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Profile Series N06CBAUA

Airgain Embedded Antenna Engineering Data Sheet

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Revision History

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1. Airgain N06CBAUA Embedded Antenna

The Model N06CBAUA Embedded Antenna provides a high efficiency, 5900-7125MHz band embedded antenna solution for Wi-Fi and ISM band applications, such as WLAN products; very low VSWR makes it suitable for 802.11ax applications.

2. Features

The Model N06CBAUA Embedded Antenna is defined by the following features:

- IEEE 802.11ax standard
- Case mount
- Truly balanced operation
- Quick integration

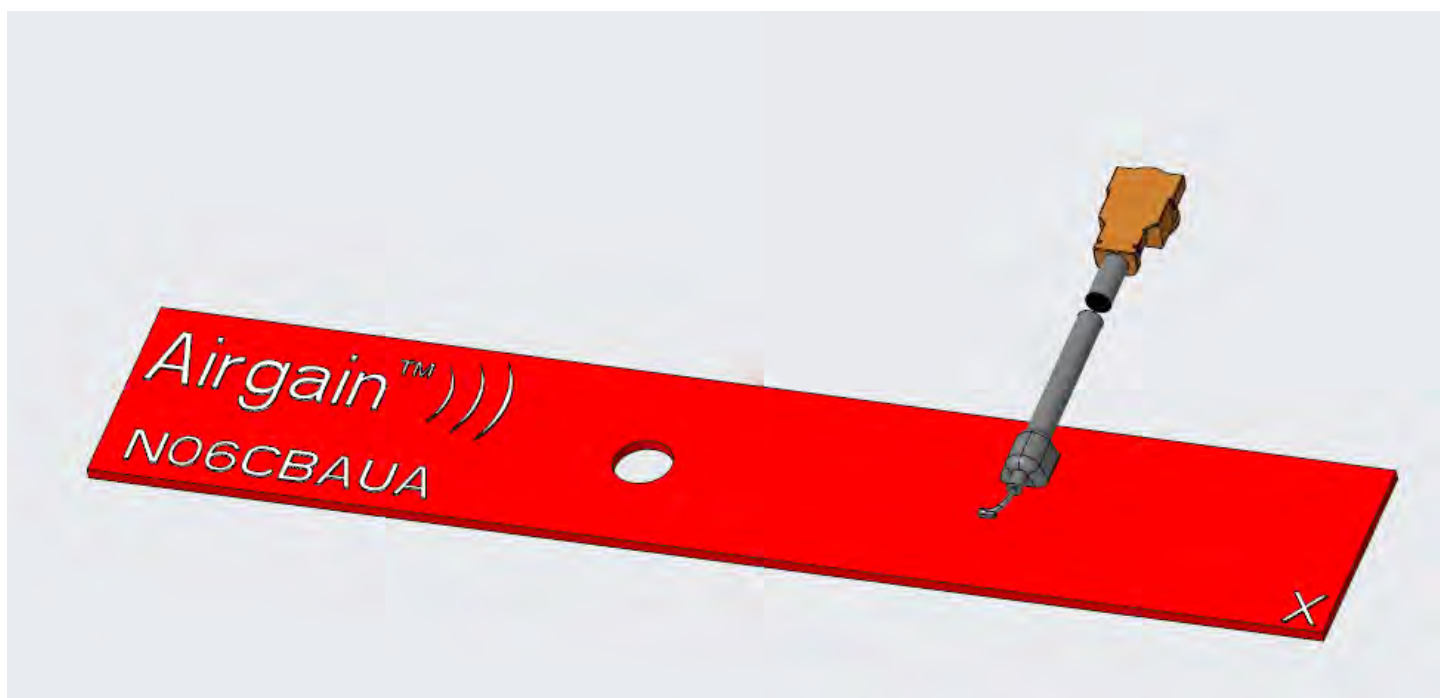


Figure 1: Model N06CBAUA Embedded Antenna

3. Specifications and Interface

Frequency range	5925-7125MHz
Peak gain	4.0 dBi@5925 MHz; 4.0 dBi@6300 MHz; 4.2 dBi@6500 MHz; 4.2 dBi@6800 MHz; 4.0 dBi@7125 MHz;
VSWR	< 2:1
Feed impedance	50 ohms
Power handling	30 dBm
Interface	50 ohms, 1.13 mm diameter, micro coax cable (available with optional U.FL-compatible cable connector and/or cable-mounted EMI ferrites)
Antenna dimensions	54.8 x 10 x 0.5 (mm)
Weight	1.17g
Temperature range	Operating: -40° C to +85° C (-40° F to +185° F) Storage: -40° C to +85° C (-40° F to +185° F)
Humidity range	0% to 95% non-condensing

4. Radiation Patterns

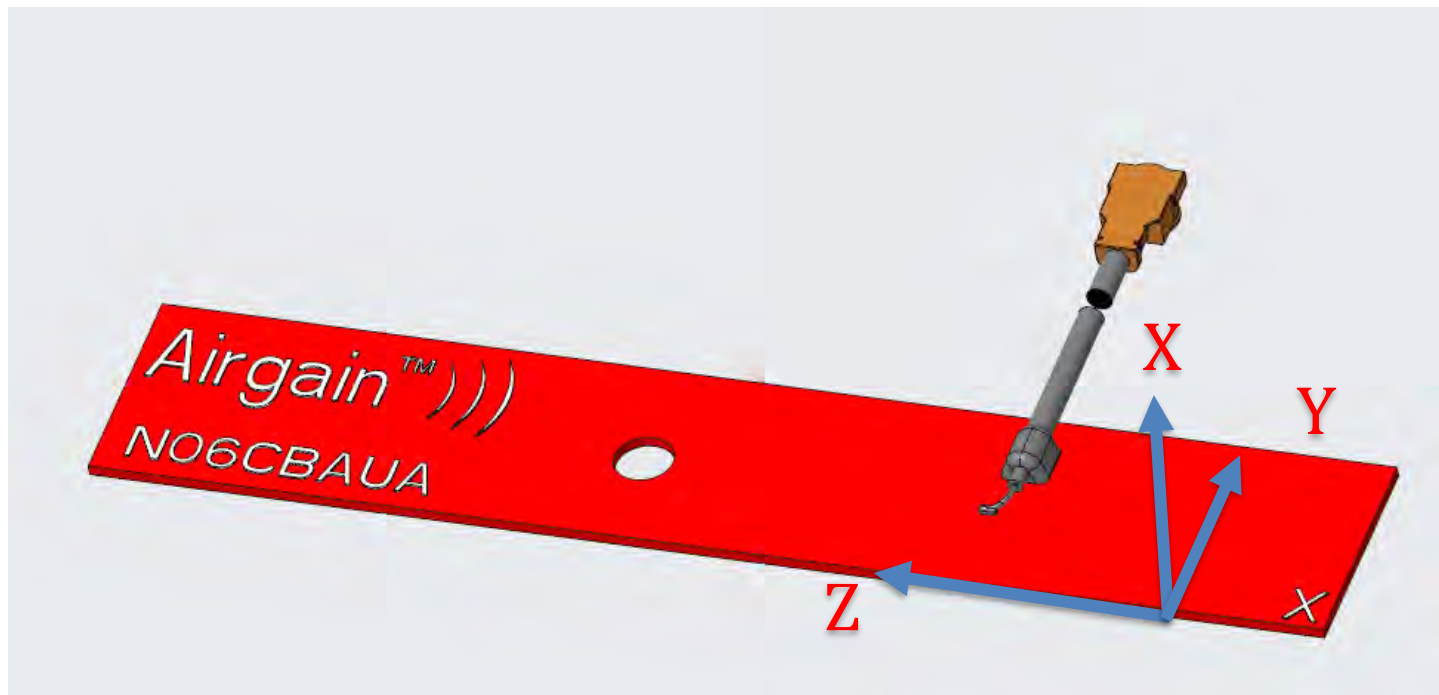


Figure 2: Model N06CBAUA Measurement axes

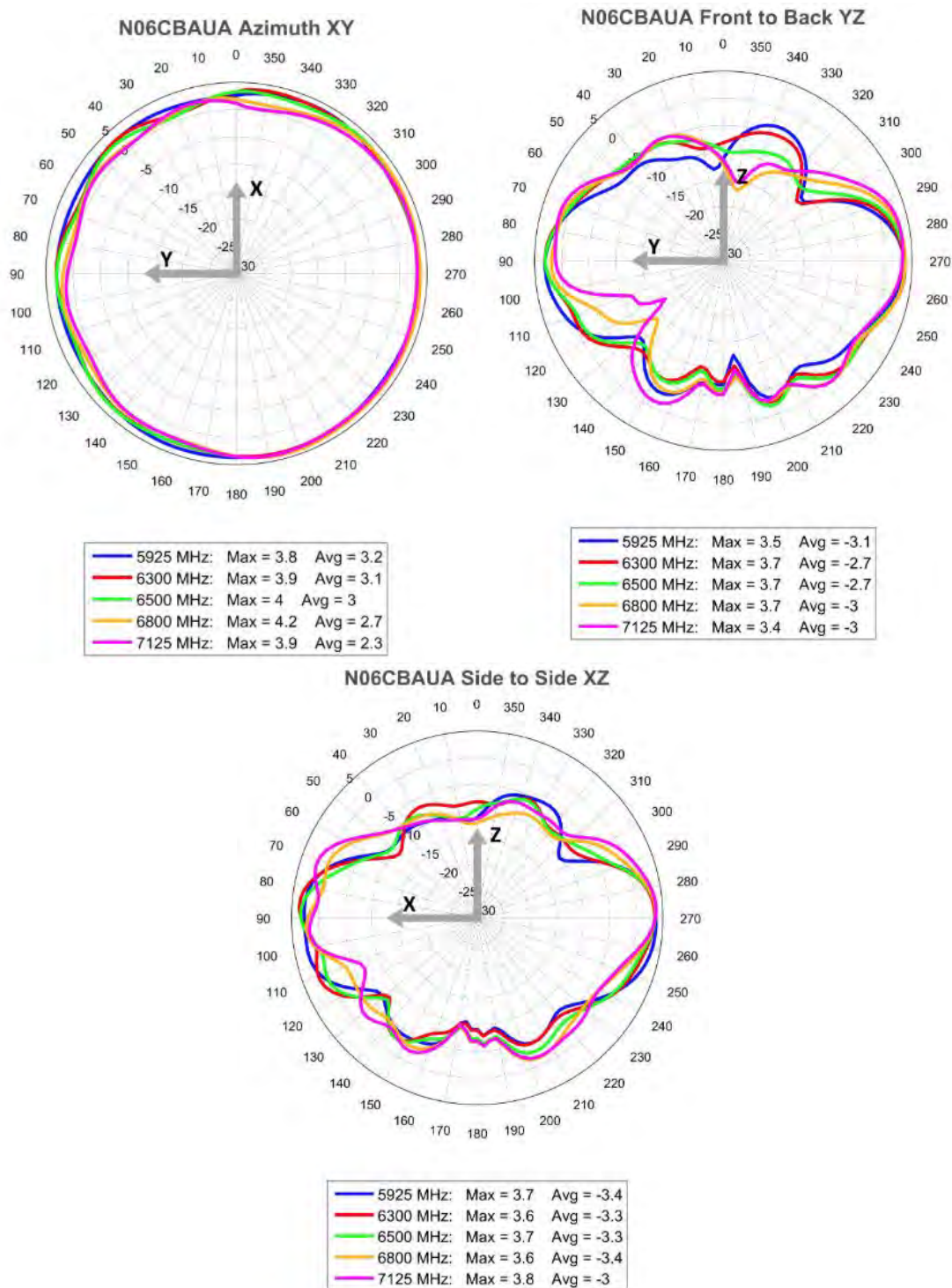


Figure 3: Airgain N06CBAUA radiation patterns at 5925 MHz to 7125 MHz

5. Dimensions

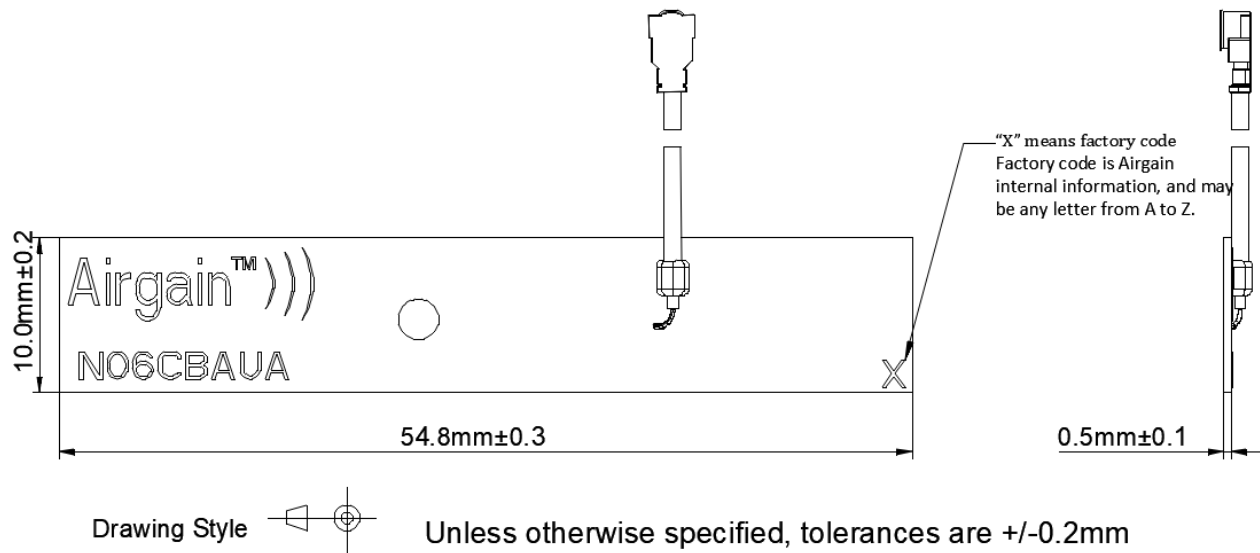


Figure 4: N06CBAUA Antenna dimensions

6. ROHS& REACH/SVHC247

Airgain N06CBAUA embedded antennas are ROHS& REACH/SVHC247 compliant.

7. Feature and Options Information

Airgain N06CBAUA antennas are equipped with an RF cable I/O interface. Optional cable termination such as U.FL-compatible micro coax connectors and cable mounted EMI ferrite cores are available. To aid mounting the N06CBAUA, pre-applied, double-sided adhesive tape is available on the N06CBAUA -T Series.

7.1 Part Number Conventions

Airgain uses a three-staged standard number system for our part numbers, which serially define the antenna type, tape type, cable type/length, and connector type/interface, as described below:

Antenna #	Tape type -XX (if required)	Packaging type -XX	Cable Assembly Type -xxxxxx		
			Cable Color -x	Cable length XXX	Connector type XX (if required)
N06CBAUA	Blank = No Tape T = Tape on bottom of element T6 = 0.5mm Tape affixed to bottom surface of antenna T2M48 = 3M 9448A, Tape affixed to bottom surface of antenna	PK1= singulated (individual) antennas (PK1 is mandatory)	G = Grey (Standard) B = Black (Non Standard) W = White (Non Standard) A = Blue(Non Standard) ↓ L* = 1.13mmOD, Low loss Cable	Cable length in millimeters (mm) Sample Lengths*: 65, 100, 130, 150, 190, 230, 250, 300, 400	Blank = Stripped Cable U = U.FL connector C = U.FL connector plus Ferrite Core, core size: 3.5mm * 9.0mm * 1.5mm UR1 = U.FL compatible connector, rotated 90° UR2 = U.FL compatible connector, rotated 180° UR3 = U.FL compatible connector, rotated 270°

* Standard cable lengths listed in RF Cable Datasheet

7.2 Part Number Example

N06CBAUA-T-PK1-G100U – N06CBAUA antenna with 1.6-mm double-sided adhesive tape, 100-mm cable, and U.FL-compatible connector.

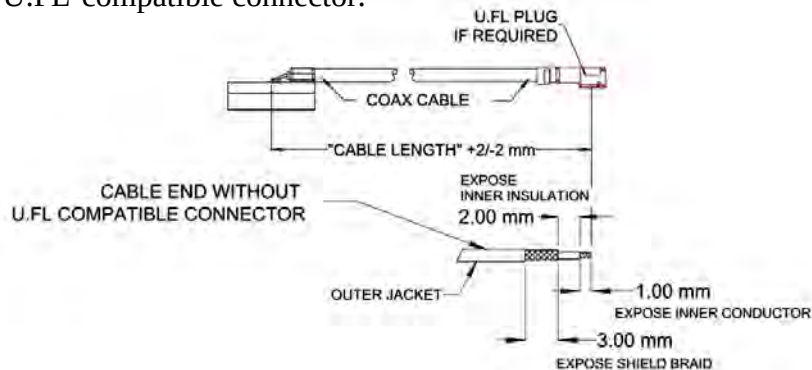


Figure 5: N06CBAUA with connector or stripped cable

8. Cable Data Sheet

Item	Specification	
Cable type	RF-1.13L/50	
Impedance	50 ± 2 ohms	
Inner conductor	Material	Silverplated copper wire
	Conductor numbers	7
	Conductor size	0.083 mm
	Outer diameter	0.249±0.02 mm
Insulation	Material	FEP
	Color	Clarity
	Diameter	0.735±0.03 mm
Outer conductor	Material	Cu-plastic composite tape
	Makeup: thickness × width	0.012×2.5 mm
	Coverage	100%
	NOM.O.D.	0.759±0.03 mm
Outer conductor	Material	Tinned copper wire
	Makeup:total / O.D. of every wire	4/0.05 mm
	Coverage	90±5%
	NOM.O.D.	0.96±0.05 mm
Outer cover	Material	FEP
	Color	Black / white / grey / blue
	Diameter	1.15±0.05 mm
VSWR testing	< 1.3@0~6GHz	
Attenuation (dB/1meter)	1GHz	≤1.88
	2GHz	≤2.55
	3GHz	≤3.05
	4GHz	≤3.52
	5GHz	≤4.05
	6GHz	≤4.4
Operating temperature	-55~+200℃	