

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

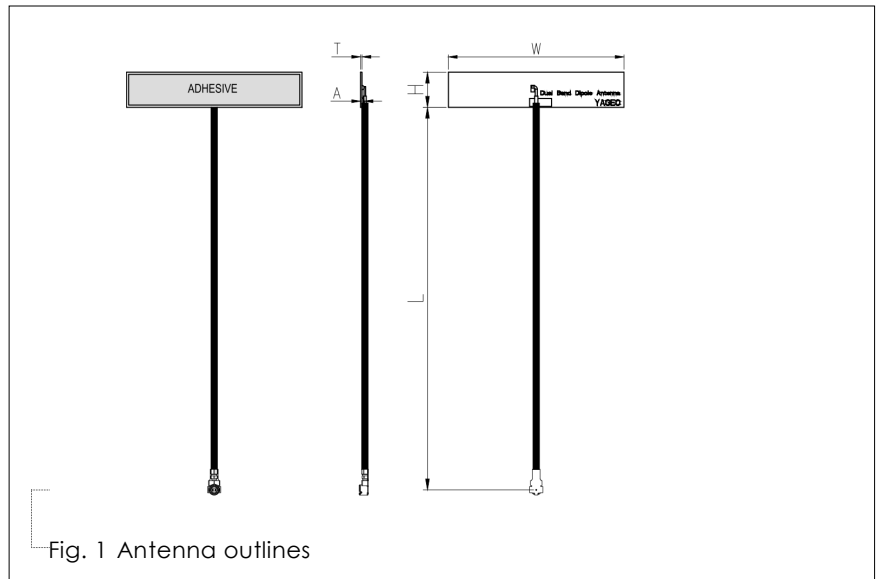
DESCRIPTION	VALUE
Working Frequency	2.40 ~ 2.50 GHz / 5.150 ~ 5.875 GHz
VSWR	2.5:1 max / 2.5:1 max
Peak Gain	2.6 dBi / 3.0 dBi
Polarization	Linear
Radiation Pattern	Omni-directional
Impedance	50 Ω Nominal
Operating Temperature	-40 °C to 85 °C
Maximum Power	1 W
Dimension (PCB+AL Foil)	40mm x 8mm x 0.55mm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

DIMENSIONS

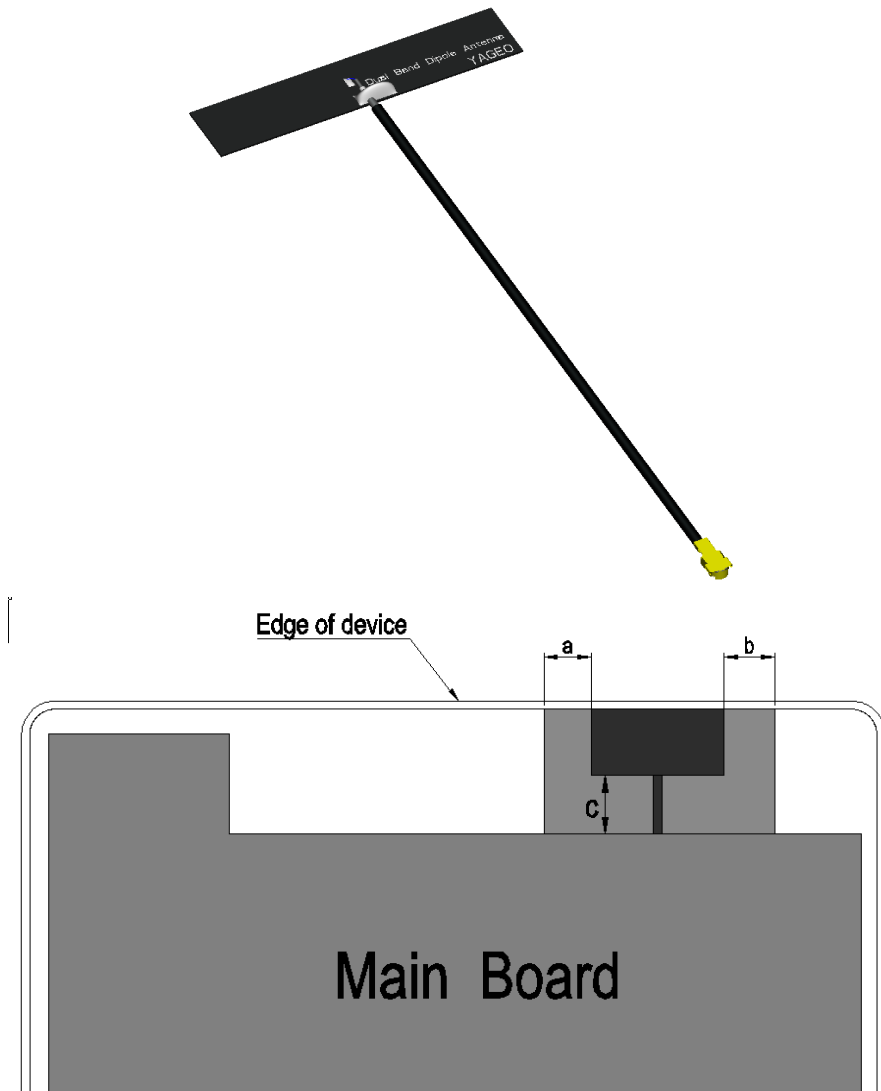
Table 2 Mechanical

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

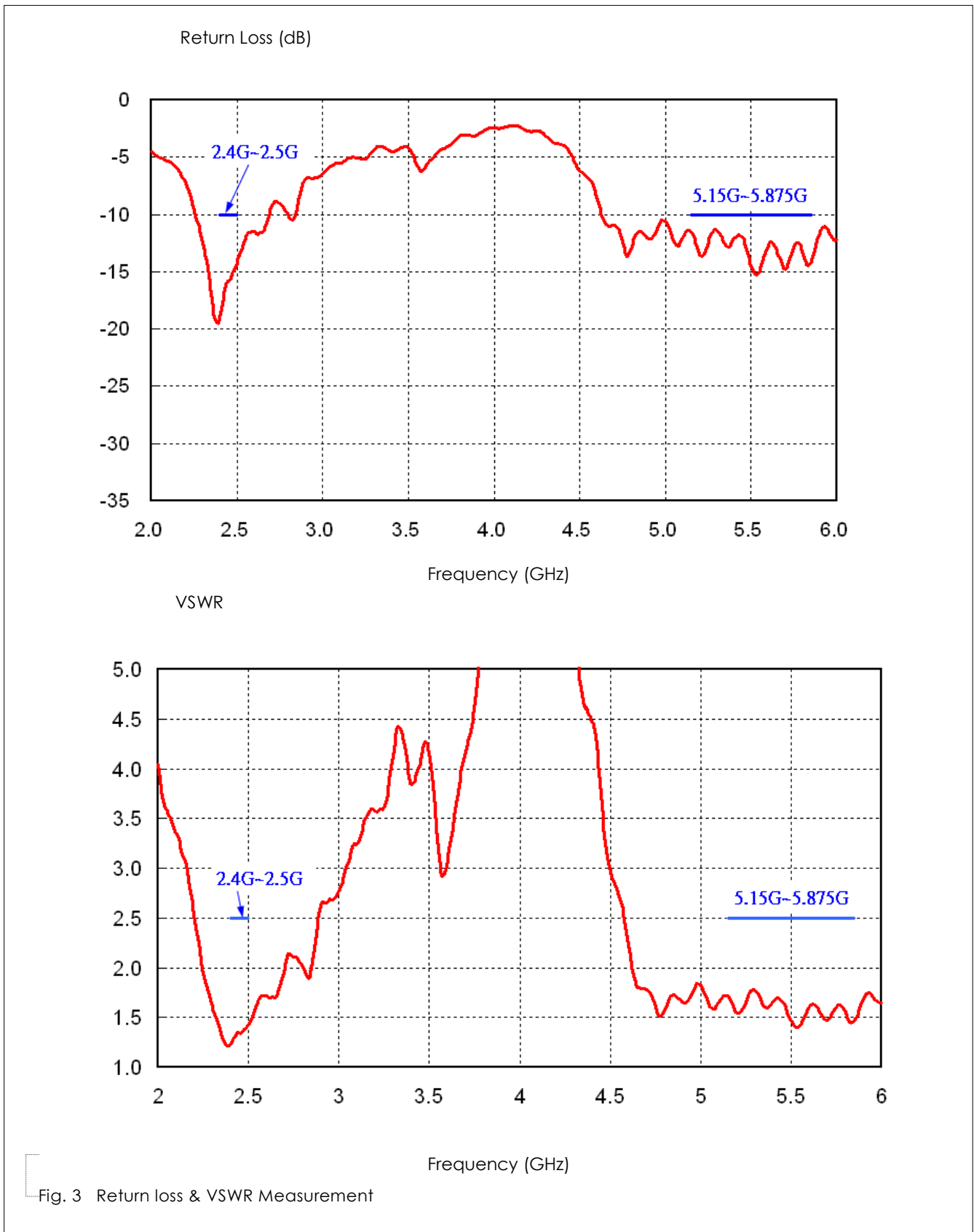


Fig. 3 Return loss & VSWR Measurement

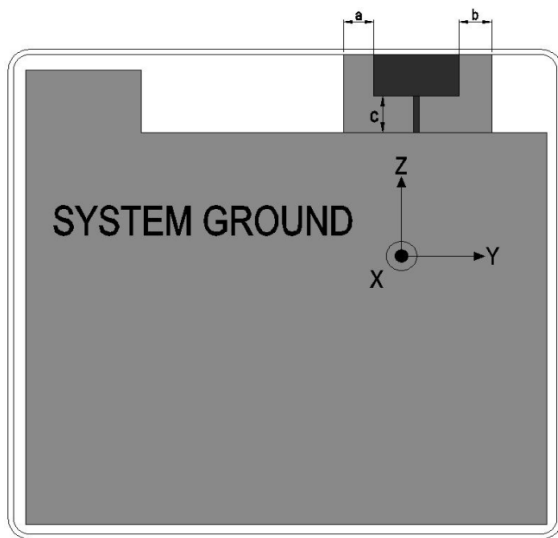
ANTENNA GAIN & EFFICIENCY

Table 3

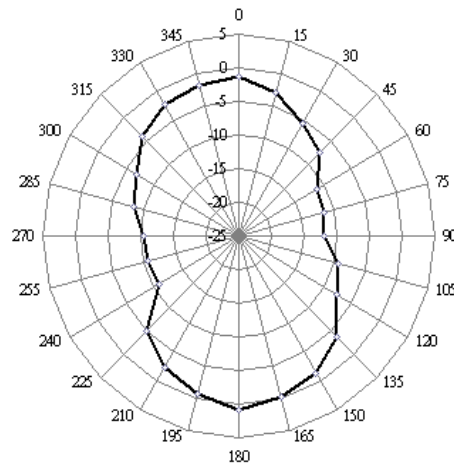
FREQUENCY (GHz)	AVERAGE GAIN (dBi)	EFFICIENCY (%)	PEAK GAIN (dBi)
2.40	-1.40	72.3	2.6
2.412	-1.37	73.0	2.4
2.422	-1.27	74.6	2.4
2.432	-1.34	73.4	2.3
2.45	-1.20	75.0	2.4
2.50	-1.20	75.7	2.3

ANTENNA RADIATION PATTERNS

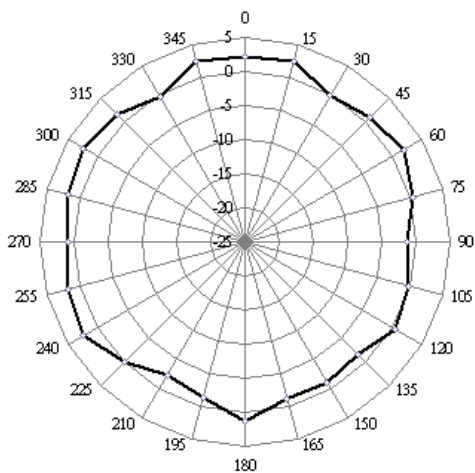
Scale: 5 dBi / div Max : 5 dBi Min : -25 dBi



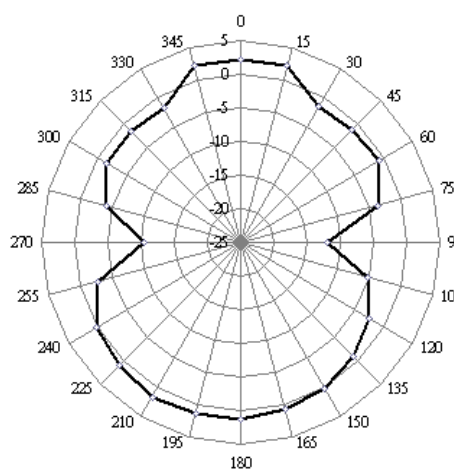
Device Setup & Coordinates



X-Y Plane



X-Z Plane



Y-Z Plane

Fig. 4 Antenna radiation patterns at 2.45 GHz

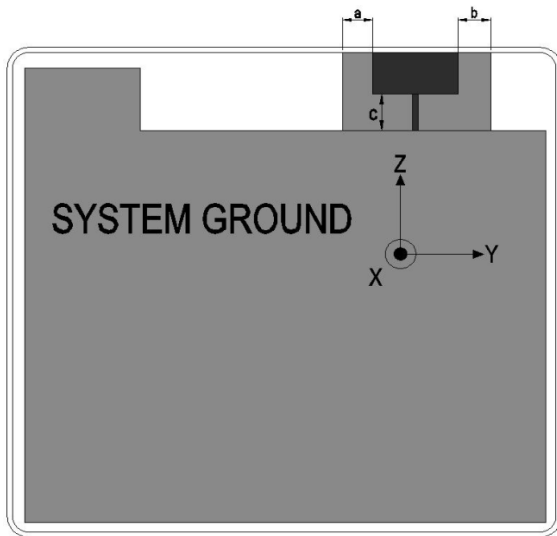
ANTENNA GAIN & EFFICIENCY

Table 4

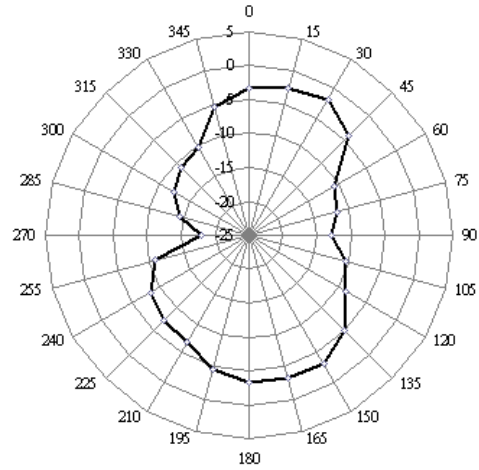
FREQUENCY (GHz)	AVERAGE GAIN (dBi)	EFFICIENCY (%)	PEAK GAIN (dBi)
5.150	-1.9	64.5	2.6
5.200	-1.9	65.1	2.2
5.250	-2.0	62.7	2.1
5.320	-2.3	58.3	2.4
5.350	-2.5	56.8	3.0
5.470	-2.1	61.1	3.0
5.500	-2.4	58.0	2.3
5.600	-2.2	60.3	2.5
5.700	-2.5	56.1	0.9
5.785	-2.3	58.6	1.0
5.805	-2.3	59.1	1.2
5.850	-2.9	51.1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

ANTENNA RADIATION PATTERNS

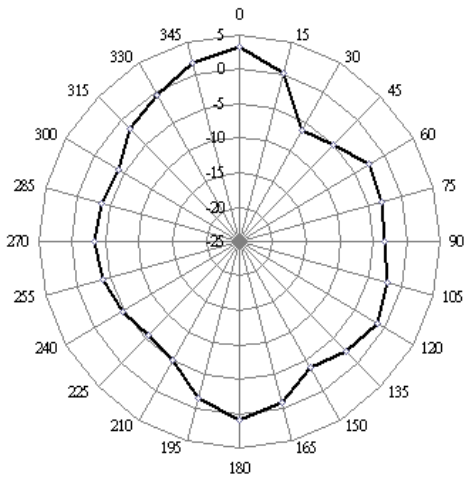
Scale: 5 dBi / div Max : 5 dBi Min : -25 dBi



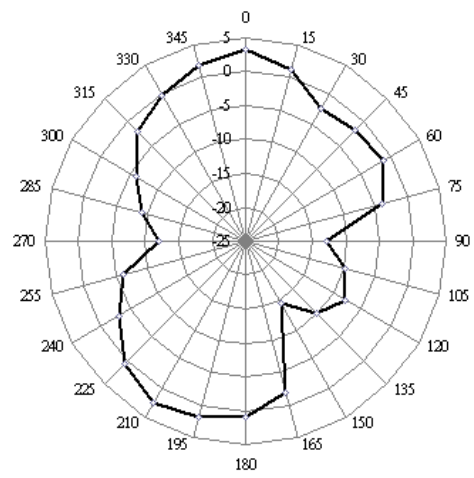
Device Setup & Coordinates



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.