



SYNZEN

PRODUCT DATASHEET

REGULUS | SURFACE MOUNT CERAMIC PATCH | GPS/GALILEO

Part Number / Name

- SZC-N-2G20
- REGULUS

Description

- GPS Surface Mount Ceramic Patch

Features

- For GPS/GALILEO Applications
- Surface Mount
- High Gain 1.5dBi
- Low Profile
- Dimensions: 12.0 x 12.0 x 2.0 (mm)





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Introduction

Introducing REGULUS (SZC-N-2G20) GPC Ceramic Patch - Your Compact Solution for GPS and GALILEO Applications

REGULUS (SZC-N-2G20) GPC ceramic patch is your go-to solution for precise positioning and navigation in compact electronic devices. With a footprint of 12 x 12mm and a slim profile of just 2mm, this ceramic patch antenna offers exceptional performance for GPS L1 and GALILEO E1 signals. Designed for a multitude of applications, the REGULUS patch antenna provides reliable reception for compact telematics devices, vehicle tracking and fleet management systems, wearables, and navigation devices.

Tuned with precision on a 50 x 50mm ground plane, the REGULUS patch operates at a central frequency of 1575.42MHz, delivering a remarkable 1.50dBi gain. Its compact dimensions make it ideal for applications where space is a premium, ensuring that you get exceptional signal reception without compromising on form factor. Additionally, REGULUS (SZC-N-2G20) is mountable via SMT (Surface Mount Technology) processes, making it a cost-effective choice for high-volume production.

Typical Applications

- Drones
- Wearables
- Telematics
- Precision Agriculture
- Asset Tracking



General

Mechanical Specifications

Part Number	SZC-N-2G20
Name	REGULUS
Dimensions	12.0 x 12.0 x 2.0 (mm)
Weight	<4g
Antenna Type	SMD Patch
Material	Ceramic

Electrical / RF Specifications*

Band	Frequency Range (MHz)	Avg Efficiency (%)	Peak Gain (dBi)	Impedance	Polarization
GPS/GALILEO/L1	1575±3	>50	1.5	50Ω	RHCP

VSWR at CF	<1.5
Axial Ratio	≤3

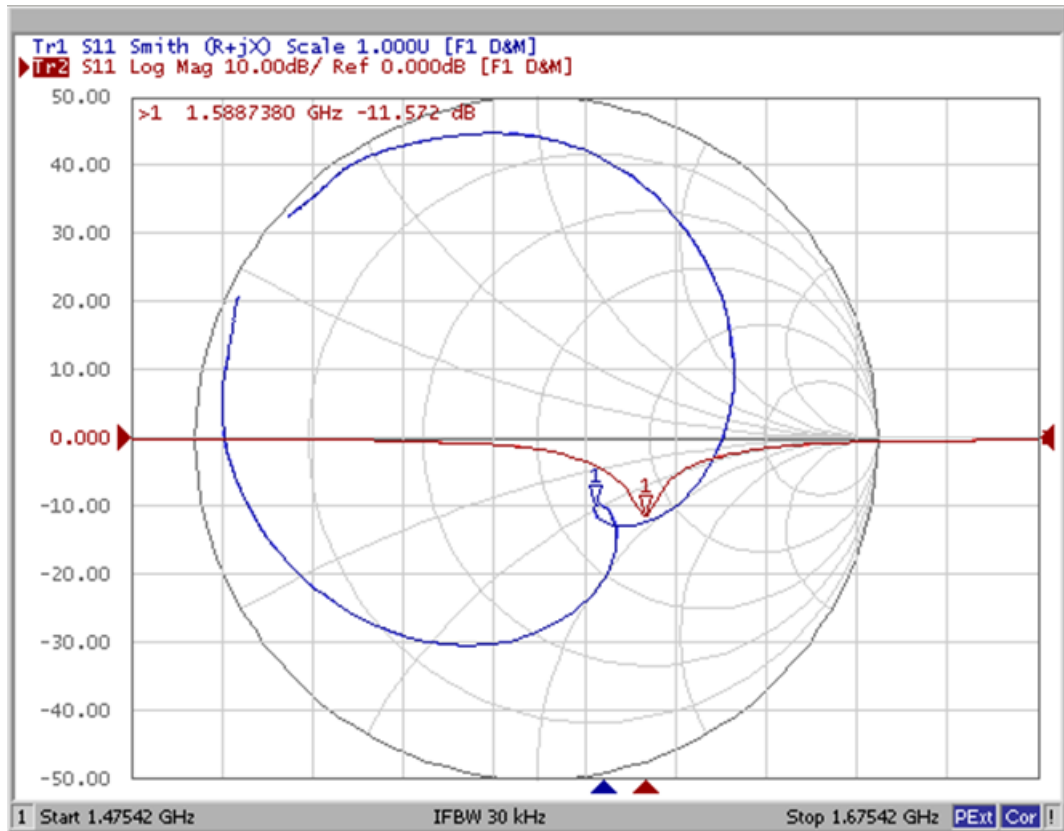
*All performance stated is measured of SZDV-C-3W21 evaluation kit.

Environmental Specifications

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

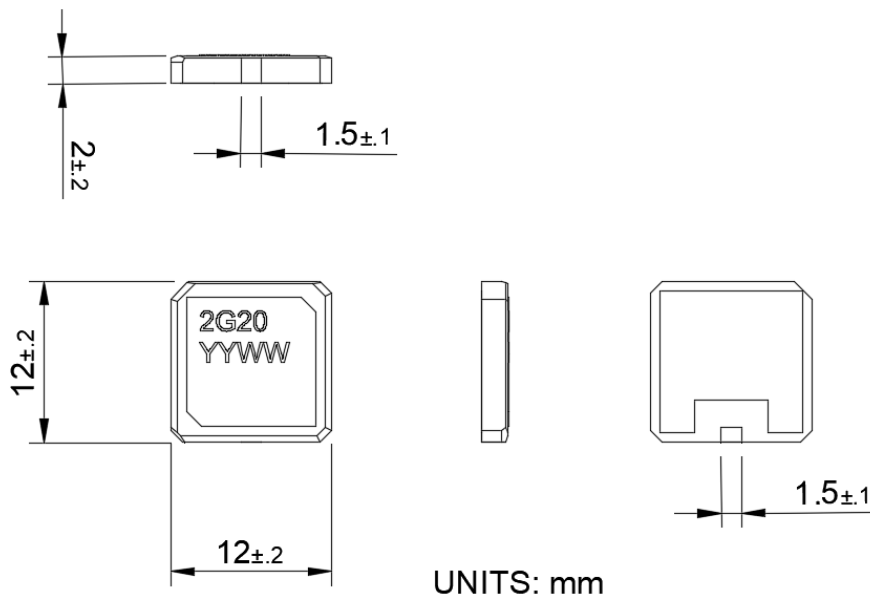
RF Characteristics

S11 / Smith

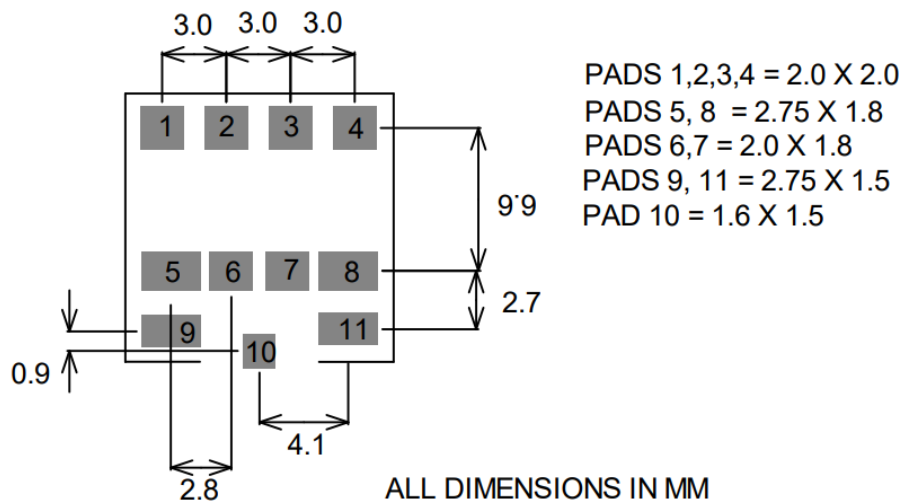


Mechanical

Antenna Mechanical Drawing



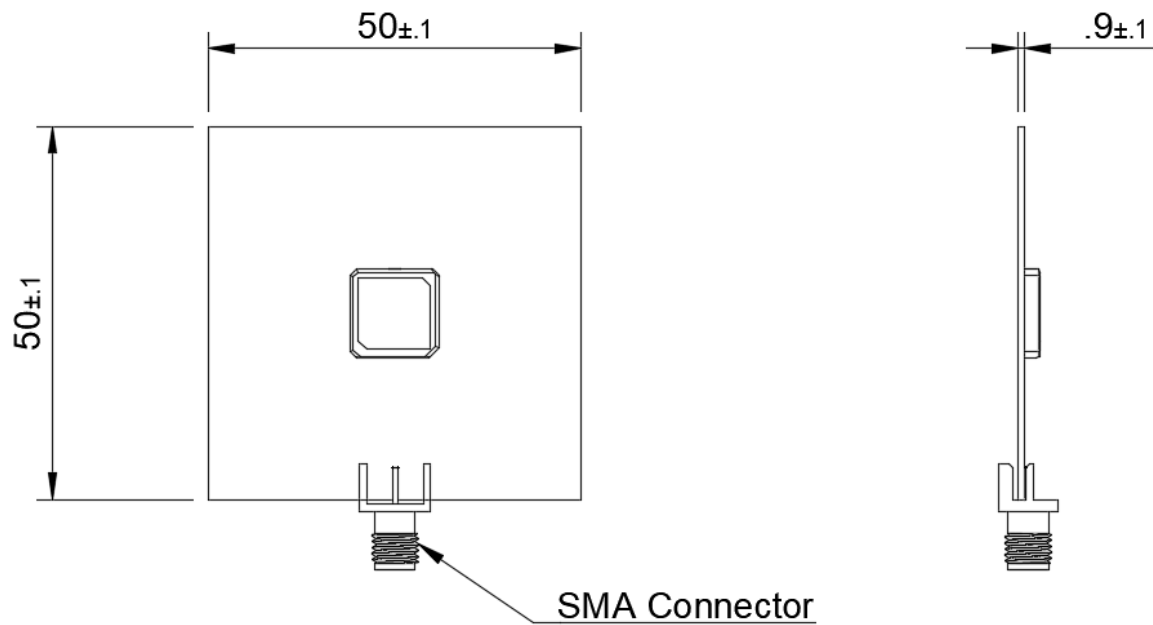
Antenna Footprint



Evaluation Kit

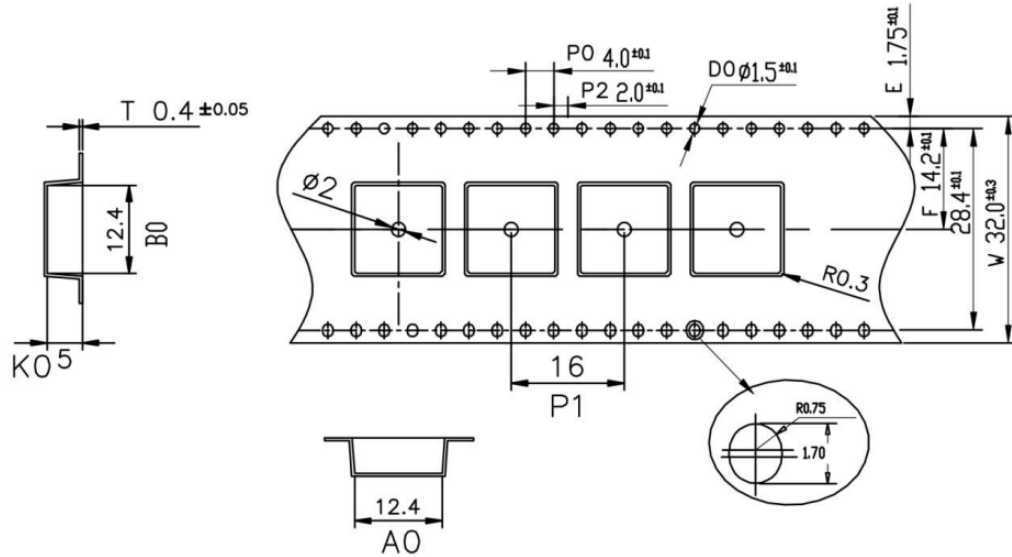
SZDV-C-2G20 Evaluation Kit

The SZDV-C-2G20 evaluation kit is a PCBA with the antenna (SZC-C-2G20) fitted. Connection to the antenna is made using the fitted female SMA connector.

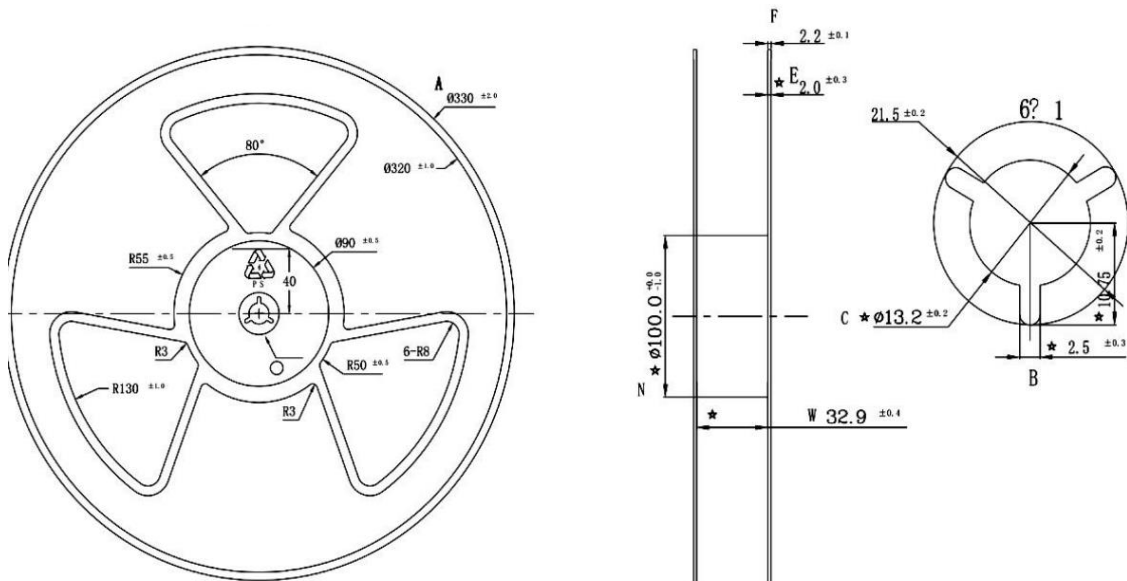


Packaging

Tape



Reel



Environmental

Material Regulation

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

Content	Material	Specification
Antenna Substrate	Microwave dielectric	45 ± 2
Electrode	Ag Plated	/





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