

DATA SHEET

WIRELESS COMPONENTS

PCB type antenna
ANTX100P001B50003

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 instal 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 802.11 b/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 5000 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

5000=5.150~5.875 GHz

(7) CABLE TYPE

3 = 1.13mm diameter Mini-Coaxial Cable

SPECIFICATIONS

Table 1

DESCRIPTION	VALUE
Working Frequency	5.150 ~ 5.875 GHz
VSWR	2.5:1 max
Peak Gain	2.5dBi
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 x 7.5mm 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)	18.4 ± 0.30
H (mm)	7.50 ± 0.30
T (mm)	0.55 ± 0.15
A (mm)	2.30Max
B (mm)	0.5 ± 0.30

OUTLINES

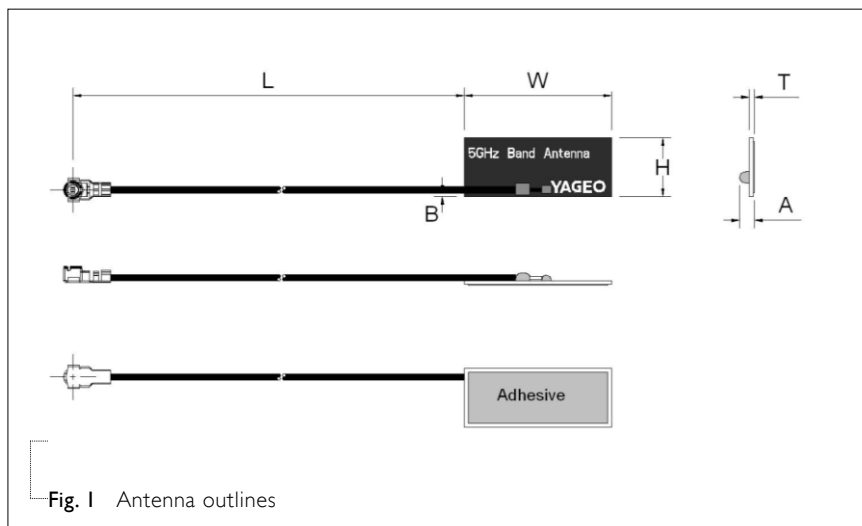
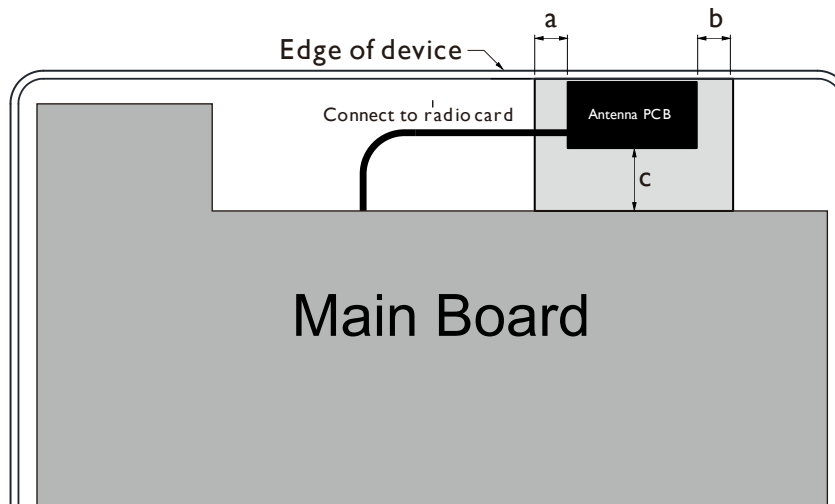
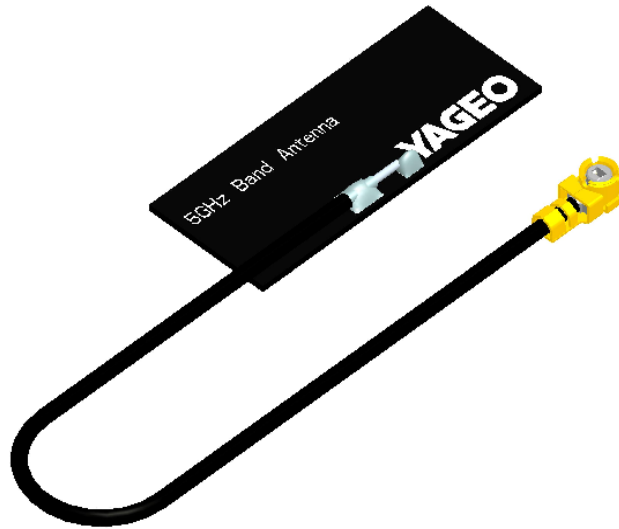


Fig. 1 Antenna outlines

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

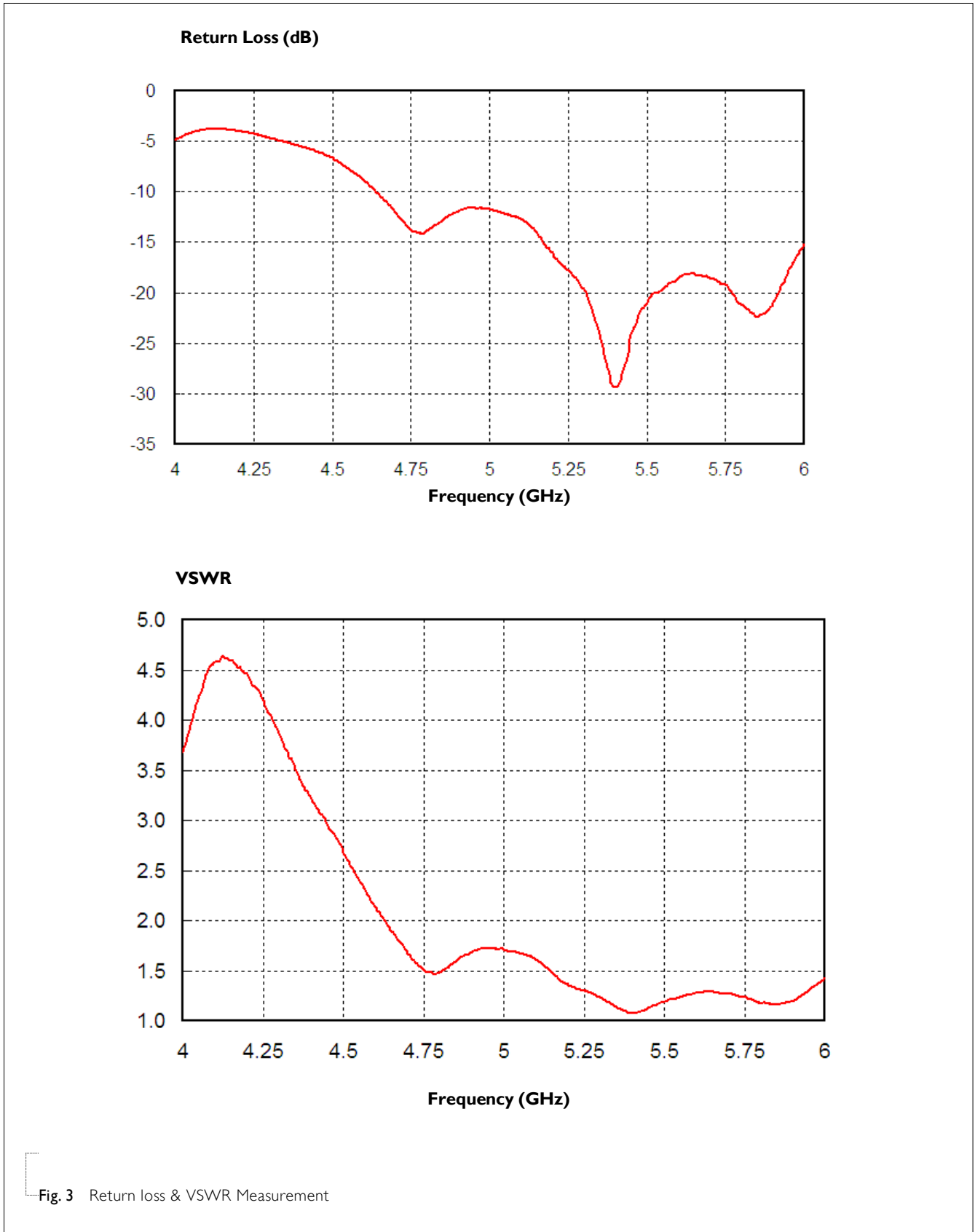


Fig. 3 Return loss & VSWR Measurement

ANTENNA GAIN & EFFICIENCY

Table 3

FREQUENCY (GHz)	AVERAGE GAIN (dBi)	EFFICIENCY (%)	PEAK GAIN (dBi)
5.150	-2.3	59	2.6
5.350	-2.7	54	2.5
5.475	-3.0	51	1.2
5.725	-2.5	56	3.1
5.875	-2.9	52	2.3

ANTENNA RADIATION PATTERNS

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

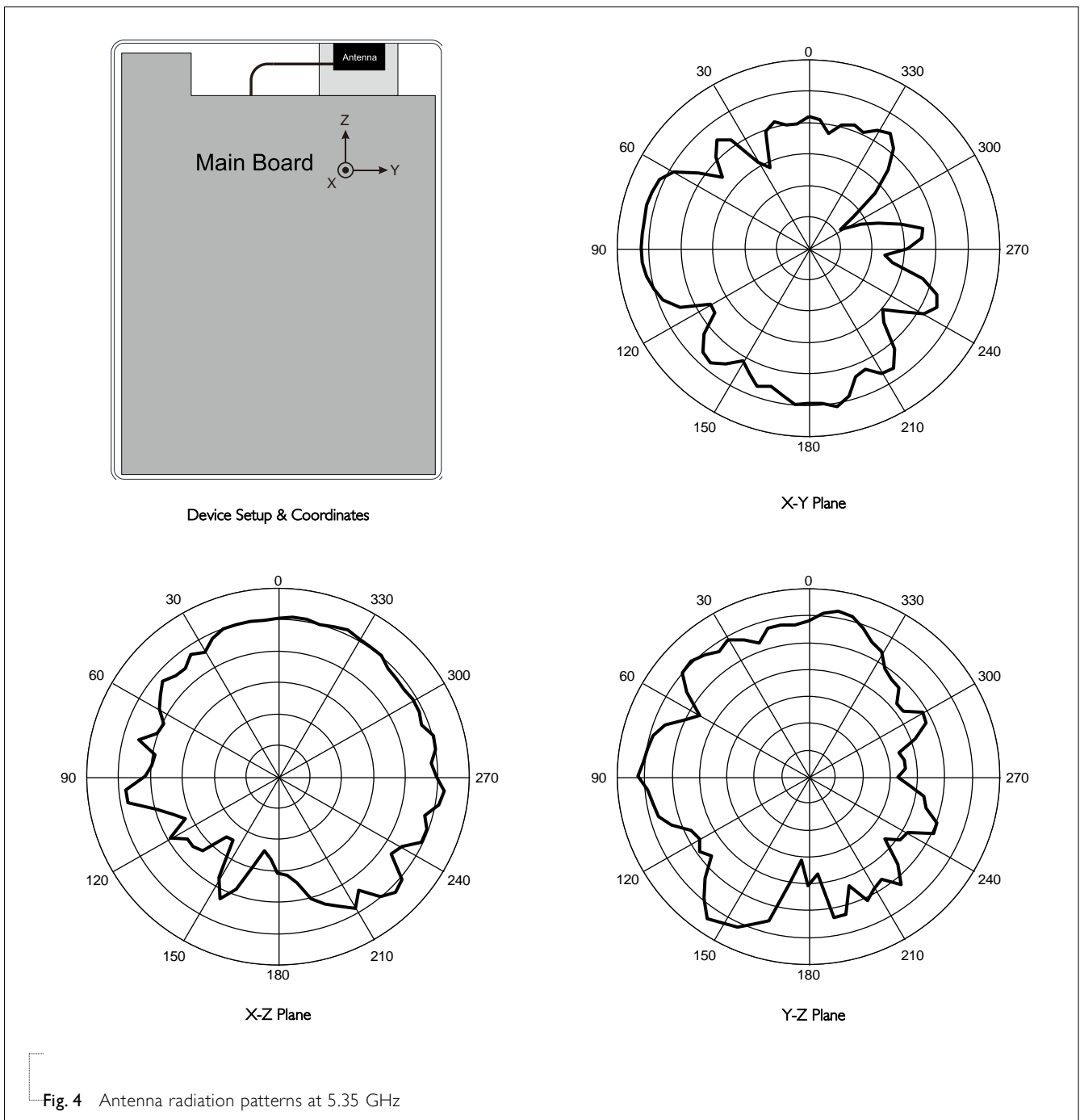


Fig. 4 Antenna radiation patterns at 5.35 GHz

REVISION HISTORY

REVISION	DATE	CHANGE NOTIFICATION	DESCRIPTION
Version 0	Oct. 08, 2013	-	- New data sheet for PCB type antenna 5.150 ~ 5.875 GHz

Mouser Electronics

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Yageo:

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