



MPA-356-1516

GPS-GLONASS-BEIDOU MICROSTRIP ANTENNA

Ordering Part #: 189-00049-01



Description

The MPA-356-1516 is a high gain antenna customized for GPS, GLONASS and BEIDOU frequencies. This antenna is designed for embedded applications which feature GNSS such tracking devices and IOT solutions. The MPA-356-1516 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 GNSS multiband/multifrequency antenna requirements. The interface connector is a through pin solution. This antenna has to be fully tuned and customized.

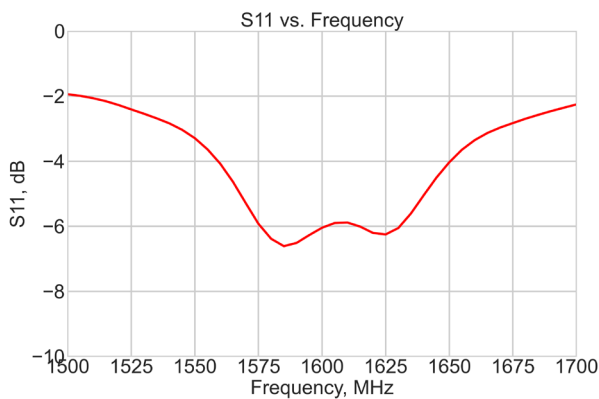
Electrical Specifications

70x70 mm ground plane

Parameter	Design Specifications
Frequency	GPS: 1575.42 MHz \pm 1.023 MHz GLONASS: 1602 MHz \pm 5 MHz Beidou: 1561.098 MHz \pm 2.046 MHz
Center Frequency	1594 MHz \pm 6 MHz
Bandwidth	49 MHz min
VSWR	1.5 max
Polarization	RHCP
Gain at Zenith	GPS: +3.7 dBi typ. GLONASS: +4.9 dBi typ. Beidou: +5.2 dBi typ.
Impedance	50 Ohm
Operating Temperature	from -40°C to 85°C

S11 vs. Frequency plot

Measured at 1575.42, 1602, 1561.098 MHz on a 70x70 mm ground plane.



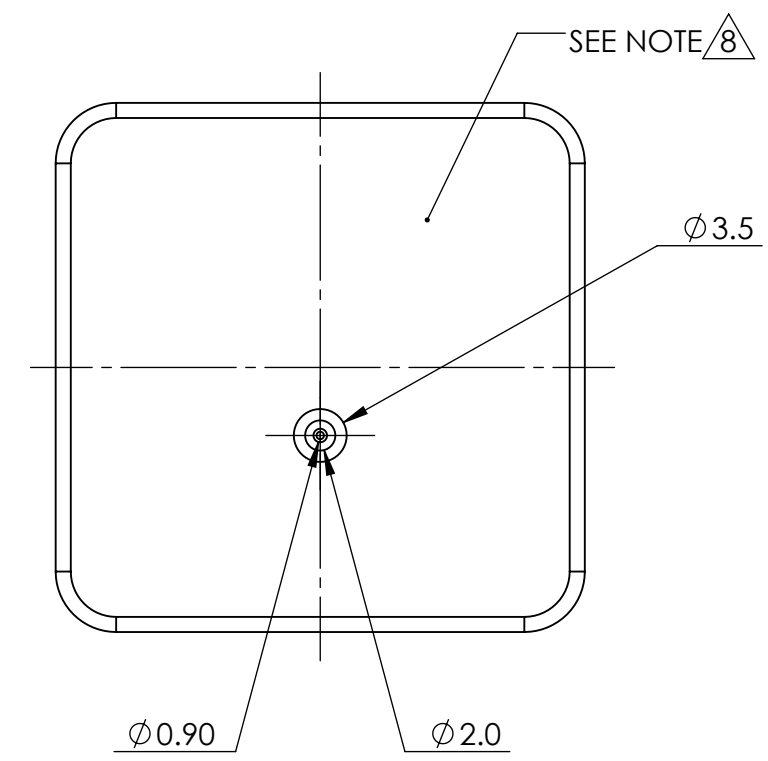
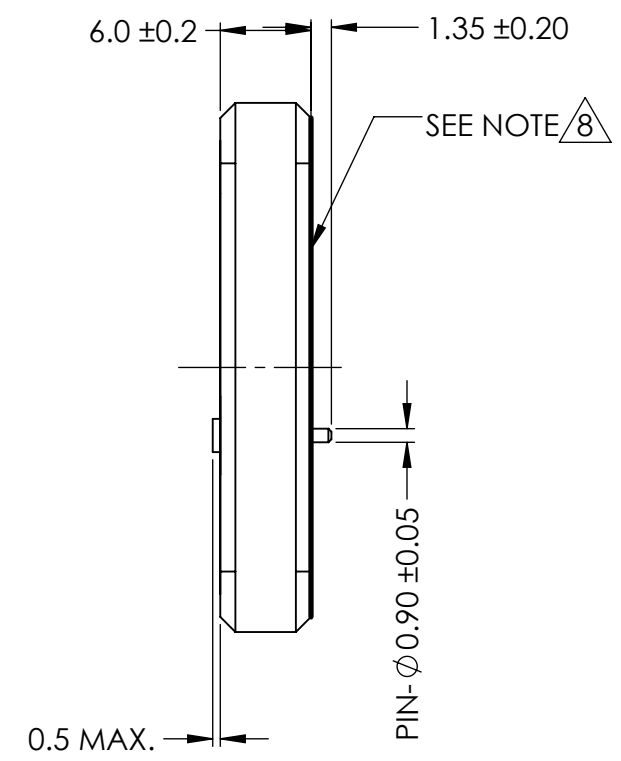
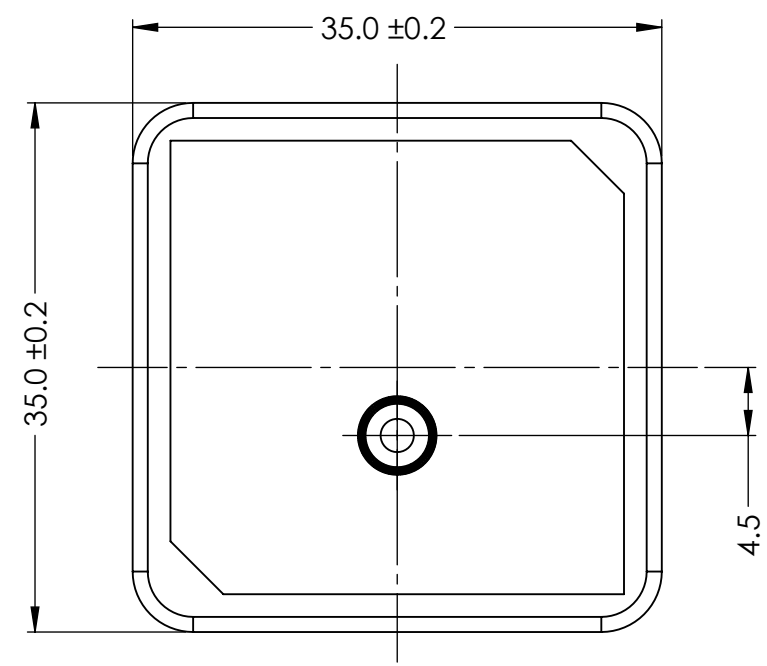
Features

- GPS, GLONASS, Beidou 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

DRAWING REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
A	INITIAL RELEASE	2021-01-27	QZ



NOTES:

- RANGE OF RECEIVING FREQUENCY:
BEIDOU: 1561.098±2.046 MHz
GPS: 1575.42±1.023 MHz
GLONASS: 1602±5 MHz
- CENTER FREQUENCY: 1594 MHz ±6 MHz (WITH 66.14×54.60 MM GND PLANE)
- BANDWIDTH: 46MHz MIN (RETURN LOSS@-10dBi)
- VSWR: 1.5MAX (CENTER FREQUENCY)
- GAIN AT ZENITH:
BEIDOU: +5.2 dBi TYP.
GPS: +3.7 dBi TYP.
GLONASS: +4.9 dBi TYP.
- IMPEDANCE: 50 OHM
- OPERATING TEMPERATURE: -40°C TO +105°
- DOUBLE-SIDE ADHESIVE ON THIS SURFACE FOR INDUSTRIAL USE.

ITEM 189-00049-01 REVISION HISTORY			
REV	DESCRIPTION	DATE	BY
A	INITIAL RELEASE	2021-01-27	QZ

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UNLESS OTHERWISE SPECIFIED:

DIMENSIONS ARE IN MM
TOLERANCES:
FRACTIONAL ±
ANGULAR: MACH ± .5° BEND ±
INTEGER ± 2
ONE PLACE DECIMAL ± 1.0
TWO PLACE DECIMAL ± 0.50
INTERPRET GEOMETRIC TOLERANCING PER:

	NAME	DATE
DRAWN	QZ	2021-01-27
CHECKED	ZX	2021-02-02
ENG APPR.	NPC	2021-02-04
MFG APPR.		
Q.A.		

THIRD ANGLE PROJECTION

DO NOT SCALE DRAWING

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

MAXTENA, INC

TITLE: 189-00049-01

MPA-356, 35x35x6MM, BEIDOU/GPS/GLONASS

SIZE	DWG. NO.	REV
B	117-00396-01	A

CAGE CODE: 5KQH7 SCALE: NONE SHEET 1 OF 1