

## 920MHz PCB Antenna with case

### Measurement results

| Appover | Reviewer | Author  |
|---------|----------|---------|
| Shizuka | Yoshida  | Kumagai |

- Sample name : 920MHz PCB Antenna with case
- Antenna type : Dipole Antenna
- Frequency : 920.6 - 923 MHz
- Quantity : 1 pcs.
- Note : Measured values include cable and connector characteristics.

Hoko Electronics Co.,Ltd.

8-45-21, Shinyoshidahigashi, Kohoku-ku,  
Yokohana-shi, Kanagawa 223-0058, Japan

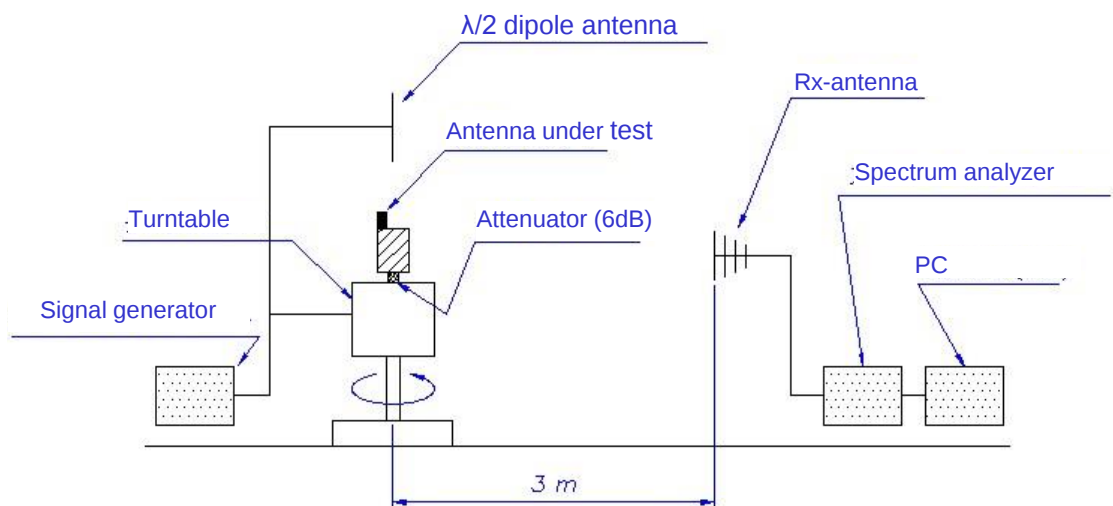
TEL : +81-45-547-2651 FAX : +81-45-547-2650

## ◆ Measuring equipment

|                            |                                 |
|----------------------------|---------------------------------|
| Signal generator           | [Anritsu / MG3692C]             |
| Spectrum analyzer          | [Agilent Technology / 4407B]    |
| Network analyzer           | [Agilent Technologies / E8361A] |
| $\lambda/2$ dipole antenna | [Anritsu / MP663A]              |
| Rx-antenna                 | [Advantest / TR17206]           |

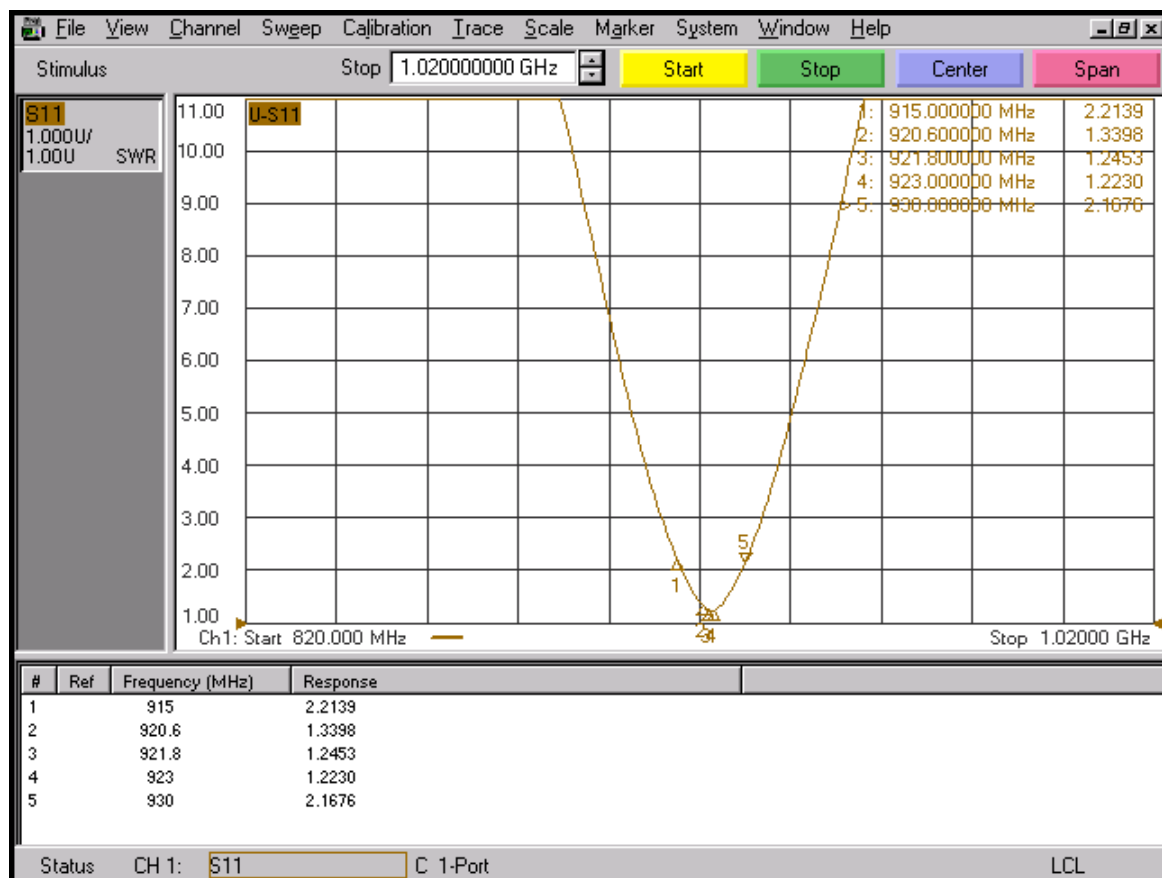
Note 1 : Calculate the gain of the dipole antenna as 2.14dBi.

Note 2 : Cable losses in the measurement are compensated for.



## ➤ S11 characteristic

### •VSWR



## ➤ Radiation pattern at XY plane

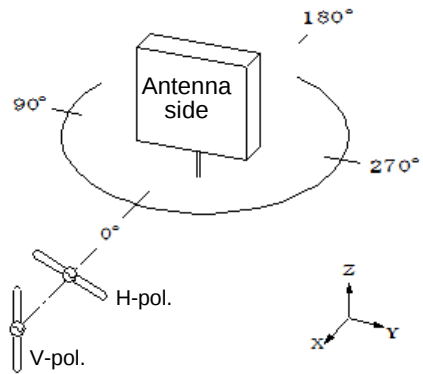
Sample Name :

920MHz PCB Antenna with case

Frequency : 920.6 - 923 MHz

H-pol. (Horizontal polarization)

V-Pol. (Vertical polarization)



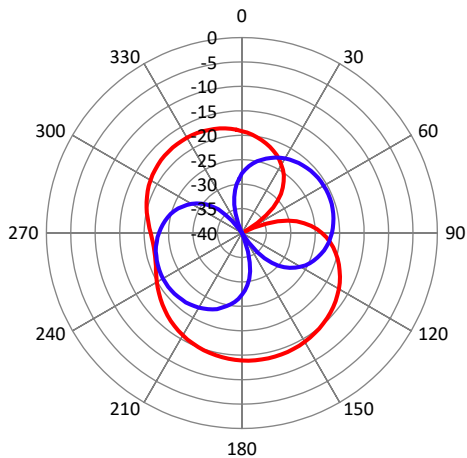
920.6 MHz

H-pol. Max. Gain -13.8 dBi

Ave. Gain -17.9 dBi

V-pol. Max. Gain -20.6 dBi

Ave. Gain -24.1 dBi



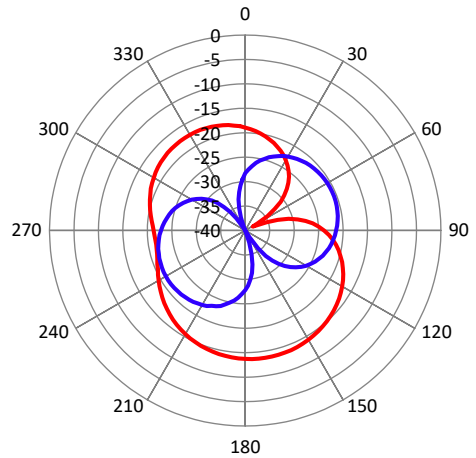
921.8 MHz

H-pol. Max. Gain -13.6 dBi

Ave. Gain -17.8 dBi

V-Pol. Max. Gain -20.5 dBi

Ave. Gain -24.0 dBi



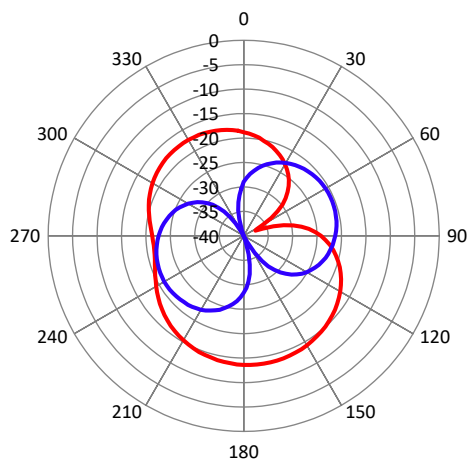
923.0 MHz

H-pol. Max. Gain -13.5 dBi

Ave. Gain -17.7 dBi

V-pol. Max. Gain -20.6 dBi

Ave. Gain -24.0 dBi



## ➤ Radiation pattern at YZ plane

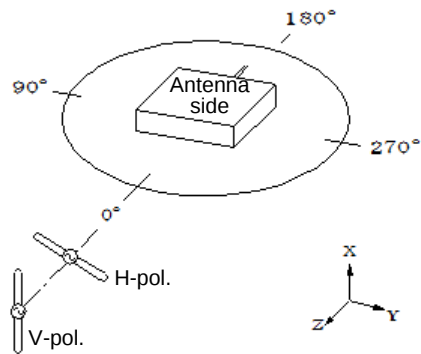
Sample Name :

920MHz PCB Antenna with case

Frequency : 920.6 - 923 MHz

H-pol. (Horizontal polarization)

V-pol. (Vertical polarization)



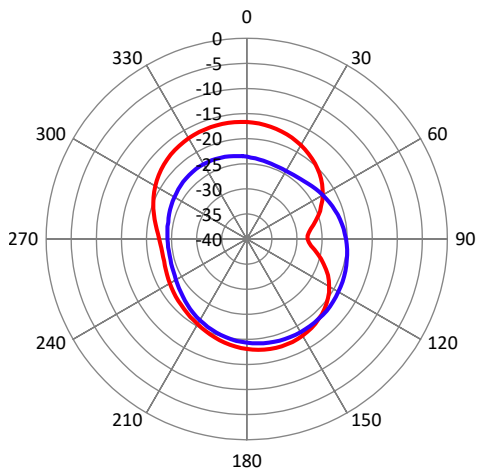
920.6 MHz

H-pol. Max. Gain -16.6 dBi

Ave. Gain -19.4 dBi

V-pol. Max. Gain -18.6 dBi

Ave. Gain -21.4 dBi



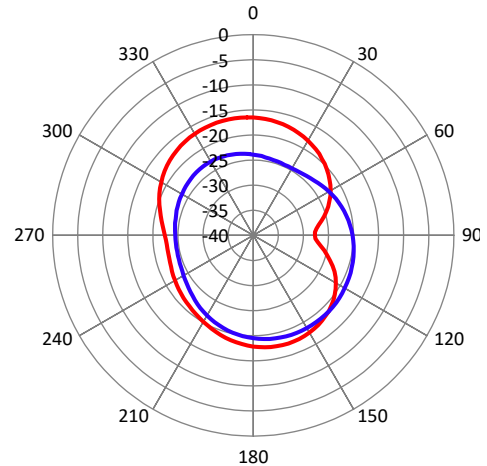
921.8 MHz

H-pol. Max. Gain -16.4 dBi

Ave. Gain -19.2 dBi

V-pol. Max. Gain -18.6 dBi

Ave. Gain -21.5 dBi



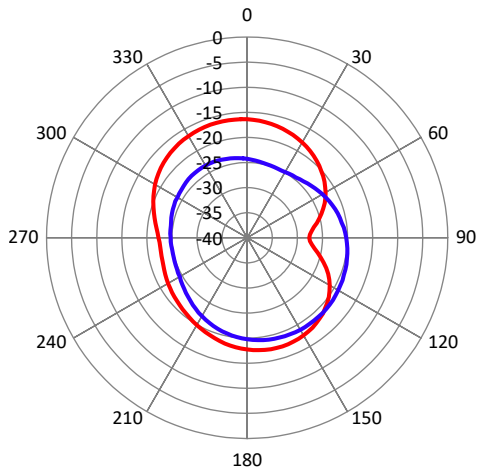
923.0 MHz

H-pol. Max. Gain -16.3 dBi

Ave. Gain -19.1 dBi

V-pol. Max. Gain -18.8 dBi

Ave. Gain -21.8 dBi



## ➤ Radiation pattern at XZ plane

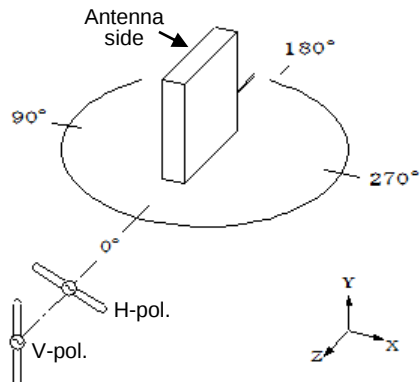
Sample Name :

920MHz PCB Antenna with case

Frequency : 920.6 - 923 MHz

H-pol. (Horizontal polarization)

V-Pol. (Vertical polarization)



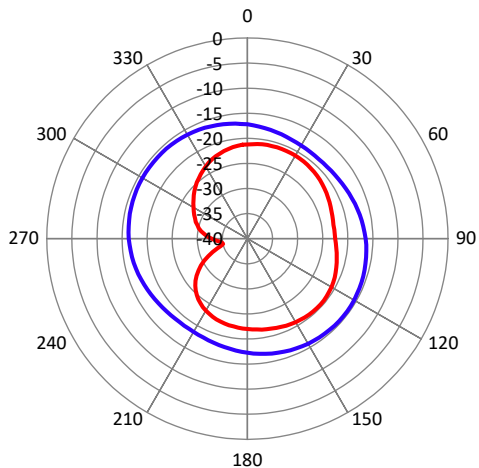
920.6 MHz

H-pol. Max. Gain -20.4 dBi

Ave. Gain -22.7 dBi

V-pol. Max. Gain -15.4 dBi

Ave. Gain -16.8 dBi



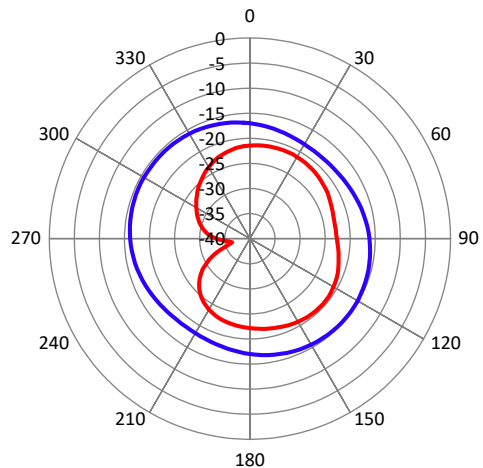
921.8 MHz

H-pol. Max. Gain -20.4 dBi

Ave. Gain -22.9 dBi

V-pol. Max. Gain -15.2 dBi

Ave. Gain -16.6 dBi



923.0 MHz

H-pol. Max. Gain -20.6 dBi

Ave. Gain -23.2 dBi

V-pol. Max. Gain -15.0 dBi

Ave. Gain -16.4 dBi

