

# DATA SHEET

## WIRELESS COMPONENTS

PCB type antenna

ANTX100P112B24553

2.40 ~ 2.50GHz / 5.150 ~ 5.875 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

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 112 B 2455 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**

112 = SERIAL NUMBER 112

---

**(5) PACKAGE TYPE**

B = Bulk

---

**(6) WORKING FREQUENCY**

2455 = 2.40 ~ 2.50 GHz / 5.150 ~ 5.875 GHz

---

**(7) CABLE TYPE**

3 = 1.13mm diameter Mini-Coaxial Cable

---

**SPECIFICATIONS**

Table 1

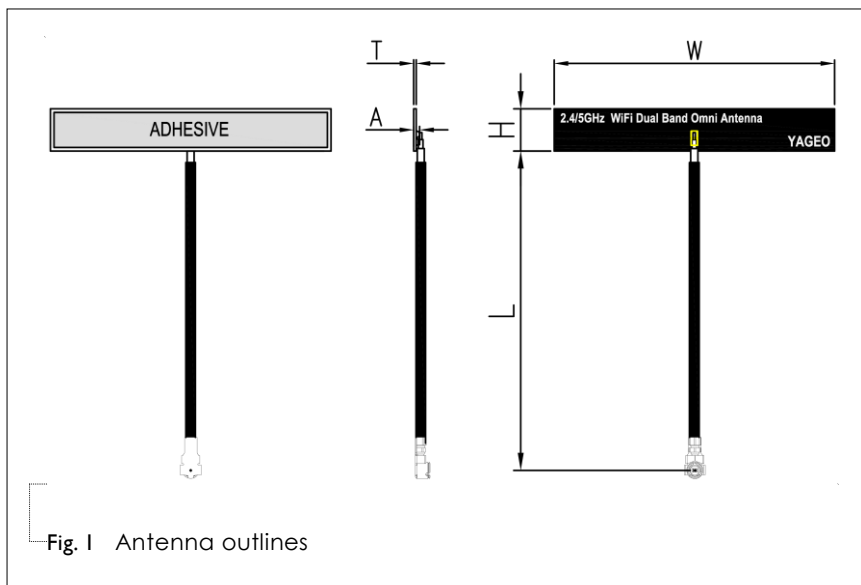
DESCRIPTION	VALUE
Working Frequency	2.40 ~ 2.50 GHz / 5.150 ~ 5.875 GHz
VSWR	2.5:1 max / 2.5:1 max
Peak Gain	2.2 dBi / 2.9 dBi
Polarization	Linear
Radiation Pattern	Omni-directional
Impedance	50 Ω Nominal
Operating Temperature	-40 °C to 85 °C
Maximum Power	1 W
Dimension	40mm x 6mm x 0.55mm
Radio Connector	I-PEX (20278-112R-13)
Cable Diameter / Length / Color	1.13mm / 100mm / Black
Mounting	Adhesive Tape (HF-DS)

**DIMENSIONS**

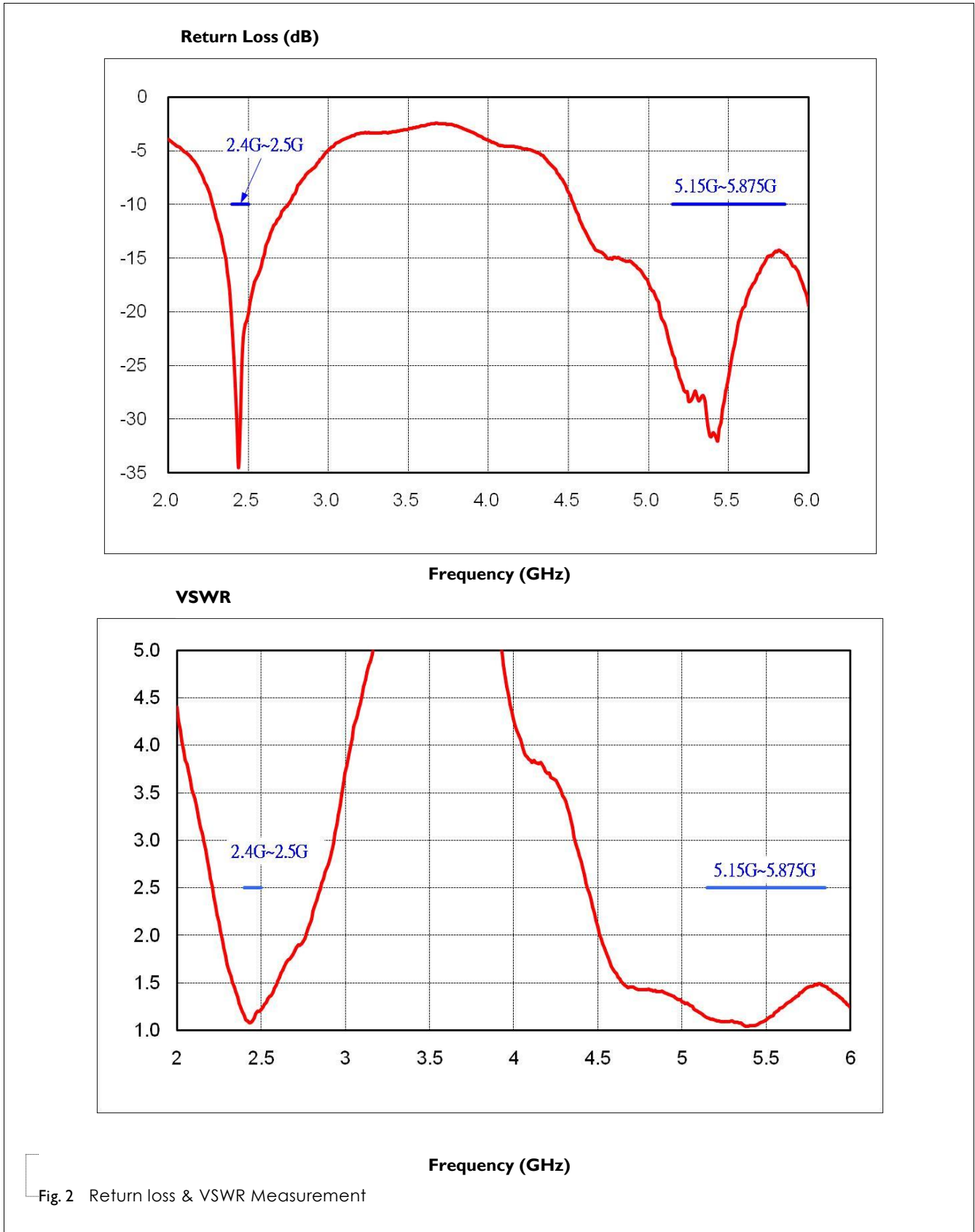
Table 2 Mechanical Dimension

DIMENSION	VALUE
L (mm)	100 ±3.00
W (mm)	40 ± 0.30
H (mm)	6 ± 0.30
T (mm)	0.55 ± 0.15
A (mm)	2.30 Max

**OUTLINES**



RETURN LOSS & VSWR



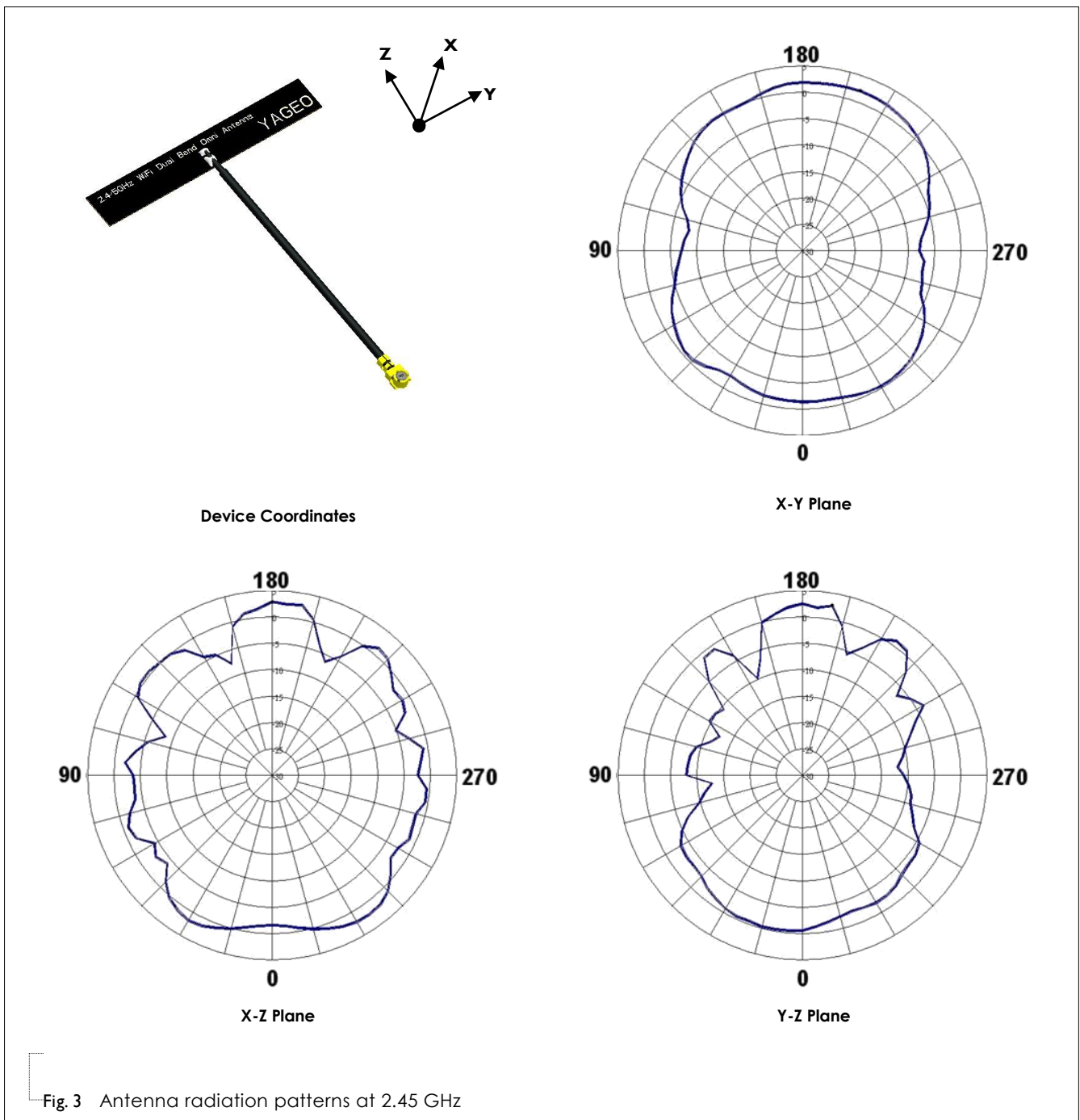
**ANTENNA GAIN & EFFICIENCY**

Table 3

FREQUENCY (GHz)	AVERAGE GAIN (dBi)	EFFICIENCY (%)	PEAK GAIN (dBi)
2.40	-0.6	87.7	2.1
2.45	-0.6	87.0	2.2
2.50	-0.9	81.9	1.5

**ANTENNA RADIATION PATTERNS**

Scale: 5 dBi / div Max : 5 dBi Min : -30dBi



**ANTENNA GAIN & EFFICIENCY**

Table 4

FREQUENCY (GHz)	AVERAGE GAIN (dBi)	EFFICIENCY (%)	PEAK GAIN (dBi)
5.150	-1.9	65.0	2.3
5.350	-2.2	60.4	2.5
5.470	-2.0	63.7	2.9
5.725	-2.0	63.7	2.7
5.875	-1.8	65.6	2.7

**ANTENNA RADIATION PATTERNS**

Scale: 5 dBi / div Max : 5 dBi Min : -30 dBi

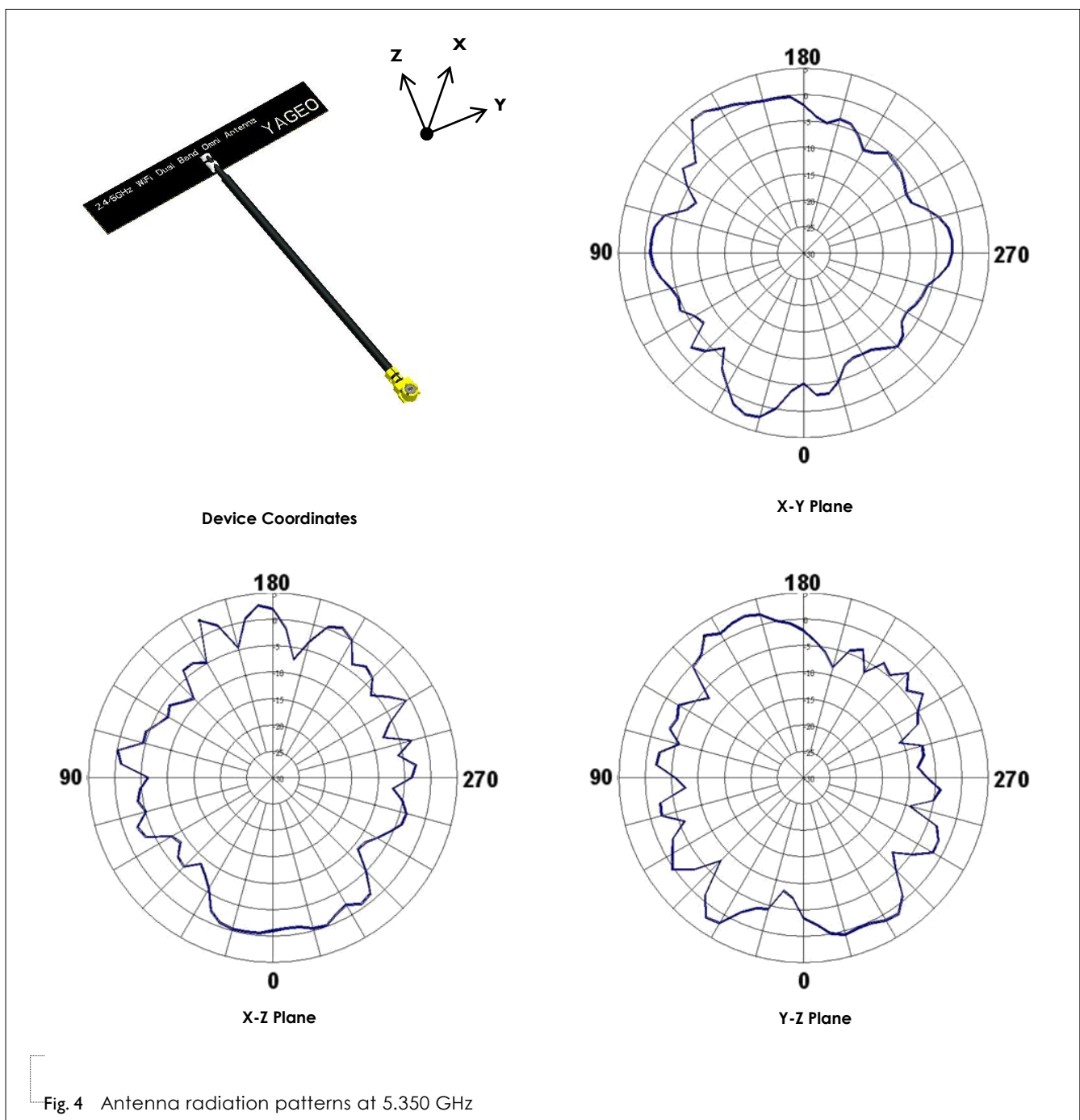


Fig. 4 Antenna radiation patterns at 5.350 GHz

REVISION HISTORY

REVISION	DATE	CHANGE NOTIFICATION	DESCRIPTION
Version 0	Apr. 20, 2016	-	- Data sheet for PCB type antenna, 2.40 ~ 2.50GHz / 5.150 ~ 5.875 GHz