

# DATA SHEET

## WIRELESS COMPONENTS

PCB type antenna  
ANTX200P001B15163

GPS/ GLONASS/ BDS



**FEATURES & BENEFITS**

- The smallest PCB antenna in the market
- Miniature design allows users to save required space
- Double-side adhesive tape makes it easy to instal in device
- Ranges of types of connector and cable provide a flexible design options
- Halogen free and RoHS compliant

**APPLICATIONS**

- Automotive
- Tablet
- Mobile phone
- Industrial computing
- Agriculture
- Tracking asset
- Fleet tracking

**ORDERING INFORMATION - GLOBAL PART NUMBER, PHYCOMP****CTC & I2NC**

All part numbers are identified by the series, packing type, material, size, antenna type, working frequency and packing quantity.

**YAGEO BRAND ordering code****GLOBAL PART NUMBER (PREFERRED)**

**ANT X200 P 001 B 1516 3**  
(1) (2) (3) (4) (5) (6) (7)

**(1) FAMILY**

ANT = Antenna products

**(2) CONNECTOR & CABLE LENGTH (MM)**

X = I-PEX  
200= 200mm

**(3) ANTENNA TYPE**

P=PCB

**(4) SERIAL NUMBER**

001 = SERIAL NUMBER 001

**(5) PACKAGE TYPE**

B = Bulk

**(6) WORKING FREQUENCY**

1575 = 1.559~1.612 GHz

**(7) CABLE TYPE**

3 = 1.13mm diameter Mini-Coaxial Cable

## SPECIFICATIONS

Table 1

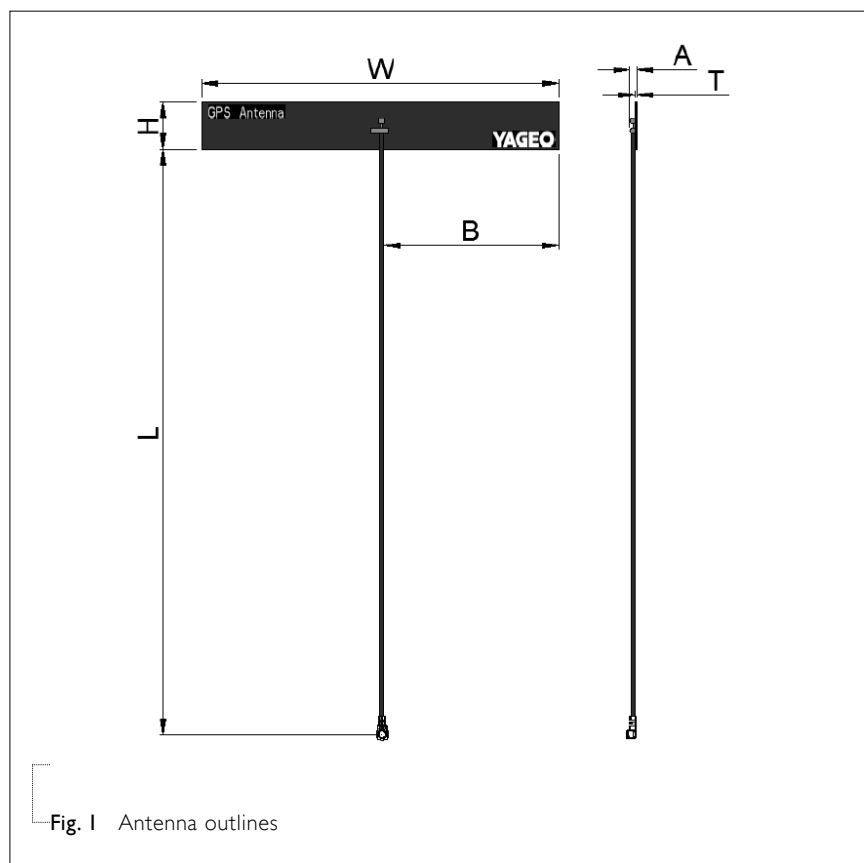
| DESCRIPTION                     | VALUE                  |
|---------------------------------|------------------------|
| Working Frequency               | 1.559 ~ 1.612 GHz      |
| VSWR                            | 2.5:1max               |
| Peak Gain                       | 3.08 dBi               |
| Polarization                    | Linear                 |
| Radiation Pattern               | Omni-directional       |
| Impedance                       | 50 $\Omega$ Nominal    |
| Operating Temperature           | - 40 °C to 85 °C       |
| Maximum Power                   | 1 W                    |
| PCB Dimension                   | 40mm × 7.5mm × 0.55mm  |
| Radio Connector                 | I-PEX (20278-112R-13)  |
| Cable Diameter / Length / Color | 1.13mm / 200mm / Black |
| Mounting                        | Adhesive Tape (HF-DS)  |

## DIMENSIONS

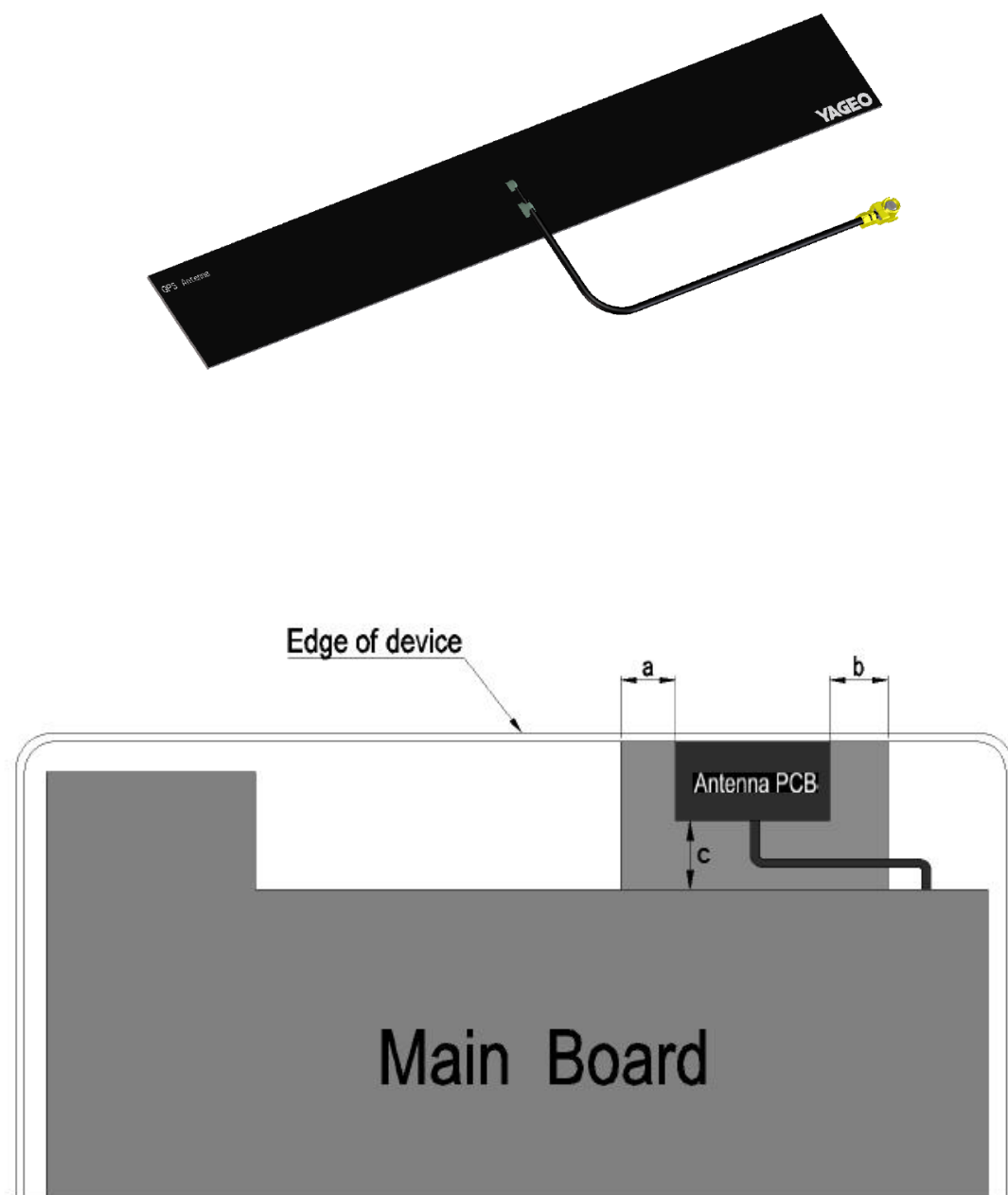
Table 2 Mechanical Dimension

| DIMENSION | VALUE       |
|-----------|-------------|
| L (mm)    | 200 ± 3.00  |
| W (mm)    | 40 ± 0.30   |
| H (mm)    | 7.5 ± 0.30  |
| T (mm)    | 0.55 ± 0.15 |
| A (mm)    | 2.30 Max    |
| B (mm)    | 20 ± 2.00   |

## OUTLINES



## APPLICATION INSTRUCTION



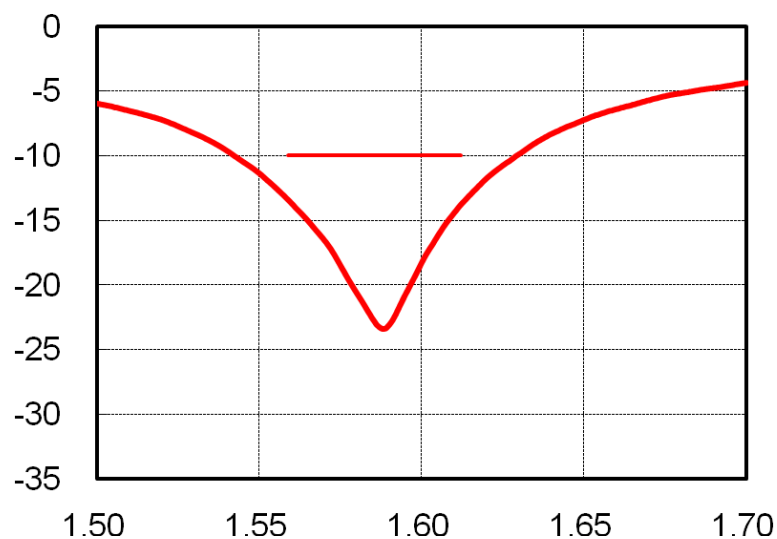
Antenna element should be placed at the edge of device, has minimum clearance from metallic object:

- a: 5 mm Min
- b: 5 mm Min
- c: 10 mm Min

**Fig. 2** Application Instruction

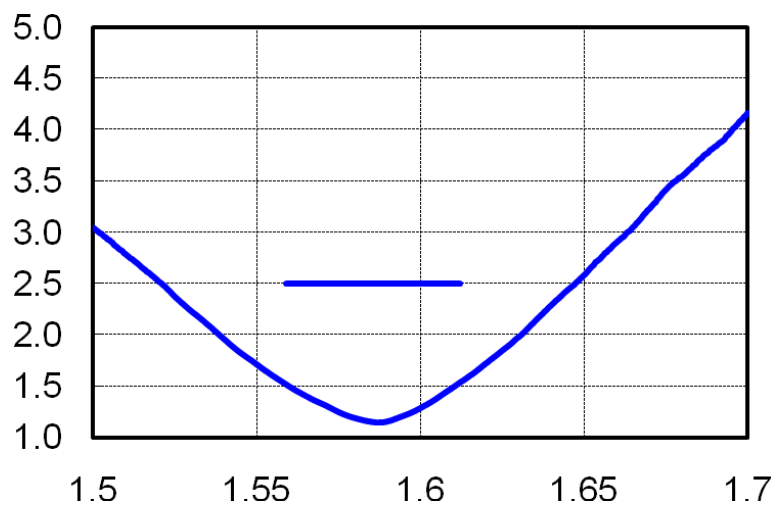
RETURN LOSS & VSWR

Return Loss (dB)



Frequency (GHz)

VSWR



Frequency (GHz)

Fig. 3 Return loss & VSWR Measurement

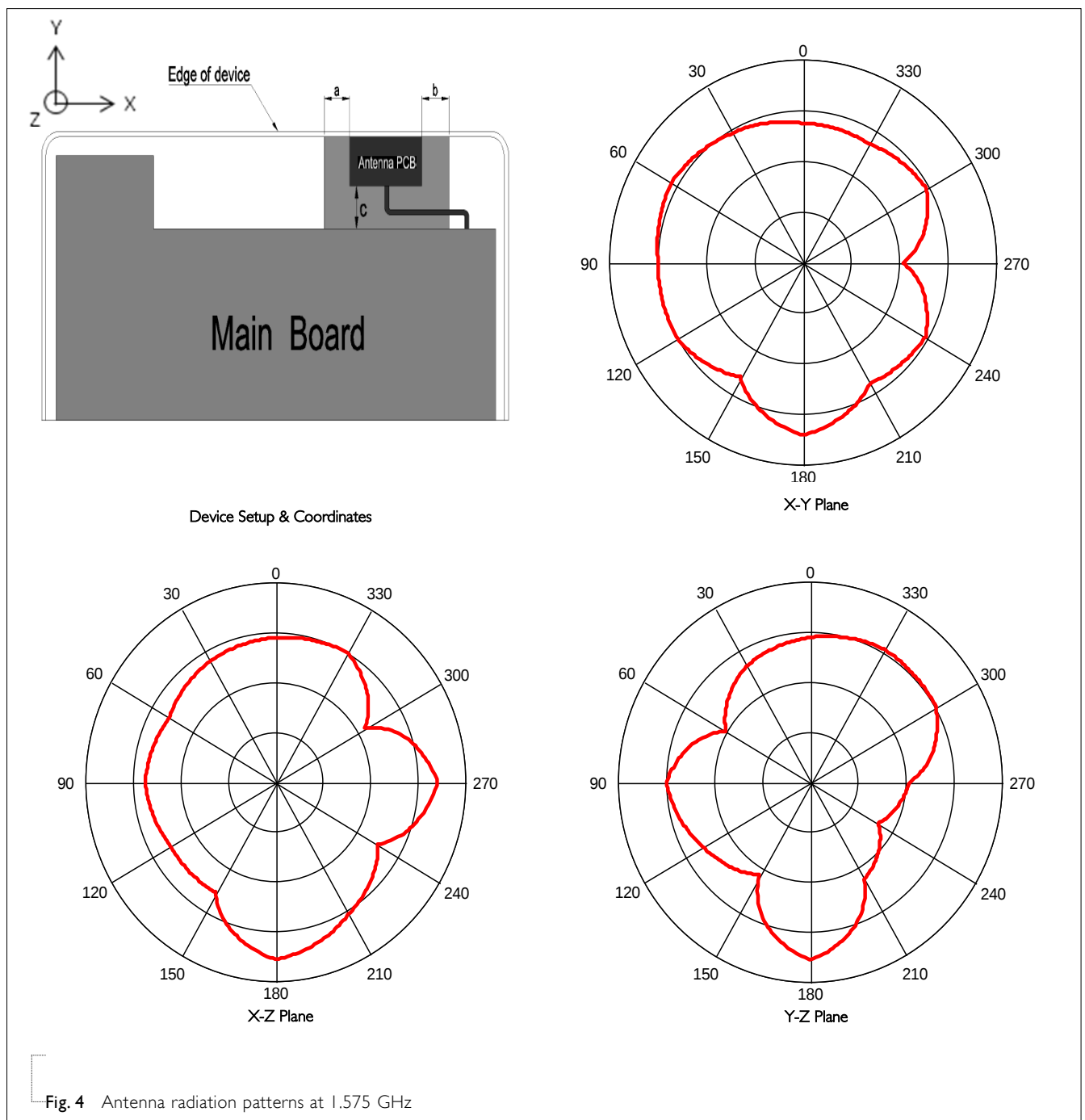
### ANTENNA GAIN & EFFICIENCY

Table 3

| FREQUENCY (GHz) | AVERAGE GAIN (dBi) | EFFICIENCY (%) | PEAK GAIN (dBi) |
|-----------------|--------------------|----------------|-----------------|
| 1.559           | -1.31              | 74             | 3.08            |
| 1.575           | -1.77              | 66             | 2.65            |
| 1.612           | -1.92              | 64             | 2.17            |

### ANTENNA RADIATION PATTERNS

Scale: 5 dBi / div    Max : 5 dBi    Min : -15 dBi



REVISION HISTORY

| REVISION  | DATE          | CHANGE NOTIFICATION | DESCRIPTION                                                 |
|-----------|---------------|---------------------|-------------------------------------------------------------|
| Version 0 | Jun. 26, 2014 | -                   | - New data sheet for PCB type antenna,<br>GPS/ GLONASS/ BDS |