

Appendix C

RF Test Data for 2.4G WIFI (Conducted Measurement)

Product Name: 5 inch 4G Smart Phone

Trade Mark: LOGIC, iSWAG, UNONU

Test Model: L50T

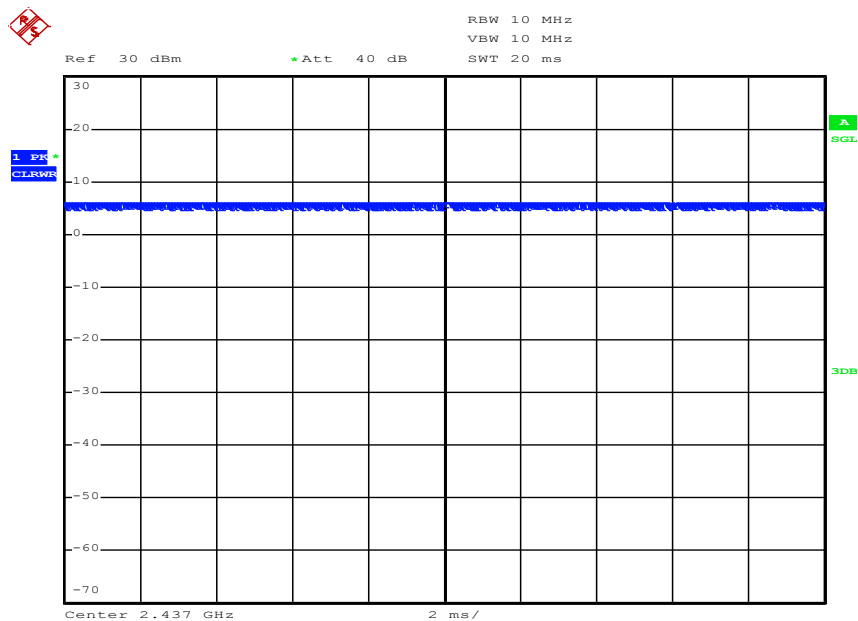
Environmental Conditions

Temperature:	24.5 ° C
Relative Humidity:	54.4%
ATM Pressure:	100.0 kPa
Test Engineer:	Wang.Chuang
Supervised by:	TOM.LIU

C.1 Duty Cycle

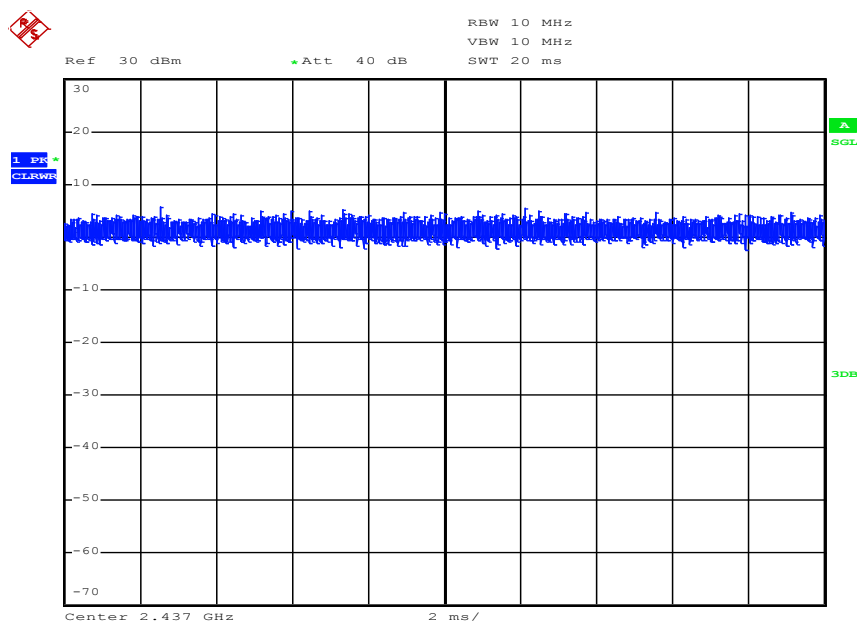
Test Mode	Test Channel	Ant	Duty Cycle[%]	Verdict
11B	2437	Ant1	100	PASS
11G	2437	Ant1	100	PASS
11N20SISO	2437	Ant1	100	PASS
11N40SISO	2437	Ant1	100	PASS

Duty Cycle_11B_2437_Ant1



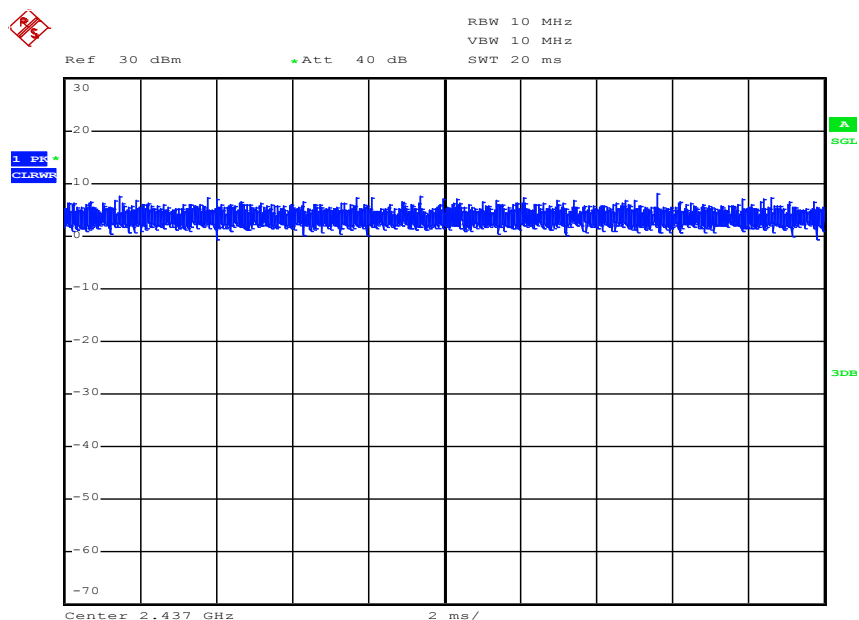
Date: 30.SEP.2019 14:27:39

Duty Cycle_11G_2437_Ant1



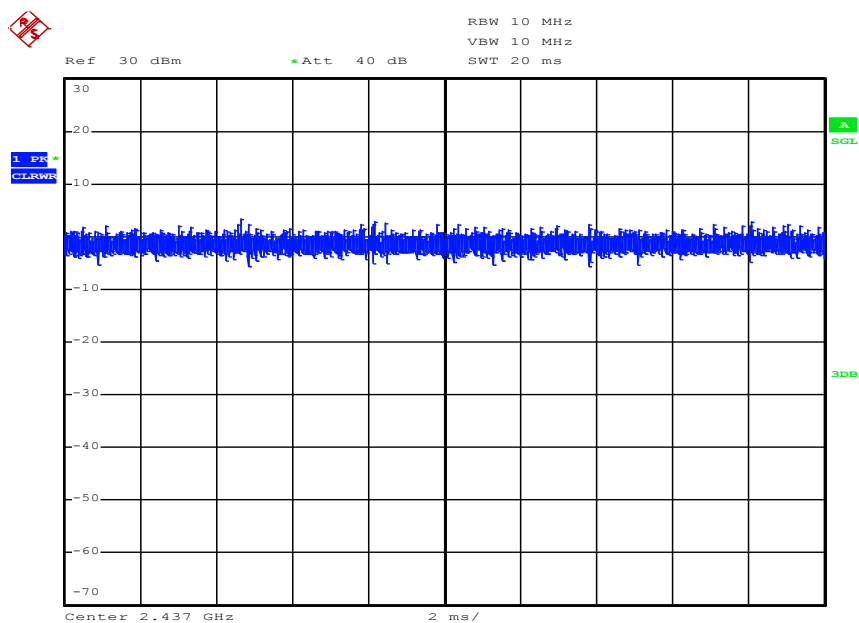
Date: 30.SEP.2019 14:28:09

Duty Cycle_11N20SISO_2437_Ant1



Date: 30.SEP.2019 14:28:38

Duty Cycle_11N40SISO_2437_Ant1



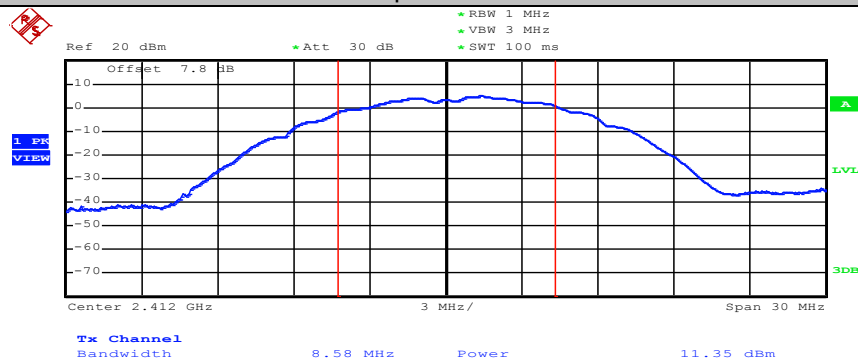
Date: 30.SEP.2019 14:29:04

C.2 Maximum Conducted Output Power

Mode	Channel	Meas. Level [dBm]	Limit [dBm]	Verdict
11B	LCH	11.35	30	PASS
	MCH	12.92	30	PASS
	HCH	13.53	30	PASS
11G	LCH	16.41	30	PASS
	MCH	17.61	30	PASS
	HCH	18.00	30	PASS
11N20SISO	LCH	16.29	30	PASS
	MCH	17.29	30	PASS
	HCH	17.41	30	PASS
11N40SISO	LCH	16.29	30	PASS
	MCH	16.89	30	PASS
	HCH	18.57	30	PASS

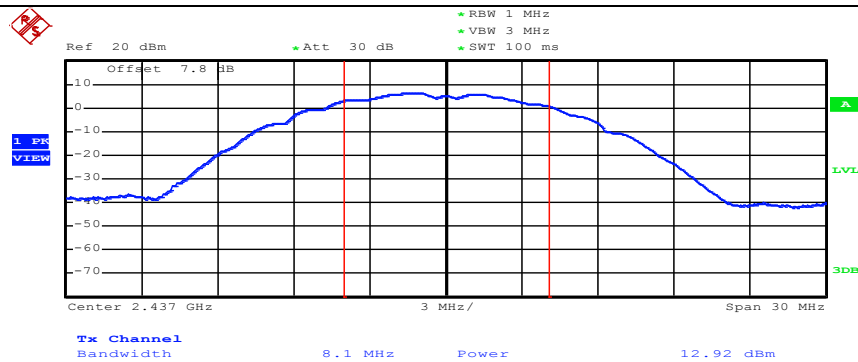
Test Graphs

11B/LCH



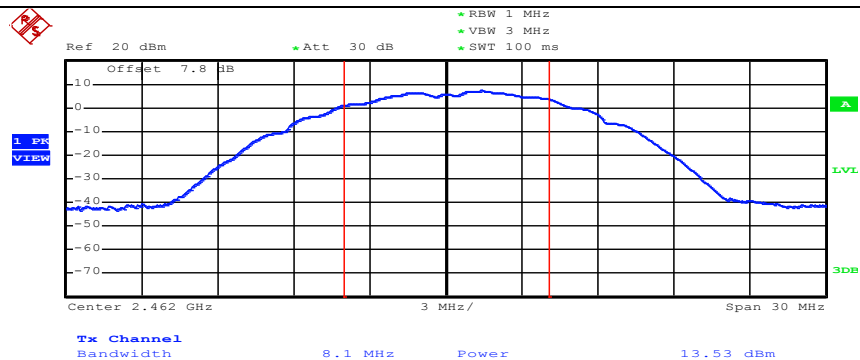
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11B/MCH



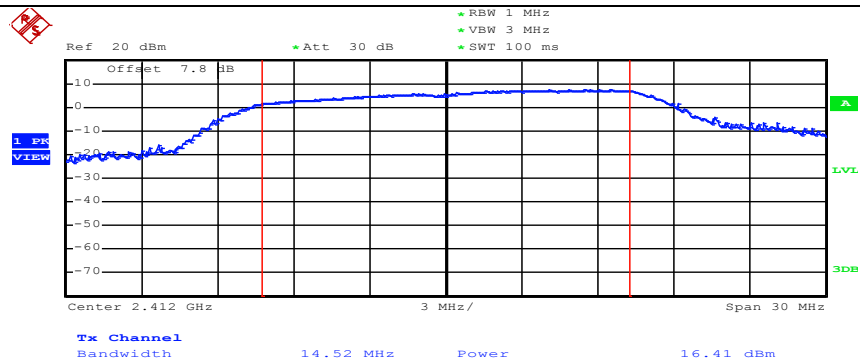
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11B/HCH



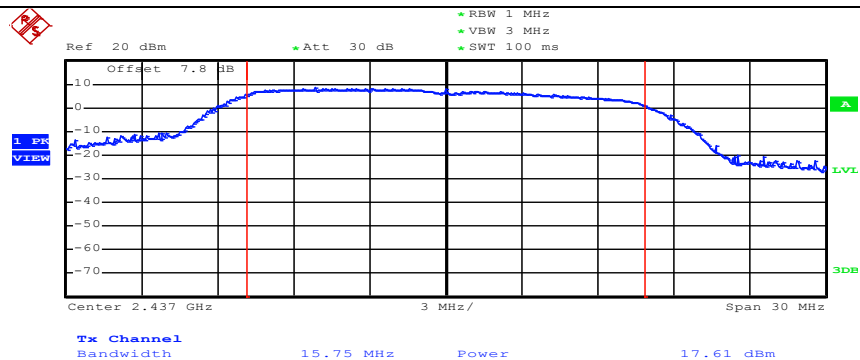
Date: 30.SEP.2019 14:02:38

11G/LCH



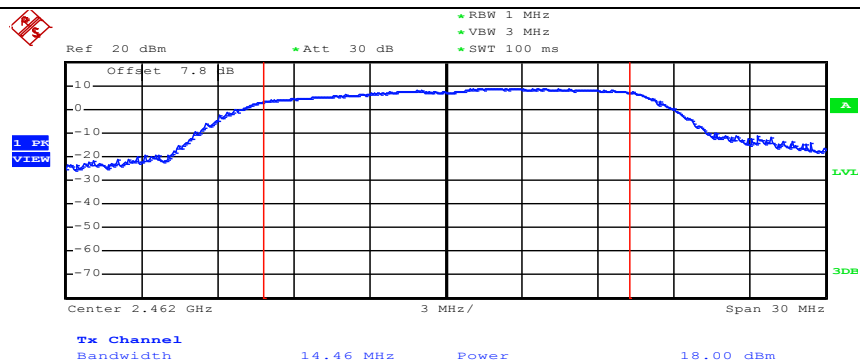
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11G/MCH



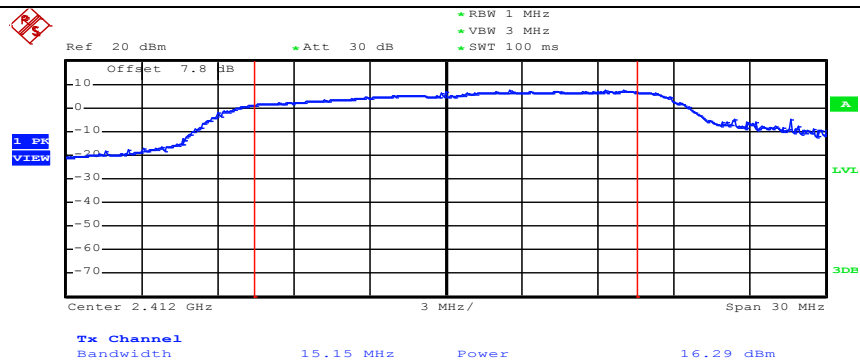
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11G/HCH



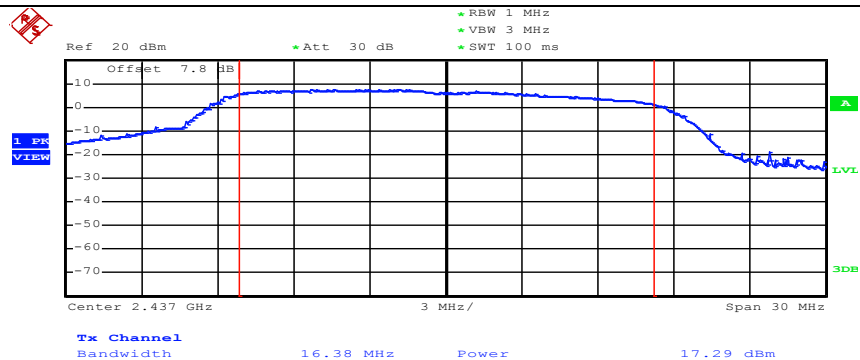
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11N20SISO/LCH



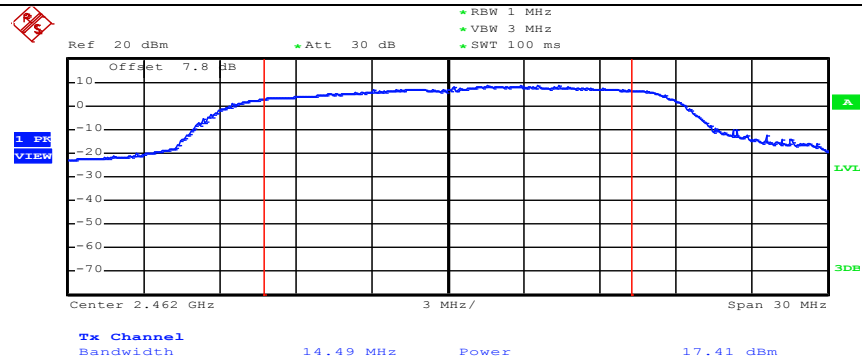
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11N20SISO/MCH



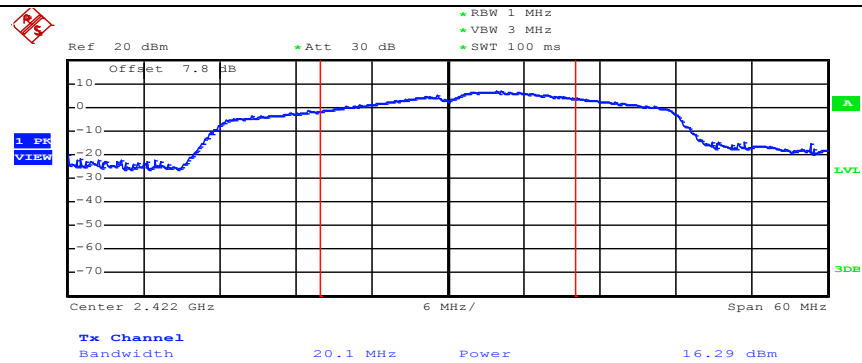
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11N20SISO/HCH



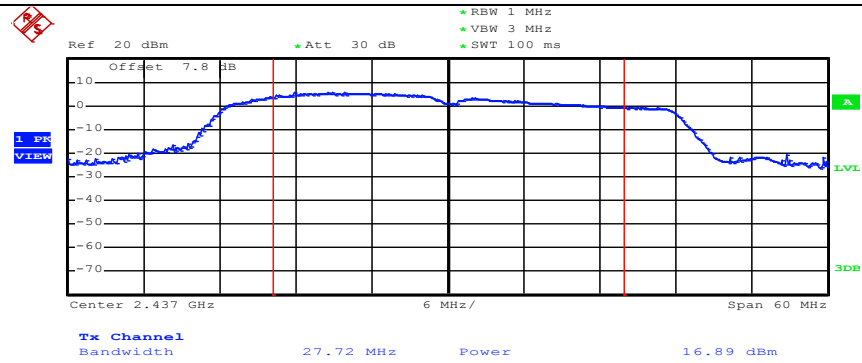
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11N40SISO/LCH



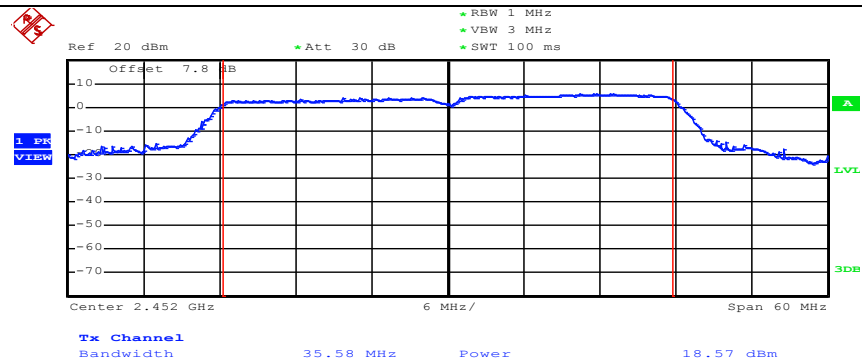
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11N40SISO/MCH



Date: 30.SEP.2019 14:23:46

11N40SISO/HCH

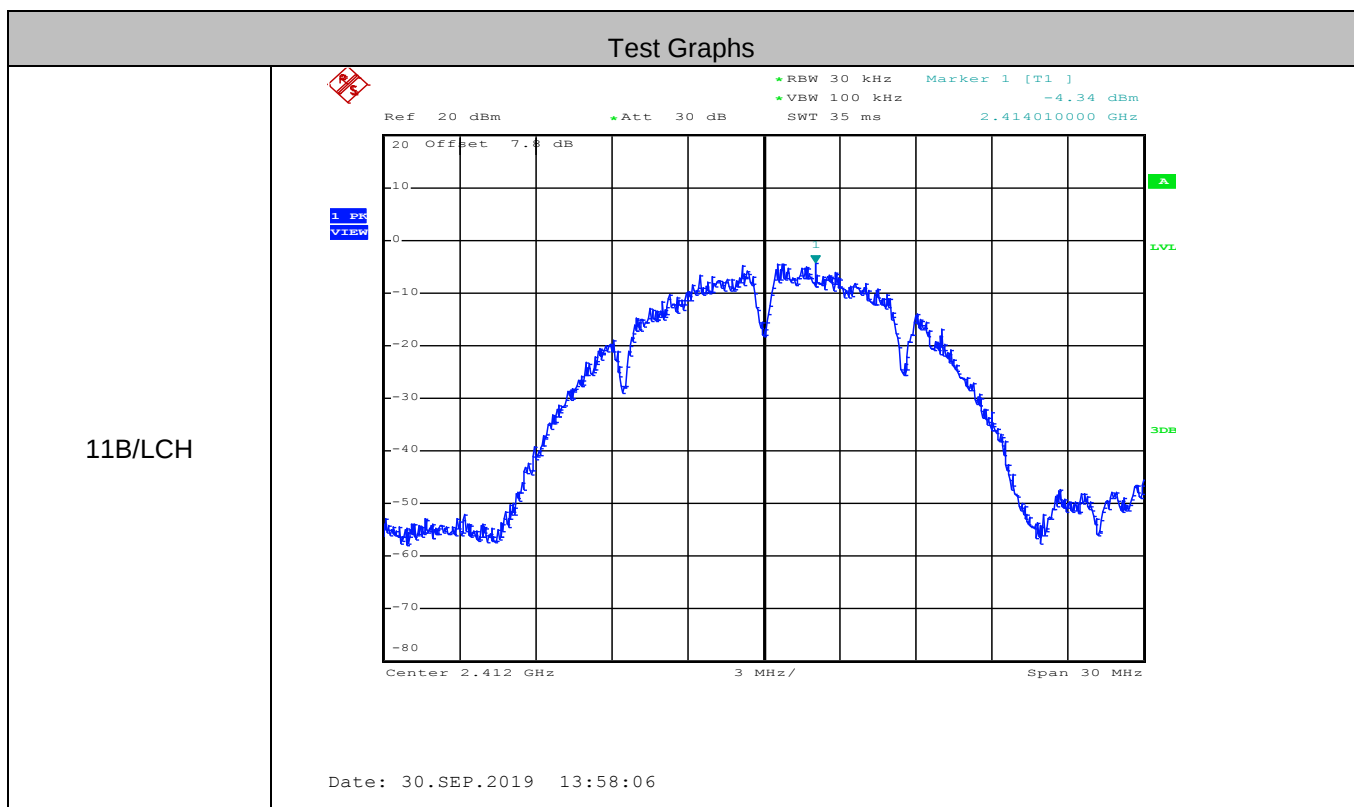


Date: 30.SEP.2019 14:25:38

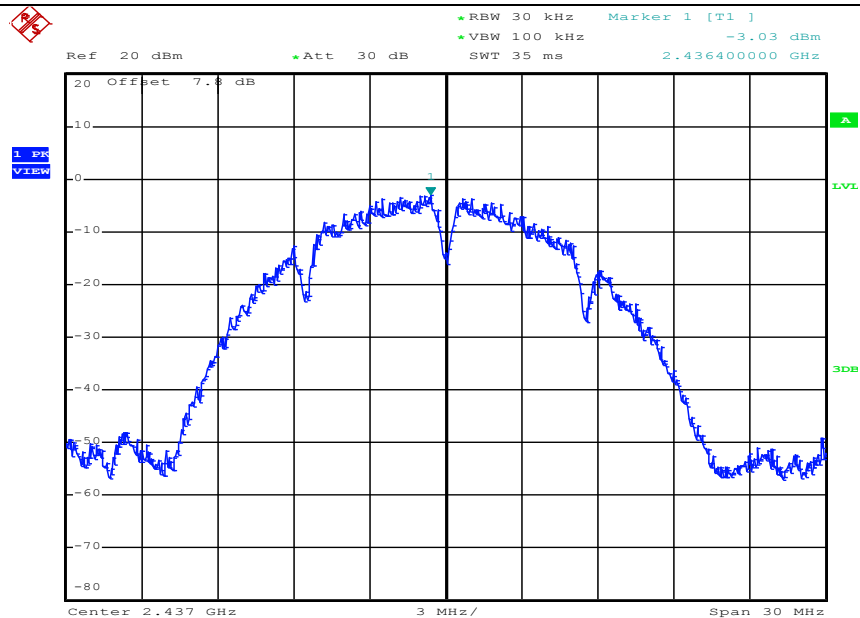
C.3 Maximum Power Spectral Density

Mode	Channel	Meas.Level [dBm/30KHz]	Convert Factor	Result [dBm/3KHz]	Limit [dBm/3KHz]	Verdict
11B	LCH	-4.340	-10	-14.340	8	PASS
	MCH	-3.030	-10	-13.030	8	PASS
	HCH	-2.100	-10	-12.100	8	PASS
11G	LCH	-6.660	-10	-16.660	8	PASS
	MCH	-5.690	-10	-15.690	8	PASS
	HCH	-5.090	-10	-15.090	8	PASS
11N20SISO	LCH	-6.250	-10	-16.250	8	PASS
	MCH	-6.380	-10	-16.380	8	PASS
	HCH	-5.350	-10	-15.350	8	PASS
11N40SISO	LCH	-7.950	-10	-17.950	8	PASS
	MCH	-7.770	-10	-17.770	8	PASS
	HCH	-7.790	-10	-17.790	8	PASS

***Note: The Convert Factor = $10 \cdot \log(3\text{KHz}/30\text{KHz}) = -10$

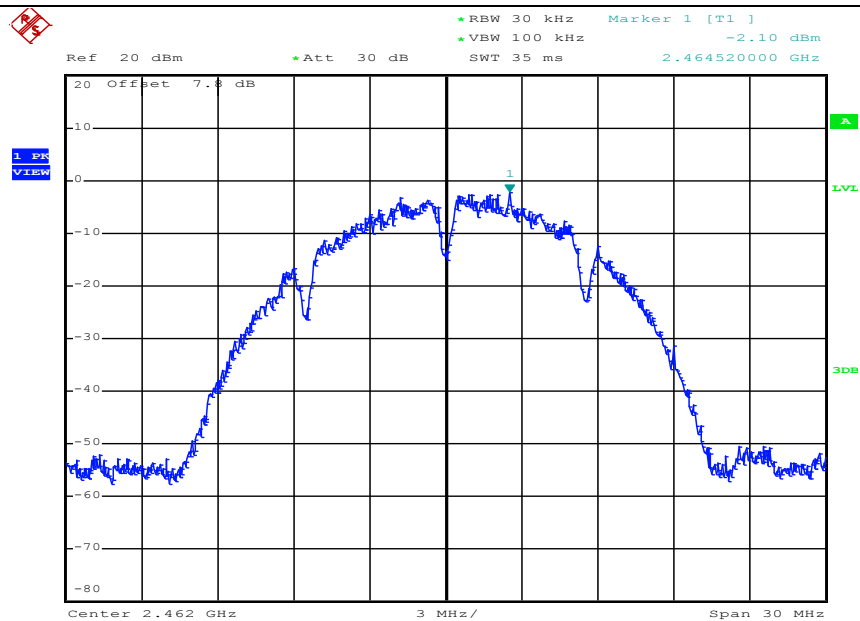


11B/MCH



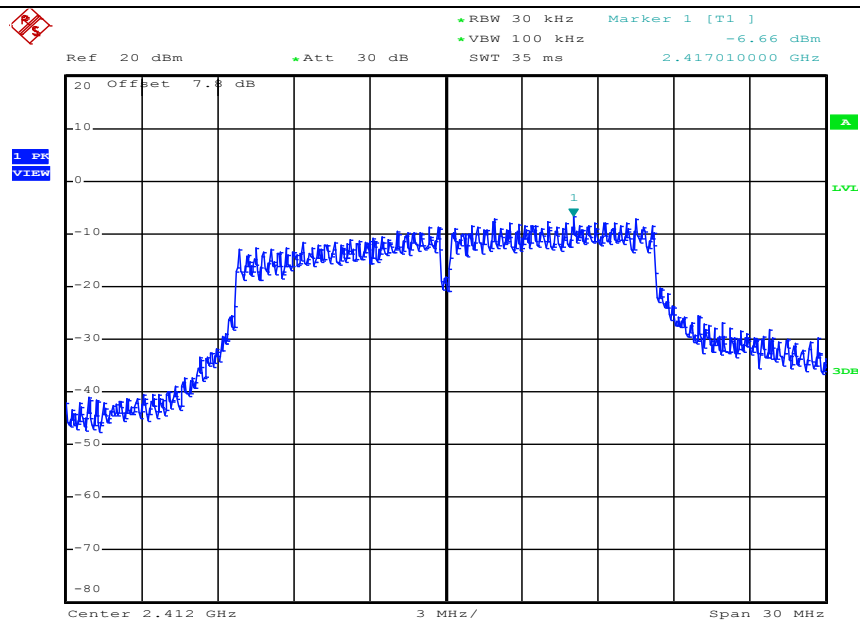
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11B/HCH



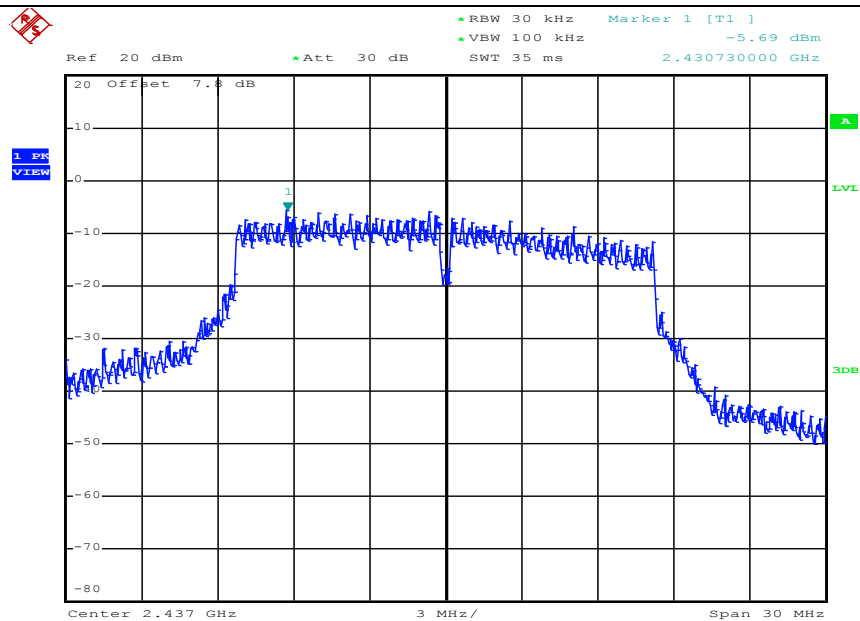
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11G/LCH



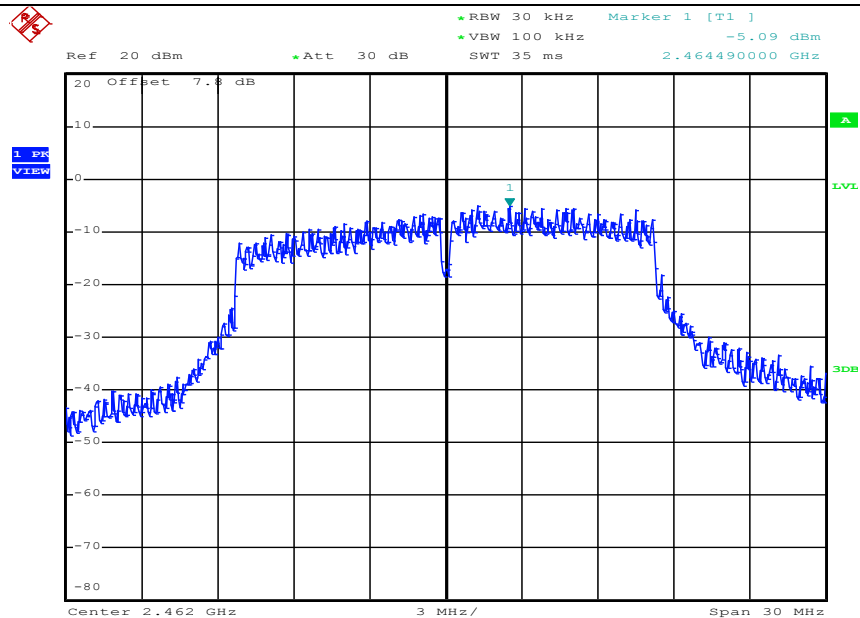
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11G/MCH



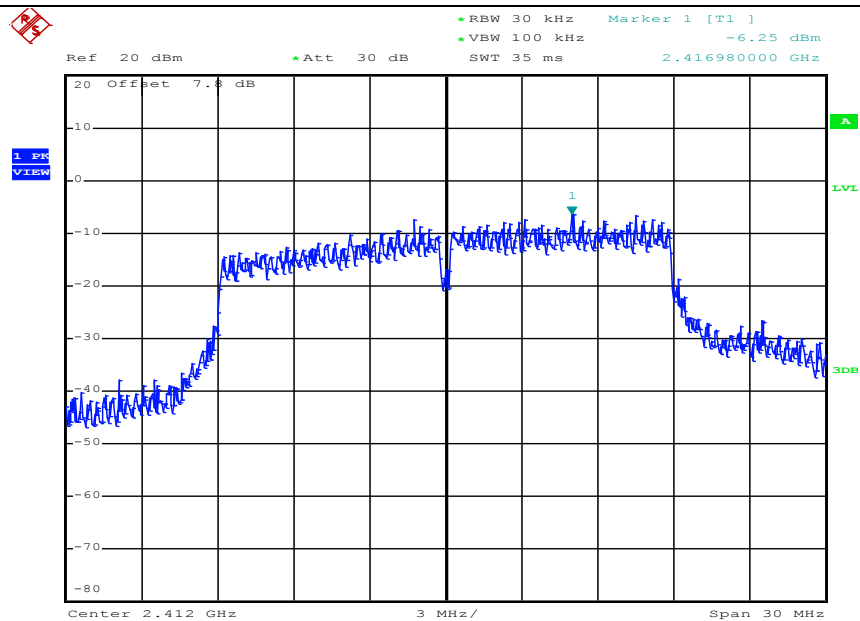
Date: 30.SEP.2019 14:08:23

11G/HCH



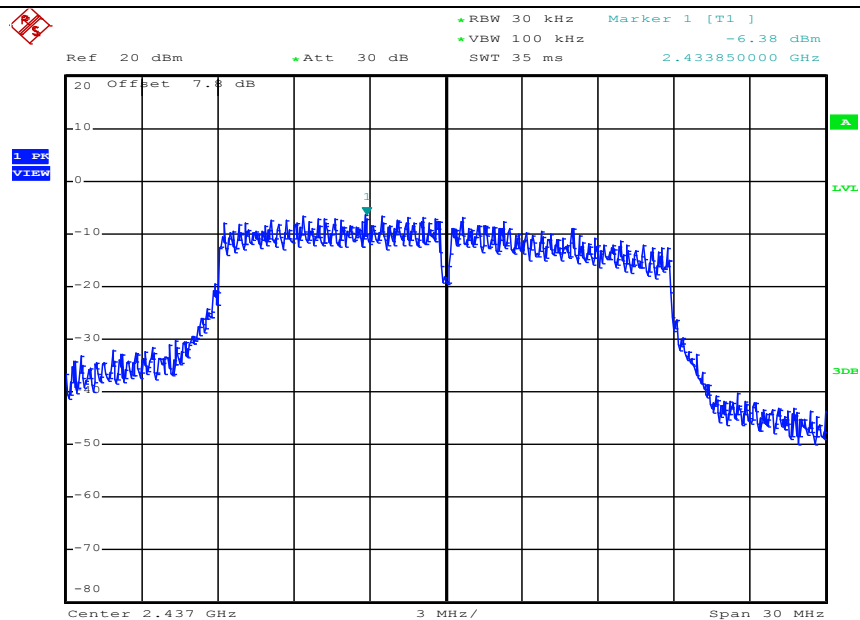
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11N20SISO/LCH



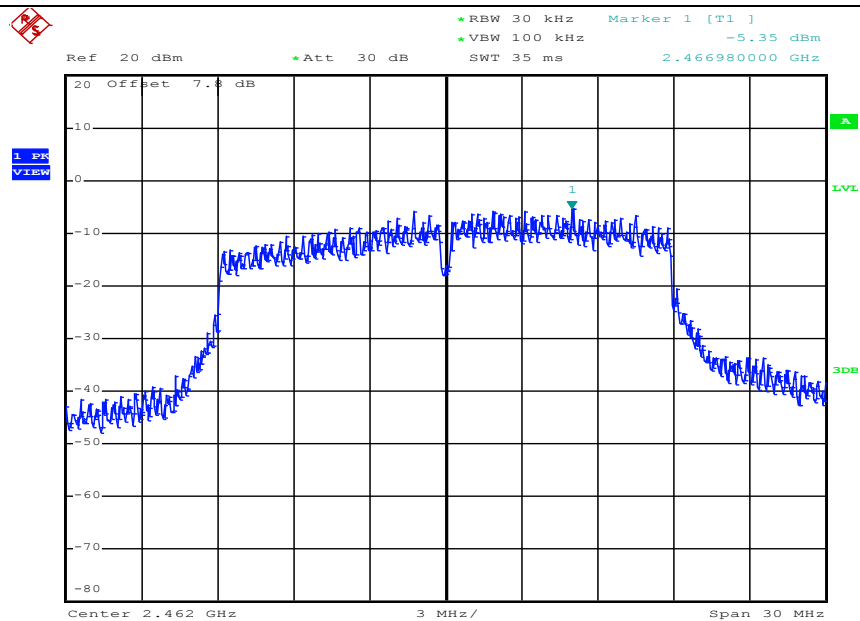
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11N20SISO/MCH



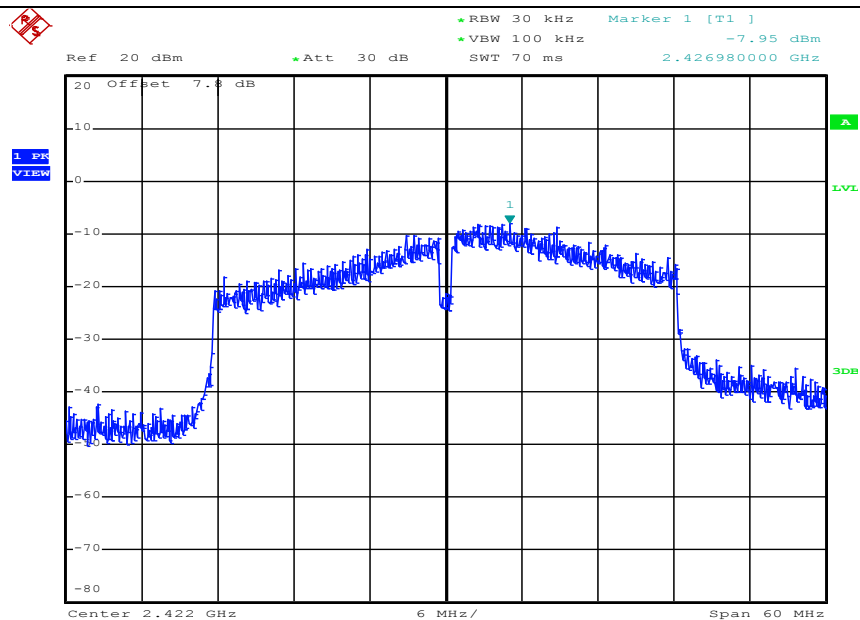
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11N20SISO/HCH



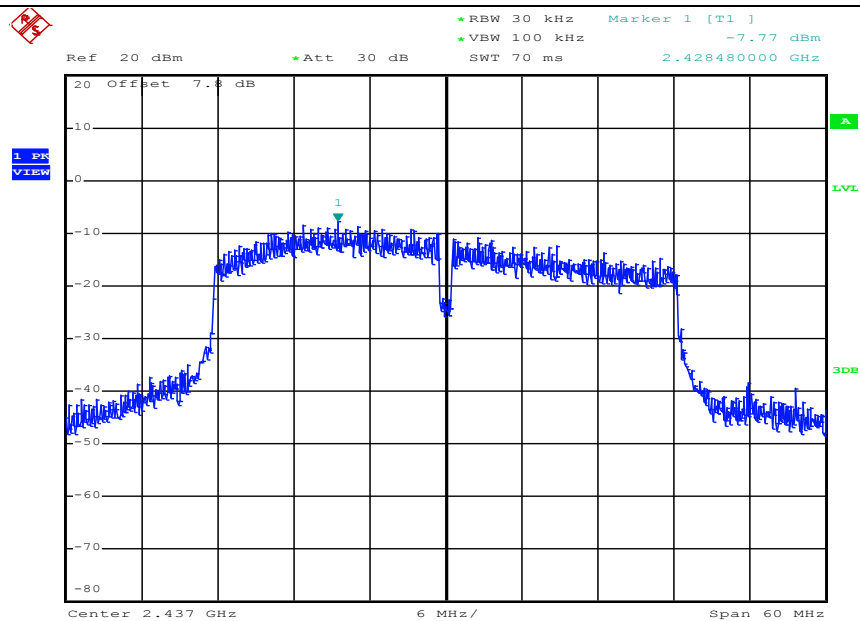
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11N40SISO/LCH



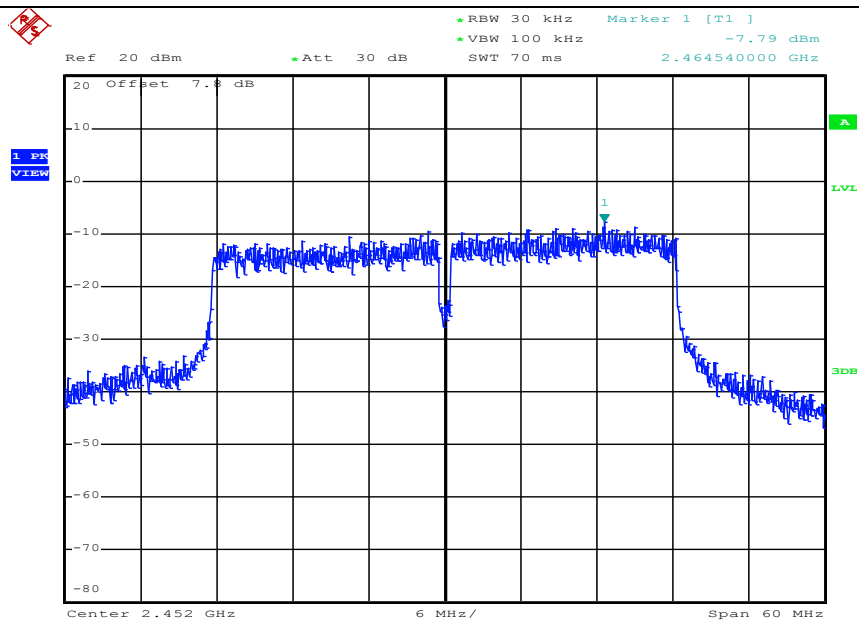
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11N40SISO/MCH



Date: 30.SEP.2019 14:23:59

11N40SISO/HCH



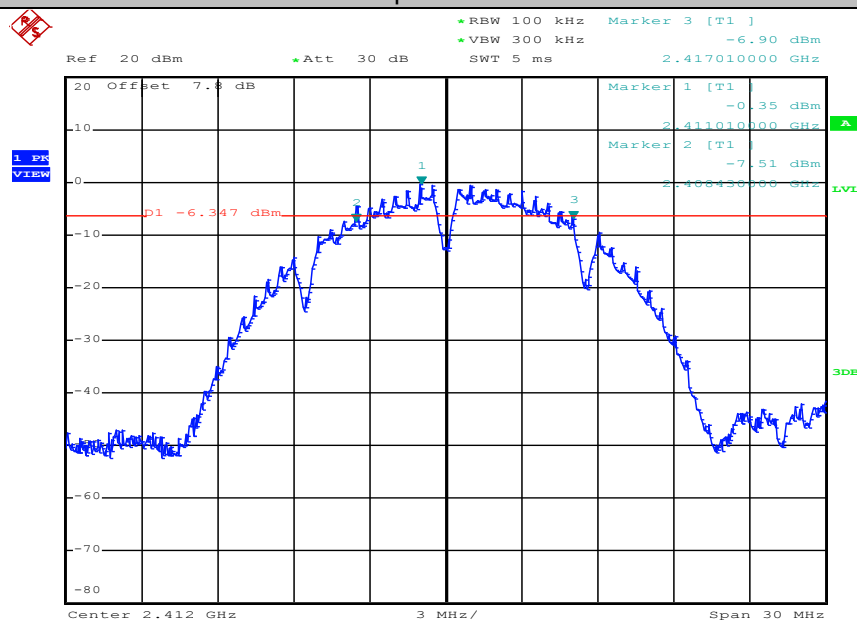
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C.4 6dB Bandwidth

Mode	Channel	6dB Bandwidth [MHz]	Limit [MHz]	Verdict
11B	LCH	8.580	≥ 0.5	PASS
	MCH	8.100	≥ 0.5	PASS
	HCH	8.100	≥ 0.5	PASS
11G	LCH	14.520	≥ 0.5	PASS
	MCH	15.750	≥ 0.5	PASS
	HCH	14.460	≥ 0.5	PASS
11N20SISO	LCH	15.150	≥ 0.5	PASS
	MCH	16.380	≥ 0.5	PASS
	HCH	14.490	≥ 0.5	PASS
11N40SISO	LCH	20.100	≥ 0.5	PASS
	MCH	27.720	≥ 0.5	PASS
	HCH	35.580	≥ 0.5	PASS

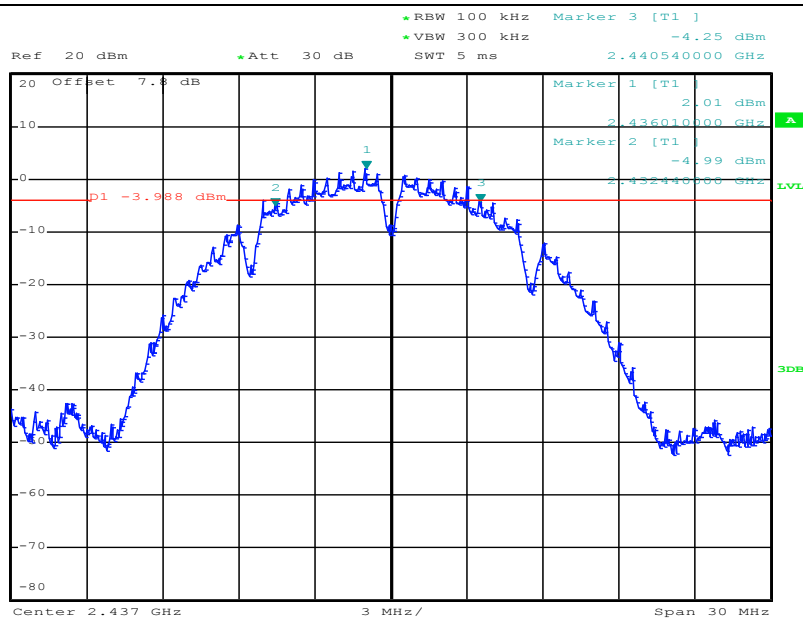
Test Graphs

11B/LCH



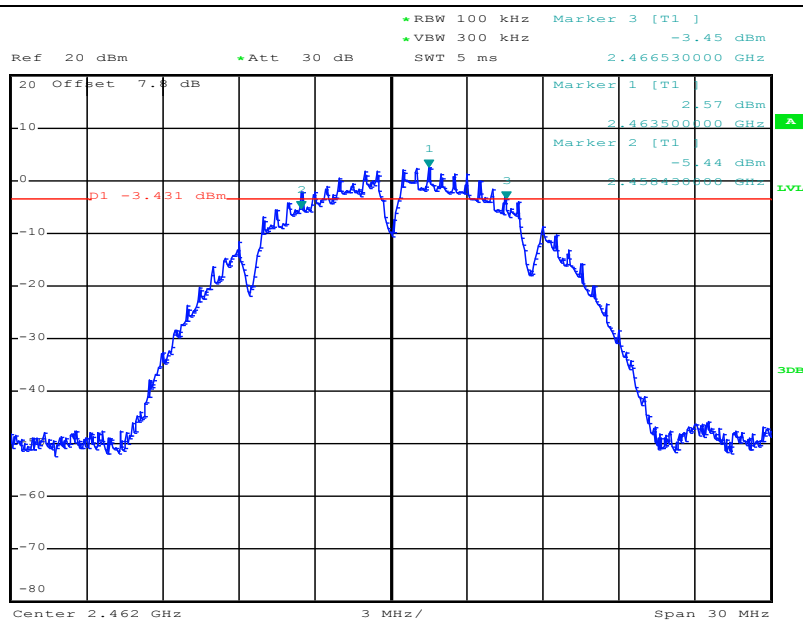
Date: 30.SEP.2019 13:57:19

11B/MCH

1 PR
VIEW

Date: 30.SEP.2019 13:59:59

11B/HCH

1 PR
VIEW

Date: 30.SEP.2019 14:02:04

*RBW 100 kHz Marker 3 [T1] -7.96 dBm
 *VBW 300 kHz
 *Att 30 dB SWT 5 ms 2.420220000 GHz

Ref 20 dBm Offset 7.5 dB

Marker 1 [T1] -1.47 dBm
 2.416980000 GHz
 Marker 2 [T1] -9.89 dBm
 2.435700000 GHz

p1 -7.47 dBm

Center 2.412 GHz 3 MHz/ Span 30 MHz

Date: 30.SEP.2019 14:04:40

1 PR
VIEW

Ref 20 dBm *Att 30 dB *RBW 100 kHz *VBW 300 kHz Marker 3 [T1] -7.98 dBm 2.444530000 GHz

SWT 5 ms 2.444530000 GHz

20 Offset 7.8 dB

Marker 1 [T1] -1.15 dBm 2.429500000 GHz

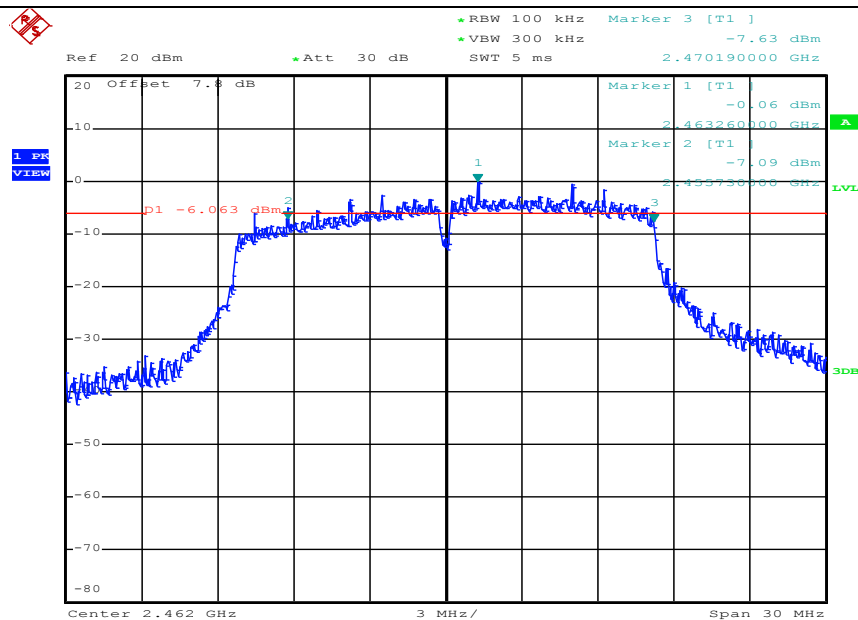
Marker 2 [T1] -7.71 dBm 2.428700000 GHz

3dB

Center 2.437 GHz 3 MHz/ Span 30 MHz

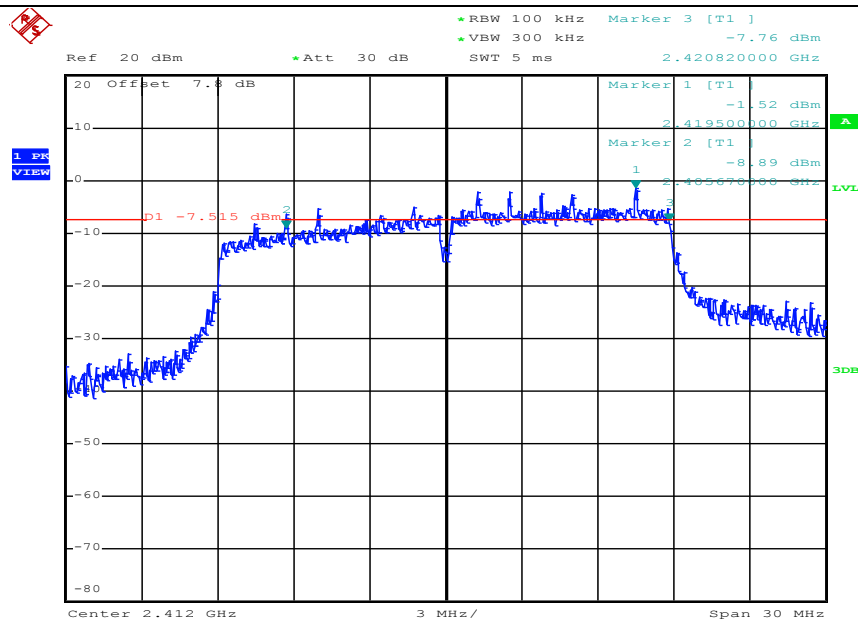
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11G/HCH



Date: 30.SEP.2019 14:10:09

11N20SISO/LCH

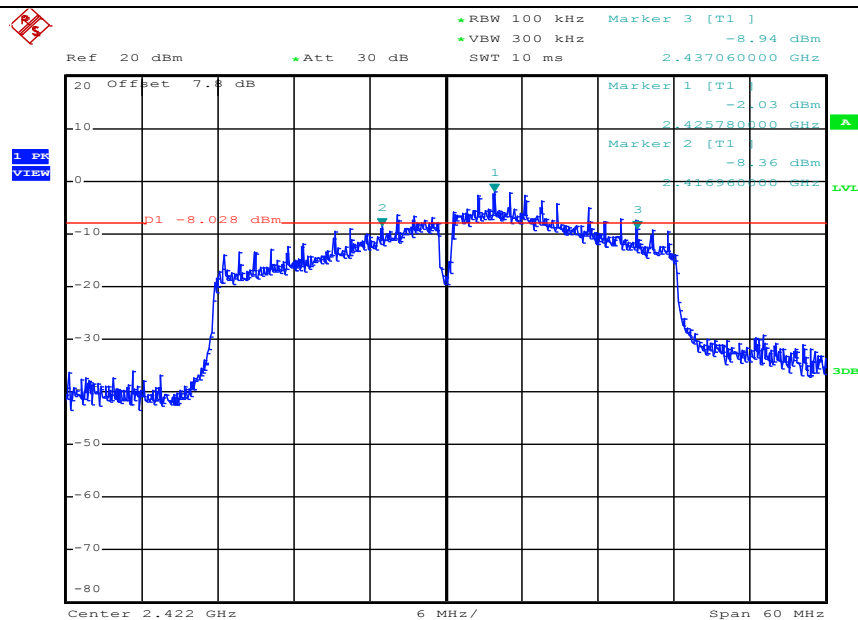


Date: 30.SEP.2019 14:13:07

Date: 30.SEP.2019 14:16:08

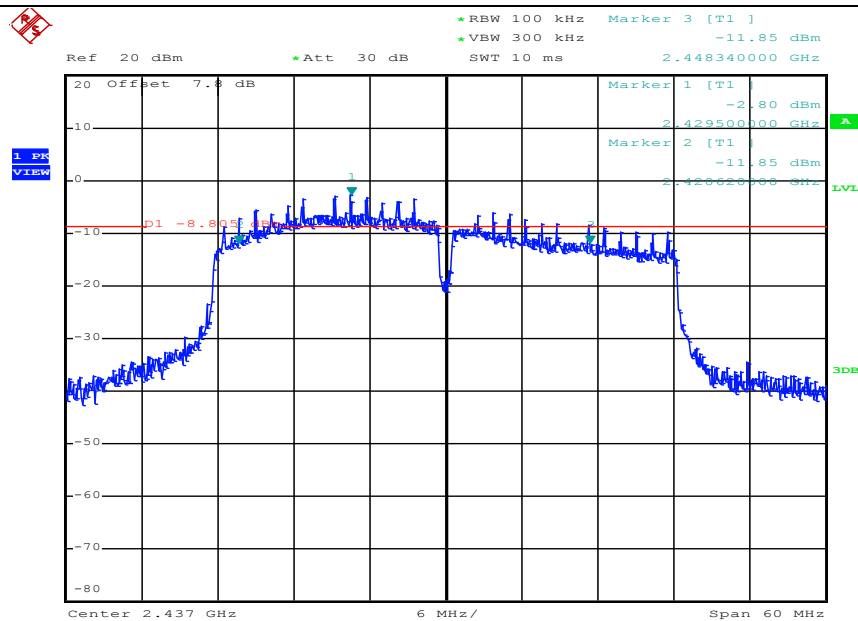
Date: 30.SEP.2019 14:17:59

11N40SISO/LCH



Date: 30.SEP.2019 14:20:31

11N40SISO/MCH

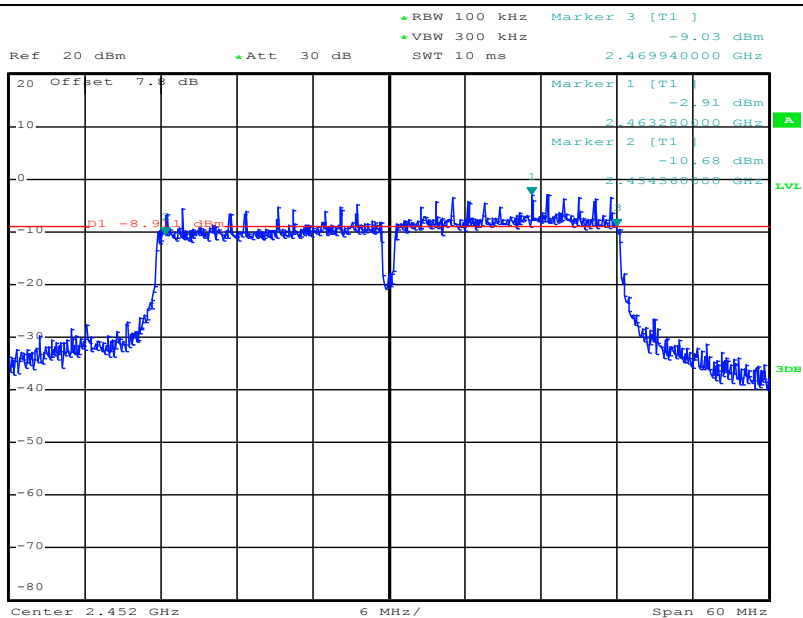


Date: 30.SEP.2019 14:23:13

11N40SISO/HCH



1 PE
VIEW



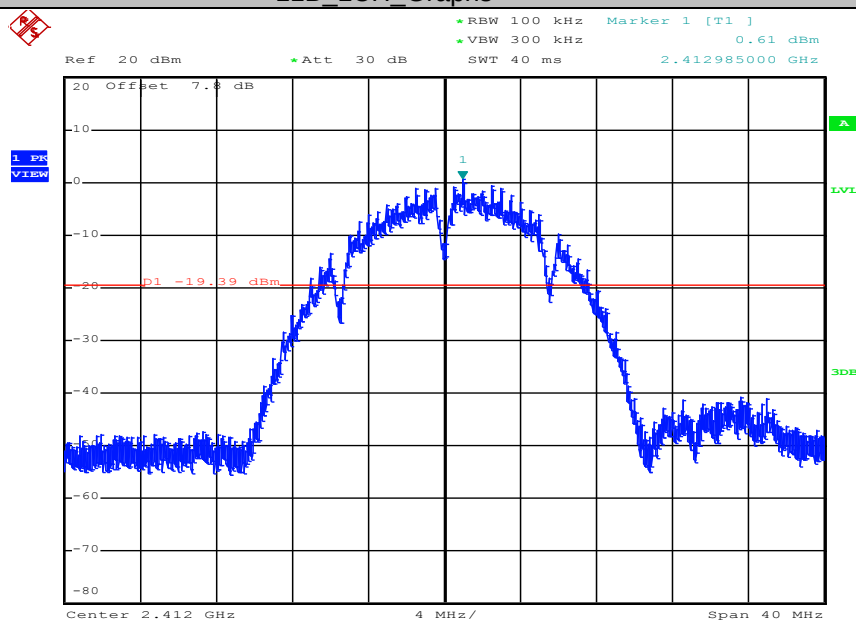
Date: 30.SEP.2019 14:25:05

C.5 RF Conducted Spurious Emissions

Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
11B	LCH	0.61	-32.080	-19.390	PASS
	MCH	1.53	-32.770	-18.470	PASS
	HCH	2.82	-31.710	-17.180	PASS
11G	LCH	-1.61	-32.320	-21.610	PASS
	MCH	-1.37	-32.850	-21.370	PASS
	HCH	-0.26	-32.120	-20.260	PASS
11N20 SISO	LCH	-1.93	-32.270	-21.930	PASS
	MCH	-1.77	-31.950	-21.770	PASS
	HCH	-0.34	-33.120	-20.340	PASS
11N40 SISO	LCH	-2.42	-32.610	-22.420	PASS
	MCH	-2.61	-32.230	-22.610	PASS
	HCH	-3.03	-31.970	-23.030	PASS

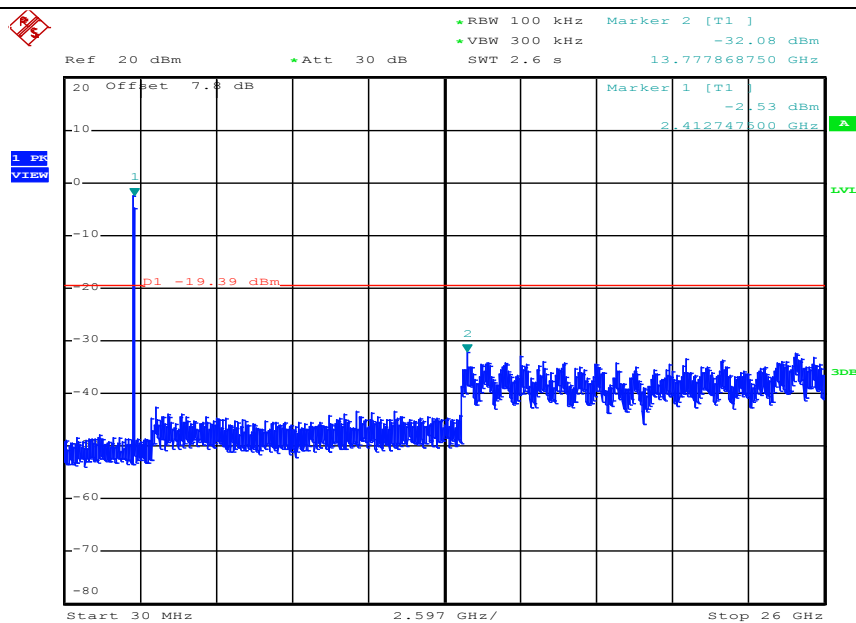
11B_LCH_Graphs

Pref/11B/LCH



Date: 30.SEP.2019 13:58:33

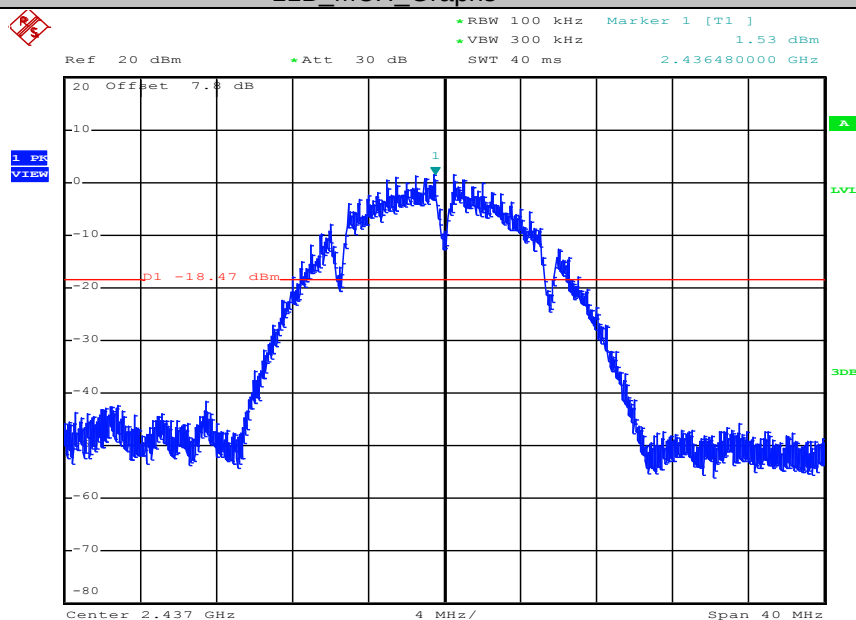
Puw/11B/LCH



Date: 30.SEP.2019 13:58:48

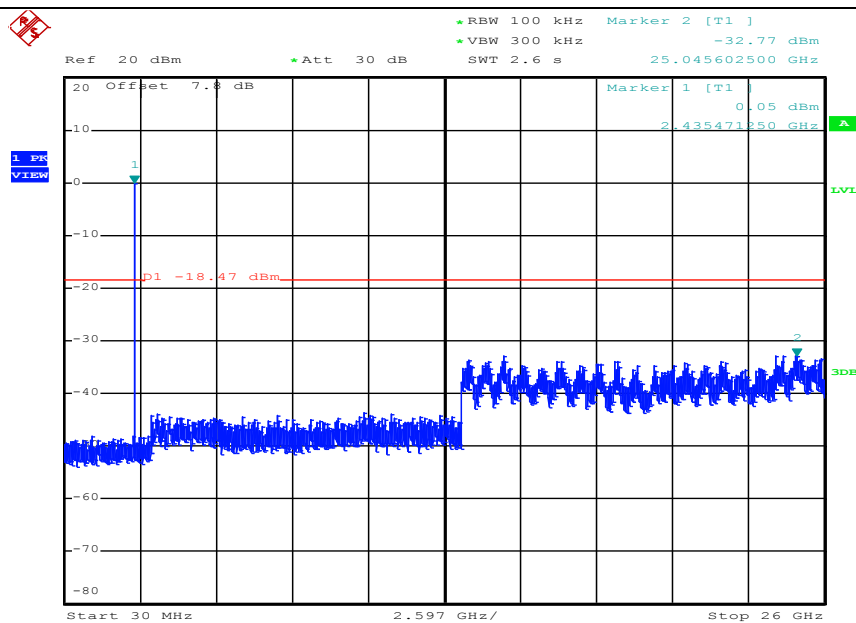
11B_MCH_Graphs

Pref/11B/MCH



Date: 30.SEP.2019 14:00:59

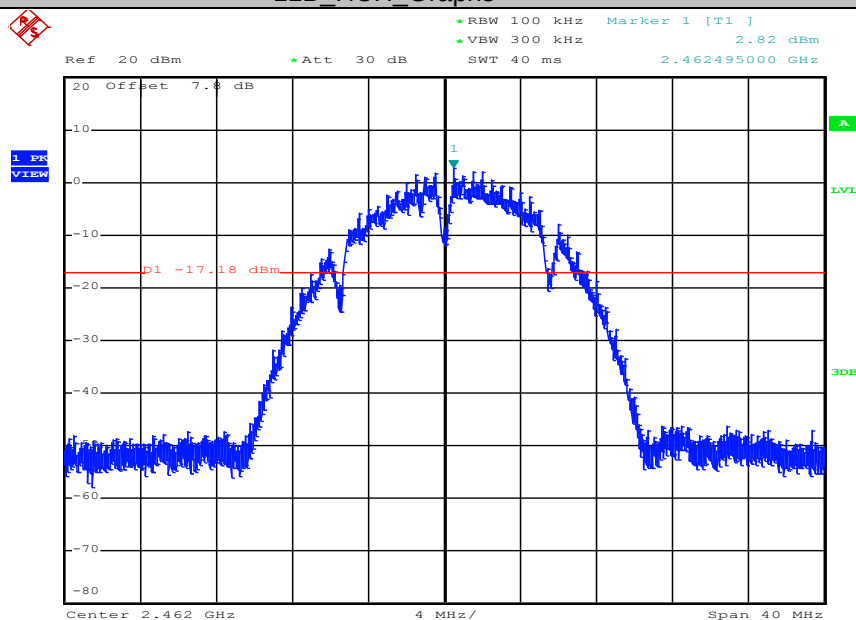
Puw/11B/MCH



Date: 30.SEP.2019 14:01:14

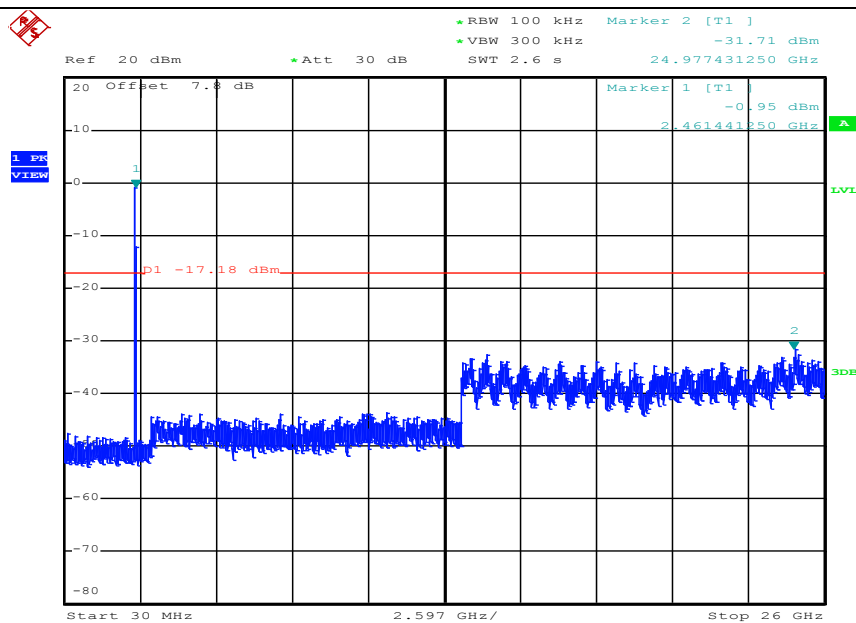
11B_HCH_Graphs

Pref/11B/HCH



Date: 30.SEP.2019 14:03:18

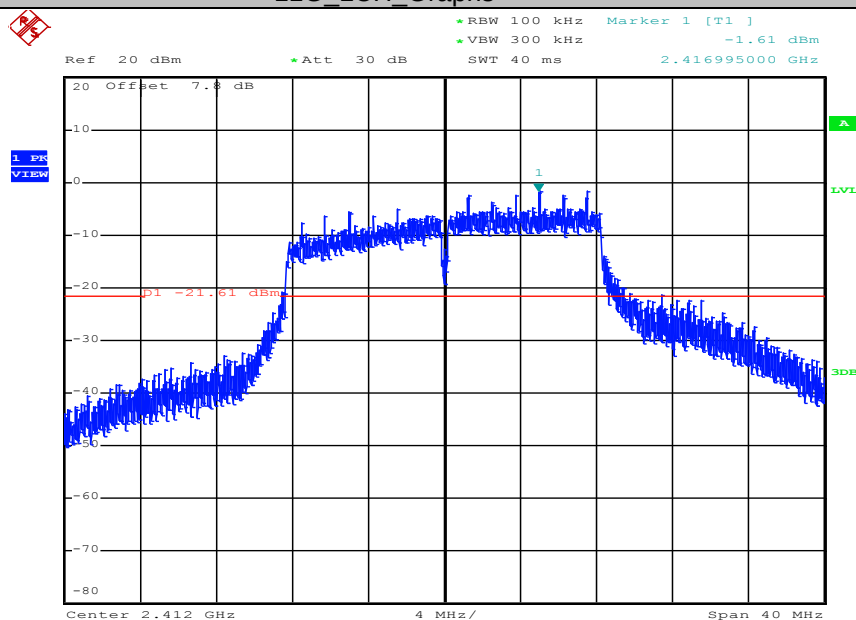
Puw/11B/HCH



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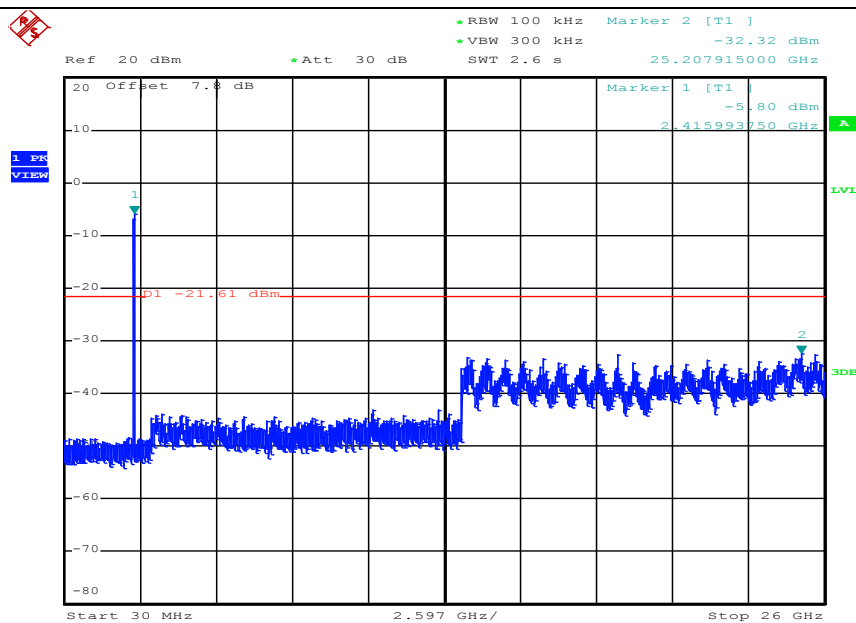
11G_LCH_Graphs

Pref/11G/LCH



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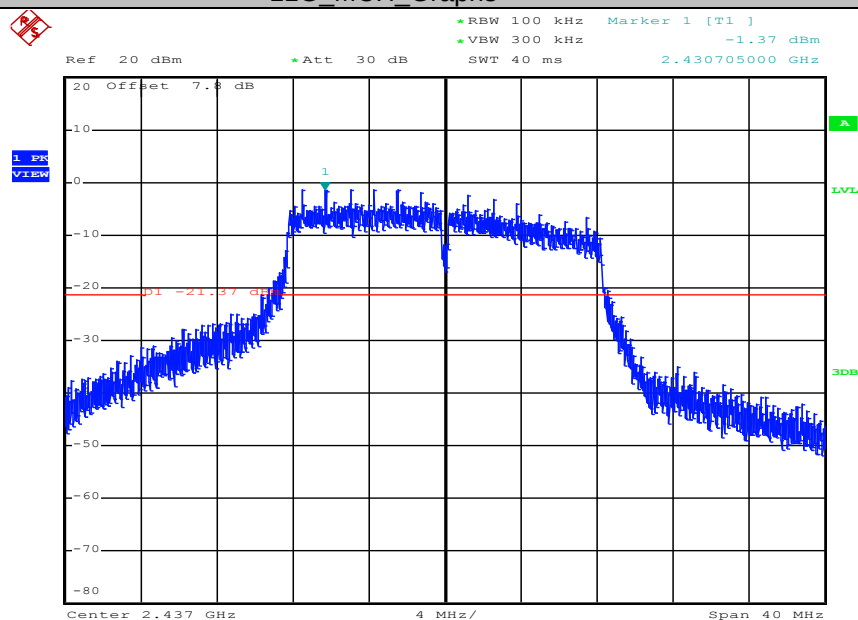
Puw/11G/LCH



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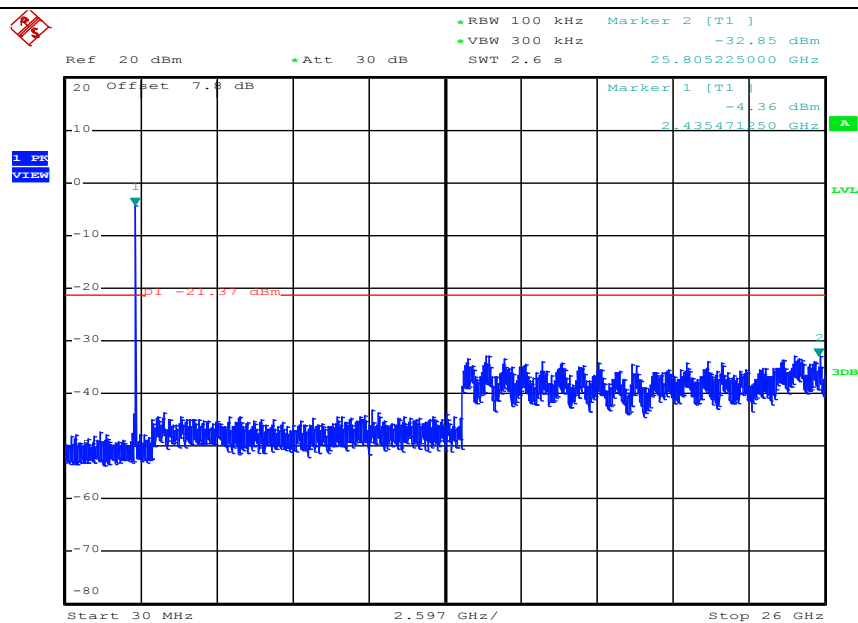
11G_MCH_Graphs

Pref/11G/MCH



Date: 30.SEP.2019 14:08:35

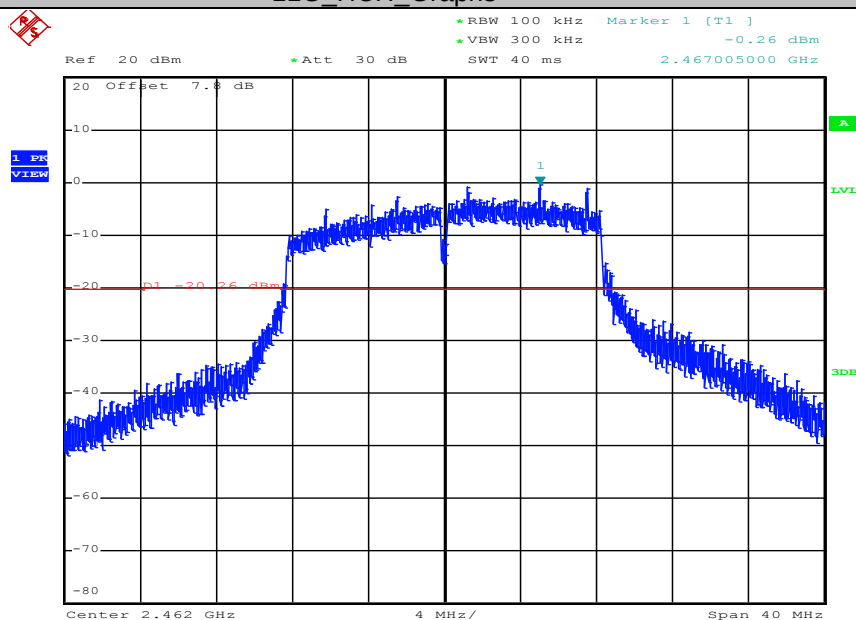
Puw/11G/MCH



Date: 30.SEP.2019 14:08:50

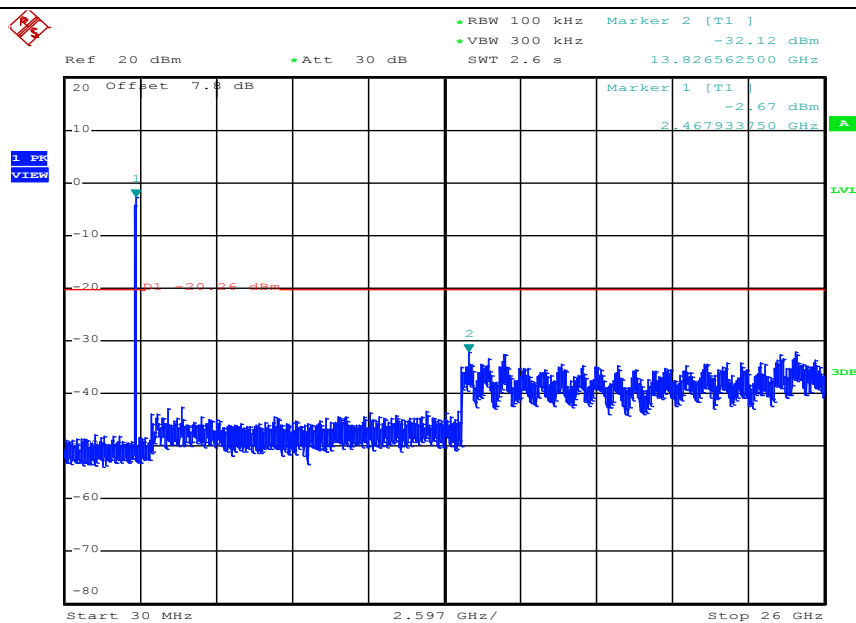
11G_HCH_Graphs

Pref/11G/HCH



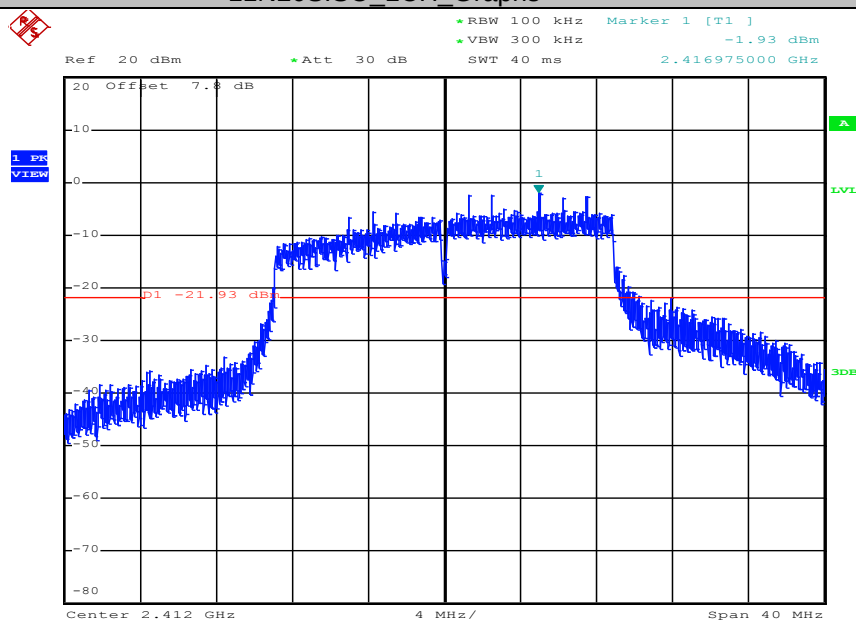
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Puw/11G/HCH

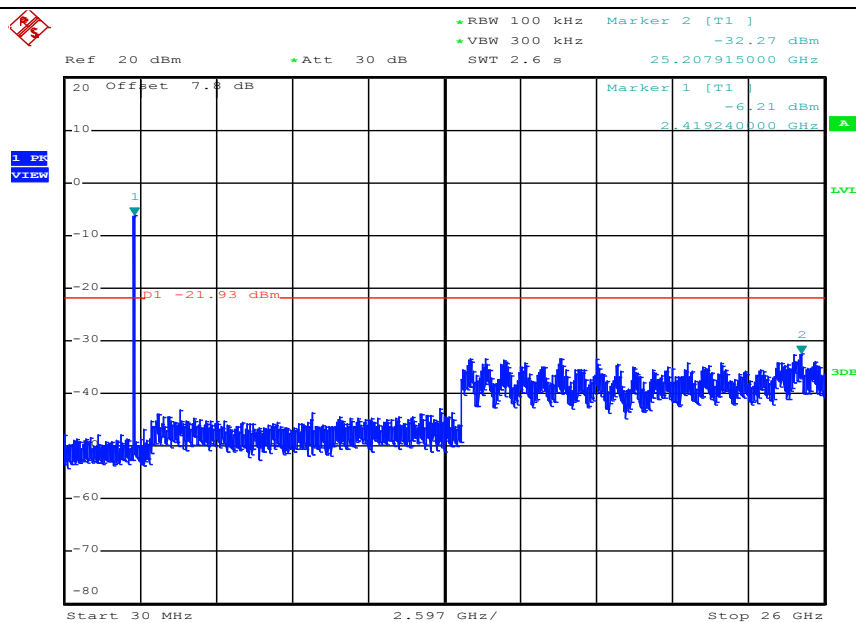


Date: 30.SEP.2019 14:11:38

11N20SISO LCH Graphs

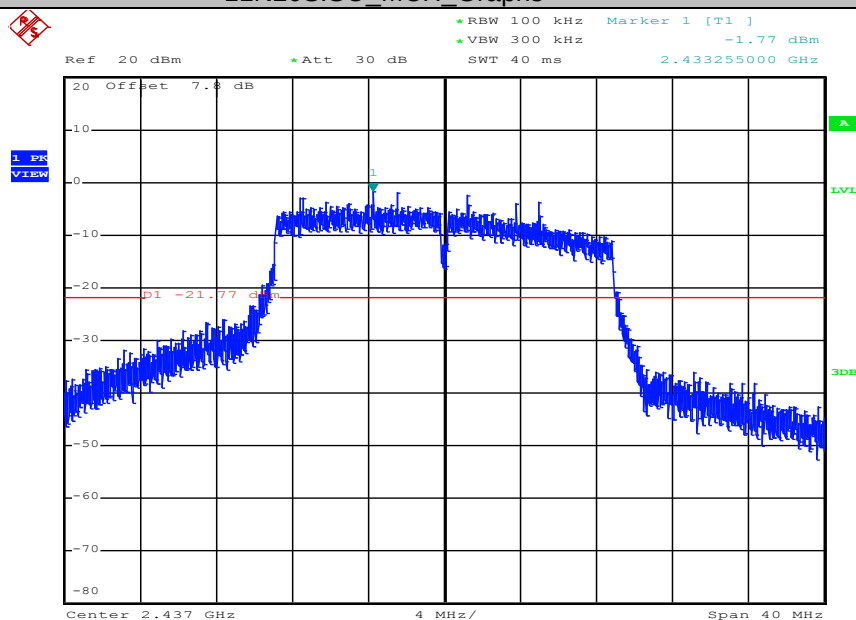
Pref/11N20SIS
O/LCH

Date: 30.SEP.2019 14:14:21

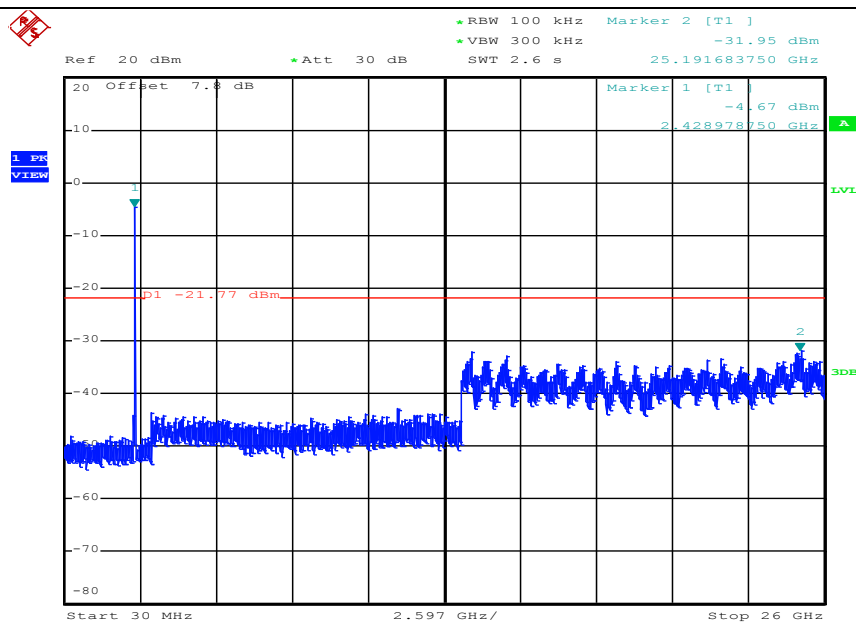
Puw/11N20
SISO/LCH

Date: 30.SEP.2019 14:14:36

11N20SISO_MCH_Graphs

Pref/11N20
SISO/MCH

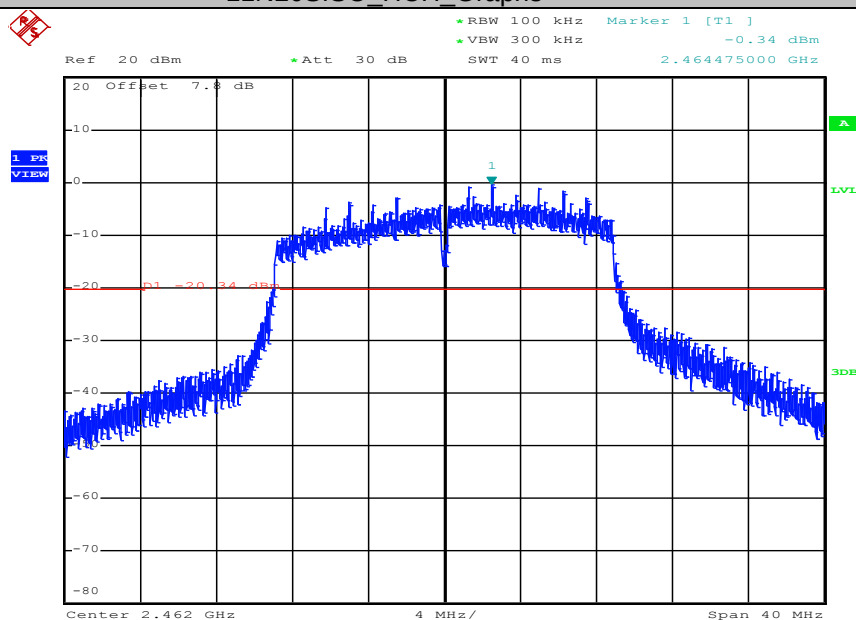
Date: 30.SEP.2019 14:17:05

Puw/11N20
SISO/MCH

Date: 30.SEP.2019 14:17:19

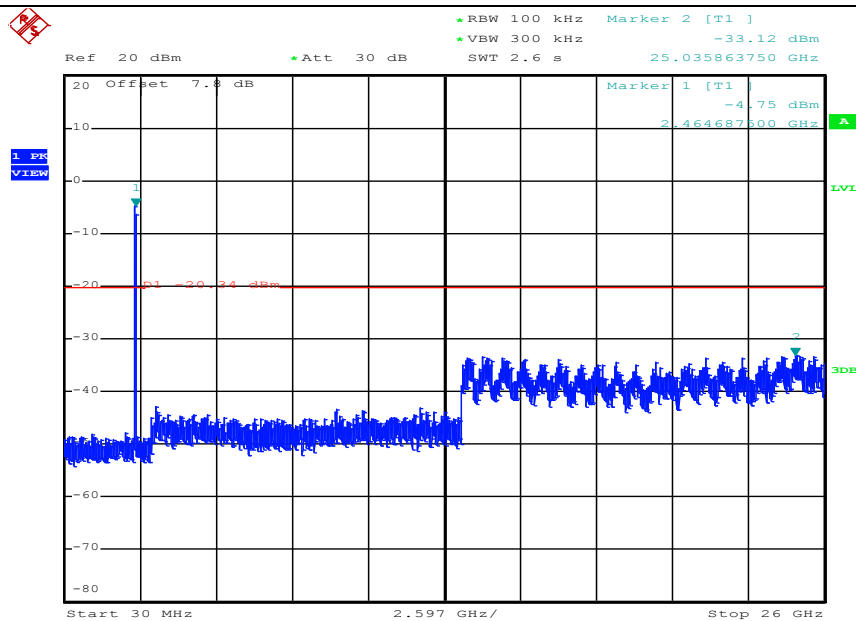
11N20SISO_HCH_Graphs

Pref/11N20
SISO/HCH



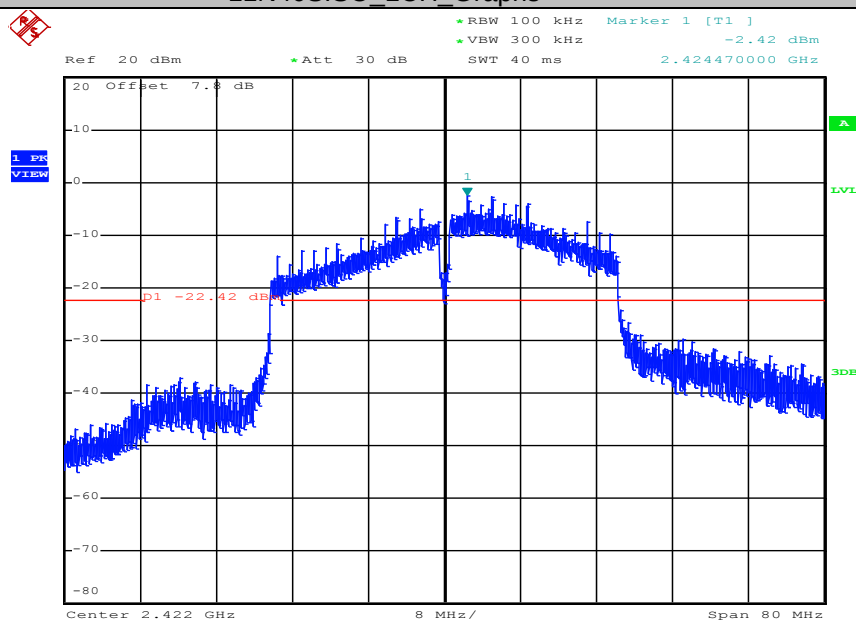
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Puw/11N20
SISO/HCH

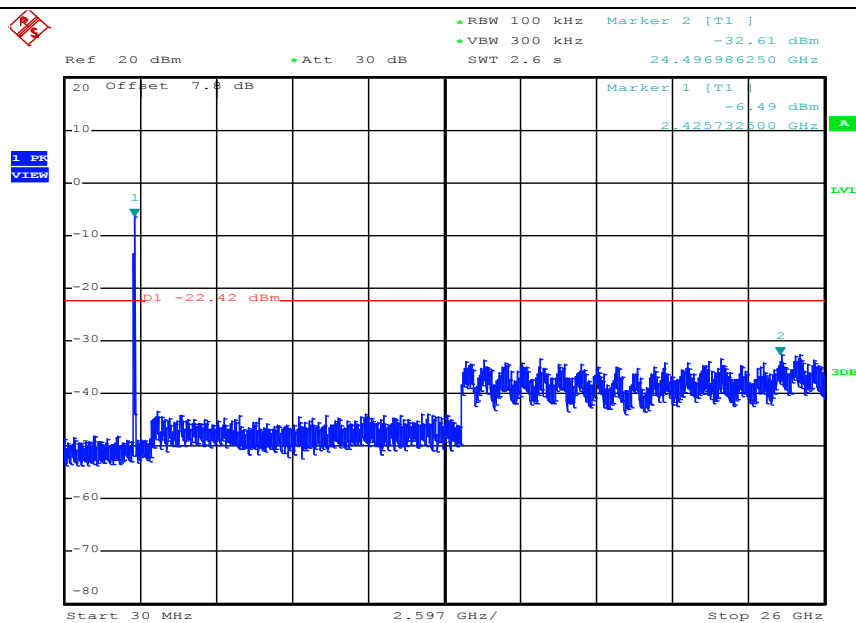


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11N40SISO LCH Graphs

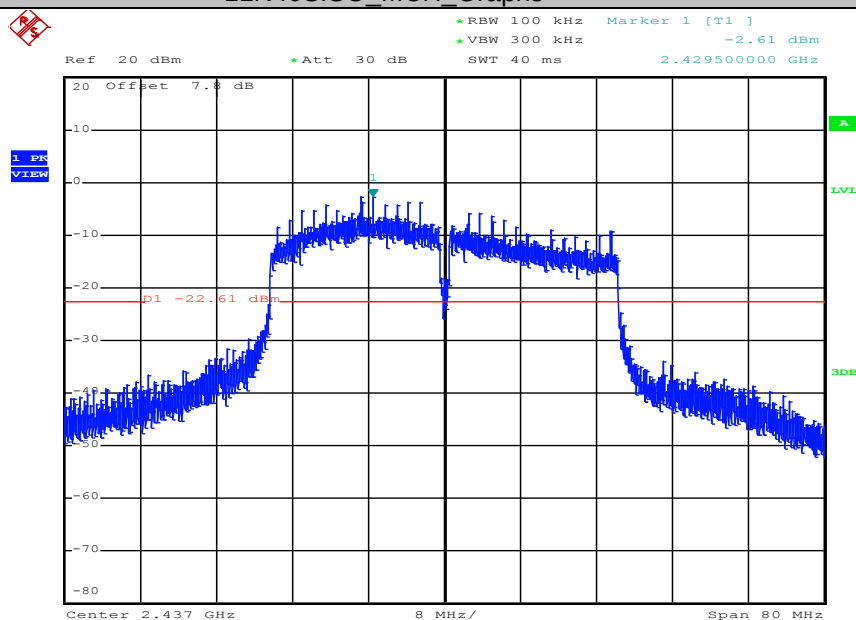
Pref/11N40
SISO/LCH

Date: 30.SEP.2019 14:21:41

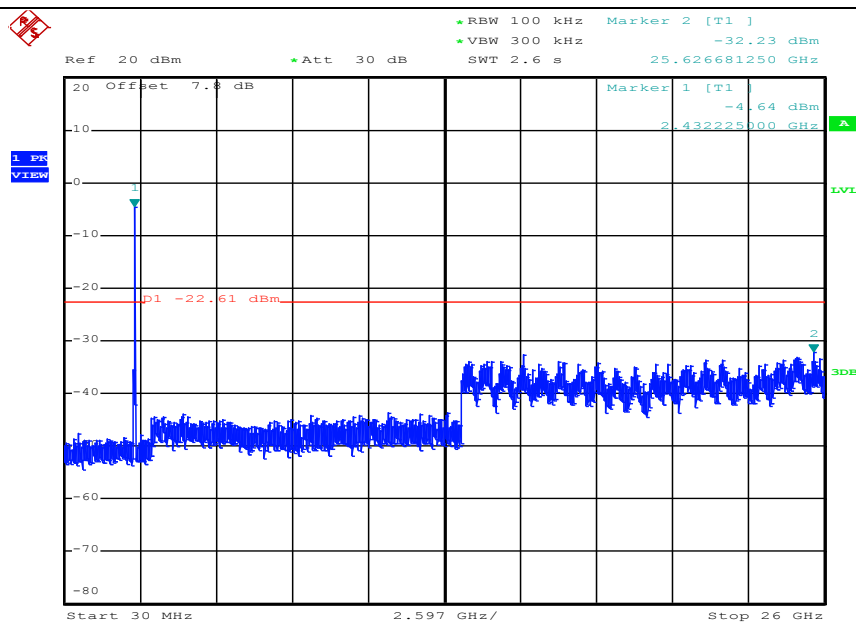
Puw/11N40
SISO/LCH

Date: 30.SEP.2019 14:21:55

11N40SISO_MCH_Graphs

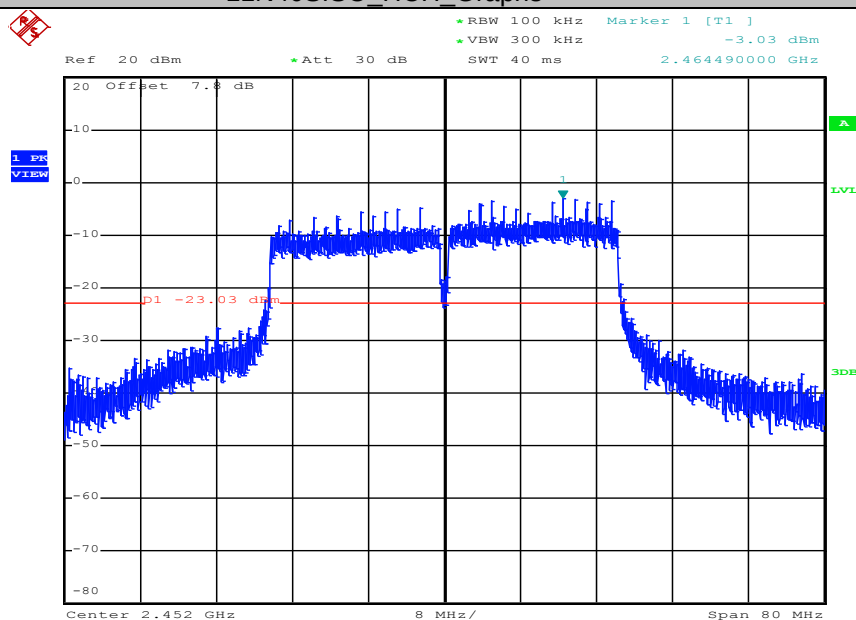
Pref/11N40
SISO/MCH

Date: 30.SEP.2019 14:24:10

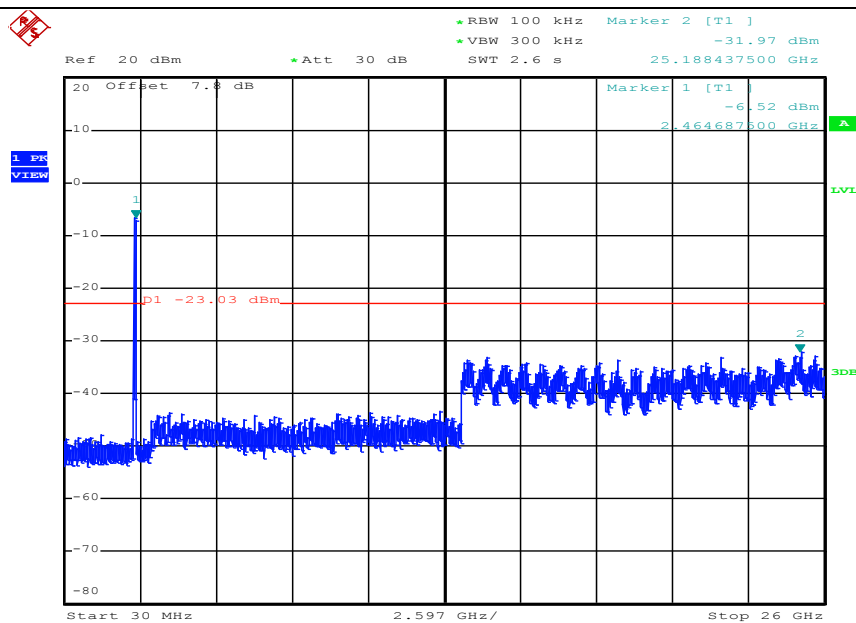
Puw/11N40
SISO/MCH

Date: 30.SEP.2019 14:24:24

11N40SISO_HCH_Graphs

Pref/11N40
SISO/HCH

Date: 30.SEP.2019 14:26:15

Puw/11N40
SISO/HCH

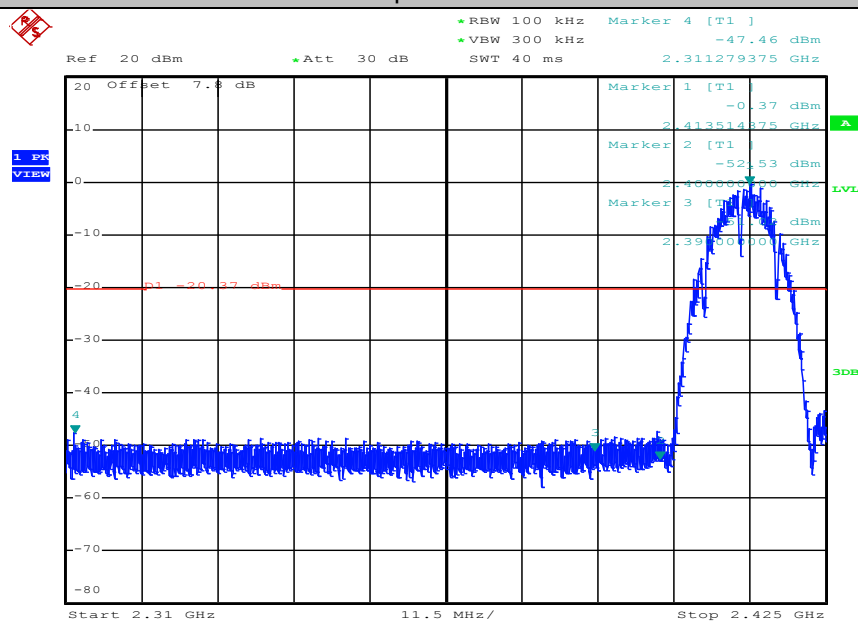
Date: 30.SEP.2019 14:26:29

C.6 Band-edge for RF Conducted Emissions

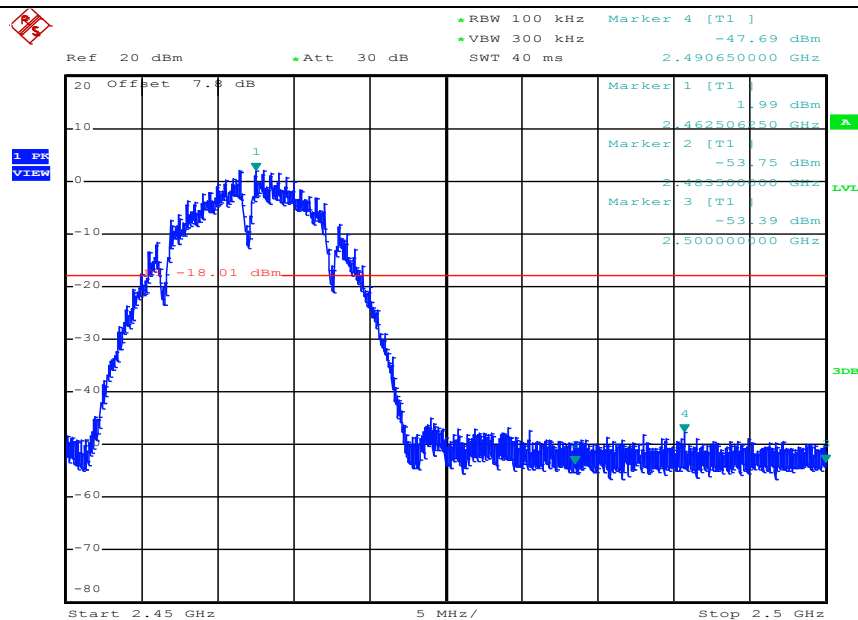
Mode	Channel	Carrier Power[dBm]	Max.Spurious Level [dBm]	Limit [dBm]	Verdict
11B	LCH	-0.370	-47.465	-20.37	PASS
	HCH	1.990	-47.689	-18.01	PASS
11G	LCH	-1.700	-47.012	-21.7	PASS
	HCH	-0.380	-44.904	-20.38	PASS
11N20SISO	LCH	-1.890	-47.145	-21.89	PASS
	HCH	-0.450	-42.769	-20.45	PASS
11N40SISO	LCH	-3.000	-42.390	-23	PASS
	HCH	-3.340	-36.427	-23.34	PASS

Test Graphs

11B/LCH

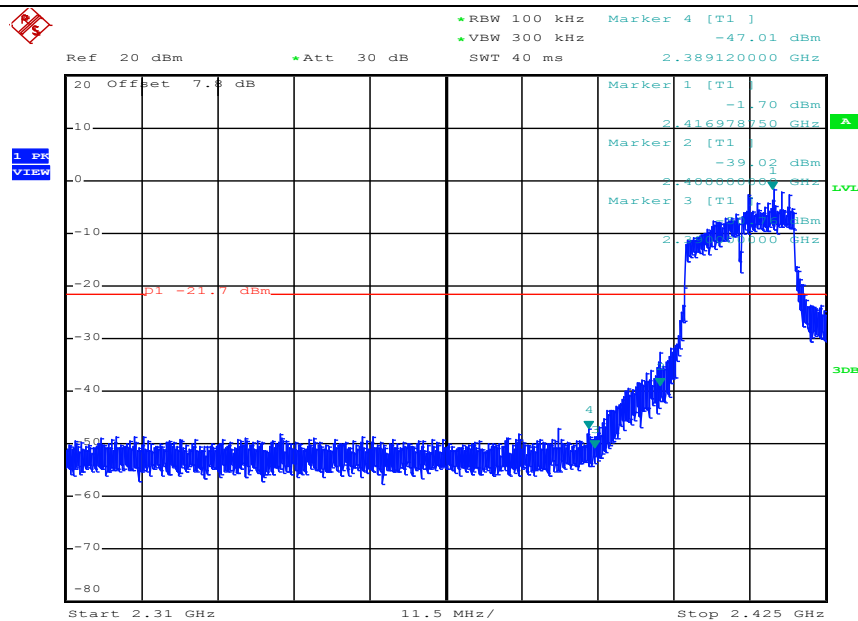


11B/HCH



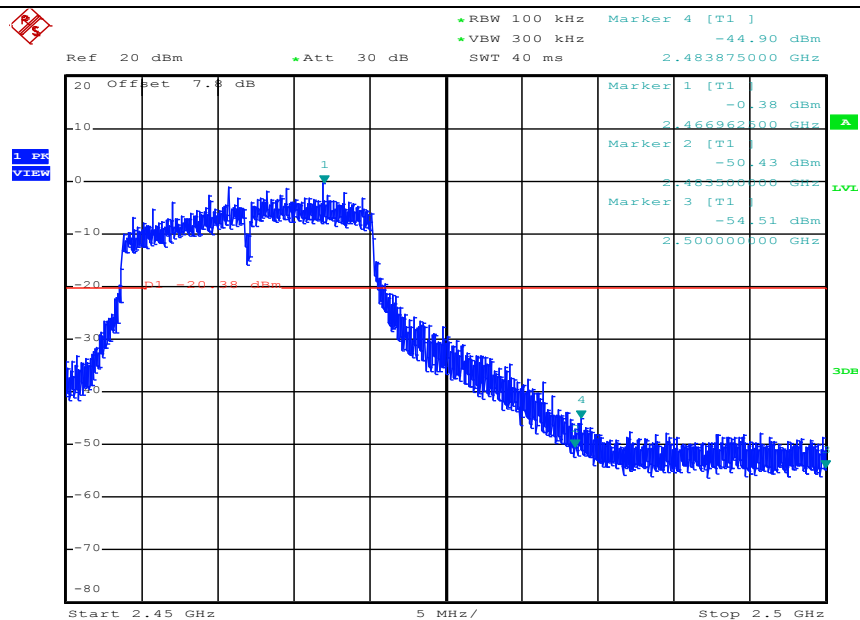
Date: 30.SEP.2019 14:03:05

11G/LCH



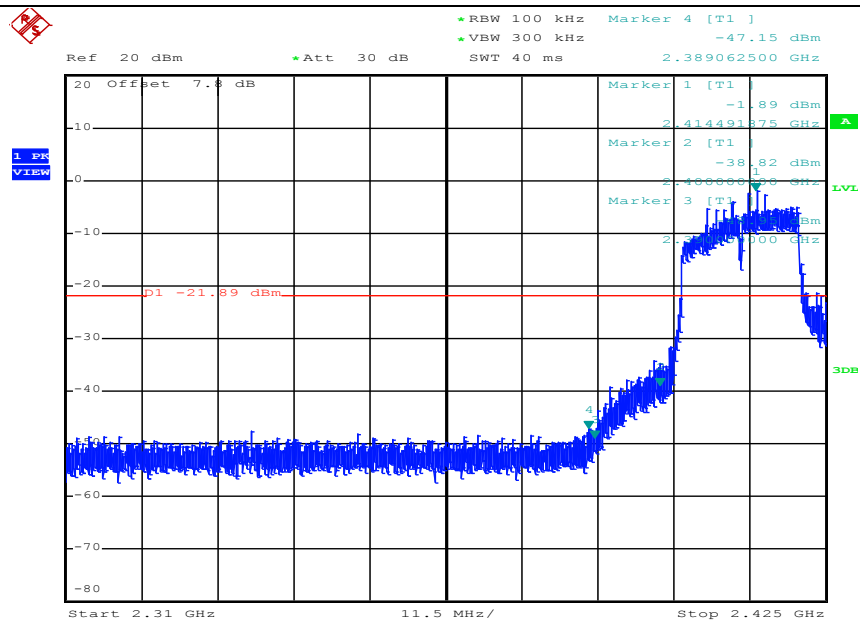
Date: 30.SEP.2019 14:05:41

11G/HCH



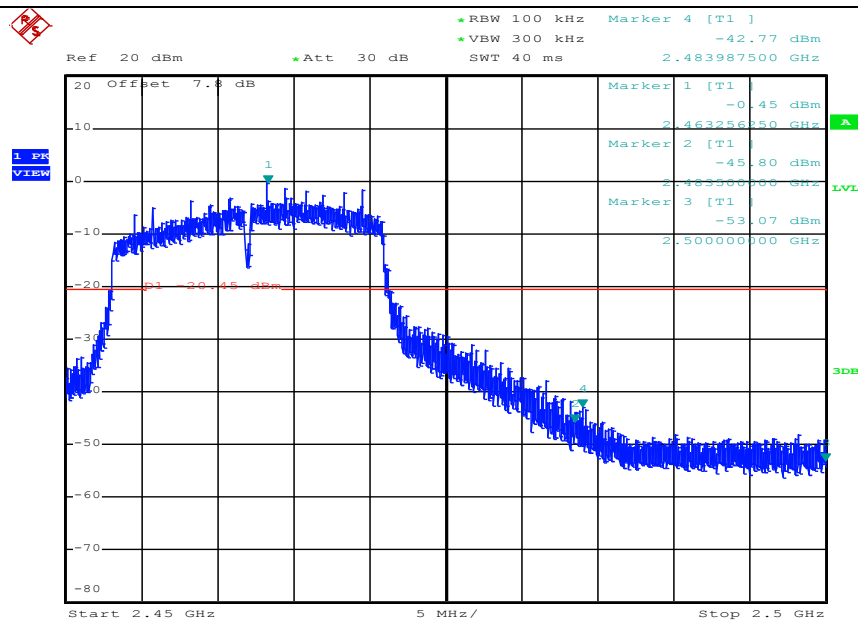
Date: 30.SEP.2019 14:11:10

11N20SISO/LCH



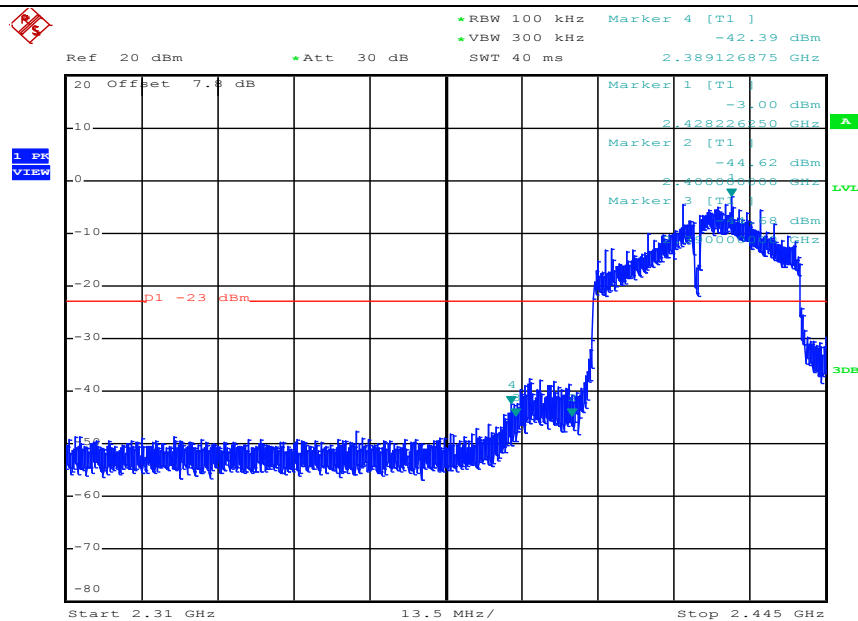
Date: 30.SEP.2019 14:14:08

11N20SISO/HCH



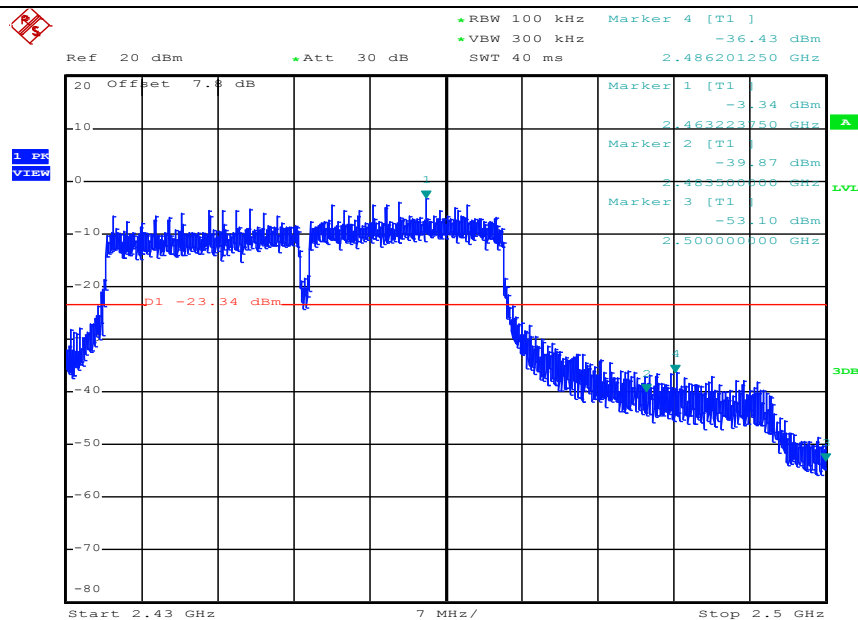
Date: 30.SEP.2019 14:18:58

11N40SISO/LCH



Date: 30.SEP.2019 14:21:29

11N40SISO/HCH



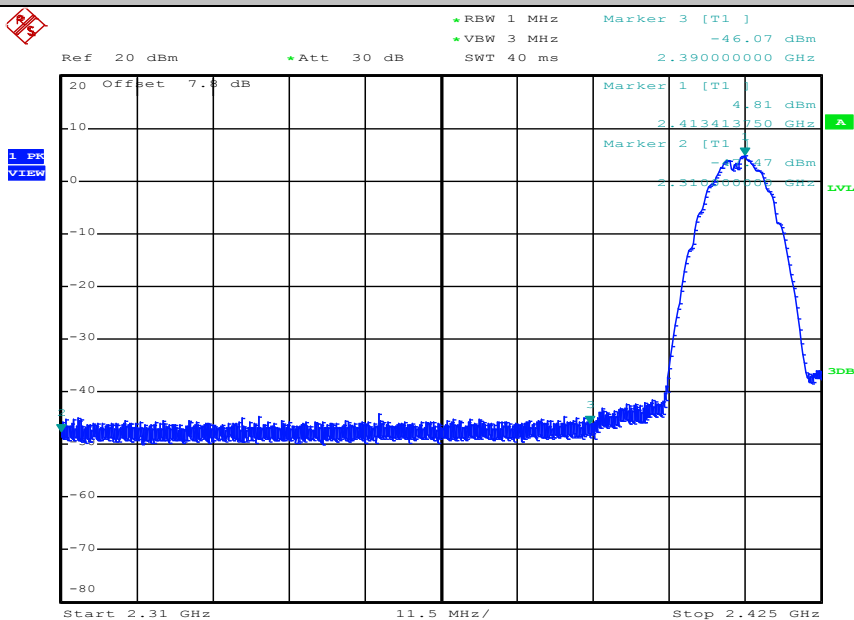
Date: 30.SEP.2019 14:26:03

C.7 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	-47.47	2.0	0	47.79	PEAK	74	PASS
	2412	Ant1	2310.0	-57.66	2.0	0	37.60	AV	54	PASS
	2412	Ant1	2390.0	-46.07	2.0	0	49.19	PEAK	74	PASS
	2412	Ant1	2390.0	-56.96	2.0	0	38.30	AV	54	PASS
	2462	Ant1	2483.5	-47.07	2.0	0	48.19	PEAK	74	PASS
	2462	Ant1	2483.5	-57.12	2.0	0	38.14	AV	54	PASS
	2462	Ant1	2500.0	-46.65	2.0	0	48.61	PEAK	74	PASS
	2462	Ant1	2500.0	-56.18	2.0	0	39.08	AV	54	PASS
11G	2412	Ant1	2310.0	-47.14	2.0	0	48.12	PEAK	74	PASS
	2412	Ant1	2310.0	-57.65	2.0	0	37.61	AV	54	PASS
	2412	Ant1	2390.0	-39.29	2.0	0	55.97	PEAK	74	PASS
	2412	Ant1	2390.0	-53.05	2.0	0	42.21	AV	54	PASS
	2462	Ant1	2483.5	-34.02	2.0	0	61.24	PEAK	74	PASS
	2462	Ant1	2483.5	-49.87	2.0	0	45.39	AV	54	PASS
	2462	Ant1	2500.0	-48.09	2.0	0	47.17	PEAK	74	PASS
	2462	Ant1	2500.0	-57.83	2.0	0	37.43	AV	54	PASS
11N20 SISO	2412	Ant1	2310.0	-48.53	2.0	0	46.73	PEAK	74	PASS
	2412	Ant1	2310.0	-57.65	2.0	0	37.61	AV	54	PASS
	2412	Ant1	2390.0	-38.16	2.0	0	57.10	PEAK	74	PASS
	2412	Ant1	2390.0	-51.67	2.0	0	43.59	AV	54	PASS
	2462	Ant1	2483.5	-29.01	2.0	0	66.25	PEAK	74	PASS
	2462	Ant1	2483.5	-48.58	2.0	0	46.68	AV	54	PASS
	2462	Ant1	2500.0	-47.07	2.0	0	48.19	PEAK	74	PASS
	2462	Ant1	2500.0	-56.39	2.0	0	38.87	AV	54	PASS
11N40 SISO	2422	Ant1	2310.0	-48.23	2.0	0	47.03	PEAK	74	PASS
	2422	Ant1	2310.0	-57.65	2.0	0	37.61	AV	54	PASS

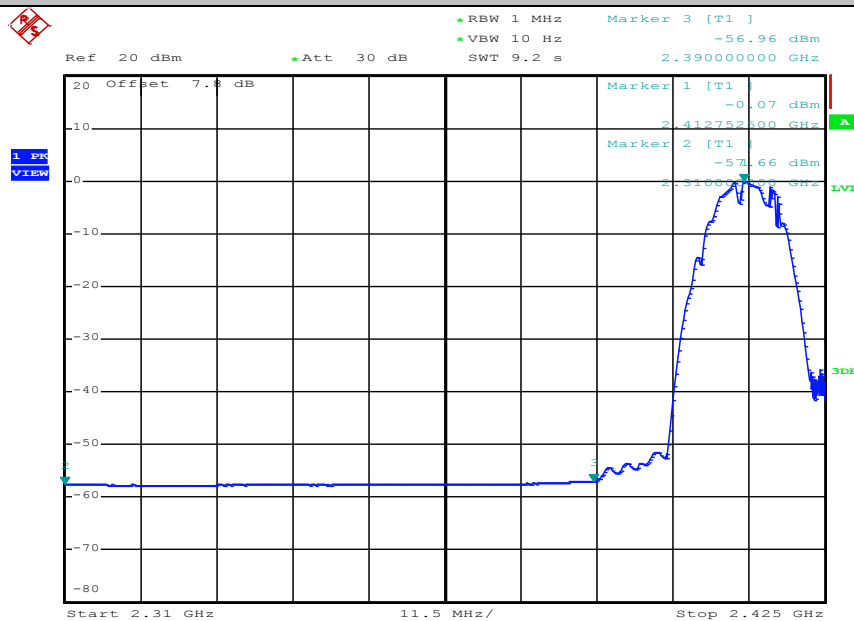
	2422	Ant1	2390.0	-30.25	2.0	0	65.01	PEAK	74	PASS
	2422	Ant1	2390.0	-47.62	2.0	0	47.64	AV	54	PASS
	2452	Ant1	2483.5	-43.76	2.0	0	51.50	PEAK	74	PASS
	2452	Ant1	2483.5	-56.54	2.0	0	38.72	AV	54	PASS
	2452	Ant1	2500.0	-47.82	2.0	0	47.44	PEAK	74	PASS
	2452	Ant1	2500.0	-57.70	2.0	0	37.56	AV	54	PASS

Restrict-band band-edge measurements_11B_2412_Ant1_PEAK



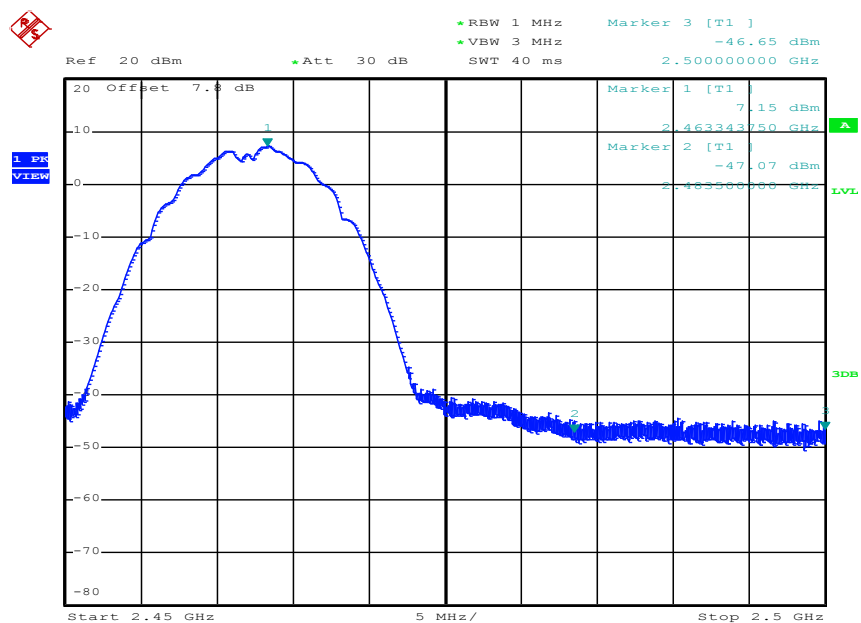
Date: 30.SEP.2019 13:59:06

Restrict-band band-edge measurements_11B_2412_Ant1_AV



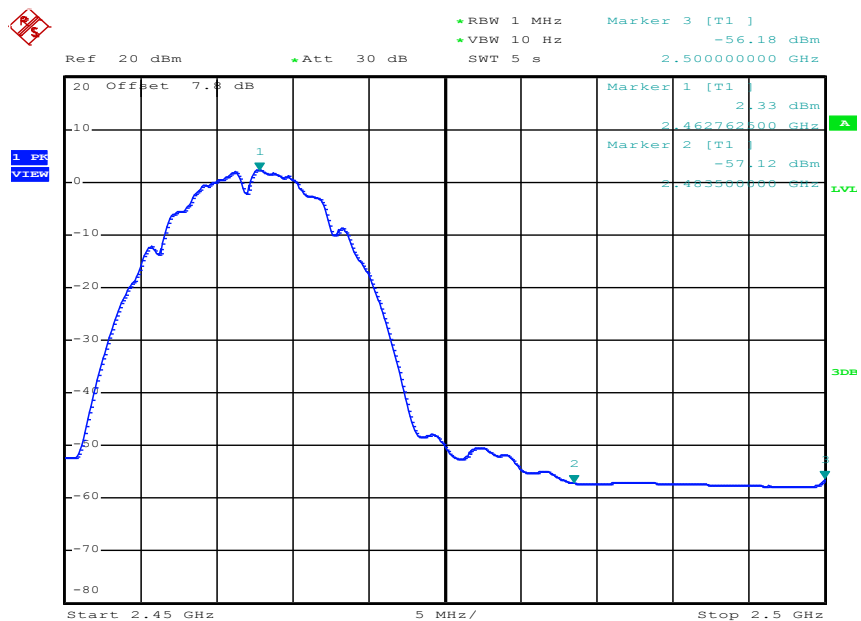
Date: 30.SEP.2019 13:59:22

Restrict-band band-edge measurements_11B_2462_Ant1_PEAK



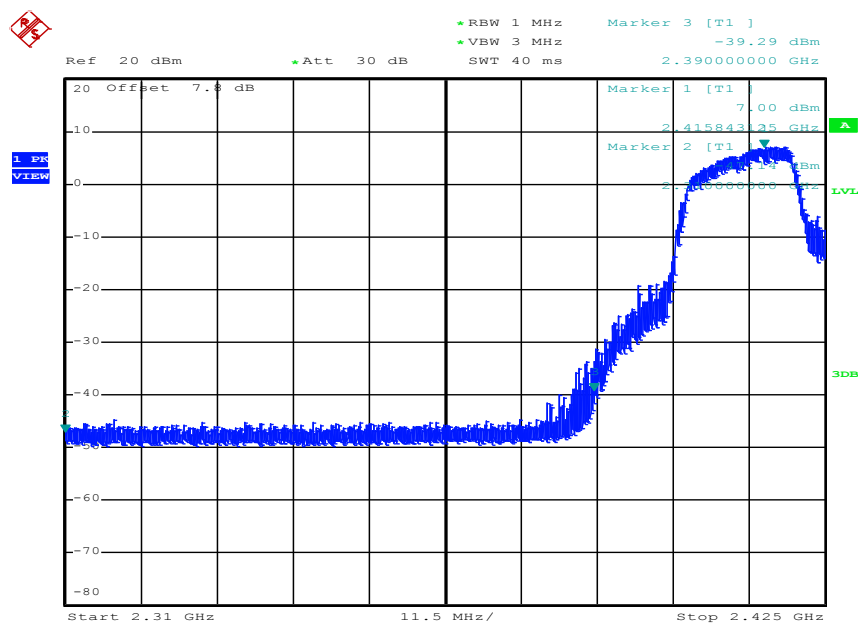
Date: 30.SEP.2019 14:03:51

Restrict-band band-edge measurements_11B_2462_Ant1_AV



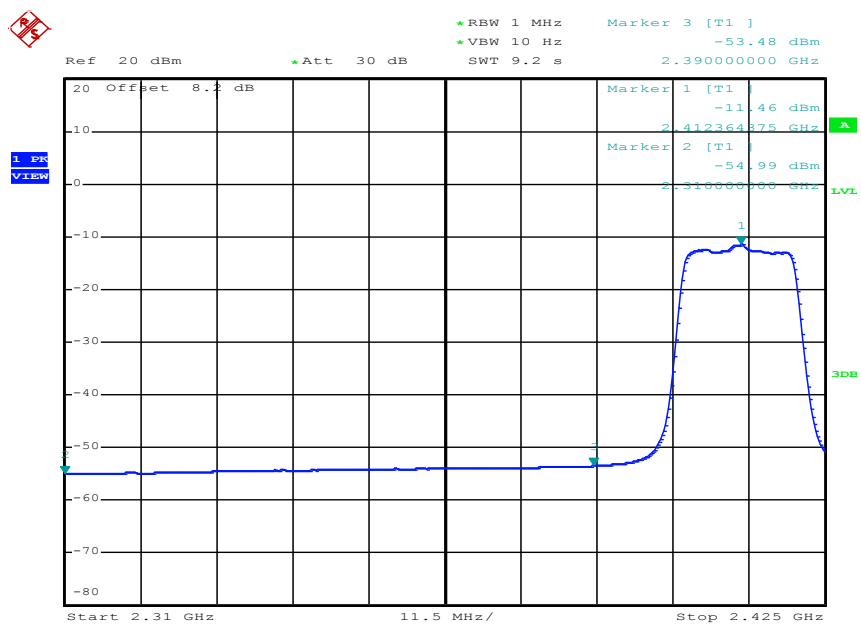
Date: 30.SEP.2019 14:04:07

Restrict-band band-edge measurements_11G_2412_Ant1_PEAK



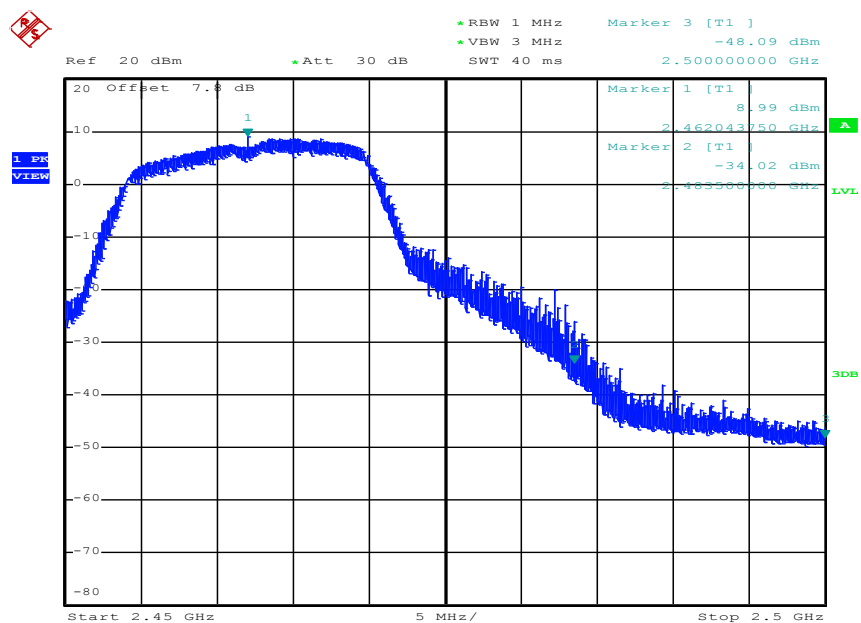
Date: 30.SEP.2019 14:06:27

Restrict-band band-edge measurements_11G_2412_Ant1_AV



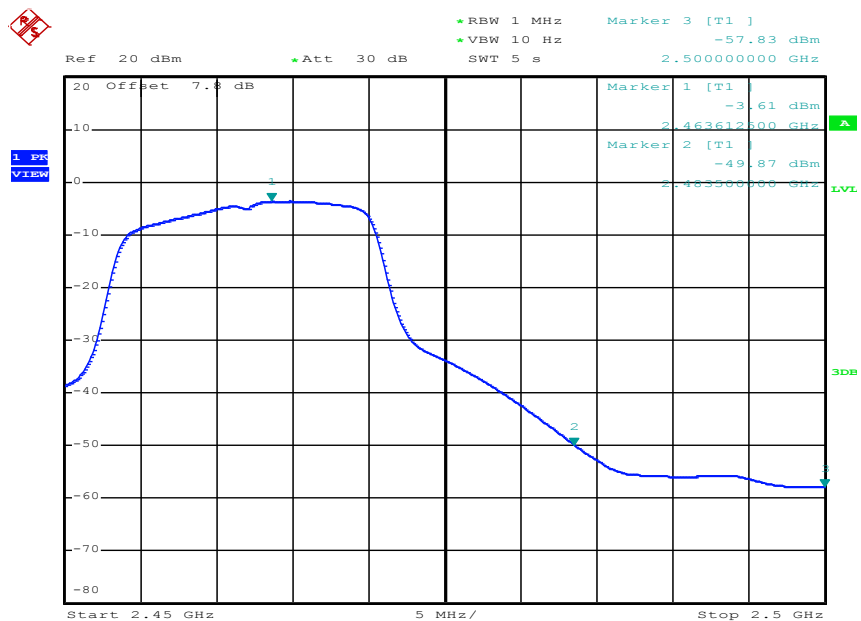
Date: 30.SEP.2019 15:20:16

Restrict-band band-edge measurements_11G_2462_Ant1_PEAK



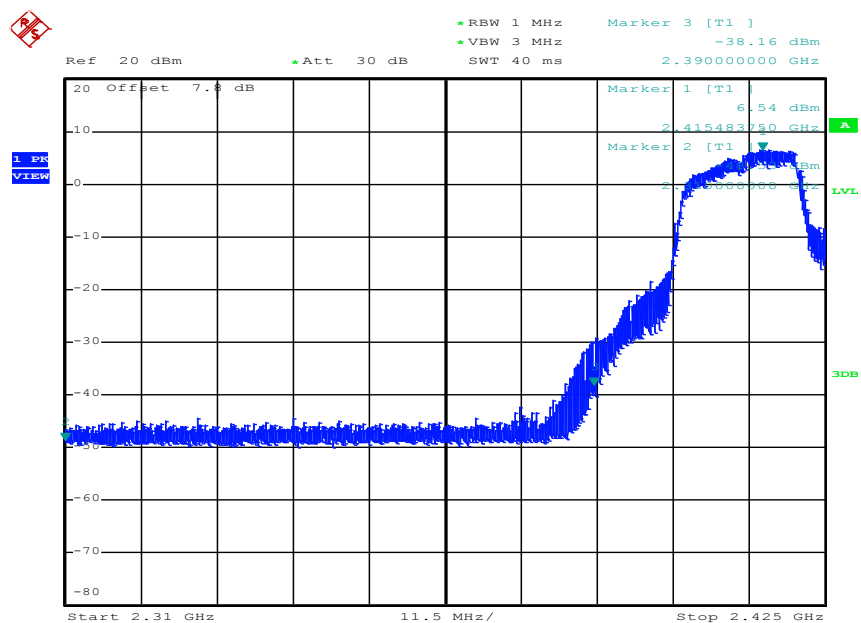
Date: 30.SEP.2019 14:11:56

Restrict-band band-edge measurements_11G_2462_Ant1_AV



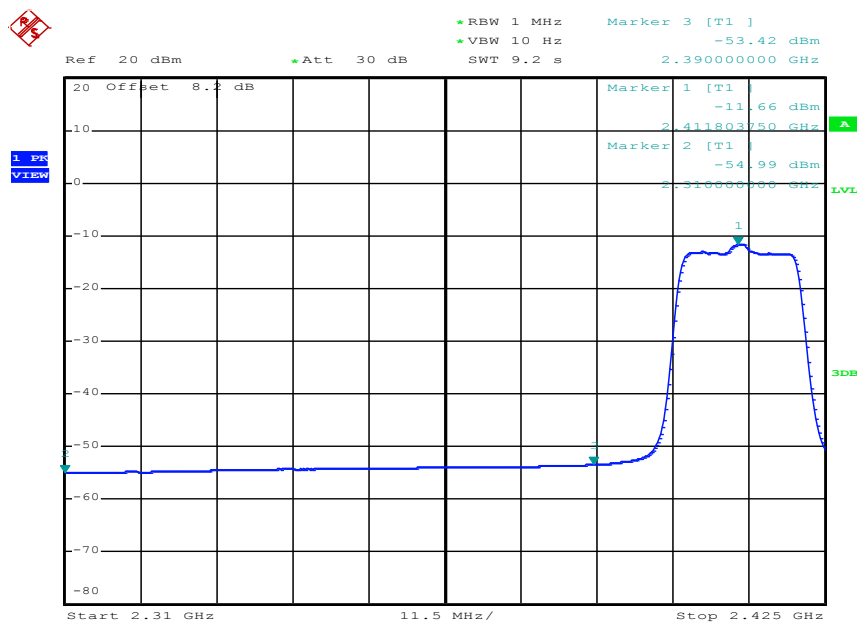
Date: 30.SEP.2019 14:12:12

Restrict-band band-edge measurements_11N20SISO_2412_Ant1_PEAK



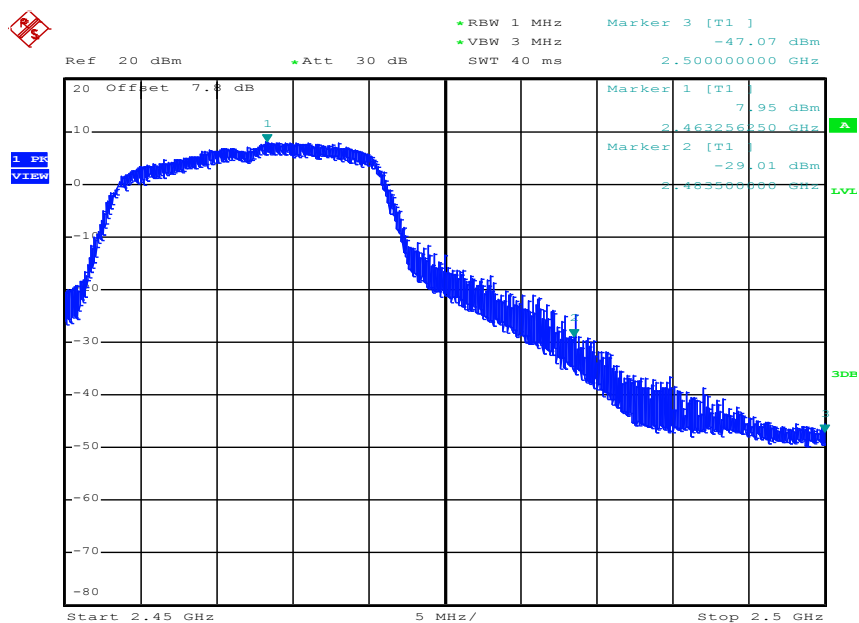
Date: 30.SEP.2019 14:14:54

Restrict-band band-edge measurements_11N20SISO_2412_Ant1_AV



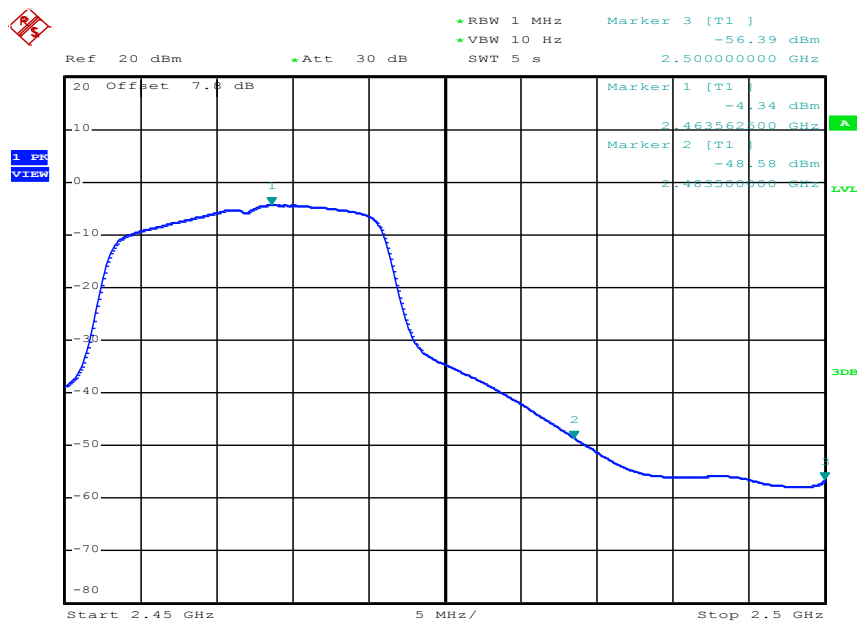
Date: 30.SEP.2019 15:29:11

Restrict-band band-edge measurements_11N20SISO_2462_Ant1_PEAK



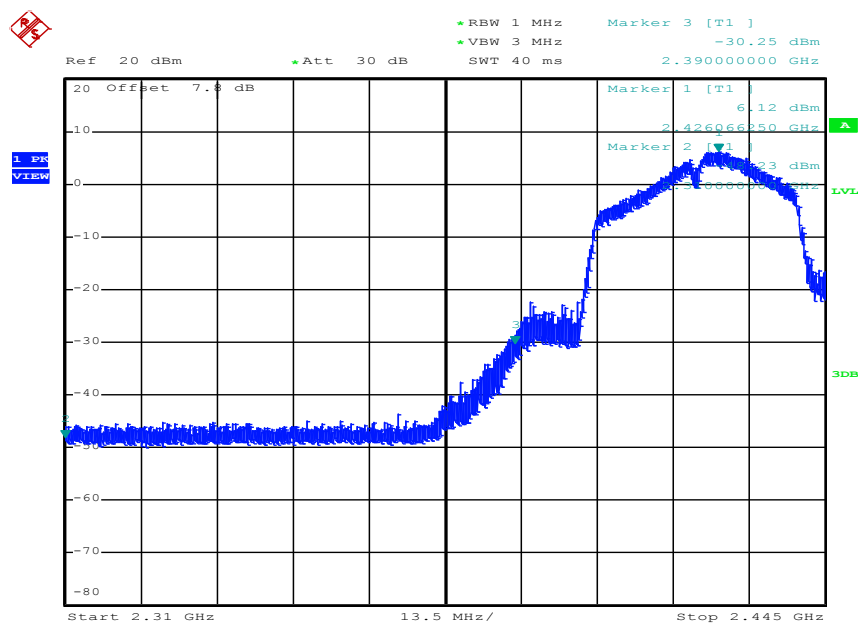
Date: 30.SEP.2019 14:19:42

Restrict-band band-edge measurements_11N20SISO_2462_Ant1_AV



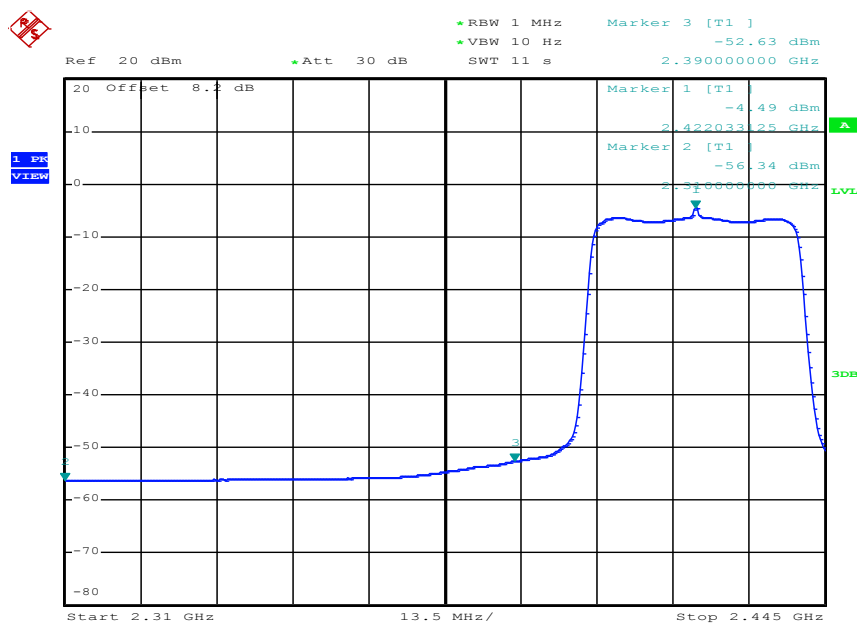
Date: 30.SEP.2019 14:19:57

Restrict-band band-edge measurements_11N40SISO_2422_Ant1_PEAK



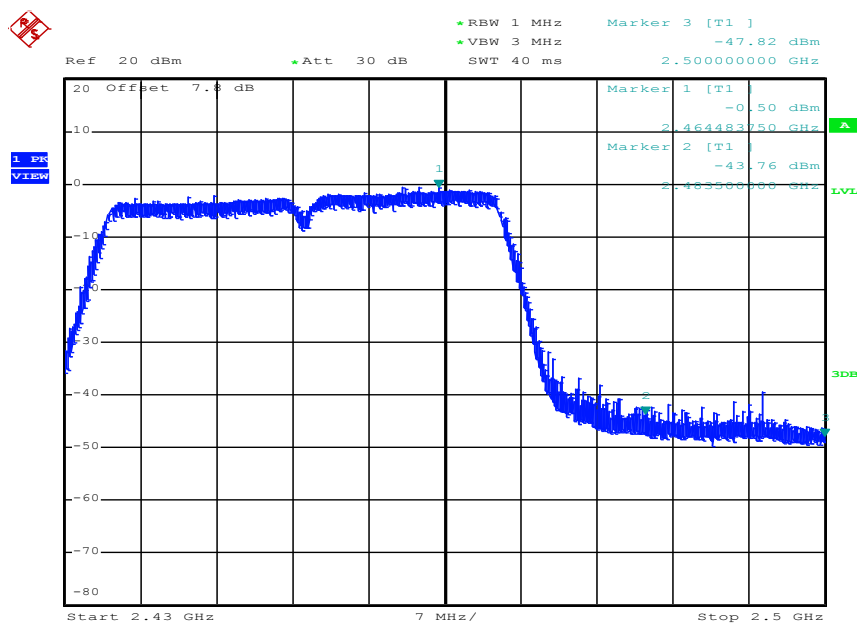
Date: 30.SEP.2019 14:22:13

Restrict-band band-edge measurements_11N40SISO_2422_Ant1_AV



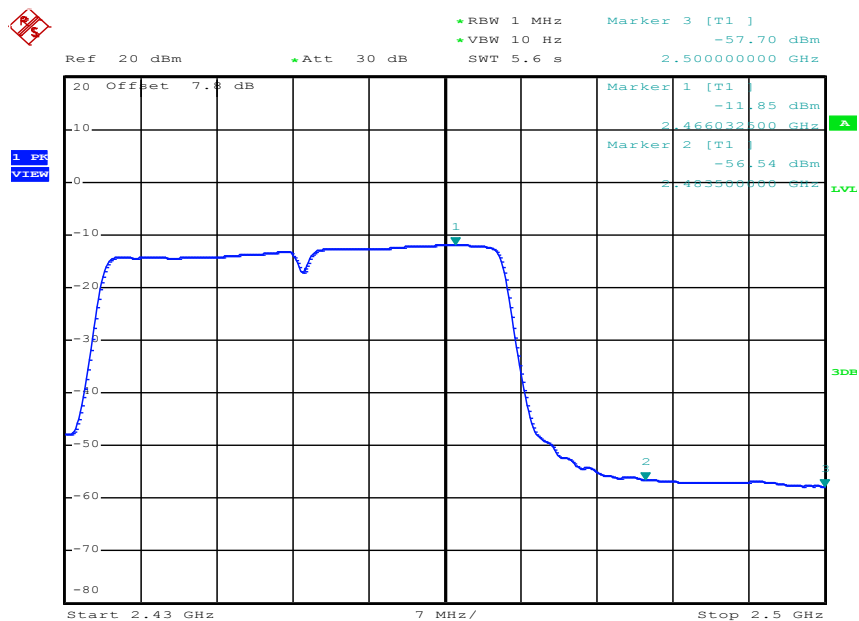
Date: 30.SEP.2019 09:20:02

Restrict-band band-edge measurements_11N40SISO_2452_Ant1_PEAK



Date: 30.SEP.2019 14:30:35

Restrict-band band-edge measurements_11N40SISO_2452_Ant1_AV



Date: 30.SEP.2019 14:30:51