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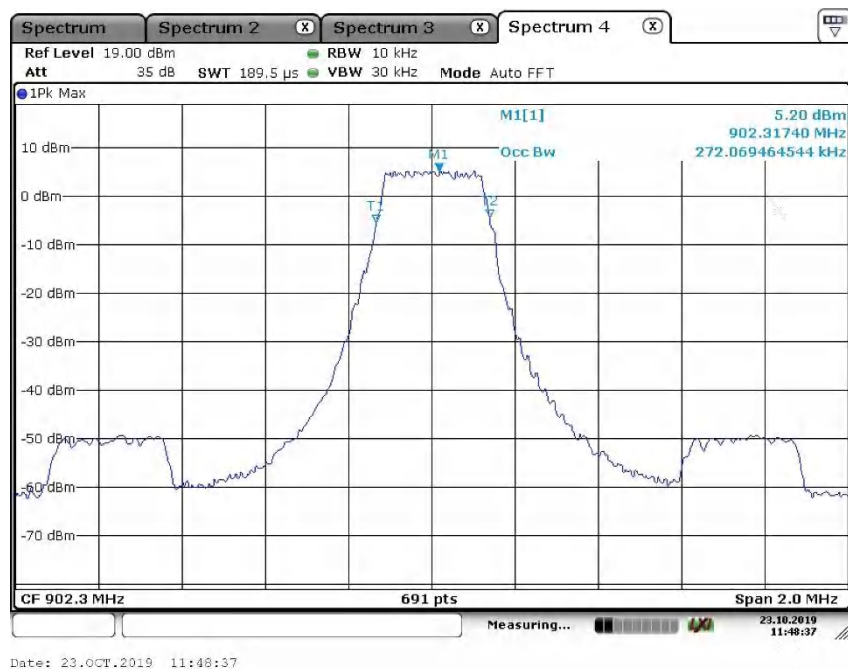
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Appendix C.1: Test Results of 99% Bandwidth

FHSS#1 (Bandwidth: 250KHz)

Low Channel



Middle Channel

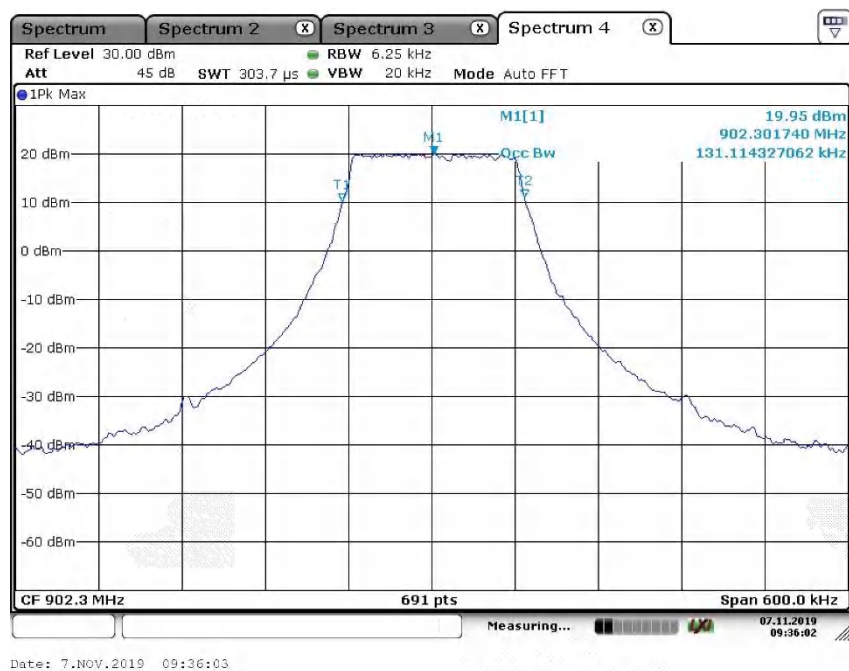


High Channel

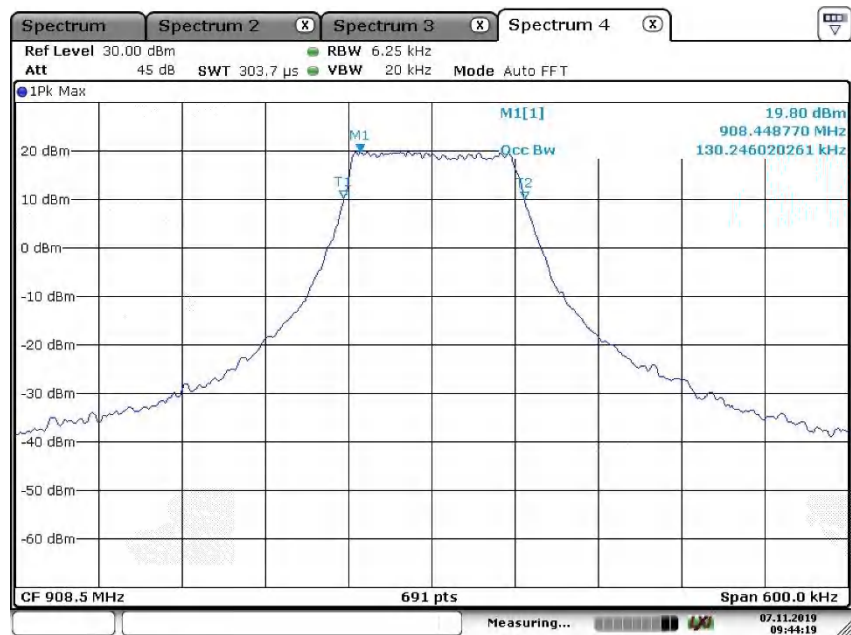


FHS#2 (Bandwidth: 125KHz)

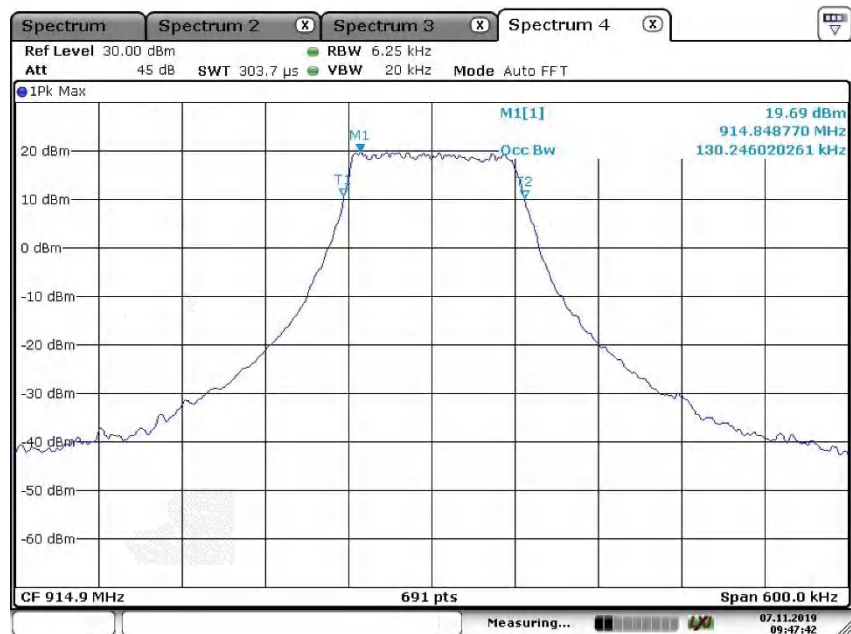
Low Channel



Middle Channel

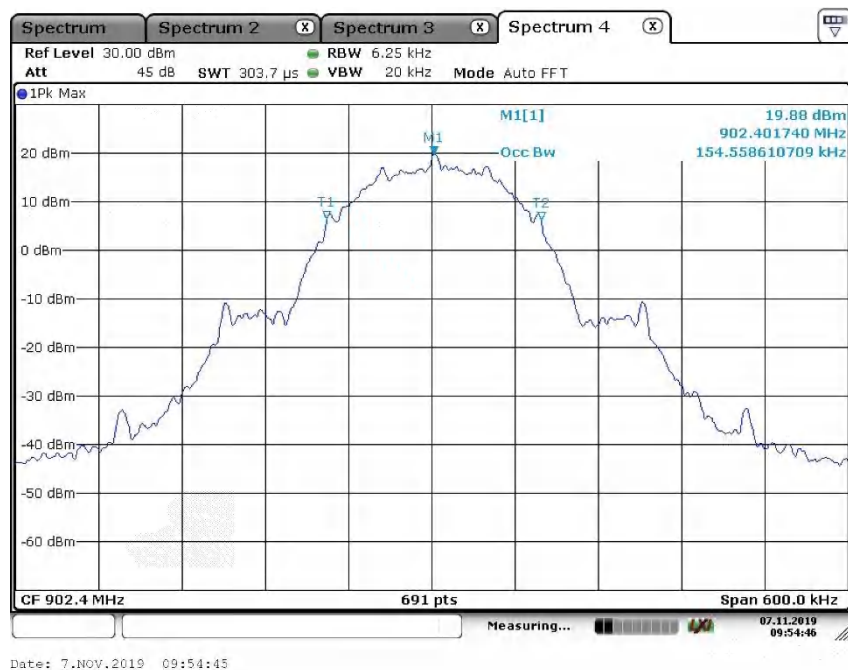


High Channel

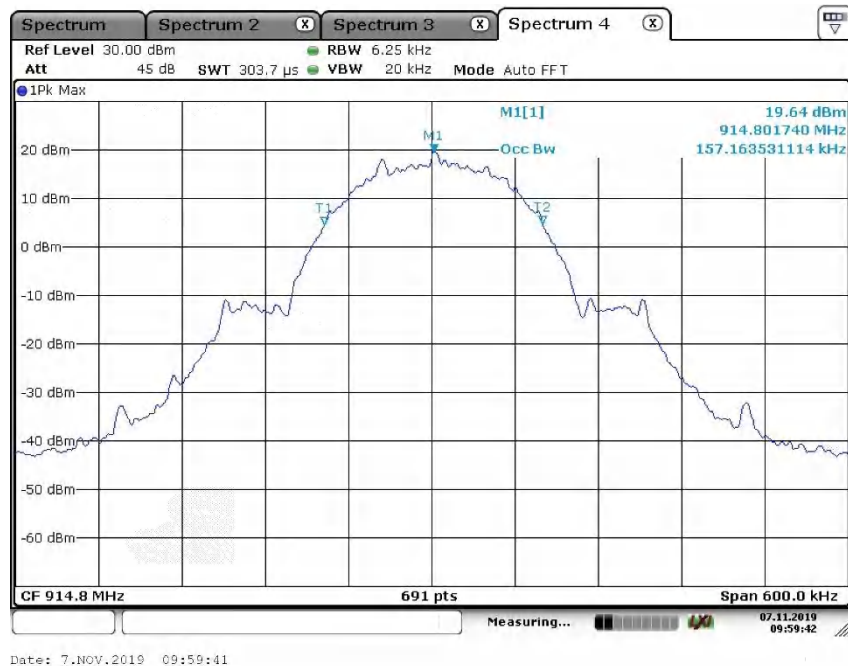


FHSS#3 (DataRate: 150Kbps)

Low Channel



Middle Channel



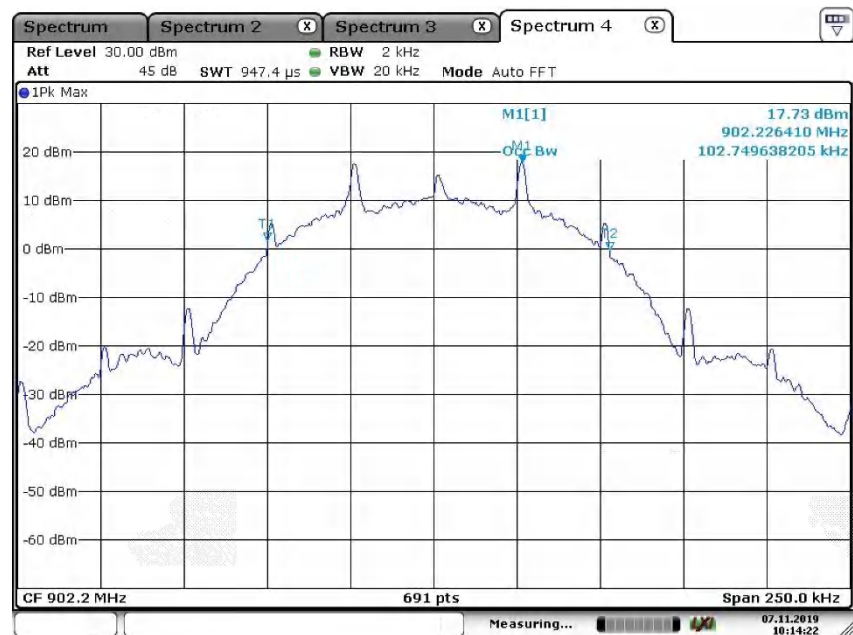
High Channel



Date: 7.NOV.2019 10:07:06

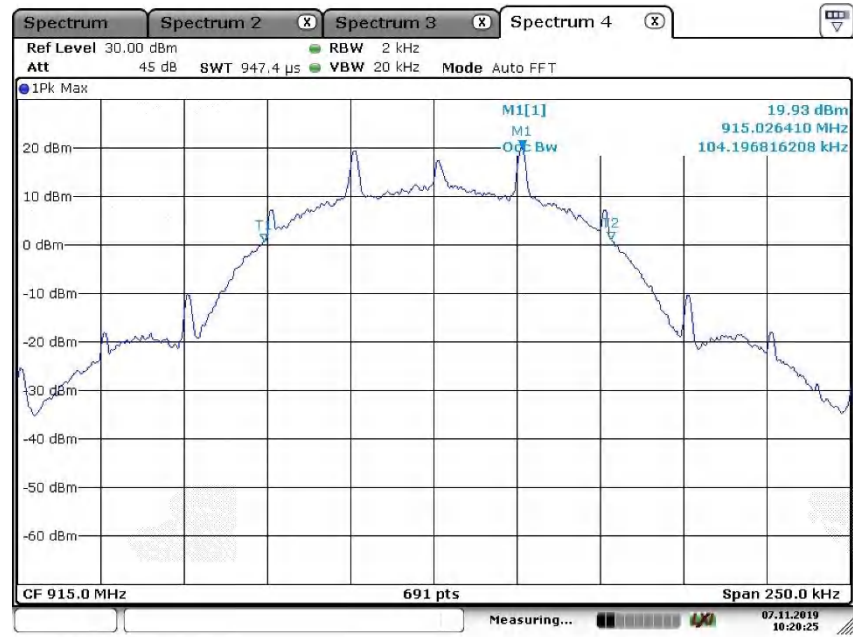
FHS#4 (DataRate: 50Kbps)

Low Channel



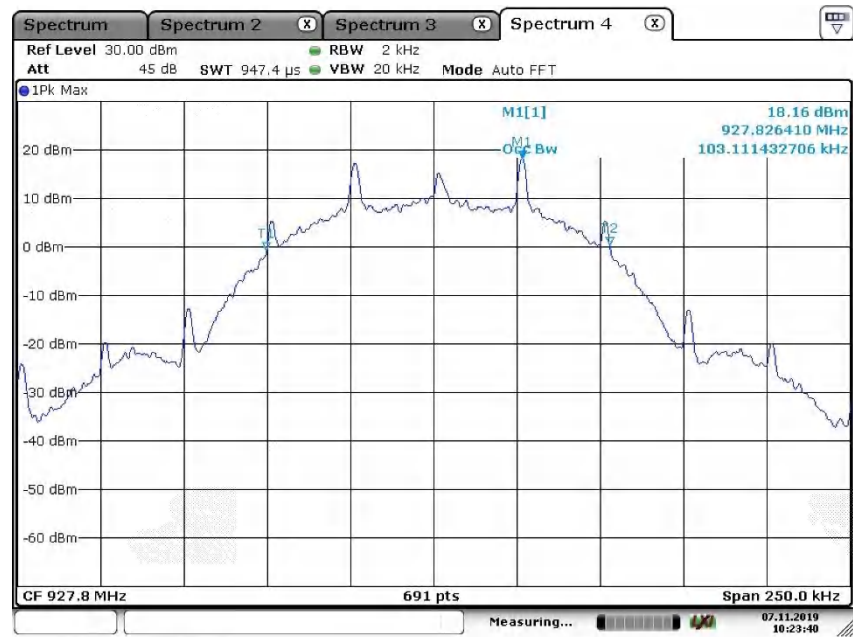
Date: 7.NOV.2019 10:14:21

Middle Channel



Date: 7.NOV.2019 10:20:25

High Channel



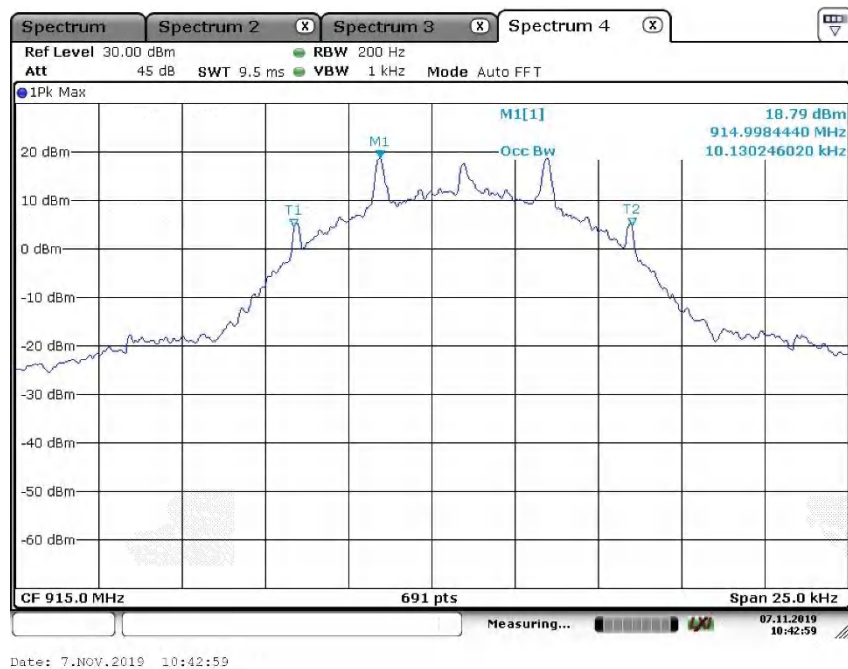
Date: 7.NOV.2019 10:23:40

FHSS#5 (DataRate: 5Kbps)

Low Channel



Middle Channel



High Channel

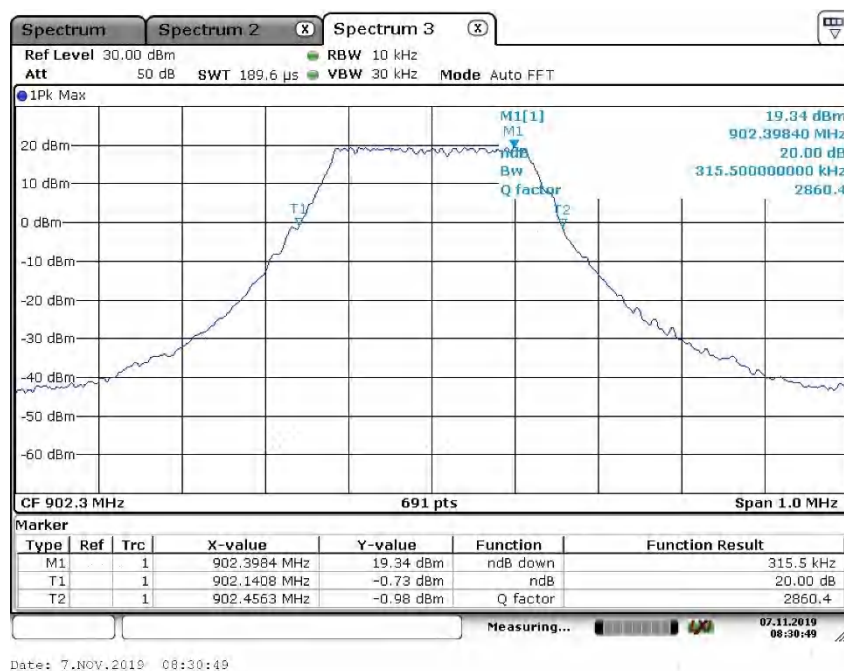


Date: 7.NOV.2019 10:33:38

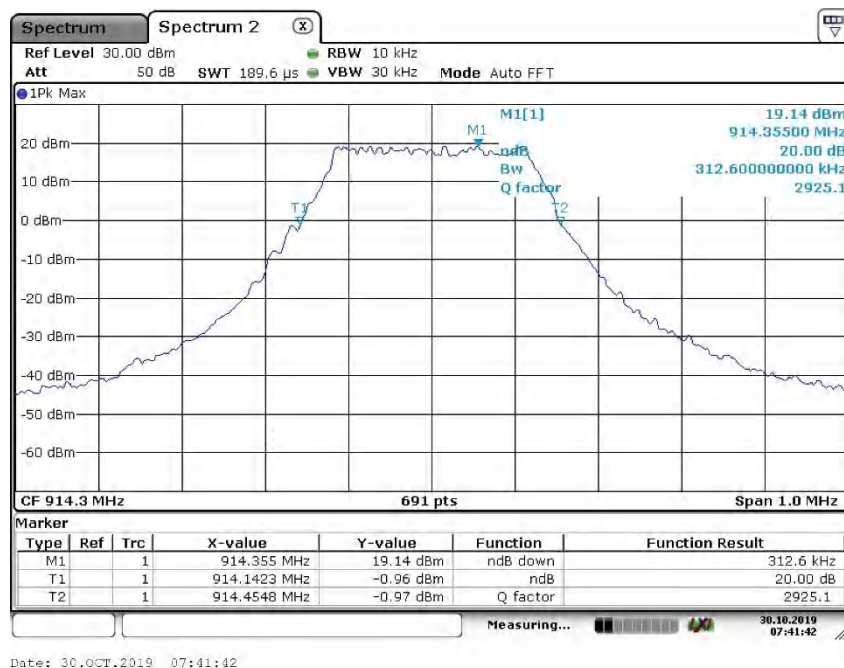
Appendix C.2: Test Results of 20dB Bandwidth

FHS#1 (Bandwidth: 250KHz)

Low Channel



Middle Channel

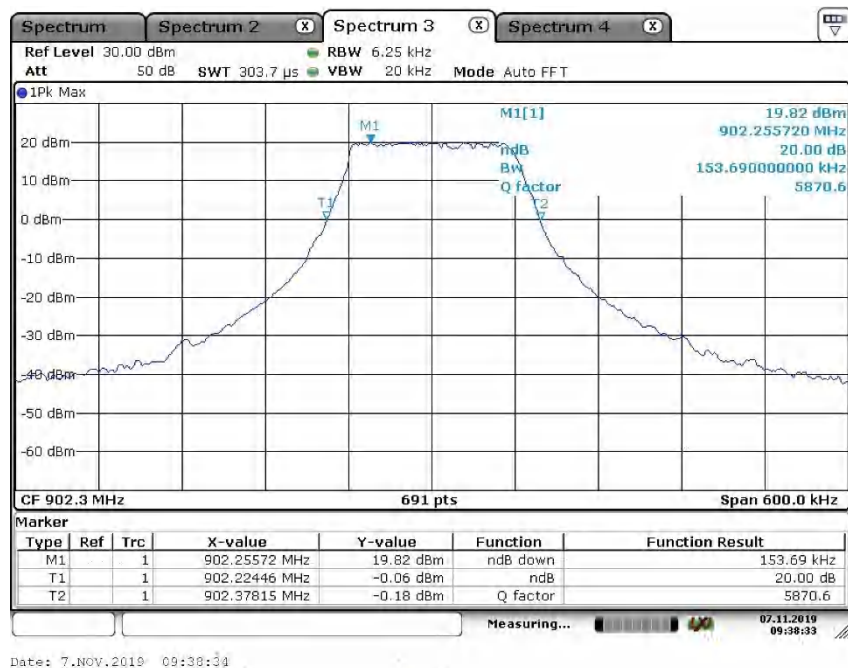


High Channel

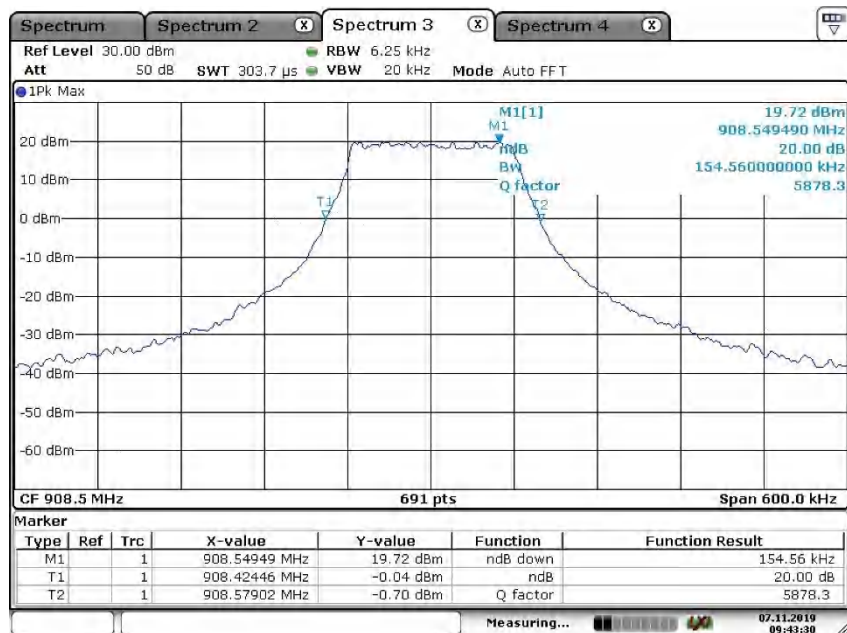


FHS#2 (Bandwidth: 125KHz)

Low Channel



Middle Channel



Date: 7.NOV.2019 09:43:30

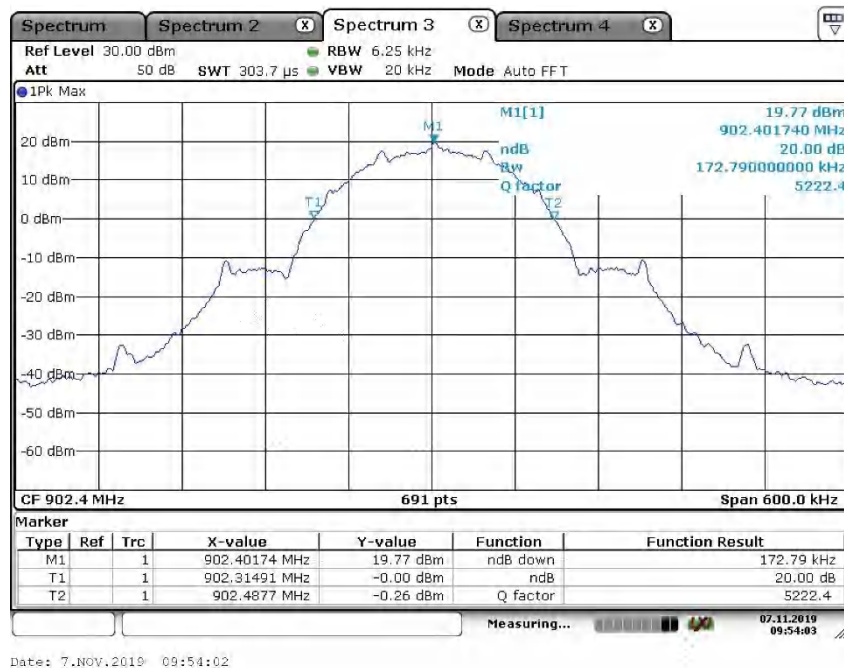
High Channel



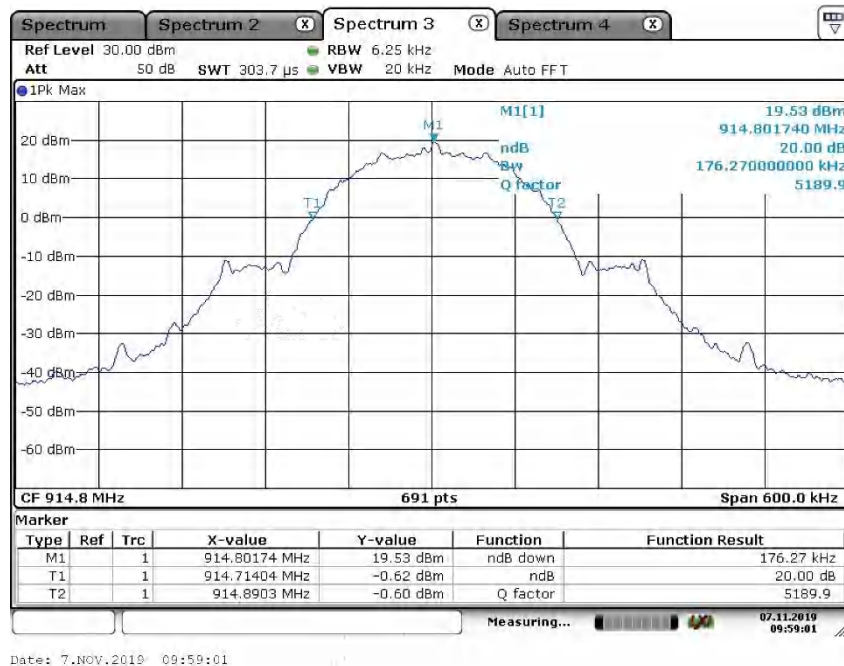
Date: 7.NOV.2019 09:46:57

FHSS#3 (DataRate: 150Kbps)

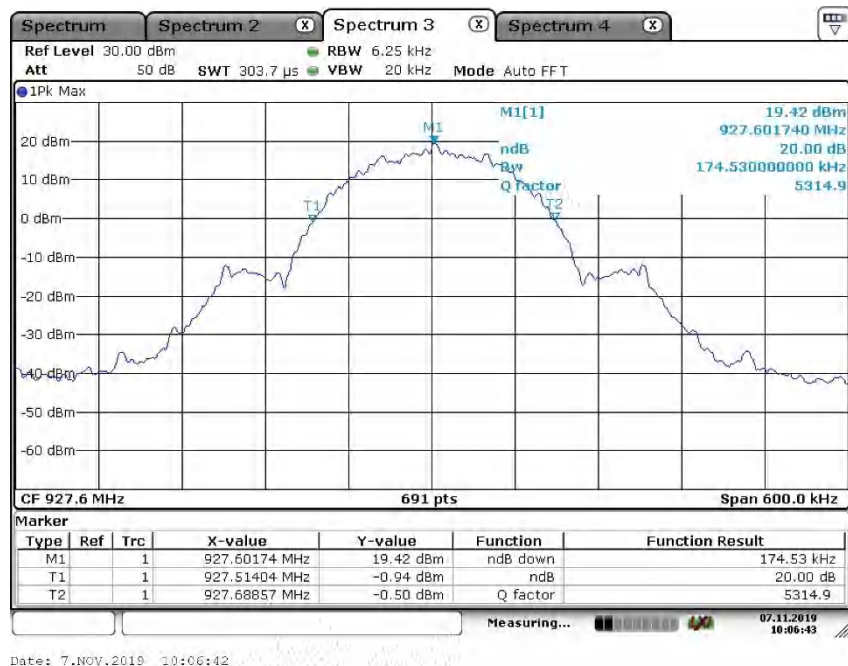
Low Channel



Middle Channel

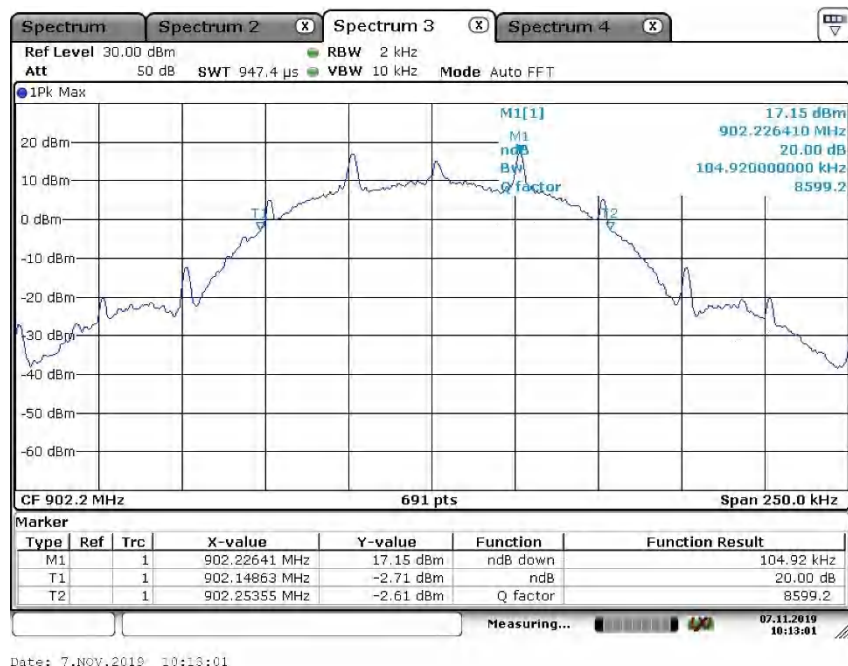


High Channel

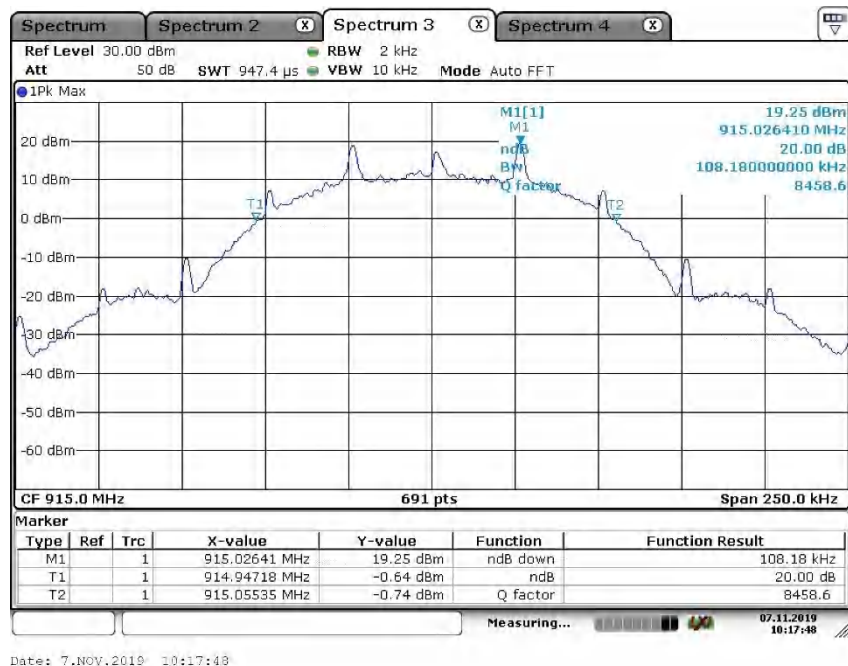


FHS#4 (DataRate: 50Kbps)

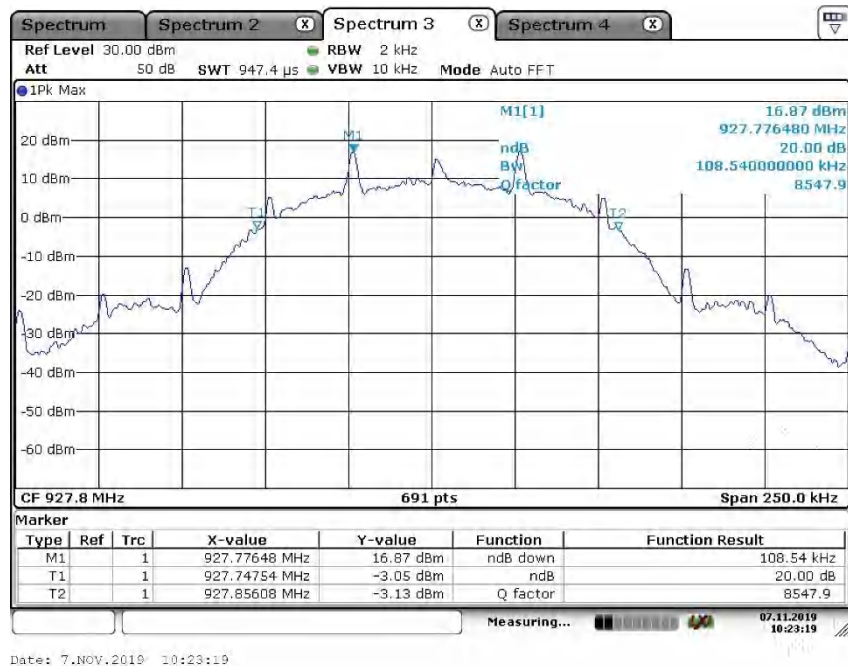
Low Channel



Middle Channel



High Channel

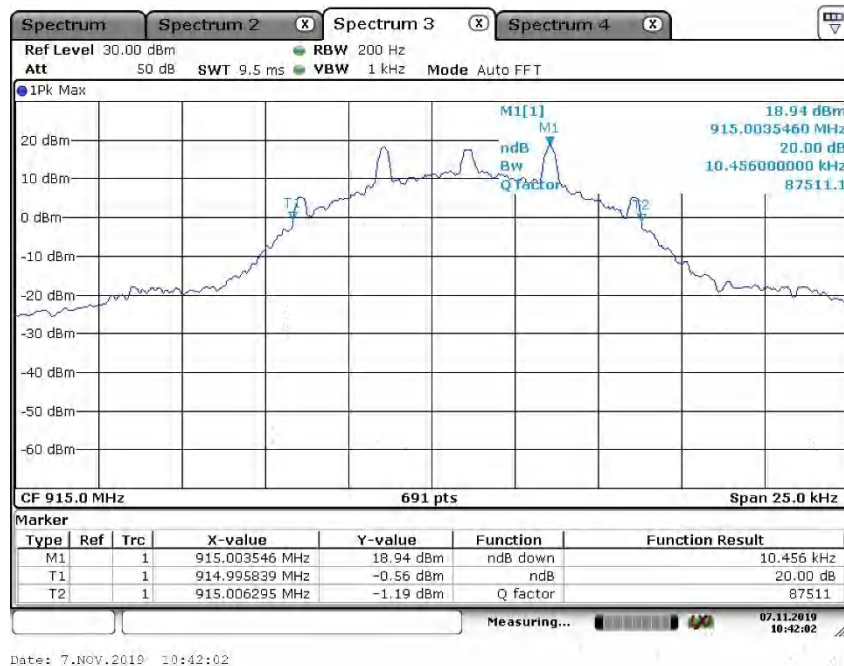


FHSS#5 (DataRate: 5Kbps)

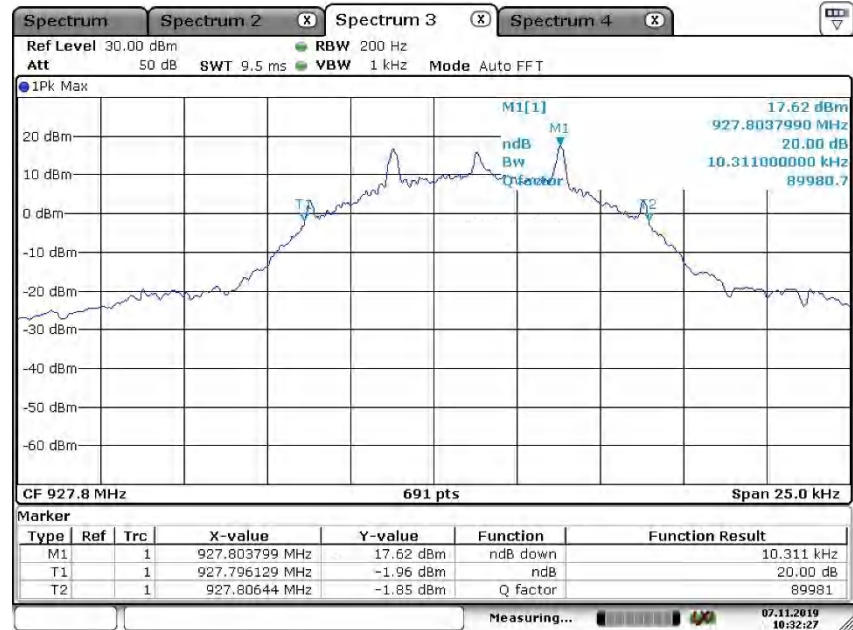
Low Channel



Middle Channel



High Channel

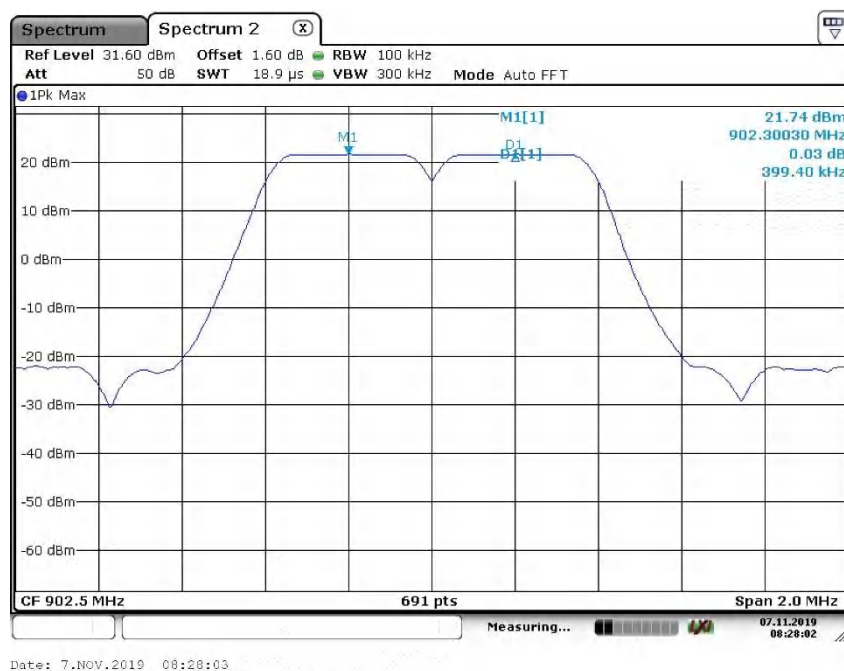


Date: 7.NOV.2019 10:32:27

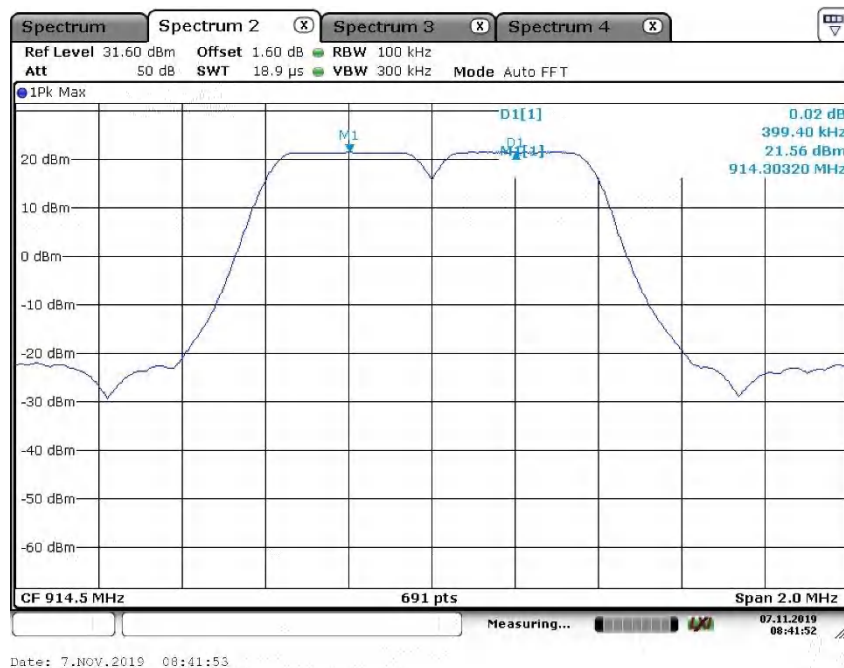
Appendix C.3: Test Results of Carrier Frequency Separation

FHS#1 (Bandwidth: 250KHz)

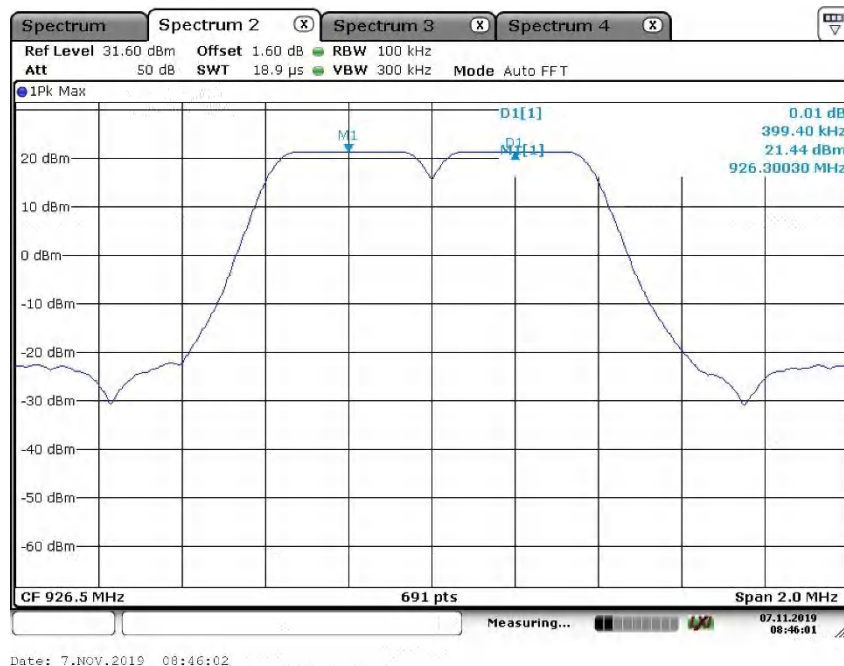
Low Channel



Middle Channel

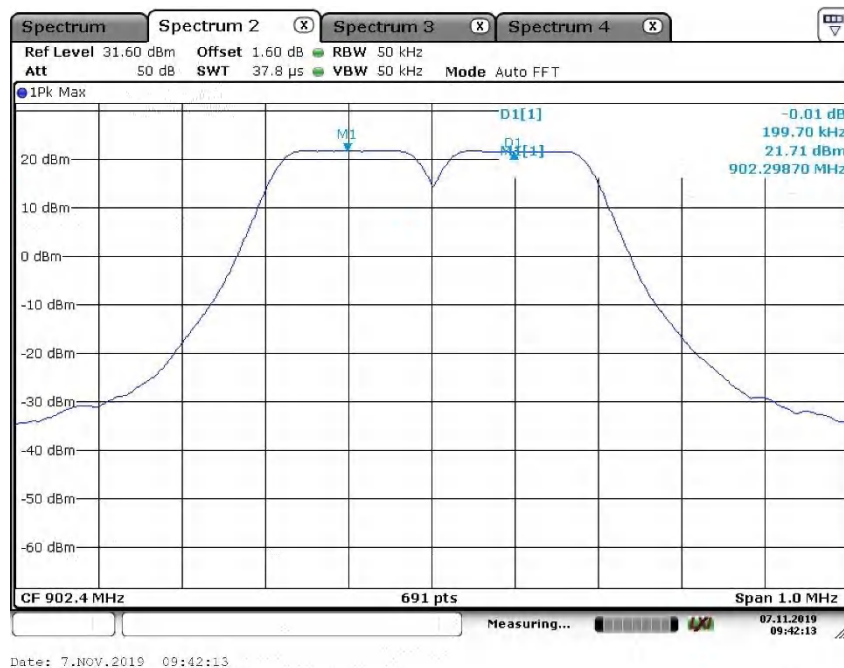


High Channel

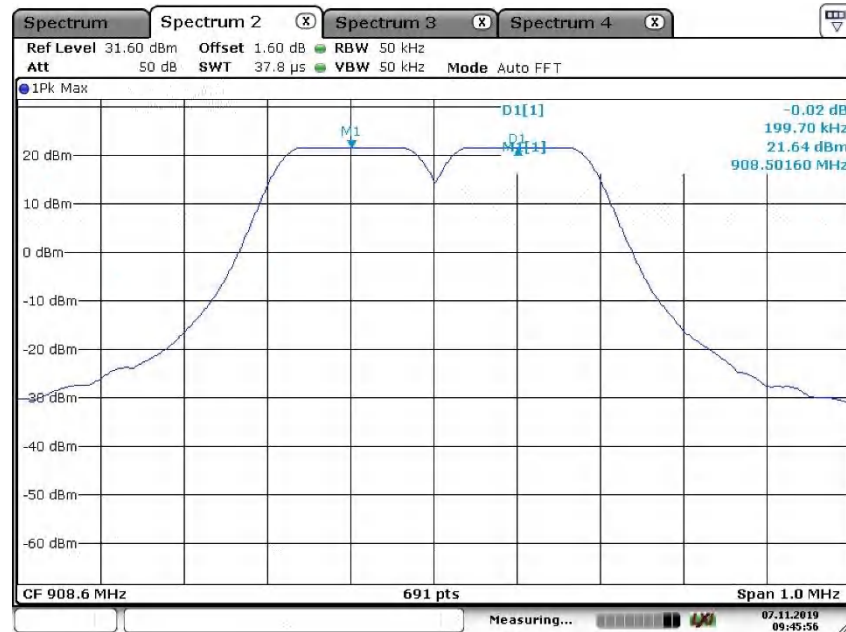


FHS#2 (Bandwidth: 125KHz)

Low Channel

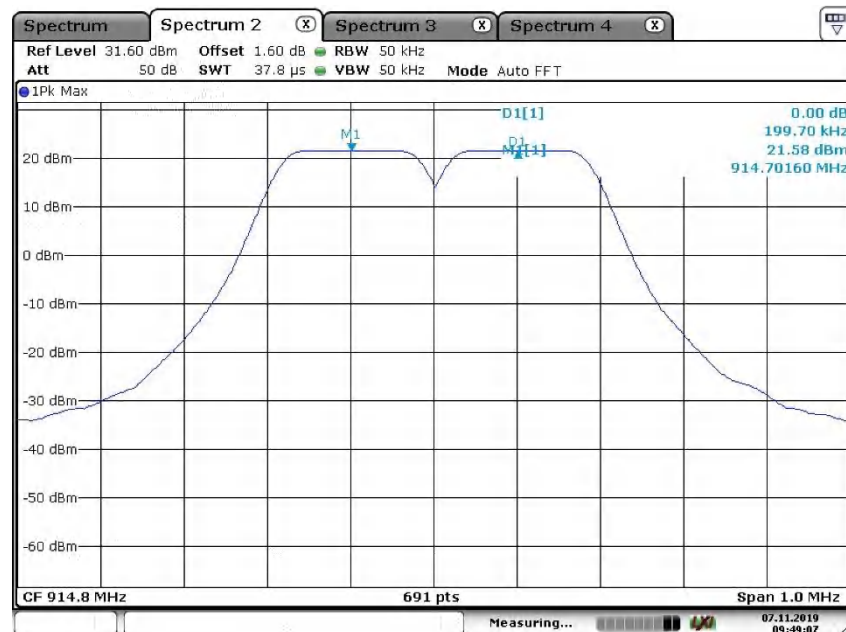


Middle Channel



Date: 7.NOV.2019 09:45:57

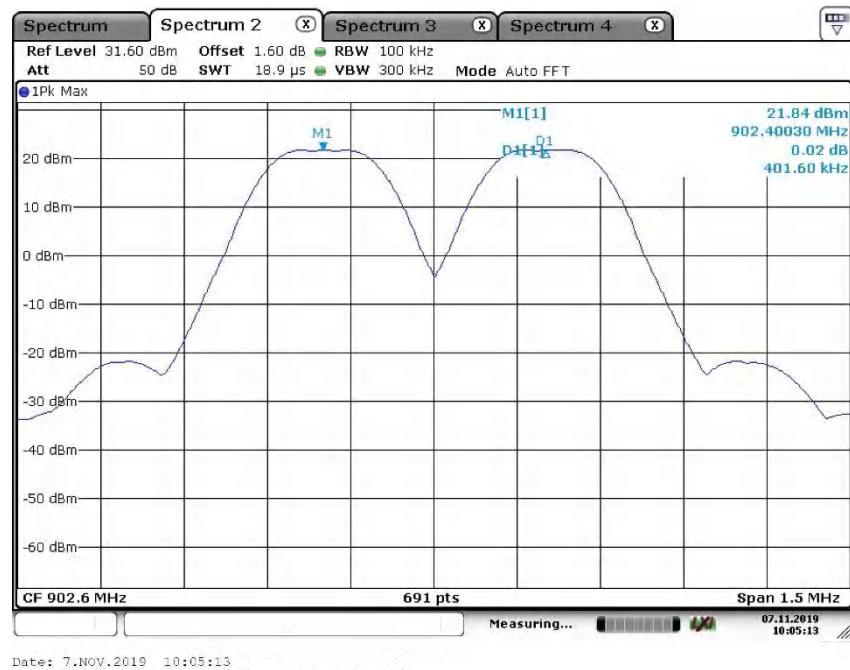
High Channel



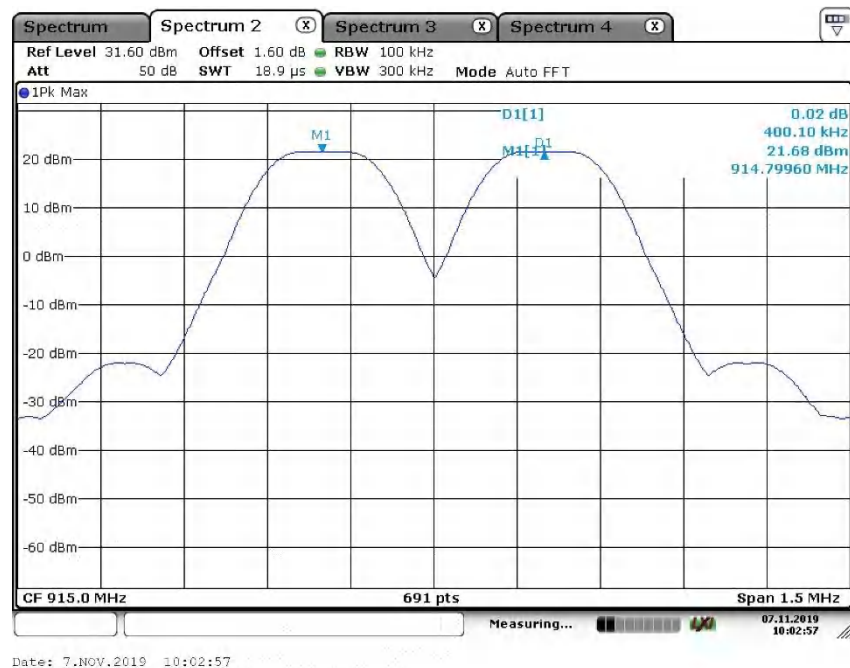
Date: 7.NOV.2019 09:49:08

FHSS#3 (DataRate: 150Kbps)

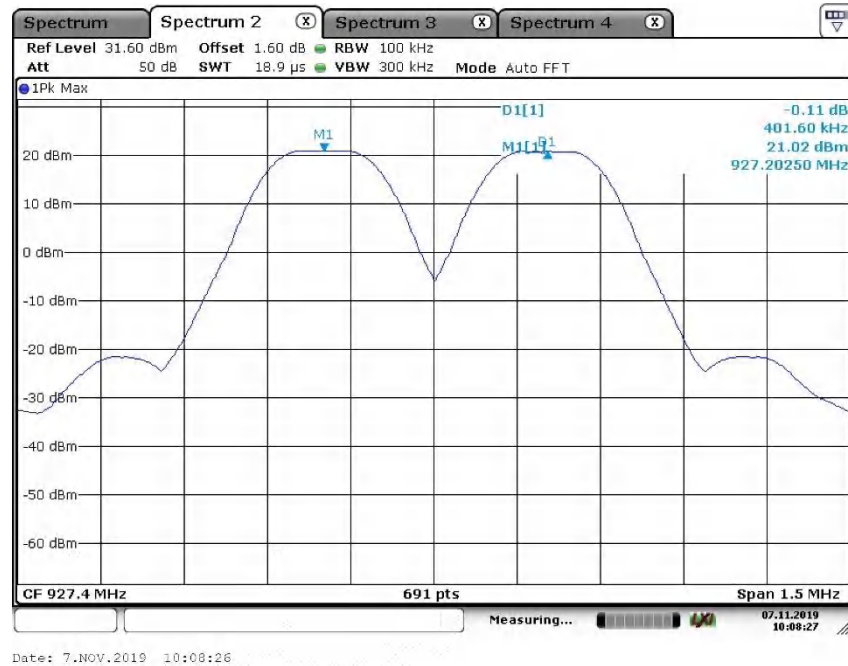
Low Channel



Middle Channel

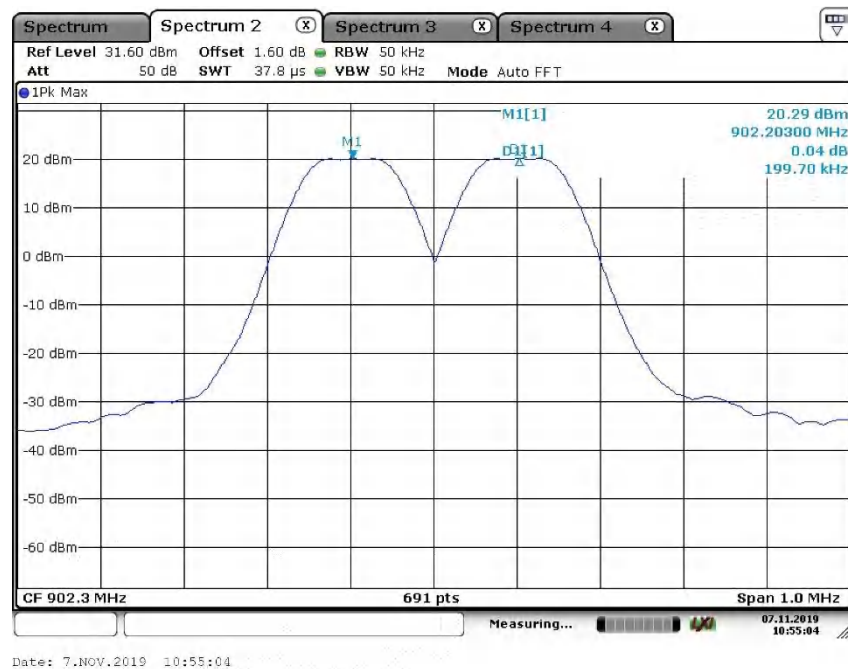


High Channel

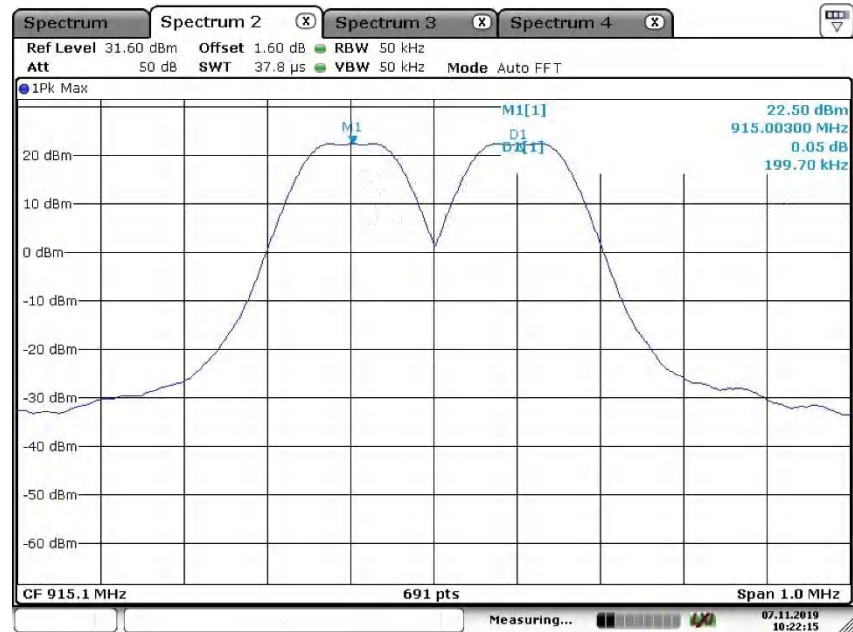


FHS#4 (DataRate: 50Kbps)

Low Channel

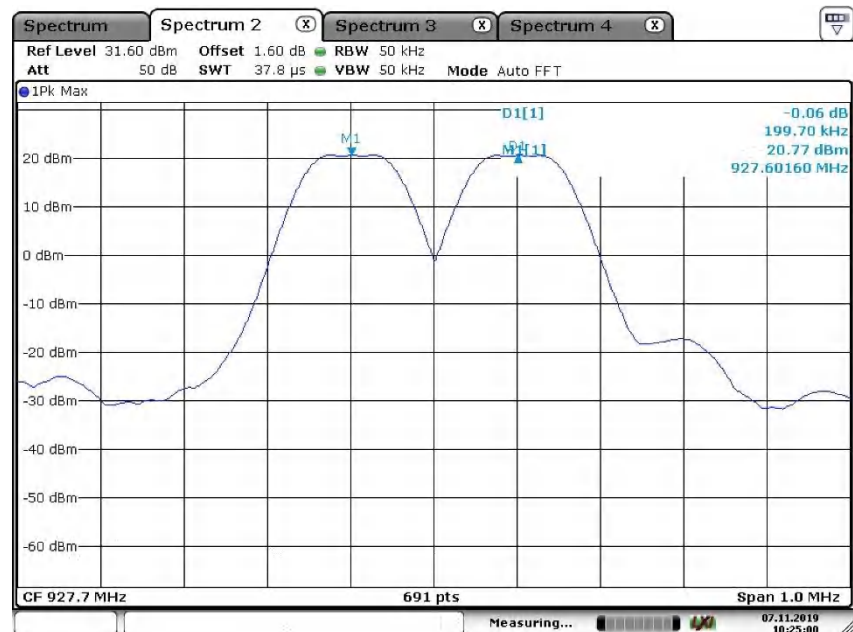


Middle Channel



Date: 7.NOV.2019 10:22:15

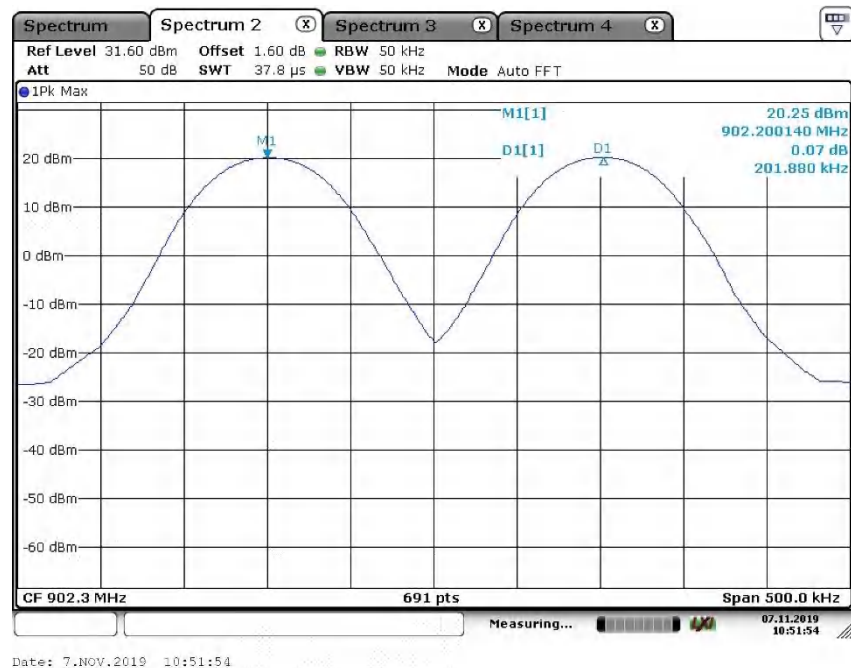
High Channel



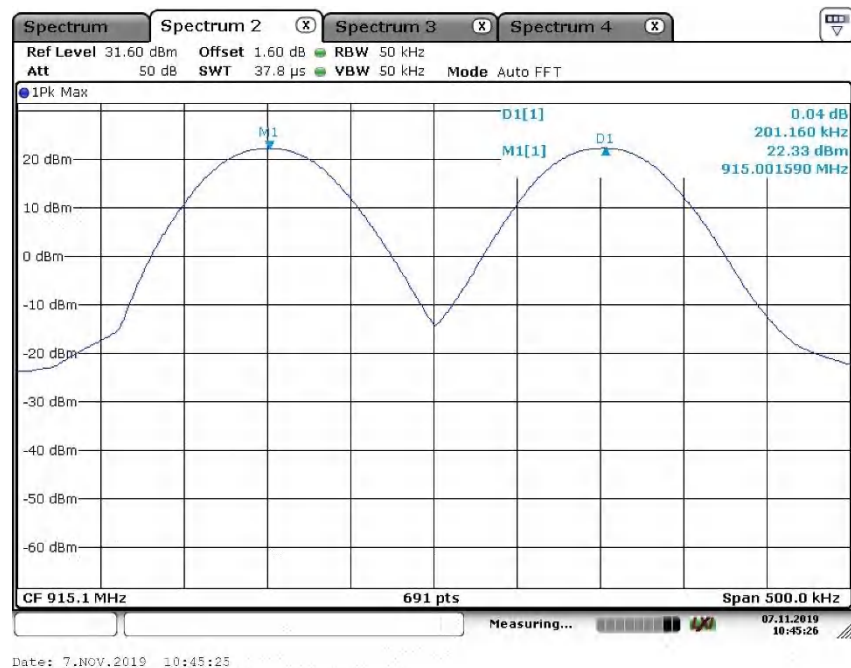
Date: 7.NOV.2019 10:25:00

FHSS#5 (DataRate: 5Kbps)

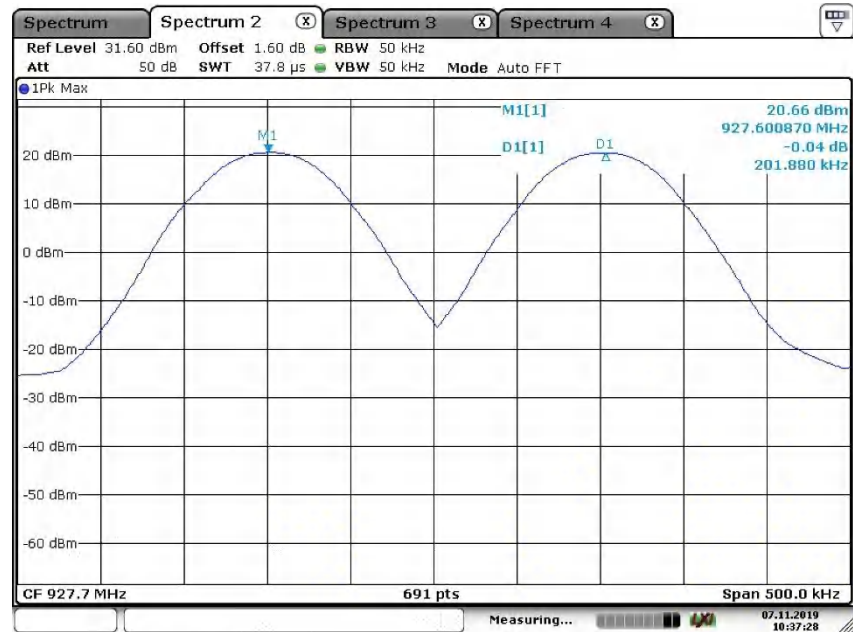
Low Channel



Middle Channel



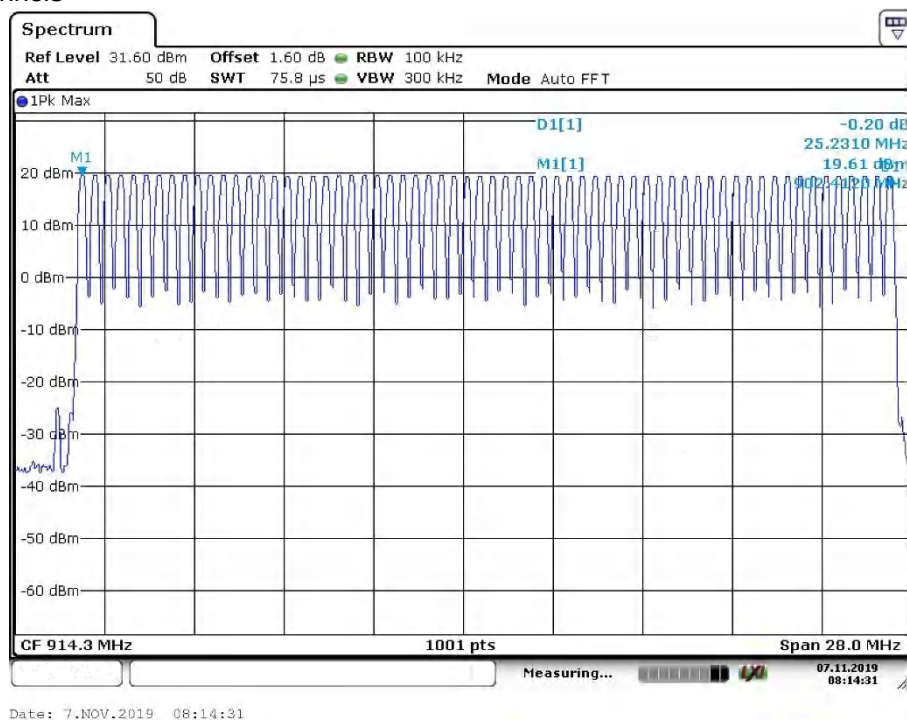
High Channel



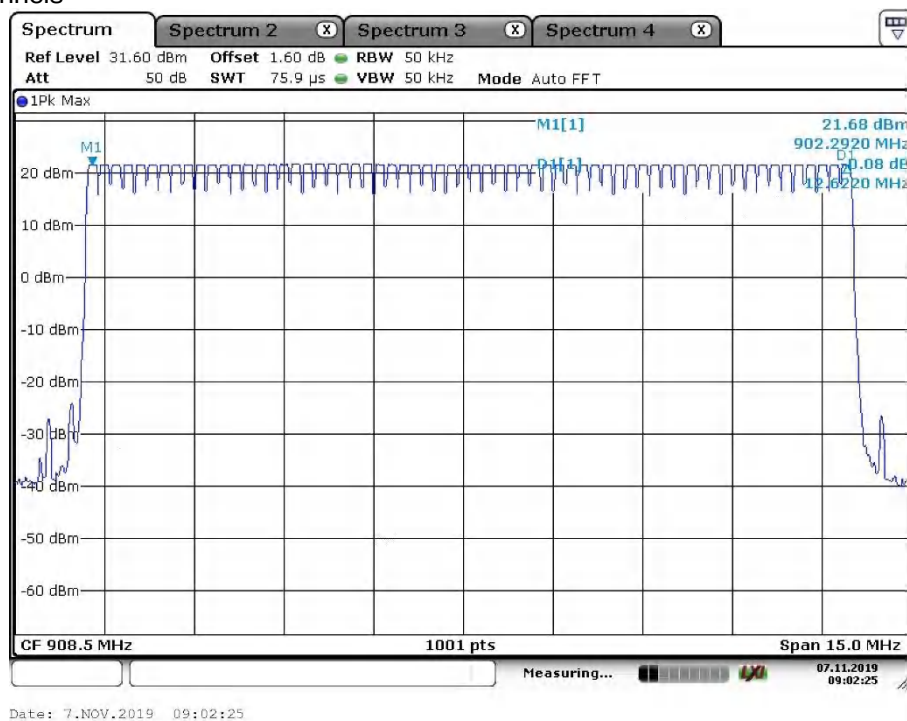
Date: 7.NOV.2019 10:37:28

Appendix C.4: Test Results of Number of Hopping Frequency

FHS#1 (Bandwidth: 250KHz) All hopping channels

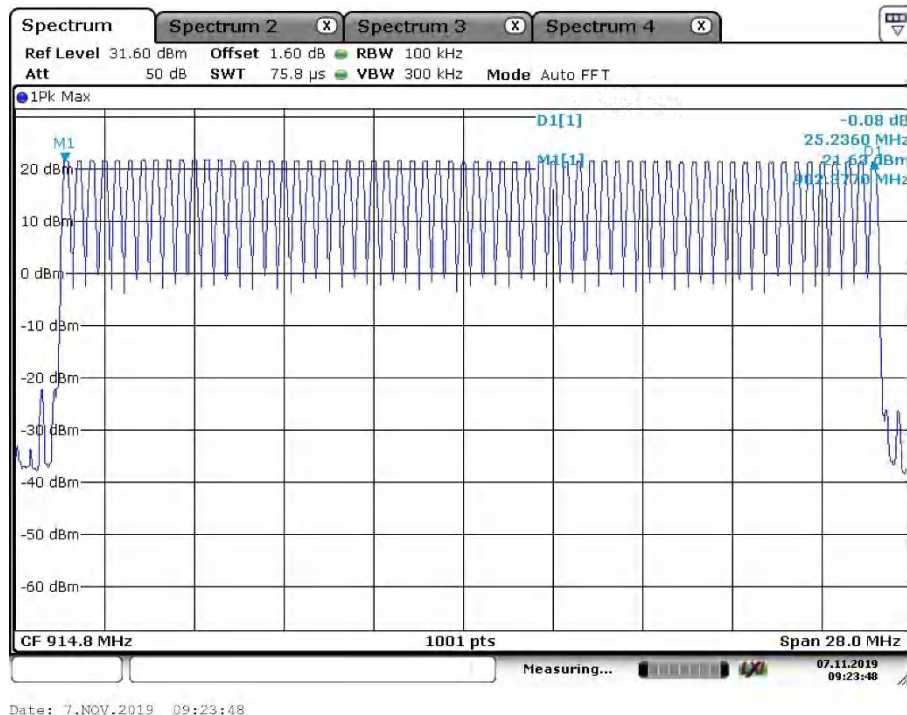


FHS#2 (Bandwidth: 125KHz) All hopping channels



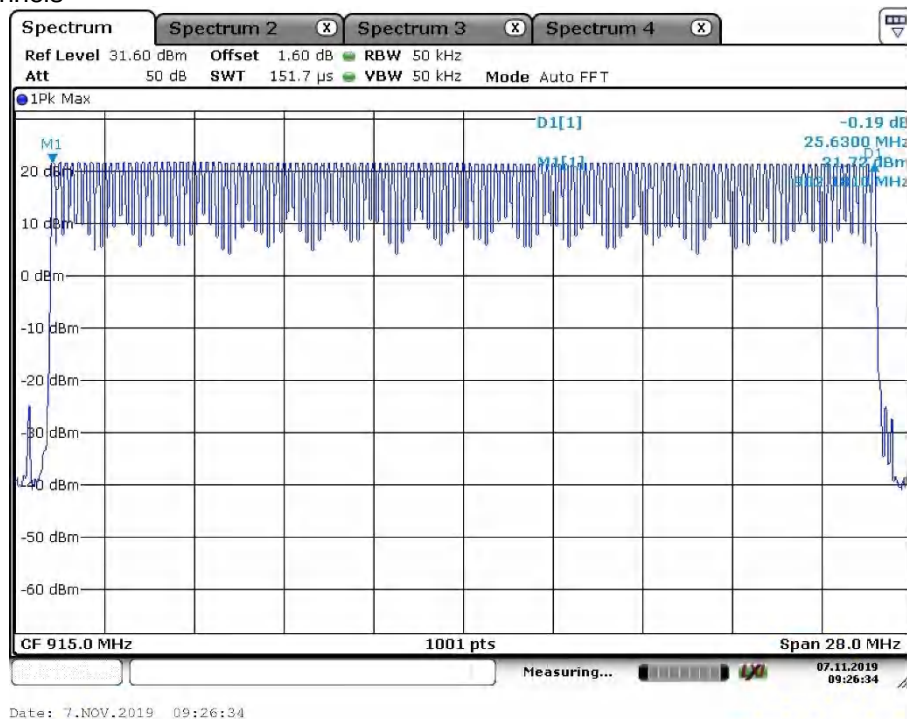
FHSS#3 (DataRate: 150Kbps)

All hopping channels

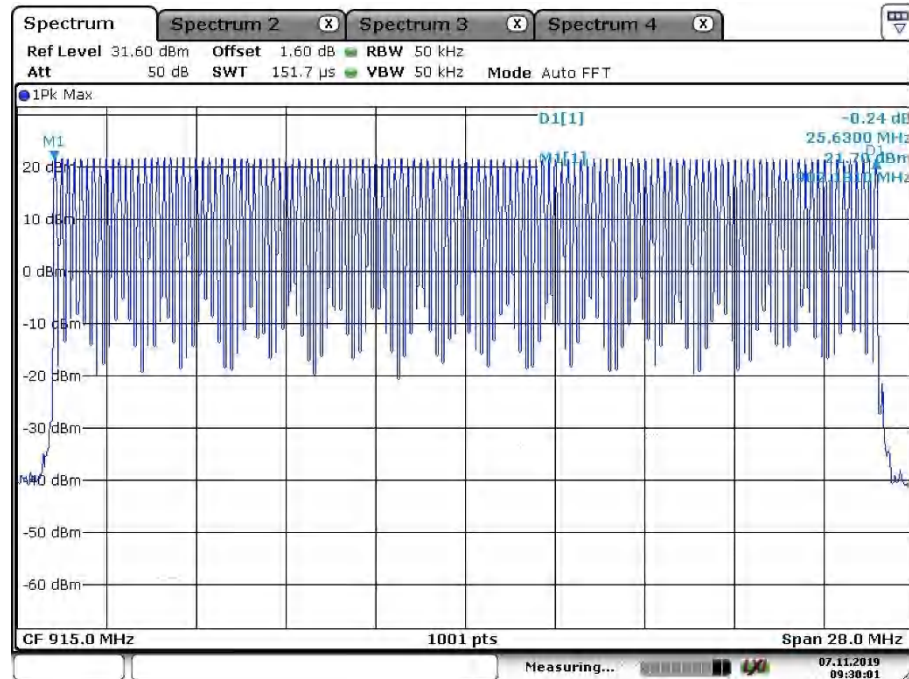


FHSS#4 (DataRate: 50Kbps)

All hopping channels

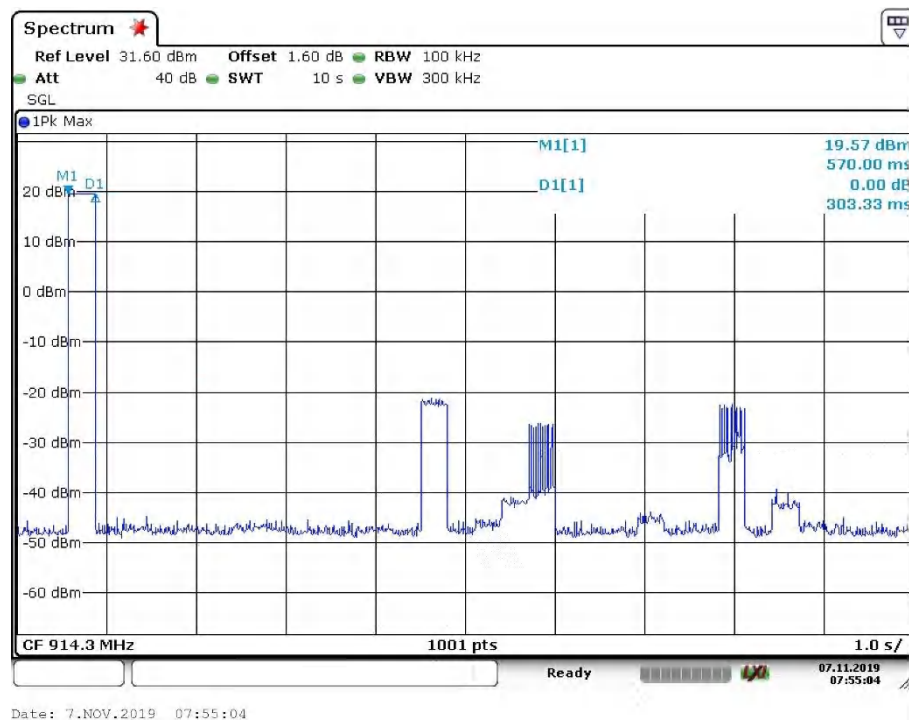


FHSS#5 (DataRate: 5Kbps)
All hopping channels

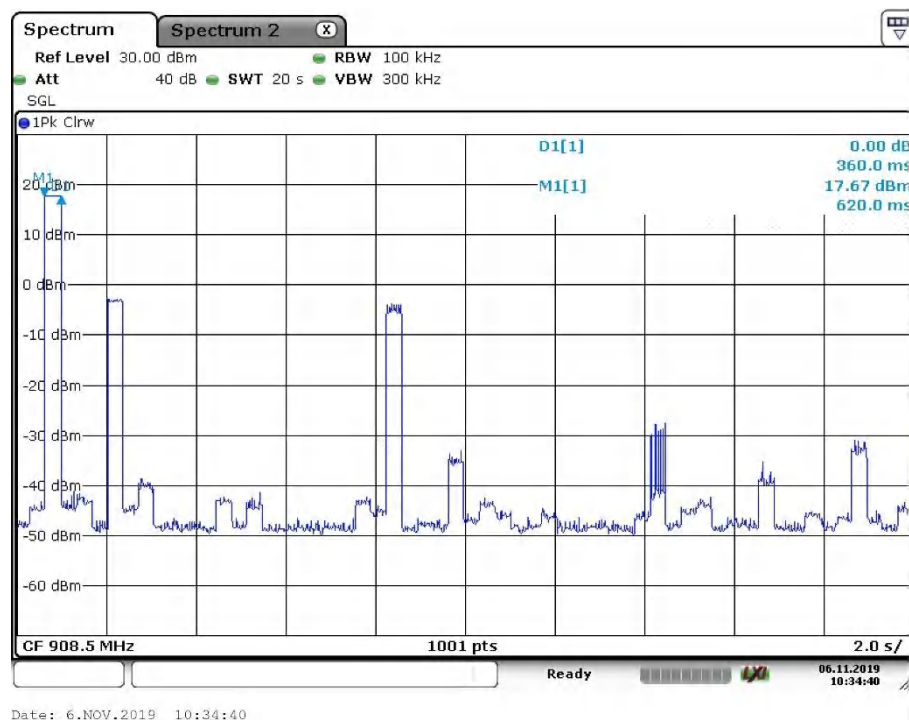


Date: 7.NOV.2019 09:30:01

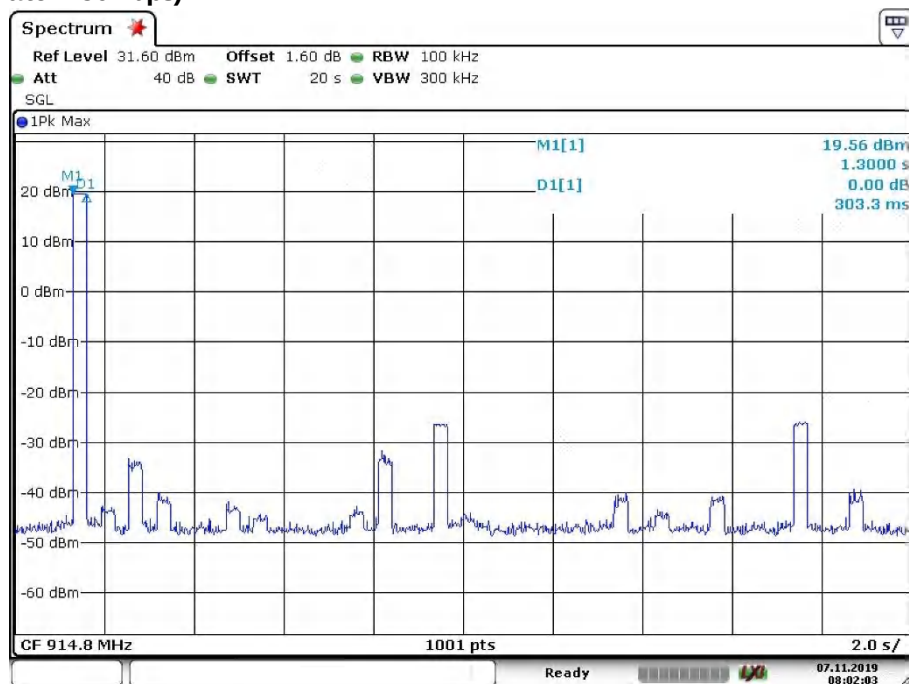
Appendix C.5: Test Results of Time of Occupancy FHSS#1 (Bandwidth: 250KHz)



FHSS#2 (Bandwidth: 125KHz)

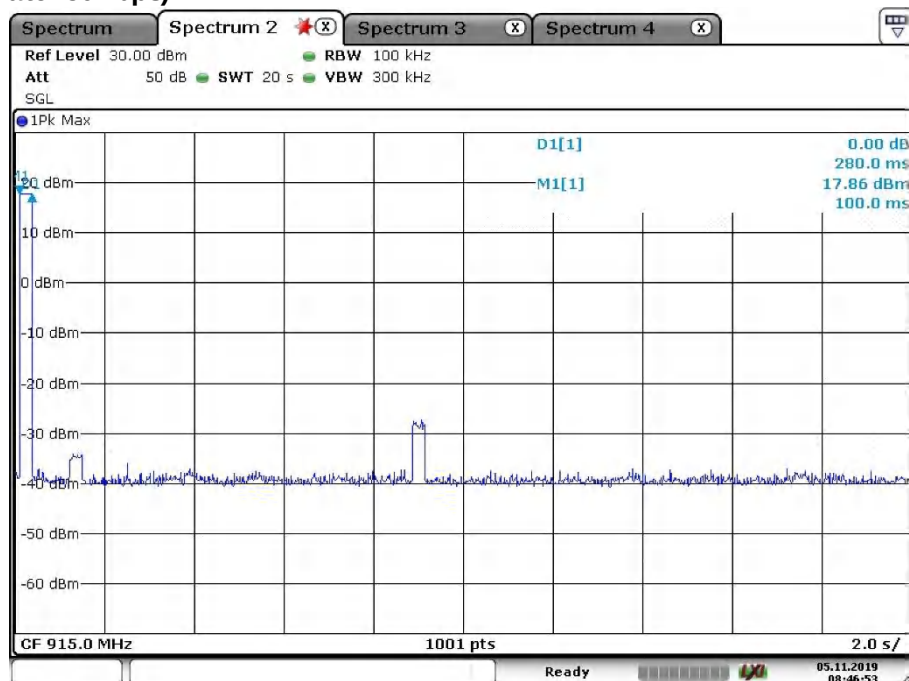


FHSS#3 (DataRate: 150Kbps)



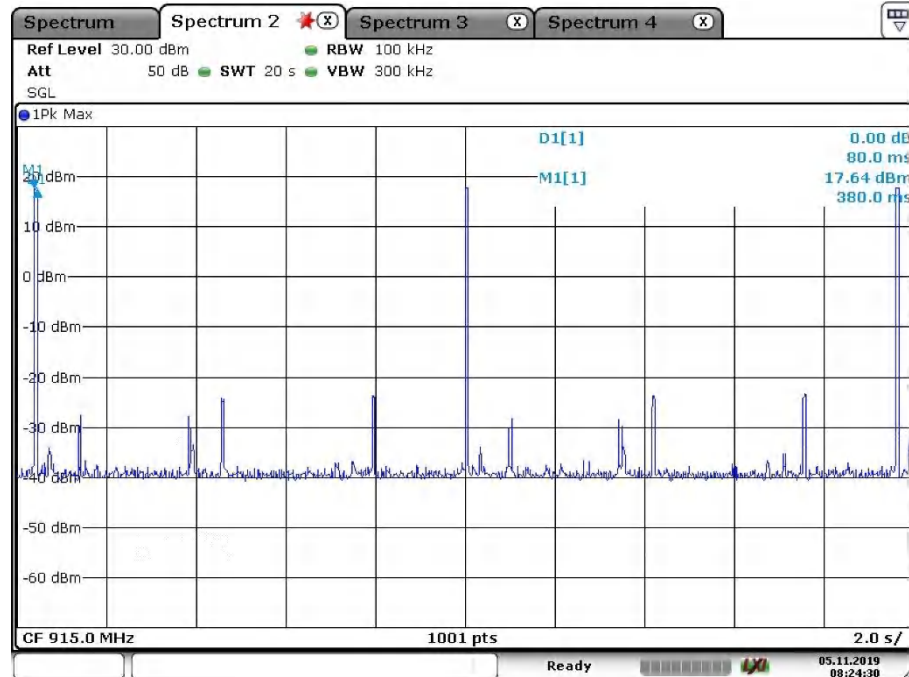
Date: 7.NOV.2019 08:02:03

FHSS#4 (DataRate: 50Kbps)



Date: 5.NOV.2019 08:46:53

FHSS#5 (DataRate: 5Kbps)

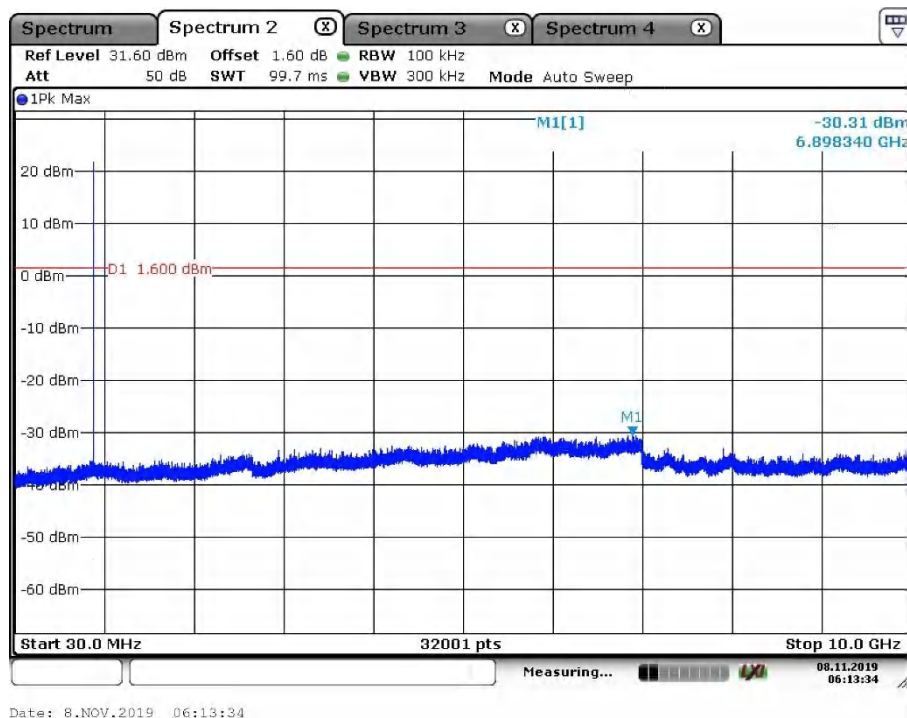


Date: 5.NOV.2019 08:24:30

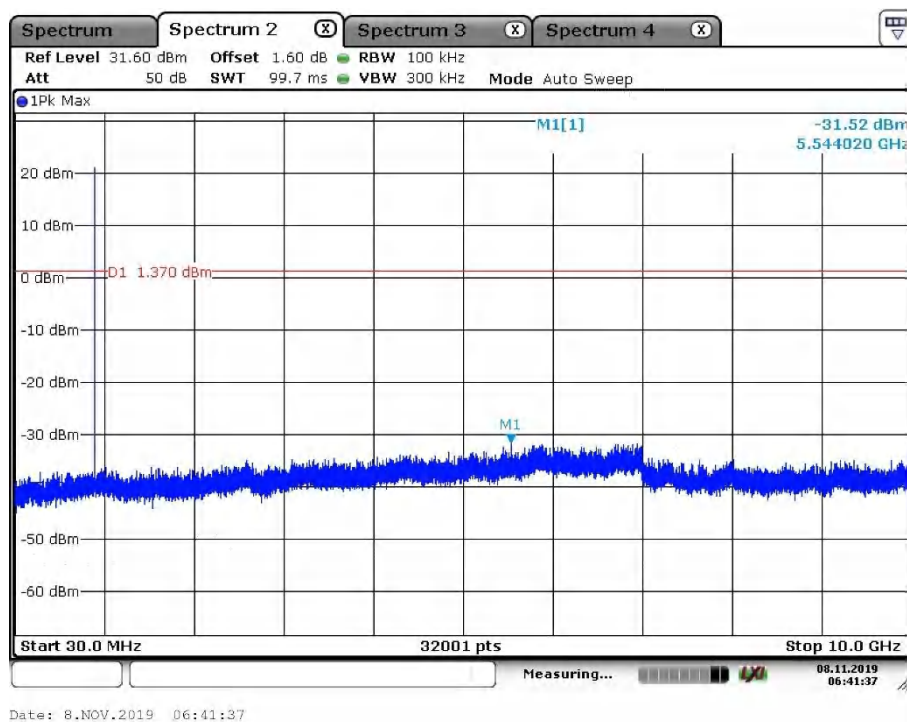
05.11.2019
08:24:30

Appendix C.6: Test Results of Conducted Spurious Emissions Measured in 100 kHz Bandwidth

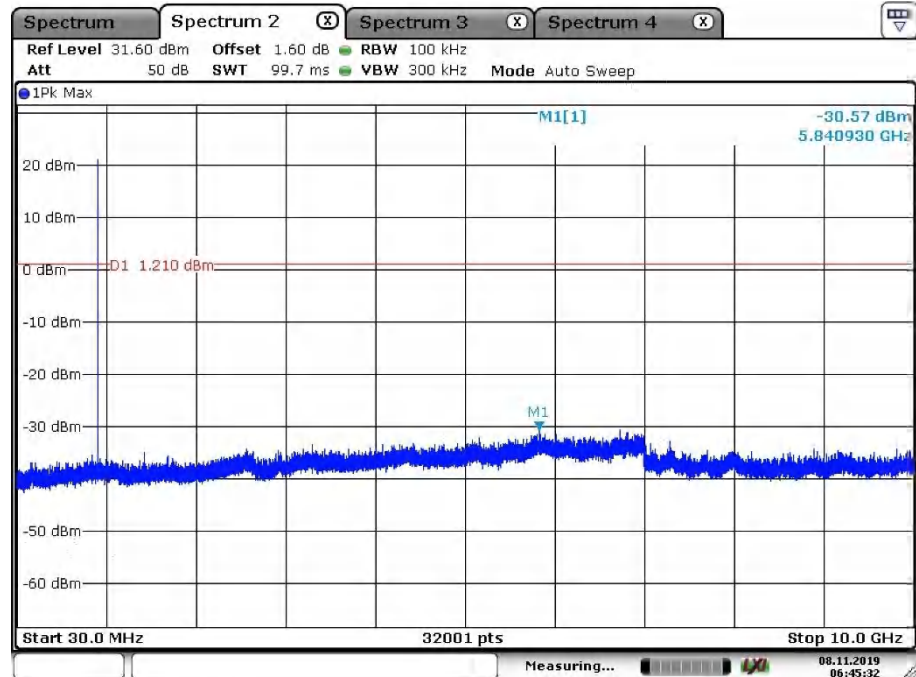
FHS#1 (Bandwidth: 250KHz) Low Channel



Middle Channel

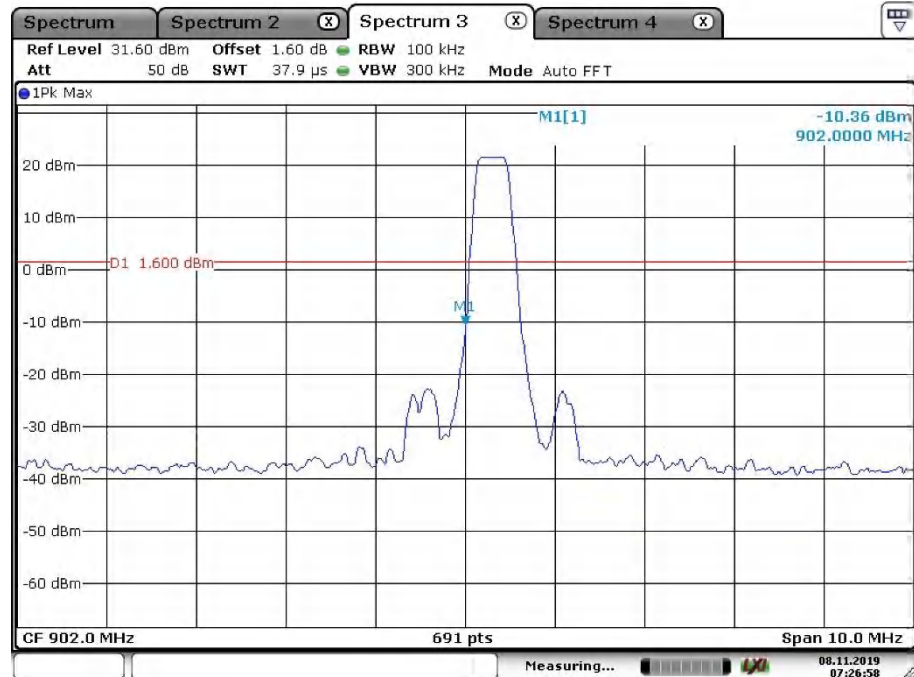


High Channel



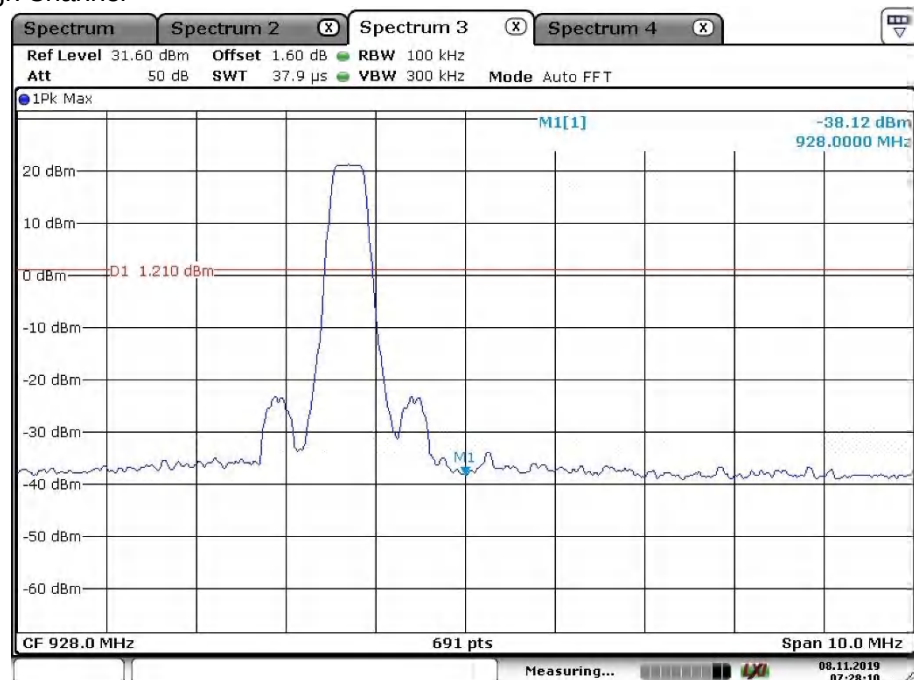
Date: 8.NOV.2019 06:45:32

Band Edge, Low Channel



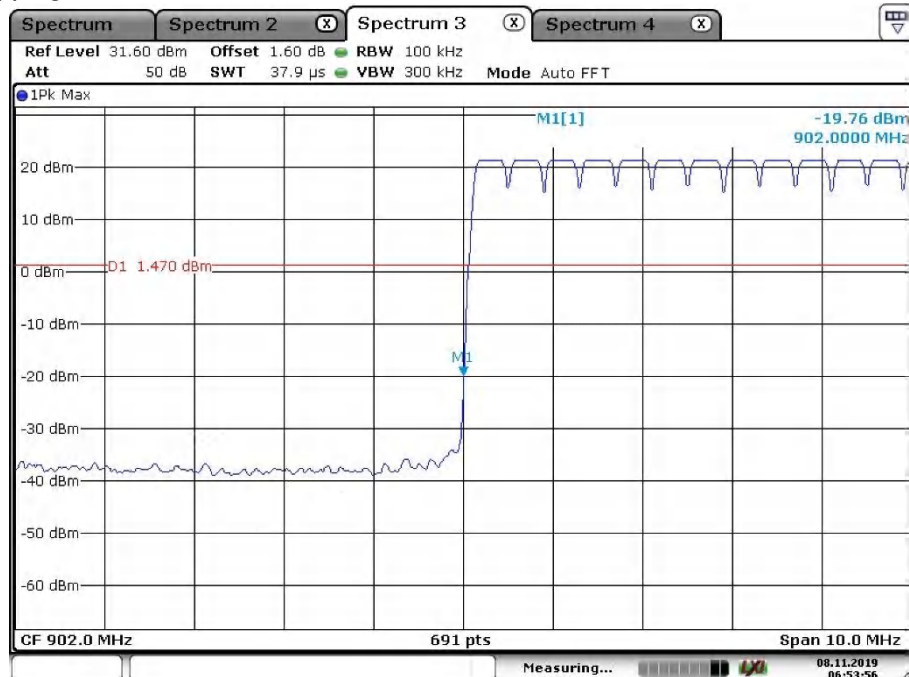
Date: 8.NOV.2019 07:26:58

Band Edge, High Channel



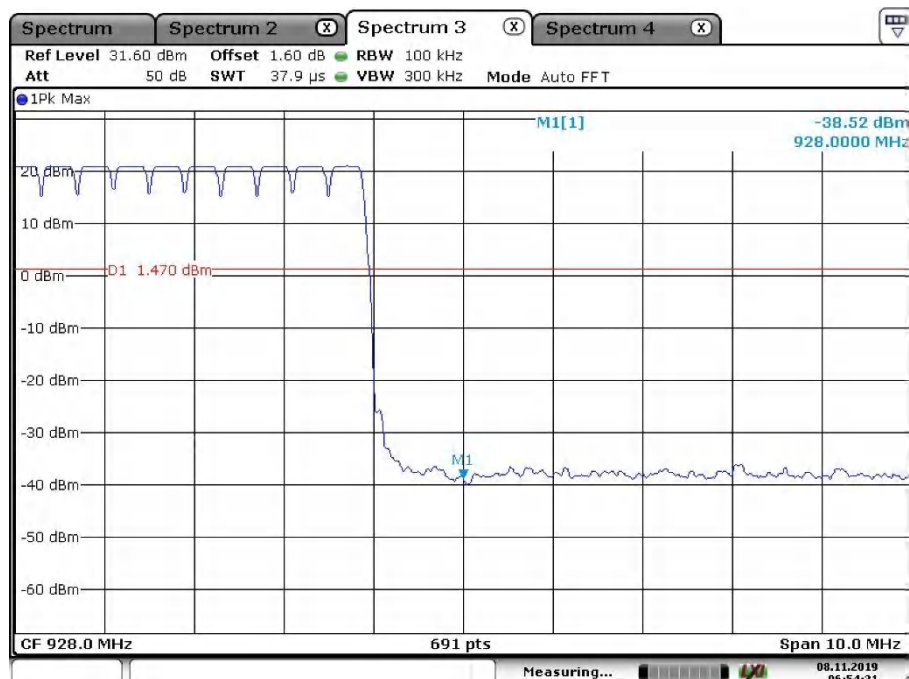
Date: 8.NOV.2019 07:28:10

Band Edge, Hopping Mode, Low Channel



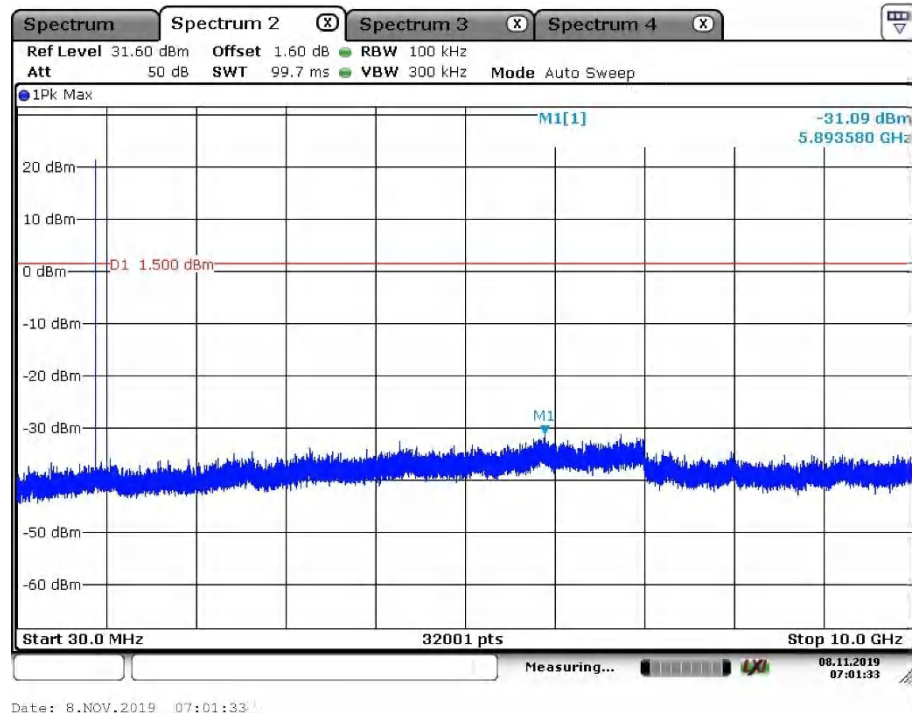
Date: 8.NOV.2019 06:53:56

Band Edge, Hopping Mode, High Channel

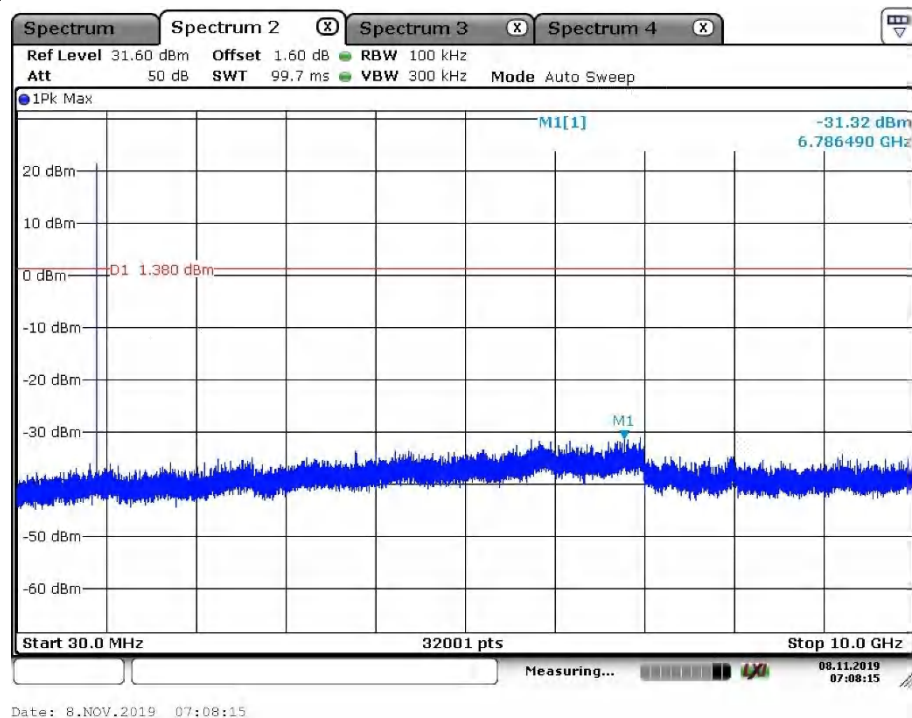


Date: 8.NOV.2019 06:54:32

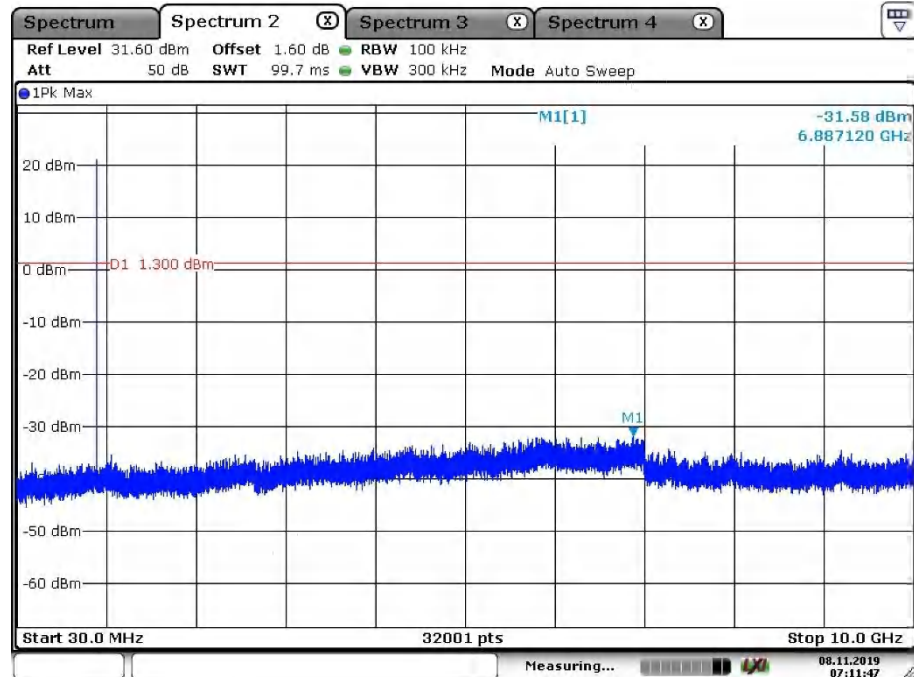
FHSS#2 (Bandwidth: 125KHz) Low Channel



Middle Channel



High Channel

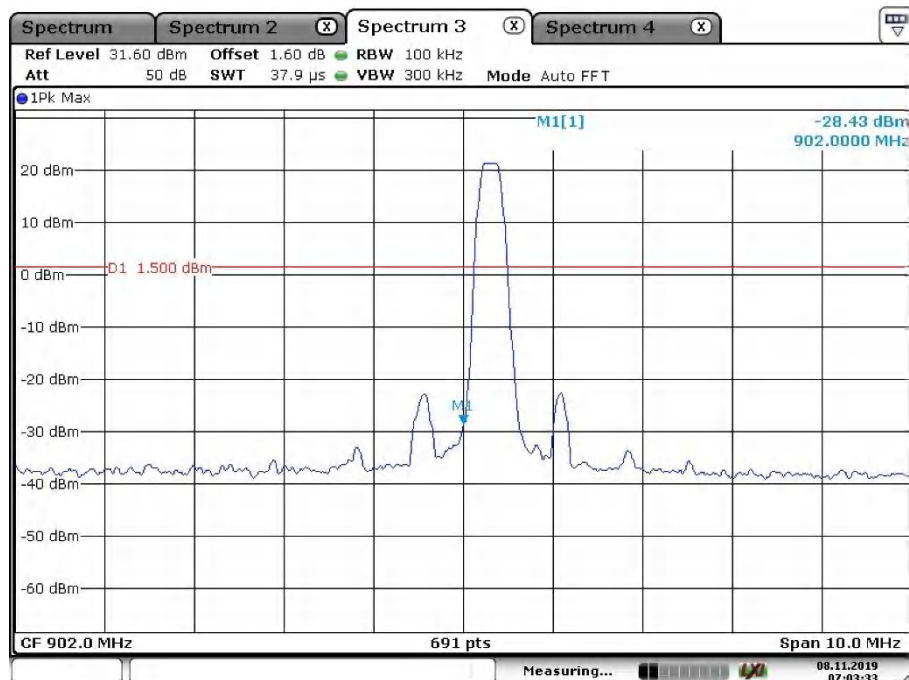


Date: 8.NOV.2019 07:11:47

Measuring...

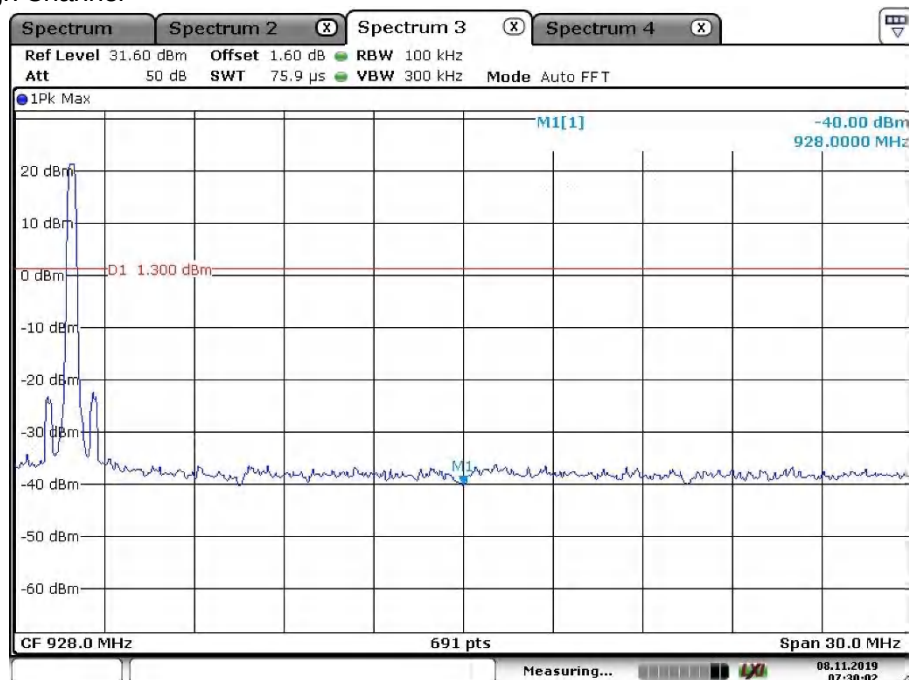
08.11.2019
07:11:47

Band Edge, Low Channel



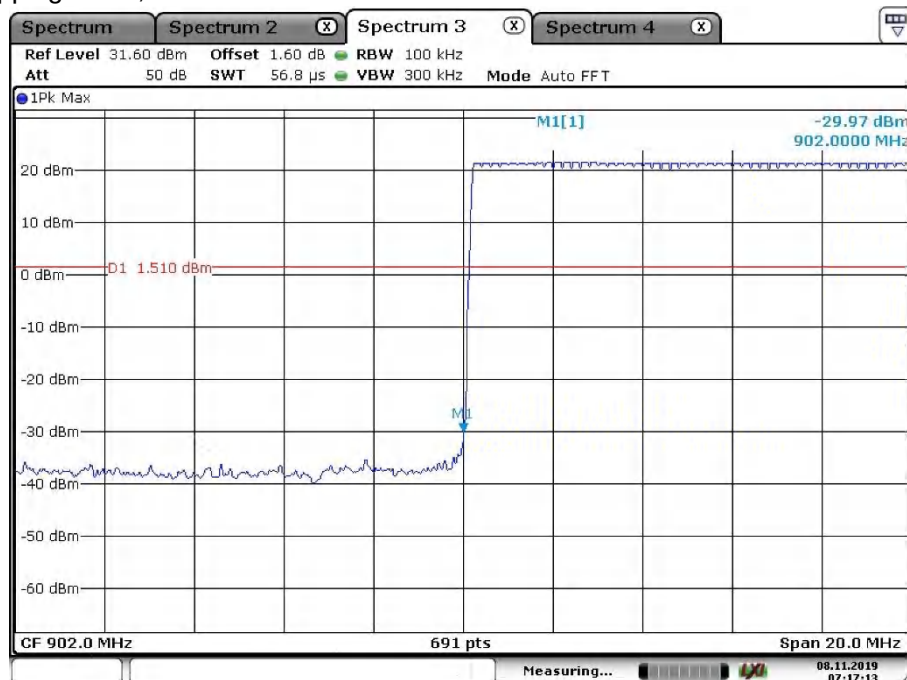
Date: 8.NOV.2019 07:03:33

Band Edge, High Channel



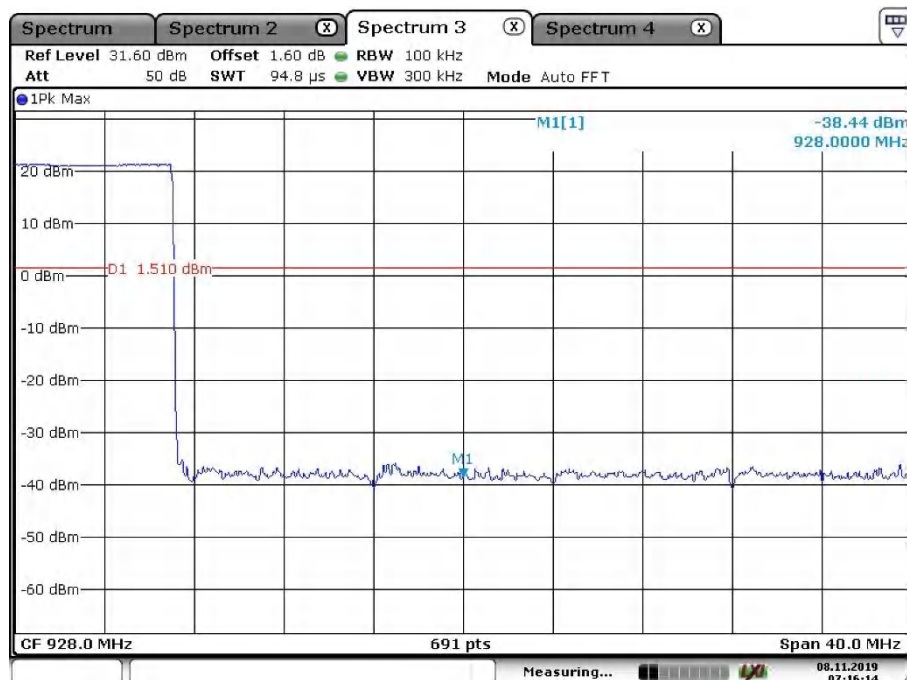
Date: 8.NOV.2019 07:30:02

Band Edge, Hopping Mode, Low Channel



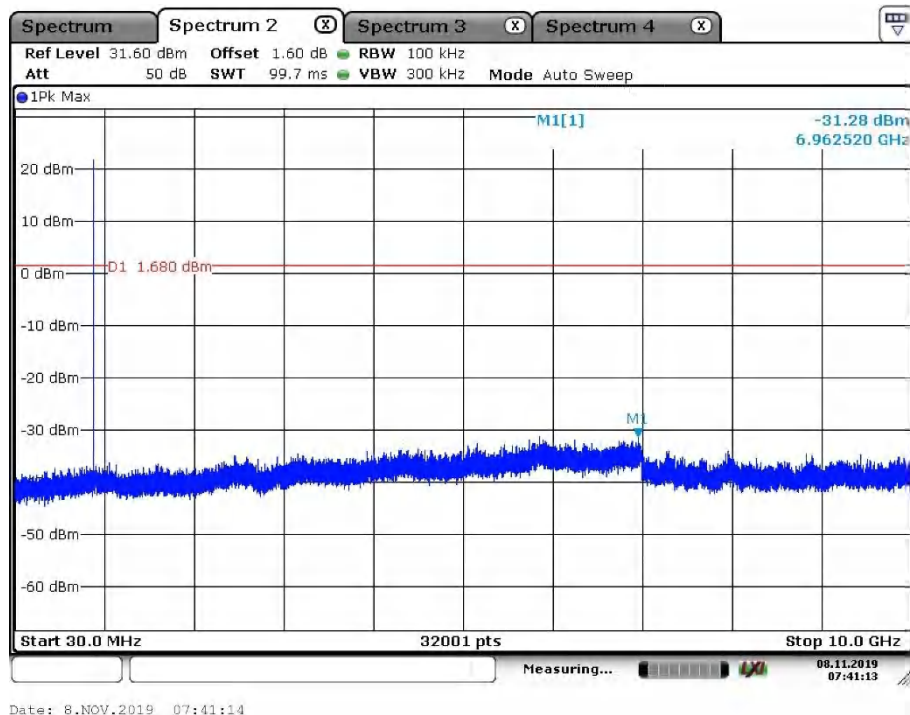
Date: 8.NOV.2019 07:17:13

Band Edge, Hopping Mode, High Channel

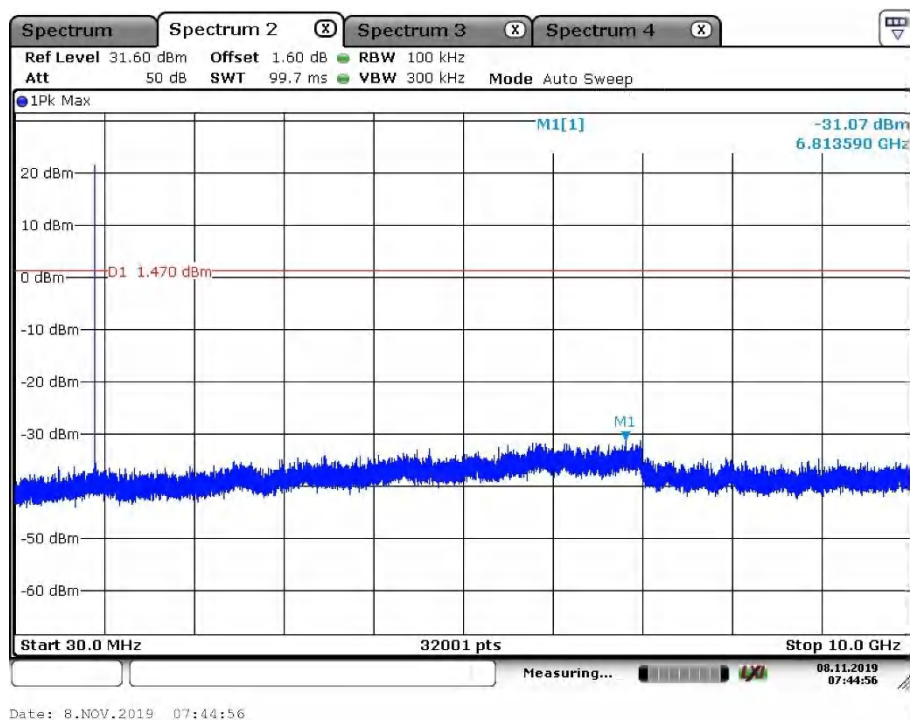


Date: 8.NOV.2019 07:16:14

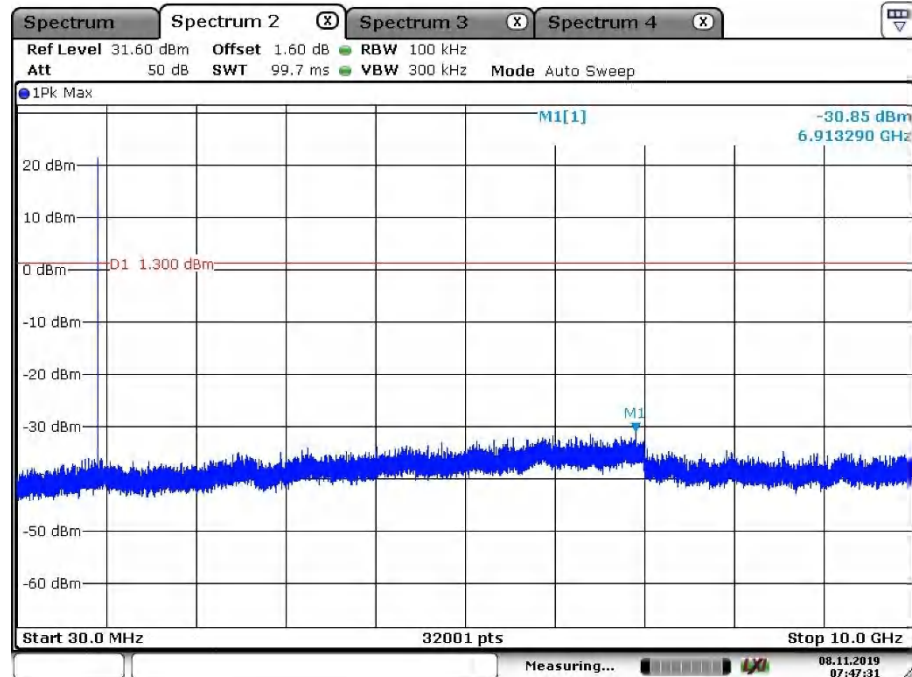
FHSS#3 (DataRate: 150Kbps)
Low Channel



Middle Channel

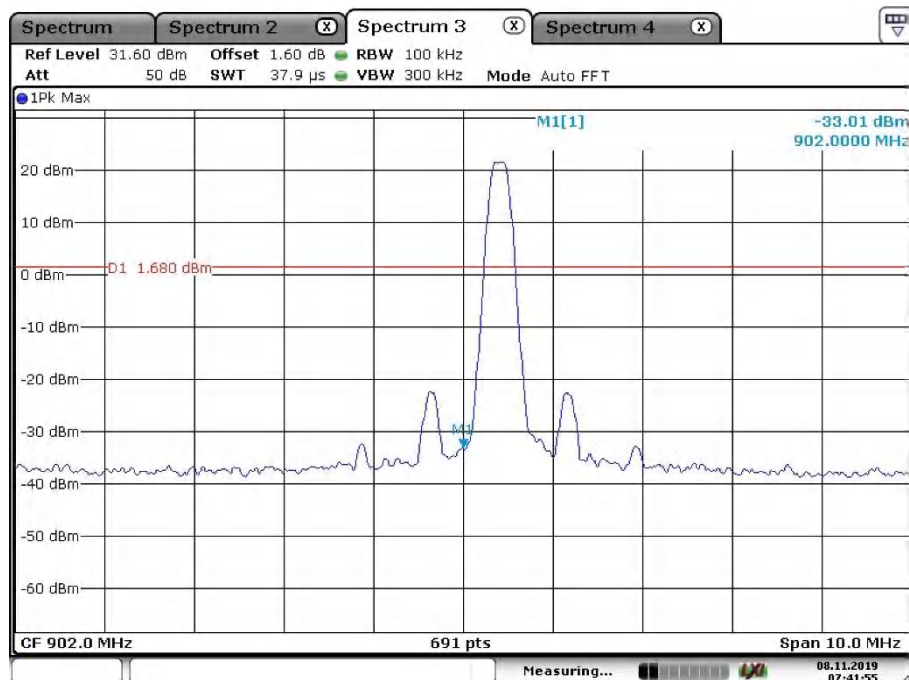


High Channel



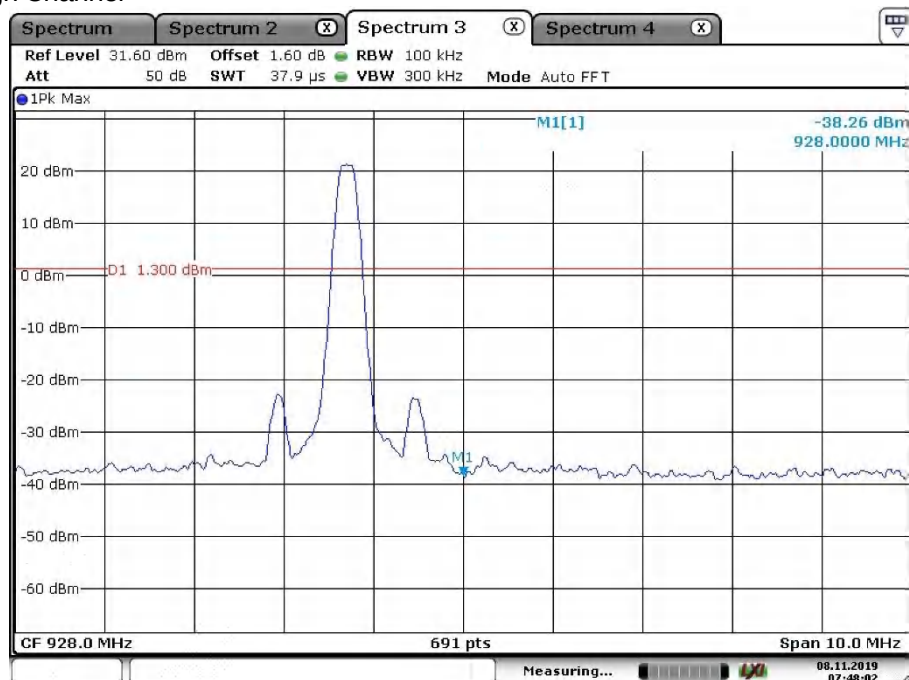
Date: 8.NOV.2019 07:47:32

Band Edge, Low Channel



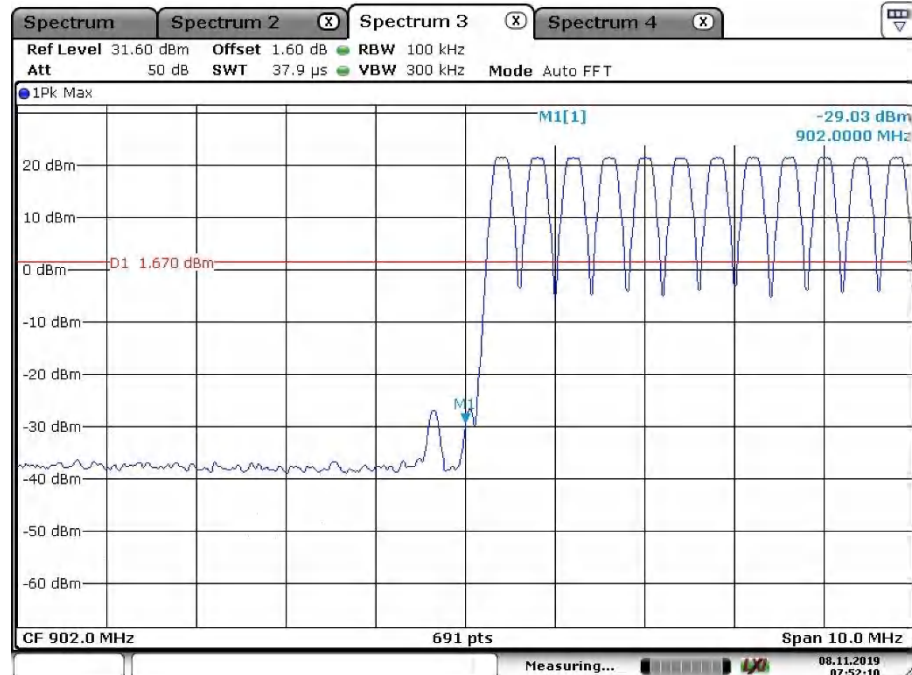
Date: 8.NOV.2019 07:41:55

Band Edge, High Channel



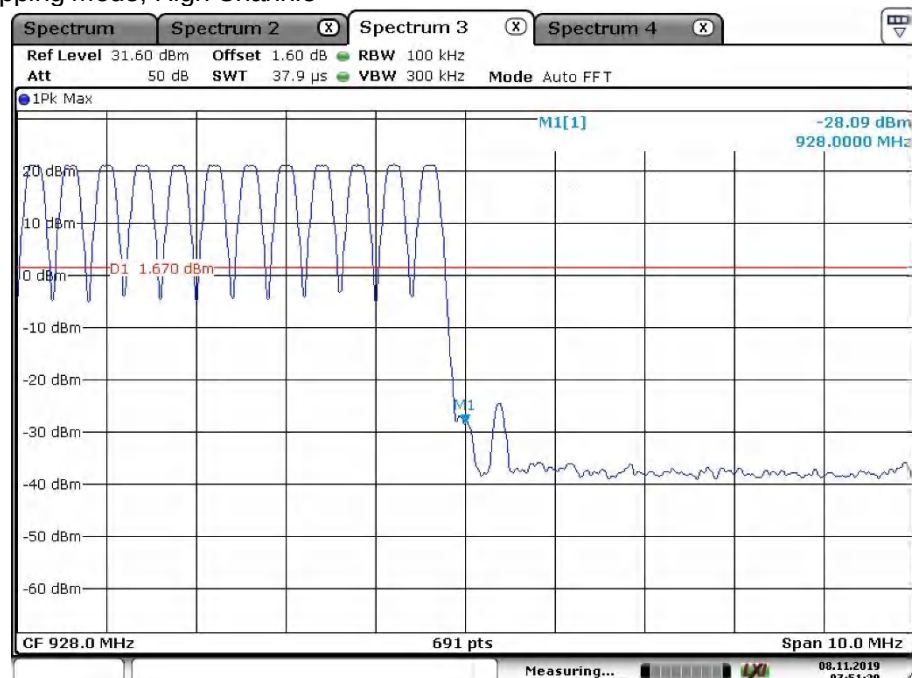
Date: 8.NOV.2019 07:48:02

Band Edge, Hopping Mode, Low Channel



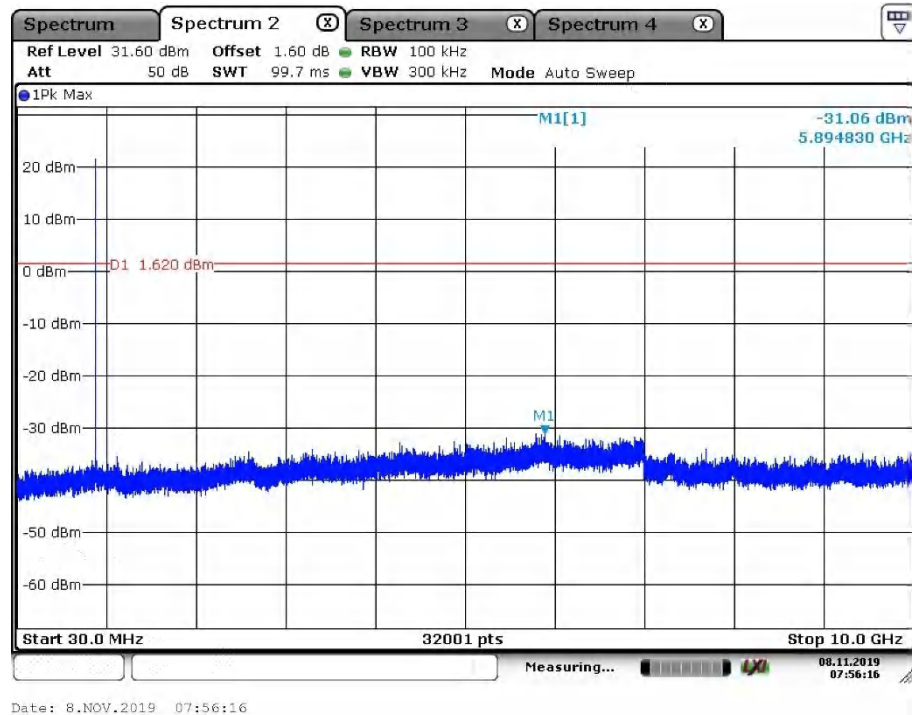
Date: 8.NOV.2019 07:52:11

Band Edge, Hopping Mode, High Channel

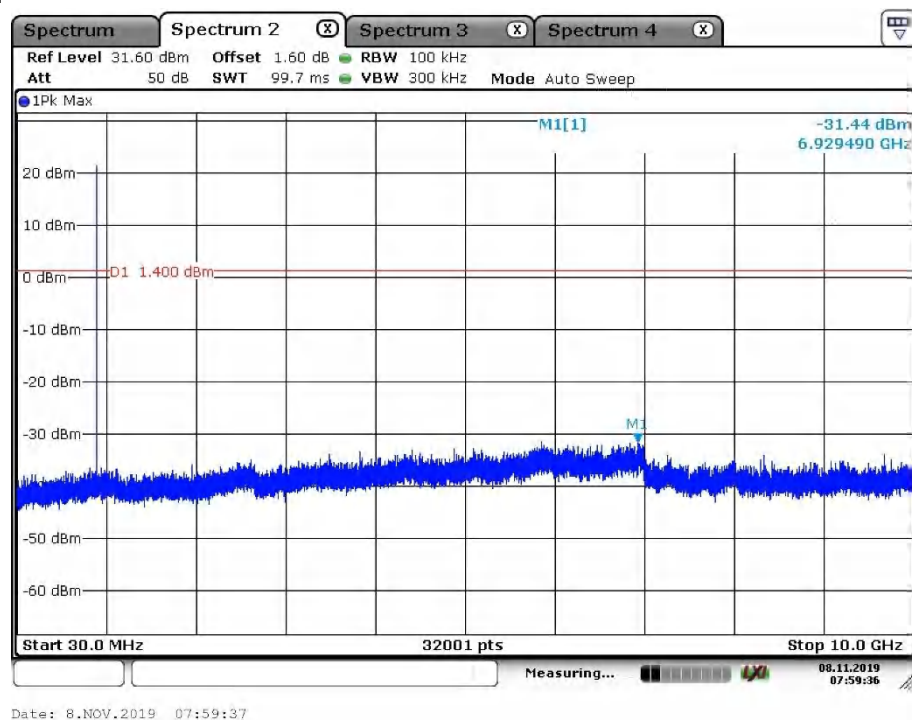


Date: 8.NOV.2019 07:51:39

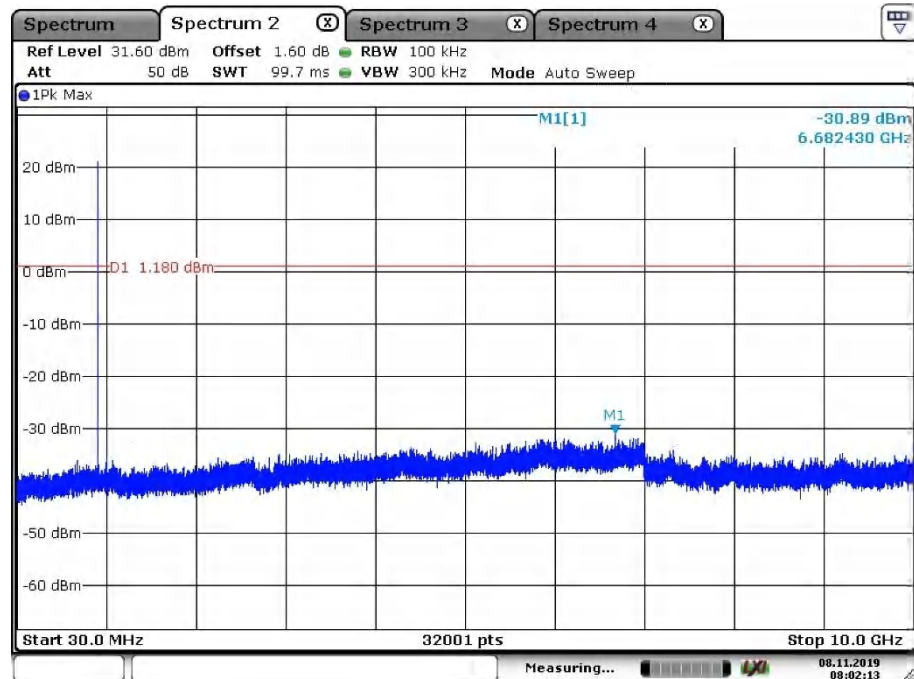
FHSS#4 (DataRate: 50Kbps) Low Channel



Middle Channel

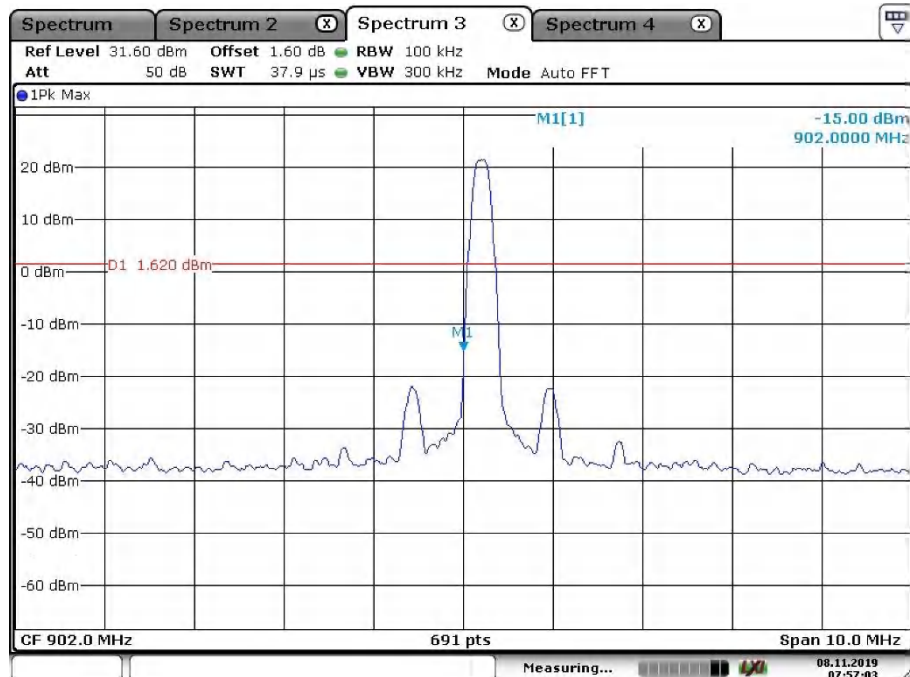


High Channel



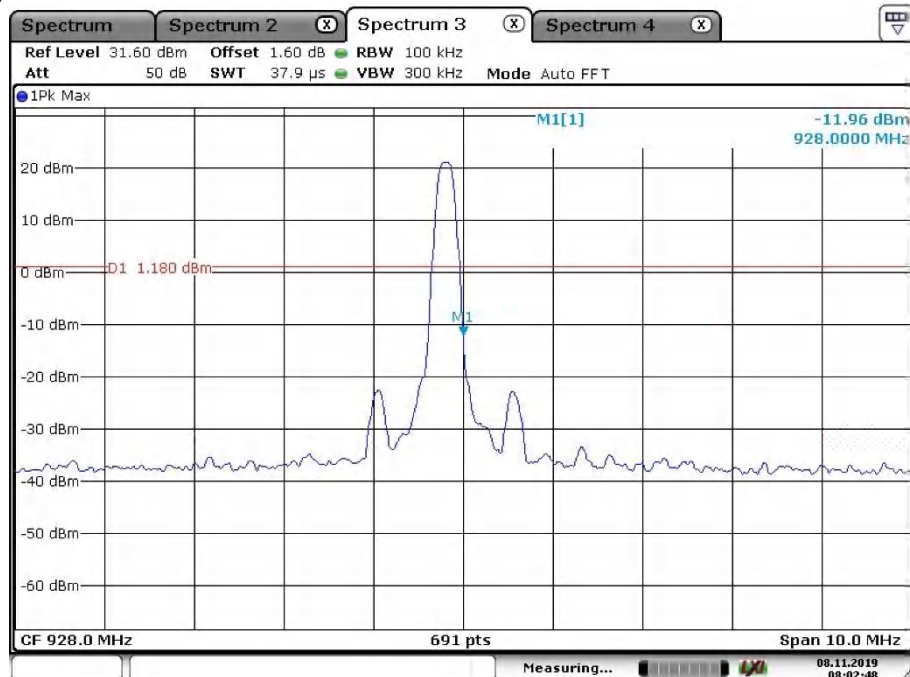
Date: 8.NOV.2019 08:02:13

Band Edge, Low Channel



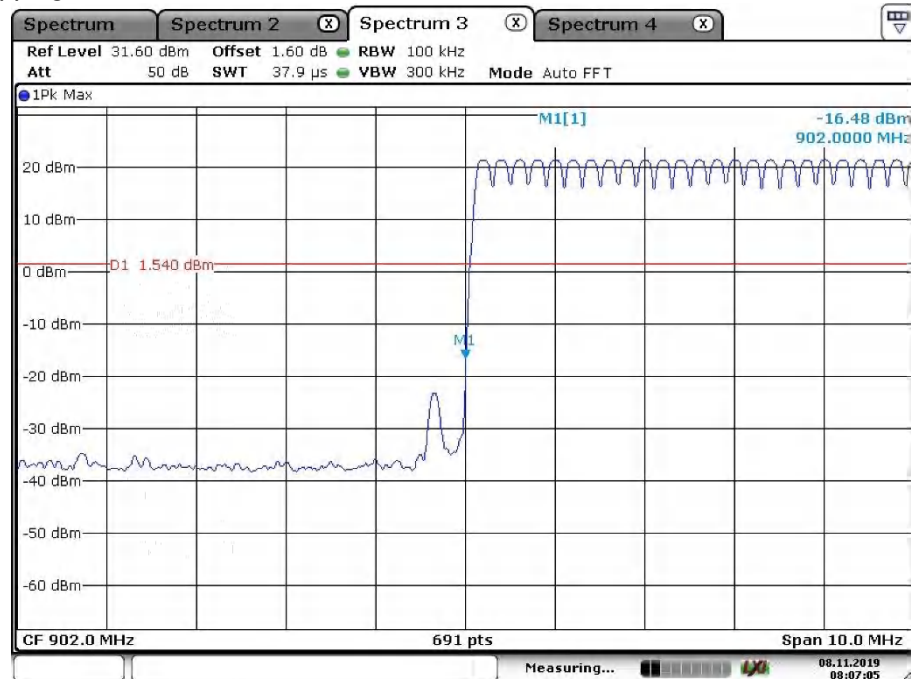
Date: 8.NOV.2019 07:57:03

Band Edge, High Channel

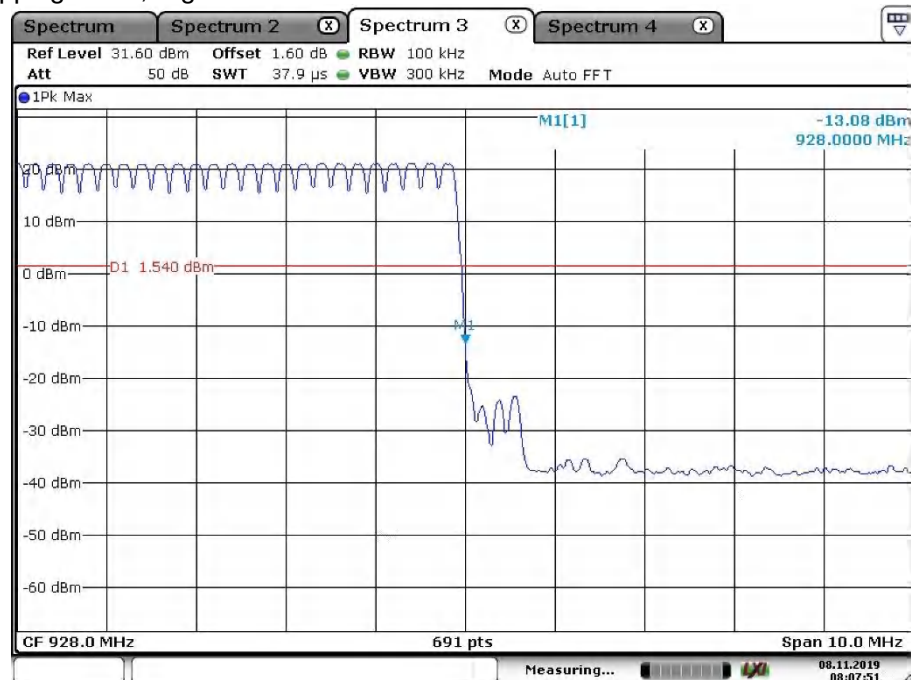


Date: 8.NOV.2019 08:02:48

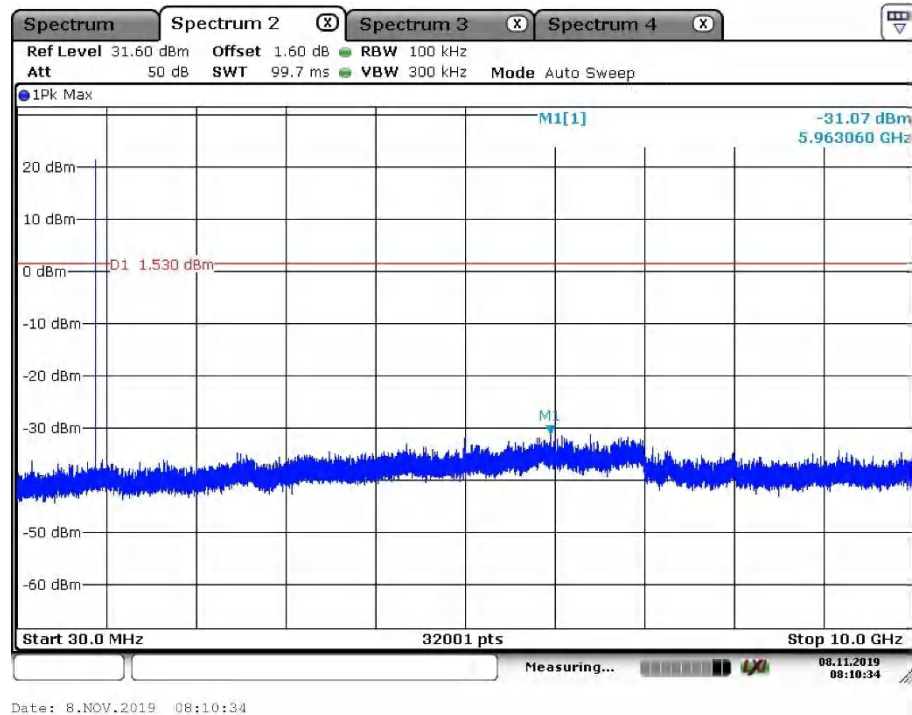
Band Edge, Hopping Mode, Low Channel



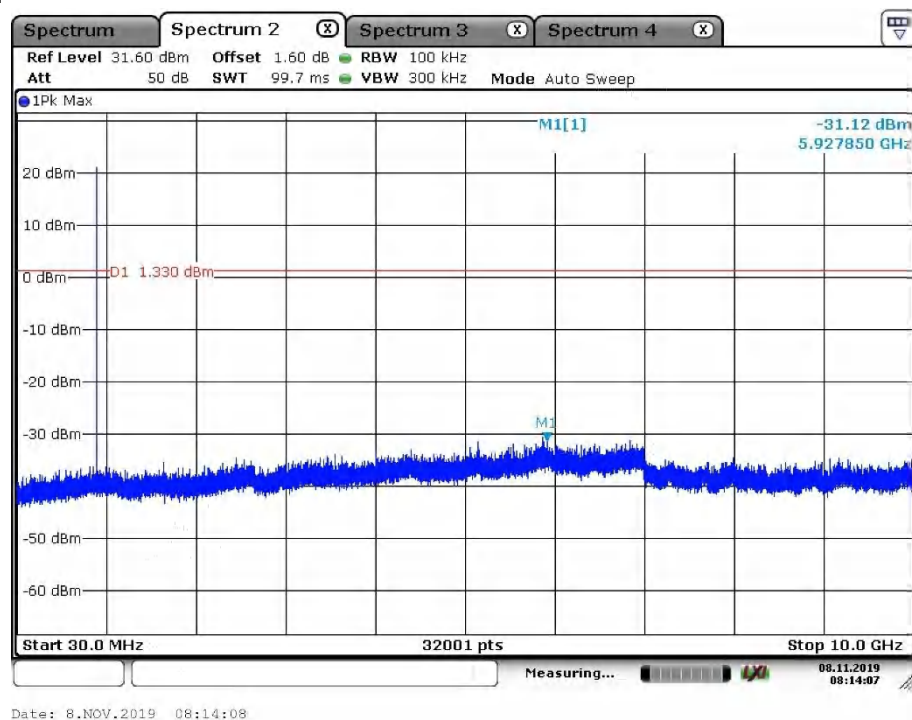
Band Edge, Hopping Mode, High Channel



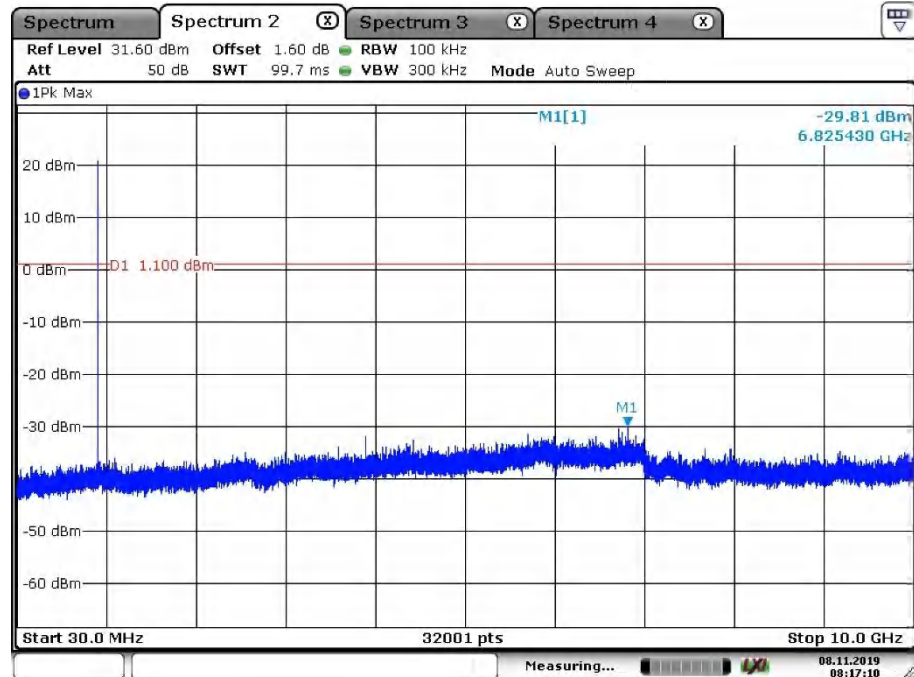
FHSS#5 (DataRate: 5Kbps)
Low Channel



Middle Channel

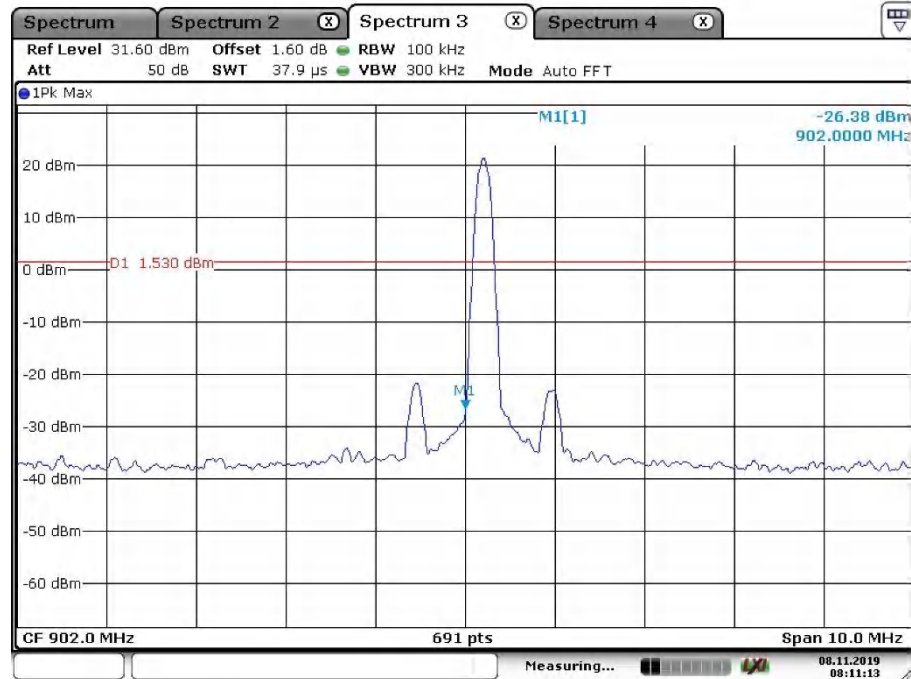


High Channel



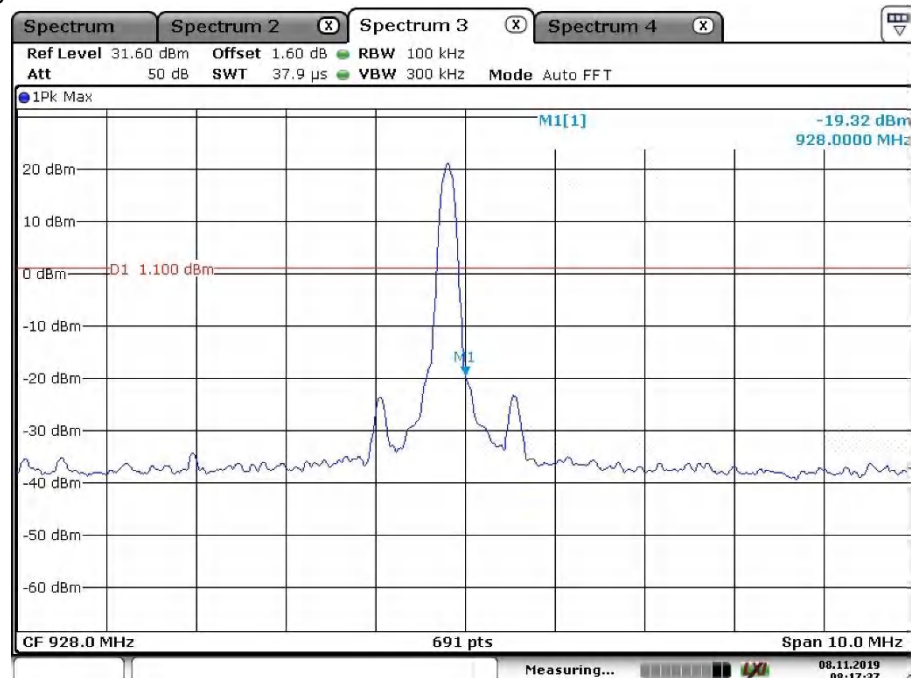
Date: 8.NOV.2019 08:17:11

Band Edge, Low Channel



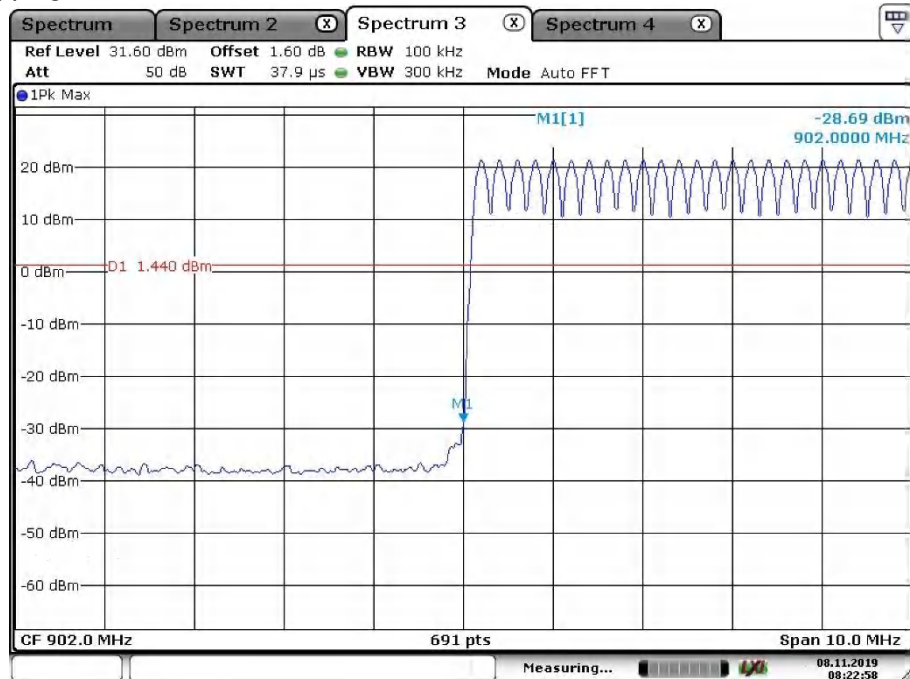
Date: 8.NOV.2019 08:11:14

Band Edge, High Channel

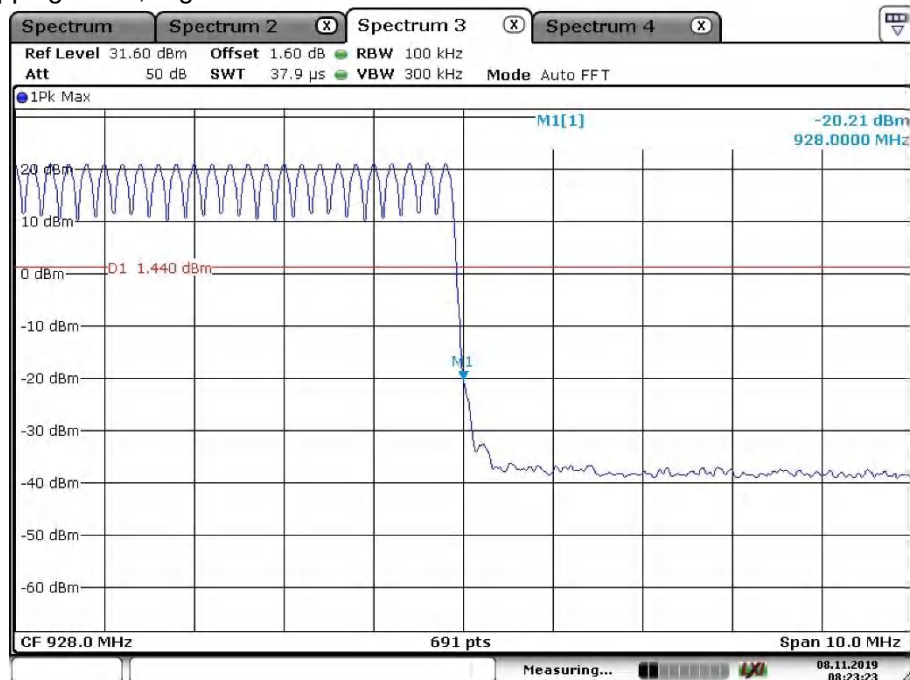


Date: 8.NOV.2019 08:17:38

Band Edge, Hopping Mode, Low Channel



Band Edge, Hopping Mode, High Channel



Appendix C.7: Test Results of Conducted Emission on AC Mains

Bluetooth connecting mode

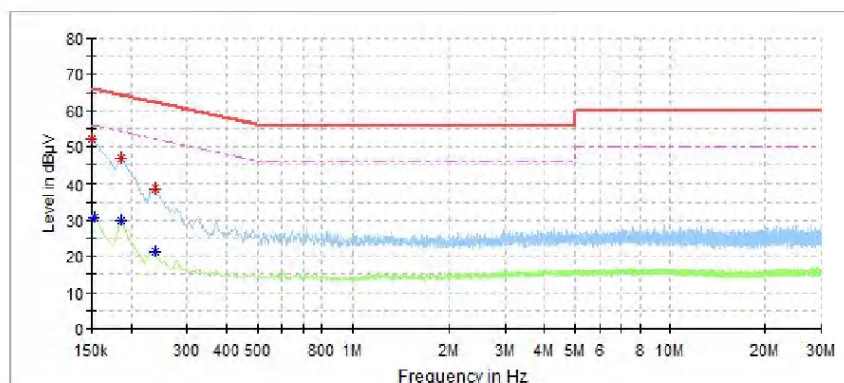
L-120V-BT

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Test Report

EUT Information

EUT Name:	Ring Smart Lightbulb
Model:	PAR38
Order No.:	168134202 50
Test Mode:	Bluetooth connecting
Test Voltage:	AC120V50Hz
Test By:	Tom Guo
Review By:	Gary Chen



Critical Freqs

Frequency (MHz)	MaxPeak (dBμV)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.150000	51.92	---	66.00	14.08	---	---	L1	9.6
0.154000	---	30.87	55.78	24.91	---	---	L1	9.6
0.186000	---	30.07	54.21	24.15	---	---	L1	9.6
0.186000	46.70	---	64.21	17.52	---	---	L1	9.6
0.238000	---	21.52	52.17	30.64	---	---	L1	9.6
0.238000	38.71	---	62.17	23.46	---	---	L1	9.6

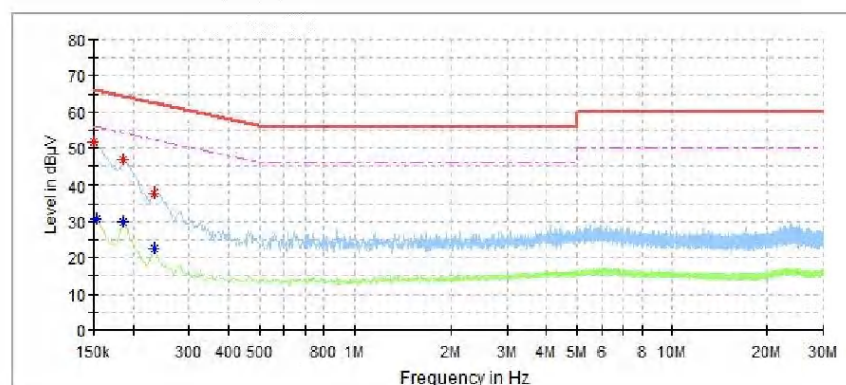
N-120V-BT

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Test Report

EUT Information

EUT Name: Ring Smart Lightbulb
Model: PAR38
Order No.: 168134202 50
Test Mode: Bluetooth connecting
Test Voltage: AC120V50Hz
Test By: Tom Guo
Review By: Gary Chen



Critical Freqs

Frequency (MHz)	MaxPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.150000	51.74	---	66.00	14.26	---	---	N	9.6
0.154000	---	30.59	55.78	25.19	---	---	N	9.6
0.186000	---	29.89	54.21	24.33	---	---	N	9.6
0.186000	46.93	---	64.21	17.29	---	---	N	9.6
0.234000	---	22.63	52.31	29.68	---	---	N	9.6
0.234000	37.70	---	62.31	24.60	---	---	N	9.6

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10:04:51 AM

DTSS connecting mode

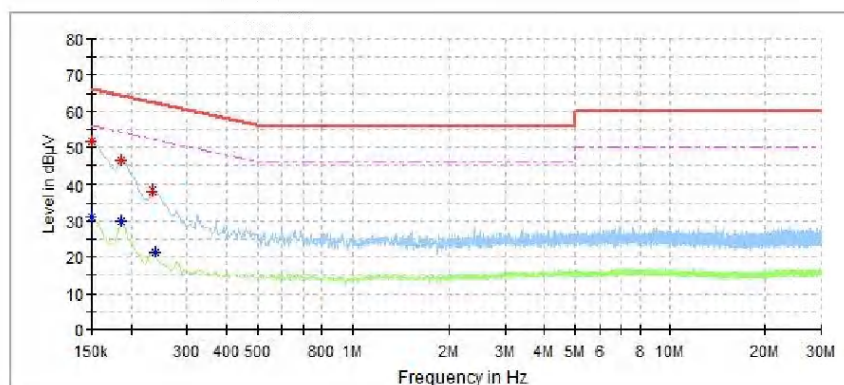
L-120V-DTSSs

1 / 1

Test Report

EUT Information

EUT Name:	Ring Smart Lightbulb
Model:	PAR38
Order No.:	168134202 50
Test Mode:	DTSSs conneting
Test Voltage:	AC120V50Hz
Test By:	Tom Guo
Review By:	Gary Chen



Critical Freqs

Frequency (MHz)	MaxPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.150000	---	31.10	56.00	24.90	---	---	L1	9.6
0.150000	51.88	---	66.00	14.12	---	---	L1	9.6
0.186000	---	29.99	54.21	24.22	---	---	L1	9.6
0.186000	46.45	---	64.21	17.77	---	---	L1	9.6
0.234000	38.03	---	62.31	24.27	---	---	L1	9.6
0.238000	---	21.17	52.17	30.99	---	---	L1	9.6

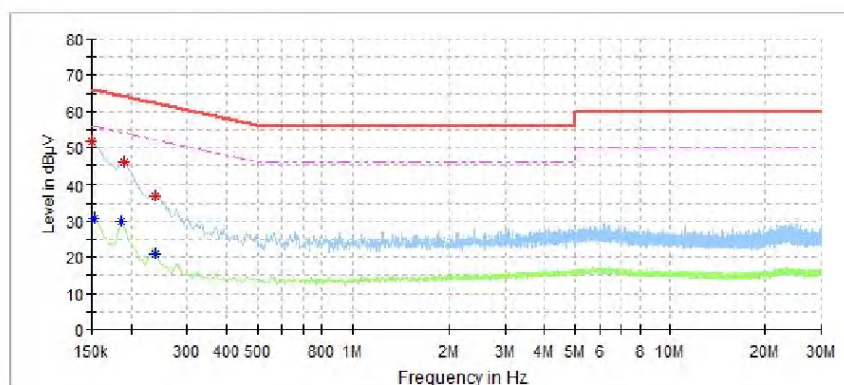
N-120V-DTSs

1 / 1

Test Report

EUT Information

EUT Name:	Ring Smart Lightbulb
Model:	PAR38
Order No.:	168134202 50
Test Mode:	DTSs connecting
Test Voltage:	AC120V50Hz
Test By:	Tom Guo
Review By:	Gary Chen
EUT Name:	Ring Smart Lightbulb



Critical Freqs

Frequency (MHz)	MaxPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.150000	51.81	---	66.00	14.19	---	---	N	9.6
0.154000	---	30.57	55.78	25.21	---	---	N	9.6
0.186000	---	29.77	54.21	24.44	---	---	N	9.6
0.190000	45.88	---	64.04	18.16	---	---	N	9.6
0.238000	---	20.74	52.17	31.43	---	---	N	9.6
0.238000	36.88	---	62.17	25.29	---	---	N	9.6

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10:09:05 AM

FHSS connecting mode

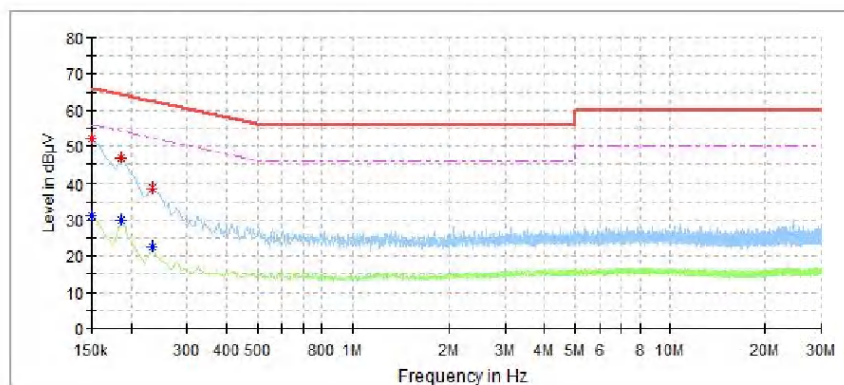
L-120V-FHSS

1 / 1

Test Report

EUT Information

EUT Name:	Ring Smart Lightbulb
Model:	PAR38
Order No.:	168134202 50
Test Mode:	FHSS connecting
Test Voltage:	AC120V50Hz
Test By:	Tom Guo
Review By:	Gary Chen
EUT Name:	Ring Smart Lightbulb



Critical Freqs

Frequency (MHz)	MaxPeak (dBμV)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.150000	---	31.14	56.00	24.86	---	---	L1	9.6
0.150000	51.98	---	66.00	14.02	---	---	L1	9.6
0.186000	---	29.89	54.21	24.33	---	---	L1	9.6
0.186000	46.65	---	64.21	17.56	---	---	L1	9.6
0.234000	---	22.59	52.31	29.72	---	---	L1	9.6
0.234000	38.75	---	62.31	23.55	---	---	L1	9.6

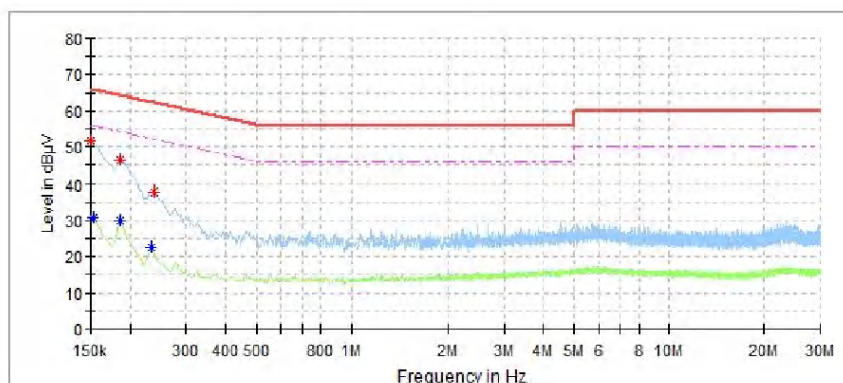
N-120V-FHSSs

1 / 1

Test Report

EUT Information

EUT Name:	Ring Smart Lightbulb
Model:	PAR38
Order No.:	168134202 50
Test Mode:	FHSSs conneting
Test Voltage:	AC120V50Hz
Test By:	Tom Guo
Review By:	Gary Chen
EUT Name:	Ring Smart Lightbulb



Critical Freqs

Frequency (MHz)	MaxPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.150000	51.80	---	66.00	14.20	---	---	N	9.6
0.154000	---	30.59	55.78	25.19	---	---	N	9.6
0.186000	---	29.87	54.21	24.34	---	---	N	9.6
0.186000	46.44	---	64.21	17.77	---	---	N	9.6
0.234000	---	22.48	52.31	29.83	---	---	N	9.6
0.238000	37.55	---	62.17	24.62	---	---	N	9.6

11/13/2019

10:21:43 AM