



TAOGLAS®



Datasheet

Part No:
GP.1575.15.4.B.02

Features:

Dimensions: 15mm*15mm*4mm
Mounted with pin and adhesive tape
1575.42MHz GPS/Galileo Patch Antenna
RoHS & REACH Compliant

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Certified



Taiwan
ISO 9001:2015
Certified



1. Introduction



The GP.1575.15.4.B.02 is a miniaturized ceramic GPS/GALILEO patch antenna based on smart XtremeGain™ technology. It has been designed and tuned by Taoglas' expert team to work at the GPS/Galileo L1 frequency 1575.42MHz. It is an ideal solution for customers who require a miniature antenna for an application where antenna size is crucial.

Typical applications include:

- Commercial & Hobbyist UAVs
- Compact IoT Sensors
- Asset Trackers
- Telematics & OBDs

It is mounted via pin and double-sided adhesive and has been selected as optimal solution for the customer device environment. The GP.1575.15.4.B.02 can be tuned for customer devices, subject to NRE and MOQ, please contact your regional Taoglas customer support team for further information.

2. Specification

GNSS Frequency Bands					
GPS	L1 1575.42 MHz	L2 1227.6 MHz	L5 1176.45 MHz		
	■	□	□		
GLONASS	G1 1602 MHz	G2 1248 MHz	G3 1207 MHz		
	□	□	□		
Galileo	E1 1575.24 MHz	E5a 1176.45 MHz	E5b 1201.5 MHz	E6 1278.75 MHz	
	■	□	□	□	
BeiDou	B1C 1575.42 MHz	B1I 1561 MHz	B2a 1176.45 MHz	B2b 1207.14 MHz	B3 1268.52 MHz
	■	□	□	□	□
L-Band	L-Band 1542 MHz				
	□				
QZSS (Regional)	L1 1575.42 MHz	L2C 1227.6 MHz	L5 1176.45 MHz	L6 1278.75e6	
	■	□	□	□	
IRNSS (Regional)	L5 1176.45 MHz				
	□				
SBAS	L1/E1/B1 1575.42 MHz	L5/B2a/E5a 1176.45 MHz	G1 1602 MHz	G2 1248 MHz	G3 1207 MHz
	■	□	□	□	□



GNSS Bands and Constellations

GNSS Electrical	
Frequency (MHz)	1575.42
Passive Antenna Efficiency (%)	36.1
Passive Antenna Gain at Zenith (dBi)	1.69
Polarization	RHCP
Impedance	50 Ω

Mechanical	
Dimensions	15*15*4mm
Weight	5g
Material	Ceramic

Environmental	
Operating Temperature	-40°C to +85°C
Storage Temperature	-40°C to +85°C
RoHs Compliant	Yes

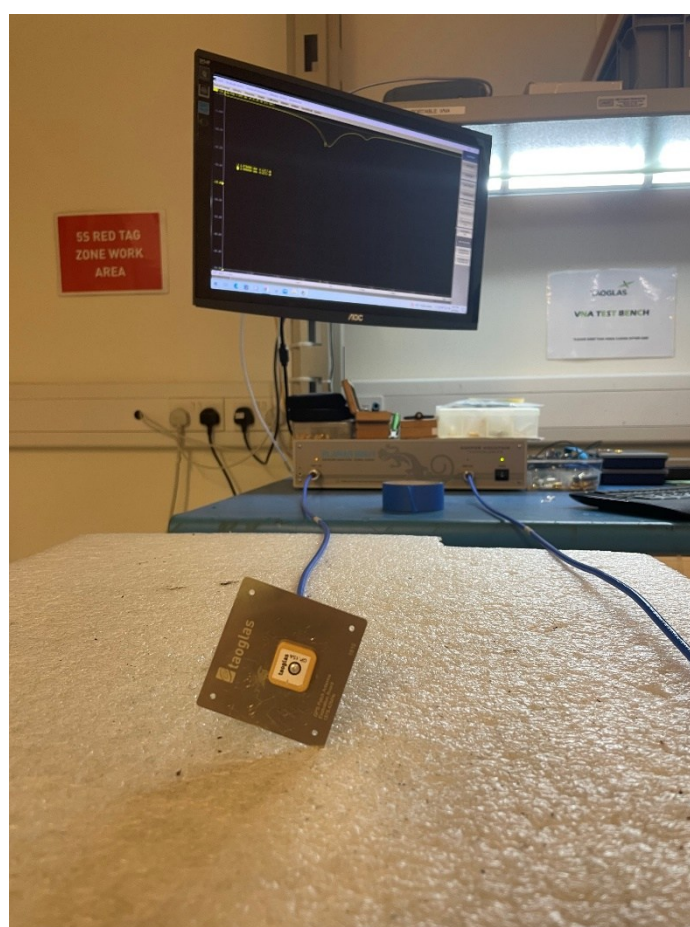
3. Antenna Characteristics

3.1 Test Setup

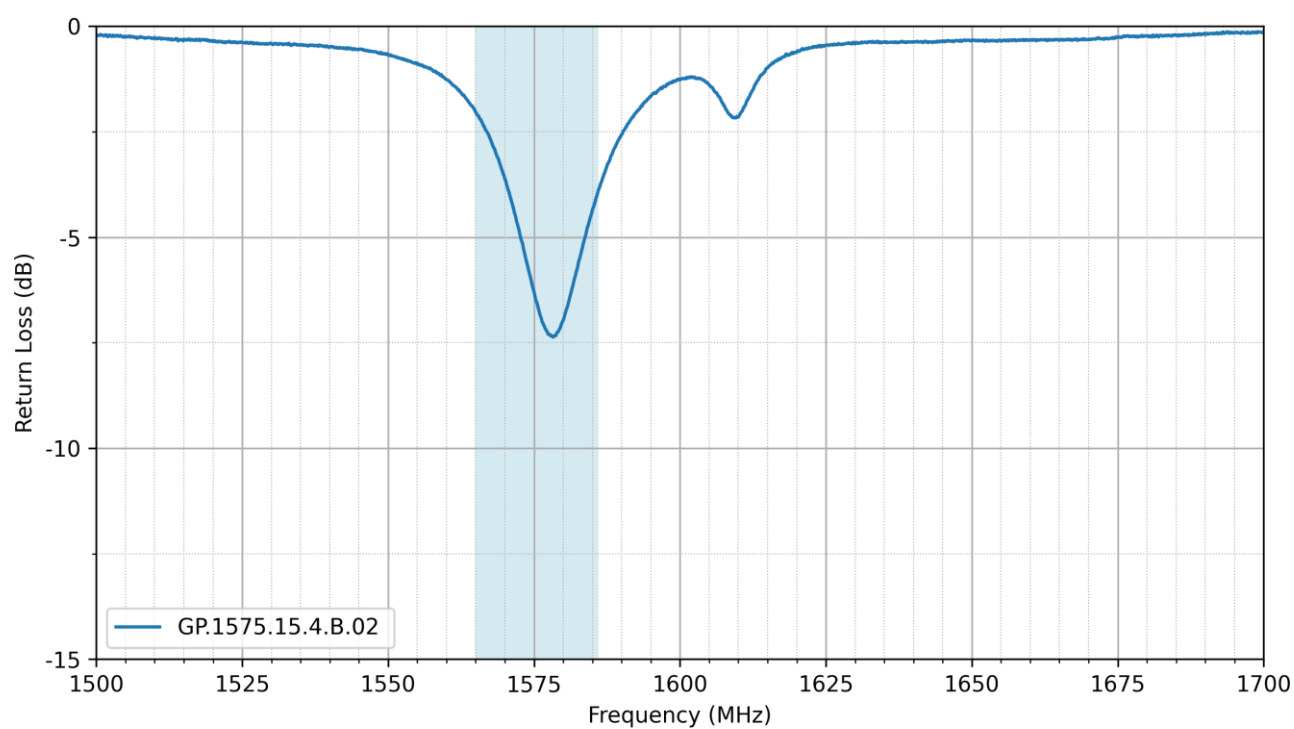
AUT



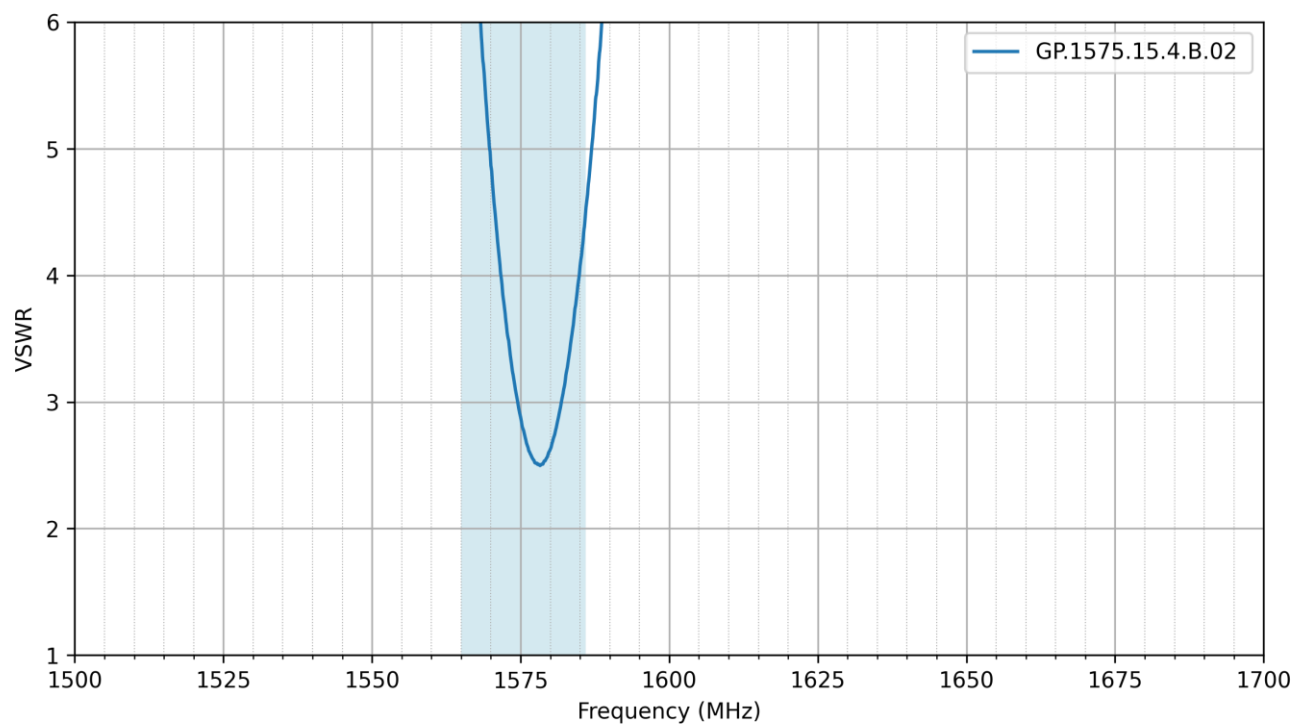
Vector Network Analyzer



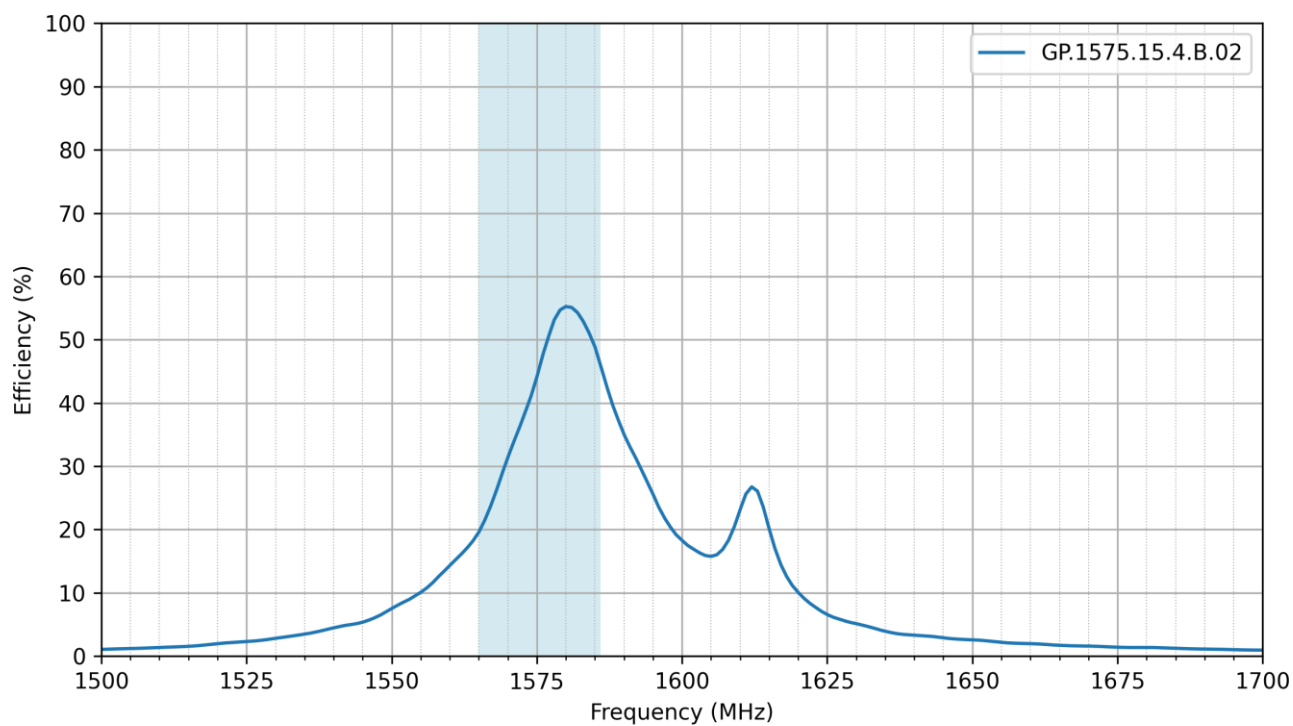
3.2 Return Loss



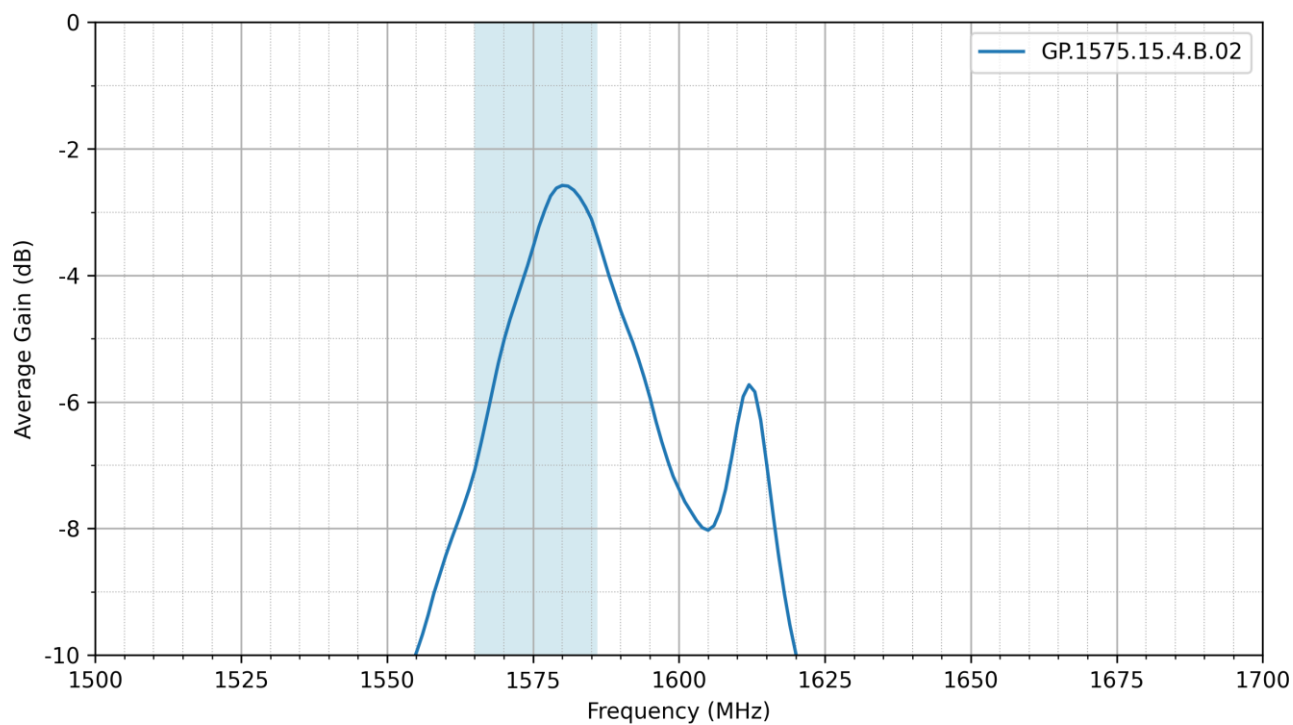
3.3 VSWR



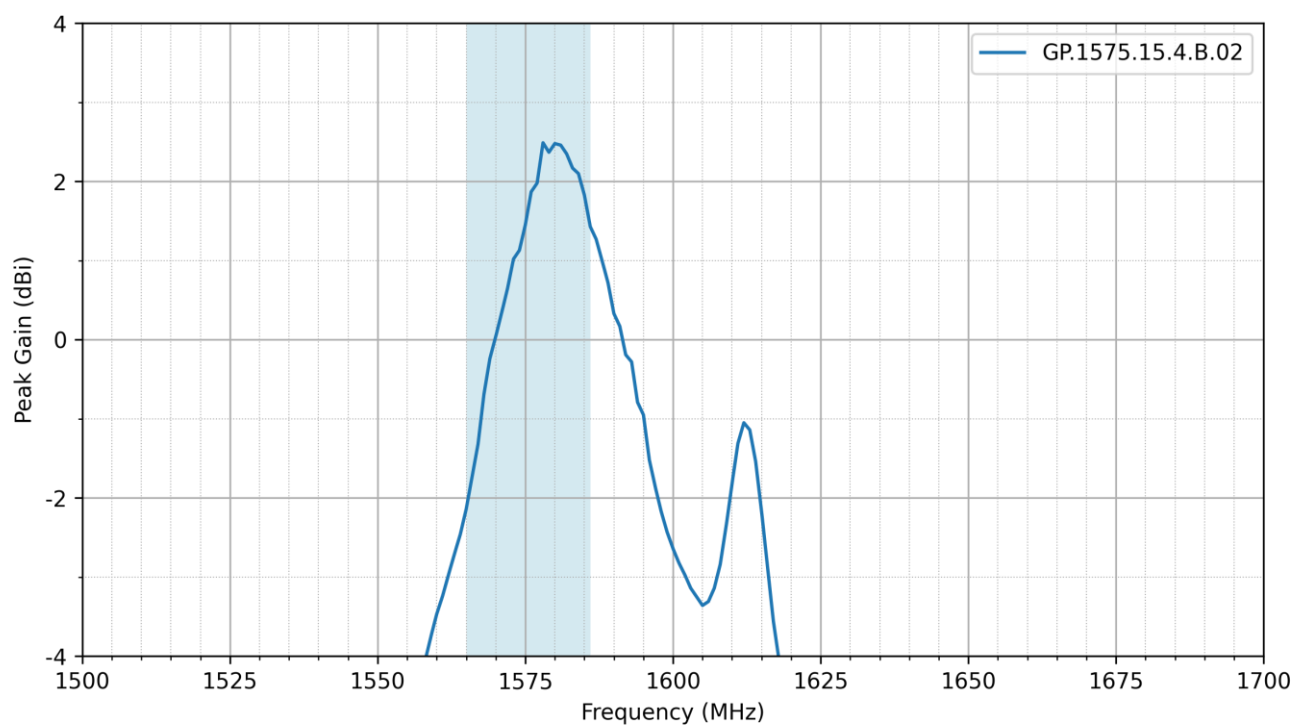
3.4 Efficiency



3.5 Average Gain

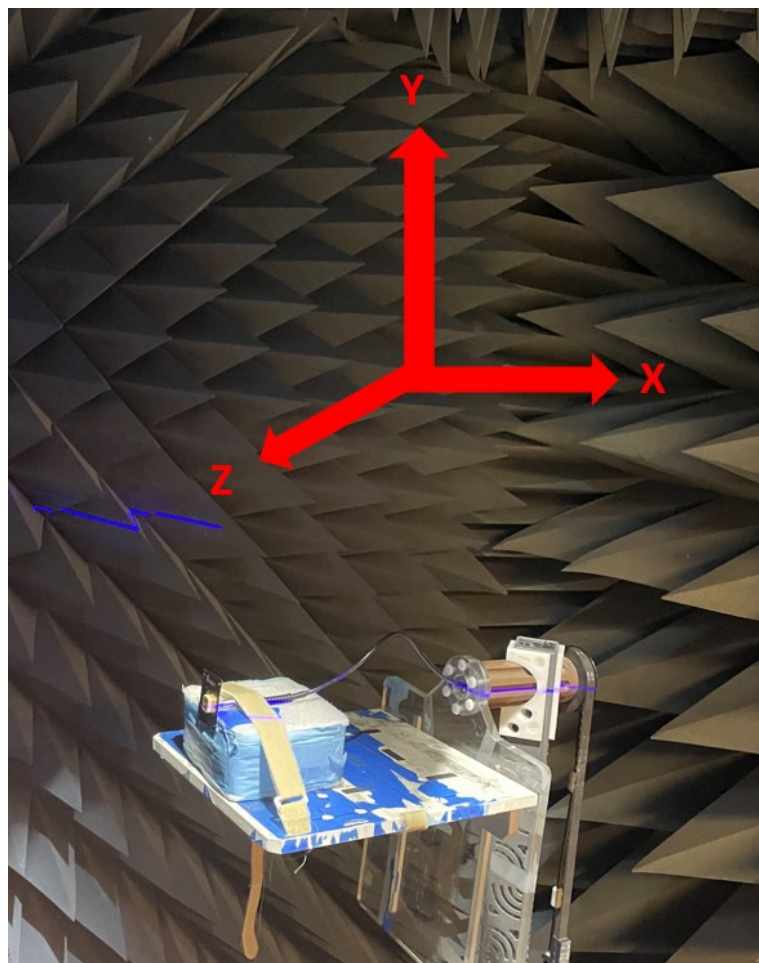
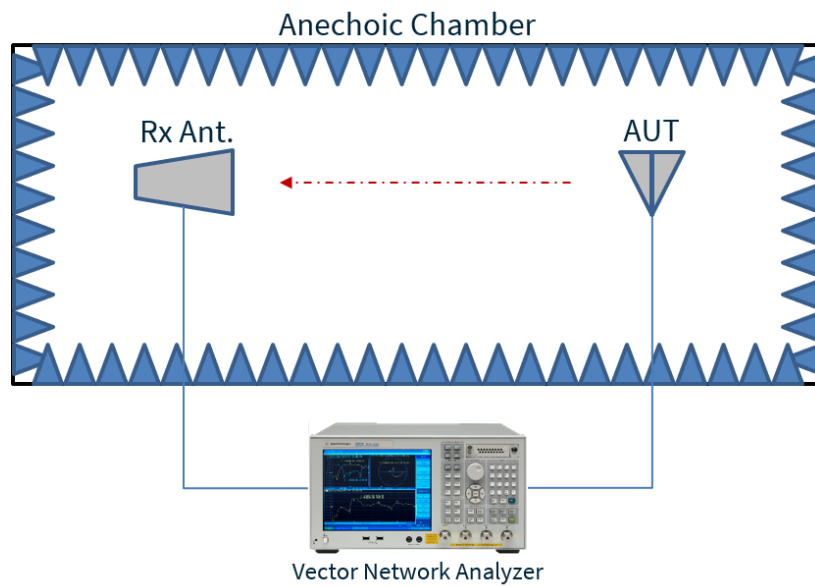


3.6 Peak Gain

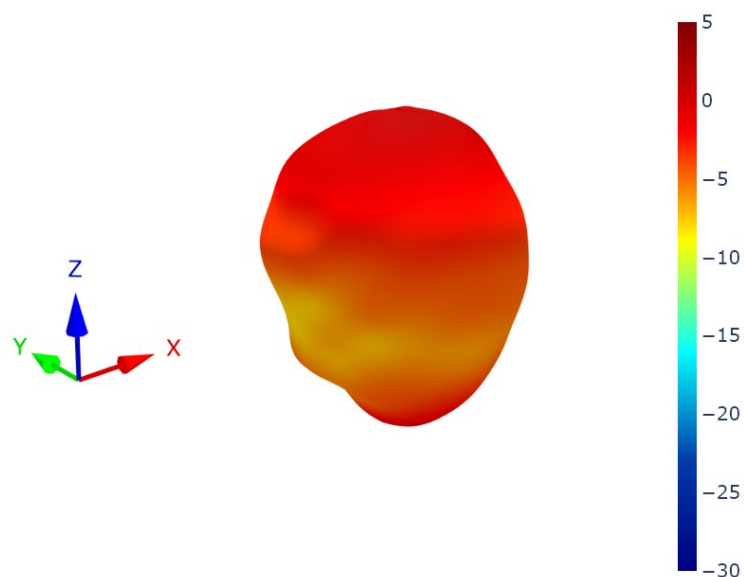


4. Radiation Patterns

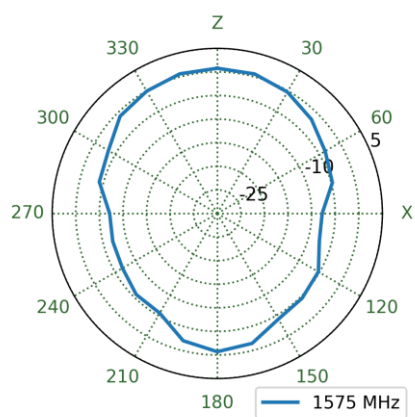
4.1 Test Setup



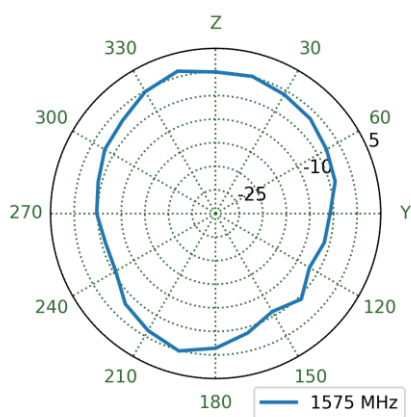
4.2 GP.1575.15.4.B.02 Patterns at 1575 MHz



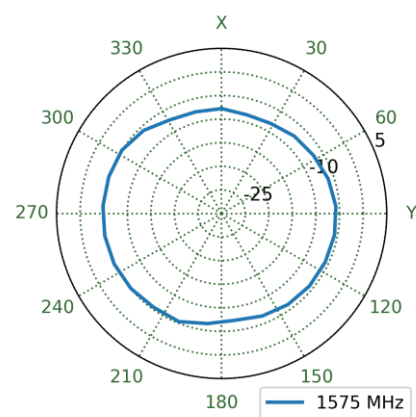
XZ Plane



YZ Plane





XY Plane

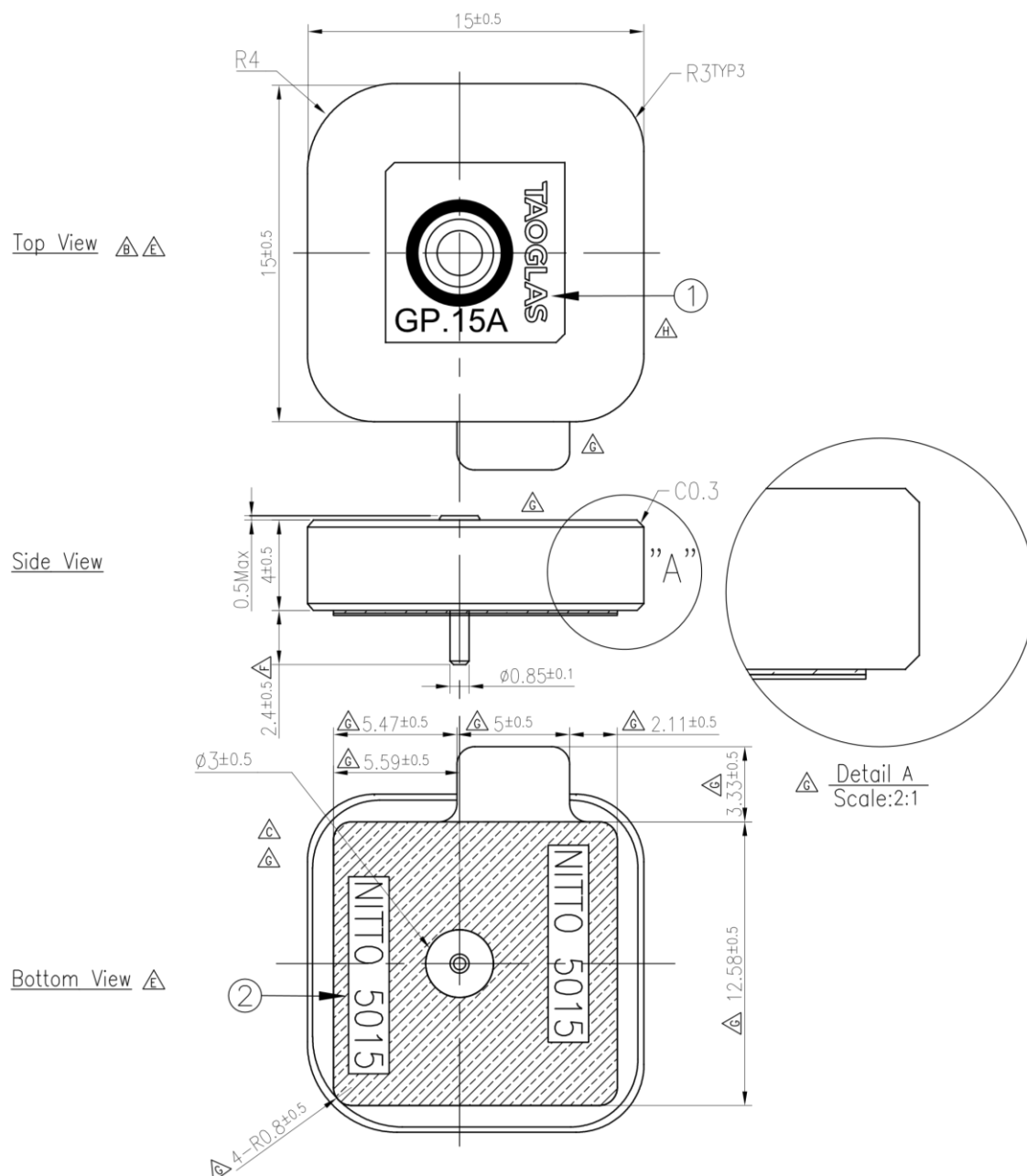





5. Mechanical Drawing

ISO NO.: EDW-11-8-800

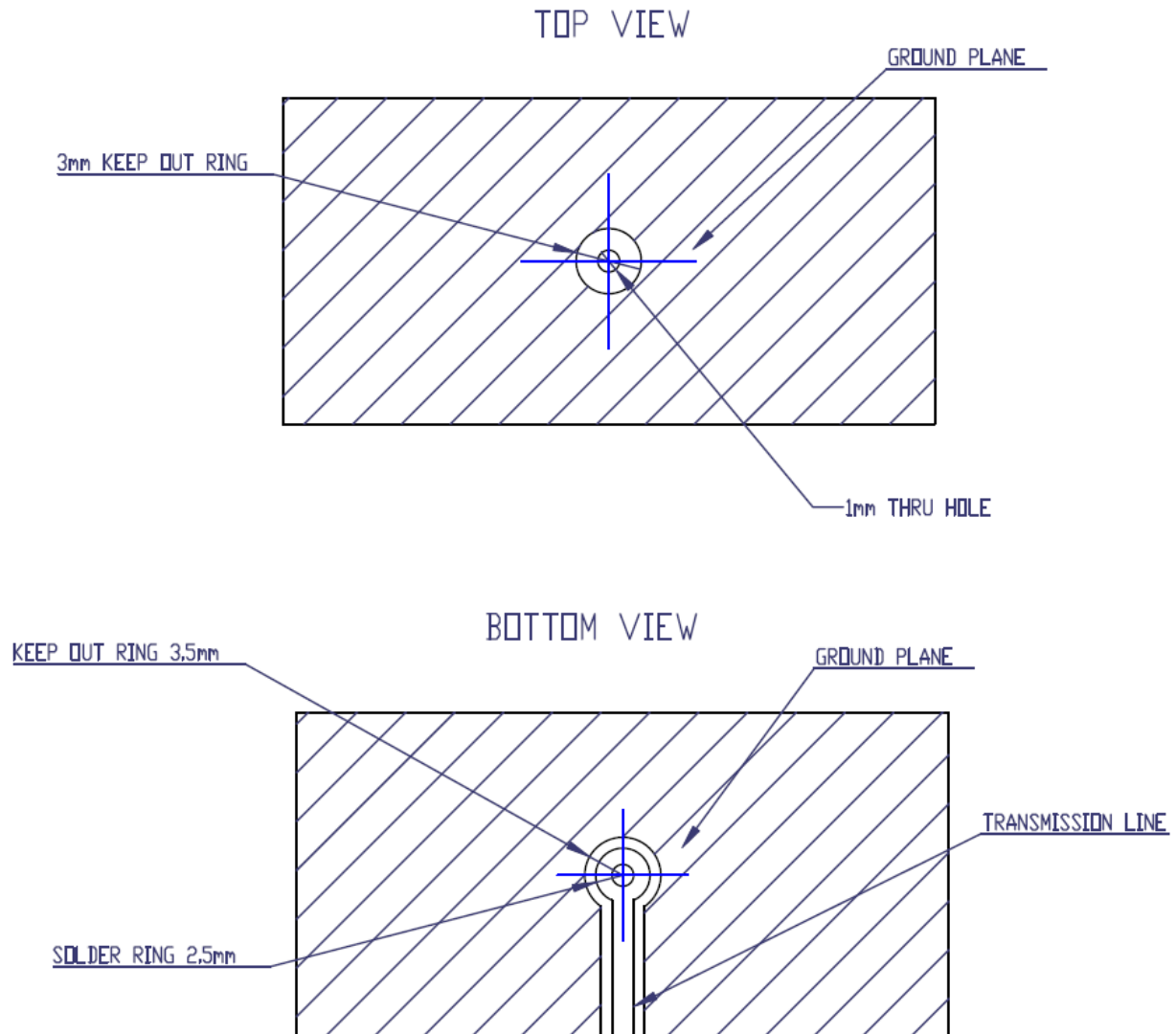
STATE: Release

NOTES: 1. Double sided adhesive area. 
2. Soldermask area. 



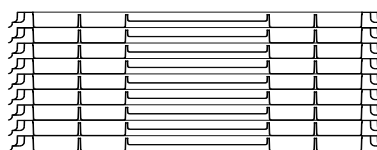
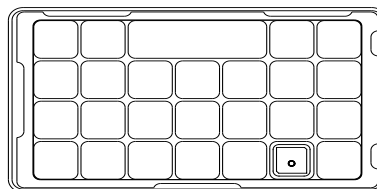
					
	Name	P/N	Material	Finish	QTY
	1 GP.1575 Patch	001517F060000A	Ceramic	Brown	1
	2 Double sided Adhesive	001517F060000A	NITTO 5015	White Linter	1

6. Footprint

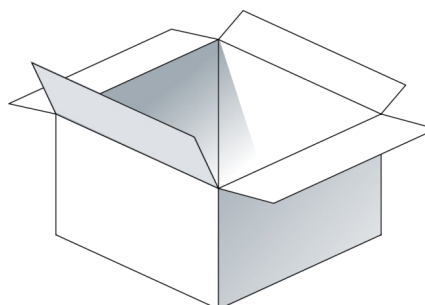


7. Packaging

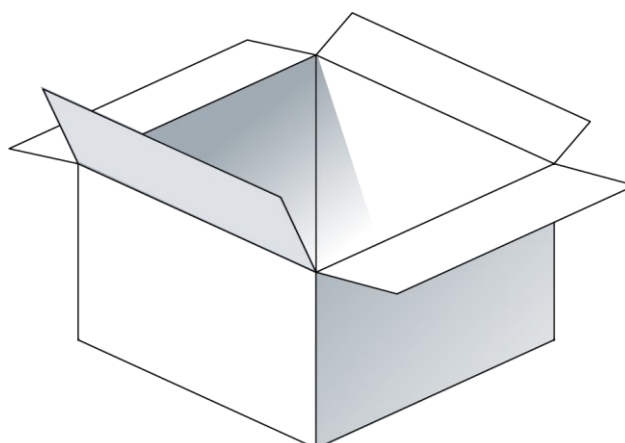
400pcs per Inner Carton



400pcs GP.1575.15.4.B.02 per carton
Dimensions - 263*154*96mm
Weight – 2Kg



1600pcs GP.1575.15.4.B.02 per carton
Dimensions - 327*280*218mm
Weight – 8.2Kg



Changelog for the datasheet

SPE-12-8-094 – GP.1575.15.4.B.02

Revision: F (Current Version)

Date:	2025-01-14
Changes:	Drawing Update
Changes Made by:	Cesar Sousa

Previous Revisions

Revision: E

Date:	2023-08-17
Changes:	Full datasheet update
Changes Made by:	Gary West

Revision: D

Date:	2021-06-21
Changes:	Updated Pin Length to 2.4mm Updated Drawing
Changes Made by:	Dan Cantwell

Revision: C

Date:	2018-03-15
Changes:	Drawing and Photo updated
Changes Made by:	Jack Conroy

Revision: B

Date:	2016-04-22
Changes:	
Changes Made by:	Jack Conroy

Revision: A (Original First Release)

Date:	2012-07-19
Notes:	
Author:	Dan Cantwell



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