



## DATASHEET

SURTUR SZA-C-3G25 | Active GPS Antenna | GNSS

### Features:

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

*>3.5dBic Peak Gain, >50% Efficiency*

*Dimensions: 25.0 x 25.0 x 8 mm*

*Cable Length: 50mm*

*Connector: MHF1 (U.FL Compatible)*

*RoHs compliant*

## Contents

Introduction .....	2
Mechanical Specifications.....	3
Electrical / RF Specifications .....	3
LNA.....	3
Environmental .....	3
RF Characteristics .....	4
Return loss / Smith Chart .....	4
LNA Test Curve .....	4
Mechanical Drawing.....	5
Packaging.....	6
Material Regulation .....	6

*Synzen Precision Technology Ltd makes no warranties based on the accuracy or completeness of the contents of this document and reserves the right to make changes to specifications and product descriptions at any time without notice. Synzen reserves all rights to this document and the information contained herein. Reproduction use or disclosure to third parties without express permission is strictly prohibited.*



## Introduction

SURTUR, 25mm internal GPS/GLONASS/GALILEO/BeiDou active patch antenna with a robust LNA gain of 18dB.

Key Features:

- High LNA Gain: 18dB
- Comprehensive GNSS Support: GPS/GLONASS/GALILEO/BeiDou
- Excellent Out-of-Band Rejection
- Ideal for Transmitter-Heavy Environments

Typical Applications:

- Wearables
- Connected Health
- Transportation

The Synzen SURTUR (SZA-N-3G25) 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 SURTUR maintains an impressively low noise figure of  $\leq 2.0\text{dB}$ , significantly minimizing signal degradation that is typical of losses in transmission lines.



## Mechanical Specifications

Parameter	
Part Number	SZA-N-3G25
Name	SURTUR
Dimensions (mm)	25.0 x 25.0 x 8
Weight	<15g
Antenna Type	Active Ceramic Patch + Cable
Cable Length (mm)*	50.0, 0.81 $\emptyset$
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 $\pm$ 1.023 /1602.56 $\pm$ 4.0	>50	3.5	<2.0:1	50 $\Omega$

## LNA

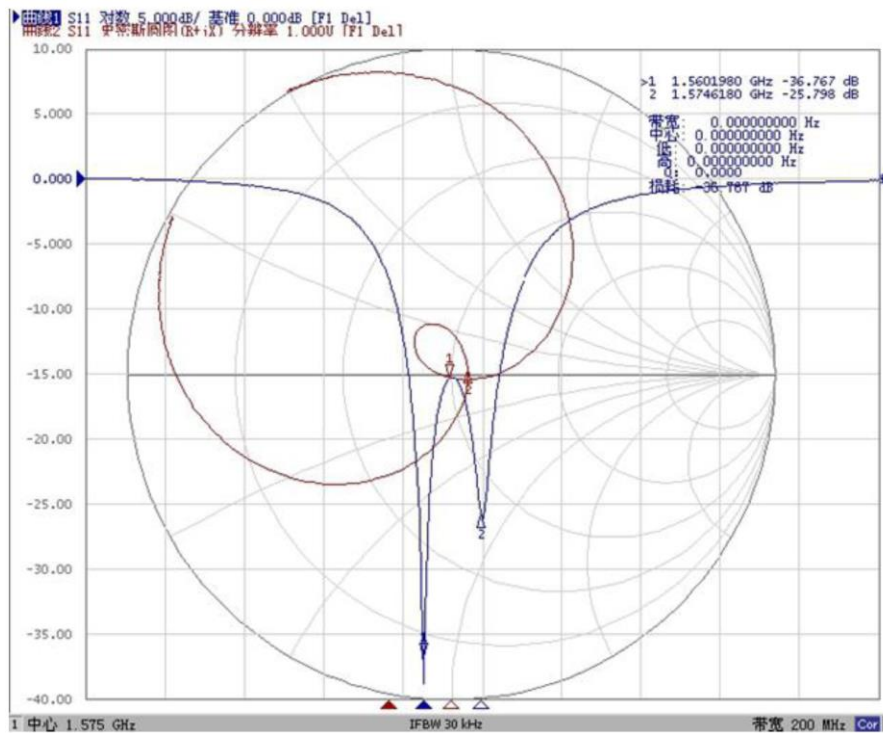
Frequency Range (MHz)	DC Voltage (V)	Current consumption (mA)	Gain (dB)	VSWR	Noise Figure
1575.42 $\pm$ 1.023 /1602.56 $\pm$ 4.0	3.0 $\pm$ 0.3V	5.0 $\pm$ 2	18 $\pm$ 3dB	<2.0:1	50 $\Omega$

## Environmental

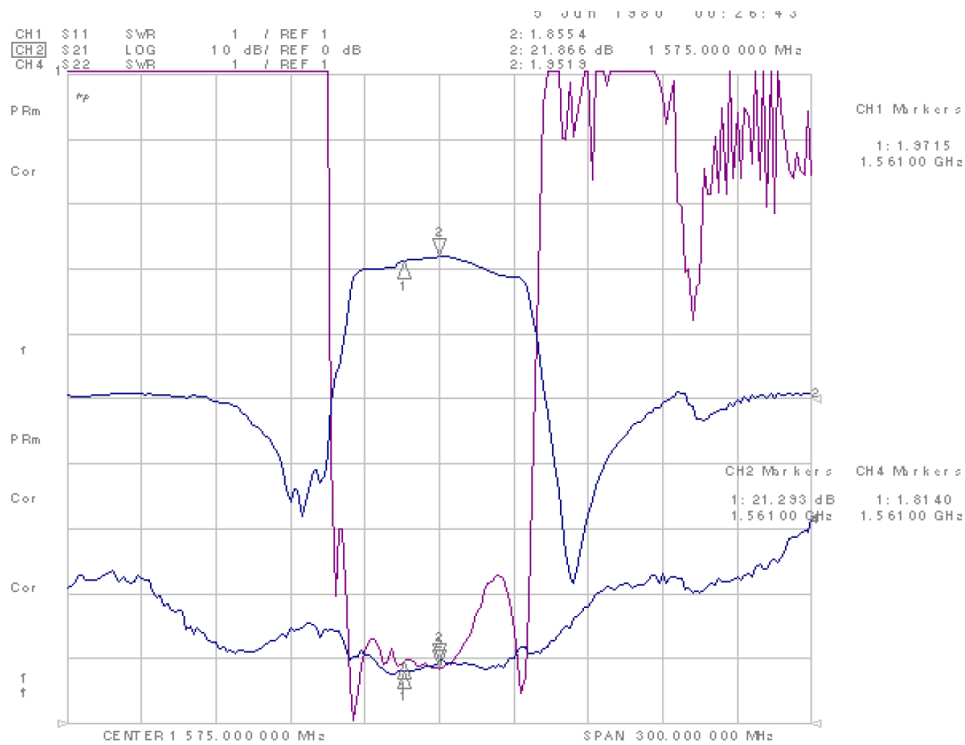
Parameter	
Operational Temperature	-40 to +85
Storage Temperature	-40 to +85
Relative Humidity (Storage)	65 $\pm$ 20% RH
Moisture Sensitivity	1
RoHs and REACH compliant	Yes

# RF Characteristics

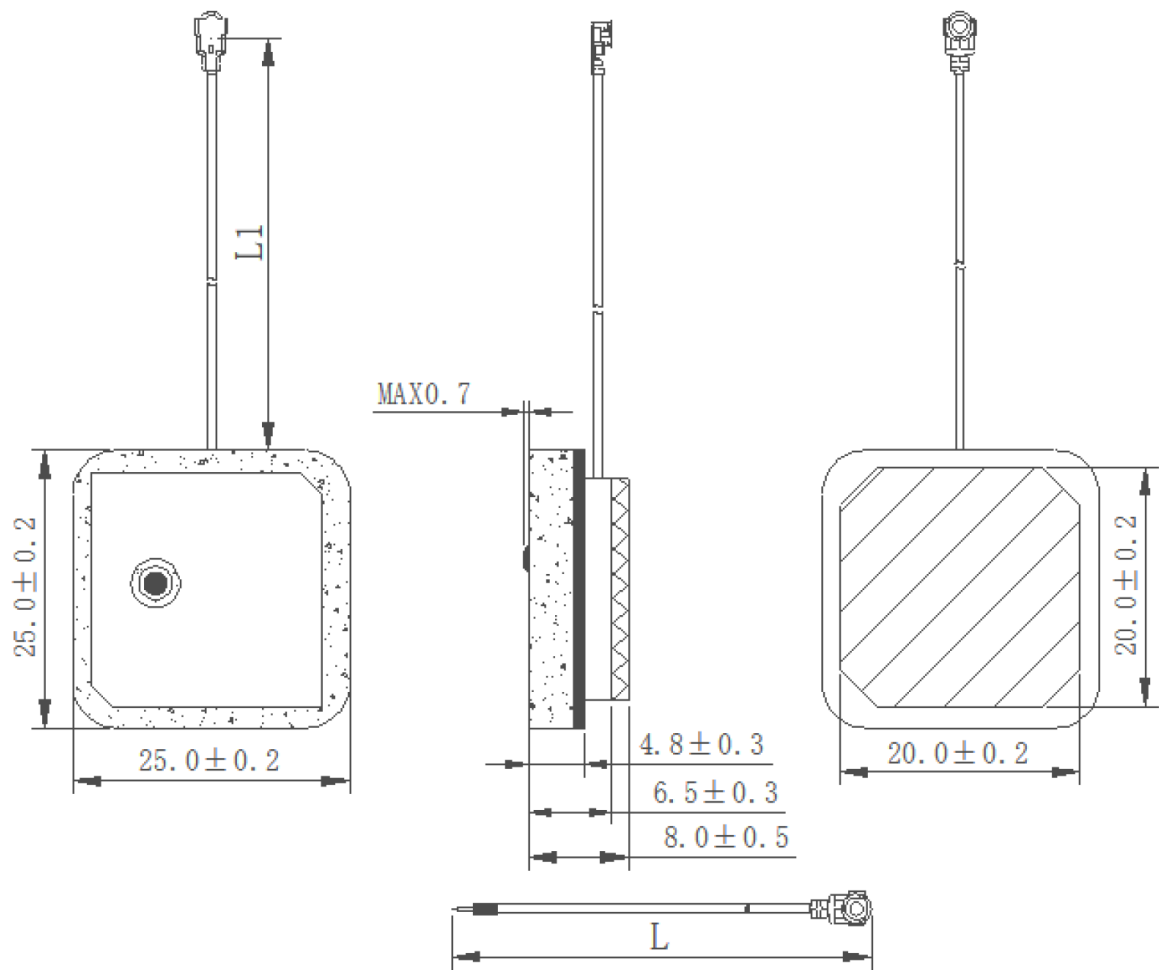
## Return loss / Smith Chart



## LNA Test Curve



## Mechanical Drawing



$$L=50 \pm 5\text{mm}, L1=40 \pm 3\text{mm}$$

## Packaging

Antennas packed in tray (50pcs)

5 trays are packed per bag.

4 vacuum bags per carton

Total 1000pcs per carton (345 x 210 x 275mmm)



## Material Regulation

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

SYNZEN 

[www.synzen.com.tw](http://www.synzen.com.tw)

