PCB Type Antenna

ANTX100P002B24553 Series

Pulse
a YAGEO company

Features and 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*

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 002 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

002 = SERIAL NUMBER 002

(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

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*

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Specifications

Table 1

DESCRIPTION	VALUE
Working Frequency	2.40 ~ 2.50 GHz / 5.150 ~ 5.875 GHz
VSWR	2.5:1max / 2.5:1 max
Peak Gain	0.7 dBi / 1.9 dBi
Polarization	Linear
Radiation Pattern	Omni-directional
Impedance	50 Ω Nominal
Operating Temperature	– 40 °C to 85 °C
Maximum Power	1 W
Dimension (PCB+AL Foil)	40mm x 43mm 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 Dimensions

DIMENSION	VALUE
L (mm)	100 ± 3.00
W (mm)	40 ± 0.30
H (mm)	8 ± 0.30
H1 (mm)	32 ± 0.30
T (mm)	0.55 ± 0.15
A (mm)	2.30 Max
T1 (mm)	0.15 ± 0.05

Outlines

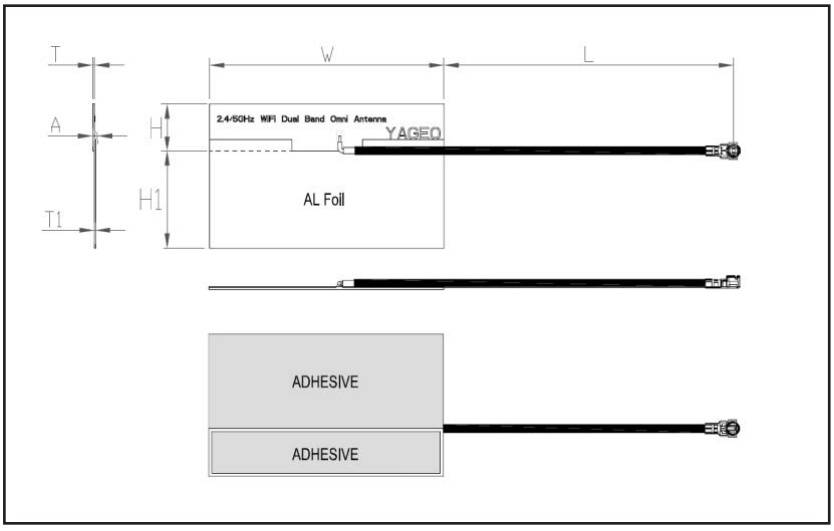
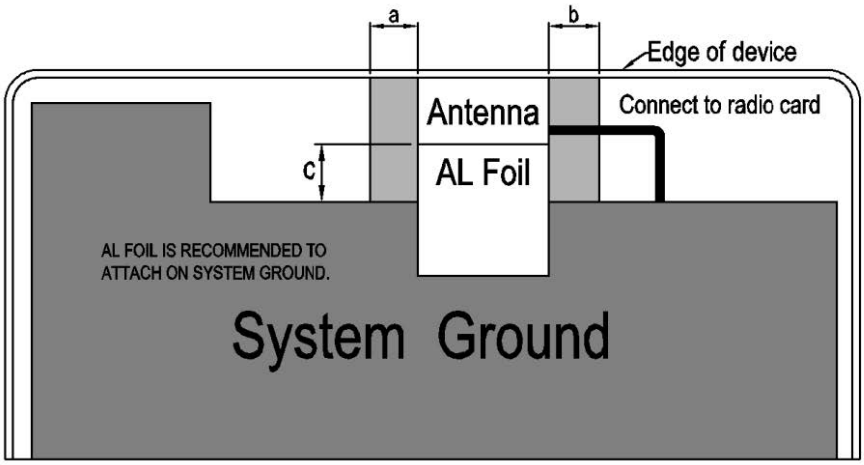


Fig 1. Antenna Outlines



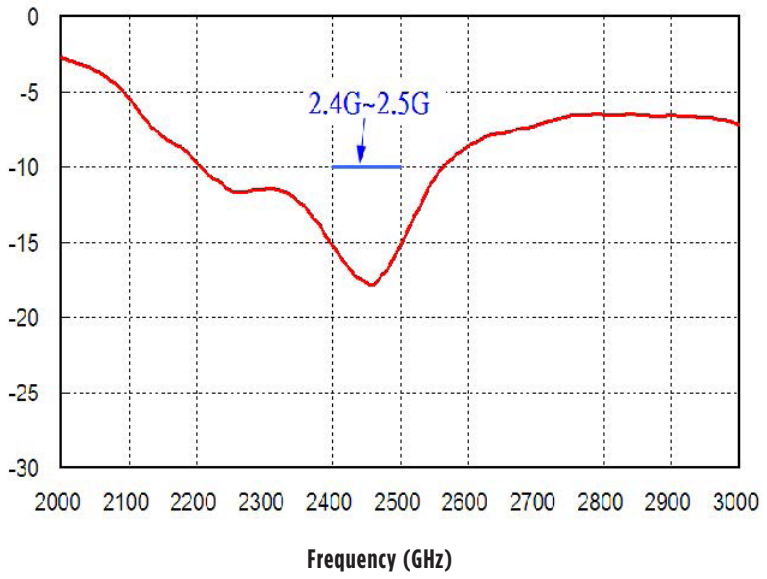
Antenna element should be placed at the edge of device, has minimum clearance from metalic object:

A: 5 mm Min
B: 5 mm Min
C: 5 mm Max

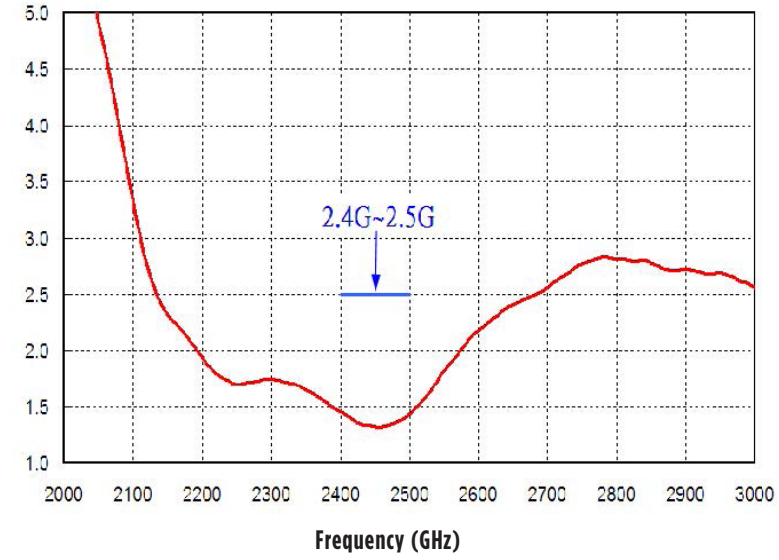
Fig. 2 Application Instruction

Return Loss & VSWR

Return Loss (dB)



VSWR



Antenna Radiation Patterns

FREQUENCY (GHz)	AVERAGE GAIN (dBi)	EFFICIENCY (%)	PEAK GAIN (dBi)
2.40	-2.1	61.2	0.4
2.45	-1.7	68.2	0.7
2.50	-2.1	61.1	0.9

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

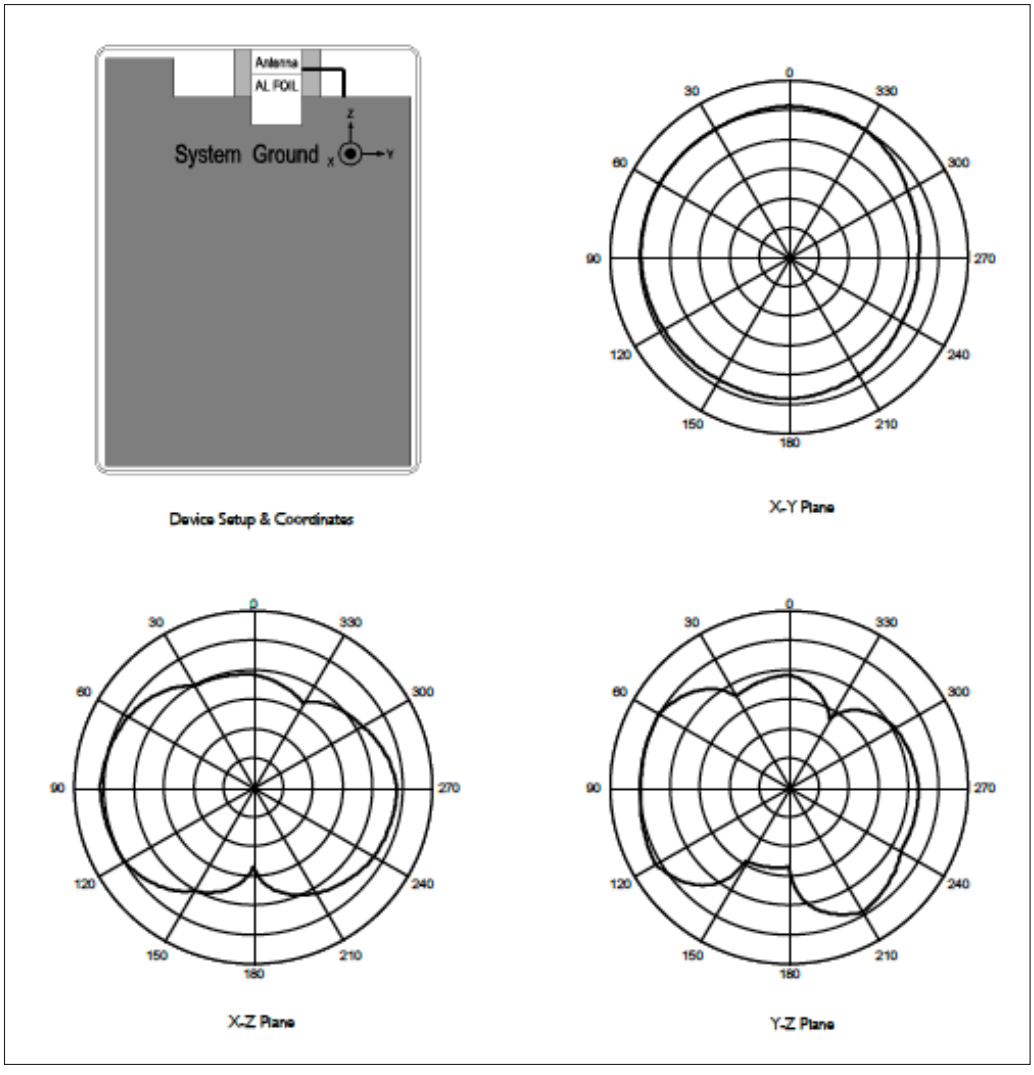


Fig. 4 Antenna radiation patterns at 2.45 GHz

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Antenna Radiation Patterns

FREQUENCY (GHz)	AVERAGE GAIN (dBi)	EFFICIENCY (%)	PEAK GAIN (dBi)
5.150	-3.9	41.0	2.3
5.350	-3.6	43.3	1.9
5.470	-4.4	40.4	1.0
5.725	-4.5	40.1	0.5
5.875	-4.1	40.9	0.4

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

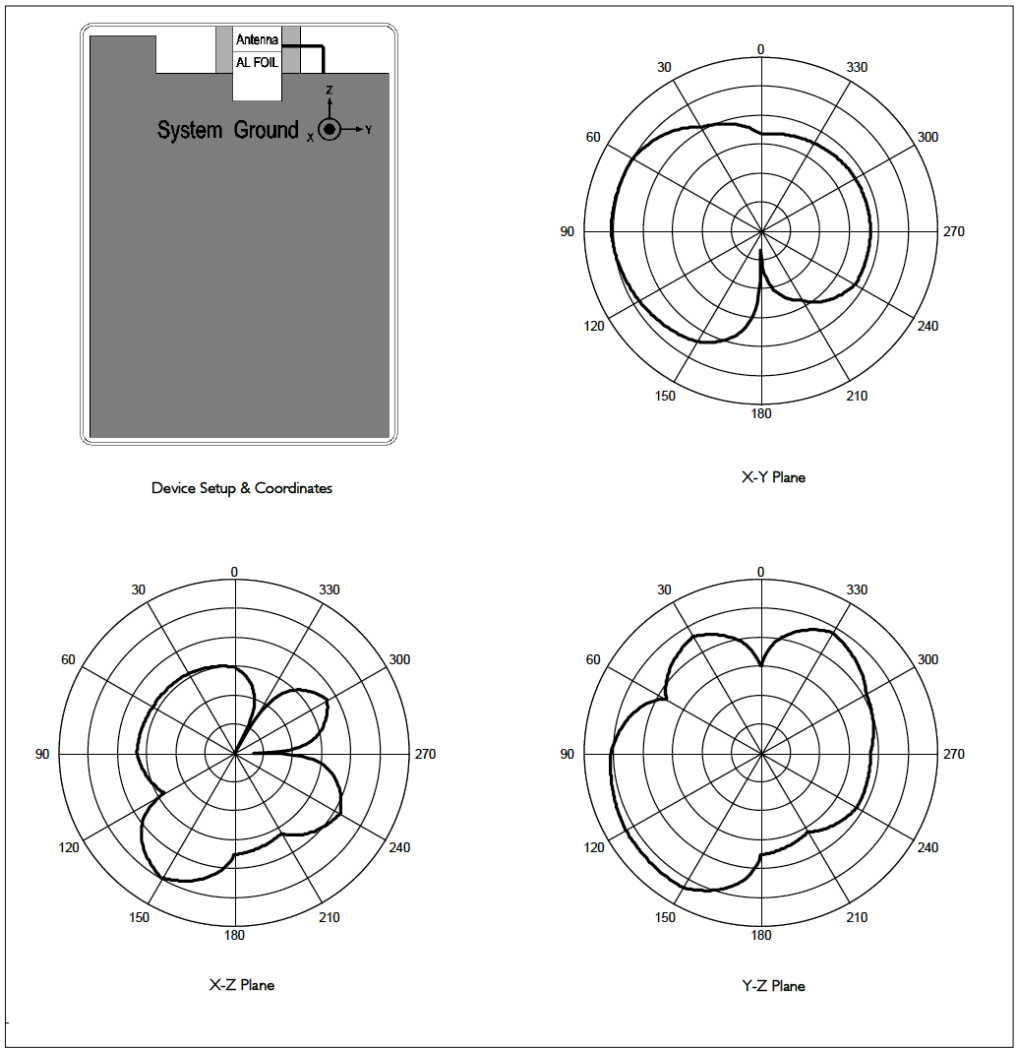

Fig. 5 Antenna radiation patterns at 5.350 GHz

For More Information:

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