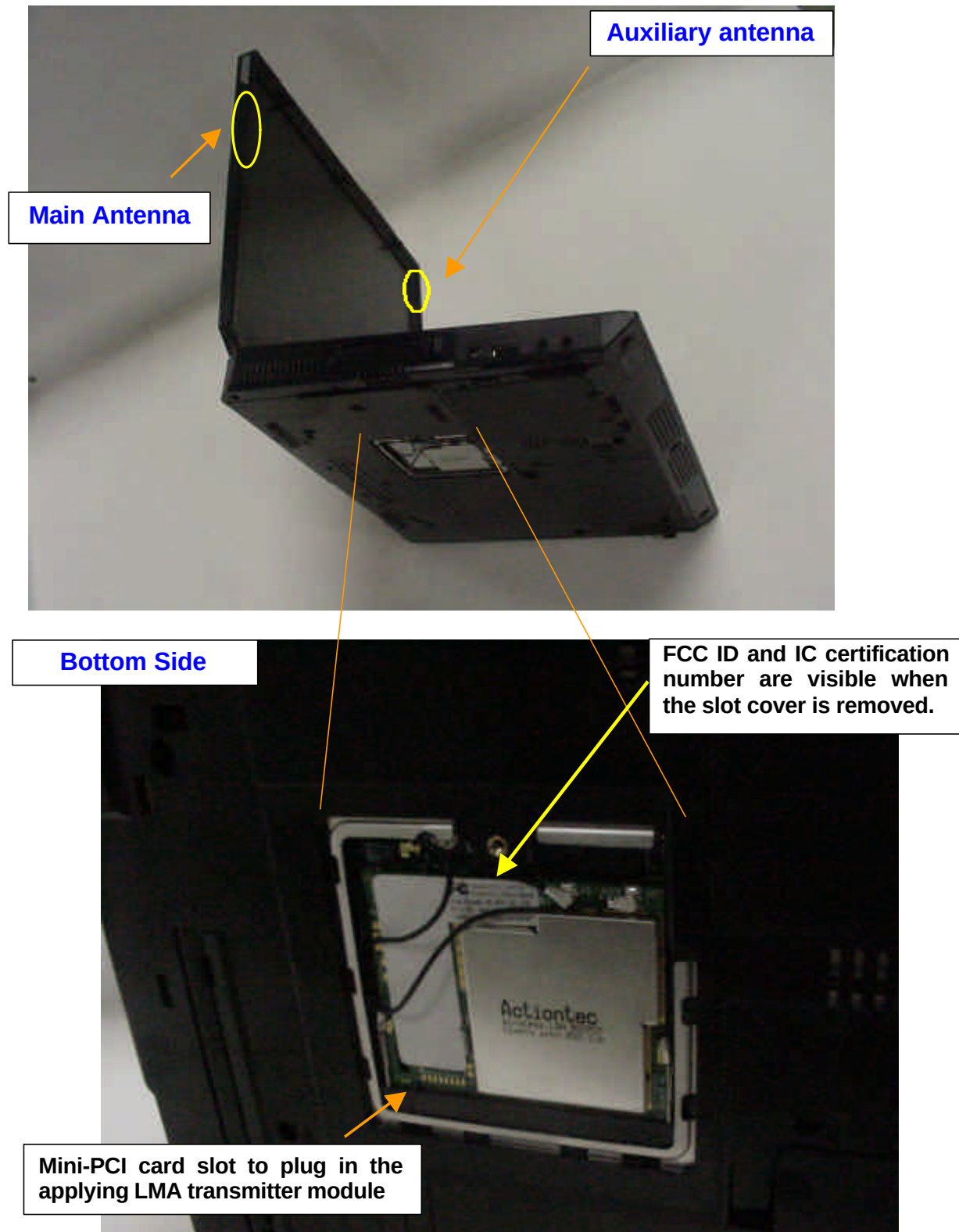


Host Unit Information of ThinkPad R40 Series

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

Host PC Information

The left antenna in LCD is used for both RF transmission and receiving with half duplex switching mode. The right antenna is used for RF receiver only. When the Wireless LAN card is in RF receiving state, one of the antennas is selected automatically to have a good quality of radio communication.



IBM ThinkPad R40 Series, LCD 15 inch Model



IBM ThinkPad R40 Series, LCD 14 inch Model

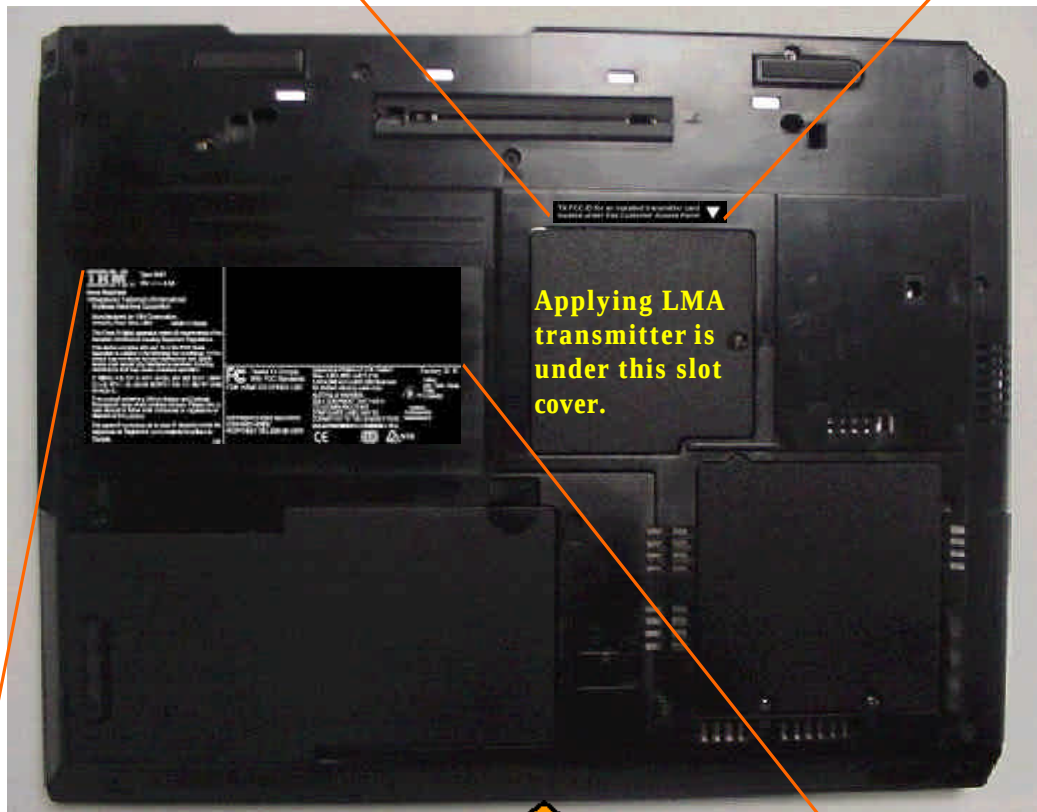


IBM ThinkPad R40 Series, LCD 13 inch Model



Host PC Labeling

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



Bottom view, Front side

IBM Type 2681 16V --- 4.5A Marca Registrada ® Registered Trademark of International Business Machines Corporation Manufactured for IBM Corporation, Armonk, New York, USA Made In Korea This Class B digital apparatus meets all requirements of the Canadian Interference Causing Equipment Regulations. This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. 본 제품에는 리튬 전지 및 수은이 들어있는 음극 합금 덩어리가 포함되어 있으므로 폐기시 사용 설명서를 참조하거나 법령 또는 해당 지역 규제를 준수하십시오. This product contains a Lithium Battery and Cathode Fluorescent Lamp which contains mercury. Please refer to User Manual or follow local ordinances or regulations for disposal of this product. Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada. CM	FC Tested To Comply With FCC Standards FOR HOME OR OFFICE USE Apparatus Claims of U.S. Patent Nos. 4,831,603, 4,577,216, 4,819,098 and 4,907,093 licensed for limited viewing uses only. AUSTRALIA WARNING: ONLY EQUIPMENT THAT HAS A TELECOMMUNICATIONS COMPLIANCE LABEL MAY BE CONNECTED TO THE HEADSET PORT. 技術基準適合認定済みの無線装置に対応 Factory ID: K Listed Info. Tech. Equip. 7K06 E145483 CANADA ICES/NMB-003 Class/Classe B COPYRIGHTED CODE AND PARTS CONTAINED HEREIN. ©COPYRIGHT 1981, 2003 IBM CORP. CE UL N79
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Label for a different model of the applying equipment (ThinkPad R40 Series)

The host device (ThinkPad R40 Series) supports the applying transmitter and a built-in type Bluetooth LMA which is to be certified separately with FCC ID: ANO20020100MTN.

IBM Type 2681 16V --- 4.5A Marca Registrada ®Registered Trademark of International Business Machines Corporation Manufactured for IBM Corporation, Armonk, New York, USA Made In Korea This Class B digital apparatus meets all requirements of the Canadian Interference Causing Equipment Regulations. This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. 본 제품은 리튬 전지 및 수은이 들어있는 음극 합금 필드가 포함되어 있으므로 폐기시 사용 설명서를 참조하거나 법령 또는 해당 지역 규격을 준수하십시오. This product contains a Lithium Battery and Cathode Fluorescent Lamp which contains mercury. Please refer to User Manual or follow local ordinances or regulations for disposal of this product. Cet appareil numérique de la class B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada. CM	COA Label FC Tested To Comply With FCC Standards FOR HOME OR OFFICE USE Contains Transmitter Module FCC ID: ANO20020100MTN Canada IC: 349E-BMDC200 Apparatus Claims of U.S. Patent Nos. 4,631,603, 4,677,216, 4,819,088 and 4,907,093 licensed for limited viewing uses only. Factory ID: K Listed Info. Tech. Equip. 71026 E145483 UL CANADA ICES/NMB-003 Class/Class B ONLY EQUIPMENT THAT HAS A TELECOMMUNICATIONS COMPLIANCE LABEL MAY BE CONNECTED TO THE HEADSET PORT. 注: 本装置は通信用の機器であり、通信用の機器にのみ接続してください。 COPYRIGHTED CODE AND PARTS CONTAINED HEREIN. ©COPYRIGHT 1991, 2003 IBM CORP. CE [E] N79
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**FCC ID of a separated application
(a built-in Bluetooth LMA transmitter)**

Antenna Information

1. Antenna Specification

Transmission Antenna assembly overview

Designator	Manufacture	Antenna type	Cable type and length	Gain (dBi) Note 1)
3301BZ9078A 15 inch LCD model Main antenna	Hitachi Cable Ltd. (Japan)	Dual Band Inverted F type Antenna	coax 530mm	2400-2500MHz 0.46 dBi (peak)
3301BZ9079A 15 inch LCD model Auxiliary antenna	Hitachi Cable Ltd. (Japan)	Dual Band Inverted F type Antenna	coax 640mm	2400-2500MHz -1.06 dBi (peak)
3301BZ9076A 13/14 inch LCD model Main antenna	Hitachi Cable Ltd. (Japan)	Dual Band Inverted F type Antenna	coax 530mm	2400-2500MHz -0.37 dBi (peak)
3301BZ9077A 13/14 inch LCD model Auxiliary antenna	Hitachi Cable Ltd. (Japan)	Dual Band Inverted F type Antenna	coax 640mm	2400-2500MHz 0.83 dBi (peak)

Notes:

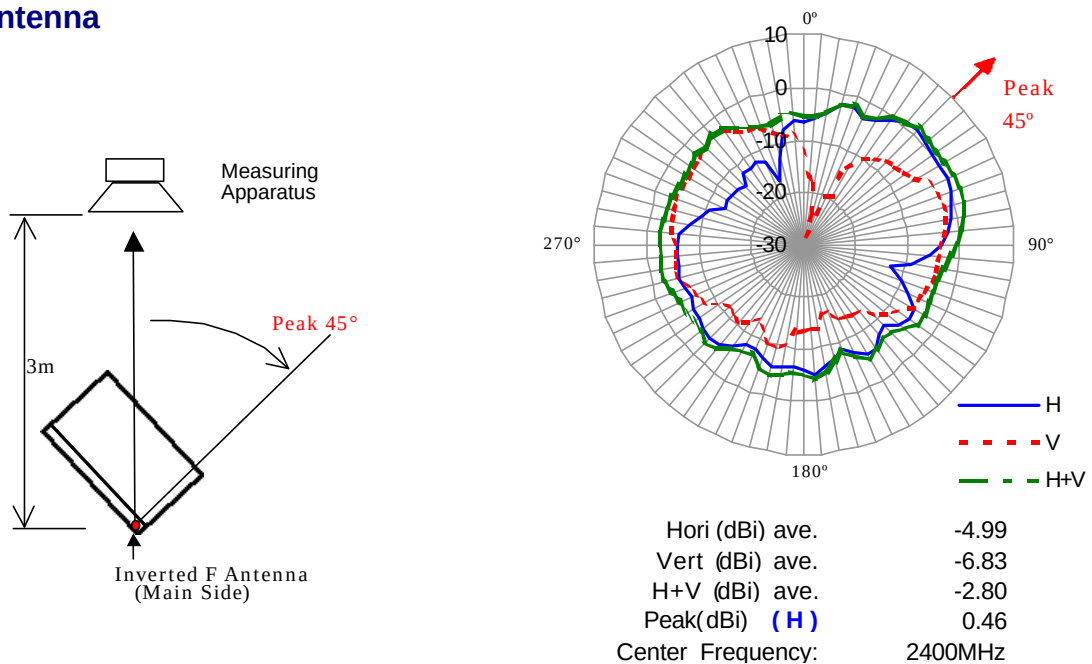
1a. Includes all cable losses.

1b. 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.

2. Radiation characteristic of antennas

2.1 2400-2500MHz radiation characteristic of antenna for LCD 15 inch model

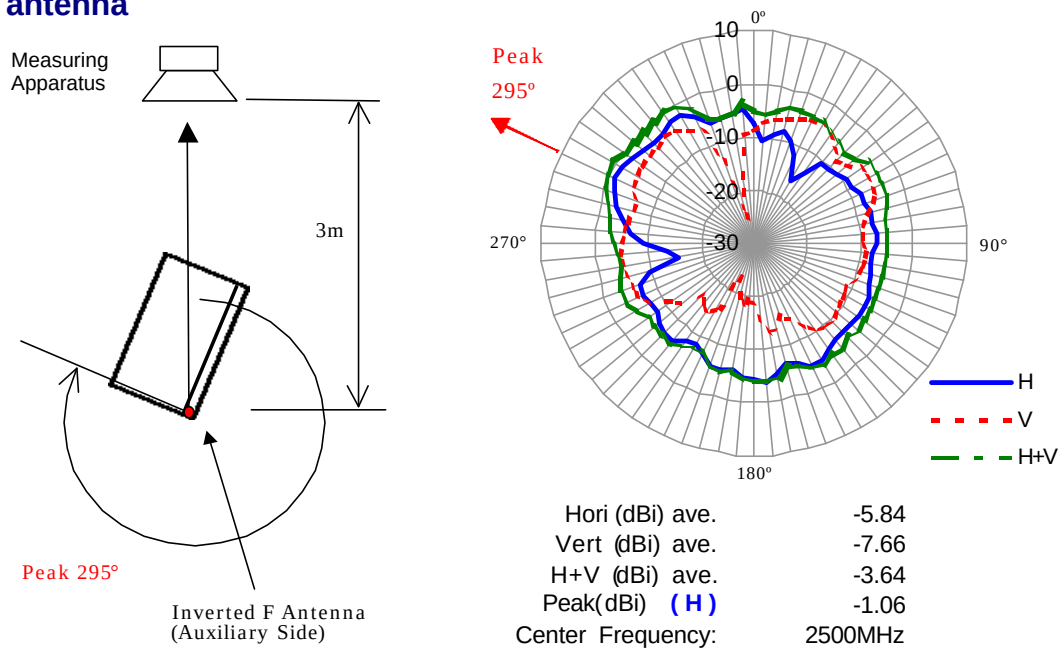
Main antenna



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

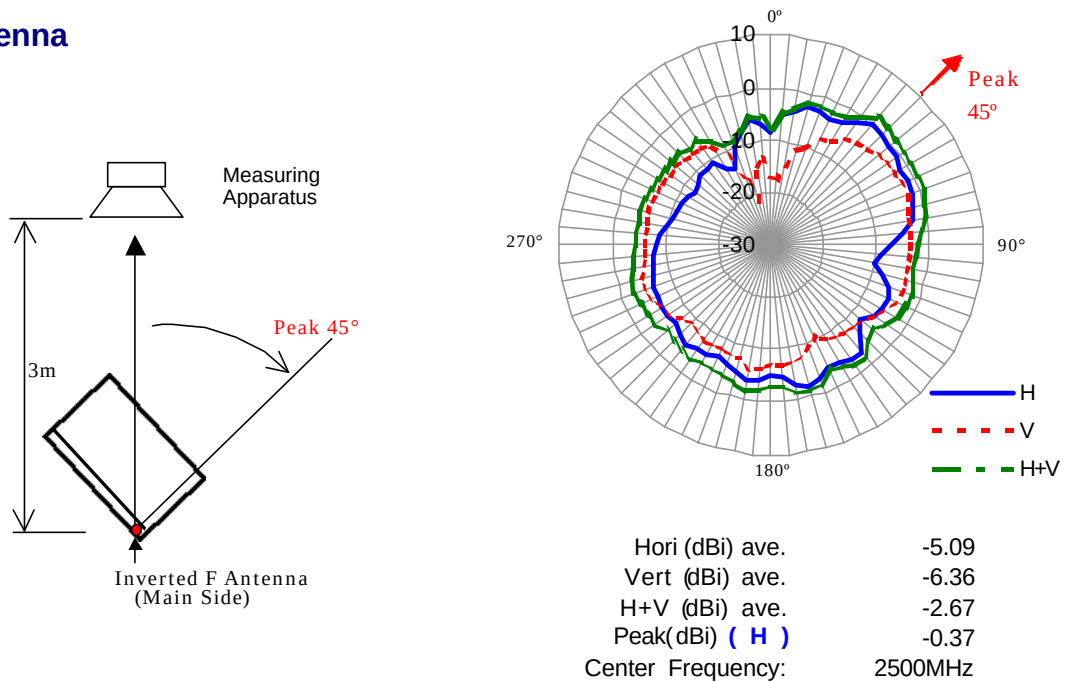
Note2) The maximum antenna gain was found around **45 degree** angle from measuring apparatus in **horizontal** polarization at the low frequency (2400MHz).

Auxiliary antenna



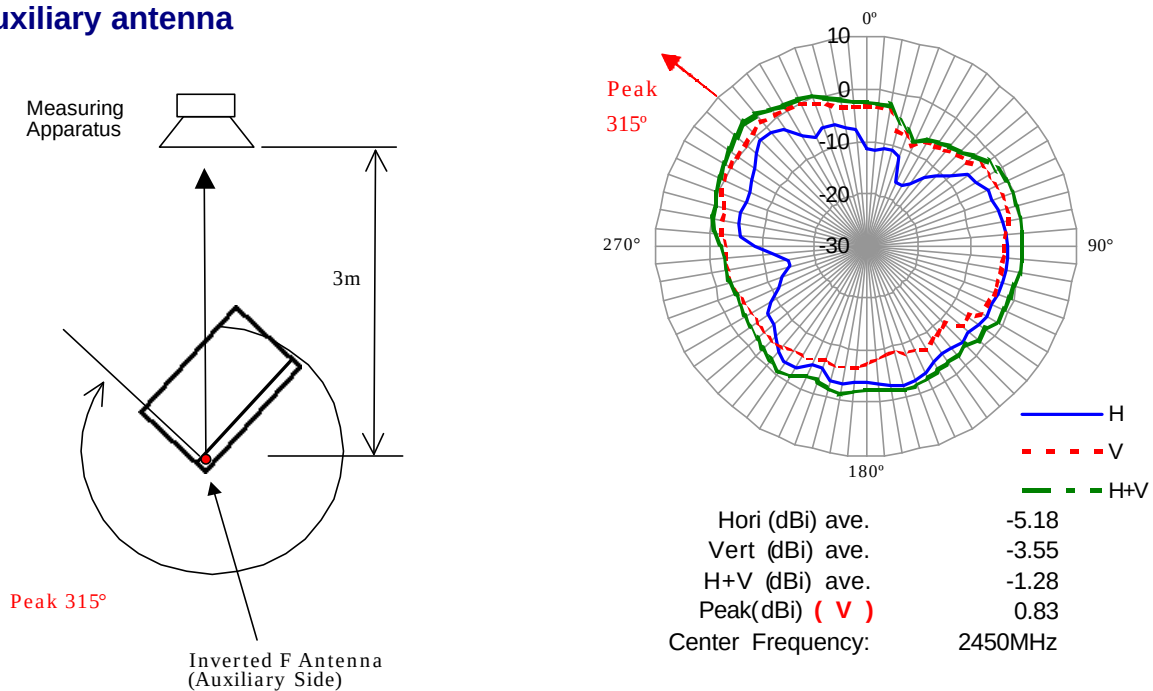
Note1) The measurement was performed at 3 frequencies (2400, 2450, 2500MHz).

Note2) The maximum antenna gain was found around **295 degree** angle from measuring apparatus in **horizontal** polarization at the high frequency (2500MHz).

2.2 2400-2500MHz radiation characteristic of antenna for LCD 13/14 inch model**Main antenna**

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 **horizontal** polarization at the high frequency (2500MHz).

Auxiliary antenna

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

Note2) The maximum antenna gain was found around **315 degree** angle from measuring apparatus in **vertical** polarization at the middle frequency (2450MHz).

3. Antenna Locations

3.1 LCD 15 inch Model

Main antenna
Dual Band Inverted-F type
P/N: 3301BZ9078A



Auxiliary antenna
Dual Band Inverted-F type
P/N: 3301BZ9079A



3.2 LCD 13/14 inch Model

Main antenna
Dual Band Inverted-F type
P/N: 3301BZ9076A

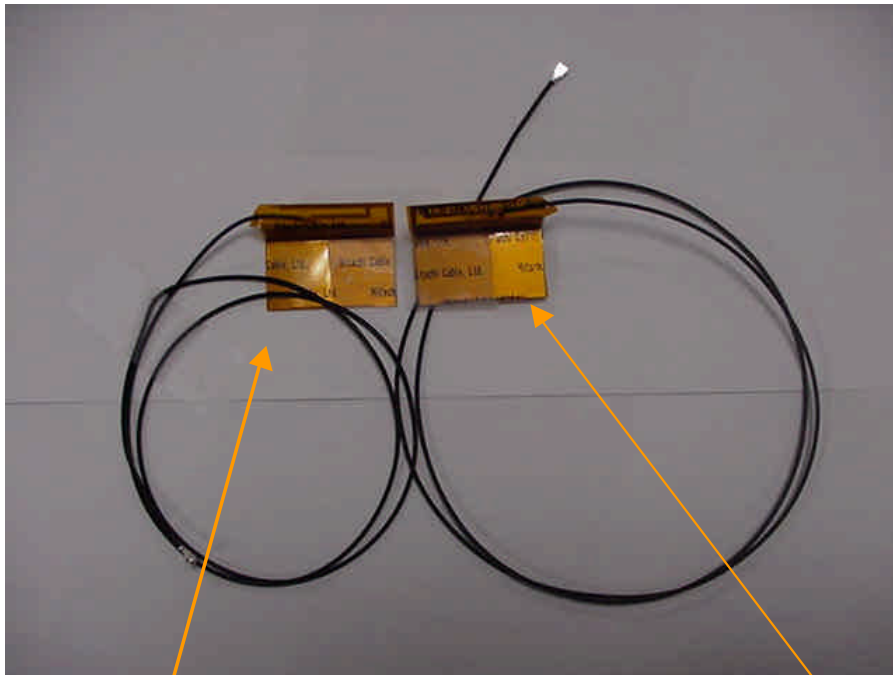
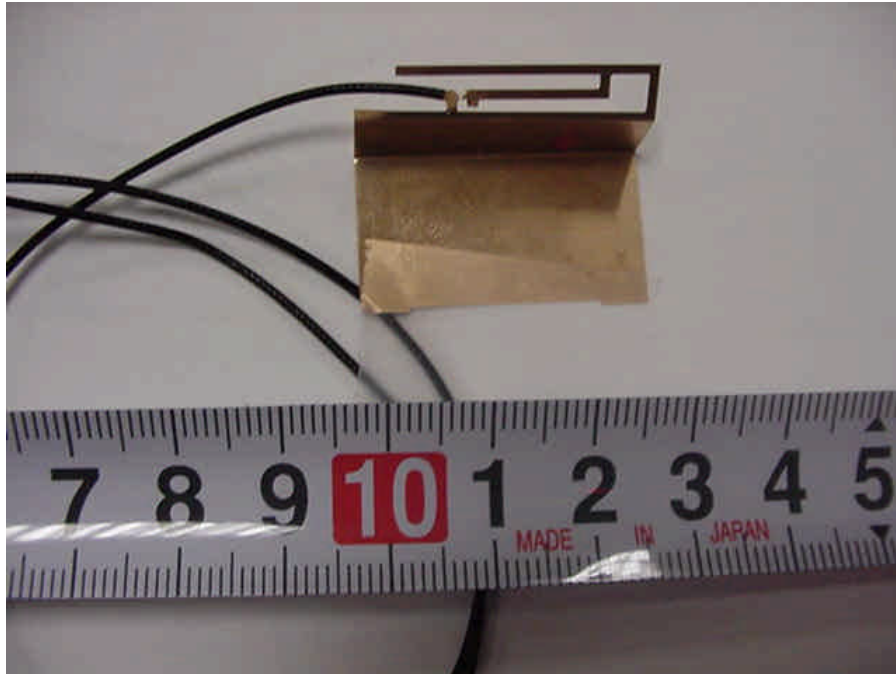


Auxiliary antenna
Dual Band Inverted-F type
P/N: 3301BZ9077A



4. Exterior Photos of Antennas

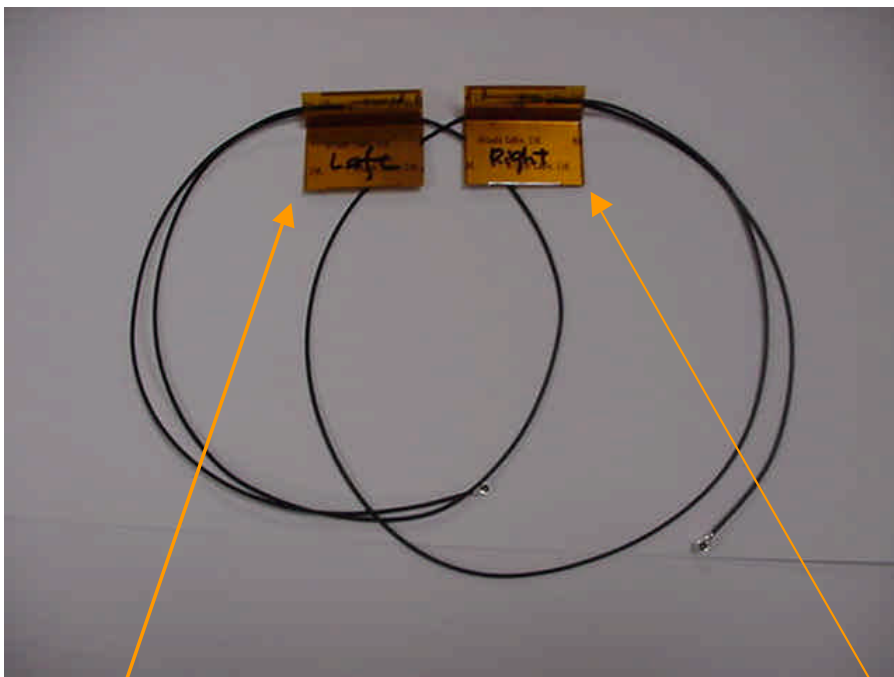
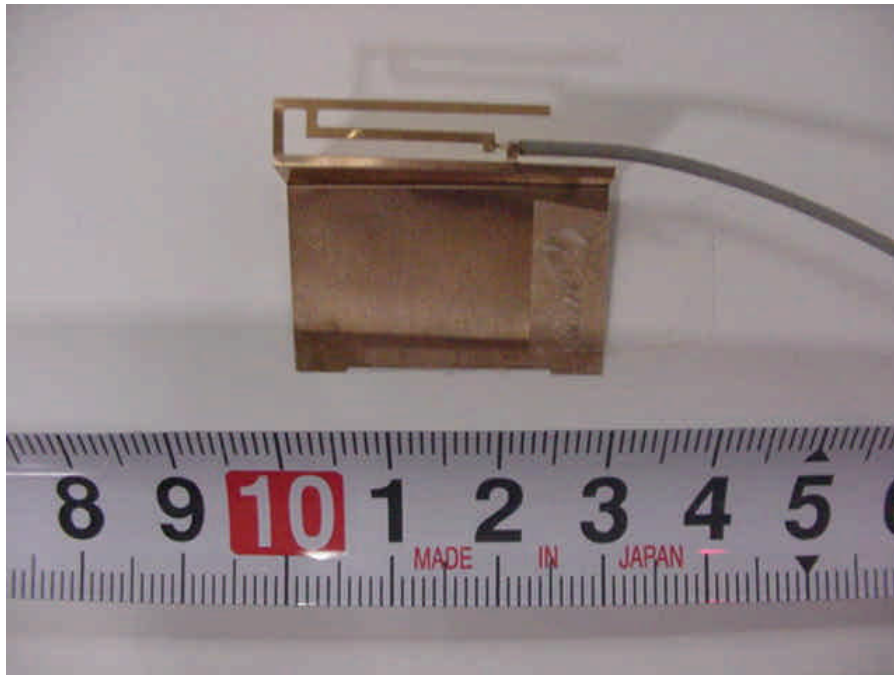
4.1 LCD 15 inch Model



Main Antenna (Left)
Manufacturer: Hitachi Cable Ltd.
Parts Number: 3301BZ9078A
Dual Band Inverted-F type antenna
Cable : coax 530 mm

Auxiliary Antenna (Right)
Manufacturer: Hitachi Cable Ltd.
Parts Number: 3301BZ9079A
Dual Band Inverted-F type antenna
Cable : coax 640 mm

4.2 LCD 13/14 inch Model Main Antenna



Main Antenna (Left)
Manufacturer: Hitachi Cable Ltd.
Parts Number: 3301BZ9076A
Dual Band Inverted-F type antenna
Cable : coax 530 mm

Auxiliary Antenna (Right)
Manufacturer: Hitachi Cable Ltd.
Parts Number: 3301BZ9077A
Dual Band Inverted-F type antenna
Cable : coax 640 mm