Innovative Service Around the Globe YAGEO

DATA SHEET

WIRELESS COMPONENTS

FR4 Chip Antenna

ANT1004F002R2400A

2.4 – 2.5 GHz

1004 Series

YAGEO Phycomp

Product Specification – April 22, 2013 V.0

FEATURES

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

APPLICATIONS

- 2.4 GHz WiFi device
- Bluetooth gadget
- Zibee device
- 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	1004	F	002	R	2400A
(1)	(2)	(3)	(4)	(5)	(6)

(1) PRODUCT

ANT = Antenna

(2) SIZE

1004 = 10 × 4 mm

(3) ANTENNA TYPE

L,F,A = Chip Antenna

(4) SERIAL NO.

002

(5) PACKING TYPE

R = Tape and Reel

(6) WORKING FREQUENCY

2400 = 2.4GHz

PHYCOMP CTC

CAN4311041022451K

PHYCOMP CTC

431104102245

SPECIFICATION

Table 1

DESCRIPTION	VALUE
Centre Frequency	2.45 GHz
Bandwidth	300 MHz (Typ.)
Return Loss	10 dB min
Polarization	Linear
Azimuth Beamwidth	Omni-directional
Peak Gain	1.55 dBi
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)	10.30 ±0.30
W (mm)	4.00 ±0.20
T (mm)	2.00 ±0.20
A (mm)	1.00 ±0.15
B (mm)	6.00 ± 0.15

OUTLINES

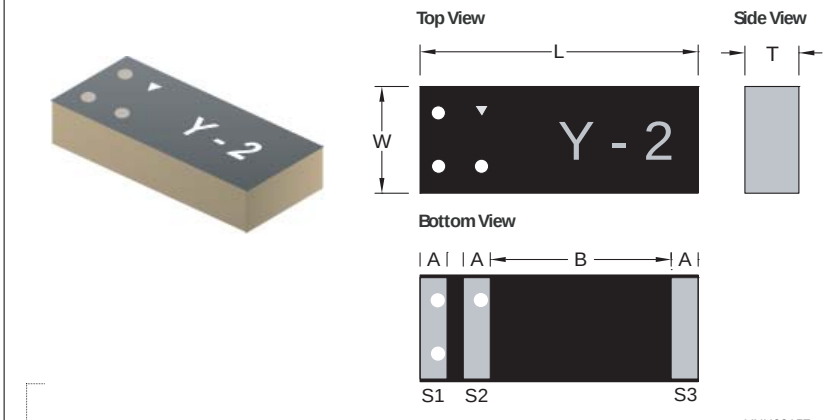


Fig. 1 Antenna outlines

Table 3 Termination configuration

TERMINAL NAME	FUNCTION
S1	GND
S2	Feeding Point
S3	Soldering Point

REFERENCE DESIGN OF EVALUATION BOARD

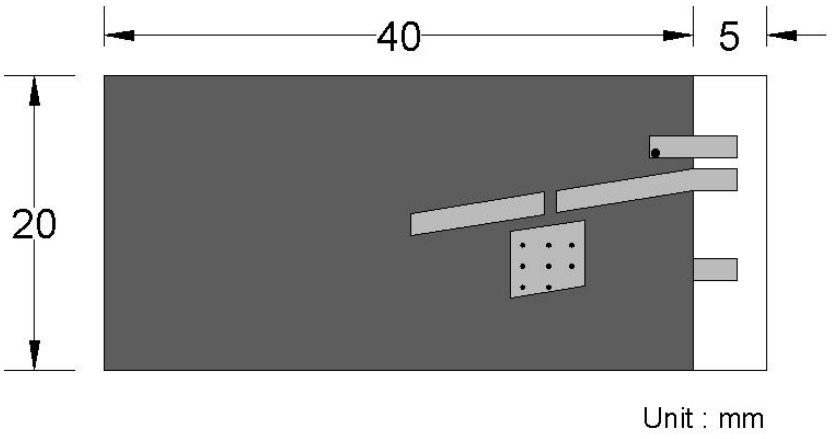


Fig. 2 Outlook and dimension of evaluation board

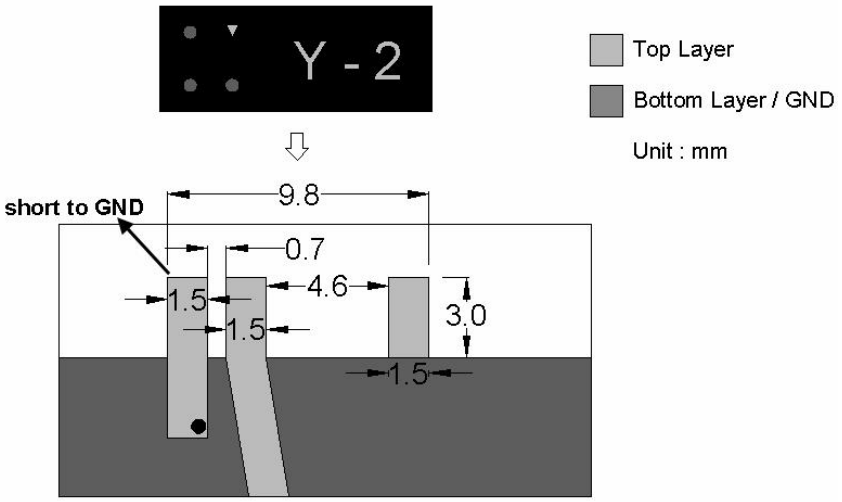
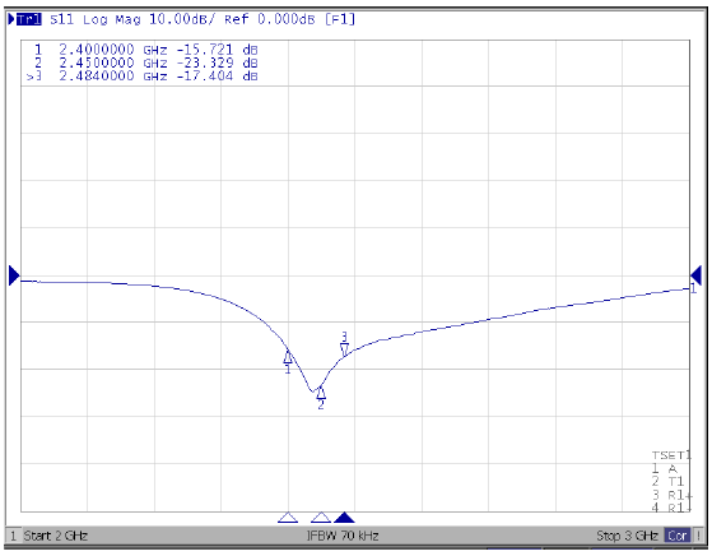


Fig. 3 Details of soldering Pad

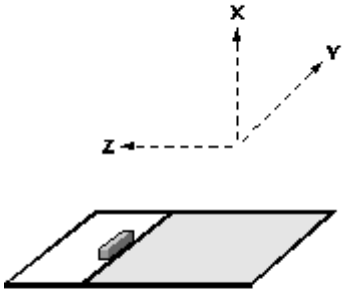
ELECTRICAL PERFORMANCES



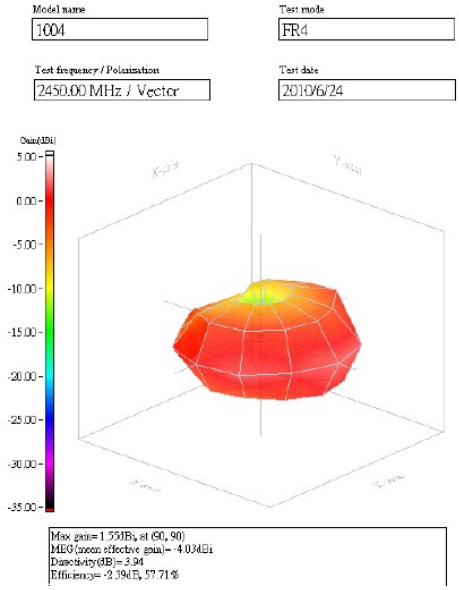
Marker data

1. 2.36GHz, -10dB
2. 2.46GHz, -38dB
3. 2.77GHz, -10dB

Fig. 4 Return loss



Evaluation board and XYZ direction



Frequency= 2.45 GHz
Max gain = 1.91 dBi, at (150,150)
MEG (mean effective gain)= -3.61dBi
Directivity (dB) = 4.33
Efficiency = -2.42dB, 57.24 %

Fig. 5 Radiation pattern

REVISION HISTORY

REVISION	DATE	CHANGE NOTIFICATION	DESCRIPTION
Version 0	Apr. 22, 2013	-	- New data sheet for SMD type antenna, 2.45GHz application, 1004 Series