

— PASSIVE GNSS

ARCADYd

GNSS 25 mm Ceramic Through Hole Patch Antenna

SZC-N-3G31

FREQUENCY

1575.42 / 1602 MHz

PEAK GAIN

Up to 4.80 dBi

MOUNTING

Through hole

SIZE

25 × 25 × 4 mm

GPS / GALILEO 1575.42 ±3 MHz

Covers GPS L1, Galileo E1

GLONASS 1602 ±5 MHz

Covers GLONASS G1

— Key Features

- GPS / Galileo / GLONASS constellations
- Through hole mount
- High gain
- Dimensions: 25.0 × 25.0 × 4.0 mm

1 Introduction

An embedded ceramic patch solution, 25 × 25 × 4 mm. This antenna is tuned best placed at the center of a 70 × 70 mm GND plane and has a peak gain of 5 dBi at 1575.42 MHz.

— Features

- ◆ GPS / Galileo / GLONASS constellations
- ◆ Through hole mount
- ◆ High gain
- ◆ Dimensions: 25.0 × 25.0 × 4.0 mm

— Applications

- ◆ Asset Tracking
- ◆ Precision agriculture
- ◆ Automotive
- ◆ Fleet management
- ◆ Emergency response

2 Mechanical Specifications

Part Number	SZC-N-3G31
Name	ARCADYd
Dimensions (mm)	25.0 × 25.0 × 4.0
Weight	<8 g
Antenna Type	Through Hole Patch
Material	Ceramic

3 Electrical / RF Specifications

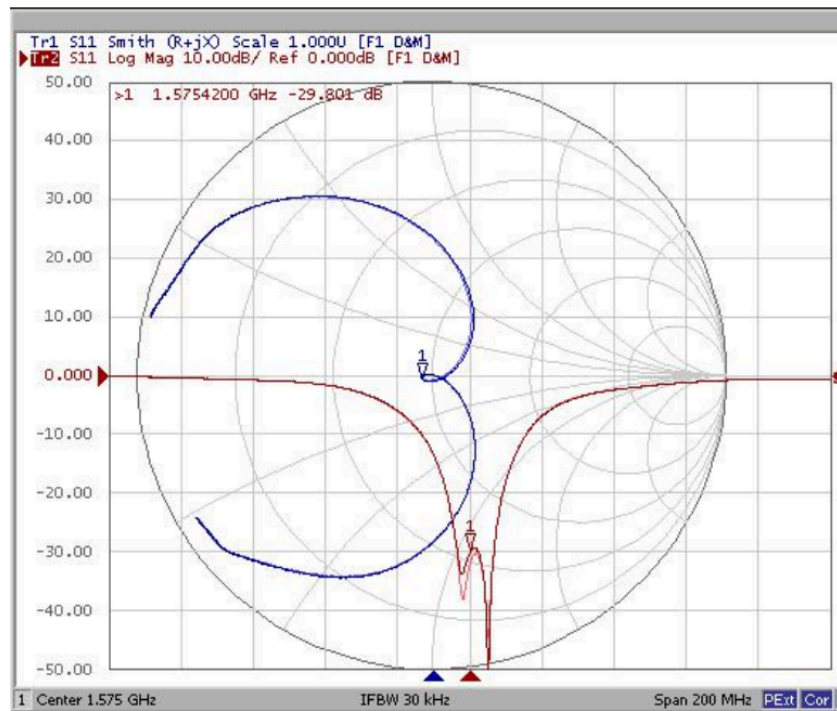
Band	Frequency Range (MHz)	Avg Efficiency (%)	Peak Gain (dBi)	Impedance	Polarization
GPS / Galileo	1575.42 ±3	>75	4.80	50 Ω	Linear
GLONASS	1602 ±5	>70	4.35		

*All performance stated is measured on the SZDV-C-3G31 evaluation kit.

4 Environmental

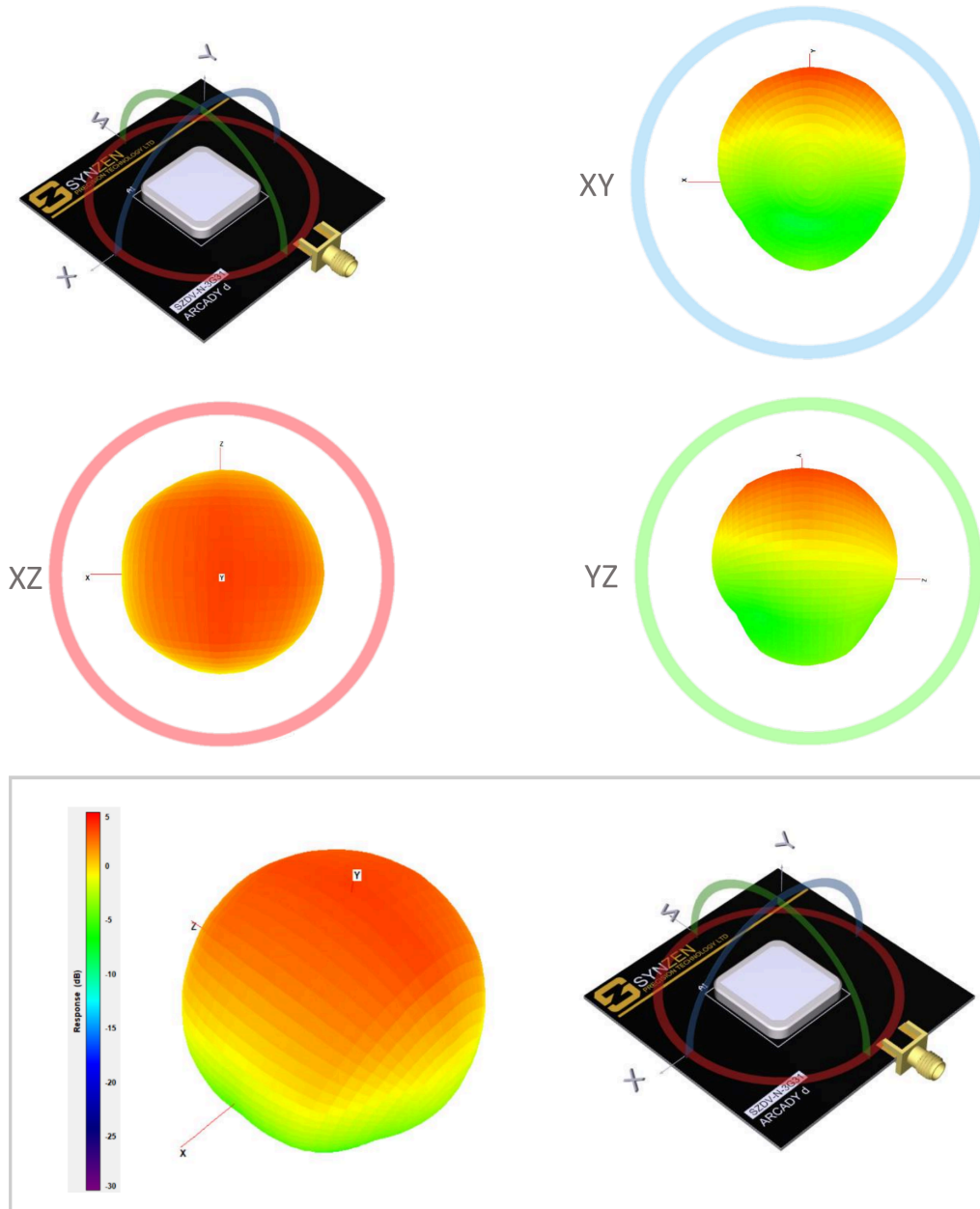
Operational Temperature	-40 to +85°C
Storage Temperature	-10 to +40°C
Relative Humidity	≤75%
Moisture Sensitivity Level (MSL)	NA
RoHS and REACH compliant	Yes

5 S11 / Smith Chart

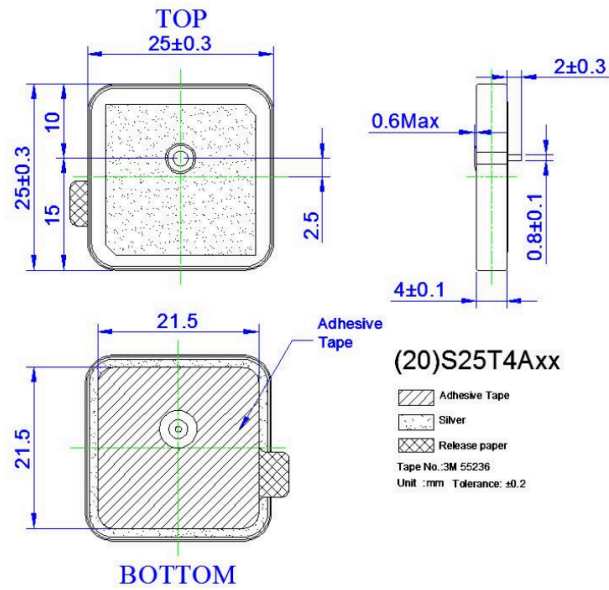


6 3D Radiation Pattern at 1575 MHz

MEASURED ON SYNZEN EVK (SZDV-C-3G31)



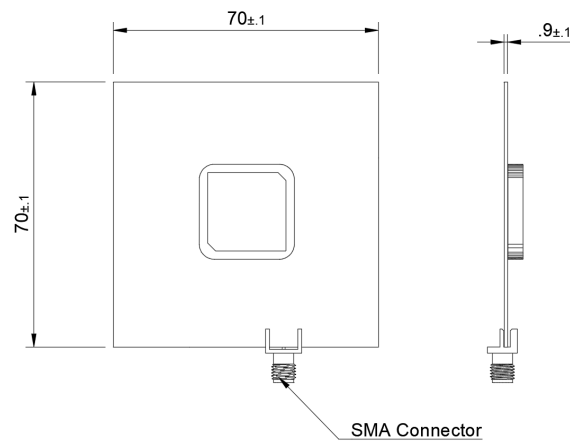
7 Antenna Mechanical Drawing



All dimensions in mm

8 SZDV-C-3G31 Evaluation Kit

The SZDV-C-3G31 evaluation kit is a PCBA with the antenna (SZC-N-3G31) fitted. Connection to the antenna is made using the fitted female SMA connector.



9 Packaging

Plastic Tray	Inner Box	Outside Box
40 pcs / tray	200 pcs / box	800 pcs / box

10 Material Specification

No.	Description	Material	Specification
5.1	Antenna Substrate	Microwave dielectric	20 ±2
5.2	Pin	Copper and silver plated	4 mm connector
5.3	Electrode	Ag plated	
5.4	Adhesive Type	3M 55236	S21.5 × 21.5
5.5	Sn	Sn:Ag:Cu	96.5:3:0.5

11 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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