



Appendix A

U-NII: Emission Bandwidth Bandwidth & U-NII: Emission Bandwidth (OBW) Bandwidth

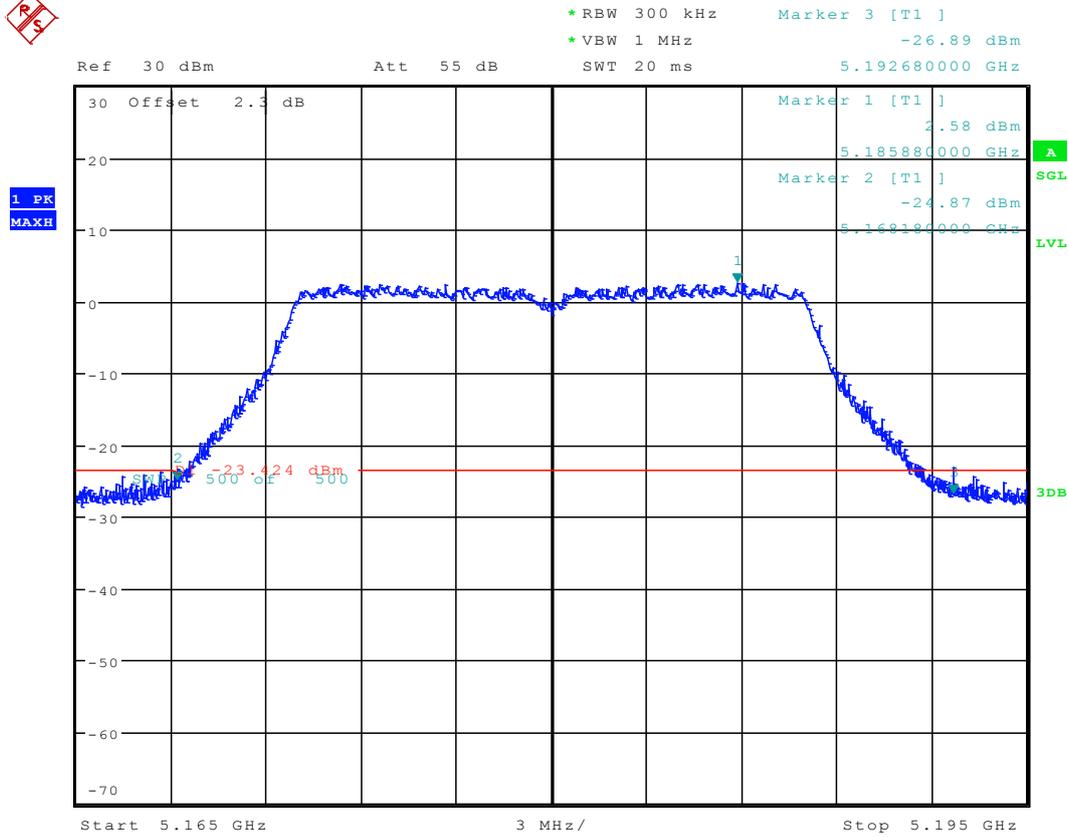
**1 (EBW)Result Table**

Test Mode	Test Channel	Frequency[MHz]	Ant	26dB Emission Bandwidth [MHz]	Verdict
11A	36	5180	Ant 1	24.5	pass
11A	48	5240	Ant 1	23.4	pass
11A	52	5260	Ant 1	23.32	pass
11A	64	5320	Ant 1	23.24	pass
11A	100	5500	Ant 1	22.94	pass
11A	140	5700	Ant 1	28.48	pass
11N20	36	5180	Ant 1	23.36	pass
11N20	48	5240	Ant 1	23.9	pass
11N20	52	5260	Ant 1	24.78	pass
11N20	64	5320	Ant 1	24.78	pass
11N20	100	5500	Ant 1	23.34	pass
11N20	140	5700	Ant 1	27.72	pass
11N40	38	5190	Ant 1	47.76	pass
11N40	46	5230	Ant 1	51.86	pass
11N40	54	5270	Ant 1	47.86	pass
11N40	62	5310	Ant 1	50.76	pass
11N40	102	5510	Ant 1	45.86	pass
11N40	134	5670	Ant 1	56.9	pass
Test Mode	Test Channel	Frequency[MHz]	Ant	6dB Emission Bandwidth [MHz]	Verdict
11A	149	5745	Ant 1	16.4	pass
11A	165	5825	Ant 1	16.38	pass
11N20	149	5745	Ant 1	17.62	pass
11N20	165	5825	Ant 1	17.64	pass
11N40	151	5755	Ant 1	35.56	pass
11N40	159	5795	Ant 1	35.18	pass



2 Test Plot

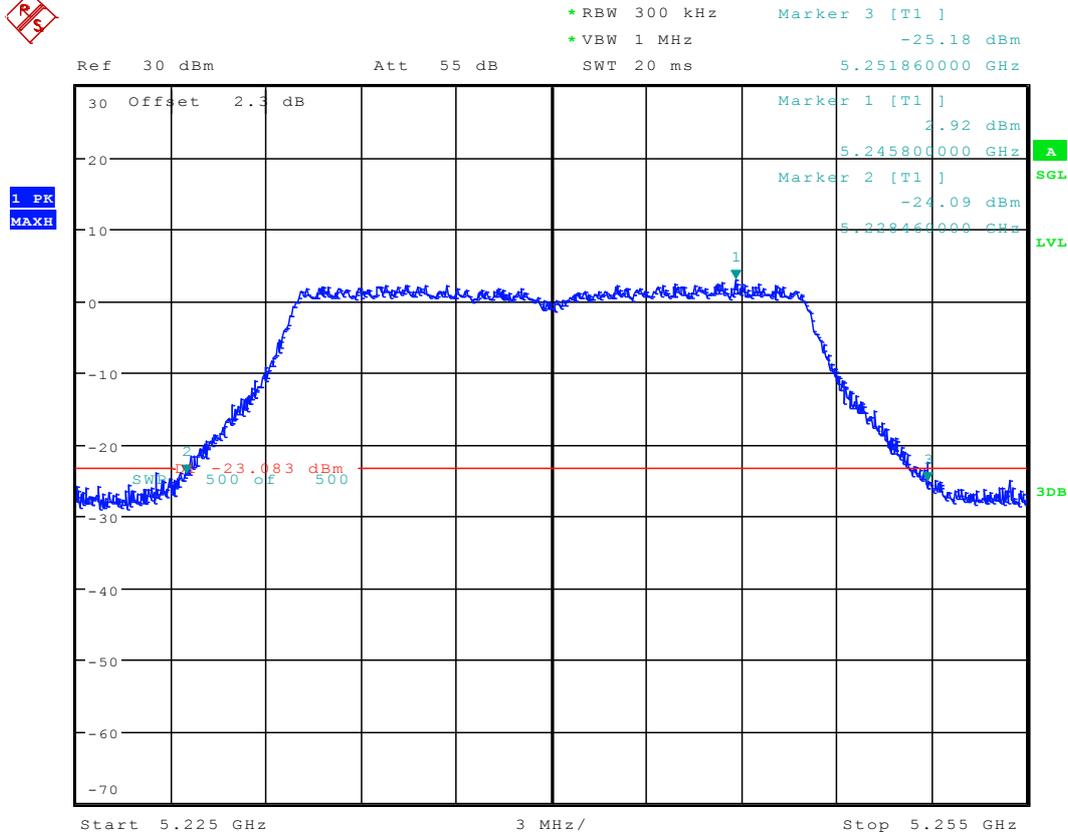
2.1 11A_36 Ant 1



Date: 9.OCT.2015 16:56:42

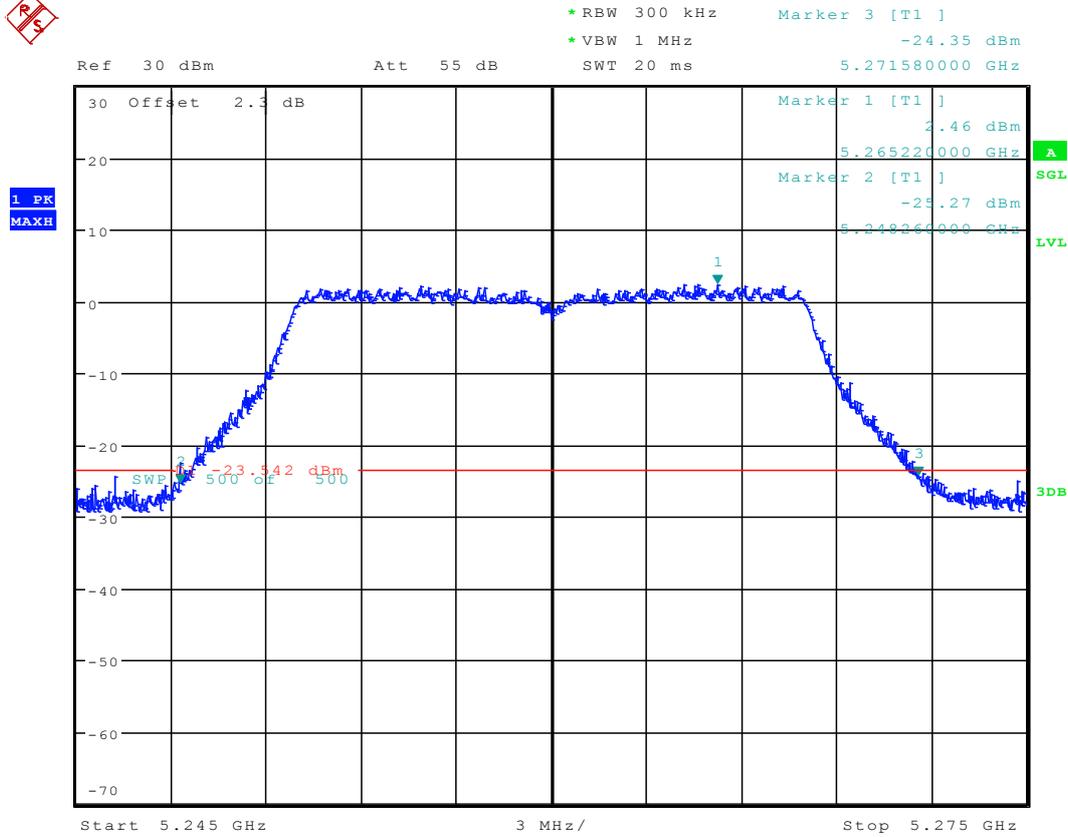


2.2 11A_48 Ant1



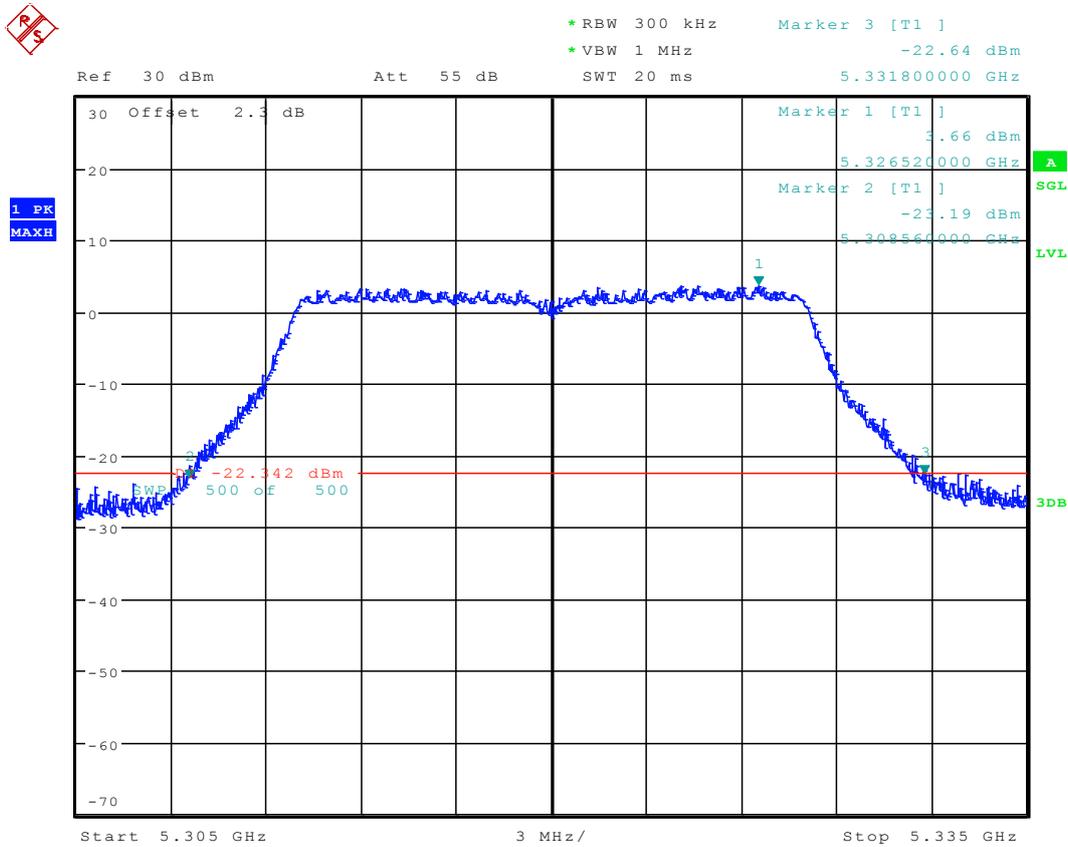
Date: 9.OCT.2015 17:02:00

2.3 11A_52 Ant 1



Date: 9.OCT.2015 17:06:55

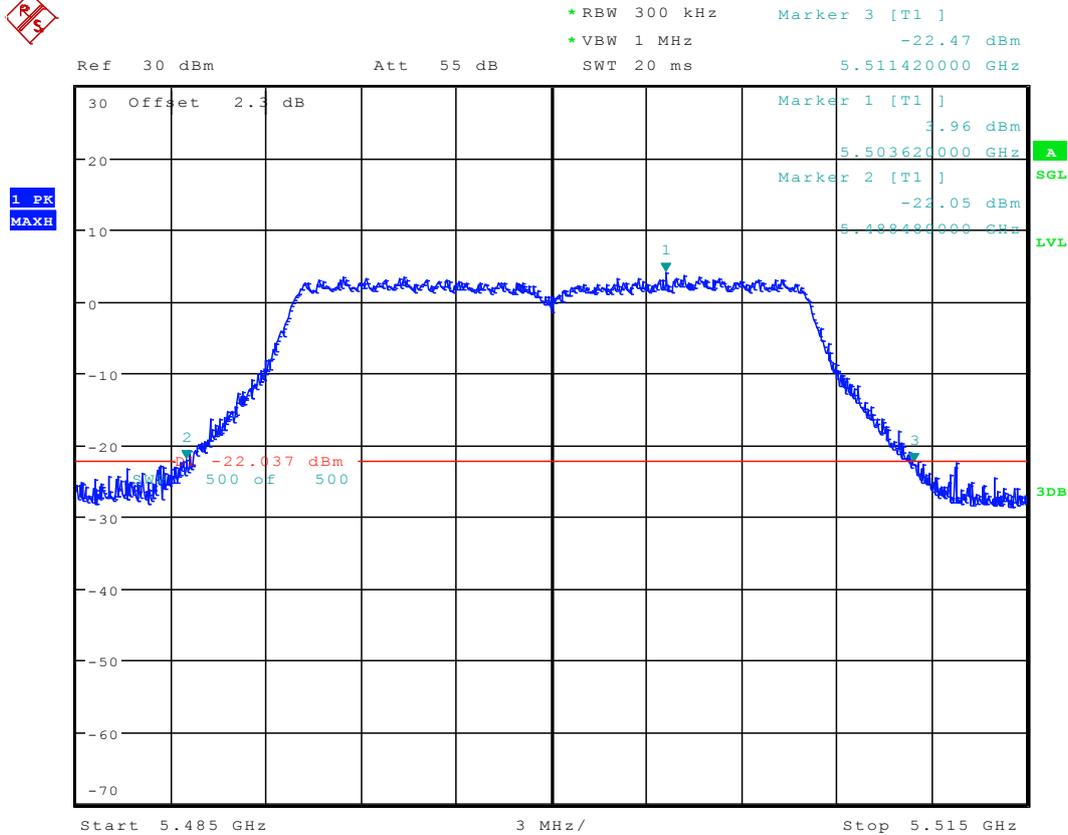
2.4 11A_64 Ant1



Date: 9.OCT.2015 17:14:28



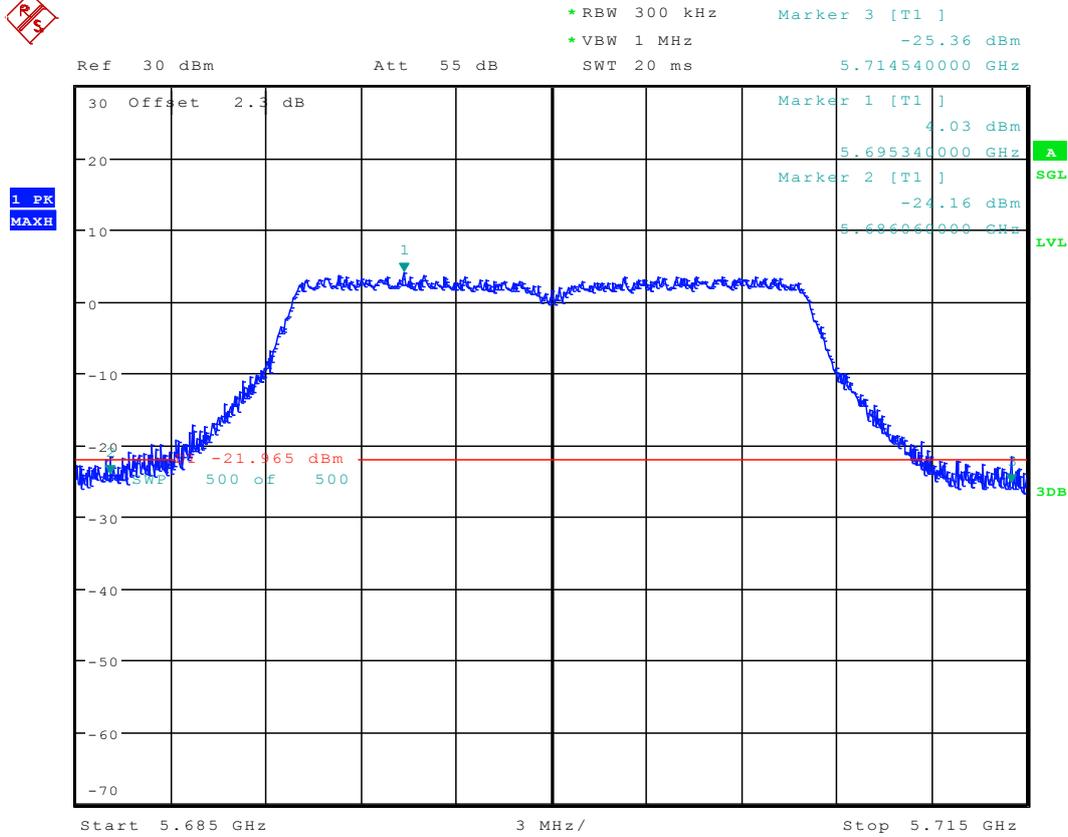
2.5 11A_100 Ant 1



Date: 9.OCT.2015 18:07:09

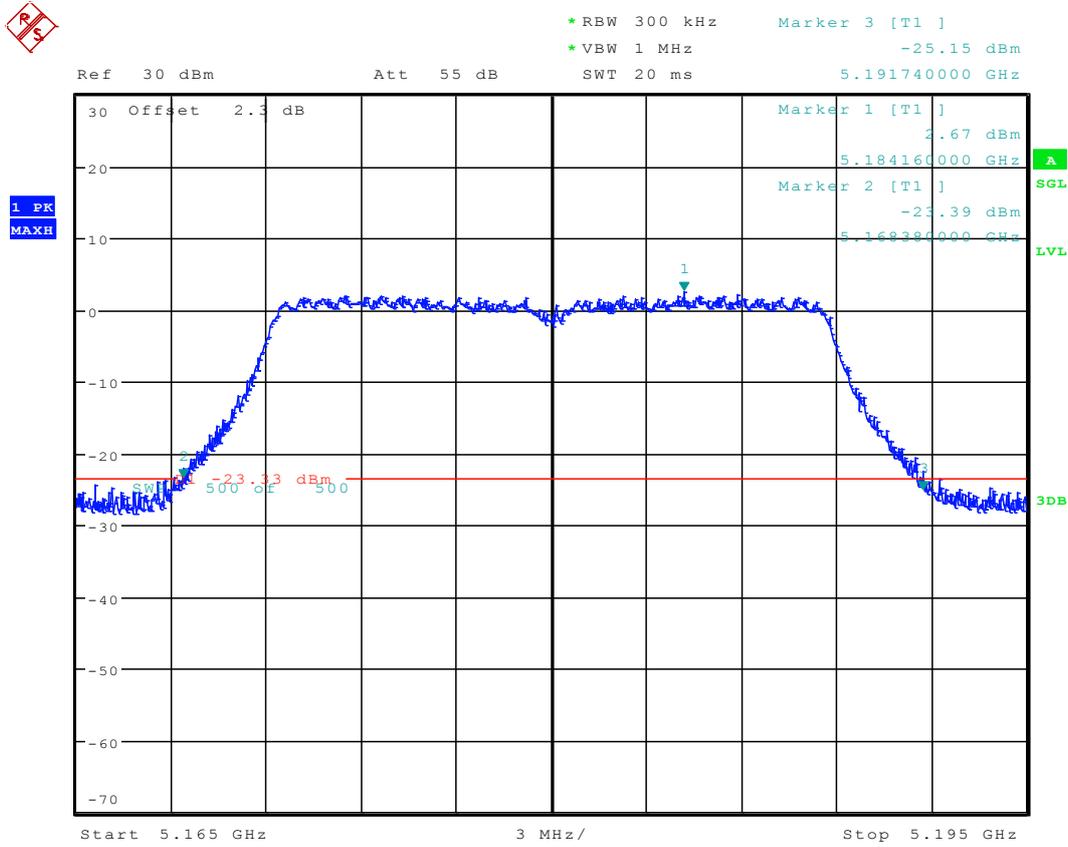


2.6 11A_140 Ant 1



Date: 9.OCT.2015 18:11:46

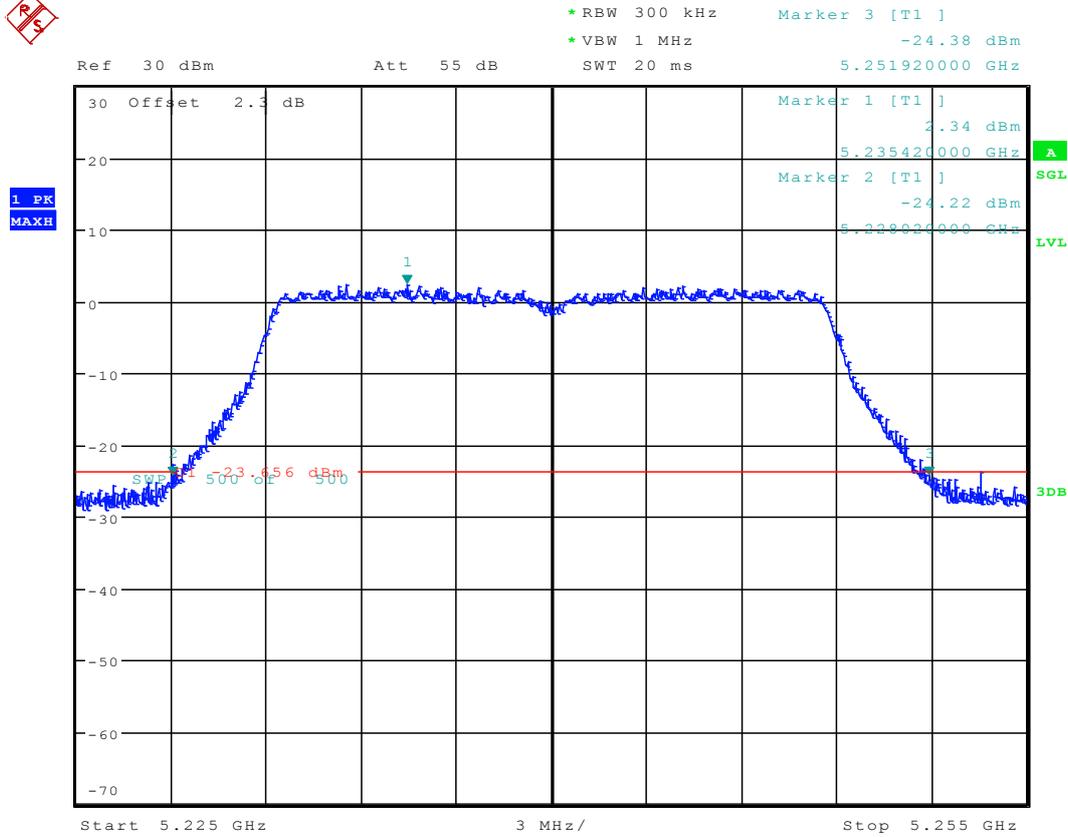
2.7 11N20_36 Ant 1



Date: 9.OCT.2015 17:20:20



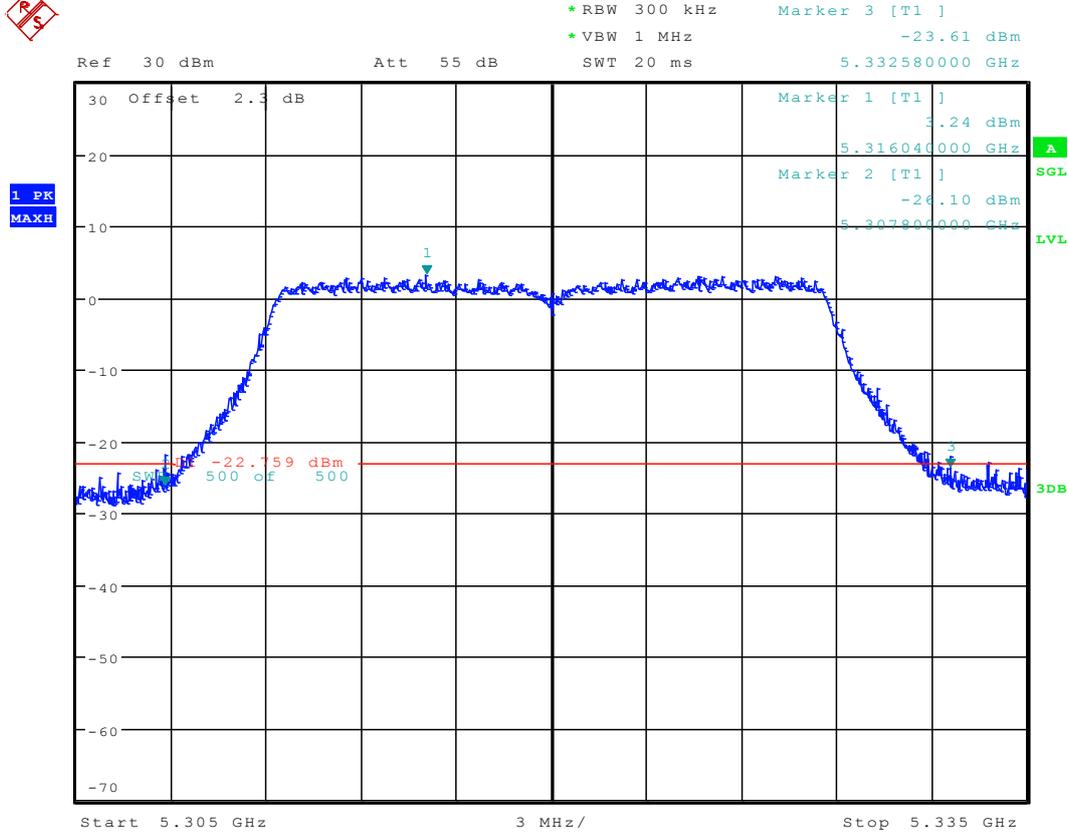
2.8 11N20_48 Ant 1



Date: 9.OCT.2015 17:25:05



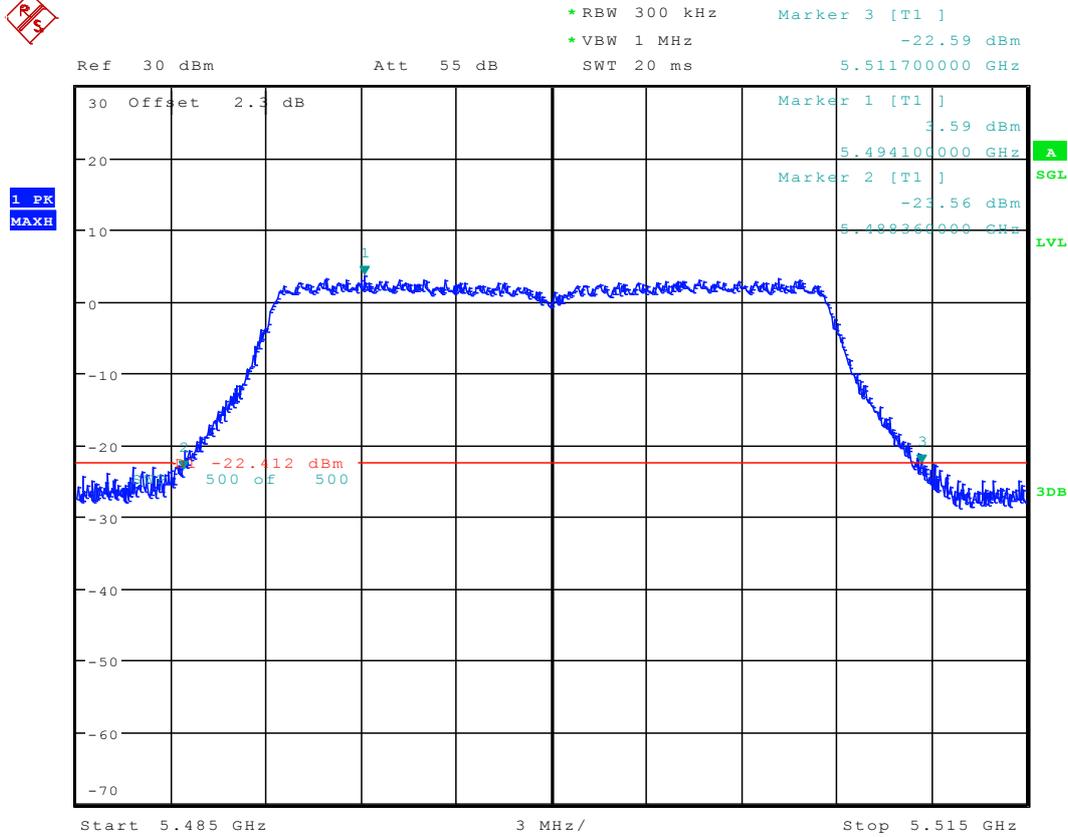
2.1011N20_64 Ant 1



Date: 9.OCT.2015 17:47:27



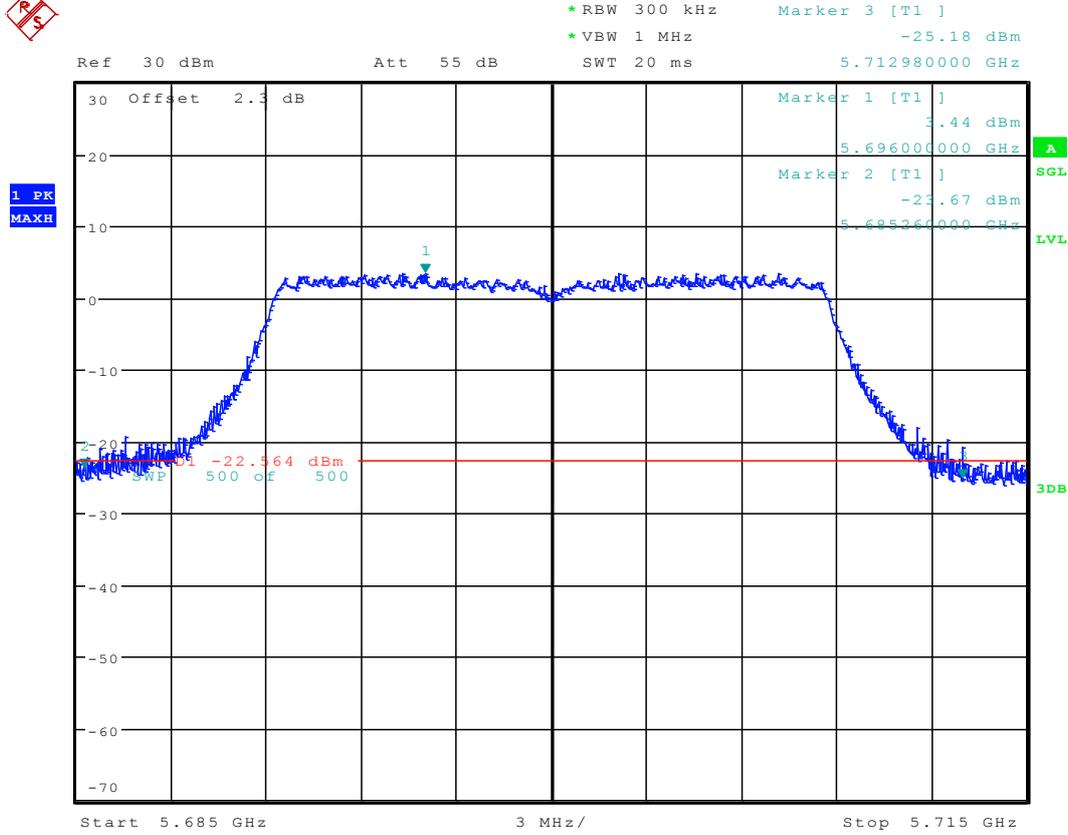
2.1111N20_100 Ant 1



Date: 9.OCT.2015 18:29:15



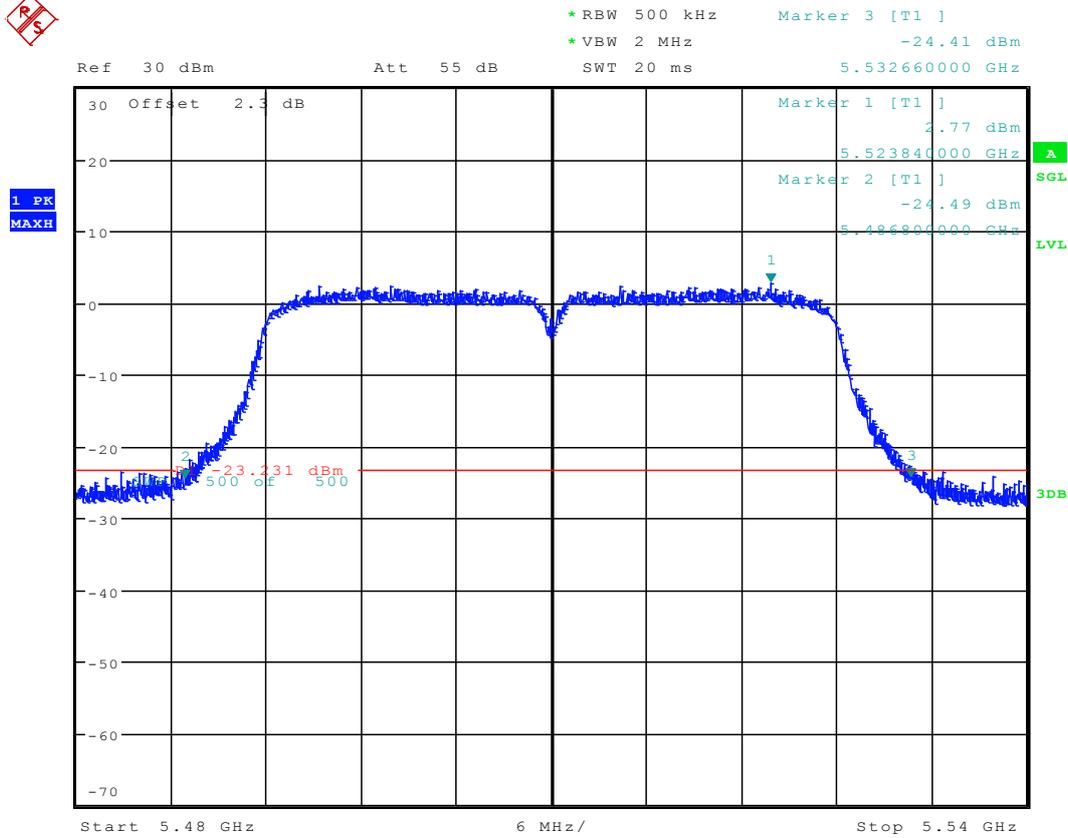
2.1211N20_140 Ant 1



Date: 9.OCT.2015 18:35:49



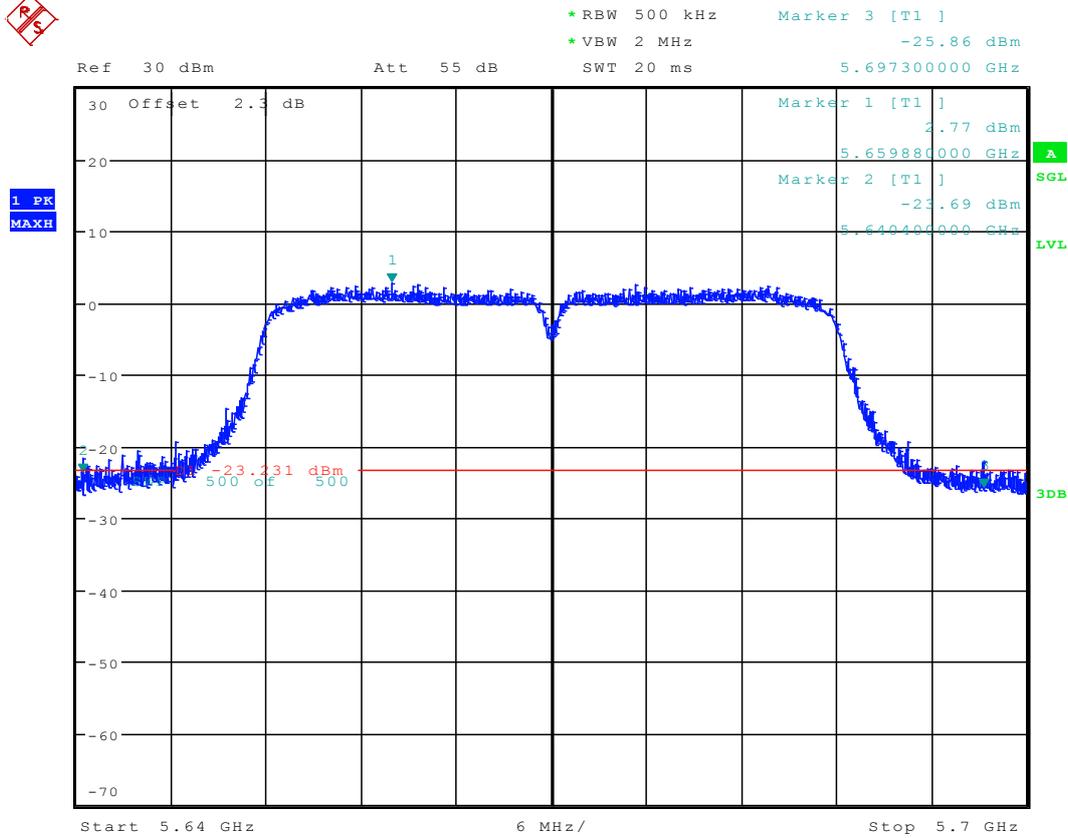
2.1711N40_102 Ant 1



Date: 9.OCT.2015 18:40:54



2.1811N40_134 Ant 1



Date: 9.OCT.2015 18:46:22

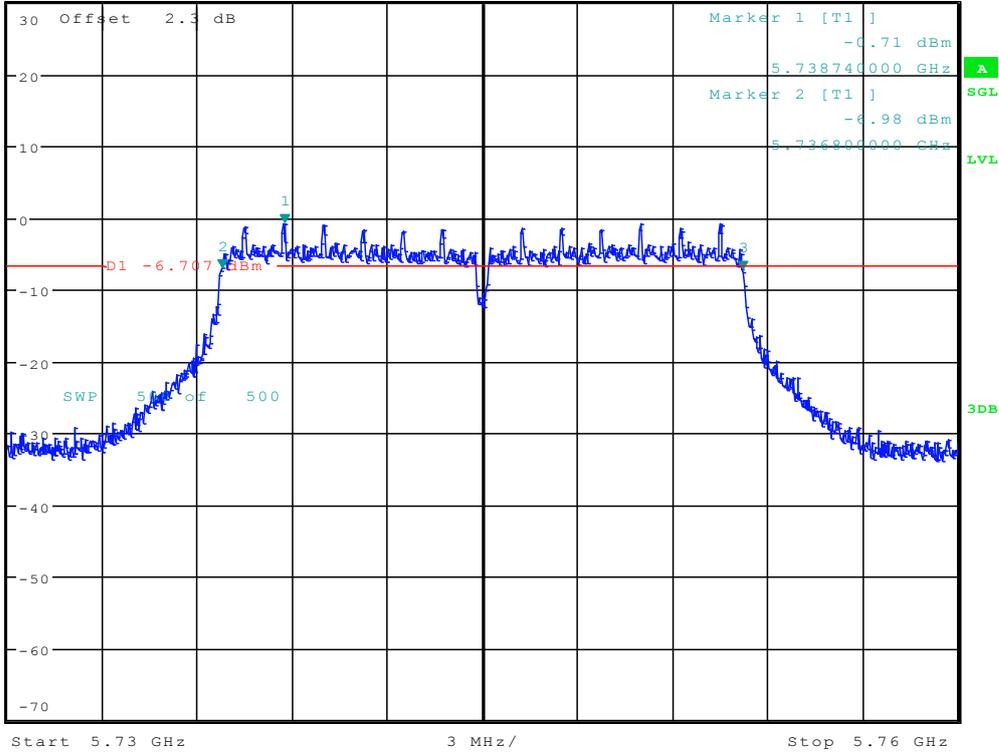


2.1911A_149 Ant 1



* RBW 100 kHz Marker 3 [T1]
 * VBW 300 kHz -7.30 dBm
 Ref 30 dBm Att 55 dB SWT 20 ms 5.75320000 GHz

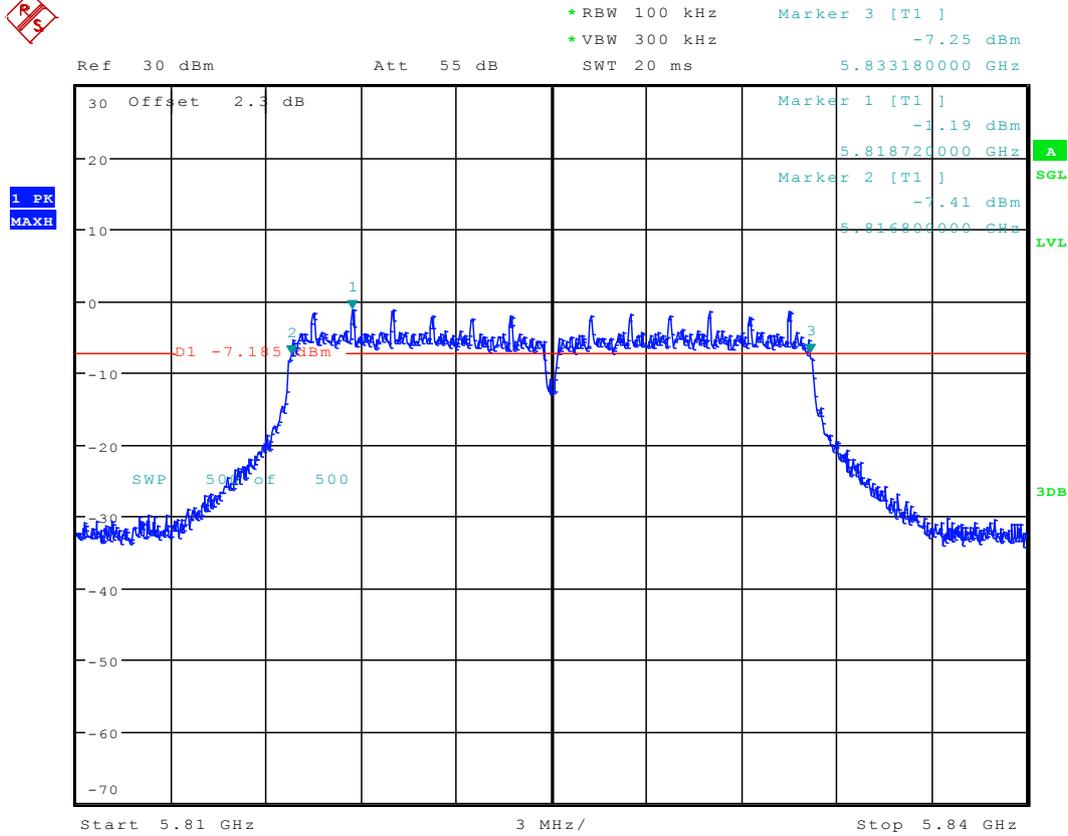
1 PK
MAXH



Date: 9.OCT.2015 18:54:03



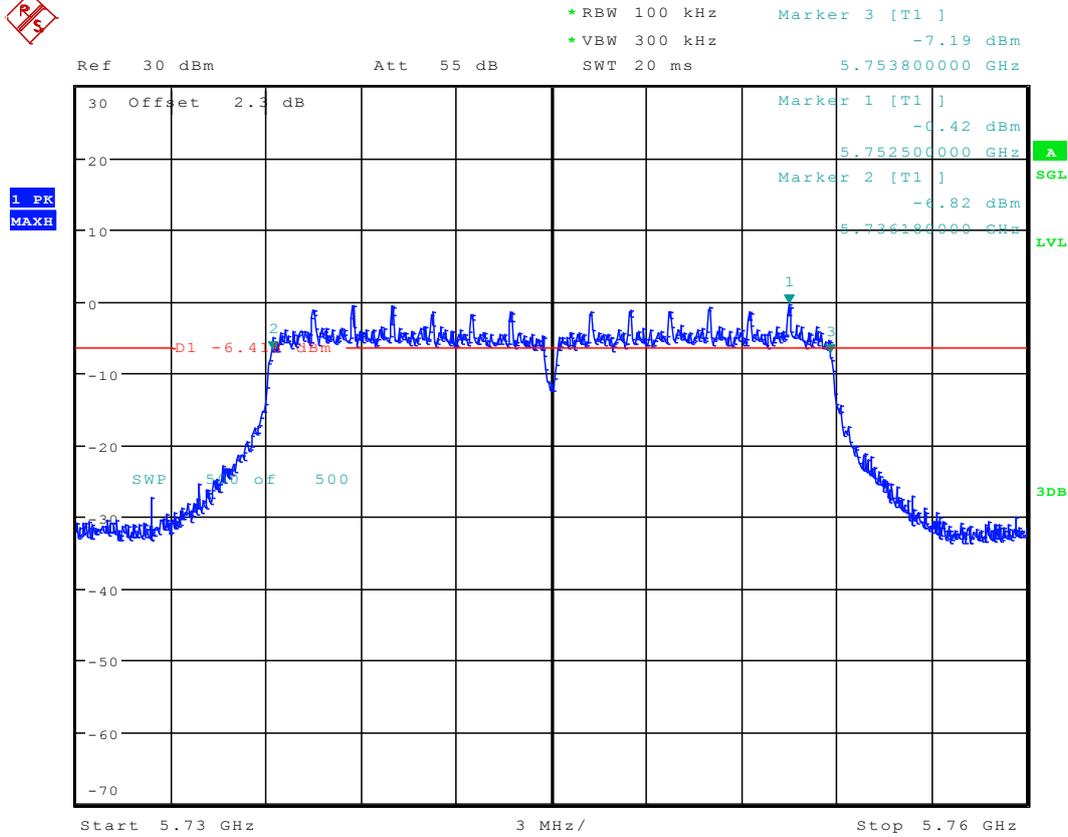
2.2011A_165 Ant 1



Date: 9.OCT.2015 19:00:38



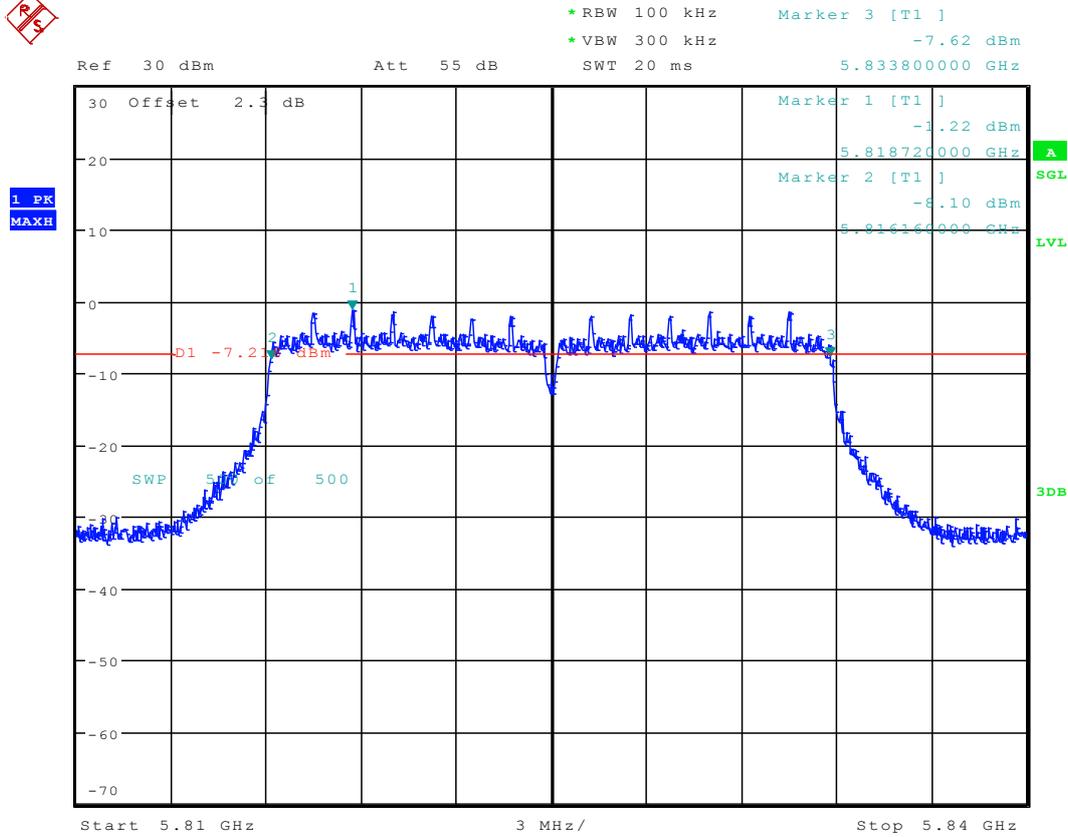
2.2111N20_149 Ant 1



Date: 9.OCT.2015 19:06:31



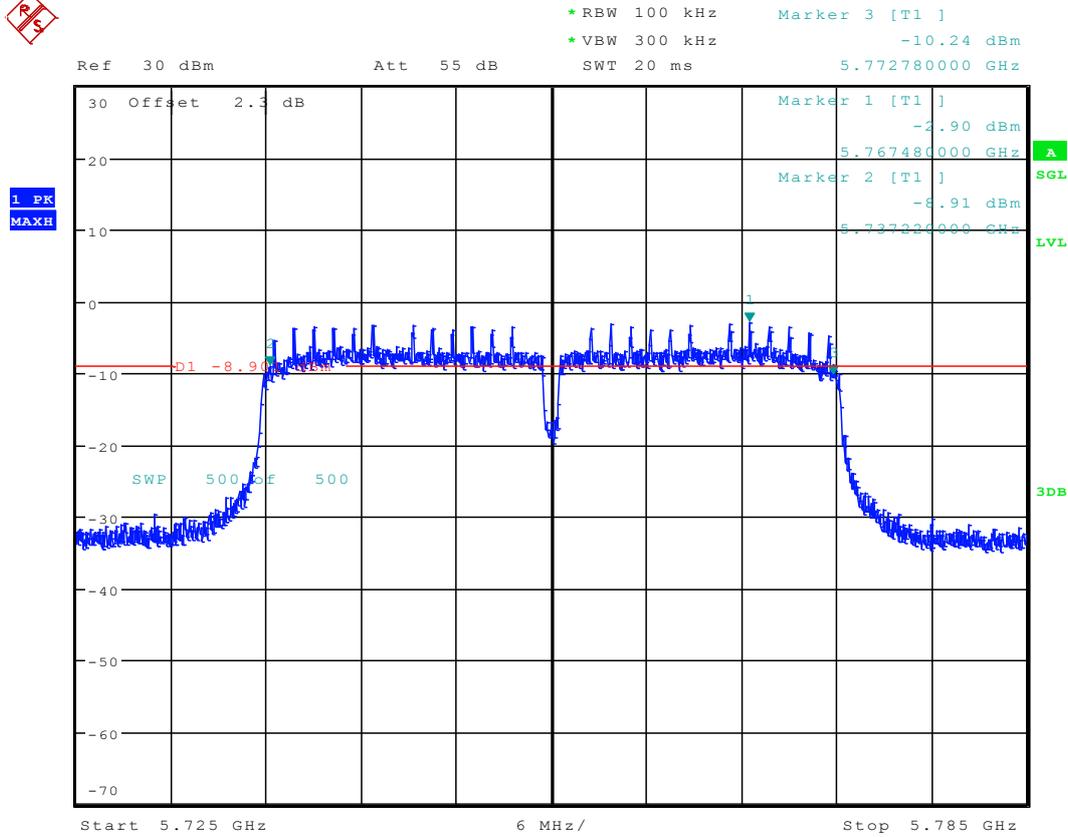
2.2211N20_165 Ant 1



Date: 9.OCT.2015 19:12:02



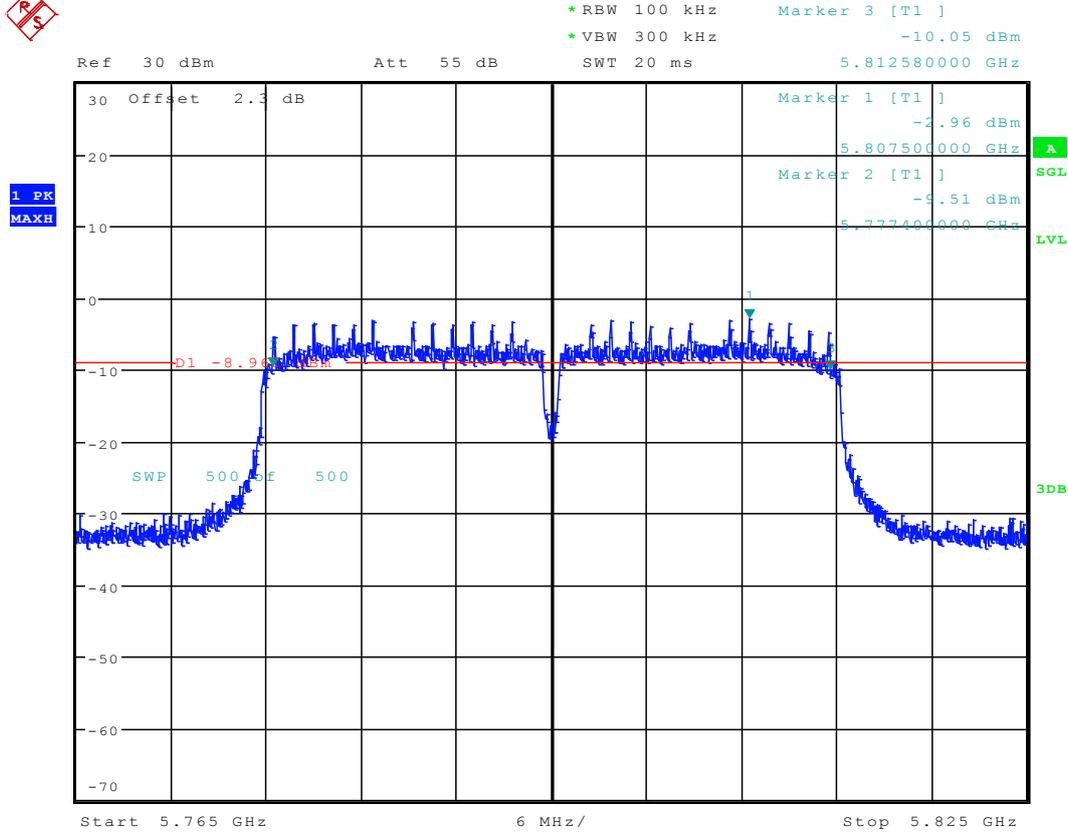
2.2311N40_151 Ant 1



Date: 9.OCT.2015 19:18:08



2.2411N40_159 Ant 1



Date: 9.OCT.2015 19:23:45



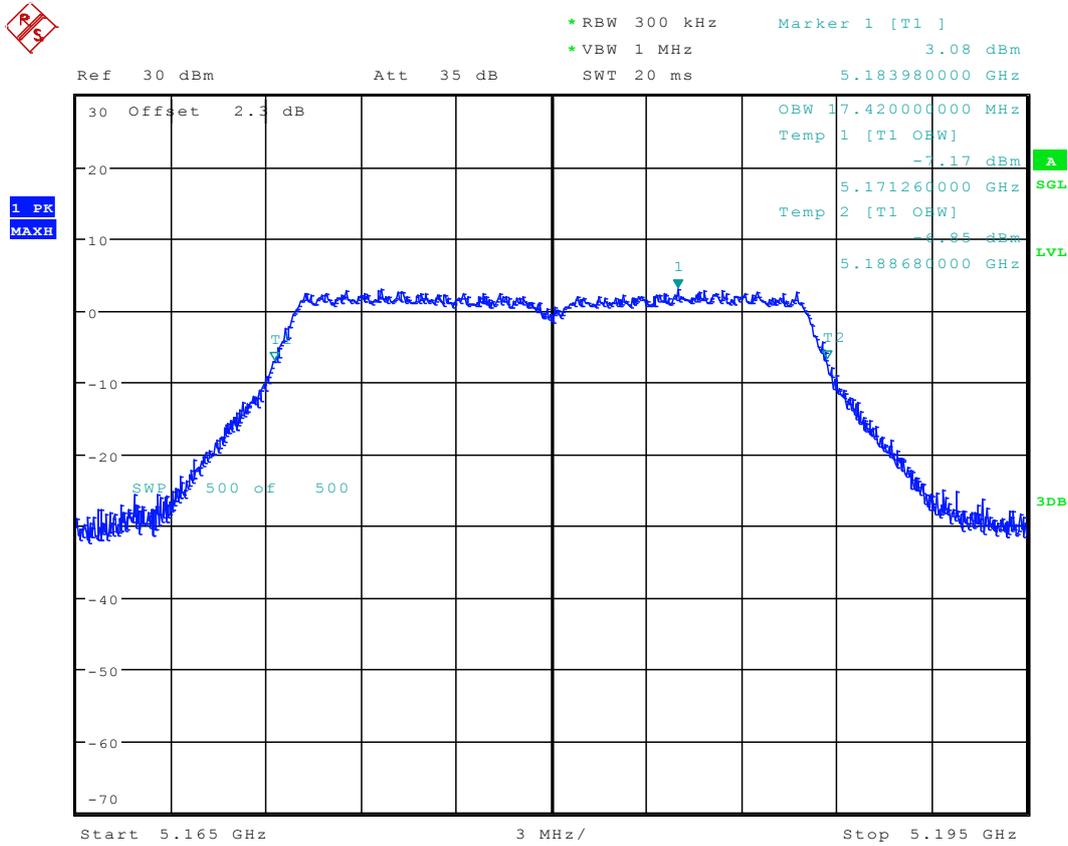
3 (OBW)Result Table

Test Mode	Test Channel	Frequency[M Hz]	Ant	OBW [MHz]	Verdict
11A	36	5180	Ant 1	17.42	pass
11A	48	5240	Ant 1	17.4	pass
11A	52	5260	Ant 1	17.4	pass
11A	64	5320	Ant 1	17.4	pass
11A	100	5500	Ant 1	17.38	pass
11A	140	5700	Ant 1	17.48	pass
11A	149	5745	Ant 1	17.42	pass
11A	165	5825	Ant 1	17.38	pass
11N20	36	5180	Ant 1	18.32	pass
11N20	48	5240	Ant 1	18.3	pass
11N20	52	5260	Ant 1	18.28	pass
11N20	64	5320	Ant 1	18.28	pass
11N20	100	5500	Ant 1	18.3	pass
11N20	140	5700	Ant 1	18.36	pass
11N20	149	5745	Ant 1	18.32	pass
11N20	165	5825	Ant 1	18.3	pass
11N40	38	5190	Ant 1	36.5	pass
11N40	46	5230	Ant 1	36.46	pass
11N40	54	5270	Ant 1	36.5	pass
11N40	62	5310	Ant 1	36.48	pass
11N40	102	5510	Ant 1	36.48	pass
11N40	134	5670	Ant 1	36.6	pass
11N40	151	5755	Ant 1	36.54	pass
11N40	159	5795	Ant 1	36.54	pass



4 Test Plot

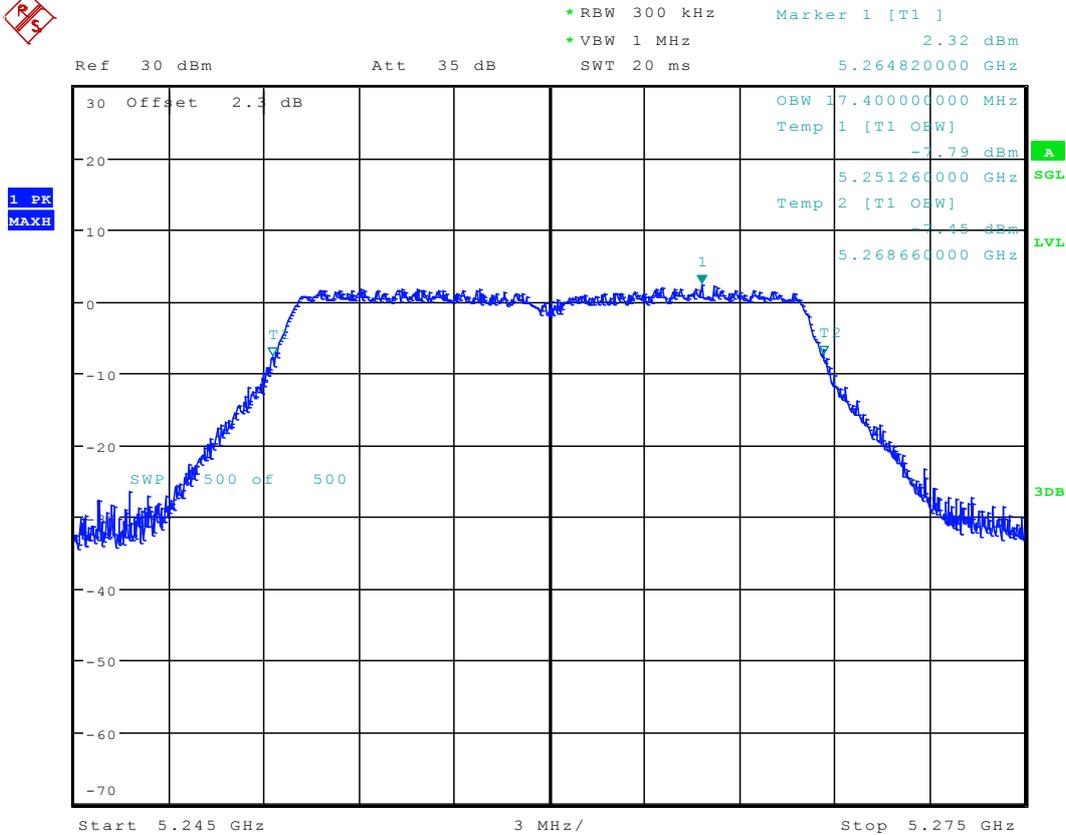
4.1 11A_36 Ant 1



Date: 9.OCT.2015 16:57:29



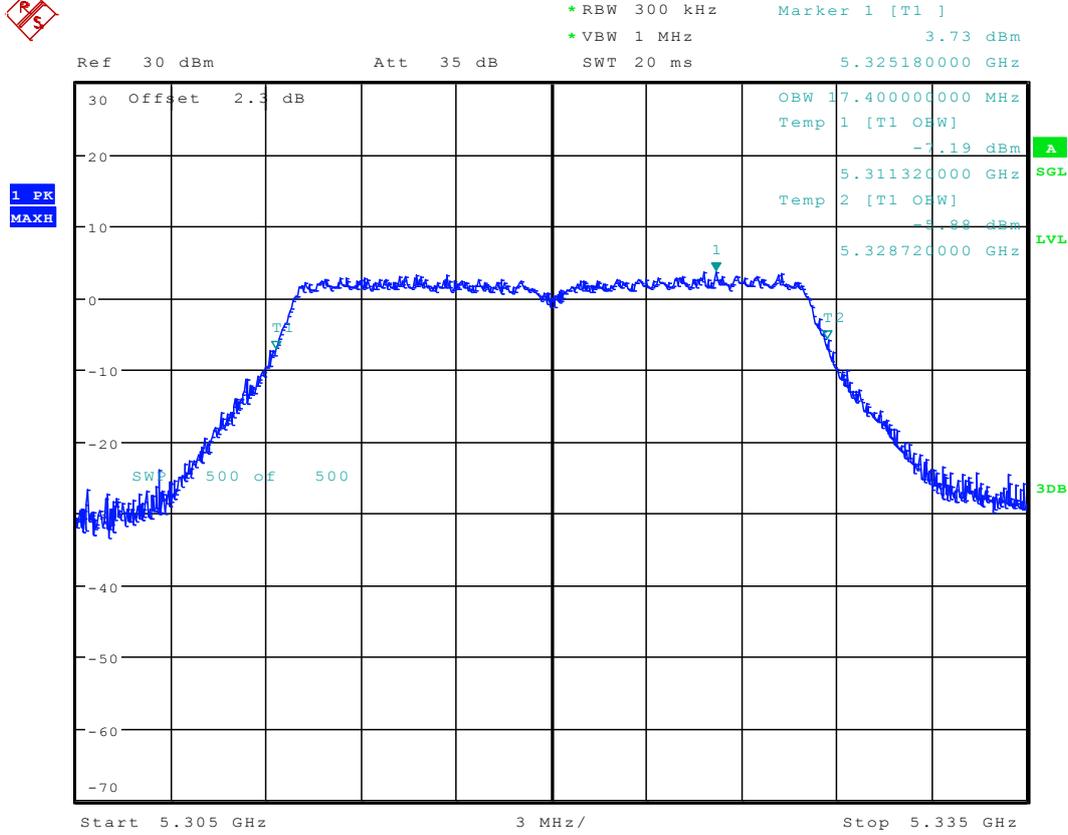
4.3 11A_52 Ant 1



Date: 9.OCT.2015 17:07:42



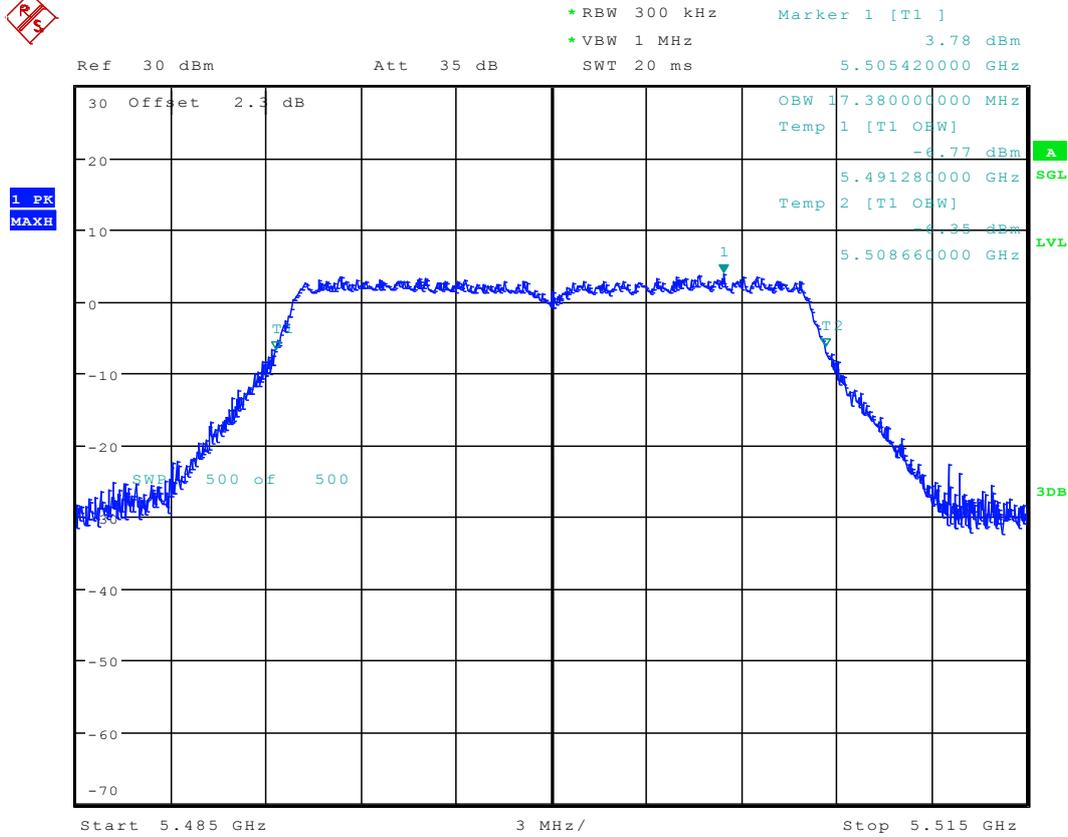
4.4 11A_64 Ant1



Date: 9.OCT.2015 17:15:12



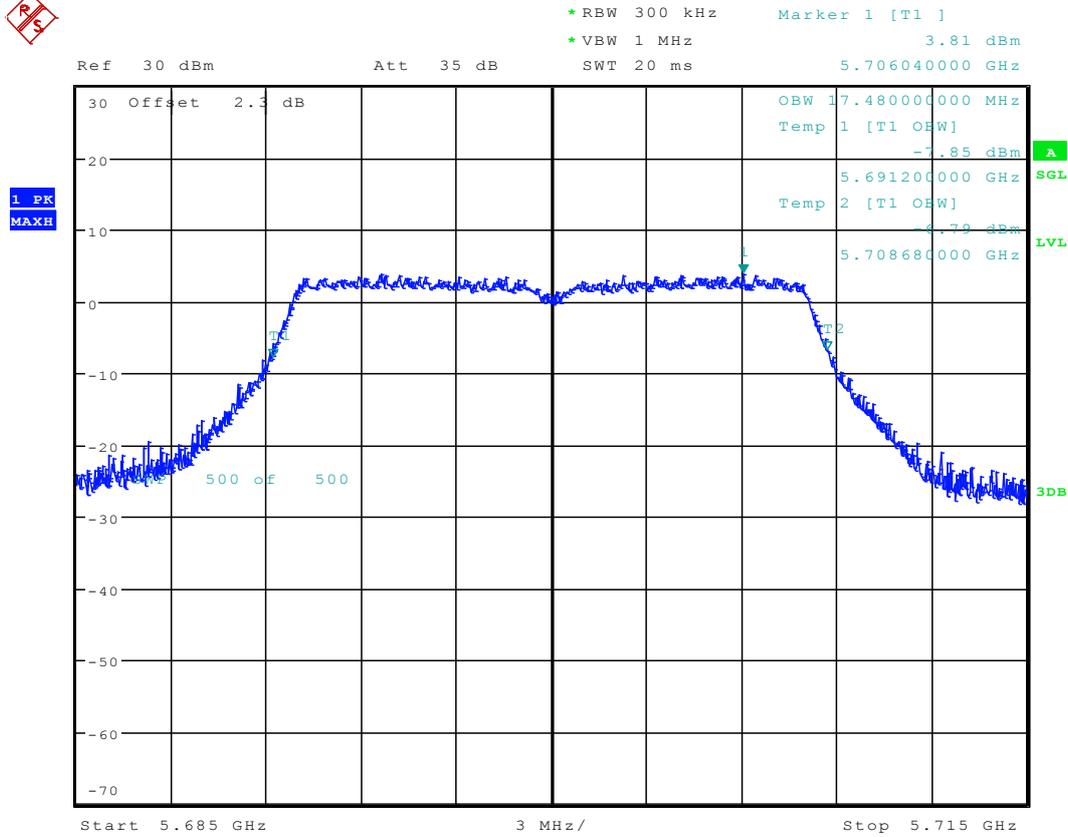
4.5 11A_100 Ant 1



Date: 9.OCT.2015 18:07:55



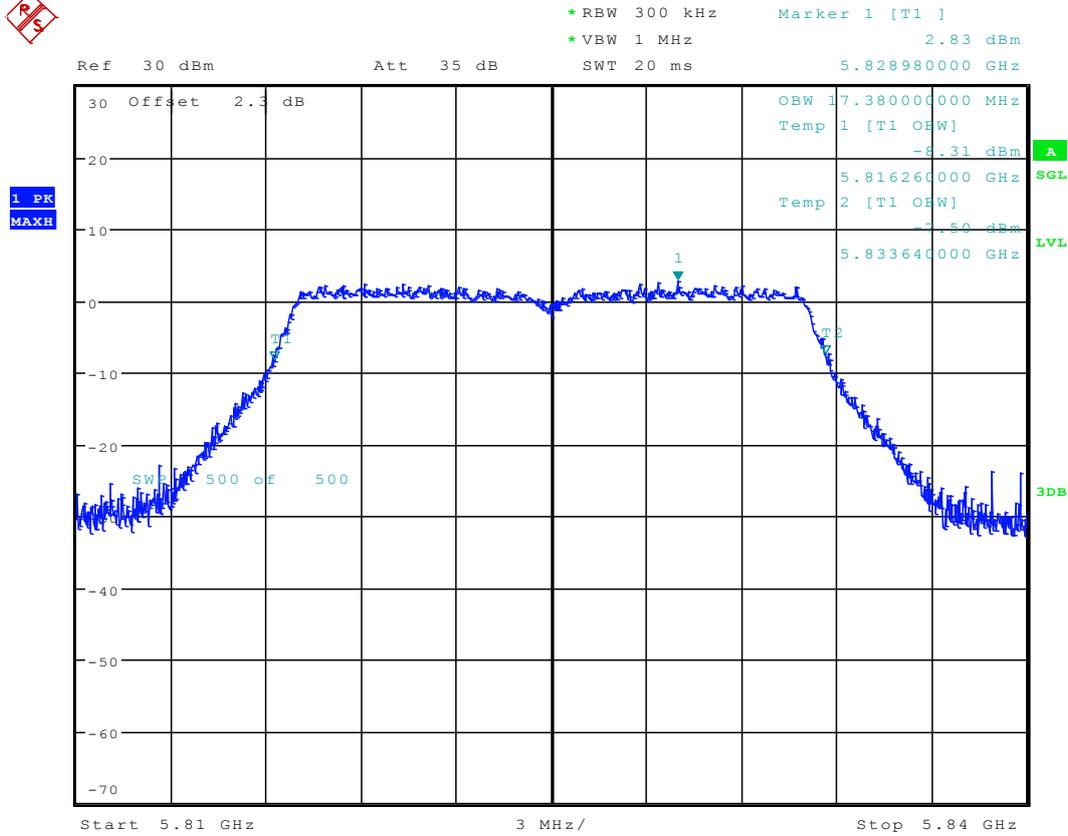
4.6 11A_140 Ant 1



Date: 9.OCT.2015 18:12:30



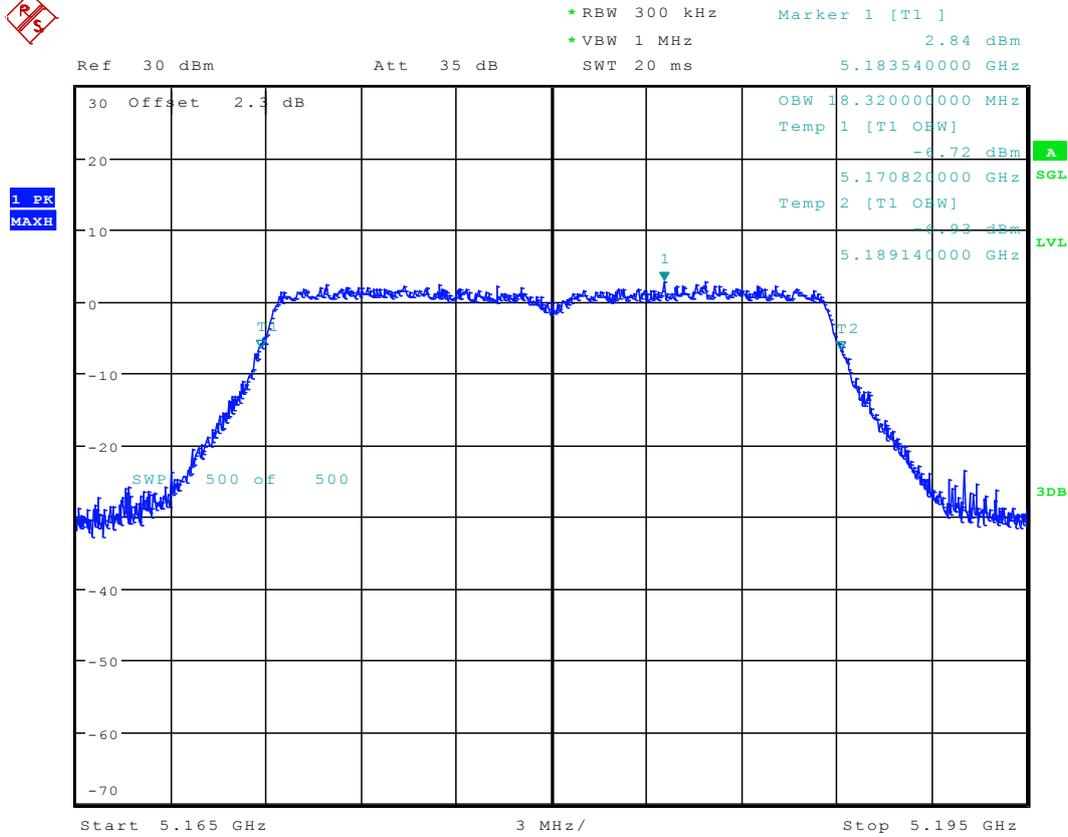
4.8 11A_165 Ant 1



Date: 9.OCT.2015 19:01:24



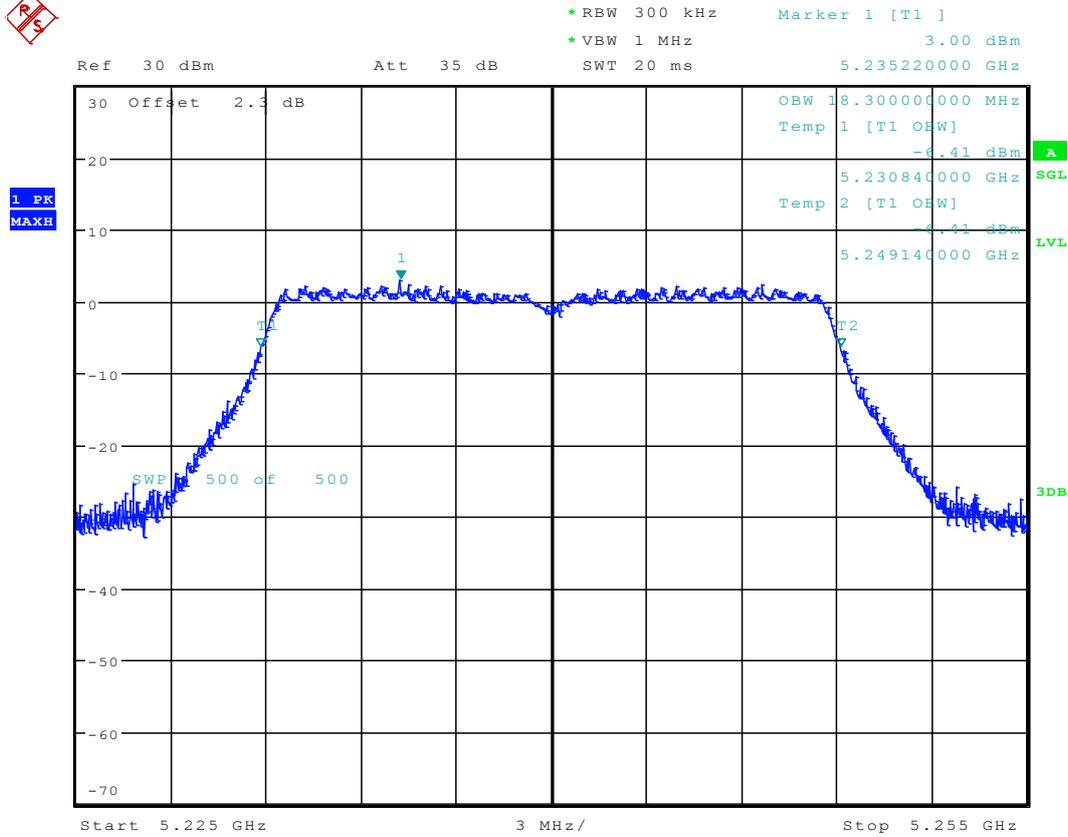
4.9 11N20_36 Ant 1



Date: 9.OCT.2015 17:21:07



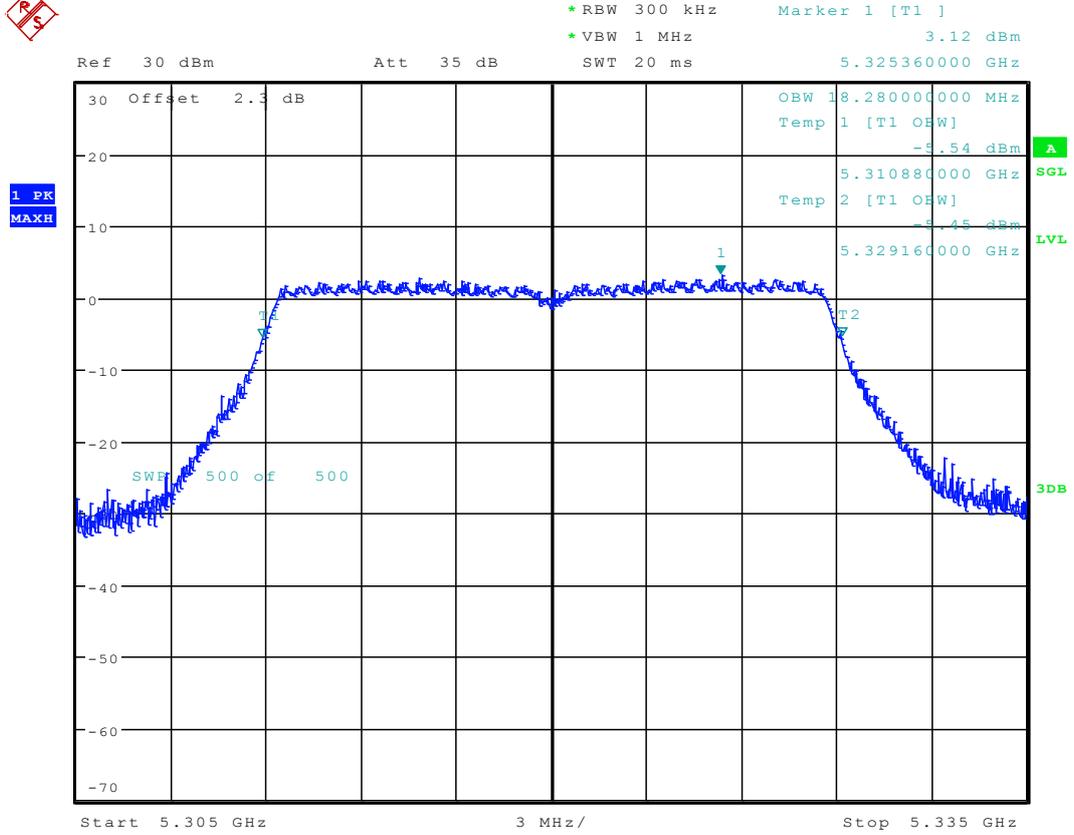
4.1011N20_48 Ant 1



Date: 9.OCT.2015 17:25:52

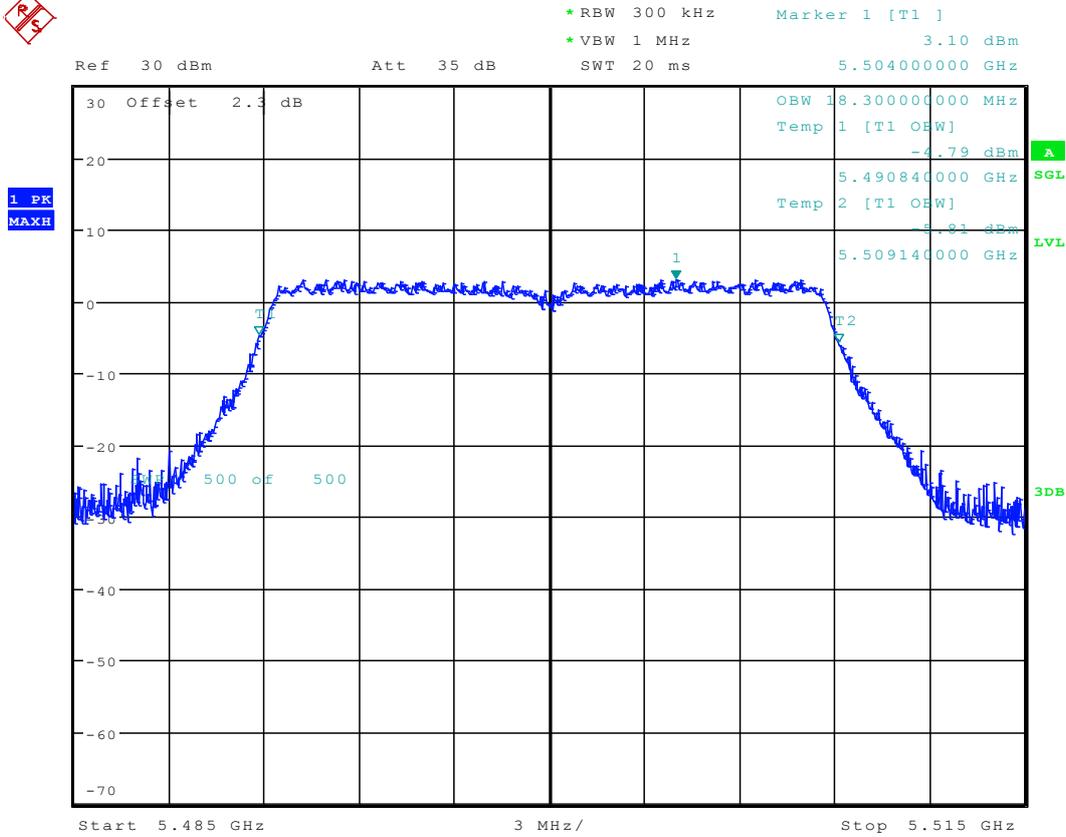


4.1211N20_64 Ant 1



Date: 9.OCT.2015 17:48:11

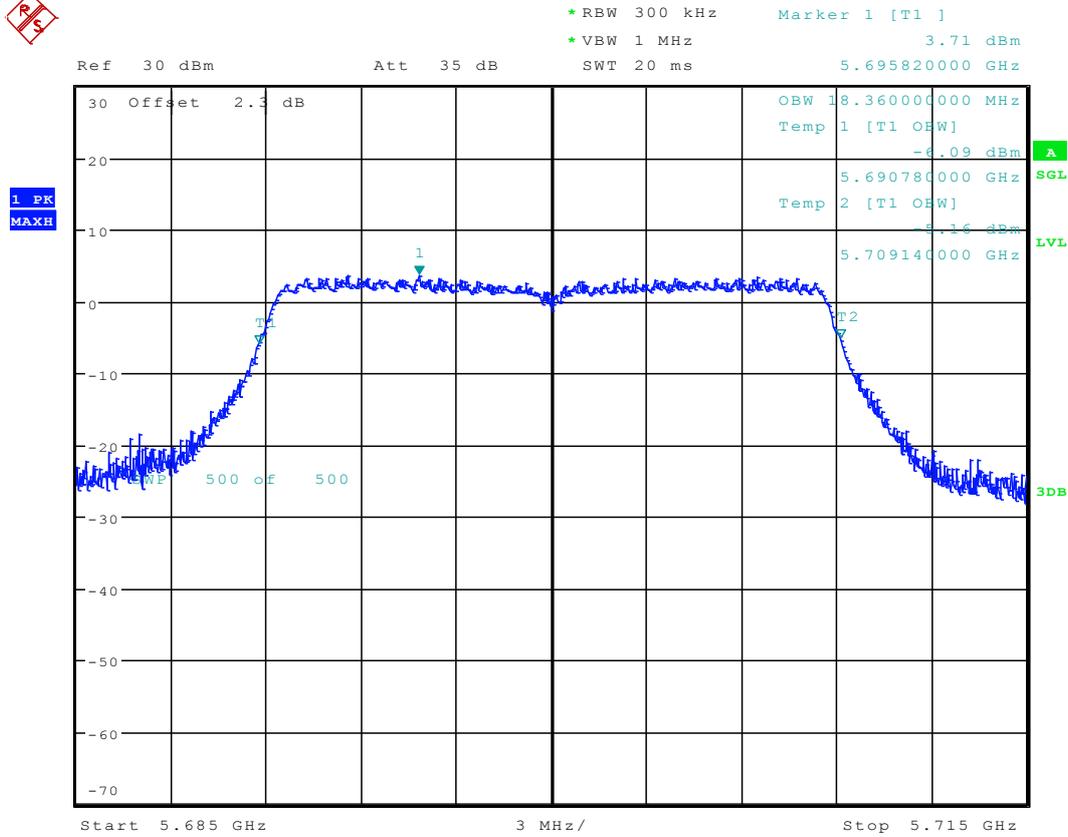
4.1311N20_100 Ant 1



Date: 9.OCT.2015 18:30:00



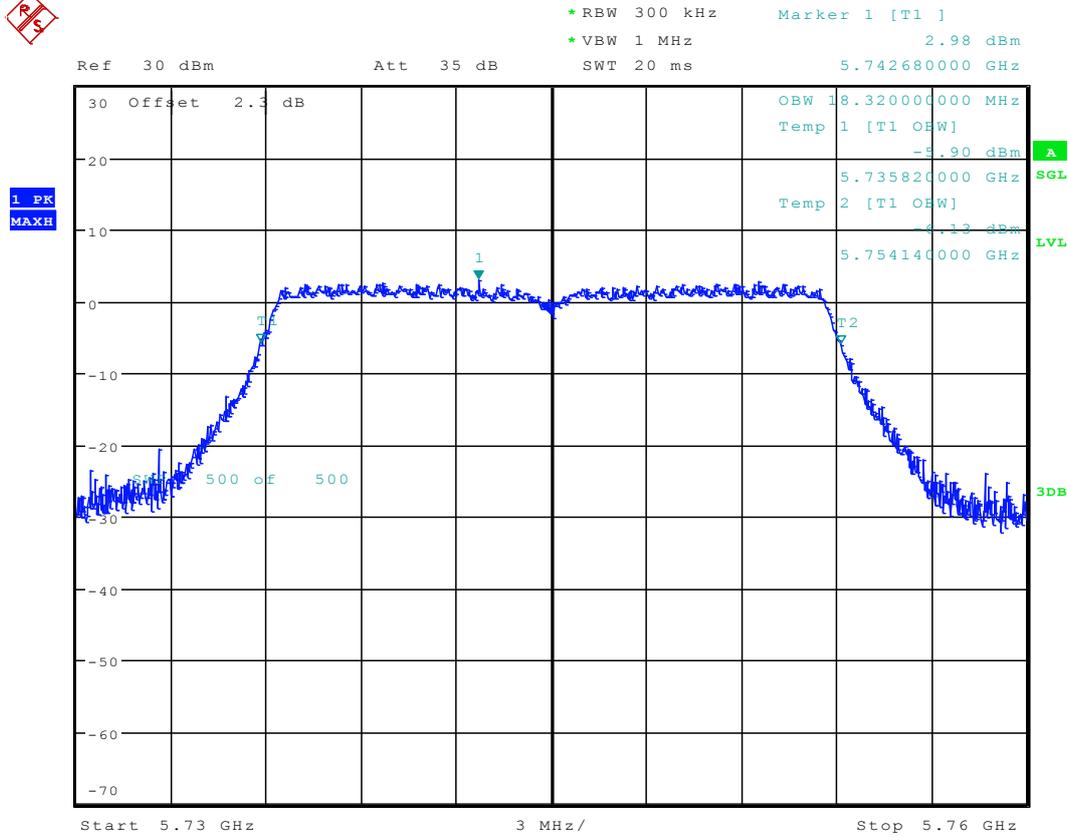
4.1411N20_140 Ant 1



Date: 9.OCT.2015 18:36:33



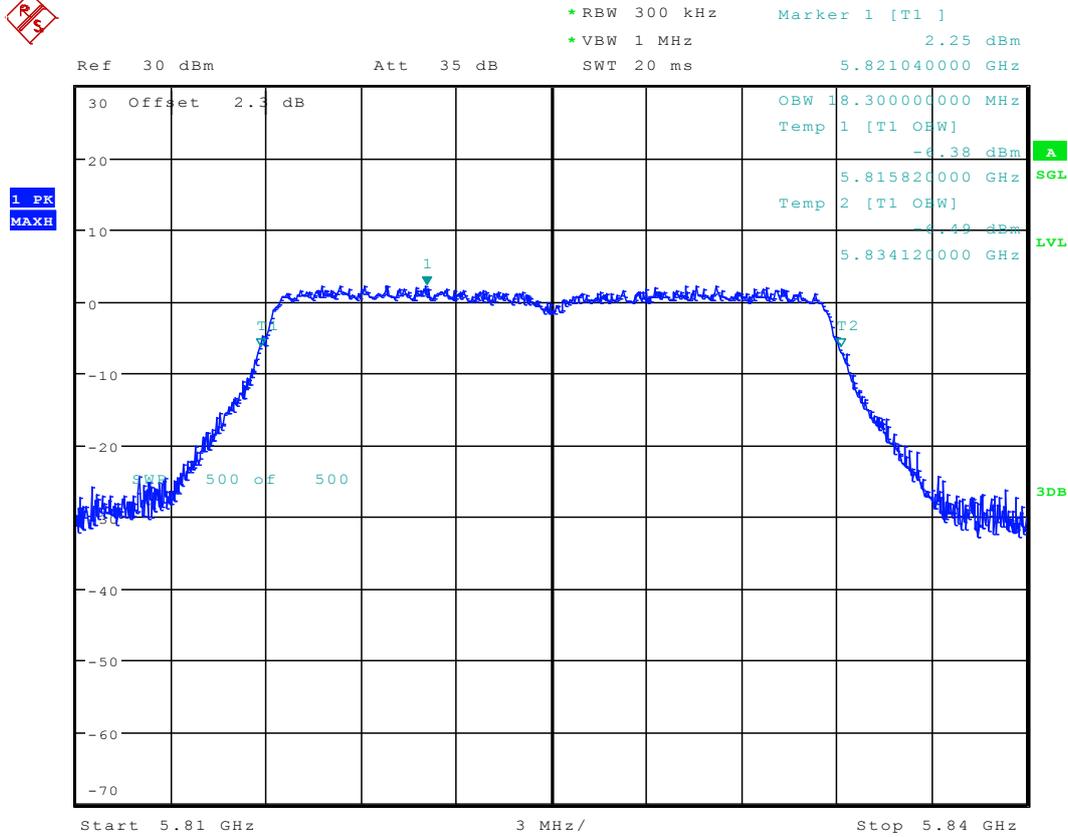
4.1511N20_149 Ant 1



Date: 9.OCT.2015 19:07:16



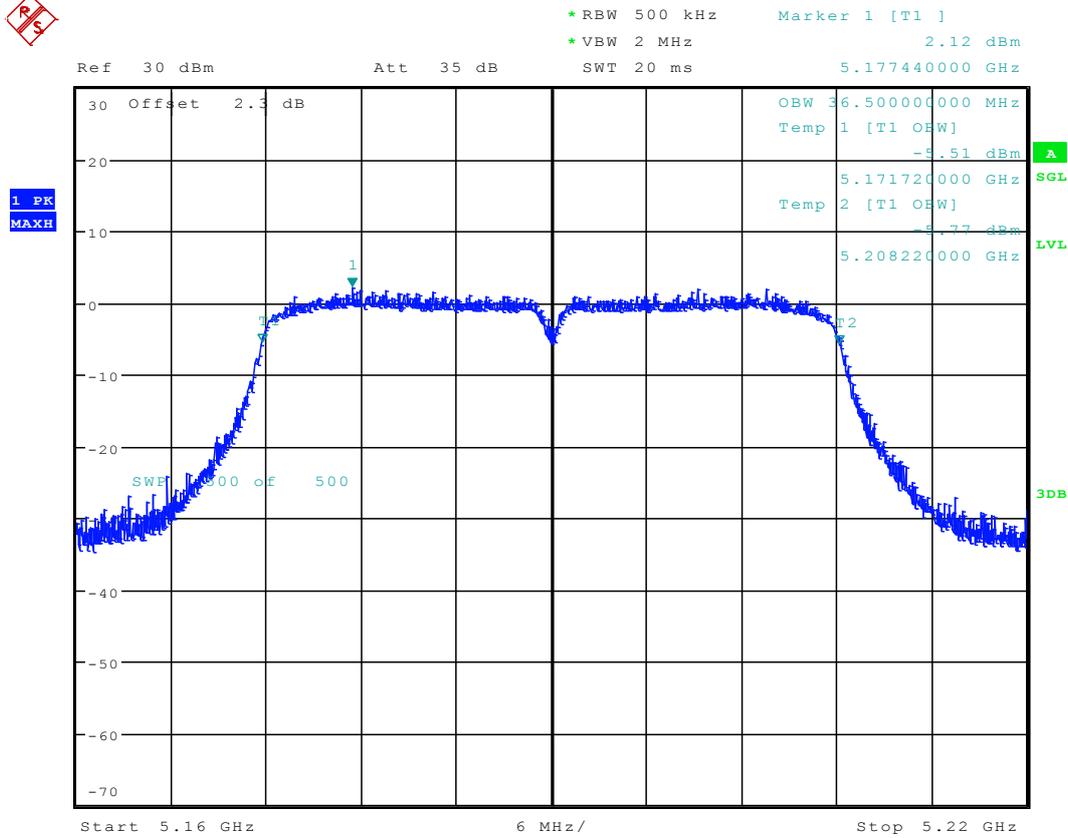
4.1611N20_165 Ant 1



Date: 9.OCT.2015 19:12:47



4.1711N40_38 Ant 1



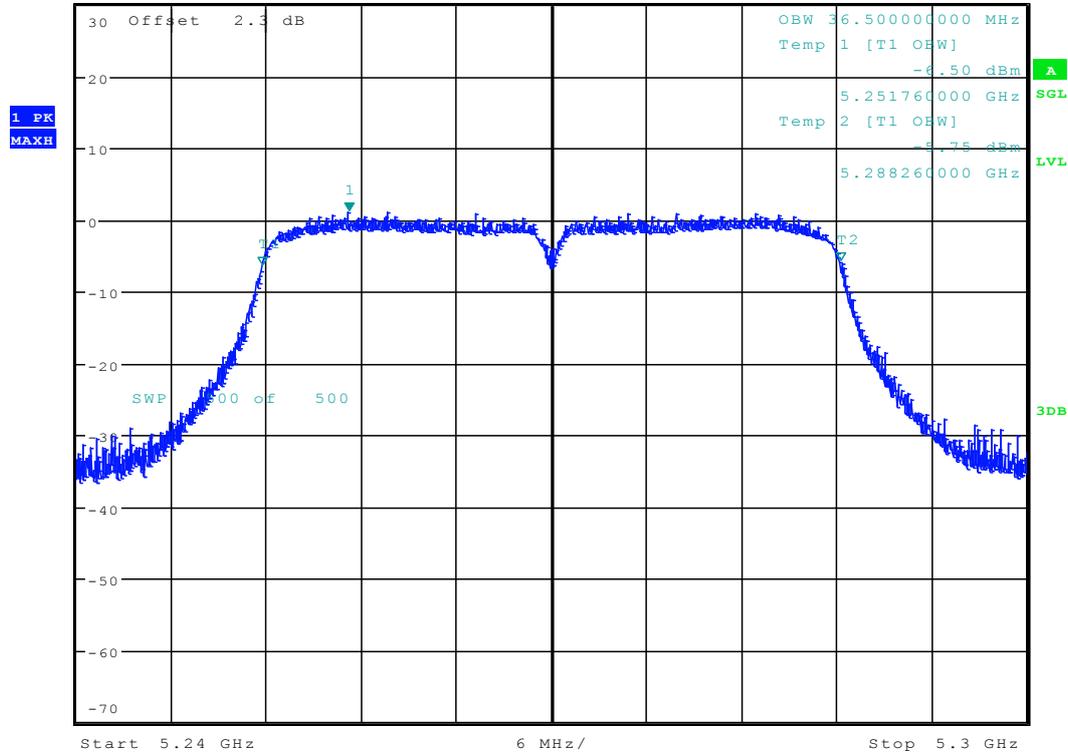
Date: 9.OCT.2015 17:31:58



4.1911N40_54 Ant 1



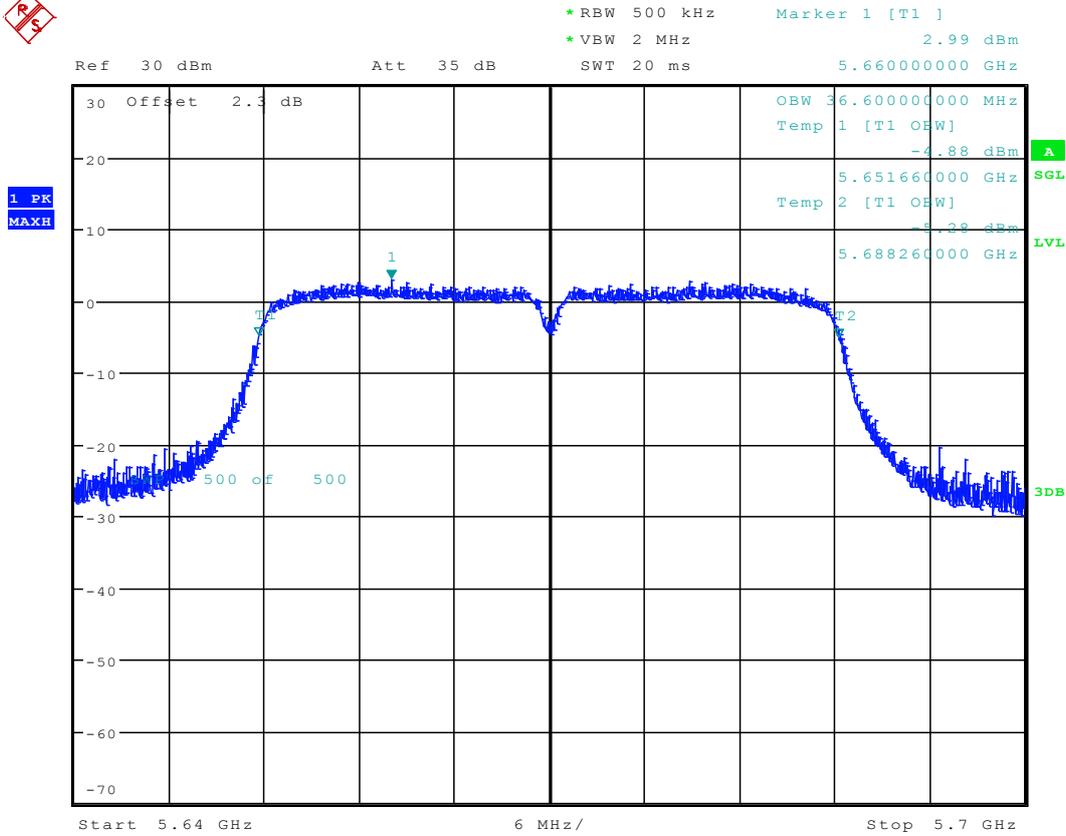
* RBW 500 kHz Marker 1 [T1]
 * VBW 2 MHz 1.17 dBm
 Ref 30 dBm Att 35 dB SWT 20 ms 5.257180000 GHz



Date: 9.OCT.2015 17:54:19



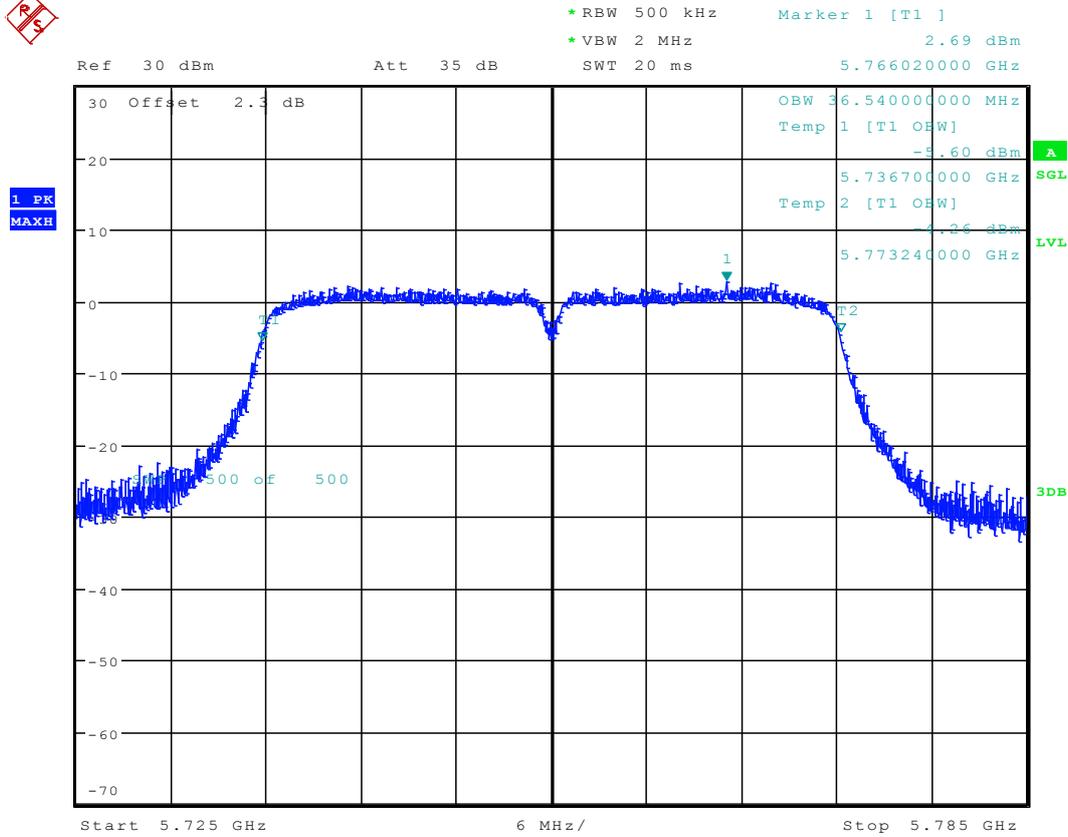
4.2211N40_134 Ant 1



Date: 9.OCT.2015 18:47:10



4.2311N40_151 Ant 1



Date: 9.OCT.2015 19:19:03



Appendix B: Maximum Conducted Output Power



5 Result Table

Test Mode	Test Channel	Frequency[M Hz]	Ant	Meas. Level (Cond.) [dBm]	Verdict
11A	36	5180	Ant 1	9.25	pass
11A	48	5240	Ant 1	9.37	pass
11A	52	5260	Ant 1	8.67	pass
11A	64	5320	Ant 1	9.83	pass
11A	100	5500	Ant 1	10.38	pass
11A	140	5700	Ant 1	10.29	pass
11A	149	5745	Ant 1	9.6	pass
11A	165	5825	Ant 1	9.26	pass
11N20	36	5180	Ant 1	9.6	pass
11N20	48	5240	Ant 1	9.19	pass
11N20	52	5260	Ant 1	9.03	pass
11N20	64	5320	Ant 1	10.11	pass
11N20	100	5500	Ant 1	10.28	pass
11N20	140	5700	Ant 1	10.32	pass
11N20	149	5745	Ant 1	9.69	pass
11N20	165	5825	Ant 1	9.23	pass
11N40	38	5190	Ant 1	8.85	pass
11N40	46	5230	Ant 1	8.78	pass
11N40	54	5270	Ant 1	8.26	pass
11N40	62	5310	Ant 1	9.06	pass
11N40	102	5510	Ant 1	9.75	pass
11N40	134	5670	Ant 1	10.05	pass
11N40	151	5755	Ant 1	9.69	pass
11N40	159	5795	Ant 1	9.89	pass



Appendix C: Duty Cycle

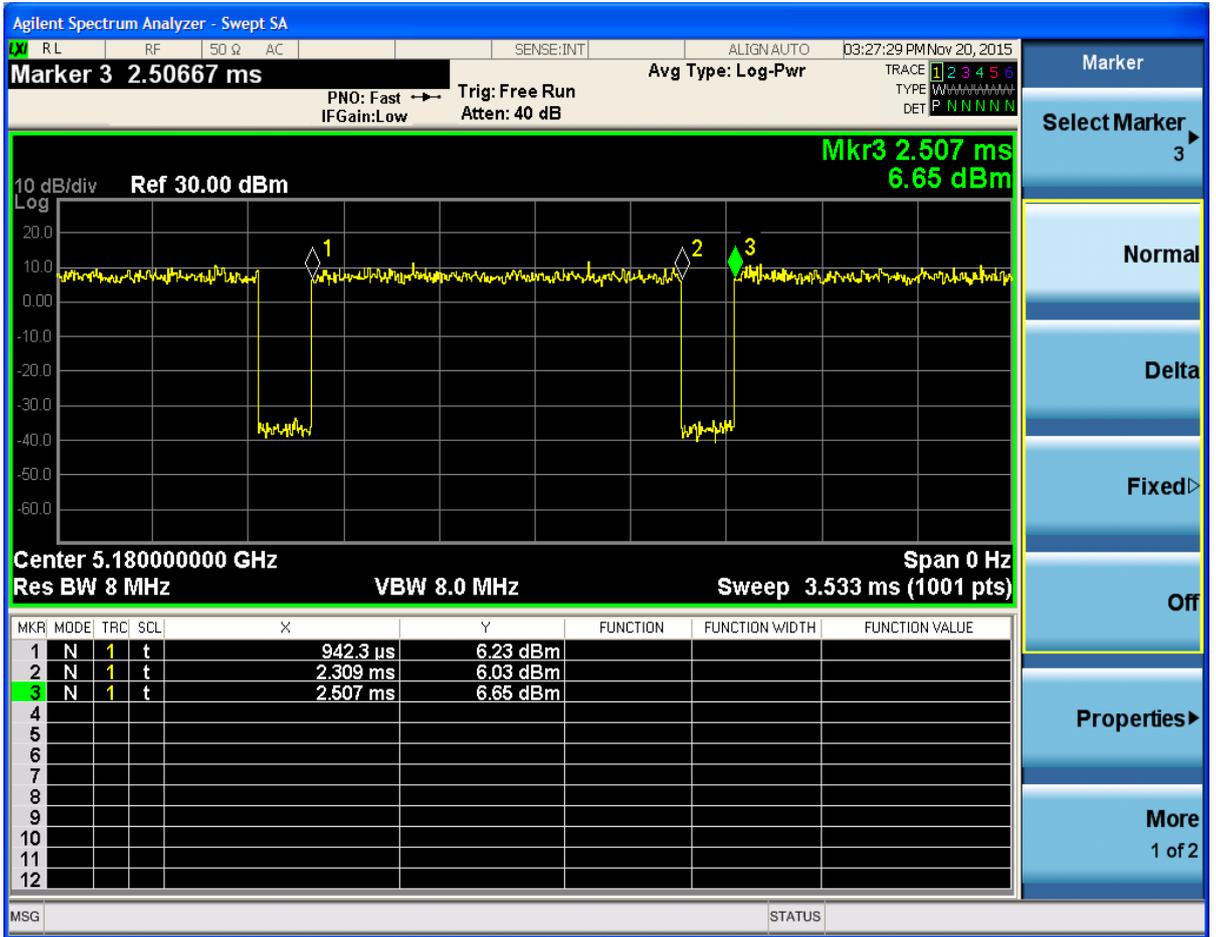
**5.1.1 Part I - Test Results**

Test Mode	Test Channel	Frequency[MHz]	Ant	Duty cycle [%]
11A	36	5180	Ant 1	87
11A	52	5260	Ant 1	87
11A	100	5500	Ant 1	87
11A	149	5745	Ant 1	87
11N20	36	5180	Ant 1	87
11N20	52	5260	Ant 1	87
11N20	100	5500	Ant 1	87
11N20	149	5745	Ant 1	87
11N40	38	5190	Ant 1	76
11N40	54	5270	Ant 1	76
11N40	62	5310	Ant 1	76
11N40	151	5755	Ant 1	76



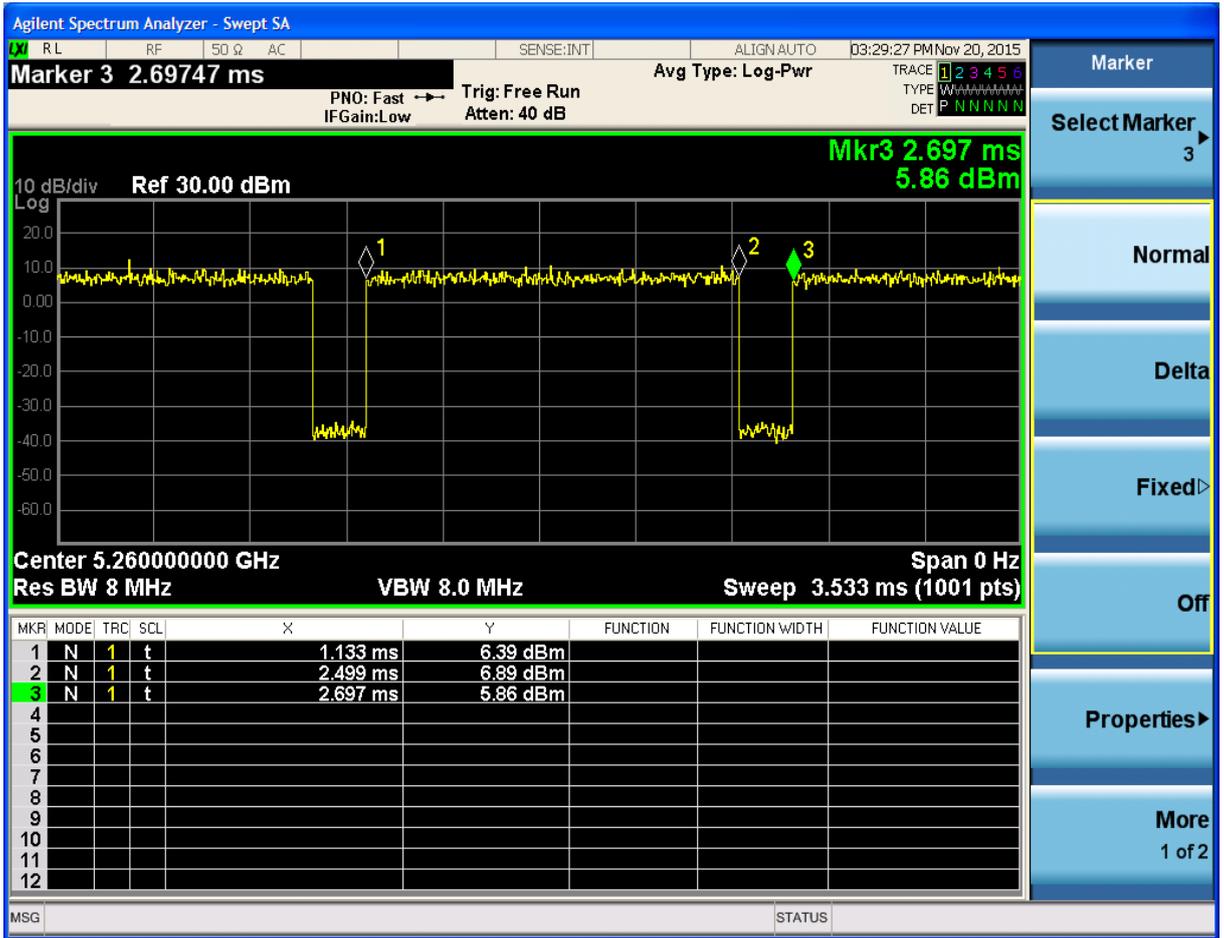
Part II - Test Plots

5.1.1.1 11A_5180_ANT1



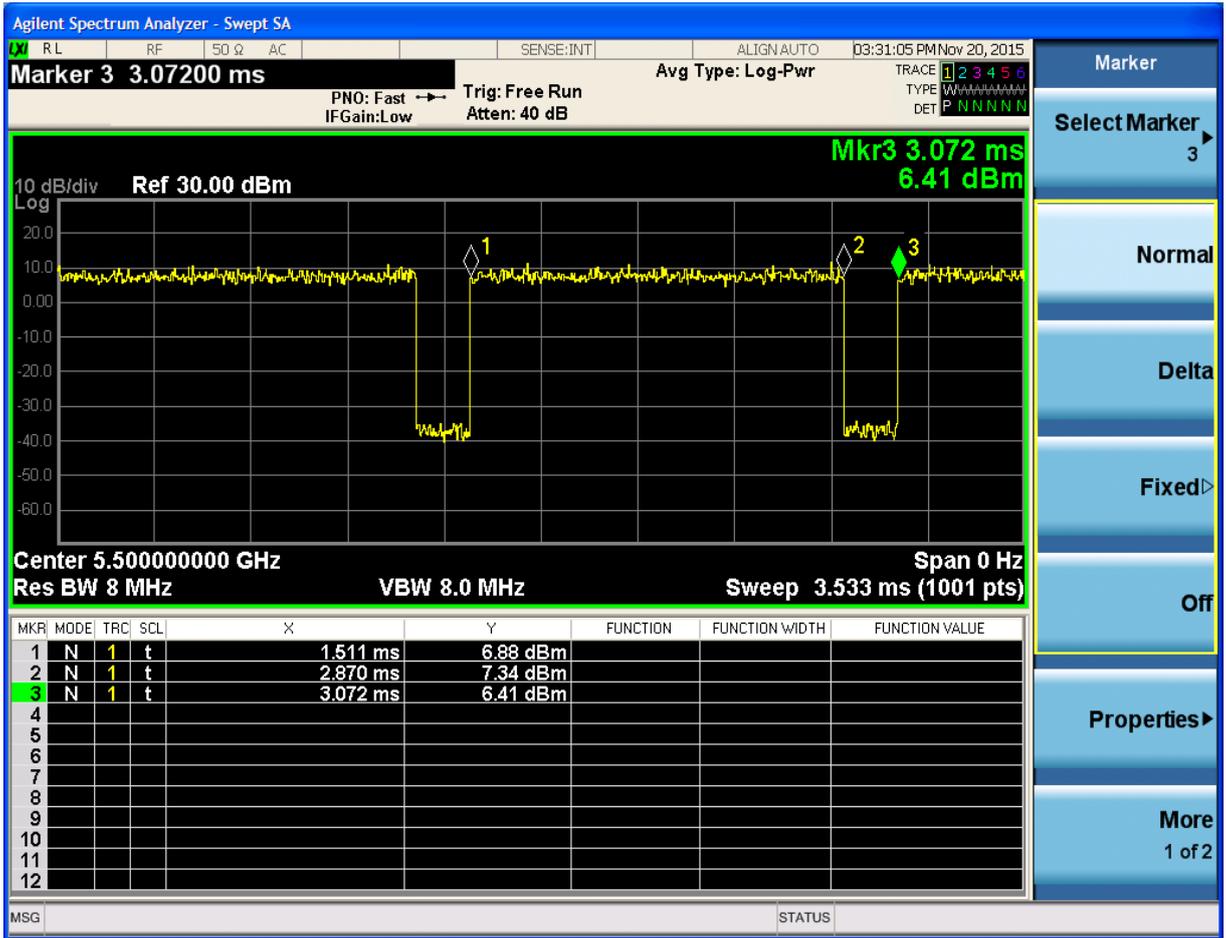


5.1.1.2 11A_5260_ANT1



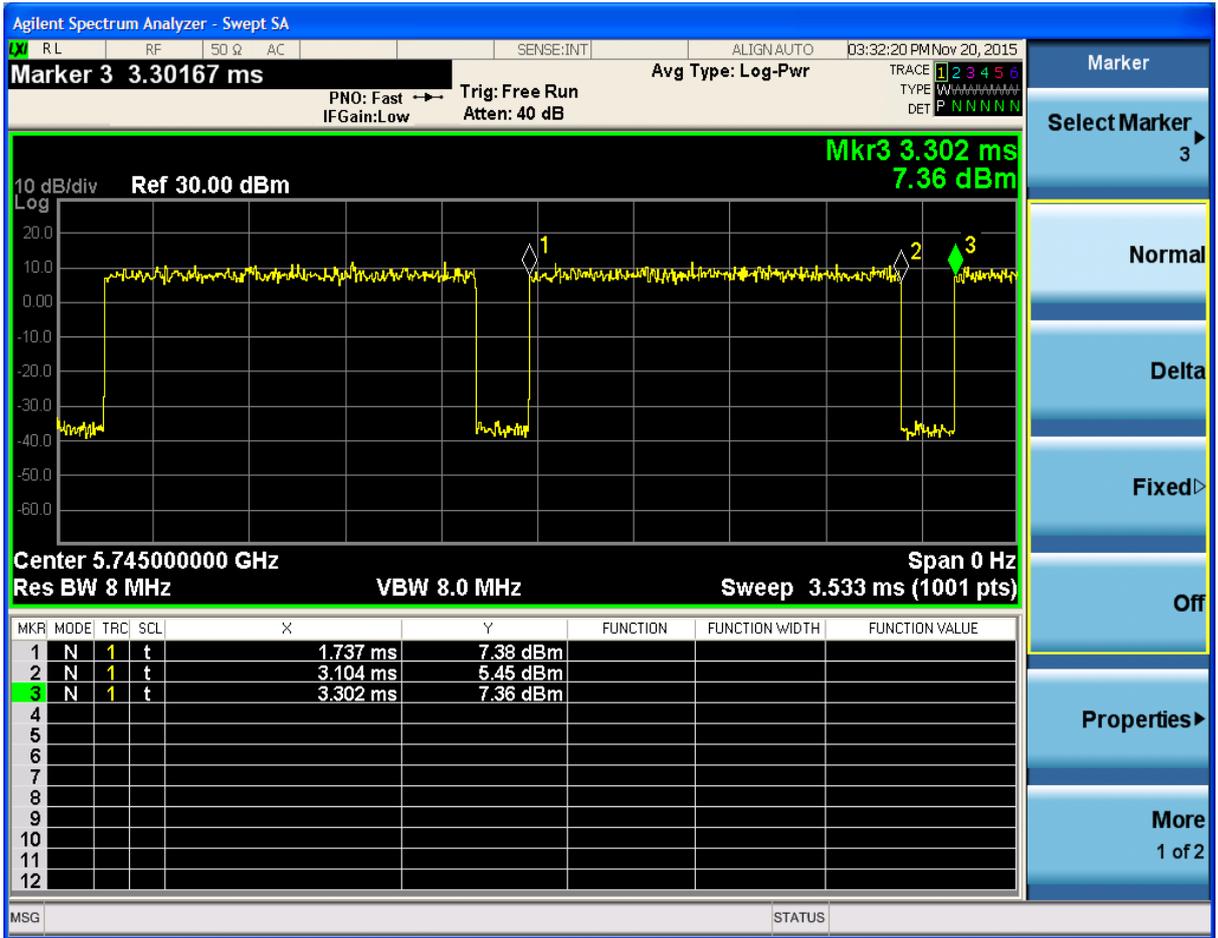


5.1.1.3 11A_5500_ANT1



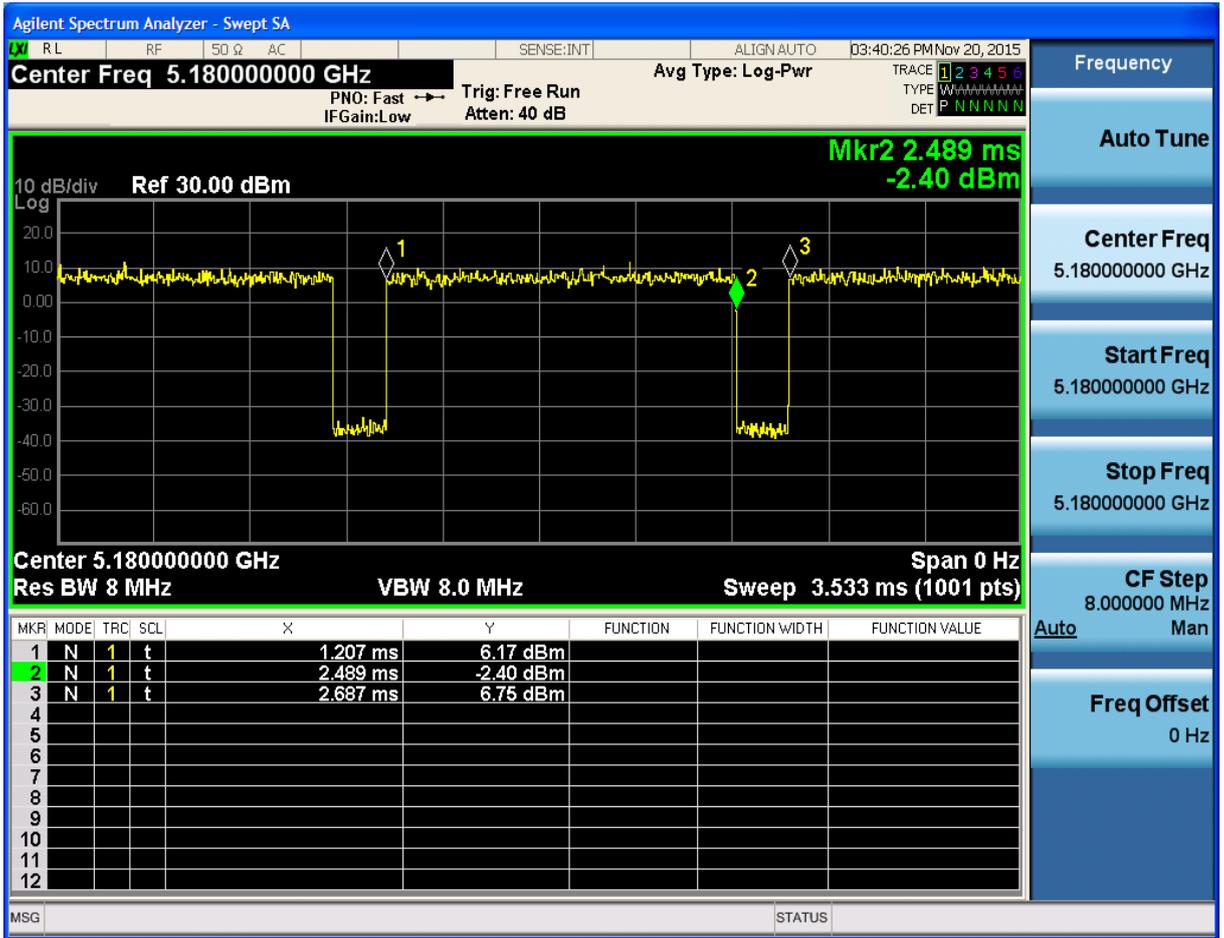


5.1.1.4 11A_5745_ANT1

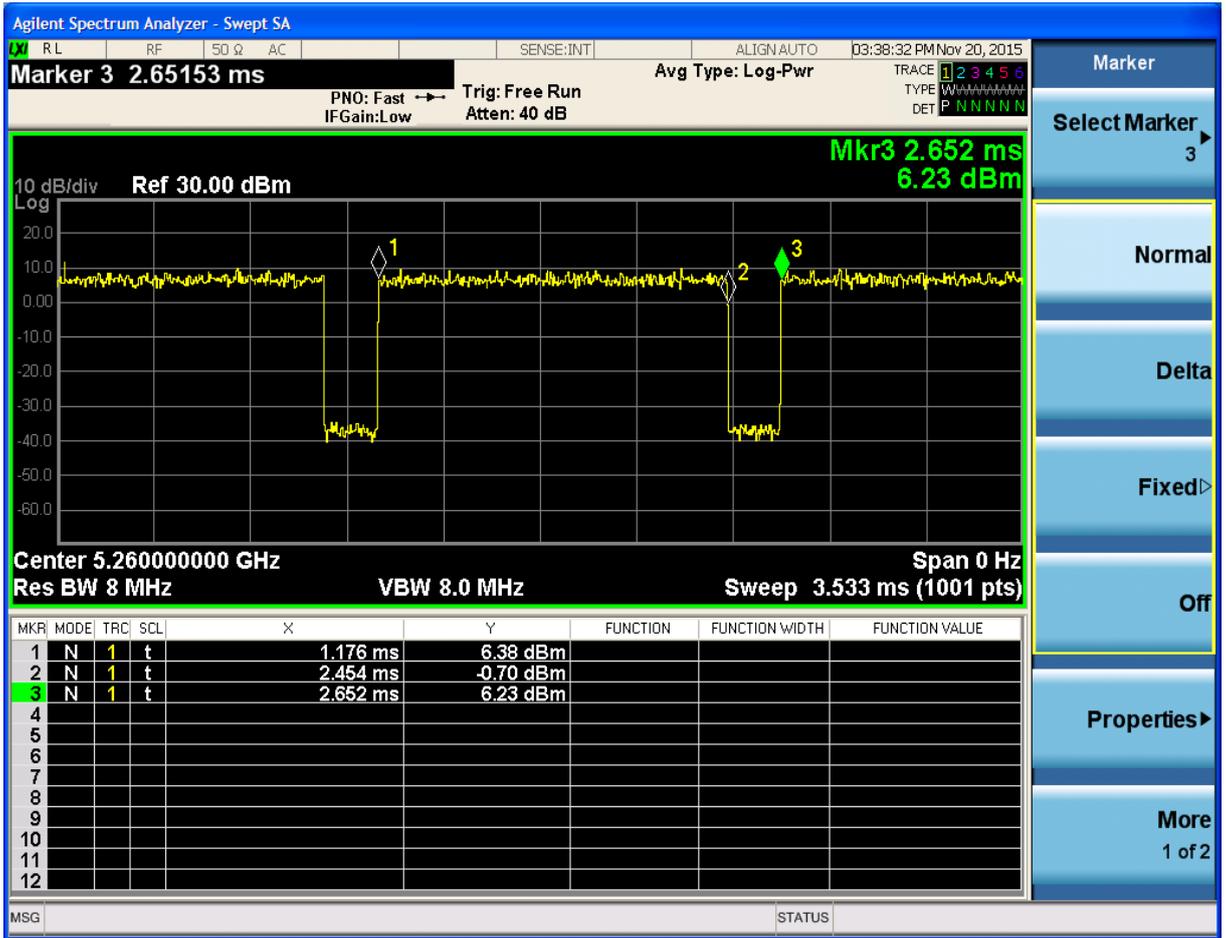




5.1.1.5 11N20_5180_ANT1

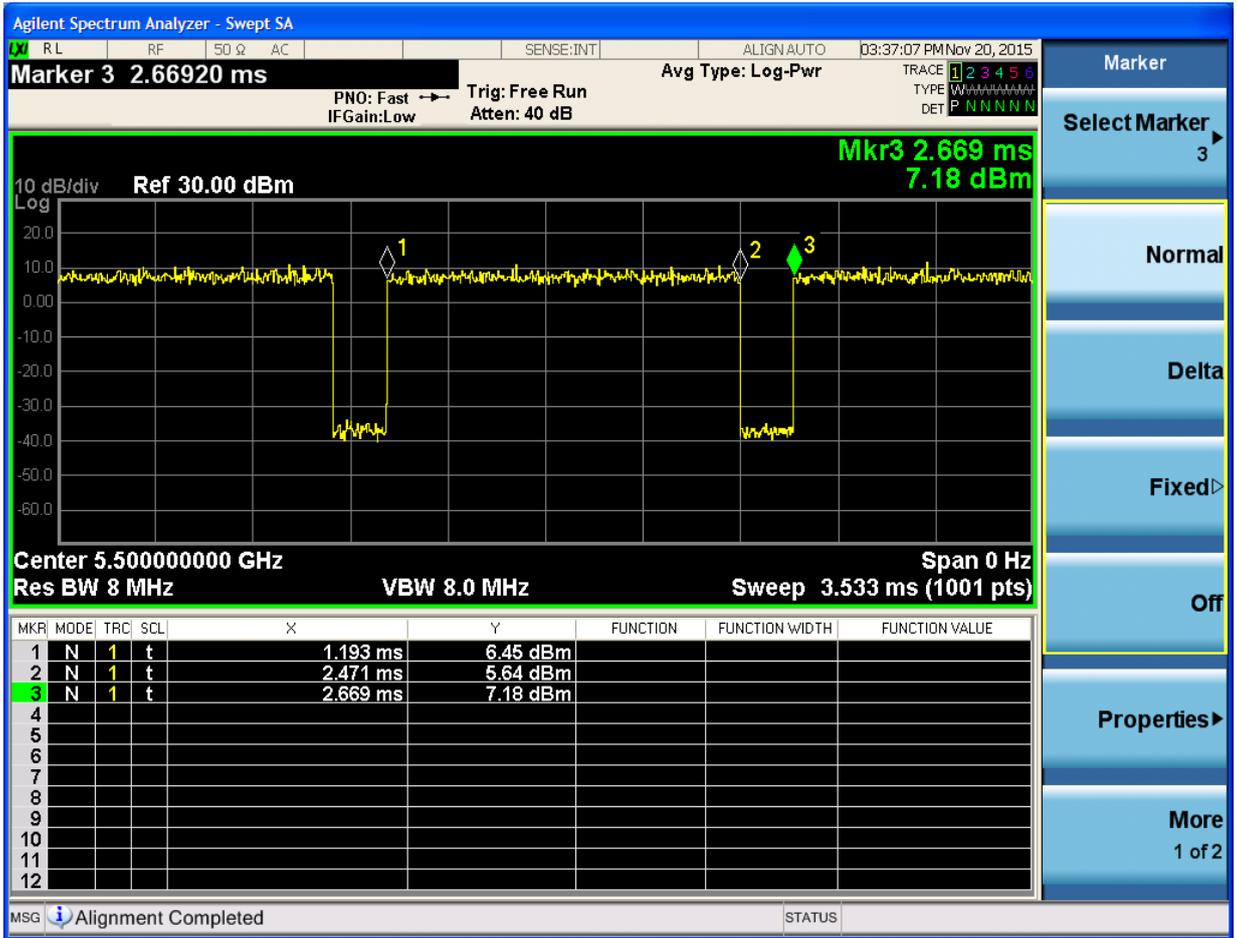


5.1.1.6 11N20_5260_ANT1



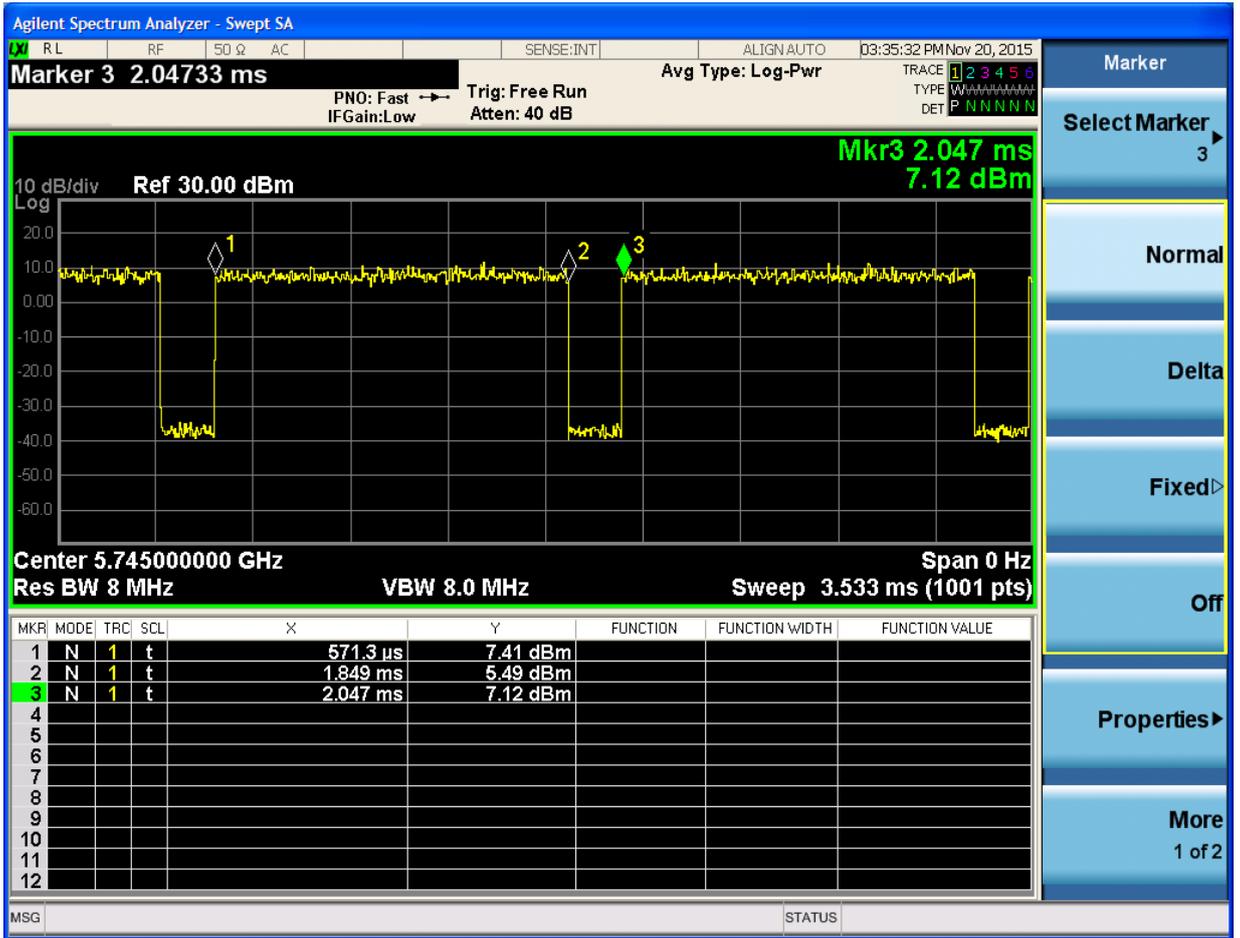


5.1.1.7 11N20_5500_ANT1



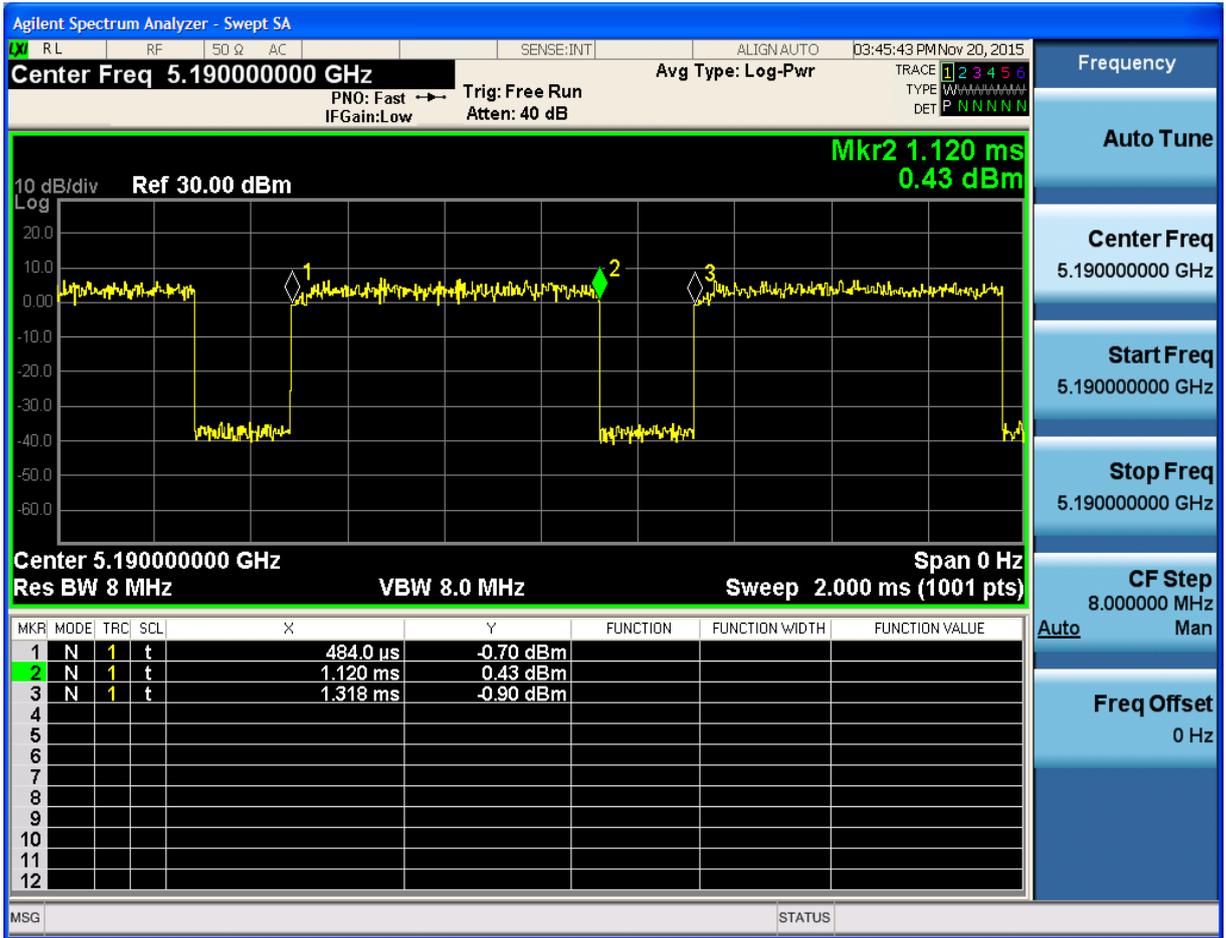


5.1.1.8 11N20_5745_ANT1



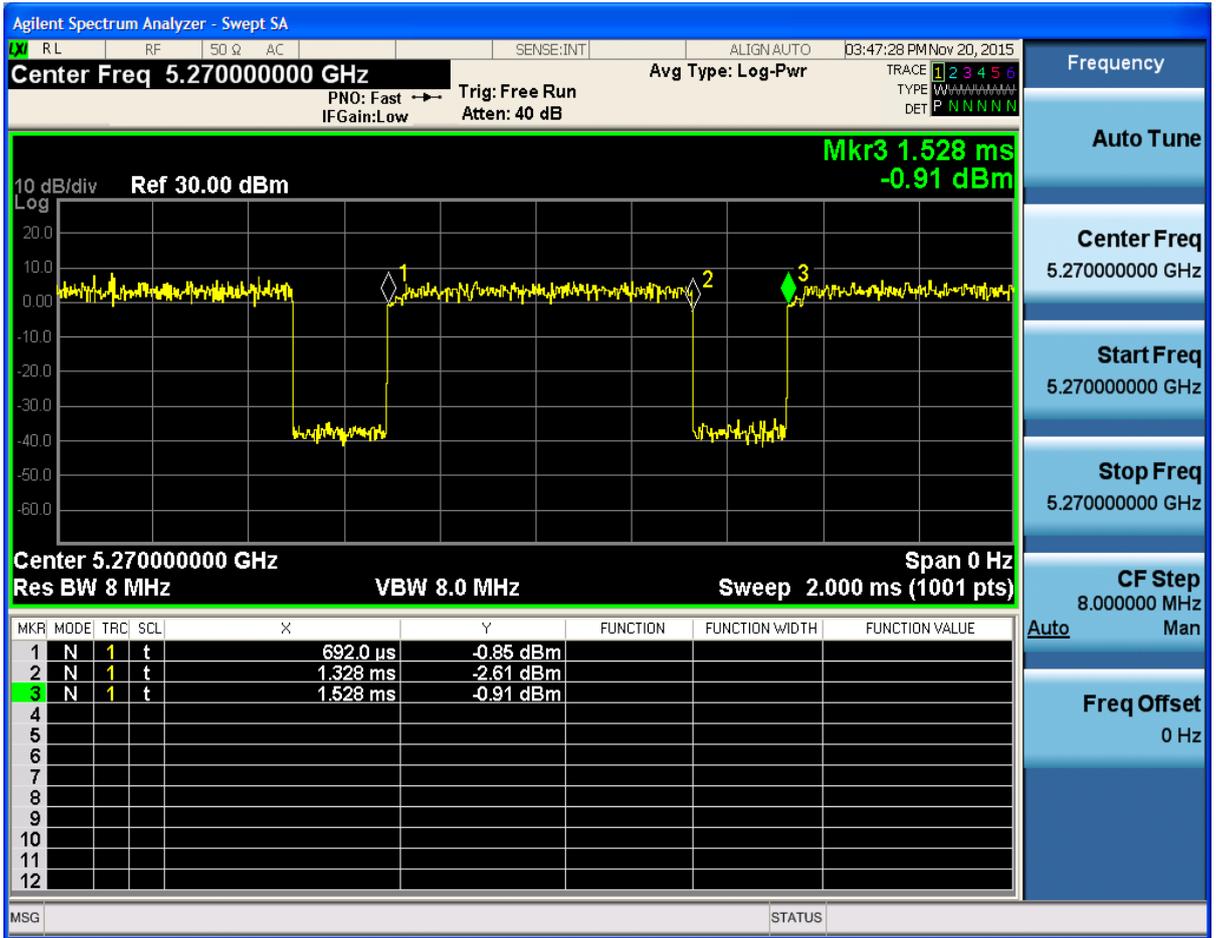


5.1.1.9 11N40_5190_ANT1



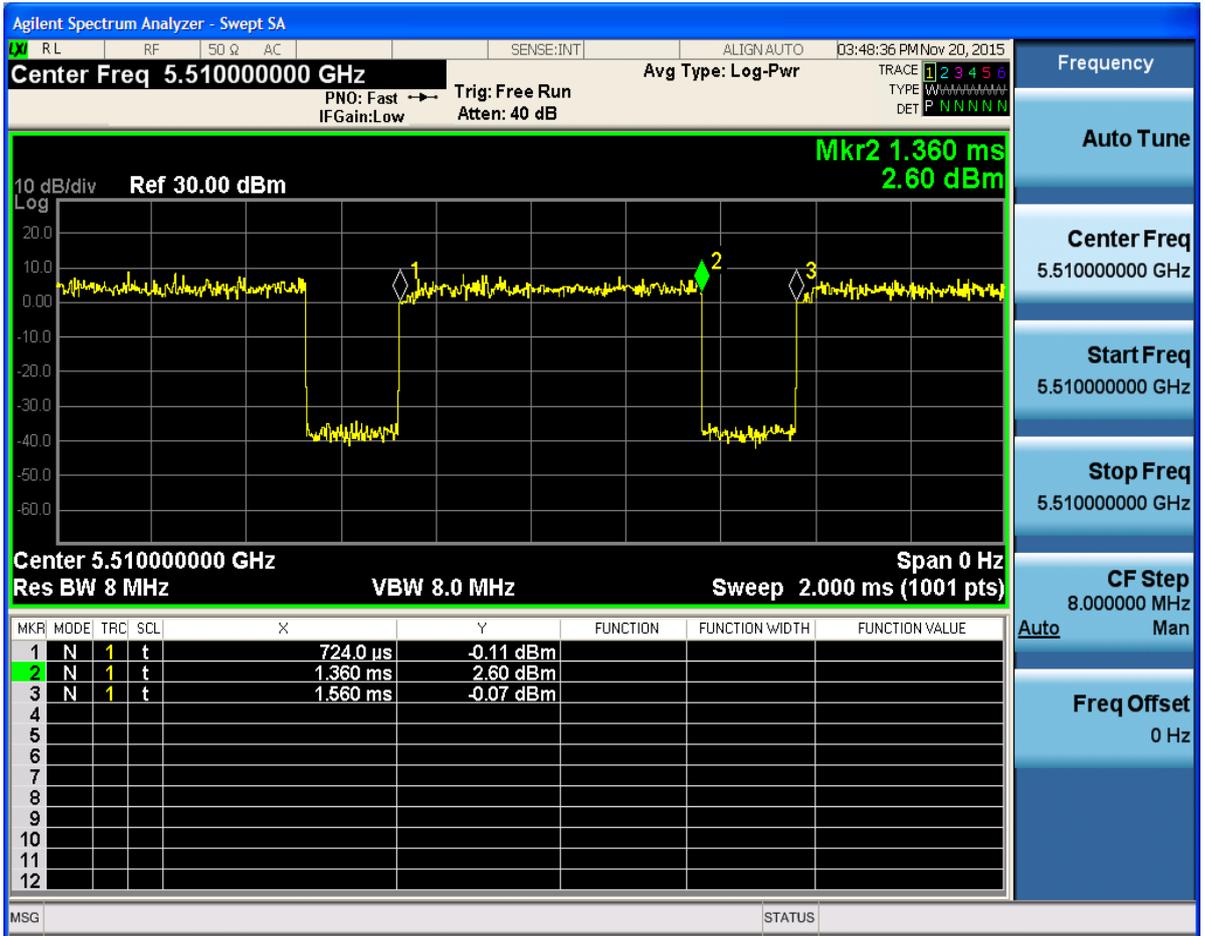


5.1.1.10 11N40_5270_ANT1



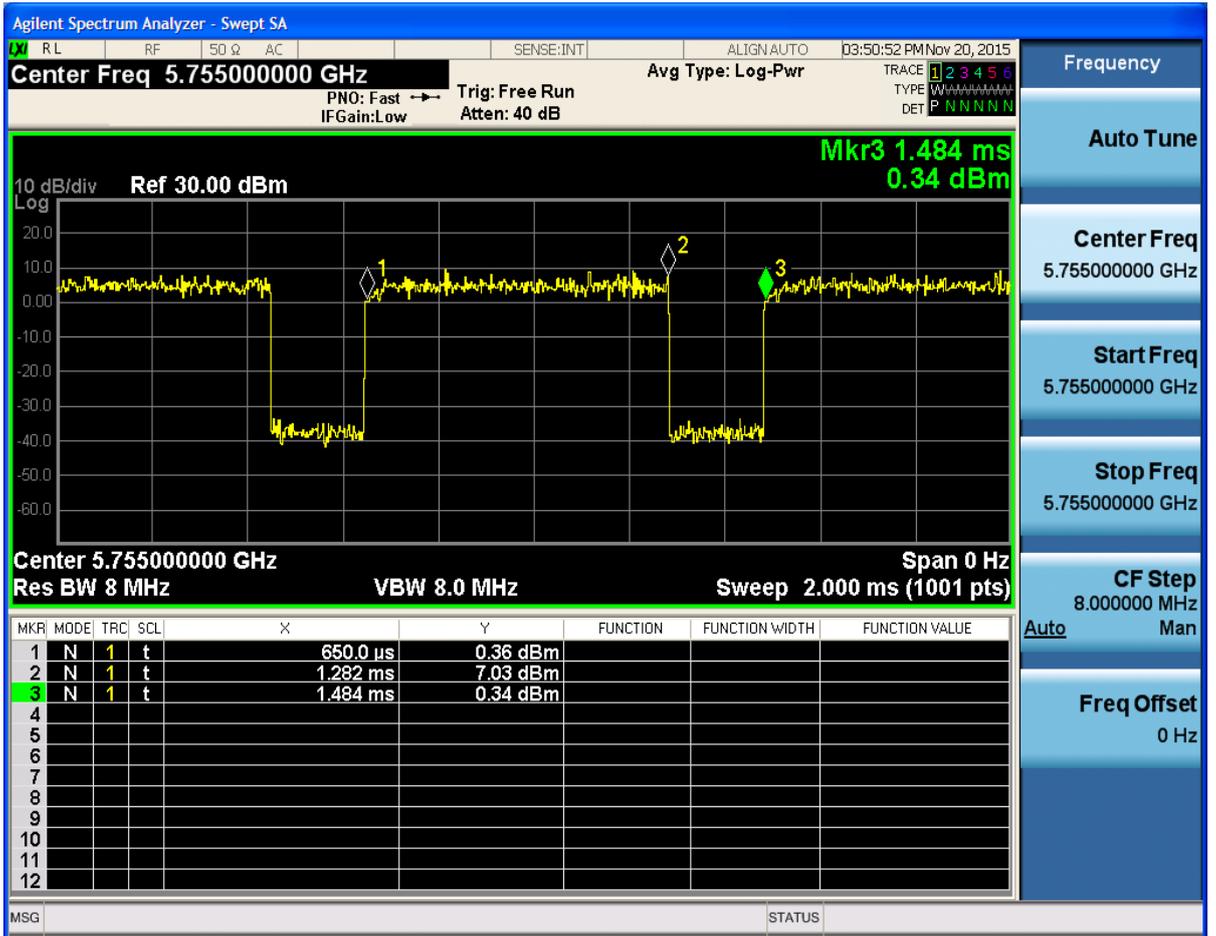


5.1.1.11 11N40_5510_ANT1





5.1.1.12 11N40_5755_ANT1





Appendix D: Peak Power Spectral Density Level



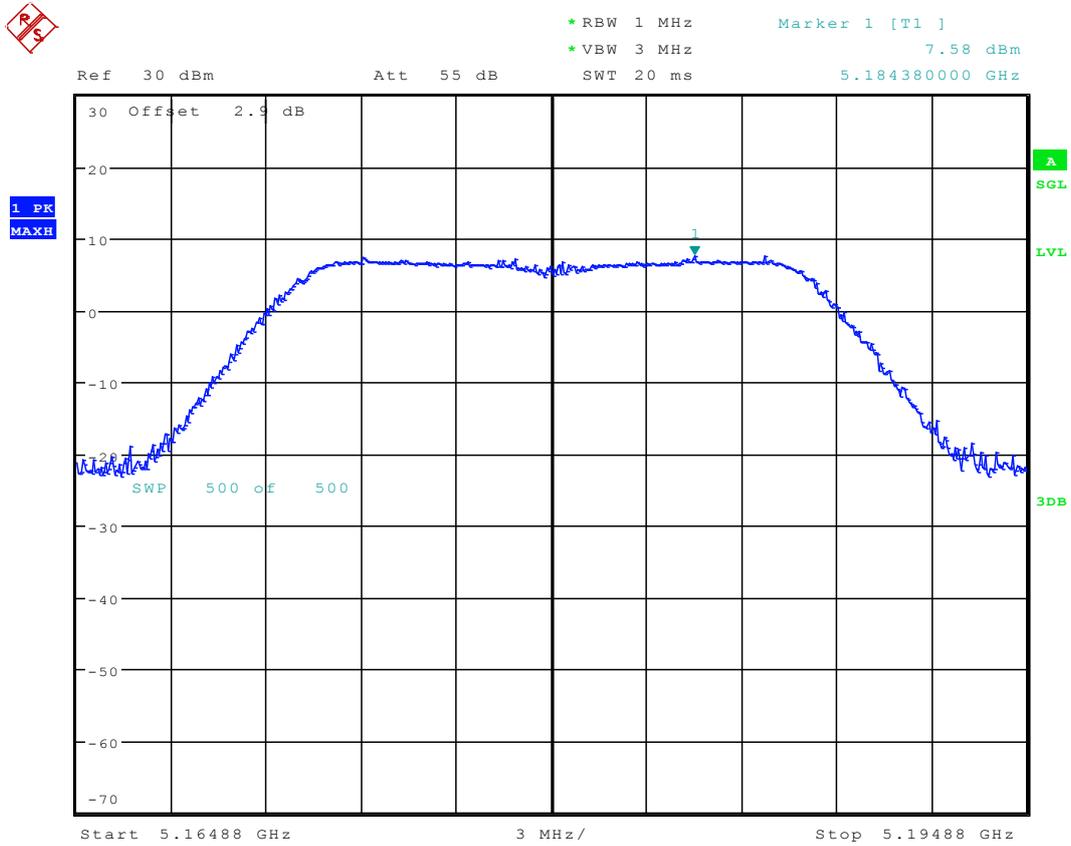
6 Result Table

Test Mode	Test Channel	Frequency[M Hz]	Ant	Meas. Level [dBm/MHz]	Verdict
11A	36	5180	Ant 1	7.58	pass
11A	48	5240	Ant 1	7.41	pass
11A	52	5260	Ant 1	7.62	pass
11A	64	5320	Ant 1	6.86	pass
11A	100	5500	Ant 1	7.69	pass
11A	140	5700	Ant 1	8.21	pass
11A	149	5745	Ant 1	8.19	pass
11A	165	5825	Ant 1	7.93	pass
11N20	36	5180	Ant 1	7.31	pass
11N20	48	5240	Ant 1	7.83	pass
11N20	52	5260	Ant 1	6.69	pass
11N20	64	5320	Ant 1	6.11	pass
11N20	100	5500	Ant 1	7.72	pass
11N20	140	5700	Ant 1	7.65	pass
11N20	149	5745	Ant 1	7.86	pass
11N20	165	5825	Ant 1	8.28	pass
11N40	38	5190	Ant 1	5.76	pass
11N40	46	5230	Ant 1	5.78	pass
11N40	54	5270	Ant 1	4.07	pass
11N40	62	5310	Ant 1	4.22	pass
11N40	102	5510	Ant 1	5.6	pass
11N40	134	5670	Ant 1	5.4	pass
11N40	151	5755	Ant 1	6.08	pass
11N40	159	5795	Ant 1	6.49	pass



7 Test Plot

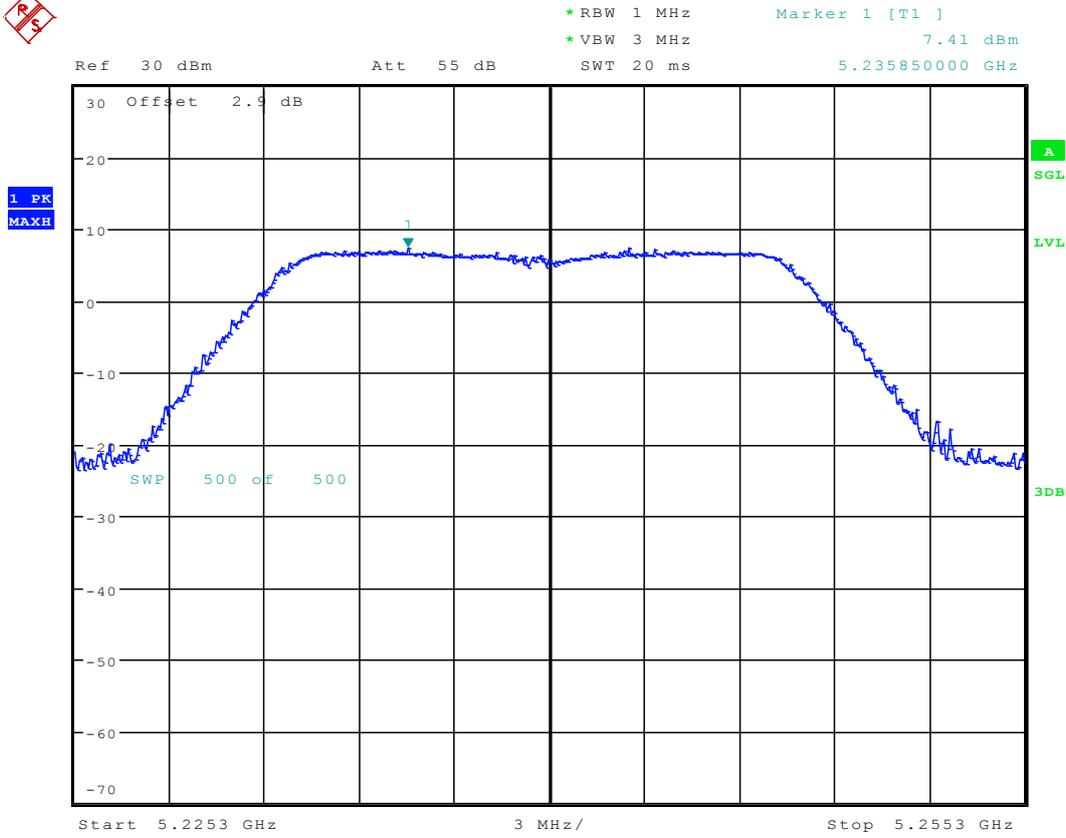
7.1 11A_36 Ant 1



Date: 22.NOV.2015 10:17:53



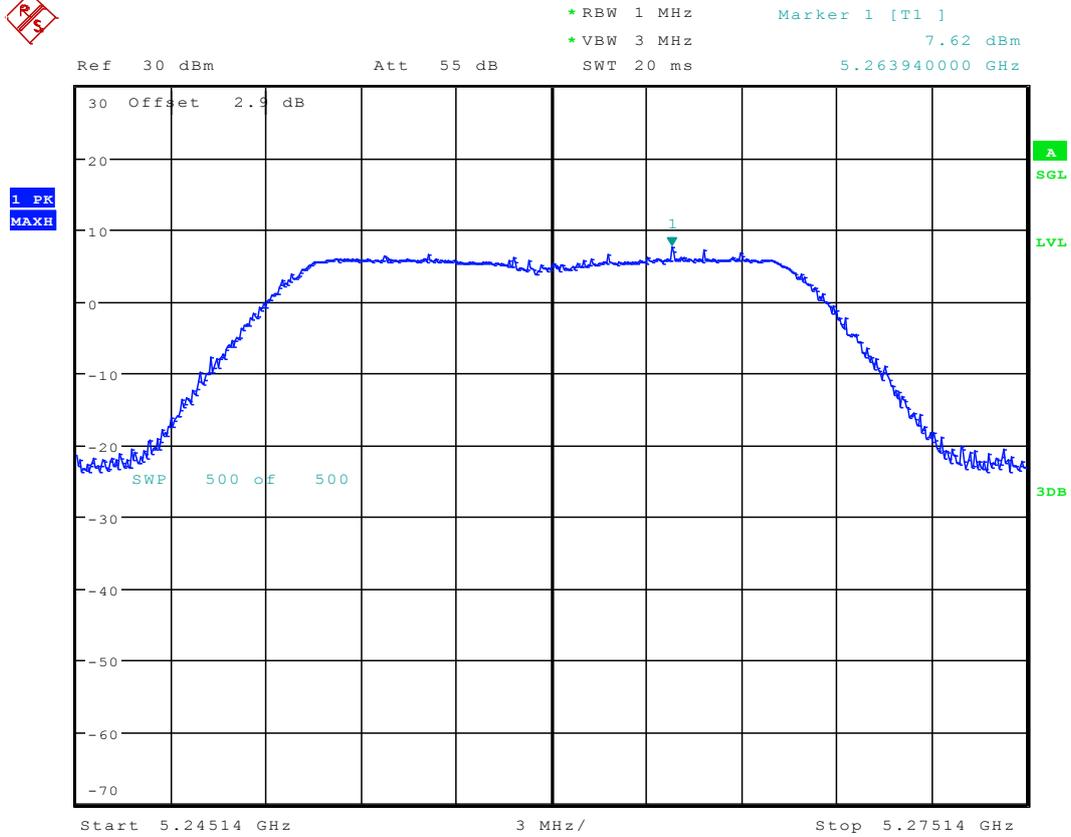
7.2 11A_48 Ant1



Date: 22.NOV.2015 10:32:31



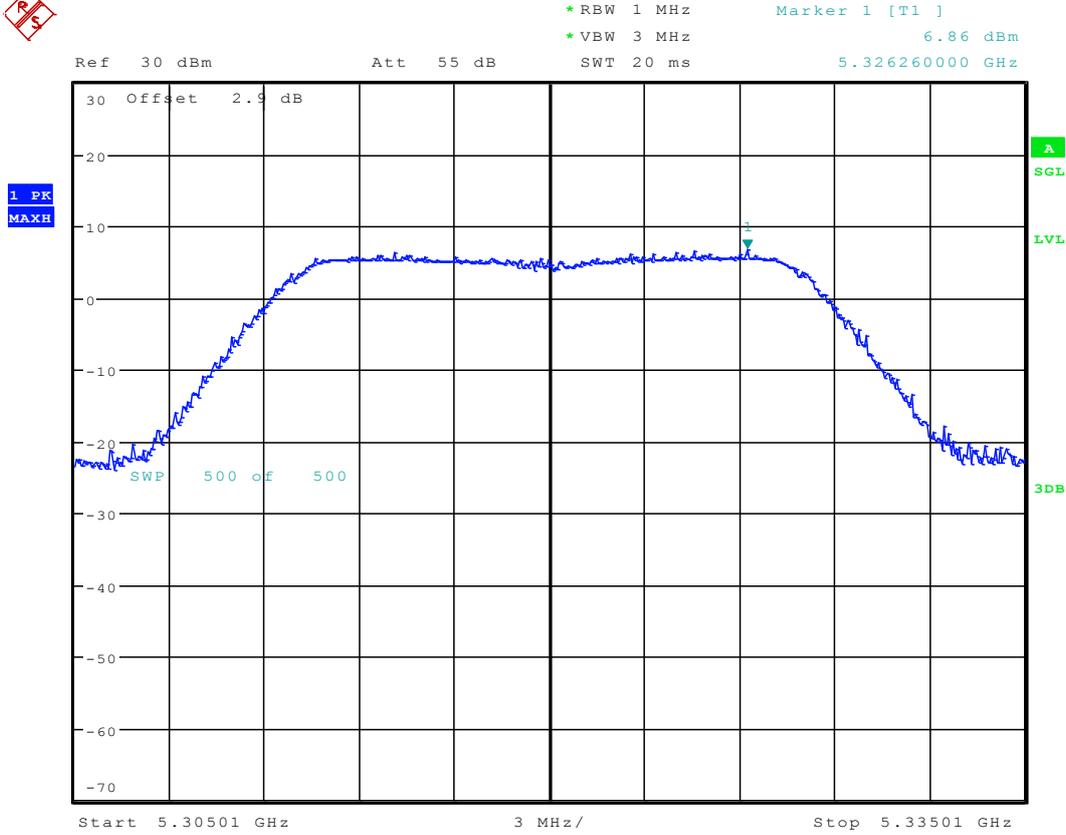
7.3 11A_52 Ant 1



Date: 22.NOV.2015 10:26:54



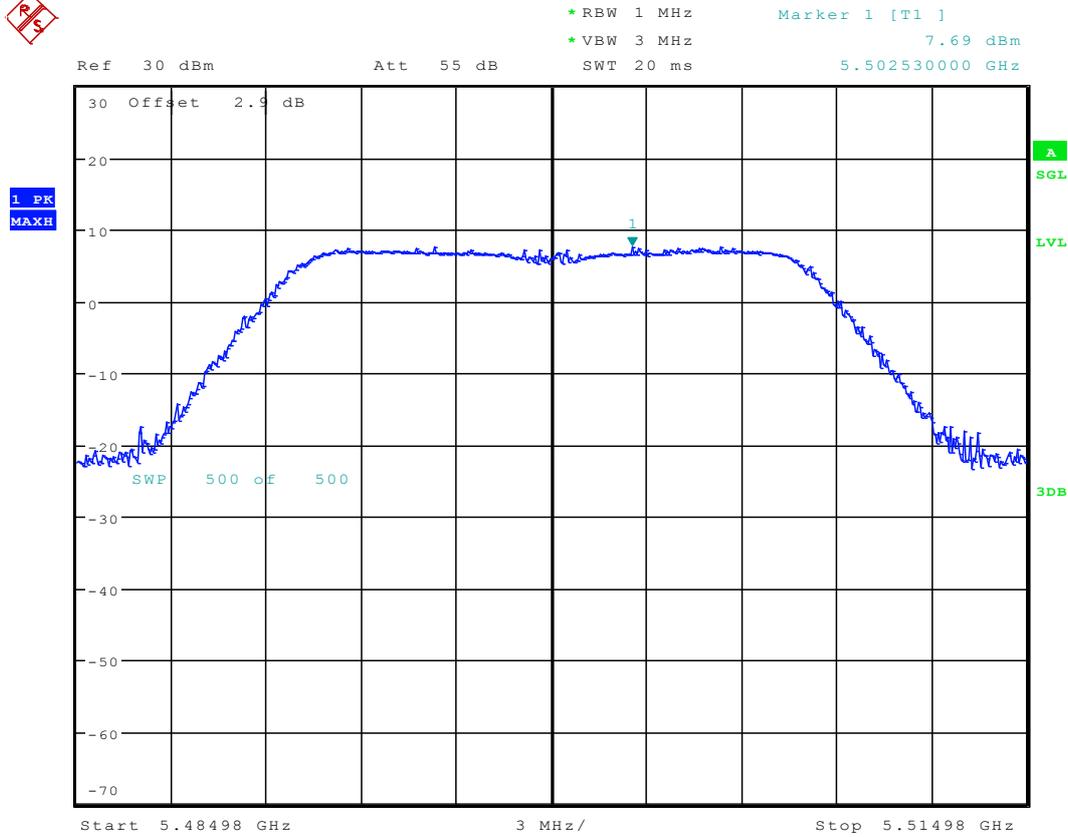
7.4 11A_64 Ant1



Date: 22.NOV.2015 10:29:31



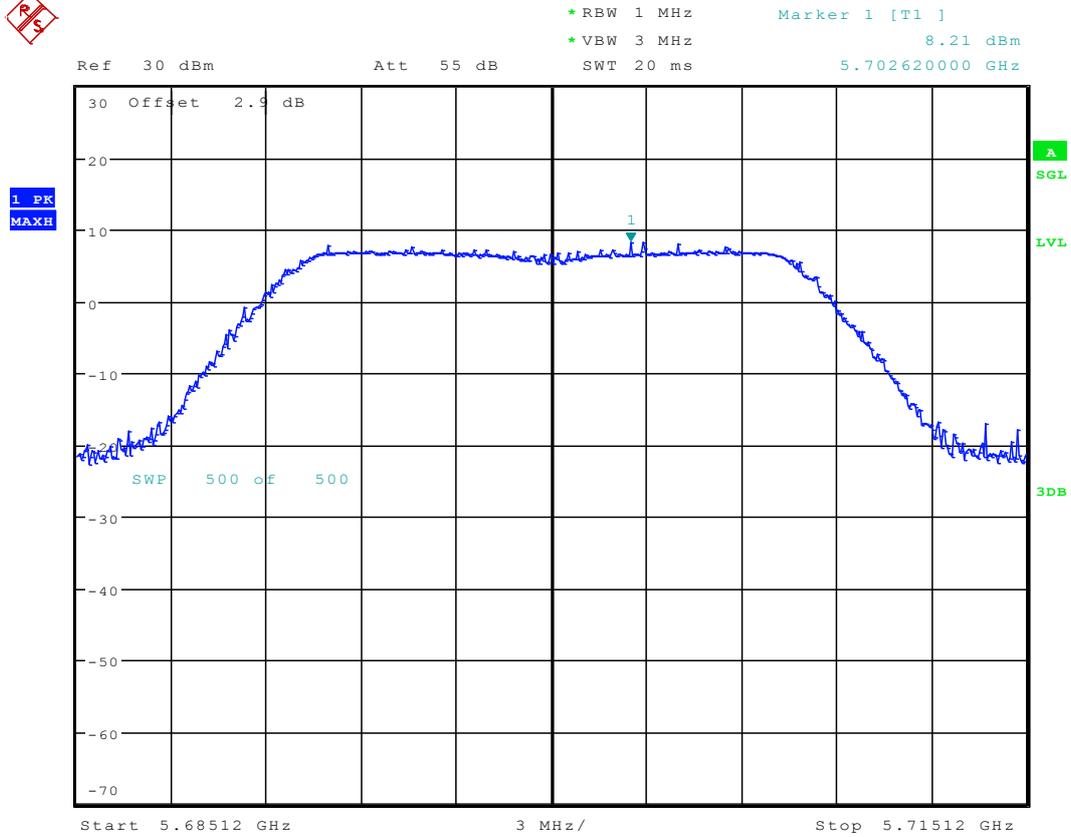
7.5 11A_100 Ant 1



Date: 22.NOV.2015 10:34:43



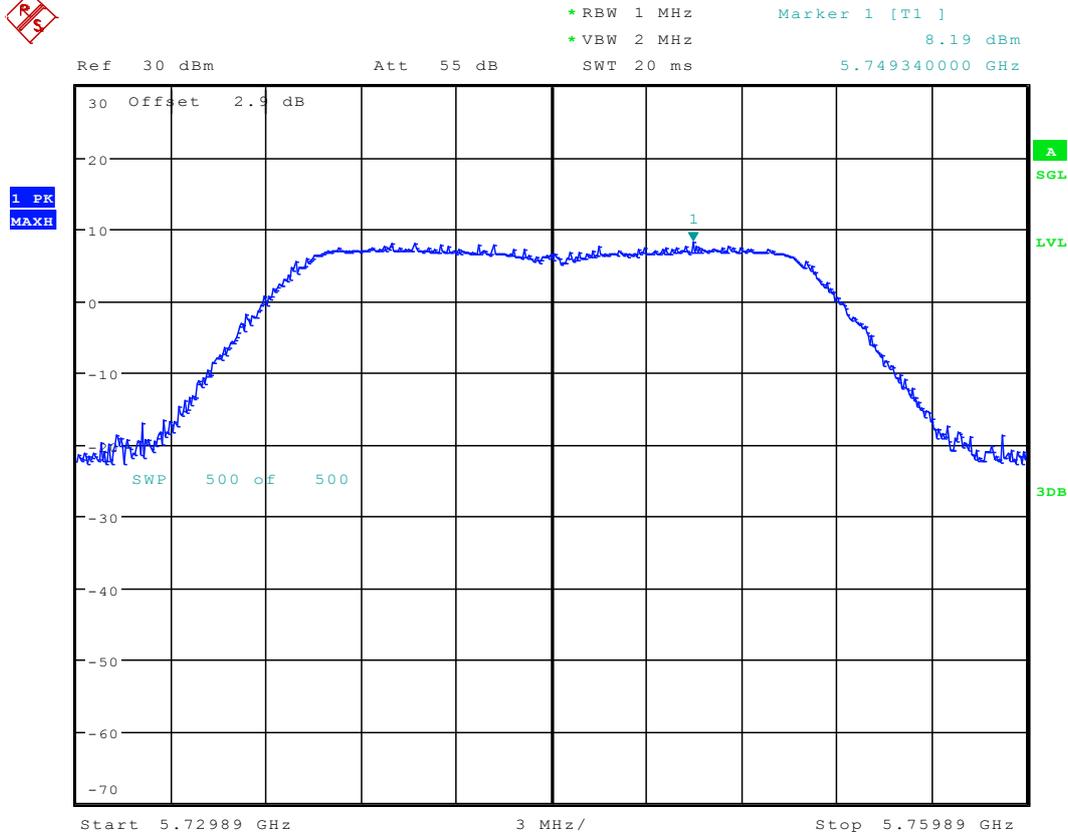
7.6 11A_140 Ant 1



Date: 22.NOV.2015 10:37:25



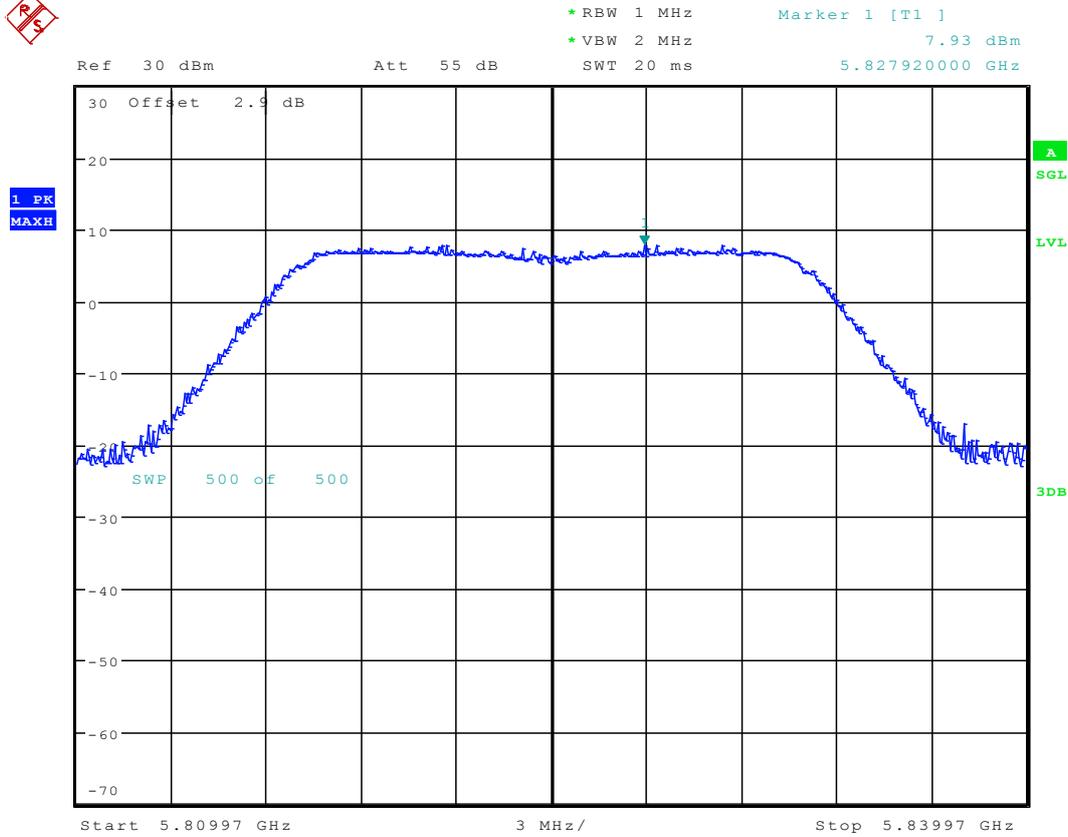
7.7 11A_149 Ant 1



Date: 22.NOV.2015 11:07:14



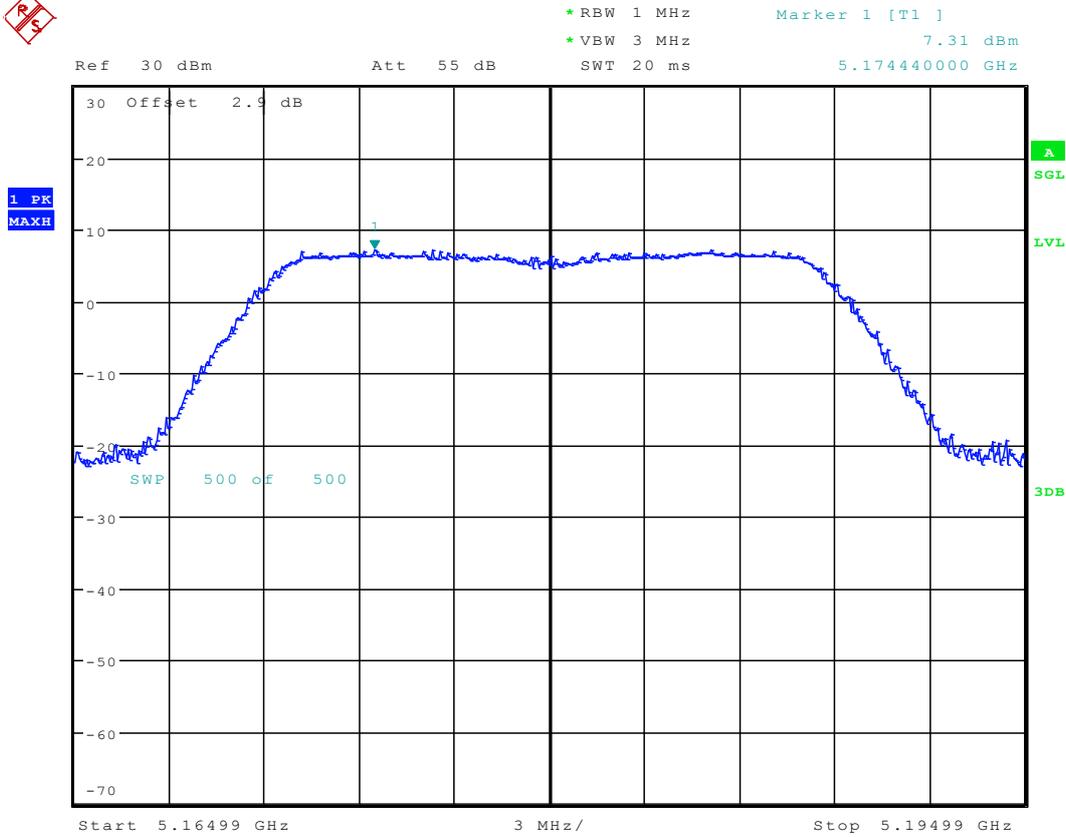
7.8 11A_165 Ant 1



Date: 22.NOV.2015 11:10:21



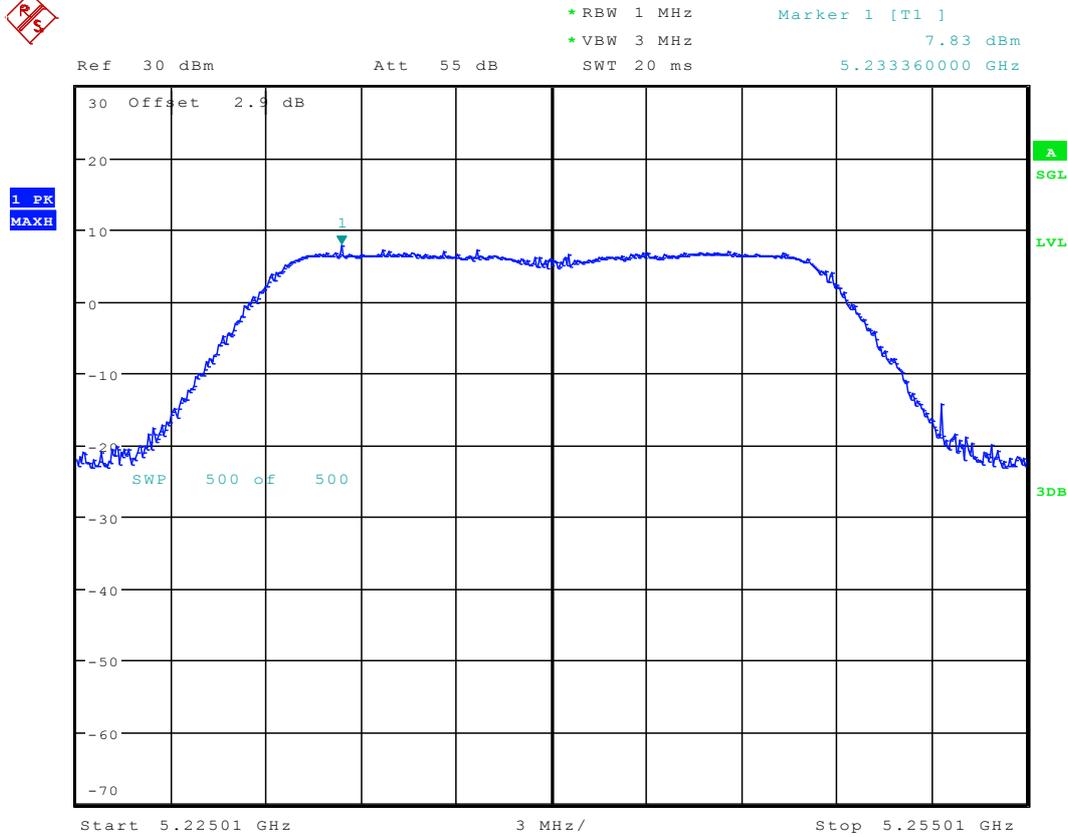
7.9 11N20_36 Ant 1



Date: 22.NOV.2015 11:12:27



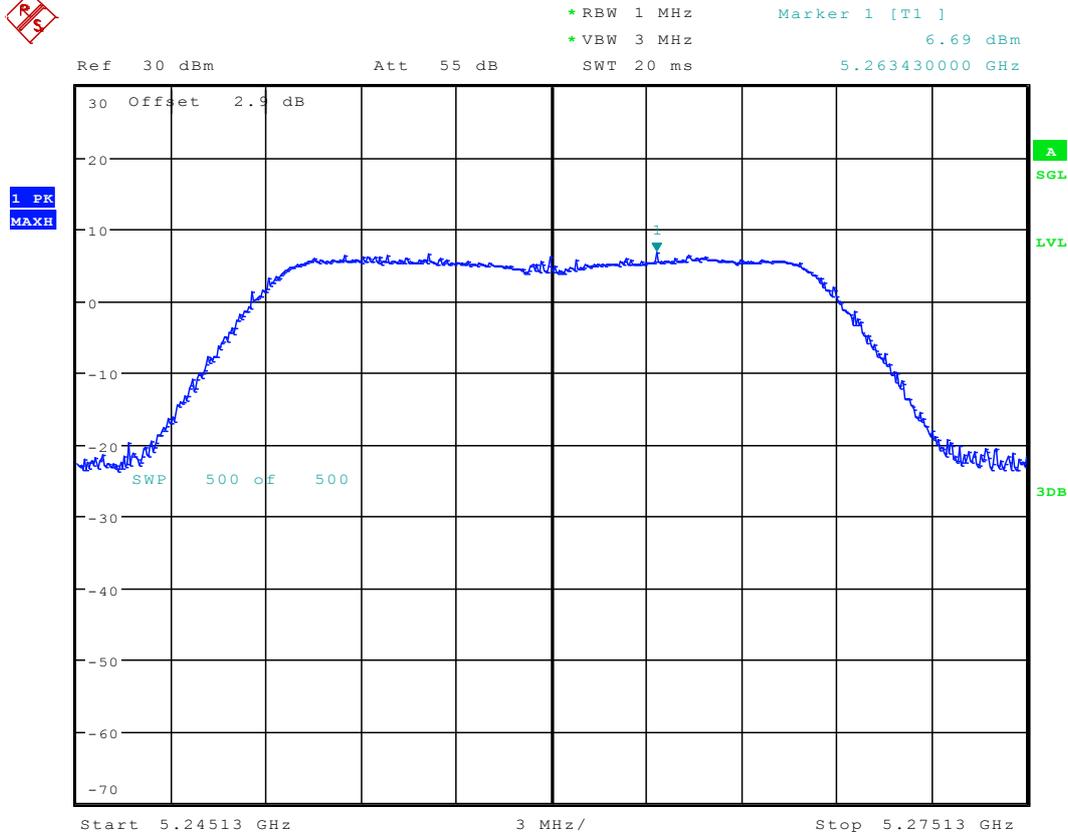
7.1011N20_48 Ant 1



Date: 22.NOV.2015 11:13:55



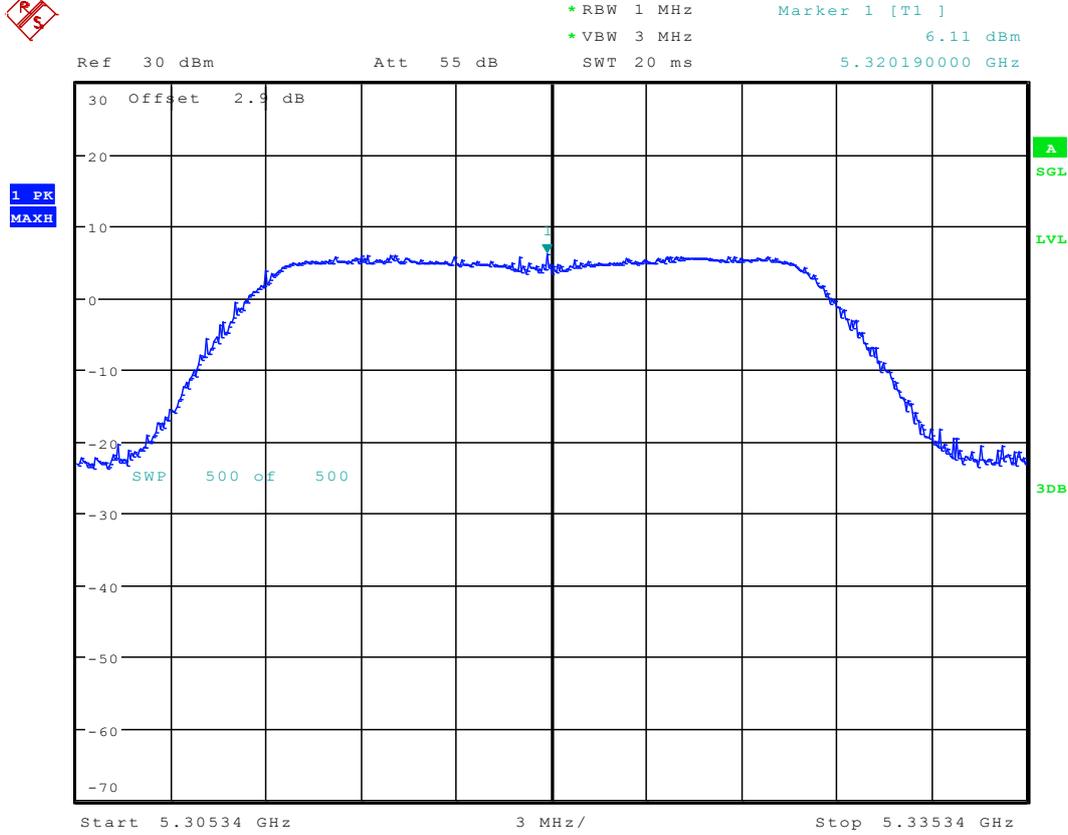
7.1111N20_52 Ant 1



Date: 22.NOV.2015 11:17:58



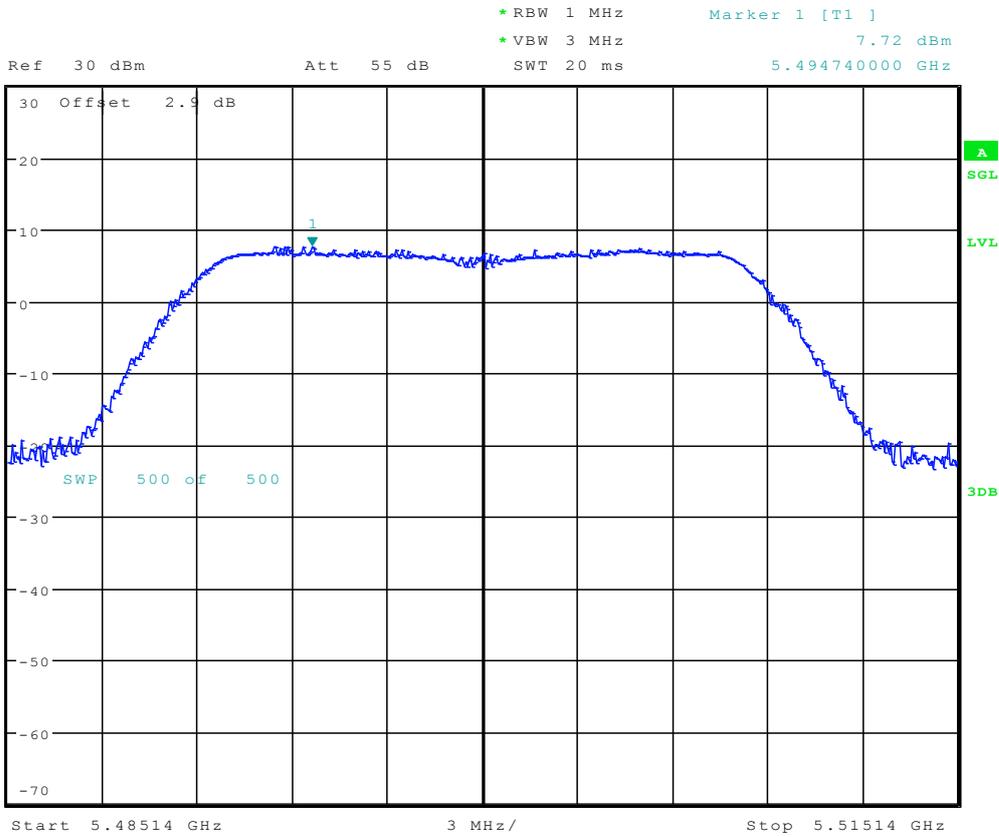
7.1211N20_64 Ant 1



Date: 22.NOV.2015 11:19:19

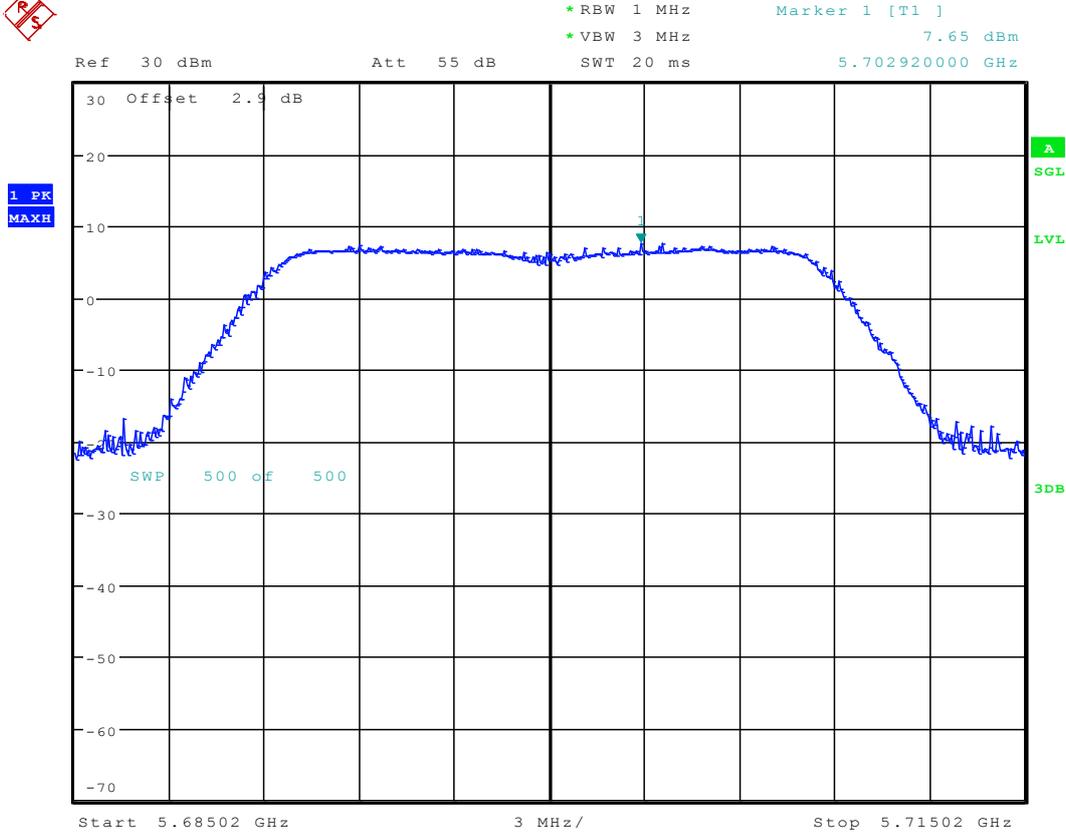


7.1311N20_100 Ant 1



Date: 22.NOV.2015 11:21:39

7.1411N20_140 Ant 1



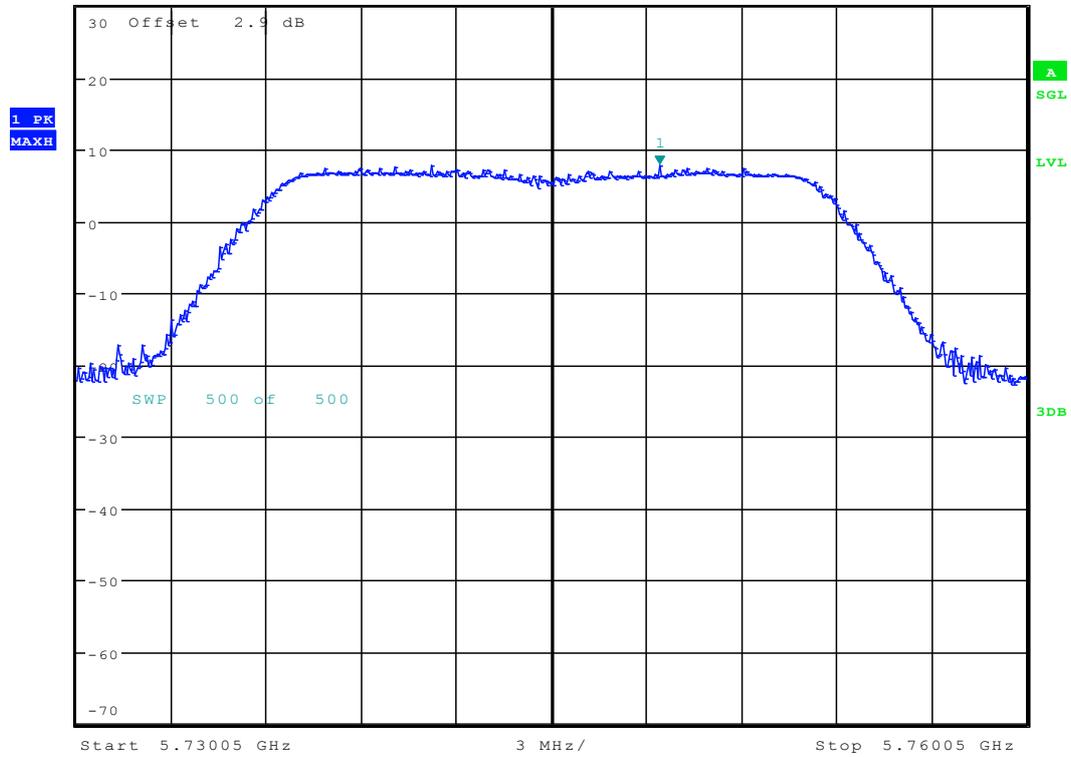
Date: 22.NOV.2015 11:24:08



7.1511N20_149 Ant 1



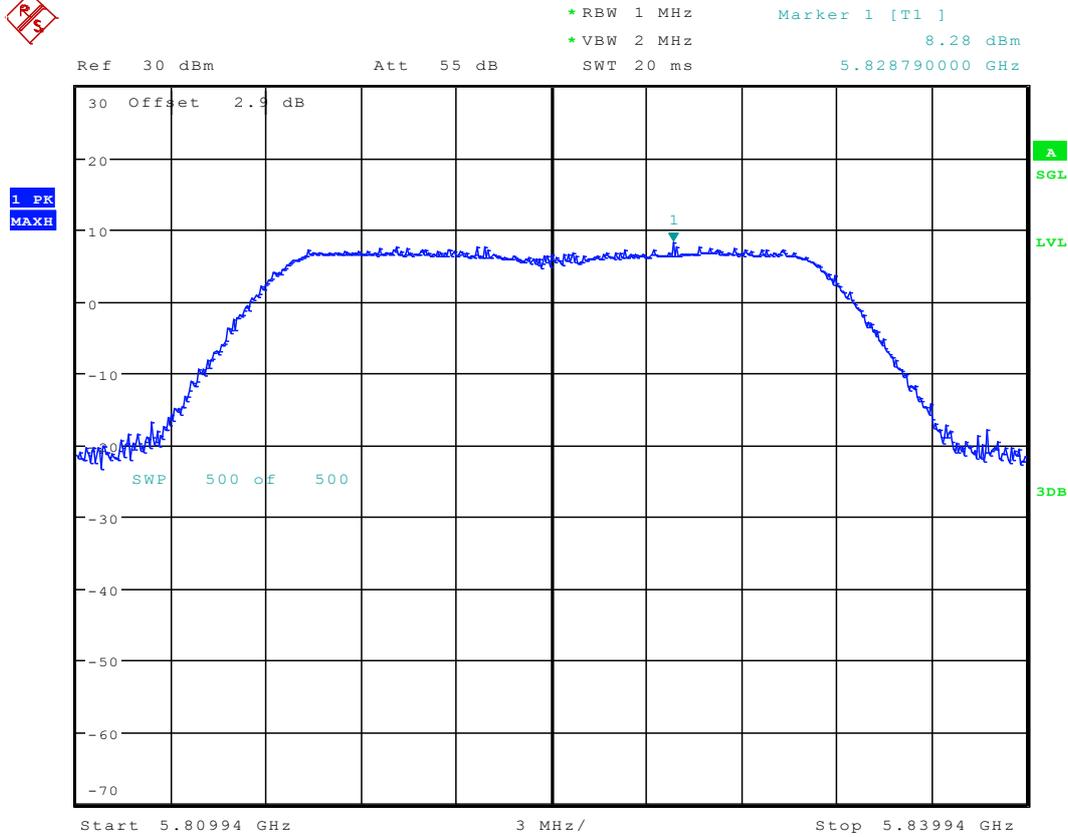
Ref 30 dBm Att 55 dB RBW 1 MHz Marker 1 [T1] 7.86 dBm
* VBW 2 MHz
SWT 20 ms 5.748450000 GHz



Date: 22.NOV.2015 11:03:25



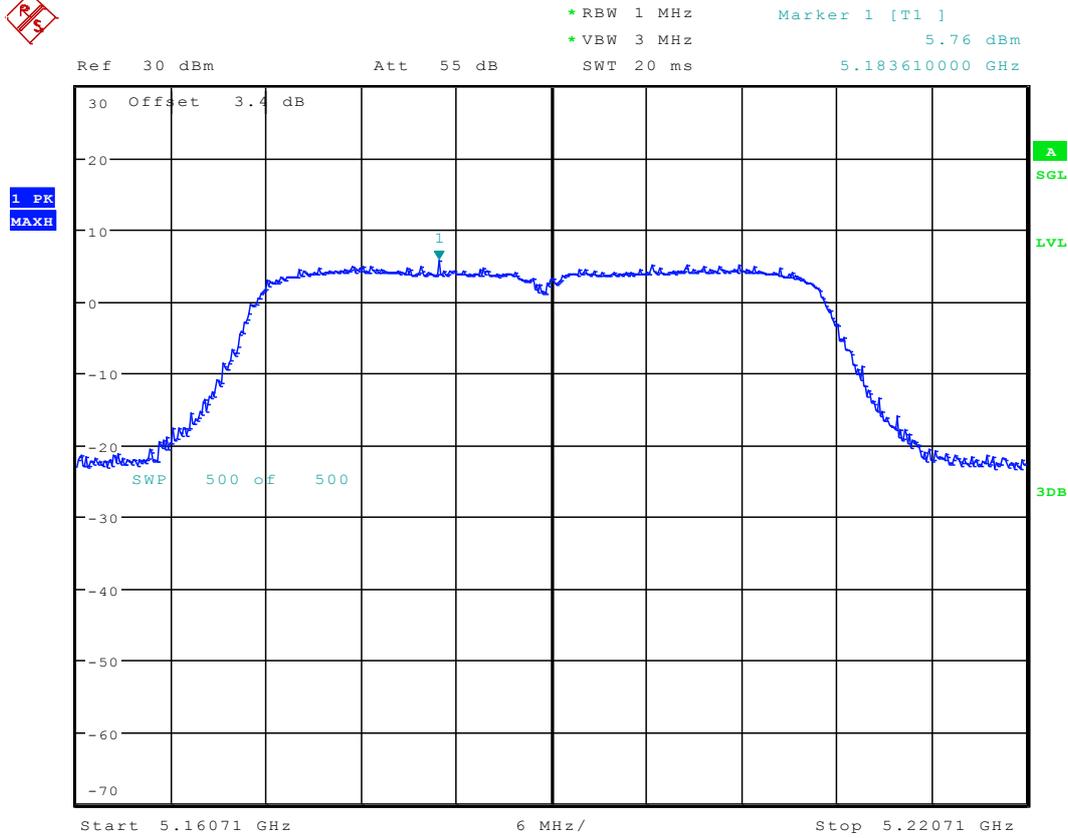
7.1611N20_165 Ant 1



Date: 22.NOV.2015 10:58:38



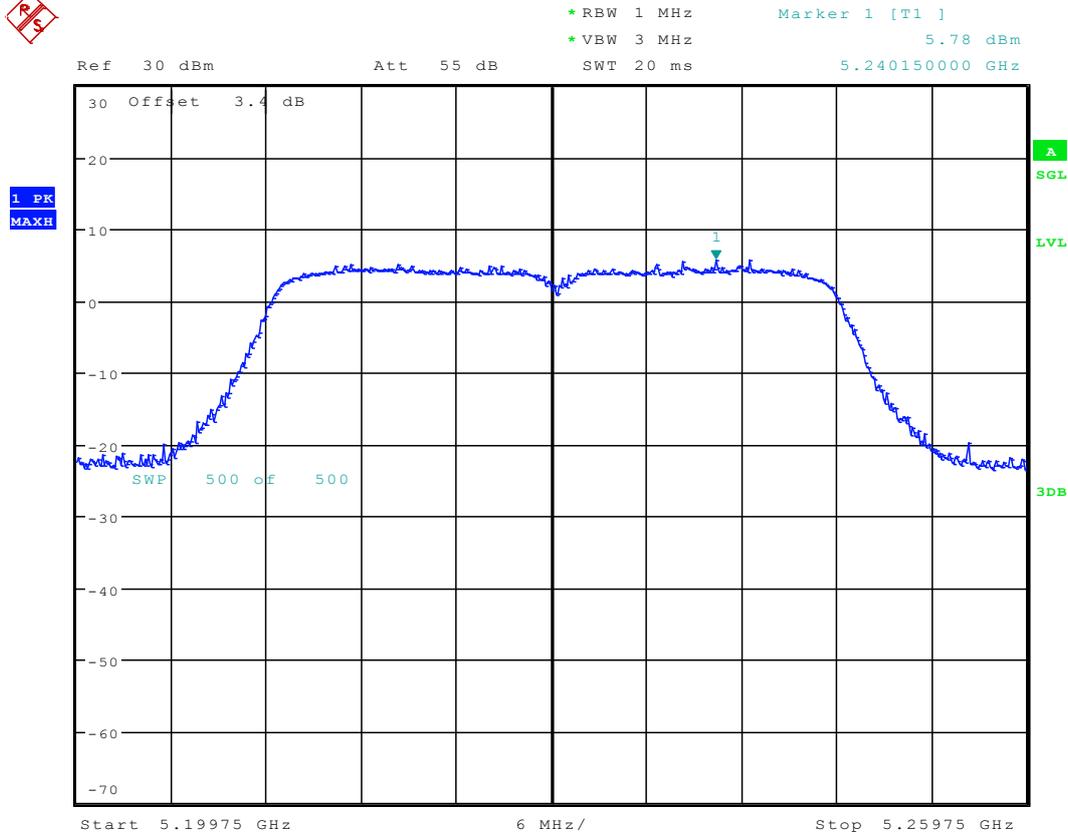
7.1711N40_38 Ant 1



Date: 22.NOV.2015 11:26:43



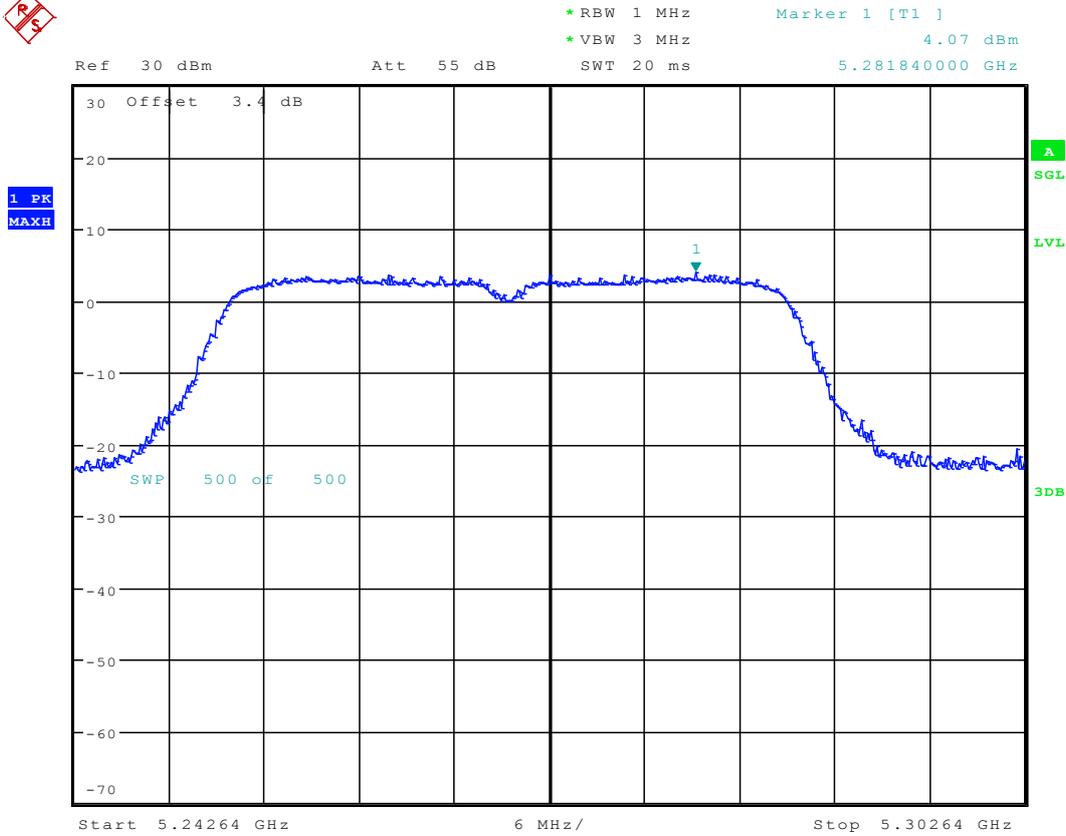
7.1811N40_46 Ant 1



Date: 22.NOV.2015 11:28:38



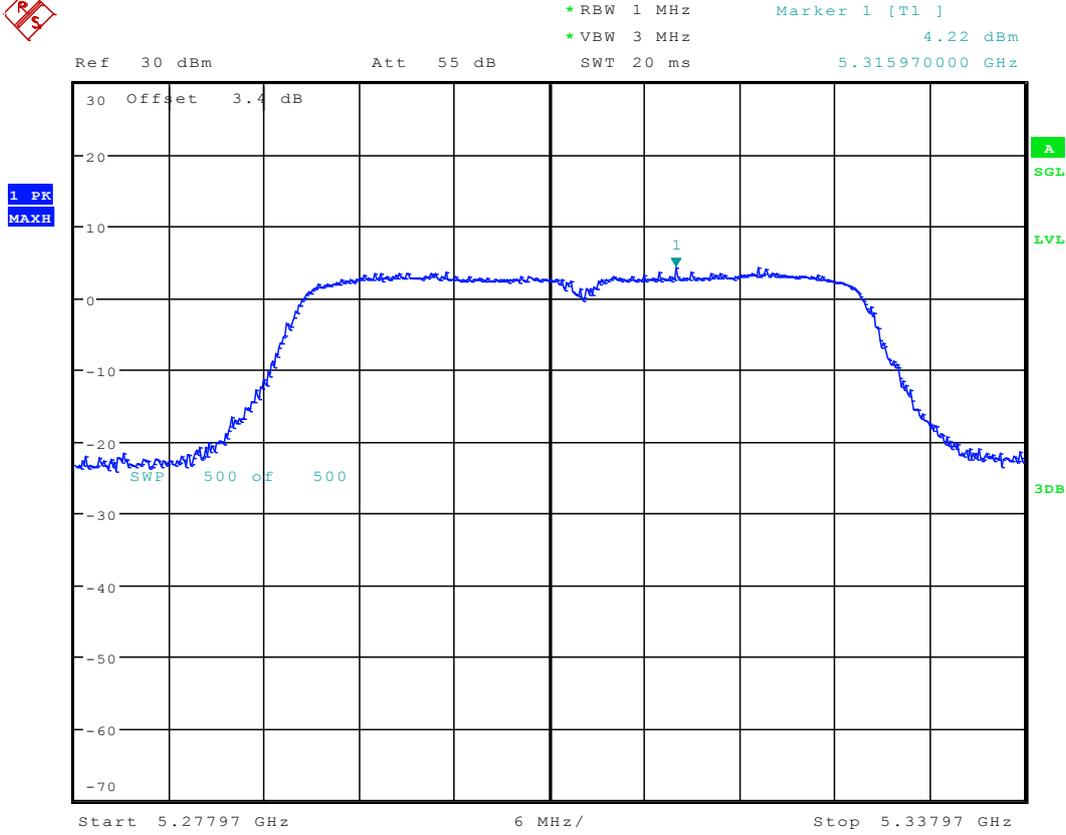
7.1911N40_54 Ant 1



Date: 22.NOV.2015 11:30:27



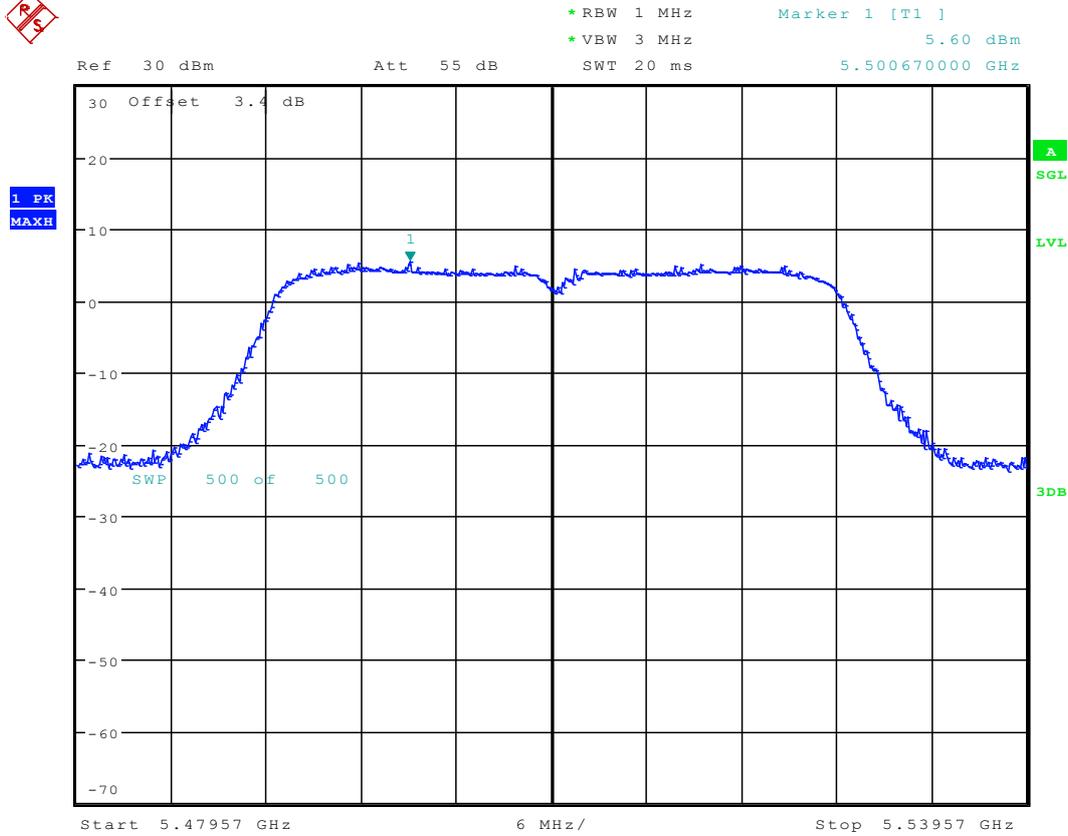
7.2011N40_62 Ant 1



Date: 22.NOV.2015 11:31:50



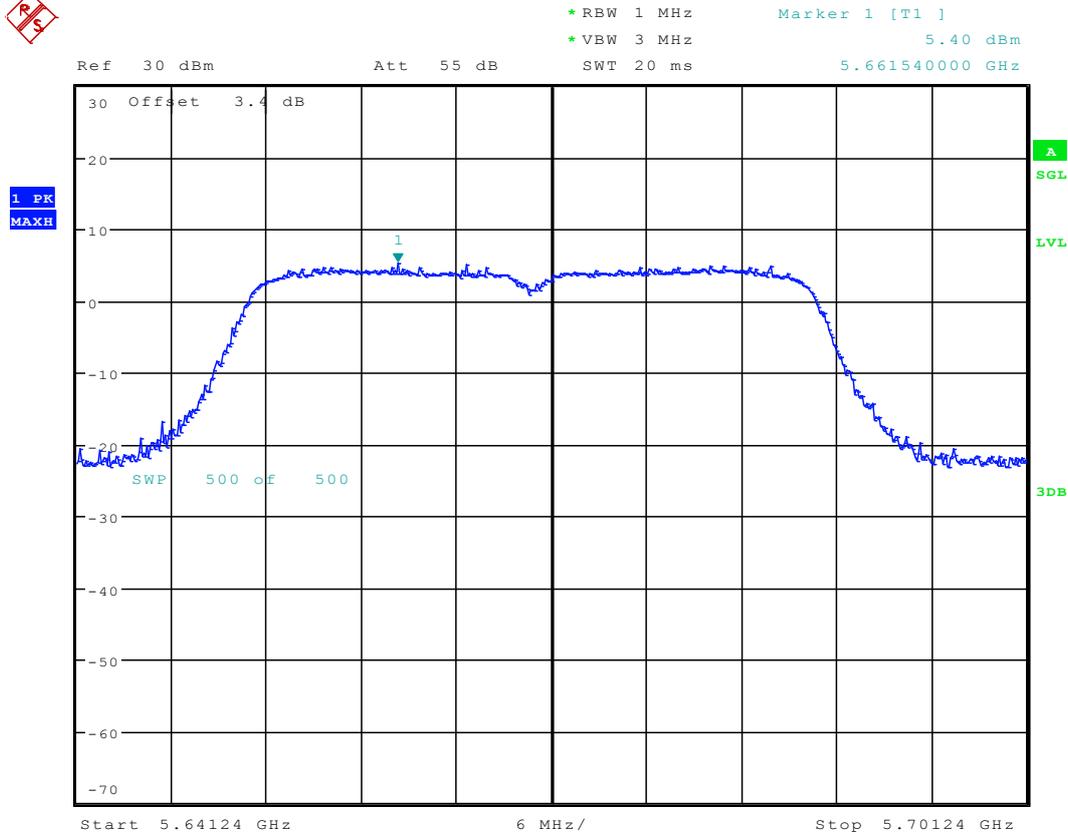
7.2111N40_102 Ant 1



Date: 22.NOV.2015 11:34:55



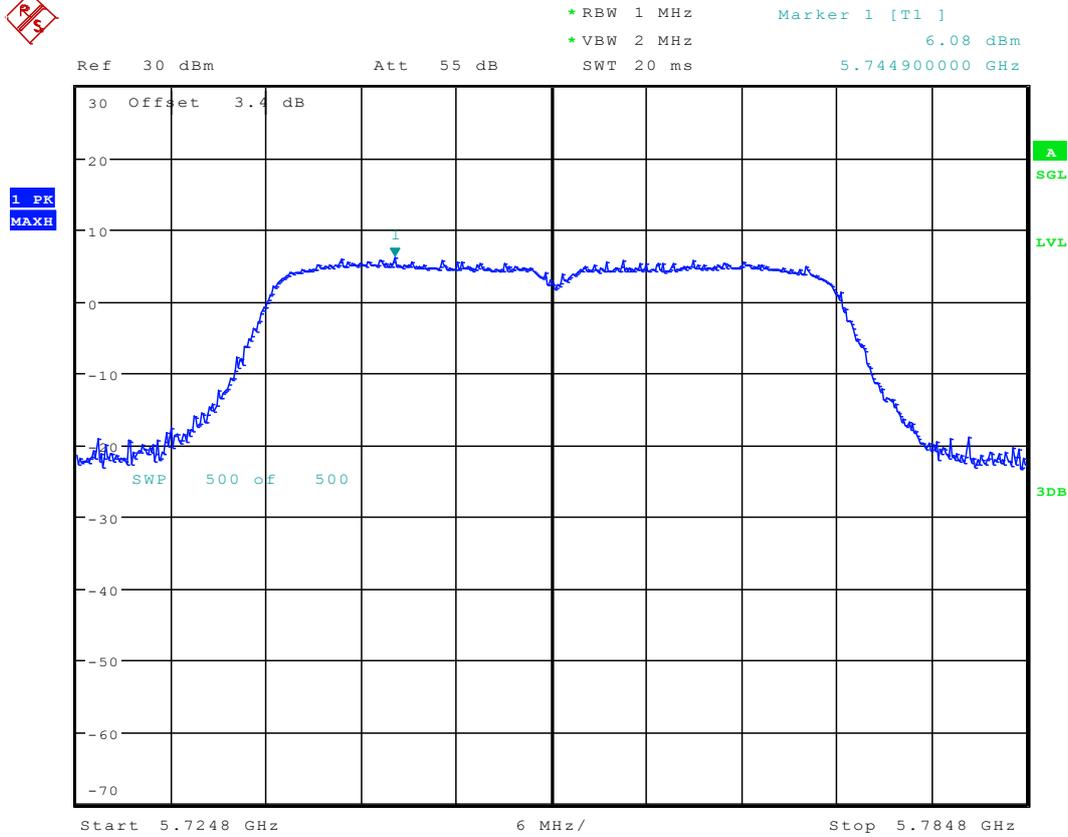
7.2211N40_134 Ant 1



Date: 22.NOV.2015 11:36:51



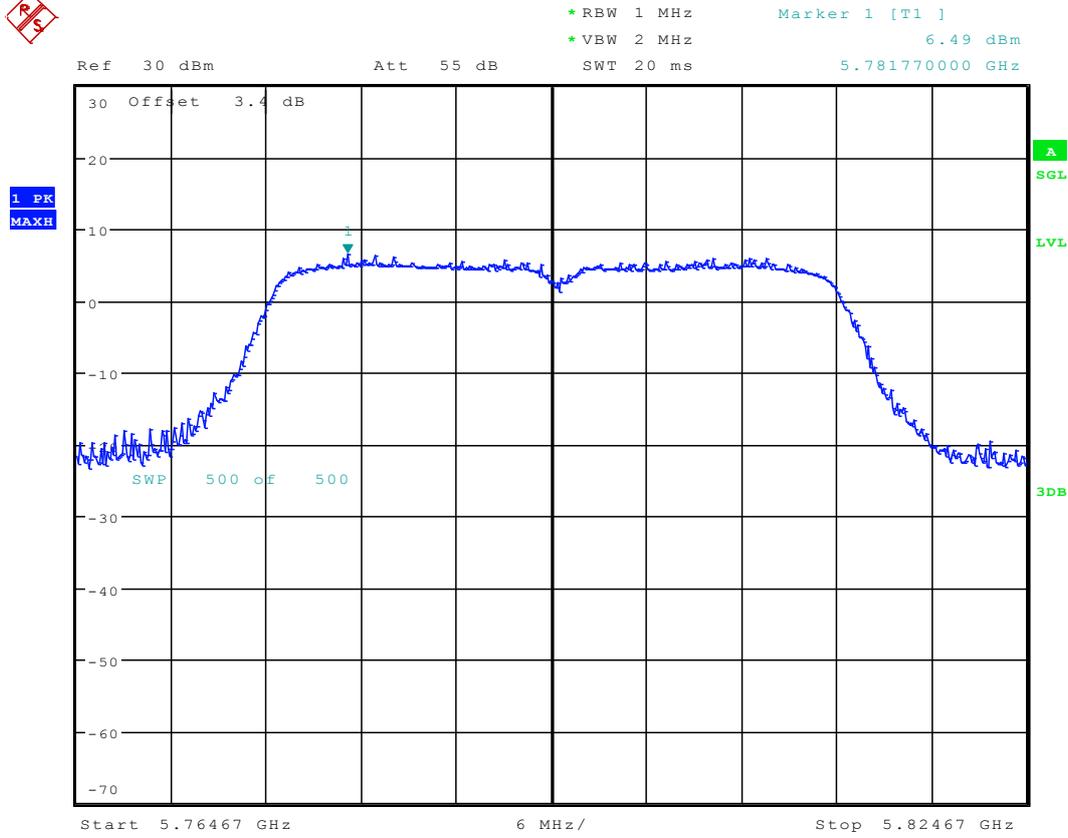
7.2311N40_151 Ant 1



Date: 22.NOV.2015 11:39:35



7.2411N40_159 Ant 1



Date: 22.NOV.2015 11:41:50



Appendix E: Unwanted Emissions into Non-Restricted Frequency Bands



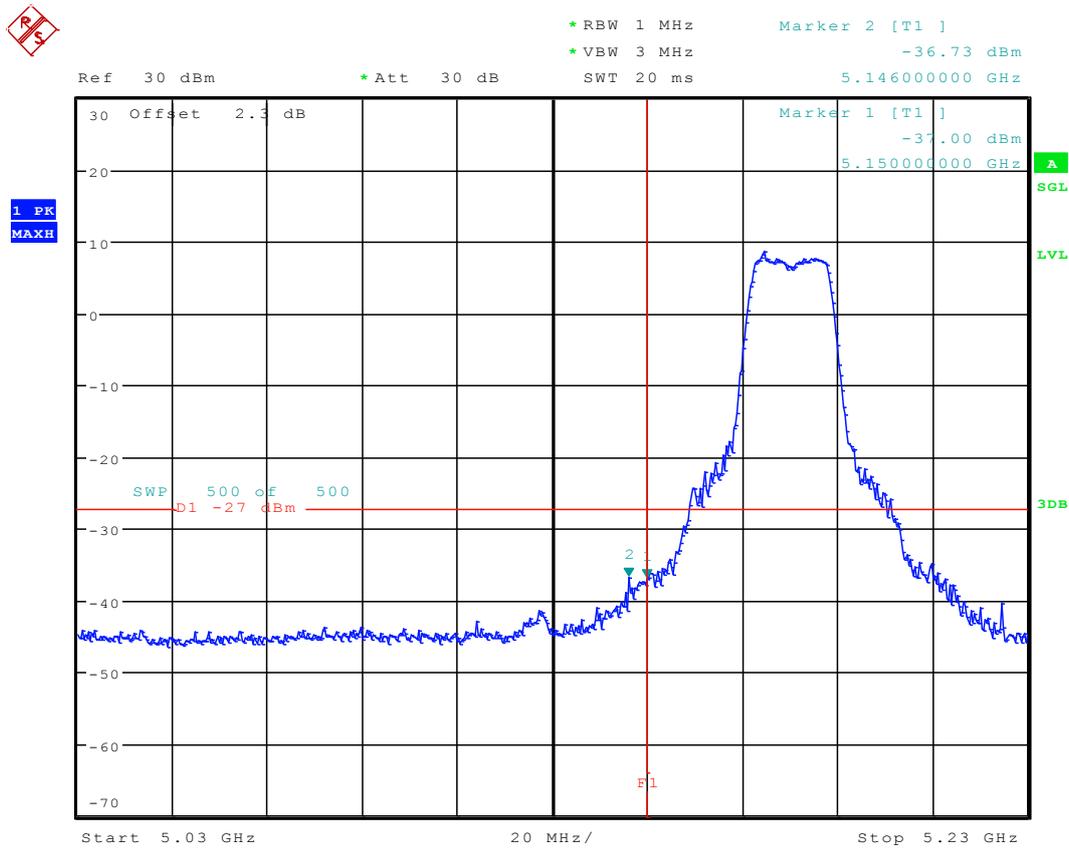
8 Result Table

FCC Part15, Subpart E		
Test Item	Frequency Range	Result
Unwanted Emissions into Non-Restricted Frequency Bands	5150-5250	pass
	5250-5350	pass
	5470-5725	pass
	5725-5825	pass

Note: We tested all modes, but the data presented below is the worst case.

9 Test Plot

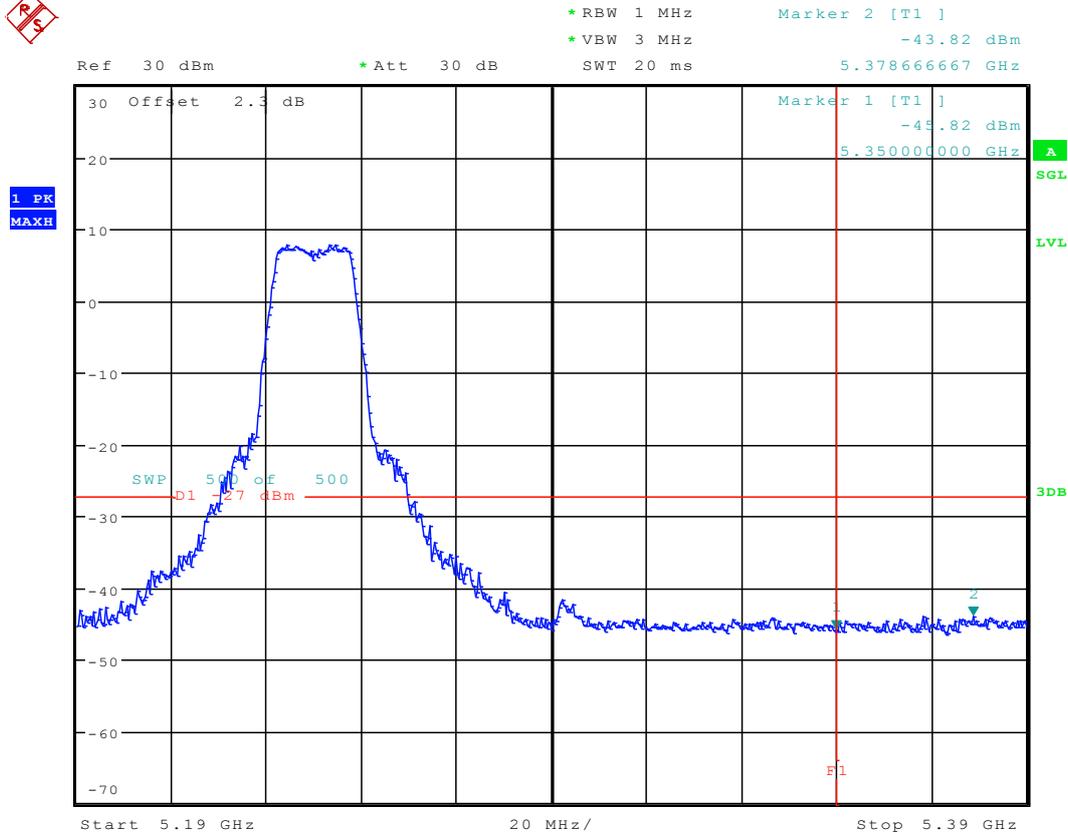
9.1 11A_36 Ant 1



Date: 9.OCT.2015 17:00:30



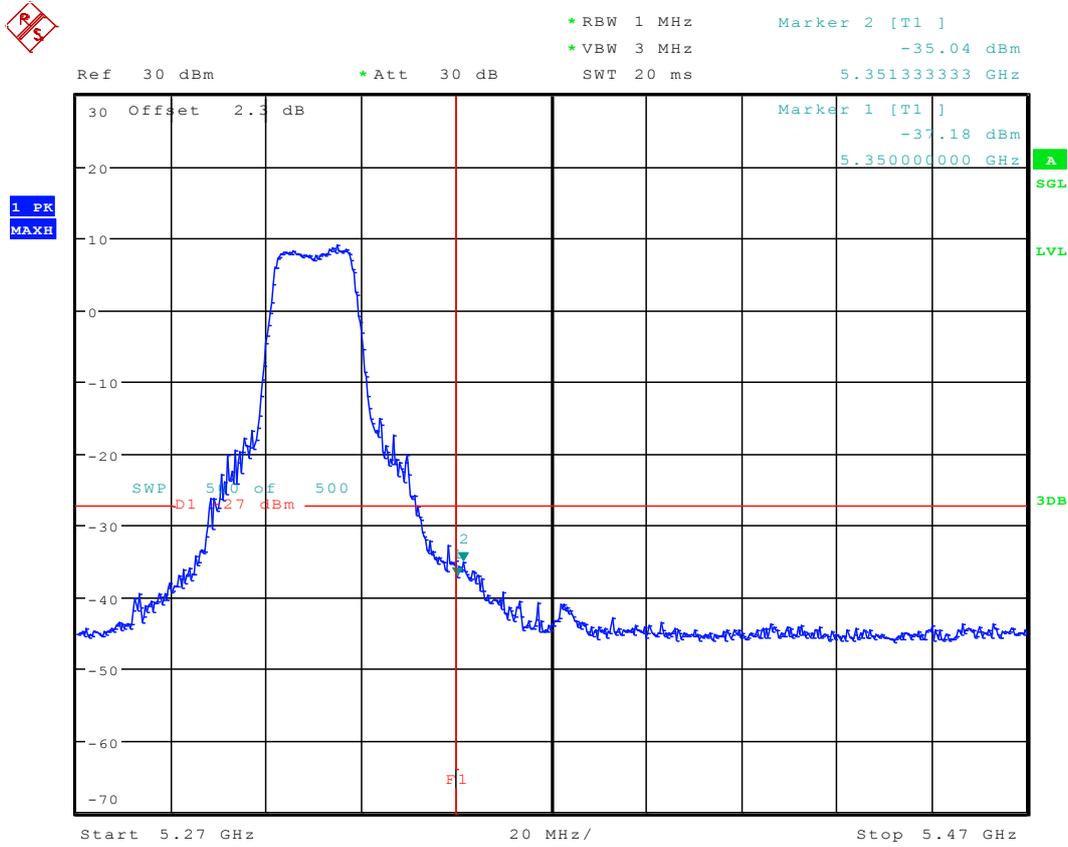
9.2 11A_48 Ant1



Date: 9.OCT.2015 17:05:34



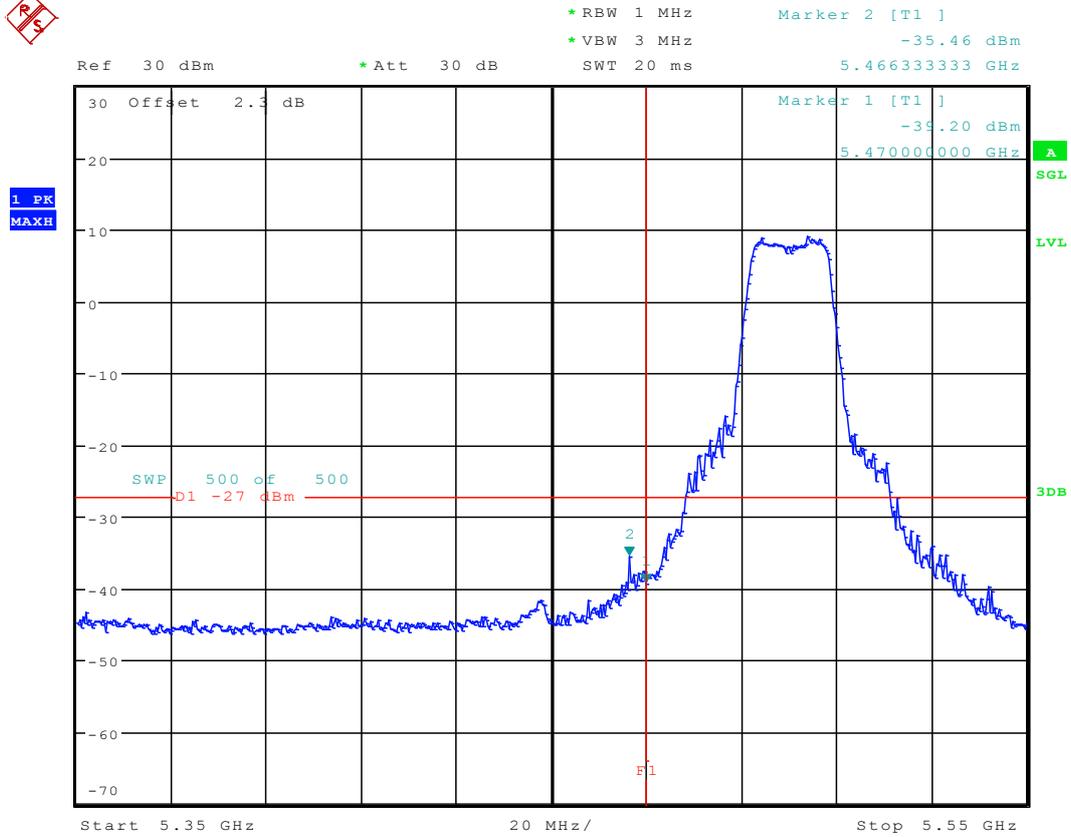
9.4 11A_64 Ant1



Date: 9.OCT.2015 17:17:55



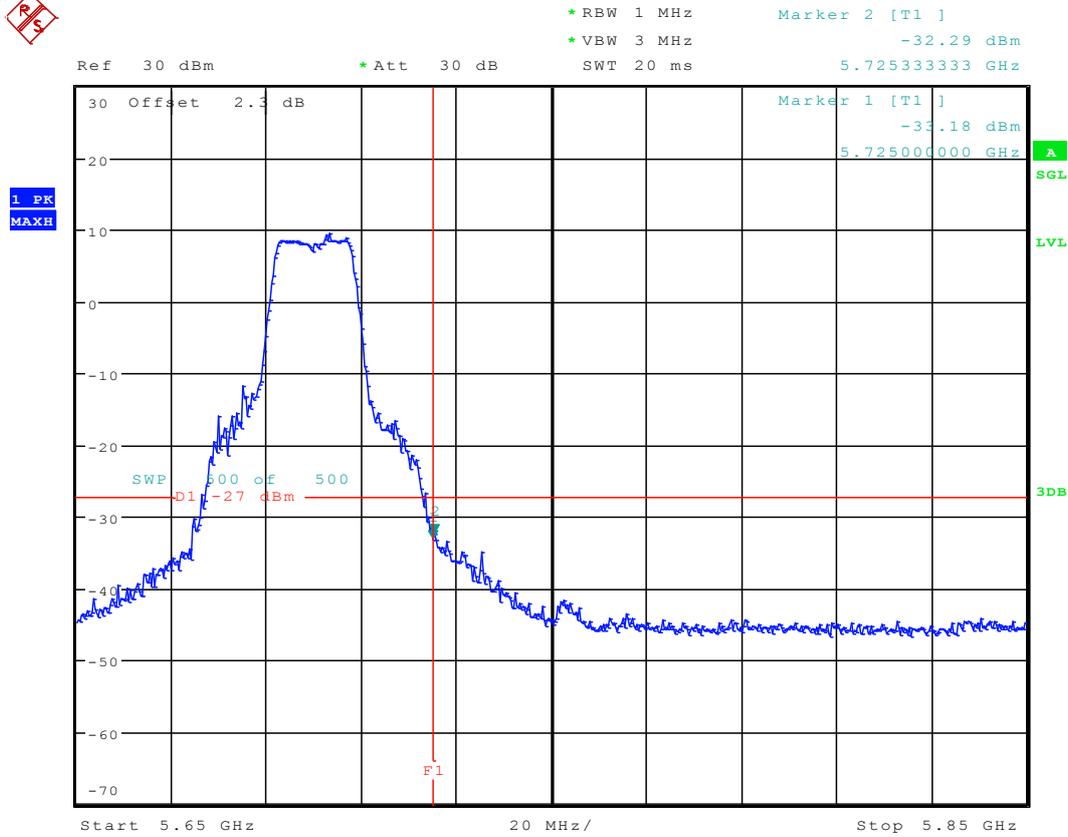
9.5 11A_100 Ant 1



Date: 9.OCT.2015 18:10:40



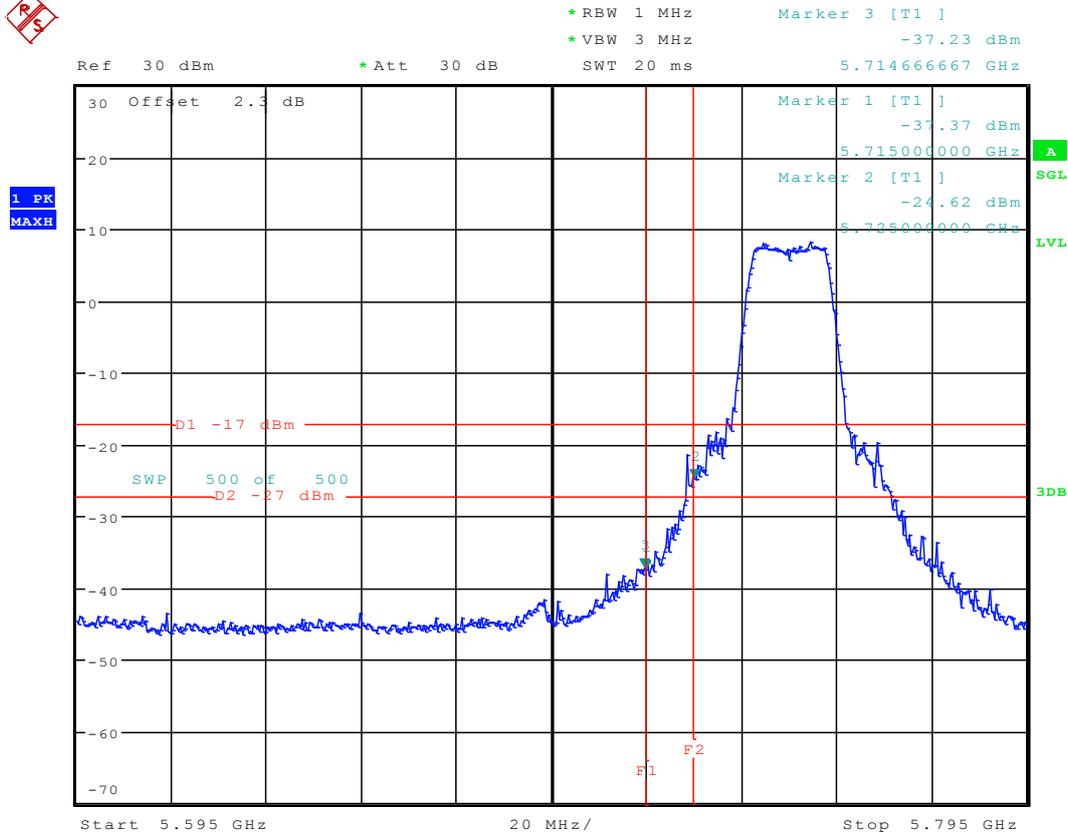
9.6 11A_140 Ant 1



Date: 9.OCT.2015 18:15:18



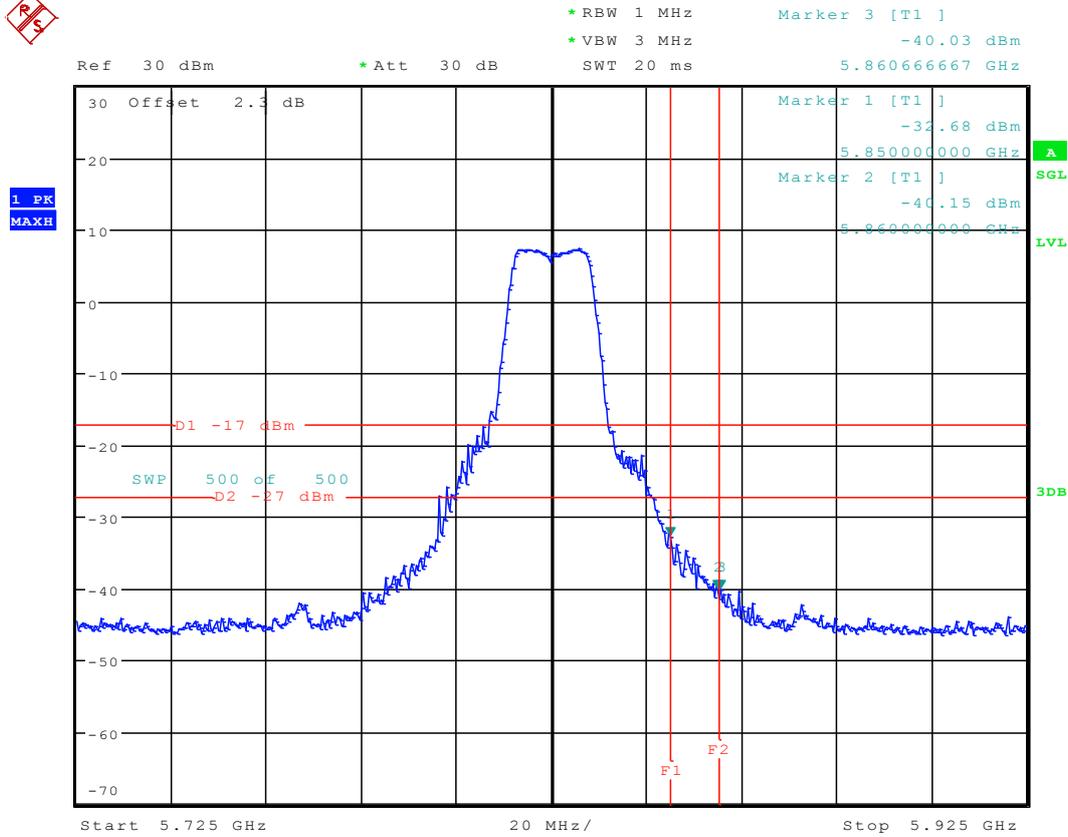
9.7 11A_149 Ant 1



Date: 9.OCT.2015 18:58:09



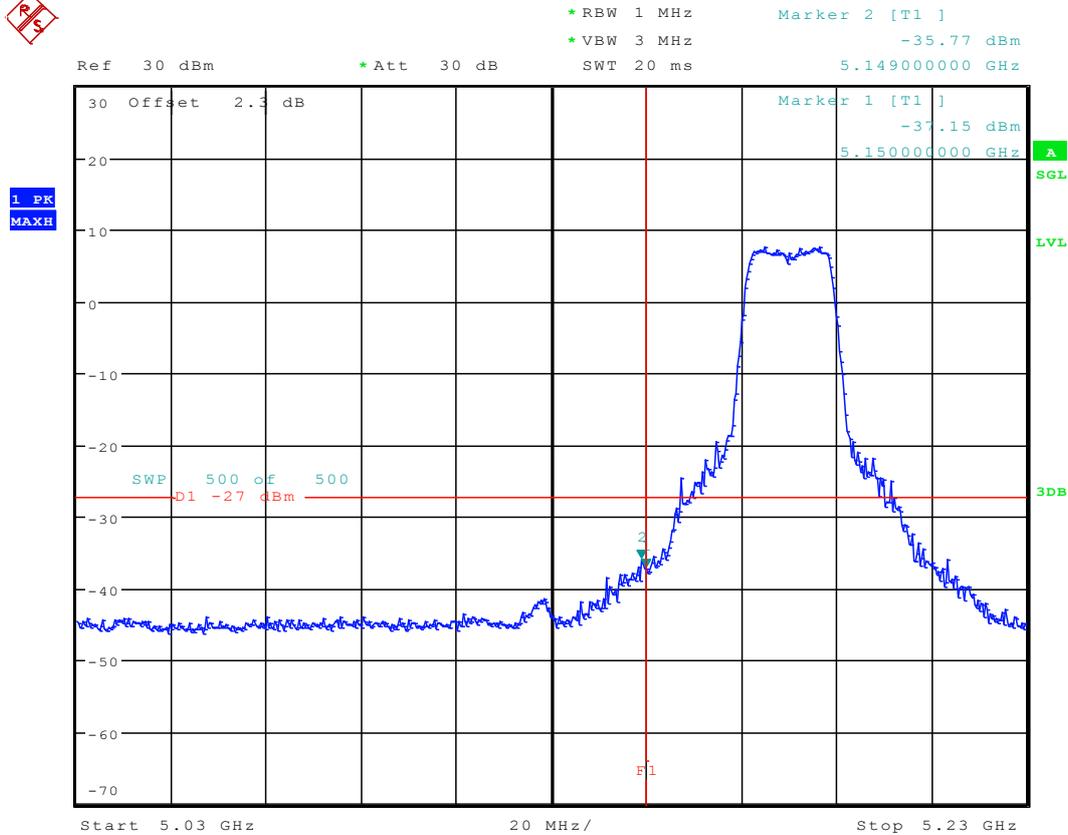
9.8 11A_165 Ant 1



Date: 9.OCT.2015 19:04:49



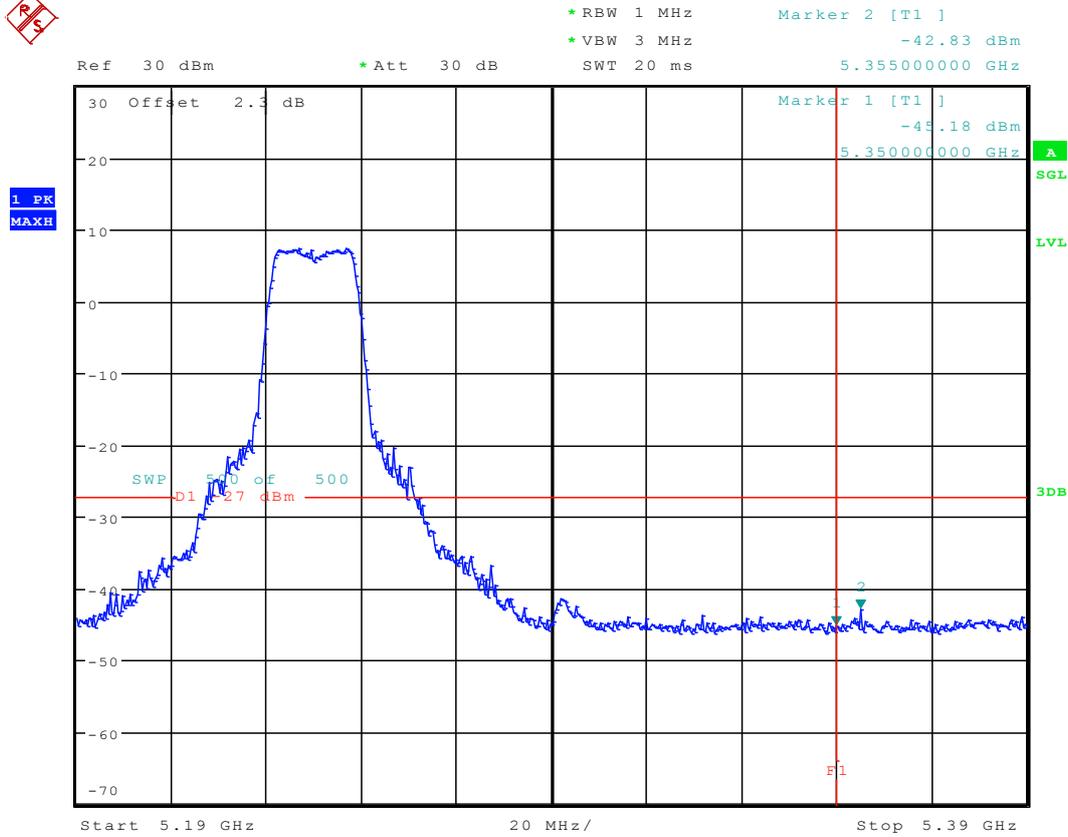
9.9 11N20_36 Ant 1



Date: 9.OCT.2015 17:23:54



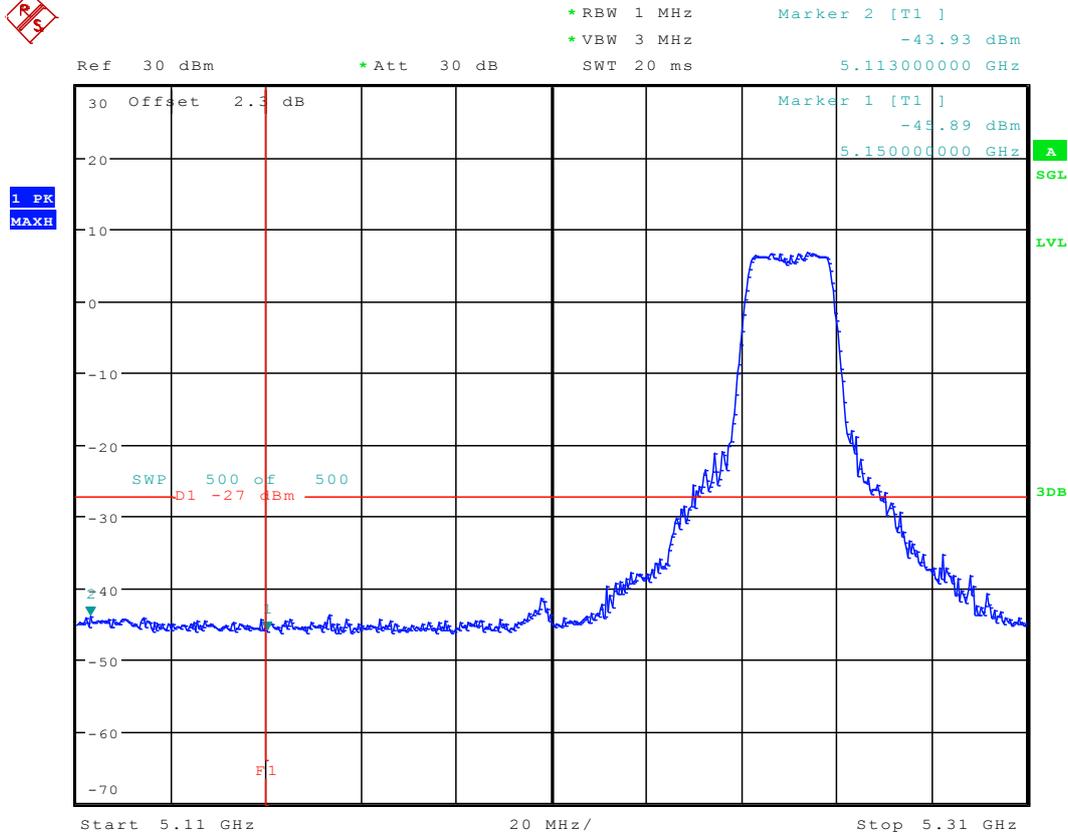
9.1011N20_48 Ant 1



Date: 9.OCT.2015 17:28:39



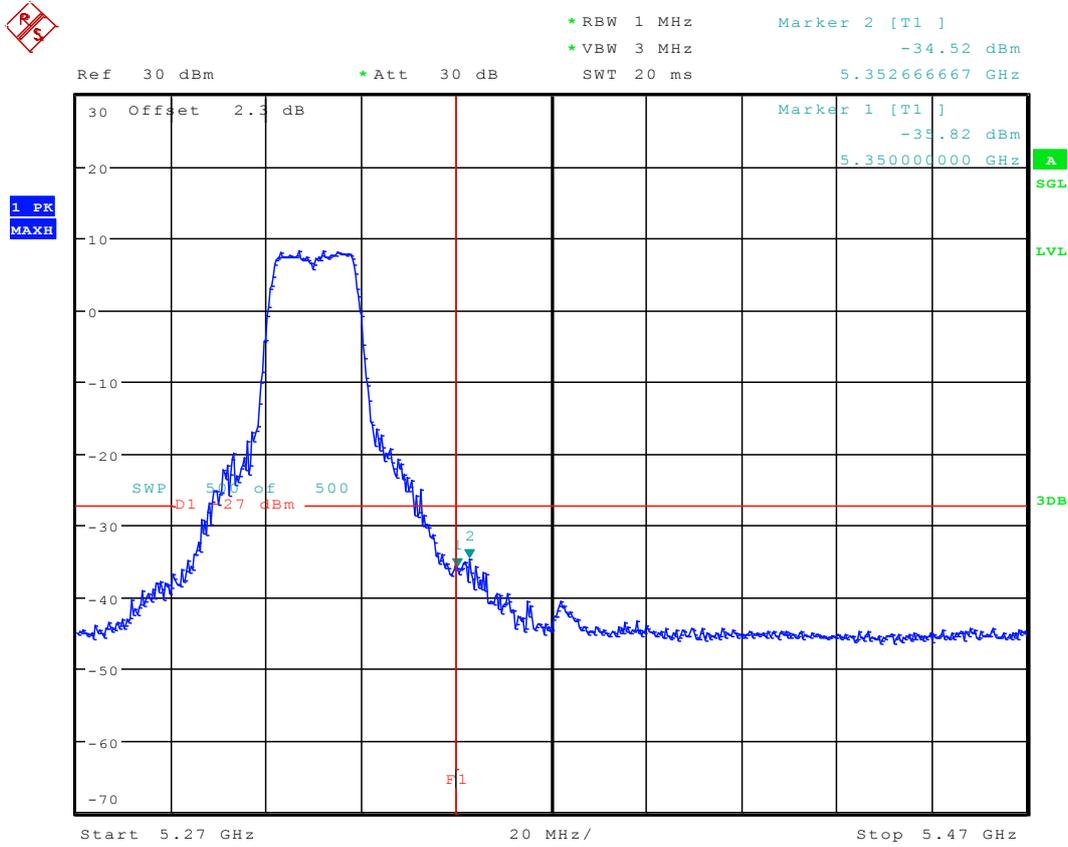
9.1111N20_52 Ant 1



Date: 9.OCT.2015 17:46:16



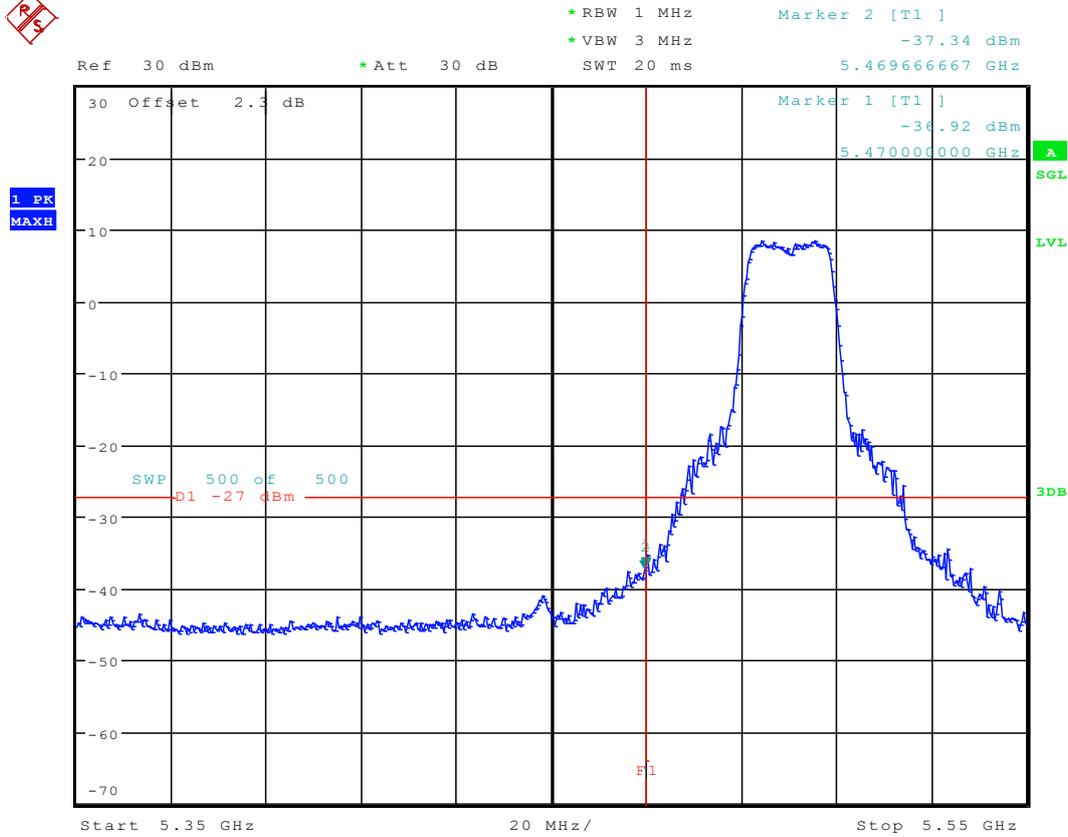
9.1211N20_64 Ant 1



Date: 9.OCT.2015 17:50:54

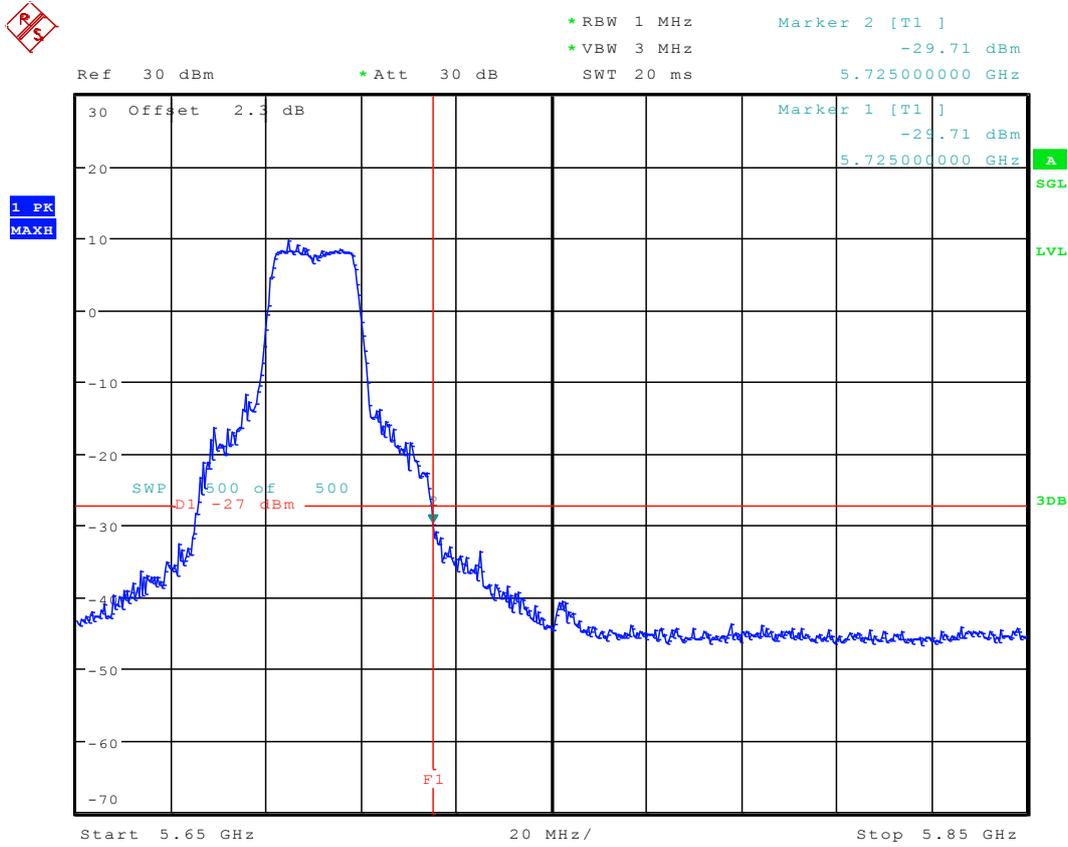


9.1311N20_100 Ant 1



Date: 9.OCT.2015 18:32:45

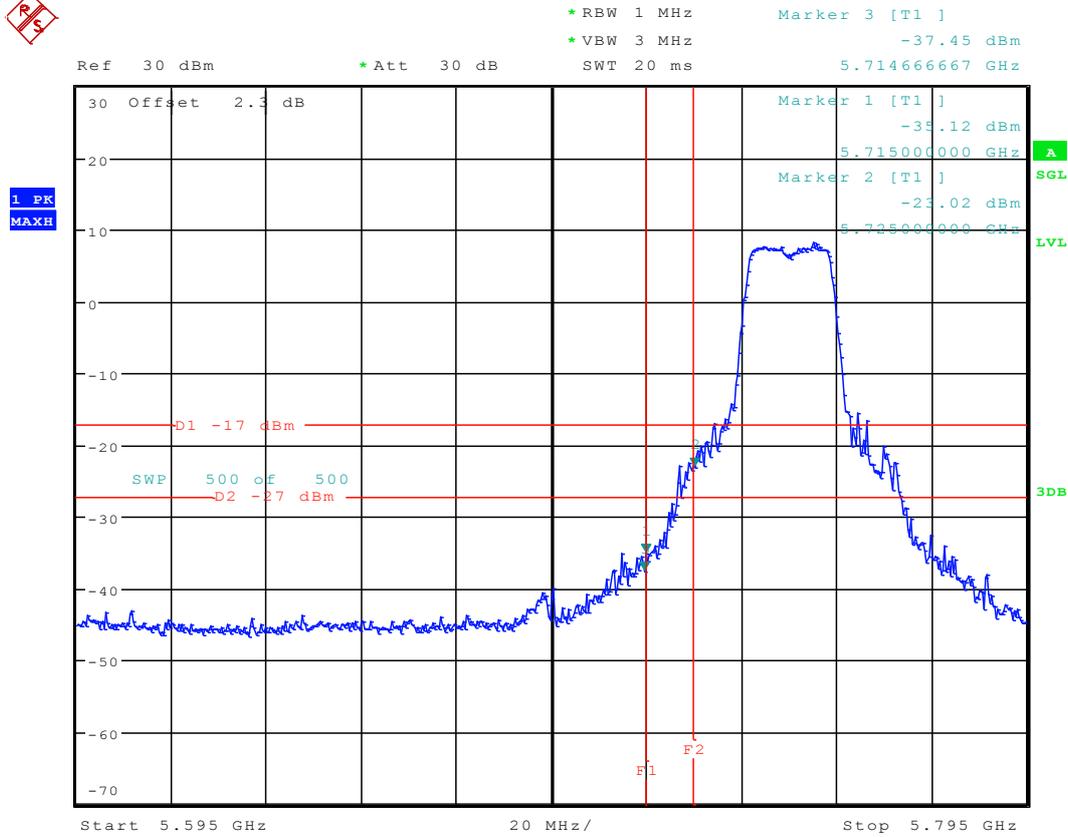
9.1411N20_140 Ant 1



Date: 9.OCT.2015 18:39:20



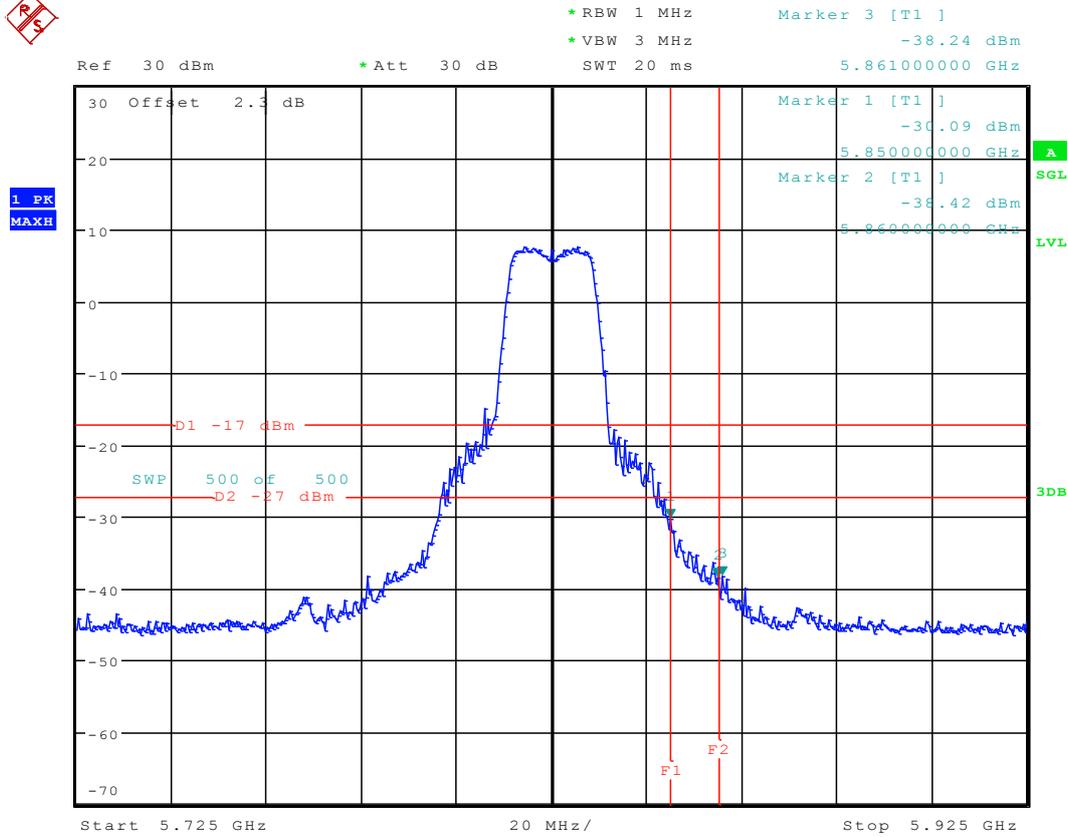
9.1511N20_149 Ant 1



Date: 9.OCT.2015 19:10:38



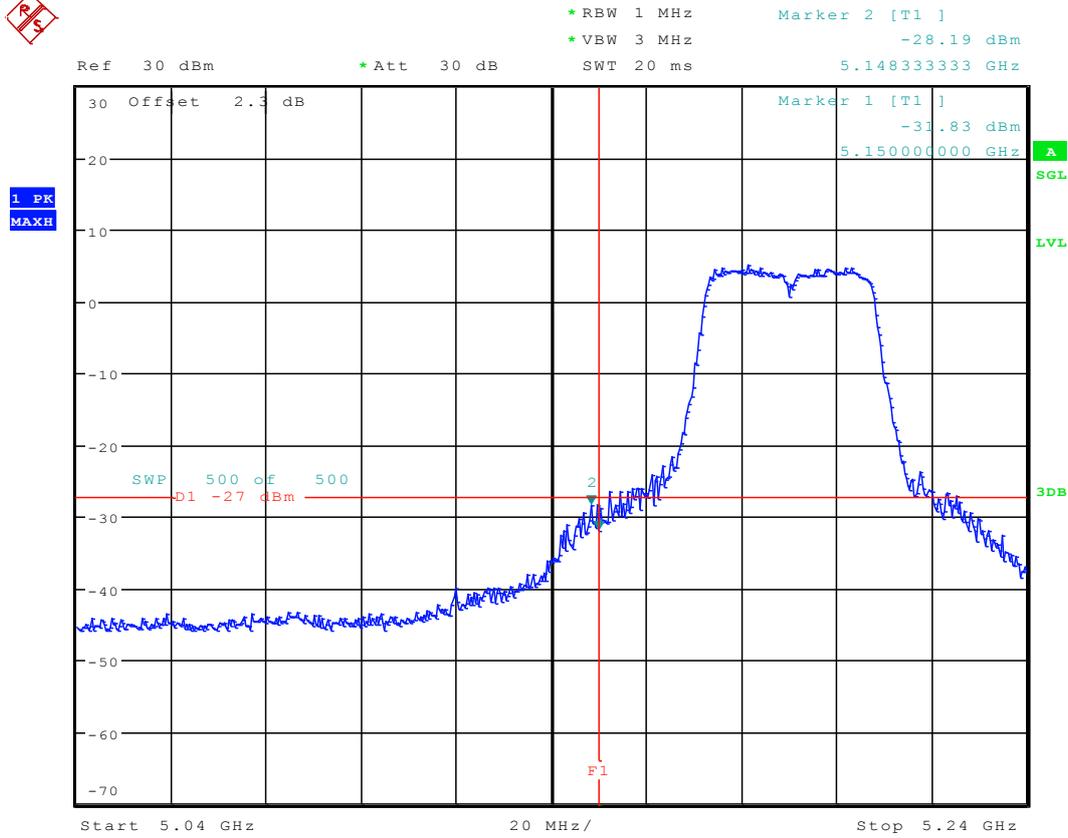
9.1611N20_165 Ant 1



Date: 9.OCT.2015 19:16:12



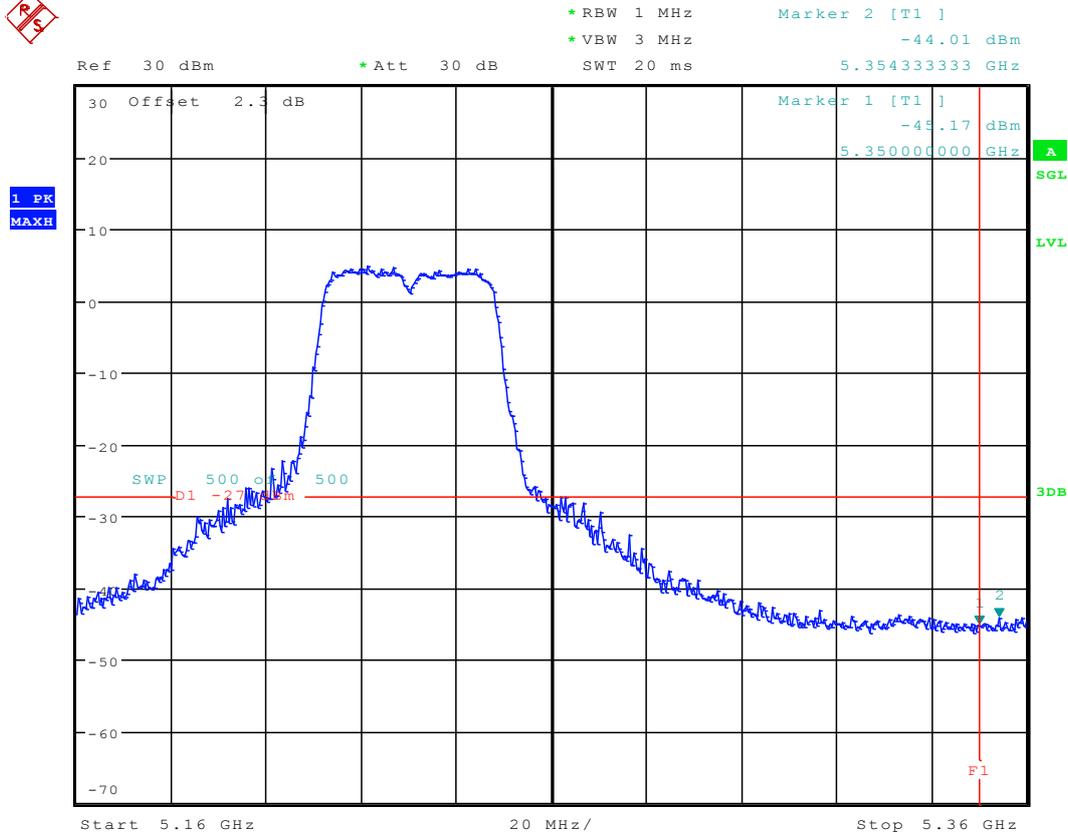
9.1711N40_38 Ant 1



Date: 9.OCT.2015 17:34:37



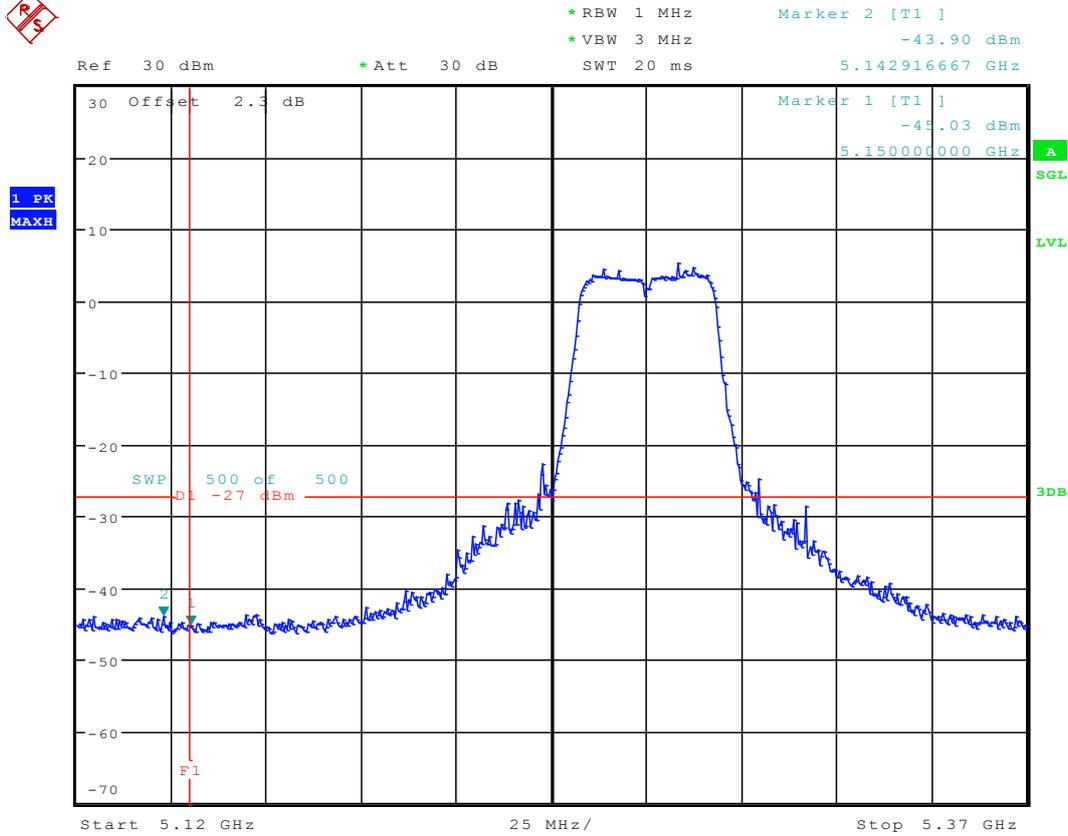
9.1811N40_46 Ant 1



Date: 9.OCT.2015 17:40:41



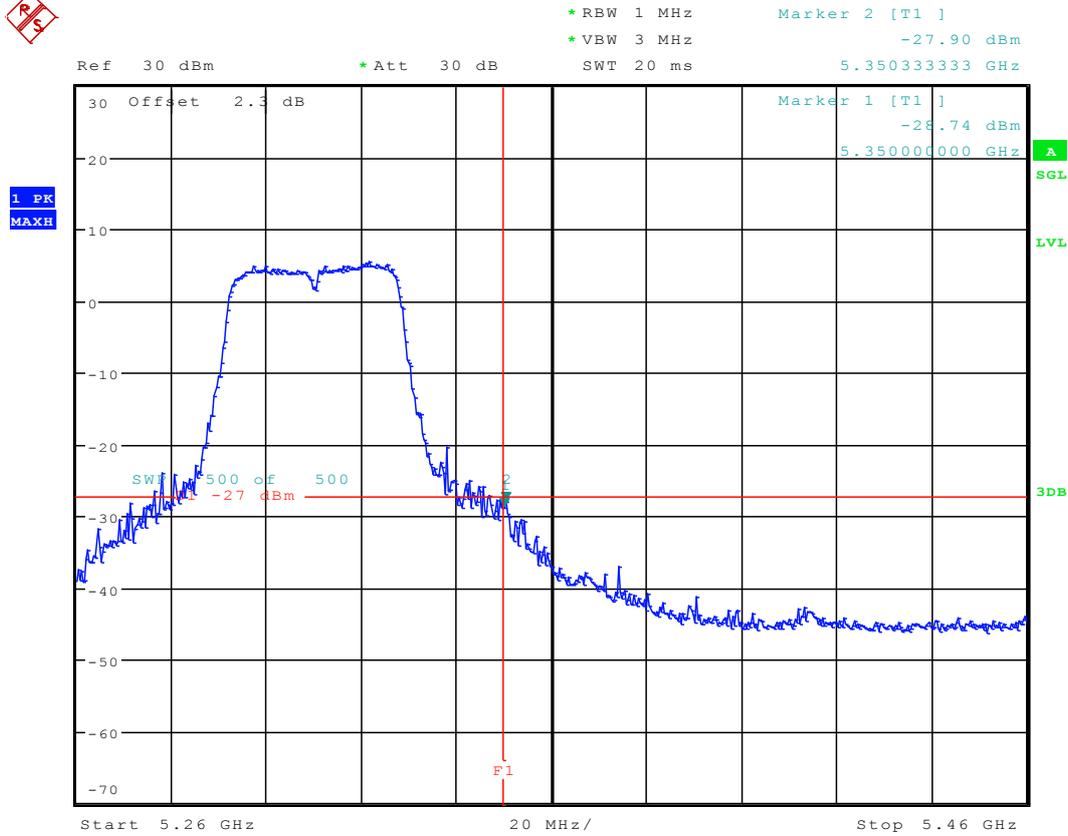
9.1911N40_54 Ant 1



Date: 9.OCT.2015 17:56:58



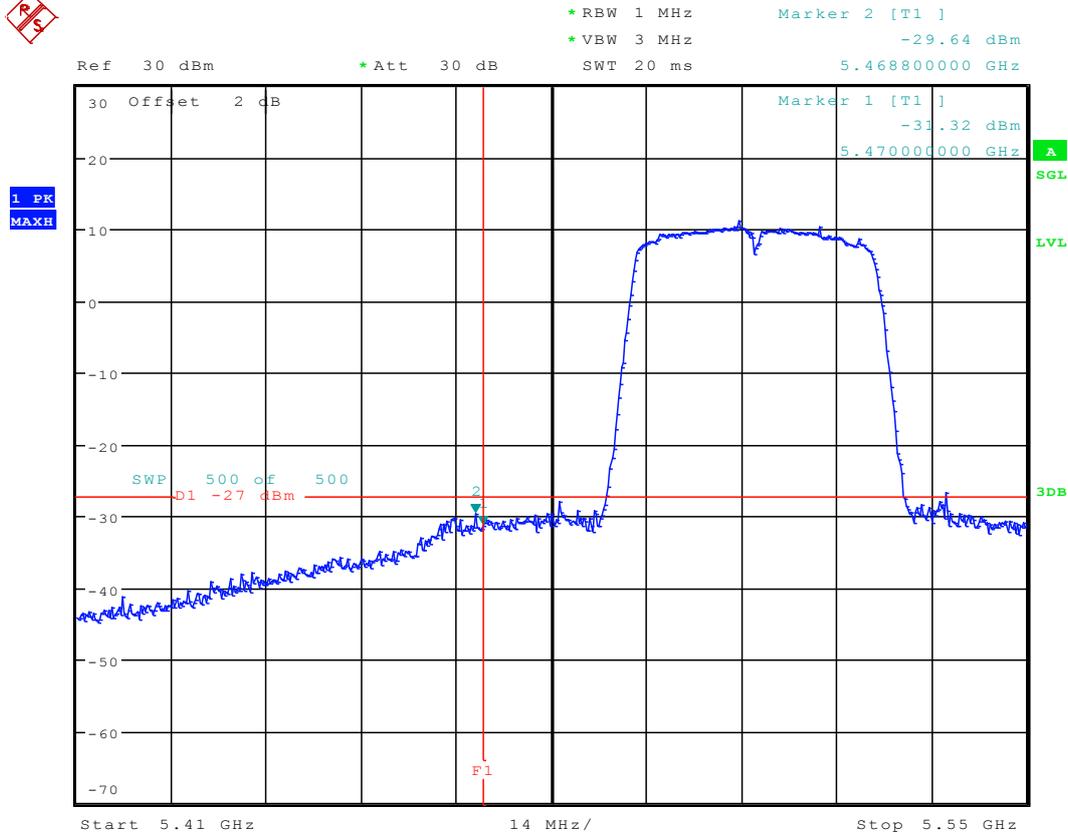
9.2011N40_62 Ant 1



Date: 9.OCT.2015 18:03:00



9.2111N40_102 Ant 1



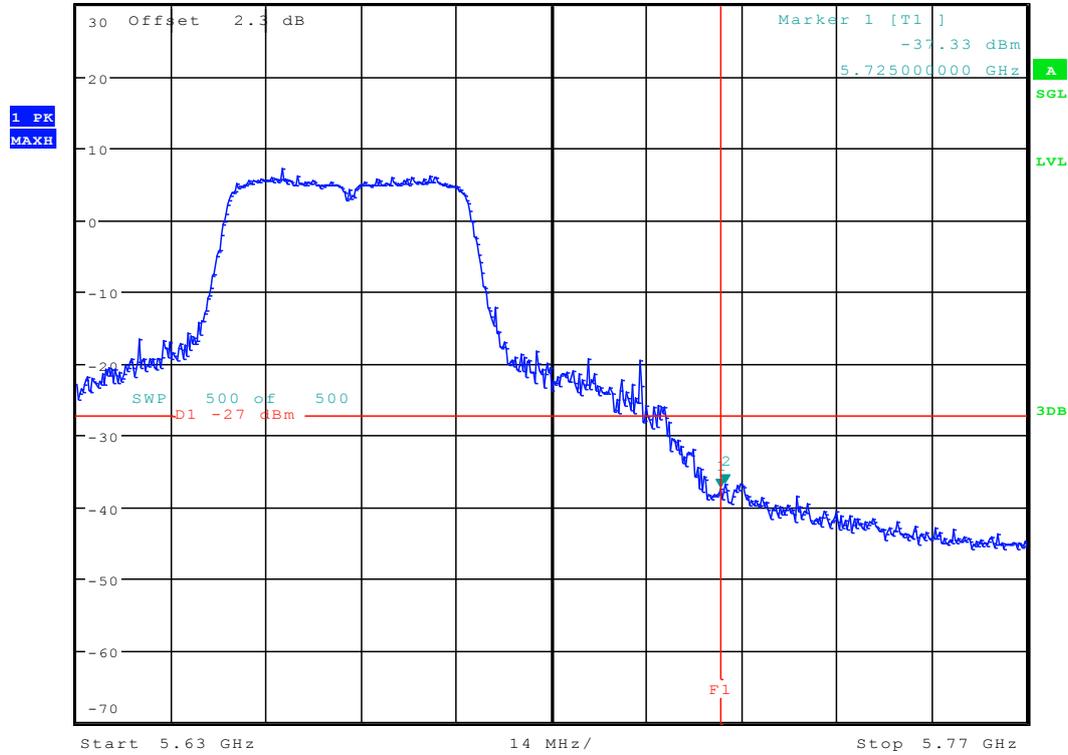
Date: 31.AUG.2015 19:15:03



9.2211N40_134 Ant 1



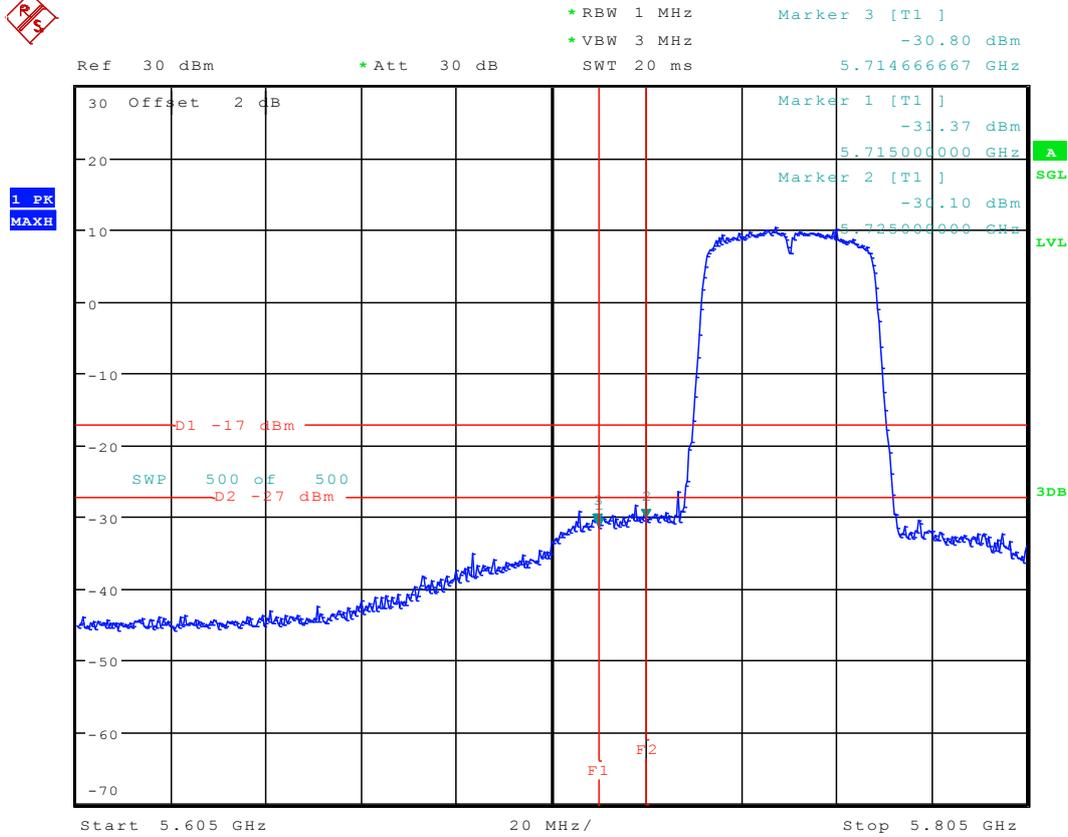
* RBW 1 MHz Marker 2 [T1]
 * VBW 3 MHz -36.69 dBm
 Ref 30 dBm * Att 30 dB SWT 20 ms 5.725666667 GHz



Date: 9.OCT.2015 18:48:15



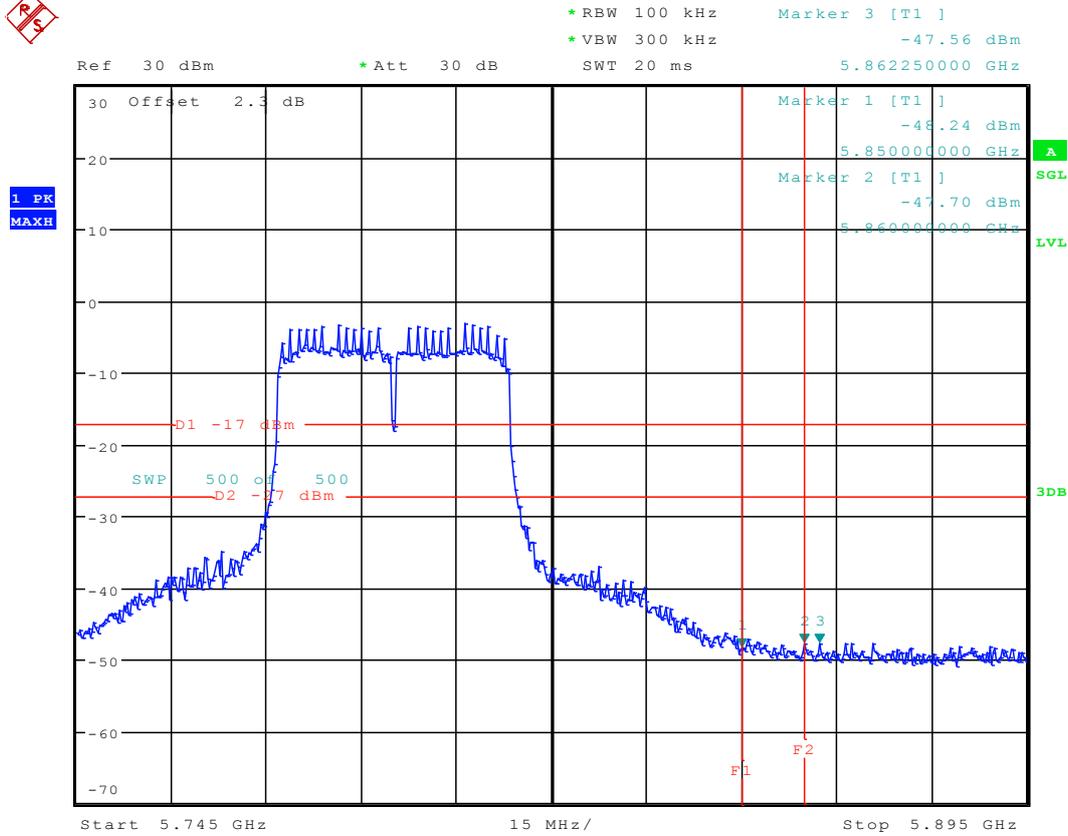
9.2311N40_151 Ant 1



Date: 2.SEP.2015 11:46:04



9.2411N40_159 Ant 1



Date: 9.OCT.2015 19:26:16

Appendix F: Frequency Stability

Frequency Error vs. Voltage:

Test Conditions	Measured Frequency (MHz)
	5180
V nom(V)	5180.0088
V max(V)	5180.0082
V min(V)	5180.0081
Max. Deviation Frequency	0.0088
Max. Frequency Error (ppm)	1.70

Frequency Error vs. Temperature:

Test Conditions (° C)	Measured Frequency (MHz)
	5180
-5	5180.0070
5	5180.0062
15	5180.0057
25	5180.0073
35	5180.0060
45	5180.0070
50	5180.0089
Max. Deviation Frequency	0.0089
Max. Frequency Error (ppm)	1.72



Frequency Error vs. Voltage:

Test Conditions	Measured Fequency (MHz)
	5320
V nom(V)	5320.0024
V max(V)	5320.0029
V min(V)	5320.0078
Max. Deviation Frequency	0.0078
Max. Frequency Error (ppm)	1.47

Frequency Error vs. Temperature:

Test Conditions (° C)	Measured Fequency (MHz)
	5320
-5	5320.0056
5	5320.0052
15	5320.0041
25	5320.0041
35	5320.0041
45	5320.0041
50	5320.0041
Max. Deviation Frequency	0.0056
Max. Frequency Error (ppm)	1.05



Frequency Error vs. Voltage:

Test Conditions	Measured Fequency (MHz)
	5700
V nom(V)	5700.0000
V max(V)	5700.0026
V min(V)	5700.0018
Max. Deviation Frequency	0.0048
Max. Frequency Error (ppm)	0.84

Frequency Error vs. Temperature:

Test Conditions (° C)	Measured Fequency (MHz)
	5700
-5	5700.0068
5	5700.0067
15	5700.0048
25	5700.0048
35	5700.0048
45	5700.0048
50	5700.0048
Max. Deviation Frequency	0.0068
Max. Frequency Error (ppm)	1.72

**UNII-3**

Frequency Error vs. Voltage:

Test Conditions	Measured Fequency (MHz)
	5825
V nom(V)	5825.0013
V max(V)	5825.0066
V min(V)	5825.0067
Max. Deviation Frequency	0.0067
Max. Frequency Error (ppm)	1.15

Frequency Error vs. Temperature:

Test Conditions (° C)	Measured Fequency (MHz)
	5825
-5	5825.0045
5	5825.0045
15	5825.0045
25	5825.0046
35	5825.0046
45	5825.0043
50	5825.0046
Max. Deviation Frequency	0.0046
Max. Frequency Error (ppm)	0.79

END