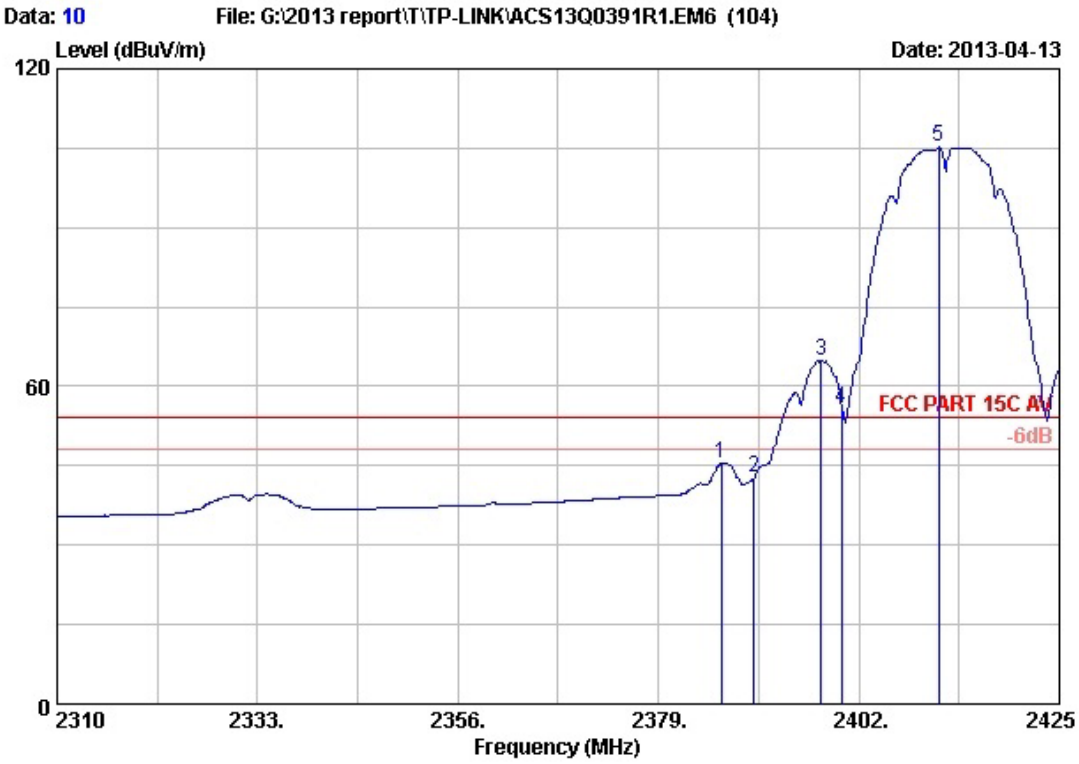
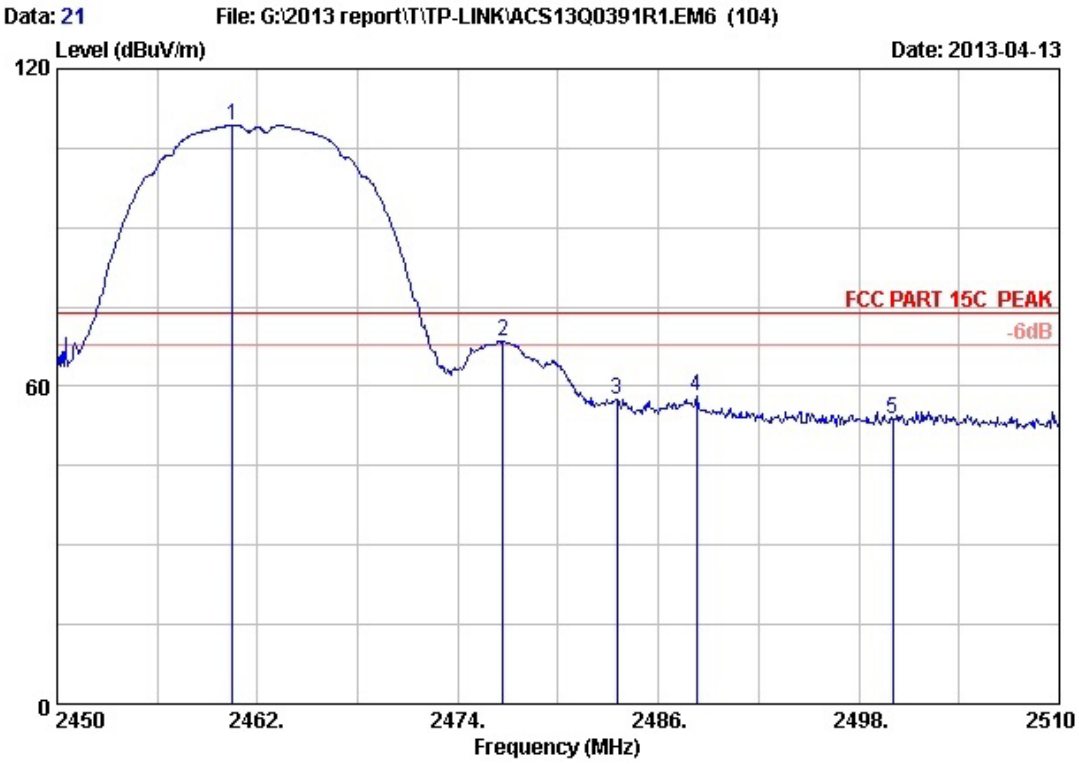


Site no. : 3m Chamber Data no. : 10
Dis. / Ant. : 3m 2012 3115 (4580) Ant. pol. : VERTICAL
Limit : FCC PART 15C AV
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : SafeSteram™ Wireless N Gigabit Broadband VPN Router
Power supply : DC 12V From Adapter Input AC 120V/60Hz
Test mode : IEEE802.11b CH1 2412MHz Tx
M/N : TL-ER604W
:

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2386.245	26.67	5.99	35.92	48.74	45.48	54.00	8.52	Average
2	2390.000	26.70	6.00	35.92	46.13	42.91	54.00	11.09	Average
3	2397.630	26.74	6.01	35.92	67.99	64.82	54.00	-10.82	Average
4	2400.000	26.76	6.02	35.92	58.85	55.71	54.00	-1.71	Average
5	2411.200	26.83	6.04	35.92	108.19	105.14	54.00	-51.14	Average

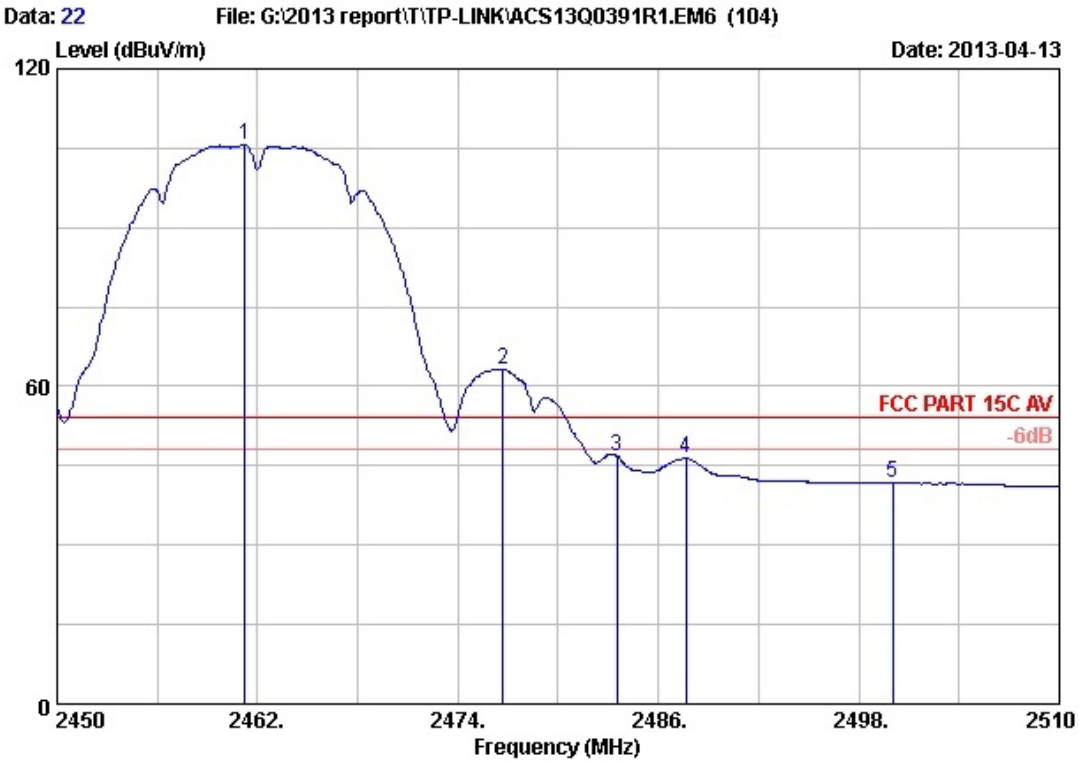
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 21
Dis. / Ant. : 3m 2012 3115 (4580) Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : SafeSteram™ Wireless N Gigabit Broadband VPN Router
Power supply : DC 12V From Adapter Input AC 120V/60Hz
Test mode : IEEE802.11b CH11 2462MHz Tx
M/N : TL-ER604W
:

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2460.500	27.15	6.12	35.92	111.97	109.32	74.00	-35.32	Peak
2	2476.700	27.25	6.15	35.92	71.08	68.56	74.00	5.44	Peak
3	2483.500	27.29	6.16	35.92	60.08	57.61	74.00	16.39	Peak
4	2488.280	27.32	6.17	35.92	60.55	58.12	74.00	15.88	Peak
5	2500.000	27.40	6.19	35.93	56.26	53.92	74.00	20.08	Peak

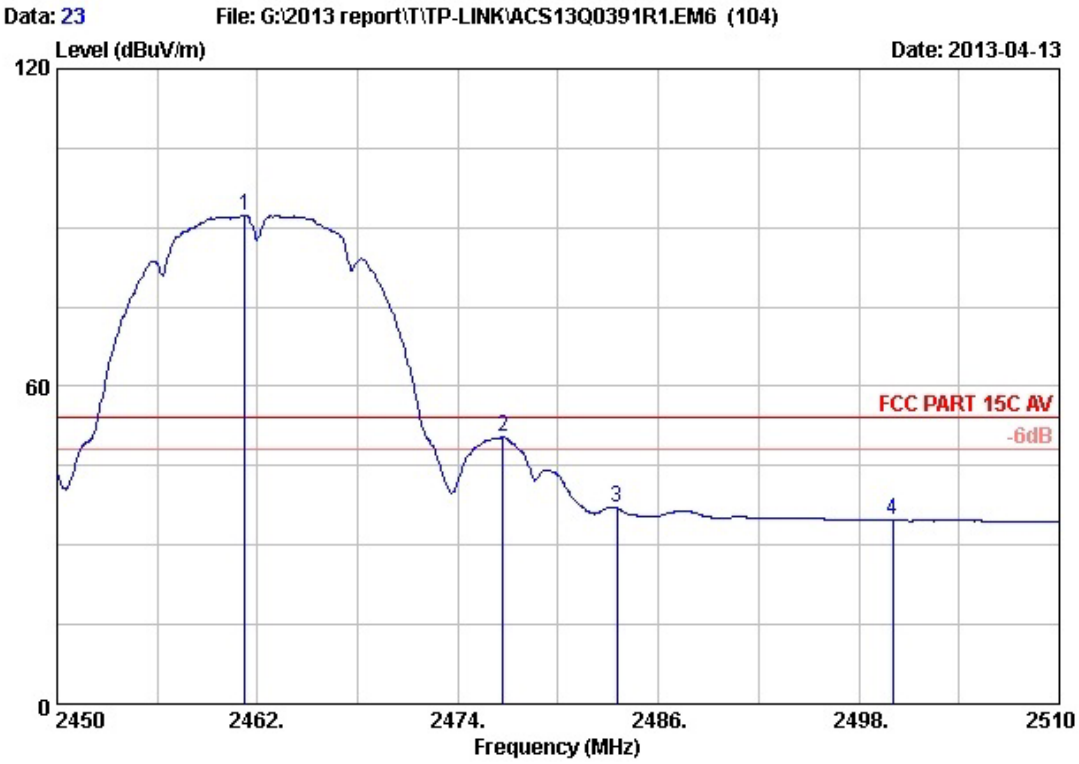
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 22
Dis. / Ant. : 3m 2012 3115 (4580) Ant. pol. : VERTICAL
Limit : FCC PART 15C AV
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : SafeSteram™ Wireless N Gigabit Broadband VPN Router
Power supply : DC 12V From Adapter Input AC 120V/60Hz
Test mode : IEEE802.11b CH11 2462MHz Tx
M/N : TL-ER604W
:

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2461.220	27.15	6.12	35.92	108.33	105.68	54.00	-51.68	Average
2	2476.700	27.25	6.15	35.92	65.81	63.29	54.00	-9.29	Average
3	2483.500	27.29	6.16	35.92	49.41	46.94	54.00	7.06	Average
4	2487.620	27.32	6.17	35.92	48.82	46.39	54.00	7.61	Average
5	2500.000	27.40	6.19	35.93	44.10	41.76	54.00	12.24	Average

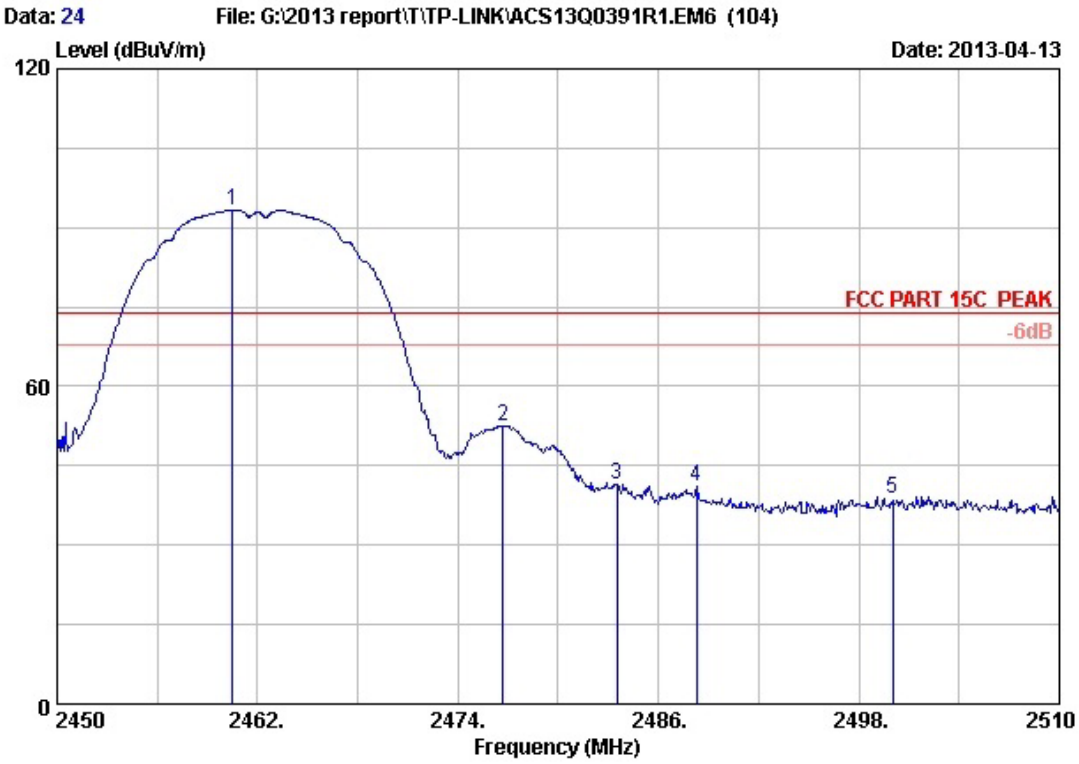
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 23
Dis. / Ant. : 3m 2012 3115 (4580) Ant. pol. : HORIZONTAL
Limit : FCC PART 15C AV
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : SafeSteram™ Wireless N Gigabit Broadband VPN Router
Power supply : DC 12V From Adapter Input AC 120V/60Hz
Test mode : IEEE802.11b CH11 2462MHz Tx
M/N : TL-ER604W
:

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2461.220	27.15	6.12	35.92	95.01	92.36	54.00	-38.36	Average
2	2476.700	27.25	6.15	35.92	52.92	50.40	54.00	3.60	Average
3	2483.500	27.29	6.16	35.92	39.50	37.03	54.00	16.97	Average
4	2500.000	27.40	6.19	35.93	37.00	34.66	54.00	19.34	Average

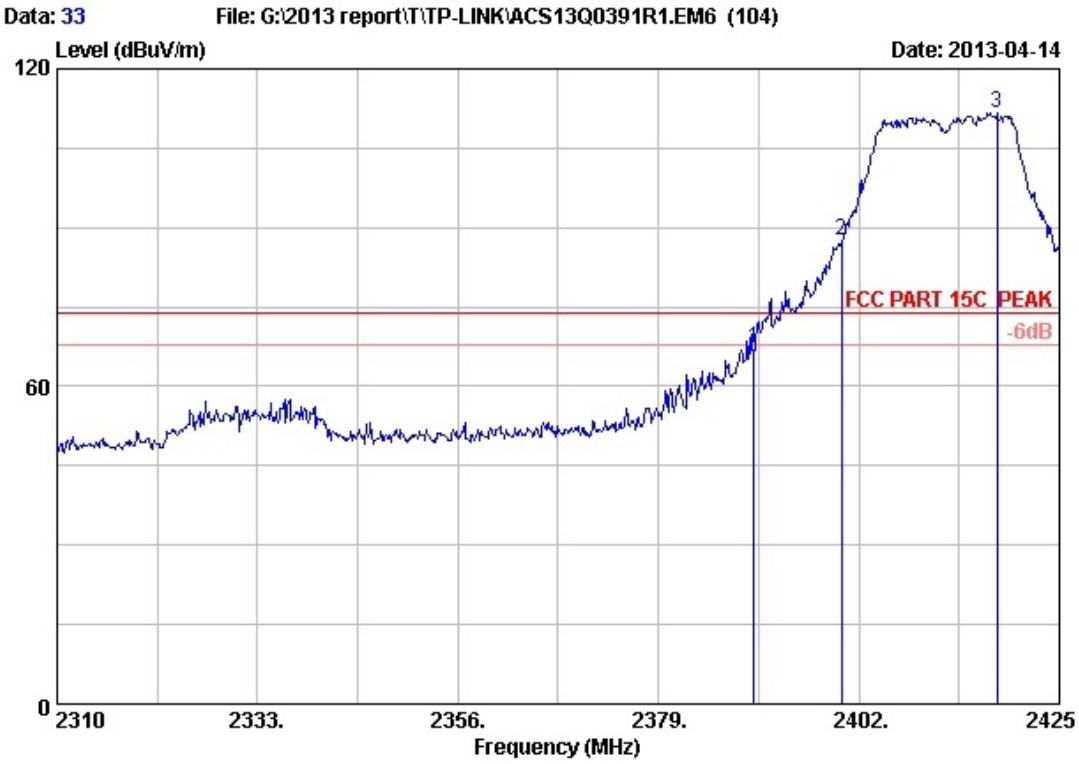
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 24
Dis. / Ant. : 3m 2012 3115 (4580) Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : SafeSteram™ Wireless N Gigabit Broadband VPN Router
Power supply : DC 12V From Adapter Input AC 120V/60Hz
Test mode : IEEE802.11b CH11 2462MHz Tx
M/N : TL-ER604W
:

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2460.500	27.15	6.12	35.92	95.97	93.32	74.00	-19.32	Peak
2	2476.700	27.25	6.15	35.92	55.00	52.48	74.00	21.52	Peak
3	2483.500	27.29	6.16	35.92	44.01	41.54	74.00	32.46	Peak
4	2488.280	27.32	6.17	35.92	43.51	41.08	74.00	32.92	Peak
5	2500.000	27.40	6.19	35.93	41.22	38.88	74.00	35.12	Peak

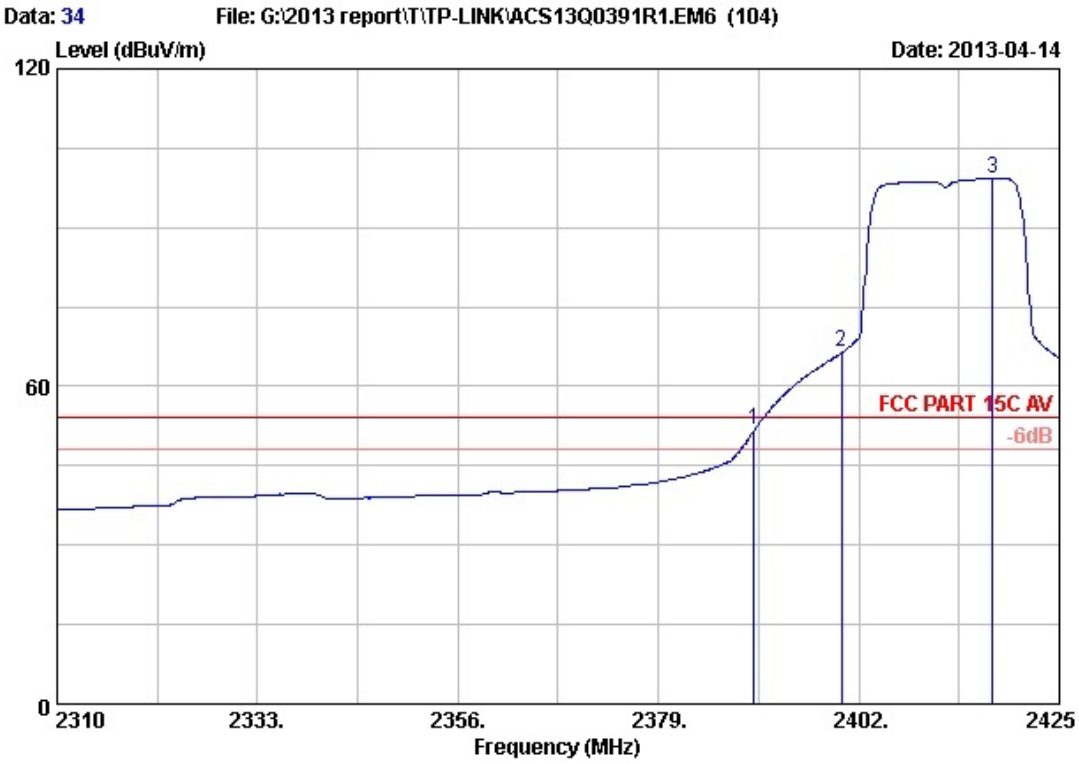
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 33
Dis. / Ant. : 3m 2012 3115 (4580) Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : SafeSteram™ Wireless N Gigabit Broadband VPN Router
Power supply : DC 12V From Adapter Input AC 120V/60Hz
Test mode : IEEE802.11g CH1 2412MHz Tx
M/N : TL-ER604W
:

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2390.000	26.70	6.00	35.92	70.28	67.06	74.00	6.94	Peak
2	2400.000	26.76	6.02	35.92	90.63	87.49	74.00	-13.49	Peak
3	2417.870	26.87	6.05	35.92	114.65	111.65	74.00	-37.65	Peak

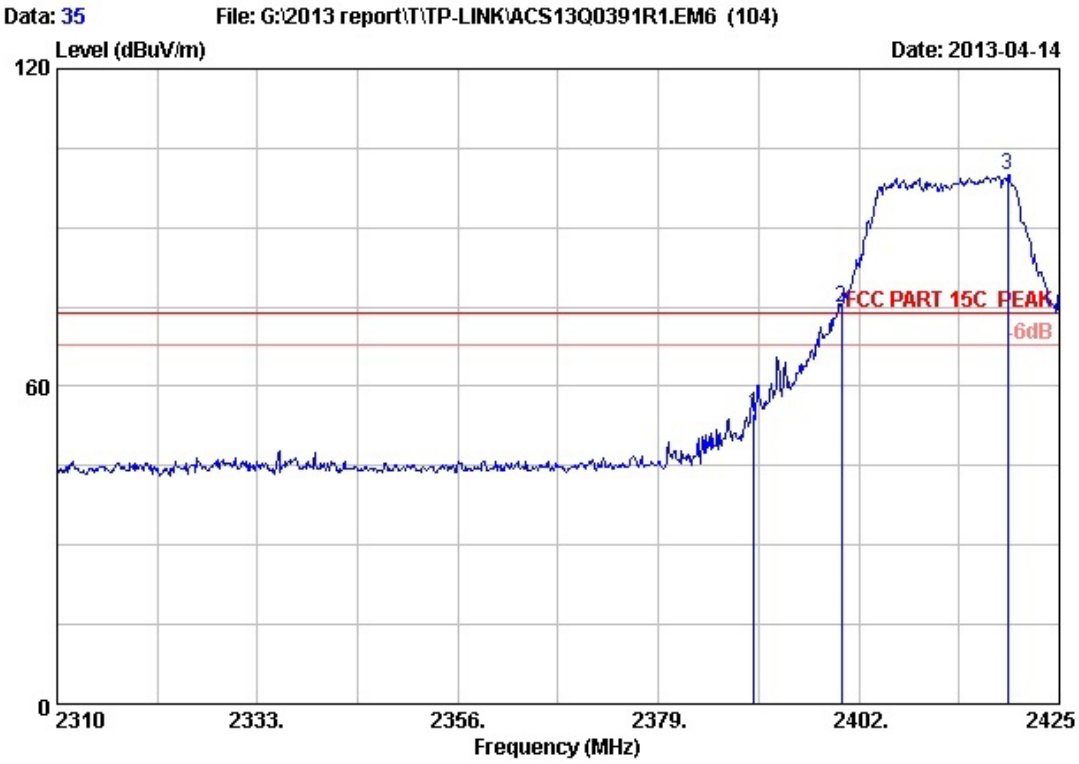
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 34
Dis. / Ant. : 3m 2012 3115 (4580) Ant. pol. : VERTICAL
Limit : FCC PART 15C AV
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : SafeStream™ Wireless N Gigabit Broadband VPN Router
Power supply : DC 12V From Adapter Input AC 120V/60Hz
Test mode : IEEE802.11g CH1 2412MHz Tx
M/N : TL-ER604W
:

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2390.000	26.70	6.00	35.92	54.93	51.71	54.00	2.29	Average
2	2400.000	26.76	6.02	35.92	69.57	66.43	54.00	-12.43	Average
3	2417.295	26.87	6.05	35.92	102.38	99.38	54.00	-45.38	Average

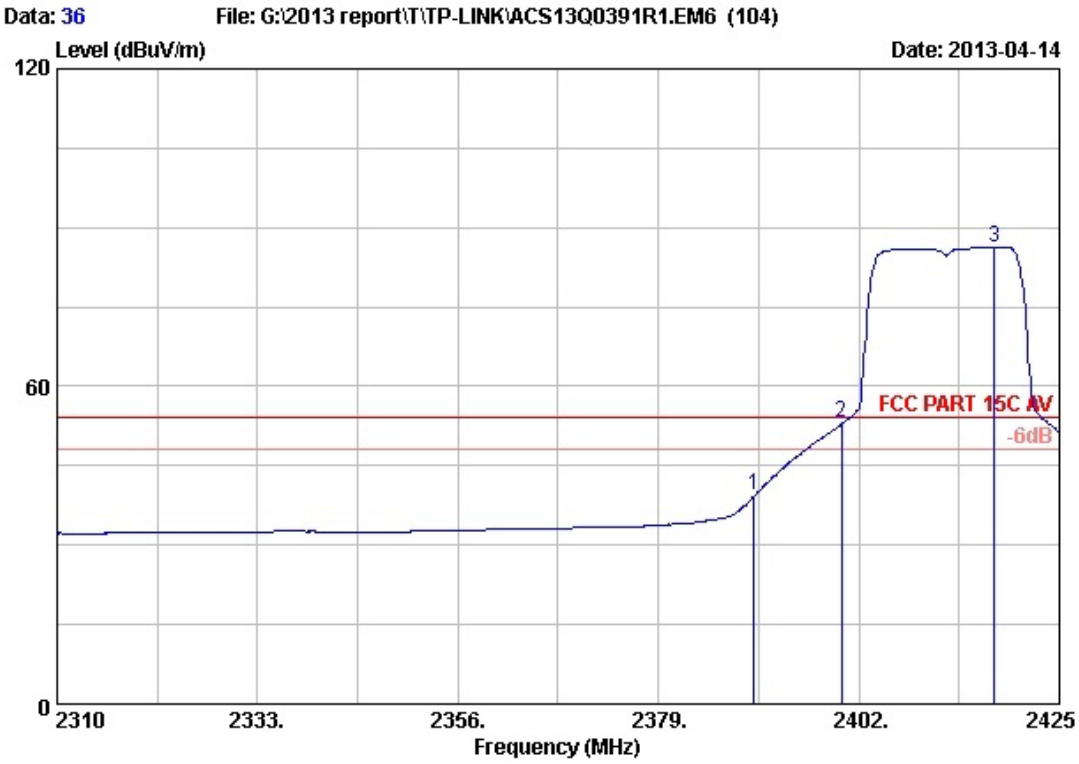
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 35
Dis. / Ant. : 3m 2012 3115 (4580) Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : SafeStream™ Wireless N Gigabit Broadband VPN Router
Power supply : DC 12V From Adapter Input AC 120V/60Hz
Test mode : IEEE802.11g CH1 2412MHz Tx
M/N : TL-ER604W
:

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2390.000	26.70	6.00	35.92	58.06	54.84	74.00	19.16	Peak
2	2400.000	26.76	6.02	35.92	78.14	75.00	74.00	-1.00	Peak
3	2419.020	26.88	6.05	35.92	102.86	99.87	74.00	-25.87	Peak

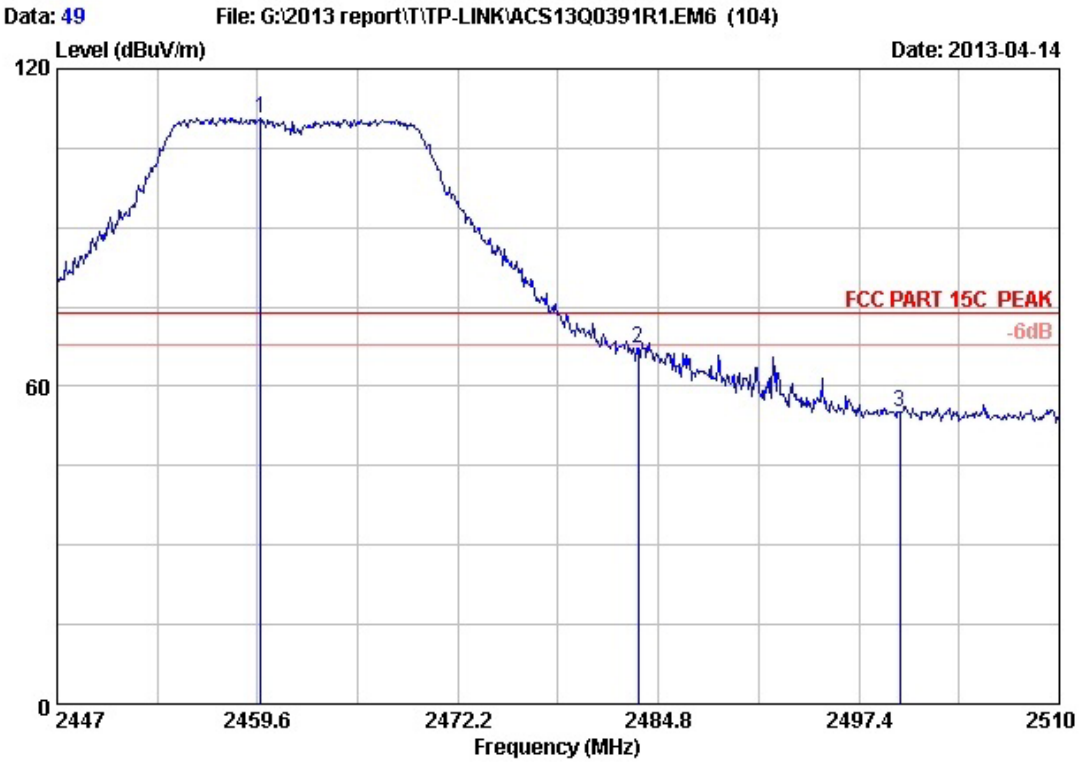
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 36
Dis. / Ant. : 3m 2012 3115 (4580) Ant. pol. : HORIZONTAL
Limit : FCC PART 15C AV
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : SafeSteram™ Wireless N Gigabit Broadband VPN Router
Power supply : DC 12V From Adapter Input AC 120V/60Hz
Test mode : IEEE802.11g CH1 2412MHz Tx
M/N : TL-ER604W
:

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2390.000	26.70	6.00	35.92	42.53	39.31	54.00	14.69	Average
2	2400.000	26.76	6.02	35.92	56.13	52.99	54.00	1.01	Average
3	2417.525	26.87	6.05	35.92	89.31	86.31	54.00	-32.31	Average

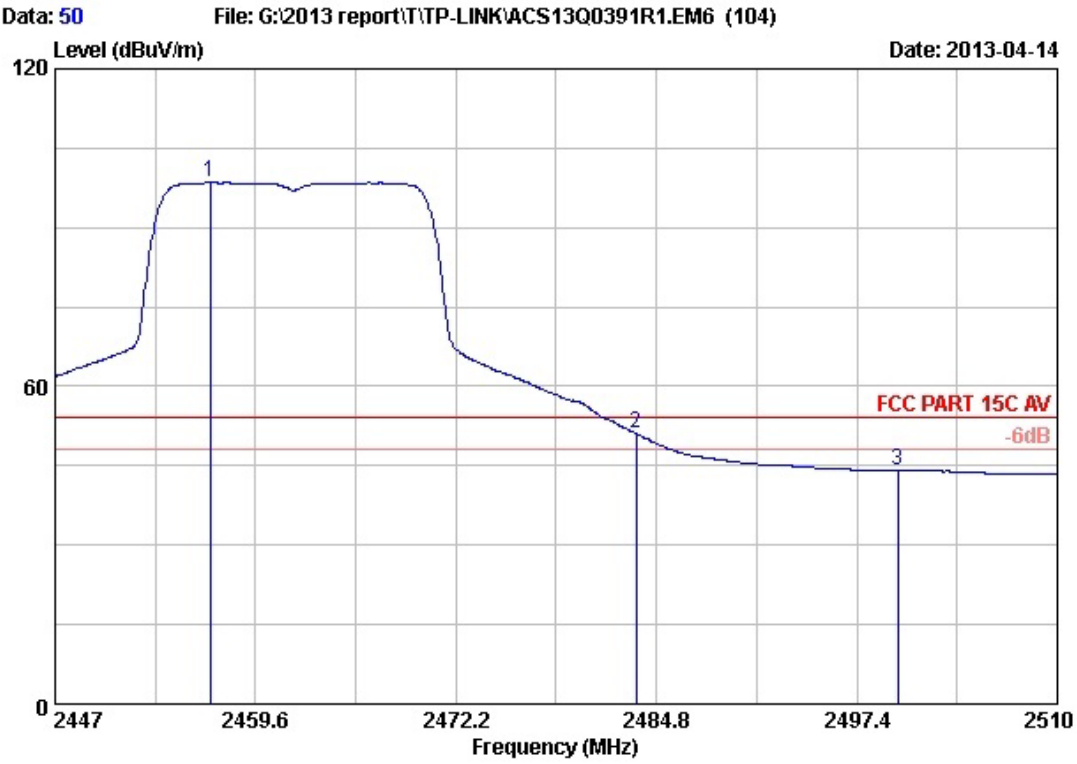
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 49
Dis. / Ant. : 3m 2012 3115 (4580) Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : SafeSteram™ Wireless N Gigabit Broadband VPN Router
Power supply : DC 12V From Adapter Input AC 120V/60Hz
Test mode : IEEE802.11g CH11 2462MHz Tx
M/N : TL-ER604W
:

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2459.789	27.14	6.12	35.92	113.29	110.63	74.00	-36.63	Peak
2	2483.500	27.29	6.16	35.92	69.56	67.09	74.00	6.91	Peak
3	2500.000	27.40	6.19	35.93	57.45	55.11	74.00	18.89	Peak

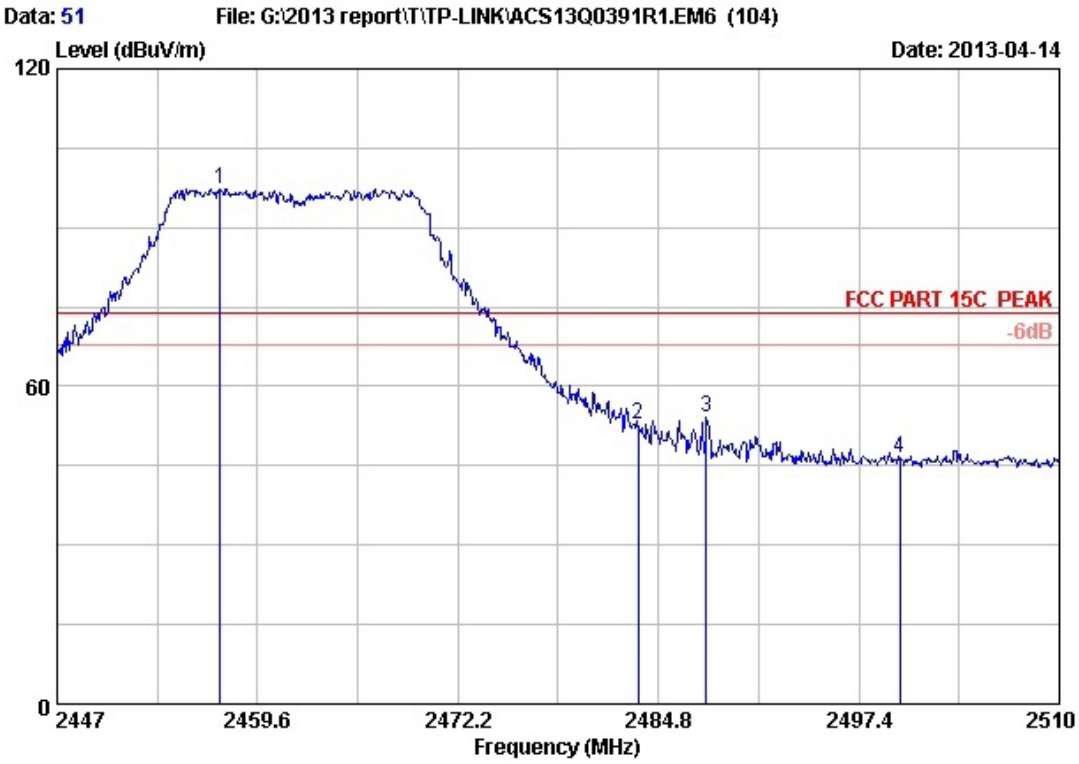
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 50
Dis. / Ant. : 3m 2012 3115 (4580) Ant. pol. : VERTICAL
Limit : FCC PART 15C AV
Env. / Ins. : 2483.5 Engineer : Leo-Li
EUT : SafeSteram™ Wireless N Gigabit Broadband VPN Router
Power supply : DC 12V From Adapter Input AC 120V/60Hz
Test mode : IEEE802.11g CH11 2462MHz Tx
M/N : TL-ER604W
:

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2456.765	27.12	6.11	35.92	101.16	98.47	54.00	-44.47	Average
2	2483.500	27.29	6.16	35.92	53.70	51.23	54.00	2.77	Average
3	2500.000	27.40	6.19	35.93	46.51	44.17	54.00	9.83	Average

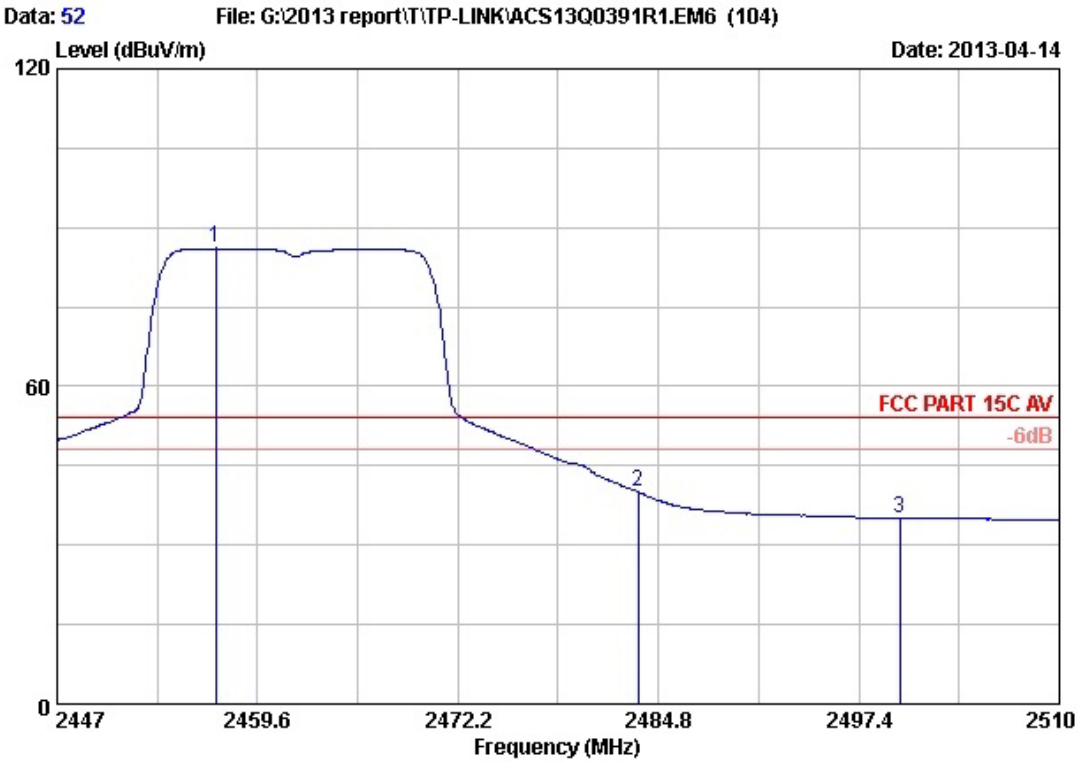
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 51
Dis. / Ant. : 3m 2012 3115 (4580) Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : SafeSteram™ Wireless N Gigabit Broadband VPN Router
Power supply : DC 12V From Adapter Input AC 120V/60Hz
Test mode : IEEE802.11g CH11 2462MHz Tx
M/N : TL-ER604W
:

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2457.269	27.13	6.11	35.92	100.09	97.41	74.00	-23.41	Peak
2	2483.500	27.29	6.16	35.92	55.17	52.70	74.00	21.30	Peak
3	2487.824	27.32	6.17	35.92	56.44	54.01	74.00	19.99	Peak
4	2500.000	27.40	6.19	35.93	48.74	46.40	74.00	27.60	Peak

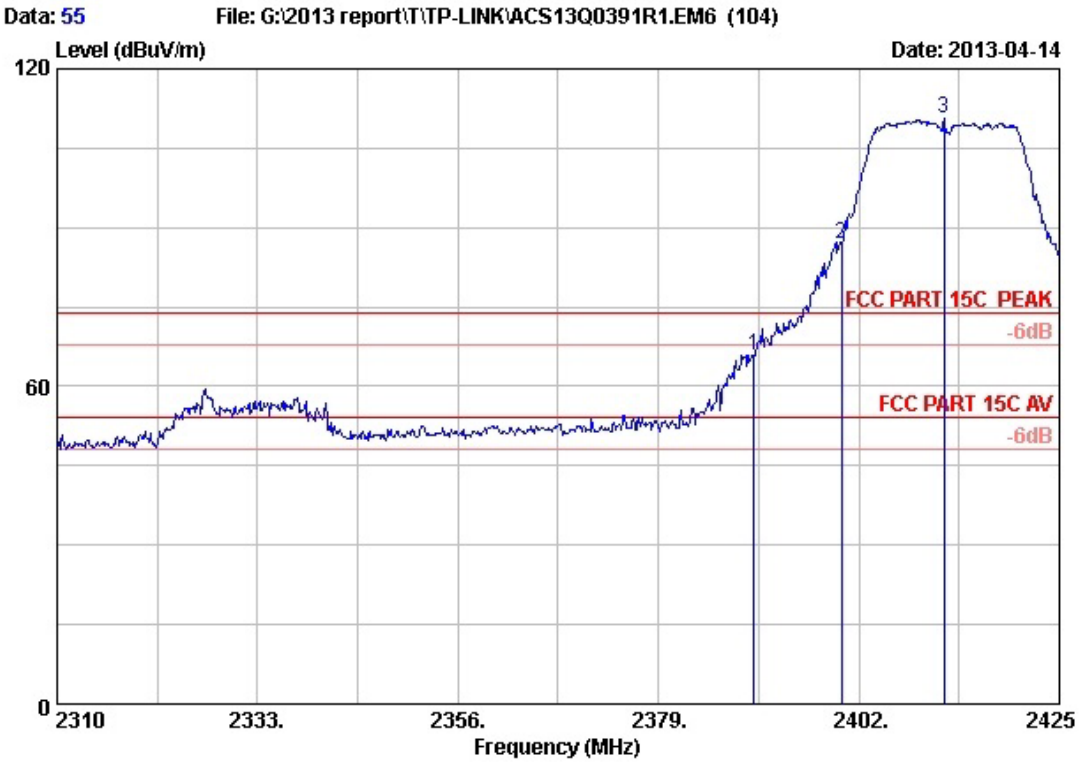
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 52
Dis. / Ant. : 3m 2012 3115 (4580) Ant. pol. : HORIZONTAL
Limit : FCC PART 15C AV
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : SafeStream™ Wireless N Gigabit Broadband VPN Router
Power supply : DC 12V From Adapter Input AC 120V/60Hz
Test mode : IEEE802.11g CH11 2462MHz Tx
M/N : TL-ER604W
:

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2456.954	27.12	6.11	35.92	88.78	86.09	54.00	-32.09	Average
2	2483.500	27.29	6.16	35.92	42.56	40.09	54.00	13.91	Average
3	2500.000	27.40	6.19	35.93	37.46	35.12	54.00	18.88	Average

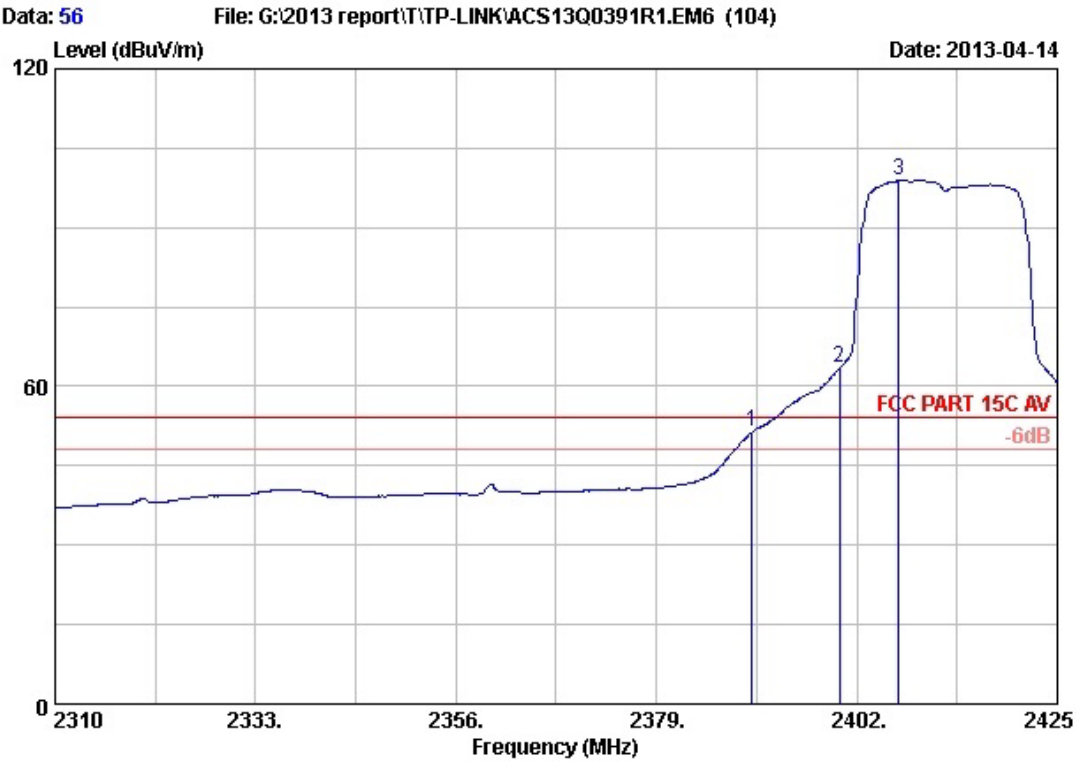
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 55
Dis. / Ant. : 3m 2012 3115 (4580) Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : SafeStream™ Wireless N Gigabit Broadband VPN Router
Power supply : DC 12V From Adapter Input AC 120V/60Hz
Test mode : IEEE802.11nHT20 CH1 2412MHz Tx
M/N : TL-ER604W
:

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2390.000	26.70	6.00	35.92	69.16	65.94	74.00	8.06	Peak
2	2400.000	26.76	6.02	35.92	90.11	86.97	74.00	-12.97	Peak
3	2411.775	26.84	6.04	35.92	113.55	110.51	74.00	-36.51	Peak

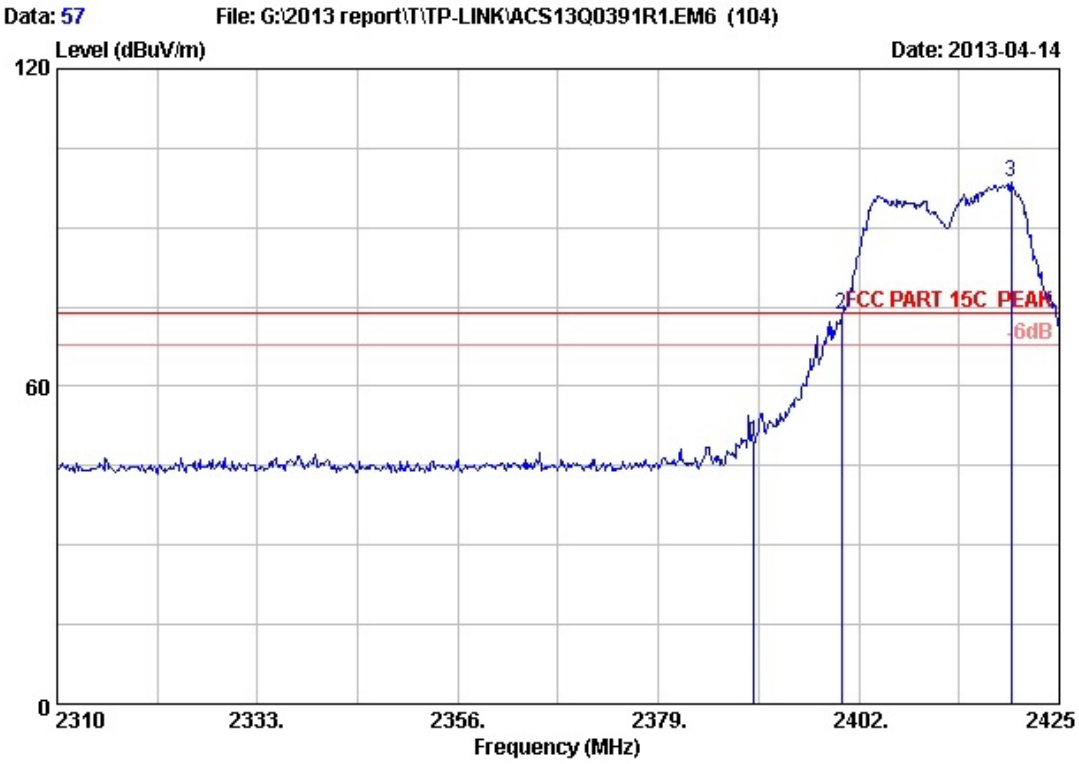
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 56
Dis. / Ant. : 3m 2012 3115 (4580) Ant. pol. : VERTICAL
Limit : FCC PART 15C AV
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : SafeStream™ Wireless N Gigabit Broadband VPN Router
Power supply : DC 12V From Adapter Input AC 120V/60Hz
Test mode : IEEE802.11nHT20 CH1 2412MHz Tx
M/N : TL-ER604W
:

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2390.000	26.70	6.00	35.92	54.64	51.42	54.00	2.58	Average
2	2400.000	26.76	6.02	35.92	66.68	63.54	54.00	-9.54	Average
3	2406.830	26.80	6.03	35.92	102.01	98.92	54.00	-44.92	Average

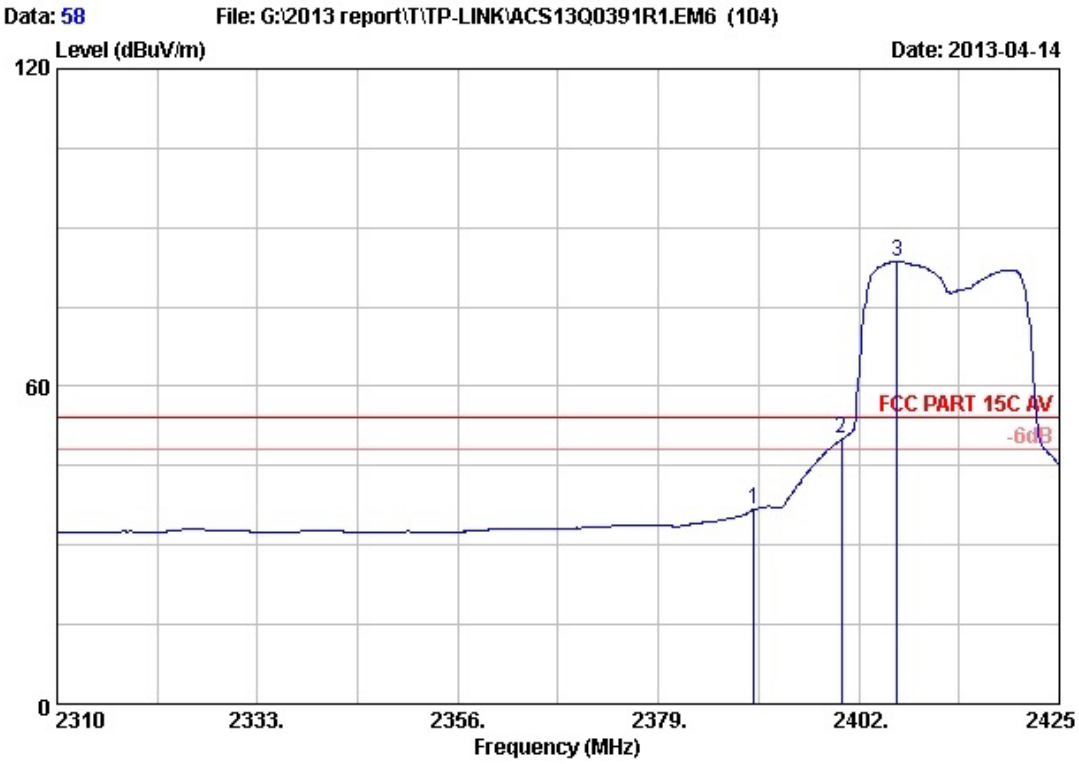
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 57
Dis. / Ant. : 3m 2012 3115 (4580) Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : SafeSteram™ Wireless N Gigabit Broadband VPN Router
Power supply : DC 12V From Adapter Input AC 120V/60Hz
Test mode : IEEE802.11nHT20 CH1 2412MHz Tx
M/N : TL-ER604W
:

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2390.000	26.70	6.00	35.92	52.81	49.59	74.00	24.41	Peak
2	2400.000	26.76	6.02	35.92	76.71	73.57	74.00	0.43	Peak
3	2419.480	26.88	6.05	35.92	101.47	98.48	74.00	-24.48	Peak

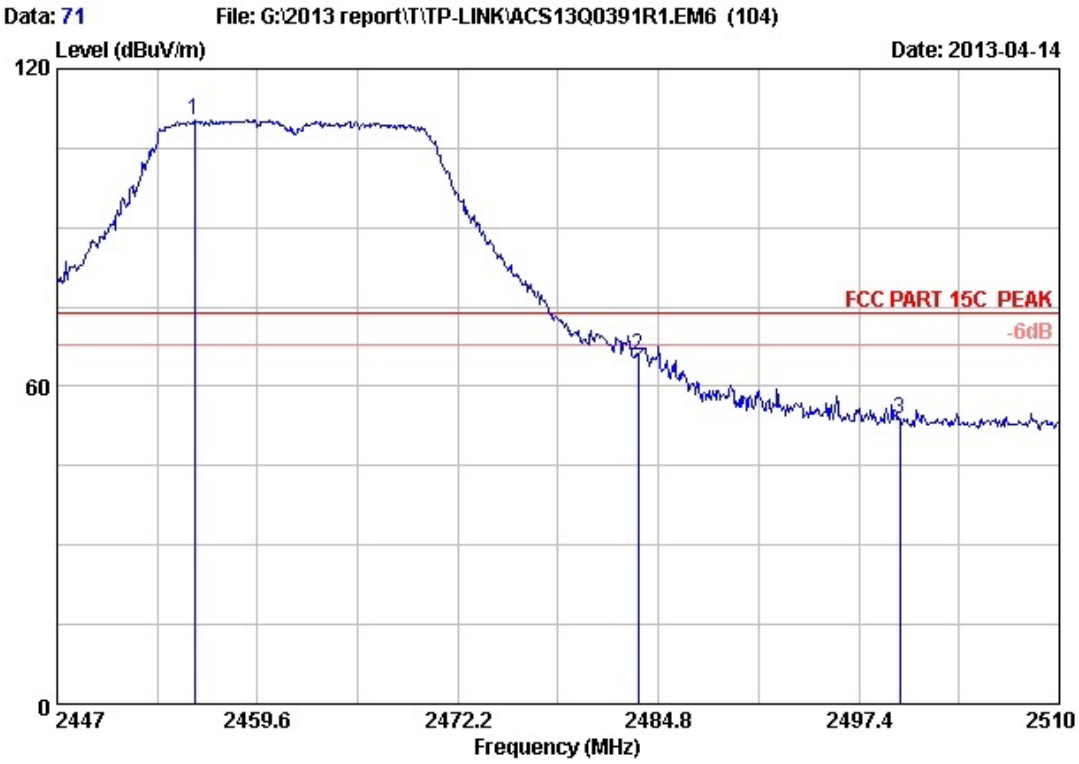
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 58
Dis. / Ant. : 3m 2012 3115 (4580) Ant. pol. : HORIZONTAL
Limit : FCC PART 15C AV
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : SafeSteram™ Wireless N Gigabit Broadband VPN Router
Power supply : DC 12V From Adapter Input AC 120V/60Hz
Test mode : IEEE802.11nHT20 CH1 2412MHz Tx
M/N : TL-ER604W
:

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2390.000	26.70	6.00	35.92	39.97	36.75	54.00	17.25	Average
2	2400.000	26.76	6.02	35.92	53.15	50.01	54.00	3.99	Average
3	2406.370	26.80	6.03	35.92	86.62	83.53	54.00	-29.53	Average

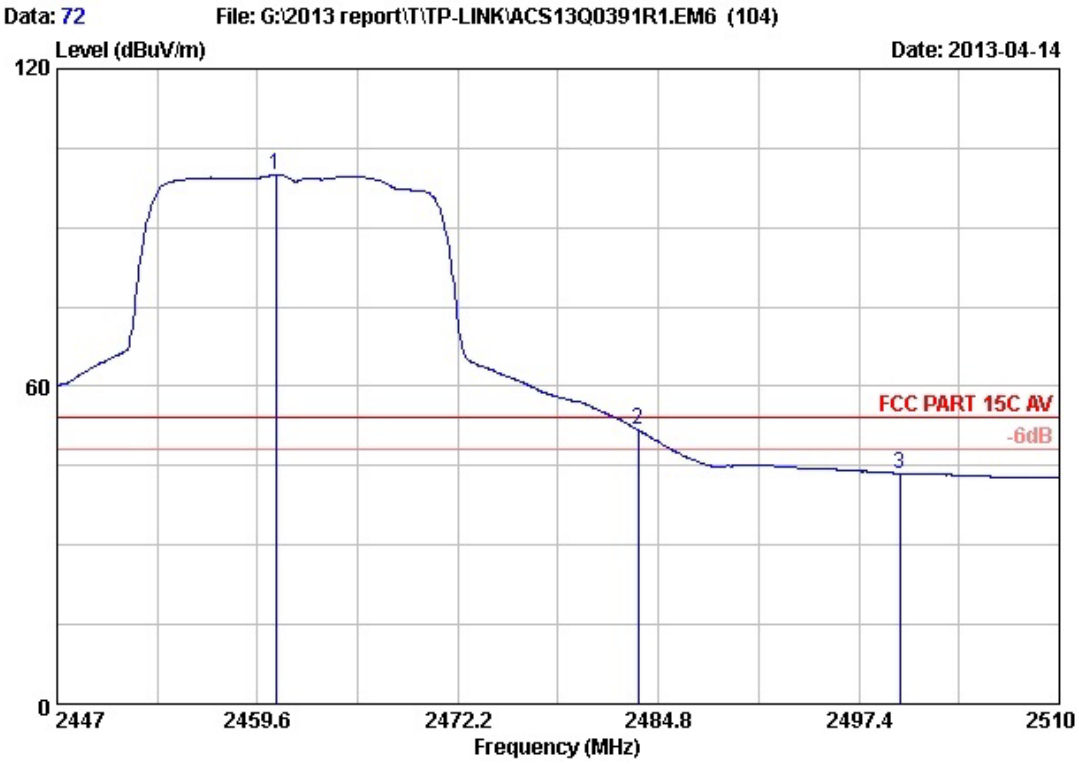
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 71
Dis. / Ant. : 3m 2012 3115 (4580) Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : SafeSteram™ Wireless N Gigabit Broadband VPN Router
Power supply : DC 12V From Adapter Input AC 120V/60Hz
Test mode : IEEE802.11nHT20 CH11 2462MHz Tx
M/N : TL-ER604W
:

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2455.631	27.12	6.11	35.92	113.04	110.35	74.00	-36.35	Peak
2	2483.500	27.29	6.16	35.92	68.23	65.76	74.00	8.24	Peak
3	2500.000	27.40	6.19	35.93	56.05	53.71	74.00	20.29	Peak

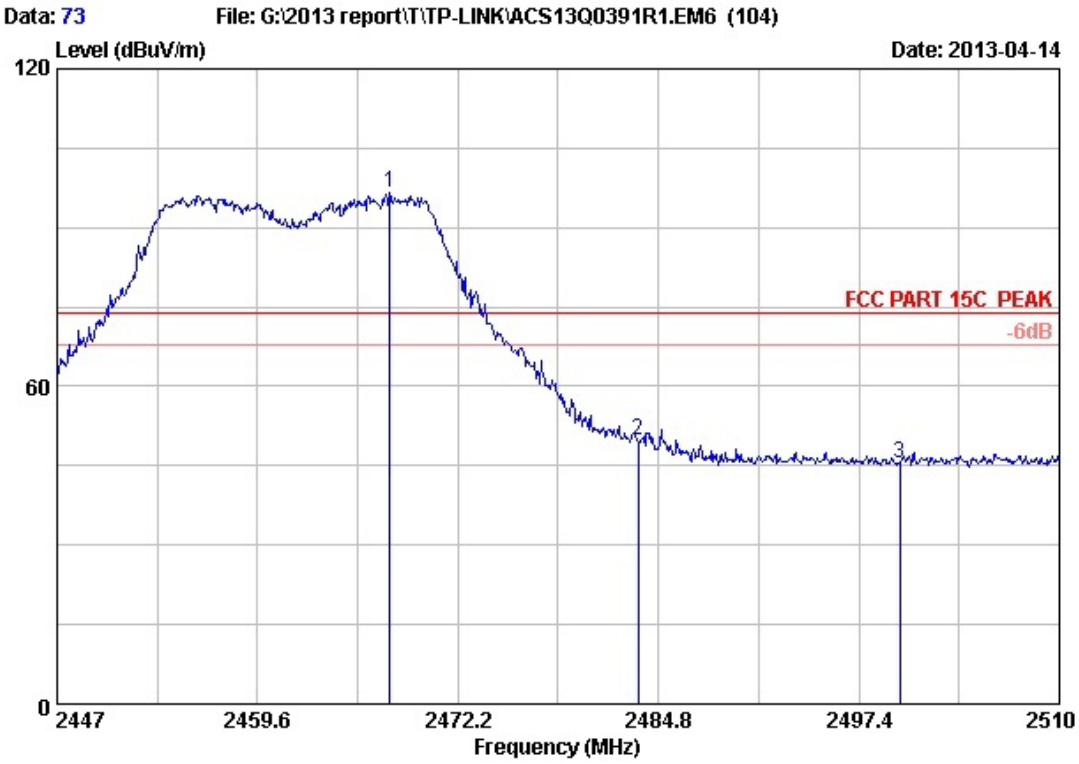
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 72
Dis. / Ant. : 3m 2012 3115 (4580) Ant. pol. : VERTICAL
Limit : FCC PART 15C AV
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : SafeStream™ Wireless N Gigabit Broadband VPN Router
Power supply : DC 12V From Adapter Input AC 120V/60Hz
Test mode : IEEE802.11nHT20 CH11 2462MHz Tx
M/N : TL-ER604W
:

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2460.734	27.15	6.12	35.92	102.57	99.92	54.00	-45.92	Average
2	2483.500	27.29	6.16	35.92	54.20	51.73	54.00	2.27	Average
3	2500.000	27.40	6.19	35.93	45.91	43.57	54.00	10.43	Average

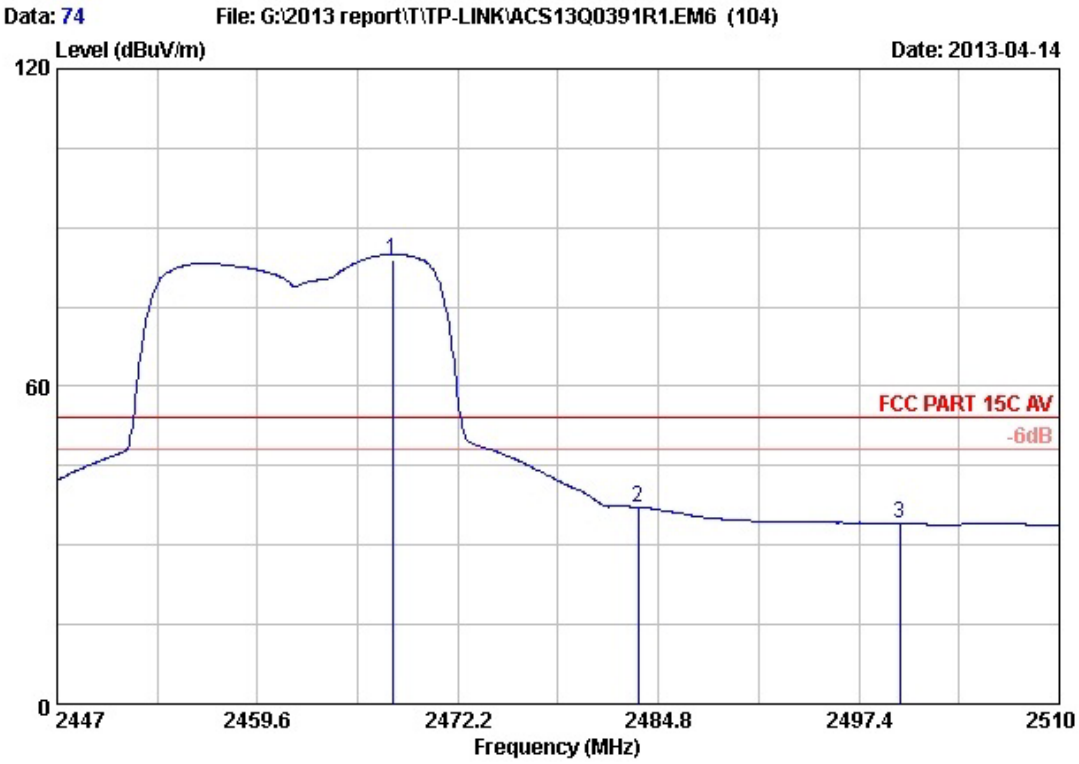
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 73
Dis. / Ant. : 3m 2012 3115 (4580) Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : SafeSteram™ Wireless N Gigabit Broadband VPN Router
Power supply : DC 12V From Adapter Input AC 120V/60Hz
Test mode : IEEE802.11nHT20 CH11 2462MHz Tx
M/N : TL-ER604W
:

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2467.916	27.19	6.13	35.92	99.20	96.60	74.00	-22.60	Peak
2	2483.500	27.29	6.16	35.92	52.28	49.81	74.00	24.19	Peak
3	2500.000	27.40	6.19	35.93	47.79	45.45	74.00	28.55	Peak

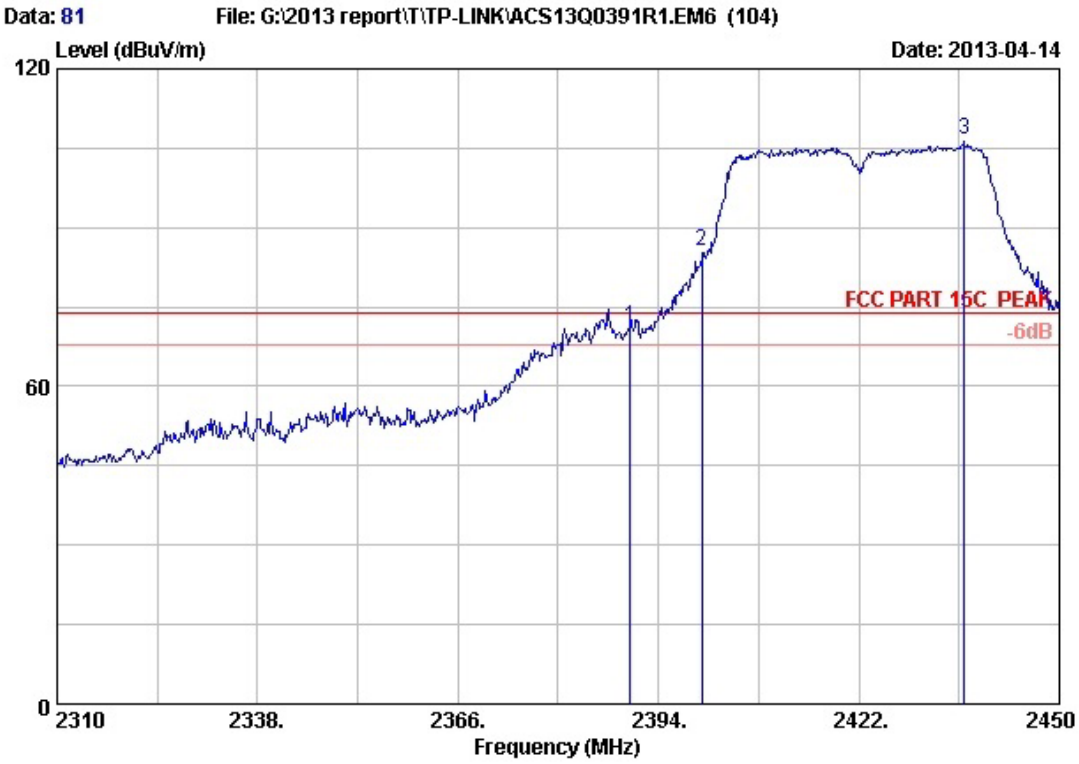
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 74
Dis. / Ant. : 3m 2012 3115 (4580) Ant. pol. : HORIZONTAL
Limit : FCC PART 15C AV
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : SafeSteram™ Wireless N Gigabit Broadband VPN Router
Power supply : DC 12V From Adapter Input AC 120V/60Hz
Test mode : IEEE802.11nHT20 CH11 2462MHz Tx
M/N : TL-ER604W
:

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2468.105	27.20	6.13	35.92	86.59	84.00	54.00	-30.00	Average
2	2483.500	27.29	6.16	35.92	39.71	37.24	54.00	16.76	Average
3	2500.000	27.40	6.19	35.93	36.44	34.10	54.00	19.90	Average

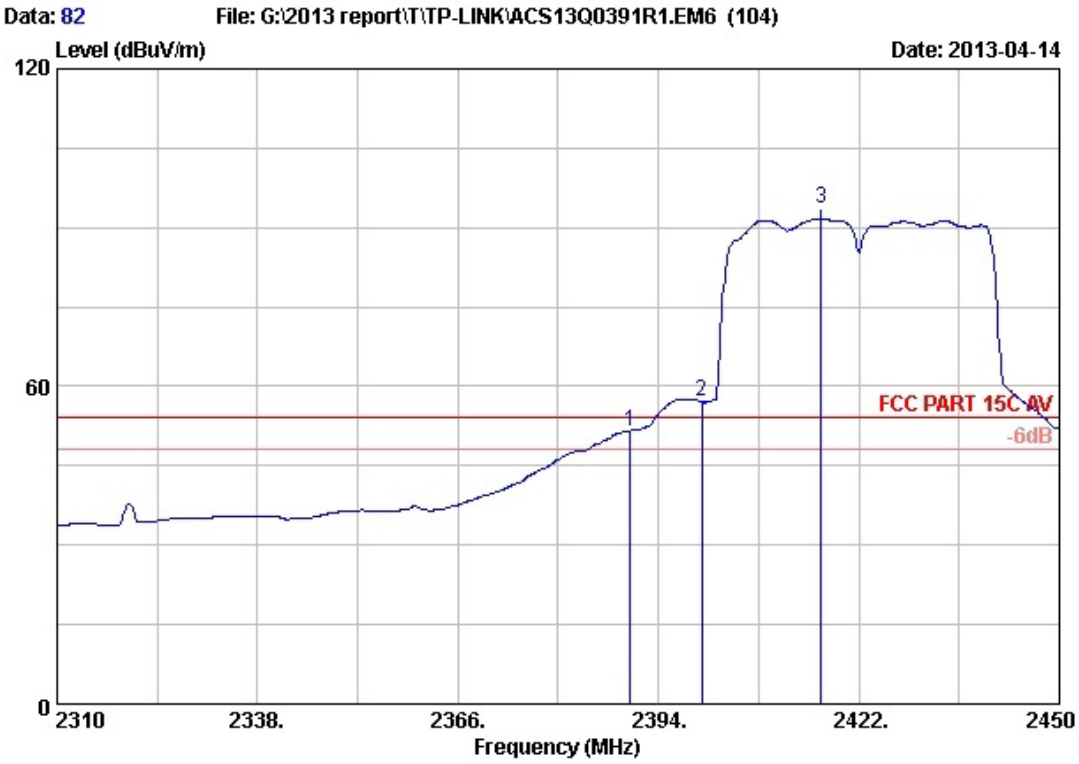
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 81
Dis. / Ant. : 3m 2012 3115 (4580) Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : SafeStream™ Wireless N Gigabit Broadband VPN Router
Power supply : DC 12V From Adapter Input AC 120V/60Hz
Test mode : IEEE802.11nHT40 CH1 2422MHz Tx
M/N : TL-ER604W
:

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2390.000	26.70	6.00	35.92	74.50	71.28	74.00	2.72	Peak
2	2400.000	26.76	6.02	35.92	88.87	85.73	74.00	-11.73	Peak
3	2436.700	26.99	6.08	35.92	109.45	106.60	74.00	-32.60	Peak

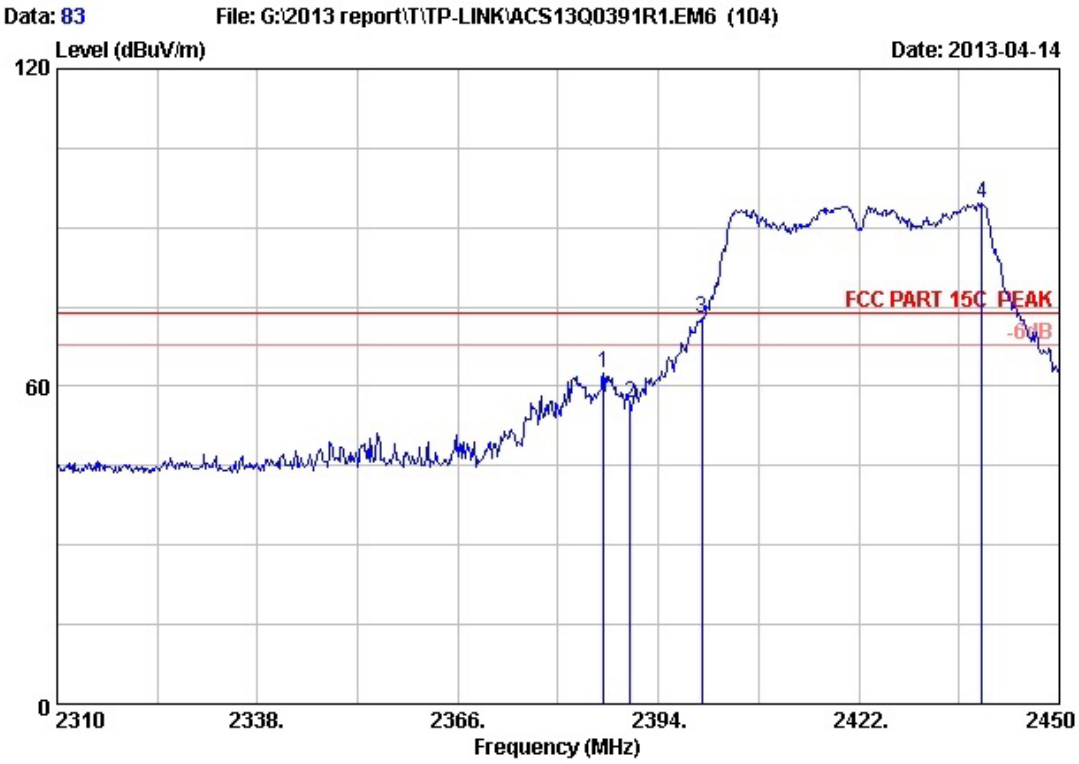
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 82
Dis. / Ant. : 3m 2012 3115 (4580) Ant. pol. : VERTICAL
Limit : FCC PART 15C AV
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : SafeSteram™ Wireless N Gigabit Broadband VPN Router
Power supply : DC 12V From Adapter Input AC 120V/60Hz
Test mode : IEEE802.11nHT40 CH1 2422MHz Tx
M/N : TL-ER604W
:

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2390.000	26.70	6.00	35.92	54.81	51.59	54.00	2.41	Average
2	2400.000	26.76	6.02	35.92	60.17	57.03	54.00	-3.03	Average
3	2416.680	26.87	6.05	35.92	96.58	93.58	54.00	-39.58	Average

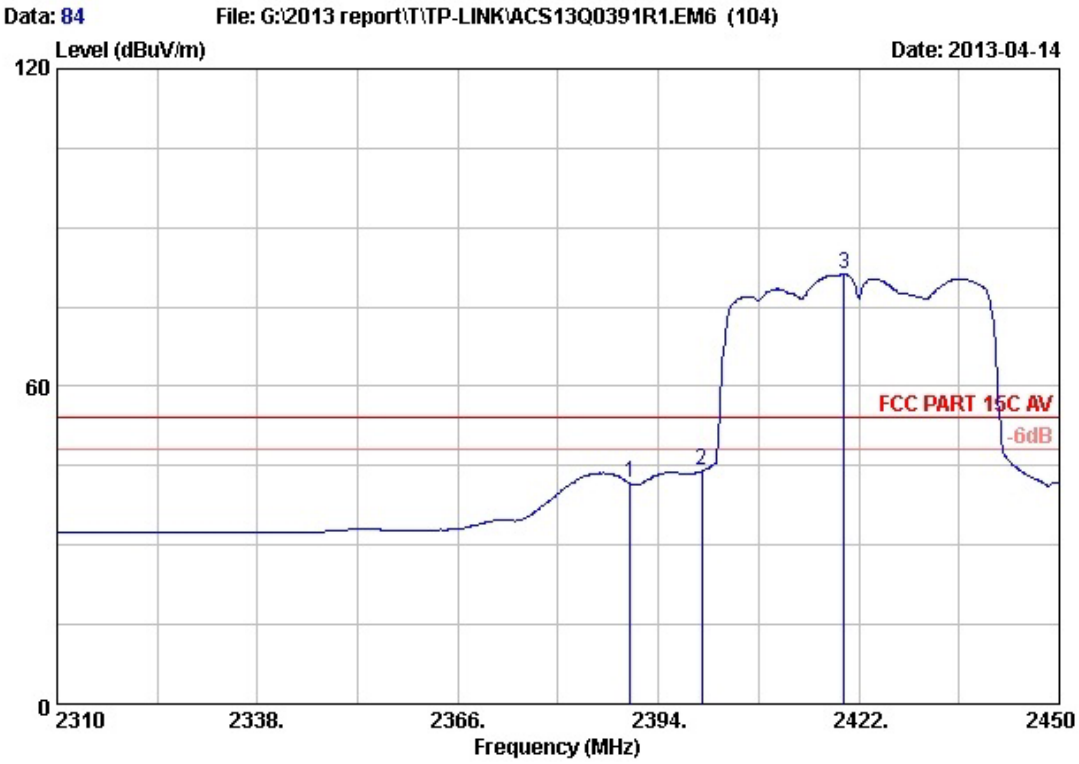
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 83
Dis. / Ant. : 3m 2012 3115 (4580) Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : SafeSteram™ Wireless N Gigabit Broadband VPN Router
Power supply : DC 12V From Adapter Input AC 120V/60Hz
Test mode : IEEE802.11nHT40 CH1 2422MHz Tx
M/N : TL-ER604W
:

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2386.300	26.67	5.99	35.92	65.71	62.45	74.00	11.55	Peak
2	2390.000	26.70	6.00	35.92	60.21	56.99	74.00	17.01	Peak
3	2400.000	26.76	6.02	35.92	76.07	72.93	74.00	1.07	Peak
4	2439.220	27.01	6.08	35.92	97.49	94.66	74.00	-20.66	Peak

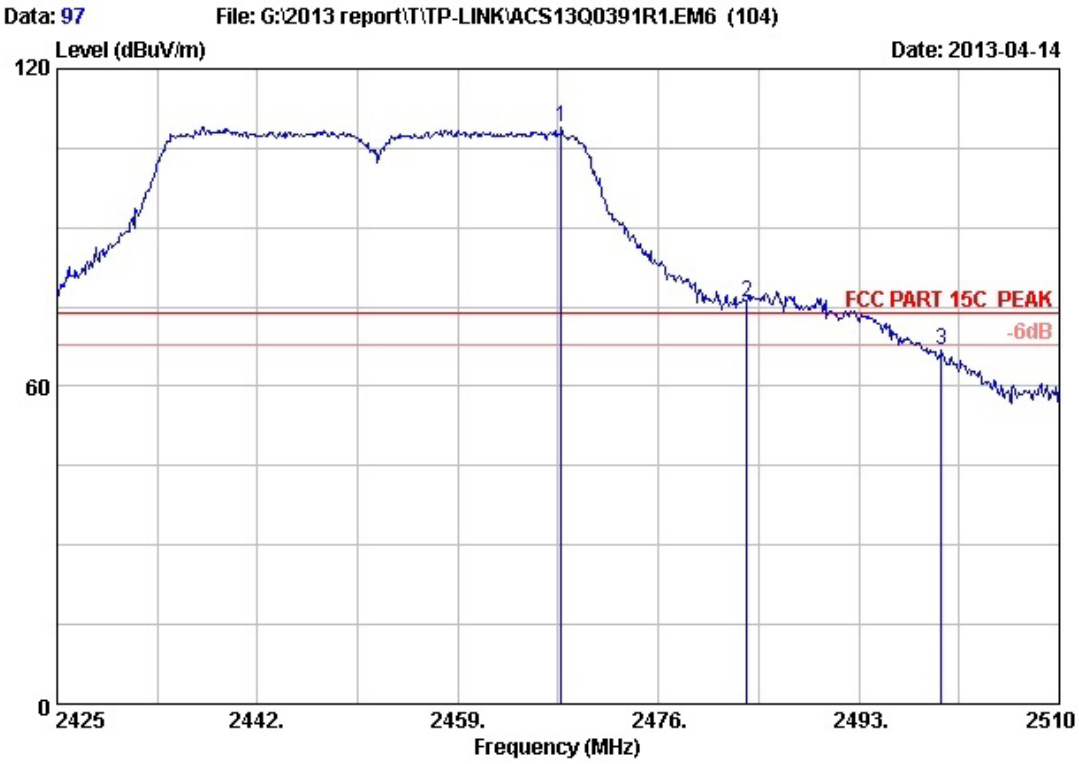
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 84
Dis. / Ant. : 3m 2012 3115 (4580) Ant. pol. : HORIZONTAL
Limit : FCC PART 15C AV
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : SafeStream™ Wireless N Gigabit Broadband VPN Router
Power supply : DC 12V From Adapter Input AC 120V/60Hz
Test mode : IEEE802.11nHT40 CH1 2422MHz Tx
M/N : TL-ER604W
:

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2390.000	26.70	6.00	35.92	44.98	41.76	54.00	12.24	Average
2	2400.000	26.76	6.02	35.92	47.13	43.99	54.00	10.01	Average
3	2419.900	26.89	6.05	35.92	84.11	81.13	54.00	-27.13	Average

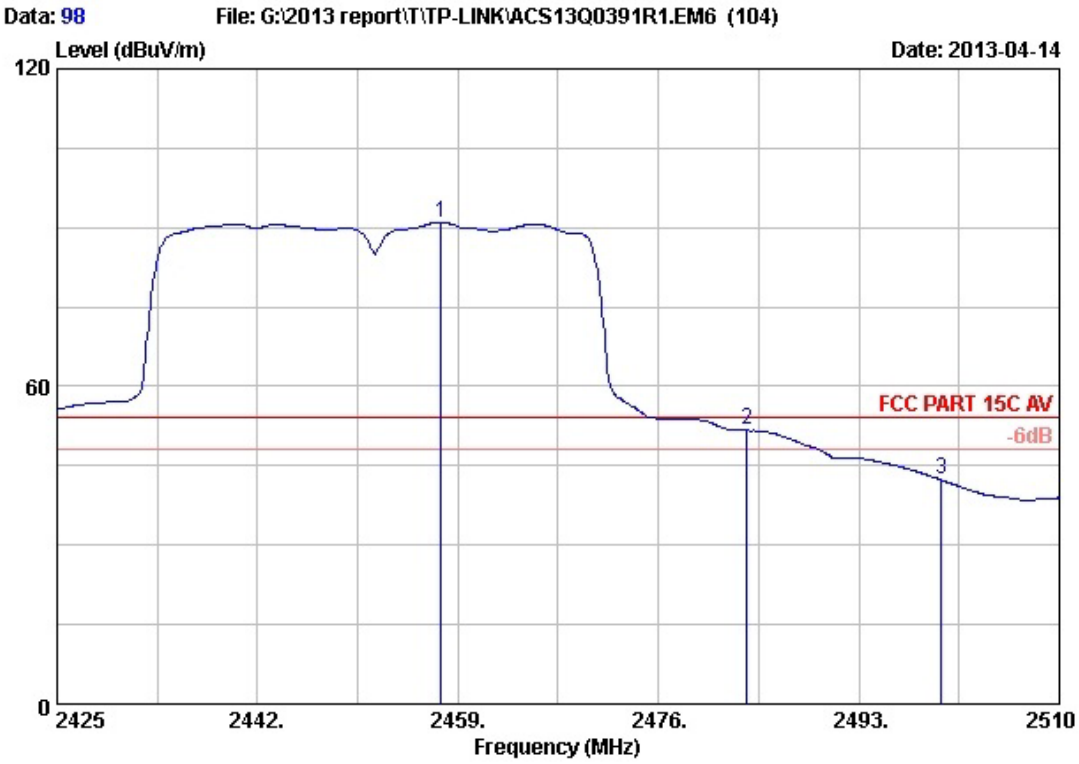
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 97
Dis. / Ant. : 3m 2012 3115 (4580) Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : SafeSteram™ Wireless N Gigabit Broadband VPN Router
Power supply : DC 12V From Adapter Input AC 120V/60Hz
Test mode : IEEE802.11nHT40 CH7 2452MHz Tx
M/N : TL-ER604W
:

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2467.755	27.19	6.13	35.92	111.56	108.96	74.00	-34.96	Peak
2	2483.500	27.29	6.16	35.92	78.24	75.77	74.00	-1.77	Peak
3	2500.000	27.40	6.19	35.93	69.18	66.84	74.00	7.16	Peak

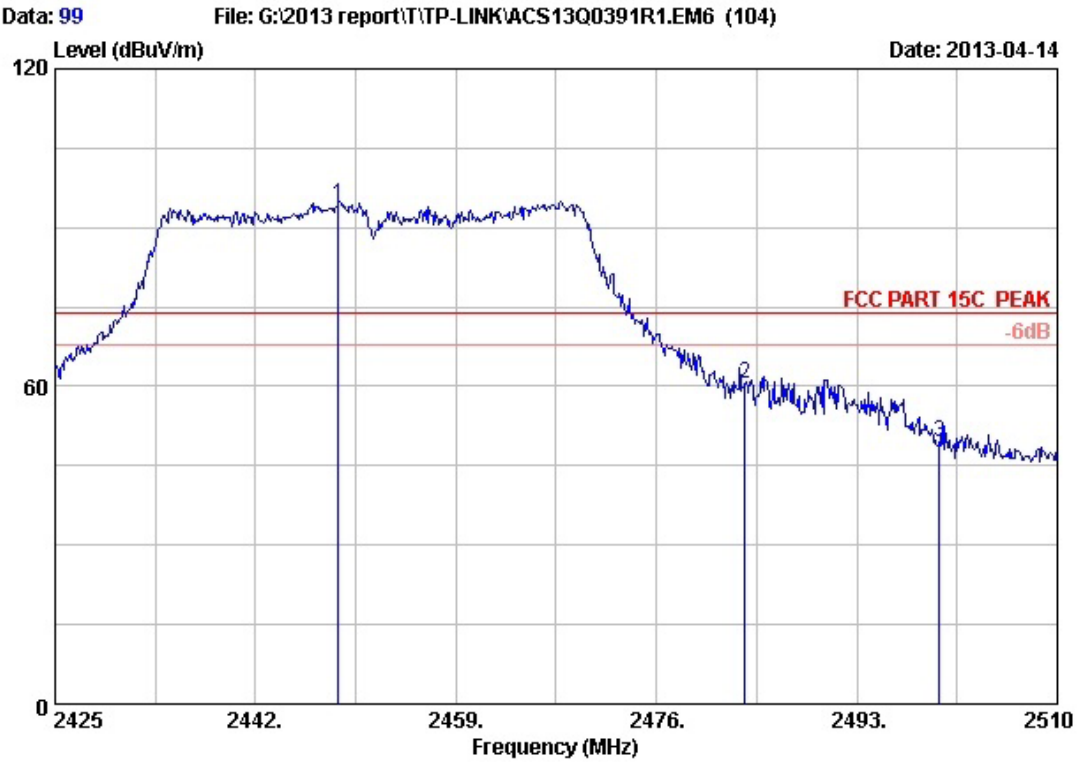
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 98
Dis. / Ant. : 3m 2012 3115 (4580) Ant. pol. : VERTICAL
Limit : FCC PART 15C AV
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : SafeSteram™ Wireless N Gigabit Broadband VPN Router
Power supply : DC 12V From Adapter Input AC 120V/60Hz
Test mode : IEEE802.11nHT40 CH7 2452MHz Tx
M/N : TL-ER604W
:

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2457.555	27.13	6.12	35.92	93.55	90.88	54.00	-36.88	Average
2	2483.500	27.29	6.16	35.92	54.19	51.72	54.00	2.28	Average
3	2500.000	27.40	6.19	35.93	44.70	42.36	54.00	11.64	Average

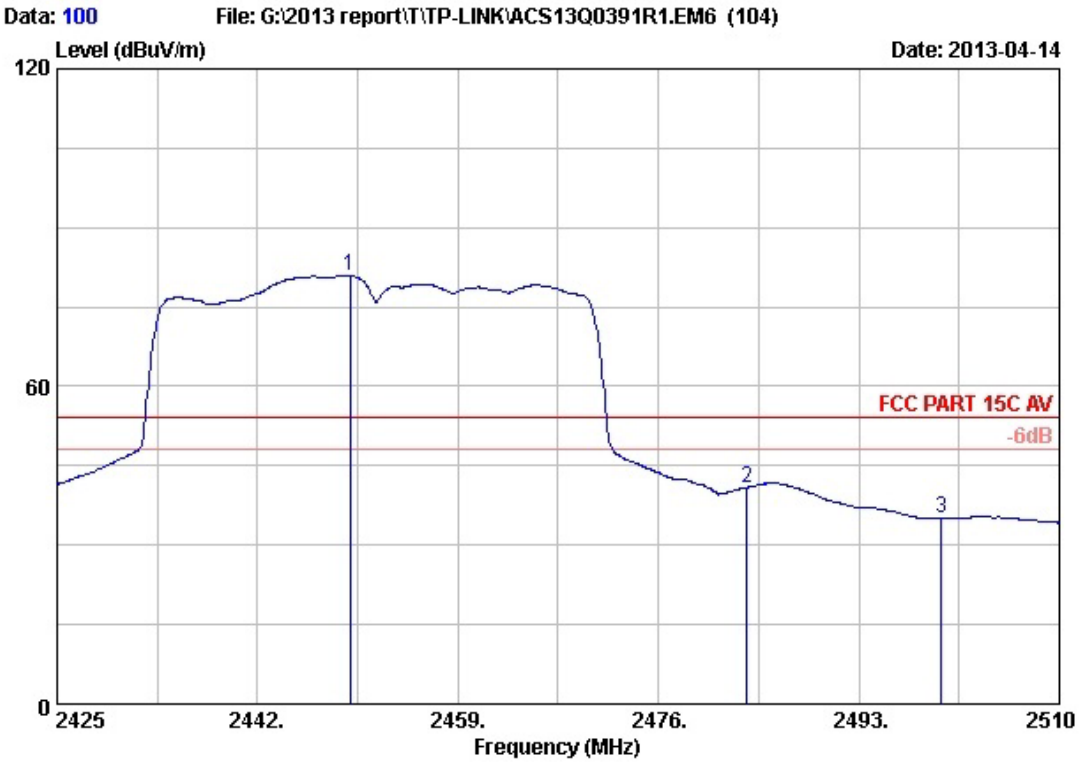
Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 99
Dis. / Ant. : 3m 2012 3115 (4580) Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : SafeSteram™ Wireless N Gigabit Broadband VPN Router
Power supply : DC 12V From Adapter Input AC 120V/60Hz
Test mode : IEEE802.11nHT40 CH7 2452MHz Tx
M/N : TL-ER604W
:

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2449.055	27.07	6.10	35.92	96.89	94.14	74.00	-20.14	Peak
2	2483.500	27.29	6.16	35.92	63.13	60.66	74.00	13.34	Peak
3	2500.000	27.40	6.19	35.93	51.78	49.44	74.00	24.56	Peak

Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 100
Dis. / Ant. : 3m 2012 3115 (4580) Ant. pol. : HORIZONTAL
Limit : FCC PART 15C AV
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : SafeStream™ Wireless N Gigabit Broadband VPN Router
Power supply : DC 12V From Adapter Input AC 120V/60Hz
Test mode : IEEE802.11nHT40 CH7 2452MHz Tx
M/N : TL-ER604W
:

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2449.820	27.08	6.10	35.92	83.56	80.82	54.00	-26.82	Average
2	2483.500	27.29	6.16	35.92	43.39	40.92	54.00	13.08	Average
3	2500.000	27.40	6.19	35.93	37.31	34.97	54.00	19.03	Average

Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

7. 6dB Bandwidth Test

7.1.Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum	Agilent	E4446A	US44300459	May.08, 12	1 Year
2.	Amp	HP	8449B	3008A08495	May.08, 12	1 Year
3.	Antenna	EMCO	3115	9510-4580	May.31, 12	1Year
4.	HF Cable	Hubersuhner	Sucoflex104	-	May.08, 12	1 Year
5.	Spectrum Analyzer	Agilent	N9030A	MY51380221	May.08,12	1Year

7.2.Limit

For direct sequence systems, the minimum 6dB bandwidth shall be at least 500kHz

7.3.Test Procedure

The transmitter output was connected to a spectrum analyzer, The bandwidth of the fundamental frequency was measured by spectrum analyzer with 100kHz RBW and 300 kHz VBW. The 6dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 6dB.

7.4.Test Results

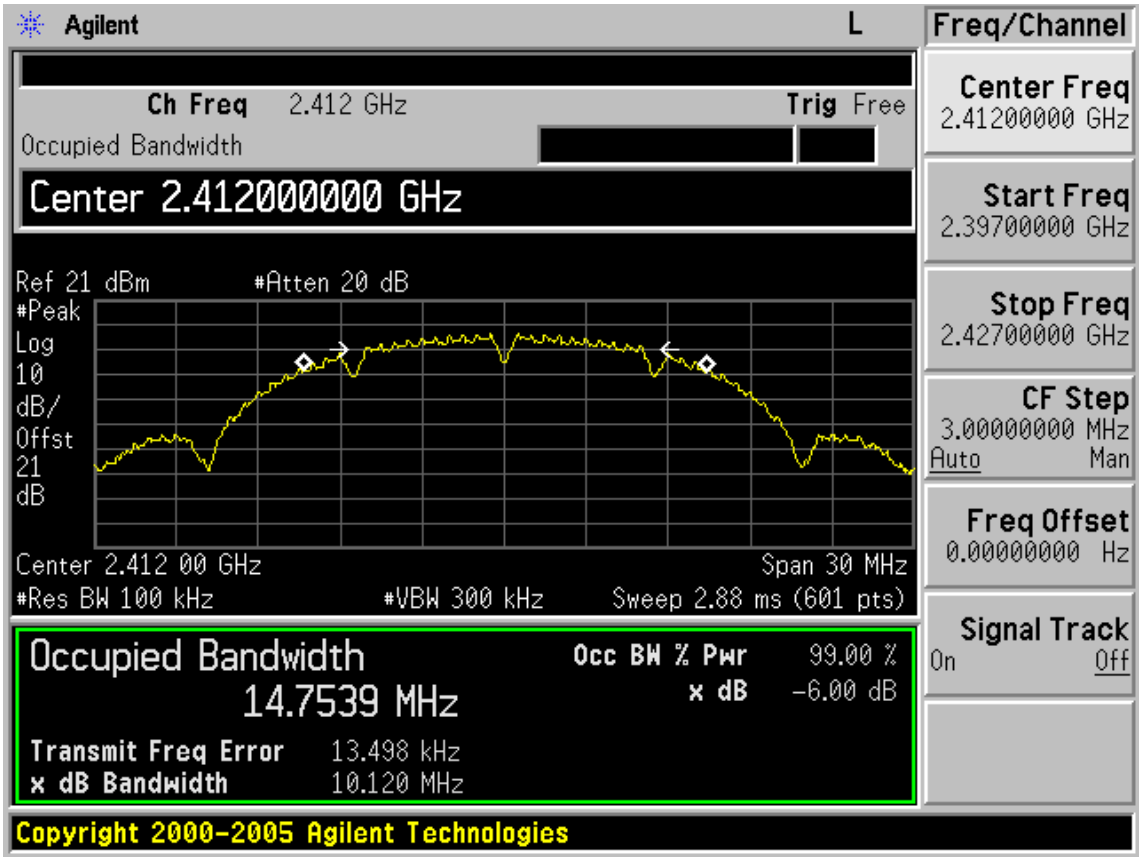
EUT: SafeStream™ Wireless N Gigabit Broadband VPN Router		
M/N: TL-ER604W		
Test date:2013-04-14	Pressure: 101.5±1.0 kpa	Humidity: 48.9±3.0%
Tested by: Leo-Li	Test site: RF Site	Temperature: 22.4±0.6 ℃

Cable loss: 1 dB		Attenuator loss: 20 dB		
Test Mode	CH	6dB bandwidth（MHz）		Limit (KHz)
		Chain0	Chain1	
11b	CH1	10.120	10.099	>500
	CH6	10.114	10.108	>500
	CH11	10.102	10.111	>500
11g	CH1	15.149	15.148	>500
	CH6	15.074	15.696	>500
	CH11	15.118	15.125	>500
11n HT20	CH1	15.108	15.975	>500
	CH6	15.107	16.105	>500
	CH11	15.087	16.074	>500
11n HT40	CH1	35.536	36.202	>500
	CH4	35.767	36.209	>500
	CH7	35.698	36.043	>500
Conclusion：PASS				

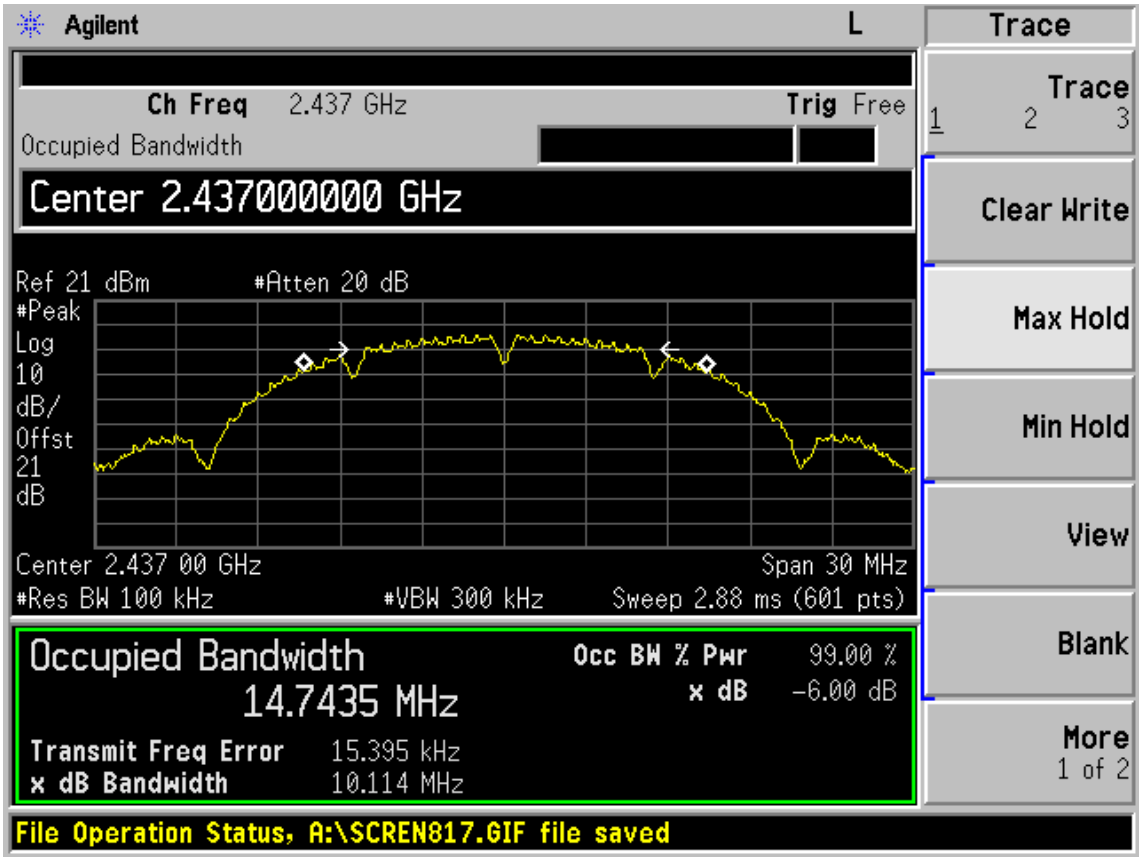
Chain 0

Test Mode: IEEE 802.11b TX

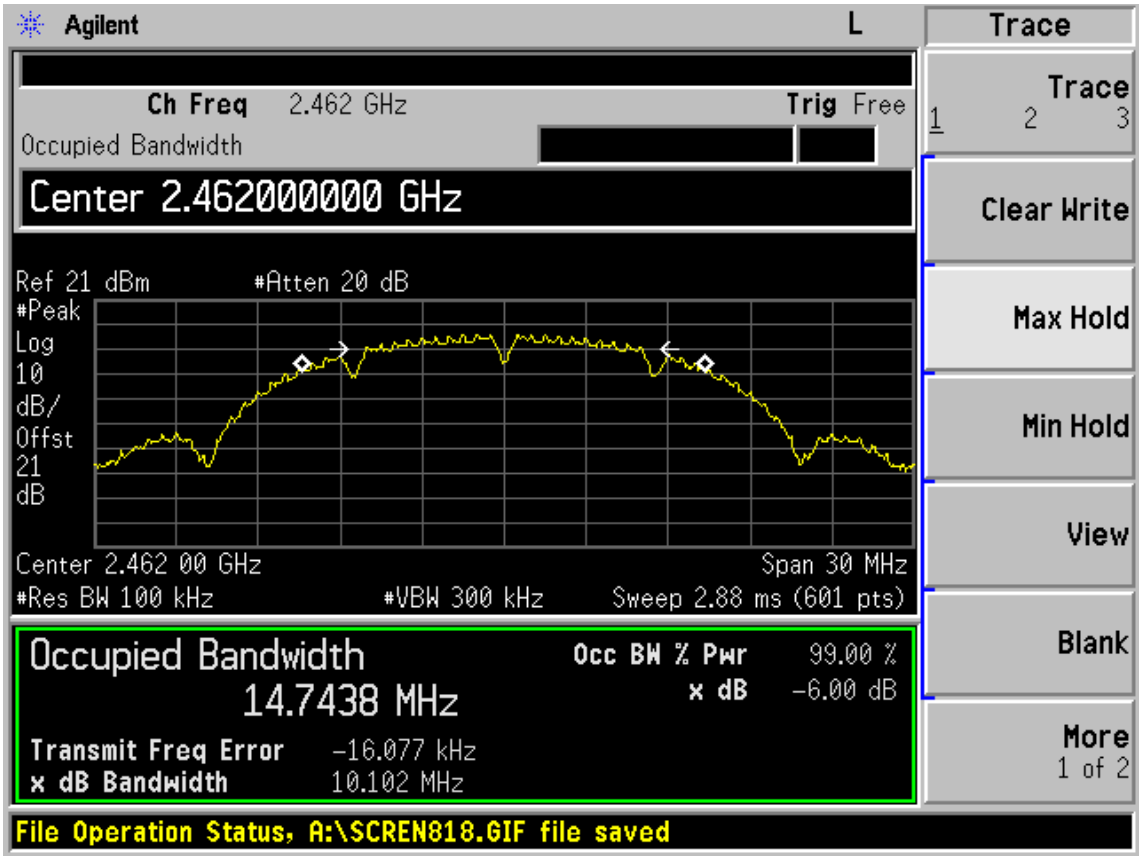
Test CH1: 2412MHz



Test CH6: 2437MHz

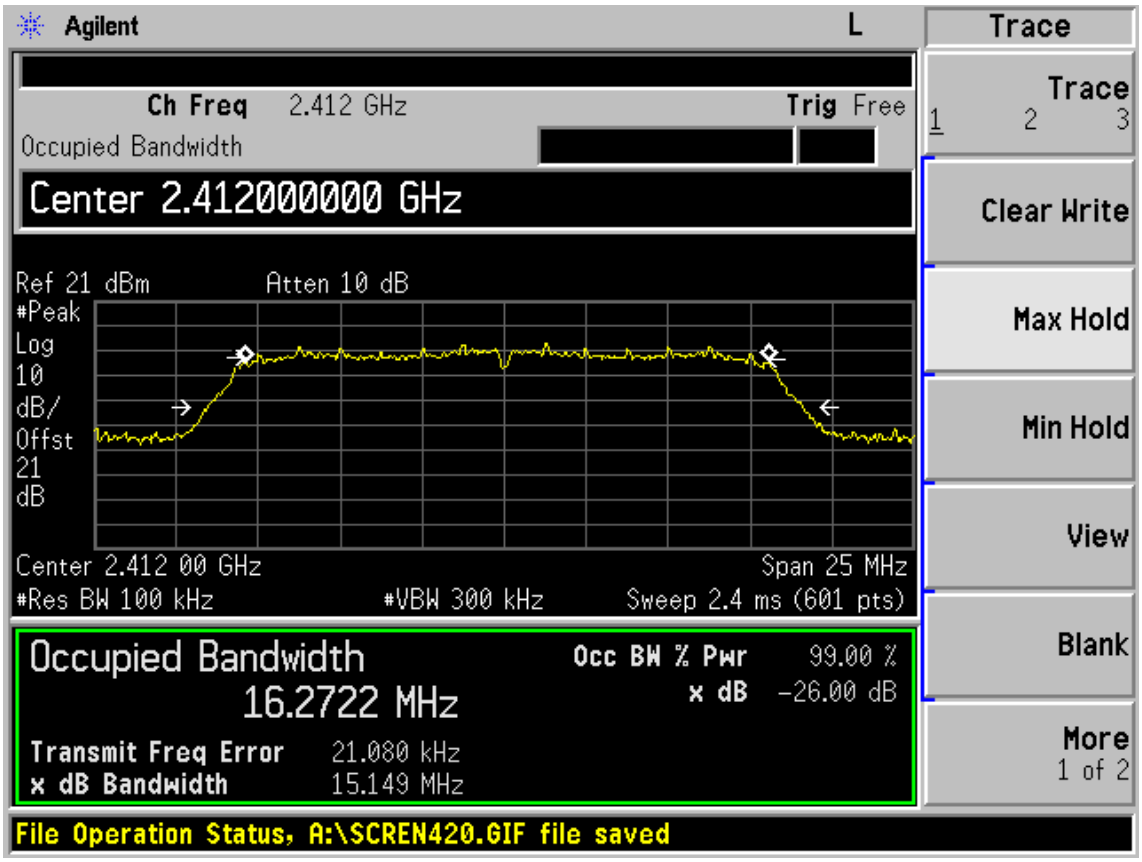


Test CH11: 2462MHz

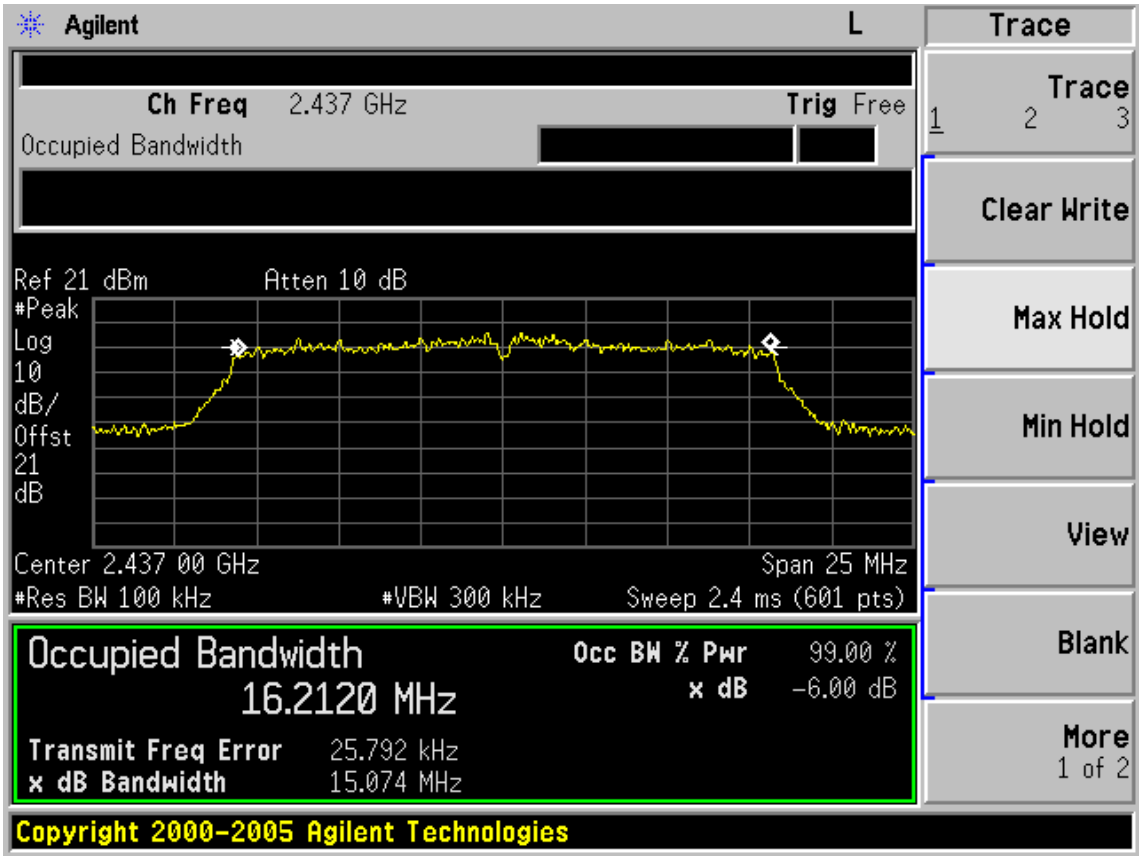


Test Mode: IEEE 802.11g TX

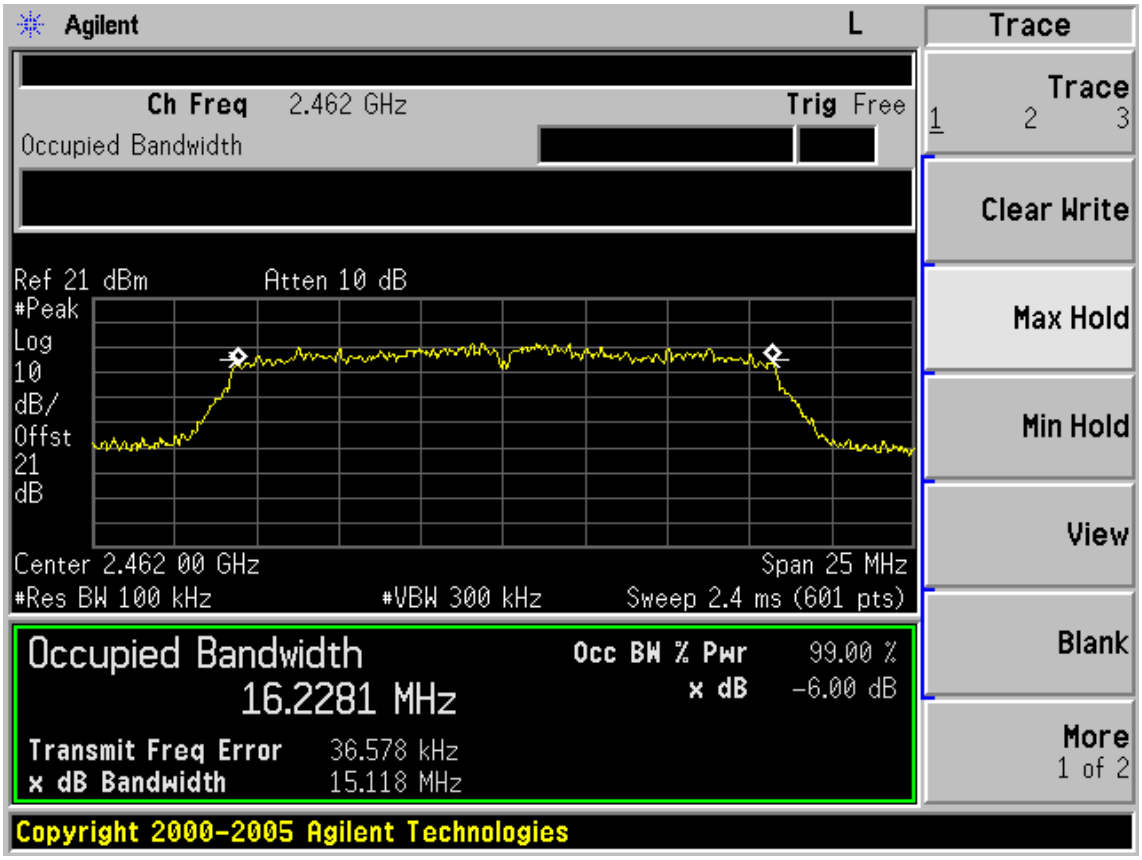
Test CH1: 2412MHz



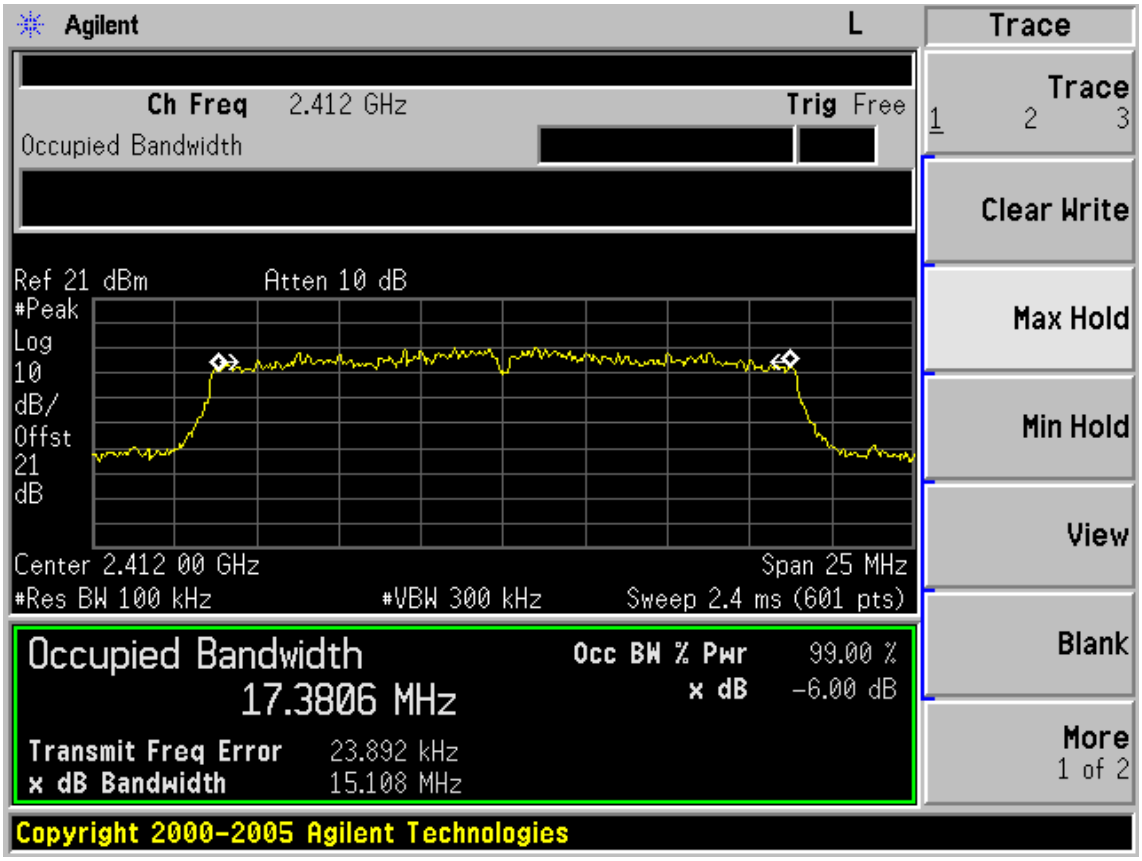
Test CH6: 2437MHz



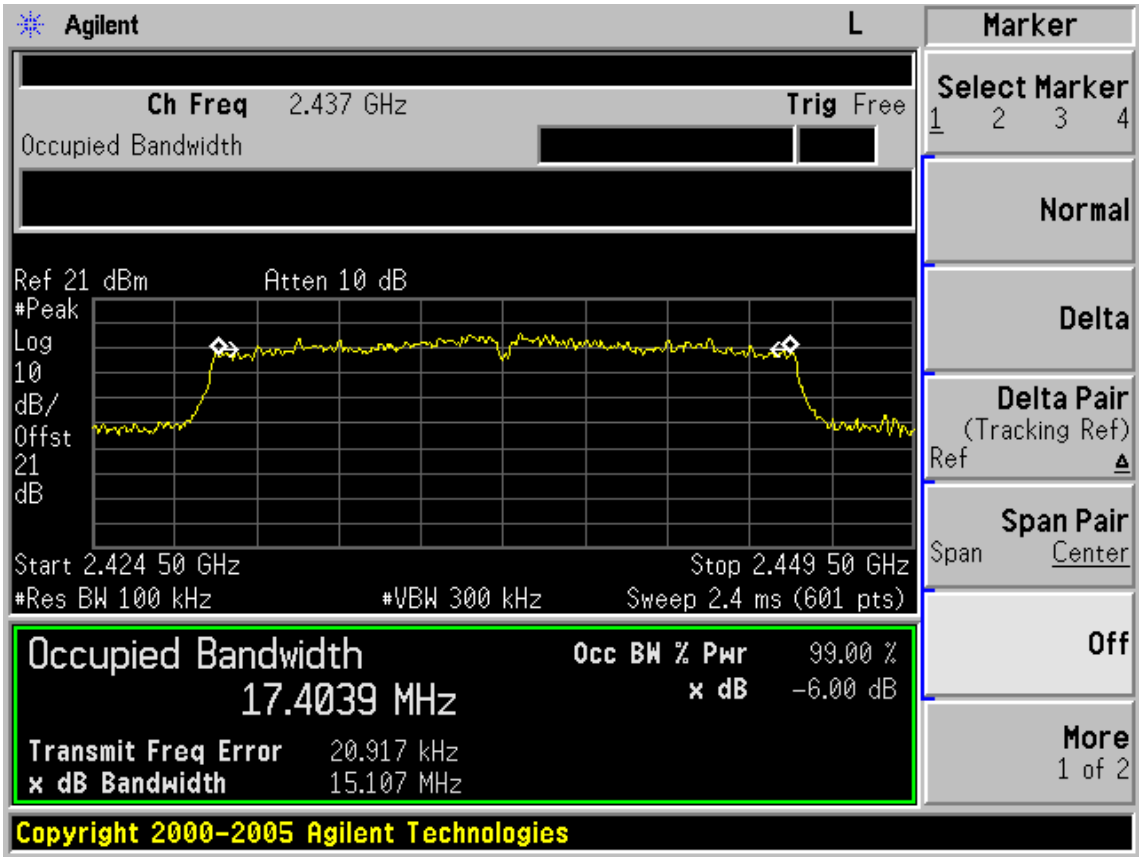
Test CH11: 2462MHz



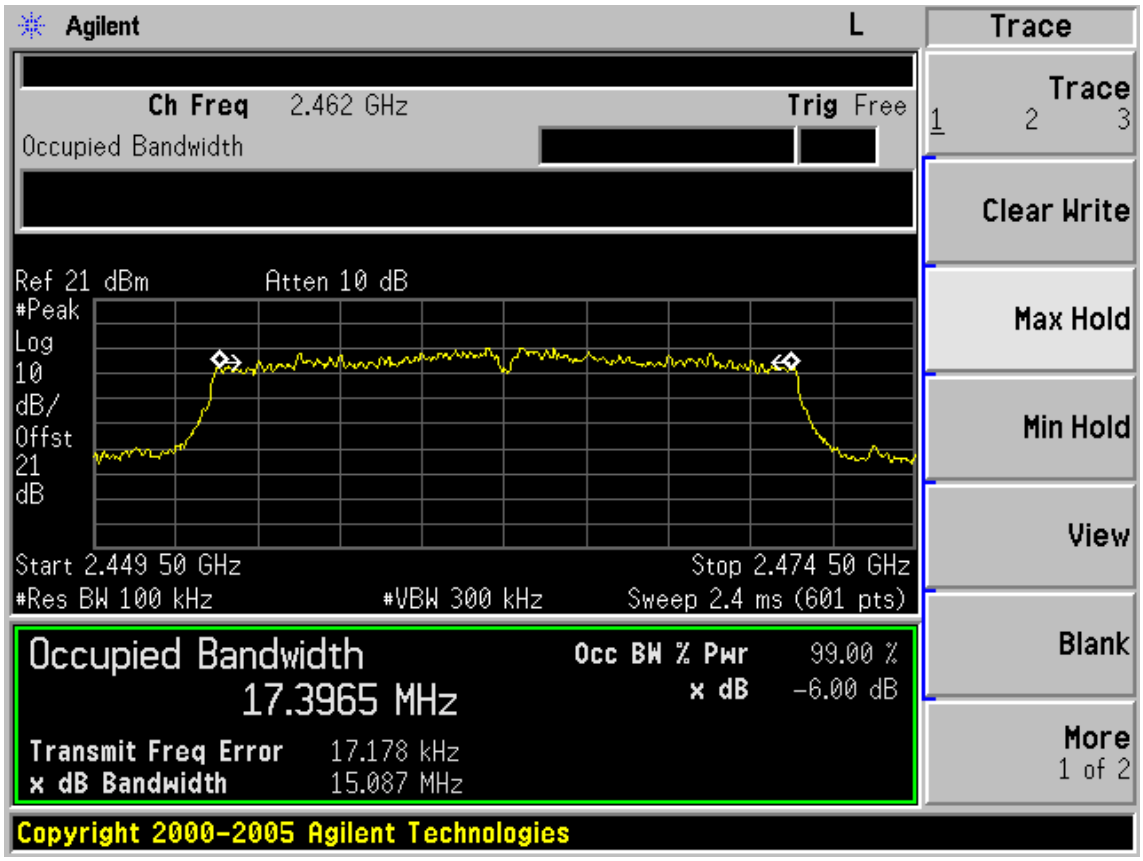
Test Mode: IEEE 802.11n HT20 TX
Test CH1: 2412MHz



Test CH6: 2437MHz

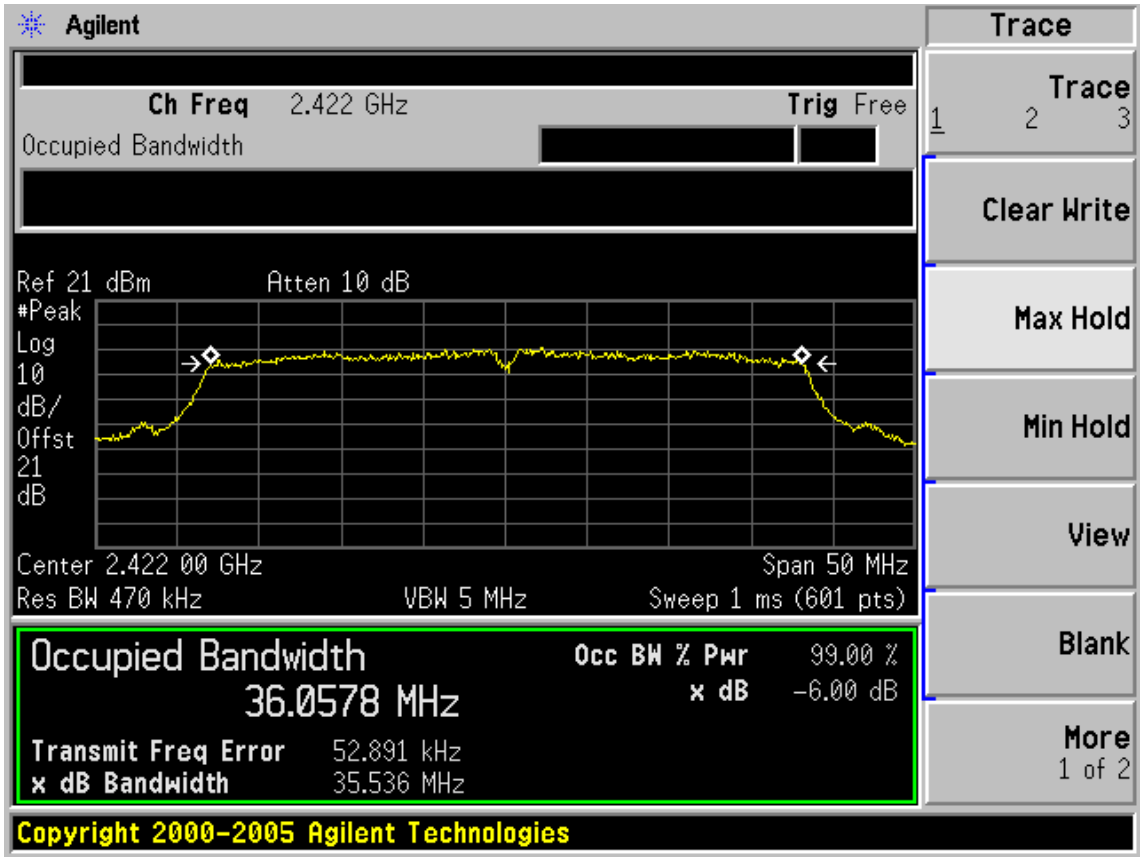


Test CH11: 2462MHz

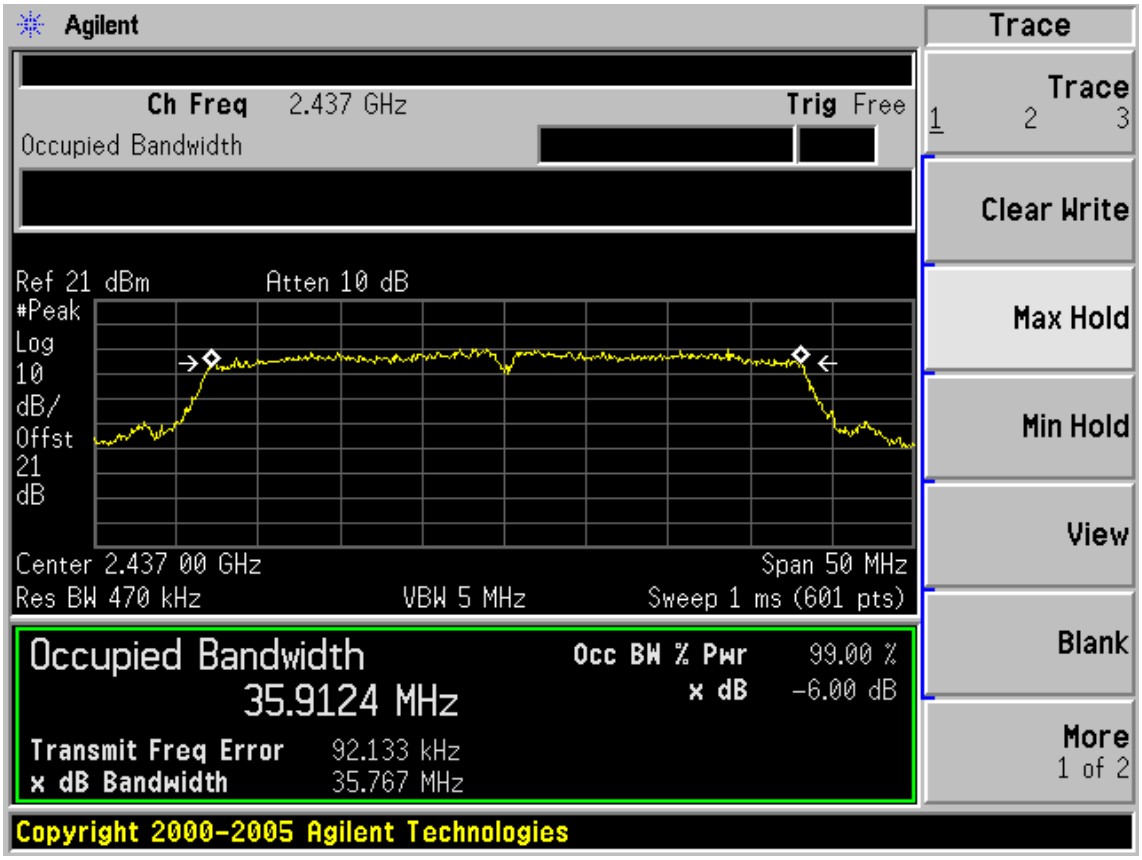


Test Mode: IEEE 802.11n HT40 TX

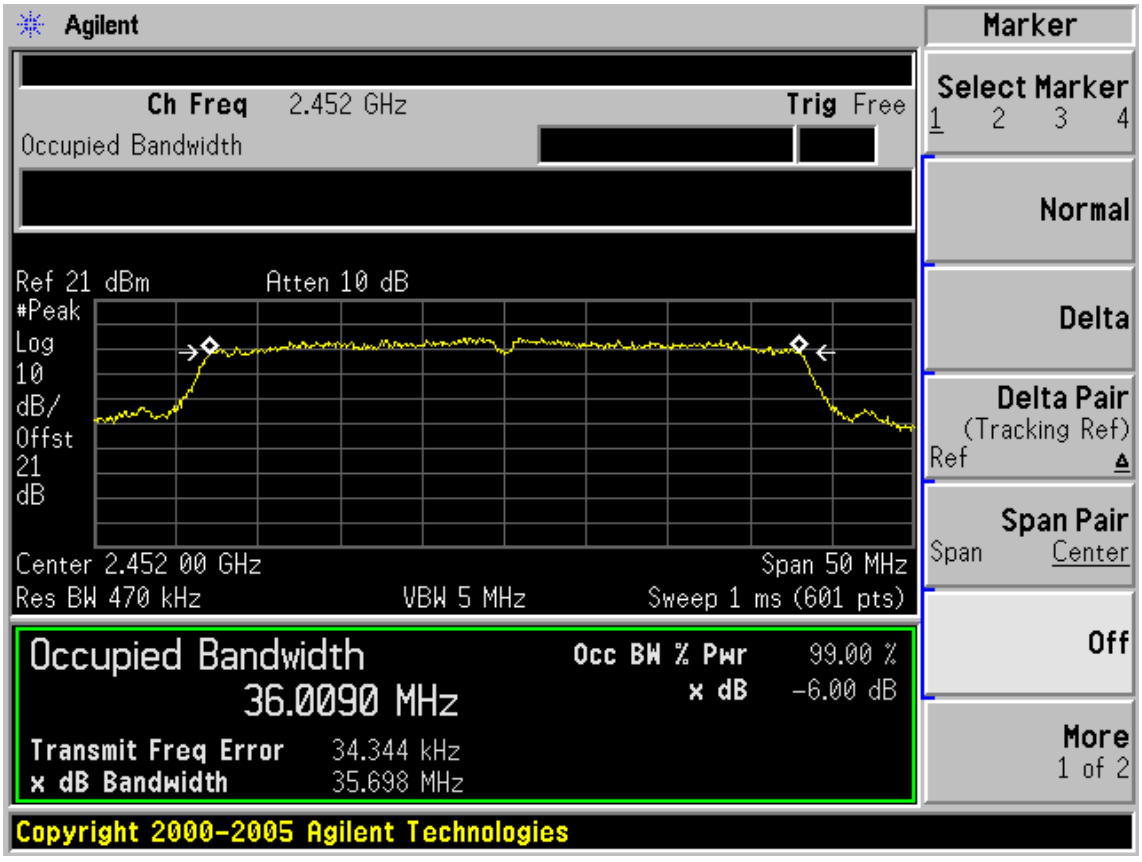
Test CH1: 2422MHz



Test CH4: 2437MHz



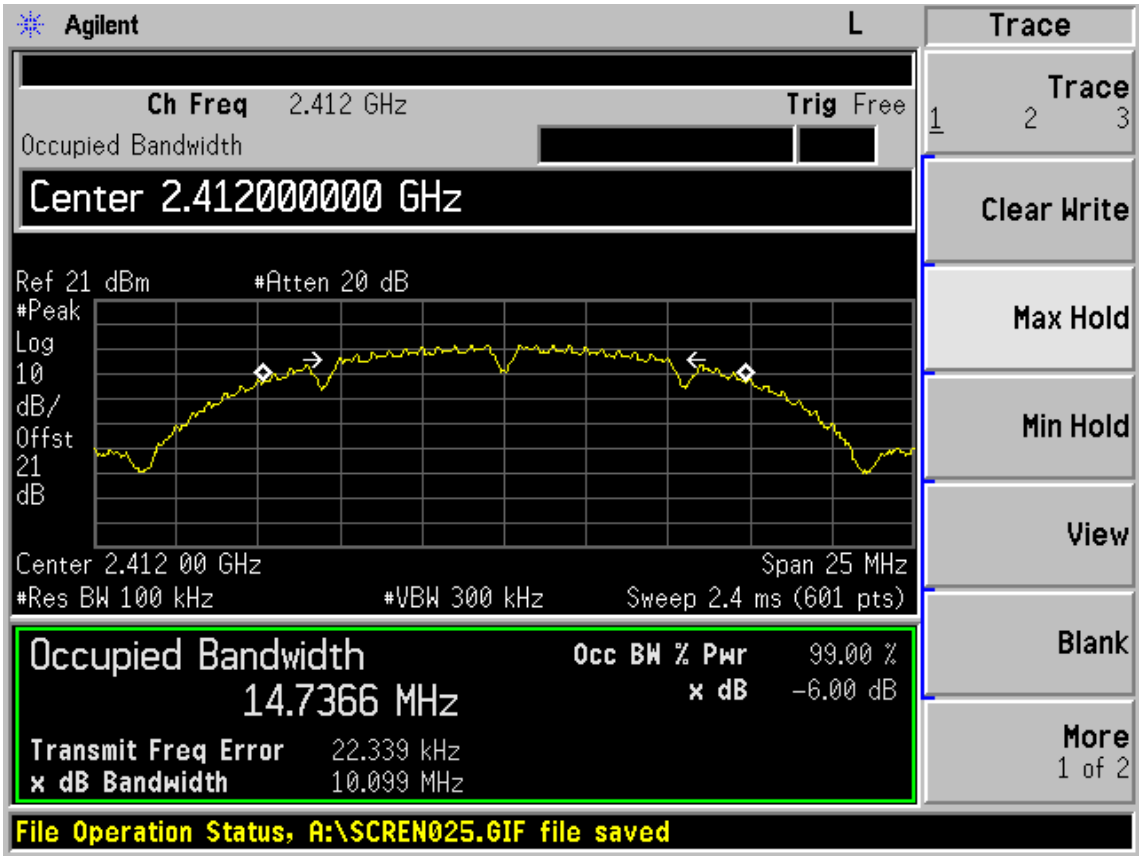
Test CH7: 2452MHz



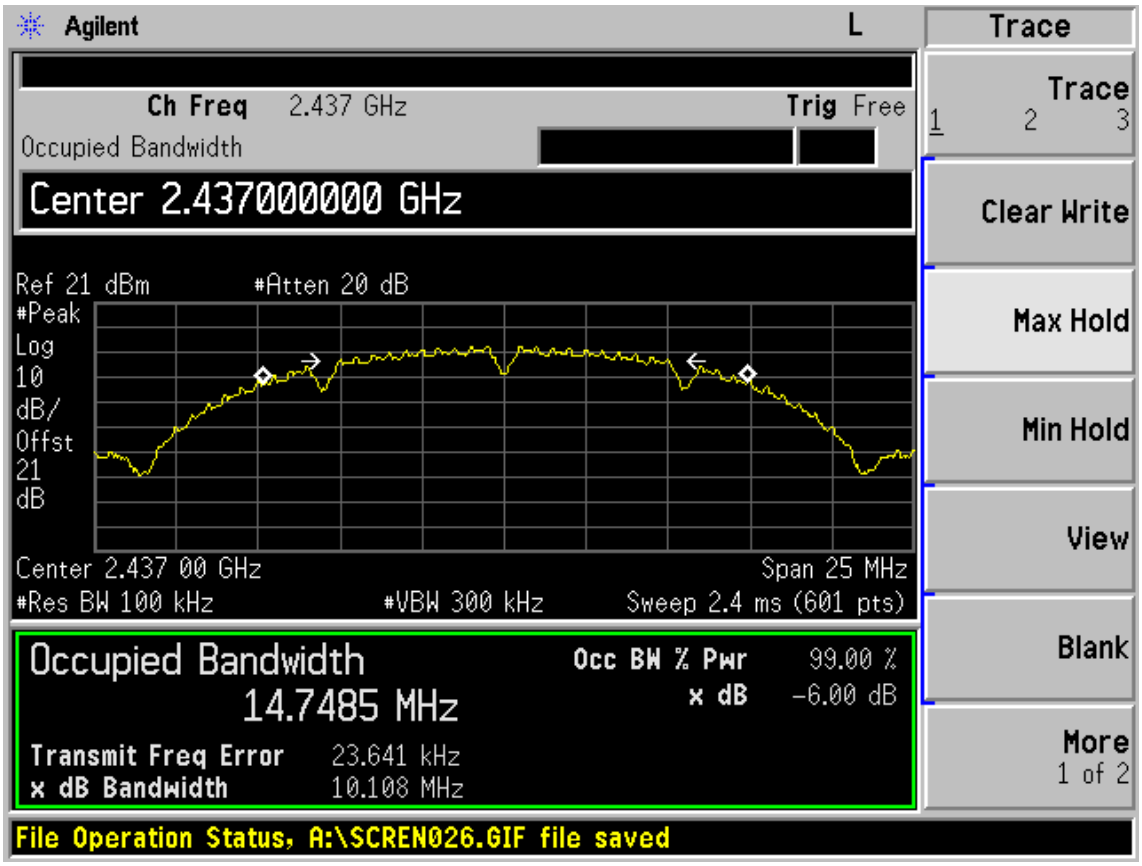
Chain 1

Test Mode: IEEE 802.11b TX

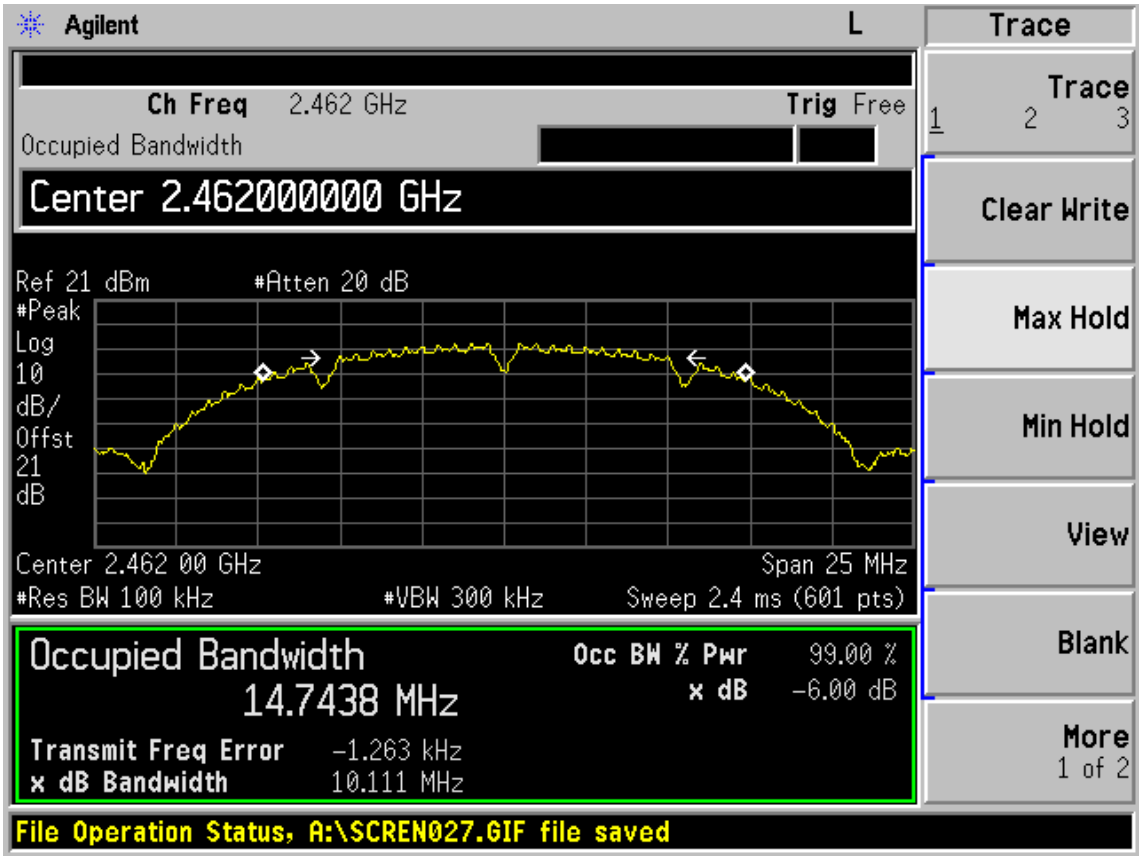
Test CH1: 2412MHz



Test CH6: 2437MHz

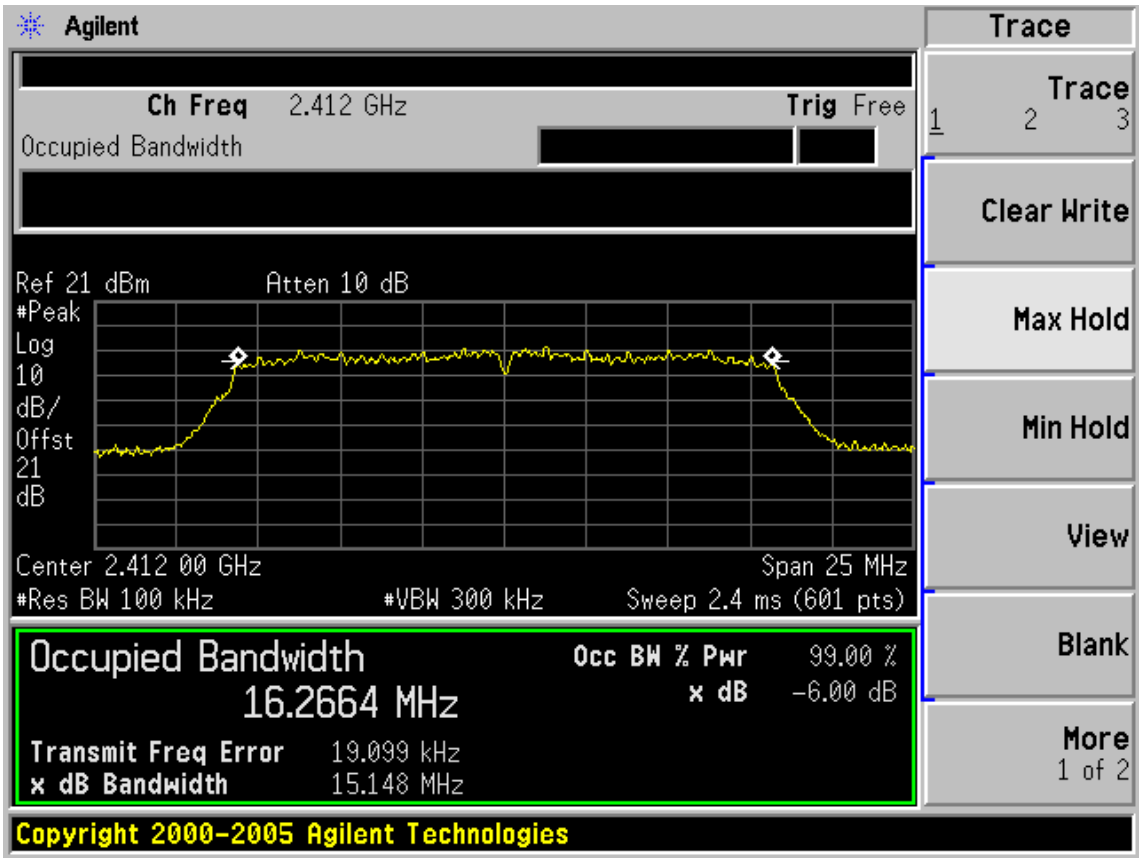


Test CH11: 2462MHz

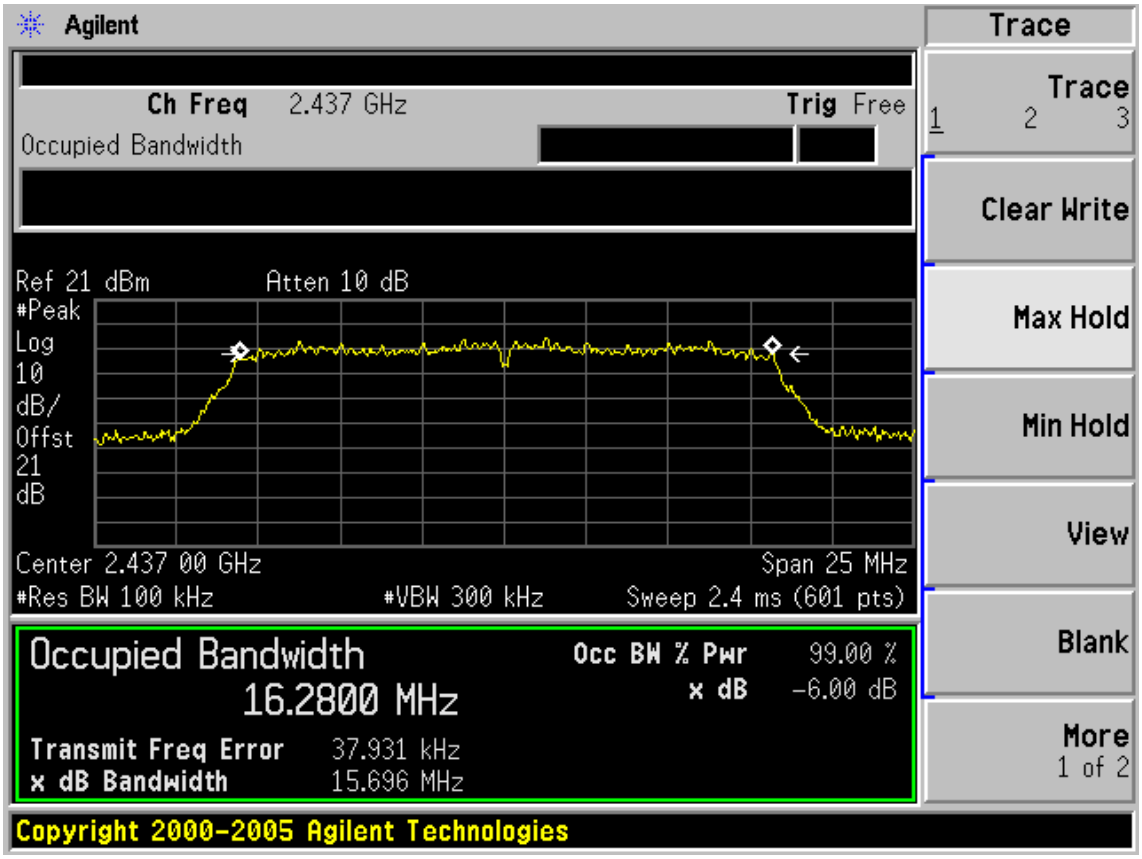


Test Mode: IEEE 802.11g TX

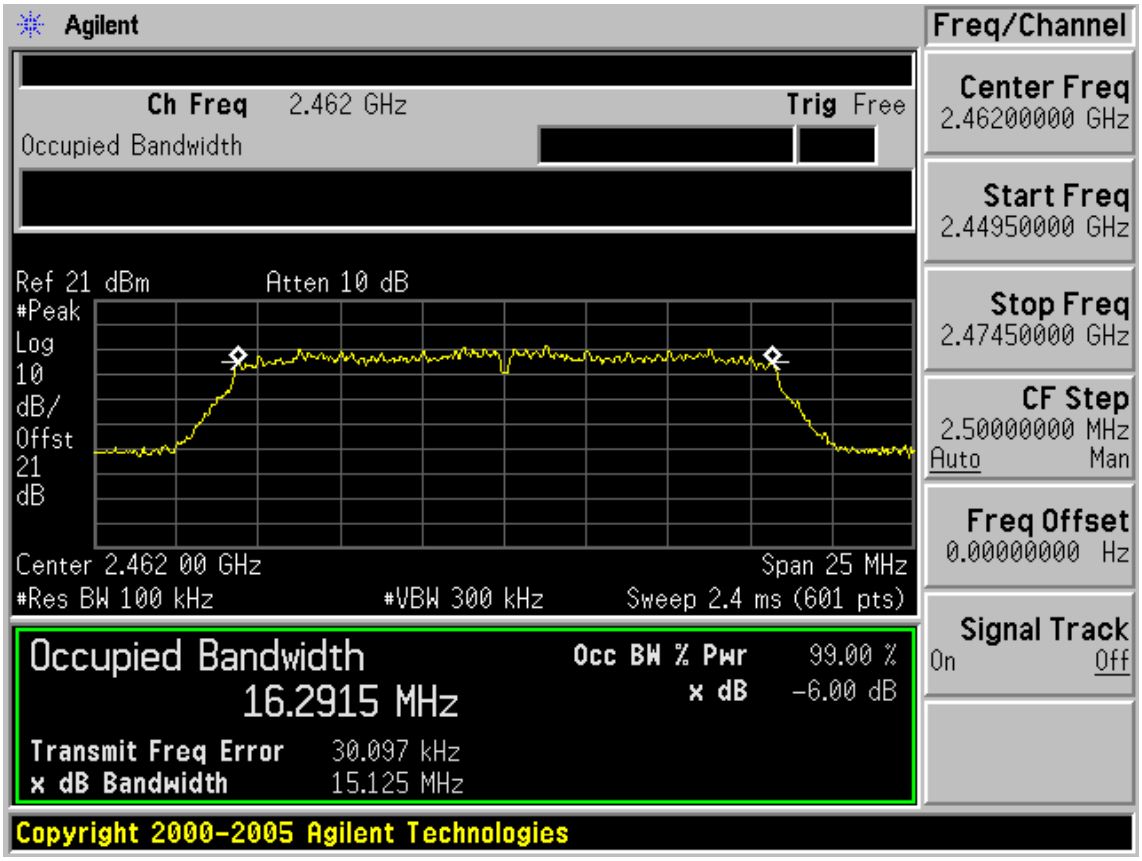
Test CH1: 2412MHz



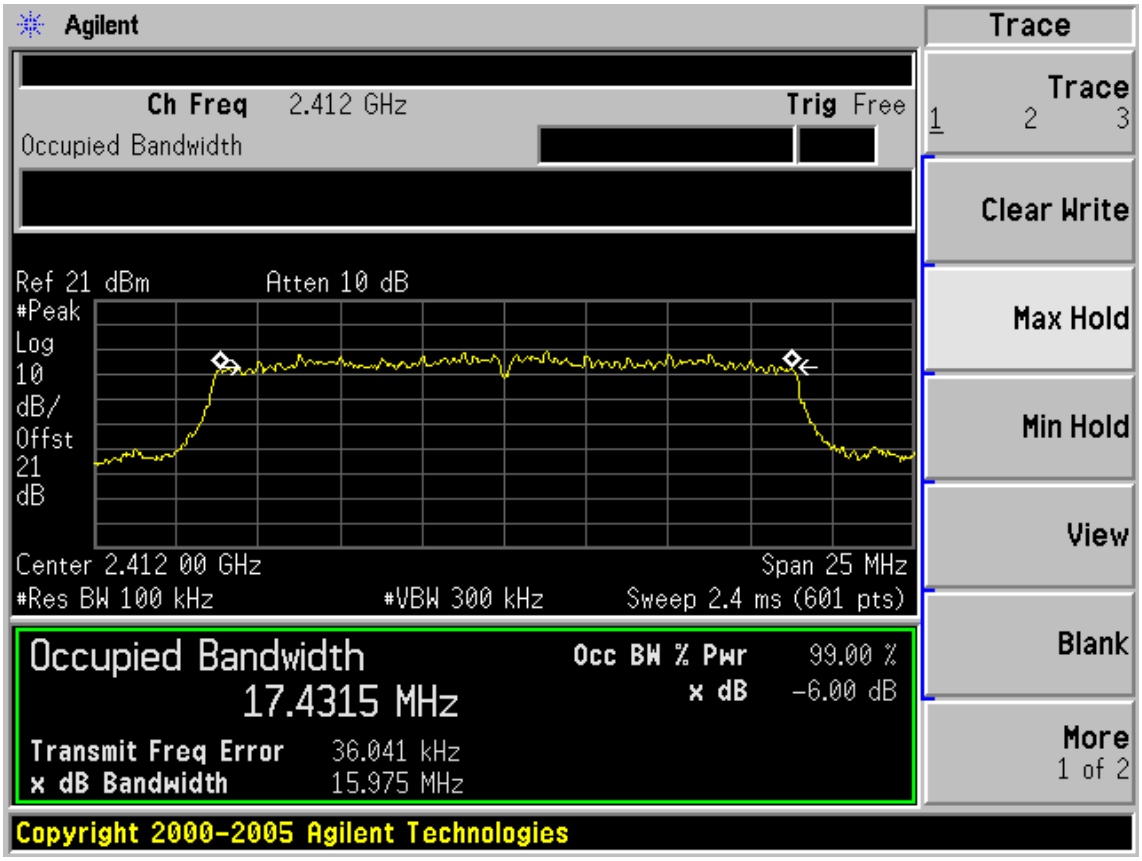
Test CH6: 2437MHz



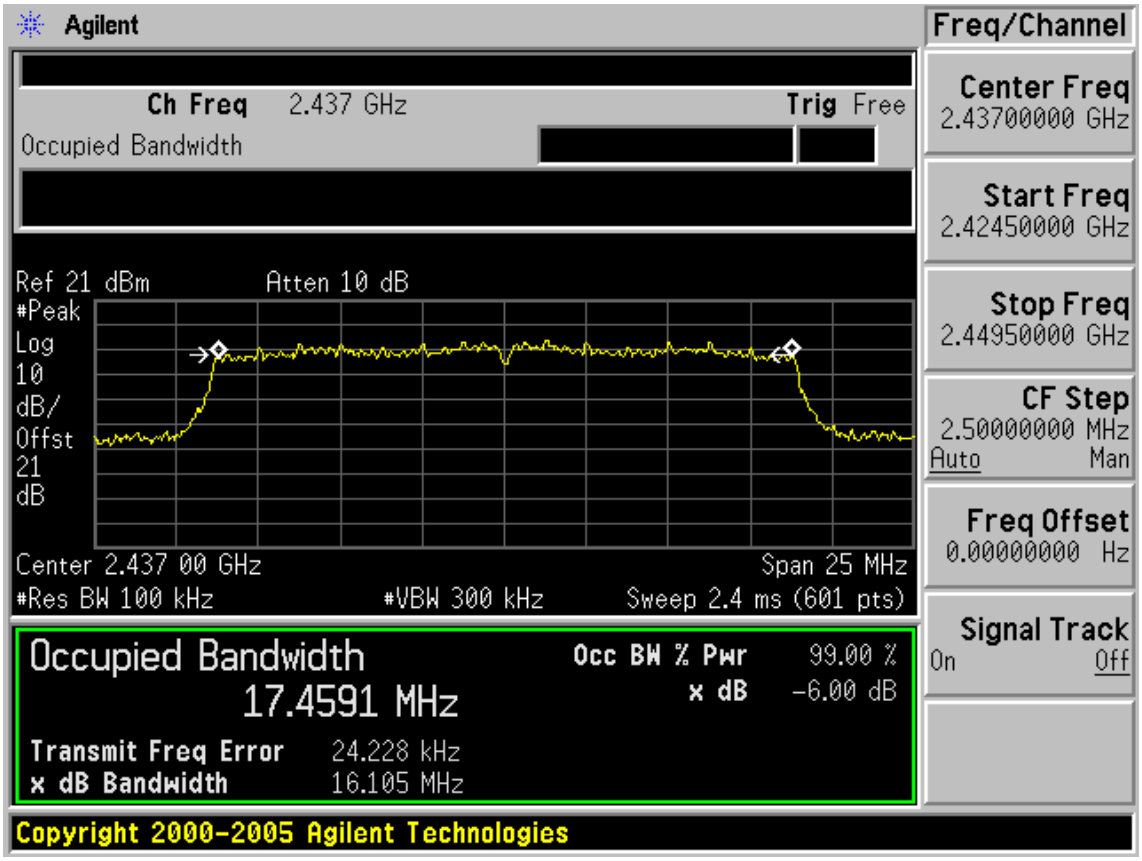
Test CH11: 2462MHz



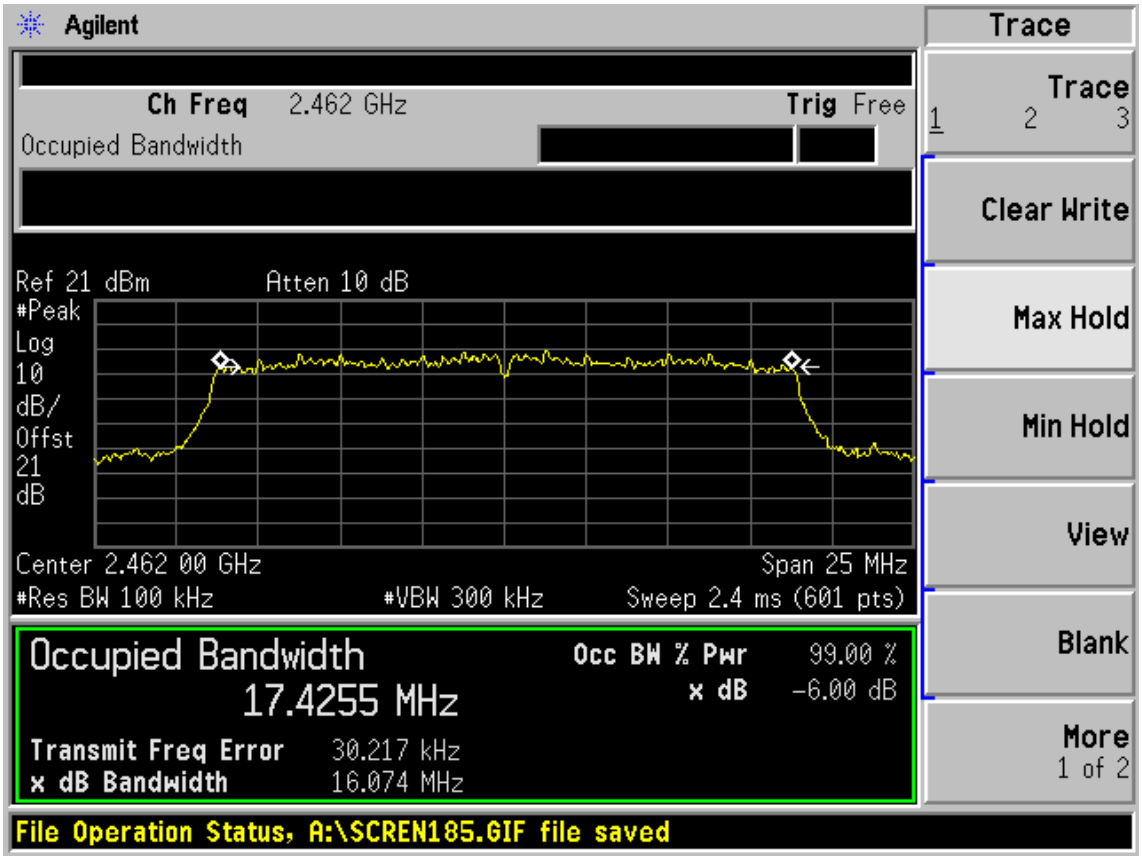
Test Mode: IEEE 802.11n HT20 TX
Test CH1: 2412MHz



Test CH6: 2437MHz

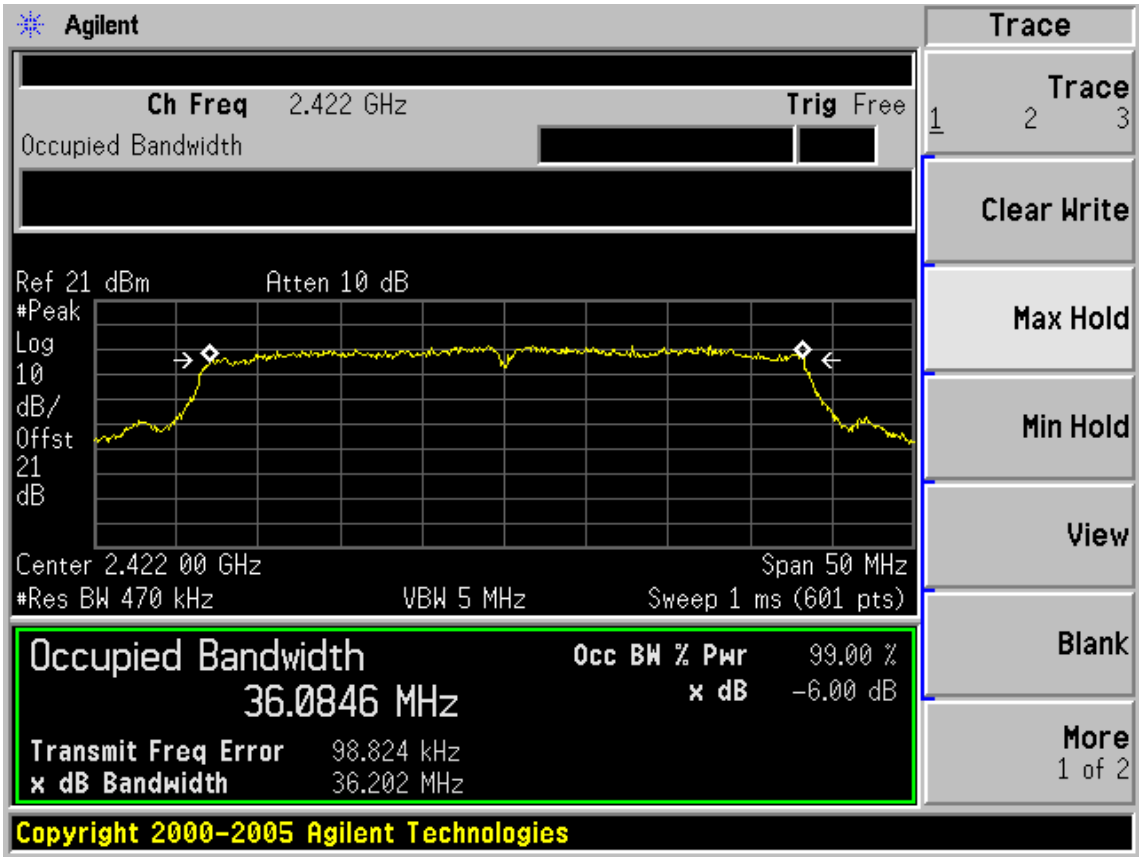


Test CH11: 2462MHz

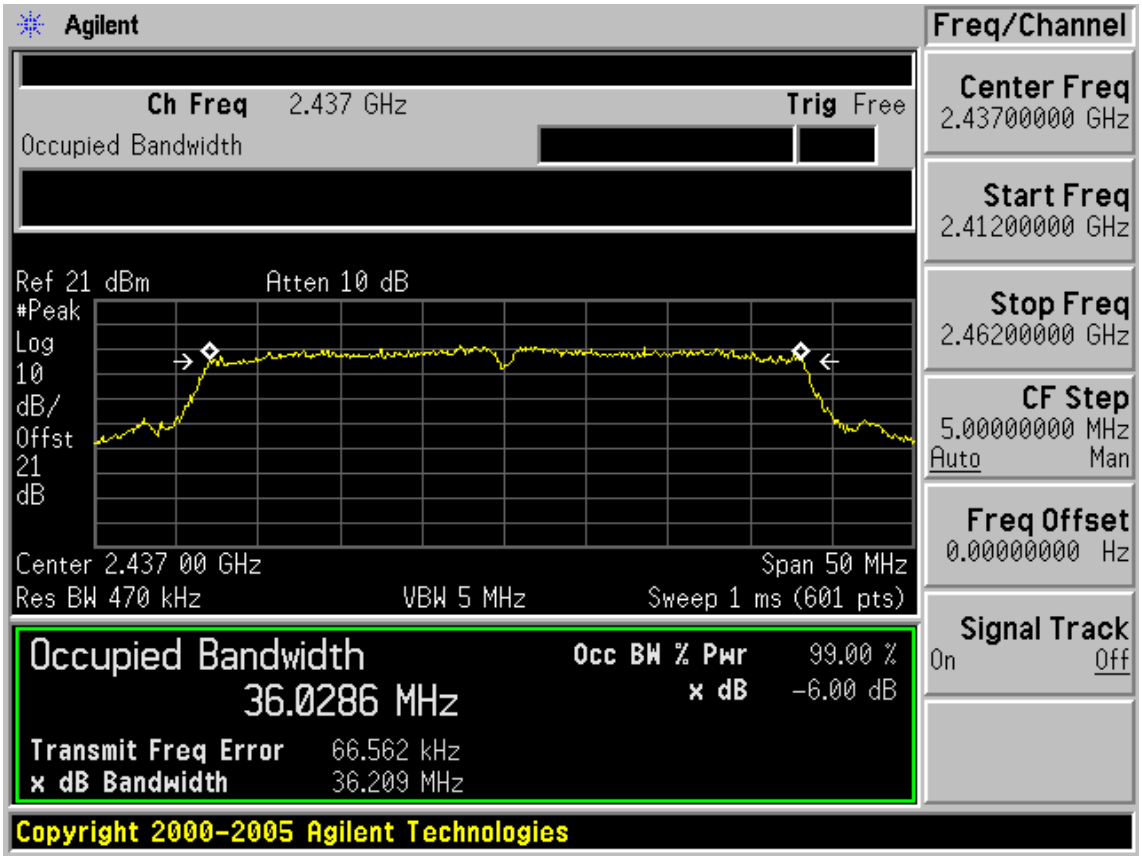


Test Mode: IEEE 802.11n HT40 TX

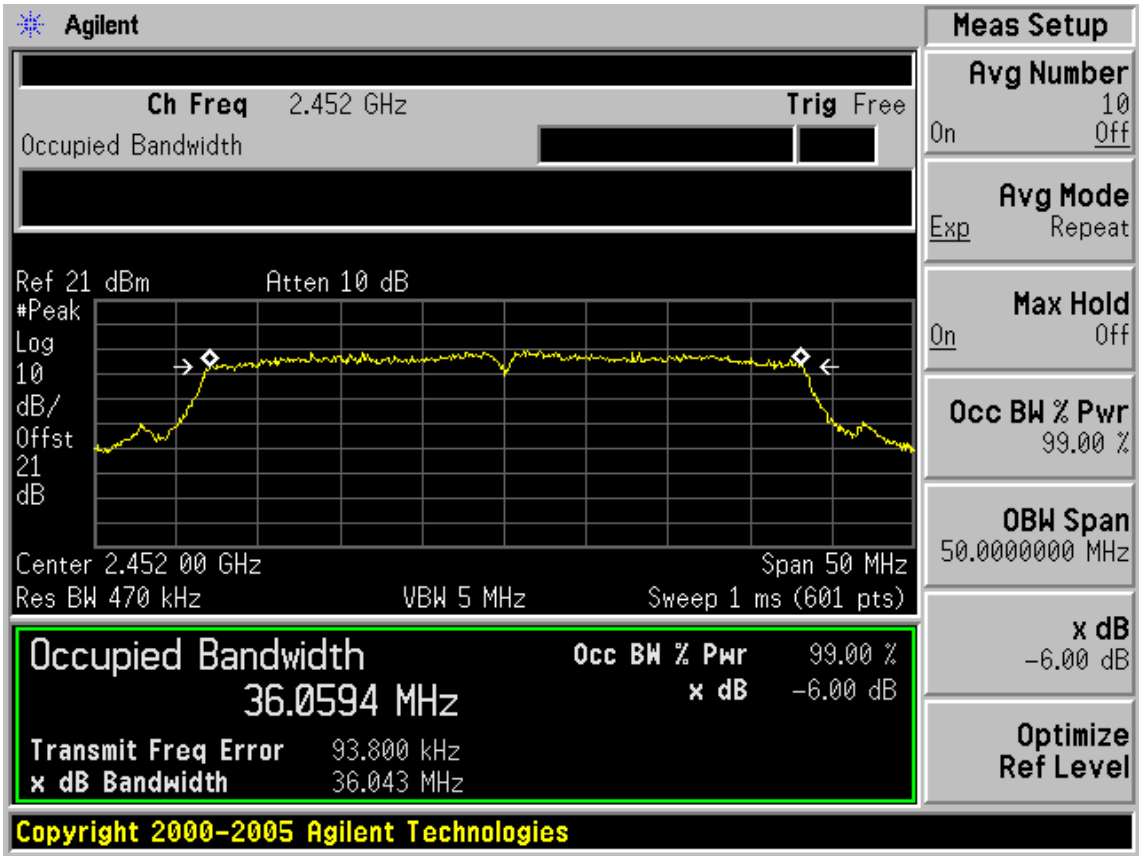
Test CH1: 2422MHz



Test CH4: 2437MHz



Test CH7: 2452MHz



8. OUTPUT POWER TEST

8.1.Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum	Agilent	E4446A	US44300459	May.08, 12	1 Year
2.	Amp	HP	8449B	3008A08495	May.08, 12	1 Year
3.	Antenna	EMCO	3115	9510-4580	May.31, 12	1Year
4.	HF Cable	Hubersuhne	Sucoflex104	-	May.08, 12	1 Year
5.	Power Meter	Anritsu	ML2487A	6K00002472	May.08, 12	1Year
6.	Power Sensor	Anritsu	MA2491A	033005	May.08, 12	1Year
7.	Spectrum Analyzer	Agilent	N9030A	MY51380221	May.08,12	1Year

8.2.Limit (FCC Part 15C 15.247 b(3))

For systems using digital modulation in the 2400—2483.5MHz, The Peak out put Power shall not exceed 1W(30dBm)

8.3.Test Procedure

1, Connected the EUT's antenna port to measure device by 26dB attenuator.

2, For IEEE 802.11b/g and IEEE802.11n HT20 mode, use a PK power meter which's bandwidth is 20MHz and above 26dB bandwidth of signal to measure out each test modes' PK output power.

3, For IEEE802.11n HT40 mode, because the signal's bandwidth is about 40MHz and above 20MHz bandwidth of power sensor ML2491A. So Bandwidth correction method according to ANSI C63.10 clause 6.10.2.1 part (c) was used:

1) Set the RBW=3MHz and VBW =8MHz
2) Turn averaging off
3) Set sweep to automatic
4) Set the span just large enough to capture the emission
5) Use a peak detector on max hold
6) Record the measured power
7) Calculate Output power of EUT use the formula:

Peak output power =measured power+ 10log[(26dB bandwidth of emission)/(analyzer RBW)]

Note: The cable loss and attenuator loss were offset into measure device as an amplitude offset.

8.4.Test Results

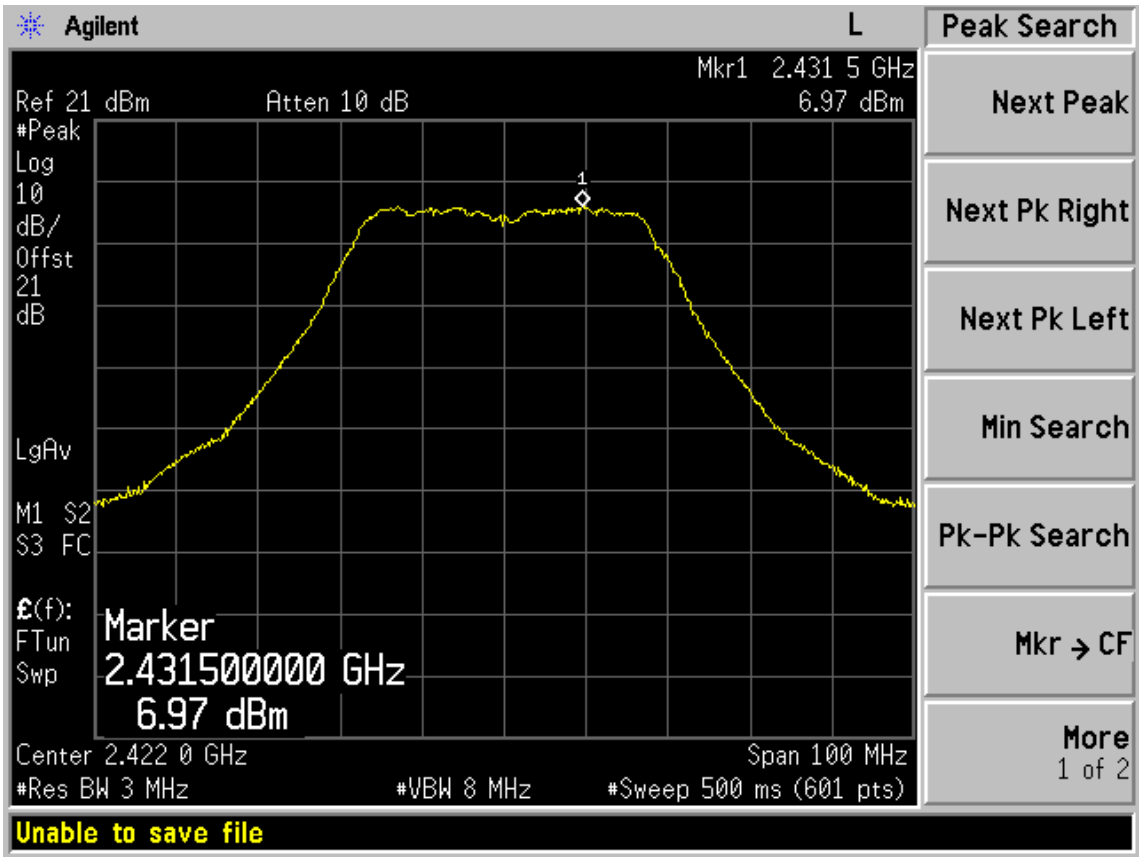
EUT: SafeStream™ Wireless N Gigabit Broadband VPN Router		
M/N: TL-ER604W		
Test date: 2013-04-14	Pressure: 101.6±1.0kpa	Humidity: 49.2±3.0%
Tested by: Leo-Li	Test site: RF site	Temperature: 22.3±0.6 ℃

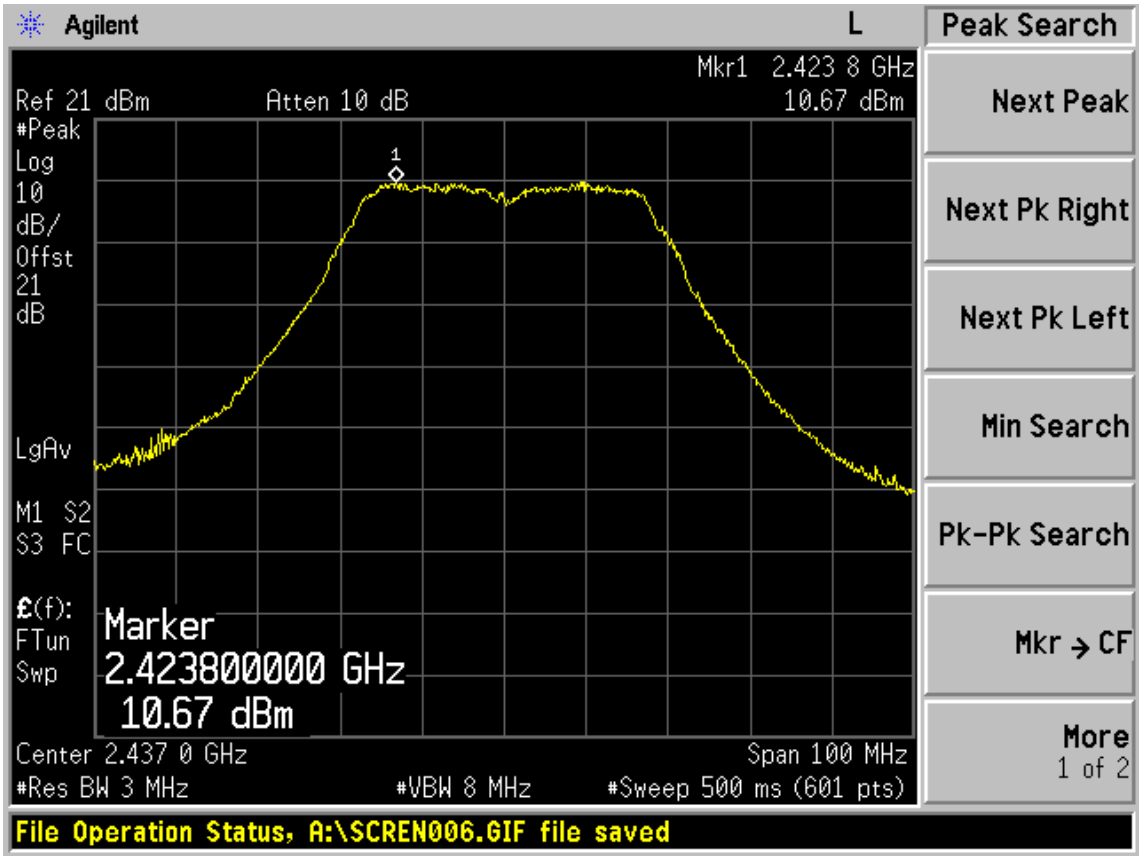
Cable loss: 1 dB		Attenuator loss: 20 dB			
Test Mode	CH (MHz)	Peak output Power（dBm）			Limit (dBm)
		Chain0	Chain1	Total	
11b	CH1	18.22	18.83	N/A	30
	CH6	17.84	17.91	N/A	30
	CH11	18.33	17.74	N/A	30
11g	CH1	22.31	22.26	N/A	30
	CH6	26.34	27.12	N/A	30
	CH11	22.45	22.24	N/A	30
11n HT20	CH1	20.34	20.69	23.53	30
	CH6	22.95	23.17	26.07	30
	CH11	21.36	21.08	24.23	30

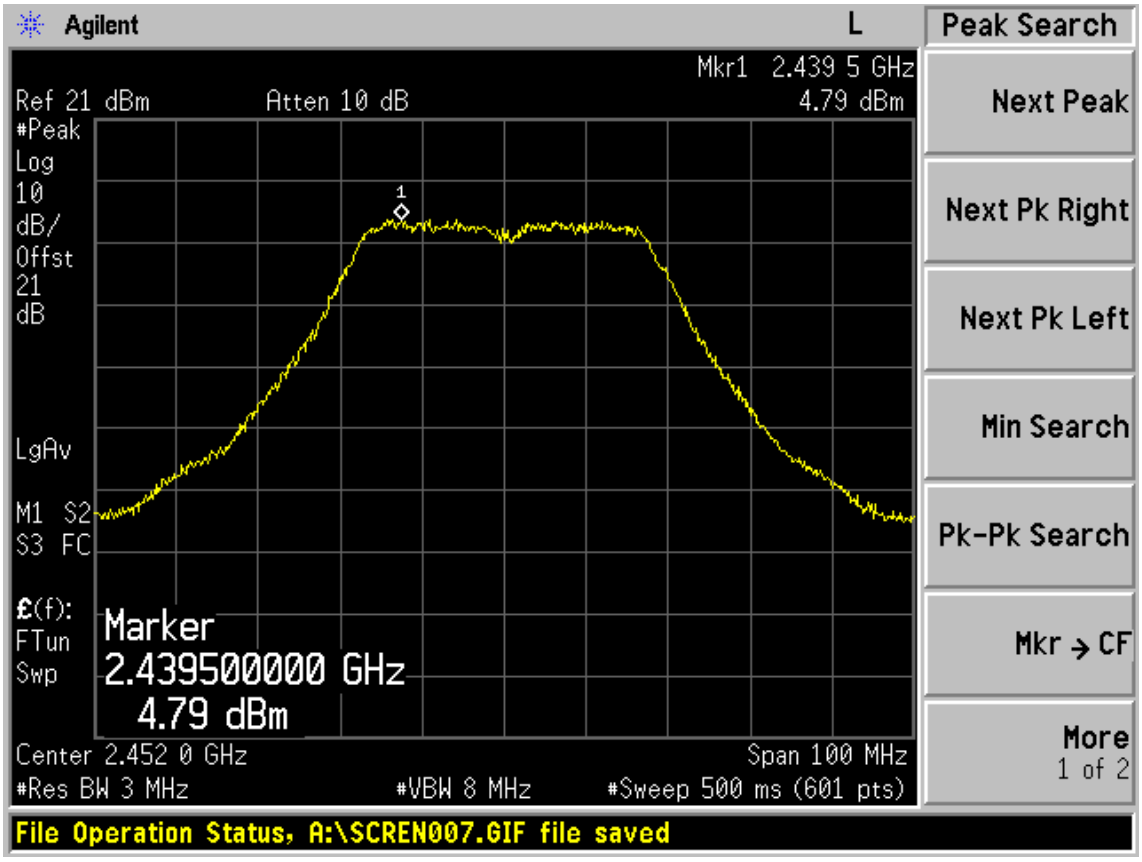
Test Mode	CH	Result					Limit
		Measured power(dBm)/3MHz		PK Output power (dBm)			(dBm)
		Chain0	Chain1	Chain0	Chain1	Total	
11n HT40	CH3	6.97	8.18	19.15	17.93	21.59	30
	CH6	10.67	11.16	22.85	23.23	26.05	30
	CH9	4.79	5.86	16.97	20.25	21.92	30
Chain A 26dB Bandwidth for 11n HT40:49.575MHz Chain B 26dB Bandwidth for 11n HT40:48.226MHz							
Chain A BW correction factor = 10log[(49.575MHz)/(3MHz)] = 12.18dB Chain B BW correction factor = 10log[(48.226MHz)/(3MHz)] = 12.07dB							
Conclusion: PASS							

CH 0

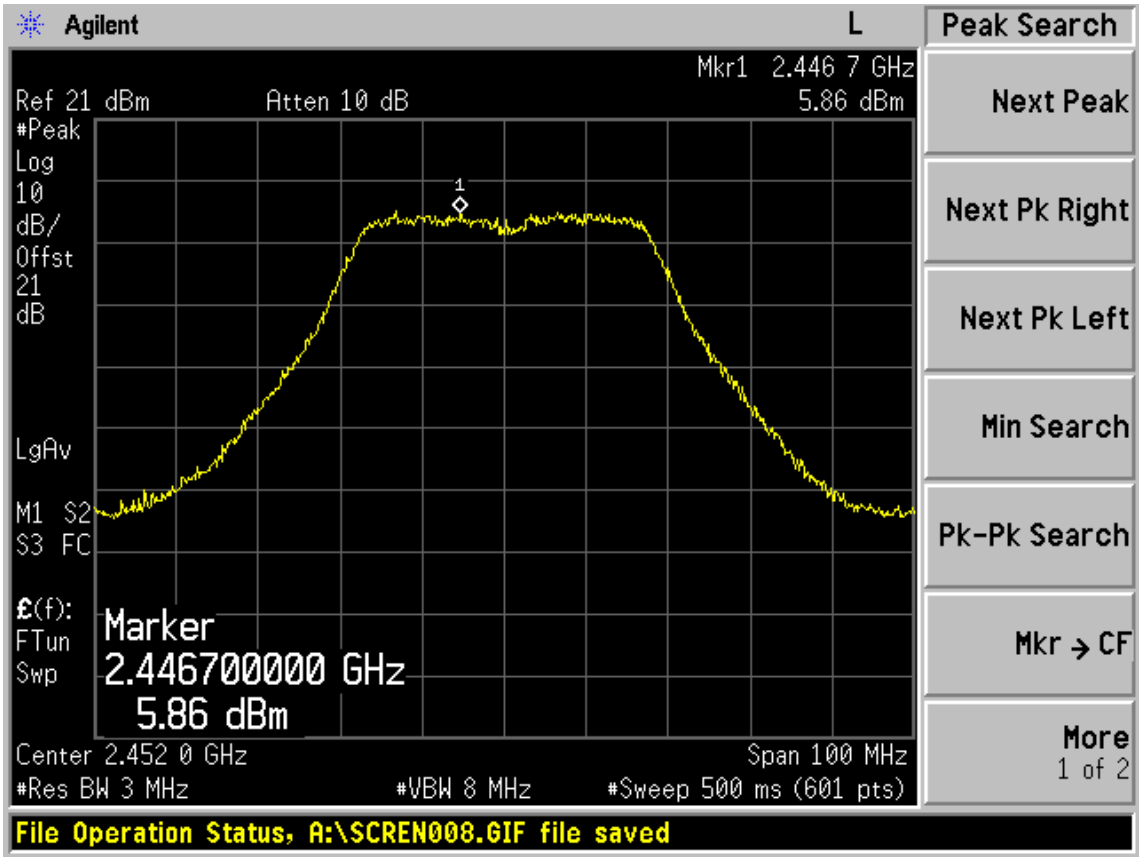
Test Mode: IEEE 802.11n HT40

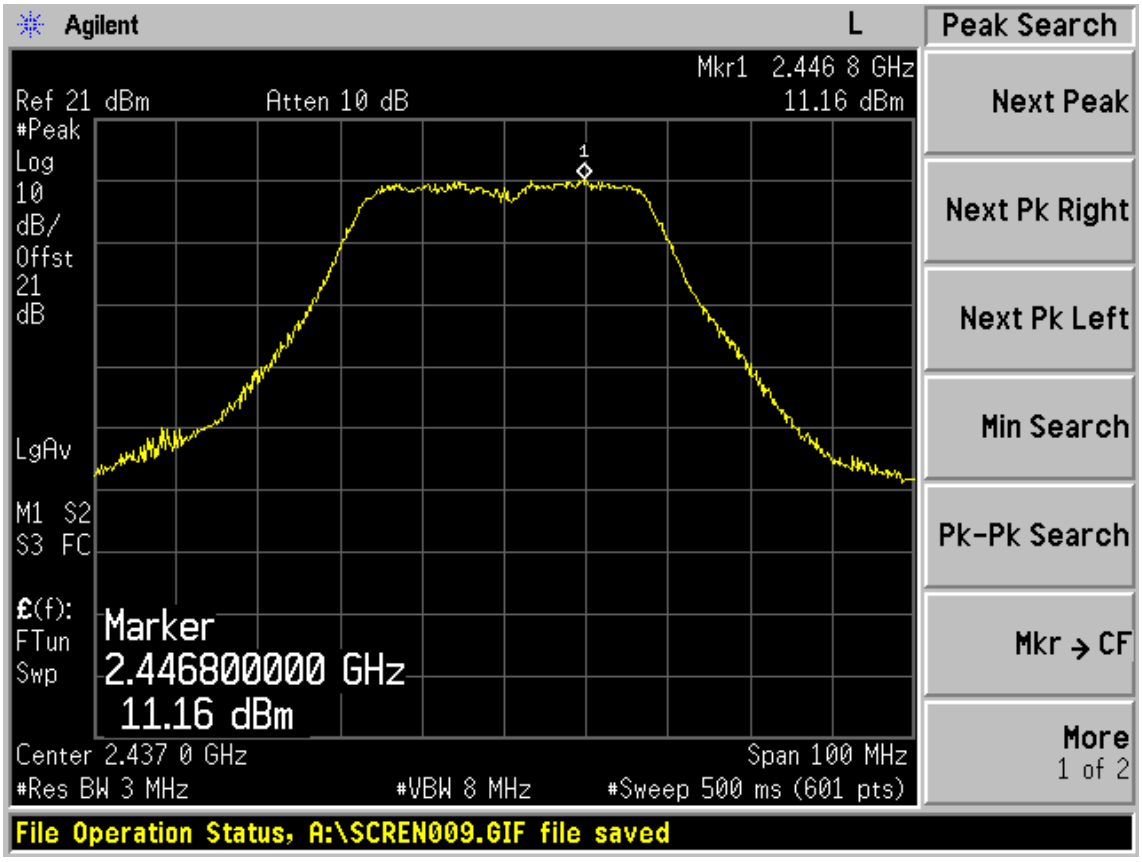


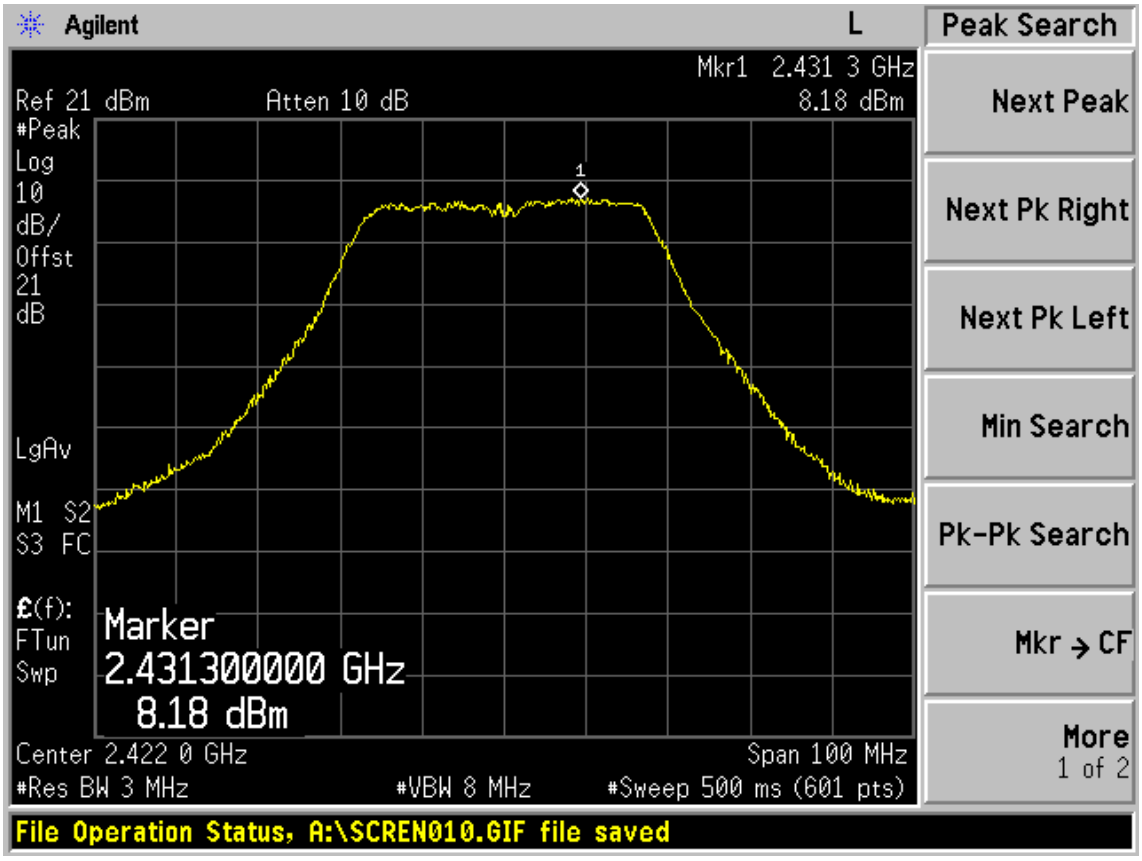



Agilent
L
Peak Search
Mkr1 2.439 5 GHz
4.79 dBm
Ref 21 dBm
Atten 10 dB
#Peak
Log
10
dB/
Offst
21
dB
LgAv
M1 S2
S3 FC
£(f):
FTun
Swp
Marker
2.439500000 GHz
4.79 dBm
Center 2.452 0 GHz
Span 100 MHz
#Res BW 3 MHz
#VBW 8 MHz
#Sweep 500 ms (601 pts)
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
File Operation Status, A:\SCREN007.GIF file saved

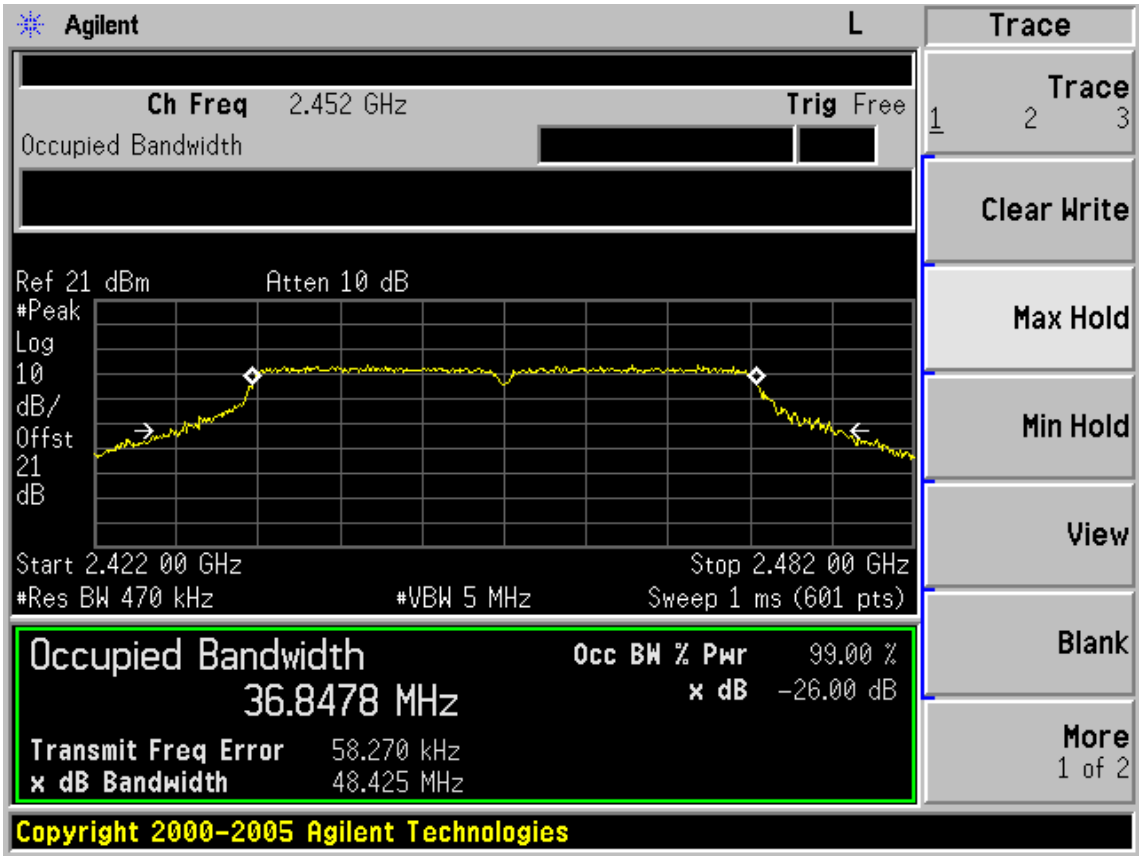
CH 1

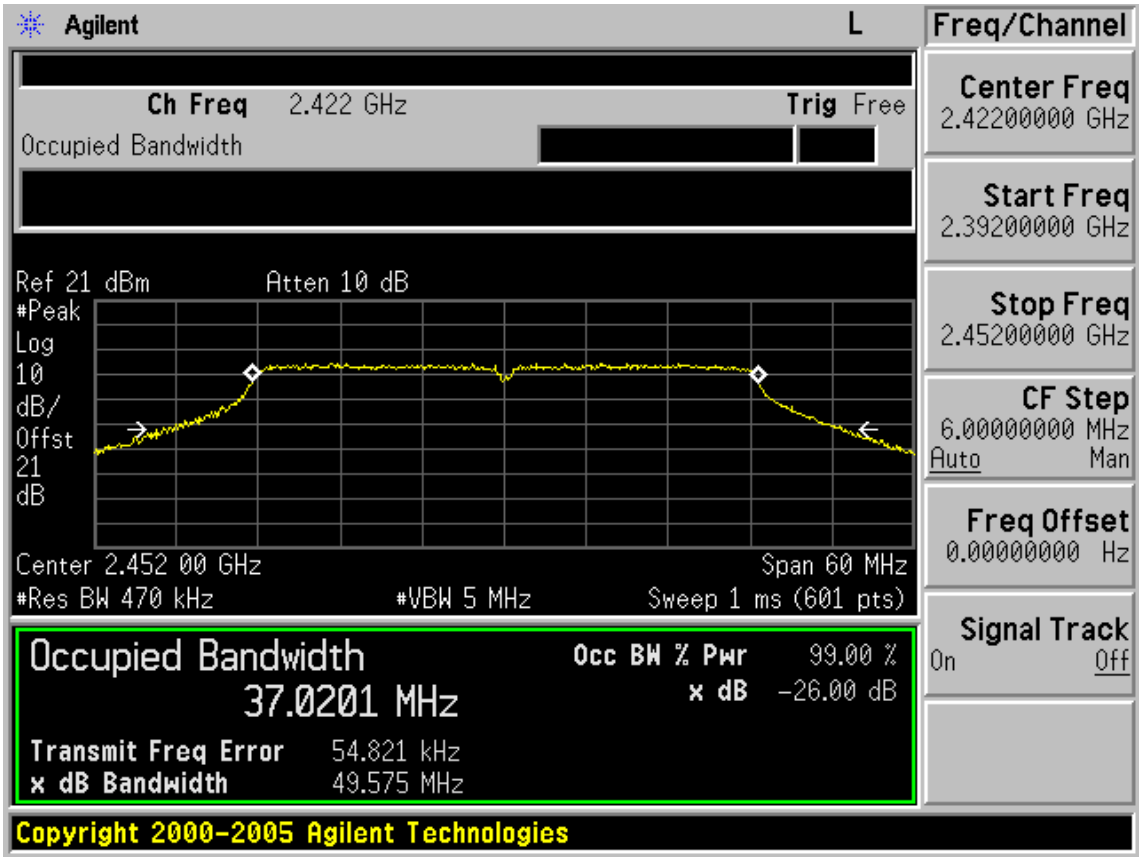

Agilent
L
Peak Search
Mkr1 2.446 7 GHz
5.86 dBm
Ref 21 dBm
Atten 10 dB
#Peak
Log
10
dB/
Offst
21
dB
LgAv
M1 S2
S3 FC
£(f):
FTun
Swp
Marker
2.446700000 GHz
5.86 dBm
Center 2.452 0 GHz
Span 100 MHz
#Res BW 3 MHz
#VBW 8 MHz
#Sweep 500 ms (601 pts)
Next Peak
Next Pk Right
Next Pk Left
Min Search
Pk-Pk Search
Mkr → CF
More
1 of 2
File Operation Status, A:\SCREN008.GIF file saved

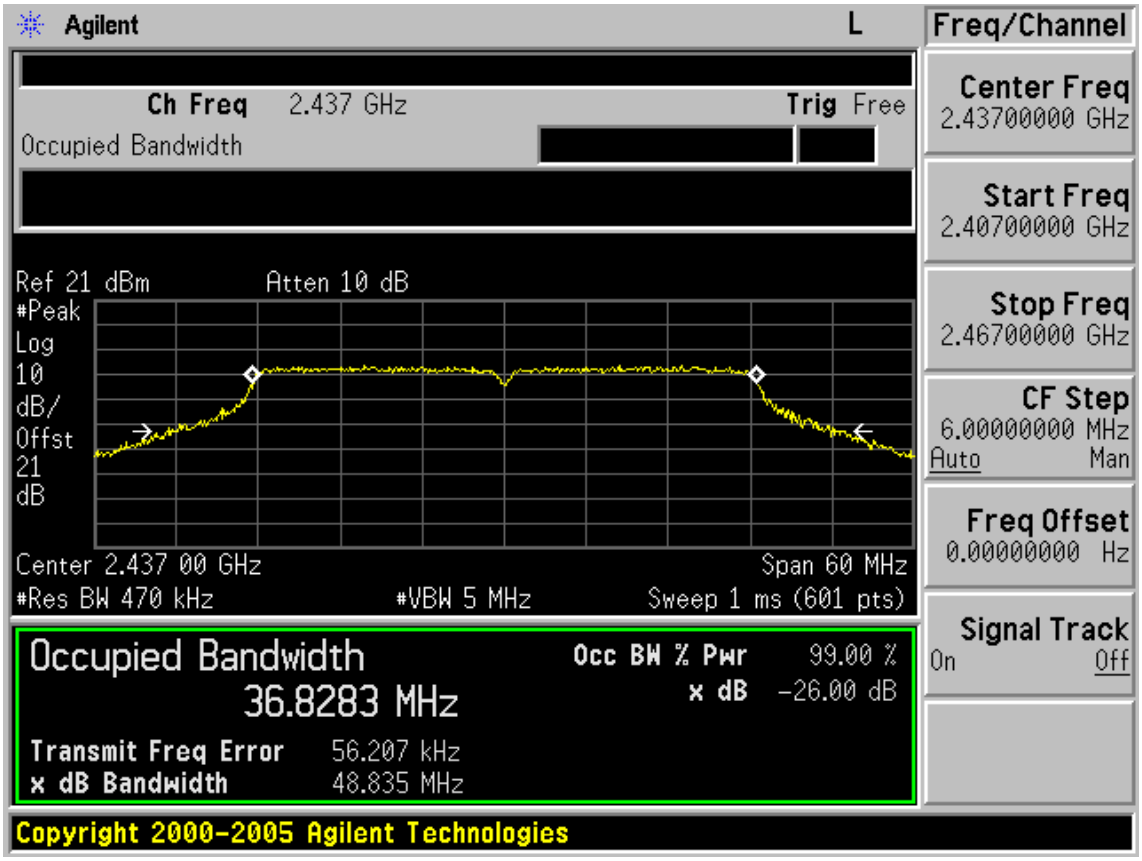

Agilent
L
Peak Search
Mkr1 2.446 8 GHz
Ref 21 dBm
Atten 10 dB
11.16 dBm
Next Peak
#Peak
Log
10
dB/
Offst
21
dB
Next Pk Right
Next Pk Left
Min Search
LgAv
M1 S2
S3 FC
Pk-Pk Search
£(f):
FTun
Swp
Marker
2.446800000 GHz
11.16 dBm
Mkr → CF
More
1 of 2
Center 2.437 0 GHz
Span 100 MHz
#Res BW 3 MHz
#VBW 8 MHz
#Sweep 500 ms (601 pts)
File Operation Status, A:\SCREN009.GIF file saved


Agilent
L
Peak Search
Mkr1 2.431 3 GHz
Ref 21 dBm
Atten 10 dB
8.18 dBm
Next Peak
#Peak
Log
10
dB/
Offst
21
dB
Next Pk Right
Next Pk Left
Min Search
LgAv
M1 S2
S3 FC
Pk-Pk Search
£(f):
FTun
Swp
Marker
2.431300000 GHz
8.18 dBm
Mkr → CF
More
1 of 2
Center 2.422 0 GHz
Span 100 MHz
#Res BW 3 MHz
#VBW 8 MHz
#Sweep 500 ms (601 pts)
File Operation Status, A:\SCREN010.GIF file saved

26Bandwidth
Test Mode: IEEE 802.11n HT40
CH 0

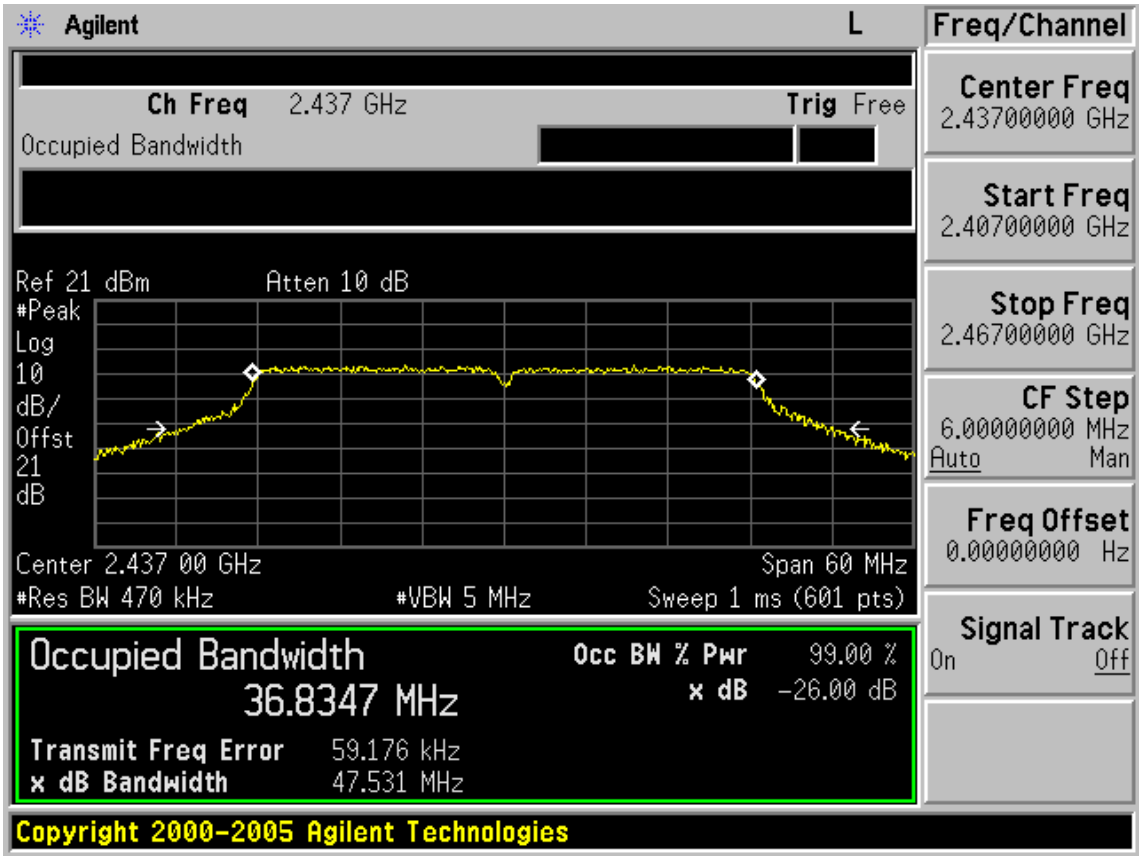


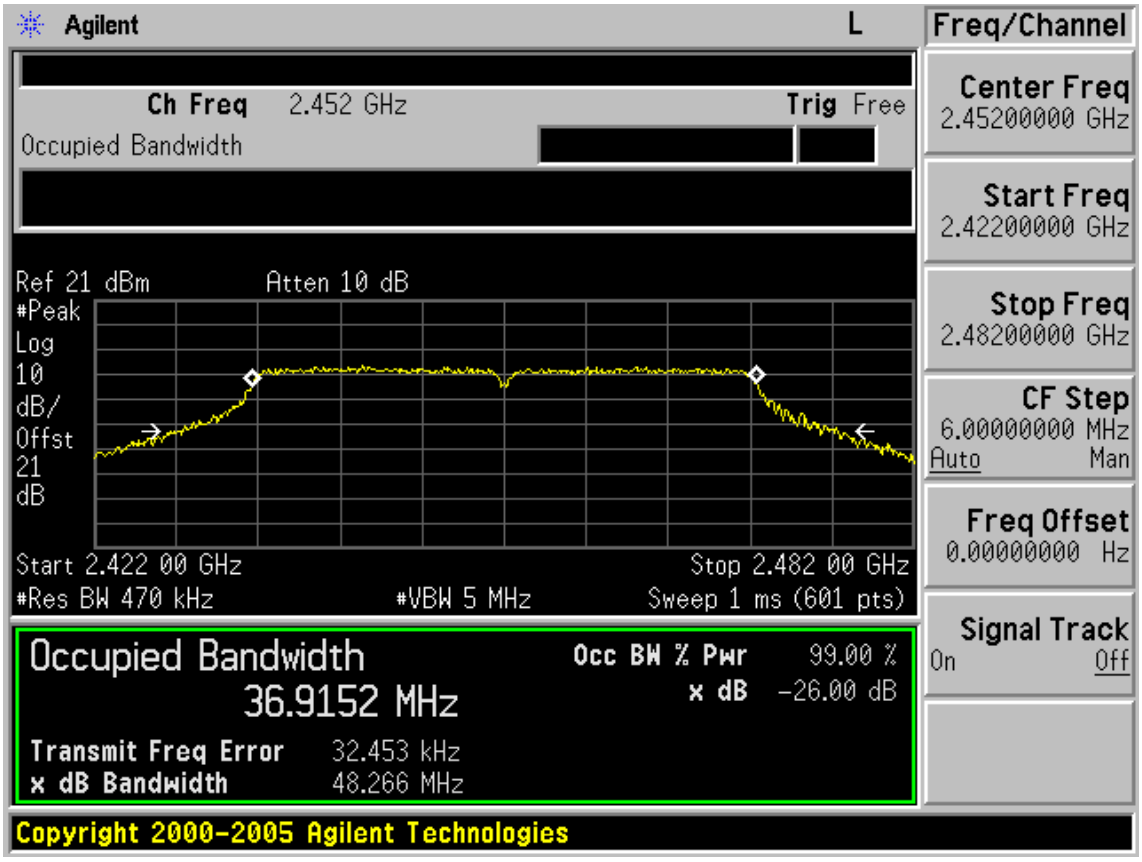


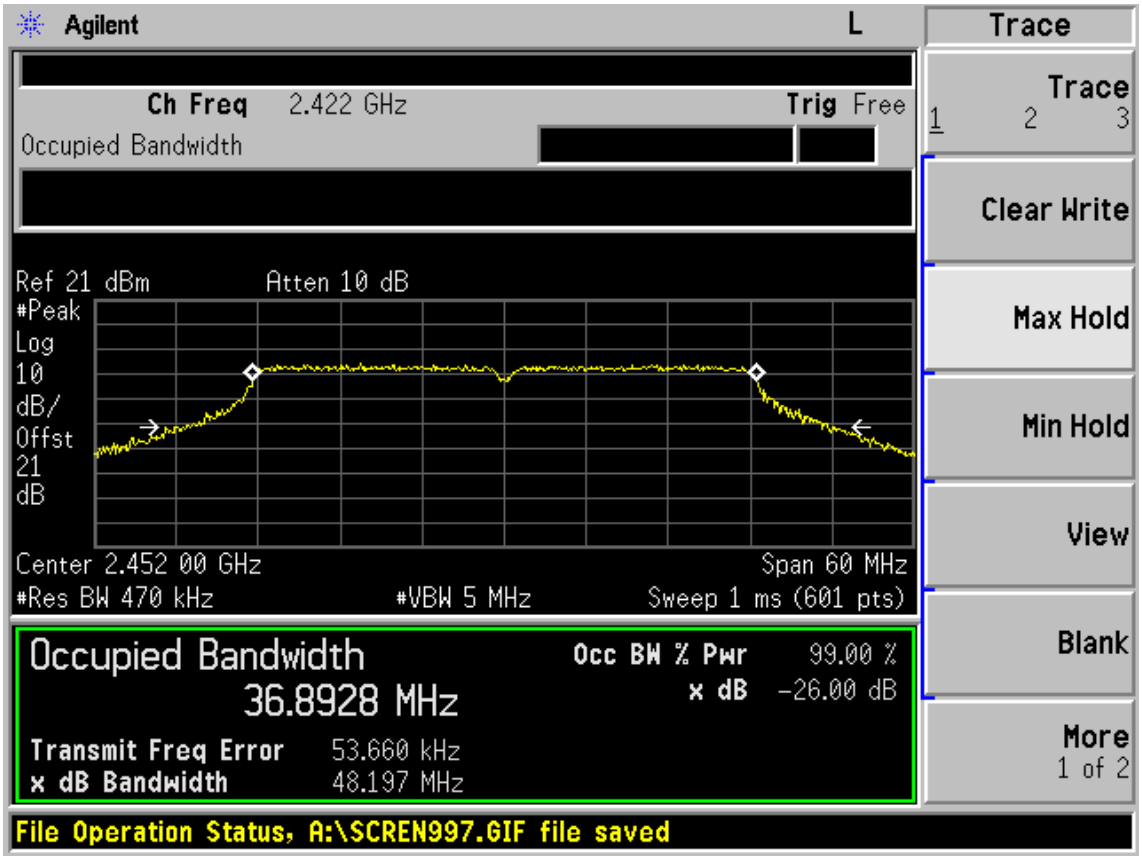


26Bandwidth

CH 1




Agilent
L
Freq/Channel
Ch Freq 2.452 GHz
Trig Free
Occupied Bandwidth
Ref 21 dBm
Atten 10 dB
#Peak
Log
10
dB/
Offst
21
dB
Start 2.422 00 GHz
Stop 2.482 00 GHz
#Res BW 470 kHz
#VBW 5 MHz
Sweep 1 ms (601 pts)
Occupied Bandwidth
36.9152 MHz
Occ BW % Pwr 99.00 %
x dB -26.00 dB
Transmit Freq Error 32.453 kHz
x dB Bandwidth 48.266 MHz
Center Freq
2.45200000 GHz
Start Freq
2.42200000 GHz
Stop Freq
2.48200000 GHz
CF Step
6.00000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
Copyright 2000-2005 Agilent Technologies


Agilent
L
Trace
Ch Freq 2.422 GHz
Trig Free
Occupied Bandwidth
Ref 21 dBm
Atten 10 dB
#Peak
Log
10
dB/
Offst
21
dB
Center 2.452 00 GHz
Span 60 MHz
#Res BW 470 kHz
#VBW 5 MHz
Sweep 1 ms (601 pts)
Occupied Bandwidth
36.8928 MHz
Occ BW % Pwr 99.00 %
x dB -26.00 dB
Transmit Freq Error 53.660 kHz
x dB Bandwidth 48.197 MHz
Trace
1 2 3
Clear Write
Max Hold
Min Hold
View
Blank
More
1 of 2
File Operation Status, A:\SCREN997.GIF file saved

9. POWER SPECTRAL DENSITY TEST

9.1.Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum	Agilent	E4446A	US44300459	May.08, 12	1 Year
2.	Amp	HP	8449B	3008A08495	May.08, 12	1 Year
3.	Antenna	EMCO	3115	9510-4580	May.31, 12	1Year
4.	HF Cable	Hubersuhne	Sucoflex104	-	May.08, 12	1 Year

9.2.Limit

For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8dBm in any 3kHz band during any time interval of continuous transmission.

9.3.Test Procedure

1. Connected the EUT's antenna port to spectrum analyzer device by 20dB attenuator.

2. Set the test frequency as center frequency, Set RBW=100KHz,VBW=300KHz,Span large enough capture the entire frequency the max hold, Read out maximum peak power level Value
3, Scale the observed power level get from step to an eguivalent value in 3KHz by adjusting the measured power by a bandwidth correction factor (BWCF), where BWCF=10log(3KHz/ 100KHz=-15.2dB)

Note: The cable loss and attenuator loss were offset into measure device as an amplitude

9.4.Test Results

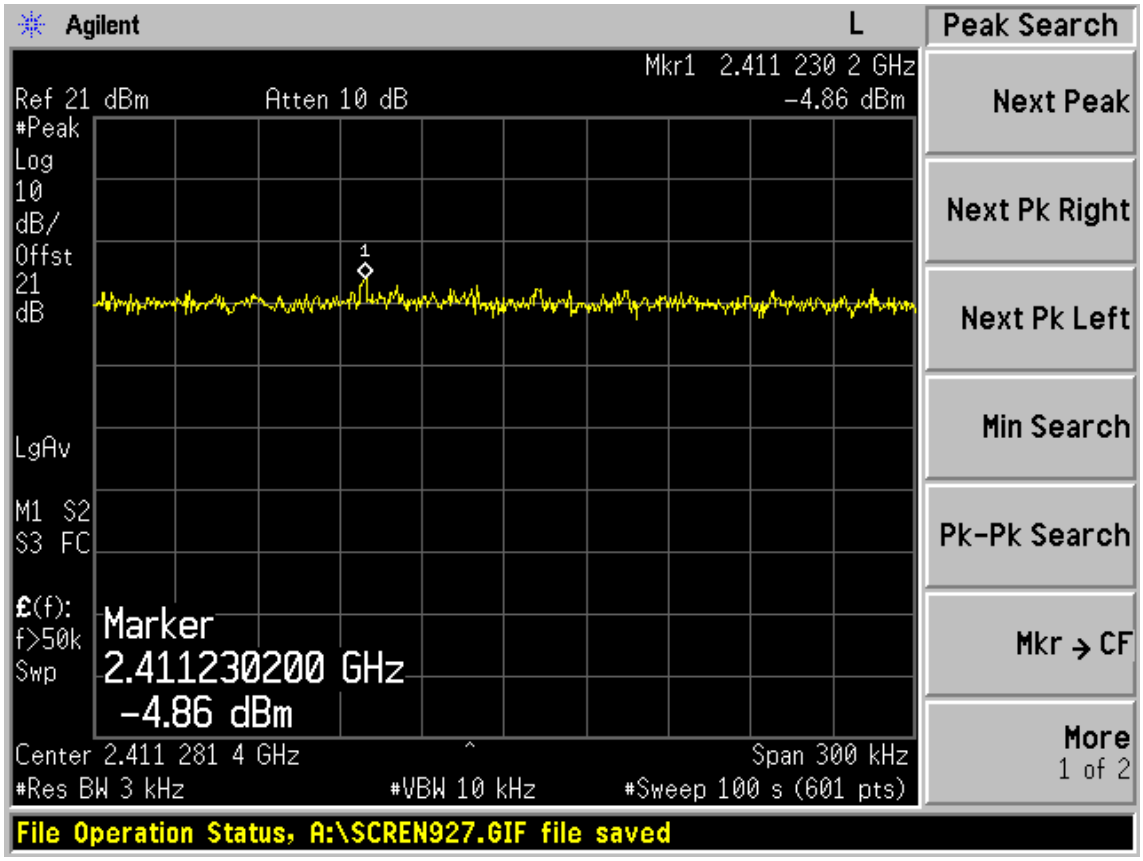
EUT: SafeStream™ Wireless N Gigabit Broadband VPN Router		
M/N: TL-ER604W		
Test date:2013-04-14	Pressure: 101.6±1.0 kpa	Humidity: 51.2±3.0%
Tested by: Leo-Li	Test site: RF Site	Temperature：22.6±0.6 ℃

Cable loss: 1 dB		Attenuator loss: 20 dB			
Test Mode	CH	Power density（dBm/3KHz）			Limit (dBm/3KHz)
		Chain0	Chain1	Total	
11b	CH1	-4.86	-5.22	N/A	8
	CH6	-6.90	-5.97	N/A	8
	CH11	-5.81	-7.00	N/A	8
11g	CH1	-5.97	-12.83	N/A	8
	CH6	-8.25	-9.95	N/A	8
	CH11	-9.94	-11.82	N/A	8
11n HT20	CH1	-11.50	-14.57	-9.76	8
	CH6	-6.77	-10.14	-5.13	8
	CH11	-13.89	-14.77	-11.30	8
11n HT40	CH1	-13.26	-13.75	-10.49	8
	CH4	-13.11	-17.20	-11.68	8
	CH7	-15.40	-19.10	-13.86	8
Conclusion：PASS					

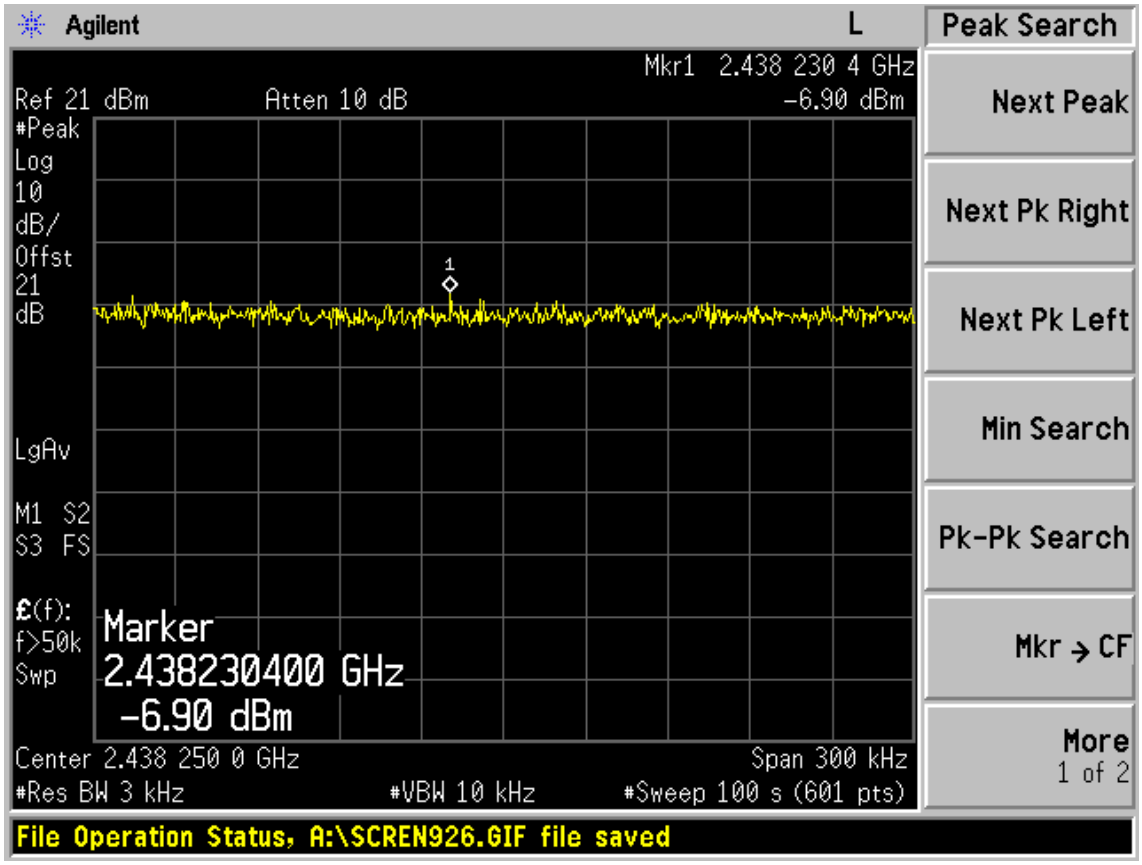
Chain 0

Test Mode: IEEE 802.11b TX

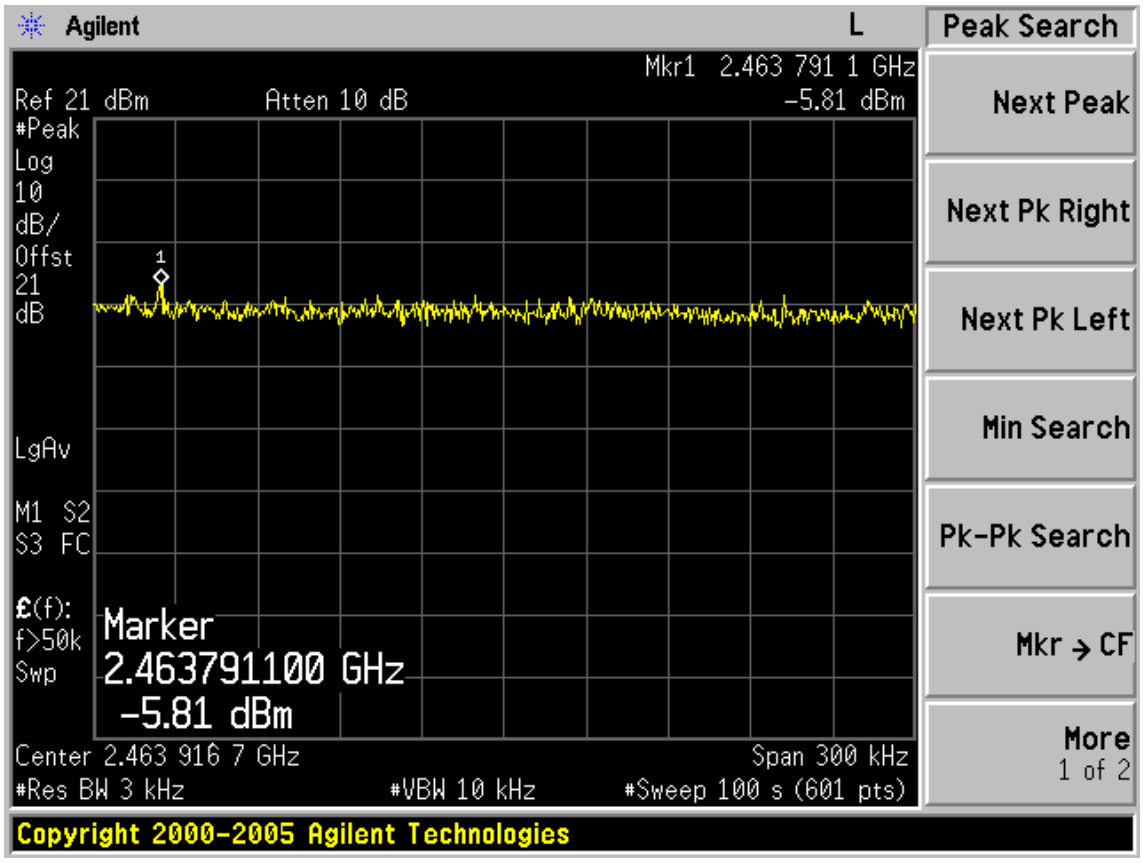
Test CH1: 2412MHz



Test CH6: 2437MHz

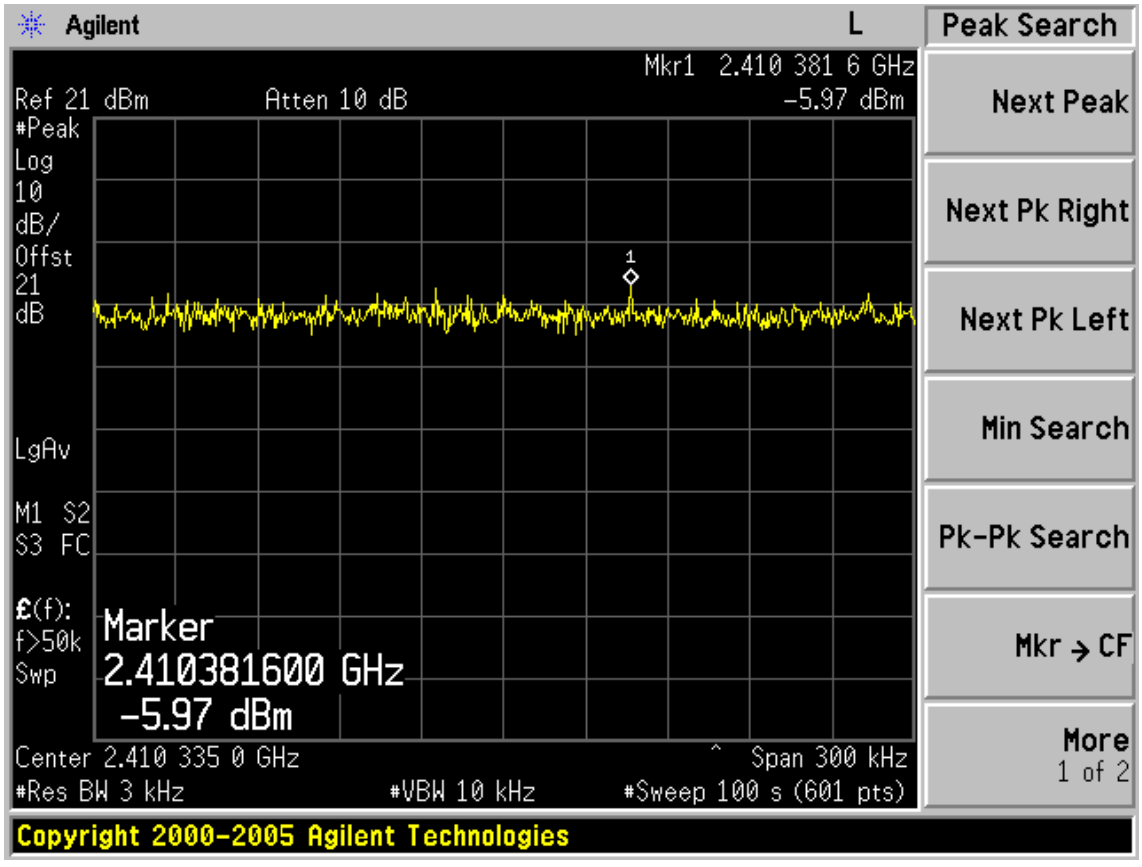


Test CH11: 2462MHz

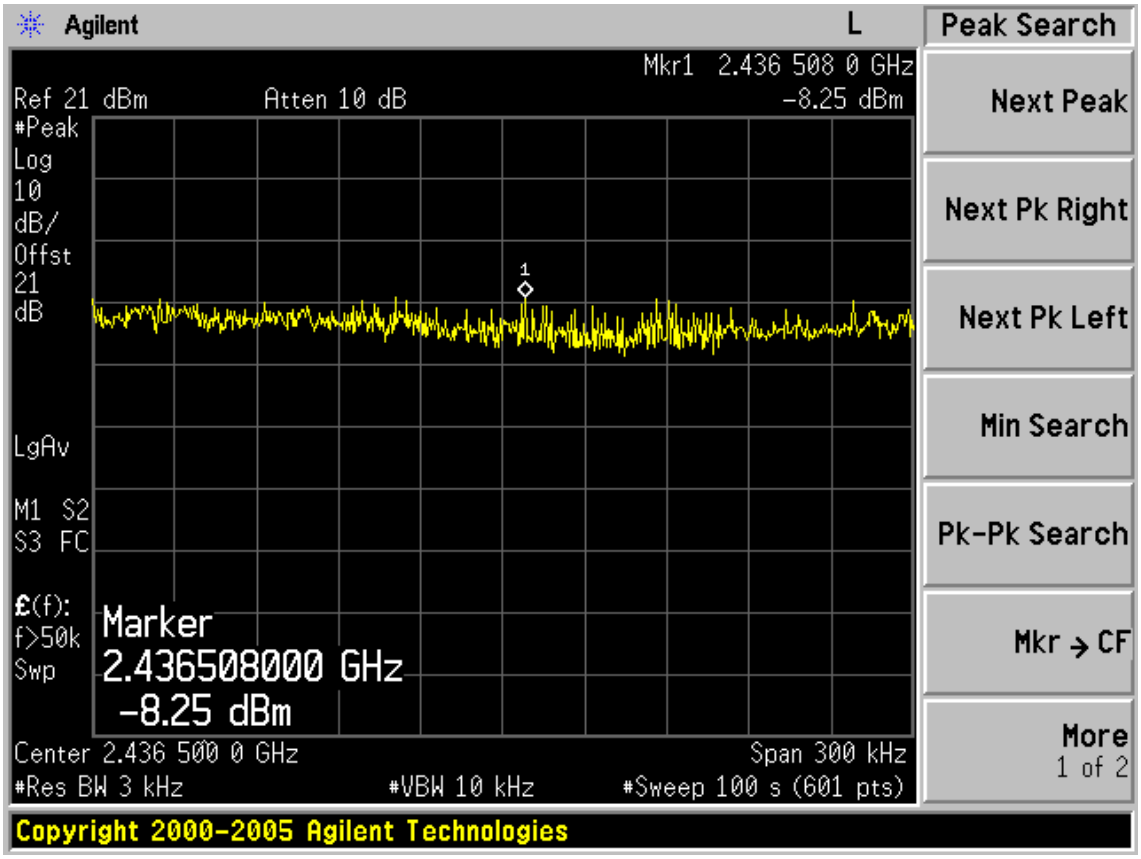


Test Mode: IEEE 802.11g TX

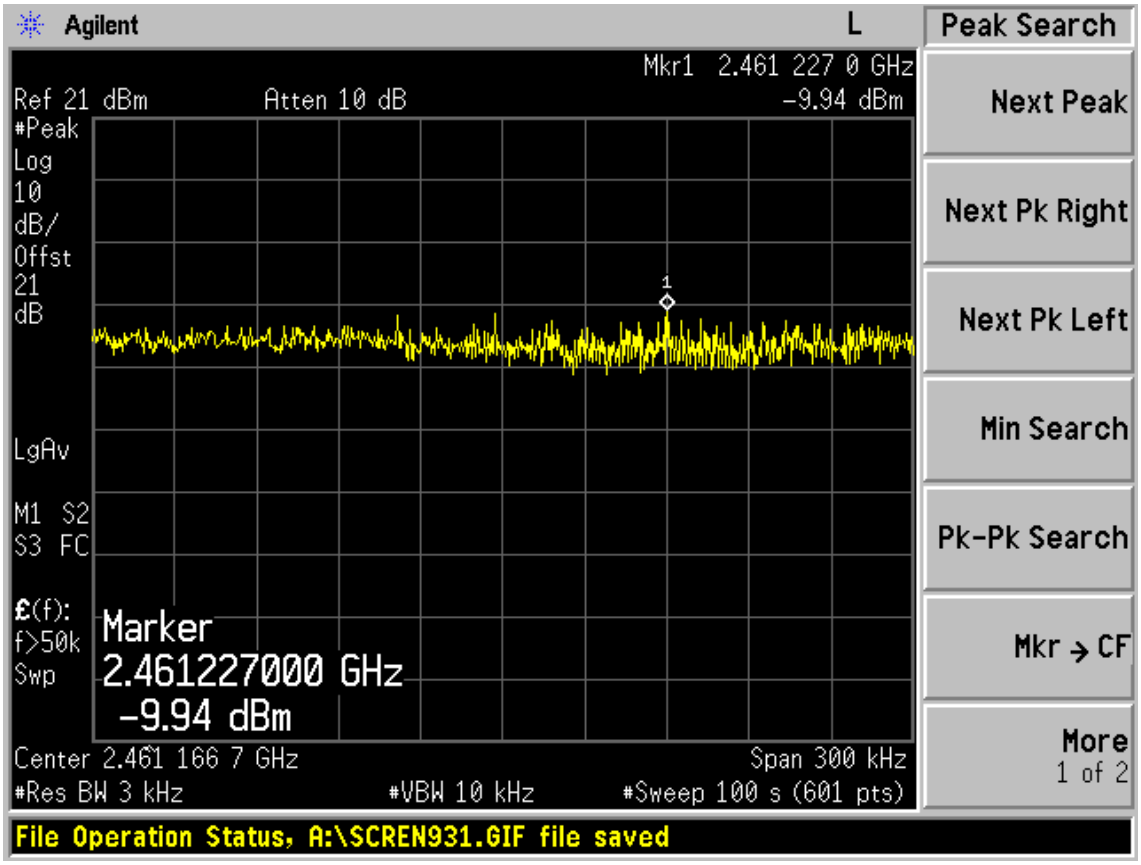
Test CH1: 2412MHz



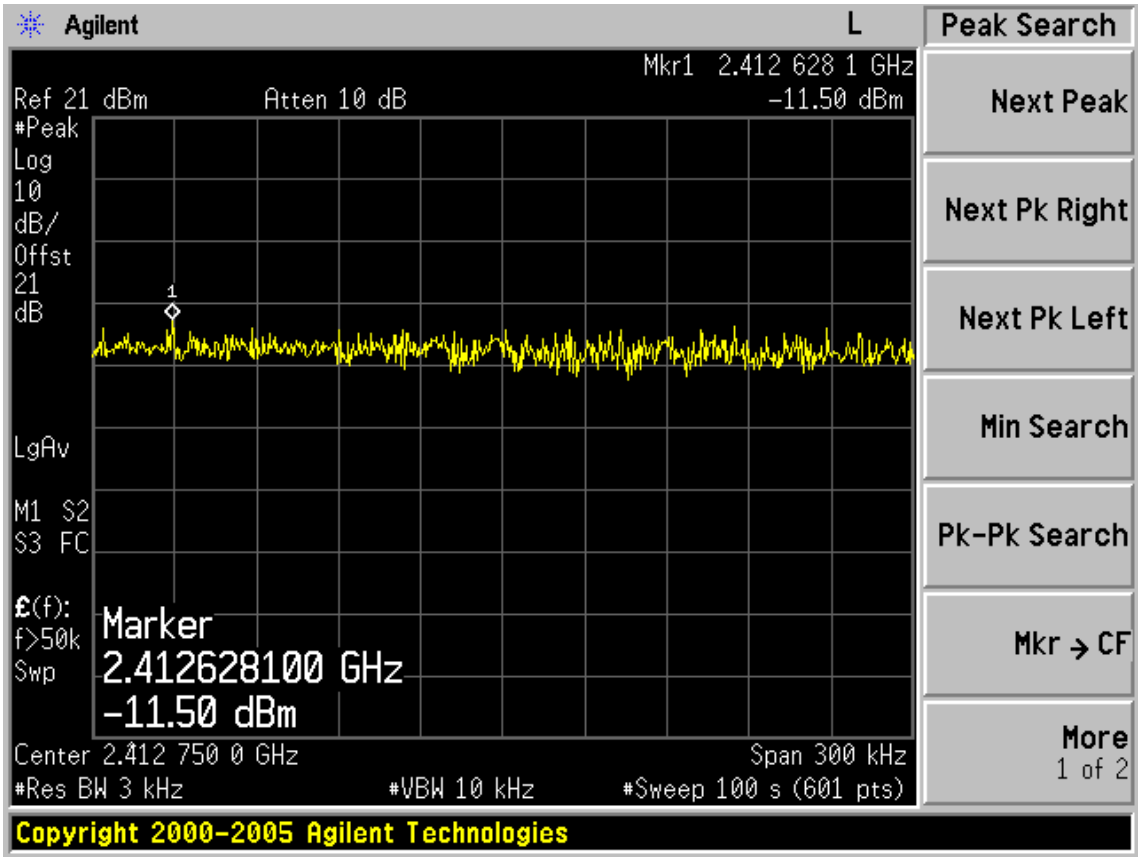
Test CH6: 2437MHz



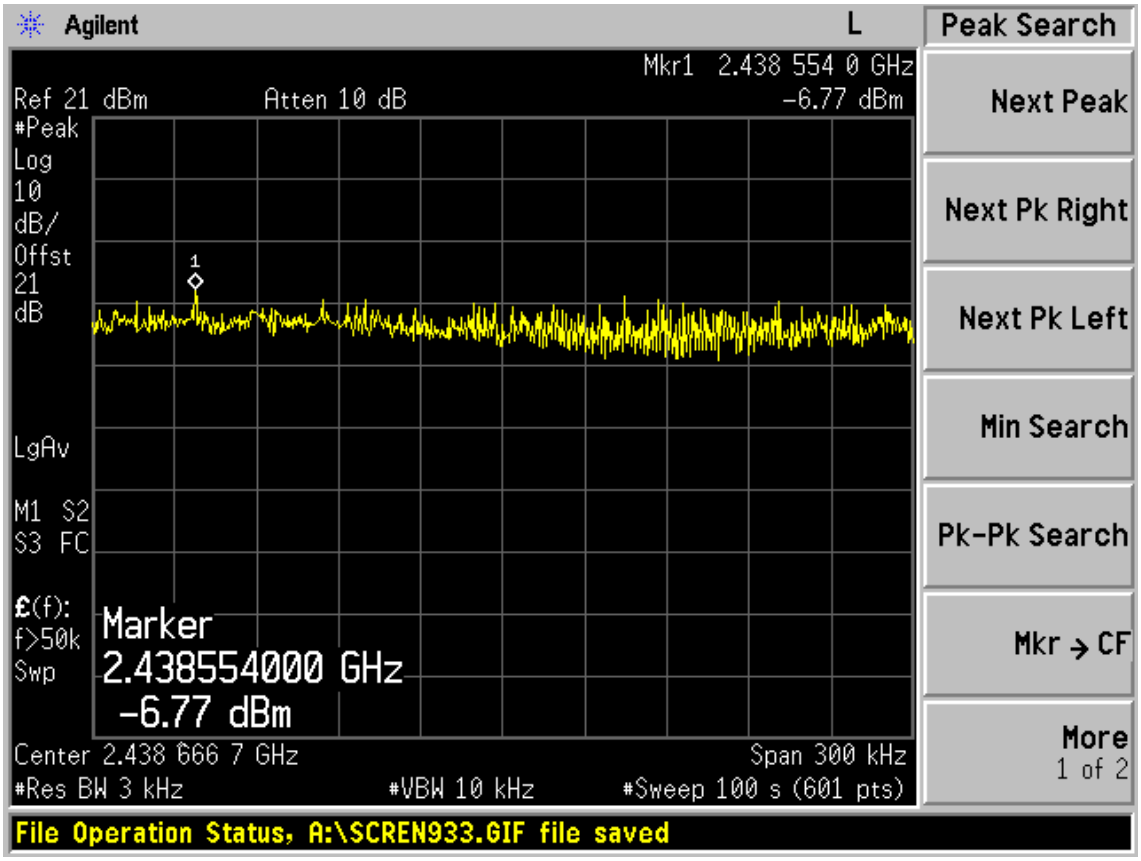
Test CH11: 2462MHz



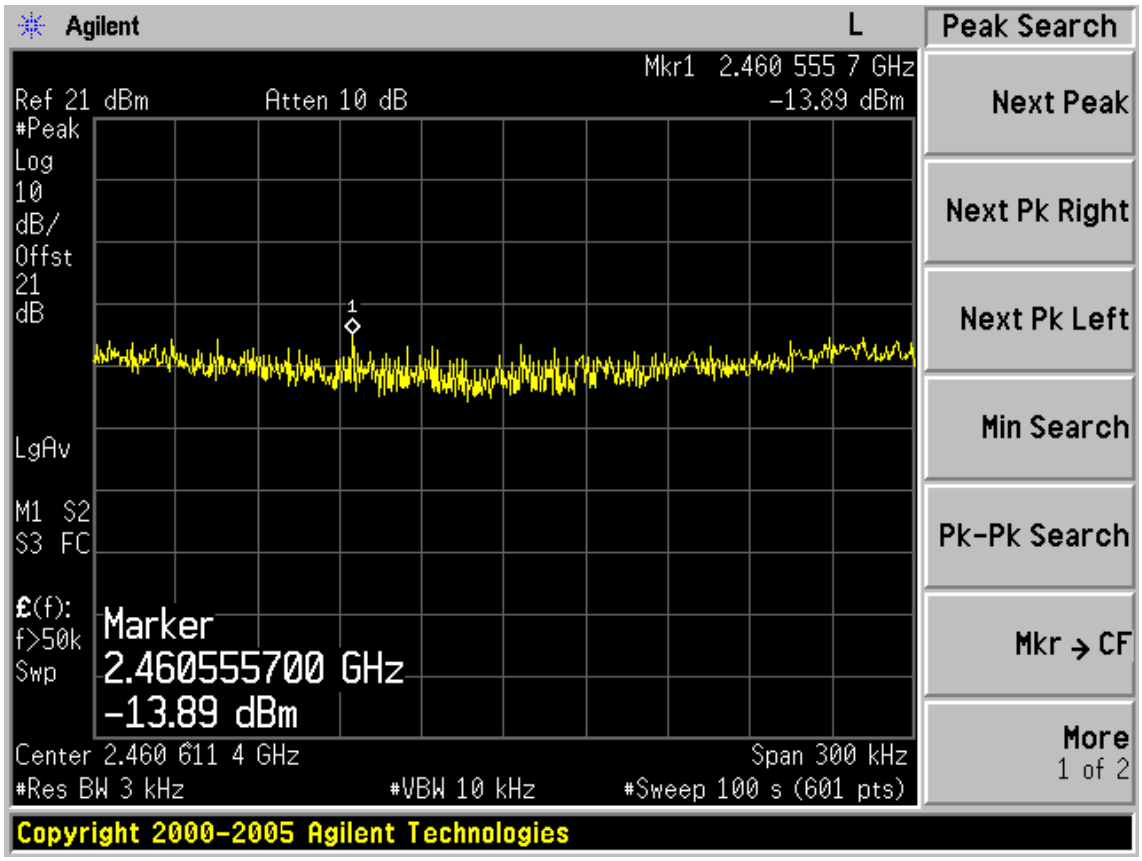
Test Mode: IEEE 802.11n HT20 TX
Test CH1: 2412MHz



Test CH6: 2437MHz

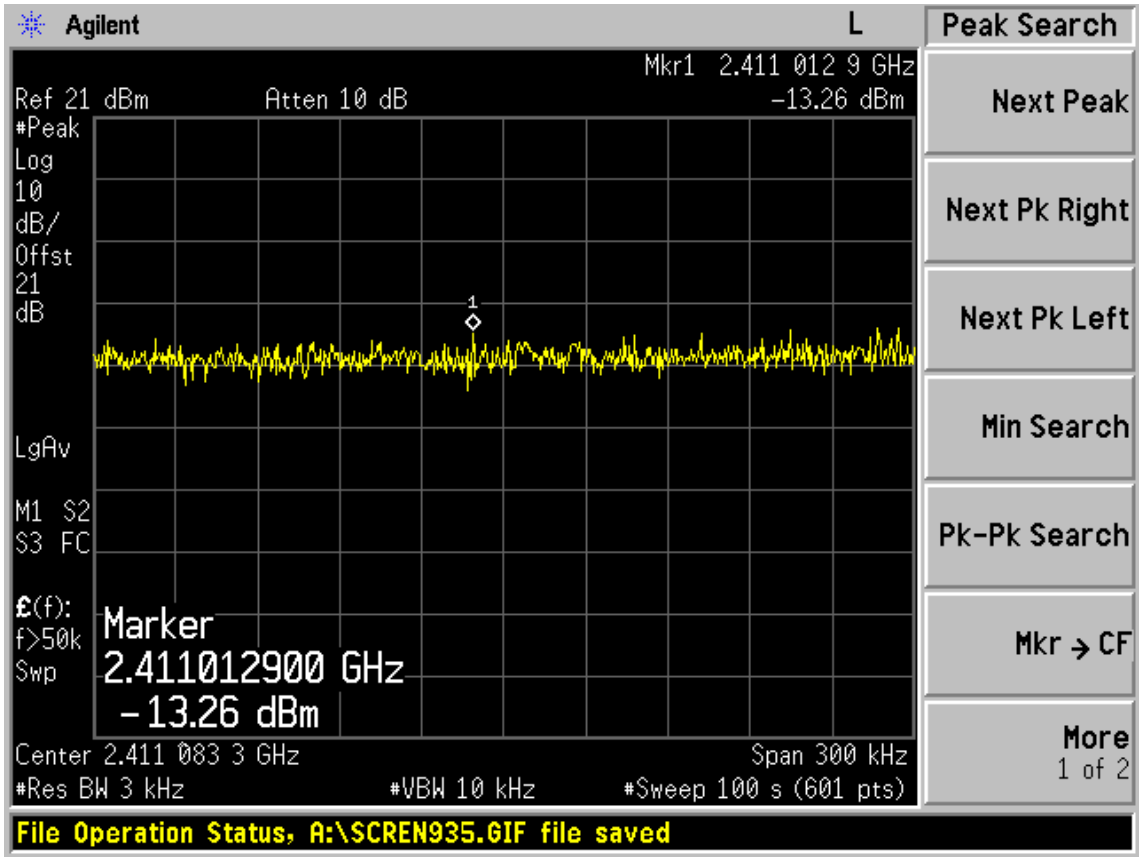


Test CH11: 2462MHz

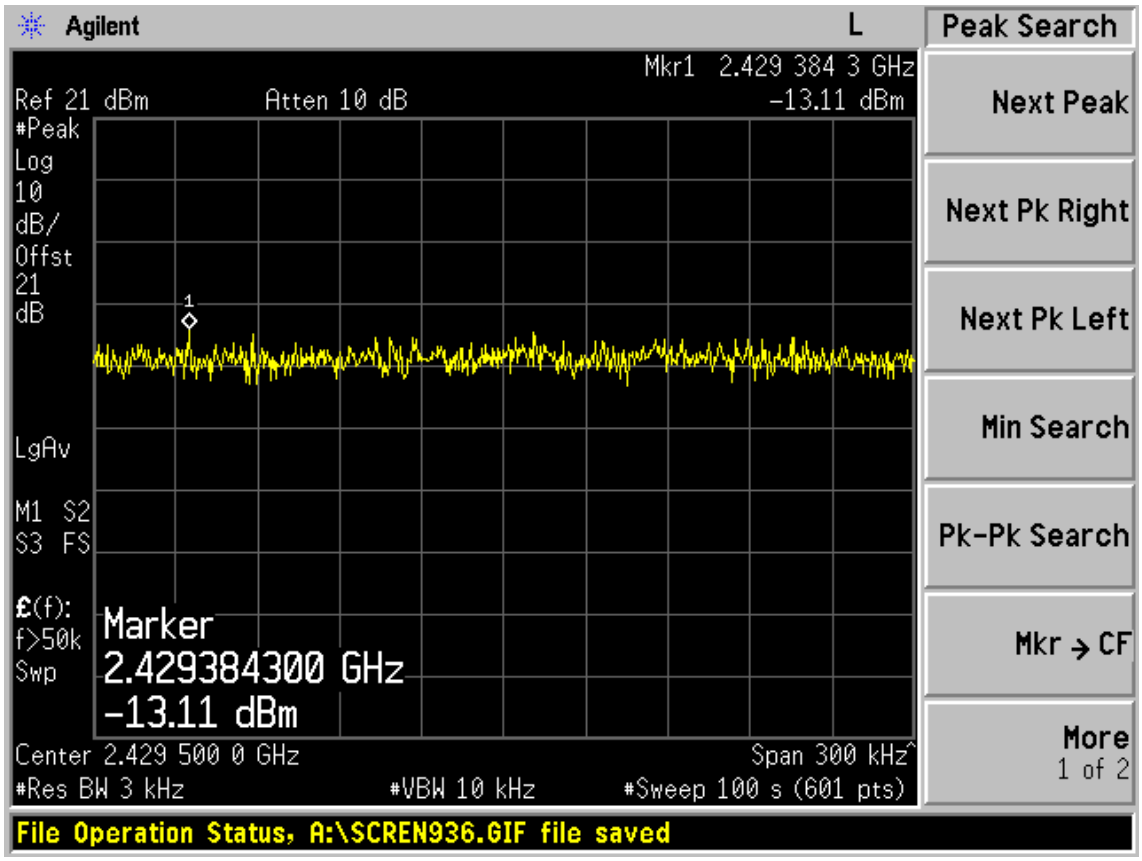


Test Mode: IEEE 802.11n HT40 TX

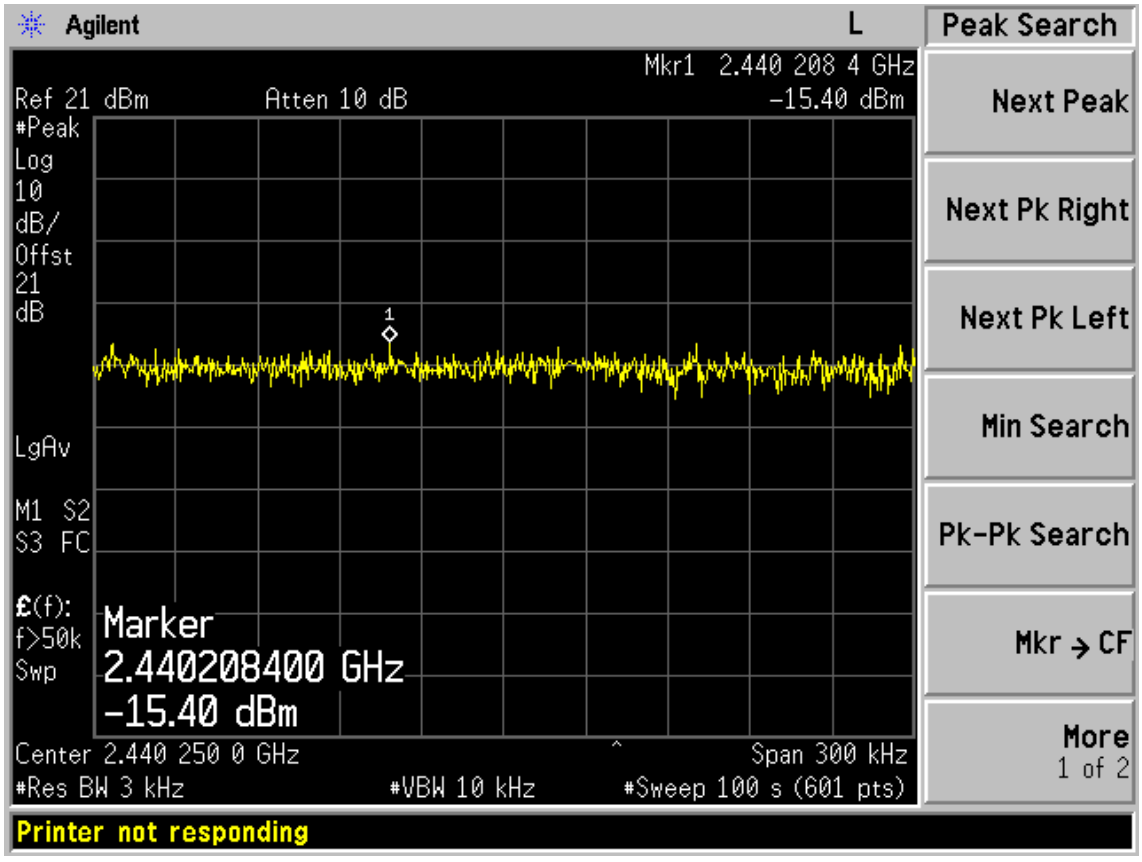
Test CH1: 2422MHz



Test CH4: 2437MHz



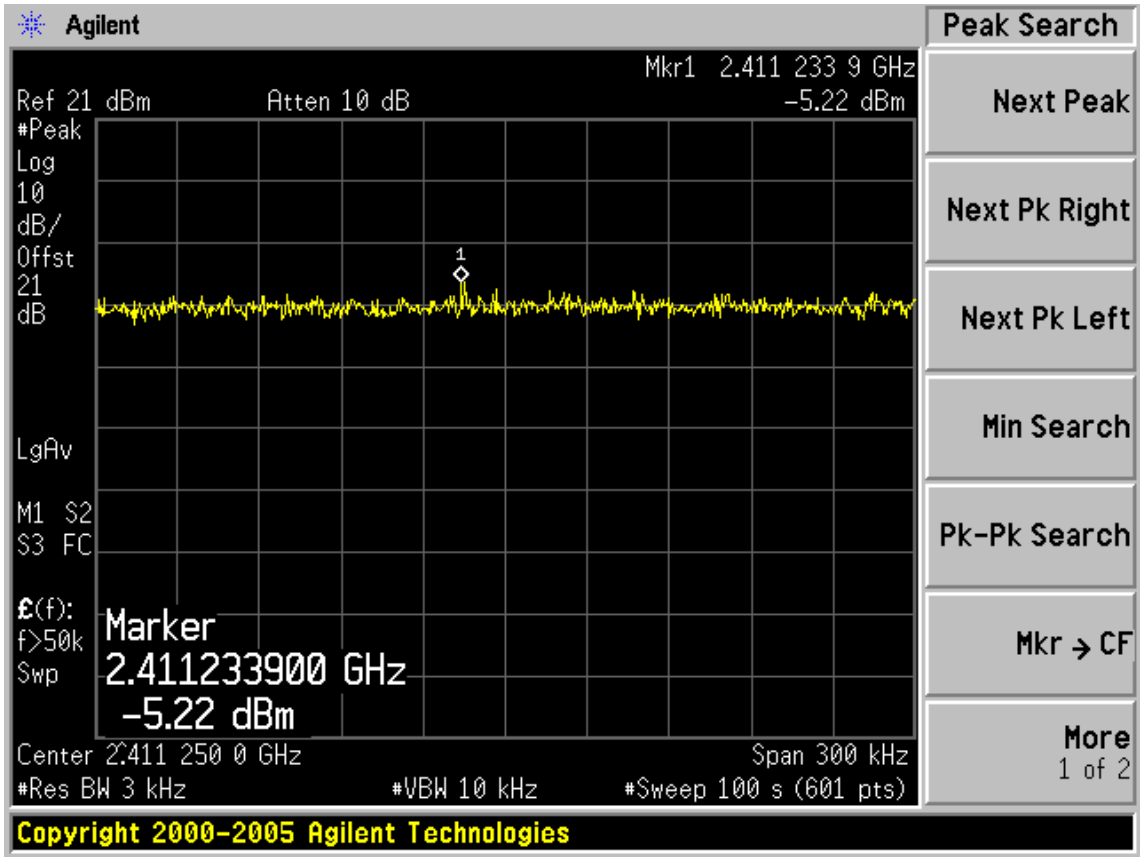
Test CH7: 2452MHz



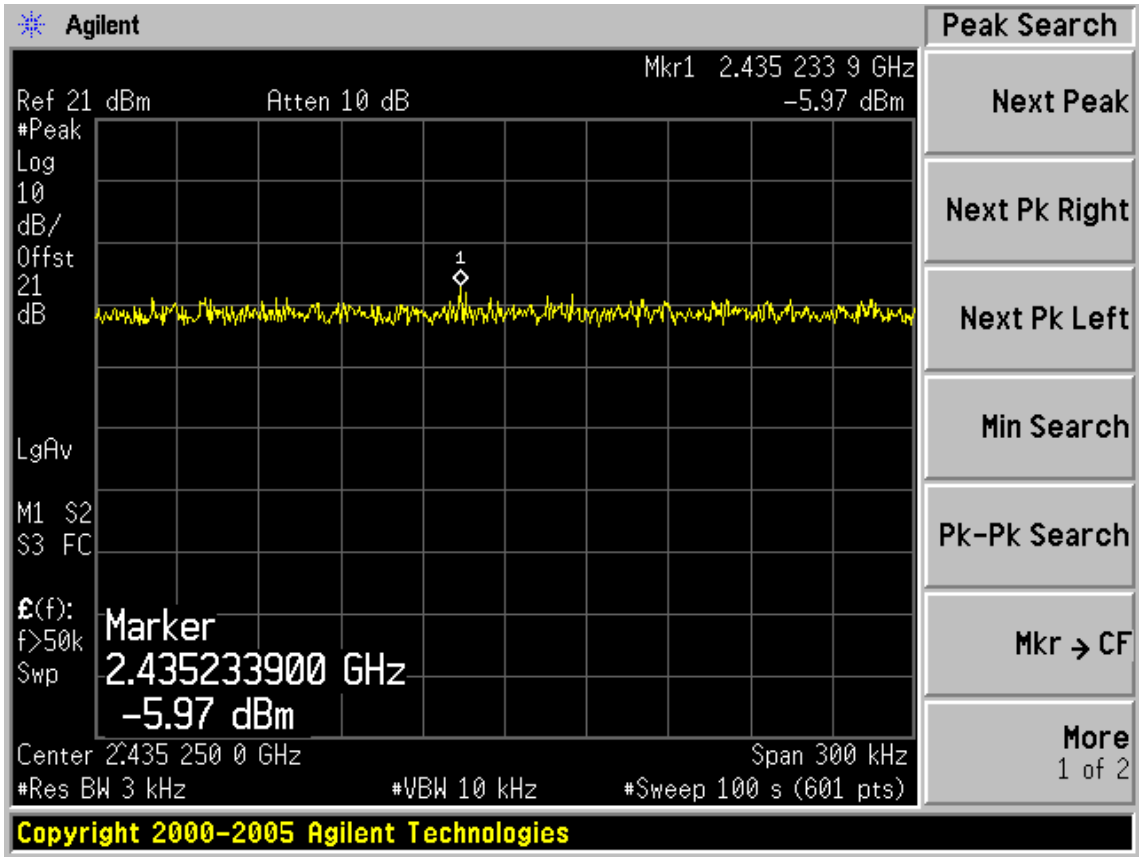
Chain 1

Test Mode: IEEE 802.11b TX

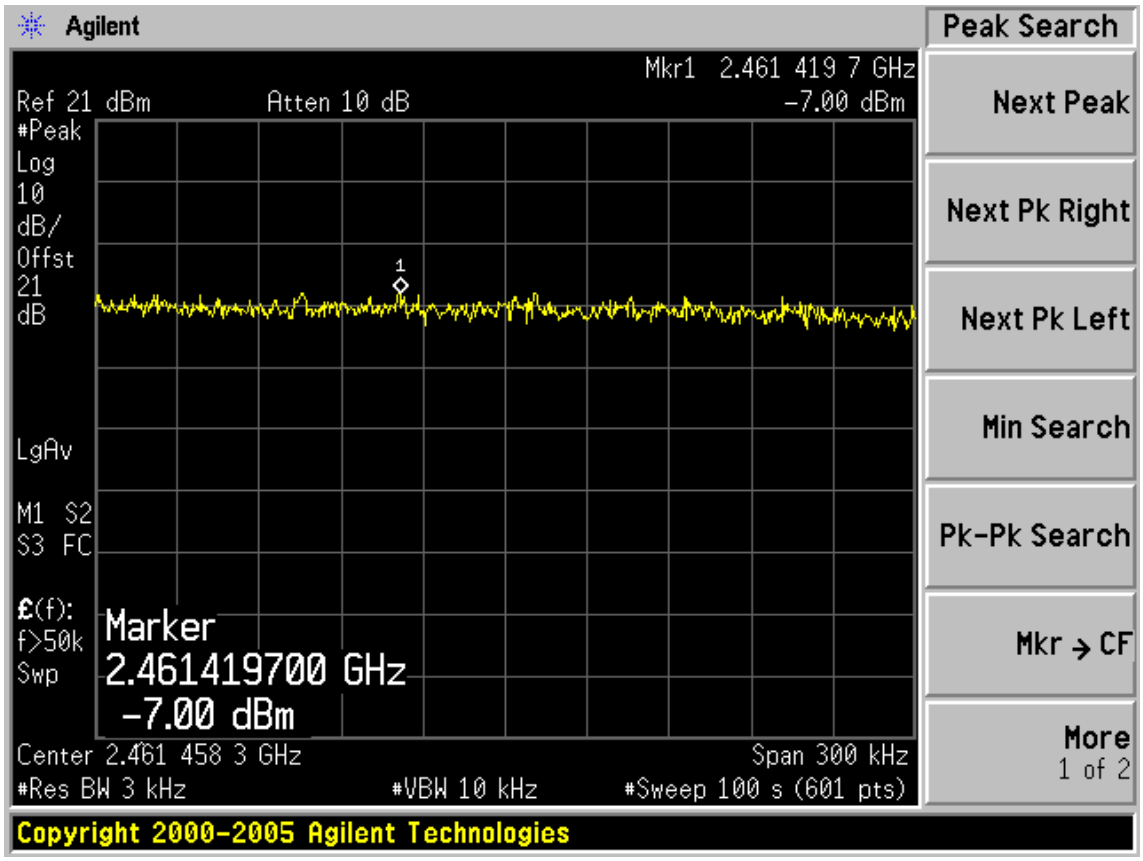
Test CH1: 2412MHz



Test CH6: 2437MHz

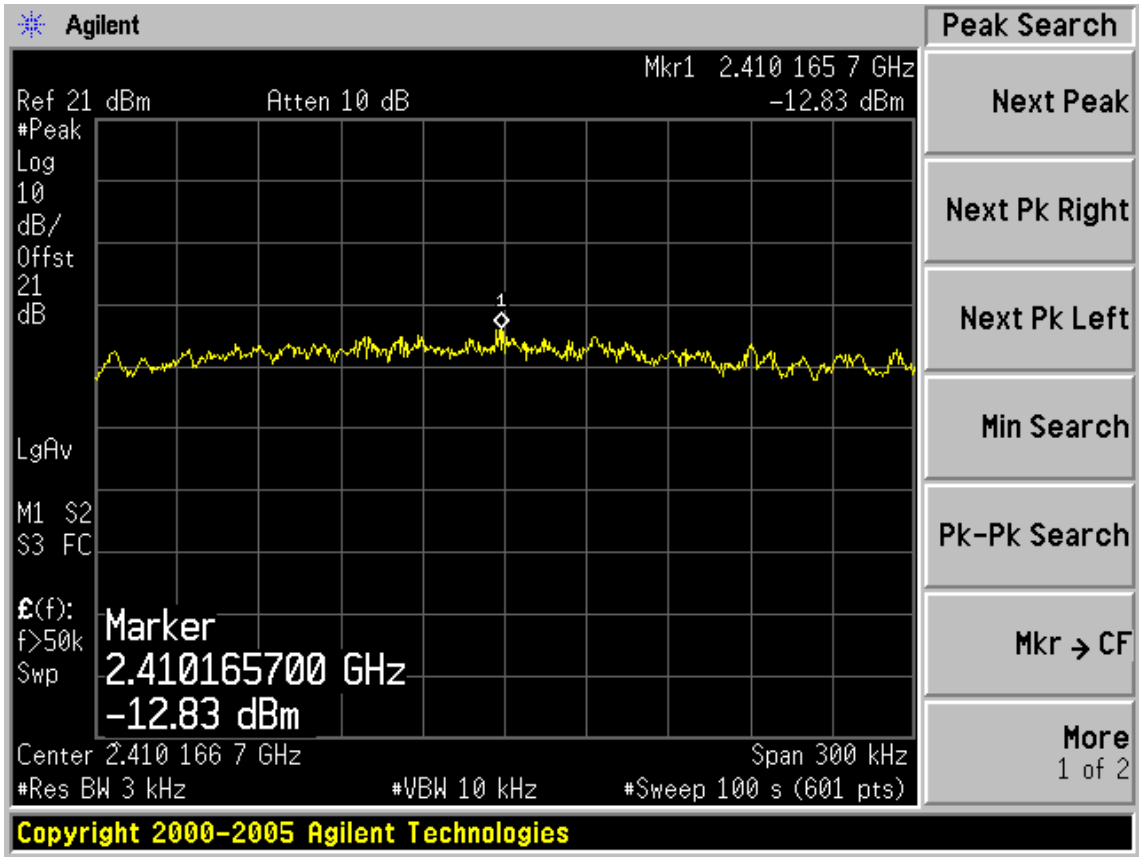


Test CH11: 2462MHz

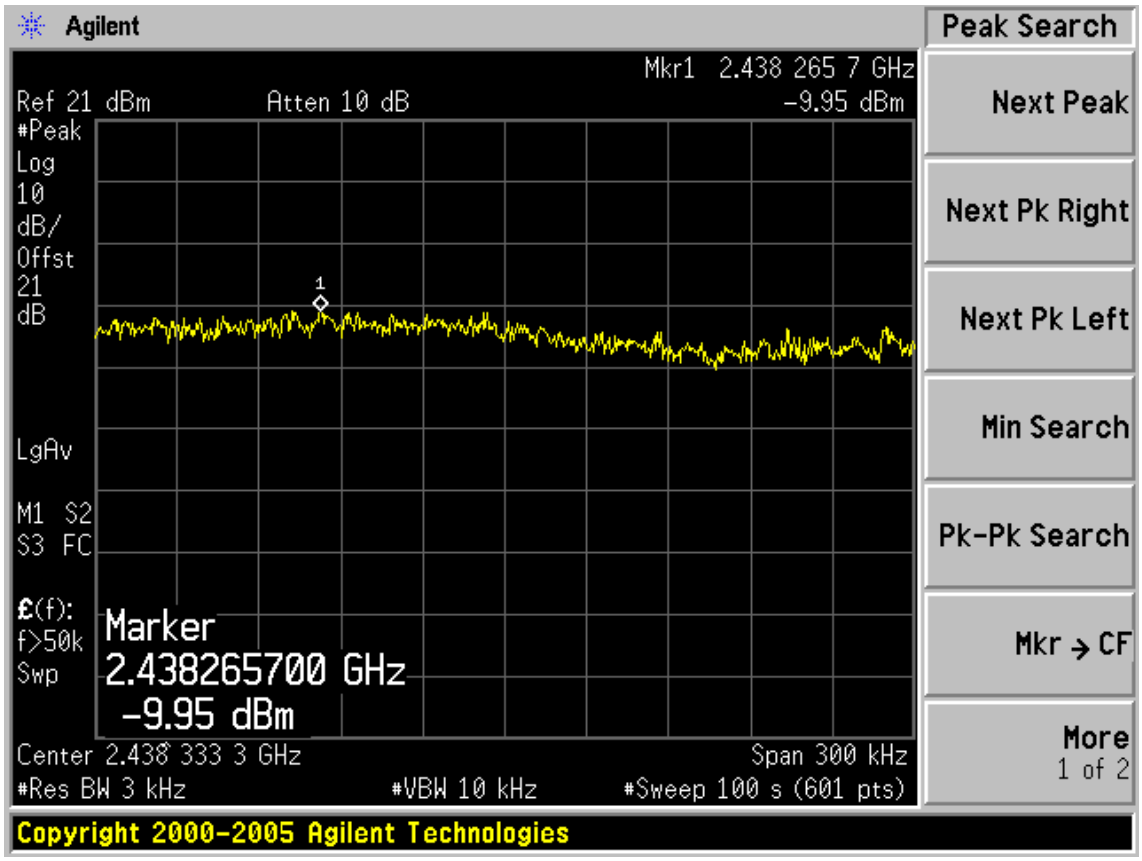


Test Mode: IEEE 802.11g TX

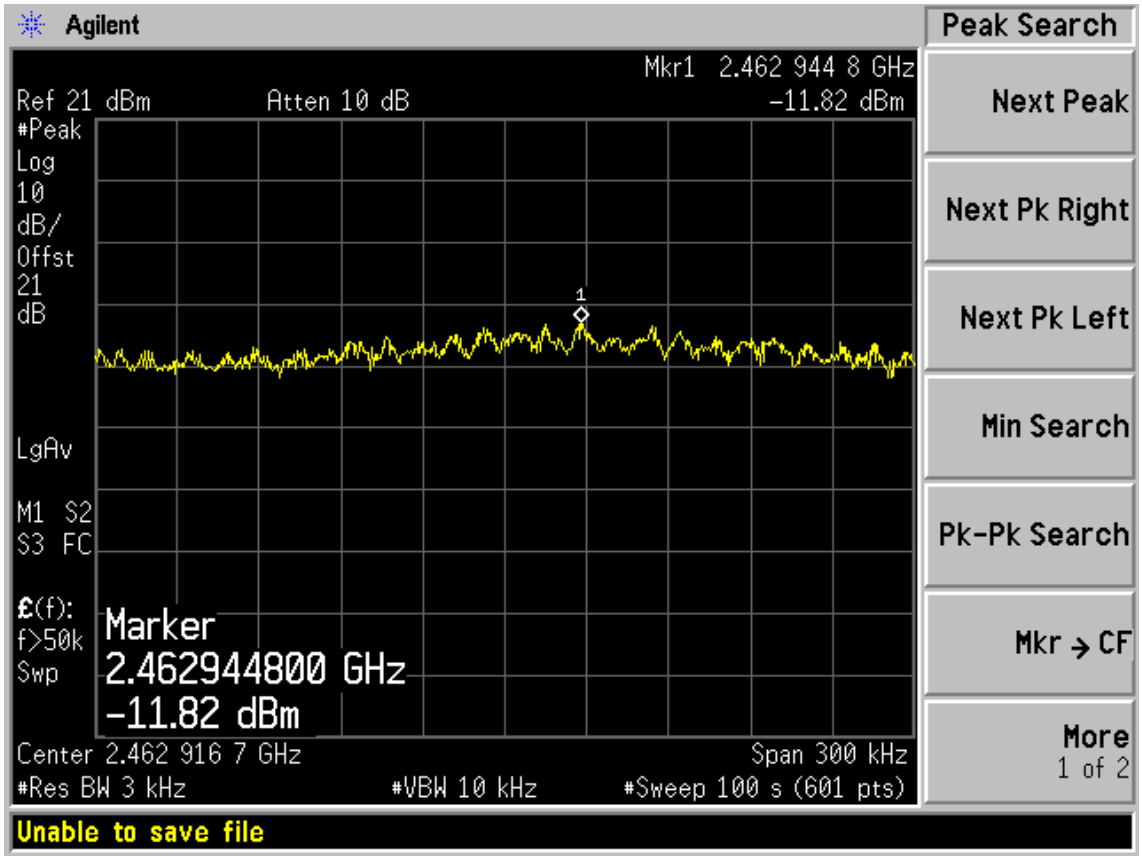
Test CH1: 2412MHz



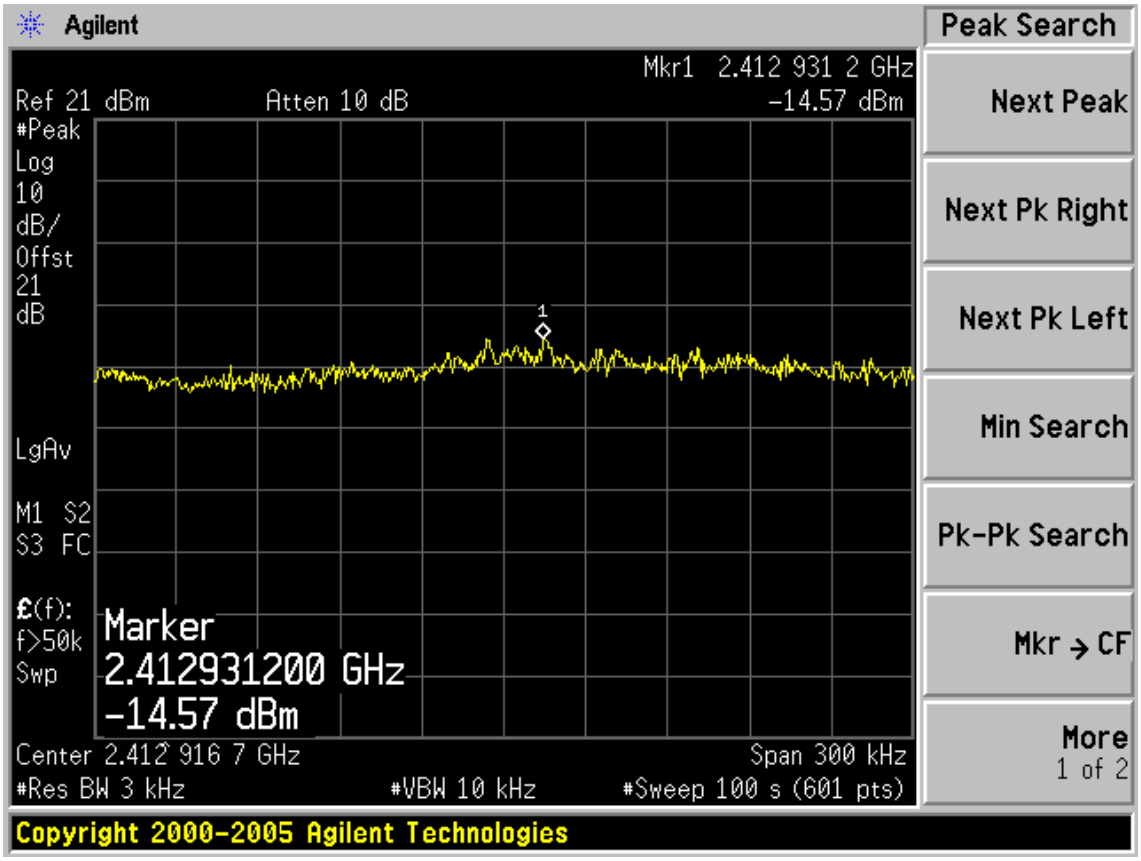
Test CH6: 2437MHz



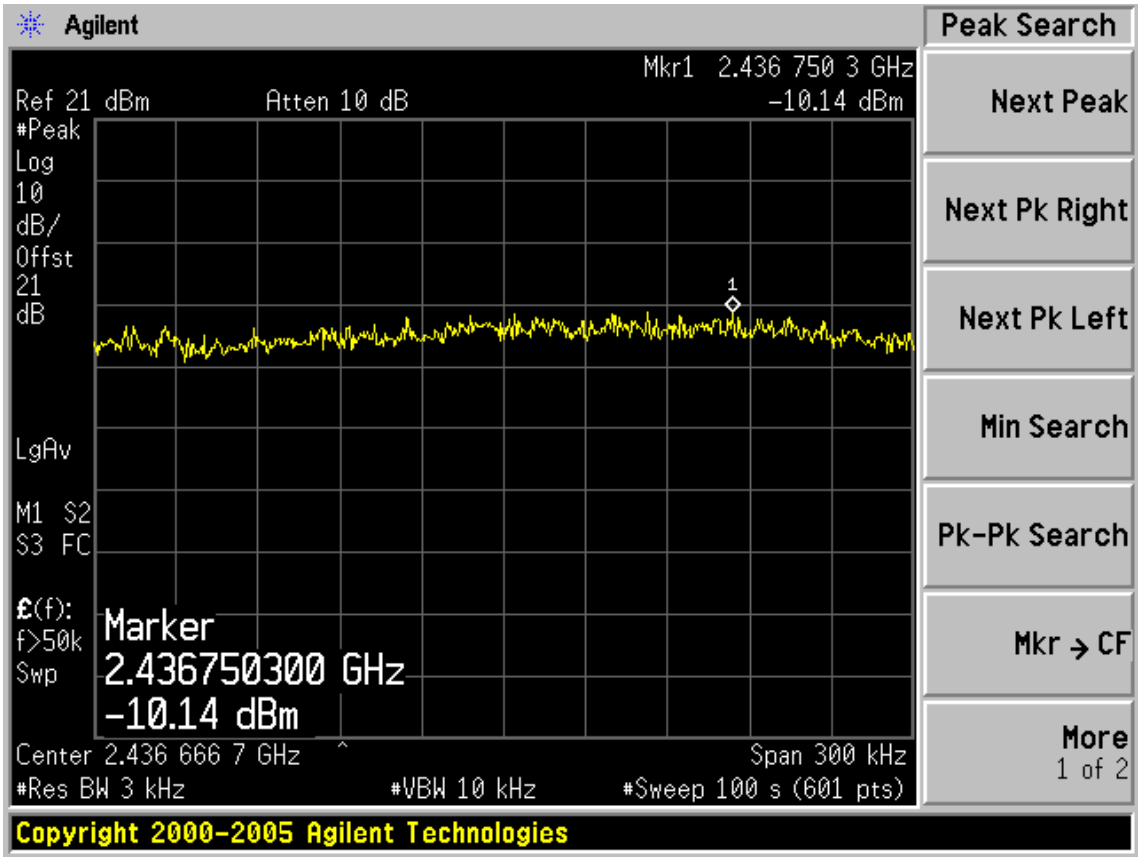
Test CH11: 2462MHz



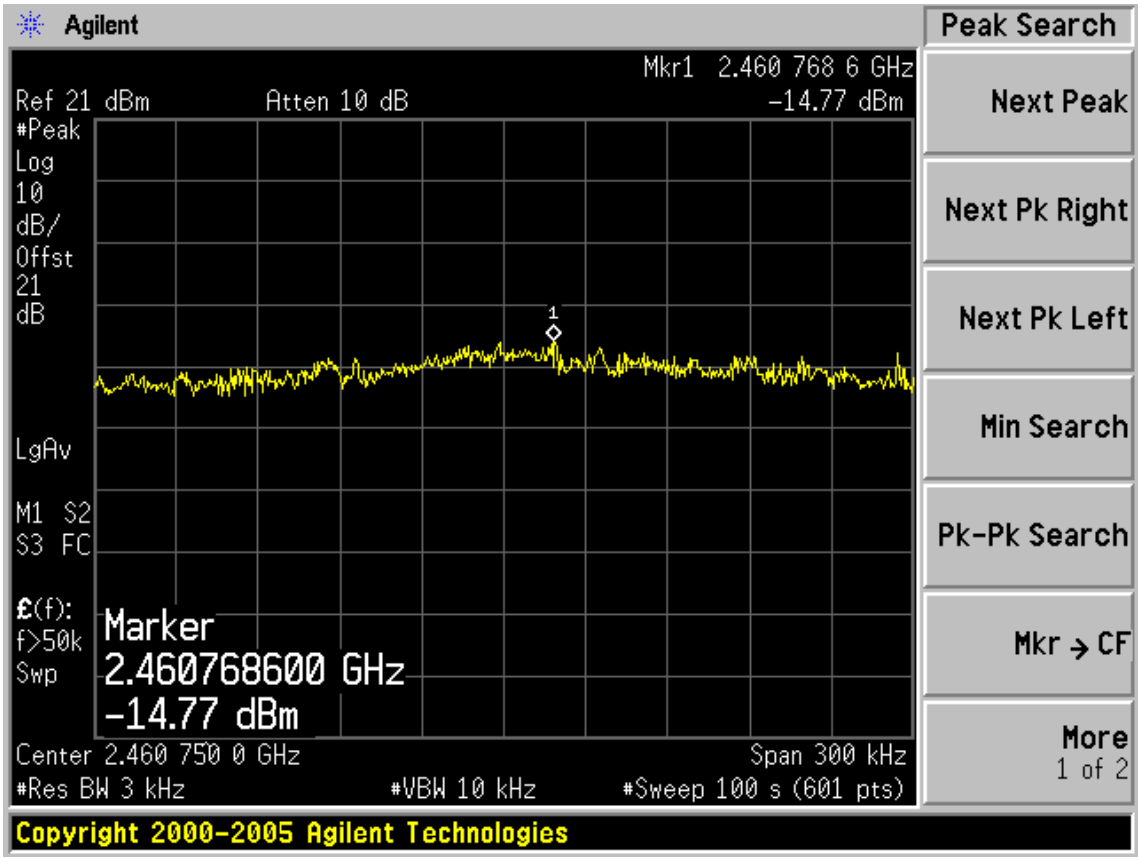
Test Mode: IEEE 802.11n HT20 TX
Test CH1: 2412MHz



Test CH6: 2437MHz

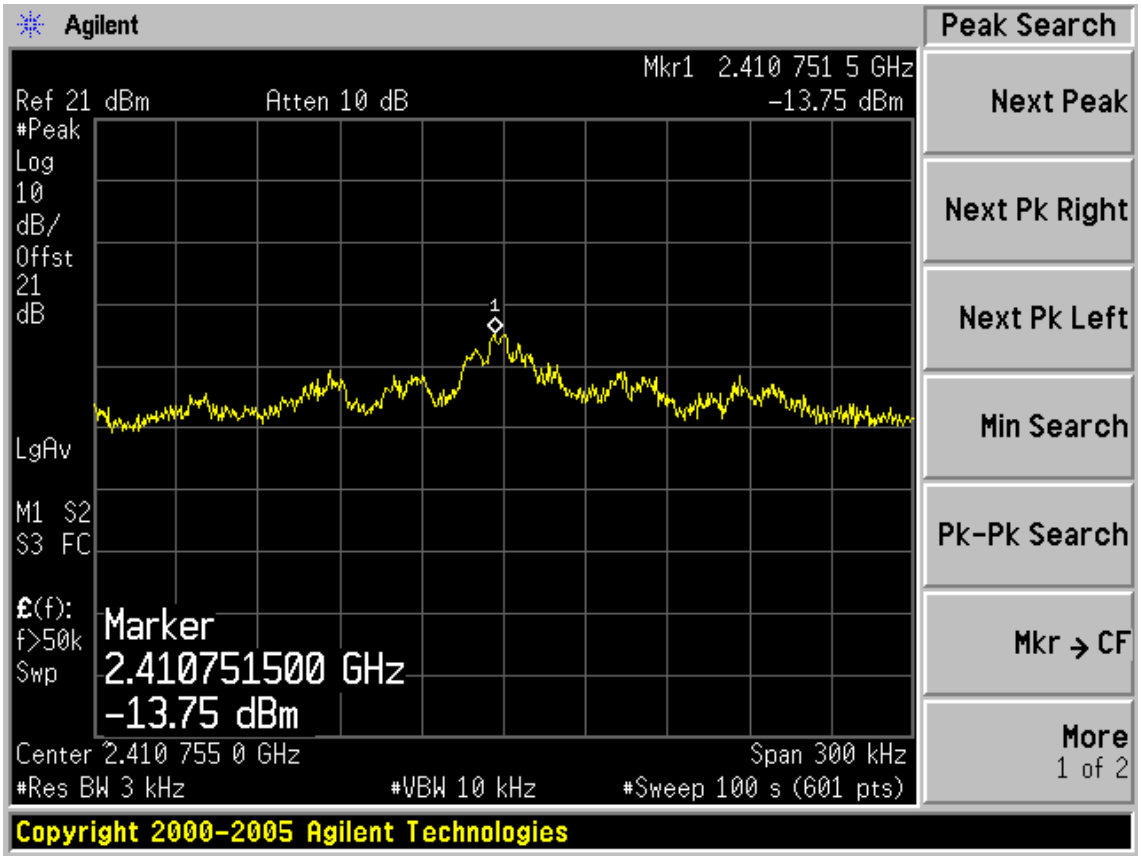


Test CH11: 2462MHz

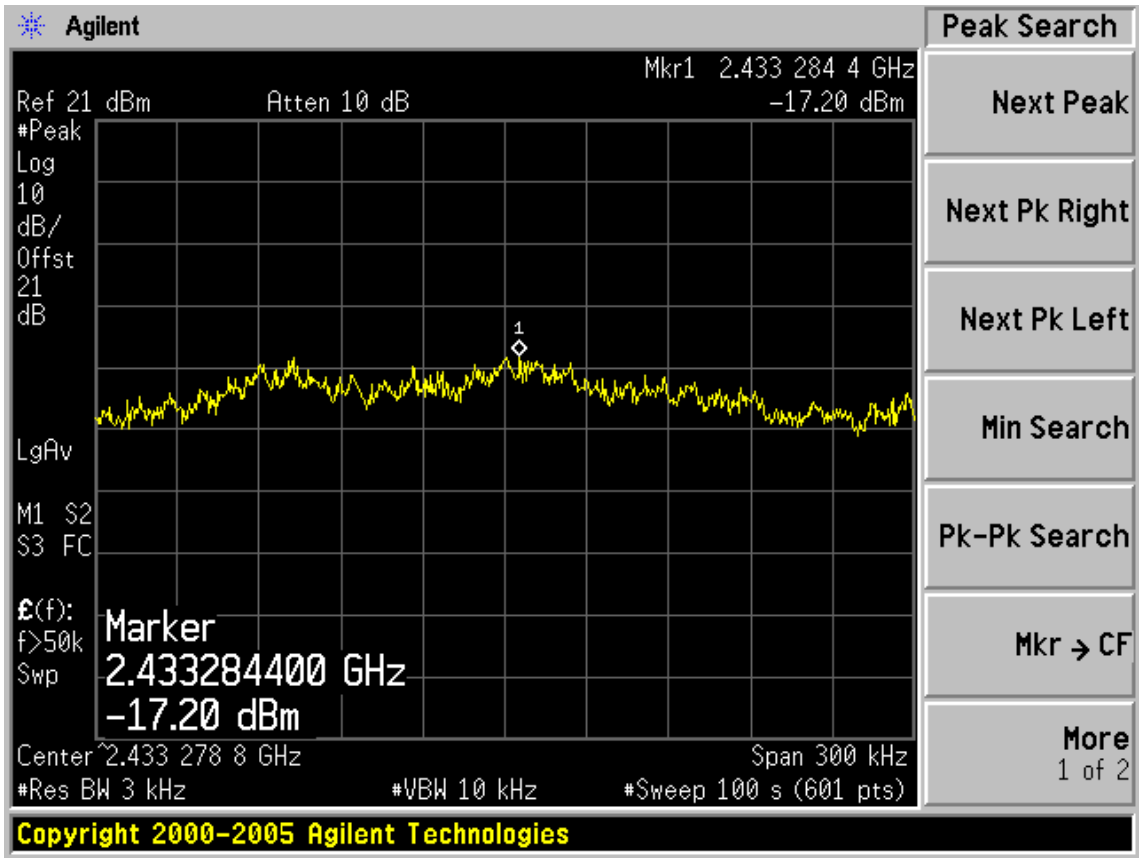


Test Mode: IEEE 802.11n HT40 TX

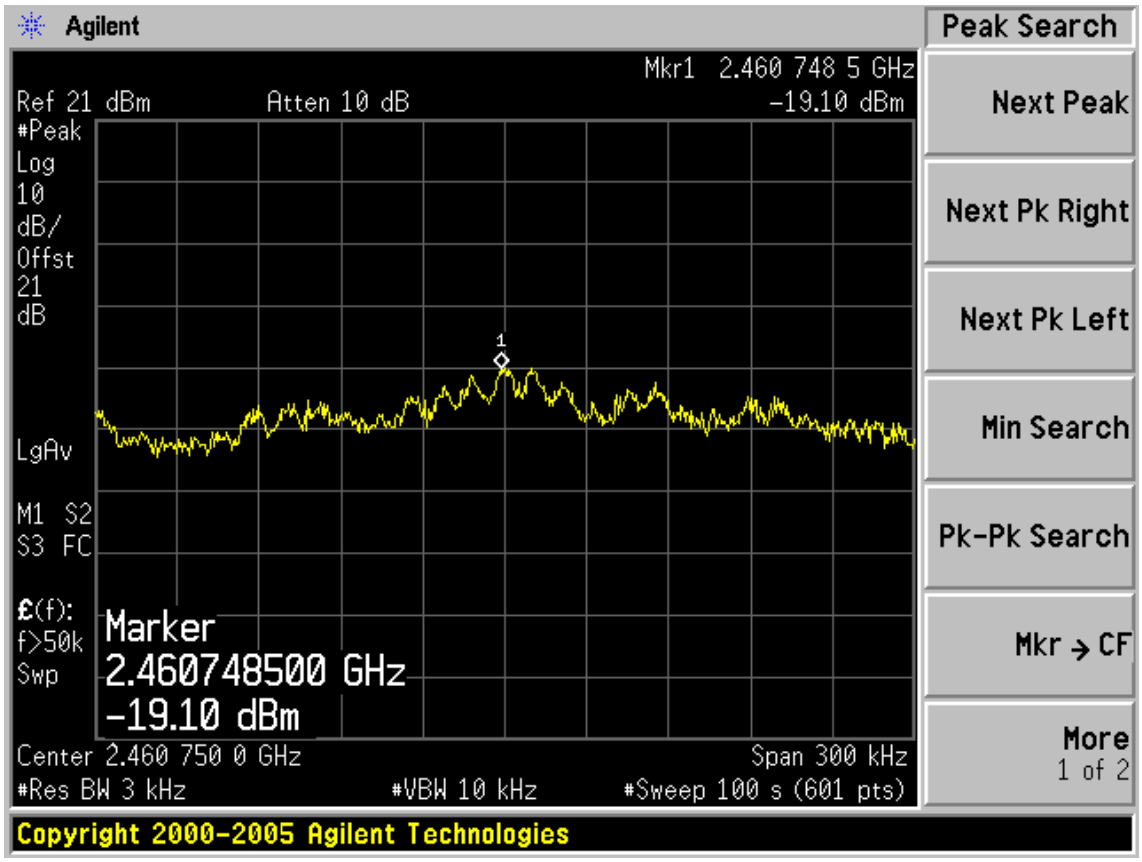
Test CH1: 2422MHz



Test CH4: 2437MHz



Test CH7: 2452MHz



10. MPE ESTIMATION

10.1.Limit for General Population/ Uncontrolled Exposures

Frequency	**Power density (mW/ cm^2)**	**Averaging time(minutes)**
300MHz----1.5GHz	F/1500	30
1.5GHz---100GHz	1.0	30

Frequency(MHz)	**Power density (mW/ cm^2)**	**Averaging time(minutes)**
2412	1	30
2437	1	30
2462	1	30

Note: F= Frequency in MHz

10.2. Estimation Result

EUT: SafeStreamTM Wireless N Gigabit Broadband VPN Router		
M/N: TL-ER604W		
Test date: 2013-04-17	Pressure: 101.2±1.0kpa	Humidity: 49.5±3.0%
Tested by: Leo-Li	Test site: RF site	Temperature:22.7±0.6 ℃

Cable loss: 1 dB		Attenuator loss: 20 dB				Antenna Gain: 5dBi	
Test Mode	CH	Frequency （MHz）	Peak Output Power (dBm)	Output Power (mW)	Antenna Gain (dBi)	Antenna Gain (Linear)	MPE
11b	CH1	2412	18.83	76.38	5	3.16	0.0481
	CH6	2437	17.91	61.80	5	3.16	0.0389
	CH11	2462	18.33	68.08	5	3.16	0.0428
11g	CH1	2412	22.31	170.22	5	3.16	0.1071
	CH6	2437	27.12	515.23	5	3.16	0.3243
	CH11	2462	22.45	175.79	5	3.16	0.1106
11n HT20	CH1	2412	23.53	225.42	5	3.16	0.1419
	CH6	2437	26.07	404.58	5	3.16	0.2547
	CH11	2462	24.23	264.85	5	3.16	0.1667
11n HT40	CH1	2422	21.59	144.21	5	3.16	0.0908
	CH4	2437	26.05	402.72	5	3.16	0.2535
	CH7	2452	21.92	155.60	5	3.16	0.0979

11. ANTENNA REQUIREMENT

11.1. STANDARD APPLICABLE

For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. And according to FCC 47 CFR Section 15.247 (b), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

11.2. ANTENNA CONNECTED CONSTRUCTION

The antennas used for this product are Dipole antenna and that no antenna other than that furnished by the responsible party shall be used with the device, the maximum peak gain of the transmit antenna is 5dBi.

12. DEVIATION TO TEST SPECIFICATIONS

[NONE]