

Appendix C

RF Test Data for 2.4G WIFI (Conducted Measurement)

Product Name: IPTV Set-Top Box

Trade Mark: N/A

Test Model: SML-5051W

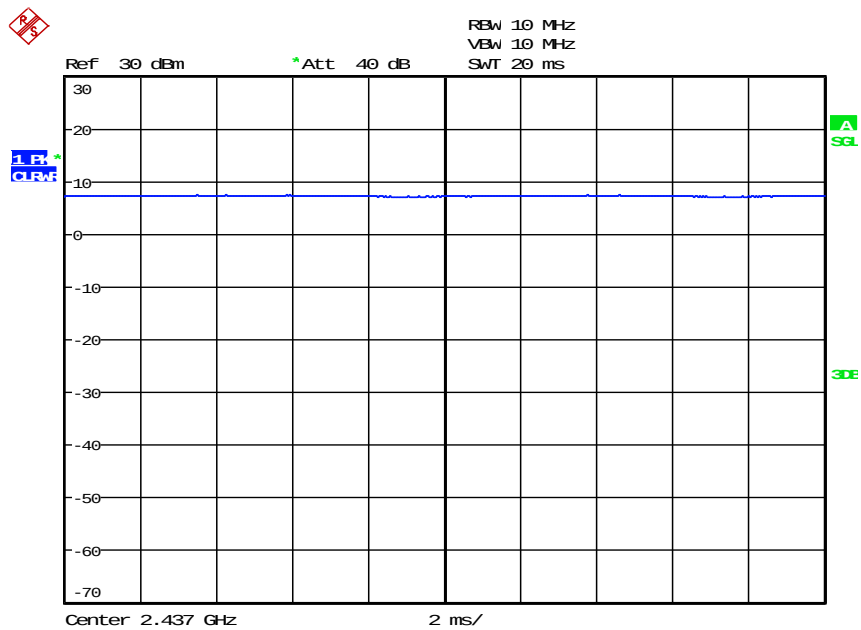
Environmental Conditions

Temperature:	23.4 ° C
Relative Humidity:	53.5%
ATM Pressure:	100.0 kPa
Test Engineer:	David Luo
Supervised by:	Wang.Chuang

C.1 Duty Cycle

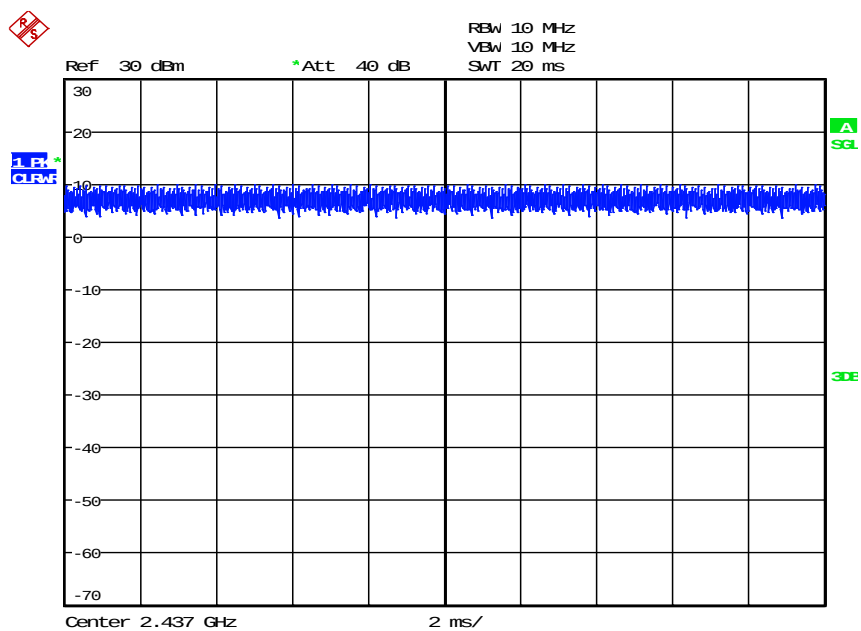
Test Mode	Test Channel	Ant	Duty Cycle[%]	Verdict
11B	2437	Ant1	100	PASS
11G	2437	Ant1	100	PASS
11N20SISO	2437	Ant1	100	PASS
11N40SISO	2437	Ant1	100	PASS

Duty Cycle_11B_2437_Ant1



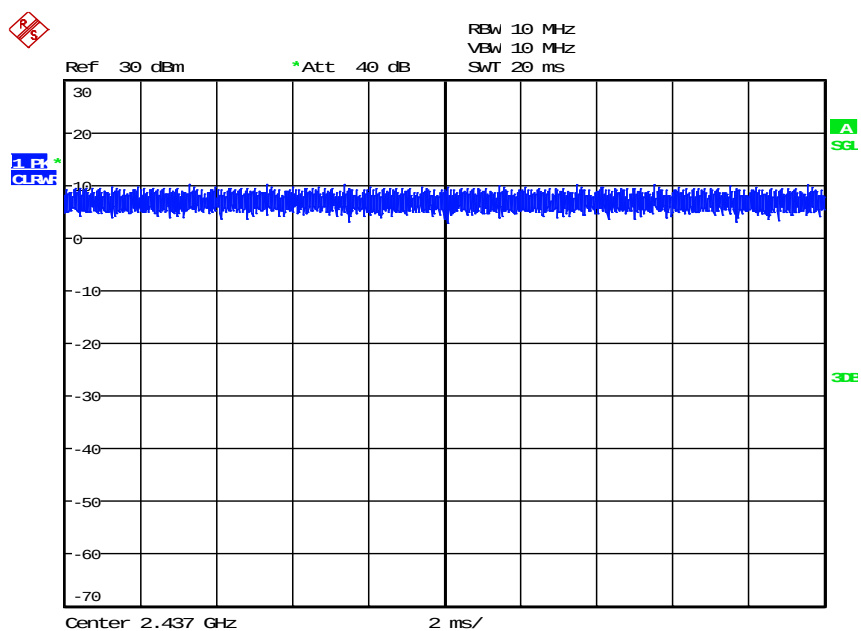
Date: 23.AUG.2019 21:29:21

Duty Cycle_11G_2437_Ant1



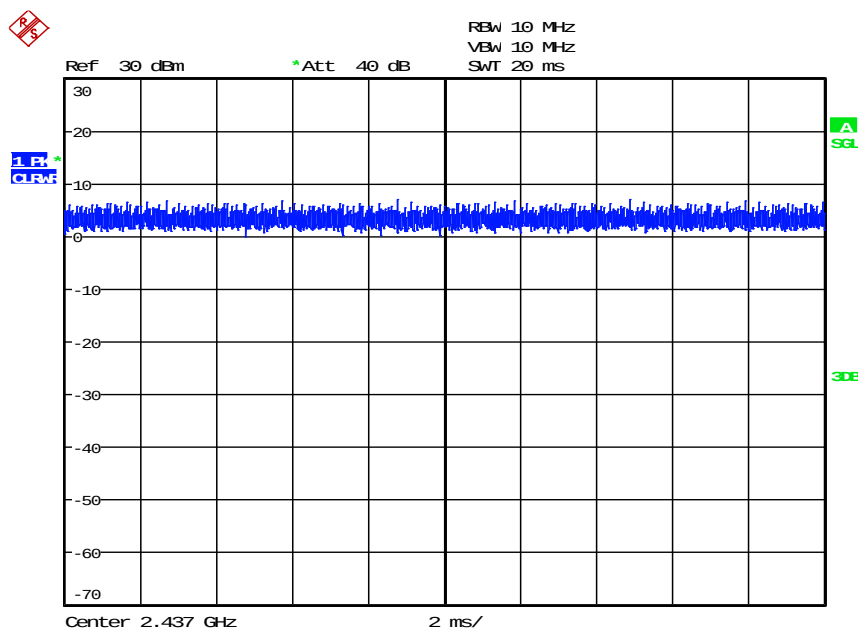
Date: 23.AUG.2019 21:29:53

Duty Cycle_11N20SISO_2437_Ant1



Date: 23.AUG.2019 21:30:23

Duty Cycle_11N40SISO_2437_Ant1



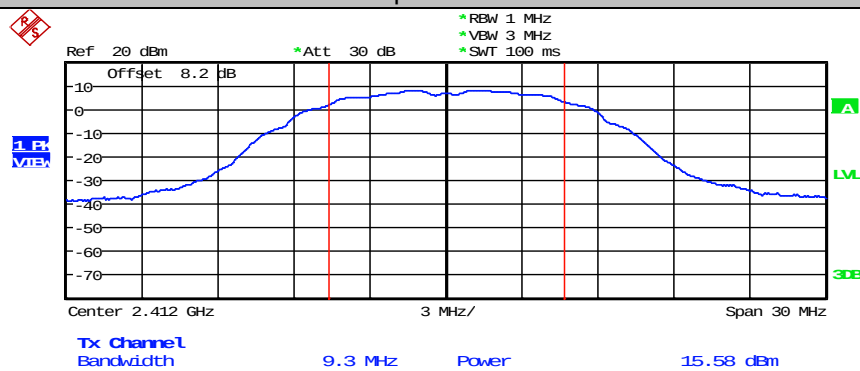
Date: 23.AUG.2019 21:30:50

C.2 Maximum Conducted Output Power

Mode	Channel	Meas.Level [dBm]	Limit [dBm]	Verdict
11B	LCH	15.58	30	PASS
	MCH	15.74	30	PASS
	HCH	15.33	30	PASS
11G	LCH	19.55	30	PASS
	MCH	19.55	30	PASS
	HCH	18.95	30	PASS
11N20SISO	LCH	19.74	30	PASS
	MCH	19.79	30	PASS
	HCH	19.26	30	PASS
11N40SISO	LCH	19.52	30	PASS
	MCH	19.67	30	PASS
	HCH	19.06	30	PASS

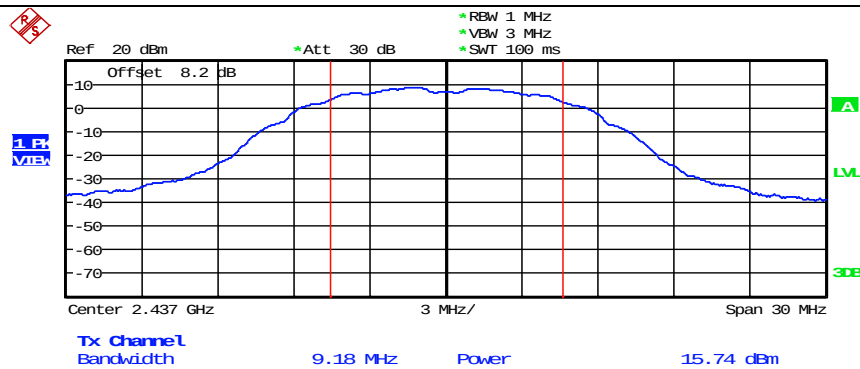
Test Graphs

11B/LCH



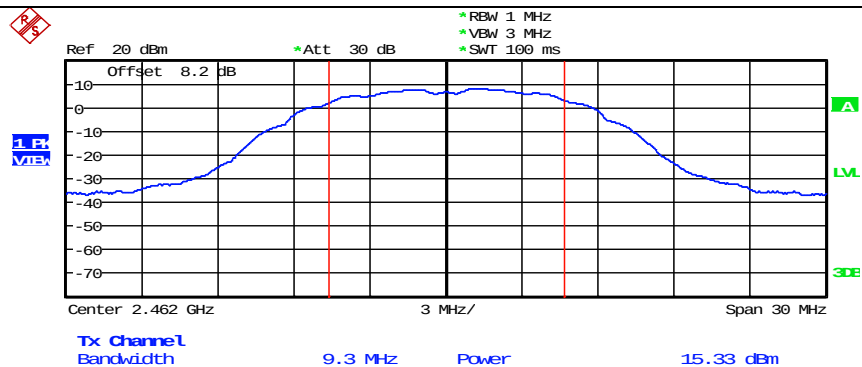
Date: 23.AUG.2019 19:21:25

11B/MCH



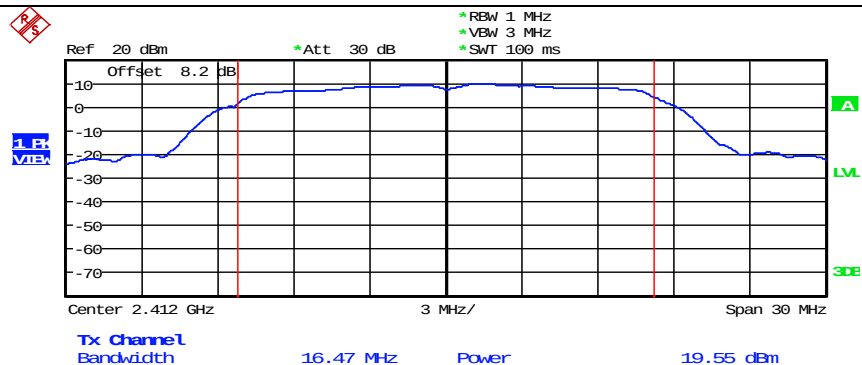
Date: 23.AUG.2019 20:48:14

11B/HCH



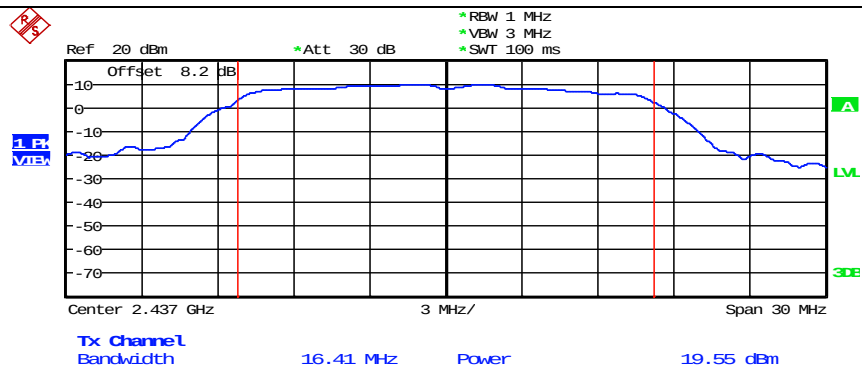
Date: 23.AUG.2019 20:53:25

11G/LCH



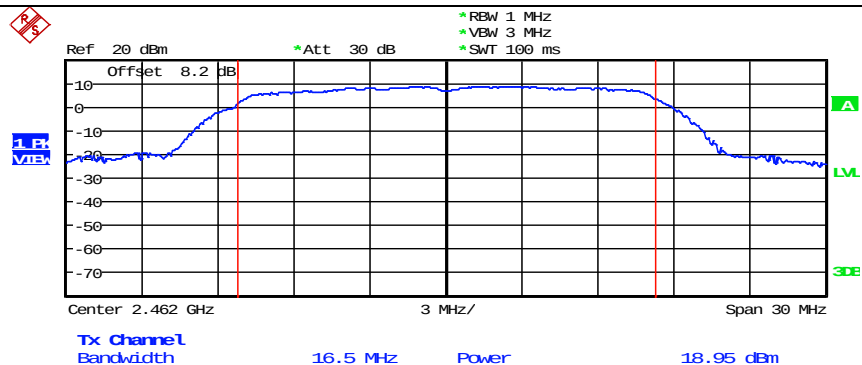
Date: 23.AUG.2019 21:02:57

11G/MCH



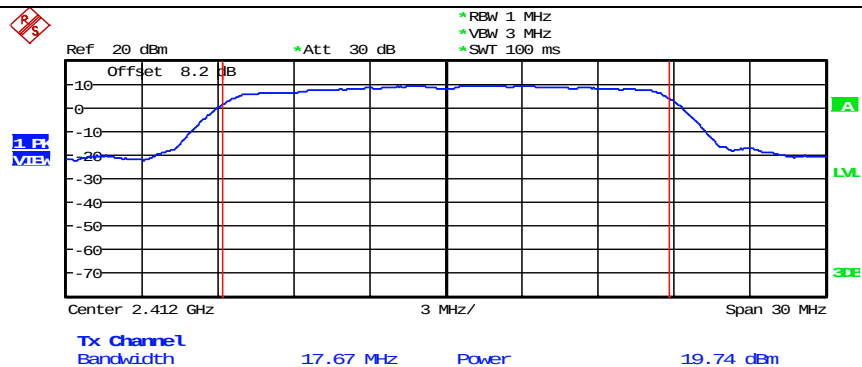
Date: 23.AUG.2019 21:05:52

11G/HCH



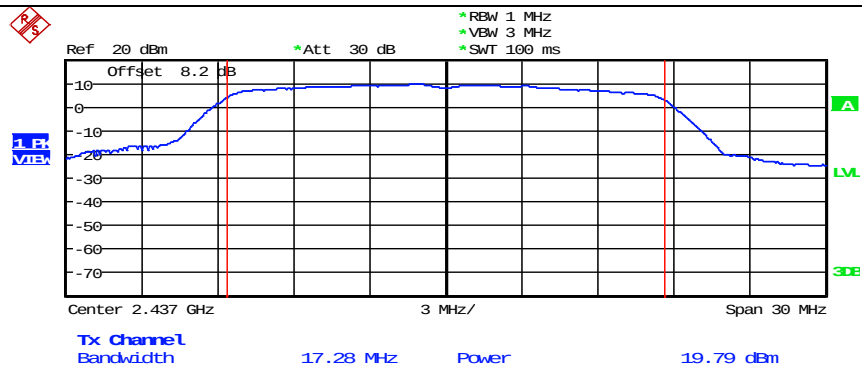
Date: 23.AUG.2019 21:09:27

11N20SISO/LCH



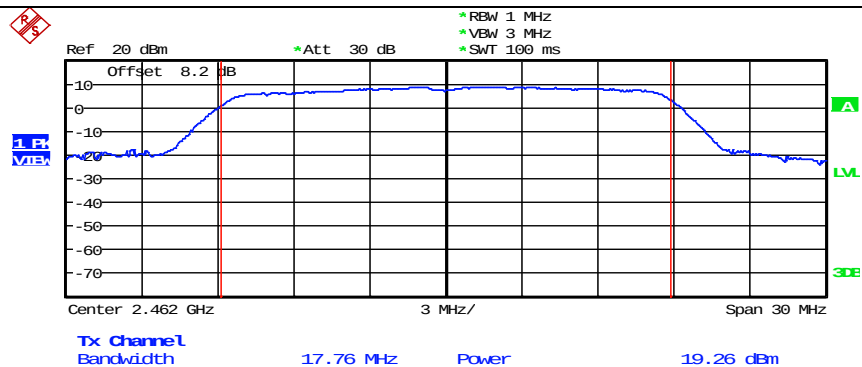
Date: 23.AUG.2019 21:13:50

11N20SISO/MCH



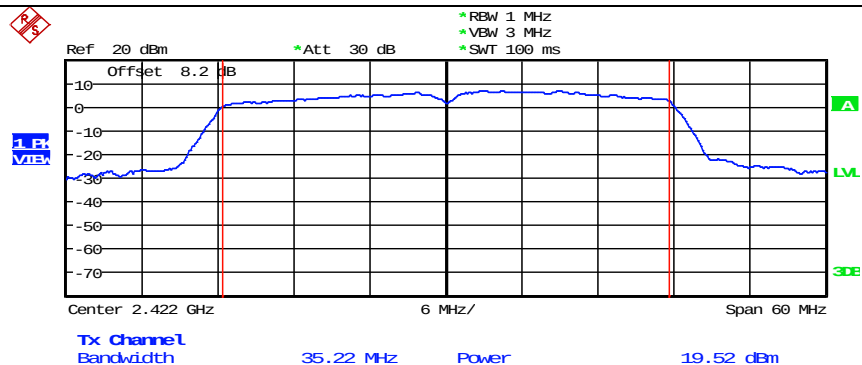
Date: 23.AUG.2019 21:16:17

11N20SISO/HCH



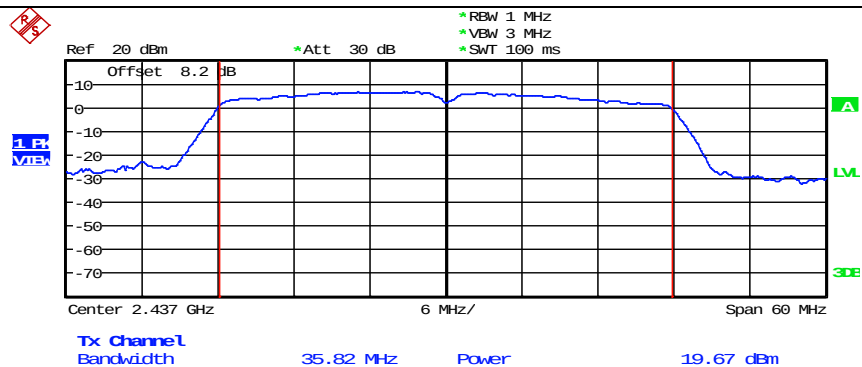
Date: 23.AUG.2019 21:18:04

11N40SISO/LCH



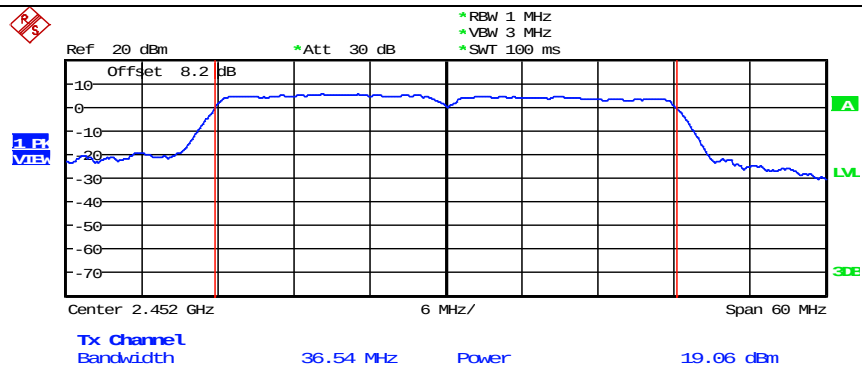
Date: 23.AUG.2019 21:20:34

11N40SISO/MCH



Date: 23.AUG.2019 21:23:43

11N40SISO/HCH



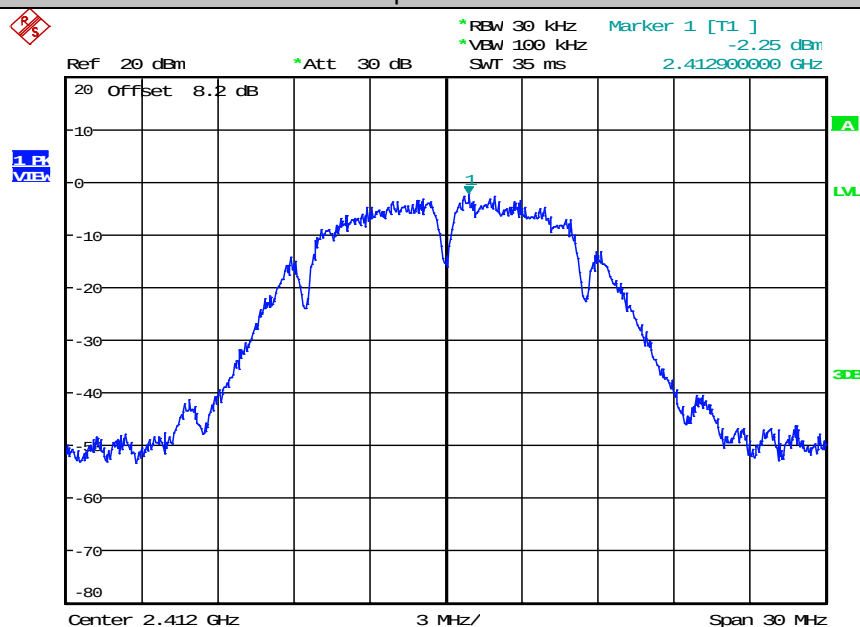
Date: 23.AUG.2019 21:27:18

C.3 Maximum Power Spectral Density

Mode	Channel	Meas.Level [dBm/30KHz]	Limit [dBm/3KHz]	Verdict
11B	LCH	-2.250	8	PASS
	MCH	-2.270	8	PASS
	HCH	-2.490	8	PASS
11G	LCH	-4.120	8	PASS
	MCH	-3.550	8	PASS
	HCH	-4.460	8	PASS
11N20SISO	LCH	-3.410	8	PASS
	MCH	-2.950	8	PASS
	HCH	-3.900	8	PASS
11N40SISO	LCH	-7.040	8	PASS
	MCH	-6.880	8	PASS
	HCH	-8.390	8	PASS

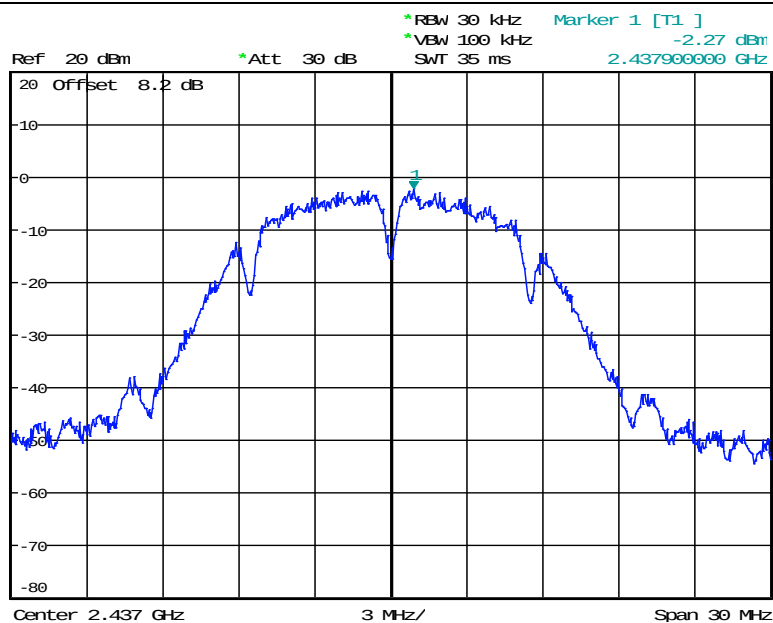
Test Graphs

11B/LCH



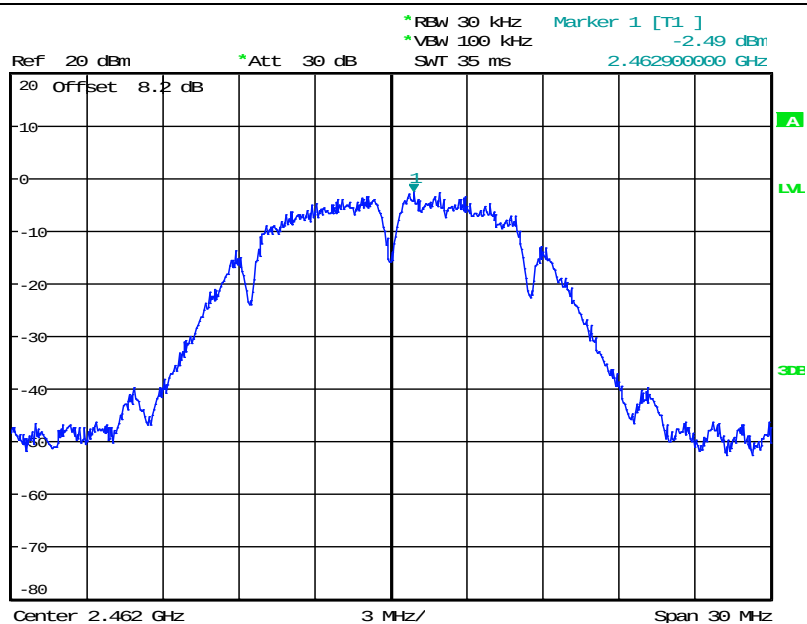
Date: 23.AUG.2019 19:21:38

11B/MCH

1 F
VIEW

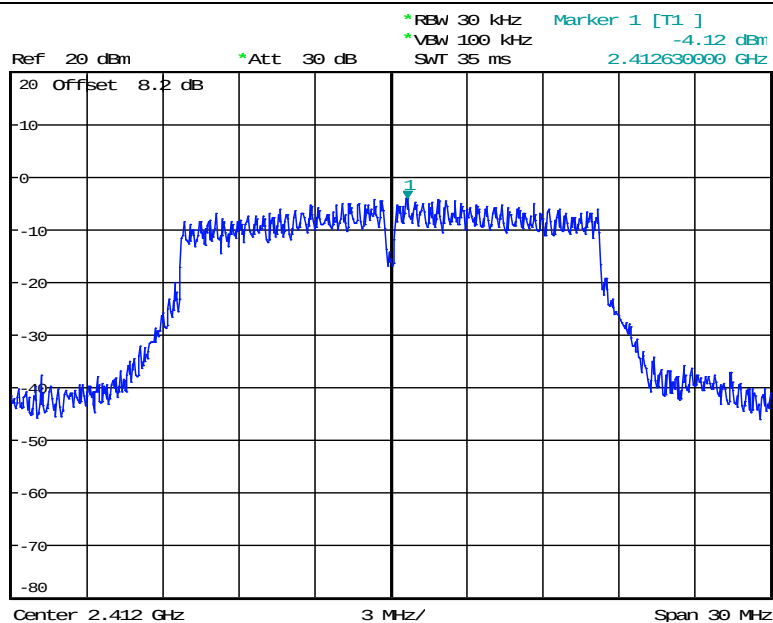
Date: 23.AUG.2019 20:48:27

11B/HCH

1 F
VIEW

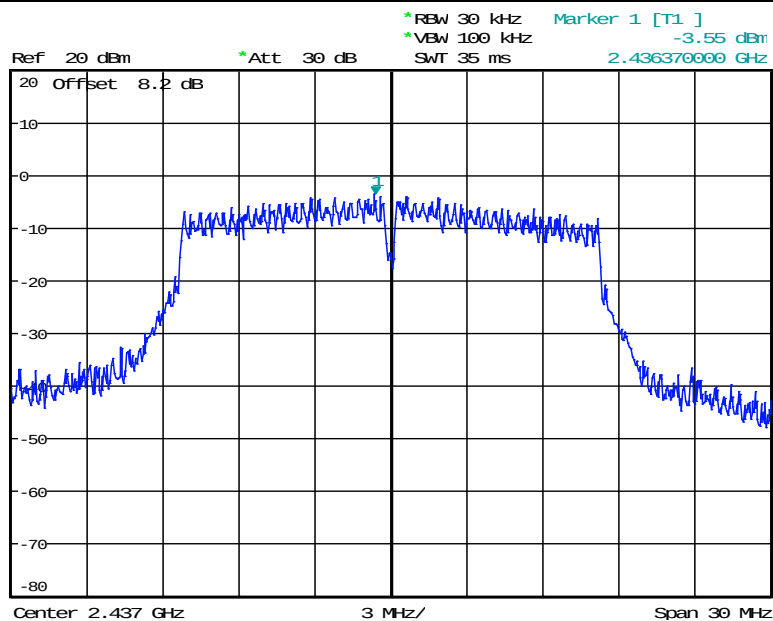
Date: 23.AUG.2019 20:53:38

11G/LCH

1 F
VIEW

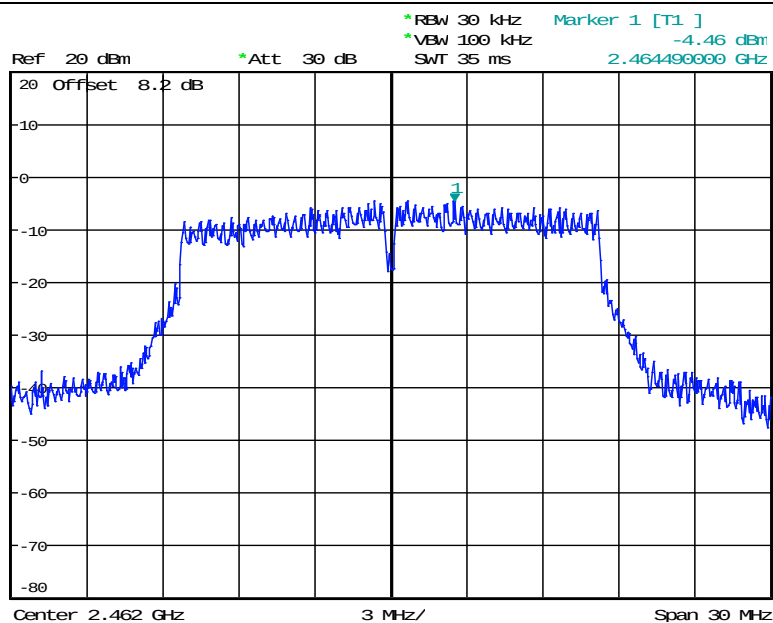
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11G/MCH

1 F
VIEW

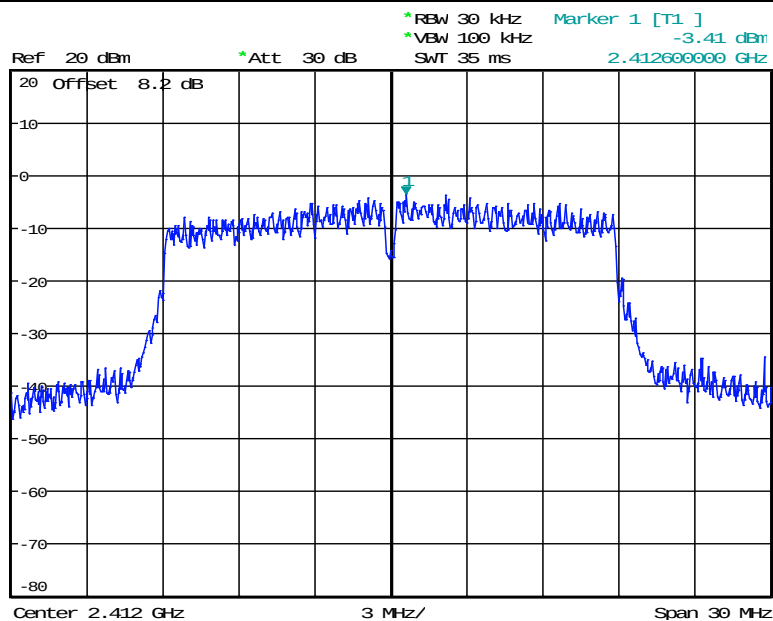
Date: 23.AUG.2019 21:06:05

11G/HCH

1 F.
VIEW

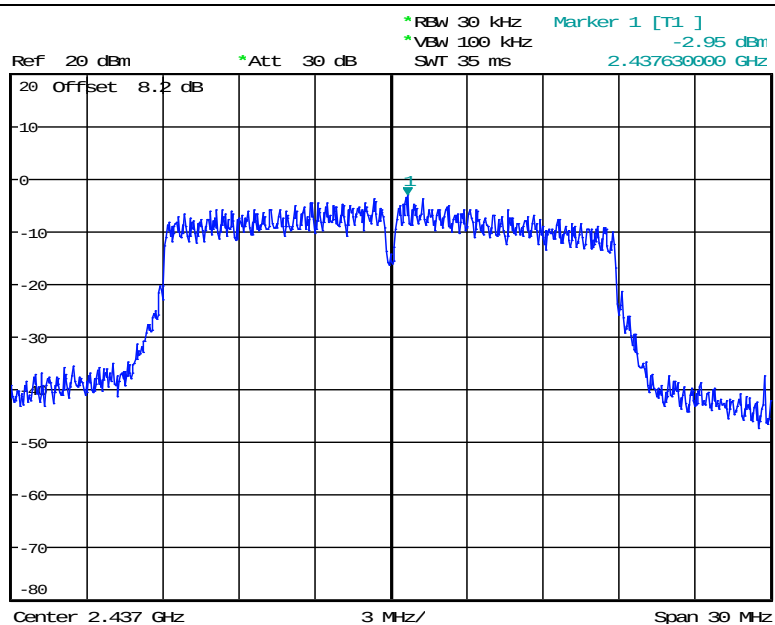
Date: 23.AUG.2019 21:09:40

11N20SISO/LCH

1 F.
VIEW

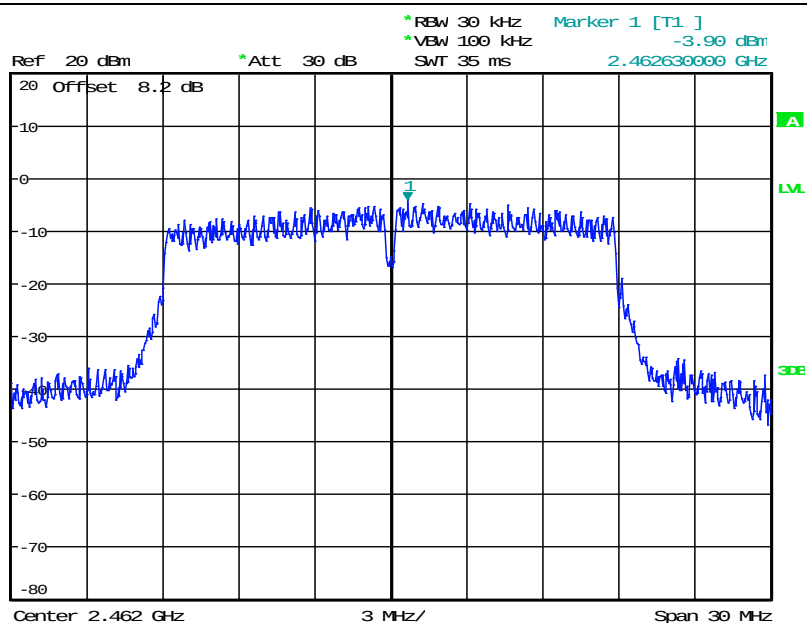
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11N20SISO/MCH

1 F
VIEW

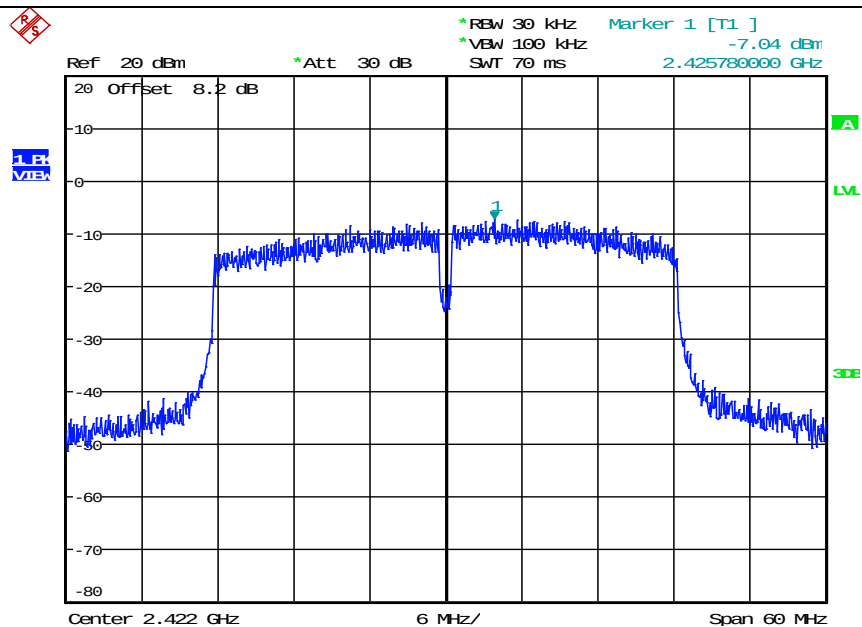
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11N20SISO/HCH

1 F
VIEW

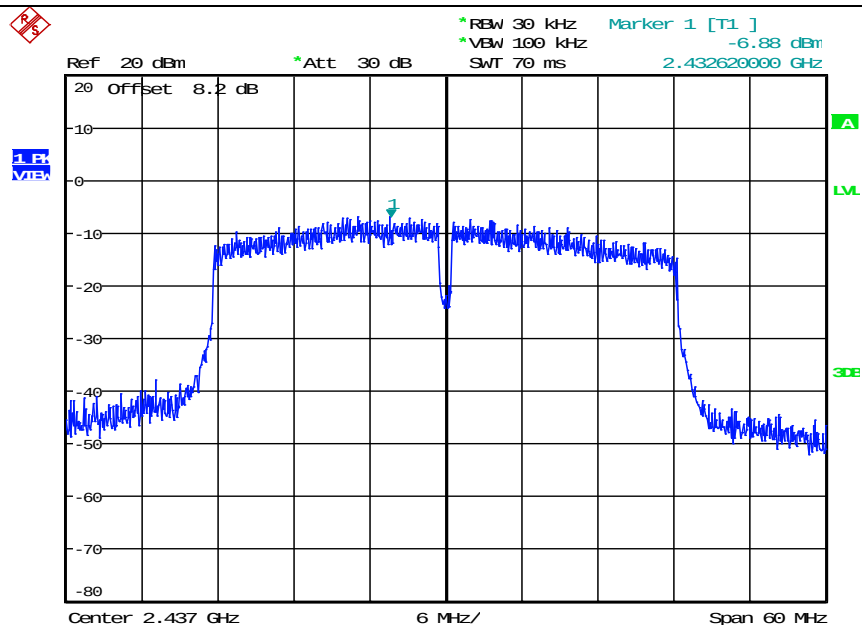
Date: 23.AUG.2019 21:18:17

11N40SISO/LCH



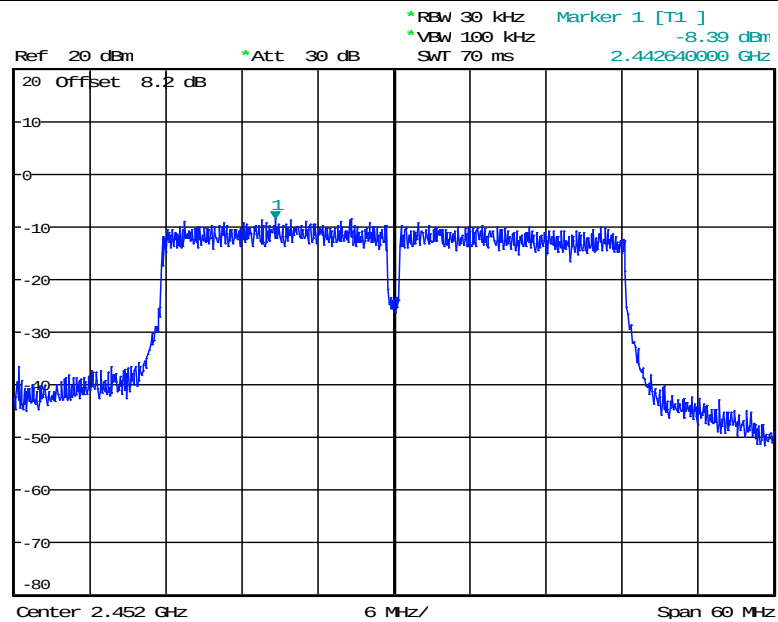
Date: 23.AUG.2019 21:20:47

11N40SISO/MCH



Date: 23.AUG.2019 21:23:56

11N40SISO/HCH

1 F
VIEW

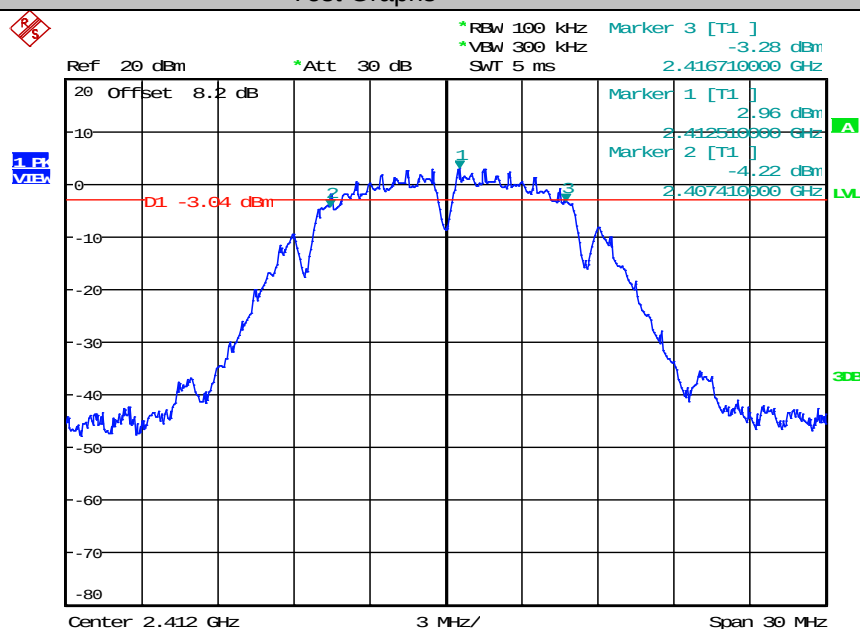
Date: 23.AUG.2019 21:27:31

C.4 6dB Bandwidth

Mode	Channel	6dB Bandwidth [MHz]	Limit [MHz]	Verdict
11B	LCH	9.300	≥ 0.5	PASS
	MCH	9.180	≥ 0.5	PASS
	HCH	9.300	≥ 0.5	PASS
11G	LCH	16.470	≥ 0.5	PASS
	MCH	16.410	≥ 0.5	PASS
	HCH	16.500	≥ 0.5	PASS
11N20SISO	LCH	17.670	≥ 0.5	PASS
	MCH	17.280	≥ 0.5	PASS
	HCH	17.760	≥ 0.5	PASS
11N40SISO	LCH	35.220	≥ 0.5	PASS
	MCH	35.820	≥ 0.5	PASS
	HCH	36.540	≥ 0.5	PASS

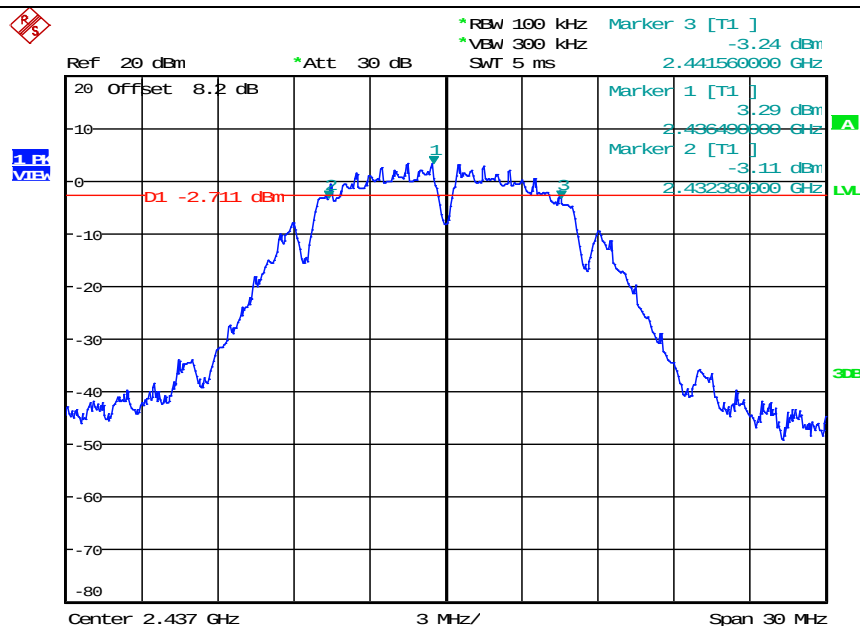
Test Graphs

11B/LCH



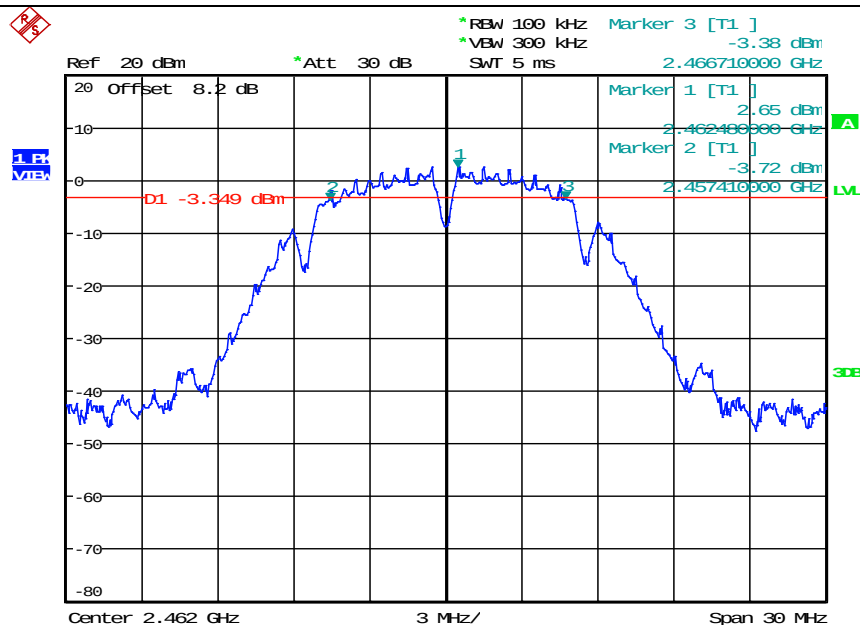
Date: 23.AUG.2019 19:20:51

11B/MCH



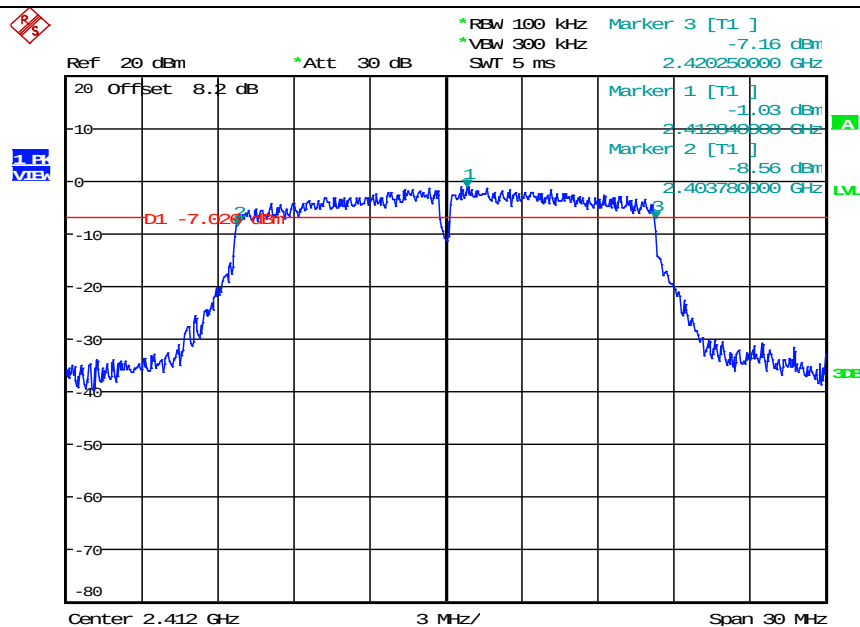
Date: 23.AUG.2019 20:47:40

11B/HCH



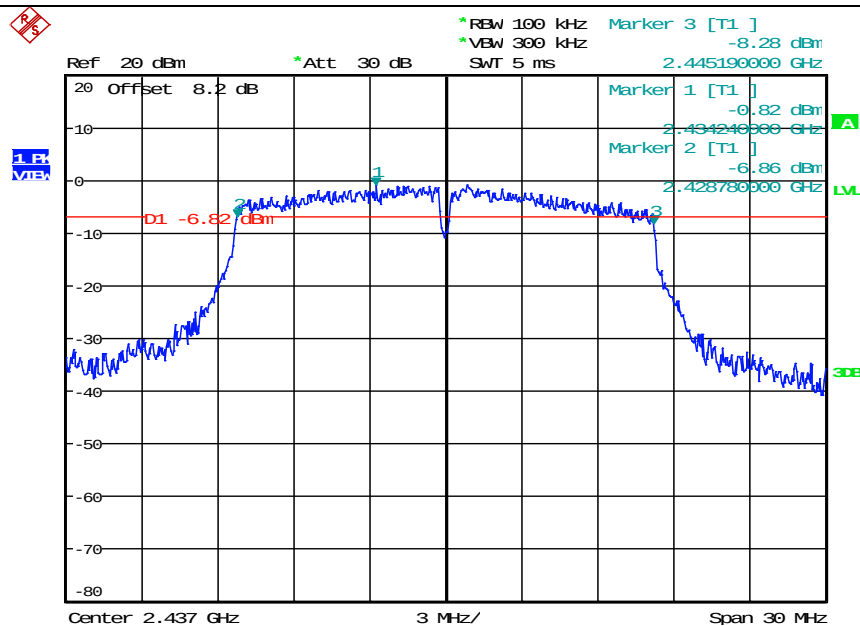
Date: 23.AUG.2019 20:52:51

11G/LCH



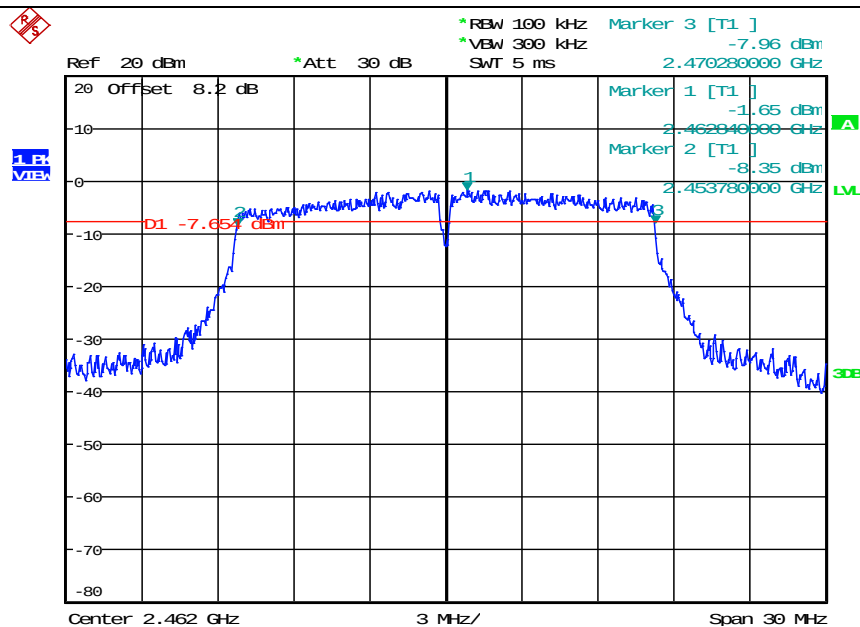
Date: 23.AUG.2019 21:02:22

11G/MCH



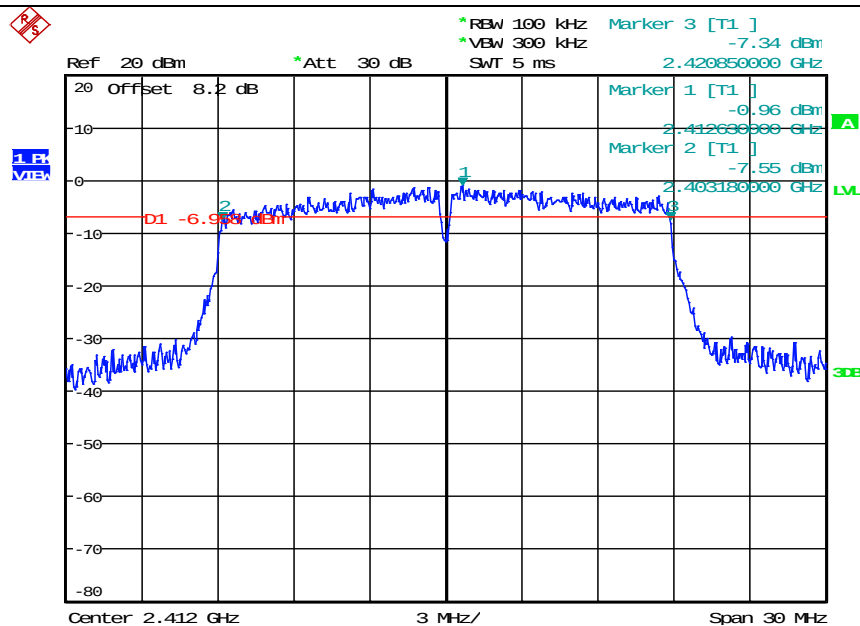
Date: 23.AUG.2019 21:05:17

11G/HCH



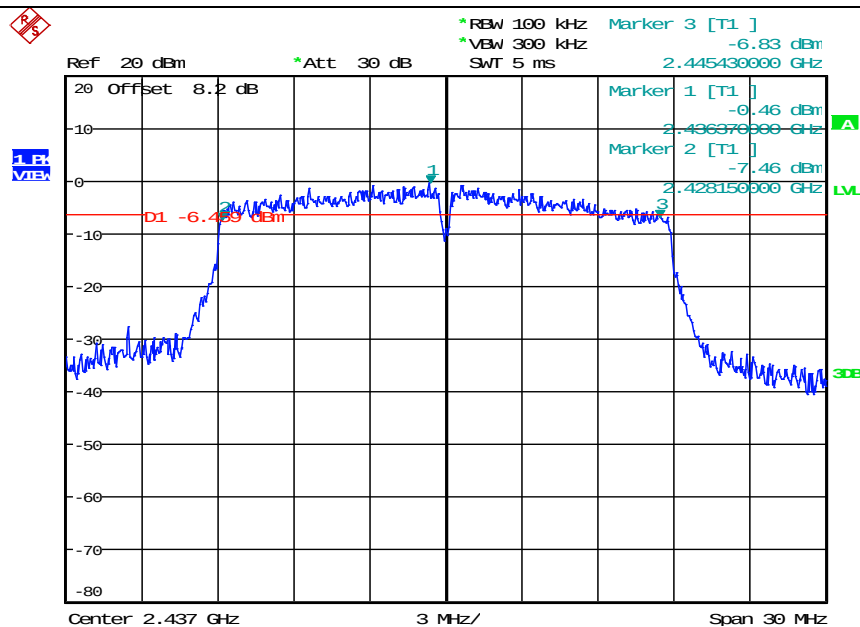
Date: 23.AUG.2019 21:08:53

11N20SISO/LCH



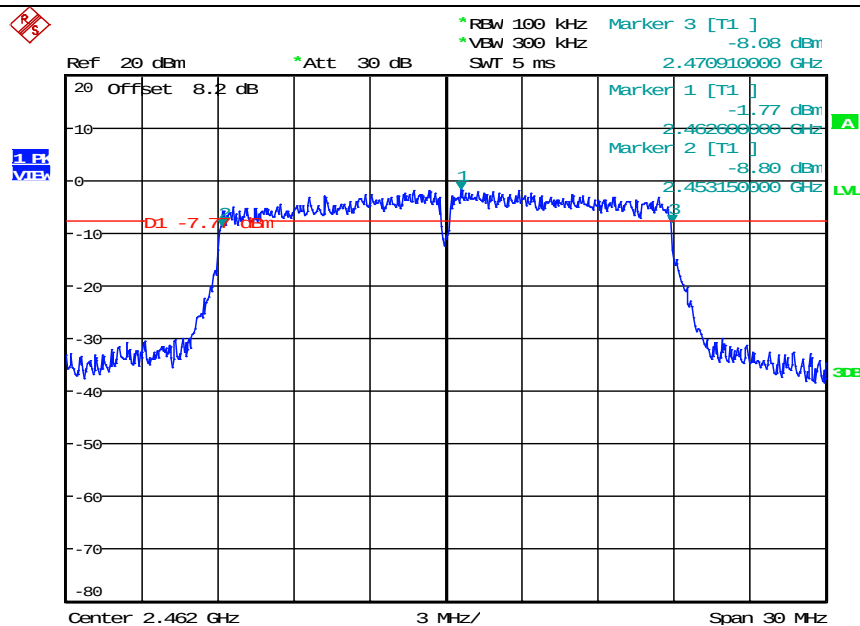
Date: 23.AUG.2019 21:13:16

11N20SISO/MCH



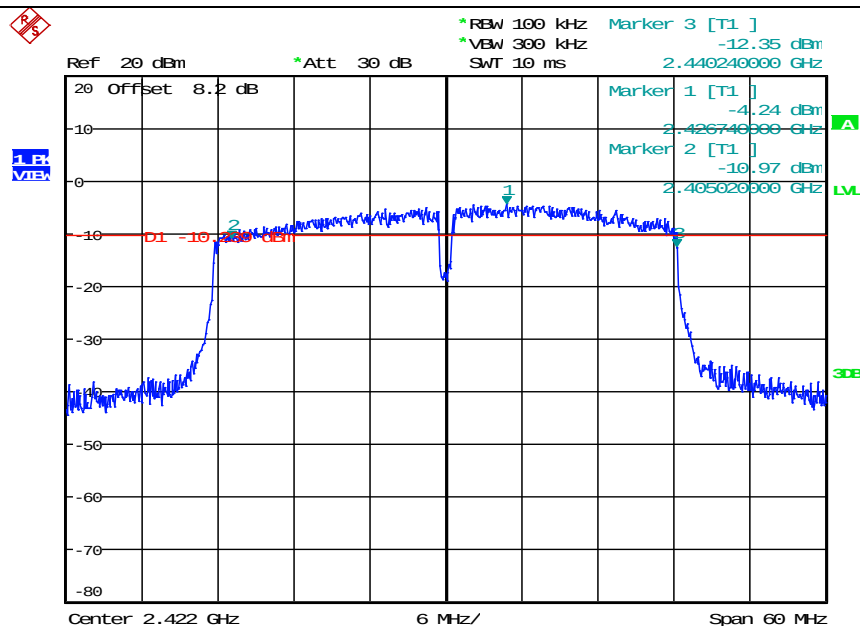
Date: 23.AUG.2019 21:15:43

11N20SISO/HCH



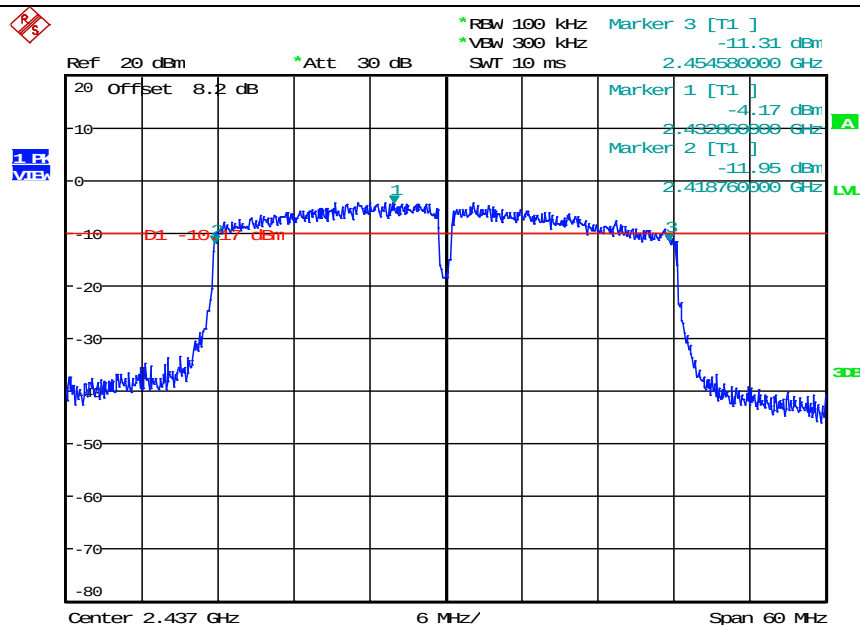
Date: 23.AUG.2019 21:17:30

11N40SISO/LCH



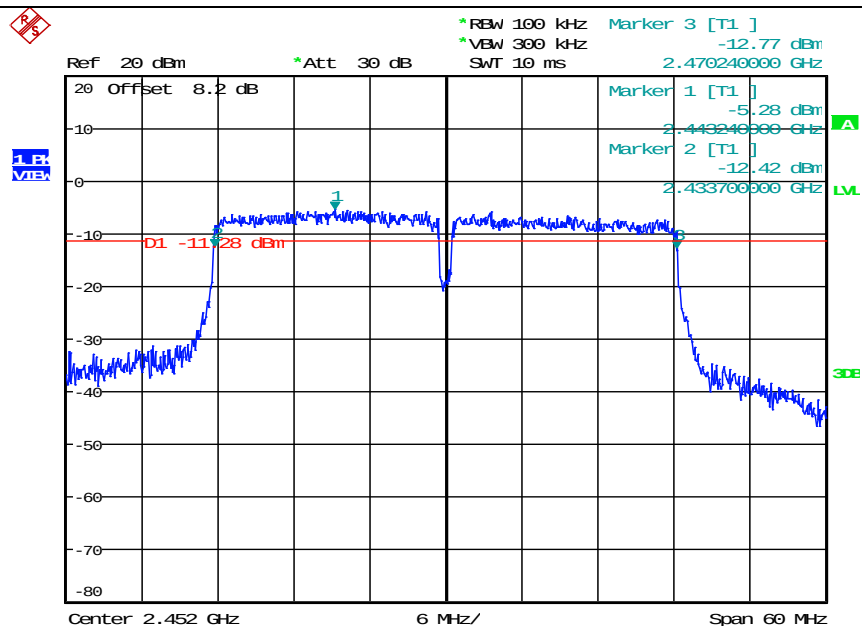
Date: 23.AUG.2019 21:19:59

11N40SISO/MCH



Date: 23.AUG.2019 21:23:08

11N40SISO/HCH



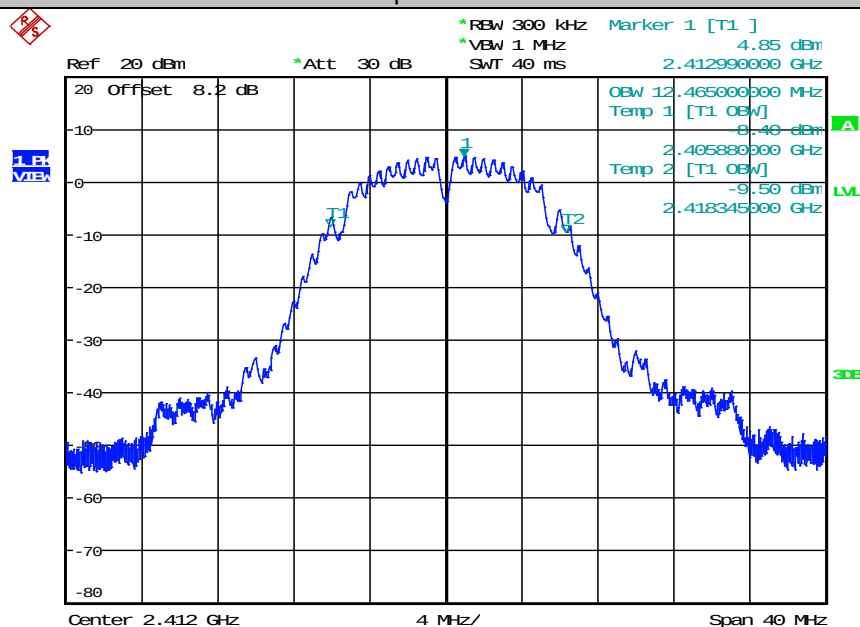
Date: 23.AUG.2019 21:26:44

C.5 Occupied Bandwidth

Mode	Channel	Occupied Bandwidth [MHz]	Limit [MHz]	Verdict
11B	LCH	12.465	≥ 0.5	PASS
	MCH	12.465	≥ 0.5	PASS
	HCH	12.560	≥ 0.5	PASS
11G	LCH	16.680	≥ 0.5	PASS
	MCH	16.600	≥ 0.5	PASS
	HCH	16.700	≥ 0.5	PASS
11N20SISO	LCH	17.680	≥ 0.5	PASS
	MCH	17.620	≥ 0.5	PASS
	HCH	17.745	≥ 0.5	PASS
11N40SISO	LCH	35.710	≥ 0.5	PASS
	MCH	35.630	≥ 0.5	PASS
	HCH	36.100	≥ 0.5	PASS

Test Graphs

11B/LCH



Date: 23.AUG.2019 21:31:36

1.8 VIB

Ref 20 dBm *Att 30 dB

*RBW 300 kHz *VBW 1 MHz *SWT 40 ms

Marker 1 [T1] 2.436916999 GHz

OBW 12.465000000 GHz

Temp 1 [T1 OBW] -9.21 dBm

2.430650000 GHz

Temp 2 [T1 OBW] -7.95 dBm

2.443115000 GHz

Center 2.437 GHz 4 MHz/ Span 40 MHz

Date: 23.AUG.2019 21:32:19

Ref 20 dBm *Att 30 dB *RBW 300 kHz Marker 1 [T1] 4.59 dBm
 *VBW 1 MHz *SWT 40 ms 2.462985000 GHz

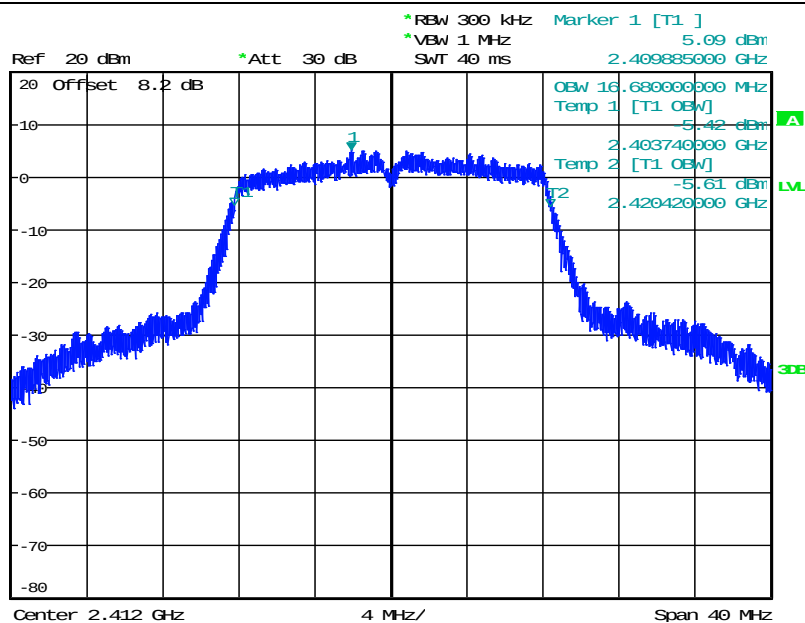
20 Offset 8.2 dB

OBW 12.560000000 GHz
 Temp 1 [T1 OBW] -9.25 dBm
 2.455830000 GHz
 Temp 2 [T1 OBW] -9.34 dBm
 2.468390000 GHz

Center 2.462 GHz 4 MHz/ Span 40 MHz

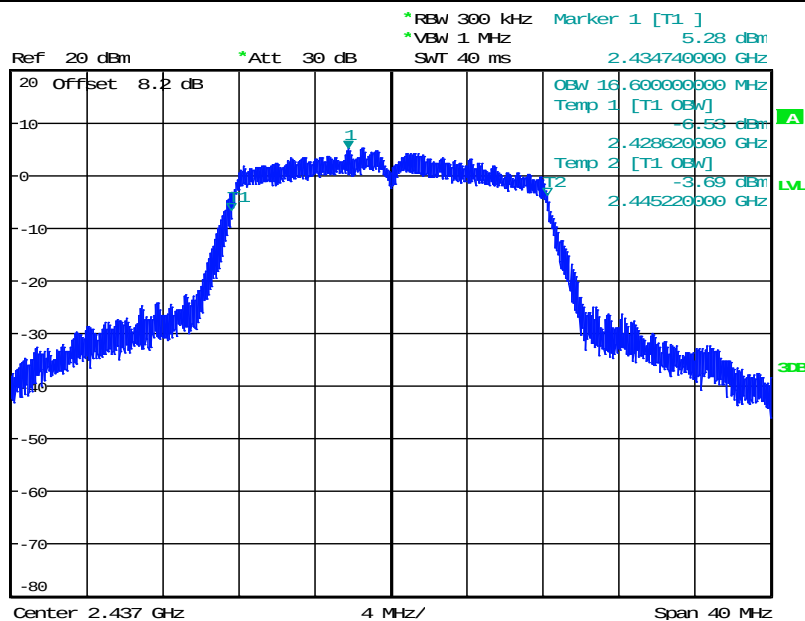
Date: 23.AUG.2019 21:33:19

11G/LCH

1 F
VIEW

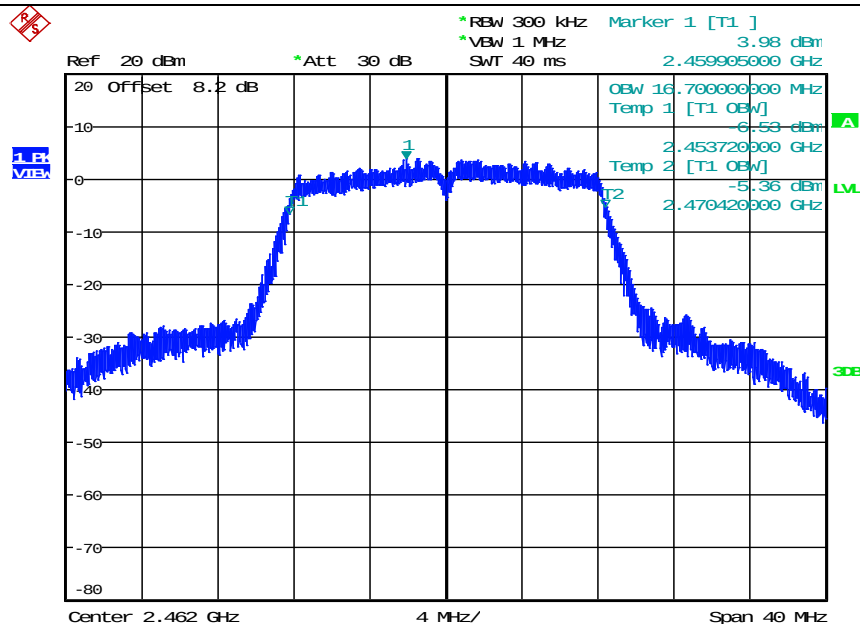
Date: 23.AUG.2019 21:33:50

11G/MCH

1 F
VIEW

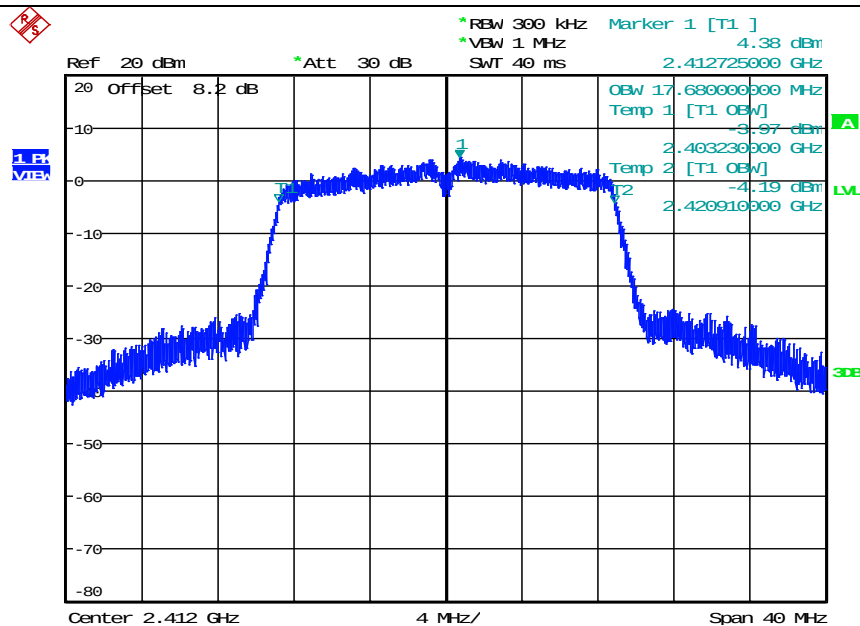
Date: 23.AUG.2019 21:34:14

11G/HCH



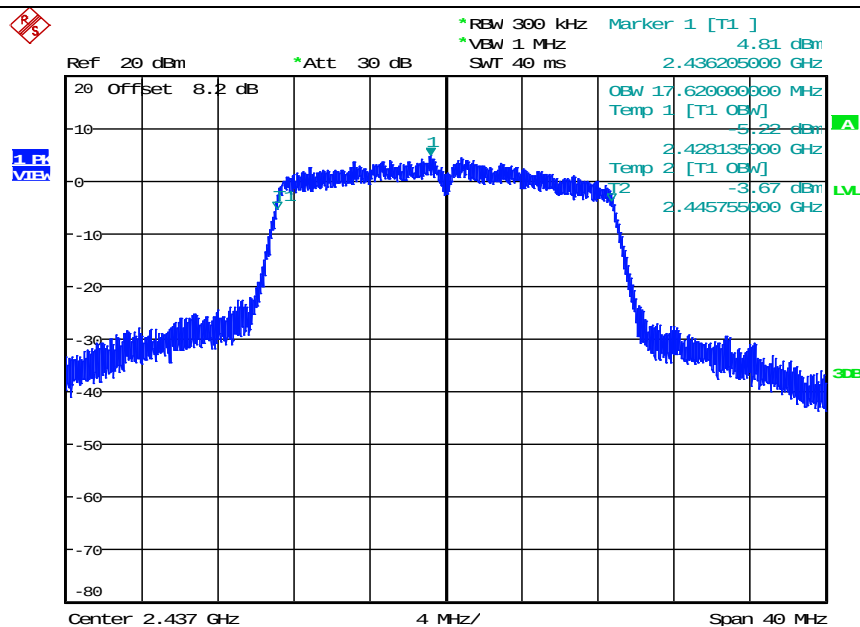
Date: 23.AUG.2019 21:34:40

11N20SISO/LCH



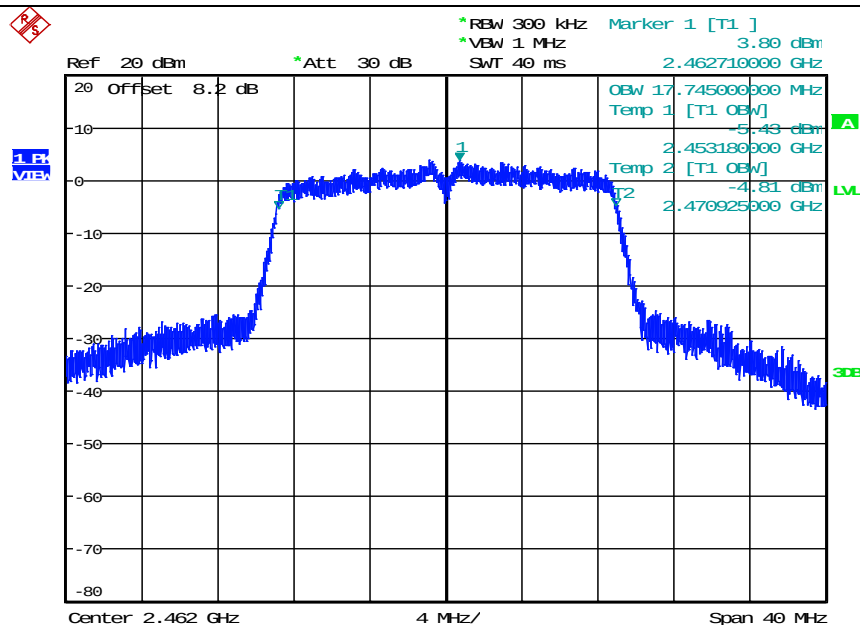
Date: 23.AUG.2019 21:35:21

11N20SISO/MCH



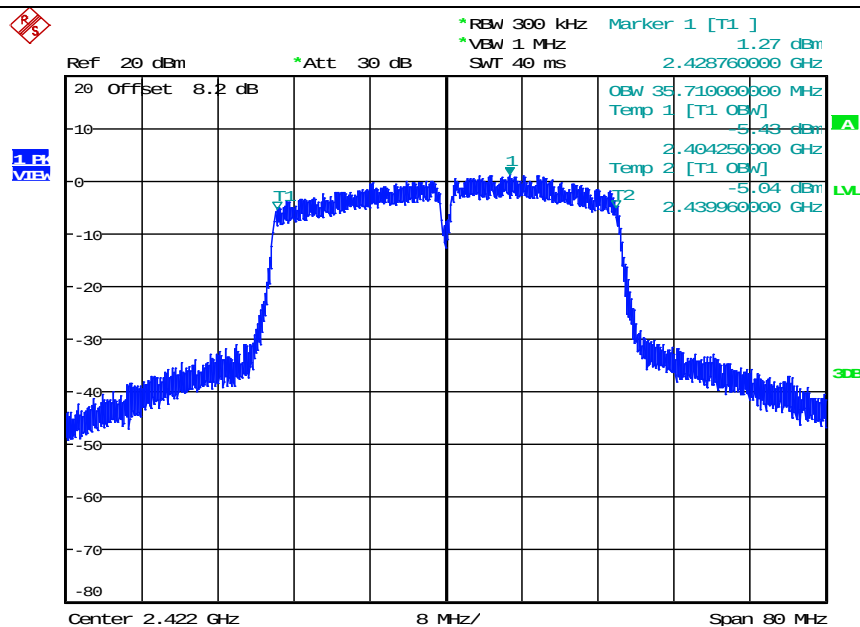
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11N20SISO/HCH



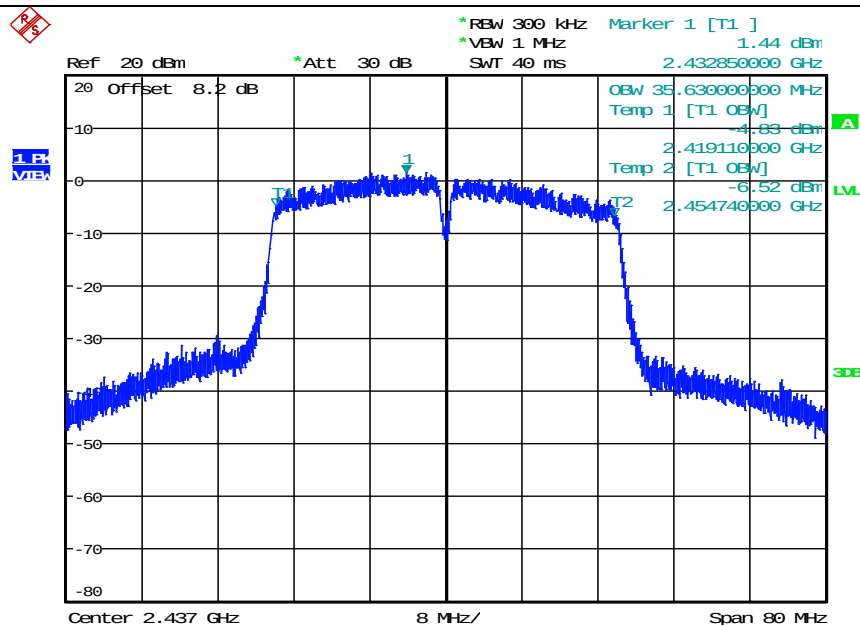
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11N40SISO/LCH



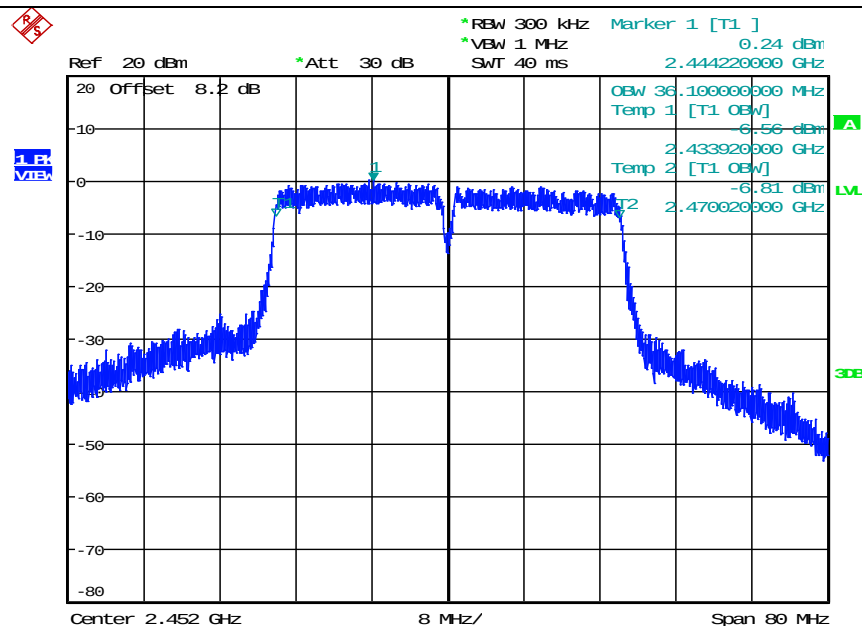
Date: 23.AUG.2019 21:36:36

11N40SISO/MCH



Date: 23.AUG.2019 21:37:00

11N40SISO/HCH



Date: 23.AUG.2019 21:37:26

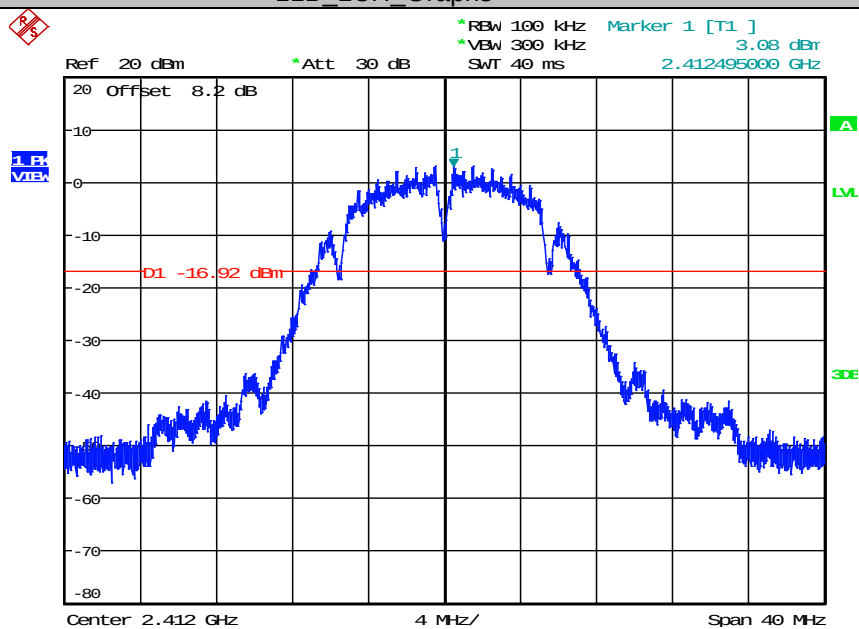
C.6 RF Conducted Spurious Emissions

Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
11B	LCH	3.08	-31.400	-16.920	PASS
	MCH	3.46	-32.690	-16.540	PASS
	HCH	2.93	-30.500	-17.070	PASS
11G	LCH	-0.73	-30.440	-20.730	PASS
	MCH	-0.93	-31.860	-20.930	PASS
	HCH	-1.56	-31.830	-21.560	PASS
11N20 SISO	LCH	-1.3	-30.760	-21.300	PASS
	MCH	-0.66	-32.470	-20.660	PASS
	HCH	-1.54	-31.230	-21.540	PASS
11N40	LCH	-4.42	-31.280	-24.420	PASS

SISO	MCH	-3.88	-32.090	-23.880	PASS
	HCH	-5.53	-31.410	-25.530	PASS

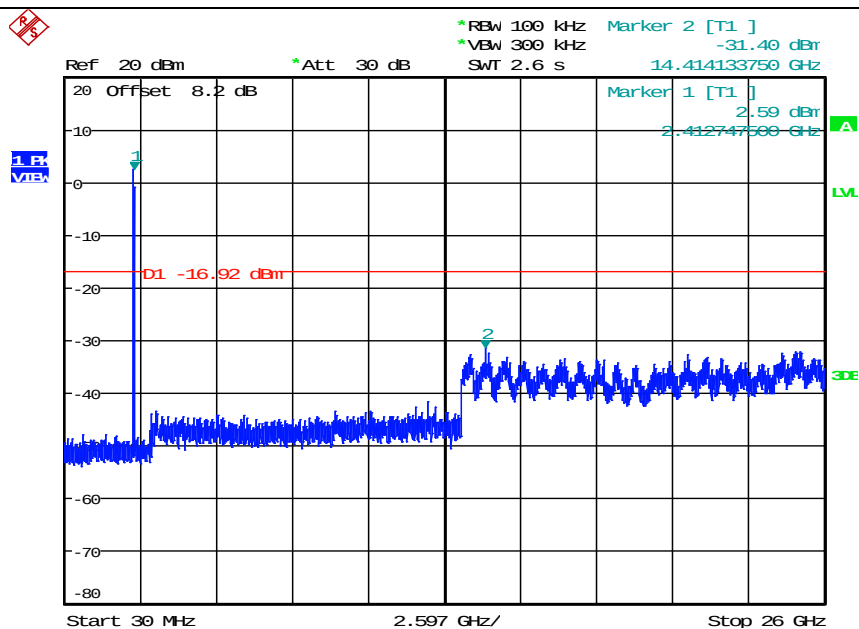
11B_LCH_Graphs

Pref/11B/LCH



Date: 23.AUG.2019 21:39:51

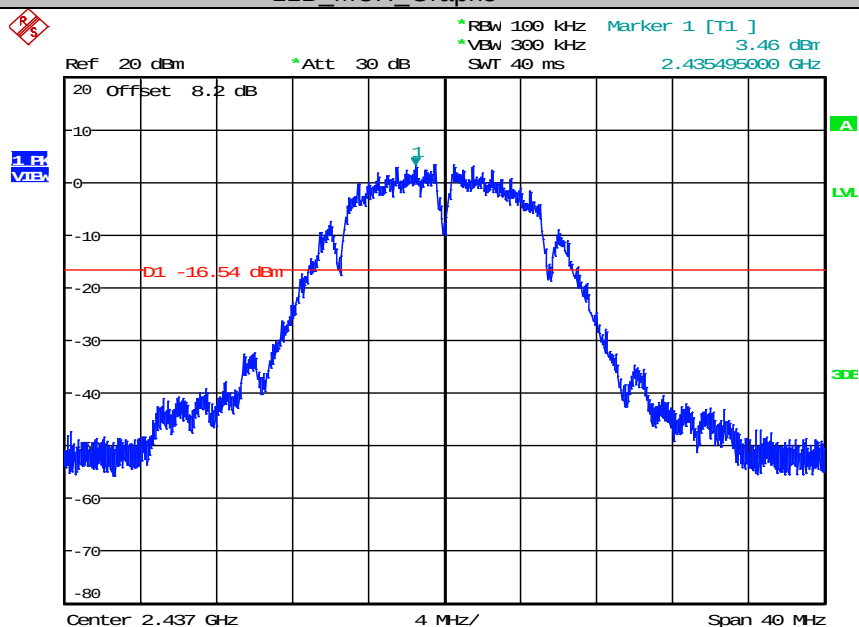
Puw/11B/LCH



Date: 23.AUG.2019 21:40:09

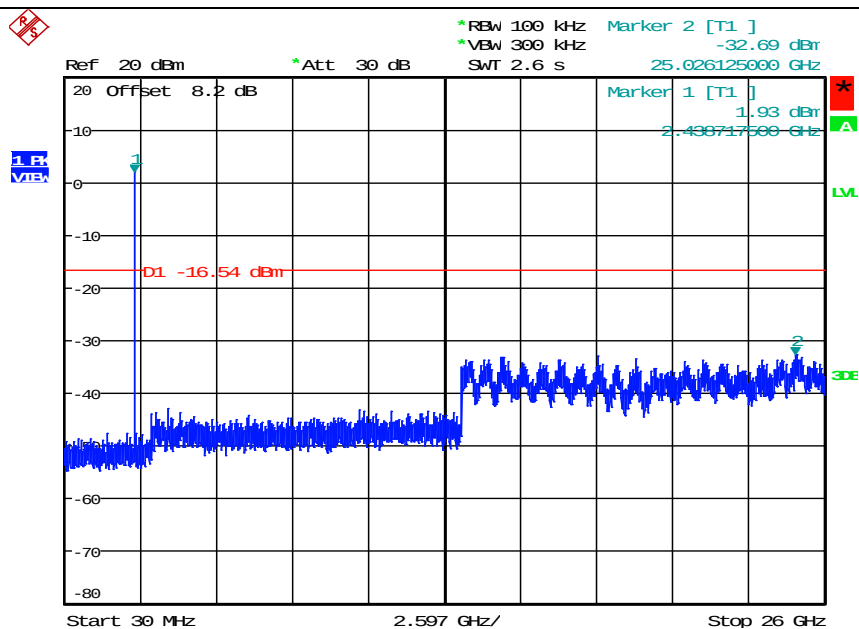
11B_MCH_Graphs

Pref/11B/MCH



Date: 23.AUG.2019 21:40:33

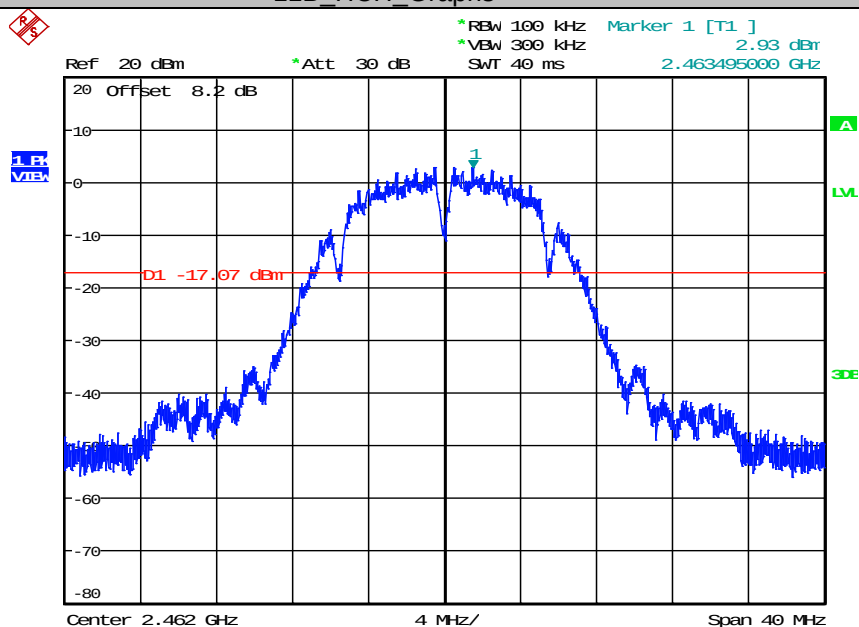
Puw/11B/MCH



Date: 23.AUG.2019 21:40:49

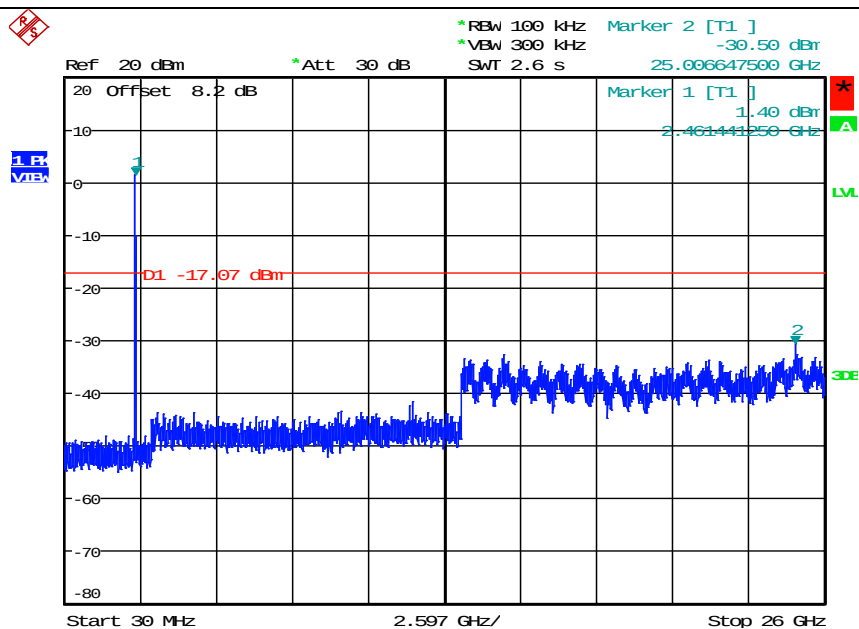
11B_HCH_Graphs

Pref/11B/HCH



Date: 23.AUG.2019 21:42:29

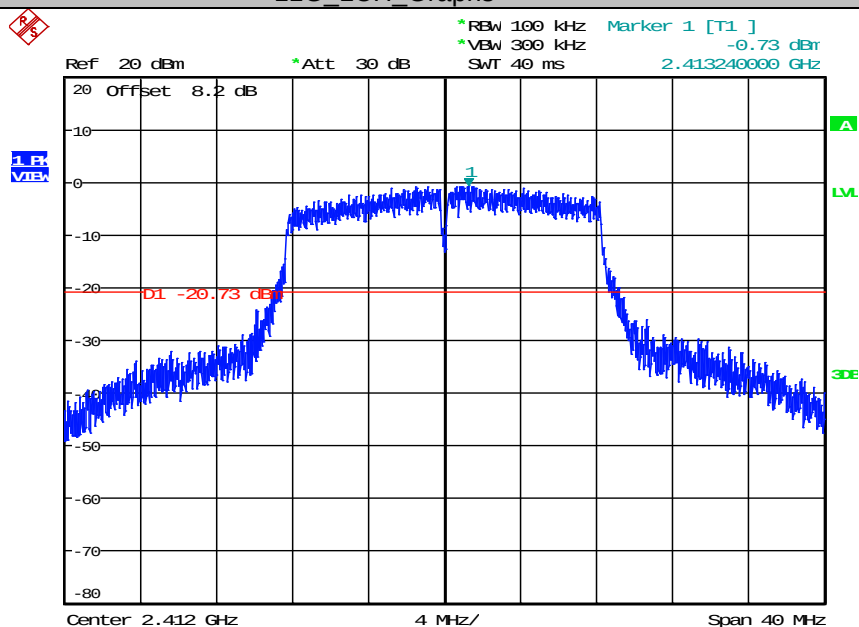
Puw/11B/HCH



Date: 23.AUG.2019 21:42:46

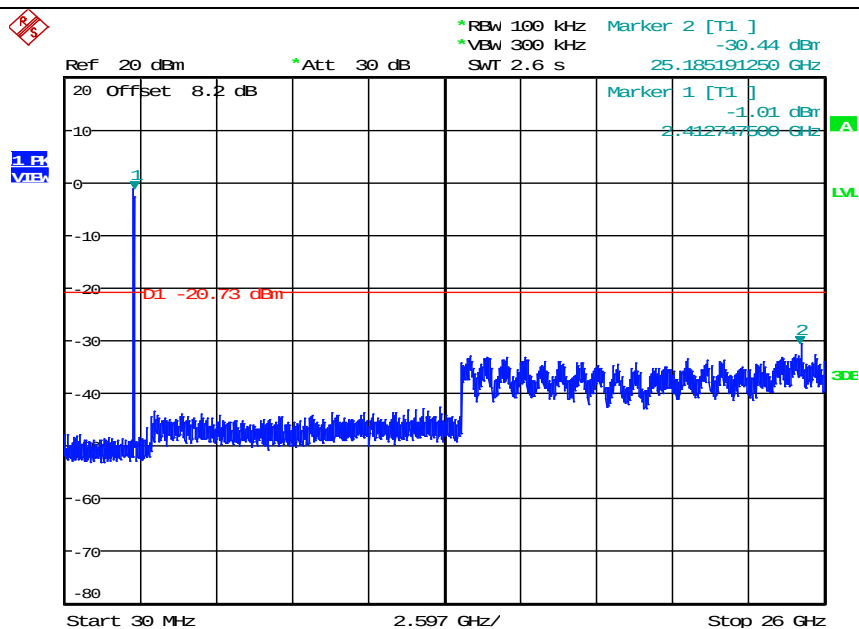
11G_LCH_Graphs

Pref/11G/LCH



Date: 23.AUG.2019 21:43:33

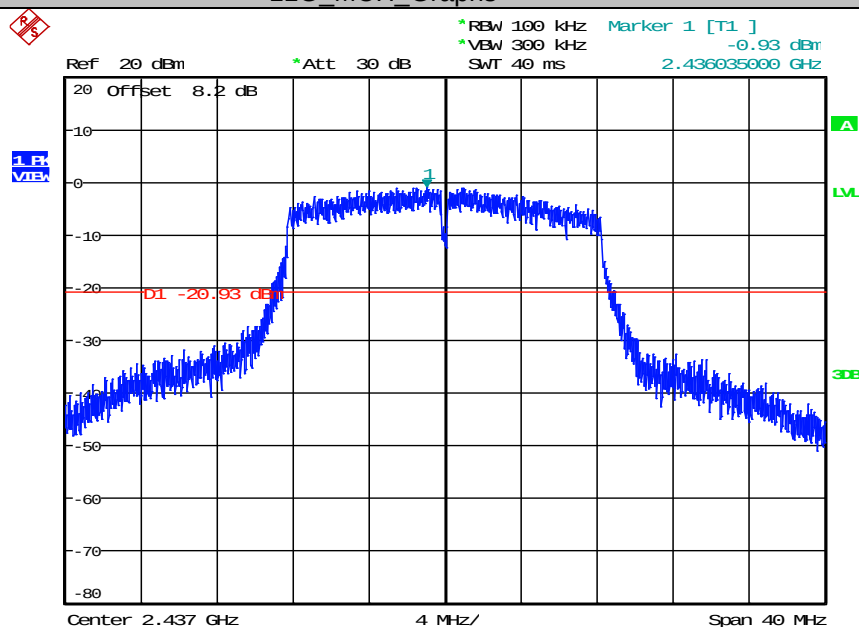
Puw/11G/LCH



Date: 23.AUG.2019 21:43:52

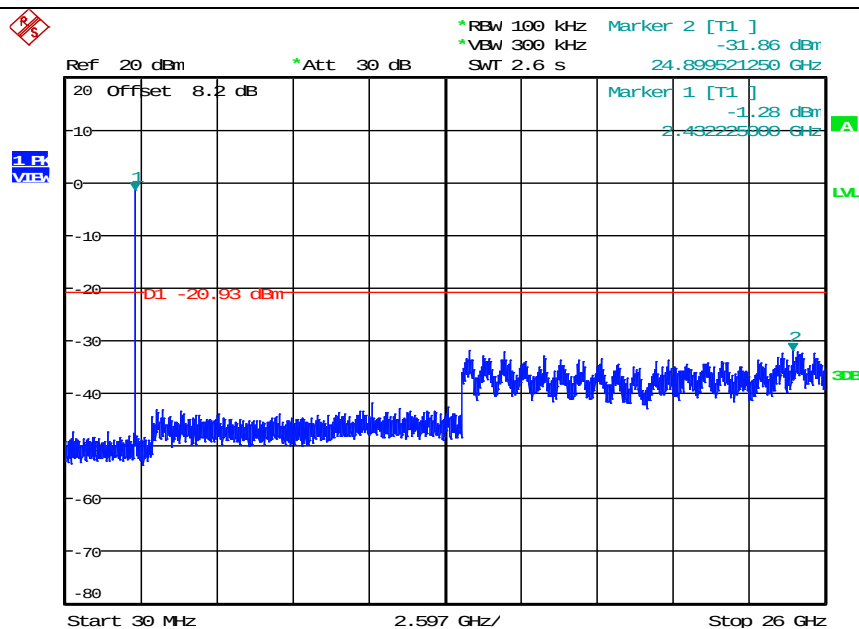
11G_MCH_Graphs

Pref/11G/MCH



Date: 23.AUG.2019 21:44:18

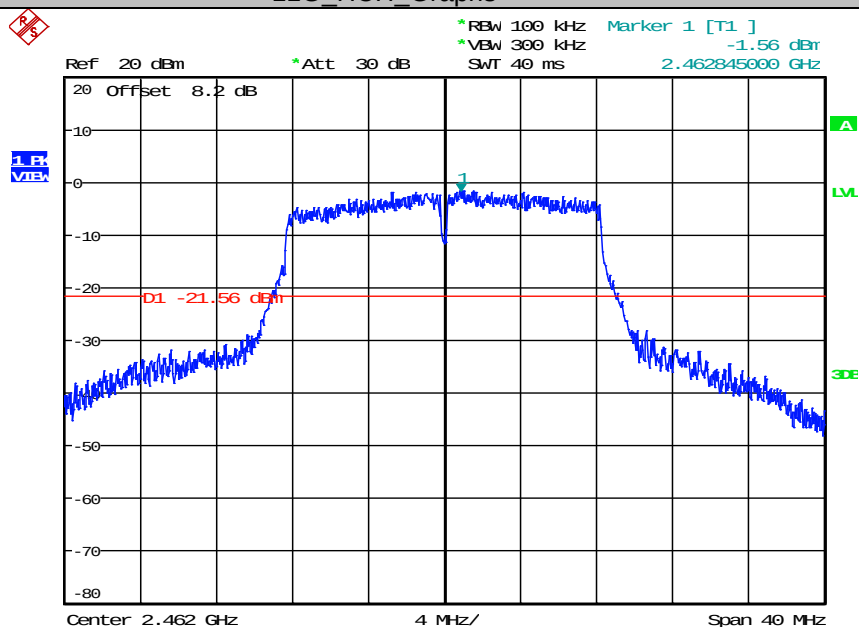
Puw/11G/MCH



Date: 23.AUG.2019 21:44:38

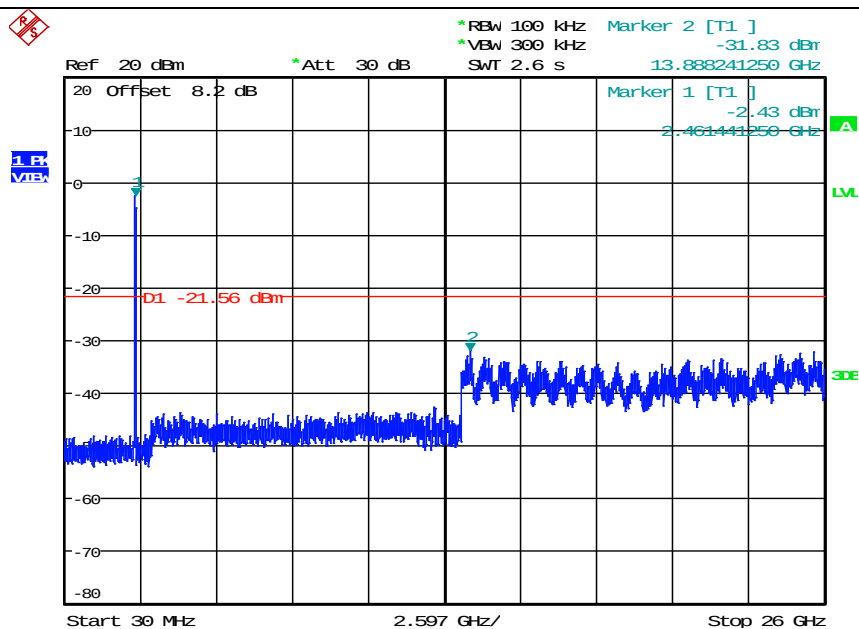
11G_HCH_Graphs

Pref/11G/HCH



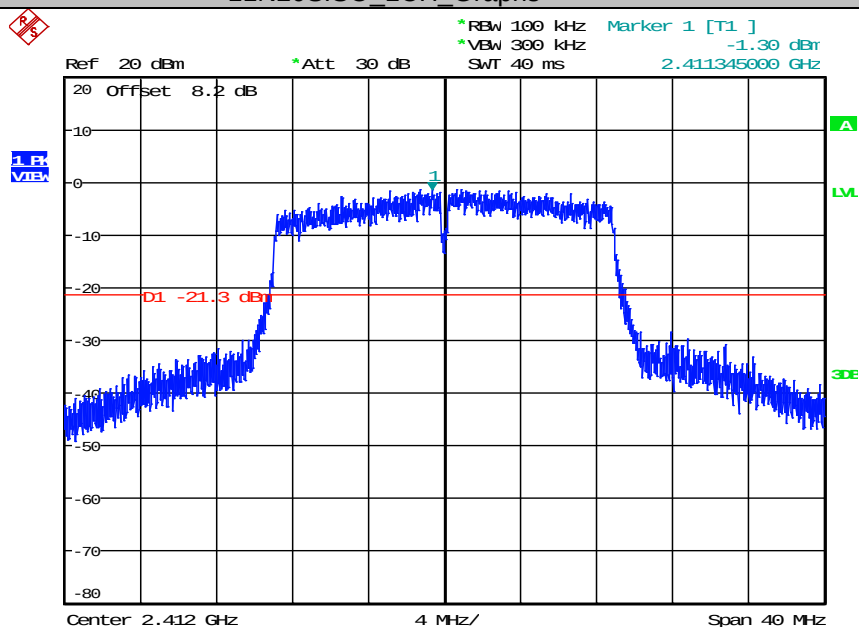
Date: 23.AUG.2019 21:45:34

Puw/11G/HCH

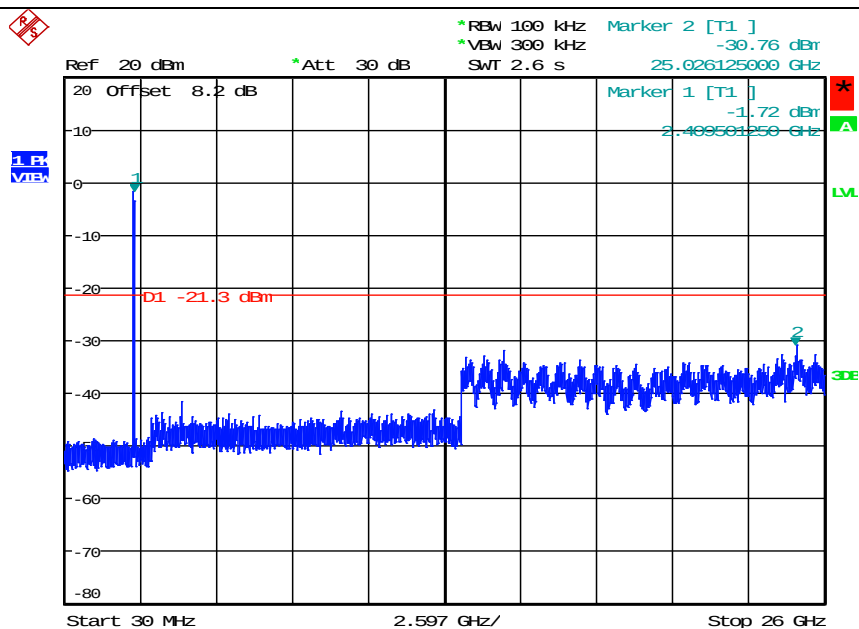


Date: 23.AUG.2019 21:45:49

11N20SISO LCH Graphs

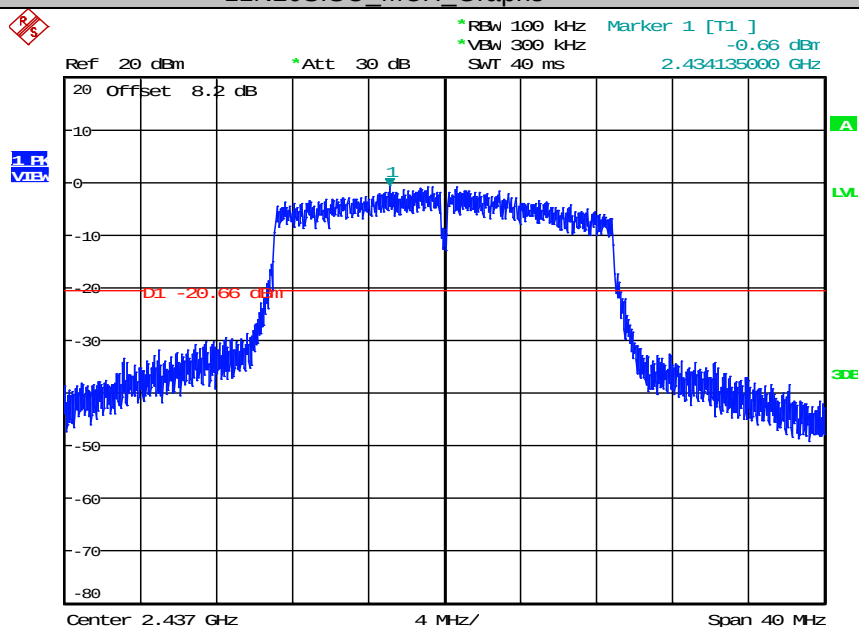
Pref/11N20SIS
O/LCH

Date: 23.AUG.2019 21:46:16

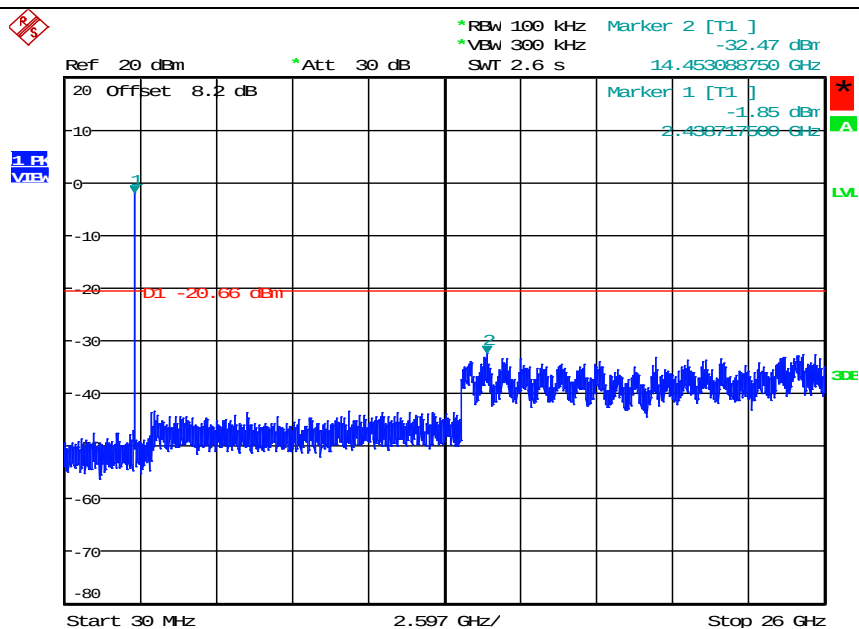
Puw/11N20
SISO/LCH

Date: 23.AUG.2019 21:46:35

11N20SISO_MCH_Graphs

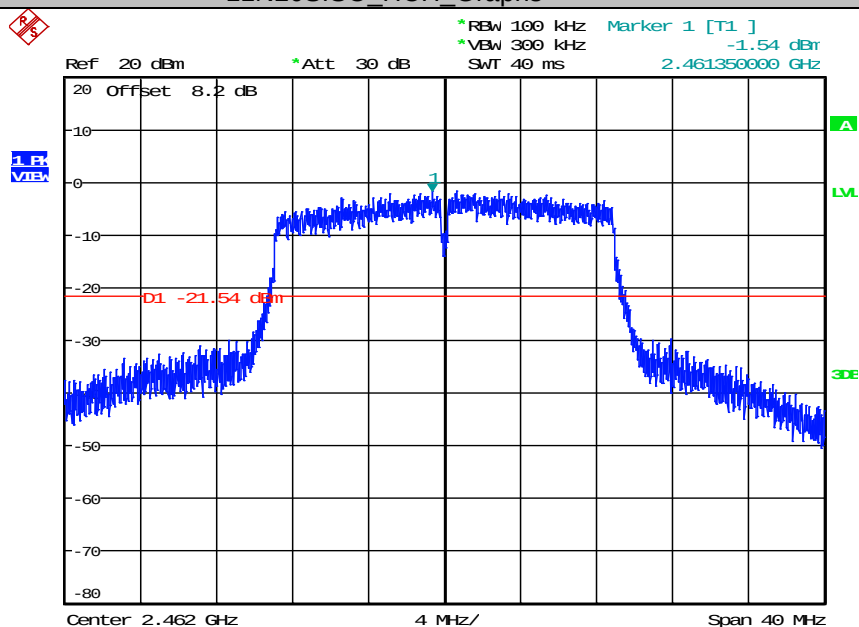
Pref/11N20
SISO/MCH

Date: 23.AUG.2019 21:46:57

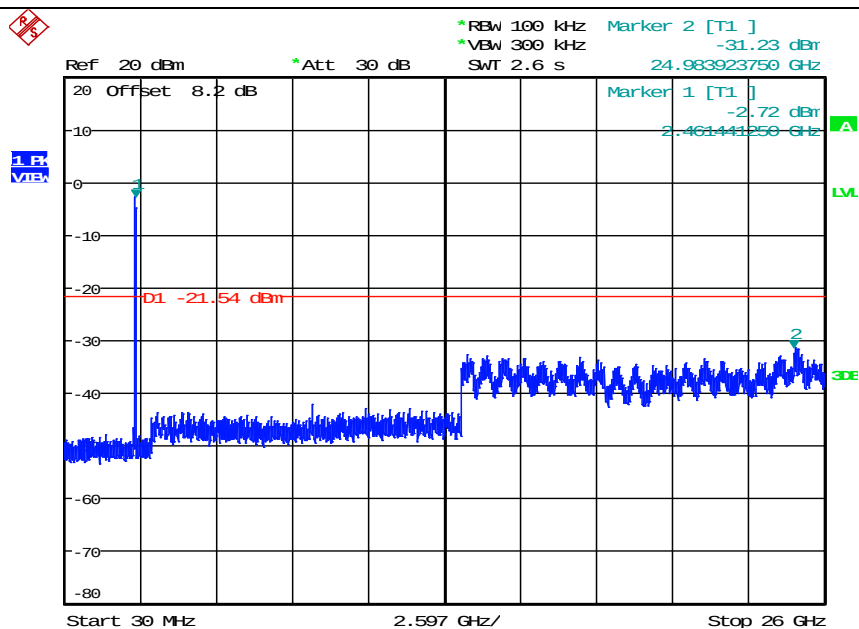
Puw/11N20
SISO/MCH

Date: 23.AUG.2019 21:47:18

11N20SISO_HCH_Graphs

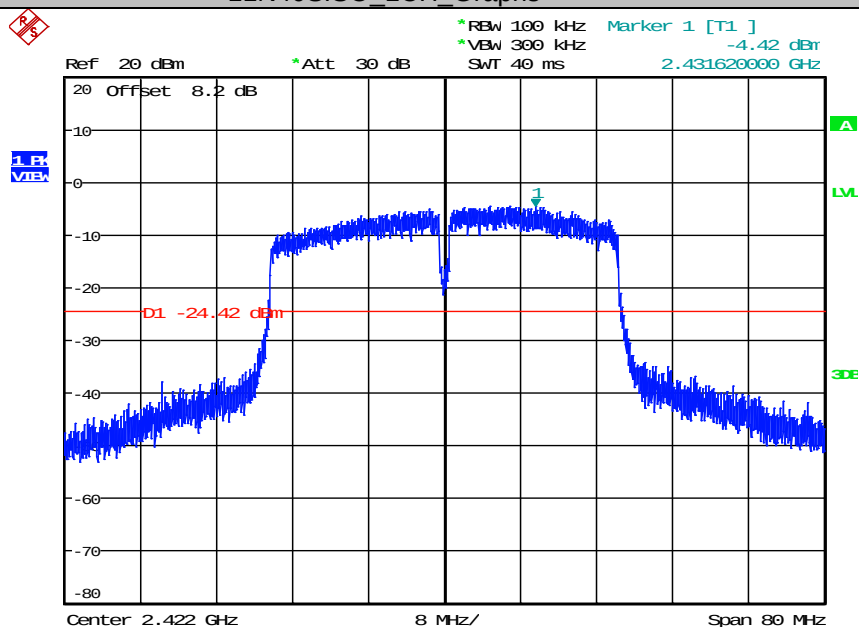
Pref/11N20
SISO/HCH

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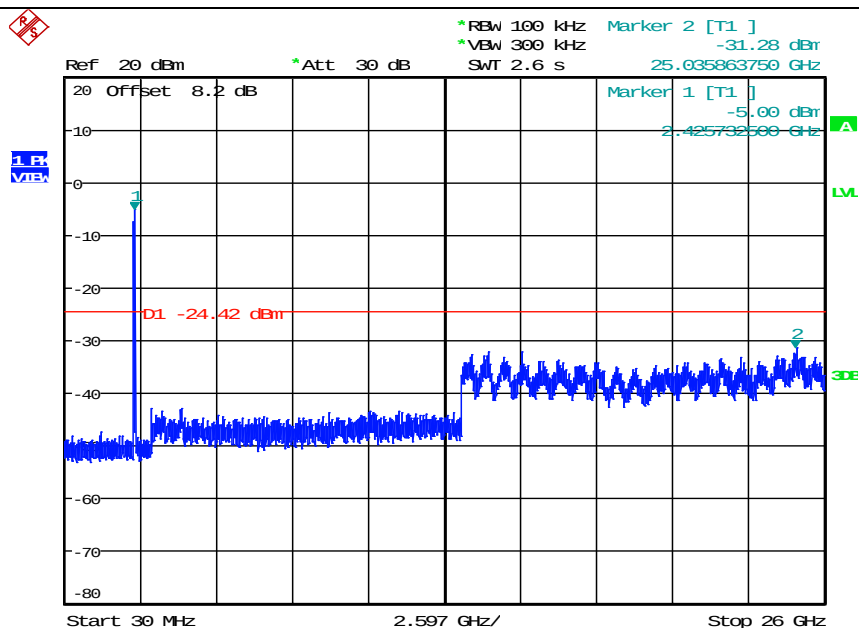
Puw/11N20
SISO/HCH

Date: 23.AUG.2019 21:48:05

11N40SISO_LCH_Graphs

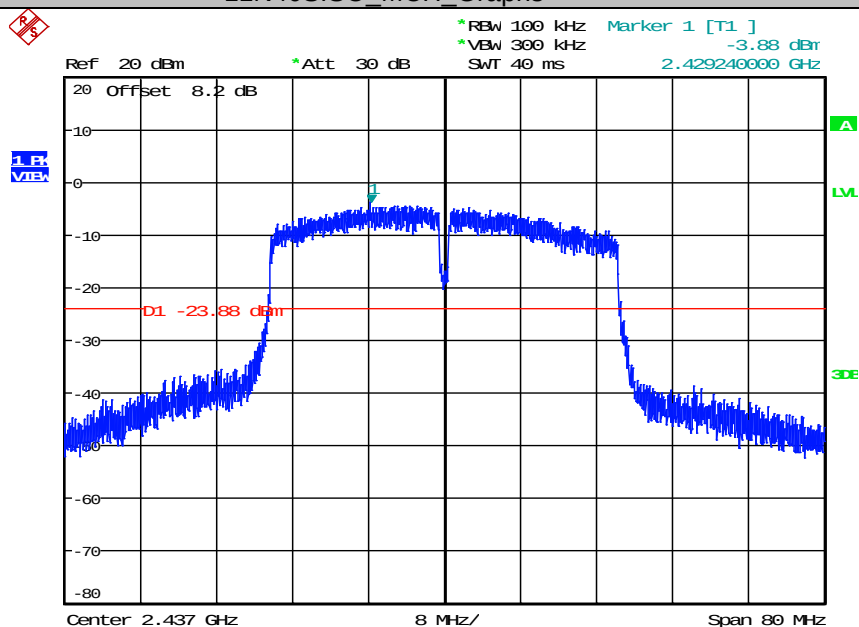
Pref/11N40
SISO/LCH

Date: 23.AUG.2019 21:48:30

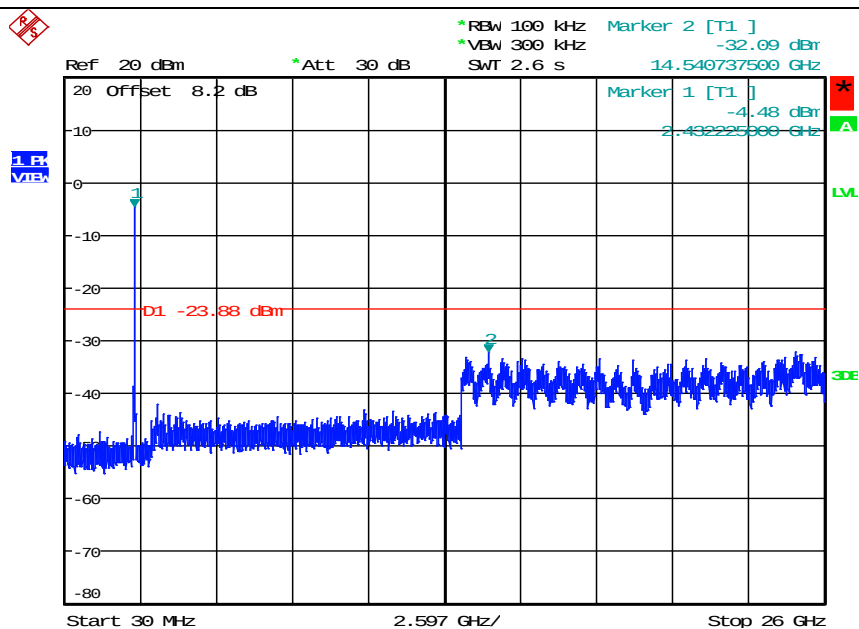
Puw/11N40
SISO/LCH

Date: 23.AUG.2019 21:48:48

11N40SISO_MCH_Graphs

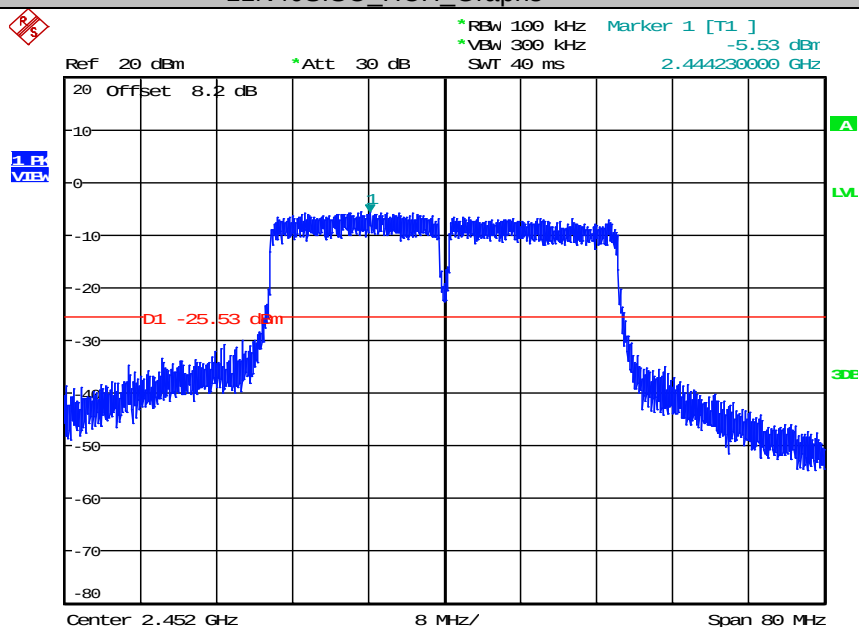
Pref/11N40
SISO/MCH

Date: 23.AUG.2019 21:49:15

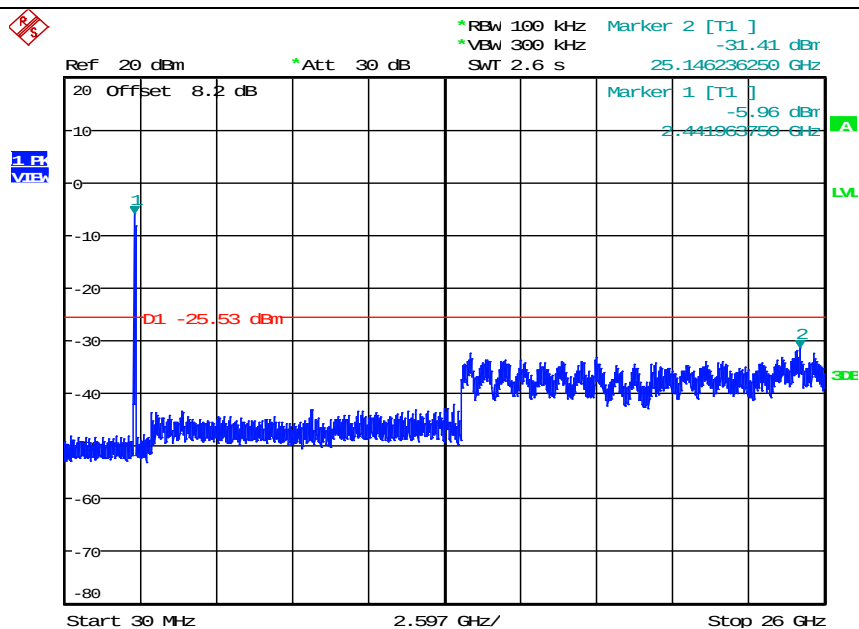
Puw/11N40
SISO/MCH

Date: 23.AUG.2019 21:49:35

11N40SISO_HCH_Graphs

Pref/11N40
SISO/HCH

Date: 23.AUG.2019 21:50:09

Puw/11N40
SISO/HCH

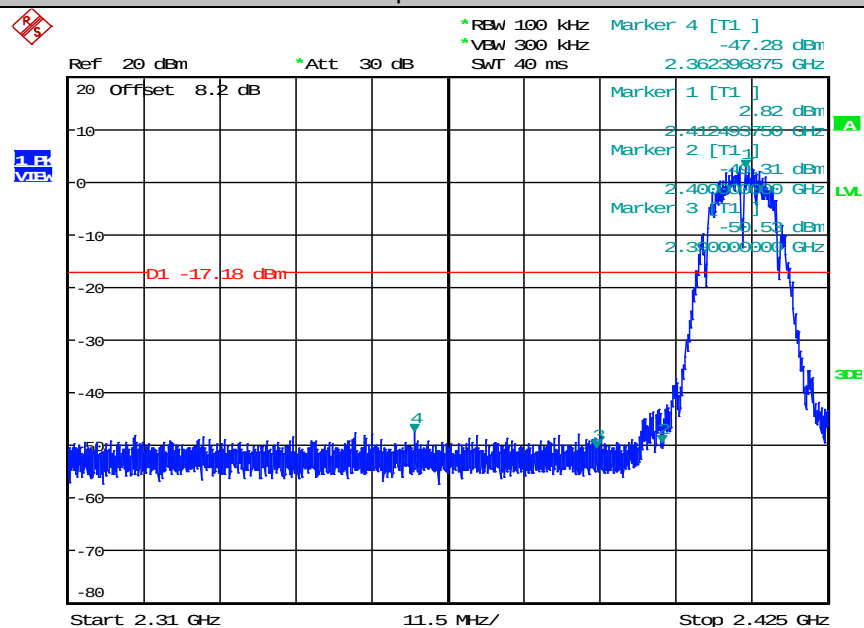
Date: 23.AUG.2019 21:50:28

C.7 Band-edge for RF Conducted Emissions

Mode	Channel	Carrier Power[dBm]	Max.Spurious Level [dBm]	Limit [dBm]	Verdict
11B	LCH	2.820	-47.278	-17.18	PASS
	HCH	2.660	-47.325	-17.34	PASS
11G	LCH	-1.450	-46.939	-21.45	PASS
	HCH	-1.590	-47.063	-21.59	PASS
11N20SISO	LCH	-1.130	-46.279	-21.13	PASS
	HCH	-1.750	-45.860	-21.75	PASS
11N40SISO	LCH	-3.900	-43.580	-23.9	PASS
	HCH	-5.590	-43.815	-25.59	PASS

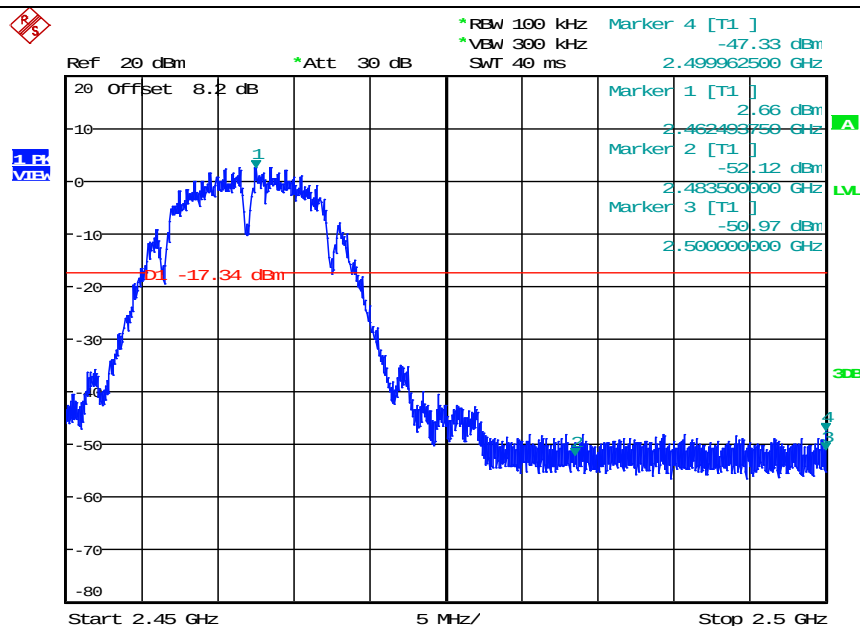
Test Graphs

11B/LCH

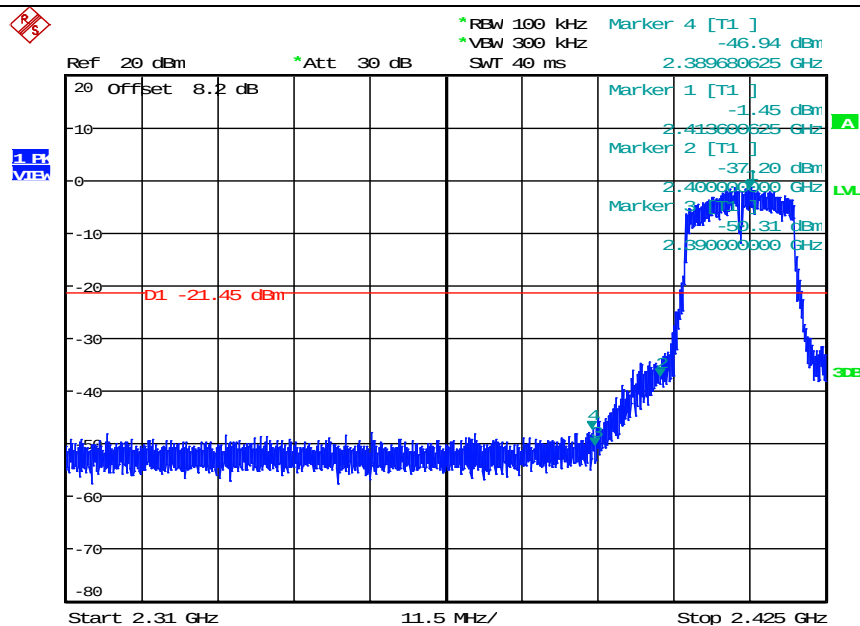


Date: 23.AUG.2019 19:21:51

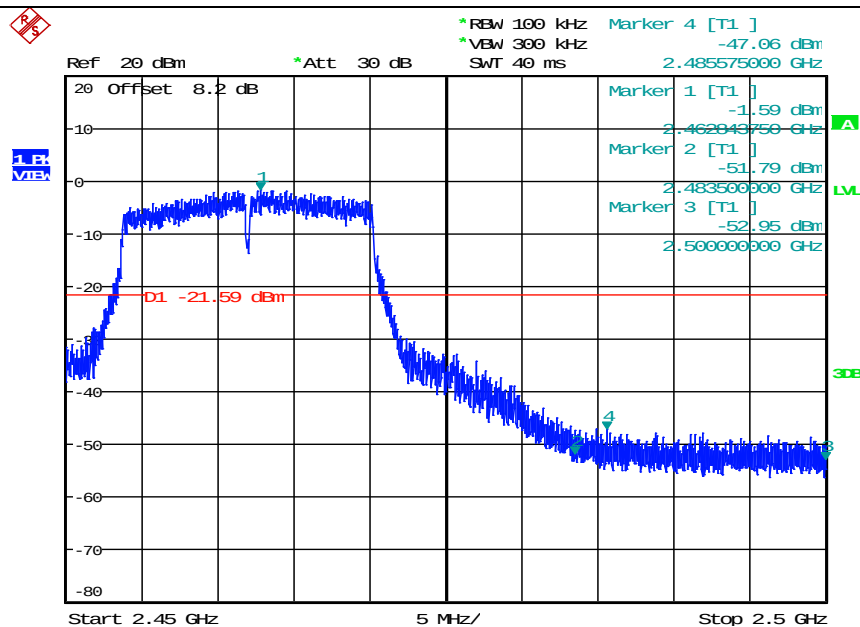
11B/HCH



11G/LCH

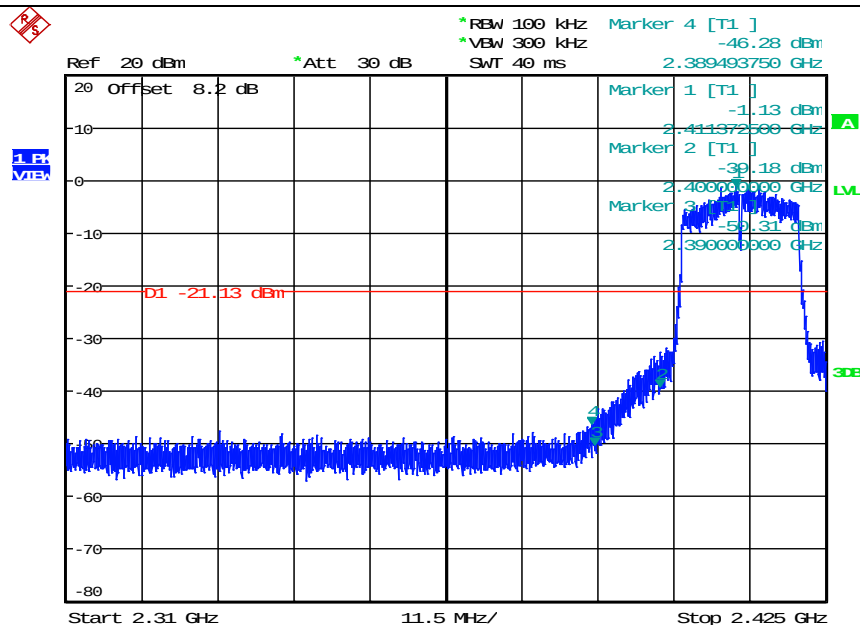


11G/HCH



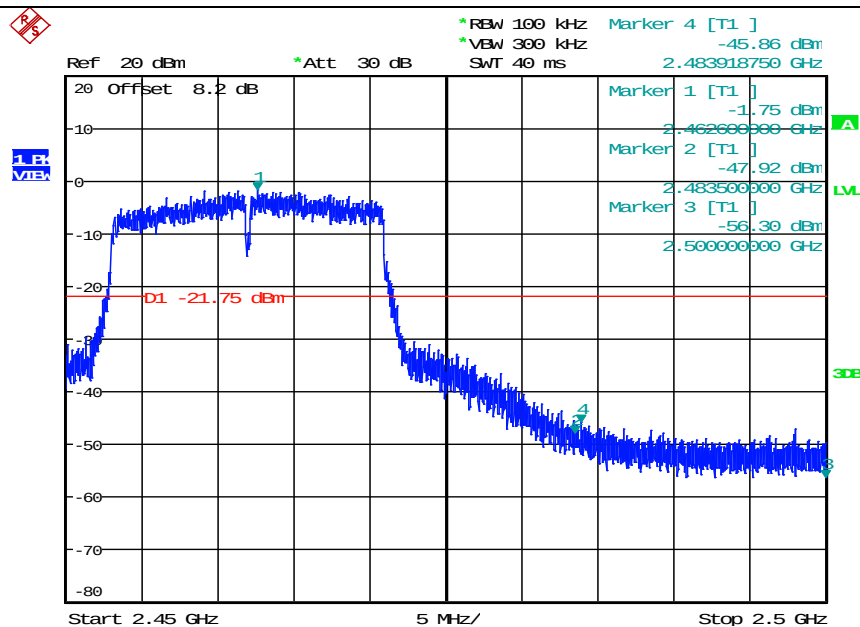
Date: 23.AUG.2019 21:09:53

11N20SISO/LCH



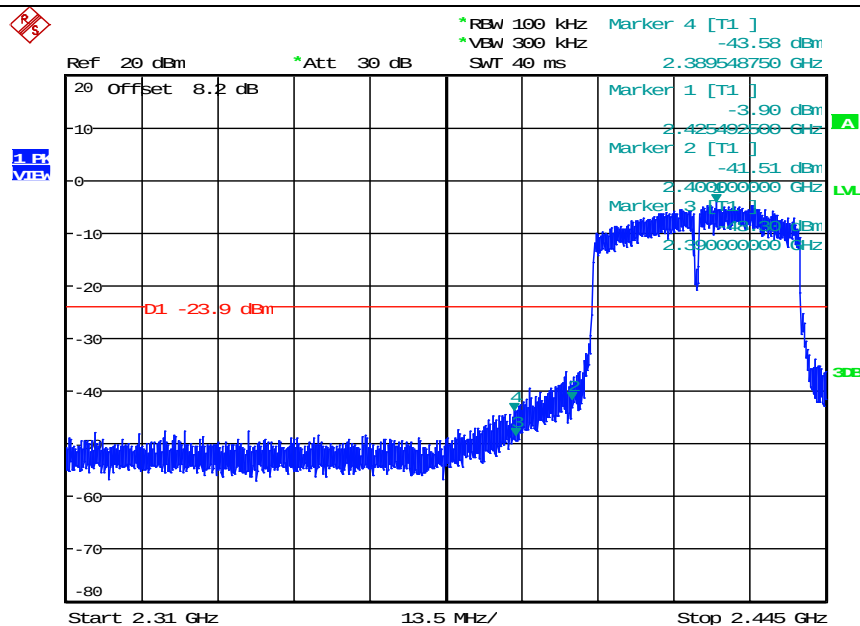
Date: 23.AUG.2019 21:14:16

11N20SISO/HCH



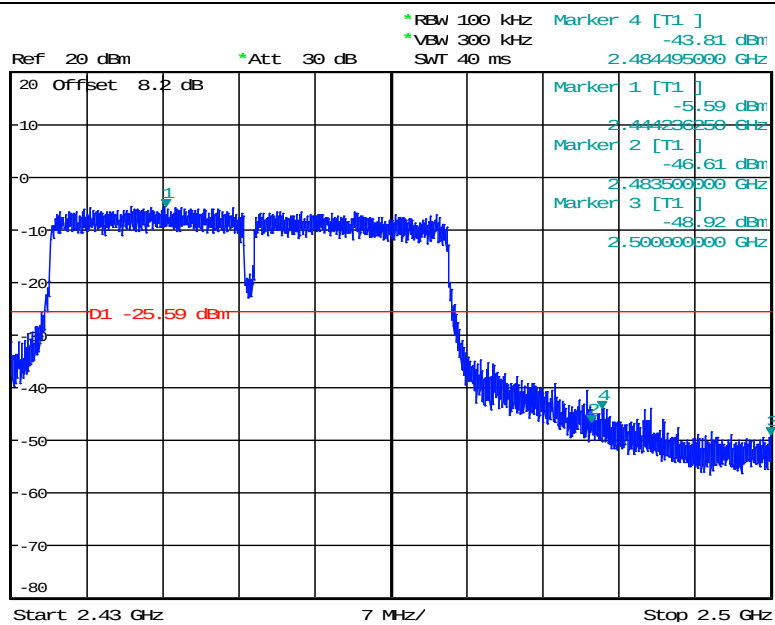
Date: 23.AUG.2019 21:18:31

11N40SISO/LCH



Date: 23.AUG.2019 21:21:00

11N40SISO/HCH

1 F
VIEW

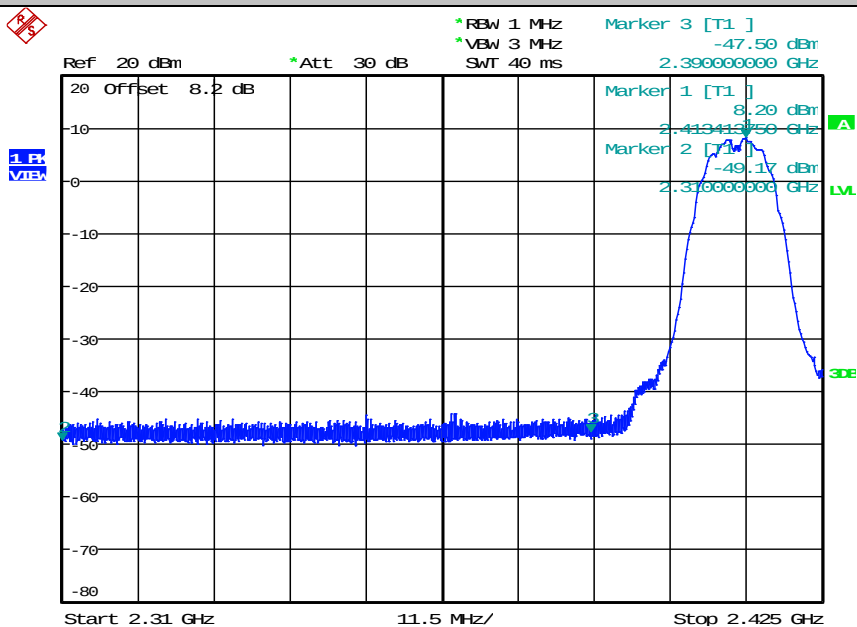
Date: 23.AUG.2019 21:27:45

C.8 Restrict-band band-edge measurements

Test Mode	Test Channel	Ant	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detector	Limit [dBuV/m]	Verdict
11B	2412	Ant1	2310.0	-49.17	2.0	0	48.09	PEAK	74	PASS
	2412	Ant1	2310.0	-57.85	2.0	0	39.41	AV	54	PASS
	2412	Ant1	2390.0	-47.50	2.0	0	49.76	PEAK	74	PASS
	2412	Ant1	2390.0	-57.00	2.0	0	40.26	AV	54	PASS
	2462	Ant1	2483.5	-46.21	2.0	0	51.05	PEAK	74	PASS
	2462	Ant1	2483.5	-56.23	2.0	0	41.03	AV	54	PASS
	2462	Ant1	2500.0	-47.95	2.0	0	49.31	PEAK	74	PASS
	2462	Ant1	2500.0	-57.99	2.0	0	39.27	AV	54	PASS
11G	2412	Ant1	2310.0	-49.46	2.0	0	47.80	PEAK	74	PASS
	2412	Ant1	2310.0	-57.85	2.0	0	39.41	AV	54	PASS
	2412	Ant1	2390.0	-37.22	2.0	0	60.04	PEAK	74	PASS
	2412	Ant1	2390.0	-51.67	2.0	0	45.59	AV	54	PASS
	2462	Ant1	2483.5	-39.94	2.0	0	57.32	PEAK	74	PASS
	2462	Ant1	2483.5	-51.45	2.0	0	45.81	AV	54	PASS
	2462	Ant1	2500.0	-47.62	2.0	0	49.64	PEAK	74	PASS
	2462	Ant1	2500.0	-58.03	2.0	0	39.23	AV	54	PASS
11N20 SISO	2412	Ant1	2310.0	-47.18	2.0	0	50.08	PEAK	74	PASS
	2412	Ant1	2310.0	-57.85	2.0	0	39.41	AV	54	PASS
	2412	Ant1	2390.0	-33.57	2.0	0	63.69	PEAK	74	PASS
	2412	Ant1	2390.0	-49.83	2.0	0	47.43	AV	54	PASS
	2462	Ant1	2483.5	-33.44	2.0	0	63.82	PEAK	74	PASS
	2462	Ant1	2483.5	-50.10	2.0	0	47.16	AV	54	PASS
	2462	Ant1	2500.0	-47.92	2.0	0	49.34	PEAK	74	PASS
	2462	Ant1	2500.0	-57.98	2.0	0	39.28	AV	54	PASS
11N40 SISO	2422	Ant1	2310.0	-48.34	2.0	0	48.92	PEAK	74	PASS
	2422	Ant1	2310.0	-57.86	2.0	0	39.40	AV	54	PASS

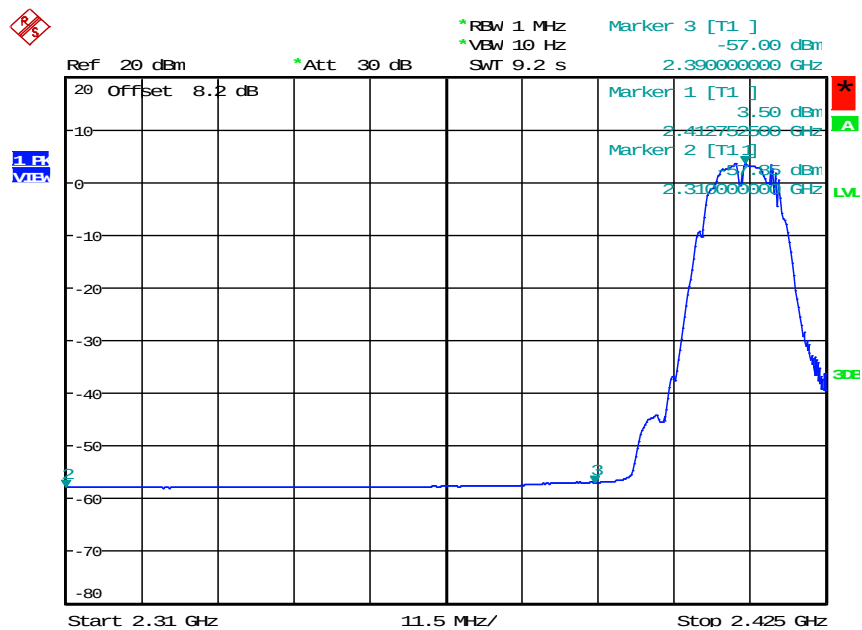
	2422	Ant1	2390.0	-35.07	2.0	0	62.19	PEAK	74	PASS
	2422	Ant1	2390.0	-46.32	2.0	0	50.94	AV	54	PASS
	2452	Ant1	2483.5	-32.43	2.0	0	64.83	PEAK	74	PASS
	2452	Ant1	2483.5	-47.36	2.0	0	49.90	AV	54	PASS
	2452	Ant1	2500.0	-47.49	2.0	0	49.77	PEAK	74	PASS
	2452	Ant1	2500.0	-57.92	2.0	0	39.34	AV	54	PASS

Restrict-band band-edge measurements_11B_2412_Ant1_PEAK



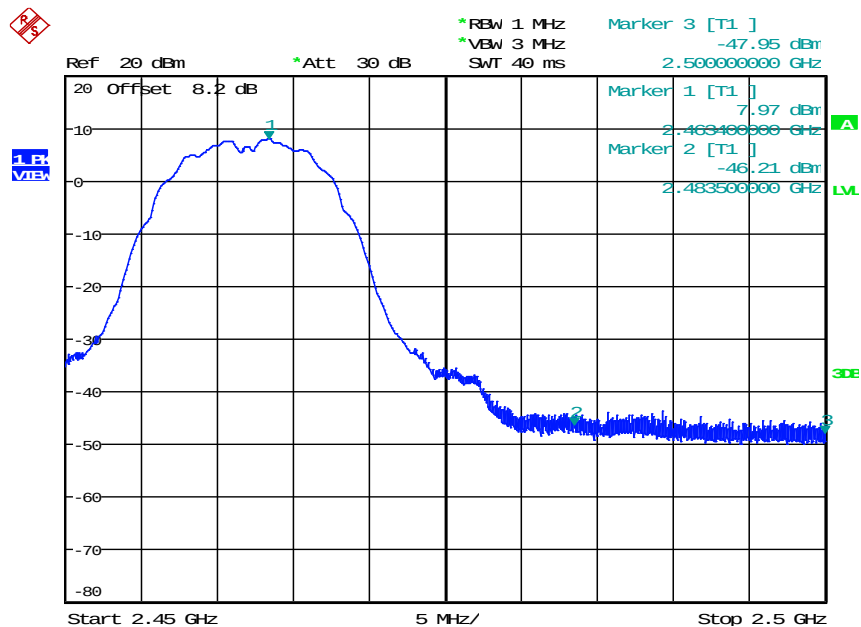
Date: 23.AUG.2019 19:22:34

Restrict-band band-edge measurements_11B_2412_Ant1_AV



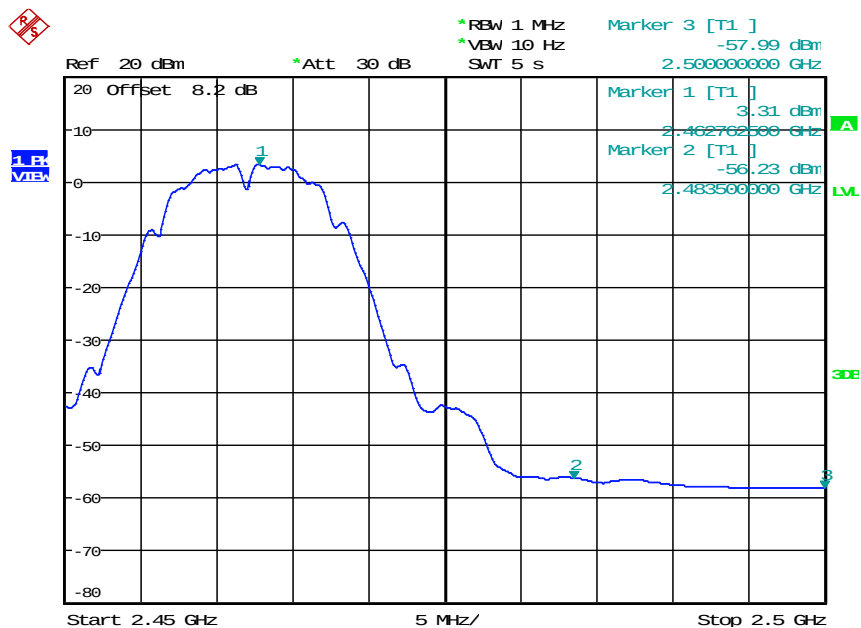
Date: 23.AUG.2019 19:22:49

Restrict-band band-edge measurements_11B_2462_Ant1_PEAK



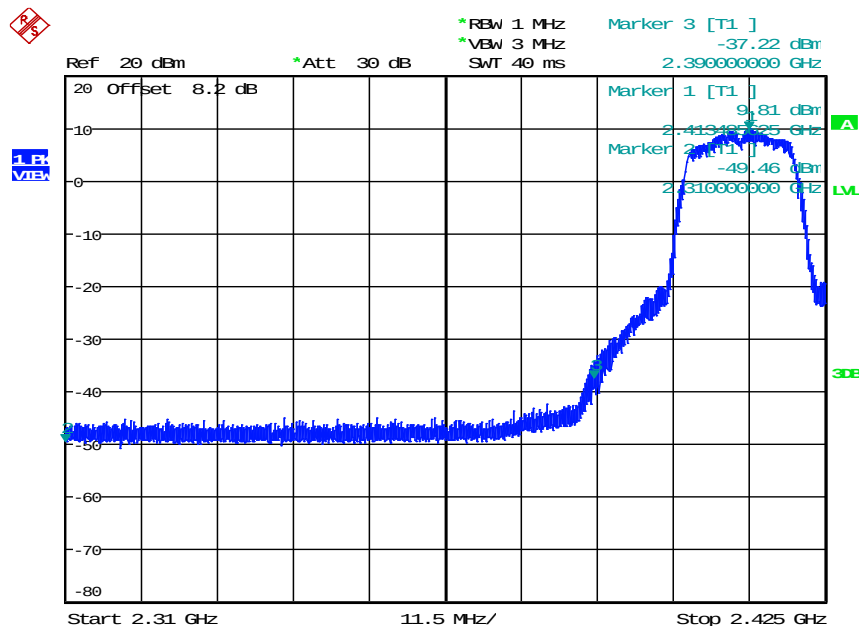
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Restrict-band band-edge measurements_11B_2462_Ant1_AV



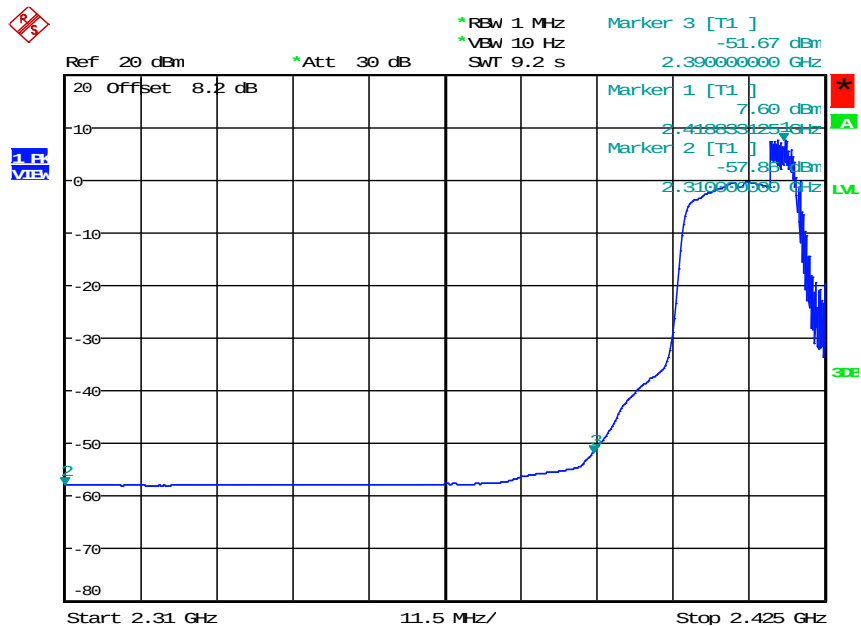
Date: 23.AUG.2019 20:54:51

Restrict-band band-edge measurements_11G_2412_Ant1_PEAK



Date: 23.AUG.2019 21:04:08

Restrict-band band-edge measurements_11G_2412_Ant1_AV



Date: 23.AUG.2019 21:04:23

Ref 20 dBm *Att 30 dB *RBW 1 MHz *VBW 3 MHz *SWT 40 ms

Marker 3 [T1] -47.62 dBm 2.50000000 GHz

Marker 1 [T1] 8.81 dBm 2.46325625 GHz

Marker 2 [T1] -39.94 dBm 2.48350000 GHz

Start 2.45 GHz 5 MHz/ Stop 2.5 GHz

Date: 23.AUG.2019 21:10:38

Ref 20 dBm *Att 30 dB *RBW 1 MHz *VBW 10 Hz SWT 5 s

Marker 1 [T1] -58.03 dBm 2.46312560 GHz

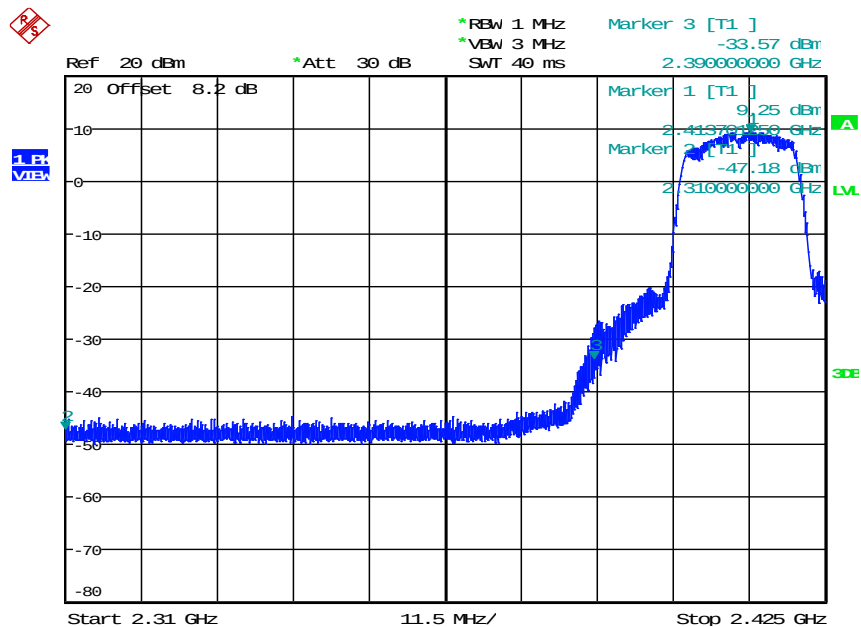
Marker 2 [T1] -51.45 dBm 2.483500000 GHz

Marker 3 [T1] -58.03 dBm 2.500000000 GHz

Start 2.45 GHz 5 MHz/ Stop 2.5 GHz

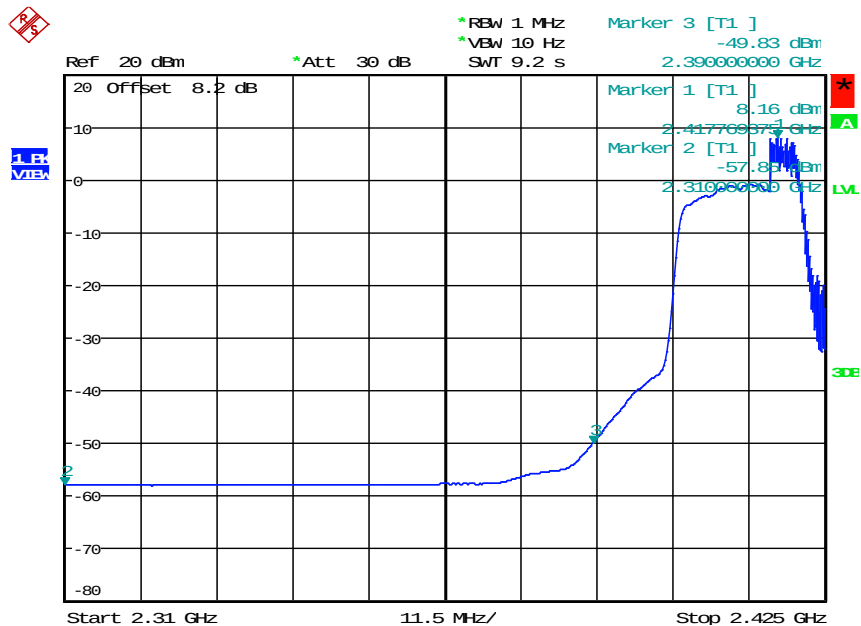
Date: 23.AUG.2019 21:10:53

Restrict-band band-edge measurements_11N20SISO_2412_Ant1_PEAK



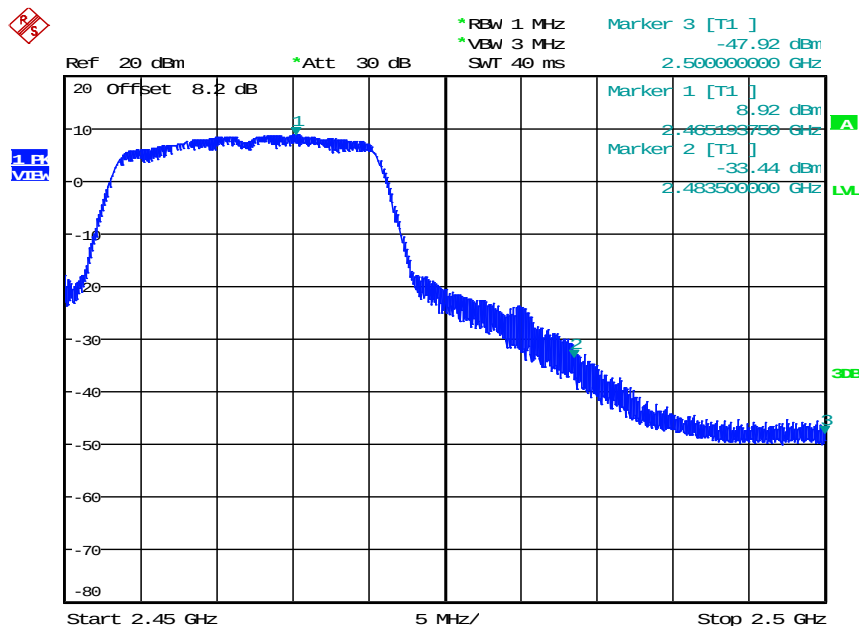
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Restrict-band band-edge measurements_11N20SISO_2412_Ant1_AV



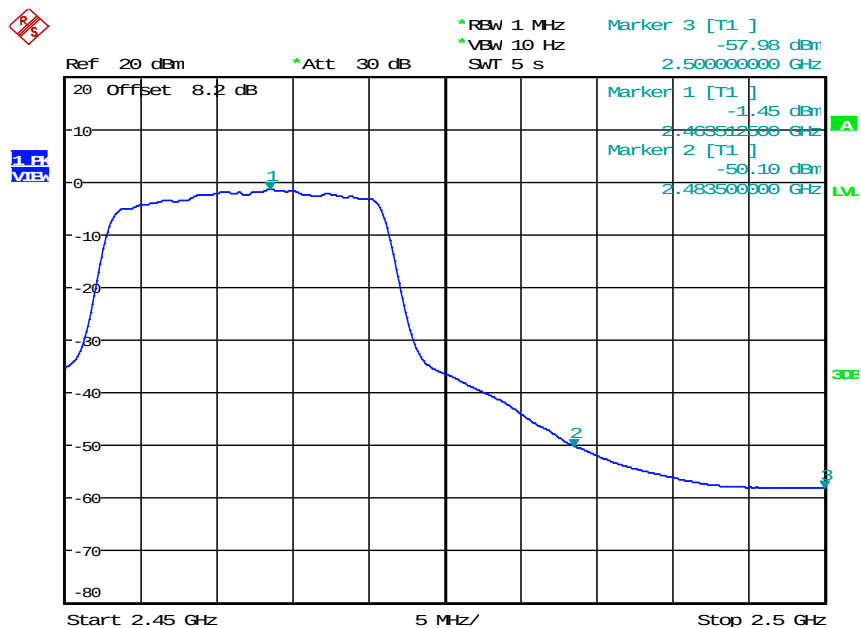
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Restrict-band band-edge measurements_11N20SISO_2462_Ant1_PEAK



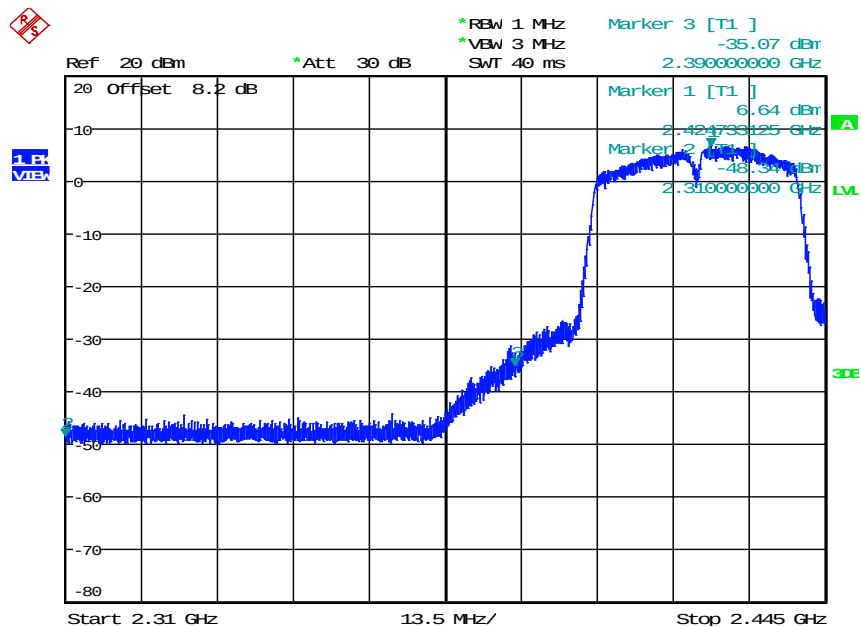
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Restrict-band band-edge measurements_11N20SISO_2462_Ant1_AV



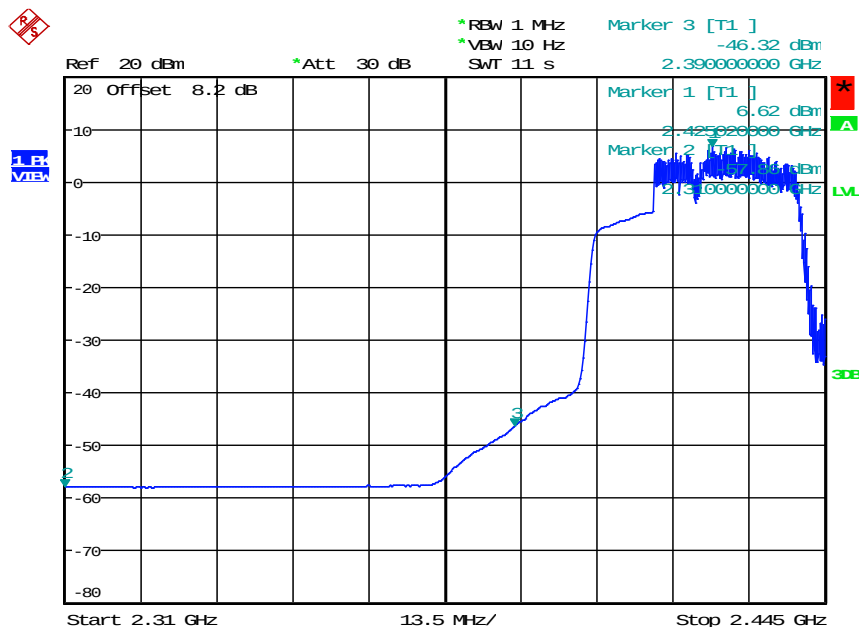
Date: 23.AUG.2019 21:19:30

Restrict-band band-edge measurements_11N40SISO_2422_Ant1_PEAK



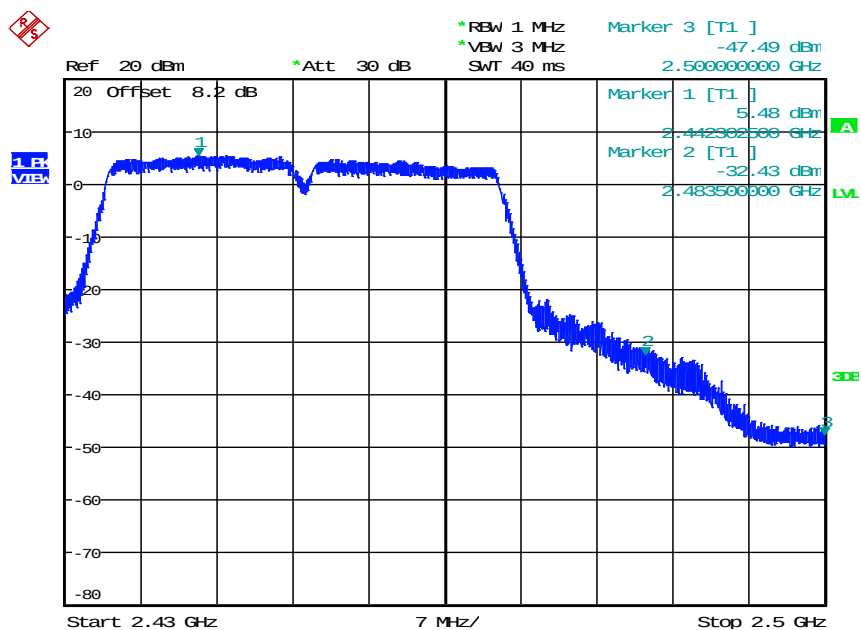
Date: 23.AUG.2019 21:21:45

Restrict-band band-edge measurements_11N40SISO_2422_Ant1_AV



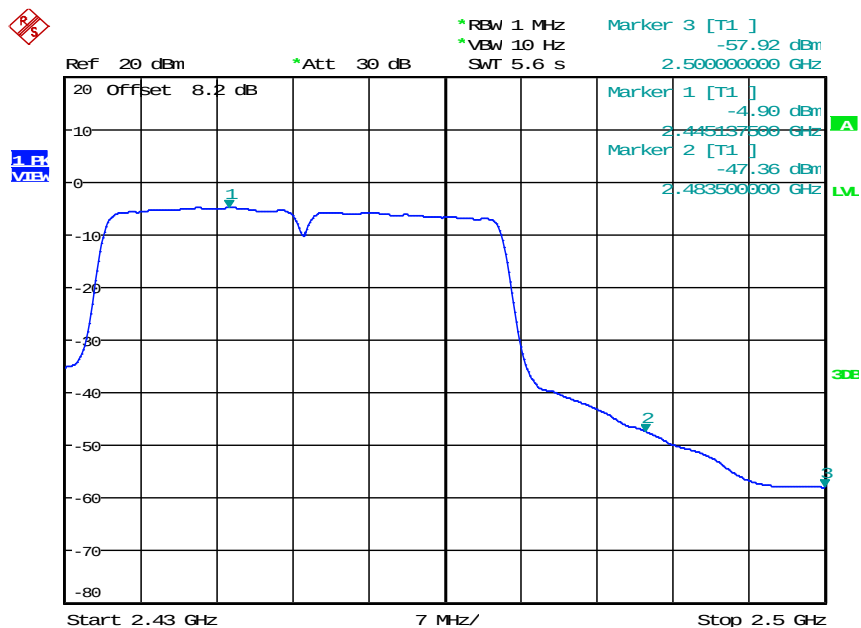
Date: 23.AUG.2019 21:22:00

Restrict-band band-edge measurements_11N40SISO_2452_Ant1_PEAK



Date: 23.AUG.2019 21:28:29

Restrict-band band-edge measurements_11N40SISO_2452_Ant1_AV



Date: 23.AUG.2019 21:28:44