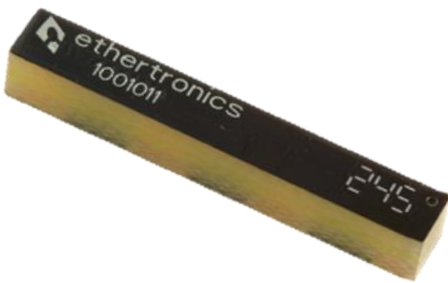


Part No. 1001011

GPS/GLONASS/Beidou/Galileo FR4 Antenna (On/Off Ground)

1.561, 1.575, 1.603 GHz

Supports: Tracking, Smart Home, Agriculture, Automotive, Healthcare, Digital Signage, Wearables, Industrial Devices



Ethertronics' antennas deliver on the key needs of device designers for higher functionality and performance in smaller/thinner designs. These innovative antennas provide compelling advantages for 1.575 GHz enabled handheld devices, media players and other mobile devices.

Real-World Performance and Implementation

Antennas may look alike on the outside, but the important difference is inside. Other antennas may contain simple PIFA or monopole designs that interact with their surroundings, complicating layout or changing performance with use position. Ethertronics' antennas utilize patented Isolated Magnetic Dipole (IMD) technology to deliver a unique size and performance combination.

GPS / GLONASS / Beidou / Galileo FR4 Antenna

1.559 – 1.610 GHz

Greater Flexibility

Ethertronics' IMD technology enables the advance antenna design that delivers superior performance in reception critical applications. 1001011 is capable for off-ground and on-ground (over metal) environments.

Electrical Specifications

Typical Characteristics, on 72 x 50 mm PCB

| Frequency (GHz) | 1.559 - 1.563 | 1.575 | 1.559 - 1.591 | 1.593 - 1.610 |
|------------------------------|-------------------------------|--------------|---------------|---------------|
| Mounting | Off Ground / On Ground | | | |
| GNSS Bands | Beidou | GPS | Galileo | Glonass |
| Peak Gain (dBi) | 0.96 / -0.26 | 0.87 / -0.22 | 0.96 / -0.18 | 1.00 / -0.35 |
| Efficiency (%) | 72 / 47 | 71 / 46 | 70 / 45 | 69 / 41 |
| Center Frequency f_0 (GHz) | 1.561 | 1.575 | 1.575 | 1.603 |
| VSWR | 1.5:1 / 2.5:1 | | | |
| Feed Point Impedance | 50 Ω unbalanced | | | |

KEY BENEFITS

Stay-in-Tune

IMD antenna technology provides superior RF field containment, resulting in less interaction with surrounding components.

Quicker Time-to-Market

By optimizing antenna size, performance and emissions, customer and regulatory specifications are more easily met.

Reliability

Products are the latest RoHS version compliant.

APPLICATIONS

- Embedded design
- Cellular, Headsets, Tablets
- Gateway, Access Point
- Handheld
- Telematics
- Tracking
- Healthcare
- M2M, Industrial devices
- Smart Grid
- OBD-II

Mechanical Specifications & Ordering Part Number

| Ordering Part Number | 1001011 |
|----------------------|----------------------------|
| Size (mm) | 22.0 x 3.2 x 3.3 |
| Mounting | Surface mounted to the PCB |
| Weight (grams) | 0.45 |
| Packaging | Tape & Reel |
| Demo Board | 1001011-02 |

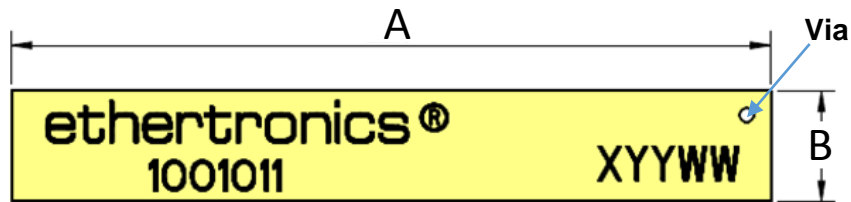
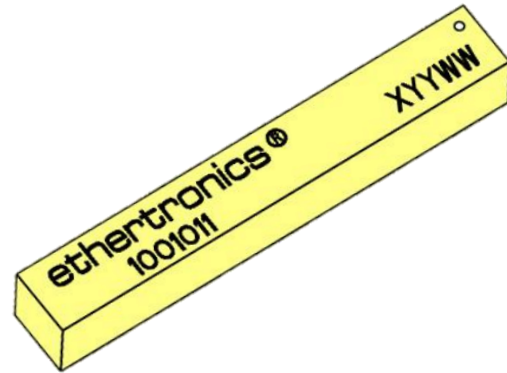


1.575 GHz Ethertronics' Embedded Antenna Specifications.
Ethertronics produces a wide variety of standard and custom antennas to meet user needs.

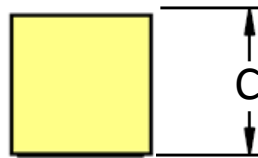
Antenna Dimensions

Typical antenna dimensions (mm)

| Part Number | A (mm) | B (mm) | C (mm) |
|-------------|------------|-----------|-----------|
| 1001011 | 22.0 ± 0.3 | 3.2 ± 0.2 | 3.3 ± 0.3 |



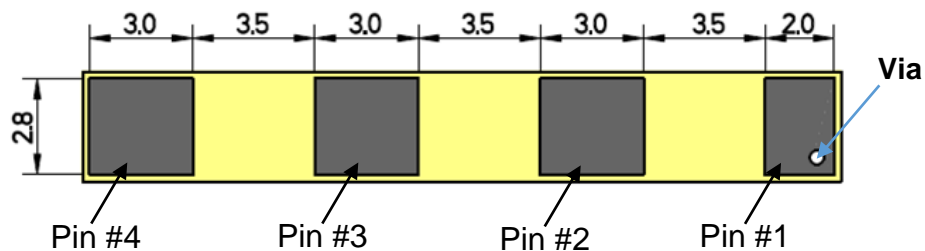
Top View



Height

Pin Descriptions

| Pin# | Description |
|------|-------------|
| 1 | Feed |
| 2 | Dummy Pad |
| 3 | Dummy Pad |
| 4 | Dummy Pad |



Bottom View

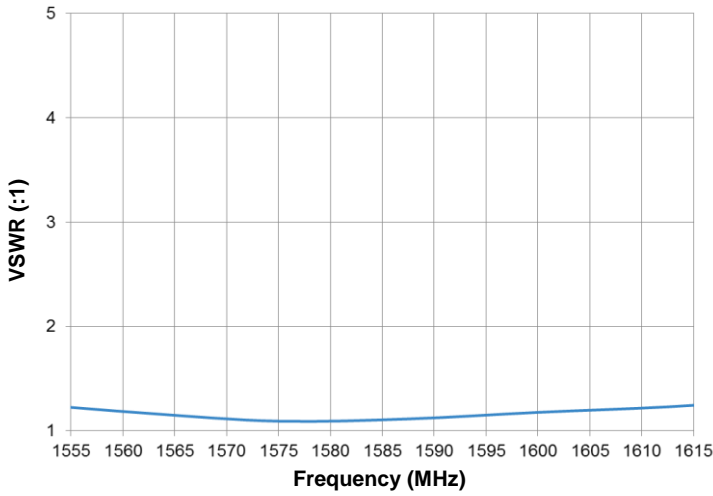


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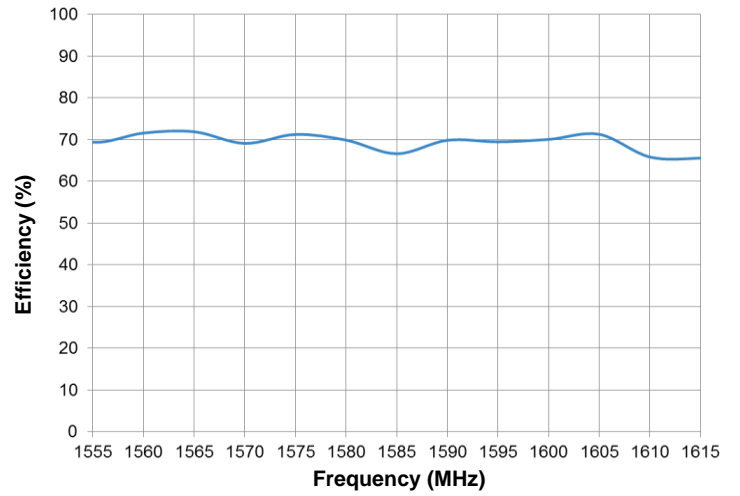
VSWR and Efficiency Plots (Off-Ground)

Typical Performances on 72 x 50 mm PCB

VSWR

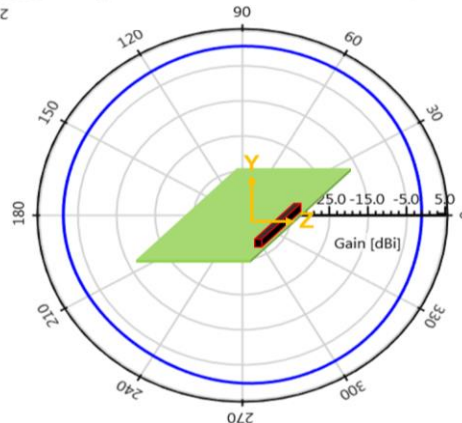
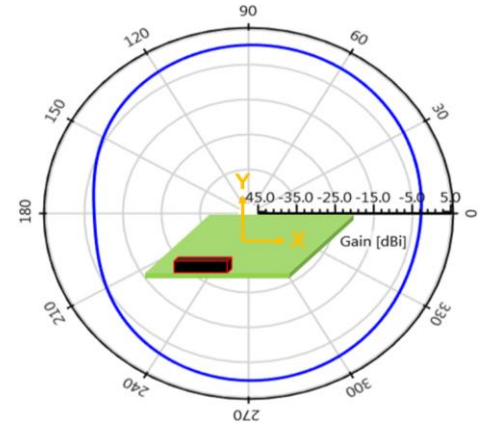
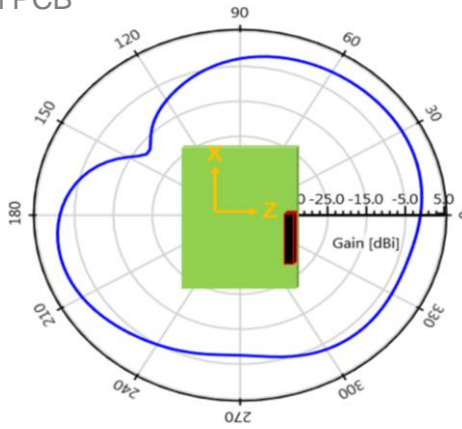


Efficiency



Antenna Radiation Patterns (Off-Ground)

Typical Performances on 72 x 50 mm PCB
measured @ 1.575 GHz

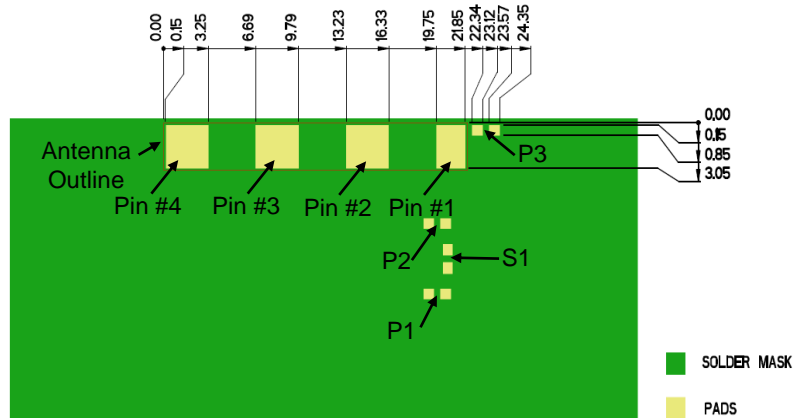
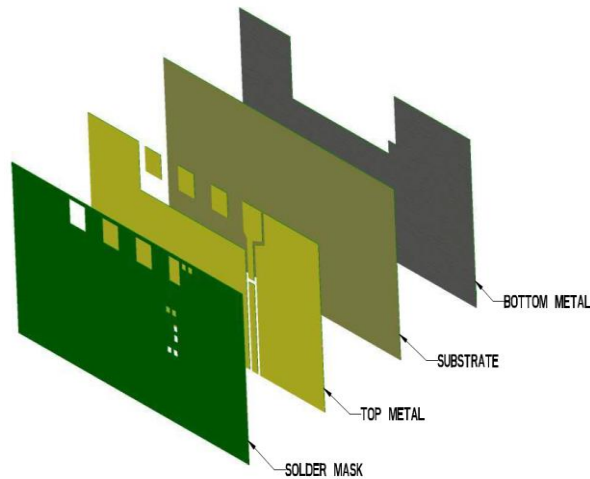




1.575 GHz Ethertronics' Embedded Antenna Specifications.
Ethertronics produces a wide variety of standard and custom antennas to meet user needs.

Antenna Layout (Off-Ground)

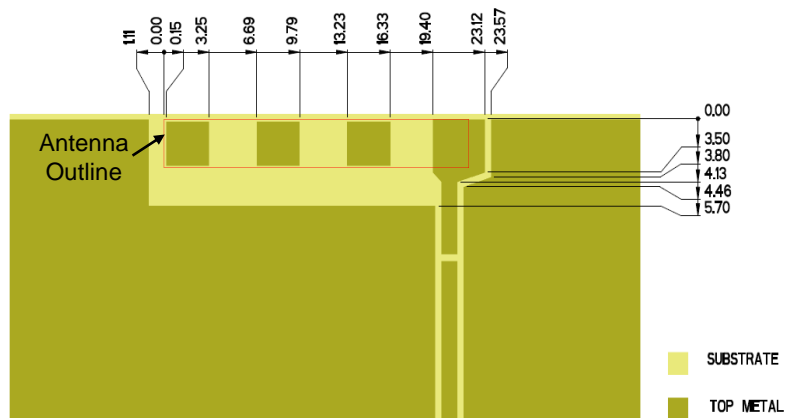
Typical layout dimensions (mm)



* VIAS: Diam. 0.2mm, (no vias on transmission lines).
Via holes must be covered by solder mask

Pin Descriptions

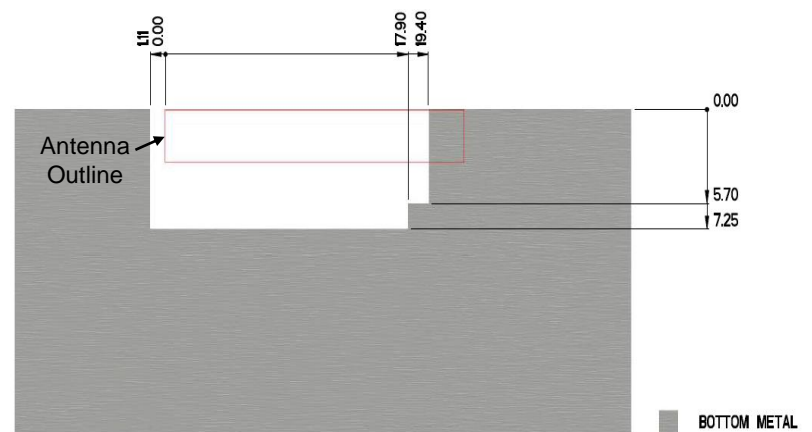
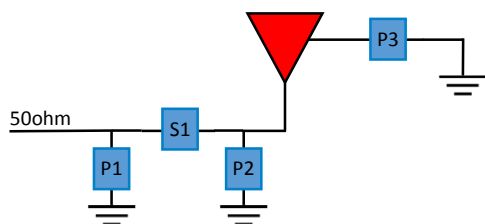
| Pin# | Description |
|------|-------------|
| 1 | Feed |
| 2 | Dummy Pad |
| 3 | Dummy Pad |
| 4 | Dummy Pad |



Matching Pi Network (Demo Board)

| Component | Value | Tolerance |
|-----------|-------|-----------|
| P1 | DNI | N/A |
| S1 | 4.3pF | ±0.25pF |
| P2 | 1pF | ±0.5pF |
| P3 | 0Ω | N/A |

*Actual matching values depend on customer design



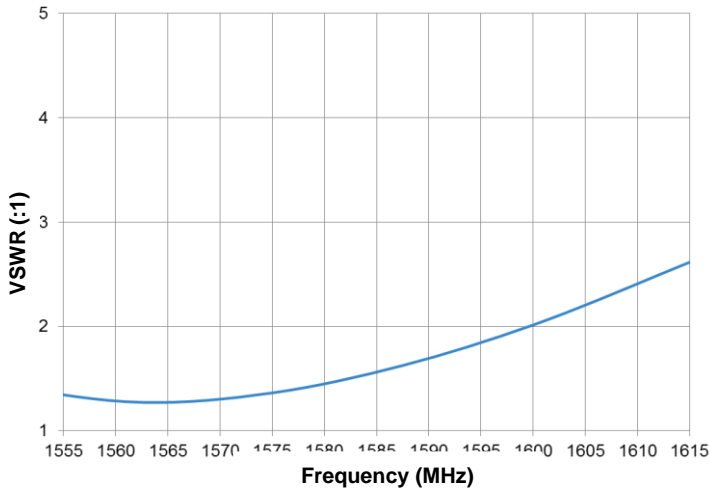


1.575 GHz Ethertronics' Embedded Antenna Specifications.
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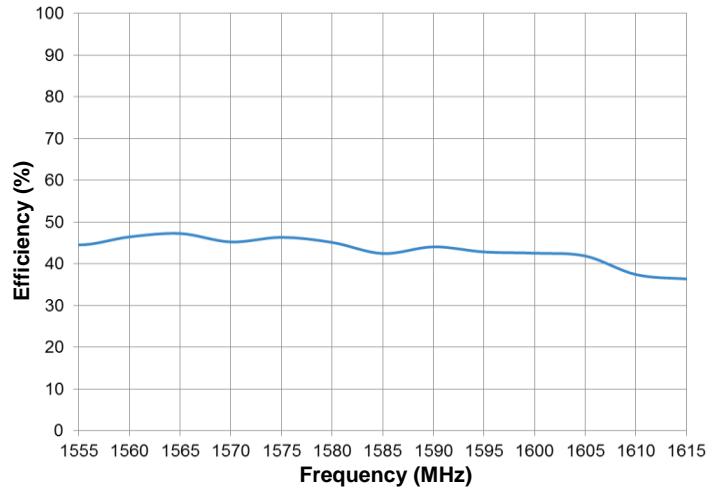
VSWR and Efficiency Plots (On-Ground)

Typical Performances on 72 x 50 mm PCB

VSWR

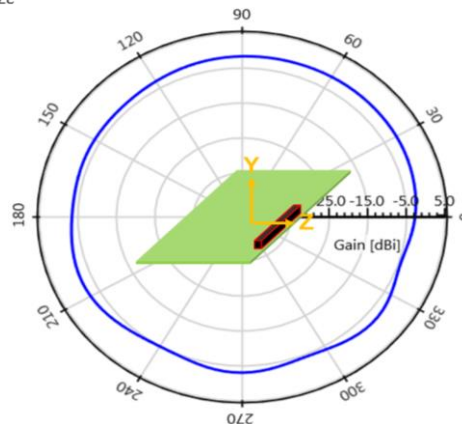
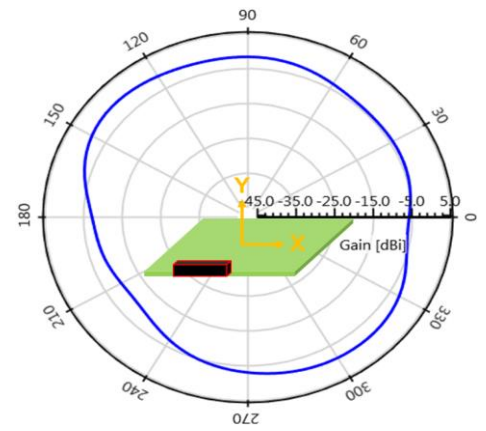
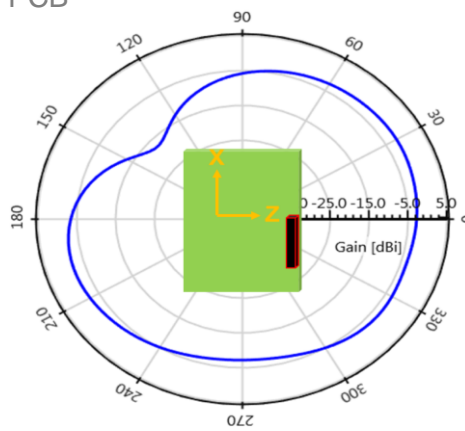


Efficiency



Antenna Radiation Patterns (On-Ground)

Typical Performances on 50 x 72 mm PCB
measured @ 1.575 GHz

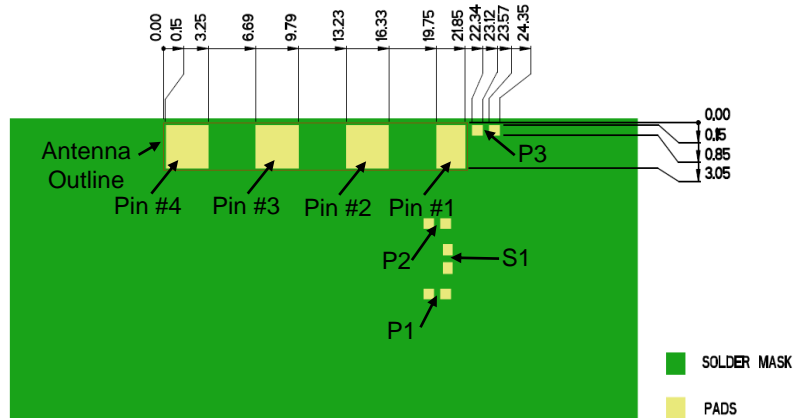
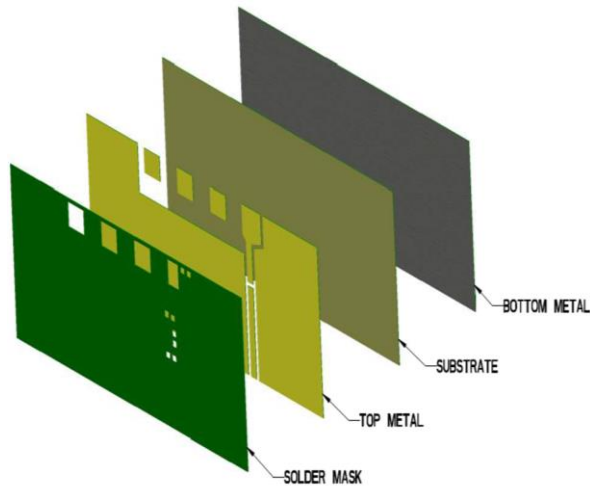




1.575 GHz Ethertronics' Embedded Antenna Specifications.
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Antenna Layout (On-Ground)

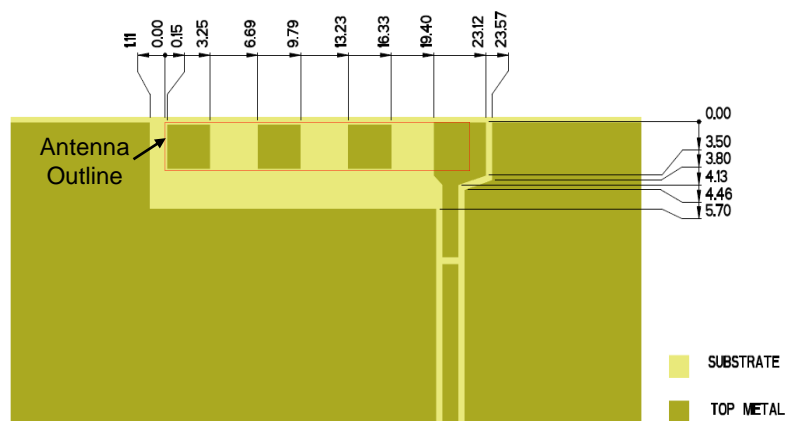
Typical layout dimensions (mm)



* VIAS: Diam. 0.2mm, (no vias on transmission lines).
Via holes must be covered by solder mask

Pin Descriptions

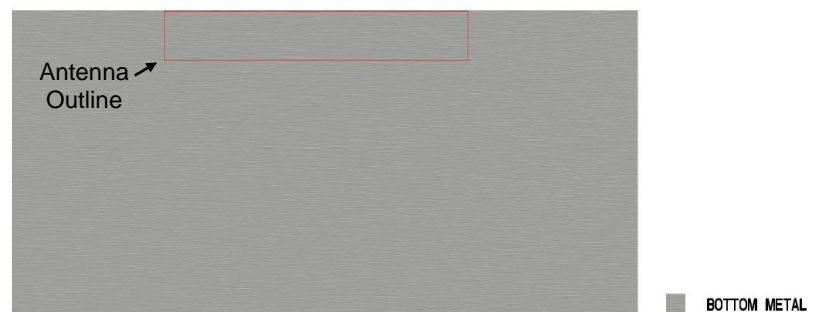
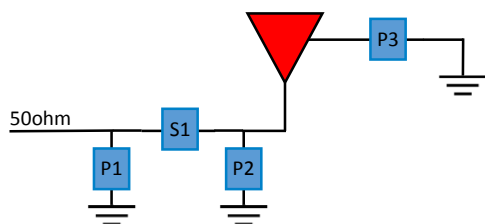
| Pin# | Description |
|------|-------------|
| 1 | Feed |
| 2 | Dummy Pad |
| 3 | Dummy Pad |
| 4 | Dummy Pad |



Matching Pi Network (Demo Board)

| Component | Value | Tolerance |
|-----------|-------|-----------|
| P1 | 2.4pF | ±0.1pF |
| S1 | 0Ω | N/A |
| P2 | DNI | N/A |
| P3 | 0Ω | N/A |

*Actual matching values depend on customer design

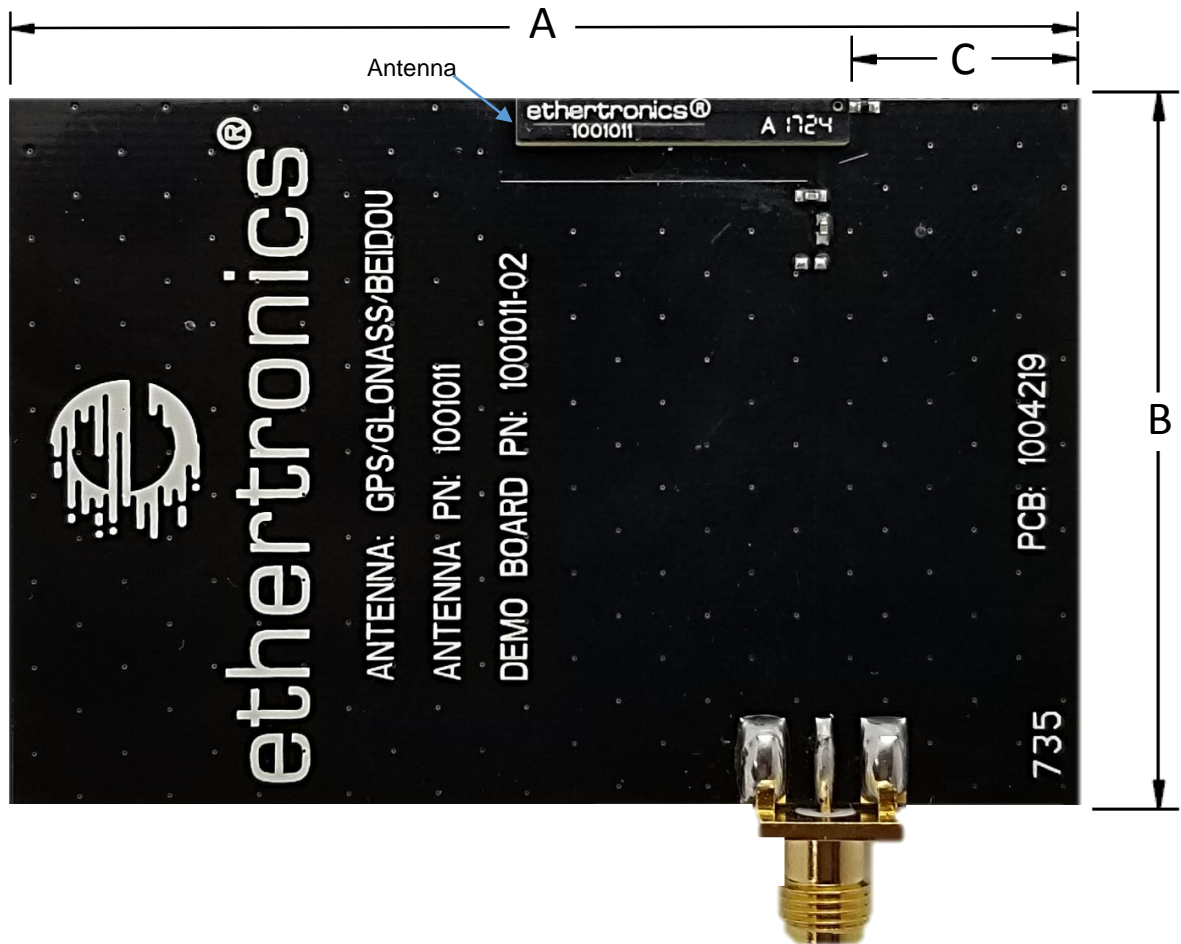




1.575 GHz Ethertronics' Embedded Antenna Specifications.
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Antenna Demo Board
1001011-02 Off-Ground

| Part Number | A (mm) | B (mm) | C (mm) |
|-------------|--------|--------|--------|
| 1001011-02 | 72.0 | 50.0 | 15.0 |



Данный компонент на территории Российской Федерации

Вы можете приобрести в компании MosChip.

Для оперативного оформления запроса Вам необходимо перейти по данной ссылке:

<http://moschip.ru/get-element>

Вы можете разместить у нас заказ для любого Вашего проекта, будь то серийное производство или разработка единичного прибора.

В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

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