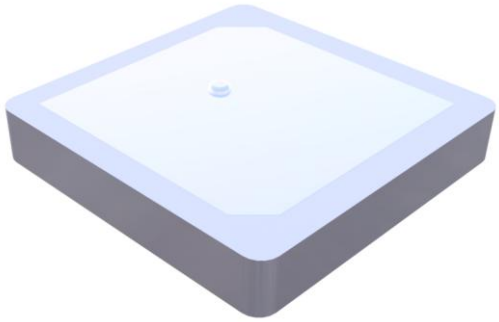
SYNZEN



DATASHEET

PALOMAR | SZC-N-5T01 | Ceramic Patch | NTN

Features:

NTN

NTN: 1525-1625MHz

>2.0/3.0dBi Peak Gain, >50/70% Efficiency

Dimensions: 25 x 25 x 2.07 mm

Contents

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.

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

Applications

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

Mechanical Specifications

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

Electrical / RF Specifications

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

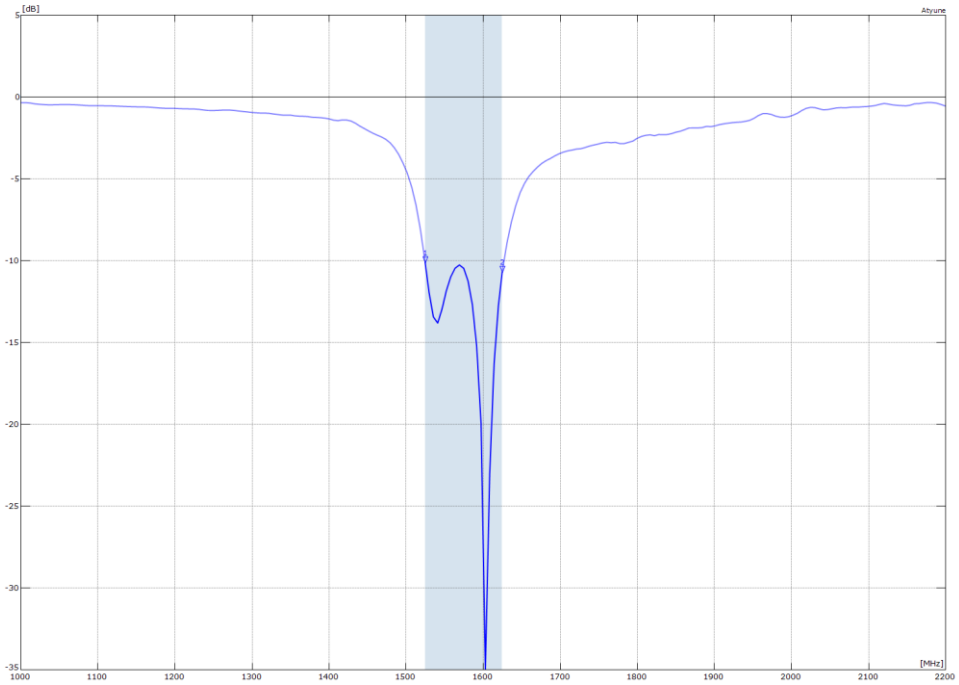
Note: All performance measured on 70 x 70 mm Ground plane

Environmental

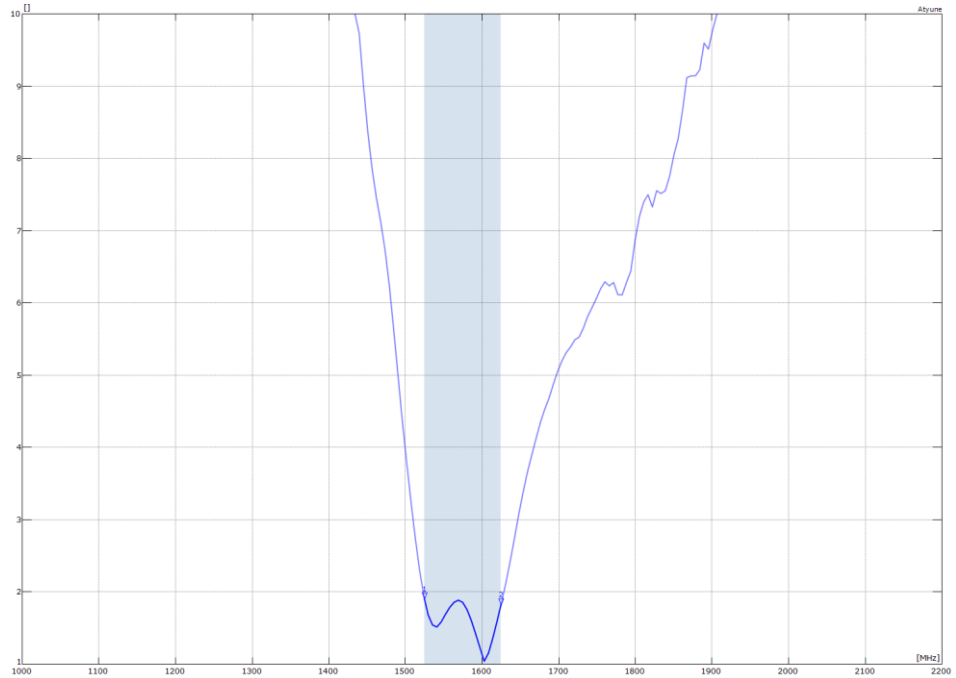
Parameter	
Operational Temperature	-40 to +85°C
Storage Temperature	-40 to +40°C
Relative Humidity (Storage)	65±20% RH
Moisture Sensitivity	1
RoHs and REACH compliant	Yes

RF Characteristics

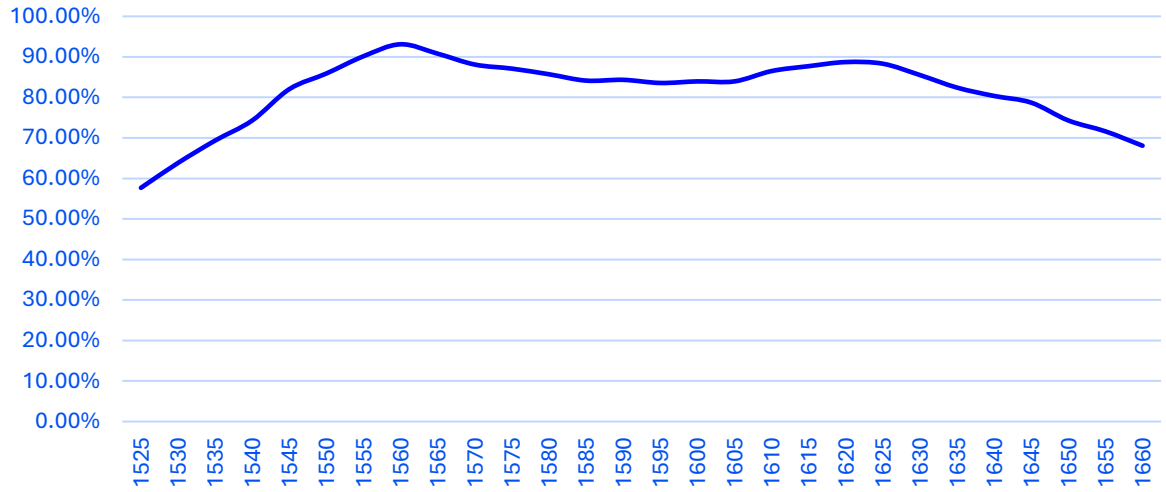
Return loss



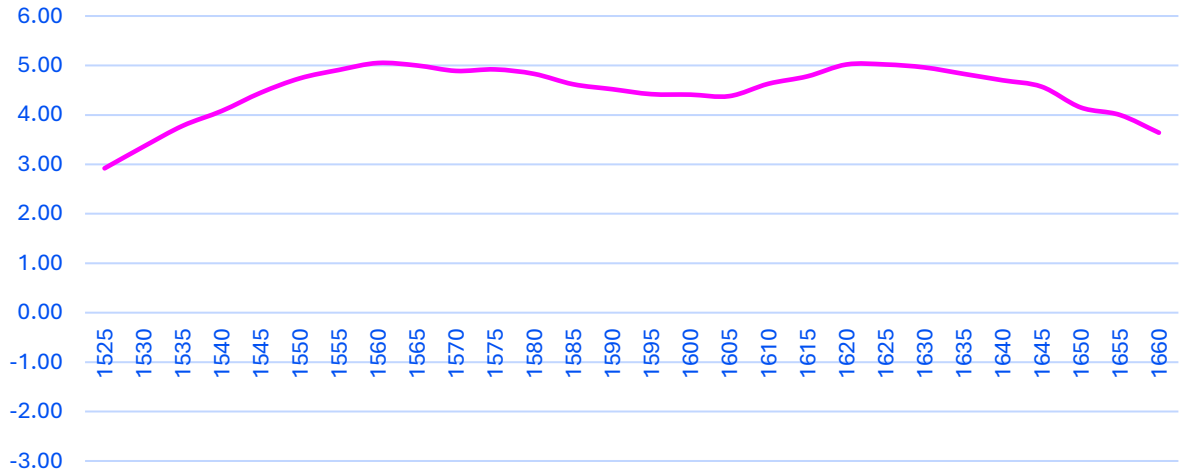
VSWR



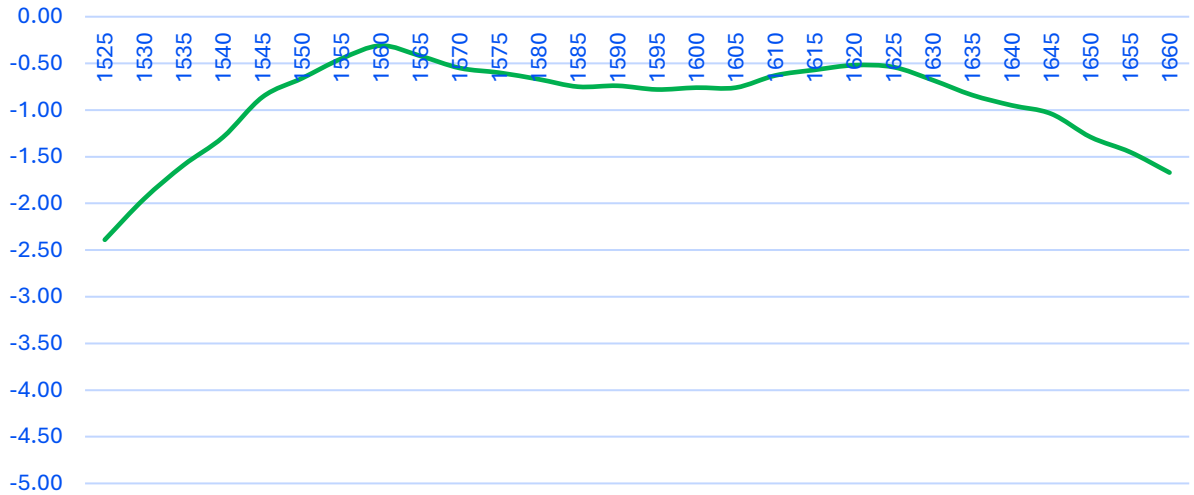
Efficiency



Peak Gain

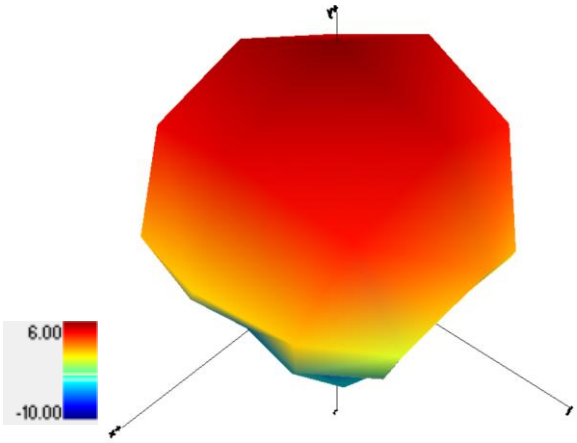


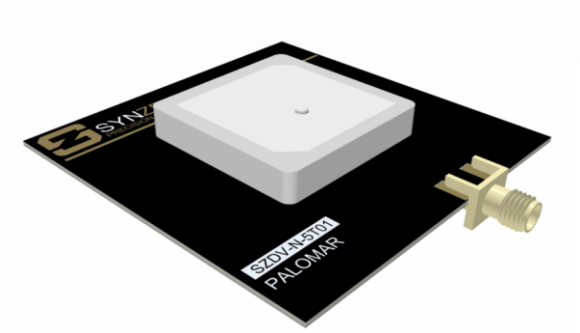
Average Gain



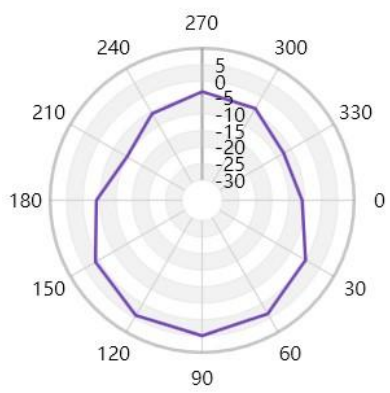
RF Radiation Patterns

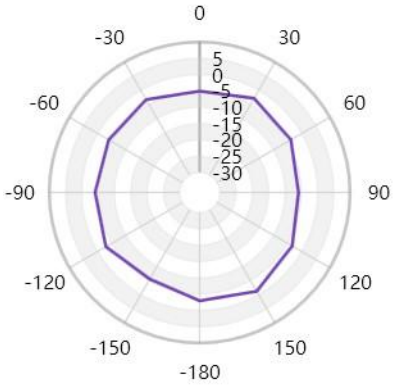
RF Radiation Patterns at 1575MHz

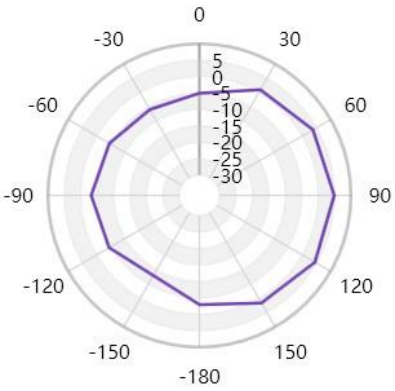




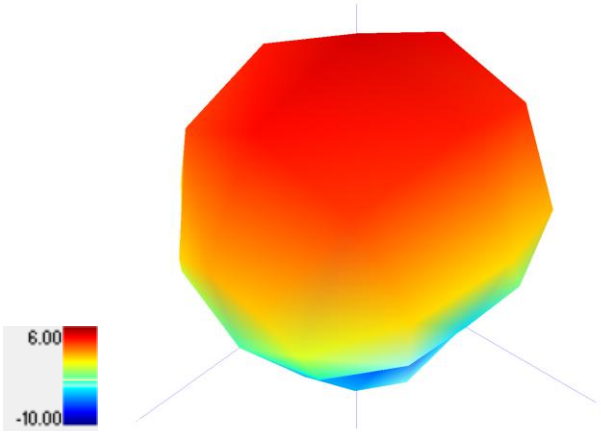
XY	XZ	YZ

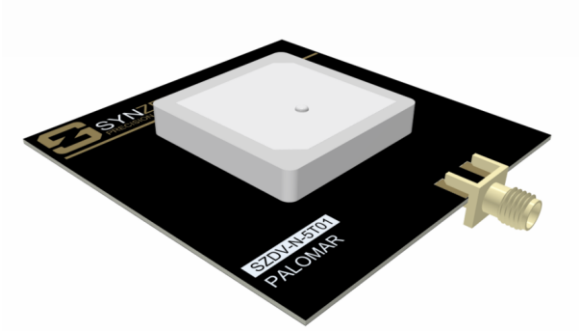




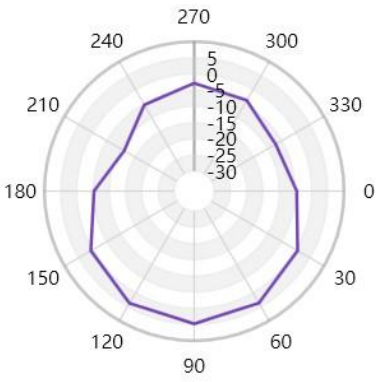


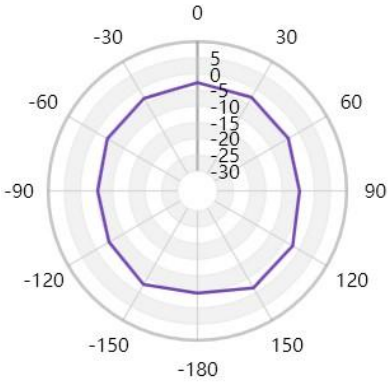
RF Radiation Patterns at 1618MHz

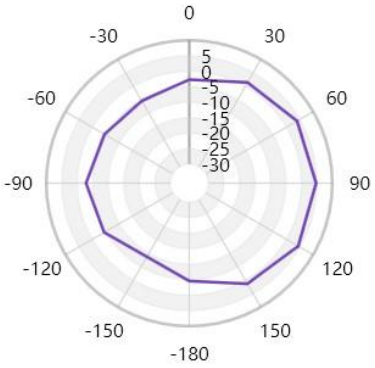




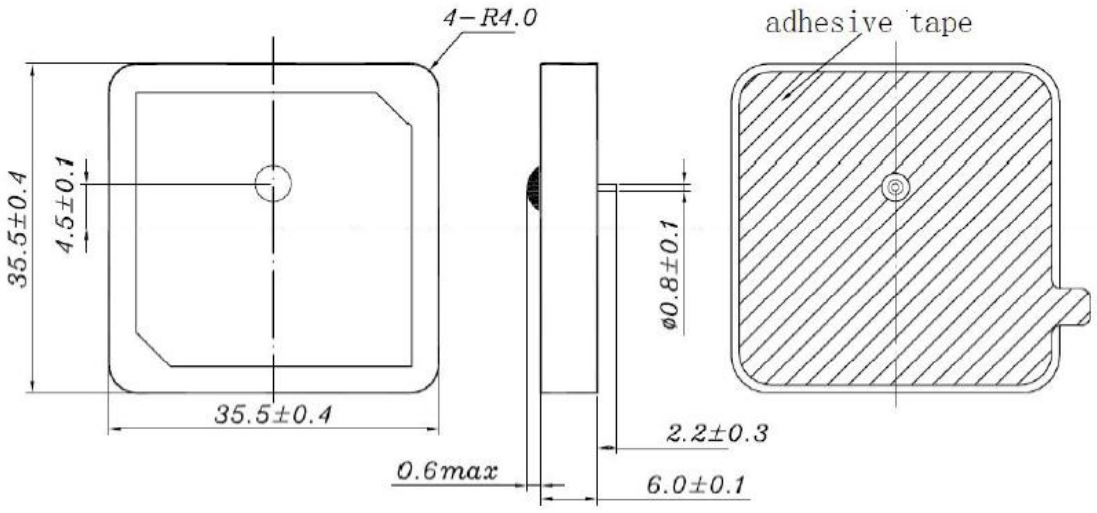
XY	XZ	YZ







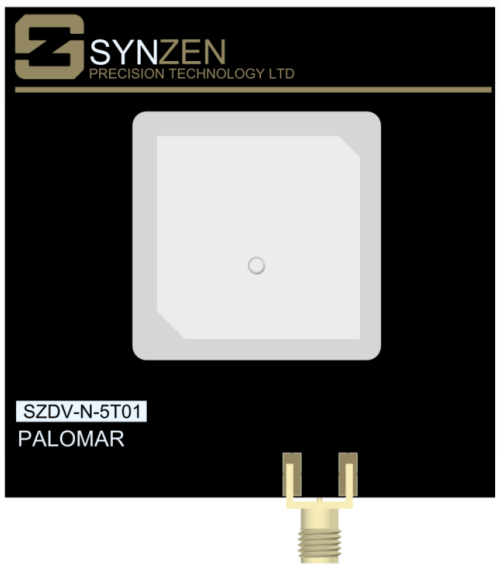
Mechanical Drawing



All dimensions in mm

Evaluation Kit

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



Packaging

Tray

Material Regulation

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