

— PASSIVE GNSS

ARIETISb

GNSS 15 mm SMD Ceramic Patch Antenna

SZC-N-0G07

FREQUENCY

1575.42 / 1602 MHz

PEAK GAIN

Up to 2.5 dBi

POLARIZATION

RHCP

SIZE

15 × 15 × 4 mm

GPS / GALILEO 1575.42 ±3 MHz

Covers GPS L1, Galileo E1

GLONASS 1602 ±5 MHz

Covers GLONASS G1

— Key Features

- For GPS / GLONASS / Galileo constellations
- SMD component supplied in trays
- High performance

1 Introduction

An embedded SMD solution, a 15 × 15 mm ceramic patch. This antenna is tuned best placed at the center of a 50 × 50 mm GND plane and has a peak gain of 2.5 dBi at 1575.42 MHz.

— Features

- ◆ For GPS / GLONASS / Galileo constellations
- ◆ SMD component supplied in trays
- ◆ High performance

— Applications

- | | |
|--------------------|--------------------|
| ◆ Asset Tracking | ◆ Drones |
| ◆ M2M Industrial | ◆ Telematics |
| ◆ Wearable devices | ◆ Fleet Management |

2 Mechanical Specifications

Part Number	SZC-N-0G07
Name	ARIETISb
Dimensions (mm)	15.0 × 15.0 × 4.0
Weight	<3.5 g
Antenna Type	Surface Mount Device

3 Electrical / RF Specifications

Parameter	1575.42 ±3 MHz	1602 ±5 MHz
Average Efficiency	>50%	>50%
Peak Gain	2.5 dBi	2.0 dBi
S11 (max)	<-10 dB	<-10 dB
VSWR (max)	2.35:1	2.90:1
Impedance	50 Ω	
Polarization	RHCP	

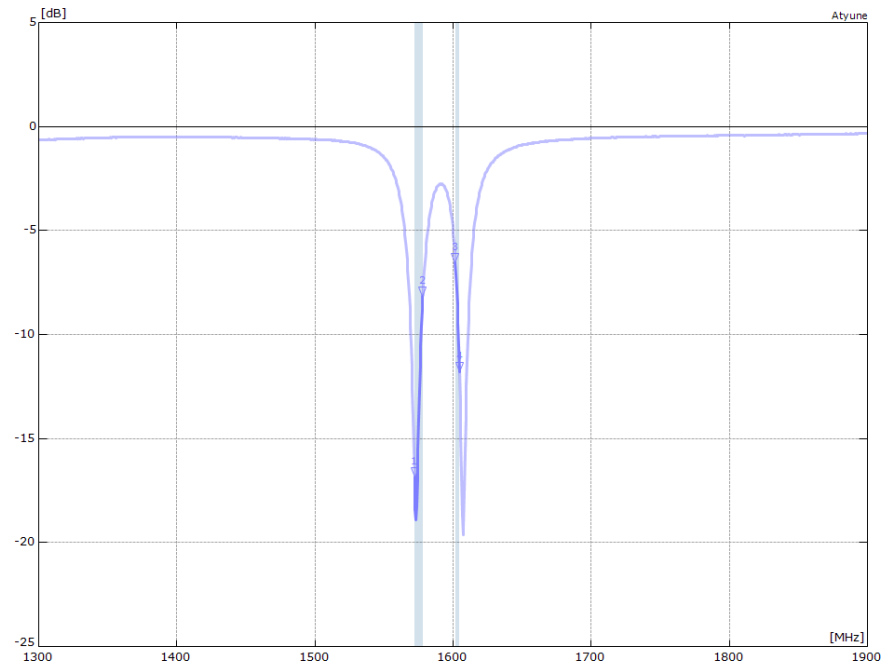
Measured on the SZDV-N-0G07 development kit.

4 Environmental

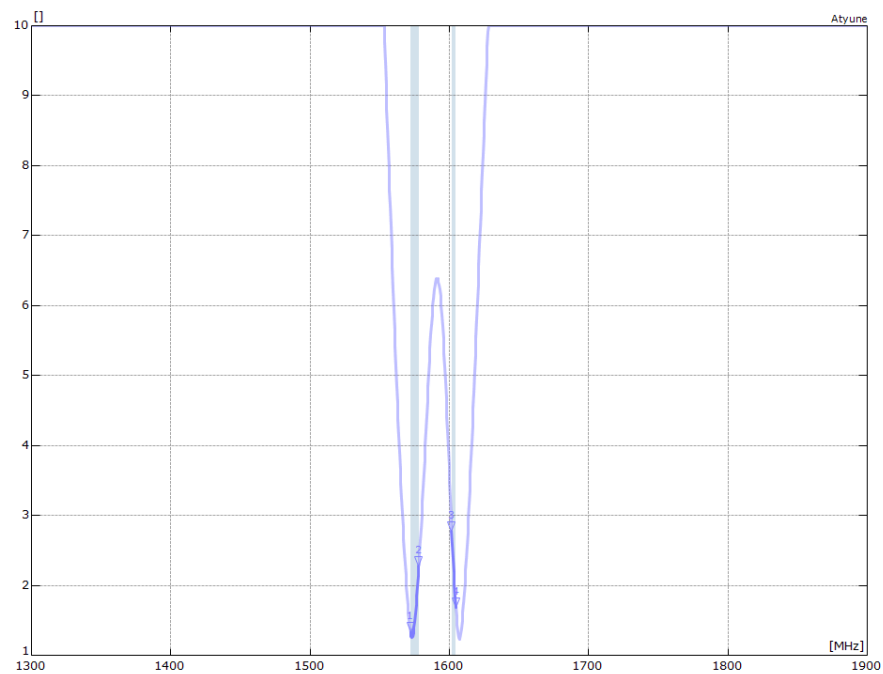
Operational Temperature	-40 to +85°C
Storage Temperature	-10 to +40°C
Relative Humidity	≤75%

5 RF Characteristics

S11 Parameter



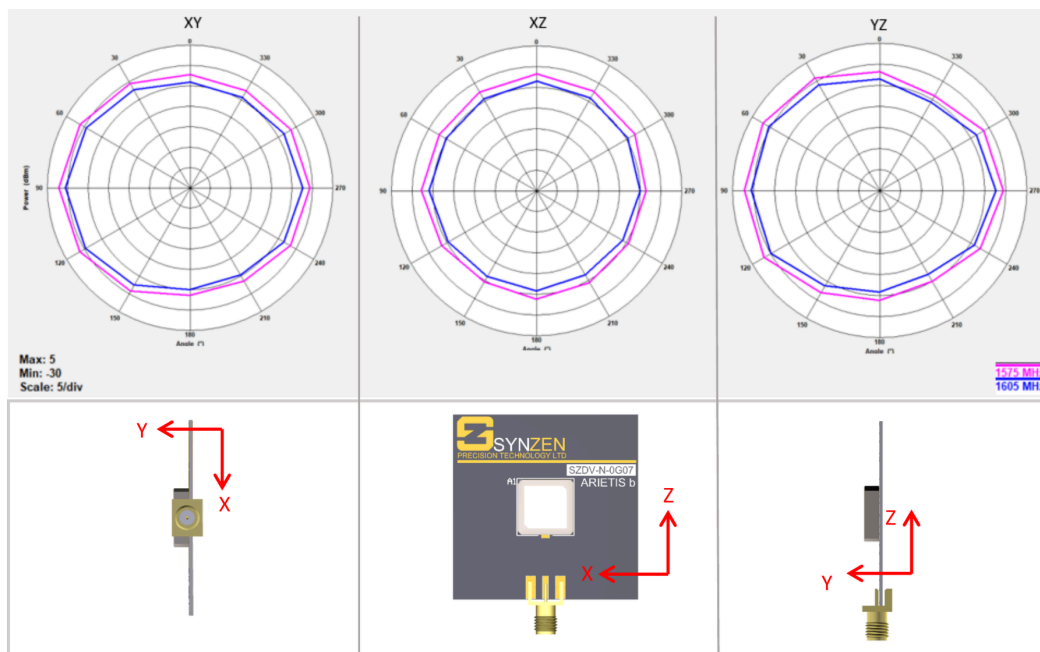
VSWR



6

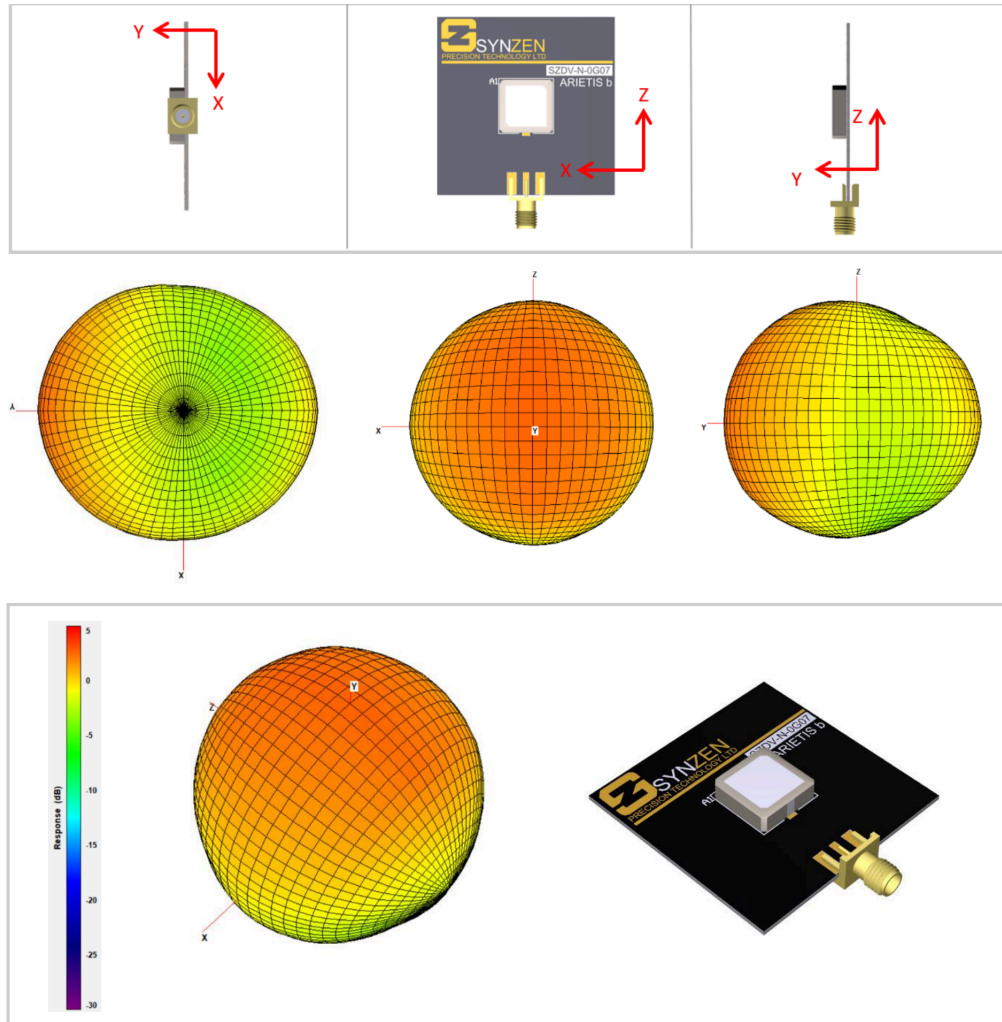
2D Polar Plot

MEASURED ON SYNZEN DVK (SZDV-N-0G07)

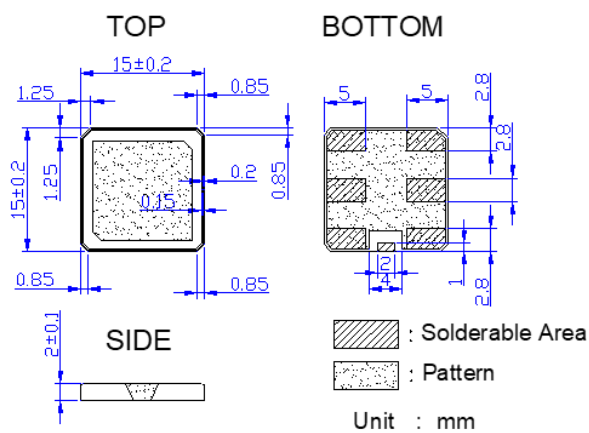


7 3D Radiation Pattern at 1575.42 MHz

MEASURED ON SYNZEN DVK (SZDV-N-0G07)

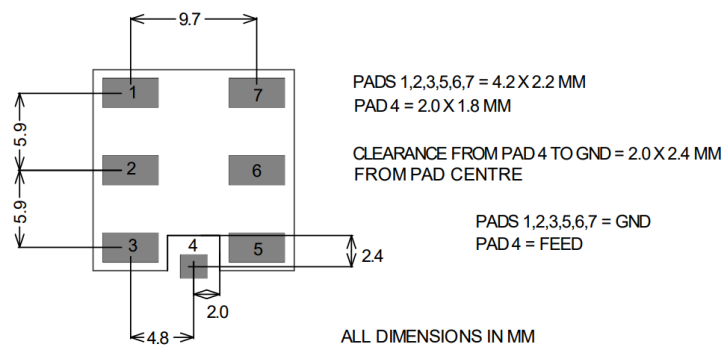


8 Mechanical Drawing



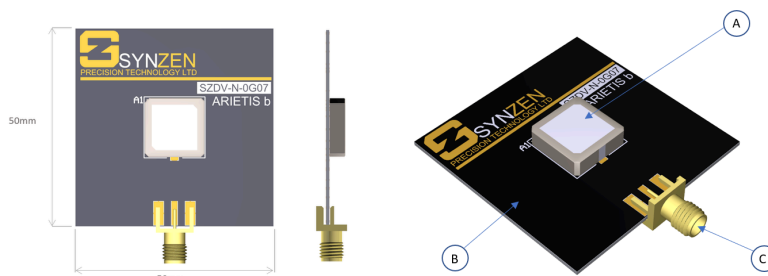
9 Host PCB Footprint

The host PCB requires the footprint shown below. PCB library files and DXF are available from our website www.synzen.com.tw/products.



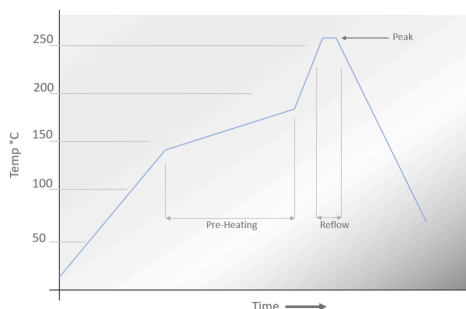
10 SZDV-N-0G07 Development Kit

The SZDV-N-0G07 development kit is a PCBA with the GNSS patch (SZC-N-0G07) fitted. Connection to the antenna is made using the fitted female SMA connector.



Item	Description
A	SZC-N-0G07 (ARIETISb)
B	Host PCB
C	SMA Connector

11 Reflow Profile



Stage	Temperature	Time
Pre-Heating	130 to 180°C	50 to 190 seconds
Reflow	>220°C	50 to 160 seconds
Peak Temperature	260°C	15 to 45 seconds

12 Packaging

Plastic Tray	Inner Box	Outside Box
70 pcs / tray	350 pcs / box	1400 pcs / box

13 Material Specification

Description	Material	Specification
Antenna Substrate	Microwave dielectric	65 ±3
Electrode	Ag plated	Ag thickness ≥8 μm
Ground Base	Ag plated	Ag thickness ≥6 μm

14 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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