

Regulatory Antenna Information

Project Name : Malibu
Host System : Notebook PC
Antenna Vendor : Hitachi Cable,Ltd

Samsung Electronics Co., Ltd.

Antenna Information

Antenna Assembly Specifications

Antenna assembly overview: Peak Gain

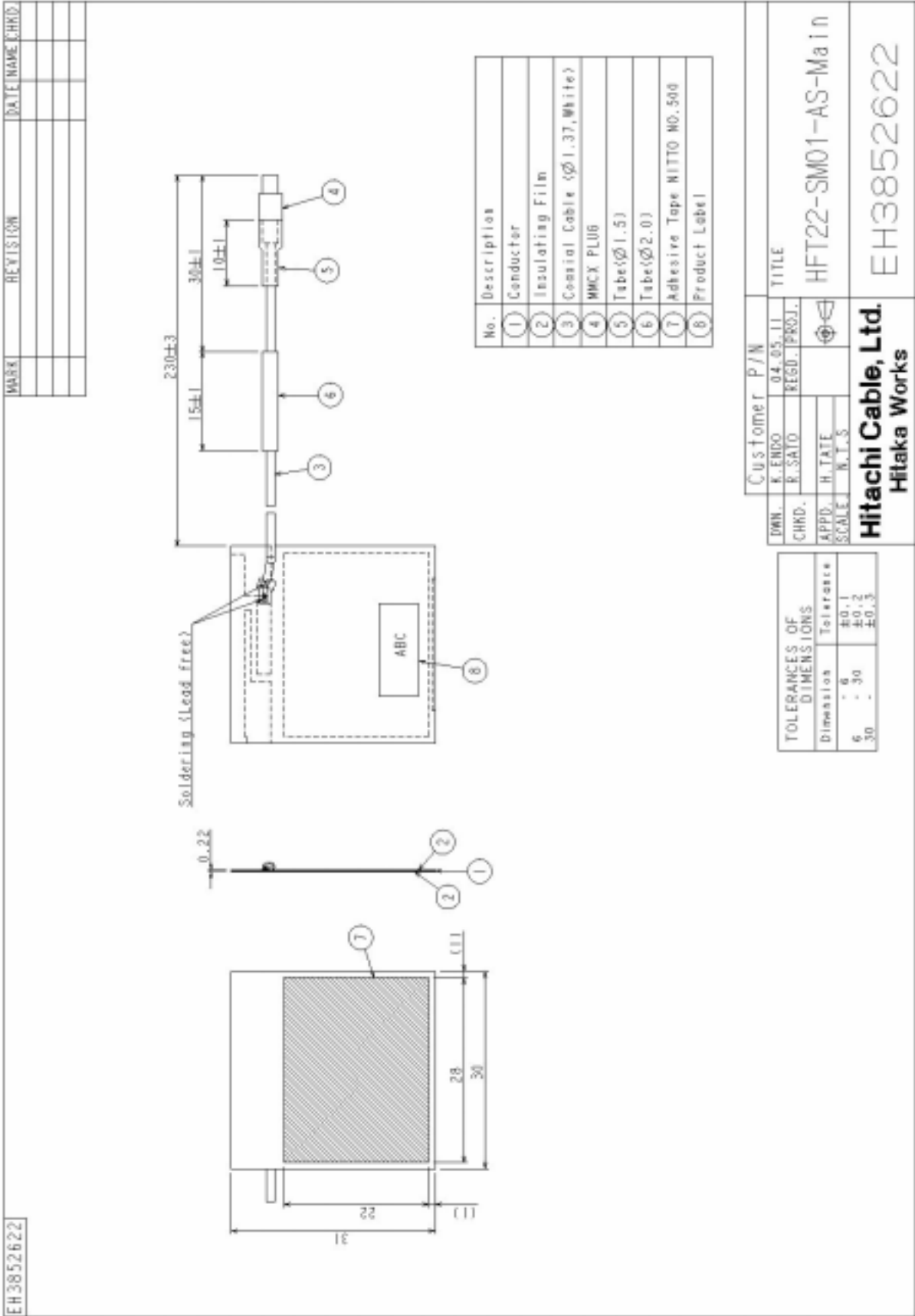
Designator	Manufacture	Antenna type	Cable Assembly Info.	Peak Gain W/ Cable loss (dBi)
(P/N :HFT22-SM01-AS-Main) Main antenna	Hitachi Cable	Monopole	(P/N: HFT20-SM01-Main) 50 ohm Coaxial. length: 455mm diameter: 1.37mm Connector: U.FL	2400-2500MHz -1.02dBi (peak)
				5150-5350MHz -0.47dBi (peak)
				5470-5725MHz 0.88dBi (peak)
				5725-5850MHz -1.30dBi (peak)
(P/N:HFT22-SM01-AS-Aux) Auxiliary antenna	Hitachi Cable	Monopole	(P/N: HFT20-SM01-Aux) 50 ohm Coaxial. length: 515 mm diameter: 1.37mm Connector: U.FL	2400-2500MHz -1.08dBi (peak)
				5150-5350MHz -1.03dBi (peak)
				5470-5725MHz 0.02dBi (peak)
				5725-5850MHz 0.02dBi (peak)

Cable assembly overview: Cable loss

Designator	Manufacture	Cable type and length	VSWR	Cable Loss (dBi)
(P/N :HFT22-SM01-AS-Main) For use with the Main antenna	Hitachi Cable	(P/N: HFT20-SM01-Main) 50 ohm Coaxial. length: 455mm diameter: 1.37mm Connector: U.FL	2400-2500MHz 1.3max	2400-2500MHz 1.14dB (peak)
			5150-5350MHz 1.5max	5150-5350MHz 1.91dB (peak)
			5470-5725MHz 1.5max	5470-5725MHz 1.91dB (peak)
			5725-5850MHz 1.5max	5725-5850MHz 1.91dB (peak)
(P/N: HFT20-SM01-AS-Aux) For use with the Auxiliary antenna	Hitachi Cable	(P/N: HFT20-SM01-Aux) 50 ohm Coaxial. length: 515 mm diameter: 1.37mm Connector: U.FL	2400-2500MHz 1.3max	2400-2500MHz 1.29dB (peak)
			5150-5350MHz 1.5max	5150-5350MHz 2.16dB (peak)
			5470-5725MHz 1.5max	5470-5725MHz 2.16dB (peak)
			5725-5850MHz 1.5max	5725-5850MHz 2.16dB (peak)

Mechanical drawings of antenna

Main Antenna

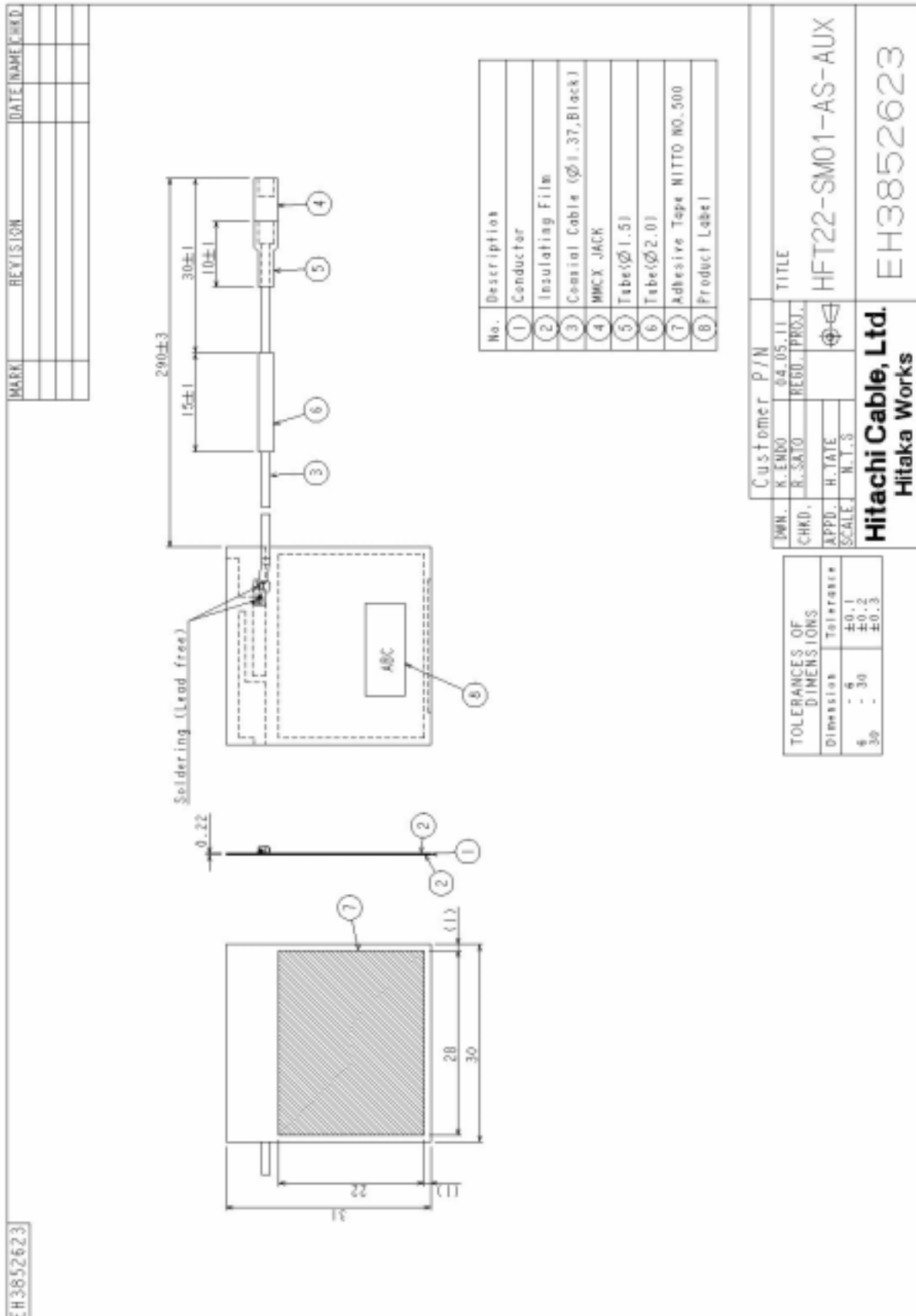


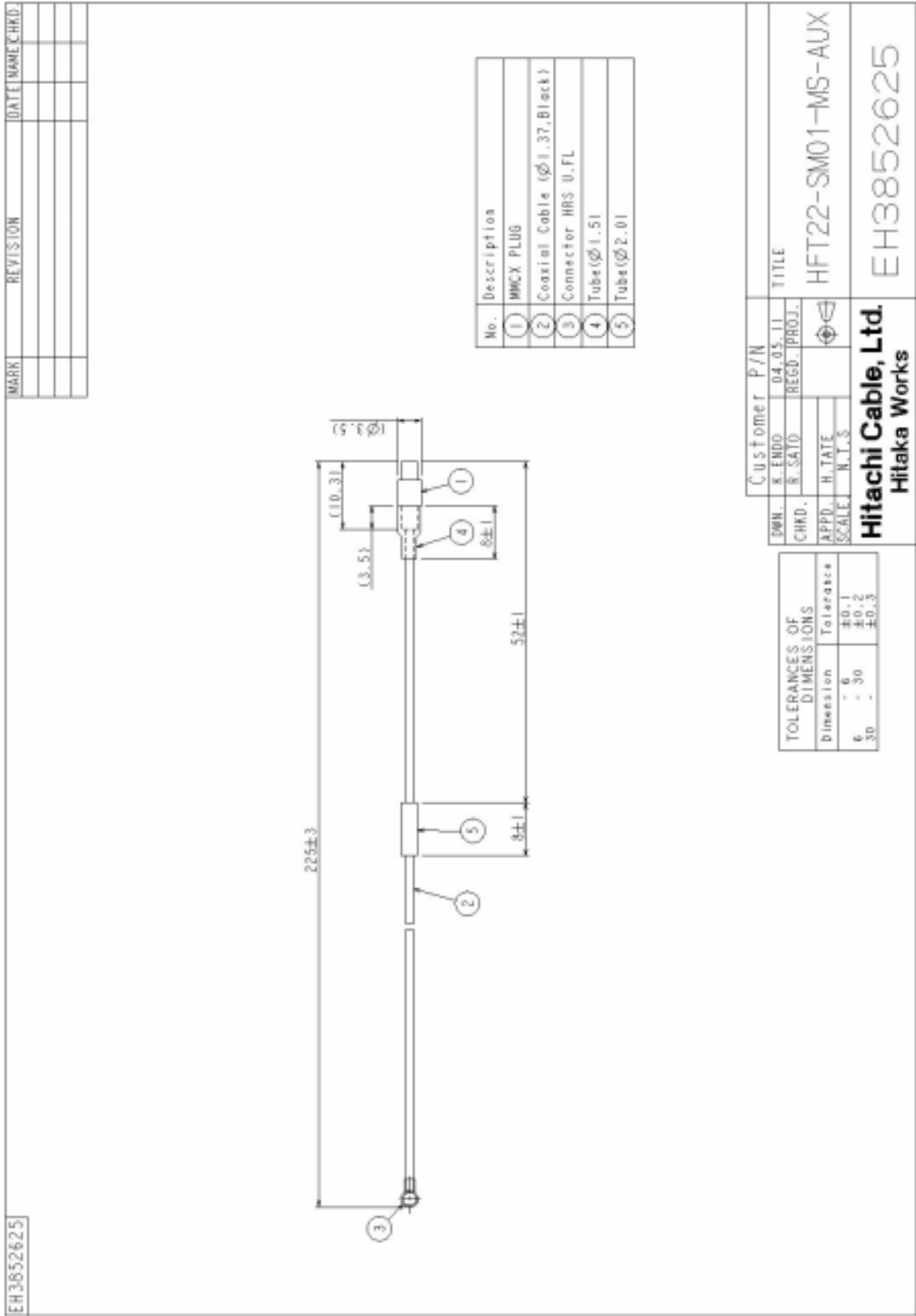
Technical drawing of a cable assembly. The main dimension is 225±3. The drawing shows a cable with a connector at one end and a jack at the other. The connector is labeled 3, the cable is labeled 2, the jack is labeled 1, and the internal components are labeled 4 and 5. The dimensions are: 225±3 (total length), 110 (jack length), 13.5 (jack to connector distance), 8±1 (connector length), 52±1 (cable length), and 8±1 (jack to cable distance). The drawing also includes a table of dimensions and tolerances.

TOLERANCES OF DIMENSIONS	
Dimension	Tolerance
6	±0.1
30	±0.2
30	±0.5

No.	Description
1	MMCX JACK
2	Coaxial Cable (ø1.37, White)
3	Connector HRS U.FL
4	Tube ø1.51
5	Tube ø2.01

Aux antenna





Radiation characteristic of antenna Loaded (In Host System)

1. Main antenna Radiation pattern and gain

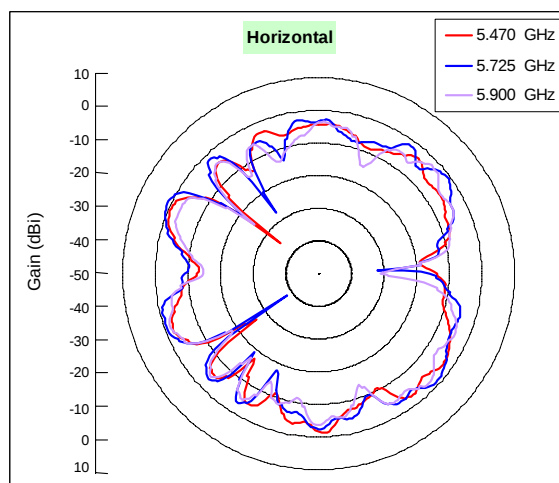
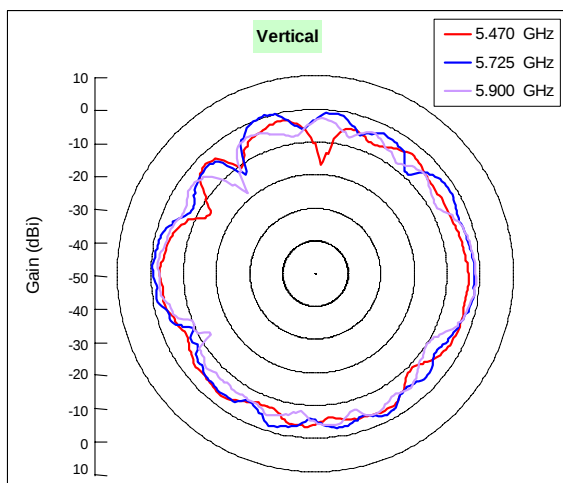
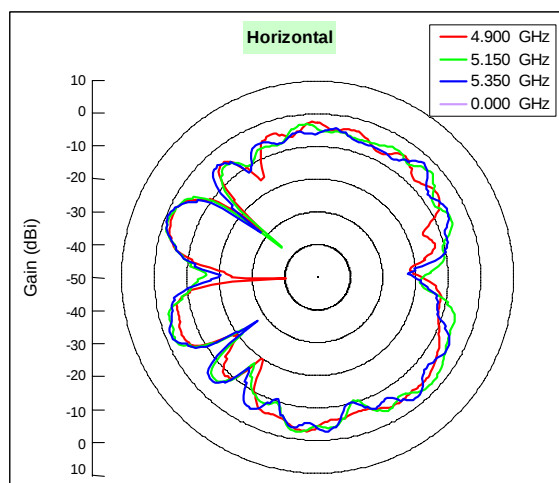
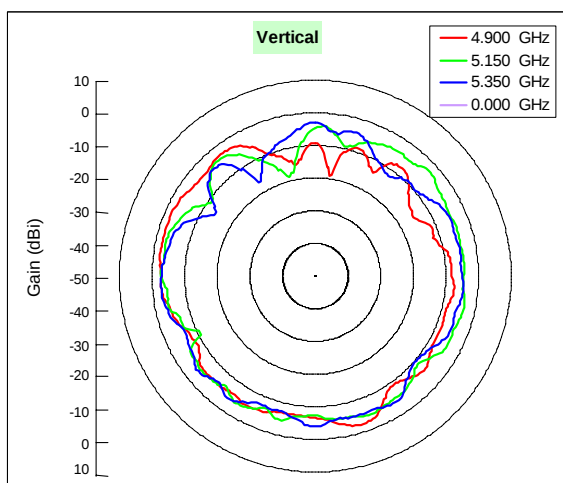
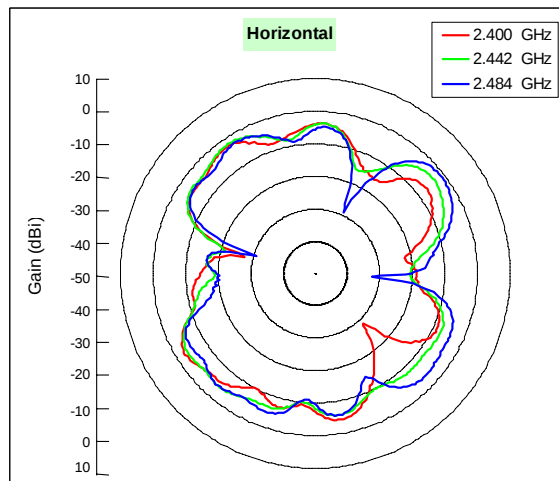
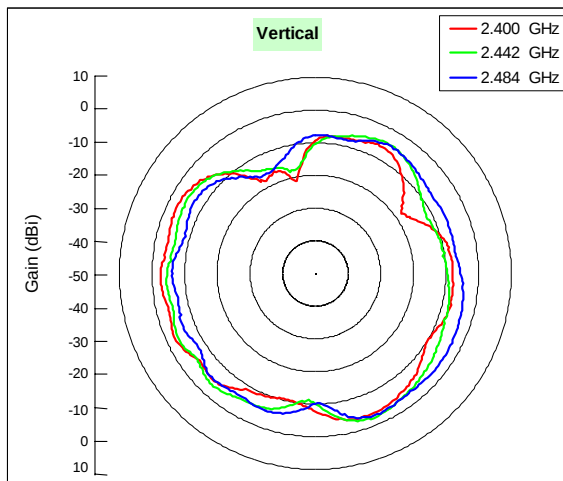


Table 1. Peak gain (dBi) summary

Frequency (MHz)	Horizontal (dBi) peak	Vertical (dBi) peak	Max Peak (dBi)
2400	-2.38	-3.53	-2.38
2442	-1.86	-2.42	-1.86
2484	-1.02	-2.80	-1.02
4900	-1.54	-1.88	-1.54
5150	-1.00	-2.59	-1.00
5350	-0.47	-2.66	-0.47
5470	-0.76	-2.40	-0.76
5725	0.88	0.33	0.88
5900	-2.03	-1.30	-1.30

2. Aux antenna Radiation pattern and gain

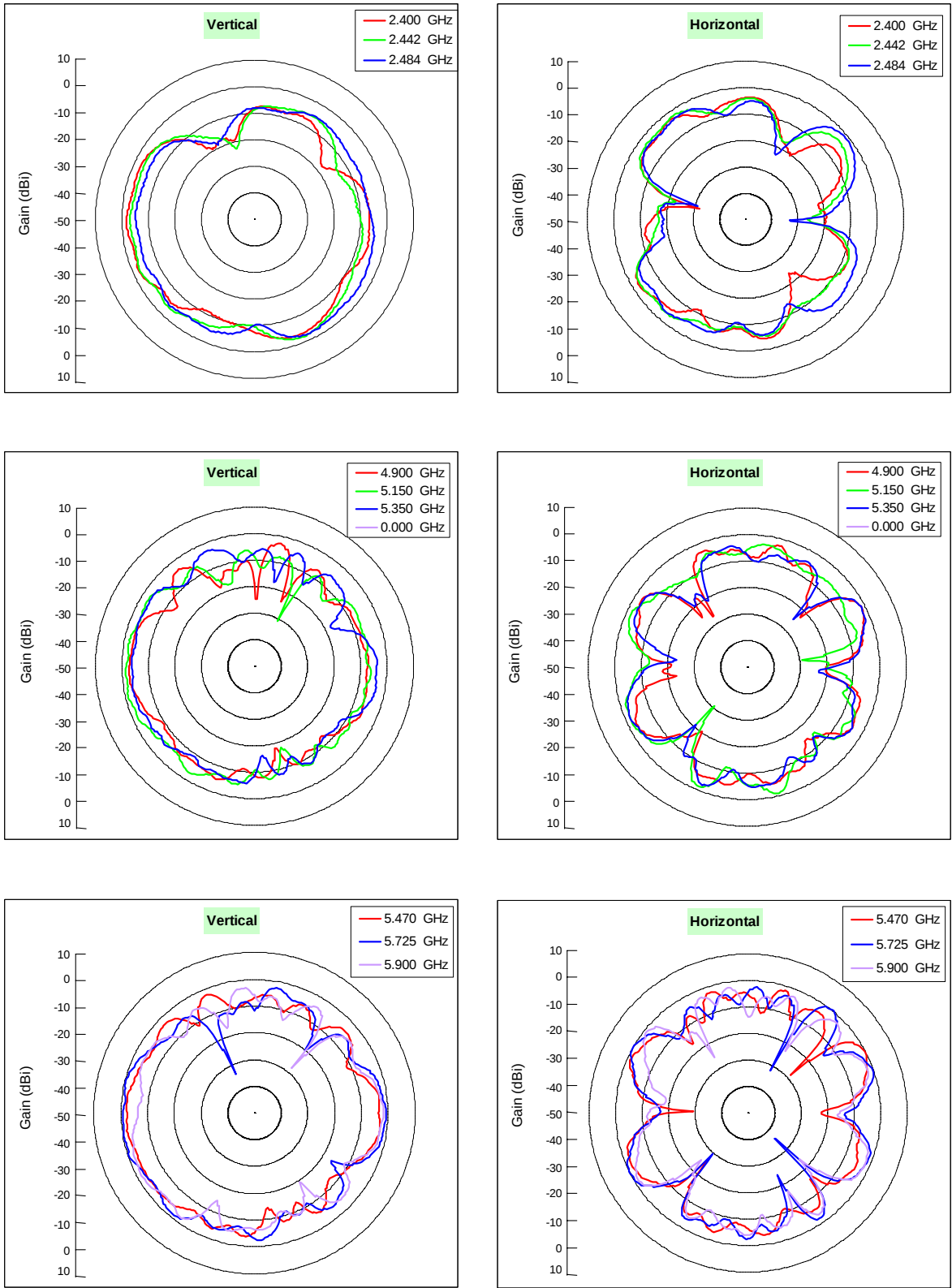


Table 2. Peak gain (dBi) summary

Frequency (MHz)	Horizontal (dBi) peak	Vertical (dBi) peak	Max Peak (dBi)
2400	-2.44	-3.27	-2.44
2442	-2.10	-2.07	-2.07
2484	-1.08	-2.30	-1.08
4900	-1.44	-2.69	-1.44
5150	-1.04	-1.03	-1.03
5350	-1.47	-3.09	-1.47
5470	-0.66	-2.01	-0.66
5725	0.02	-0.48	0.02
5900	-1.30	-1.72	-1.30

Host PC Information

Host System : Notebook PC
(Project and Model Name : Malibu)

Antenna location : Top of the LCD of
Antenna : Main = Right , Aux = Left

Photographs of the antenna location in the Malibu



Antenna location



Main Antenna



Auxiliary Antenna

Full antenna picture