

DATA SHEET

WIRELESS COMPONENTS

PCB type antenna
ANTA0ZZ11241WLAN1
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 & 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 A0 ZZ 1124 1 WLAN1**

(1) (2) (3) (4) (5) (6) (7)

(1) FAMILY

ANT = Antenna Products

(2) CHECK CODE

A0=General

(3) CUSTOMER

ZZ=Customer

(4) PROJECT NUMBER

1124 = Project Serial Number

(5) AMOUNT OF CONNECTORS

1 = 1

(6) ANTENNA FUNCTION

WLAN = WLAN

(7) ANTENNA NUMBER

1 = PROJECT PART NUMBER

SPECIFICATIONS

Table 1

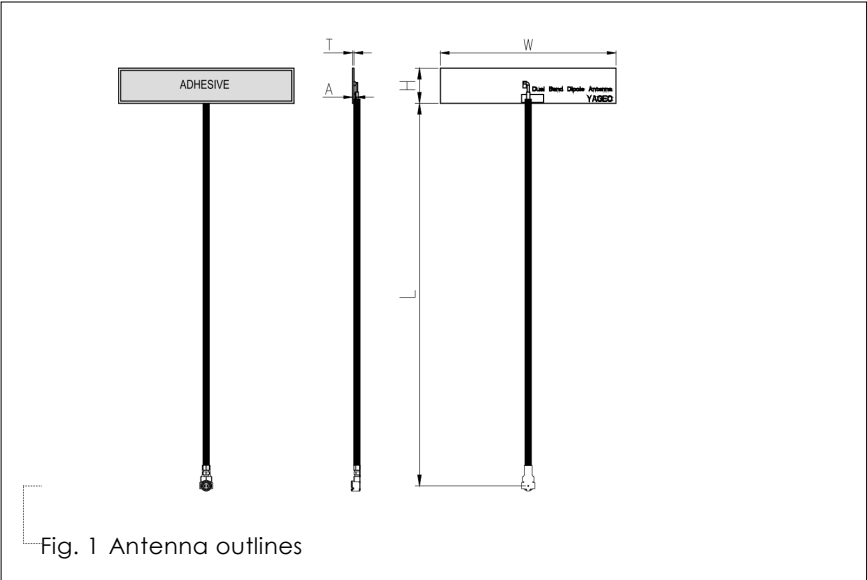
DESCRIPTION	VALUE
Working Frequency	2.40 ~ 2.50 GHz / 5.150 ~ 5.875 GHz
VSWR	2.5:1 max / 2.5:1 max
Peak Gain	2.6 dBi / 3.0 dBi
Polarization	Linear
Radiation Pattern	Omni-directional
Impedance	50 Ω Nominal
Operating Temperature	-40 °C to 85 °C
Maximum Power	1 W
Dimension (PCB+AL Foil)	40mm x 8mm x 0.55mm
Radio Connector	IPEX 20278
Cable Diameter / Length / Color	1.13mm / 150mm / Black
Mounting	Adhesive Tape (HF-DS)

DIMENSIONS

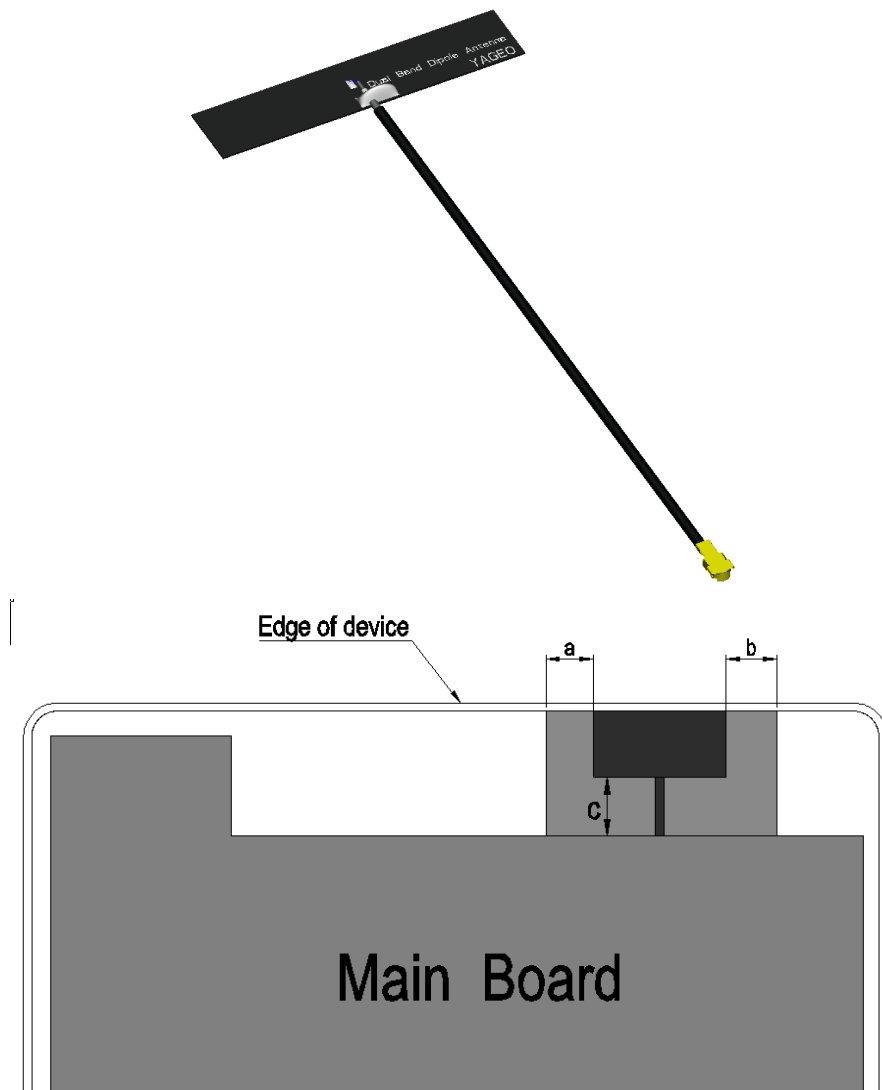
Table 2 Mechanical

DIMENSION	VALUE
L (mm)	150 ±3.00
W (mm)	40 ± 0.30
H (mm)	8 ± 0.30
T (mm)	0.55 ± 0.15
A (mm)	2.30 Max

OUTLINES



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..

Fig. 2 Application Instruction

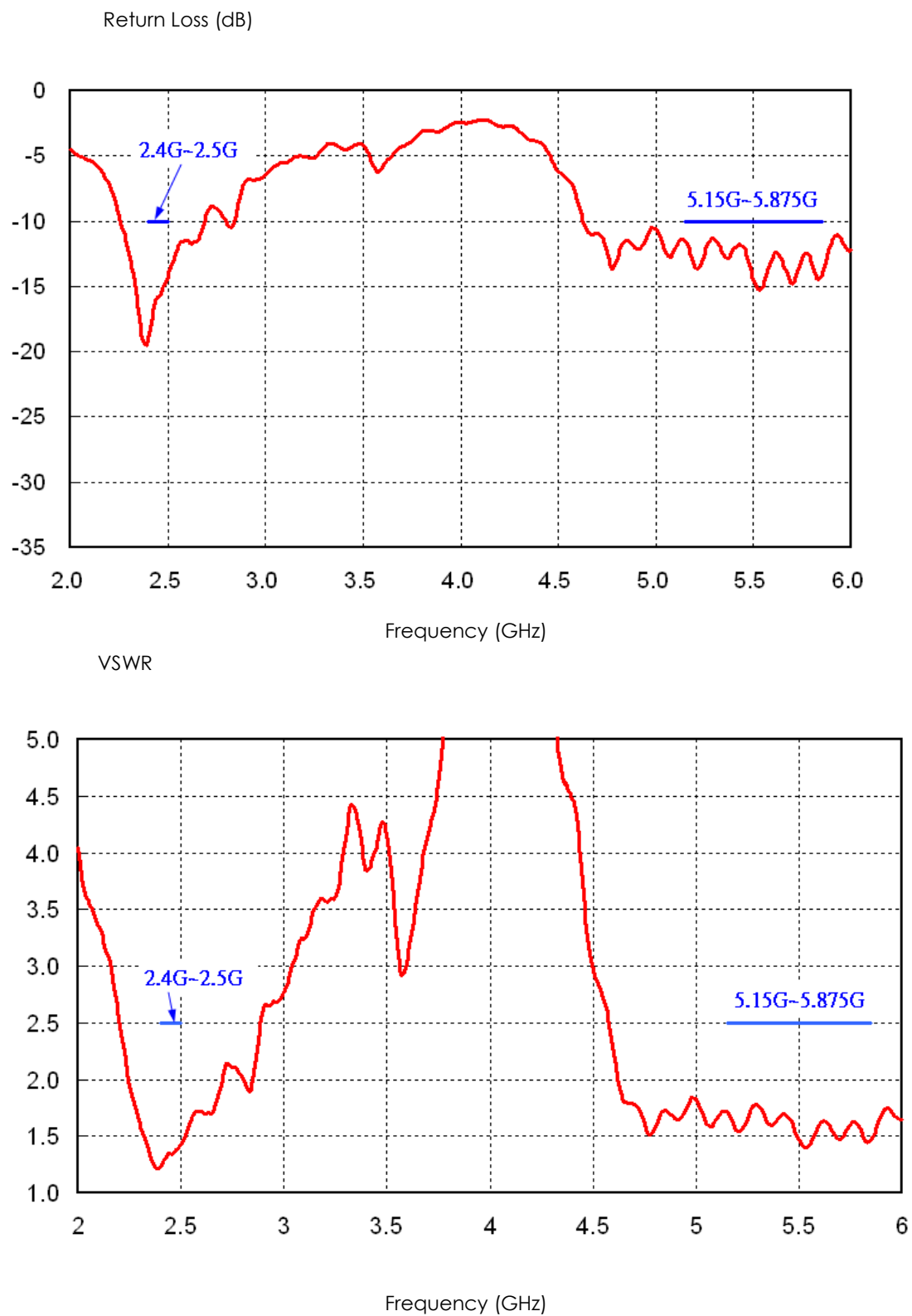
RETURN LOSS & VSWR

Fig. 3 Return loss & VSWR Measurement

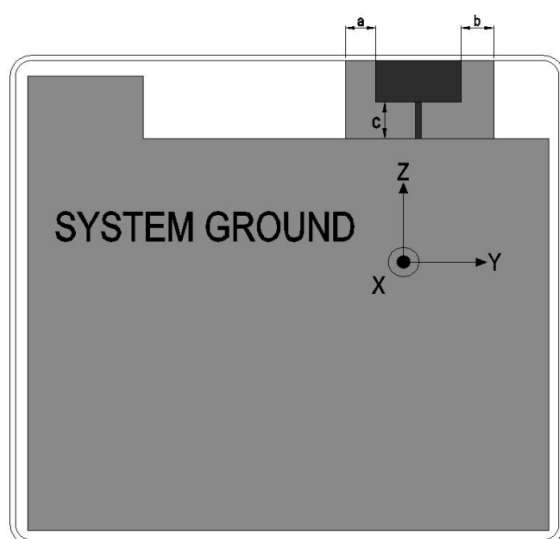
ANTENNA GAIN & EFFICIENCY

Table 3

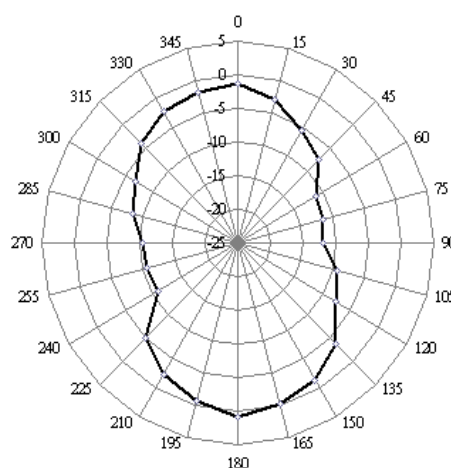
FREQUENCY (GHz)	AVERAGE GAIN (dBi)	EFFICIENCY (%)	PEAK GAIN (dBi)
2.40	-1.40	72.3	2.6
2.412	-1.37	73.0	2.4
2.422	-1.27	74.6	2.4
2.432	-1.34	73.4	2.3
2.45	-1.20	75.0	2.4
2.50	-1.20	75.7	2.3

ANTENNA RADIATION PATTERNS

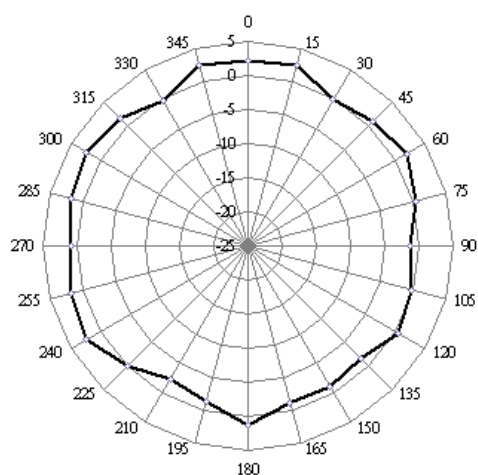
Scale: 5 dBi / div Max : 5 dBi Min : -25 dBi



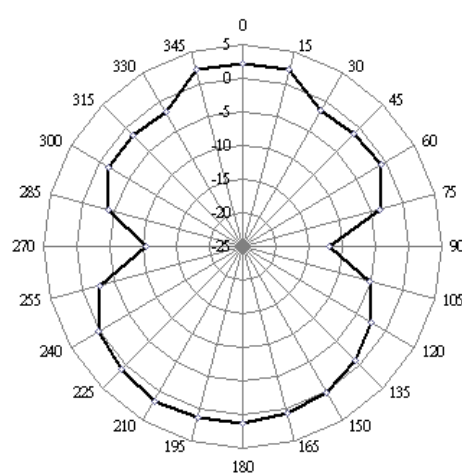
Device Setup & Coordinates



X-Y Plane



X-Z Plane



Y-Z Plane

Fig. 4 Antenna radiation patterns at 2.45 GHz

ANTENNA GAIN & EFFICIENCY

Table 4

FREQUENCY (GHz)	AVERAGE GAIN (dBi)	EFFICIENCY (%)	PEAK GAIN (dBi)
5.150	-1.9	64.5	2.6
5.200	-1.9	65.1	2.2
5.250	-2.0	62.7	2.1
5.320	-2.3	58.3	2.4
5.350	-2.5	56.8	3.0
5.470	-2.1	61.1	3.0
5.500	-2.4	58.0	2.3
5.600	-2.2	60.3	2.5
5.700	-2.5	56.1	0.9
5.785	-2.3	58.6	1.0
5.805	-2.3	59.1	1.2
5.850	-2.9	51.1	0.8

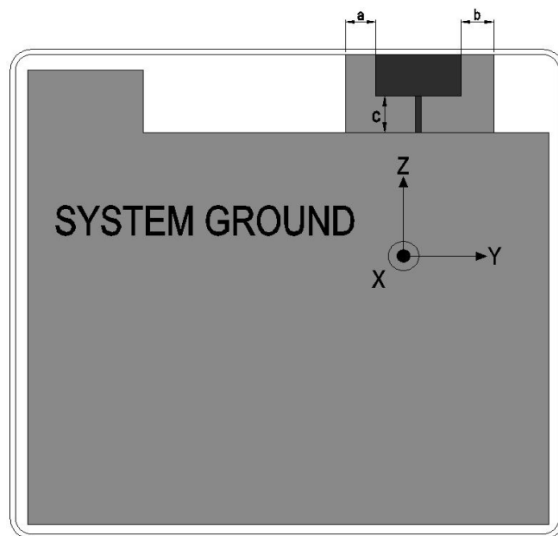
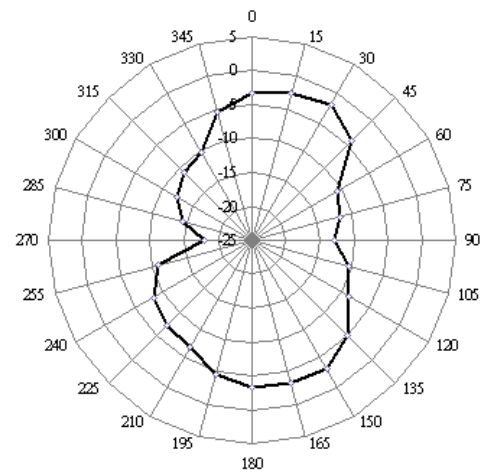
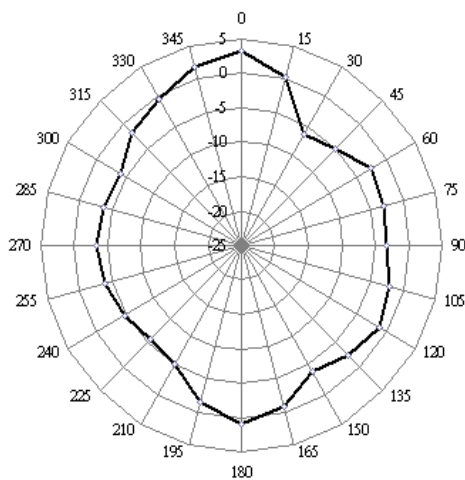
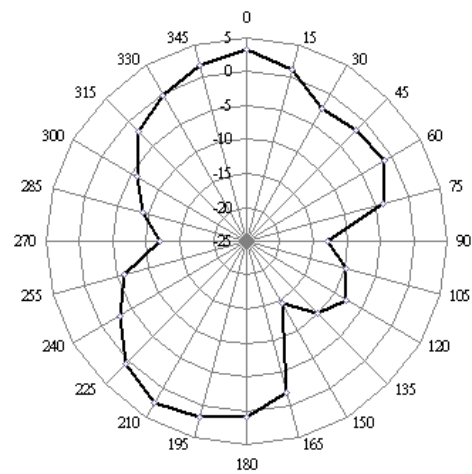
ANTENNA RADIATION PATTERNS**Scale:** 5 dBi / div Max : 5 dBi Min : -25 dBi**Device Setup & Coordinates****X-Y Plane****X-Z Plane****Y-Z Plane**

Fig. 5 Antenna radiation patterns at 5.350 GHz

REVISION HISTORY

REVISION	DATE	CHANGE NOTIFICATION	DESCRIPTION
Version 0	Mar. 14, 2016	-	- New data sheet for PCB type antenna, 2.40 ~ 2.50GHz / 5.150 ~ 5.875 GHz
Version 1	May. 18, 2016		Update performance data.
Version 2	Dec. 21, 2016		Add frequency points.