

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 802.11 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 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

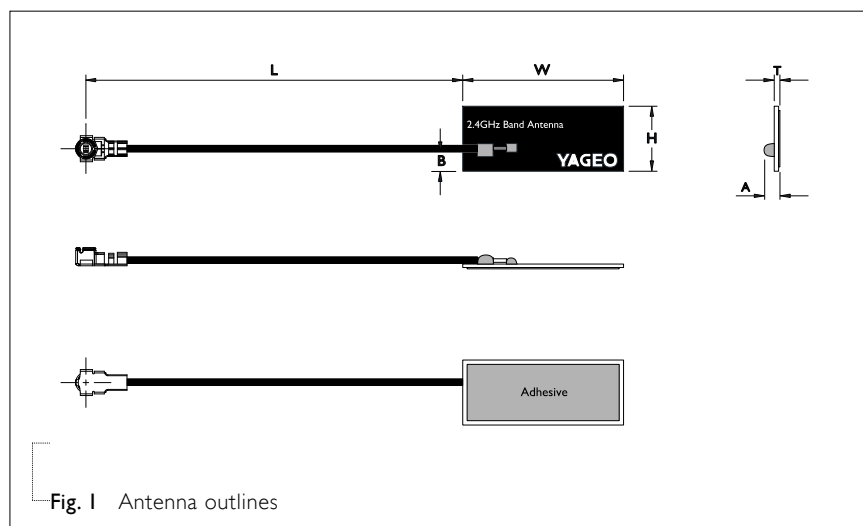
DESCRIPTION	VALUE
Working Frequency	2.4~2.5 GHz
VSWR	2.0 : 1 max
Peak Gain	4.4dBi (Typ.)
Polarization	Linear
Radiation Pattern	Omni-directional
Impedance	50 Ω Nominal
Operating Temperature	-40 °C to 85 °C
Maximum Power	1 W
PCB Dimension	18.4mm x 7.5mm x 0.55mm
Radio Connector	I-PEX (20278-112R-13)
Cable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

DIMENSIONS

Table 2 Mechanical Dimension

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

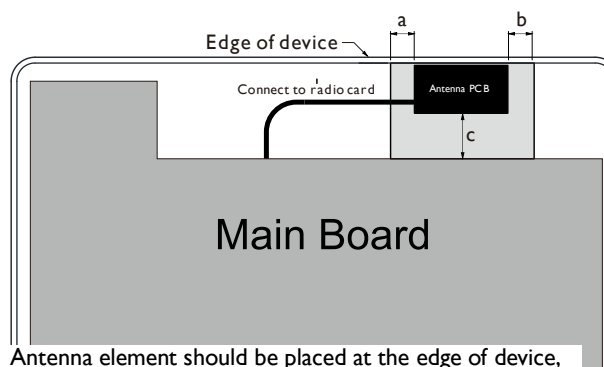
OUTLINES



APPLICATION INSTRUCTION



Fig. 2 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

RETURN LOSS & VSWR

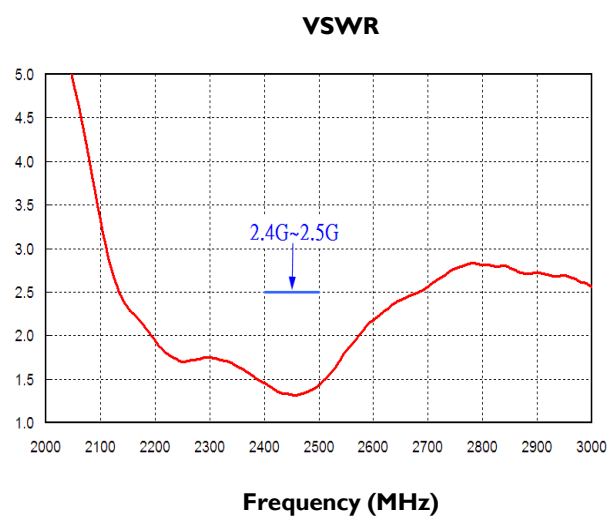
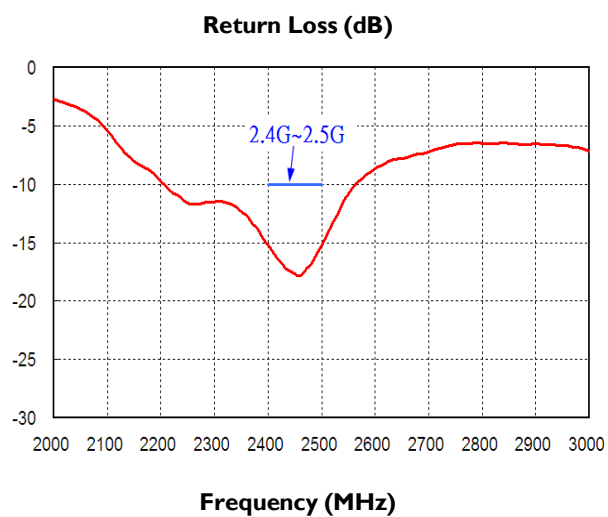


Fig. 3 Return loss & VSWR Measurement

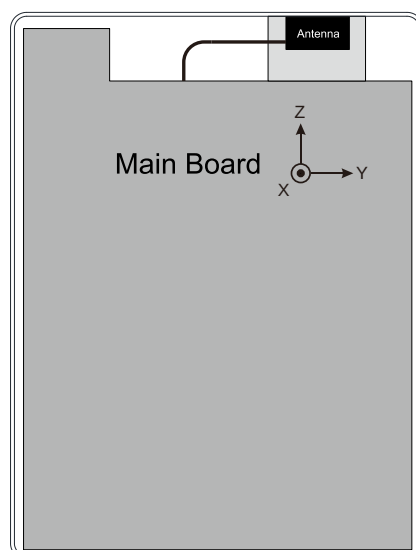
ANTENNA GAIN & EFFICIENCY

Table 3

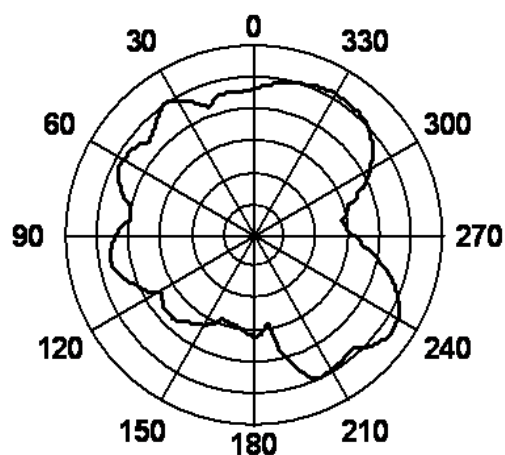
FREQUENCY (GHz)	AVERAGE GAIN (dBi)	EFFICIENCY (%)	PEAK GAIN (dBi)
2.40	-2.1	62	4.0
2.45	-2.2	61	4.4
2.50	-3.0	50	4.1

ANTENNA RADIATION PATTERNS

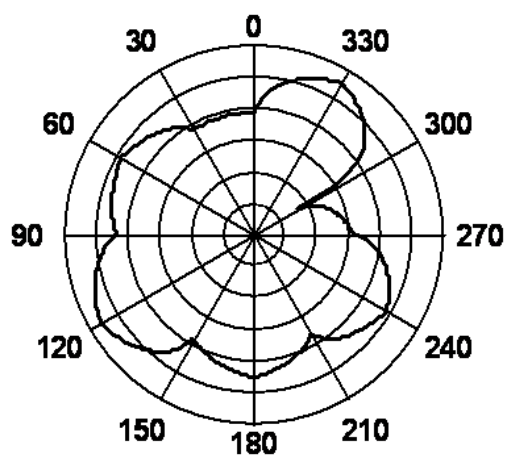
Scale: 5 dBi / div Max : 5 dBi Min : -25 dBi



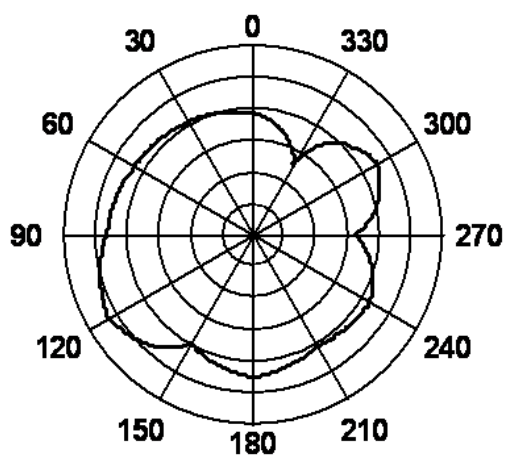
Device Setup & Coordinates



X-Y Plane



X-Z Plane



Y-Z Plane

Fig. 4 Antenna radiation patterns at 2.45 GHz

REVISION HISTORY

REVISION	DATE	CHANGE NOTIFICATION	DESCRIPTION
Version 0	Jun. 16, 2014	-	- New data sheet for PCB type antenna, 2.45 GHz application

Mouser Electronics

Authorized Distributor

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Pulse:

[ANTX100P001B24553](#) [ANTX200P001B24003](#) [ANTX100P001BWPEN3](#) [ANTX100P001B15163](#)
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[ANTX100P111B24003](#) [ANTX100P001B50003](#) [ANTX100P111B50003](#) [ANTX100P113B24003](#) [ANTX150P118B09153](#)
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