

# Host Unit Antenna Information

## for

### ThinkPad T40 Series, 14 inch model

### ThinkPad R50 Series, 14/15 inch models

<b>1. Host PC Information.....</b>	<b>2</b>
<b>2. Host PC Labeling .....</b>	<b>5</b>
2.1 Labeling of T40 Series.....	5
2.2 Labeling of R50 Series.....	6
<b>3. Antenna Specifications .....</b>	<b>7</b>
3.1 Transmission Antenna assembly overview.....	7
3.2 Antenna Locations.....	8
3.3 Exterior Photos of Antennas.....	10

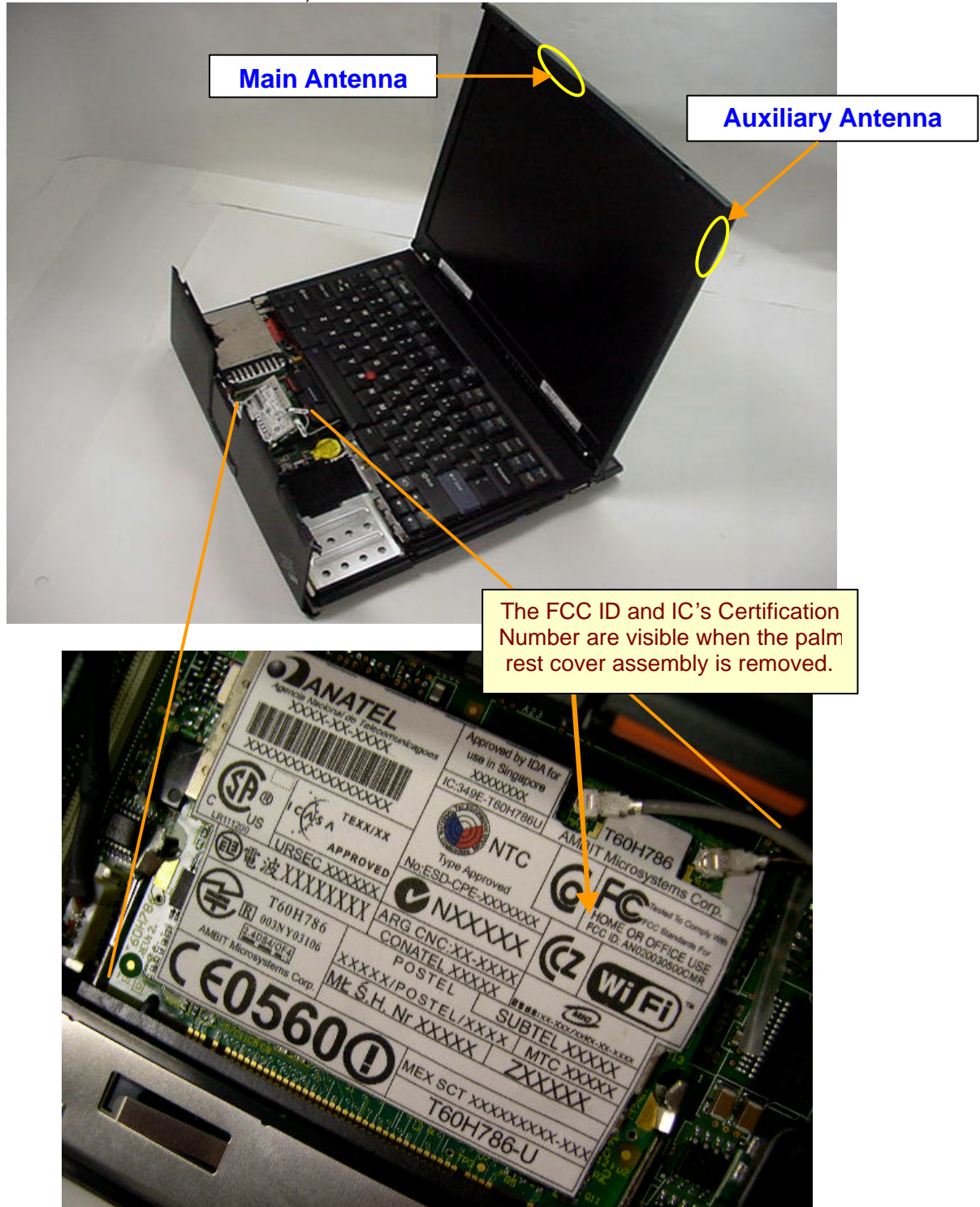
# 1. Host PC Information

## IBM ThinkPad T40 Series and R50 Series

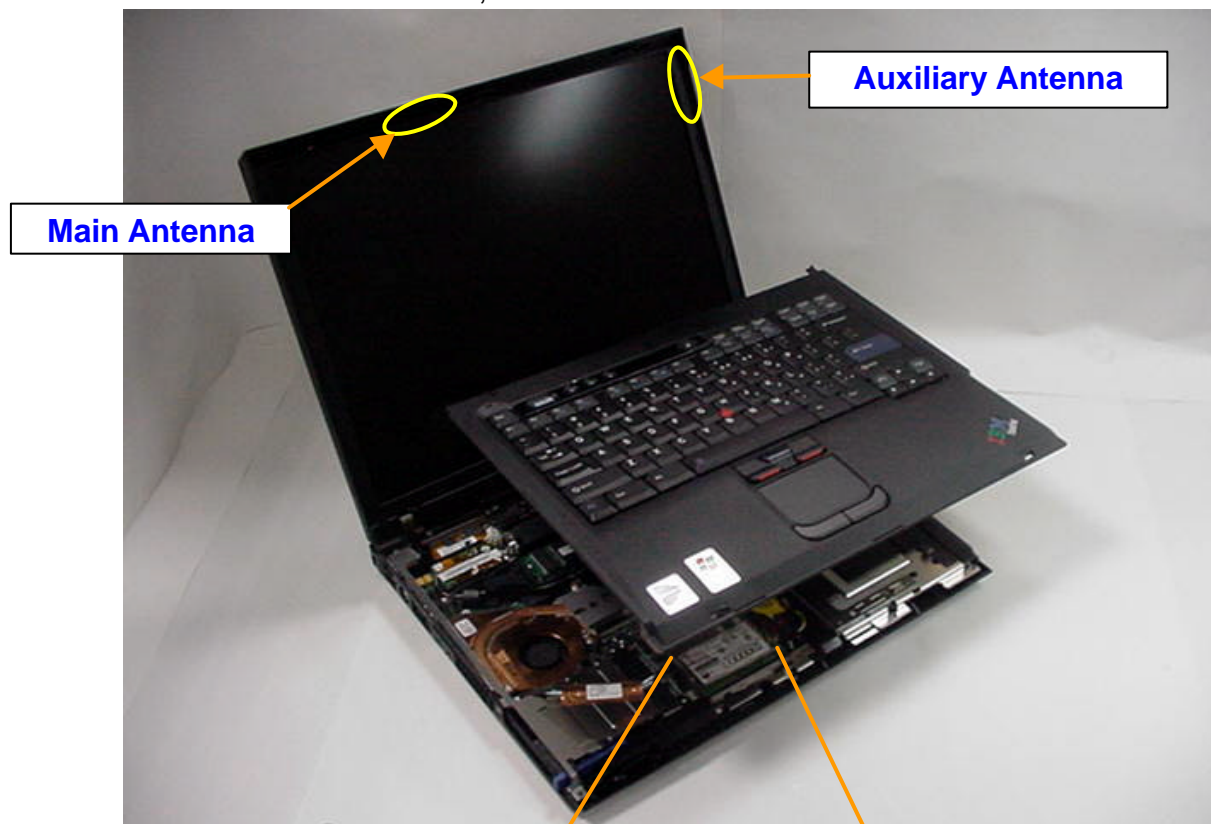
The host PCs (IBM ThinkPad **T40** Series and **R50** Series) are designed with the same conceptual hardware configuration of full size laptop PC.

The main antenna is built in the top portion of the LCD, and the auxiliary antenna is built in the right side of the LCD. 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.

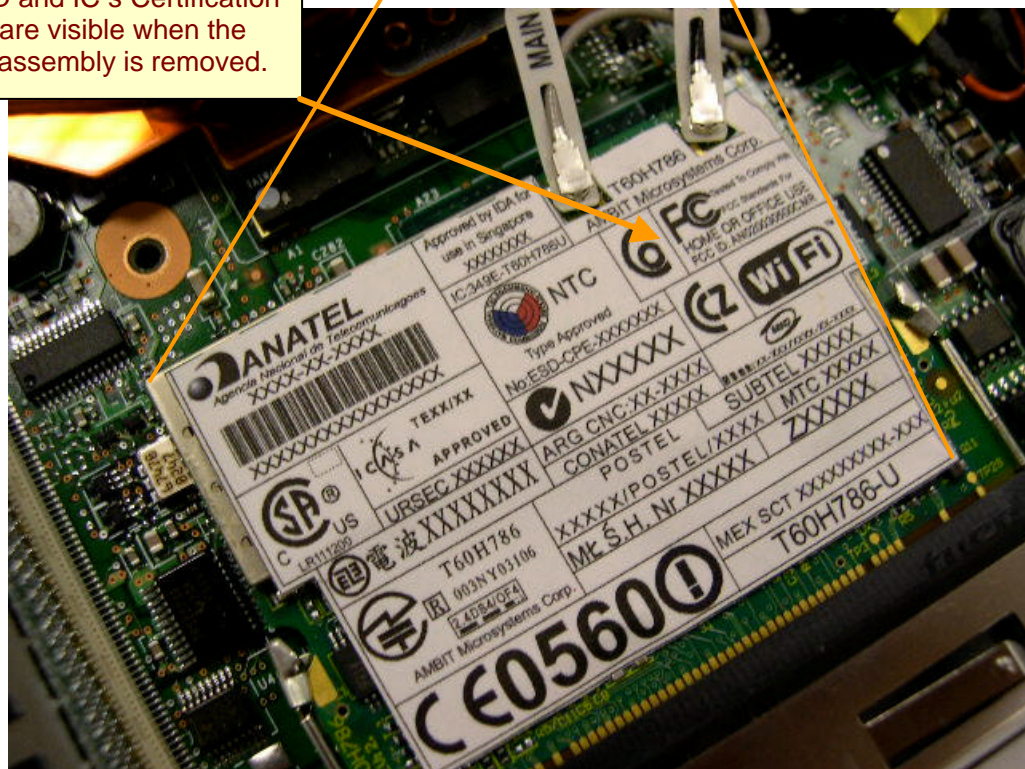
IBM ThinkPad **T40** Series, LCD 14 inch model



IBM ThinkPad R50 Series, LCD 14 and 15 inch models



The FCC ID and IC's Certification Number are visible when the keyboard assembly is removed.

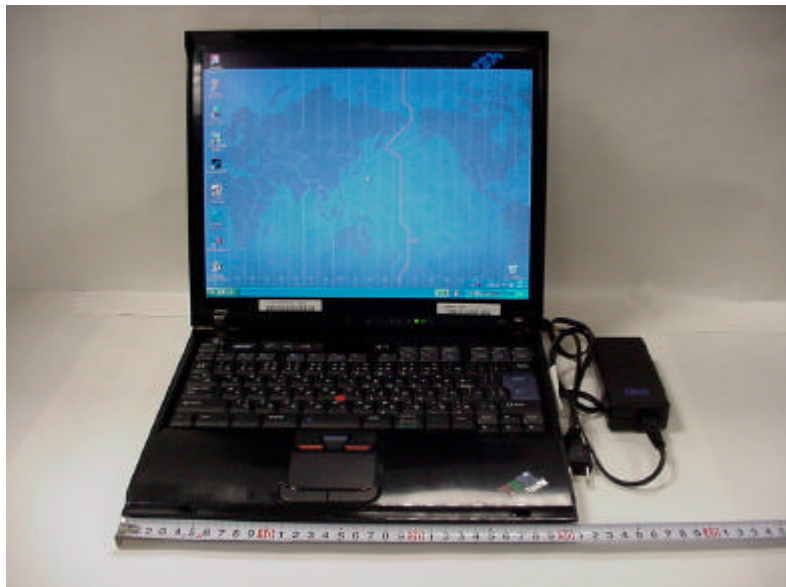




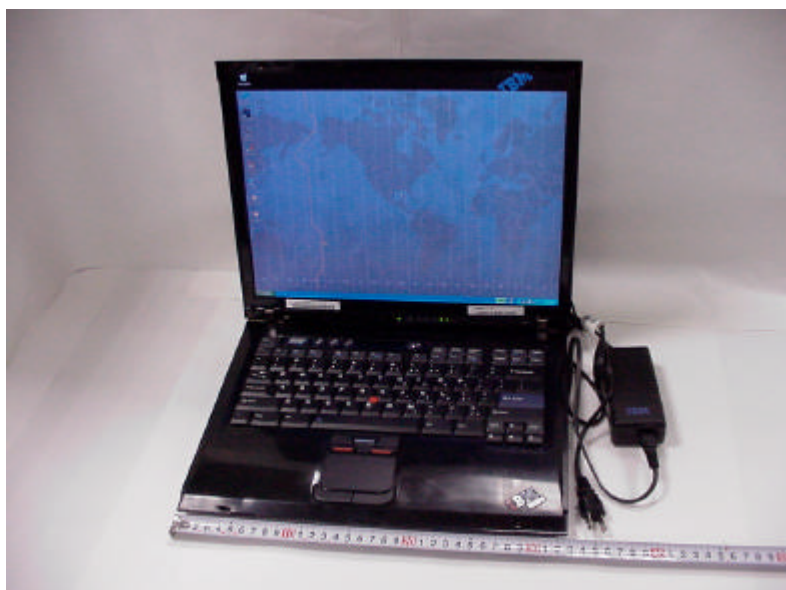
ThinkPad T40 Series  
LCD 14 inch



ThinkPad R50 Series  
LCD 14 inch



ThinkPad R50 Series  
LCD 15 inch



## 2. Host PC Labeling

### 2.1 Labeling of T40 Series

Manufactured by IBM United Kingdom Ltd.  
Greenock Scotland, Made in U.K.



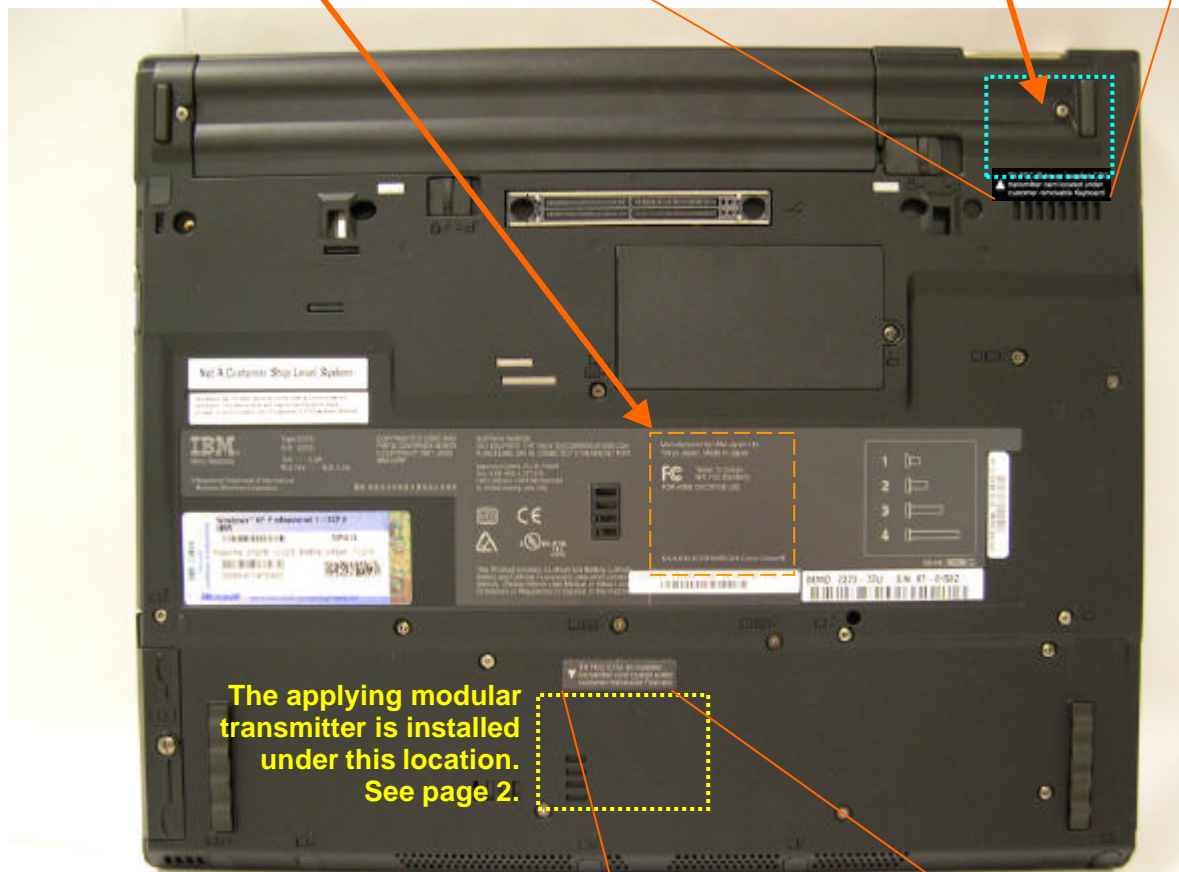
Tested To Comply  
With FCC Standards  
FOR HOME OR OFFICE USE

CANADA ICES/NMB-003 Class/ClasseB

The host device (ThinkPad T40 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



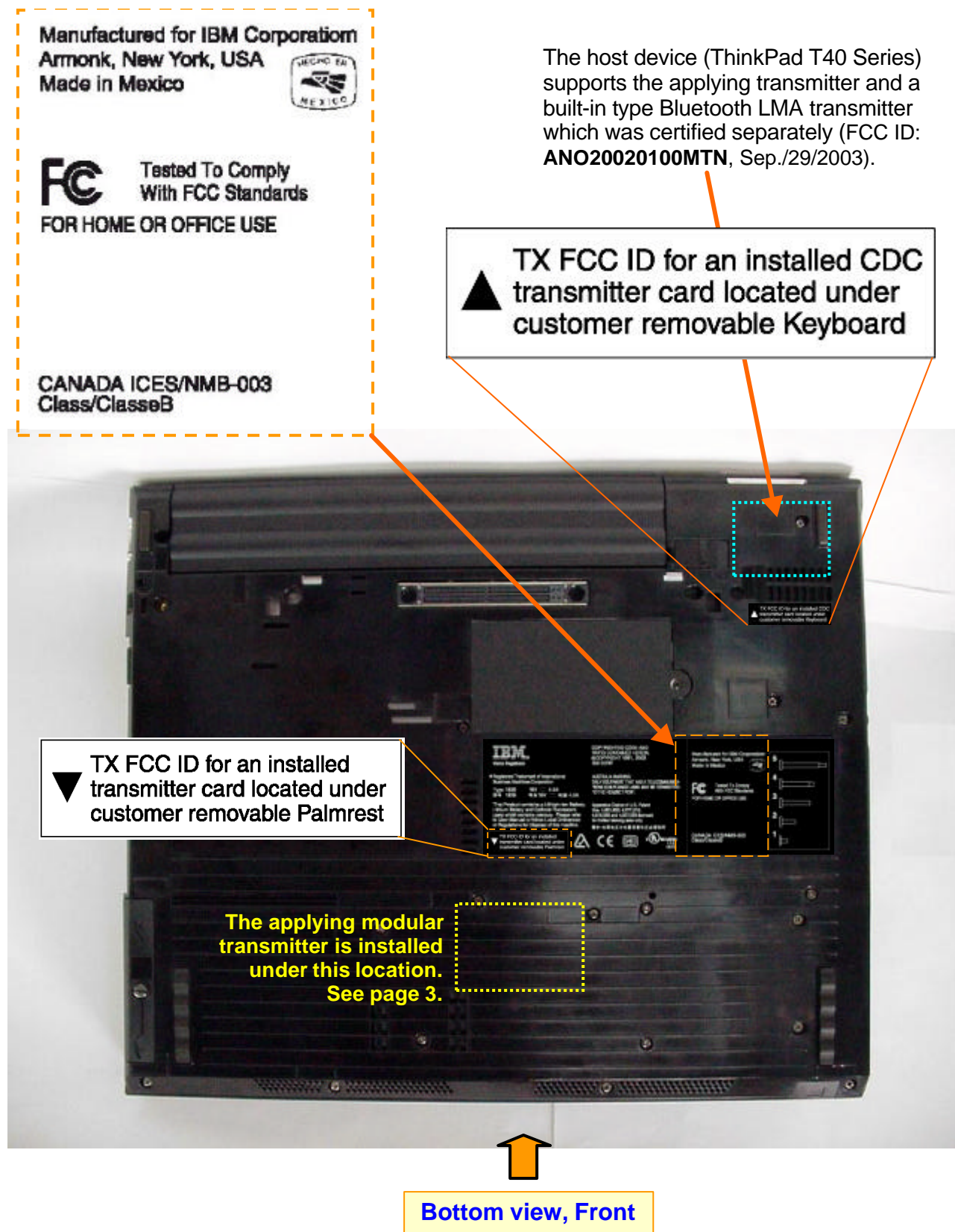
The applying modular transmitter is installed under this location.  
See page 2.



Bottom view, Front side

TX FCC ID for an installed transmitter card located under customer removable Palmrest

## 2.2 Labeling of R50 Series



### 3. Antenna Specifications

#### 3.1 Transmission Antenna assembly overview

Note 1): The previous naming of “**Inverted F**” is updated to the recent one “**Meander**”.

Note 2): 2a. Includes all cable losses.

2b. Antenna type should be Omni Directional and have gain of 2.0 dBi or less for IEEE802.11b (2.4GHz band), regarding the IBM internal specification.

##### IBM ThinkPad T40 Series

		Designator	Manufacture	Antenna type Note 1)	Cable type and length	Gain (dBi) Note 2)
LCD 14 inch Model	Main	62P4204	Foconn Electronics Inc. (R.O.C.)	Dual Band Meander Antenna	Coax 745 mm	0.99 dBi (peak)
	Auxiliary	62P4203		Dual-Band Coupled Floating Element Antenna	Coax 860 mm	-0.48 dBi (peak)

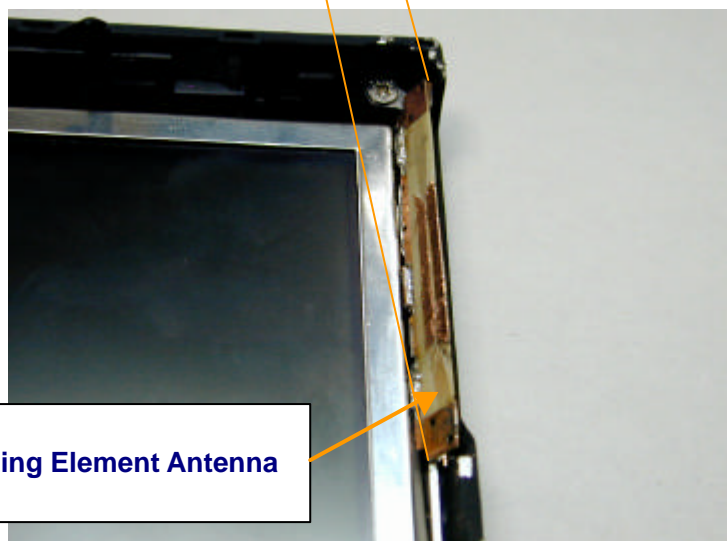
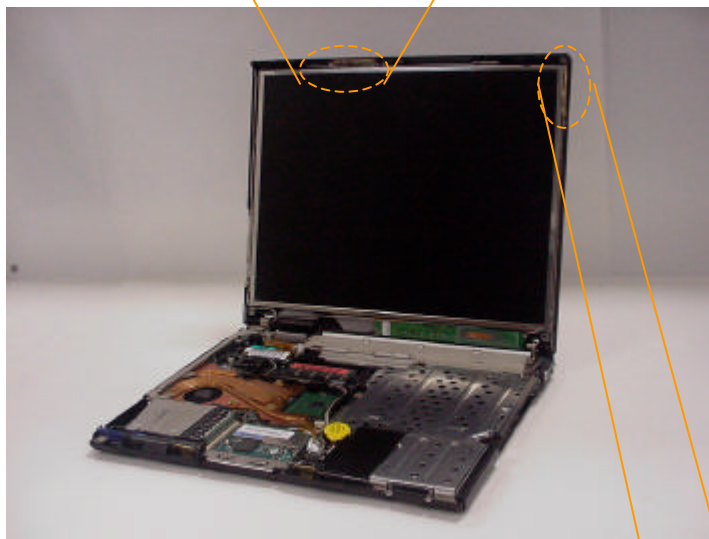
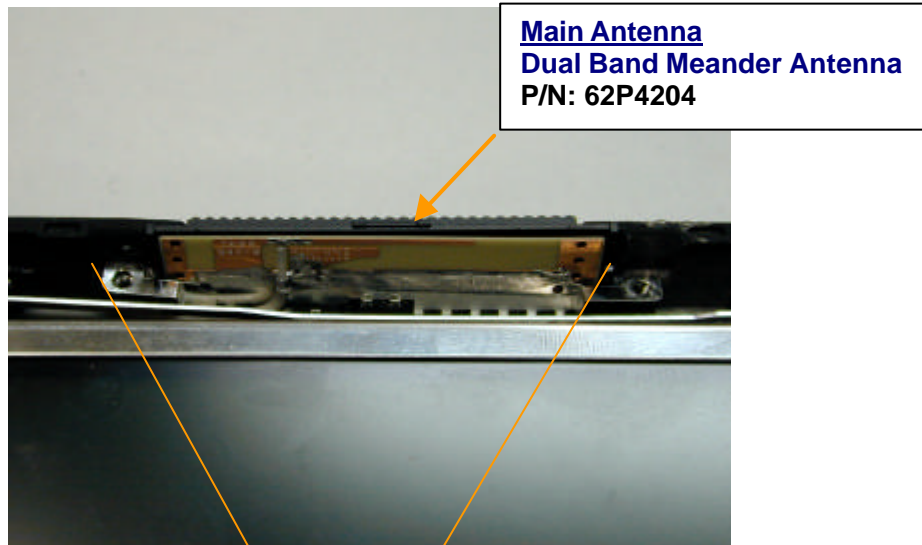
##### IBM ThinkPad R50 Series

		Designator	Manufacture	Antenna type Note 1)	Cable type and length	Gain (dBi) Note 2)
LCD 14 inch Model	Main	91P6810	Hitachi Cable Ltd. (Japan)	Dual Band Meander Antenna	Coax 750 mm	1.52 dBi (peak)
	Auxiliary	91P6811			Coax 635 mm	1.84 dBi (peak)
LCD 15 inch Model	Main	91P6812	Hitachi Cable Ltd. (Japan)	Dual Band Meander Antenna	coax 775mm	1.18 dBi (peak)
	Auxiliary	91P6813			coax 670mm	1.71 dBi (peak)



## 3.2 Antenna Locations

### 3.2.1 IBM ThinkPad T40 Series, LCD 14 inch model

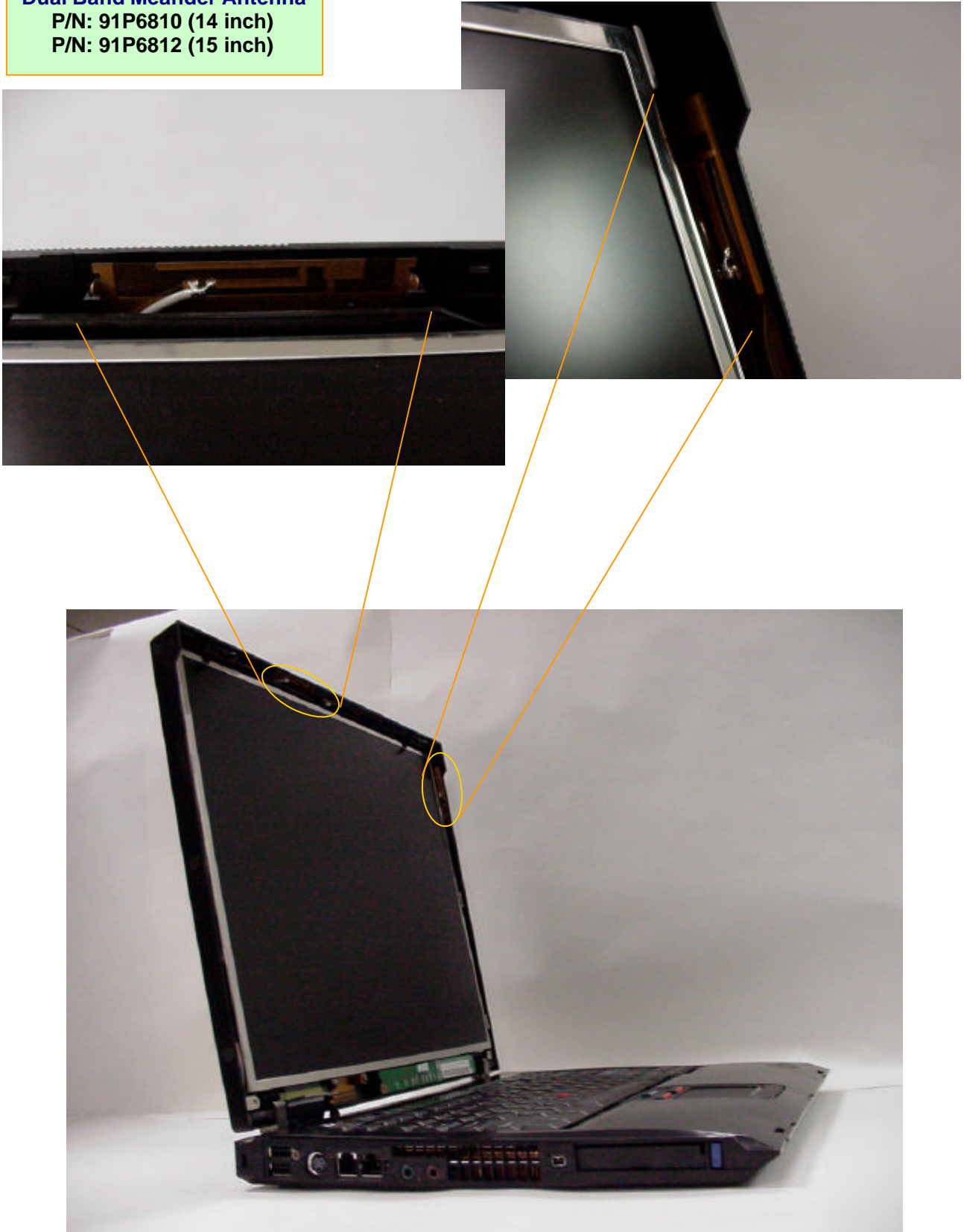




### 3.2.2 IBM ThinkPad R50 Series

**Main antenna**  
**Dual Band Meander Antenna**  
P/N: 91P6810 (14 inch)  
P/N: 91P6812 (15 inch)

**Auxiliary antenna**  
**Dual Band Meander Antenna**  
P/N: 91P6811 (14 inch)  
P/N: 91P6813 (15 inch)



### 3.3 Exterior Photos of Antennas

#### 3.3.1 IBM ThinkPad T40 Series, LCD 14 inch model

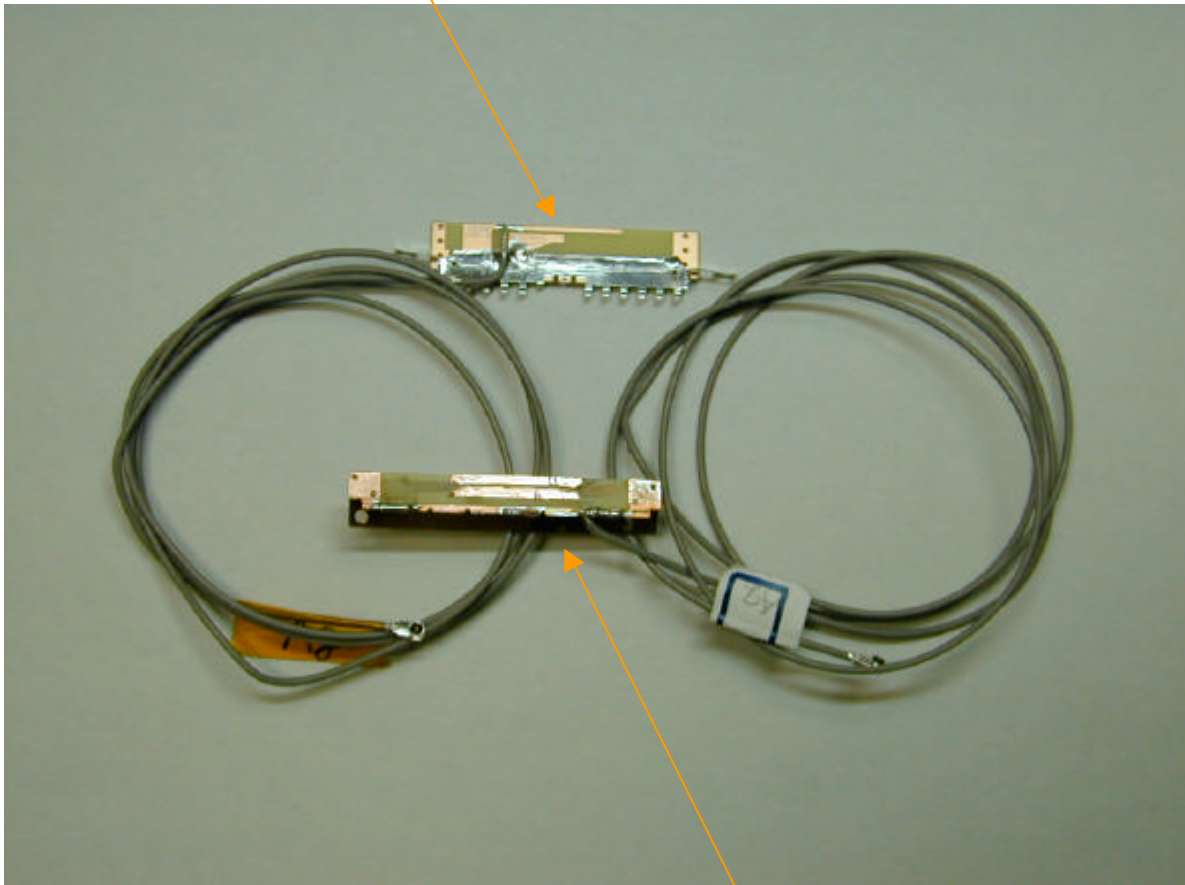
**Main Antenna**

**Manufacturer: Foxconn Electronics Inc.**

**Parts Number: 62P4204**

**Dual Band Meander antenna**

**Cable: coax 740mm**



**Auxiliary Antenna**

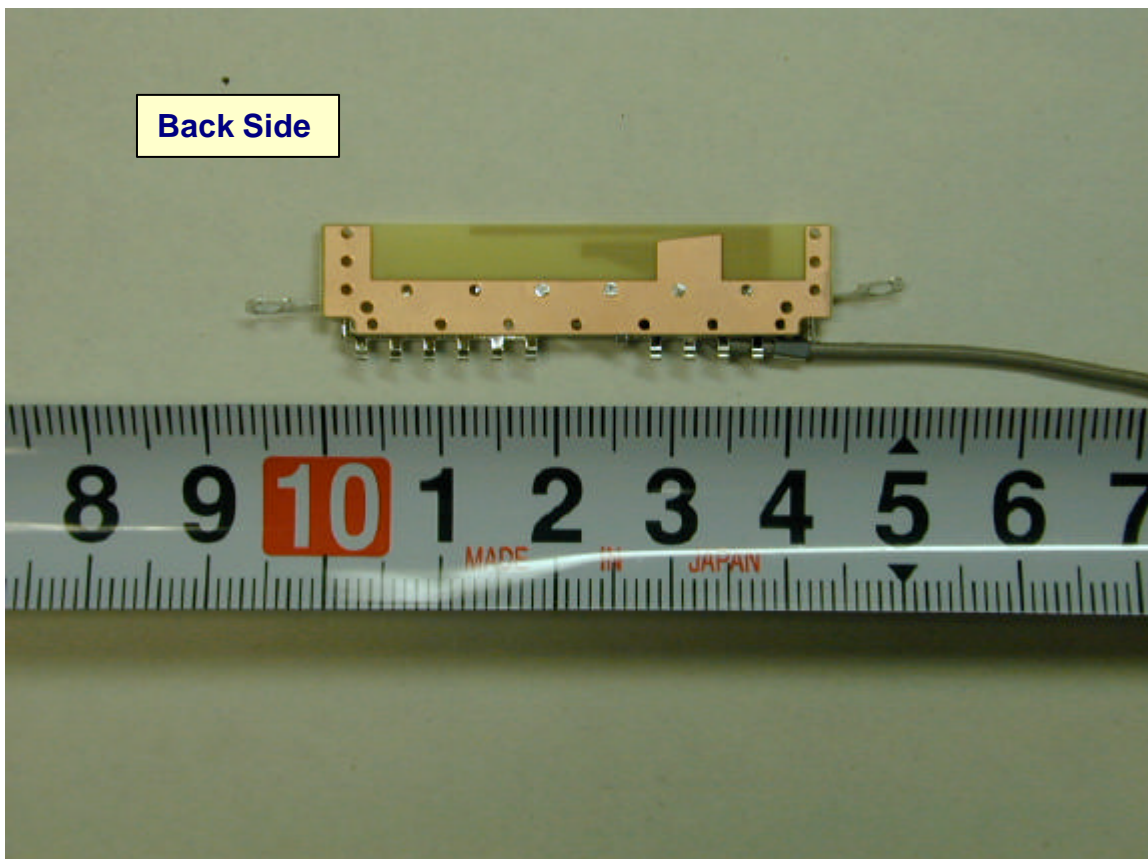
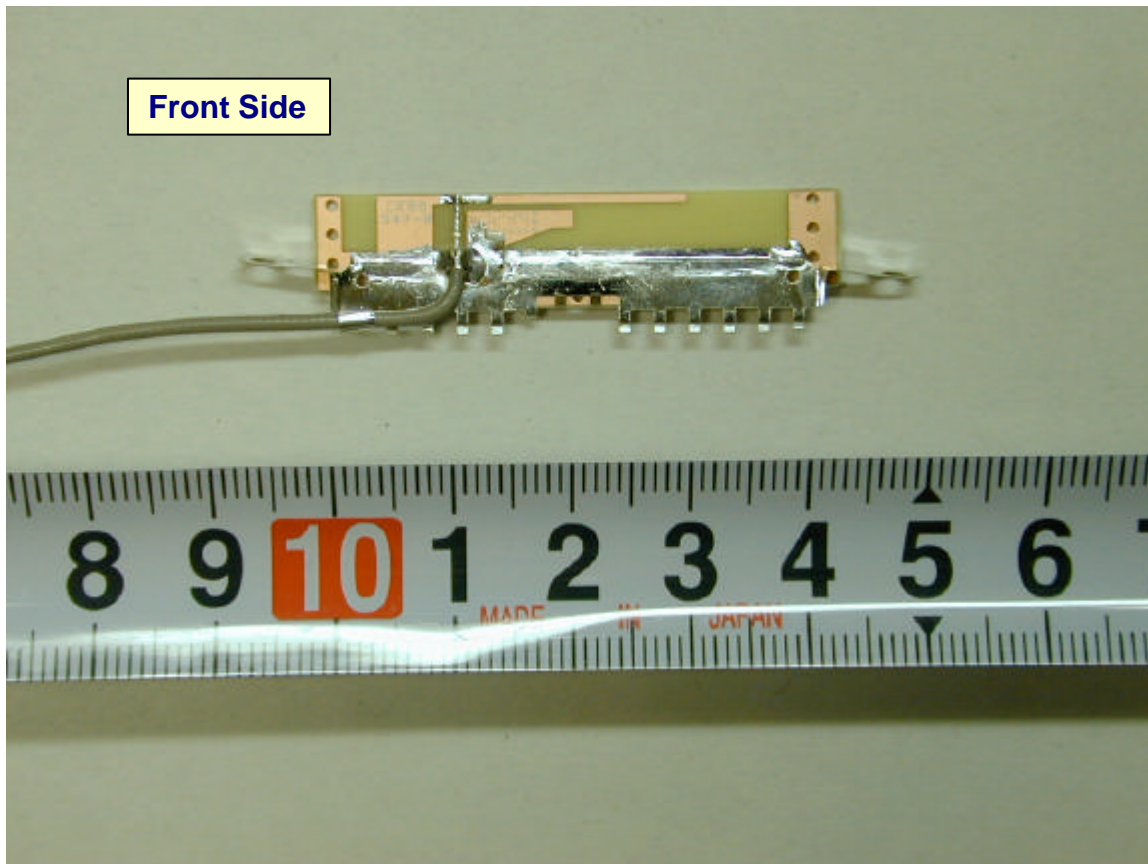
**Manufacturer: Foxconn Electronics Inc.**

**Parts Number: 62P4203**

**Dual-Band Coupled Floating Element Antenna**

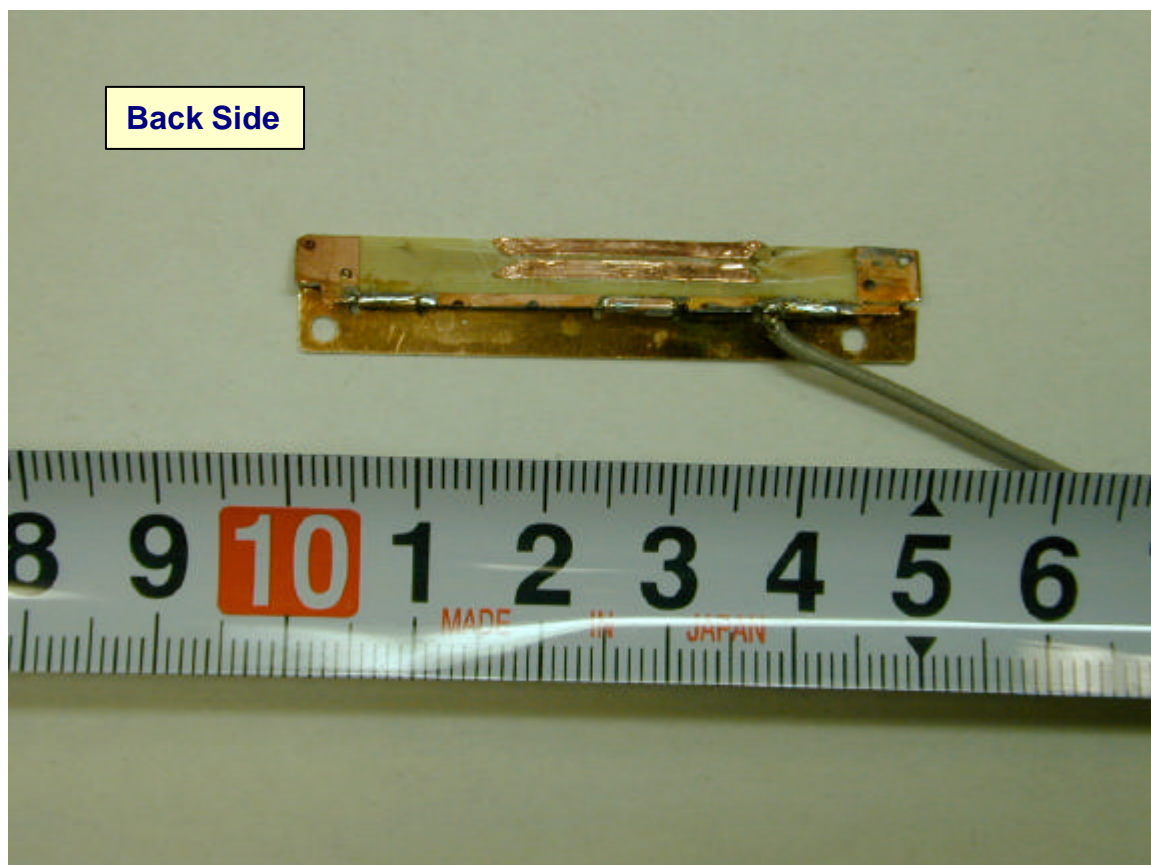
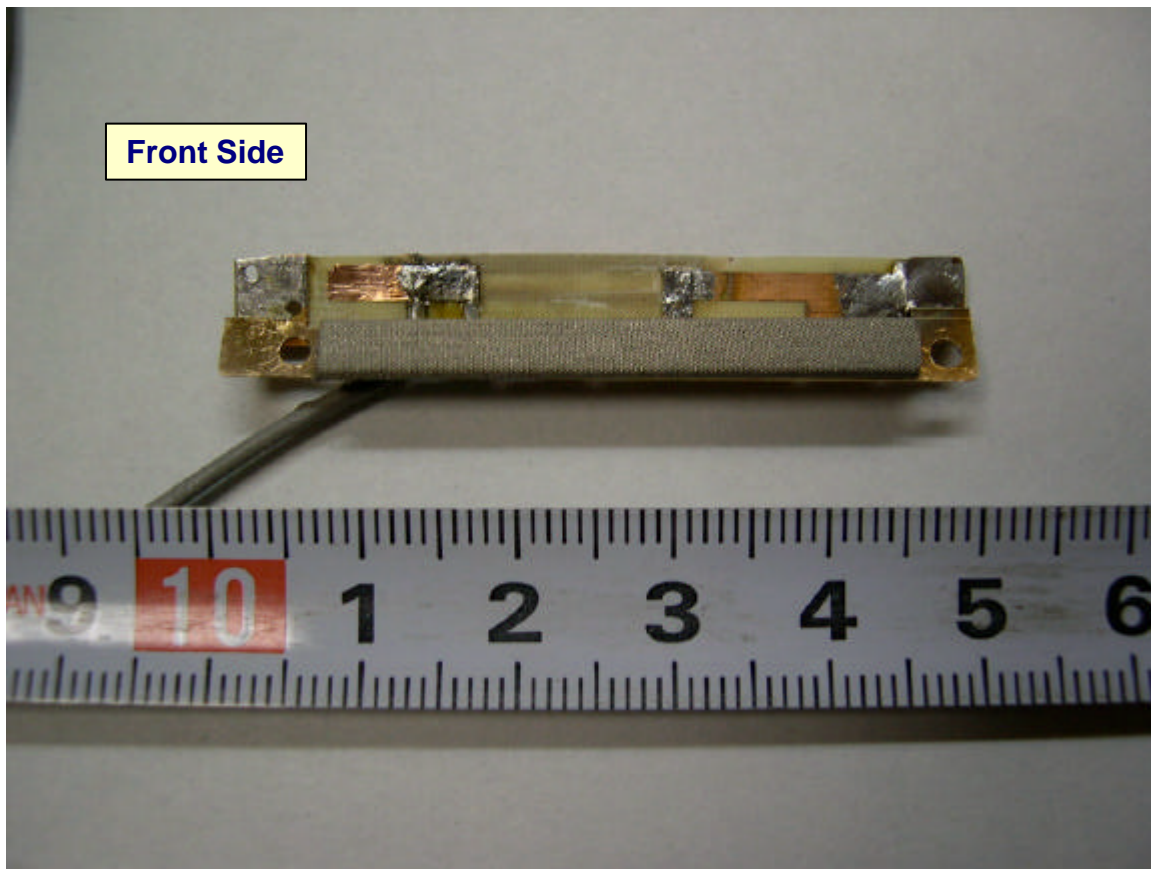
**Cable : coax 845mm**

**Main Antennas for ThinkPad T40 Series, LCD 14 inch model**





Auxiliary Antennas for ThinkPad T40 Series, LCD 14 inch model



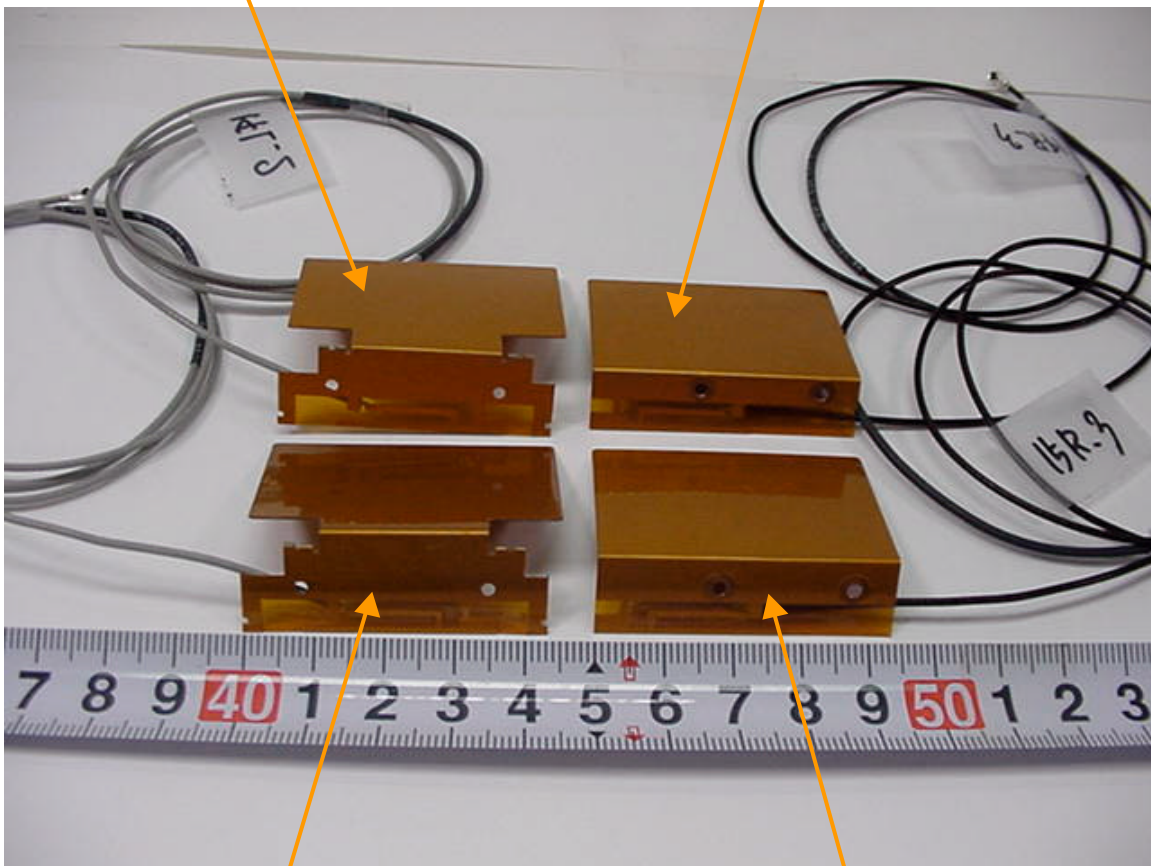
### 3.3.2 IBM ThinkPad R50 Series

**Main antenna for 14 inch model**

**Manufacturer: Hitachi Cable Ltd.  
Parts Number: 91P6810  
Dual Band Meander antenna  
Cable : coax 750 mm**

**Auxiliary antenna for LCD 14 inch model**

**Manufacturer: Hitachi Cable Ltd.  
Parts Number: 91P6811  
Dual Band Meander antenna  
Cable : coax 635 mm**

**Main antenna for LCD 15 inch model**

**Manufacturer: Hitachi Cable Ltd.  
Parts Number: 91P6812  
Dual Band Meander antenna  
Cable : coax 775 mm**

**Auxiliary antenna for LCD 15 inch model**

**Manufacturer: Hitachi Cable Ltd.  
Parts Number: 91P6813  
Dual Band Meander antenna  
Cable : coax 670 mm**

**Antennas for ThinkPad R50 Series, LCD 14 inch model**

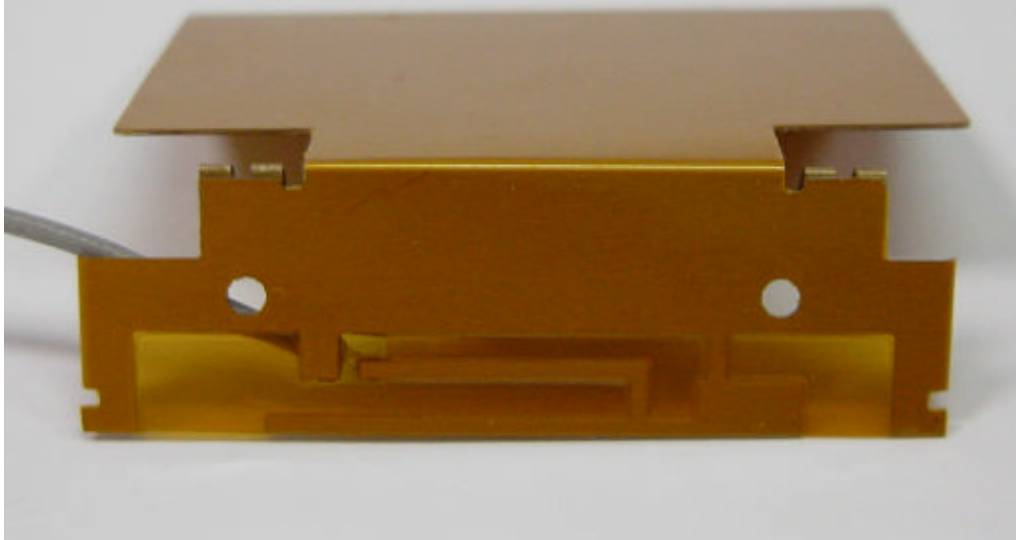
**Main Antenna**

**Manufacturer: Hitachi Cable Ltd.**

**Parts Number: 91P6810**

**Dual Band Meander antenna**

**Cable : coax 750 mm**



**Auxiliary Antenna**

**Manufacturer: Hitachi Cable Ltd.**

**Parts Number: 91P6811**

**Dual Band Meander antenna**

**Cable : coax 635 mm**





**Antennas for ThinkPad R50 Series, LCD 15 inch model**

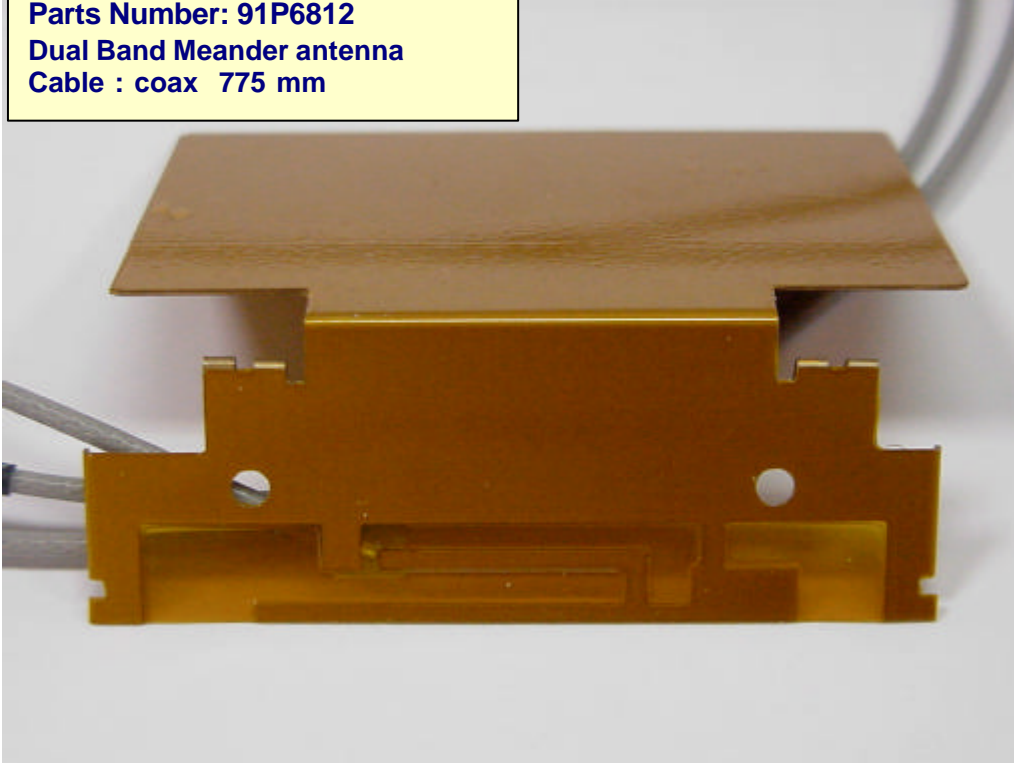
**Main Antenna**

**Manufacturer: Hitachi Cable Ltd.**

**Parts Number: 91P6812**

**Dual Band Meander antenna**

**Cable : coax 775 mm**



**Auxiliary Antenna**

**Manufacturer: Hitachi Cable Ltd.**

**Parts Number: 91P6813**

**Dual Band Meander antenna**

**Cable : coax 670 mm**

