

# DATA SHEET

## WIRELESS COMPONENTS

PCB type antenna  
ANTX100P001B24003  
2.45 GHz



**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 install in device
- Ranges of types of connector and cable provide a flexible design options
- Halogen free and RoHS compliant

**APPLICATIONS**

- Tablet / Desktop PC
- Internet TV / STB / Game console / Camera
- WiFi network devices (IEEE 802.11b/g/n)
- Bluetooth / ZigBee devices
- Car Infotainment
- Smart meter
- Lighting control
- POS terminal
- Wireless Industrial Control

**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 X100 P 001 B 2400 3**

(1) (2) (3) (4) (5) (6) (7)

**(1) FAMILY**

ANT = Antenna products

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

X = I-PEX  
100 = 100mm

**(3) ANTENNA TYPE**

P=PCB

**(4) SERIAL NUMBER**

001 = SERIAL NUMBER 001

**(5) PACKAGE TYPE**

B = Bulk

**(6) WORKING FREQUENCY**

2400 = 2.4~2.5 GHz

**(7) CABLE TYPE**

3 = 1.13mm diameter Mini-Coaxial Cable

**SPECIFICATIONS**

Table 1

DESCRIPTION	VALUE
Working Frequency	2.4~2.5 GHz
VSWR	2.0 : 1 max
Peak Gain	4.4dBi (Typ.)
Polarization	Linear
Radiation Pattern	Omni-directional
Impedance	50 Ω Nominal
Operating Temperature	-40 °C to 85 °C
Maximum Power	1 W
PCB Dimension	18.4mm × 7.5mm × 0.55mm
Radio Connector	I-PEX (20278-112R-13)
Cable Diameter / Length / Color	1.13mm / 100mm / Black
Mounting	Adhesive Tape (HF-DS)

**DIMENSIONS**

Table 2 Mechanical Dimension

DIMENSION	VALUE
L (mm)	100 ± 3.00
W (mm)	18.40 ± 0.30
H (mm)	7.50 ± 0.30
T (mm)	0.55 ± 0.15
A (mm)	2.30 Max
B (mm)	1.80 ± 1.00

**OUTLINES**

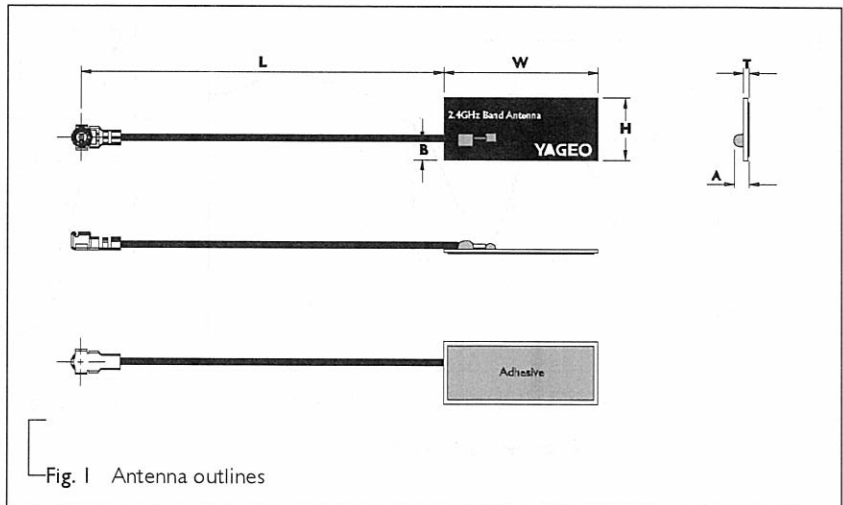

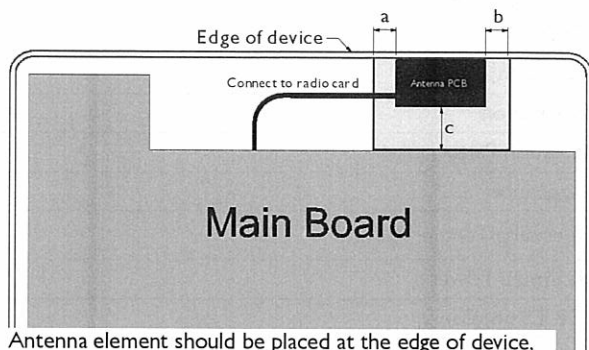


Fig. 1 Antenna outlines

**APPLICATION INSTRUCTION**





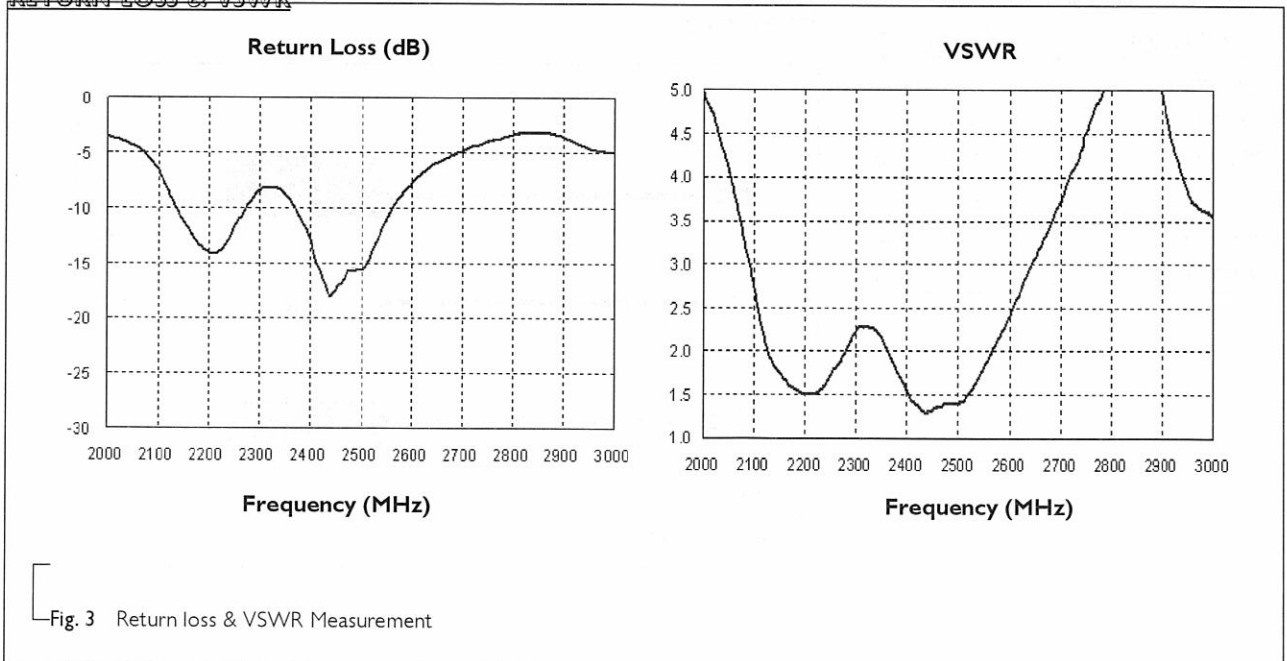
Antenna element should be placed at the edge of device, has minimum keep-out zone of

- A: 5 mm Min
- B: 5 mm Min
- C: 10 mm Min

from metallic object.

Fig. 2 Application Instruction

**RETURN LOSS & VSWR**



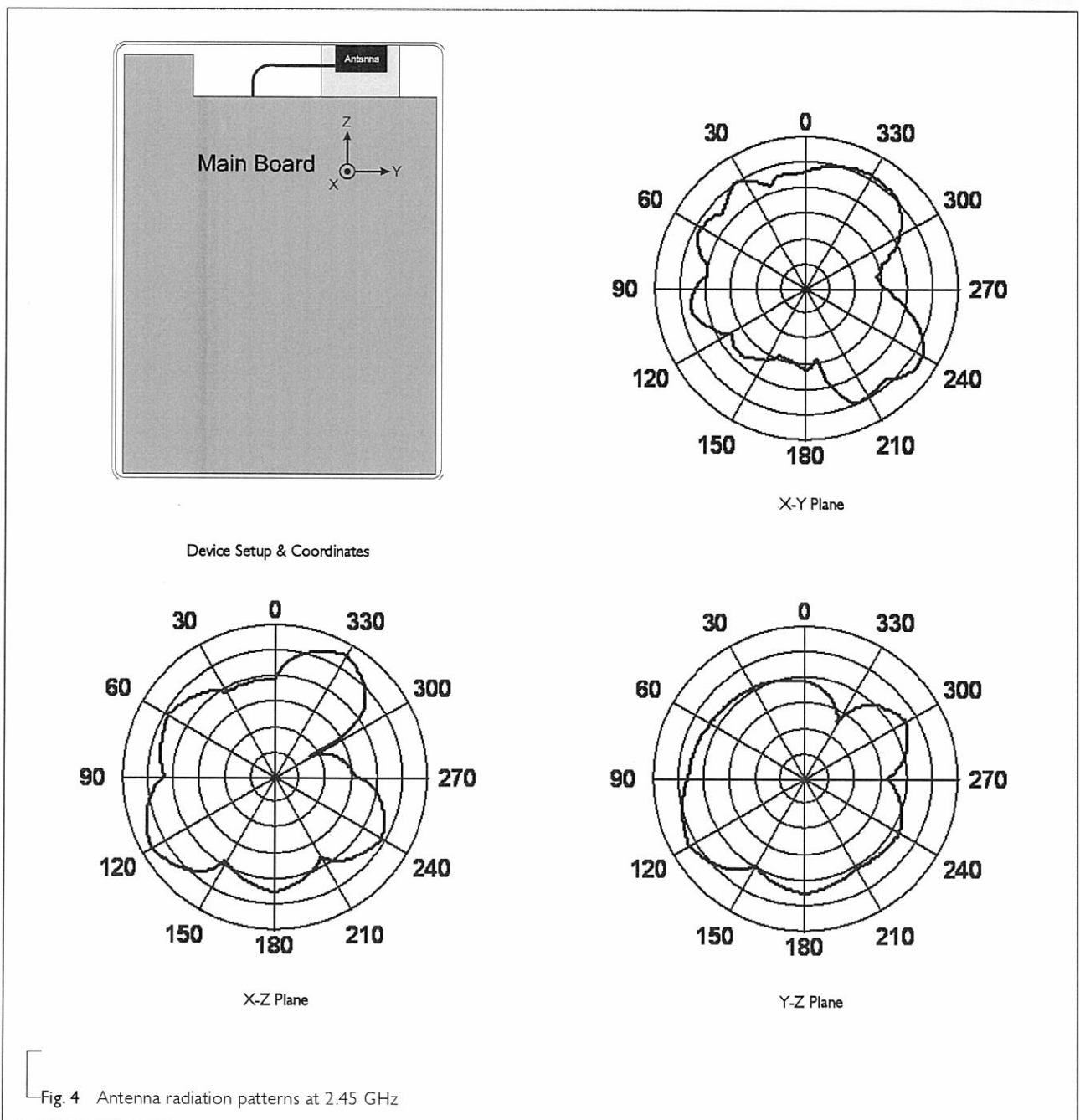
**ANTENNA GAIN & EFFICIENCY**

Table 3

FREQUENCY (GHz)	AVERAGE GAIN (dBi)	EFFICIENCY (%)	PEAK GAIN (dBi)
2.40	-2.1	62	4.0
2.45	-2.2	61	4.4
2.50	-3.0	50	4.1

**ANTENNA RADIATION PATTERNS**

Scale: 5 dBi / div    Max : 5 dBi    Min : -25 dBi



**REVISION HISTORY**

<b>REVISION</b>	<b>DATE</b>	<b>CHANGE NOTIFICATION</b>	<b>DESCRIPTION</b>
Version 0	May. 20, 2013	-	- New data sheet for PCB type antenna, 2.45 GHz application