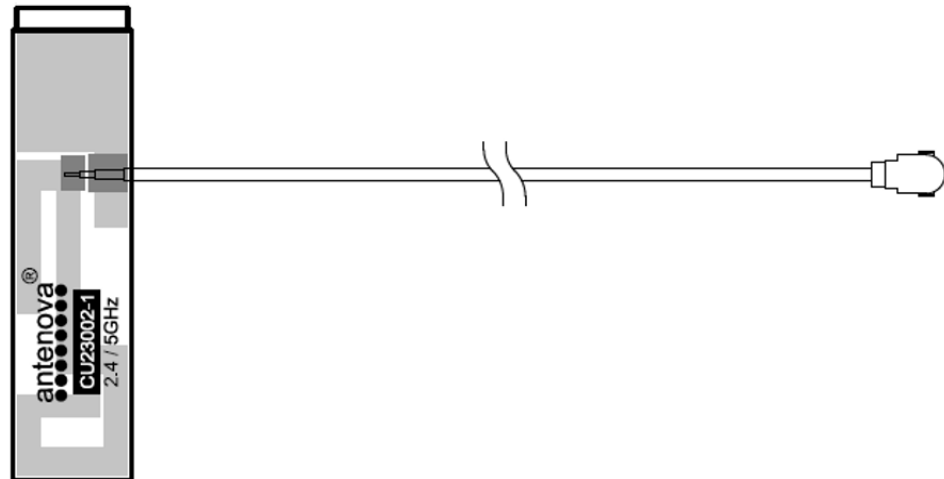
For Owl Labs			
	Approved by	Signature	Date
	Ashish Thanawala	<i>Ashish Thanawala</i>	17-Aug-2023

TABLE OF CONTENTS

TABLE OF CONTENTS	2
1. PART NUMBER	3
2. GENERAL DATA	3
3. RF CHARACTERISTICS SUMMARY	4
4. RF PERFORMANCE	5
4.1 Return Loss	5
4.2 Antenna Efficiency and Peak Gain	6
4.3 Antenna Radiation Pattern	7
5. DIMENSIONS	8
5.1 Antenna Dimensions	8
5.2 Assembled	9
6. ELECTRICAL INTERFACE	10
7. HAZARDOUS MATERIAL REGULATION CONFORMANCE	10
8. STATEMENT ON INTELLECTUAL PROPERTY & DISCLAIMER	10

1. PART NUMBER

Part Number
CU23002-1



2. GENERAL DATA

Part No.	CU23002-1
Frequency	2400-2500, 5150-5850 MHz
Polarization	Linear
Operating Temperature	-40 to +85°C
Impedance	50 Ω
Weight	<1 g
Antenna Type	FPC antenna
Dimensions	FPC: 30.0 x 8.0 x 0.15 (mm ³), FPC + sponge : 30.0 x 8.0 x 2.3 (mm ³)
Cable Length	205.0 (mm)-black, $\varnothing$ 1.13 double shielding cable + MHF (20278-112R-13)

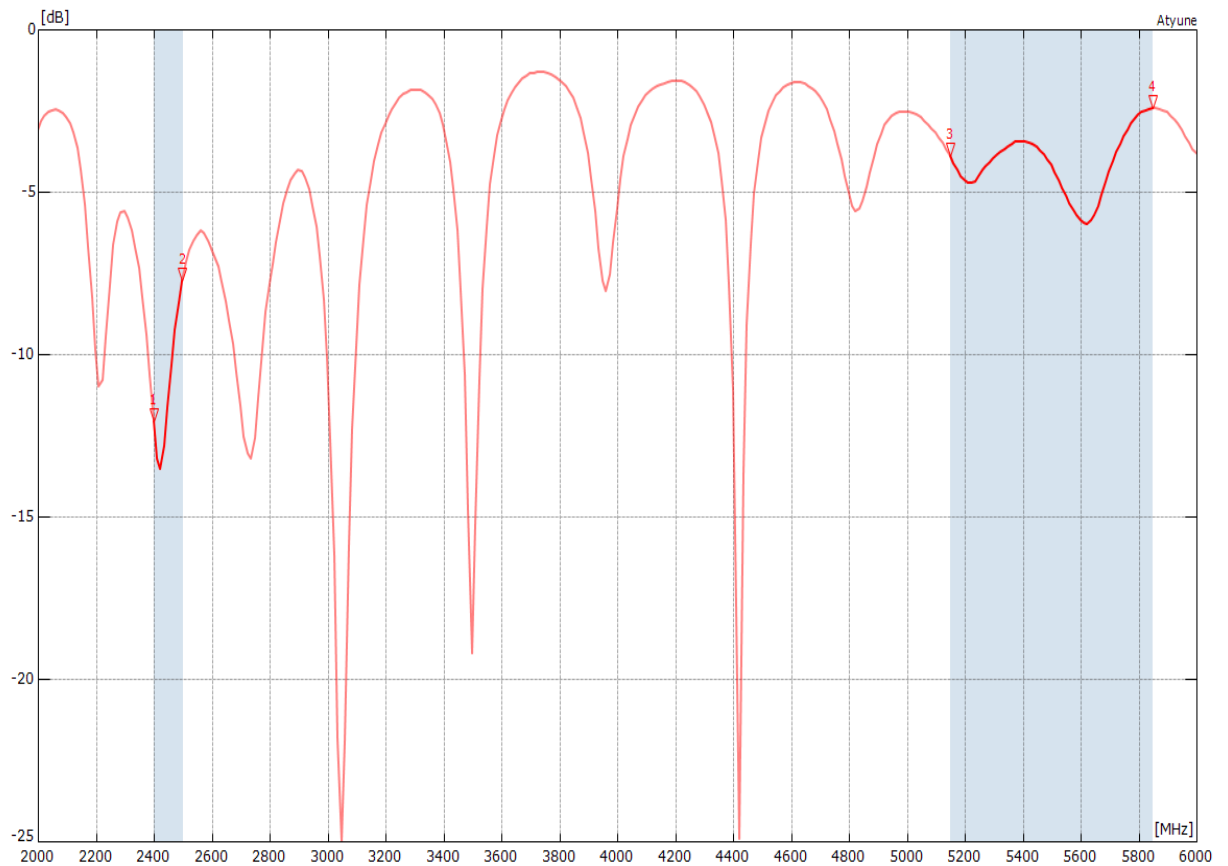
3. RF CHARACTERISTICS SUMMARY

CU23002-1	2400-2500 MHz	5150-5850 MHz
Efficiency (min.)	45.1%	28.2%
Efficiency (avg.)	47.3%	30.6%
Gain (peak)	2.9dBi	3.2dBi
Gain (avg.)	-3.2dB	-5.1dB

All data is measured while CU23002-1 adhered to the Owl's device

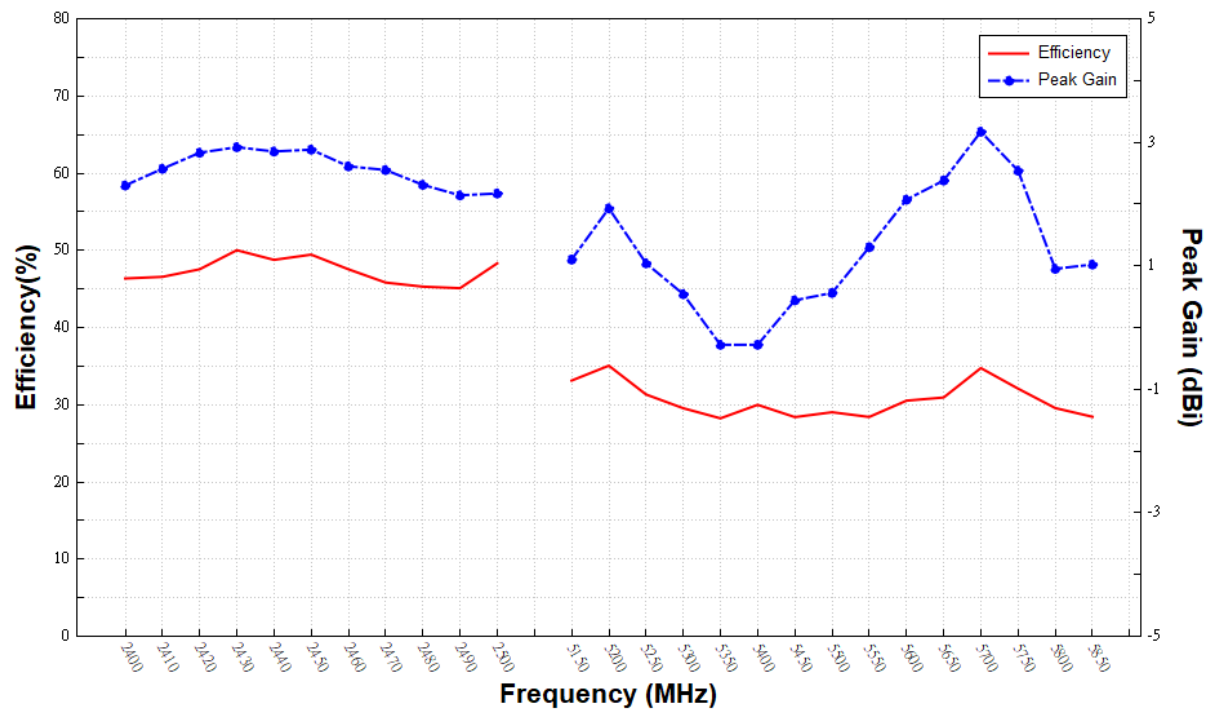
4. RF PERFORMANCE

4.1 Return Loss



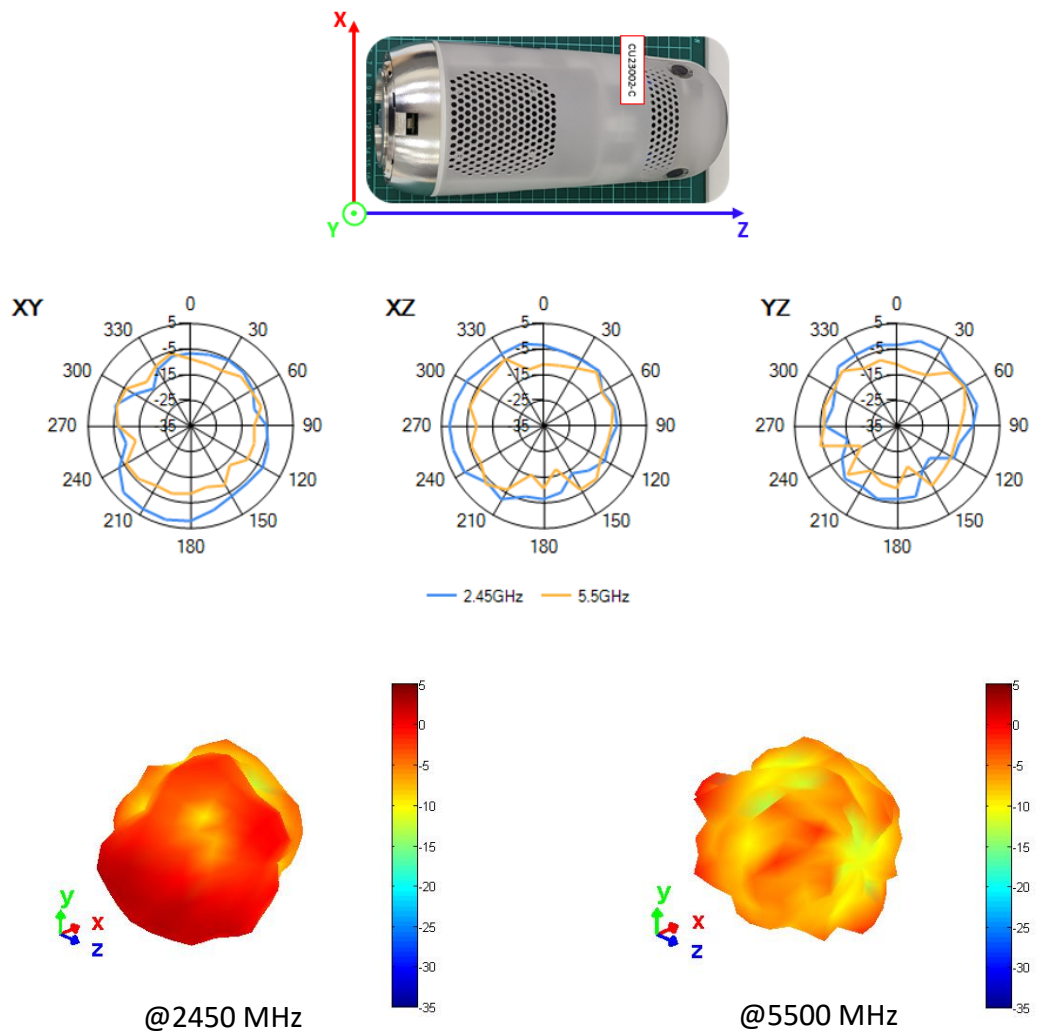
All data is measured while CU23002-1 adhered to the Owl's device

4.2 Antenna Efficiency and Peak Gain



All data is measured while CU23002-1 adhered to the Owl's device

4.3 Antenna Radiation Pattern

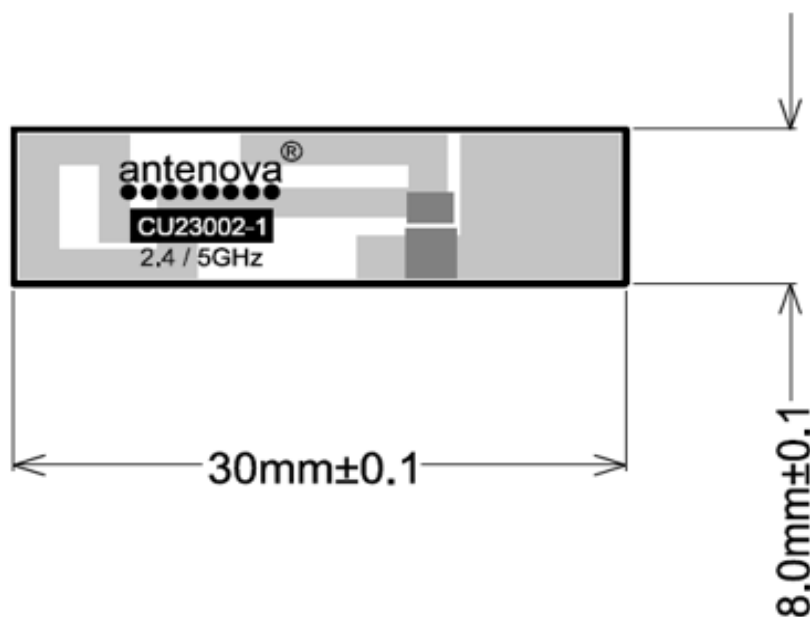


All data is measured while CU23002-1 adhered to the Owl's device

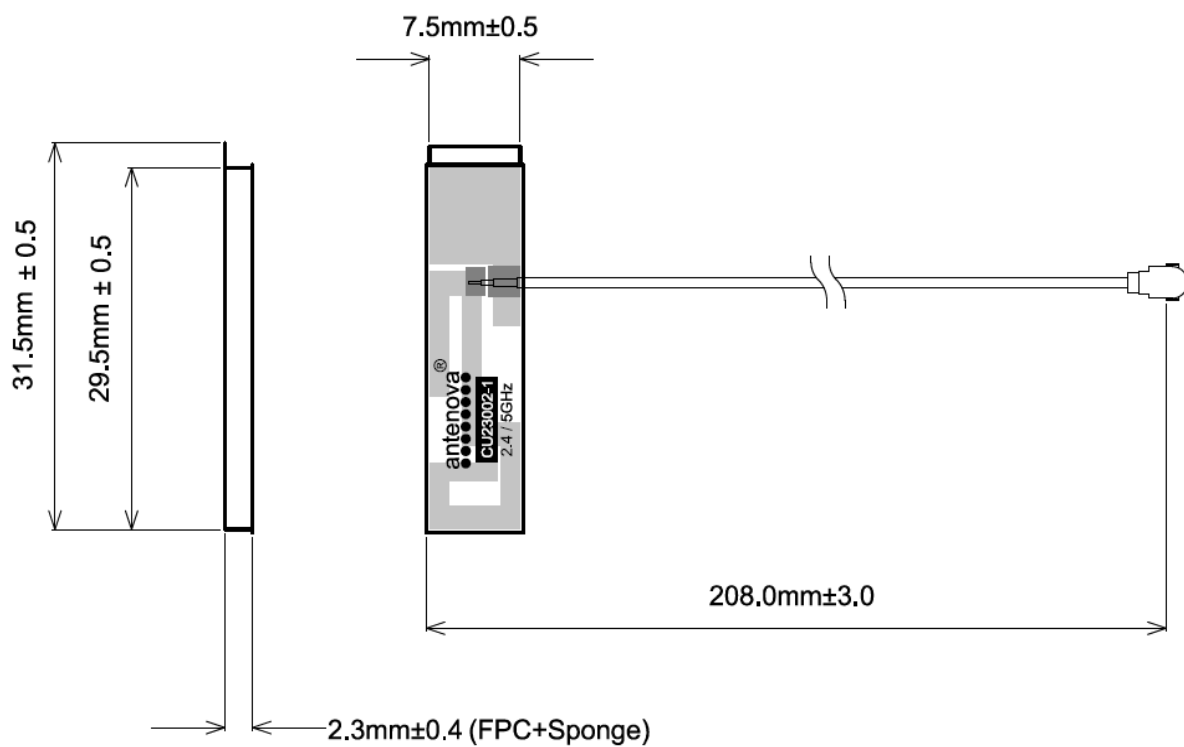
5. DIMENSIONS

5.1 Antenna Dimensions

L	W	T
Length	Width	Thickness
30.0 ±0.1 mm	8.0 ±0.1 mm	0.15mm



5.2 Assembled



6. ELECTRICAL INTERFACE

The Host PCB should ensure that the transmission lines are designed to have a characteristic impedance of 50 Ω

- The length of the transmission lines should be kept to a minimum
- Any other parts of the RF system like transceivers, power amplifiers, etc., should also be designed to have an impedance of 50 Ω

Once the material for the PCB has been chosen (PCB thickness and dielectric constant), a coplanar transmission line can easily be designed using any of the commercial software packages for transmission line design. For the chosen PCB thickness, copper thickness and substrate dielectric constant, the program will calculate the appropriate transmission line width and gaps on either side of the track so the characteristic impedance of the coplanar transmission line is 50 Ω

7. HAZARDOUS MATERIAL REGULATION CONFORMANCE

The antenna has been tested to conform to RoHS requirements. A certificate of conformance is available from Antenova's website.

8. STATEMENT ON INTELLECTUAL PROPERTY & DISCLAIMER

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Disclaimer

Antenova accepts no responsibility for injury to the individual resulting from the use or misuse of this product.

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