Innovative Service Around the Globe YAGEO

DATA SHEET

WIRELESS COMPONENTS

FR4 Chip Antenna

ANT1204F002R0433A

433MHz

1204 Series



YAGEO Phycomp

Product Specification – August 18, 2014 V.0

FEATURES

- Compact size
- Omni-directional Radiation
- Tape & reel automaic mounting
- Reflow process compatible
- RoHS compliant

APPLICATIONS

- Smart meter
- Industrial remote control
- ISM band equipment

ORDERING INFORMATION

All part numbers are identified by the series, packing type, material, size, antenna type, working frequency and packing quantity.

PART NUMBER

ANT	1204	F	002	R	0433A
(1)	(2)	(3)	(4)	(5)	(6)

(1) PRODUCT

ANT = Antenna

(2) SIZE

1204=12× 4

(3) ANTENNA TYPE

L, F, A=Chip antenna

(4) SERIAL NO.

002

(5) PACKING STYLE

R = Tape and Reel

(6) WORKING FREQUENCY

0433=433 MHz

PHYCOMP CTC

CAN431105902043K

12NC

431105902043

SPECIFICATION

Table 1

DESCRIPTION	VALUE
Centre Frequency	433 M Hz
Bandwidth	28M Hz (Typ.)
Return Loss	6.5 dB min
Polarization	Linear
Azimuth Beamwidth	Omni-directional
Peak Gain	0.79 dBi (Typ.)
Impedance	50 Ω
Operating Temperature	- 40~105 ℃
Maximum Power	1 W
Termination	Cu / Au (Environmentally-Friendly Leadless)
Resistance to Soldering Heats	260℃ , 10sec.

NOTE

1. The specification is defined on Yageo evaluation board

DIMENSIONS

Table 2 Machinical Dimension

	DIMENSION
L (mm)	12.30 ±0.20
W (mm)	4.00 ±0.20
T (mm)	1.60 ±0.20
A (mm)	0.50 ±0.20

OUTLINES

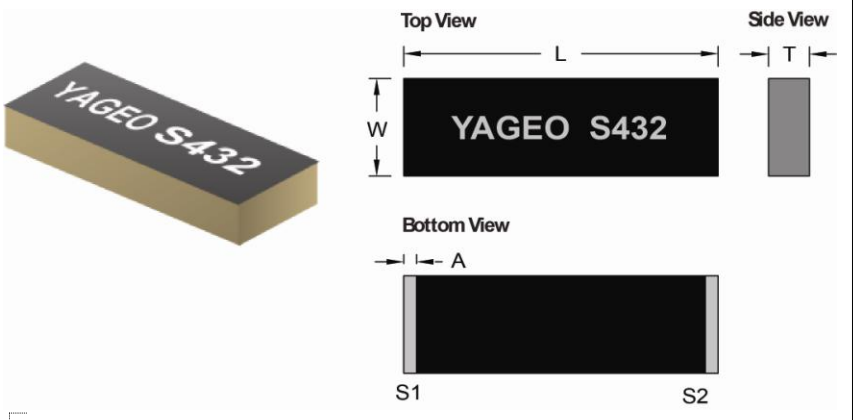


Fig. 1 Antenna outlines

Table 3 Termination configuration

TERMINAL NAME	FUNCTION
S1	Feeding Point
S2	Soldering Point

REFERENCE DESIGN OF EVALUATION BOARD

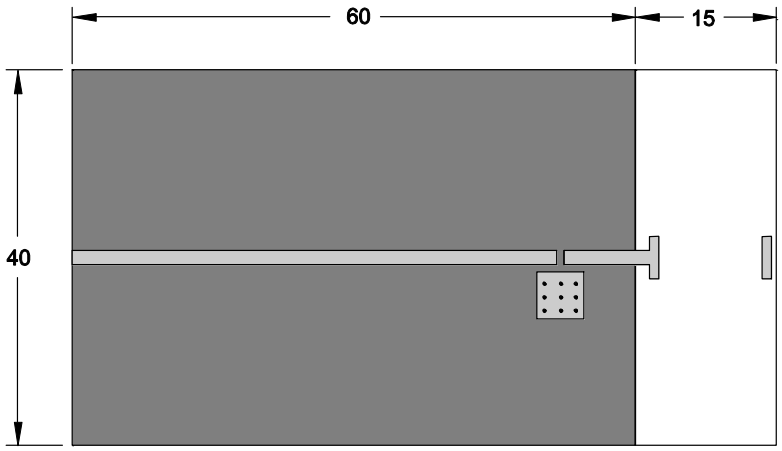


Fig. 3 Outlook and dimension of evaluation board

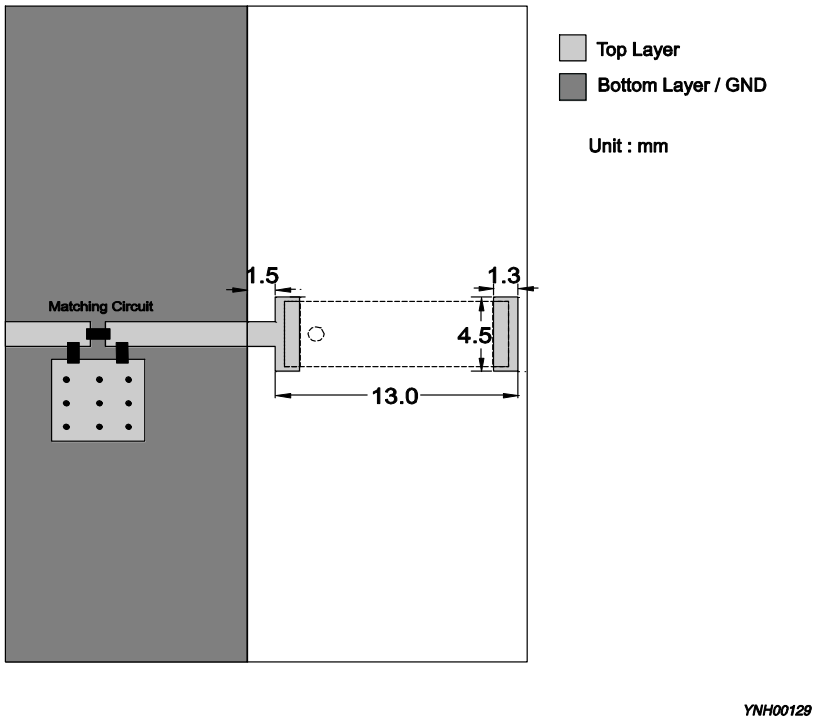
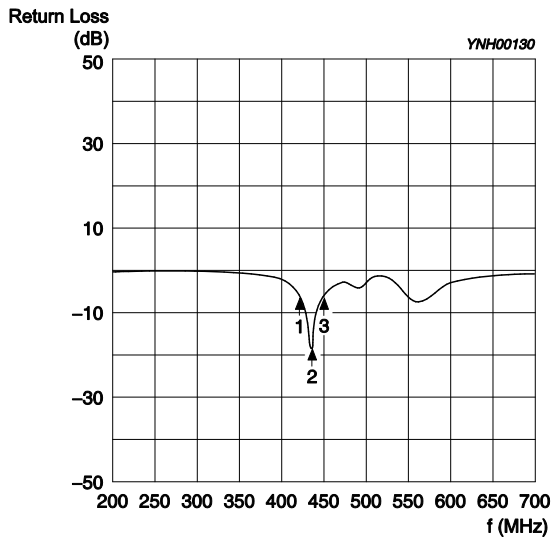


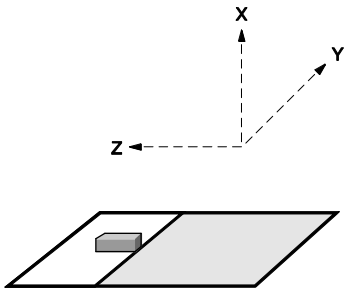
Fig. 4 Details of soldering Pad

ELECTRICAL PERFORMANCES

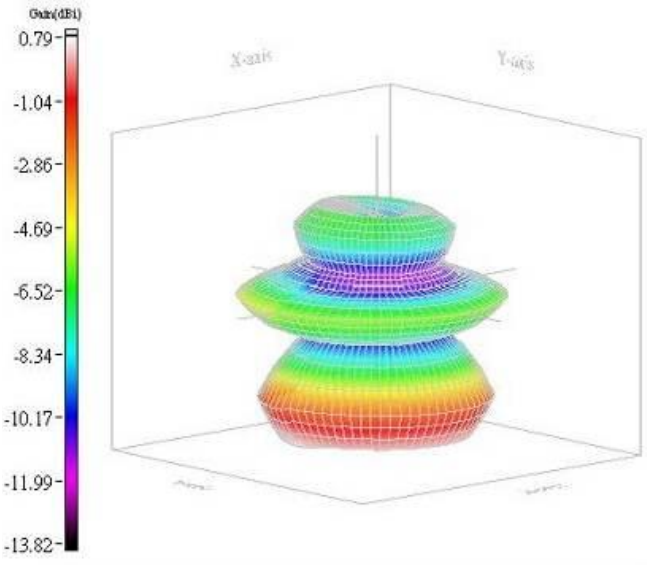


Marker data
1. 419MHz, -6.5dB
2. 433MHz, -16dB
3. 447MHz, -6.5dB

Fig. 5 Return loss



Evaluation board and XYZ direction



Frequency= 433 MHz
Max gain = 0.79 dBi, at (150,330)
MEG (mean effective gain)= -4.84 dBi
Directivity (dB) = 6.35
Efficiency = -5.56dB, 27.79 %

Fig. 6 Radiation pattern

REVISION HISTORY

REVISION	DATE	CHANGE NOTIFICATION	DESCRIPTION
Version 0	Aug. 05, 2013	-	- New data sheet for SMD type antenna, 433MHz application, 1204 series