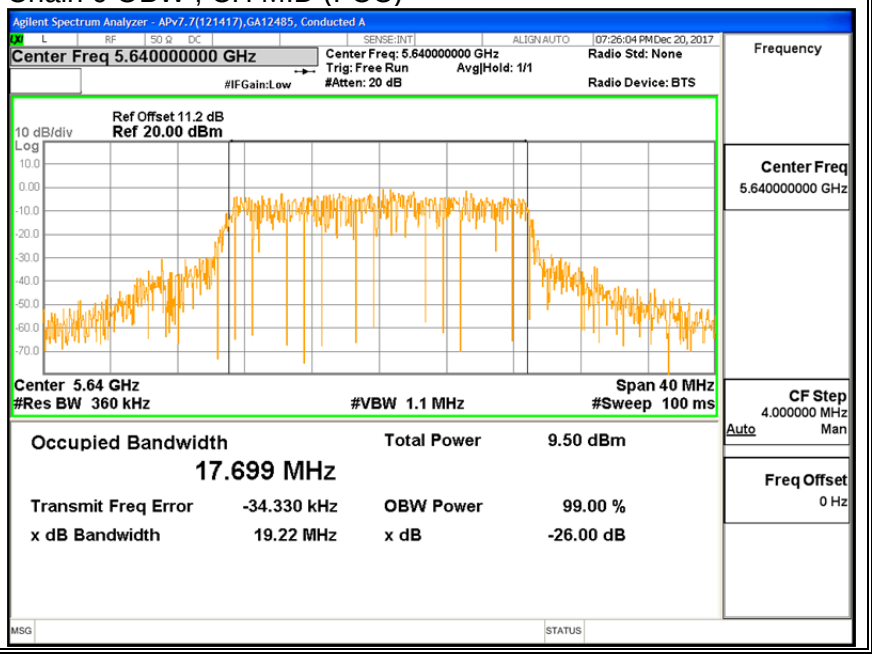
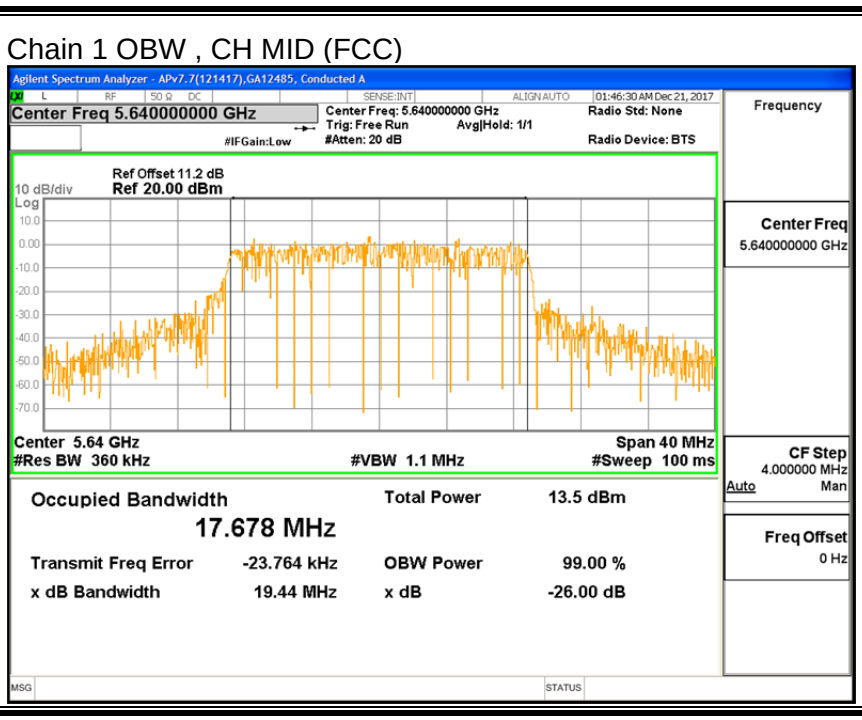
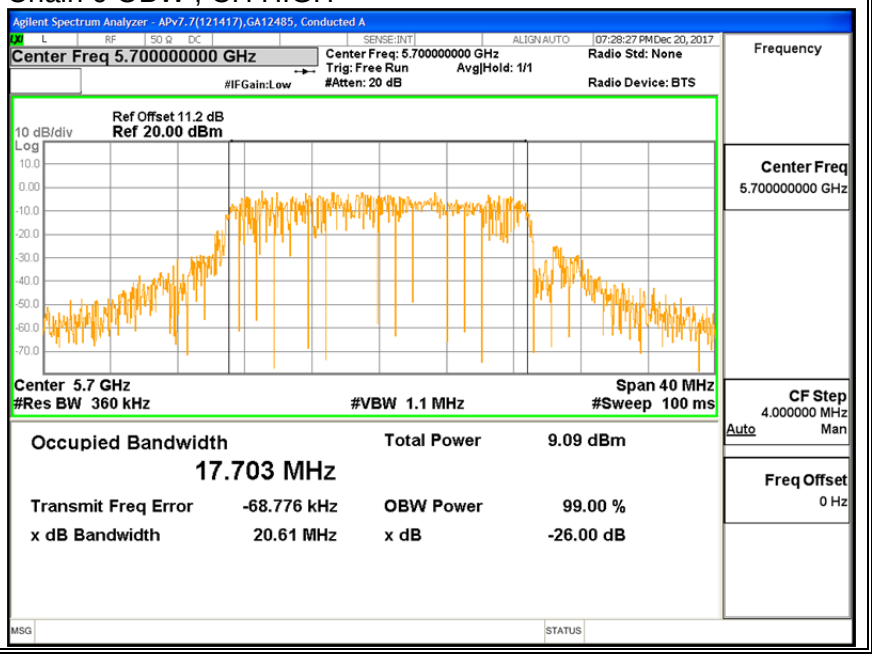
Chain 0 OBW , CH MID (FCC)



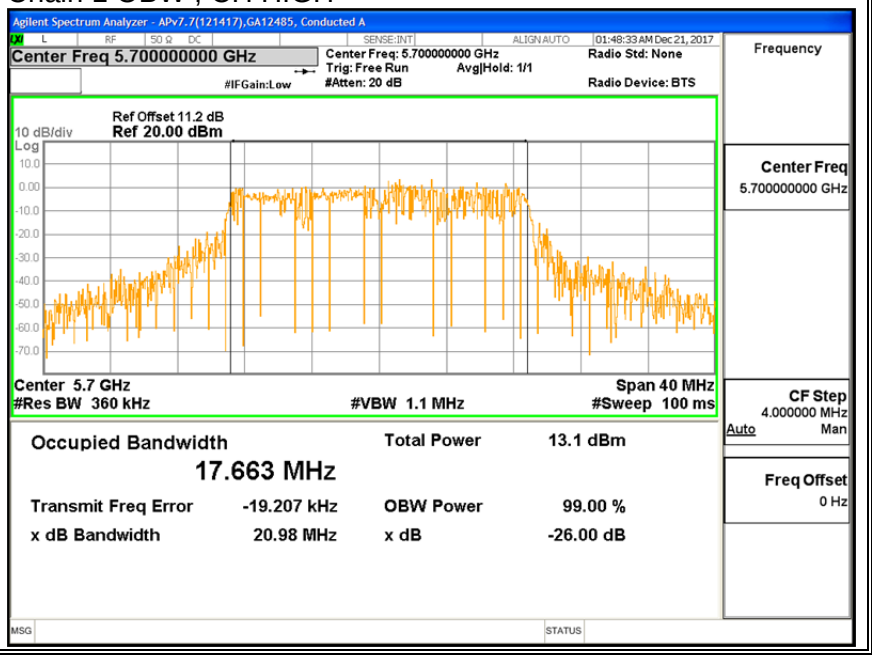
Chain 1 OBW , CH MID (FCC)



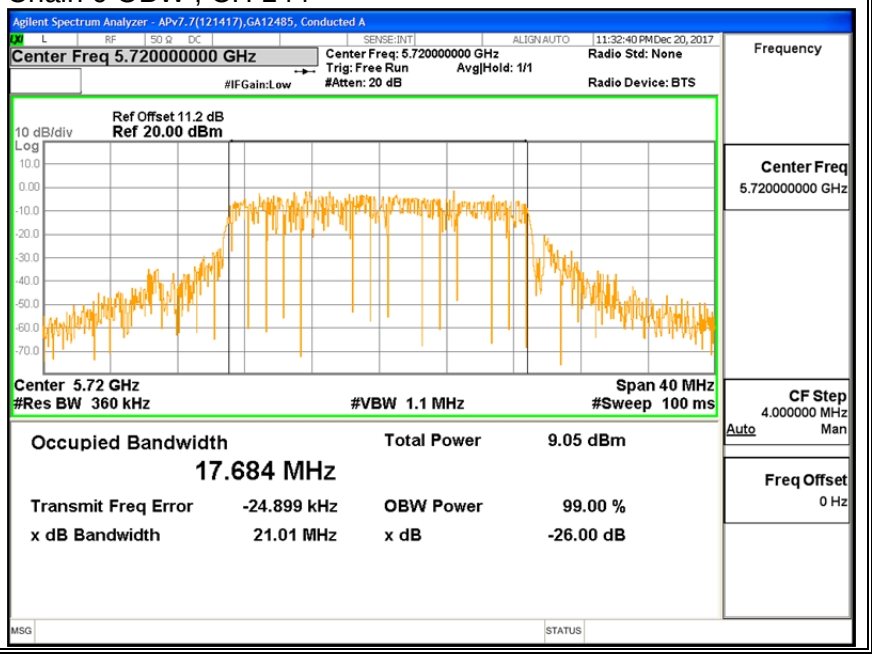
Chain 0 OBW , CH HIGH



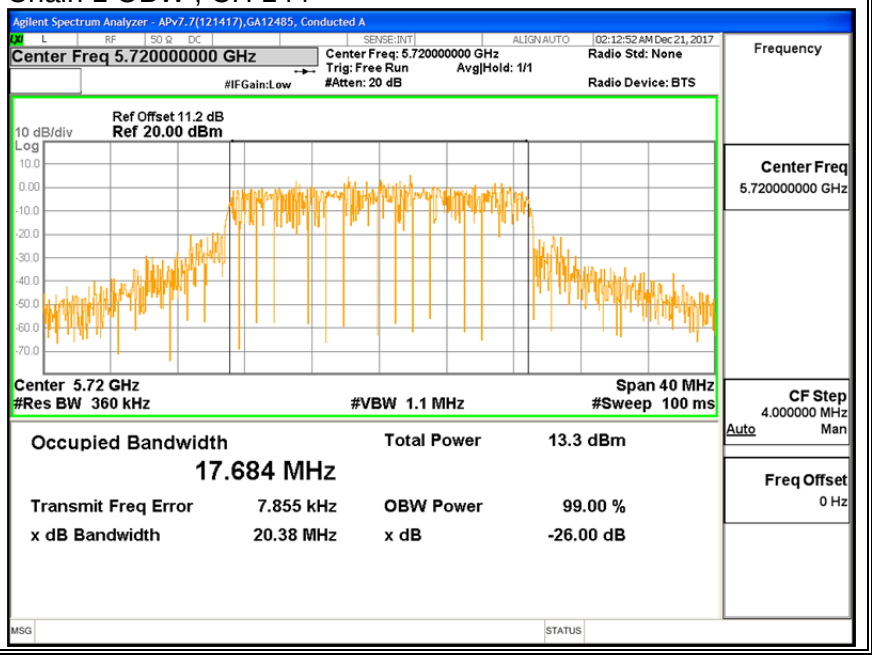
Chain 1 OBW , CH HIGH



Chain 0 OBW , CH 144



Chain 1 OBW , CH 144



9.10.3. OUTPUT POWER AND PPSD

LIMITS

FCC §15.407 (a) (2)

For the band 5.47–5.725 GHz, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26–dB emission bandwidth in MHz. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1–MHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter provided that the gate parameters are adjusted such that the power is measured only when the EUT is transmitting at its maximum power control level. Since the measurement is made only during the ON time of the transmitter, no duty cycle correction factor is required.

DIRECTIONAL ANTENNA GAIN

For power, the TX chains are uncorrelated and the antenna gain is unequal among the chains. The directional gain is:

5470-5725 MHz

Chain 0 Antenna Gain (dBi)	Chain 1 Antenna Gain (dBi)	Uncorrelated Chains Directional Gain (dBi)
0.96	-5.75	-1.21

For PSD the TX chains are correlated and the antenna gain is unequal among the chains. The directional gain is:

5470-5725 MHz

Chain 0 Antenna Gain (dBi)	Chain 1 Antenna Gain (dBi)	Correlated Chains Directional Gain (dBi)
0.96	-5.75	1.25

RESULTS

ID:	GA12485	Date:	12/21/17

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain for Power (dBi)	Directional Gain for PPSD (dBi)
Low	5500	22.35	17.669	-1.21	1.25
Mid	5580	22.20	17.664	-1.21	1.25
Mid (FCC)	5640	22.65	17.678	-1.21	1.25
High	5700	21.70	17.663	-1.21	1.25
144	5720	16.43	13.842	-1.21	1.25

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Power Limit (dBm)	FCC PPSD Limit (dBm)	IC PSD Limit (dBm)	PPSD Limit (dBm)
Low	5500	24.00	23.47	29.47	23.47	11.00	11.00	11.00
Mid	5580	24.00	23.47	29.47	23.47	11.00	11.00	11.00
Mid (FCC)	5640	24.00	23.47	29.47	23.47	11.00	11.00	11.00
High	5700	24.00	23.47	29.47	23.47	11.00	11.00	11.00
144	5720	23.16	22.41	28.41	22.41	11.00	11.00	11.00

Duty Cycle CF (dB)	0.14	Included in Calculations of Corr'd PPSD

Output Power Results

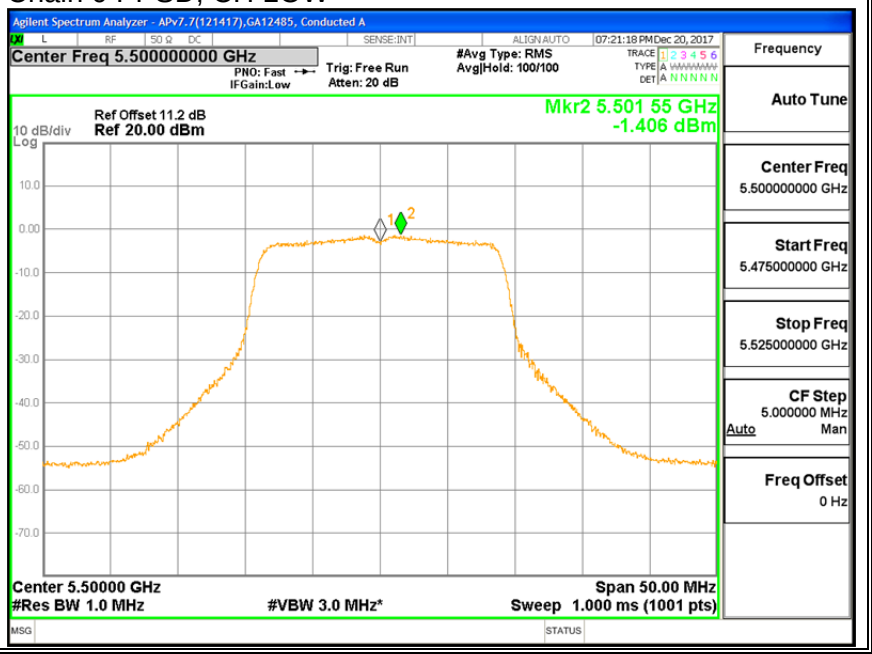
Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5500	8.76	13.73	14.93	23.47	-8.54
Mid	5580	8.43	13.32	14.54	23.47	-8.93
Mid (FCC)	5640	9.24	13.52	14.90	23.47	-8.58
High	5700	8.64	13.23	14.53	23.47	-8.95
144	5720	8.65	13.24	14.54	22.41	-7.88

PPSD Results

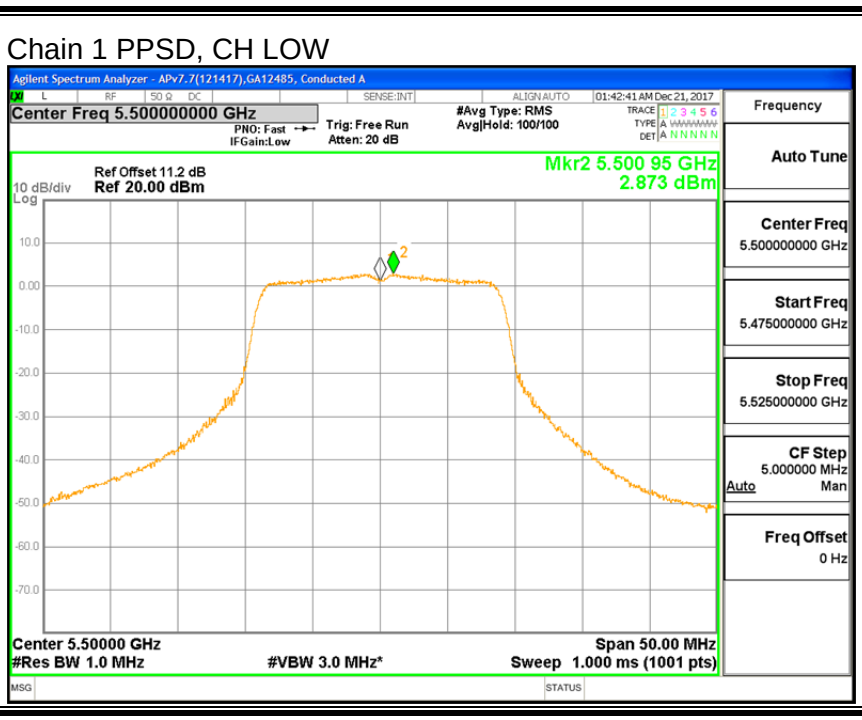
Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Chain 1 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5500	-1.406	2.873	4.39	11.00	-6.61
Mid	5580	-1.742	2.411	3.96	11.00	-7.04
Mid (FCC)	5640	-1.316	2.839	4.39	11.00	-6.61
High	5700	-1.415	2.760	4.31	11.00	-6.69
144	5720	-0.938	2.574	4.31	11.00	-6.69

Note: the power readings above were measured with gated method, and the measurement was taken only during the ON time. No duty cycle correction was necessary.

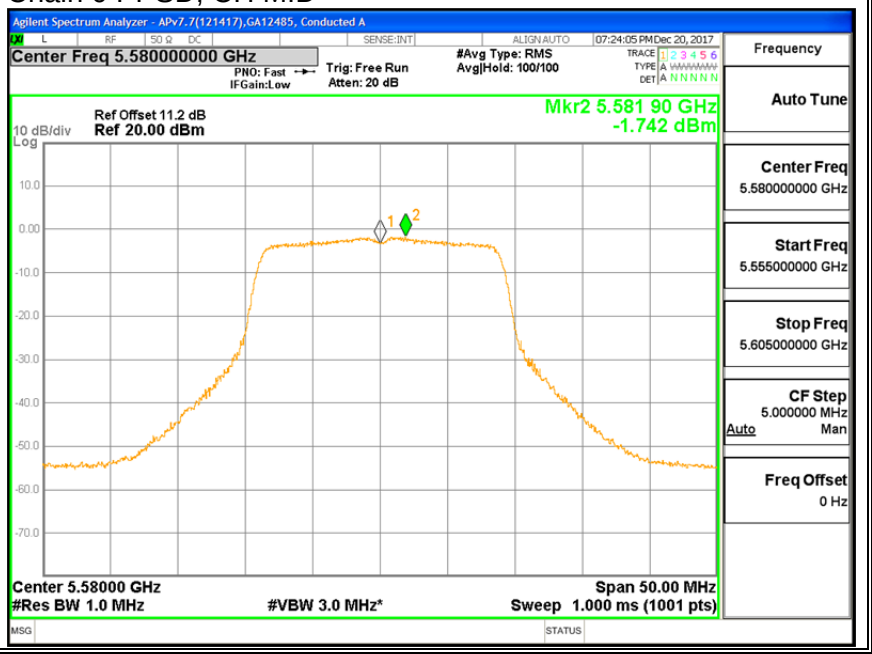
Chain 0 PPSD, CH LOW



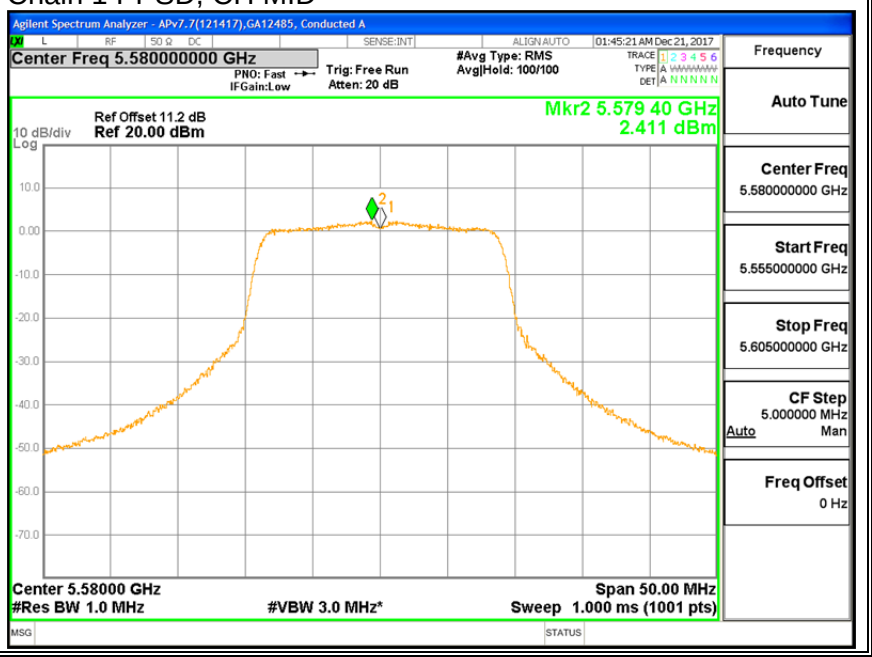
Chain 1 PPSD, CH LOW



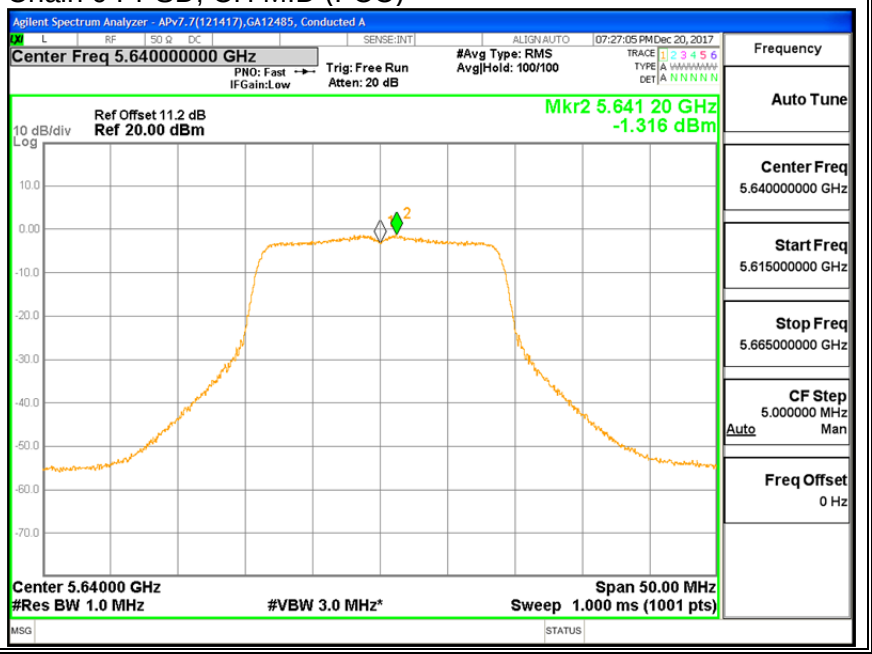
Chain 0 PPSD, CH MID



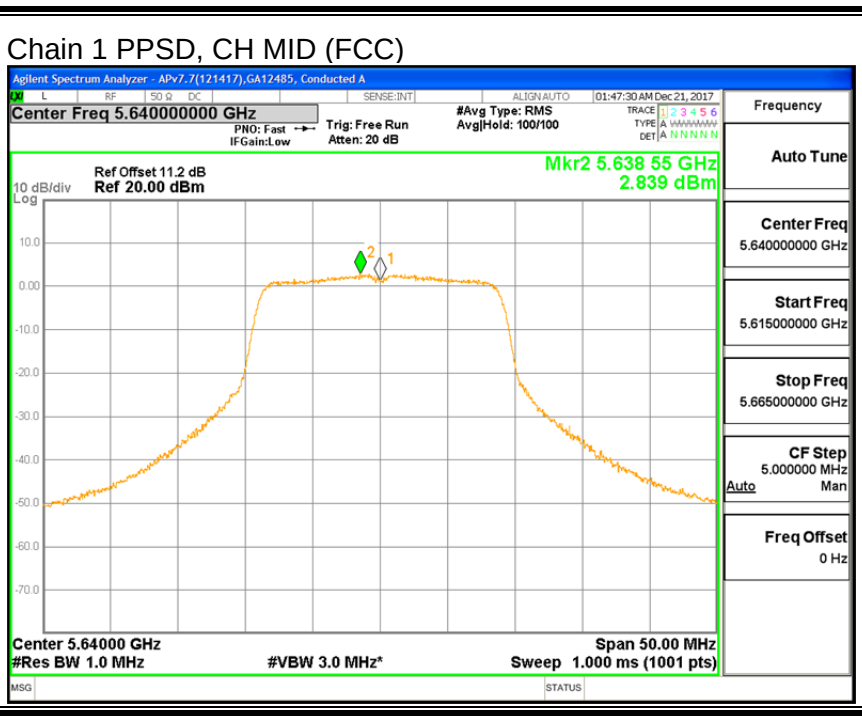
Chain 1 PPSD, CH MID



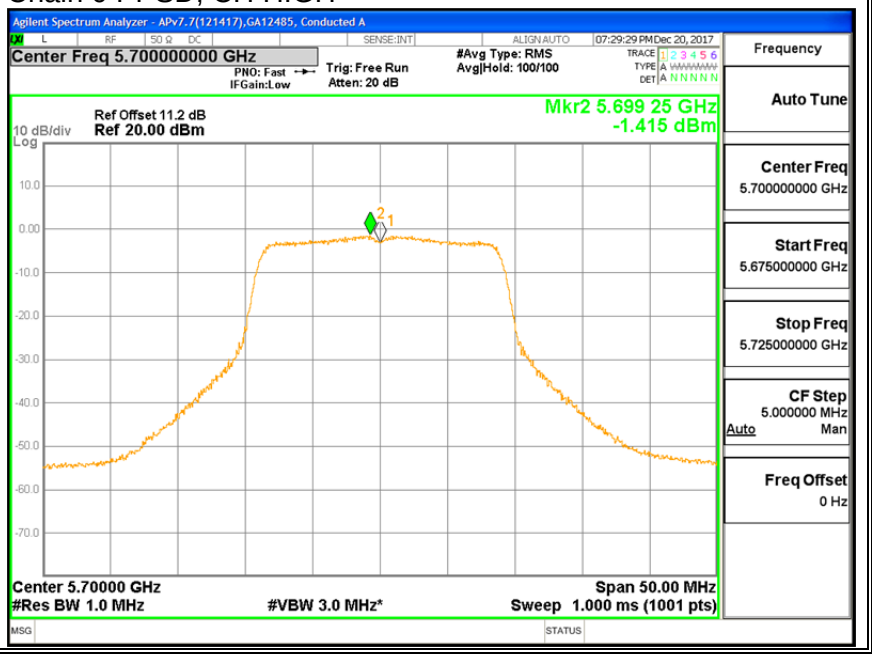
Chain 0 PPSD, CH MID (FCC)



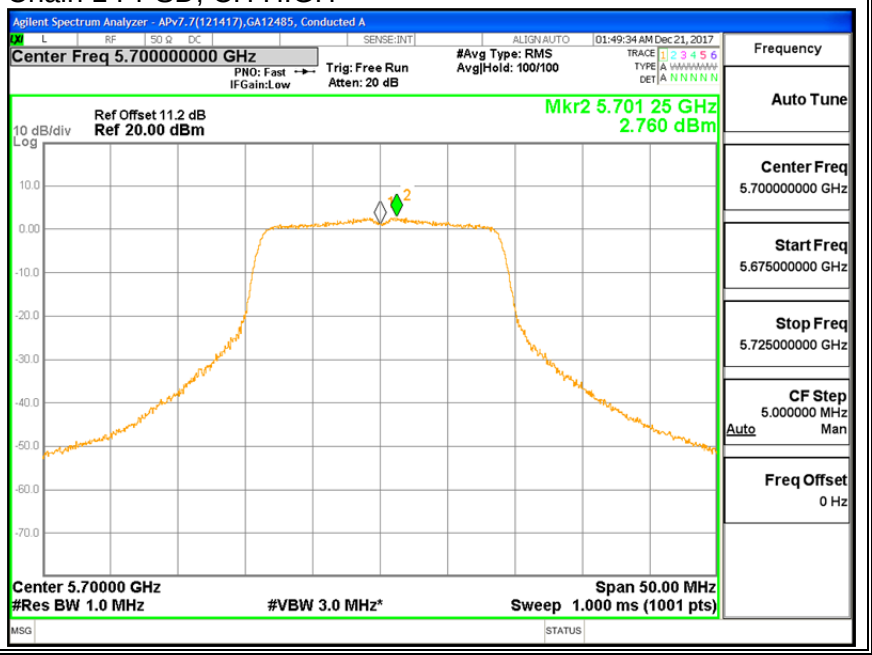
Chain 1 PPSD, CH MID (FCC)



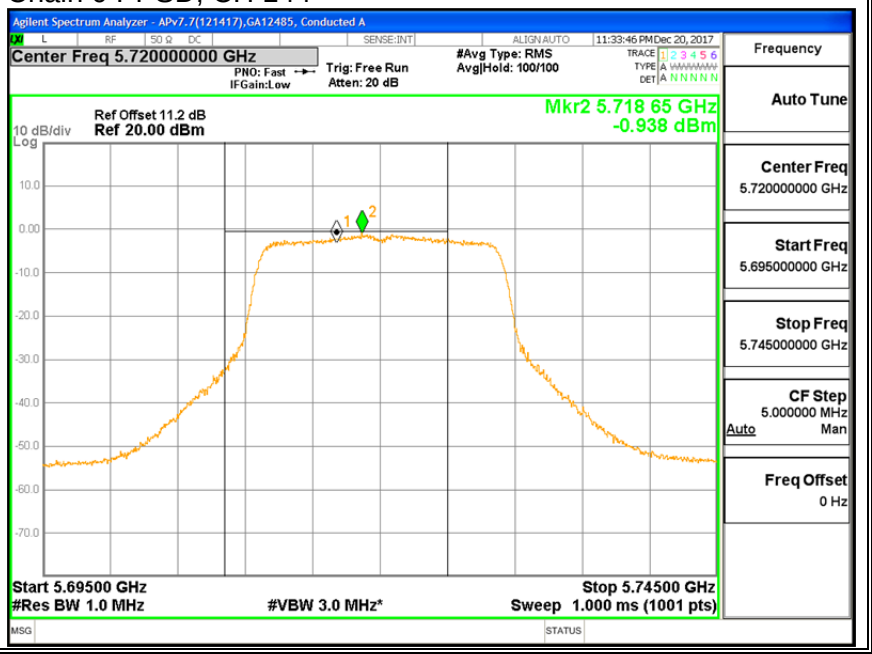
Chain 0 PPSD, CH HIGH



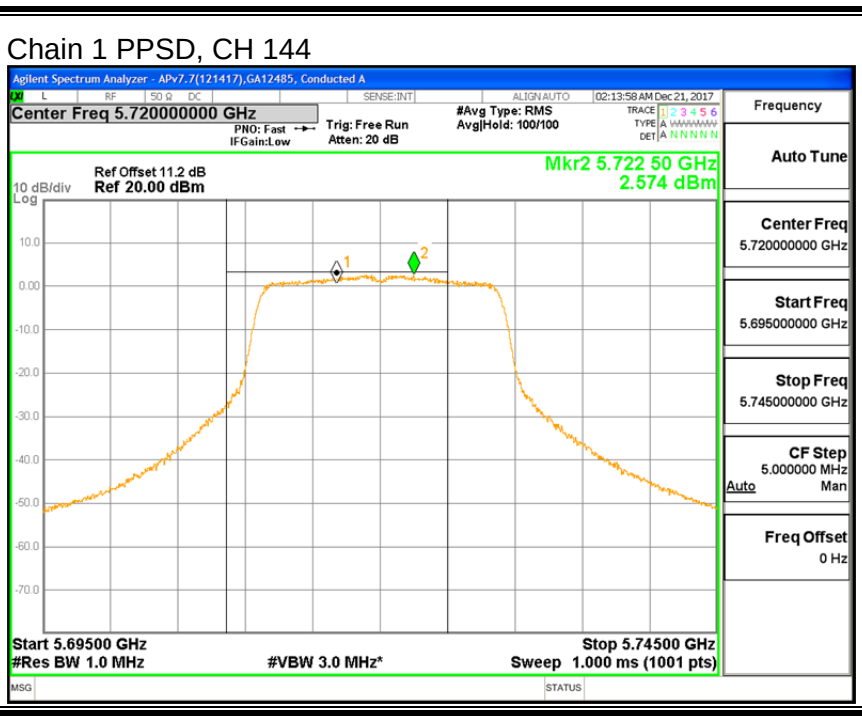
Chain 1 PPSD, CH HIGH



Chain 0 PPSD, CH 144



Chain 1 PPSD, CH 144



9.11. 11n HT40 2TX CDD MIMO MODE IN THE 5.6GHz BAND

9.11.1. 26 dB BANDWIDTH

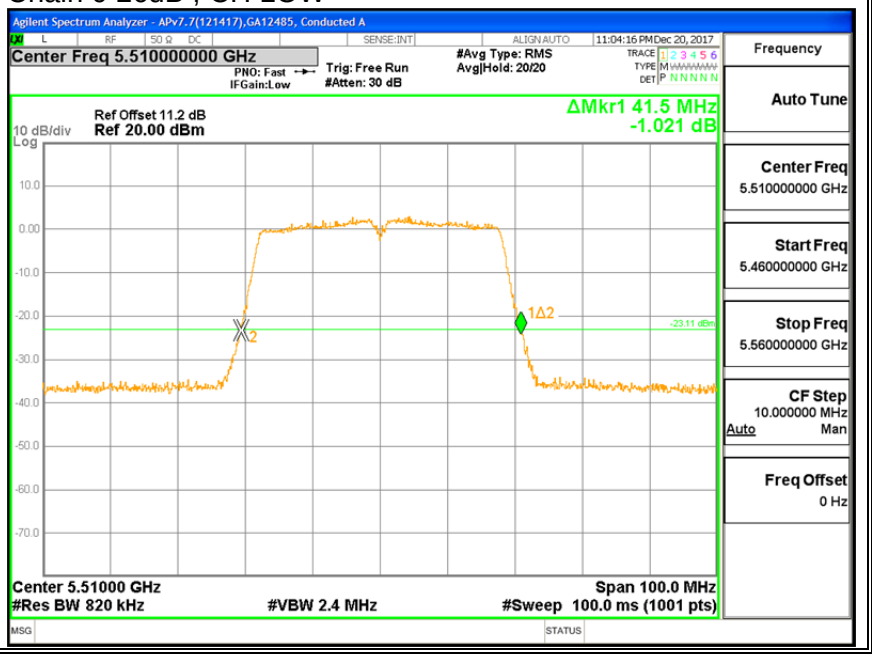
LIMITS

None; for reporting purposes only.

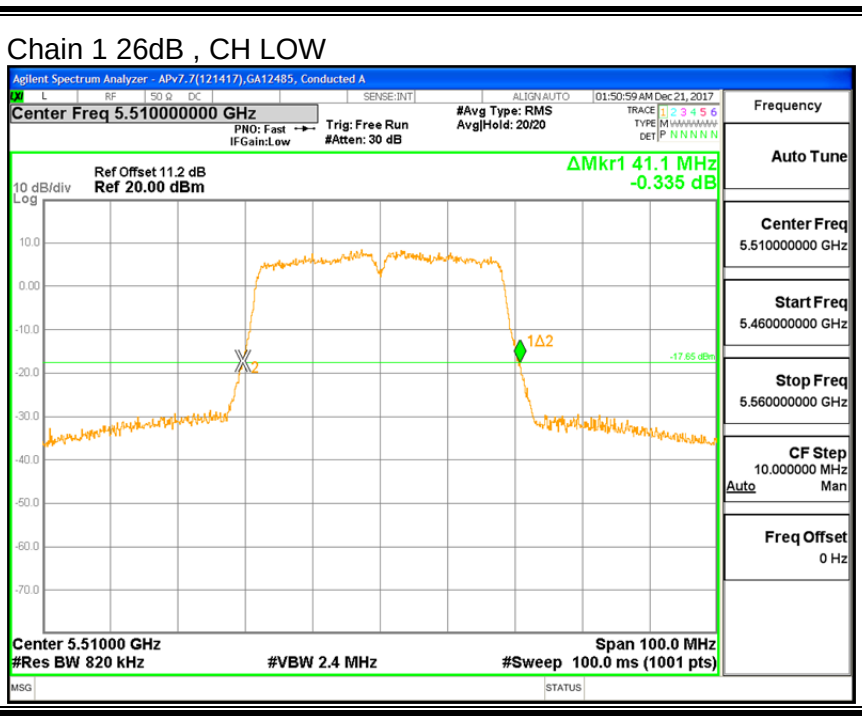
RESULTS

Channel	Frequency	26 dB BW Chain 0 (MHz)	26 dB BW Chain 1 (MHz)
Low	5510	41.5	41.1
Mid	5550	41.4	41.2
Mid (FCC)	5630	41.9	40.6
High	5670	41.6	41.2
142	5710	41.6	41.1

Chain 0 26dB , CH LOW

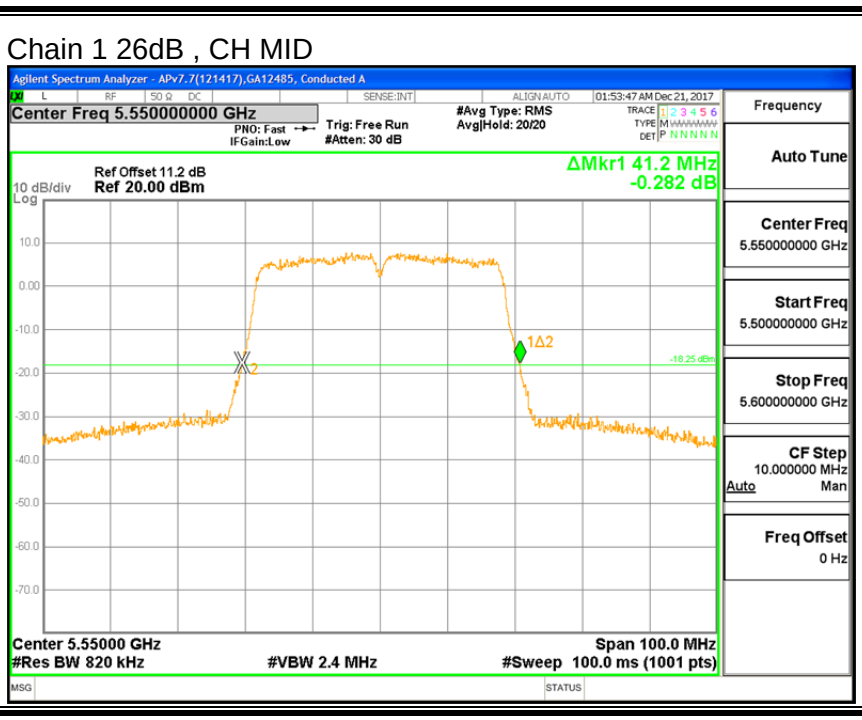


Chain 1 26dB , CH LOW



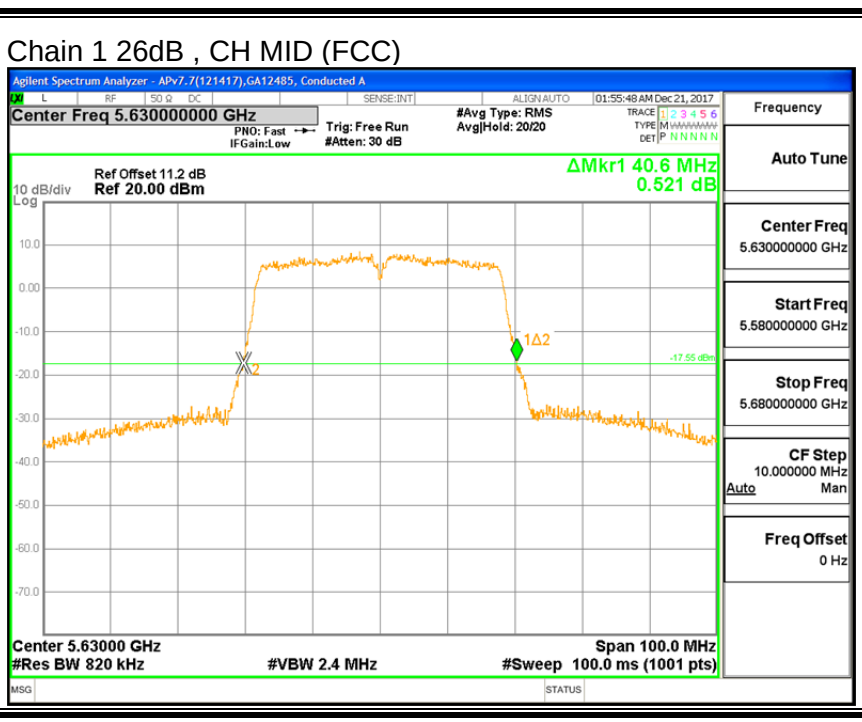
Chain 0 26dB , CH MID

Chain 1 26dB , CH MID



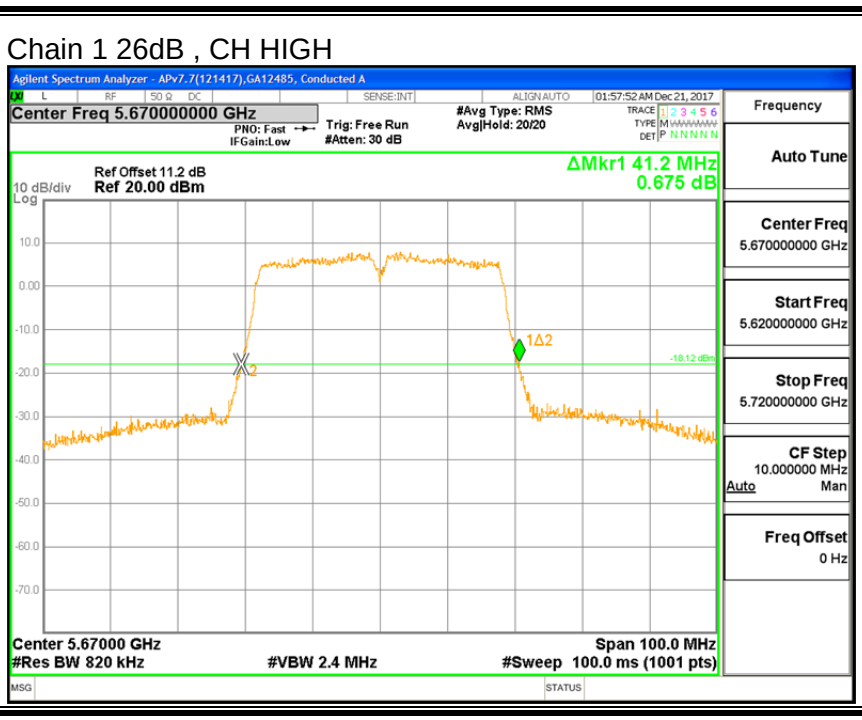
Chain 0 26dB , CH MID (FCC)

Chain 1 26dB , CH MID (FCC)



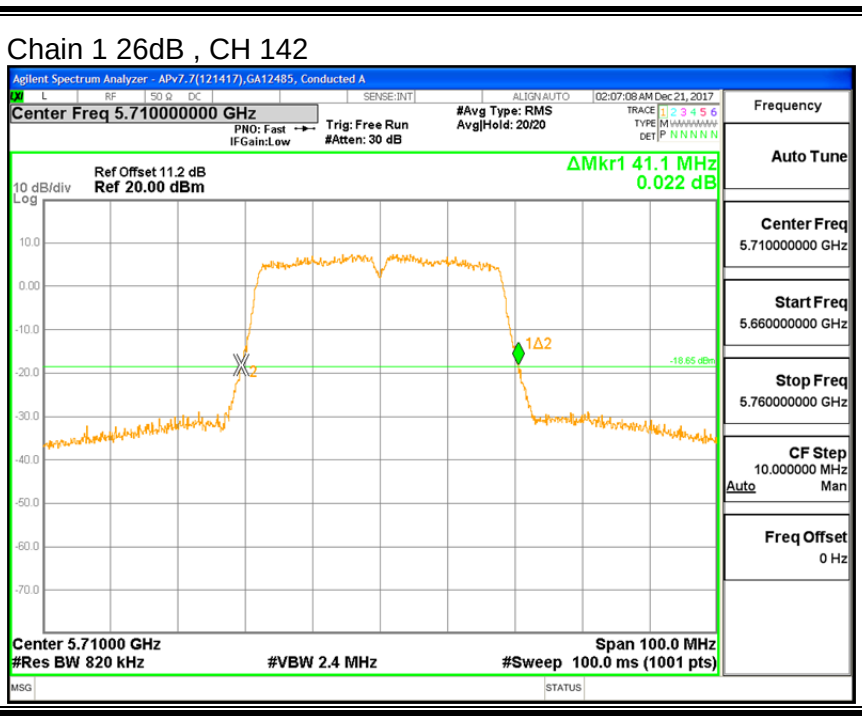
Chain 0 26dB , CH HIGH

Chain 1 26dB , CH HIGH



Chain 0 26dB , CH 142

Chain 1 26dB , CH 142



9.11.2. 99% BANDWIDTH

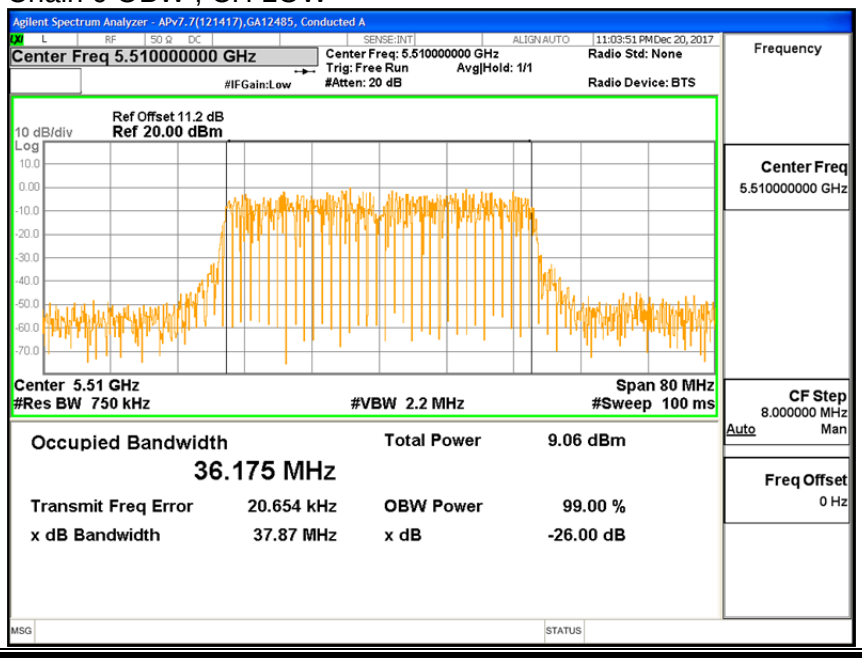
LIMITS

None; for reporting purposes only.

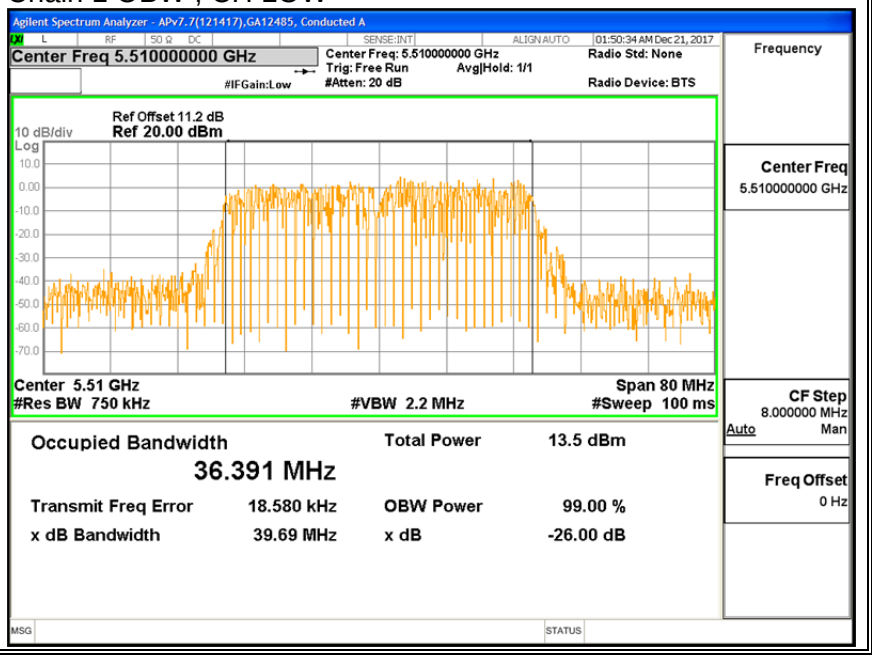
RESULTS

Channel	Frequency	99% BW Chain 0 (MHz)	99% BW Chain 1 (MHz)
Low	5510	36.175	36.391
Mid	5550	36.451	36.225
Mid (FCC)	5630	36.197	36.135
High	5670	36.277	36.093
142	5710	36.390	36.109

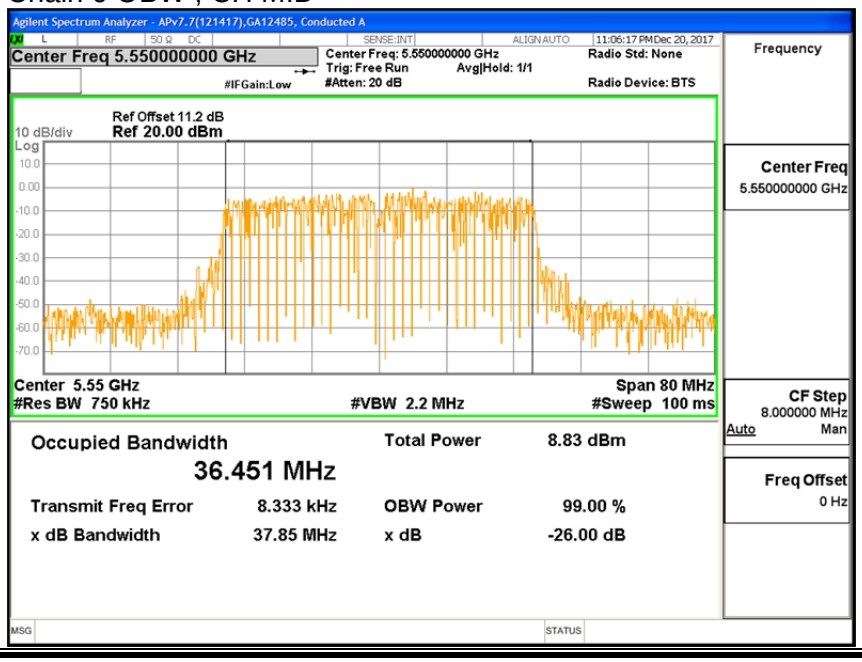
Chain 0 OBW , CH LOW



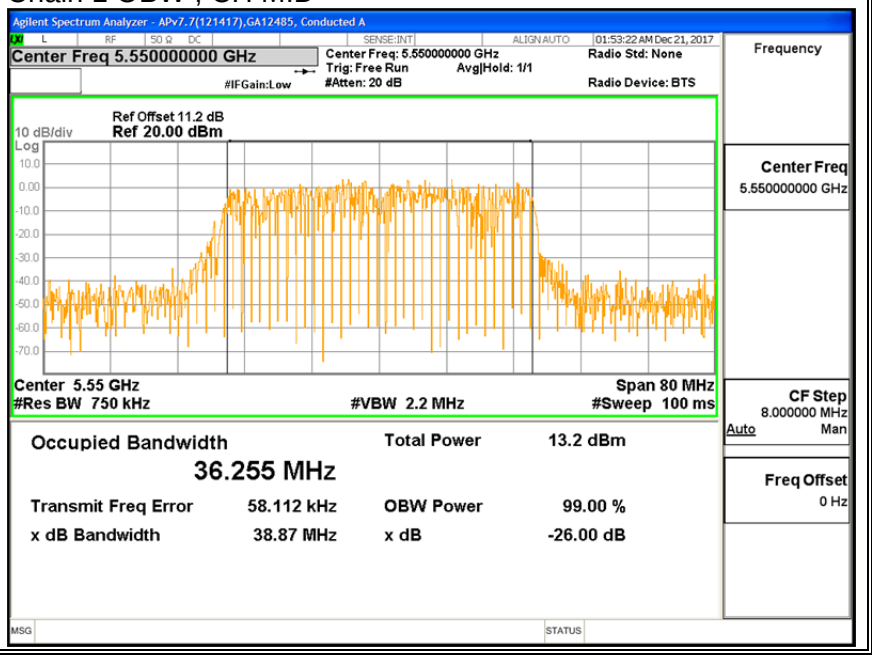
Chain 1 OBW , CH LOW



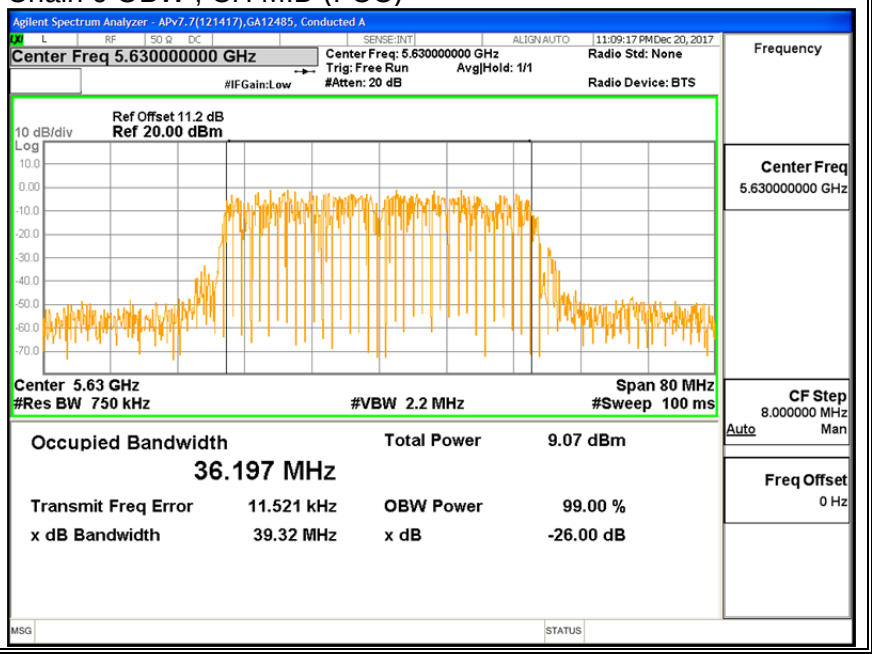
Chain 0 OBW , CH MID



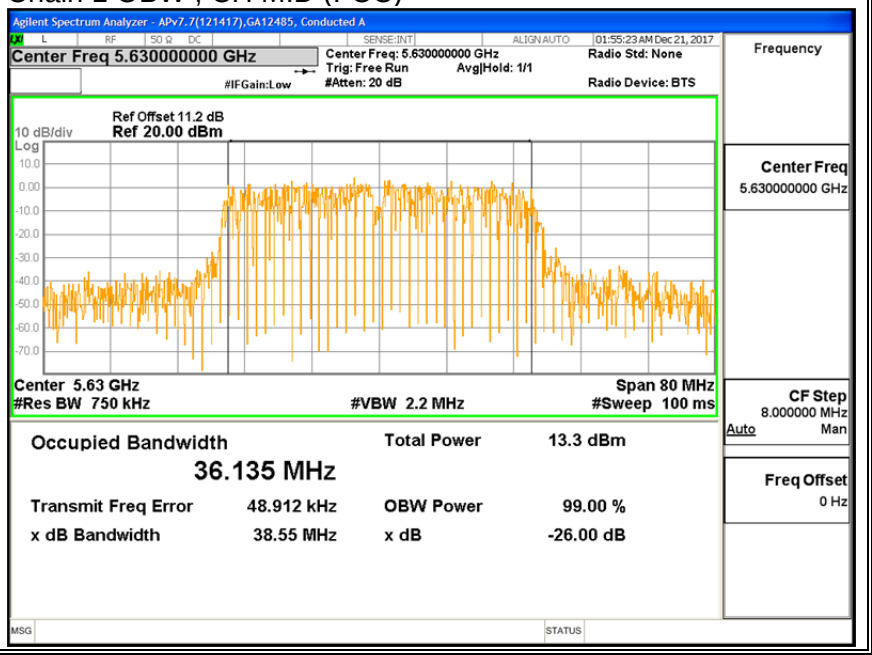
Chain 1 OBW , CH MID



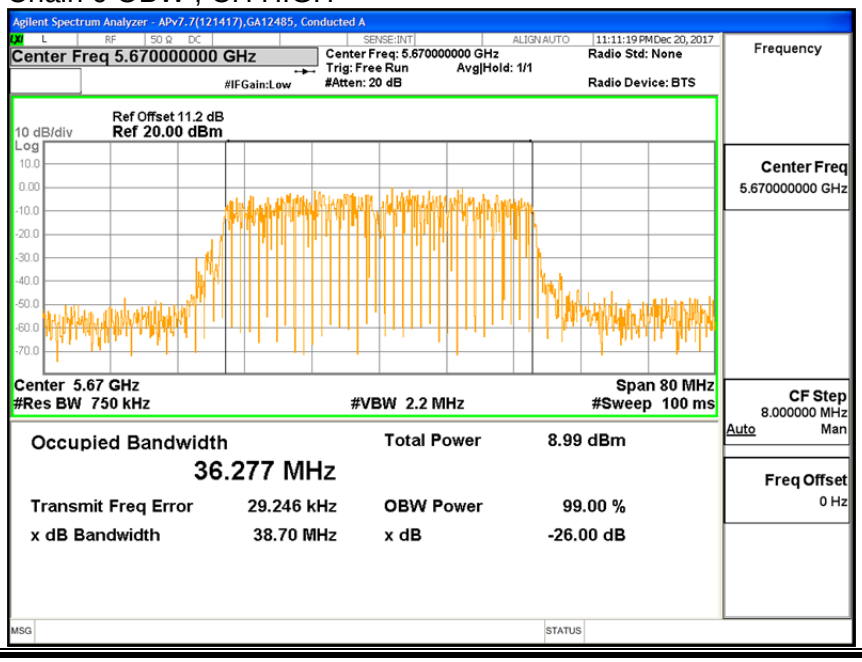
Chain 0 OBW , CH MID (FCC)



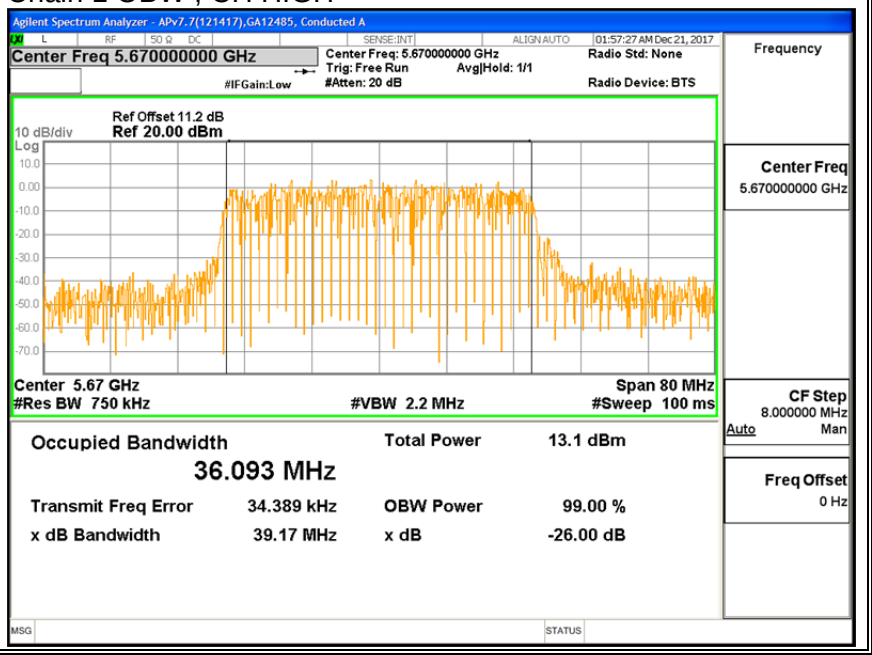
Chain 1 OBW , CH MID (FCC)



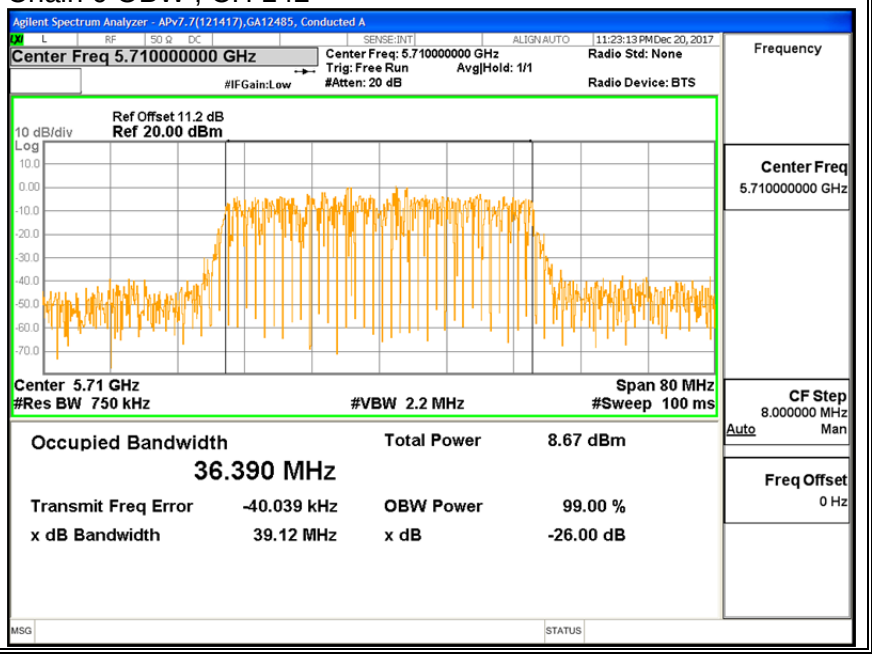
Chain 0 OBW , CH HIGH



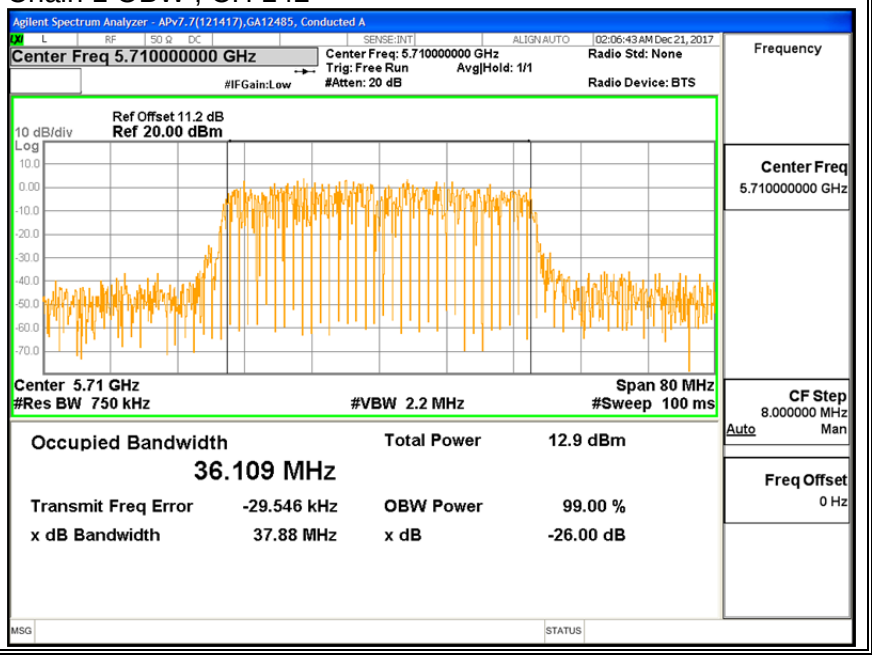
Chain 1 OBW , CH HIGH



Chain 0 OBW , CH 142



Chain 1 OBW , CH 142



9.11.3. OUTPUT POWER AND PPSD

LIMITS

FCC §15.407 (a) (2)

For the band 5.47–5.725 GHz, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26–dB emission bandwidth in MHz. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1–MHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter provided that the gate parameters are adjusted such that the power is measured only when the EUT is transmitting at its maximum power control level. Since the measurement is made only during the ON time of the transmitter, no duty cycle correction factor is required.

DIRECTIONAL ANTENNA GAIN

For power, the TX chains are uncorrelated and the antenna gain is unequal among the chains. The directional gain is:

5470-5725 MHz

Chain 0 Antenna Gain (dBi)	Chain 1 Antenna Gain (dBi)	Uncorrelated Chains Directional Gain (dBi)
0.96	-5.75	-1.21

For PSD the TX chains are correlated and the antenna gain is unequal among the chains. The directional gain is:

5470-5725 MHz

Chain 0 Antenna Gain (dBi)	Chain 1 Antenna Gain (dBi)	Correlated Chains Directional Gain (dBi)
0.96	-5.75	1.25

RESULTS

ID:	GA12485	Date:	12/21/17

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain for Power (dBi)	Directional Gain for PPSD (dBi)
Low	5510	41.10	36.175	-1.21	1.25
Mid	5550	41.20	36.225	-1.21	1.25
Mid (FCC)	5630	40.60	36.135	-1.21	1.25
High	5670	41.20	36.093	-1.21	1.25
142	5710	35.55	33.055	-1.21	1.25

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Power Limit (dBm)	FCC PPSD Limit (dBm)	IC PSD Limit (dBm)	PPSD Limit (dBm)
Low	5510	24.00	24.00	30.00	24.00	11.00	11.00	11.00
Mid	5550	24.00	24.00	30.00	24.00	11.00	11.00	11.00
Mid (FCC)	5630	24.00	24.00	30.00	24.00	11.00	11.00	11.00
High	5670	24.00	24.00	30.00	24.00	11.00	11.00	11.00
142	5710	24.00	24.00	30.00	24.00	11.00	11.00	11.00

Duty Cycle CF (dB)	0.41	Included in Calculations of Corr'd PPSD

Output Power Results

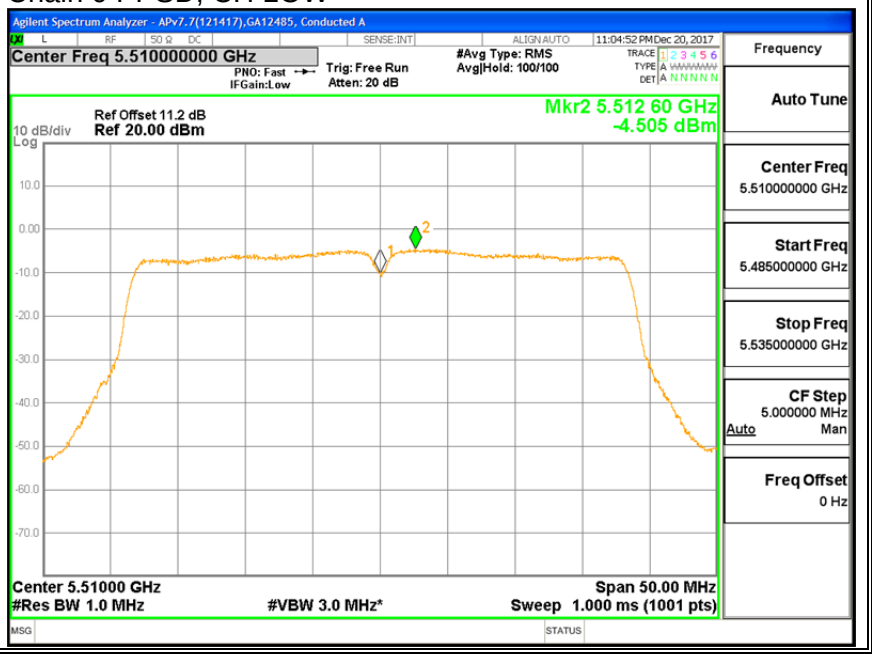
Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5510	8.62	13.47	14.70	24.00	-9.30
Mid	5550	8.55	13.26	14.52	24.00	-9.48
Mid (FCC)	5630	8.82	13.32	14.64	24.00	-9.36
High	5670	8.68	13.24	14.54	24.00	-9.46
142	5710	8.61	13.09	14.41	24.00	-9.59

PPSD Results

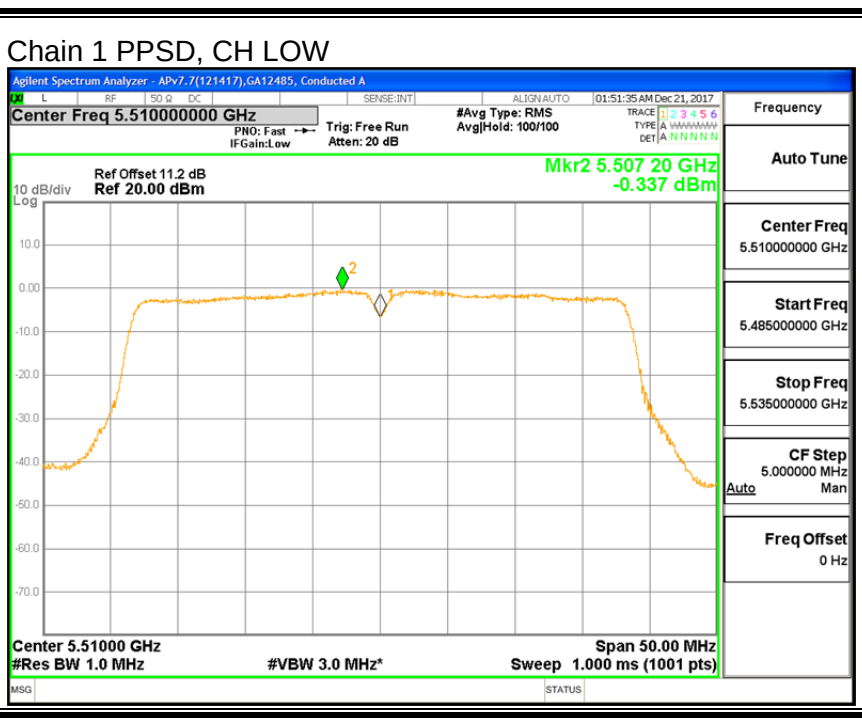
Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Chain 1 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5510	-4.505	-0.337	1.48	11.00	-9.52
Mid	5550	-5.369	-0.456	1.17	11.00	-9.83
Mid (FCC)	5630	-4.579	-0.264	1.51	11.00	-9.49
High	5670	-4.469	-0.516	1.36	11.00	-9.64
142	5710	-4.575	-0.428	1.40	11.00	-9.60

Note: the power readings above were measured with gated method, and the measurement was taken only during the ON time. No duty cycle correction was necessary.

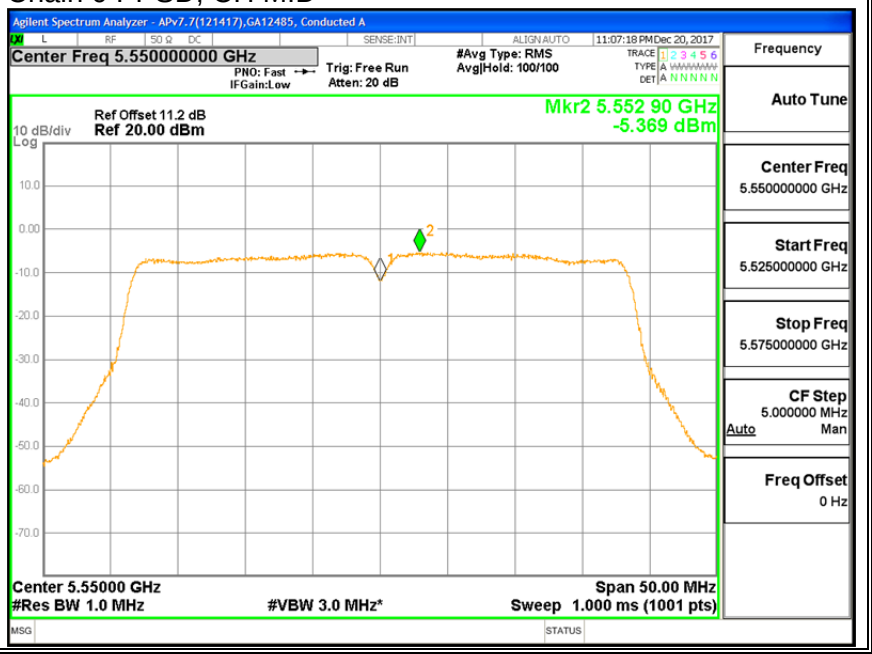
Chain 0 PPSD, CH LOW



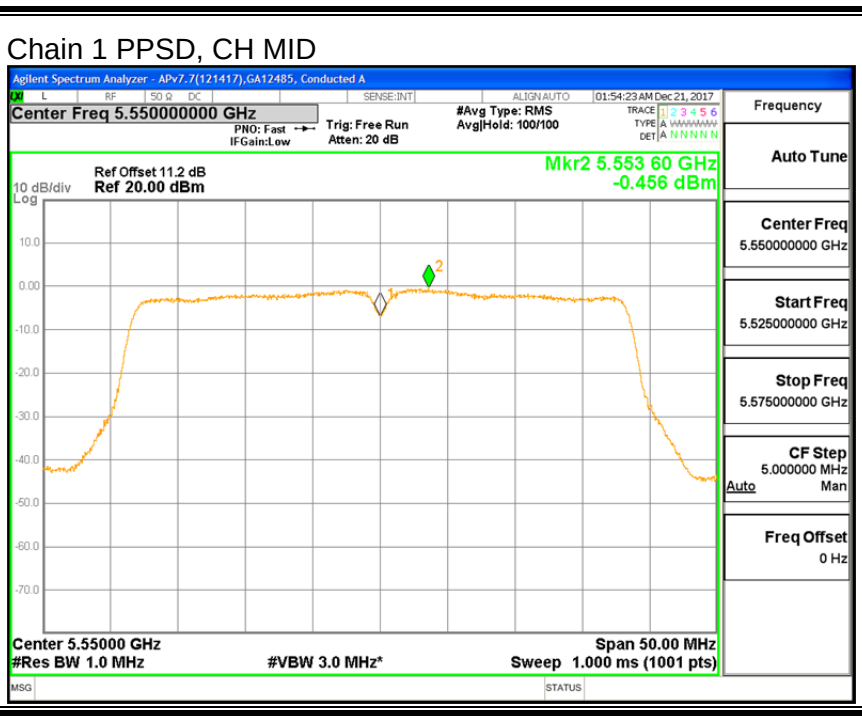
Chain 1 PPSD, CH LOW



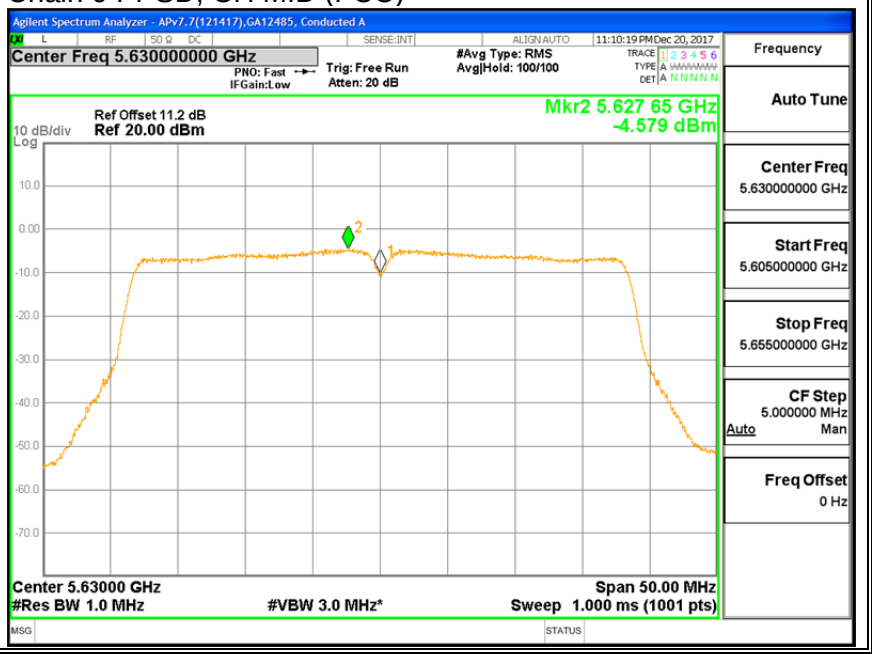
Chain 0 PPSD, CH MID



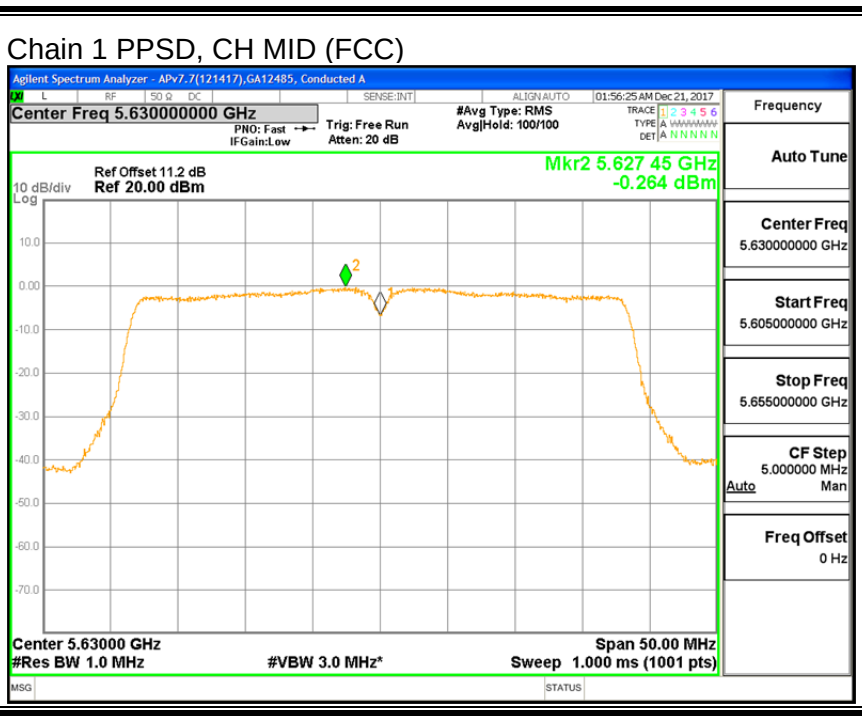
Chain 1 PPSD, CH MID



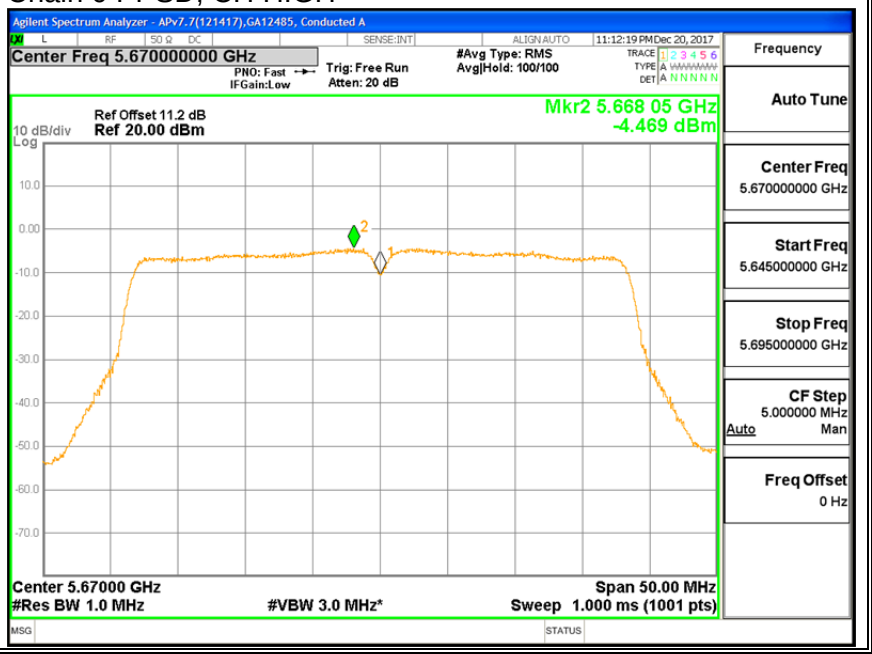
Chain 0 PPSD, CH MID (FCC)



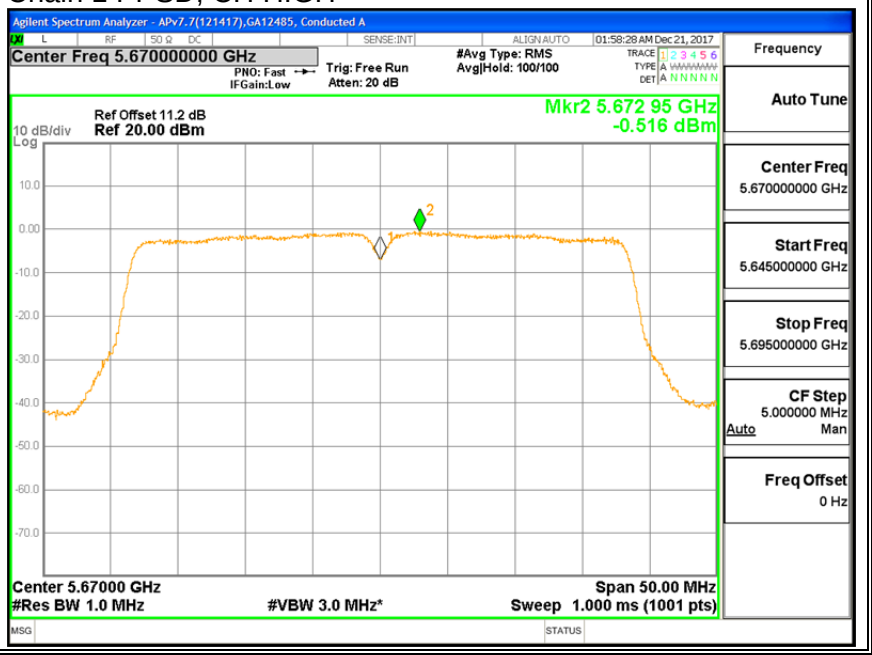
Chain 1 PPSD, CH MID (FCC)



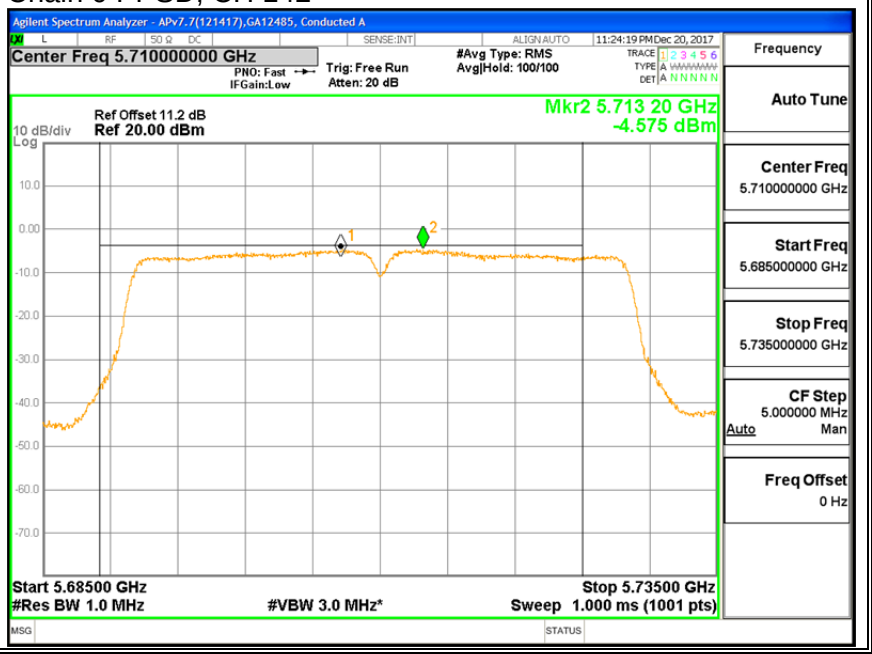
Chain 0 PPSD, CH HIGH



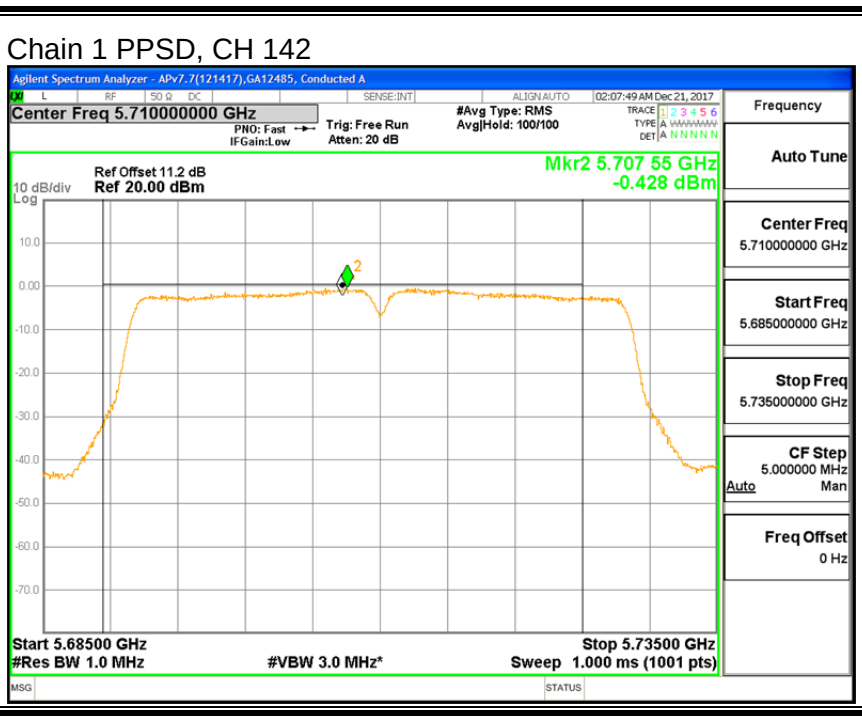
Chain 1 PPSD, CH HIGH



Chain 0 PPSD, CH 142



Chain 1 PPSD, CH 142



9.12. 11ac HT80 2TX CDD MIMO MODE IN THE 5.6GHz BAND

9.12.1. 26 dB BANDWIDTH

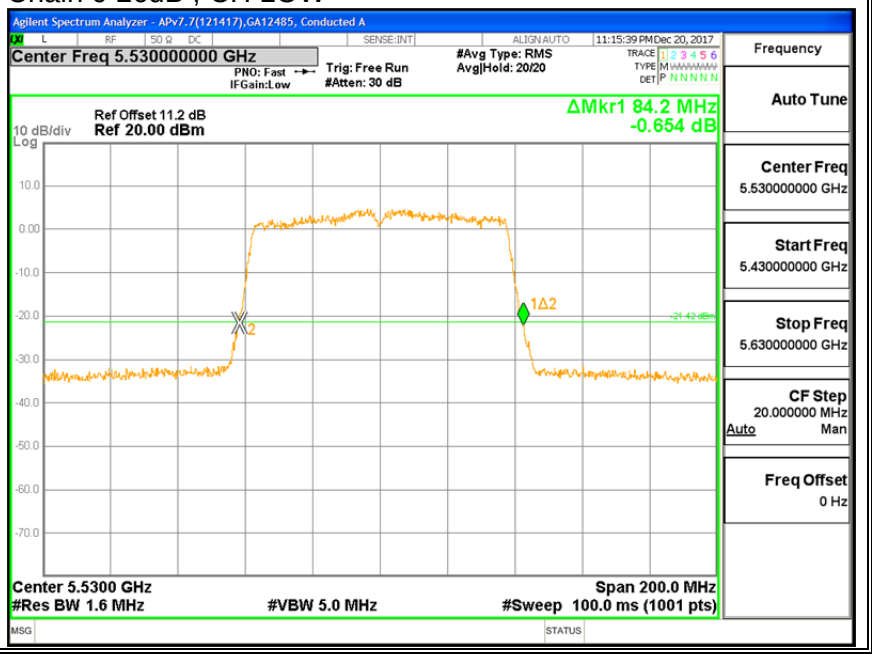
LIMITS

None; for reporting purposes only.

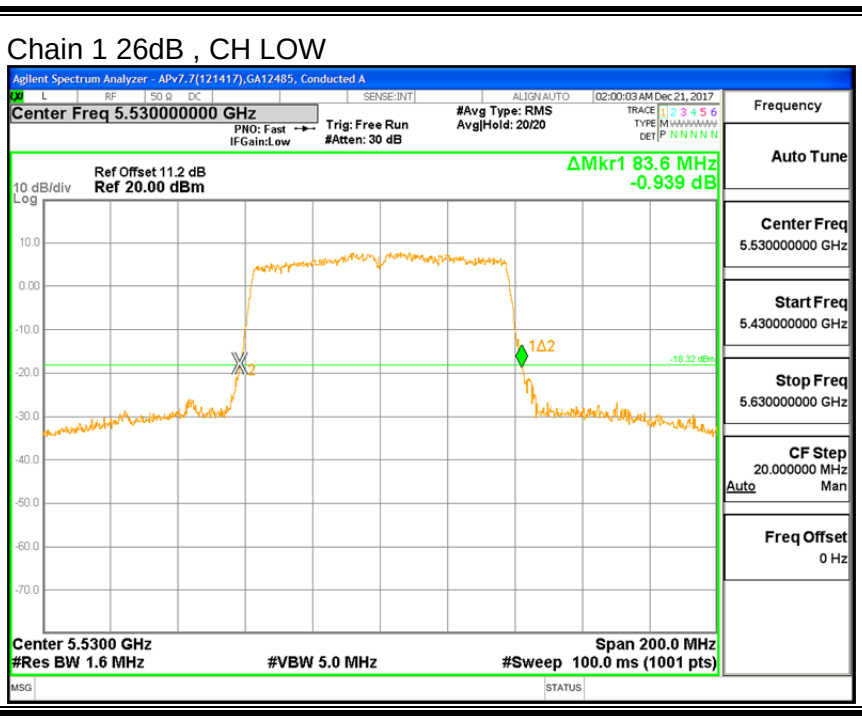
RESULTS

Channel	Frequency	26 dB BW Chain 0 (MHz)	26 dB BW Chain 1 (MHz)
Low	5530	84.2	83.6
Mid	5610	84.2	83.2
138	5690	84.0	83.6

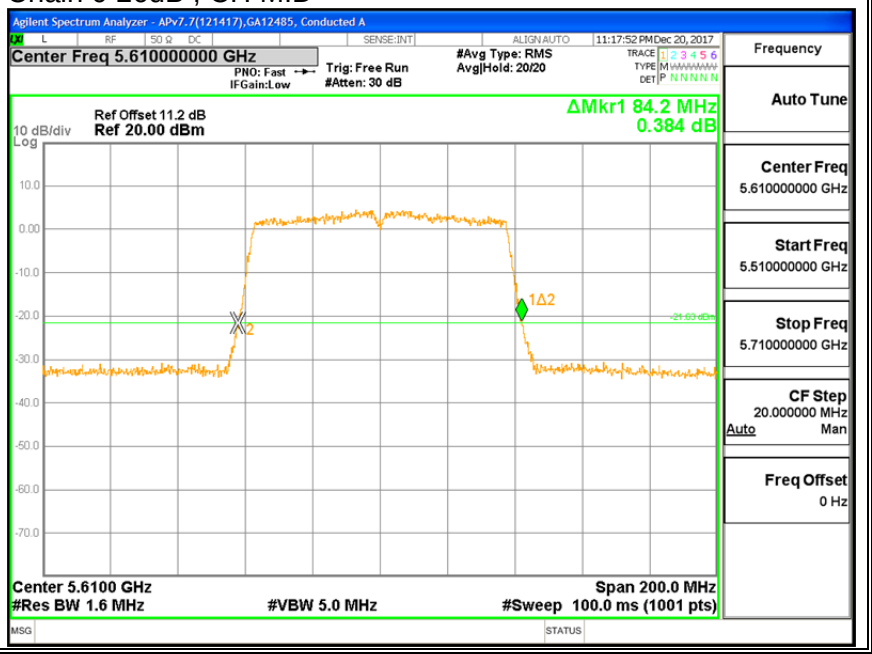
Chain 0 26dB , CH LOW



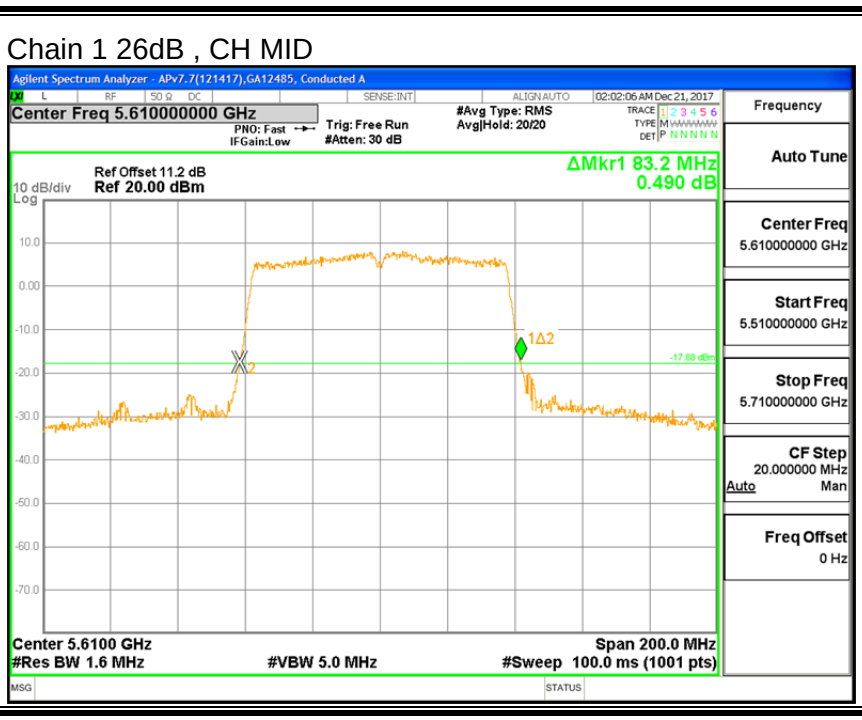
Chain 1 26dB , CH LOW



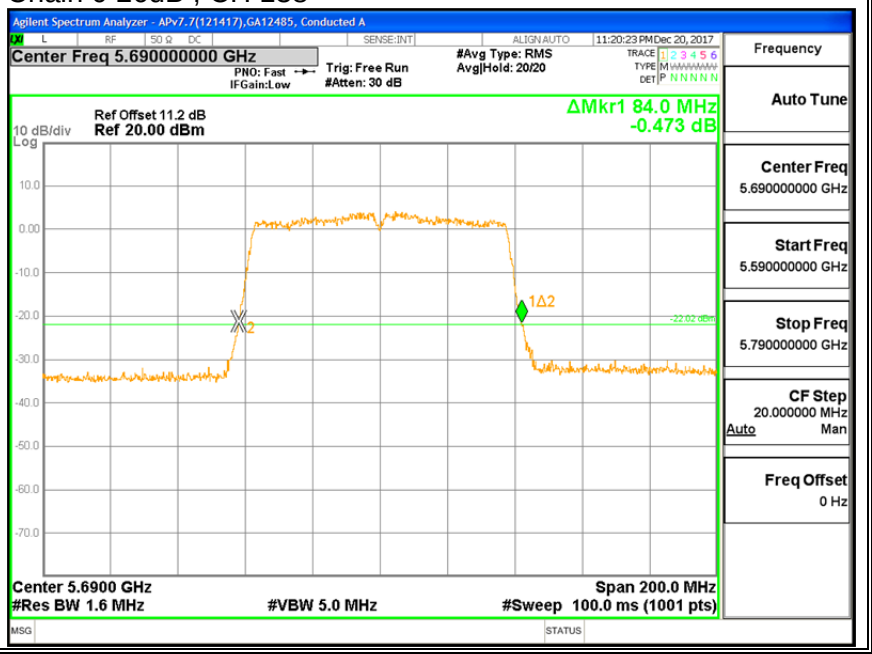
Chain 0 26dB , CH MID



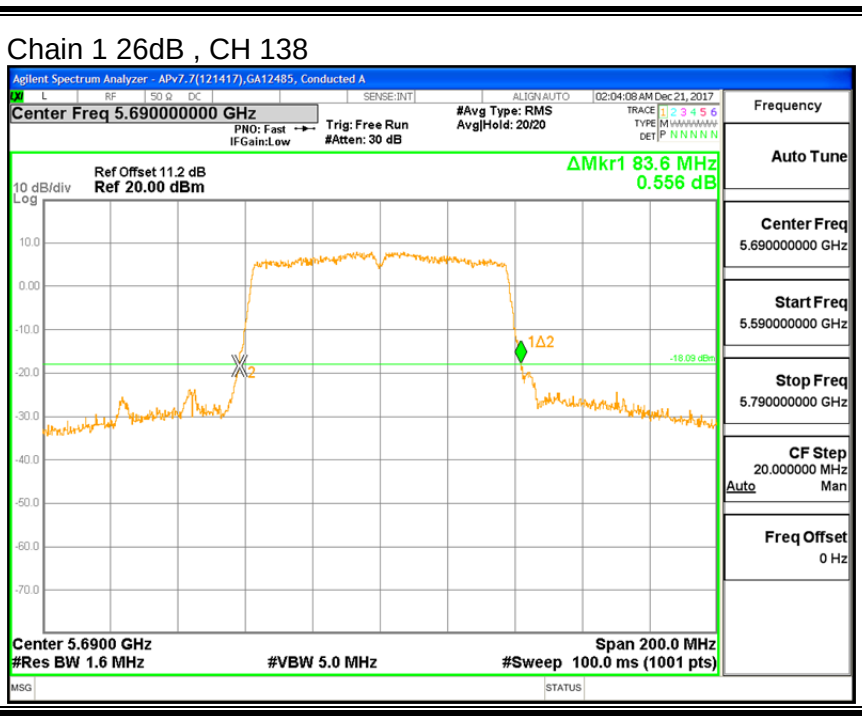
Chain 1 26dB , CH MID



Chain 0 26dB , CH 138



Chain 1 26dB , CH 138



9.12.2. 99% BANDWIDTH

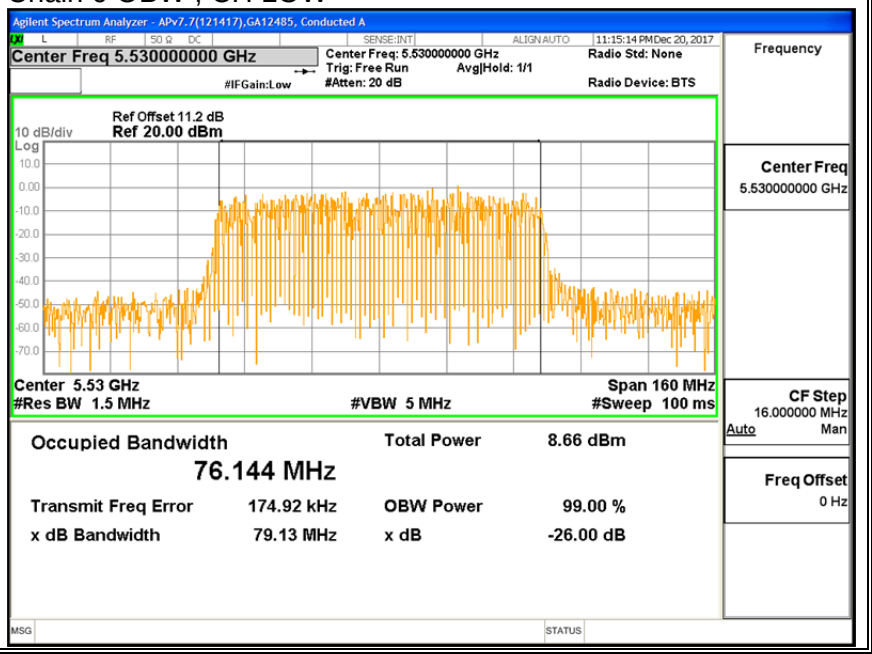
LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency	99% BW Chain 0 (MHz)	99% BW Chain 1 (MHz)
Low	5530	76.144	75.856
Mid	5610	76.148	75.754
138	5690	76.199	75.754

Chain 0 OBW , CH LOW



Chain 1 OBW , CH LOW