Innovative Service Around the Globe YAGEO

DATA SHEET

WIRELESS COMPONENTS

PCB type antenna

ANTX100P001B24003

2.45 GHz



YAGEO Phycomp

Product Specification – June 16, 2014 V.0



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 & 12NC

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 ±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

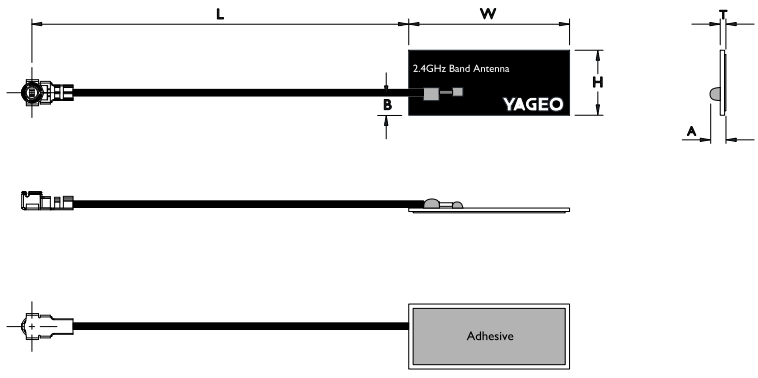
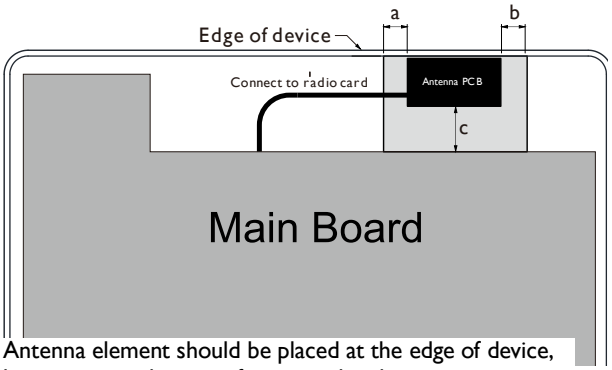


Fig. 1 Antenna outlines

APPLICATION INSTRUCTION

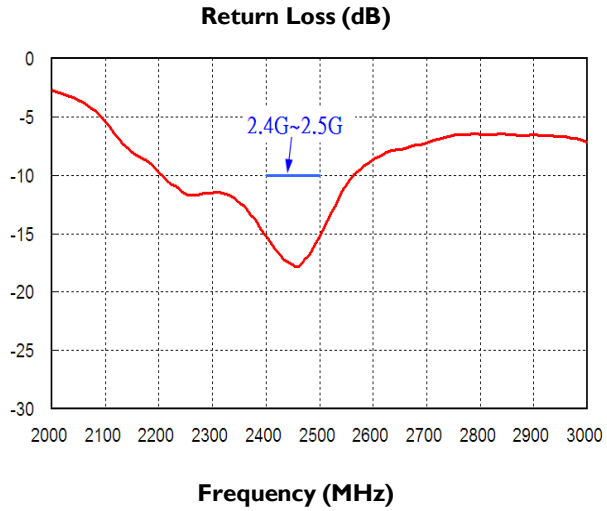




Antenna element should be placed at the edge of device, has minimum clearance from metalic object:
A: 5 mm Min
B: 5 mm Min
C: 10 mm Min

Fig. 2 Application Instruction

RETURN LOSS & VSWR



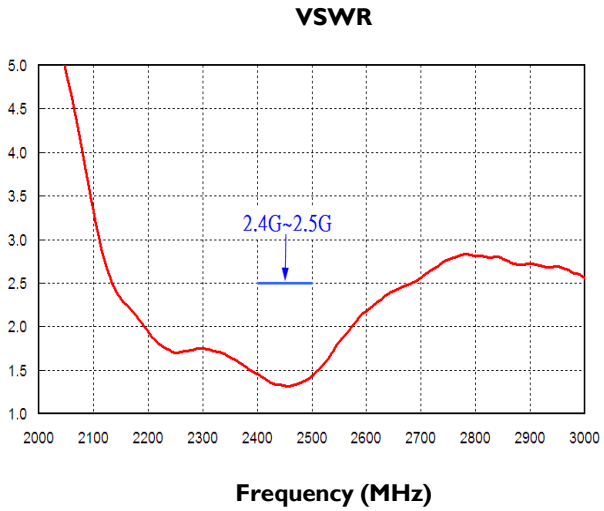


Fig. 3 Return loss & VSWR Measurement

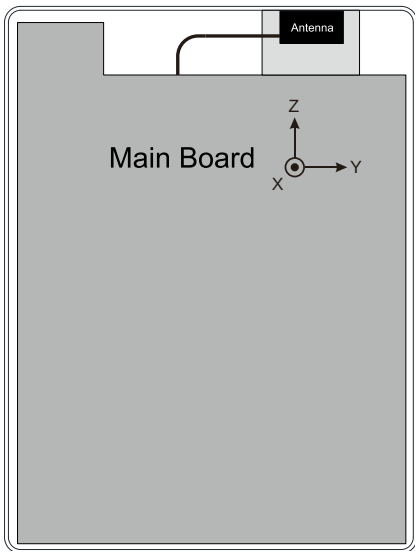
ANTENNA GAIN & EFFICIENCY

Table 3

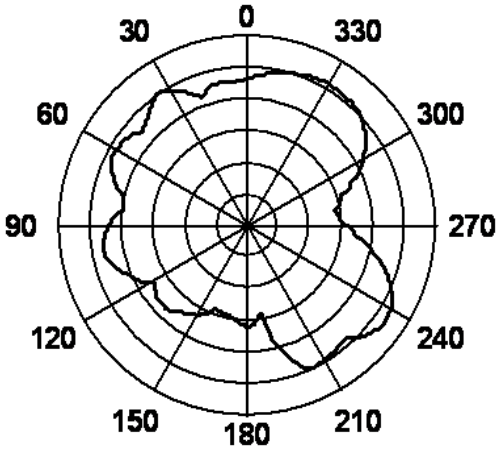
FREQUENCY (GHz)	AVERAGE GAIN (dBi)	EFFICIENCY (%)	PEAK GAIN (dBi)
2.40	-2.1	62	4.0
2.45	-2.2	61	4.4
2.50	-3.0	50	4.1

ANTENNA RADIATION PATTERNS

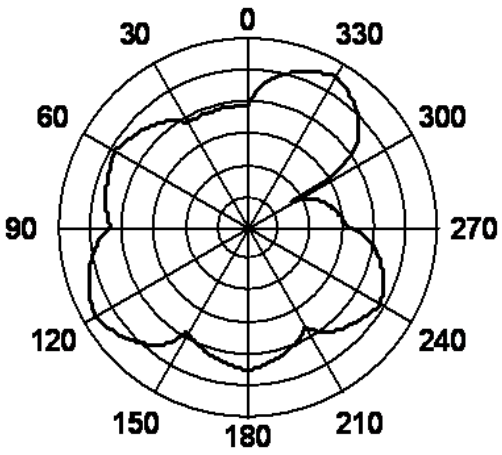
Scale: 5 dBi / div Max : 5 dBi Min : -25 dBi



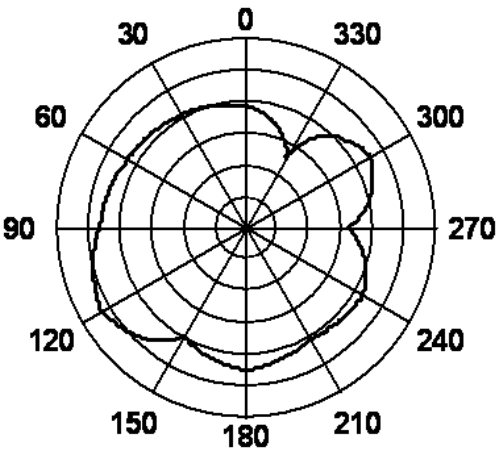
Device Setup & Coordinates



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