

Host Unit Antenna Information

for

ThinkPad R50 Series

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1. Host PC Information

The main antenna, inverted F-figure type, is built in the top side of LCD and the auxiliary antenna, inverted F-figure type, is built in the right side of LCD.

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.



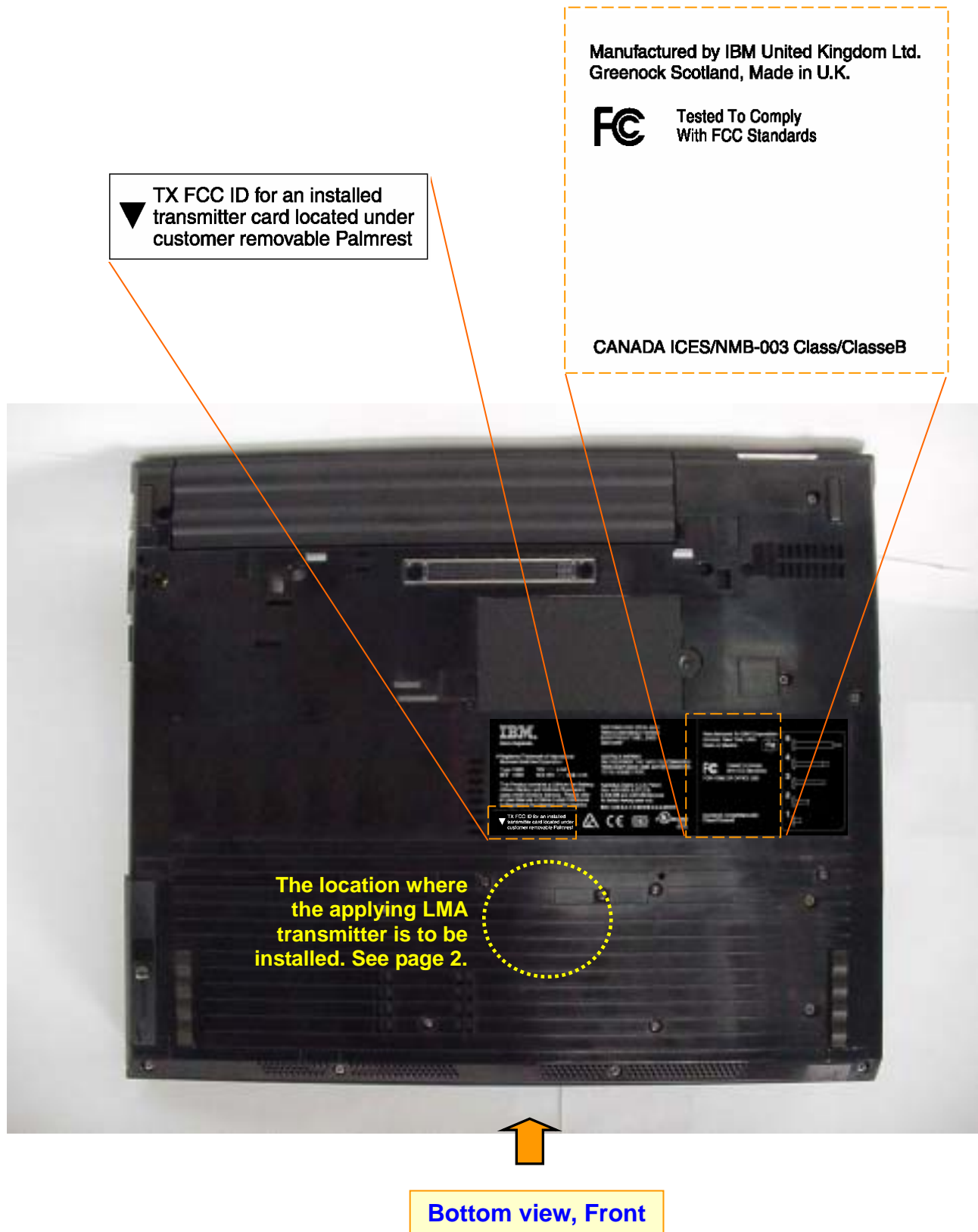
IBM ThinkPad R50 Series, LCD 15 inch Model



IBM ThinkPad R50 Series, LCD 14 inch Model



2. Host PC Labeling



Label for a different model of the host PC (ThinkPad R50 Series)

The model (R50) supports the applying transmitter and a built-in type Bluetooth LMA which is to be certified separately as the FCC ID: ANO20020100MTN.



**TX FCC ID for an installed CDC
transmitter card located under
customer removable Keyboard**

**The location where the collocated
user installable Bluetooth LMA
transmitter is to be installed.**



Bottom view, Front side

3. Antenna Specifications

3.1 Transmission Antenna assembly overview

Designator	Manufacture	Antenna type	Cable type and length	Gain (dBi) Note 1)
91P6812 15 inch LCD model Main antenna	Hitachi Cable Ltd. (Japan)	Dual Band Inverted F type Antenna	coax 775mm	2.4GHz Band 1.18 dBi (peak)
				5.8GHz Band 1.78 dBi (peak)
91P6813 15 inch LCD model Auxiliary antenna	Hitachi Cable Ltd. (Japan)	Dual Band Inverted F type Antenna	coax 670mm	2.4GHz Band 1.71 dBi (peak)
				5.8GHz Band 1.51 dBi (peak)
91P6810 14 inch LCD model Main antenna	Hitachi Cable Ltd. (Japan)	Dual Band Inverted F type Antenna	coax 750mm	2.4GHz Band 1.52 dBi (peak)
				5.8GHz Band 0.02 dBi (peak)
91P6811 14 inch LCD model Auxiliary antenna	Hitachi Cable Ltd. (Japan)	Dual Band Inverted F type Antenna	coax 635mm	2.4GHz Band 1.84 dBi (peak)
				5.8GHz Band 0.19 dBi (peak)

Notes:

1a. Includes all cable losses.

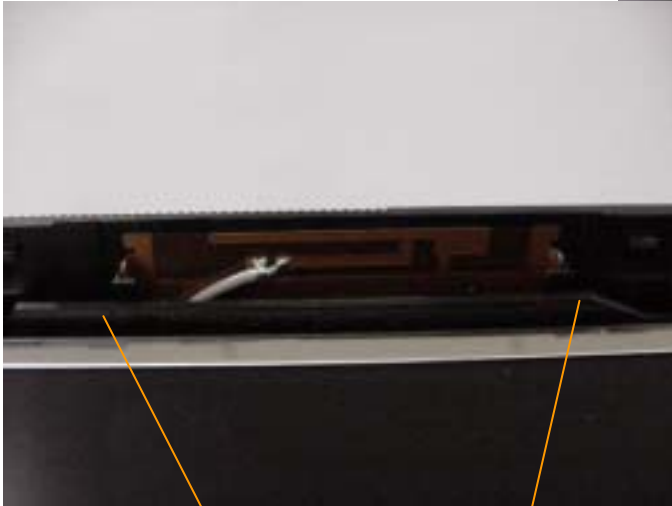
1b. Antenna type should be Omni Directional and have gain of 3.0 dBi or less for IEEE802.11a(5GHz band) and have gain of 2.0 dBi or less for IEEE802.11b/g(2.4GHz band), regarding the IBM internal specification.

3.2 Antenna Photos

Antenna Locations

Main antenna
Dual Band Inverted-F type

Auxiliary antenna
Dual Band Inverted-F type



Exterior Photos of Antennas

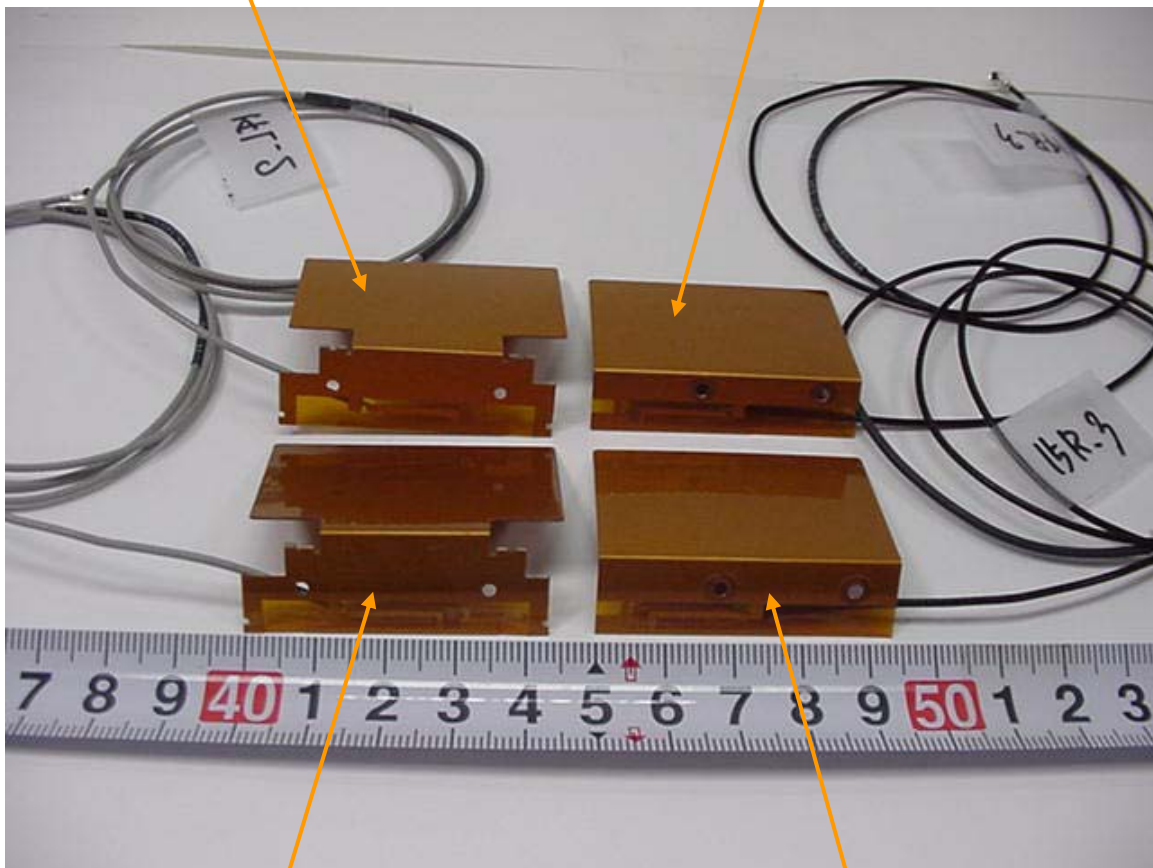
Over view of Antennas for ThinkPad R50 series

Main antenna for 14 inch model

Manufacturer: Hitachi Cable Ltd.
Parts Number: 91P6810
Dual Band Inverted-F type antenna
Cable : coax 750 mm

Auxiliary antenna for LCD 14 inch model

Manufacturer: Hitachi Cable Ltd.
Parts Number: 91P6811
Dual Band Inverted-F type antenna
Cable : coax 635 mm



Main antenna for LCD 15 inch model

Manufacturer: Hitachi Cable Ltd.
Parts Number: 91P6812
Dual Band Inverted-F type antenna
Cable : coax 775 mm

Auxiliary antenna for LCD 15 inch model

Manufacturer: Hitachi Cable Ltd.
Parts Number: 91P6813
Dual Band Inverted-F type antenna
Cable : coax 670 mm

Antennas for ThinkPad R50 series LCD 15 inch Model

Main Antenna

Manufacturer: Hitachi Cable Ltd.

Parts Number: 91P6812

Dual Band Inverted-F type antenna

Cable : coax 775 mm



Auxiliary Antenna

Manufacturer: Hitachi Cable Ltd.

Parts Number: 91P6813

Dual Band Inverted-F type 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 Inverted-F type antenna

Cable : coax 750 mm



Auxiliary Antenna

Manufacturer: Hitachi Cable Ltd.

Parts Number: 91P6811

Dual Band Inverted-F type antenna

Cable : coax 635 mm

