



Appendix

Model: MHAV4031Y-64863

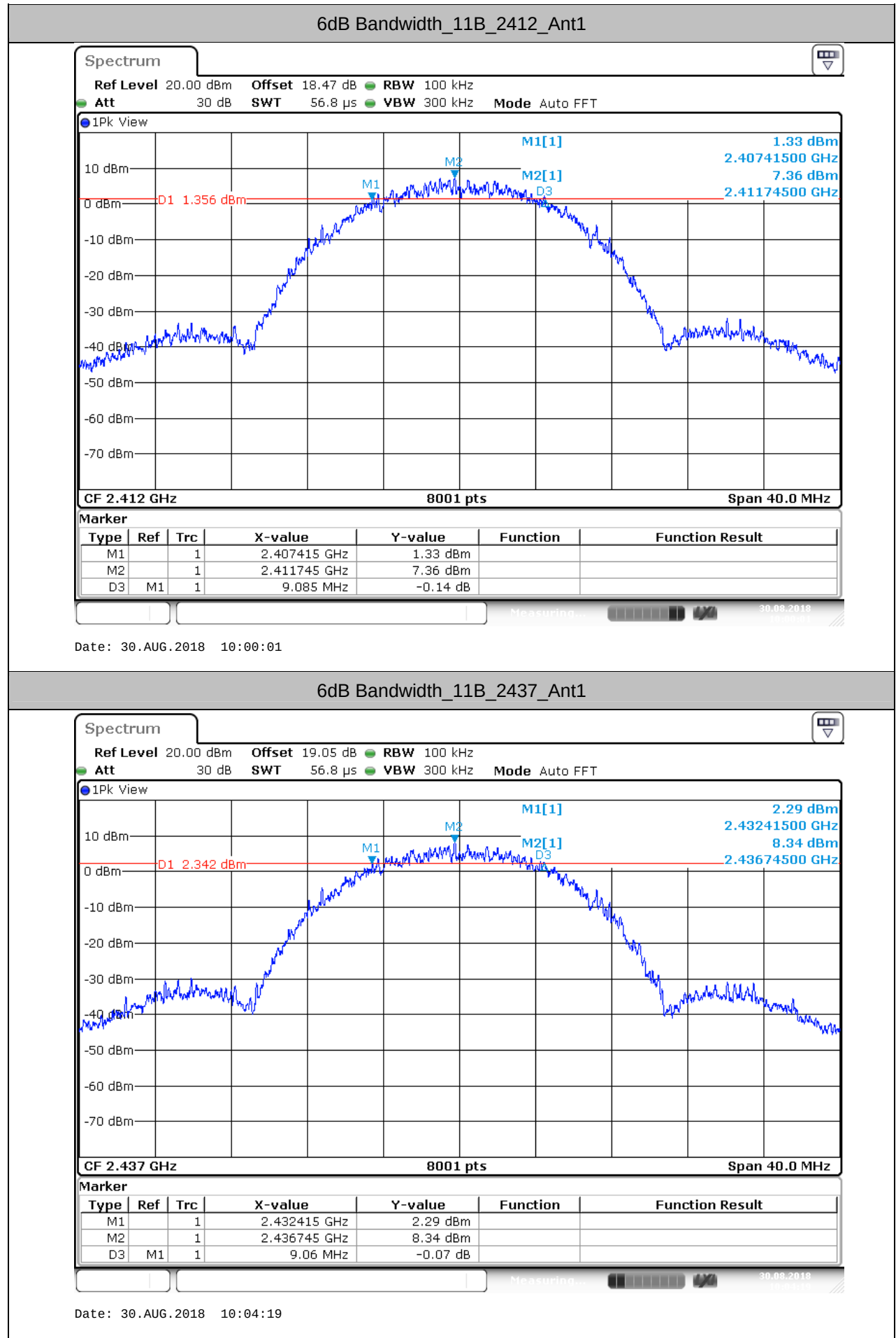
FCC ID: 2AHVH40648633

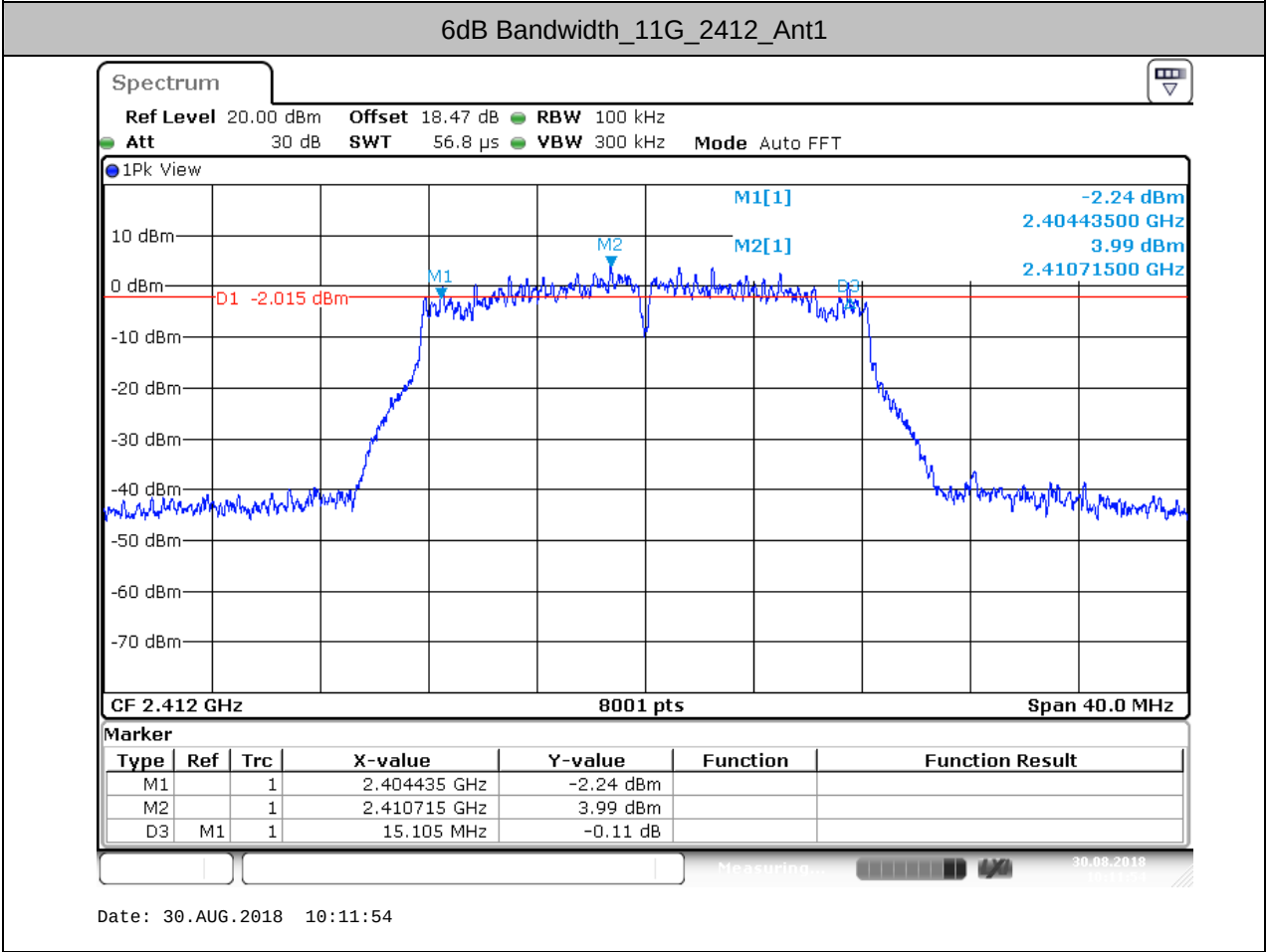
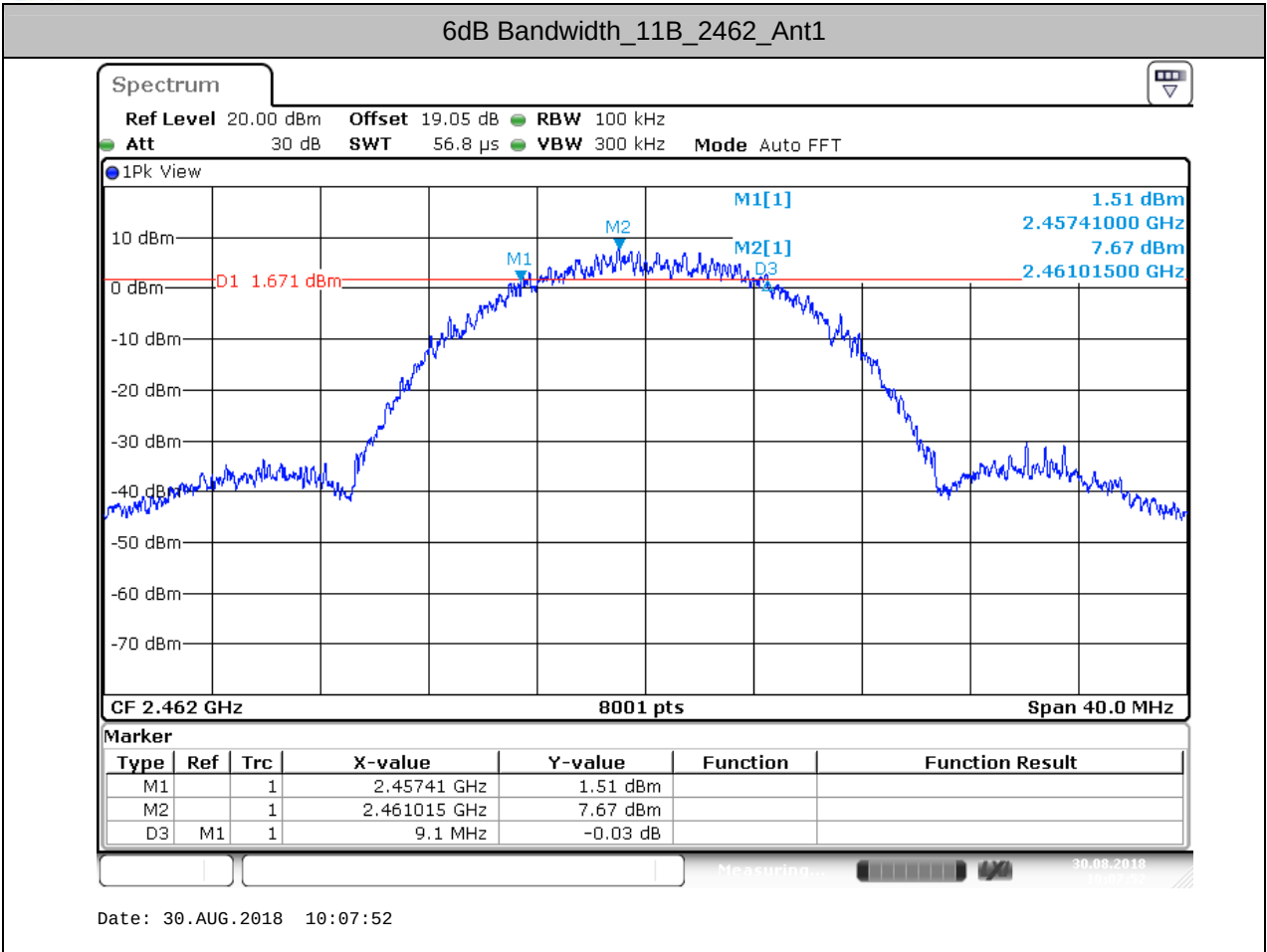
IC: 24259-40648633

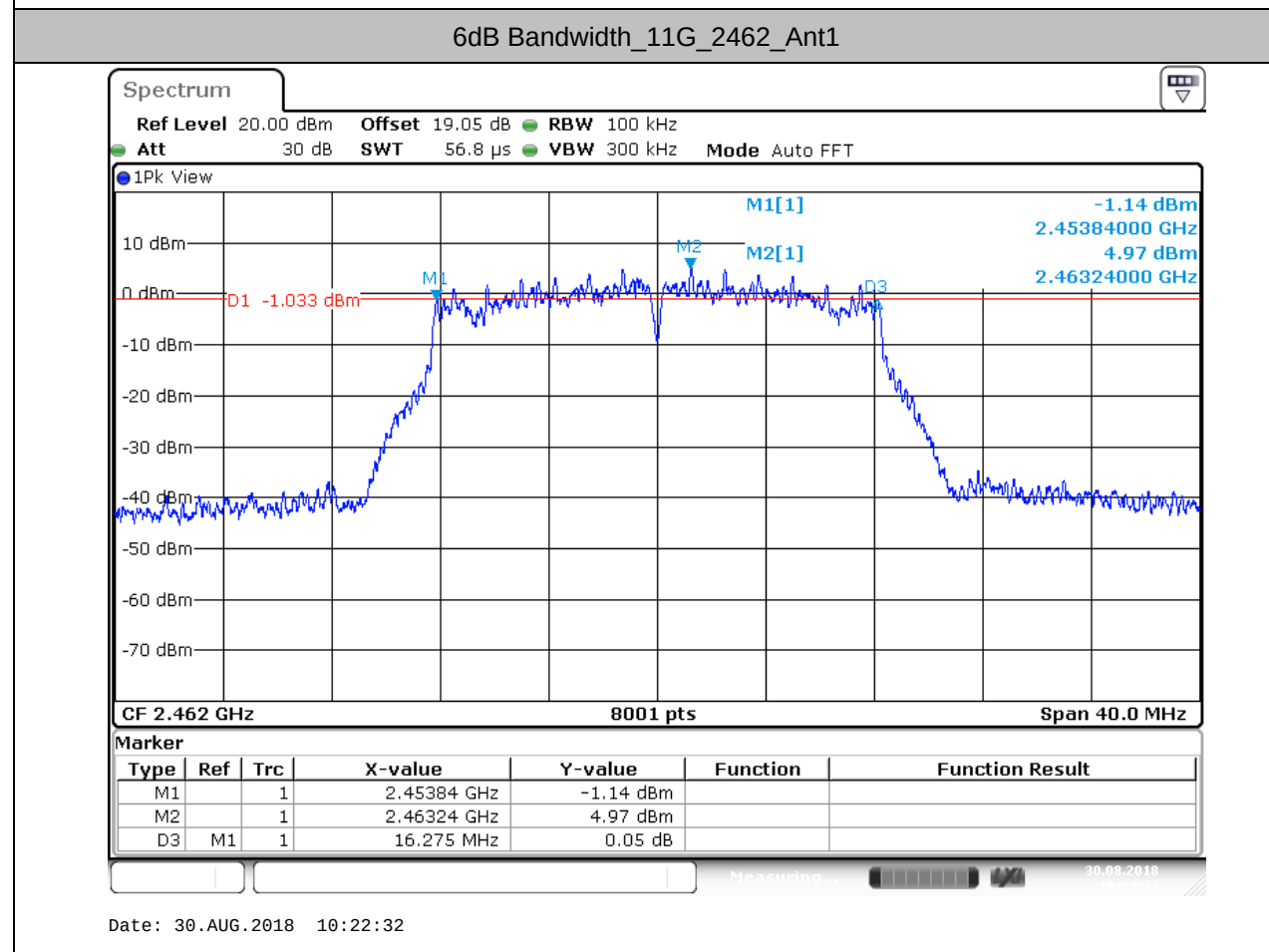
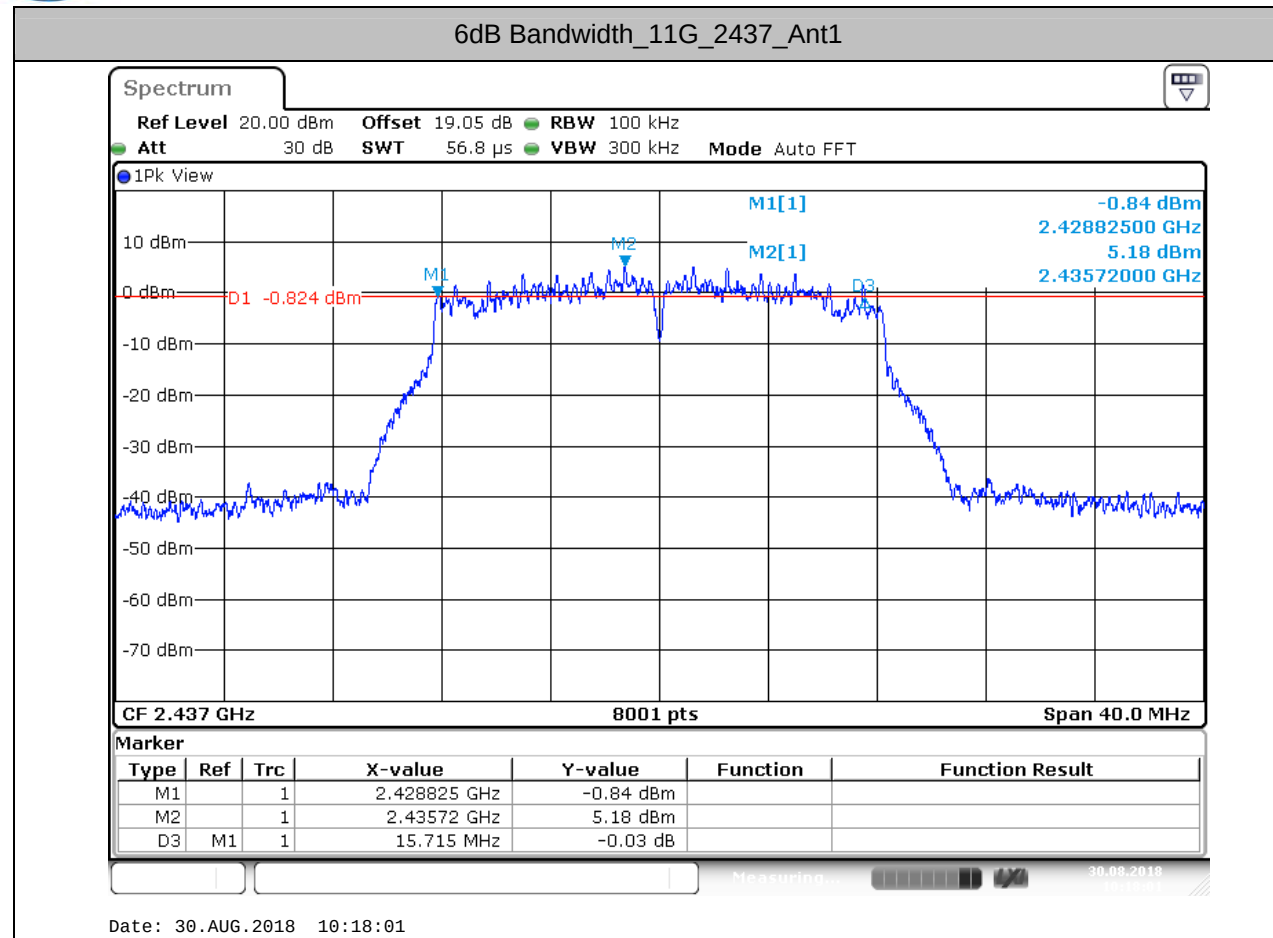


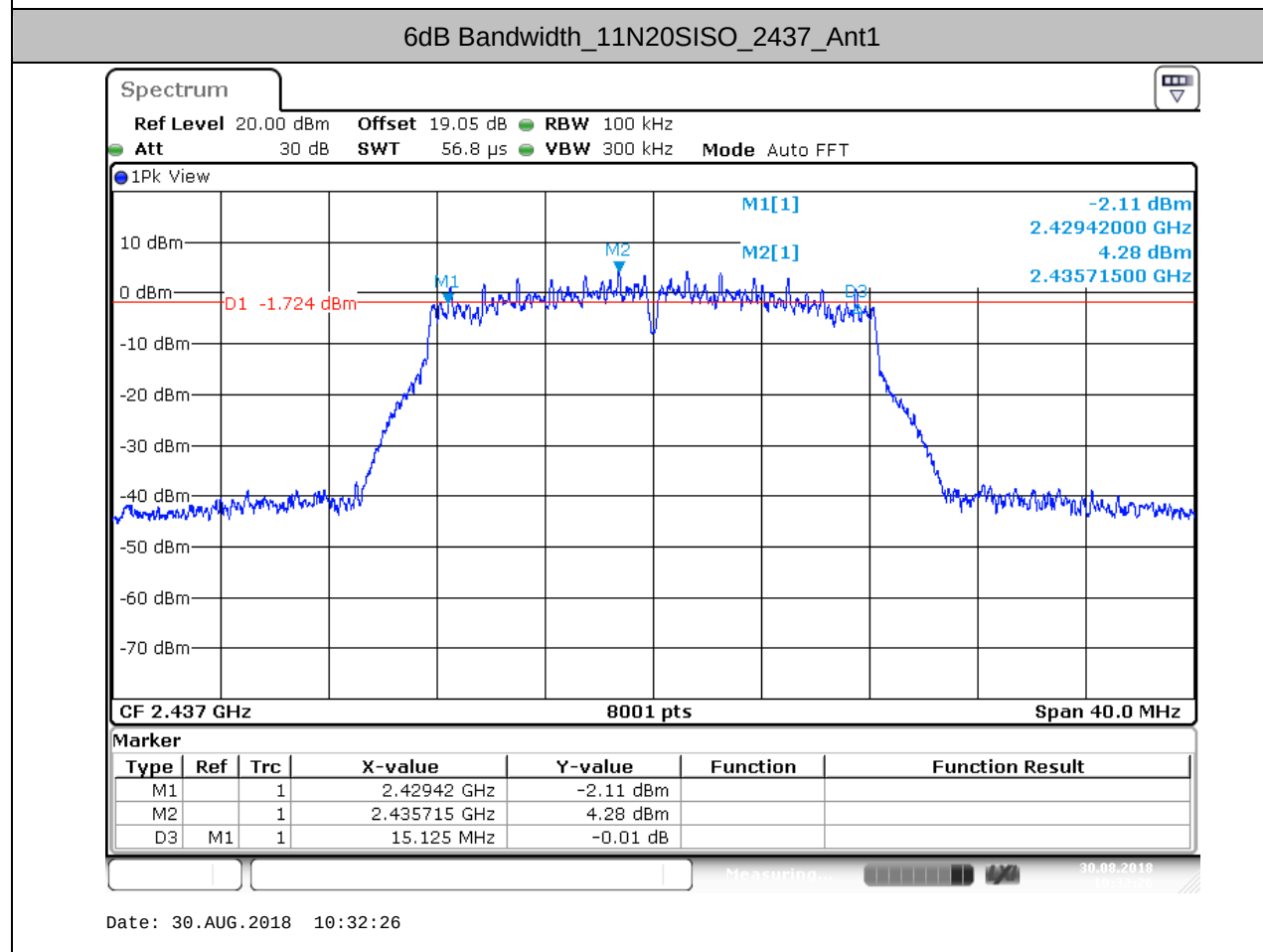
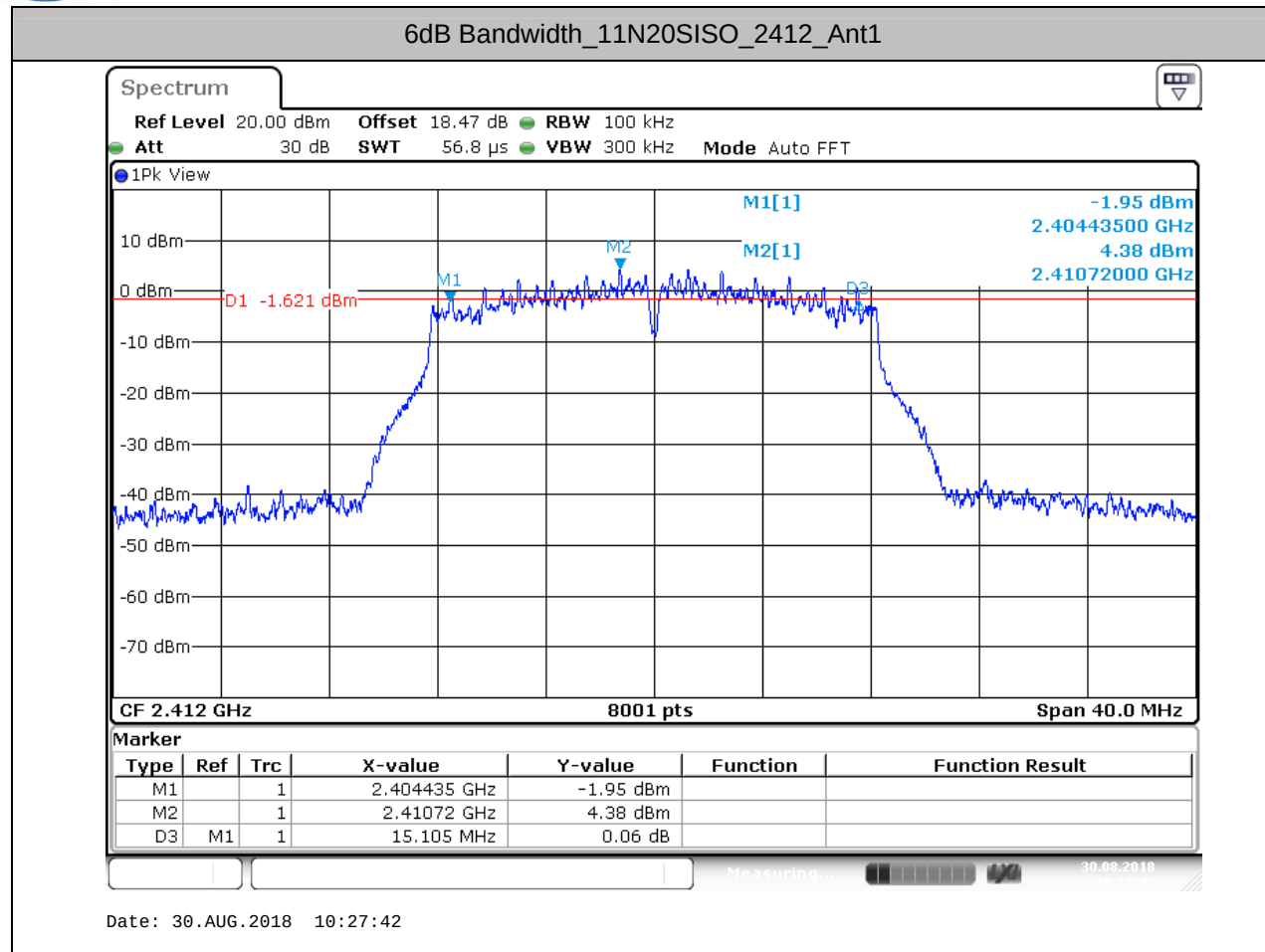
1.6dB Bandwidth

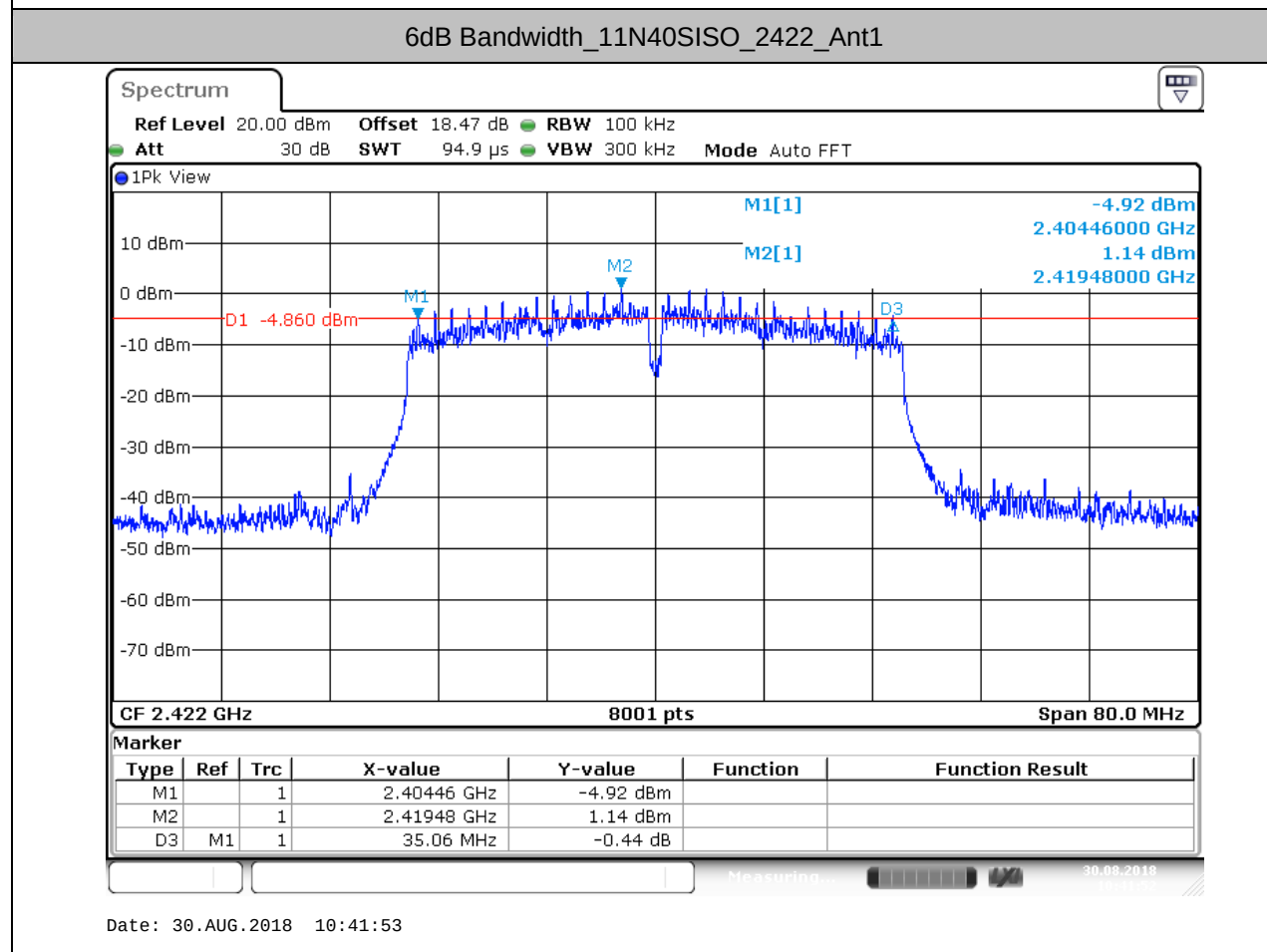
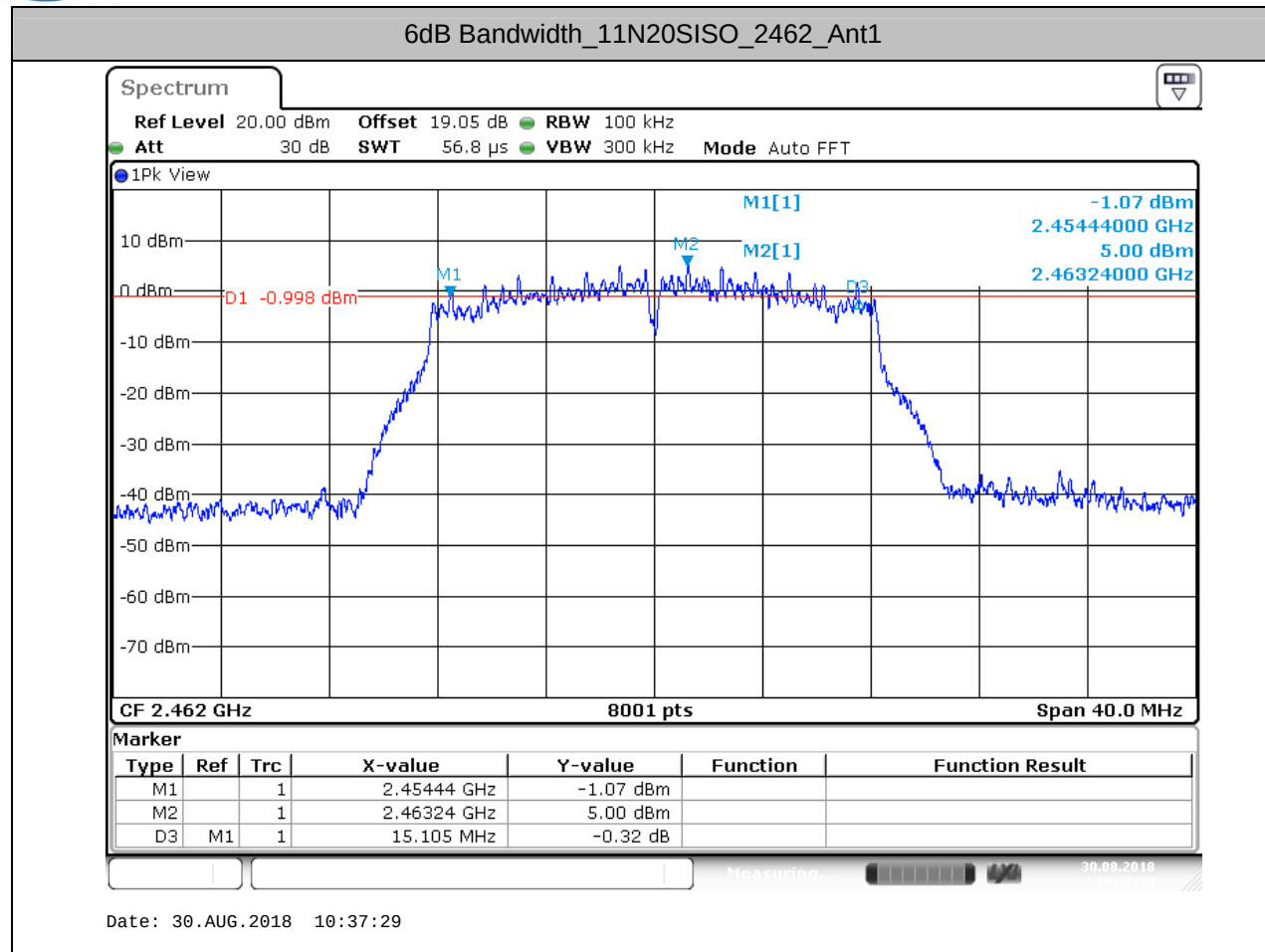
Test Mode	Test Channel	Ant	EBW[MHz]	Limit	Verdict
11B	2412	Ant1	9.085	0.5	PASS
11B	2437	Ant1	9.060	0.5	PASS
11B	2462	Ant1	9.100	0.5	PASS
11G	2412	Ant1	15.105	0.5	PASS
11G	2437	Ant1	15.715	0.5	PASS
11G	2462	Ant1	16.275	0.5	PASS
11N20SISO	2412	Ant1	15.105	0.5	PASS
11N20SISO	2437	Ant1	15.125	0.5	PASS
11N20SISO	2462	Ant1	15.105	0.5	PASS
11N40SISO	2422	Ant1	35.060	0.5	PASS
11N40SISO	2437	Ant1	35.100	0.5	PASS
11N40SISO	2452	Ant1	35.100	0.5	PASS
11B	2412	Ant2	9.020	0.5	PASS
11B	2437	Ant2	9.025	0.5	PASS
11B	2462	Ant2	9.055	0.5	PASS
11G	2412	Ant2	15.395	0.5	PASS
11G	2437	Ant2	16.340	0.5	PASS
11G	2462	Ant2	15.460	0.5	PASS
11N20SISO	2412	Ant2	15.090	0.5	PASS
11N20SISO	2437	Ant2	15.375	0.5	PASS
11N20SISO	2462	Ant2	15.115	0.5	PASS
11N40SISO	2422	Ant2	35.060	0.5	PASS
11N40SISO	2437	Ant2	35.100	0.5	PASS
11N40SISO	2452	Ant2	35.100	0.5	PASS
11N20MIMO	2412	Ant1+2	15.305	0.5	PASS
11N20MIMO	2437	Ant1+2	15.475	0.5	PASS
11N20MIMO	2462	Ant1+2	16.015	0.5	PASS
11N40MIMO	2422	Ant1+2	33.830	0.5	PASS
11N40MIMO	2437	Ant1+2	35.060	0.5	PASS
11N40MIMO	2452	Ant1+2	31.320	0.5	PASS

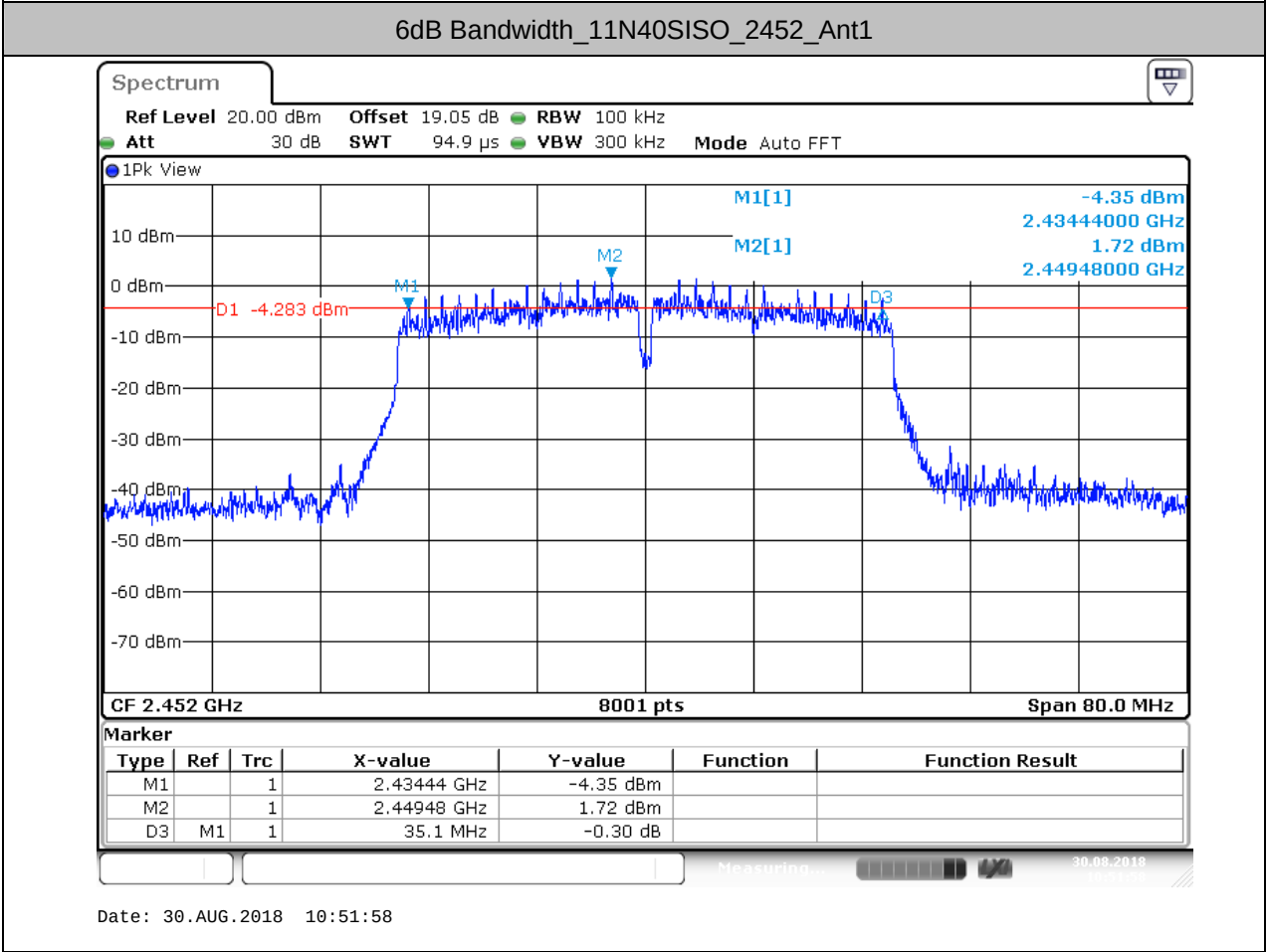
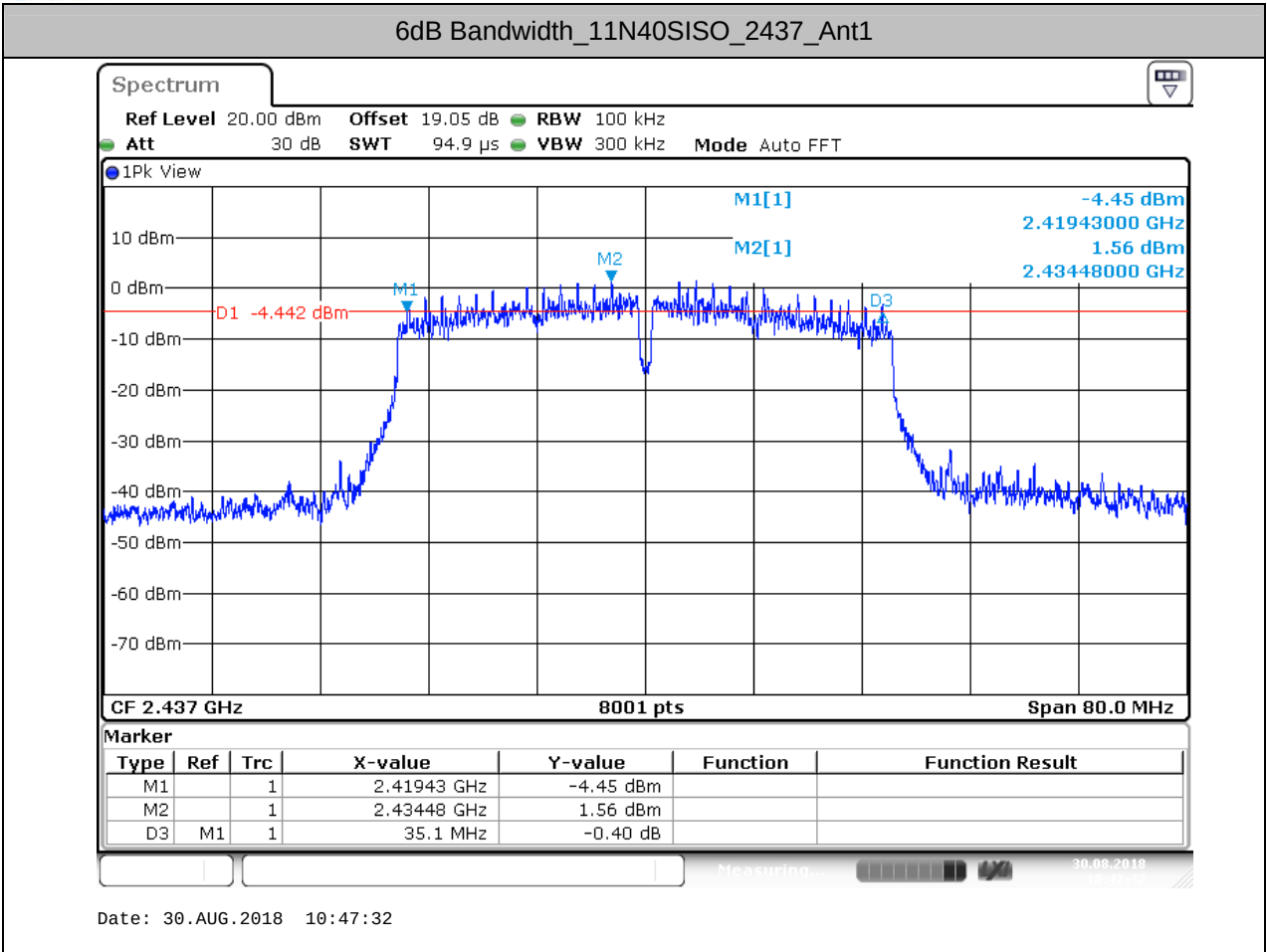


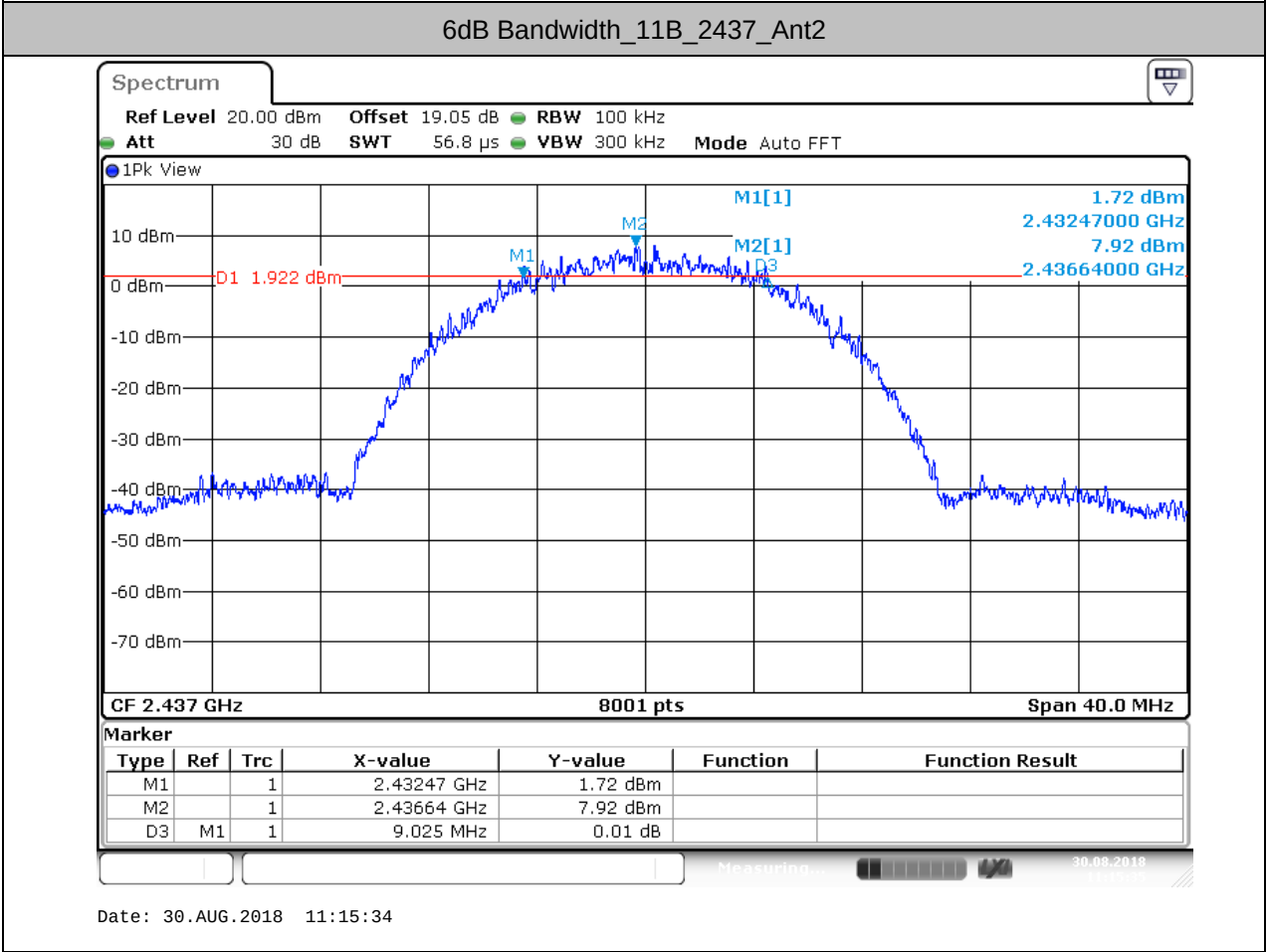
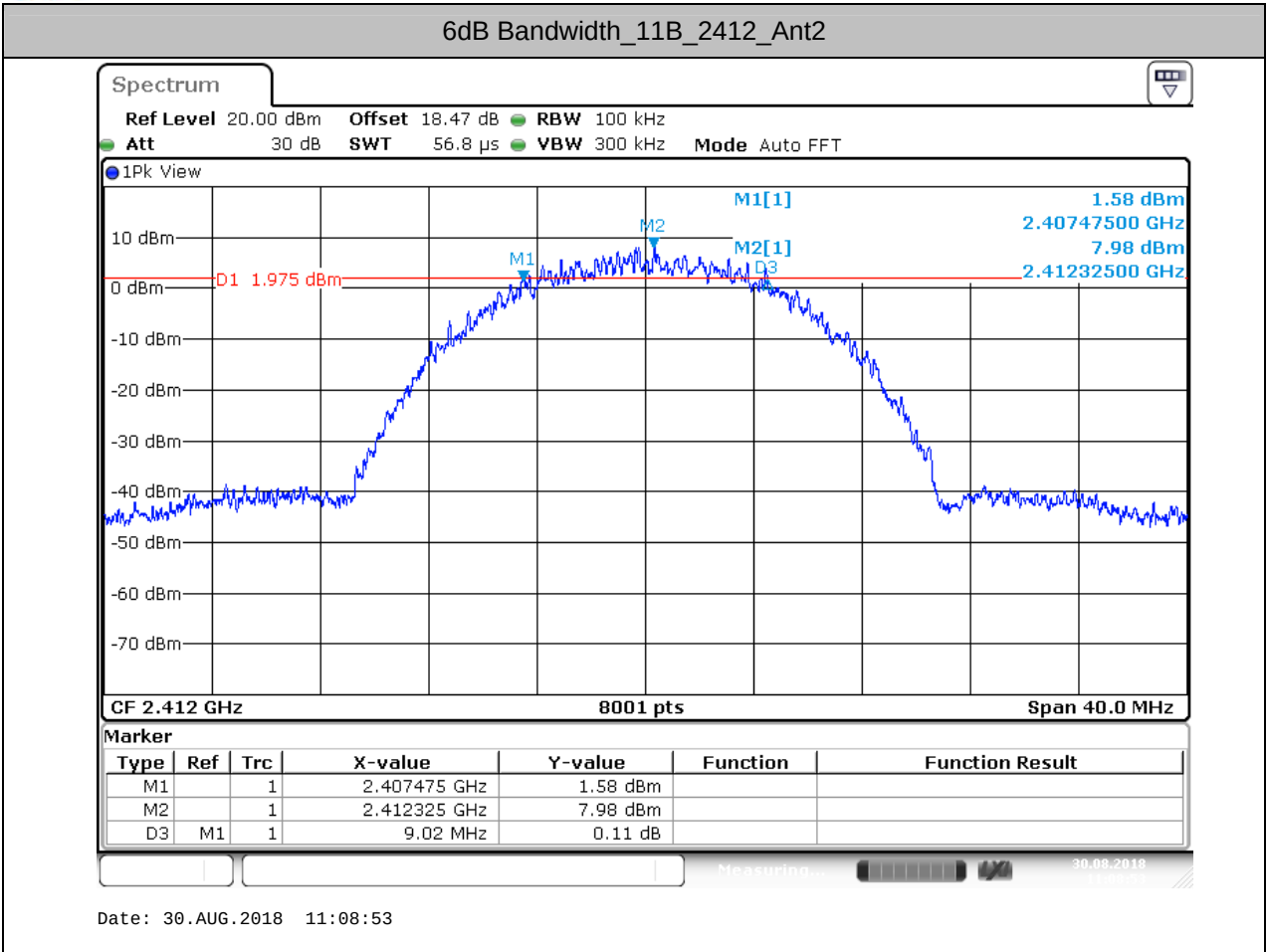


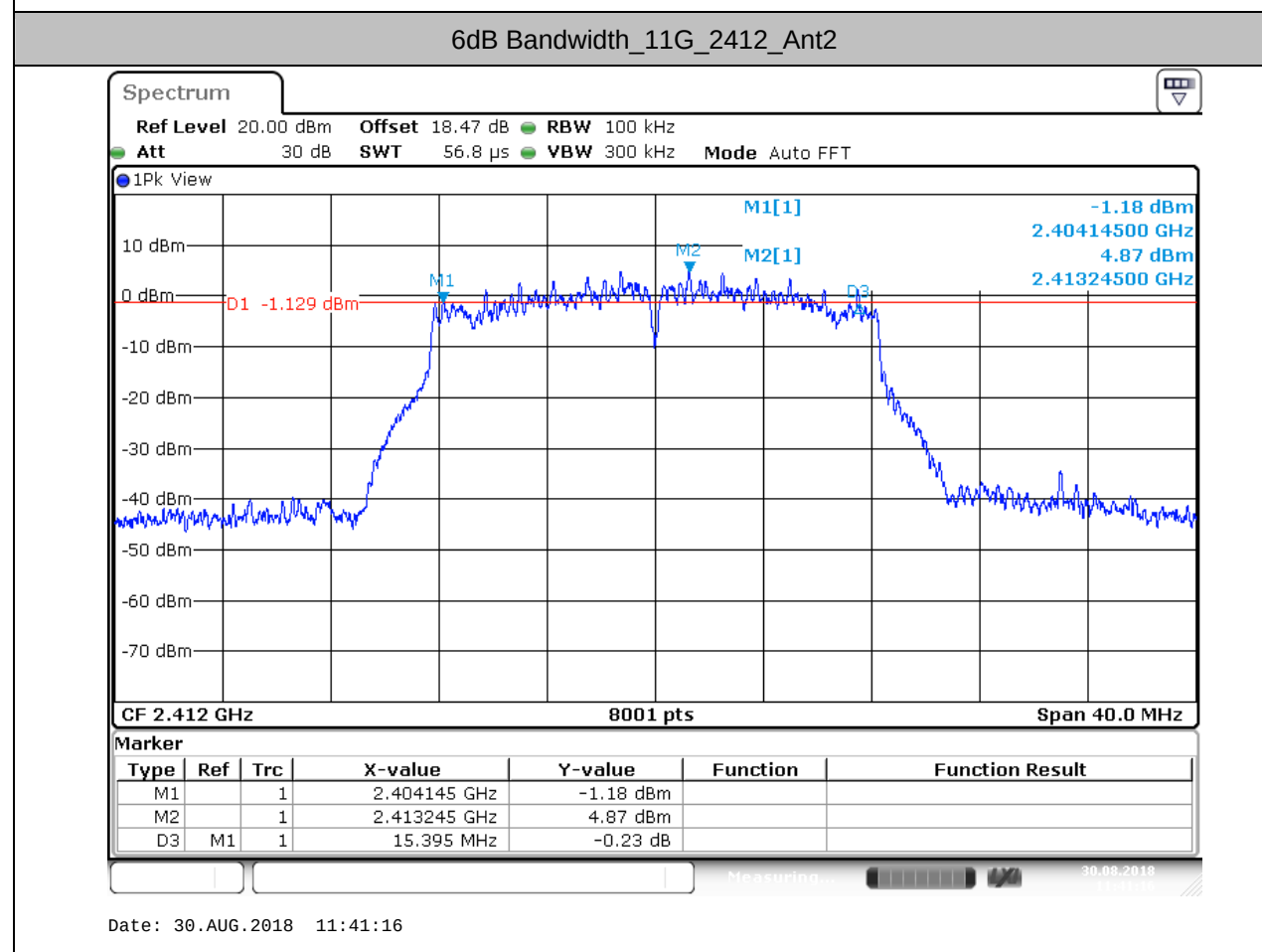
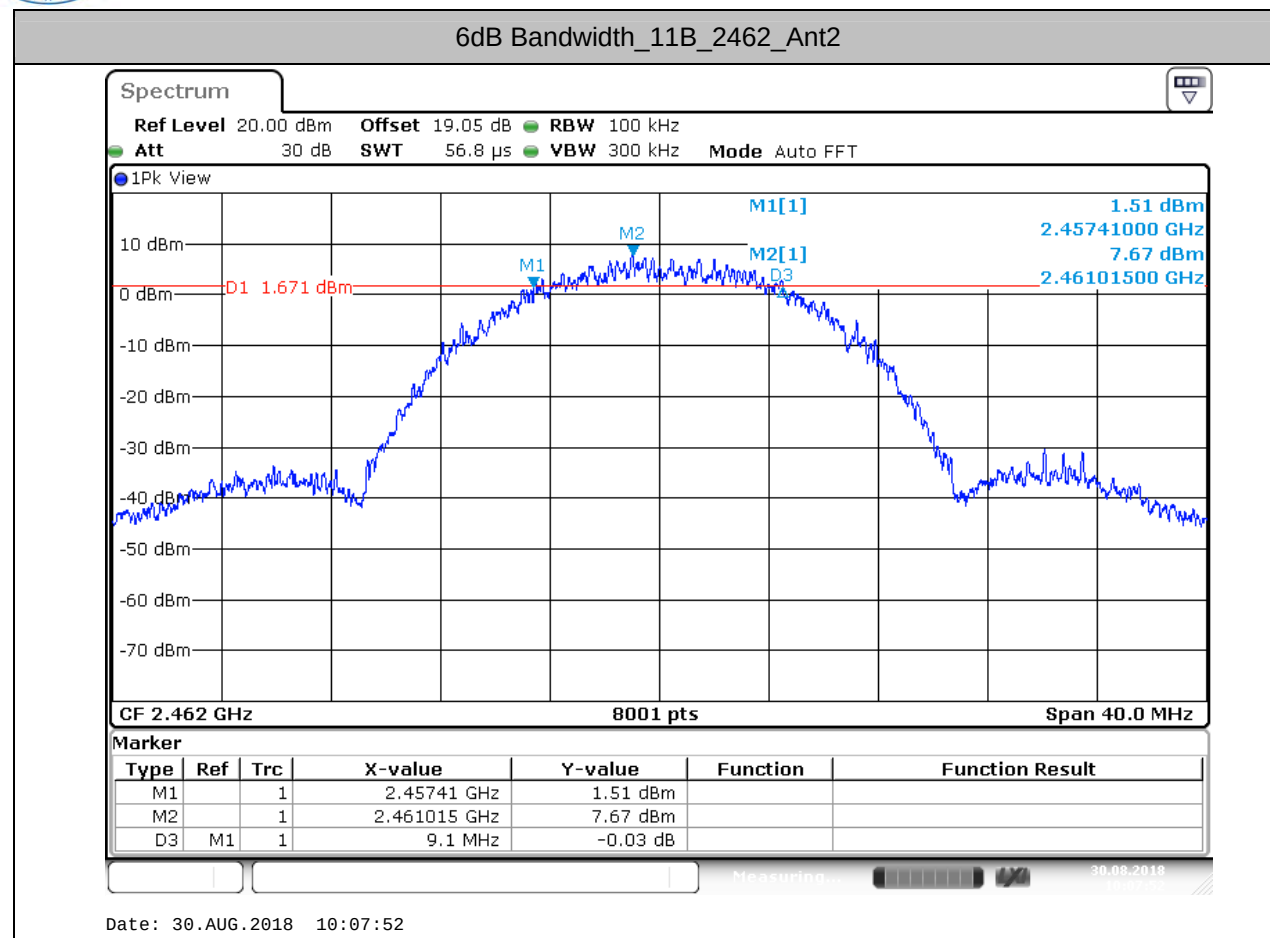


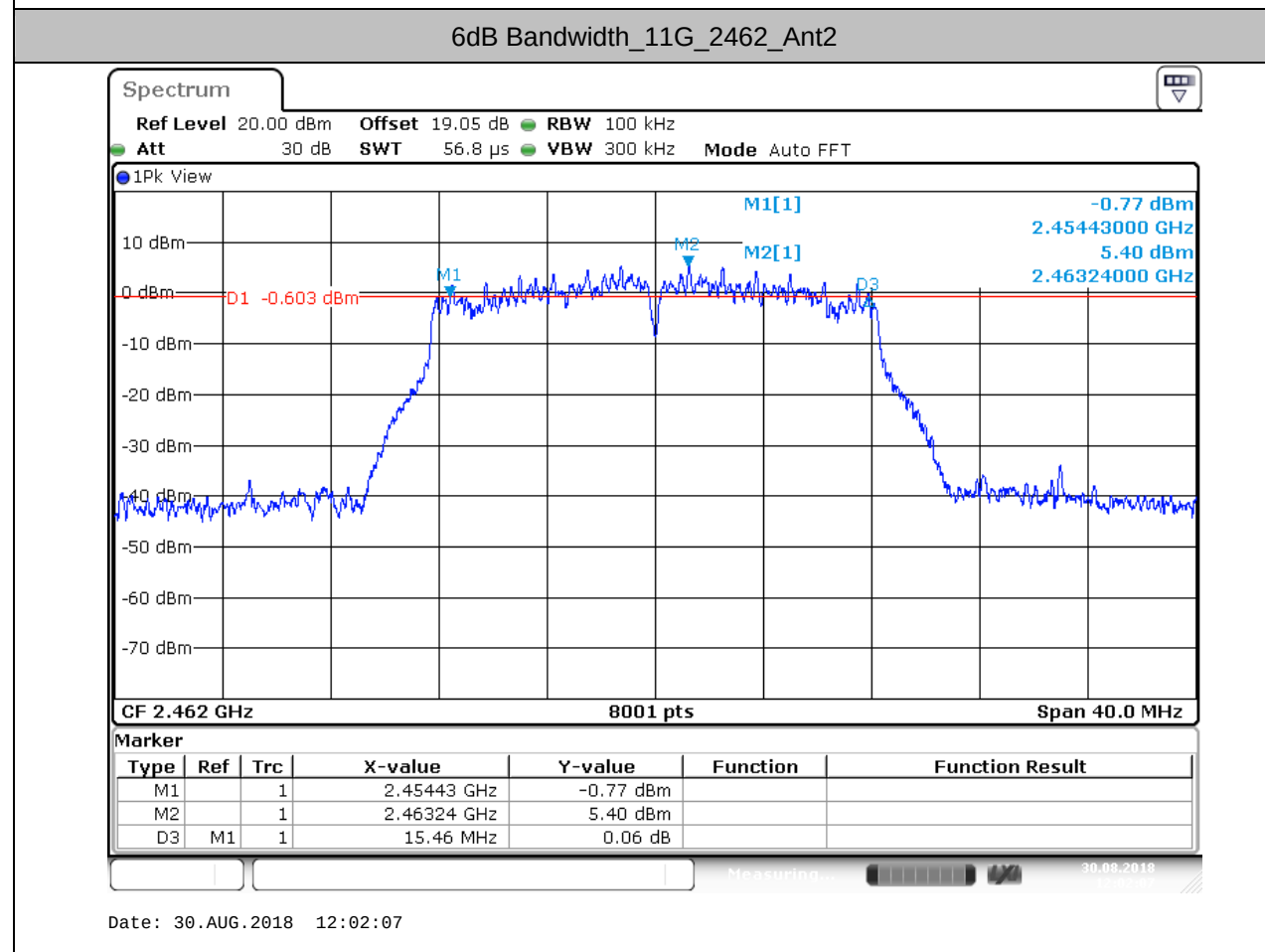
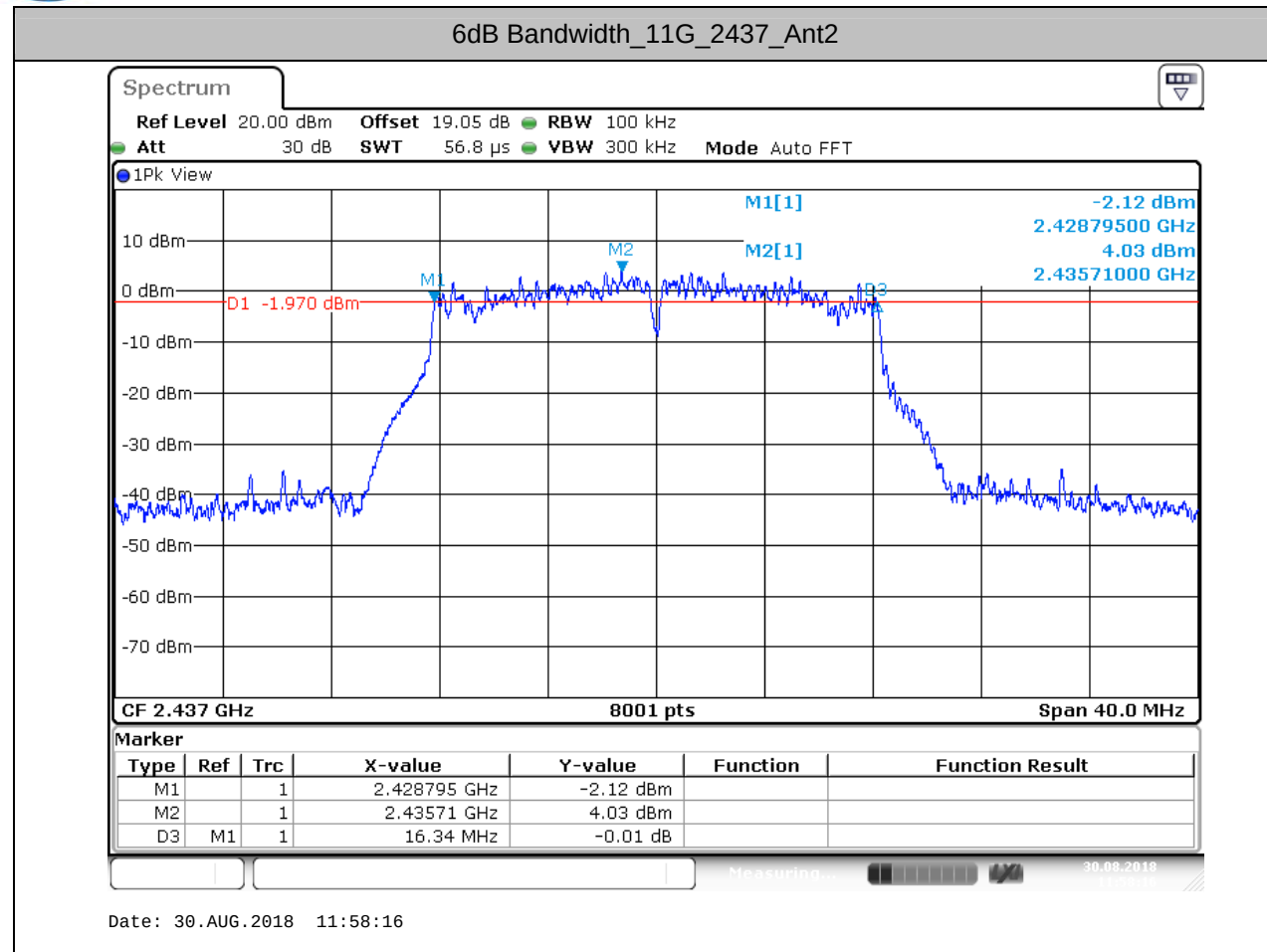


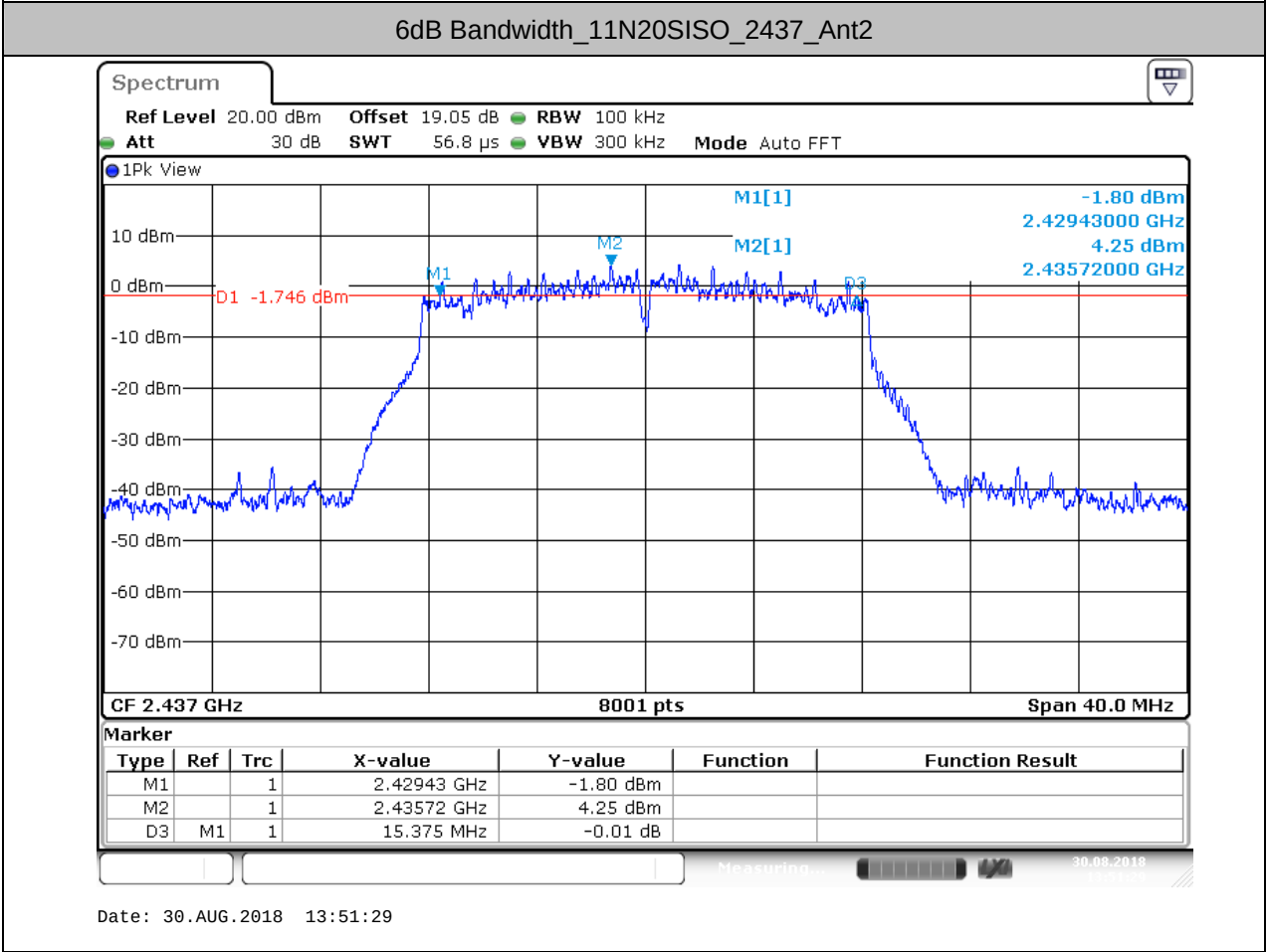
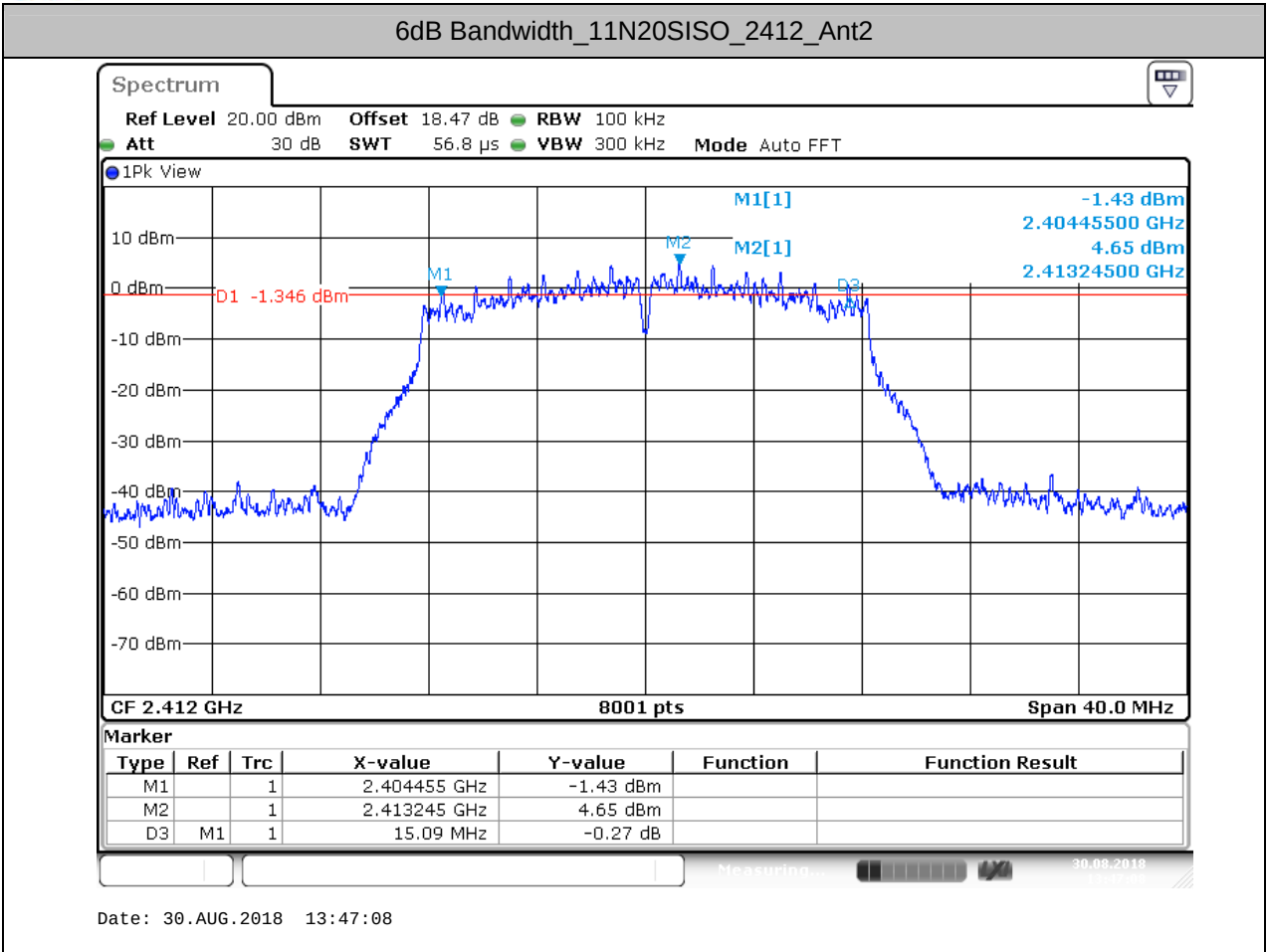


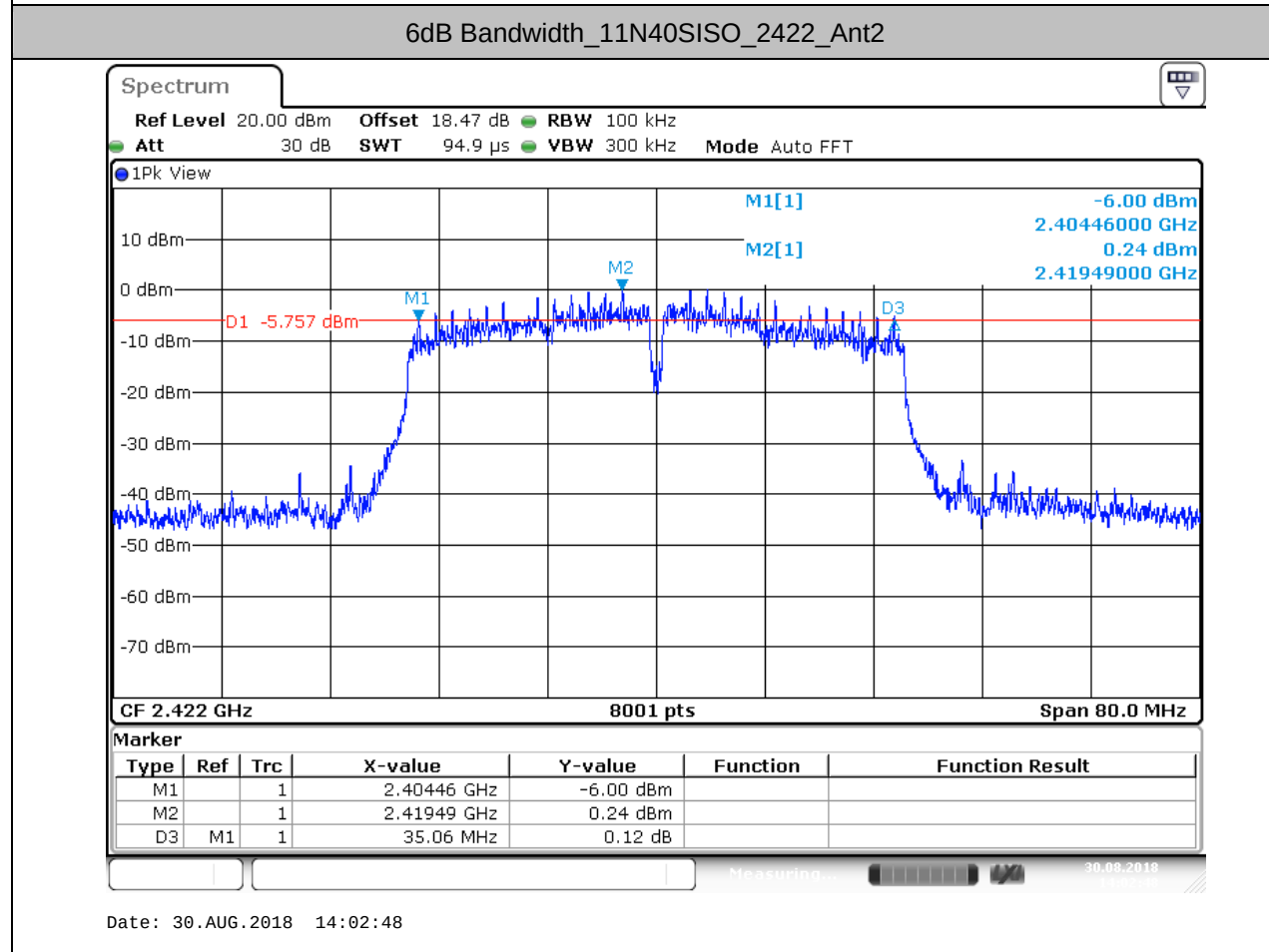
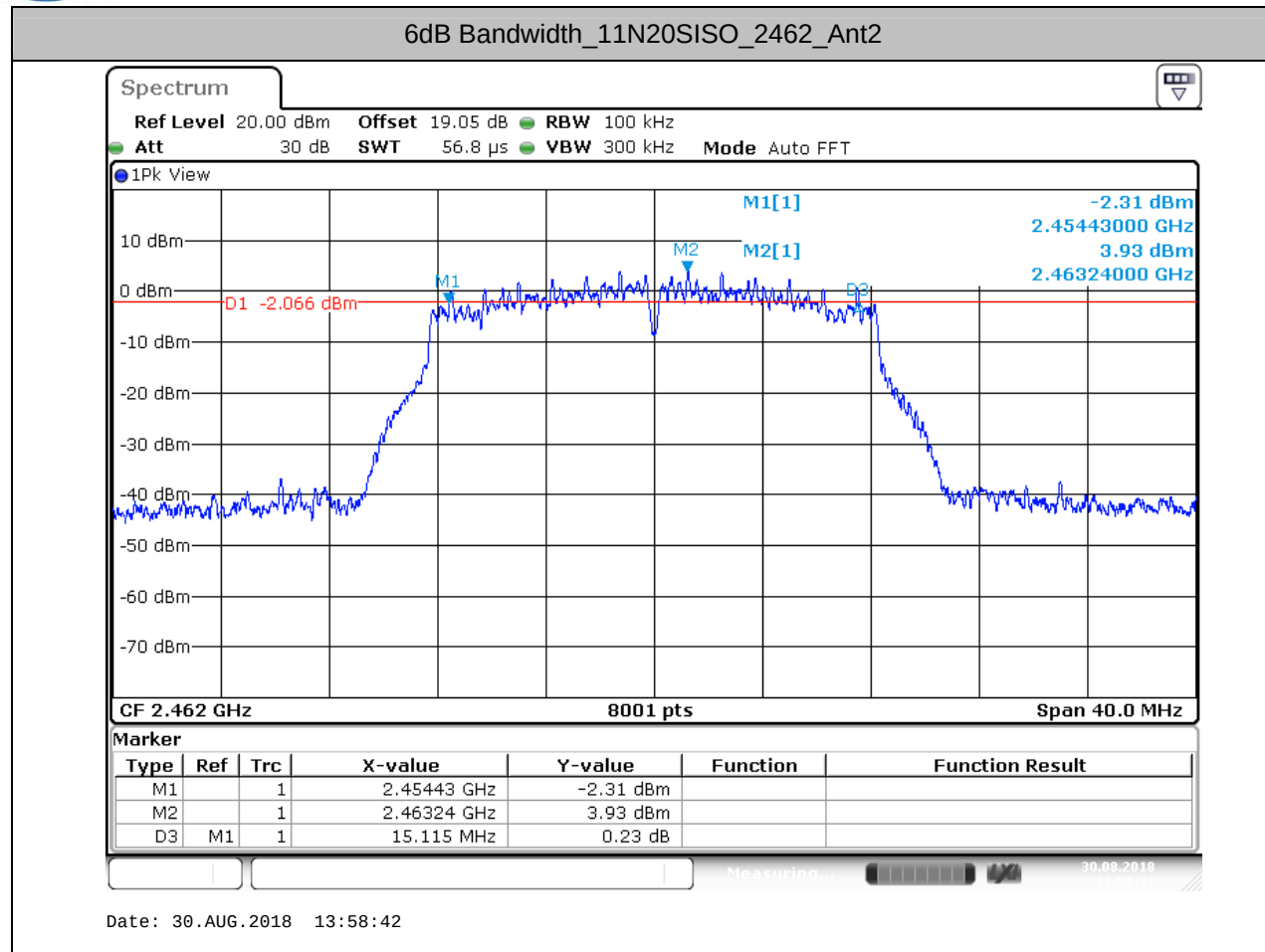


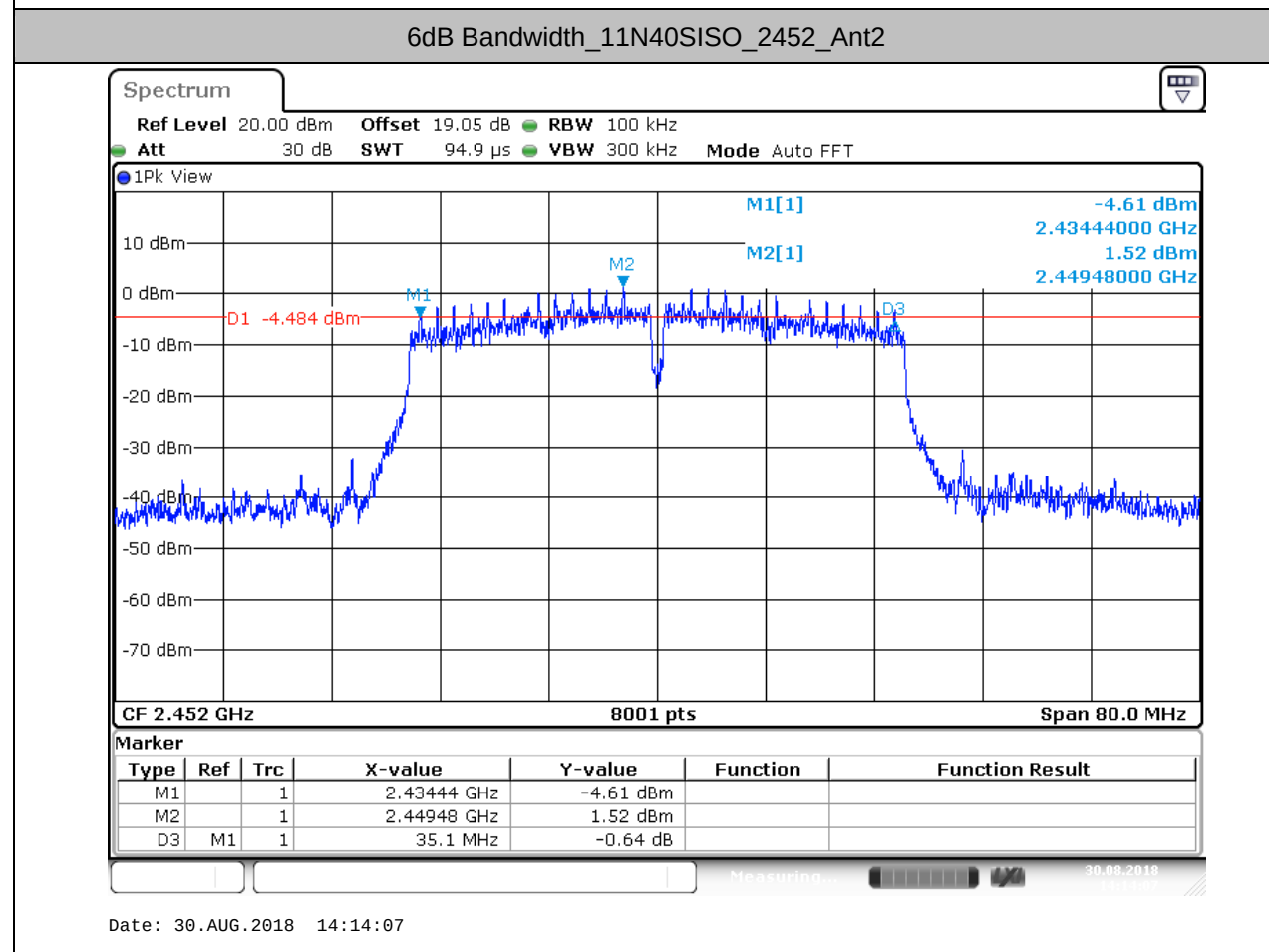
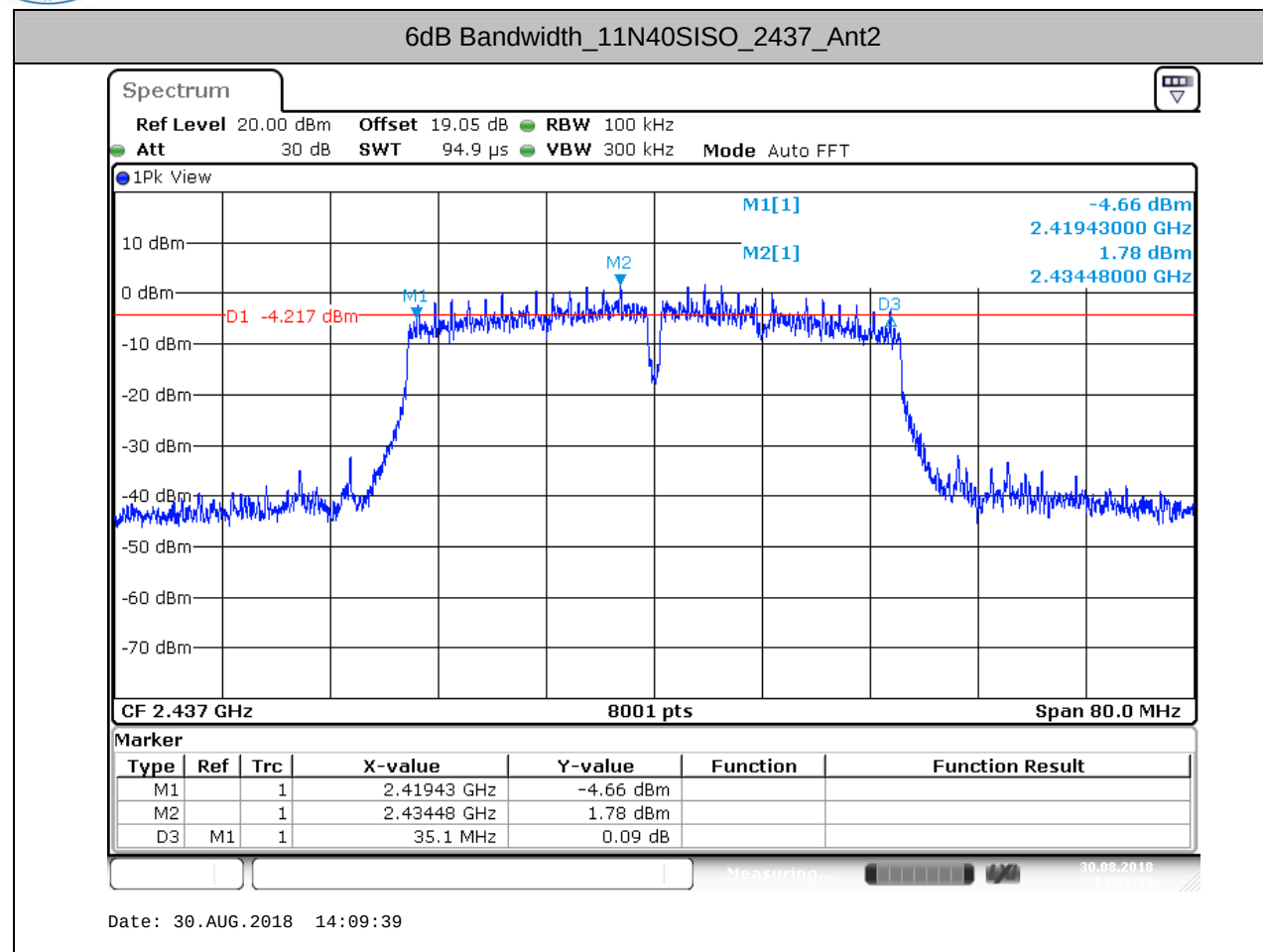


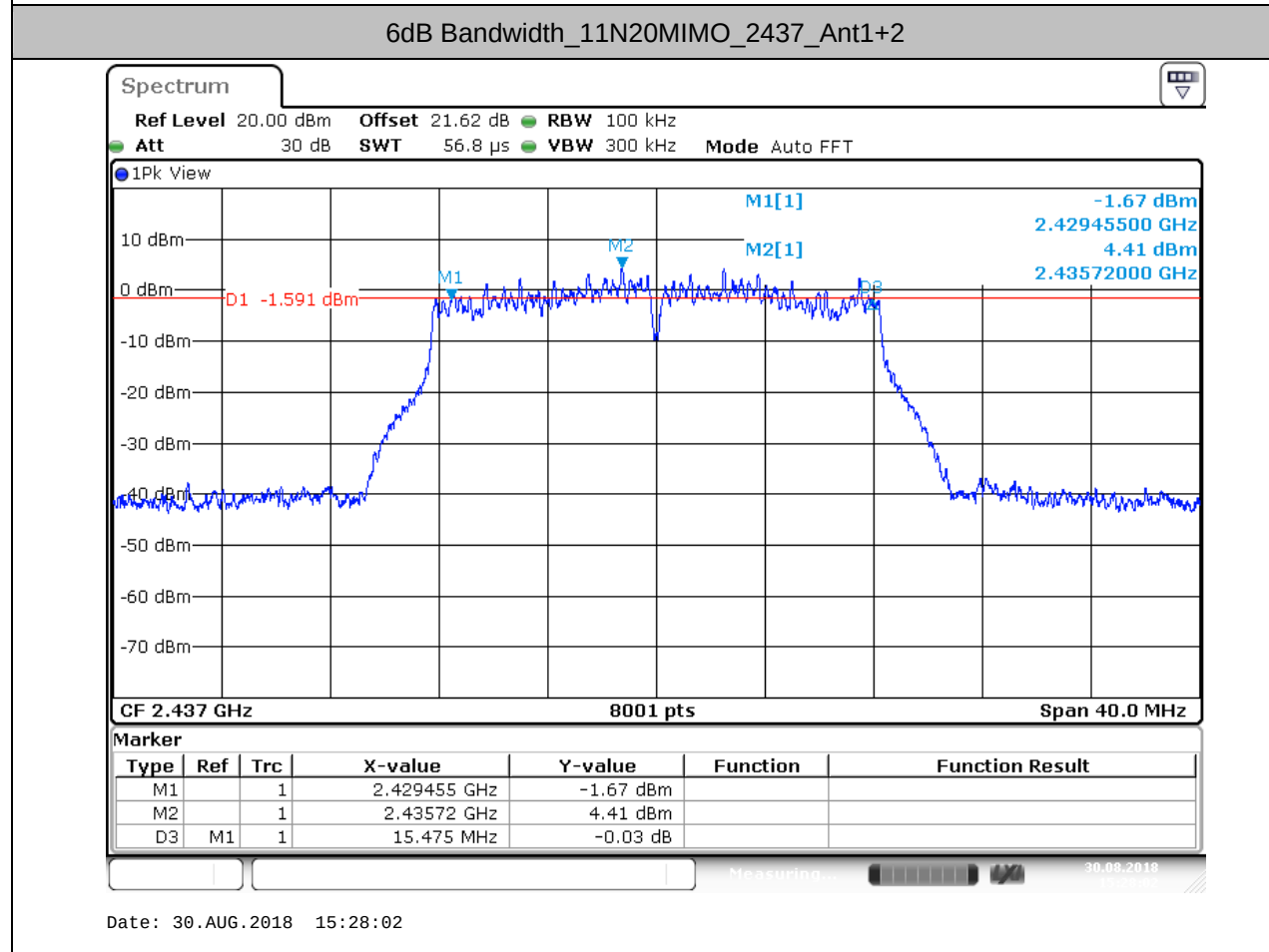
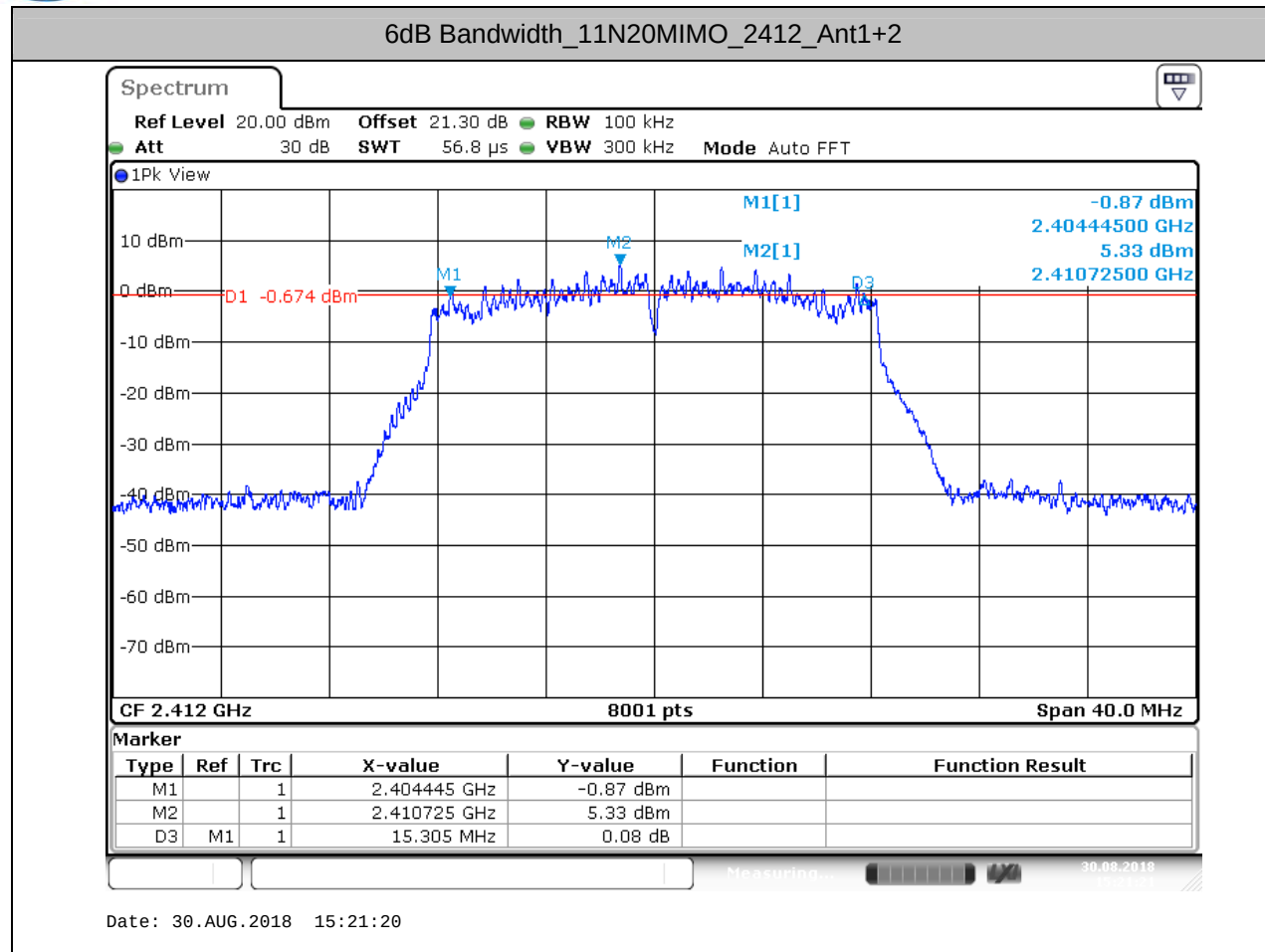


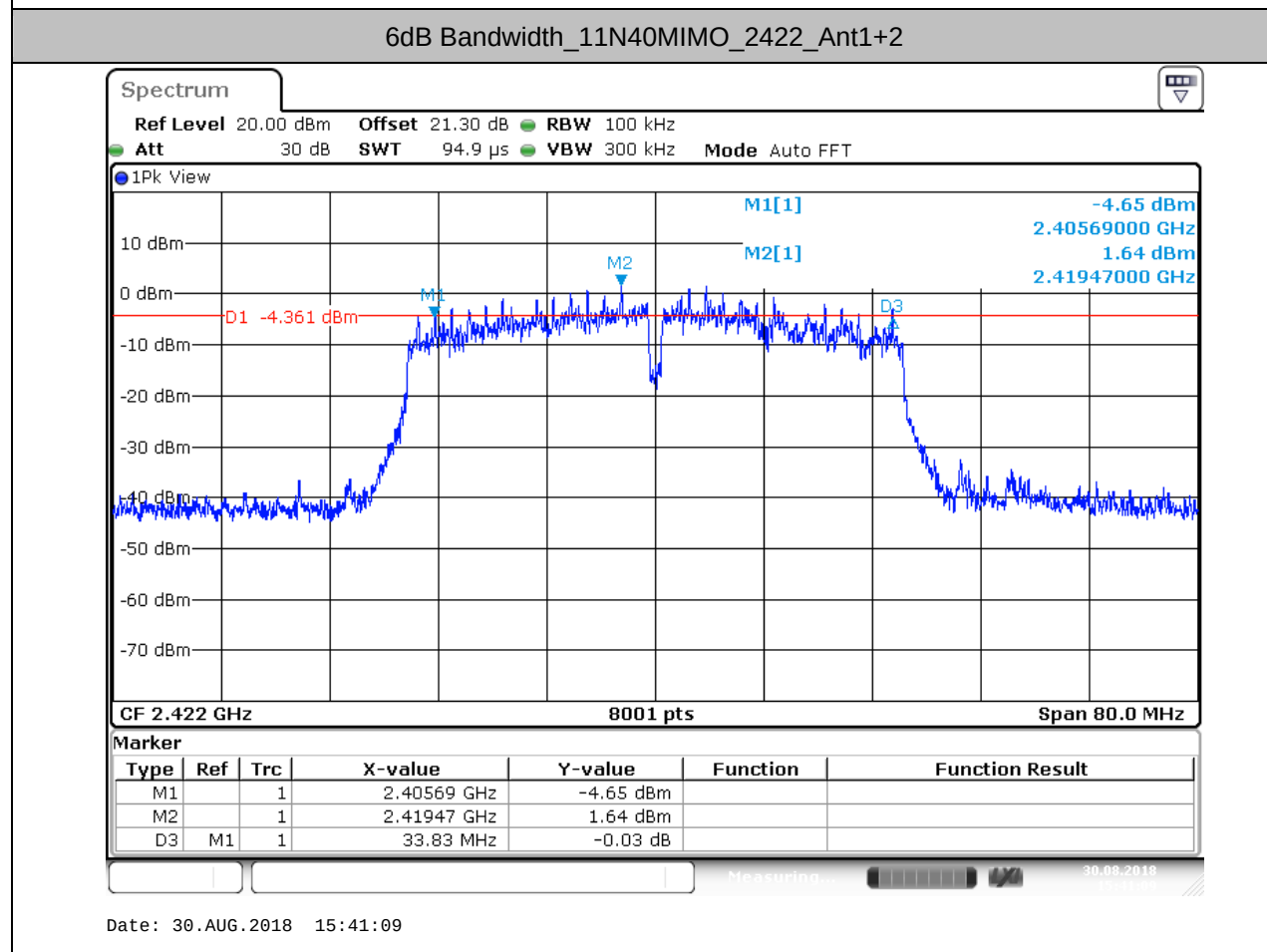
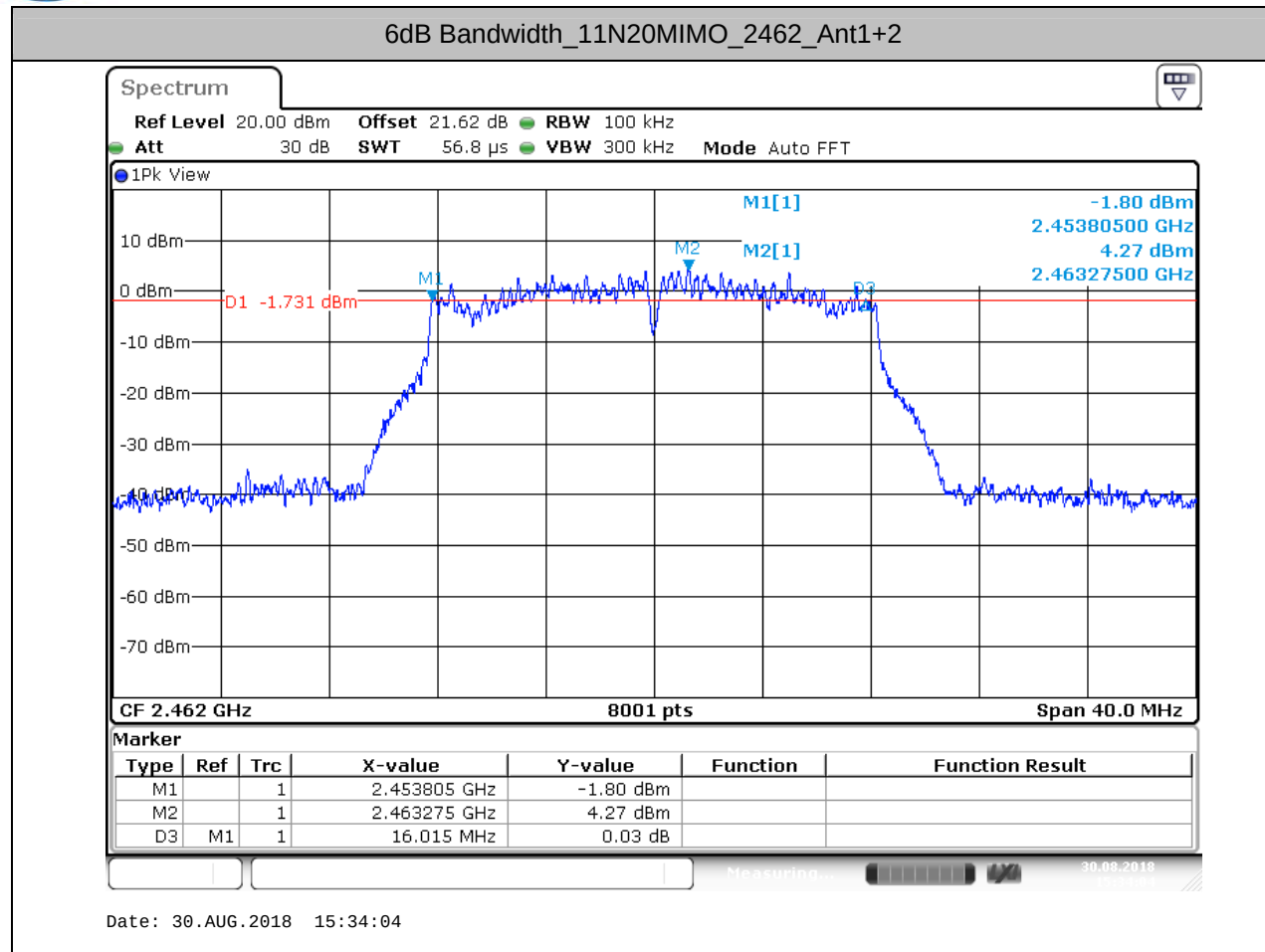


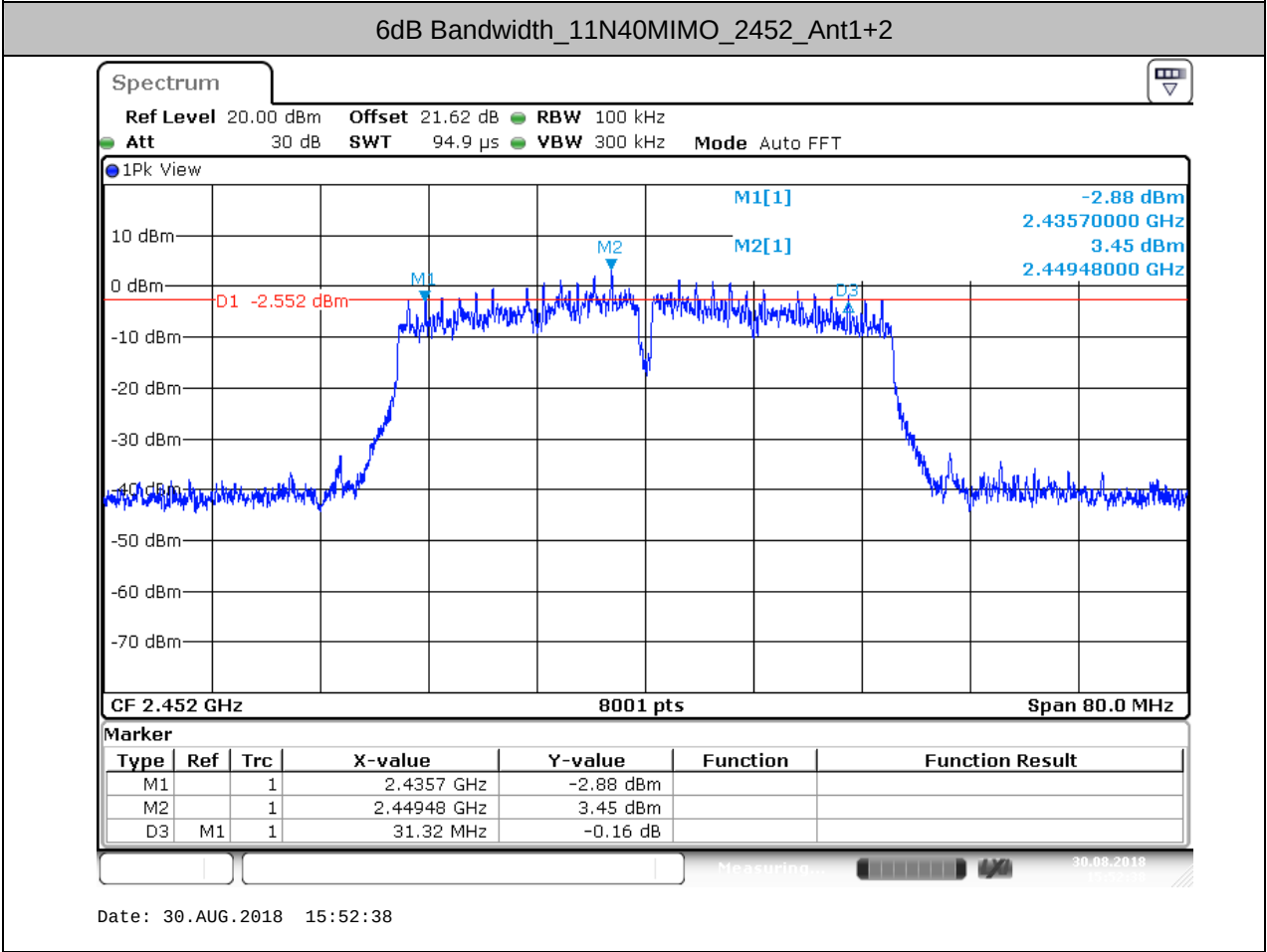
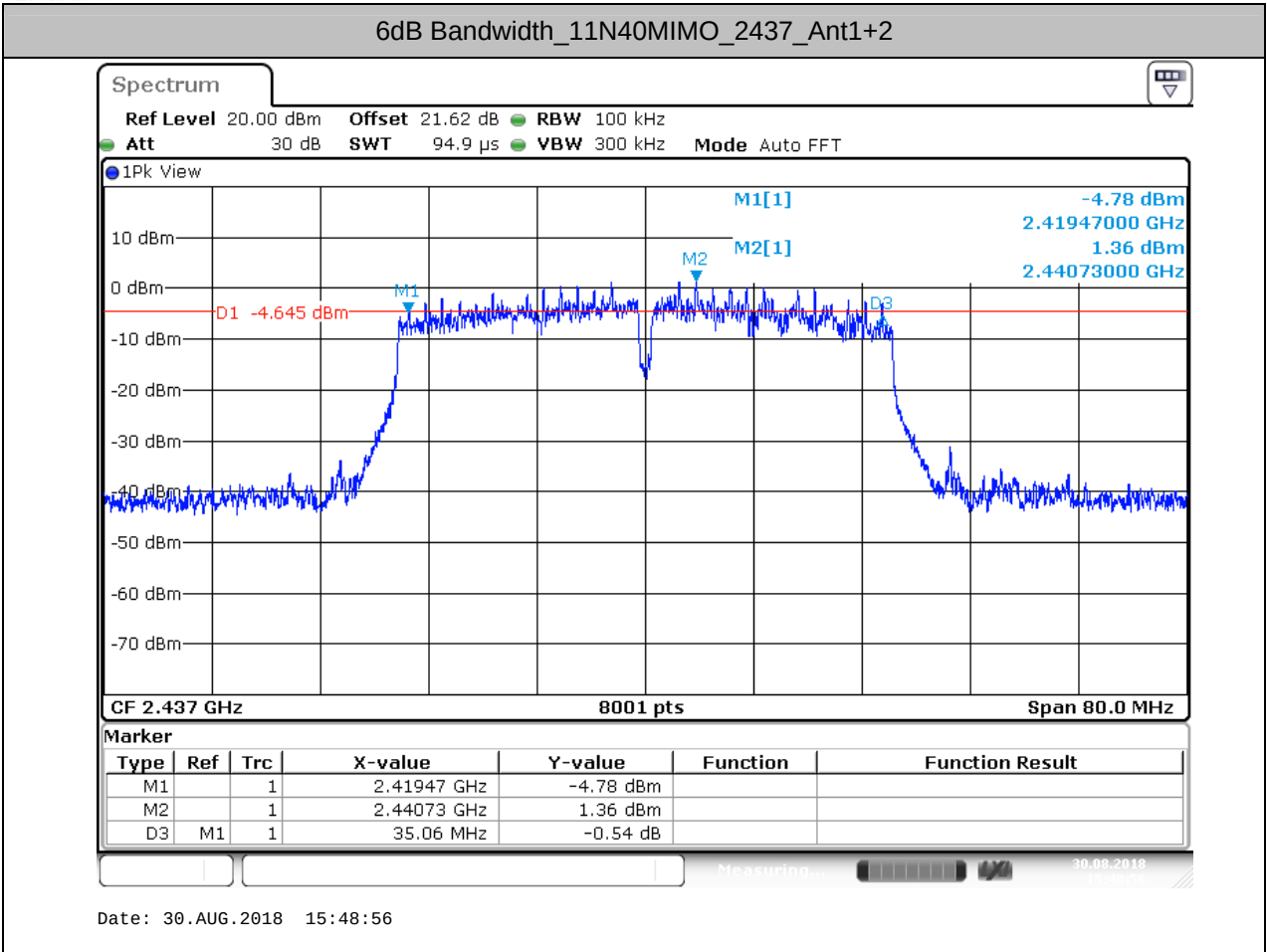








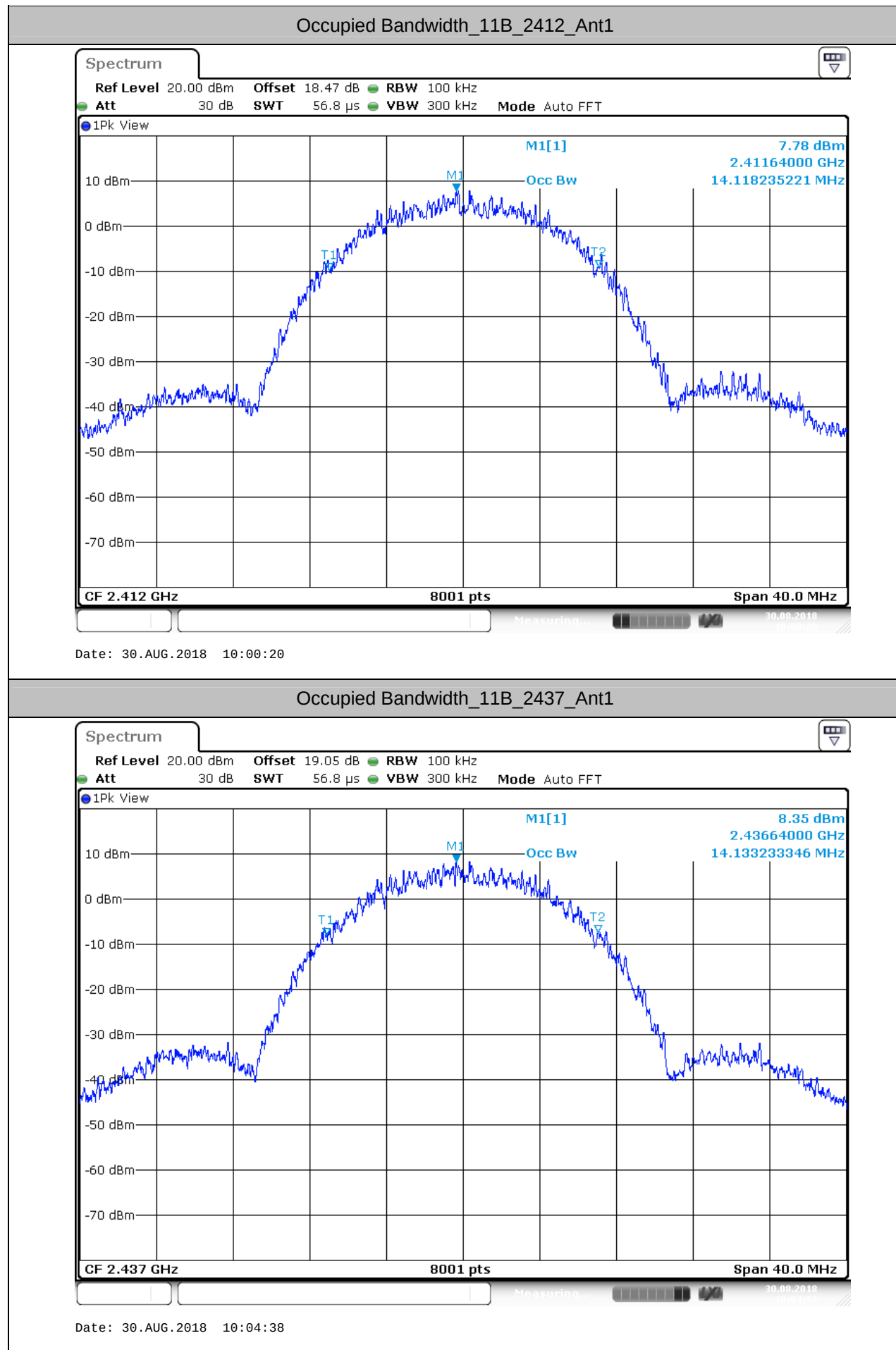


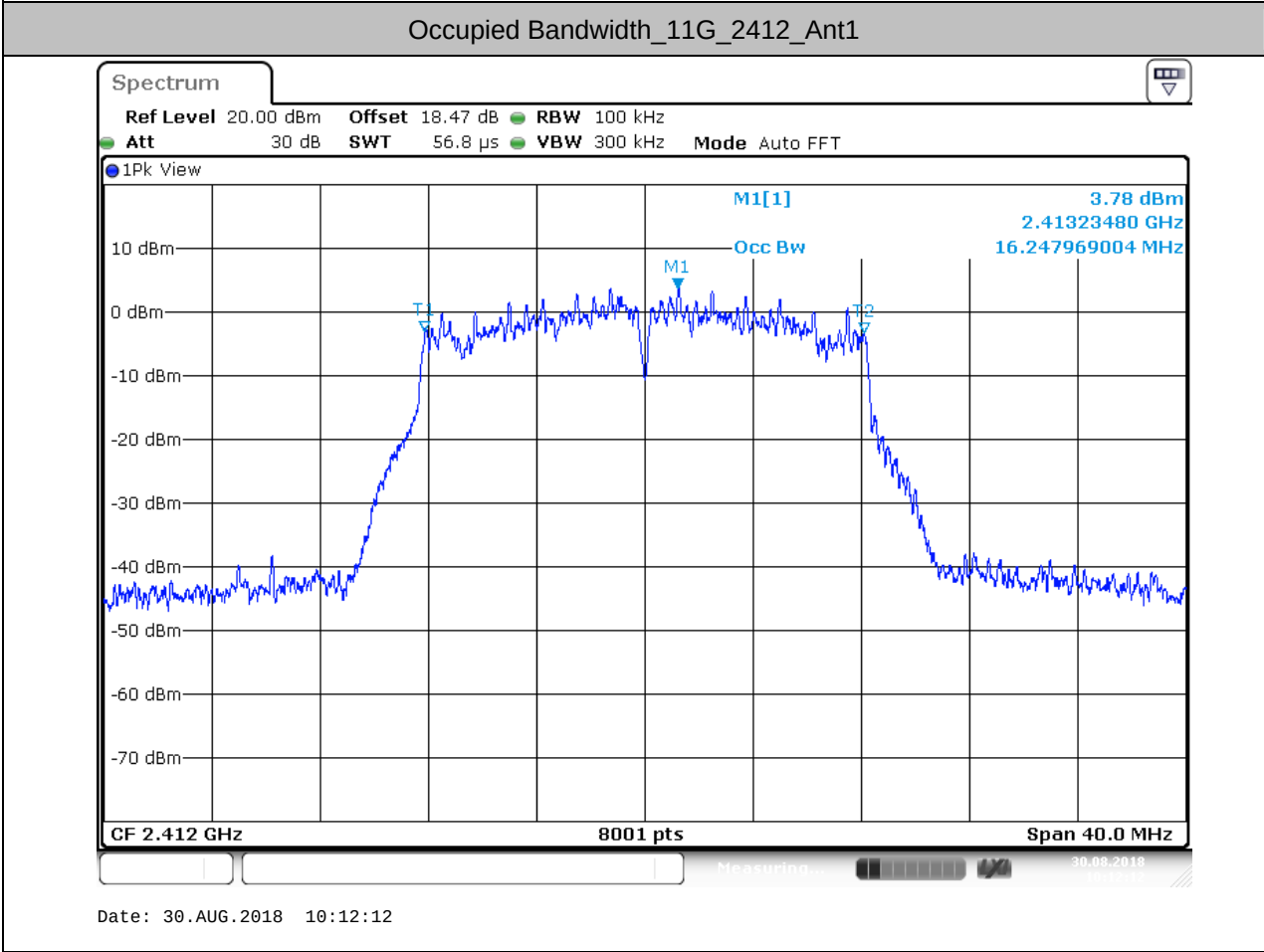
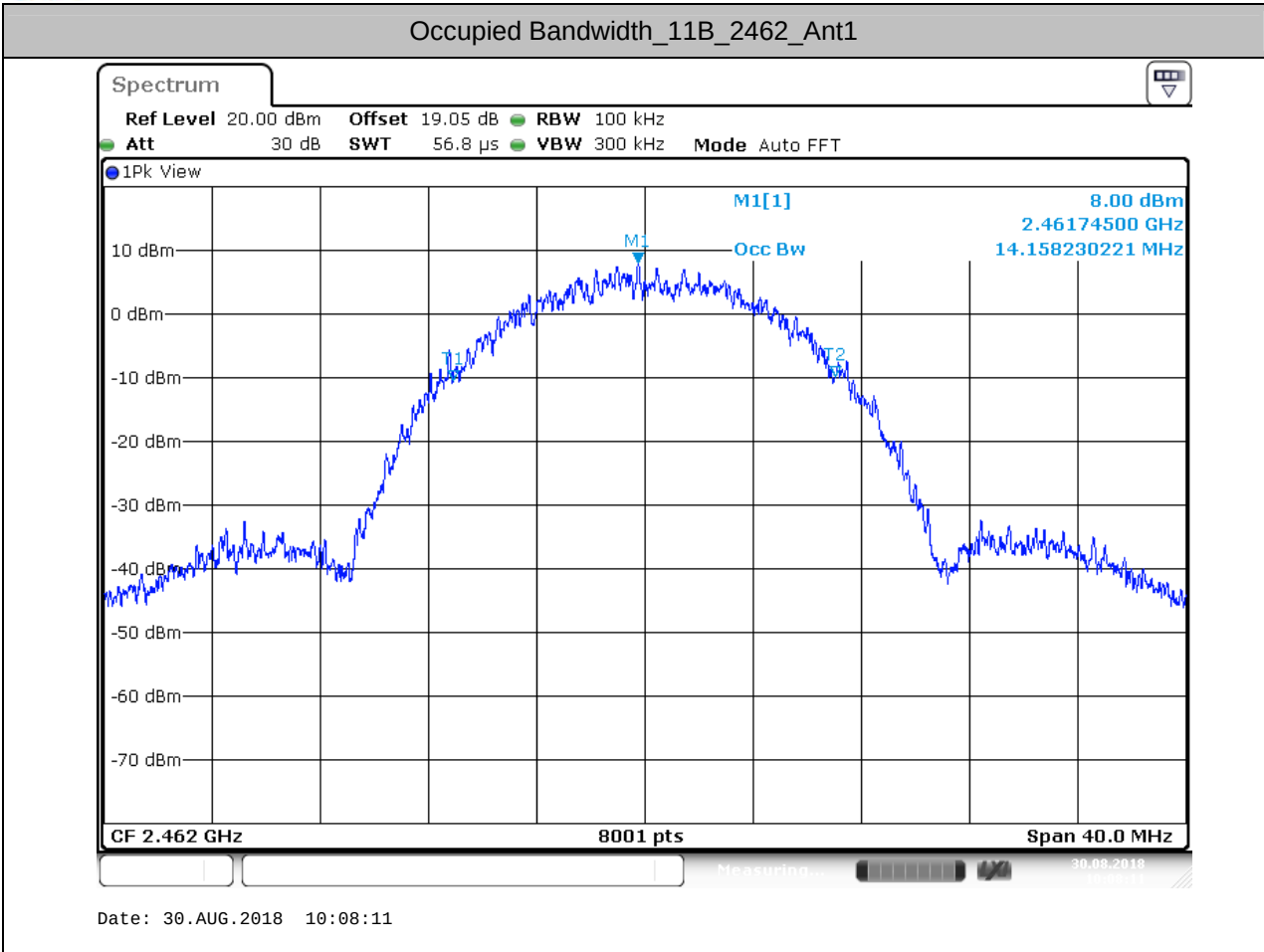


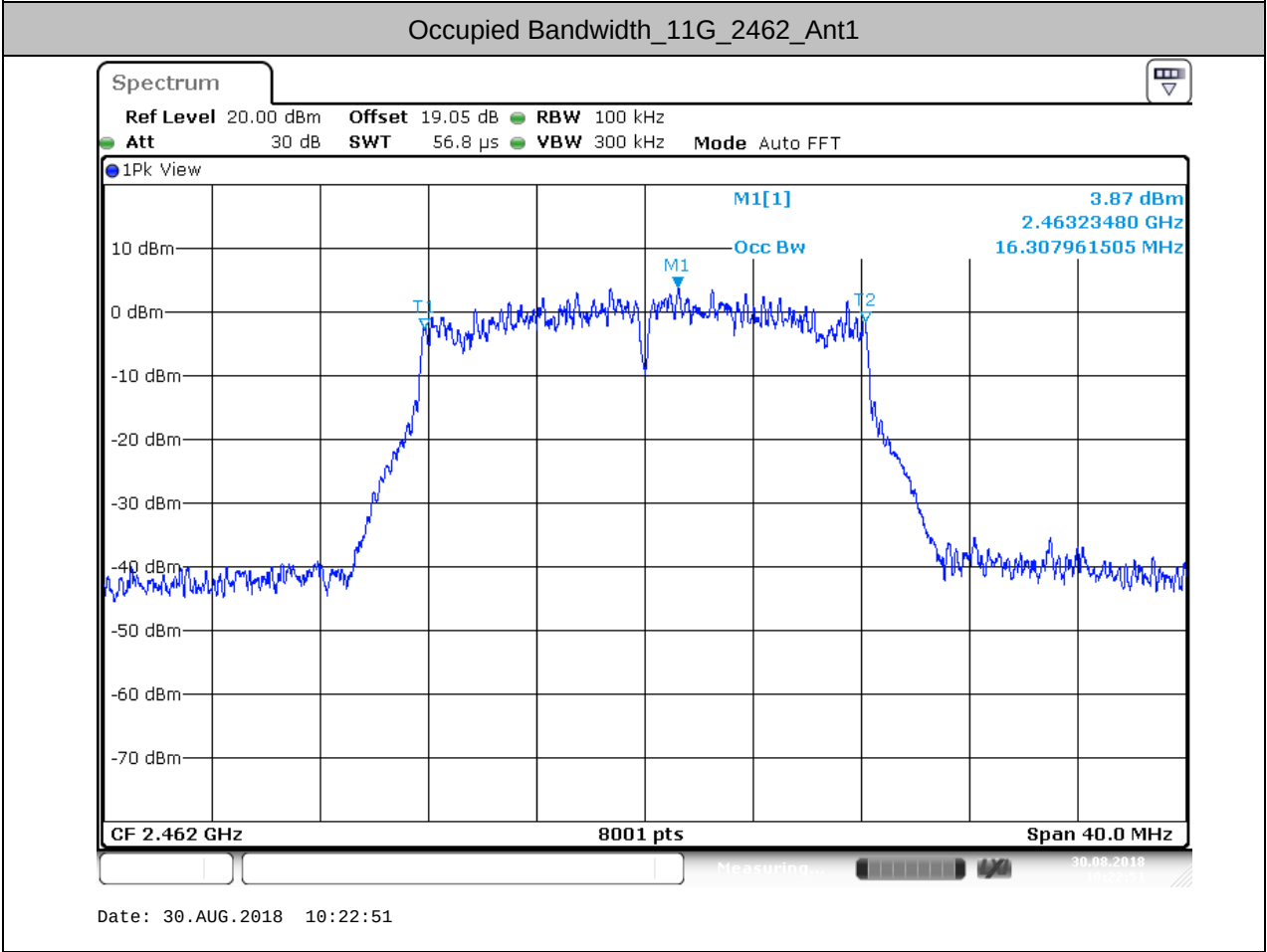
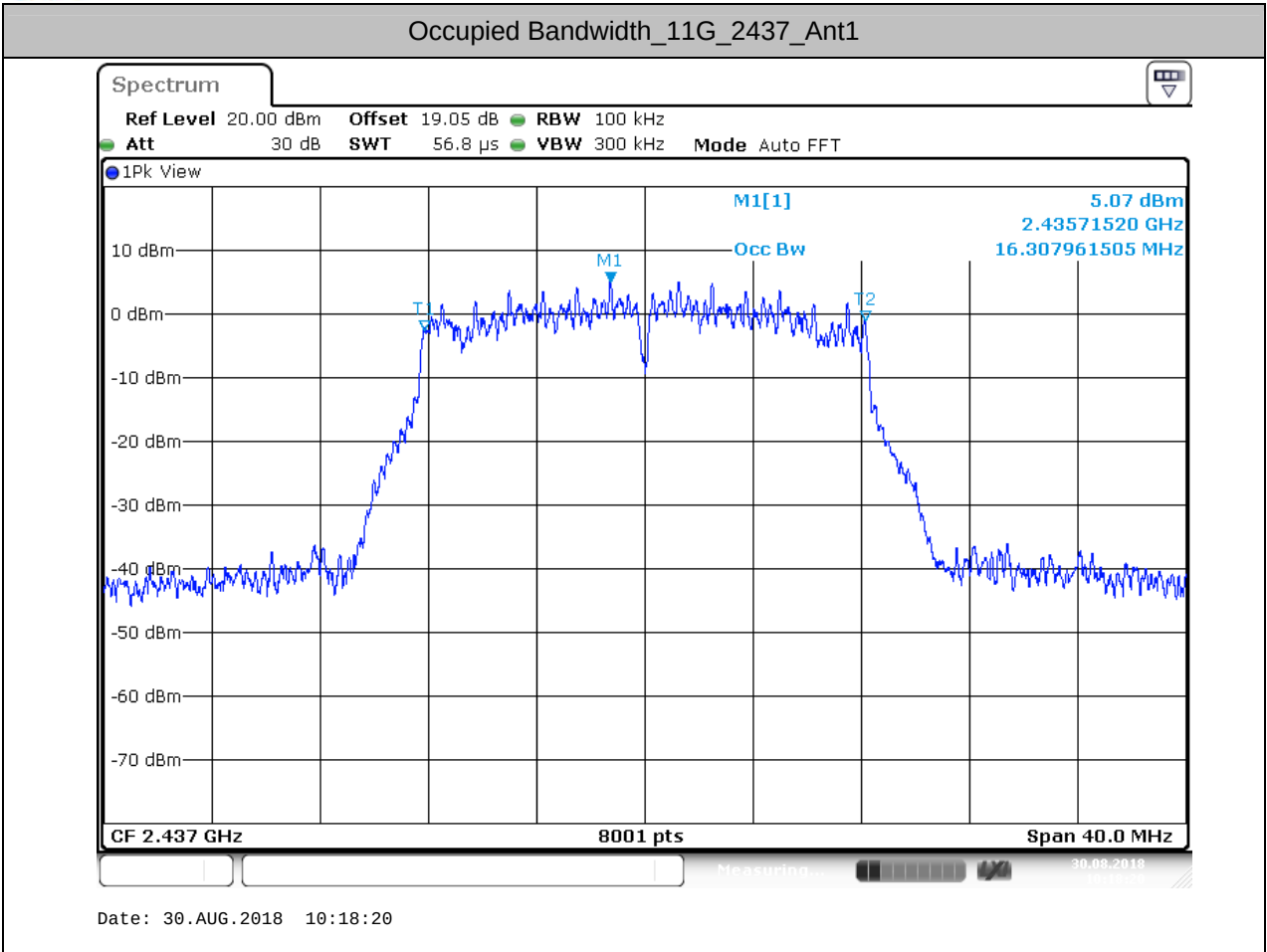


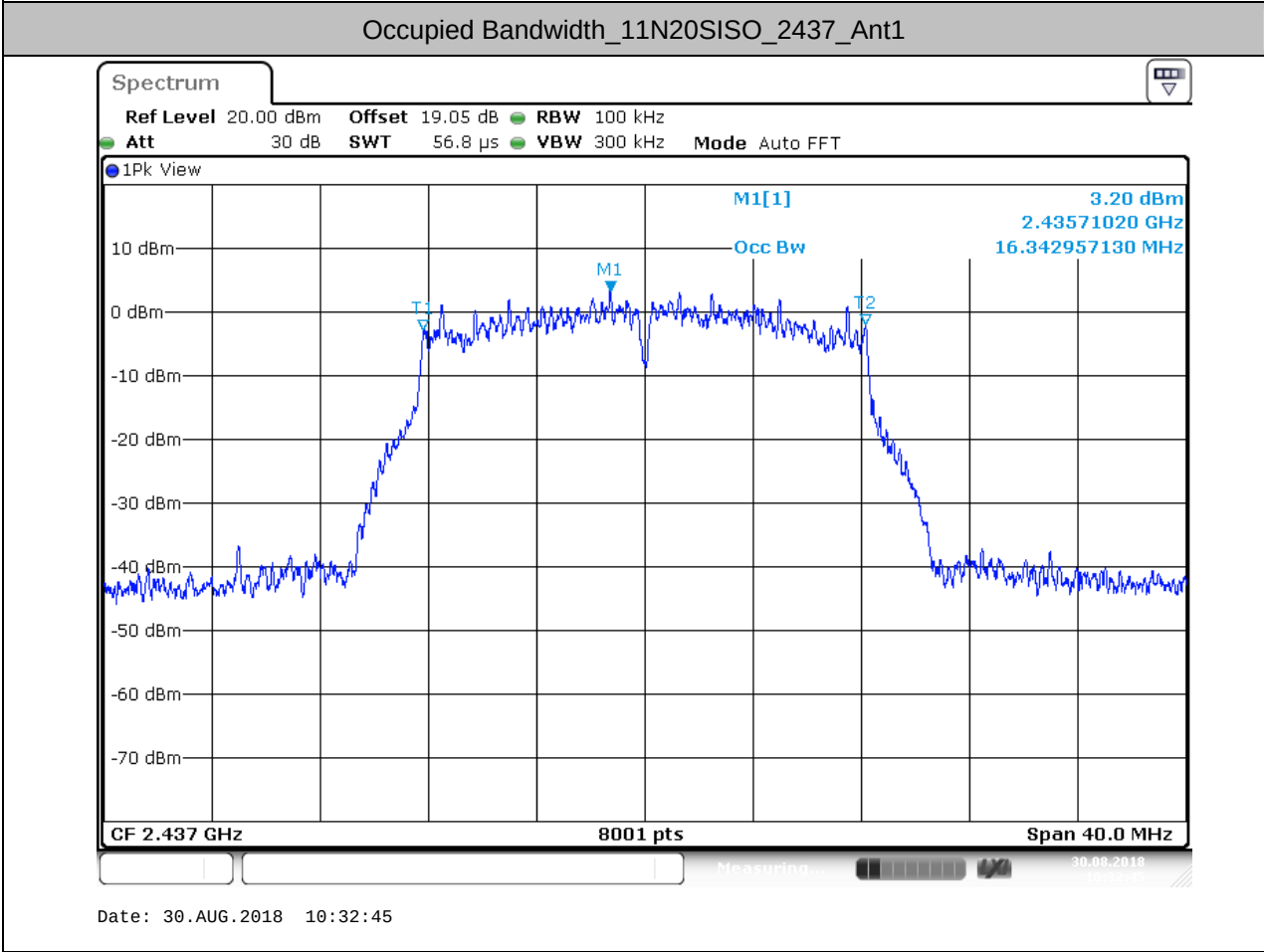
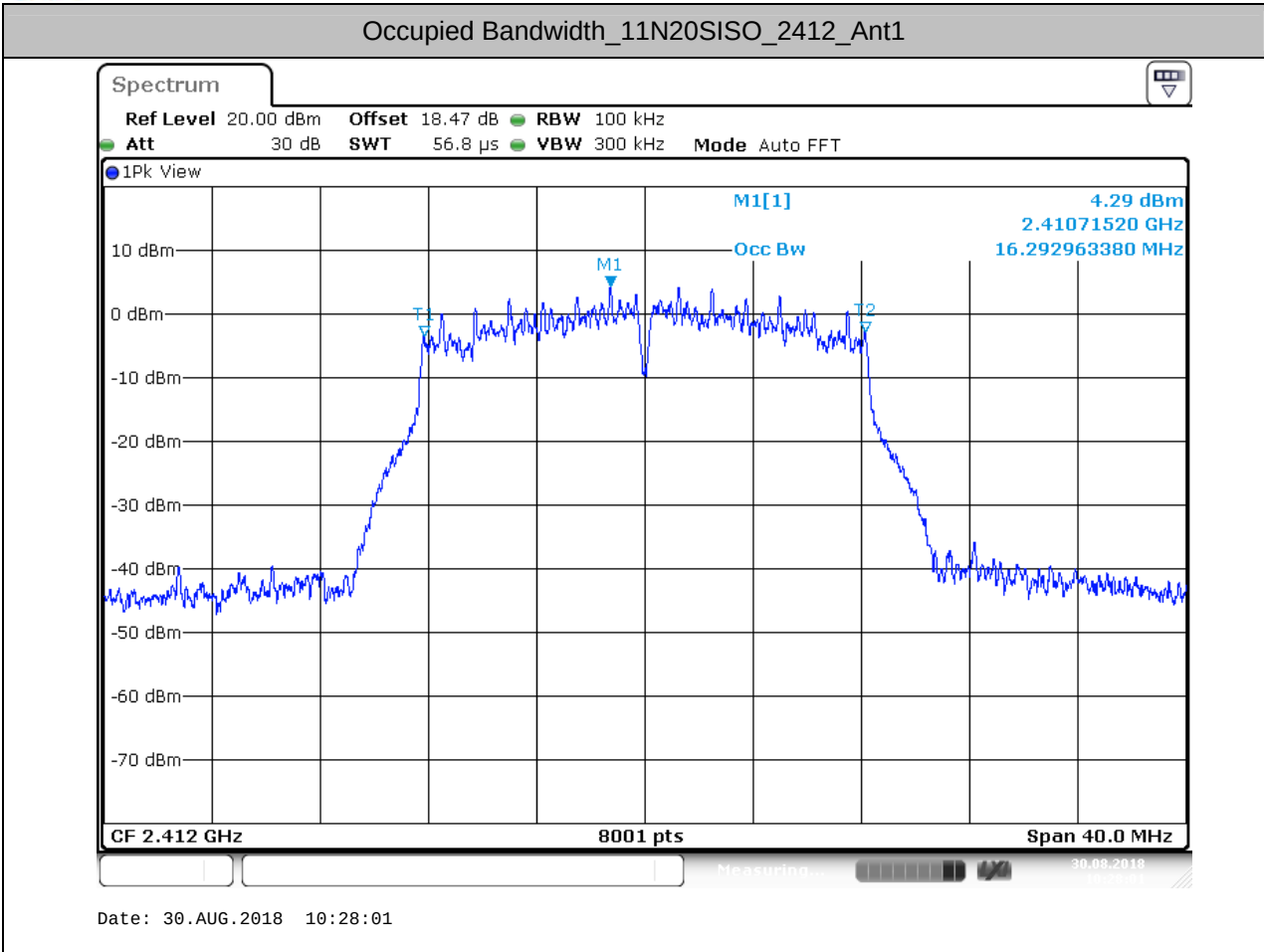
2.Occupied Bandwidth

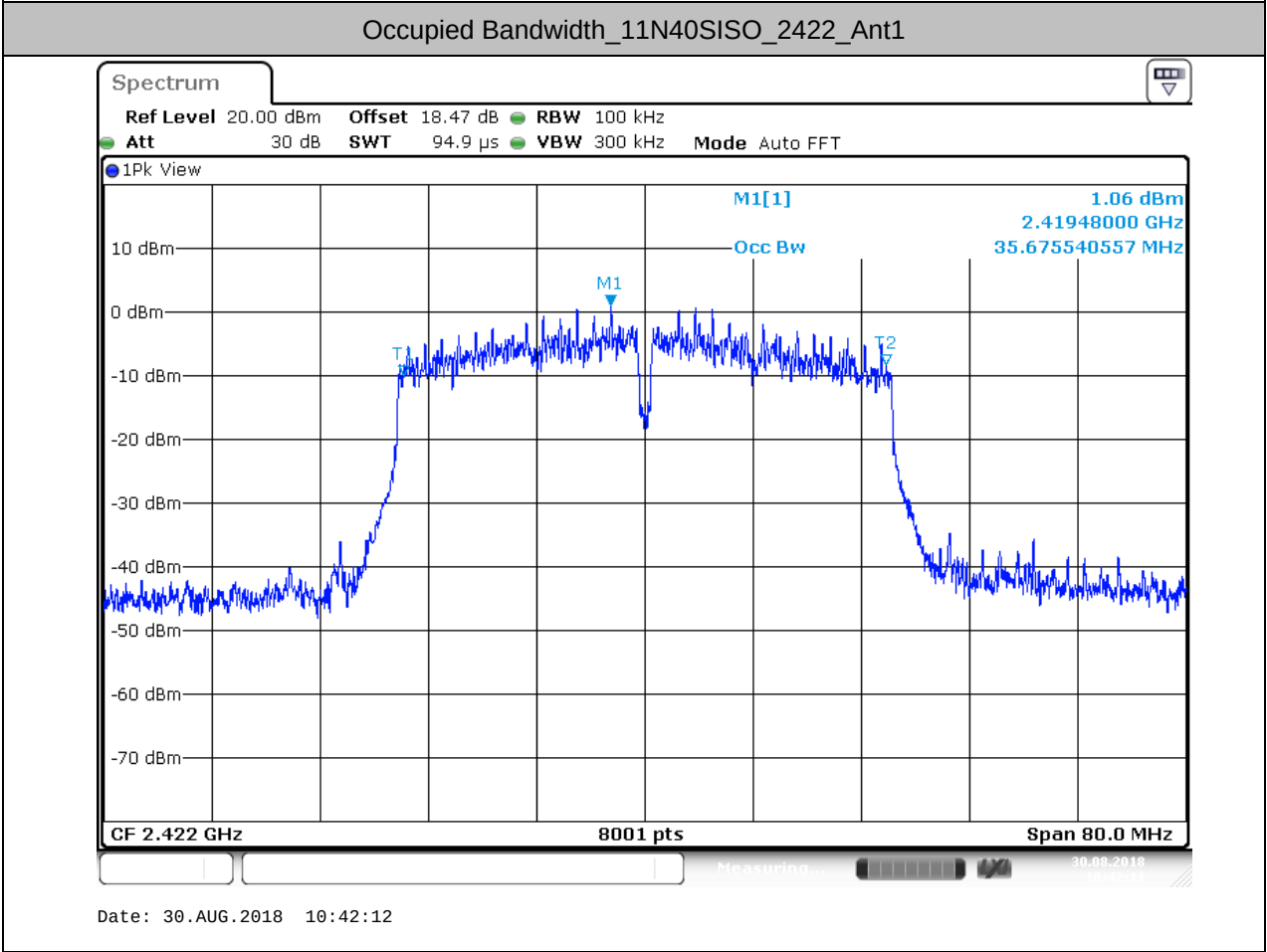
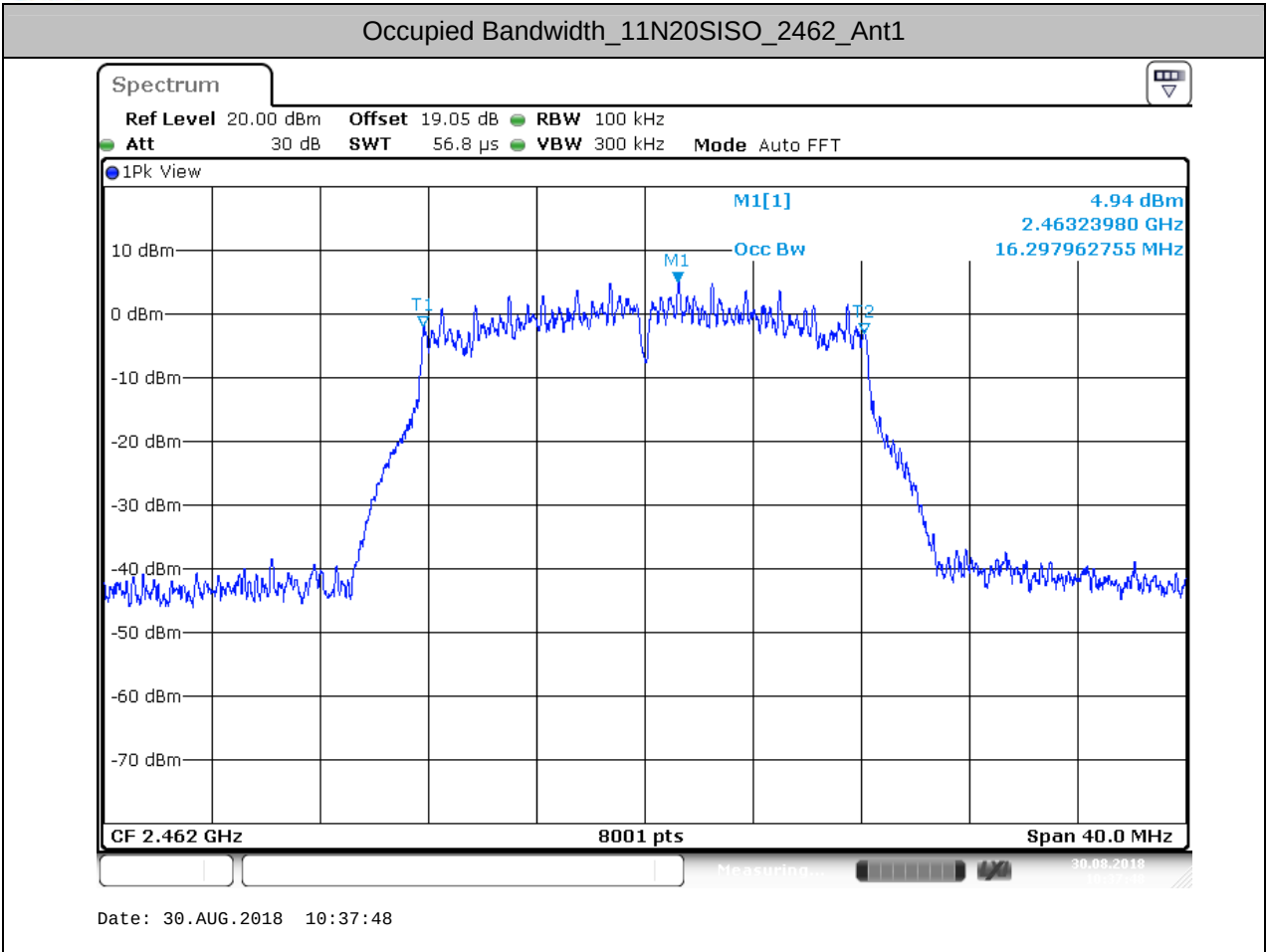
Test Mode	Test Channel	Ant	OBW[MHz]	Limit[MHz]	Verdict
11B	2412	Ant1	14.118	---	PASS
11B	2437	Ant1	14.133	---	PASS
11B	2462	Ant1	14.158	---	PASS
11G	2412	Ant1	16.248	---	PASS
11G	2437	Ant1	16.308	---	PASS
11G	2462	Ant1	16.308	---	PASS
11N20SISO	2412	Ant1	16.293	---	PASS
11N20SISO	2437	Ant1	16.343	---	PASS
11N20SISO	2462	Ant1	16.298	---	PASS
11N40SISO	2422	Ant1	35.676	---	PASS
11N40SISO	2437	Ant1	35.756	---	PASS
11N40SISO	2452	Ant1	35.746	---	PASS
11B	2412	Ant2	13.963	---	PASS
11B	2437	Ant2	14.053	---	PASS
11B	2462	Ant2	14.148	---	PASS
11G	2412	Ant2	16.253	---	PASS
11G	2437	Ant2	16.298	---	PASS
11G	2462	Ant2	16.298	---	PASS
11N20SISO	2412	Ant2	16.308	---	PASS
11N20SISO	2437	Ant2	16.288	---	PASS
11N20SISO	2462	Ant2	16.303	---	PASS
11N40SISO	2422	Ant2	35.626	---	PASS
11N40SISO	2437	Ant2	35.736	---	PASS
11N40SISO	2452	Ant2	35.846	---	PASS
11N20MIMO	2412	Ant1+2	16.268	---	PASS
11N20MIMO	2437	Ant1+2	16.353	---	PASS
11N20MIMO	2462	Ant1+2	16.323	---	PASS
11N40MIMO	2422	Ant1+2	35.696	---	PASS
11N40MIMO	2437	Ant1+2	35.826	---	PASS
11N40MIMO	2452	Ant1+2	35.816	---	PASS

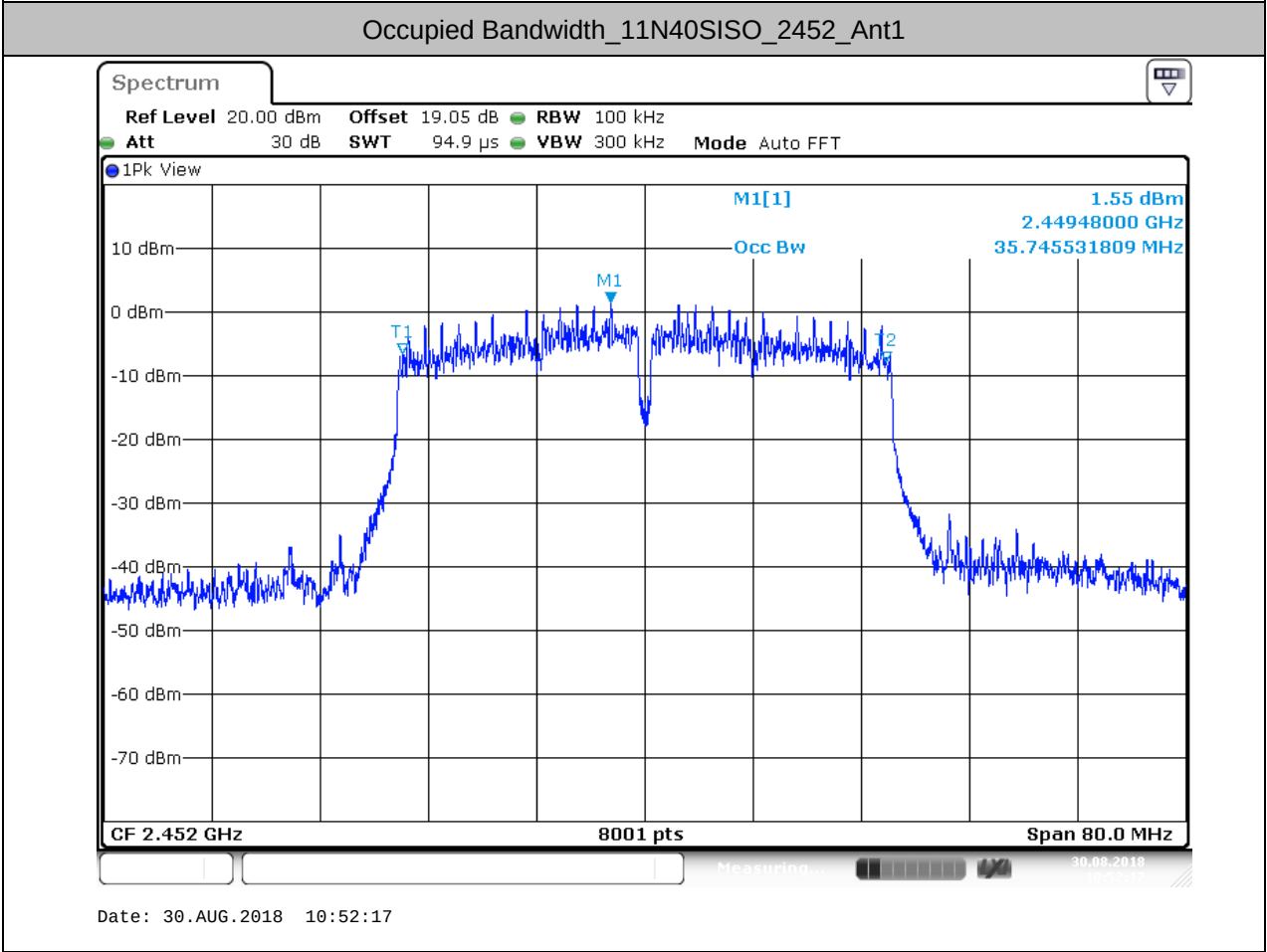
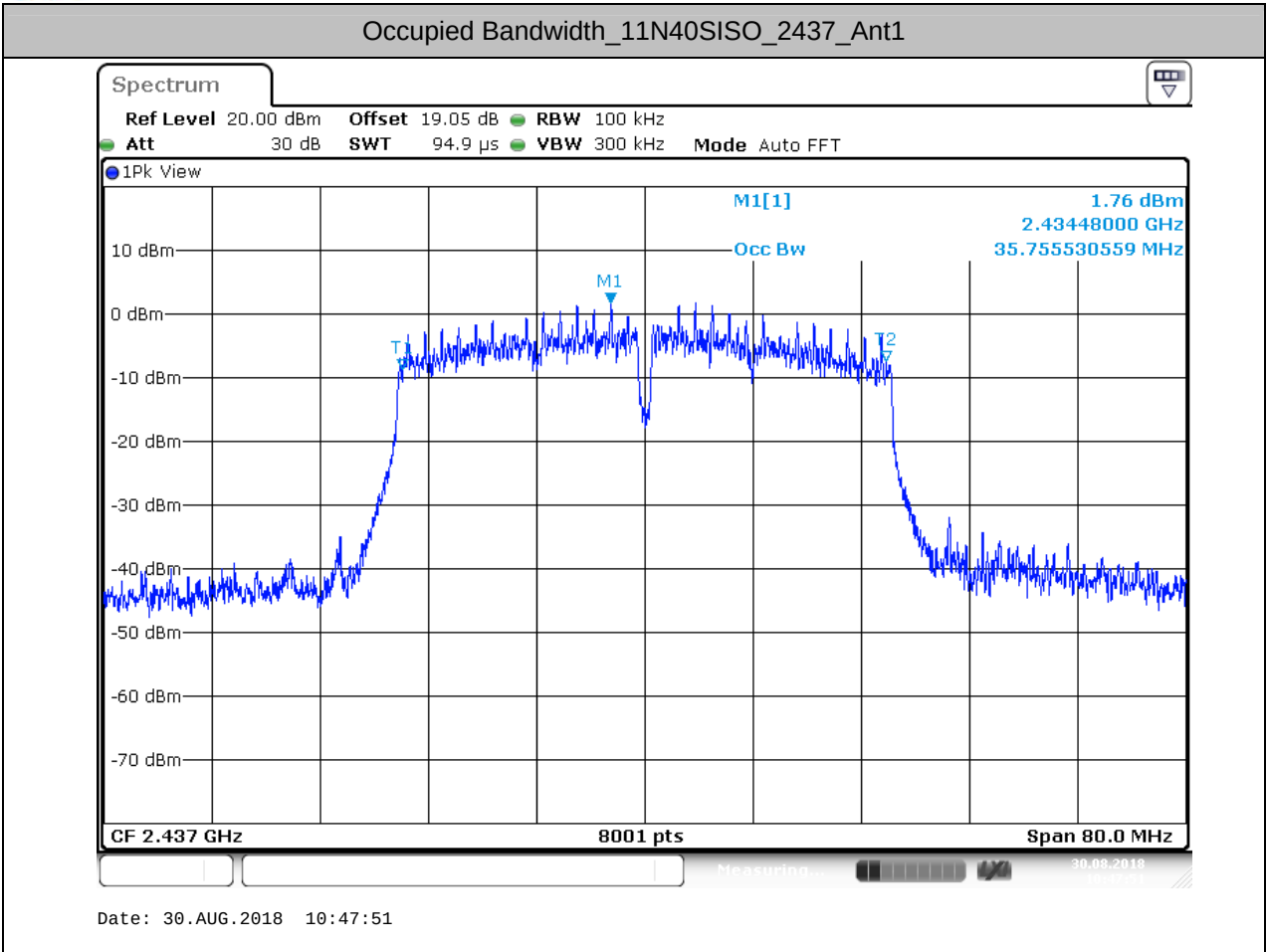


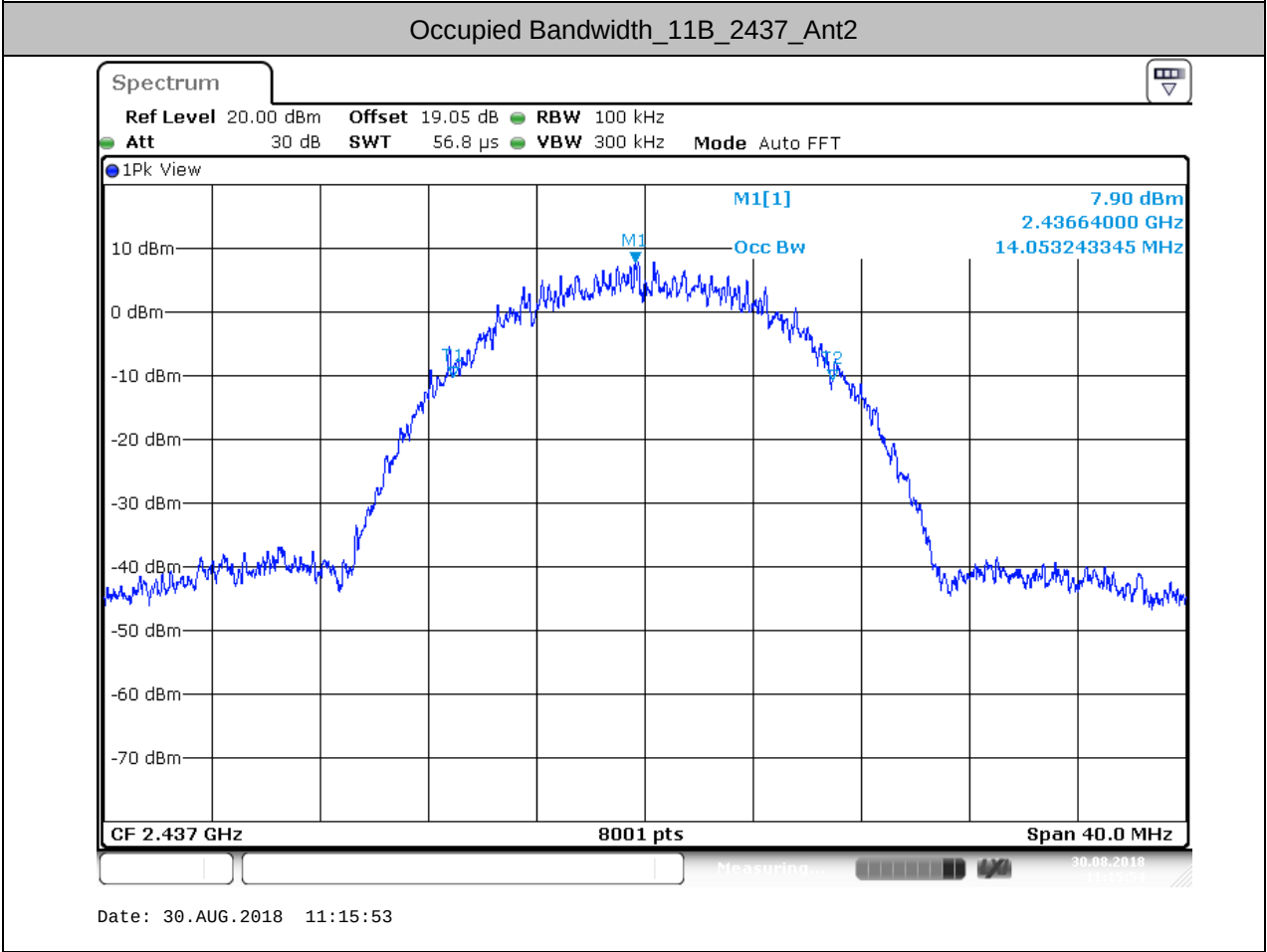
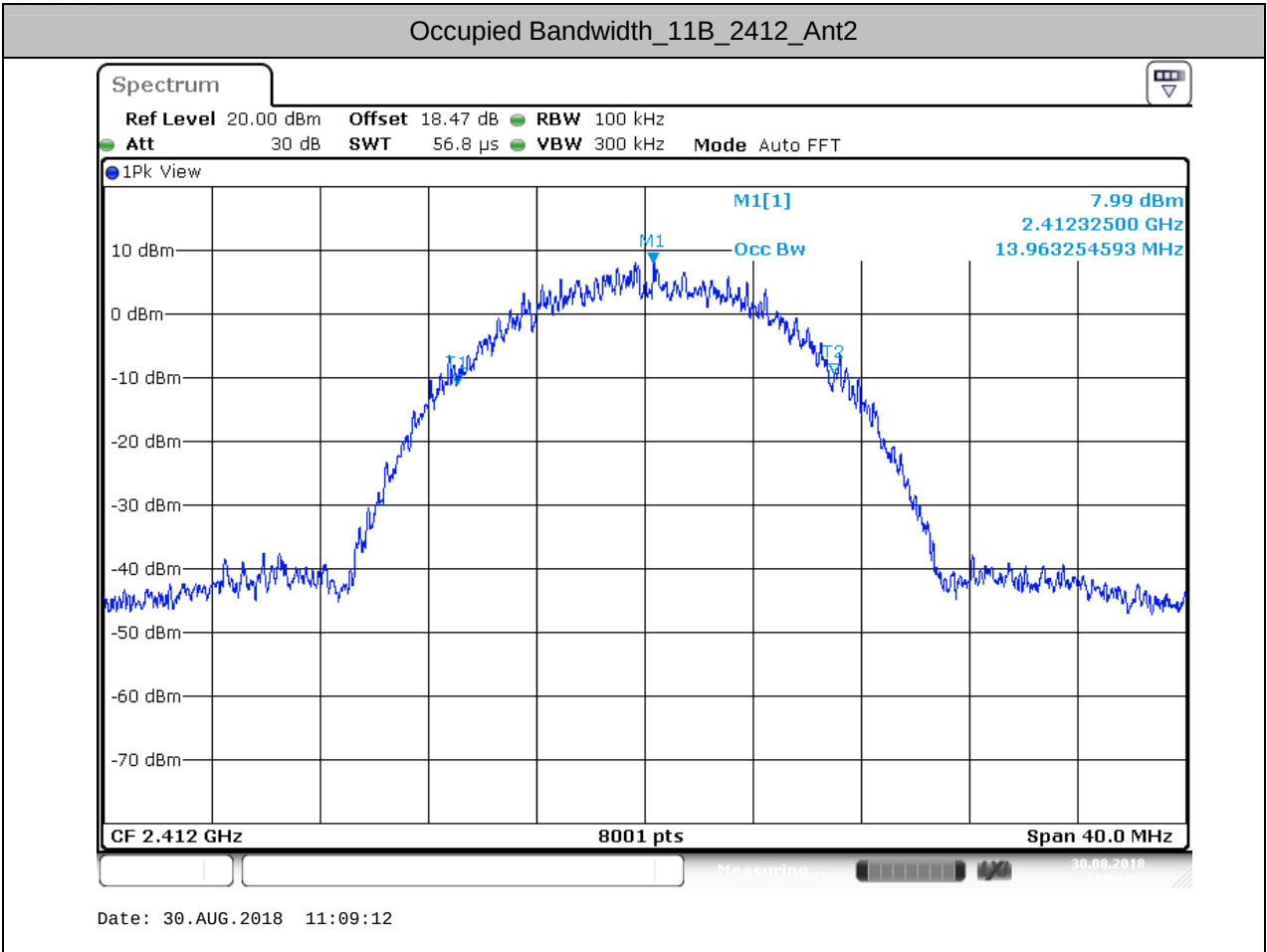


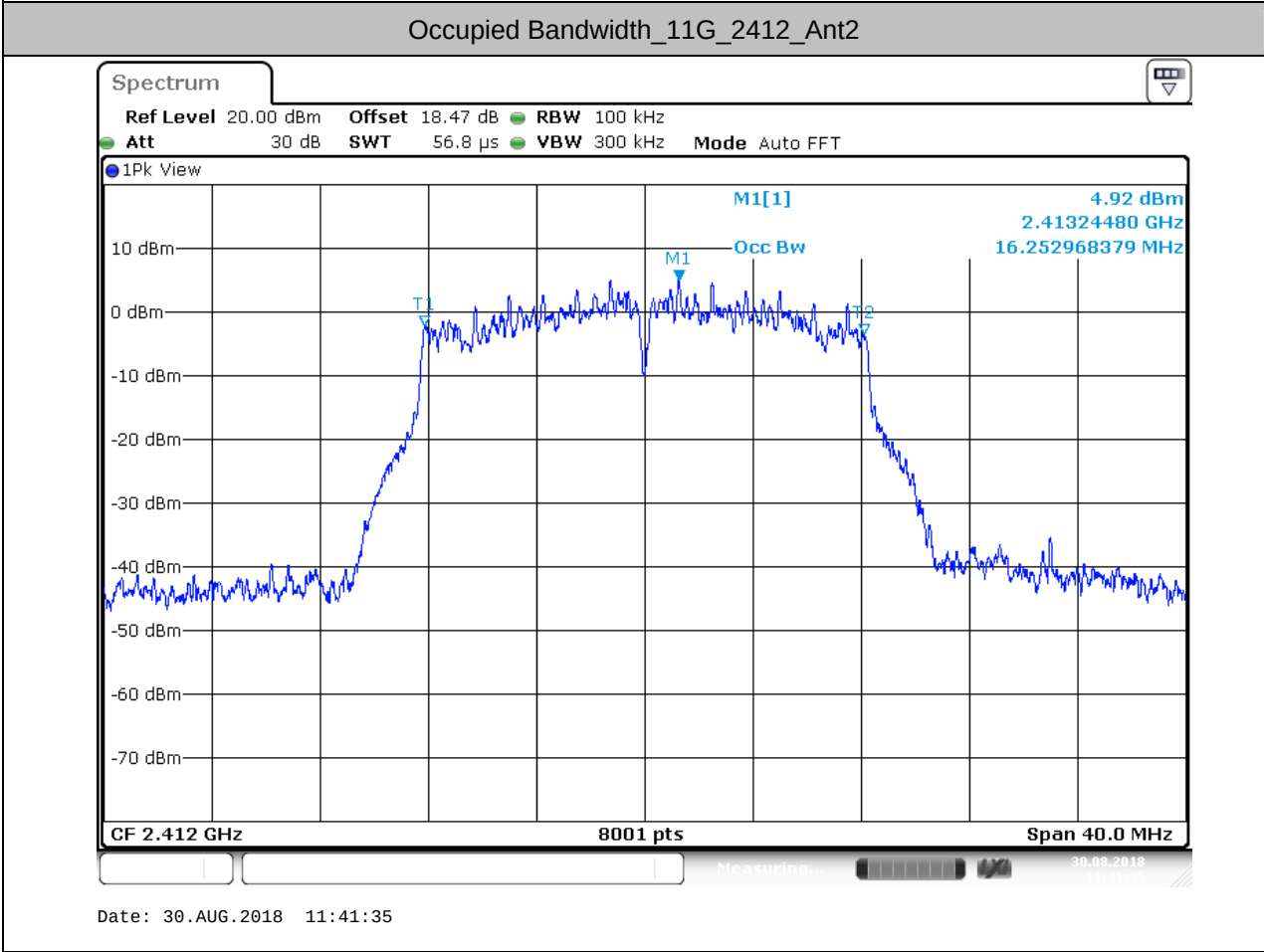
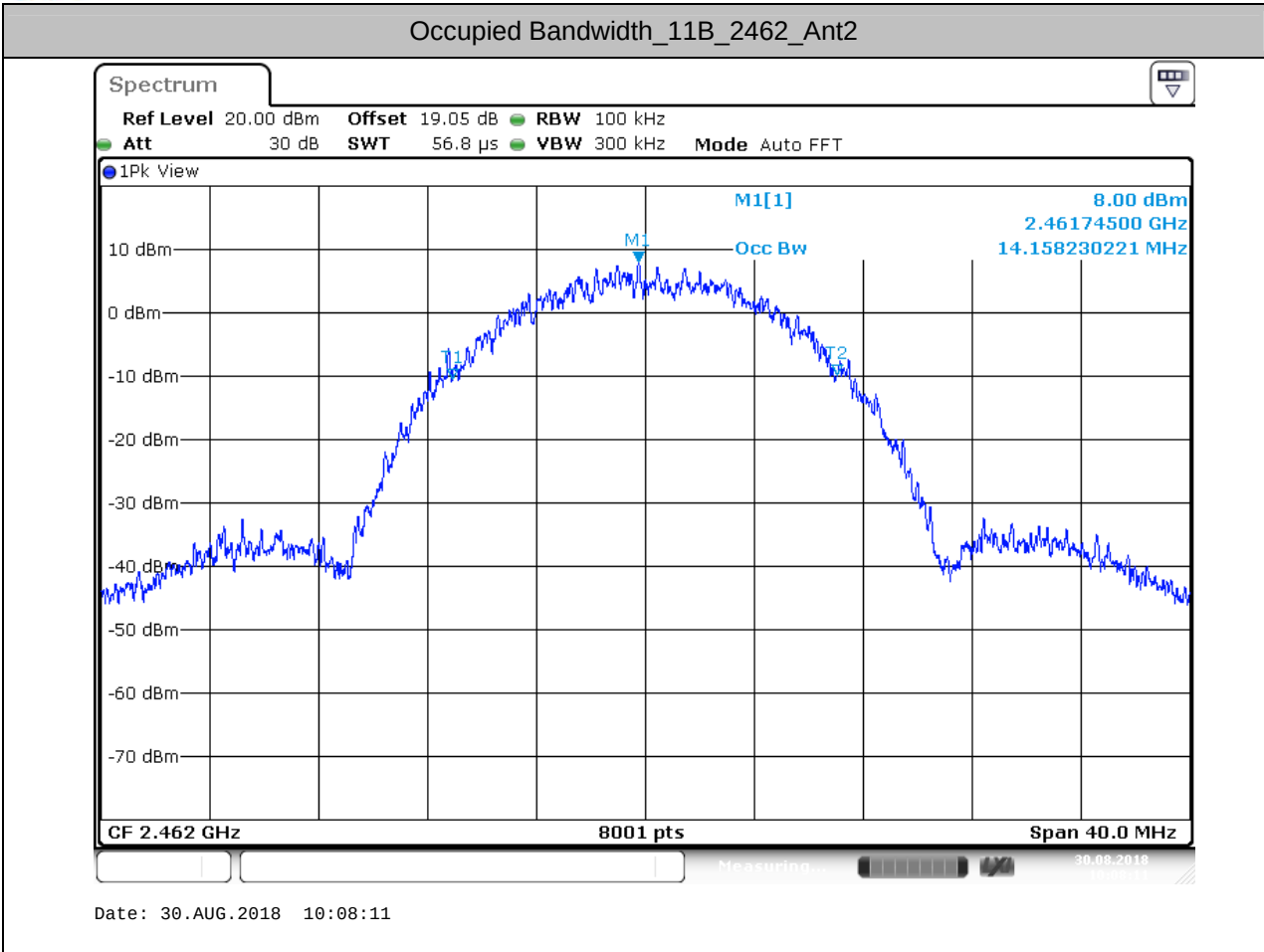


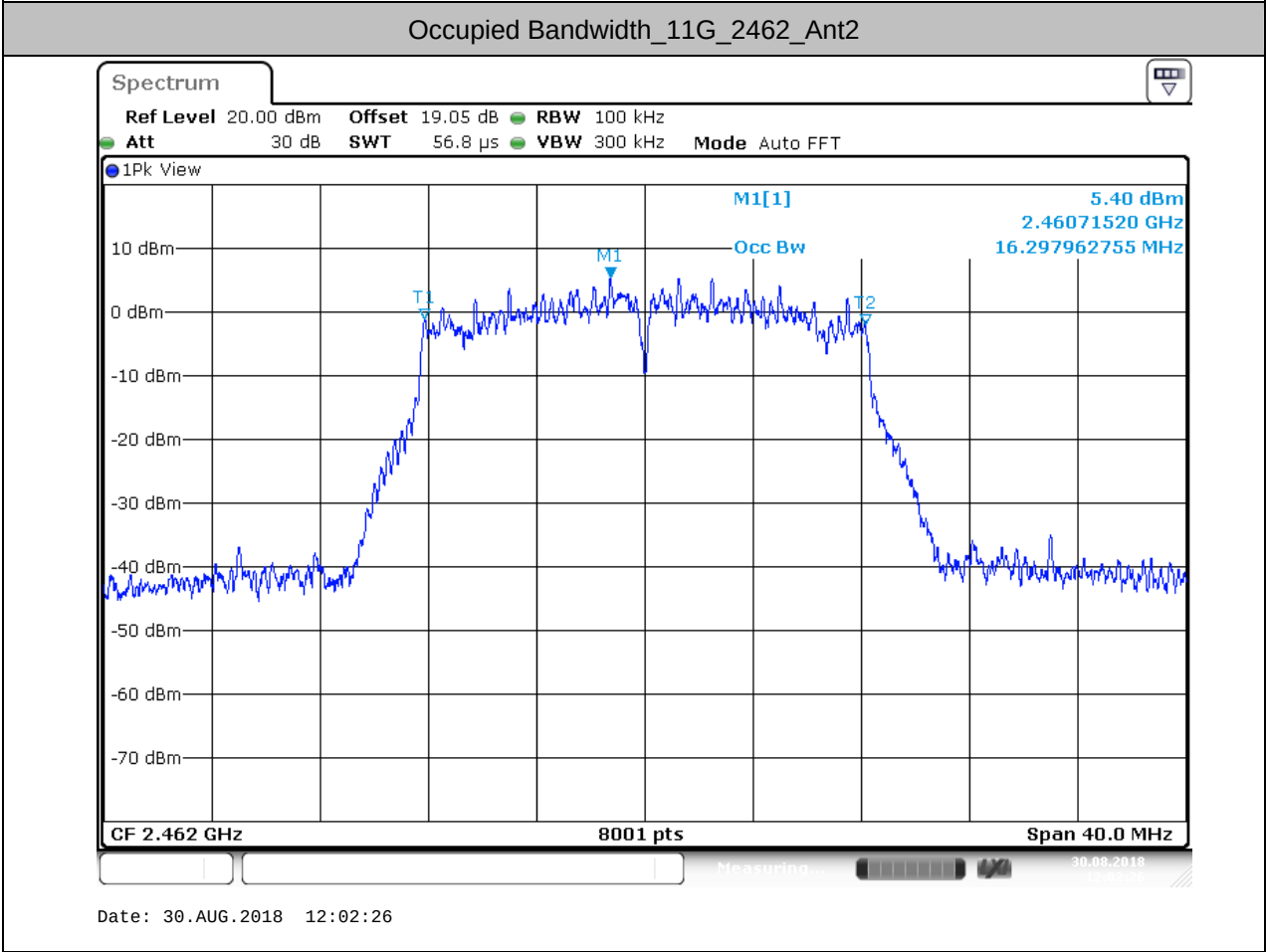
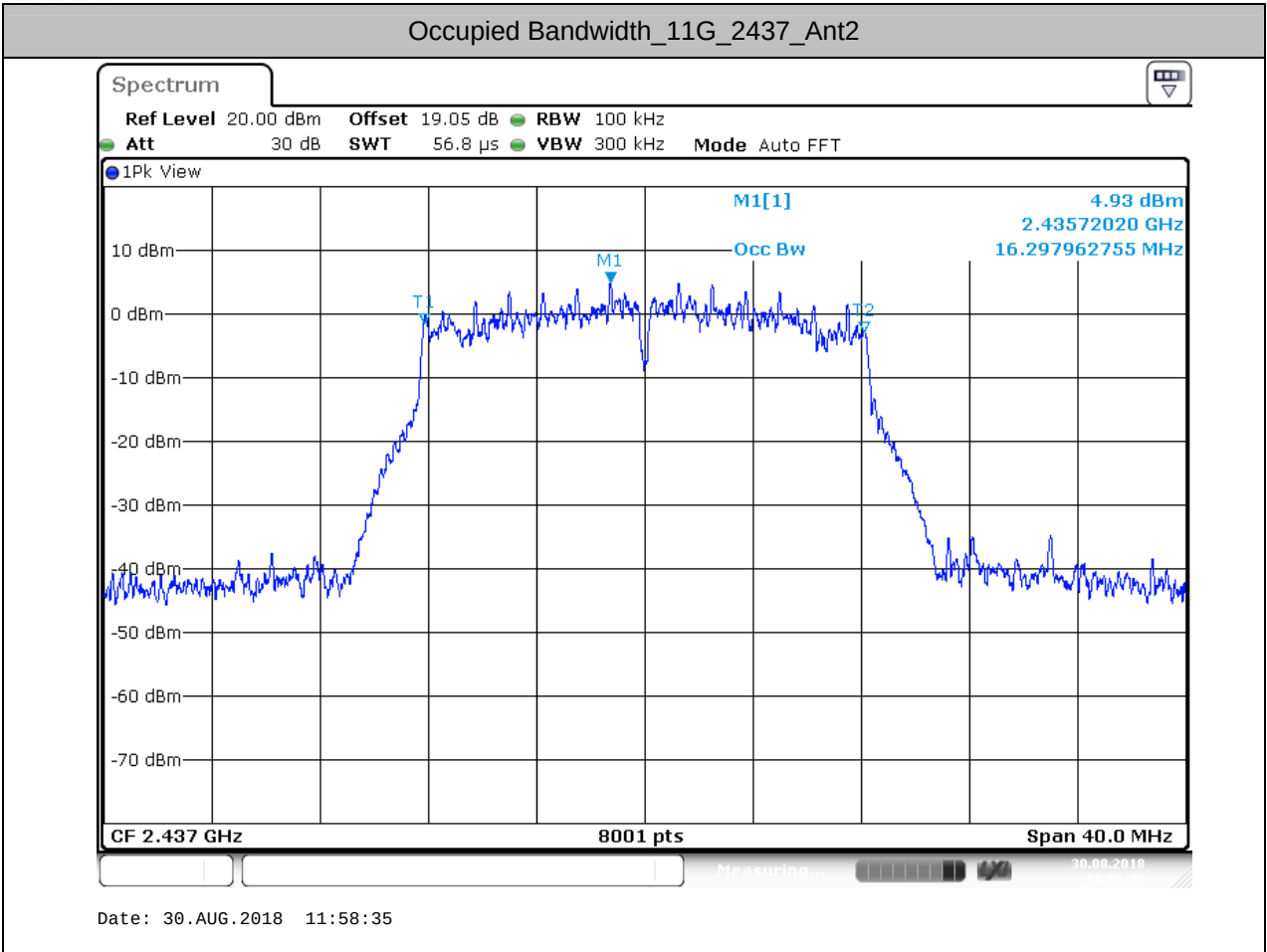


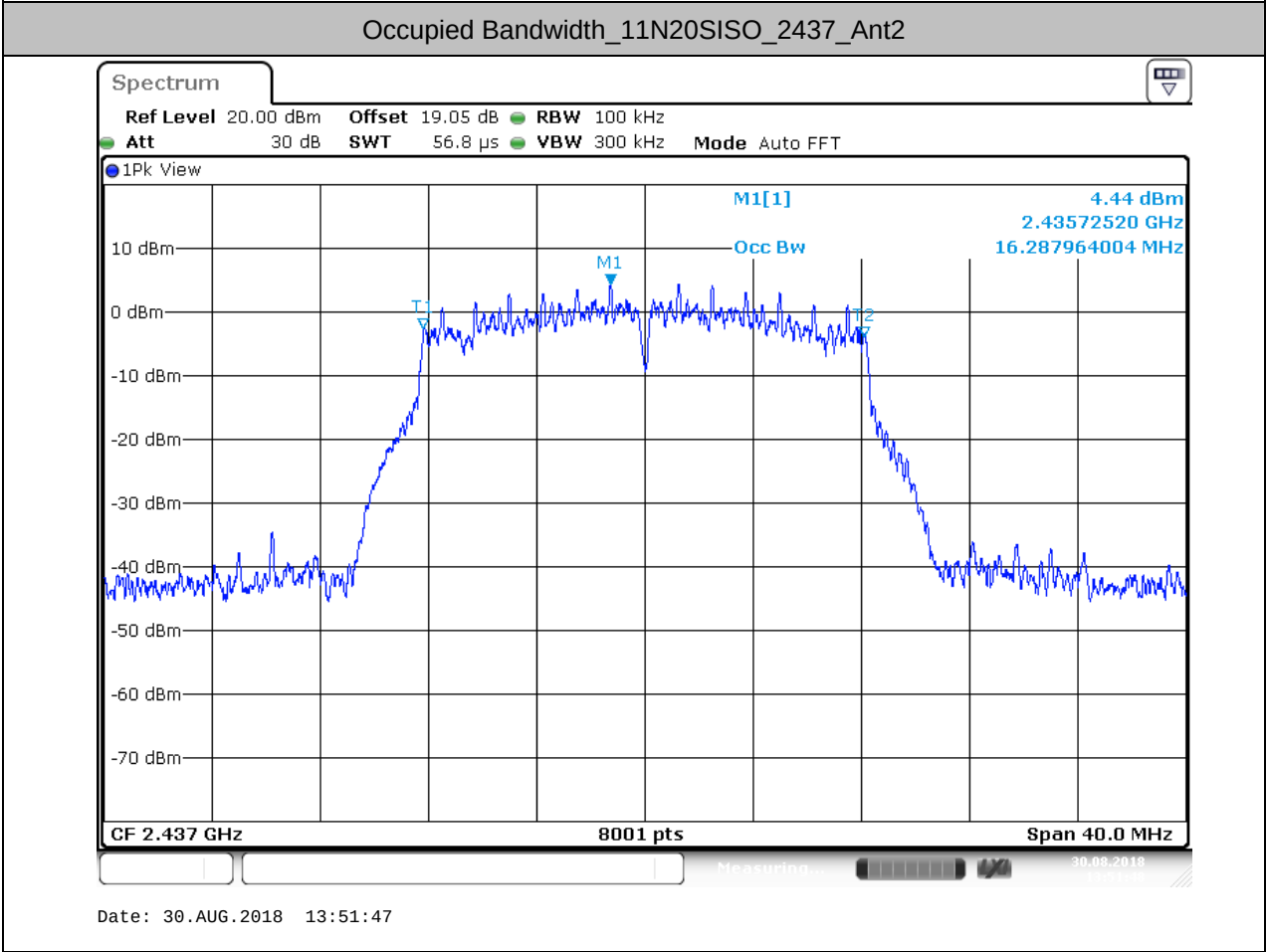
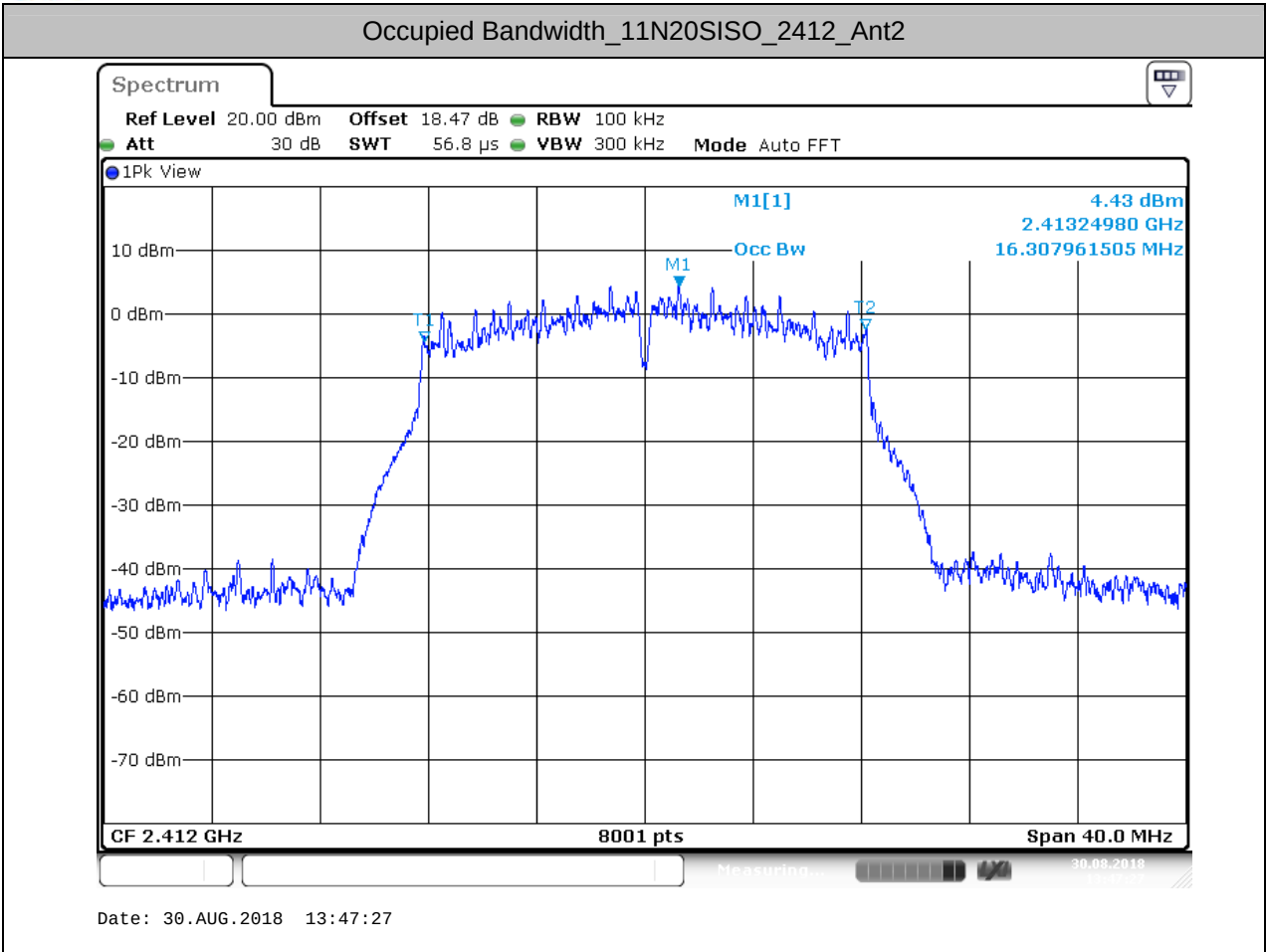


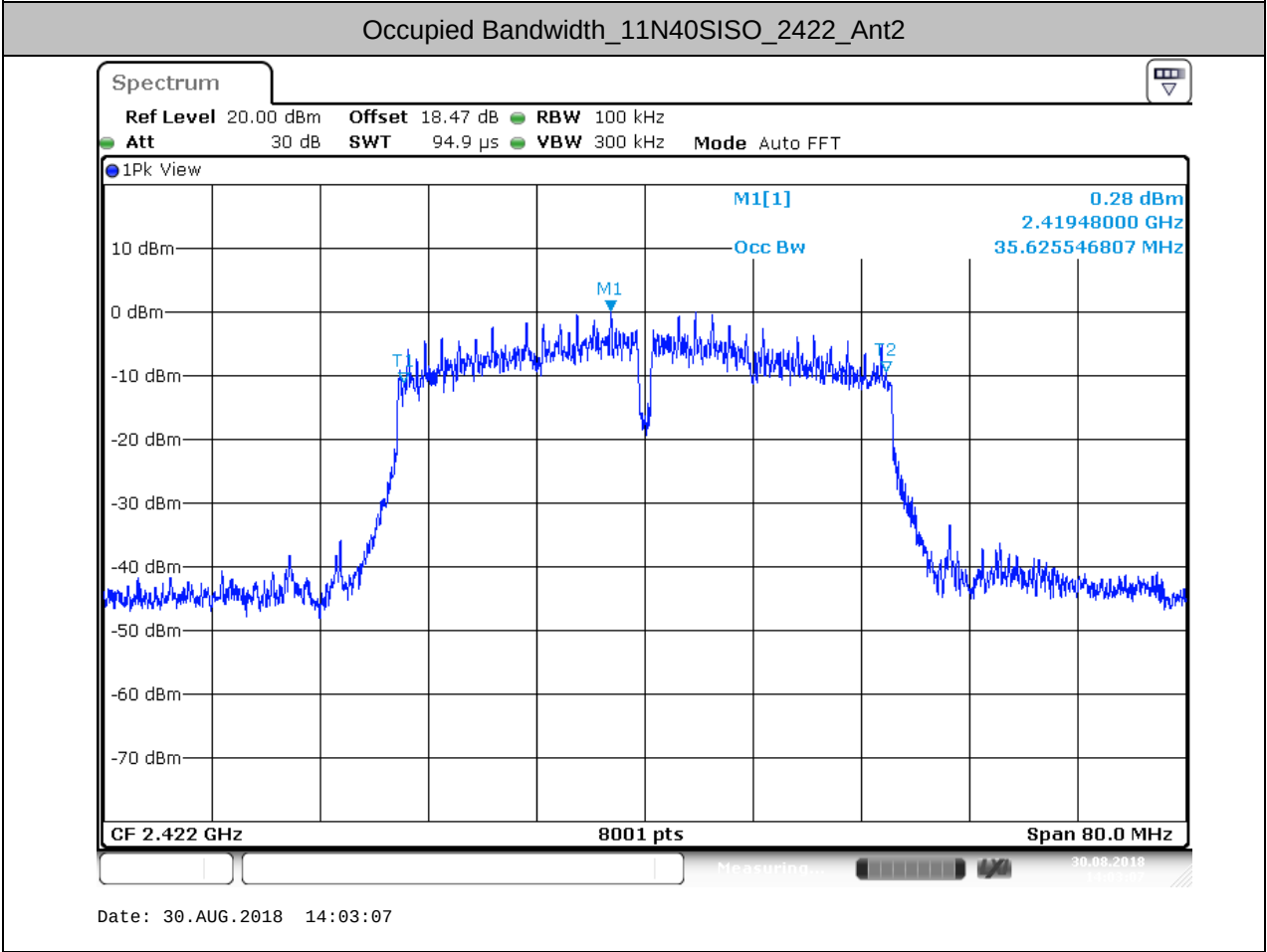
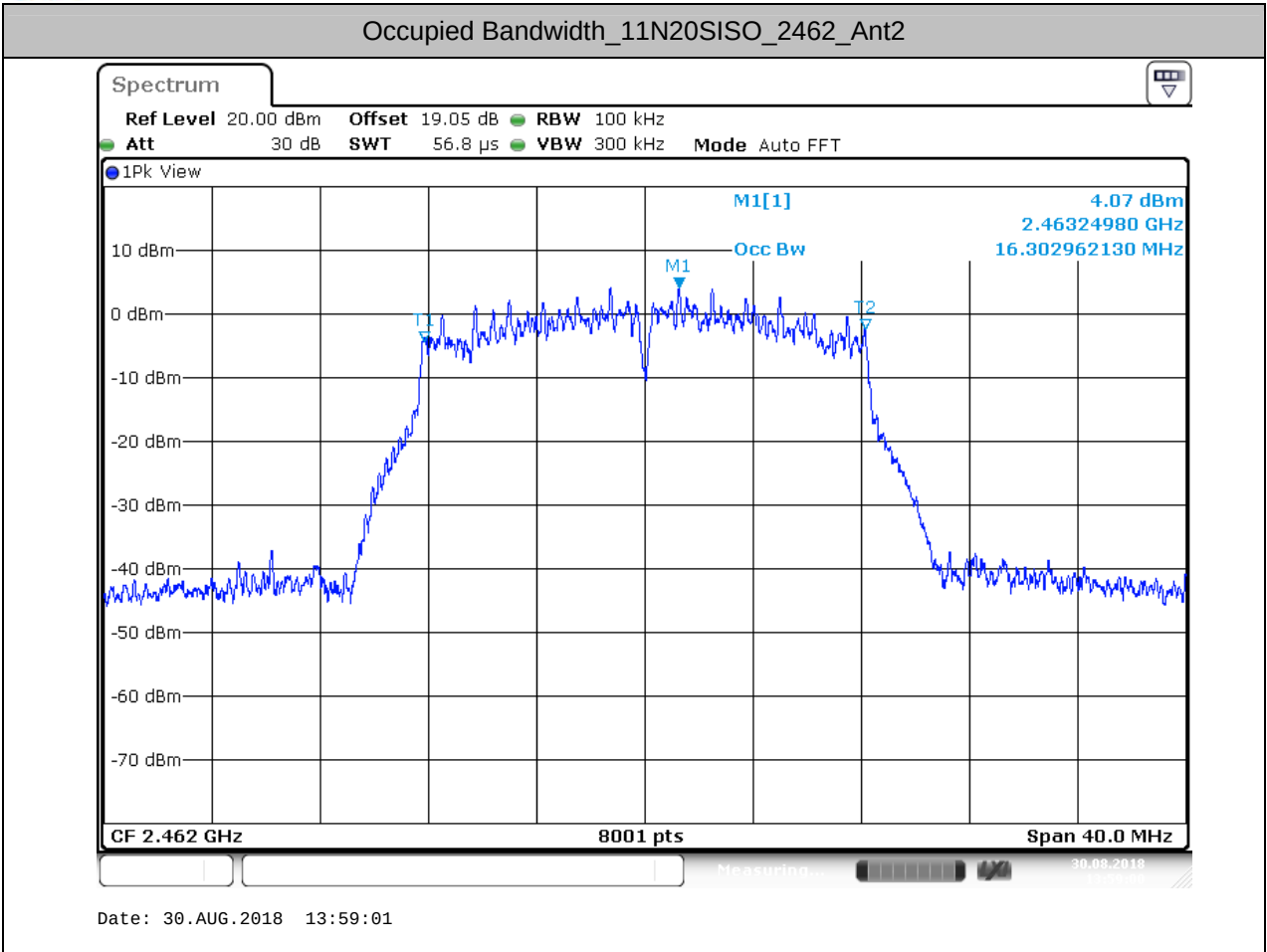


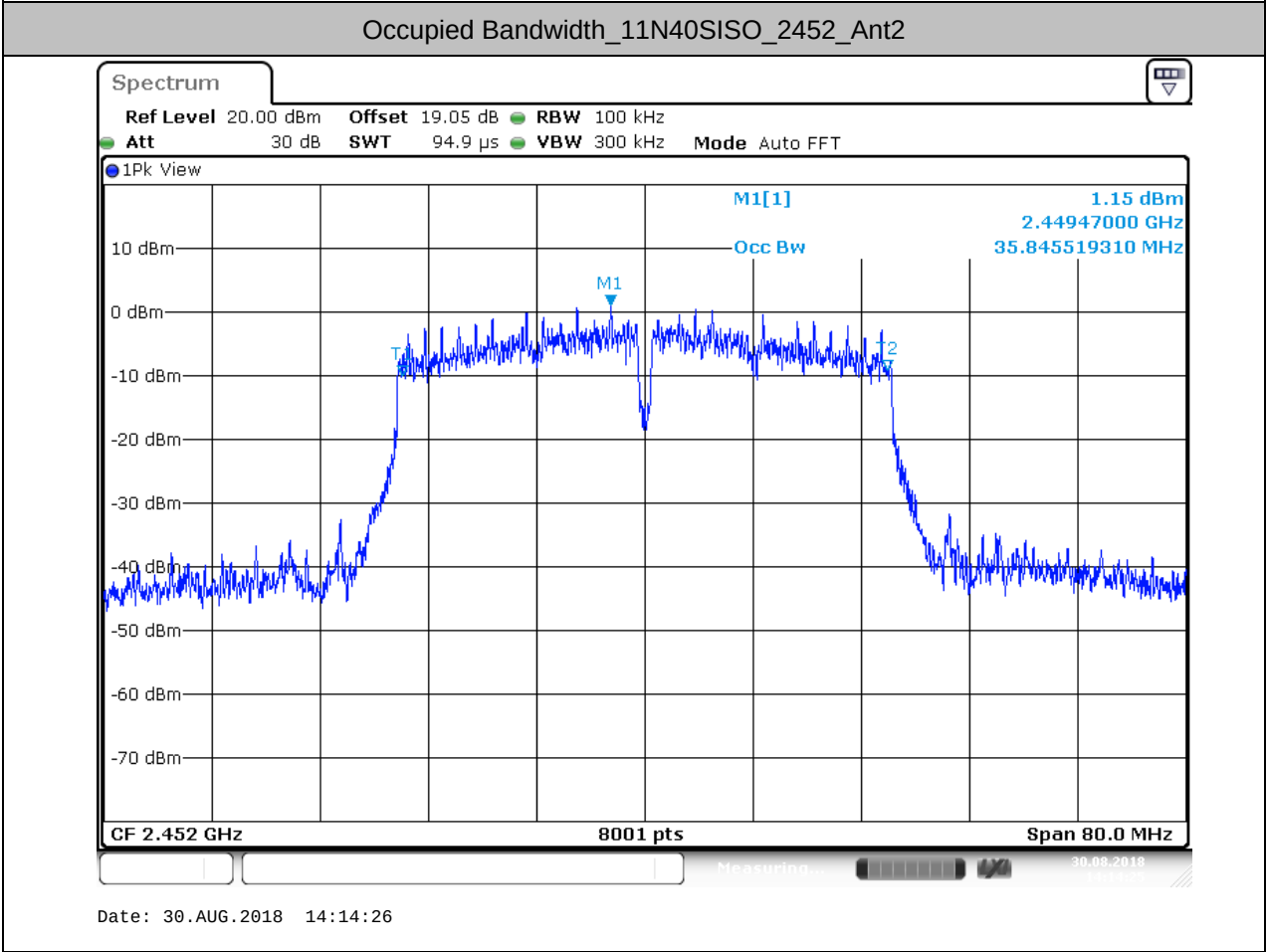
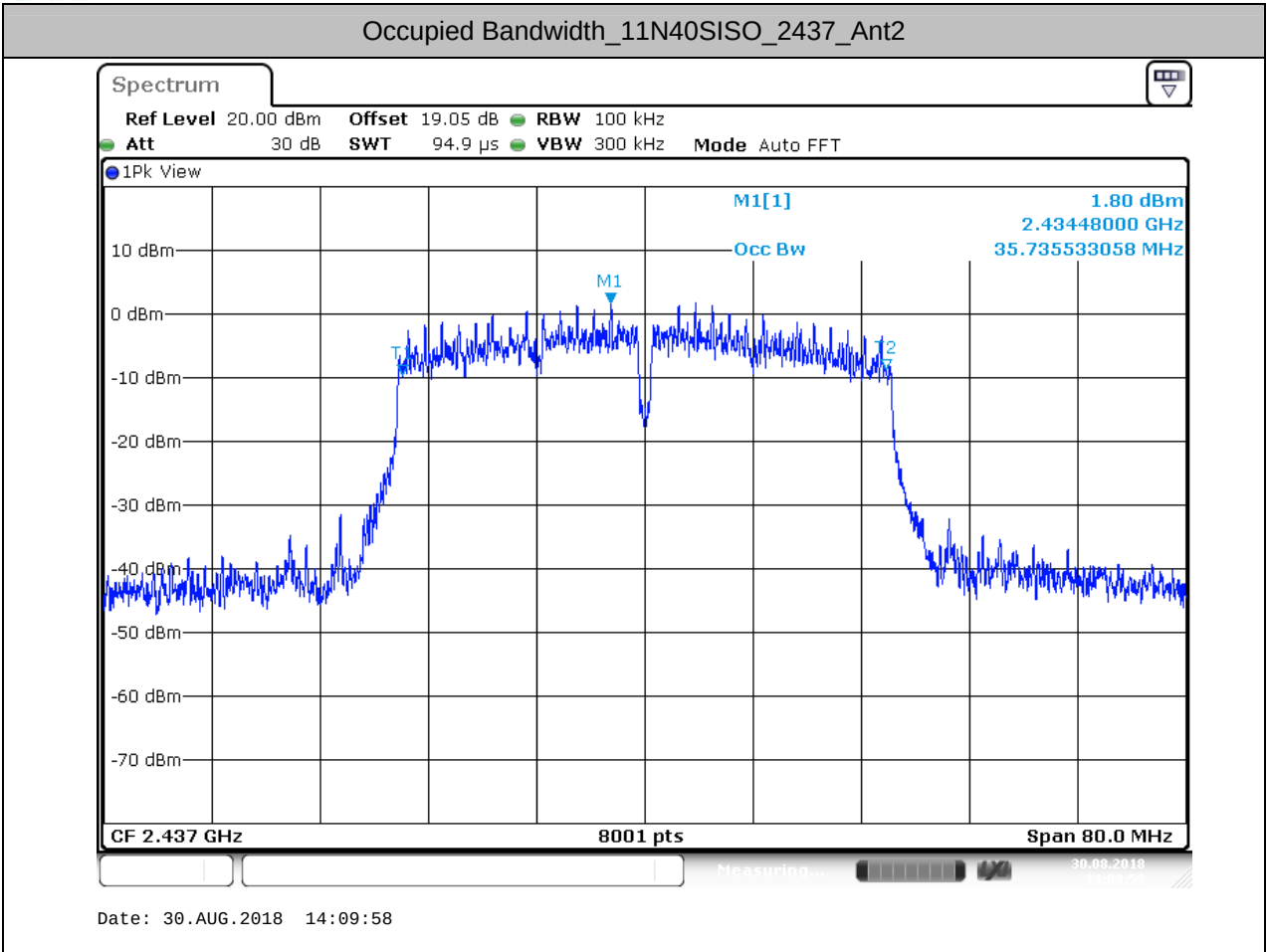


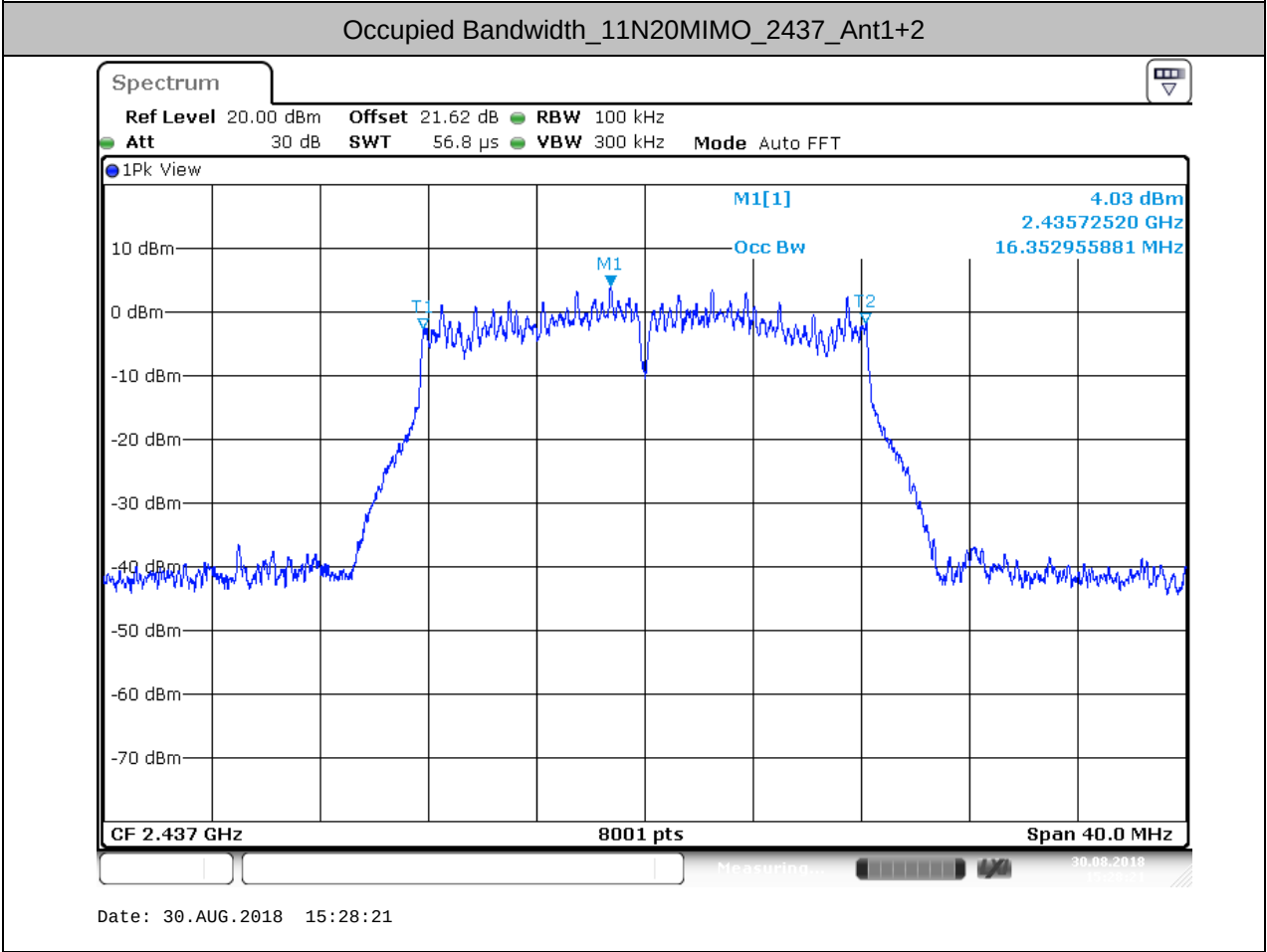
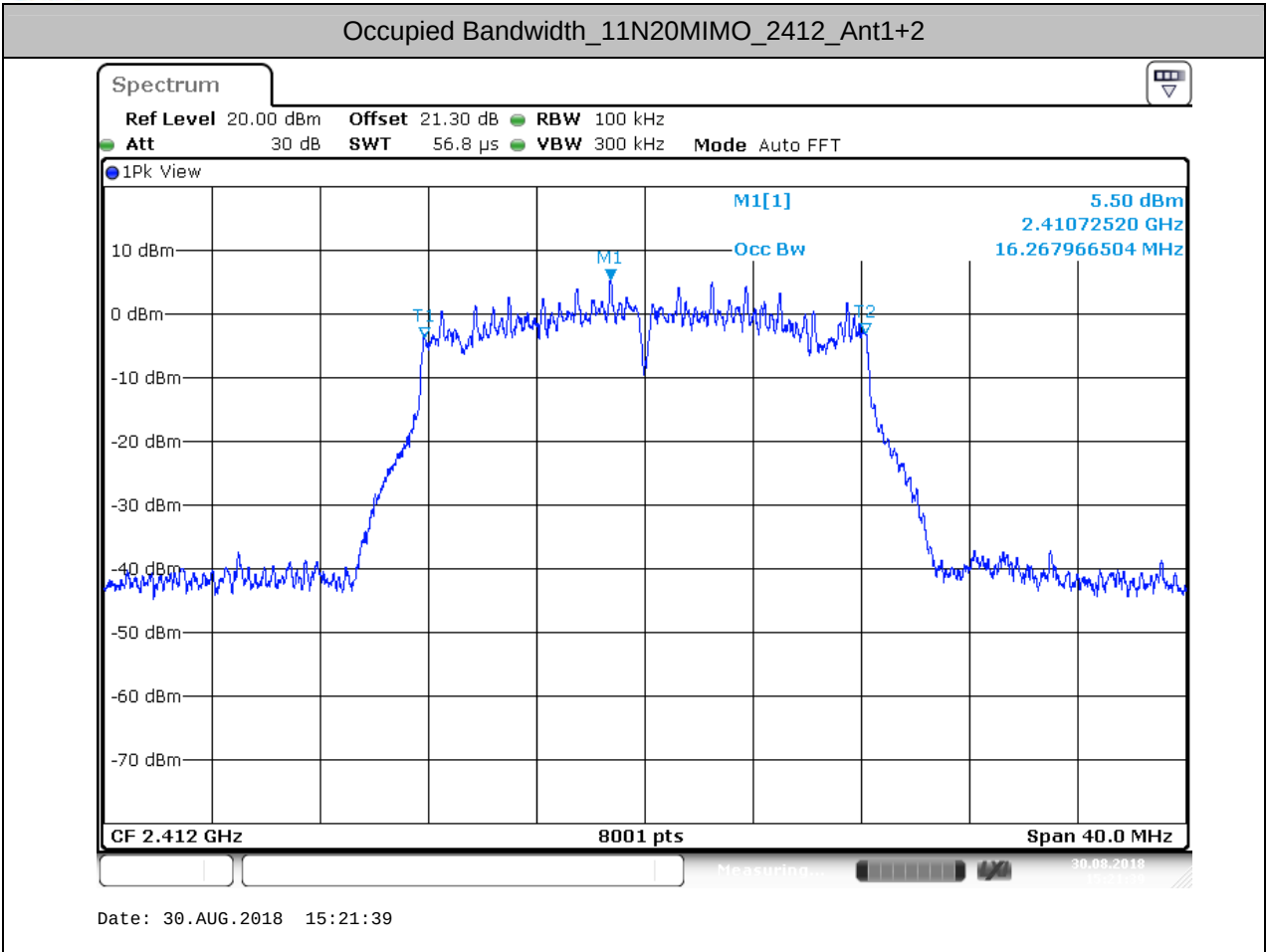


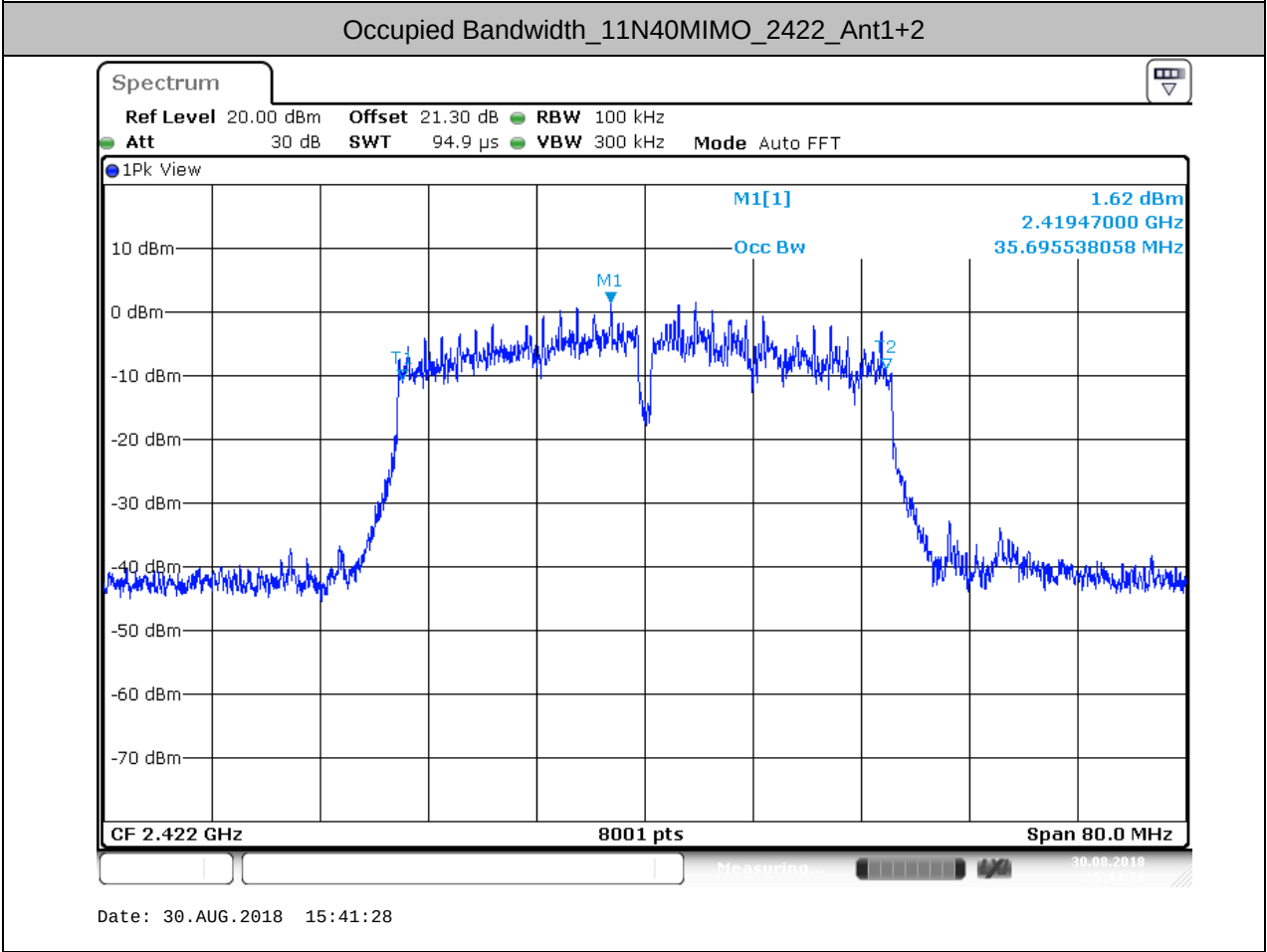
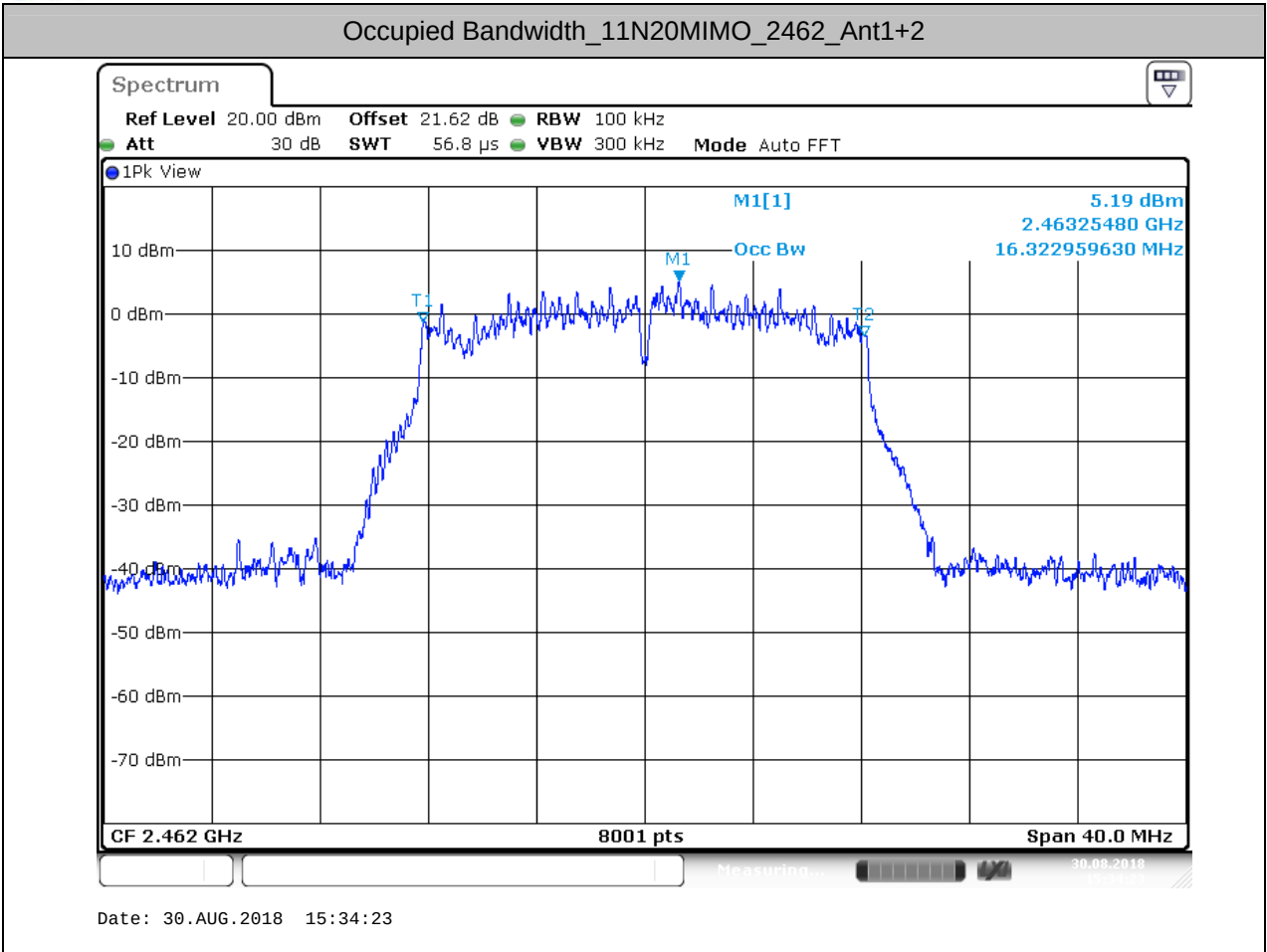


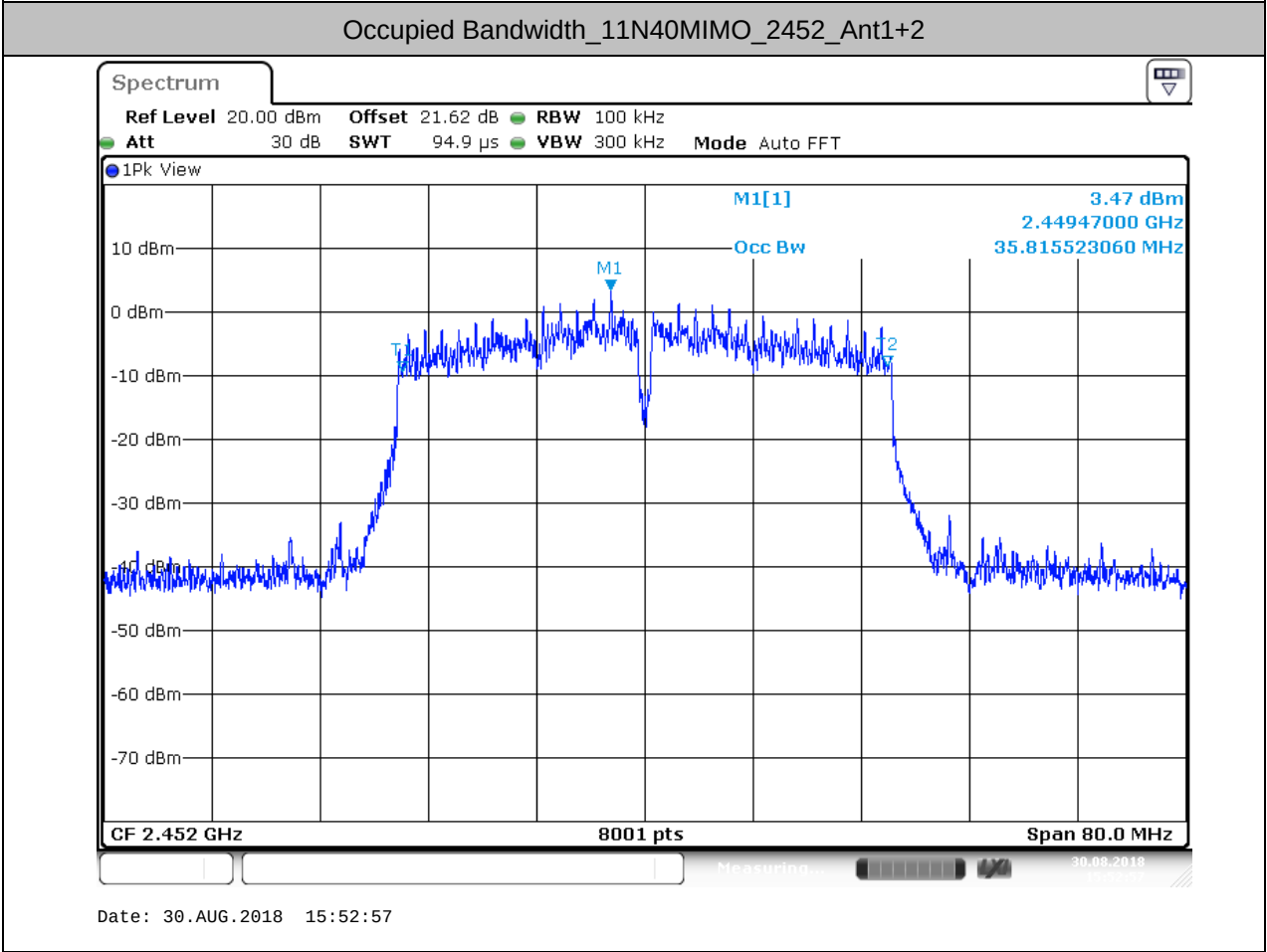
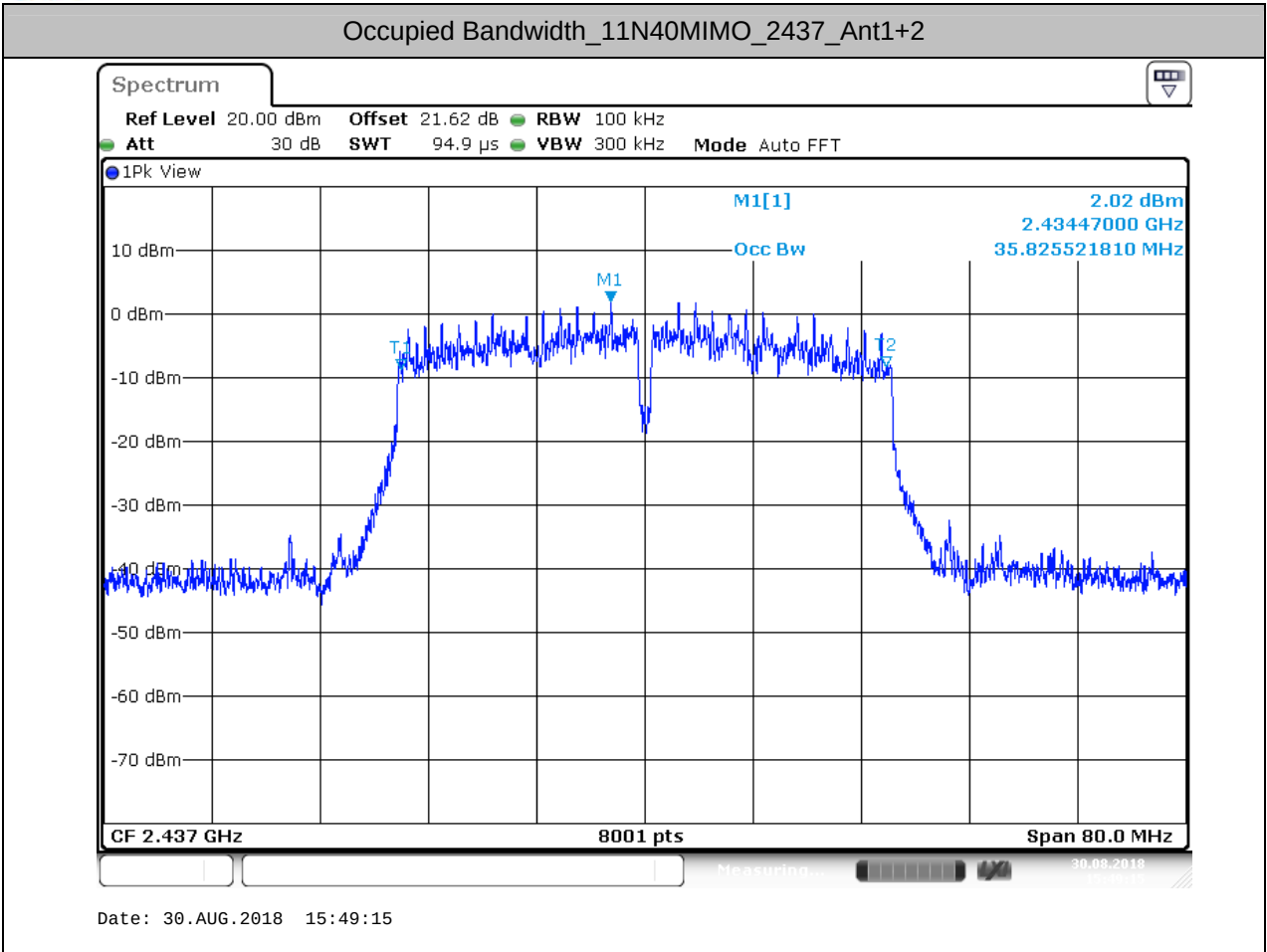














3.Maximum conducted (average) output power

Test Mode	Test Channel	Ant	Power [dBm]	Limit [dBm]	Verdict
11B	2412	Ant1	17.57	30	PASS
11B	2437	Ant1	17.75	30	PASS
11B	2462	Ant1	17.84	30	PASS
11G	2412	Ant1	16.99	30	PASS
11G	2437	Ant1	16.90	30	PASS
11G	2462	Ant1	16.96	30	PASS
11N20SISO	2412	Ant1	16.96	30	PASS
11N20SISO	2437	Ant1	17.71	30	PASS
11N20SISO	2462	Ant1	17.29	30	PASS
11N40SISO	2422	Ant1	15.58	30	PASS
11N40SISO	2437	Ant1	16.23	30	PASS
11N40SISO	2452	Ant1	15.07	30	PASS
11B	2412	Ant2	17.23	30	PASS
11B	2437	Ant2	17.12	30	PASS
11B	2462	Ant2	18.14	30	PASS
11G	2412	Ant2	17.91	30	PASS
11G	2437	Ant2	17.16	30	PASS
11G	2462	Ant2	17.59	30	PASS
11N20SISO	2412	Ant2	17.94	30	PASS
11N20SISO	2437	Ant2	16.47	30	PASS
11N20SISO	2462	Ant2	17.30	30	PASS
11N40SISO	2422	Ant2	17.46	30	PASS
11N40SISO	2437	Ant2	16.51	30	PASS
11N40SISO	2452	Ant2	17.00	30	PASS
11N20MIMO	2412	Ant1+2	17.17	30	PASS
11N20MIMO	2437	Ant1+2	16.15	30	PASS
11N20MIMO	2462	Ant1+2	16.93	30	PASS
11N40MIMO	2422	Ant1+2	16.51	30	PASS
11N40MIMO	2437	Ant1+2	15.39	30	PASS
11N40MIMO	2452	Ant1+2	17.36	30	PASS

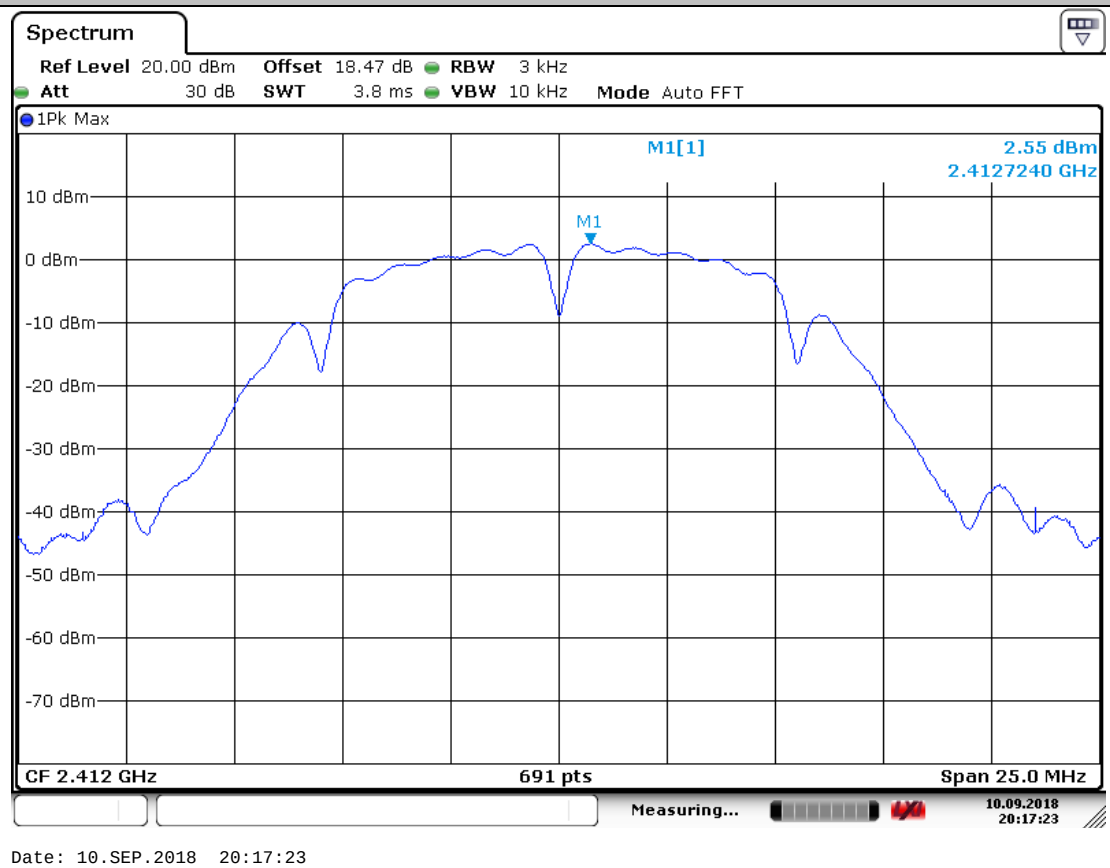


4.Maximum(average) power spectral density

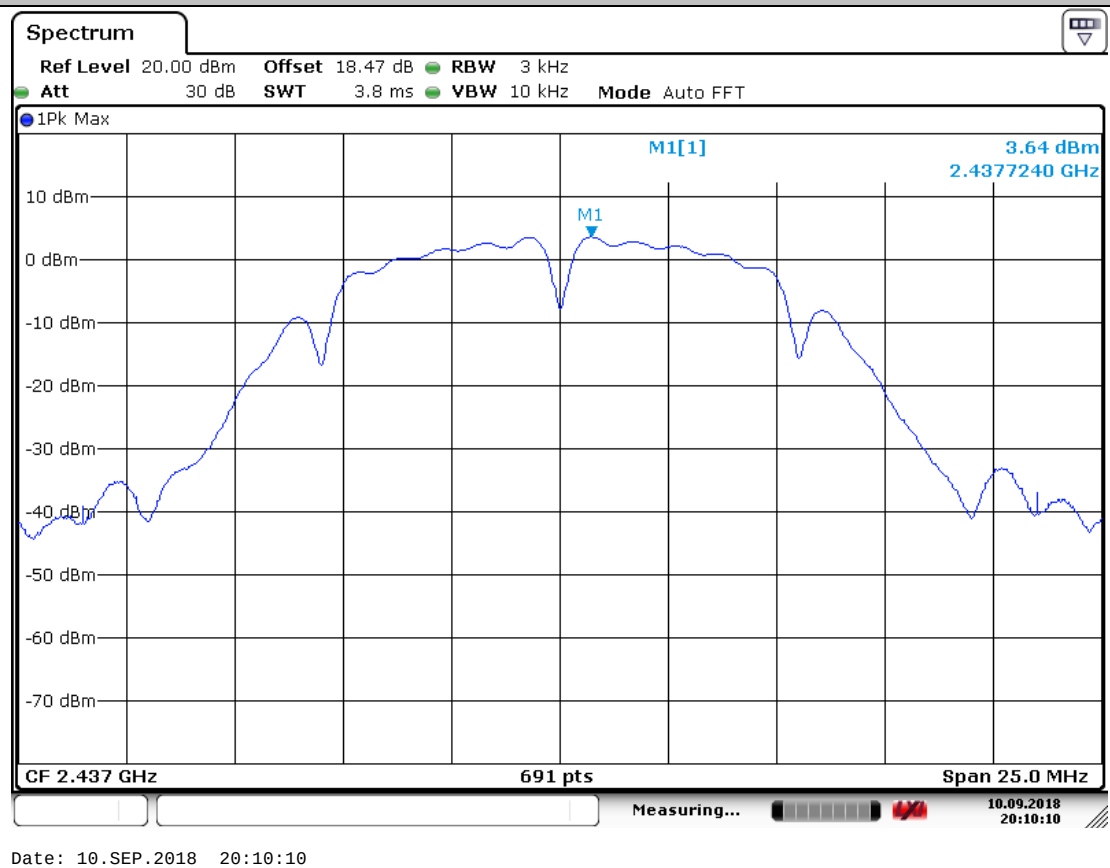
Test Mode	Test Channel	Ant	PSD [dBm/MHz]	Limit [dBm/MHz]	Verdict
11B	2412	Ant1	2.55	8.00	PASS
11B	2437	Ant1	3.64	8.00	PASS
11B	2462	Ant1	3.26	8.00	PASS
11G	2412	Ant1	-1.48	8.00	PASS
11G	2437	Ant1	3.47	8.00	PASS
11G	2462	Ant1	3.67	8.00	PASS
11N20SISO	2412	Ant1	1.44	8.00	PASS
11N20SISO	2437	Ant1	2.36	8.00	PASS
11N20SISO	2462	Ant1	1.80	8.00	PASS
11N40SISO	2422	Ant1	-0.32	8.00	PASS
11N40SISO	2437	Ant1	-0.07	8.00	PASS
11N40SISO	2452	Ant1	1.00	8.00	PASS
11B	2412	Ant2	2.76	8.00	PASS
11B	2437	Ant2	3.35	8.00	PASS
11B	2462	Ant2	3.33	8.00	PASS
11G	2412	Ant2	-1.64	8.00	PASS
11G	2437	Ant2	3.08	8.00	PASS
11G	2462	Ant2	3.42	8.00	PASS
11N20SISO	2412	Ant2	0.90	8.00	PASS
11N20SISO	2437	Ant2	2.13	8.00	PASS
11N20SISO	2462	Ant2	1.97	8.00	PASS
11N40SISO	2422	Ant2	-0.31	8.00	PASS
11N40SISO	2437	Ant2	-0.41	8.00	PASS
11N40SISO	2452	Ant2	0.61	8.00	PASS
11N20MIMO	2412	Ant1+2	1.36	8.00	PASS
11N20MIMO	2437	Ant1+2	2.80	8.00	PASS
11N20MIMO	2462	Ant1+2	1.87	8.00	PASS
11N40MIMO	2422	Ant1+2	-0.35	8.00	PASS
11N40MIMO	2437	Ant1+2	-0.25	8.00	PASS
11N40MIMO	2452	Ant1+2	0.67	8.00	PASS



Maximum(average) power spectral density_11B_2412_Ant1

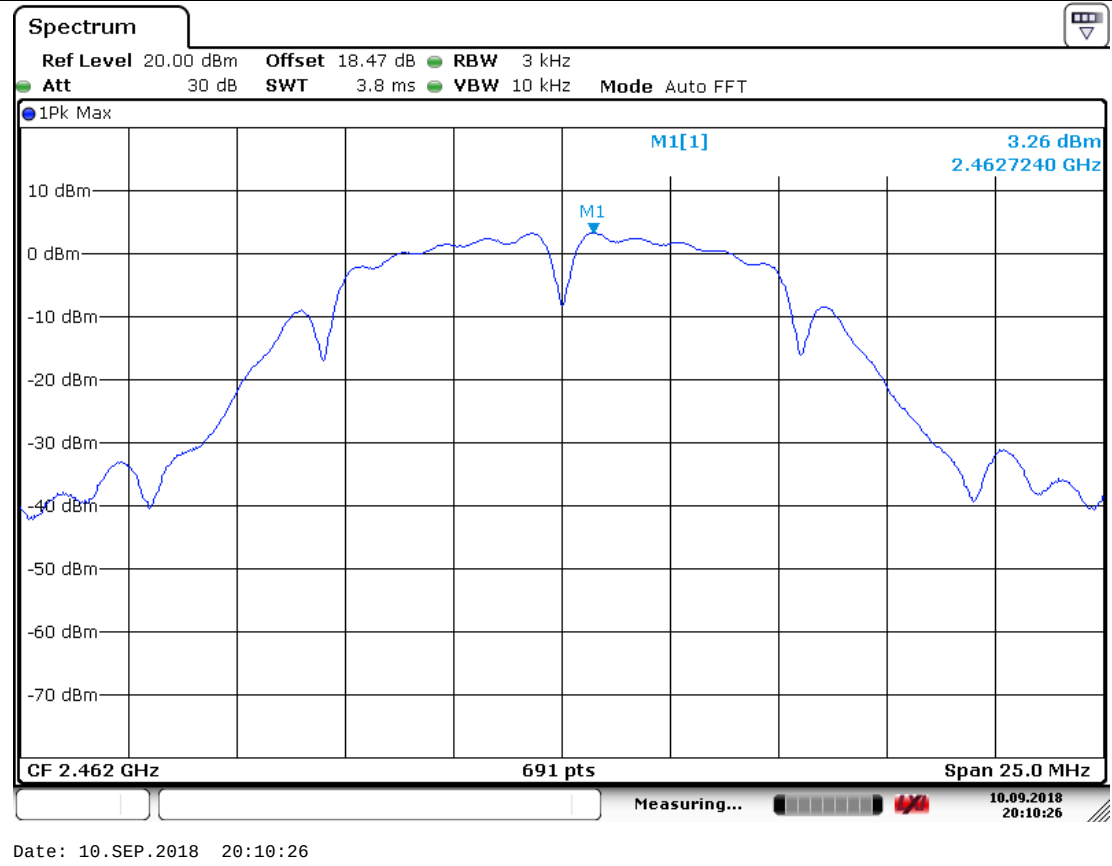


Maximum(average) power spectral density_11B_2437_Ant1

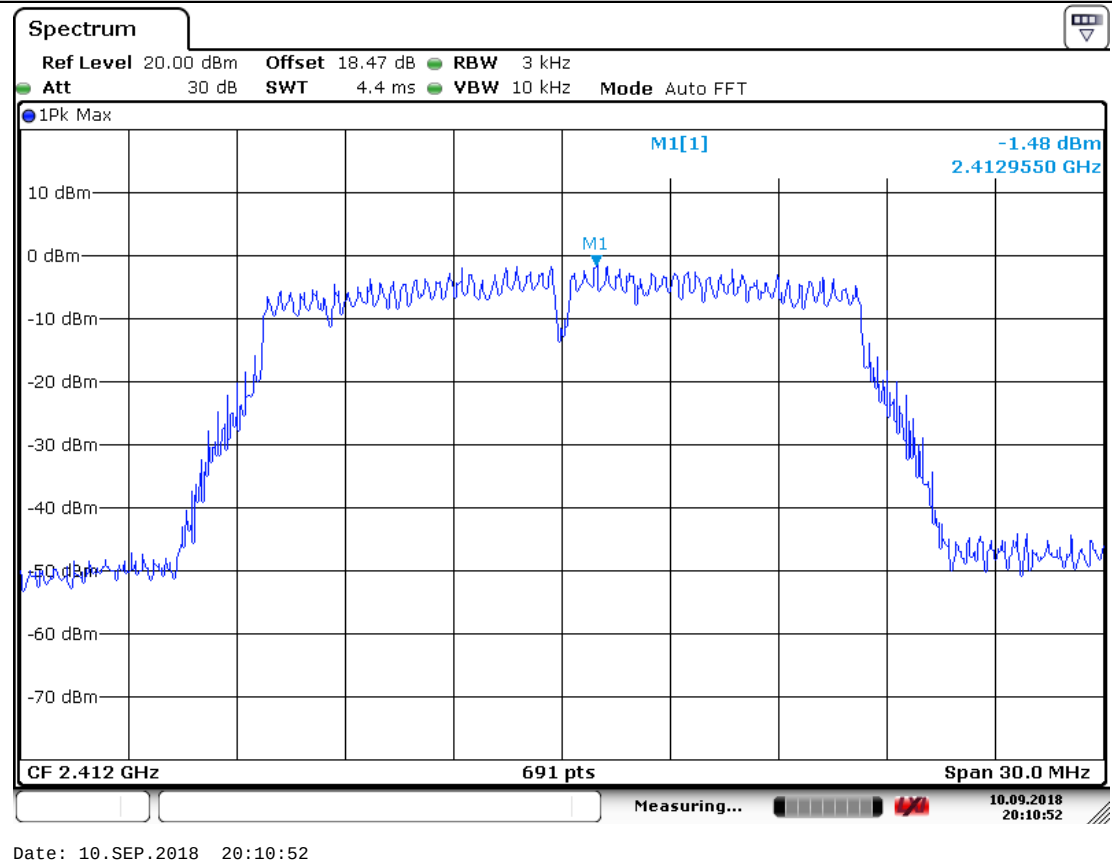




Maximum(average) power spectral density_11B_2462_Ant1

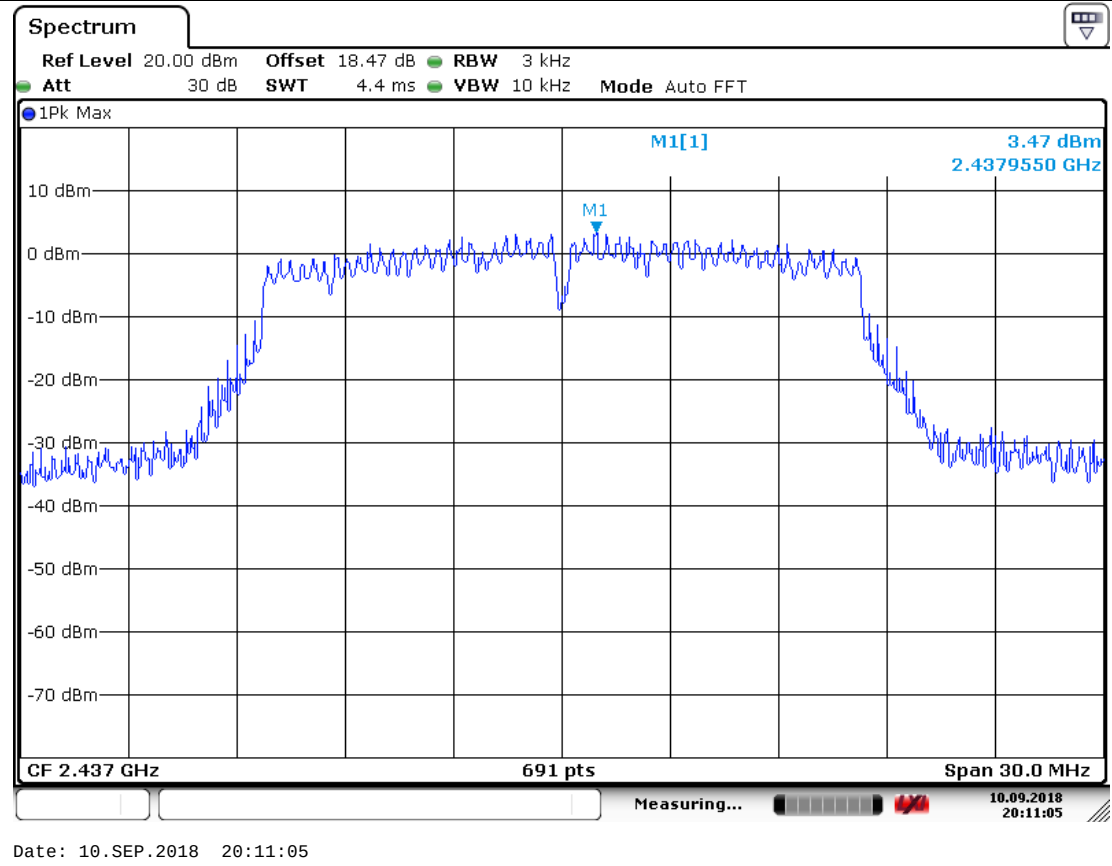


Maximum(average) power spectral density_11G_2412_Ant1

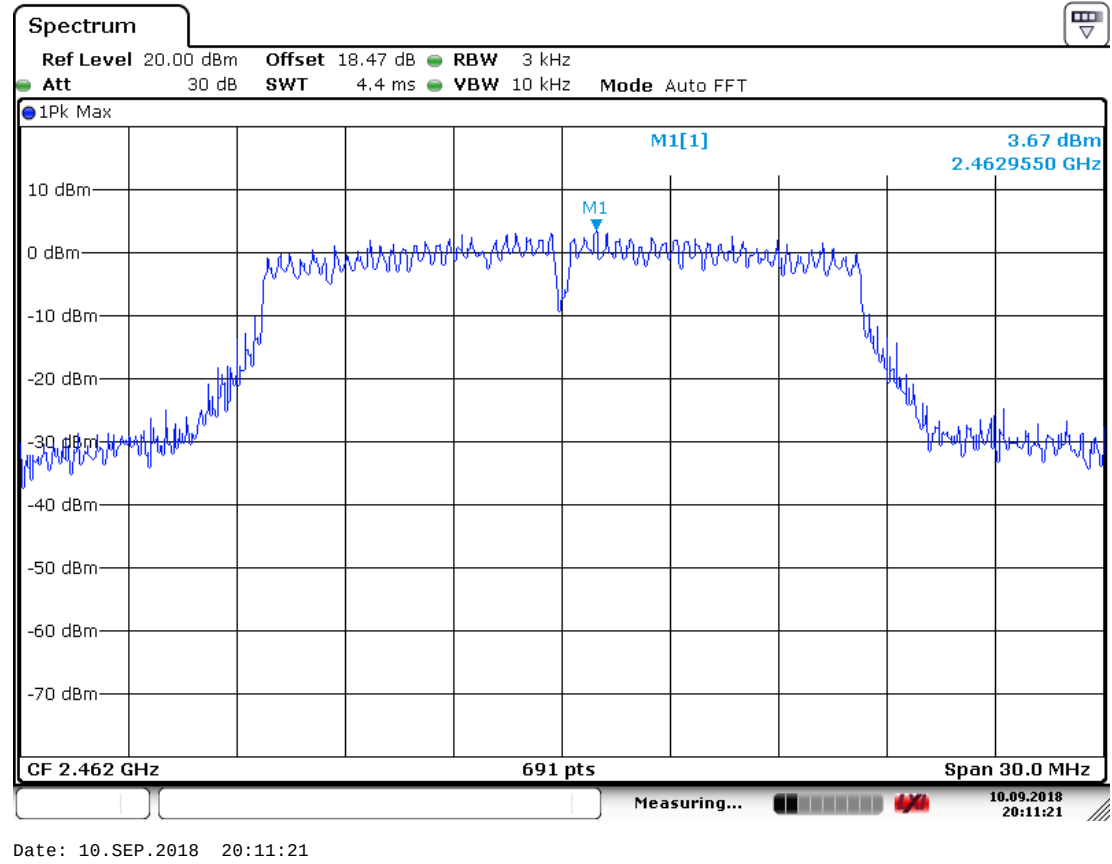




Maximum(average) power spectral density_11G_2437_Ant1

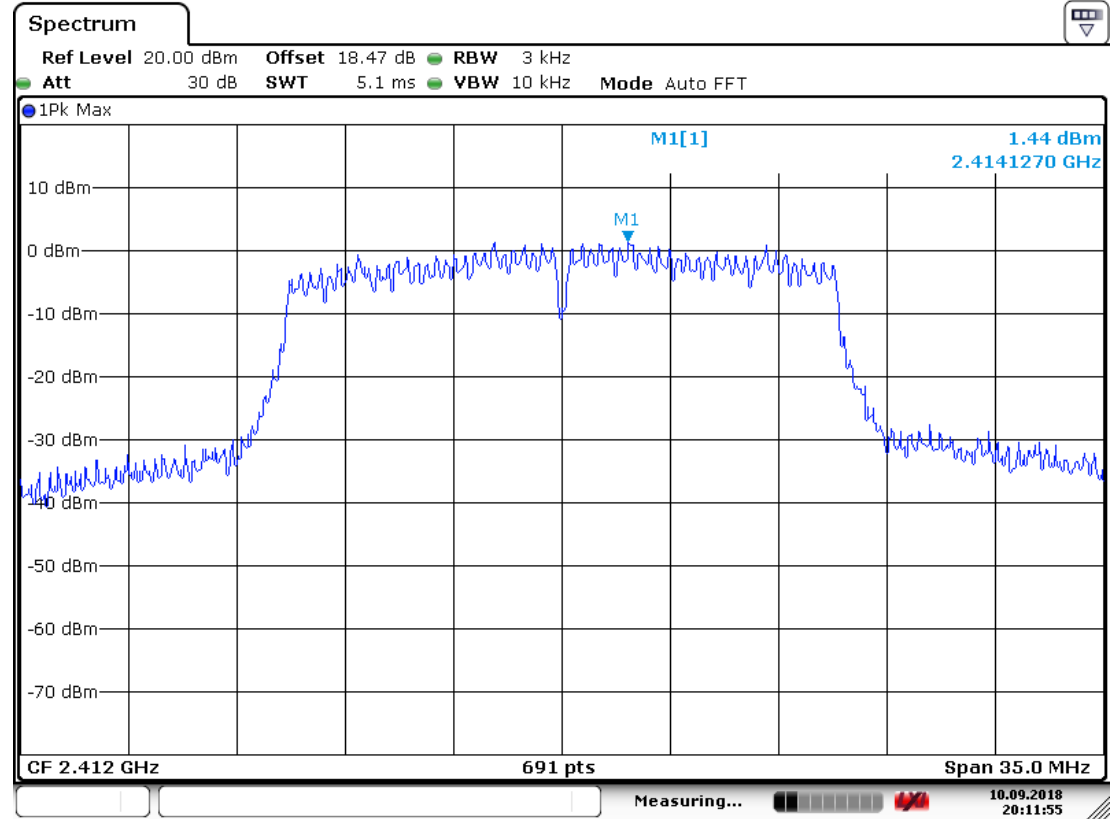


Maximum(average) power spectral density_11G_2462_Ant1

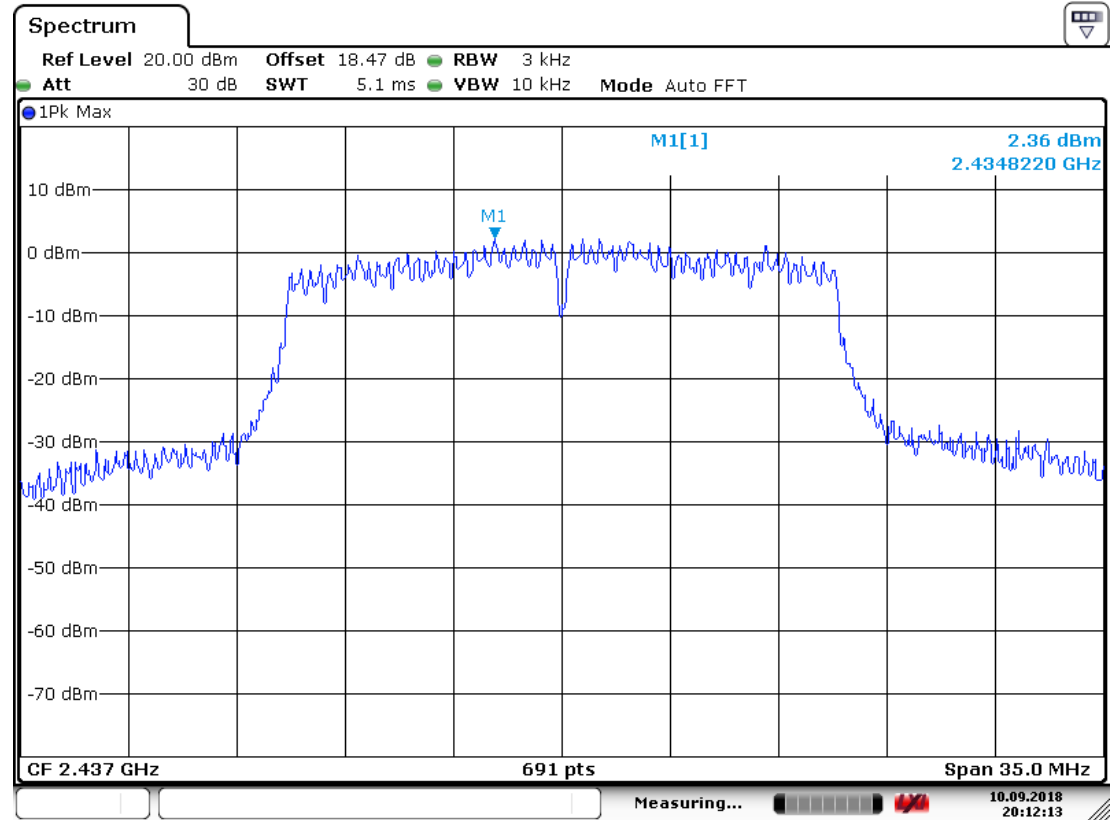


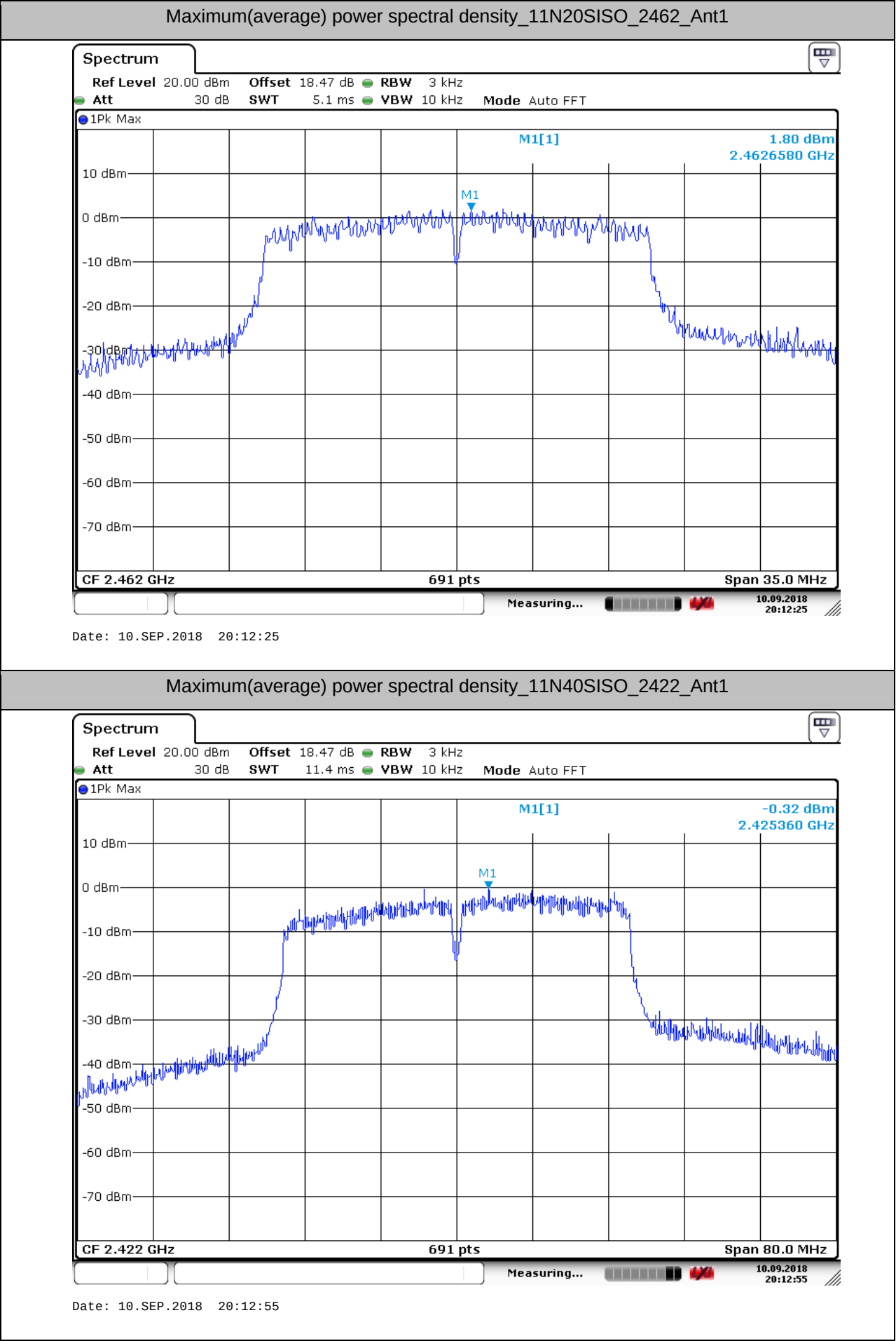


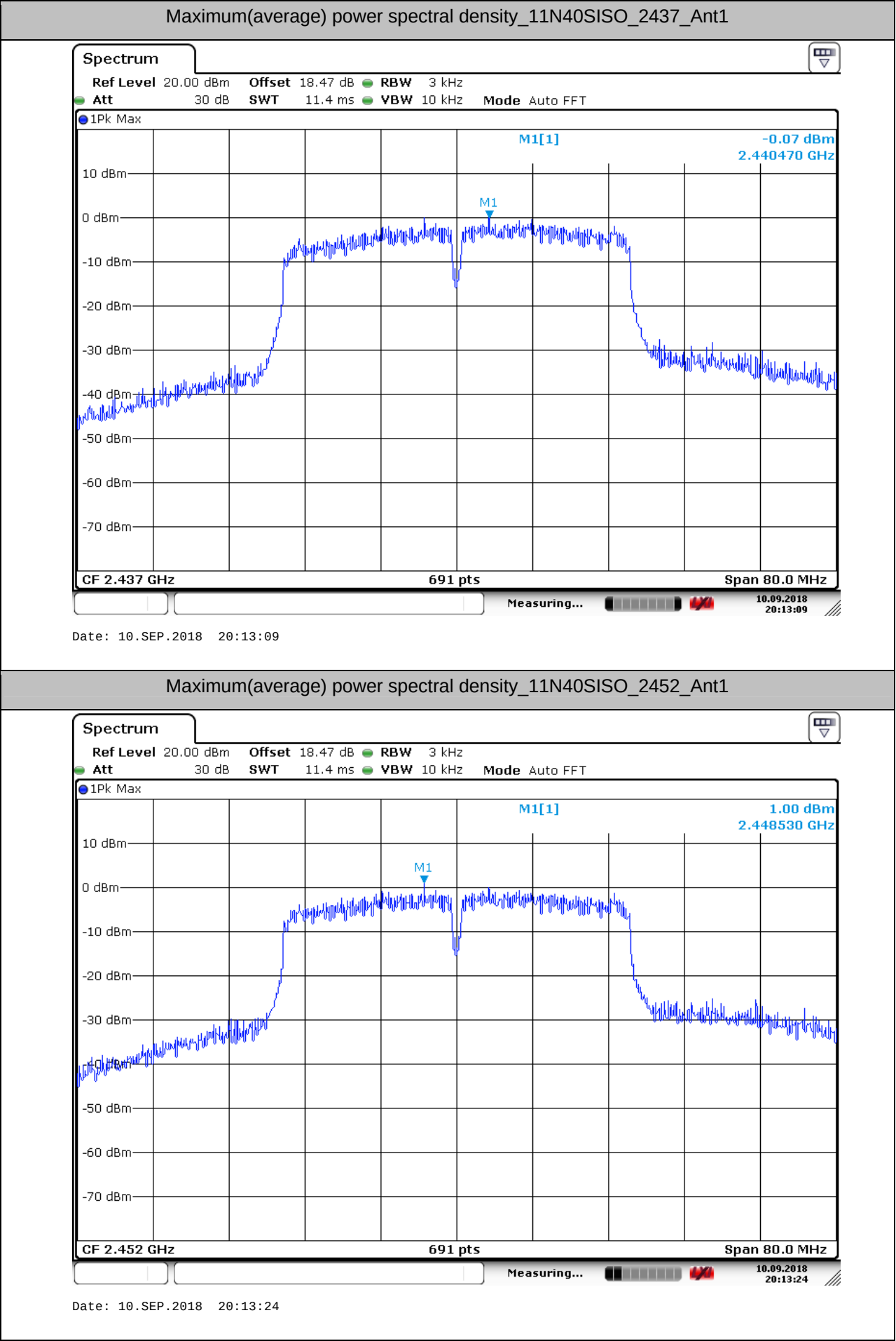
Maximum(average) power spectral density_11N20SISO_2412_Ant1



Maximum(average) power spectral density_11N20SISO_2437_Ant1

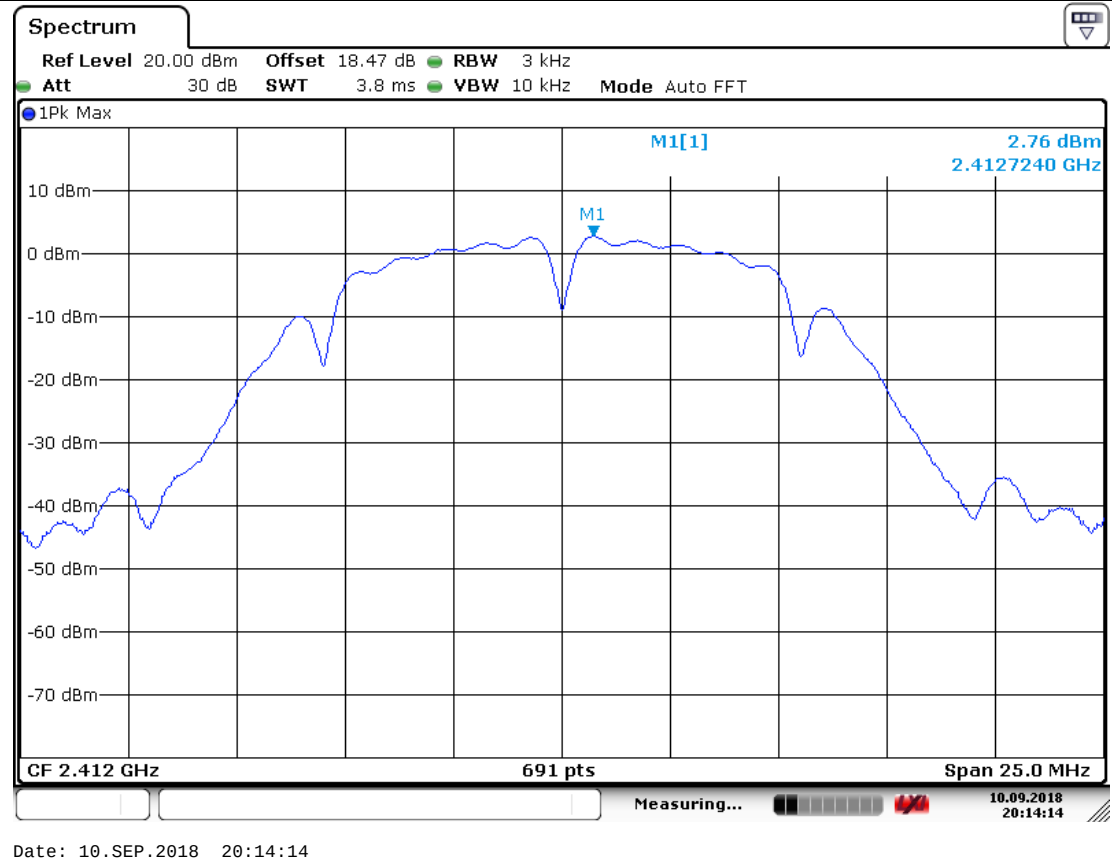




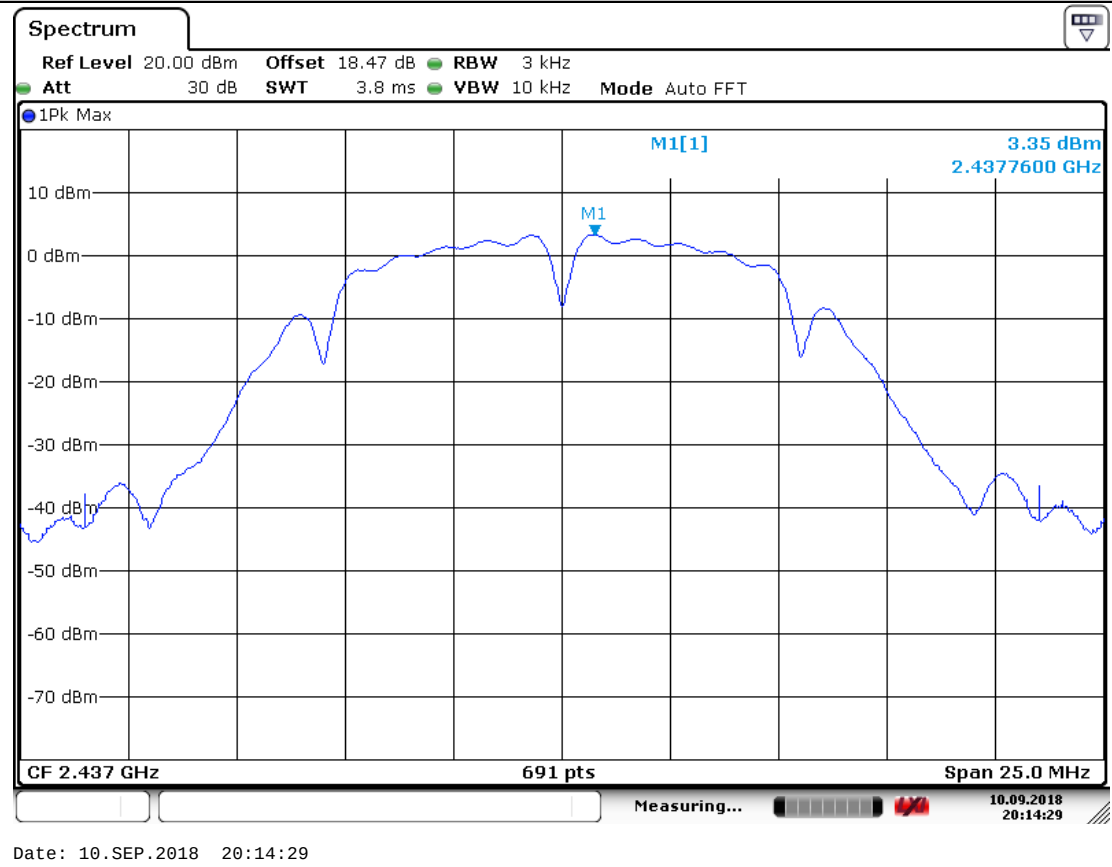




Maximum(average) power spectral density_11B_2412_Ant2

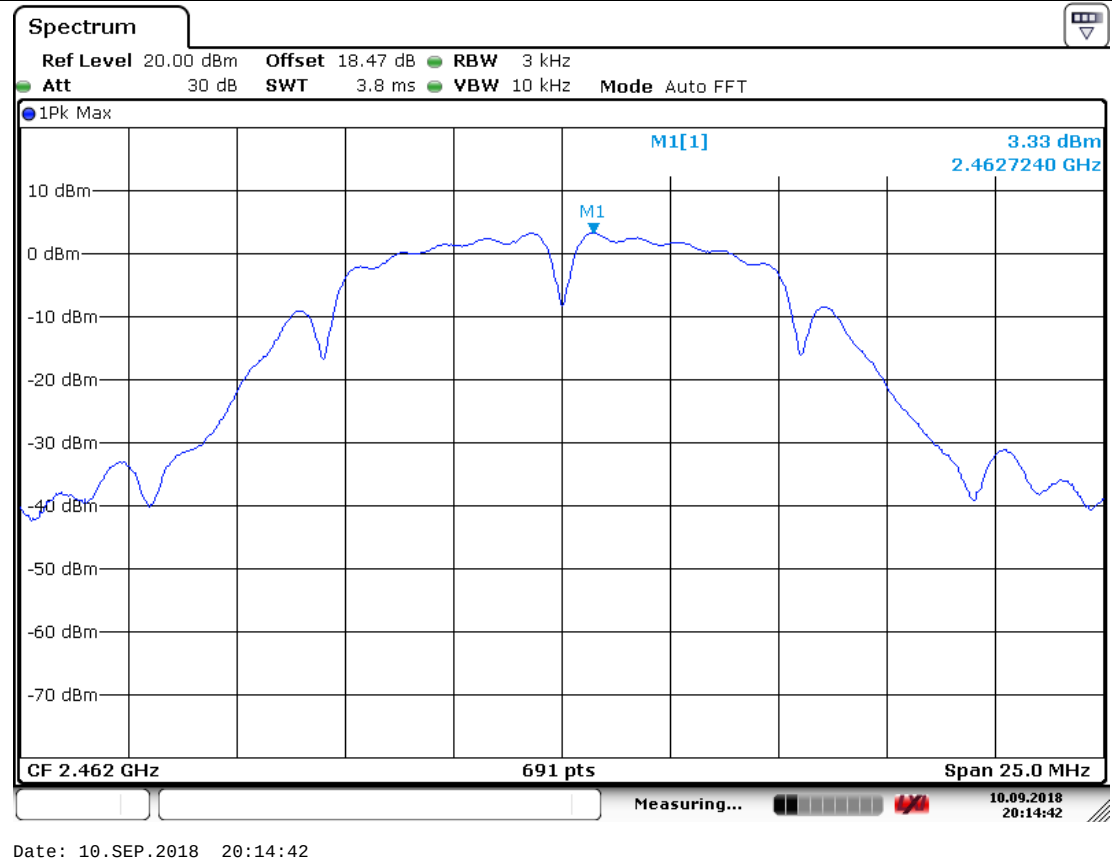


Maximum(average) power spectral density_11B_2437_Ant2

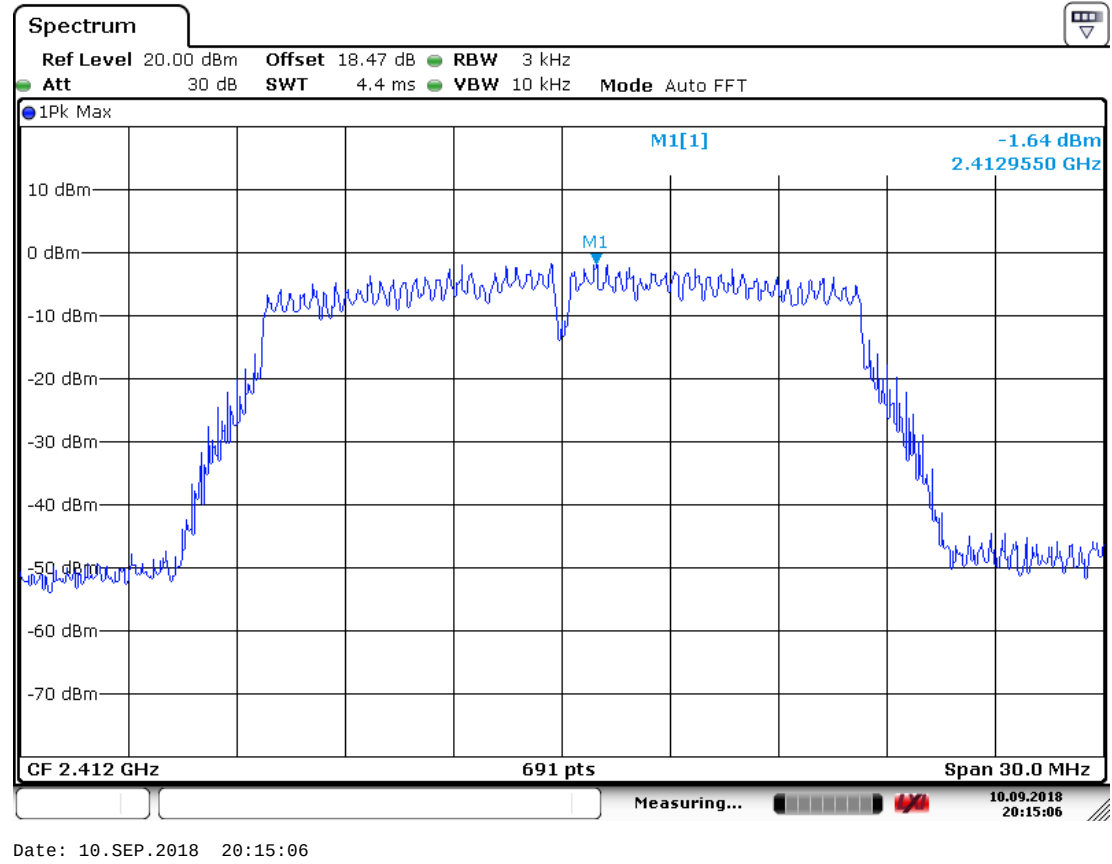




Maximum(average) power spectral density_11B_2462_Ant2

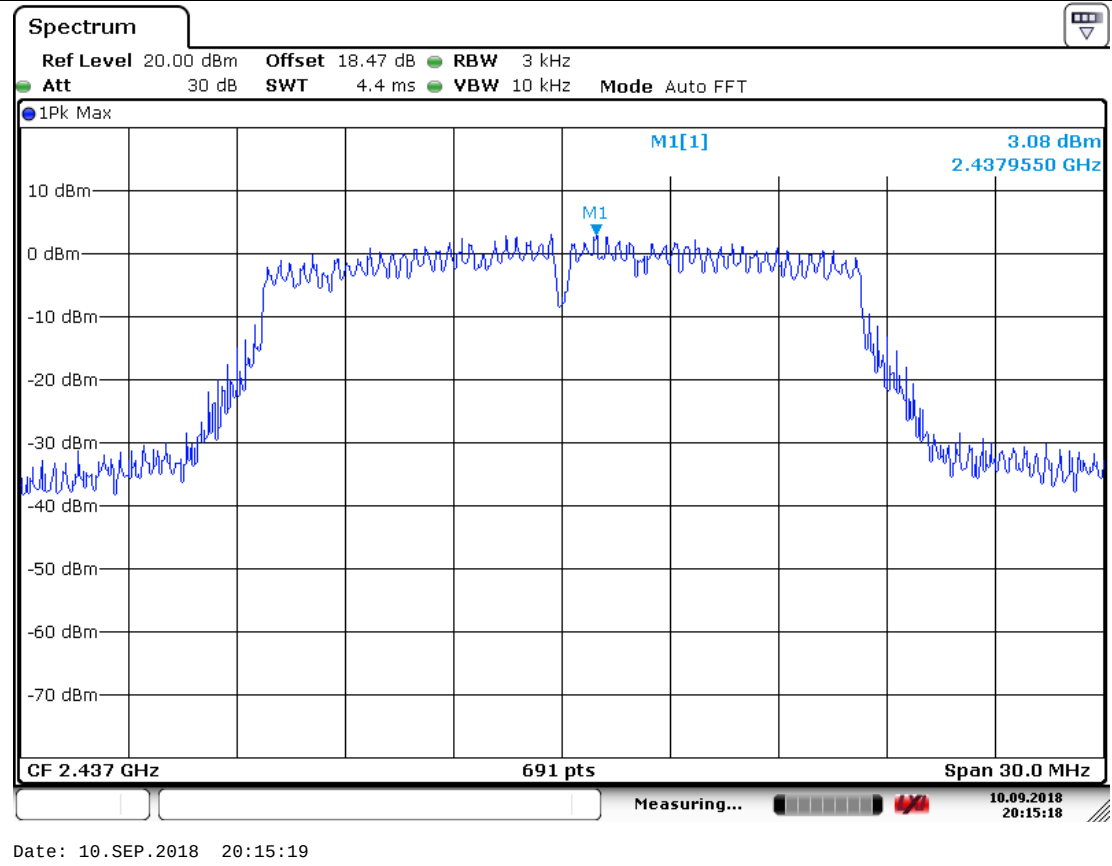


Maximum(average) power spectral density_11G_2412_Ant2

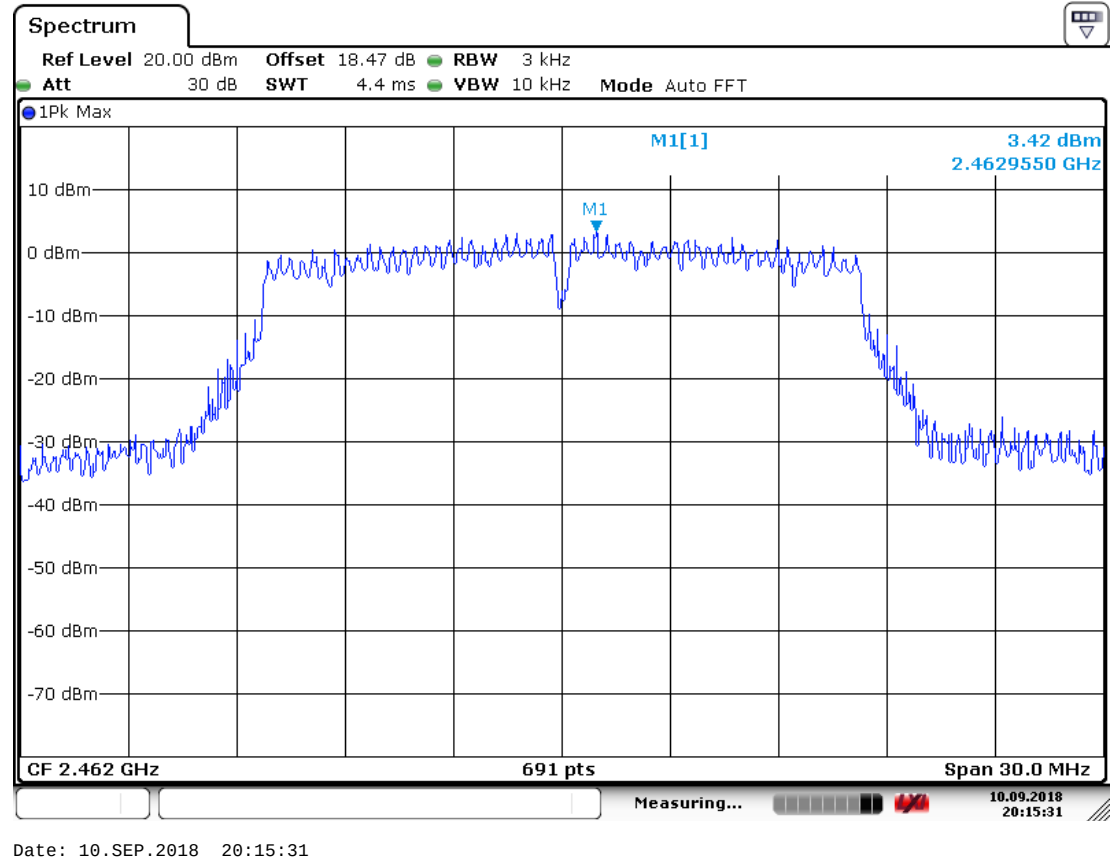




Maximum(average) power spectral density_11G_2437_Ant2

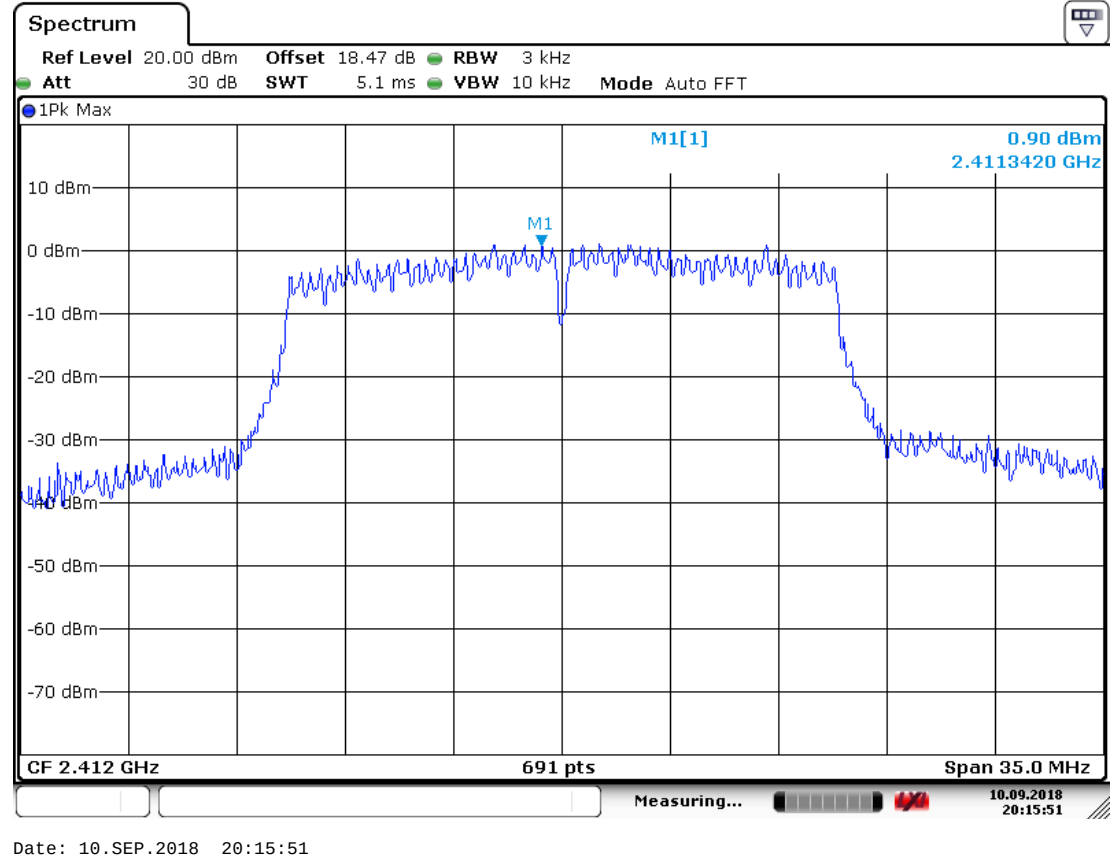


Maximum(average) power spectral density_11G_2462_Ant2

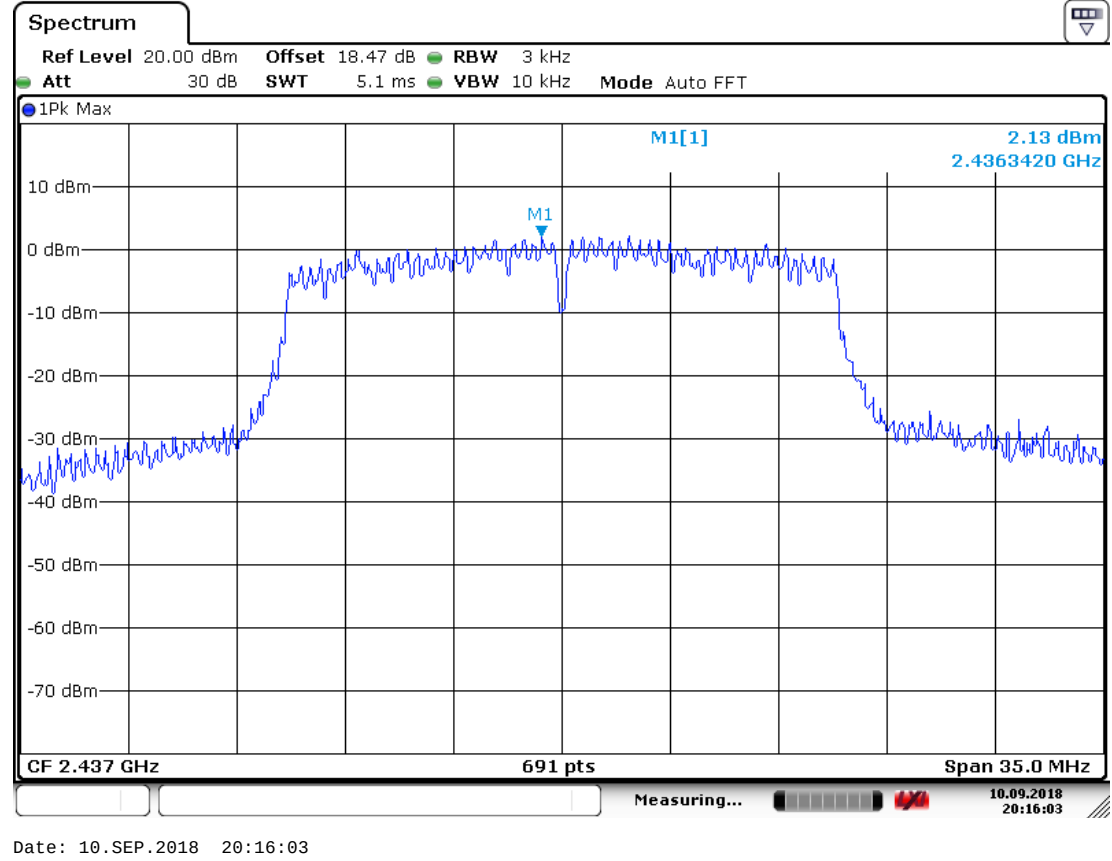


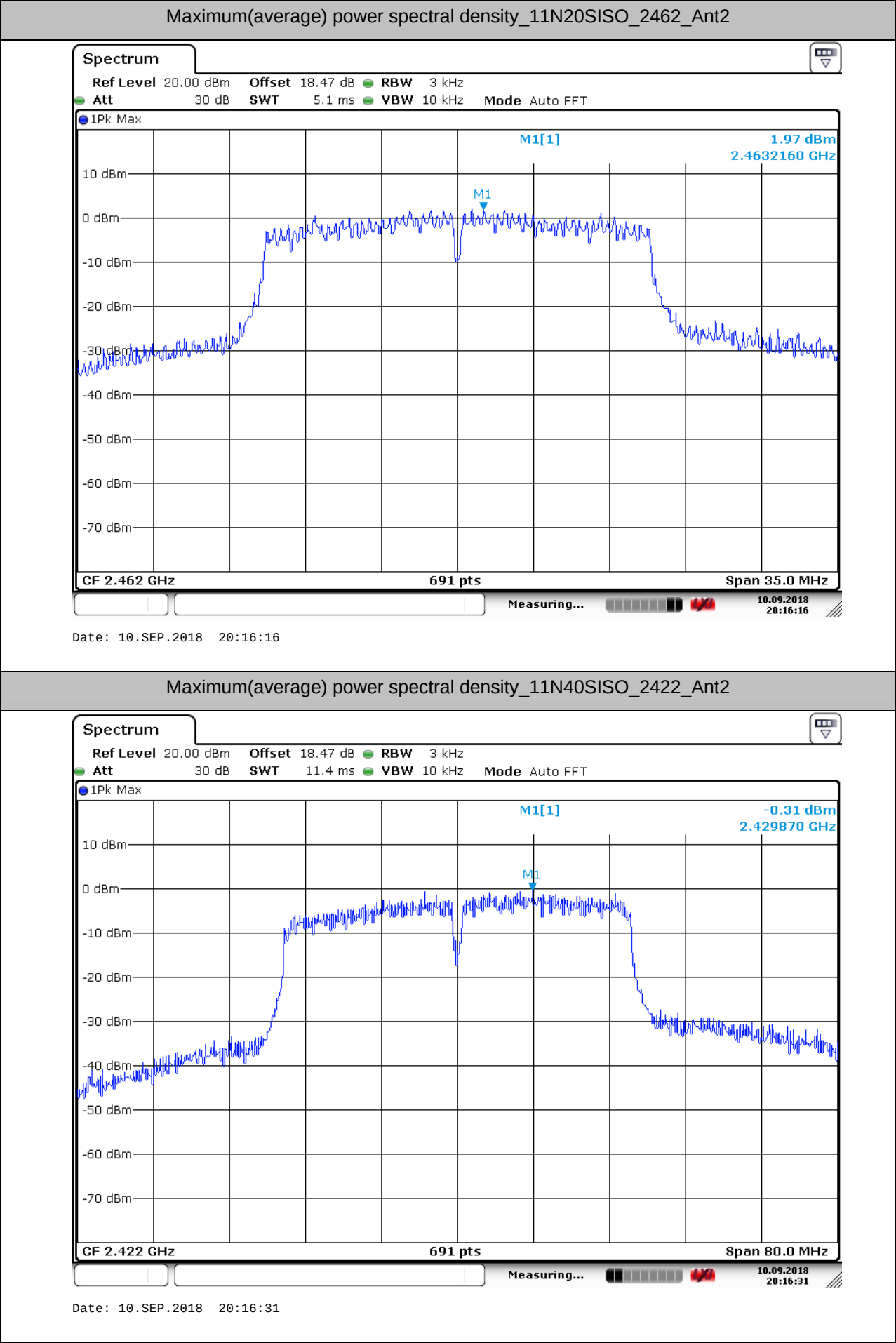


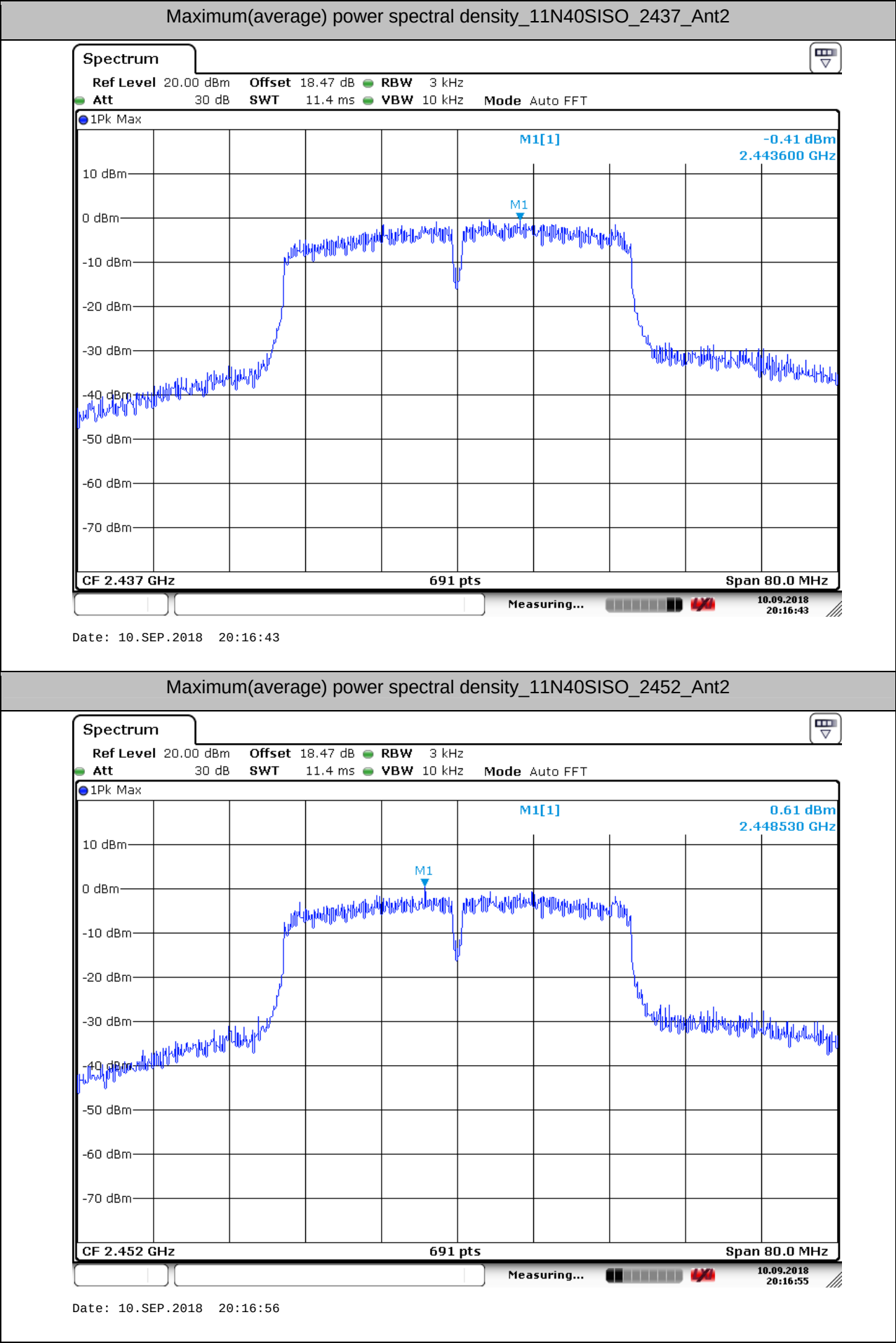
Maximum(average) power spectral density_11N20SISO_2412_Ant2



Maximum(average) power spectral density_11N20SISO_2437_Ant2

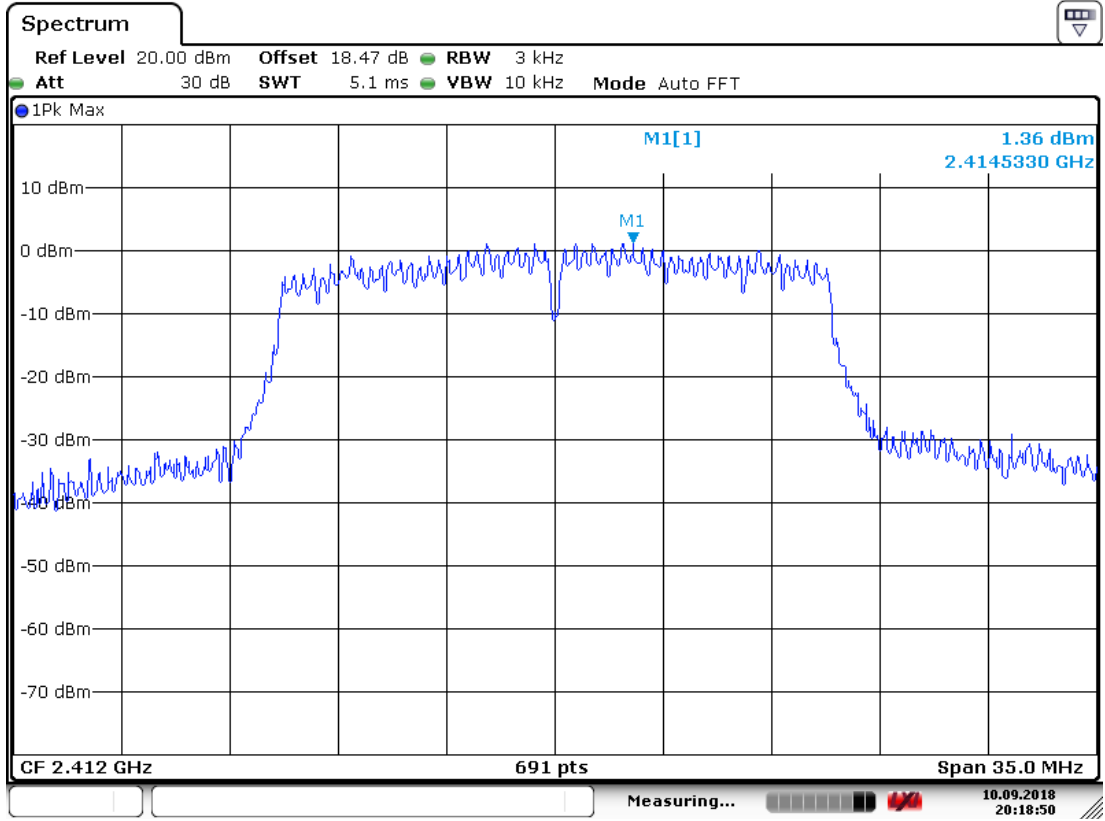






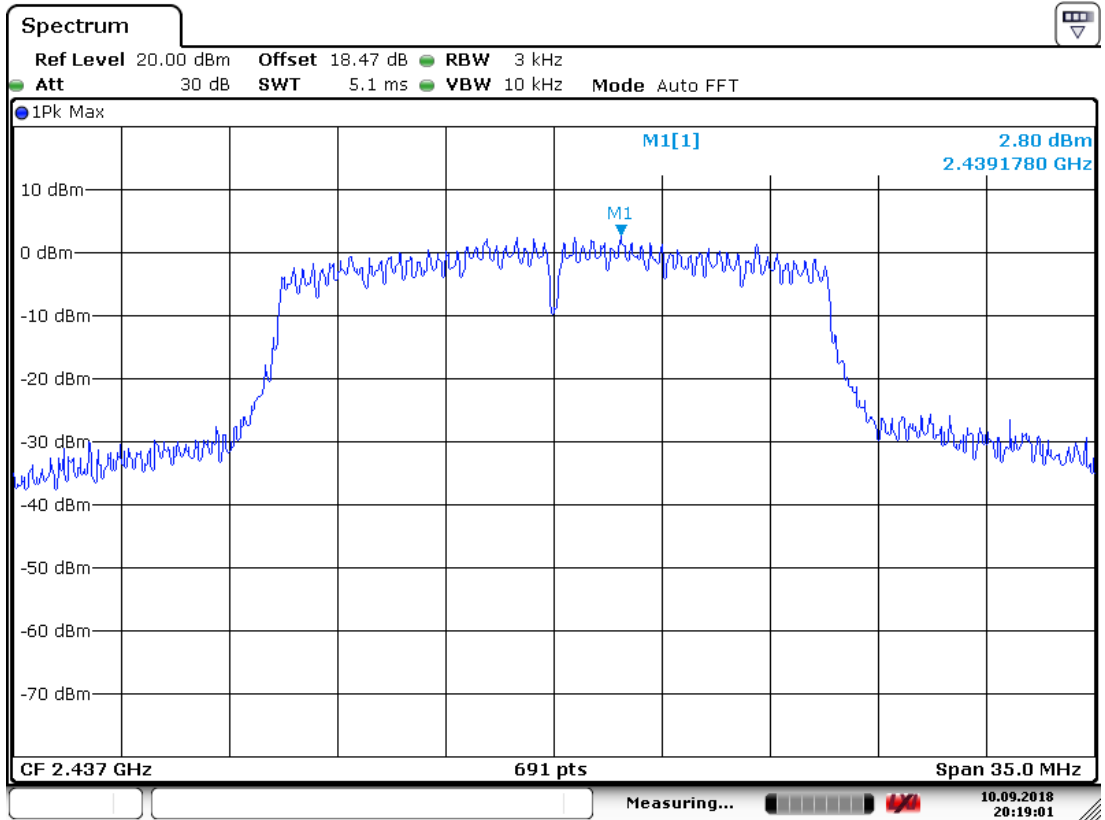


Maximum(average) power spectral density_11N20MIMO_2412_Ant1+2

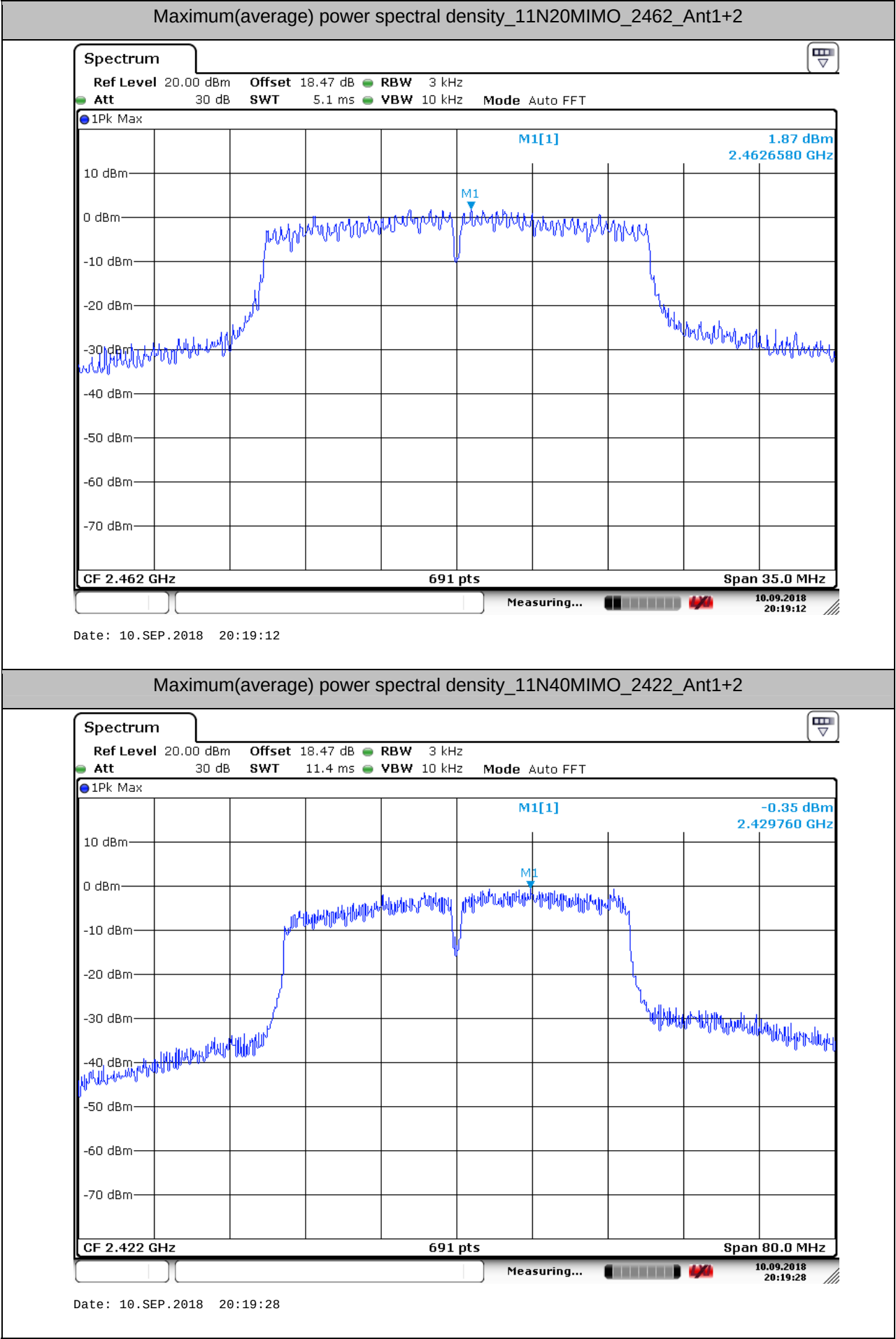


Date: 10.SEP.2018 20:18:50

Maximum(average) power spectral density_11N20MIMO_2437_Ant1+2

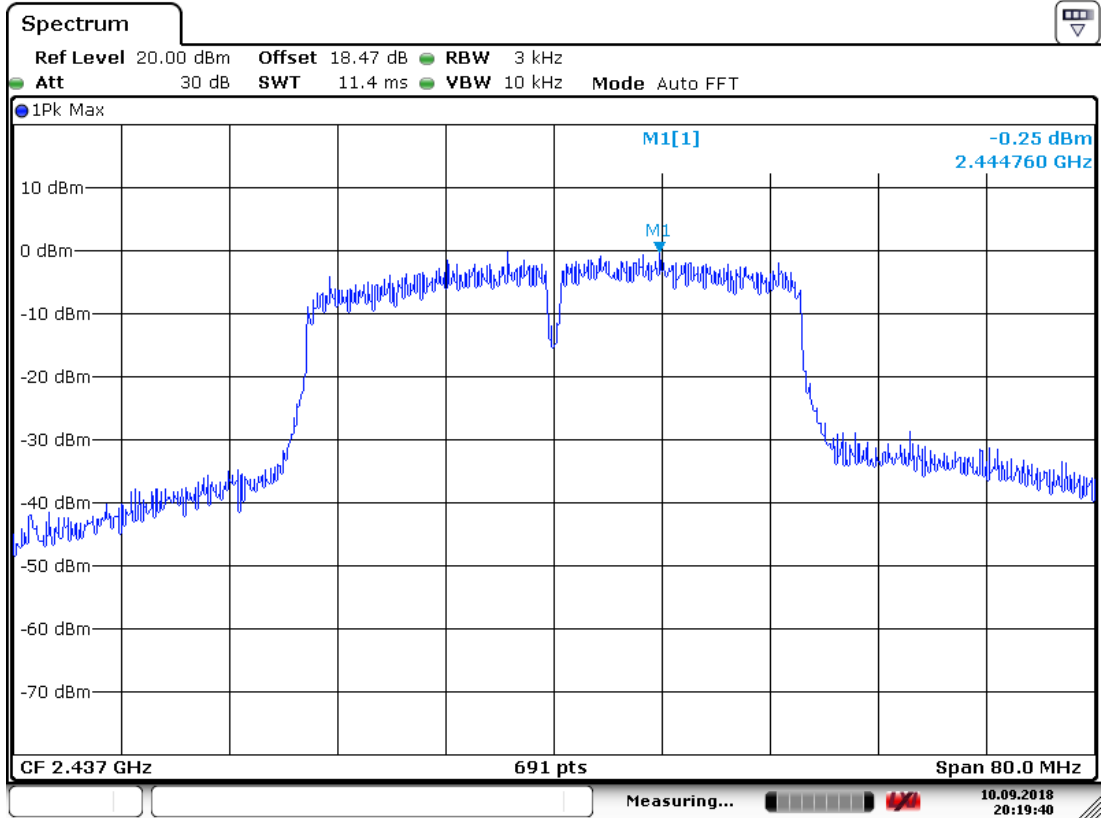


Date: 10.SEP.2018 20:19:01



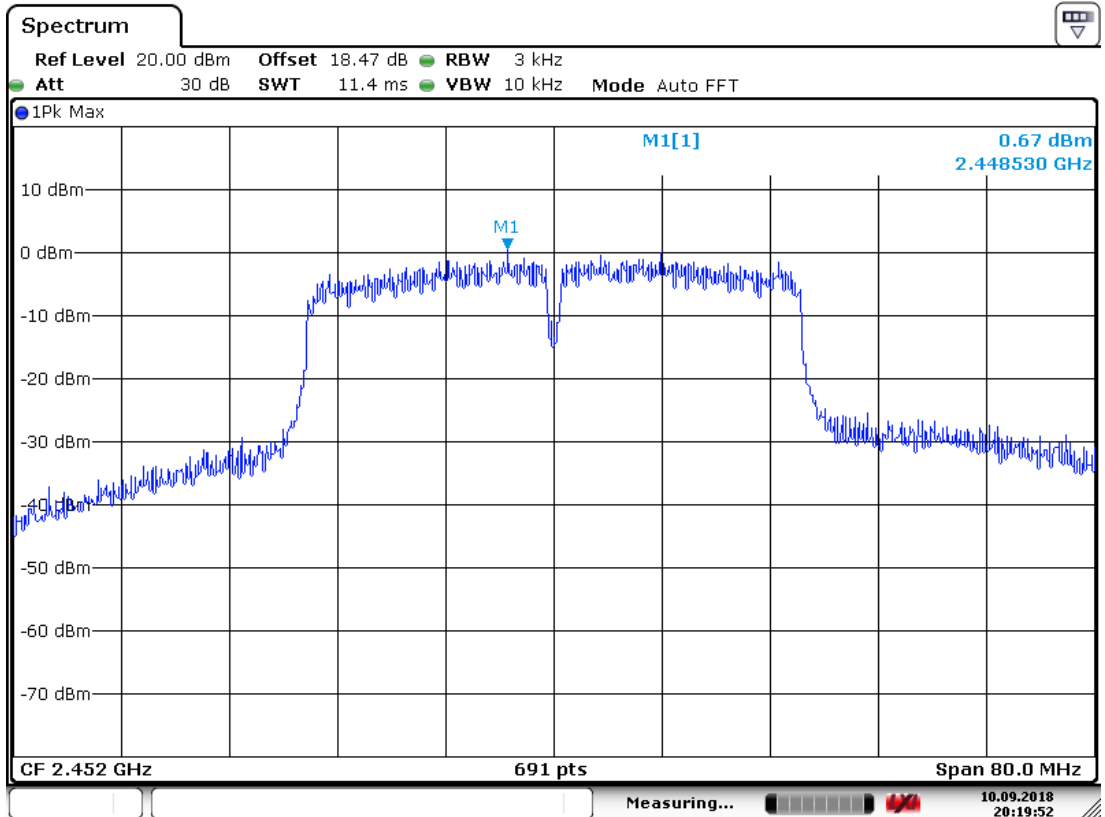


Maximum(average) power spectral density_11N40MIMO_2437_Ant1+2



Date: 10.SEP.2018 20:19:41

Maximum(average) power spectral density_11N40MIMO_2452_Ant1+2



Date: 10.SEP.2018 20:19:52

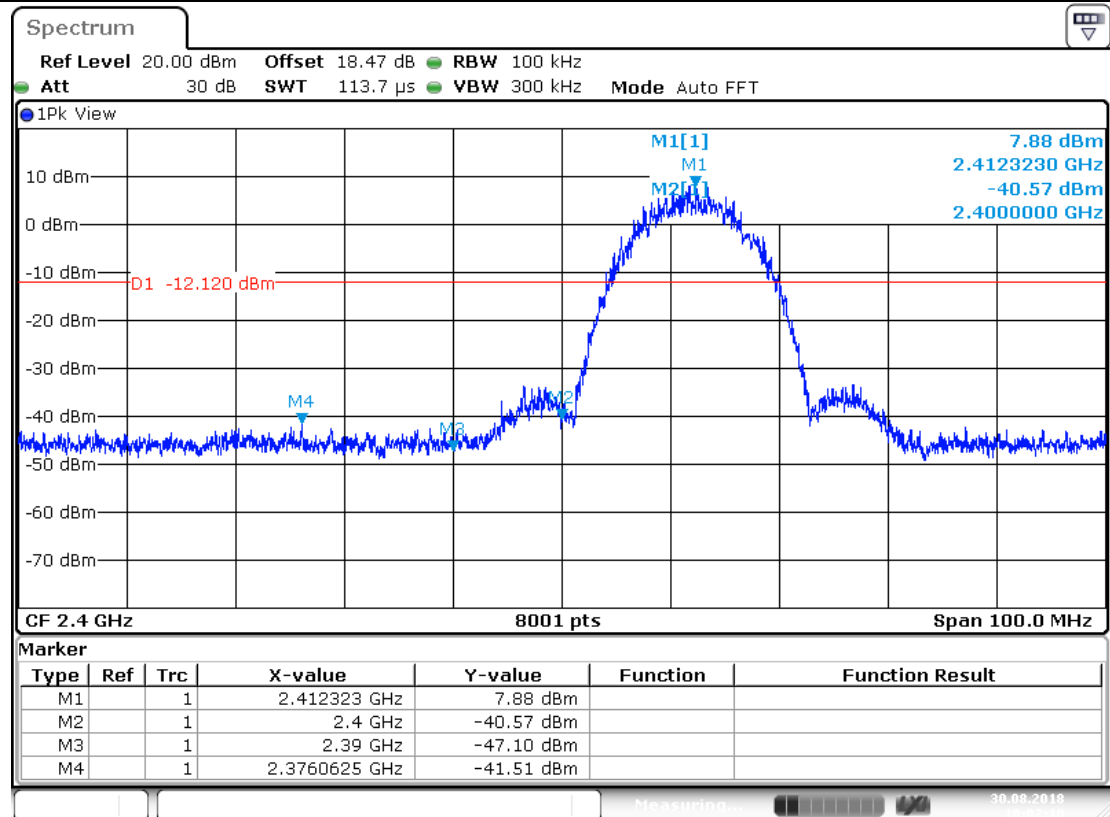


5.Band-edge for RF Conducted Emissions

Test Mode	Test Channel	Ant	Carrier Power[dBm]	Max. Spurious Level [dBm]	Limit [dBm]	Verdict
11B	2412	Ant1	7.880	-40.570	-12.12	PASS
11B	2462	Ant1	8.560	-41.770	-11.44	PASS
11G	2412	Ant1	4.620	-41.190	-15.38	PASS
11G	2462	Ant1	4.930	-39.970	-15.07	PASS
11N20SISO	2412	Ant1	4.460	-42.290	-15.54	PASS
11N20SISO	2462	Ant1	4.900	-41.260	-15.1	PASS
11N40SISO	2422	Ant1	1.490	-41.430	-18.51	PASS
11N40SISO	2452	Ant1	1.830	-36.900	-18.17	PASS
11B	2412	Ant2	7.310	-42.310	-12.69	PASS
11B	2462	Ant2	7.880	-41.830	-12.12	PASS
11G	2412	Ant2	5.150	-42.240	-14.85	PASS
11G	2462	Ant2	5.590	-40.570	-14.41	PASS
11N20SISO	2412	Ant2	4.440	-42.200	-15.56	PASS
11N20SISO	2462	Ant2	4.160	-41.080	-15.84	PASS
11N40SISO	2422	Ant2	1.850	-38.180	-18.15	PASS
11N40SISO	2452	Ant2	1.740	-36.630	-18.26	PASS
11N20MIMO	2412	Ant1+2	4.140	-39.010	-15.86	PASS
11N20MIMO	2462	Ant1+2	5.010	-39.300	-14.99	PASS
11N40MIMO	2422	Ant1+2	2.110	-39.110	-17.89	PASS
11N40MIMO	2452	Ant1+2	1.890	-39.240	-18.11	PASS

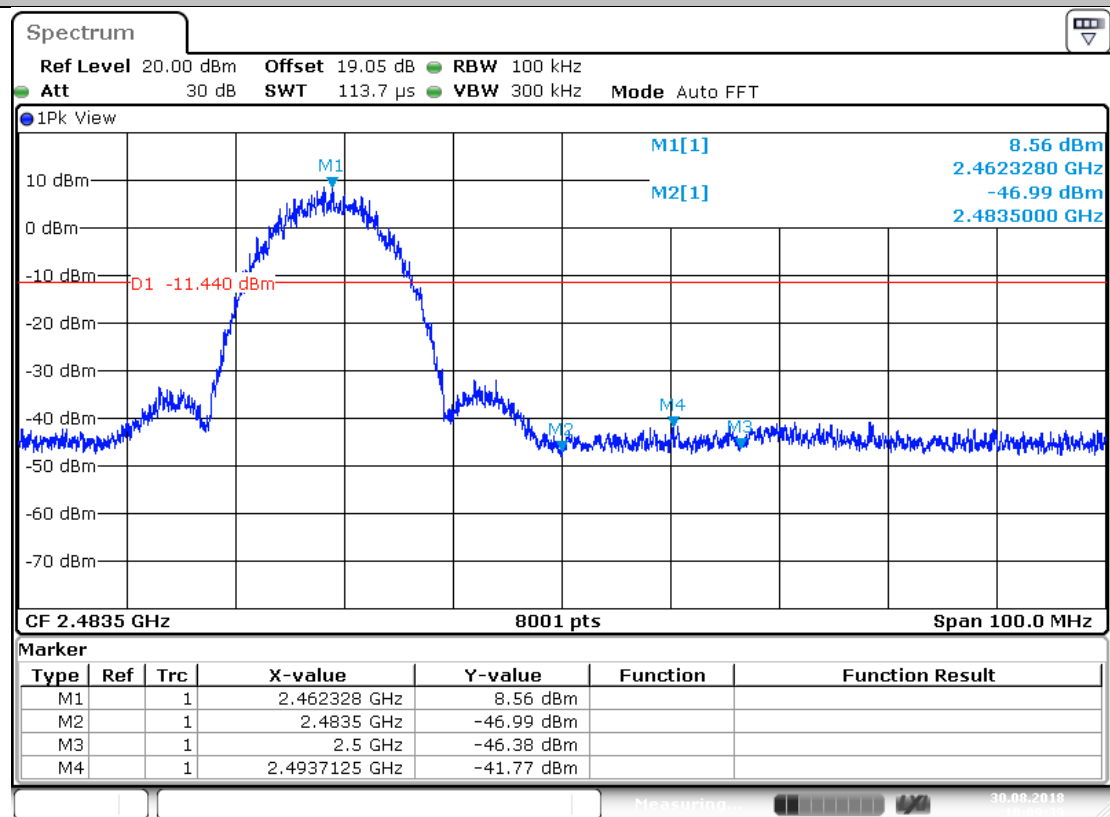


Band-edge for RF Conducted Emissions_11B_2412_Ant1



Date: 30.AUG.2018 10:02:09

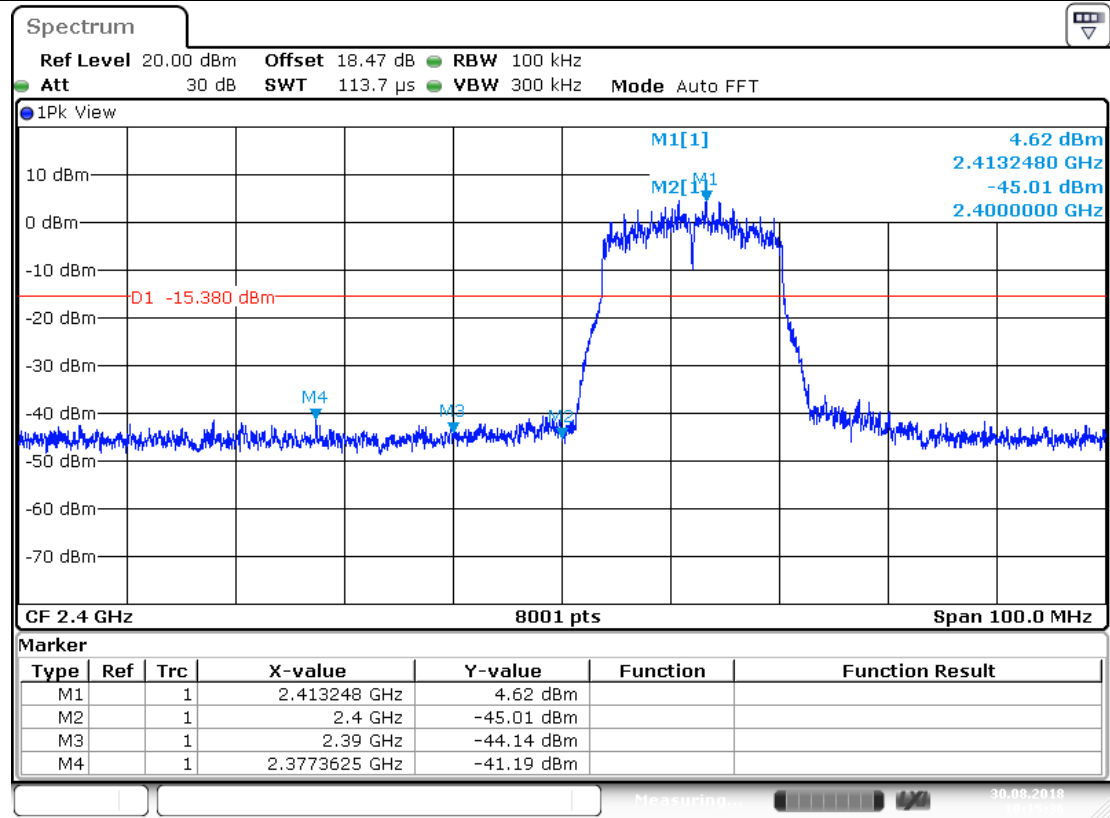
Band-edge for RF Conducted Emissions_11B_2462_Ant1



Date: 30.AUG.2018 10:09:39

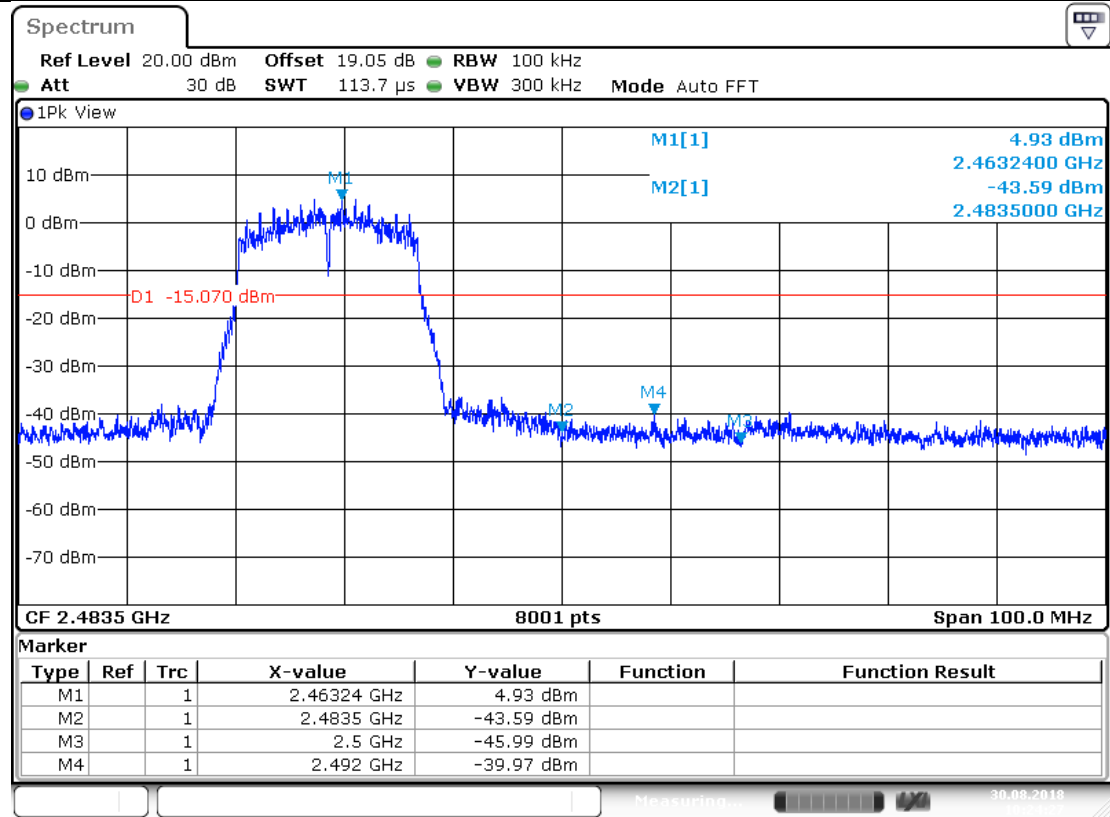


Band-edge for RF Conducted Emissions_11G_2412_Ant1



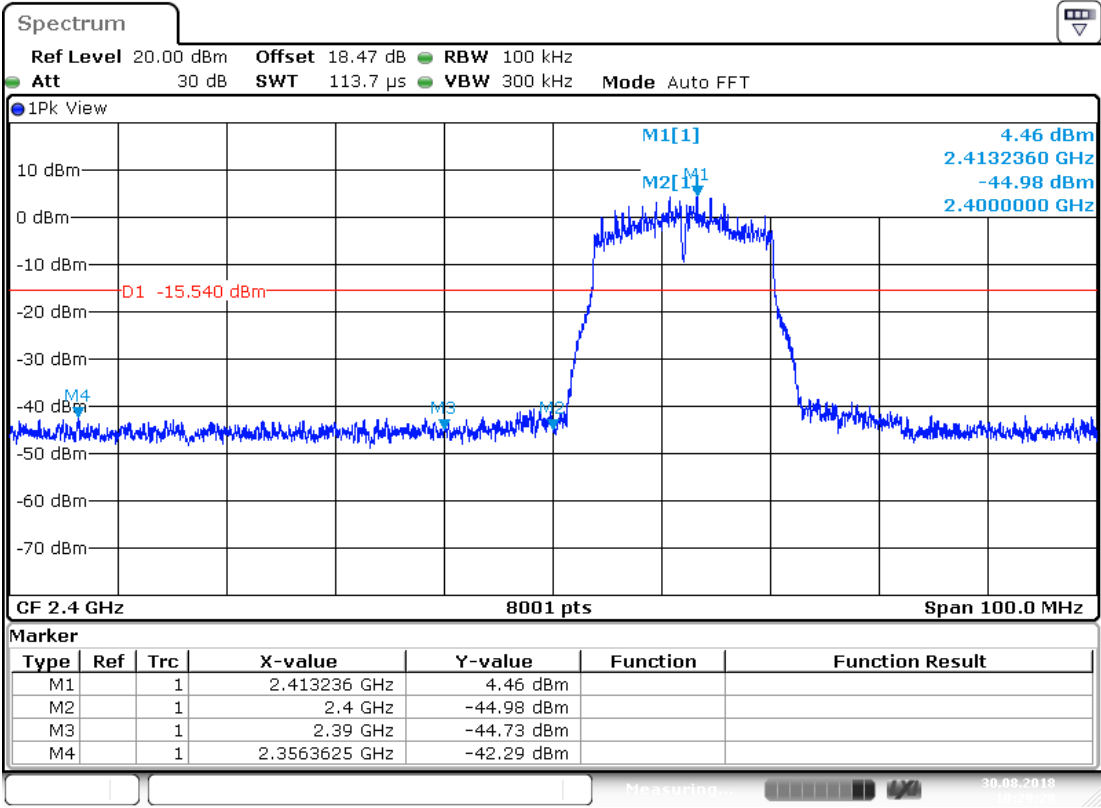
Date: 30.AUG.2018 10:15:36

Band-edge for RF Conducted Emissions_11G_2462_Ant1



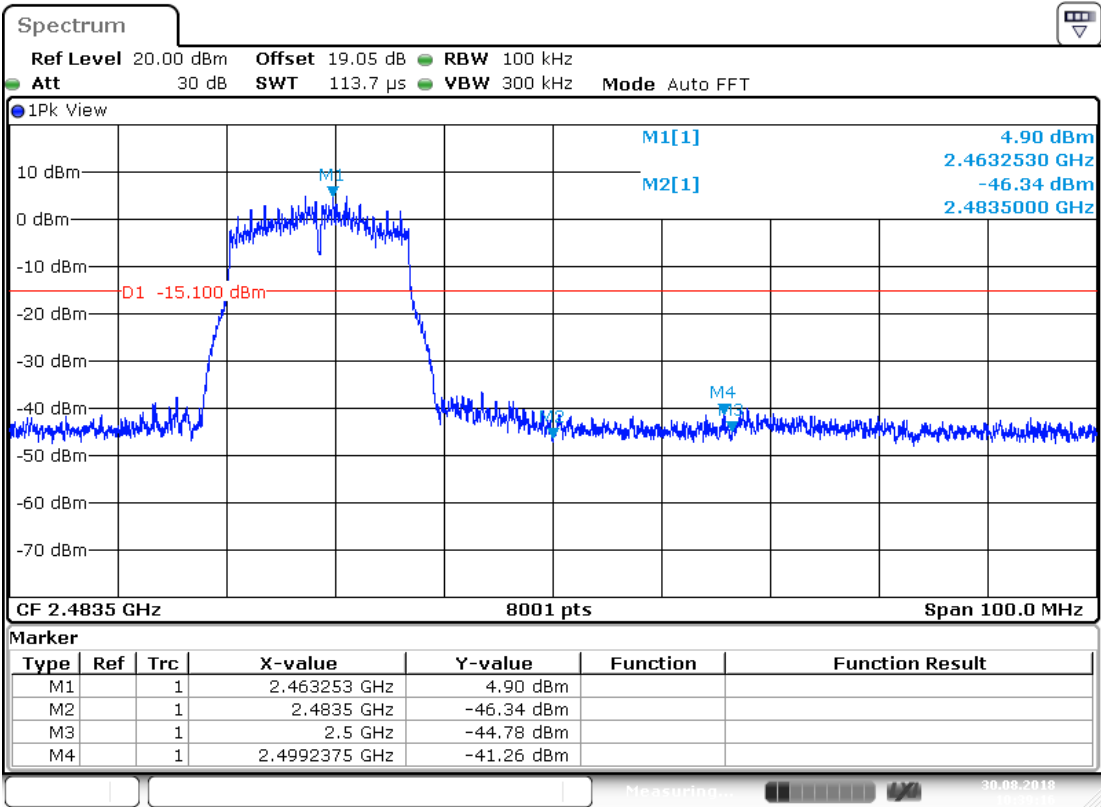
Date: 30.AUG.2018 10:24:27

Band-edge for RF Conducted Emissions_11N20SISO_2412_Ant1



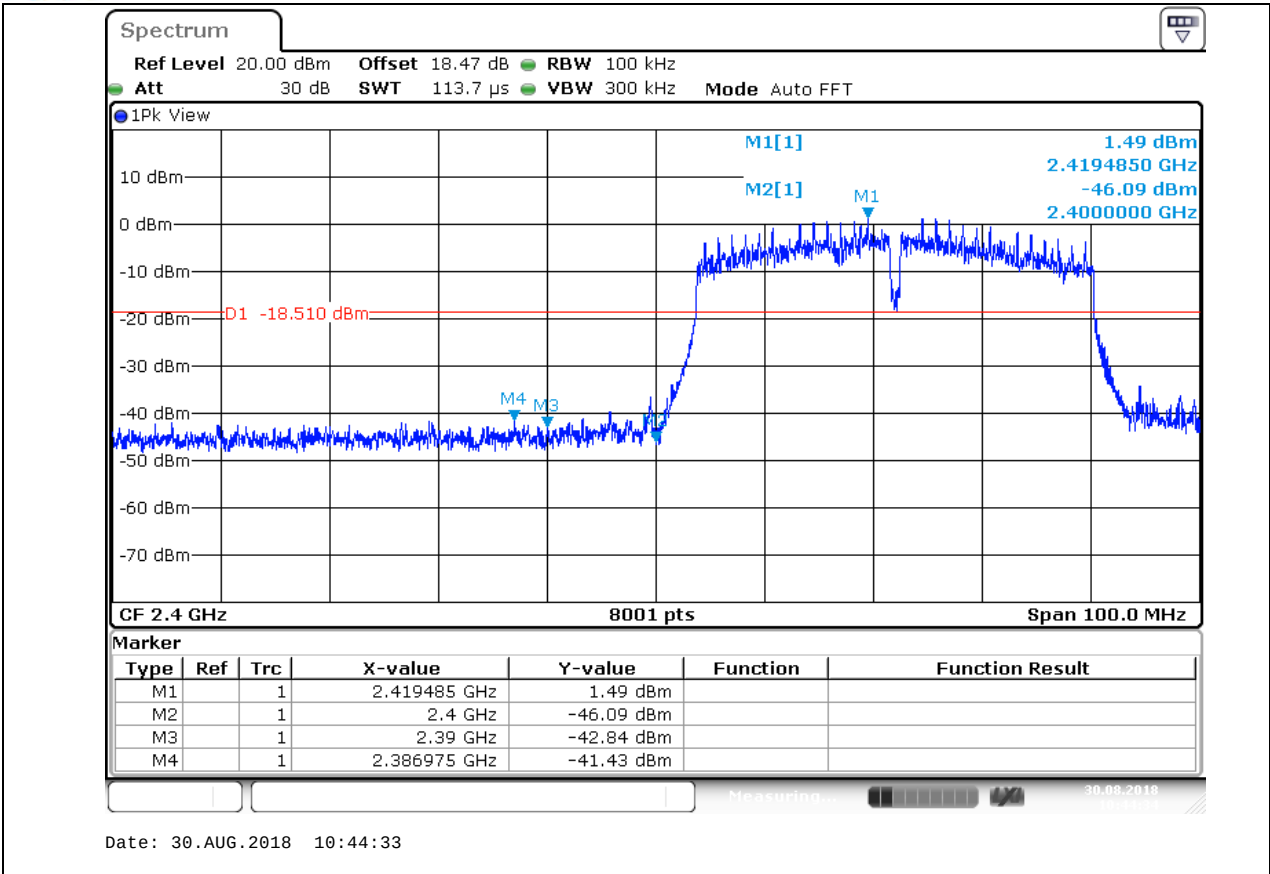
Date: 30.AUG.2018 10:29:28

Band-edge for RF Conducted Emissions_11N20SISO_2462_Ant1

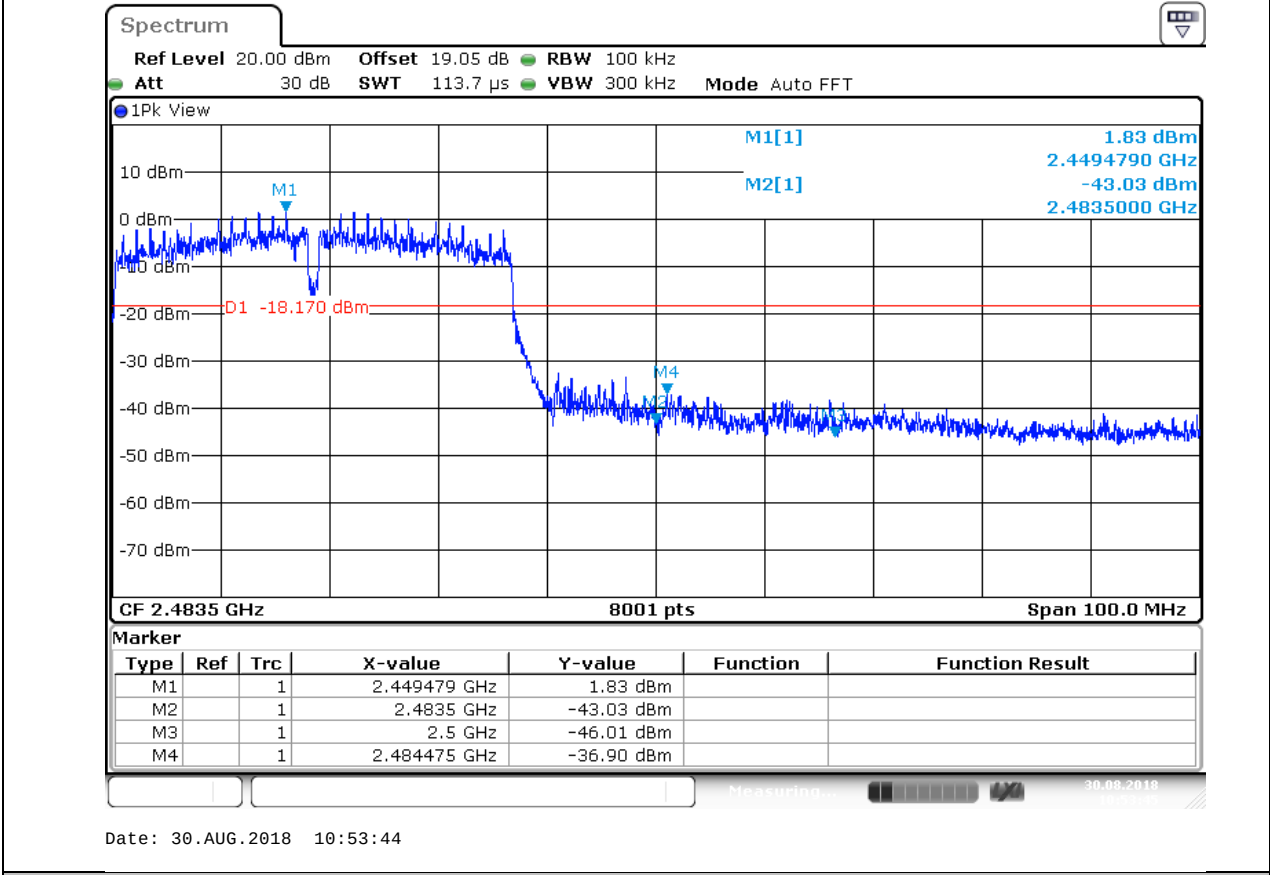


Date: 30.AUG.2018 10:39:15

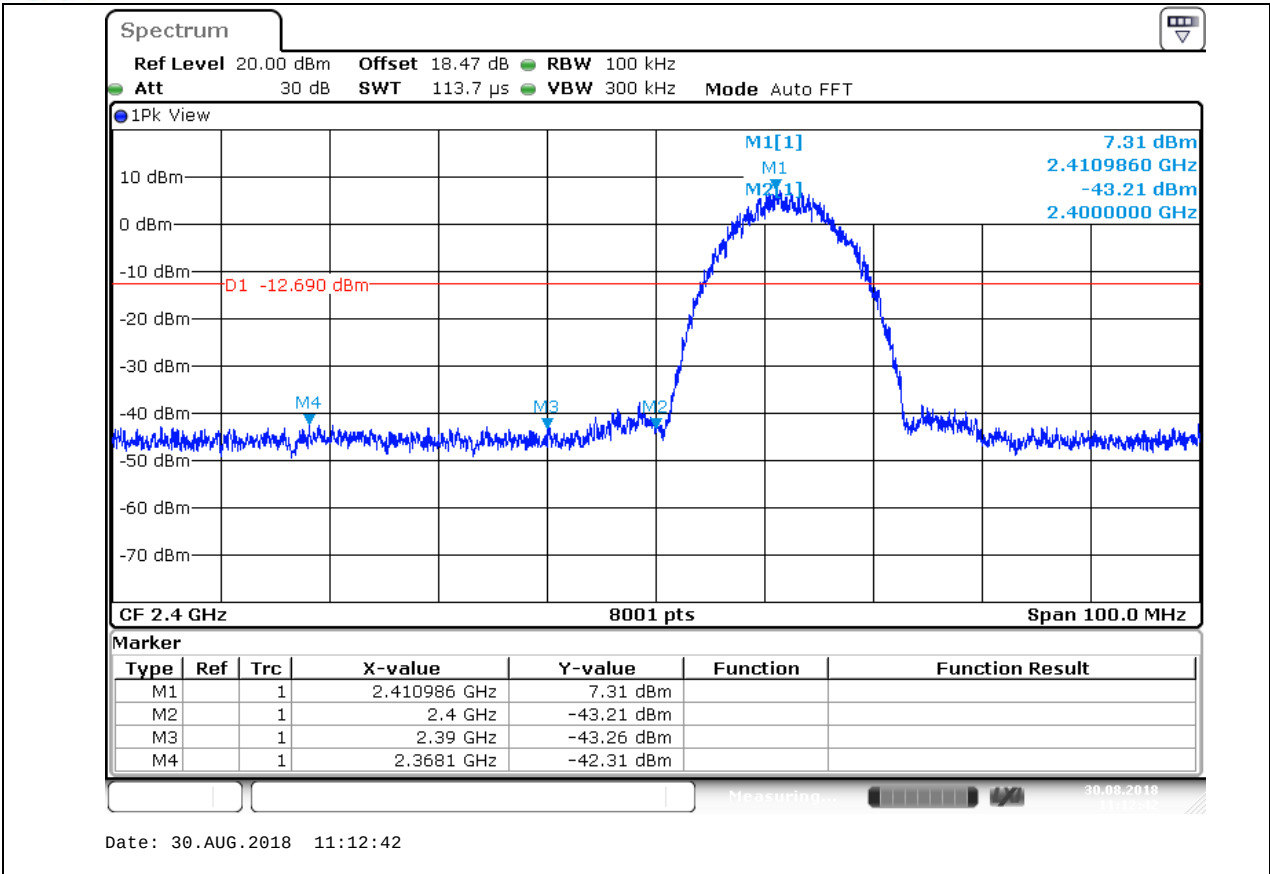
Band-edge for RF Conducted Emissions_11N40SISO_2422_Ant1



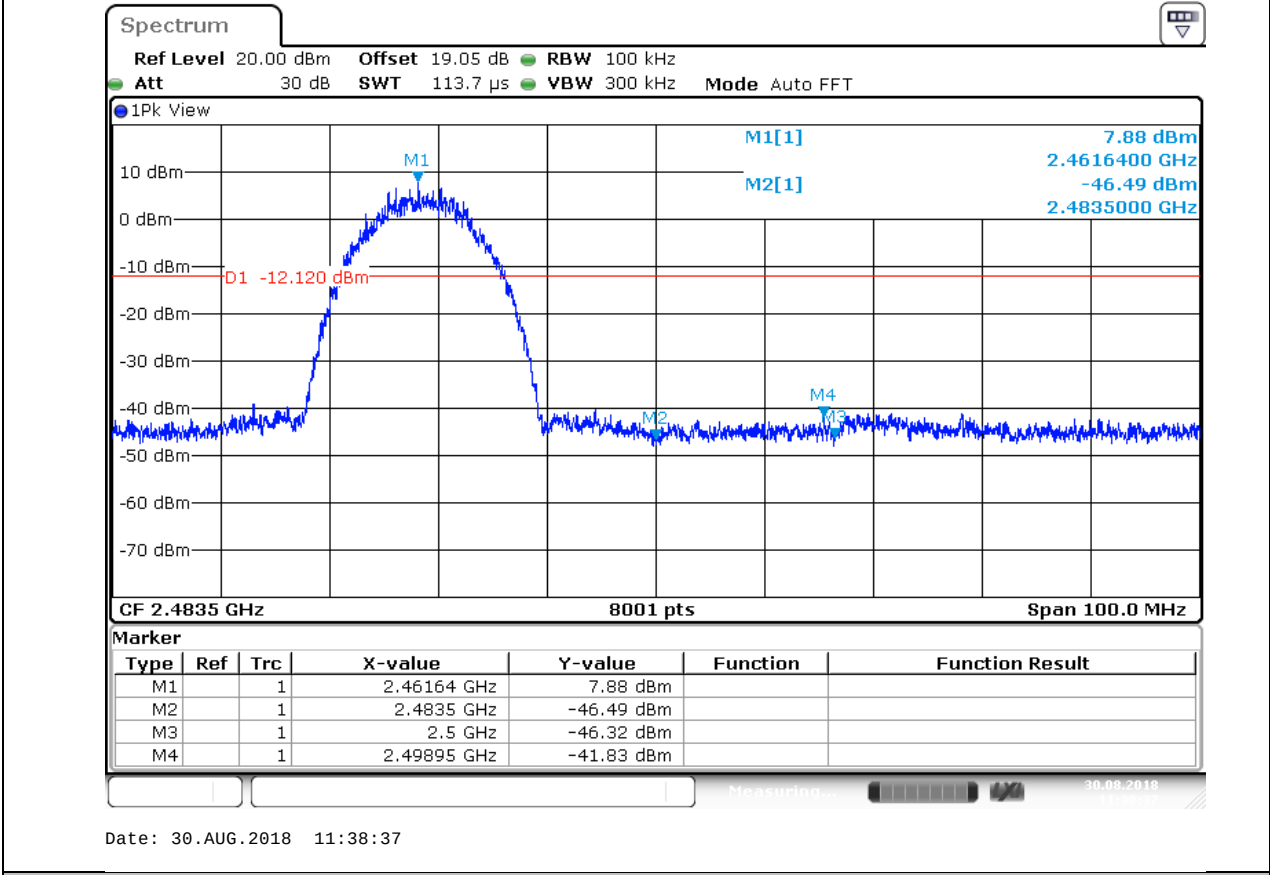
Band-edge for RF Conducted Emissions_11N40SISO_2452_Ant1



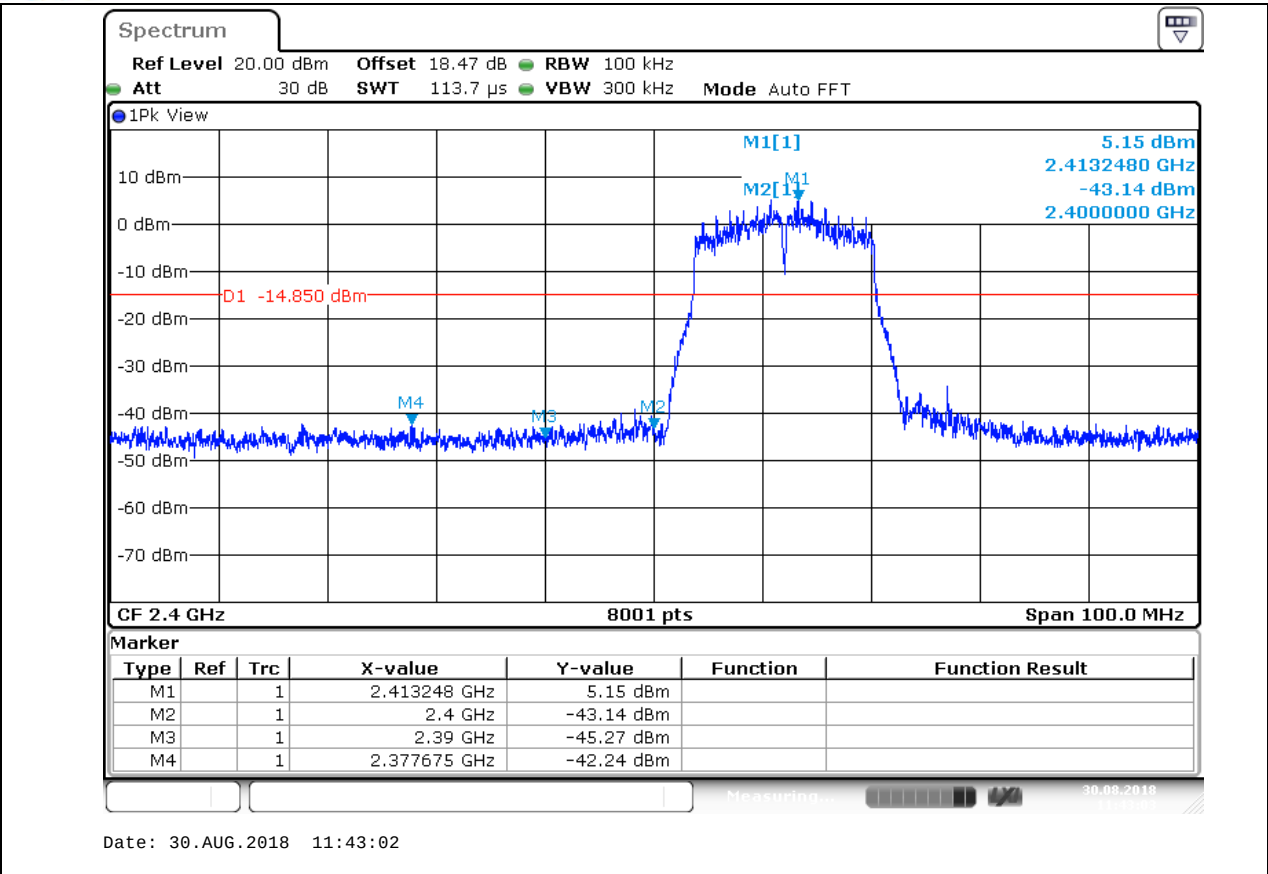
Band-edge for RF Conducted Emissions_11B_2412_Ant2



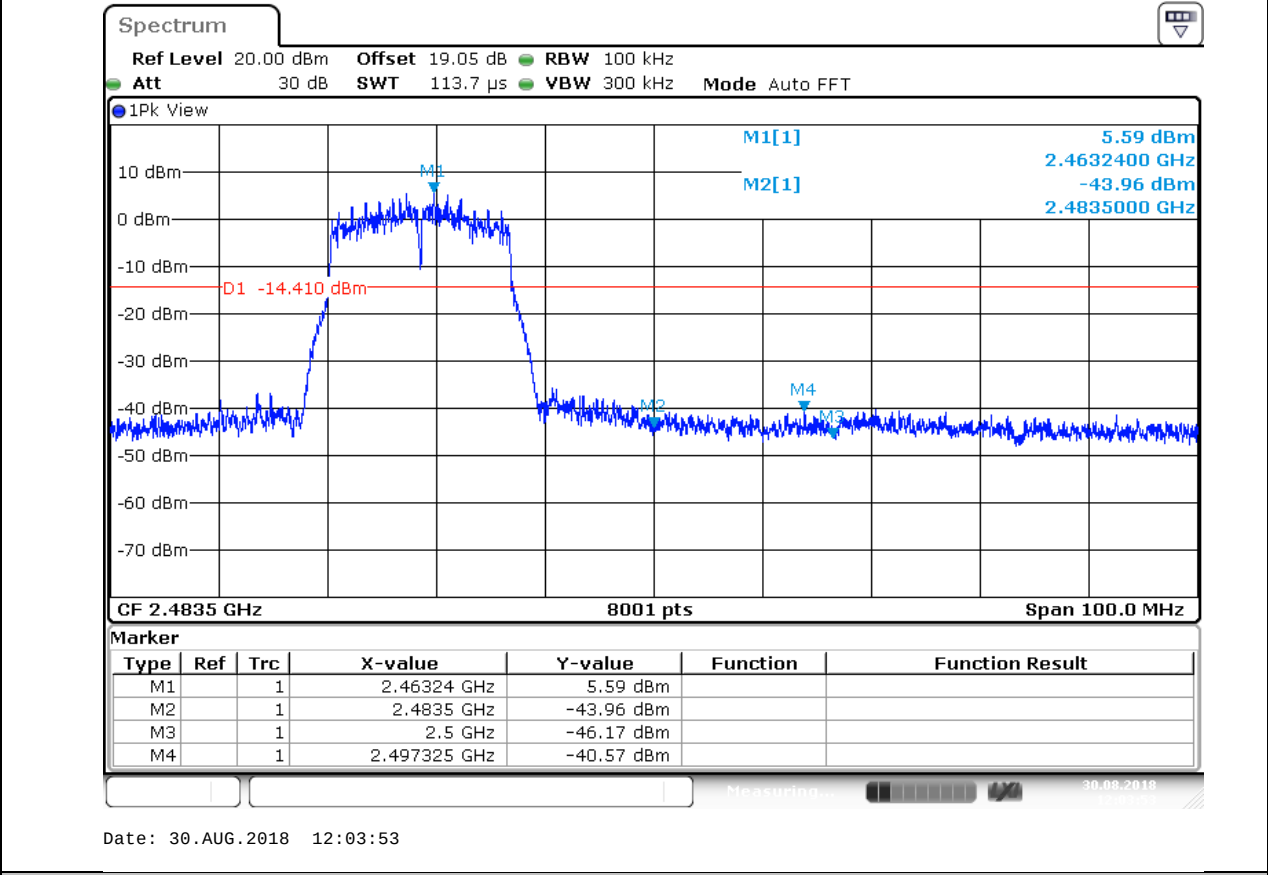
Band-edge for RF Conducted Emissions_11B_2462_Ant2



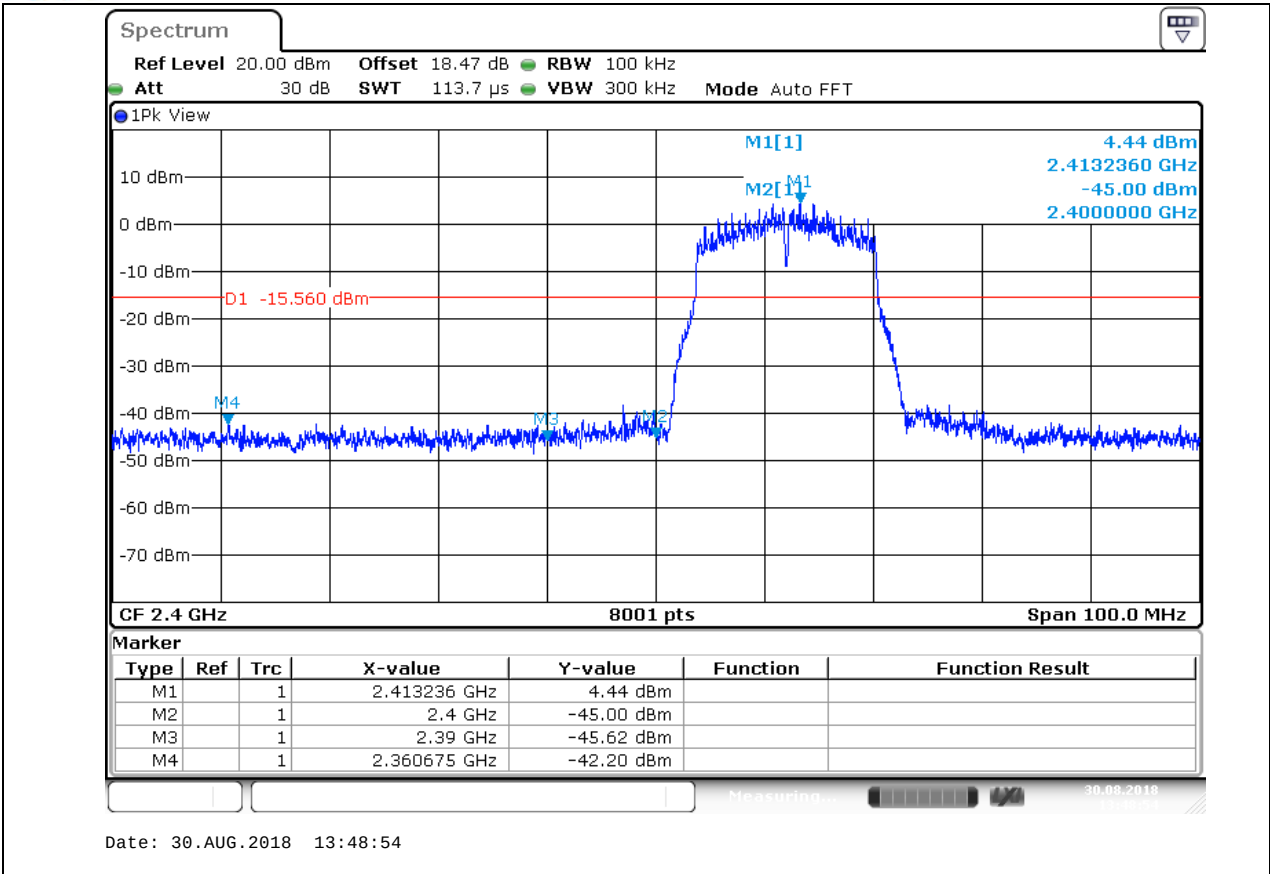
Band-edge for RF Conducted Emissions_11G_2412_Ant2



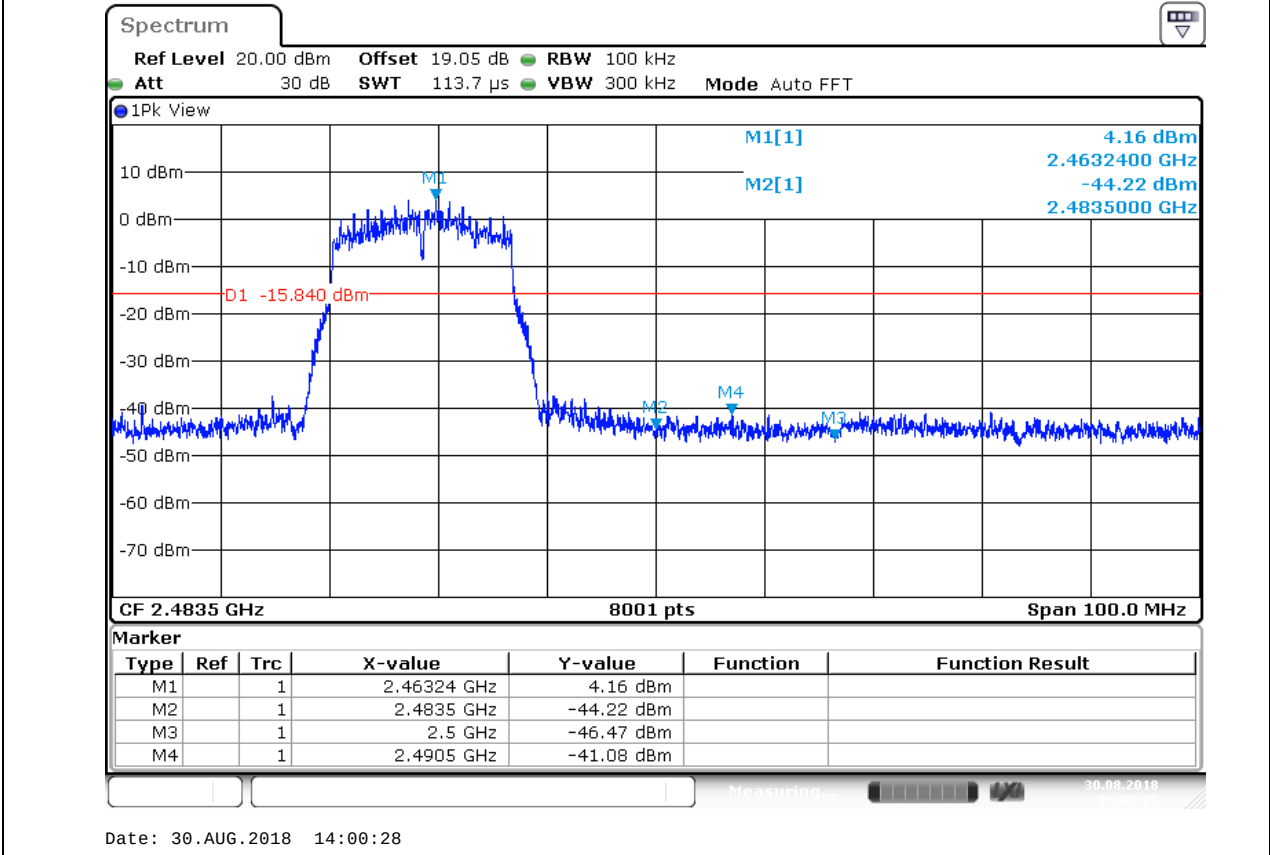
Band-edge for RF Conducted Emissions_11G_2462_Ant2



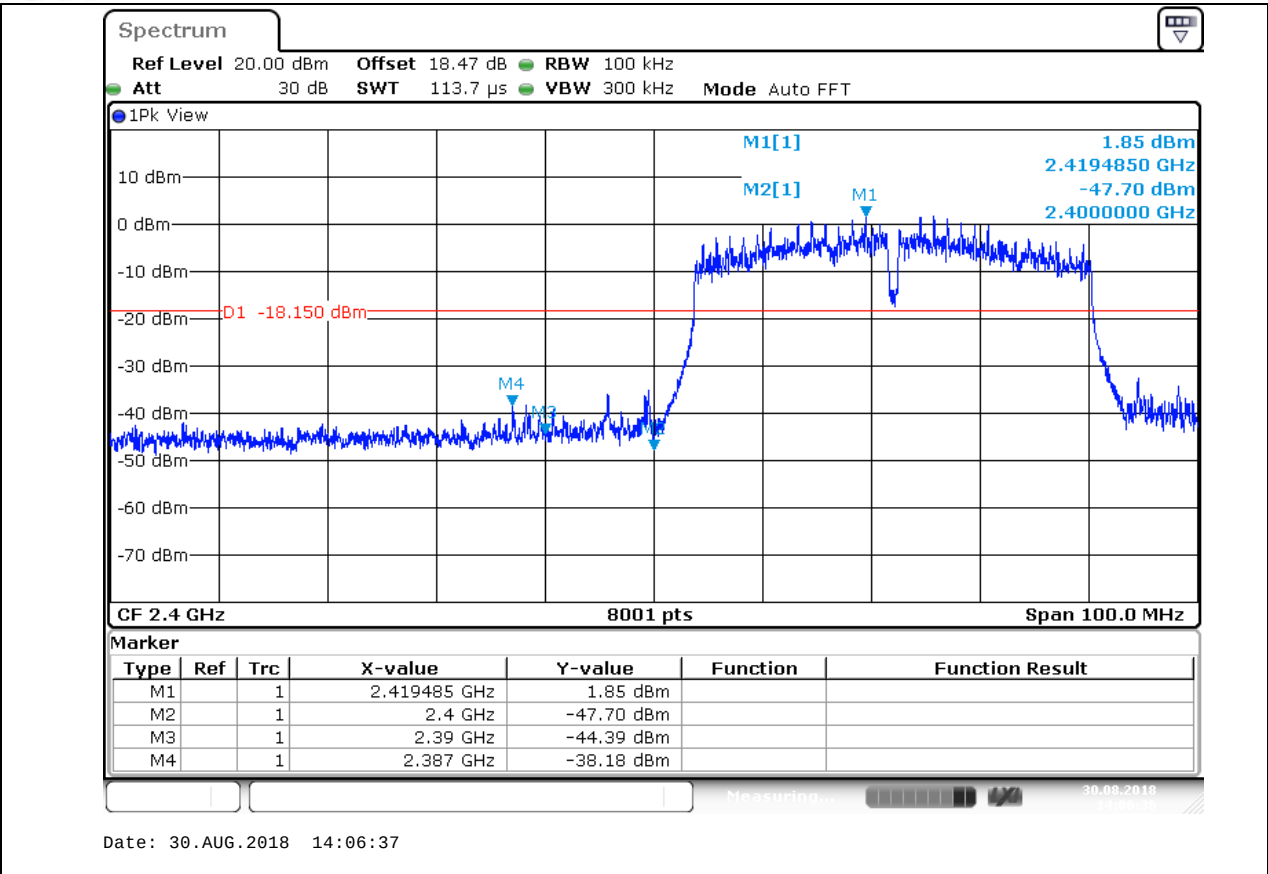
Band-edge for RF Conducted Emissions_11N20SISO_2412_Ant2



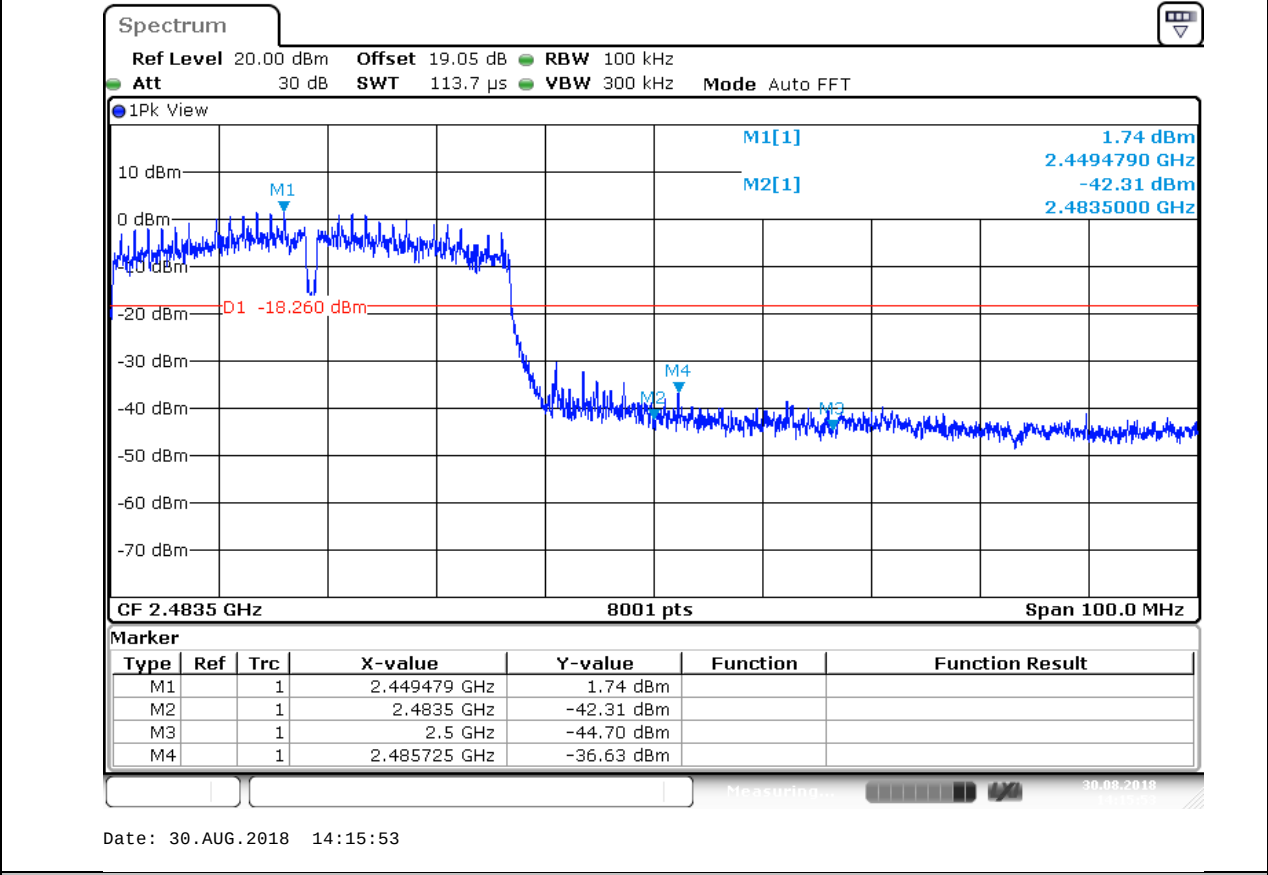
Band-edge for RF Conducted Emissions_11N20SISO_2462_Ant2



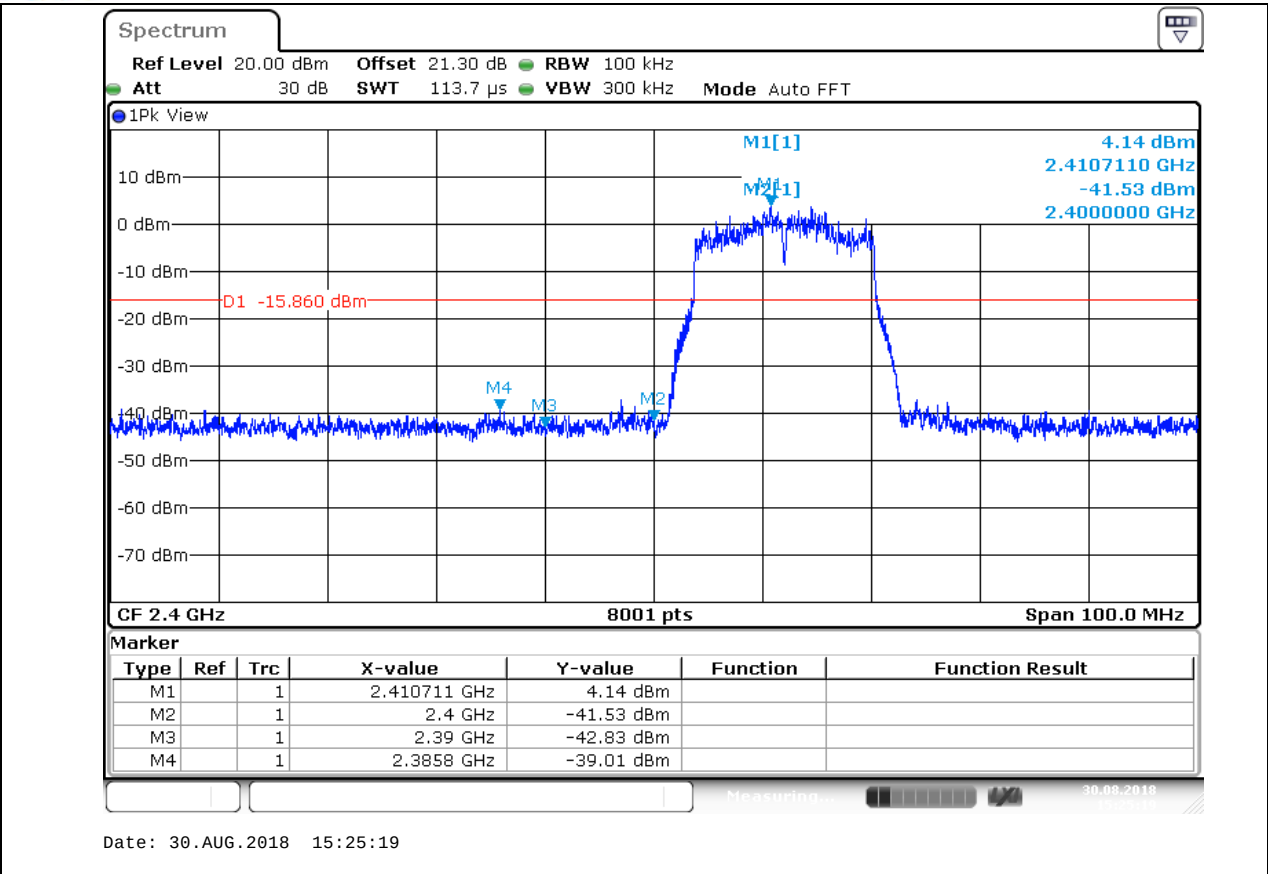
Band-edge for RF Conducted Emissions_11N40SISO_2422_Ant2



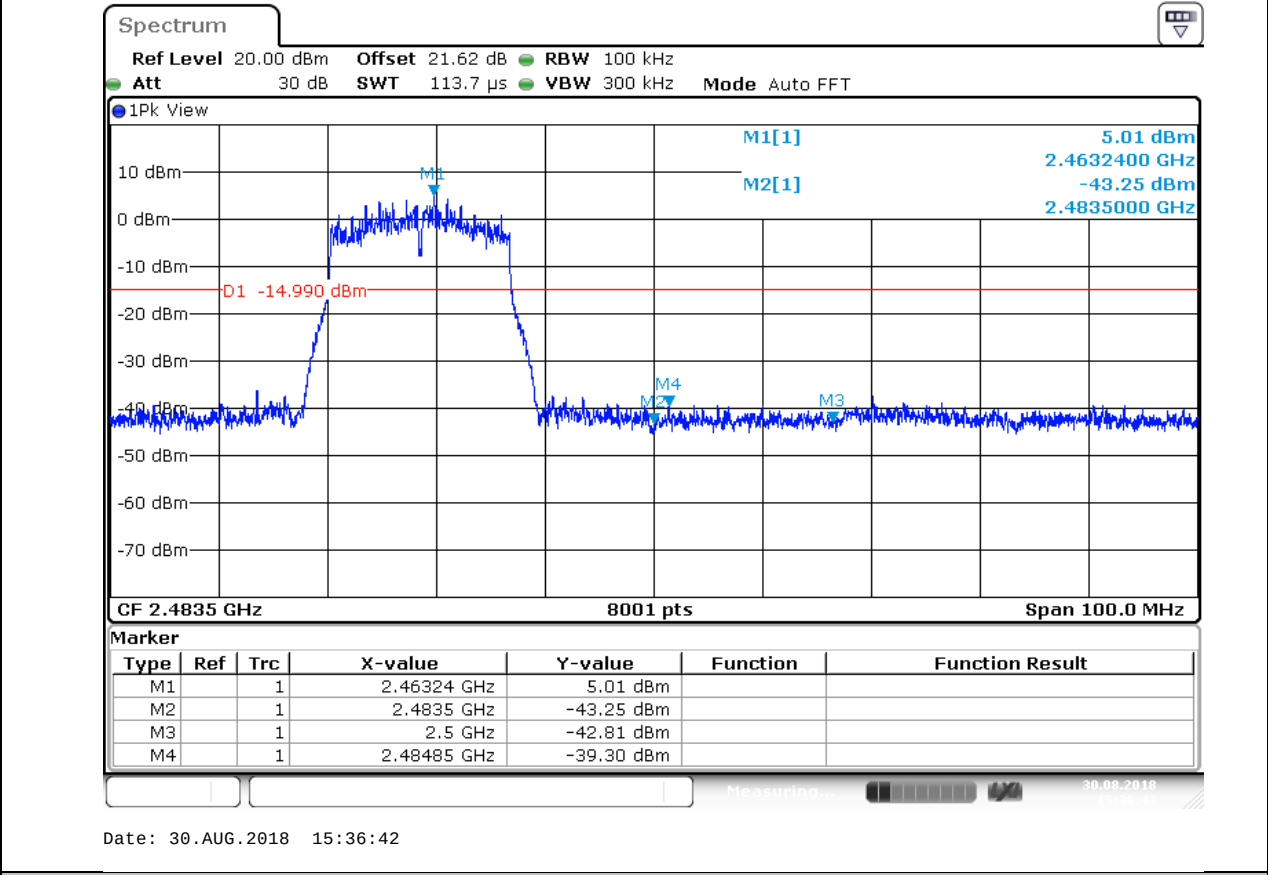
Band-edge for RF Conducted Emissions_11N40SISO_2452_Ant2



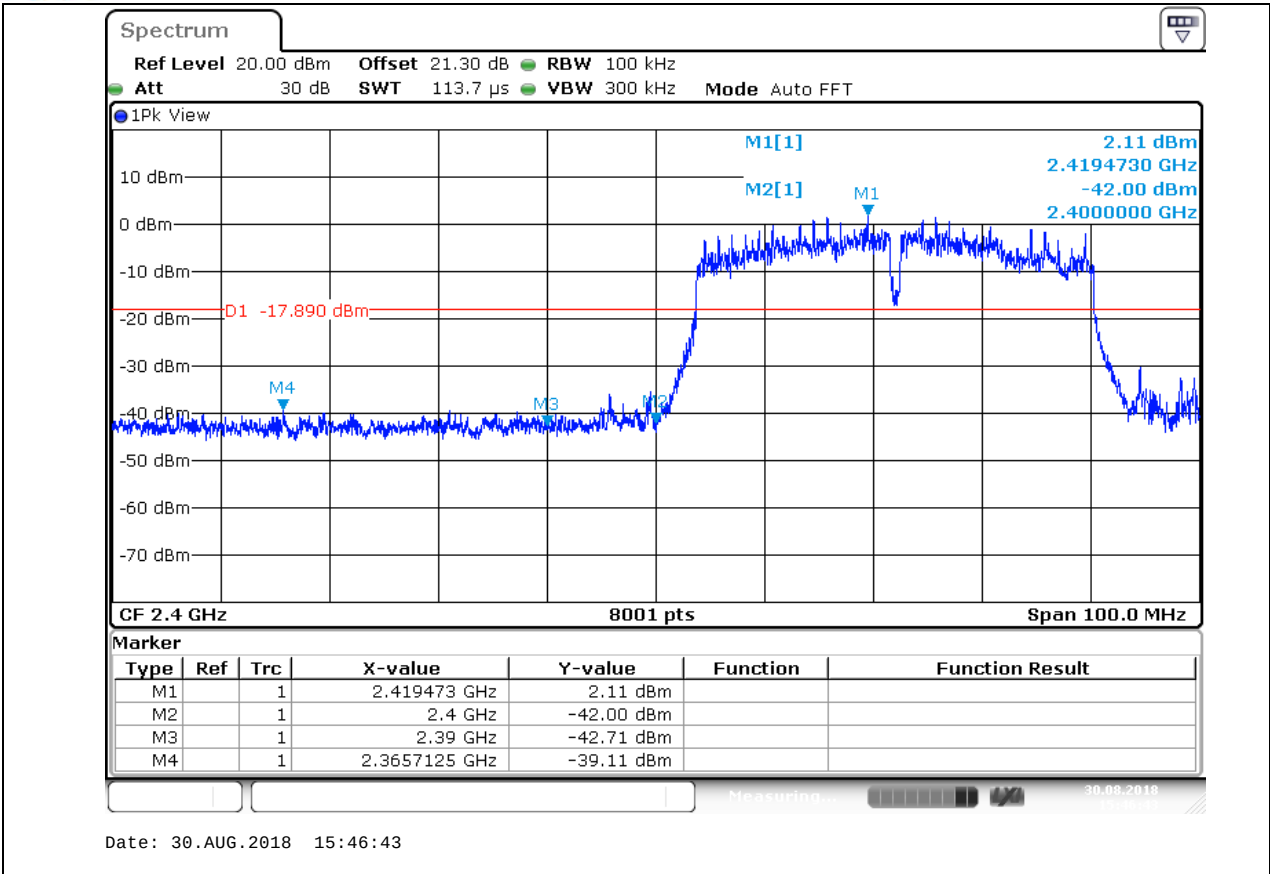
Band-edge for RF Conducted Emissions_11N20MIMO_2412_Ant1+2



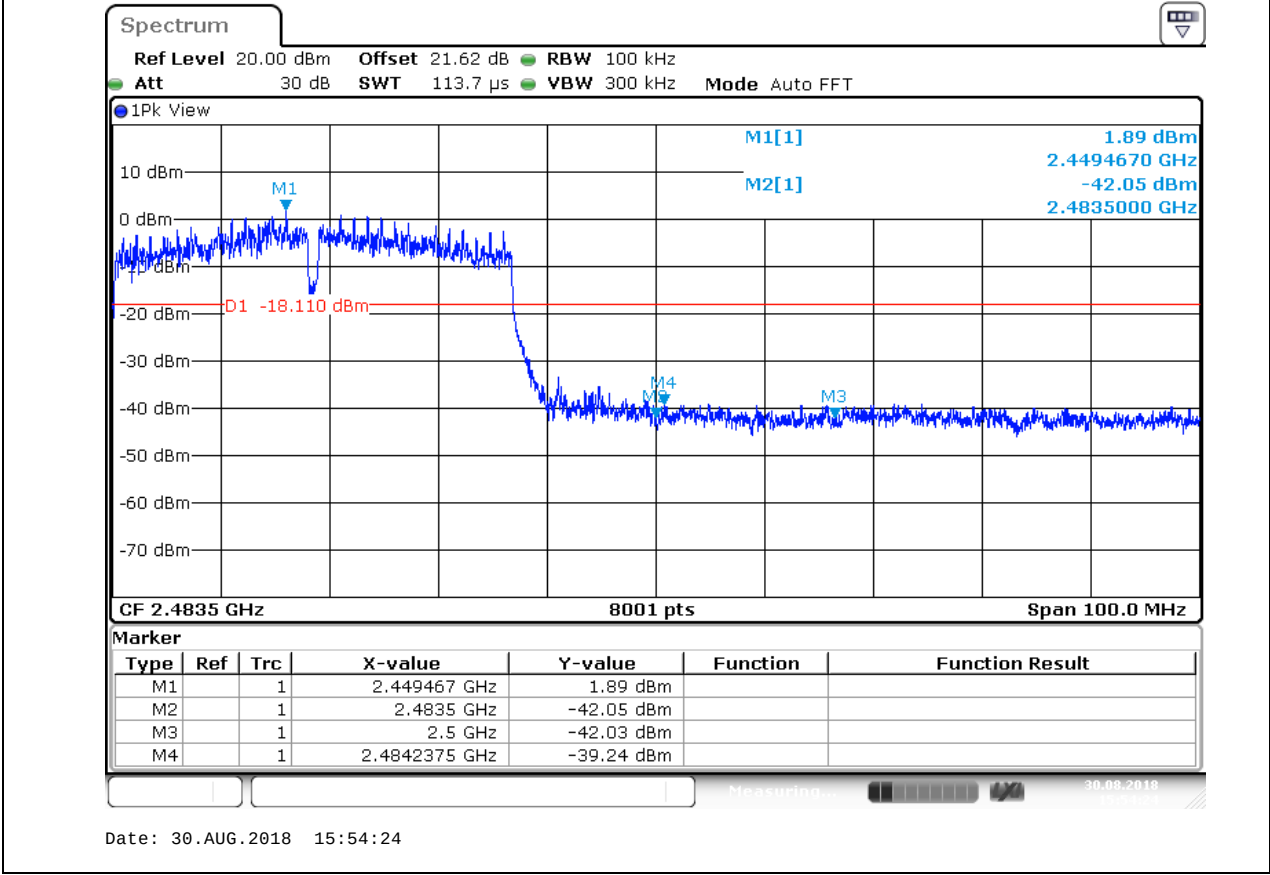
Band-edge for RF Conducted Emissions_11N20MIMO_2462_Ant1+2



Band-edge for RF Conducted Emissions_11N40MIMO_2422_Ant1+2



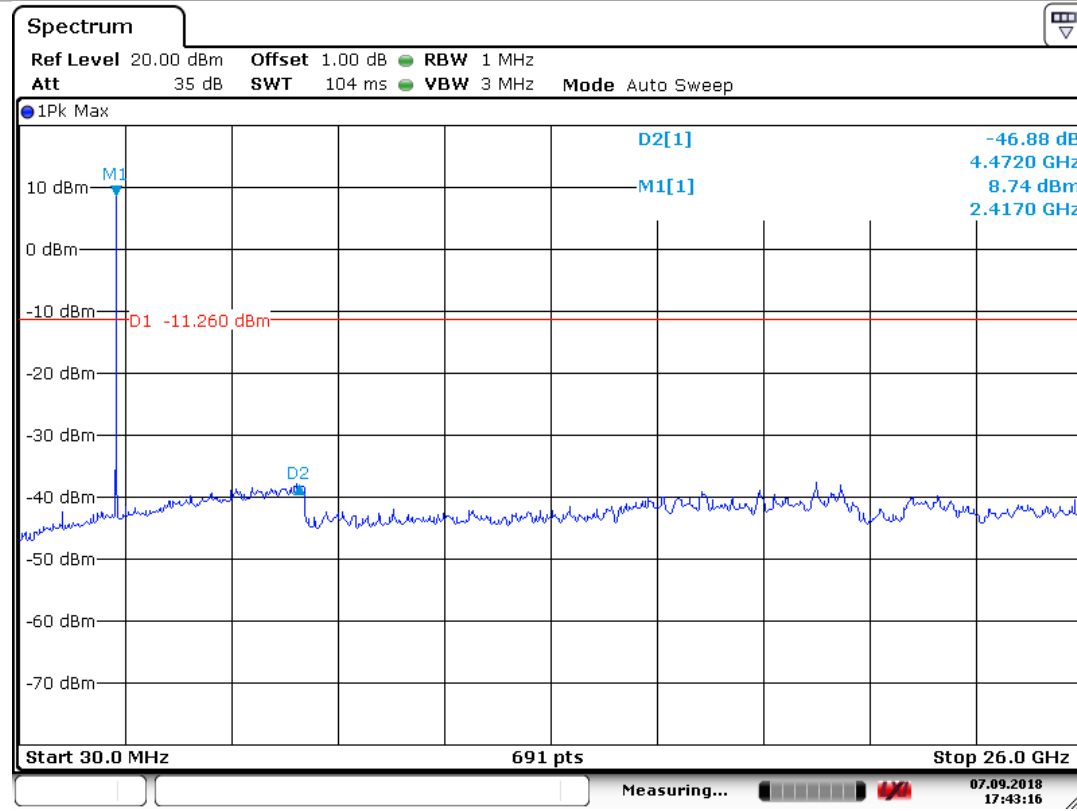
Band-edge for RF Conducted Emissions_11N40MIMO_2452_Ant1+2





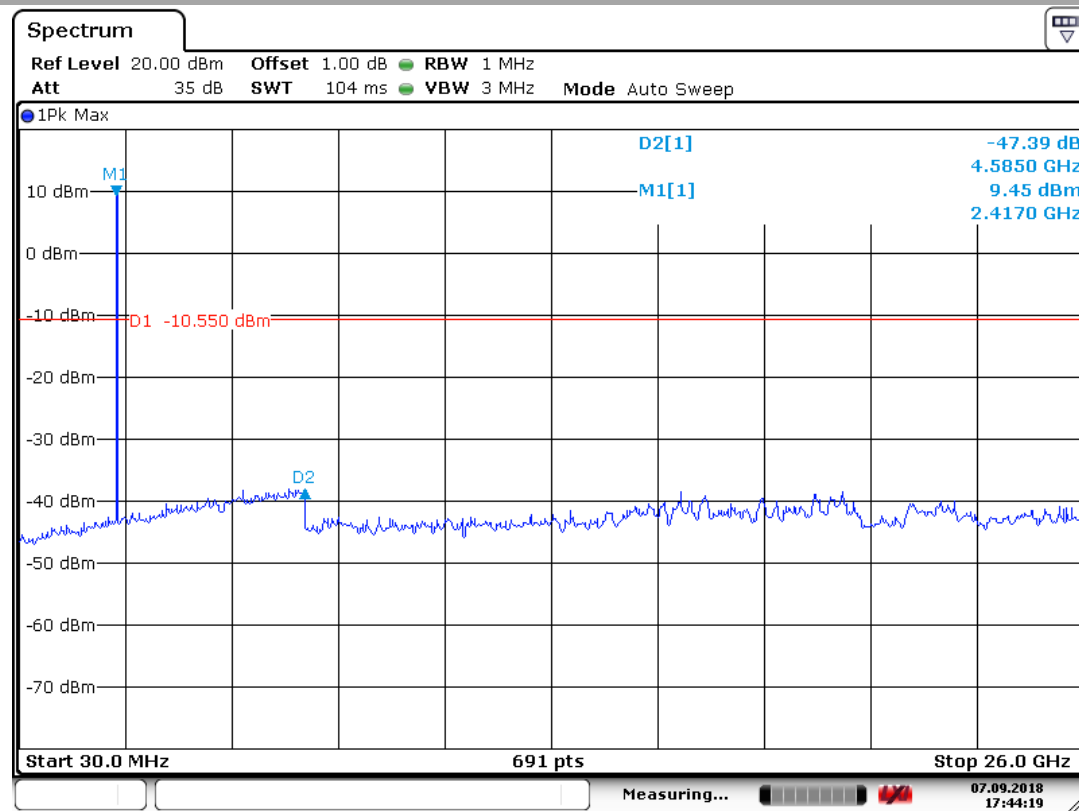
6. RF Conducted Spurious Emissions

RF Conducted Spurious Emissions_11B_2412_Ant1



Date: 7.SEP.2018 17:43:16

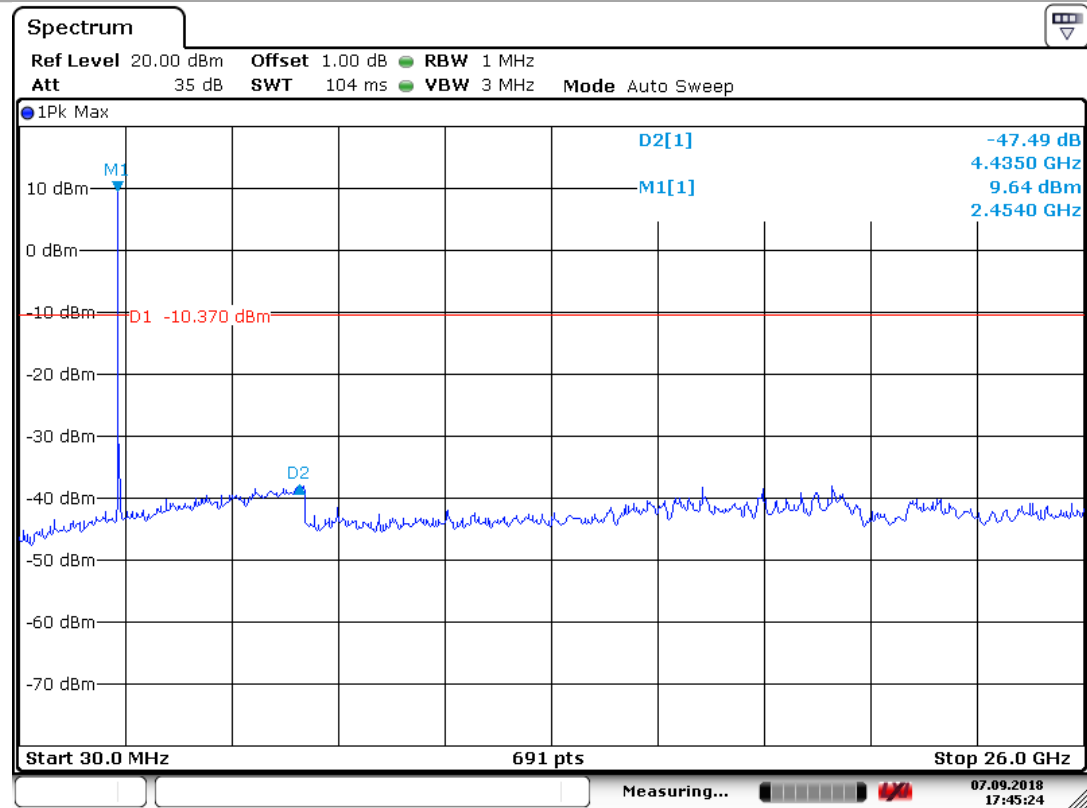
RF Conducted Spurious Emissions_11B_2437_Ant1



Date: 7.SEP.2018 17:44:19

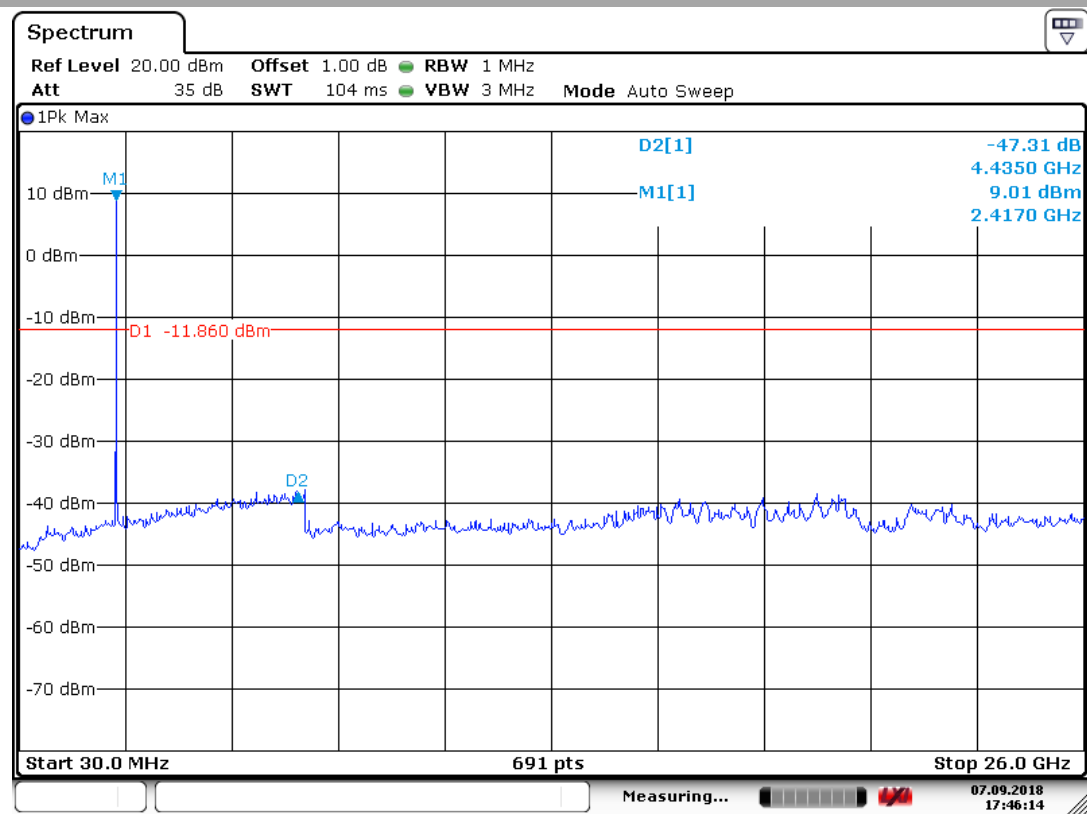


RF Conducted Spurious Emissions_11B_2462_Ant1



Date: 7.SEP.2018 17:45:24

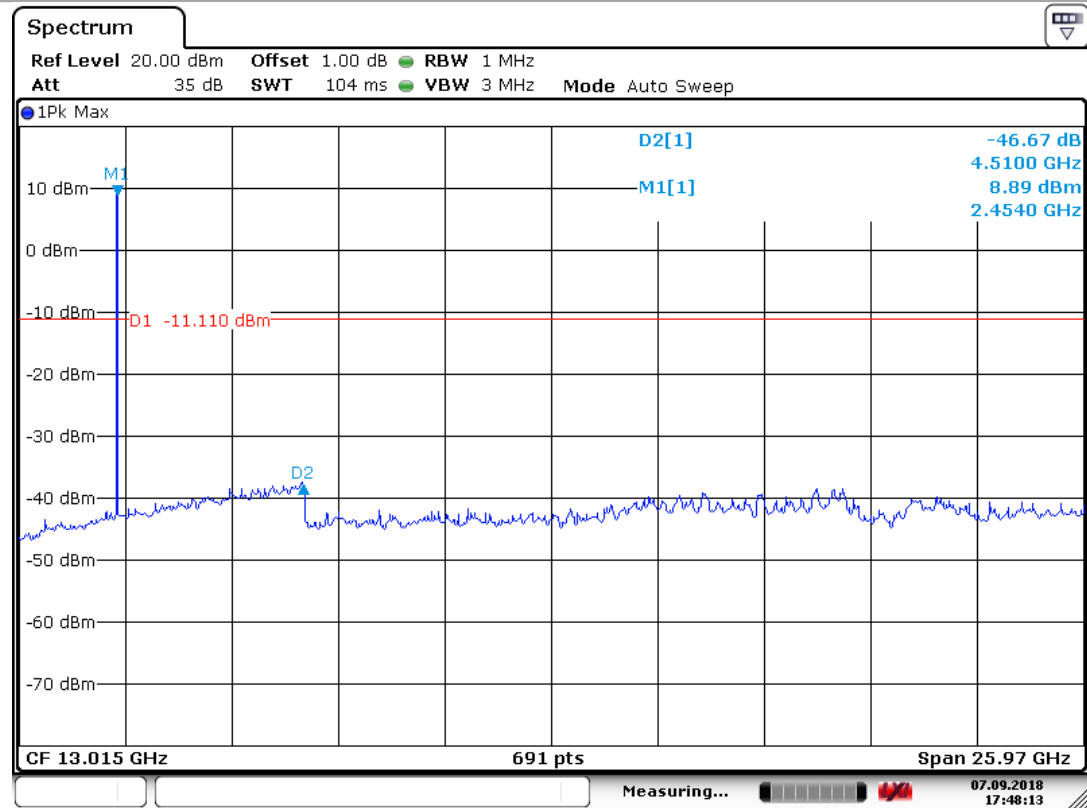
RF Conducted Spurious Emissions_11G_2412_Ant1



Date: 7.SEP.2018 17:46:14

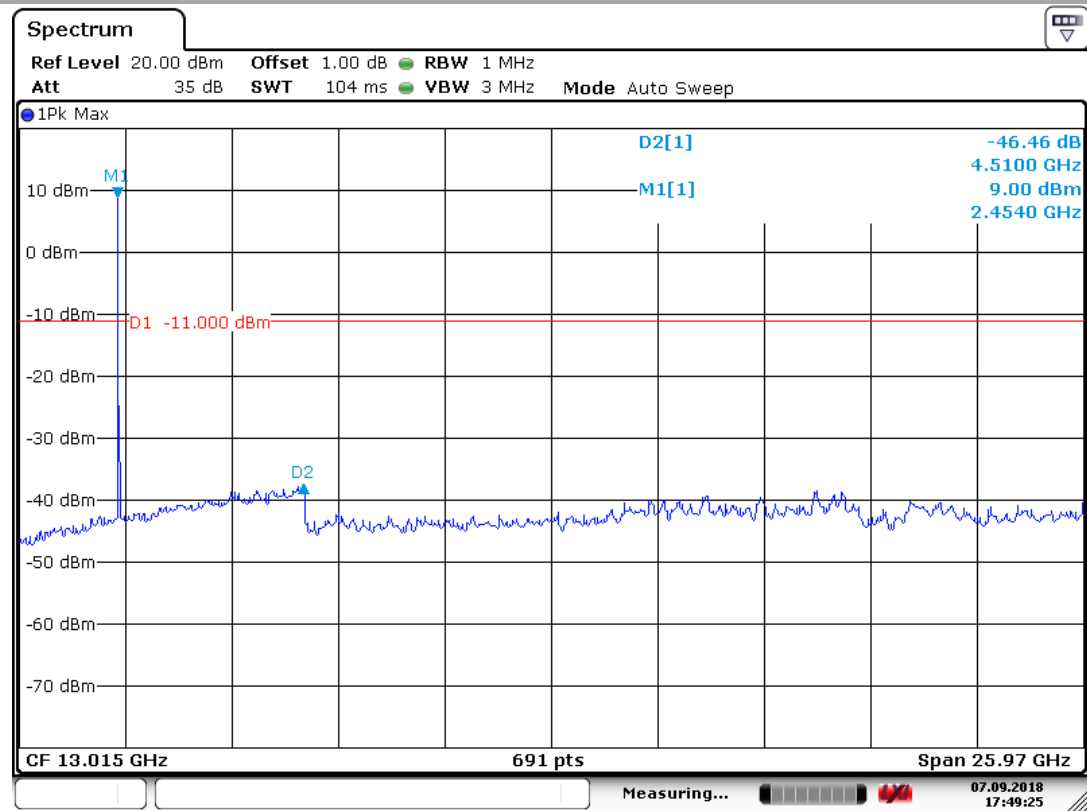


RF Conducted Spurious Emissions_11G_2437_Ant1



Date: 7.SEP.2018 17:48:13

RF Conducted Spurious Emissions_11G_2462_Ant1



Date: 7.SEP.2018 17:49:25



Spectrum

Ref Level 20.00 dBm Offset 1.00 dB RBW 1 MHz
 Att 35 dB SWT 104 ms VBW 3 MHz Mode Auto Sweep

1Pk Max

M1 -47.69 dBm
 4.5100 GHz
 9.57 dBm
 2.4170 GHz

D2[1]
 M1[1]

D1 -10.430 dBm

D2

CF 13.015 GHz 691 pts Span 25.97 GHz

Measuring... 07.09.2018 17:50:34

Spectrum

Ref Level 20.00 dBm Offset 1.00 dB RBW 1 MHz
 Att 35 dB SWT 104 ms VBW 3 MHz Mode Auto Sweep

1Pk Max

M1 -46.83 dB
 4.0590 GHz
 9.20 dBm
 2.4540 GHz

D2[1]
 M1[1]

D1 -10.820 dBm

D2

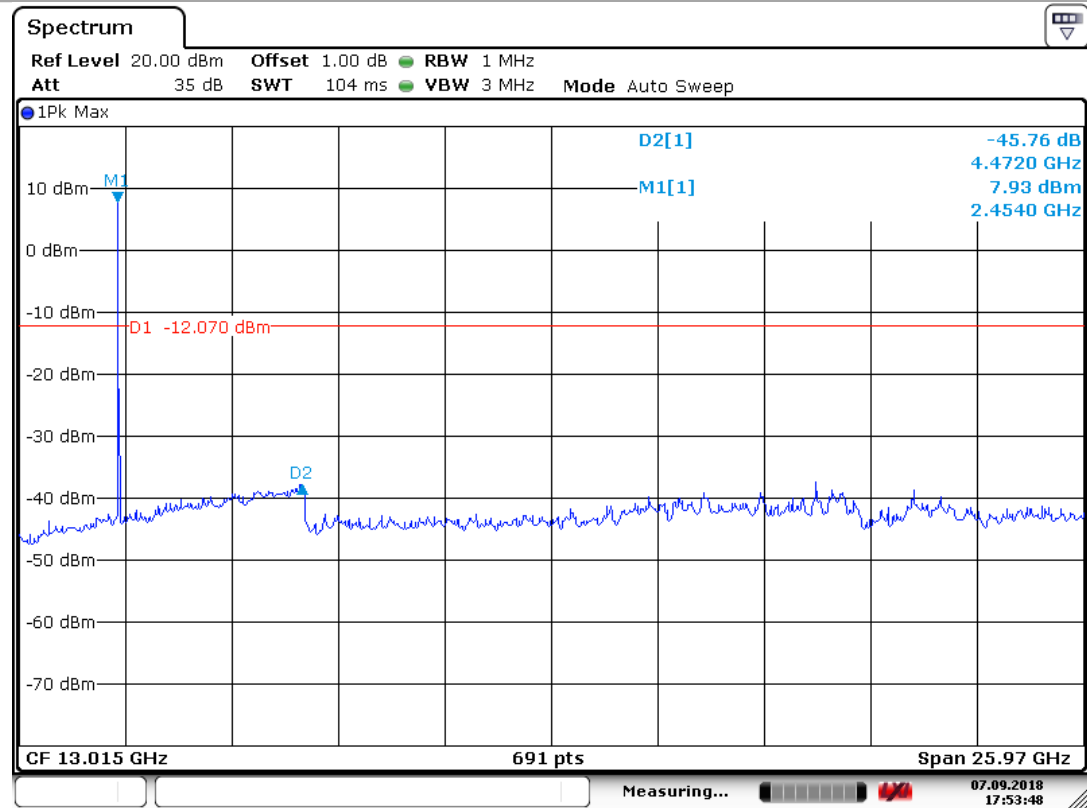
CF 13.015 GHz 691 pts Span 25.97 GHz

Measuring... 07.09.2018 17:53:04

Date: 7.SEP.2018 17:53:04

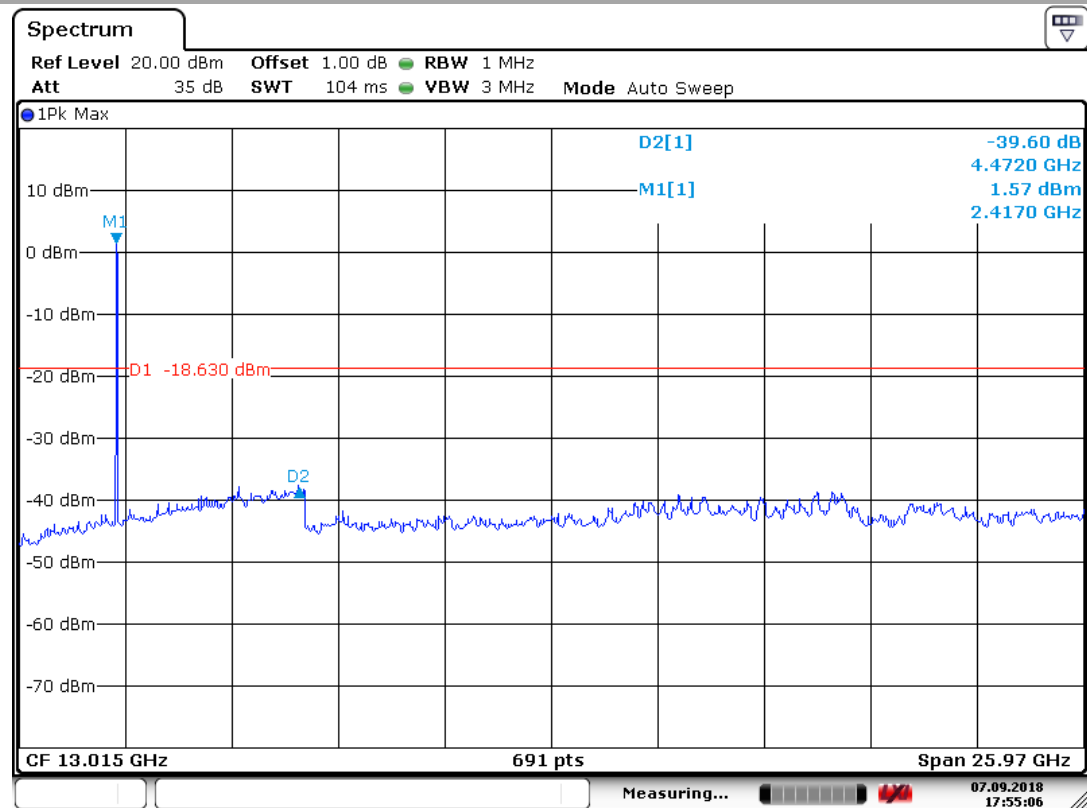


RF Conducted Spurious Emissions_11N20_2462_Ant1



Date: 7.SEP.2018 17:53:48

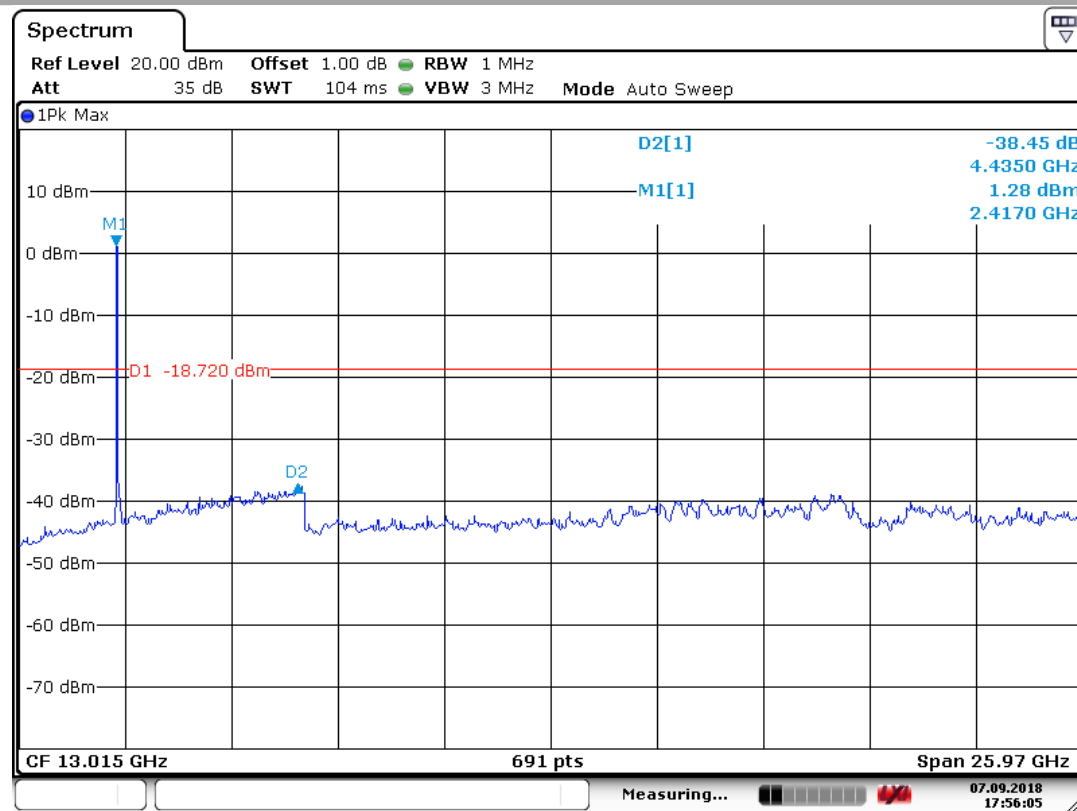
RF Conducted Spurious Emissions_11N40_2422_Ant1



Date: 7.SEP.2018 17:55:06

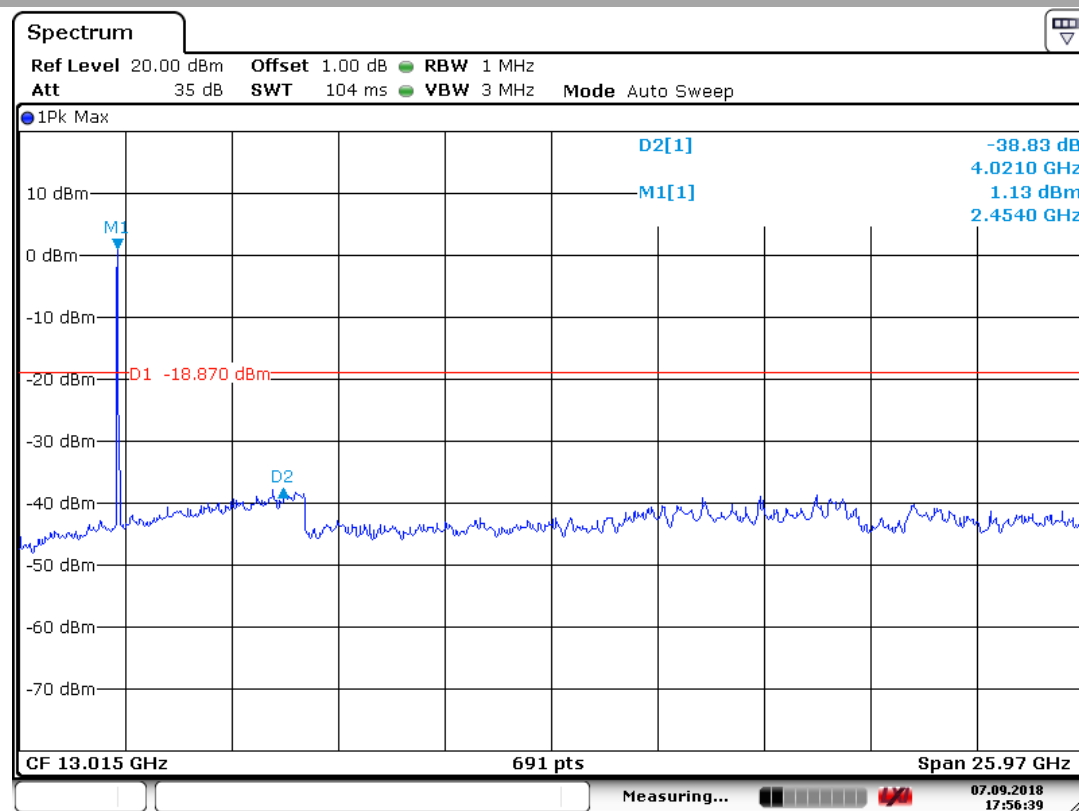


RF Conducted Spurious Emissions_11N40_2437_Ant1



Date: 7.SEP.2018 17:56:05

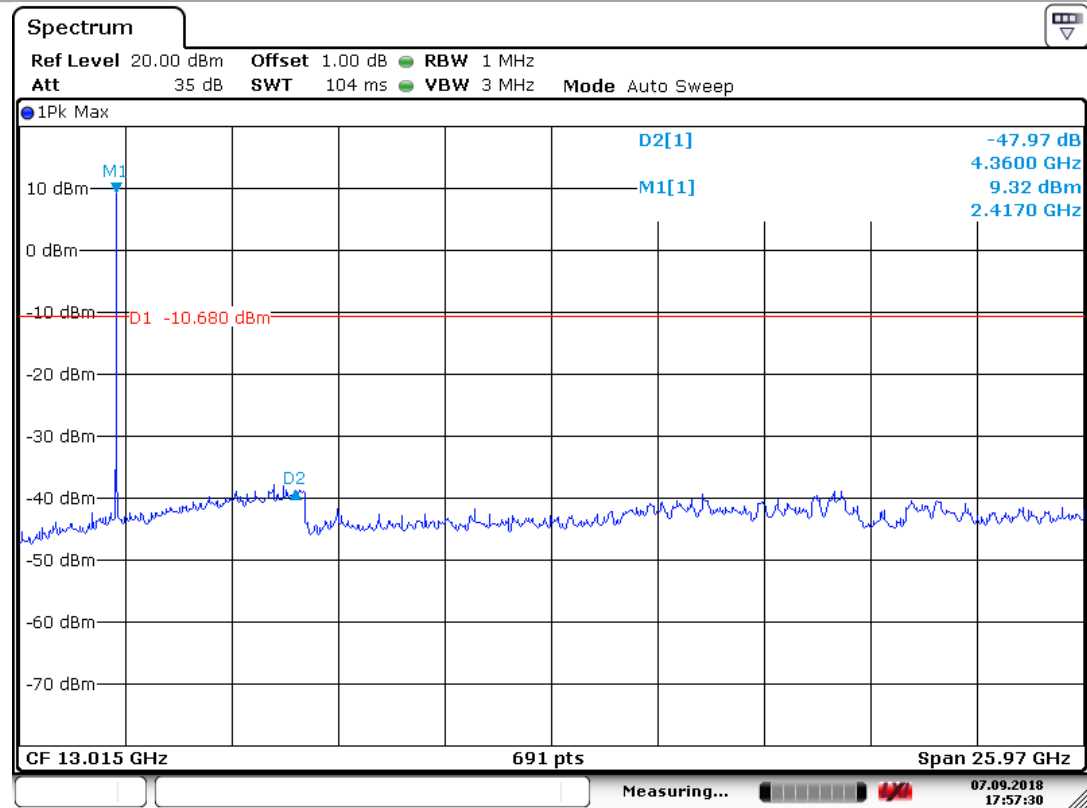
RF Conducted Spurious Emissions_11N40_2452_Ant1



Date: 7.SEP.2018 17:56:39

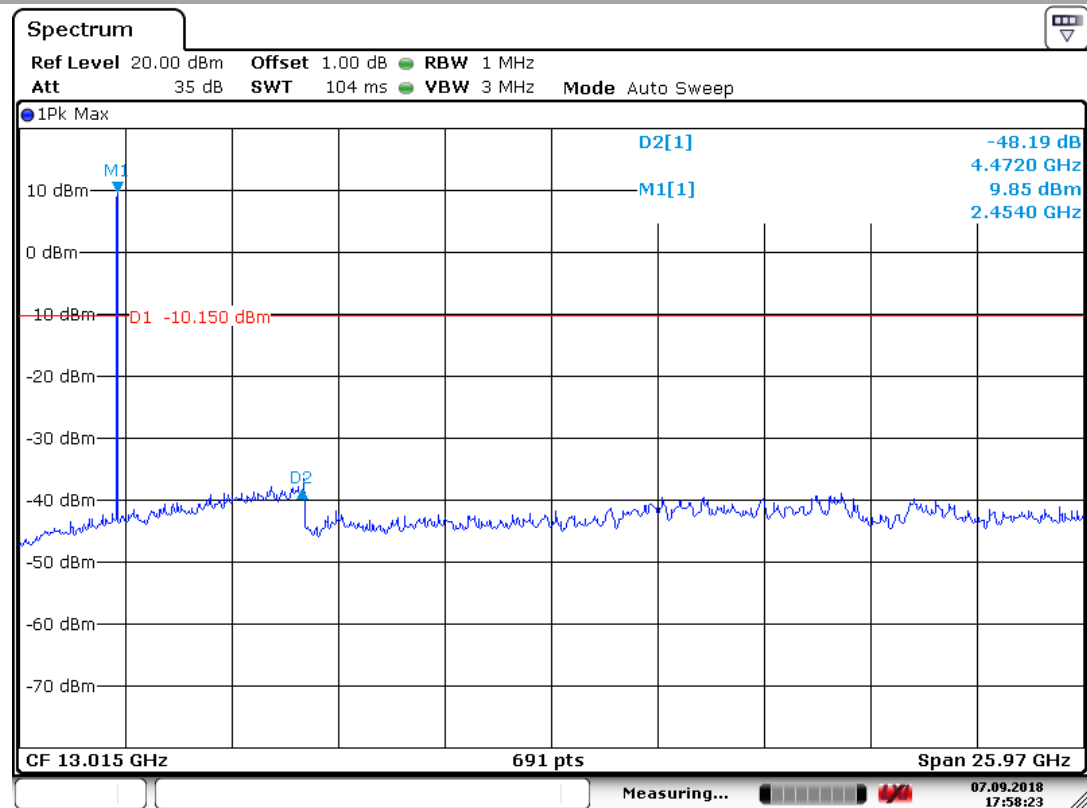


RF Conducted Spurious Emissions_11B_2412_Ant2



Date: 7.SEP.2018 17:57:30

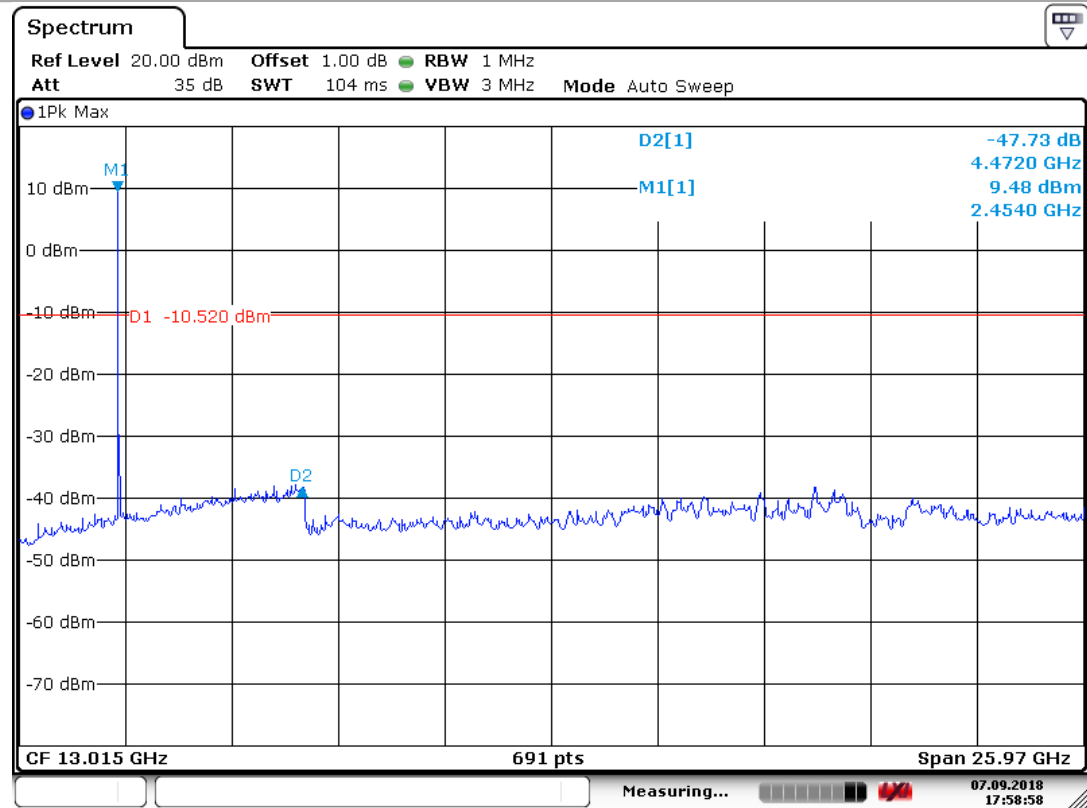
RF Conducted Spurious Emissions_11B_2437_Ant2



Date: 7.SEP.2018 17:58:23

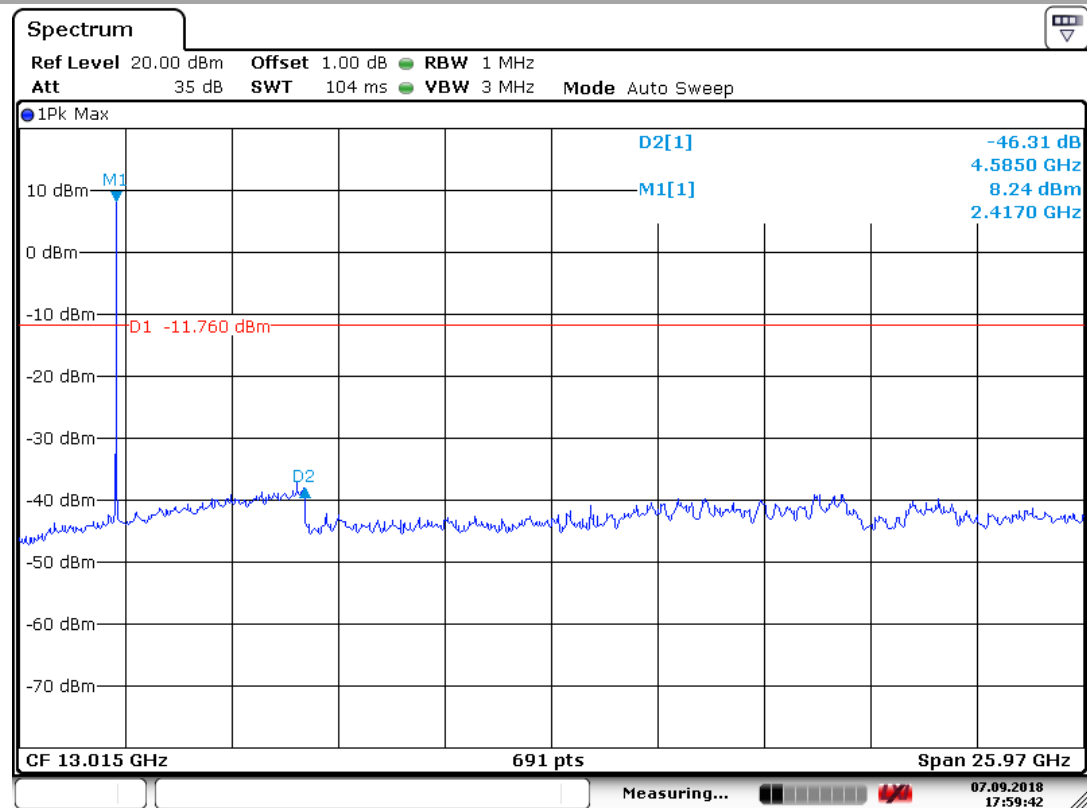


RF Conducted Spurious Emissions_11B_2462_Ant2



Date: 7.SEP.2018 17:58:58

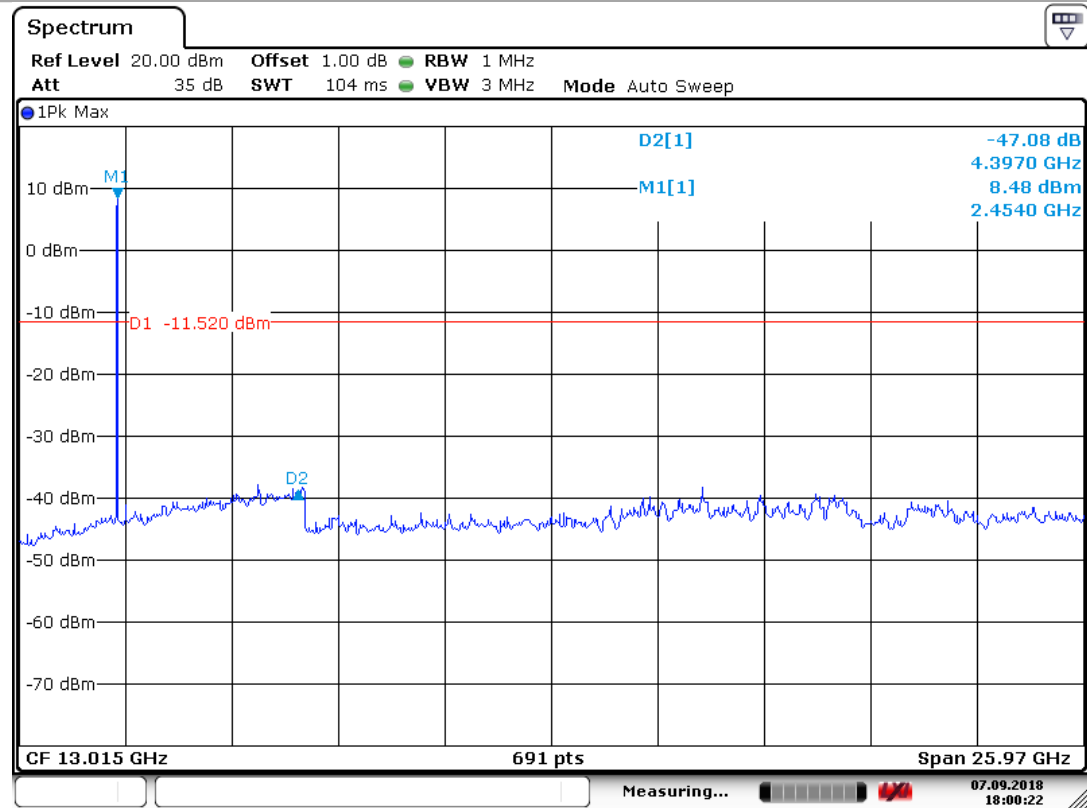
RF Conducted Spurious Emissions_11G_2412_Ant2



Date: 7.SEP.2018 17:59:42

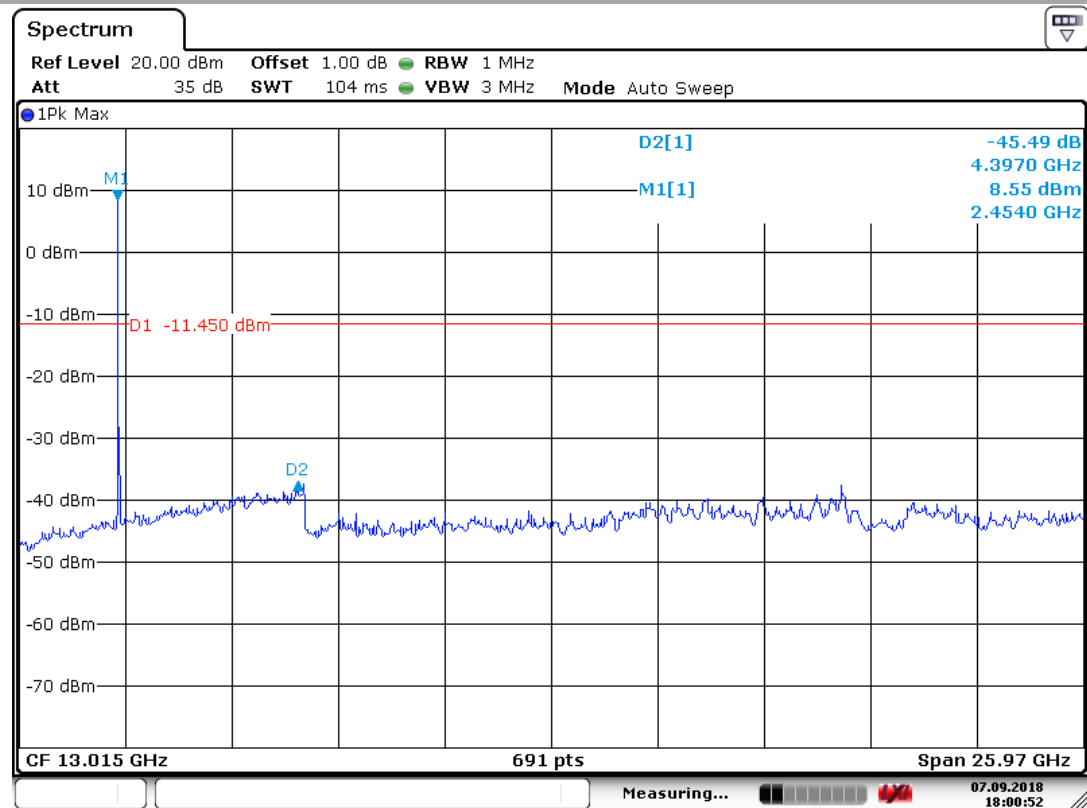


RF Conducted Spurious Emissions_11G_2437_Ant2



Date: 7.SEP.2018 18:00:22

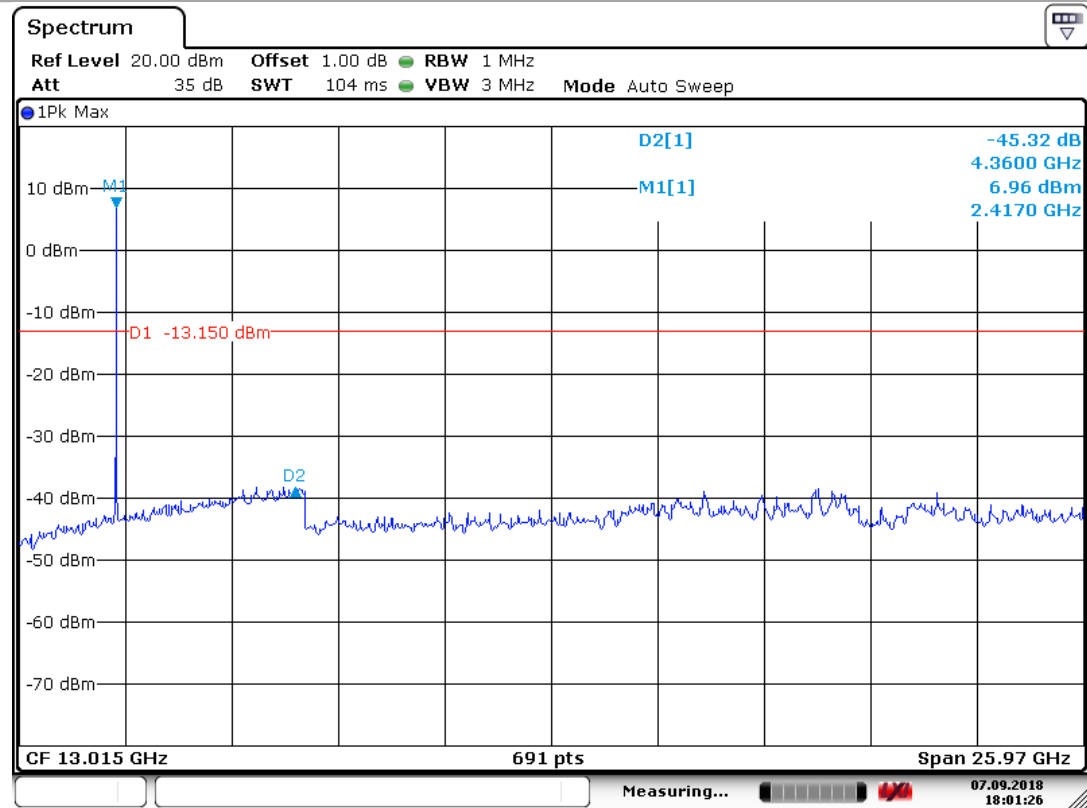
RF Conducted Spurious Emissions_11G_2462_Ant2



Date: 7.SEP.2018 18:00:53

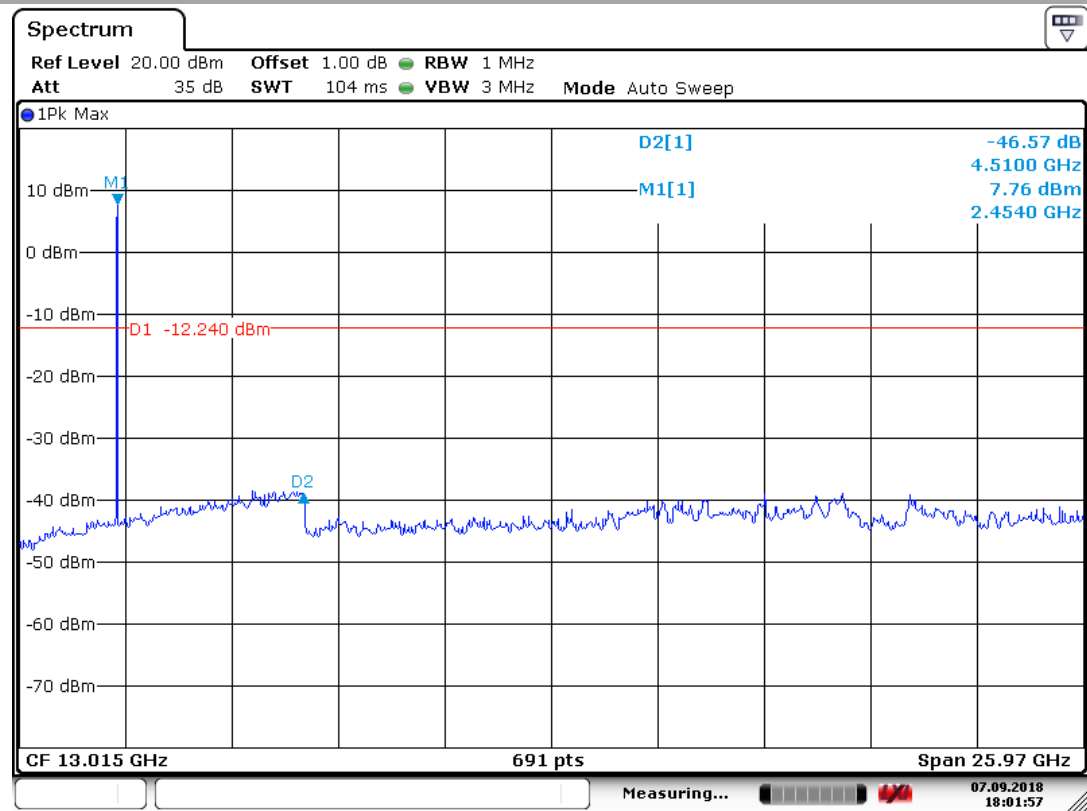


RF Conducted Spurious Emissions_11N20_2412_Ant2



Date: 7.SEP.2018 18:01:26

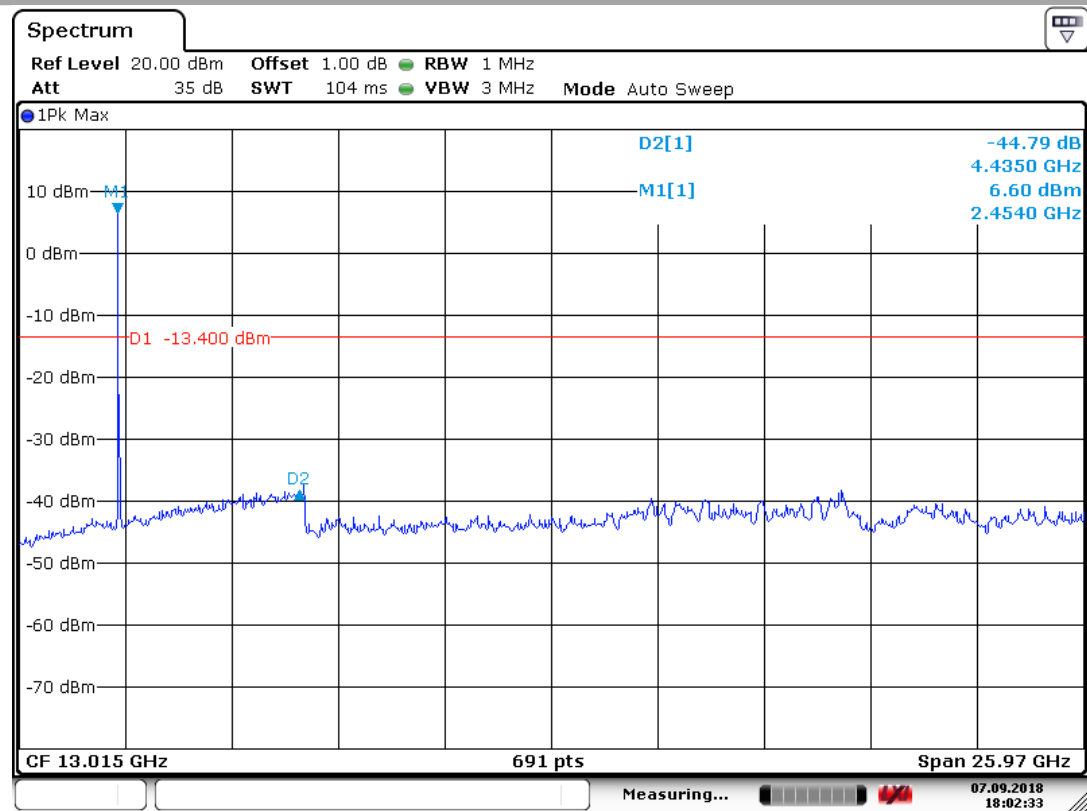
RF Conducted Spurious Emissions_11N20_2437_Ant2



Date: 7.SEP.2018 18:01:57

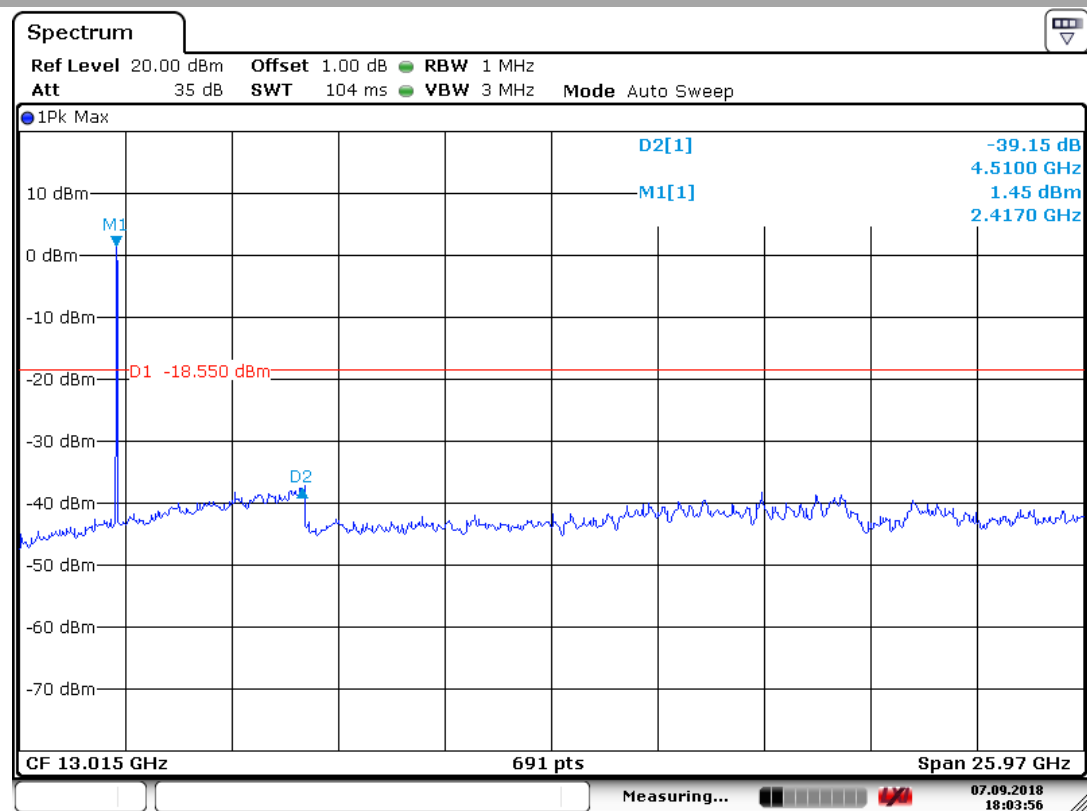


RF Conducted Spurious Emissions_11N20_2462_Ant2



Date: 7.SEP.2018 18:02:33

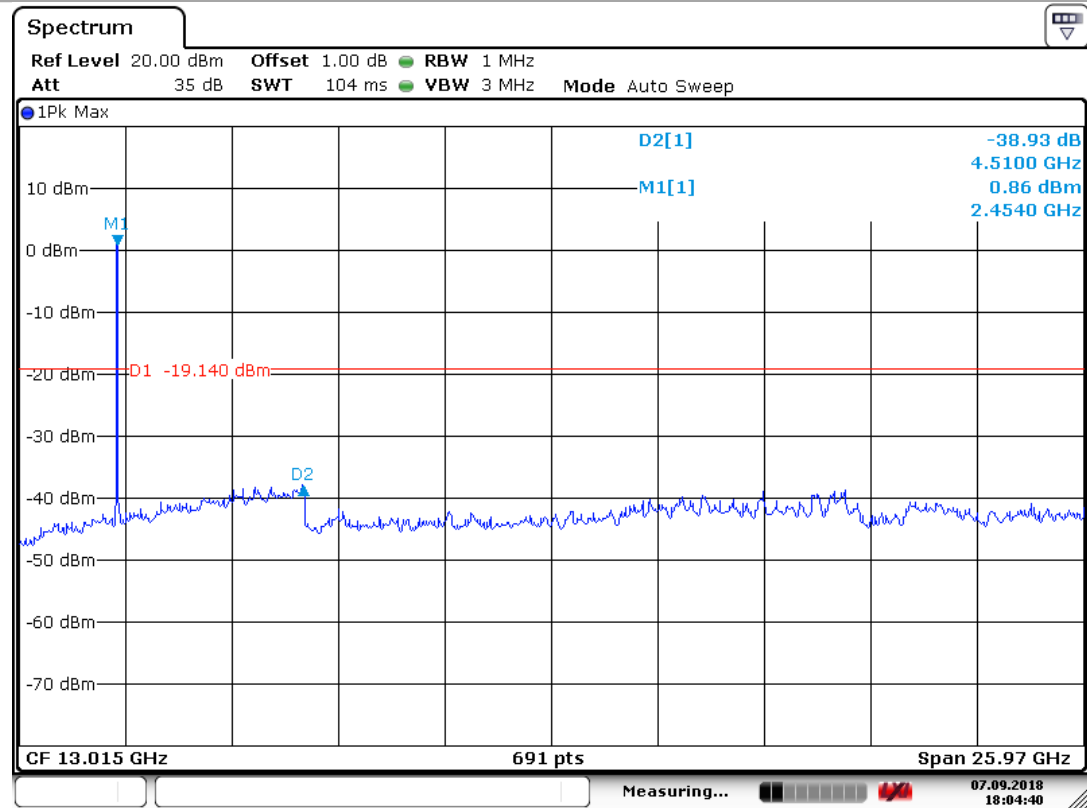
RF Conducted Spurious Emissions_11N40_2422_Ant2



Date: 7.SEP.2018 18:03:56

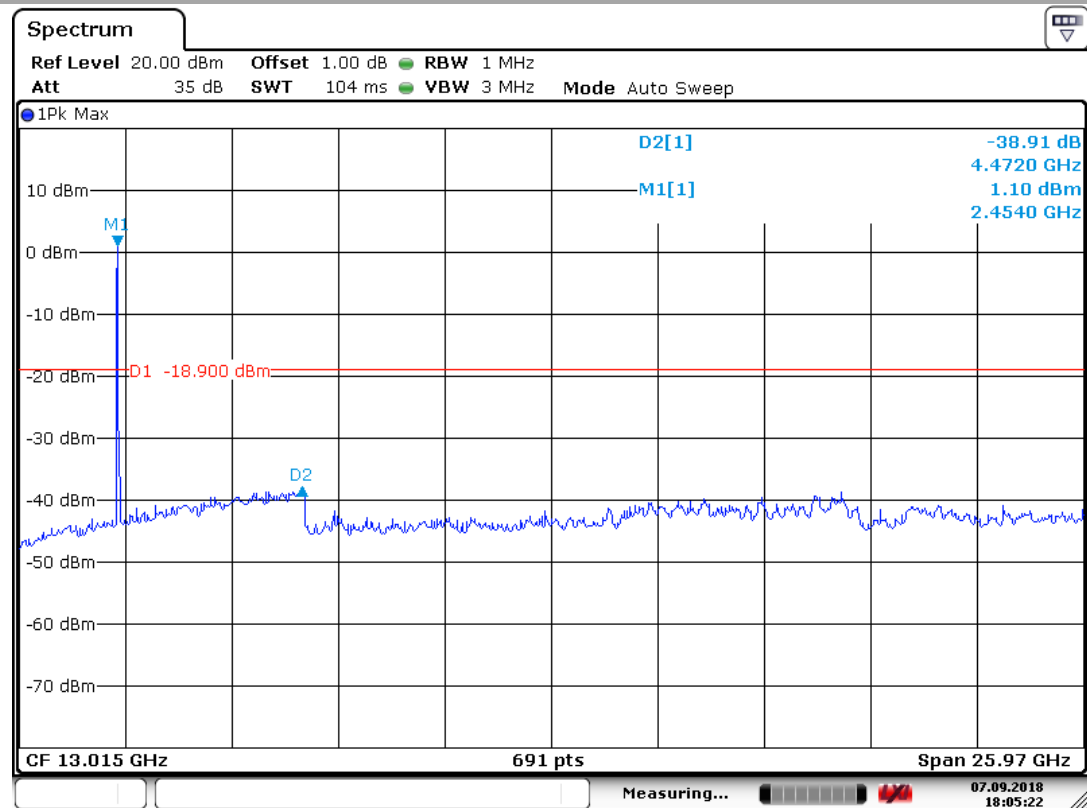


RF Conducted Spurious Emissions_11N40_2437_Ant2



Date: 7.SEP.2018 18:04:40

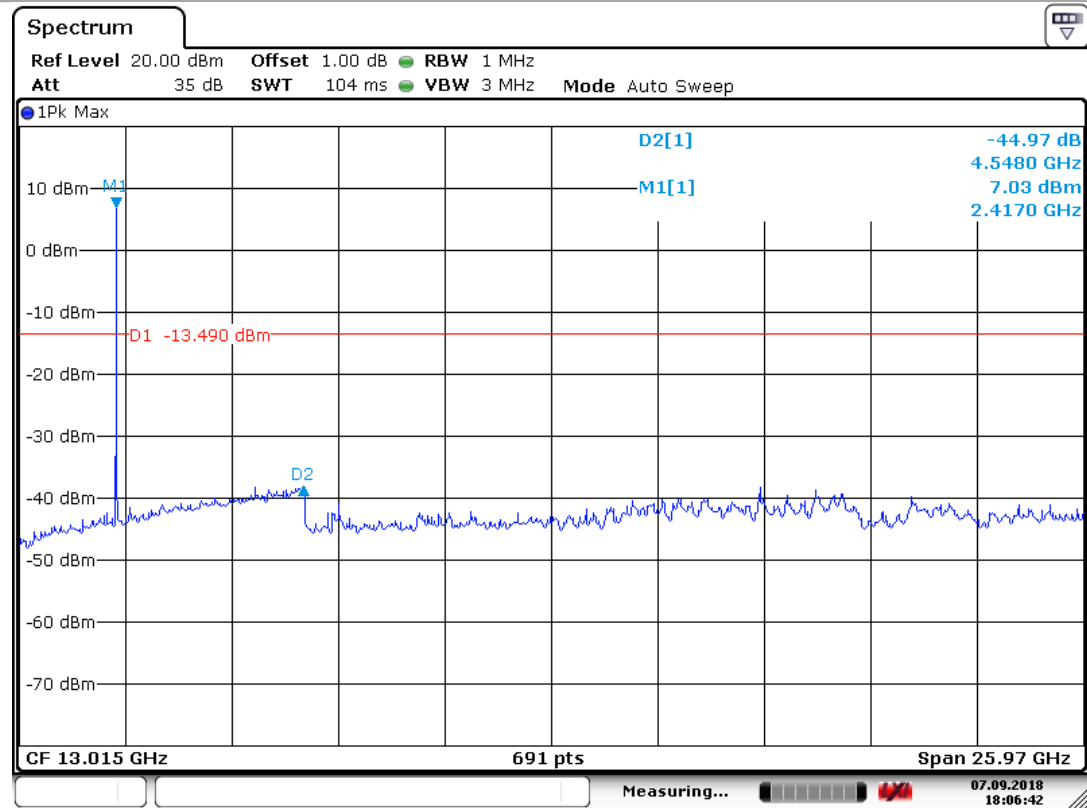
RF Conducted Spurious Emissions_11N40_2452_Ant2



Date: 7.SEP.2018 18:05:22

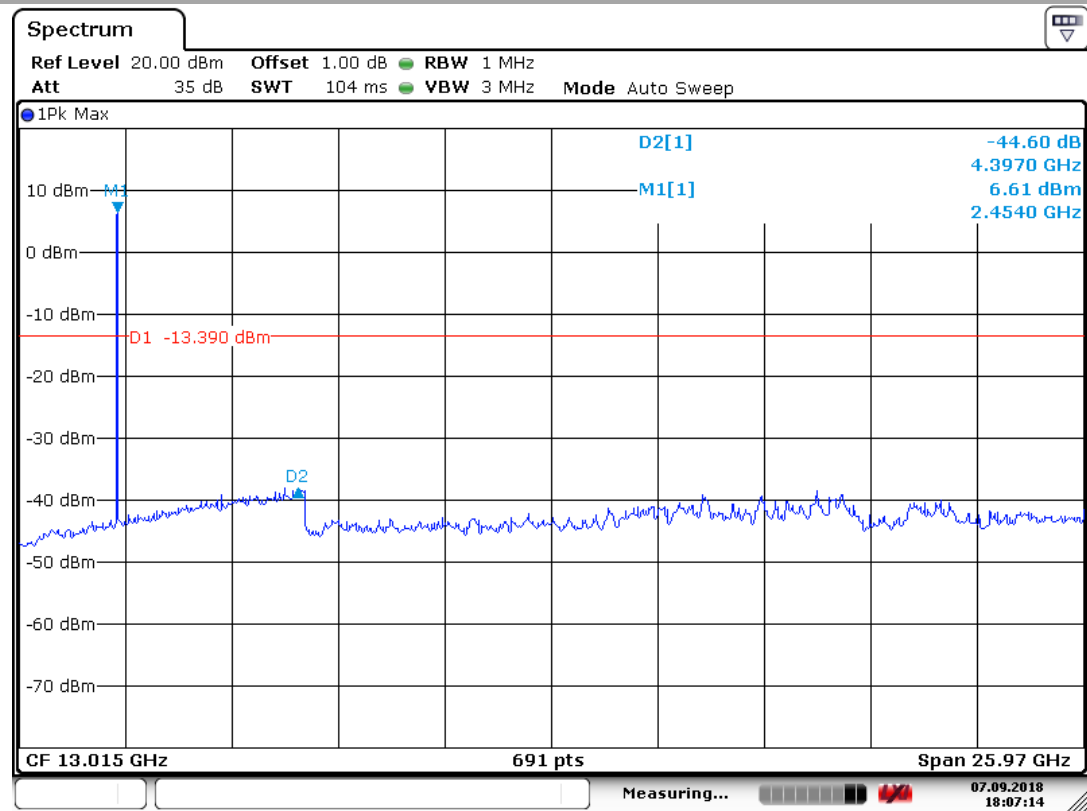


RF Conducted Spurious Emissions_11N20_2412_Ant1+2



Date: 7.SEP.2018 18:06:42

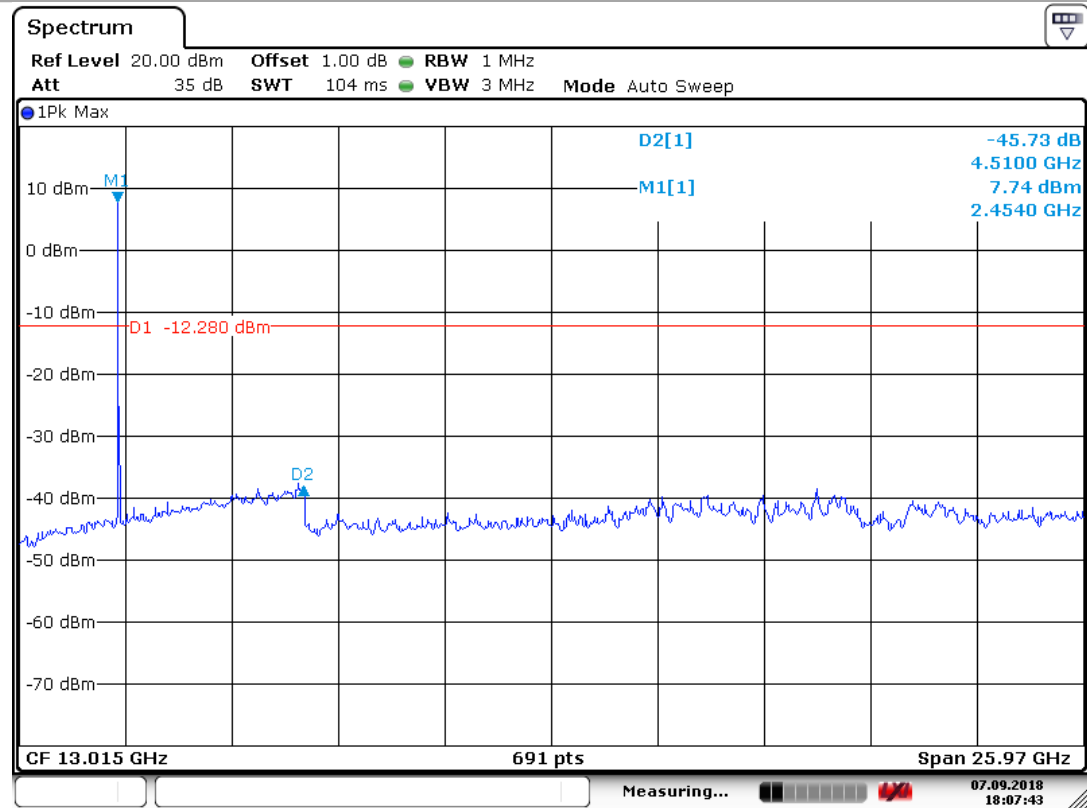
RF Conducted Spurious Emissions_11N20_2437_Ant1+2



Date: 7.SEP.2018 18:07:14

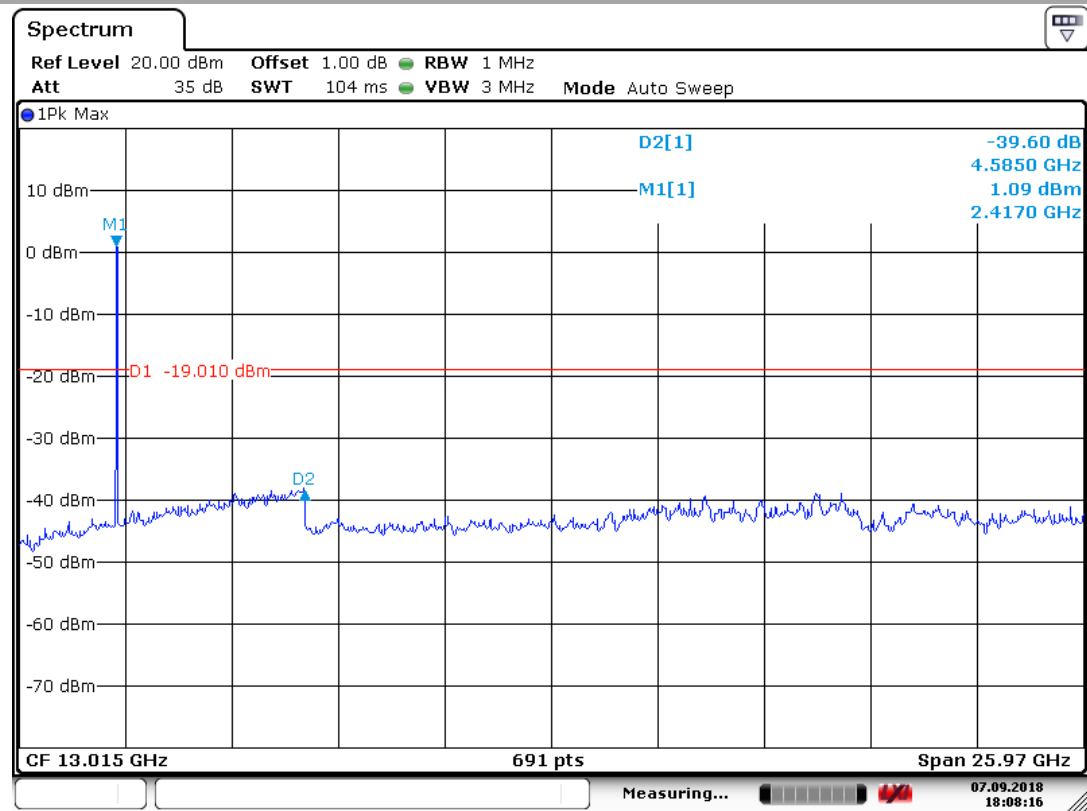


RF Conducted Spurious Emissions_11N20_2462_Ant1+2



Date: 7.SEP.2018 18:07:43

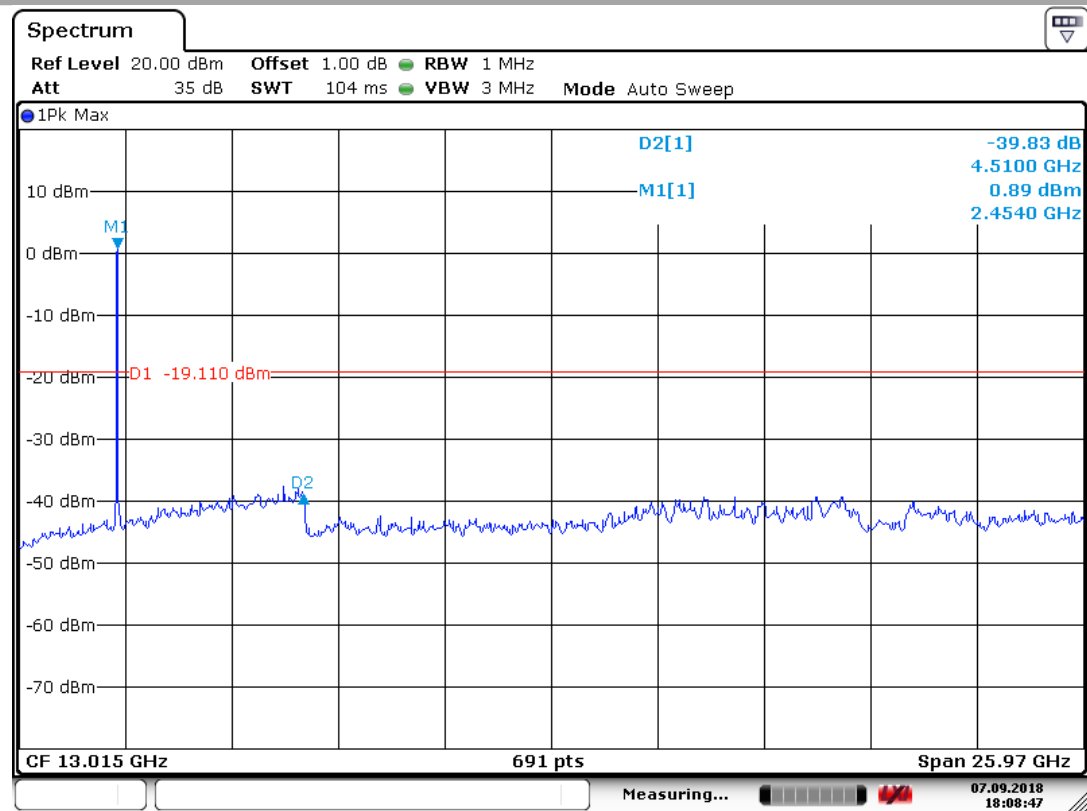
RF Conducted Spurious Emissions_11N40_2422_Ant1+2



Date: 7.SEP.2018 18:08:16

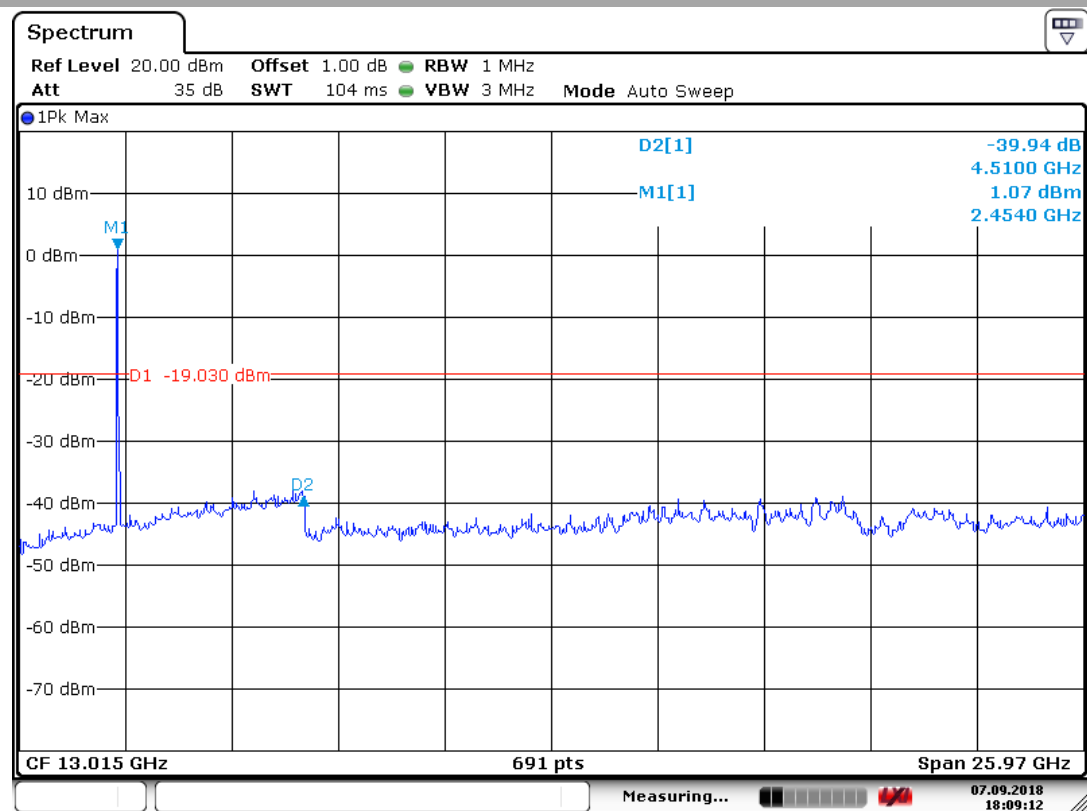


RF Conducted Spurious Emissions_11N40_2437_Ant1+2



Date: 7.SEP.2018 18:08:47

RF Conducted Spurious Emissions_11N40_2452_Ant1+2



Date: 7.SEP.2018 18:09:12