

# Host Unit Antenna Information

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# 1. Antenna Assembly Overview

Note 1) 1a. Includes all cable losses.

1b. Antenna type should be Omni Directional.

## IBM ThinkPad G40 Series

Designator	Manufacture	Antenna type	Cable type and length	Gain (dBi) Note 1)
R0222-099 Main antenna	SmartAnt Telecom Co., Ltd. (R.O.C.)	Dual Band Meander (Inverted F) Antenna	coax 570mm	2.4GHz band <b>-0.25 dBi</b> (peak)
				5.8GHz band <b>3.15 dBi</b> (peak)
R0222-100 Auxiliary antenna			coax 610mm	2.4GHz band <b>0.87 dBi</b> (peak)
				5.8GHz band <b>2.11 dBi</b> (peak)

## IBM ThinkPad X30 Series

Designator	Manufacture	Antenna type	Cable type and length	Gain (dBi) Note 1)
08K4083 Main antenna	Nissei Electric Co. Ltd. (Japan)	Dual Band Meander (Inverted F) Antenna	coax 394mm	2.4GHz band <b>0.62 dBi</b> (peak)
				5.8GHz band <b>0.32 dBi</b> (peak)
08K4084 Auxiliary antenna			coax 534mm	2.4GHz band <b>1.28 dBi</b> (peak)
				5.8GHz band <b>-0.87 dBi</b> (peak)

## IBM ThinkPad X40 Series

Designator	Manufacture	Antenna type	Cable type and length	Gain (dBi) Note 1)
13N5743 Main Antenna	Nissei Electric Co., Ltd. (Japan)	Dual Band Meander (Inverted F) Antenna	coax 488mm	2.4GHz band <b>0.39 dBi</b> (peak)
				5.8GHz band <b>1.74 dBi</b> (peak)
13N5742 Auxiliary Antenna			coax 449mm	2.4GHz band <b>1.67 dBi</b> (peak)
				5.8GHz band <b>2.04 dBi</b> (peak)

## 2. Antenna Info of ThinkPad G40 Series

### 2.1 Host PC Information

The two meander (Inverted F type) antennas are built in the top LCD bezel. Those diversity antennas are not used simultaneously. One of the antennas is selected automatically or manually to have a good quality of radio communication. The selected antenna performs transmission or receiving in half duplex alternatively.



**IBM ThinkPad G40 Series, LCD 14 inch Model**

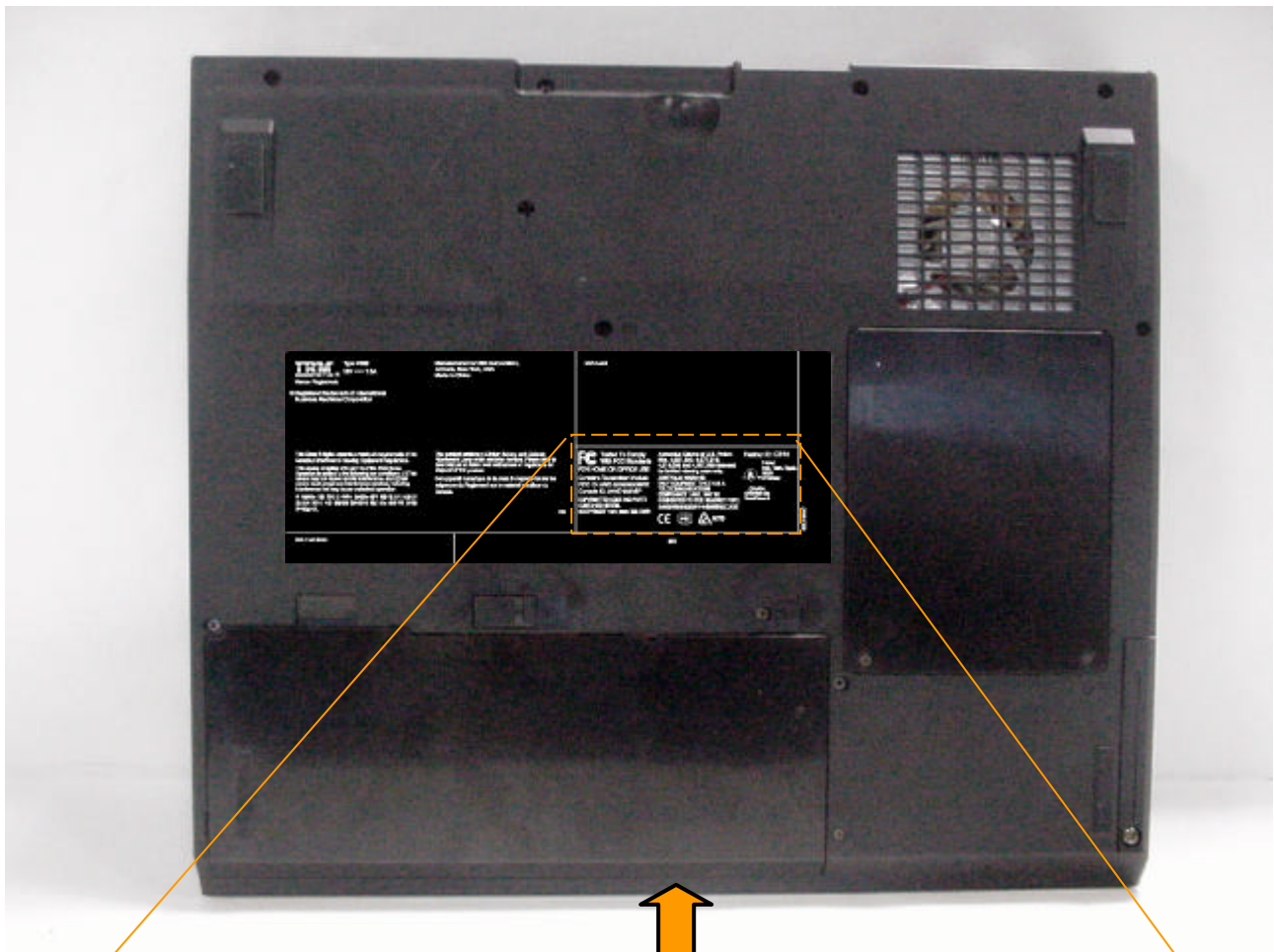


**IBM ThinkPad G40 Series, LCD 15 inch Model**





## 2.2 Host PC Labeling



Bottom view, Front side

**FC** Tested To Comply  
With FCC Standards  
FOR HOME OR OFFICE USE  
Contains Transmitter Module  
FCC ID: ANO20040600BTL  
Canada IC: 349E-AR5BMB44  
COPYRIGHTED CODE AND PARTS  
CONTAINED HEREIN.  
©COPYRIGHT 1981, 2004 IBM CORP.

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.  
AUSTRALIA WARNING:  
ONLY EQUIPMENT THAT HAS A  
TELECOMMUNICATIONS  
COMPLIANCE LABEL MAY BE  
CONNECTED TO THE HEADSET PORT.



Factory ID: AF10



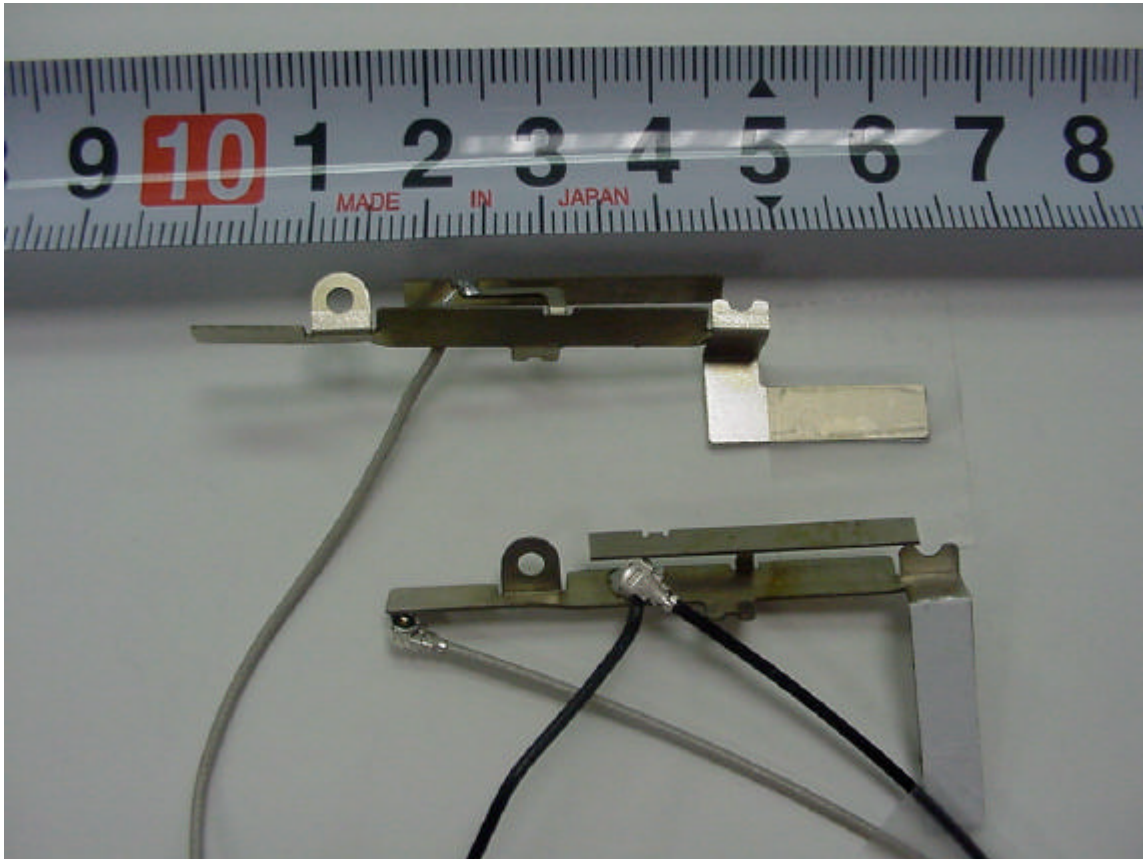
CANADA  
ICES/NMB-003  
Class/Classe B

## 2.3 Antenna Locations





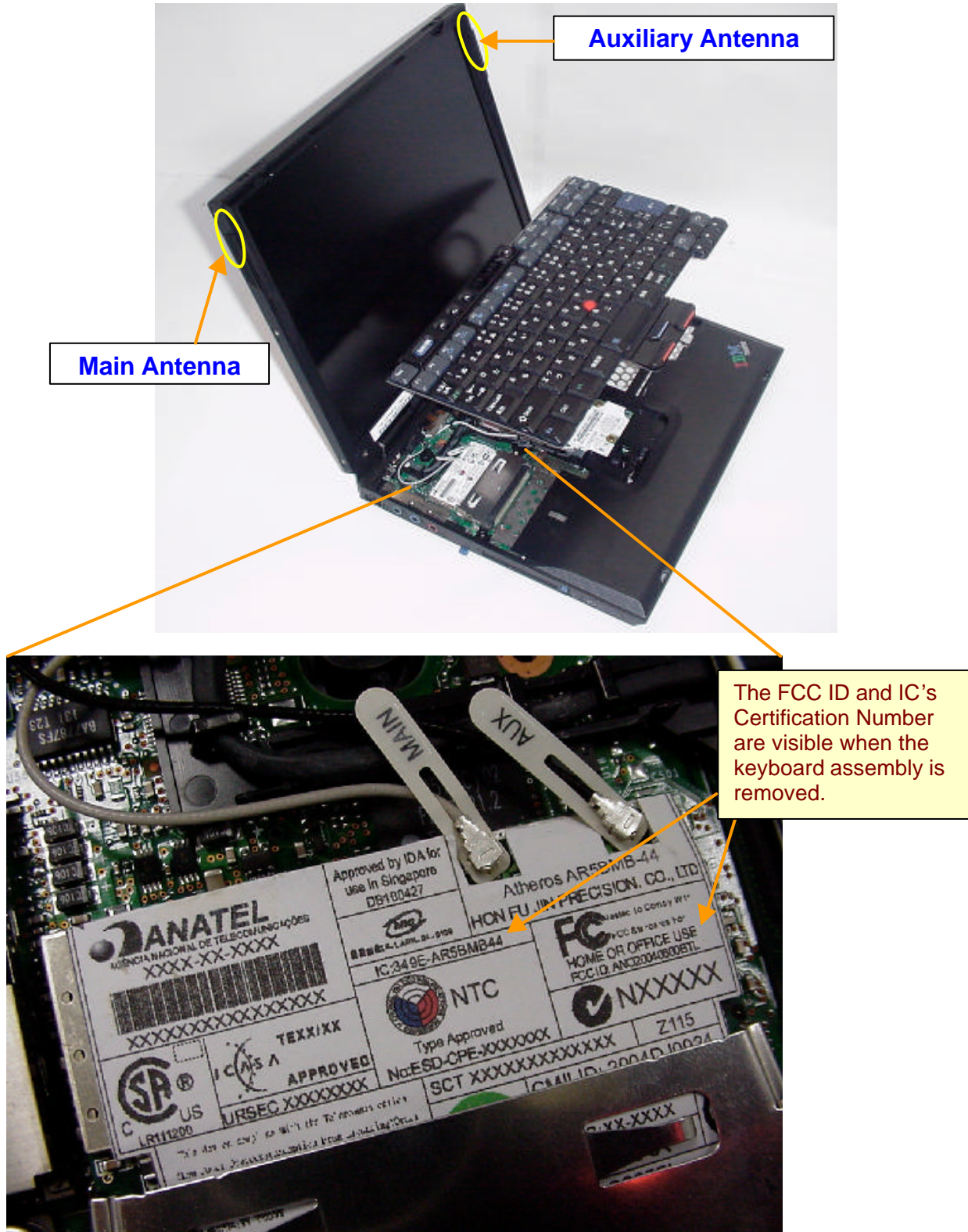
## 2.4 Exterior Photos of Antennas



### 3. Antenna Info of ThinkPad X30 Series

#### 3.1 Host PC Information

The two Meander (Inverted F type) antennas are built in the left and right top sides of LCD as shown in the Photo. Those diversity antennas are not used simultaneously. One of the antennas is selected automatically or manually to have a good quality of radio communication. The selected antenna performs transmission or receiving in half duplex alternatively.





## 3.2 Host PC Labeling




Applying LMA transmitter is installed under this location. See previous page.

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

The host device (ThinkPad X30 Series) supports the applying transmitter and a built-in type Bluetooth LMA transmitter which was certified separately (FCC ID: ANO20020100MTN, Feb/26/2003).

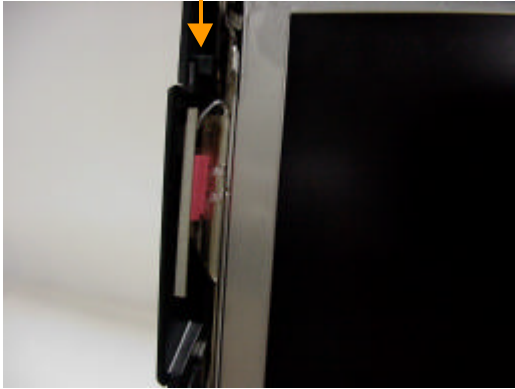
TX FCC ID for an installed CDC transmitter Card located under customer removable keyboard.

Bottom view Front Side

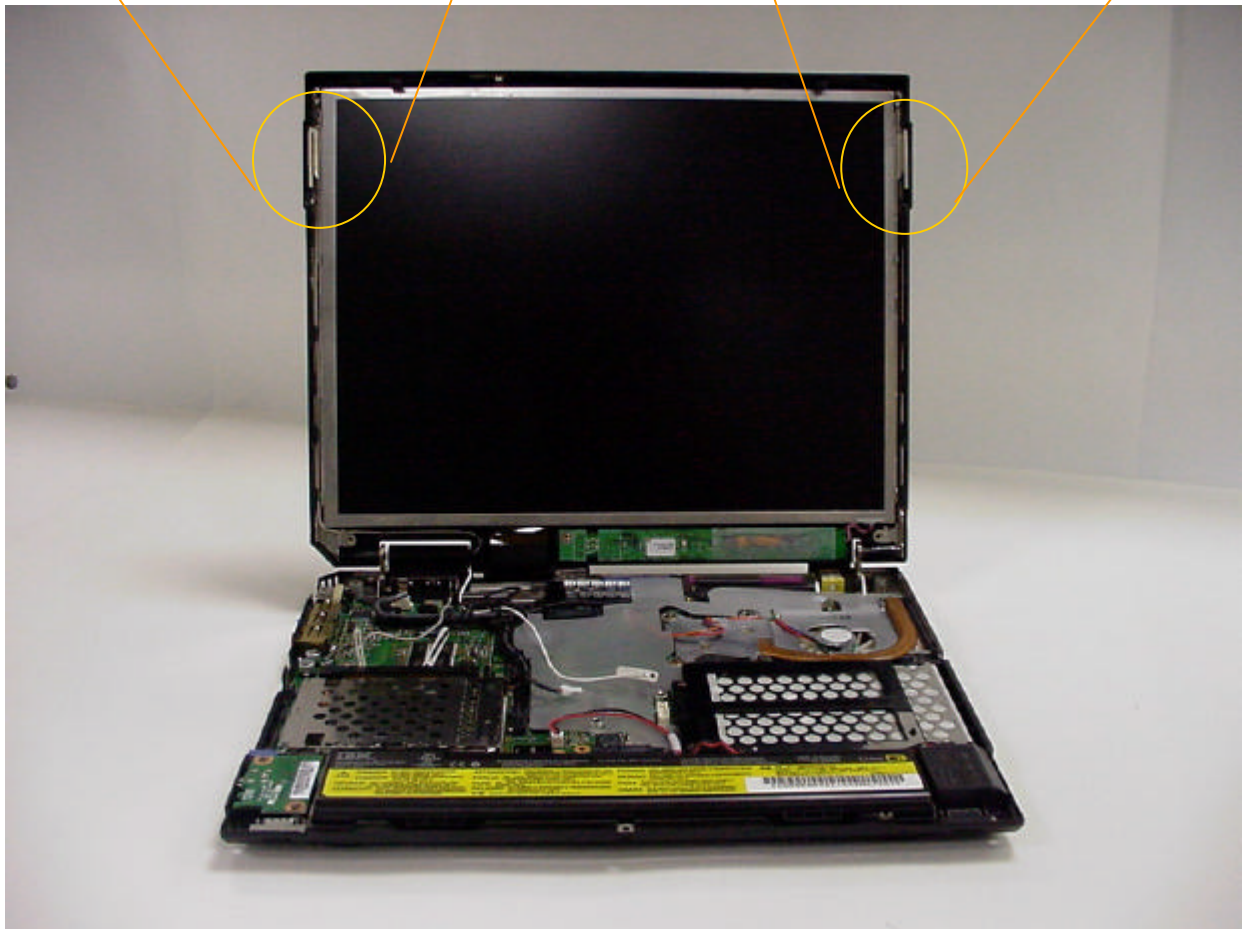
 <p>Type 2672 型号 2672 16V — 3.5A 电压 16V — 电流 3.5A</p> <p>Marca Registrada</p> <p>®Registered Trademark of International Business Machines Corporation COPYRIGHTED CODE AND PARTS CONTAINED HEREIN. ©COPYRIGHT 1981, 2002 IBM CORP.</p>	<p>This Product contains a Lithium Ion Battery, Lithium Battery and Cathode 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</p>	 <p>UL LISTED L.T.E. 187G</p>
<p>Manufactured by IBM Made in Mexico</p> <p>AUSTRALIA WARNING: ONLY EQUIPMENT THAT HAS A TELECOMMUNICATIONS COMPLIANCE LABEL MAY BE CONNECTED TO THE HEADSET PORT.</p> <p>Apparatus Claims of U.S. Patent Nos. 4,631,603; 4,577,216; 4,819,098 and 4,907,093 licensed for limited viewing uses only.</p> <p>CANADA ICES/NMB-003 Class/Classe B</p> <p></p>	<p><b>FC</b> Tested To Comply With FCC Standards FOR HOME OR OFFICE USE</p>	<p>802.3 MAC Address</p>
<p>802.11 MAC Address</p>		

### 3.3 Antenna Locations

**Main antenna**  
**Dual Band Meander antenna**  
**P/N: 08K4083**

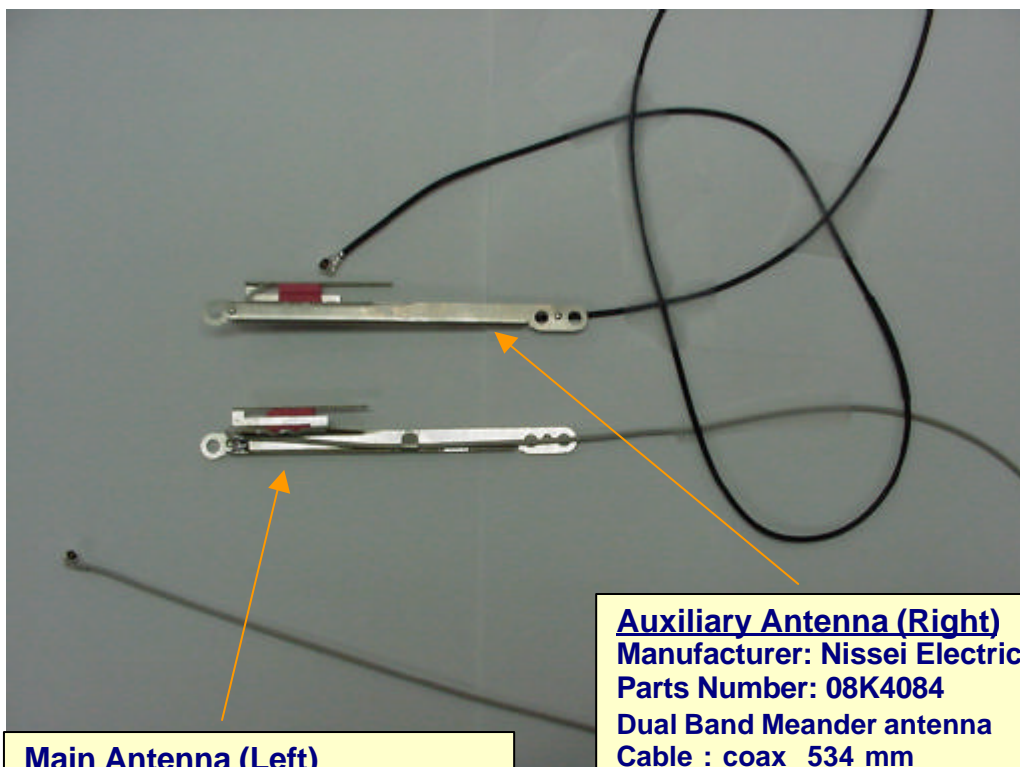
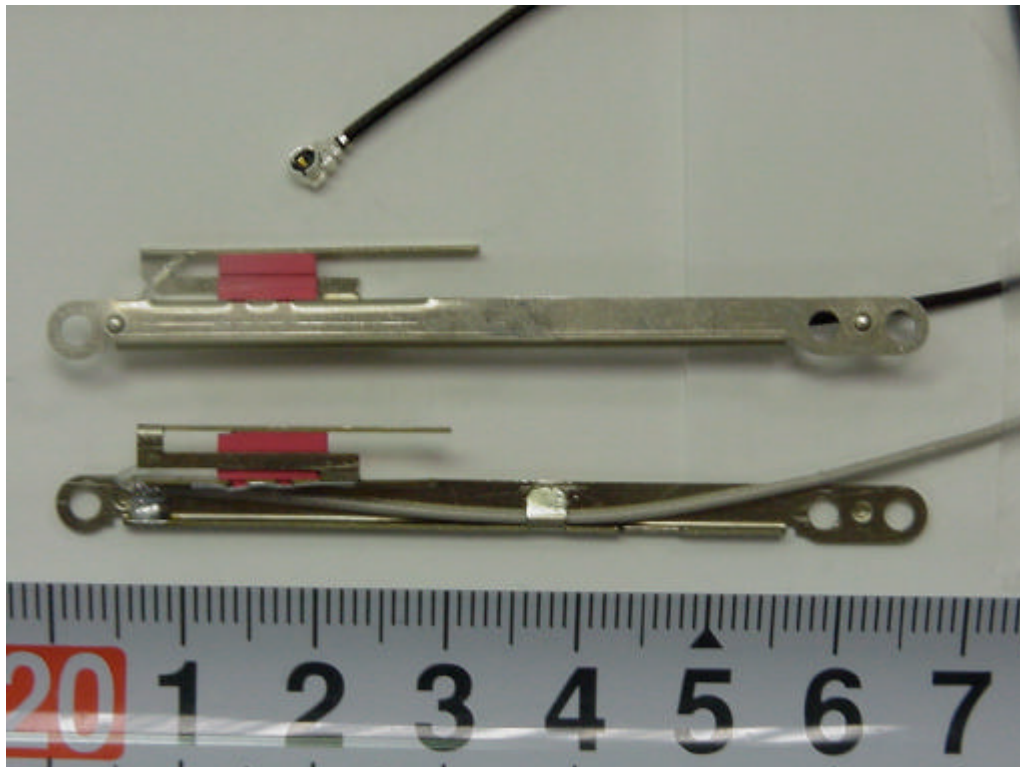


**Auxiliary antenna**  
**Dual Band Meander antenna**  
**P/N: 08K4084**



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### 3.4 Exterior Photos of Antennas



**Main Antenna (Left)**  
Manufacturer: Nissei Electric Ltd.  
Parts Number: 08K4083  
Dual Band Meander antenna  
Cable : coax 394 mm

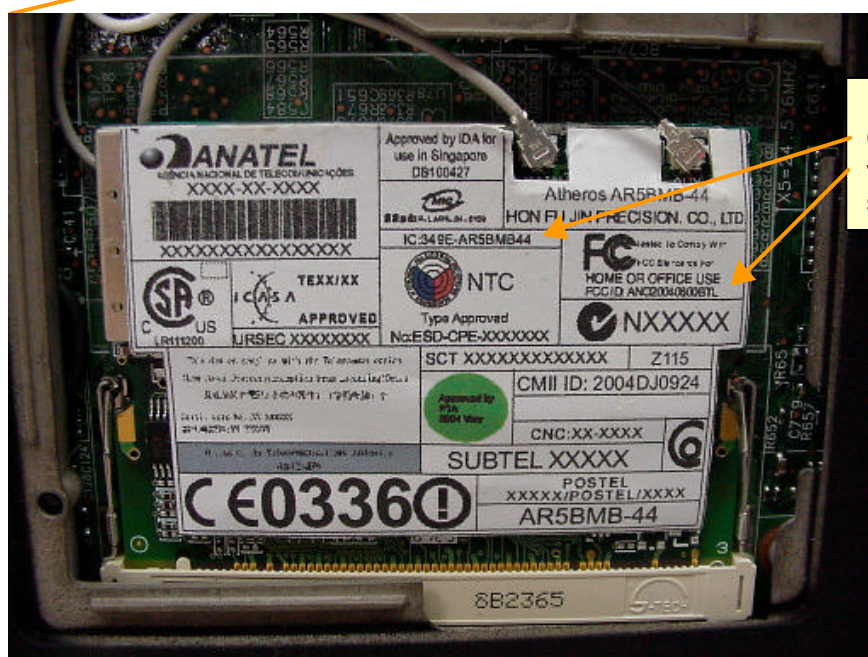
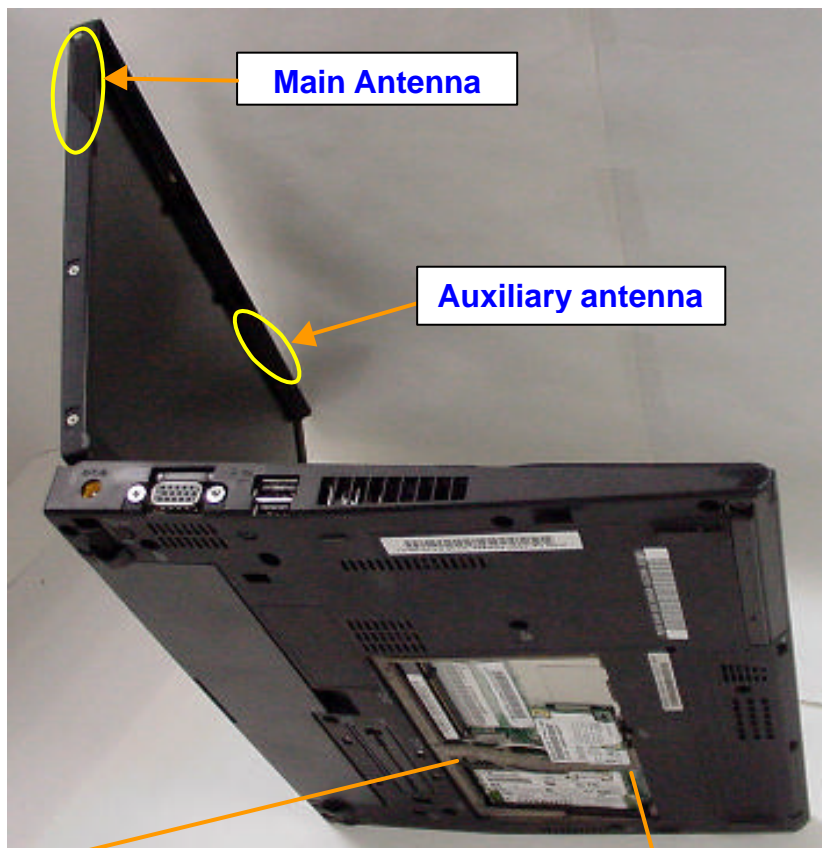
**Auxiliary Antenna (Right)**  
Manufacturer: Nissei Electric Ltd.  
Parts Number: 08K4084  
Dual Band Meander antenna  
Cable : coax 534 mm



## 4. Antenna Info of ThinkPad X40 Series

### 4.1 Host PC Information

The main and auxiliary meander (Inverted F) antennas are built in the left and right top sides of LCD as shown in the Photo. Those diversity antennas are not used for transmission simultaneously. One of the antennas is selected automatically or manually to have a good quality of radio communication. The selected antenna performs transmission or receiving in half duplex alternatively.



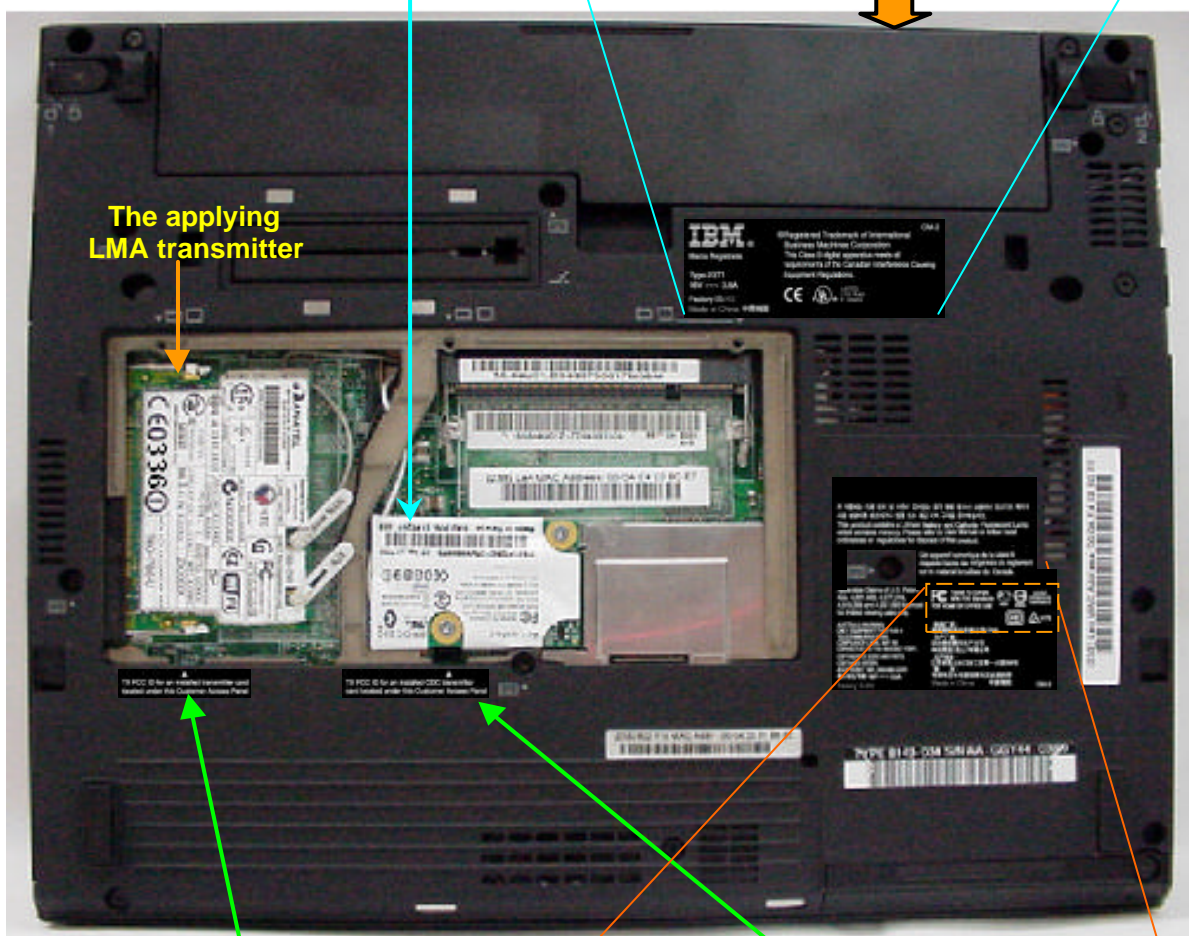
FCC ID and IC's Certification Number are visible when the card slot cover is removed.

## 4.2 Host PC Labeling

The host device (ThinkPad X40 Series) supports the applying transmitter and a built-in type Bluetooth LMA transmitter which was certified separately (FCC ID: **ANO20020100MTN**, Dec/17/2003).



**Bottom view, Back side**



**TX FCC ID for an installed transmitter card located under this Customer Access Panel**

**TX FCC ID for an installed CDC transmitter card located under this Customer Access Panel**





## 4.3 Antenna Locations

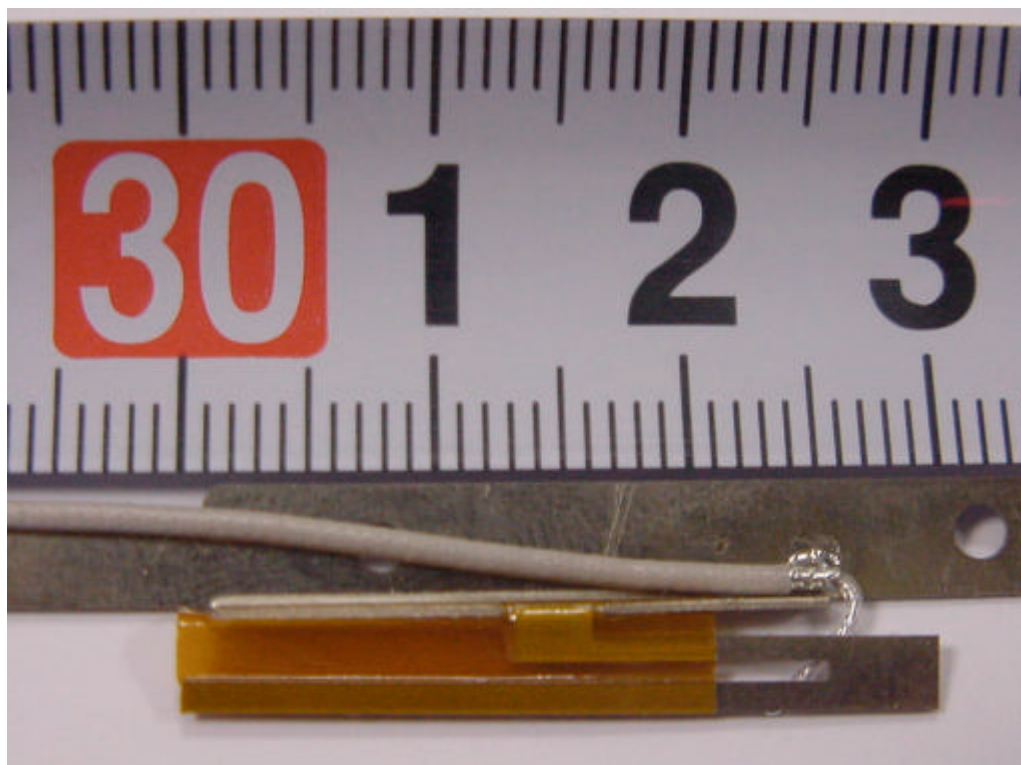




## 4.4 Exterior Photos of Antennas

### Main Antenna

**Manufacturer: Nissei Electric Co., Ltd.**  
**Parts Number: 13N5743**  
**Type: Dual Band Meander**  
**Cable: Coax, 488 mm**



**Auxiliary Antenna**

**Manufacturer: Nissei Electric Co., Ltd.**  
**Parts Number: 13N5742**  
**Type: Dual Band Meander**  
**Cable: Coax, 449 mm**

