

DATASHEET

SZA-N-5G39 | Active GPS Antenna | GNSS

Features:

GPS L1 / GALILEO / GLONASS G1 / BEIDOU: 1559-1610 MHz

>2.9dBic Peak Gain, >50% Efficiency

Dimensions: 25.0 x 25.0 x 7.0 mm

Cable Length: 100mm

Connector: MHF1 (U.FL Compatible)

RoHs compliant

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Introduction

SURTUR2 (SZA-N-5G39) is a compact 25mm active patch antenna engineered for GPS, GLONASS, GALILEO, and BeiDou. With an integrated LNA delivering a robust 28dB of gain, SURTUR2 ensures reliable performance even in transmitter-dense environments. Dual SAW filters at both the front and back ends provide exceptional out-of-band rejection, safeguarding GNSS receivers from harmful interference and preventing overload from nearby signals.

Despite this high level of rejection, the antenna maintains a noise figure of $\leq 2.0\text{dB}$, preserving signal integrity and minimizing losses commonly seen in transmission lines. This balance of strong filtering and low noise makes SURTUR2 an excellent choice for applications where space, reliability, and immunity to interference are critical.

Key Features

- 28dB High LNA Gain
- Full GNSS Coverage: GPS, GLONASS, GALILEO, BeiDou
- Outstanding Out-of-Band Rejection
- Designed for Harsh RF Environments

Typical Applications

- Wearables
- Connected Health Devices
- Transportation and Mobility

Mechanical Specifications

Parameter	
Part Number	SZA-N-5G39
Name	SURTUR2
Dimensions (mm)	25.0 x 25.0 x 7
Weight	<15g
Antenna Type	Active Ceramic Patch + Cable
Cable Length (mm)*	50.0, 0.81ø
Connector*	MHF1 (U.FL Compatible)
Adhesive backing	3M 468

****Alternate cable length and connectors available on request***

Electrical / RF Specifications

Frequency Range (MHz)	Efficiency (%)	Peak Gain (dBic)	VSWR	Impedance
1575.42	>50	4.01	<2.0:1	50Ω
1602	>50	4.03	<2.0:1	50Ω
1609	>50	2.9	<2.0:1	50Ω

LNA

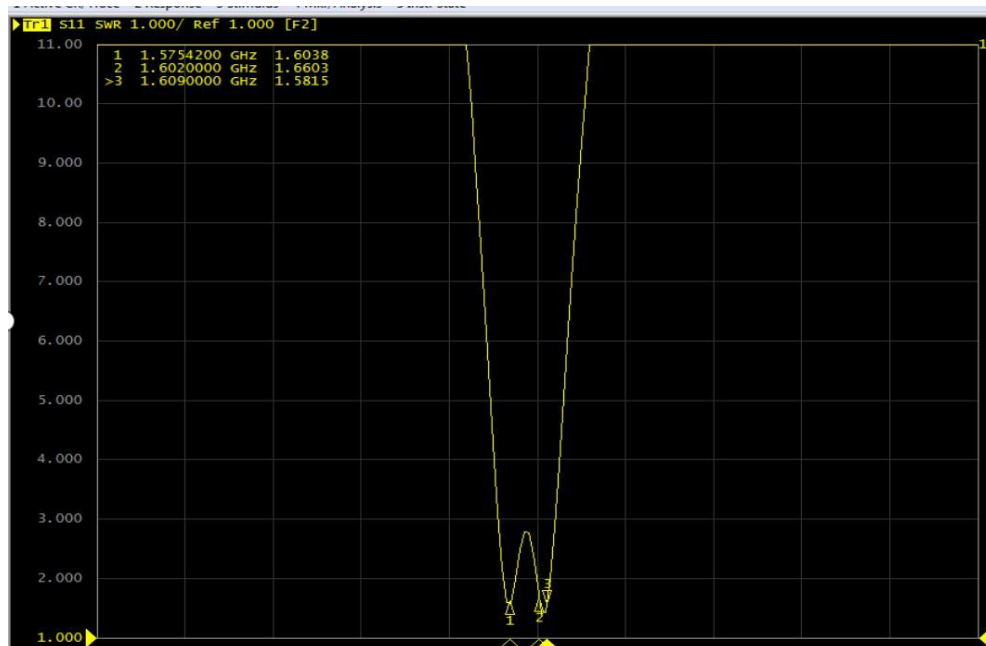
Frequency Range (MHz)	DC Voltage (V)	Current consumption (mA)	Gain (dB)	VSWR	Noise Figure
1559-1610MHz	1.8 – 5V	10±1mA	28 ±3dB	<2.0:1	<2.0

Environmental

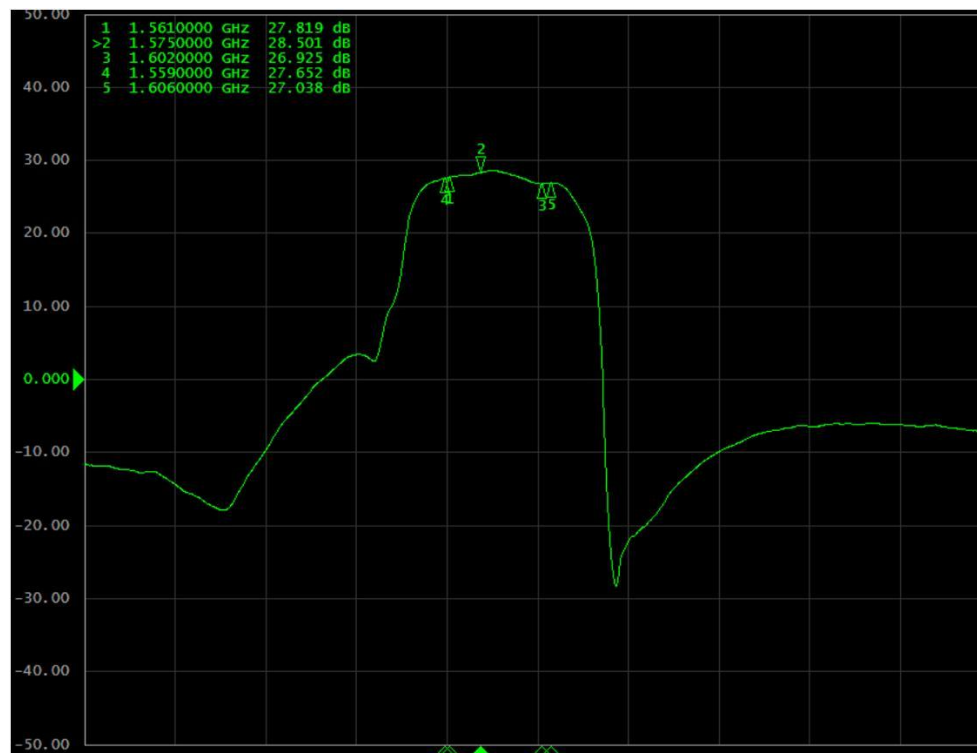
Parameter	
Operational Temperature	-40 to +85
Storage Temperature	-40 to +85
Relative Humidity (Storage)	65±20% RH
Moisture Sensitivity	1
RoHs and REACH compliant	Yes

RF Characteristics

Return loss / Smith Chart

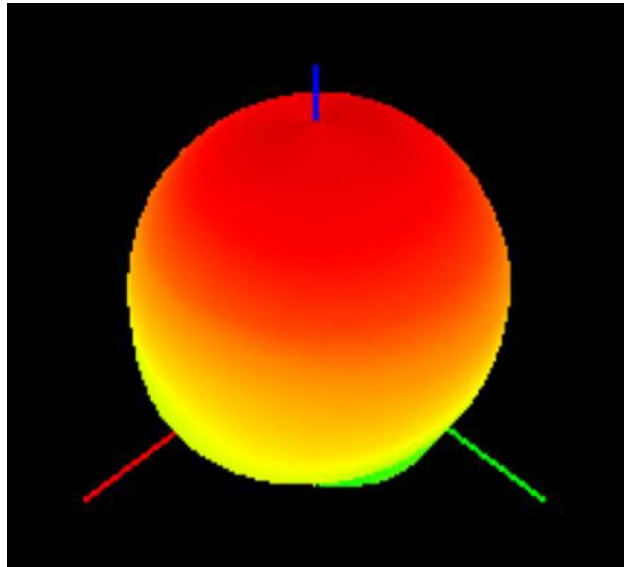
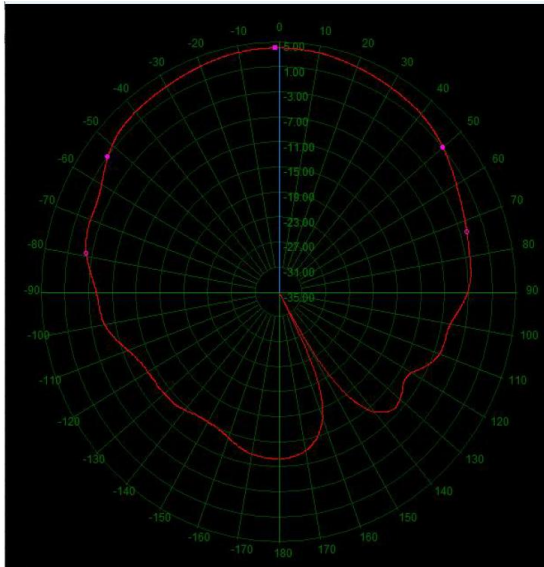


LNA Test Curve

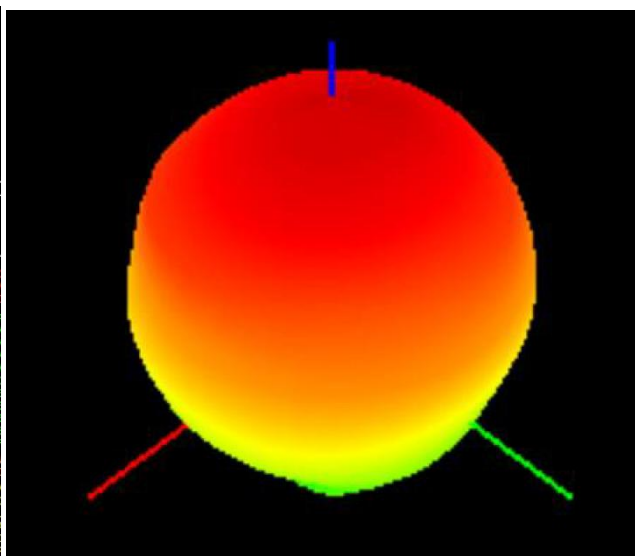
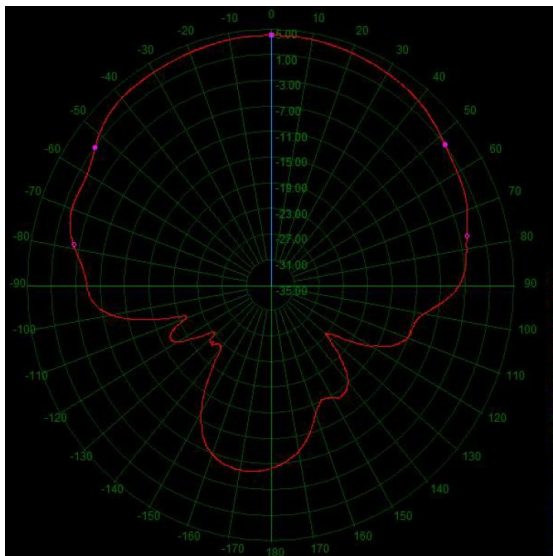


Radiated Performance

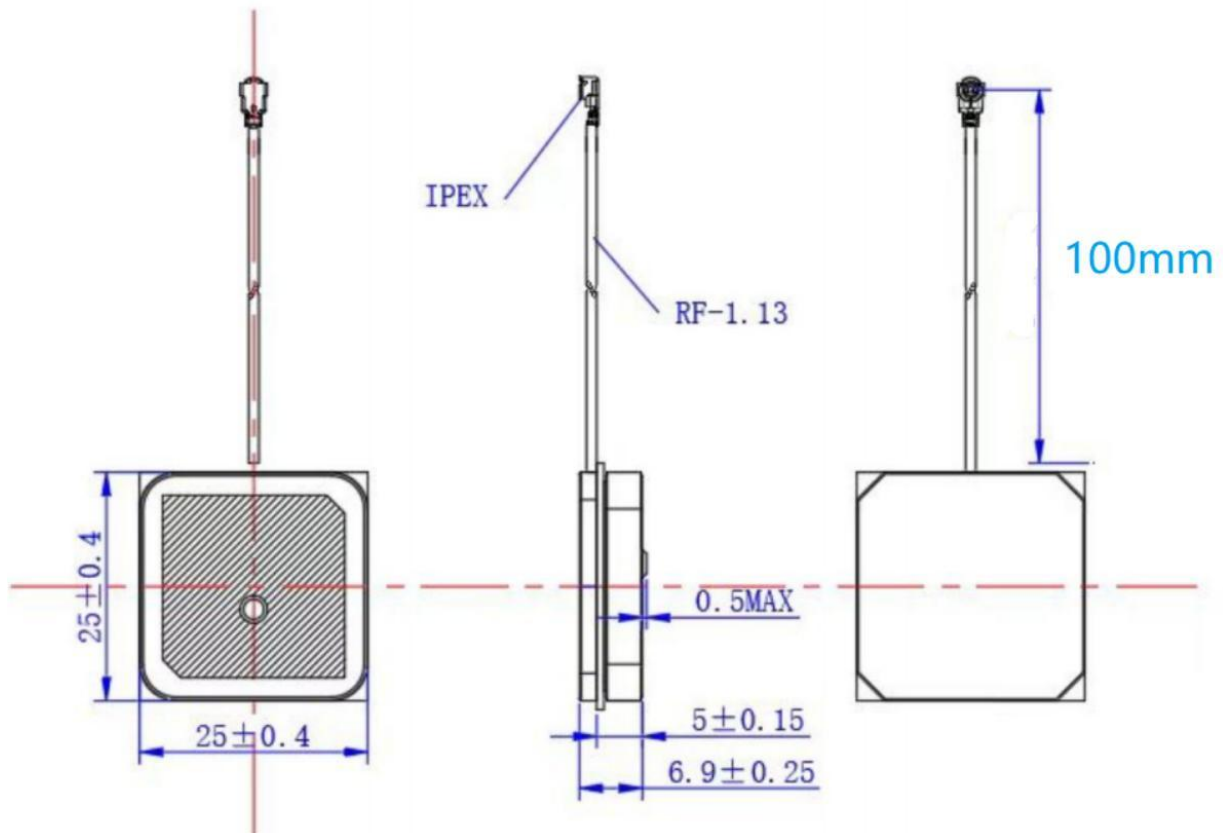
1575.42MHz



1602MHz



Mechanical Drawing



Packaging

Antennas packed in tray (50pcs)

5 trays are packed per bag.

4 vacuum bags per carton

Total 1000pcs per carton (390 x 370 x 180mmm)



Material Regulation

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

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