

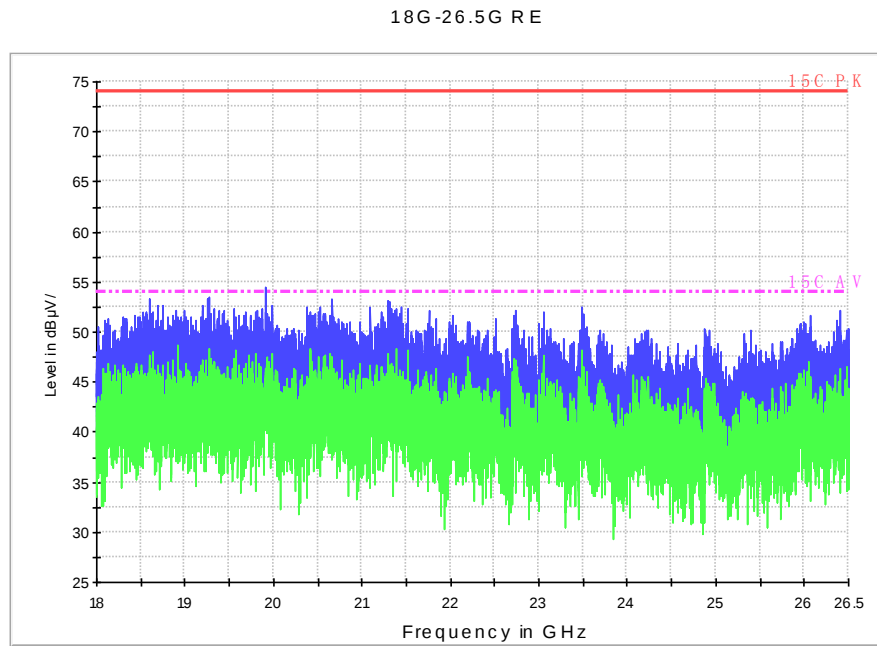


Fig. 171 Radiated Spurious Emission (802.11n-HT40, ch46, 18 GHz-26.5 GHz)

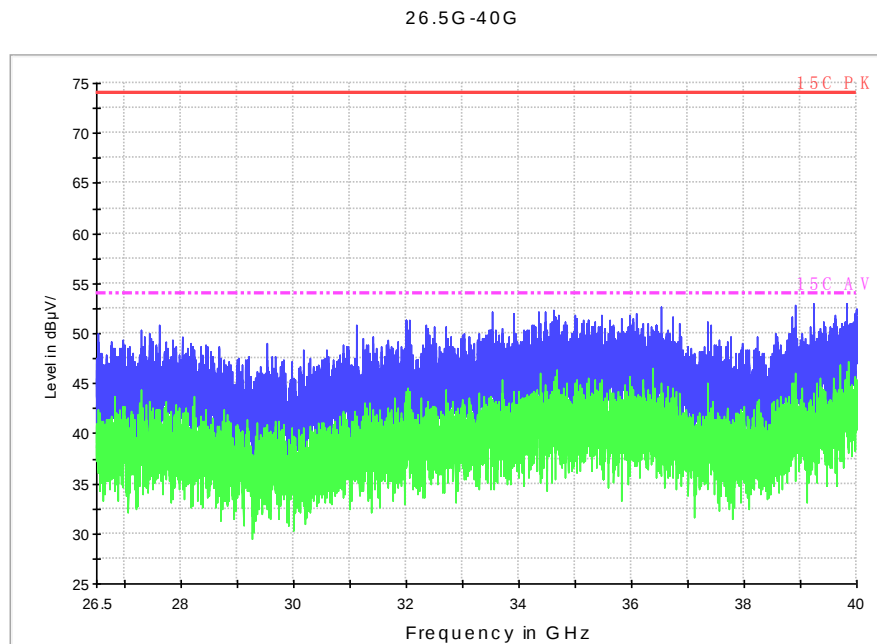


Fig. 172 Radiated Spurious Emission (802.11n-HT40, ch46, 26.5 GHz-40 GHz)

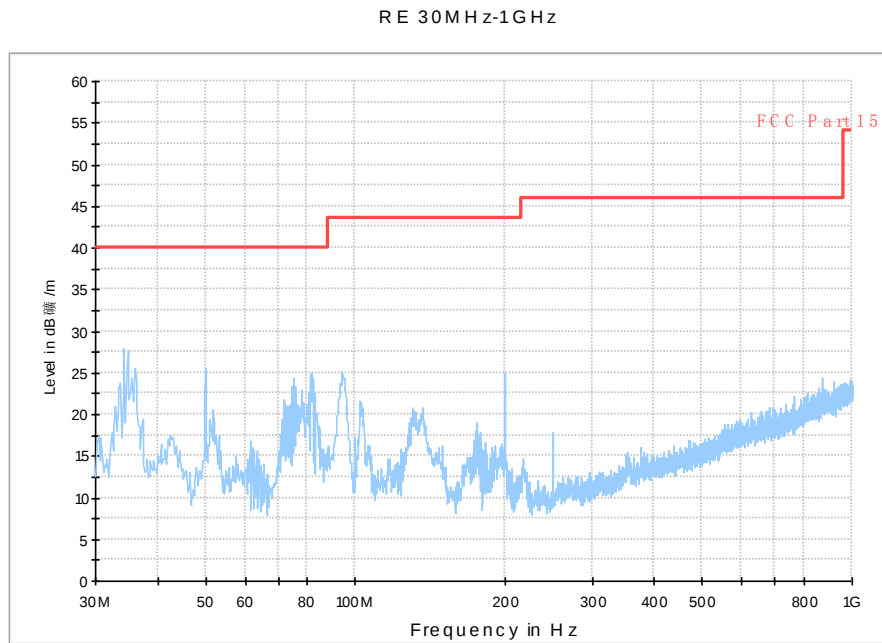


Fig. 173 Radiated Spurious Emission (802.11n-HT40, ch54, 30 MHz-1 GHz)

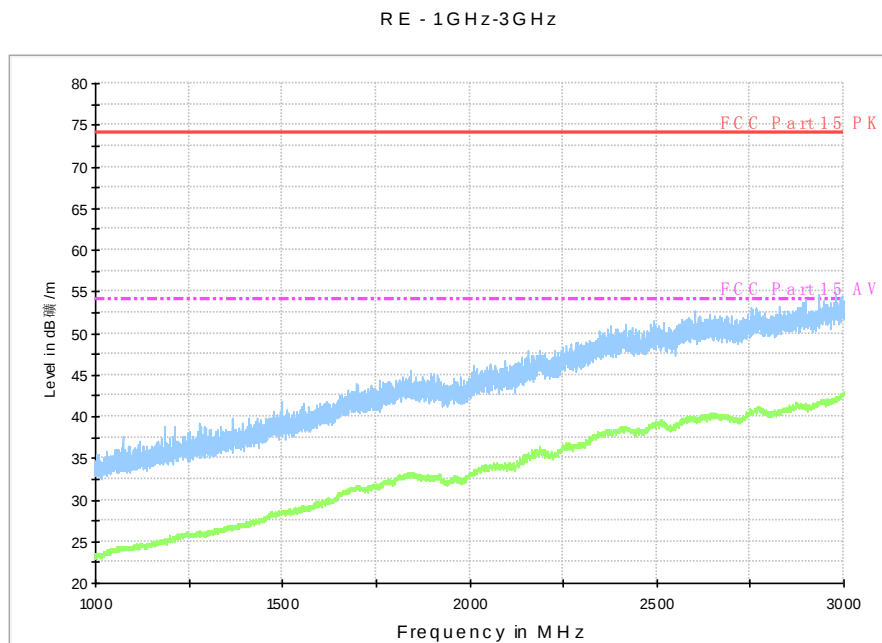


Fig. 174 Radiated Spurious Emission (802.11n-HT40, ch54, 1 GHz-3 GHz)

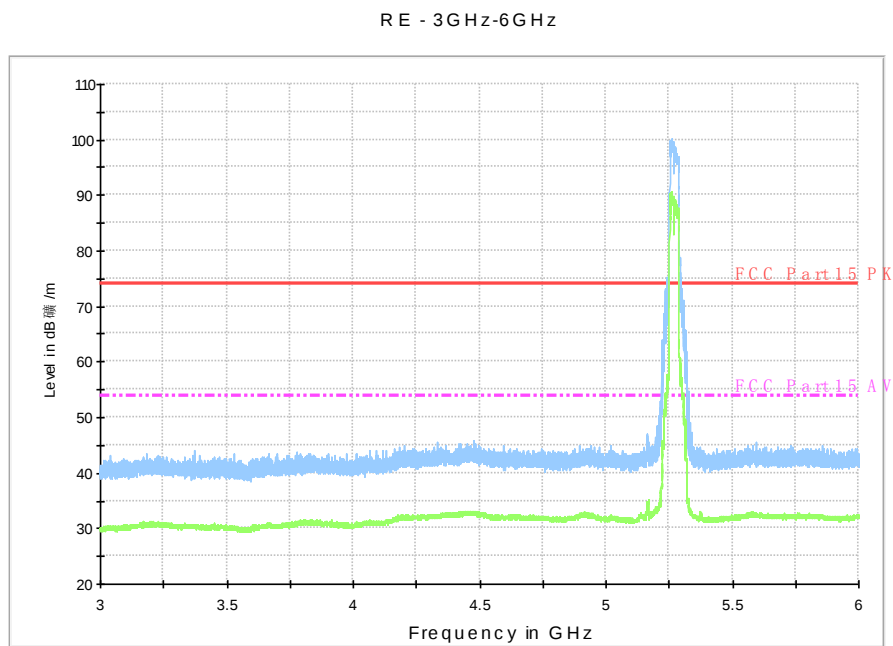


Fig. 175 Radiated Spurious Emission (802.11n-HT40, ch54, 3 GHz-6 GHz)

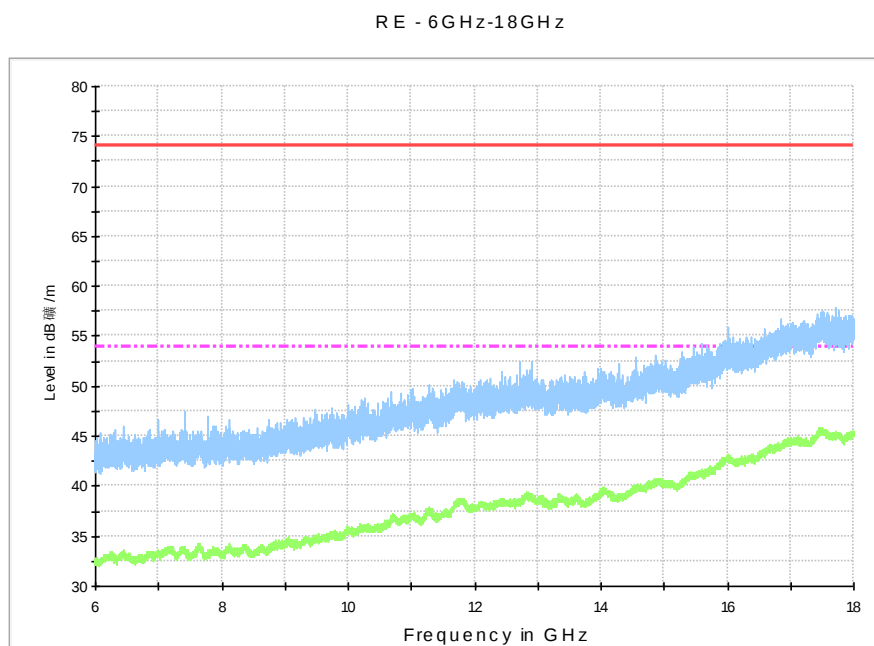


Fig. 176 Radiated Spurious Emission (802.11n-HT40, ch54, 6 GHz-18 GHz)

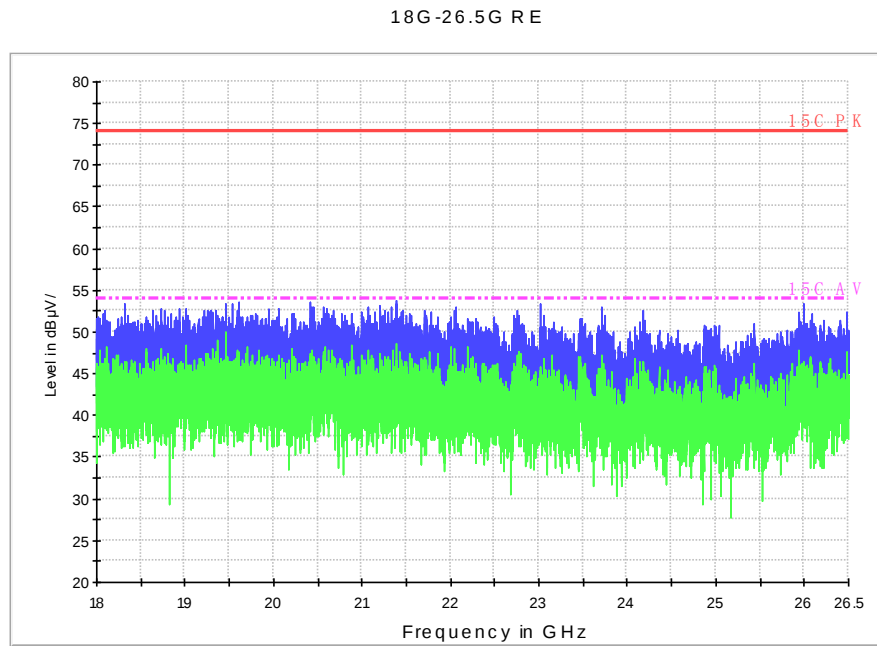


Fig. 177 Radiated Spurious Emission (802.11n-HT40, ch54, 18 GHz-26.5 GHz)

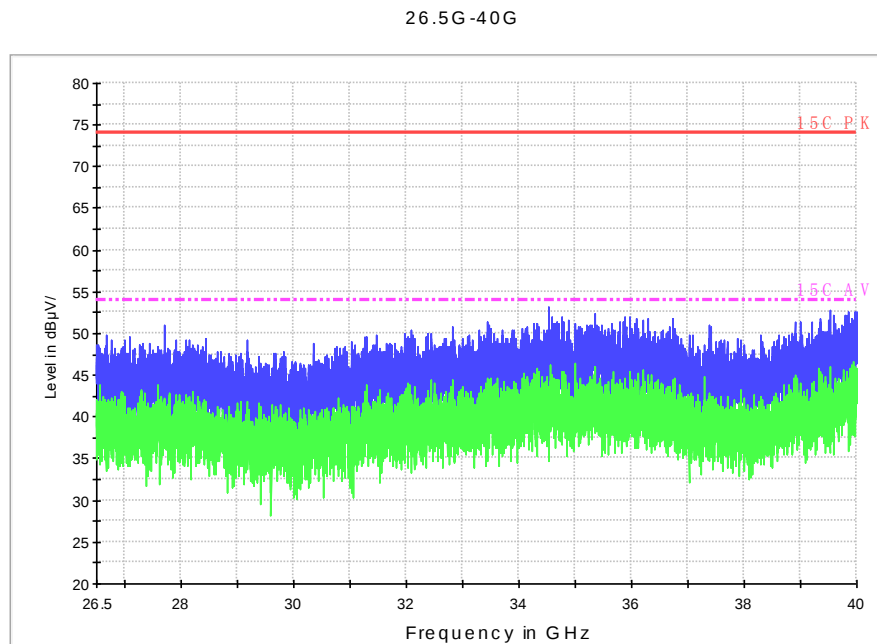


Fig. 178 Radiated Spurious Emission (802.11n-HT40, ch54, 26.5 GHz-40 GHz)

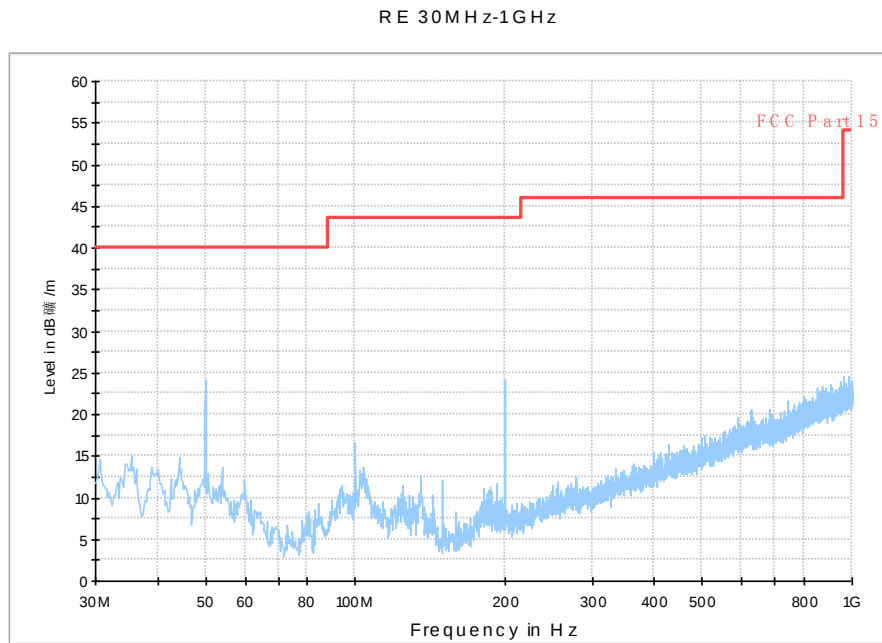


Fig. 179 Radiated Spurious Emission (802.11n-HT40, ch62, 30 MHz-1 GHz)

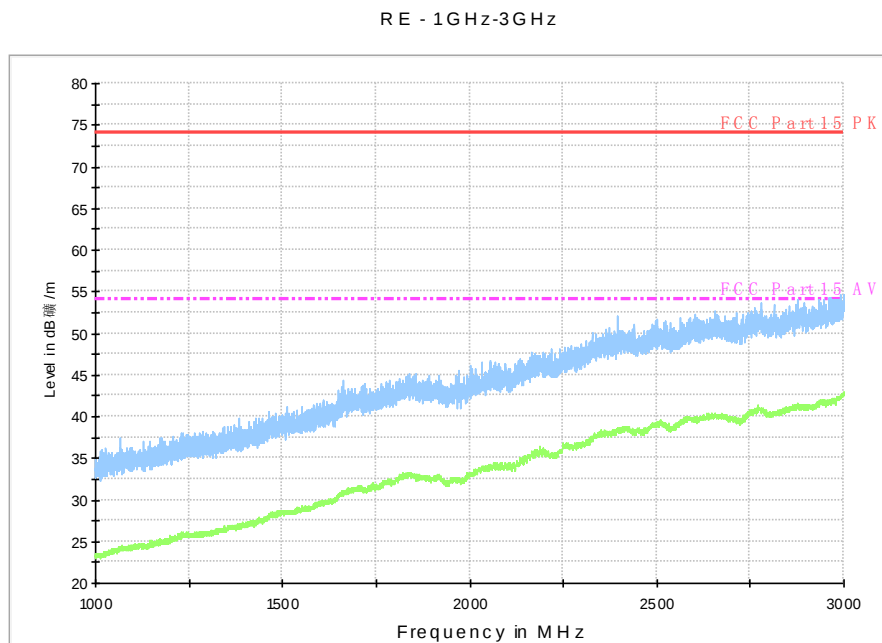


Fig. 180 Radiated Spurious Emission (802.11n-HT40, ch62, 1 GHz-3 GHz)

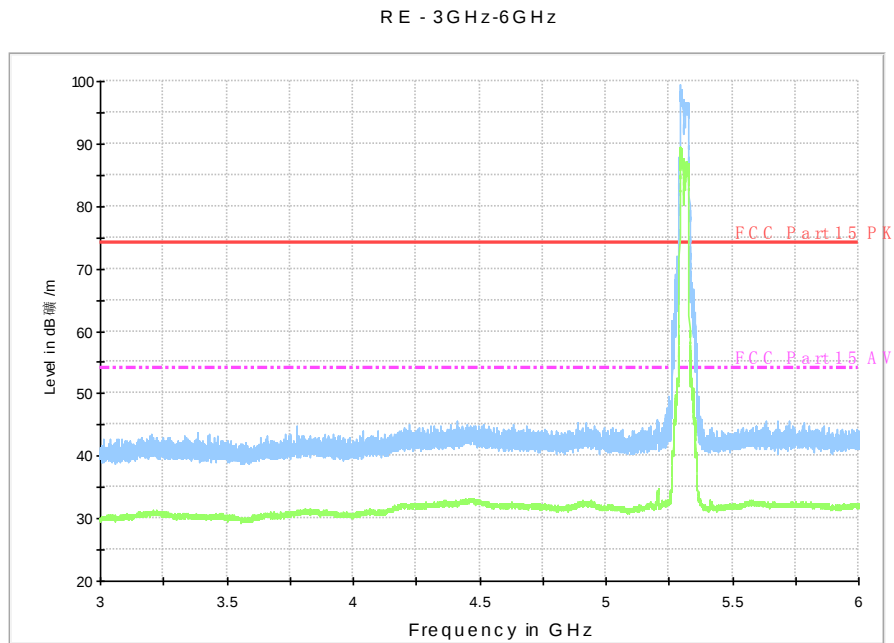


Fig. 181 Radiated Spurious Emission (802.11n-HT40, ch62, 3 GHz-6 GHz)

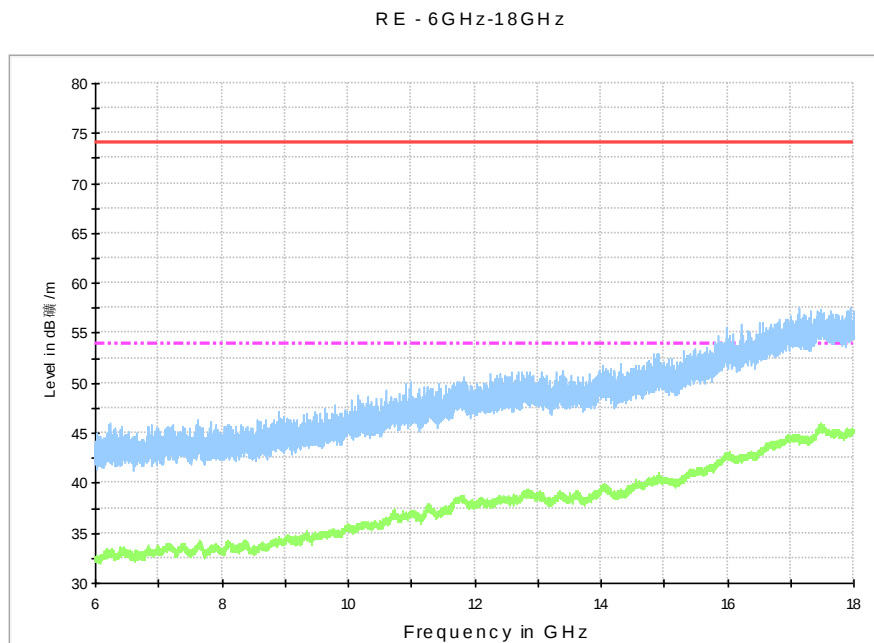


Fig. 182 Radiated Spurious Emission (802.11n-HT40, ch62, 6 GHz-18 GHz)

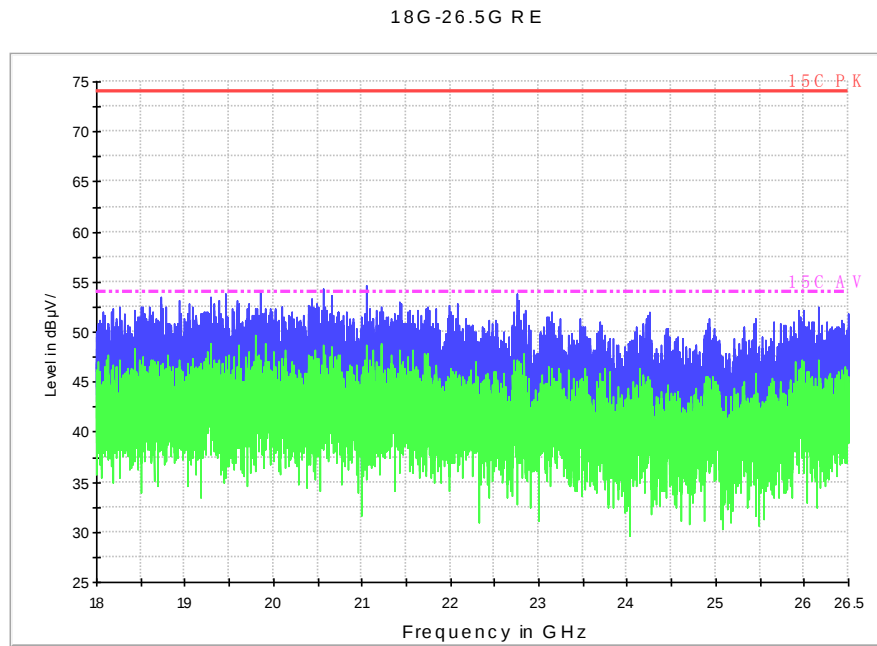


Fig. 183 Radiated Spurious Emission (802.11n-HT40, ch62, 18 GHz-26.5 GHz)

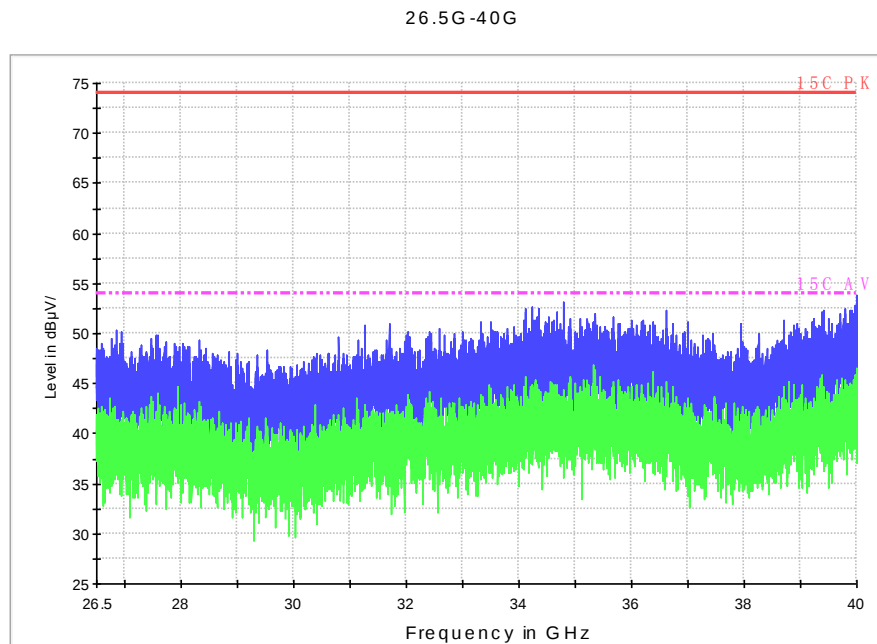


Fig. 184 Radiated Spurious Emission (802.11n-HT40, ch62, 26.5 GHz-40 GHz)

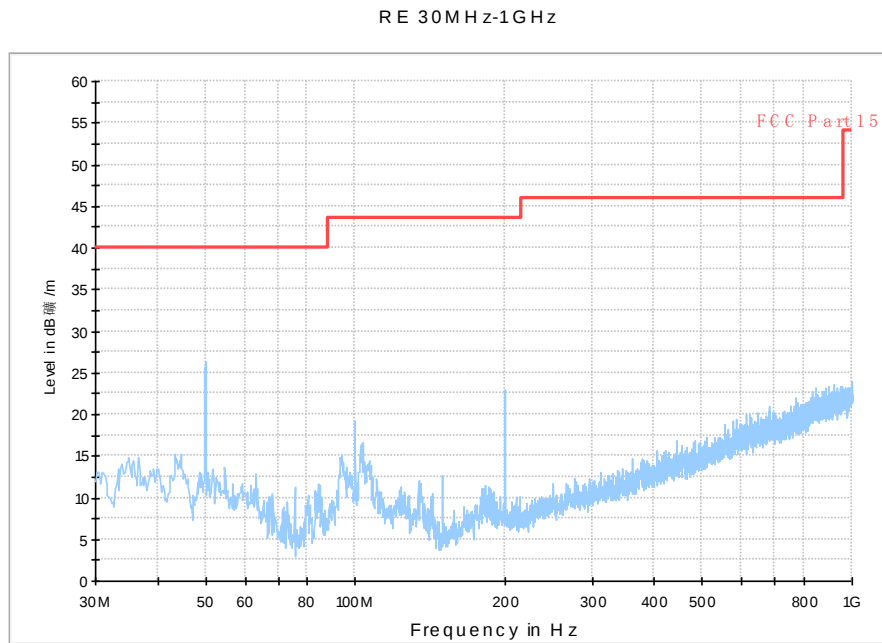


Fig. 185 Radiated Spurious Emission (802.11n-HT40, ch102, 30 MHz-1 GHz)

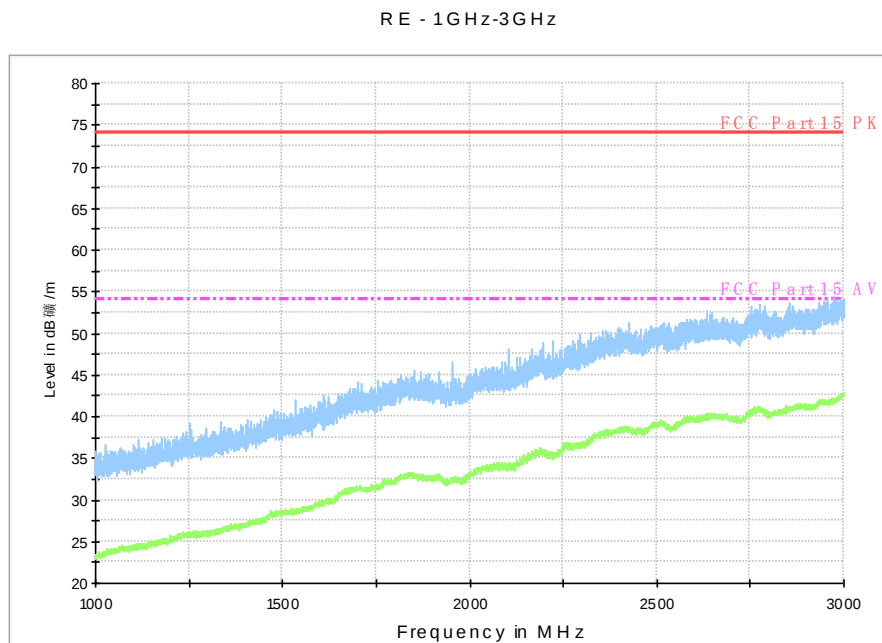


Fig. 186 Radiated Spurious Emission (802.11n-HT40, ch102, 1 GHz-3 GHz)

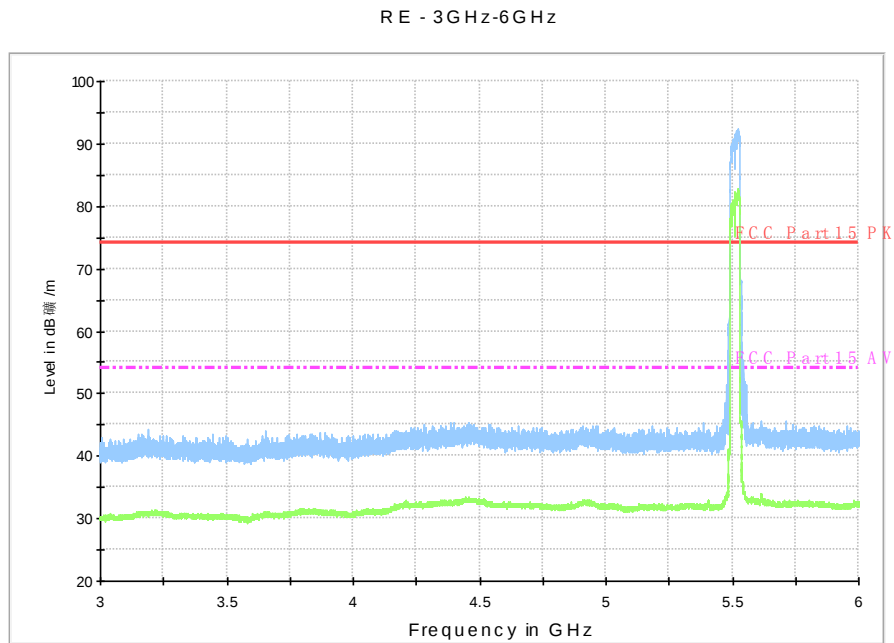


Fig. 187 Radiated Spurious Emission (802.11n-HT40, ch102, 3 GHz-6 GHz)

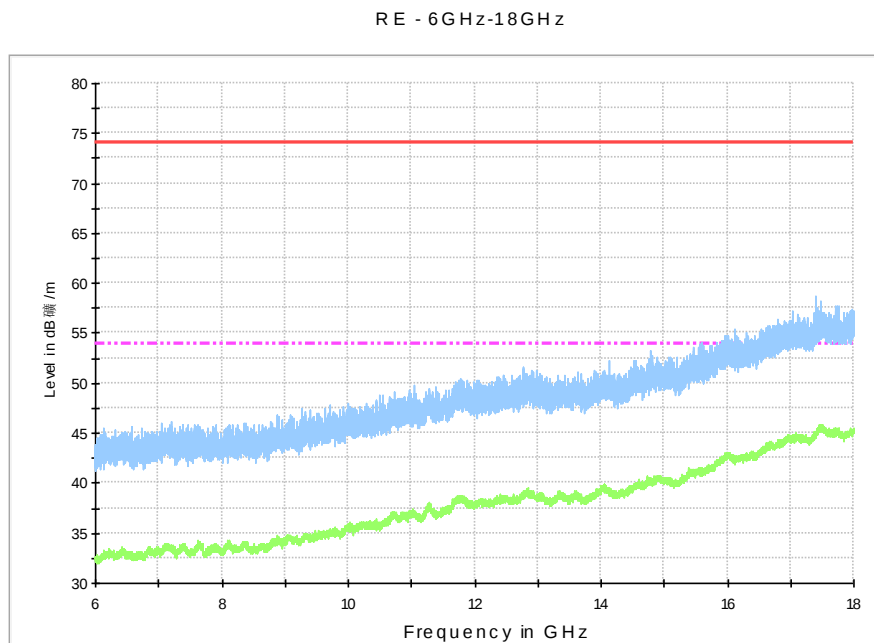


Fig. 188 Radiated Spurious Emission (802.11n-HT40, ch102, 6 GHz-18 GHz)

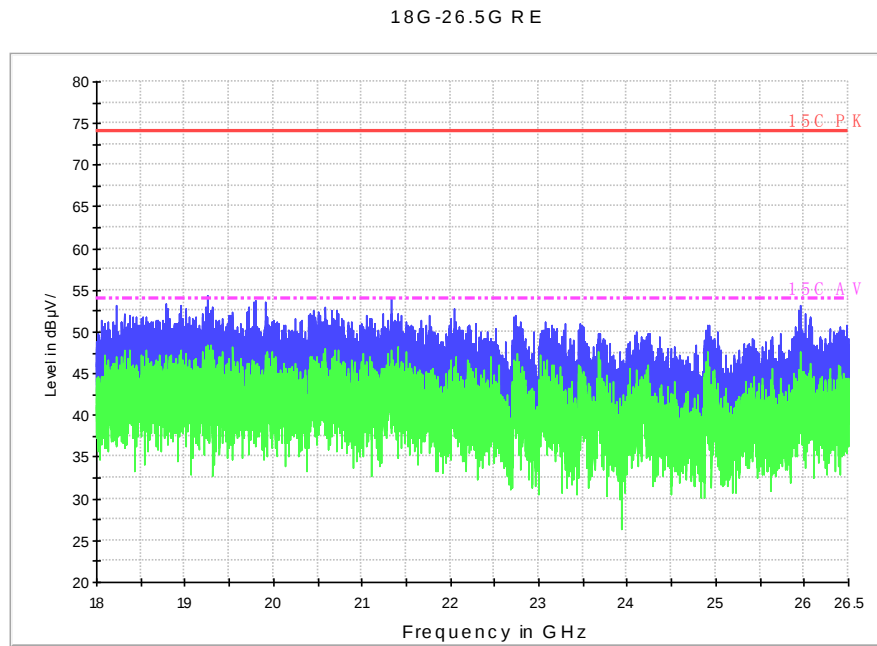


Fig. 189 Radiated Spurious Emission (802.11n-HT40, ch102, 18 GHz-26.5 GHz)

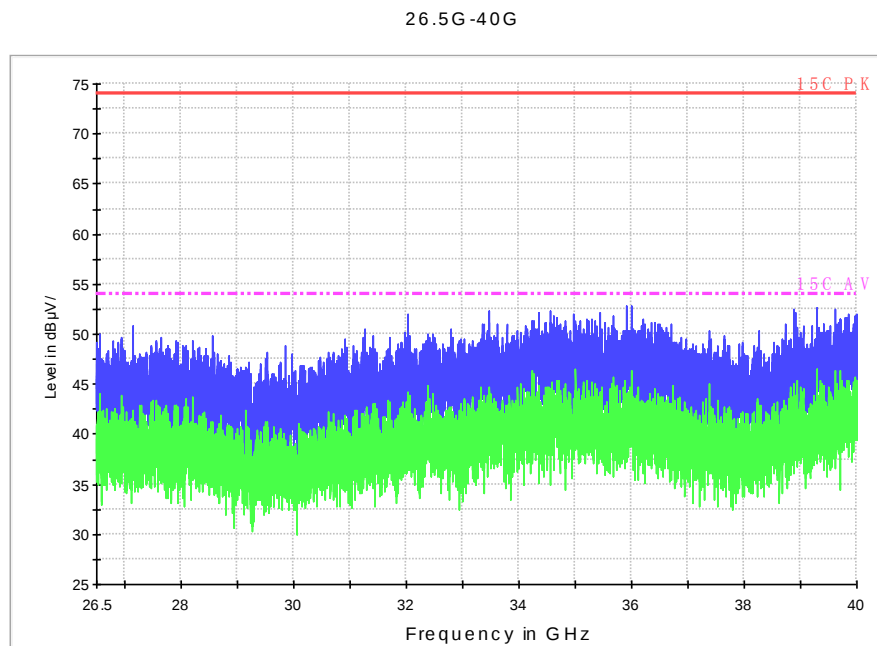


Fig. 190 Radiated Spurious Emission (802.11n-HT40, ch102, 26.5 GHz-40 GHz)

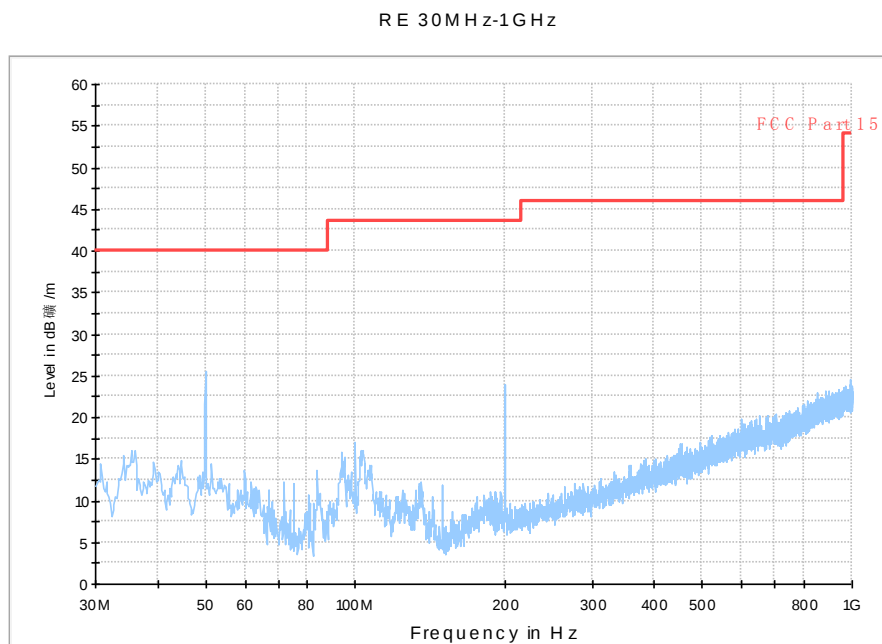


Fig. 191 Radiated Spurious Emission (802.11n-HT40, ch118, 30 MHz-1 GHz)

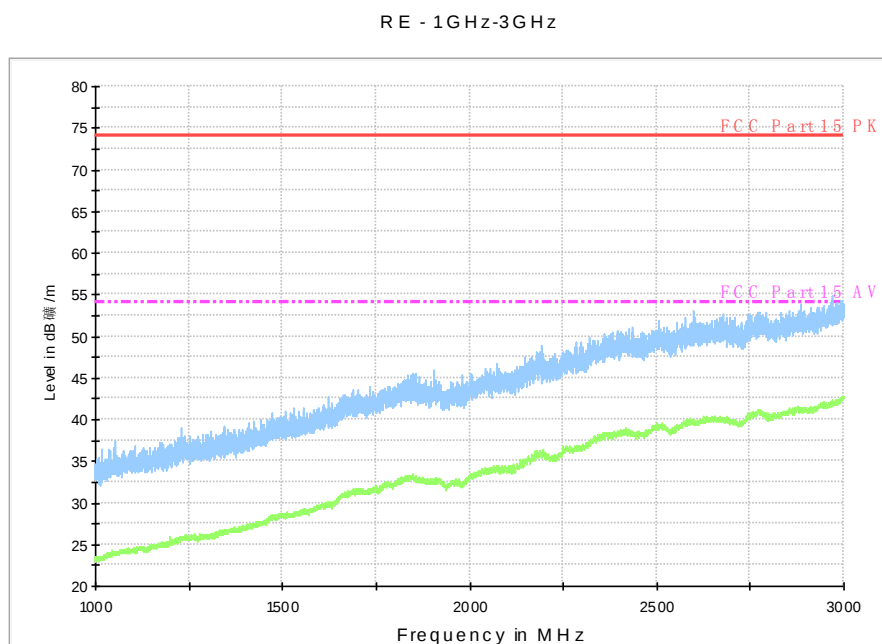


Fig. 192 Radiated Spurious Emission (802.11n-HT40, ch118, 1 GHz-3 GHz)

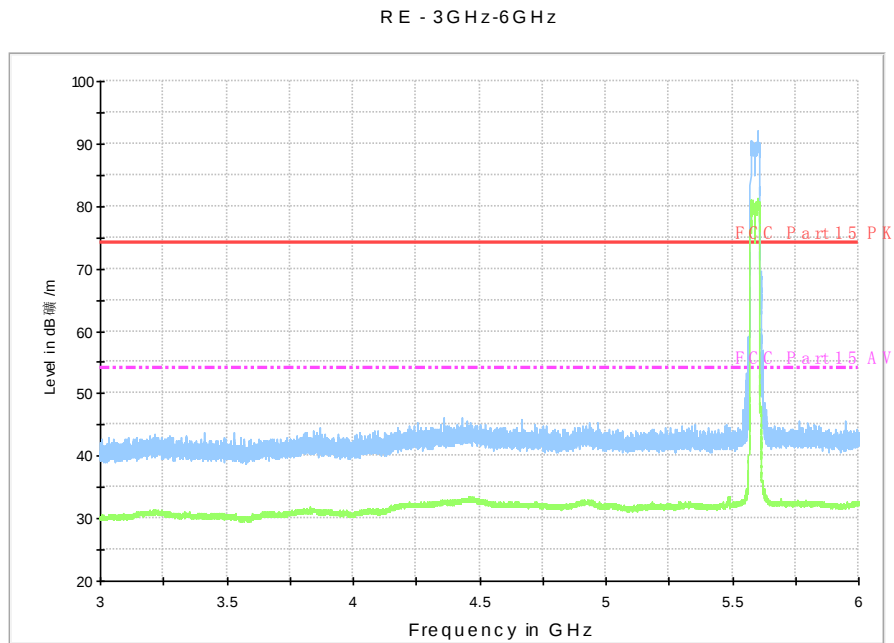


Fig. 193 Radiated Spurious Emission (802.11n-HT40, ch118, 3 GHz-6 GHz)

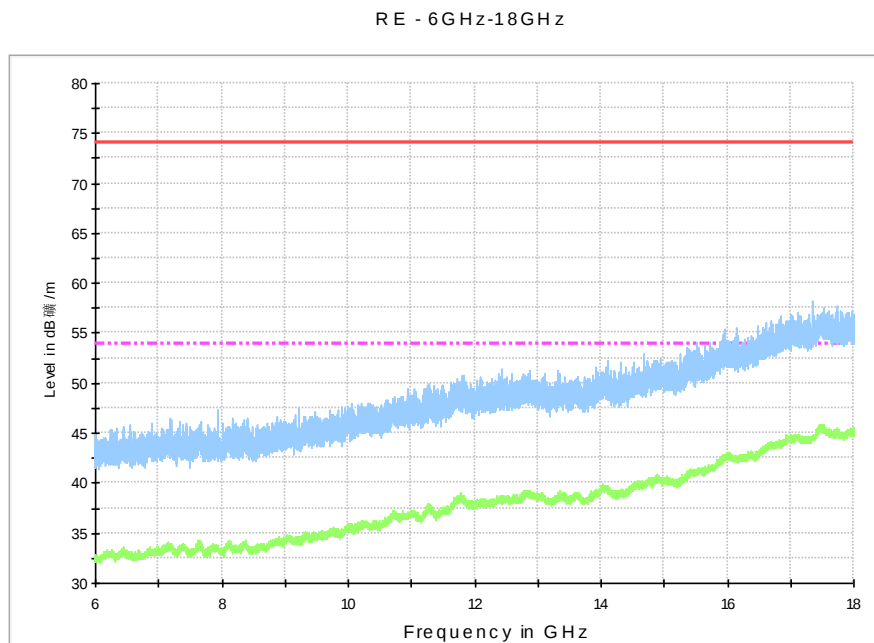


Fig. 194 Radiated Spurious Emission (802.11n-HT40, ch118, 6 GHz-18 GHz)

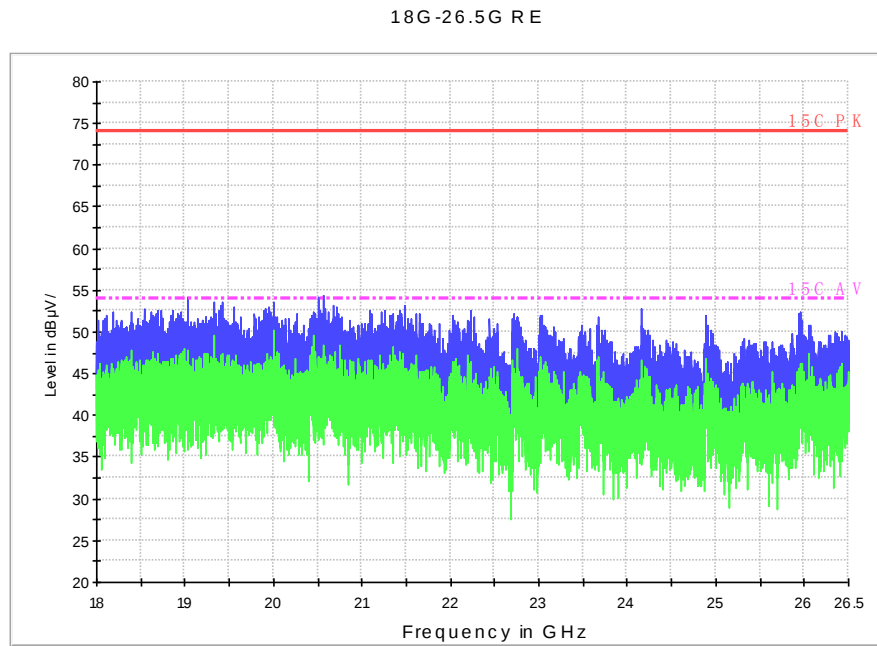


Fig. 195 Radiated Spurious Emission (802.11n-HT40, ch118, 18 GHz-26.5 GHz)

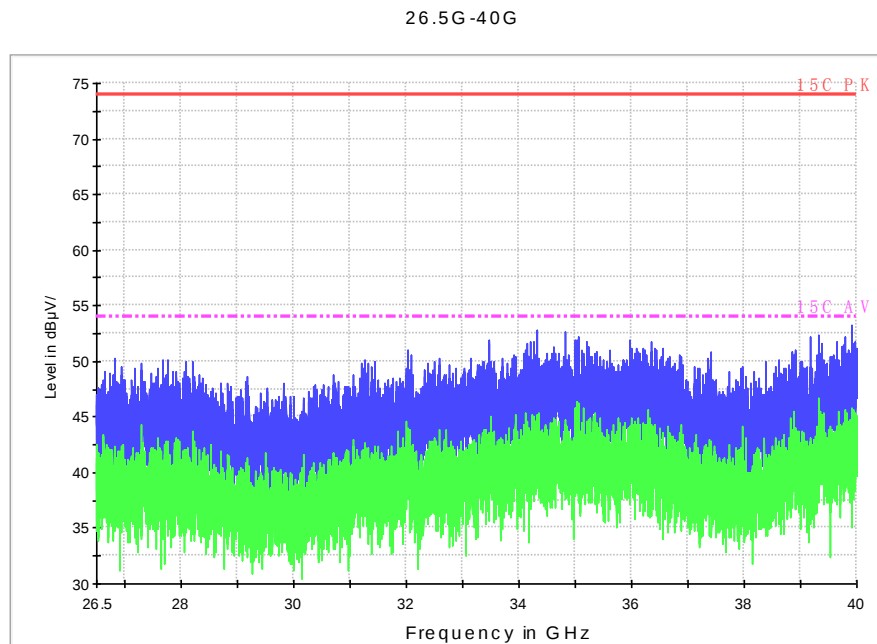


Fig. 196 Radiated Spurious Emission (802.11n-HT40, ch118, 26.5 GHz-40 GHz)

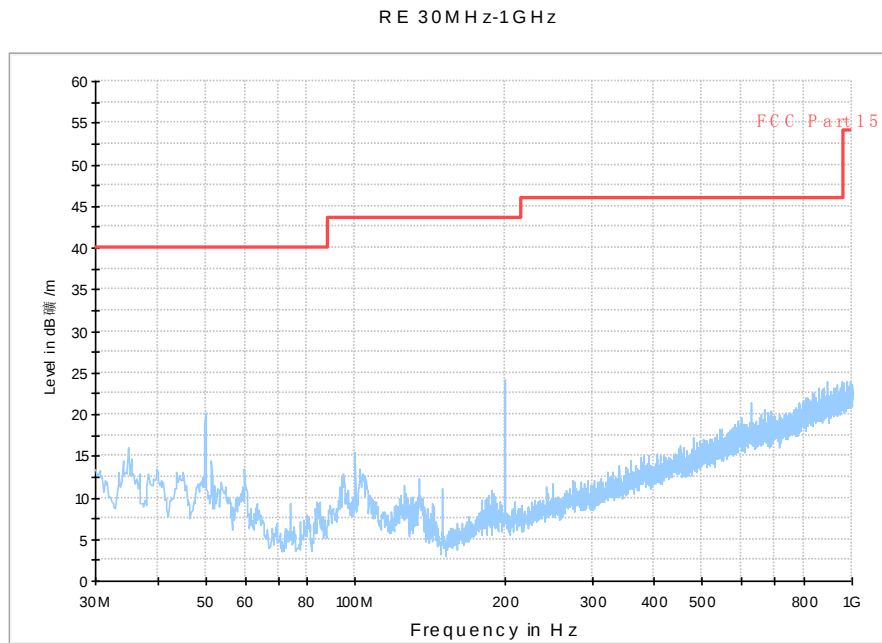


Fig. 197 Radiated Spurious Emission (802.11n-HT40, ch134, 30 MHz-1 GHz)

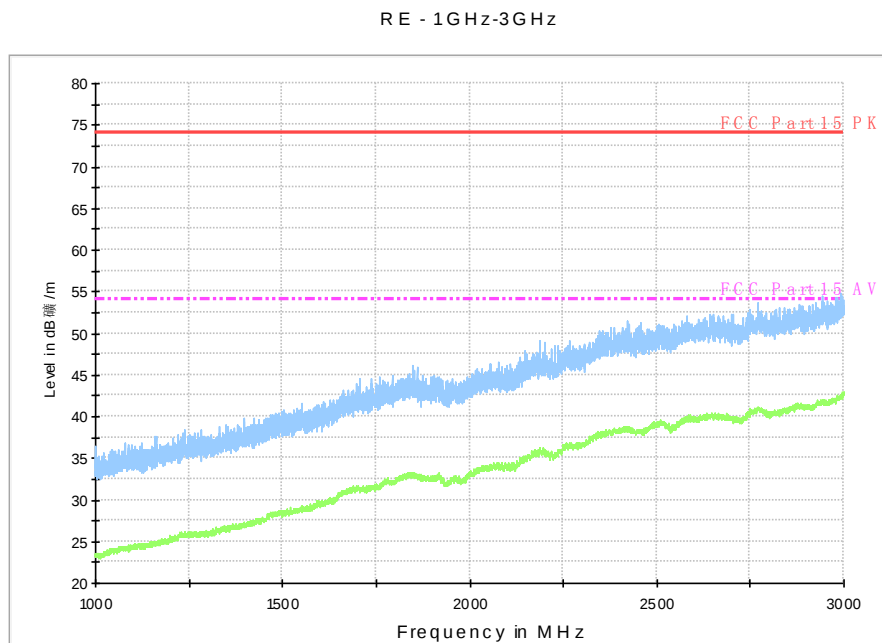


Fig. 198 Radiated Spurious Emission (802.11n-HT40, ch134, 1 GHz-3 GHz)

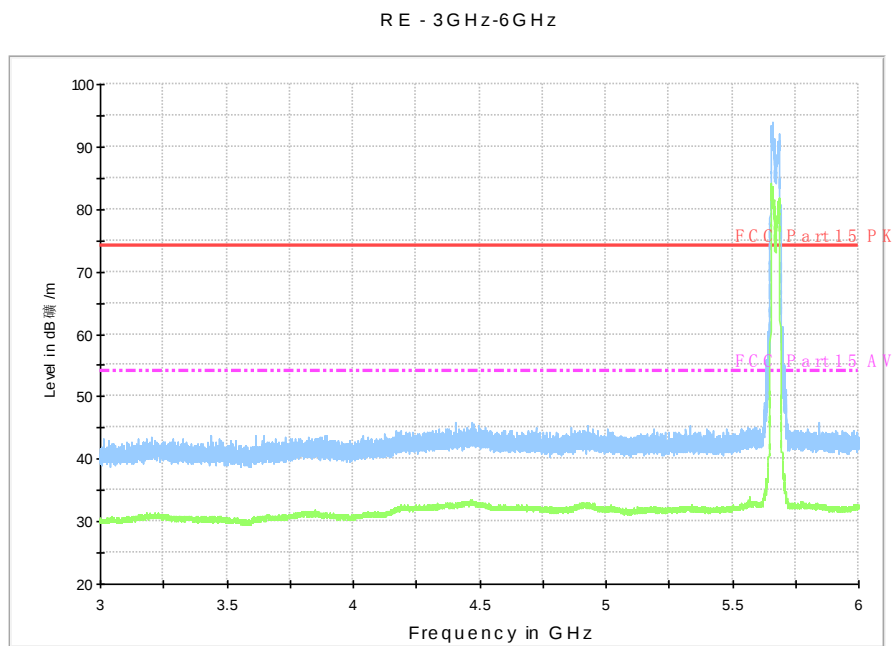


Fig. 199 Radiated Spurious Emission (802.11n-HT40, ch134, 3 GHz-6 GHz)

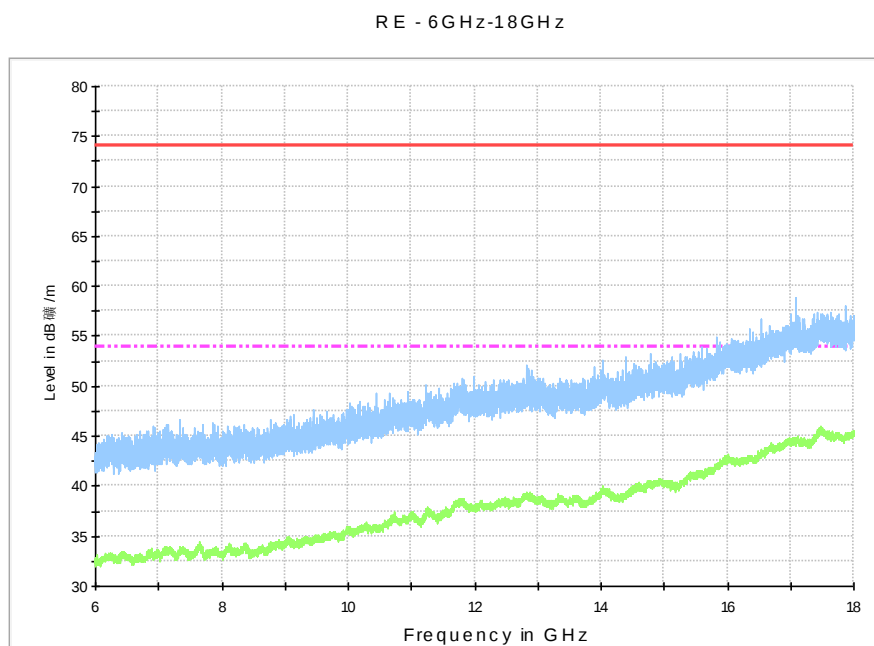


Fig. 200 Radiated Spurious Emission (802.11n-HT40, ch134, 6 GHz-18 GHz)

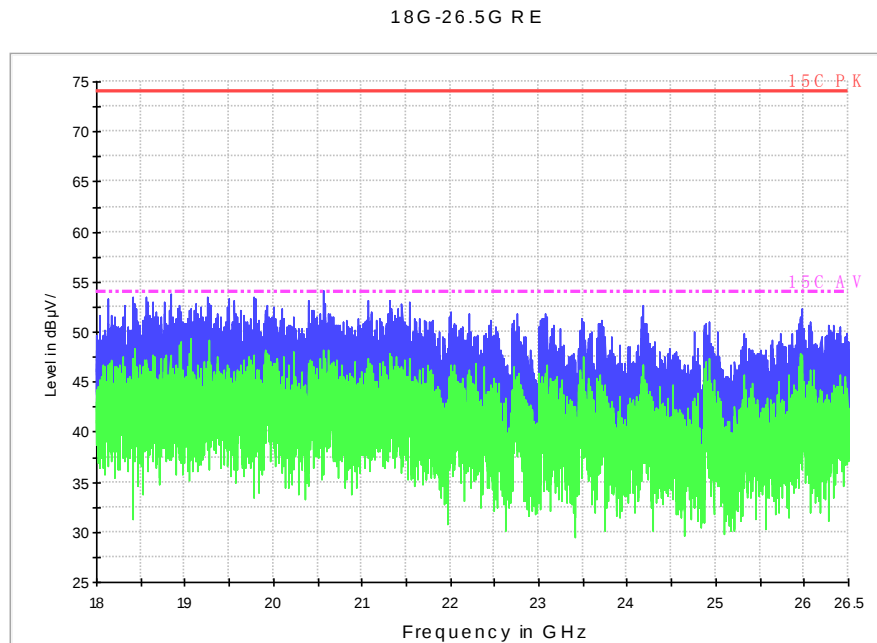


Fig. 201 Radiated Spurious Emission (802.11n-HT40, ch134, 18 GHz-26.5 GHz)

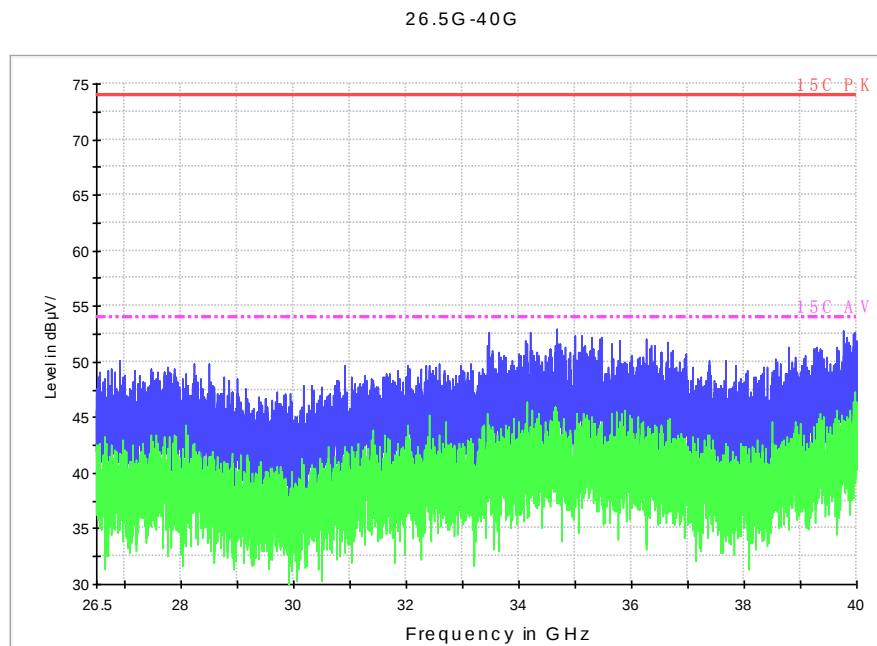


Fig. 202 Radiated Spurious Emission (802.11n-HT40, ch134, 26.5 GHz-40 GHz)

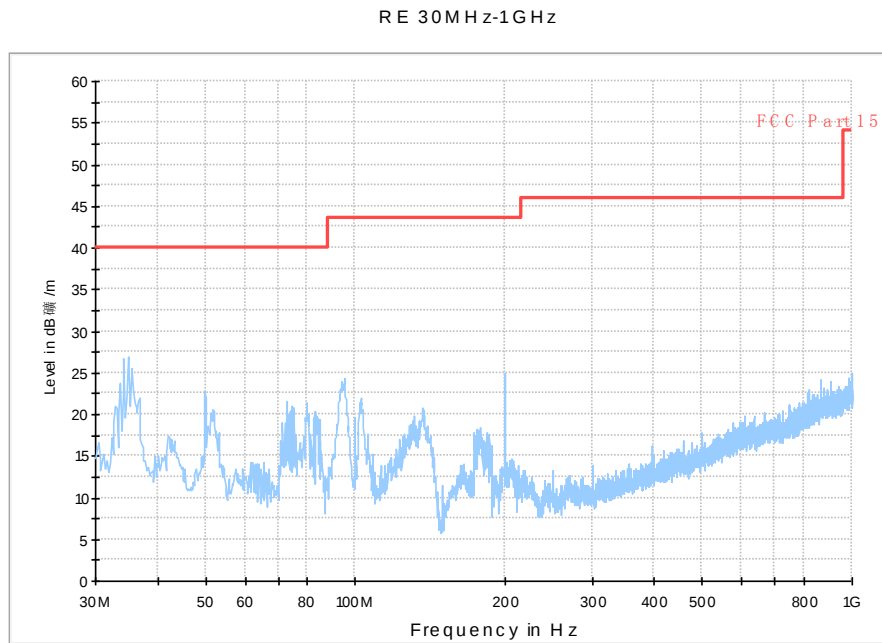


Fig. 203 Radiated Spurious Emission (802.11ac-HT80, ch42, 30 MHz-1 GHz)

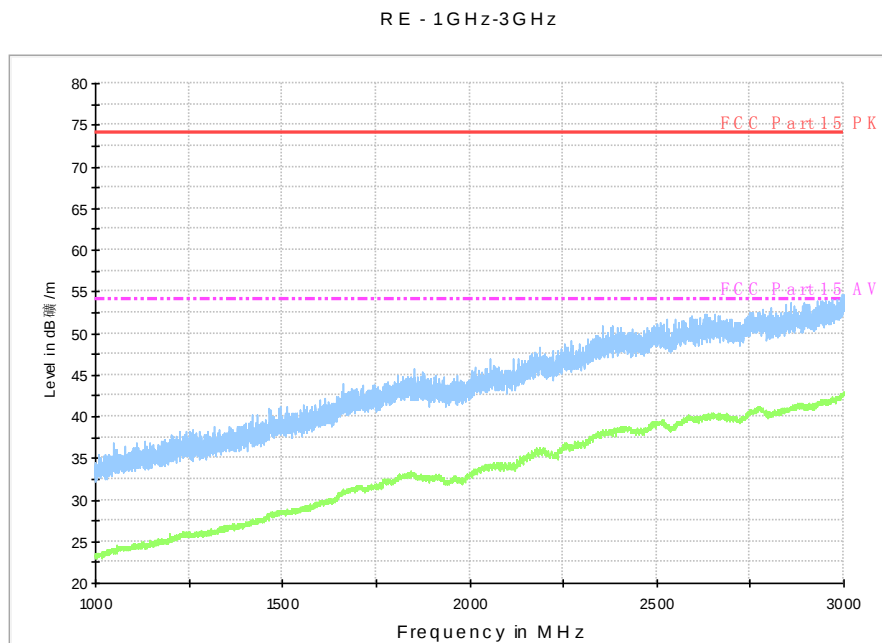


Fig. 204 Radiated Spurious Emission (802.11ac-HT80, ch42, 1 GHz-3 GHz)

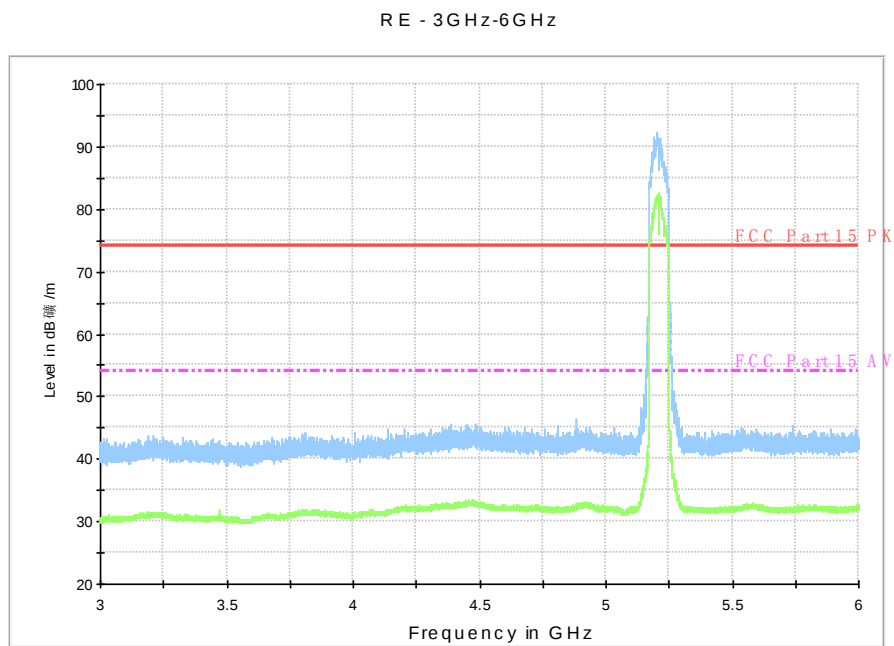


Fig. 205 Radiated Spurious Emission (802.11ac-HT80, ch42, 3 GHz-6 GHz)

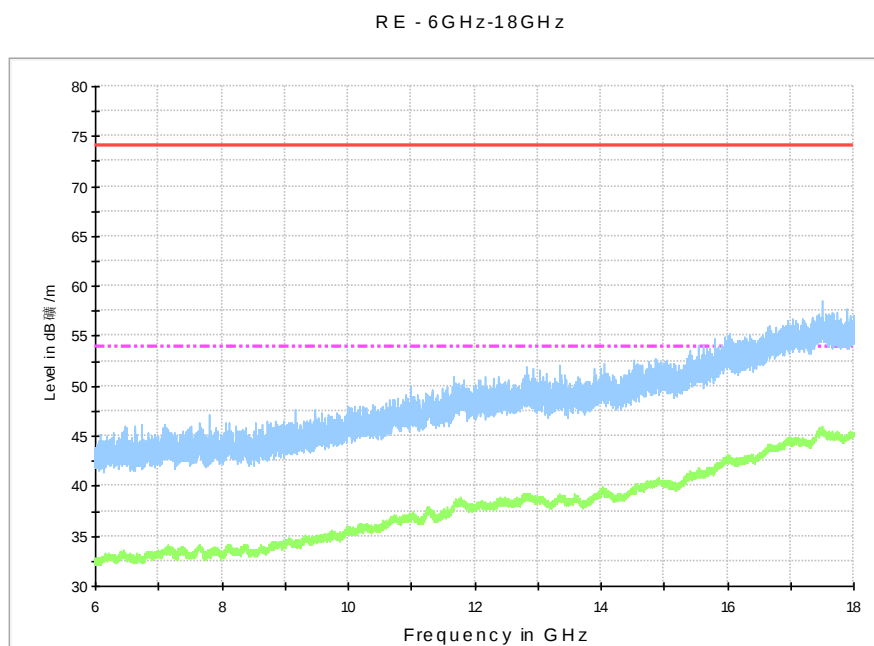


Fig. 206 Radiated Spurious Emission (802.11ac-HT80, ch42, 6 GHz-18 GHz)

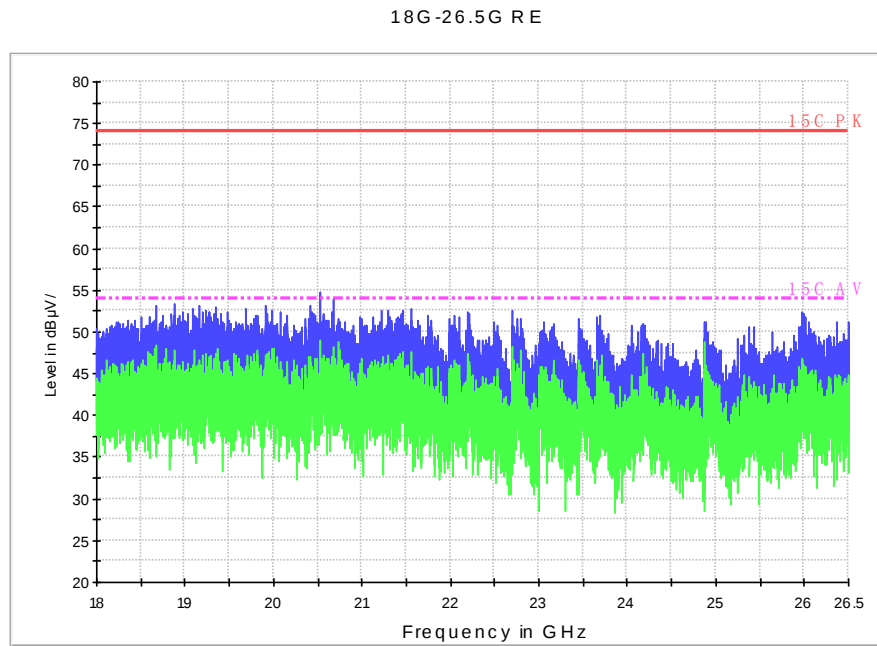


Fig. 207 Radiated Spurious Emission (802.11ac-HT80, ch42, 18 GHz-26.5 GHz)

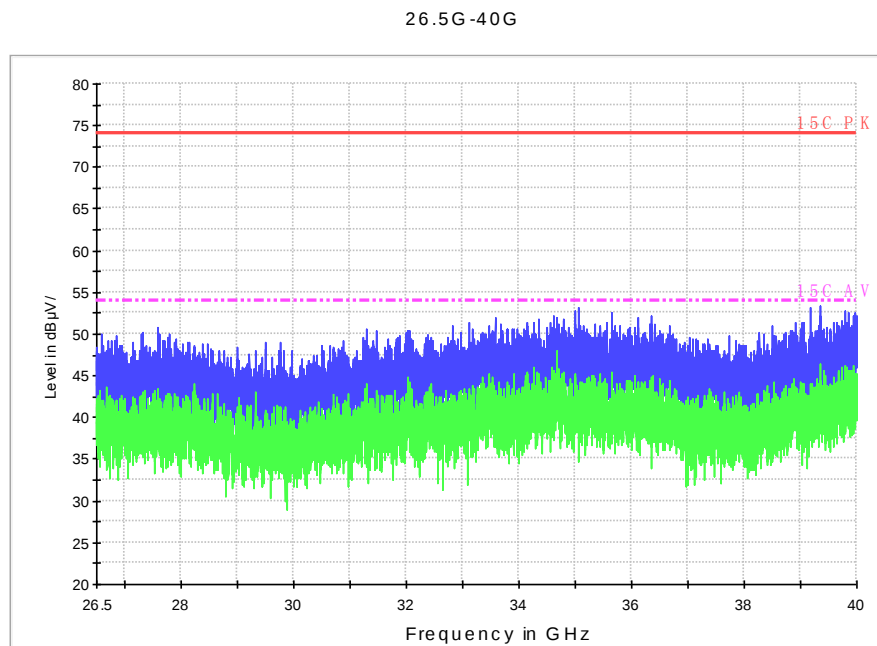


Fig. 208 Radiated Spurious Emission (802.11ac-HT80, ch42, 26.5 GHz-40 GHz)

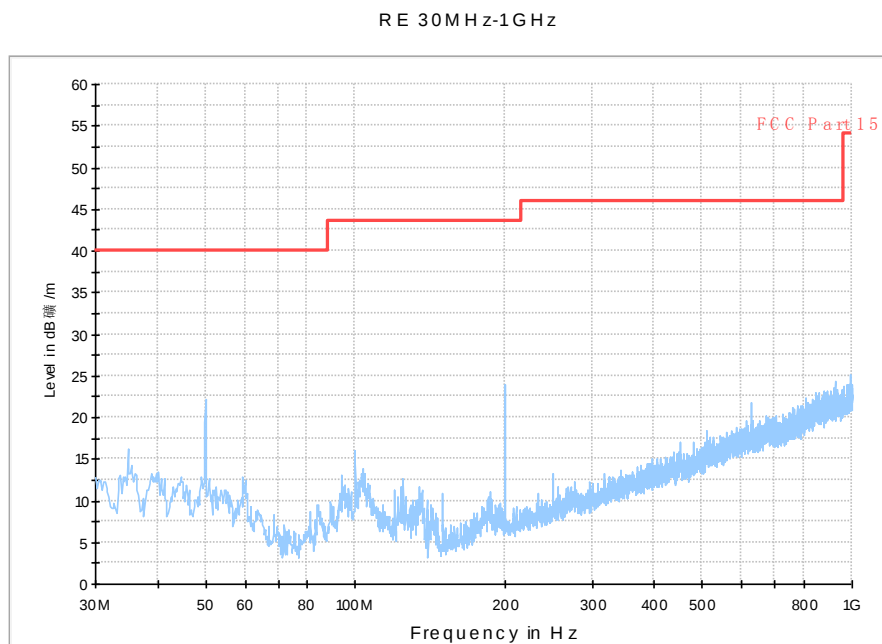


Fig. 209 Radiated Spurious Emission (802.11ac-HT80, ch106, 30 MHz-1 GHz)

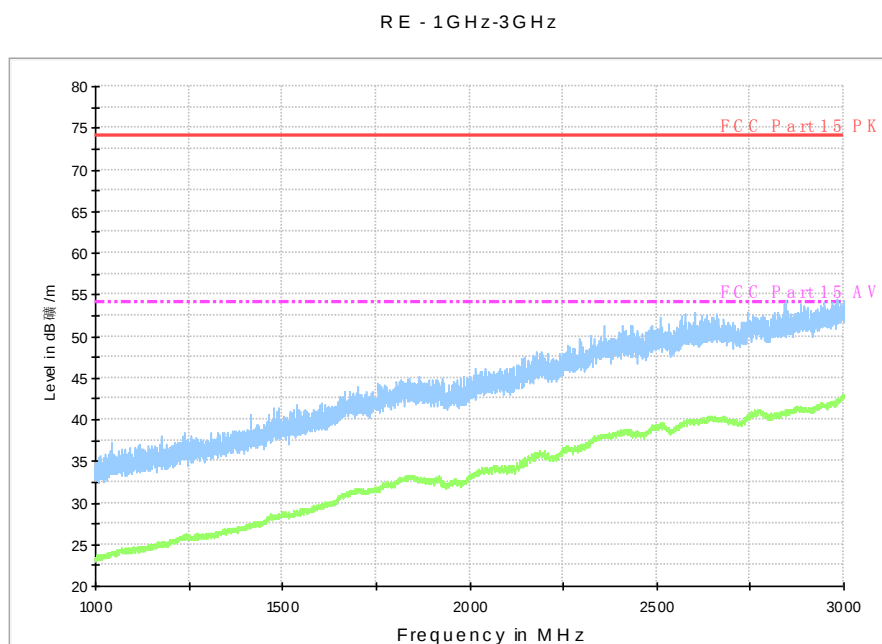


Fig. 210 Radiated Spurious Emission (802.11ac-HT80, ch106, 1 GHz-3 GHz)

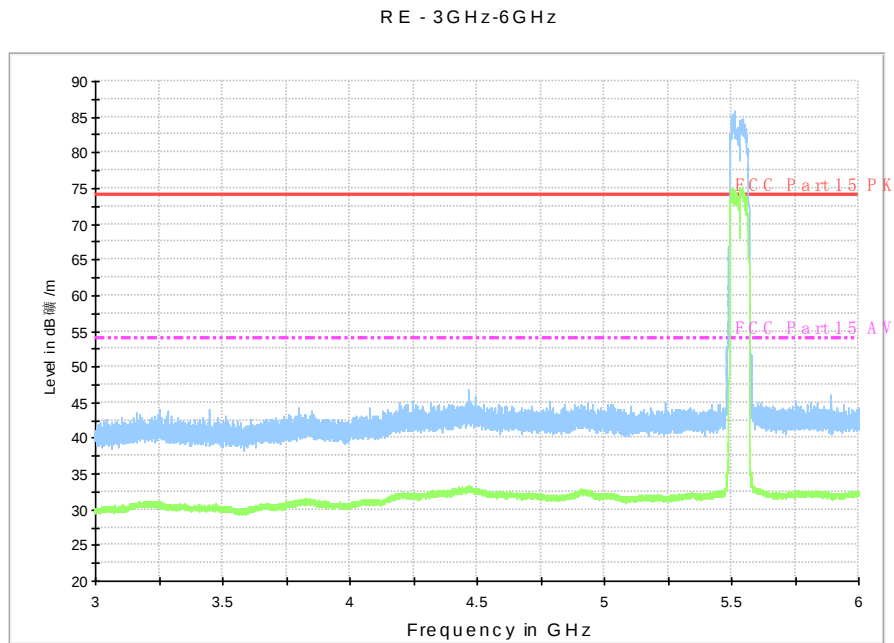


Fig. 211 Radiated Spurious Emission (802.11ac-HT80, ch106, 3 GHz-6 GHz)

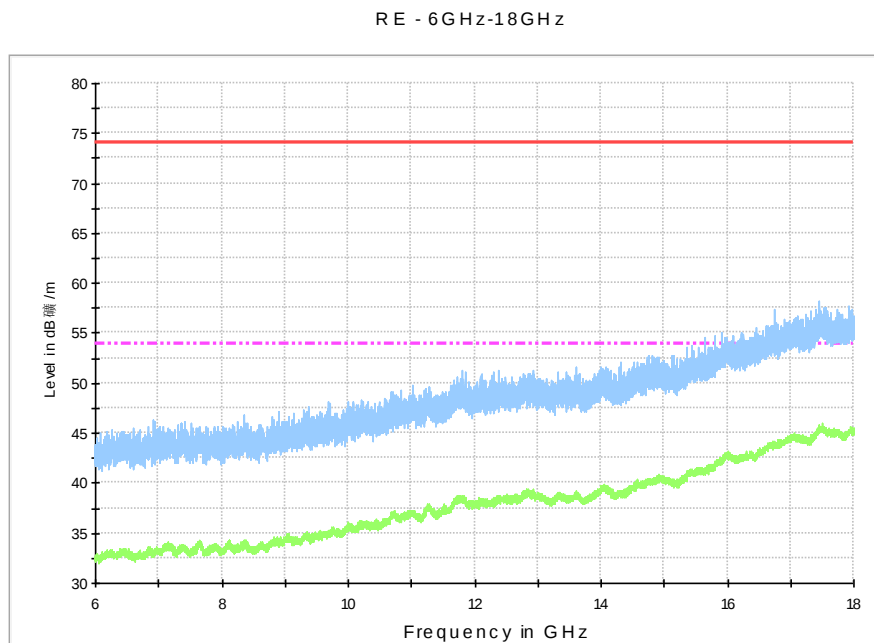


Fig. 212 Radiated Spurious Emission (802.11ac-HT80, ch106, 6 GHz-18 GHz)

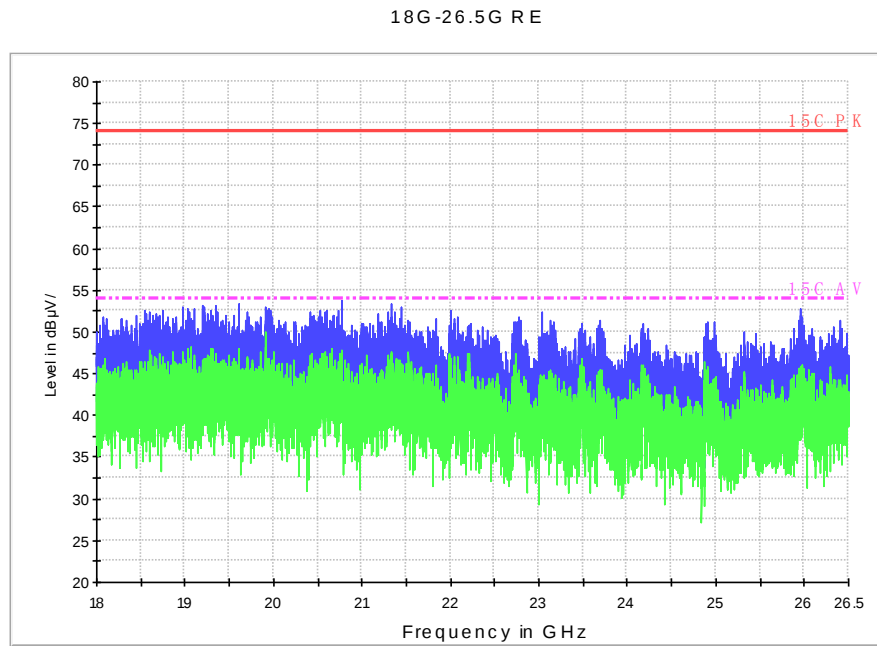


Fig. 213 Radiated Spurious Emission (802.11ac-HT80, ch106, 18 GHz-26.5 GHz)

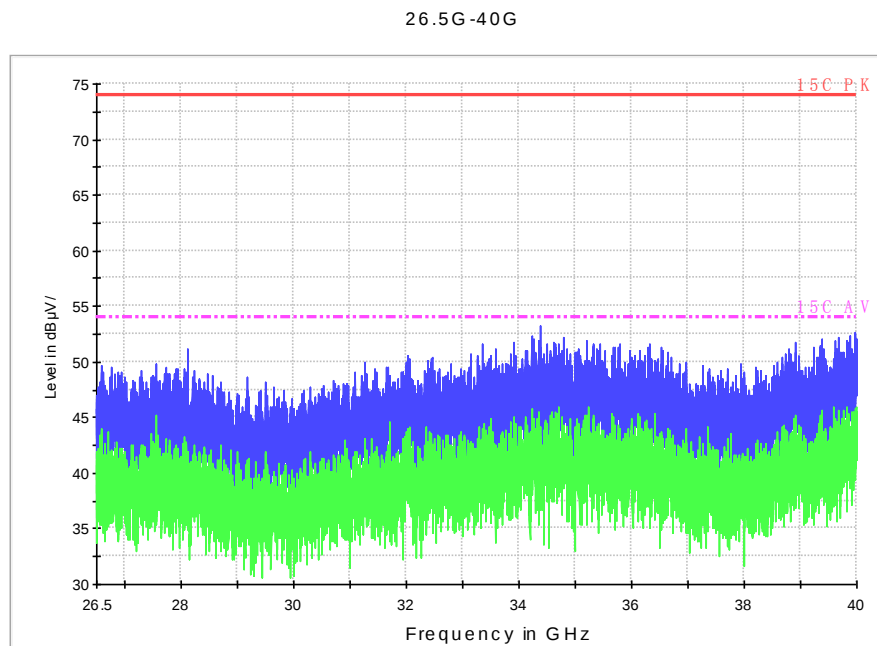


Fig. 214 Radiated Spurious Emission (802.11ac-HT80, ch106, 26.5 GHz-40 GHz)

A.7. Spurious Emissions Radiated < 30MHz

Measurement Limit(15.209, 9kHz-30MHz):

Frequency (MHz)	Field strength($\mu\text{V/m}$)	Measurement distance(m)
0.009 - 0.490	2400/F(kHz)	300
0.490 - 1.705	24000/F(kHz)	30
1.705 – 30.0	30	30

The measurement is made according to KDB 789033

Note: The measurement distance during the test is 3m. The limit used in plots is recalculated based on the extrapolation factor of 40 dB/decade.

Measurement uncertainty:

Expanded measurement uncertainty for this test item is $U = 2.6\text{dB}$, $k=2$.

Measurement Results:

Mode	Frequency Range	Test Results	Conclusion
802.11a	9 kHz ~30 MHz	Fig.215	P

Conclusion: PASS

Test graphs as below:

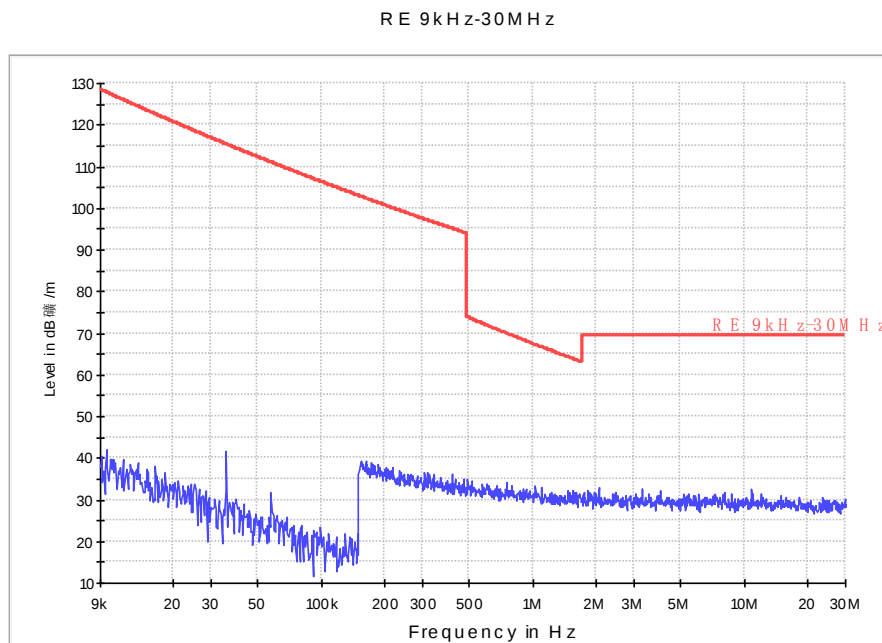


Fig. 215 Radiated Spurious Emission (802.11a, ch40, 9 kHz ~30 MHz)

A.8. Conducted Emission (150kHz- 30MHz)

Test Condition:

Voltage (V)	Frequency (Hz)
110	60

Measurement uncertainty:

Expanded measurement uncertainty for this test item is $U = 3.2\text{dB}$, $k=2$.

Measurement Result and limit:

WLAN (Quasi-peak Limit)

Frequency range (MHz)	Quasi-peak Limit (dBμV)	Result (dBμV)		Conclusion
		With charger		
		11a mode	Idle	
0.15 to 0.5	66 to 56	Fig. 216	Fig. 217	P
0.5 to 5	56			
5 to 30	60			

NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.

WLAN (Average Limit)

Frequency range (MHz)	Average Limit (dBμV)	Result (dBμV)		Conclusion
		With charger		
		11a mode	Idle	
0.15 to 0.5	56 to 46	Fig.216	Fig.217	P
0.5 to 5	46			
5 to 30	50			

NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.

Conclusion: PASS

Test graphs as below:

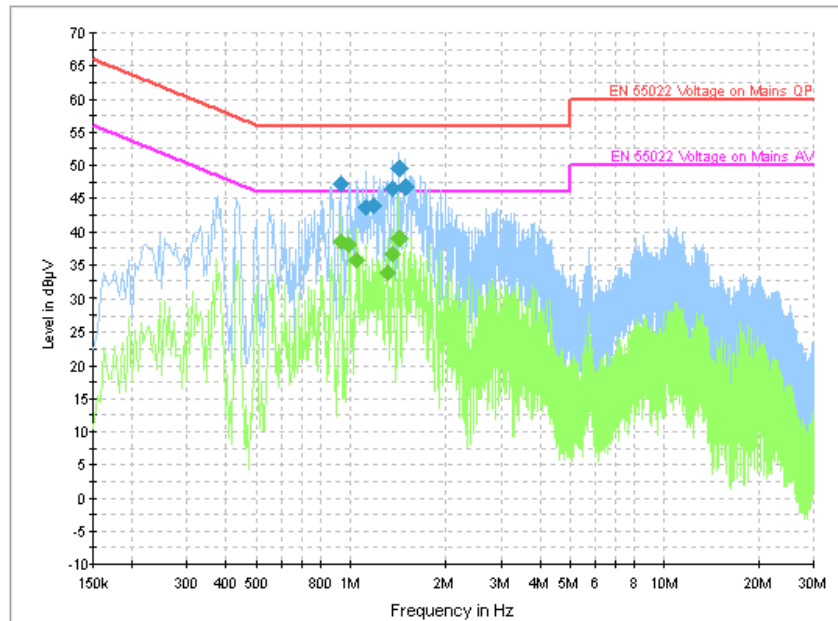


Fig. 216 Conducted Emission(802.11a, Ch40, TX)

Measurement Result:

Frequency (MHz)	QuasiPeak (dBμV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.933001	47.1	GND	L1	9.9	8.9	56.0
1.117501	43.7	GND	L1	9.9	12.3	56.0
1.180501	43.8	GND	L1	9.9	12.2	56.0
1.365001	46.4	GND	L1	9.9	9.6	56.0
1.428001	49.4	GND	L1	9.9	6.6	56.0
1.495501	46.8	GND	L1	9.9	9.2	56.0

Measurement Result:

Frequency (MHz)	CAverage (dBμV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.933001	38.4	GND	L1	9.9	7.6	46.0
0.991501	37.9	GND	L1	9.9	8.1	46.0
1.050001	35.7	GND	L1	9.9	10.3	46.0
1.315501	33.8	GND	L1	9.9	12.2	46.0
1.365001	36.6	GND	L1	9.9	9.4	46.0
1.428001	39.0	GND	L1	9.9	7.0	46.0

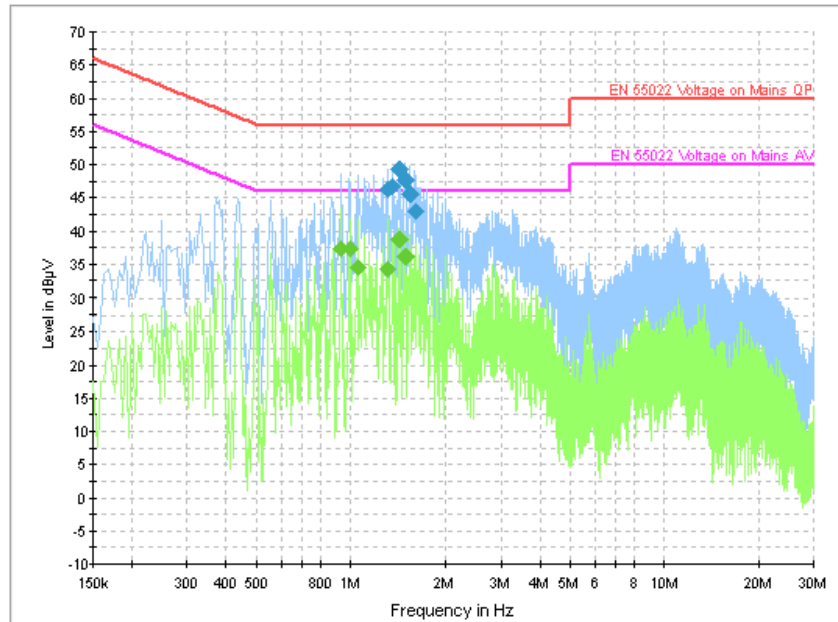


Fig. 217 Conducted Emission(802.11a, IDLE)

Measurement Result:

Frequency (MHz)	QuasiPeak (dBμV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
1.320001	46.1	GND	L1	9.9	9.9	56.0
1.369501	46.8	GND	L1	9.9	9.2	56.0
1.432501	49.3	GND	L1	9.9	6.7	56.0
1.495501	47.7	GND	L1	9.9	8.3	56.0
1.545001	45.6	GND	L1	9.9	10.4	56.0
1.594501	43.0	GND	L1	9.9	13.0	56.0

Measurement Result:

Frequency (MHz)	CAverage (dBμV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.937501	37.2	GND	L1	9.9	8.8	46.0
0.996001	37.2	GND	L1	9.9	8.8	46.0
1.054501	34.4	GND	L1	9.9	11.6	46.0
1.320001	34.3	GND	L1	9.9	11.7	46.0
1.432501	38.8	GND	L1	9.9	7.2	46.0
1.495501	36.1	GND	L1	9.9	9.9	46.0

A.9.Peak Excursion

Measurement Limit:

Standard	Limit (dB)
FCC 47 CFR Part 15.407	13

The measurement is made according to KDB 789033, the method SA-1 is used for PPSD measurement.

Measurement Uncertainty:

Measurement Uncertainty	0.75 dB
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Measurement Result:

11a mode

Type	Peak Excursion					
	5180MHz (Ch36)		5200MHz (Ch40)		5240MHz (Ch48)	
Peak (dBm)	Fig.218	16.31	Fig.219	16.12	Fig.220	15.89
Average(dBm)	Fig.221	7.80	Fig.222	7.95	Fig.223	7.59
Result (dB)	8.51		8.17		8.30	

Type	Test Result (dBm)					
	5260MHz (Ch52)		5280 MHz (Ch56)		5320 MHz (Ch64)	
Peak (dBm)	Fig.224	15.78	Fig.225	15.98	Fig.226	15.79
Average(dBm)	Fig.227	8.00	Fig.228	7.76	Fig.229	7.67
Result (dB)	7.78		8.22		8.12	

Type	Test Result (dBm)					
	5500MHz (Ch100)		5600MHz (Ch120)		5700MHz (Ch140)	
Peak (dBm)	Fig.230	16.69	Fig.231	16.90	Fig.232	16.48
Average(dBm)	Fig.233	8.03	Fig.234	8.12	Fig.235	7.99
Result (dB)	8.66		8.78		8.49	

11n-HT20 mode

Type	Peak Excursion					
	5180MHz (Ch36)		5200MHz (Ch40)		5240MHz (Ch48)	
Peak (dBm)	Fig.236	17.71	Fig.237	17.64	Fig.238	17.61
Average(dBm)	Fig.239	8.87	Fig.240	8.82	Fig.241	8.93
Result (dB)	8.84		8.82		8.68	

Type	Test Result (dBm)					
	5260MHz (Ch52)		5280 MHz (Ch56)		5320 MHz (Ch64)	
Peak (dBm)	Fig.242	17.70	Fig.243	17.60	Fig.244	17.83
Average(dBm)	Fig.245	8.84	Fig.246	8.77	Fig.247	8.59
Result (dB)	8.86		8.83		9.24	

Type	Test Result (dBm)					
	5500MHz (Ch100)		5600MHz (Ch120)		5700MHz (Ch140)	
Peak (dBm)	Fig.248	18.14	Fig.249	17.77	Fig.250	18.25
Average(dBm)	Fig.251	8.86	Fig.252	9.09	Fig.253	8.70
Result (dB)	9.28		8.68		9.55	

11n-HT40 mode

Type	Peak Excursion							
	5190MHz (Ch38)		5230MHz (Ch46)		5270MHz (Ch54)		5310 MHz (Ch62)	
Peak (dBm)	Fig.254	14.56	Fig.255	14.37	Fig.256	15.20	Fig.257	15.77
Average(dBm)	Fig.258	5.87	Fig.259	6.15	Fig.260	6.01	Fig.261	5.94
Result (dB)	8.69		8.22		9.19		9.83	

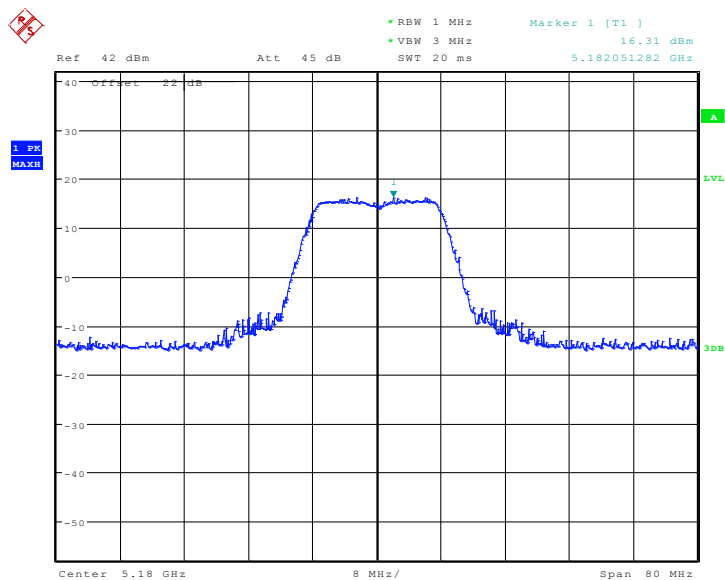
Type	Test Result (dBm)					
	5510MHz (Ch102)		5590MHz (Ch118)		5670MHz (Ch134)	
Peak (dBm)	Fig.262	15.07	Fig.263	15.51	Fig.264	15.54
Average(dBm)	Fig.265	6.16	Fig.266	6.29	Fig.267	6.13
Result (dB)	8.91		9.22		9.41	

11ac-HT80 mode

Type	Test Result (dBm)					
	5210MHz (Ch42)		5290MHz (Ch58)		5530MHz (Ch106)	
Peak (dBm)	Fig.268	2.25	Fig.269	2.60	Fig.270	1.95
Average(dBm)	Fig.271	-5.71	Fig.272	-5.99	Fig.273	-6.15
Result (dB)	7.96		8.59		8.10	

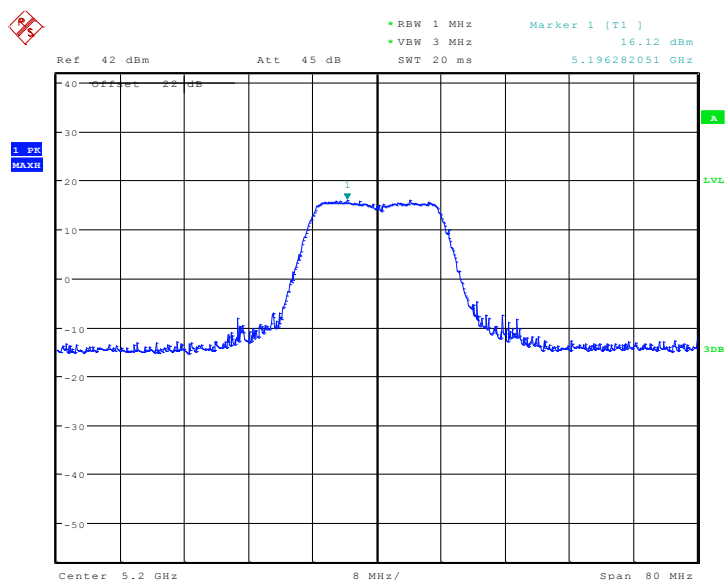
Conclusion: PASS

Test graphs as below:



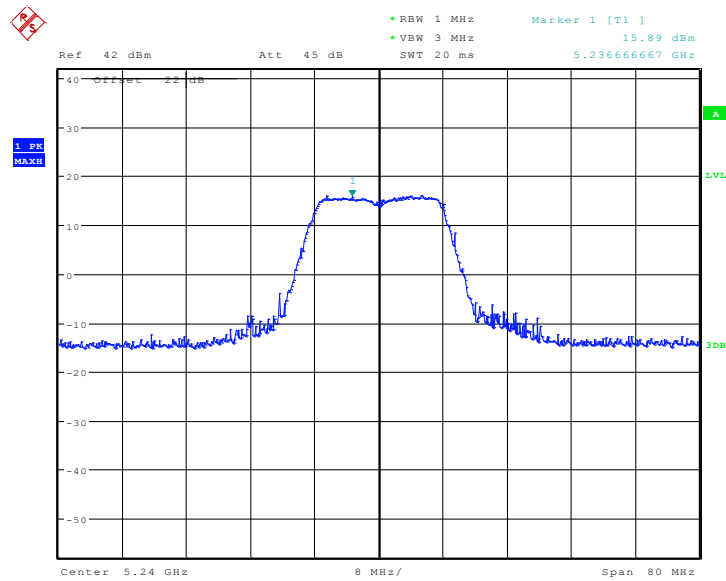
Date: 21.AUG.2013 15:58:24

Fig. 218 Peak Excursions (802.11a, ch36, peak)



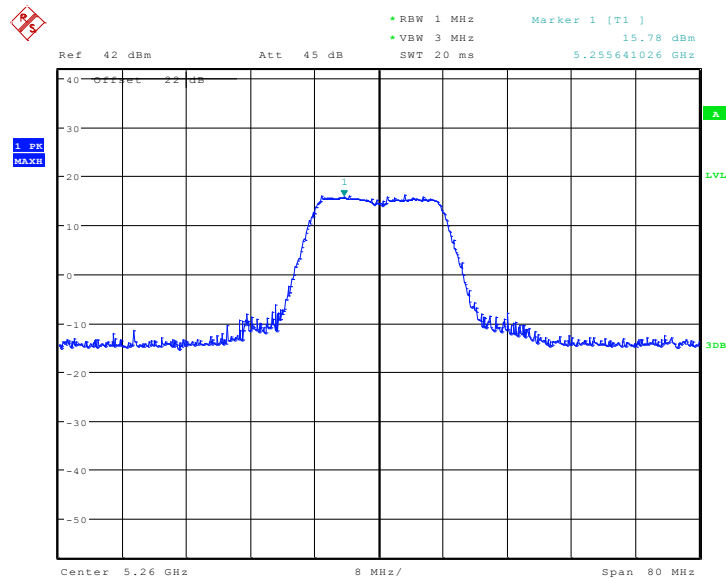
Date: 21.AUG.2013 15:59:44

Fig. 219 Peak Excursions (802.11a, ch40, peak)



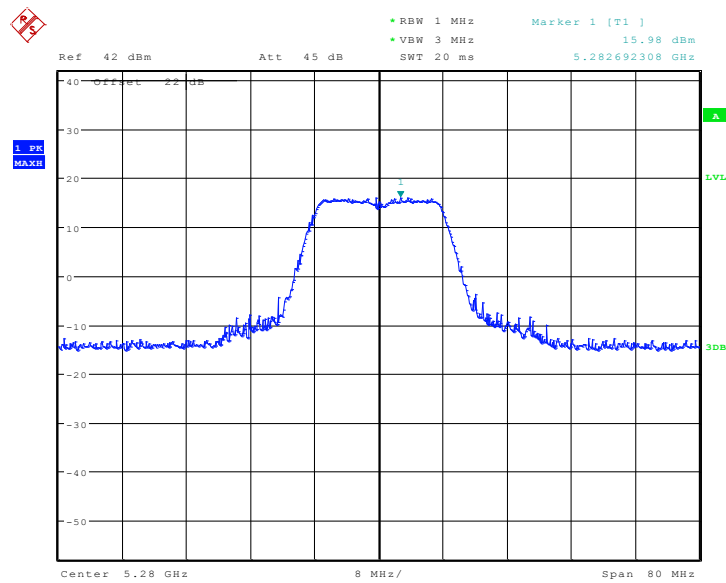
Date: 21.AUG.2013 16:01:37

Fig. 220 Peak Excursions (802.11a, ch48, peak)



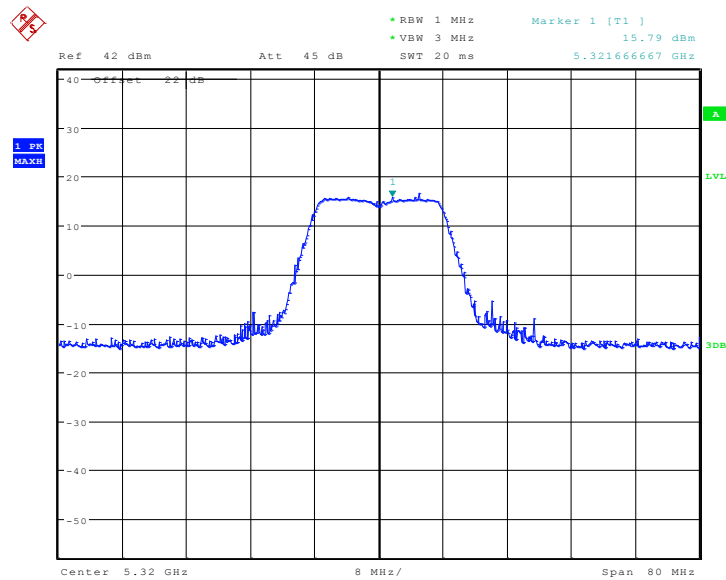
Date: 21.AUG.2013 16:02:39

Fig. 221 Peak Excursions (802.11a, ch52, peak)



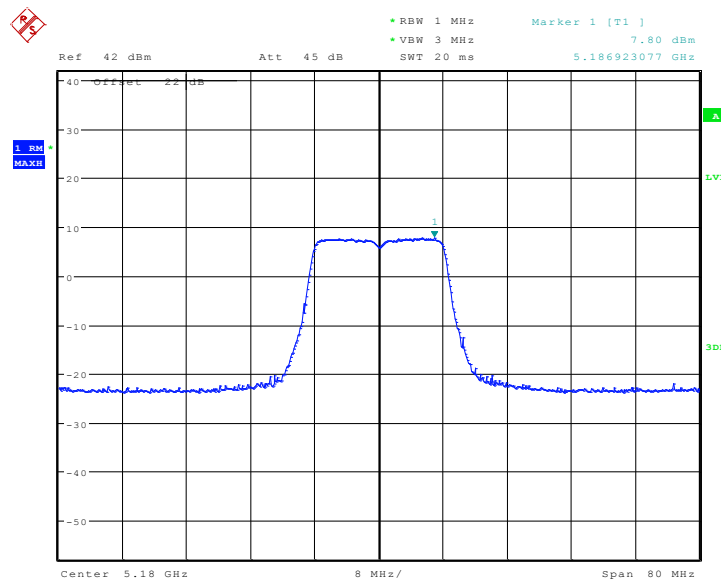
Date: 21.AUG.2013 16:03:27

Fig. 222 Peak Excursions (802.11a, ch56, peak)



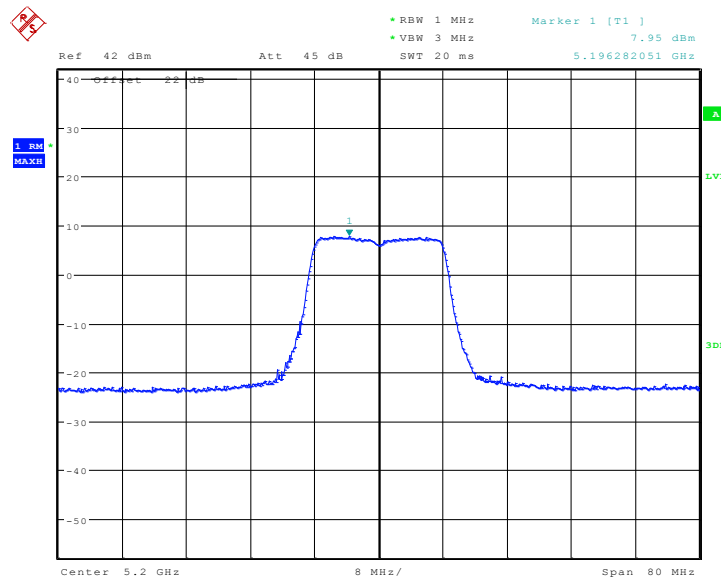
Date: 21.AUG.2013 16:04:16

Fig. 223 Peak Excursions (802.11a, ch64, peak)



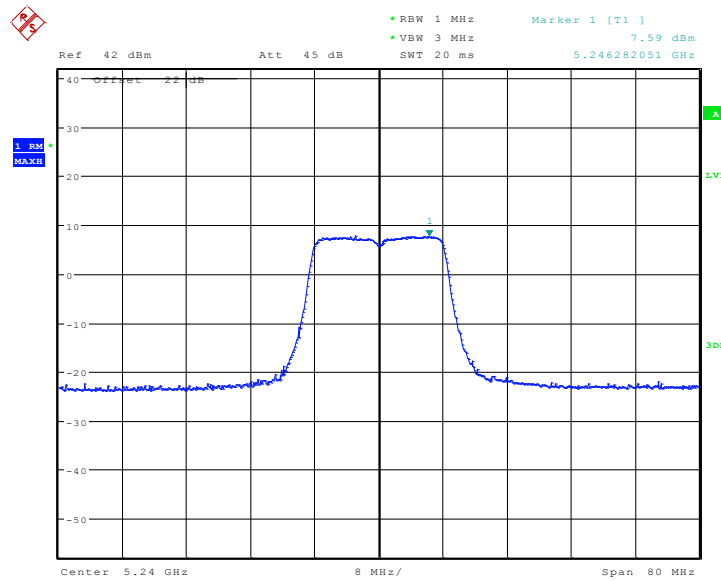
Date: 21.AUG.2013 15:58:54

Fig. 224 Peak Excursions (802.11a, ch36, average)



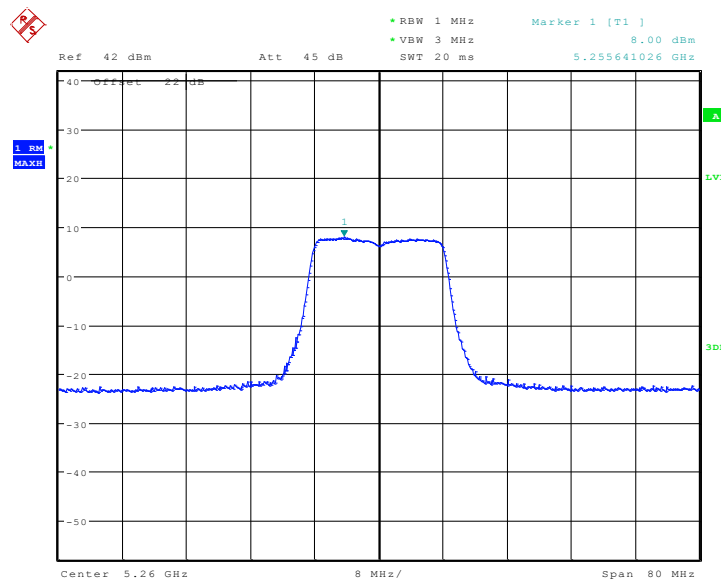
Date: 21.AUG.2013 16:00:55

Fig. 225 Peak Excursions (802.11a, ch40, average)



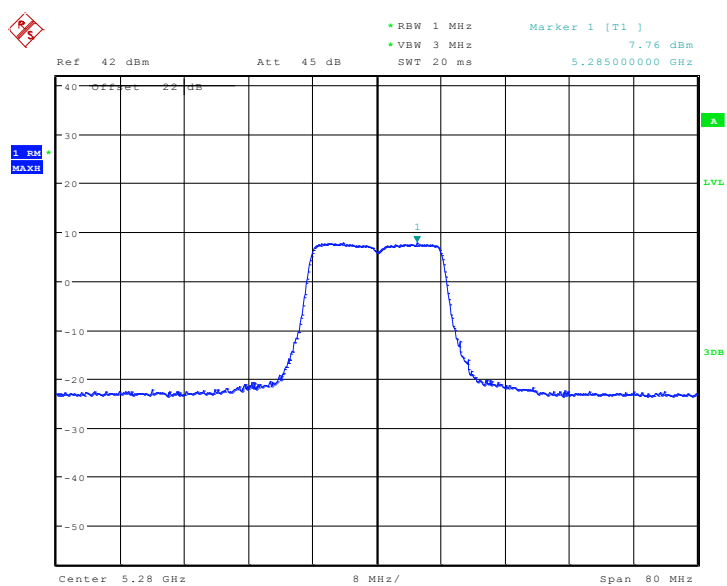
Date: 21.AUG.2013 16:01:56

Fig. 226 Peak Excursions (802.11a, ch48, average)



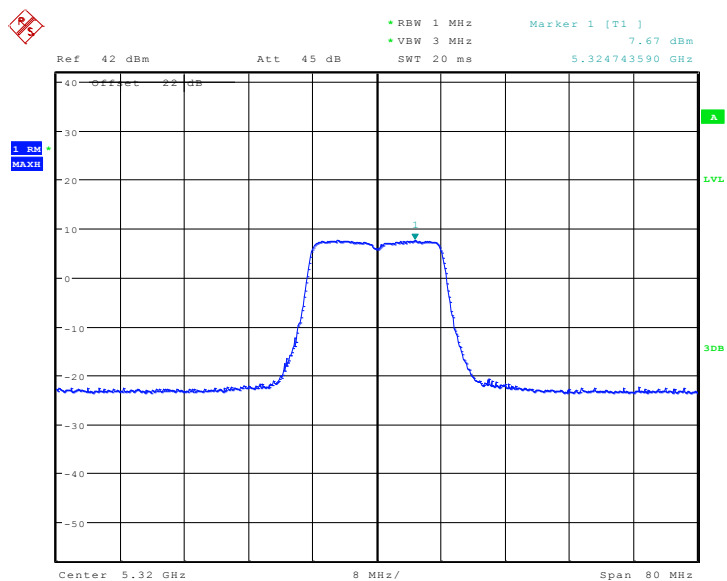
Date: 21.AUG.2013 16:02:58

Fig. 227 Peak Excursions (802.11a, ch52, average)



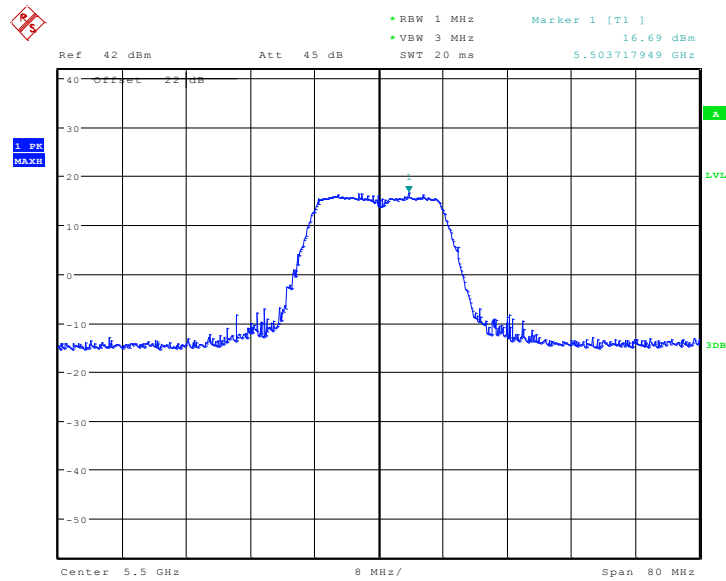
Date: 21.AUG.2013 16:03:46

Fig. 228 Peak Excursions (802.11a, ch56, average)



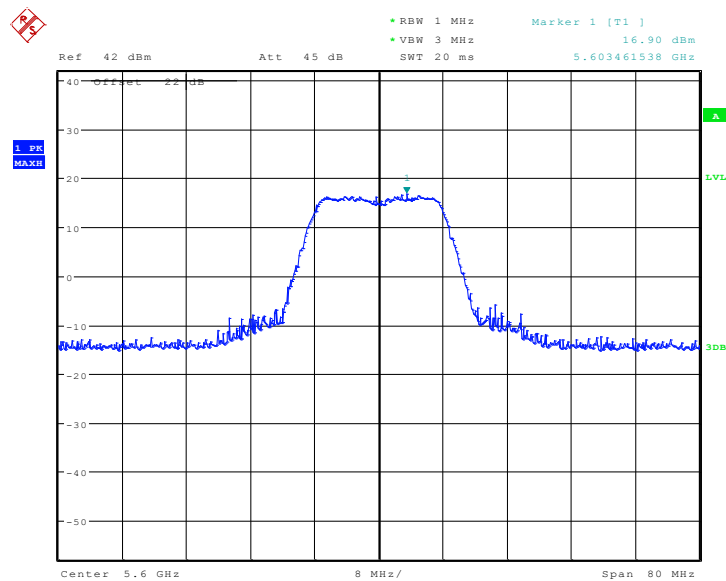
Date: 21.AUG.2013 16:04:31

Fig. 229 Peak Excursions (802.11a, ch64, average)



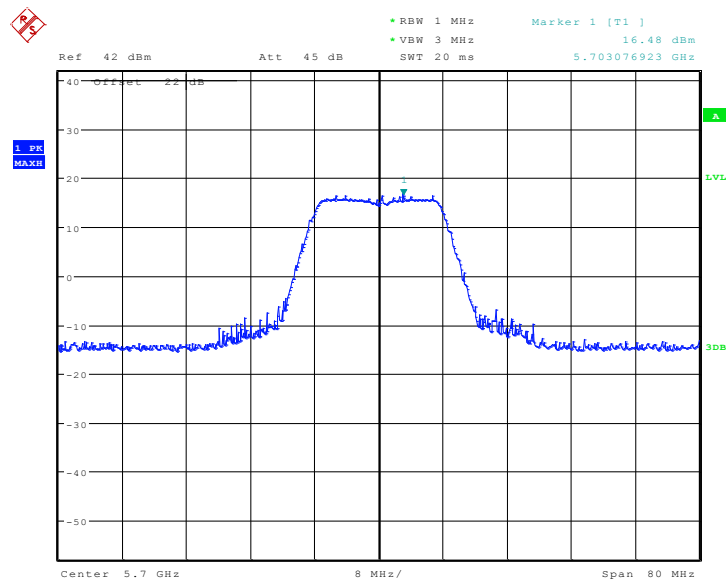
Date: 21.AUG.2013 16:05:00

Fig. 230 Peak Excursions (802.11a, ch100, peak)



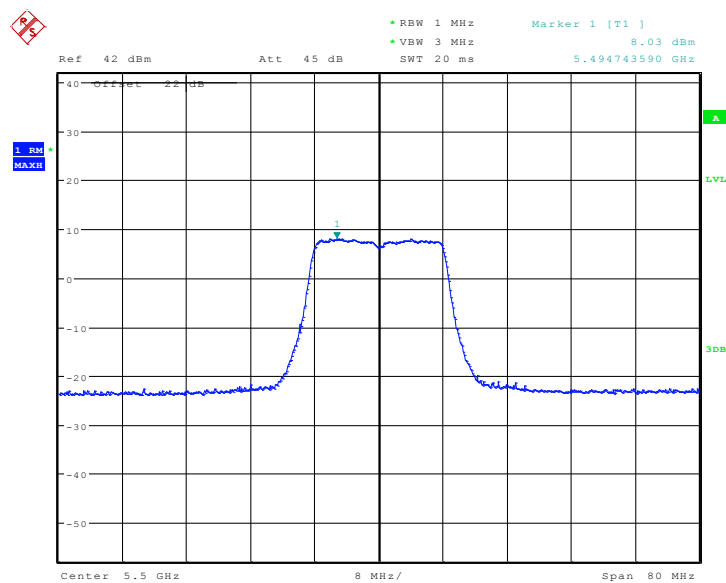
Date: 21.AUG.2013 16:06:06

Fig. 231 Peak Excursions (802.11a, ch120, peak)



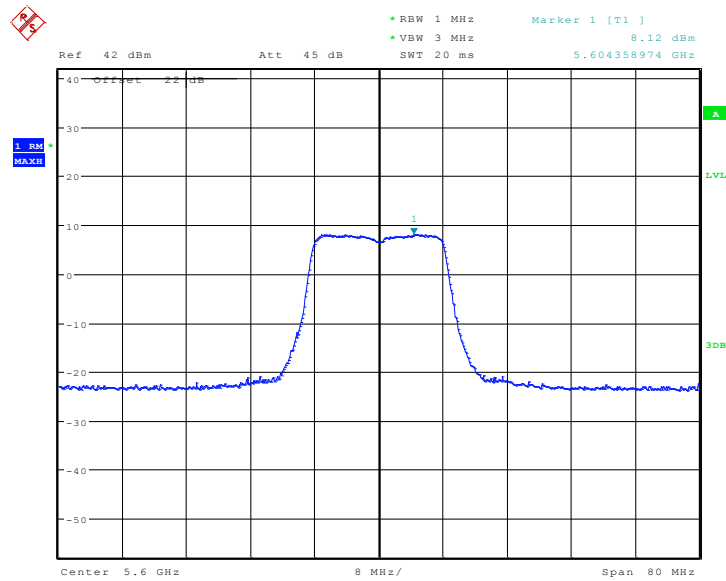
Date: 21.AUG.2013 16:07:00

Fig. 232 Peak Excursions (802.11a, ch140, peak)



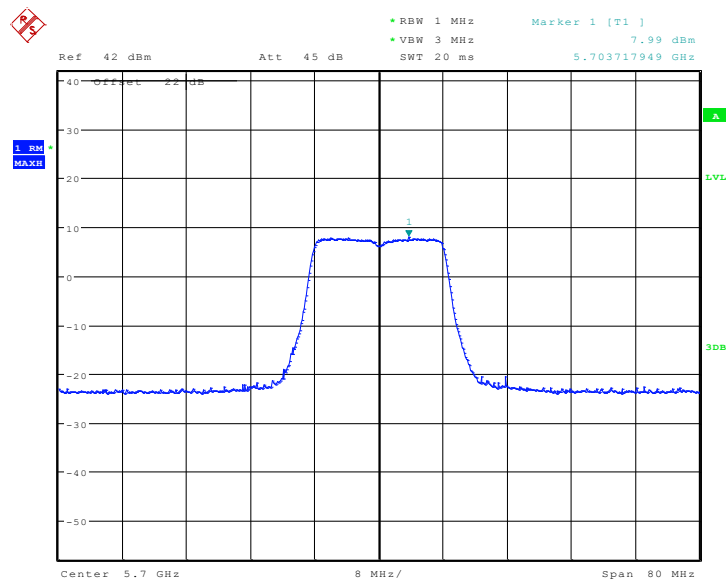
Date: 21.AUG.2013 16:05:19

Fig. 233 Peak Excursions (802.11a, ch100, average)



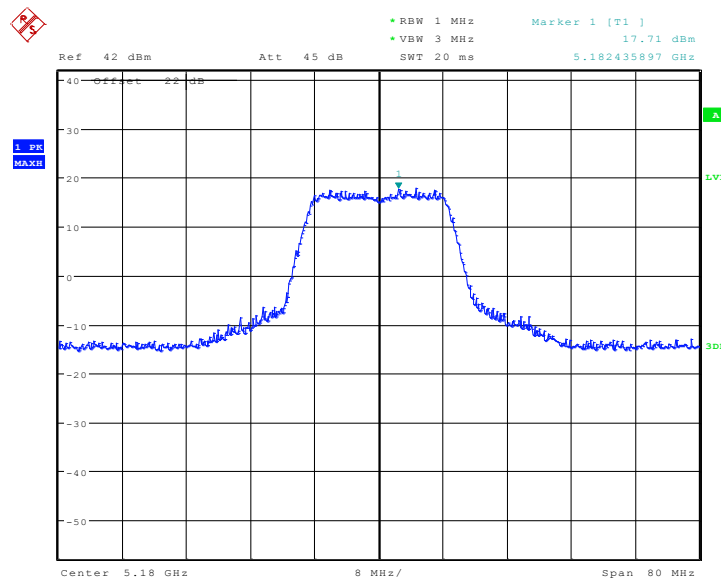
Date: 21.AUG.2013 16:06:23

Fig. 234 Peak Excursions (802.11a, ch120, average)



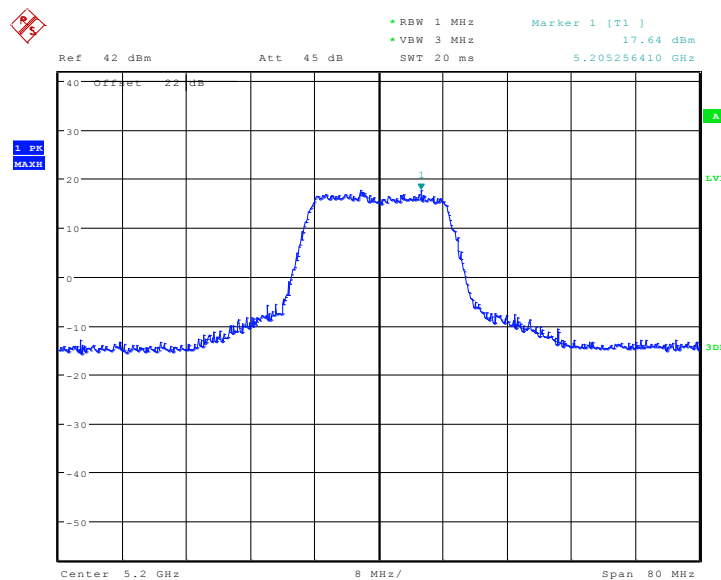
Date: 21.AUG.2013 16:07:20

Fig. 235 Peak Excursions (802.11a, ch140, average)



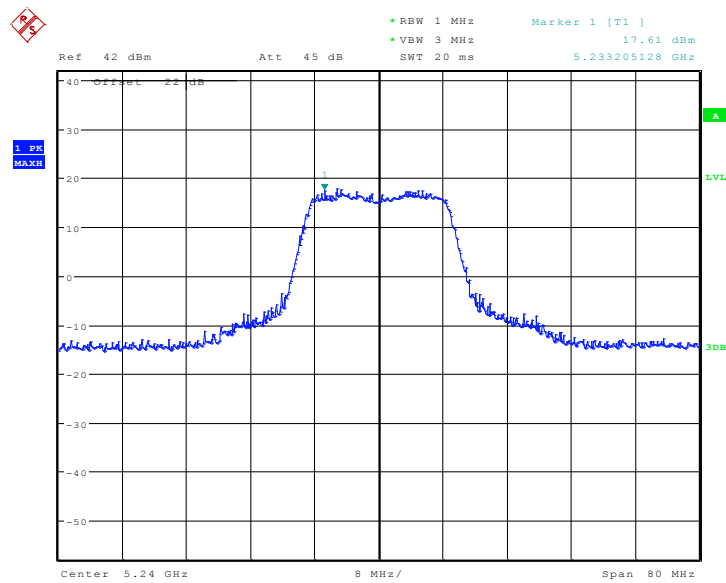
Date: 21.AUG.2013 16:09:01

Fig. 236 Peak Excursions (802.11n-HT20, ch36, peak)



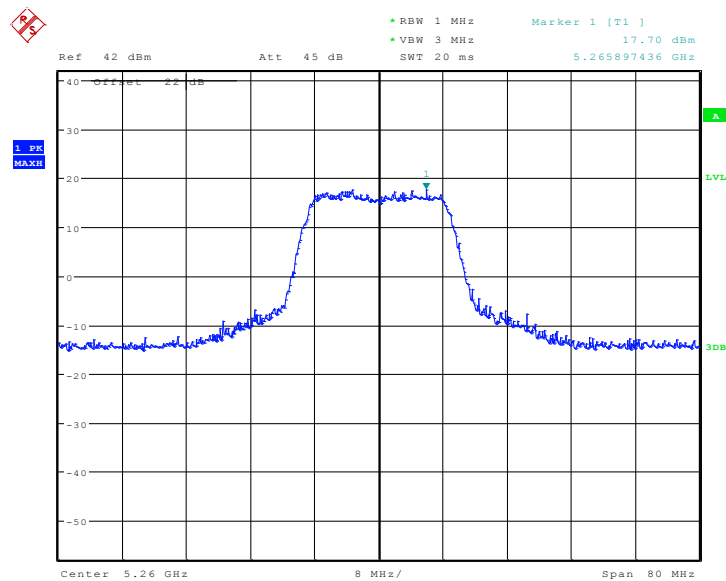
Date: 21.AUG.2013 16:10:21

Fig. 237 Peak Excursions (802.11n-HT20, ch40, peak)



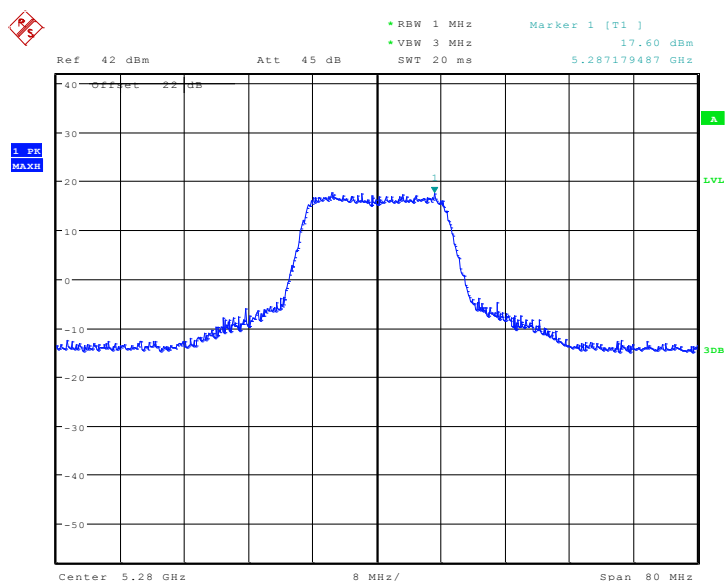
Date: 21.AUG.2013 16:11:21

Fig. 238 Peak Excursions (802.11n-HT20, ch48, peak)



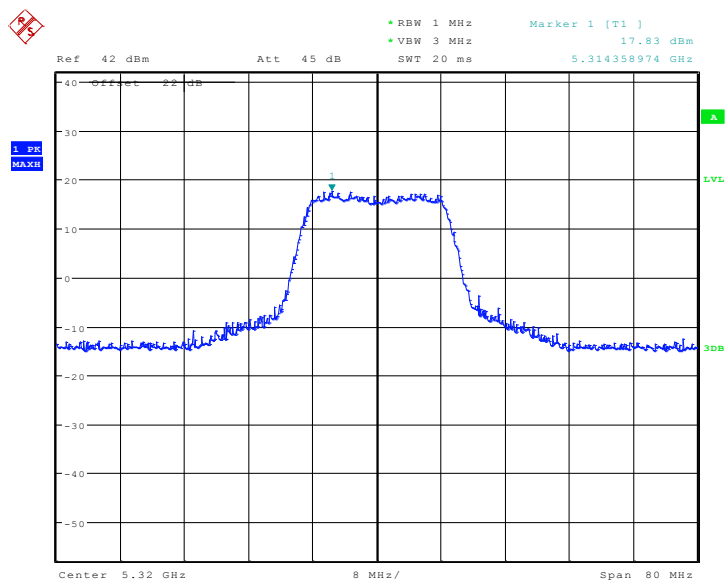
Date: 21.AUG.2013 16:12:14

Fig. 239 Peak Excursions (802.11n-HT20, ch52, peak)



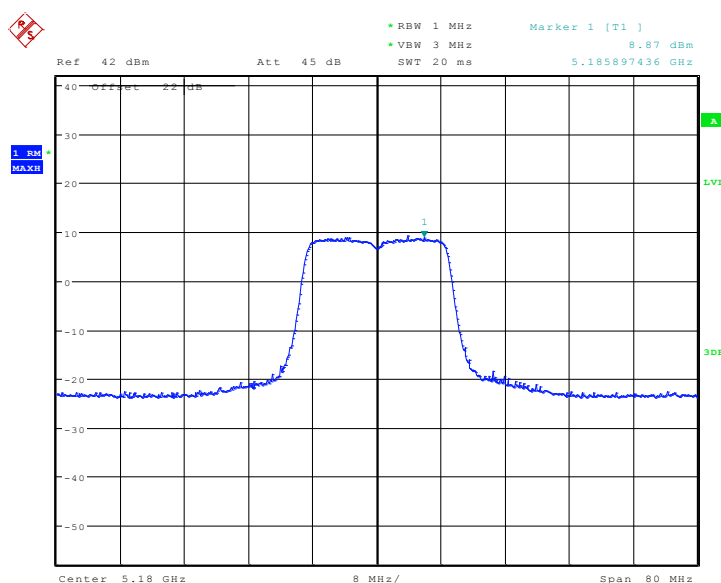
Date: 21.AUG.2013 16:13:11

Fig. 240 Peak Excursions (802.11n-HT20, ch56, peak)



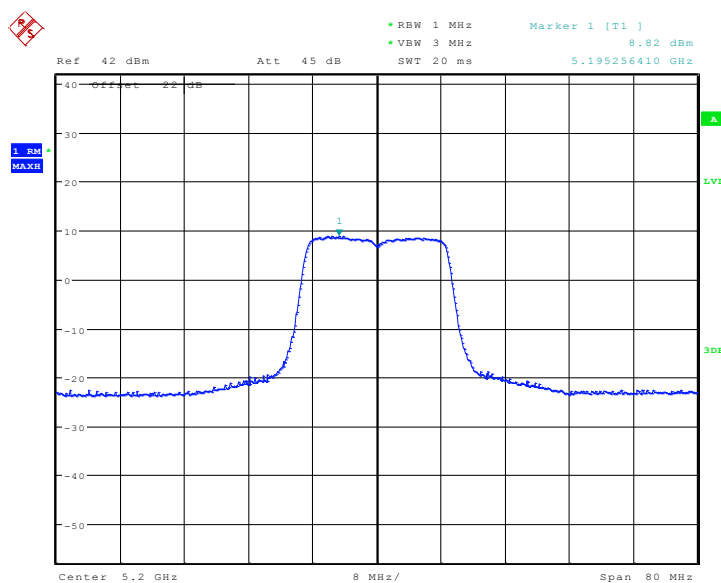
Date: 21.AUG.2013 16:14:03

Fig. 241 Peak Excursions (802.11n-HT20, ch64, peak)



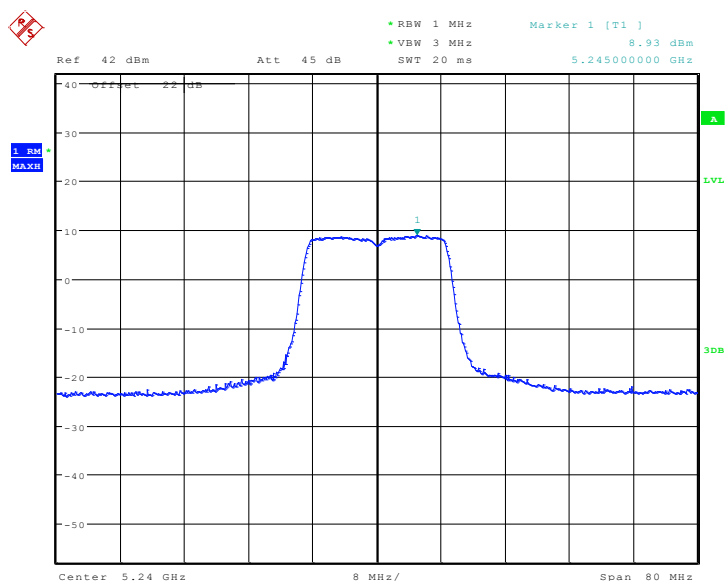
Date: 21.AUG.2013 16:09:21

Fig. 242 Peak Excursions (802.11n-HT20, ch36, average)



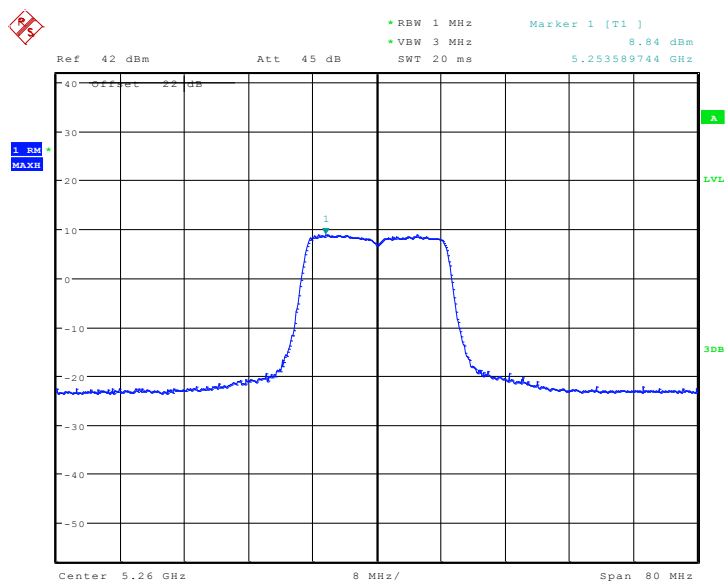
Date: 21.AUG.2013 16:10:47

Fig. 243 Peak Excursions (802.11n-HT20, ch40, average)



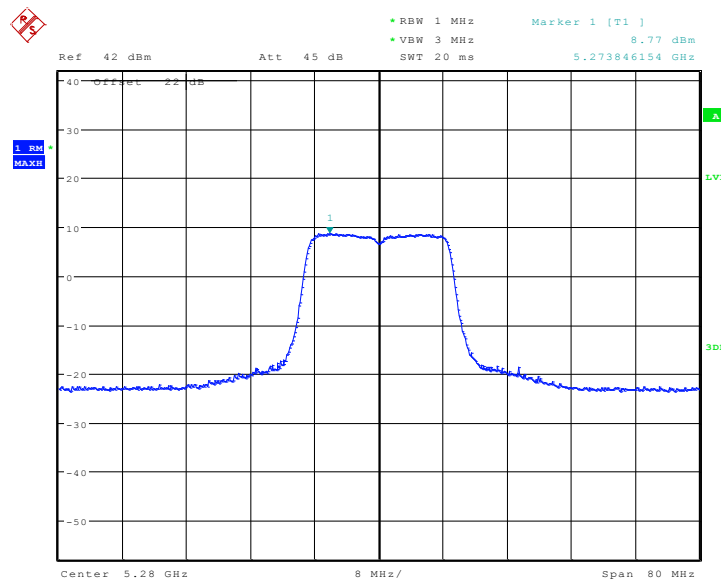
Date: 21.AUG.2013 16:11:40

Fig. 244 Peak Excursions (802.11n-HT20, ch48, average)



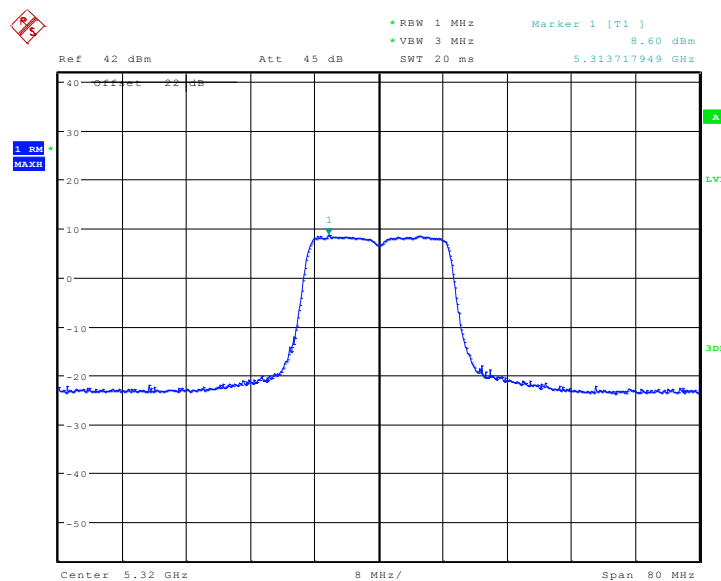
Date: 21.AUG.2013 16:12:33

Fig. 245 Peak Excursions (802.11n-HT20, ch52, average)



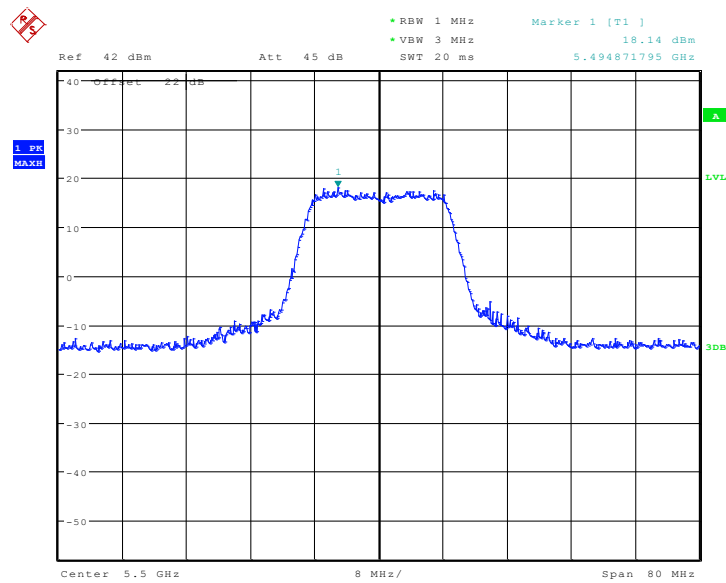
Date: 21.AUG.2013 16:13:29

Fig. 246 Peak Excursions (802.11n-HT20, ch56, average)



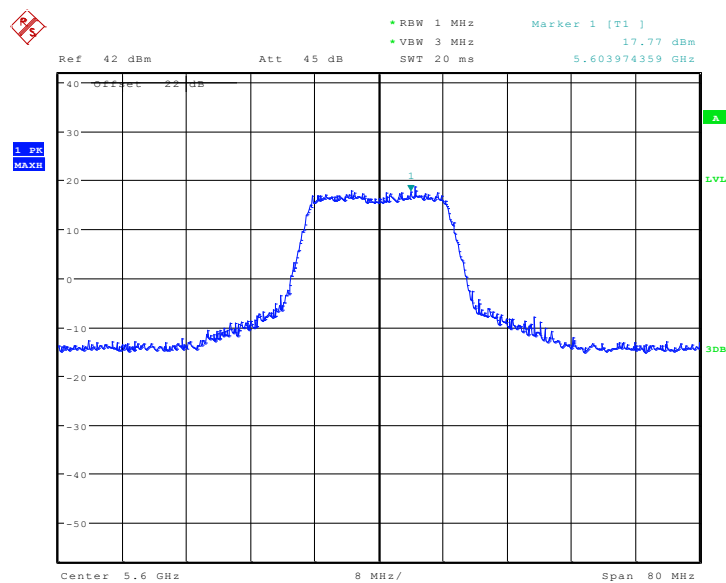
Date: 21.AUG.2013 16:14:18

Fig. 247 Peak Excursions (802.11n-HT20, ch64, average)



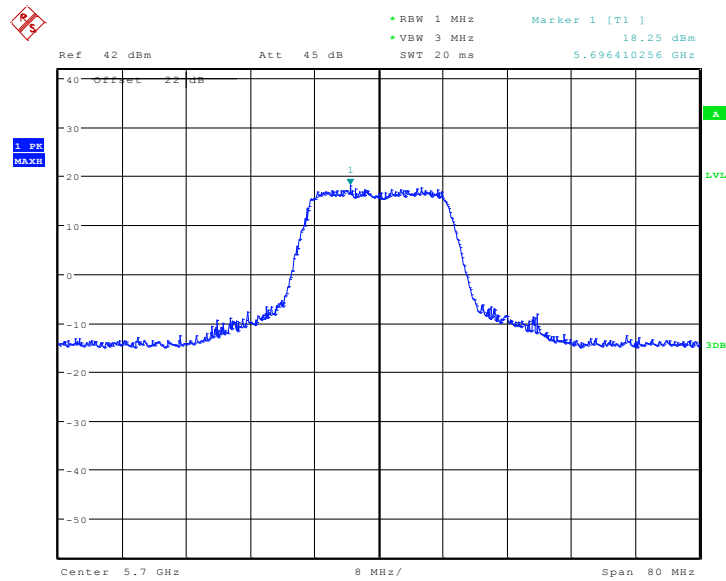
Date: 21.AUG.2013 16:14:49

Fig. 248 Peak Excursions (802.11n-HT20, ch100, peak)



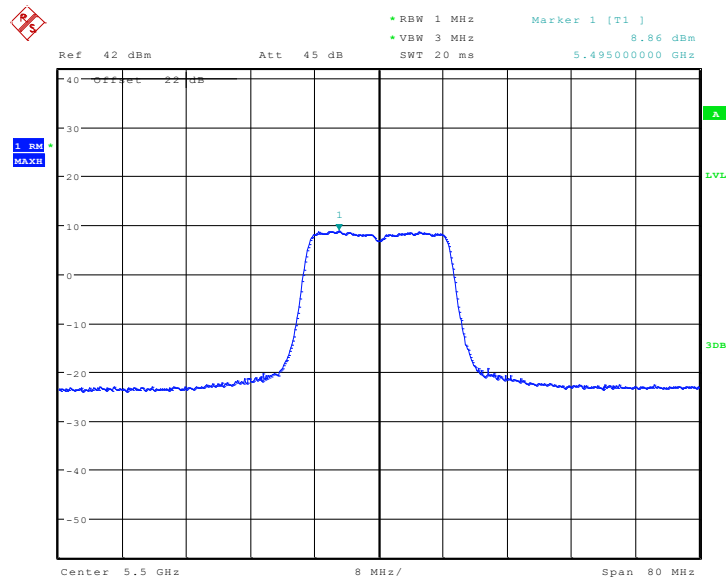
Date: 21.AUG.2013 16:15:43

Fig. 249 Peak Excursions (802.11n-HT20, ch120, peak)



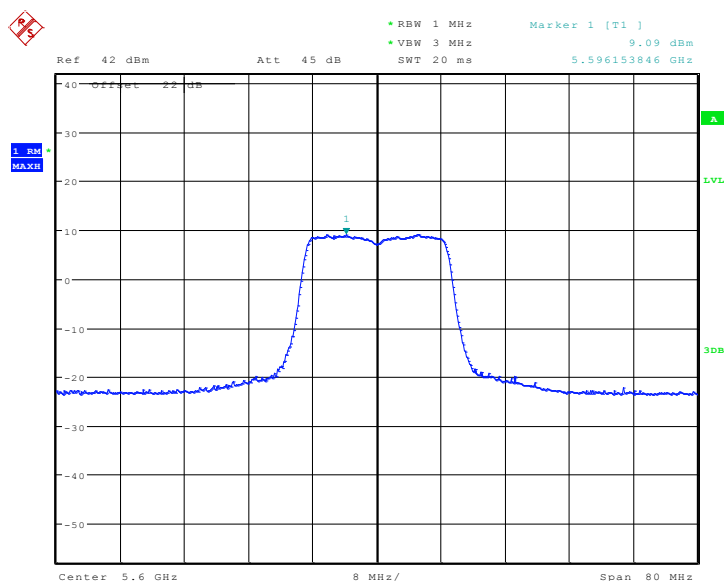
Date: 21.AUG.2013 16:17:27

Fig. 250 Peak Excursions (802.11n-HT20, ch140, peak)



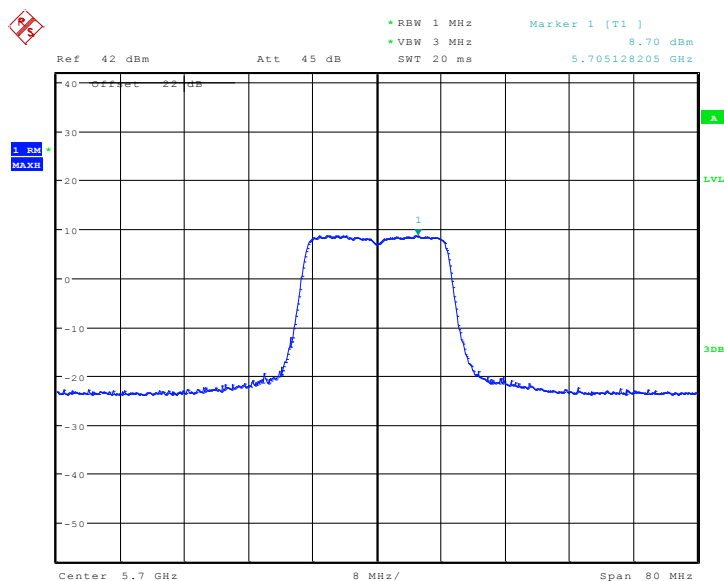
Date: 21.AUG.2013 16:15:10

Fig. 251 Peak Excursions (802.11n-HT20, ch100, average)



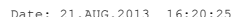
Date: 21.AUG.2013 16:16:09

Fig. 252 Peak Excursions (802.11n-HT20, ch120, average)



Date: 21.AUG.2013 16:17:54

Fig. 253 Peak Excursions (802.11n-HT20, ch140, average)



• RBW 1 MHz
 • VBW 3 MHz
 • SWT 20 ms

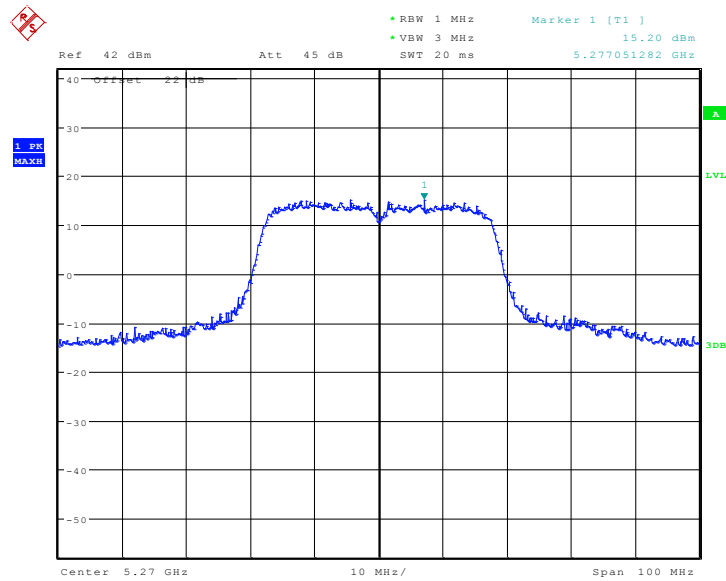
Marker 1 [T1]
 14.37 dBm
 5.239294872 GHz

Ref 42 dBm
 Att 45 dB

1.98
 0.0248

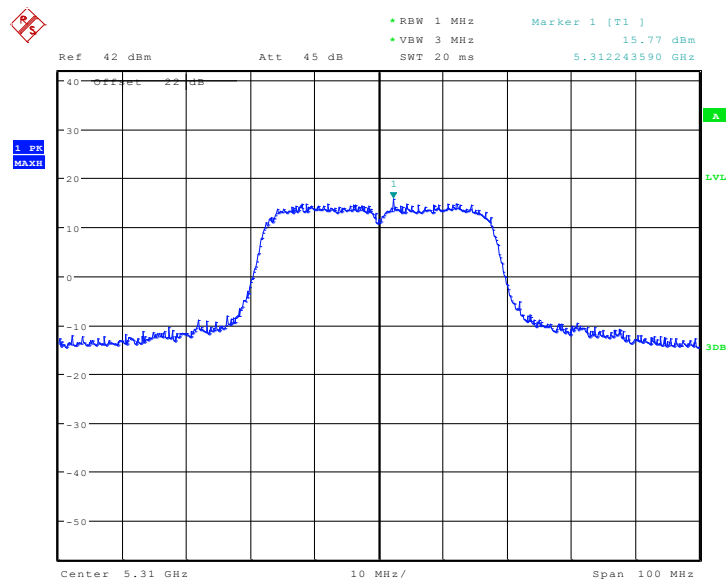
Center 5.23 GHz
 10 MHz/
 Span 100 MHz

Date: 21.AUG.2013 16:21:44



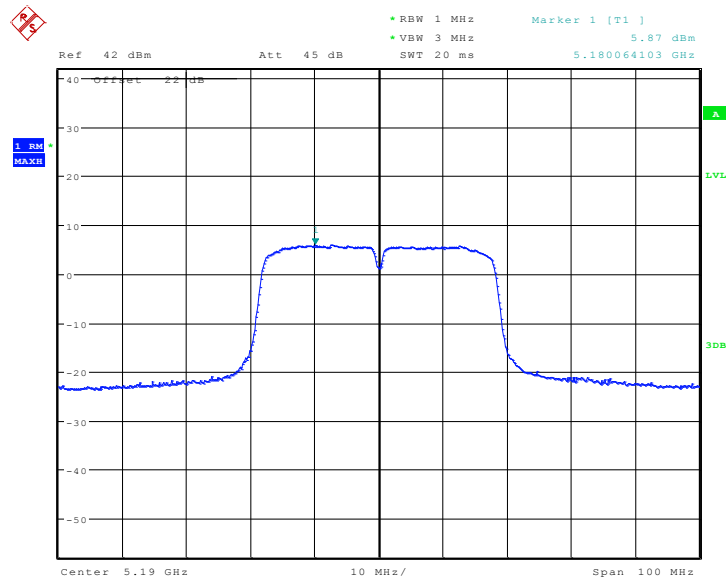
Date: 21.AUG.2013 16:23:24

Fig. 256 Peak Excursions (802.11n-HT40, ch54, peak)



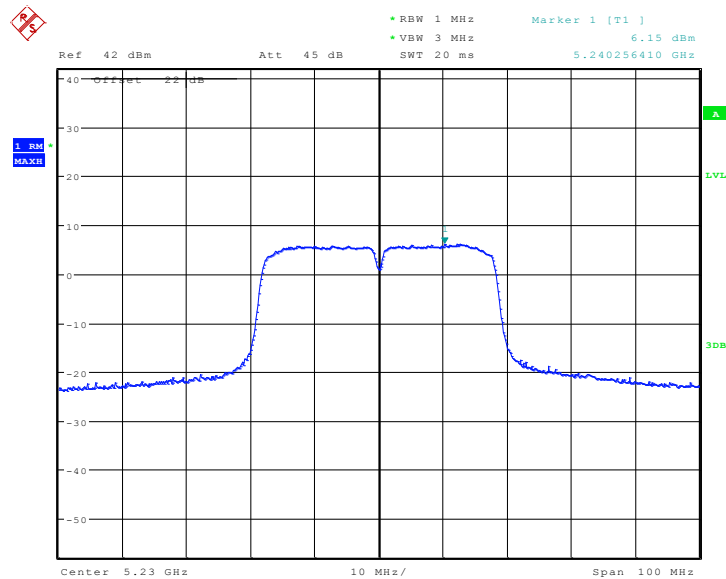
Date: 21.AUG.2013 16:24:21

Fig. 257 Peak Excursions (802.11n-HT40, ch62, peak)



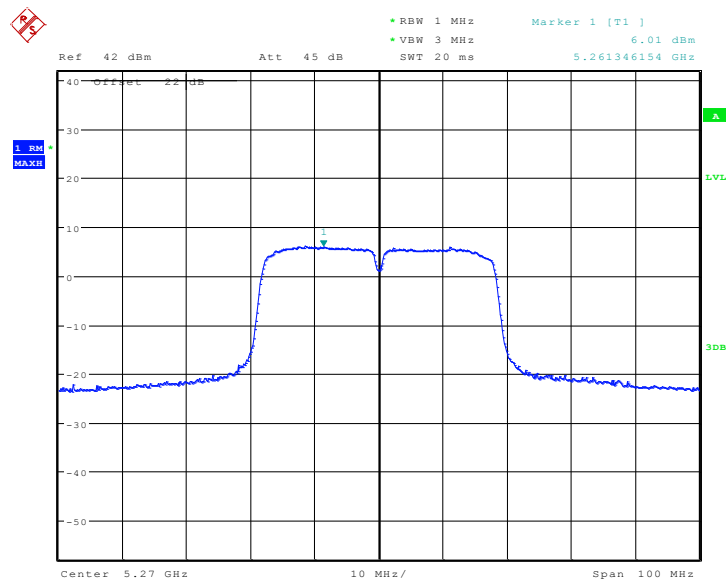
Date: 21.AUG.2013 16:20:55

Fig. 258 Peak Excursions (802.11n-HT40, ch38, average)



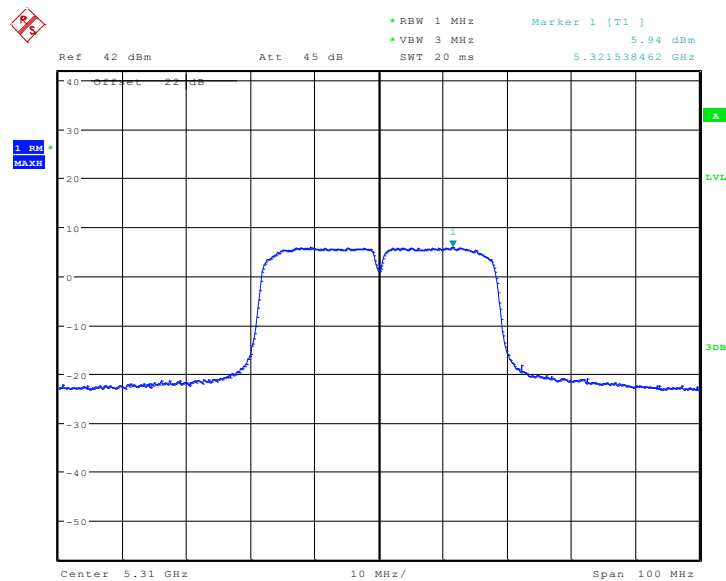
Date: 21.AUG.2013 16:22:08

Fig. 259 Peak Excursions (802.11n-HT40, ch46, average)



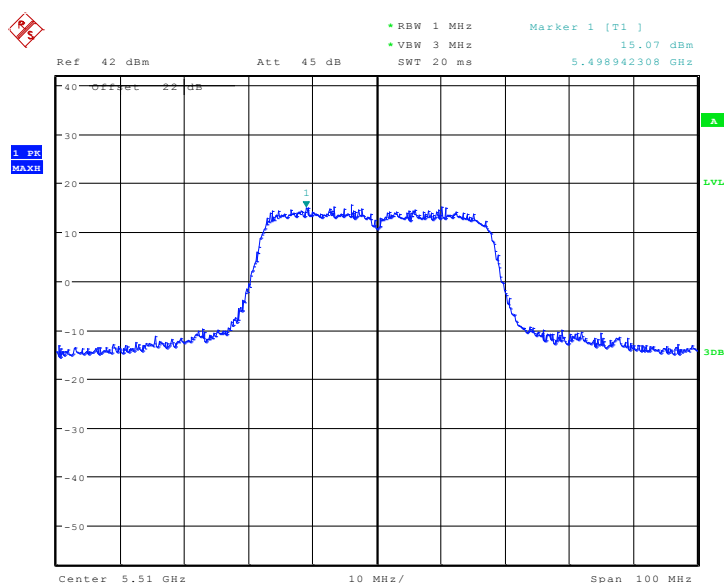
Date: 21.AUG.2013 16:23:40

Fig. 260 Peak Excursions (802.11n-HT40, ch54, average)



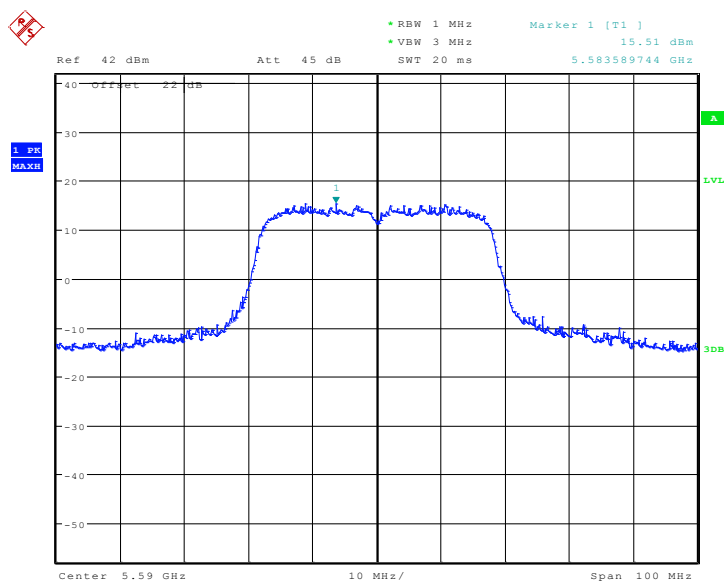
Date: 21.AUG.2013 16:24:52

Fig. 261 Peak Excursions (802.11n-HT40, ch62, average)



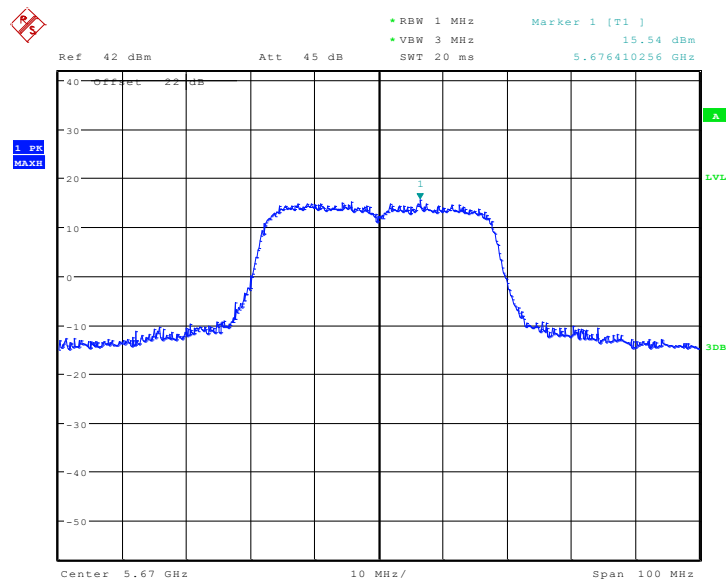
Date: 21.AUG.2013 16:25:32

Fig. 262 Peak Excursions (802.11n-HT40, ch102, peak)



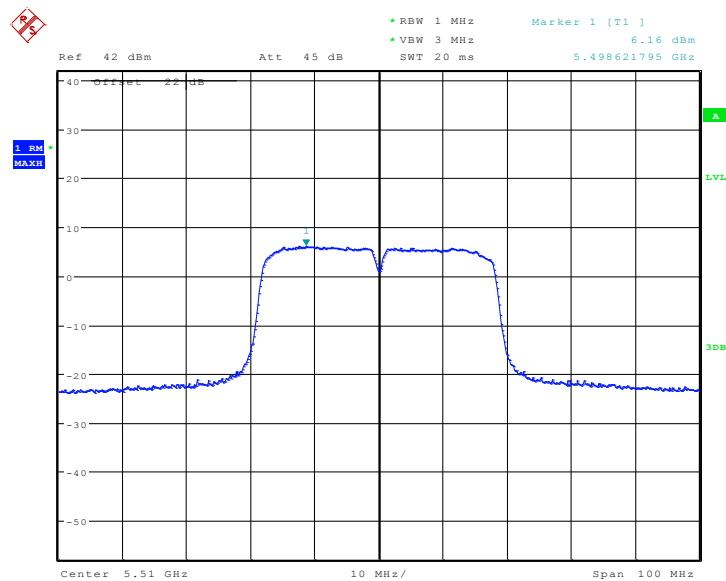
Date: 21.AUG.2013 16:26:27

Fig. 263 Peak Excursions (802.11n-HT40, ch118, peak)



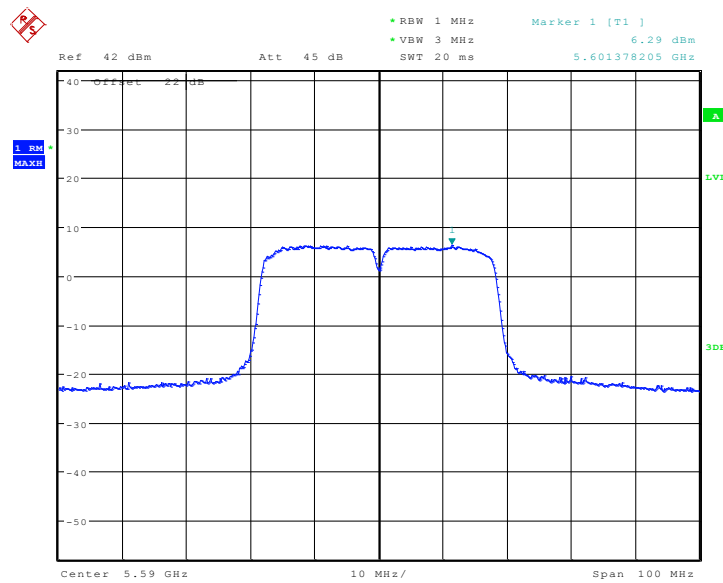
Date: 21.AUG.2013 16:27:29

Fig. 264 Peak Excursions (802.11n-HT40, ch134, peak)



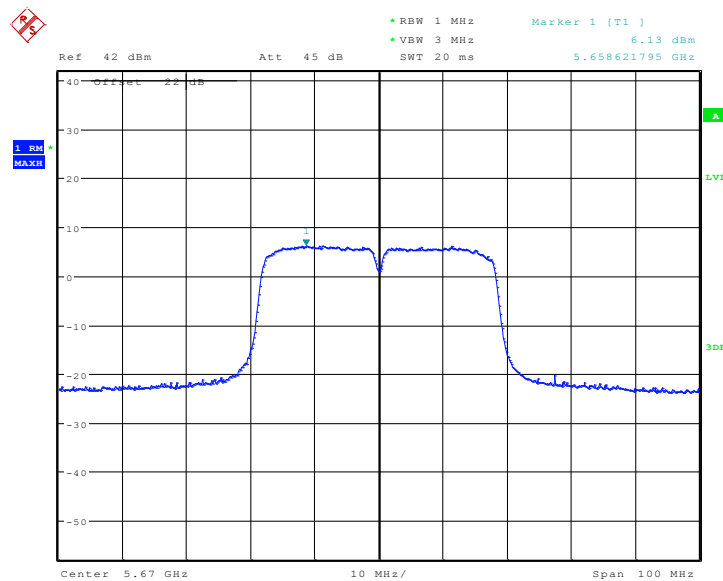
Date: 21.AUG.2013 16:25:51

Fig. 265 Peak Excursions (802.11n-HT40, ch102, average)



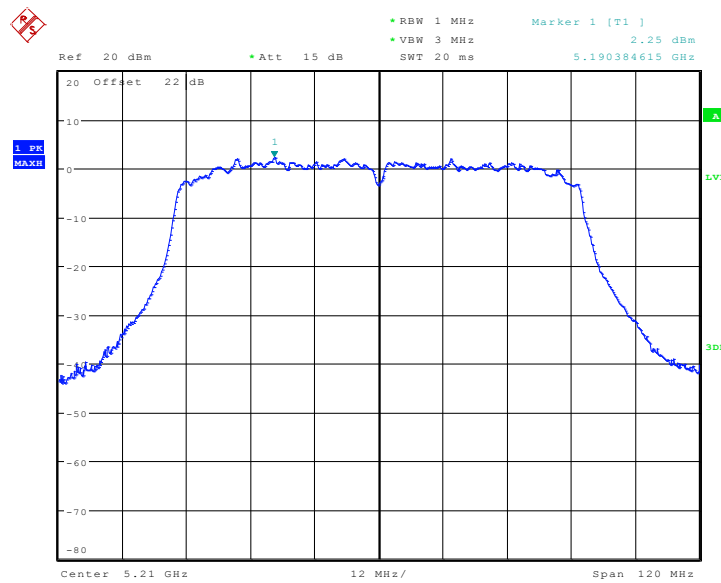
Date: 21.AUG.2013 16:26:44

Fig. 266 Peak Excursions (802.11n-HT40, ch118, average)



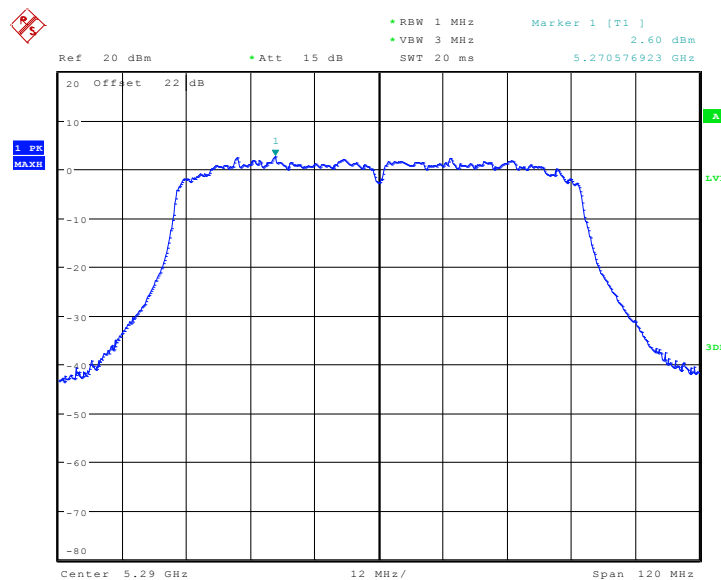
Date: 21.AUG.2013 16:27:45

Fig. 267 Peak Excursions (802.11n-HT40, ch134, average)



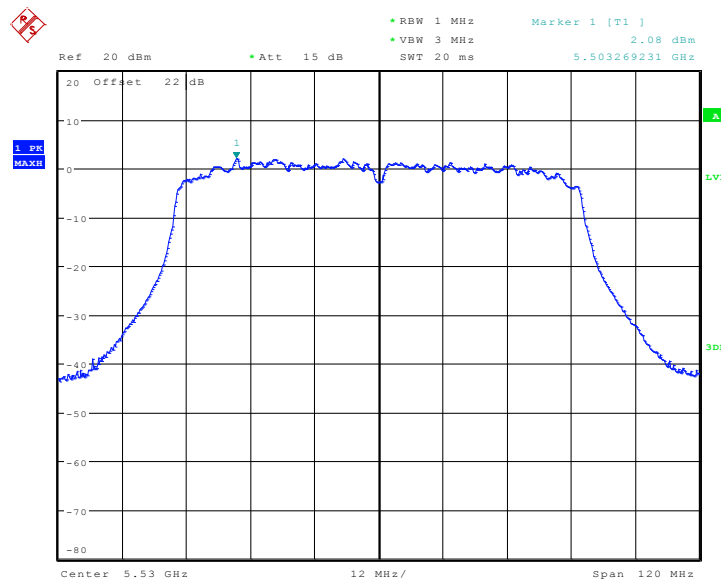
Date: 15.OCT.2013 14:03:16

Fig. 268 Peak Excursions (802.11ac-HT80, ch42, peak)



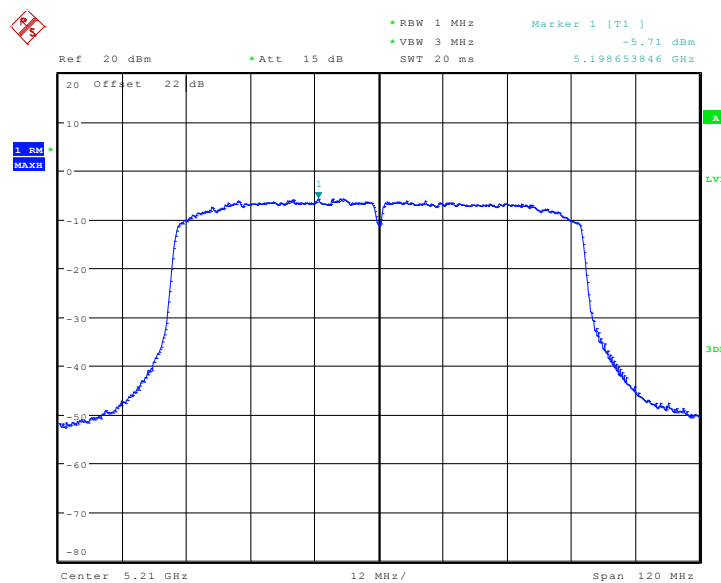
Date: 15.OCT.2013 14:02:15

Fig. 269 Peak Excursions (802.11ac-HT80, ch58, peak)



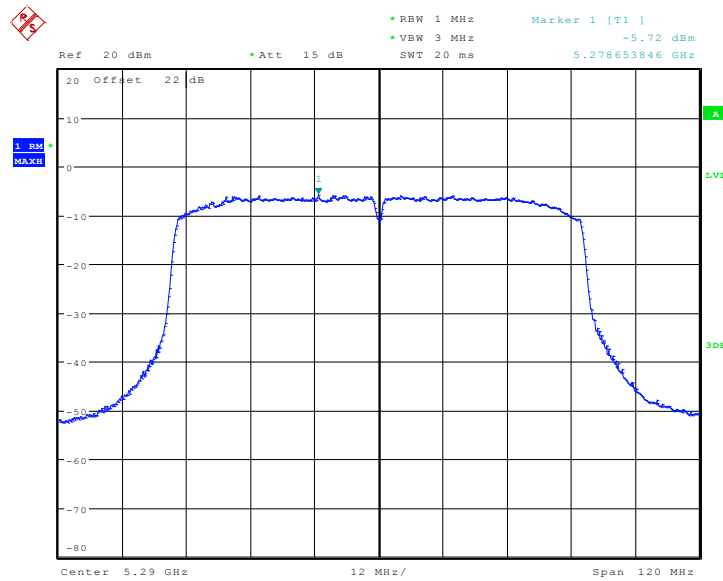
Date: 15.OCT.2013 13:59:28

Fig. 270 Peak Excursions (802.11ac-HT80, ch106, peak)



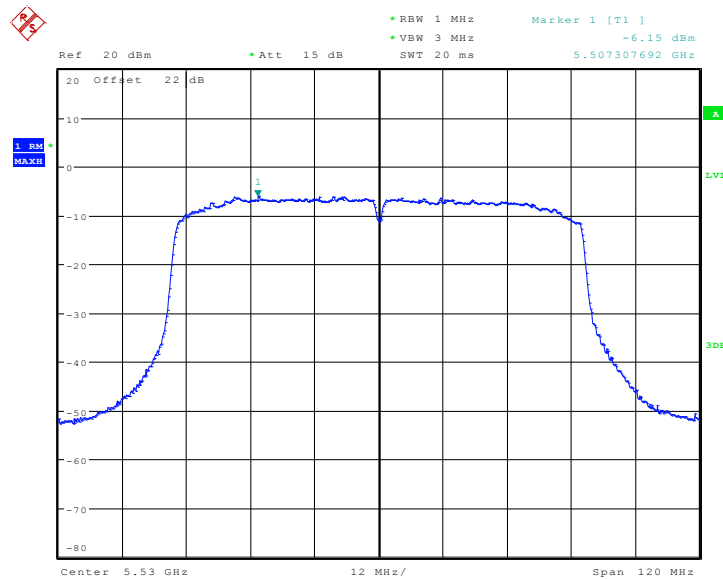
Date: 15.OCT.2013 14:03:57

Fig. 271 Peak Excursions (802.11ac-HT80, ch42, average)



Date: 15.OCT.2013 14:01:48

Fig. 272 Peak Excursions (802.11ac-HT80, ch58, average)



Date: 15.OCT.2013 14:00:00

Fig. 273 Peak Excursions (802.11ac-HT80, ch106, average)

A.10. Frequency Stability

Manufacturers ensured the EUT meet the requirement of frequency stability, such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual.

A.11. Power control

A Transmission Power Control mechanism is not required for systems with an e.i.r.p. of less than 27dBm (500 mW).