SYNZEN


# DATASHEET

MIMOSA | SZK-C-2G19 | Flexible Self-Adhesive Antenna | GNSS

## Features:

GNSS: 1559-1609MHz

>3.0dBi Peak Gain, >50% Efficiency

Dimensions: 30.0 x 10.0 x 0.2 mm
Cable Length: 100mm, 1.13mmØ
Connector: MHF1 (U.FL compatible
RoHs Compliant

# Contents

# Introduction

MIMOSA is a high performance GNSS flexible printed circuit antenna engineered for compact, integrated positioning devices where space is limited but reliability is non-negotiable. Designed for stable efficiency, controlled impedance, and consistent gain across the primary GNSS bands, it delivers dependable satellite reception without the need for complex onboard antenna design or extensive tuning.

Its ultra-thin, low profile FPC structure allows easy placement within plastic enclosures and tight mechanical layouts, while the integrated coaxial cable and miniature connector enable fast, plug and operate assembly. The result is a practical, production ready antenna that reduces development risk, shortens time to market, and provides repeatable RF performance from prototype to volume manufacturing.

**Features**

- Wideband GNSS coverage for GPS, GLONASS, Galileo, and BeiDou
- High radiation efficiency and stable peak gain across 1559 to 1609 MHz
- Ultra thin, lightweight FPC construction for space constrained designs
- Self adhesive backing for quick and secure installation
- Integrated micro coax cable with compact U.FL compatible connector
- No custom PCB antenna design required, reducing development time and risk
- Custom cable lengths and connector options available

**Applications**

- Asset and fleet tracking devices
- UAV and drone navigation systems
- Portable and handheld positioning equipment
- M2M and IoT terminals
- Industrial monitoring and smart infrastructure
- Embedded GNSS modules in compact electronics

# Mechanical Specifications

| Parameter | |
|---|---|
| **Part Number** | SZK-C-2G19 |
| **Name** | MIMOSA |
| **Dimensions (mm)** | 30.0 x 10.0 x 0.2 |
| **Weight (g)** | <0.5 |
| **Antenna Type** | Linear |
| **Cable Length (mm)** | 100.0, 1.13ø* |
| **Connector Type** | MHF1 (U. FL compatible) |
| **Part Number with cable + connector** | SZK-C-2G19-100-01 |
| **Adhesive backing** | 3M 868 |

# Electrical / RF Specifications

| Band | Frequency Range (MHz) | Average Efficiency (%) | Peak Gain (dBi) | VSWR (worst case) | Impedance |
|---|---|---|---|---|---|
| GPS/GLONASS Galileo/Beidou | 1559-1609 | >70 | 2.79 | <2.00:1 | 50 Ω |

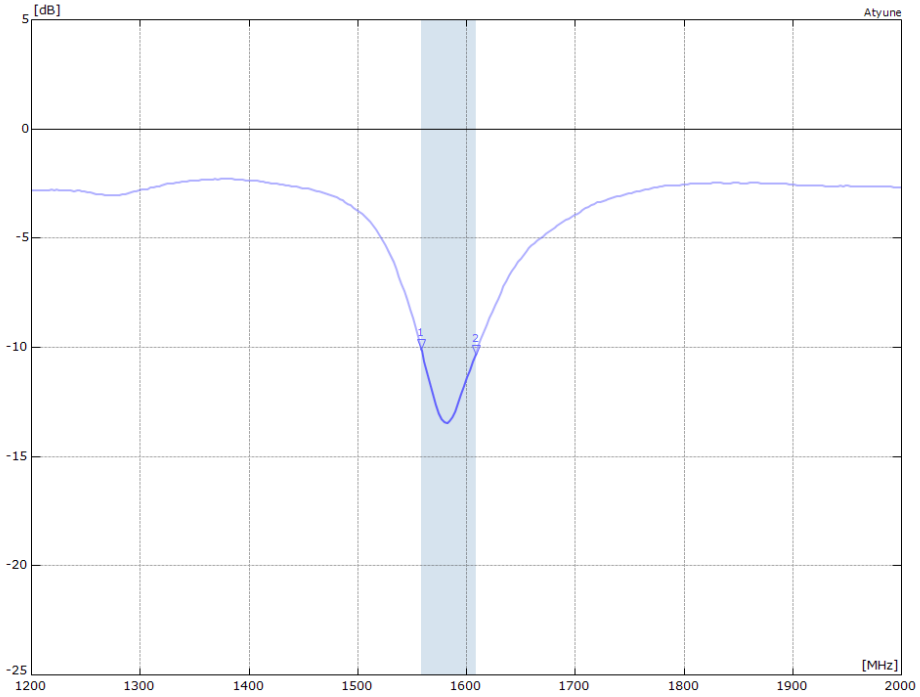
*Note: The antenna performance was measured on a 2mm thick ABS plastic sheet*

# Environmental

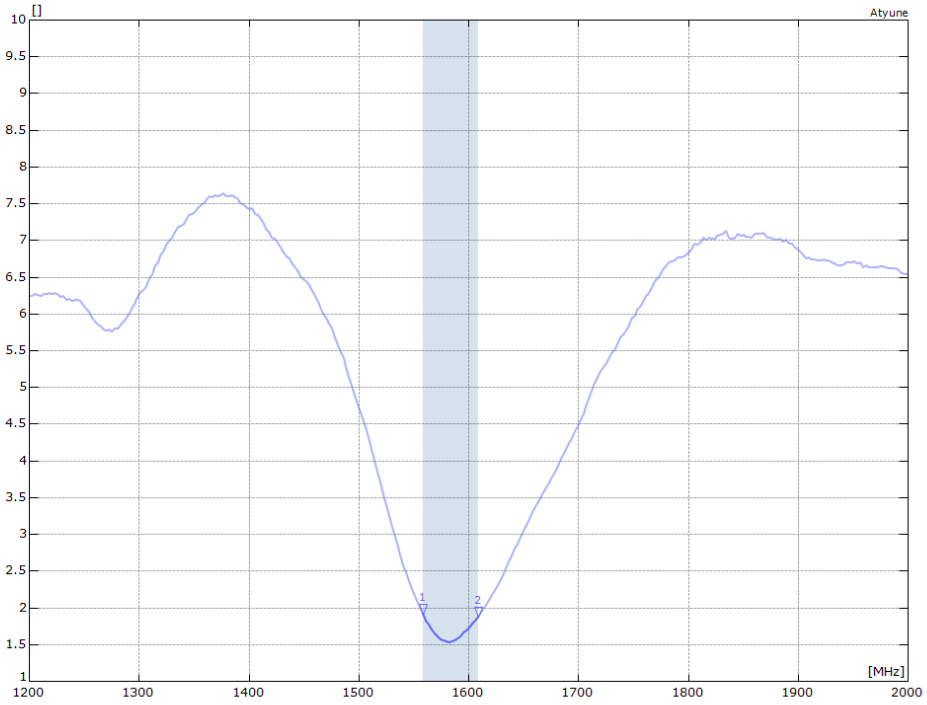
| Parameter | |
|---|---|
| Operational Temperature | -40 to +85°C |
| Storage Temperature | -10 to +40°C |
| Relative Humidity (Storage) | 65±20% RH |
| Moisture Sensitivity | 1 |
| RoHs and REACH compliant | Yes |

# RF Characteristics

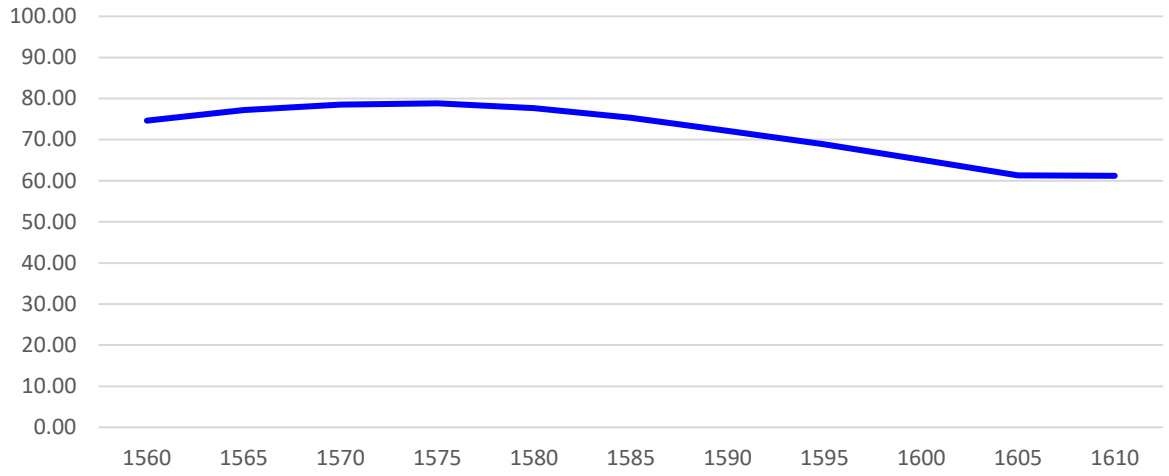
## Return loss



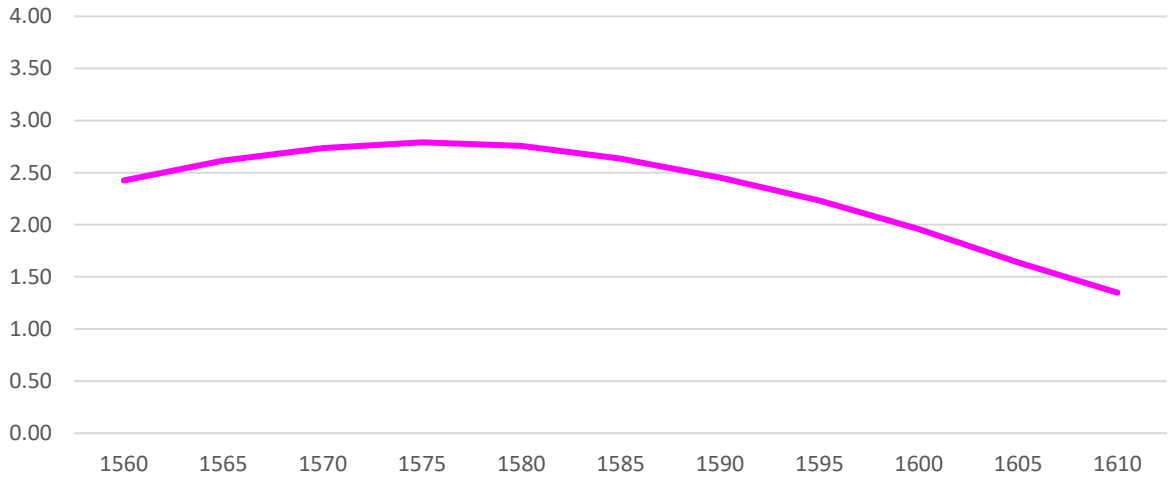

## VSWR



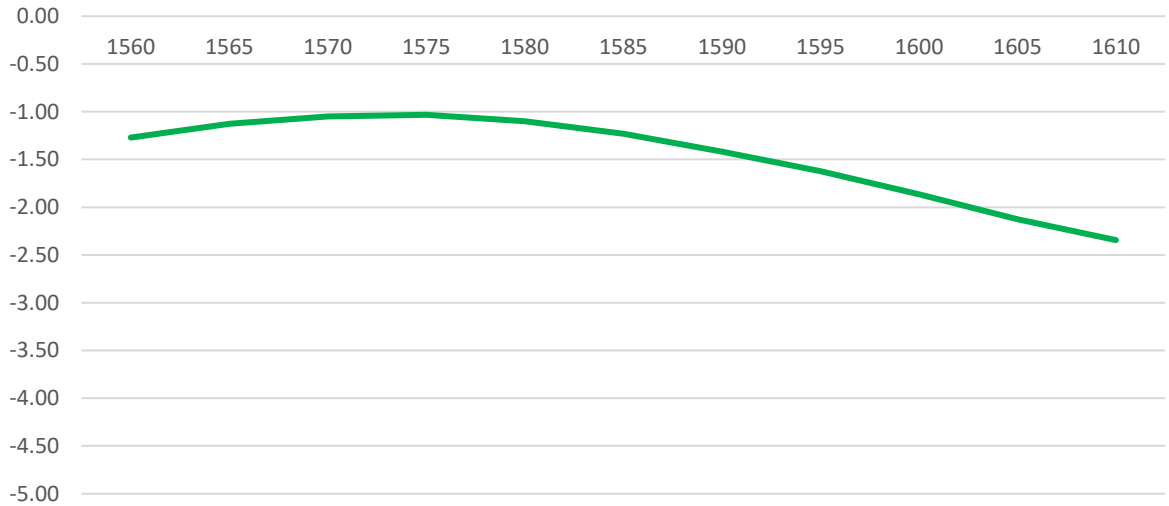
## Efficiency




## Peak Gain

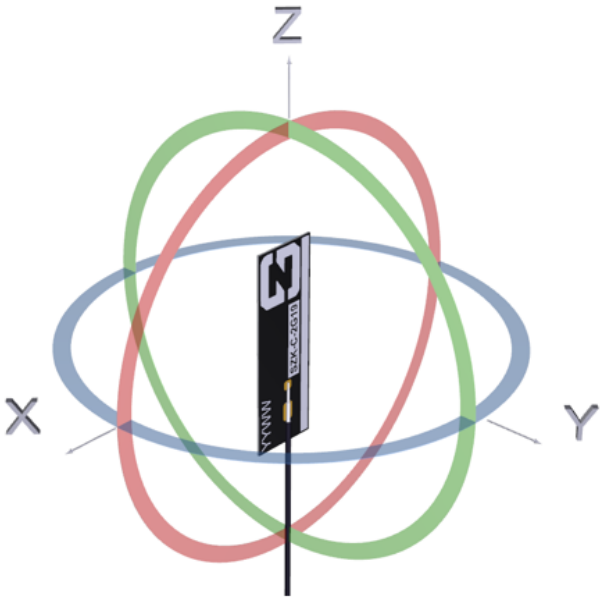


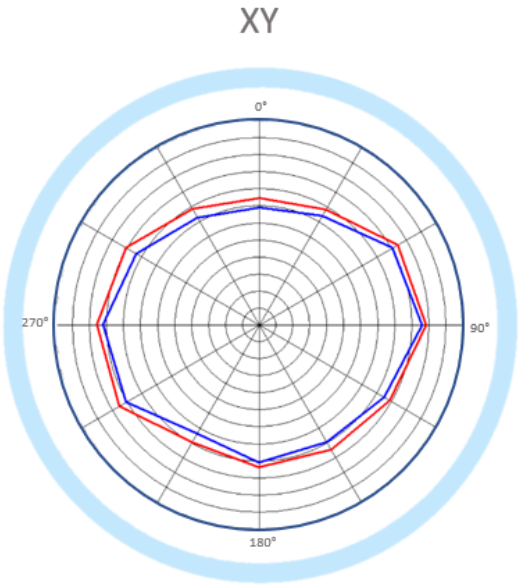

## Average Gain



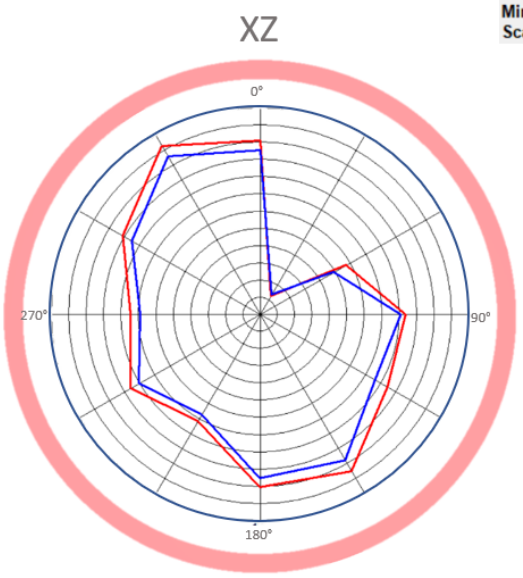
# RF Radiation Patterns

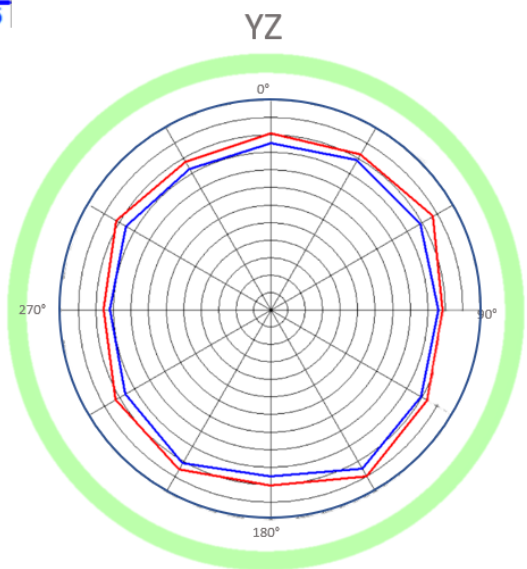
## 2D Polar Plots



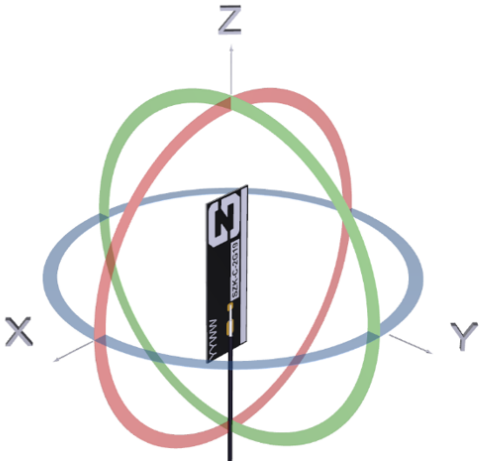



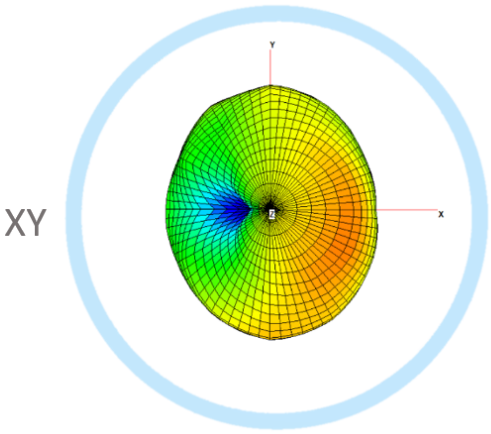


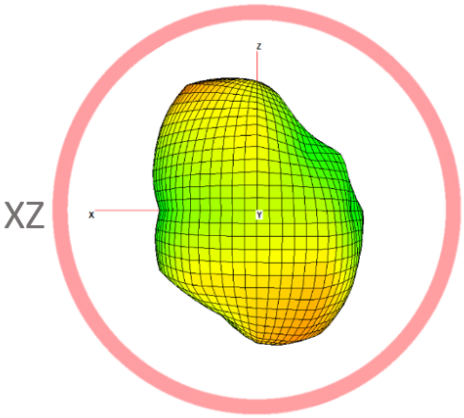


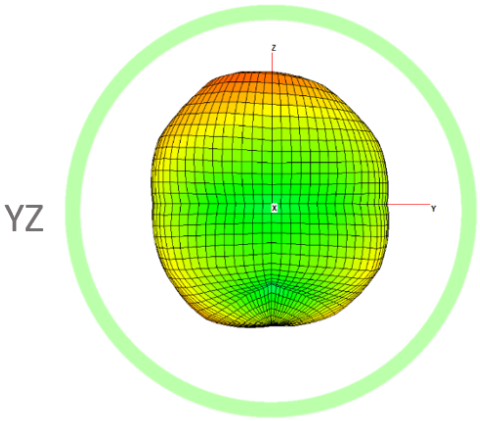



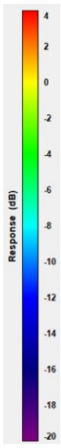
## 3D Radiation Pattern at 1575MHz

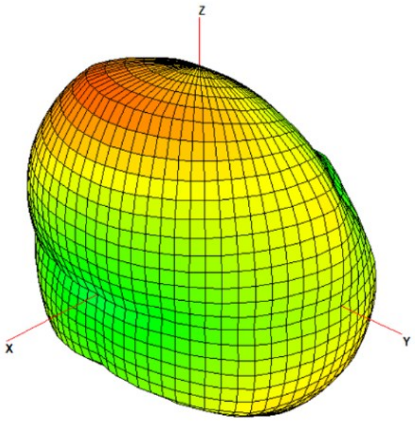


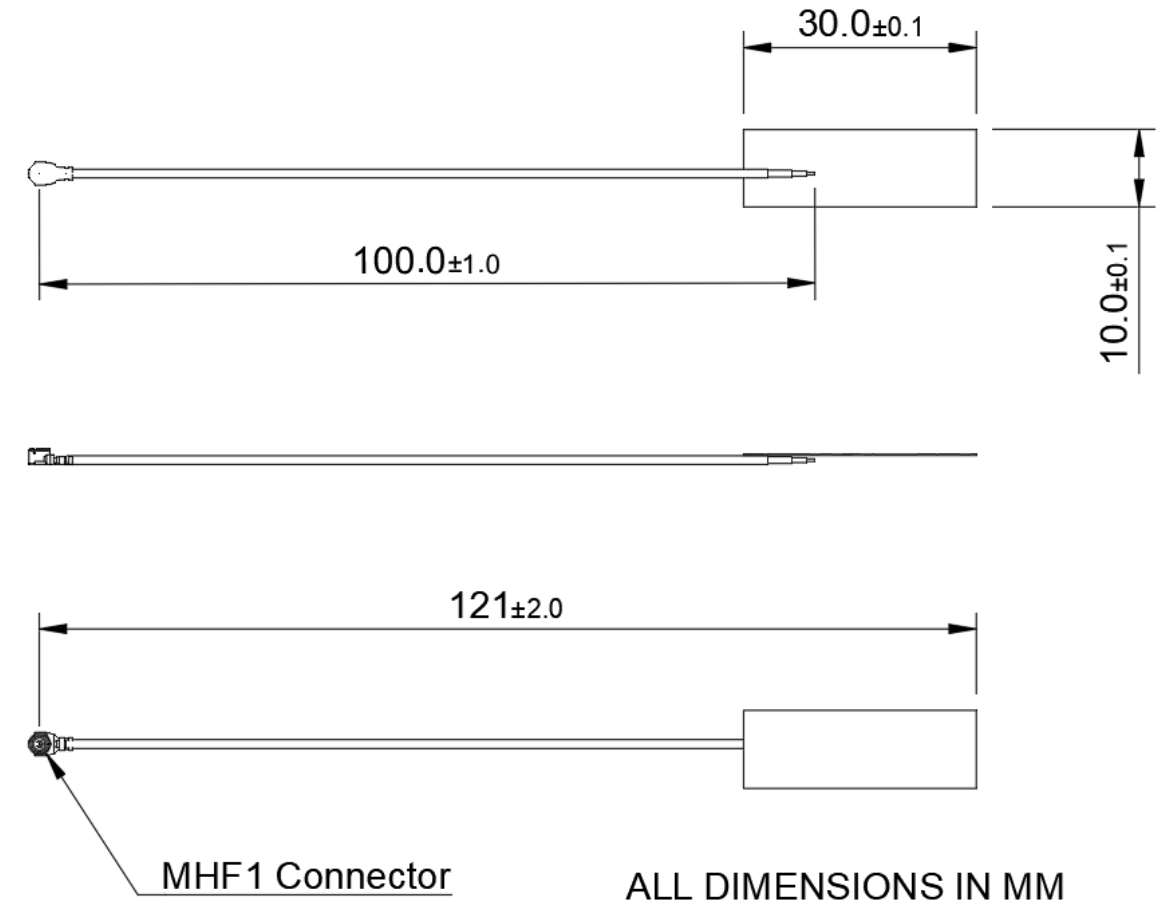




# Mechanical Drawing




# Packaging

Antennas packed in PE bag (20 per bag)

Small bag dimensions: 28.5 x 9.5 (cm)

100pcs per larger PE bag with product label

Bag dimensions = 30 x 19 (cm)

# Material Regulation

The antenna has been assessed to conform to RoHS requirements. A certificate of conformance is available upon request.