

DATA SHEET

WIRELESS COMPONENTS

PCB type antenna
ANTX050P116B08683

860~880MHz



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 X050 P 116 B 0868 3
 (1) (2) (3) (4) (5) (6) (7)

(1) FAMILY

ANT = Antenna products

(2) CONNECTOR & CABLE LENGTH (MM)

X = I-PEX
 50 = 50mm

(3) ANTENNA TYPE

P=PCB

(4) SERIAL NUMBER

116 = SERIAL NUMBER 116

(5) PACKAGE TYPE

B = Bulk

(6) WORKING FREQUENCY

868 = 860~880MHz

(7) CABLE TYPE

3 = 1.13mm diameter Mini-Coaxial Cable

SPECIFICATIONS

Table 1

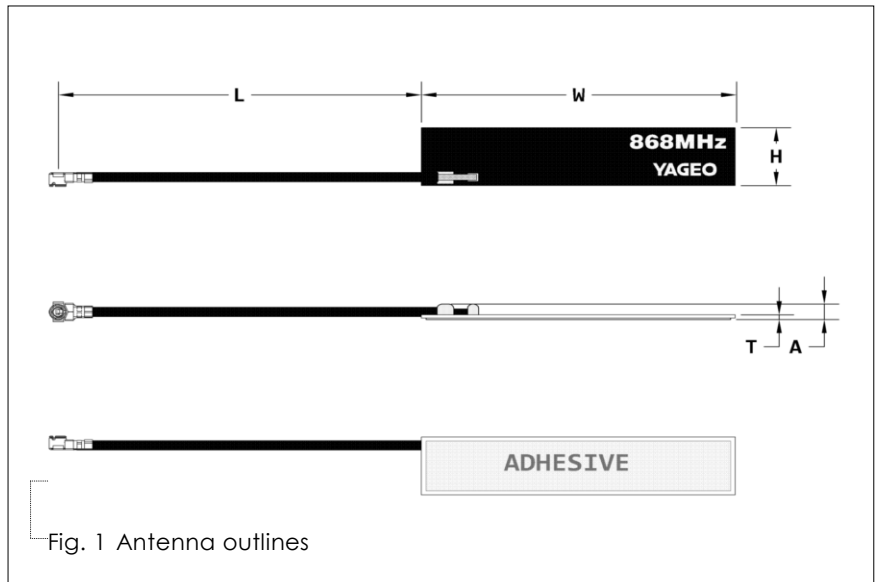
DESCRIPTION	VALUE
Working Frequency	860~880MHz
VSWR	2.5:1 max
Peak Gain	2dBi
Polarization	Linear
Radiation Pattern	Omni-directional
Impedance	50 Ω Nominal
Operating Temperature	-40 °C to 85 °C
Maximum Power	1 W
Dimension	34mm x 7mm x 0.95mm
Radio Connector	I-PEX (20278-112R-13)
Cable Diameter / Length / Color	1.13mm / 50mm / Black
Mounting	Adhesive Tape (HF-DS)

DIMENSIONS

Table 2 Mechanical

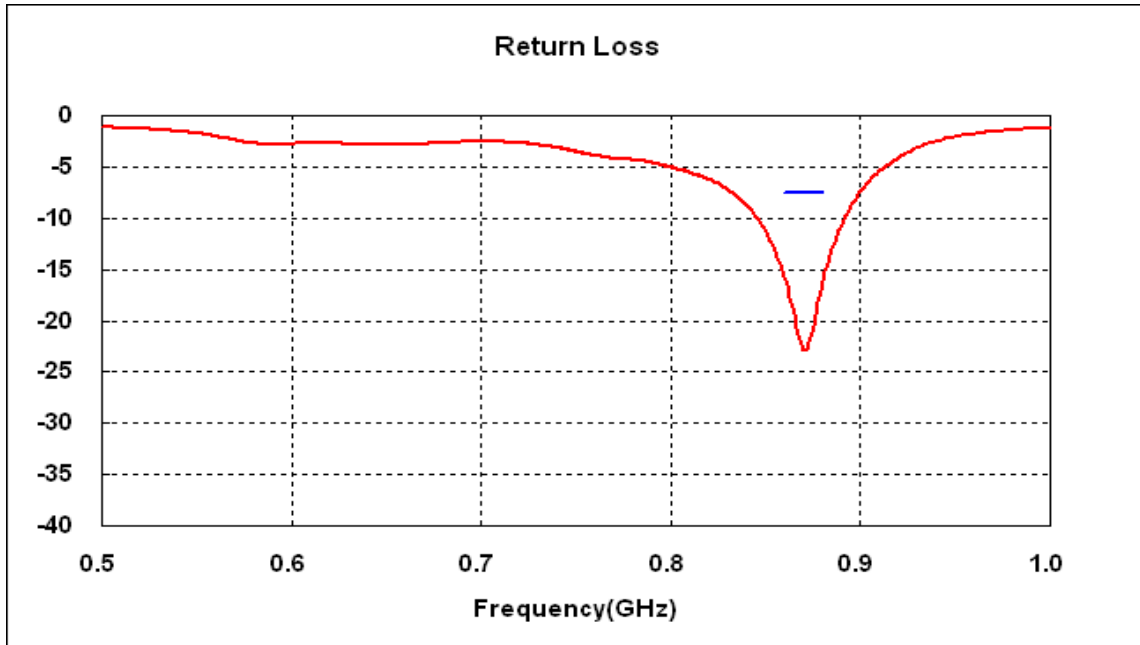
DIMENSION	VALUE
L (mm)	50+-3.00
W (mm)	34+-0.30
H (mm)	7+-0.30
T (mm)	0.95+-0.15
A (mm)	2.30 Max

OUTLINES

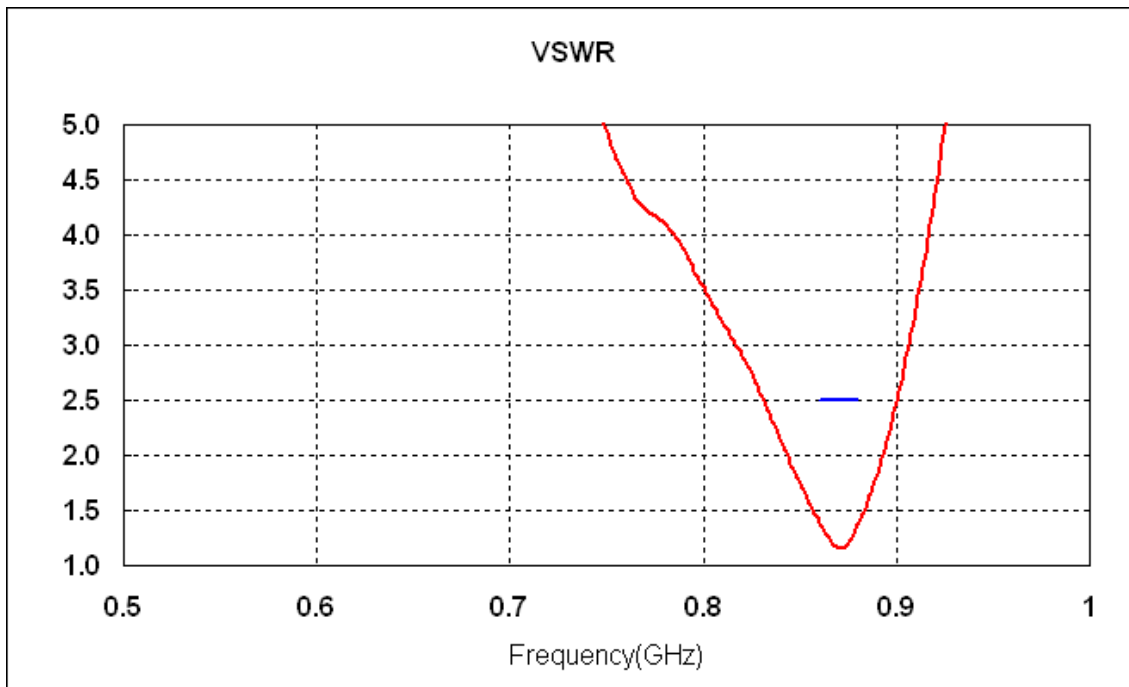


RETURN LOSS & VSWR

Return Loss (dB)



VSWR



Frequency (GHz)

Fig. 2 Return loss & VSWR Measurement

ANTENNA GAIN & EFFICIENCY

Table 3

FREQUENCY (GHz)	AVERAGE GAIN (dBi)	EFFICIENCY (%)	PEAK GAIN (dBi)
860	-2.2	60.4	2.0
868	-2.0	62.6	2.0
875	-2.4	57.6	1.6
880	-2.6	55.6	1.4

ANTENNA RADIATION PATTERNS

Scale: 5 dBi / div Max : 5 dBi Min : -20 dBi

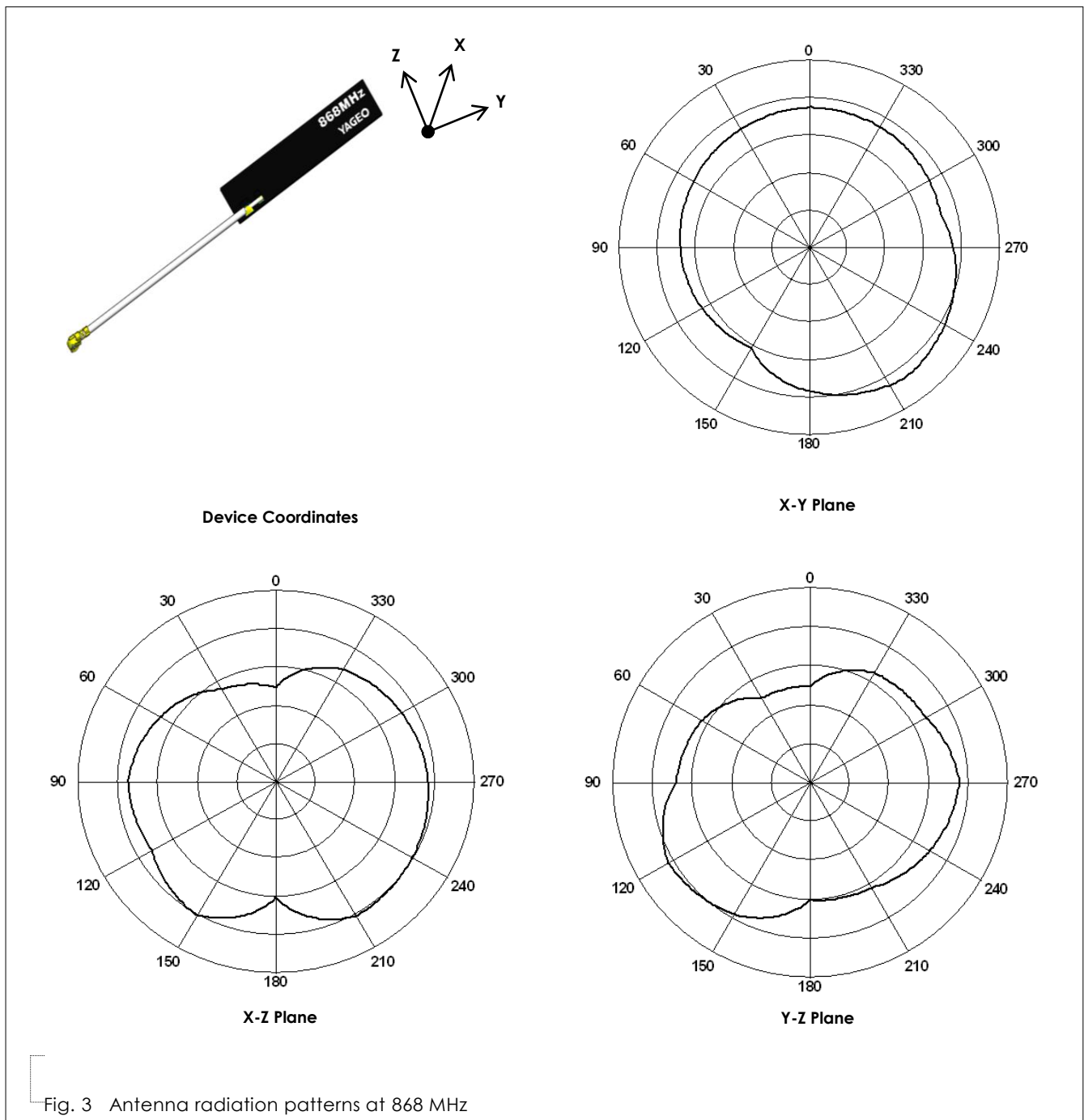


Fig. 3 Antenna radiation patterns at 868 MHz

REVISION HISTORY

REVISION	DATE	CHANGE NOTIFICATION	DESCRIPTION
Version 0	Jan. 11, 2018	-	- New data sheet for PCB type antenna, 860~880MHz application