

MIA-GPS-12-C

Embedded GPS Active Antenna – 12mm
Part #: 189-00073-01

Description

The MIA-GPS-12-C is a high gain antenna customized for GPS frequencies. This advanced ceramic patch antenna includes an LNA and front-end SAW filter to reduce out of band noise with IPEX MHFI® (U.FL compatible) connector and 200 mm cable length.

This antenna is designed for embedded applications which feature high performance GPS applications such as GPS handheld units, mobile devices, and tracking devices. The MIA-GPS-10-C utilizes a special semi ceramic based material which leads to higher upper hemisphere efficiency and a lower axial ratio as compared to regular patch antennas. This allows the antenna to be superior and a top choice for demanding GPS multi-band/multi-frequency antenna requirements.

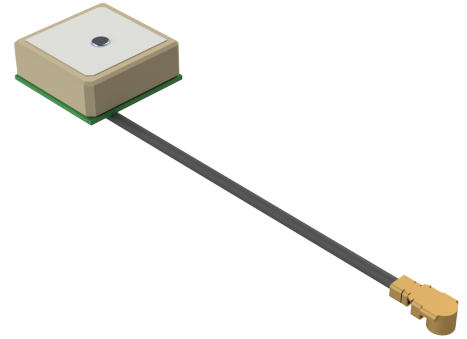
Our patch antenna offerings are perfect for projects with a smaller scope and budget for which high-performance and lower weight is not a primary factor for consideration for the antenna. It features a low noise figure and high-linearity LNA. The interface connector is available in U.FL or other. Cable length can also be customized.

Electrical Specification

Parameter		Specification		
Antenna	Frequency Range	1575.42 ± 1.023 MHz		
	Gain	-4.5 dBic Typ. @zenith		
	Polarization	RHCP		
	Axial Ratio	≤ 4 dB @zenith		
LNA	Frequency Range	1575.42 ± 1.023 MHz		
	Gain	≥ 23 dB; 25 dB typ.		
	Noise Figure	1.4 dB typ.		
	Impedance	50Ω		
	VSWR	≤ 2.0		
Input Voltage		min:2.7 V	typ.: 3.0 V	max:3.3 V
Current Consumption		≤ 15mA, typ.: 10mA (at 3.0V)		

Mechanical Specification

Parameter	Specification
Antenna Dimensions	12 x 12 x 6 mm
Antenna Type	Embedded
Operating Temperature	-40°C to 85°C
Connector	I-PEX
Cable Type	RF Coaxial Cable

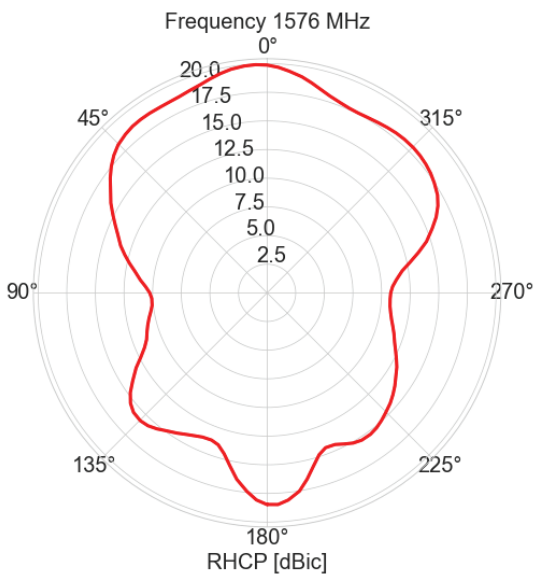
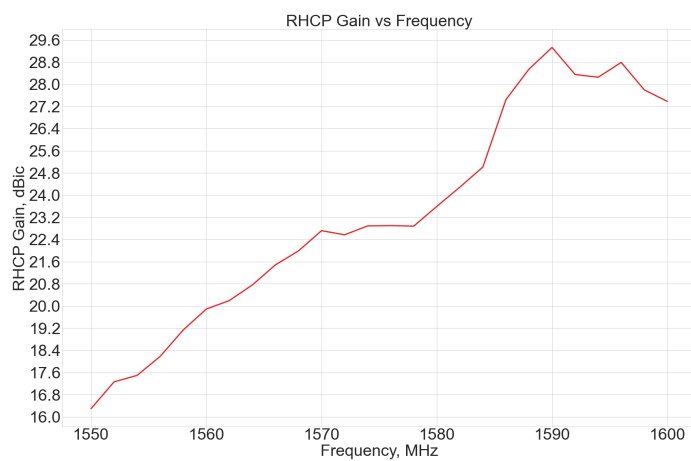
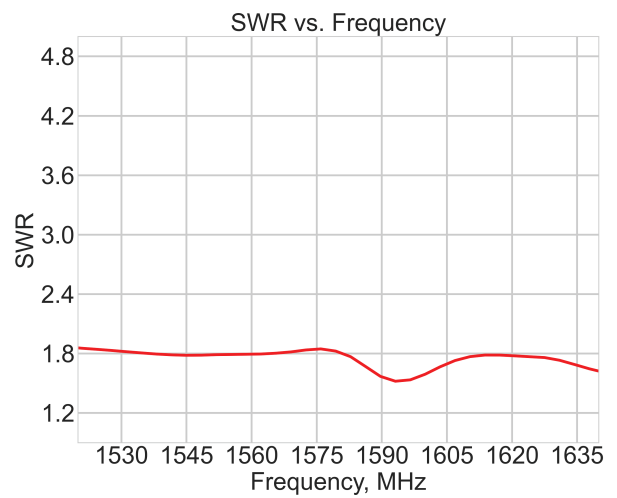
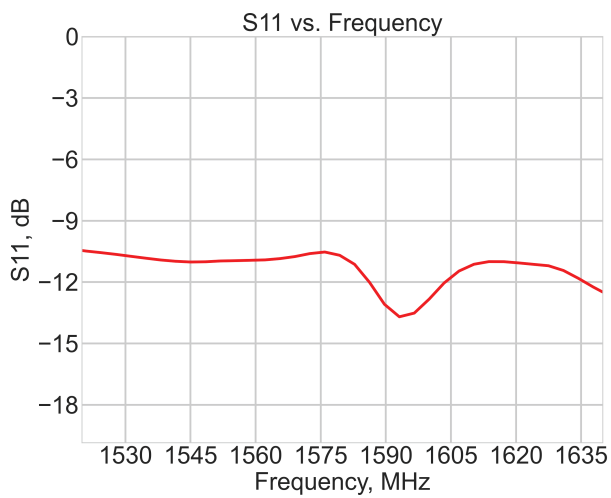


Features

- GPS L1 frequency
- Active LNA circuitry
- Compact size
- Custom tuning
- Custom connector/Cable size
- Excellent out-of-band signal rejection
- Ideal antenna solution for RTK systems

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

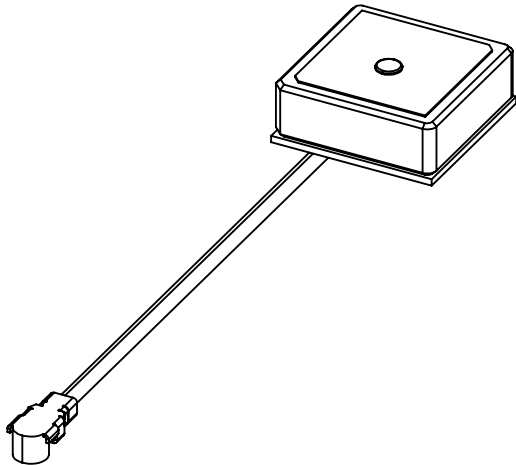
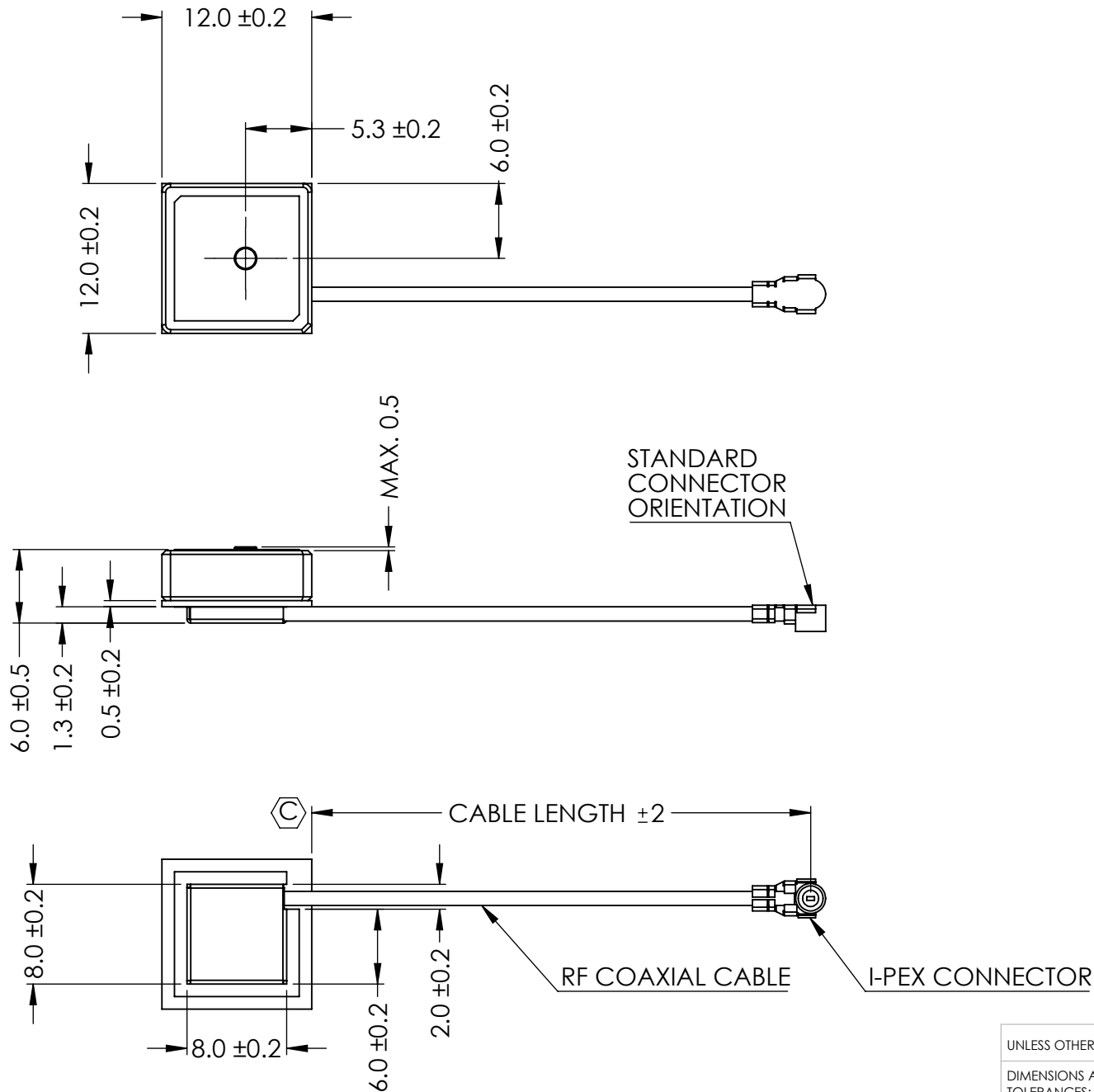


NOTES:

1. CUSTOMIZABLE CABLE AND CONNECTOR TYPE
2. OPERATING TEMPERTATURE: -40 C ~ +85 C
3. STORAGE TEMPERTATURE: -40 C ~ +90 C

DRAWING REVISION HISTORY

REV	DESCRIPTION	DATE	BY
A	INITIAL RELEASE	2021-09-24	JET
B	ADDED -02 CONFIGURATION	2022-04-01	SZ
C	FIXED CABLE LENGTH VALUES; ADDED FREQUENCY COLUMN; ADDED MORE CONFIGURATIONS	2022-05-06	SZ



189-00073 CONFIGURATION TABLE

DASH NO	CABLE TYPE	CABLE LENGTH	CONNECTOR TYPE	CONNECTOR ORIENTATION	FREQUENCY
-01	Ø 1.13 MM RF COAXIAL	40 MM	I-PEX	DOWNWARD FACING	1575 MHz
-02	Ø 1.13 MM RF COAXIAL	30 MM	I-PEX	DOWNWARD FACING	1575 MHz
-03	Ø 1.13 MM RF COAXIAL	30 MM	I-PEX	DOWNWARD FACING	1545 MHz
-04	Ø 1.13 MM RF COAXIAL	30 MM	I-PEX	DOWNWARD FACING	1550 MHz
-05	Ø 1.13 MM RF COAXIAL	30 MM	I-PEX	DOWNWARD FACING	1555 MHz
-06	Ø 1.13 MM RF COAXIAL	30 MM	I-PEX	DOWNWARD FACING	1560 MHz
-07	Ø 1.13 MM RF COAXIAL	30 MM	I-PEX	DOWNWARD FACING	1565 MHz

UNLESS OTHERWISE SPECIFIED:

DIMENSIONS ARE IN MM
TOLERANCES:
FRACTIONAL ±
ANGULAR: MACH ± .5° BEND ±
ONE PLACE DECIMAL ± 1.0
TWO PLACE DECIMAL ± .50

INTERPRET GEOMETRIC
TOLERANCING PER:



THIRD ANGLE PROJECTION

DO NOT SCALE DRAWING

NAME

DATE

DRAWN

JET

2021-09-24

CHECKED

ZX

2021-09-24

ENG APPR.

NPC

2021-09-24

MFG APPR.

Q.A.

CAD MAINTAINED.
CHANGES SHALL BE
INCORPORATED BY
THE DESIGN ACTIVITY.

MAXTENA, INC

TITLE:

189-00073
MIA-GPS-12-C

SIZE

B

DWG. NO.

117-00512-01

REV

C

CAGE CODE: 5KQH7

SCALE: NONE

SHEET 1 OF 1

ITEM 189-00073 REVISION HISTORY

REV	DESCRIPTION	DATE	BY
A	INITIAL RELEASE	2021-09-24	JET

PROPRIETARY AND CONFIDENTIAL

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