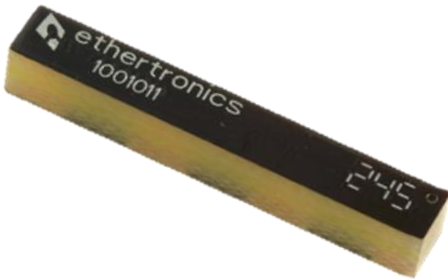


Part No. 1001011

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.

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 | Glomass |
| 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 | | | |

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 |

GPS / GLONASS / Beidou / Galileo FR4 Antenna

1.559 – 1.610 GHz

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

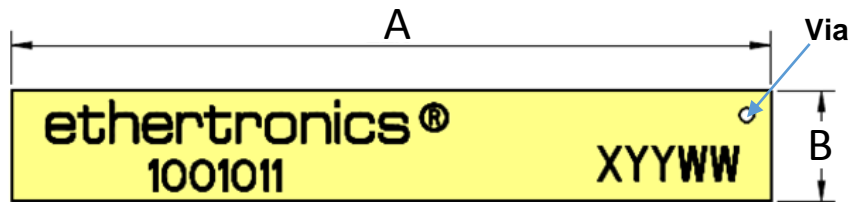
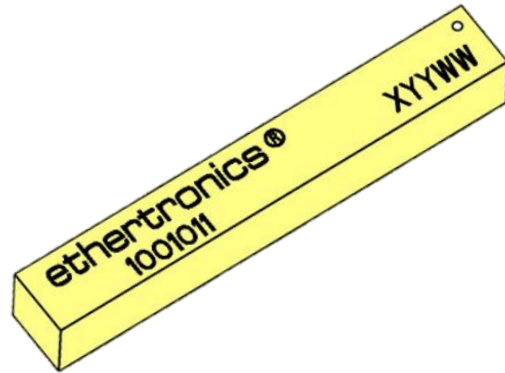


1.575 GHz Ethertronics' Embedded Antenna Specifications.
Ethertronics produces a wide variety of standard and custom antennas to meet user needs.

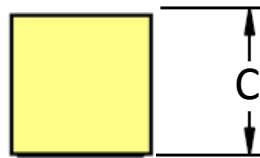
Antenna Dimensions

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 |



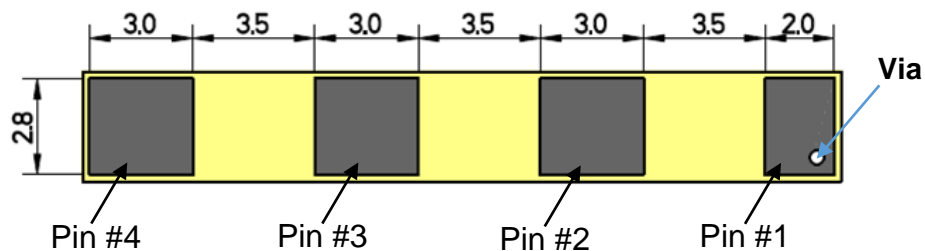
Top View



Height

Pin Descriptions

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



Bottom View

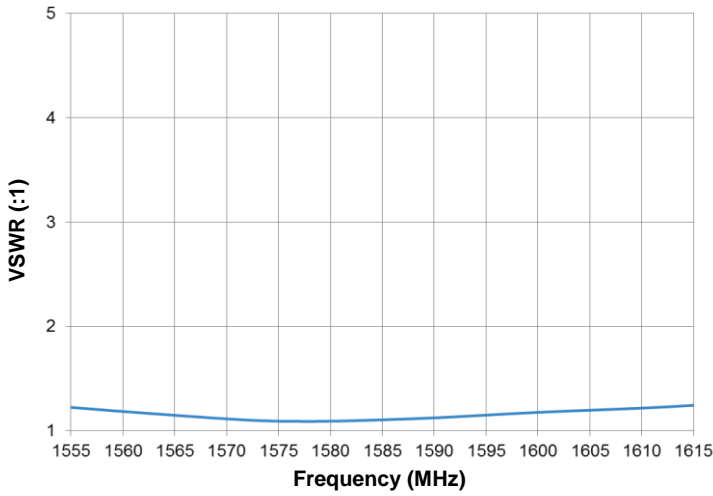


1.575 GHz Ethertronics' Embedded Antenna Specifications.
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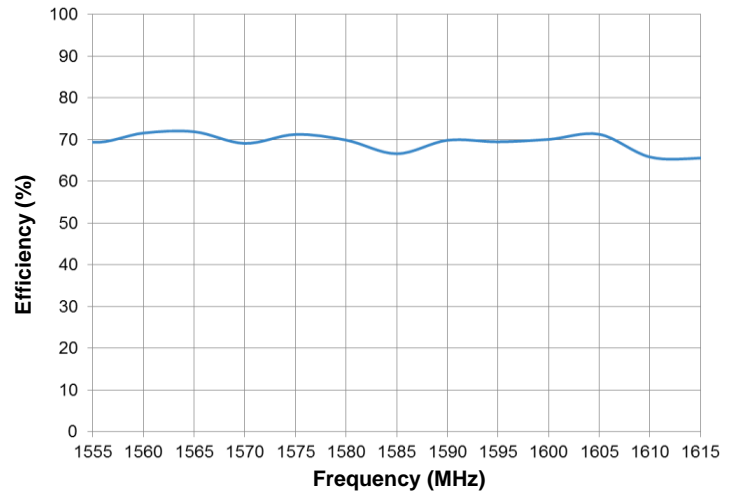
VSWR and Efficiency Plots (Off-Ground)

Typical Performances on 72 x 50 mm PCB

VSWR

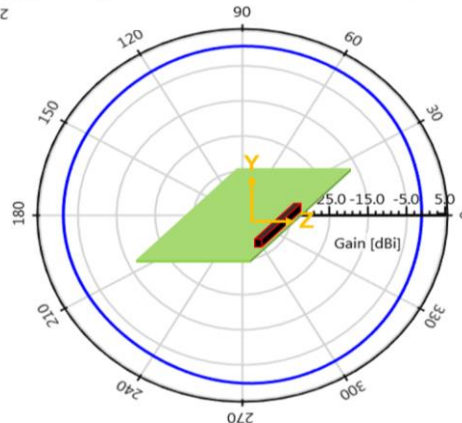
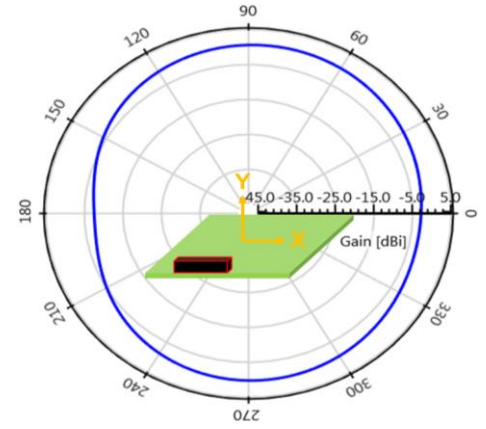
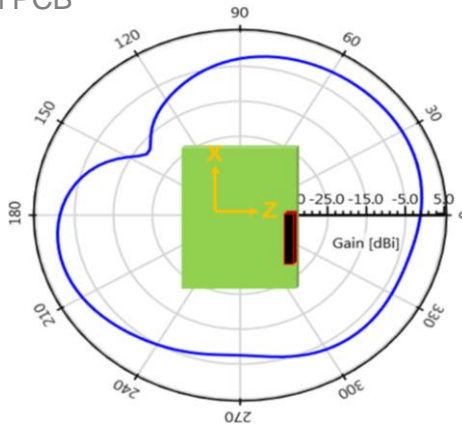


Efficiency



Antenna Radiation Patterns (Off-Ground)

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

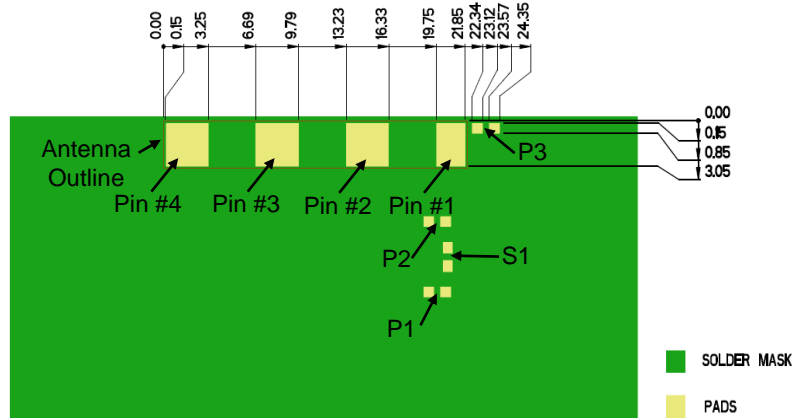
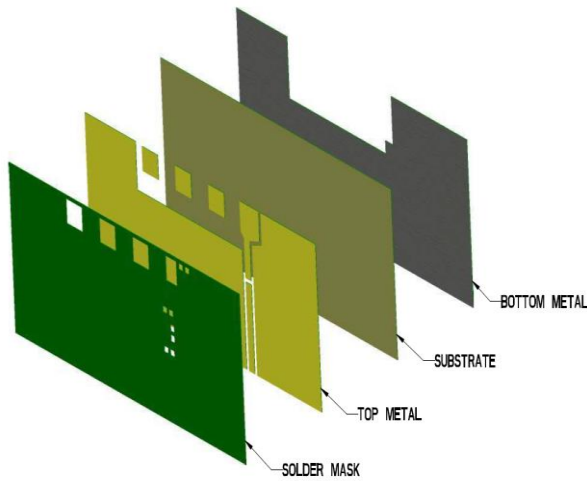




1.575 GHz Ethertronics' Embedded Antenna Specifications.
Ethertronics produces a wide variety of standard and custom antennas to meet user needs.

Antenna Layout (Off-Ground)

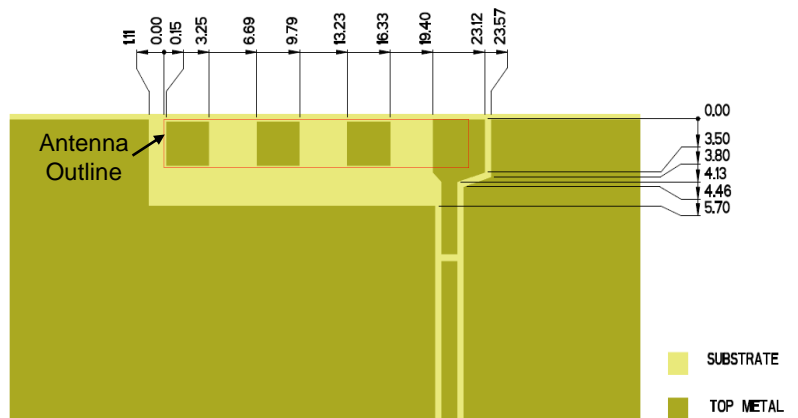
Typical layout dimensions (mm)



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

Pin Descriptions

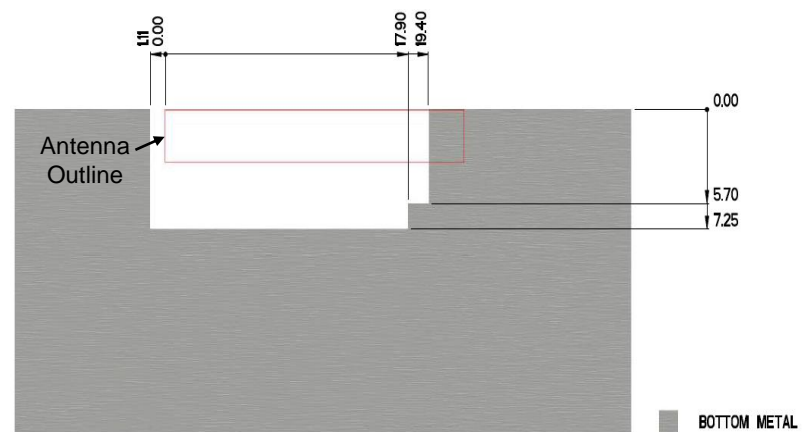
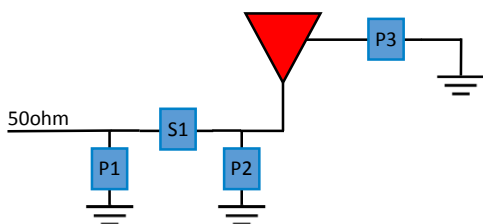
| Pin# | Description |
|------|-------------|
| 1 | Feed |
| 2 | Dummy Pad |
| 3 | Dummy Pad |
| 4 | Dummy Pad |



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



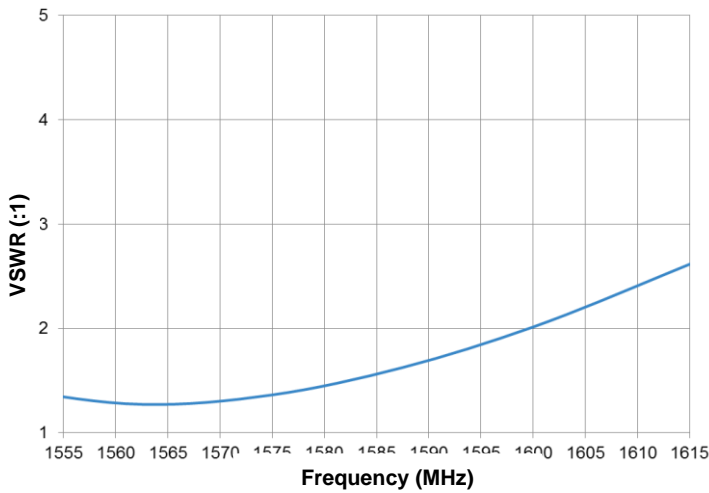


1.575 GHz Ethertronics' Embedded Antenna Specifications.
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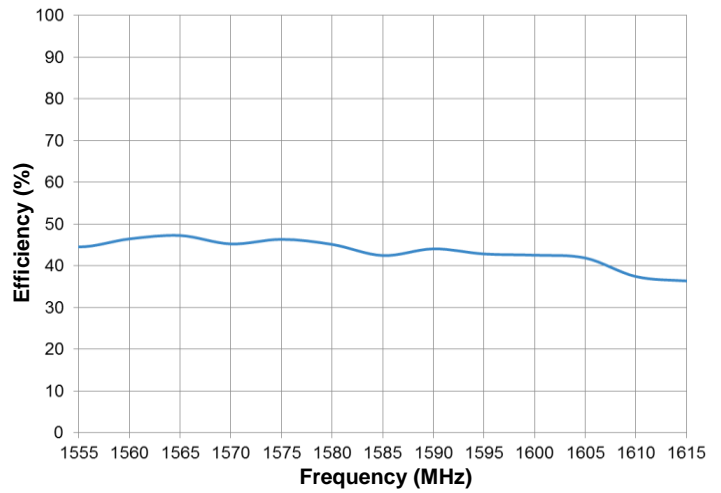
VSWR and Efficiency Plots (On-Ground)

Typical Performances on 72 x 50 mm PCB

VSWR

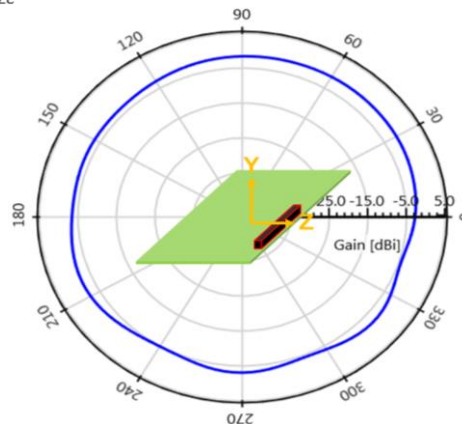
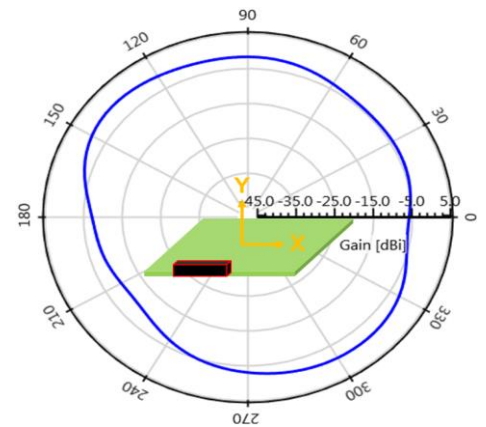
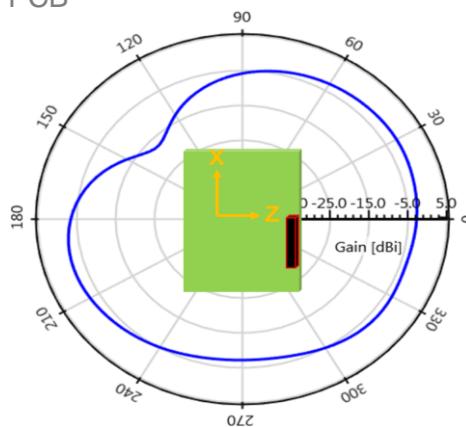


Efficiency



Antenna Radiation Patterns (On-Ground)

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

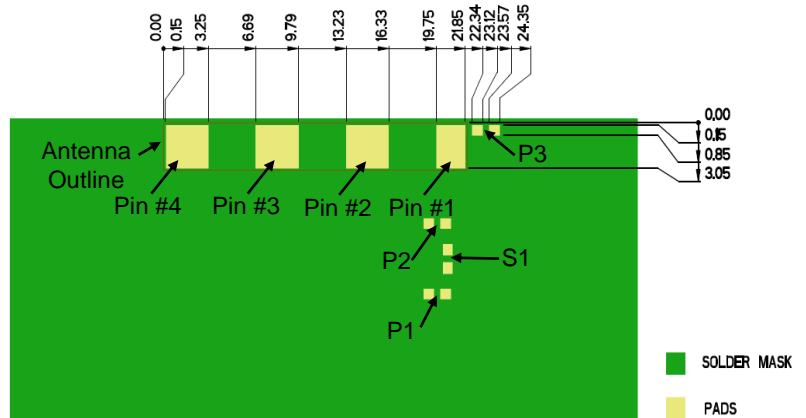
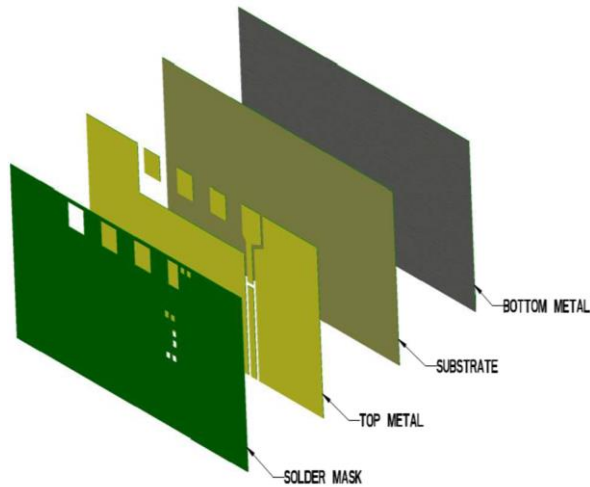




1.575 GHz Ethertronics' Embedded Antenna Specifications.
Ethertronics produces a wide variety of standard and custom antennas to meet user needs.

Antenna Layout (On-Ground)

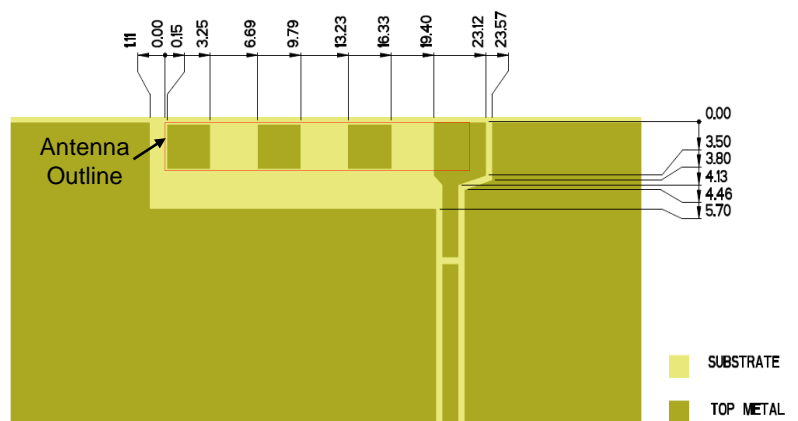
Typical layout dimensions (mm)



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

Pin Descriptions

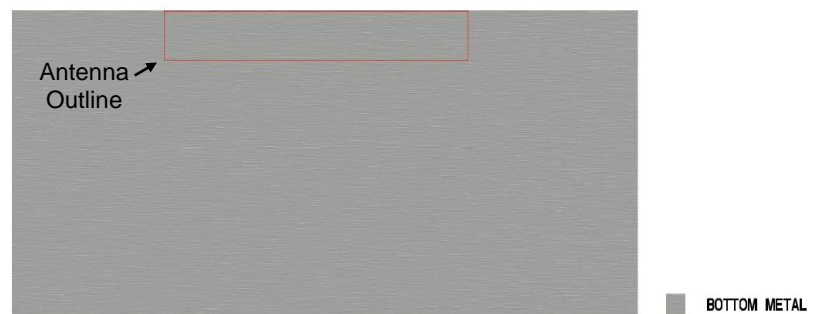
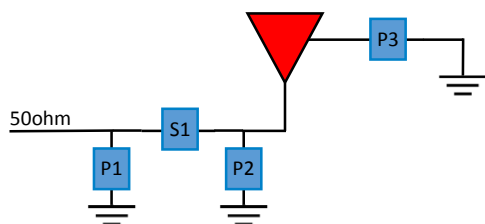
| Pin# | Description |
|------|-------------|
| 1 | Feed |
| 2 | Dummy Pad |
| 3 | Dummy Pad |
| 4 | Dummy Pad |



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

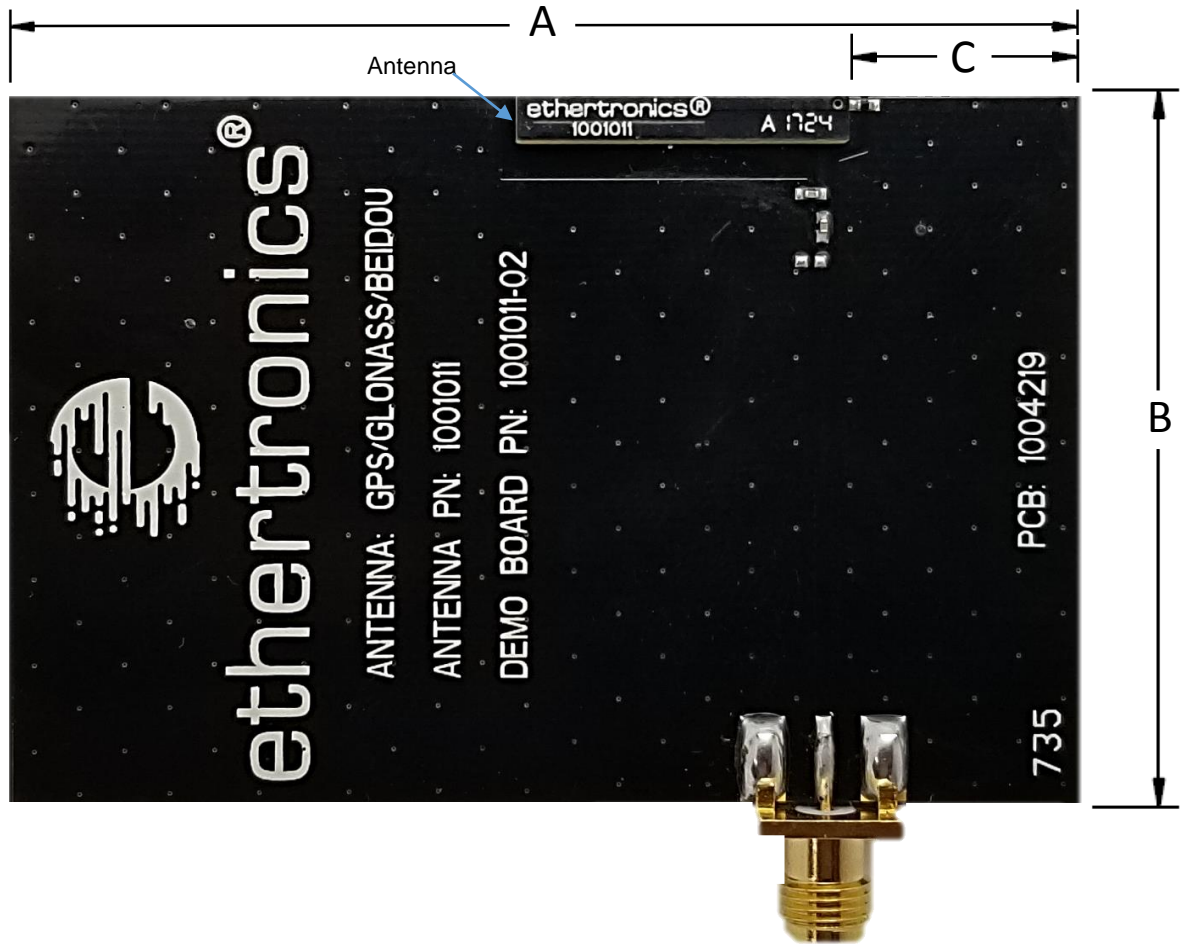




1.575 GHz Ethertronics' Embedded Antenna Specifications.
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Antenna Demo Board
1001011-02 Off-Ground

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





Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

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Факс: 8 (812) 320-02-42

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