



# TAOGLAS®



# Datasheet

## GPS/GLONASS/BeiDou Patch

**Part No:**  
CGGBP.35.6.A.02

### **Description:**

GPS/GLONASS/Galileo/BeiDou Embedded Patch Antenna

### **Features:**

Dielectric Ceramic

BeiDou 1561MHz / GPS-Galileo 1575MHz / GLONASS 1602MHz

Pin Mount

Dimensions: 35mm\*35mm\*6.5mm

RoHS & Reach Compliant

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# 1. Introduction



The Taoglas CGGBP.35.6.A.02 is a Circularly Polarized embedded GNSS patch designed for use across the full single band GNSS spectrum.

This 35mm square ceramic GPS/GLONASS/Galileo/BeiDou patch antenna's wide band of operation leads to excellent gain and radiation pattern stability on all GNSS system bands.

Typical applications include:

- Agriculture
- Asset tracking systems
- Navigation

Compared to using a smaller antenna, this will translate into the GNSS system having much higher location accuracy, improved reliability of lock in urban areas, better signal reception, with more satellites acquired and a quicker time to first fix.

The patch is mounted via pin and double-sided adhesive and can be custom tuned to a device subject to NRE, for further information please contact your regional Taoglas customer support team.

## 2. Specifications

GNSS Frequency Bands Covered							
GPS/QZSS	L1 1575.42MHz	L2 1227.6MHz	L5 1176.45MHz	L6 1278.75MHz			
	■	□	□	□			
GLONASS	L5R 1176.45MHz	L3PT 1201.5MHz	L2PT 1246MHz	L1CR 1575.42MHz	L1PT 1602MHz		
	□	□	□	■	■		
Galileo	E5a 1176.45MHz	E5b 1201.5MHz	E4 1215MHz	E3 1256MHz	E6 1278.75MHz	E2 1561MHz	L1 1575.42MHz
	□	□	□	□	□	■	■
BeiDou	B1 1561MHz	B2 1207.14MHz	B3 1268.52MHz				
	■	□	□				
Compass	E5B(B2)/ E6(B3) 1268.56MHz	E2(B1) 1561MHz					
	□	■					
SBAS	Omnistar 1542.5MHz	WAAS/EGN OS 1575.42MHz					
	□	■					

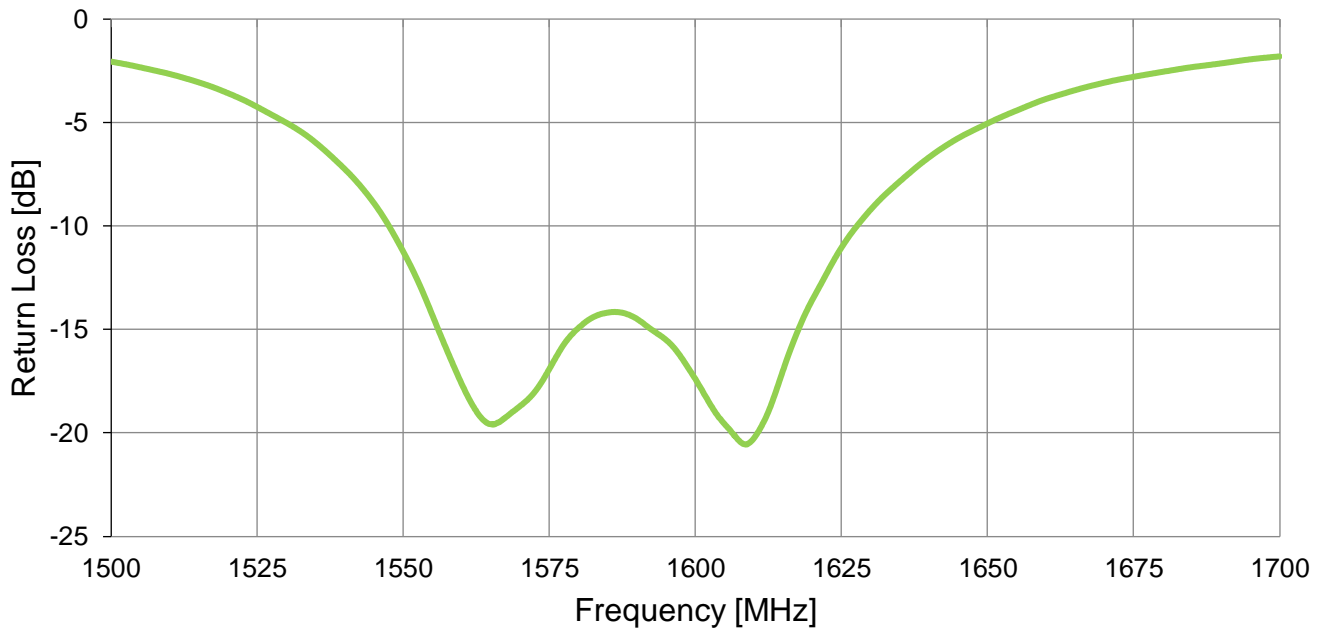
<b>GNSS Electrical</b>			
<b>Frequency (MHz)</b>	<b>1561</b>	<b>1575.42</b>	<b>1602</b>
Average Gain (dB)	-0.2	-0.3	-0.2
Efficiency (%)	97	94	95
Peak Gain (dBi)	5.8	5.5	5.6
Axial Ratio (dB)	13	9	3
Polarization	RHCP		
Impedance	50Ω		

<b>Mechanical</b>	
Dimensions	35 x 35 x 6.5mm
Material	Ceramic
Pin Diameter	0.9mm
Pin Length	2.4mm
Weight	29g

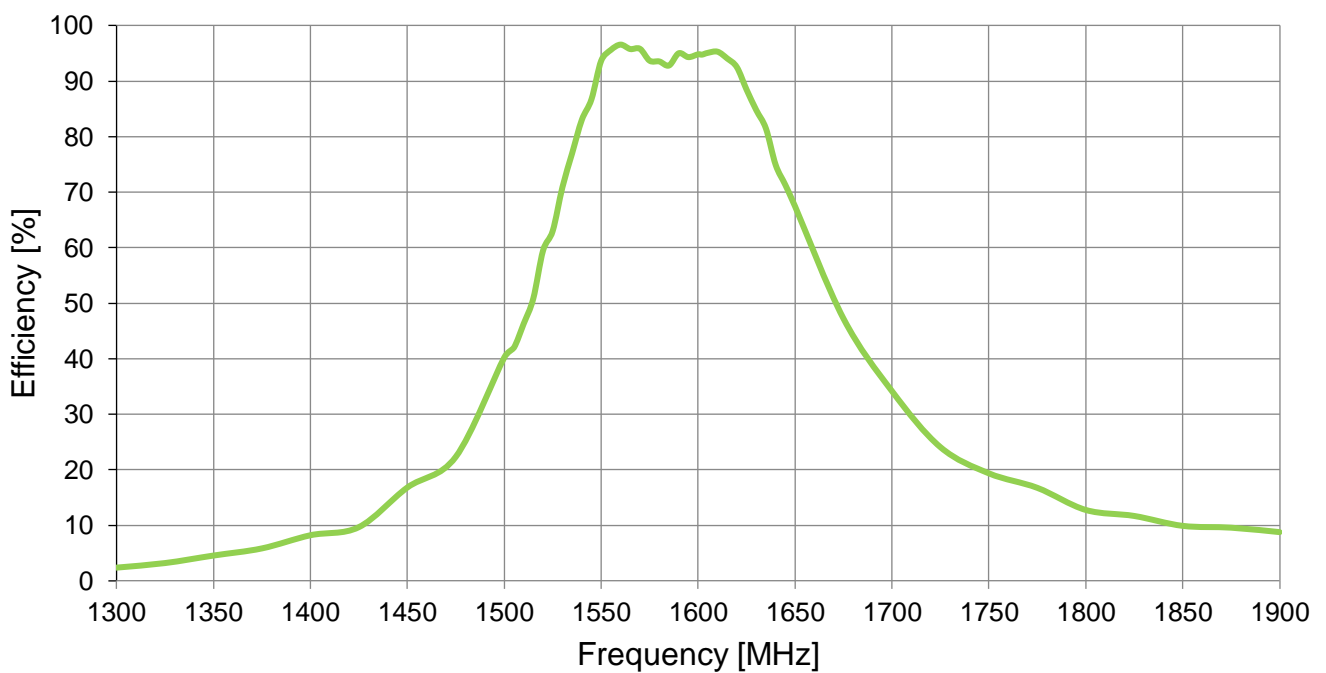
<b>Environmental</b>	
Temperature Range	-40°C to 85°C

### 3. Antenna Characteristics

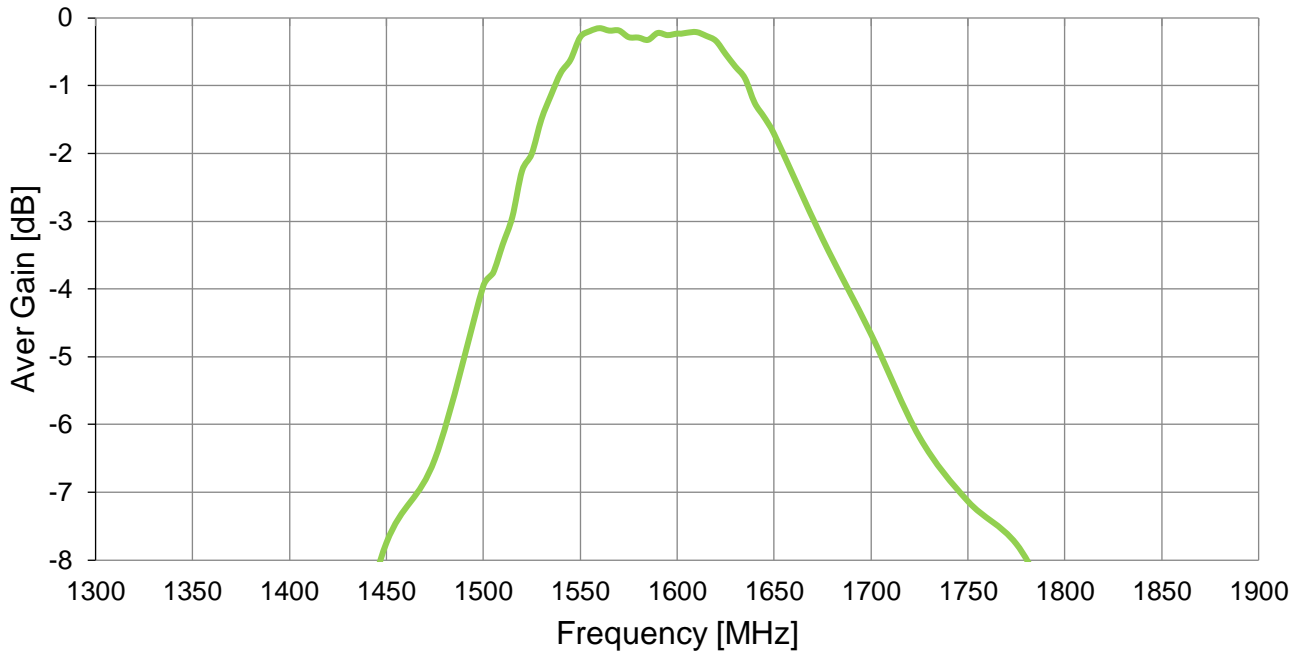
#### 3.1 Return Loss



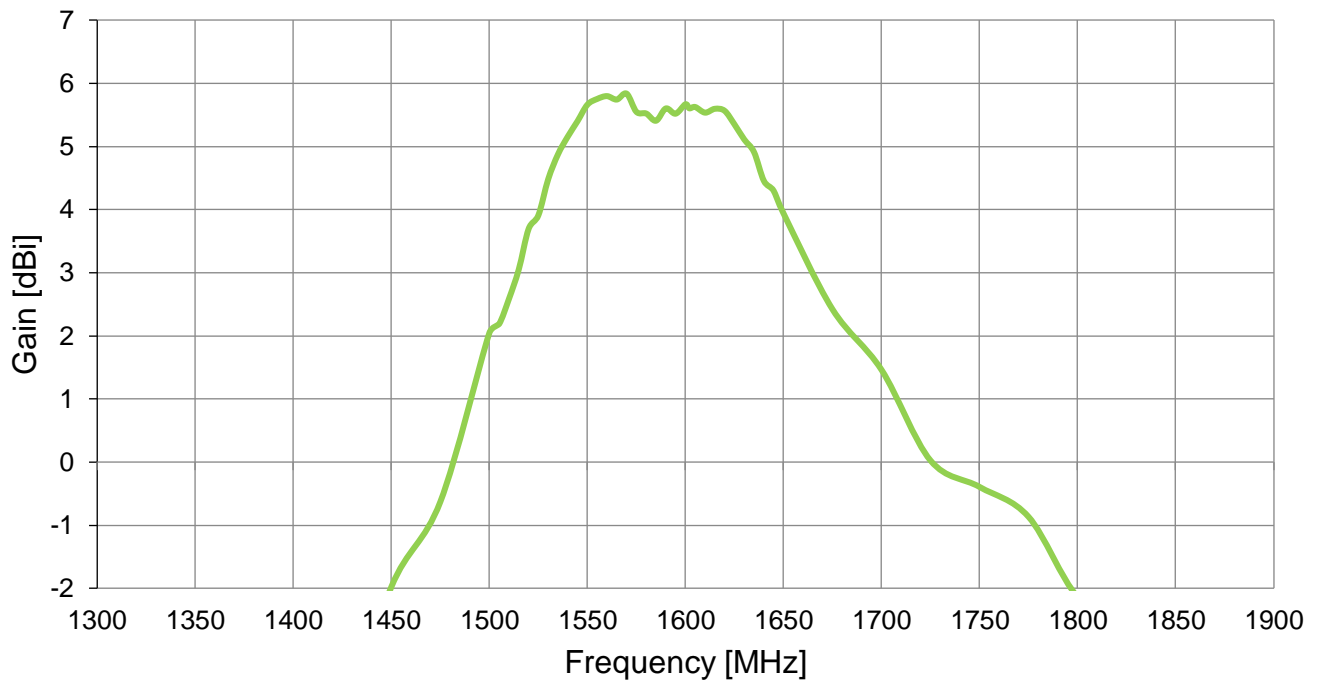
#### 3.2 Efficiency



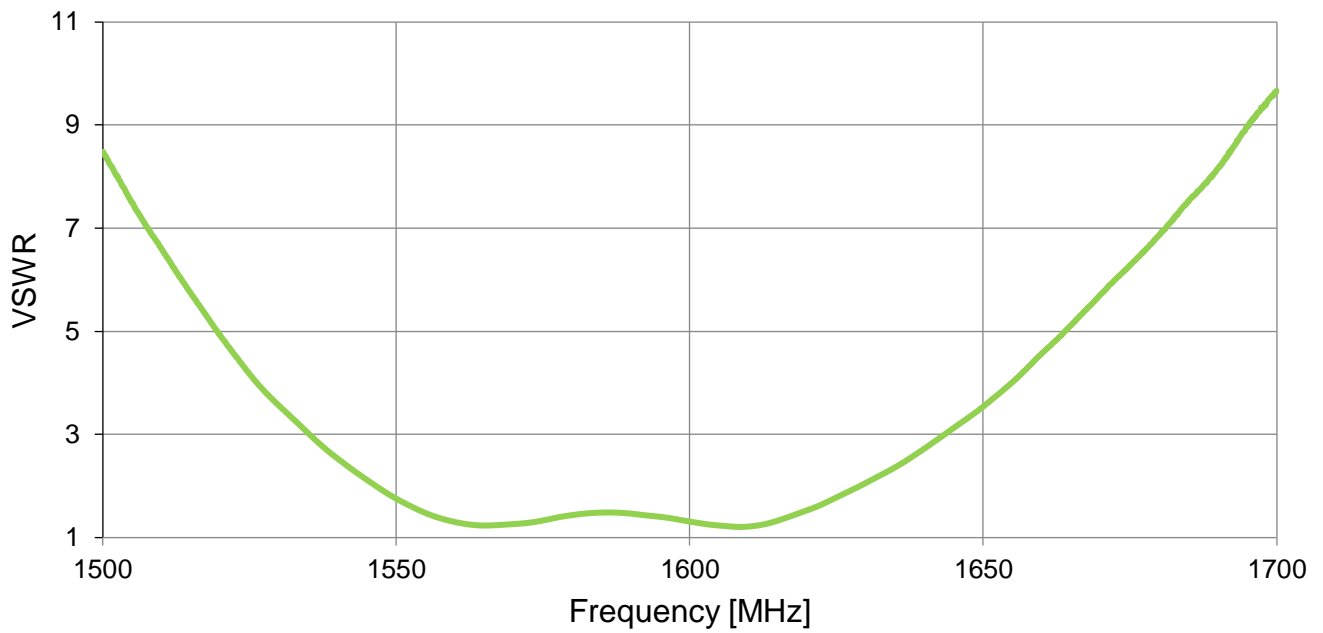
### 3.3 Average Gain



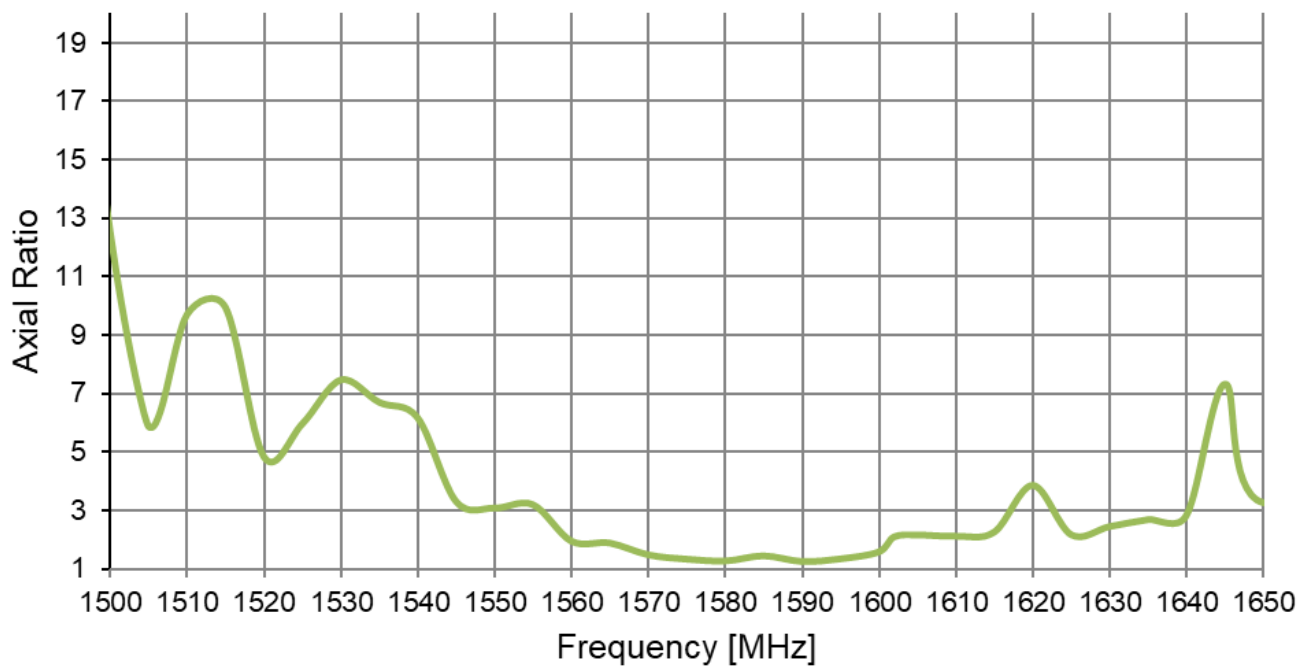
### 3.4 Peak Gain



### 3.5 VSWR



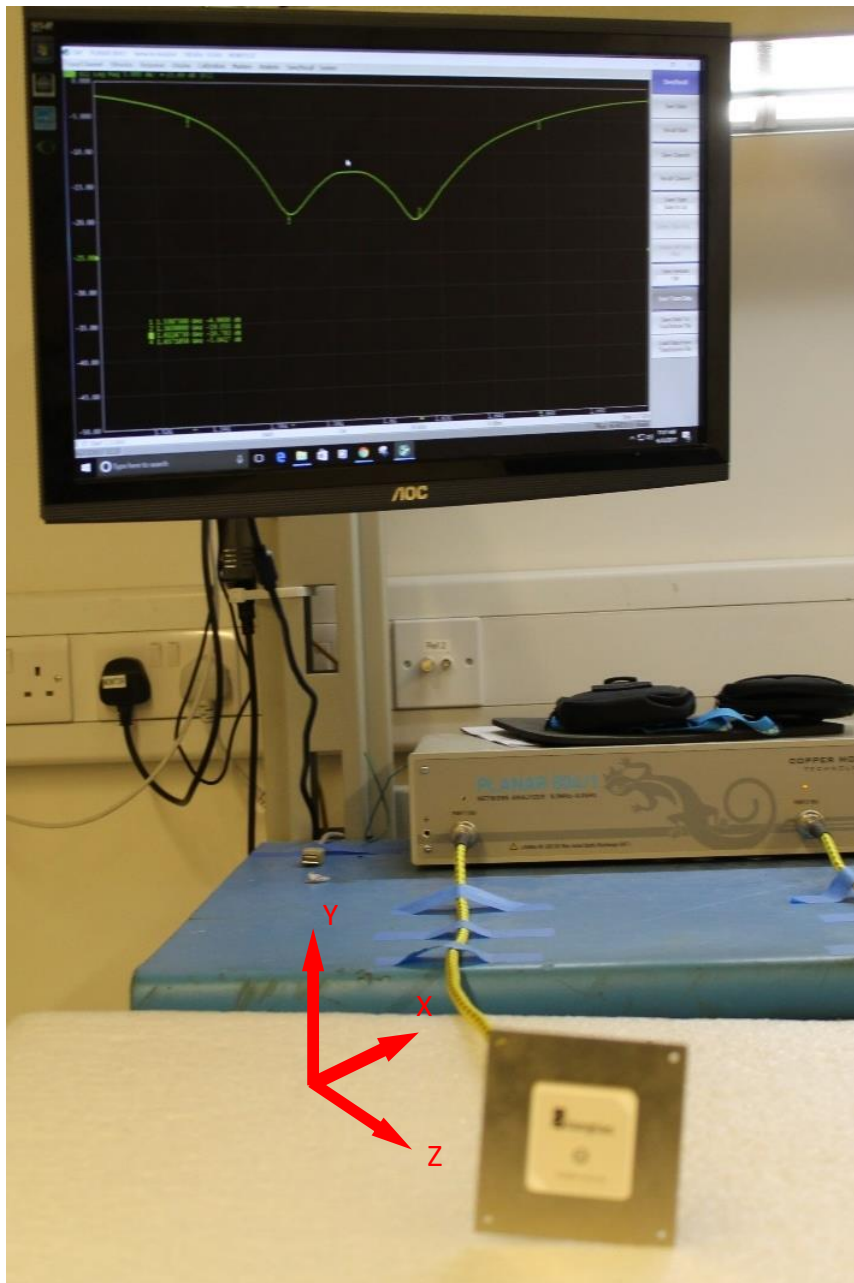
### 3.6 Axial Ratio





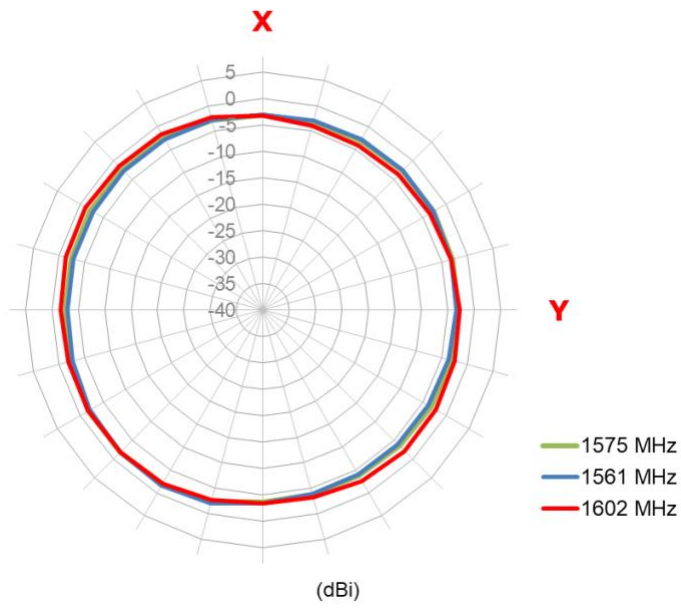
## 4. 2D Radiation Patterns

### 4.1 Test Setup

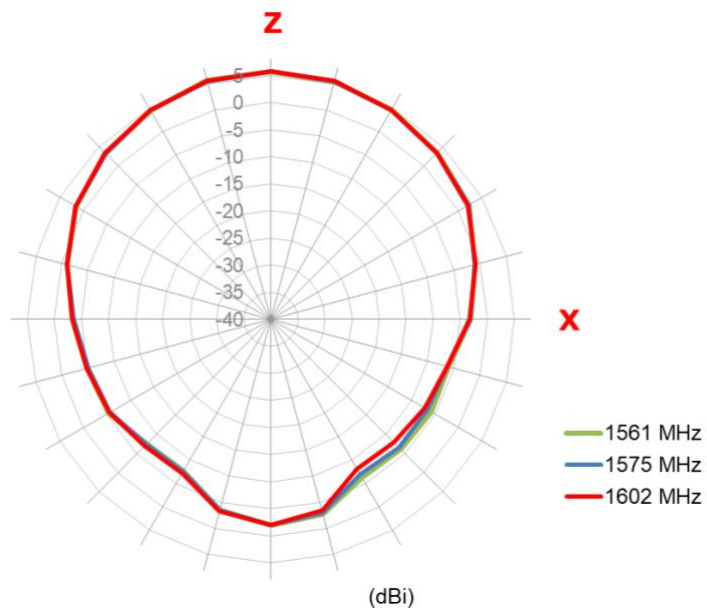


On Evaluation Board

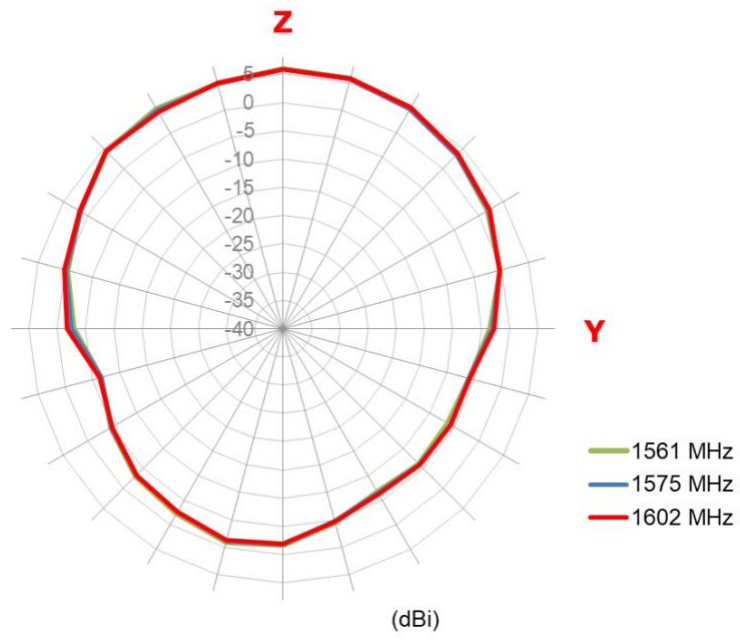
XY Plane



XZ Plane



YZ Plane



# 5. Mechanical Drawing (Units: mm)

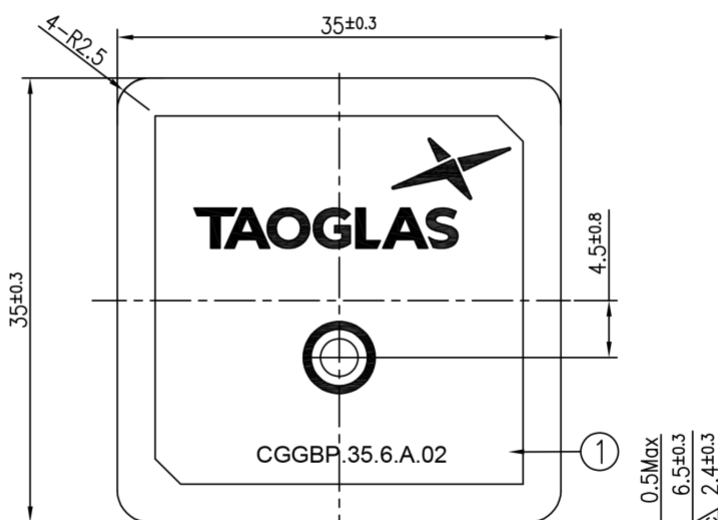
ISO NO.: EDW-18-8-0694

STATE: Release

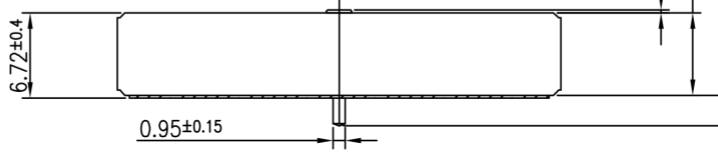
NOTES: 1. Double sided adhesive area

REV.	DESCRIPTION	ENG.	APPROVED	DATE
A	Initial Design	Eva	Paul	2018/09/06
B	Replace the new LOGO <EDR-18-8-258>	Rachel	Aaron	2019/09/24
C	EC-21-08-010	Mickey	Buluto	2021/03/02

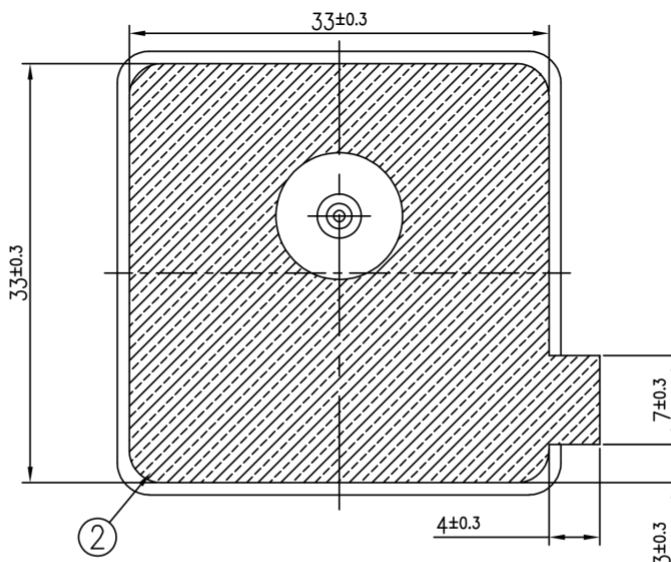
Top View



Side View



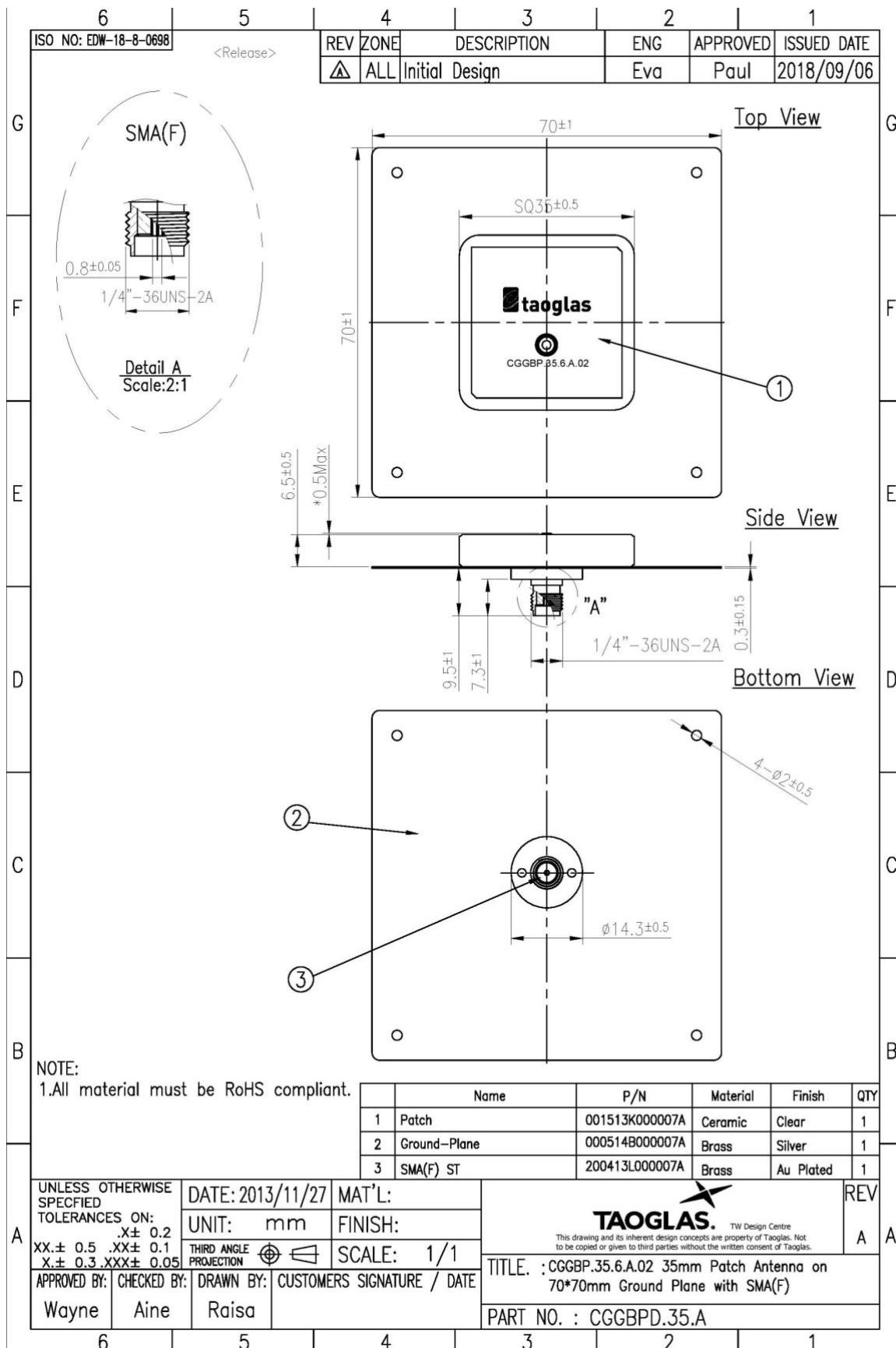
Bottom View



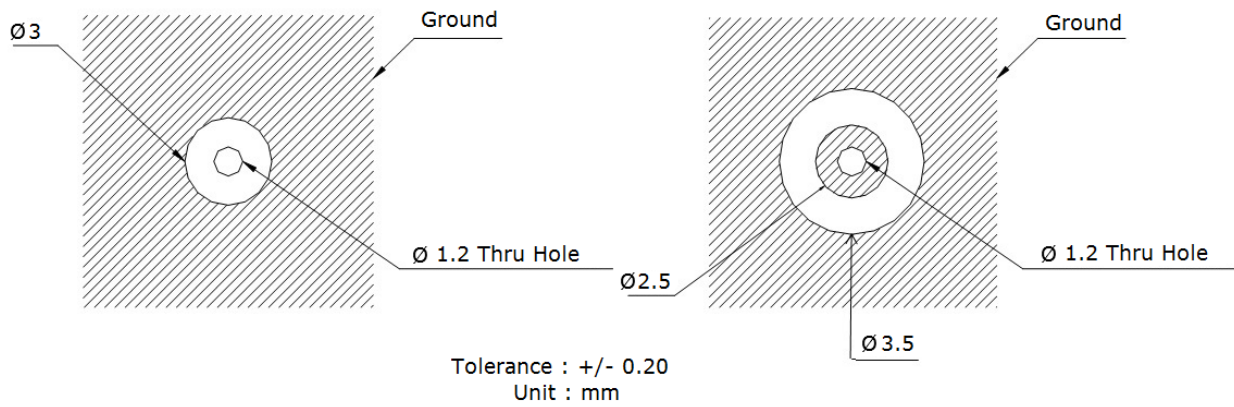
	Name	P/N	Material	Finish	QTY
1	Patch	001518G040007A	Ceramic	Clear	1
2	Double sided Adhesive	001518G040007A	NIITO 5015	White Liner	1

APPROVED BY: Joanna	 <small>TW Design Centre This drawing and its inherent design concepts are property of Taoglas. Not to be copied or given to third parties without the written consent of Taoglas.</small>
CHECK BY: Martin	
DRAWN BY: Sandy	
DATE: 2013/10/31	
UNLESS OTHERWISE SPECIFIED TOLERANCES ON: XX±0.5 X±0.3 X±0.2 XX±0.1 XXX±0.05	TITLE : GPS/GLONASS/BEIDOU Patch Antenna 35*35*6.5mm
THIRD ANGLE PROJECTION	PART NO. : CGGBP.35.6.A.02
	UNIT: mm SCALE: 2:1 PAGES: 1/1 REV. C

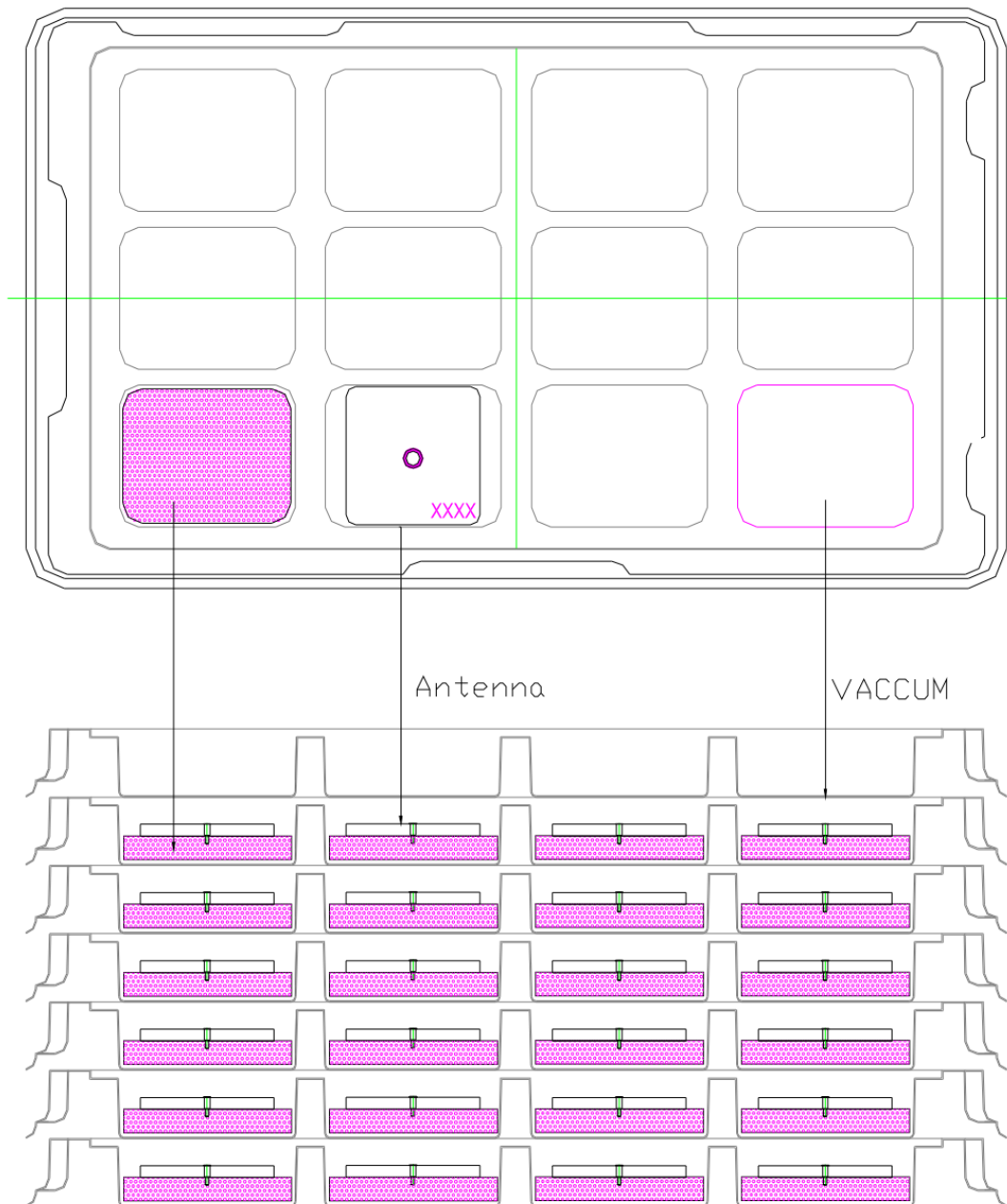
# 6. Evaluation Board Drawing



## 7. Footprint



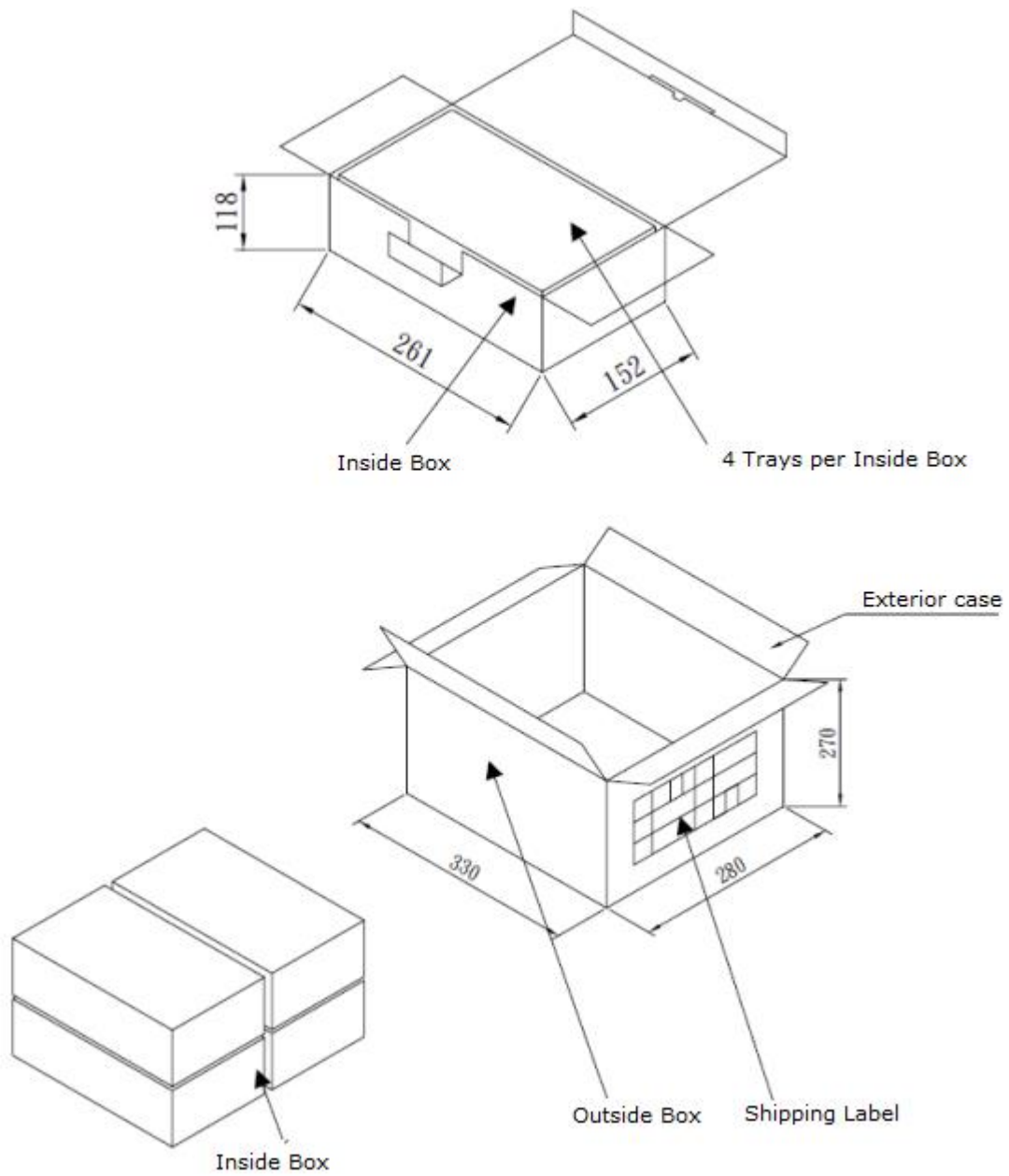
## 8. Packaging



12 pieces per tray

6 Trays per Inside Box = 72

4 Inside Boxes per Outer Carton -Outer Carton contains 288 pieces





Changelog for the datasheet

**SPE-14-8-018 – CGGBP.35.6.A.02**

**Revision: G (Current Version)**

Date:	2021-06-08
Changes:	Pin Length changed to 2.4mm Drawing updated
Changes Made by:	Dan Cantwell

**Previous Revisions**

**Revision: F**

Date:	2020-01-27
Changes:	Installation Guide Amended
Changes Made by:	Jack Conroy

**Revision: A (Original First Release)**

Date:	2014-03-04
Notes:	
Author:	Aine Doyle

**Revision: E**

Date:	2018-03-27
Changes:	Installation Guide Amended
Changes Made by:	Jack Conroy

**Revision: D**

Date:	2017-06-27
Changes:	
Changes Made by:	David Connolly

**Revision: C**

Date:	2015-01-06
Changes:	PCB Footprint
Changes Made by:	Made by Andy Mahoney

**Revision: B**

Date:	2014-11-17
Changes:	Evaluation Board Added
Changes Made by:	Aine Doyle



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