

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

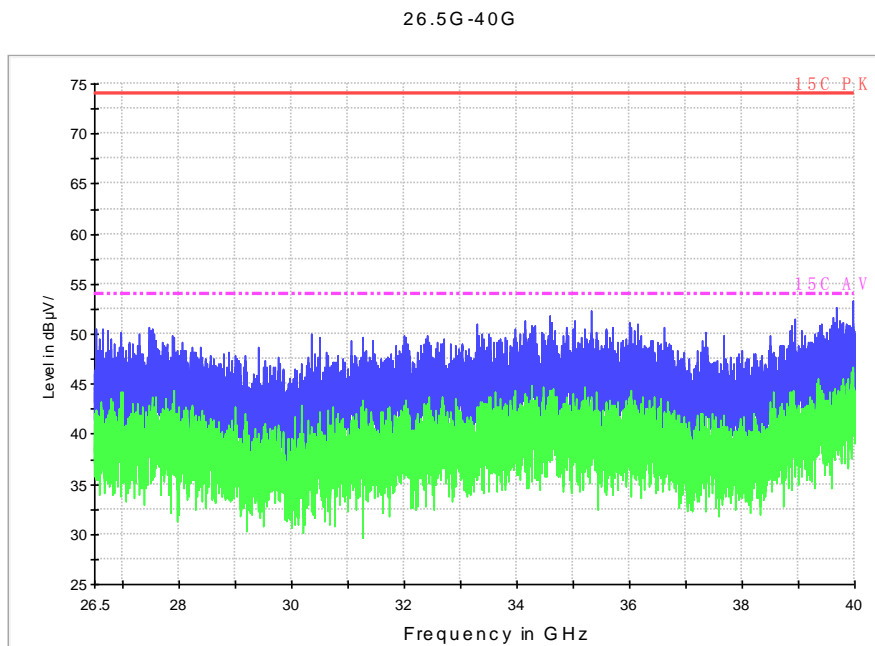


Fig. 208 Radiated Spurious Emission (802.11ac-HT80, ch42, 26.5 GHz-40 GHz)

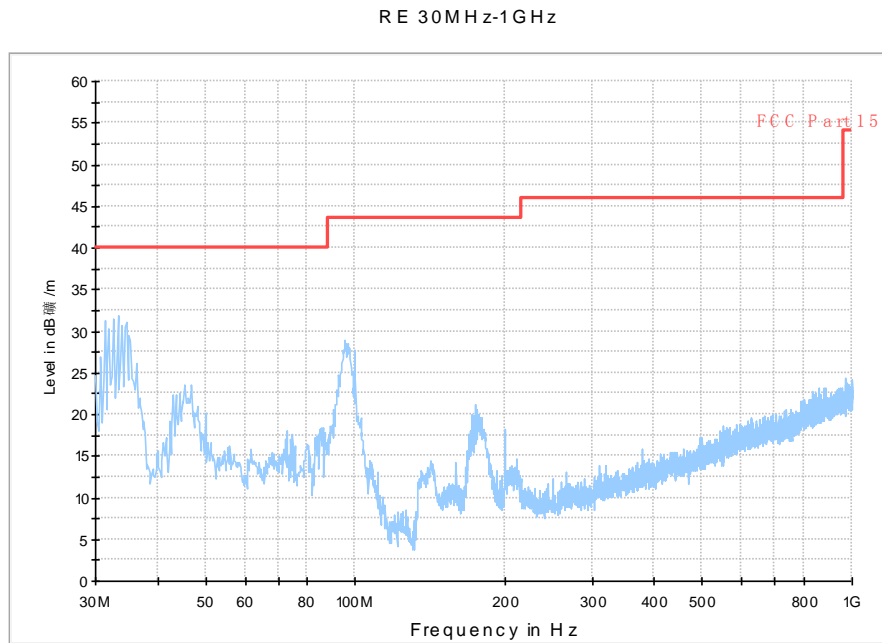


Fig. 209 Radiated Spurious Emission (802.11ac-HT80, ch58, 30 MHz-1 GHz)

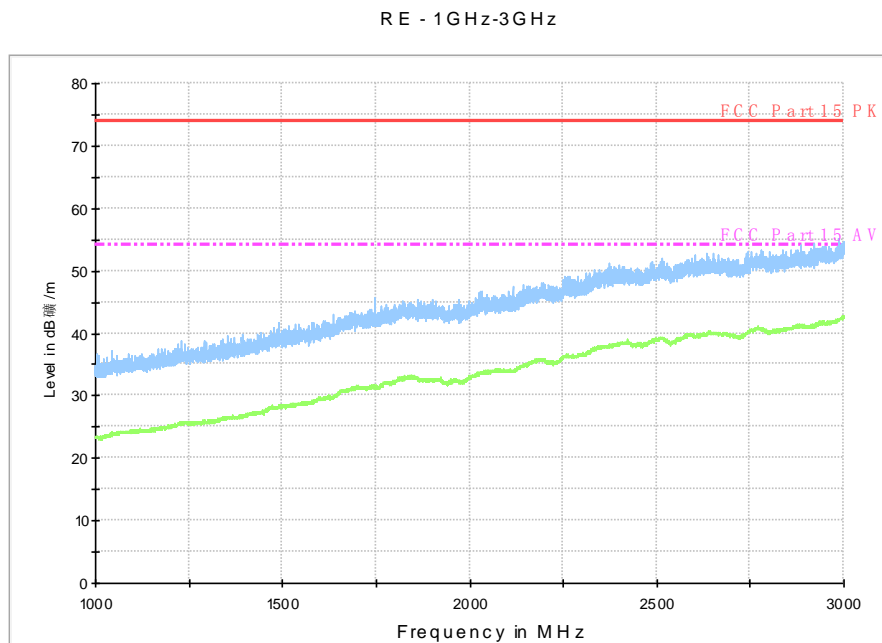


Fig. 210 Radiated Spurious Emission (802.11ac-HT80, ch58, 1 GHz-3 GHz)

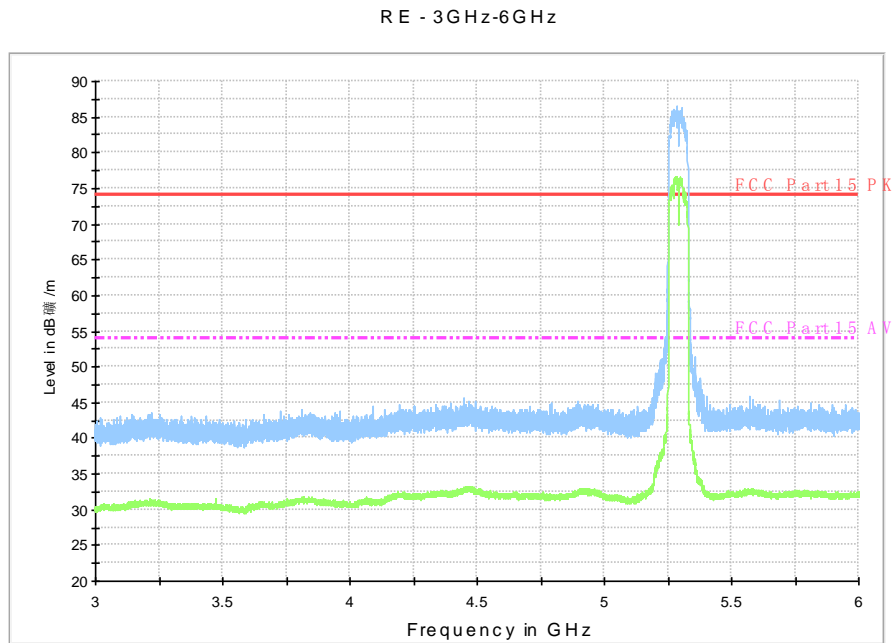


Fig. 211 Radiated Spurious Emission (802.11ac-HT80, ch58, 3 GHz-6 GHz)

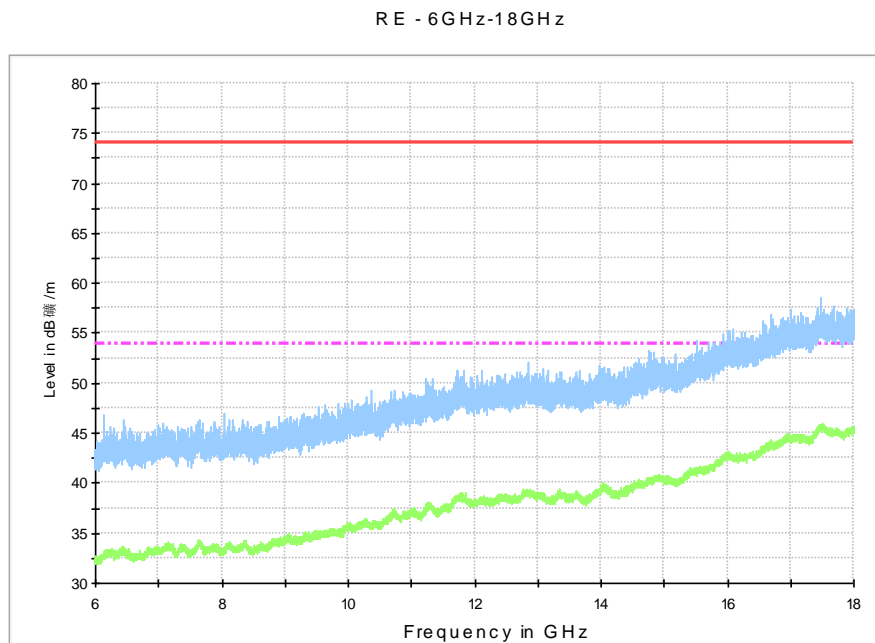


Fig. 212 Radiated Spurious Emission (802.11ac-HT80, ch58, 6 GHz-18 GHz)

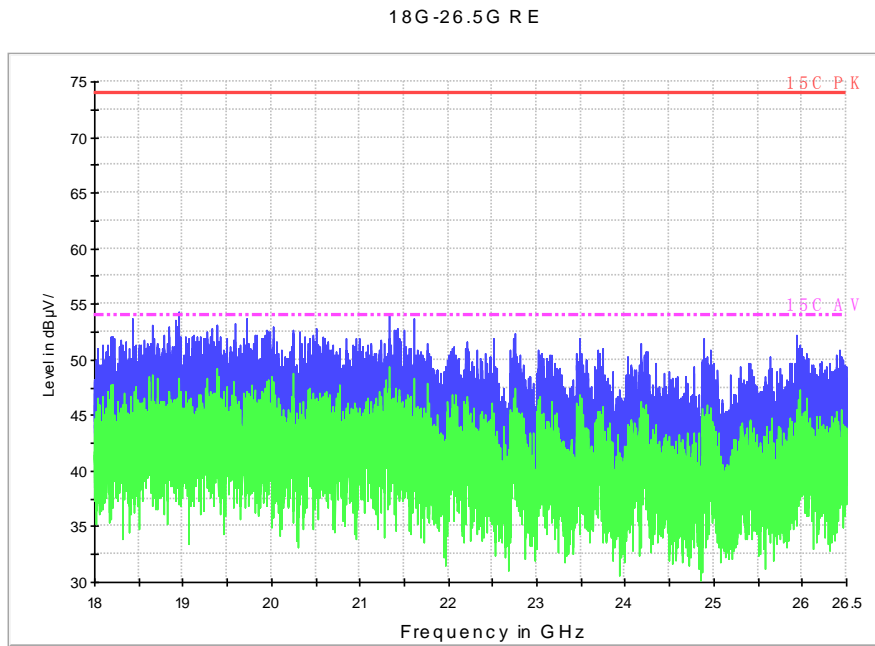


Fig. 213 Radiated Spurious Emission (802.11ac-HT80, ch58, 18 GHz-26.5 GHz)

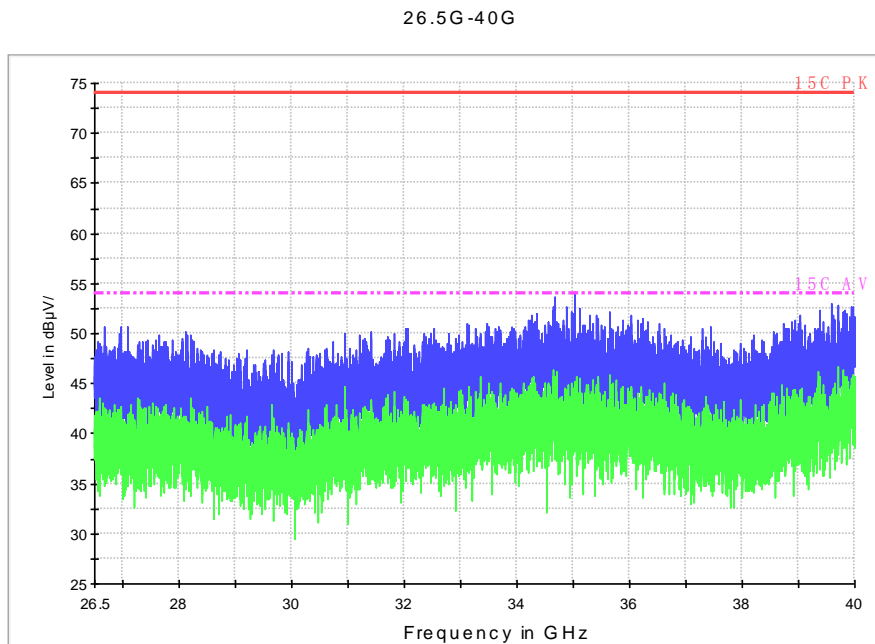


Fig. 214 Radiated Spurious Emission (802.11ac-HT80, ch58, 26.5 GHz-40 GHz)

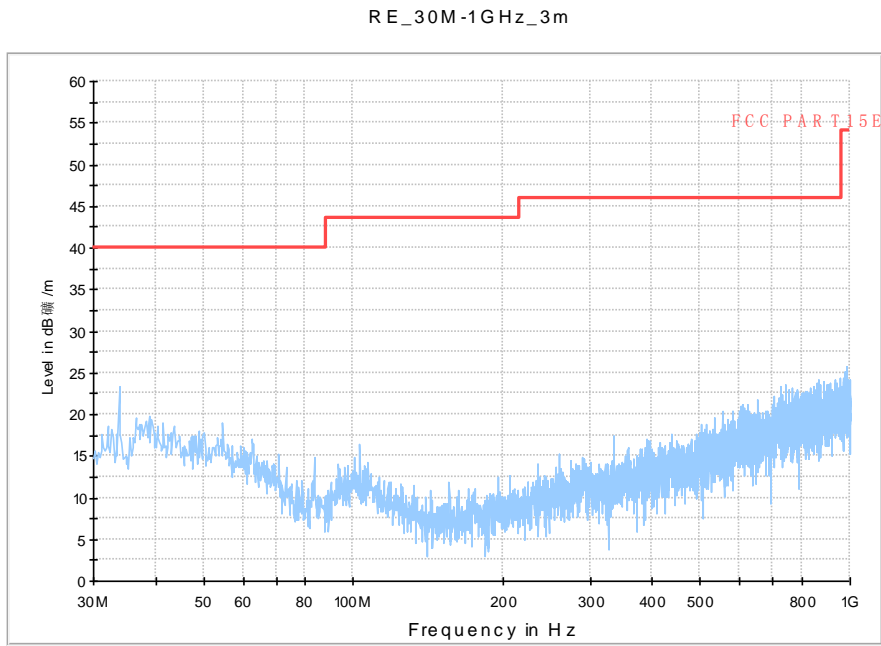


Fig. 215 Radiated Spurious Emission (802.11ac-HT80, ch106, 30 MHz-1 GHz)

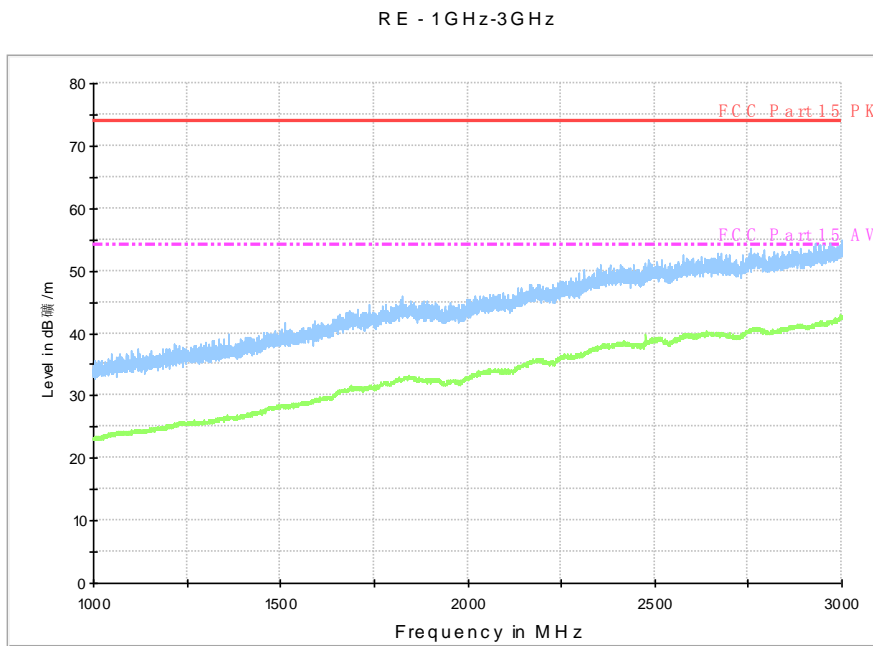


Fig. 216 Radiated Spurious Emission (802.11ac-HT80, ch106, 1 GHz-3 GHz)

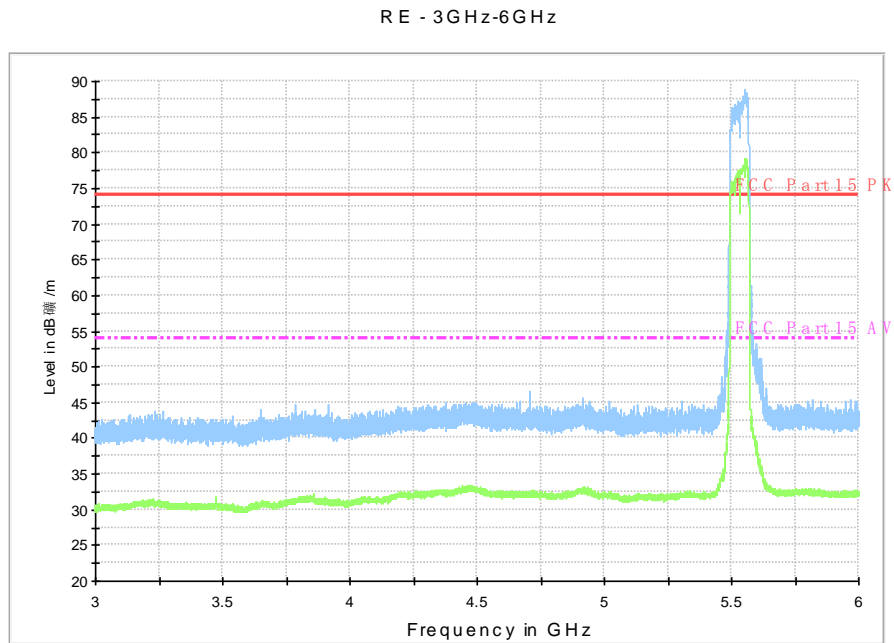


Fig. 217 Radiated Spurious Emission (802.11ac-HT80, ch106, 3 GHz-6 GHz)

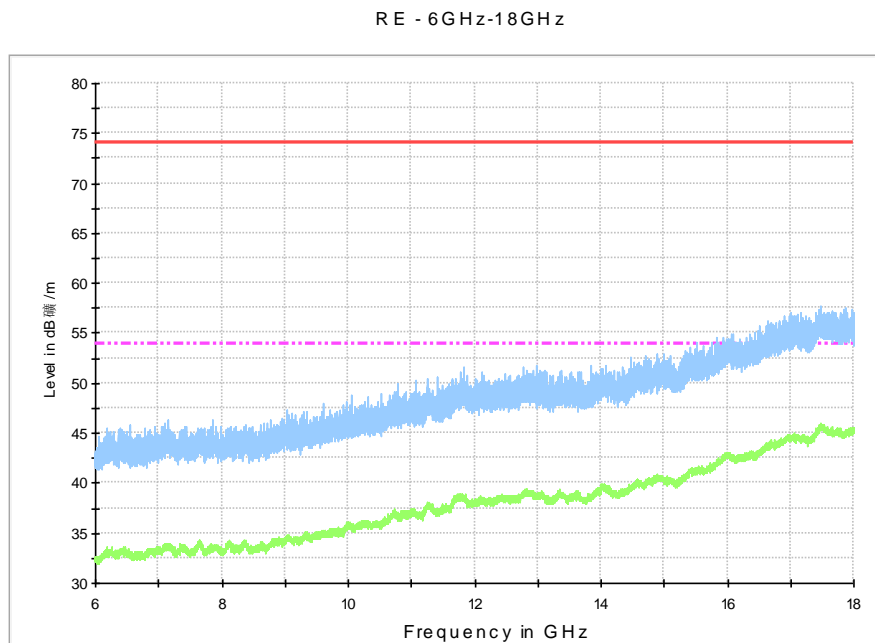


Fig. 218 Radiated Spurious Emission (802.11ac-HT80, ch106, 6 GHz-18 GHz)

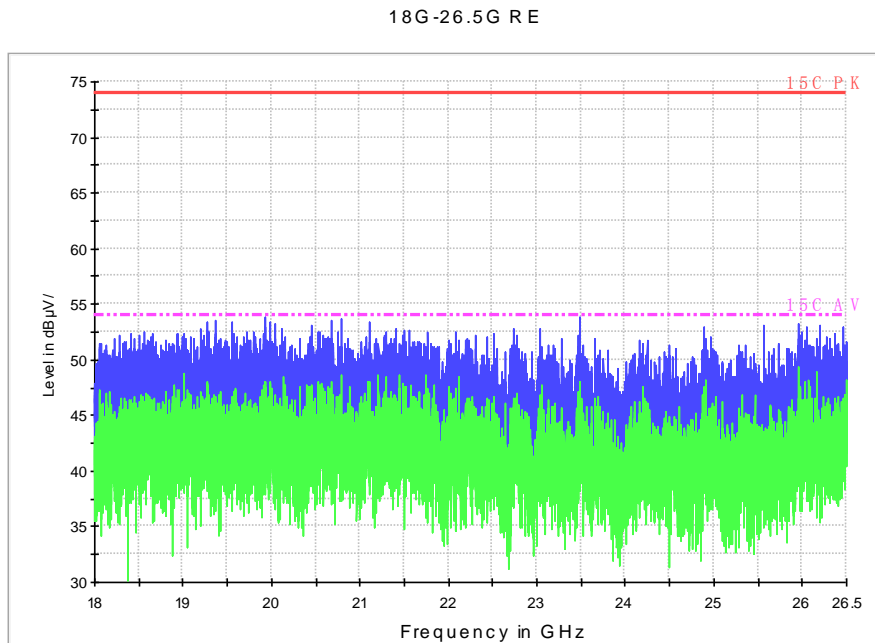


Fig. 219 Radiated Spurious Emission (802.11ac-HT80, ch106, 18 GHz-26.5 GHz)

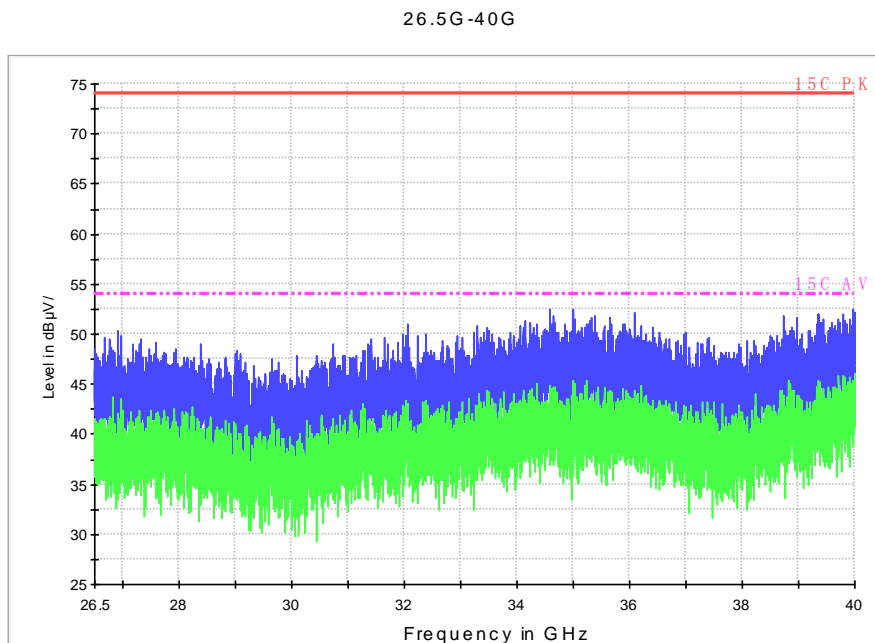


Fig. 220 Radiated Spurious Emission (802.11ac-HT80, ch106, 26.5 GHz-40 GHz)

A.7. Spurious Emissions Radiated < 30MHz

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

Frequency (MHz)	Field strength($\mu\text{V}/\text{m}$)	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.221	P

Conclusion: PASS

Test graphs as below:

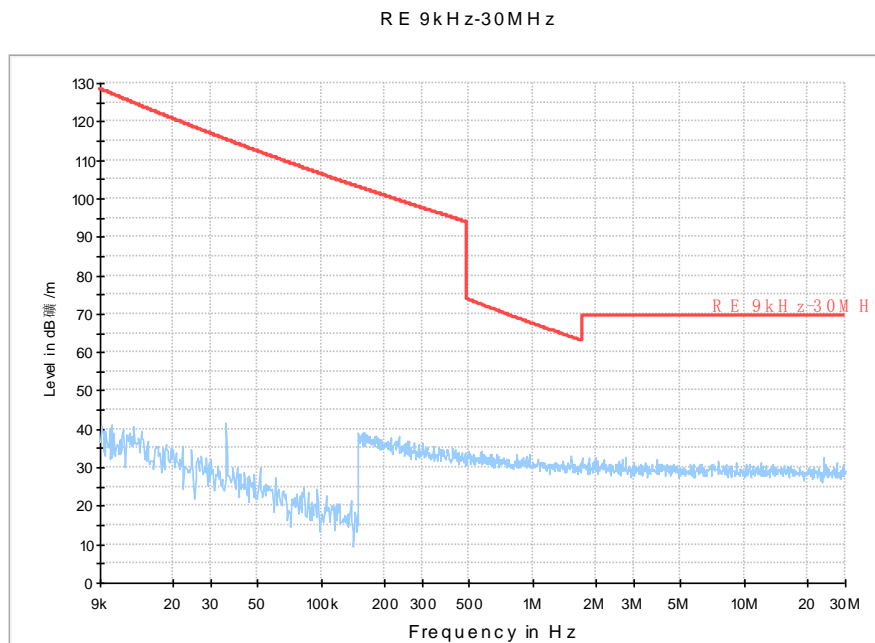


Fig. 221 Radiated Spurious Emission (802.11a, ch40, 9 kHz ~30 MHz)

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 =3.2dB, k=2.

Measurement Result and limit:

WLAN (Quasi-peak Limit)

Frequency range (MHz)	Quasi-peak Limit (dB μ V)	Result (dB μ V)		Conclusion
		With charger		
		11a mode	Idle	
0.15 to 0.5	66 to 56	Fig. 222	Fig. 223	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 (dB μ V)	Result (dB μ V)		Conclusion
		With charger		
		11a mode	Idle	
0.15 to 0.5	56 to 46	Fig.222	Fig.223	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:

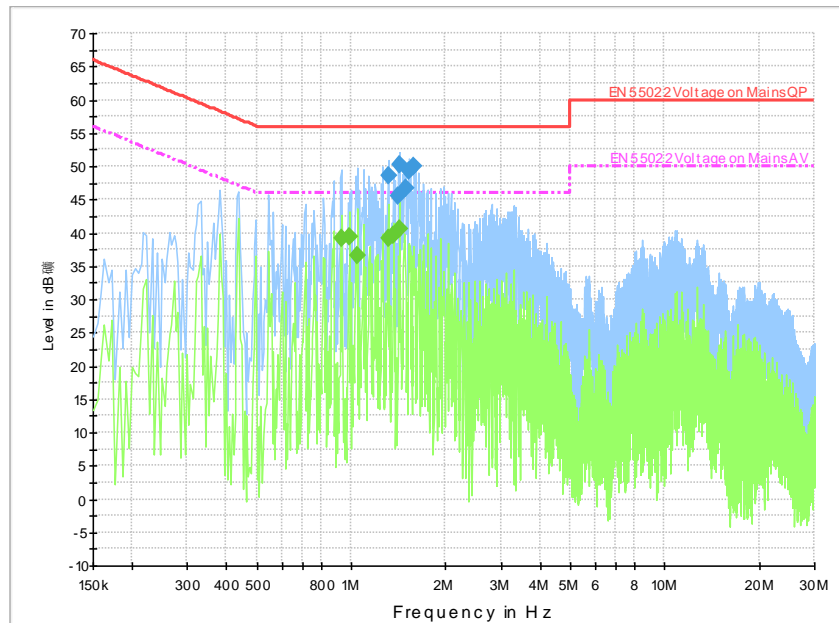


Fig. 222 Conducted Emission(802.11a, Ch40, TX)

Measurement Result:

Frequency (MHz)	QuasiPeak (dBμV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
1.311001	48.6	GND	N	9.9	7.4	56.0
1.414501	45.6	GND	L1	9.9	10.4	56.0
1.423501	50.2	GND	N	9.9	5.8	56.0
1.486501	46.7	GND	N	9.9	9.3	56.0
1.536001	49.2	GND	N	9.9	6.8	56.0
1.585501	49.9	GND	N	9.9	6.1	56.0

Measurement Result:

Frequency (MHz)	CAverage (dBμV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.928501	39.2	GND	N	9.9	6.8	46.0
0.987001	39.4	GND	N	9.9	6.6	46.0
1.045501	36.7	GND	N	9.9	9.3	46.0
1.311001	39.3	GND	N	9.9	6.7	46.0
1.369501	39.6	GND	N	9.9	6.4	46.0
1.423501	40.5	GND	N	9.9	5.5	46.0

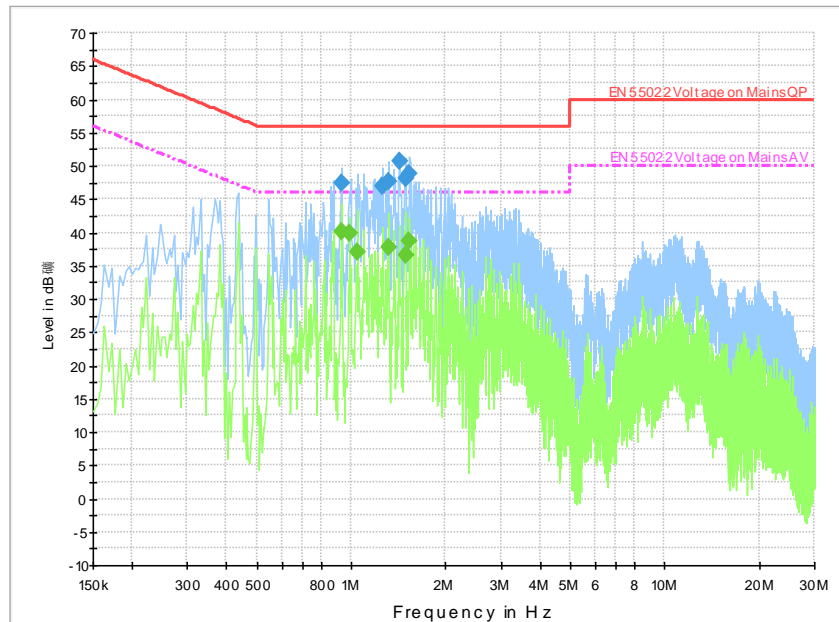


Fig. 223 Conducted Emission(802.11a, IDLE)

Measurement Result:

Frequency (MHz)	QuasiPeak (dBμV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.928501	47.5	GND	N	9.9	8.5	56.0
1.261501	47.1	GND	N	9.9	8.9	56.0
1.311001	47.7	GND	N	9.9	8.3	56.0
1.423501	50.8	GND	N	9.9	5.2	56.0
1.486501	48.0	GND	N	9.9	8.0	56.0
1.536001	48.7	GND	N	9.9	7.3	56.0

Measurement Result:

Frequency (MHz)	CAverage (dBμV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.928501	40.2	GND	N	9.9	5.8	46.0
0.987001	39.8	GND	N	9.9	6.2	46.0
1.045501	37.0	GND	N	9.9	9.0	46.0
1.311001	37.8	GND	N	9.9	8.2	46.0
1.486501	36.6	GND	N	9.9	9.4	46.0
1.536001	38.7	GND	N	9.9	7.3	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.224	9.39	Fig.225	9.31	Fig.226	9.18
Average(dBm)	Fig.227	0.61	Fig.228	0.69	Fig.229	0.74
Result (dB)	8.78		8.62		8.44	

Type	Test Result (dBm)					
	5260MHz (Ch52)		5280 MHz (Ch56)		5320 MHz (Ch64)	
Peak (dBm)	Fig.230	10.00	Fig.231	10.07	Fig.232	9.45
Average(dBm)	Fig.233	1.72	Fig.234	1.50	Fig.235	0.91
Result (dB)	8.28		8.57		8.54	

Type	Test Result (dBm)					
	5500MHz (Ch100)		5600MHz (Ch120)		5700MHz (Ch140)	
Peak (dBm)	Fig.236	9.64	Fig.237	10.67	Fig.238	9.43
Average(dBm)	Fig.239	1.01	Fig.240	1.99	Fig.241	0.96
Result (dB)	8.63		8.68		8.47	

11n-HT20 mode

Type	Peak Excursion					
	5180MHz (Ch36)		5200MHz (Ch40)		5240MHz (Ch48)	
Peak (dBm)	Fig.242	9.27	Fig.243	9.70	Fig.244	9.40
Average(dBm)	Fig.245	1.04	Fig.246	0.54	Fig.247	0.83
Result (dB)	8.23		9.16		8.57	

Type	Test Result (dBm)					
	5260MHz (Ch52)		5280 MHz (Ch56)		5320 MHz (Ch64)	
Peak (dBm)	Fig.248	11.08	Fig.249	9.45	Fig.250	9.57
Average(dBm)	Fig.251	1.72	Fig.252	1.22	Fig.253	0.89
Result (dB)	9.36		8.23		8.68	

Type	Test Result (dBm)					
	5500MHz (Ch100)		5600MHz (Ch120)		5700MHz (Ch140)	
Peak (dBm)	Fig.254	9.59	Fig.255	11.09	Fig.256	9.56
Average(dBm)	Fig.257	1.06	Fig.258	2.14	Fig.259	1.20
Result (dB)	8.53		8.95		8.36	

11n-HT40 mode

Type	Peak Excursion							
	5190MHz (Ch38)		5230MHz (Ch46)		5270MHz (Ch54)		5310 MHz (Ch62)	
Peak (dBm)	Fig.260	2.26	Fig.261	1.92	Fig.262	3.49	Fig.263	3.61
Average(dBm)	Fig.264	-6.29	Fig.265	-5.80	Fig.266	-5.20	Fig.267	-5.78
Result (dB)	8.55		7.72		8.69		9.39	

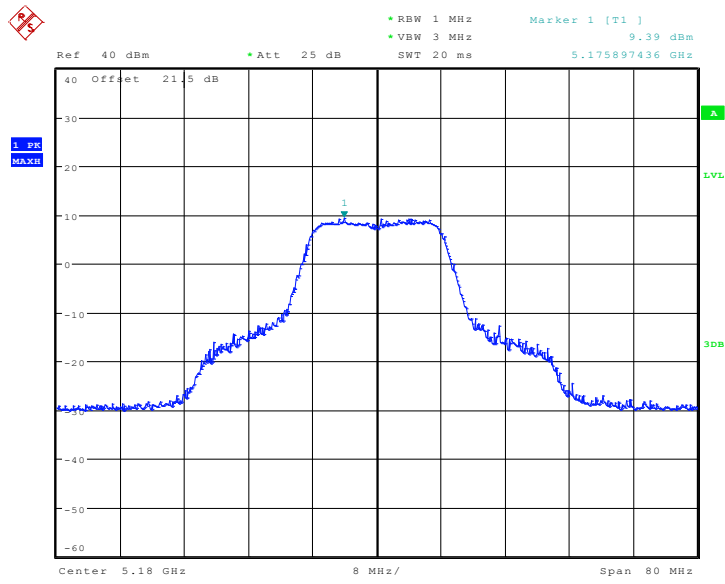
Type	Test Result (dBm)					
	5510MHz (Ch102)		5590MHz (Ch118)		5670MHz (Ch134)	
Peak (dBm)	Fig.268	2.65	Fig.269	3.63	Fig.270	2.64
Average(dBm)	Fig.271	-5.44	Fig.272	-4.74	Fig.273	-4.99
Result (dB)	8.09		8.37		7.63	

11ac-HT80 mode

Type	Test Result (dBm)					
	5210MHz (Ch42)		5290MHz (Ch58)		5530MHz (Ch106)	
Peak (dBm)	Fig.274	-2.60	Fig.275	-0.47	Fig.276	-2.81
Average(dBm)	Fig.277	-10.71	Fig.278	-8.88	Fig.279	-10.36
Result (dB)	8.11		8.41		7.55	

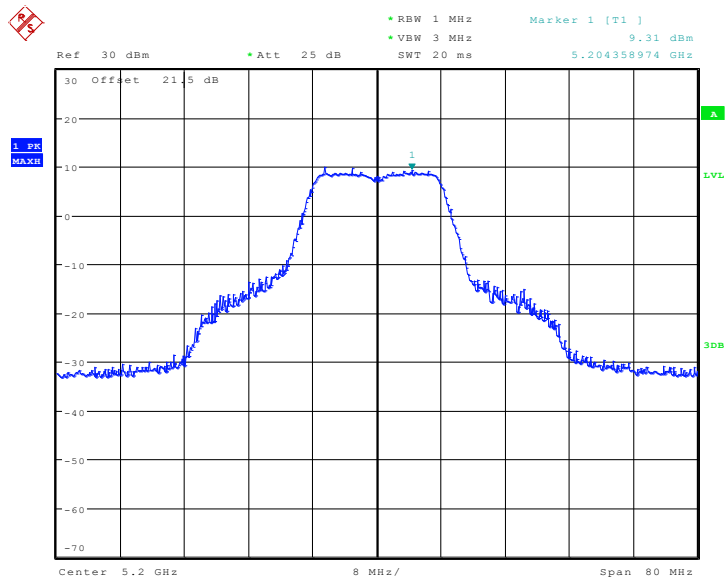
Conclusion: PASS

Test graphs as below:



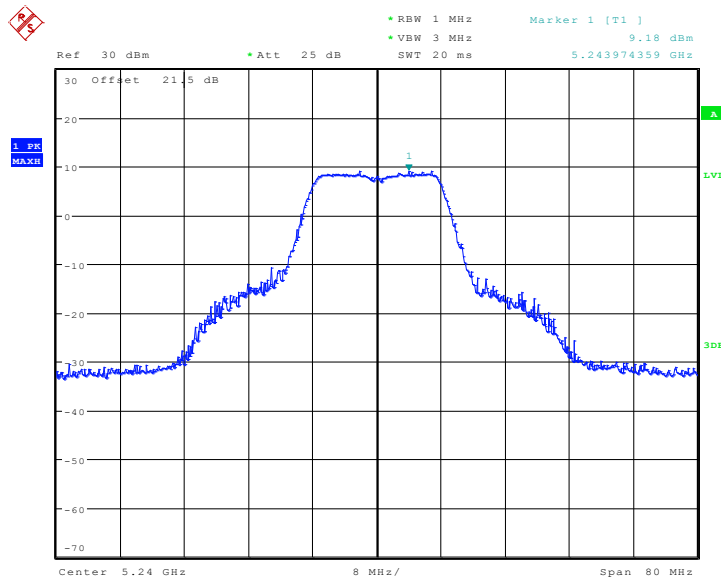
Date: 27.SEP.2013 17:28:34

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



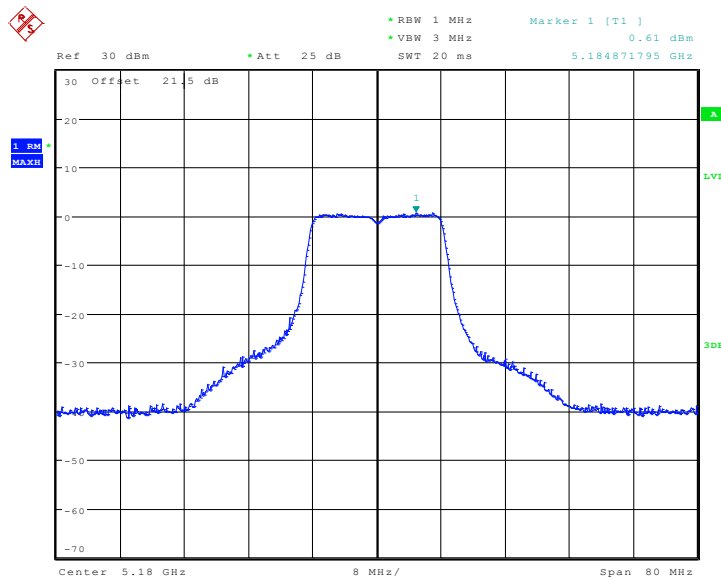
Date: 27.SEP.2013 17:32:05

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



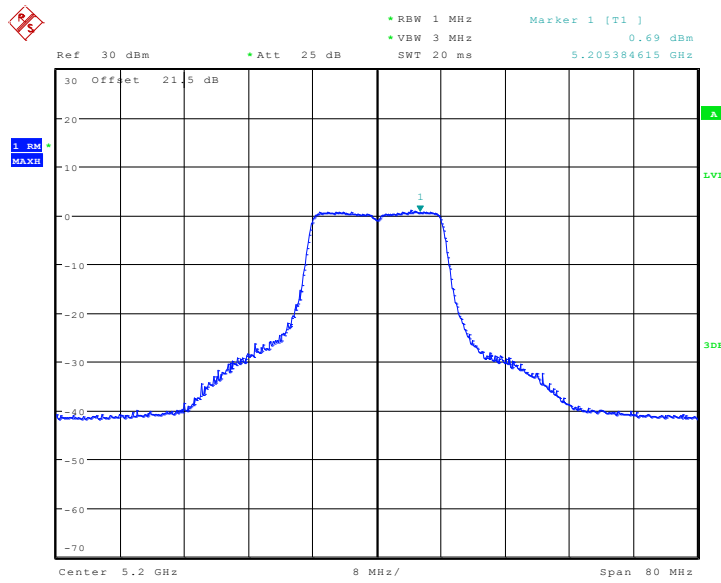
Date: 27.SEP.2013 17:32:58

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



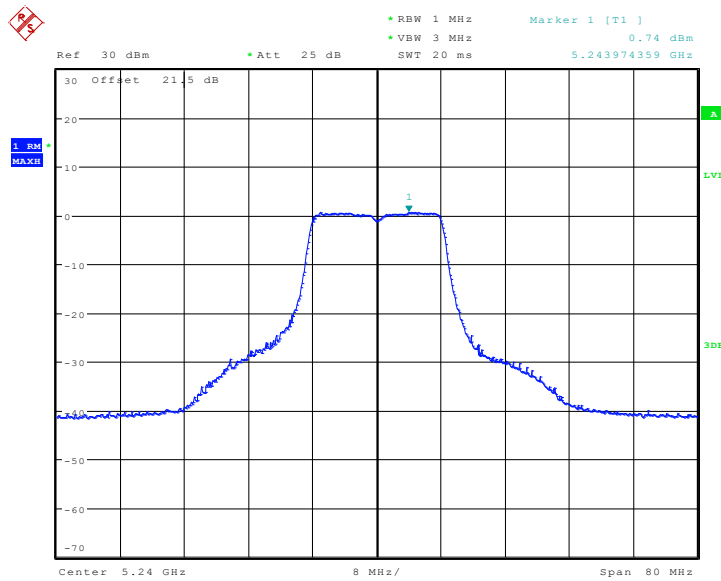
Date: 27.SEP.2013 17:28:55

Fig. 227 Peak Excursions (802.11a, ch36, average)



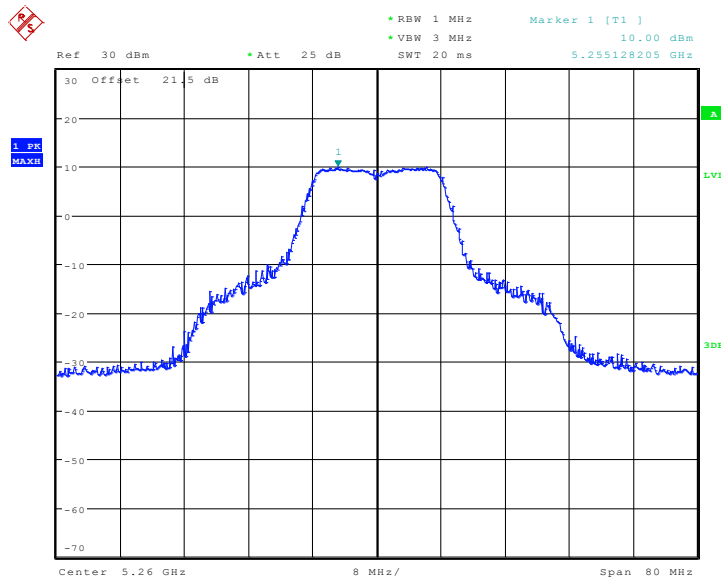
Date: 27.SEP.2013 17:32:18

Fig. 228 Peak Excursions (802.11a, ch40, average)



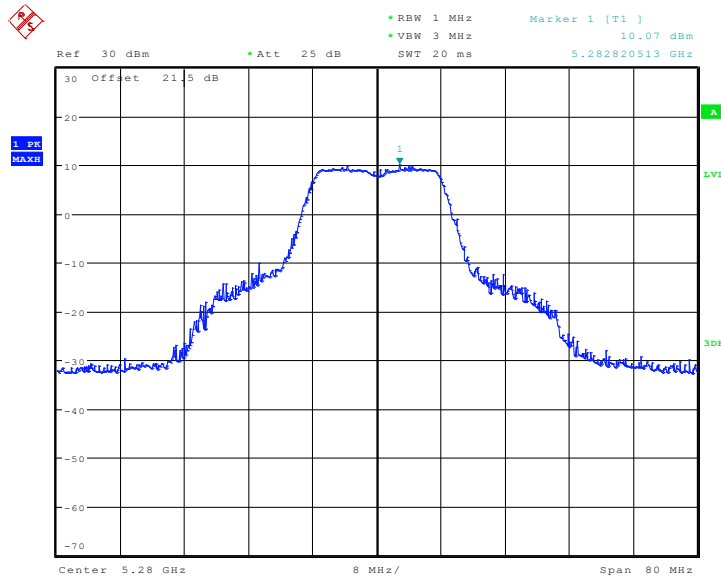
Date: 27.SEP.2013 17:33:18

Fig. 229 Peak Excursions (802.11a, ch48, average)



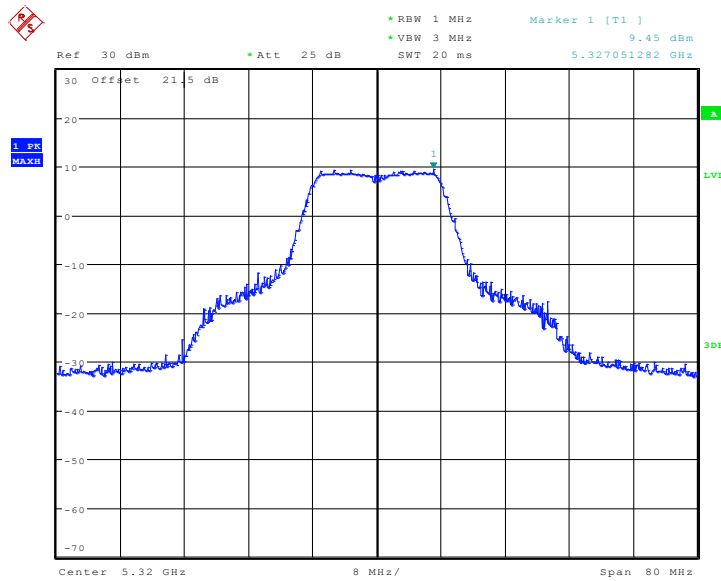
Date: 27.SEP.2013 17:45:06

Fig. 230 Peak Excursions (802.11a, ch52, peak)



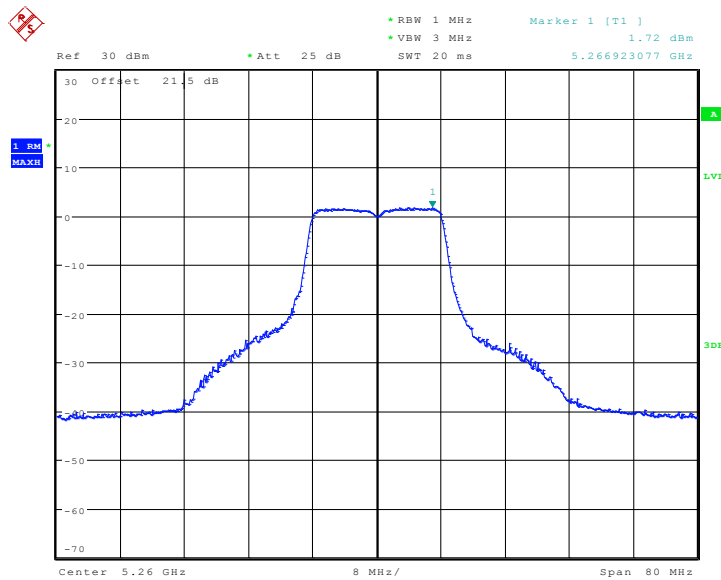
Date: 27.SEP.2013 17:46:00

Fig. 231 Peak Excursions (802.11a, ch56, peak)



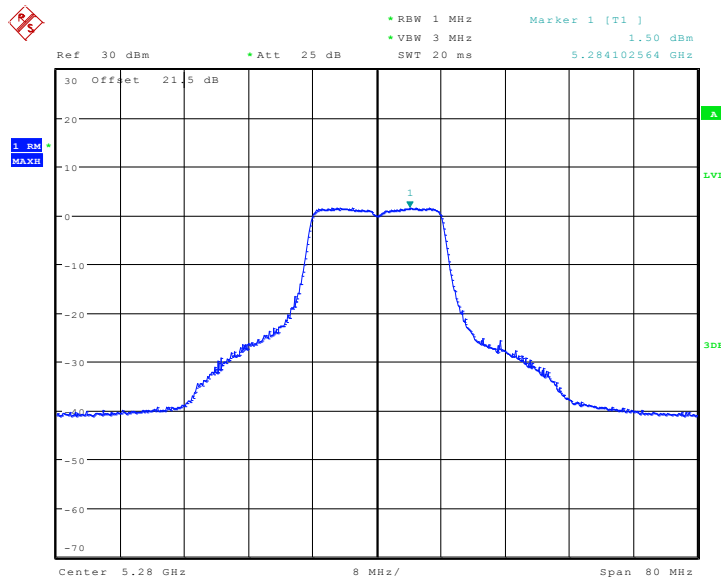
Date: 27.SEP.2013 17:47:58

Fig. 232 Peak Excursions (802.11a, ch64, peak)



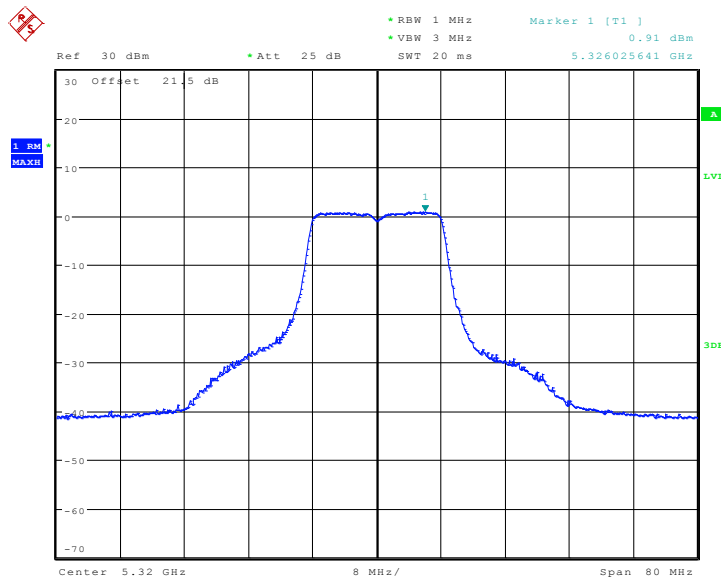
Date: 27.SEP.2013 17:45:20

Fig. 233 Peak Excursions (802.11a, ch52, average)



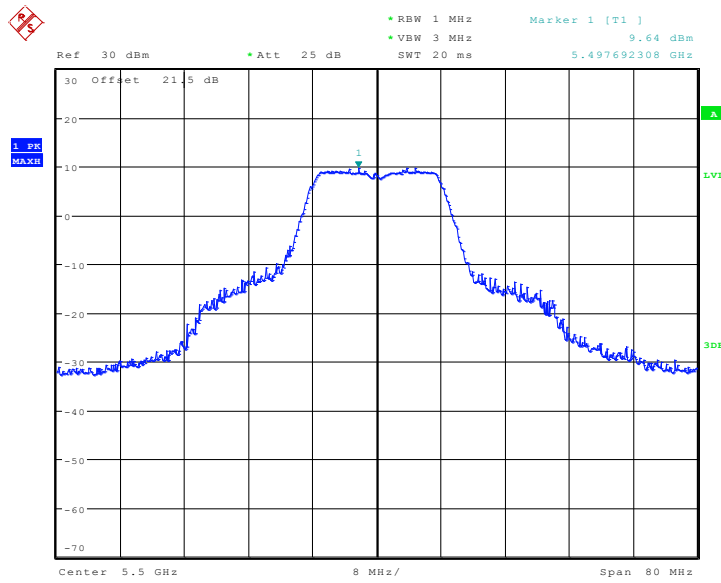
Date: 27.SEP.2013 17:47:12

Fig. 234 Peak Excursions (802.11a, ch56, average)



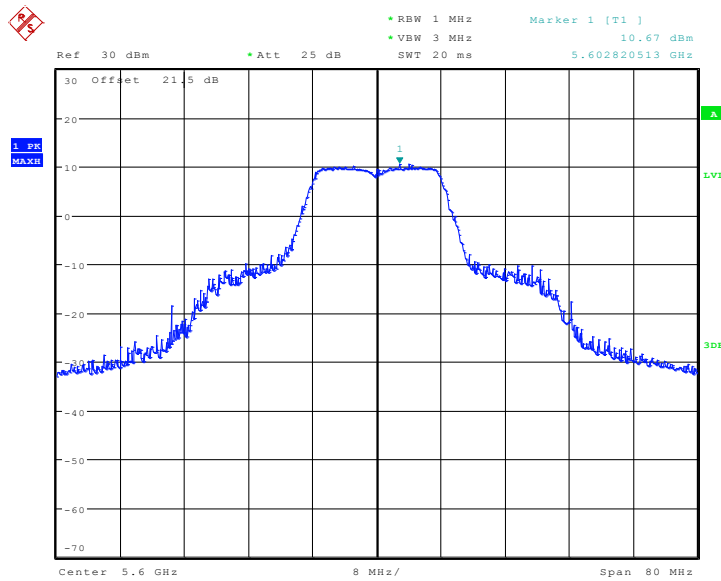
Date: 27.SEP.2013 17:48:17

Fig. 235 Peak Excursions (802.11a, ch64, average)



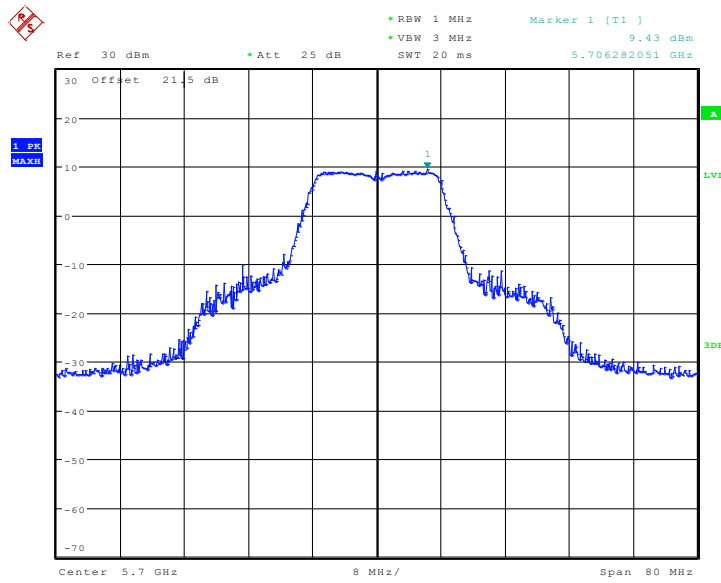
Date: 27.SEP.2013 18:27:28

Fig. 236 Peak Excursions (802.11a, ch100, peak)



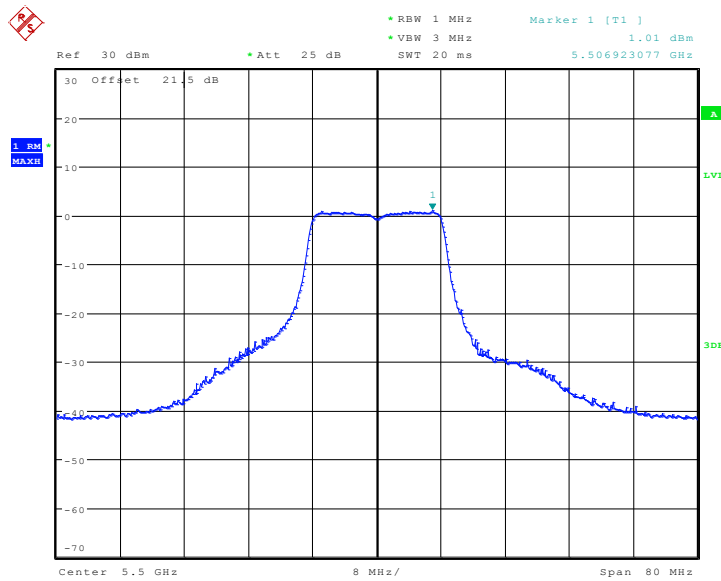
Date: 27.SEP.2013 18:28:38

Fig. 237 Peak Excursions (802.11a, ch120, peak)



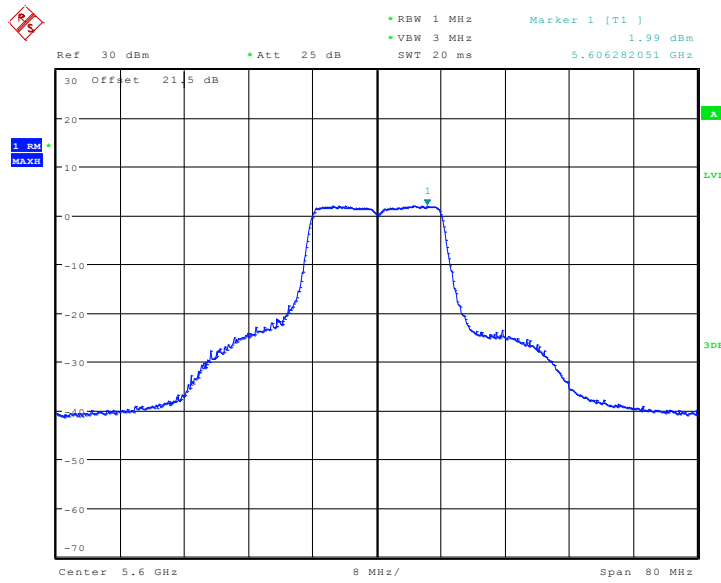
Date: 27.SEP.2013 18:29:43

Fig. 238 Peak Excursions (802.11a, ch140, peak)



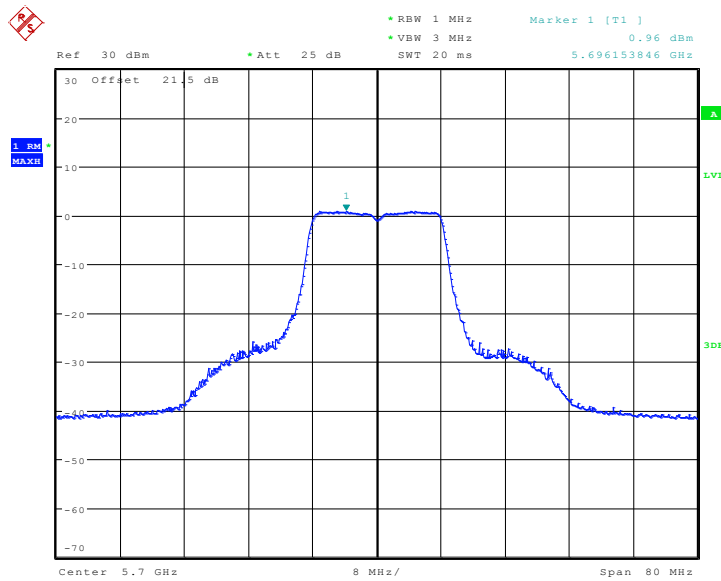
Date: 27.SEP.2013 18:27:46

Fig. 239 Peak Excursions (802.11a, ch100, average)



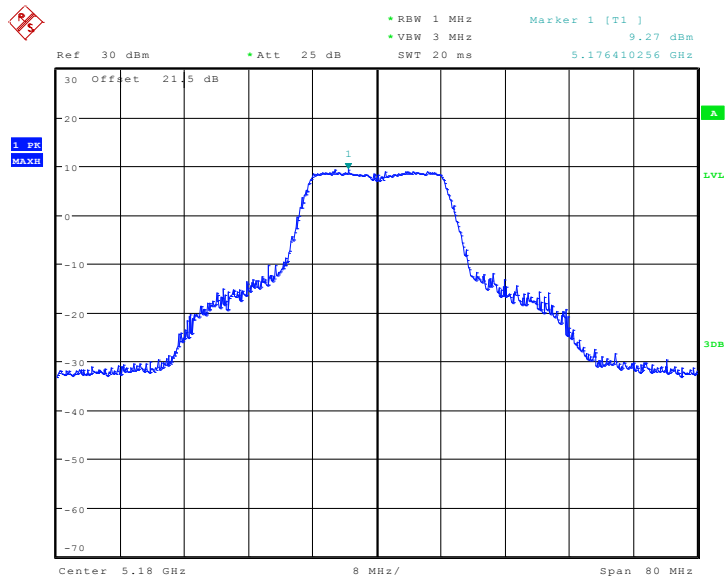
Date: 27.SEP.2013 18:29:08

Fig. 240 Peak Excursions (802.11a, ch120, average)



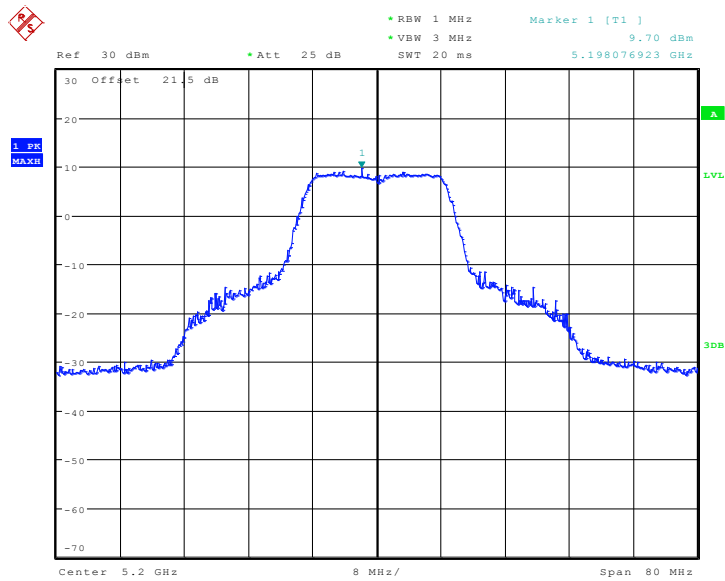
Date: 27.SEP.2013 18:30:00

Fig. 241 Peak Excursions (802.11a, ch140, average)



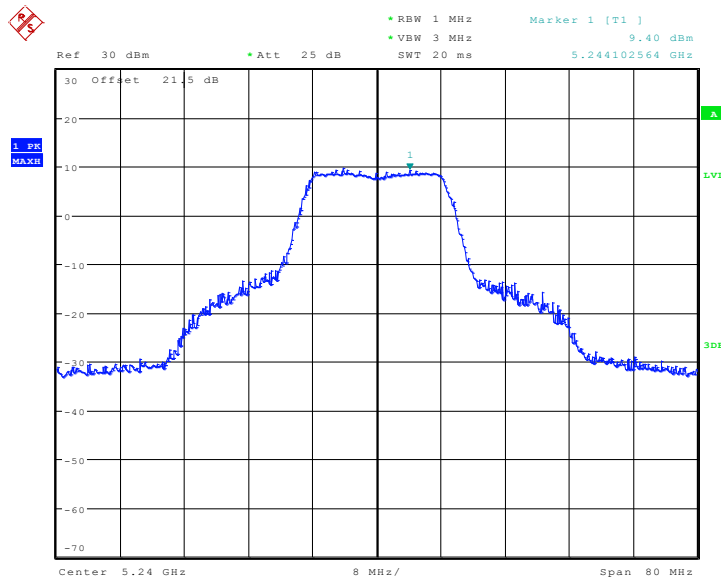
Date: 27.SEP.2013 18:30:39

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



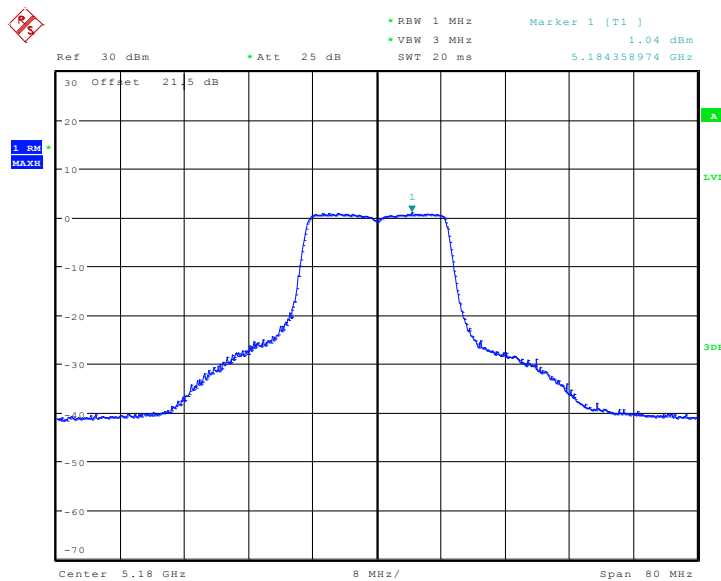
Date: 27.SEP.2013 18:32:20

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



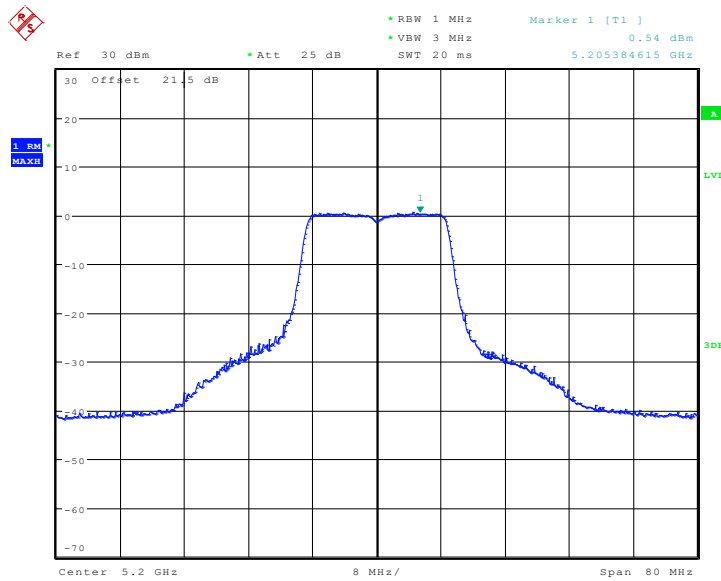
Date: 27.SEP.2013 18:33:29

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



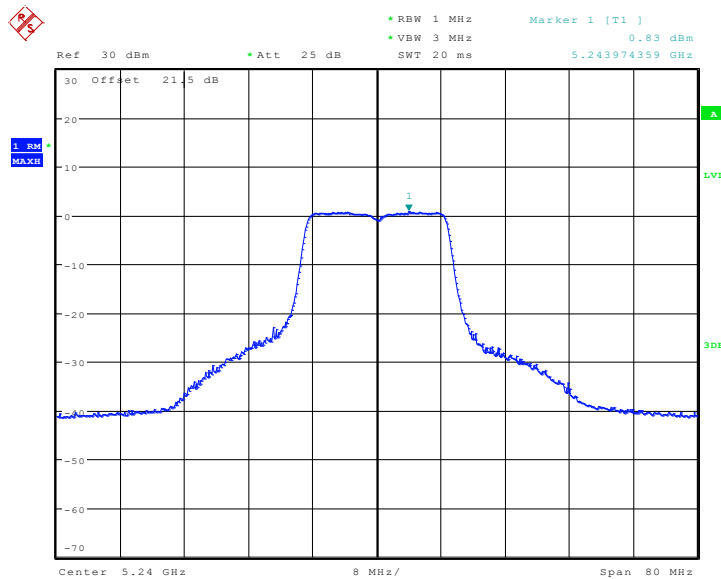
Date: 27.SEP.2013 18:31:07

Fig. 245 Peak Excursions (802.11n-HT20, ch36, average)



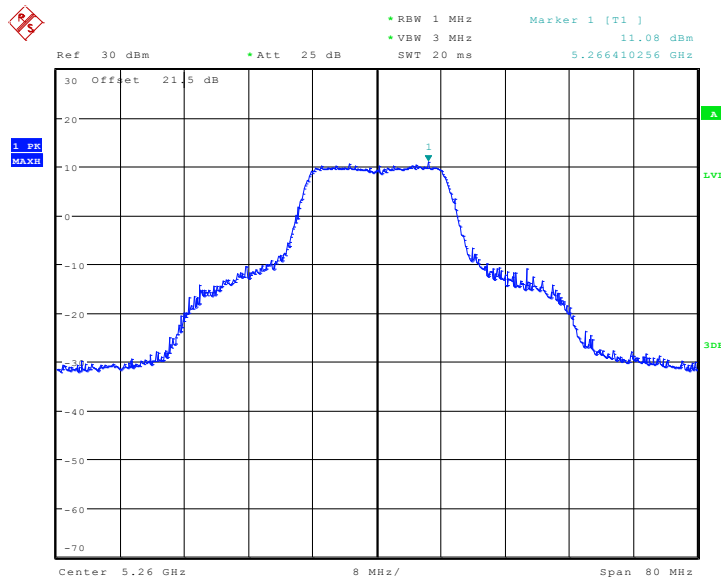
Date: 27.SEP.2013 18:32:41

Fig. 246 Peak Excursions (802.11n-HT20, ch40, average)



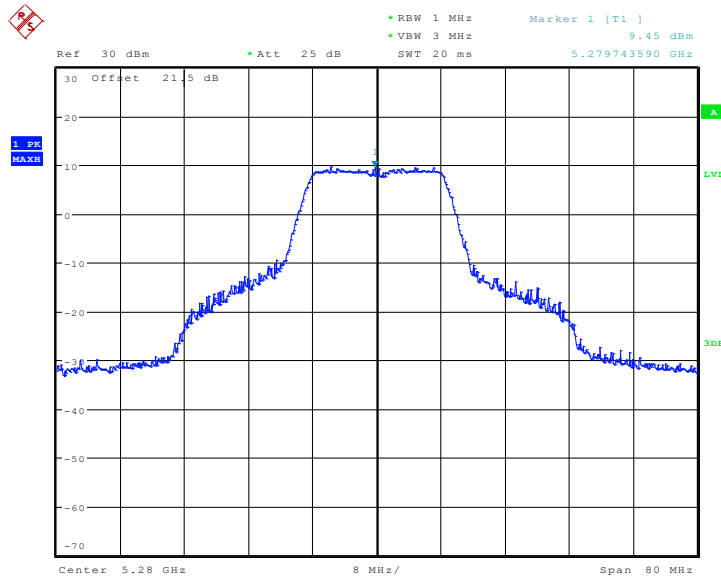
Date: 27.SEP.2013 18:33:53

Fig. 247 Peak Excursions (802.11n-HT20, ch48, average)



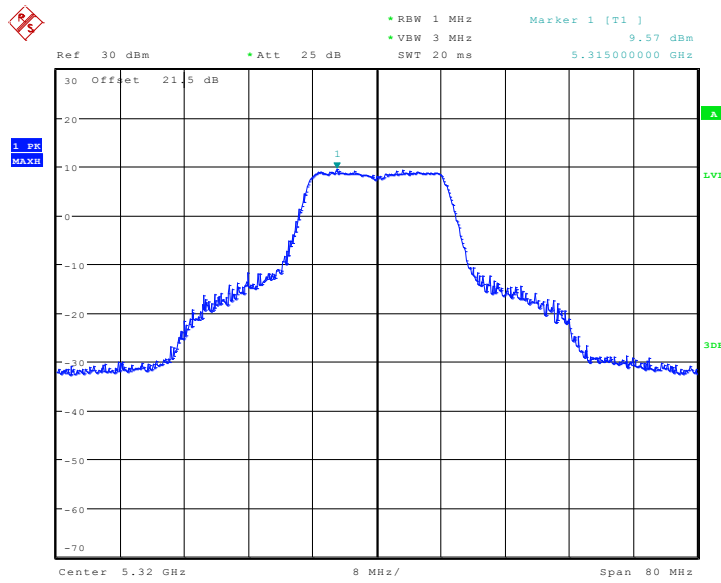
Date: 27.SEP.2013 18:35:27

Fig. 248 Peak Excursions (802.11n-HT20, ch52, peak)



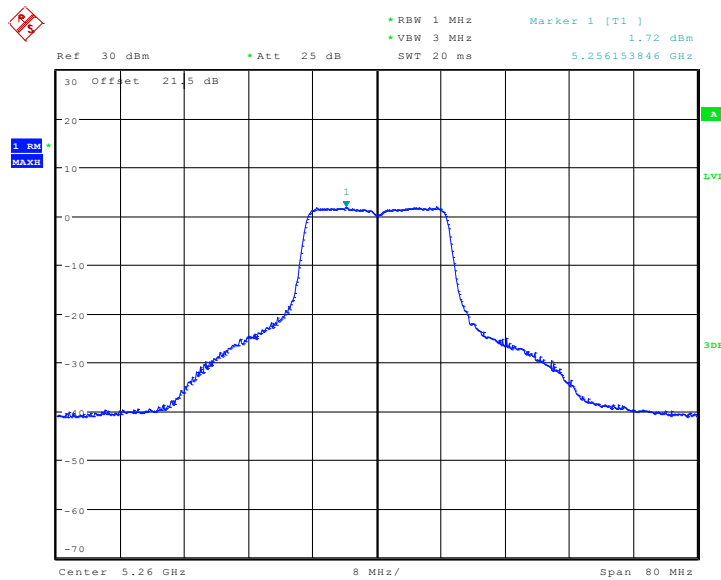
Date: 27.SEP.2013 18:37:05

Fig. 249 Peak Excursions (802.11n-HT20, ch56, peak)



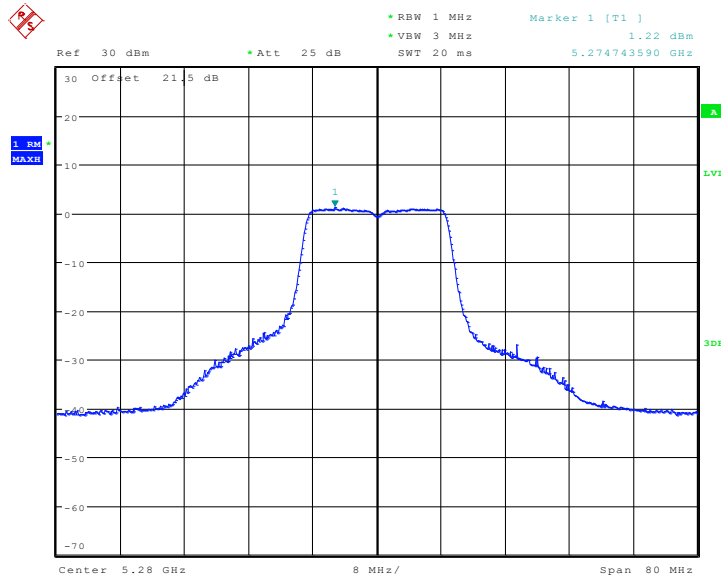
Date: 27.SEP.2013 18:38:20

Fig. 250 Peak Excursions (802.11n-HT20, ch64, peak)



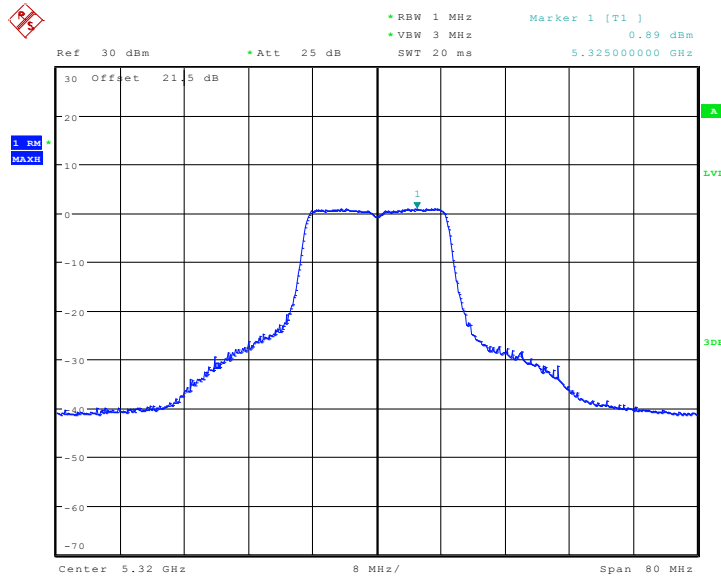
Date: 27.SEP.2013 18:35:46

Fig. 251 Peak Excursions (802.11n-HT20, ch52, average)



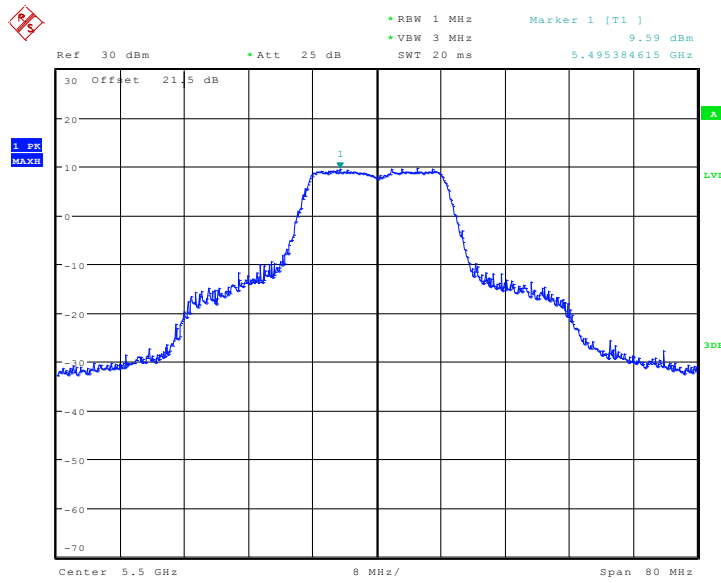
Date: 27.SEP.2013 18:37:25

Fig. 252 Peak Excursions (802.11n-HT20, ch56, average)



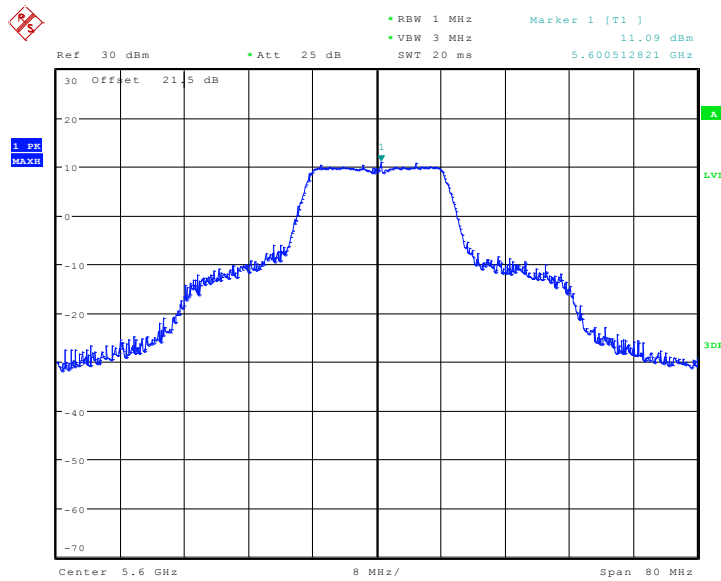
Date: 27.SEP.2013 18:38:35

Fig. 253 Peak Excursions (802.11n-HT20, ch64, average)



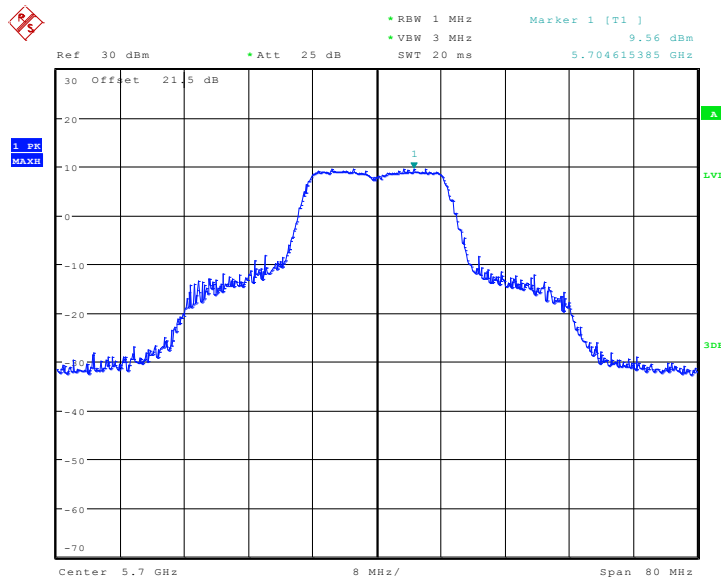
Date: 27.SEP.2013 18:39:17

Fig. 254 Peak Excursions (802.11n-HT20, ch100, peak)



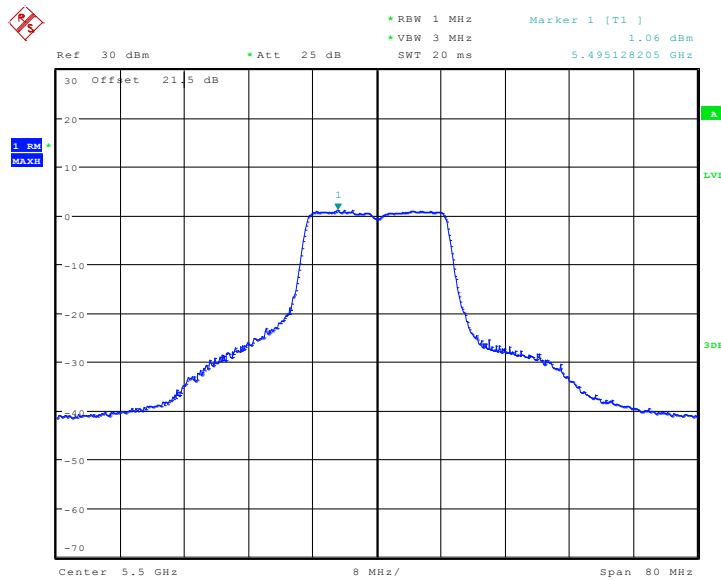
Date: 27.SEP.2013 18:40:22

Fig. 255 Peak Excursions (802.11n-HT20, ch120, peak)



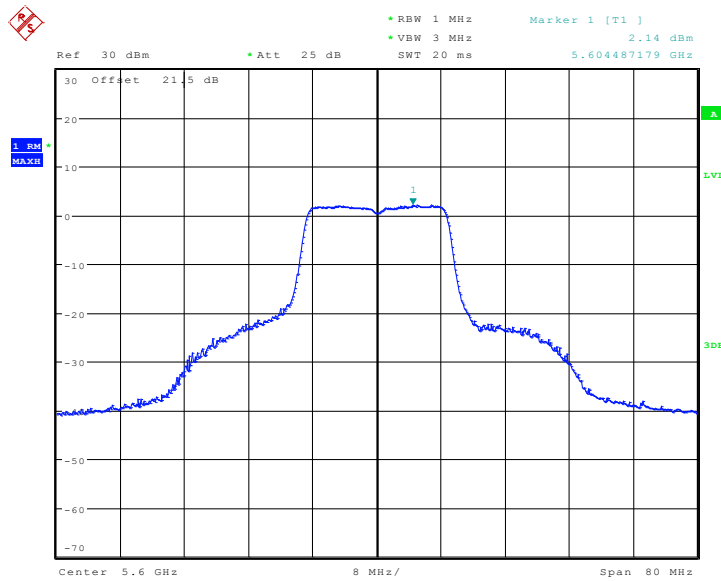
Date: 27.SEP.2013 18:41:30

Fig. 256 Peak Excursions (802.11n-HT20, ch140, peak)



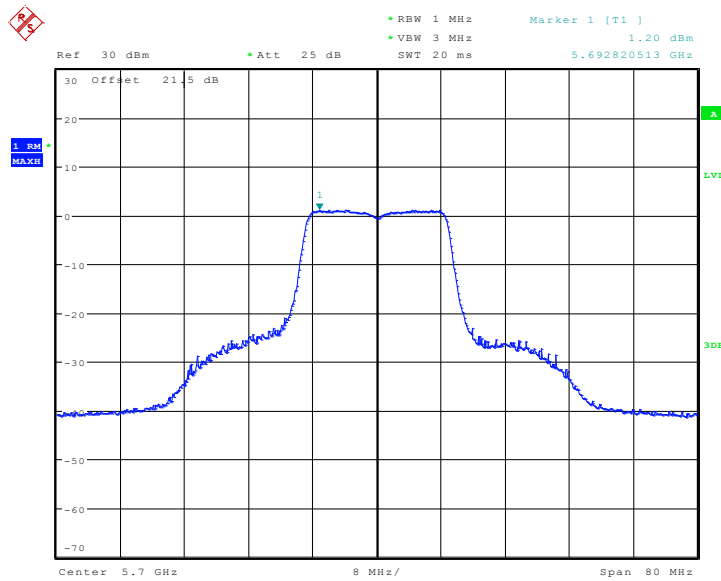
Date: 27.SEP.2013 18:39:34

Fig. 257 Peak Excursions (802.11n-HT20, ch100, average)



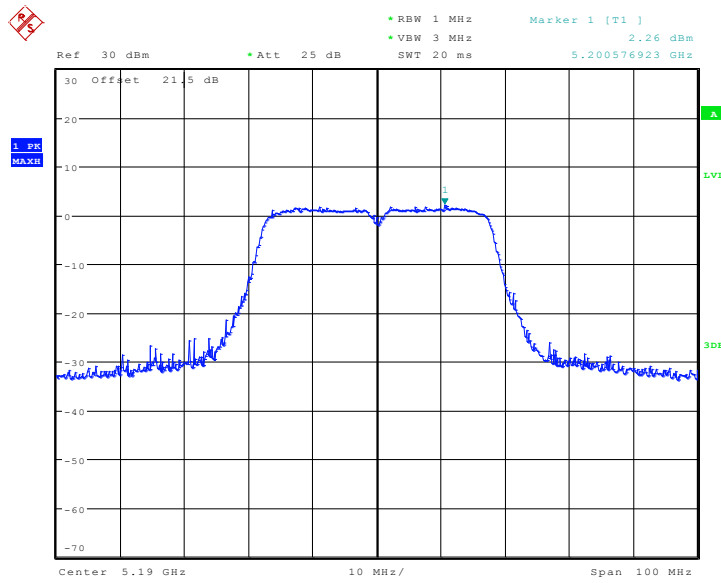
Date: 27.SEP.2013 18:40:39

Fig. 258 Peak Excursions (802.11n-HT20, ch120, average)



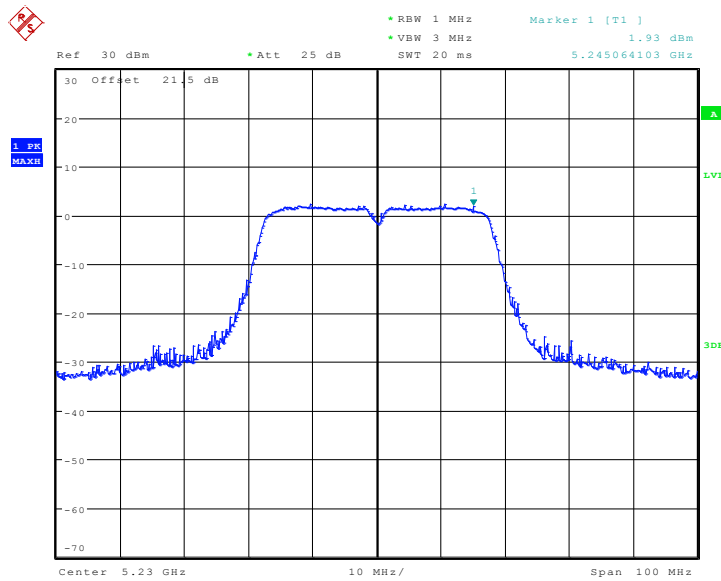
Date: 27.SEP.2013 18:42:06

Fig. 259 Peak Excursions (802.11n-HT20, ch140, average)



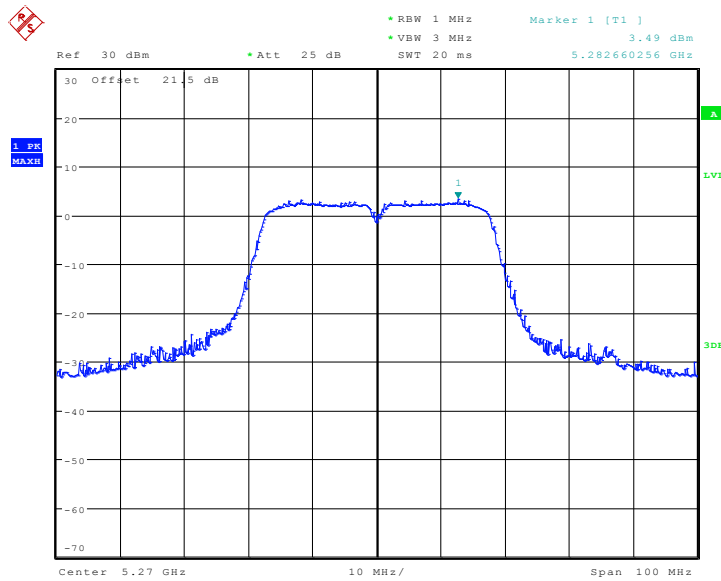
Date: 27.SEP.2013 18:43:33

Fig. 260 Peak Excursions (802.11n-HT40, ch38, peak)



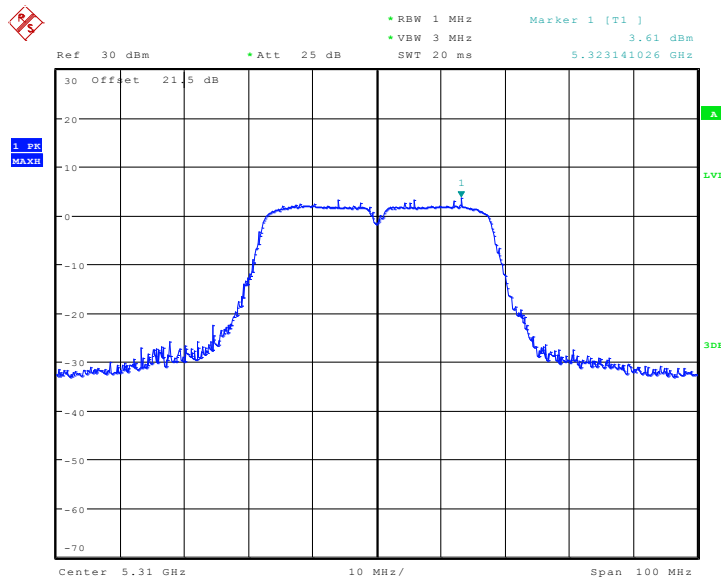
Date: 27.SEP.2013 18:44:53

Fig. 261 Peak Excursions (802.11n-HT40, ch46, peak)



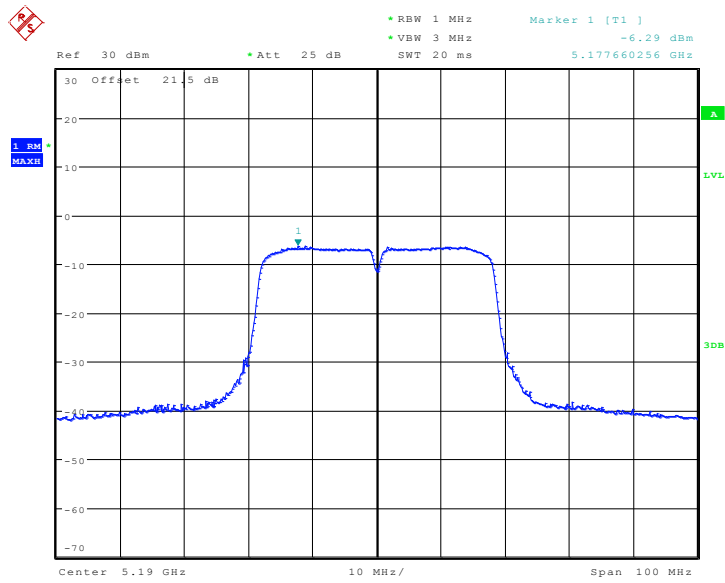
Date: 27.SEP.2013 18:46:21

Fig. 262 Peak Excursions (802.11n-HT40, ch54, peak)



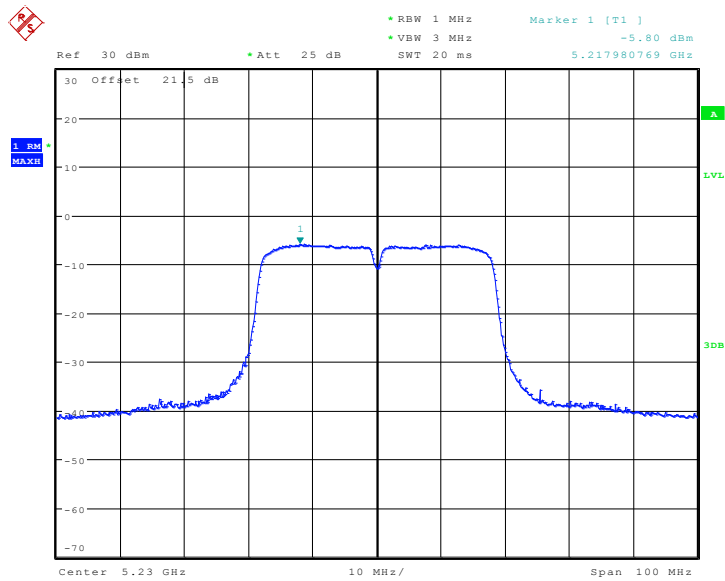
Date: 27.SEP.2013 18:47:30

Fig. 263 Peak Excursions (802.11n-HT40, ch62, peak)



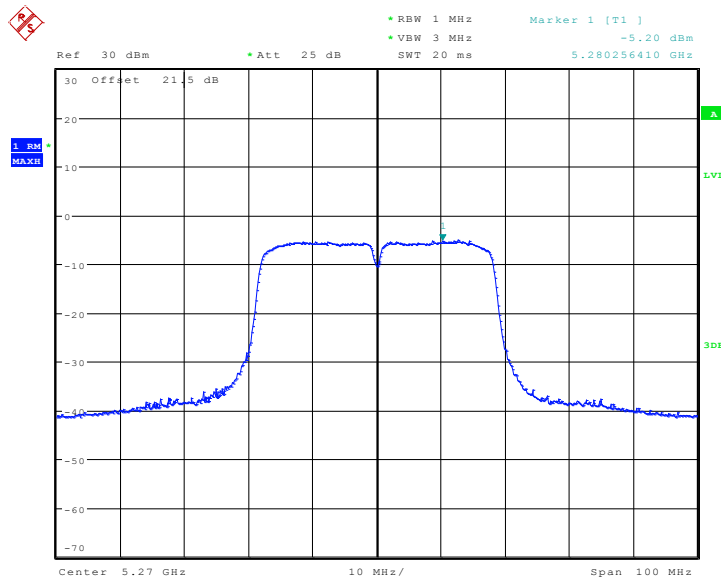
Date: 27.SEP.2013 18:43:49

Fig. 264 Peak Excursions (802.11n-HT40, ch38, average)



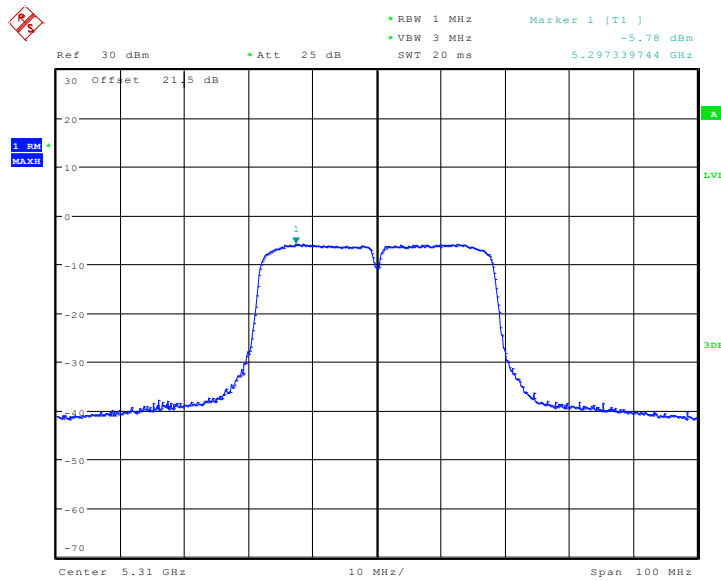
Date: 27.SEP.2013 18:45:21

Fig. 265 Peak Excursions (802.11n-HT40, ch46, average)



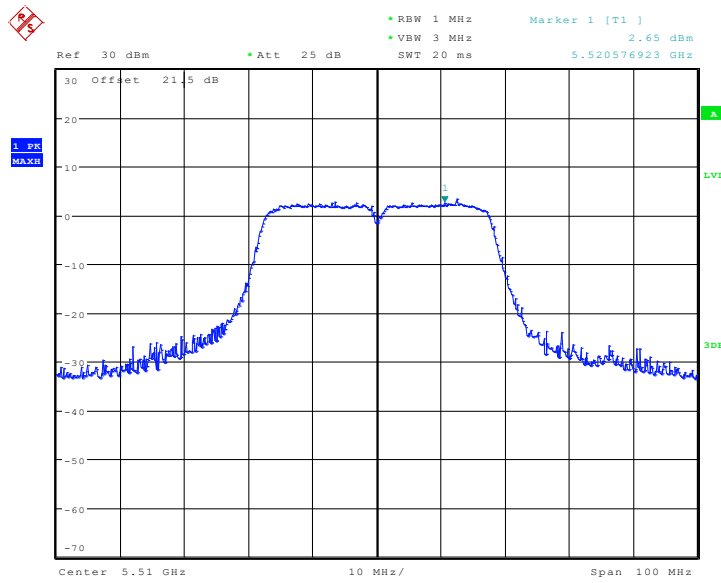
Date: 27.SEP.2013 18:46:43

Fig. 266 Peak Excursions (802.11n-HT40, ch54, average)



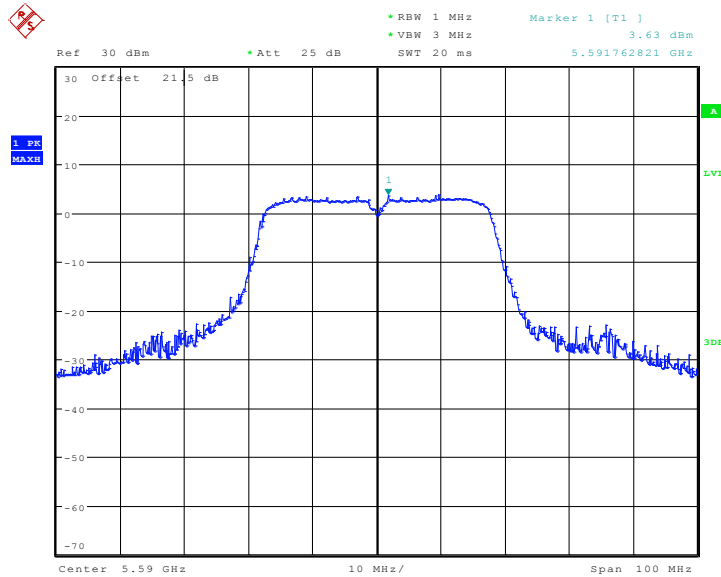
Date: 27.SEP.2013 18:47:44

Fig. 267 Peak Excursions (802.11n-HT40, ch62, average)



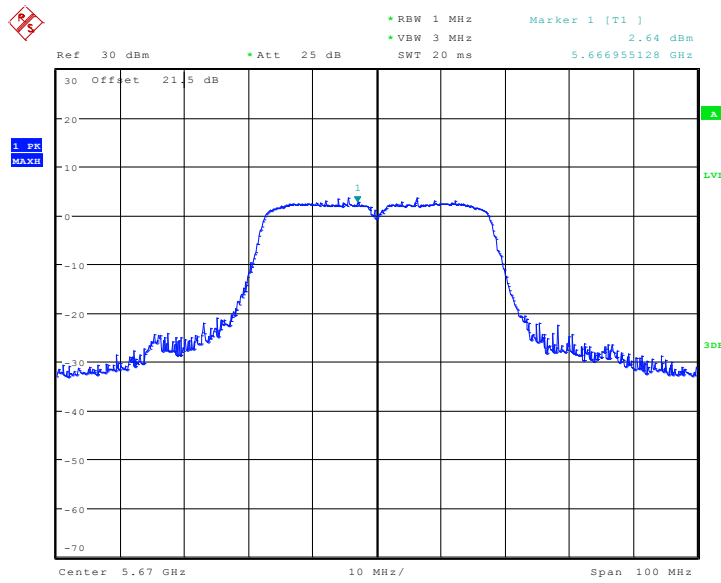
Date: 27.SEP.2013 18:48:20

Fig. 268 Peak Excursions (802.11n-HT40, ch102, peak)



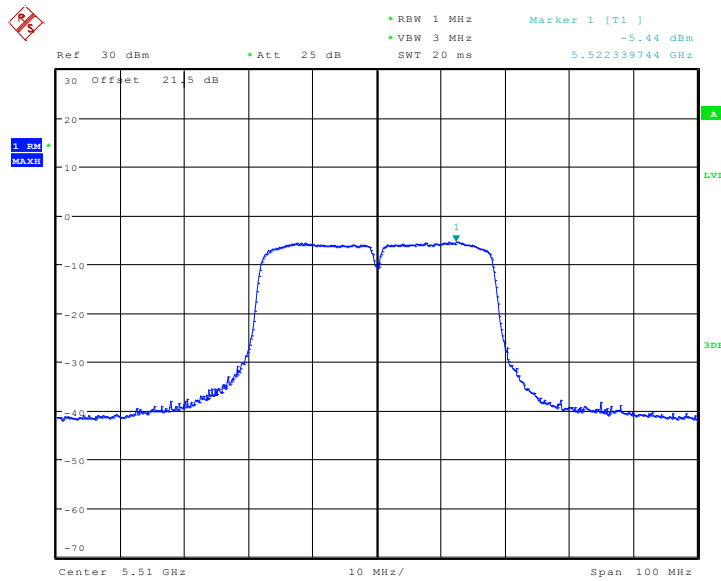
Date: 27.SEP.2013 18:49:24

Fig. 269 Peak Excursions (802.11n-HT40, ch118, peak)



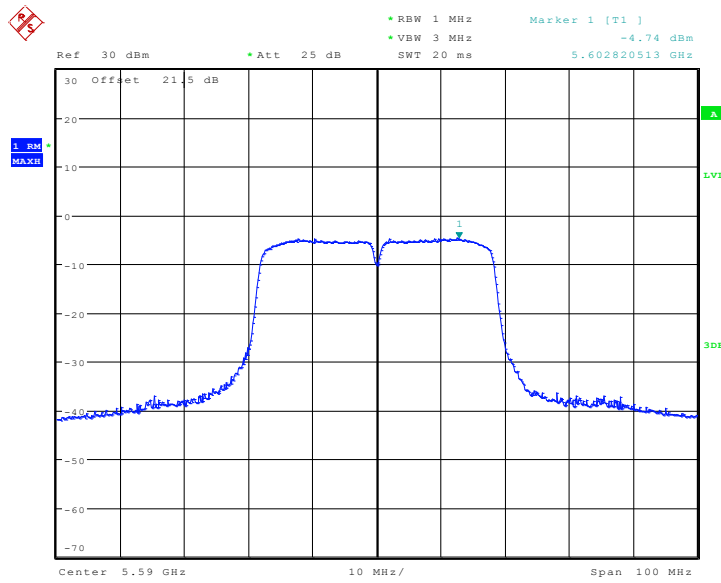
Date: 27.SEP.2013 18:50:34

Fig. 270 Peak Excursions (802.11n-HT40, ch134, peak)



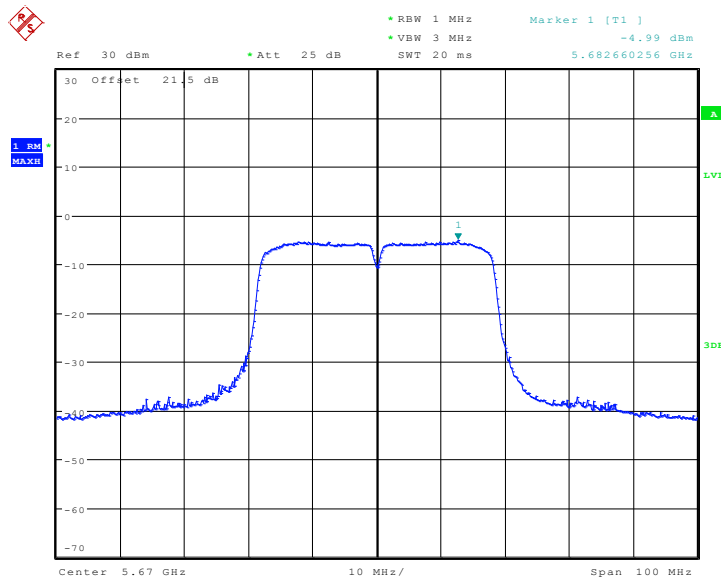
Date: 27.SEP.2013 18:48:44

Fig. 271 Peak Excursions (802.11n-HT40, ch102, average)



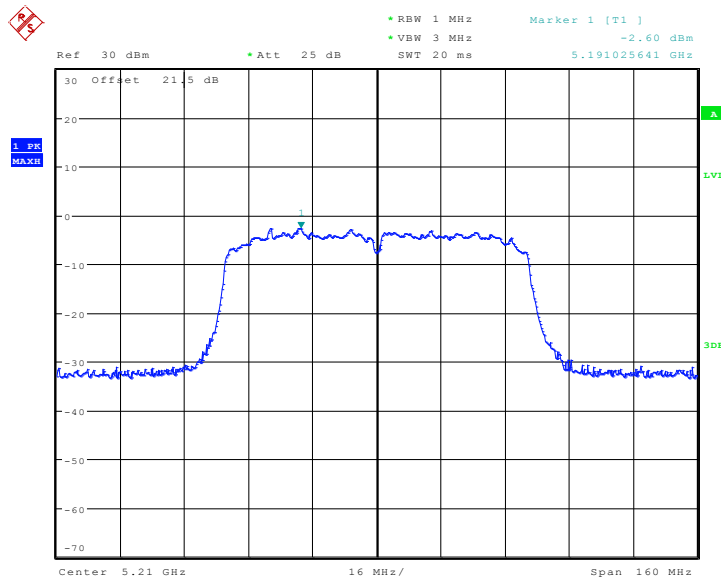
Date: 27.SEP.2013 18:49:43

Fig. 272 Peak Excursions (802.11n-HT40, ch118, average)



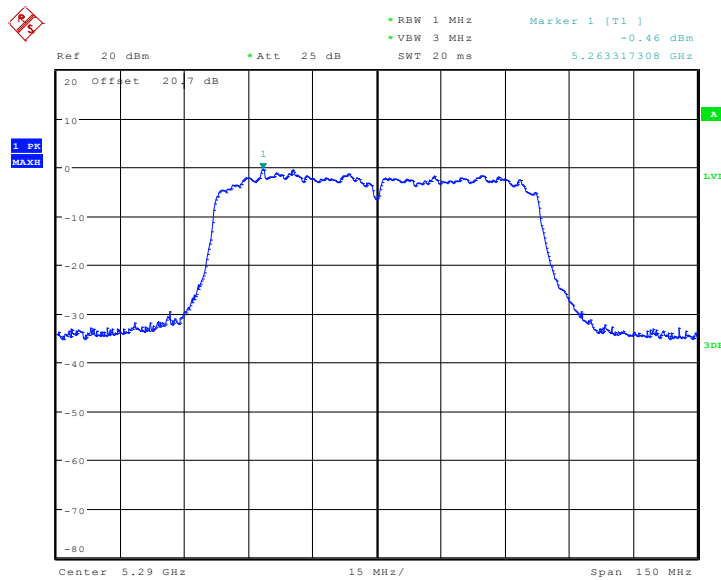
Date: 27.SEP.2013 18:50:51

Fig. 273 Peak Excursions (802.11n-HT40, ch134, average)



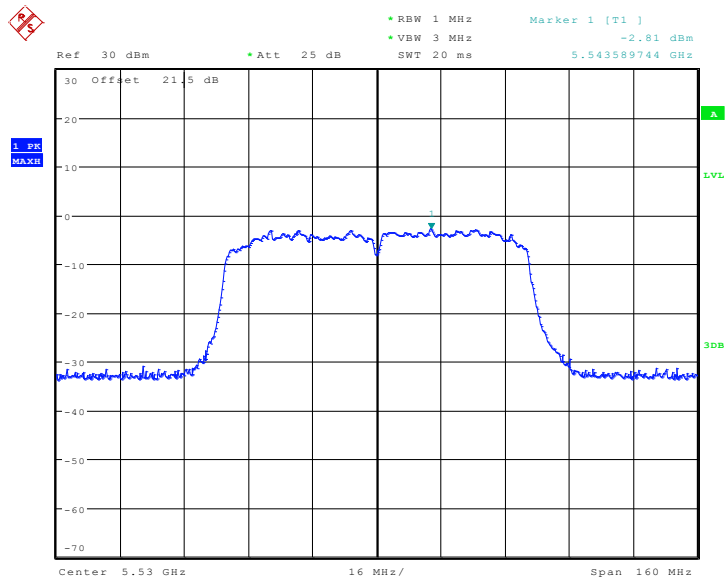
Date: 27.SEP.2013 18:52:12

Fig. 274 Peak Excursions (802.11ac-HT80, ch42, peak)



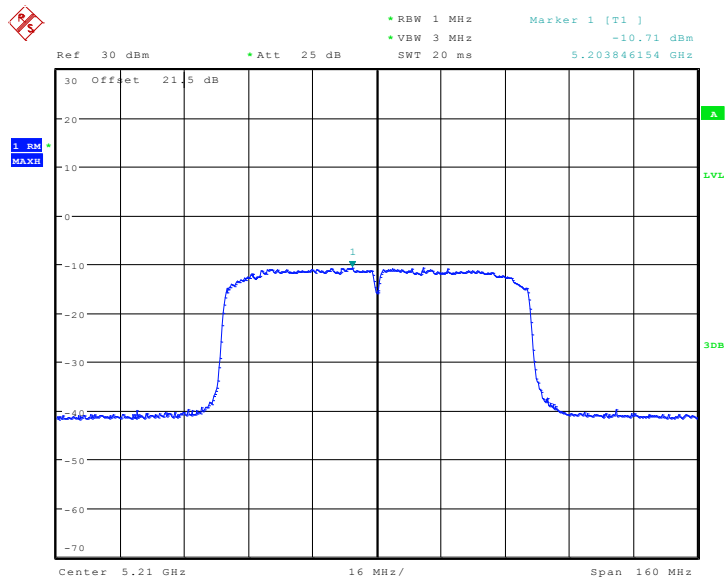
Date: 29.SEP.2013 11:17:15

Fig. 275 Peak Excursions (802.11ac-HT80, ch58, peak)



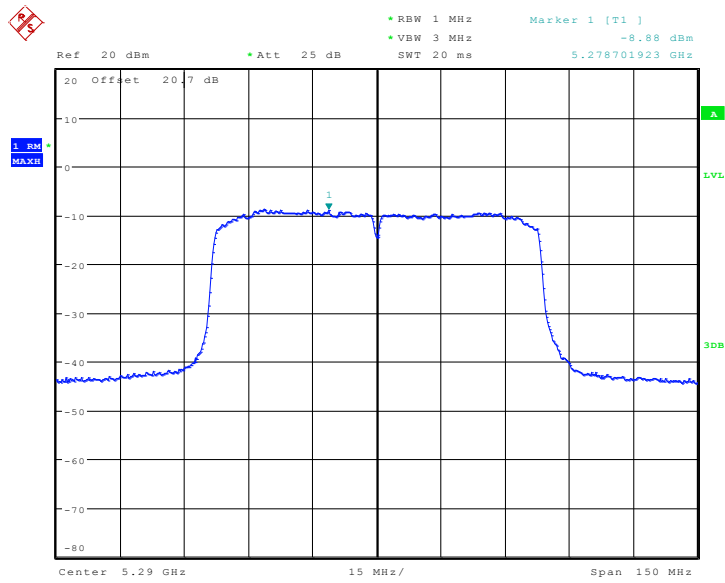
Date: 27.SEP.2013 18:53:18

Fig. 276 Peak Excursions (802.11ac-HT80, ch106, peak)



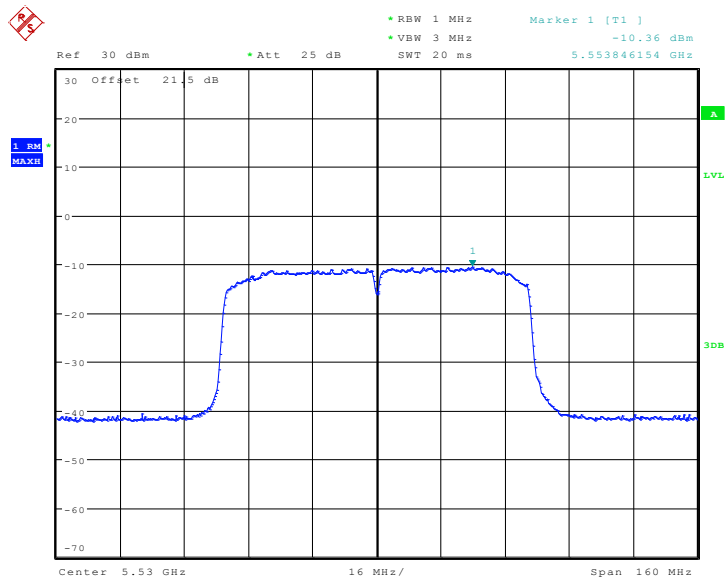
Date: 27.SEP.2013 18:52:34

Fig. 277 Peak Excursions (802.11ac-HT80, ch42, average)



Date: 29.SEP.2013 11:17:50

Fig. 278 Peak Excursions (802.11ac-HT80, ch58, average)



Date: 27.SEP.2013 18:53:41

Fig. 279 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).