



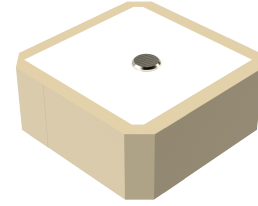
# MPA-104-C

L1 GPS Passive Microstrip Antenna - 10mm

Part #: 189-00080-01

## Description

The MPA-104-C is a 10 mm ceramic GPS passive patch antenna based on Maxtena technology. Our patch antenna offerings are perfect for projects with a smaller scope and budget for which high-performance and lower weight is not a primary factor for consideration for the antenna. This antenna is designed for embedded applications such as GPS handheld units, mobile devices, and tracking devices. It features higher upper hemisphere efficiency and a lower axial ratio as compared to regular patch antennas. The interface connector is mounted through pin solution, and double-sided adhesive.



## Electrical Specification

Parameter	Specification
Frequency Range	1583-1597 MHz
Center Frequency	1590 MHz
Bandwidth	14 MHz
Return loss	-10.5 dB @center frequency
Polarization	RHCP
Average Gain	-3 dB
Efficiency	50%
Realized Gain	2.5 dBic
Axial ratio	1.5 dB (typical) / 2.5 dB (max)
Bandwidth (-1db)	10 MHz
Beamwidth (3dB)	100° (both axes)
CP rejection	15 dB (typical) / 10 dB (min)
VSWR	1.8
Impedance	50 Ω
Radiation Pattern	Hemispherical

## Mechanical Specification

Parameter	Specification
Antenna Dimensions	10 x 10 x 4.76 mm
Mounting Type	Embedded
Operating Temperature	-40°C to 85°C
Connector	Pin
Weight	2 g

\*Mounted on Ground Plane of 72 x 75 mm

## Features

- GPS L1 frequency
- Adhesive mounting
- Pin connector
- Compact size
- Custom tuning

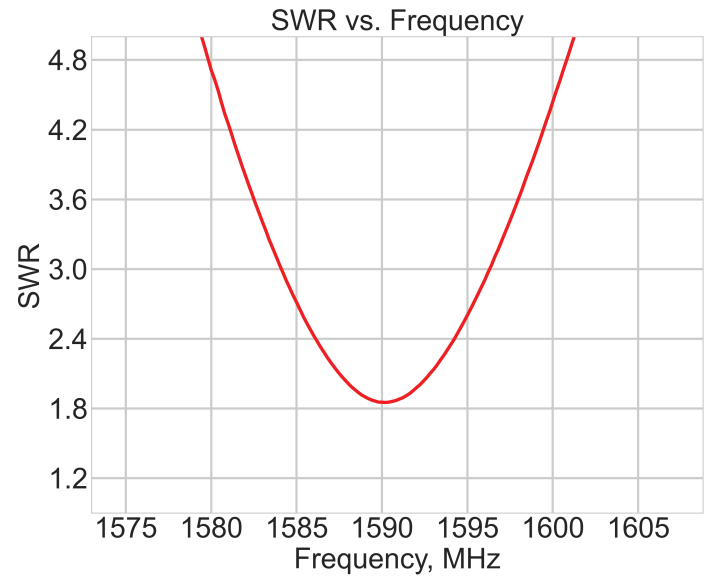
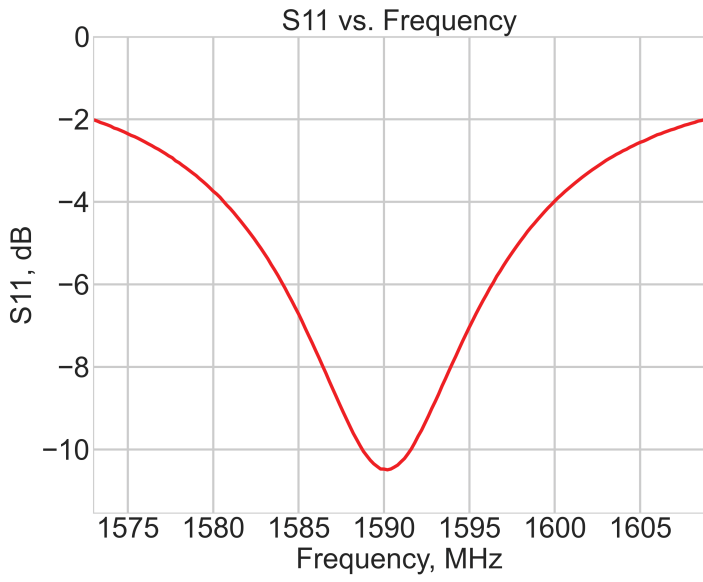
## Applications

- Vehicle and fleet tracking
- Military & security
- Asset tracking
- Embedded applications
- Oil & gas industries
- Navigation devices
- Mining equipment
- LBS & M2M applications
- Handheld devices
- Law enforcement



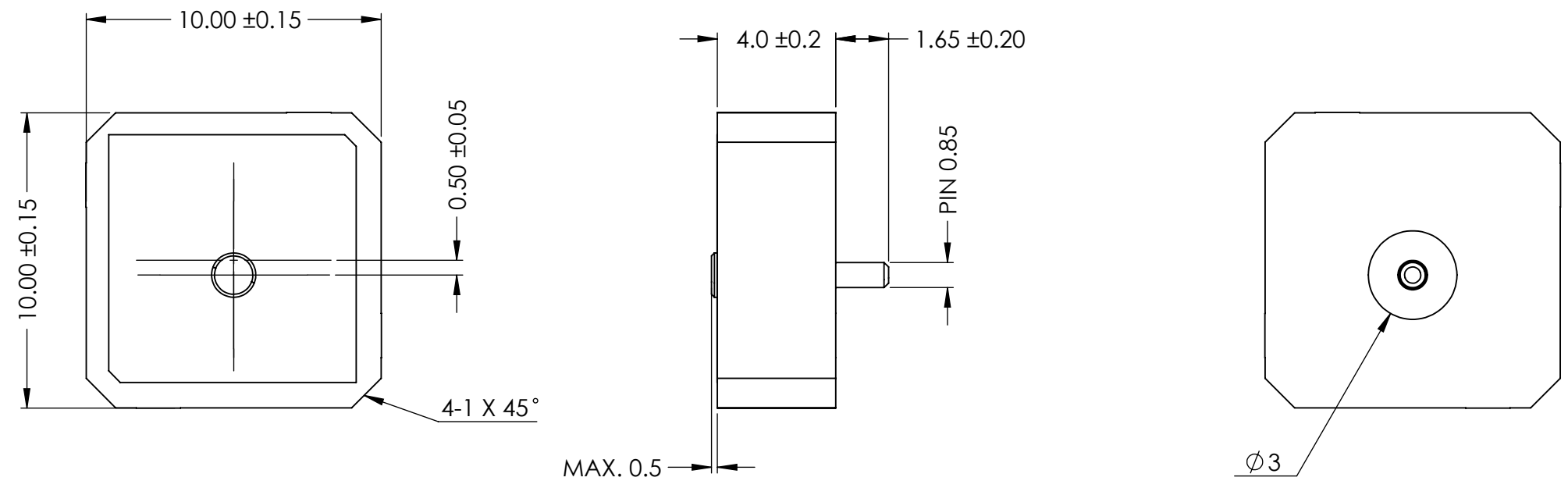
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- NOTES:  
 1. FREQUENCY: 1575.42 MHz  
 2. OPERATING TEMPERTATURE: -40° C ~ +105° C  
 3. STORAGE TEMPERTATURE: -40° C ~ +105° C

DRAWING REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
A	INITIAL RELEASE	2021-10-08	JET



ITEM 189-00080-01 REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
A	INITIAL RELEASE	2021-10-08	JET

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TOLERANCES:	CHECKED	ZX 2021-10-08
FRACTIONAL ±	ENG APPR.	NPC 2021-10-08
ANGULAR: MACH ± .5° BEND ±	MFG APPR.	
ONE PLACE DECIMAL ± 1.0	Q.A.	
TWO PLACE DECIMAL ± .50		
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TITLE: 189-00080-01 MPA-104-C		
SIZE	DWG. NO.	REV
B	117-00530-01	A
CAGE CODE: 5KQH7	SCALE: NONE	SHEET 1 OF 1