Innovative Service Around the Globe YAGEO

DATA SHEET

WIRELESS COMPONENTS

PCB type antenna
ANTX150P001B50003
5.150~5.875 GHz

YAGEO Phycomp

Product Specification – October 8, 2013 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 instal 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	**X150**	**P**	**001**	**B**	**5000**	**3**
(1)	(2)	(3)	(4)	(5)	(6)	(7)

(1) FAMILY

ANT = Antenna products

(2) CONNECTOR & CABLE LENGTH (MM)

X = I-PEX
150 = 150mm

(3) ANTENNA TYPE

P=PCB

(4) SERIAL NUMBER

001 = SERIAL NUMBER 001

(5) PACKAGE TYPE

B = Bulk

(6) WORKING FREQUENCY

5000=5.150~5.875 GHz

(7) CABLE TYPE

3 = 1.13mm diameter Mini-Coaxial Cable

SPECIFICATIONS

Table 1

DESCRIPTION	VALUE
Working Frequency	5.150 ~ 5.875 GHz
VSWR	2.5:1 max
Peak Gain	2.5 dBi
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 / 150mm / Black
Mounting	Adhesive Tape (HF-DS)

DIMENSIONS

Table 2 Mechanical Dimension

DIMENSION	VALUE
L (mm)	150 ±3.00
W (mm)	18.4 ±0.30
H (mm)	7.50 ±0.30
T (mm)	0.55 ±0.15
A (mm)	2.30Max
B (mm)	0.5 ±0.30

OUTLINES

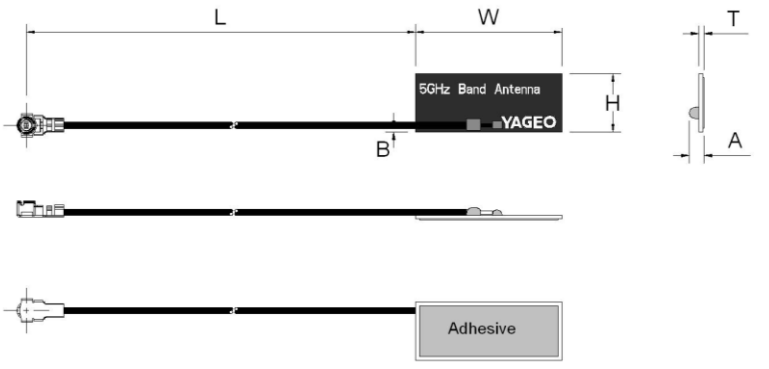
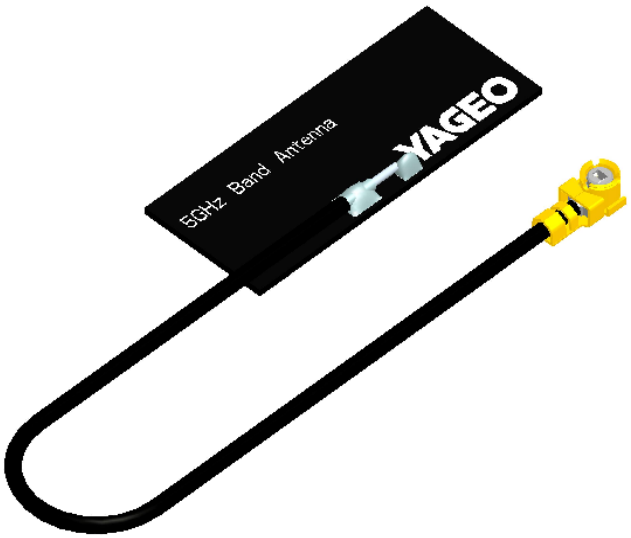
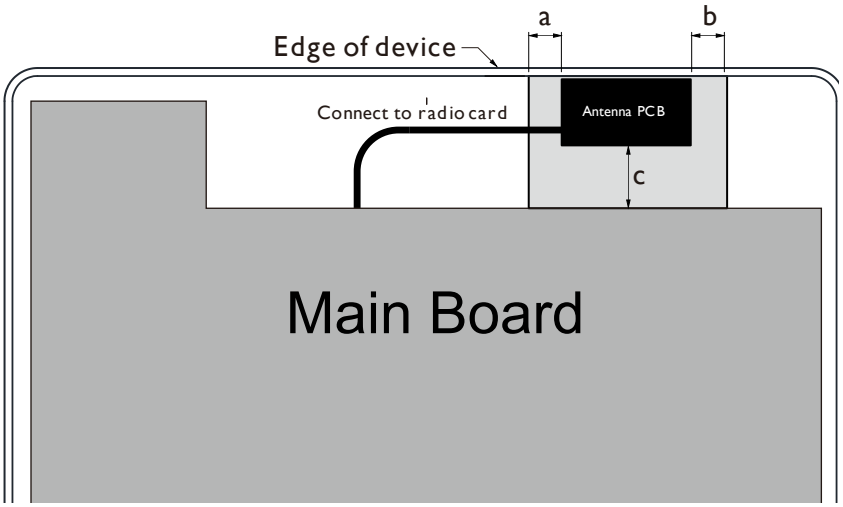


Fig. 1 Antenna outlines

APPLICATION INSTRUCTION

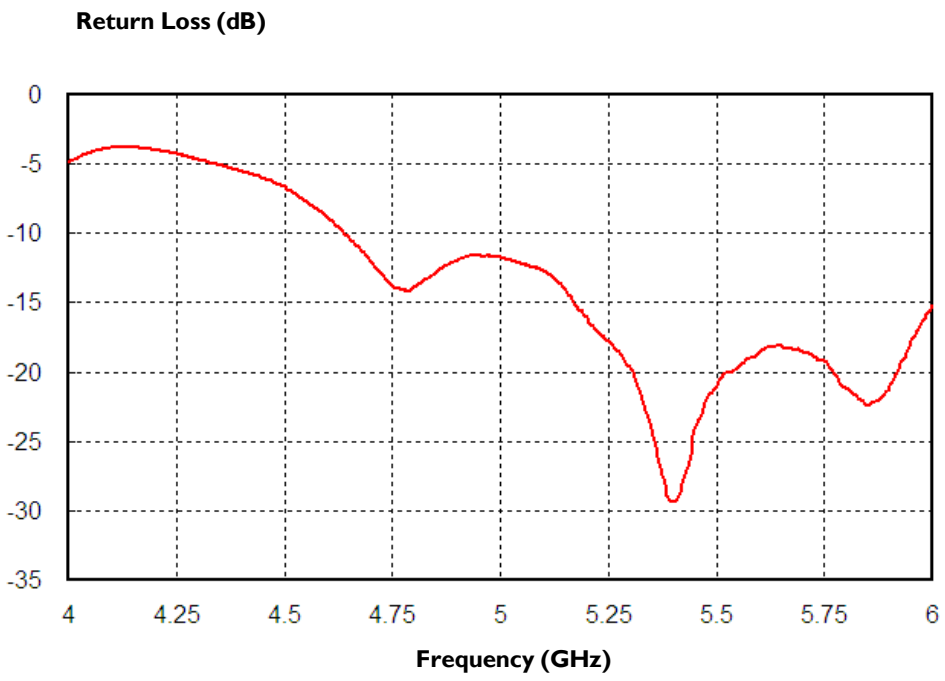




Antenna element element should be placed at the edge of device, has minimum keep-out zone of
A: 5 mm Min
B: 5 mm Min
C: 10 mm Min
from metallic object.

Fig. 2 Application Instruction

RETURN LOSS & VSWR



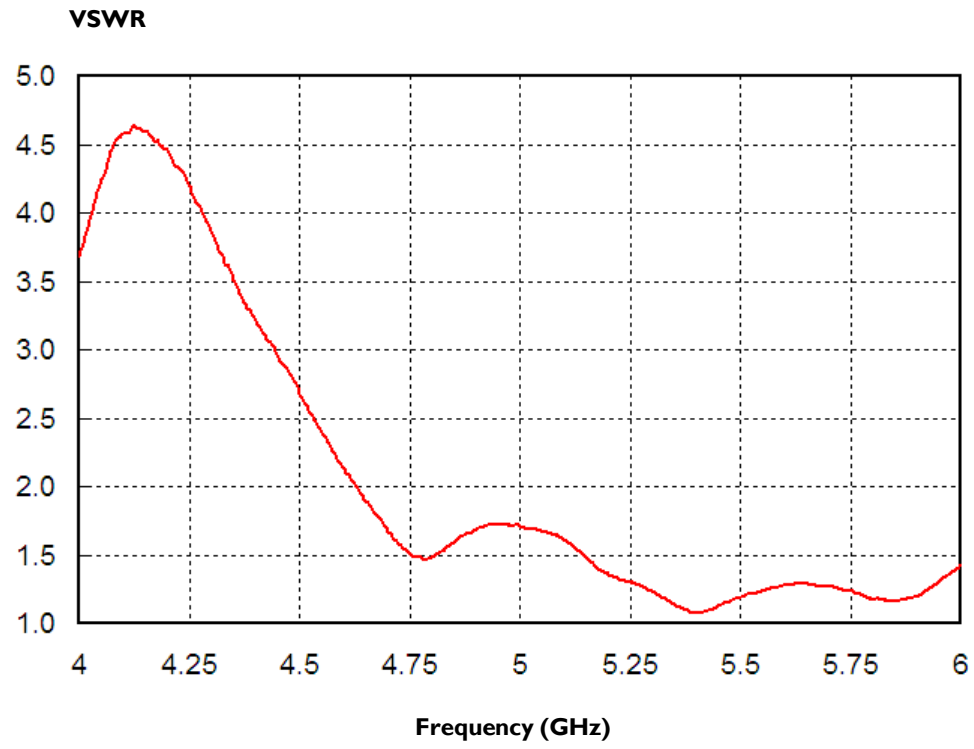


Fig. 3 Return loss & VSWR Measurement

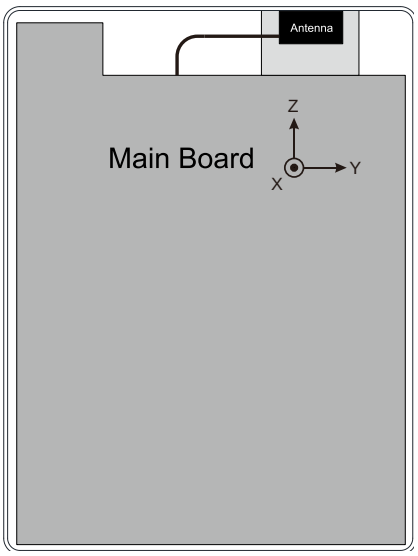
ANTENNA GAIN & EFFICIENCY

Table 3

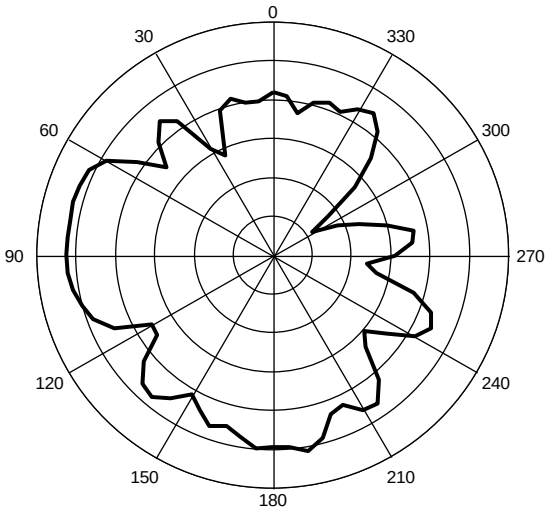
FREQUENCY (GHz)	AVERAGE GAIN (dBi)	EFFICIENCY (%)	PEAK GAIN (dBi)
5.150	-2.3	59	2.6
5.350	-2.7	54	2.5
5.475	-3.0	51	1.2
5.725	-2.5	56	3.1
5.875	-2.9	52	2.3

ANTENNA RADIATION PATTERNS

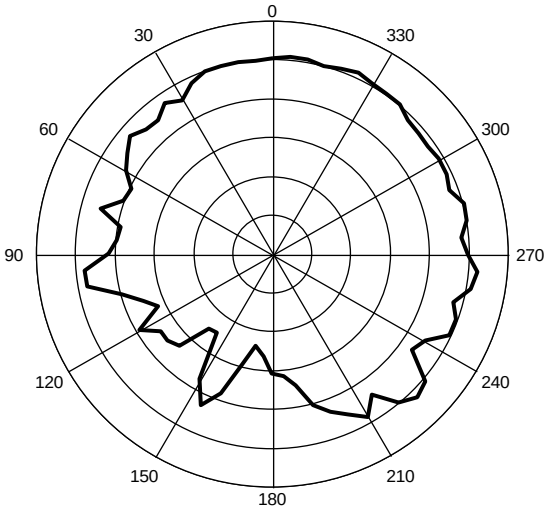
Scale: 5 dBi / div Max : 5 dBi Min : -25 dBi



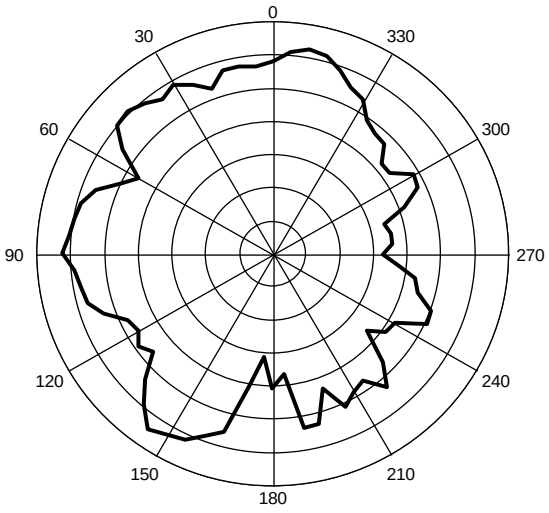
Device Setup & Coordinates



X-Y Plane



X-Z Plane



Y-Z Plane

Fig. 4 Antenna radiation patterns at 5.35 GHz

REVISION HISTORY

REVISION	DATE	CHANGE NOTIFICATION	DESCRIPTION
Version 0	Oct. 08, 2013	-	- New data sheet for PCB type antenna, 5.150 ~ 5.875 GHz