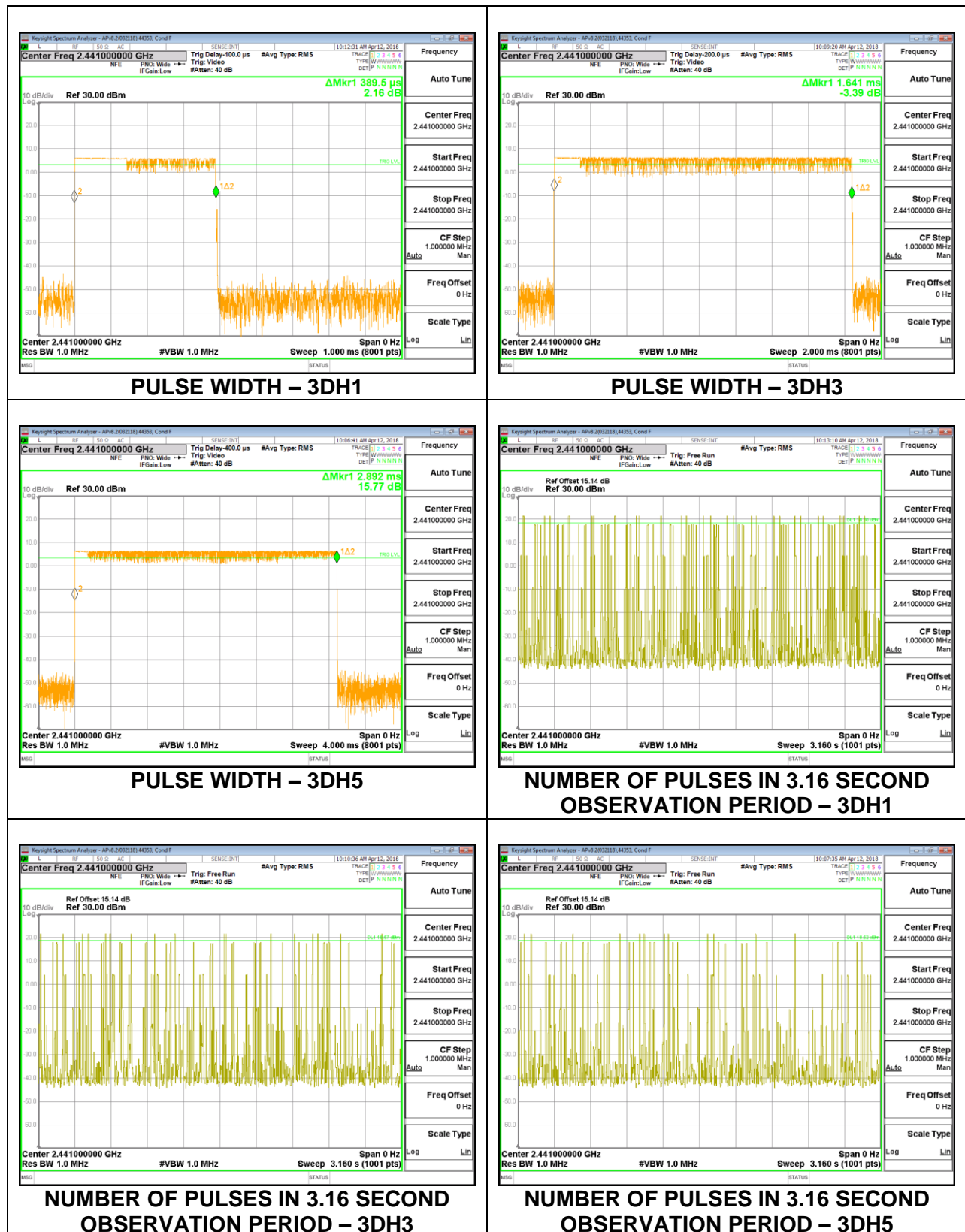


Antenna 3

DH Packet	Pulse Width (msec)	Number of Pulses in 3.16 seconds	Average Time of Occupancy (sec)	Limit (sec)	Margin (sec)
8PSK Normal Mode					
3DH1	0.389	29	0.11281	0.4	-0.2872
3DH3	1.641	17	0.27897	0.4	-0.121
3DH5	2.892	12	0.34704	0.4	-0.053

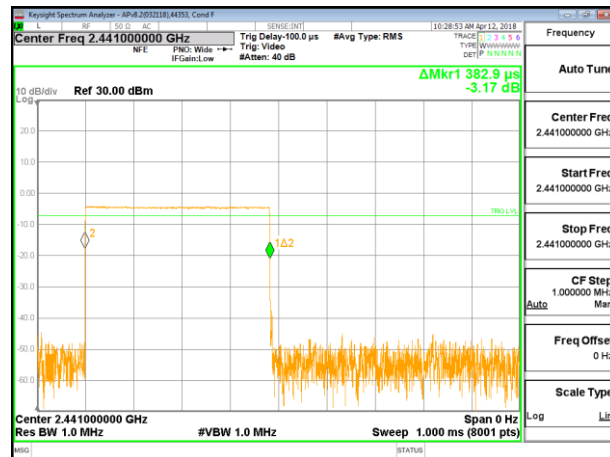
Note: for AFH(8PSK) mode, please refer to the results of AFH(GFSK) mode; the channel selection and hopping rate are the same for both EDR and Basic Rate operation, data for Basic Rate in section 8.5.1 demonstrates compliance with channel occupancy when AFH is employed.



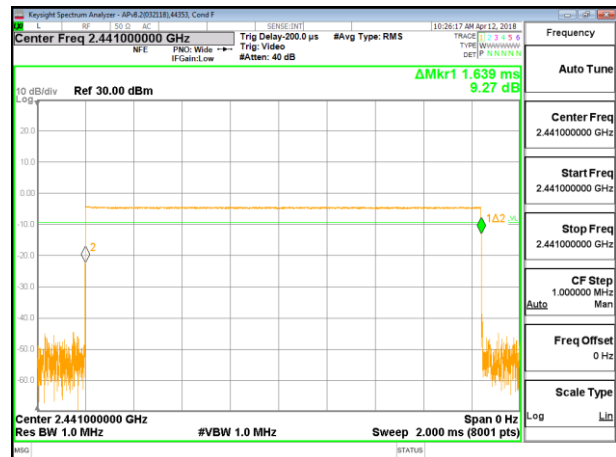
8.5.3. LOW POWER BASIC DATA RATE GFSK MODULATION

Antenna 4

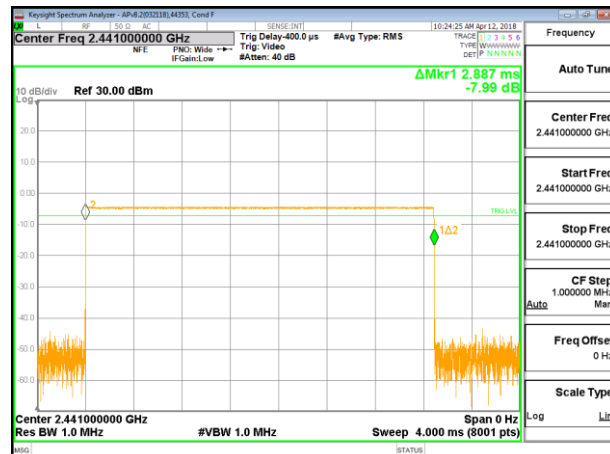
DH Packet	Pulse Width (msec)	Number of Pulses in 3.16 seconds	Average Time of Occupancy (sec)	Limit (sec)	Margin (sec)
GFSK Normal Mode					
DH1	0.383	32	0.1226	0.4	-0.2774
DH3	1.639	16	0.2622	0.4	-0.1378
DH5	2.887	10	0.2887	0.4	-0.1113
DH Packet	Pulse Width (sec)	Number of Pulses in 0.8 seconds	Average Time of Occupancy (sec)	Limit (sec)	Margin (sec)
GFSK AFH Mode					
DH1	0.383	8	0.03064	0.4	-0.3694
DH3	1.639	4	0.06556	0.4	-0.3344
DH5	2.887	2.5	0.07218	0.4	-0.3278



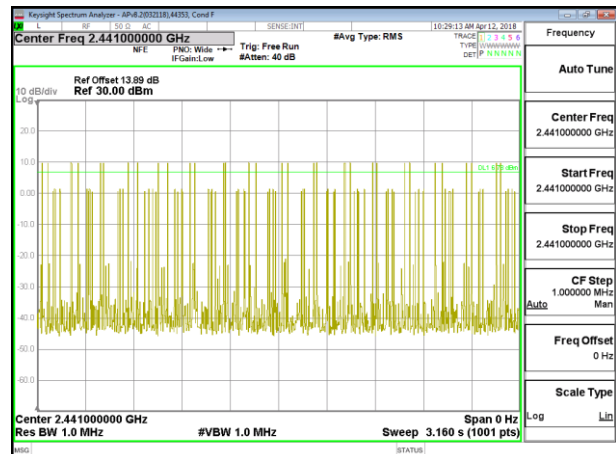
PULSE WIDTH – DH1



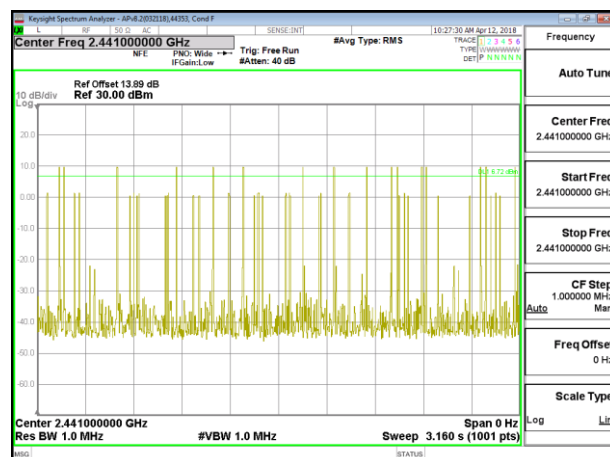
PULSE WIDTH – DH3



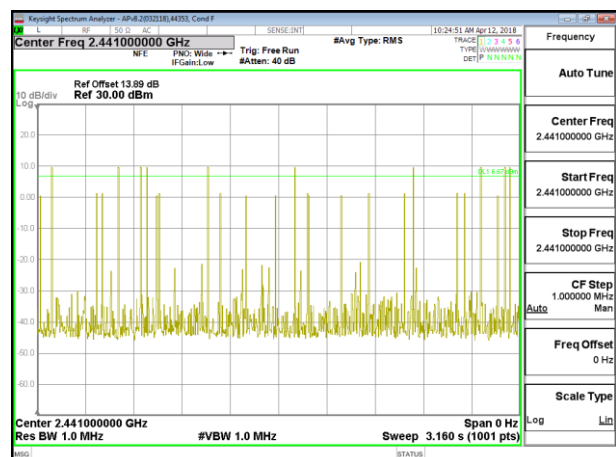
PULSE WIDTH – DH5



**NUMBER OF PULSES IN 3.16 SECOND
OBSERVATION PERIOD – DH1**



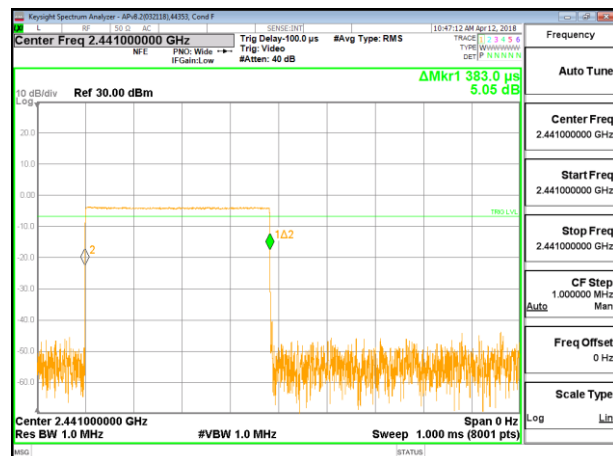
**NUMBER OF PULSES IN 3.16 SECOND
OBSERVATION PERIOD – DH3**



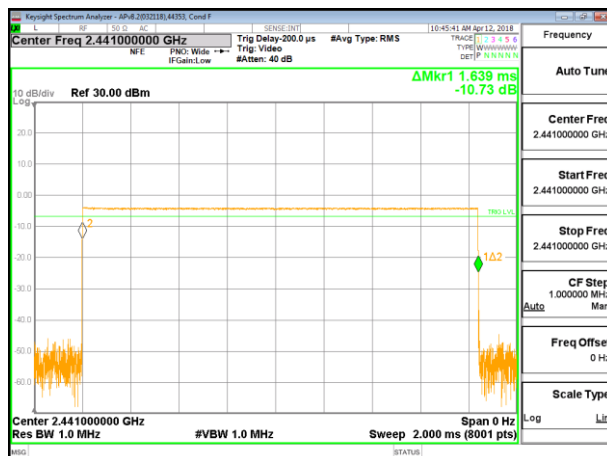
**NUMBER OF PULSES IN 3.16 SECOND
OBSERVATION PERIOD – DH5**

Antenna 3

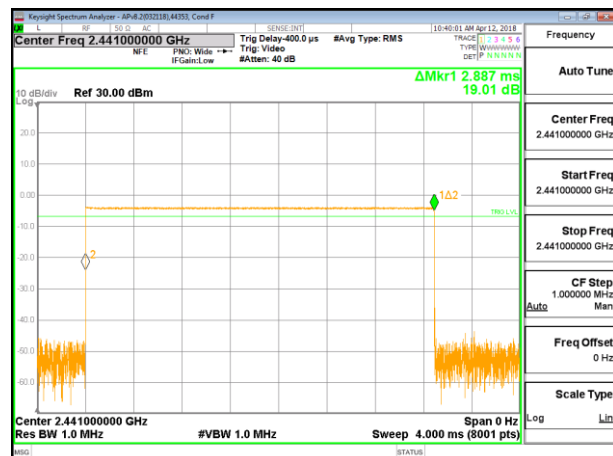
DH Packet	Pulse Width (msec)	Number of Pulses in 3.16 seconds	Average Time of Occupancy (sec)	Limit (sec)	Margin (sec)
GFSK Normal Mode					
DH1	0.383	31	0.1187	0.4	-0.2813
DH3	1.639	17	0.2786	0.4	-0.1214
DH5	2.887	11	0.3176	0.4	-0.0824
DH Packet	Pulse Width (sec)	Number of Pulses in 0.8 seconds	Average Time of Occupancy (sec)	Limit (sec)	Margin (sec)
GFSK AFH Mode					
DH1	0.383	7.75	0.02968	0.4	-0.3703
DH3	1.639	4.25	0.06966	0.4	-0.3303
DH5	2.887	2.75	0.07939	0.4	-0.3206



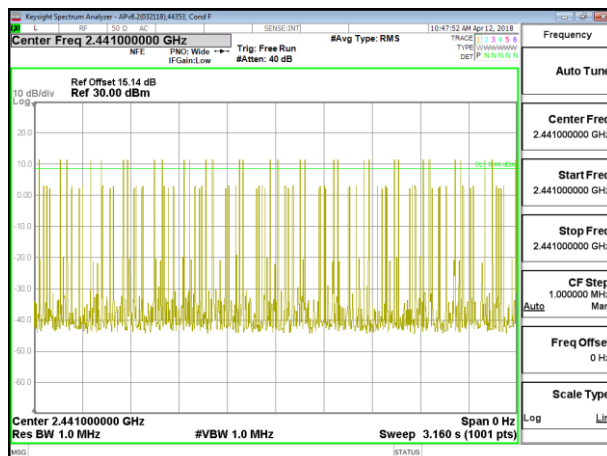
PULSE WIDTH – DH1



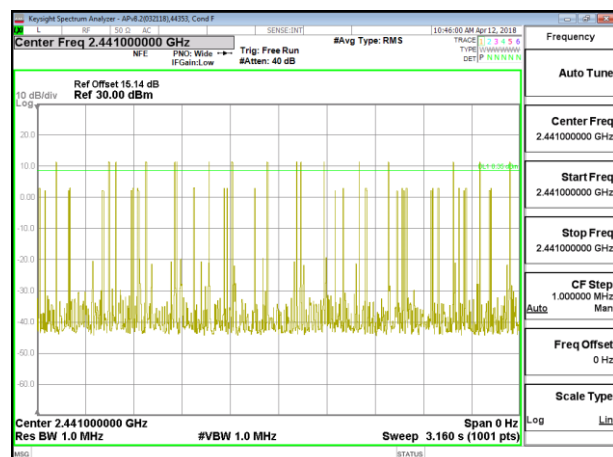
PULSE WIDTH – DH3



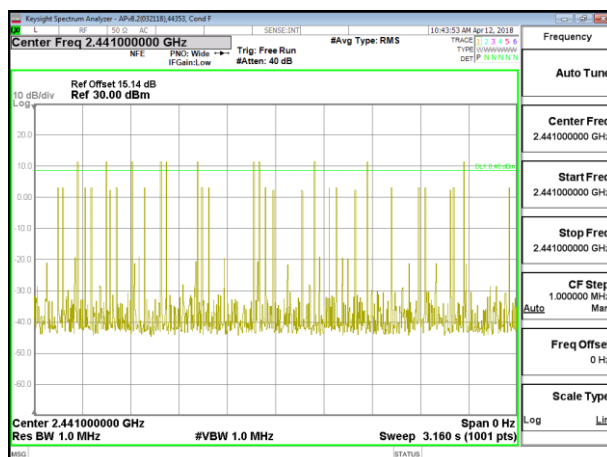
PULSE WIDTH – DH5



NUMBER OF PULSES IN 3.16 SECOND OBSERVATION PERIOD – DH1



NUMBER OF PULSES IN 3.16 SECOND OBSERVATION PERIOD – DH3



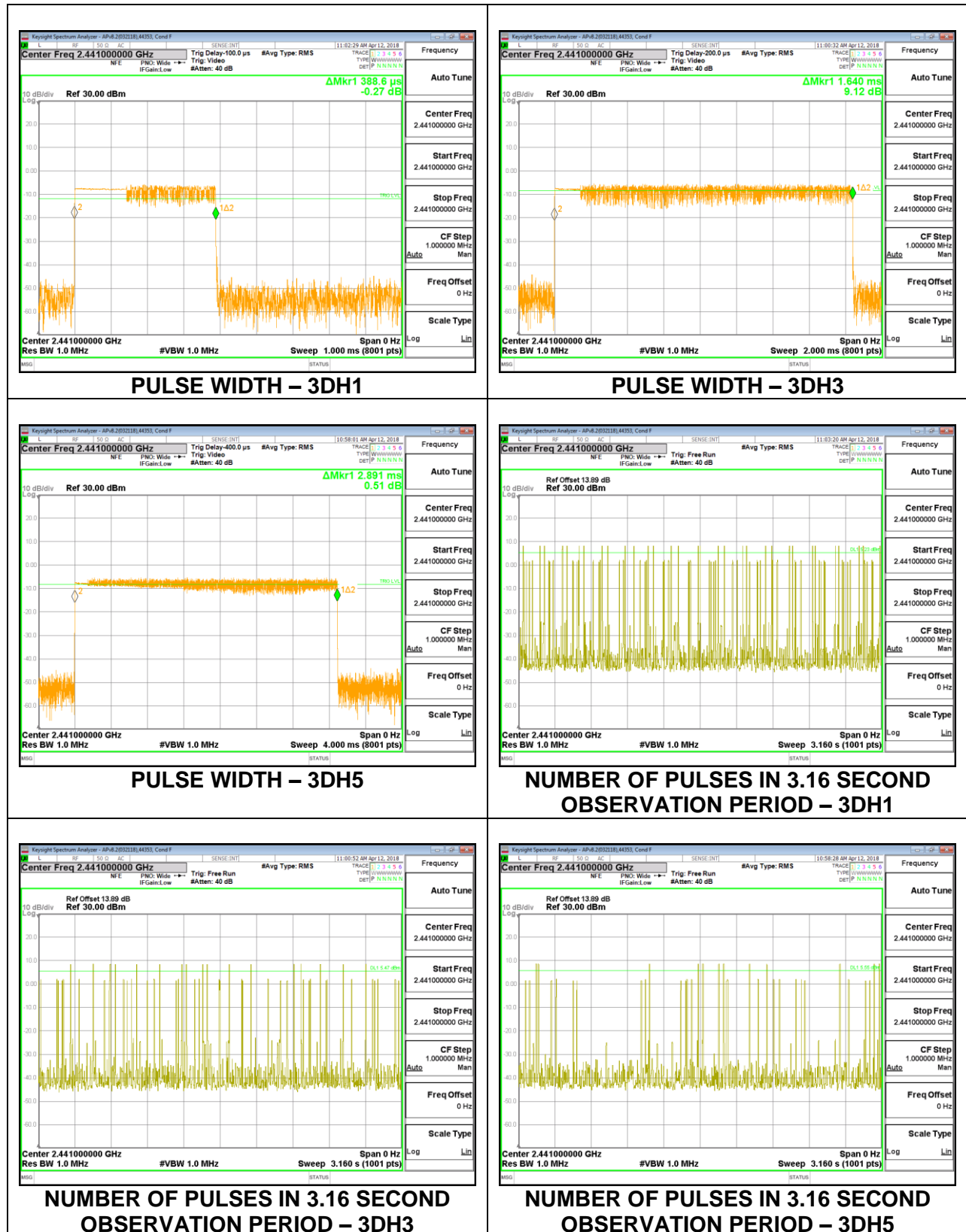
NUMBER OF PULSES IN 3.16 SECOND OBSERVATION PERIOD – DH5

8.5.4. LOW POWER ENCHANCED DATA RATE 8PSK MODULATION

Antenna 4

DH Packet	Pulse Width (msec)	Number of Pulses in 3.16 seconds	Average Time of Occupancy (sec)	Limit (sec)	Margin (sec)
8PSK Normal Mode					
3DH1	0.389	32	0.12448	0.4	-0.2755
3DH3	1.64	17	0.2788	0.4	-0.1212
3DH5	2.891	12	0.34692	0.4	-0.0531

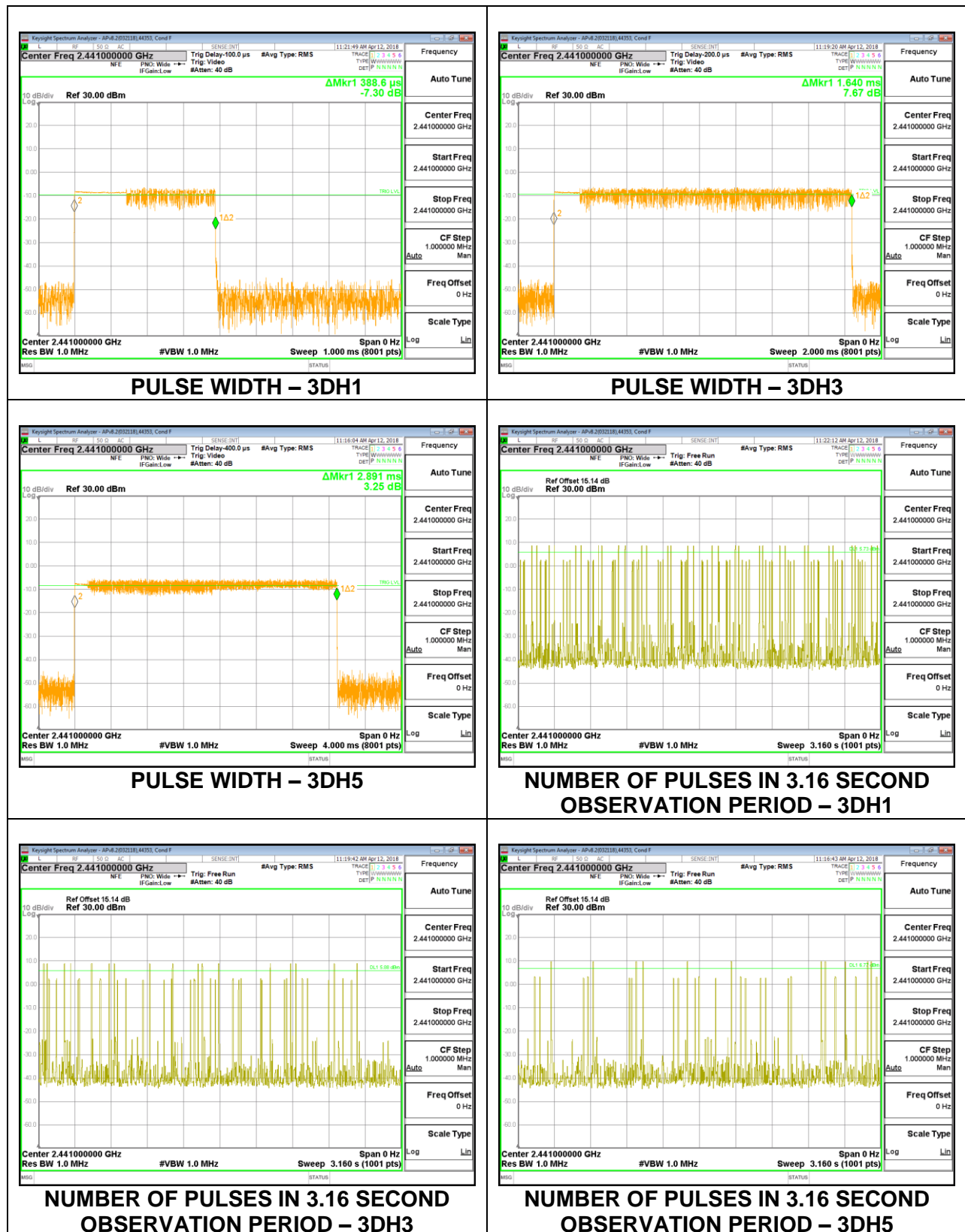
Note: for AFH(8PSK) mode, please refer to the results of AFH(GFSK) mode; the channel selection and hopping rate are the same for both EDR and Basic Rate operation, data for Basic Rate in section 8.5.3 demonstrates compliance with channel occupancy when AFH is employed.



Antenna 3

DH Packet	Pulse Width (msec)	Number of Pulses in 3.16 seconds	Average Time of Occupancy (sec)	Limit (sec)	Margin (sec)
8PSK Normal Mode					
3DH1	0.389	31	0.12059	0.4	-0.2794
3DH3	1.64	17	0.2788	0.4	-0.1212
3DH5	2.891	11	0.31801	0.4	-0.082

Note: for AFH(8PSK) mode, please refer to the results of AFH(GFSK) mode; the channel selection and hopping rate are the same for both EDR and Basic Rate operation, data for Basic Rate in section 8.5.3 demonstrates compliance with channel occupancy when AFH is employed.



8.6. OUTPUT POWER

LIMITS

§15.247 (b) (1)

RSS-247 (5.4) (b)

For frequency hopping systems operating in the 2400-2483.5 MHz band employing at least 75 non-overlapping hopping channels, and all frequency hopping systems in the 5725-5850 MHz band: 1 watt. For all other frequency hopping systems in the 2400-2483.5 MHz band: 0.125 watts

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter.

The cable assembly insertion loss of 10.5 dB (including 10 dB pad and 0.5 dB cable) was entered as an offset in the power meter to allow for a gated peak reading of power.

RESULTS

8.6.1. HIGH POWER BASIC DATA RATE GFSK MODULATION

Antenna 4

Tested By:	30554
Date:	6/13/2018

Channel	Frequency (MHz)	Output Power (dBm)	Limit (dBm)	Margin (dB)
Low	2402	18.22	30	-11.78
Middle	2441	18.38	30	-11.62
High	2480	18.14	30	-11.86

Antenna 3

Tested By:	30554			
Date:	6/13/2018			
Channel	Frequency (MHz)	Output Power (dBm)	Limit (dBm)	Margin (dB)
Low	2402	20.11	30	-9.89
Middle	2441	20.18	30	-9.82
High	2480	10.15	30	-19.85

8.6.2. HIGH POWER ENCHANCED DATA RATE 8PSK MODULATION

Antenna 4

Tested By:	30554
Date:	6/13/2018

Channel	Frequency (MHz)	Output Power (dBm)	Limit (dBm)	Margin (dB)
Low	2402	20.13	21	-0.87
Middle	2441	20.15	21	-0.85
High	2480	20.11	21	-0.89

Antenna 3

Tested By:	30554
Date:	6/13/2018

Channel	Frequency (MHz)	Output Power (dBm)	Limit (dBm)	Margin (dB)
Low	2402	20.14	21	-0.86
Middle	2441	20.12	21	-0.88
High	2480	20.1	21	-0.9

8.6.3. HIGH POWER ENCHANCED DATA RATE DQPSK MODULATION

Antenna 4

Tested By:	30554
Date:	6/13/2018

Channel	Frequency (MHz)	Output Power (dBm)	Limit (dBm)	Margin (dB)
Low	2402	19.98	21	-1.02
Middle	2441	19.99	21	-1.01
High	2480	20.02	21	-0.98

Antenna 3

Tested By:	30554
Date:	6/13/2018

Channel	Frequency (MHz)	Output Power (dBm)	Limit (dBm)	Margin (dB)
Low	2402	20.03	21	-0.97
Middle	2441	20.07	21	-0.93
High	2480	20.02	21	-0.98

8.6.4. LOW POWER BASIC DATA RATE GFSK MODULATION

Antenna 4

Tested By:	30554
Date:	6/13/2018

Channel	Frequency (MHz)	Output Power (dBm)	Limit (dBm)	Margin (dB)
Low	2402	11.11	30	-18.89
Middle	2441	11.14	30	-18.86
High	2480	11.09	30	-18.91

Antenna 3

Tested By:	30554
Date:	6/13/2018

Channel	Frequency (MHz)	Output Power (dBm)	Limit (dBm)	Margin (dB)
Low	2402	11.12	30	-18.88
Middle	2441	11.18	30	-18.82
High	2480	11.05	30	-18.95

8.6.5. LOW POWER ENCHANCED DATA RATE 8PSK MODULATION

Antenna 4

Tested By:	30554
Date:	6/13/2018

Channel	Frequency (MHz)	Output Power (dBm)	Limit (dBm)	Margin (dB)
Low	2402	9.98	21	-11.02
Middle	2441	10.11	21	-10.89
High	2480	10.04	21	-10.96

Antenna 3

Tested By:	30554
Date:	6/13/2018

Channel	Frequency (MHz)	Output Power (dBm)	Limit (dBm)	Margin (dB)
Low	2402	10.1	21	-10.9
Middle	2441	10.14	21	-10.86
High	2480	10.17	21	-10.83

8.6.6. LOW POWER ENCHANCED DATA RATE DQPSK MODULATION

Antenna 4

Tested By:	30554
Date:	6/13/2018

Channel	Frequency (MHz)	Output Power (dBm)	Limit (dBm)	Margin (dB)
Low	2402	9.89	21	-11.11
Middle	2441	10.03	21	-10.97
High	2480	9.98	21	-11.02

Antenna 3

Tested By:	30554
Date:	6/13/2018

Channel	Frequency (MHz)	Output Power (dBm)	Limit (dBm)	Margin (dB)
Low	2402	9.87	21	-11.13
Middle	2441	9.99	21	-11.01
High	2480	10.01	21	-10.99

8.7. AVERAGE POWER

LIMITS

None; for reporting purposes only

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter.

The cable assembly insertion loss of 10.5 dB (including 10 dB pad and 0.5 dB cable) was entered as an offset in the power meter to allow for a gated average reading of power.

RESULTS

8.7.1. HIGH POWER BASIC DATA RATE GFSK MODULATION

ID:	30554	Date:	6/13/2018
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Antenna 4

Channel	Frequency (MHz)	Output Power (dBm)
Low	2402	17.77
Middle	2441	17.83
High	2480	17.80

Antenna 3

Channel	Frequency (MHz)	Output Power (dBm)
Low	2402	19.79
Middle	2441	19.88
High	2480	19.85

8.7.2. HIGH POWER ENCHANCED DATA RATE 8PSK MODULATION

ID:	30554	Date:	6/13/2018
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Antenna 4

Channel	Frequency (MHz)	Output Power (dBm)
Low	2402	17.47
Middle	2441	17.49
High	2480	17.45

Antenna 3

Channel	Frequency (MHz)	Output Power (dBm)
Low	2402	17.48
Middle	2441	17.45
High	2480	17.43

8.7.3. HIGH POWER ENCHANCED DATA RATE DQPSK MODULATION

ID:	30554	Date:	6/13/2018
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Antenna 4

Channel	Frequency (MHz)	Output Power (dBm)
Low	2402	17.42
Middle	2441	17.45
High	2480	17.41

Antenna 3

Channel	Frequency (MHz)	Output Power (dBm)
Low	2402	17.43
Middle	2441	17.45
High	2480	17.40

8.7.4. LOW POWER BASIC DATA RATE GFSK MODULATION

ID:	30554	Date:	6/13/2018
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Antenna 4

Channel	Frequency (MHz)	Output Power (dBm)
Low	2402	10.82
Middle	2441	10.87
High	2480	10.73

Antenna 3

Channel	Frequency (MHz)	Output Power (dBm)
Low	2402	10.78
Middle	2441	10.85
High	2480	10.72

8.7.5. LOW POWER ENCHANCED DATA RATE 8PSK MODULATION

ID:	30554	Date:	6/13/2018
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Antenna 4

Channel	Frequency (MHz)	Output Power (dBm)
Low	2402	7.48
Middle	2441	7.49
High	2480	7.43

Antenna 3

Channel	Frequency (MHz)	Output Power (dBm)
Low	2402	7.43
Middle	2441	7.48
High	2480	7.49

8.7.6. LOW POWER ENCHANCED DATA RATE DQPSK MODULATION

ID:	30554	Date:	6/13/2018
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Antenna 4

Channel	Frequency (MHz)	Output Power (dBm)
Low	2402	7.45
Middle	2441	7.47
High	2480	7.40

Antenna 3

Channel	Frequency (MHz)	Output Power (dBm)
Low	2402	7.46
Middle	2441	7.43
High	2480	7.48

8.8. CONDUCTED SPURIOUS EMISSIONS

LIMITS

FCC §15.247 (d)

RSS-247 5.5

Limit = -20 dBc

TEST PROCEDURE

The transmitter output is connected to a spectrum analyzer. The resolution bandwidth is set to 100 kHz. The video bandwidth is set to 300 kHz.

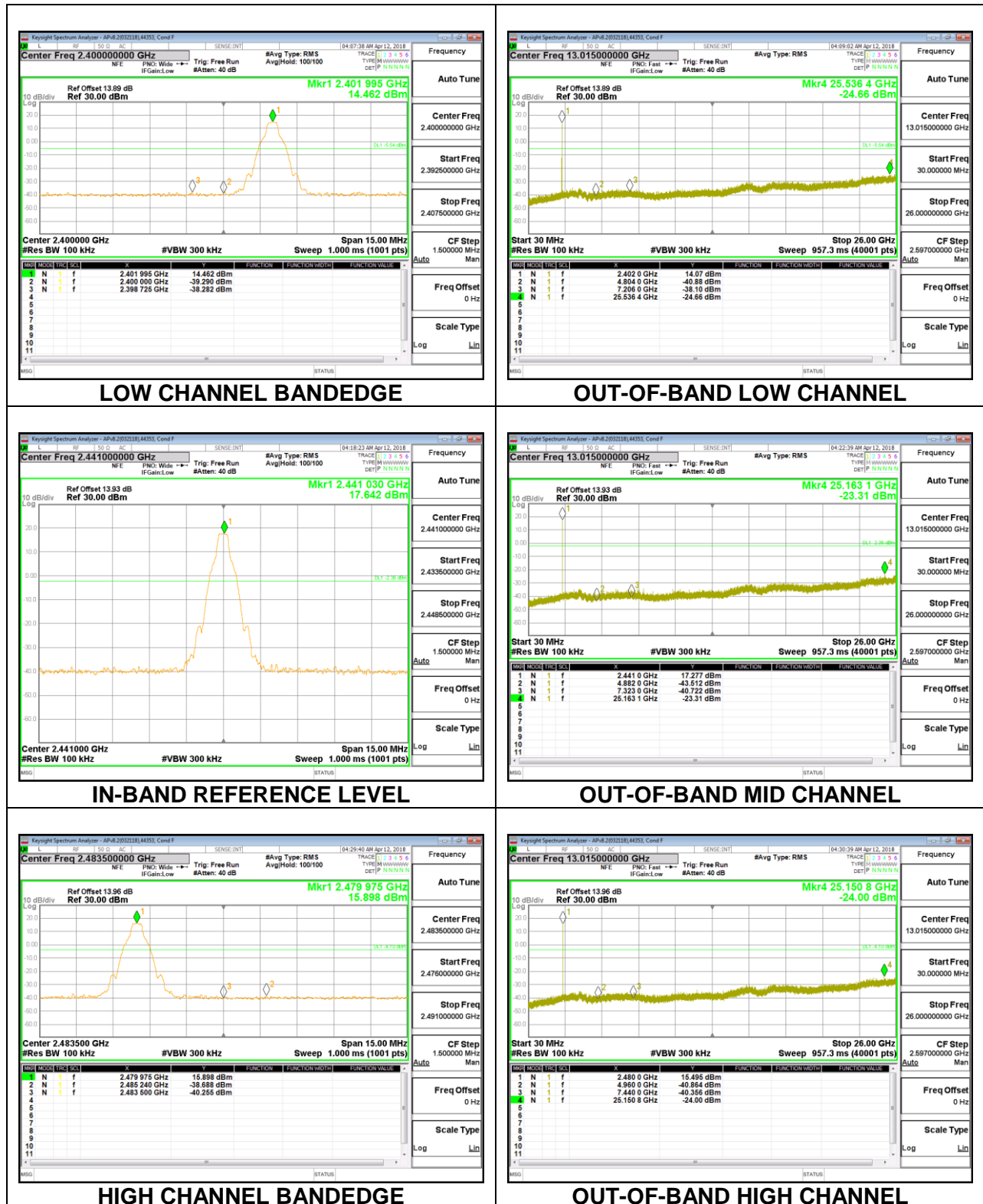
The spectrum from 30 MHz to 26 GHz is investigated with the transmitter set to the lowest, middle, and highest channels.

The bandedges at 2.4 and 2.4835 GHz are investigated with the transmitter set to the normal hopping mode.

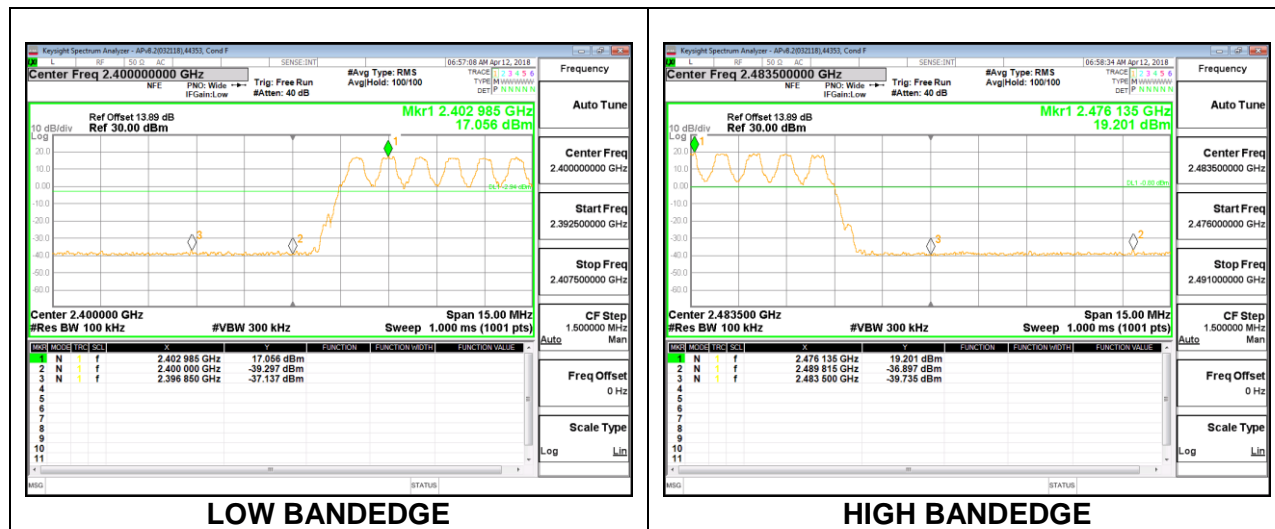
RESULTS

8.8.1. HIGH POWER BASIC DATA RATE GFSK MODULATION

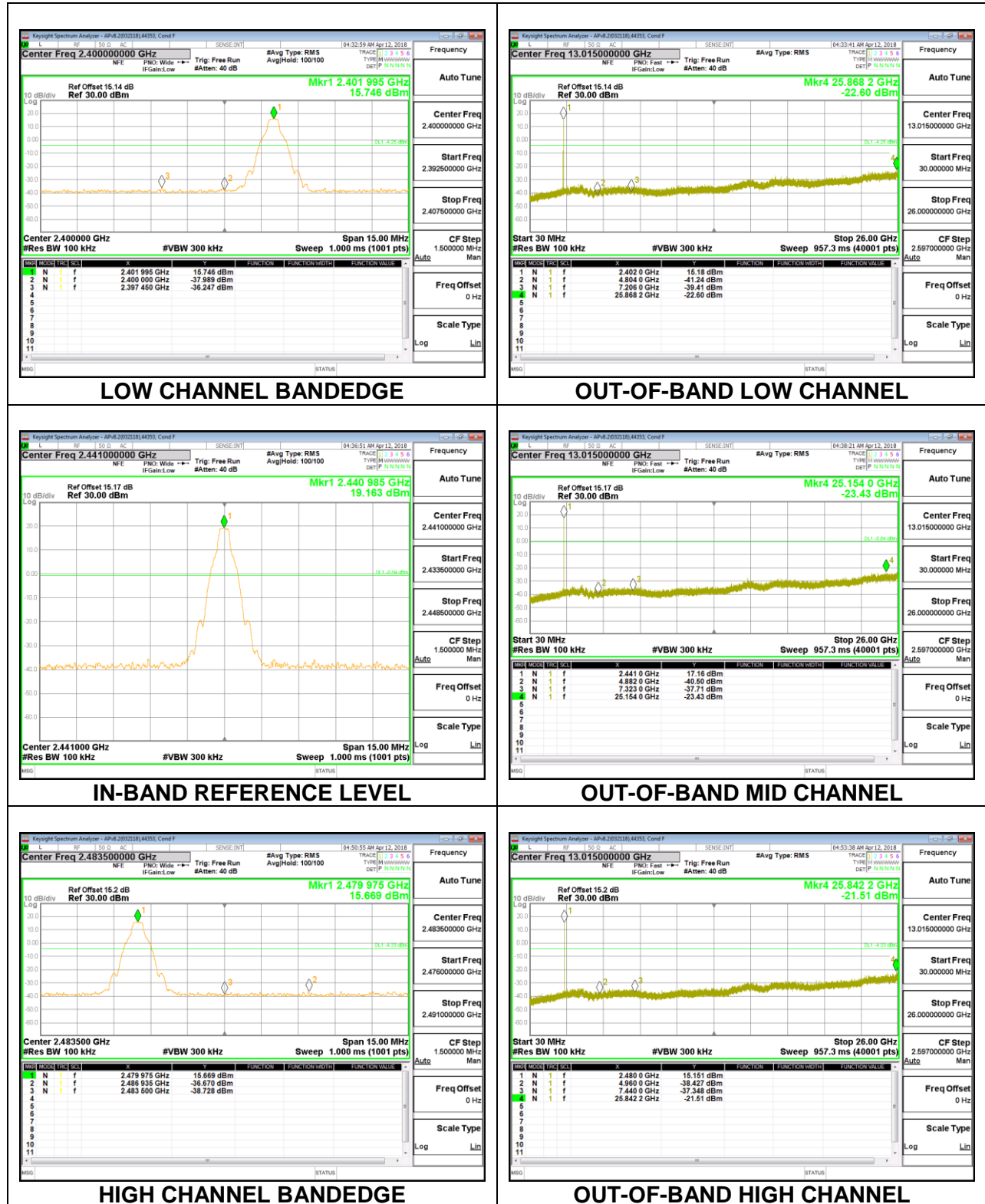
Antenna 4 SPURIOUS EMISSIONS, NON-HOPPING



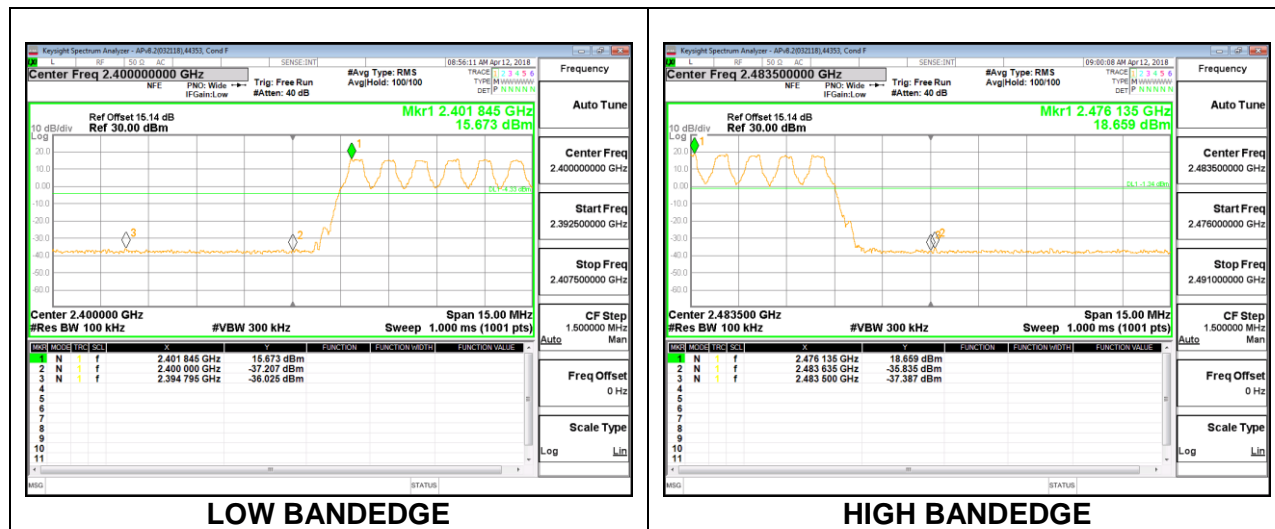
Antenna 4 SPURIOUS BANDEDGE EMISSIONS WITH HOPPING ON



Antenna 3 SPURIOUS EMISSIONS, NON-HOPPING

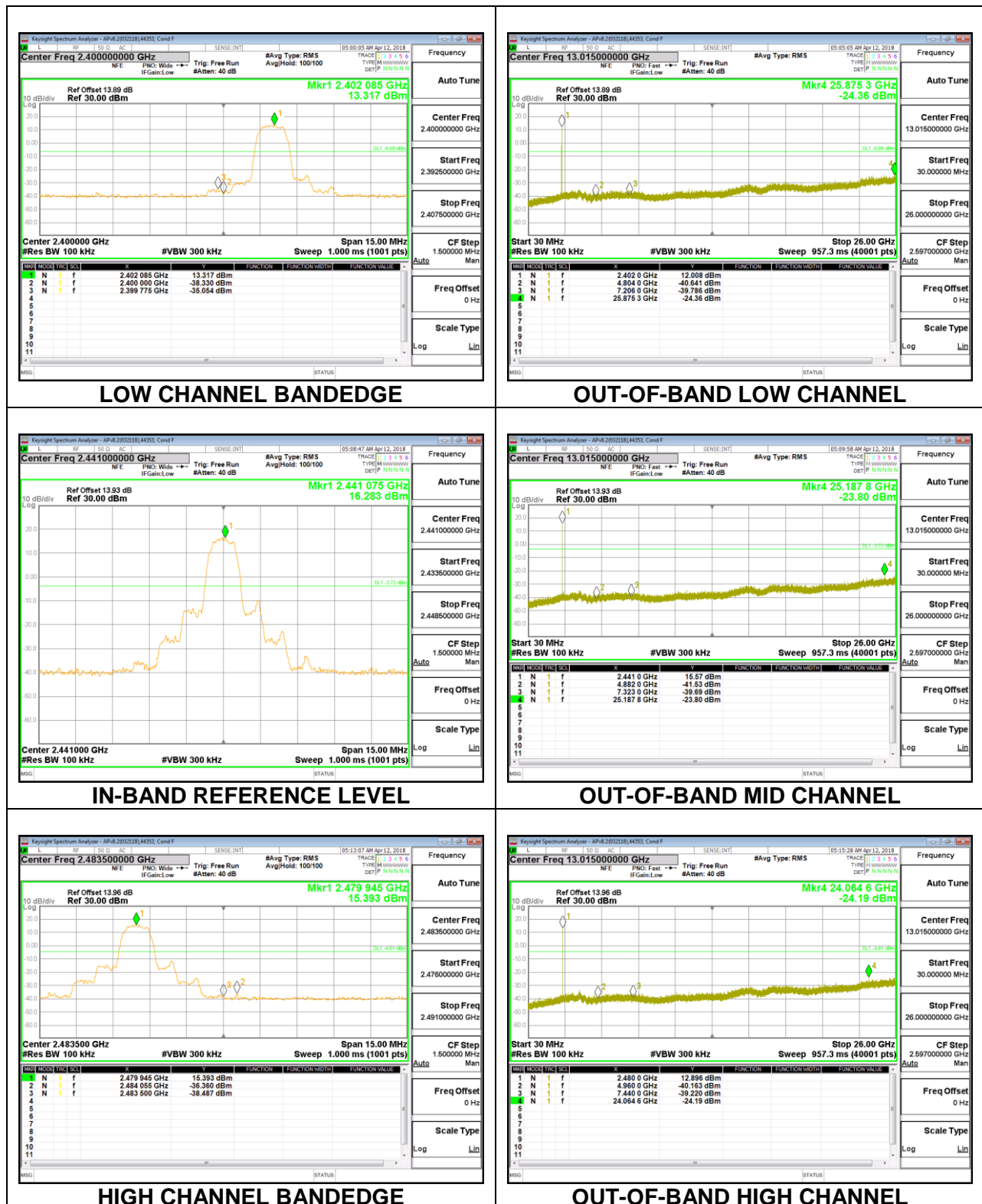


Antenna 3 SPURIOUS BANDEDGE EMISSIONS WITH HOPPING ON

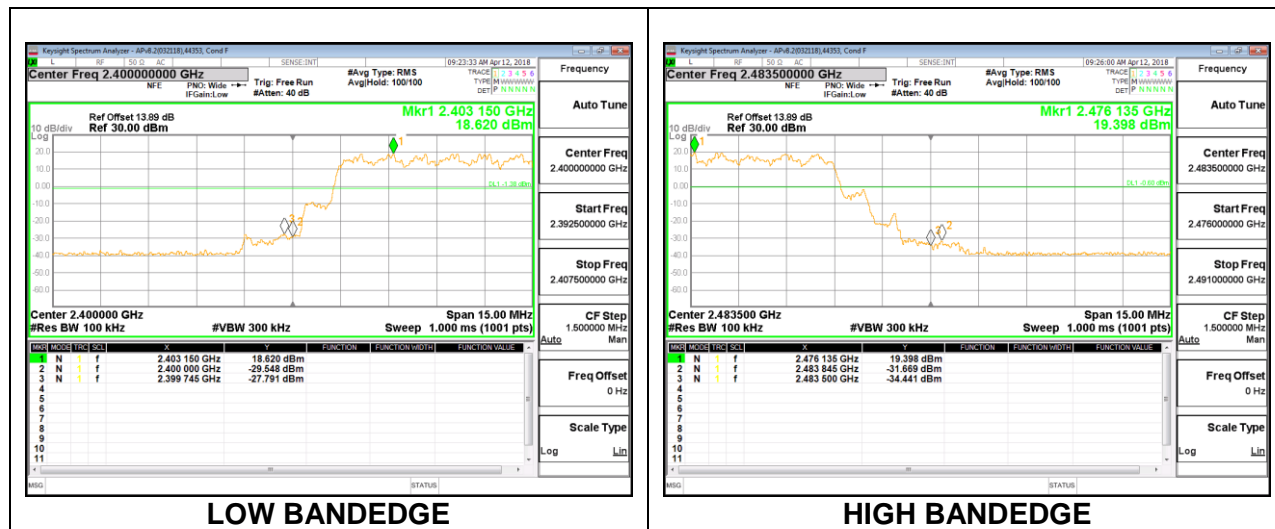


8.8.2. HIGH POWER ENCHANCED DATA RATE 8PSK MODULATION

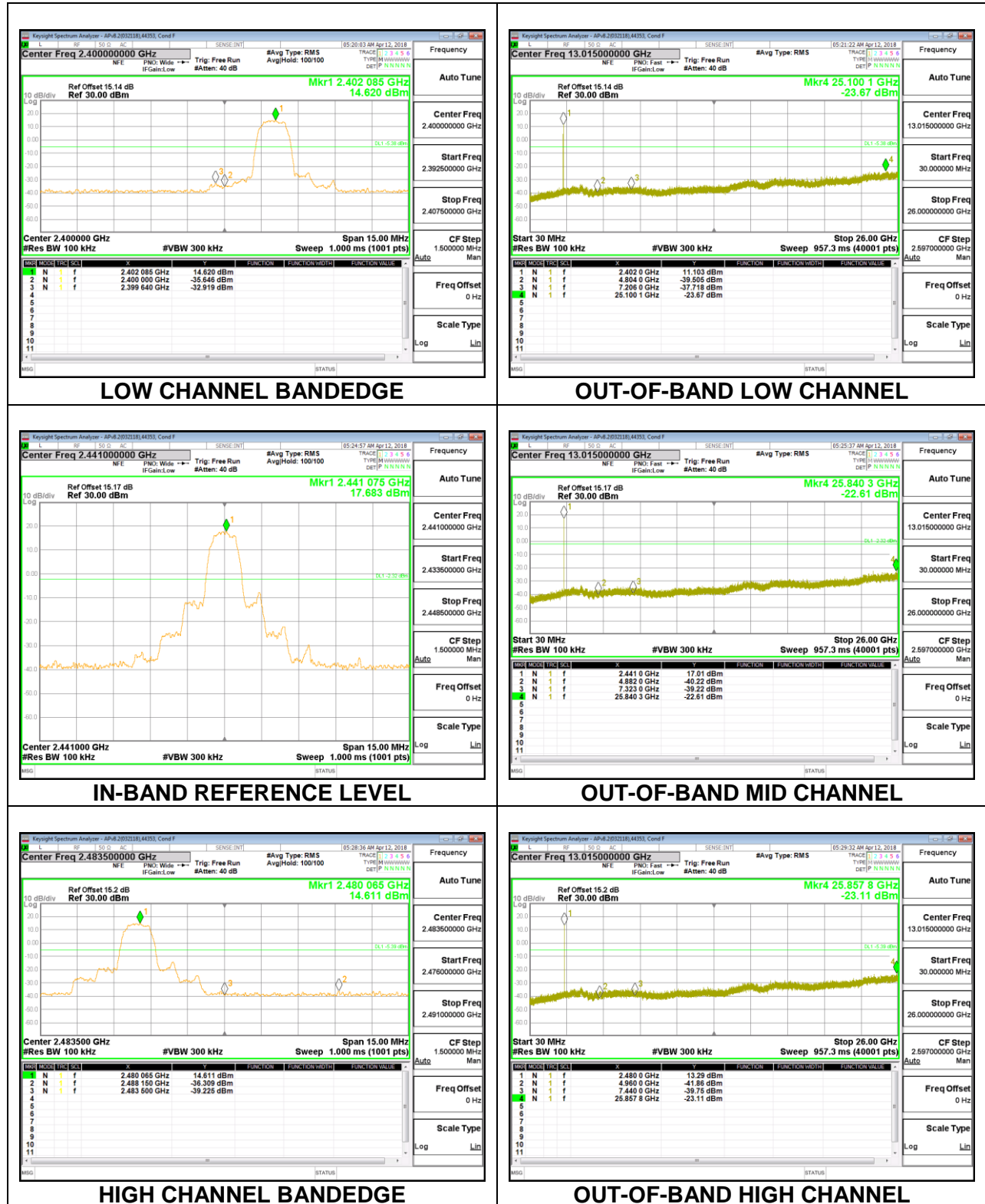
Antenna 4 SPURIOUS EMISSIONS, NON-HOPPING



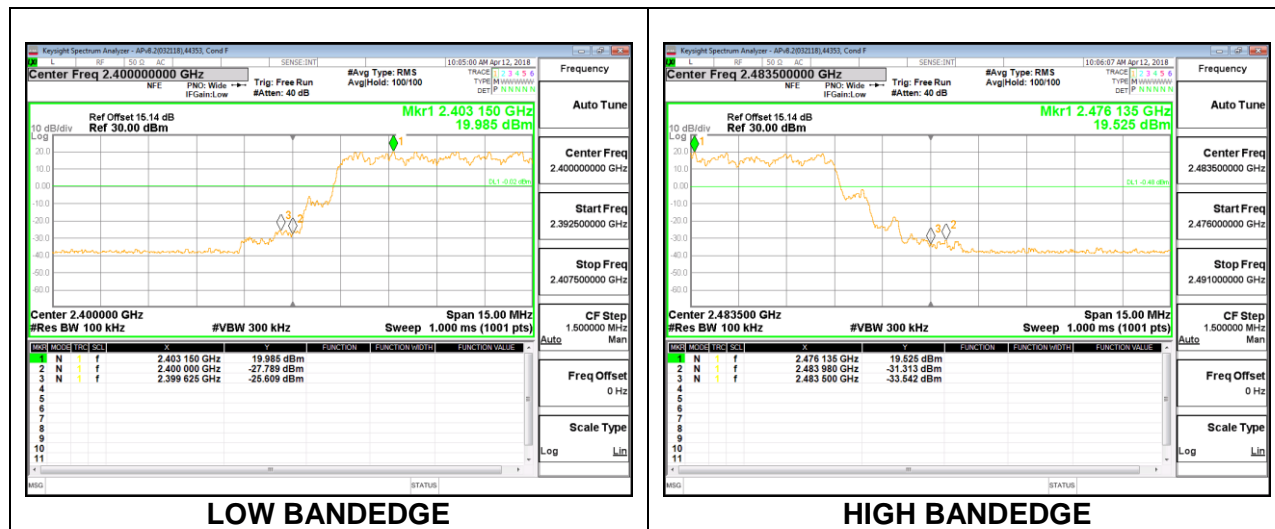
Antenna 4 SPURIOUS BANDEDGE EMISSIONS WITH HOPPING ON



Antenna 3 SPURIOUS EMISSIONS, NON-HOPPING

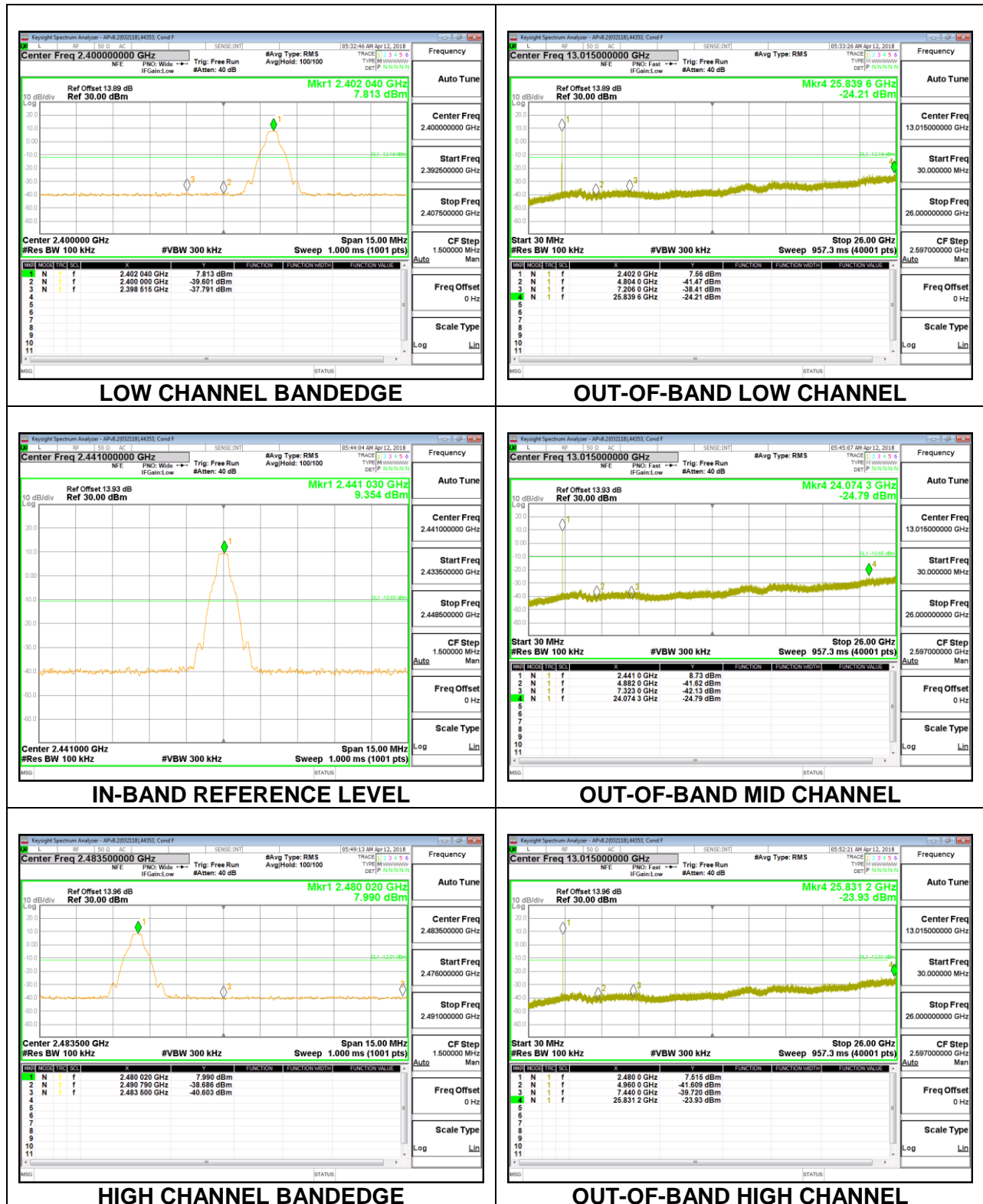


Antenna 3 SPURIOUS BANDEDGE EMISSIONS WITH HOPPING ON



8.8.3. LOW POWER BASIC DATA RATE GFSK MODULATION

Antenna 4 SPURIOUS EMISSIONS, NON-HOPPING



Antenna 4 SPURIOUS BANDEDGE EMISSIONS WITH HOPPING ON

