



ACTIVE GNSS

MIMAS

Active GNSS Patch Antenna

SZA-N-3G23

BAND
GNSS L1

LNA GAIN
20 dB

NOISE FIGURE
 ≤ 2.0 dB

SIZE
15.0 × 15.0 × 5.9 mm

L1
1559 to 1610 MHz

Covers GPS L1, Galileo, GLONASS G1, BeiDou

Key Features

- High LNA gain: 20 dB
- Comprehensive GNSS support: GPS / GLONASS / Galileo / BeiDou
- Excellent out-of-band rejection
- Ideal for transmitter-heavy environments

1 Introduction

MIMAS, 15 mm internal GPS / GLONASS / Galileo / BeiDou active patch antenna with a robust LNA gain of 20 dB.

The Synzen MIMAS (SZA-N-3G23) integrates front-end and back-end SAW filters with outstanding rejection across all non-GNSS frequencies, protecting your GPS receiver from potential overdriving or damage caused by nearby transmitters.

Despite its remarkable out-of-band rejection capabilities, the MIMAS maintains an impressively low noise figure of ≤ 2.0 dB, significantly minimizing signal degradation that is typical of losses in transmission lines.

— Features

- ◆ High LNA gain: 20 dB
- ◆ Comprehensive GNSS support: GPS / GLONASS / Galileo / BeiDou
- ◆ Excellent out-of-band rejection
- ◆ Ideal for transmitter-heavy environments

— Applications

- ◆ Wearables
- ◆ Connected Health
- ◆ Transportation

2 Mechanical Specifications

Part Number	SZA-N-3G23
Name	MIMAS
Dimensions (mm)	15.0 × 15.0 × 5.9
Weight	<6 g
Antenna Type	Active Ceramic Patch + Cable
Cable Length (mm)*	35.0, 0.81 Ø
Connector*	MHF1 (U.FL Compatible)
Adhesive Backing	3M 468

*Alternate cable length and connectors available on request

3 Antenna Specifications

Frequency Range (MHz)	Efficiency (%)	Peak Gain (dBic)	VSWR	Impedance
1575.42 ±1.023 / 1602.56 ±4.0	>50	1.5	<2.0:1	50 Ω

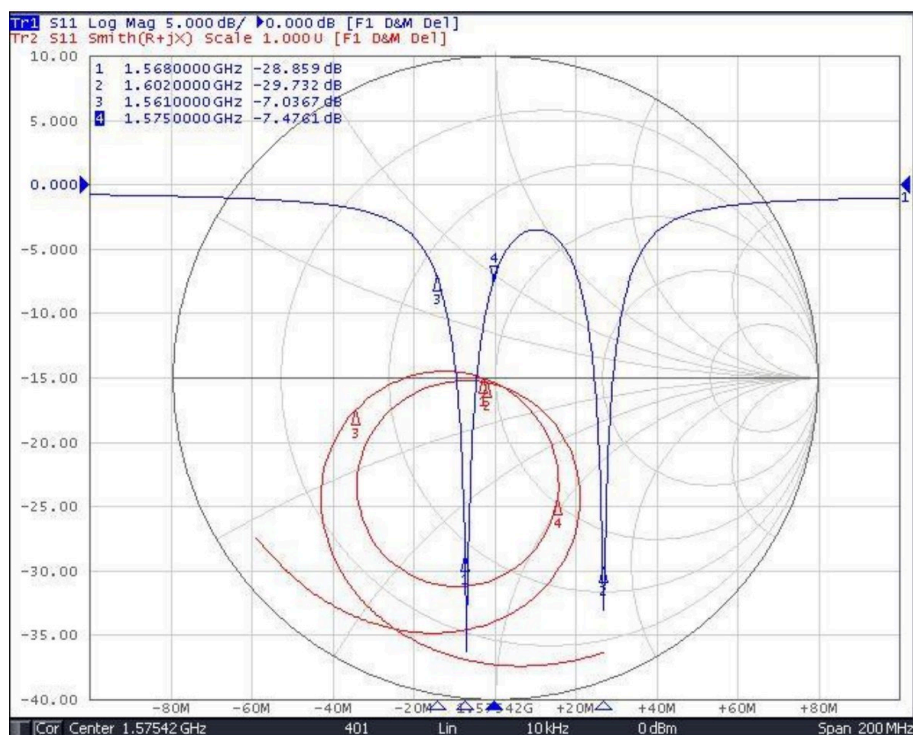
4 LNA Specifications

Frequency Range (MHz)	DC Voltage (V)	Current (mA)	Gain (dB)	VSWR	Noise Figure (dB)
1575.42 ±1.023 / 1602.56 ±4.0	3.0 ±0.3	5.0 ±2	20	<2.0:1	≤2.0

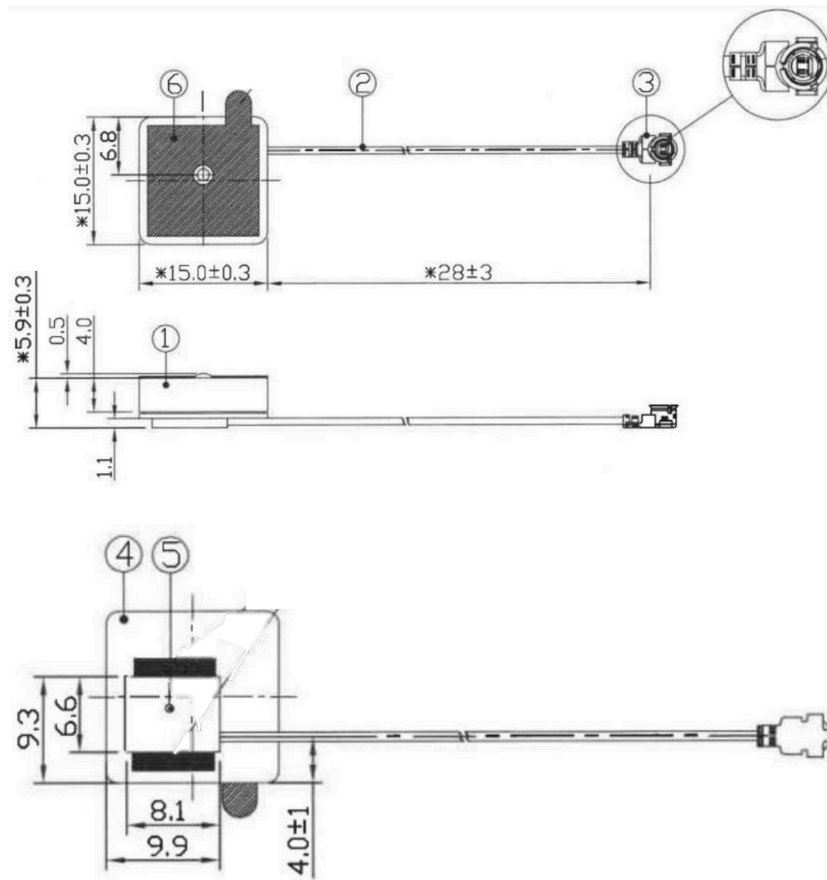
5 Environmental

Operational Temperature	-40 to +85°C
Storage Temperature	-40 to +85°C
Relative Humidity (Storage)	65 ±20% RH
Moisture Sensitivity Level (MSL)	1
RoHS and REACH compliant	Yes

6 Return Loss / Smith Chart



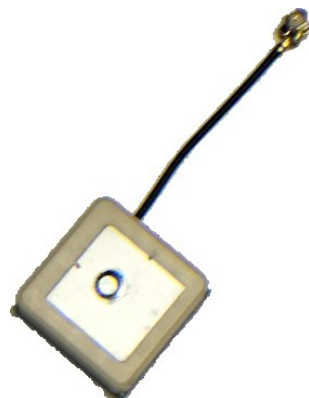
7 Mechanical Drawing



All dimensions in mm

8 Top and Bottom View

Top



Bottom



9 Packaging



10 Compliance

ROHS

Compliant

Conforms to EU RoHS Directive 2011/65/EU as amended by Delegated Directive (EU) 2015/863.

REACH

Compliant

Conforms to EU REACH Regulation (EC) No 1907/2006.

CERTIFICATE

On request

A certificate of conformance is available upon request from sales@synzen.com.tw.

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