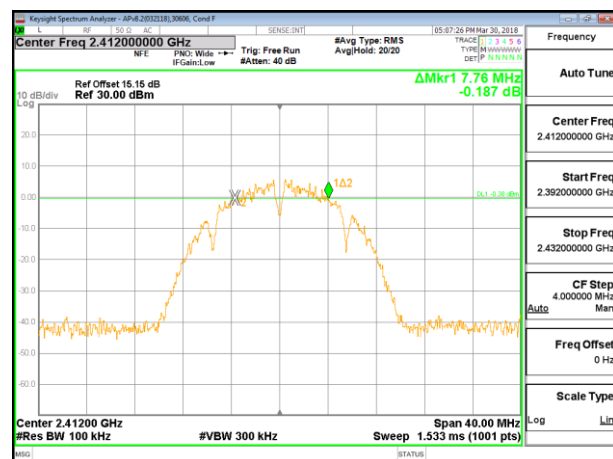
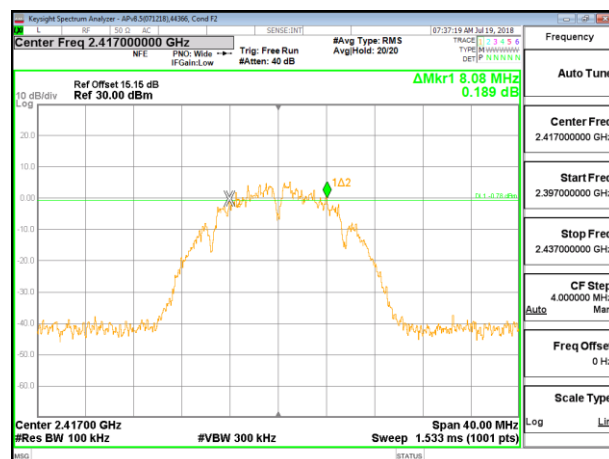


1TX Antenna 3 MODE

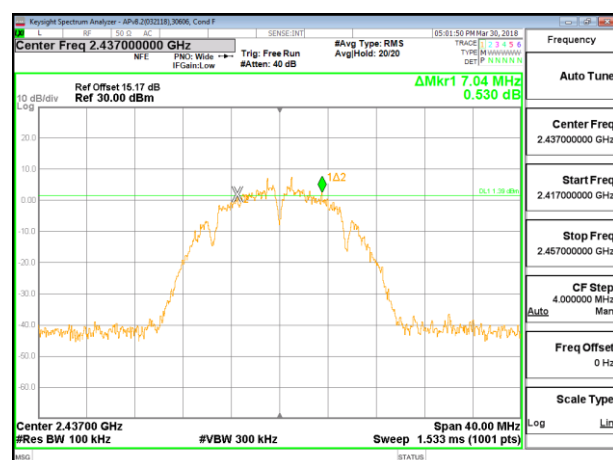
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low 1	2412	7.760	0.5
Low 2	2417	8.080	0.5
Mid 6	2437	7.040	0.5
High 11	2462	7.640	0.5
High 12	2467	8.440	0.5
High 13	2472	8.560	0.5



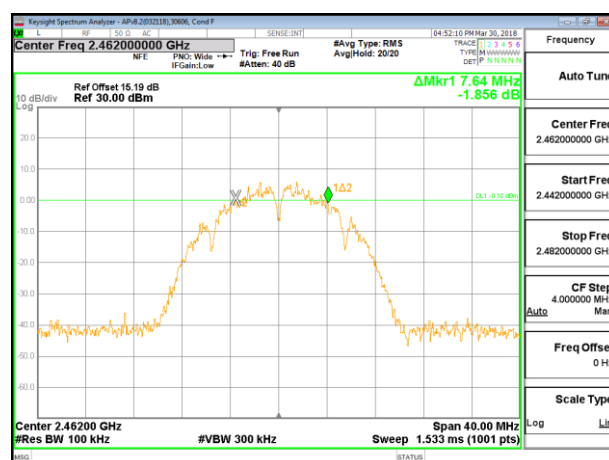
LOW CHANNEL 1



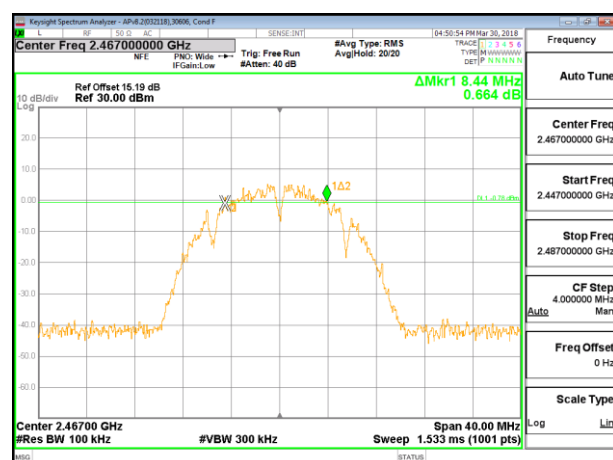
LOW CHANNEL 2



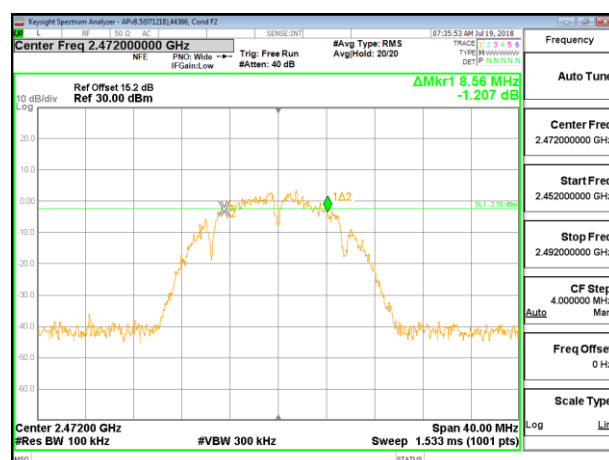
MID CHANNEL 6



HIGH CHANNEL 11



HIGH CHANNEL 12

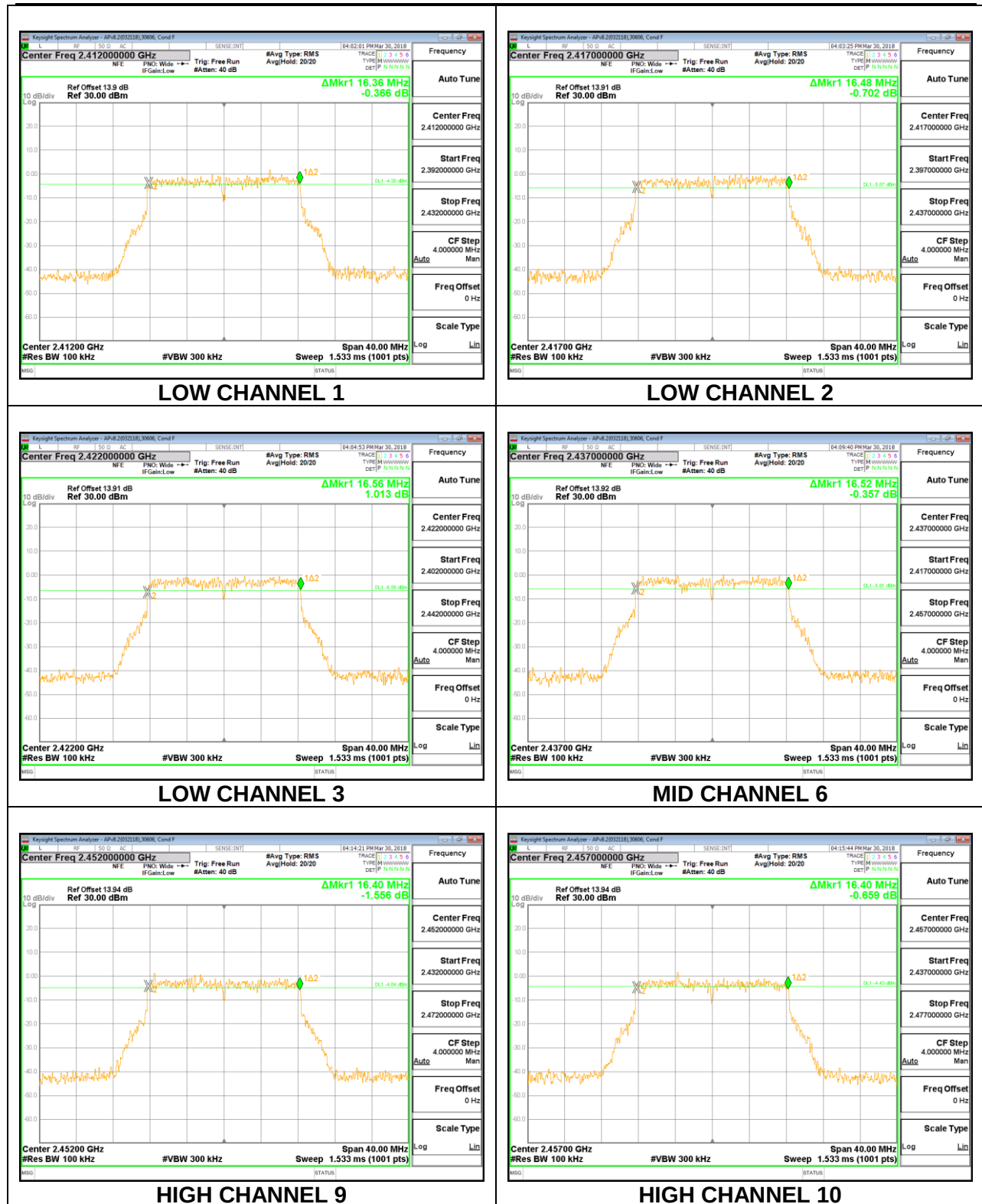


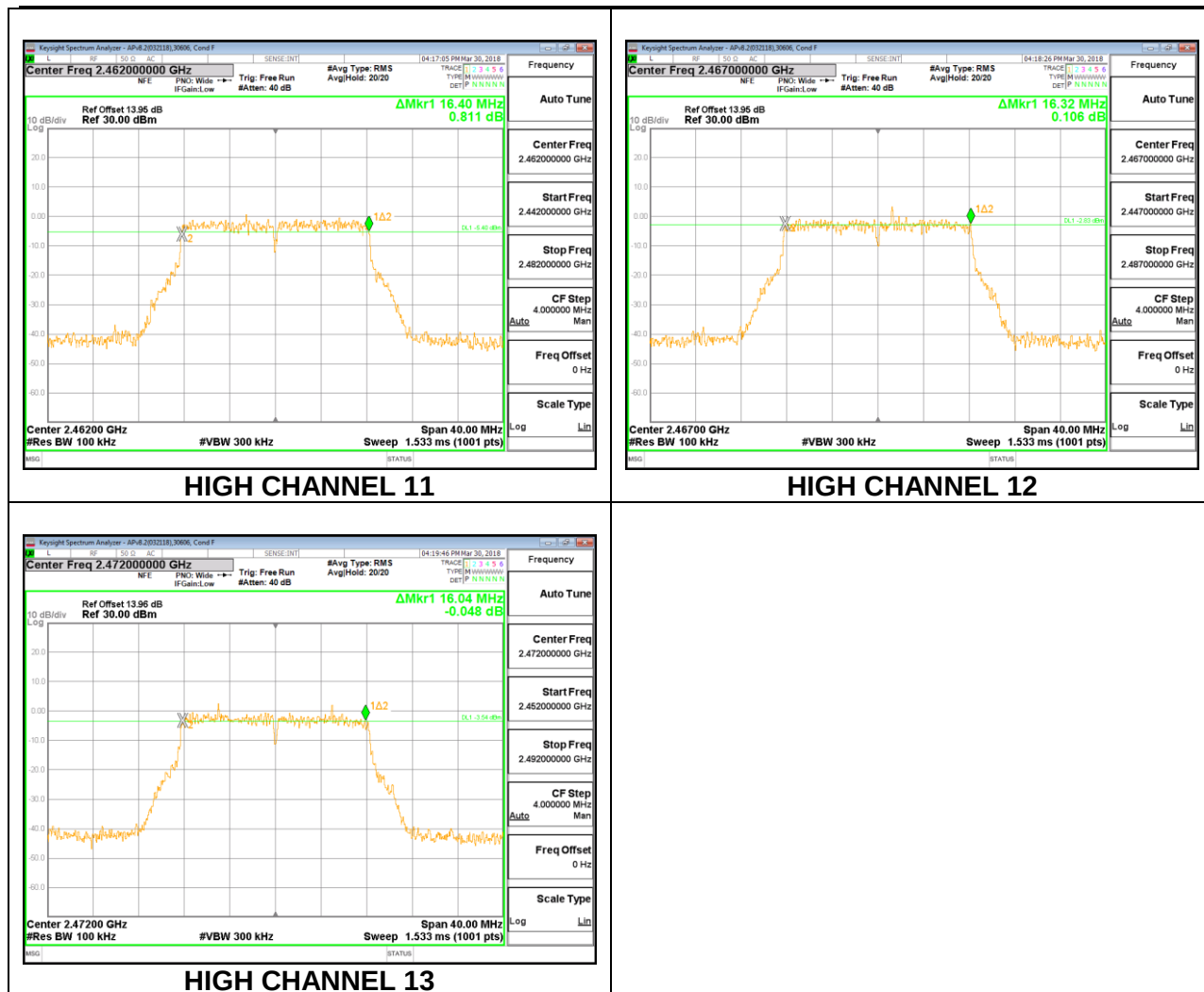
HIGH CHANNEL 13

8.3.2. 802.11n HT20 MODE

1TX Antenna 4 MODE

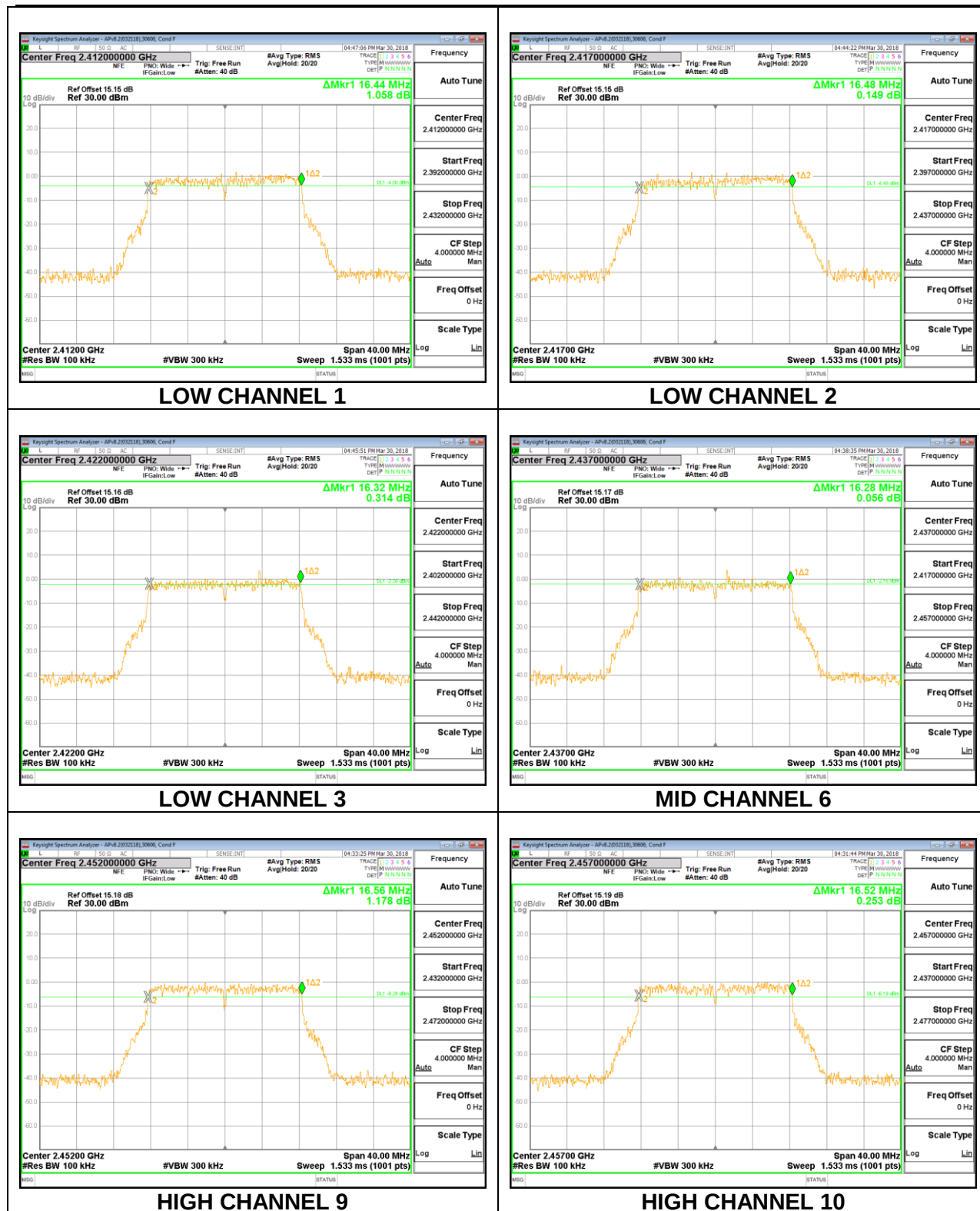
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low 1	2412	16.360	0.5
Low 2	2417	16.480	0.5
Low 3	2422	16.560	0.5
Mid 6	2437	16.520	0.5
High 9	2452	16.400	0.5
High 10	2457	16.400	0.5
High 11	2462	16.400	0.5
High 12	2467	16.320	0.5
High 13	2472	16.040	0.5

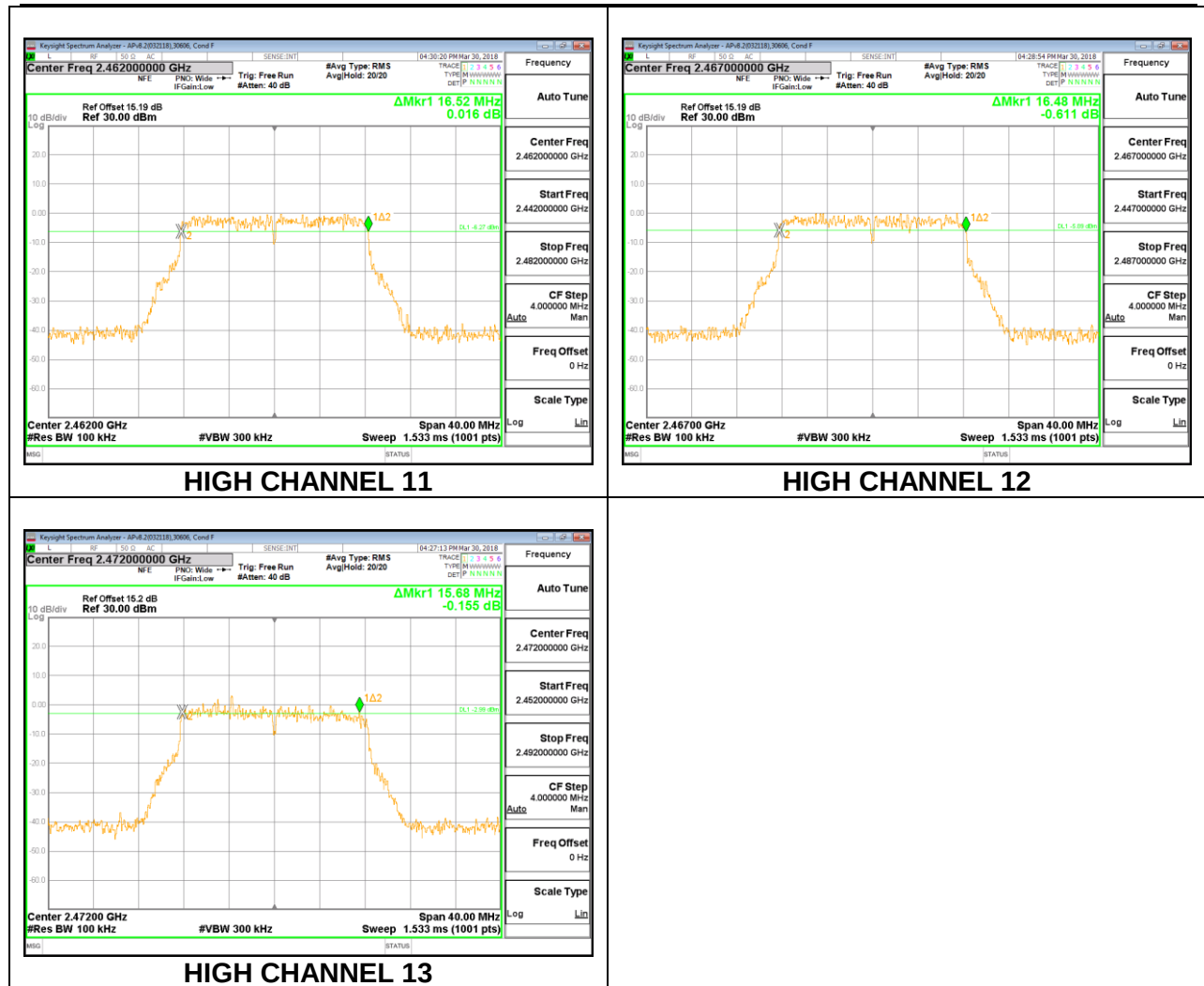




1TX Antenna 3 MODE

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low 1	2412	16.440	0.5
Low 2	2417	16.480	0.5
Low 3	2422	16.320	0.5
Mid 6	2437	16.280	0.5
High 9	2452	16.560	0.5
High 10	2457	16.520	0.5
High 11	2462	16.520	0.5
High 12	2467	16.480	0.5
High 13	2472	15.680	0.5

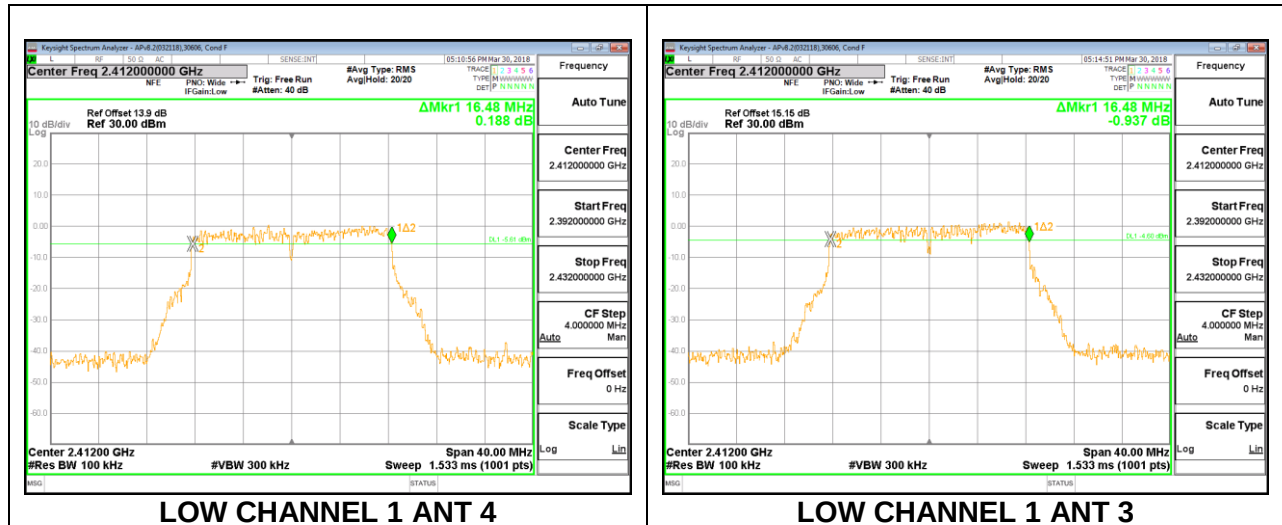




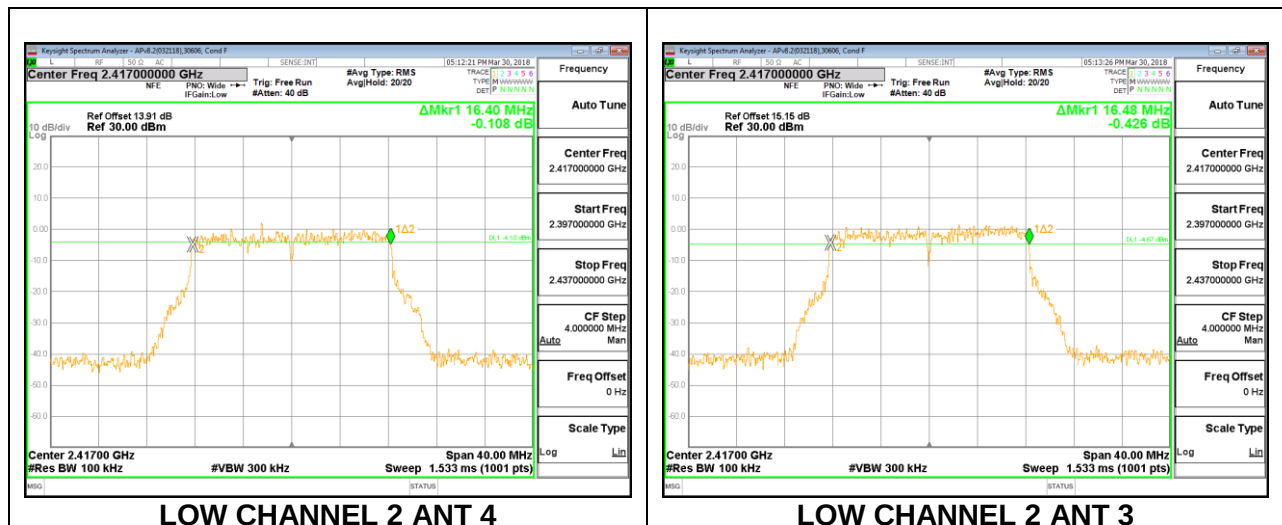
8.3.3. 2TX Antenna 4 + Antenna 3 CDD MODE

Channel	Frequency (MHz)	6 dB BW Antenna 4 (MHz)	6 dB BW Antenna 3 (MHz)	Minimum Limit (MHz)
Low 1	2412	16.480	16.480	0.5
Low 2	2417	16.400	16.480	0.5
Low 3	2422	16.320	16.520	0.5
Low 4	2427	16.400	16.360	0.5
Mid 6	2437	16.480	16.320	0.5
High 8	2447	16.360	16.360	0.5
High 9	2452	16.480	16.520	0.5
High 10	2457	16.360	16.040	0.5
High 11	2462	16.320	16.320	0.5
High 12	2467	15.960	16.440	0.5
High 13	2472	16.360	16.200	0.5

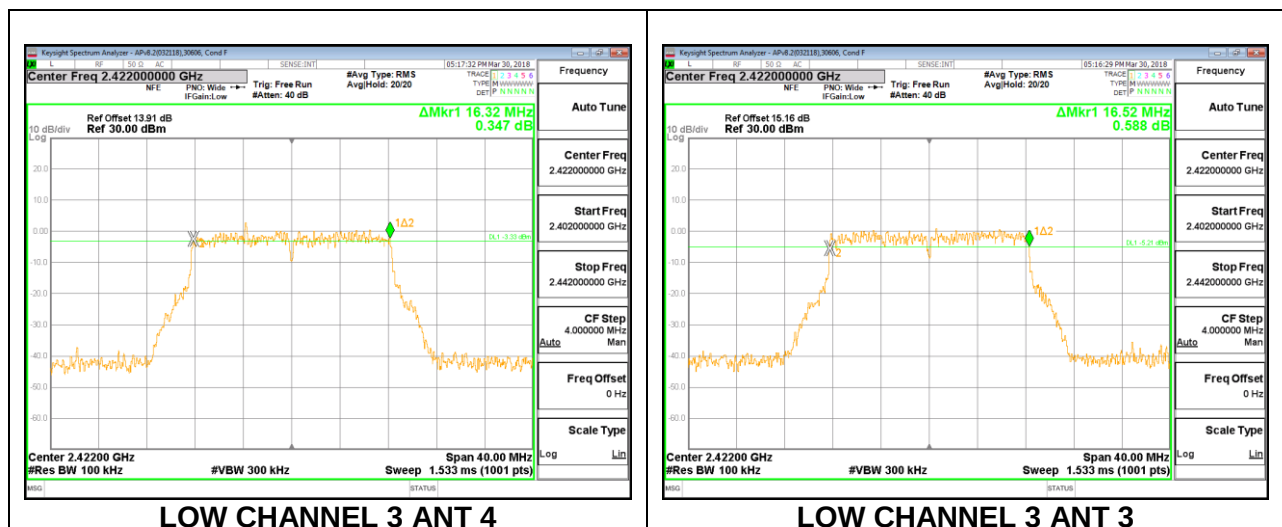
LOW CHANNEL 1



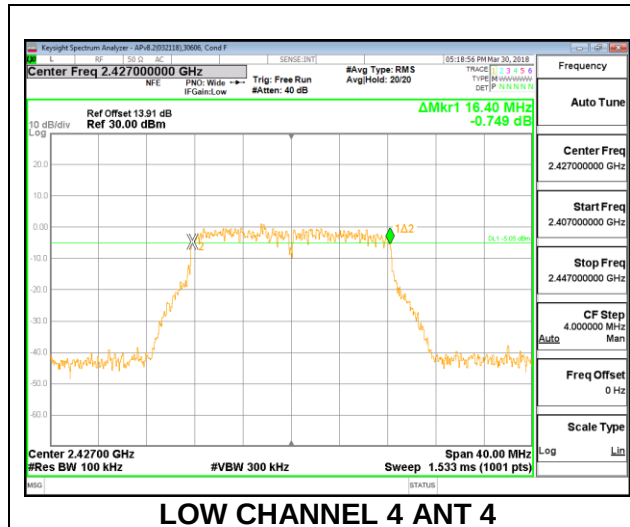
LOW CHANNEL 2



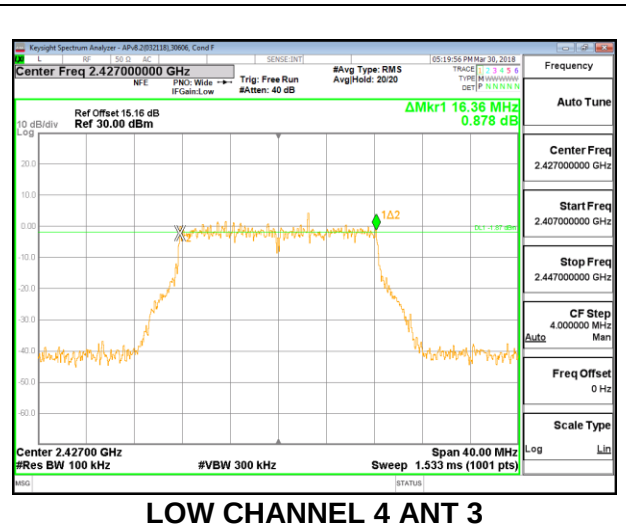
LOW CHANNEL 3



LOW CHANNEL 4

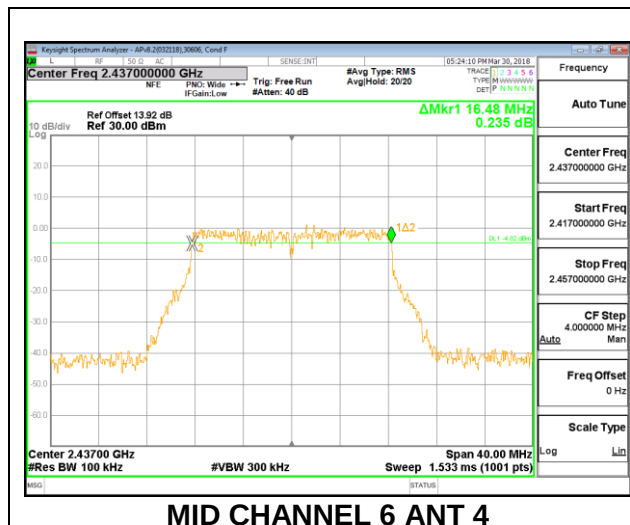


LOW CHANNEL 4 ANT 4

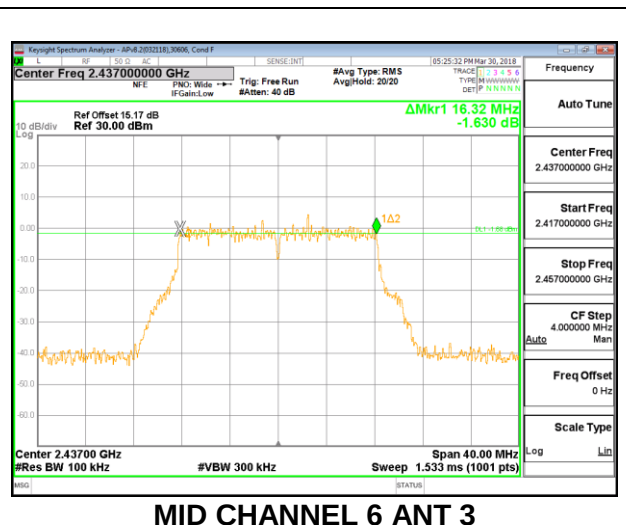


LOW CHANNEL 4 ANT 3

MID CHANNEL 6

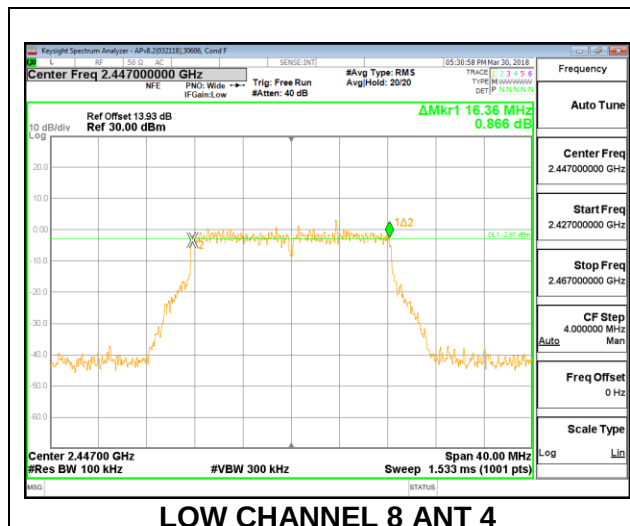


MID CHANNEL 6 ANT 4

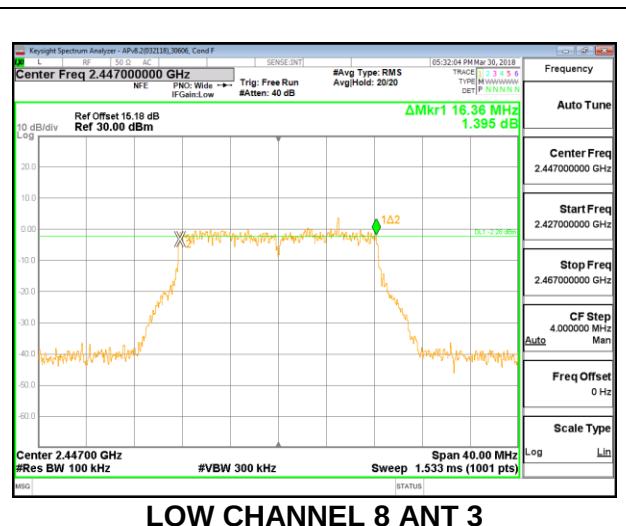


MID CHANNEL 6 ANT 3

LOW CHANNEL 8

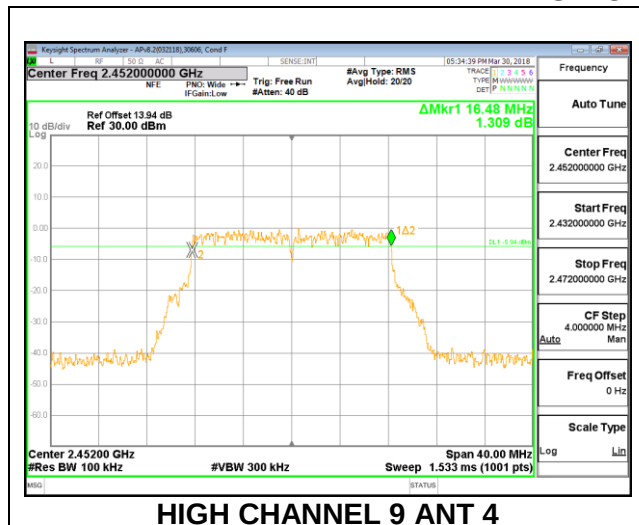


LOW CHANNEL 8 ANT 4

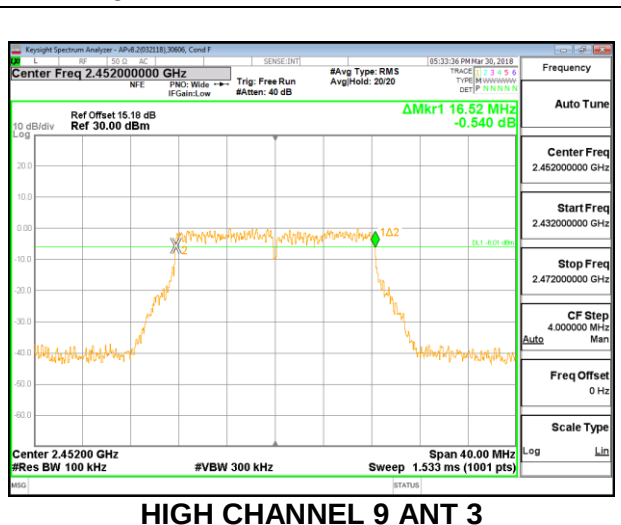


LOW CHANNEL 8 ANT 3

HIGH CHANNEL 9

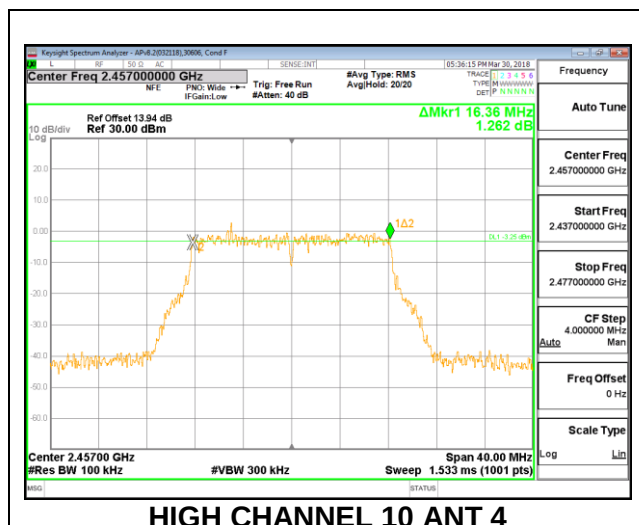


HIGH CHANNEL 9 ANT 4

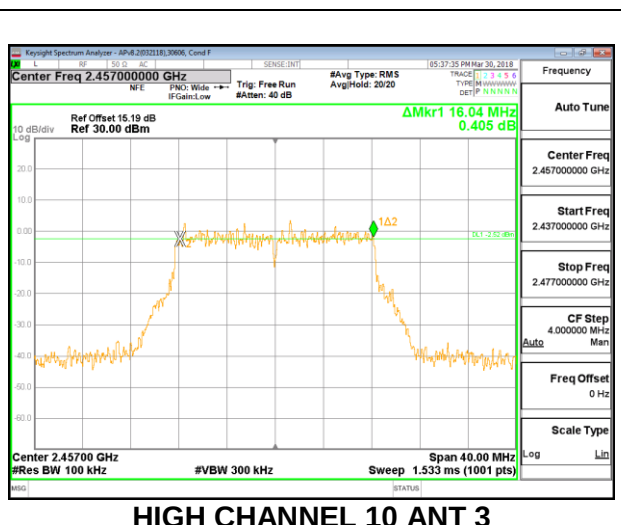


HIGH CHANNEL 9 ANT 3

HIGH CHANNEL 10

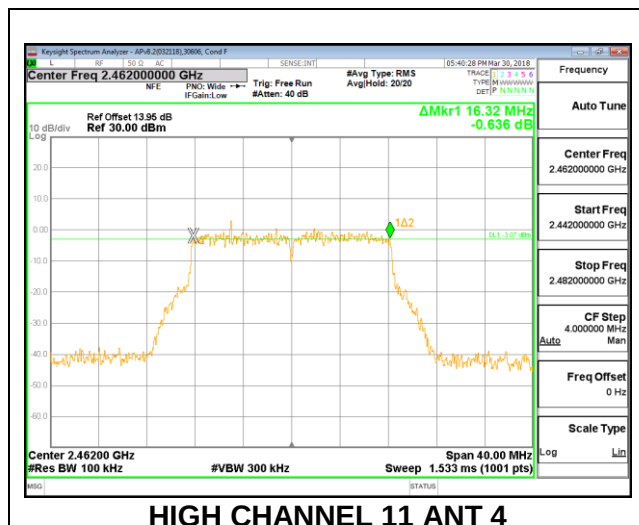


HIGH CHANNEL 10 ANT 4

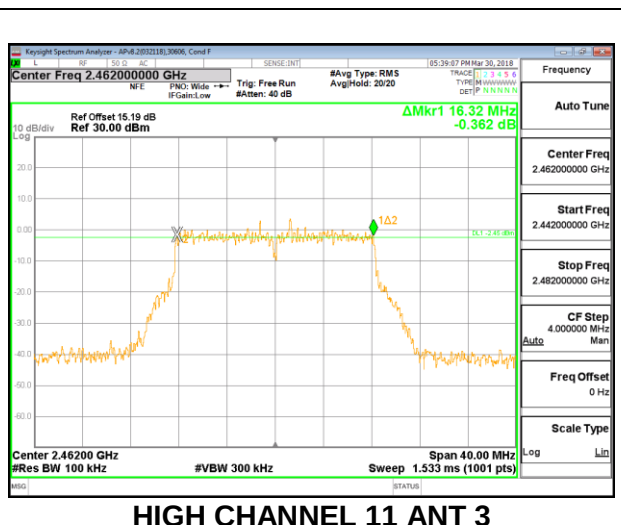


HIGH CHANNEL 10 ANT 3

HIGH CHANNEL 11

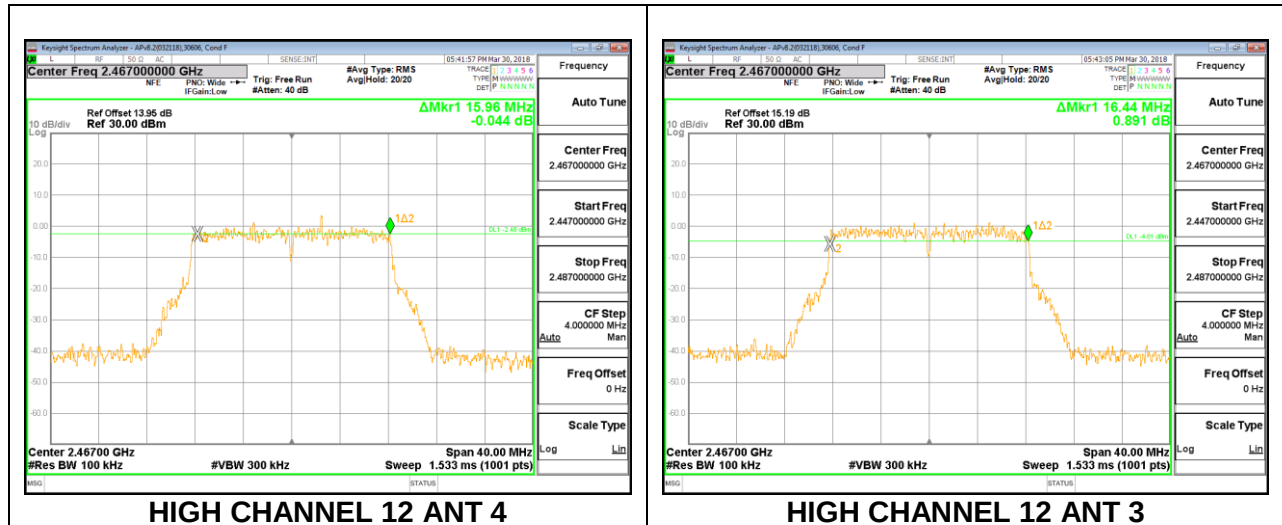


HIGH CHANNEL 11 ANT 4

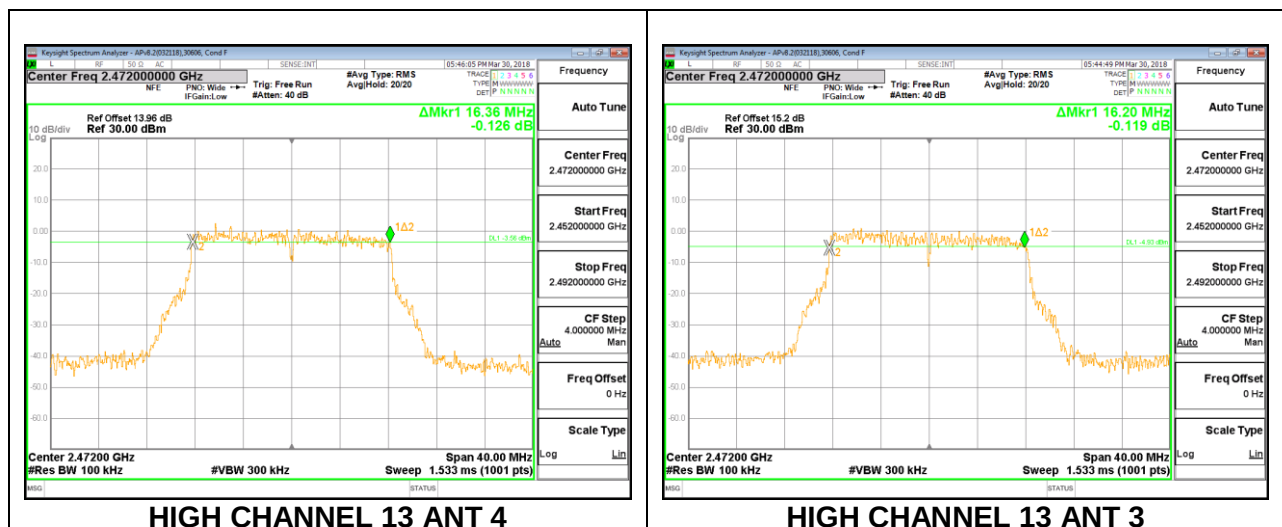


HIGH CHANNEL 11 ANT 3

HIGH CHANNEL 12



HIGH CHANNEL 13



8.4. OUTPUT POWER

LIMITS

FCC §15.247 (b) (3)

RSS-247 5.4 (d)

For systems using digital modulation in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands: 1 Watt, based on the use of antennas with directional gains that do not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

TEST PROCEDURE

The transmitter output is connected to a 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.

DIRECTIONAL ANTENNA GAIN

For 1 TX:

There is only one transmitter output therefore the directional gain is equal to the antenna gain.

For 2 TX:

Tx chains are uncorrelated for power and correlated for PSD due to the device supporting CDD in all MIMO modes. The directional gains are as follows:

Band (GHz)	Ant 4 Antenna Gain (dBi)	Ant 3 Antenna Gain (dBi)	Uncorrelated Chains Directional Gain (dBi)	Correlated Chains Directional Gain (dBi)
2.4	-2.30	-4.80	-3.37	-0.45

RESULTS

8.4.1. 802.11b MODE

1TX Antenna 4 MODE

Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC Power Limit (dBm)	ISED Power Limit (dBm)	ISED EIRP Limit (dBm)	Max Power (dBm)
Low 1	2412	-2.30	30.00	30	36	30.00
Low 2	2417	-2.30	30.00	30	36	30.00
Mid 6	2437	-2.30	30.00	30	36	30.00
High 11	2462	-2.30	30.00	30	36	30.00
High 12	2467	-2.30	30.00	30	36	30.00
High 13	2472	-2.30	30.00	30	36	30.00

Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd Power
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Results

Channel	Frequency (MHz)	Antenna 4 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
Low 1	2412	20.36	20.36	30.00	-9.64
Low 2	2417	20.59	20.59	30.00	-9.41
Mid 6	2437	20.68	20.68	30.00	-9.32
High 11	2462	20.73	20.73	30.00	-9.27
High 12	2467	20.42	20.42	30.00	-9.58
High 13	2472	18.86	18.86	30.00	-11.14

1TX Antenna 3 MODE

Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC Power Limit (dBm)	ISED Power Limit (dBm)	ISED EIRP Limit (dBm)	Max Power (dBm)
Low 1	2412	-4.80	30.00	30	36	30.00
Low 2	2417	-4.80	30.00	30	36	30.00
Mid 6	2437	-4.80	30.00	30	36	30.00
High 11	2462	-4.80	30.00	30	36	30.00
High 12	2467	-4.80	30.00	30	36	30.00
High 13	2472	-4.80	30.00	30	36	30.00

Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd Power
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Results

Channel	Frequency (MHz)	Antenna 3 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
Low 1	2412	20.37	20.37	30.00	-9.63
Low 2	2417	21.82	21.82	30.00	-8.18
Mid 6	2437	21.87	21.87	30.00	-8.13
High 11	2462	21.90	21.90	30.00	-8.10
High 12	2467	20.42	20.42	30.00	-9.58
High 13	2472	18.88	18.88	30.00	-11.12

8.4.2. 802.11n HT20 MODE

1TX Antenna 4 MODE

Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC Power Limit (dBm)	ISED Power Limit (dBm)	ISED EIRP Limit (dBm)	Max Power (dBm)
Low 1	2412	-2.30	30.00	30	36	30.00
Low 2	2417	-2.30	30.00	30	36	30.00
Low 3	2422	-2.30	30.00	30	36	30.00
Mid 6	2437	-2.30	30.00	30	36	30.00
High 9	2452	-2.30	30.00	30	36	30.00
High 10	2457	-2.30	30.00	30	36	30.00
High 11	2462	-2.30	30.00	30	36	30.00
High 12	2467	-2.30	30.00	30	36	30.00
High 13	2472	-2.30	30.00	30	36	30.00

Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd Power
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Results

Channel	Frequency (MHz)	Antenna 4 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
Low 1	2412	17.38	17.38	30.00	-12.62
Low 2	2417	19.40	19.40	30.00	-10.60
Low 3	2422	20.58	20.58	30.00	-9.42
Mid 6	2437	20.61	20.61	30.00	-9.39
High 9	2452	20.72	20.72	30.00	-9.28
High 10	2457	19.41	19.41	30.00	-10.59
High 11	2462	17.42	17.42	30.00	-12.58
High 12	2467	15.36	15.36	30.00	-14.64
High 13	2472	7.81	7.81	30.00	-22.19

1TX Antenna 3 MODE

Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC Power Limit (dBm)	ISED Power Limit (dBm)	ISED EIRP Limit (dBm)	Max Power (dBm)
Low 1	2412	-4.80	30.00	30	36	30.00
Low 2	2417	-4.80	30.00	30	36	30.00
Low 3	2422	-4.80	30.00	30	36	30.00
Mid 6	2437	-4.80	30.00	30	36	30.00
High 9	2452	-4.80	30.00	30	36	30.00
High 10	2457	-4.80	30.00	30	36	30.00
High 11	2462	-4.80	30.00	30	36	30.00
High 12	2467	-4.80	30.00	30	36	30.00
High 13	2472	-4.80	30.00	30	36	30.00

Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd Power
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Results

Channel	Frequency (MHz)	Antenna 3 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
Low 1	2412	17.44	17.44	30.00	-12.56
Low 2	2417	19.34	19.34	30.00	-10.66
Low 3	2422	21.56	21.56	30.00	-8.44
Mid 6	2437	21.42	21.42	30.00	-8.58
High 9	2452	21.62	21.62	30.00	-8.38
High 10	2457	19.36	19.36	30.00	-10.64
High 11	2462	17.42	17.42	30.00	-12.58
High 12	2467	15.43	15.43	30.00	-14.57
High 13	2472	7.78	7.78	30.00	-22.22

8.4.3. 2TX Antenna 4 + Antenna 3 CDD MODE

Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC/ISED Power Limit (dBm)	ISED EIRP Limit (dBm)	Max Power (dBm)
Low 1	2412	-3.37	30.00	36	30.00
Low 2	2417	-3.37	30.00	36	30.00
Low 3	2422	-3.37	30.00	36	30.00
Low 4	2427	-3.37	30.00	36	30.00
Mid 6	2437	-3.37	30.00	36	30.00
High 8	2447	-3.37	30.00	36	30.00
High 9	2452	-3.37	30.00	36	30.00
High 10	2457	-3.37	30.00	36	30.00
High 11	2462	-3.37	30.00	36	30.00
High 12	2467	-3.37	30.00	36	30.00
High 13	2472	-3.37	30.00	36	30.00

Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd Po
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Results

Channel	Frequency (MHz)	Antenna 4 Meas Power (dBm)	Antenna 3 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margi (dB)
Low 1	2412	16.38	16.43	19.42	30.00	-10.58
Low 2	2417	18.24	18.28	21.27	30.00	-8.73
Low 3	2422	19.81	19.88	22.86	30.00	-7.14
Low 4	2427	20.67	21.64	24.19	30.00	-5.81
Mid 6	2437	20.48	21.95	24.29	30.00	-5.71
High 8	2447	20.64	21.81	24.27	30.00	-5.73
High 9	2452	19.93	19.85	22.90	30.00	-7.10
High 10	2457	18.35	18.46	21.42	30.00	-8.58
High 11	2462	16.31	16.37	19.35	30.00	-10.65
High 12	2467	14.23	14.35	17.30	30.00	-12.70
High 13	2472	6.76	6.84	9.81	30.00	-20.19

8.5. POWER SPECTRAL DENSITY

LIMITS

FCC §15.247 (e)

RSS-247 (5.2) (b)

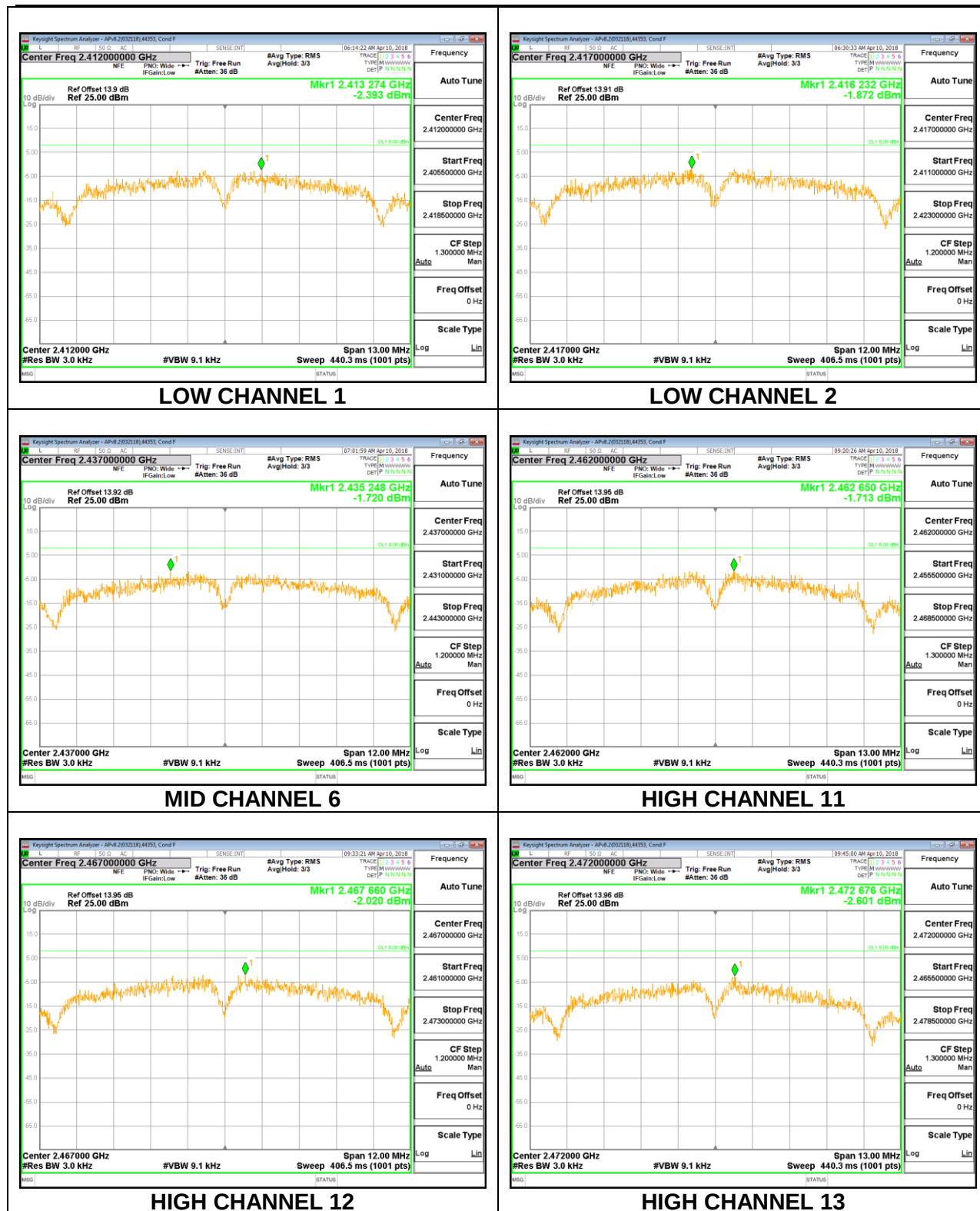
The power spectral density conducted from the transmitter to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

RESULTS

8.5.1. 802.11b MODE

1TX Antenna 4 MODE

Duty Cycle CF (dB)		0.00	Included in Calculations of Corr'd PSD		
PSD Results					
Channel	Frequency (MHz)	Antenna 4 Meas (dBm/ 3kHz)	Total Corr'd PSD (dBm/ 3kHz)	Limit (dBm/ 3kHz)	Margin (dB)
Low 1	2412	-2.39	-2.39	8.0	-10.4
Low 2	2417	-1.87	-1.87	8.0	-9.9
Mid 6	2437	-1.72	-1.72	8.0	-9.7
High 11	2462	-1.71	-1.71	8.0	-9.7
High 12	2467	-2.02	-2.02	8.0	-10.0
High 13	2472	-2.60	-2.60	8.0	-10.6

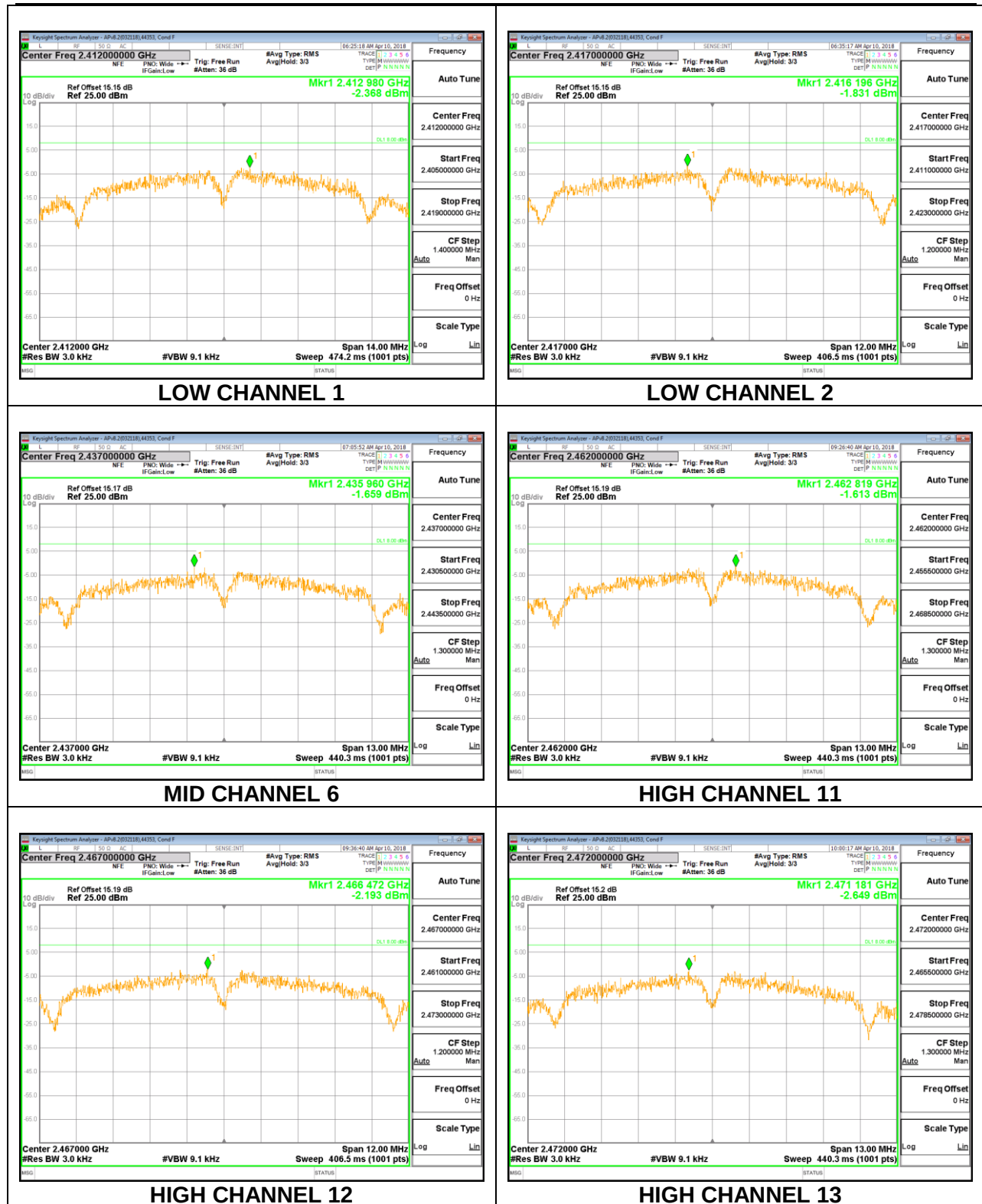


1TX Antenna 3 MODE

Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd PSD
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PSD Results

Channel	Frequency (MHz)	Antenna 3 Meas (dBm/ 3kHz)	Total Corr'd PSD (dBm/ 3kHz)	Limit (dBm/ 3kHz)	Margin (dB)
Low 1	2412	-2.37	-2.37	8.0	-10.4
Low 2	2417	-1.83	-1.83	8.0	-9.8
Mid 6	2437	-1.66	-1.66	8.0	-9.7
High 11	2462	-1.61	-1.61	8.0	-9.6
High 12	2467	-2.19	-2.19	8.0	-10.2
High 13	2472	-2.65	-2.65	8.0	-10.7



8.5.2. 802.11n HT20 MODE

1TX Antenna 4 MODE

Duty Cycle CF (dB)		0.00	Included in Calculations of Corr'd PSD		
PSD Results					
Channel	Frequency (MHz)	Antenna 4 Meas (dBm/ 3kHz)	Total Corr'd PSD (dBm/ 3kHz)	Limit (dBm/ 3kHz)	Margin (dB)
Low 1	2412	-6.82	-6.82	8.0	-14.8
Low 2	2417	-5.84	-5.84	8.0	-13.8
Low 3	2422	-4.50	-4.50	8.0	-12.5
Mid 6	2437	-4.47	-4.47	8.0	-12.5
High 9	2452	-4.30	-4.30	8.0	-12.3
High 10	2457	-5.66	-5.66	8.0	-13.7
High 11	2462	-6.80	-6.80	8.0	-14.8
High 12	2467	-10.49	-10.49	8.0	-18.5
High 13	2472	-16.87	-16.87	8.0	-24.9

