

Figure 139: Reference Level for HT20 at 5745 MHz, Chain 2

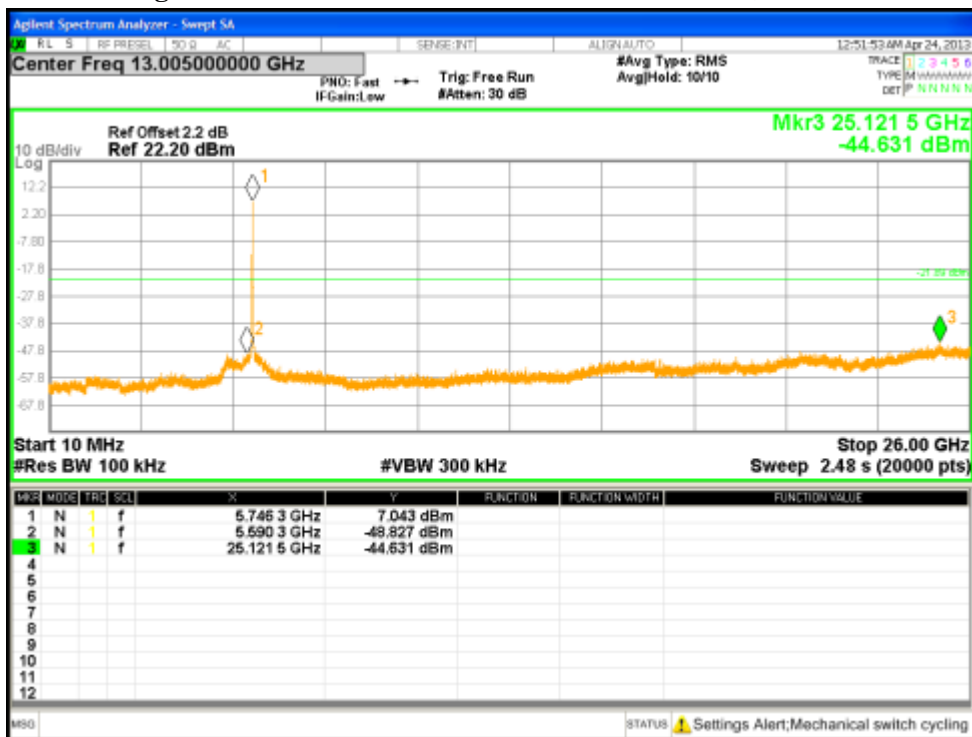
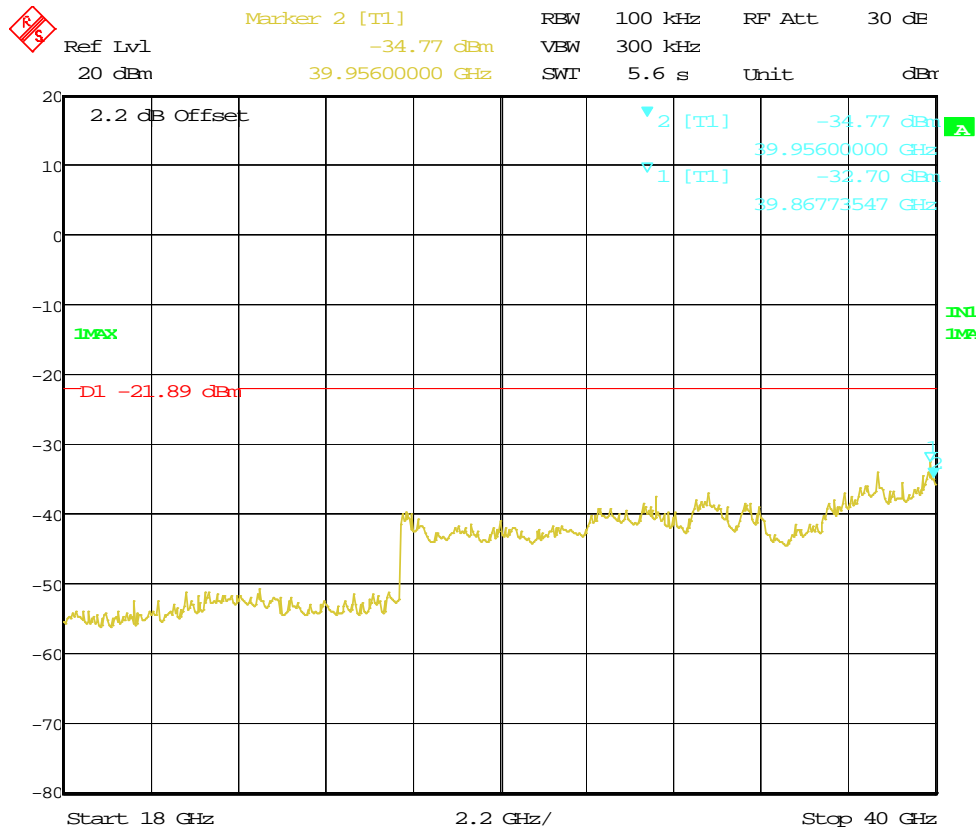


Figure 140: Out of Band Emission for HT20 at 5745 MHz, Chain 2



Date: 25.MAR.2013 15:07:18

Figure 141: Out of Band Emission for HT20 at 5745 MHz, Chain 2

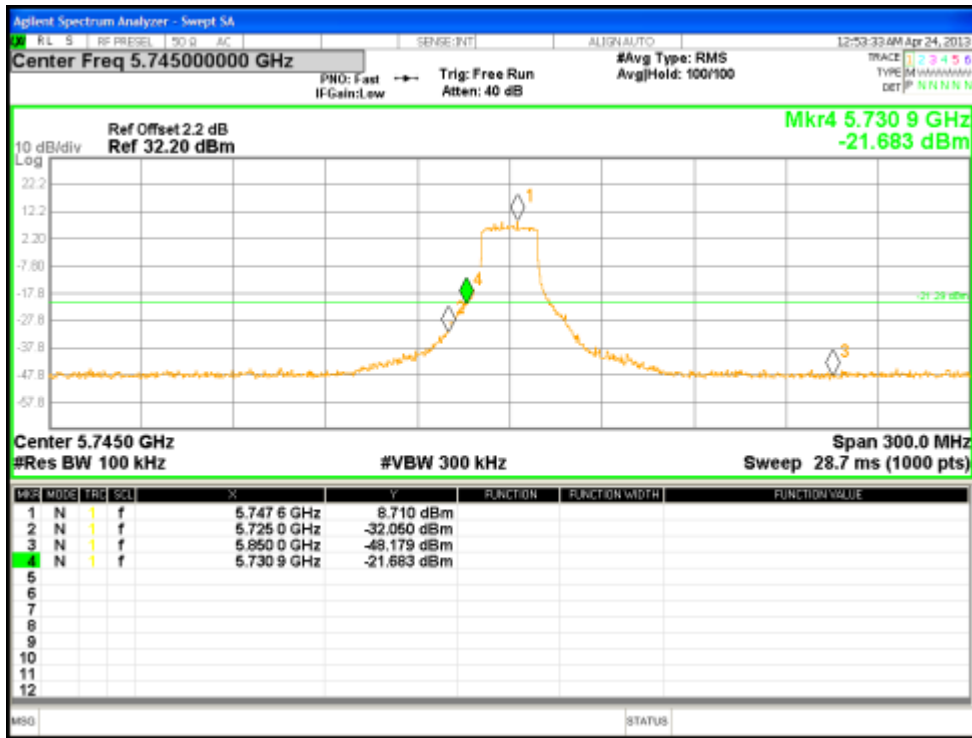


Figure 142: Reference Level for HT20 at 5745 MHz, Chain 3

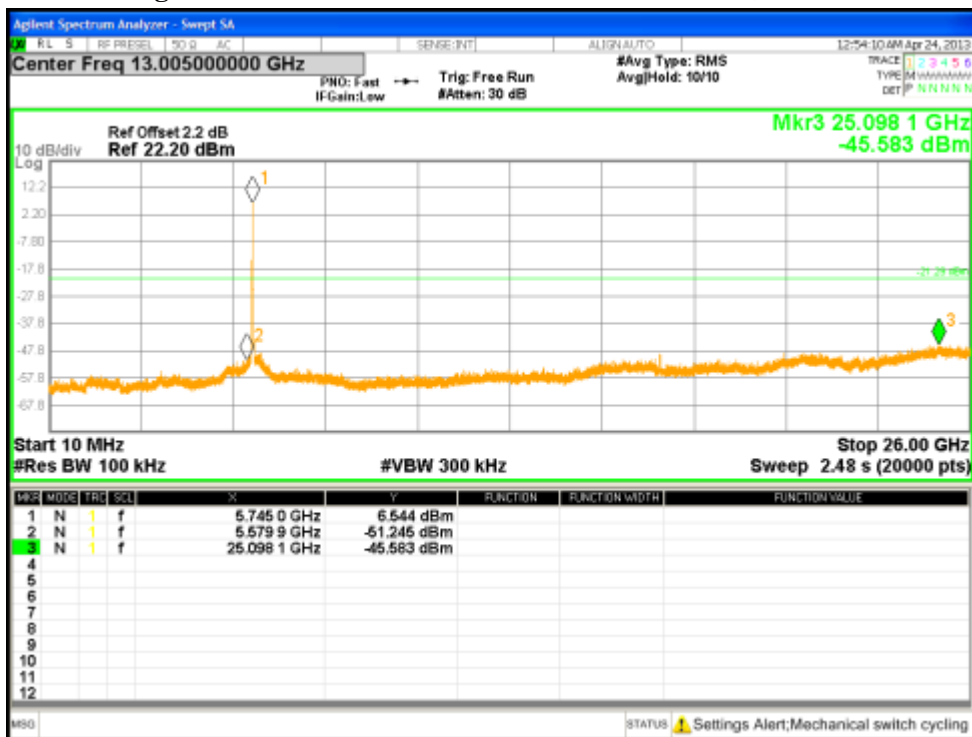
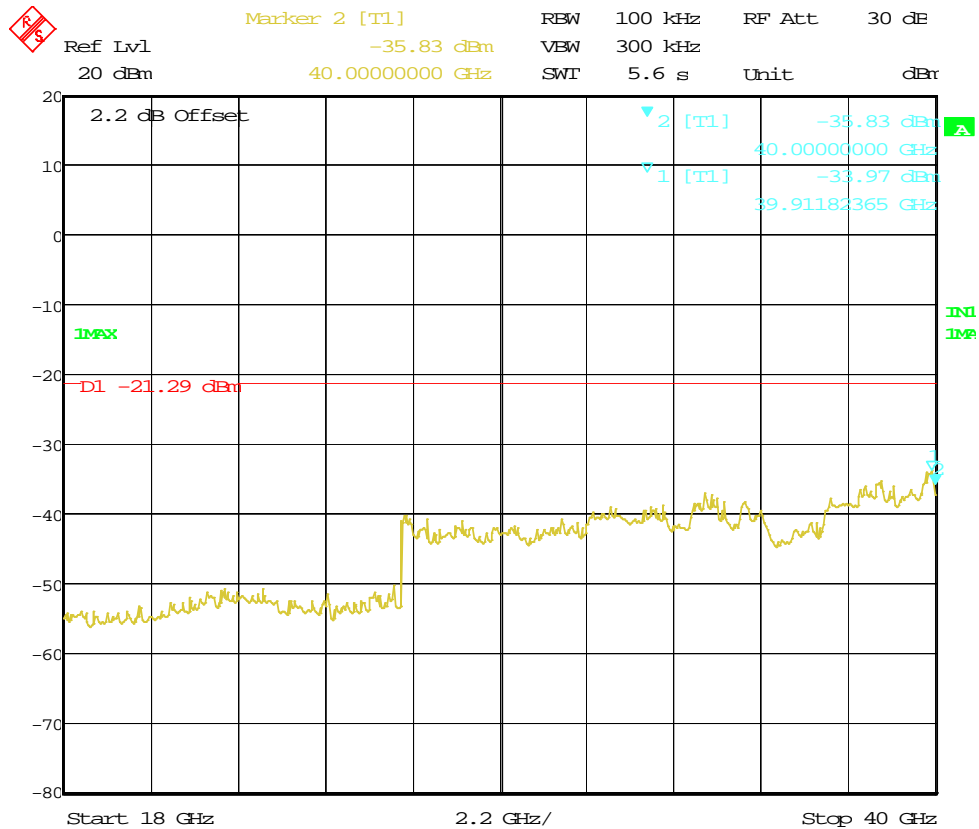


Figure 143: Out of Band Emission for HT20 at 5745 MHz, Chain 3



Date: 25.MAR.2013 15:08:44

Figure 144: Out of Band Emission for HT20 at 5745 MHz, Chain 3

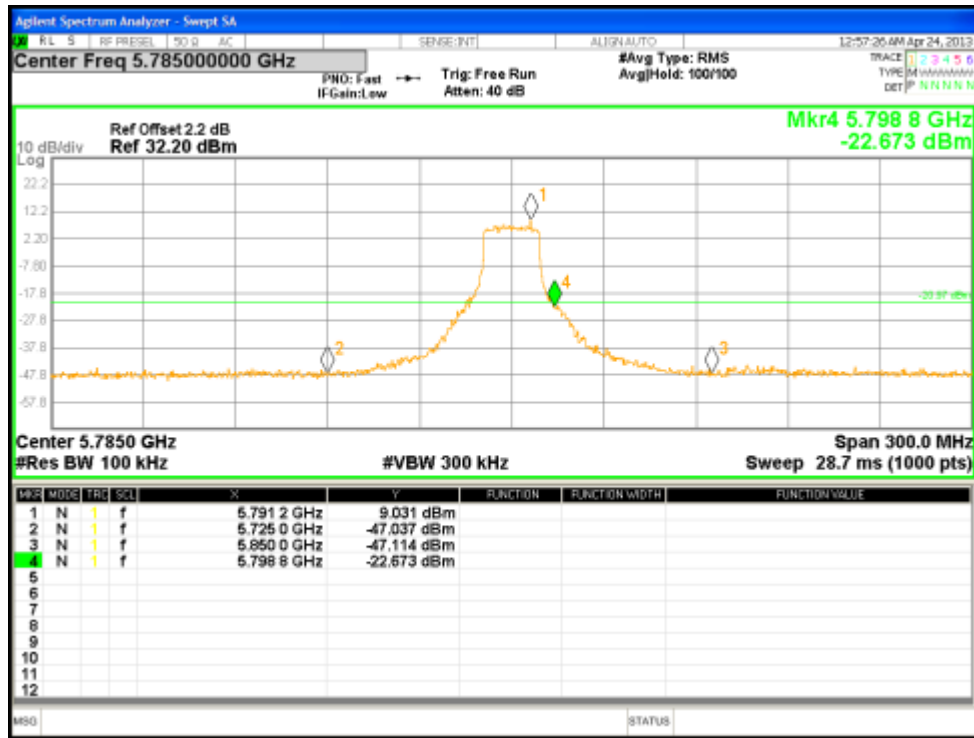


Figure 145: Reference Level for HT20 at 5785 MHz, Chain 0

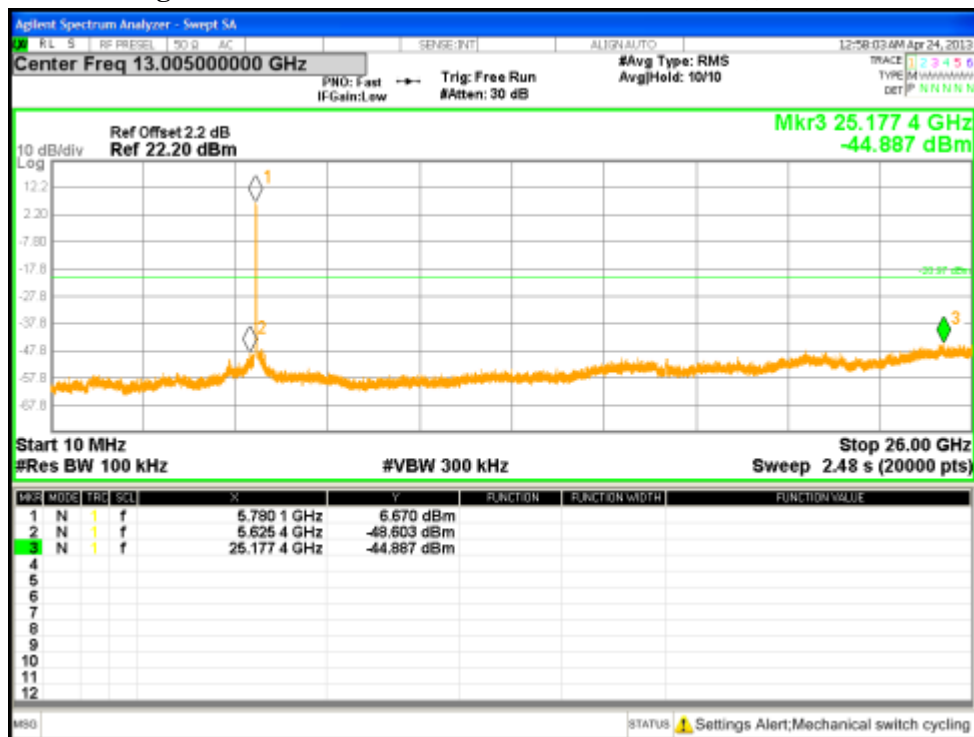
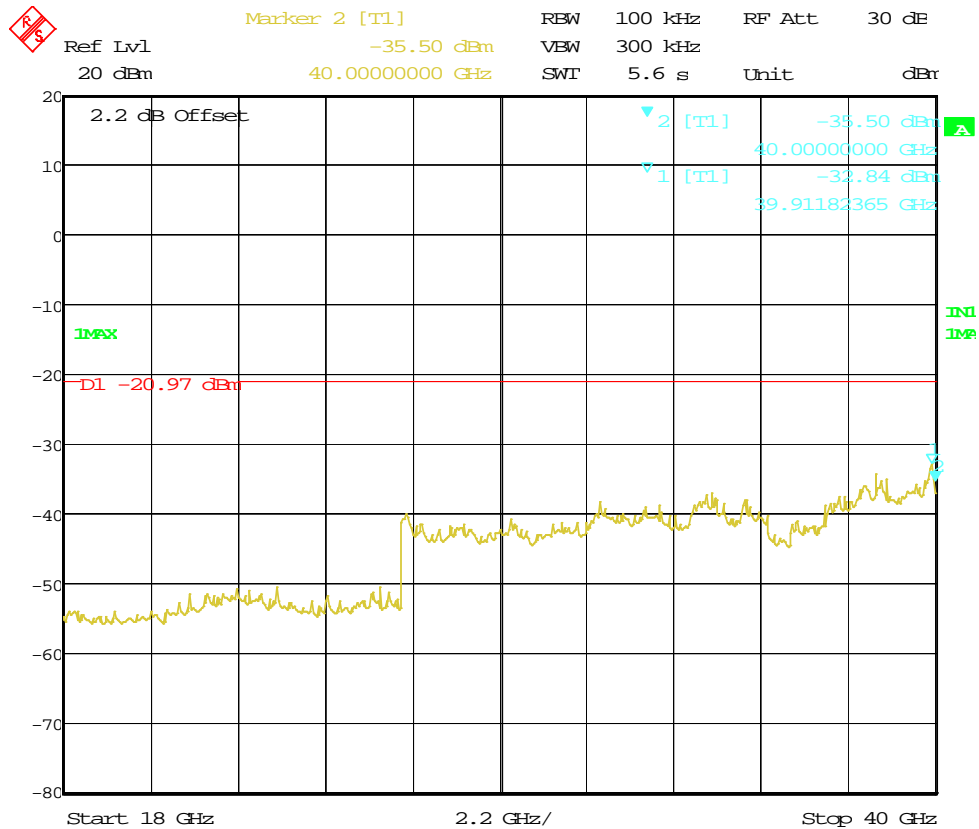


Figure 146: Out of Band Emission for HT20 at 5785 MHz, Chain 0



Date: 25.MAR.2013 15:11:48

Figure 147: Out of Band Emission for HT20 at 5785 MHz, Chain 0

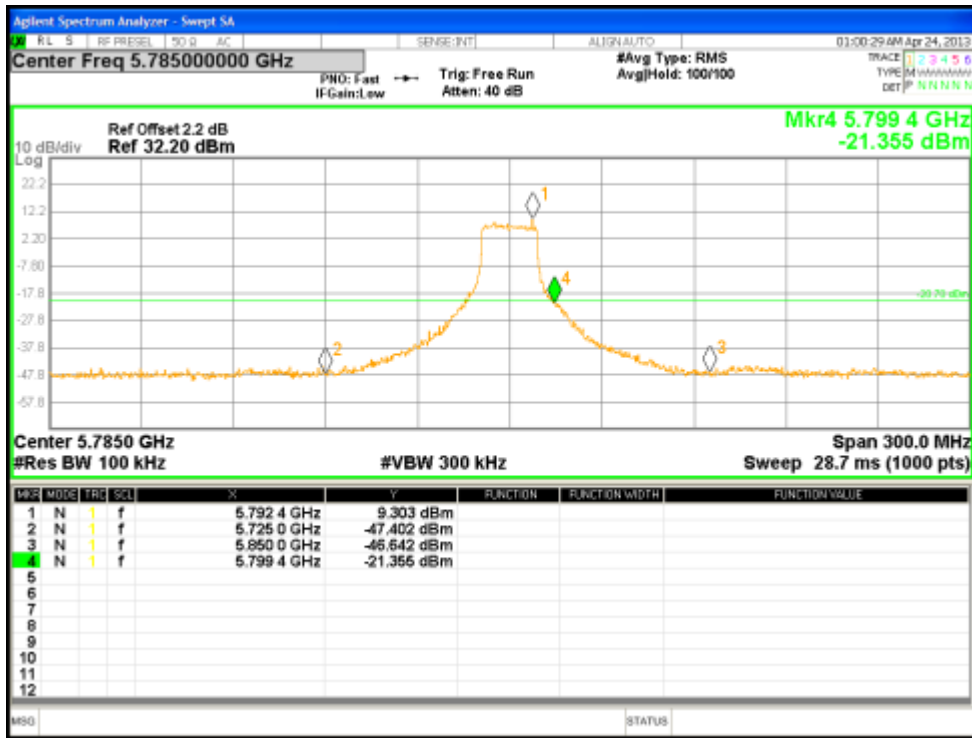


Figure 148: Reference Level for HT20 at 5785 MHz, Chain 1

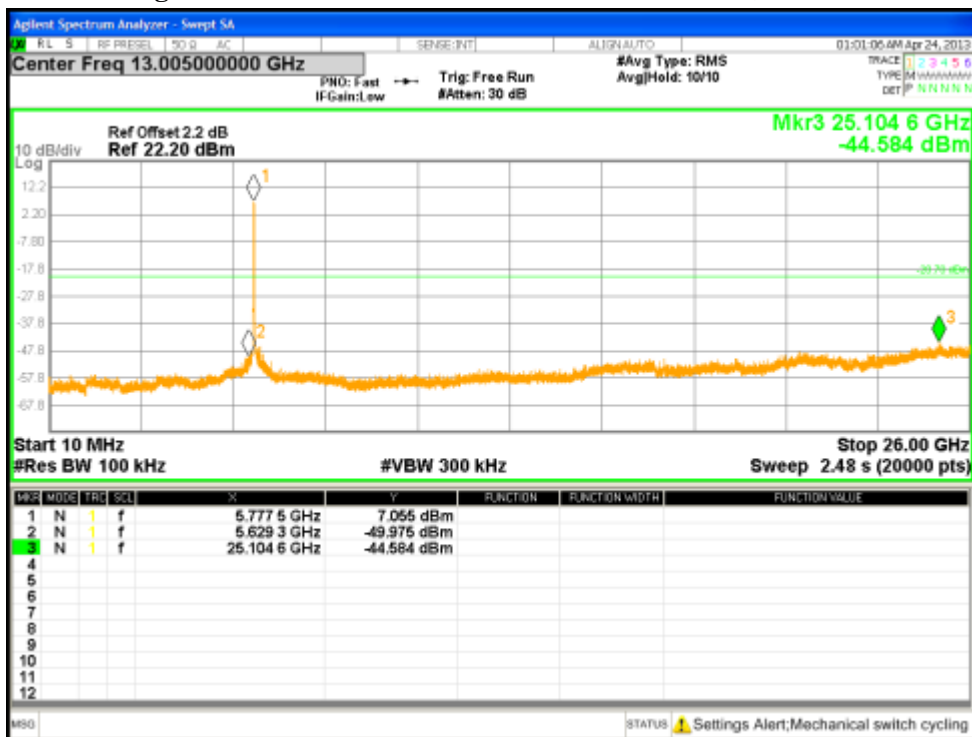
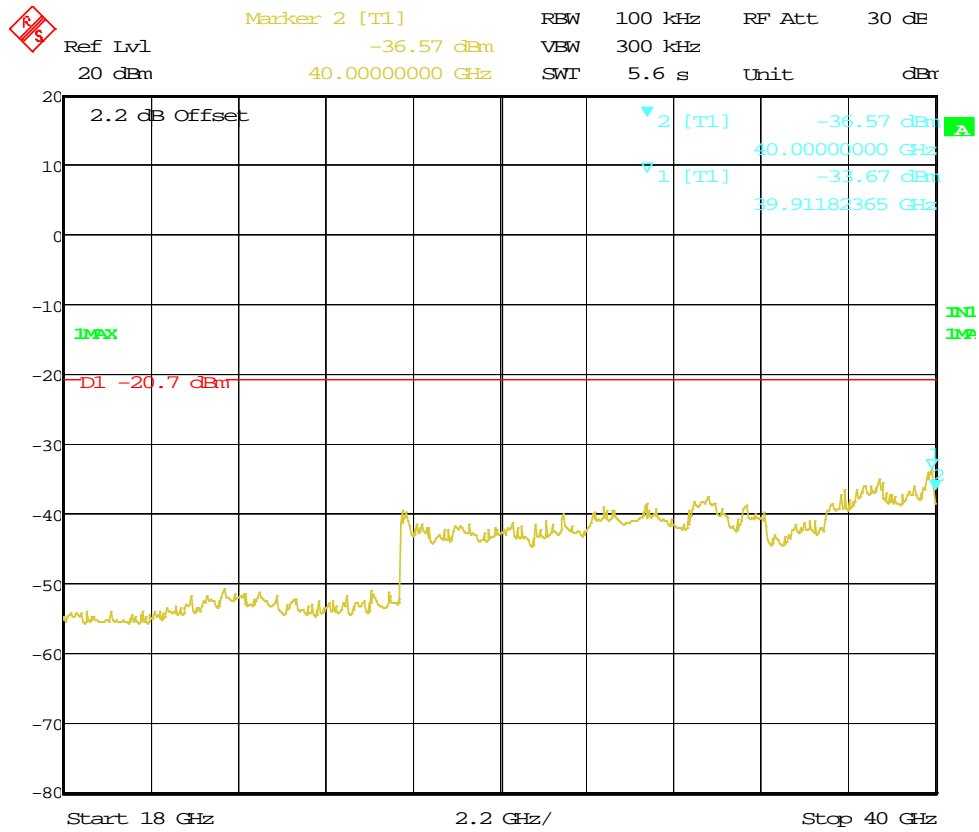


Figure 149: Out of Band Emission for HT20 at 5785 MHz, Chain 1



Date: 25.MAR.2013 15:13:31

Figure 150: Out of Band Emission for HT20 at 5785 MHz, Chain 1

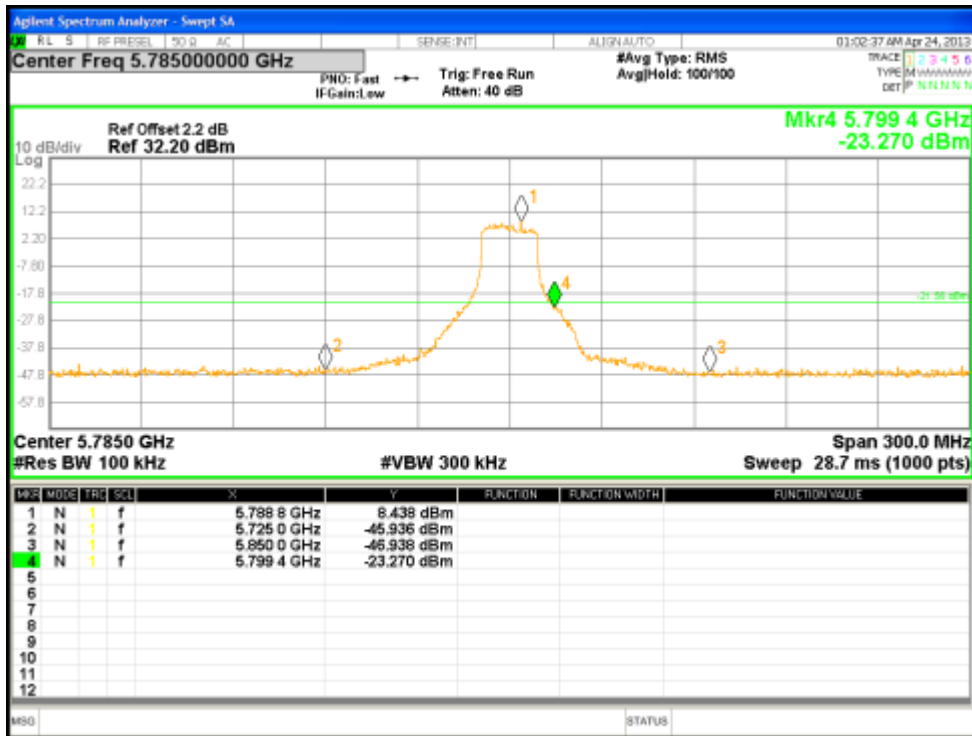


Figure 151: Reference Level for HT20 at 5785 MHz, Chain 2

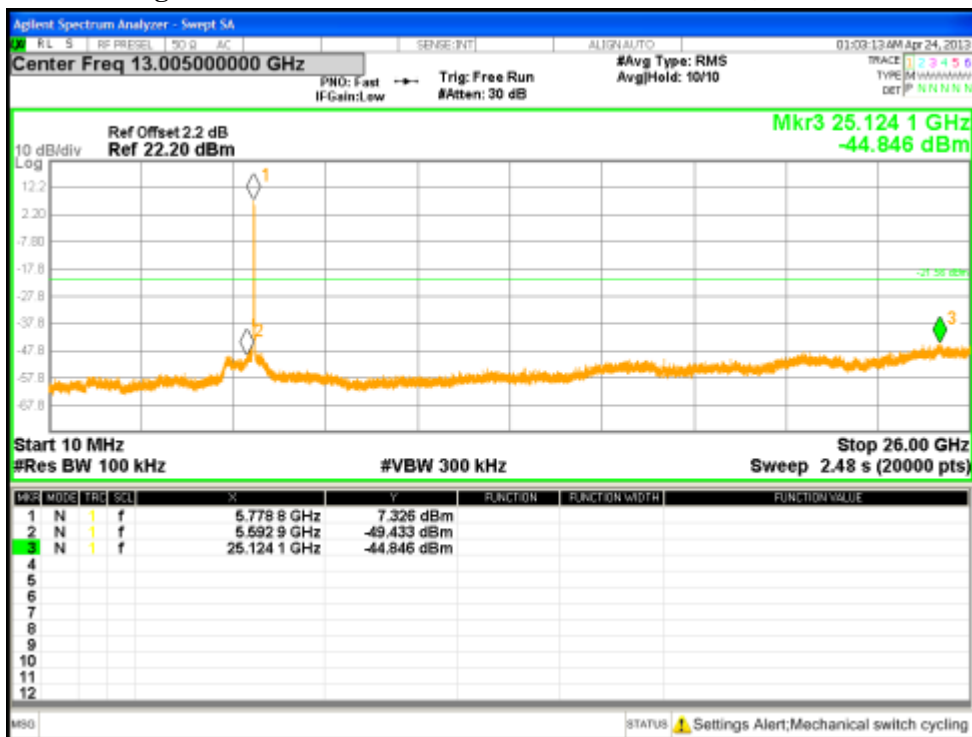
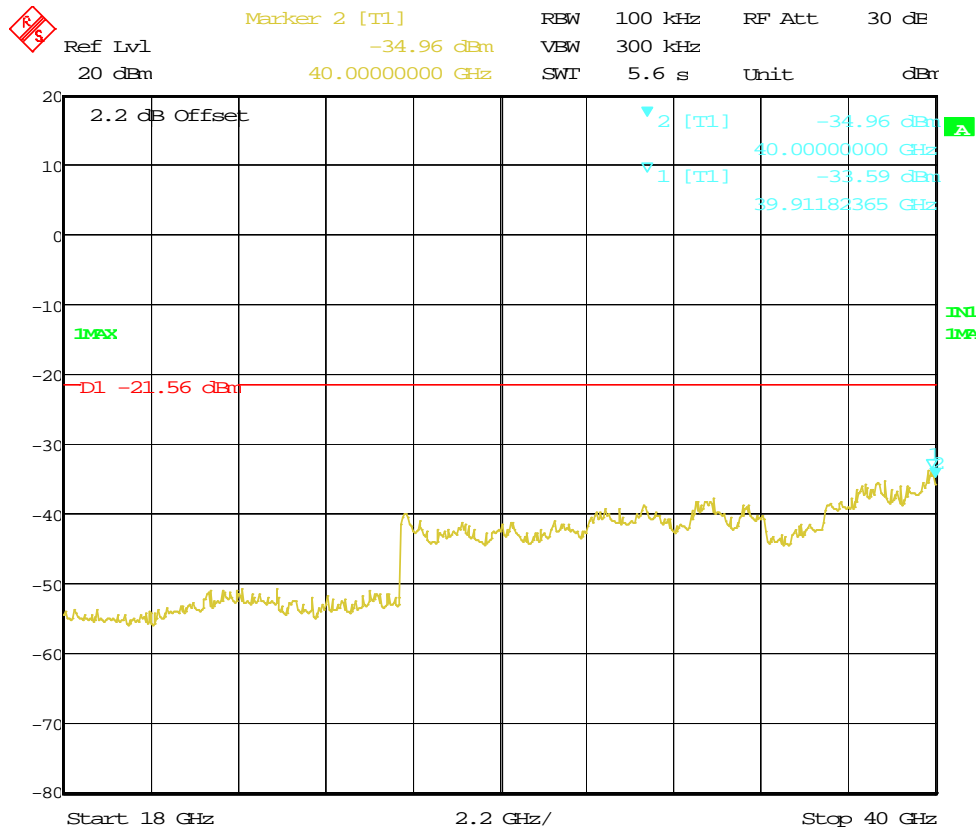


Figure 152: Out of Band Emission for HT20 at 5785 MHz, Chain 2



Date: 25.MAR.2013 15:14:22

Figure 153: Out of Band Emission for HT20 at 5785 MHz, Chain 2

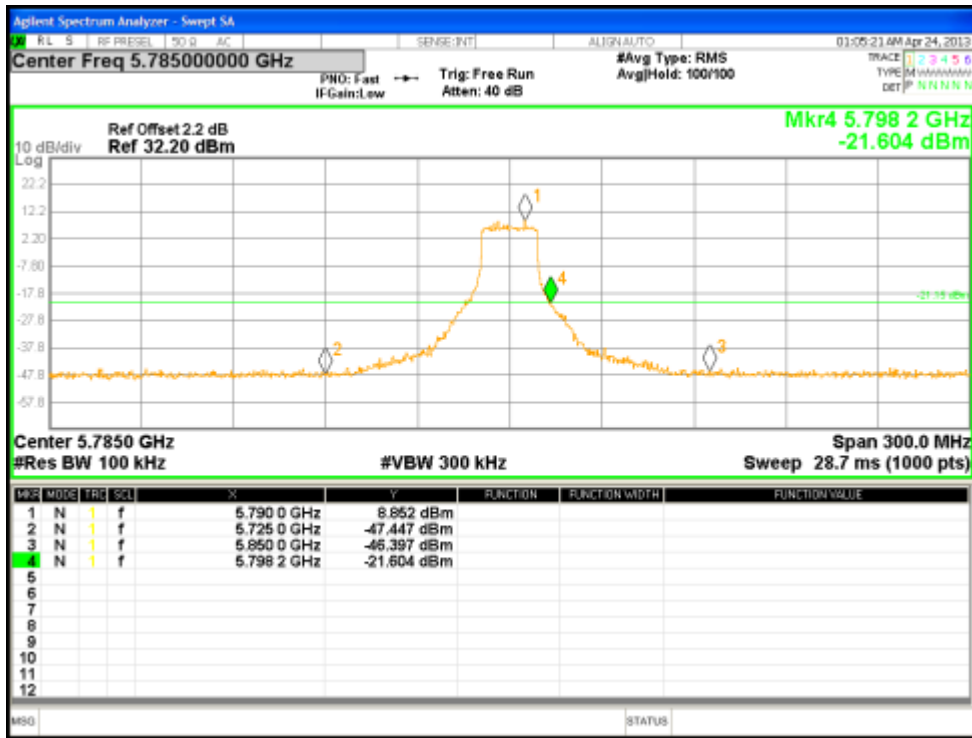


Figure 154: Reference Level for HT20 at 5785 MHz, Chain 3

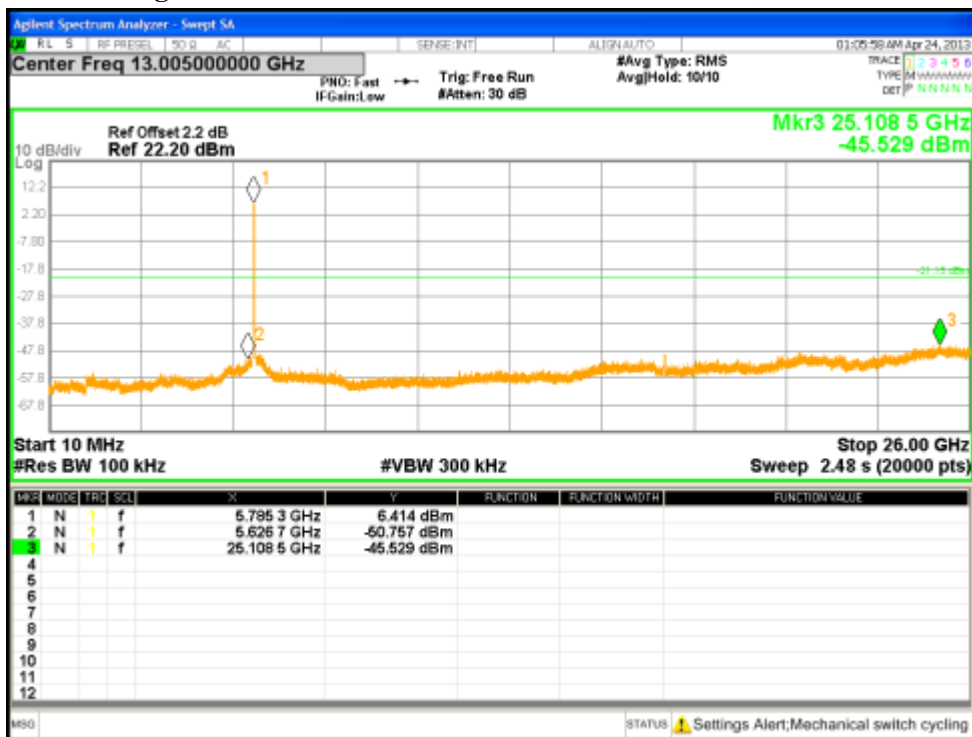
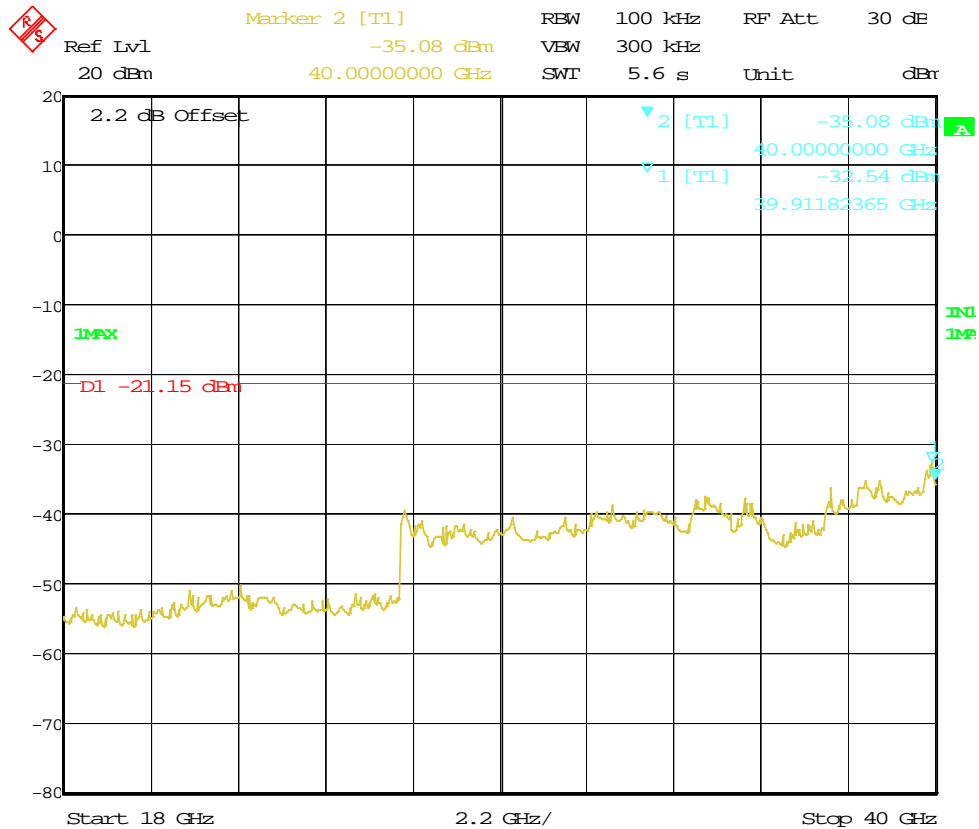


Figure 155: Out of Band Emission for HT20 at 5785 MHz, Chain 3



Date: 25.MAR.2013 15:15:19

Figure 156: Out of Band Emission for HT20 at 5785 MHz, Chain 3

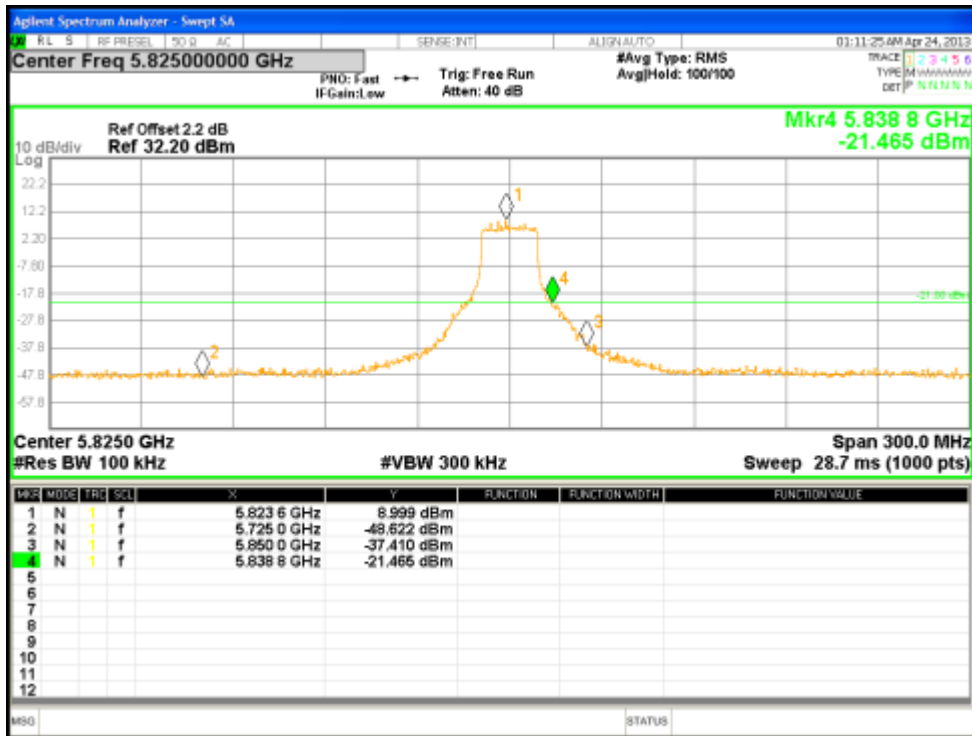


Figure 157: Reference Level for HT20 at 5825 MHz, Chain 0

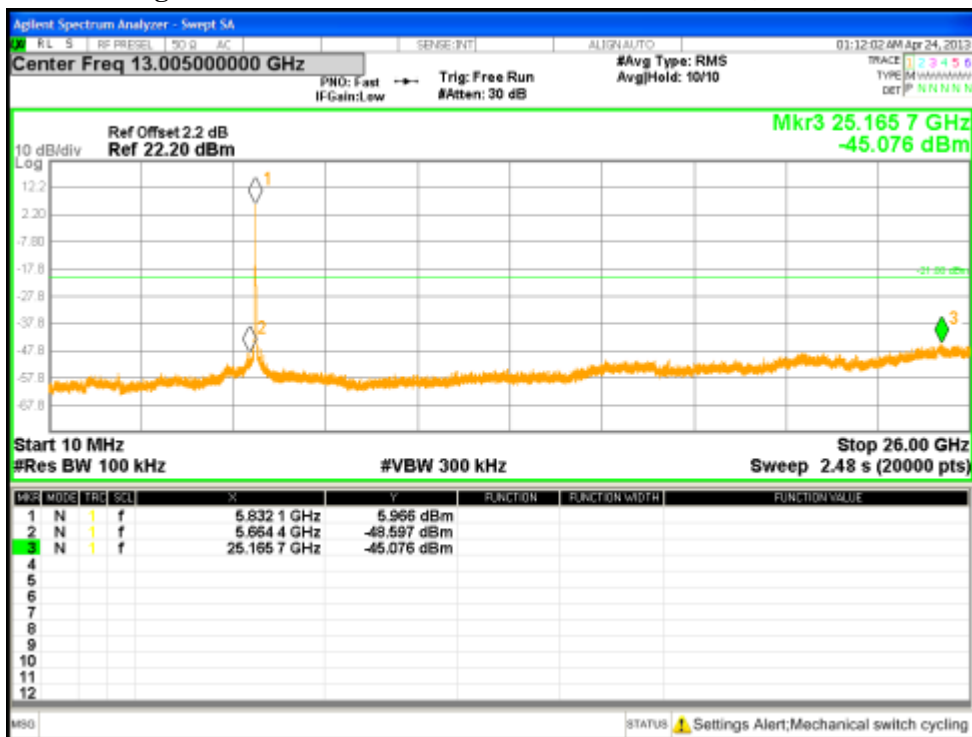
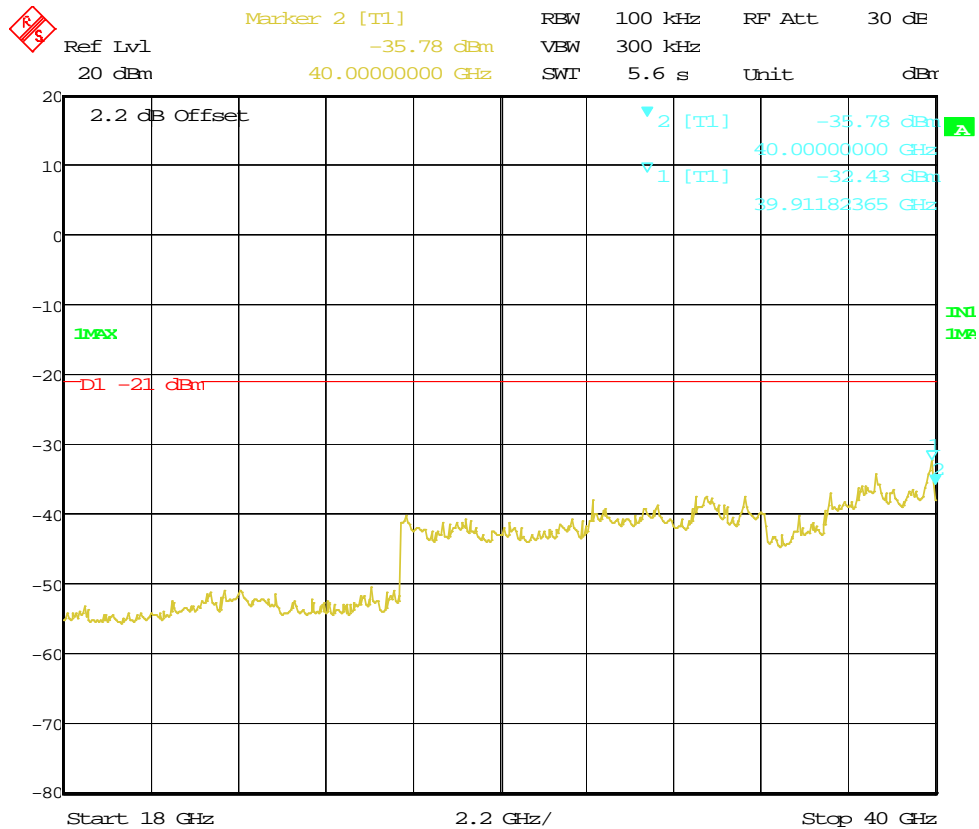


Figure 158: Out of Band Emission for HT20 at 5825 MHz, Chain 0



Date: 25.MAR.2013 15:17:22

Figure 159: Out of Band Emission for HT20 at 5825 MHz, Chain 0

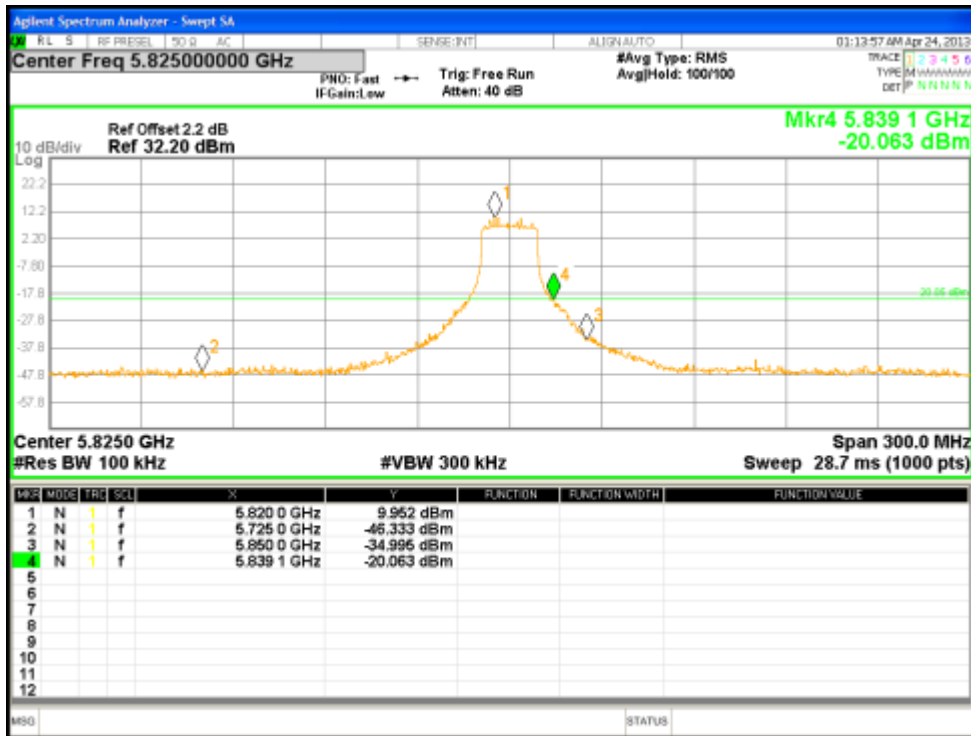


Figure 160: Reference Level for HT20 at 5825 MHz, Chain 1

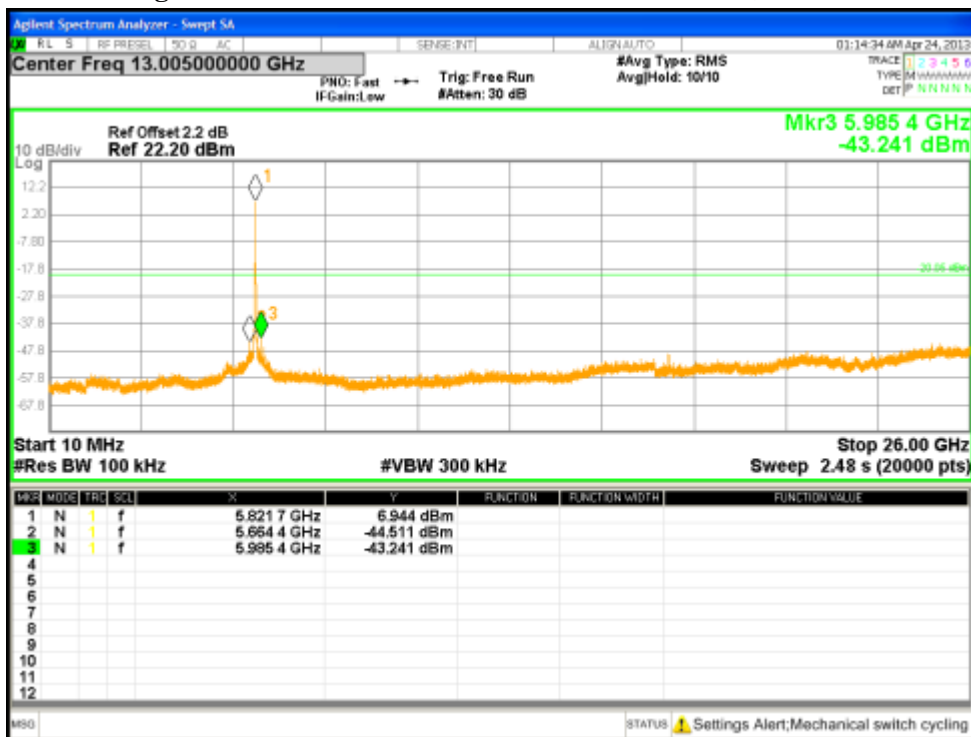
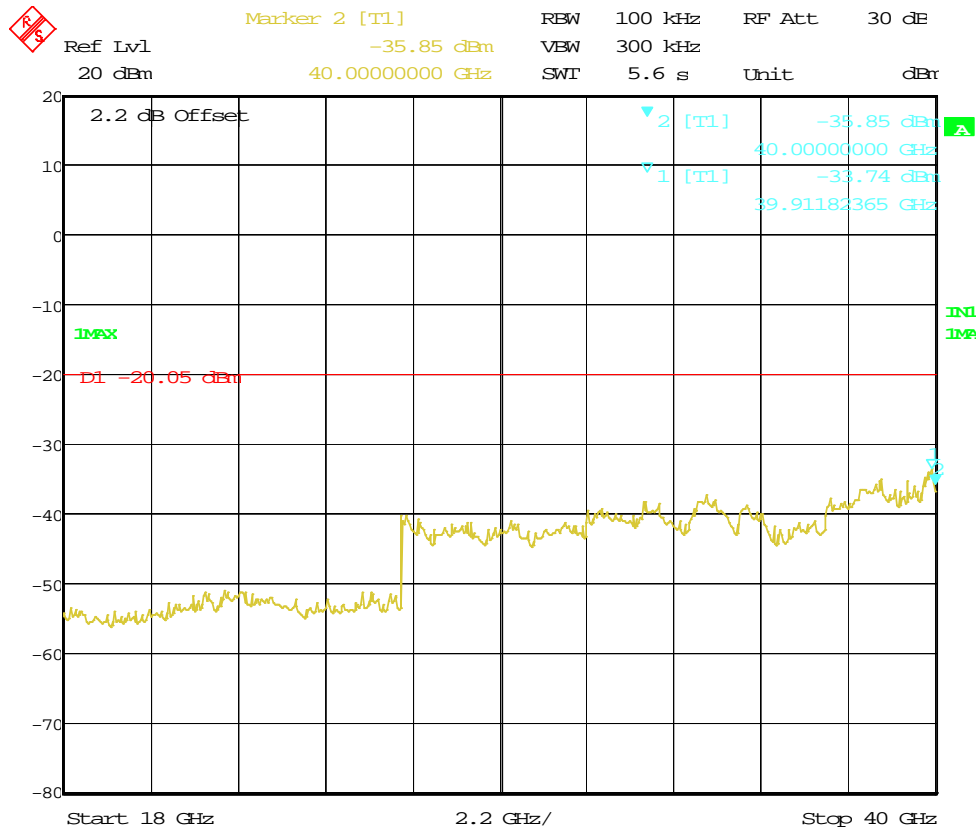


Figure 161: Out of Band Emission for HT20 at 5825 MHz, Chain 1



Date: 25.MAR.2013 15:18:34

Figure 162: Out of Band Emission for HT20 at 5825 MHz, Chain 1

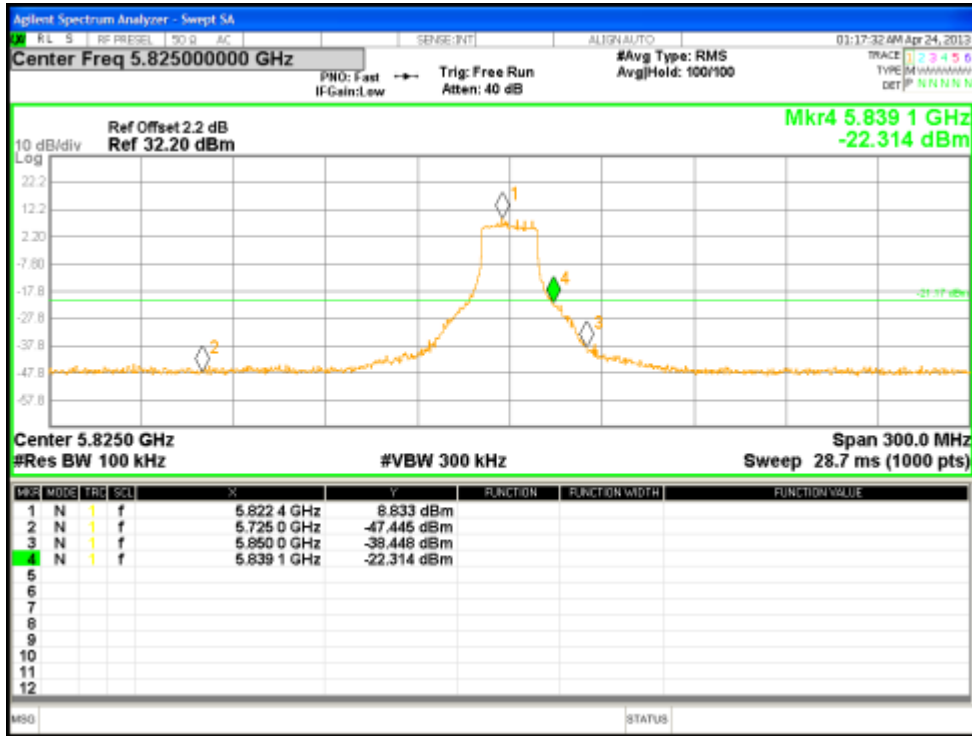


Figure 163: Reference Level for HT20 at 5825 MHz, Chain 2

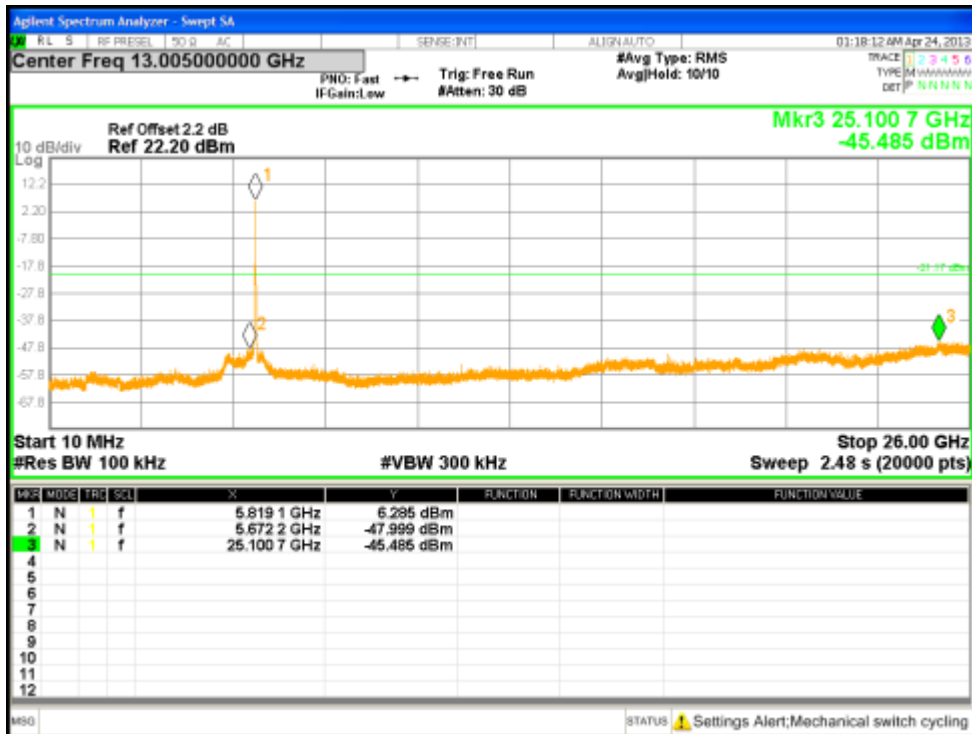
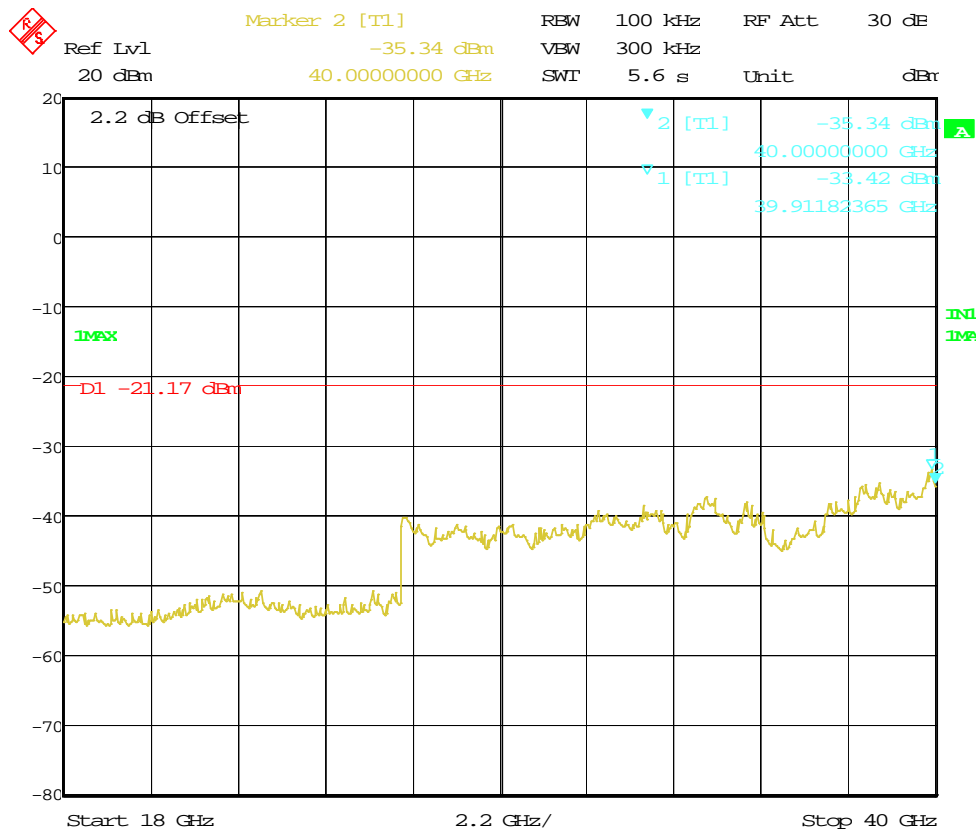


Figure 164: Out of Band Emission for HT20 at 5825 MHz, Chain 2



Date: 25.MAR.2013 15:19:43

Figure 165: Out of Band Emission for HT20 at 5825 MHz, Chain 2

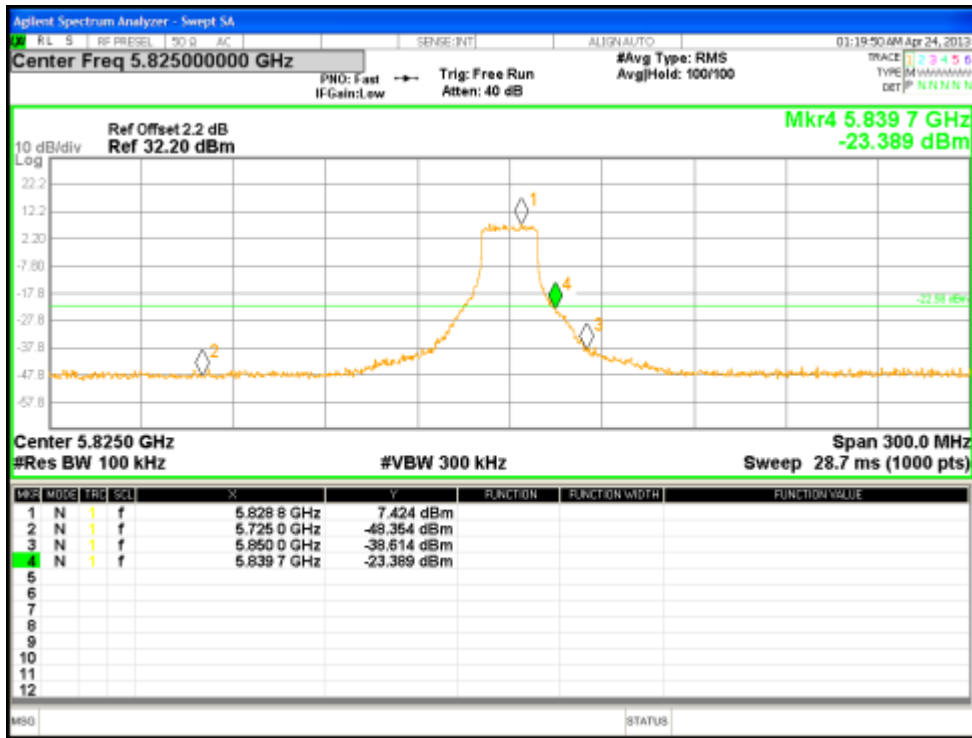


Figure 166: Reference Level for HT20 at 5825 MHz, Chain 3

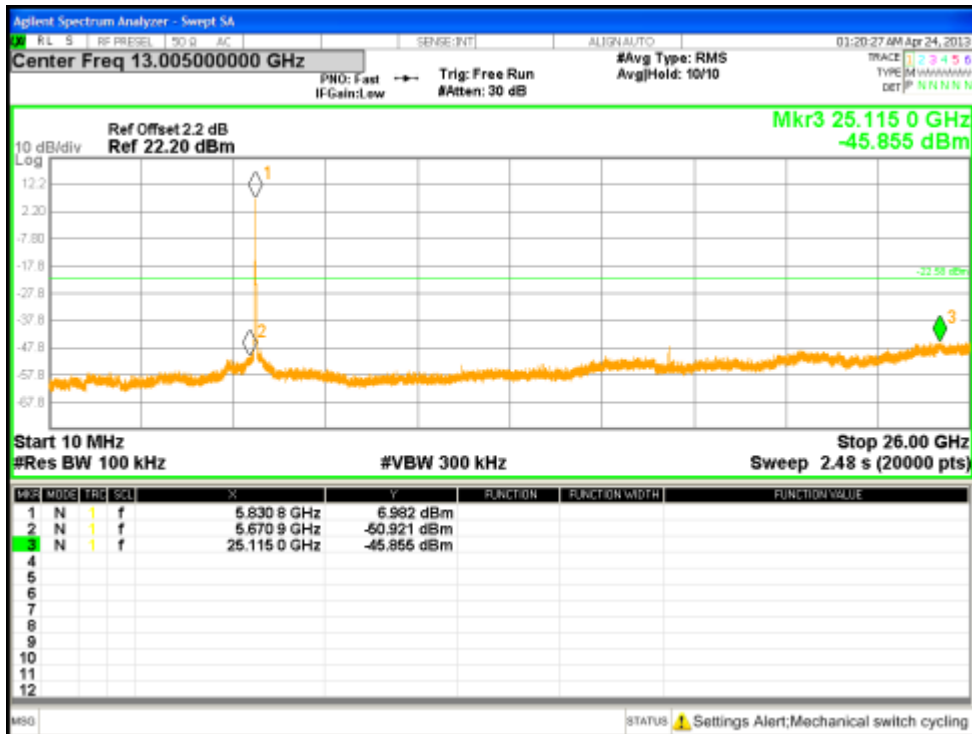
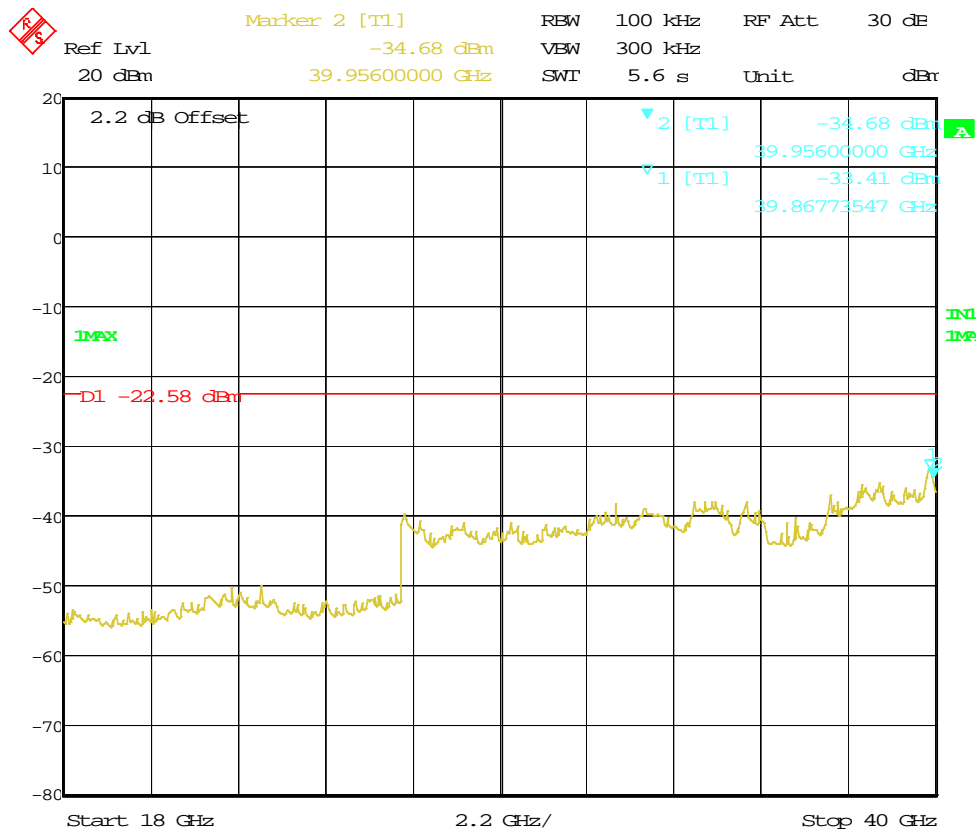
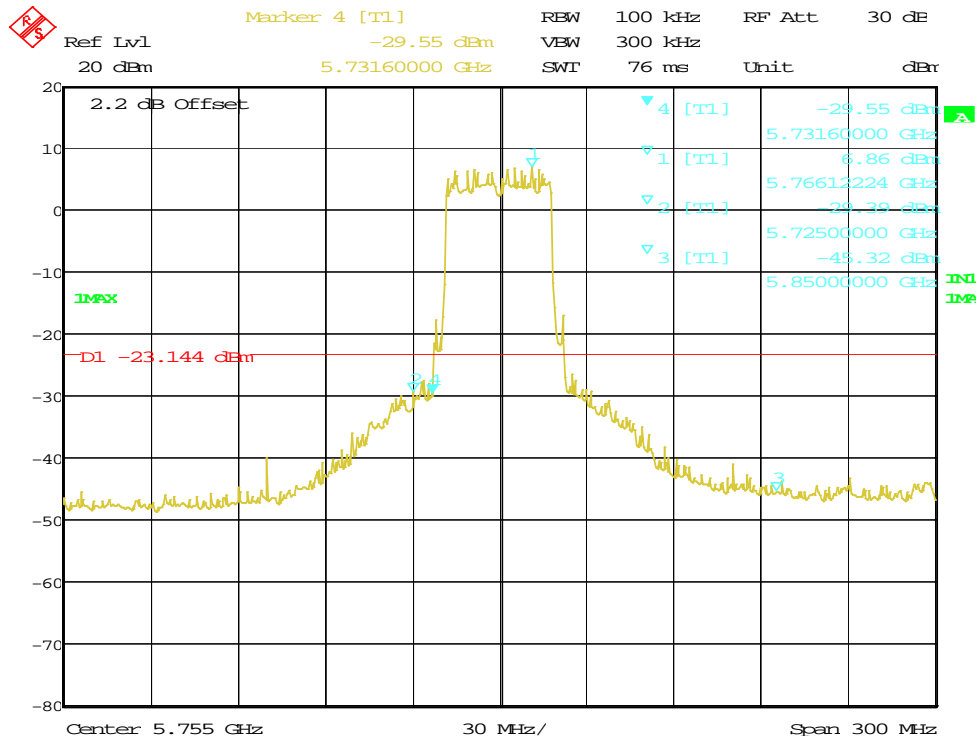


Figure 167: Out of Band Emission for HT20 at 5825 MHz, Chain 3



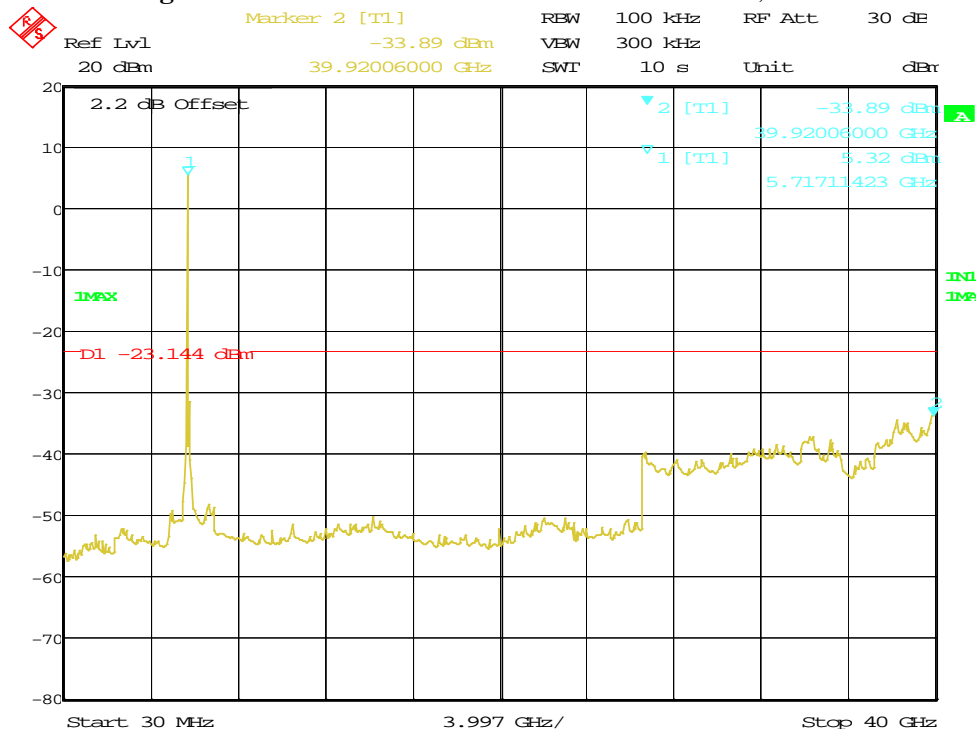
Date: 25.MAR.2013 15:20:46

Figure 168: Out of Band Emission for HT20 at 5825 MHz, Chain 3



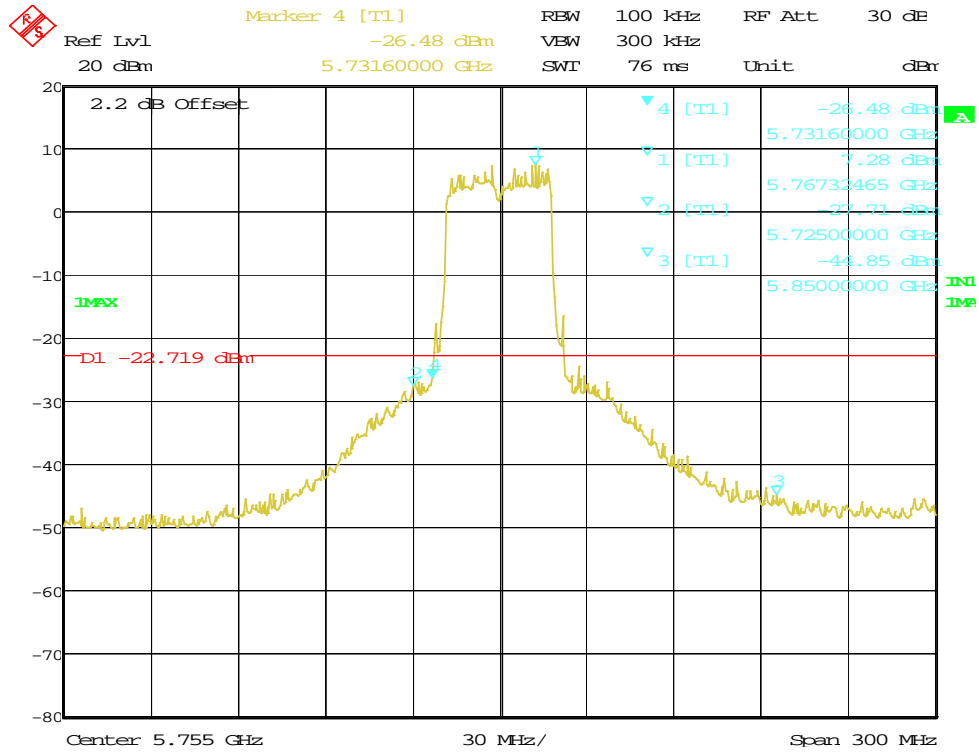
Date: 25.MAR.2013 16:01:26

Figure 169: Reference Level for HT40 at 5755 MHz, Chain 0



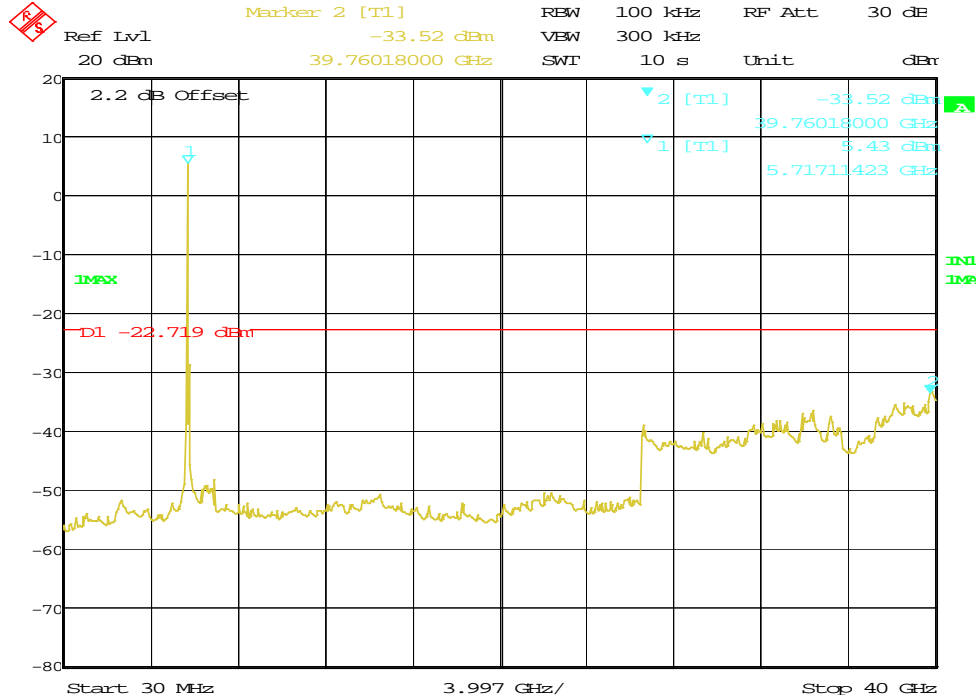
Date: 25.MAR.2013 16:02:02

Figure 170: Out of Band Emission for HT40 at 5755 MHz, Chain 0



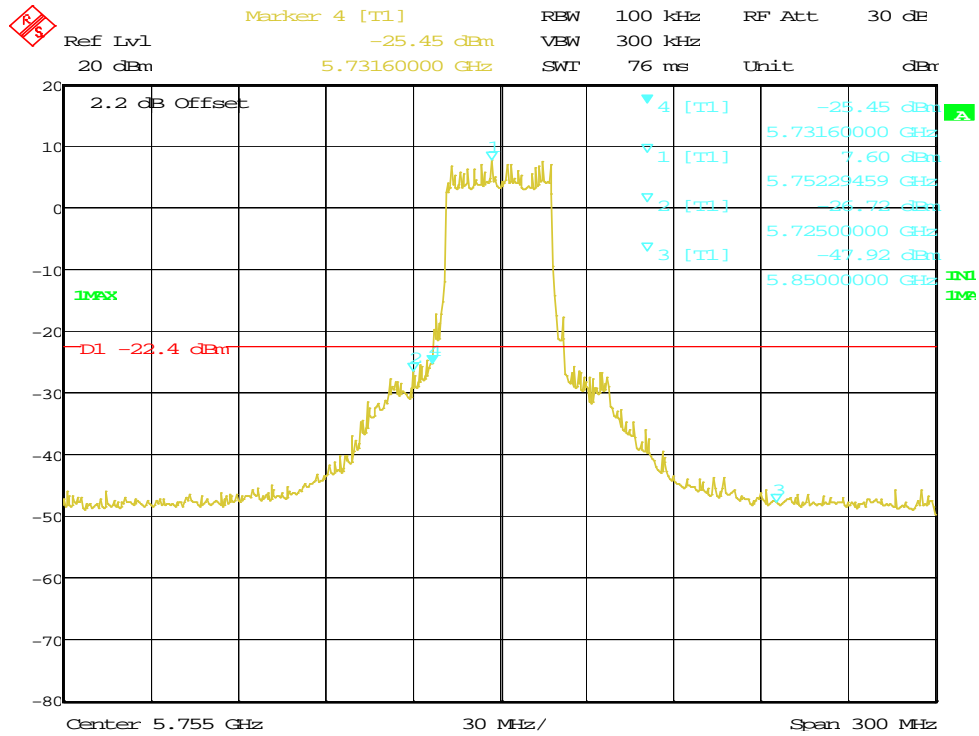
Date: 25.MAR.2013 16:03:23

Figure 171: Reference Level for HT40 at 5755 MHz, Chain 1



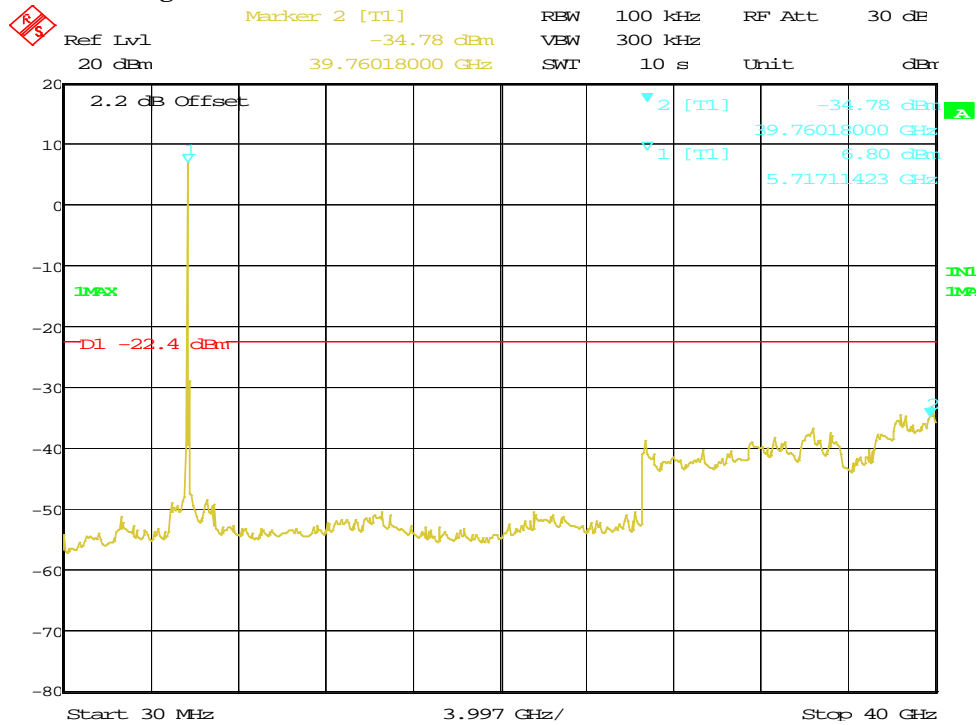
Date: 25.MAR.2013 16:03:59

Figure 172: Out of Band Emission for HT40 at 5755 MHz, Chain 1



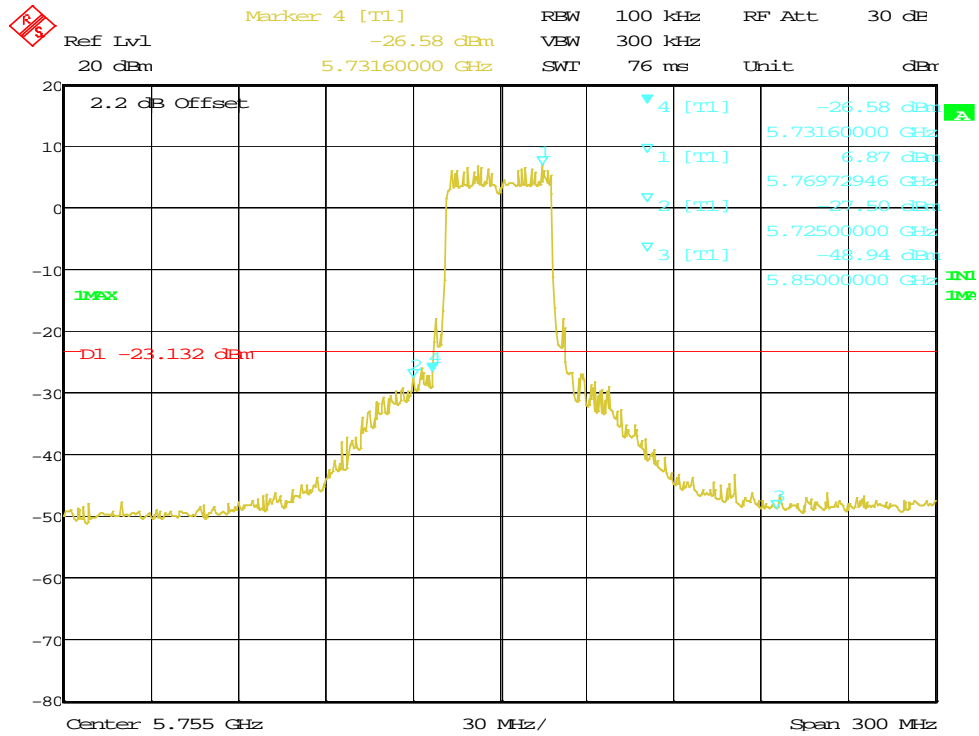
Date: 25.MAR.2013 16:04:54

Figure 173: Reference Level for HT40 at 5755 MHz, Chain 2



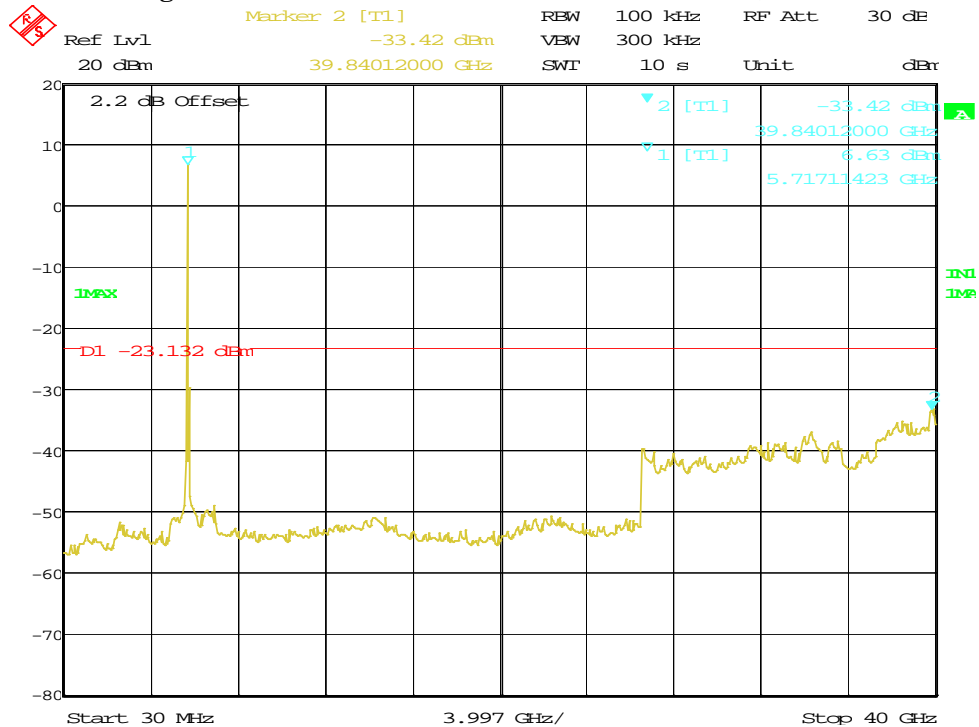
Date: 25.MAR.2013 16:05:30

Figure 174: Out of Band Emission for HT40 at 5755 MHz, Chain 2



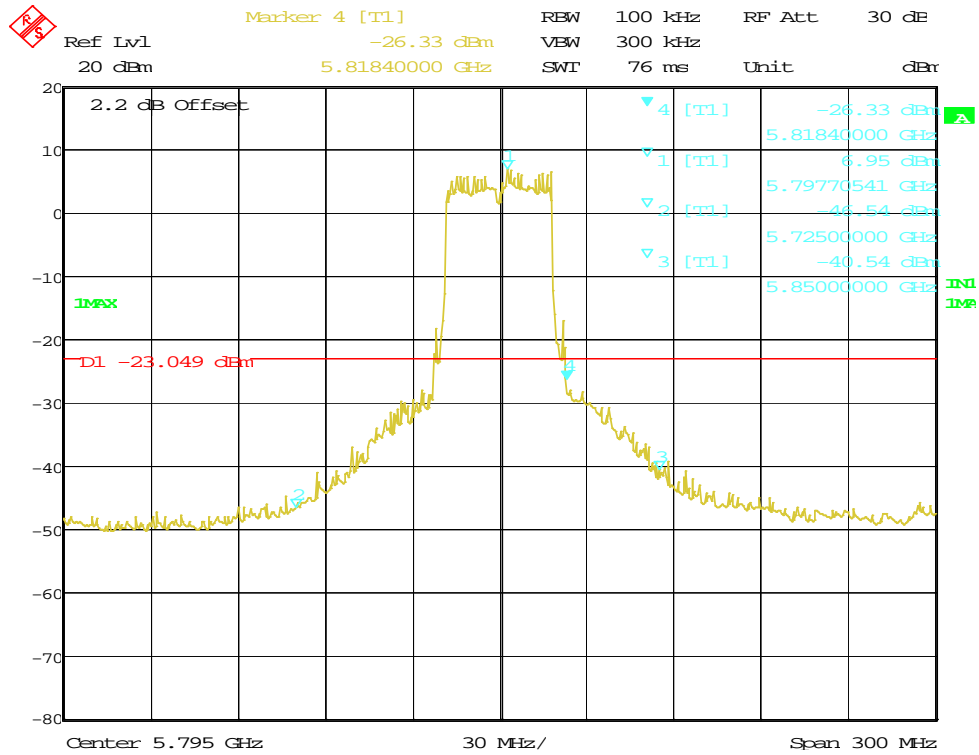
Date: 25.MAR.2013 16:06:23

Figure 175: Reference Level for HT40 at 5755 MHz, Chain 3



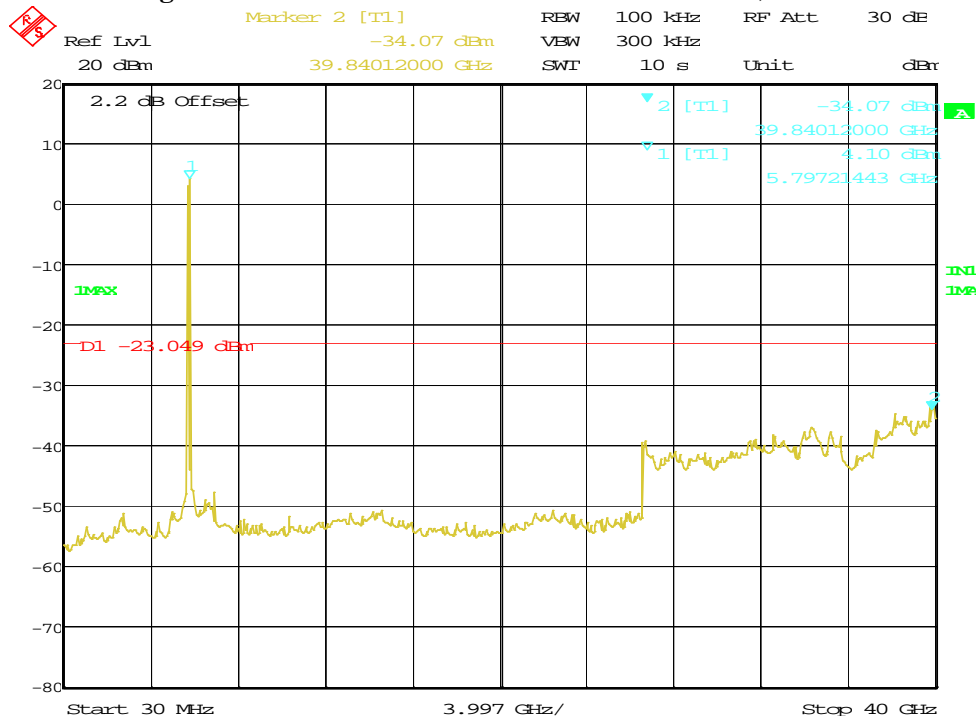
Date: 25.MAR.2013 16:06:59

Figure 176: Out of Band Emission for HT40 at 5755 MHz, Chain 3



Date: 25.MAR.2013 16:09:03

Figure 177: Reference Level for HT40 at 5795 MHz, Chain 0



Date: 25.MAR.2013 16:09:39

Figure 178: Out of Band Emission for HT40 at 5795 MHz, Chain 0

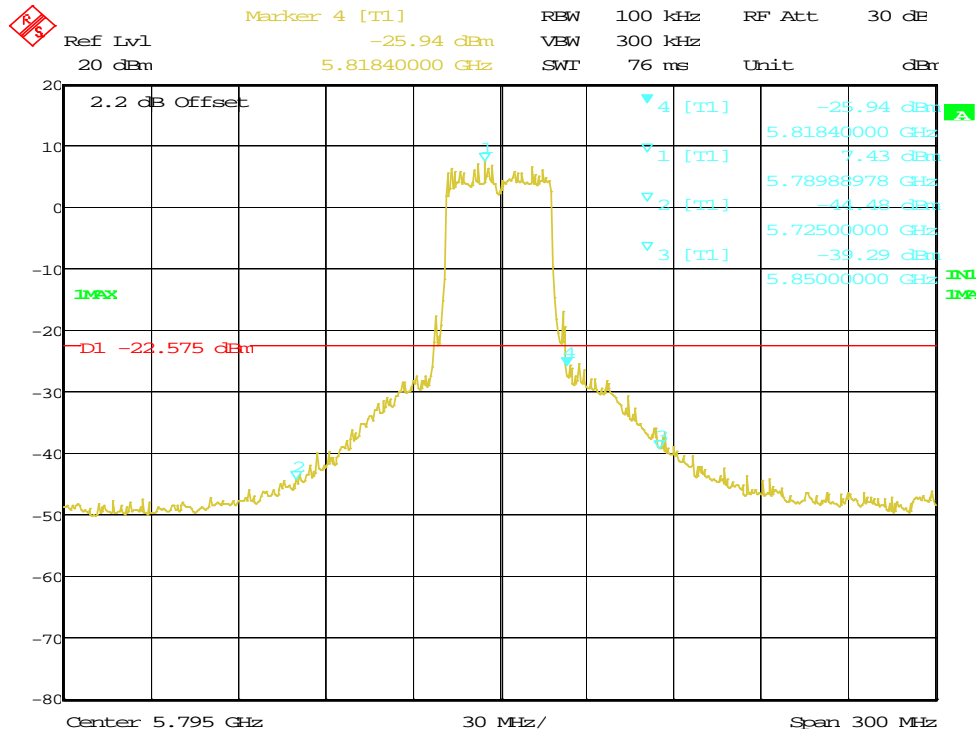


Figure 179: Reference Level for HT40 at 5795 MHz, Chain 1

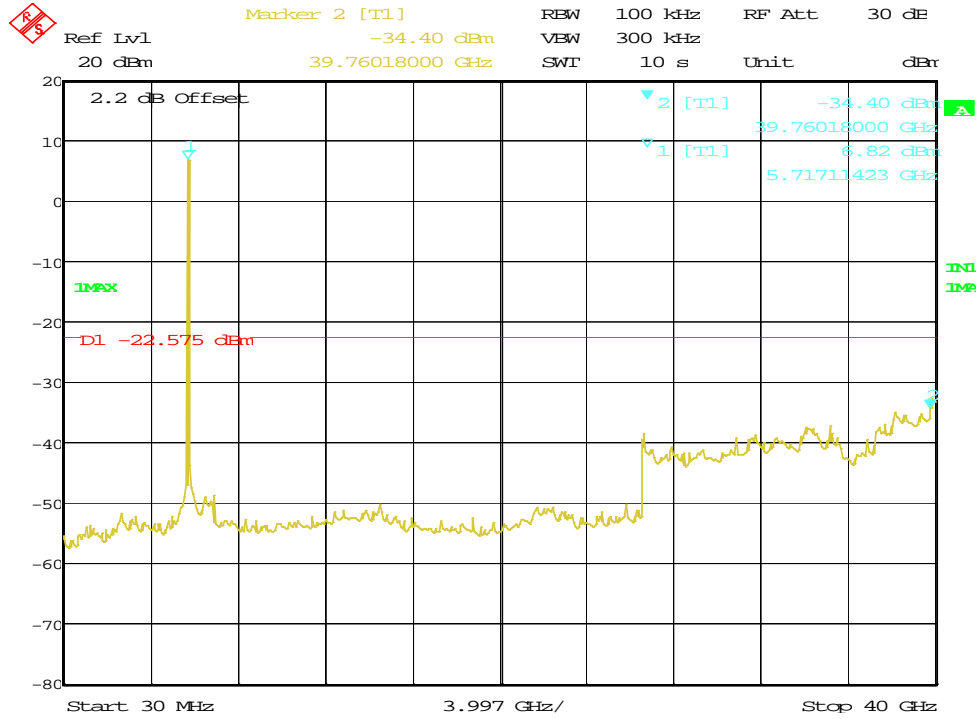
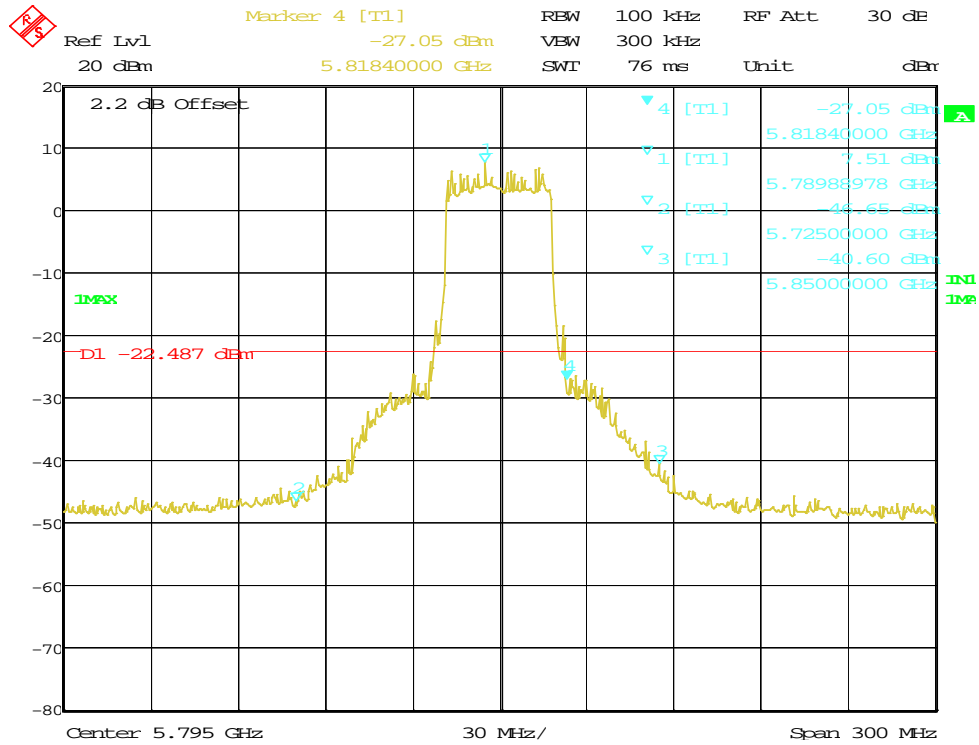
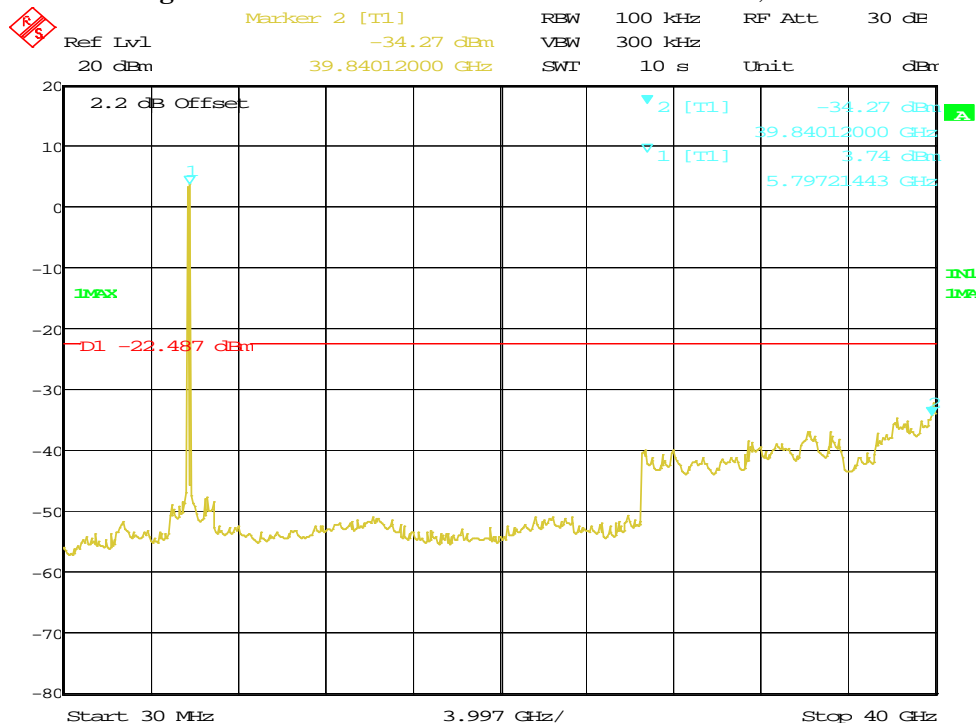


Figure 180: Out of Band Emission for HT40 at 5795 MHz, Chain 1



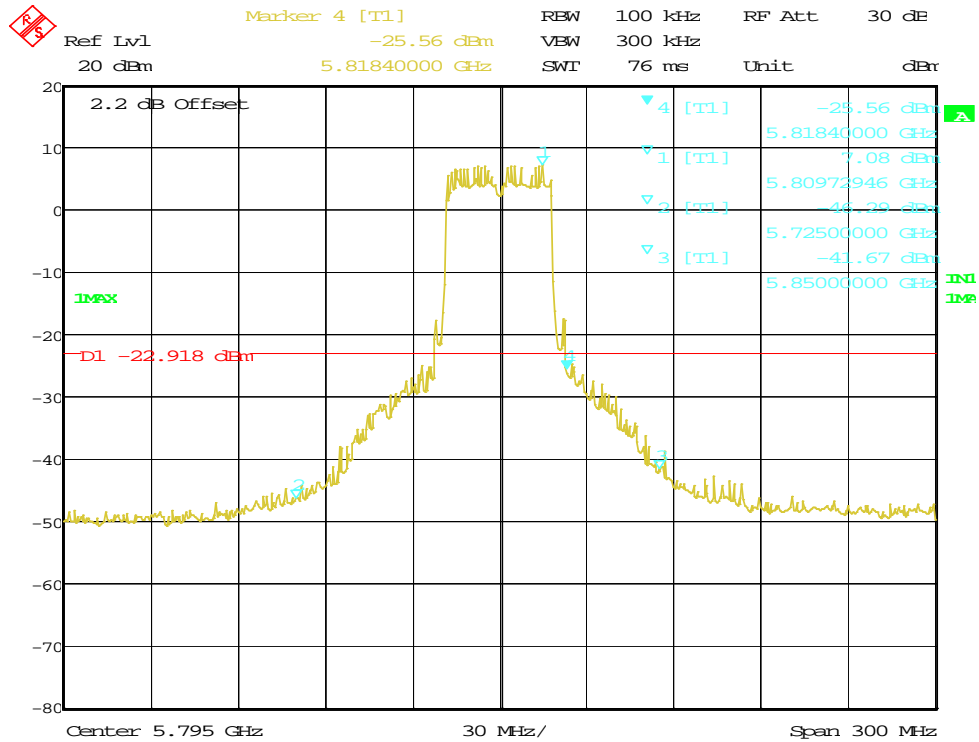
Date: 25.MAR.2013 16:11:57

Figure 181: Reference Level for HT40 at 5795 MHz, Chain 2



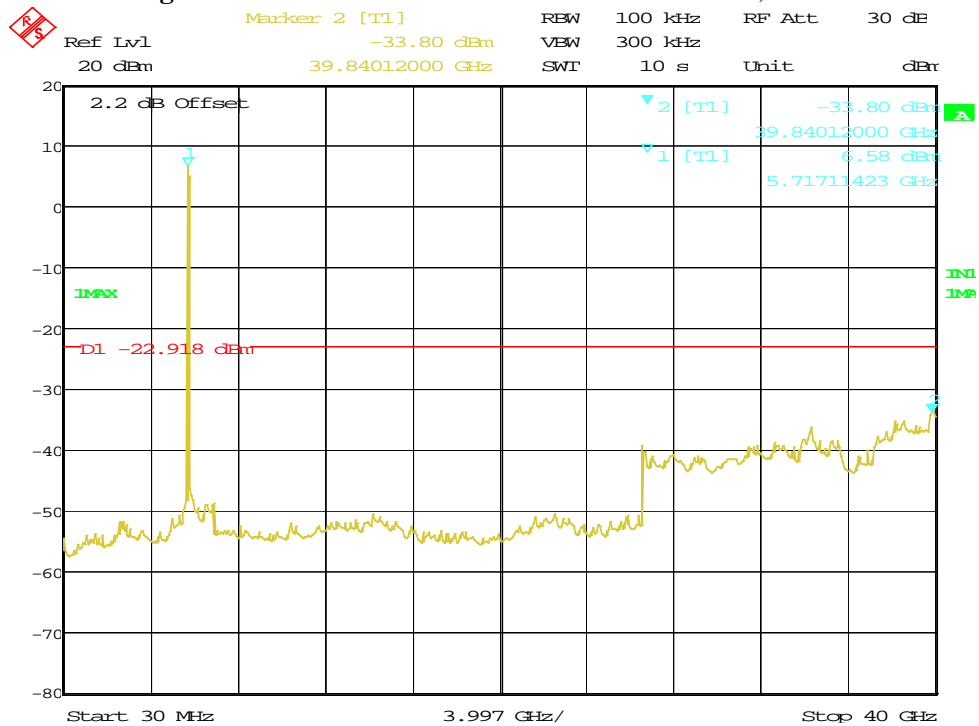
Date: 25.MAR.2013 16:12:33

Figure 182: Out of Band Emission for HT40 at 5795 MHz, Chain 2



Date: 25.MAR.2013 16:13:24

Figure 183: Reference Level for HT40 at 5795 MHz, Chain 3



Date: 25.MAR.2013 16:14:00

Figure 184: Out of Band Emission for HT40 at 5795 MHz, Chain 3

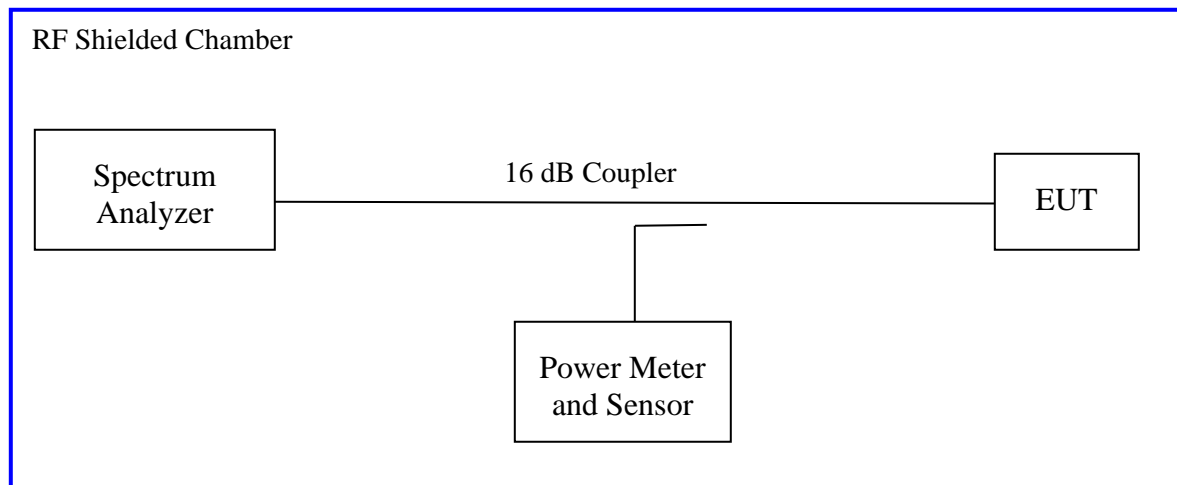
4.4 Peak Power Spectral Density

According to the CFR47 Part 15.247 (e) and RSS 210 (A8.2), the spectral power density output of the antenna port shall be less than 8 dBm in any 3kHz band during any time interval of continuous transmission.

4.4.1 Test Method

The conducted method was used to measure the channel peak power spectral density per ANSI C63.10-2009 Section 6.11.2. The measurement was performed with modulation per CFR47 Part 15.247 (e) and RSS 210 (A8.2). This test was conducted on 3 channels of Sample, S/N 09130M000104. The worst findings were conducted on 3 channels in each operating mode of 5725 MHz to 5850 MHz indicated below.

Test Setup:



Measurement procedure AVGPSD-1 of KDB 558074 D01 DTS Meas. Guidance v03r01 was applied.

4.4.2 Results

As originally tested, the EUT was found to be compliant to the requirements of the test standard(s).

Table 6: Peak Power Spectral Density – Test Results

Test Conditions: Conducted Measurement, Normal Temperature and Voltage only								
Antenna Type: Integrated				Power Setting: See Test plan				
Max. Directional Gain: + 8 dBi				Signal State: Modulated at 100%.				
Ambient Temp.: 23 °C				Relative Humidity: 32%				
Peak Power Spectral Density								
802.11a Mode								
Freq. (MHz)	Ch0 [dBm]	Ch1 [dBm]	Ch2 [dBm]	Ch3 [dBm]	CF [dB]	Max. PPSD [dBm]	Limit [dBm]	Margin [dB]
5745	1.875	3.595	1.797	1.692	-9.21	-5.62	6.00	-11.62
5785	1.944	3.714	1.964	1.815	-9.21	-5.50	6.00	-11.50
5825	1.756	3.937	2.000	1.929	-9.21	-5.27	6.00	-11.27
Note: 1. The highest peak output power was observed at 802.11a 6Mbps per data stream. 2. $CF = (10 * \text{Log}(3\text{kHz}/100\text{kHz})) + (10 * \text{Log}(N))$ where N is accounted for the number of data streams being used per KDB 662911. 3. The total directional gain would be 8 dBi; 2 dBi +10*Log(4). Per CFR47 Part 15.247, the limit is reduced for every dBi gain exceeding 6 dBi. The limit would be 6.00 dBm.								
802.11n (HT20) Mode								
Freq. (MHz)	Ch0 [dBm]	Ch1 [dBm]	Ch2 [dBm]	Ch3 [dBm]	CF [dB]	Max. PPSD [dBm]	Limit [dBm]	Margin [dB]
5745	1.41	2.83	2.03	1.59	-9.21	-6.40	6.00	-12.40
5785	0.757	1.663	1.291	1.016	-9.21	-7.57	6.00	-13.57
5825	1.228	3.986	1.458	1.152	-9.21	-5.24	6.00	-11.24
Note: 1. The highest peak output power was observed at HT20 6.5 Mbps per data stream. 2. $CF = (10 * \text{Log}(3\text{kHz}/100\text{kHz})) + (10 * \text{Log}(N))$ where N is accounted for the number of data streams being used per KDB 662911. 3. The total directional gain would be 8 dBi; 2 dBi +10*Log(4). Per CFR47 Part 15.247, the limit is reduced for every dBi gain exceeding 6 dBi. The limit would be 6.00 dBm.								

802.11n (HT40) Mode								
Freq. (MHz)	Ch0 [dBm]	Ch1 [dBm]	Ch2 [dBm]	Ch3 [dBm]	CF [dB]	Max. PPSD [dBm]	Limit [dBm]	Margin [dB]
5755	-4.29	-4.12	-4.29	-4.72	-9.21	-13.33	6.00	-19.33
5795	-5.10	-4.73	-3.32	-4.91	-9.21	-12.53	6.00	-18.53
<p>Note: 1. The highest peak output power was observed at HT40 13.5 Mbps per data stream. 2. $CF = (10 * \text{Log}(3\text{kHz}/100\text{kHz})) + (10 * \text{Log}(N))$ where N is accounted for the number of data streams being used per KDB 662911. 3. The total directional gain would be 8 dBi; 2 dBi + $10 * \text{Log}(4)$. Per CFR47 Part 15.247, the limit is reduced for every dBi gain exceeding 6 dBi. The limit would be 6.00 dBm.</p>								



Figure 185: PPSD, 5745 MHz at 802.11n 802.11A, Chain 0 – 6 Mbps

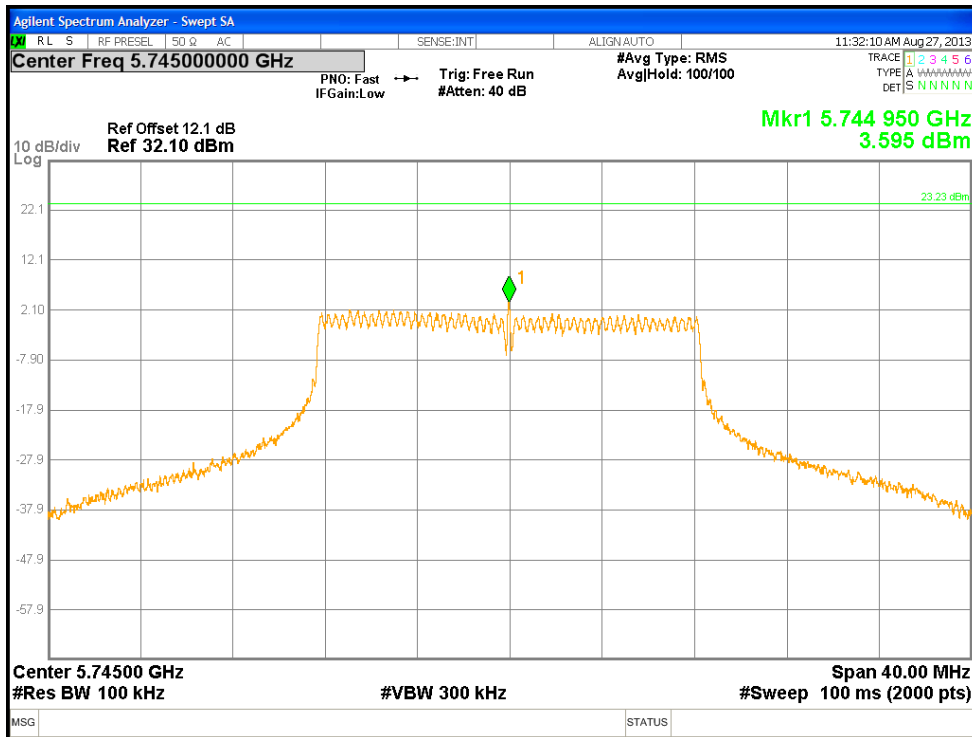


Figure 186: PPSD, 5745 MHz at 802.11n 802.11A, Chain 1 – 6 Mbps

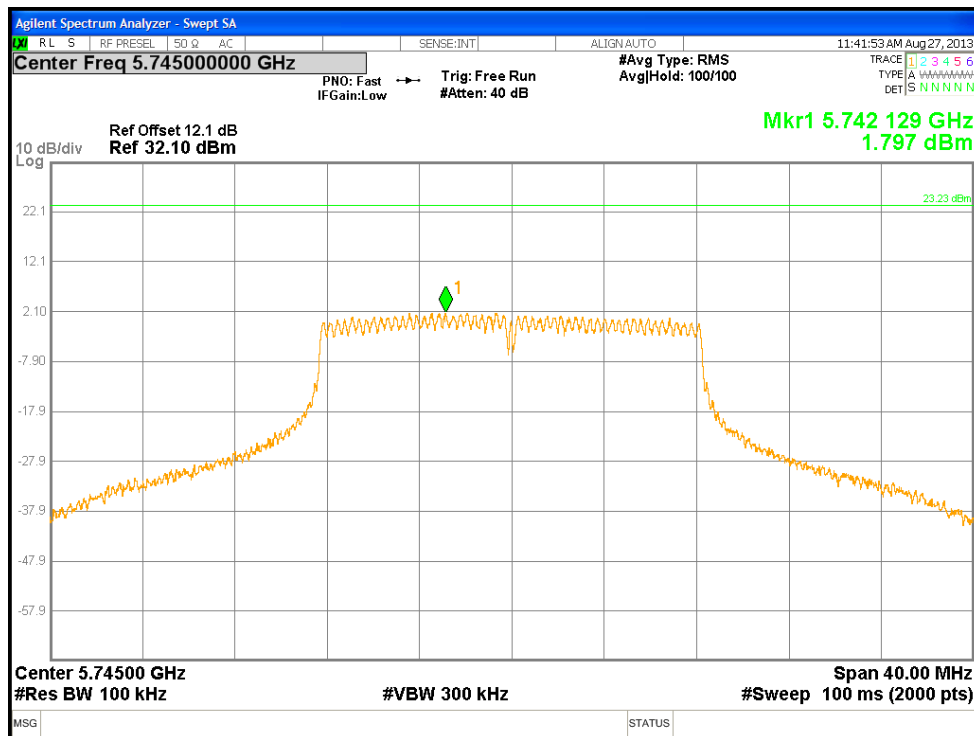


Figure 187: PPSD, 5745 MHz at 802.11n 802.11A, Chain 2 – 6 Mbps

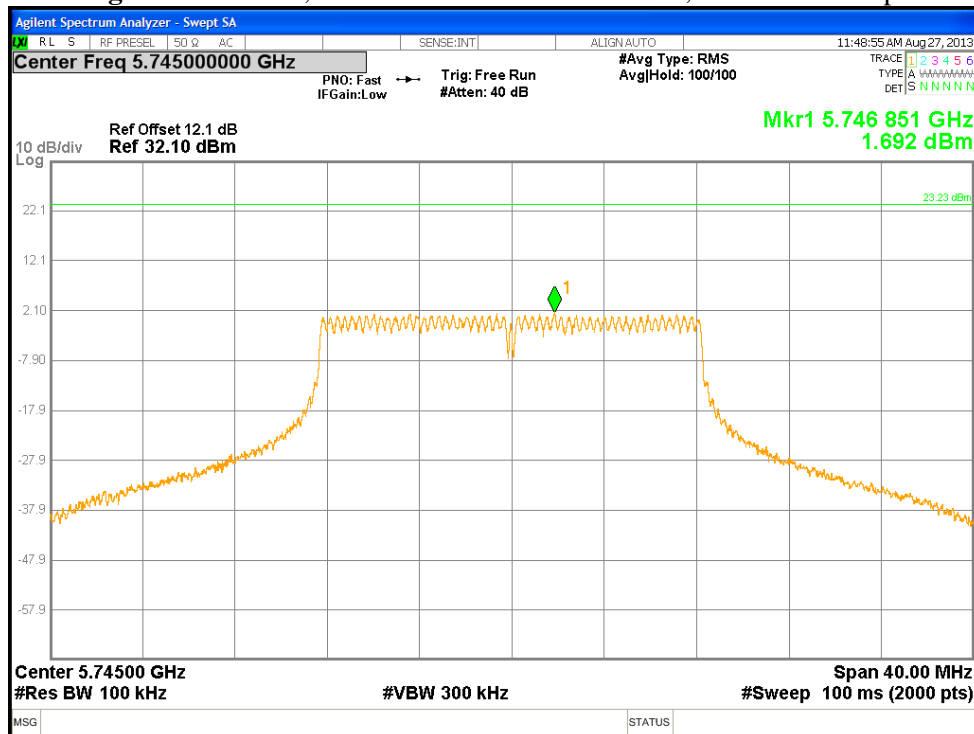


Figure 188: PPSD, 5745 MHz at 802.11n 802.11A, Chain 3 – 6 Mbps



Figure 189: PPSD, 5785 MHz at 802.11n 802.11A, Chain 0 – 6 Mbps

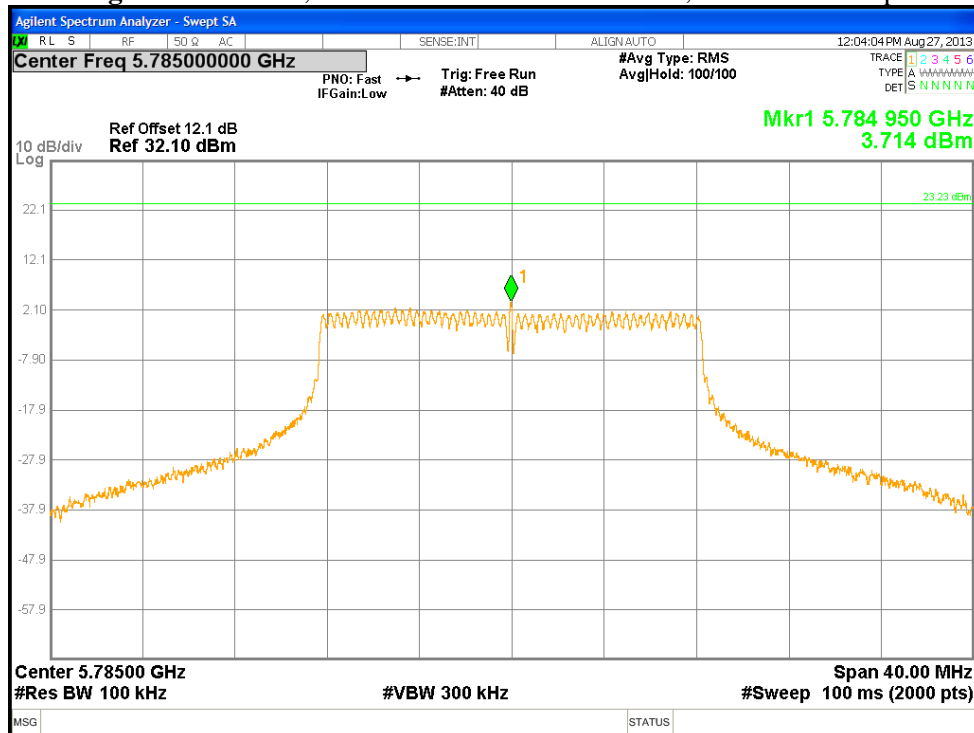


Figure 190: PPSD, 5785 MHz at 802.11n 802.11A, Chain 1 – 6 Mbps

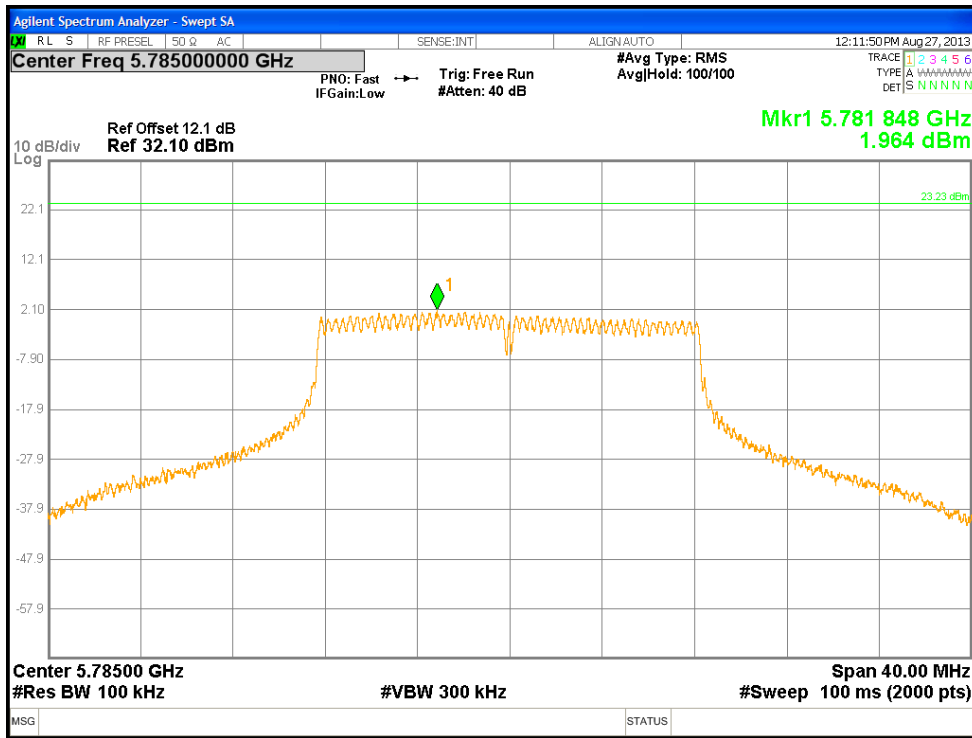


Figure 191: PPSD, 5785 MHz at 802.11n 802.11A, Chain 2 – 6 Mbps



Figure 192: PPSD, 5785 MHz at 802.11n 802.11A, Chain 3 – 6 Mbps

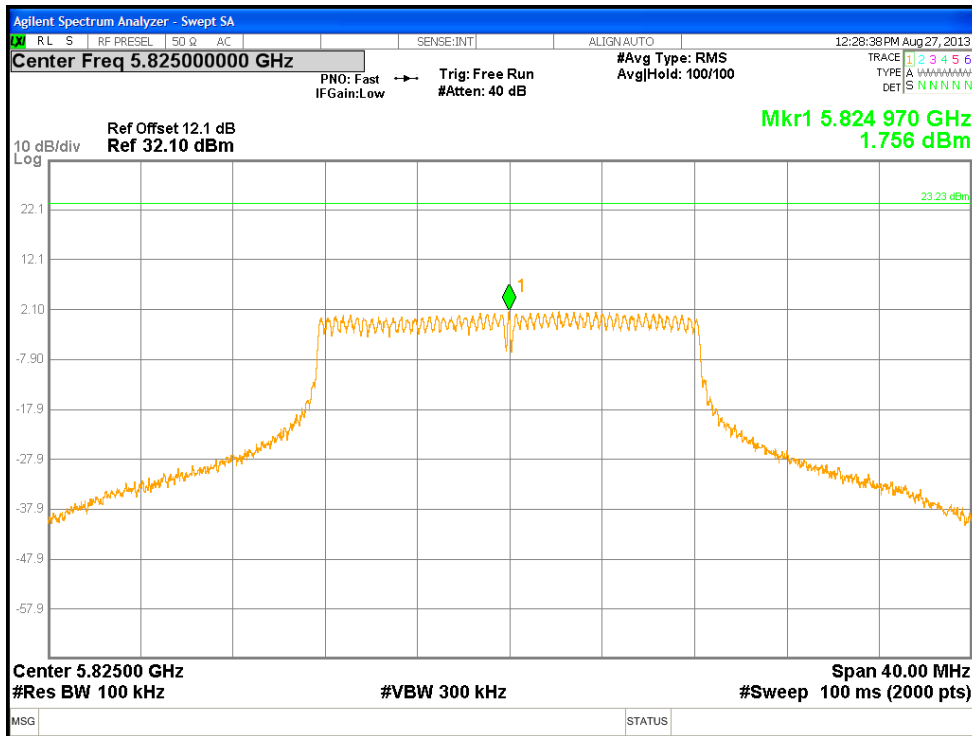


Figure 193: PPSD, 5825 MHz at 802.11n 802.11A, Chain 0 – 6 Mbps

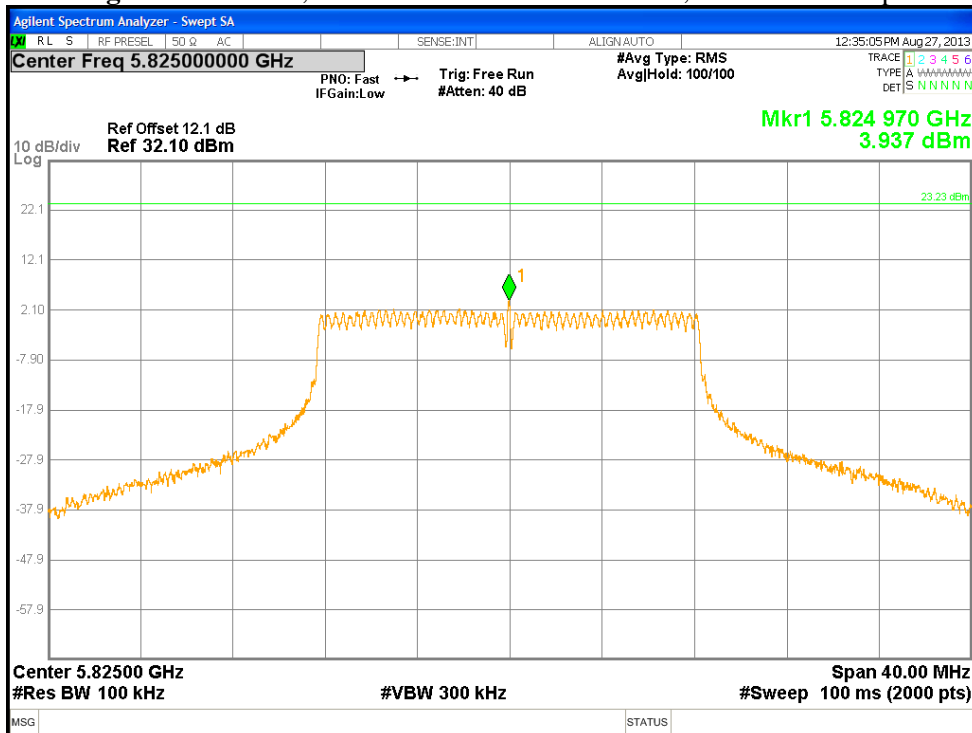


Figure 194: PPSD, 5825 MHz at 802.11n 802.11A, Chain 1 – 6 Mbps

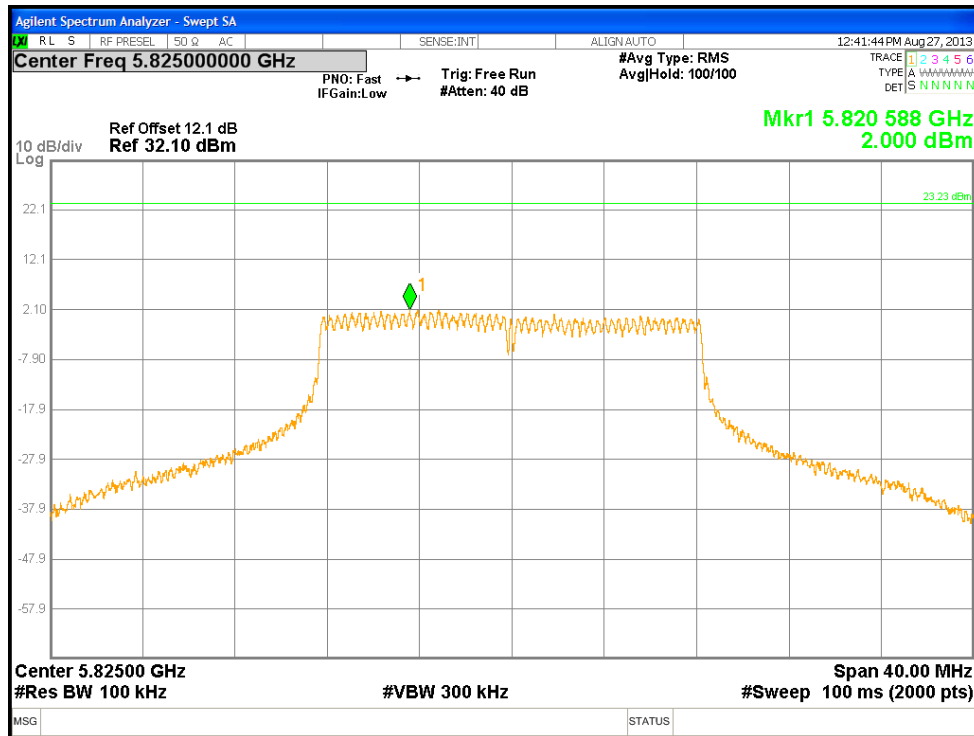


Figure 195: PPSD, 5825 MHz at 802.11n 802.11A, Chain 2 – 6 Mbps

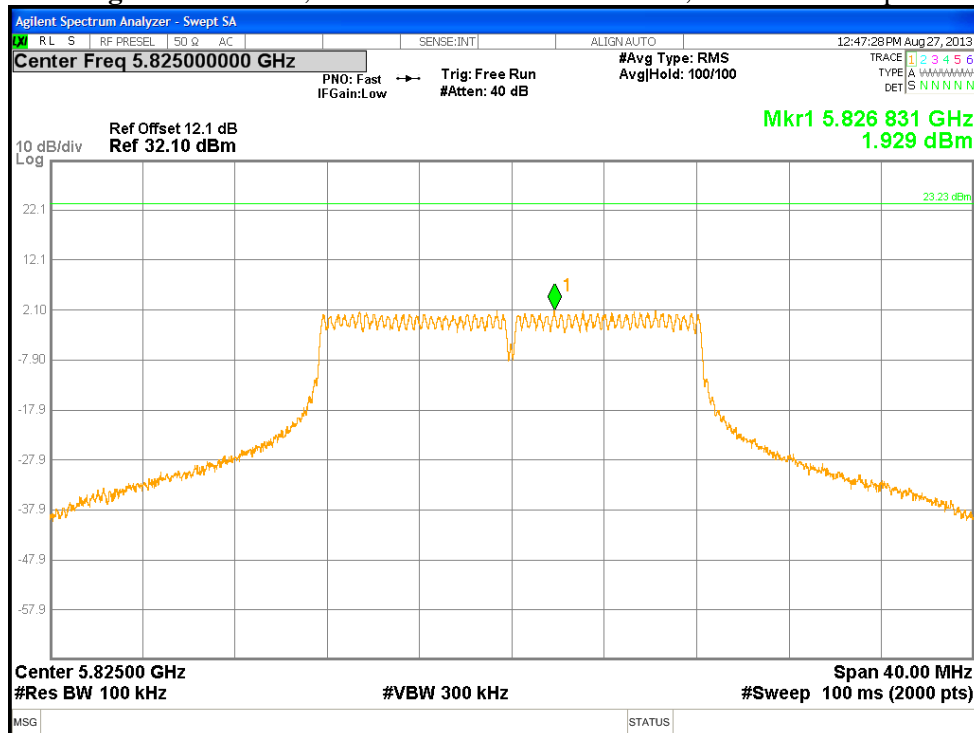


Figure 196: PPSD, 5825 MHz at 802.11n 802.11A, Chain 3 – 6 Mbps

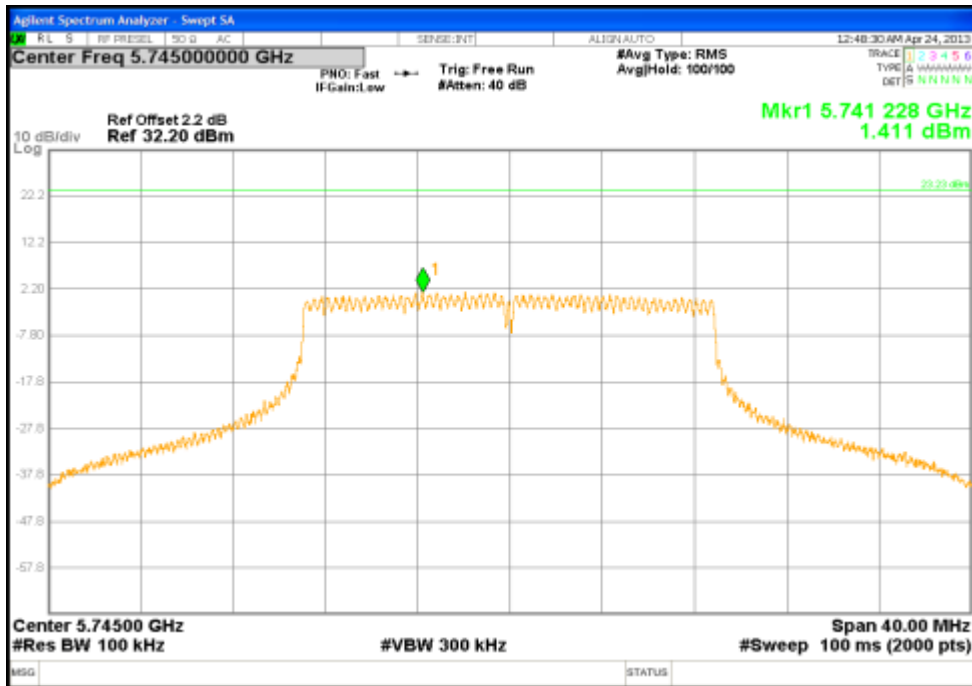


Figure 197: PPSD, 5745 MHz at 802.11n HT20, Chain 0 – 6.5 Mbps

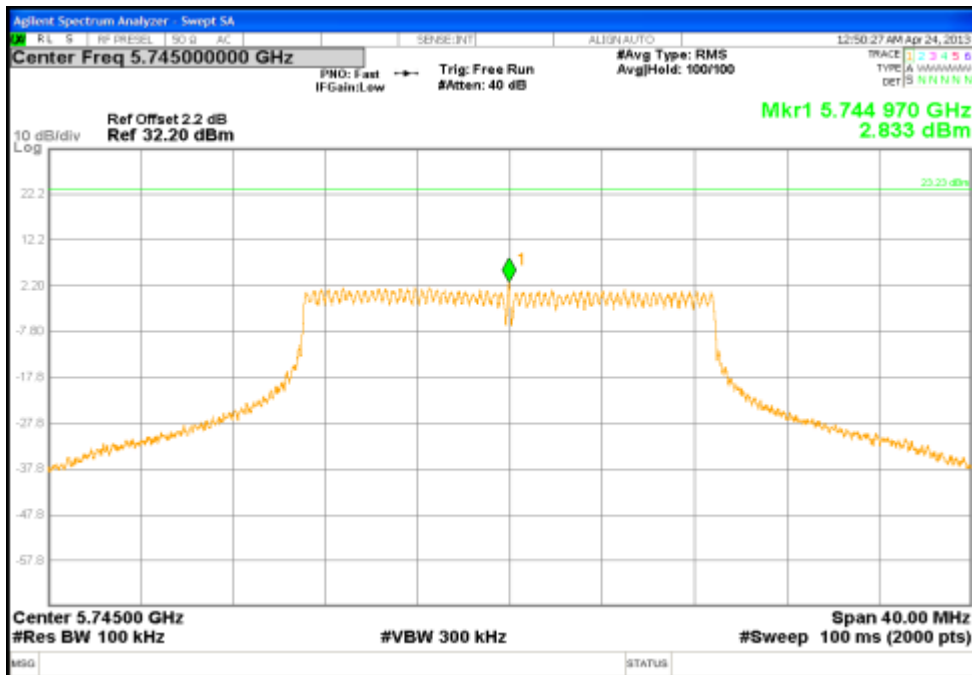


Figure 198: PPSD, 5745 MHz at 802.11n HT20, Chain 1 – 6.5 Mbps

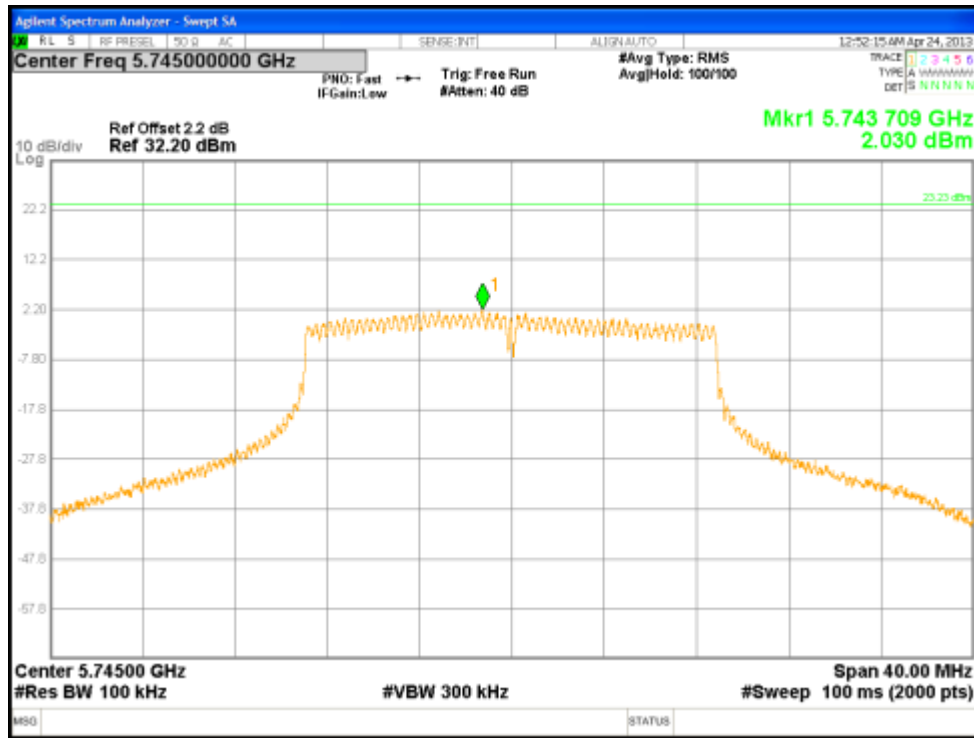


Figure 199: PPSD, 5745 MHz at 802.11n HT20, Chain 2 – 6.5 Mbps

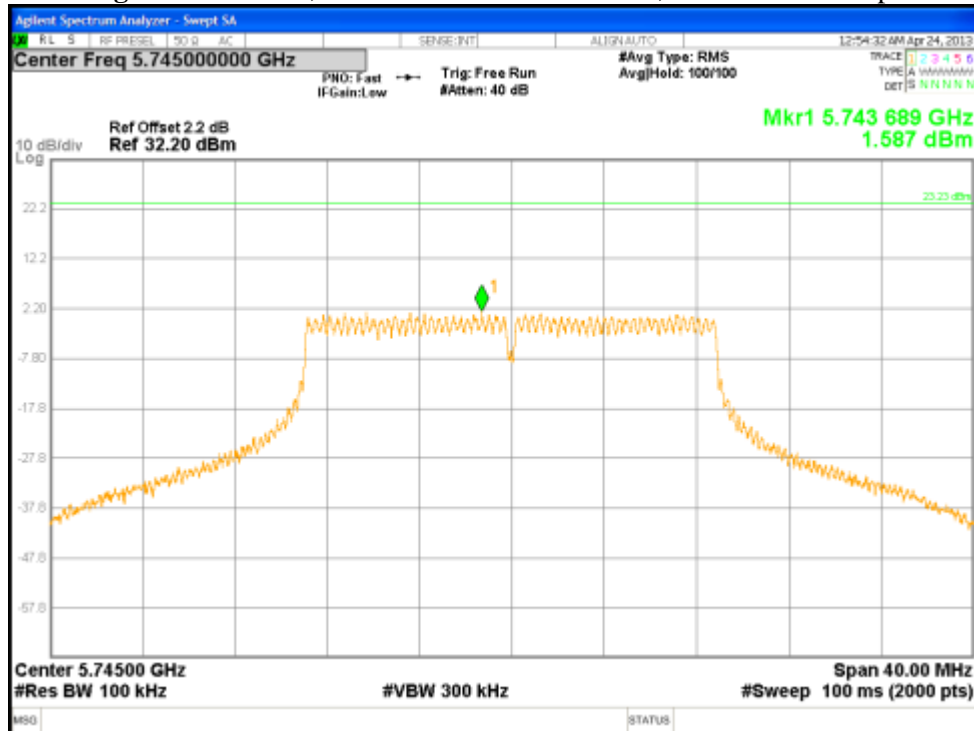


Figure 200: PPSD, 5745 MHz at 802.11n HT20, Chain 3 – 6.5 Mbps

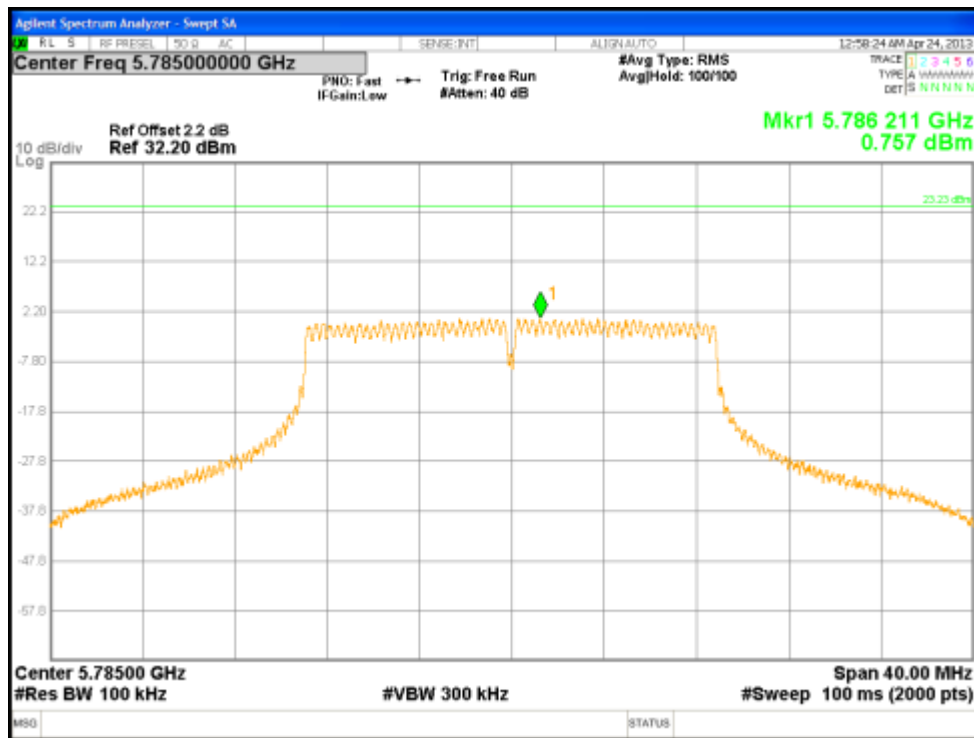


Figure 201: PPSD, 5785 MHz at 802.11n HT20, Chain 0 – 6.5 Mbps

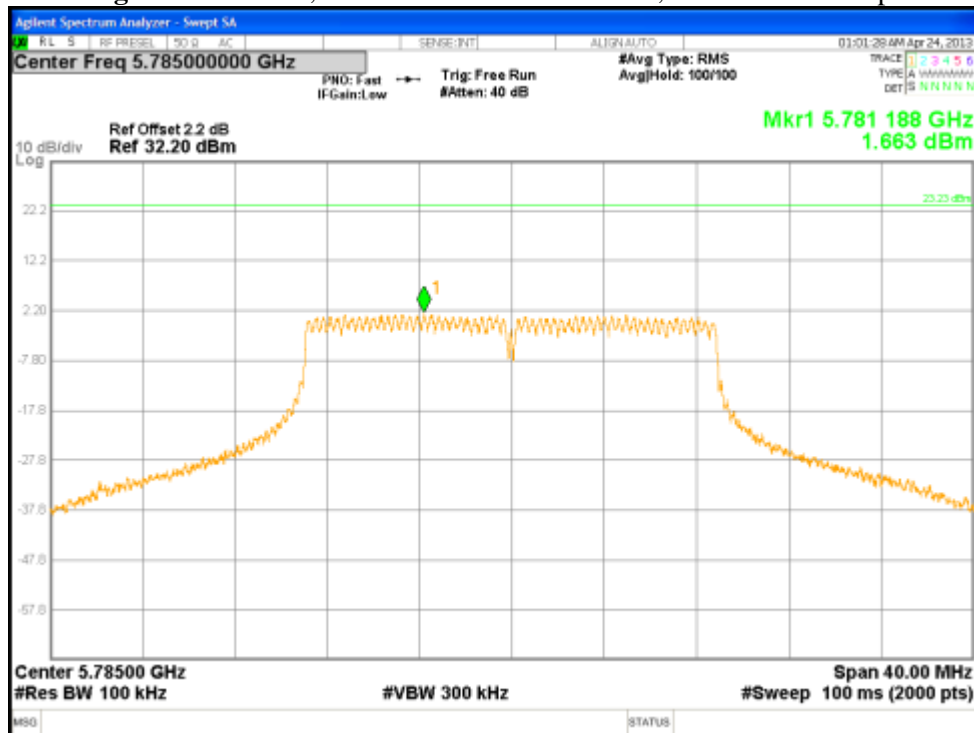


Figure 202: PPSD, 5785 MHz at 802.11n HT20, Chain 1 – 6.5 Mbps

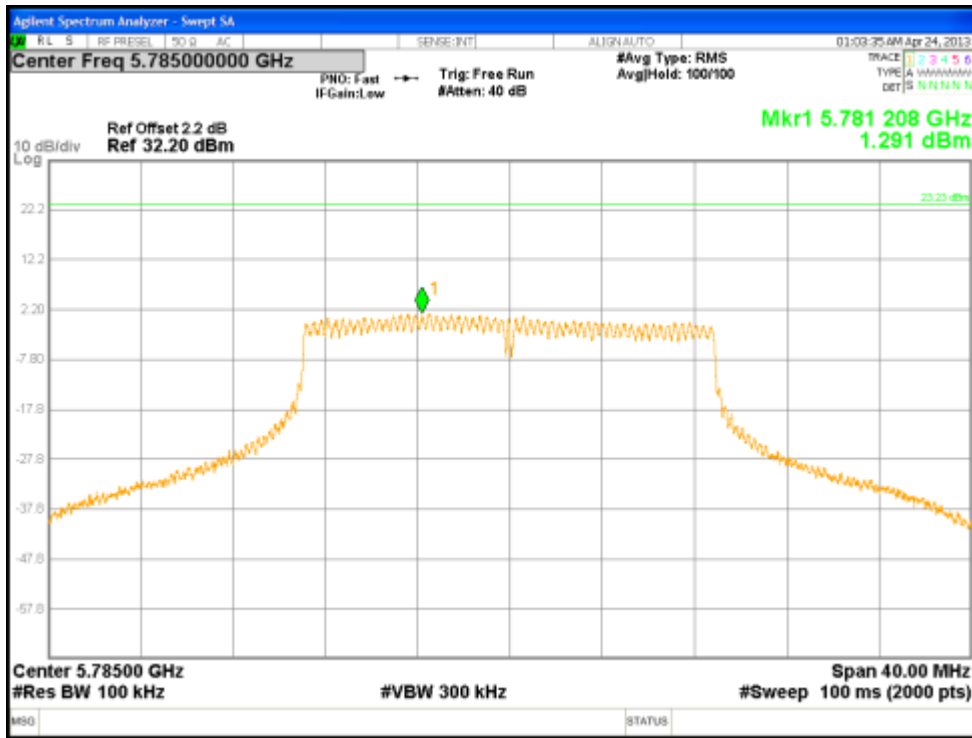


Figure 203: PPSD, 5785 MHz at 802.11n HT20, Chain 2 – 6.5 Mbps

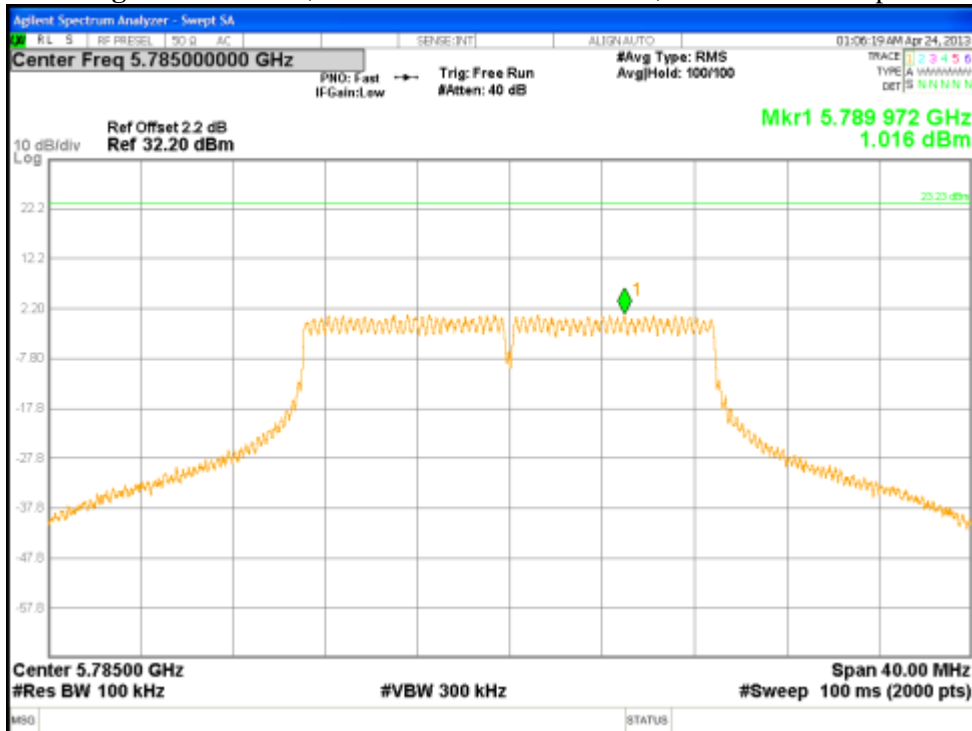


Figure 204: PPSD, 5785 MHz at 802.11n HT20, Chain 3 – 6.5 Mbps

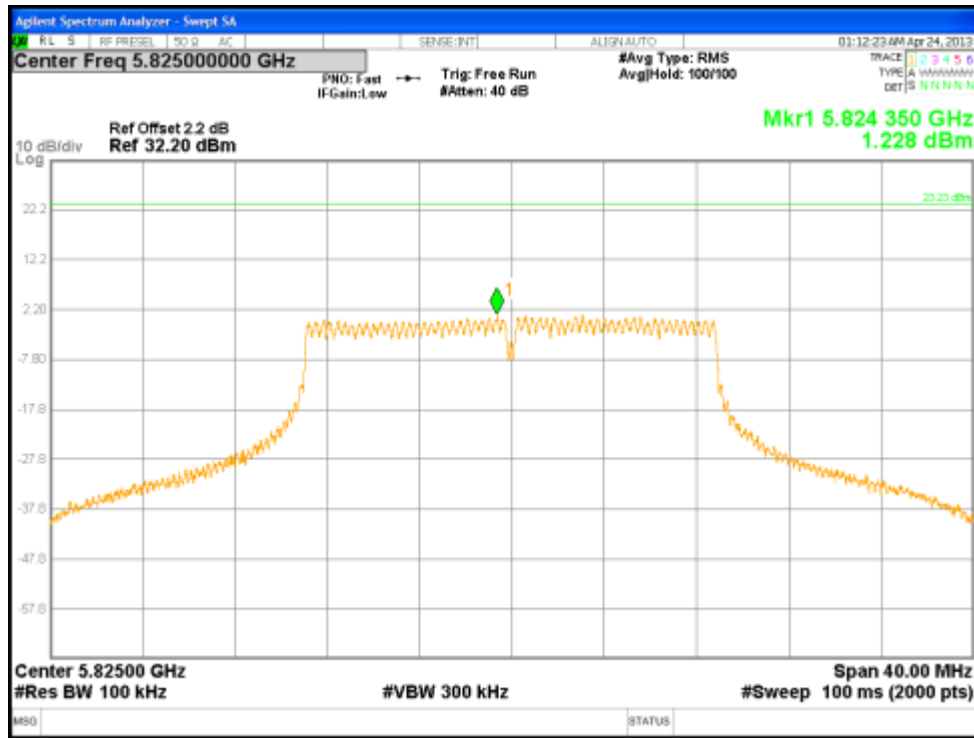


Figure 205: PPSD, 5825 MHz at 802.11n HT20, Chain 0 – 6.5 Mbps

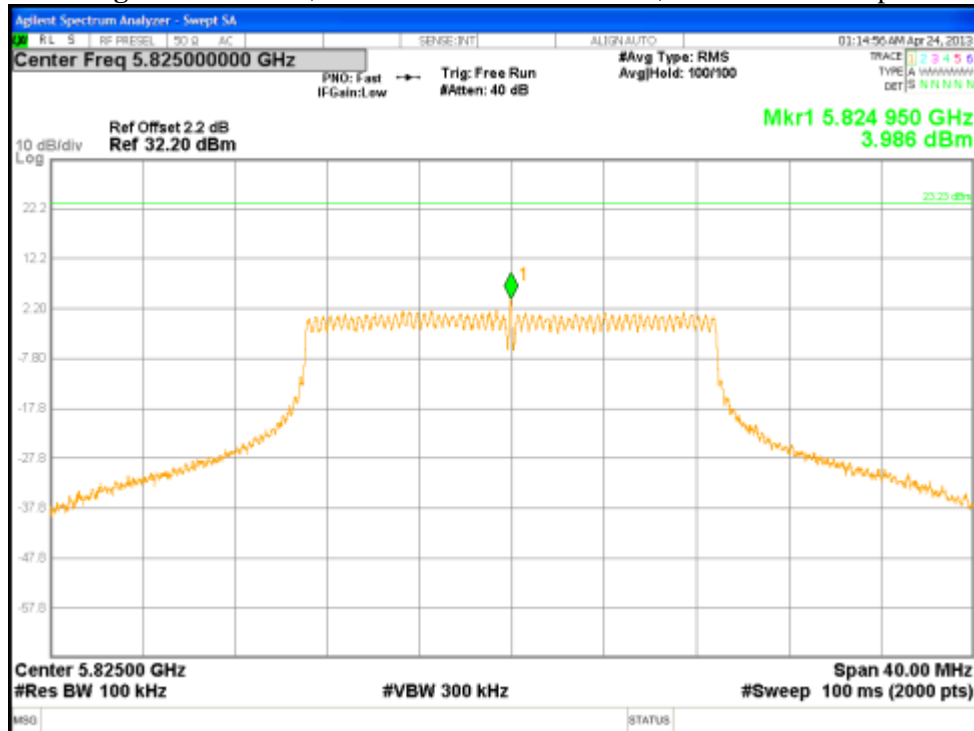


Figure 206: PPSD, 5825 MHz at 802.11n HT20, Chain 1 – 6.5 Mbps

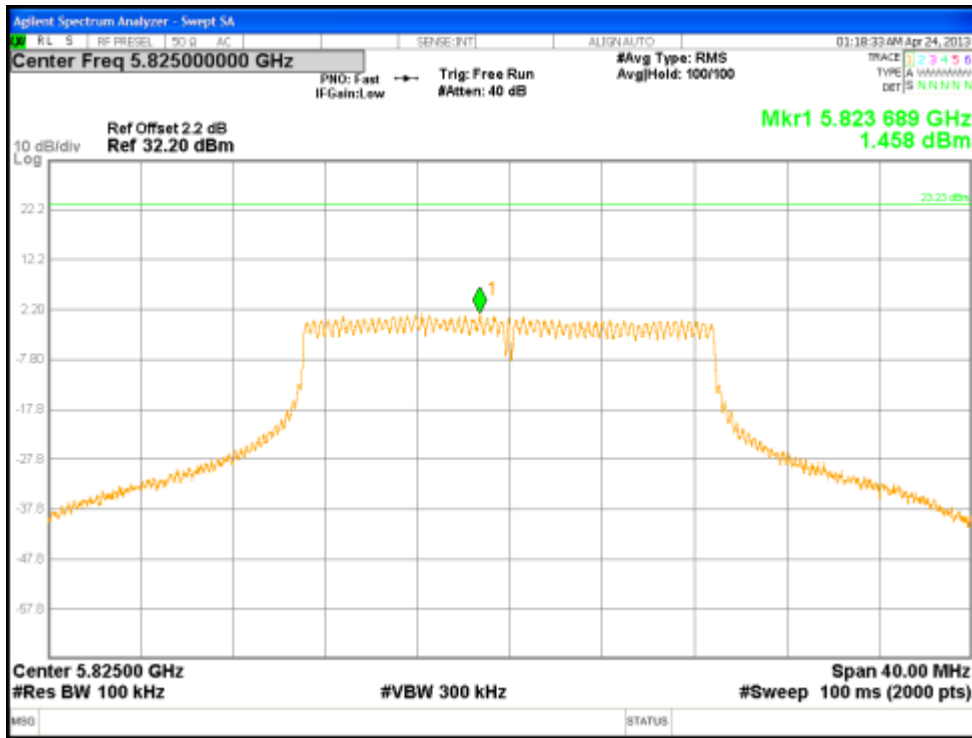


Figure 207: PPSD, 5825 MHz at 802.11n HT20, Chain 2 – 6.5 Mbps

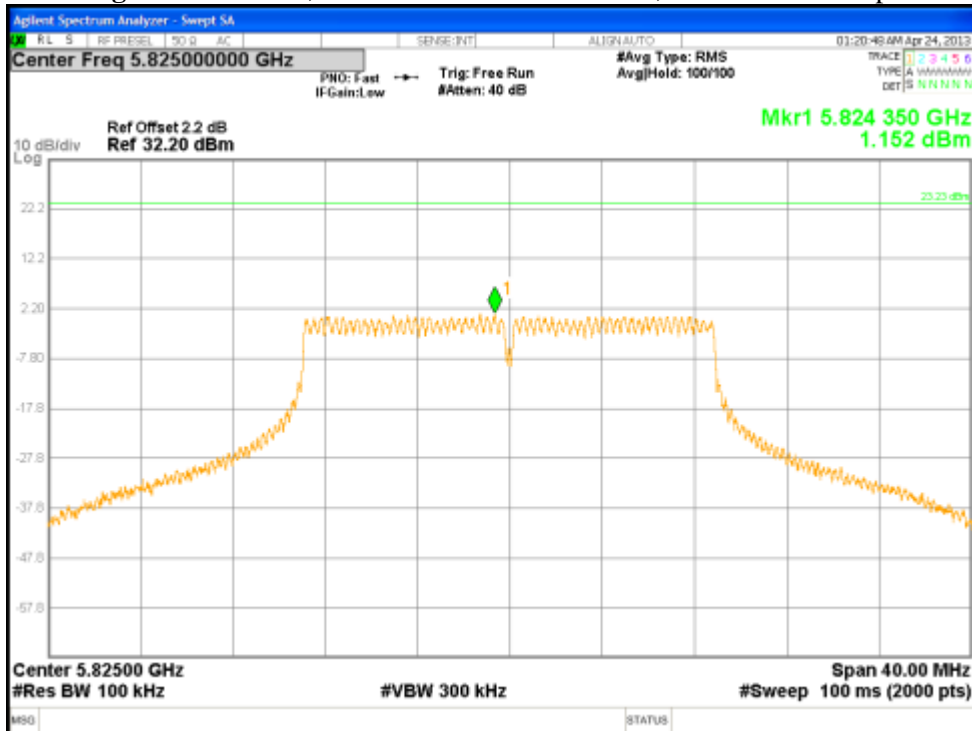


Figure 208: PPSD, 5825 MHz at 802.11n HT20, Chain 3 – 6.5 Mbps

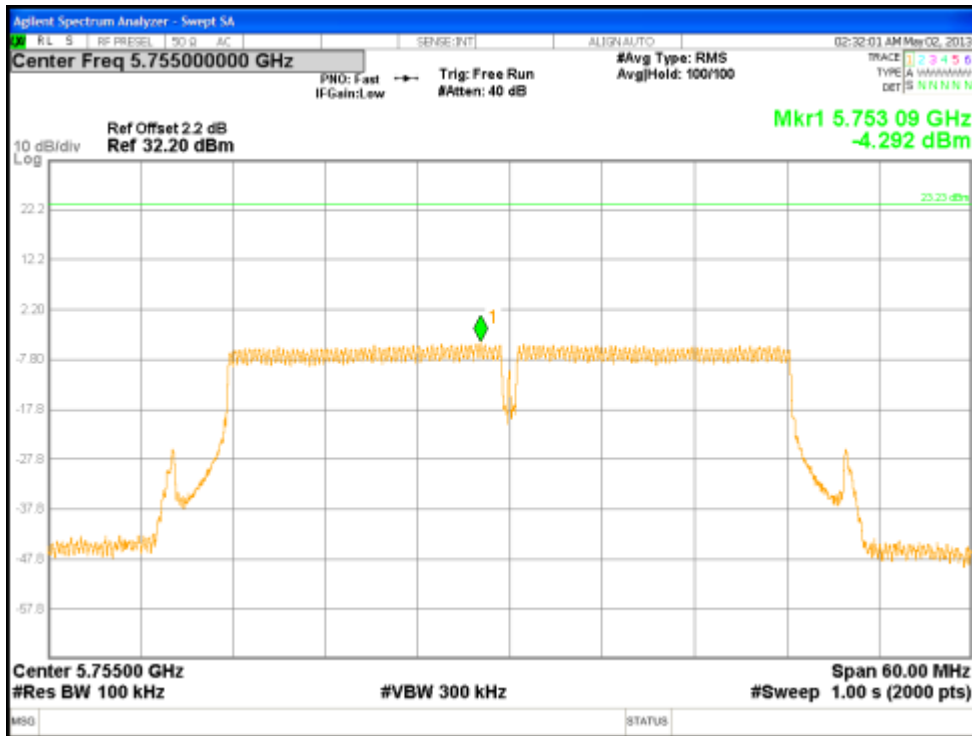


Figure 209: PPSD, 5755 MHz at 802.11n HT40, Chain 0 – 13.5 Mbps

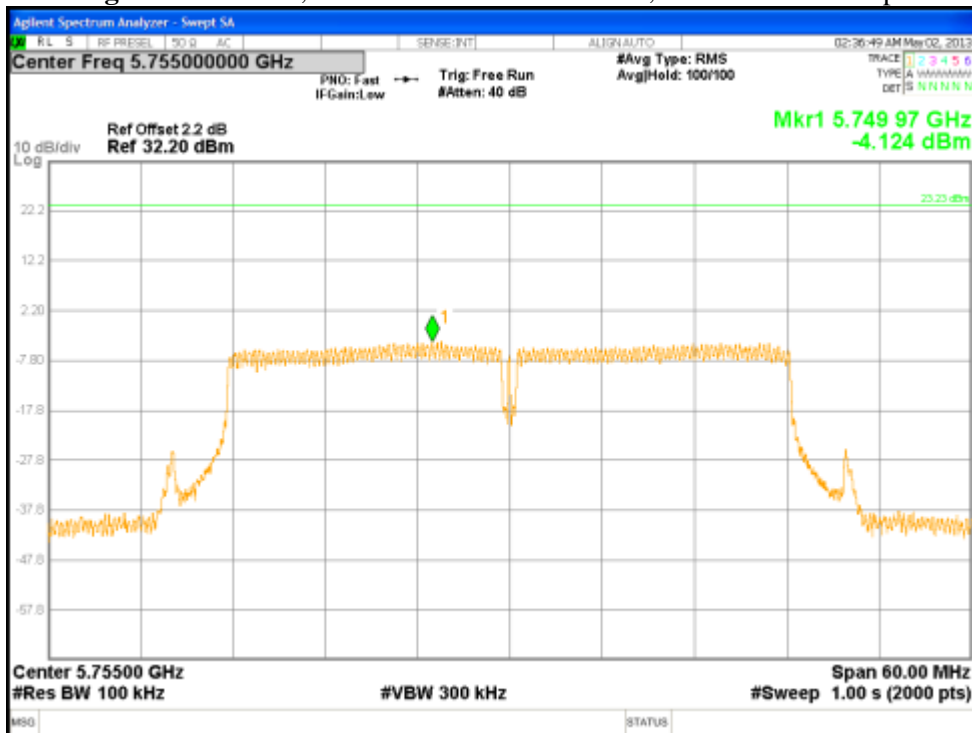


Figure 210: PPSD, 5755 MHz at 802.11n HT40, Chain 1 – 13.5 Mbps

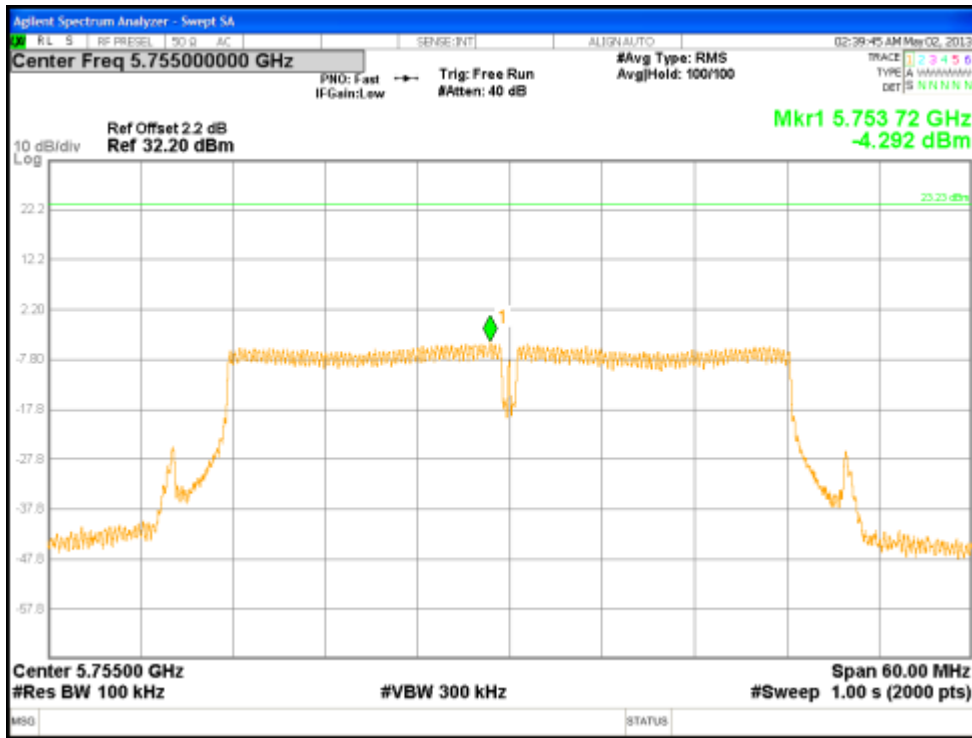


Figure 211: PPSD, 5755 MHz at 802.11n HT40, Chain 2 – 13.5 Mbps

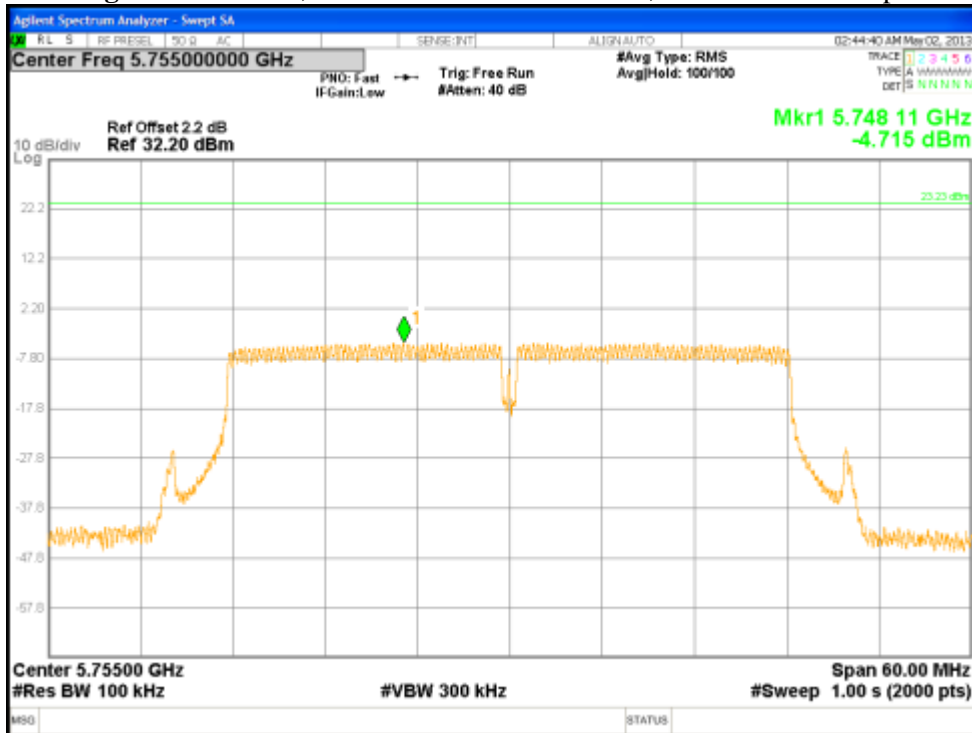


Figure 212: PPSD, 5755 MHz at 802.11n HT40, Chain 3 – 13.5 Mbps

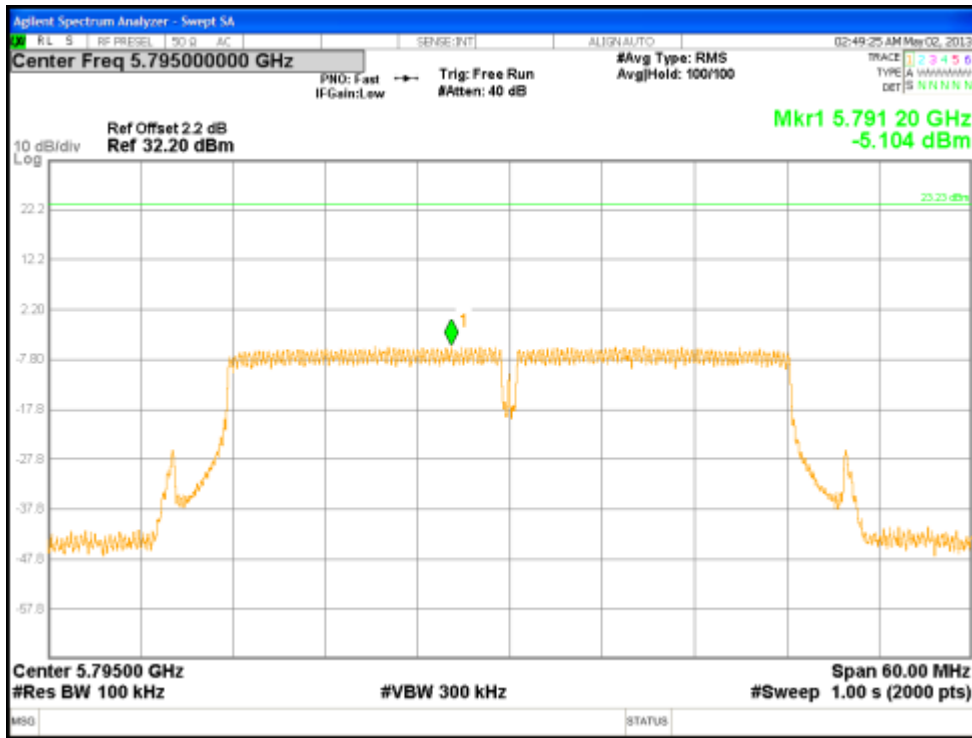


Figure 213: PPSD, 5795 MHz at 802.11n HT40, Chain 0 – 13.5 Mbps

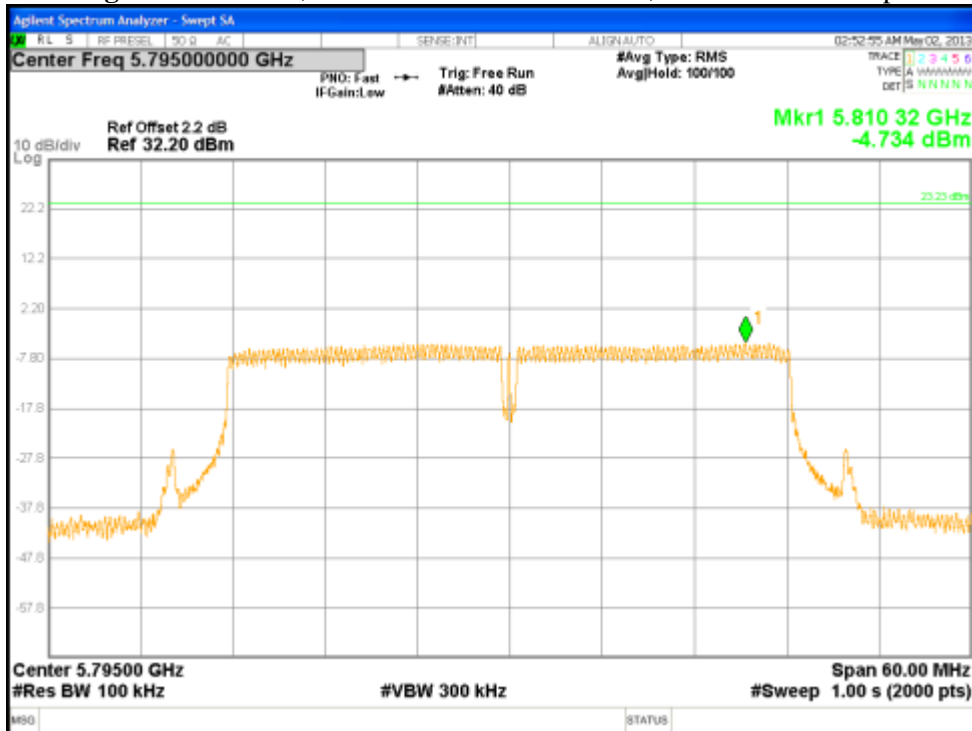


Figure 214: PPSD, 5795 MHz at 802.11n HT40, Chain 1 – 13.5 Mbps

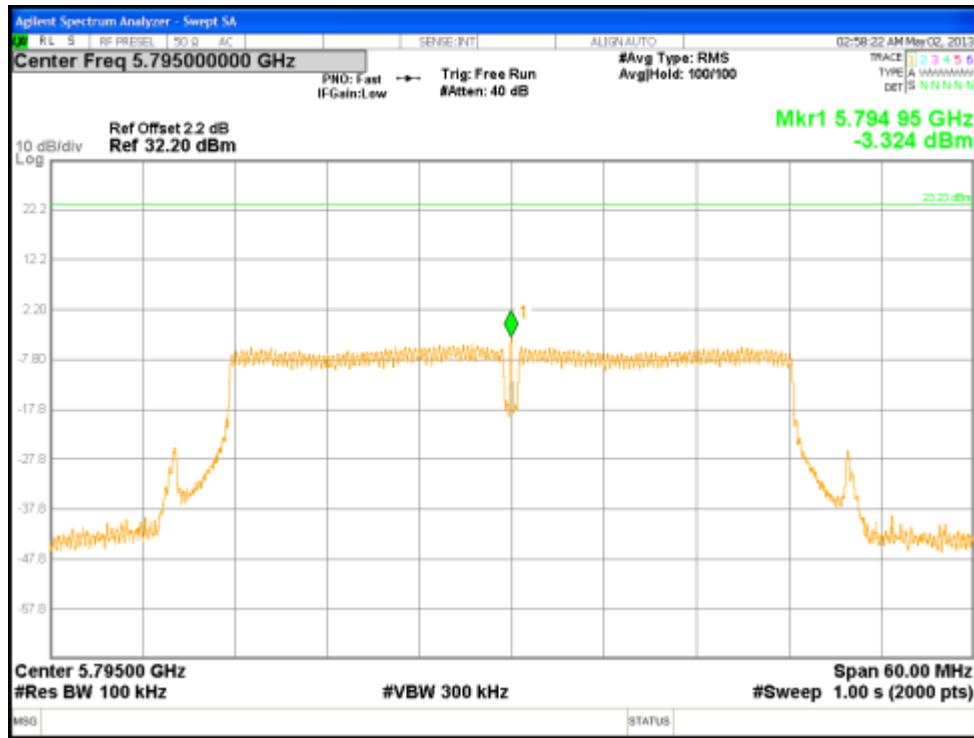


Figure 215: PPSD, 5795 MHz at 802.11n HT40, Chain 2 – 13.5 Mbps

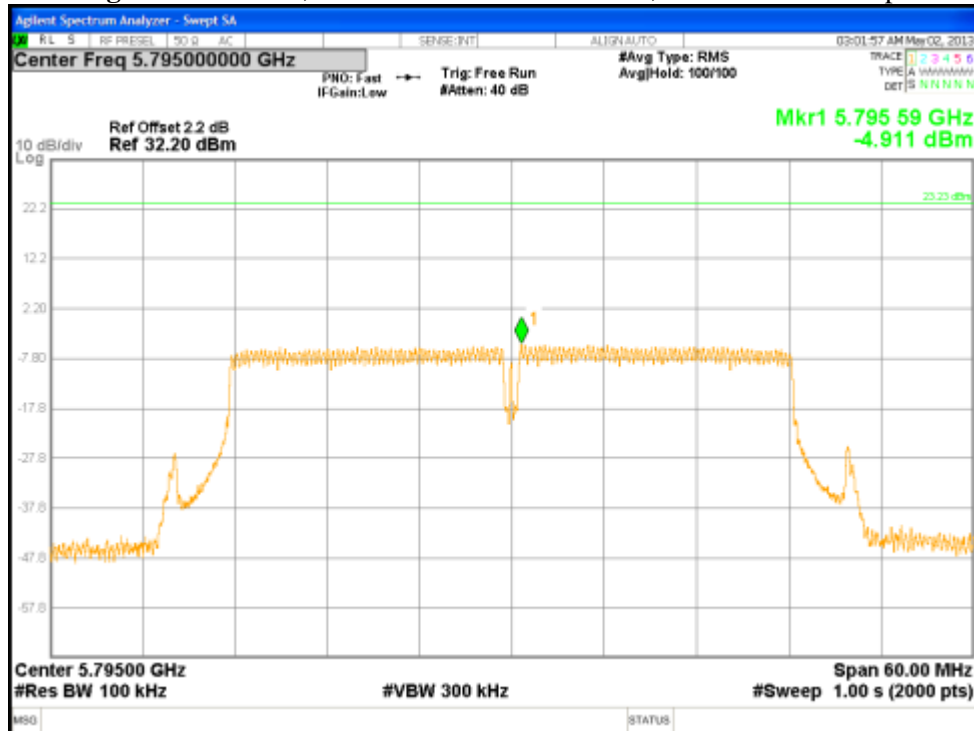


Figure 216: PPSD, 5795 MHz at 802.11n HT40, Chain 3 – 13.5 Mbps

4.5 Transmitter Spurious Emissions

Transmitter spurious emissions are emissions outside the frequency range of the equipment when the equipment is in transmit mode; per requirement of CFR47 15.205, 15.209, 15.407(b), RSS 210 Sect. A.9.2.

4.5.1 Test Methodology

4.5.1.1 Preliminary Test

A test program that controls instrumentation and data logging was used to automate the preliminary RF emission test procedure. The frequency range of interest was divided into sub-ranges to yield a frequency resolution of approximately 120 kHz and provide a reading at each frequency for no more than 12° of turntable rotation. For each frequency sub-range the turntable was rotated 360° while peak emission data was recorded and plotted over the frequency range of interest in horizontal and vertical antenna polarization's.

Preliminary emission profile testing was performed inside the anechoic chamber. The EUT was placed on a 1.0m x 1.5m non-conductive table 80cm above the floor. The EUT was positioned as shown in the setup photographs. The receiving antenna was placed at a distance of 3m at a fixed height of 1m. Measurement equipment was located outside of the chamber. A video camera was placed inside the chamber to view the EUT.

Pres-scans were performed to determine the worst axis, data rate/chains.

4.5.1.2 Final Test

For each frequency measured, the peak emission was maximized by manipulating the receiving antenna from 1 to 4 meters above the ground plane and placing it at the position that produced the maximum signal strength reading. The turntable was then rotated through 360° while observing the peak signal and placing the EUT at the position that produced maximum radiation. The six highest emissions relative to the limit were measured unless such emissions were more than 20 dB below the limit. If less than six emissions are within 20 dB of the limit, than the noise level of the receiver is measured at frequencies where emissions are expected. Multiples of all oscillator and microprocessor frequencies were also checked.

Final testing was performed on an NSA compliant test site. The EUT was placed on a 1.0m x 1.5m non-conductive table 80cm above the ground plane. The placement of EUT and cables were the same as for preliminary testing and is shown in the setup photographs.

The final scans performed on the worst axis, Y-Axis, for three operating channels;

6 Mbit/s for 802.11a Mode: 5745 MHz, 5785 MHz, 5825 MHz

6.5 Mbit/s for 802.11n HT20 Mode: 5745 MHz, 5785 MHz, 5825 MHz

13.5 Mbit/s for 802.11n HT40 Mode: 5755 MHz, 5795 MHz

4.5.1.3 Deviations

None.

4.5.2 Transmitter Spurious Emission Limit

The spurious emissions of the transmitter shall not exceed the values in CFR47 Part 15.205, 15.209: 2009 and RSS 210 A1.1.2 2007.

Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490.....	2400/F (kHz)	300
0.490-1.705.....	24000/F (kHz)	30
1.705-30.0.....	30	30
30-88.....	100 **	3
88-216.....	150 **	3
216-960.....	200 **	3
Above 960.....	500	3

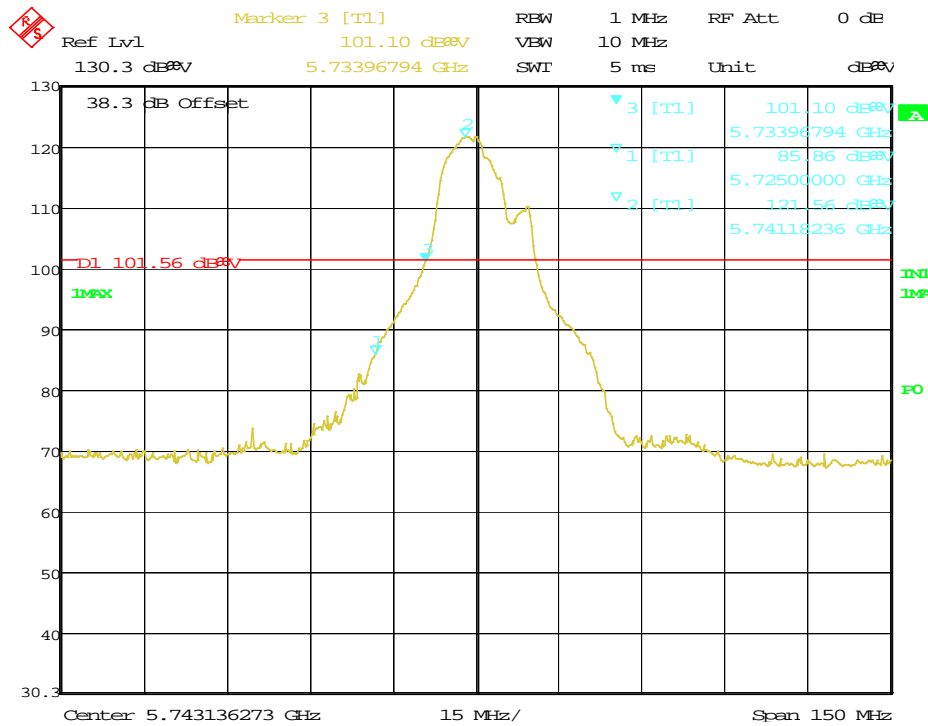
4.5.3 Test Results

The final measurement data was taken under the worst case operating modes, configurations, and/or cable positions. It also reflects the results including any modifications and/or special accessories listed in Sections 1.4 and test plan.

As originally tested, the EUT was found to be compliant to the requirements of the test standard(s).

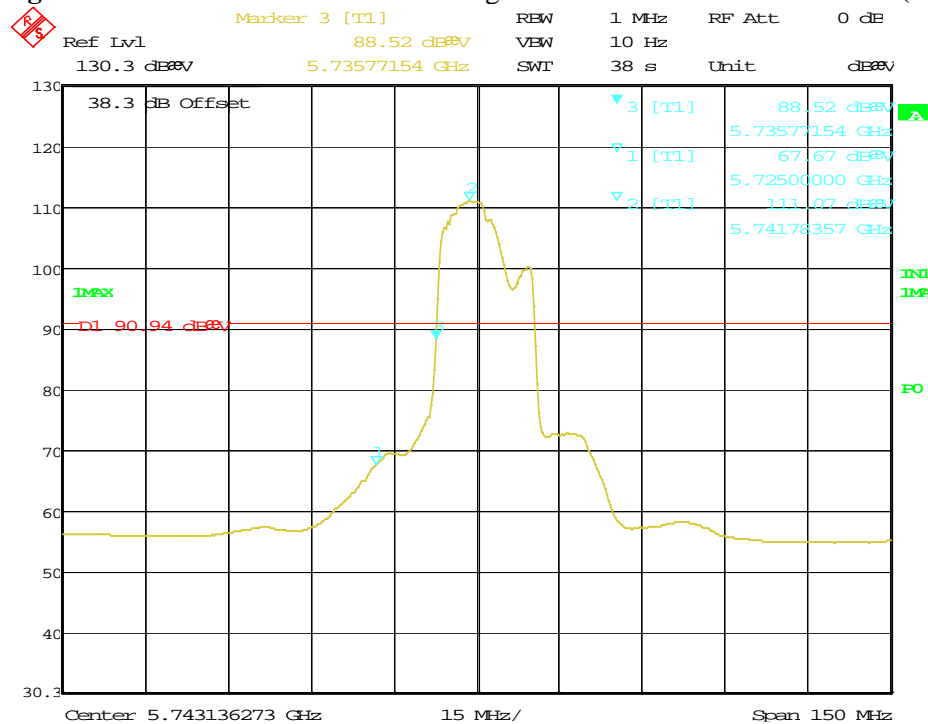
Table 7: Transmit Spurious Emission at Band-Edge Requirements

Test Conditions: Radiated Measurement, Normal Temperature and Voltage only								
Antenna Type: Integrated				Power Setting: See test plan				
Max. Directional Gain: + 8 dBi				Signal State: Modulated at 100%.				
Ambient Temp.: 23 °C				Relative Humidity: 33%				
Band-Edge Results								
Freq. (MHz)	Level (dBuV/m)	Polarity (H/V)	Limit (dBuV/m)	Margin (dB)	Det.	Table Deg.	Tower (cm)	Note
5725.00	85.86	H	101.56	-15.70	Pk	276	210	11a-5745MHz at 22 dBm
5725.00	67.67	H	90.94	-23.27	Ave	276	210	11a-5745MHz at 22 dBm
5725.00	84.26	V	100.65	-16.39	Pk	307	176	11a-5745MHz at 22 dBm
5725.00	64.00	V	90.37	-26.37	Ave	307	176	11a-5745MHz at 22 dBm
5850.00	79.82	V	103.80	-23.98	Pk	266	164	11a-5825MHz at 22 dBm
5850.00	64.93	V	93.02	-28.09	Ave	266	164	11a-5825MHz at 22 dBm
5850.00	71.58	H	102.77	-31.19	Pk	279	154	11a-5825MHz at 22 dBm
5850.00	58.75	H	0.00	58.75	Ave	279	154	11a-5825MHz at 22 dBm
5725.00	87.32	V	106.10	-18.78	Pk	234	173	HT20, 5745MHz, 22 dBm
5725.00	69.57	V	84.35	-14.78	Ave	234	173	HT20, 5745MHz, 22 dBm
5725.00	89.09	H	103.91	-14.82	Pk	265	179	HT20, 5745MHz, 22 dBm
5725.00	69.69	H	82.29	-12.60	Ave	265	179	HT20, 5745MHz, 22 dBm
5850.00	76.68	H	104.38	-27.70	Pk	262	179	HT20, 5825MHz, 22 dBm
5850.00	58.07	H	82.31	-24.24	Ave	262	179	HT20, 5825MHz, 22 dBm
5850.00	79.09	V	102.91	-23.82	Pk	272	216	HT20, 5825MHz, 22 dBm
5850.00	62.21	V	80.77	-18.56	Ave	272	216	HT20, 5825MHz, 22 dBm
5725.00	86.26	V	99.63	-13.37	Pk	324	177	HT40, 5755MHz, 22 dBm
5725.00	61.23	V	77.56	-16.33	Ave	324	177	HT40, 5755MHz, 22 dBm
5725.00	88.82	H	99.70	-10.88	Pk	261	171	HT40, 5755MHz, 22 dBm
5725.00	64.62	H	78.14	-13.52	Ave	261	171	HT40, 5795MHz, 22 dBm
5725.00	69.69	H	99.60	-29.91	Pk	270	174	HT40, 5755MHz, 22 dBm
5725.00	54.37	H	77.73	-23.36	Ave	270	174	HT40, 5755MHz, 22 dBm
5725.00	70.28	V	102.34	-32.06	Pk	246	168	HT40, 5755MHz, 22 dBm
5725.00	55.14	V	80.12	-24.98	Ave	246	168	HT40, 5755MHz, 22 dBm
<p>Note: 1. Band-edge frequencies were taken at 5725MHz or 5850 MHz. Since both sides of the operational band are not restricted, the measurements took to demonstrate the compliance to 20 dB relative to peak.</p> <p>2. All the band-edge measurements met the restricted band requirements of CFR47 15.205 and 15.209.</p>								



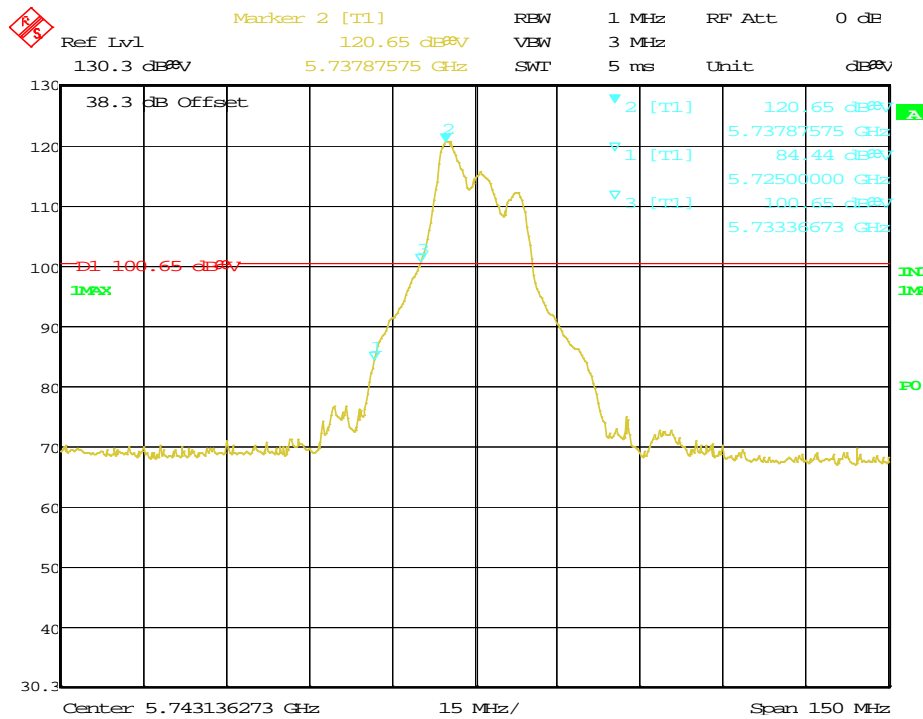
Date: 16.AUG.2013 23:00:00

Figure 217: Radiated Emission at the Edge for 802.11A 5745 MHz – Horz. (Pk)

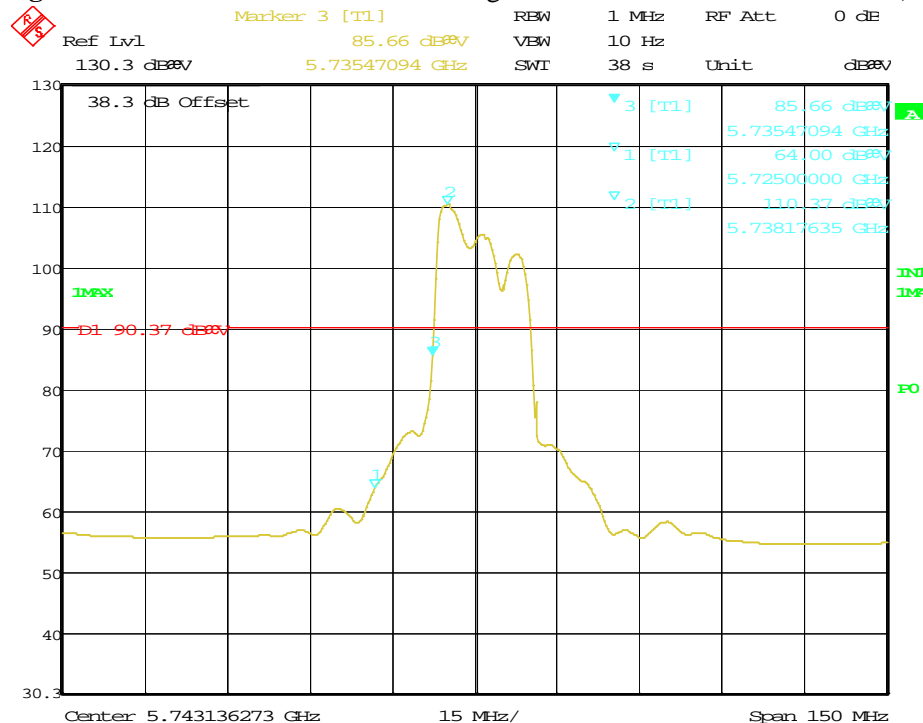


Date: 16.AUG.2013 23:01:22

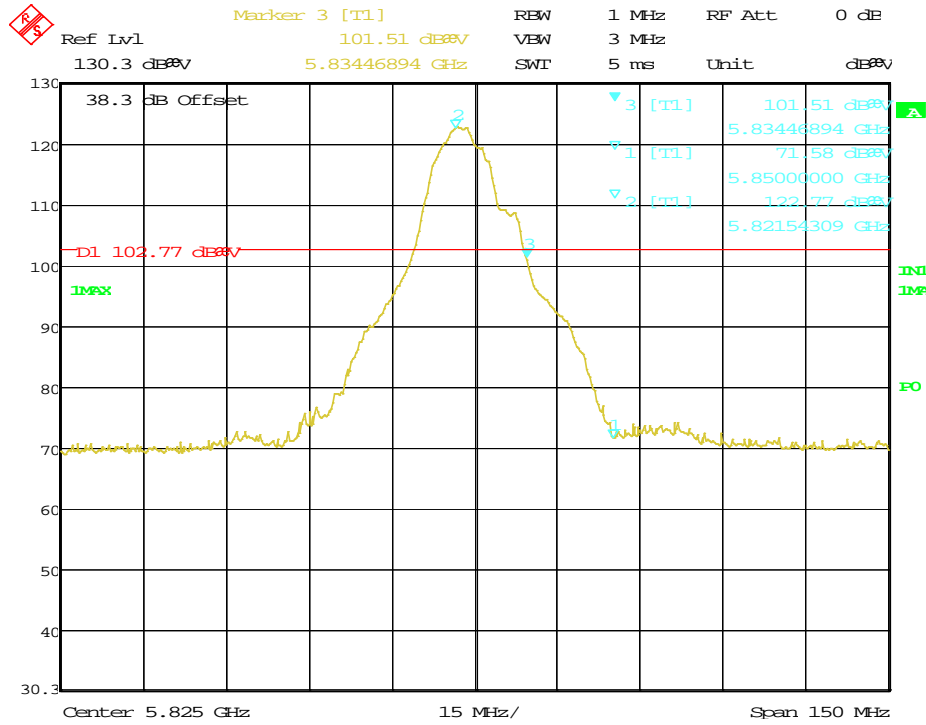
Figure 218: Radiated Emission at the Edge for 802.11A 5745 MHz – Horz. (AVE)



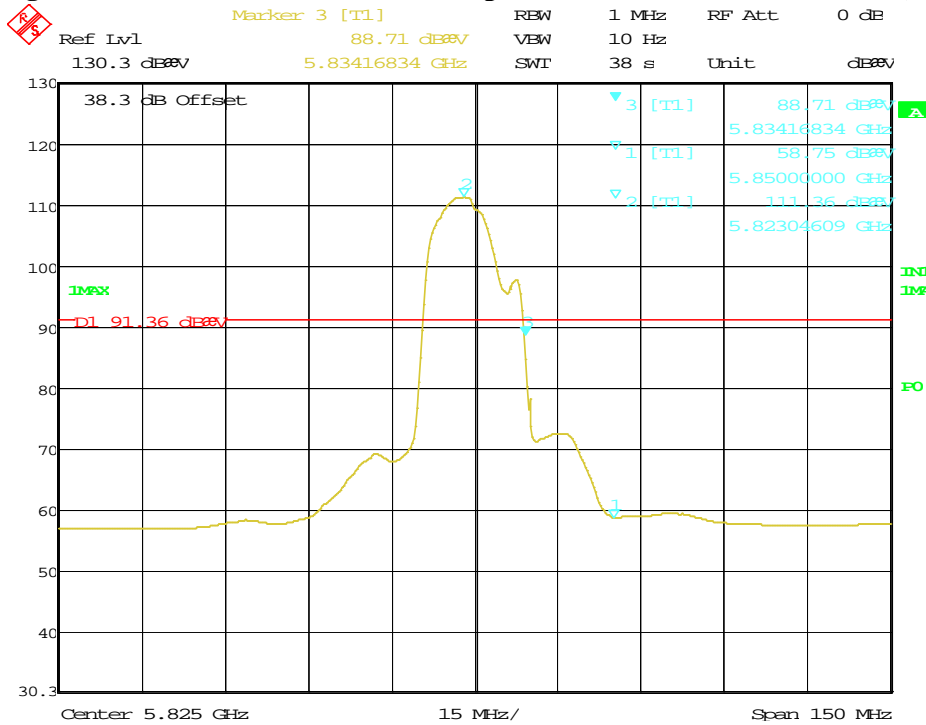
Date: 16.AUG.2013 23:05:02
Figure 219: Radiated Emission at the Edge for 802.11A 5745 MHz – Vert. (Pk)



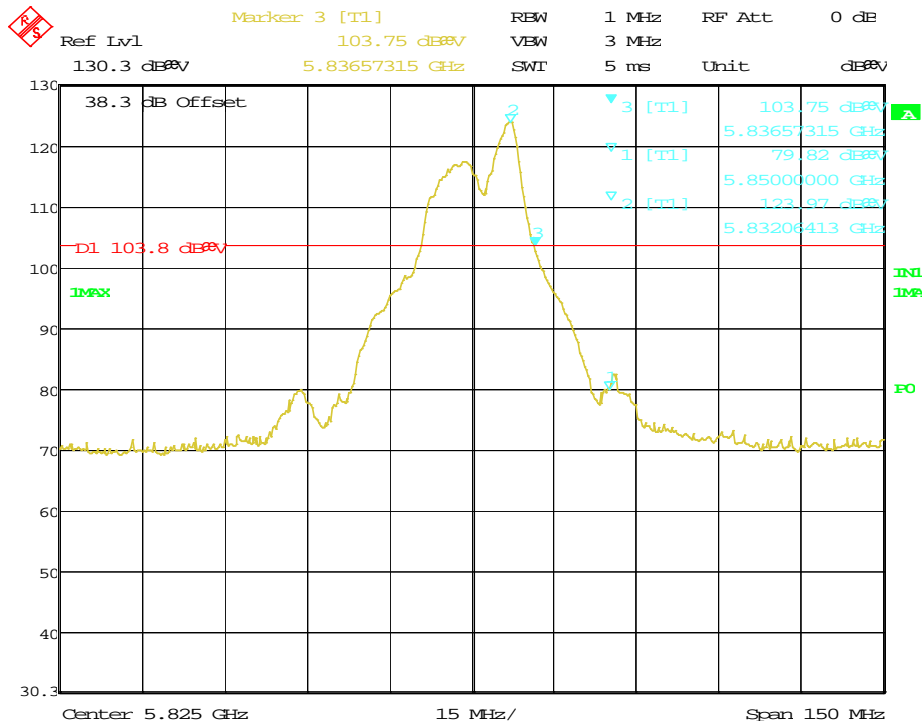
Date: 16.AUG.2013 23:06:11
Figure 220: Radiated Emission at the Edge for 802.11A 5745 MHz – Vert. (AVE)



Date: 16.AUG.2013 23:14:47
Figure 221: Radiated Emission at the Edge for 802.11A 5825 MHz – Horz. (Pk)

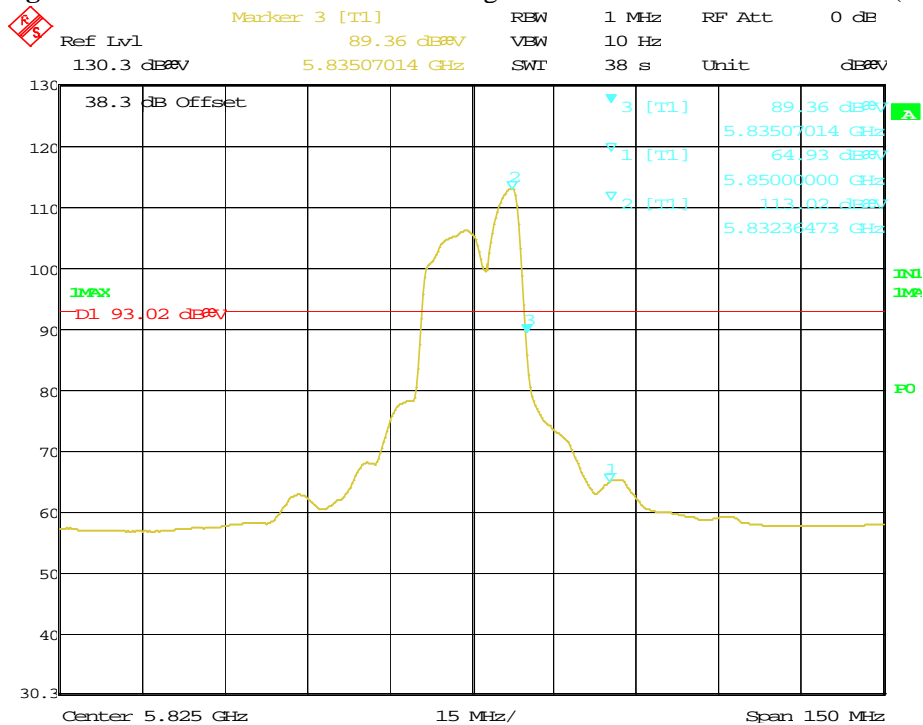


Date: 16.AUG.2013 23:15:51
Figure 222: Radiated Emission at the Edge for 802.11A 5825 MHz – Horz. (AVE)



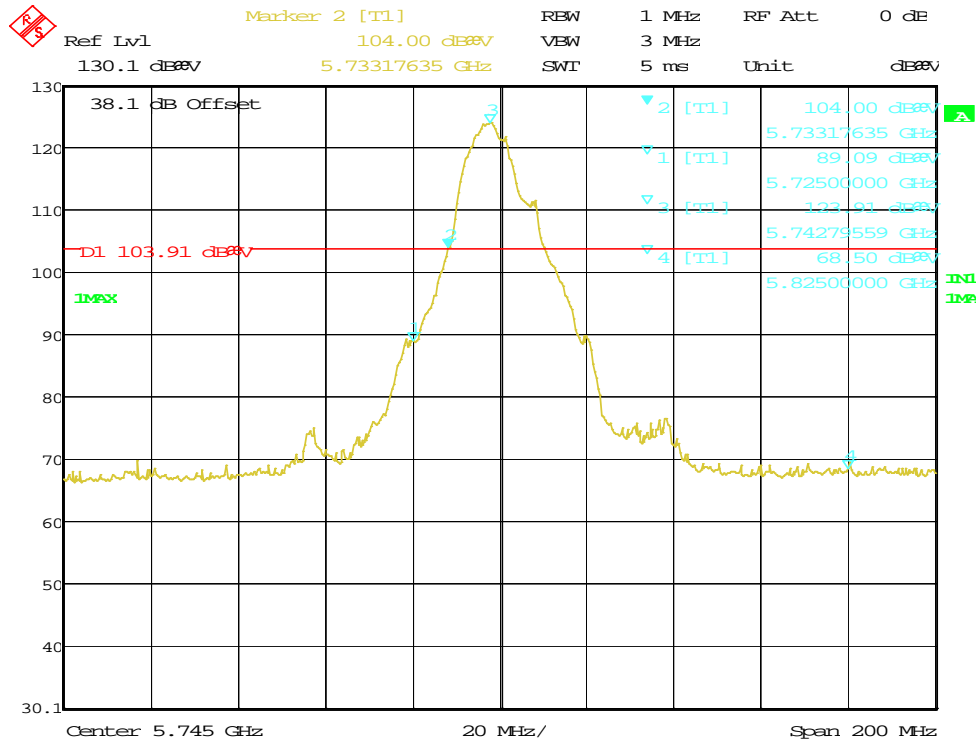
Date: 16.AUG.2013 23:10:32

Figure 223: Radiated Emission at the Edge for 802.11A 5825 MHz – Vert. (Pk)



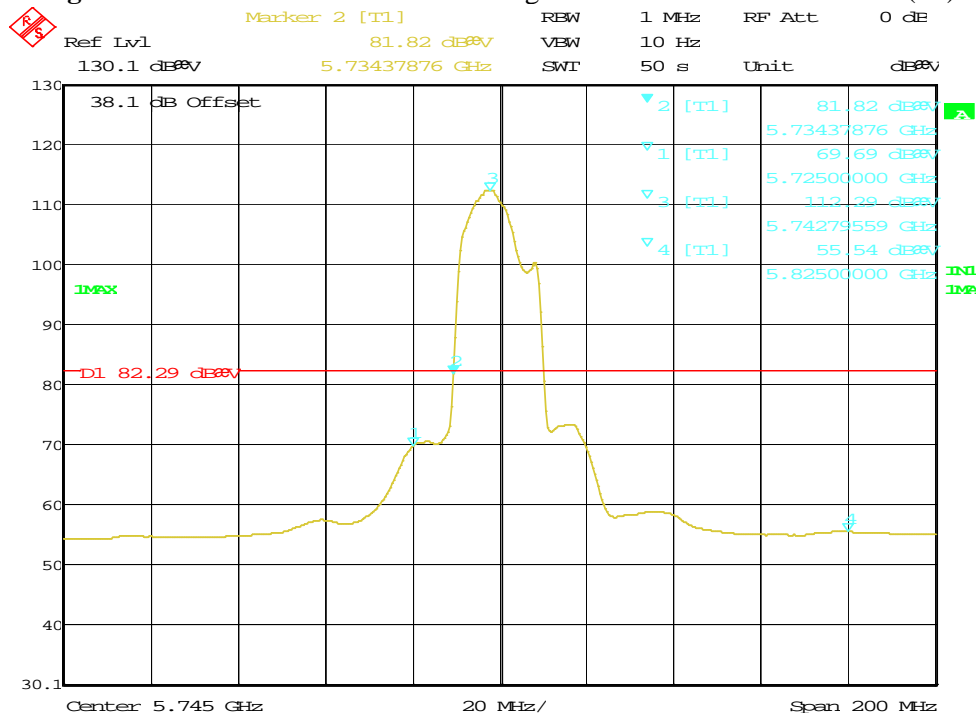
Date: 16.AUG.2013 23:11:35

Figure 224: Radiated Emission at the Edge for 802.11A 5825 MHz – Vert. (AVE)



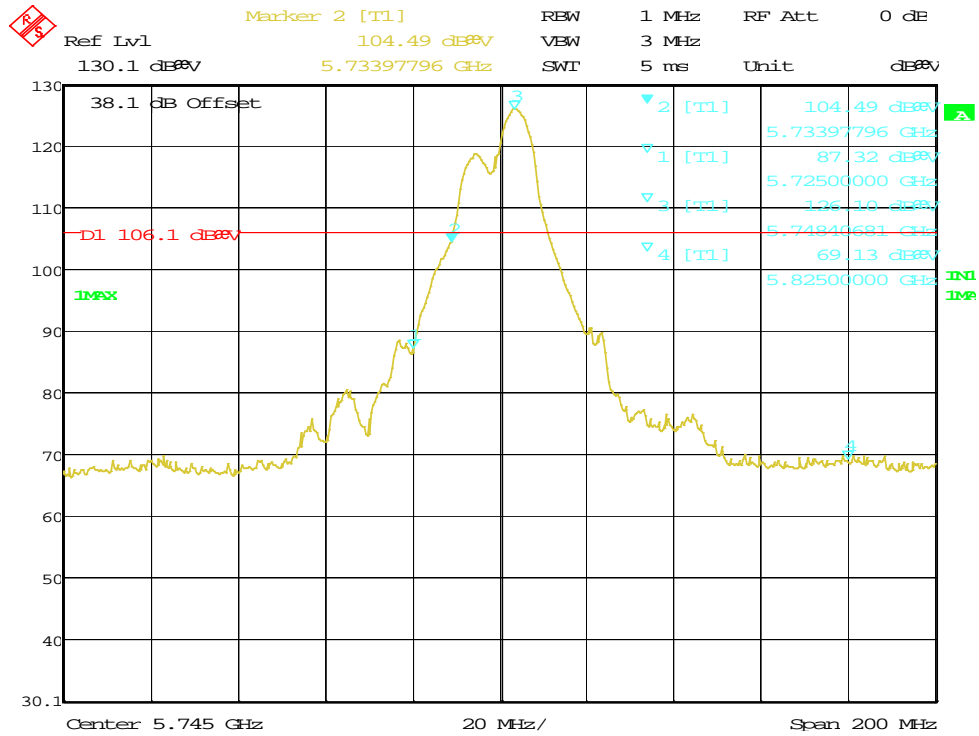
Date: 11.MAR.2013 14:09:37

Figure 225: Radiated Emission at the Edge for HT20 5745 MHz – Horiz. (Pk)



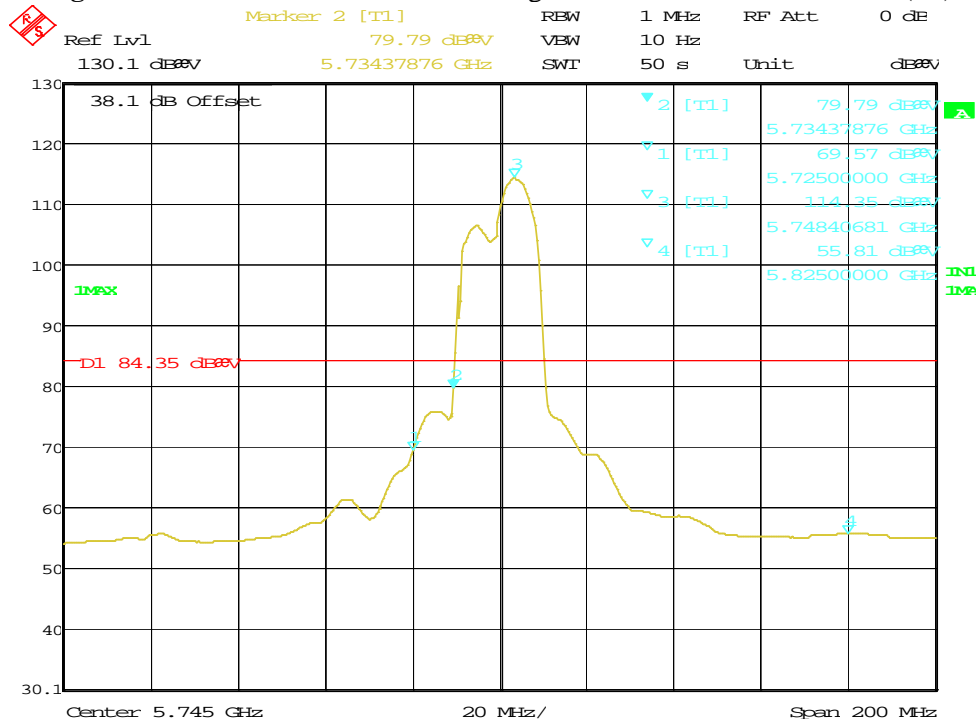
Date: 11.MAR.2013 14:10:57

Figure 226: Radiated Emission at the Edge for HT20 5745 MHz – Horiz. (AVE)



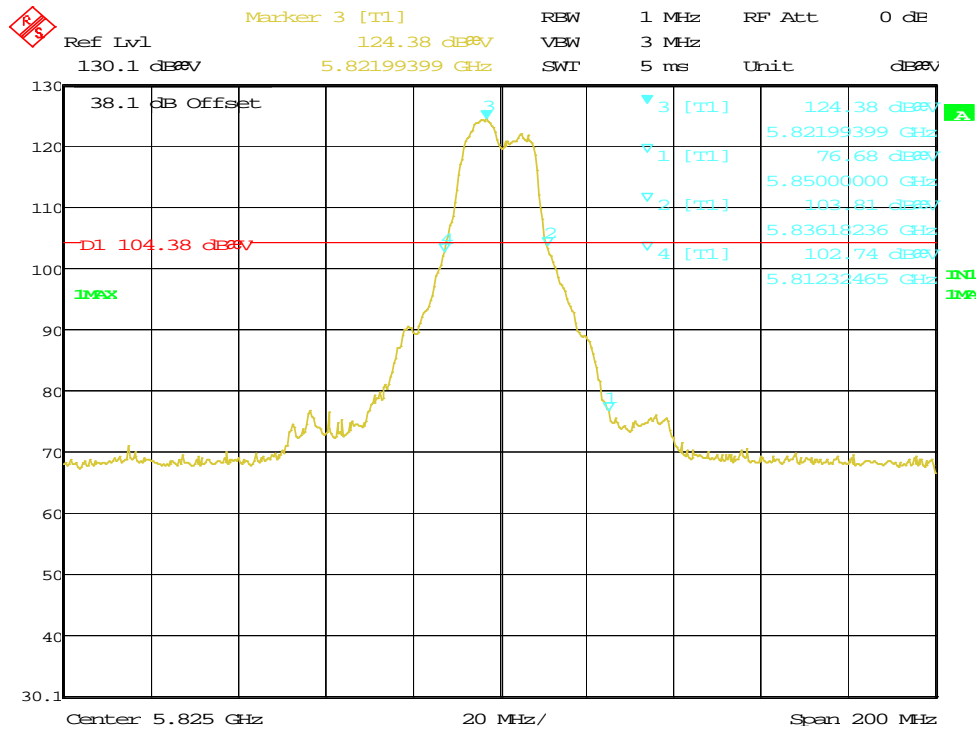
Date: 11.MAR.2013 14:03:52

Figure 227: Radiated Emission at the Edge for HT20 5745 MHz – Vert. (Pk)



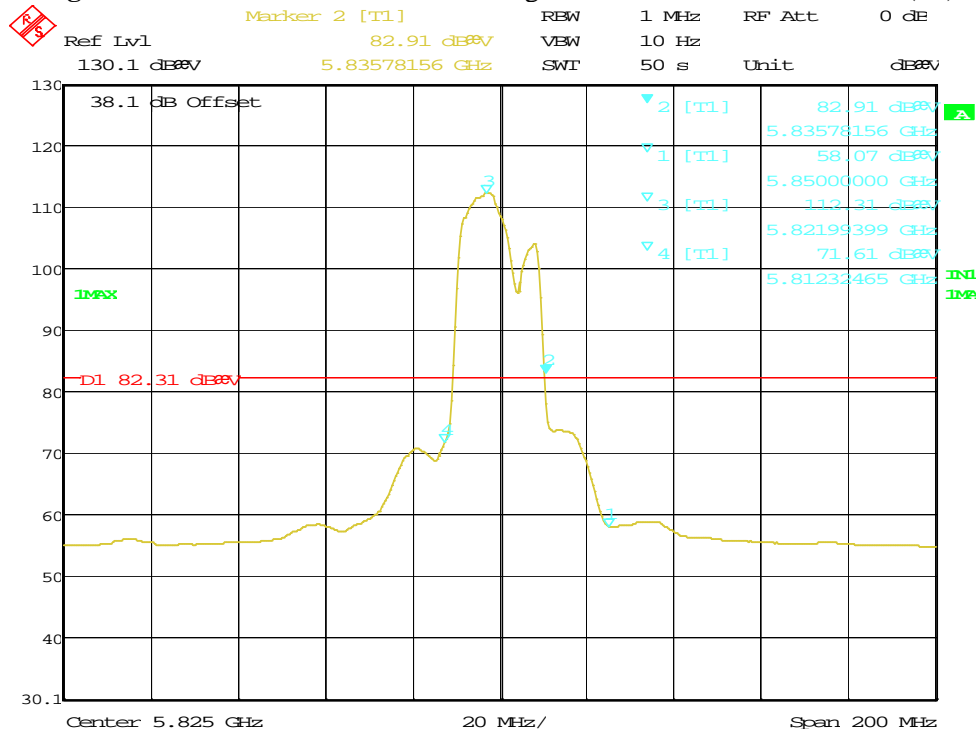
Date: 11.MAR.2013 14:06:19

Figure 228: Radiated Emission at the Edge for HT20 5745 MHz – Vert. (AVE)



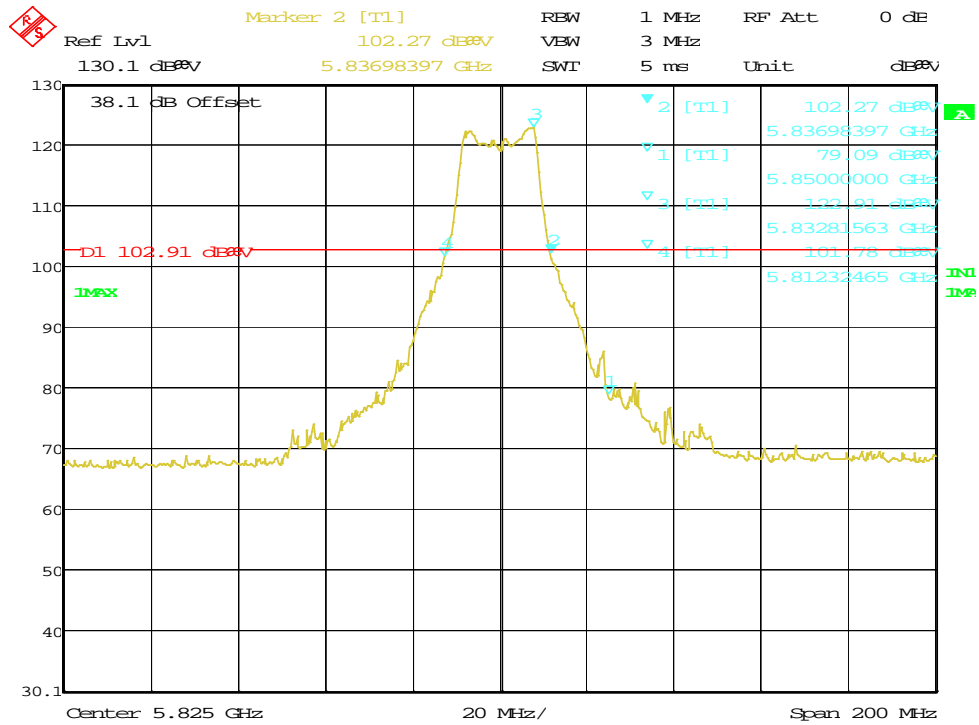
Date: 11.MAR.2013 14:20:19

Figure 229: Radiated Emission at the Edge for HT20 5825 MHz – Horiz. (Pk)



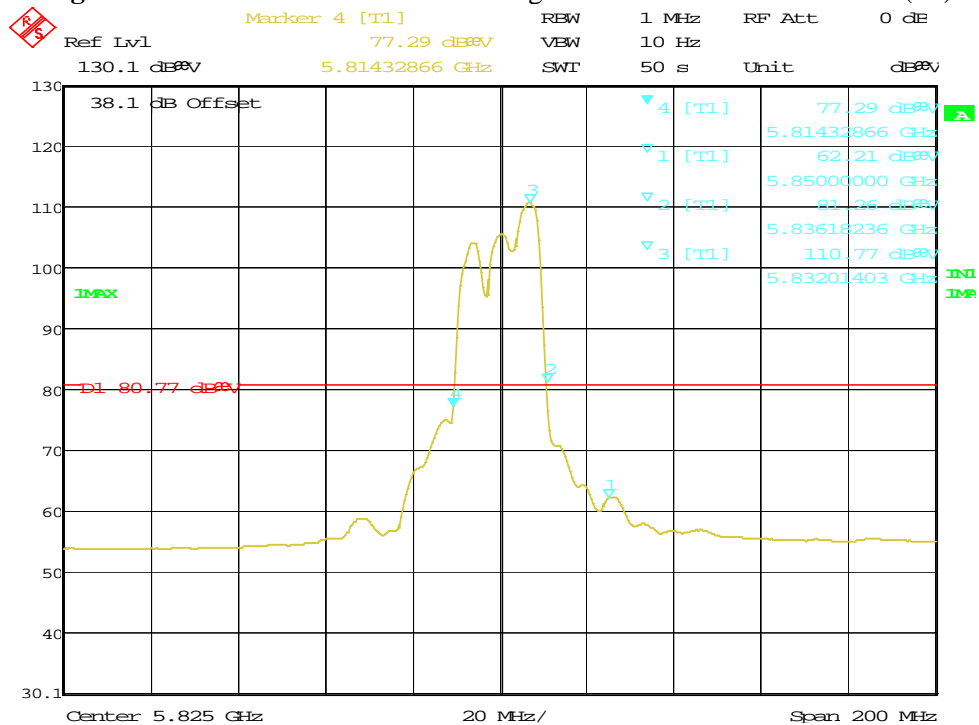
Date: 11.MAR.2013 14:22:05

Figure 230: Radiated Emission at the Edge for HT20 5825 MHz – Horiz. (AVE)



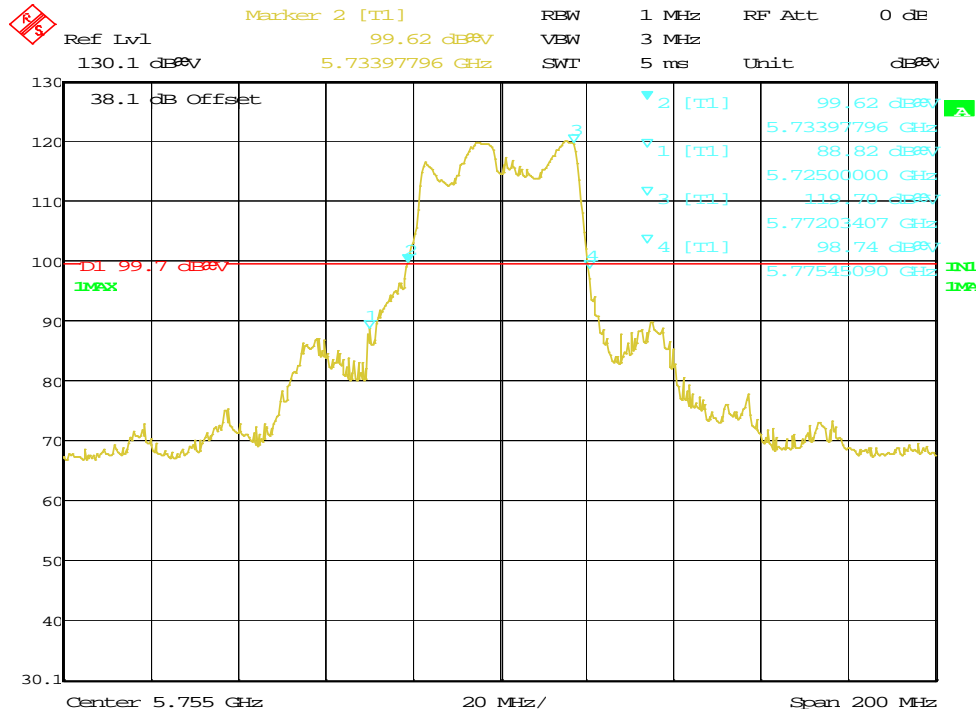
Date: 11.MAR.2013 14:25:26

Figure 231: Radiated Emission at the Edge for HT20 5825 MHz – Vert. (Pk)



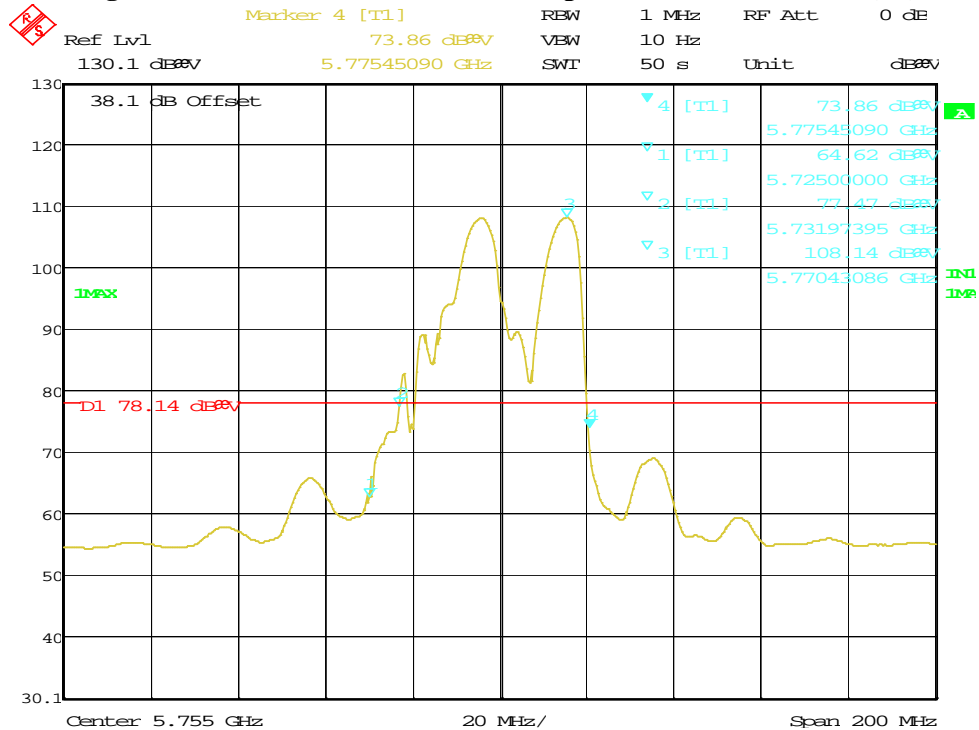
Date: 11.MAR.2013 14:27:02

Figure 232: Radiated Emission at the Edge for HT20 5825 MHz – Vert. (AVE)



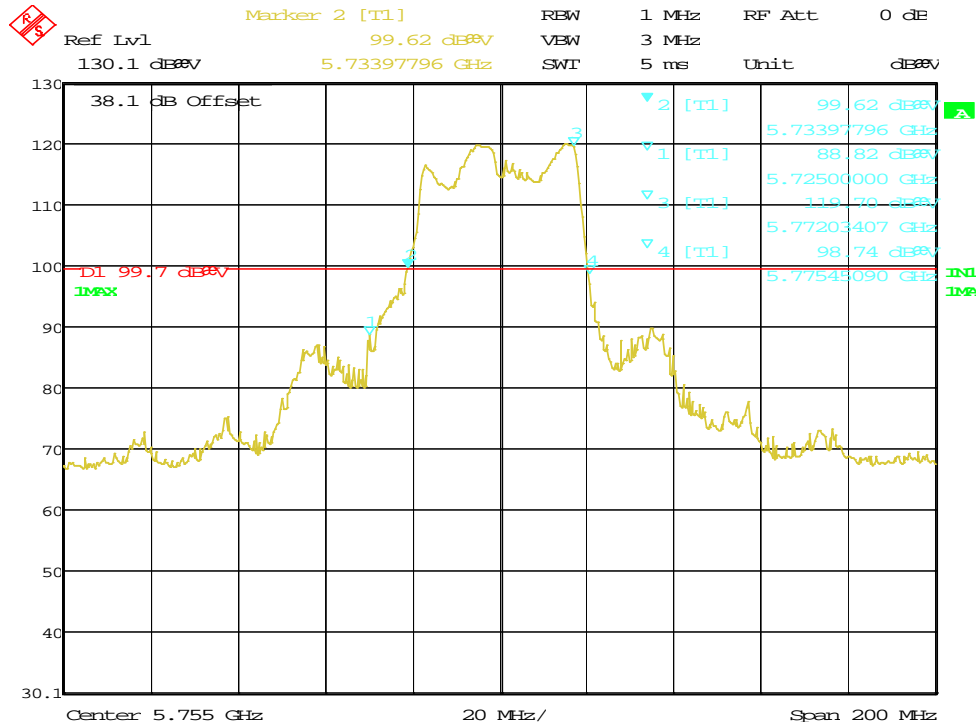
Date: 11.MAR.2013 14:37:19

Figure 233: Radiated Emission at the Edge for 5755 MHz – Horz. (Pk)



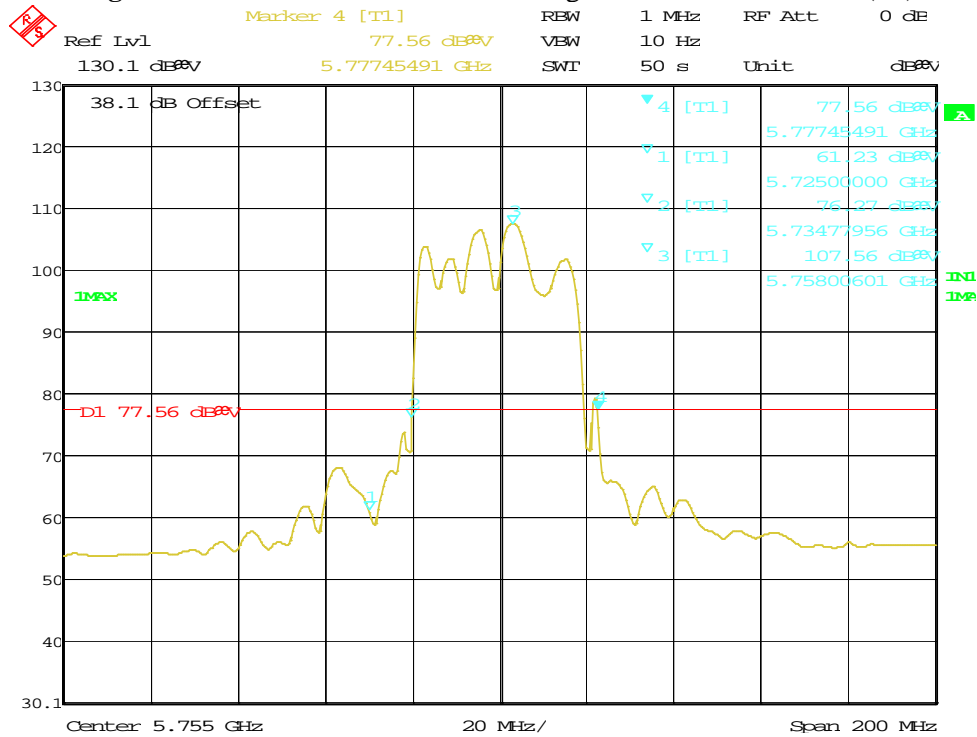
Date: 11.MAR.2013 14:38:52

Figure 234: Radiated Emission at the Edge for 5755 MHz – Horz. (AVE)



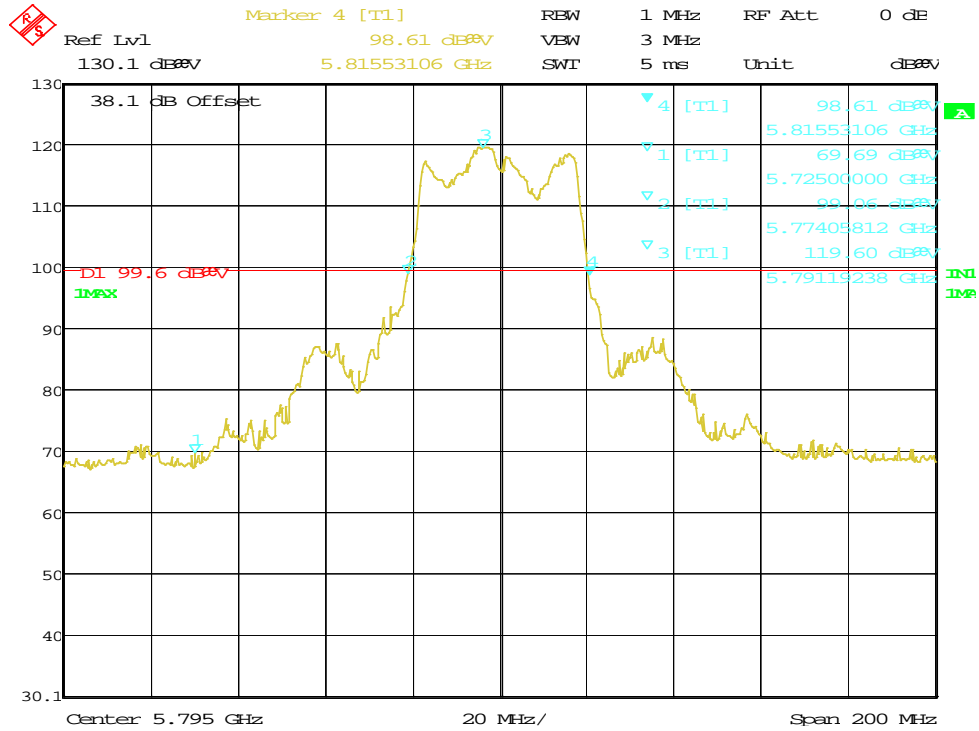
Date: 11.MAR.2013 14:37:19

Figure 235: Radiated Emission at the Edge for 5755 MHz – Vert. (Pk)



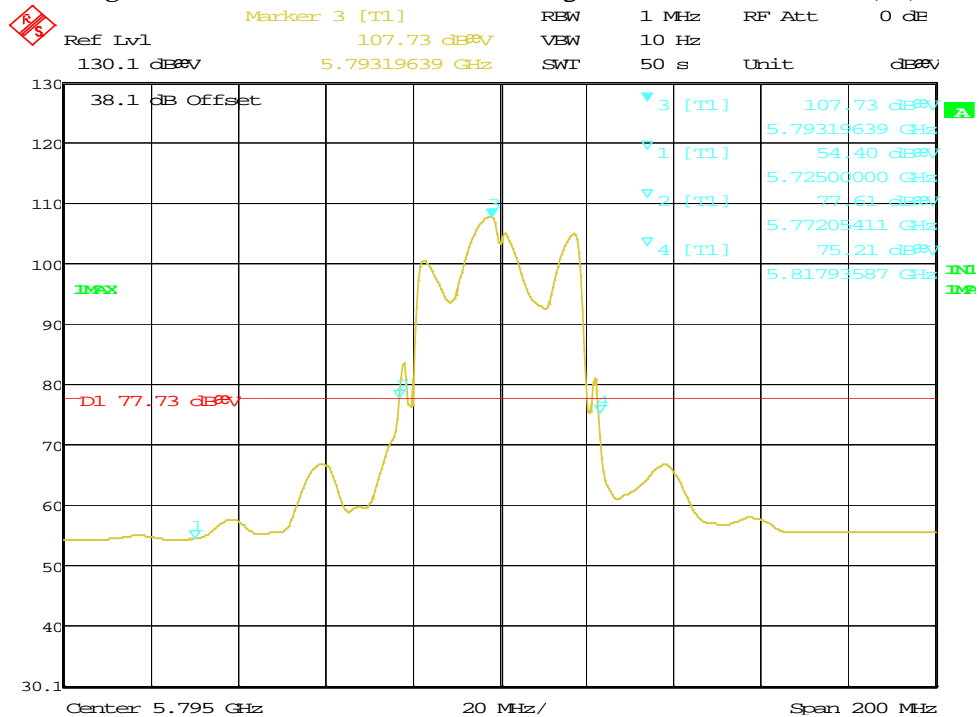
Date: 11.MAR.2013 14:34:06

Figure 236: Radiated Emission at the Edge for 5755 MHz – Vert. (AVE)



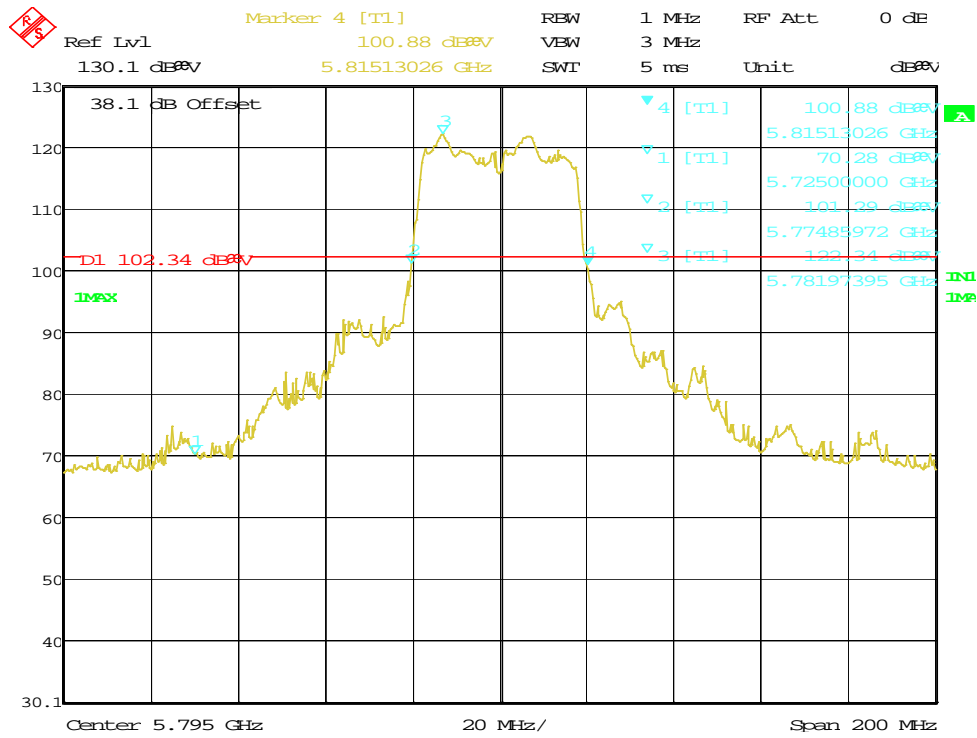
Date: 11.MAR.2013 14:45:10

Figure 237: Radiated Emission at the Edge for 5795 MHz – Horz. (Pk)



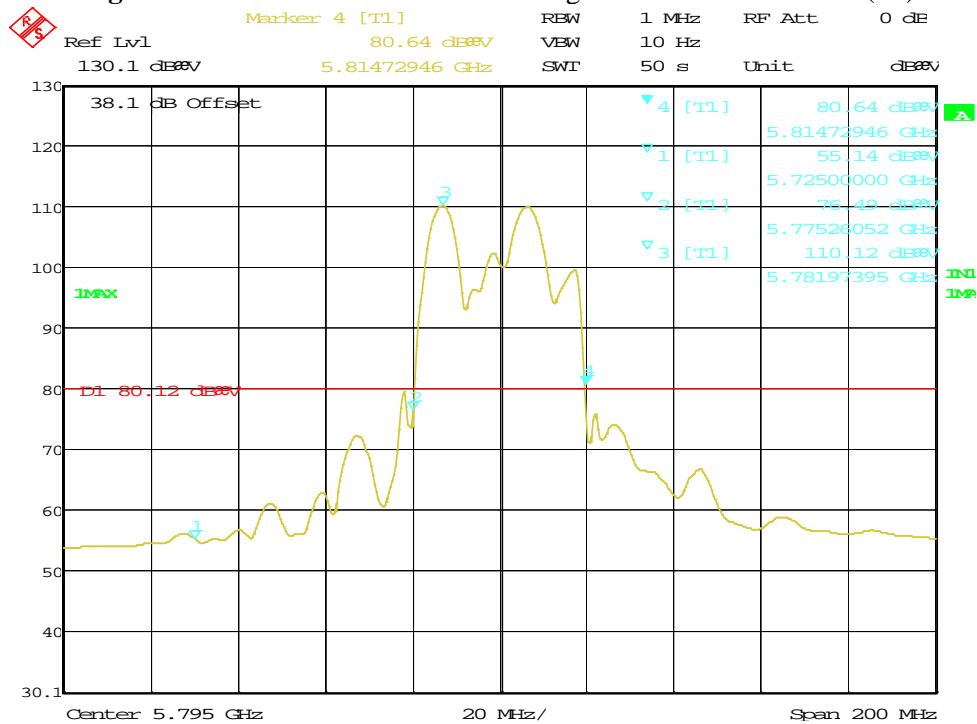
Date: 11.MAR.2013 14:46:24

Figure 238: Radiated Emission at the Edge for 5795 MHz – Horz. (AVE)



Date: 11.MAR.2013 14:49:30

Figure 239: Radiated Emission at the Edge for 5795 MHz – Vert. (Pk)



Date: 11.MAR.2013 14:50:51

Figure 240: Radiated Emission at the Edge for 5795 MHz – Vert. (AVE)

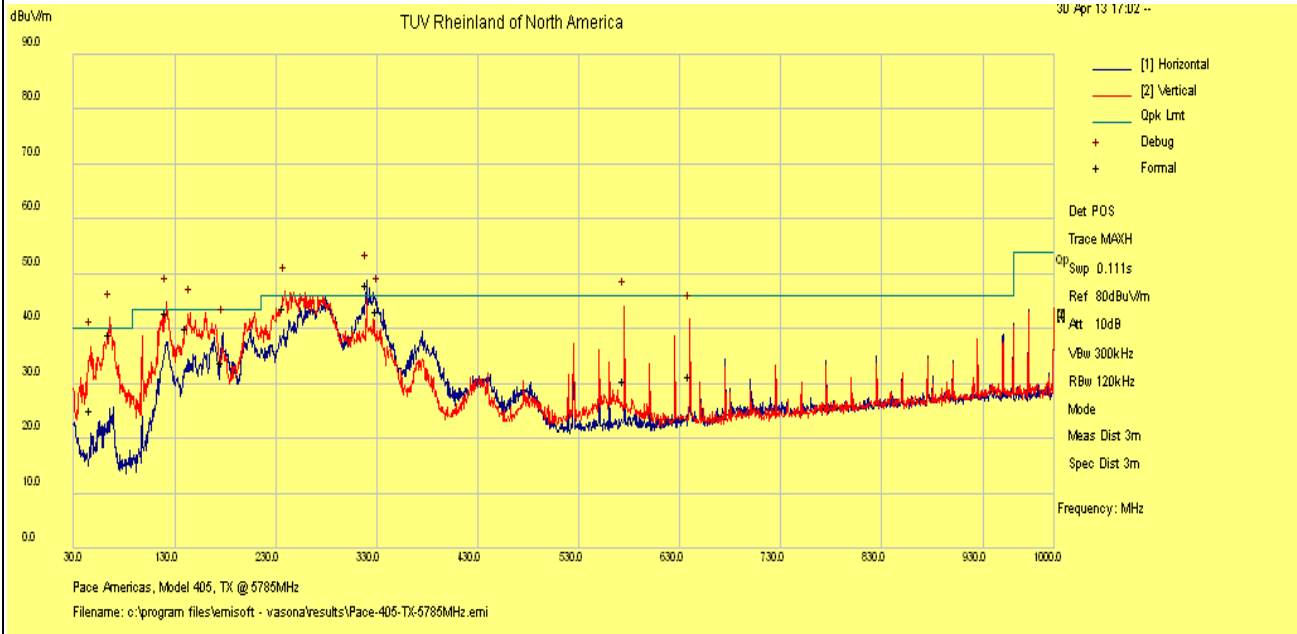
SOP 1 Radiated Emissions					Tracking # 31360999.002 Page 1 of 21				
EUT Name		Wireless Video Access Point			Date		April 30, 2013		
EUT Model		405			Temp / Hum in		23°C / 28%rh		
EUT Serial		09130M000104			Temp / Hum out		N/A		
EUT Config.		Y-Axis, 802.11n HT20 at 6.5 Mbps/ chain			Line AC / Freq		120 Vac/60 Hz		
Standard		CFR47 Part 15 Subpart C			RBW / VBW		120 kHz/ 300 kHz		
Dist/Ant Used		3m / JB3			Performed by		Jeremy Luong		
Emission Freq (MHz)	ANT Polar (H/V)	ANT Pos (cm)	Table Pos (deg)	FIM QP (dBuV/m)	Total CF (dBuV)	E-Field QP (dBuV/m)	Spec Limit (dBuV/m)	Spec Margin (dB)	Type
30 MHz to 1 GHz Transmitted at 802.11n HT20, 5785 MHz 6.5 Mbps/chain									
47.11	V	400	186	42.42	-17.19	25.24	40.00	-14.76	Spurious
65.83	V	149	352	57.44	-18.46	38.98	40.00	-1.02	Spurious
121.93	V	103	356	54.89	-11.99	42.90	43.50	-0.60	Spurious
141.91	V	103	206	52.93	-12.70	40.23	43.50	-3.27	Spurious
176.84	H	400	356	47.93	-13.97	33.96	43.50	-9.54	Spurious
237.35	V	139	46	56.50	-12.79	43.71	46.00	-2.29	Spurious
330.23	H	207	322	53.28	-9.95	43.33	46.00	-2.67	Spurious
574.99	V	400	262	36.36	-5.84	30.52	46.00	-15.48	Spurious
639.99	V	400	356	36.30	-4.75	31.55	46.00	-14.45	Spurious
Spec Margin = E-Field QP - Limit, E-Field QP = FIM QP+ Total CF ± Uncertainty									
Total CF= Amp Gain + Cable Loss + ANT Factor									
Combined Standard Uncertainty $u_c(y) = \pm 3.2$ dB Expanded Uncertainty $U = k u_c(y)$ $k = 2$ for 95% confidence									
Notes: Worst case was observed on Y-axis at 802.11n HT20, 5200 MHz 6.5 Mbps.									
All radio related emissions passed Class B limit.									

SOP 1 Radiated Emissions

Tracking # 31360999.002 Page 2 of 21

EUT Name	Wireless Video Access Point	Date	April 30, 2013
EUT Model	405	Temp / Hum in	23°C / 28%rh
EUT Serial	09130M000104	Temp / Hum out	N/A
EUT Config.	Y-Axis, 802.11n HT20 at 6.5 Mbps/ chain	Line AC	120 Vac 60 Hz
Standard	CFR47 Part 15 Subpart C	RBW / VBW	120 kHz / 300 kHz
Dist/Ant Used	3m – JB3	Performed by	Jeremy Luong

30 MHz to 1 GHz Plots for Transmit Mode at 5785 MHz



Notes: FCC Class B Limit. 320.00 MHz emission was verified that it was not radio related. It was from digital circuitry.

SOP 1 Radiated Emissions				Tracking # 31360999.002 Page 3 of 21				
EUT Name	Wireless Video Access Point			Date	August 18, 2013			
EUT Model	405			Temp / Hum in	23°C / 45%rh			
EUT Serial	09130M000104			Temp / Hum out	N/A			
EUT Config.	Y-Axis, 802.11a at 6 Mbps			Line AC / Freq	120 Vac/60 Hz			
Standard	CFR47 Part 15 Subpart C			RBW / VBW	1 MHz/ 3 MHz			
Dist/Ant Used	3m / EMCO3115 / 1m - RA42-K-F-4B-C			Performed by	Jeremy Luong			
Emission Freq (MHz)	ANT Polar (H/V)	ANT Pos (cm)	Table Pos (deg)	Peak (dBuV/m)	Average (dBuV/m)	Spec Limit (dBuV/m)	Spec Margin (dB)	Type
Transmitted Data at 5745 MHz @ 22 dBm								
1279.98	H	114	58	49.46	43.41	54.00	-10.59	Spurious
11486.23	H	99	112	55.35	43.50	54.00	-10.50	Harmonics
5577.52	V	168	250	60.08	49.60	54.00	-4.40	Spurious
5615.23	V	121	182	51.67	40.73	54.00	-13.27	Spurious
5984.94	V	147	302	58.58	51.65	54.00	-2.35	Spurious
6056.65	V	190	246	55.27	43.78	54.00	-10.22	Spurious
7660.03	V	260	280	45.87	41.05	54.00	-12.96	Spurious
11487.07	V	134	68	48.92	42.80	54.00	-11.20	Harmonics
22975.80	V	99	103	68.47	56.06	64.00	-7.94	Harmonics
22979.80	H	97	103	66.28	59.68	64.00	-4.32	Harmonics
Transmitted Data at 5785 MHz @ 22 dBm								
1025.03	H	142	64	44.86	42.57	54.00	-11.43	Spurious
1279.93	H	109	316	44.55	44.20	54.00	-9.80	Spurious
11569.92	H	180	66	54.81	44.90	54.00	-9.10	Harmonics
5547.14	V	199	258	58.90	49.62	54.00	-4.38	Spurious
6026.43	V	228	236	58.05	49.90	54.00	-4.10	Spurious
6189.48	V	187	244	54.49	45.11	54.00	-8.90	Spurious
11568.06	V	185	140	56.18	41.60	54.00	-12.40	Harmonics
23139.90	H	103	120	54.56	50.24	64.00	-13.76	Harmonics
23139.90	V	103	462	56.11	53.40	64.00	-10.60	Harmonics
19283.20	V	102	417	46.86	44.44	64.00	-19.56	Harmonics
Transmitted Data at 5825 MHz @ 22 dBm								
1280.06	H	110	320	45.30	44.90	54.00	-9.10	Spurious
11650.54	H	261	126	56.22	49.80	54.00	-4.20	Harmonics
5586.76	V	159	116	59.84	46.01	54.00	-7.99	Spurious
5984.81	V	213	236	58.00	53.23	54.00	-0.77	Spurious
6237.42	V	196	242	53.00	41.80	54.00	-12.20	Spurious
11651.75	V	119	122	51.32	44.90	54.00	-9.10	Harmonics
23300.00	H	93	112	53.09	49.00	64.00	-15.00	Harmonics
23299.80	V	105	113	55.12	51.47	64.00	-12.53	Harmonics
19416.50	V	90	40	51.26	46.78	64.00	-17.22	Harmonics
Spec Margin = E-Field Average - Limit, E-Field Average = Field Meas.+ Total CF ± Uncertainty								
Total CF= Amp Gain + Cable Loss + ANT Factor								
Combined Standard Uncertainty $u_c(y) = \pm 3.2$ dB Expanded Uncertainty $U = ku_c(y)$ $k = 2$ for 95% confidence								
Notes: Worst case was observed on Y-axis, 6 Mbps.								

SOP 1 Radiated Emissions				Tracking # 31360999.002 Page 4 of 21				
EUT Name	Wireless Video Access Point			Date	April 10, 2013			
EUT Model	405			Temp / Hum in	23°C / 33%rh			
EUT Serial	09130M000104			Temp / Hum out	N/A			
EUT Config.	Y-Axis, 802.11 HT20 at 6.5 Mbps			Line AC / Freq	120 Vac/60 Hz			
Standard	CFR47 Part 15 Subpart C			RBW / VBW	1 MHz/ 3 MHz			
Dist/Ant Used	3m / EMCO3115 / 1m - RA42-K-F-4B-C			Performed by	Jeremy Luong			
Emission Freq (MHz)	ANT Polar (H/V)	ANT Pos (cm)	Table Pos (deg)	Peak (dBuV/m)	Average (dBuV/m)	Spec Limit (dBuV/m)	Spec Margin (dB)	Type
Transmitted Data at 5745 MHz @ 22 dBm								
1279.95	H	101	65	48.12	44.02	53.98	-9.96	Spurious
5577.35	V	171	173	63.16	51.48	53.98	-2.50	Spurious
5578.73	H	319	268	62.11	50.51	53.98	-3.47	Spurious
5981.63	H	350	269	60.26	48.82	53.98	-5.16	Spurious
5985.09	V	230	-33	60.00	51.03	53.98	-2.95	Spurious
7659.94	V	229	314	50.59	46.01	53.98	-7.97	Spurious
11486.10	H	240	77	62.89	49.78	53.98	-4.20	Harmonics
11487.10	V	272	69	62.84	49.81	53.98	-4.17	Harmonics
22969.90	V	99	32	74.10	59.13	64.00	-4.87	Harmonics
22979.80	H	114	107	68.98	61.90	64.00	-2.10	Harmonics
Transmitted Data at 5785 MHz @ 22 dBm								
1279.96	H	261	58	46.28	41.89	53.98	-12.09	Spurious
2428.05	V	280	-48	44.96	40.15	53.98	-13.83	Spurious
5058.90	H	261	255	58.82	46.71	53.98	-7.27	Spurious
5545.16	V	177	234	62.96	52.61	53.98	-1.37	Spurious
6025.01	V	213	155	59.52	50.99	53.98	-2.99	Spurious
7713.29	V	212	237	53.44	45.48	53.98	-8.50	Spurious
11568.90	V	107	50	65.35	52.79	53.98	-1.19	Harmonics
11569.80	H	136	414	63.99	51.73	53.98	-2.25	Harmonics
23147.00	V	93	477	69.16	56.73	64.00	-7.27	Harmonics
23139.90	H	99	95	63.33	58.46	64.00	-5.54	Harmonics
28924.80	V	101	163	52.72	45.22	64.00	-18.78	Harmonics
Transmitted Data at 5825 MHz @ 22 dBm								
1280.03	H	100	423	48.13	44.53	53.98	-9.45	Spurious
5061.87	H	269	274	59.73	47.23	53.98	-6.75	Spurious
5564.25	V	205	143	61.20	49.97	53.98	-4.01	Spurious
6041.64	V	246	302	61.63	51.63	53.98	-2.35	Spurious
7739.95	V	213	-23	50.66	43.14	53.98	-10.84	Spurious
11609.80	V	122	480	64.12	51.46	53.98	-2.52	Harmonics
11609.90	H	129	50	63.75	51.44	53.98	-2.54	Harmonics
23291.40	H	97	46	69.76	55.93	64.00	-8.07	Harmonics
23299.50	V	96	32	72.78	60.58	64.00	-3.42	Harmonics

Spec Margin = E-Field Average - Limit, E-Field Average = Field Meas.+ Total CF \pm Uncertainty
Total CF= Amp Gain + Cable Loss + ANT Factor
Combined Standard Uncertainty $u_c(y) = \pm 3.2$ dB Expanded Uncertainty $U = k u_c(y)$ $k = 2$ for 95% confidence
Notes: Worst case was observed on Y-axis, 6.5 Mbps.

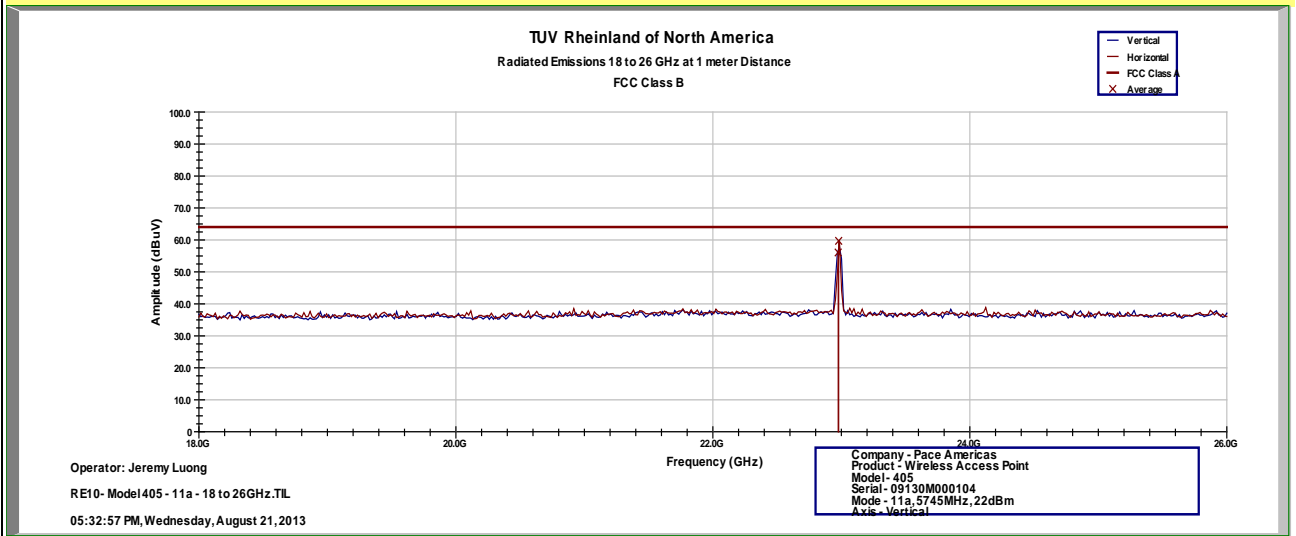
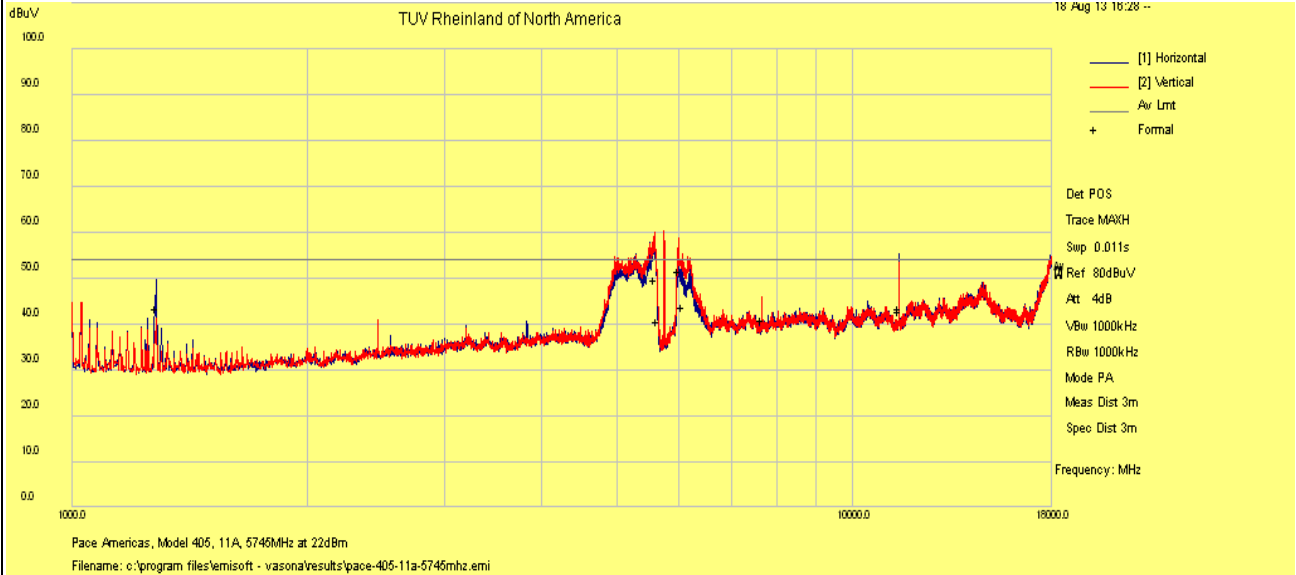
SOP 1 Radiated Emissions				Tracking # 31360999.002 Page 5 of 21				
EUT Name	Wireless Video Access Point			Date	April 10, 2013			
EUT Model	405			Temp / Hum in	23°C / 33%rh			
EUT Serial	09130M000104			Temp / Hum out	N/A			
EUT Config.	Y-Axis, 802.11 HT40 at 13.5 Mbps			Line AC / Freq	120 Vac/60 Hz			
Standard	CFR47 Part 15 Subpart C			RBW / VBW	1 MHz/ 3 MHz			
Dist/Ant Used	3m / EMCO3115 / 1m - RA42-K-F-4B-C			Performed by	Jeremy Luong			
Emission Freq (MHz)	ANT Polar (H/V)	ANT Pos (cm)	Table Pos (deg)	Peak (dBuV/m)	Average (dBuV/m)	Spec Limit (dBuV/m)	Spec Margin (dB)	Type
Transmitted Data at 5755 MHz @ 22 dBm								
1279.91	H	105	292	50.76	46.90	53.98	-7.08	Spurious
5016.72	H	224	270	54.81	43.29	53.98	-10.69	Spurious
5039.90	V	179	123	53.38	42.05	53.98	-11.93	Spurious
5578.93	V	176	243	63.82	51.48	53.98	-2.50	Spurious
5985.24	V	131	191	59.34	48.48	53.98	-5.50	Spurious
7673.25	V	212	228	54.26	46.80	53.98	-7.18	Spurious
11507.40	V	108	418	61.82	51.81	53.98	-2.17	Harmonics
11510.10	H	142	71	60.64	50.86	53.98	-3.12	Harmonics
23029.70	V	97	31	65.20	57.52	64.00	-6.48	Harmonics
23019.80	H	99	100	64.82	60.51	64.00	-3.49	Harmonics
Transmitted Data at 5795 MHz @ 22 dBm								
5039.92	V	144	274	57.71	48.99	53.98	-4.99	Spurious
5554.96	V	141	236	62.66	51.90	53.98	-2.08	Spurious
6025.23	V	127	191	61.54	49.52	53.98	-4.46	Spurious
7726.54	V	107	221	53.41	44.14	53.98	-9.84	Spurious
11589.80	V	100	45	62.76	52.61	53.98	-1.37	Harmonics
11589.80	H	97	150	61.31	51.27	53.98	-2.71	Harmonics
23169.50	V	100	36	65.84	57.73	64.00	-6.27	Harmonics
23179.80	H	100	32	62.97	59.45	64.00	-4.55	Harmonics
Spec Margin = E-Field Average - Limit, E-Field Average = Field Meas.+ Total CF ± Uncertainty								
Total CF= Amp Gain + Cable Loss + ANT Factor								
Combined Standard Uncertainty $u_c(y) = \pm 3.2$ dB Expanded Uncertainty $U = ku_c(y)$ $k = 2$ for 95% confidence								
Notes: Worst case was observed on Y-axis, 13.5 Mbps.								

SOP 1 Radiated Emissions

Tracking # 31360999.002 Page 6 of 21

EUT Name	Wireless Video Access Point	Date	August 18 & 21, 2013
EUT Model	405	Temp / Hum in	23°C / 45%rh
EUT Serial	09130M000104	Temp / Hum out	N/A
EUT Config.	Y-Axis, 802.11a at 6 Mbps	Line AC	120 Vac 60 Hz
Standard	CFR47 Part 15 Subpart C	RBW / VBW	1 MHz / 3 MHz
Dist/Ant Used	3m - EMCO3115 / 1m - RA42-K-F-4B-C	Performed by	Jeremy Luong

Above 1 GHz Plots for Transmit Mode at 5745 MHz



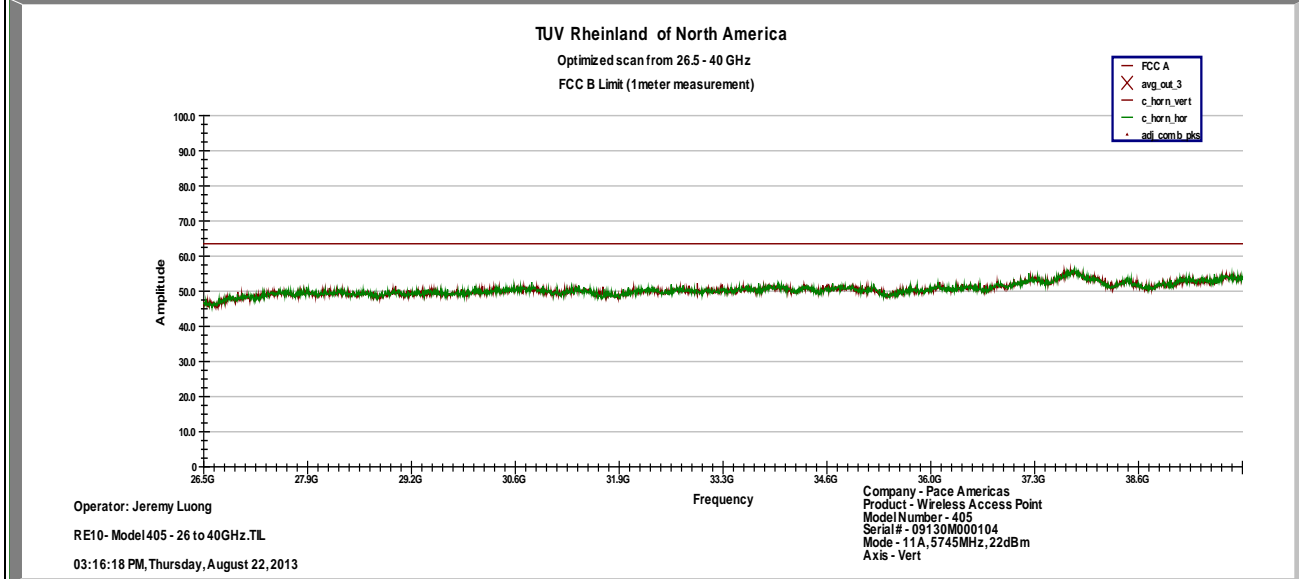
Notes: Limit was extrapolated to 1m distance for 18 GHz – 26 GHz range.

SOP 1 Radiated Emissions

Tracking # 31360999.002 Page 7 of 21

EUT Name	Wireless Video Access Point	Date	August 18, 2013
EUT Model	405	Temp / Hum in	23°C / 45%rh
EUT Serial	09130M000104	Temp / Hum out	N/A
EUT Config.	Y-Axis, 802.11a at 6 Mbps	Line AC	120 Vac 60 Hz
Standard	CFR47 Part 15 Subpart C	RBW / VBW	1 MHz / 3 MHz
Dist/Ant Used	1m - RA42-K-F-4B-C	Performed by	Jeremy Luong

Above 1 GHz Plots for Transmit Mode at 5745 MHz



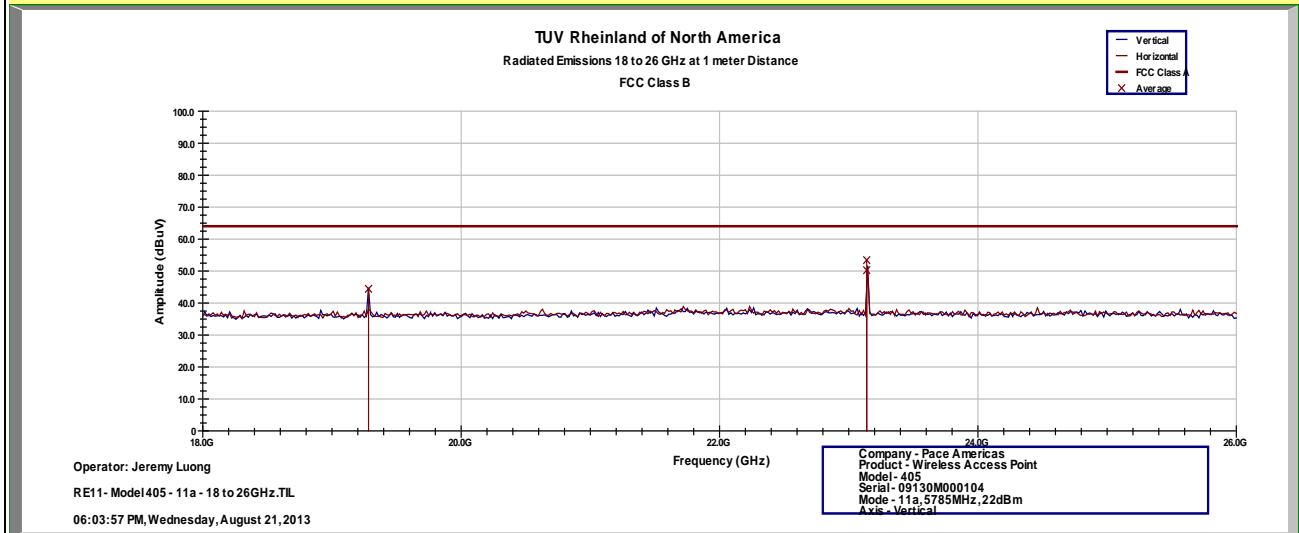
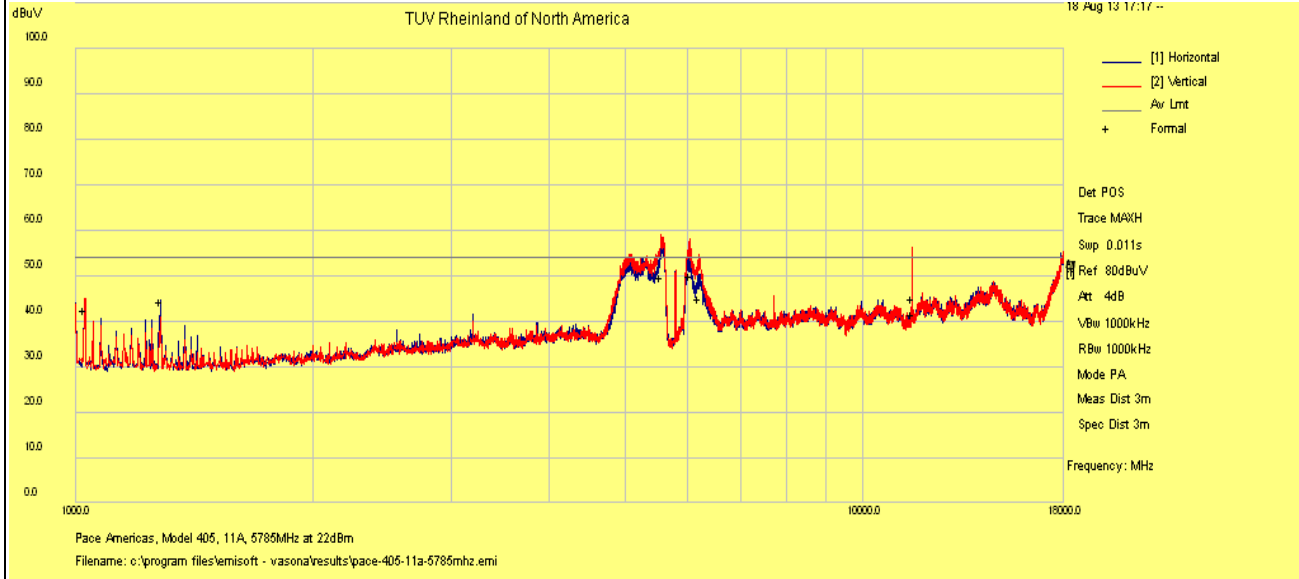
Notes: Limit was extrapolated to 1m distance for 26.5 GHz – 40 GHz range.

SOP 1 Radiated Emissions

Tracking # 31360999.002 Page 8 of 21

EUT Name	Wireless Video Access Point	Date	August 18 & 21, 2013
EUT Model	405	Temp / Hum in	23°C / 45%rh
EUT Serial	09130M000104	Temp / Hum out	N/A
EUT Config.	Y-Axis, 802.11a at 6 Mbps	Line AC	120 Vac 60 Hz
Standard	CFR47 Part 15 Subpart C	RBW / VBW	1 MHz / 3 MHz
Dist/Ant Used	3m - EMCO3115 / 1m - RA42-K-F-4B-C	Performed by	Jeremy Luong

Above 1 GHz Plots for Transmit Mode at 5785 MHz



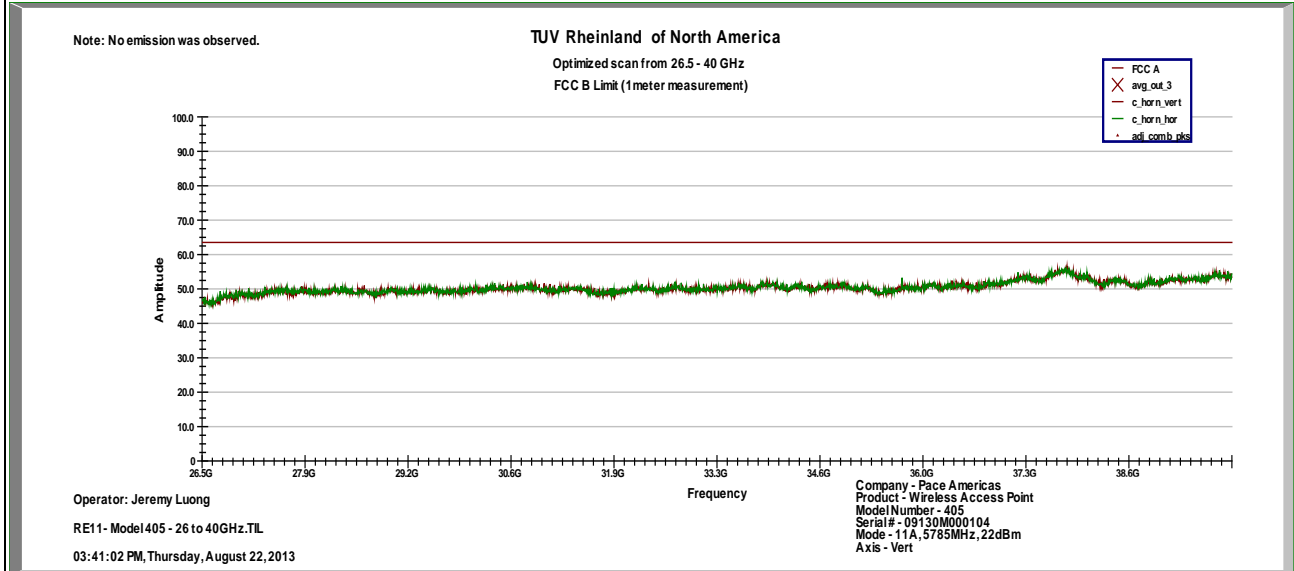
Notes: Limit was extrapolated to 1m distance for 18 GHz – 26 GHz range.

SOP 1 Radiated Emissions

Tracking # 31360999.002 Page 9 of 21

EUT Name	Wireless Video Access Point	Date	August 22, 2013
EUT Model	405	Temp / Hum in	23°C / 45%rh
EUT Serial	09130M000104	Temp / Hum out	N/A
EUT Config.	Y-Axis, 802.11a at 6 Mbps	Line AC	120 Vac 60 Hz
Standard	CFR47 Part 15 Subpart C	RBW / VBW	1 MHz / 3 MHz
Dist/Ant Used	1m - RA42-K-F-4B-C	Performed by	Jeremy Luong

Above 1 GHz Plots for Transmit Mode at 5785 MHz



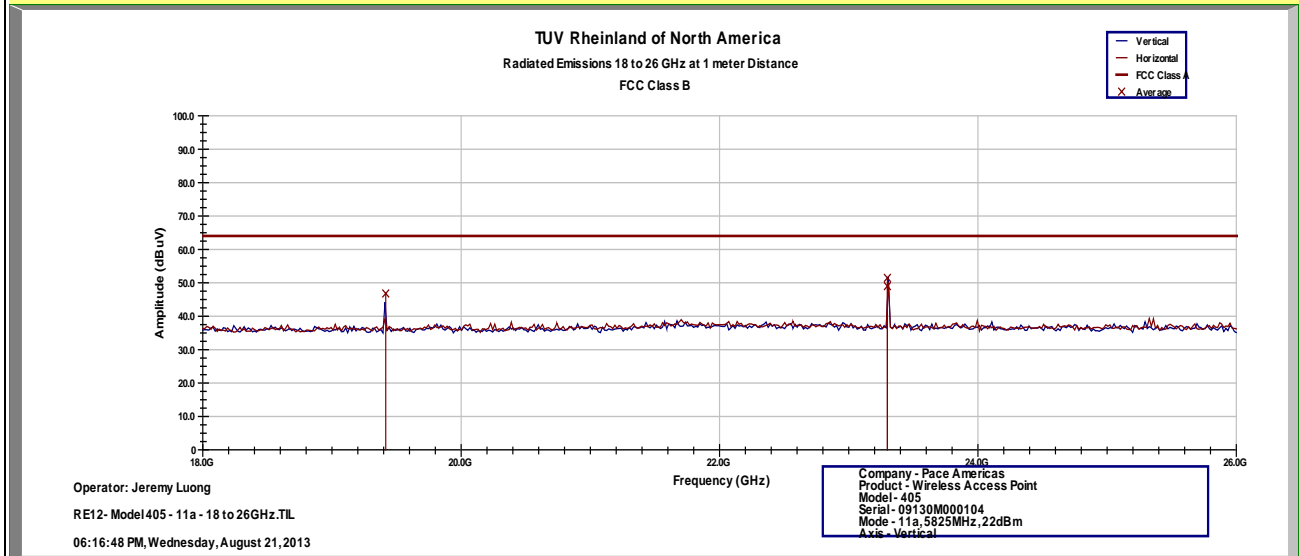
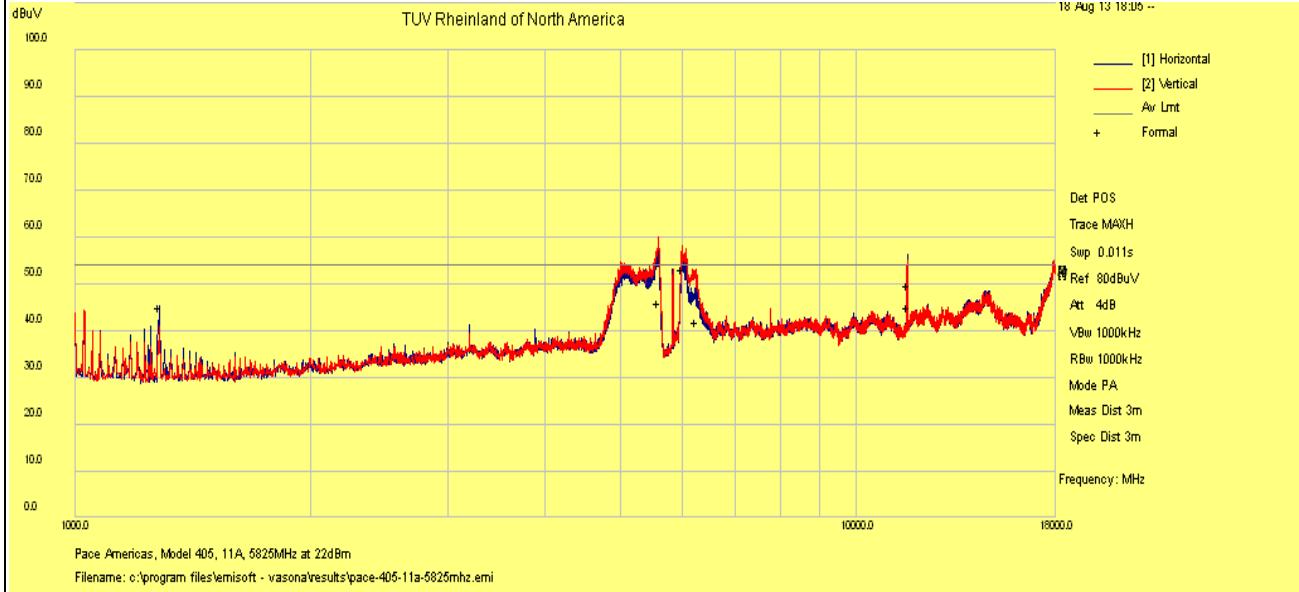
Notes: Limit was extrapolated to 1m distance for 26.5 GHz – 40 GHz range.

SOP 1 Radiated Emissions

Tracking # 31360999.002 Page 10 of 21

EUT Name	Wireless Video Access Point	Date	August 18 & 21, 2013
EUT Model	405	Temp / Hum in	23°C / 45%rh
EUT Serial	09130M000104	Temp / Hum out	N/A
EUT Config.	Y-Axis, 802.11a at 6 Mbps	Line AC	120 Vac 60 Hz
Standard	CFR47 Part 15 Subpart C	RBW / VBW	1 MHz / 3 MHz
Dist/Ant Used	3m - EMCO3115 / 1m - RA42-K-F-4B-C	Performed by	Jeremy Luong

Above 1 GHz Plots for Transmit Mode at 5825 MHz



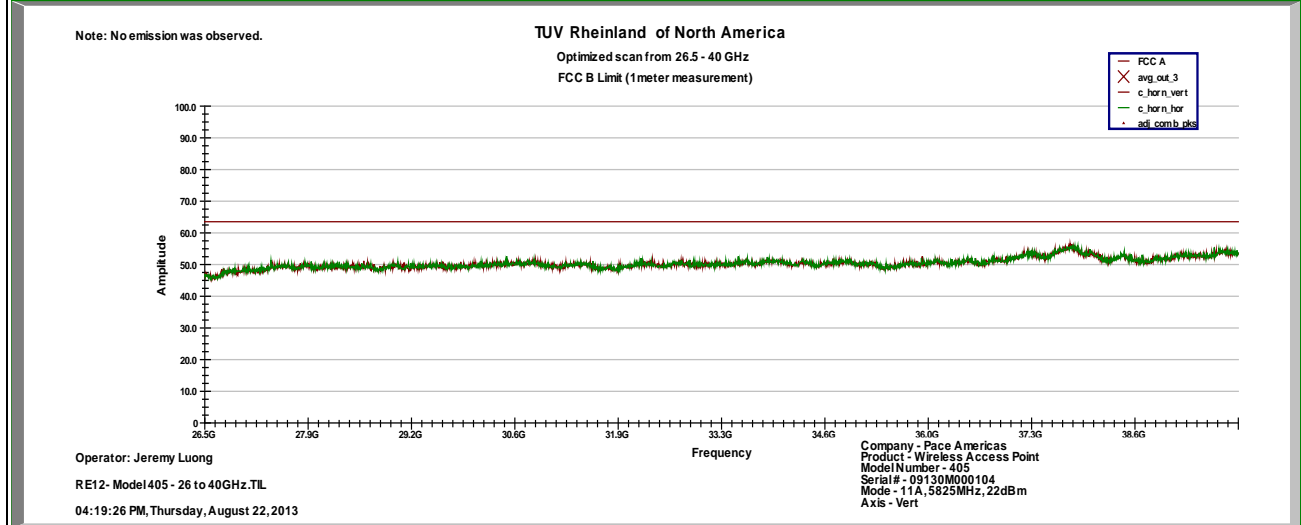
Notes: Limit was extrapolated to 1m distance for 18 GHz – 26 GHz range.

SOP 1 Radiated Emissions

Tracking # 31360999.002 Page 11 of 21

EUT Name	Wireless Video Access Point	Date	August 22, 2013
EUT Model	405	Temp / Hum in	23°C / 45%rh
EUT Serial	09130M000104	Temp / Hum out	N/A
EUT Config.	Y-Axis, 802.11a at 6 Mbps	Line AC	120 Vac 60 Hz
Standard	CFR47 Part 15 Subpart C	RBW / VBW	1 MHz / 3 MHz
Dist/Ant Used	1m - RA42-K-F-4B-C	Performed by	Jeremy Luong

Above 1 GHz Plots for Transmit Mode at 5825 MHz



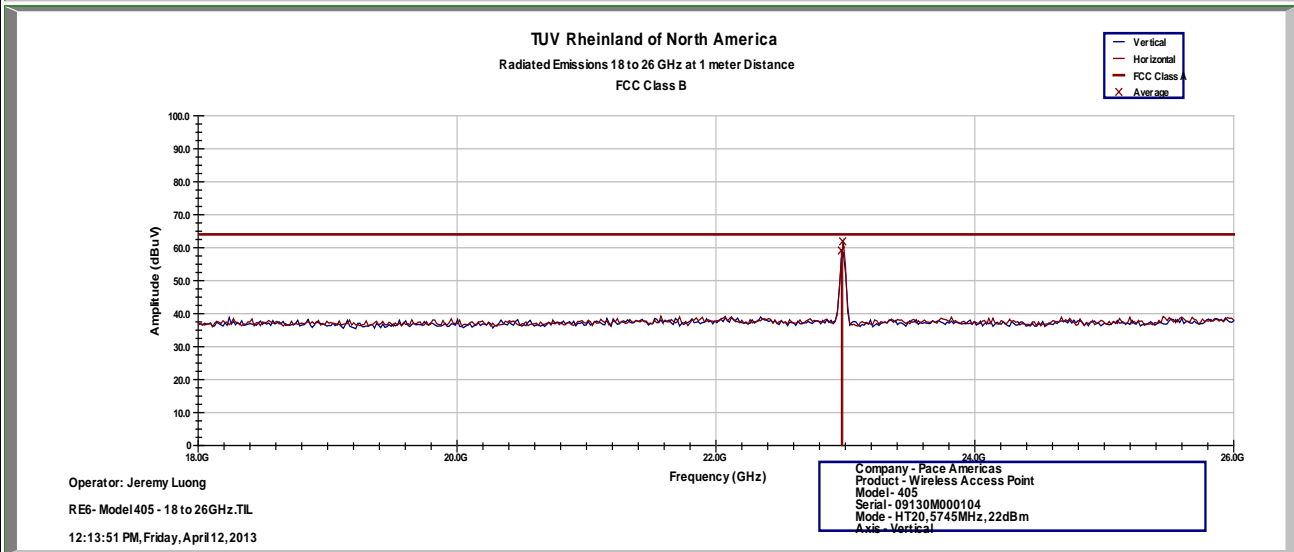
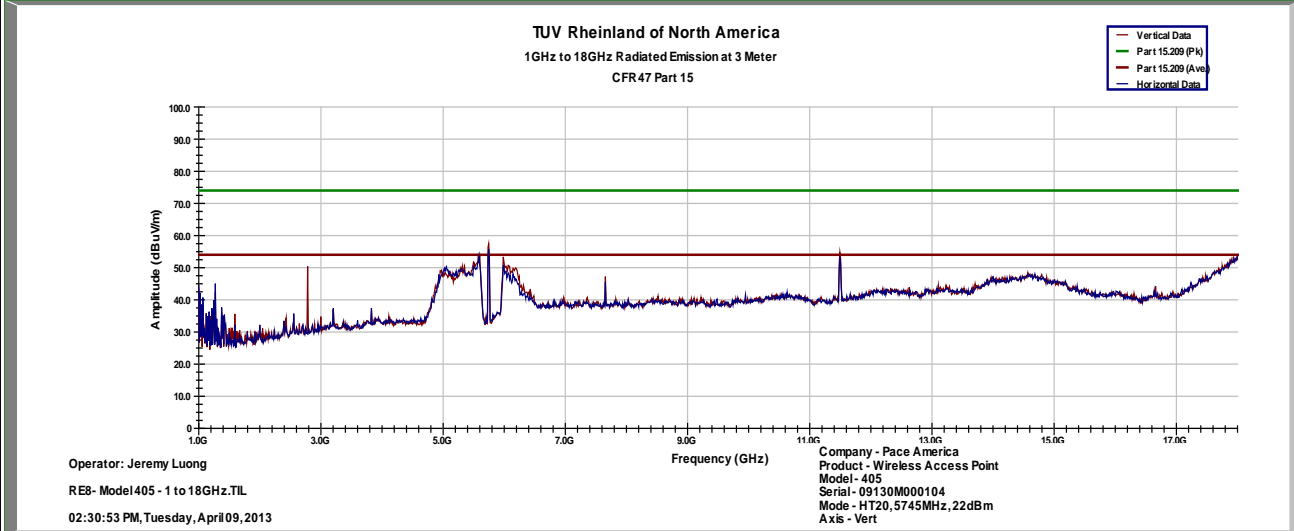
Notes: Limit was extrapolated to 1m distance for 26.5 GHz – 40 GHz range.

SOP 1 Radiated Emissions

Tracking # 31360999.002 Page 12 of 21

EUT Name	Wireless Video Access Point	Date	April 9 & 12, 2013
EUT Model	405	Temp / Hum in	23°C / 33%rh
EUT Serial	09130M000104	Temp / Hum out	N/A
EUT Config.	Y-Axis, 802.11n HT20 at 6.5 Mbps	Line AC	120 Vac 60 Hz
Standard	CFR47 Part 15 Subpart C	RBW / VBW	1 MHz / 3 MHz
Dist/Ant Used	3m - EMCO3115 / 1m - RA42-K-F-4B-C	Performed by	Jeremy Luong

Above 1 GHz Plots for Transmit Mode at 5745 MHz



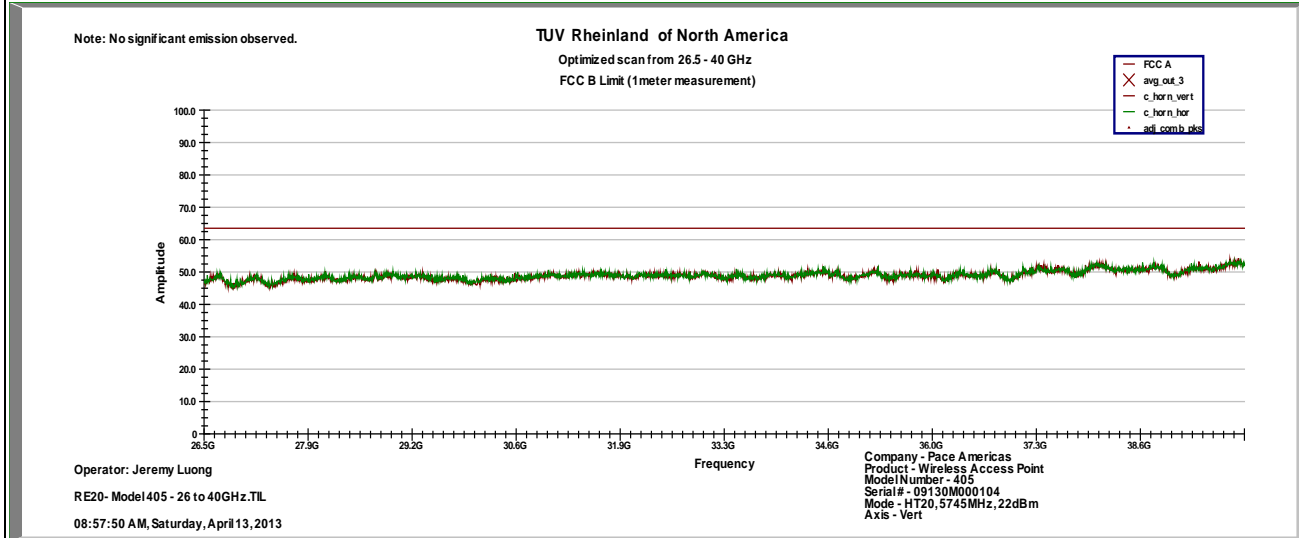
Notes: Limit was extrapolated to 1m distance for 18 GHz – 26 GHz range.

SOP 1 Radiated Emissions

Tracking # 31360999.002 Page 13 of 21

EUT Name	Wireless Video Access Point	Date	April 13, 2013
EUT Model	405	Temp / Hum in	23°C / 33%rh
EUT Serial	09130M000104	Temp / Hum out	N/A
EUT Config.	Y-Axis, 802.11n HT20 at 6.5 Mbps	Line AC	120 Vac 60 Hz
Standard	CFR47 Part 15 Subpart C	RBW / VBW	1 MHz / 3 MHz
Dist/Ant Used	1m - RA42-K-F-4B-C	Performed by	Jeremy Luong

Above 1 GHz Plots for Transmit Mode at 5745 MHz



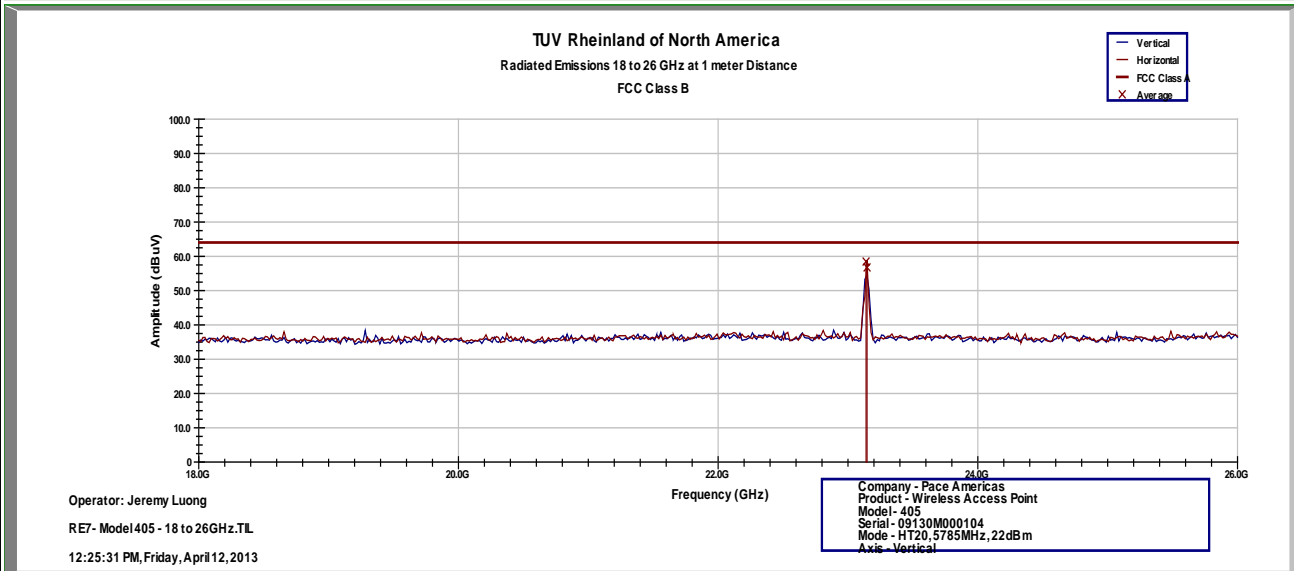
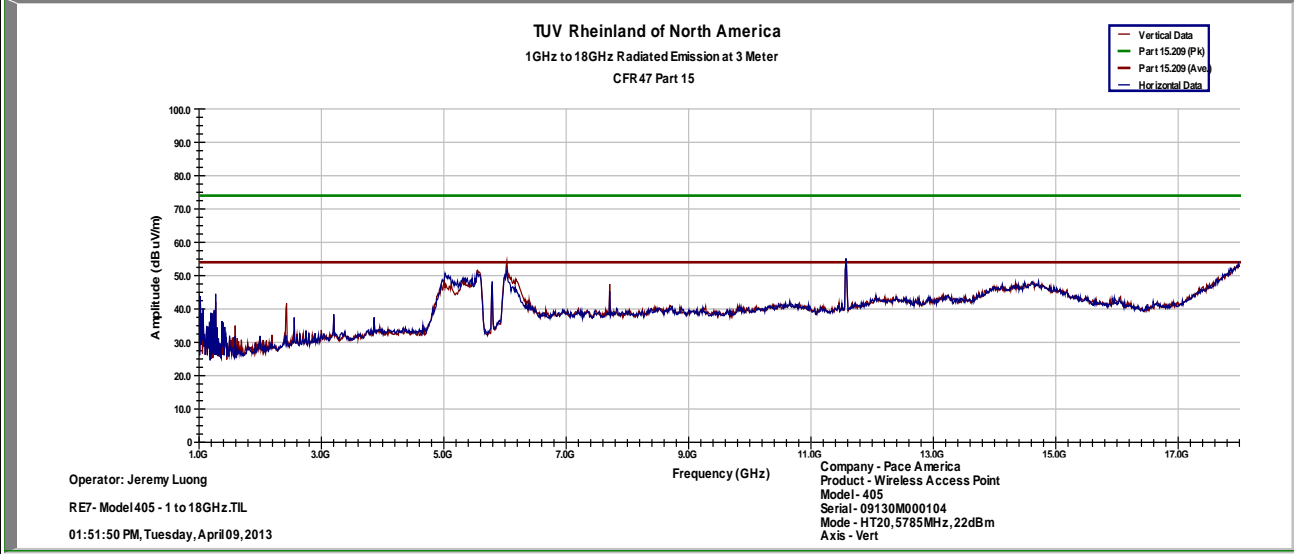
Notes: Limit was extrapolated to 1m distance for 26.5 GHz – 40 GHz range.

SOP 1 Radiated Emissions

Tracking # 31360999.002 Page 14 of 21

EUT Name	Wireless Video Access Point	Date	April 9 & 12, 2013
EUT Model	405	Temp / Hum in	23°C / 33%rh
EUT Serial	09130M000104	Temp / Hum out	N/A
EUT Config.	Y-Axis, 802.11n HT20 at 6.5 Mbps	Line AC	120 Vac 60 Hz
Standard	CFR47 Part 15 Subpart C	RBW / VBW	1 MHz / 3 MHz
Dist/Ant Used	3m - EMCO3115 / 1m - RA42-K-F-4B-C	Performed by	Jeremy Luong

Above 1 GHz Plots for Transmit Mode at 5785 MHz



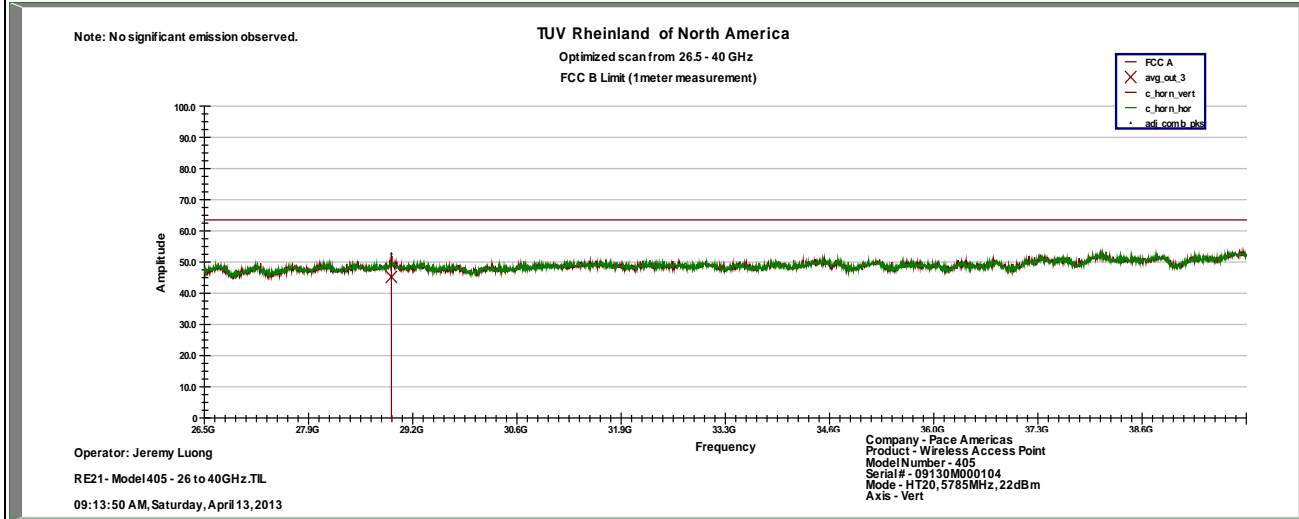
Notes: Limit was extrapolated to 1m distance for 18 GHz – 26 GHz range.

SOP 1 Radiated Emissions

Tracking # 31360999.002 Page 15 of 21

EUT Name	Wireless Video Access Point	Date	April 13, 2013
EUT Model	405	Temp / Hum in	23°C / 33%rh
EUT Serial	09130M000104	Temp / Hum out	N/A
EUT Config.	Y-Axis, 802.11n HT20 at 6.5 Mbps	Line AC	120 Vac 60 Hz
Standard	CFR47 Part 15 Subpart C	RBW / VBW	1 MHz / 3 MHz
Dist/Ant Used	1m - RA42-K-F-4B-C	Performed by	Jeremy Luong

Above 1 GHz Plots for Transmit Mode at 5785 MHz



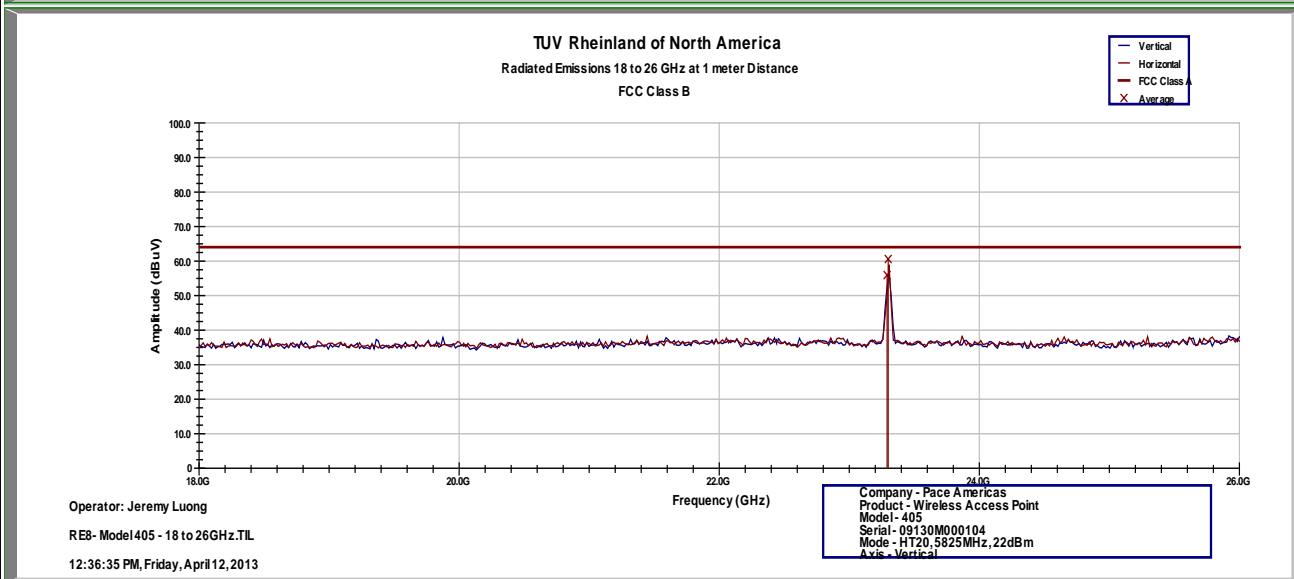
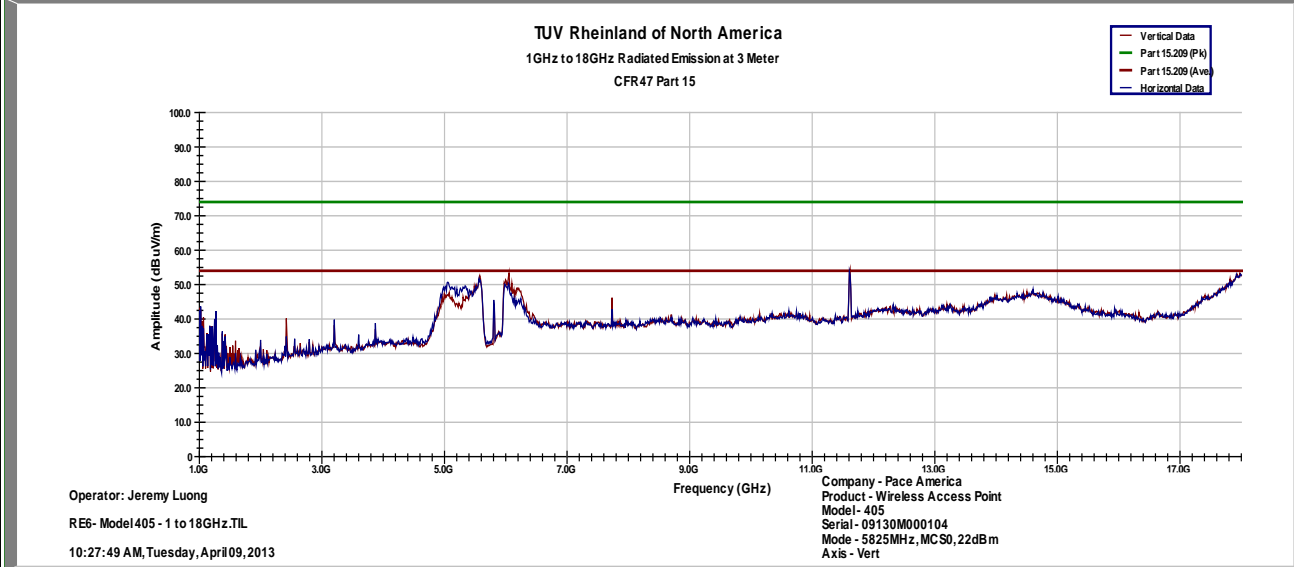
Notes: Limit was extrapolated to 1m distance for 26.5 GHz – 40 GHz range.

SOP 1 Radiated Emissions

Tracking # 31360999.002 Page 16 of 21

EUT Name	Wireless Video Access Point	Date	April 9 & 12, 2013
EUT Model	405	Temp / Hum in	23°C / 33%rh
EUT Serial	09130M000104	Temp / Hum out	N/A
EUT Config.	Y-Axis, 802.11n HT20 at 6.5 Mbps	Line AC	120 Vac 60 Hz
Standard	CFR47 Part 15 Subpart C	RBW / VBW	1 MHz / 3 MHz
Dist/Ant Used	3m - EMCO3115 / 1m - RA42-K-F-4B-C	Performed by	Jeremy Luong

Above 1 GHz Plots for Transmit Mode at 5825 MHz



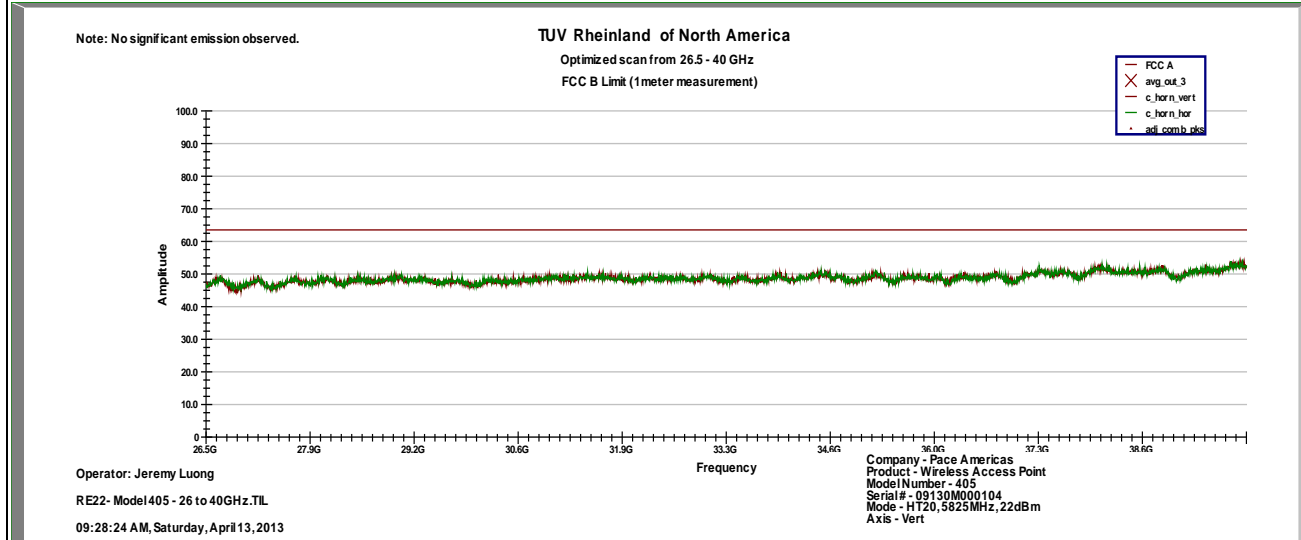
Notes: Limit was extrapolated to 1m distance for 18 GHz – 26 GHz range.

SOP 1 Radiated Emissions

Tracking # 31360999.002 Page 17 of 21

EUT Name	Wireless Video Access Point	Date	April 13, 2013
EUT Model	405	Temp / Hum in	23°C / 33%rh
EUT Serial	09130M000104	Temp / Hum out	N/A
EUT Config.	Y-Axis, 802.11n HT20 at 6.5 Mbps	Line AC	120 Vac 60 Hz
Standard	CFR47 Part 15 Subpart C	RBW / VBW	1 MHz / 3 MHz
Dist/Ant Used	1m - RA42-K-F-4B-C	Performed by	Jeremy Luong

Above 1 GHz Plots for Transmit Mode at 5825 MHz



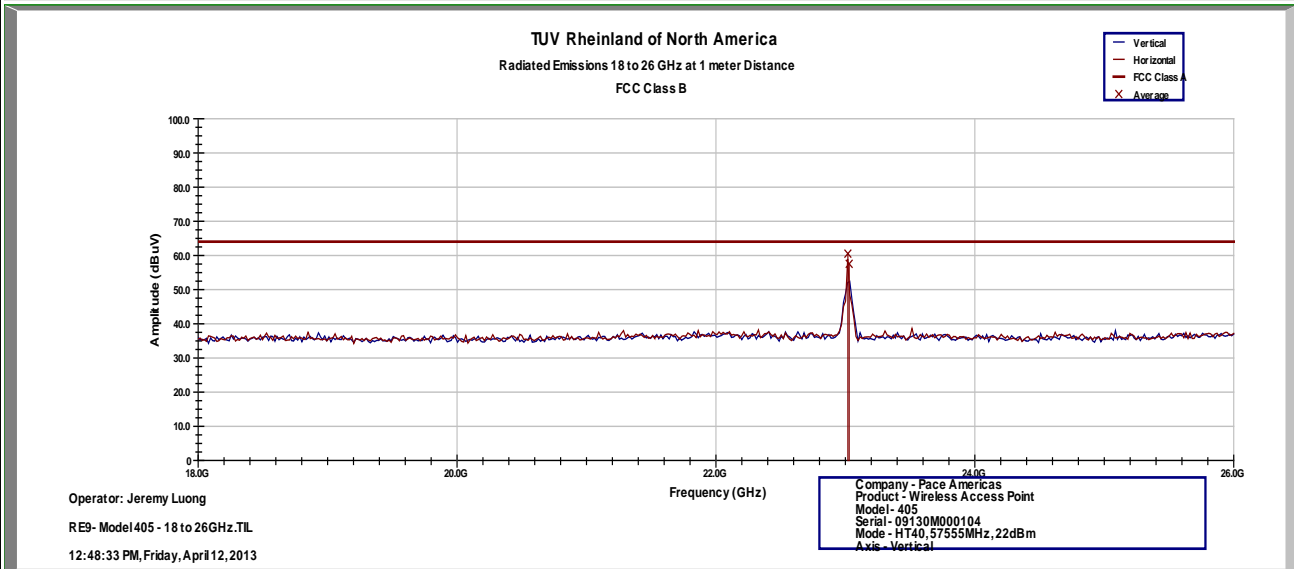
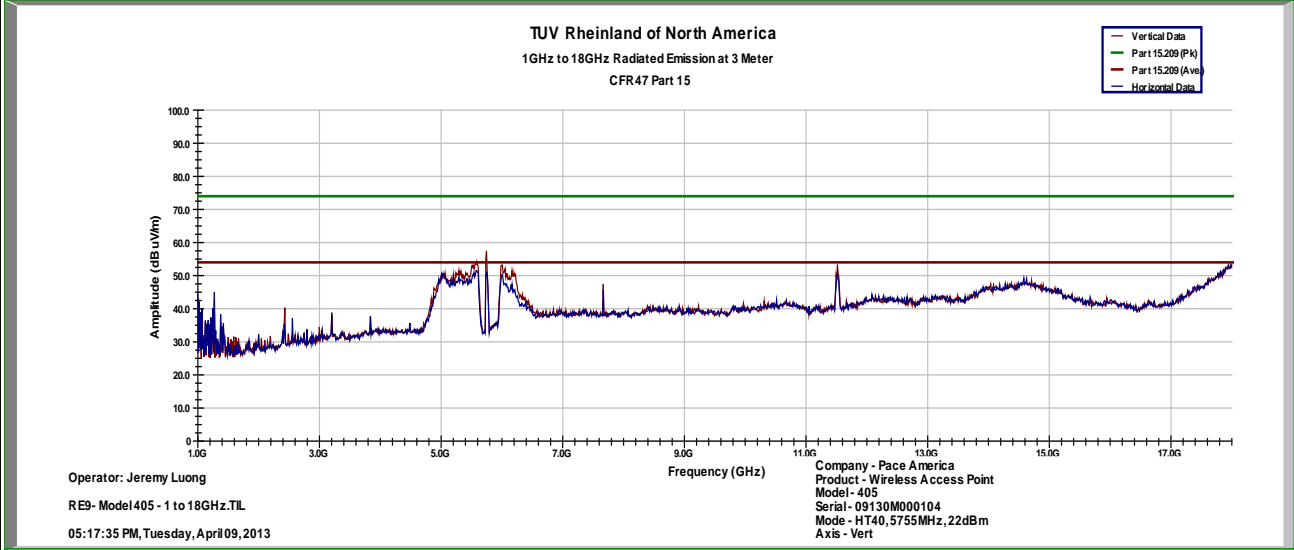
Notes: Limit was extrapolated to 1m distance for 26.5 GHz – 40 GHz range.

SOP 1 Radiated Emissions

Tracking # 31360999.002 Page 18 of 21

EUT Name	Wireless Video Access Point	Date	April 9 & 12, 2013
EUT Model	405	Temp / Hum in	23°C / 33%rh
EUT Serial	09130M000104	Temp / Hum out	N/A
EUT Config.	Y-Axis, 802.11 HT40 at 13.5 Mbps	Line AC	120 Vac 60 Hz
Standard	CFR47 Part 15 Subpart C	RBW / VBW	1 MHz / 3 MHz
Dist/Ant Used	3m - EMCO3115 / 1m - RA42-K-F-4B-C	Performed by	Jeremy Luong

Above 1 GHz Plots for Transmit Mode at 5755 MHz



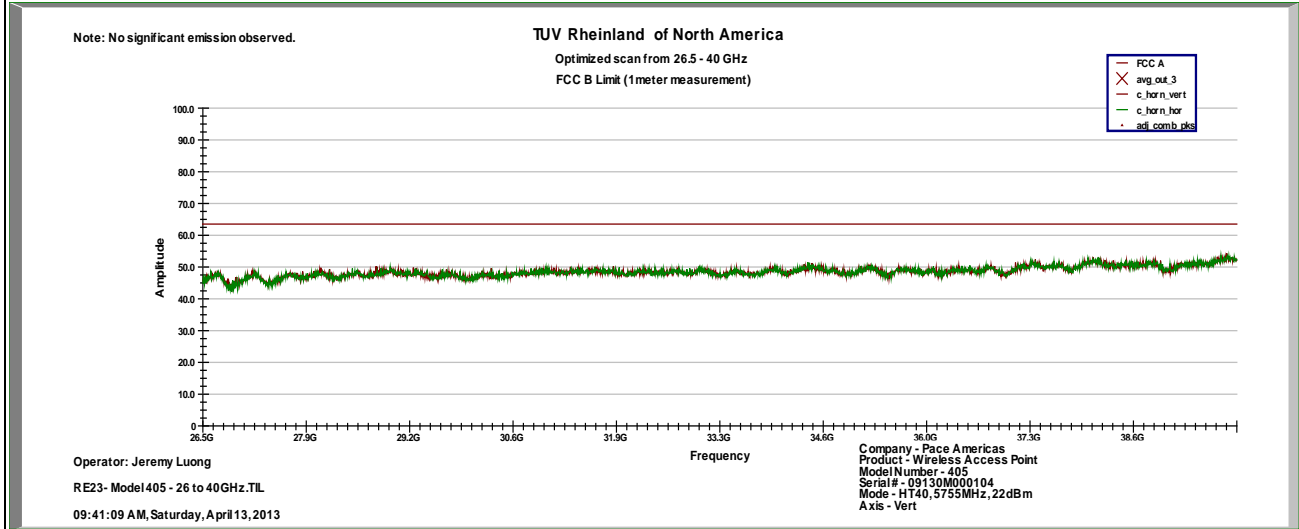
Notes: Limit was extrapolated to 1m distance for 18 GHz – 26 GHz range.

SOP 1 Radiated Emissions

Tracking # 31360999.002 Page 19 of 21

EUT Name	Wireless Video Access Point	Date	April 13, 2013
EUT Model	405	Temp / Hum in	23°C / 33%rh
EUT Serial	09130M000104	Temp / Hum out	N/A
EUT Config.	Y-Axis, 802.11 HT40 at 13.5 Mbps	Line AC	120 Vac 60 Hz
Standard	CFR47 Part 15 Subpart C	RBW / VBW	1 MHz / 3 MHz
Dist/Ant Used	1m - RA42-K-F-4B-C	Performed by	Jeremy Luong

Above 1 GHz Plots for Transmit Mode at 5755 MHz



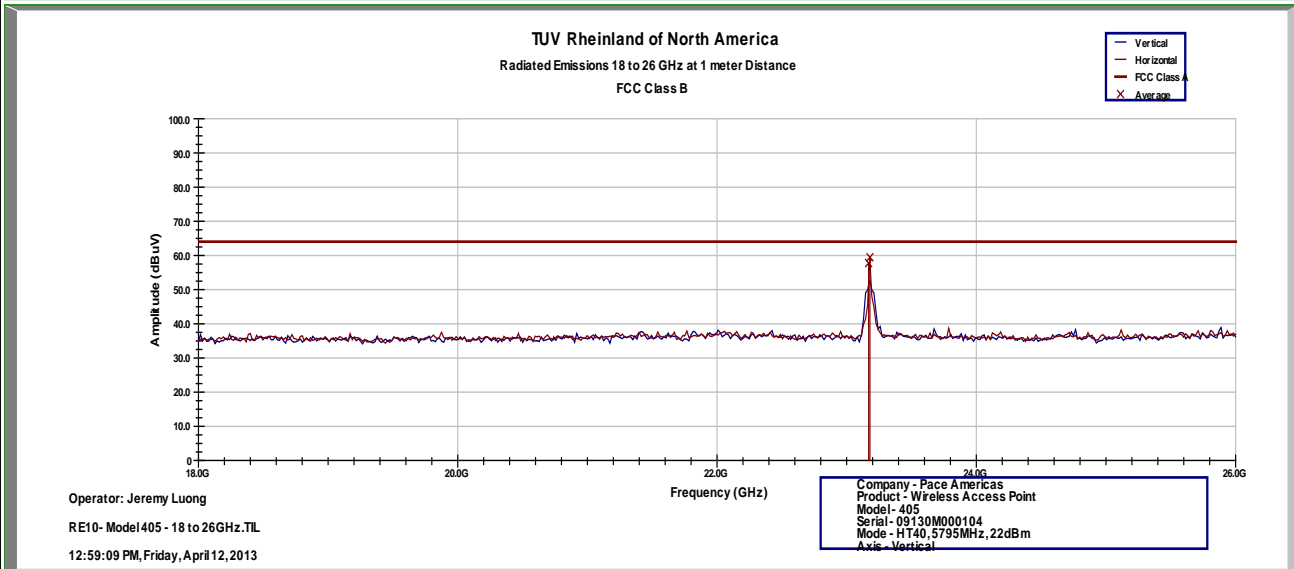
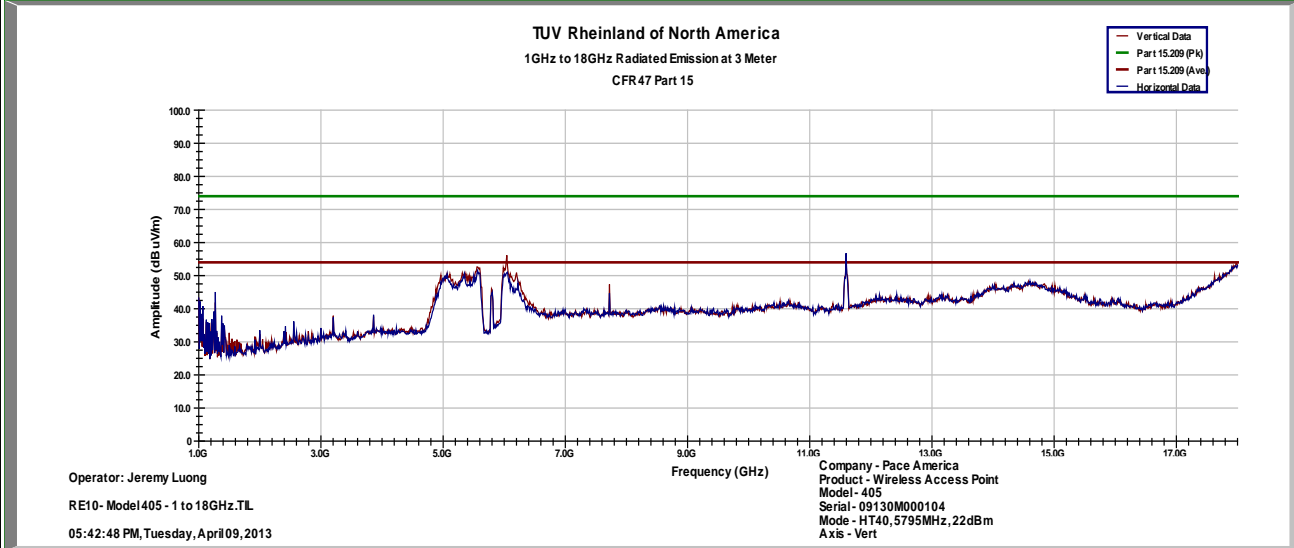
Notes: Limit was extrapolated to 1m distance for 26.5 GHz – 40 GHz range.

SOP 1 Radiated Emissions

Tracking # 31360999.002 Page 20 of 21

EUT Name	Wireless Video Access Point	Date	April 9 & 12, 2013
EUT Model	405	Temp / Hum in	23°C / 33%rh
EUT Serial	09130M000104	Temp / Hum out	N/A
EUT Config.	Y-Axis, 802.11 HT40 at 13.5 Mbps	Line AC	120 Vac 60 Hz
Standard	CFR47 Part 15 Subpart C	RBW / VBW	1 MHz / 3 MHz
Dist/Ant Used	3m - EMCO3115 / 1m - RA42-K-F-4B-C	Performed by	Jeremy Luong

Above 1 GHz Plots for Transmit Mode at 5795 MHz



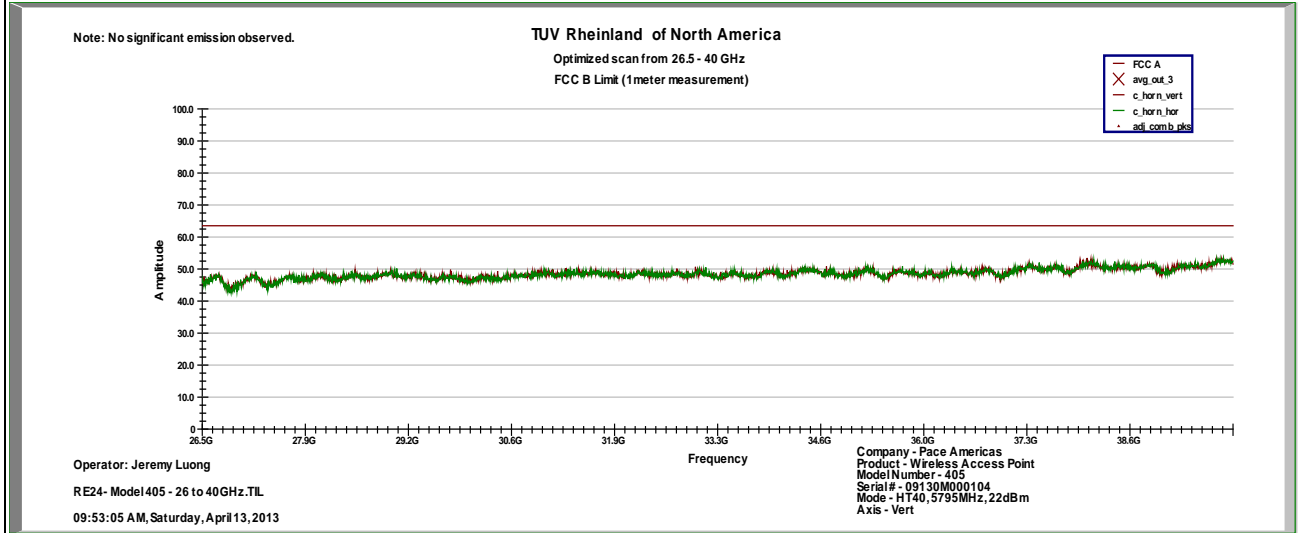
Notes: Limit was extrapolated to 1m distance for 18 GHz – 26 GHz range.
 1 GHz – 26 GHz Setting: RBW = 1 MHz/ VBW = 3 MHz

SOP 1 Radiated Emissions

Tracking # 31360999.002 Page 21 of 21

EUT Name	Wireless Video Access Point	Date	April 13, 2013
EUT Model	405	Temp / Hum in	23°C / 33%rh
EUT Serial	09130M000104	Temp / Hum out	N/A
EUT Config.	Y-Axis, 802.11 HT40 at 13.5 Mbps	Line AC	120 Vac 60 Hz
Standard	CFR47 Part 15 Subpart C	RBW / VBW	1 MHz / 3 MHz
Dist/Ant Used	3m - EMCO3115 / 1m - RA42-K-F-4B-C	Performed by	Jeremy Luong

Above 1 GHz Plots for Transmit Mode at 5795 MHz



Notes: Limit was extrapolated to 1m distance for 26.5 GHz – 40 GHz range.

4.5.4 Sample Calculation

The field strength is calculated by subtracting the Amplifier Gain and adding the Cable Loss and Antenna Correction Factor to the measured reading. The basic equation is as follows:

$$\text{Field Strength (dB}\mu\text{V/m)} = \text{FIM} - \text{AMP} + \text{CBL} + \text{ACF}$$

- Where: FIM = Field Intensity Meter (dBμV)
- AMP = Amplifier Gain (dB)
- CBL = Cable Loss (dB)
- ACF = Antenna Correction Factor (dB/m)

$$\mu\text{V/m} = 10^{\frac{\text{dB}\mu\text{V} / \text{m}}{20}}$$

4.6 AC Conducted Emissions

Testing was performed in accordance with ANSI C63.4: 2010. These test methods are listed under the laboratory's A2LA Scope of Accreditation.

This test measures the levels emanating from the EUT's AC input port, thus evaluating the potential for the EUT to cause radio frequency interference to other electronic devices.

The AC conducted emissions of equipment under test shall not exceed the values in CFR47 Part 15.207: 2012 and RSS 210: 2010.

4.6.1 Test Methodology

A test program that controls instrumentation and data logging was used to automate the AC Power Line Conducted emission test procedure. The frequency range of interest was divided into sub-ranges such as to yield a frequency resolution of 9 kHz. Each phase and neutral of the AC power line were measured with respect to ground. Measurements were performed using a set of 50µH / 50Ω LISNs.

Testing is either performed in Lab 2. The setup photographs clearly identify which site was used. The vertical ground plane used in the semi-anechoic chamber is a 2m x 2m solid aluminum frame and panel, and it is bonded to the horizontal ground plane.

In the case of tabletop equipment, the EUT is placed on a 1.0m x 1.5m non-conductive table 80cm above the ground plane and 40cm from a vertical ground reference plane. The rear of the EUT was positioned flush with the backside of the table and directly over the LISNs. The power and I/O cables were routed over the edge of the table and bundled approximately 40cm from the ground plane. Support equipment was powered from a separate LISN.

4.6.1.1 Deviations

There were no deviations from this test methodology.

4.6.2 Test Results

As originally tested, the EUT was found to be compliant to the requirements of the test standard(s).

Table 8: AC Conducted Emissions – Test Results

Test Conditions: Conducted Measurement at Normal Conditions only		
Antenna Type: Attached		Power Level: See Test Plan
AC Power: 120 Vac/60 Hz		Configuration: Tabletop
Ambient Temperature: 22° C		Relative Humidity: 37% RH
Configuration	Frequency Range	Test Result
Line 1 (Hot)	0.15 to 30 MHz	Pass
Line 2 (Neutral)	0.15 to 30 MHz	Pass

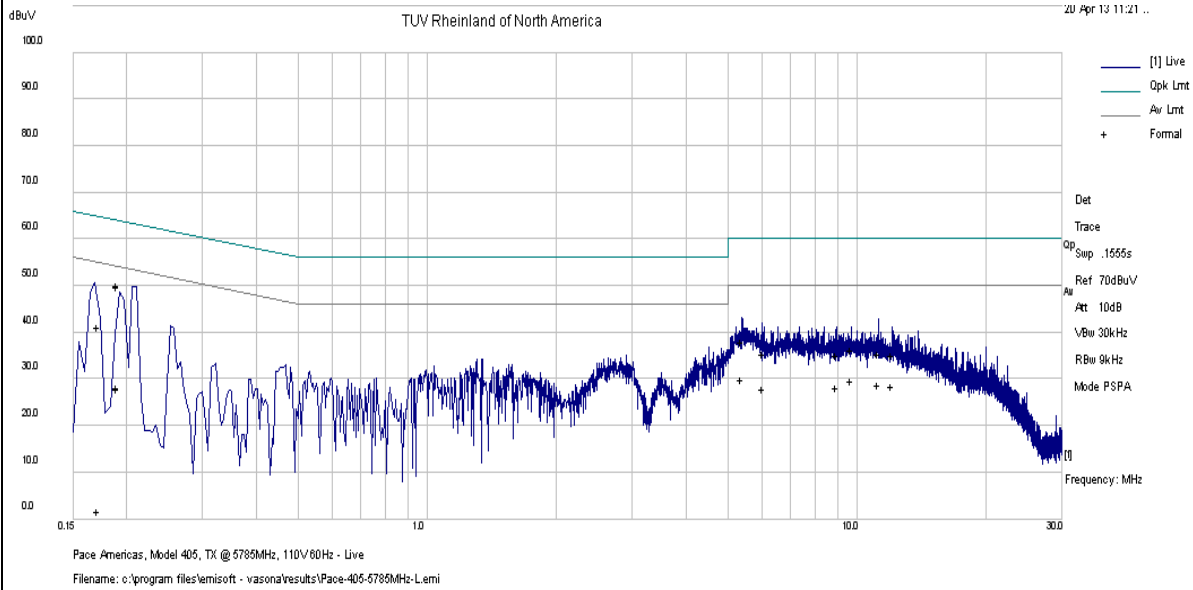
SOP 2 Conducted Emissions						Tracking # 31360999.002 Page 1 of 4				
EUT Name	Wireless Video Access Point					Date	April 20, 2013			
EUT Model	405					Temp / Hum in	23° C / 34% rh			
EUT Serial	09130M000104					Temp / Hum out	N/A			
EUT Config.	Attached Antenna					Line AC / Freq	120 Vac/60 Hz			
Standard	CFR47 Part 15.207					RBW / VBW	9 kHz / 30 kHz			
Lab/LISN	Lab #2 /Com-Power, Line 1					Performed by	Jeremy Luong			
Frequency	Raw	Limiter	Ins. Loss	Level	Detector	Line	Limit	Margin	Result	
MHz	dBuV	dB	dB	dBuV		Line	dBuV	dB		
0.171	31.82	10.12	-0.66	41.28	QP	Line	64.90	-23.62	Pass	
0.171	-7.72	10.12	-0.66	1.74	Ave	Line	54.90	-53.16	Pass	
0.190	40.64	10.12	-0.60	50.17	QP	Line	64.02	-13.85	Pass	
0.190	18.39	10.12	-0.60	27.92	Ave	Line	54.02	-26.10	Pass	
0.190	40.24	10.12	-0.60	49.77	QP	Line	64.02	-14.25	Pass	
0.190	18.76	10.12	-0.60	28.29	Ave	Line	54.02	-25.73	Pass	
5.395	27.78	10.28	-0.13	37.93	QP	Line	60.00	-22.07	Pass	
5.395	19.78	10.28	-0.13	29.93	Ave	Line	50.00	-20.07	Pass	
6.074	25.25	10.30	-0.13	35.42	QP	Line	60.00	-24.58	Pass	
6.074	17.62	10.30	-0.13	27.79	Ave	Line	50.00	-22.21	Pass	
8.981	24.79	10.40	-0.10	35.09	QP	Line	60.00	-24.91	Pass	
8.981	17.91	10.40	-0.10	28.21	Ave	Line	50.00	-21.79	Pass	
9.693	25.89	10.42	-0.10	36.21	QP	Line	60.00	-23.79	Pass	
9.693	19.22	10.42	-0.10	29.54	Ave	Line	50.00	-20.46	Pass	
11.205	25.05	10.45	-0.09	35.41	QP	Line	60.00	-24.59	Pass	
11.205	18.47	10.45	-0.09	28.83	Ave	Line	50.00	-21.17	Pass	
12.089	24.66	10.46	-0.08	35.04	QP	Line	60.00	-24.96	Pass	
12.089	18.10	10.46	-0.08	28.48	Ave	Line	50.00	-21.52	Pass	
Spec Margin = QP./Ave. - Limit, ± Uncertainty										
Combined Standard Uncertainty $u_c(y) = \pm 1.2$ dB Expanded Uncertainty $U = ku_c(y)$ $k = 2$ for 95% confidence										
Notes: EUT was setup as table top equipment and transmitted at 5785 MHz in HT20 at 6.5 Mbps										

SOP 2 Conducted Emissions

Tracking # 31360999.002 Page 2 of 4

EUT Name	Wireless Video Access Point	Date	April 20, 2013
EUT Model	405	Temp / Hum in	23° C / 34% rh
EUT Serial	09130M000104	Temp / Hum out	N/A
EUT Config.	Attached Antenna	Line AC	120 Vac/60 Hz
Standard	CFR47 Part 15.207	RBW / VBW	9 kHz / 30 kHz
Lab/LISN	Lab #2 /Com-Power, Line 1	Performed by	Jeremy Luong

150 kHz to 30 MHz Plot for Line 1 (Hot)



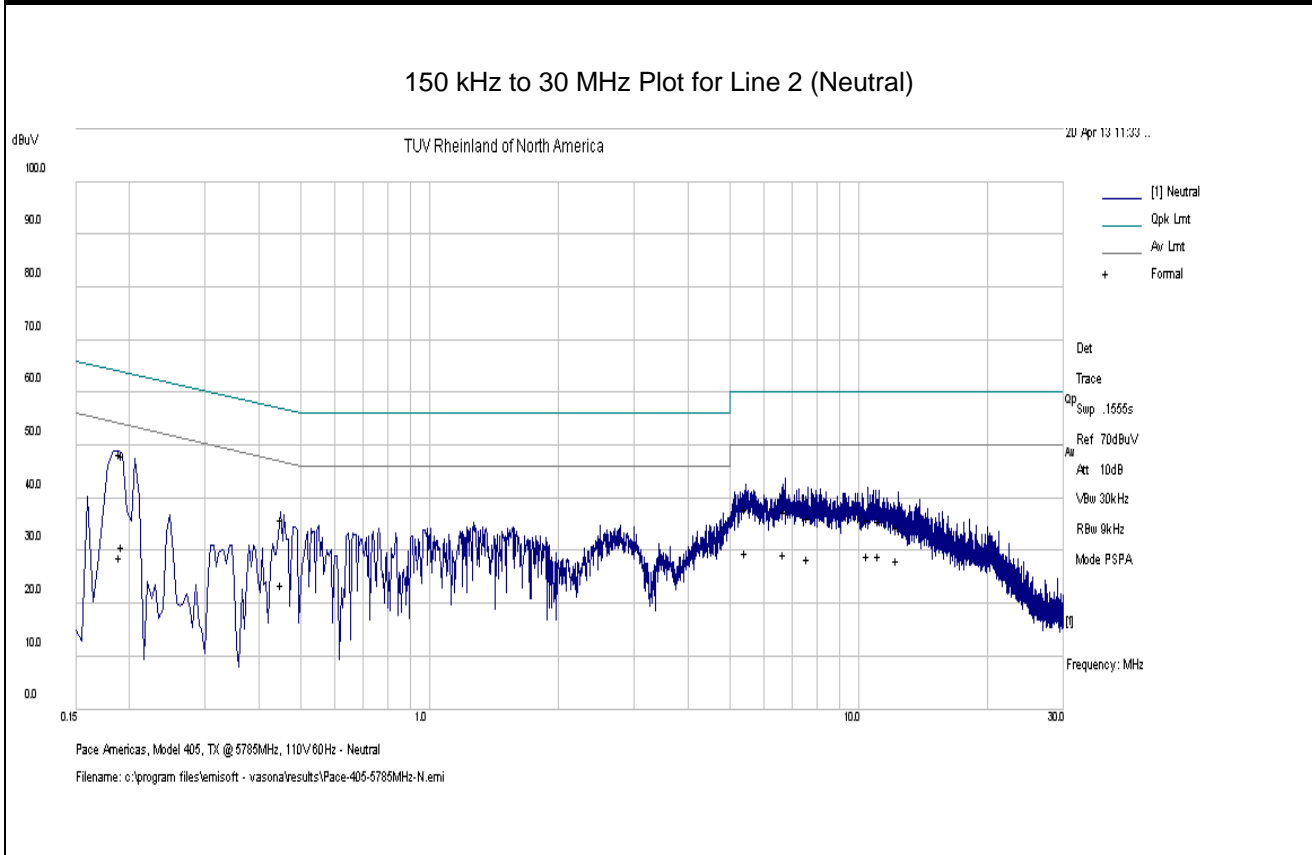
Notes: Meet FCC Class B limit.

SOP 2 Conducted Emissions						Tracking # 31360999.002 Page 3 of 4				
EUT Name	Wireless Video Access Point					Date	April 20, 2013			
EUT Model	405					Temp / Hum in	23° C / 34% rh			
EUT Serial	09130M000104					Temp / Hum out	N/A			
EUT Config.	Attached Antenna					Line AC / Freq	120 Vac/60 Hz			
Standard	CFR47 Part 15.207					RBW / VBW	9 kHz / 30 kHz			
Lab/LISN	Lab #2 /Com-Power, Line 2					Performed by	Jeremy Luong			
Frequency	Raw	Limiter	Ins. Loss	Level	Detector	Line	Limit	Margin	Result	
MHz	dBuV	dB	dB	dBuV		Line	dBuV	dB		
0.191	38.80	10.12	-0.60	48.33	QP	Neutral	64.01	-15.68	Pass	
0.191	19.28	10.12	-0.60	28.81	Ave	Neutral	54.01	-25.20	Pass	
0.193	38.56	10.13	-0.59	48.09	QP	Neutral	63.91	-15.82	Pass	
0.193	21.16	10.13	-0.59	30.69	Ave	Neutral	53.91	-23.22	Pass	
0.454	26.21	10.16	-0.33	36.04	QP	Neutral	56.81	-20.77	Pass	
0.454	13.78	10.16	-0.33	23.61	Ave	Neutral	46.81	-23.20	Pass	
5.461	27.79	10.28	-0.13	37.94	QP	Neutral	60.00	-22.06	Pass	
5.461	19.43	10.28	-0.13	29.58	Ave	Neutral	50.00	-20.42	Pass	
6.734	27.35	10.32	-0.12	37.55	QP	Neutral	60.00	-22.45	Pass	
6.734	19.13	10.32	-0.12	29.33	Ave	Neutral	50.00	-20.67	Pass	
7.621	26.09	10.36	-0.12	36.33	QP	Neutral	60.00	-23.67	Pass	
7.621	18.10	10.36	-0.12	28.34	Ave	Neutral	50.00	-21.66	Pass	
10.485	25.55	10.43	-0.10	35.89	QP	Neutral	60.00	-24.11	Pass	
10.485	18.69	10.43	-0.10	29.03	Ave	Neutral	50.00	-20.97	Pass	
11.140	25.22	10.45	-0.09	35.58	QP	Neutral	60.00	-24.42	Pass	
11.140	18.82	10.45	-0.09	29.18	Ave	Neutral	50.00	-20.82	Pass	
12.331	24.13	10.46	-0.08	34.52	QP	Neutral	60.00	-25.48	Pass	
12.331	17.72	10.46	-0.08	28.11	Ave	Neutral	50.00	-21.89	Pass	
Spec Margin = QP./Ave. - Limit, ± Uncertainty										
Combined Standard Uncertainty $u_c(y) = \pm 1.2$ dB Expanded Uncertainty $U = ku_c(y)$ $k = 2$ for 95% confidence										
Notes: EUT was setup as table top equipment and transmitted at 5785 MHz in HT20 at 6.5 Mbps										

SOP 2 Conducted Emissions

Tracking # 31360999.002 Page 4 of 4

EUT Name	Wireless Video Access Point	Date	April 20, 2013
EUT Model	405	Temp / Hum in	23° C / 34% rh
EUT Serial	09130M000104	Temp / Hum out	N/A
EUT Config.	Attached Antenna	Line AC	120 Vac/60 Hz
Standard	CFR47 Part 15.207	RBW / VBW	9 kHz / 30 kHz
Lab/LISN	Lab #2 /Com-Power, Line 2	Performed by	Jeremy Luong



Note: Meet FCC Class B Limit.

4.7 Maximum Permissible Exposure

4.7.1 Test Methodology

In this document, we try to prove the safety of radiation harmfulness to the human body for our product. The limit for Maximum Permissible Exposure (MPE) specified in FCC 1.1310 is followed. The Gain of the antenna used in this calculation is declared by the manufacturer, and the maximum total power input to the antenna is measured. Through the Friis transmission formula and the maximum gain of the antenna, we can calculate the distance, away from the product, where the limit of MPE is reached.

Although the Friis transmission formula is a far field assumption, the calculated result of that is an over-prediction for near field power density. We will take that as the worst case to specify the safety range.

4.7.2 RF Exposure Limit

According to FCC 1.1310 table 1: The criteria listed in the following table shall be used to evaluate the environmental impact of human exposure to radio-frequency (RF) radiation as specified in 1.1307(b)

LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)	Average Time (minutes)
(A)Limits For Occupational / Control Exposures				
0.3 - 3.0	614	1.63	*(100)	6
3.0 - 30	1842/f	4.89/f	*(900/f ²)	6
30 - 300	...	...	1.0	6
300 - 1500	...	...	f/300	6
1500 - 100,000	...	...	5	6
(B)Limits For General Population / Uncontrolled Exposure				
0.3 - 1.34	614	1.63	*(100)	30
1.34 - 30	824/f	2.19/f	*(180/f ²)	30
30 - 300	27.5	0.037	0.2	30
300 - 1500	...	...	f/1500	30
1500 - 100,000	...	...	1.0	30

F = Frequency in MHz

* = Plane-wave equivalent power density

4.7.3 EUT Operating Condition

The software provided by Manufacturer enabled the EUT to transmit data at lowest, middle and highest channel individually.

4.7.4 Classification

The antenna of the product, under normal use condition, is at least 20cm away from the body of the user. Warning statement to the user for keeping at least 20cm or more separation distance with the antenna should be included in user's manual. So, this device is classified as a **Mobile Device**.

4.7.5 Test Results

4.7.5.1 Antenna Gain

The transmitting antenna was integrated. The directional antenna gain was +8.00 dBi or 6.31 (numeric).

4.7.5.2 Output Power into Antenna & RF Exposure value at distance 20cm:

Calculations for this report are based on highest power measurement.

Limit for MPE (from FCC part 1.1310 table1) is 1.0 mW/cm²

The highest measured total power is +27.65 dBm or 582.103mW

Using the Friss transmission formula, the EIRP is Pout*G, and R is 20cm.

$P_d = (582.103 * 6.31) / (1600\pi) = 0.731105 \text{ mW/cm}^2$, which is 0.2689 mW/cm² below to the limit.

As originally tested, the EUT was found to be compliant to the requirements of the test standard(s).

4.7.6 Sample Calculation

The Friss transmission formula: $P_d = (P_{out} * G) / (4 * \pi * R^2)$

Where;

P_d = power density in mW/cm²

P_{out} = output power to antenna in mW

G = gain of antenna in linear scale

$\pi \approx 3.1416$

R = distance between observation point and center of the radiator in cm

Ref. : David K. Cheng, *Field and Wave Electromagnetics*, Second Edition, Page 640, Eq. (11-133).

5 Test Equipment List

5.1 Equipment List

Equipment	Manufacturer	Model #	Serial/Inst #	Last Cal mm/dd/yy	Next Cal mm/dd/yy
Bilog Antenna	Sunol Sciences	JB3	A102606	05/15/2012	05/15/2014
Horn Antenna	Sunol Sciences	DRH-118	A040806	11/05/2012	11/05/2014
Antenna (18-26 GHz)	CMT	RA42-K-F-4B-C	020131-004	03/05/2013	03/05/2014
Antenna (26-40 GHz)	CMT	RA28-K-F-4B-C	011469R-003	11/20/2012	11/20/2014
EMI Receiver	Hewlett Packard	8546A	3807A00445	01/18/2013	01/18/2014
Preselector	Hewlett Packard	85460A	3704A00407	01/18/2013	01/18/2014
Amplifier	Hewlett Packard	8447D	2944A07996	01/16/2013	01/16/2014
Spectrum Analyzer	Rohde & Schwarz	ESIB	832427/002	01/16/2013	01/16/2014
Amplifier	Rohde & Schwarz	TS-PR18	3545.7008.03	01/16/2013	01/16/2014
Amplifier	Rohde & Schwarz	TS-PR26	100011	03/05/2013	03/05/2014
Amplifier	Rohde & Schwarz	TS-PR40	100012	11/20/2012	11/20/2014
Signal Generator	Anritsu	MG3694A	42803	01/19/2013	01/19/2014
Notch Filter	Micro-Tronics	BRM50702	37	01/16/2013	01/16/2014
Notch Filter	Micro-Tronics	BRC50703	11	01/16/2013	01/16/2014
Notch Filter	Micro-Tronics	BRC50704	8	01/16/2013	01/16/2014
Notch Filter	Micro-Tronics	BRC50705	9	01/16/2013	01/16/2014
High Pass Filter (3.5 GHz)	Hewlett Packard	84300-80038	820004	01/16/2013	01/16/2014
High Pass Filter (8.5 GHz)	Micro-Tronics	HPM50107	4	01/16/2013	01/16/2014
Power Supplier	Kikusui	PCR8000W	CM000912	01/17/2013	01/17/2014
Digital Multimeter	Fluke	177	92780314	01/17/2013	01/17/2014
Power Meter	Agilent	E4418B	MY45103902	01/19/2013	01/19/2014
Power Sensor	Hewlett Packard	8482A	55-5131	01/19/2013	01/19/2014
EMI Receiver	Hewlett Packard	8546A	3942A00514	07/02/2012	07/02/2013
Preselector	Hewlett Packard	85460A	3704A00485	07/02/2012	07/02/2013
LISN	Com-Power	LI-215	12100	01/16/2013	01/16/2014
Transient Limiter	Com-Power	LIT-930	531582	01/16/2013	01/16/2014
Thermometer	Fluke	52II	88650033	07/26/2012	07/26/2013
Thermo Chamber	Espec	BTZ-133	0613436	03/11/2013	03/11/2014
Spectrum Analyzer	Rohde & Schwarz	FSL6	100169	02/07/2013	02/07/2014
Spectrum Analyzer	Agilent	N9038A	MY51210195	01/19/2013	01/19/2014
Vector Signal Generator	Rohde & Schwarz	SMU 200A	1141.2005.02	11/24/2011	11/24/2013
Amplifier	Hewlett Packard	8449B	30008A01014	01/17/2013	01/17/2014

* Calibration of equipment past due for re-calibration will be performed expeditiously. If any equipment is found to be out of tolerance at that time, affected customers will be notified accordingly.

6 EMC Test Plan

6.1 Introduction

This section provides a description of the Equipment Under Test (EUT), configurations, operating conditions, and performance acceptance criteria. It is an overview of information provided by the manufacturer so that the test laboratory may perform the requested testing.

6.2 Customer

Table 9: Customer Information

Company Name	Pace Americas
Address	310 Providence Mine Road, Ste. 200
City, State, Zip	Nevada City, CA 95959
Country	U.S.A.
Phone	(530) 274 5440
Fax	(530) 273 6340

Table 10: Technical Contact Information

Name	Mark Rieger
E-mail	Mark.Rieger@pace.com
Phone	(530) 274 5440
Fax	(530) 273 6340

6.3 Equipment Under Test (EUT)

Table 11: EUT Specifications

EUT Specifications	
Dimensions	6.0" x 5.6" x 1.3"
AC Adapter (Pace M/N:T018WA1225, S/N:810611302000003156)	Input Voltage: 120 Vac 50-60 Hz Input Current: 680 mA Output Voltage: 12 Vdc Output Current: 1.5 A
Environment	Indoor and Outdoor
Operating Temperature Range:	0 to 40 degrees C
Multiple Feeds:	<input type="checkbox"/> Yes and how many <input checked="" type="checkbox"/> No
Hardware Version	Rev. A1C
Part Number	297T1001700
RF Software Version	Busy Box V1.10.3
802.11-radio modules	
Operating Mode	802.11a, and 802.11n (HT20 and HT40)
Transmitter Frequency Band	5.15 GHz to 5.25 GHz (Indoor Use) 5.250 GHz to 5.350 GHz 5.470 GHz to 5.725 GHz (exclude 5.600 - 5.650 GHz) 5.725 GHz to 5.85 GHz
Max. Rated Power Output	See Channel Planning Table.
Power Setting @ Operating Channel	See Channel Planning Table.
Antenna Type	3 integrated PCB Antenna and 1 stamped metal loop antenna
Antenna Gain	+2 dBi per antenna. (Same for both antenna type) +8 dBi (max. directional gain)
Modulation Type	<input type="checkbox"/> AM <input type="checkbox"/> FM <input checked="" type="checkbox"/> DSSS <input checked="" type="checkbox"/> OFDM <input type="checkbox"/> Other describe:
Data Rate	802.11a: 4 Spatial Streams: 6, 9, 12, 18, 24, 36, 48, 54 Mbps 802.11n HT20: 4 Spatial Streams: 26, 52, 78, 104, 156, 208, 234, 260 Mbps 802.11n HT40: 4 Spatial Streams: 54, 108, 162, 216, 324, 432, 486, 540 Mbps
TX/RX Chain (s)	MIMO (4x4)

EUT Specifications	
Directional Gain Type	<input checked="" type="checkbox"/> Correlated <input checked="" type="checkbox"/> Beam-Forming <input type="checkbox"/> Other describe:
Type of Equipment	<input checked="" type="checkbox"/> Table Top <input type="checkbox"/> Wall-mount <input type="checkbox"/> Floor standing cabinet <input type="checkbox"/> Other
Note: 1. All four chains will be on / transmitted at all time. 2. This report only documents the radio characteristics for 5727 - 5850 MHz band.	

Table 12: EUT Channel Power Specifications

No.	Frequency (MHz)	Target Power Value				
		802.11b	802.11g	802.11a	802.11n HT20	802.11n HT40
36	5180			10.0	10.0	11.0
40	5200			9.0	9.0	
44	5220			9.0	9.0	11.0
48	5240			9.0	9.0	
52	5260			15.0	15.0	17.0
56	5280			15.0	15.0	
60	5300			15.0	15.0	14.0
64	5320			15.0	15.0	
100	5500			16.0	16.0	16.0
104	5520			16.0	16.0	
108	5540			16.0	16.0	18.0
112	5560			16.0	16.0	
116	5580			16.0	16.0	
120	5600					
124	5620					
128	5640					
132	5660			16.0	16.0	18.0
136	5680			16.0	16.0	
140	5700			15.0	15.0	
149	5745			22.0	22.0	22.0
153	5765			22.0	22.0	
157	5785			22.0	22.0	22.0
159	5795			22.0	22.0	
161	5805			22.0	22.0	
165	5825			22.0	22.0	

Note: 1. The center operating frequency is shifted upward by 10 MHz for HT40.
 2. The final adjusted power targets are updated at the above indicated frequencies.

Table 13: Interface Specifications

Interface Type	Cabled with what type of cable?	Is the cable shielded?	Maximum potential length of the cable?	Metallic (M), Coax (C), Fiber (F), or Not Applicable?
RJ45	CAT-5 Ethernet	<input type="checkbox"/> No	<input checked="" type="checkbox"/> Metric: 10 m	<input checked="" type="checkbox"/> M

Table 14: Supported Equipment

Equipment	Manufacturer	Model	Serial	Used for
Laptop	Dell	PP23LB	9271001233	Setup EUT operating channel
Note: None.				

Table 15: Description of Sample used for Testing

Device	Serial	RF Connection	CFR47 Part 15.247
405	09130M000104	Integrated Antenna	Radiated Emission. AC Conducted Emission
		Direct via Murada Connection	Output Power, Peak Power Spectral Density, Occupied Bandwidth Conducted Spurious Emission

Table 16: Description of Test Configuration used for Radiated Measurement.

Device	Antenna	Mode	Setup Photo (X-Axis)	Setup Photo (Y-Axis)	Setup Photo (Z-Axis)
Model 405	Integrated	Transmit	EUT laid flat.	EUT stood upright	Na.
Note: Pre-scans were performed in 2 supporting axis, and Y-axis was worst.					

Table 17: Final Test Mode for 5725 - 5850 Bands

Test	802.11a	802.11n HT20	802.11n HT40
Occupied Bandwidth CFR47 15.247 (a2), RSS GEN Sect.4.4.1	Band : 5745, 5785, 5825 MHz 4 Streams – 6 Mbps/ stream	Band : 5745, 5785, 5825 MHz 4 Streams – 6.5 Mbps/ stream	Band : 5755, 5795 MHz 4 Streams – 13.5 Mbps/ stream
Output Power CFR47 15.247 (b3), RSS 210 Sect. A.8.4	Band : 5745, 5785, 5825 MHz 4 Streams – 6 Mbps/ stream	Band : 5745, 5785, 5825 MHz 4 Streams – 6.5 Mbps/ stream	Band : 5755, 5795 MHz 4 Streams – 13.5 Mbps/ stream
Peak Power Spectral Density CFR47 15.247 (e), RSS 210 Sect. A.8.2	Band : 5745, 5785, 5825 MHz 4 Streams – 6 Mbps/ stream	Band : 5745, 5785, 5825 MHz 4 Streams – 6.5 Mbps/ stream	Band : 5755, 5795 MHz 4 Streams – 13.5 Mbps/ stream

Test	802.11a	802.11n HT20	802.11n HT40
Out-of-Band (-30 dB). CFR47 15.247 (d), RSS 210 Sect. A.8.5	Band : 5745, 5785, 5825 MHz 4 Streams – 6 Mbps/ stream	Band : 5745, 5785, 5825 MHz 4 Streams – 6.5 Mbps/ stream	Band : 5755, 5795 MHz 4 Streams – 13.5 Mbps/ stream
Band-Edge (Radiated) FCC Part 15.205, 15.209	Band : 5745, 5825 MHz 4 Streams – 6 Mbps/ stream	Band : 5745, 5825 MHz 4 Streams – 6.5 Mbps/ stream	Band : 5755, 5795 MHz 4 Streams – 13.5 Mbps/ stream
Transmitted Spurious Emission (30 MHz – 1 GHz) FCC Part 15.205, 15.209		Worst Case: 5785 MHz 4 Streams – 6.5 Mbps/ stream (Y-Axis)	
Transmitted Spurious Emission (Above 1 GHz) FCC Part 15.205, 15.209	Band : 5745, 5785, 5825 MHz 4 Streams – 6 Mbps/ stream	Band : 5745, 5785, 5825 MHz 4 Streams – 6.5 Mbps/ stream	Band : 5755, 5795 MHz 4 Streams – 13.5 Mbps/ stream
AC Conducted Emission FCC Part 15.207		5785 MHz at 4 Data Stream: 6.5Mbps	
<p>Note: 1. All radiated emission performed on Y-Axis; worst axis. 2. All four chains will be on at all time during the EUT's deployment. 3. All tests were pre-scanned for worst case before final testing.</p>			

6.4 Test Specifications

Testing requirements

Table 18: Test Specifications

Emissions and Immunity	
Standard	Requirement
CFR 47 Part 15.407: 2012	All
RSS 210 Issue 8, 2010	All

END OF REPORT