CU23001-1
Product Specification
Rev.01

For Antenova					
Author	**Signature**	**Date**	**Approved by**	**Signature**	**Date**
Tim Lin	Tim Lin	14-Aug-2023			14-Aug-2023

For Owl Labs			
	Approved by	**Signature**	**Date**
	Ashish Thanawala	Ashish Thanawala	17-Aug-2023

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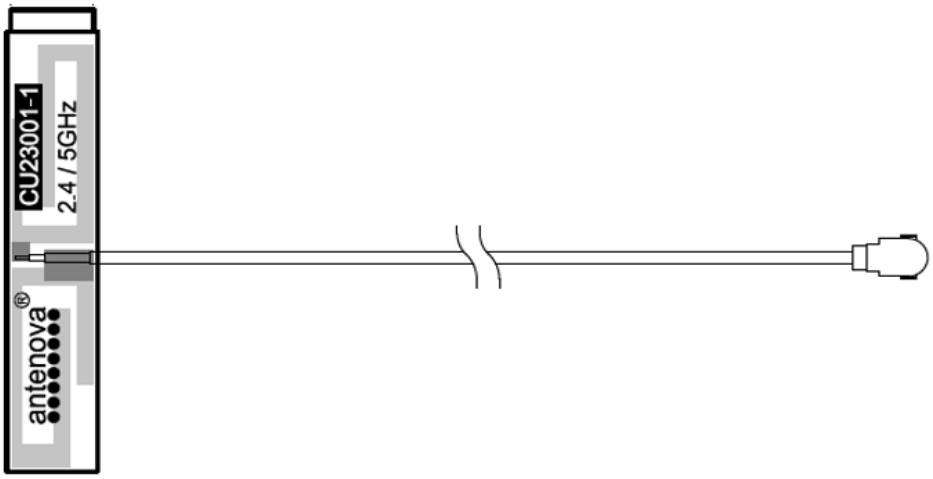
1. PART NUMBER

Part Number
CU23001-1



2. GENERAL DATA

Part No.	CU23001-1
Frequency	2400-2500, 5150-5850 MHz
Polarization	Linear
Operating Temperature	-40 to +85°C
Impedance	50 Ω
Weight	<1g
Antenna Type	FPC antenna
Dimensions	FPC: 30.0 x 6.0 x 0.15 (mm^3), FPC + sponge : 30.0 x 6.0 x 2.3 (mm^3)
Cable Length	295.0 (mm)-white, Ø 1.13 double shielding cable + MHF (20278-112R-13)

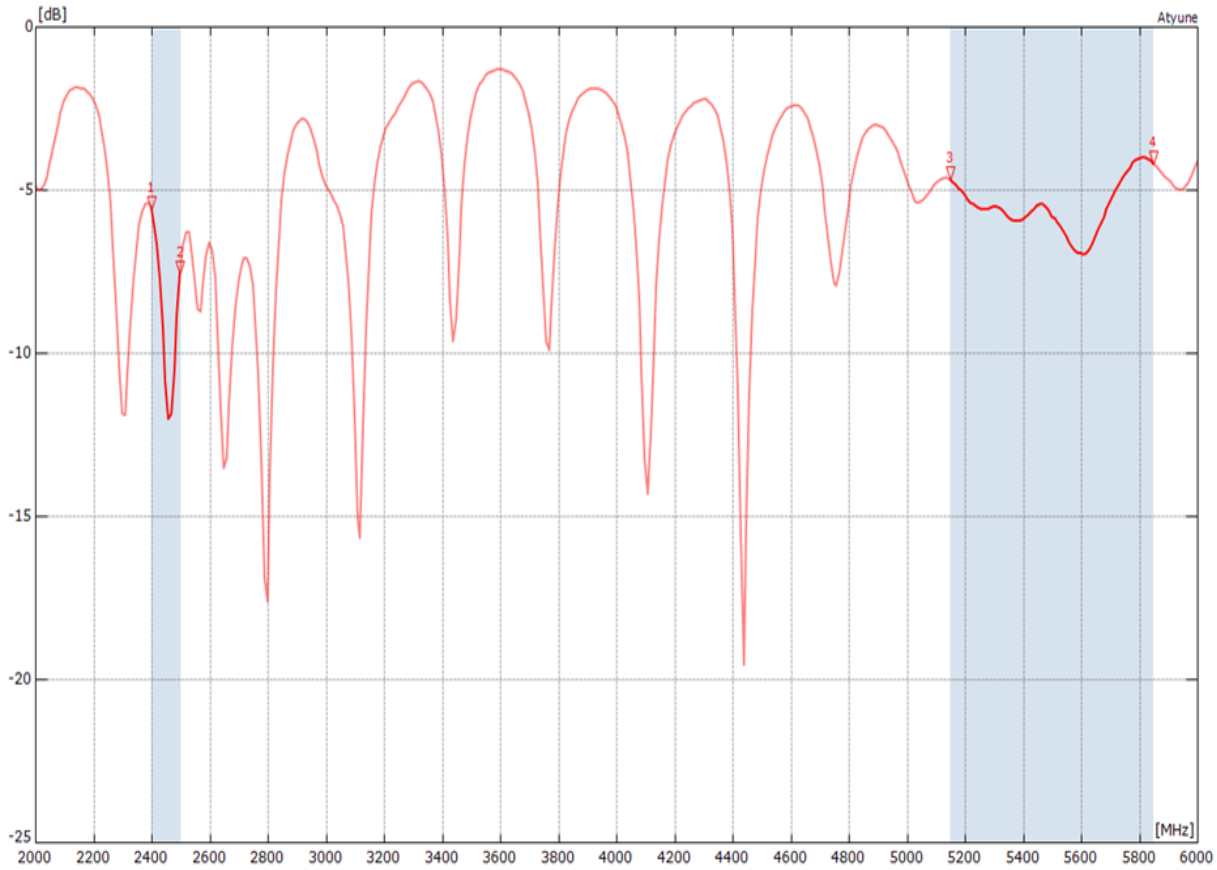
3. RF CHARACTERISTICS SUMMARY

CU23001-1	2400-2500 MHz	5150-5850 MHz
Efficiency (min.)	45.2%	30.5%
Efficiency (avg.)	48.6%	34.2%
Gain (peak)	2.9dBi	3.8dBi
Gain (avg.)	-3.1dB	-4.7dB

All data is measured while CU23001-1 adhered to the Owl's device

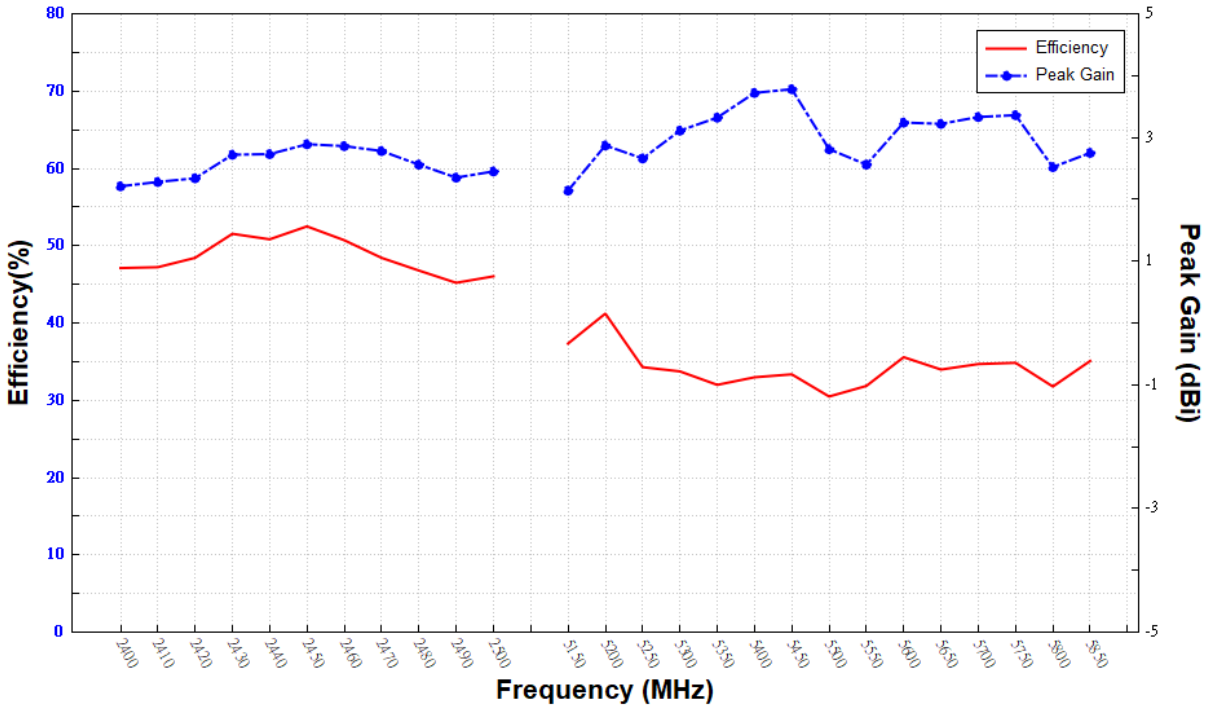
4. RF PERFORMANCE

4.1 Return Loss



All data is measured while CU23001-1 adhered to the Owl's device.

4.2 **Antenna Efficiency and Peak Gain**



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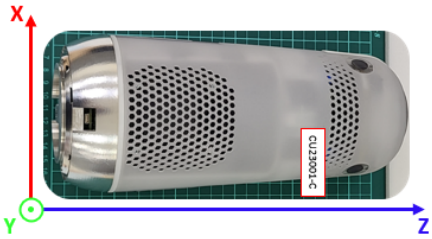
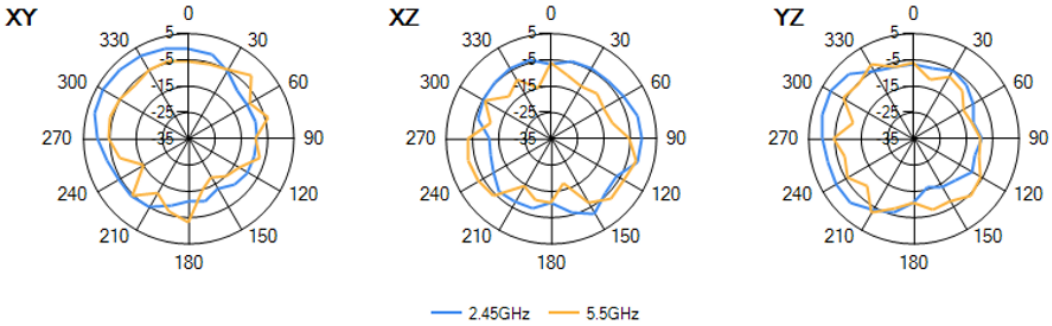
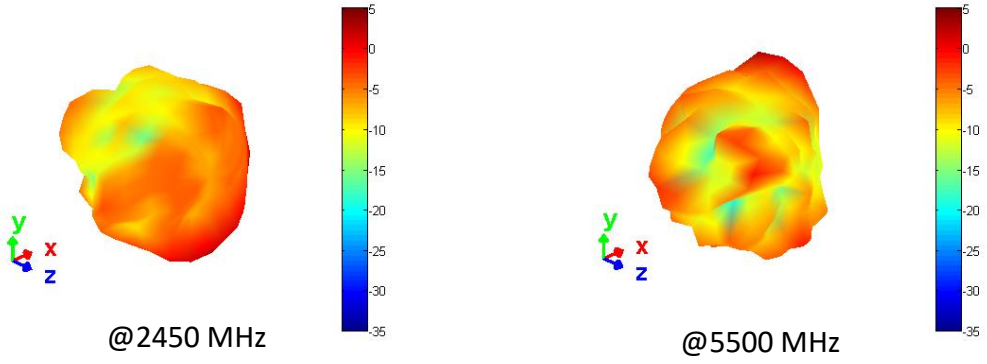
4.3 **Antenna Radiation Pattern**







@2450 MHz

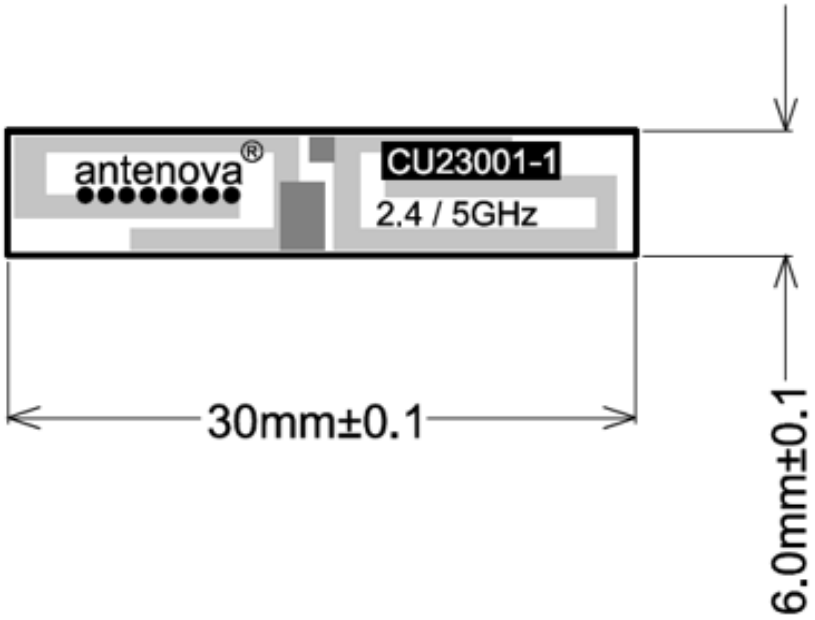
@5500 MHz

All data is measured while CU23001-1 adhered to the Owl's device.

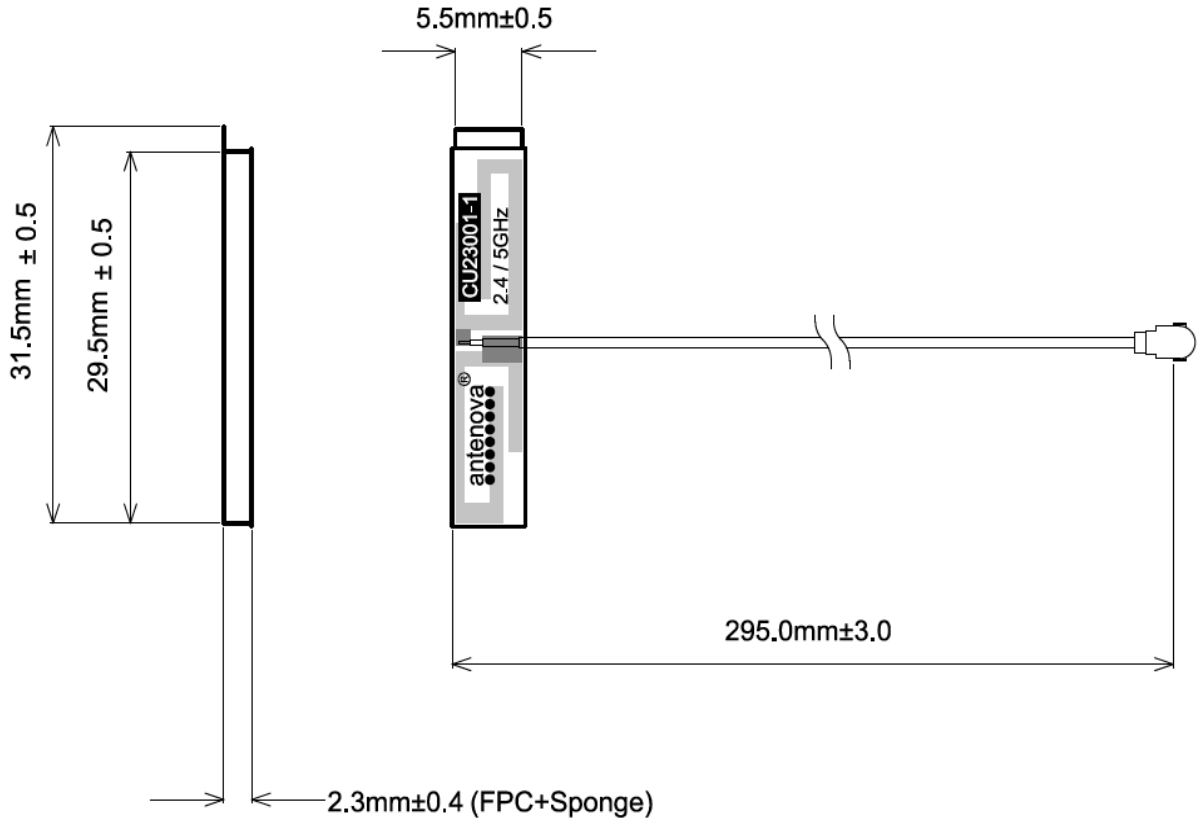
5. DIMENSIONS

5.1 Antenna Dimensions

L	W	T
Length	Width	Thickness
30.0 ±0.1 mm	6.0 ±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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