Innovative Service Around the Globe YAGEO

DATA SHEET

WIRELESS COMPONENTS

FR4 Chip Antenna

ANT1204F007R0870A

UHF (870MHz)

1204 Series



Product Specification – September 26, 2013 V.0

YAGEO Phycomp

FEATURES

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

APPLICATIONS

- Smart meter
- Industrial remote control

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 007 R 0870 A
(1) (2) (3) (4) (5) (6)

(1) PRODUCT

ANT = Antenna

(2) SIZE

1204=12 × 4 mm

(3) ANTENNA TYPE

L, F, A=Chip antenna

(4) SERIAL NO.

007

(5) PACKING STYLE

R = Tape and Reel

(6) WORKING FREQUENCY

0870 = UHF 870MHz

PHYCOMP CTC

CAN431105907087 1K

12NC

431105907087

SPECIFICATION

Table 1

DESCRIPTION	VALUE
Centre Frequency	870MHz
Bandwidth	30 MHz (Typ.)
Return Loss	10 dB min
Polarization	Linear
Azimuth Beamwidth	Omni-directional
Peak Gain	1.67 dBi (Typ.)
Impedance	50Ω
Operating Temperature	- 40~85 ℃
Maximum Power	1 W
Termination	Cu / Au (Environmentally-Friendly Leadless)
Resistance to Soldering Heats	260°C / 10 sec

NOTE
The specification is defined on Yageo evaluation board

DIMENSIONS

Table 2 Machinical Dimension

	DIMENSION
L (mm)	12.20±0.20
W (mm)	4.00±0.20
T (mm)	1.60±0.20

Table 3 Termination configuration

TERMINAL NAME	Function
S1	Feeding Point
S2	Soldering Point

OUTLINES

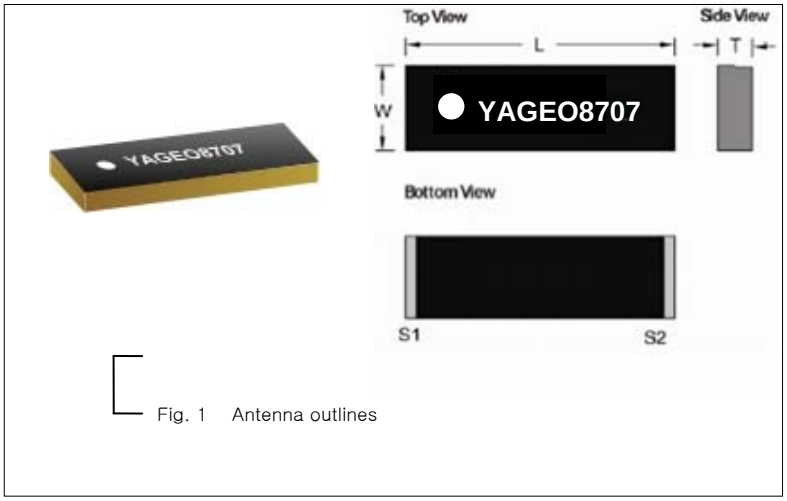


Fig. 1 Antenna outlines

REFERENCE DESIGN OF EVALUATION BOARD

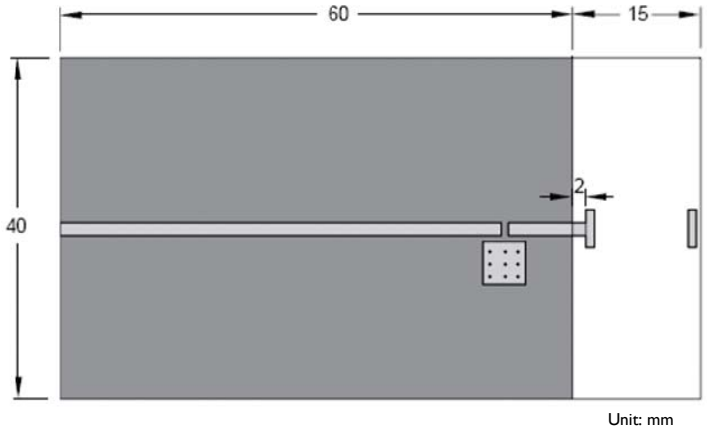


Fig. 2 Outlook and dimension of evaluation board

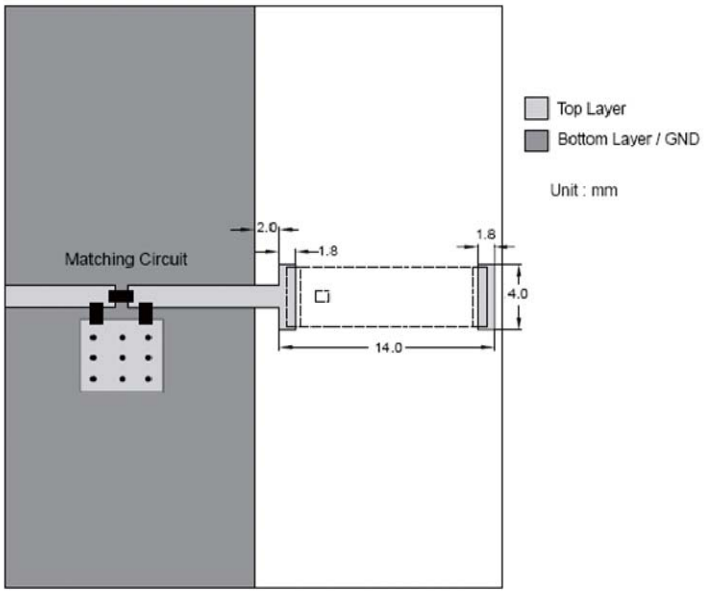
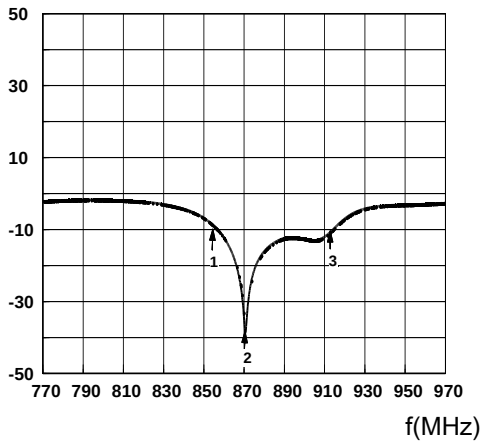


Fig. 3 Details of soldering Pad

ELECTRICAL PERFORMANCE



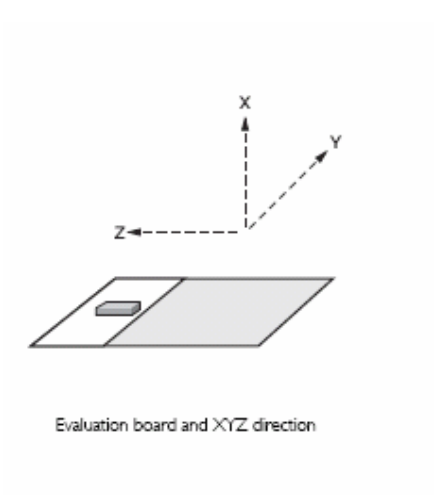
Marker data

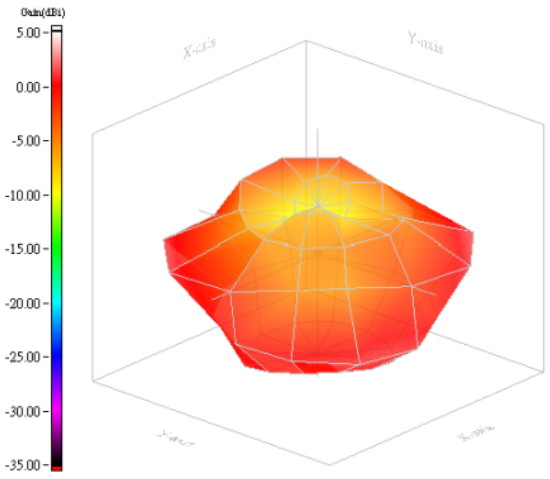
1.856MHz,-10dB

2.870MHz,-34dB

3.914MHz,-10dB

Fig. 4 Return loss





Max gain= 1.67dBi, at (90, 150)
MEG (mean effective gain)= -2.69dBi
Directivity(dB)= 3.87
Efficiency= -2.20dB, 60.30%

Fig. 5 Radiation pattern

REVISION HISTORY

REVISION	DATE	CHANGE NOTIFICATION	DESCRIPTION
Version 0	Sept. 26, 2013		- New data sheet antenna, 870MHz application, 1204 series