APPENDIX E

DATA SHEETS

RADIATED EMISSIONS

DATA SHEETS

FCC 15.247

Intel Corporation — Date: 3/08/05

Intel Mini PCI Type 3A 802.11BG Wireless LAN Adapter — Lab: B

Model: WM3A2200BG — Tested By: Benigno Chavez

Configuration: Dell Latitude Laptop D510 Agency Series Number: PP17L -- Main Port

With Hitachi Antenna

Channel 1 - 802.11 b Mode Gain : 28.0 Peak Power: 17.11 dBm Avg. Power: 14.75 dBm

Transmit Mode

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
4824	37.45	V	74	-36.55	Peak	2.92	180	
4824	26.06	V	54	-27.94	Avg	2.92	180	
7236	40.8	V	74	-33.2	Peak	2.12	225	
7236	27.17	V	54	-26.83	Avg	2.12	225	
9648	51.97	V	--	--	Peak	2.07	180	Not in Restricted Band
9648	46.43	V	--	--	Avg	2.07	180	Not in Restricted Band
12060	46.21	V	74	-27.79	Peak	1.96	180	
12060	32.08	V	54	-21.92	Avg	1.96	180	
14472	47.7	V	74	-26.3	Peak	1.78	135	
14472	33.81	V	54	-20.19	Avg	1.78	135	
16884	44.44	V	--	--	Peak	2.32	180	Not in Restricted Band
16884	29.36	V	--	--	Avg	2.32	180	Not in Restricted Band
19296		V	74	-74	Peak			No Emissions
19296		V	54	-54	Avg			Detected
21708		V	--	--	Peak			No Emissions
21708		V	--	--	Avg			Detected
24120		V	--	--	Peak			No Emissions
24120		V	--	--	Avg			Detected

FCC 15.247

Intel Corporation — Date: 3/08/05

Intel Mini PCI Type 3A 802.11BG Wireless LAN Adapter — Lab: B

Model: WM3A2200BG — Tested By: Benigno Chavez

Configuration: Dell Latitude Laptop D510 Agency Series Number: PP17L -- Main Port

With Hitachi Antenna

Channel 1 - 802.11 b Mode Gain : 28.0 Peak Power: 17.11 dBm Avg. Power: 14.75 dBm

Transmit Mode

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
4824	37.29	H	74	-36.71	Peak	2.46	180	
4824	25.34	H	54	-28.66	Avg	2.46	180	
7236	41.3	H	74	-32.7	Peak	2.05	225	
7236	27.11	H	54	-26.89	Avg	2.05	225	
9648	52.99	H	--	--	Peak	1.56	315	Not in Restricted Band
9648	48.05	H	--	--	Avg	1.56	315	Not in Restricted Band
12060	46.51	H	74	-27.49	Peak	1.67	180	
12060	32.34	H	54	-21.66	Avg	1.67	180	
14472	48.21	H	74	-25.79	Peak	2.69	135	
14472	34.35	H	54	-19.65	Avg	2.69	135	
16884	49.8	H	--	--	Peak	2.89	225	Not in Restricted Band
16884	35.24	H	--	--	Avg	2.89	225	Not in Restricted Band
19296		H	74	-74	Peak			No Emissions
19296		H	54	-54	Avg			Detected
21708		H	--	--	Peak			No Emissions
21708		H	--	--	Avg			Detected
24120		H	--	--	Peak			No Emissions
24120		H	--	--	Avg			Detected

FCC 15.247

Intel Corporation — Date: 3/08/05

Intel Mini PCI Type 3A 802.11BG Wireless LAN Adapter — Lab: B

Model: WM3A2200BG — Tested By: Benigno Chavez

Configuration: Dell Latitude Laptop D510 Agency Series Number: PP17L -- Main Port

With Hitachi Antenna

Channel 6 - 802.11 b Mode Gain : 28.5 Peak Power: 17.08 dBm Avg. Power: 14.62 dBm

Transmit Mode

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
4874	37.58	V	74	-36.42	Peak	1.69	225	
4874	24.68	V	54	-29.32	Avg	1.69	225	
7311	40.8	V	74	-33.2	Peak	2.62	180	
7311	26.48	V	54	-27.52	Avg	2.62	180	
9748	54.74	V	--	--	Peak	2.27	180	Not in Restricted Band
9748	50.83	V	--	--	Avg	2.27	180	Not in Restricted Band
12185	45.67	V	74	-28.33	Peak	2.07	135	
12185	31.95	V	54	-22.05	Avg	2.07	135	
14622	47.25	V	--	--	Peak	1.87	225	Not in Restricted Band
14622	33.07	V	--	--	Avg	1.87	225	Not in Restricted Band
17059	46.98	V	--	--	Peak	2.02	180	Not in Restricted Band
17059	32.49	V	--	--	Avg	2.02	180	Not in Restricted Band
19496		V	74	-74	Peak			No Emissions
19496		V	54	-54	Avg			Detected
21933		V	--	--	Peak			No Emissions
21933		V	--	--	Avg			Detected
22001		V	74	-74	Peak			No Emissions
22001		V	54	-54	Avg			Detected
24370		V	--	--	Peak			No Emissions
24370		V	--	--	Avg			Detected

FCC 15.247
Intel Corporation Date: 3/08/05
Intel Mini PCI Type 3A 802.11BG Wireless LAN Adapter Lab: B
Model: WM3A2200BG Tested By: Benigno Chavez
Configuration: Dell Latitude Laptop D510 Agency Series Number: PP17L -- Main Port
With Hitachi Antenna
Channel 6 - 802.11 b Mode Gain : 28.5 Peak Power: 17.08 dBm Avg. Power: 14.62 dBm
Transmit Mode

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
4874	37.47	H	74	-36.53	Peak	1.82	225	
4874	23.97	H	54	-30.03	Avg	1.82	225	
7311	40.47	H	74	-33.53	Peak	2.16	180	
7311	26.81	H	54	-27.19	Avg	2.16	180	
9748	54.28	H	--	--	Peak	1.99	225	Not in Restricted Band
9748	50.06	H	--	--	Avg	1.99	225	Not in Restricted Band
12185	45.76	H	74	-28.24	Peak	2.22	225	
12185	31.92	H	54	-22.08	Avg	2.22	225	
14622	47.34	H	--	--	Peak	2.56	180	Not in Restricted Band
14622	33.35	H	--	--	Avg	2.56	180	Not in Restricted Band
17059	50.42	H	--	--	Peak	2.31	135	Not in Restricted Band
17059	36.11	H	--	--	Avg	2.31	135	Not in Restricted Band
19496		H	74	-74	Peak			No Emissions
19496		H	54	-54	Avg			Detected
21933		H	--	--	Peak			No Emissions
21933		H	--	--	Avg			Detected
22001		H	74	-74	Peak			No Emissions
22001		H	54	-54	Avg			Detected
24370		H	--	--	Peak			No Emissions
24370		H	--	--	Avg			Detected

FCC 15.247

Intel Corporation — Date: 3/08/05

Intel Mini PCI Type 3A 802.11BG Wireless LAN Adapter — Lab: B

Model: WM3A2200BG — Tested By: Benigno Chavez

Configuration: Dell Latitude Laptop D510 Agency Series Number: PP17L -- Main Port

With Hitachi Antenna

Channel 11 - 802.11 b Mode Gain : 29.0 Peak Power: 17.25 dBm Avg. Power: 14.85 dBm

Transmit Mode

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
4924	38.65	V	74	-35.35	Peak	1.72	180	
4924	26.49	V	54	-27.51	Avg	1.72	180	
7386	40.42	V	74	-33.58	Peak	2.32	180	
7386	26.38	V	54	-27.62	Avg	2.32	180	
9848	52.79	V	--	--	Peak	1.47	225	Not in Restricted Band
9848	48.48	V	--	--	Avg	1.47	225	Not in Restricted Band
12310	44.99	V	74	-29.01	Peak	1.68	180	
12310	31.54	V	54	-22.46	Avg	1.68	180	
14772	47.19	V	--	--	Peak	1.74	180	Not in Restricted Band
14772	33.7	V	--	--	Avg	1.74	180	Not in Restricted Band
17234	50.19	V	--	--	Peak	1.36	135	Not in Restricted Band
17234	35.51	V	--	--	Avg	1.36	135	Not in Restricted Band
19696		V	74	-74	Peak			No Emissions
19696		V	54	-54	Avg			Detected
22158		V	74	-74	Peak			No Emissions
22158		V	54	-54	Avg			Detected
24620		V	--	--	Peak			No Emissions
24620		V	--	--	Avg			Detected

FCC 15.247

Intel Corporation — Date: 3/08/05

Intel Mini PCI Type 3A 802.11BG Wireless LAN Adapter — Lab: B

Model: WM3A2200BG — Tested By: Benigno Chavez

Configuration: Dell Latitude Laptop D510 Agency Series Number: PP17L -- Main Port

With Phycomp Antenna

Channel 11 - 802.11 b Mode Gain : 29.0 Peak Power: 17.25 dBm Avg. Power: 14.85 dBm

Transmit Mode

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
4924	37.58	H	74	-36.42	Peak	2.46	315	
4924	25.26	H	54	-28.74	Avg	2.46	315	
7386	40.29	H	74	-33.71	Peak	1.6	270	
7386	26.22	H	54	-27.78	Avg	1.6	270	
9848	53.82	H	--	--	Peak	2.67	225	Not in Restricted Band
9848	50.16	H	--	--	Avg	2.67	225	Not in Restricted Band
12310	45.77	H	74	-28.23	Peak	2.03	225	
12310	31.65	H	54	-22.35	Avg	2.03	225	
14772	49.43	H	--	--	Peak	1.79	180	Not in Restricted Band
14772	34.95	H	--	--	Avg	1.79	180	Not in Restricted Band
17234	49.72	H	--	--	Peak	1.61	180	Not in Restricted Band
17234	35.86	H	--	--	Avg	1.61	180	Not in Restricted Band
19696		H	74	-74	Peak			No Emissions
19696		H	54	-54	Avg			Detected
22158		H	74	-74	Peak			No Emissions
22158		H	54	-54	Avg			Detected
24620		H	--	--	Peak			No Emissions
24620		H	--	--	Avg			Detected

FCC 15.247

Intel Corporation — Date: 3/08/05

Intel Mini PCI Type 3A 802.11BG Wireless LAN Adapter — Lab: B

Model: WM3A2200BG — Tested By: Benigno Chavez

Configuration: Dell Latitude Laptop D510 Agency Series Number: PP17L -- Main Port

With Hitachi Antenna

Channel 1 - 802.11 g Mode Gain : 22.5 Peak Power: 16.70 dBm Avg. Power: 10.21 dBm

Transmit Mode

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
4824	37.07	V	74	-36.93	Peak	1.88	225	
4824	22.52	V	54	-31.48	Avg	1.88	225	
7236	42.17	V	74	-31.83	Peak	1.88	180	
7236	27.42	V	54	-26.58	Avg	1.88	180	
9648	46.25	V	--	--	Peak	2.05	225	Not in Restricted Band
9648	32.55	V	--	--	Avg	2.05	225	Not in Restricted Band
12060	45.84	V	74	-28.16	Peak	2.2	225	
12060	32.36	V	54	-21.64	Avg	2.2	225	
14472	47.53	V	74	-26.47	Peak	2.01	180	
14472	33.68	V	54	-20.32	Avg	2.01	180	
16884	46.8	V	--	--	Peak	1.89	135	Not in Restricted Band
16884	33.64	V	--	--	Avg	1.89	135	Not in Restricted Band
19296		V	74	-74	Peak			No Emissions
19296		V	54	-54	Avg			Detected
21708		V	--	--	Peak			No Emissions
21708		V	--	--	Avg			Detected
24120		V	--	--	Peak			No Emissions
24120		V	--	--	Avg			Detected

FCC 15.247
Intel Corporation Date: 3/08/05
Intel Mini PCI Type 3A 802.11BG Wireless LAN Adapter Lab: B
Model: WM3A2200BG Tested By: Benigno Chavez
Configuration: Dell Latitude Laptop D510 Agency Series Number: PP17L -- Main Port
With Hitachi Antenna
Channel 1 - 802.11 g Mode Gain : 22.5 Peak Power: 16.70 dBm Avg. Power: 10.21 dBm
Transmit Mode

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
4824	37.04	H	74	-36.96	Peak	2.26	90	
4824	22.98	H	54	-31.02	Avg	2.26	90	
7236	41.65	H	74	-32.35	Peak	2.03	180	
7236	41.65	H	54	-12.35	Avg	2.03	180	
9648	47.29	H	--	--	Peak	2.4	225	Not in Restricted Band
9648	32.85	H	--	--	Avg	2.4	225	Not in Restricted Band
12060	46.23	H	74	-27.77	Peak	1.95	225	
12060	32.53	H	54	-21.47	Avg	1.95	225	
14472	48.02	H	74	-25.98	Peak	1.77	180	
14472	34.19	H	54	-19.81	Avg	1.77	180	
16884	48.7	H	--	--	Peak	2.28	135	Not in Restricted Band
16884	35.15	H	--	--	Avg	2.28	135	Not in Restricted Band
19296		H	74	-74	Peak			No Emissions
19296		H	54	-54	Avg			Detected
21708		H	--	--	Peak			No Emissions
21708		H	--	--	Avg			Detected
24120		H	--	--	Peak			No Emissions
24120		H	--	--	Avg			Detected

FCC 15.247

Intel Corporation — Date: 3/08/05

Intel Mini PCI Type 3A 802.11BG Wireless LAN Adapter — Lab: B

Model: WM3A2200BG — Tested By: Benigno Chavez

Configuration: Dell Latitude Laptop D510 Agency Series Number: PP17L -- Main Port

With Hitachi Antenna

Channel 6 - 802.11 g Mode Gain : 22.5 Peak Power: 16.39 dBm Avg. Power: 9.87 dBm

Transmit Mode

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
4874	37.08	V	74	-36.92	Peak	1.98	180	
4874	23.01	V	54	-30.99	Avg	1.98	180	
7311	40.77	V	74	-33.23	Peak	1.85	135	
7311	26.97	V	54	-27.03	Avg	1.85	135	
9748	45.89	V	--	--	Peak	2.04	225	Not in Restricted Band
9748	31.57	V	--	--	Avg	2.04	225	Not in Restricted Band
12185	45.35	V	74	-28.65	Peak	1.91	180	
12185	31.94	V	54	-22.06	Avg	1.91	180	
14622	45.83	V	--	--	Peak	1.74	180	Not in Restricted Band
14622	32.24	V	--	--	Avg	1.74	180	Not in Restricted Band
17059	45.31	V	--	--	Peak	1.32	225	Not in Restricted Band
17059	31.69	V	--	--	Avg	1.32	225	Not in Restricted Band
19496		V	74	-74	Peak			No Emissions
19496		V	54	-54	Avg			Detected
21933		V	--	--	Peak			No Emissions
21933		V	--	--	Avg			Detected
22001		V	74	-74	Peak			No Emissions
22001		V	54	-54	Avg			Detected
24370		V	--	--	Peak			No Emissions
24370		V	--	--	Avg			Detected

FCC 15.247
Intel Corporation Date: 3/08/05
Intel Mini PCI Type 3A 802.11BG Wireless LAN Adapter Lab: B
Model: WM3A2200BG Tested By: Benigno Chavez
Configuration: Dell Latitude Laptop D510 Agency Series Number: PP17L -- Main Port
With Hitachi Antenna
Channel 6 - 802.11 g Mode Gain : 22.5 Peak Power: 16.39 dBm Avg. Power: 9.87 dBm
Transmit Mode

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
4874	36.71	H	74	-37.29	Peak	2.06	180	
4874	22.86	H	54	-31.14	Avg	2.06	180	
7311	40.69	H	74	-33.31	Peak	2.03	225	
7311	26.99	H	54	-27.01	Avg	2.03	225	
9748	45.96	H	--	--	Peak	2.15	135	Not in Restricted Band
9748	32.03	H	--	--	Avg	2.15	135	Not in Restricted Band
12185	46.46	H	74	-27.54	Peak	2.53	180	
12185	32.17	H	54	-21.83	Avg	2.53	180	
14622	47.67	H	--	--	Peak	1.8	135	Not in Restricted Band
14622	33.55	H	--	--	Avg	1.8	135	Not in Restricted Band
17059	50.03	H	--	--	Peak	2.11	225	Not in Restricted Band
17059	36.15	H	--	--	Avg	2.11	225	Not in Restricted Band
19496		H	74	-74	Peak			No Emissions
19496		H	54	-54	Avg			Detected
21933		H	--	--	Peak			No Emissions
21933		H	--	--	Avg			Detected
22001		H	74	-74	Peak			No Emissions
22001		H	54	-54	Avg			Detected
24370		H	--	--	Peak			No Emissions
24370		H	--	--	Avg			Detected

FCC 15.247

Intel Corporation — Date: 3/08/05

Intel Mini PCI Type 3A 802.11BG Wireless LAN Adapter — Lab: B

Model: WM3A2200BG — Tested By: Benigno Chavez

Configuration: Dell Latitude Laptop D510 Agency Series Number: PP17L -- Main Port

With Hitachi Antenna

Channel 11 - 802.11 g Mode Gain : 22.5 Peak Power: 16.14 dBm Avg. Power: 9.59 dBm

Transmit Mode

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
4924	36.43	V	74	-37.57	Peak	1.86	180	
4924	23.18	V	54	-30.82	Avg	1.86	180	
7386	40.44	V	74	-33.56	Peak	1.95	135	
7386	26.2	V	54	-27.8	Avg	1.95	135	
9848	45.45	V	--	--	Peak	1.5	225	Not in Restricted Band
9848	34.69	V	--	--	Avg	1.5	225	Not in Restricted Band
12310	45.18	V	74	-28.82	Peak	1.34	180	
12310	31.68	V	54	-22.32	Avg	1.34	180	
14772	48.33	V	--	--	Peak	1.32	180	Not in Restricted Band
14772	34.34	V	--	--	Avg	1.32	180	Not in Restricted Band
17234	47.02	V	--	--	Peak	1.84	135	Not in Restricted Band
17234	33.25	V	--	--	Avg	1.84	135	Not in Restricted Band
19696		V	74	-74	Peak			No Emissions
19696		V	54	-54	Avg			Detected
22158		V	74	-74	Peak			No Emissions
22158		V	54	-54	Avg			Detected
24620		V	--	--	Peak			No Emissions
24620		V	--	--	Avg			Detected

FCC 15.247

Intel Corporation — Date: 3/08/05

Intel Mini PCI Type 3A 802.11BG Wireless LAN Adapter — Lab: B

Model: WM3A2200BG — Tested By: Benigno Chavez

Configuration: Dell Latitude Laptop D510 Agency Series Number: PP17L -- Main Port

With Hitachi Antenna

Channel 11 - 802.11 g Mode Gain : 22.5 Peak Power: 16.14 dBm Avg. Power: 9.59 dBm

Transmit Mode

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
4924	36.51	H	74	-37.49	Peak	2.13	225	
4924	23.21	H	54	-30.79	Avg	2.13	225	
7386	41.06	H	74	-32.94	Peak	2.23	180	
7386	26.6	H	54	-27.4	Avg	2.23	180	
9848	46.39	H	--	--	Peak	2.84	225	Not in Restricted Band
9848	33.93	H	--	--	Avg	2.84	225	Not in Restricted Band
12310	45.35	H	74	-28.65	Peak	1.89	135	
12310	31.69	H	54	-22.31	Avg	1.89	135	
14772	48.17	H	--	--	Peak	1.9	225	Not in Restricted Band
14772	34.91	H	--	--	Avg	1.9	225	Not in Restricted Band
17234	49.76	H	--	--	Peak	2.03	180	Not in Restricted Band
17234	35.57	H	--	--	Avg	2.03	180	Not in Restricted Band
19696		H	74	-74	Peak			No Emissions
19696		H	54	-54	Avg			Detected
22158		H	74	-74	Peak			No Emissions
22158		H	54	-54	Avg			Detected
24620		H	--	--	Peak			No Emissions
24620		H	--	--	Avg			Detected

FCC 15.247

Intel Corporation — Date: 3/09/05

Intel Mini PCI Type 3A 802.11BG Wireless LAN Adapter — Lab: B

Model: WM3A2200BG — Tested By: Kyle Fujimoto

Configuration: Dell Latitude Laptop D510 Agency Series Number: PP17L -- Main Port

With Hitachi Antenna

Channel 1 - 802.11 b Mode Gain : 28.0 Peak Power: 17.11 dBm Avg. Power: 14.75 dBm

Channel 6 - 802.11 b Mode Gain : 28.5 Peak Power: 17.08 dBm Avg. Power: 14.62 dBm

Channel 11 - 802.11 b Mode Gain : 29.0 Peak Power: 17.25 dBm Avg. Power: 14.85 dBm

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
2312	51.99	V	74	-22.01	Peak	1.88	225	103 MHz Below the Fundamental
2312	46.76	V	54	-7.24	Avg	1.88	225	of Channel 1
2512	45.95	V	74	-28.05	Peak	1.96	225	103 MHz Above the Fundamental
2512	36.56	V	54	-17.44	Avg	1.96	225	of Channel 1
2312	54.97	H	74	-19.03	Peak	1.94	225	103 MHz Below the Fundamental
2312	50.17	H	54	-3.83	Avg	1.94	225	of Channel 1
2512	49.02	H	74	-24.98	Peak	2.42	180	103 MHz Above the Fundamental
2512	41.91	H	54	-12.09	Avg	2.42	180	of Channel 1
2336	53.51	V	74	-20.49	Peak	2.51	225	103 MHz Below the Fundamental
2336	47.39	V	54	-6.61	Avg	2.51	225	of Channel 6
2538.7	46.46	V	74	-27.54	Peak	2.2	90	103 MHz Above the Fundamental
2538.7	39.9	V	54	-14.1	Avg	2.2	90	of Channel 6
2336	56.49	H	74	-17.51	Peak	2.31	225	103 MHz Below the Fundamental
2336	50.3	H	54	-3.7	Avg	2.31	225	of Channel 6
2538.7	48.5	H	74	-25.5	Peak	2.37	225	103 MHz Above the Fundamental
2538.7	41.52	H	54	-12.48	Avg	2.37	225	of Channel 6
2360	50.56	V	74	-23.44	Peak	3.24	270	103 MHz Below the Fundamental
2360	43.56	V	54	-10.44	Avg	3.24	270	of Channel 11
2565	45.59	V	74	-28.41	Peak	2.23	90	103 MHz Above the Fundamental
2565	35.9	V	54	-18.1	Avg	2.23	90	of Channel 11
2360	52.38	H	74	-21.62	Peak	3.12	225	103 MHz Below the Fundamental
2360	45.95	H	54	-8.05	Avg	3.12	225	of Channel 11
2564	48.28	H	74	-25.72	Peak	2.35	225	103 MHz Above the Fundamental
2564	39.35	H	54	-14.65	Peak	2.35	225	of Channel 11

FCC 15.247

Intel Corporation — Date: 3/09/05

Intel Mini PCI Type 3A 802.11BG Wireless LAN Adapter — Lab: B

Model: WM3A2200BG — Tested By: Kyle Fujimoto

Configuration: Dell Latitude Laptop D510 Agency Series Number: PP17L -- Main Port

With Hitachi Antenna

Channel 1 - 802.11 g Mode Gain : 22.5 Peak Power: 16.70 dBm Avg. Power: 10.21 dBm

Channel 6 - 802.11 g Mode Gain : 22.5 Peak Power: 16.39 dBm Avg. Power: 9.87 dBm

Channel 11 - 802.11 g Mode Gain : 22.5 Peak Power: 16.14 dBm Avg. Power: 9.59 dBm

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
2312	54.89	V	74	-19.11	Peak	2.83	135	103 MHz Below the Fundamental
2312	50.16	V	54	-3.84	Avg	2.83	135	of Channel 1
2512	52.33	V	74	-21.67	Peak	2.45	135	103 MHz Above the Fundamental
2512	45.29	V	54	-8.71	Avg	2.45	135	of Channel 1
2312	65.92	H	83.5	-17.58	Peak	1.25	315	103 MHz Below the Fundamental
2312	58.12	H	63.5	-5.38	Avg	1.25	315	at 1 Meter and Extrapolated - Ch. 1
2512	62.51	H	83.5	-20.99	Peak	1.18	315	103 MHz Above the Fundamental
2512	55.96	H	63.5	-7.54	Avg	1.18	315	at 1 Meter and Extrapolated - Ch. 1
2336	55.58	V	74	-18.42	Peak	3.21	270	103 MHz Below the Fundamental
2336	50.92	V	54	-3.08	Avg	3.21	270	of Channel 6
2538.7	50.9	V	74	-23.1	Peak	2.41	270	103 MHz Above the Fundamental
2538.7	44.96	V	54	-9.04	Avg	2.41	270	of Channel 6
2336	65.2	H	83.5	-18.3	Peak	1.26	0	103 MHz Below the Fundamental
2336	57.85	H	63.5	-5.65	Avg	1.26	0	at 1 Meter and Extrapolated - Ch. 6
2538.7	60.98	H	83.5	-22.52	Peak	1.54	315	103 MHz Above the Fundamental
2538.7	55.23	H	63.5	-8.27	Avg	1.54	315	at 1 Meter and Extrapolated - Ch. 6
2360	54.64	V	74	-19.36	Peak	2.67	135	103 MHz Below the Fundamental
2360	49.51	V	54	-4.49	Avg	2.67	135	of Channel 11
2565	49.44	V	74	-24.56	Peak	2.38	270	103 MHz Above the Fundamental
2565	41.12	V	54	-12.88	Avg	2.38	270	of Channel 11
2360	62.97	H	83.5	-20.53	Peak	1.21	225	103 MHz Below the Fundamental
2360	55.94	H	63.5	-7.56	Avg	1.21	225	at 1 Meter and Extrapolated - Ch. 11
2564	60.7	H	83.5	-22.8	Peak	1.19	315	103 MHz Above the Fundamental
2564	52.96	H	63.5	-10.54	Peak	1.19	315	at 1 Meter and Extrapolated - Ch. 11

Note: The readings measured at 1 meter were measured without a preamp to avoid saturating the preamplifier and EMI Receiver because the signals were close to the fundamental frequency.

FCC 15.247
Intel Corporation Date: 3/08/05
Intel Mini PCI Type 3A 802.11BG Wireless LAN Adapter Lab: B
Model: WM3A2200BG Tested By: Benigno Chavez
Configuration: Dell Latitude Laptop D510 Agency Series Number: PP17L -- Main Port
With Hitachi Antenna
Channel 1 - 802.11 b Mode Gain : 28.0 Peak Power: 17.11 dBm Avg. Power: 14.75 dBm
Transmit Mode

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
3216	42.4	V	74	-31.6	Peak	1.08	270	Fundamental of LO for
3216	37.93	V	54	-16.07	Avg	1.08	270	Channel 1
6432	38.82	V	--	--	Peak	1.47	270	2nd Harmonic of LO for
6432	26.02	V	--	--	Avg	1.47	270	Channel 1
9648	51.97	V	--	--	Peak	2.07	180	3rd Harmonic of LO =
9648	46.43	V	--	--	Avg	2.07	180	4th Harmonic of Tx for Channel 1
12864	45.93	V	--	--	Peak	2.37	135	4th Harmonic of LO for
12864	32.24	V	--	--	Avg	2.37	135	Channel 1
3216	41.15	H	74	-32.85	Peak	1.59	135	Fundamental of LO for
3216	36.5	H	54	-17.5	Avg	1.59	135	Channel 1
6432	38.19	H	--	--	Peak	1.19	180	2nd Harmonic of LO for
6432	24.77	H	--	--	Avg	1.19	180	Channel 1
9648	52.99	H	--	--	Peak	1.56	315	3rd Harmonic of LO =
9648	48.05	H	--	--	Avg	1.56	315	4th Harmonic of Tx for Channel 1
12864	46.55	H	--	--	Peak	1.86	135	4th Harmonic of LO for
12864	32.19	H	--	--	Avg	1.86	135	Channel 1
								Only the Fundamental of the LO
								is in the Restricted Band

FCC 15.247

Intel Corporation — Date: 3/08/05

Intel Mini PCI Type 3A 802.11BG Wireless LAN Adapter — Lab: B

Model: WM3A2200BG — Tested By: Benigno Chavez

Configuration: Dell Latitude Laptop D510 Agency Series Number: PP17L -- Main Port

With Hitachi Antenna

Channel 6 - 802.11 b Mode Gain : 28.5 Peak Power: 17.08 dBm Avg. Power: 14.62 dBm

Transmit Mode

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
3249.33	42.15	V	74	-31.85	Peak	1.79	270	Fundamental of LO for
3249.33	38.02	V	54	-15.98	Avg	1.79	270	Channel 6
6498.67	38.76	V	--	--	Peak	1.8	270	2nd Harmonic of LO for
6498.67	26.91	V	--	--	Avg	1.8	270	Channel 6
9748	54.74	V	--	--	Peak	2.27	180	3rd Harmonic of LO =
9748	50.83	V	--	--	Avg	2.27	180	4th Harmonic of Tx for Channel 6
12997.3	44.79	V	--	--	Peak	1.91	225	4th Harmonic of LO for
12997.3	31.54	V	--	--	Avg	1.91	225	Channel 6
3249.33	38.63	H	74	-35.37	Peak	1.69	225	Fundamental of LO for
3249.33	33.13	H	54	-20.87	Avg	1.69	225	Channel 6
6498.67	39.62	H	--	--	Peak	3.04	180	2nd Harmonic of LO for
6498.67	25.61	H	--	--	Avg	3.04	180	Channel 6
9748	54.28	H	--	--	Peak	1.99	225	3rd Harmonic of LO =
9748	50.06	H	--	--	Avg	1.99	225	4th Harmonic of Tx for Channel 6
12997.3	45.83	H	--	--	Peak	2.23	225	4th Harmonic of LO for
12997.3	31.48	H	--	--	Avg	2.23	225	of Channel 6
								Only the Fundamental of the LO
								is in the Restricted Band

FCC 15.247
Intel Corporation Date: 3/08/05
Intel Mini PCI Type 3A 802.11BG Wireless LAN Adapter Lab: B
Model: WM3A2200BG Tested By: Benigno Chavez
Configuration: Dell Latitude Laptop D510 Agency Series Number: PP17L -- Main Port
With Hitachi Antenna
Channel 11 - 802.11 b Mode Gain : 29.0 Peak Power: 17.25 dBm Avg. Power: 14.85 dBm
Transmit Mode

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
3282.67	42.47	V	74	-31.53	Peak	1.85	270	Fundamental of LO for
3282.67	39.14	V	54	-14.86	Avg	1.85	270	Channel 11
6565.33	39.24	V	--	--	Peak	1.96	270	2nd Harmonic of LO for
6565.33	26.55	V	--	--	Avg	1.96	270	Channel 11
9848	52.79	V	--	--	Peak	1.47	225	3rd Harmonic of LO =
9848	48.48	V	--	--	Avg	1.47	225	4th Harmonic of Tx for Channel 11
13130.7	43.24	V	--	--	Peak	1.58	180	4th Harmonic of LO for
13130.7	29.81	V	--	--	Avg	1.58	180	of Channel 11
3282.67	40.22	H	74	-33.78	Peak	1.49	180	Fundamental of LO for
3282.67	34.59	H	54	-19.41	Avg	1.49	180	Channel 11
6565.33	38.86	H	--	--	Peak	3.03	225	2nd Harmonic of LO for
6565.33	25.47	H	--	--	Avg	3.03	225	Channel 11
9848	53.82	H	--	--	Peak	2.67	225	3rd Harmonic of LO =
9848	50.16	H	--	--	Avg	2.67	225	4th Harmonic of Tx for Channel 11
13130.7	44.17	H	--	--	Peak	2.31	135	4th Harmonic of LO for
13130.7	30.26	H	--	--	Avg	2.31	135	of Channel 11
								Only the Fundamental of the LO
								is in the Restricted Band

FCC 15.247

Intel Corporation — Date: 3/08/05

Intel Mini PCI Type 3A 802.11BG Wireless LAN Adapter — Lab: B

Model: WM3A2200BG — Tested By: Benigno Chavez

Configuration: Dell Latitude Laptop D510 Agency Series Number: PP17L -- Main Port

With Hitachi Antenna

Channel 1 - 802.11 g Mode Gain : 22.5 Peak Power: 16.70 dBm Avg. Power: 10.21 dBm

Transmit Mode

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
3216	41.02	V	74	-32.98	Peak	2.05	225	Fundamental of LO for
3216	35.78	V	54	-18.22	Avg	2.05	225	Channel 1
6432	39.04	V	--	--	Peak	2.89	270	2nd Harmonic of LO for
6432	26.44	V	--	--	Avg	2.89	270	Channel 1
9648	46.25	V	--	--	Peak	2.05	225	3rd Harmonic of LO =
9648	32.55	V	--	--	Avg	2.05	225	4th Harmonic of Tx for Channel 1
12864	46.04	V	--	--	Peak	2.75	315	4th Harmonic of LO for
12864	32.36	V	--	--	Avg	2.75	315	Channel 1
3216	40.83	H	74	-33.17	Peak	1.56	225	Fundamental of LO for
3216	35.8	H	54	-18.2	Avg	1.56	225	Channel 1
6432	38.93	H	--	--	Peak	3.06	180	2nd Harmonic of LO for
6432	25.3	H	--	--	Avg	3.06	180	Channel 1
9648	47.29	H	--	--	Peak	2.4	225	3rd Harmonic of LO =
9648	32.85	H	--	--	Avg	2.4	225	4th Harmonic of Tx for Channel 1
12864	45.83	H	--	--	Peak	1.44	315	4th Harmonic of LO for
12864	32.22	H	--	--	Avg	1.44	315	Channel 1
								Only the Fundamental of the LO
								is in the Restricted Band

FCC 15.247

Intel Corporation — Date: 3/08/05

Intel Mini PCI Type 3A 802.11BG Wireless LAN Adapter — Lab: B

Model: WM3A2200BG — Tested By: Benigno Chavez

Configuration: Dell Latitude Laptop D510 Agency Series Number: PP17L -- Main Port

With Hitachi Antenna

Channel 6 - 802.11 g Mode Gain : 22.5 Peak Power: 16.39 dBm Avg. Power: 9.87 dBm

Transmit Mode

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
3249.33	40.06	V	74	-33.94	Peak	3.31	45	Fundamental of LO for
3249.33	35.68	V	54	-18.32	Avg	3.31	45	Channel 6
6498.67	39.2	V	--	--	Peak	1.88	315	2nd Harmonic of LO for
6498.67	26.35	V	--	--	Avg	1.88	315	Channel 6
9748	45.89	V	--	--	Peak	2.04	225	3rd Harmonic of LO =
9748	31.57	V	--	--	Avg	2.04	225	4th Harmonic of Tx for Channel 6
12997.3	44.79	V	--	--	Peak	2.27	135	4th Harmonic of LO for
12997.3	31.33	V	--	--	Avg	2.27	135	Channel 6
3249.33	40.03	H	74	-33.97	Peak	2.25	315	Fundamental of LO for
3249.33	34.47	H	54	-19.53	Avg	2.25	315	Channel 6
6498.67	38.51	H	--	--	Peak	2.06	225	2nd Harmonic of LO for
6498.67	24.86	H	--	--	Avg	2.06	225	Channel 6
9748	45.96	H	--	--	Peak	2.15	135	3rd Harmonic of LO =
9748	32.03	H	--	--	Avg	2.15	135	4th Harmonic of Tx for Channel 6
12997.3	44.69	H	--	--	Peak	2.35	270	4th Harmonic of LO for
12997.3	31.33	H	--	--	Avg	2.35	270	of Channel 6
								Only the Fundamental of the LO
								is in the Restricted Band

FCC 15.247
Intel Corporation Date: 3/08/05
Intel Mini PCI Type 3A 802.11BG Wireless LAN Adapter Lab: B
Model: WM3A2200BG Tested By: Benigno Chavez
Configuration: Dell Latitude Laptop D510 Agency Series Number: PP17L -- Main Port
With Hitachi Antenna
Channel 11 - 802.11 g Mode Gain : 22.5 Peak Power: 16.14 dBm Avg. Power: 9.59 dBm
Transmit Mode

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
3282.67	43.3	V	74	-30.7	Peak	1.84	270	Fundamental of LO for
3282.67	39.9	V	54	-14.1	Avg	1.84	270	Channel 11
6565.33	40.64	V	--	--	Peak	1.97	270	2nd Harmonic of LO for
6565.33	26.61	V	--	--	Avg	1.97	270	Channel 11
9848	45.45	V	--	--	Peak	1.5	225	3rd Harmonic of LO =
9848	34.69	V	--	--	Avg	1.5	225	4th Harmonic of Tx for Channel 11
13130.7	43.62	V	--	--	Peak	1.33	225	4th Harmonic of LO for
13130.7	29.99	V	--	--	Avg	1.33	225	of Channel 11
3282.67	39.15	H	74	-34.85	Peak	2.17	315	Fundamental of LO for
3282.67	32.99	H	54	-21.01	Avg	2.17	315	Channel 11
6565.33	38.95	H	--	--	Peak	1.79	270	2nd Harmonic of LO for
6565.33	25.46	H	--	--	Avg	1.79	270	Channel 11
9848	46.39	H	--	--	Peak	2.84	225	3rd Harmonic of LO =
9848	33.93	H	--	--	Avg	2.84	225	4th Harmonic of Tx for Channel 11
13130.7	43.5	H	--	--	Peak	1.29	180	4th Harmonic of LO for
13130.7	29.8	H	--	--	Avg	1.29	180	of Channel 11
								Only the Fundamental of the LO
								is in the Restricted Band

RSS-210
Intel Corporation
Intel Mini PCI Type 3A 802.11BG Wireless LAN Adapter
Model: WM3A2200BG
Date: 3/08/05
Lab: B
Tested By: Benigno Chavez
Configuration: Dell Latitude Laptop D510 Agency Series Number: PP17L -- Main Port
With Hitachi Antenna
Channel 6 - 802.11 b Mode
Receive Mode

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
3249.33	39.28	V	80	-40.72	Peak	1.93	225	Fundamental of LO for
3249.33	32.97	V	60	-27.03	Avg	1.93	225	Channel 6
6498.67	39.01	V	80	-40.99	Peak	2.78	315	2nd Harmonic of LO for
6498.67	26.11	V	60	-33.89	Avg	2.78	315	Channel 6
9748	46.52	V	80	-33.48	Peak	1.45	315	3rd Harmonic of LO for
9748	35.03	V	60	-24.97	Avg	1.45	315	Channel 6
3249.33	38.14	H	80	-41.86	Peak	1.84	315	Fundamental of LO for
3249.33	31.85	H	60	-28.15	Avg	1.84	315	Channel 6
6498.67	38.73	H	80	-41.27	Peak	2.73	315	2nd Harmonic of LO for
6498.67	24.97	H	60	-35.03	Avg	2.73	315	Channel 6
9748	46.13	H	80	-33.87	Peak	2.08	315	3rd Harmonic of LO for
9748	32.56	H	60	-27.44	Avg	2.08	315	Channel 6

RSS-210
Intel Corporation
Intel Mini PCI Type 3A 802.11BG Wireless LAN Adapter
Model: WM3A2200BG
Date: 3/08/05
Lab: B
Tested By: Benigno Chavez
Configuration: Dell Latitude Laptop D510 Agency Series Number: PP17L -- Main Port
With Hitachi Antenna
Channel 6 - 802.11 g Mode
Receive Mode

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
3249.33	39.28	V	80	-40.72	Peak	2.32	225	Fundamental of LO for
3249.33	34.13	V	60	-25.87	Avg	2.32	225	Channel 6
6498.67	38.75	V	80	-41.25	Peak	3.15	270	2nd Harmonic of LO for
6498.67	25.53	V	60	-34.47	Avg	3.15	270	Channel 6
9748	46.8	V	80	-33.2	Peak	2.61	315	3rd Harmonic of LO for
9748	35.39	V	60	-24.61	Avg	2.61	315	Channel 6
3249.33	38.98	H	80	-41.02	Peak	1.59	135	Fundamental of LO for
3249.33	32.4	H	60	-27.6	Avg	1.59	135	Channel 6
6498.67	38.58	H	80	-41.42	Peak	3.04	225	2nd Harmonic of LO for
6498.67	25.47	H	60	-34.53	Avg	3.04	225	Channel 6
9748	46.05	H	80	-33.95	Peak	2.89	315	3rd Harmonic of LO for
9748	33.39	H	60	-26.61	Avg	2.89	315	Channel 6

COMPATIBLE ELECTRONICS

Test Location : Compatible Electronics Page : 1/1
Customer : Intel Date : 3/09/2005
Manufacturer : Intel Time : 18:23:05
Eut name : Intel Mini PCI Type 3A 802.11bg Wir Lab : A
Model : WM3A2200BG Test Distance : 3.0 Meters
Serial # : N/A
Specification : FCC B
Distance correction factor (20 * log(test/spec) : 0.00
Test Mode : Configuration: Hitachi Antenna - Dell Laptop PP17L
Scan Range: 10 kHz to 1000 MHz (Vertical & Horizontal)
Mode of Operation (worst case): Transmit
Test Engineer: Benigno Chavez

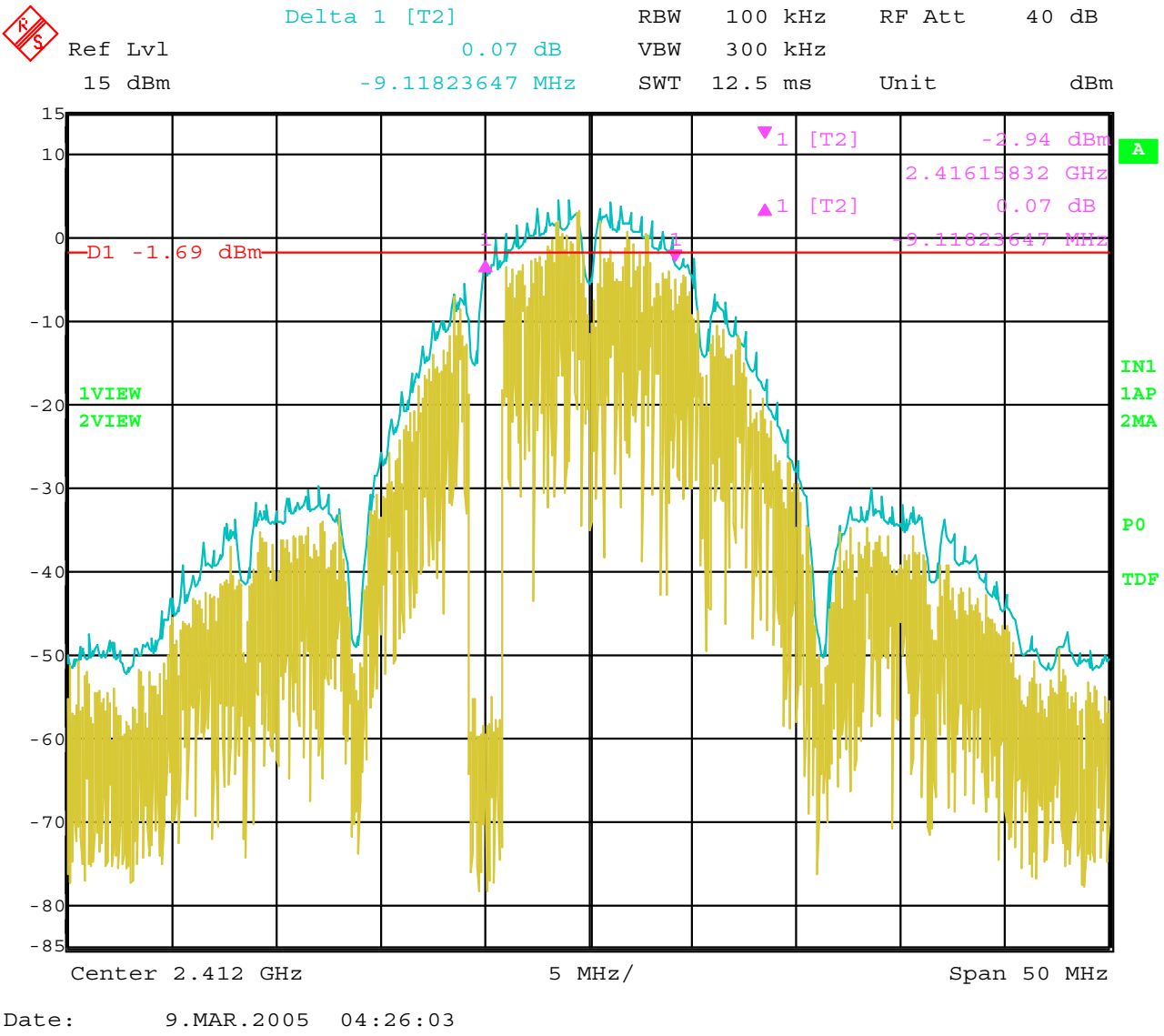
Pol	Freq	Rdng	Cable loss	Ant factor	Amp gain	Cor'd rdg = R	Limit = L	Delta R-L
	MHz	dBuV	dB	dB	dB	dBuV	dBuV/m	dB
1V	135.201	50.50	2.82	12.16	32.31	33.16	43.50	-10.34
2V	144.076	50.60	2.99	11.78	32.24	33.13	43.50	-10.37
3V	181.958	49.90	2.93	16.40	32.40	36.83	43.50	-6.67
4V	299.253	38.50	3.60	19.08	32.29	28.88	46.00	-17.12
5H	135.282	48.30	2.82	12.15	32.31	30.96	43.50	-12.54
6H	142.264	50.60	2.95	11.75	32.26	33.04	43.50	-10.46
7H	149.314	56.70	3.09	11.89	32.21	39.47	43.50	-4.03
8H	149.315Qp	52.20	3.09	11.89	32.21	34.97	43.50	-8.53
9H	151.454	57.40	3.09	12.09	32.21	40.37	43.50	-3.13
10H	151.455Qp	52.72	3.09	12.09	32.21	35.69	43.50	-7.81
11H	153.176	54.90	3.07	12.32	32.23	38.07	43.50	-5.43
12H	153.177Qp	50.35	3.07	12.32	32.23	33.52	43.50	-9.98
13H	178.880	53.60	2.92	16.29	32.40	40.41	43.50	-3.09
14H	178.881Qp	48.66	2.92	16.29	32.40	35.47	43.50	-8.03
15H	314.712	49.80	3.66	12.87	32.27	34.06	46.00	-11.94
16H	338.380	49.10	3.76	13.12	32.22	33.75	46.00	-12.25
17H	405.955	43.60	4.36	13.85	32.17	29.64	46.00	-16.36
18H	473.777	49.40	5.00	15.44	32.00	37.84	46.00	-8.16
19V	338.258	53.30	3.76	13.12	32.22	37.95	46.00	-8.05
20V	406.038	54.50	4.36	13.85	32.17	40.54	46.00	-5.46

FCC Class B
Intel Corporation Date: 3/09/05
Intel Mini PCI Type 3A 802.11BG Wireless LAN Adapter Lab: B
Model: WM3A2200BG Tested By: Kyle Fujimoto
Configuration: Dell Latitude Laptop D510 Agency Series Number: PP17L -- Main Port
With Hitachi Antenna
Digital Portion - 1 GHz to 25 GHz

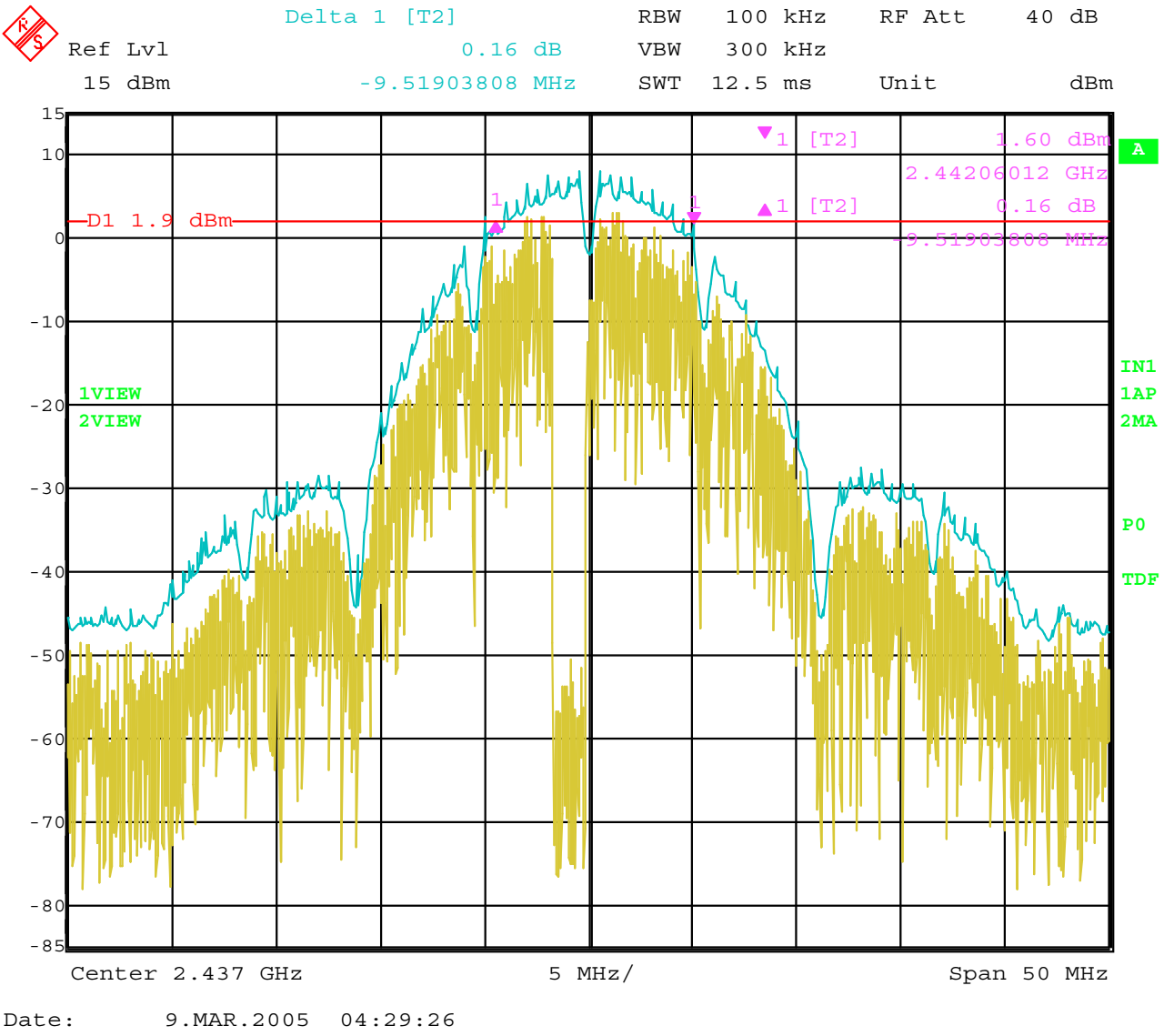
Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
1100	39.97	V	74	-34.03	Peak	1.46	315	
1100	35.71	V	54	-18.29	Avg	1.46	315	
2196.8	45.6	V	74	-28.4	Peak	1.85	315	
2196.8	37.85	V	54	-16.15	Avg	1.85	315	
2288.18	48.61	V	74	-25.39	Peak	1.81	225	
2288.18	41.51	V	54	-12.49	Avg	1.81	225	
1100	34.4	H	74	-39.6	Peak	2.41	225	
1100	26.16	H	54	-27.84	Avg	2.41	225	
1622.5	36.35	H	74	-37.65	Peak	2.42	180	
1622.5	22.56	H	54	-31.44	Avg	2.42	180	
2196.8	48.69	H	74	-25.31	Peak	2.46	315	
2196.8	40.14	H	54	-13.86	Avg	2.46	315	

-6 dB BANDWIDTH

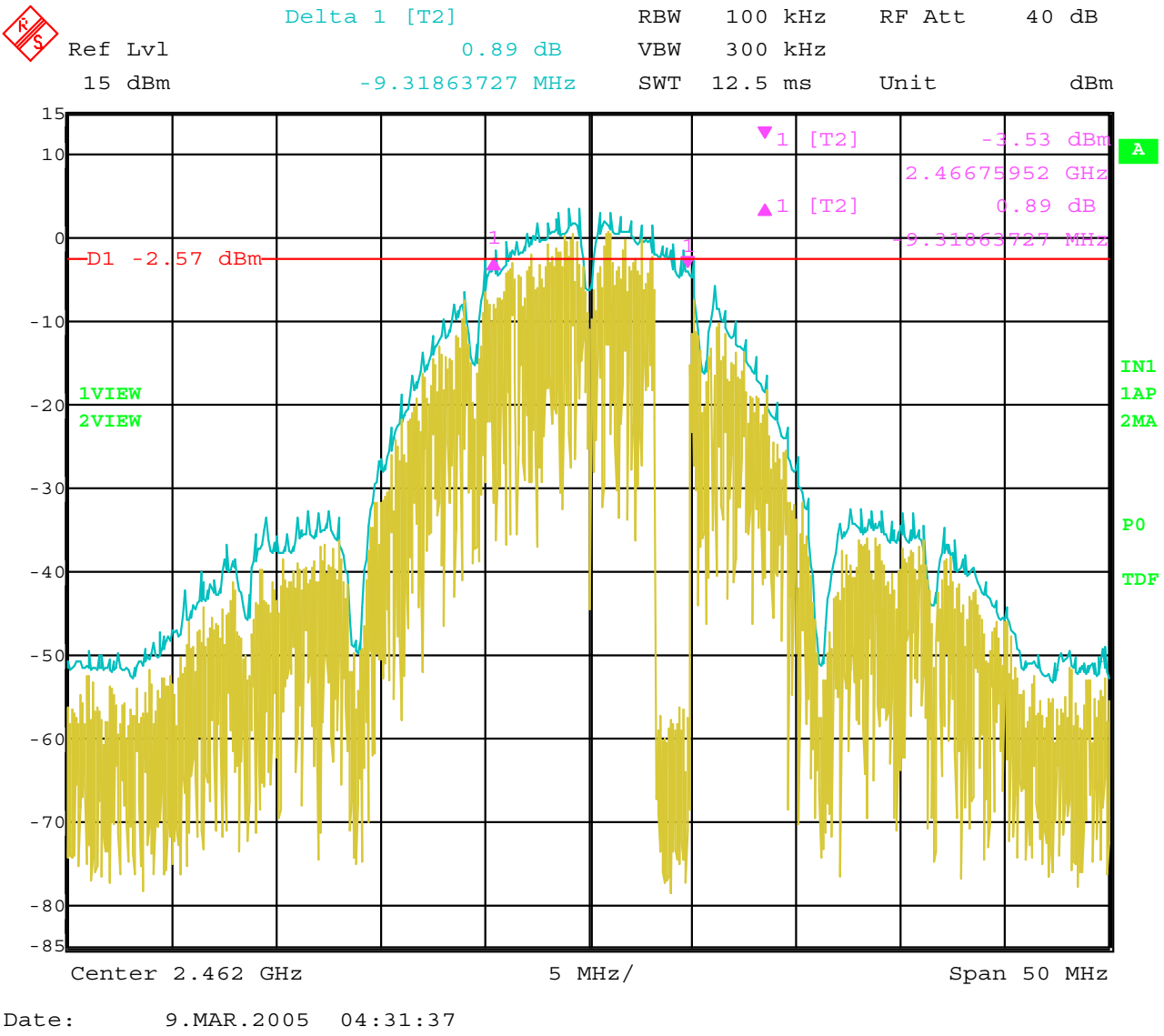
DATA SHEETS



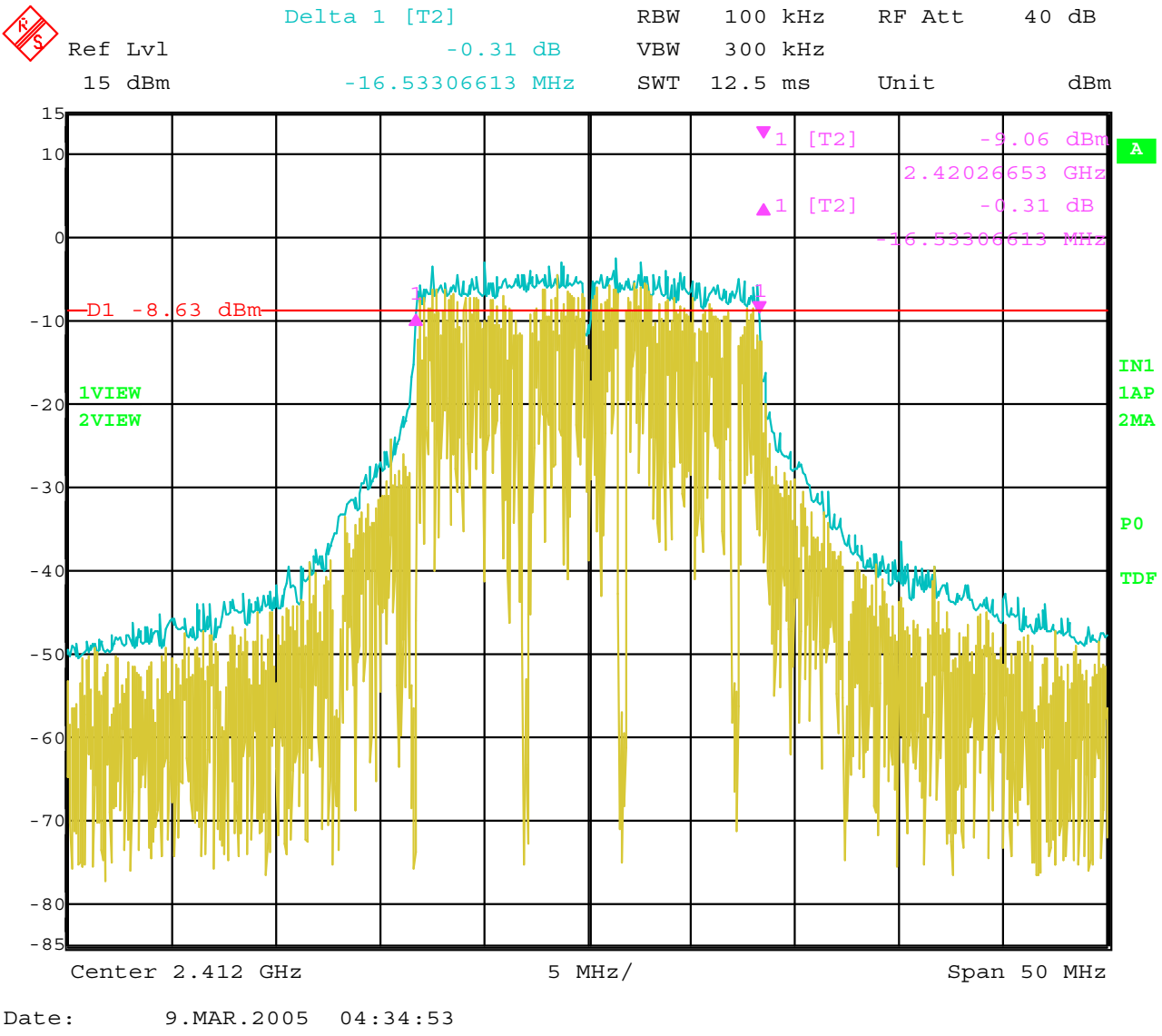
Bandwidth 6 dB – Channel 1 – 802.11 b Mode – Hitachi Antenna



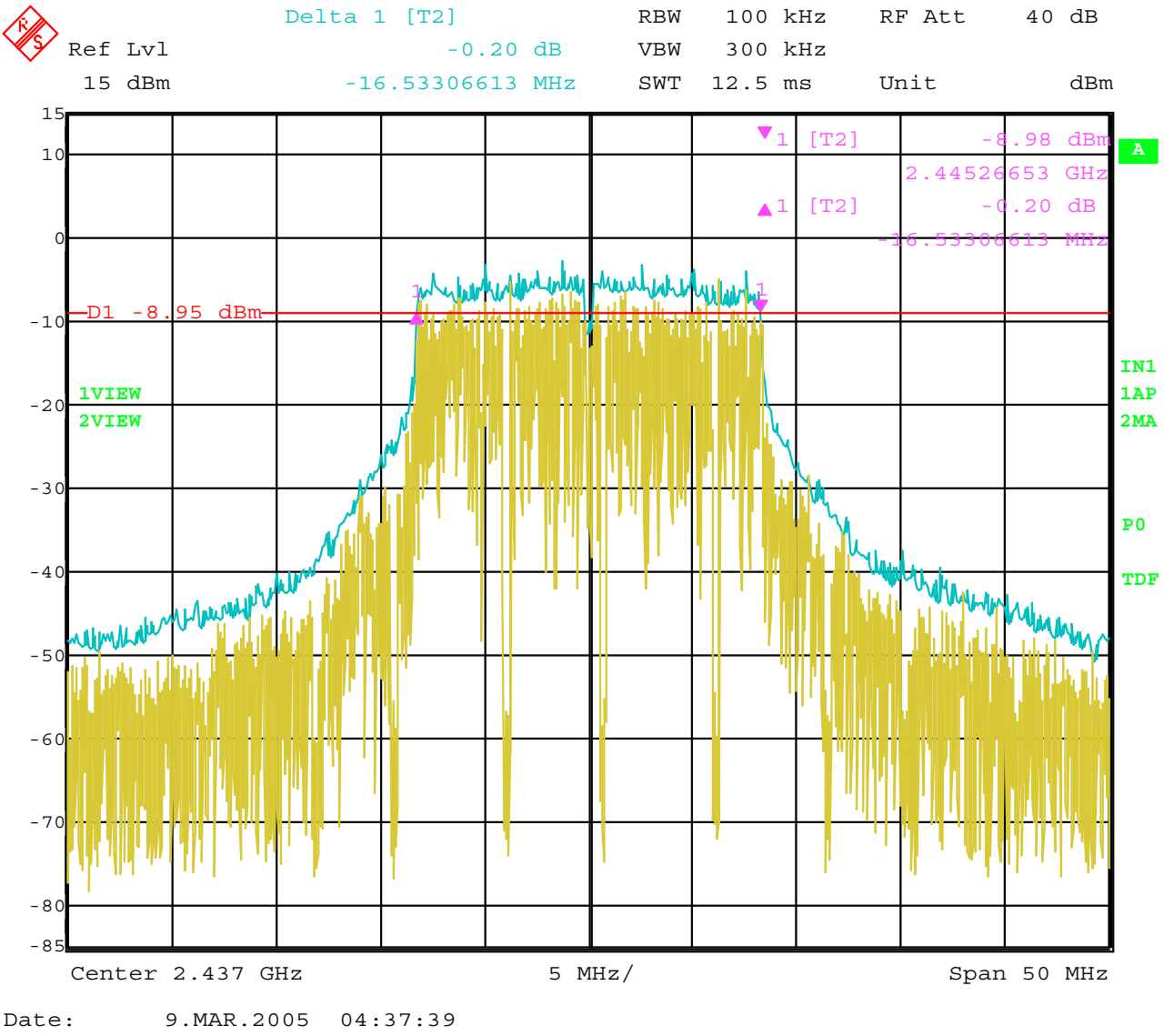
Bandwidth 6 dB – Channel 6 – 802.11 b Mode – Hitachi Antenna



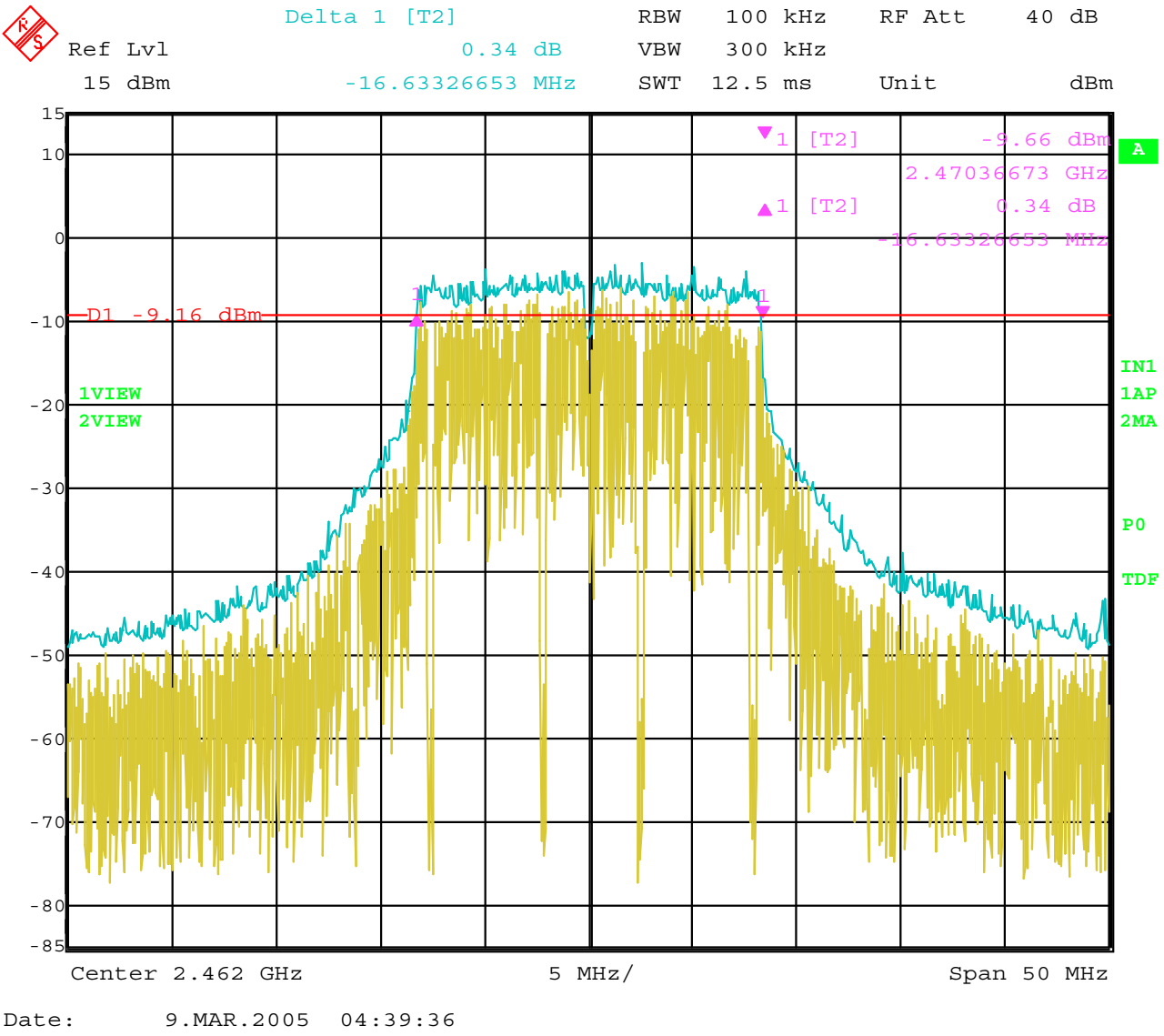
Bandwidth 6 dB – Channel 11 – 802.11 b Mode – Hitachi Antenna



Bandwidth 6 dB – Channel 1 – 802.11 g Mode – Hitachi Antenna



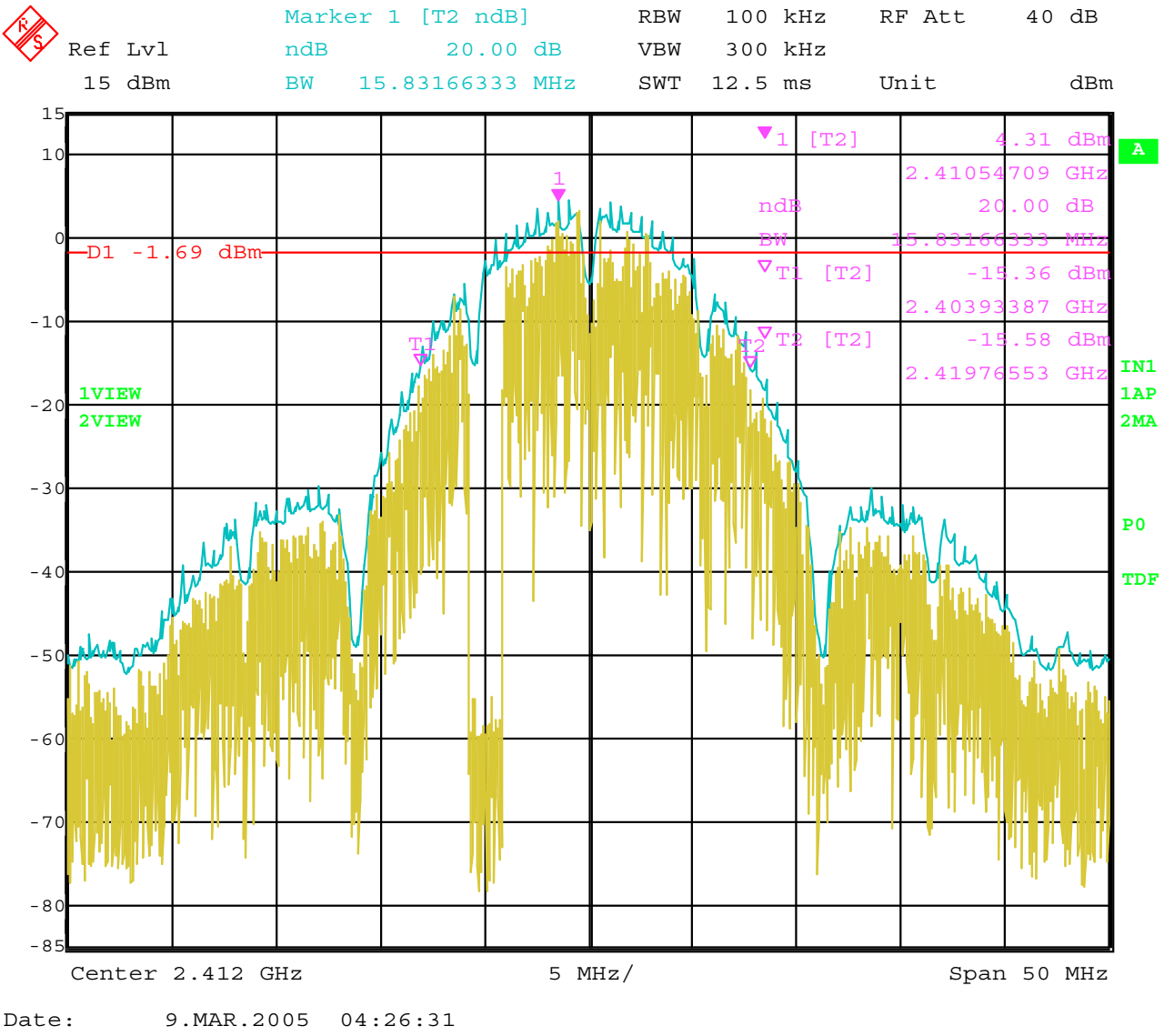
Bandwidth 6 dB – Channel 1 – 802.11 g Mode – Hitachi Antenna



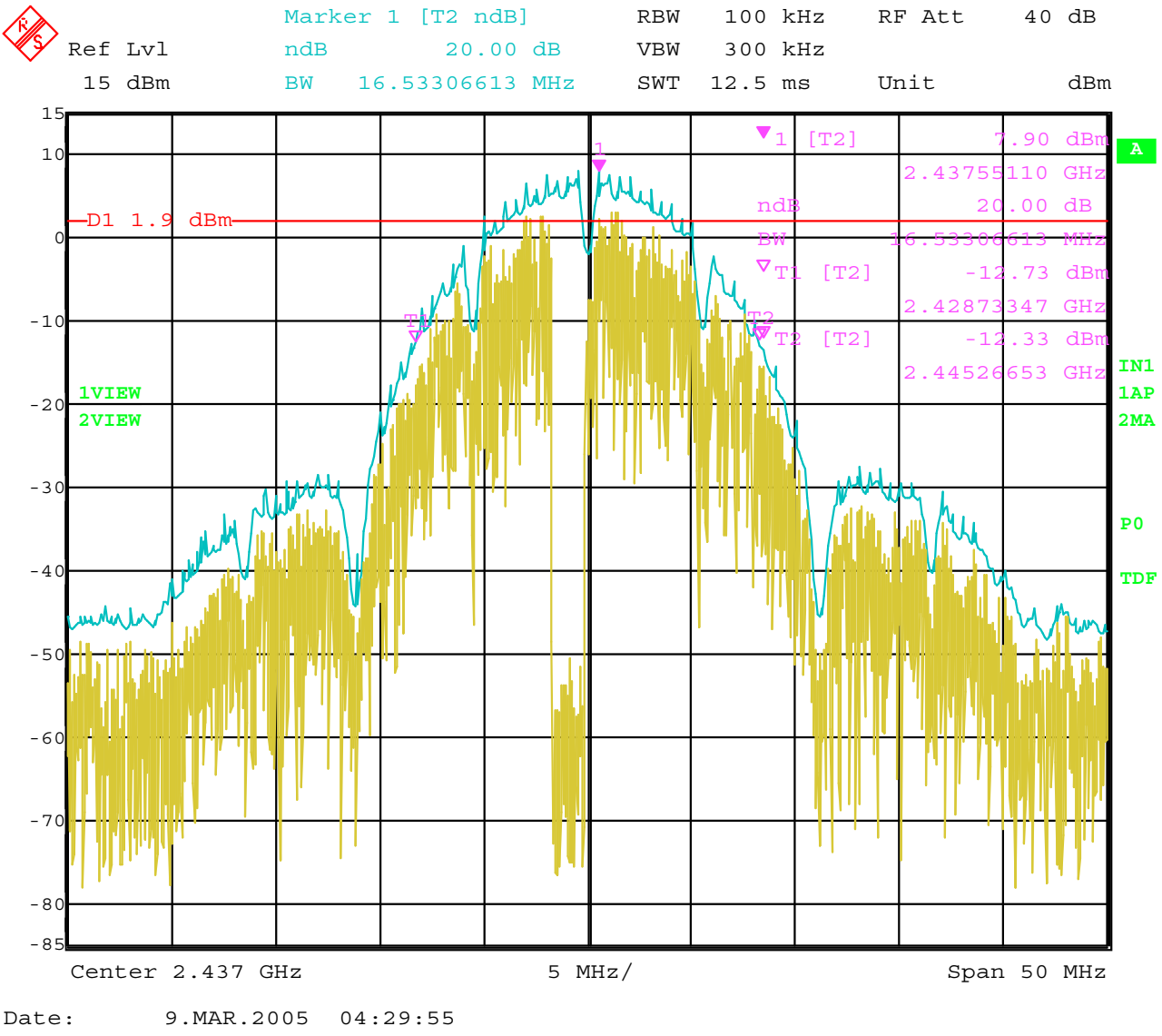
Bandwidth 6 dB – Channel 11 – 802.11 g Mode – Hitachi Antenna

-20 dB BANDWIDTH

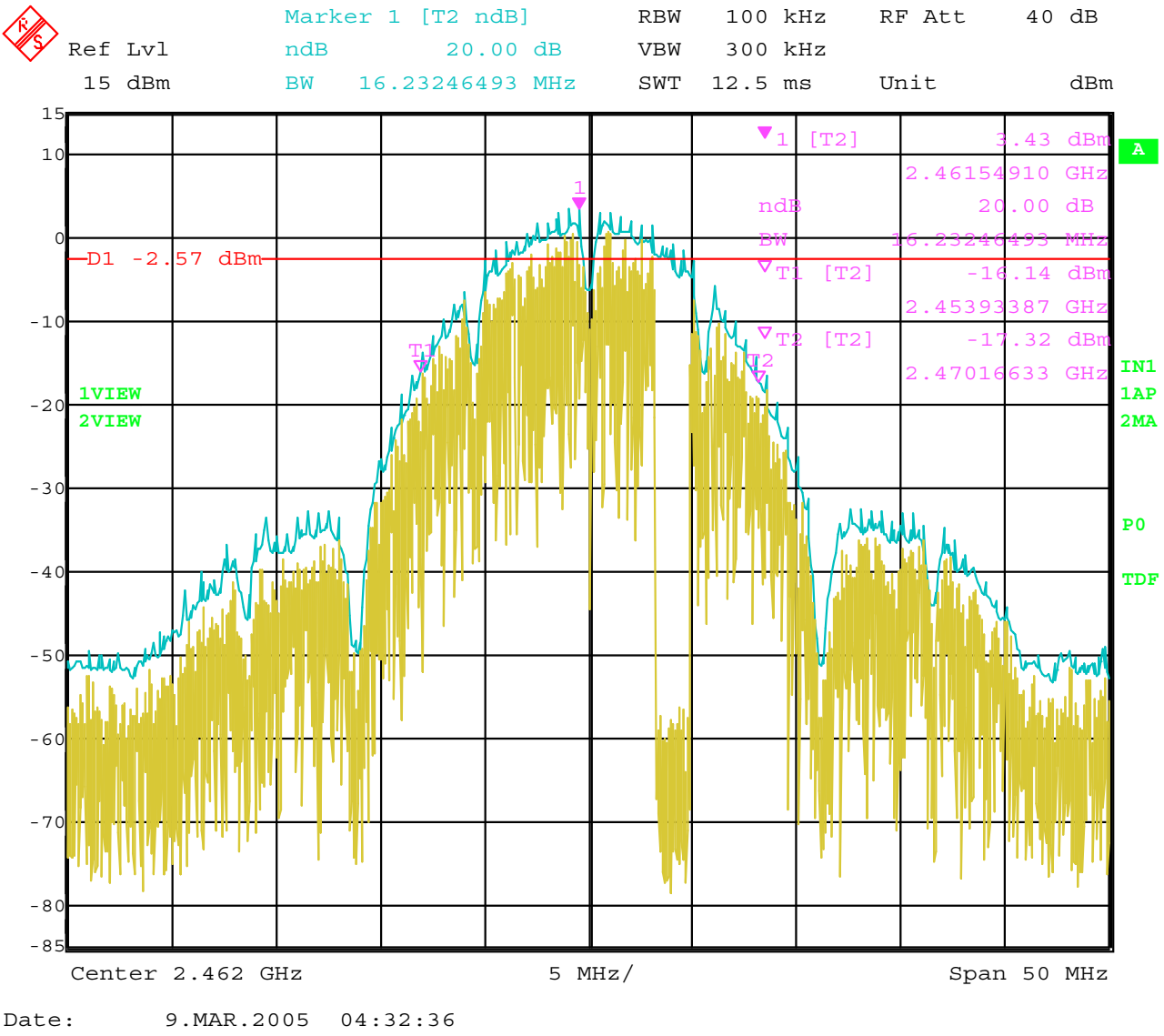
DATA SHEETS



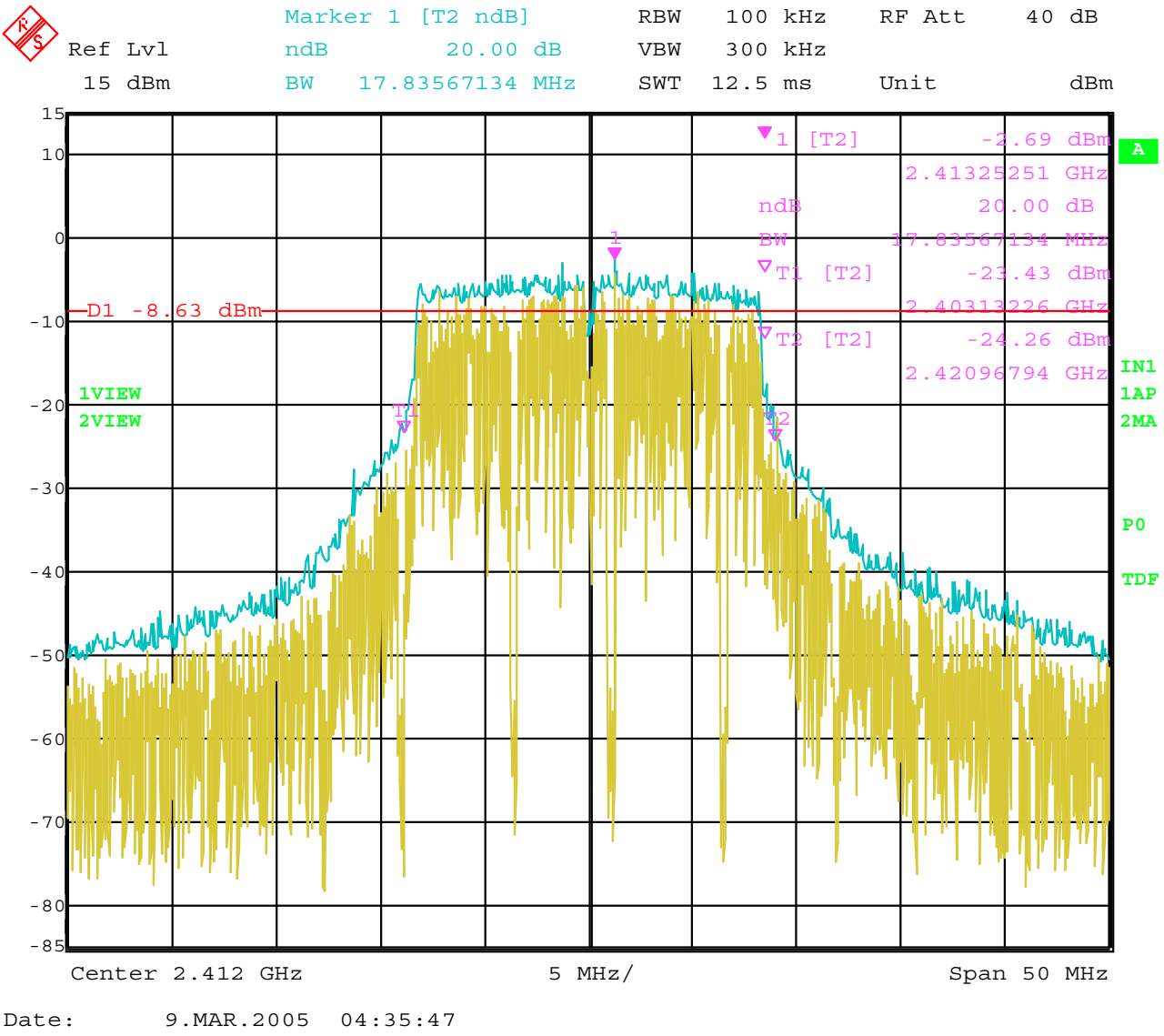
Bandwidth 20 dB – Channel 1 – 802.11 b Mode – Hitachi Antenna



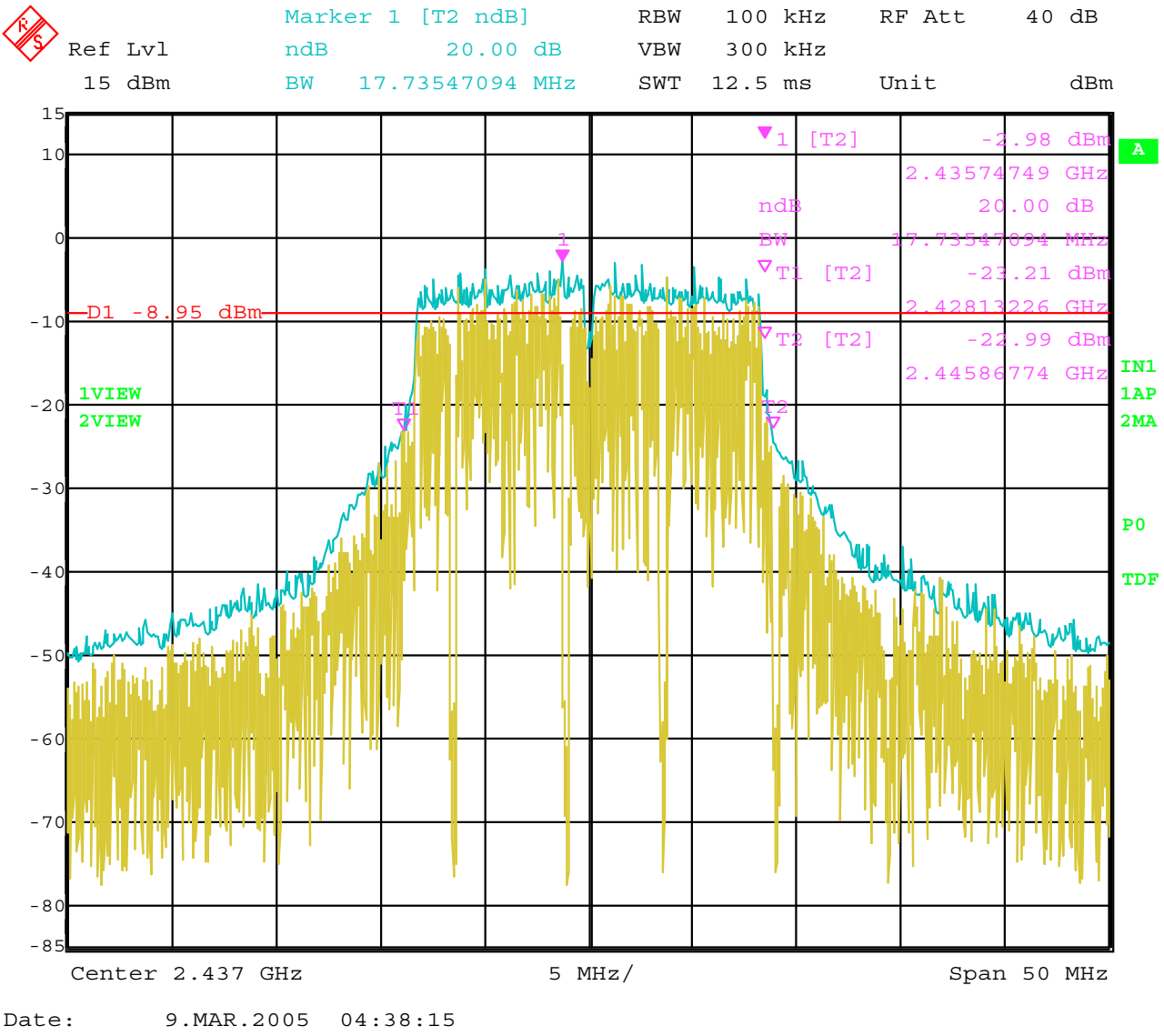
Bandwidth 20 dB – Channel 6 – 802.11 b Mode – Hitachi Antenna



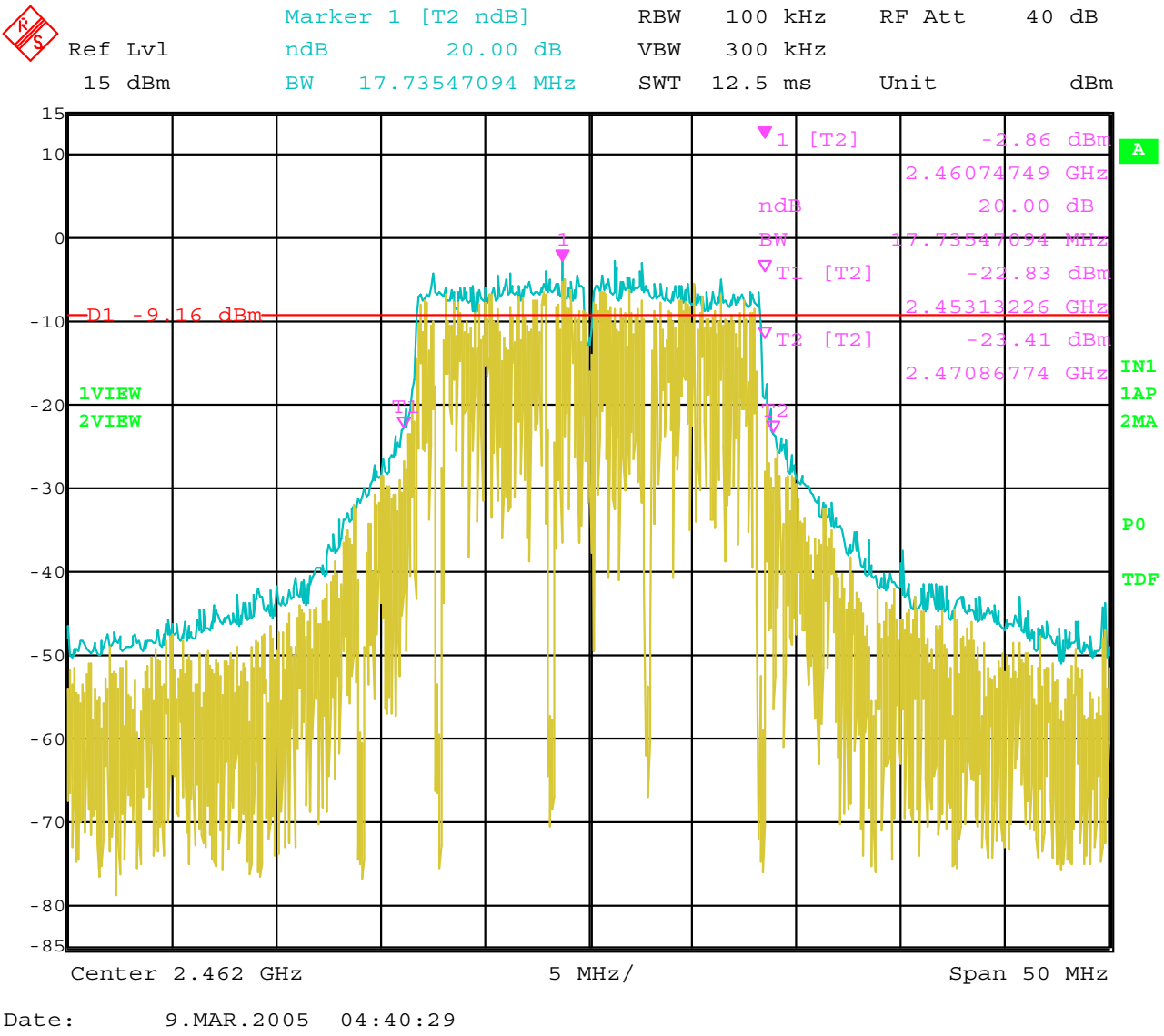
Bandwidth 20 dB – Channel 11 – 802.11 b Mode – Hitachi Antenna



Bandwidth 20 dB – Channel 1 – 802.11 g Mode – Hitachi Antenna



Bandwidth 20 dB – Channel 6 – 802.11 g Mode – Hitachi Antenna



Bandwidth 20 dB – Channel 11 – 802.11 g Mode – Hitachi Antenna

PEAK POWER OUTPUT

DATA SHEETS

PEAK OUTPUT POWER

Intel Corporation

Intel Mini PCI Type 3A 802.11 BG Wireless LAN Adapter

MODEL: WM3A2200BG

For use in the Dell Agency Series #: PP17L

With Hitachi Antenna

802.11 b Mode (Worst Case Rate is 1 Mbps)

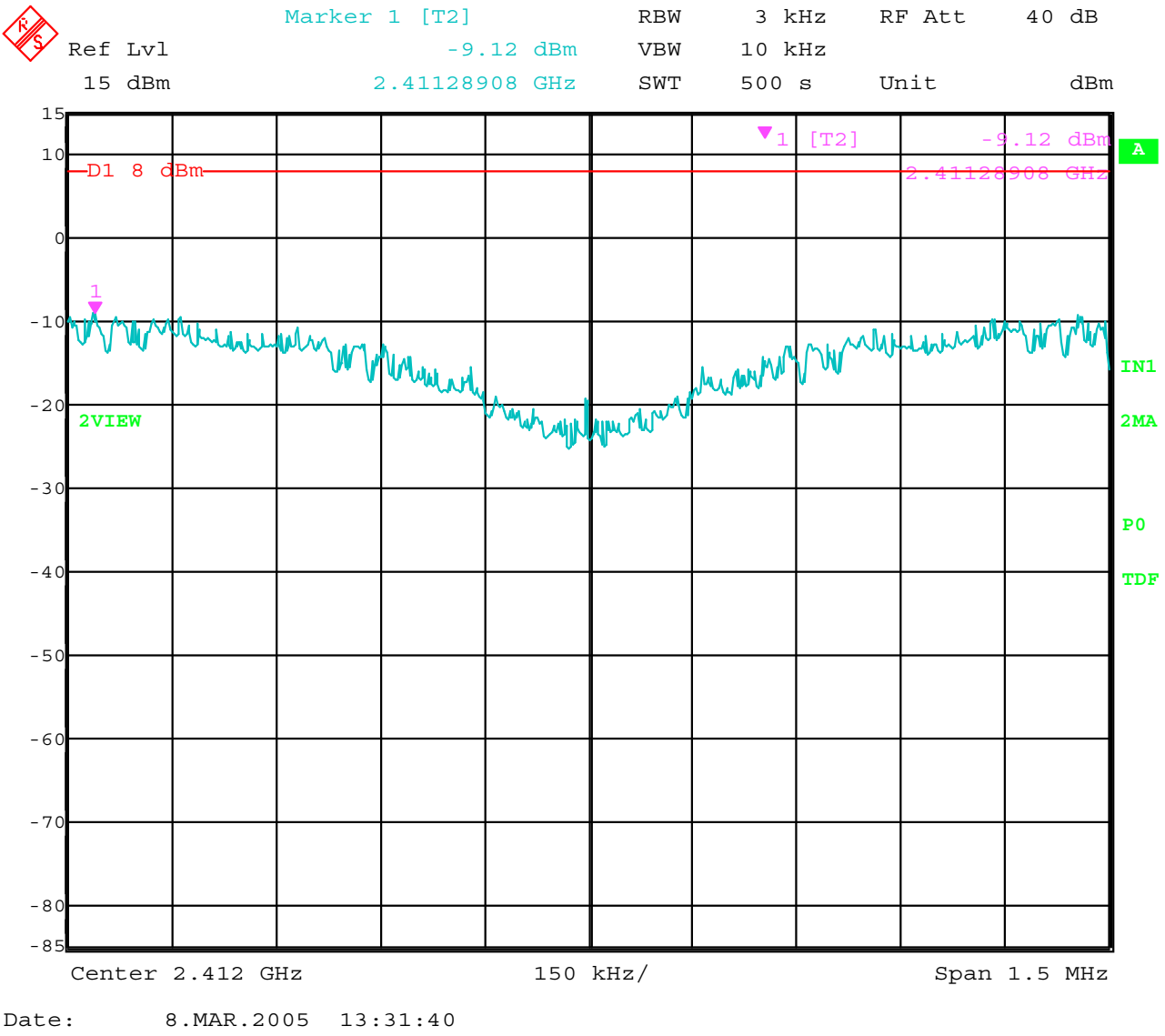
CHANNEL	GAIN	PEAK POWER OUTPUT (dBm)
1 (2412 MHz)	28.0	17.11
6 (2437 MHz)	28.5	17.08
11 (2462 MHz)	29.0	17.25

802.11 g Mode (Worst Case Rate is 6 Mbps)

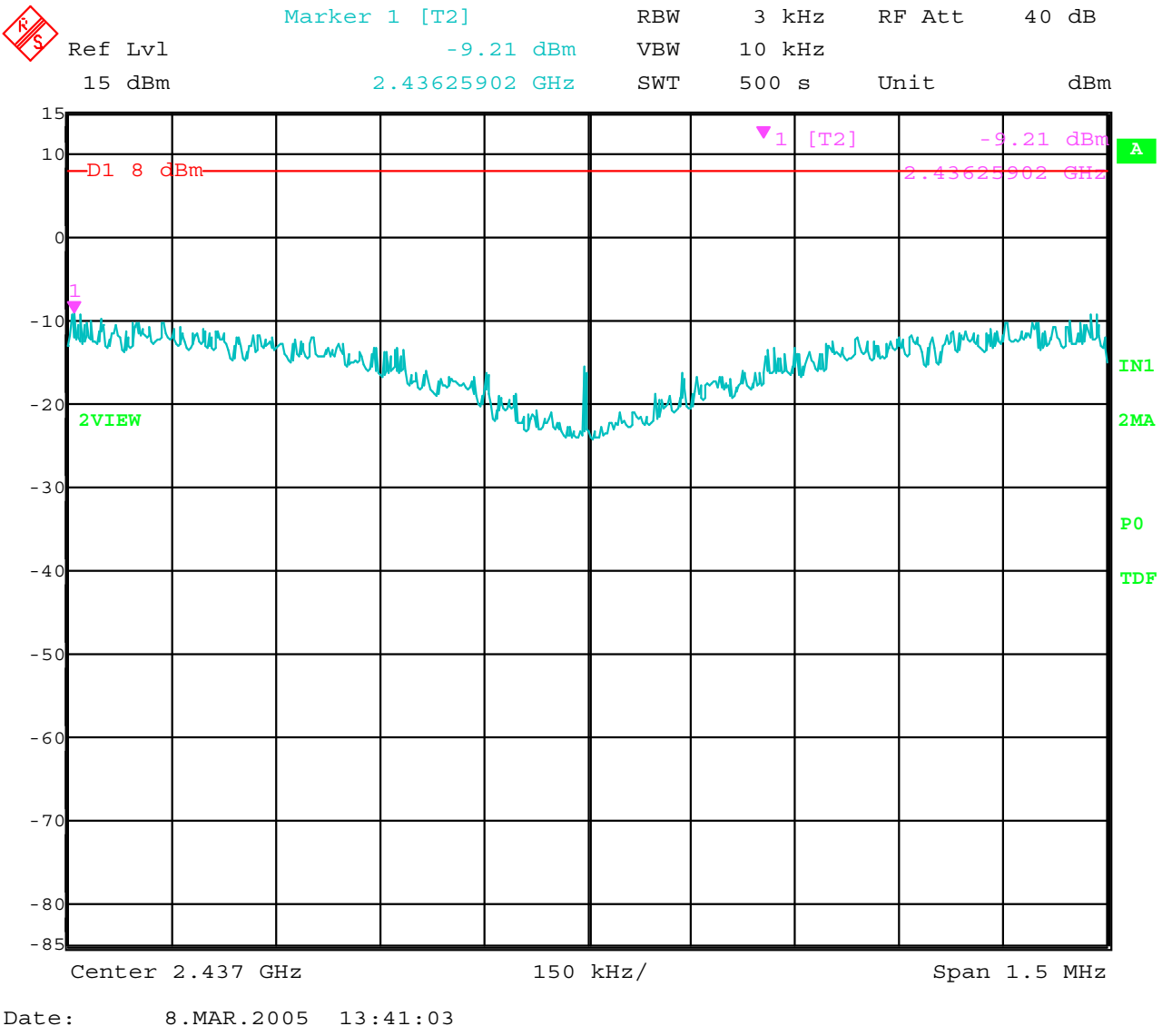
CHANNEL	GAIN	PEAK POWER OUTPUT (dBm)
1 (2412 MHz)	22.5	16.70
6 (2437 MHz)	22.5	16.39
11 (2462 MHz)	22.5	16.14

PEAK POWER SPECTRAL DENSITY

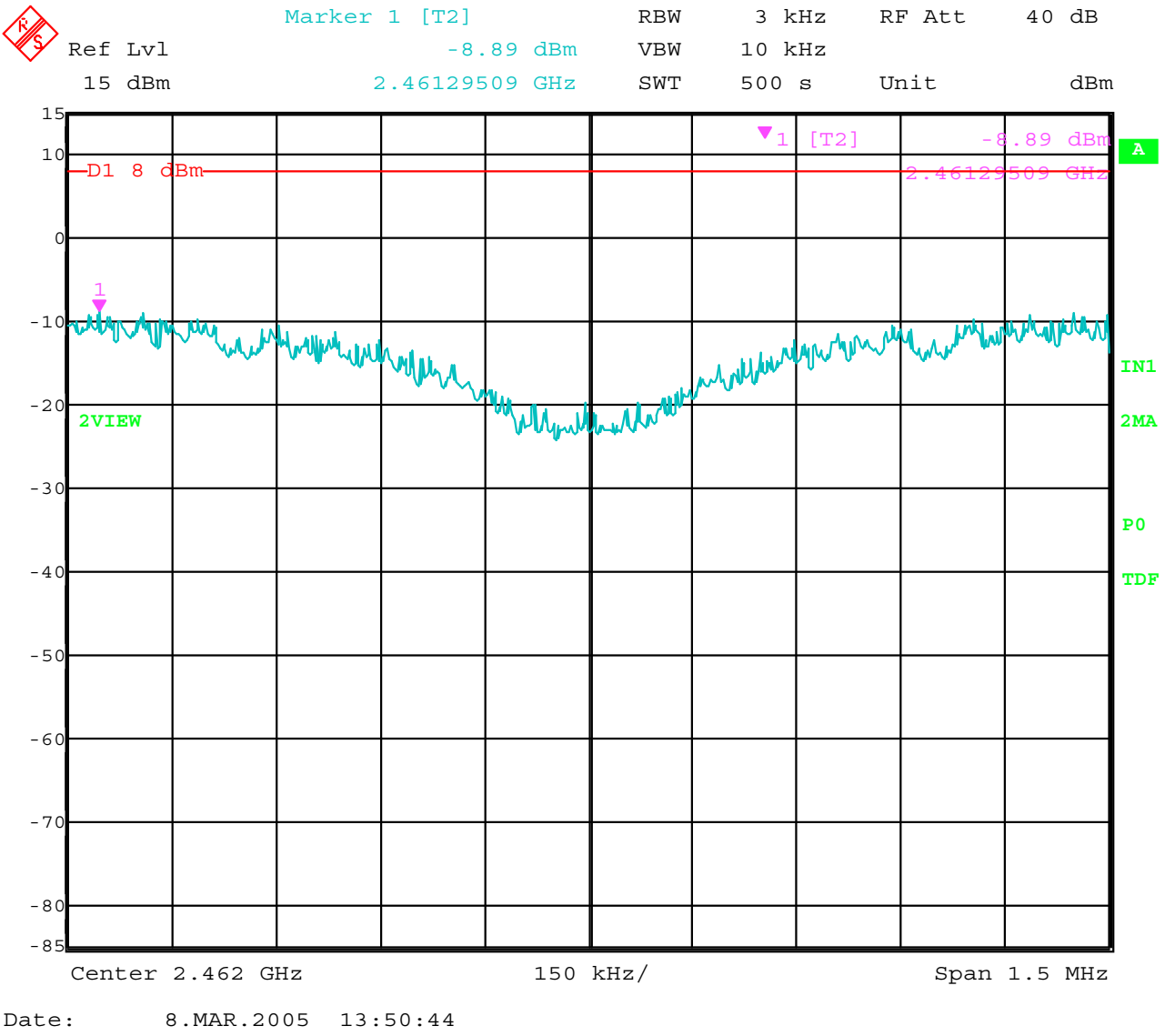
DATA SHEETS



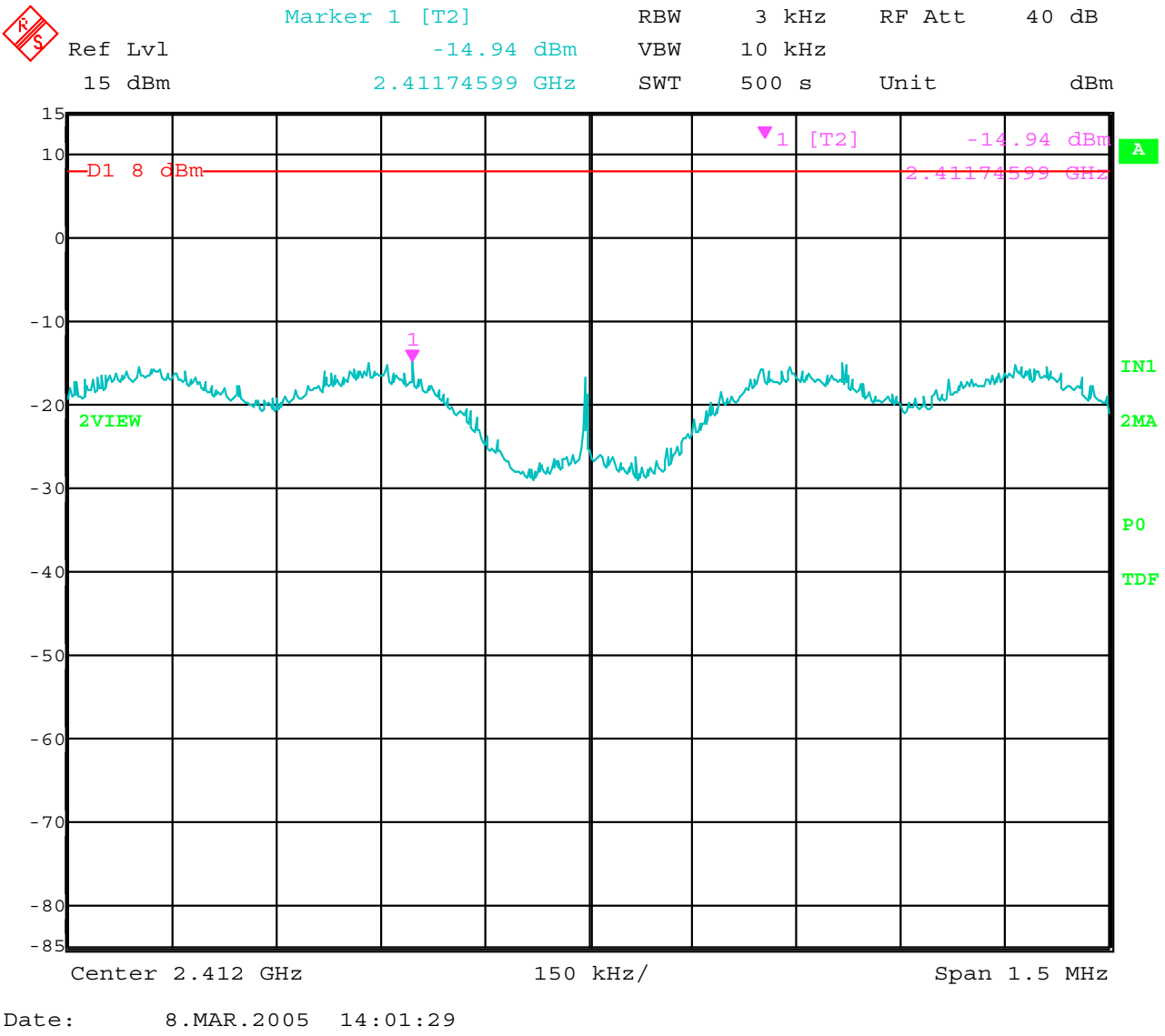
Spectral Density Output – Channel 1 – 802.11 b Mode – Hitachi Antenna



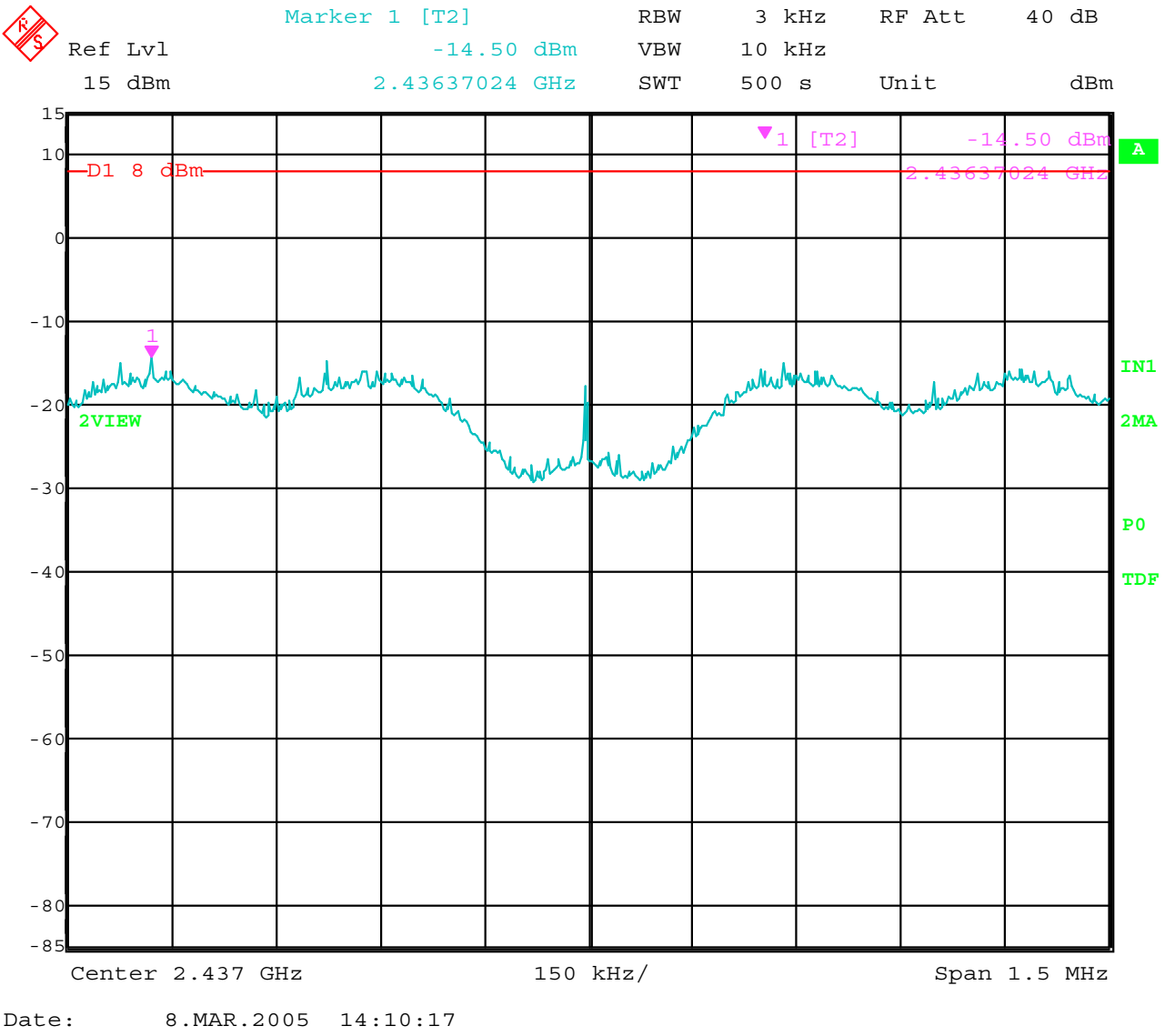
Spectral Density Output – Channel 6 – 802.11 b Mode – Hitachi Antenna



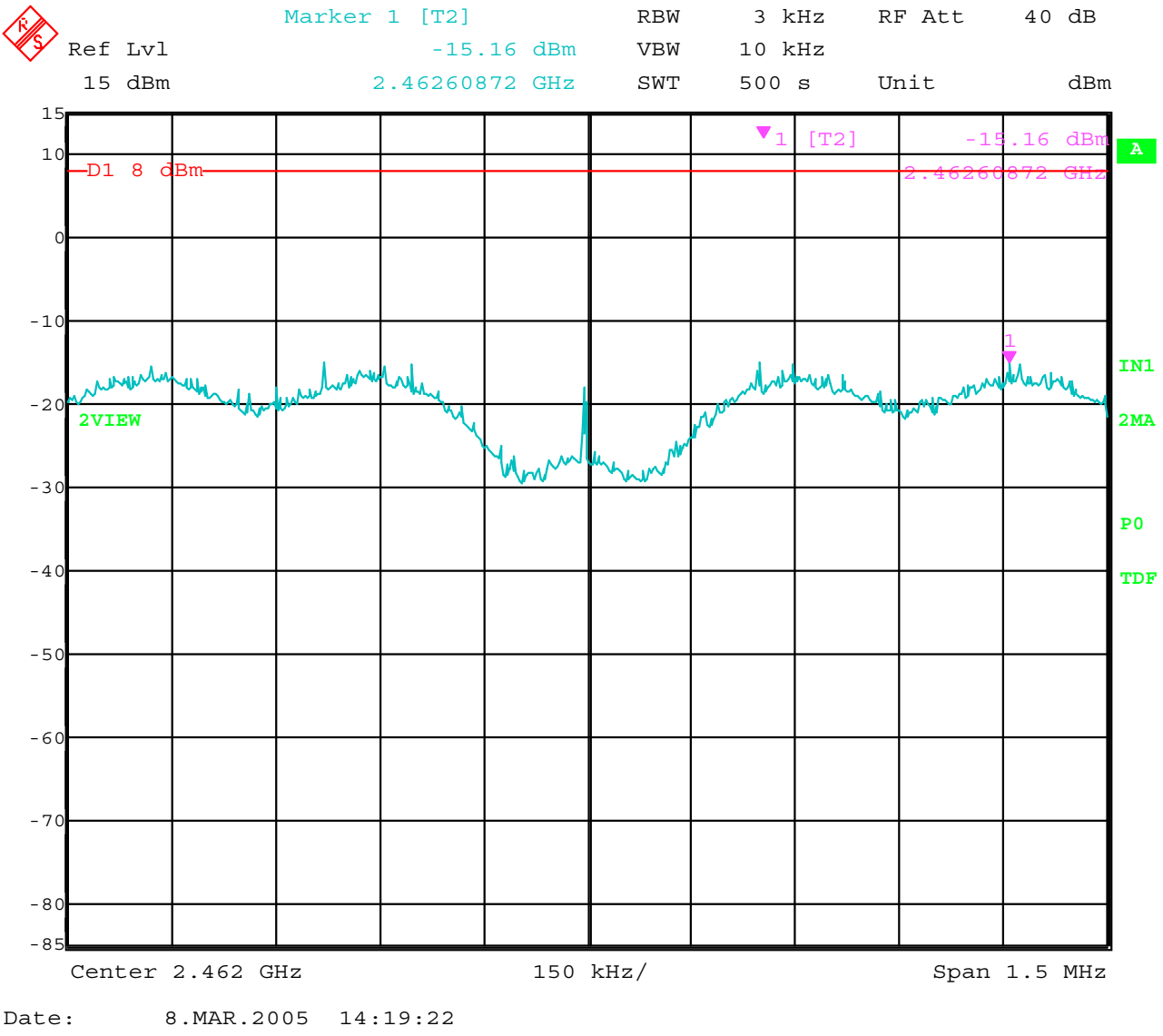
Spectral Density Output – Channel 11 – 802.11 b Mode – Hitachi Antenna



Spectral Density Output – Channel 1 – 802.11 g Mode – Hitachi Antenna



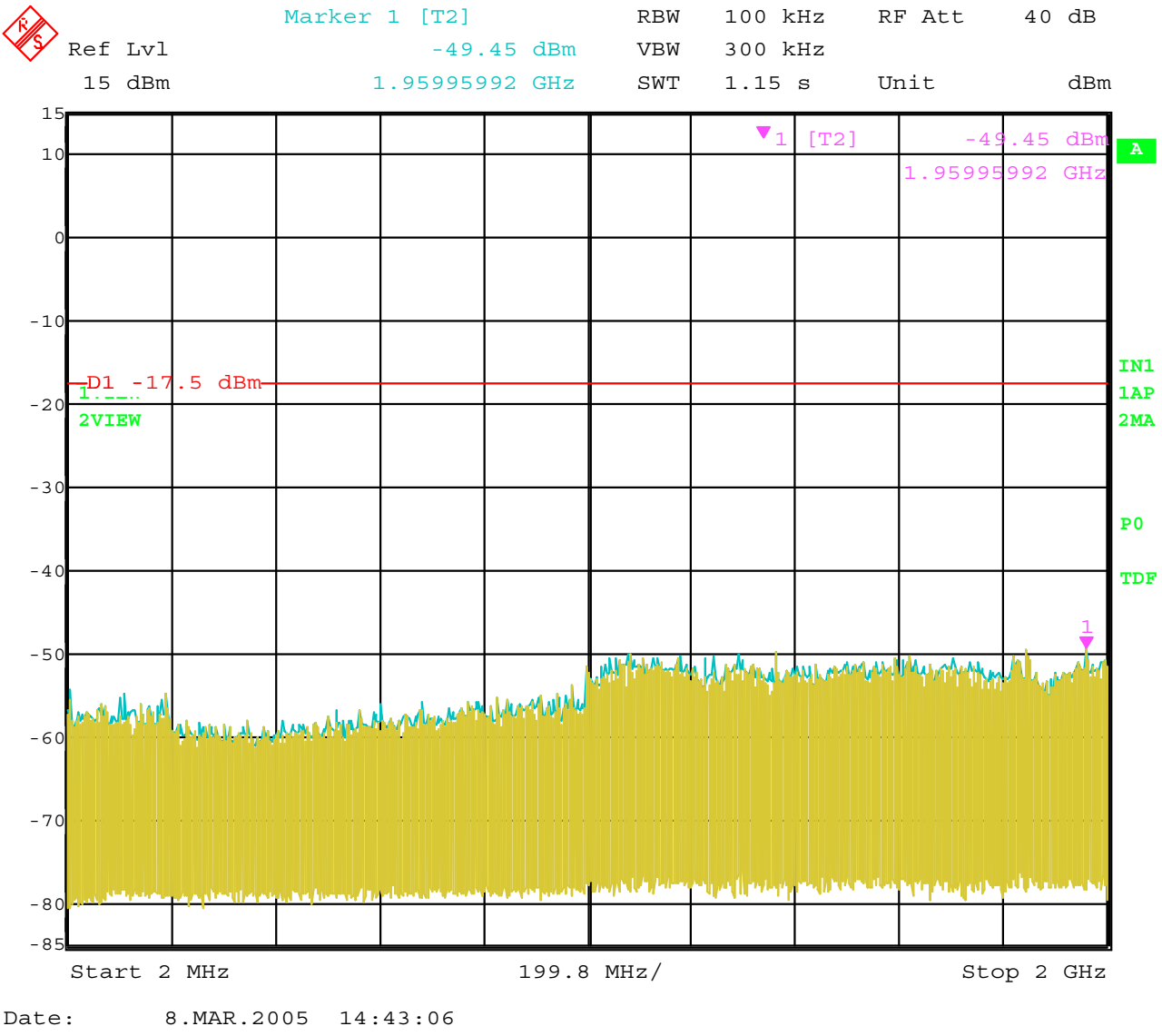
Spectral Density Output – Channel 6 – 802.11 g Mode – Hitachi Antenna



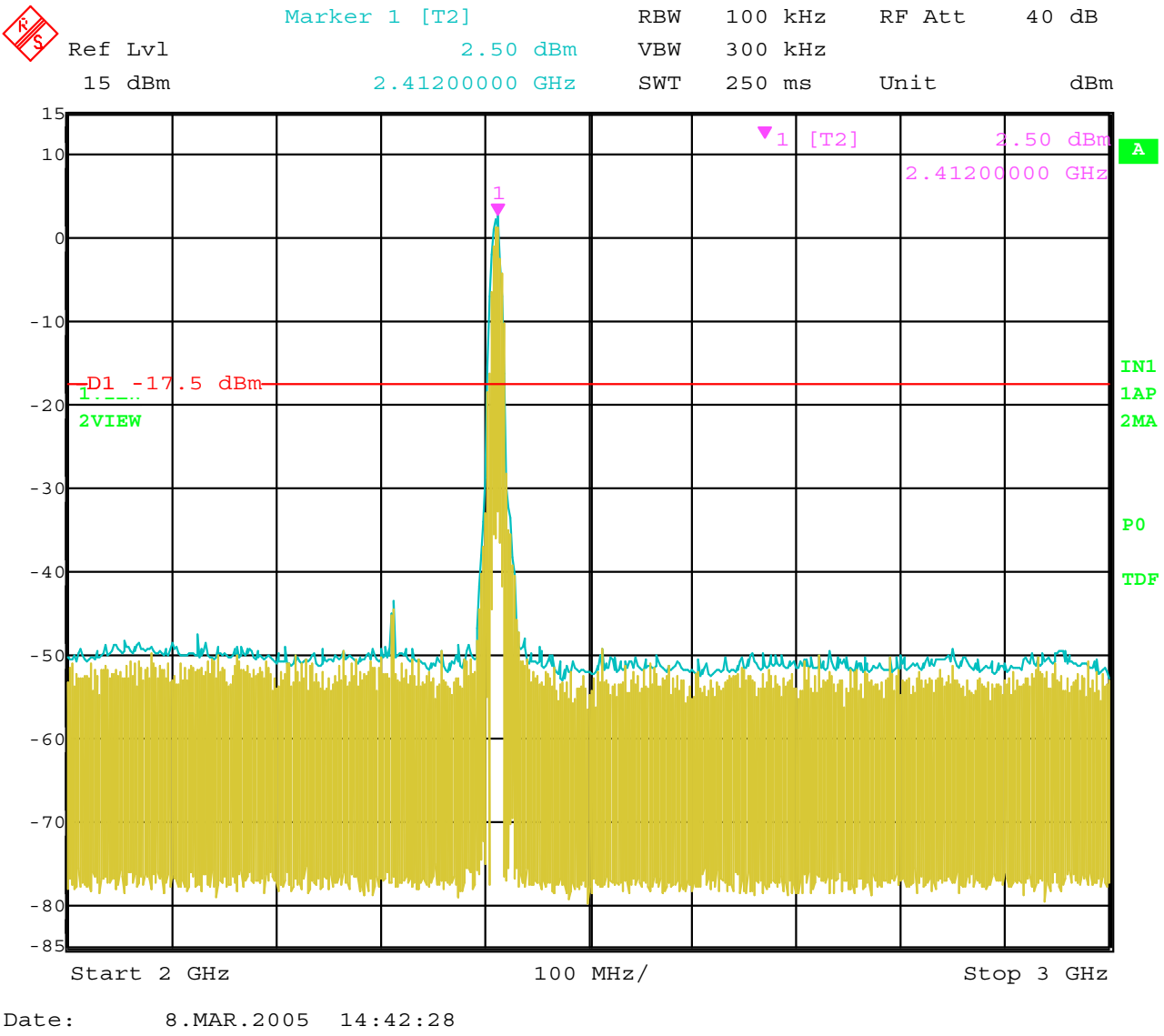
Spectral Density Output – Channel 11 – 802.11 g Mode – Hitachi Antenna

RF ANTENNA CONDUCTED

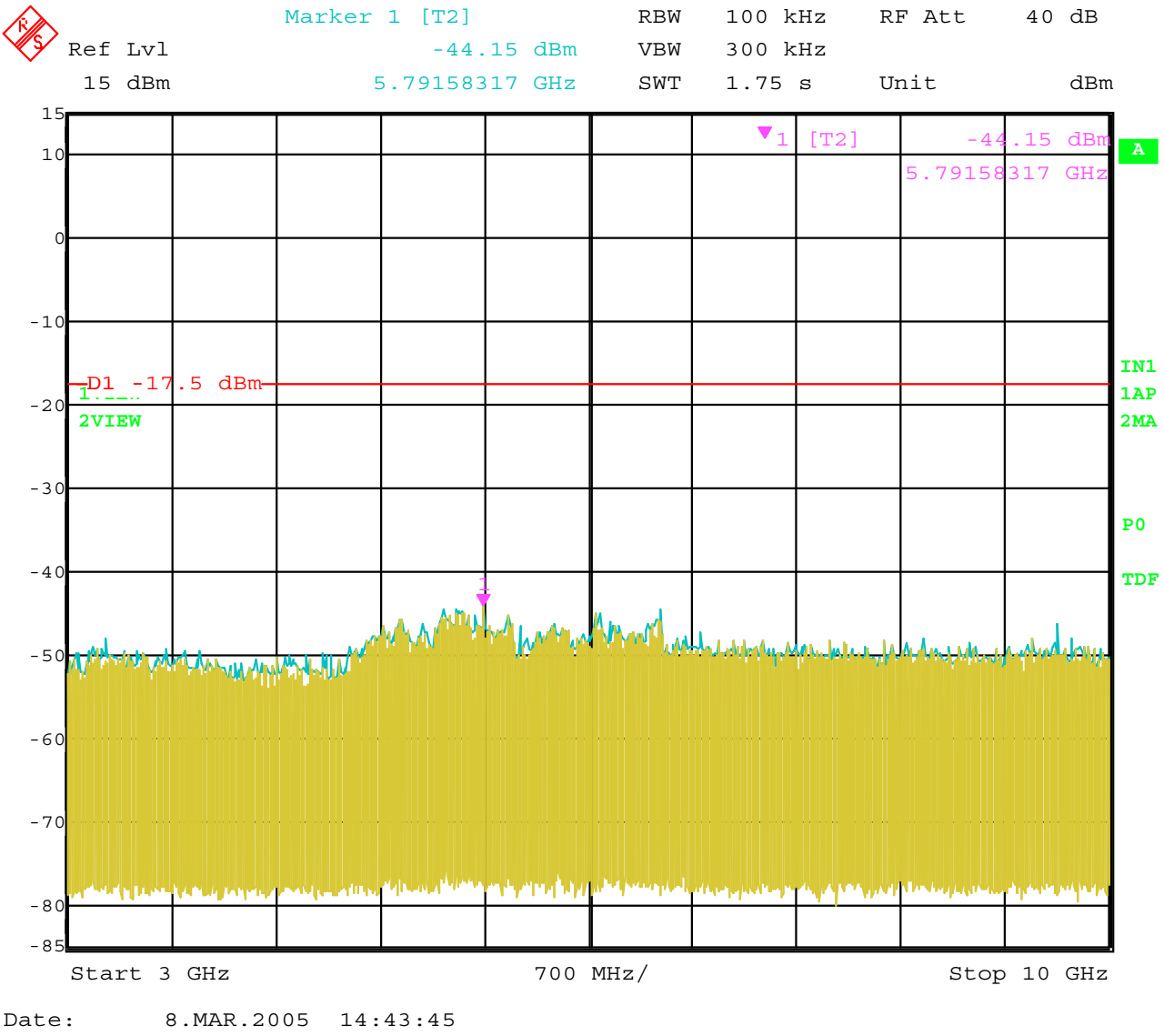
DATA SHEETS



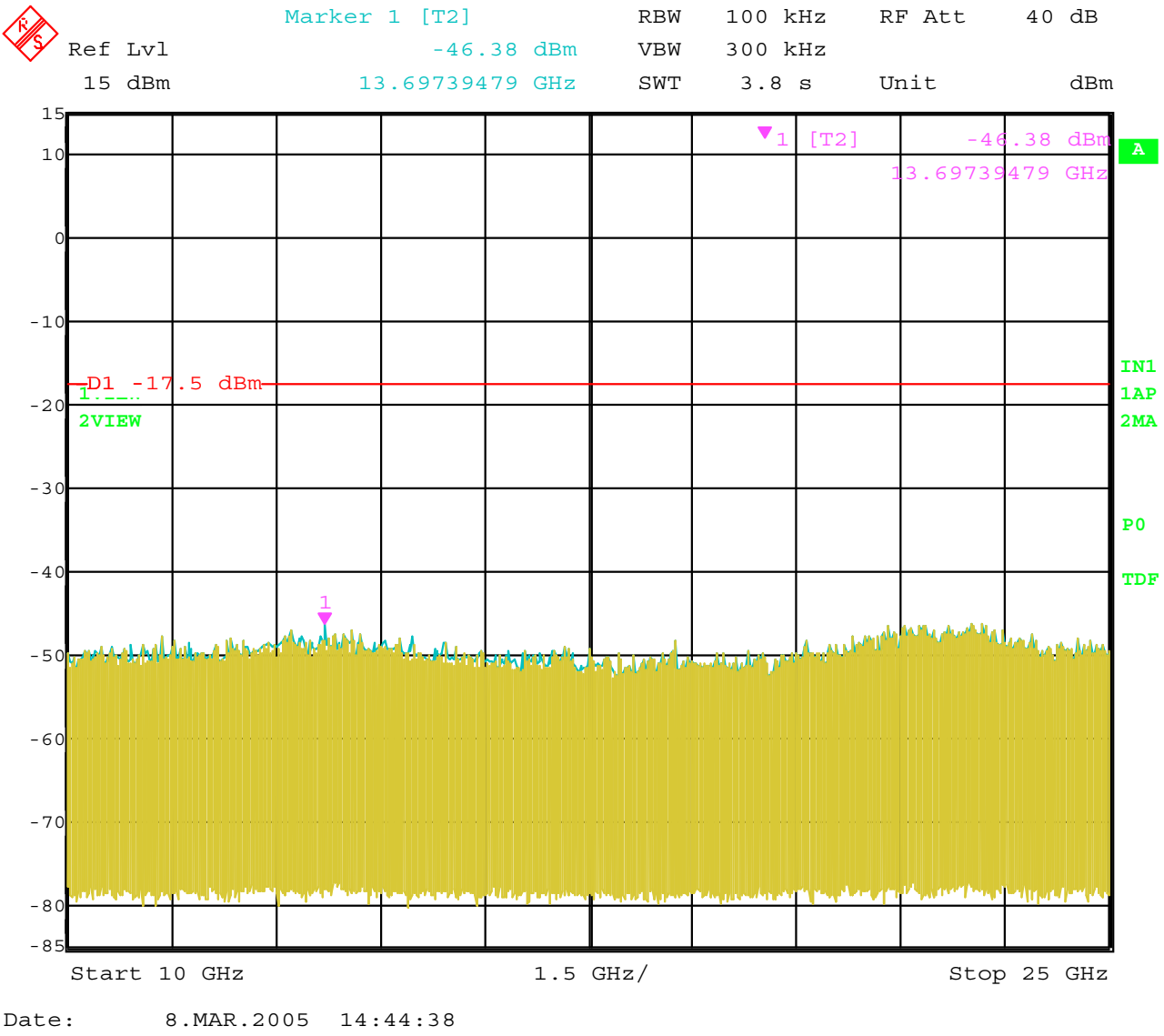
RF Antenna Conducted – Channel 1 – 802.11 b Mode – Hitachi Antenna – 2 MHz to 2 GHz



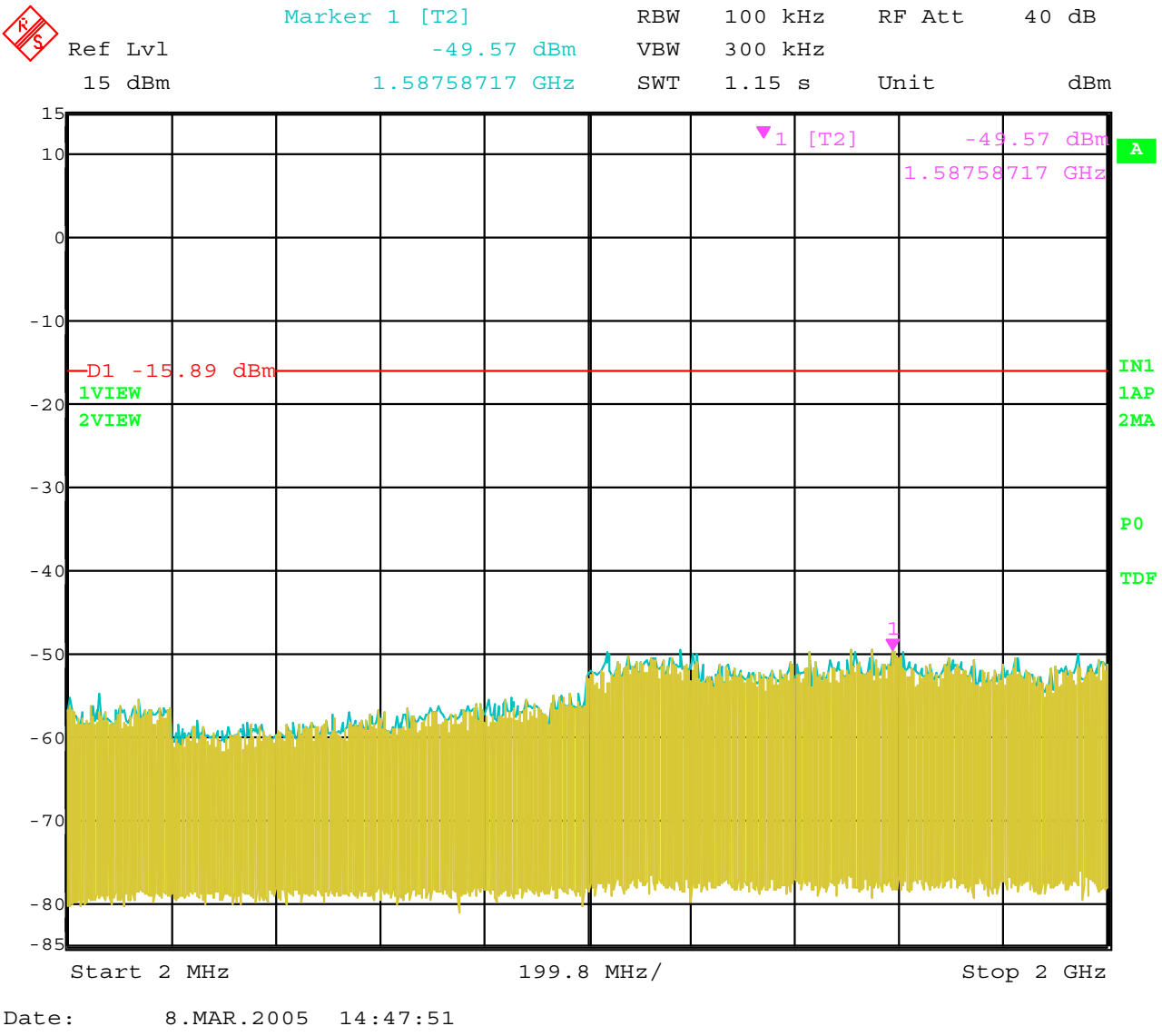
RF Antenna Conducted – Channel 1 – 802.11 b Mode – Hitachi Antenna – 2 GHz to 3 GHz



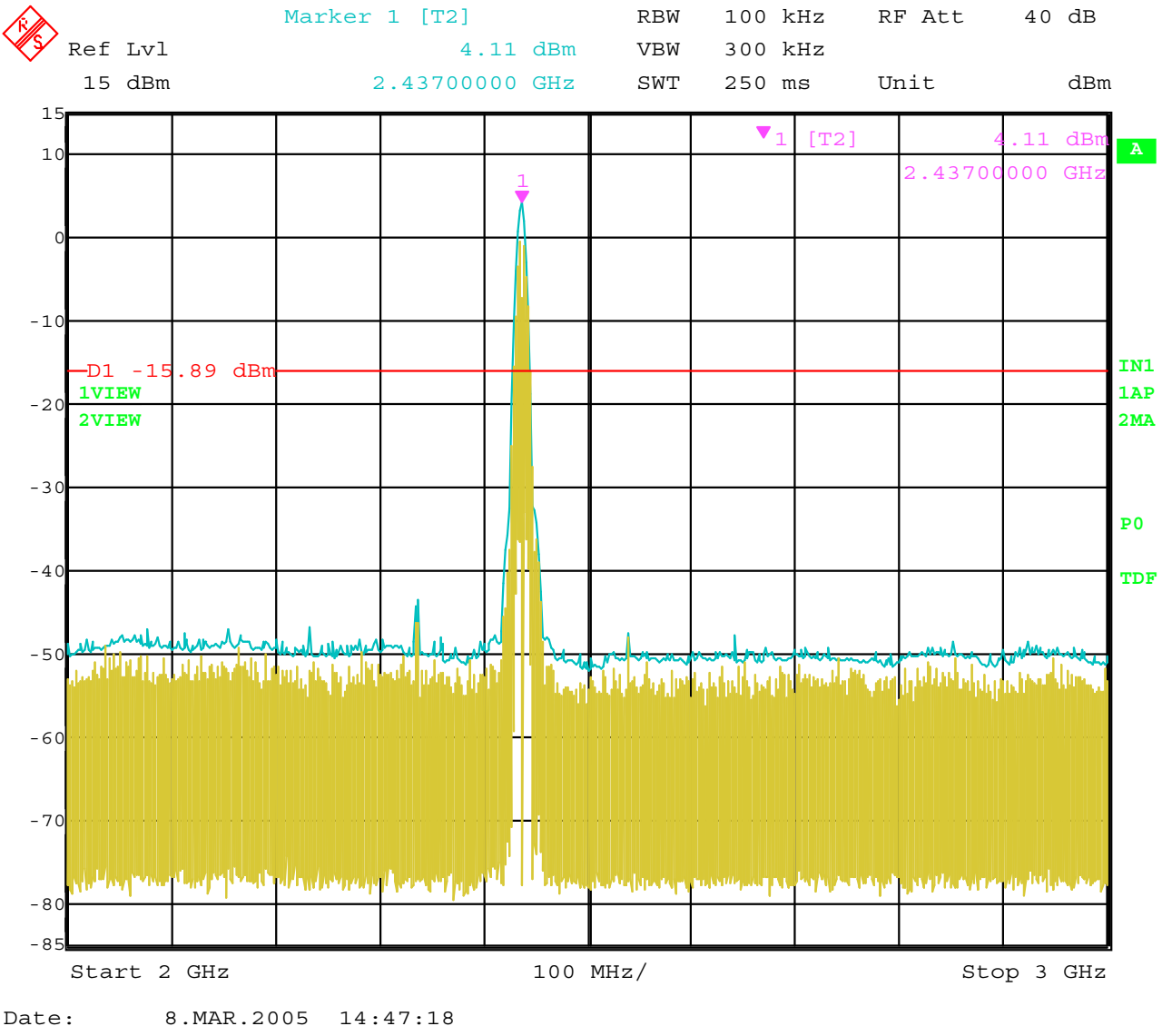
RF Antenna Conducted – Channel 1 – 802.11 b Mode – Hitachi Antenna – 3 GHz to 10 GHz



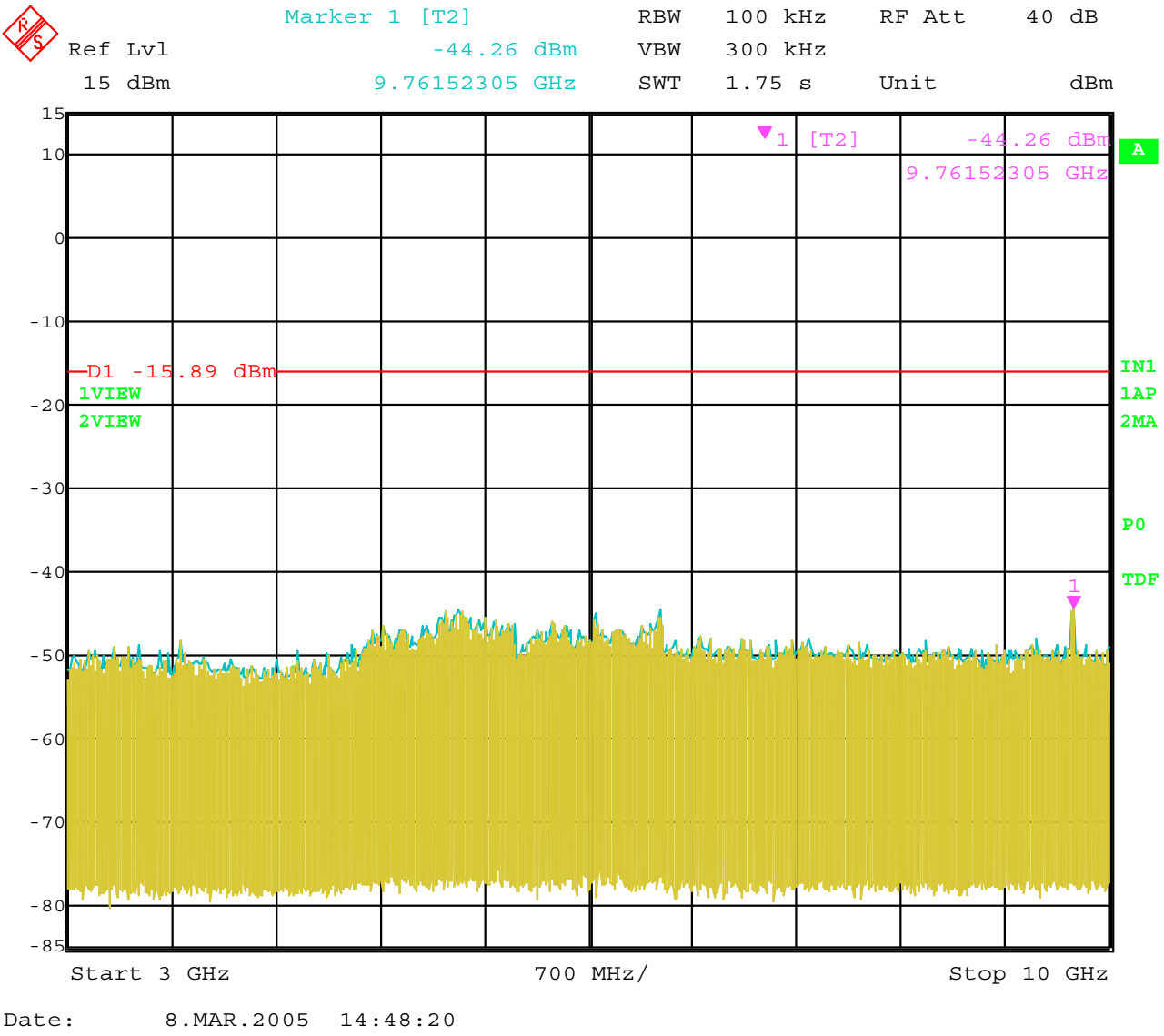
RF Antenna Conducted – Channel 1 – 802.11 b Mode – Hitachi Antenna – 10 GHz to 25 GHz



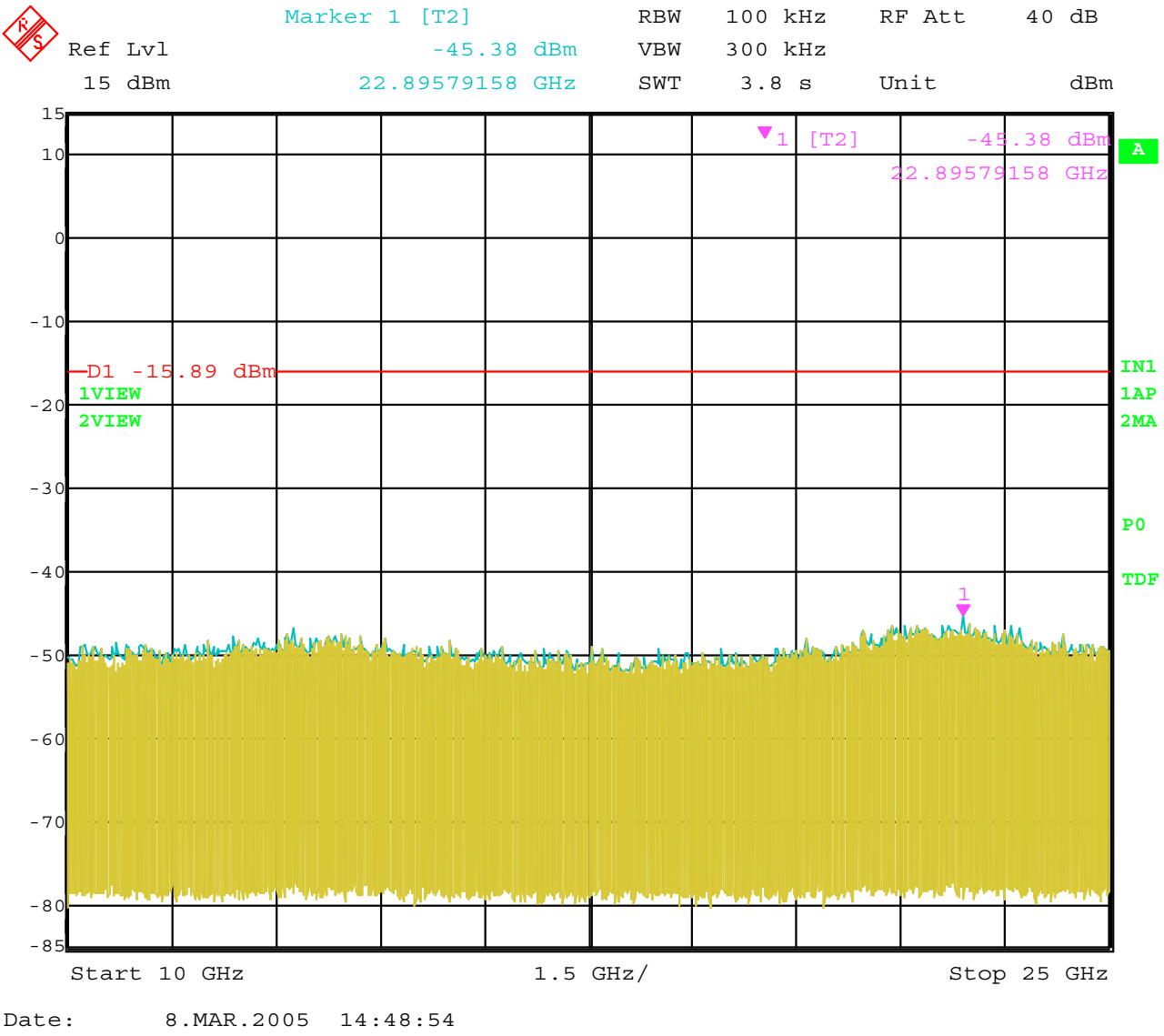
RF Antenna Conducted – Channel 6 – 802.11 b Mode – Hitachi Antenna – 2 MHz to 2 GHz



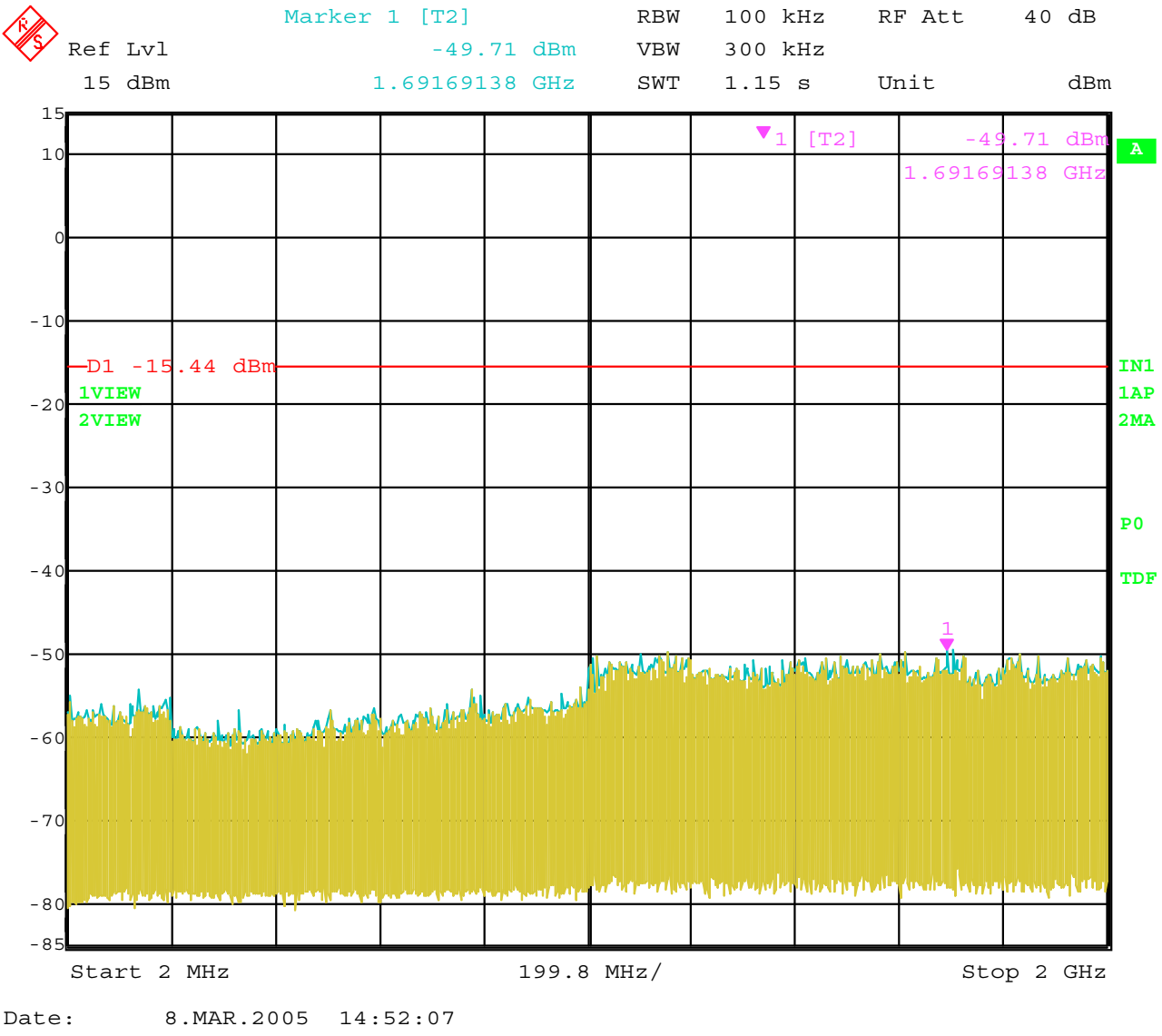
RF Antenna Conducted – Channel 6 – 802.11 b Mode – Hitachi Antenna – 2 GHz to 3 GHz



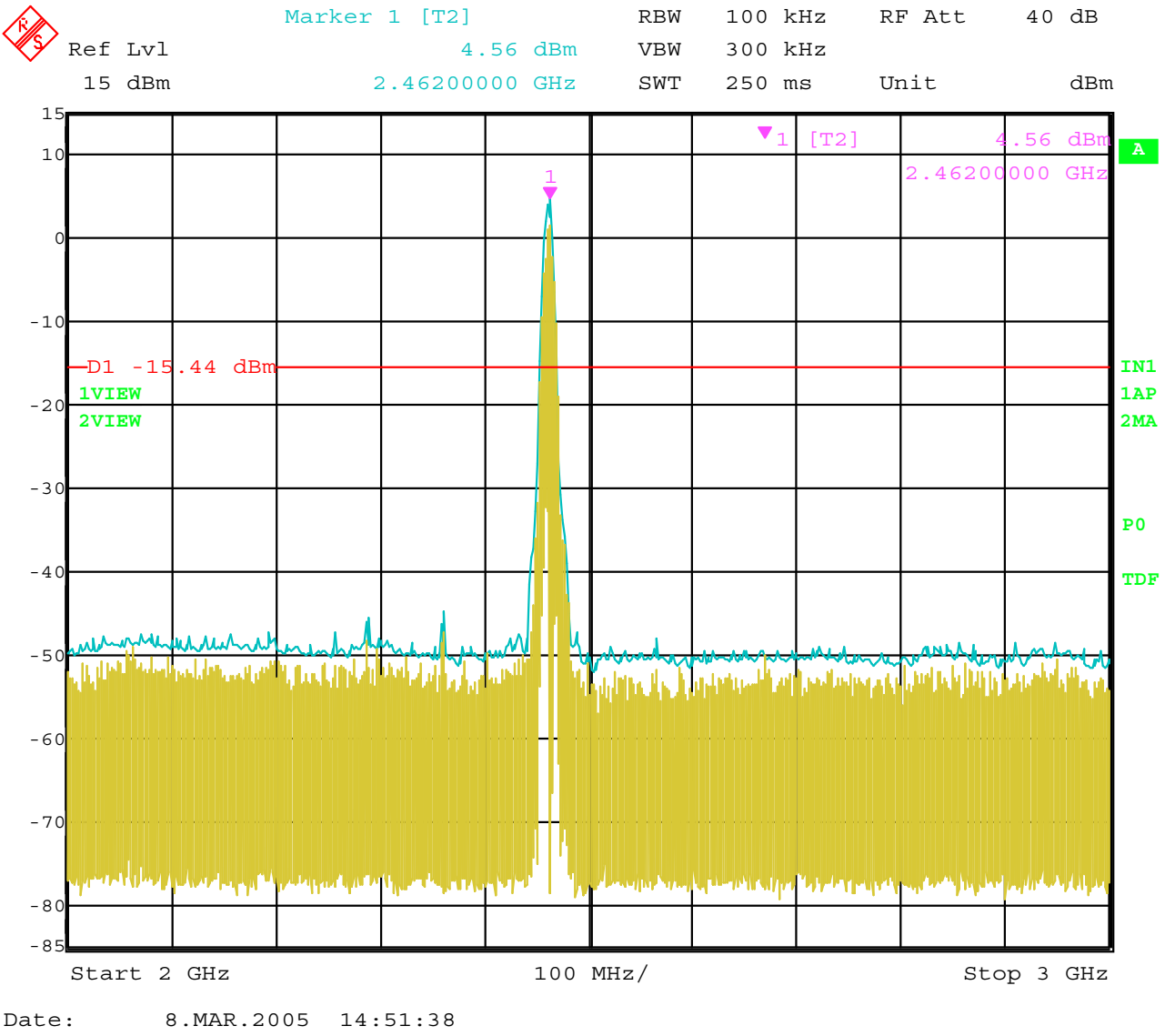
RF Antenna Conducted – Channel 6 – 802.11 b Mode – Hitachi Antenna – 3 GHz to 10 GHz



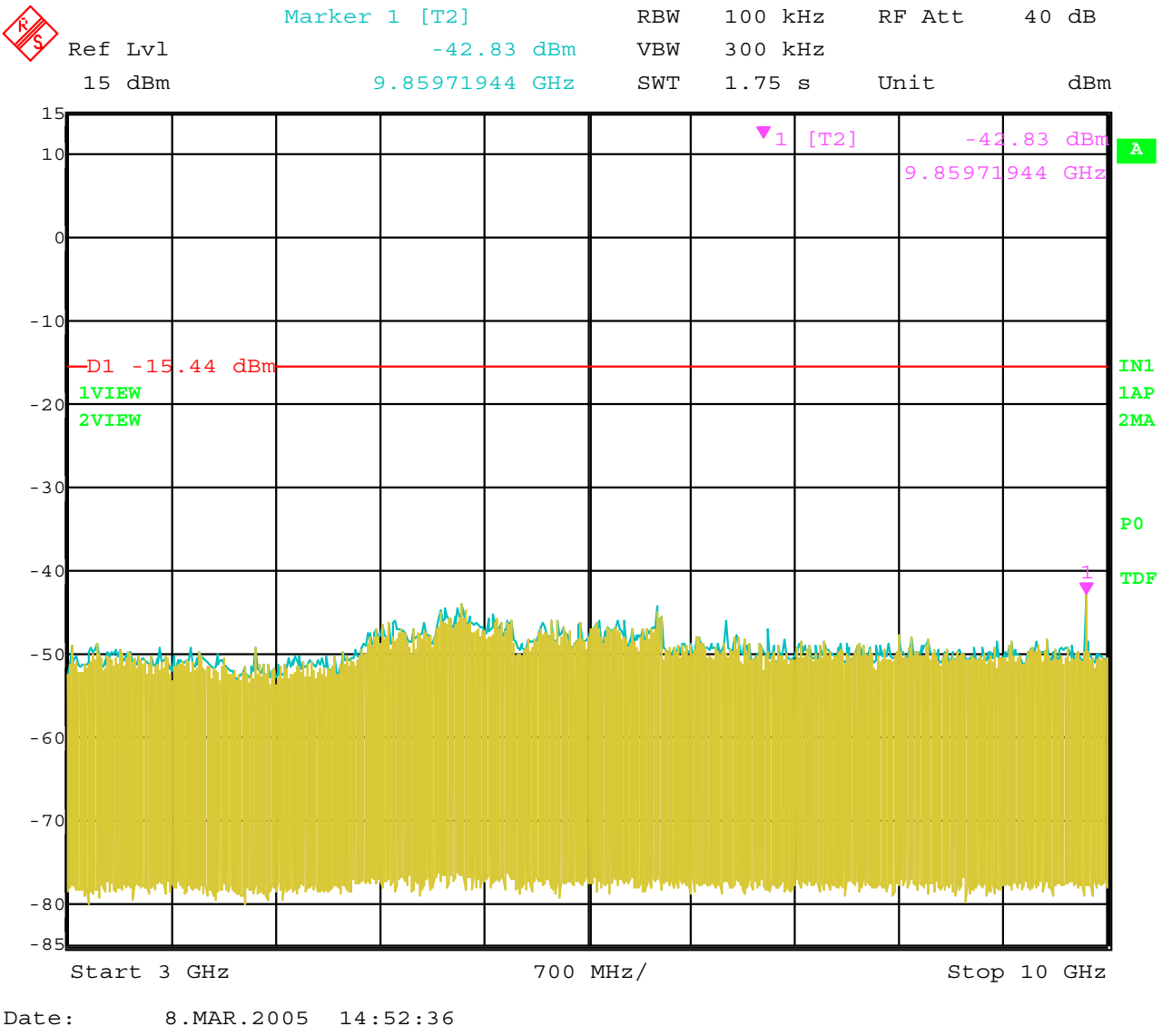
RF Antenna Conducted – Channel 6 – 802.11 b Mode – Hitachi Antenna – 10 GHz to 25 GHz



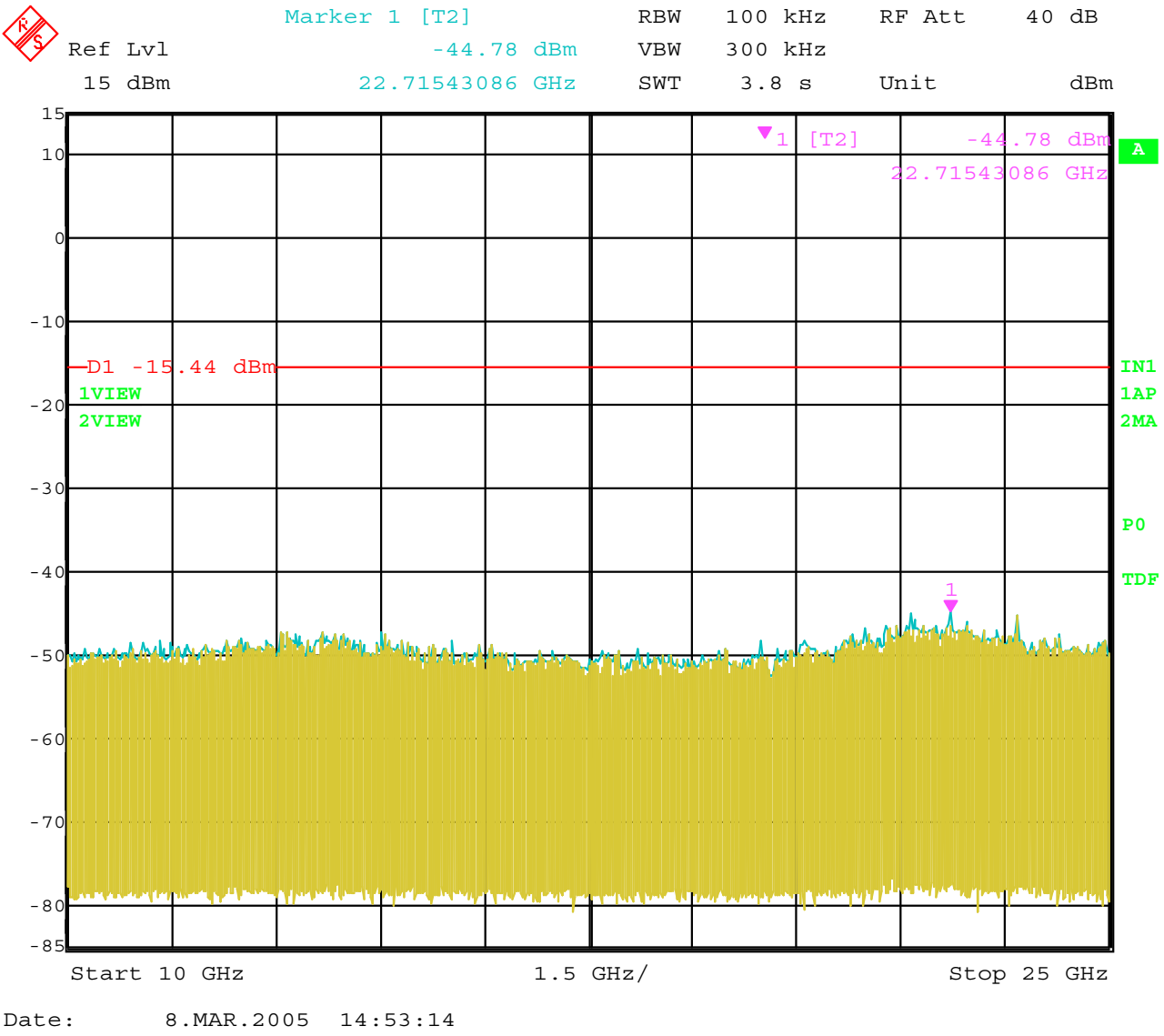
RF Antenna Conducted – Channel 11 – 802.11 b Mode – Hitachi Antenna – 2 MHz to 2 GHz



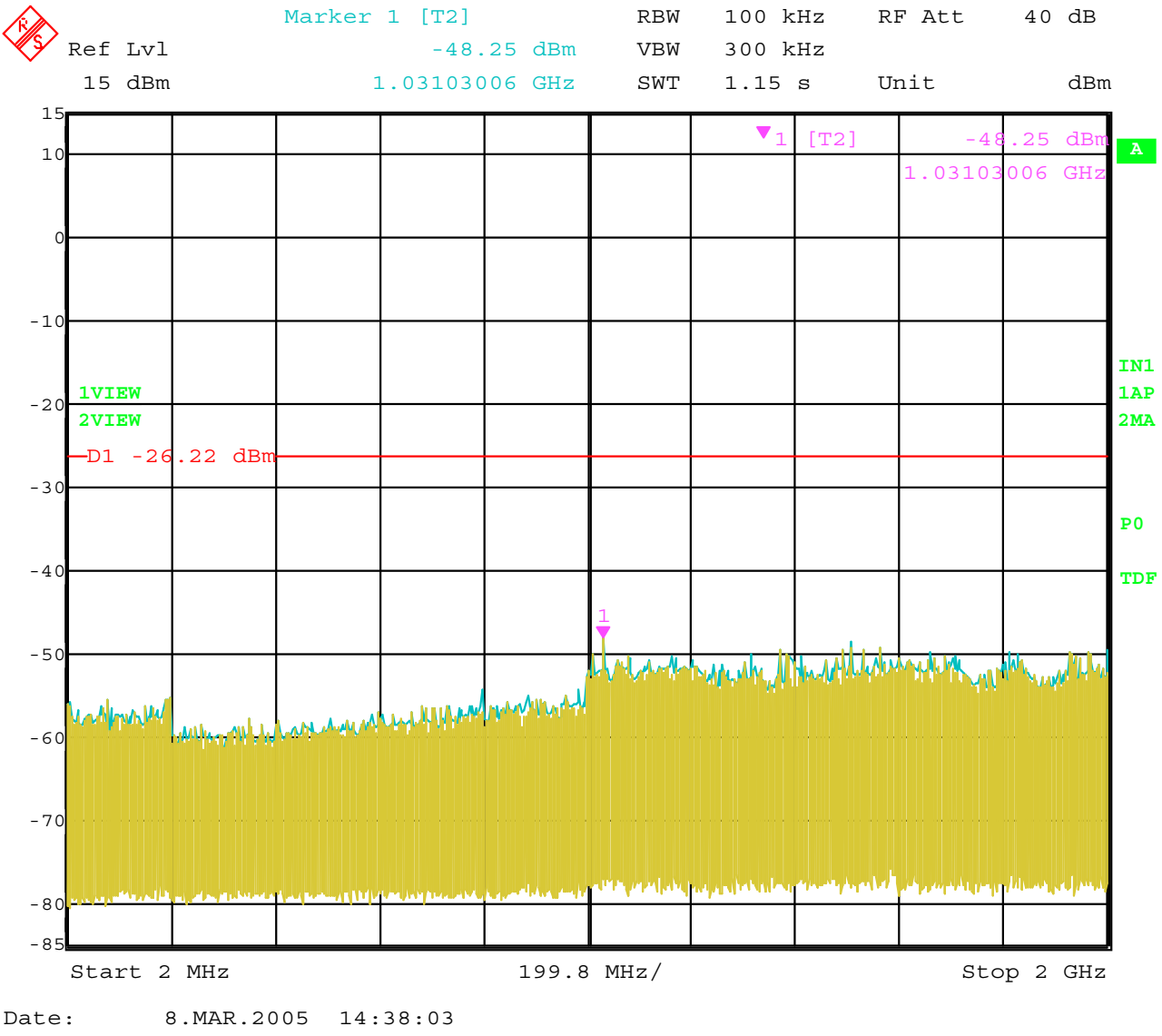
RF Antenna Conducted – Channel 11 – 802.11 b Mode – Hitachi Antenna – 2 GHz to 3 GHz



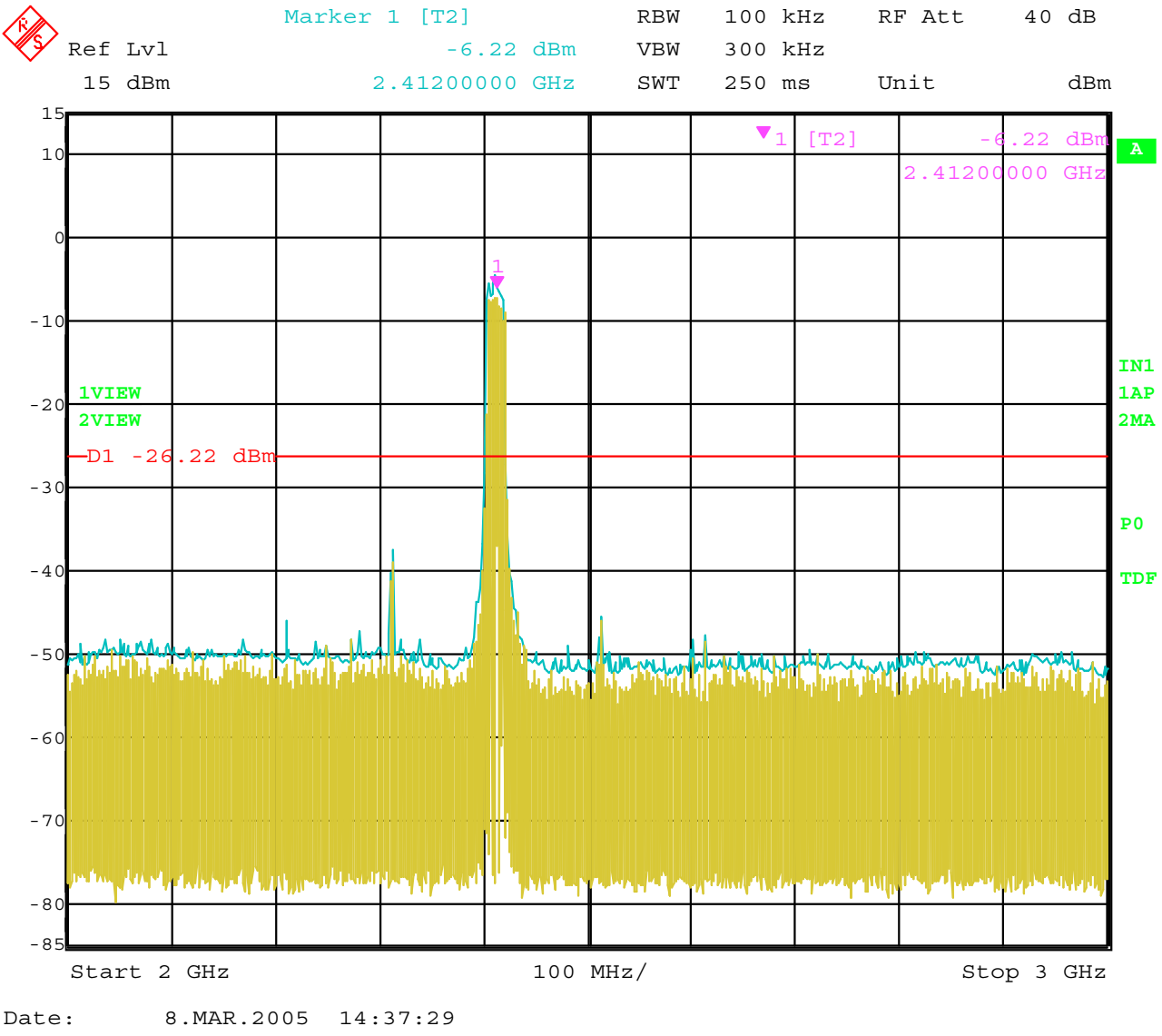
RF Antenna Conducted – Channel 11 – 802.11 b Mode – Hitachi Antenna – 3 GHz to 10 GHz



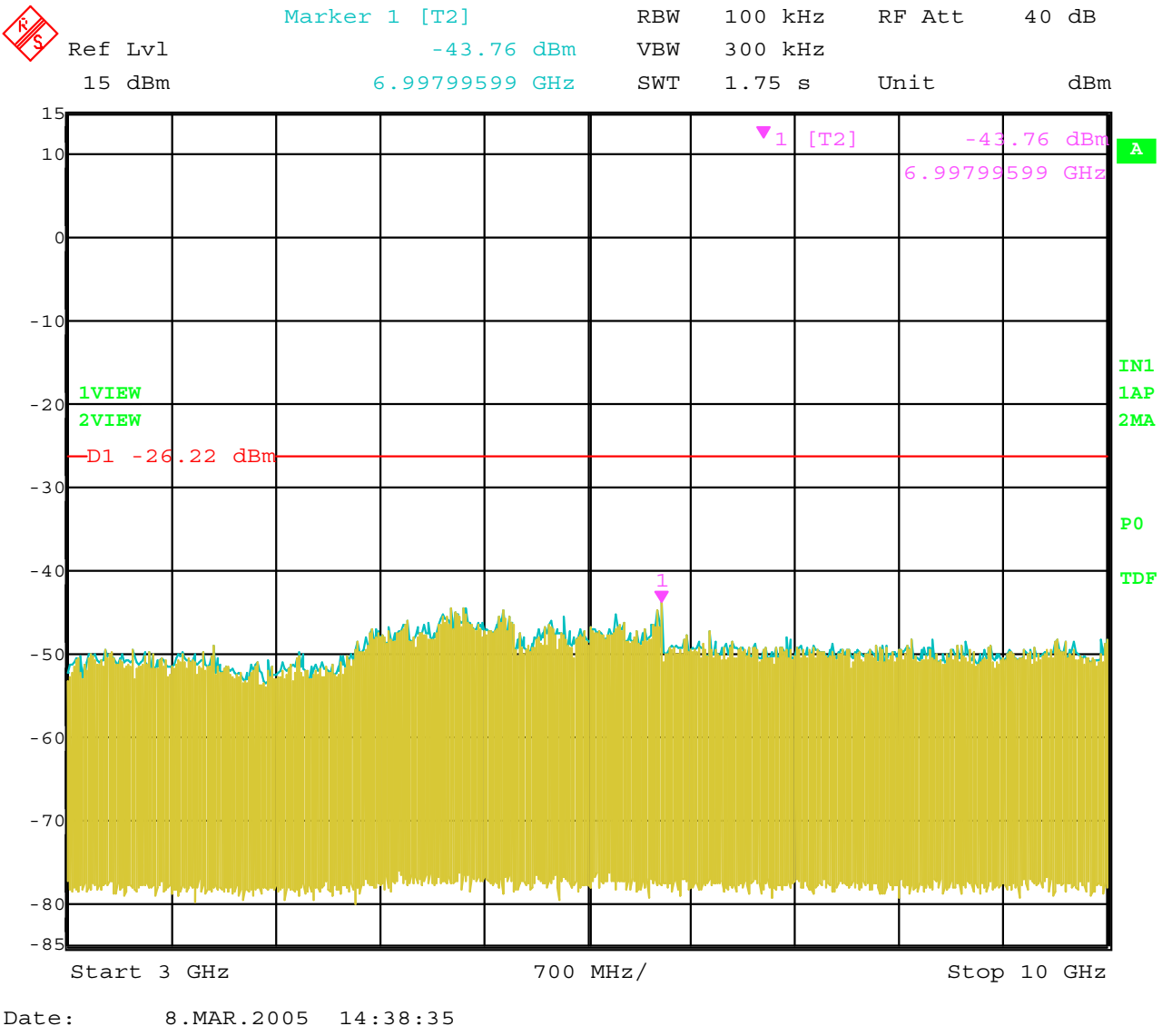
RF Antenna Conducted – Channel 11 – 802.11 b Mode – Hitachi Antenna – 10 GHz to 25 GHz



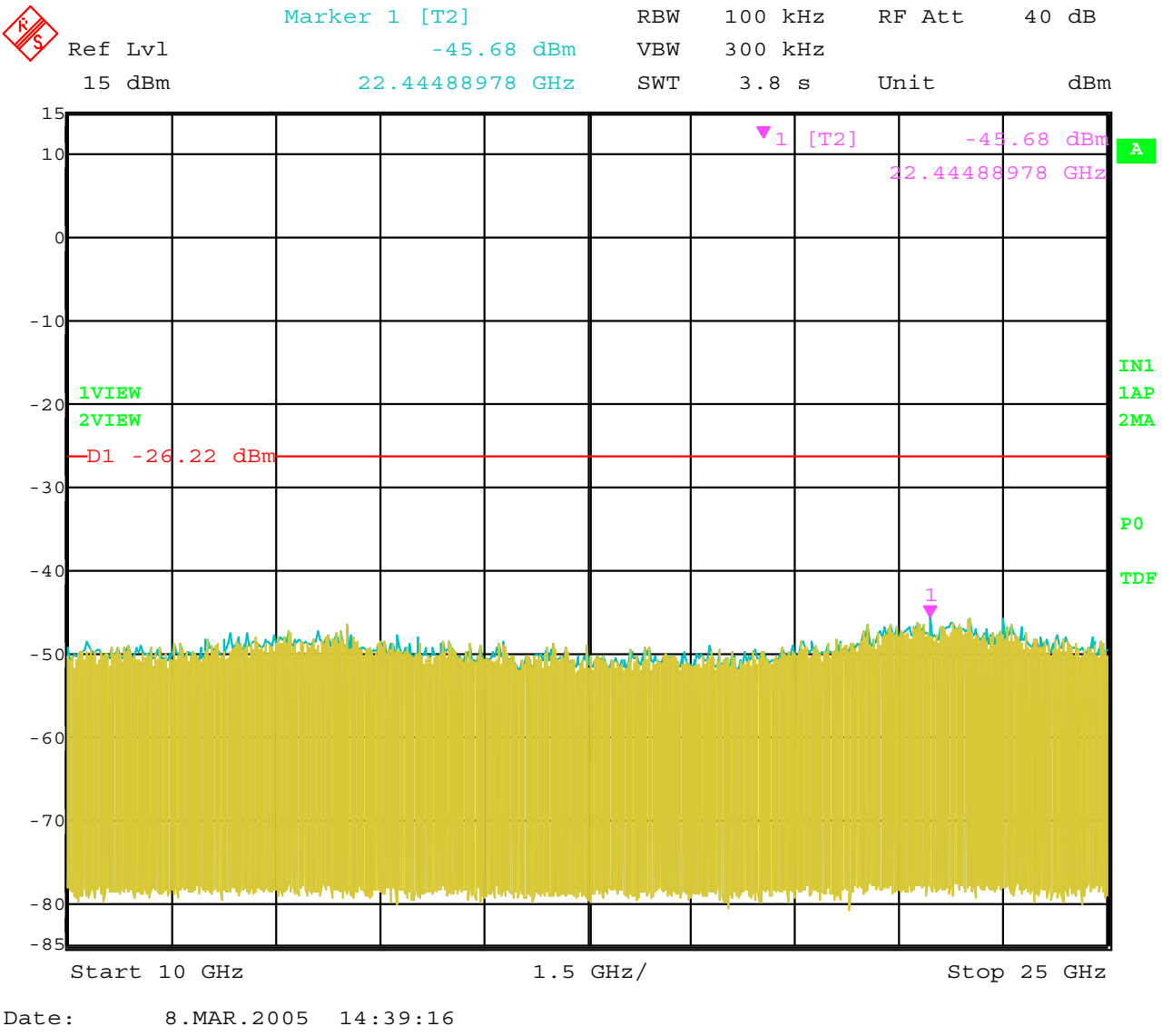
RF Antenna Conducted – Channel 1 – 802.11 g Mode – Hitachi Antenna – 2 MHz to 2 GHz



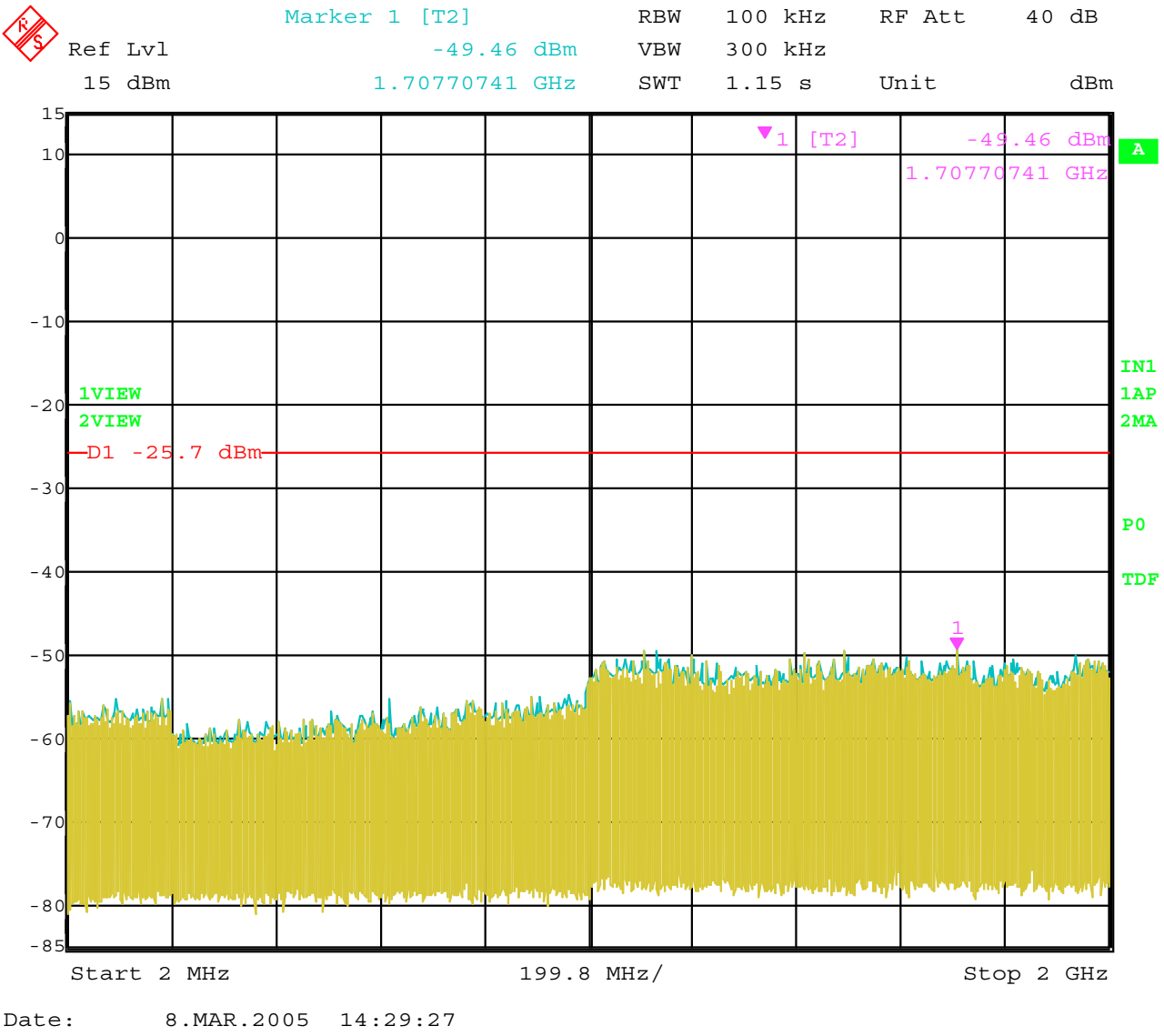
RF Antenna Conducted – Channel 1 – 802.11 g Mode – Hitachi Antenna – 2 GHz to 3 GHz



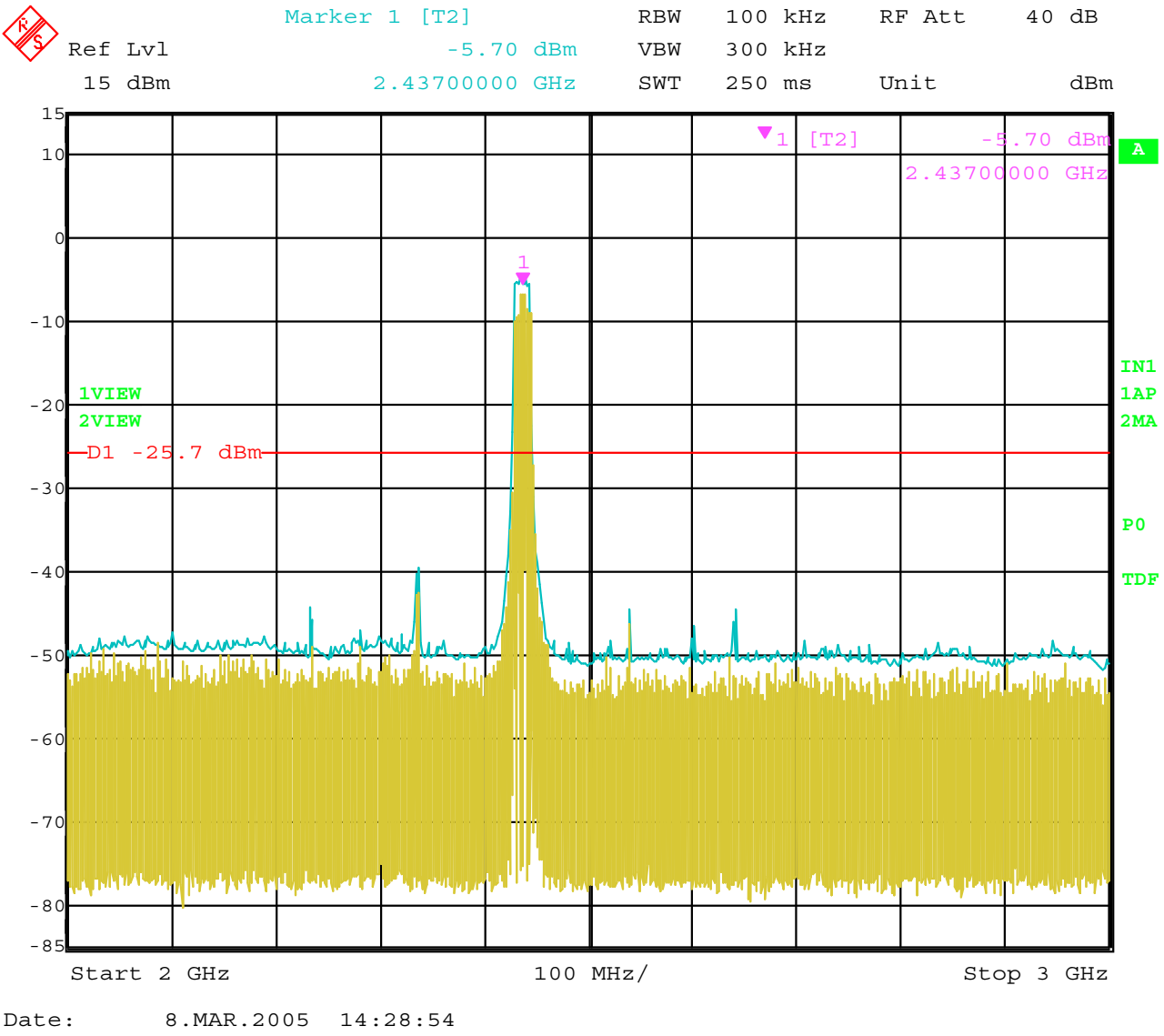
RF Antenna Conducted – Channel 1 – 802.11 g Mode – Hitachi Antenna – 3 GHz to 10 GHz



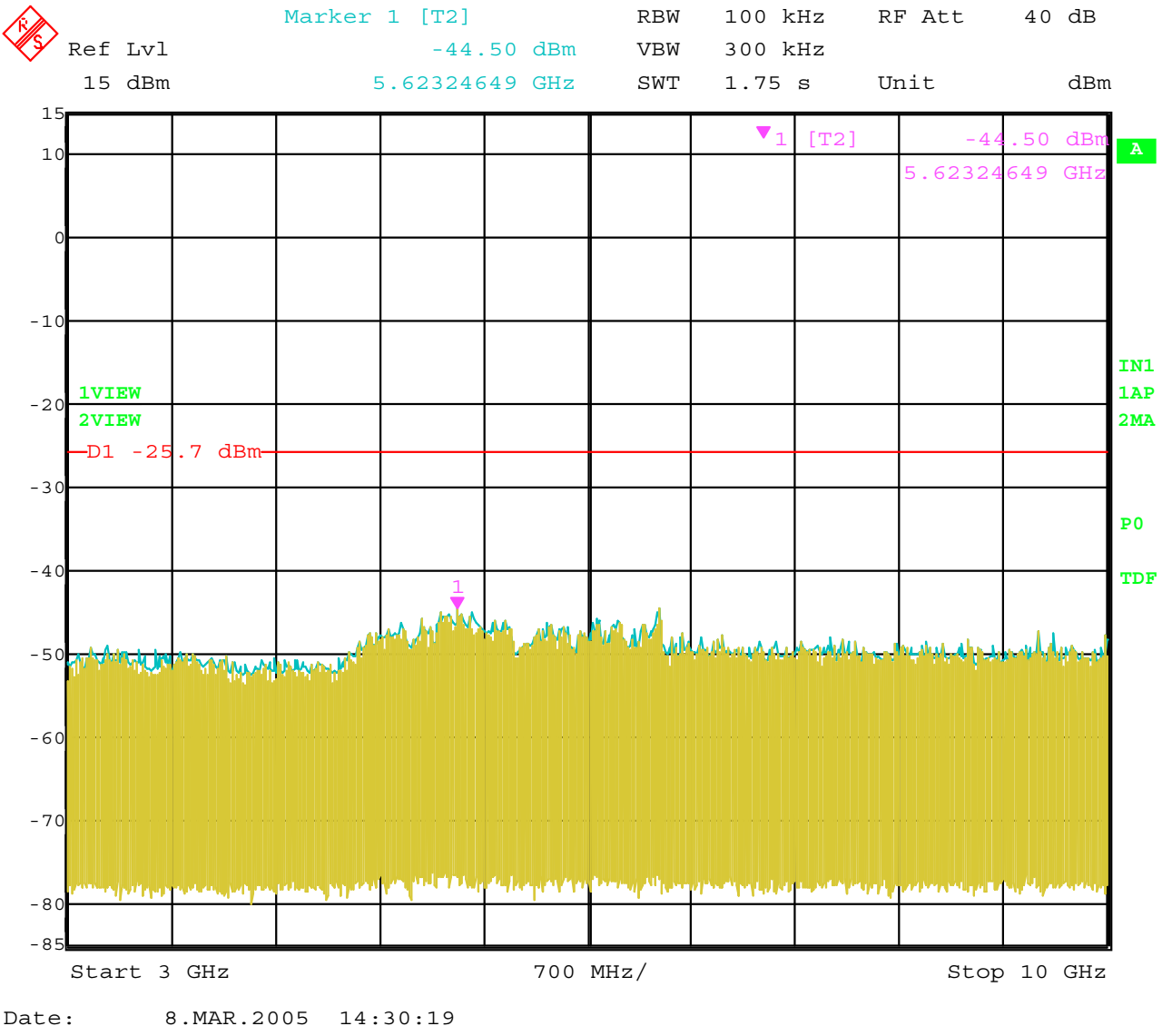
RF Antenna Conducted – Channel 1 – 802.11 g Mode – Hitachi Antenna – 10 GHz to 25 GHz



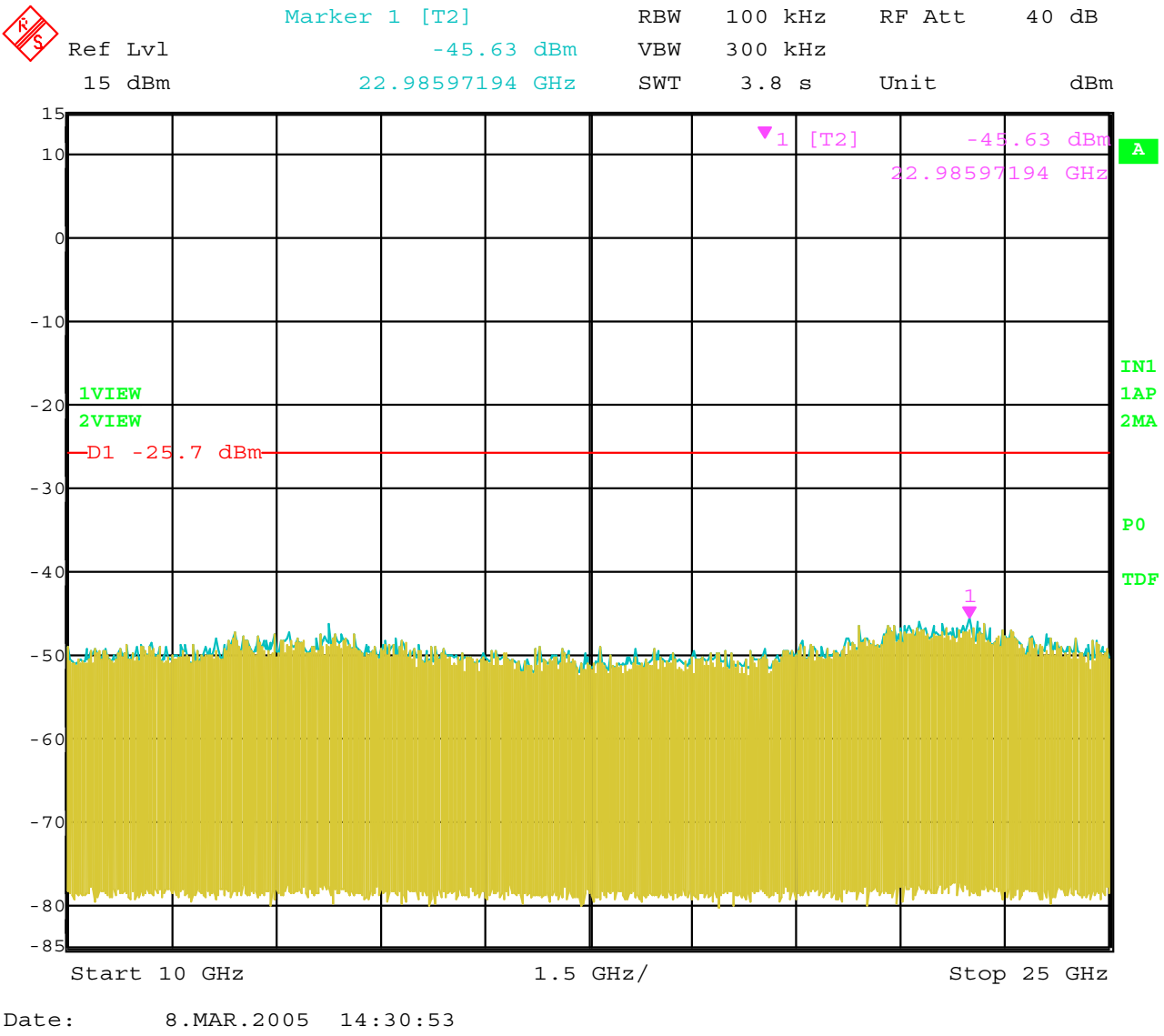
RF Antenna Conducted – Channel 6 – 802.11 g Mode – Hitachi Antenna – 2 MHz to 2 GHz



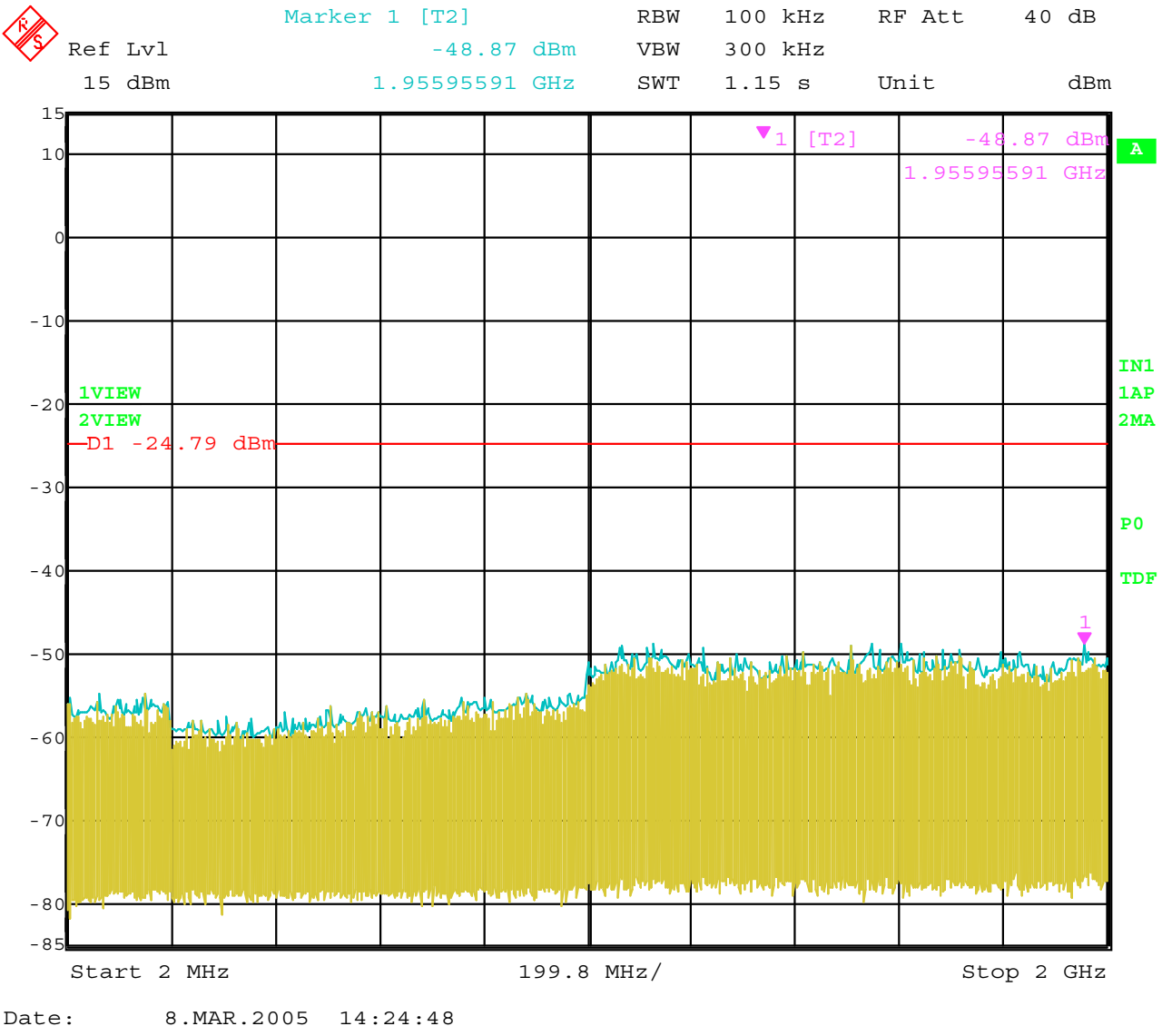
RF Antenna Conducted – Channel 6 – 802.11 g Mode – Hitachi Antenna – 2 GHz to 3 GHz



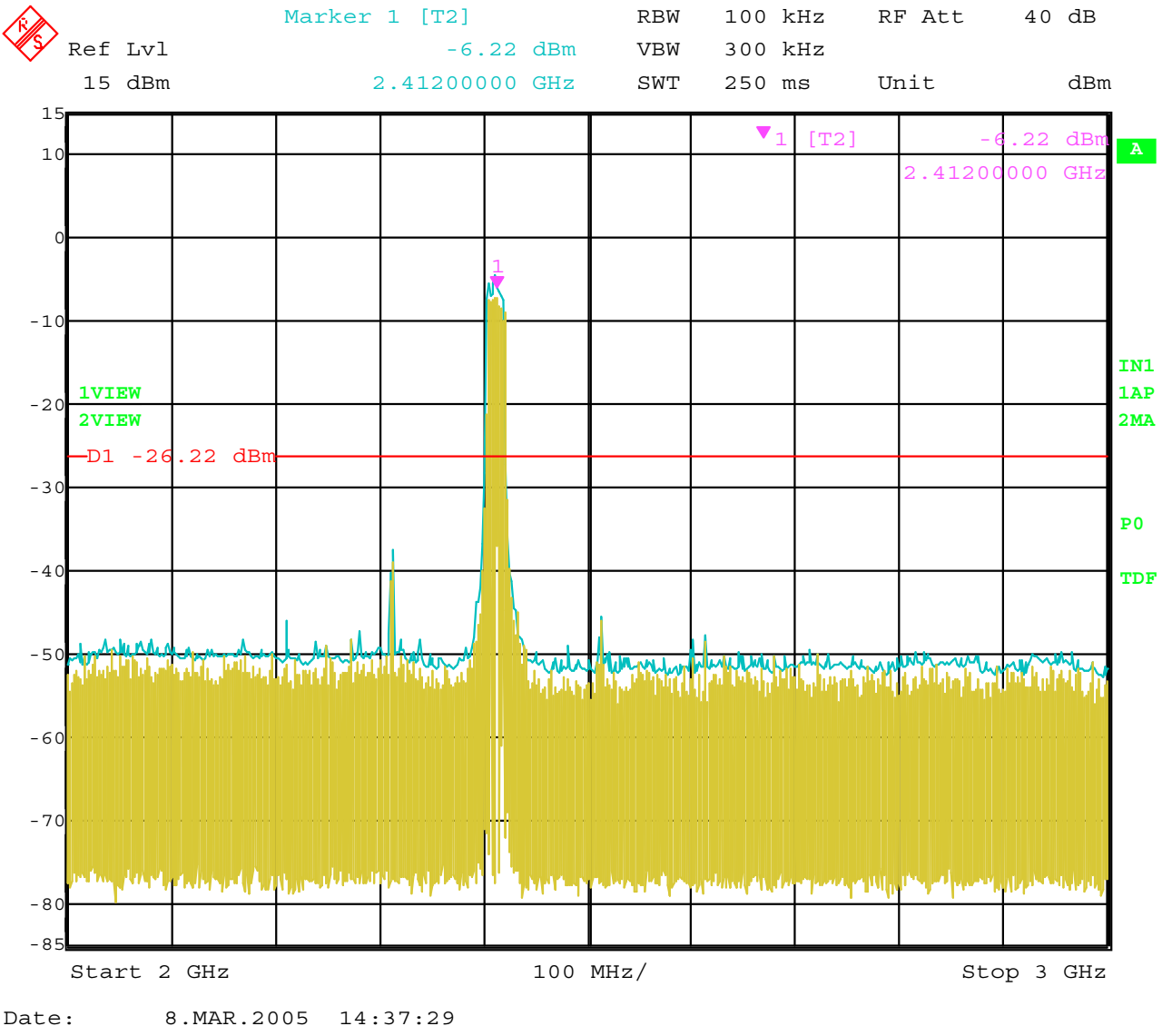
RF Antenna Conducted – Channel 6 – 802.11 g Mode – Hitachi Antenna – 3 GHz to 10 GHz



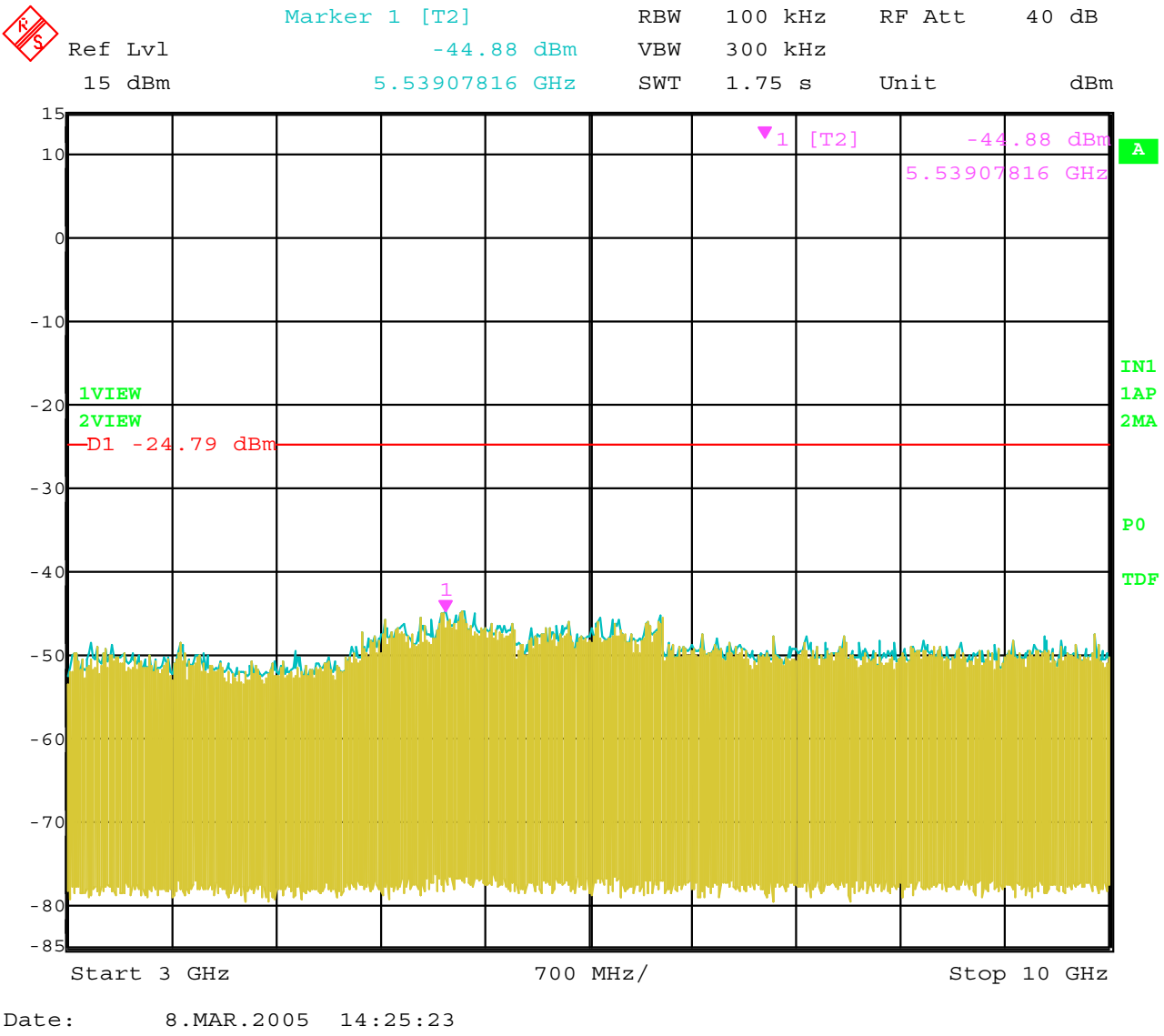
RF Antenna Conducted – Channel 6 – 802.11 g Mode – Hitachi Antenna – 10 GHz to 25 GHz



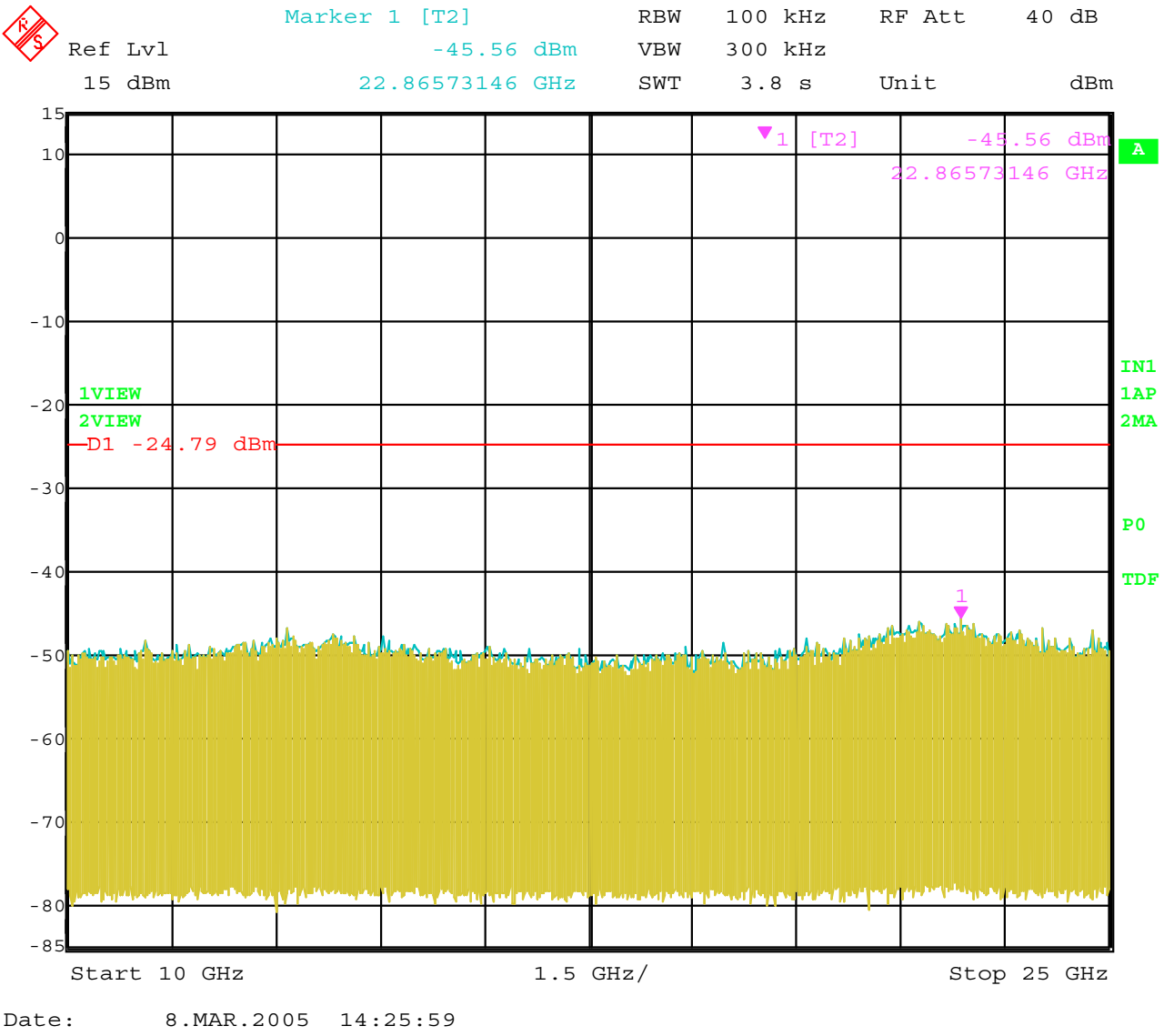
RF Antenna Conducted – Channel 11 – 802.11 g Mode – Hitachi Antenna – 2 MHz to 2 GHz



RF Antenna Conducted – Channel 11 – 802.11 g Mode – Hitachi Antenna – 2 GHz to 3 GHz



RF Antenna Conducted – Channel 11 – 802.11 g Mode – Hitachi Antenna – 3 GHz to 10 GHz



RF Antenna Conducted – Channel 11 – 802.11 g Mode – Hitachi Antenna – 10 GHz to 25 GHz

BAND EDGES

DATA SHEETS

FCC 15.247

Intel Corporation — Date: 3/09/05

Intel Mini PCI Type 3A 802.11BG Wireless LAN Adapter — Lab: B

Model: WM3A2200BG — Tested By: Kyle Fujimoto

Configuration: Dell Latitude Laptop D510 Agency Series Number: PP17L -- Main Port

With Hitachi Antenna

Channel 1 - 802.11 b Mode Gain : 28.0 Peak Power: 17.11 dBm Avg. Power: 14.75 dBm

Channel 6 - 802.11 b Mode Gain : 28.5 Peak Power: 17.08 dBm Avg. Power: 14.62 dBm

Channel 11 - 802.11 b Mode Gain : 29.0 Peak Power: 17.25 dBm Avg. Power: 14.85 dBm

Transmit Mode

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
2412	100.39	V	--	--	Peak	2.02	90	Fundamental of Channel 1
2412	94.12	V	--	--	Avg	2.02	90	@ 3 meters
2390	50.7	V	74	-23.3	Peak	2.02	90	**No** Marker Delta Method
2390	39.15	V	54	-14.85	Avg	2.02	90	Method Used
2382.4	52.02	V	74	-21.98	Peak	2.02	90	**No** Marker Delta Method
2385.5	40.7	V	54	-13.3	Avg	2.02	90	Method Used
2437	100.79	V	--	--	Peak	1.68	135	Fundamental of Channel 6
2437	94.27	V	--	--	Avg	1.68	135	@ 3 meters
2462	100.7	V	--	--	Peak	1.69	225	Fundamental of Channel 11
2462	94.59	V	--	--	Avg	1.69	225	@ 3 meters
2483.5	51.89	V	74	-22.11	Peak	1.69	225	**No** Marker Delta Method
2483.5	40.11	V	54	-13.89	Avg	1.69	225	Method Used
2488.5	53.82	V	74	-20.18	Peak	1.69	225	**No** Marker Delta Method
2488.3	42.79	V	54	-11.21	Avg	1.69	225	Method Used

FCC 15.247

Intel Corporation — Date: 3/09/05

Intel Mini PCI Type 3A 802.11BG Wireless LAN Adapter — Lab: B

Model: WM3A2200BG — Tested By: Kyle Fujimoto

Configuration: Dell Latitude Laptop D510 Agency Series Number: PP17L -- Main Port

With Hitachi Antenna

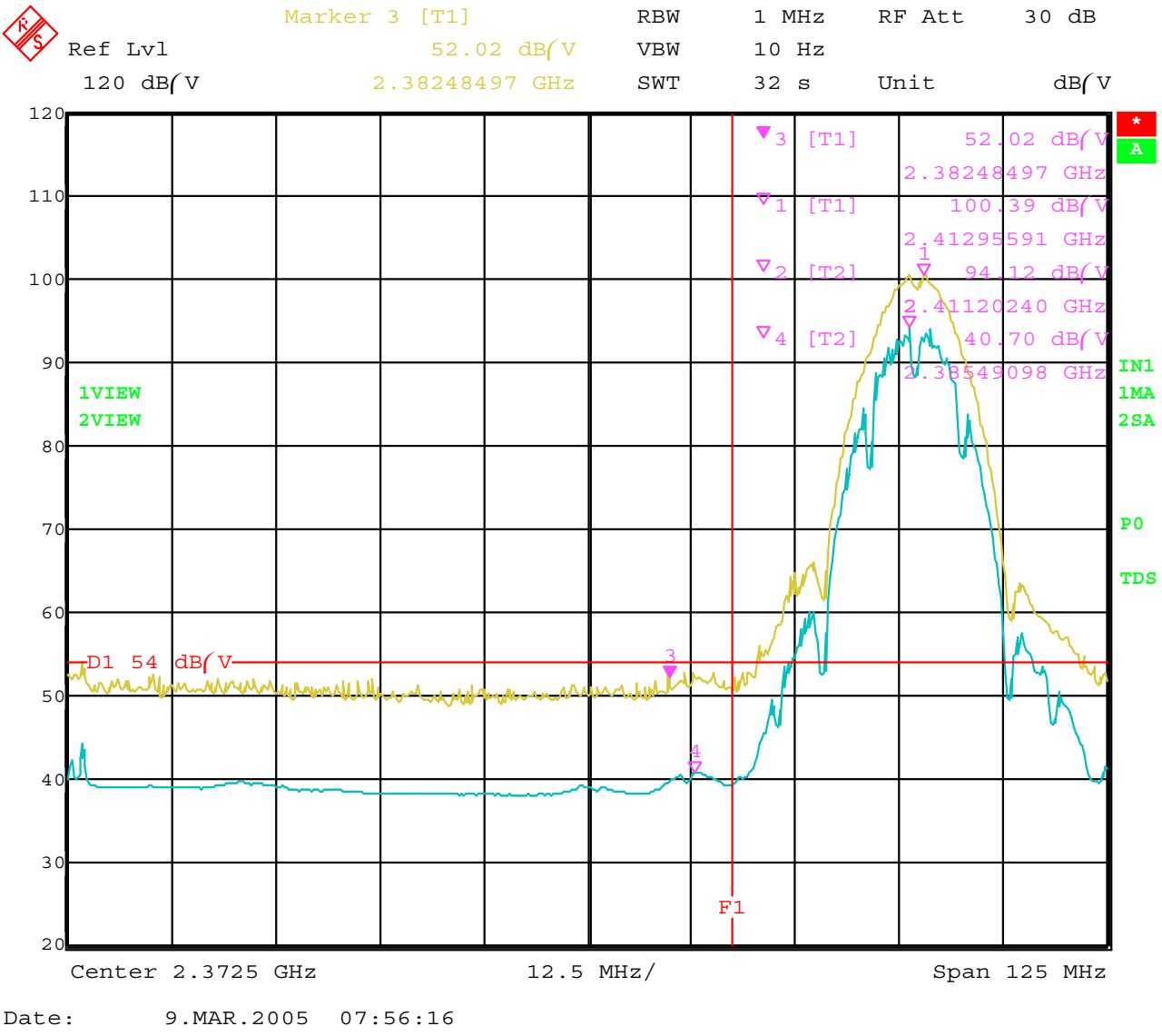
Channel 1 - 802.11 b Mode Gain : 28.0 Peak Power: 17.11 dBm Avg. Power: 14.75 dBm

Channel 6 - 802.11 b Mode Gain : 28.5 Peak Power: 17.08 dBm Avg. Power: 14.62 dBm

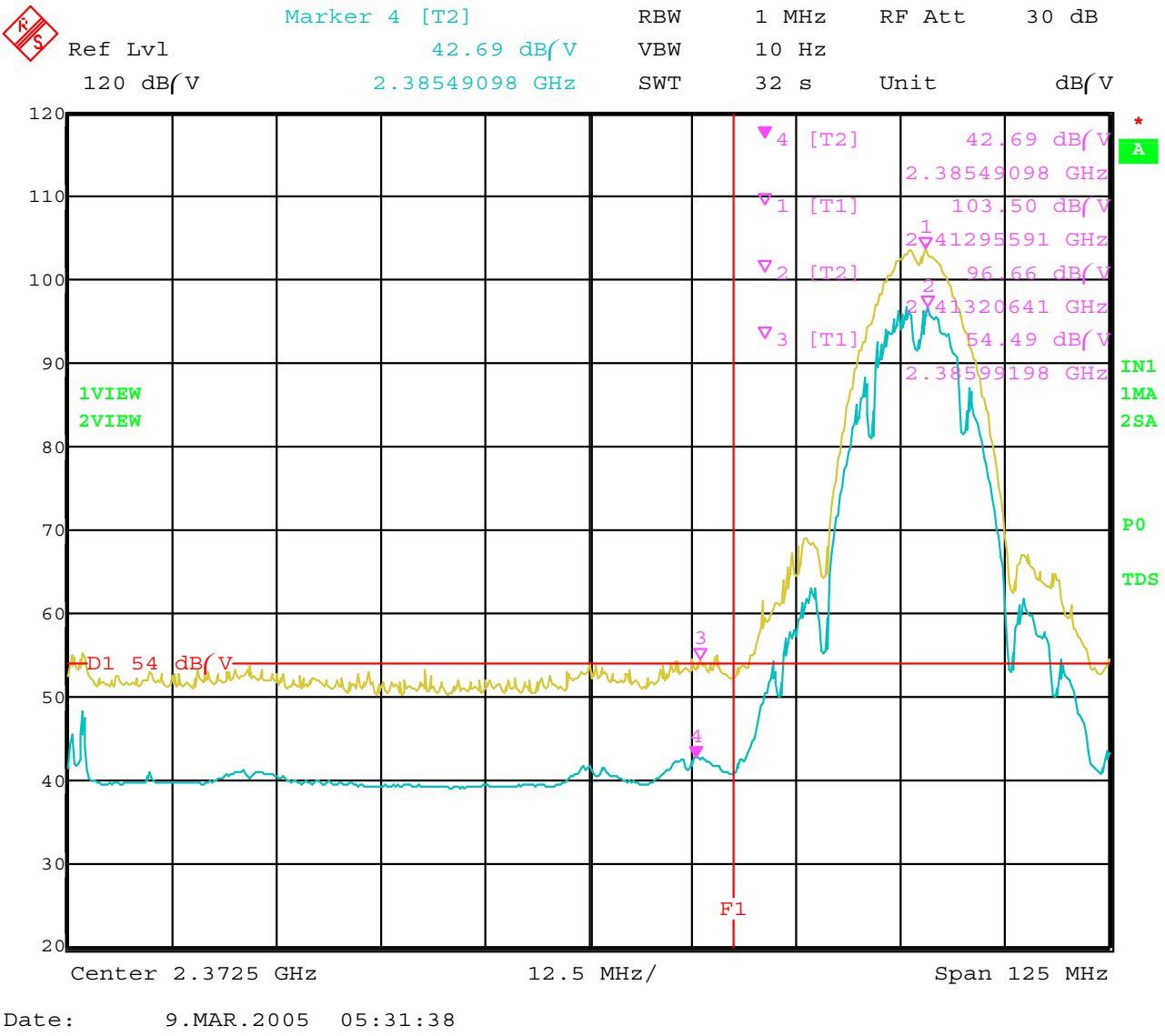
Channel 11 - 802.11 b Mode Gain : 29.0 Peak Power: 17.25 dBm Avg. Power: 14.85 dBm

Transmit Mode

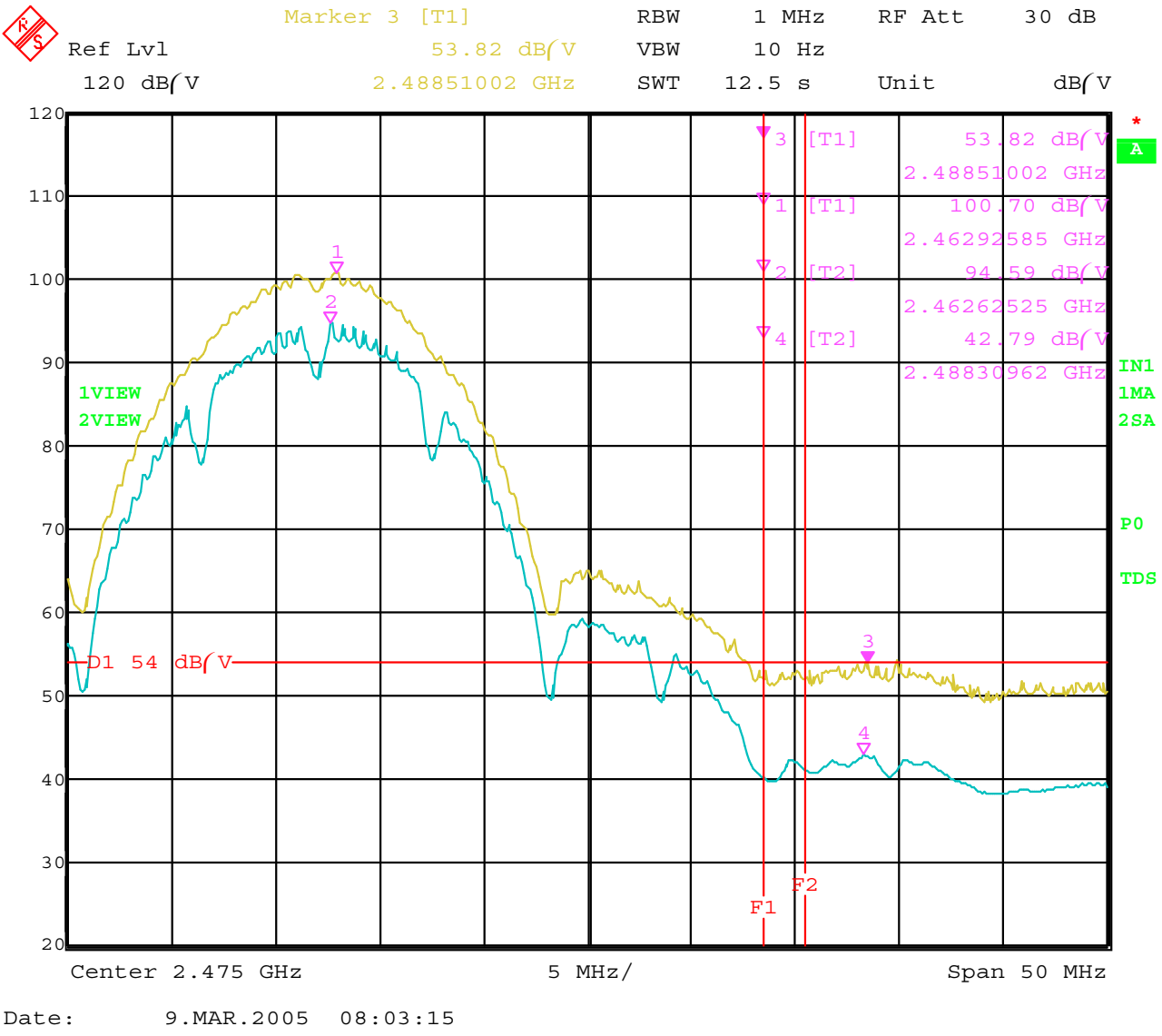
Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
2412	103.5	H	--	--	Peak	2.38	0	Fundamental of Channel 1
2412	96.66	H	--	--	Avg	2.38	0	@ 3 meters
2390	52.15	H	74	-21.85	Peak	2.38	0	**No** Marker Delta Method
2390	40.57	H	54	-13.43	Avg	2.38	0	Method Used
2385.4	54.49	H	74	-19.51	Peak	2.38	0	**No** Marker Delta Method
2385.4	42.69	H	54	-11.31	Avg	2.38	0	Method Used
2437	103.98	H	--	--	Peak	2.34	0	Fundamental of Channel 6
2437	97.02	H	--	--	Avg	2.34	0	@ 3 meters
2462	104.25	H	--	--	Peak	2.16	315	Fundamental of Channel 11
2462	97.65	H	--	--	Avg	2.16	315	@ 3 meters
2483.5	53.03	H	74	-20.97	Peak	2.16	315	**No** Marker Delta Method
2483.5	42.72	H	54	-11.28	Peak	2.16	315	Method Used
2486.7	56.71	H	74	-17.29	Peak	2.16	315	**No** Marker Delta Method
2488.8	46.11	H	54	-7.89	Peak	2.16	315	Method Used



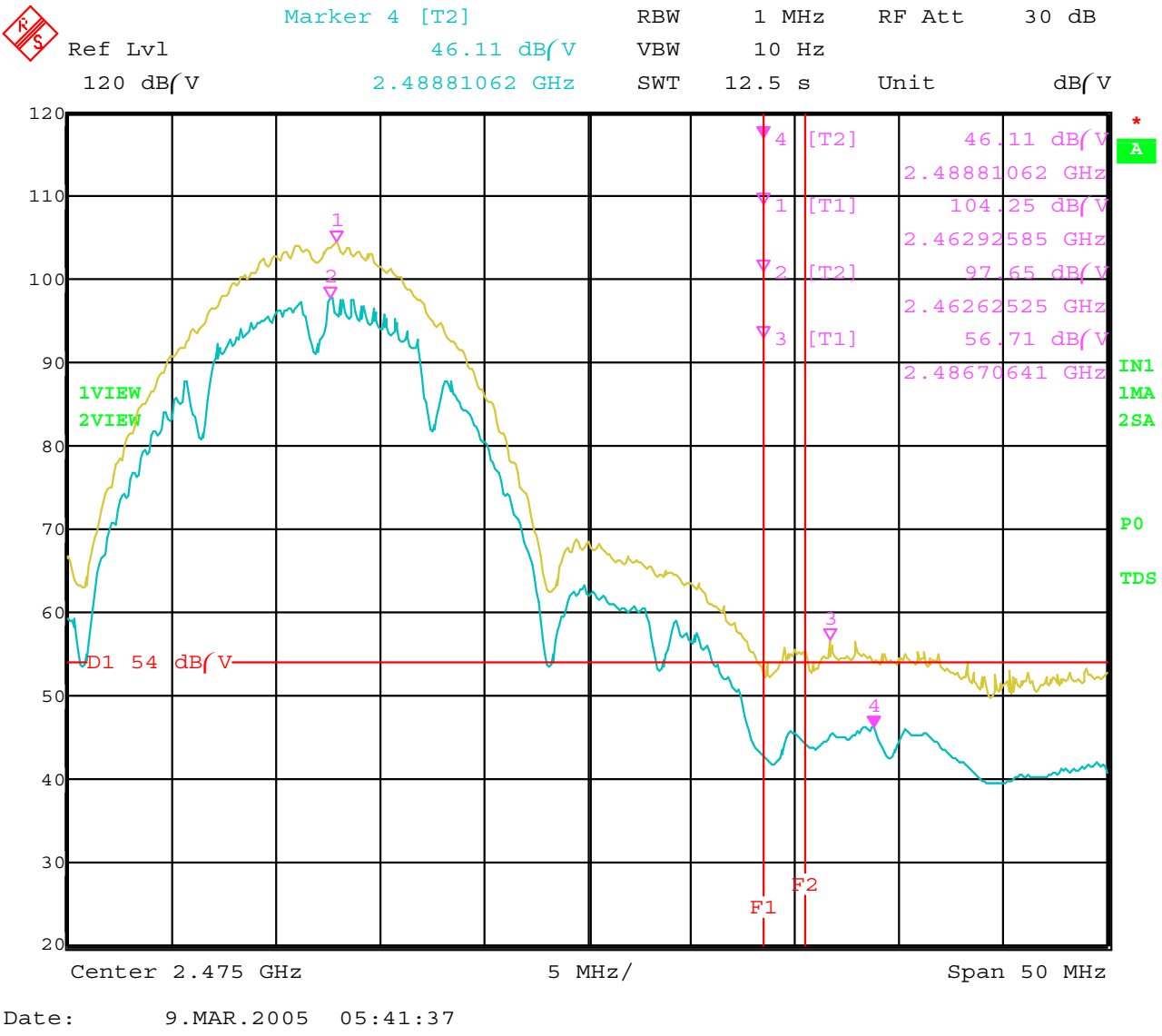
Band Edge – Channel 1 – Vertical Polarization – 802.11 b Mode – Hitachi Antenna



Band Edge – Channel 1 – Horizontal Polarization – 802.11 b Mode – Hitachi Antenna



Band Edge – Channel 11 – Vertical Polarization – 802.11 b Mode – Hitachi Antenna



Band Edge – Channel 11 – Horizontal Polarization – 802.11 b Mode – Hitachi Antenna

FCC 15.247

Intel Corporation — Date: 3/09/05

Intel Mini PCI Type 3A 802.11BG Wireless LAN Adapter — Lab: B

Model: WM3A2200BG — Tested By: Kyle Fujimoto

Configuration: Dell Latitude Laptop D510 Agency Series Number: PP17L -- Main Port

With Hitachi Antenna

Channel 1 - 802.11 g Mode Gain : 22.5 Peak Power: 16.70 dBm Avg. Power: 10.21 dBm

Channel 6 - 802.11 g Mode Gain : 22.5 Peak Power: 16.39 dBm Avg. Power: 9.87 dBm

Channel 11 - 802.11 g Mode Gain : 22.5 Peak Power: 16.14 dBm Avg. Power: 9.59 dBm

Transmit Mode

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
2412	100.46	V	--	--	Peak	2.35	135	Fundamental of Channel 1
2412	86.11	V	--	--	Avg	2.35	135	@ 3 meters
2390	57.37	V	74	-16.63	Peak	2.35	135	**No** Marker Delta Method
2390	43.12	V	54	-10.88	Avg	2.35	135	Method Used
2437	99.11	V	--	--	Peak	2.22	135	Fundamental of Channel 6
2437	84.18	V	--	--	Avg	2.22	135	@ 3 meters
2462	98.76	V	--	--	Peak	2.29	135	Fundamental of Channel 11
2462	84.03	V	--	--	Avg	2.29	135	@ 3 meters
2483.5	60.44	V	74	-13.56	Peak	2.29	135	**No** Marker Delta Method
2483.5	43.62	V	54	-10.38	Avg	2.29	135	Method Used
2487.1	56.7	V	74	-17.3	Peak	2.29	135	**With** Marker Delta Method
2486.7	44.11	V	54	-9.89	Avg	2.29	135	Method Used

FCC 15.247

Intel Corporation — Date: 3/09/05

Intel Mini PCI Type 3A 802.11BG Wireless LAN Adapter — Lab: B

Model: WM3A2200BG — Tested By: Kyle Fujimoto

Configuration: Dell Latitude Laptop D510 Agency Series Number: PP17L -- Main Port

With Hitachi Antenna

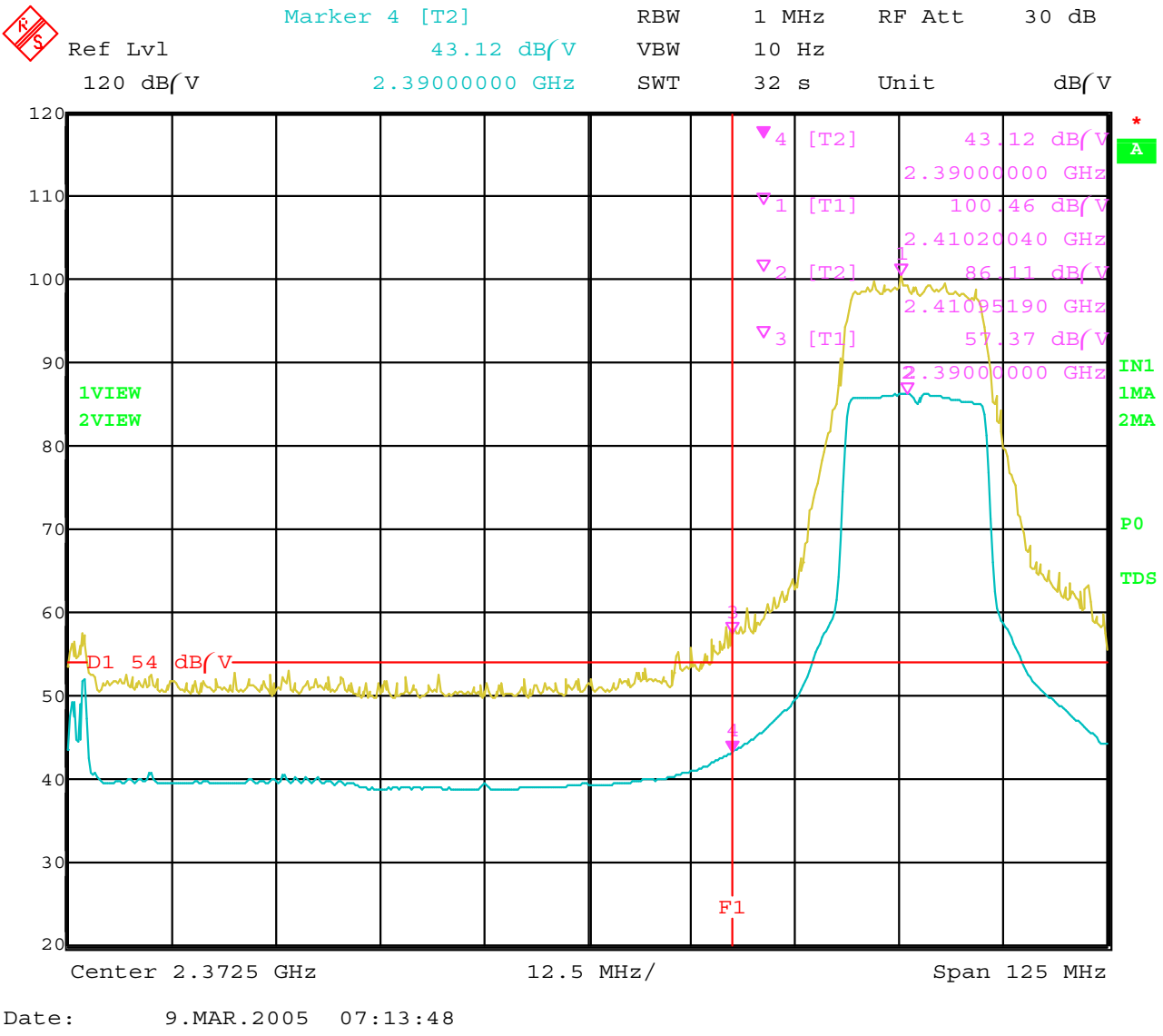
Channel 1 - 802.11 g Mode Gain : 22.5 Peak Power: 16.70 dBm Avg. Power: 10.21 dBm

Channel 6 - 802.11 g Mode Gain : 22.5 Peak Power: 16.39 dBm Avg. Power: 9.87 dBm

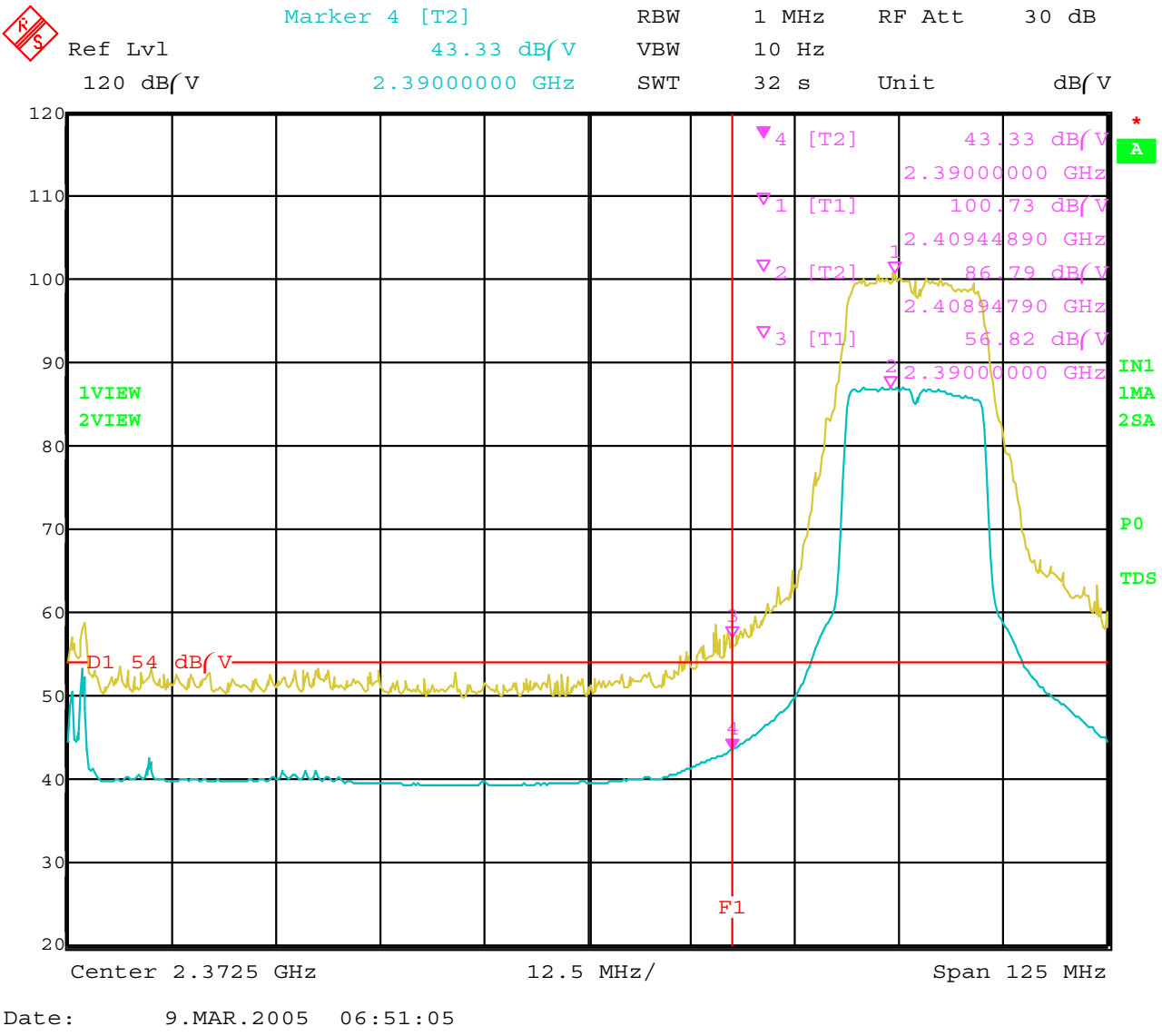
Channel 11 - 802.11 g Mode Gain : 22.5 Peak Power: 16.14 dBm Avg. Power: 9.59 dBm

Transmit Mode

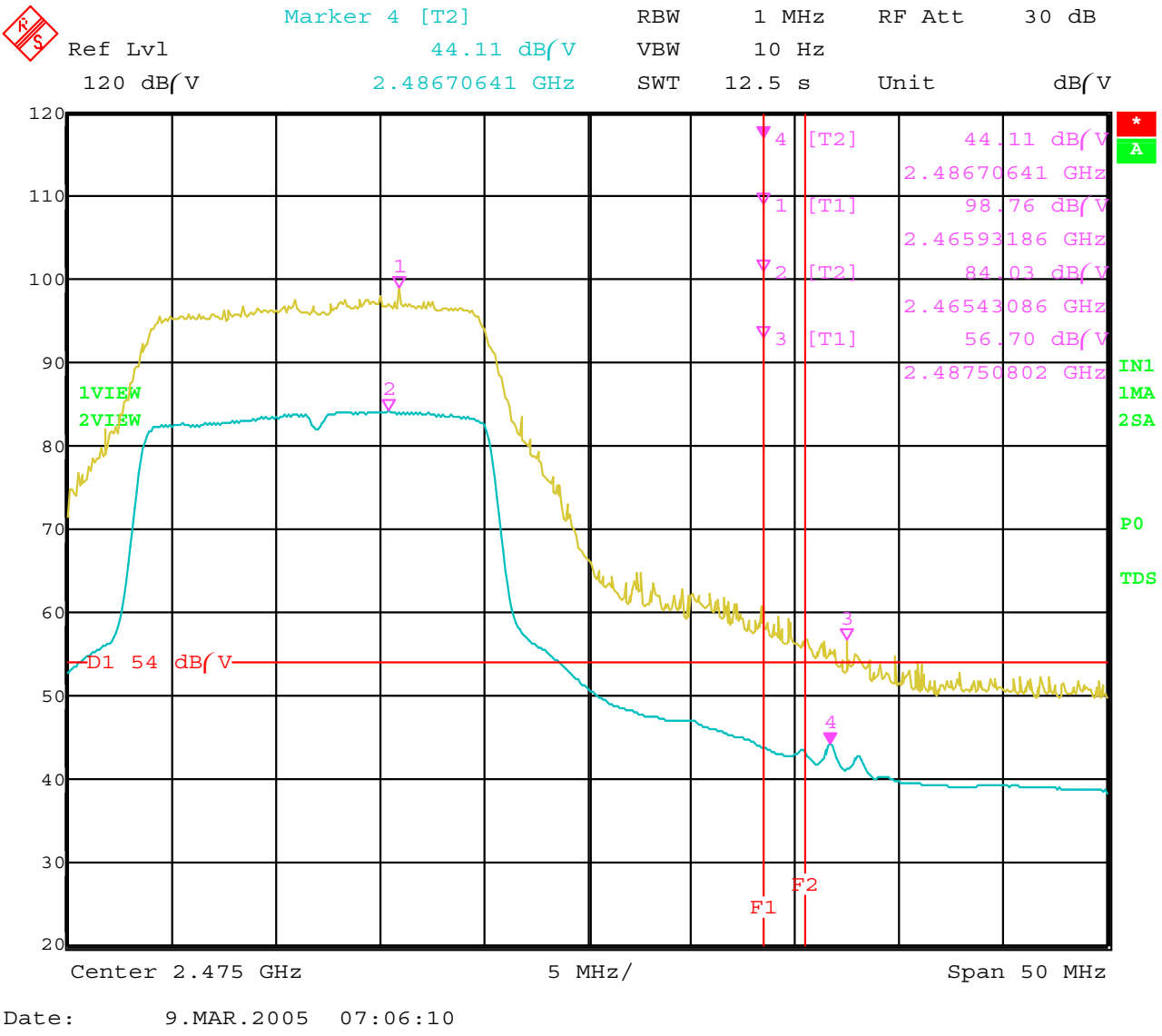
Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
2412	100.73	H	--	--	Peak	2.35	0	Fundamental of Channel 1
2412	86.79	H	--	--	Avg	2.35	0	@ 3 meters
2390	56.82	H	74	-17.18	Peak	2.35	0	**No** Marker Delta Method
2390	43.33	H	54	-10.67	Avg	2.35	0	Method Used
2437	100.37	H	--	--	Peak	2.3	0	Fundamental of Channel 6
2437	85.68	H	--	--	Avg	2.3	0	@ 3 meters
2462	100.28	H	--	--	Peak	2.19	315	Fundamental of Channel 11
2462	86.5	H	--	--	Avg	2.19	315	@ 3 meters
2483.5	63.51	H	74	-10.49	Peak	2.19	315	**No** Marker Delta Method
2483.5	45.41	H	54	-8.59	Peak	2.19	315	Method Used
2487	58.02	H	74	-15.98	Peak	2.19	315	**With** Marker Delta Method
2486.7	46.24	H	54	-7.76	Peak	2.19	315	Method Used



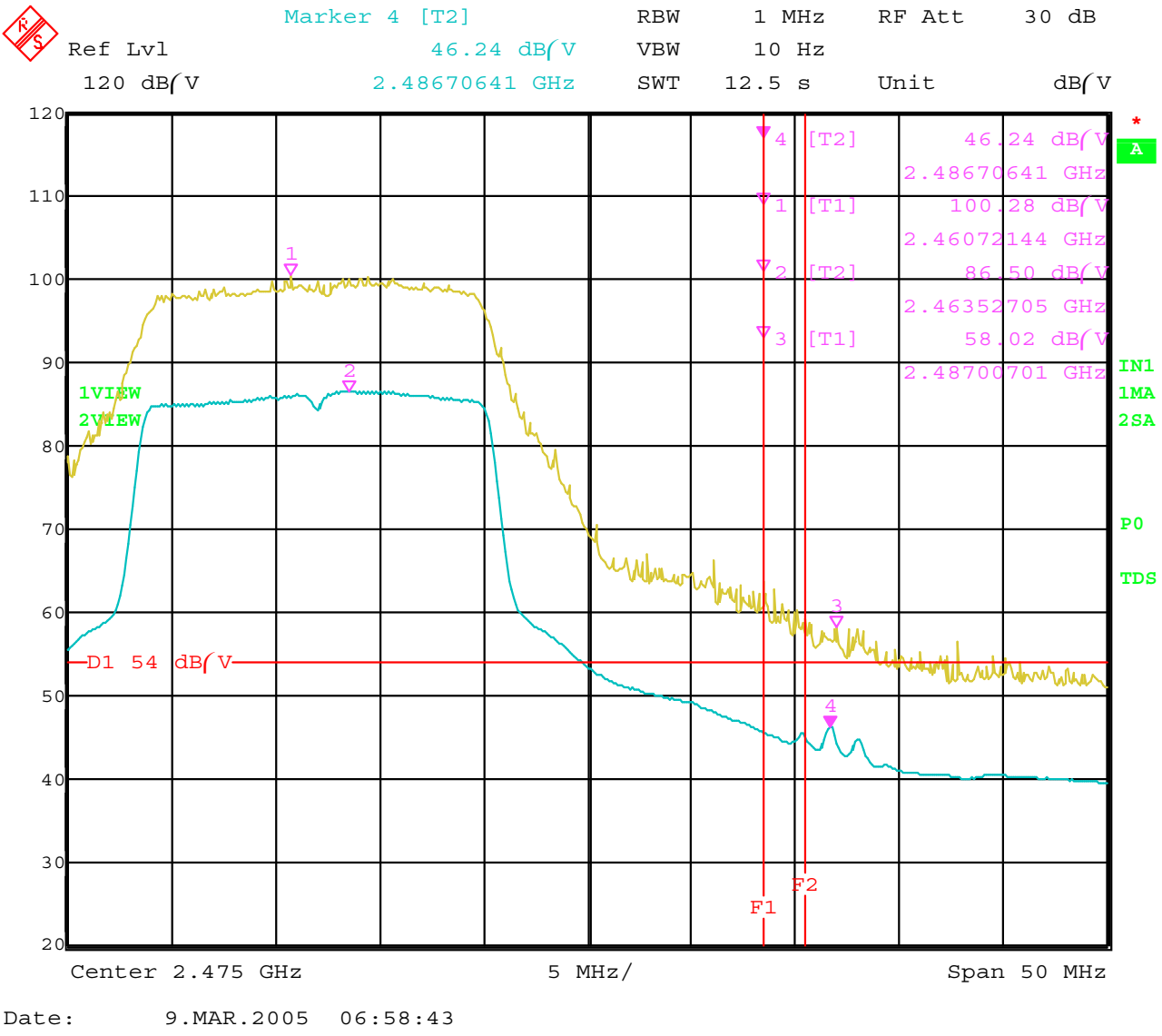
Band Edge – Channel 1 – Vertical Polarization – 802.11 g Mode – Hitachi Antenna



Band Edge – Channel 1 – Horizontal Polarization – 802.11 g Mode – Hitachi Antenna



Band Edge – Channel 11 – Vertical Polarization – 802.11 g Mode – Hitachi Antenna



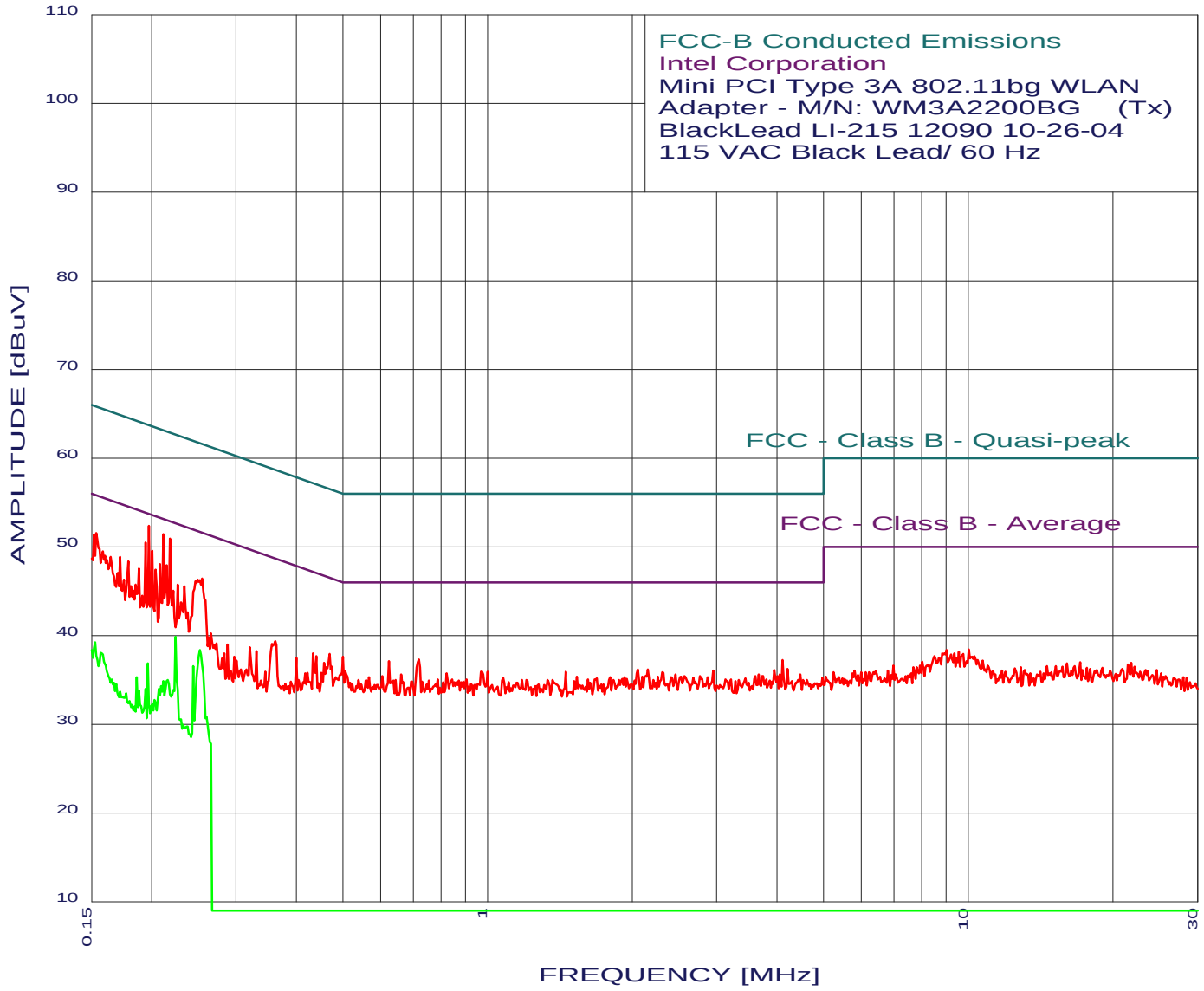
Band Edge – Channel 11 – Horizontal Polarization – 802.11 g Mode – Hitachi Antenna

CONDUCTED EMISSIONS

DATA SHEETS

EMISSION LEVEL [dBuV] PEAK
Graph forPeak& Average

3/09/2005 21:28:17



COMPATIBLE ELECTRONICS

COMPATIBLE ELECTRONICS

3/09/2005 21:28:17

Intel Corporation
Mini PCI Type 3A 802.11bg Wireless LAN
Model: WM3A2200BG (Transmit Mode)
With Hitachi Antenna
TEST ENGINEER : Benigno Chavez

---

39 highest peaks above -50.00 dB of FCC - Class B - Average limit line
Peak criteria : 1.00 dB, Curve : Peak

Peak#	Freq(MHz)	Amp(dBuV)	Limit(dB)	Delta(dB)
1	0.198	52.34	53.71	-1.37*
2	0.212	51.43	53.14	-1.71*
3	0.219	50.93	52.87	-1.94*
4	0.195	50.44	53.84	-3.40*
5	0.201	49.54	53.58	-4.04*
6	0.153	51.56	55.82	-4.26*
7	0.152	51.36	55.91	-4.55*
8	0.215	47.93	53.00	-5.08*
9	0.255	46.40	51.60	-5.20*
10	0.208	48.03	53.27	-5.23*
11	0.172	48.85	54.86	-6.00*
12	0.204	47.44	53.44	-6.01*
13	0.158	49.46	55.56	-6.10*
14	0.179	48.35	54.54	-6.19*
15	0.164	48.86	55.25	-6.39*
16	0.188	47.55	54.10	-6.56*
17	0.234	45.51	52.30	-6.78*
18	0.227	45.72	52.57	-6.85*
19	0.222	45.02	52.74	-7.72*
20	0.170	47.05	54.94	-7.89*
21	0.500	37.57	46.01	-8.43
22	0.175	46.25	54.72	-8.47*
23	0.185	45.75	54.24	-8.49*
24	0.469	37.88	46.53	-8.65
25	0.720	37.29	46.00	-8.71
26	0.230	43.72	52.43	-8.72*
27	4.114	37.23	46.00	-8.77
28	0.181	45.55	54.46	-8.91*
29	0.624	37.08	46.00	-8.92
30	0.433	37.99	47.19	-9.21
31	0.362	39.32	48.69	-9.38
32	0.440	37.69	47.06	-9.38
33	0.192	44.44	53.97	-9.53*
34	4.204	36.24	46.00	-9.76
35	2.156	36.14	46.00	-9.86
36	2.055	36.13	46.00	-9.87
37	0.457	36.88	46.76	-9.87
38	3.945	36.11	46.00	-9.89
39	2.948	36.02	46.00	-9.98

---

* Please See the Average Readings on the Next Page and on the Plot

COMPATIBLE ELECTRONICS

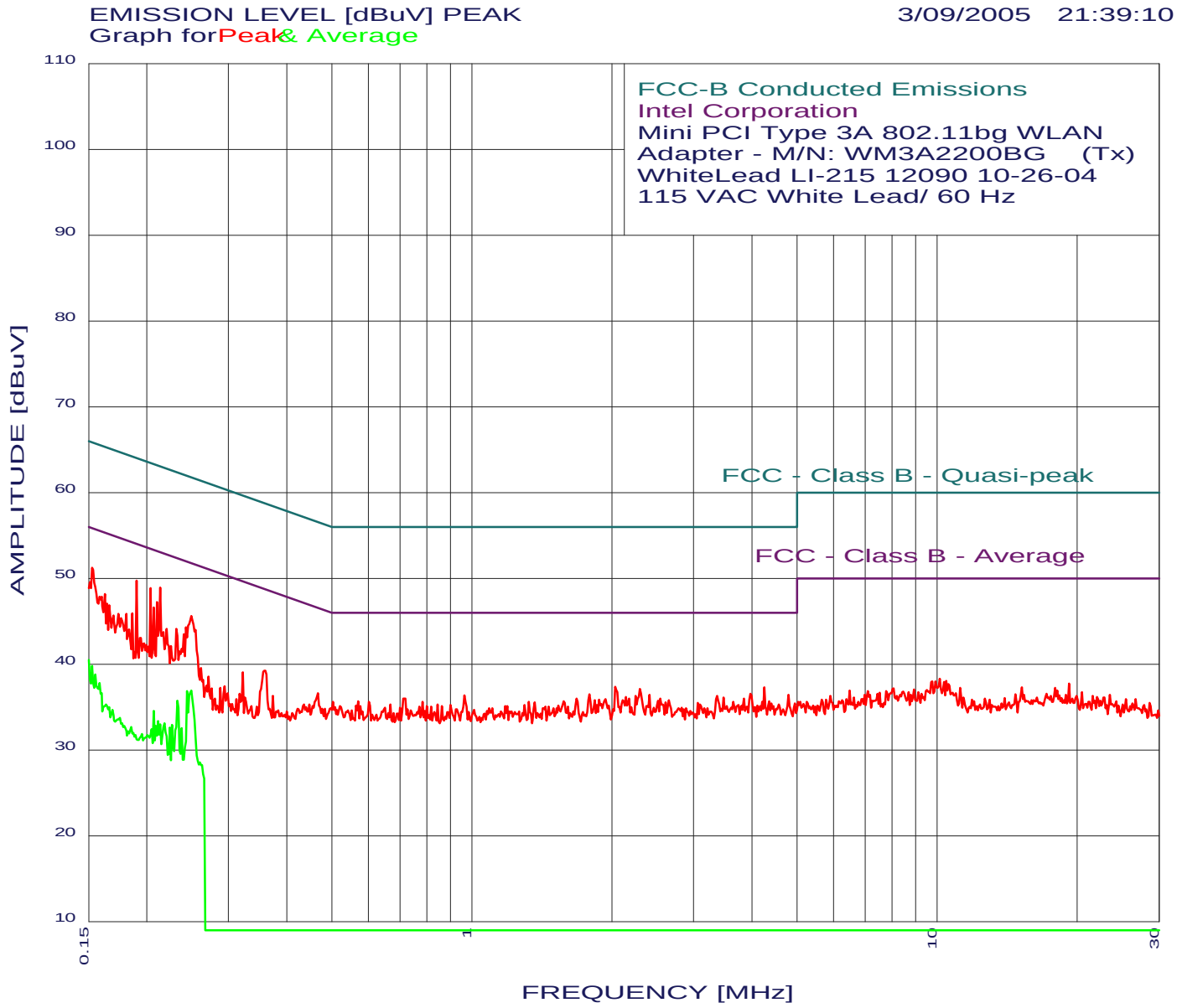
3/09/2005 21:28:17

Intel Corporation
Mini PCI Type 3A 802.11bg Wireless LAN
Model: WM3A2200BG (Transmit Mode)
With Hitachi Antenna
TEST ENGINEER : Benigno Chavez

---

27 highest peaks above -50.00 dB of FCC - Class B - Average limit line
Peak criteria : 0.10 dB, Curve : Average

Peak#	Freq(MHz)	Amp(dBuV)	Limit(dB)	Delta(dB)
1	0.224	39.85	52.65	-12.80
2	0.252	38.33	51.68	-13.35
3	0.244	36.55	51.95	-15.40
4	0.152	39.24	55.86	-16.62
5	0.197	36.85	53.75	-16.90
6	0.157	38.06	55.64	-17.58
7	0.216	34.99	52.96	-17.97
8	0.212	34.86	53.14	-18.28
9	0.222	33.84	52.74	-18.90
10	0.186	35.28	54.19	-18.92
11	0.210	34.26	53.23	-18.96
12	0.207	33.98	53.31	-19.33
13	0.195	33.95	53.84	-19.89
14	0.165	35.04	55.20	-20.17
15	0.188	33.80	54.10	-20.31
16	0.167	34.66	55.11	-20.45
17	0.169	34.54	55.03	-20.48
18	0.260	30.84	51.42	-20.58
19	0.203	32.72	53.49	-20.77
20	0.172	33.68	54.86	-21.17
21	0.177	33.45	54.63	-21.18
22	0.201	32.25	53.58	-21.33
23	0.180	32.57	54.50	-21.93
24	0.183	32.16	54.37	-22.21
25	0.184	31.96	54.28	-22.33
26	0.233	29.89	52.34	-22.45
27	0.237	29.73	52.21	-22.48



COMPATIBLE ELECTRONICS

COMPATIBLE ELECTRONICS

3/09/2005 21:39:10

Intel Corporation
Mini PCI Type 3A 802.11bg Wireless LAN
Model: WM3A2200BG (Transmit Mode)
With Hitachi Antenna
TEST ENGINEER : Benigno Chavez

---

39 highest peaks above -50.00 dB of FCC - Class B - Average limit line
Peak criteria : 1.00 dB, Curve : Peak

Peak#	Freq(MHz)	Amp(dBuV)	Limit(dB)	Delta(dB)
1	0.214	48.90	53.05	-4.14*
2	0.190	49.72	54.01	-4.29*
3	0.152	51.25	55.86	-4.62*
4	0.204	48.81	53.44	-4.63*
5	0.211	47.21	53.18	-5.97*
6	0.250	45.57	51.77	-6.20*
7	0.207	46.61	53.31	-6.70*
8	0.162	48.14	55.34	-7.20*
9	0.243	44.28	52.00	-7.72*
10	0.164	47.04	55.25	-8.21*
11	0.186	45.93	54.19	-8.27*
12	0.232	44.09	52.39	-8.30*
13	0.166	46.84	55.16	-8.32*
14	0.240	43.48	52.08	-8.60*
15	0.181	45.83	54.46	-8.63*
16	2.034	37.34	46.00	-8.66
17	0.221	44.10	52.78	-8.69*
18	4.249	37.28	46.00	-8.72
19	2.298	37.07	46.00	-8.93
20	0.174	45.83	54.77	-8.93*
21	0.170	45.64	54.98	-9.35*
22	3.966	36.56	46.00	-9.44
23	1.790	36.49	46.00	-9.51
24	0.358	39.20	48.78	-9.58
25	4.799	36.40	46.00	-9.60
26	2.410	36.39	46.00	-9.61
27	0.963	36.32	46.00	-9.68
28	3.365	36.29	46.00	-9.71
29	2.145	36.16	46.00	-9.84
30	3.474	36.10	46.00	-9.90
31	0.466	36.58	46.58	-10.00
32	2.540	36.00	46.00	-10.00
33	0.720	36.00	46.00	-10.00
34	1.680	35.97	46.00	-10.03
35	3.841	35.95	46.00	-10.05
36	1.939	35.93	46.00	-10.07
37	2.651	35.81	46.00	-10.19
38	1.840	35.81	46.00	-10.19
39	0.183	44.03	54.33	-10.30*

---

* Please See the Average Readings on the Next Page and on the Plot

COMPATIBLE ELECTRONICS

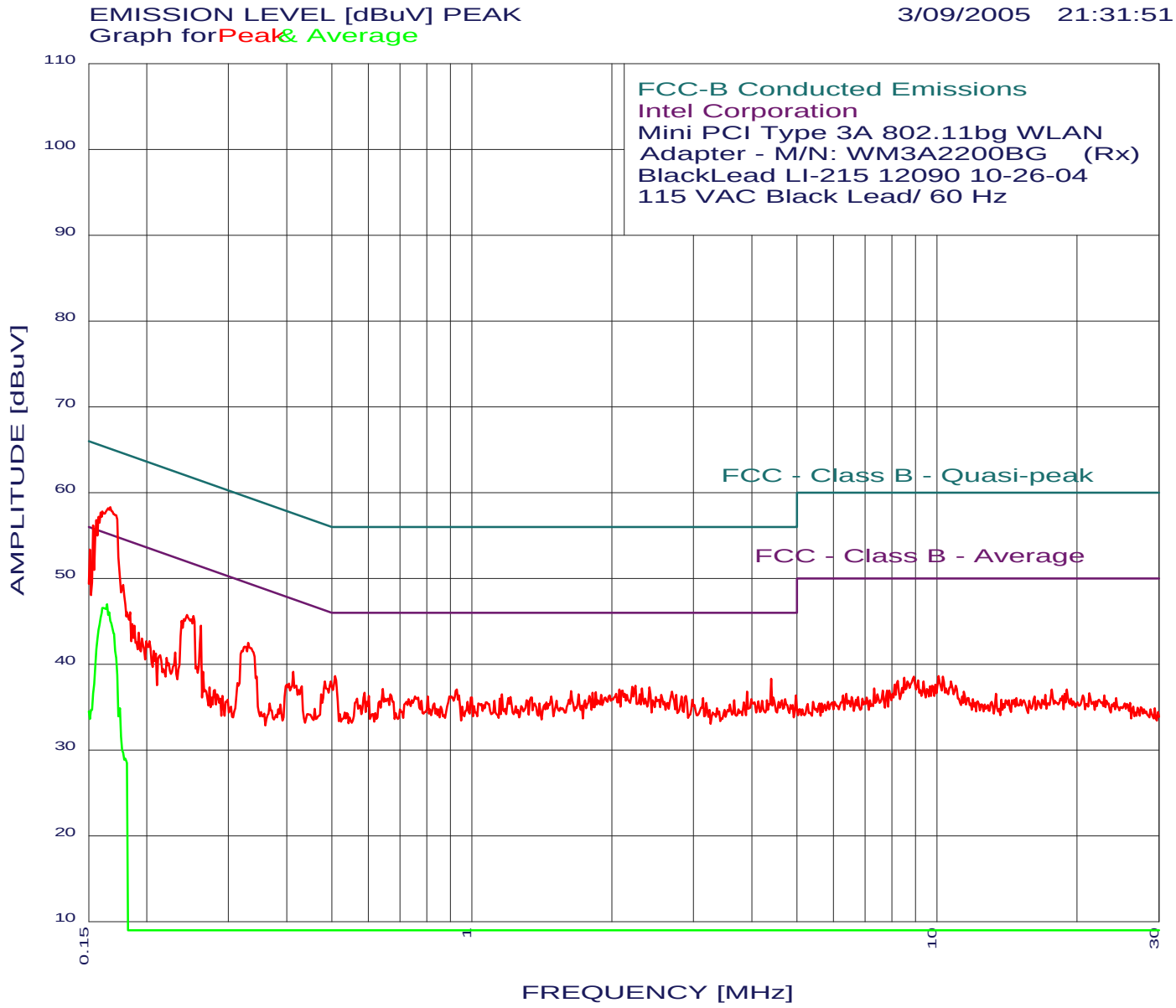
3/09/2005 21:39:10

Intel Corporation
Mini PCI Type 3A 802.11bg Wireless LAN
Model: WM3A2200BG (Transmit Mode)
With Hitachi Antenna
TEST ENGINEER : Benigno Chavez

---

26 highest peaks above -50.00 dB of FCC - Class B - Average limit line
Peak criteria : 0.10 dB, Curve : Average

Peak#	Freq(MHz)	Amp(dBuV)	Limit(dB)	Delta(dB)
1	0.250	36.90	51.77	-14.87
2	0.244	36.85	51.95	-15.10
3	0.152	39.80	55.86	-16.07
4	0.233	35.72	52.34	-16.63
5	0.155	38.79	55.73	-16.95
6	0.158	37.80	55.56	-17.75
7	0.207	34.51	53.31	-18.80
8	0.238	32.54	52.17	-19.63
9	0.227	32.92	52.57	-19.65
10	0.212	33.36	53.14	-19.78
11	0.219	33.07	52.87	-19.80
12	0.163	35.29	55.29	-20.00
13	0.224	32.59	52.65	-20.06
14	0.214	32.95	53.05	-20.09
15	0.166	35.00	55.16	-20.16
16	0.169	34.67	55.03	-20.36
17	0.210	32.77	53.23	-20.46
18	0.205	32.42	53.40	-20.98
19	0.175	33.71	54.72	-21.01
20	0.185	32.65	54.24	-21.59
21	0.179	32.76	54.54	-21.78
22	0.201	31.70	53.58	-21.88
23	0.196	31.85	53.80	-21.95
24	0.183	32.17	54.37	-22.20
25	0.189	31.70	54.06	-22.35
26	0.260	28.51	51.42	-22.91



COMPATIBLE ELECTRONICS

COMPATIBLE ELECTRONICS

3/09/2005 21:31:51

Intel Corporation
Mini PCI Type 3A 802.11bg Wireless LAN
Model: WM3A2200BG (Receive Mode)
With Hitachi Antenna
TEST ENGINEER : Benigno Chavez

---

39 highest peaks above -50.00 dB of FCC - Class B - Average limit line
Peak criteria : 1.00 dB, Curve : Peak

Peak#	Freq(MHz)	Amp(dBuV)	Limit(dB)	Delta(dB)
1	0.167	58.25	55.11	3.14*
2	0.156	56.76	55.69	1.07*
3	0.153	56.16	55.82	0.34*
4	0.151	53.36	55.95	-2.59*
5	0.244	45.71	51.95	-6.24
6	0.262	44.49	51.38	-6.88
7	0.331	42.44	49.44	-7.00
8	0.508	38.57	46.00	-7.43
9	4.408	38.26	46.00	-7.74
10	0.497	37.97	46.05	-8.08
11	0.484	37.98	46.27	-8.30
12	0.413	39.09	47.59	-8.50
13	2.250	37.45	46.00	-8.55
14	2.214	37.34	46.00	-8.66
15	2.410	37.26	46.00	-8.74
16	2.322	37.15	46.00	-8.85
17	0.644	37.09	46.00	-8.91
18	2.077	37.03	46.00	-8.97
19	0.929	37.01	46.00	-8.99
20	2.111	36.93	46.00	-9.07
21	1.637	36.85	46.00	-9.15
22	3.903	36.81	46.00	-9.19
23	2.693	36.79	46.00	-9.21
24	1.849	36.69	46.00	-9.31
25	1.820	36.68	46.00	-9.32
26	0.589	36.68	46.00	-9.32
27	0.669	36.49	46.00	-9.51
28	1.699	36.46	46.00	-9.54
29	1.160	36.45	46.00	-9.55
30	0.186	44.65	54.19	-9.55
31	2.298	36.45	46.00	-9.55
32	1.899	36.40	46.00	-9.60
33	2.751	36.40	46.00	-9.60
34	2.554	36.38	46.00	-9.62
35	0.188	44.45	54.10	-9.66
36	4.980	36.32	46.00	-9.68
37	2.885	36.31	46.00	-9.69
38	0.601	36.28	46.00	-9.72
39	1.790	36.28	46.00	-9.72

---

* Please See the Average Readings on the Next Page and on the Plot

COMPATIBLE ELECTRONICS

3/09/2005 21:31:51

Intel Corporation
Mini PCI Type 3A 802.11bg Wireless LAN
WM3A2200BG (Receive Mode)
With Hitachi Antenna
TEST ENGINEER : Benigno Chavez

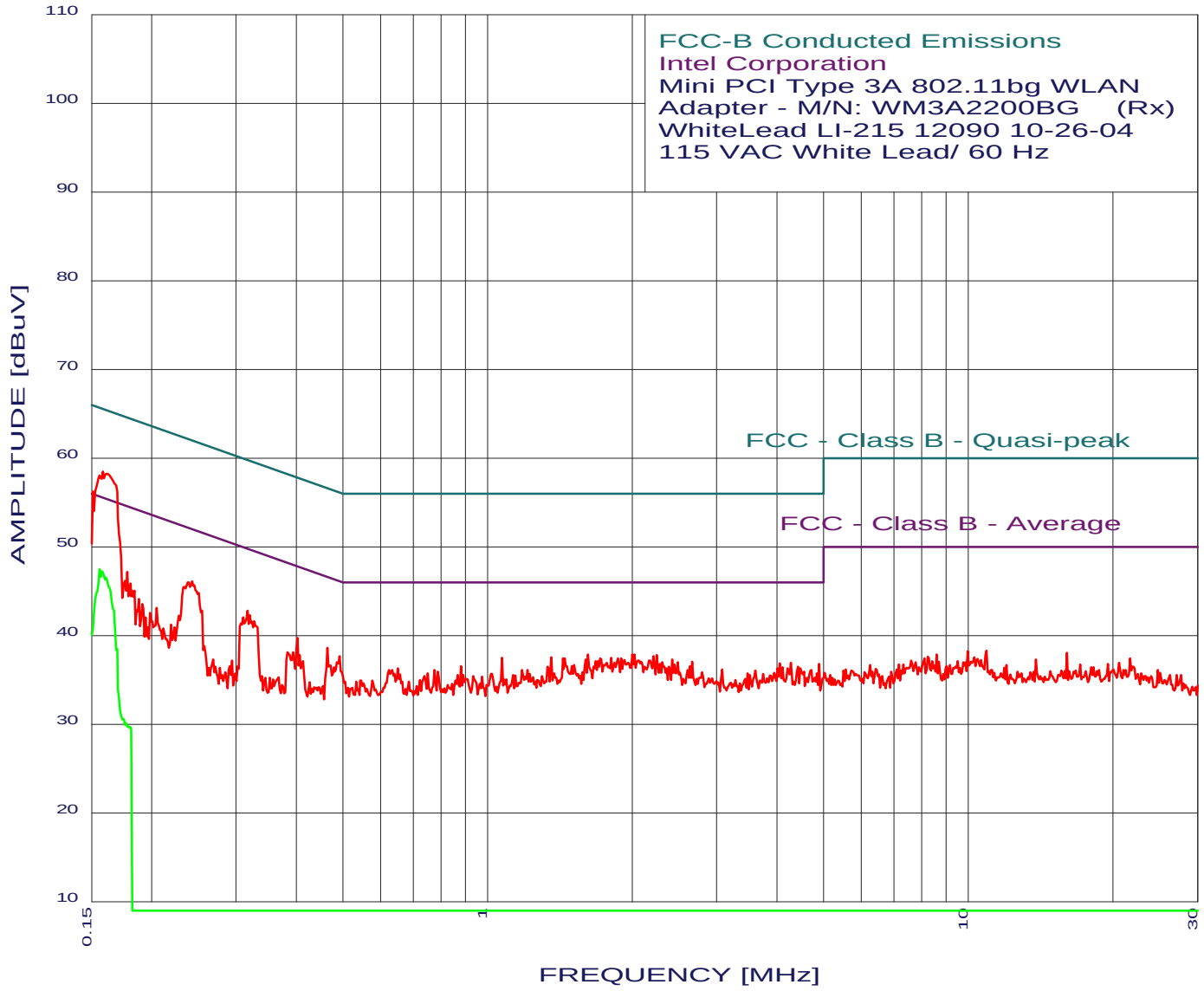
---

5 highest peaks above -50.00 dB of FCC - Class B - Average limit line
Peak criteria : 0.10 dB, Curve : Average

Peak#	Freq(MHz)	Amp(dBuV)	Limit(dB)	Delta(dB)
1	0.164	46.99	55.25	-8.26
2	0.162	46.55	55.38	-8.84
3	0.166	46.05	55.16	-9.10
4	0.175	34.85	54.72	-19.87
5	0.180	29.00	54.50	-25.50

EMISSION LEVEL [dBuV] PEAK
Graph forPeak& Average

3/09/2005 21:35:20



COMPATIBLE ELECTRONICS

COMPATIBLE ELECTRONICS

3/09/2005 21:35:20

Intel Corporation
Mini PCI Type 3A 802.11bg Wireless LAN
Model: WM3A2200BG (Receive Mode)
With Hitachi Antenna
TEST ENGINEER : Benigno Chavez

---

39 highest peaks above -50.00 dB of FCC - Class B - Average limit line
Peak criteria : 1.00 dB, Curve : Peak

Peak#	Freq(MHz)	Amp(dBuV)	Limit(dB)	Delta(dB)
1	0.158	58.44	55.56	2.89*
2	0.151	56.25	55.95	0.29*
3	0.243	46.08	52.00	-5.92
4	0.317	42.81	49.79	-6.98
5	0.178	47.13	54.59	-7.46*
6	0.464	38.58	46.62	-8.04
7	0.402	39.69	47.81	-8.12
8	1.620	37.86	46.00	-8.14
9	2.023	37.84	46.00	-8.16
10	2.002	37.84	46.00	-8.16
11	2.250	37.77	46.00	-8.23
12	2.214	37.66	46.00	-8.34
13	0.492	37.67	46.14	-8.47
14	1.359	37.50	46.00	-8.50
15	1.810	37.50	46.00	-8.50
16	0.176	46.13	54.68	-8.54*
17	1.072	37.44	46.00	-8.56
18	1.449	37.42	46.00	-8.58
19	1.434	37.42	46.00	-8.58
20	1.899	37.42	46.00	-8.58
21	1.869	37.41	46.00	-8.59
22	1.717	37.38	46.00	-8.62
23	0.181	45.83	54.46	-8.63
24	2.423	37.29	46.00	-8.71
25	1.603	37.26	46.00	-8.74
26	2.665	37.01	46.00	-8.99
27	2.488	36.99	46.00	-9.01
28	2.310	36.97	46.00	-9.03
29	4.272	36.88	46.00	-9.12
30	4.050	36.87	46.00	-9.13
31	4.902	36.81	46.00	-9.19
32	1.512	36.64	46.00	-9.36
33	0.881	36.51	46.00	-9.49
34	2.637	36.51	46.00	-9.49
35	1.331	36.50	46.00	-9.50
36	4.432	36.49	46.00	-9.51
37	2.384	36.48	46.00	-9.52
38	4.114	36.38	46.00	-9.62
39	4.480	36.29	46.00	-9.71

---

* Please See the Average Readings on the Next Page and on the Plot

COMPATIBLE ELECTRONICS

3/09/2005 21:35:20

Intel Corporation
Mini PCI Type 3A 802.11bg Wireless LAN
Model: WM3A2200BG (Receive Mode)
With Hitachi Antenna
TEST ENGINEER : Benigno Chavez

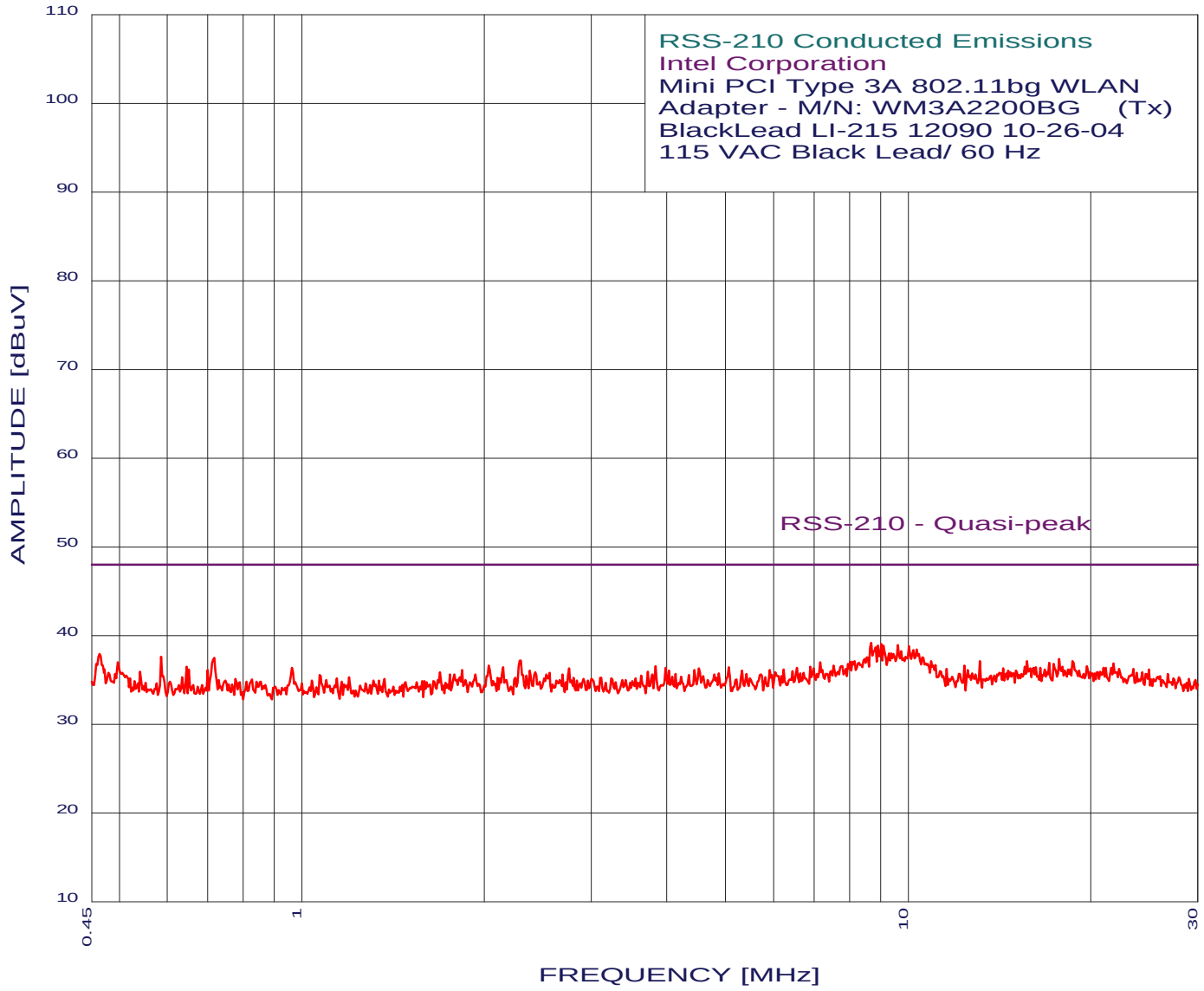
---

5 highest peaks above -50.00 dB of FCC - Class B - Average limit line
Peak criteria : 0.10 dB, Curve : Average

Peak#	Freq(MHz)	Amp(dBuV)	Limit(dB)	Delta(dB)
1	0.156	47.48	55.69	-8.20
2	0.157	47.23	55.60	-8.37
3	0.161	46.51	55.43	-8.92
4	0.170	38.50	54.98	-16.49
5	0.177	30.10	54.63	-24.53

EMISSION LEVEL [dBuV] PEAK
Graph forPeak

3/09/2005 22:00:03



COMPATIBLE ELECTRONICS

COMPATIBLE ELECTRONICS

3/09/2005 22:00:03

Intel Corporation
Mini PCI Type 3A 802.11bg Wireless LAN
Model: WM3A2200BG (Transmit Mode)
With Hitachi Antenna
TEST ENGINEER : Benigno Chavez

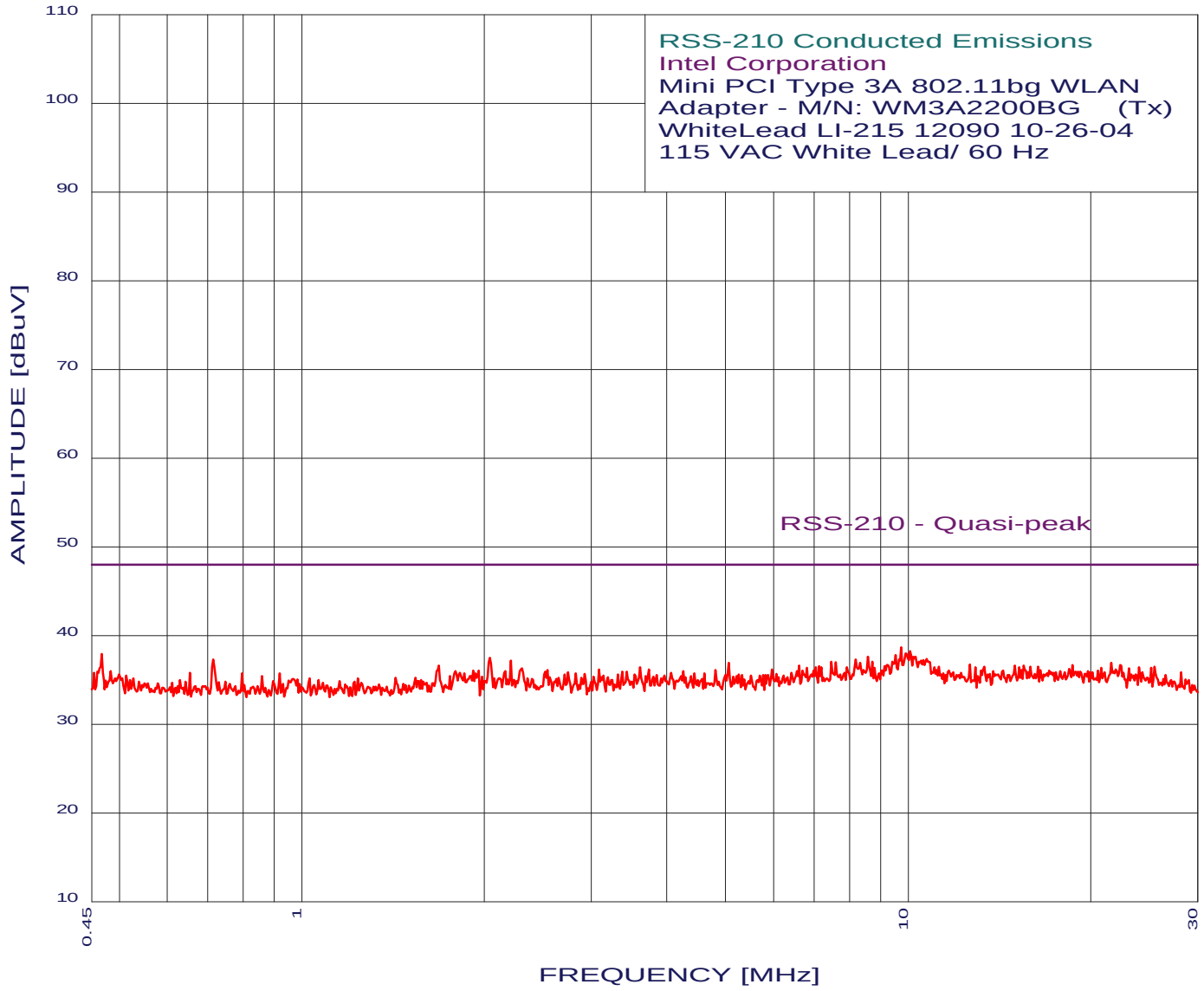
---

40 highest peaks above -50.00 dB of RSS-210 - Quasi-peak limit line
Peak criteria : 1.00 dB, Curve : Peak

Peak#	Freq(MHz)	Amp(dBuV)	Limit(dB)	Delta(dB)
1	8.693	39.15	48.00	-8.85
2	9.027	39.06	48.00	-8.94
3	9.614	38.89	48.00	-9.11
4	9.103	38.86	48.00	-9.14
5	8.916	38.86	48.00	-9.14
6	10.027	38.81	48.00	-9.19
7	10.328	38.43	48.00	-9.57
8	0.464	37.88	48.00	-10.12
9	0.586	37.58	48.00	-10.42
10	8.547	37.54	48.00	-10.46
11	0.718	37.49	48.00	-10.51
12	17.753	37.33	48.00	-10.67
13	2.296	37.15	48.00	-10.85
14	13.120	37.12	48.00	-10.88
15	15.714	37.09	48.00	-10.91
16	18.670	37.09	48.00	-10.91
17	10.907	37.07	48.00	-10.93
18	7.166	36.97	48.00	-11.03
19	0.498	36.97	48.00	-11.03
20	17.095	36.88	48.00	-11.12
21	21.805	36.86	48.00	-11.14
22	17.380	36.80	48.00	-11.20
23	2.033	36.62	48.00	-11.38
24	7.537	36.59	48.00	-11.41
25	12.371	36.57	48.00	-11.43
26	19.717	36.55	48.00	-11.45
27	3.833	36.50	48.00	-11.50
28	7.794	36.50	48.00	-11.50
29	0.646	36.49	48.00	-11.51
30	6.898	36.46	48.00	-11.54
31	2.147	36.44	48.00	-11.56
32	16.254	36.43	48.00	-11.57
33	5.057	36.43	48.00	-11.57
34	16.524	36.35	48.00	-11.65
35	6.560	36.34	48.00	-11.66
36	3.980	36.32	48.00	-11.68
37	0.962	36.32	48.00	-11.68
38	21.001	36.32	48.00	-11.68
39	14.331	36.30	48.00	-11.70
40	2.762	36.30	48.00	-11.70

EMISSION LEVEL [dBuV] PEAK
Graph forPeak

3/09/2005 21:52:51



COMPATIBLE ELECTRONICS

COMPATIBLE ELECTRONICS

3/09/2005 21:52:51

Intel Corporation
Mini PCI Type 3A 802.11bg Wireless LAN
Model: WM3A2200BG (Transmit Mode)
With Hitachi Antenna
TEST ENGINEER : Benigno Chavez

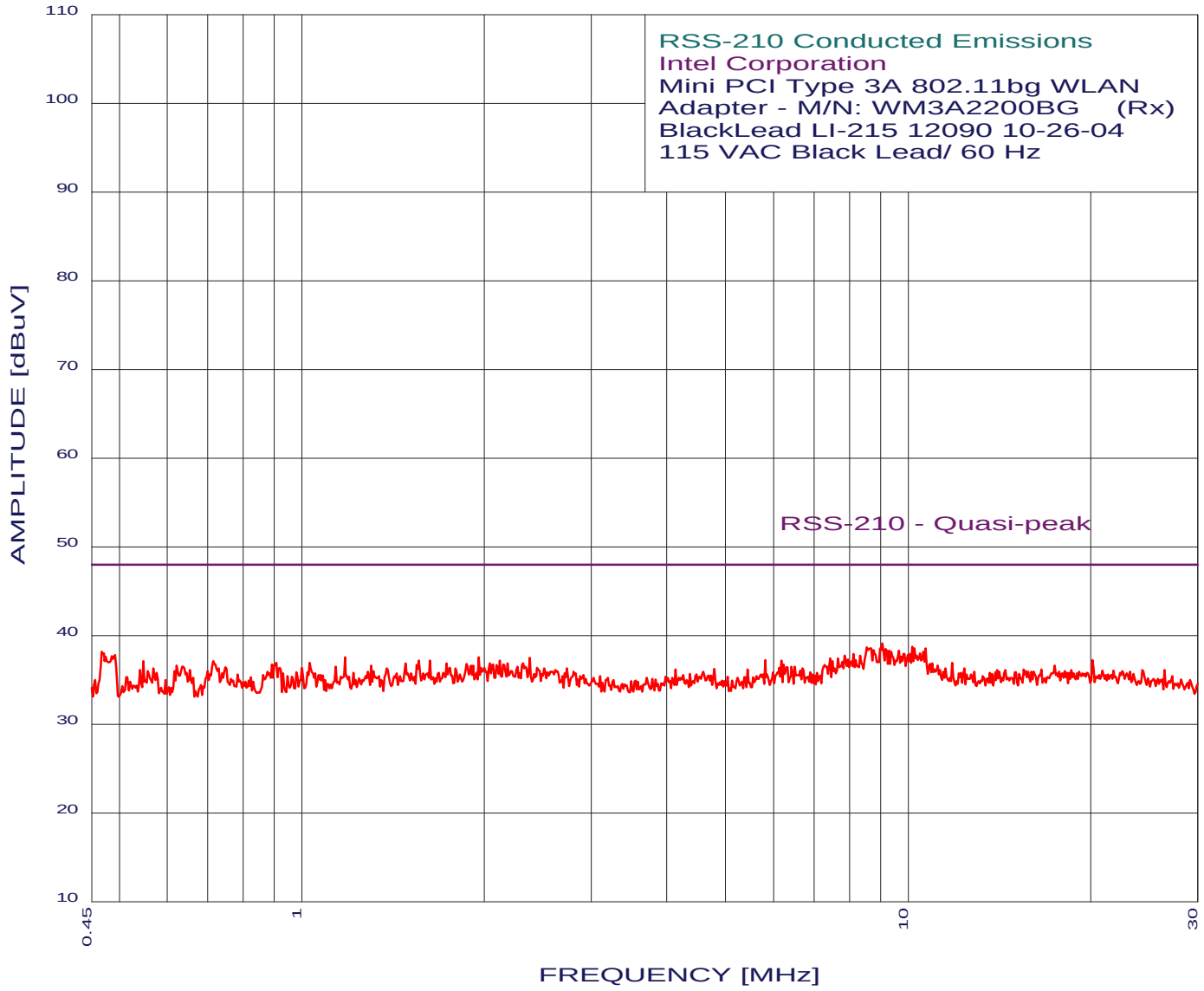
---

40 highest peaks above -50.00 dB of RSS-210 - Quasi-peak limit line
Peak criteria : 1.00 dB, Curve : Peak

Peak#	Freq(MHz)	Amp(dBuV)	Limit(dB)	Delta(dB)
1	9.738	38.68	48.00	-9.32
2	10.068	38.20	48.00	-9.80
3	0.467	37.88	48.00	-10.12
4	9.533	37.77	48.00	-10.23
5	10.284	37.62	48.00	-10.38
6	8.582	37.61	48.00	-10.39
7	2.042	37.44	48.00	-10.56
8	0.715	37.30	48.00	-10.70
9	8.196	37.29	48.00	-10.71
10	2.211	37.16	48.00	-10.84
11	7.474	37.05	48.00	-10.95
12	8.730	37.02	48.00	-10.98
13	7.600	36.96	48.00	-11.04
14	5.057	36.91	48.00	-11.09
15	21.622	36.88	48.00	-11.12
16	12.631	36.70	48.00	-11.30
17	22.367	36.68	48.00	-11.32
18	18.670	36.66	48.00	-11.34
19	15.519	36.62	48.00	-11.38
20	6.617	36.60	48.00	-11.40
21	15.007	36.58	48.00	-11.42
22	1.683	36.57	48.00	-11.43
23	7.137	36.53	48.00	-11.47
24	11.230	36.49	48.00	-11.51
25	16.389	36.49	48.00	-11.51
26	25.470	36.48	48.00	-11.52
27	13.340	36.45	48.00	-11.55
28	15.917	36.45	48.00	-11.55
29	7.196	36.44	48.00	-11.56
30	7.047	36.43	48.00	-11.57
31	3.614	36.42	48.00	-11.58
32	12.903	36.42	48.00	-11.58
33	24.018	36.42	48.00	-11.58
34	15.263	36.40	48.00	-11.60
35	7.927	36.38	48.00	-11.62
36	25.157	36.34	48.00	-11.66
37	20.824	36.33	48.00	-11.67
38	8.804	36.33	48.00	-11.67
39	6.814	36.31	48.00	-11.69
40	2.305	36.27	48.00	-11.73

EMISSION LEVEL [dBuV] PEAK
Graph forPeak

3/09/2005 21:57:33



COMPATIBLE ELECTRONICS

COMPATIBLE ELECTRONICS

3/09/2005 21:57:33

Intel Corporation
Mini PCI Type 3A 802.11bg Wireless LAN
Model: WM3A2200BG (Receive Mode)
With Hitachi Antenna
TEST ENGINEER : Benigno Chavez

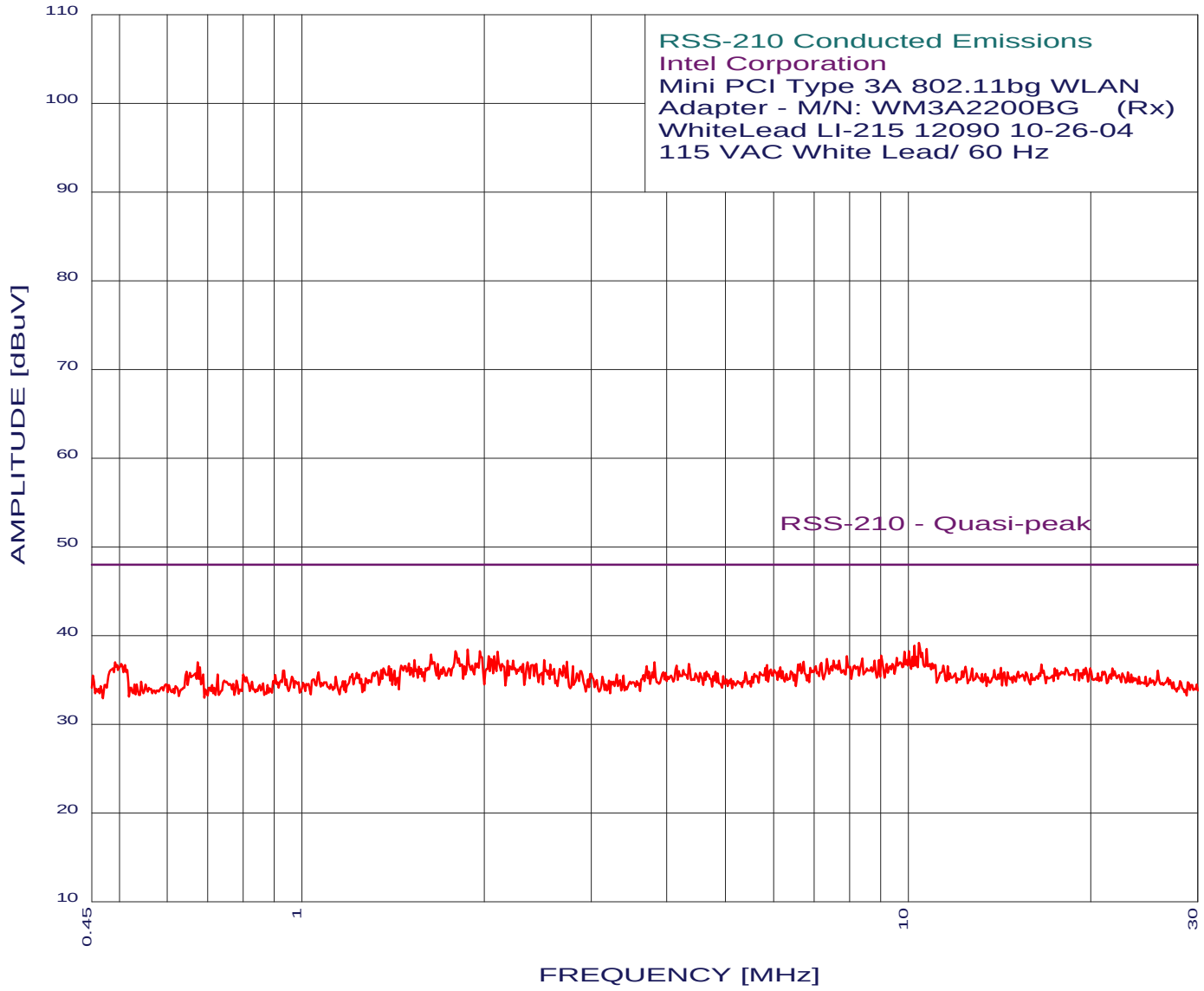
---

40 highest peaks above -50.00 dB of RSS-210 - Quasi-peak limit line
Peak criteria : 1.00 dB, Curve : Peak

Peak#	Freq(MHz)	Amp(dBuV)	Limit(dB)	Delta(dB)
1	9.064	39.06	48.00	-8.94
2	10.153	38.72	48.00	-9.28
3	8.547	38.64	48.00	-9.36
4	10.677	38.55	48.00	-9.45
5	10.240	38.52	48.00	-9.48
6	9.181	38.47	48.00	-9.53
7	8.767	38.35	48.00	-9.65
8	9.655	38.29	48.00	-9.71
9	9.298	38.27	48.00	-9.73
10	0.467	38.18	48.00	-9.82
11	9.377	38.18	48.00	-9.82
12	10.589	38.15	48.00	-9.85
13	8.126	37.92	48.00	-10.08
14	9.862	37.90	48.00	-10.10
15	8.337	37.73	48.00	-10.27
16	7.860	37.71	48.00	-10.29
17	1.178	37.56	48.00	-10.44
18	1.957	37.51	48.00	-10.49
19	2.375	37.46	48.00	-10.54
20	7.663	37.40	48.00	-10.60
21	7.443	37.39	48.00	-10.61
22	20.137	37.24	48.00	-10.76
23	5.808	37.21	48.00	-10.79
24	1.627	37.15	48.00	-10.85
25	1.560	37.13	48.00	-10.87
26	2.120	37.13	48.00	-10.87
27	6.185	37.13	48.00	-10.87
28	0.715	37.09	48.00	-10.91
29	7.506	37.09	48.00	-10.91
30	0.548	37.08	48.00	-10.92
31	11.811	36.93	48.00	-11.07
32	1.029	36.93	48.00	-11.07
33	0.908	36.91	48.00	-11.09
34	10.953	36.87	48.00	-11.13
35	1.733	36.87	48.00	-11.13
36	2.315	36.85	48.00	-11.15
37	2.183	36.84	48.00	-11.16
38	2.042	36.82	48.00	-11.18
39	1.483	36.82	48.00	-11.18
40	1.869	36.79	48.00	-11.21

EMISSION LEVEL [dBuV] PEAK
Graph forPeak

3/09/2005 21:54:48



COMPATIBLE ELECTRONICS

COMPATIBLE ELECTRONICS

3/09/2005 21:54:48

Intel Corporation
Mini PCI Type 3A 802.11bg Wireless LAN
Model: WM3A2200BG (Receive Mode)
With Hitachi Antenna
TEST ENGINEER : Benigno Chavez

---

40 highest peaks above -50.00 dB of RSS-210 - Quasi-peak limit line
Peak criteria : 1.00 dB, Curve : Peak

Peak#	Freq(MHz)	Amp(dBuV)	Limit(dB)	Delta(dB)
1	10.415	39.13	48.00	-8.87
2	10.240	38.81	48.00	-9.19
3	10.723	38.45	48.00	-9.55
4	1.877	38.41	48.00	-9.59
5	1.965	38.23	48.00	-9.77
6	10.027	38.20	48.00	-9.80
7	1.792	38.20	48.00	-9.80
8	9.862	38.19	48.00	-9.81
9	2.102	38.15	48.00	-9.85
10	1.634	37.86	48.00	-10.14
11	9.027	37.74	48.00	-10.26
12	7.927	37.68	48.00	-10.32
13	2.075	37.65	48.00	-10.35
14	2.033	37.64	48.00	-10.36
15	10.328	37.62	48.00	-10.38
16	10.153	37.61	48.00	-10.39
17	9.572	37.47	48.00	-10.53
18	8.407	37.40	48.00	-10.60
19	2.050	37.34	48.00	-10.66
20	7.348	37.34	48.00	-10.66
21	1.534	37.24	48.00	-10.76
22	8.953	37.24	48.00	-10.76
23	2.508	37.20	48.00	-10.80
24	2.230	37.17	48.00	-10.83
25	7.694	37.16	48.00	-10.84
26	2.183	37.16	48.00	-10.84
27	8.804	37.13	48.00	-10.87
28	2.739	37.02	48.00	-10.98
29	6.729	37.01	48.00	-10.99
30	0.674	36.99	48.00	-11.01
31	2.355	36.98	48.00	-11.02
32	0.492	36.97	48.00	-11.03
33	3.817	36.94	48.00	-11.06
34	7.196	36.94	48.00	-11.06
35	1.502	36.83	48.00	-11.17
36	6.645	36.80	48.00	-11.20
37	2.435	36.79	48.00	-11.21
38	4.348	36.79	48.00	-11.21
39	2.315	36.77	48.00	-11.23
40	1.675	36.77	48.00	-11.23
