

— NTN CERAMIC PATCH

PALOMAR

NTN L Band Ceramic Patch Antenna

SZC-N-5T01

FREQUENCY
1525 to 1660 MHz

PEAK GAIN
>5.00 dBi

POLARIZATION
RHCP

SIZE
35 × 35 × 6.0 mm

NTN L BAND **1525 to 1660 MHz**

Covers n255 DL, n256 DL, GNSS L1 / E1 / B1

— Key Features

- Compact 35 mm by 35 mm by 6 mm ceramic patch design
- Full NTN L band coverage from 1525 MHz to 1660 MHz
- RHCP operation for robust satellite acquisition and tracking
- Directional hemispherical radiation pattern
- Peak RHCP gain around 5 dBi in the mid band region
- ≤ 3.5 VSWR across the operating band
- Stable performance with a 70 mm by 70 mm ground plane
- Suited for passive architectures with clean impedance matching

1 Introduction

The NTN N255 is a solid L band patch crafted for devices that need unwavering contact with the sky. Its 35 mm by 35 mm ceramic body hides a steady and deliberate RHCP engine that holds its gain right through the 1525 to 1660 MHz spectrum. This antenna does not try to impress with drama. It simply performs, locking onto satellite signals with a stable directional pattern and a mid-band sweet spot that gives real link margin where it matters. Compact, dependable, and tuned for NTN systems, the N255 brings a quiet strength to any design that relies on satellite reach.

— Features

- ◆ Compact 35 mm by 35 mm by 6 mm ceramic patch design
- ◆ Full NTN L band coverage from 1525 MHz to 1660 MHz
- ◆ RHCP operation for robust satellite acquisition and tracking
- ◆ Directional hemispherical radiation pattern
- ◆ Peak RHCP gain around 5 dBi in the mid band region
- ◆ ≤ 3.5 VSWR across the operating band
- ◆ Stable performance with a 70 mm by 70 mm ground plane
- ◆ Suited for passive architectures with clean impedance matching

— Applications

- | | |
|---|--|
| ◆ NTN communication terminals | ◆ Emergency beacons and remote monitoring units |
| ◆ Satellite tracking and positioning systems | ◆ Maritime and aviation support devices |
| ◆ L band receivers and messaging devices | ◆ Narrowband satellite IoT platforms |
| ◆ Asset tracking hardware with satellite uplink support | ◆ Any compact product requiring reliable L band RHCP performance |

2 Mechanical Specifications

Part Number	SZC-N-5T01
Name	PALOMAR
Dimensions (mm)	35 × 35 × 6.0
Weight	<15 g
Antenna Type	Through Hole Ceramic Patch
Adhesive Backing	3M 468 MP

3 Electrical / RF Specifications

Band	Frequency Range (MHz)	Efficiency (%)	Peak Gain (dBi)	VSWR	Impedance
n255 DL, GNSS L1 / E1 / B1, n256 DL	1525 to 1660	81.0	>5.00	2.00:1	50 Ω

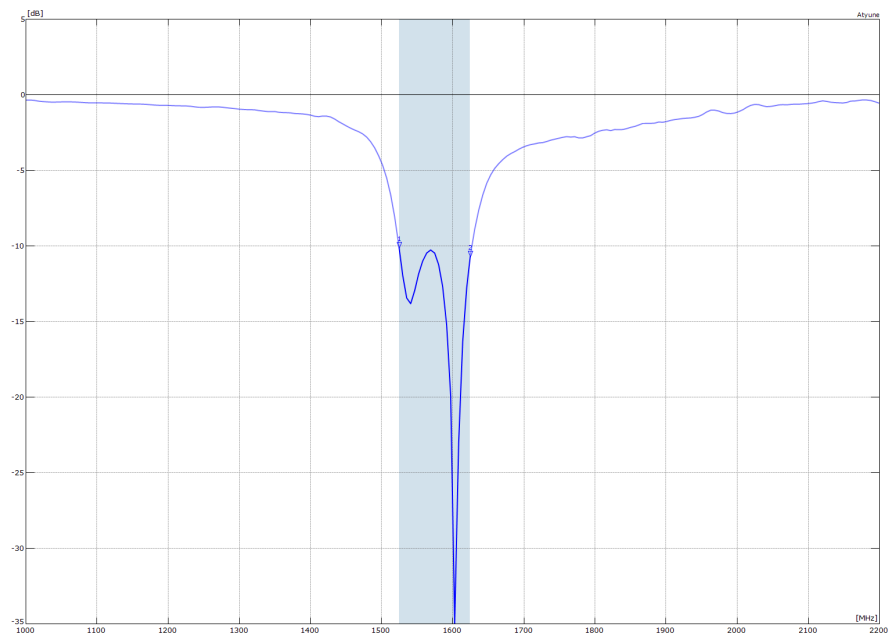
Note: All performance measured on a 70 × 70 mm ground plane.

4 Environmental

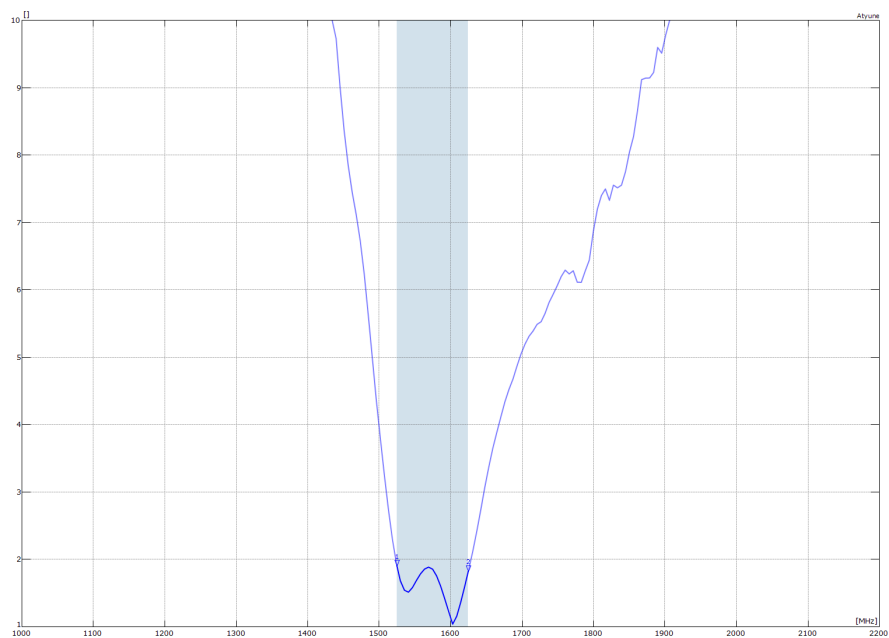
Operational Temperature	-40 to +85°C
Storage Temperature	-40 to +40°C
Relative Humidity (Storage)	65 ±20% RH
Moisture Sensitivity Level (MSL)	1
RoHS and REACH compliant	Yes

5 RF Characteristics

S11 Parameter



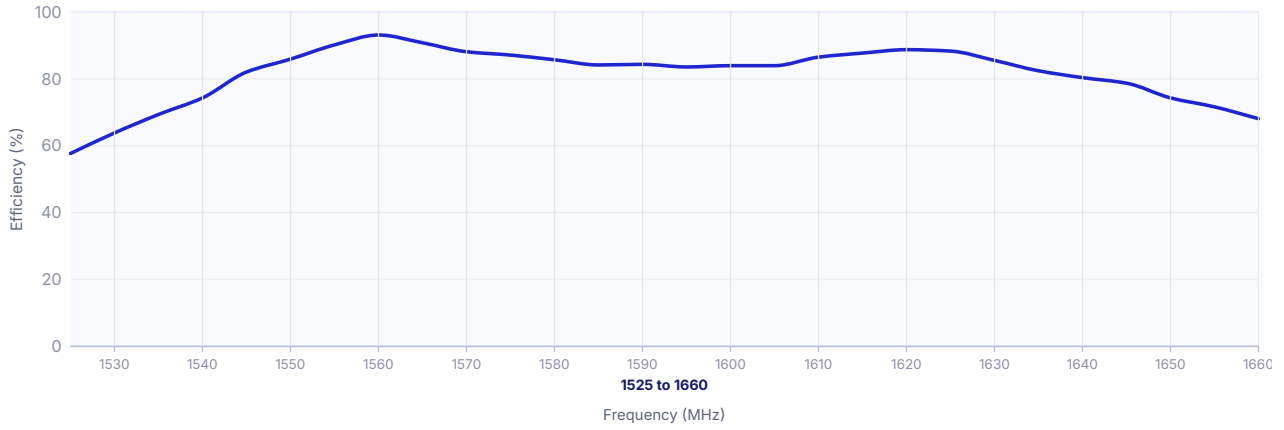
VSWR



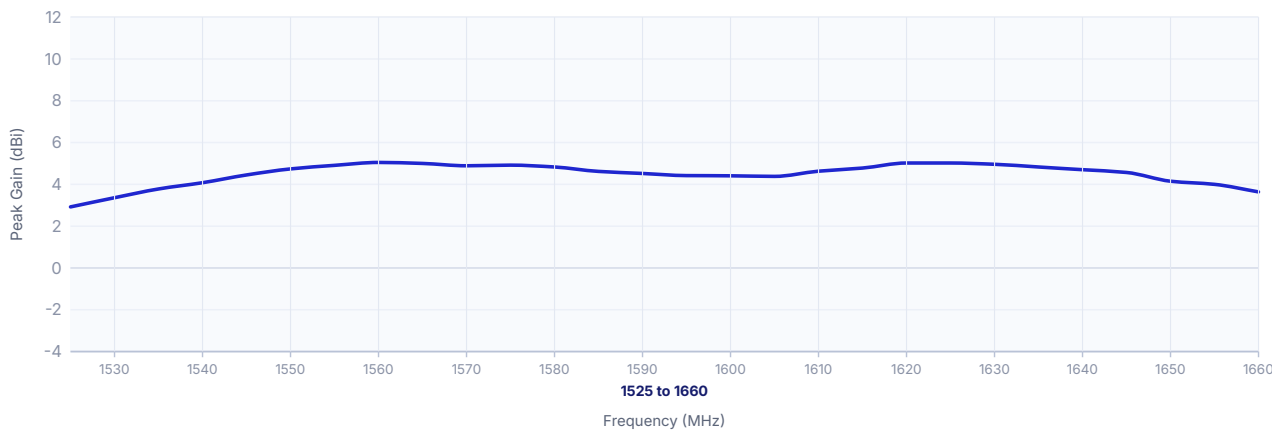
6

Antenna Performance

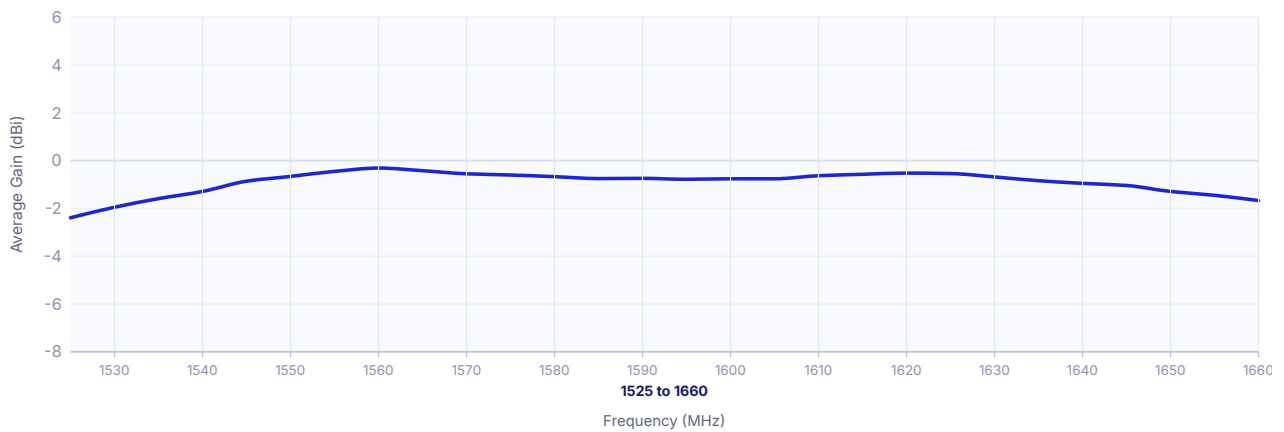
Efficiency



Peak Gain

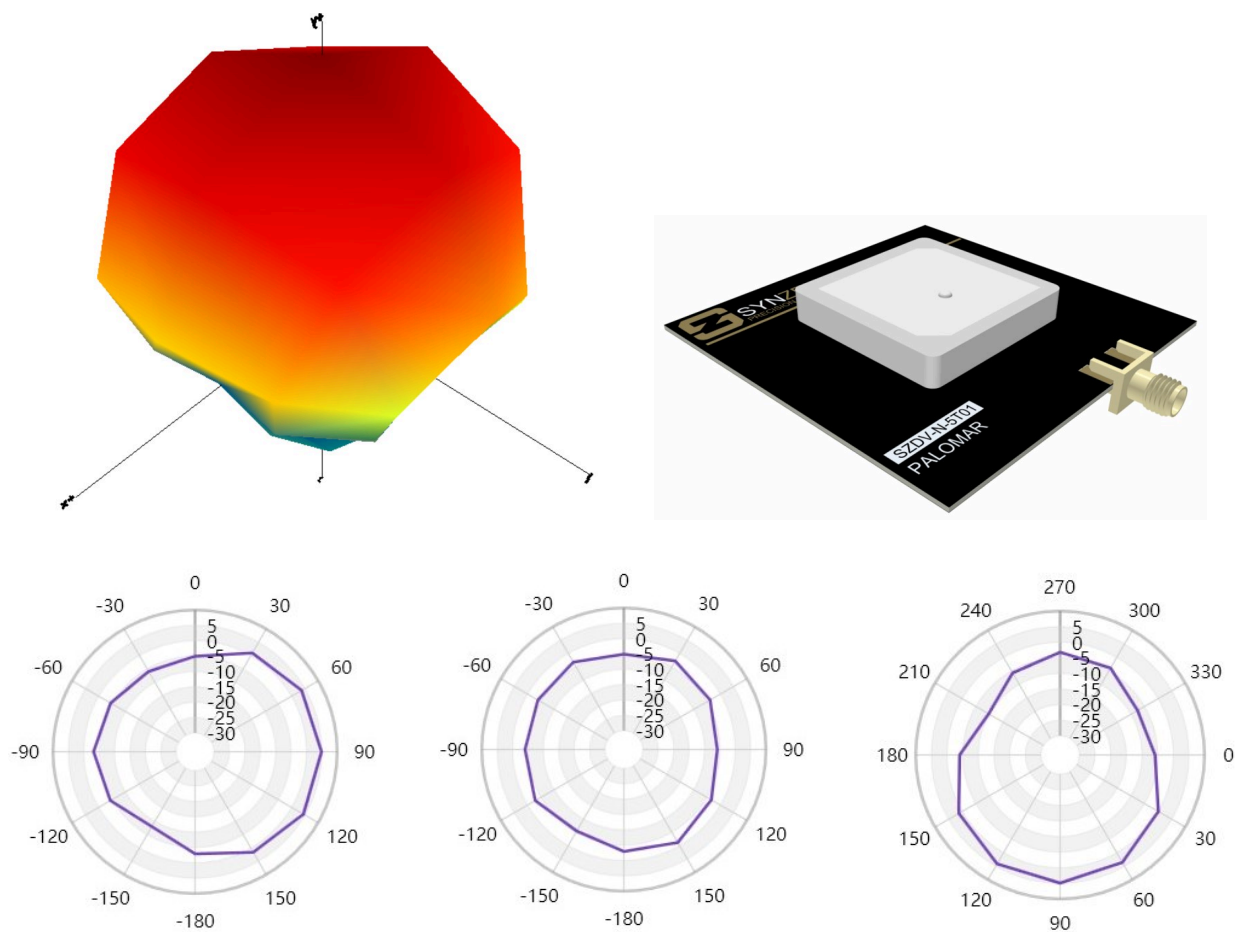


Average Gain



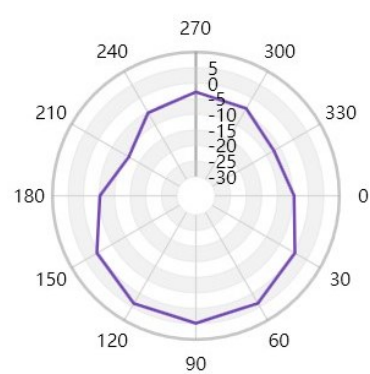
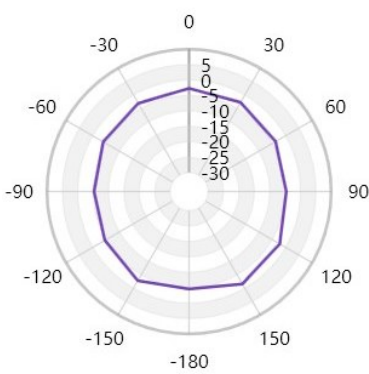
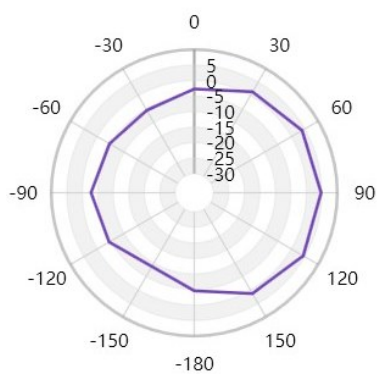
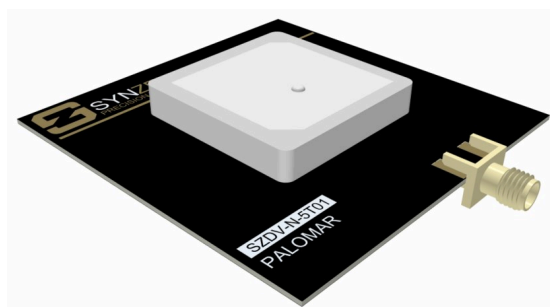
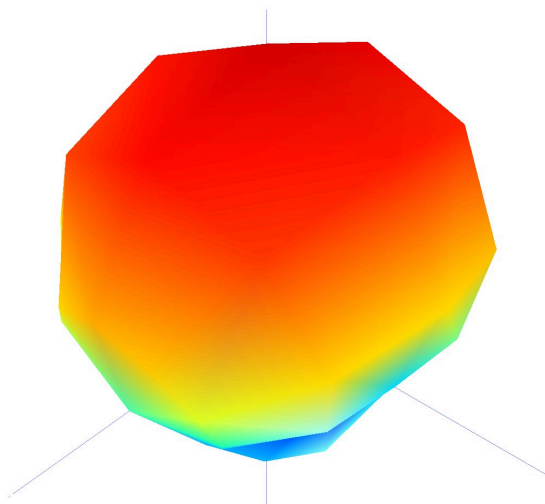
7 Radiation Patterns at 1575 MHz

MEASURED ON A 70 × 70 MM GROUND PLANE



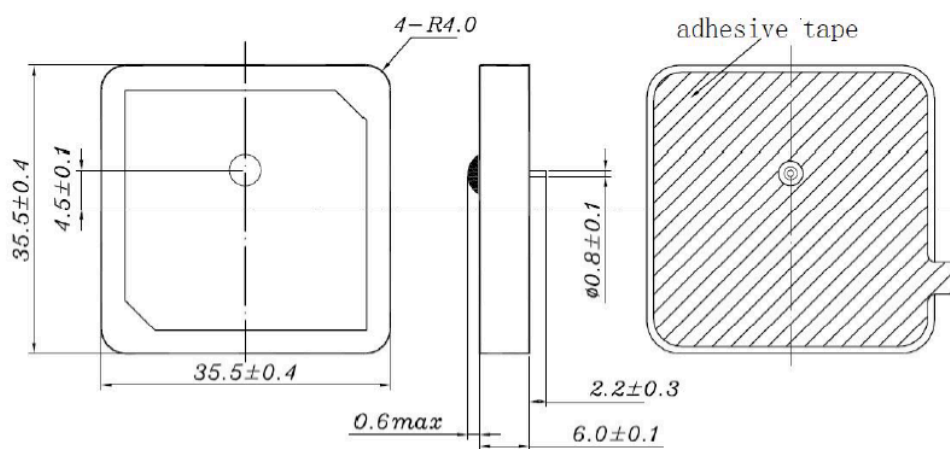
8 Radiation Patterns at 1618 MHz

MEASURED ON A 70 × 70 MM GROUND PLANE



Polar plots, left to right: XY, XZ, YZ planes

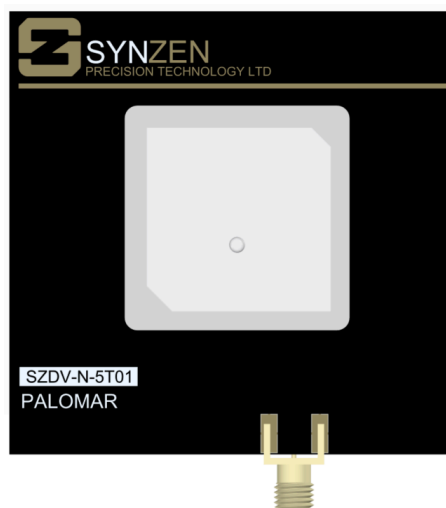
9 Mechanical Drawing



All dimensions in mm

10 Evaluation Kit

The SZDV-N-5T01 development kit is a PCBA with the antenna (SZC-N-5T01) fitted and optimized with a matching network. Connection to the antenna is made using the fitted female SMA connector.



11 Packaging

Packaging Type

Tray

12

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.

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.