

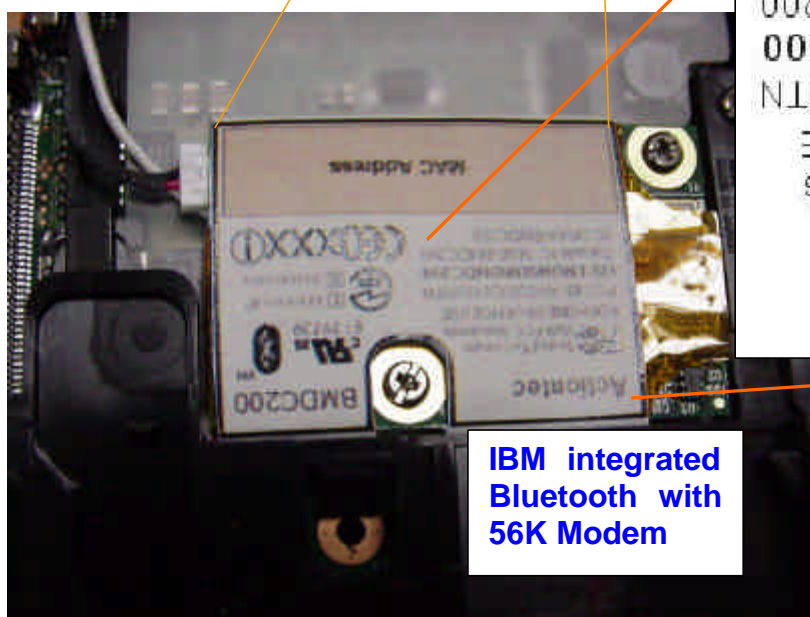
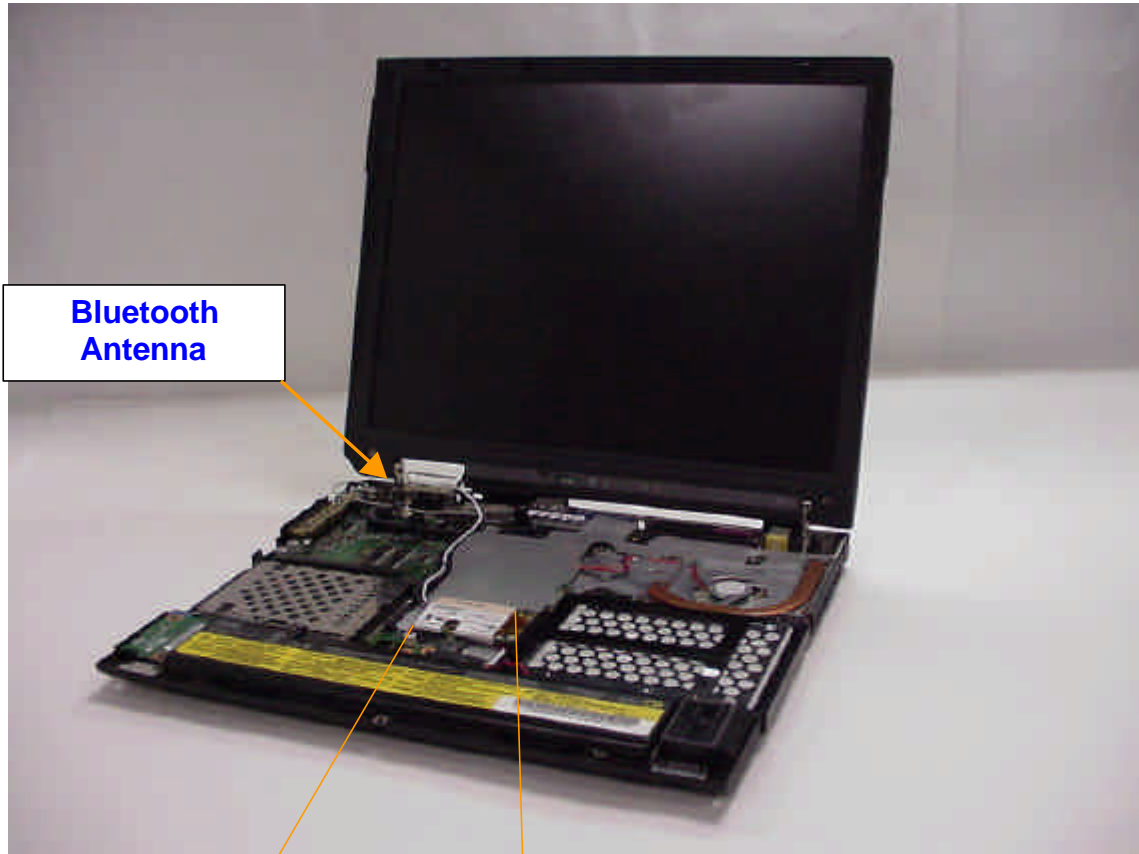
## **IBM Integrated Bluetooth with 56K Modem**

# **Host Unit Information of ThinkPad X30 Series**

- **Host PC Information**
- **Host PC Labeling**
- **Antenna Information**

## Host PC Information

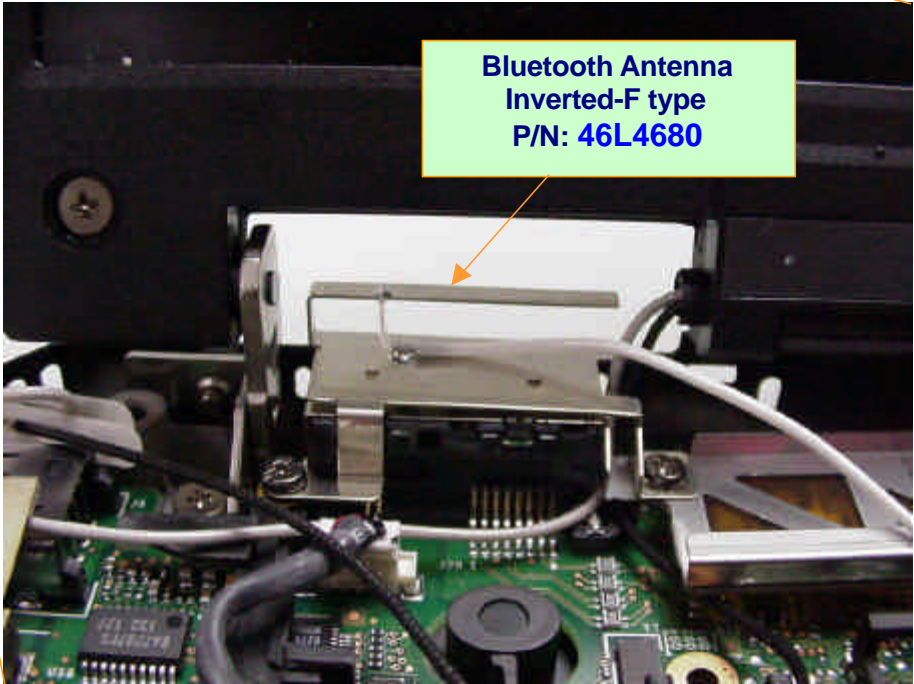
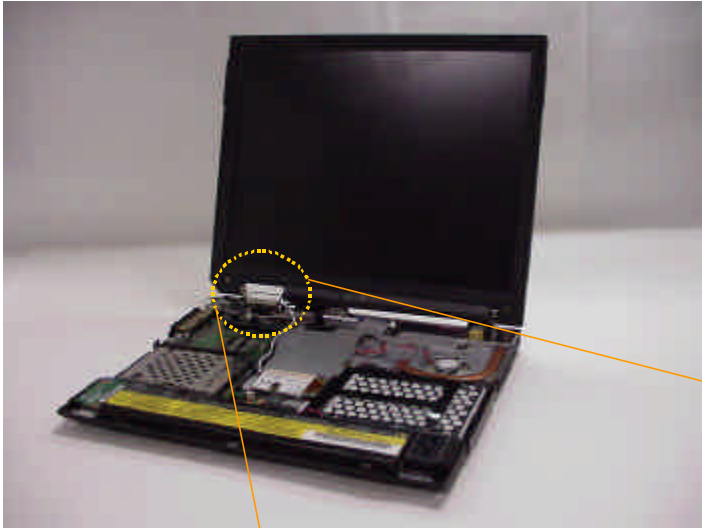
The inverted F-figure type antenna is built in the left side hinge section of main body.



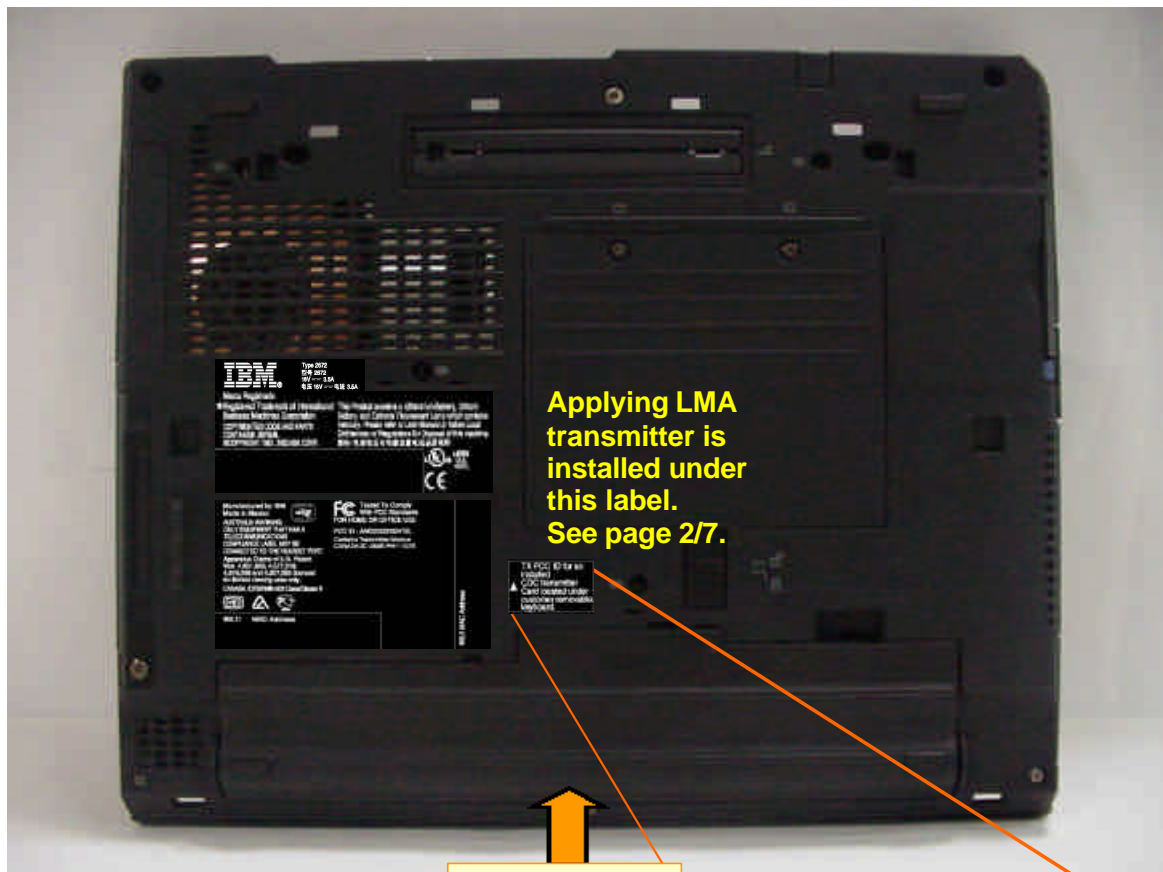
**IBM integrated Bluetooth with 56K Modem**

The FCC ID and IC certification number are visible when the customer removable keyboard is taken away.

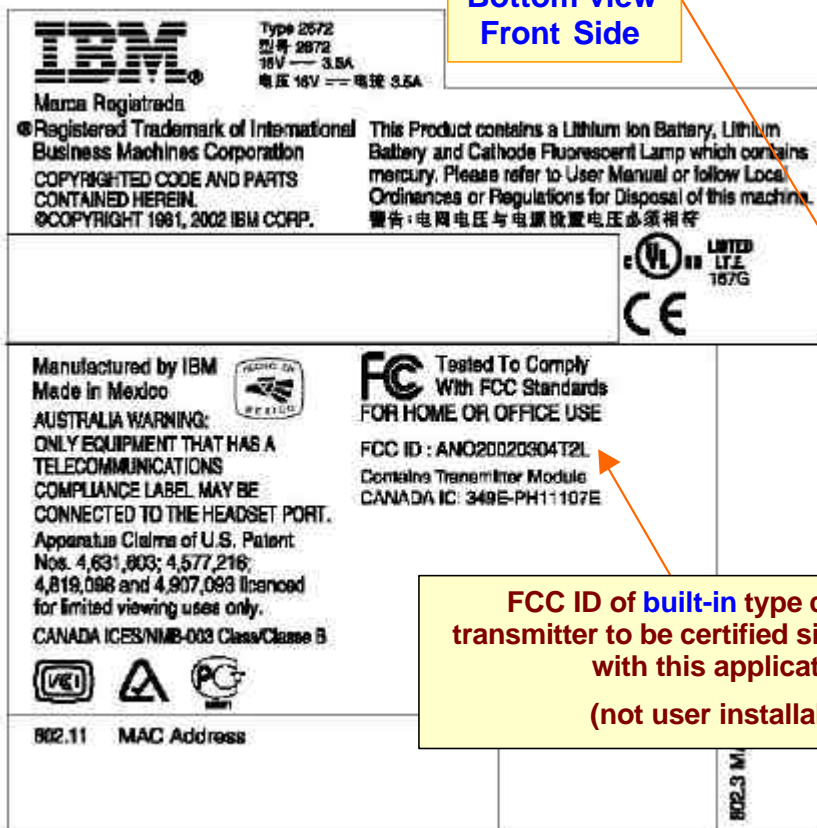
IBM ThinkPad X30 Series



## Host PC Labeling



Bottom view  
Front Side



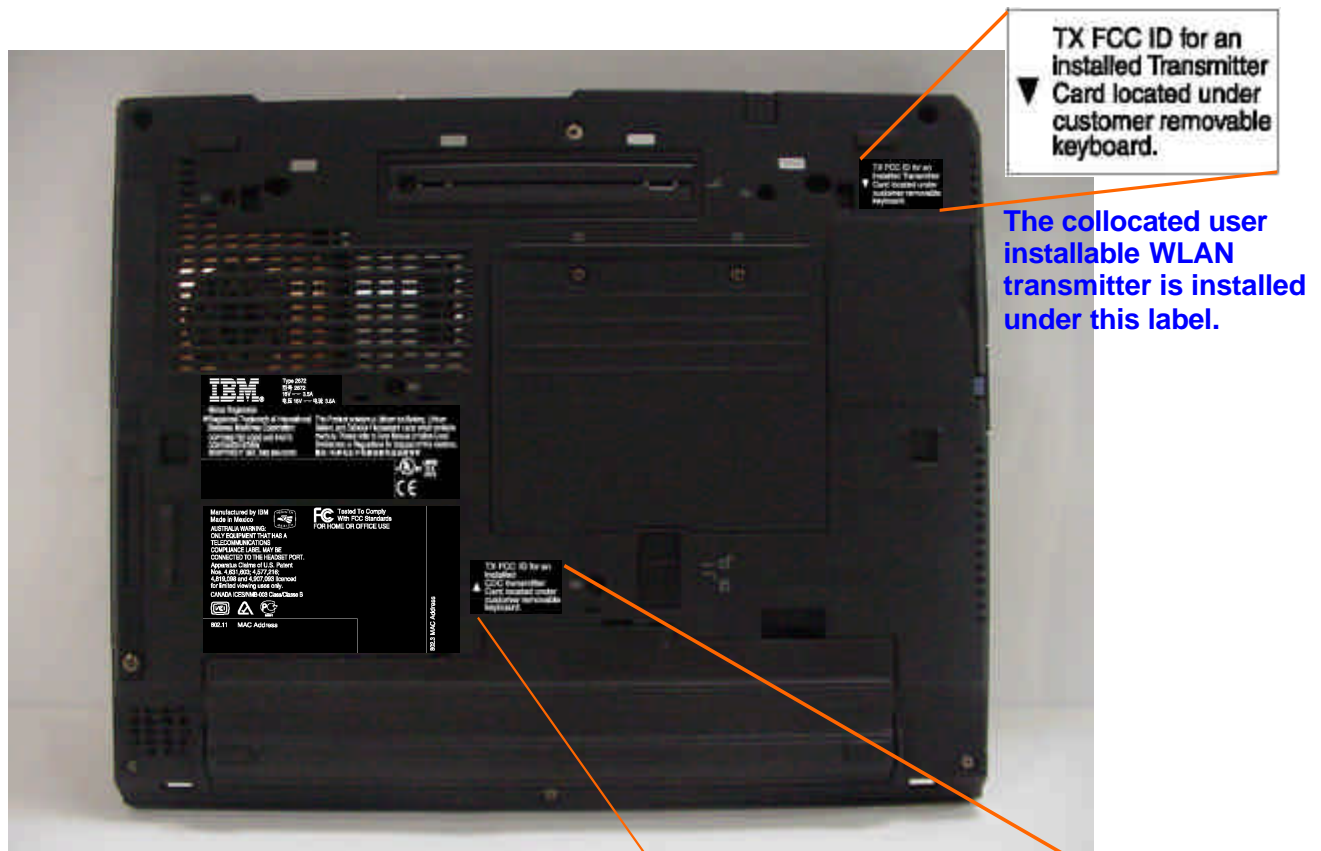
TX FCC ID for an installed CDC transmitter Card located under customer removable keyboard.







FCC ID of built-in type collocated transmitter to be certified simultaneously with this application (not user installable)



**Label for a different model of the host PC (ThinkPad X30 Series)**

The model (X30) supports the applying Bluetooth LMA module and one of the [user installable](#) WLANs (ANO20020201CLK or ANOU58H004) which are to be certified simultaneously with this application.



		Type 2672 型号 2672 16V --- 3.5A 电压 16V --- 电流 3.5A
Marca Registrada ©Registered Trademark of International Business Machines Corporation COPYRIGHTED CODE AND PARTS CONTAINED HEREIN. ©COPYRIGHT 1981, 2002 IBM CORP.		This Product contains a Lithium Ion Battery, Lithium Battery and Cathode Fluorescent Lamp which contains mercury. Please refer to User Manual or follow Local Ordinances or Regulations for Disposal of this machine. 警告: 电网电压与电源设置电压必须相符
Manufactured by IBM Made in Mexico AUSTRALIA WARNING: ONLY EQUIPMENT THAT HAS A TELECOMMUNICATIONS COMPLIANCE LABEL MAY BE CONNECTED TO THE HEADSET PORT. Apparatus Claims of U.S. Patent Nos. 4,631,603; 4,577,216; 4,819,098 and 4,907,093 licenced for limited viewing uses only. CANADA ICES/NMIS-003 Class/Classe B		FC Tested To Comply With FCC Standards FOR HOME OR OFFICE USE  LIMITED LITE 167G 
  		802.3 MAC Address
802.11 MAC Address		

TX FCC ID for an installed CDC transmitter Card located under customer removable keyboard.

# Antenna Information

## 1. Antenna Specification

Transmission Antenna assembly overview

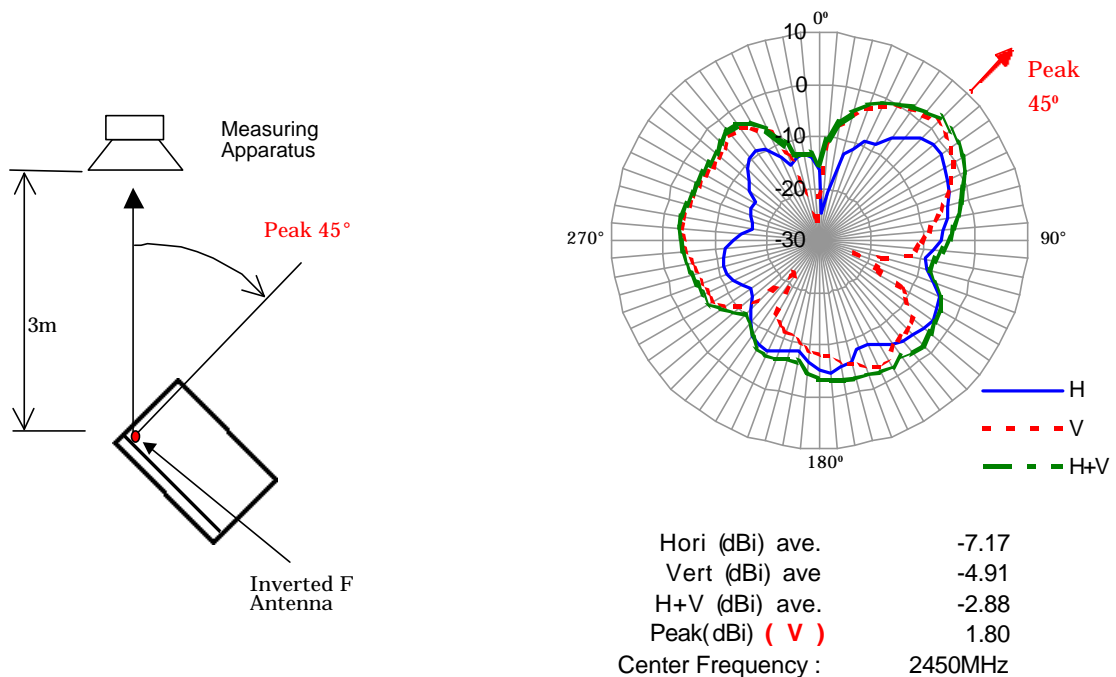
Designator (Parts Number)	Manufacture	Antenna type	Cable type and length	Gain (dBi) Note 1)
Bluetooth antenna 46L4680	NISSEI ELECTRIC Co., Ltd.	Inverted F type Antenna	coax 180mm	1.80 dBi (peak)

Notes:

1a. Includes all cable losses.

1b. Antenna type should be Omni Directional and have gain of 2.0 dBi or less, regarding the IBM internal specification.

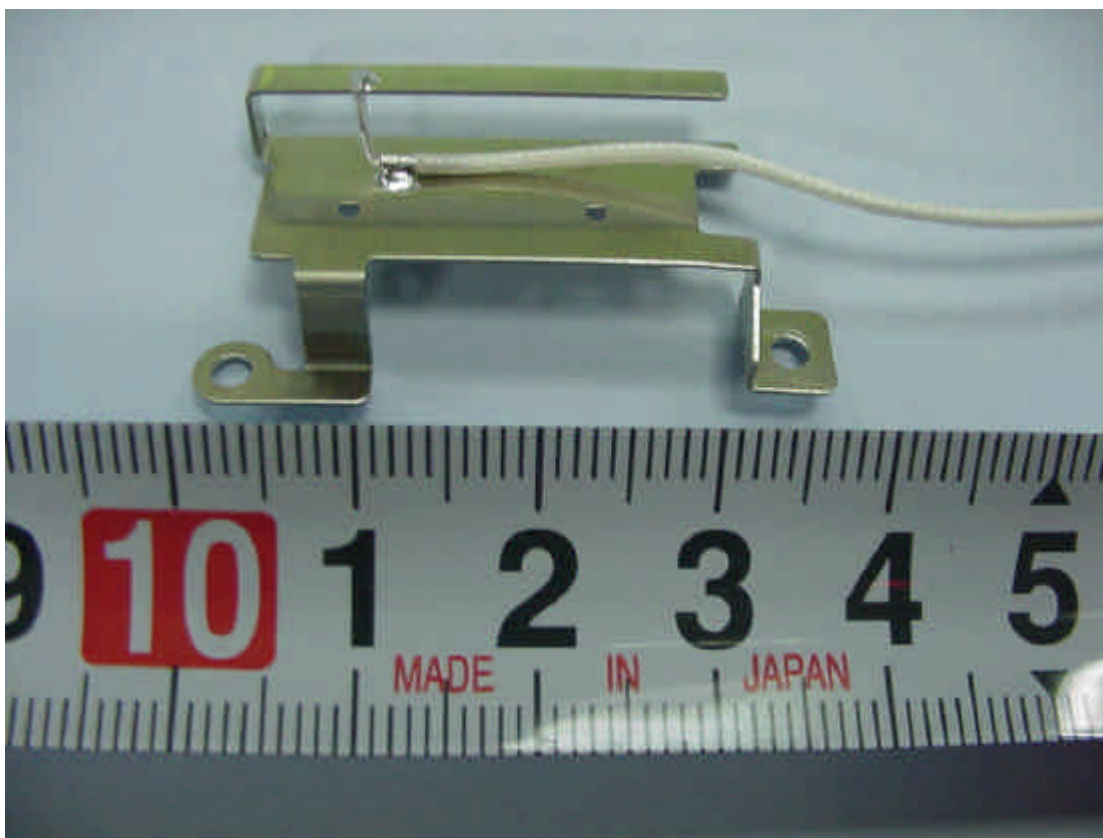
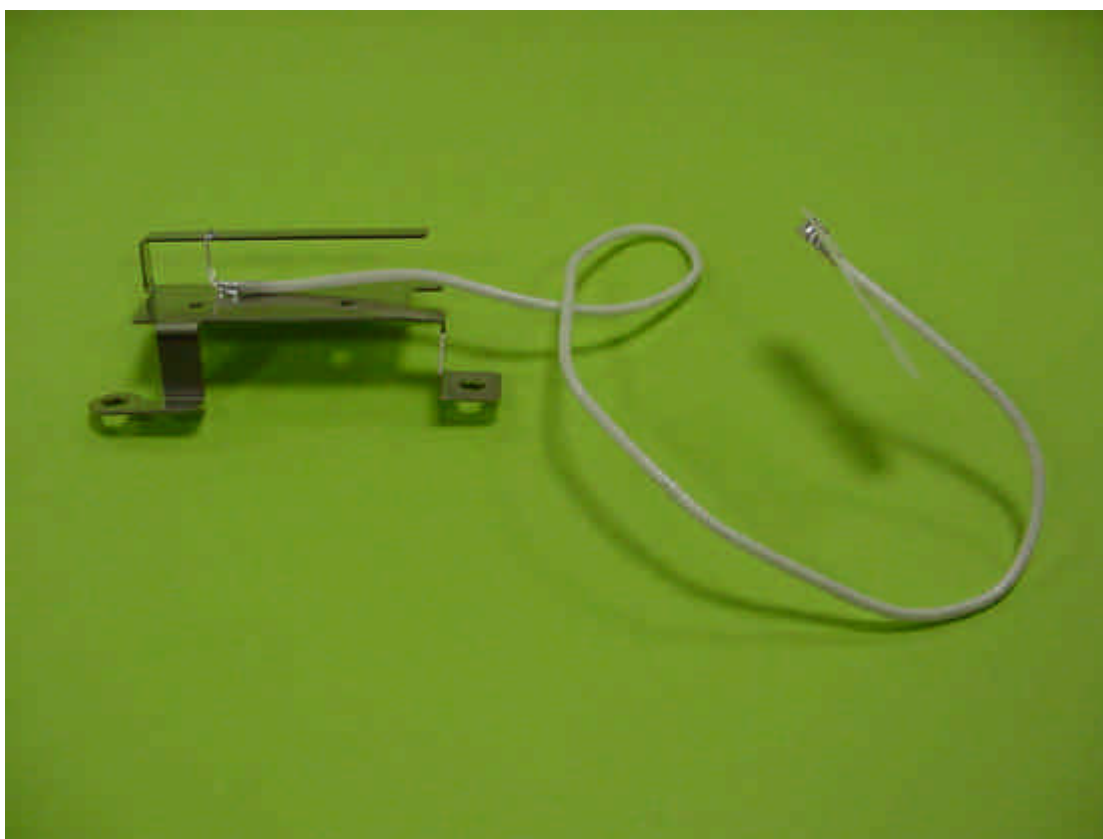
## 2. Radiation characteristic of antennas



Note1) The measurement was performed at 3 frequencies (2400, 2450, 2500MHz).

Note2) The maximum antenna gain was found around **45 degree** angle from measuring apparatus in **Vertical** polarization at the middle frequency (2450MHz).

### **3. Exterior Photos of Antennas**



**Tx/Rx switch, NISSEI, P/N: 46L4680, Cable : coax 180 mm**