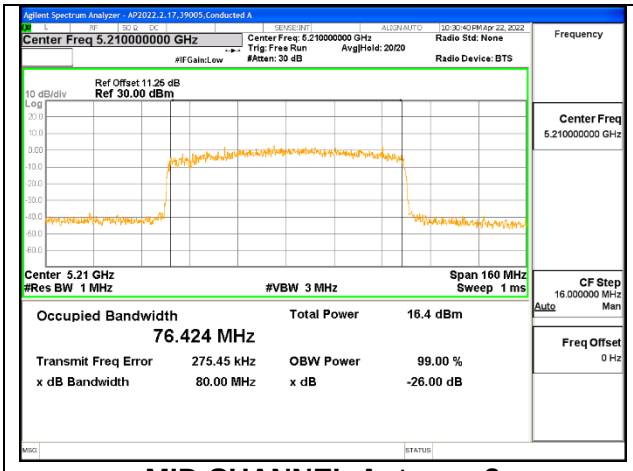
9.3.3. **802.11ax HE80 MODE 2TX IN THE 5.2GHz BAND**

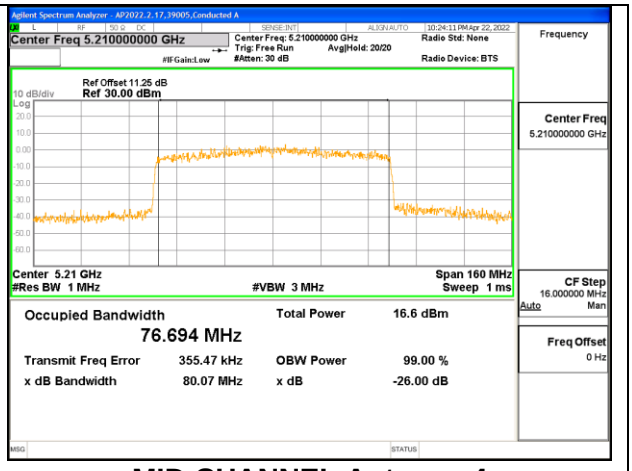
2TX Antenna 2 + Antenna 4 CDD OFDMA MODE: 996-Tones, RU Index 67

Channel	Frequency (MHz)	99% Bandwidth Antenna 2 (MHz)	99% Bandwidth Antenna 4 (MHz)
Mid	5210	76.424	76.694

MID CHANNEL



MID CHANNEL Antenna 2

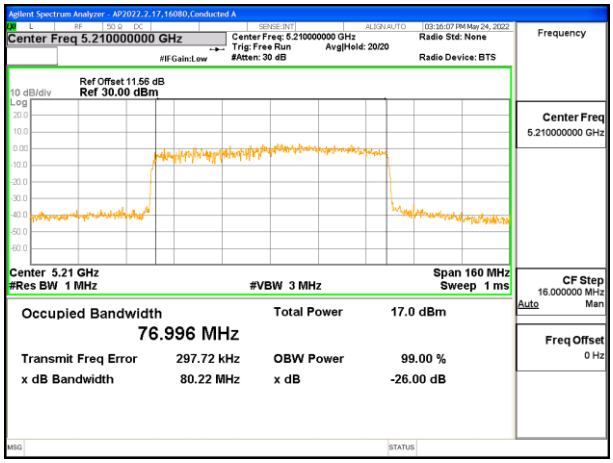


MID CHANNEL Antenna 4

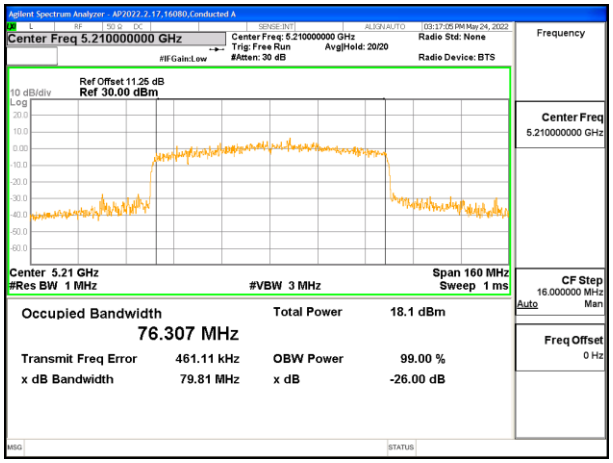
2TX Antenna 2 + Antenna 4 CDD MODE: SU (Single User)

Channel	Frequency (MHz)	99% Bandwidth Antenna 2 (MHz)	99% Bandwidth Antenna 4 (MHz)
Mid	5210	76.996	76.307

MID CHANNEL



MID CHANNEL Antenna 2



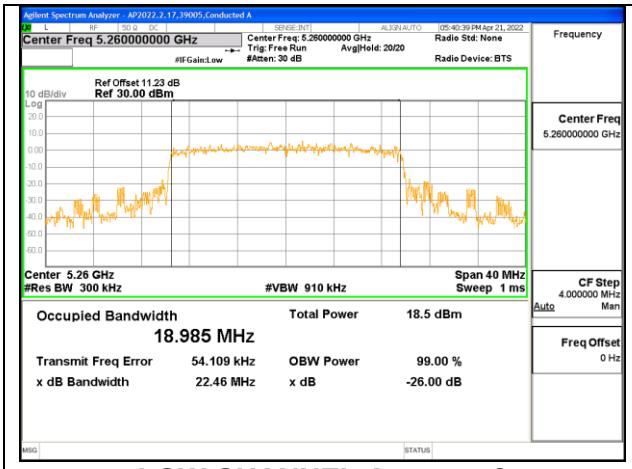
MID CHANNEL Antenna 4

9.3.4. **802.11ax HE20 MODE 2TX IN THE 5.3GHz BAND**

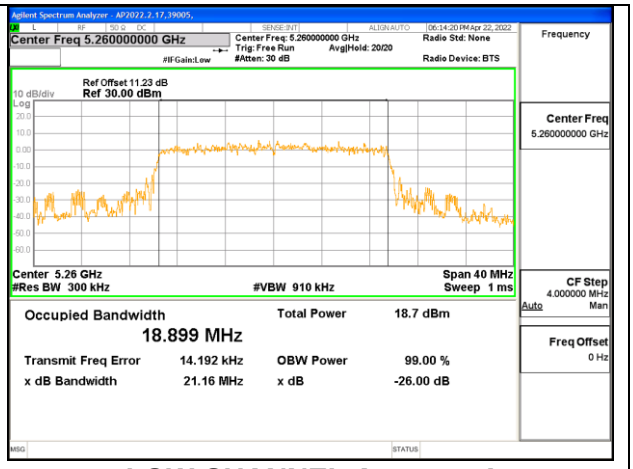
2TX Antenna 2 + Antenna 4 CDD OFDMA MODE: 242-Tones, RU Index 61

Channel	Frequency (MHz)	99% Bandwidth Antenna 2 (MHz)	99% Bandwidth Antenna 4 (MHz)
Low	5260	18.985	18.899
Mid	5300	18.992	18.942
High	5320	18.963	18.912

LOW CHANNEL

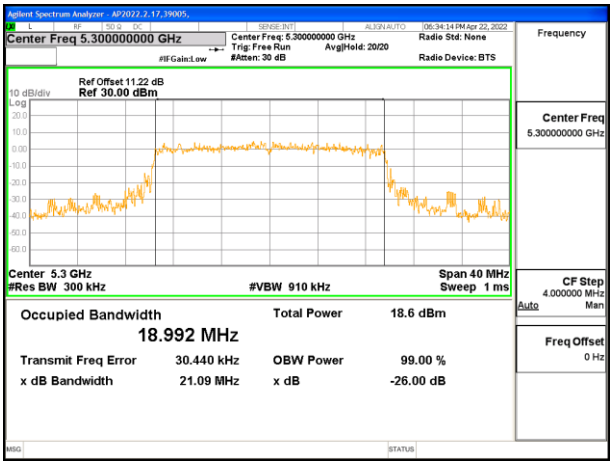


LOW CHANNEL Antenna 2

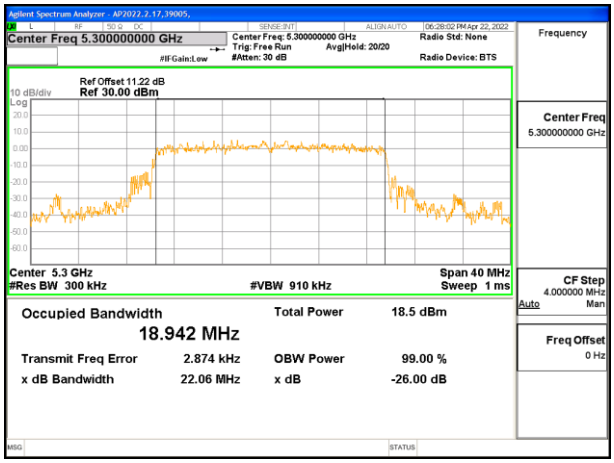


LOW CHANNEL Antenna 4

MID CHANNEL

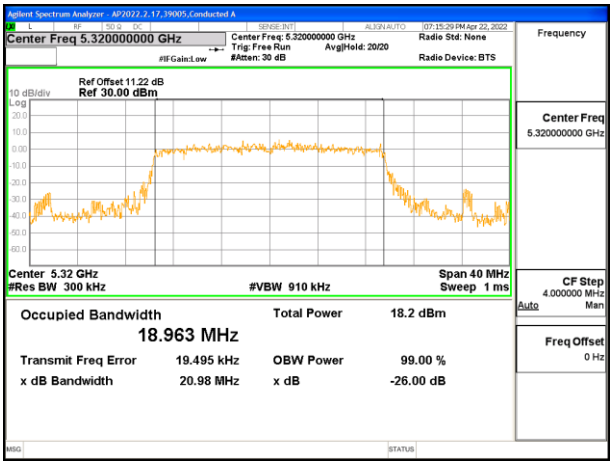


MID CHANNEL Antenna 2

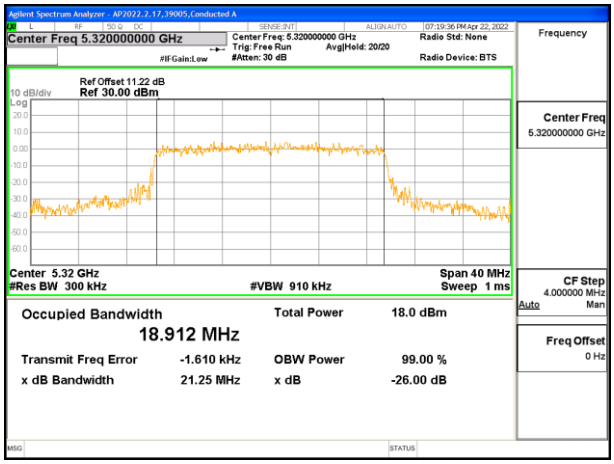


MID CHANNEL Antenna 4

HIGH CHANNEL



HIGH CHANNEL Antenna 2



HIGH CHANNEL Antenna 4

9.3.5. **802.11ax HE40 MODE 2TX IN THE 5.3GHz BAND**

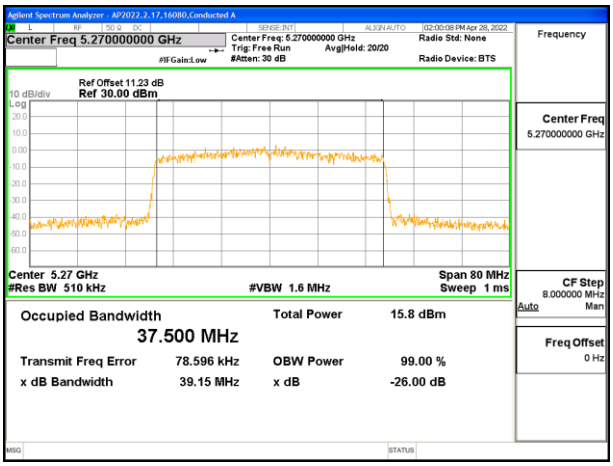
2TX Antenna 2 + Antenna 4 CDD OFDMA MODE: 26-Tones, RU Index 17

Channel	Frequency (MHz)	99% Bandwidth Antenna 2 (MHz)	99% Bandwidth Antenna 4 (MHz)
High	5310	17.907	17.667

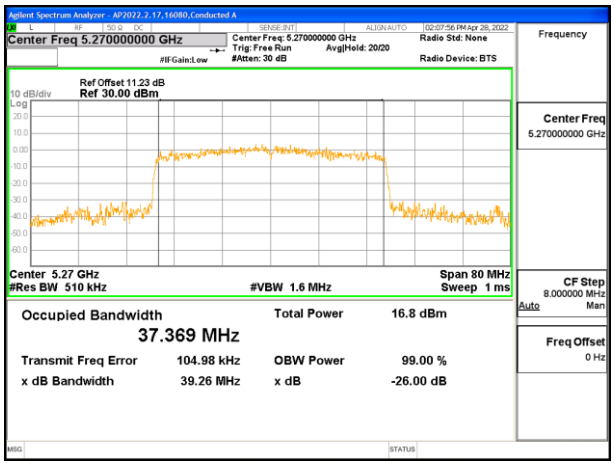
2TX Antenna 2 + Antenna 4 CDD OFDMA MODE: 484-Tones, RU Index 65

Channel	Frequency (MHz)	99% Bandwidth Antenna 2 (MHz)	99% Bandwidth Antenna 4 (MHz)
Low	5270	37.500	37.369
High	5310	37.488	37.581

LOW CHANNEL

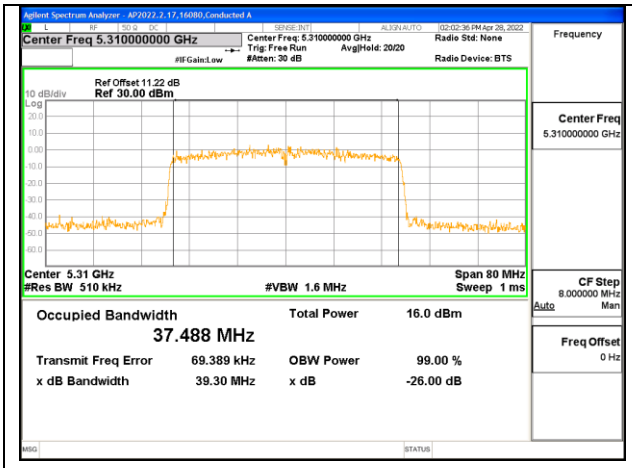


LOW CHANNEL Antenna 2

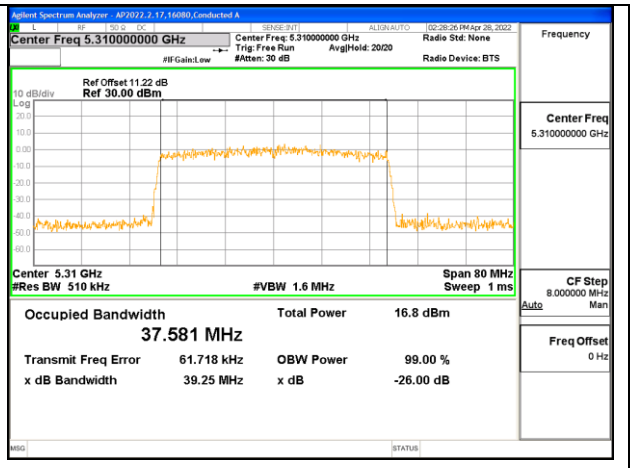


LOW CHANNEL Antenna 4

HIGH CHANNEL



HIGH CHANNEL Antenna 2



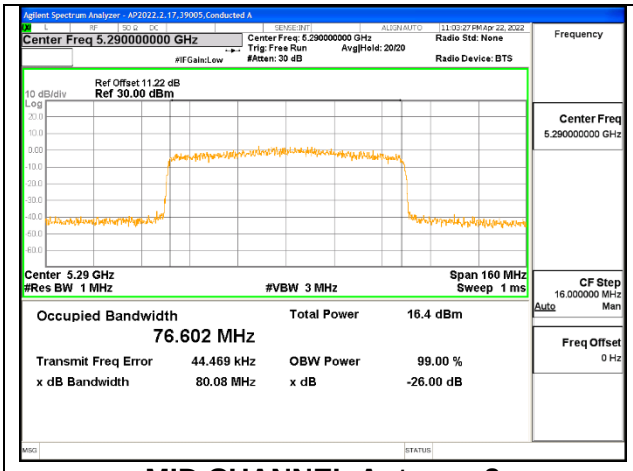
HIGH CHANNEL Antenna 4

9.3.6. **802.11ax HE80 MODE 2TX IN THE 5.3GHz BAND**

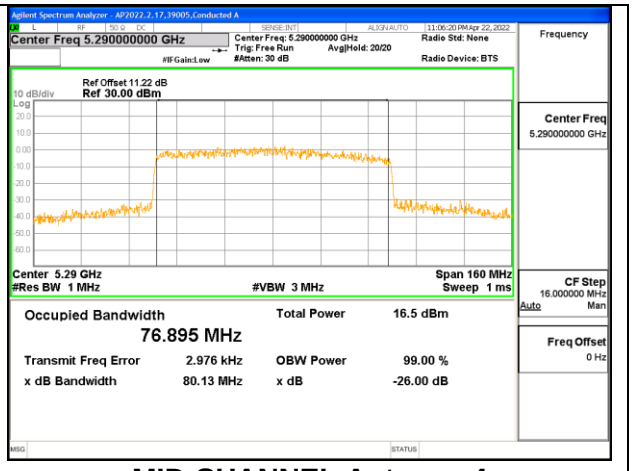
2TX Antenna 2 + Antenna 4 CDD OFDMA MODE: 996-Tones, RU Index 67

Channel	Frequency (MHz)	99% Bandwidth Antenna 2 (MHz)	99% Bandwidth Antenna 4 (MHz)
Mid	5290	76.602	76.895

MID CHANNEL



MID CHANNEL Antenna 2



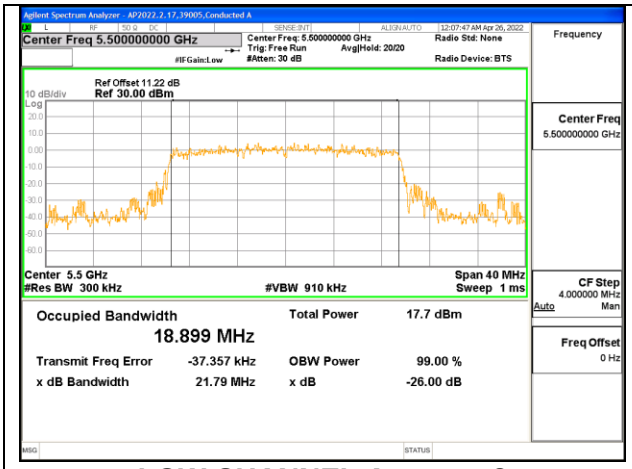
MID CHANNEL Antenna 4

9.3.7. **802.11ax HE20 MODE 2TX IN THE 5.6GHz BAND**

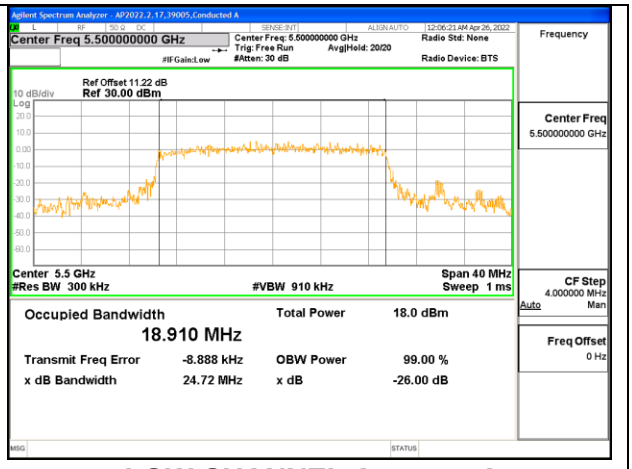
2TX Antenna 2 + Antenna 4 CDD OFDMA MODE: 242-Tones, RU Index 61

Channel	Frequency (MHz)	99% Bandwidth Antenna 2 (MHz)	99% Bandwidth Antenna 4 (MHz)
Low	5500	18.899	18.910
Mid	5580	18.920	18.933
High	5700	18.907	18.941

LOW CHANNEL

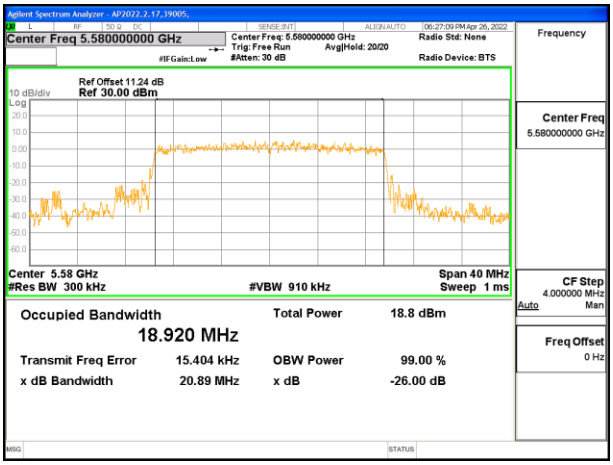


LOW CHANNEL Antenna 2

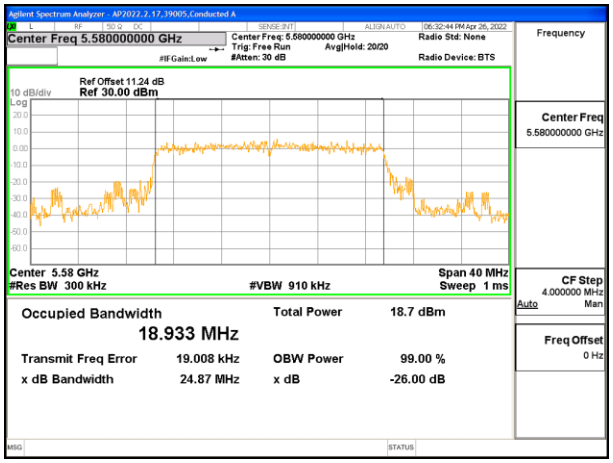


LOW CHANNEL Antenna 4

MID CHANNEL

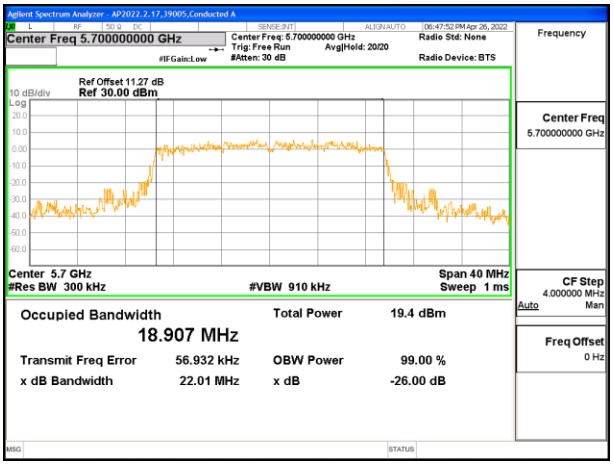


MID CHANNEL Antenna 2

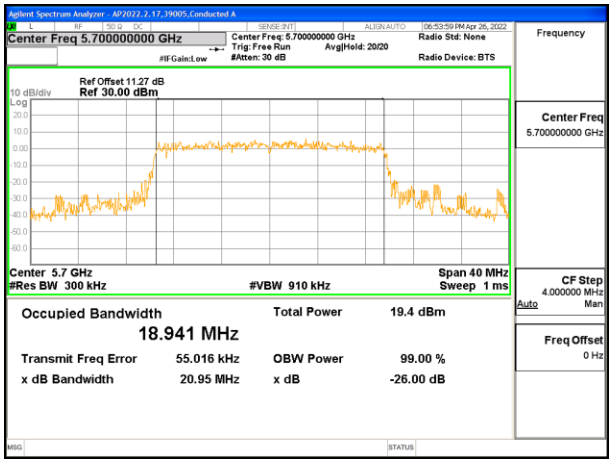


MID CHANNEL Antenna 4

HIGH CHANNEL



HIGH CHANNEL Antenna 2



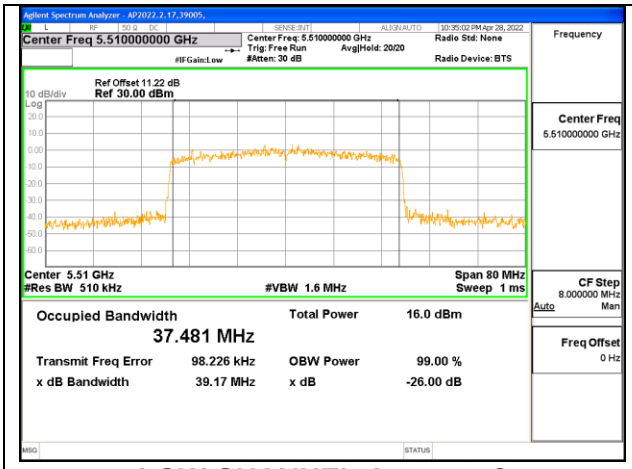
HIGH CHANNEL Antenna 4

9.3.8. **802.11ax HE40 MODE 2TX IN THE 5.6GHz BAND**

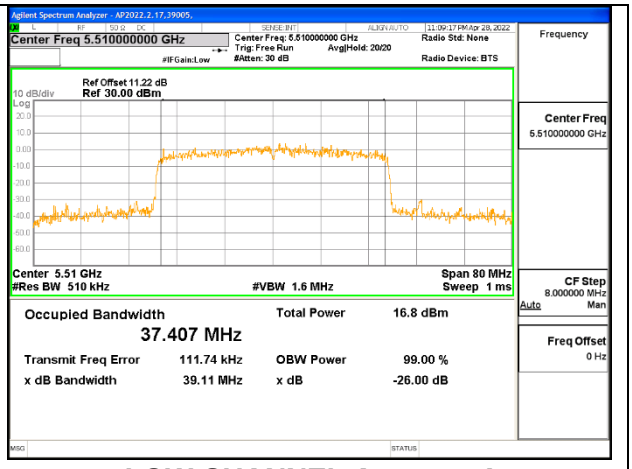
2TX Antenna 2 + Antenna 4 CDD OFDMA MODE: 484-Tones, RU Index 65

Channel	Frequency (MHz)	99% Bandwidth Antenna 2 (MHz)	99% Bandwidth Antenna 4 (MHz)
Low	5510	37.481	37.407
Mid	5550	37.520	37.562
High	5670	37.398	37.877

LOW CHANNEL

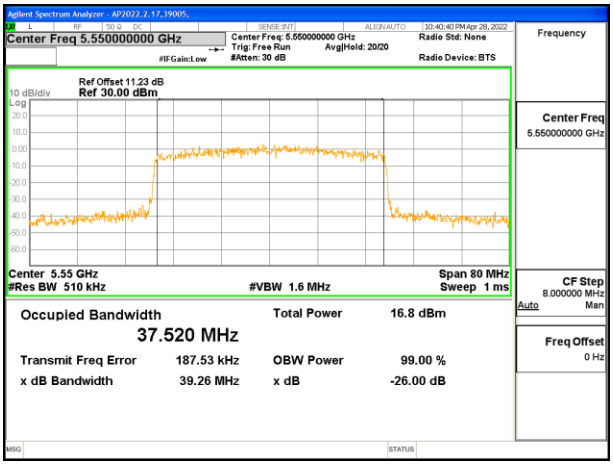


LOW CHANNEL Antenna 2

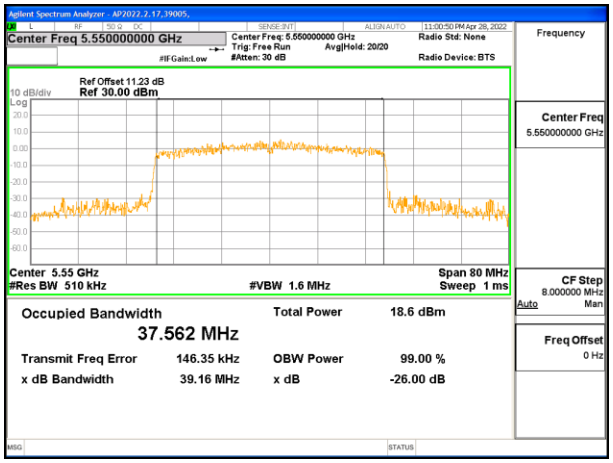


LOW CHANNEL Antenna 4

MID CHANNEL

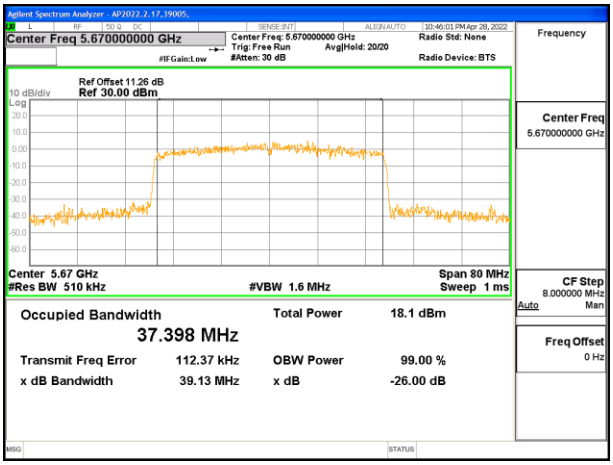


MID CHANNEL Antenna 2

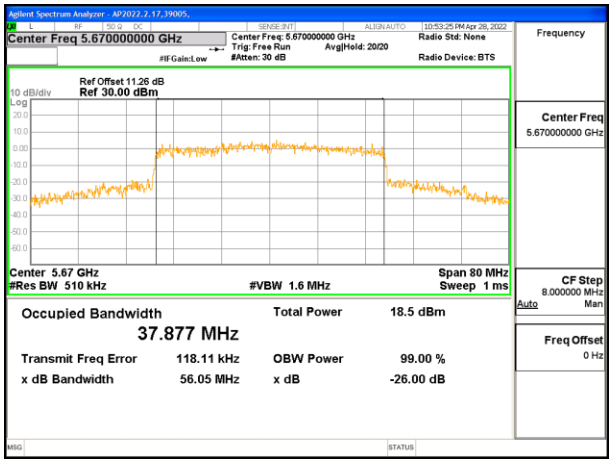


MID CHANNEL Antenna 4

HIGH CHANNEL



HIGH CHANNEL Antenna 2



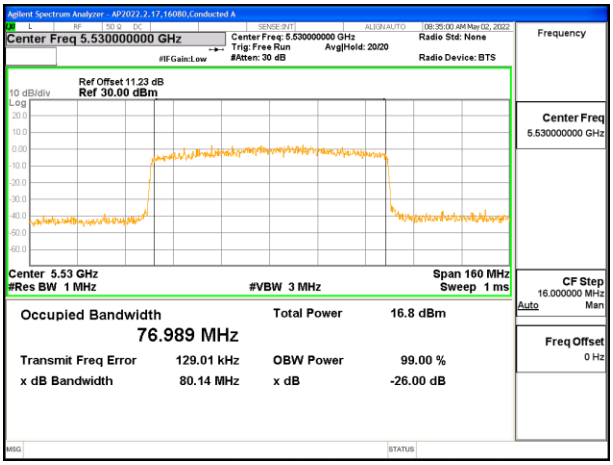
HIGH CHANNEL Antenna 4

9.3.9. **802.11ax HE80 MODE 2TX IN THE 5.6GHz BAND**

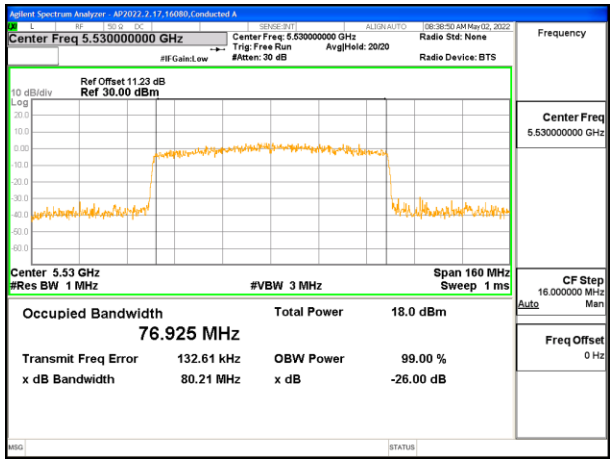
2TX Antenna 2 + Antenna 4 CDD OFDMA MODE: 996-Tones, RU Index 67

Channel	Frequency (MHz)	99% Bandwidth Antenna 2 (MHz)	99% Bandwidth Antenna 4 (MHz)
Low	5530	76.989	76.925
High	5610	76.806	76.978

LOW CHANNEL

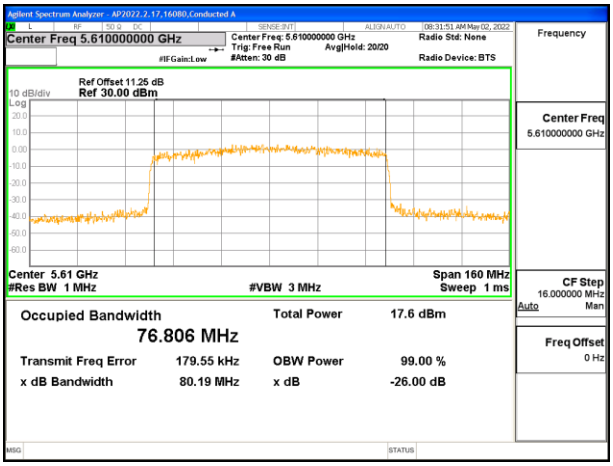


LOW CHANNEL Antenna 2

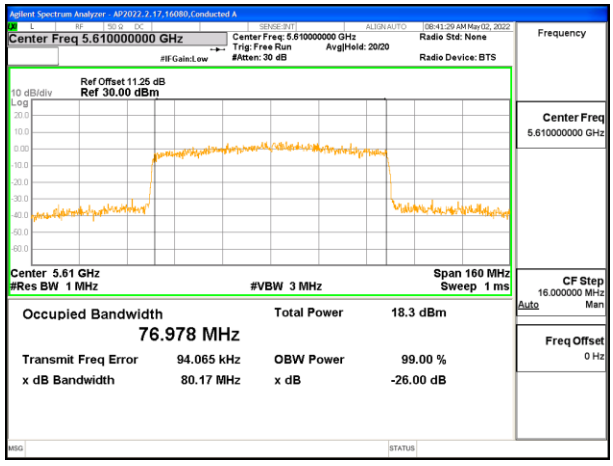


LOW CHANNEL Antenna 4

HIGH CHANNEL



HIGH CHANNEL Antenna 2



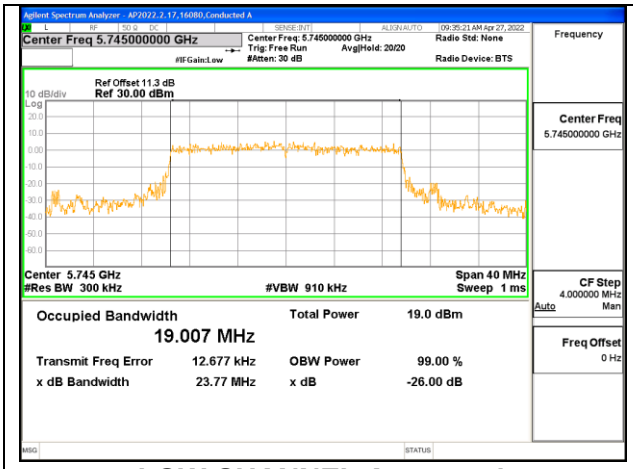
HIGH CHANNEL Antenna 4

9.3.10. 802.11ax HE20 MODE 2TX IN THE 5.8GHz BAND

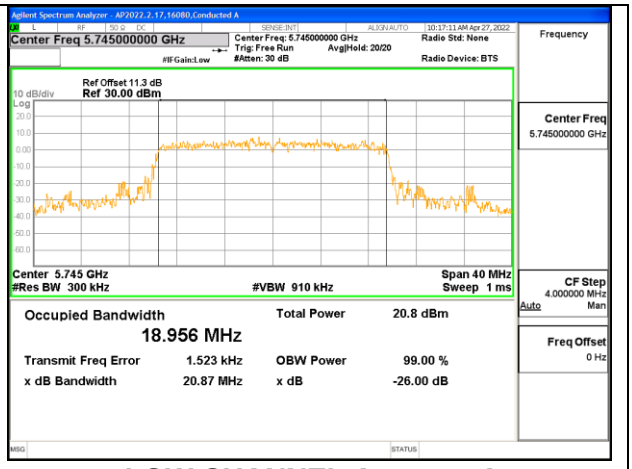
2TX Antenna 1 + Antenna 4 CDD OFDMA MODE: 242-Tones, RU Index 61

Channel	Frequency (MHz)	99% Bandwidth Antenna 1 (MHz)	99% Bandwidth Antenna 4 (MHz)
Low	5745	19.007	18.956
Mid	5785	18.989	18.927
High	5825	18.900	18.905

LOW CHANNEL

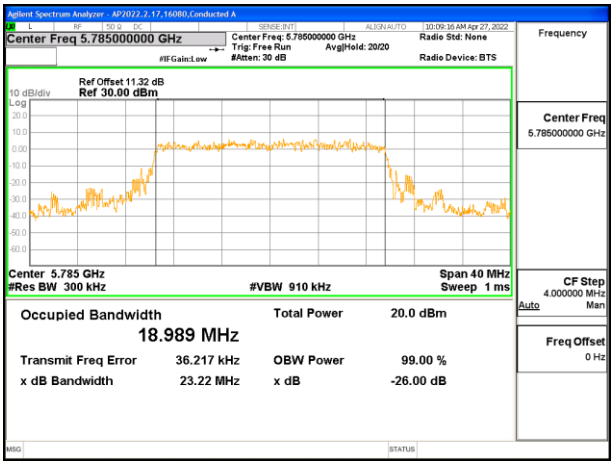


LOW CHANNEL Antenna 1

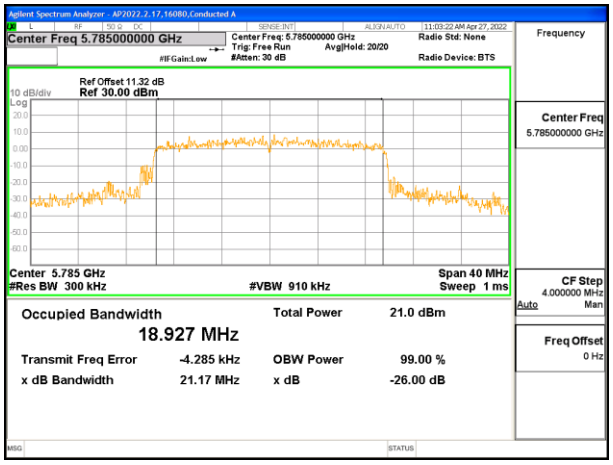


LOW CHANNEL Antenna 4

MID CHANNEL

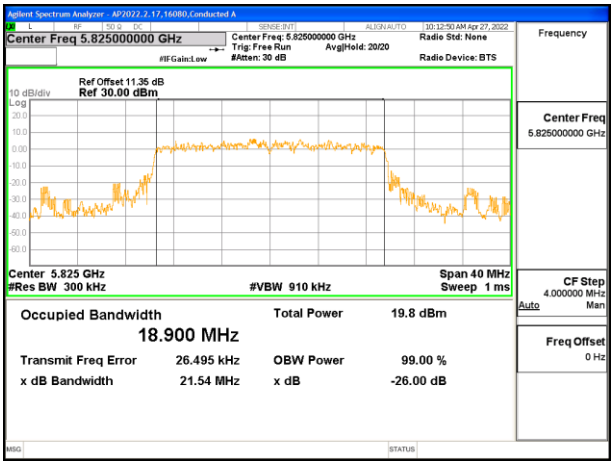


MID CHANNEL Antenna 1

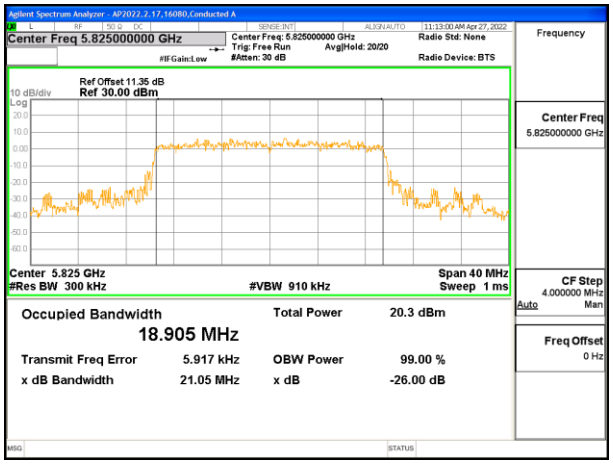


MID CHANNEL Antenna 4

HIGH CHANNEL



HIGH CHANNEL Antenna 1



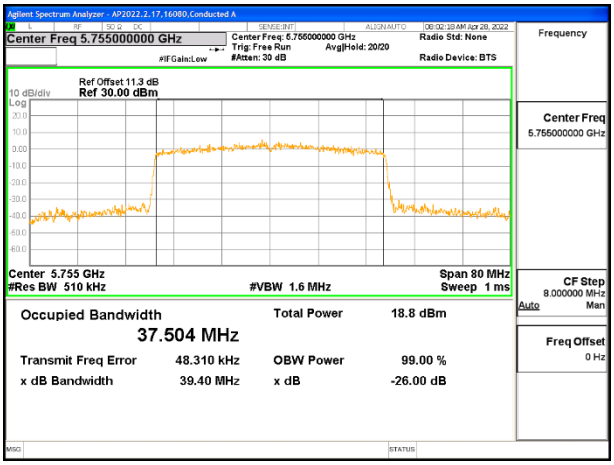
HIGH CHANNEL Antenna 4

9.3.11. 802.11ax HE40 MODE 2TX IN THE 5.8GHz BAND

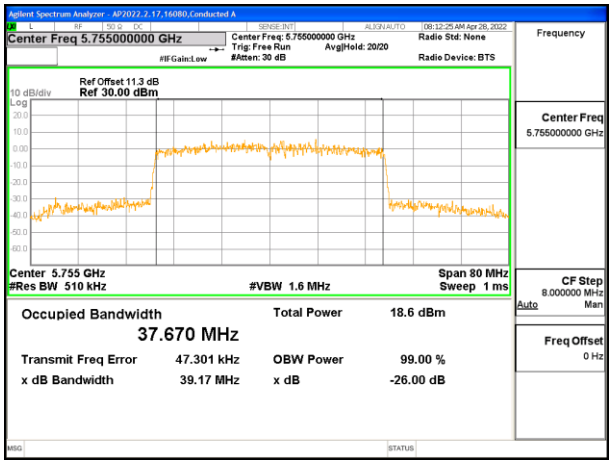
2TX Antenna 1 + Antenna 4 CDD OFDMA MODE: 484-Tones, RU Index 65

Channel	Frequency (MHz)	99% Bandwidth Antenna 1 (MHz)	99% Bandwidth Antenna 4 (MHz)
Low	5755	37.504	37.670
High	5795	37.583	37.373

LOW CHANNEL

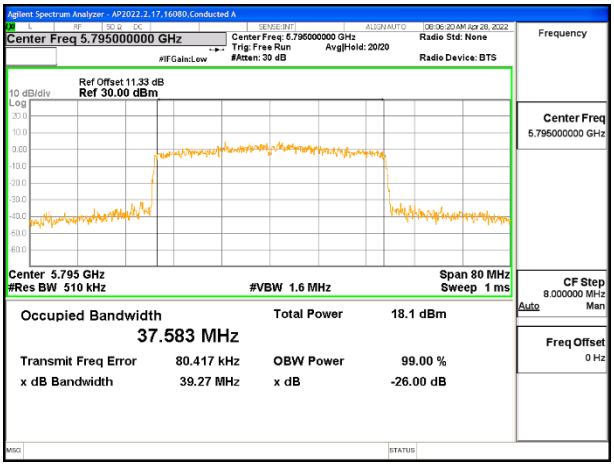


LOW CHANNEL Antenna 1

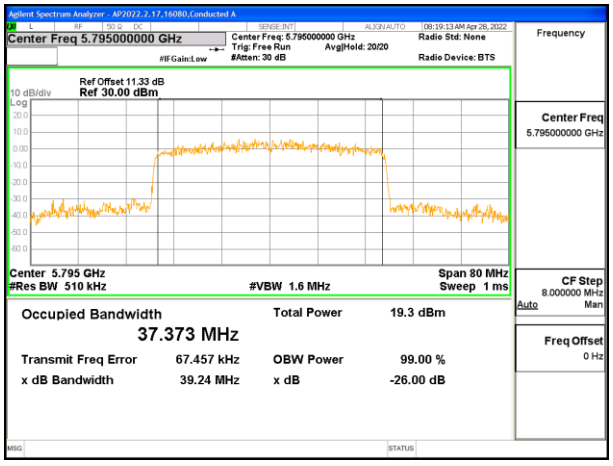


LOW CHANNEL Antenna 4

HIGH CHANNEL



HIGH CHANNEL Antenna 1



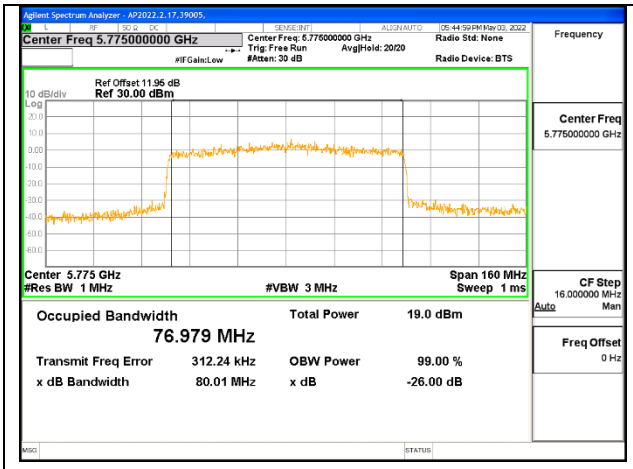
HIGH CHANNEL Antenna 4

9.3.12. 802.11ax HE80 MODE 2TX IN THE 5.8GHz BAND

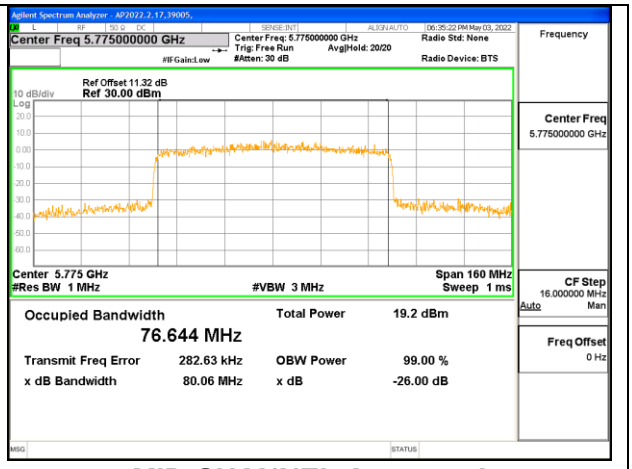
2TX Antenna 1 + Antenna 4 CDD OFDMA MODE: 996-Tones, RU Index 67

Channel	Frequency (MHz)	99% Bandwidth Antenna 1 (MHz)	99% Bandwidth Antenna 4 (MHz)
Mid	5775	76.979	76.644

MID CHANNEL



MID CHANNEL Antenna 1



MID CHANNEL Antenna 4

9.4. 6 dB BANDWIDTH

LIMITS

FCC §15.407 (e)

RSS-247 6.2.4.1

The minimum 6 dB bandwidth shall be at least 500 kHz.

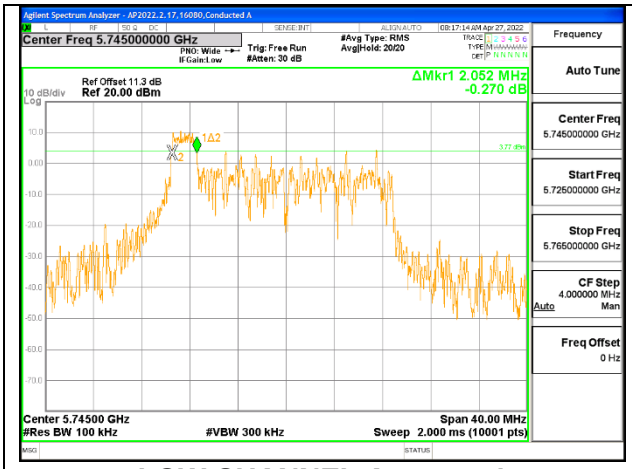
RESULTS

9.4.1. **802.11ax HE20 MODE 2TX IN THE 5.8GHz BAND**

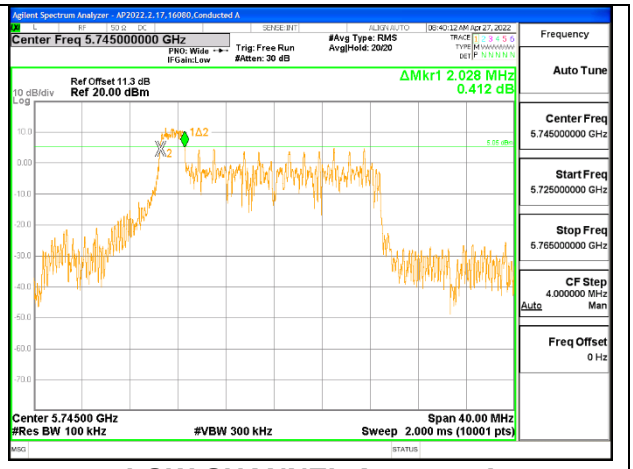
2TX Antenna 1 + Antenna 4 CDD OFDMA MODE: 26-Tones, RU Index 0

Channel	Frequency (MHz)	6 dB BW Antenna 1 (MHz)	6 dB BW Antenna 4 (MHz)	Minimum Limit (MHz)
Low	5745	2.052	2.028	0.5

LOW CHANNEL



LOW CHANNEL Antenna 1

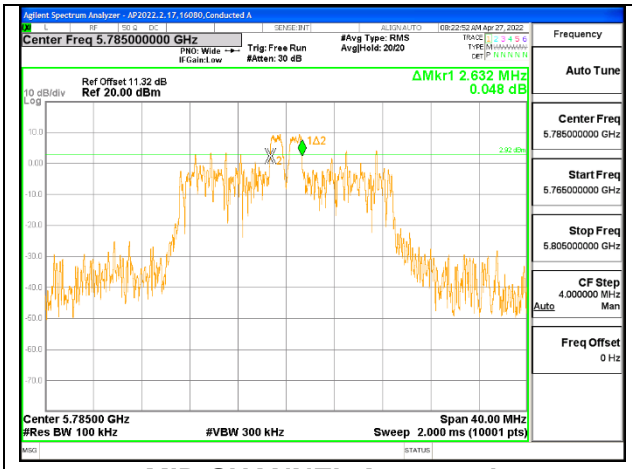


LOW CHANNEL Antenna 4

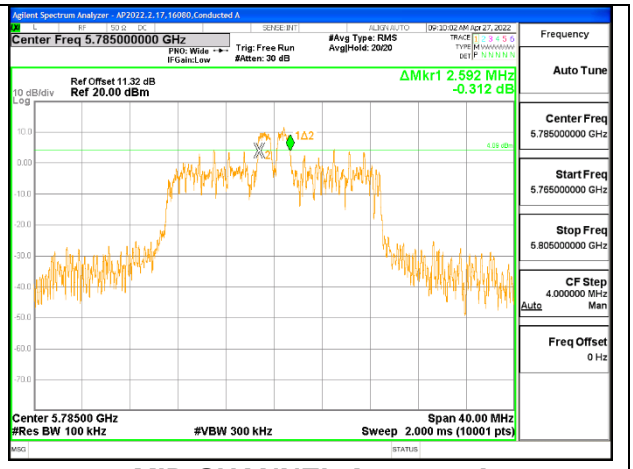
2TX Antenna 1 + Antenna 4 CDD OFDMA MODE: 26-Tones, RU Index 4

Channel	Frequency (MHz)	6 dB BW Antenna 1 (MHz)	6 dB BW Antenna 4 (MHz)	Minimum Limit (MHz)
Mid	5785	2.632	2.592	0.5

MID CHANNEL



MID CHANNEL Antenna 1

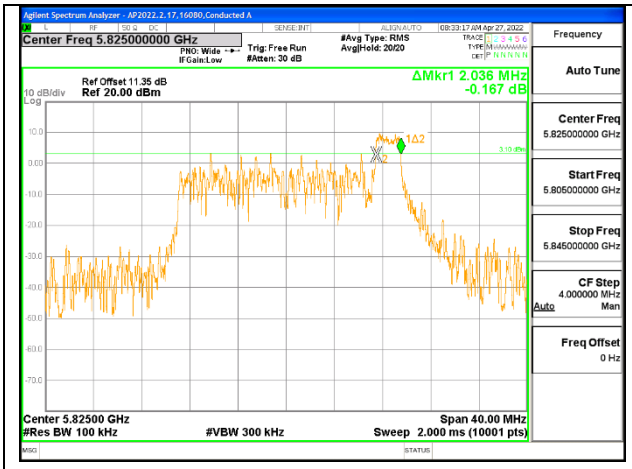


MID CHANNEL Antenna 4

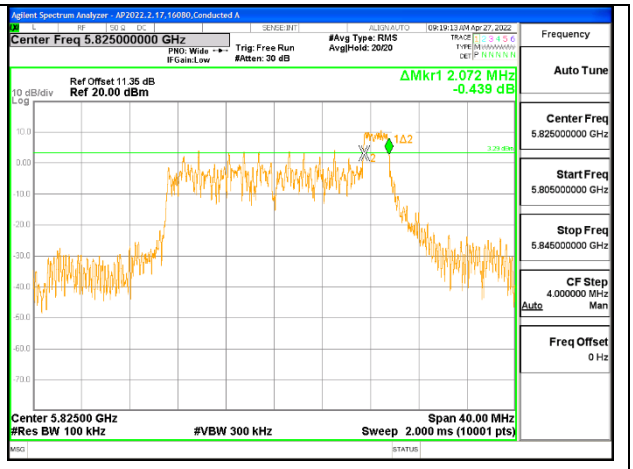
2TX Antenna 1 + Antenna 4 CDD OFDMA MODE: 26-Tones, RU Index 8

Channel	Frequency (MHz)	6 dB BW Antenna 1 (MHz)	6 dB BW Antenna 4 (MHz)	Minimum Limit (MHz)
High	5825	2.036	2.072	0.5

HIGH CHANNEL



HIGH CHANNEL Antenna 1

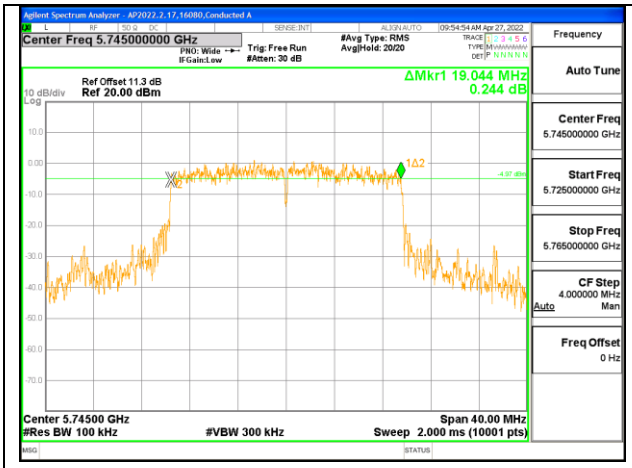


HIGH CHANNEL Antenna 4

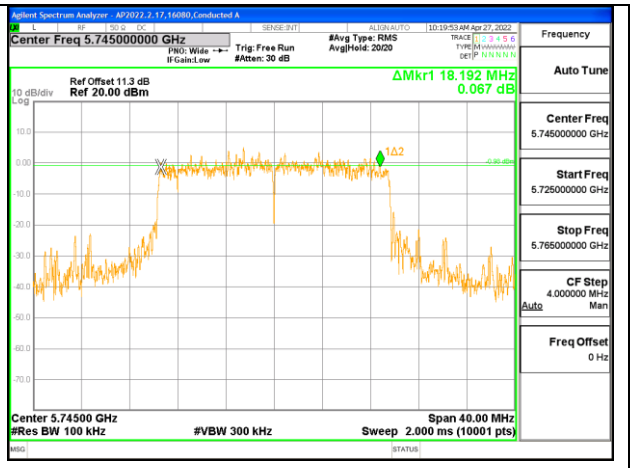
2TX Antenna 1 + Antenna 4 CDD OFDMA MODE: 242-Tones, RU Index 61

Channel	Frequency (MHz)	6 dB BW Antenna 1 (MHz)	6 dB BW Antenna 4 (MHz)	Minimum Limit (MHz)
Low	5745	19.044	18.192	0.5
Mid	5785	18.324	18.884	0.5
High	5825	18.300	18.180	0.5

LOW CHANNEL

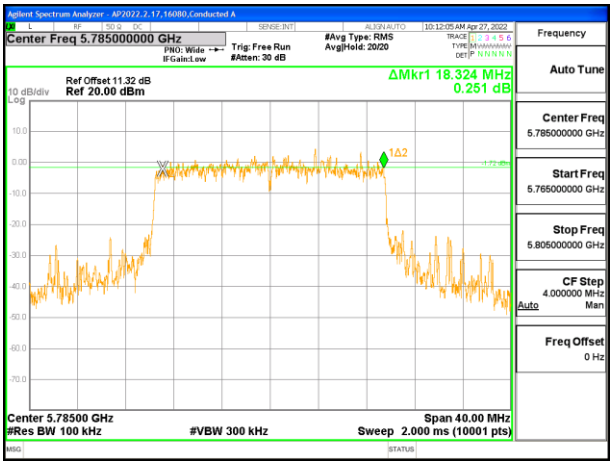


LOW CHANNEL Antenna 1

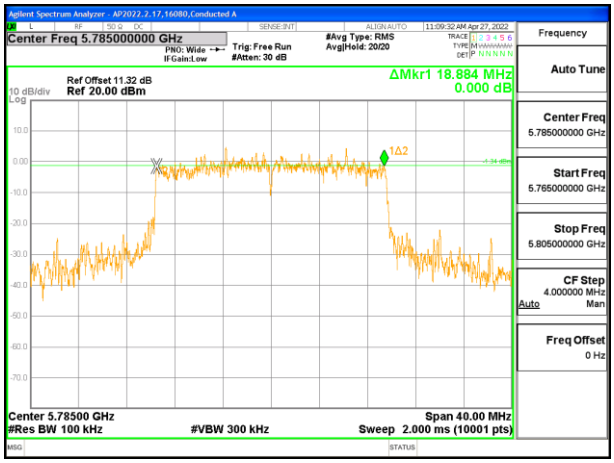


LOW CHANNEL Antenna 4

MID CHANNEL

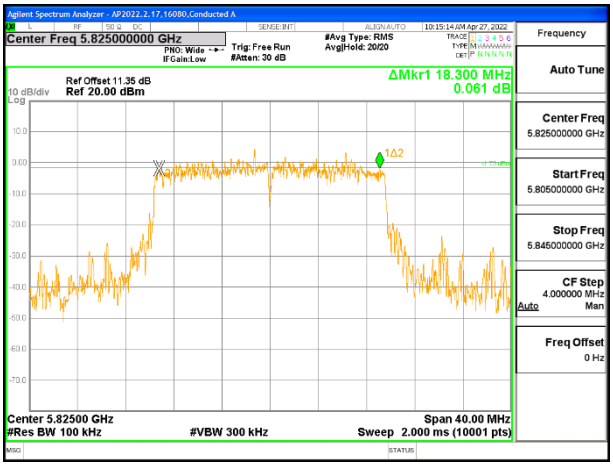


MID CHANNEL Antenna 1

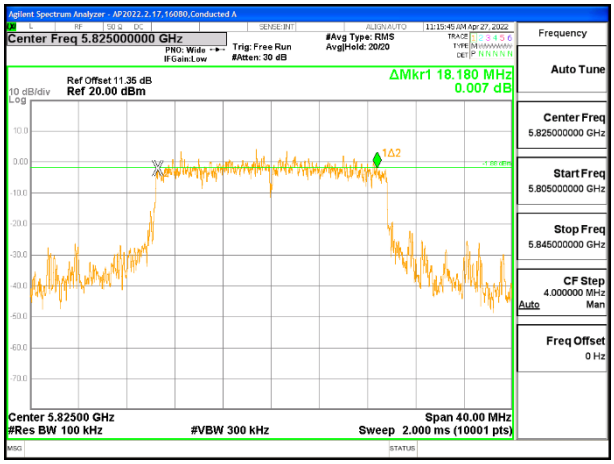


MID CHANNEL Antenna 4

HIGH CHANNEL



HIGH CHANNEL Antenna 1



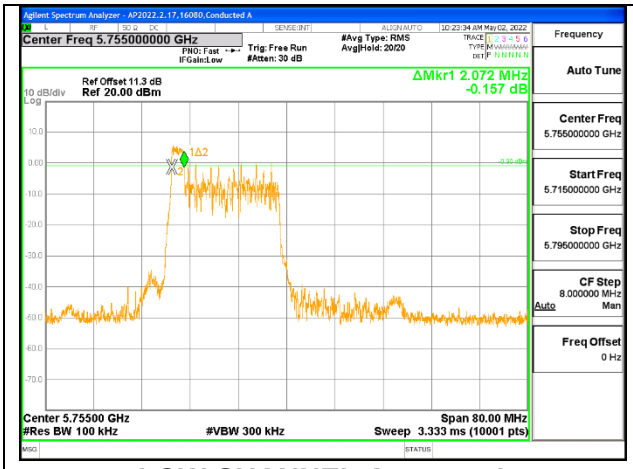
HIGH CHANNEL Antenna 4

9.4.2. **802.11ax HE40 MODE 2TX IN THE 5.8GHz BAND**

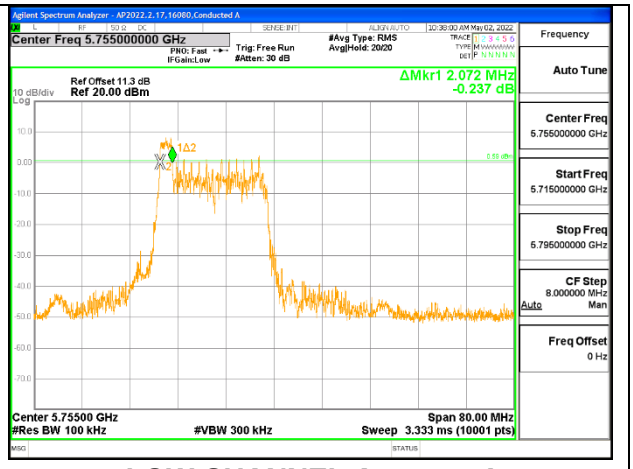
2TX Antenna 1 + Antenna 4 CDD OFDMA MODE: 26-Tones, RU Index 0

Channel	Frequency (MHz)	6 dB BW Antenna 1 (MHz)	6 dB BW Antenna 4 (MHz)	Minimum Limit (MHz)
Low	5755	2.072	2.072	0.5

LOW CHANNEL



LOW CHANNEL Antenna 1

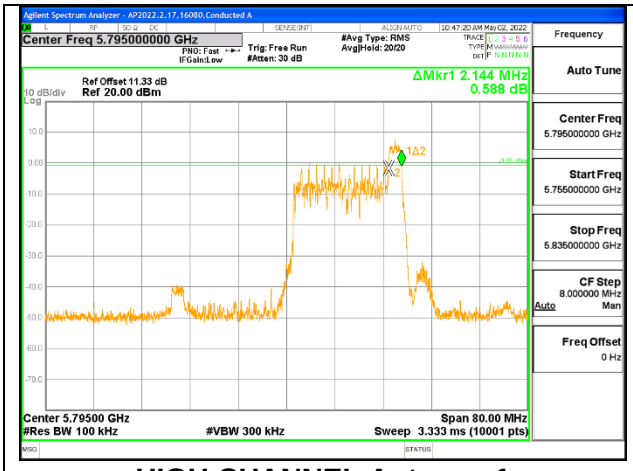


LOW CHANNEL Antenna 4

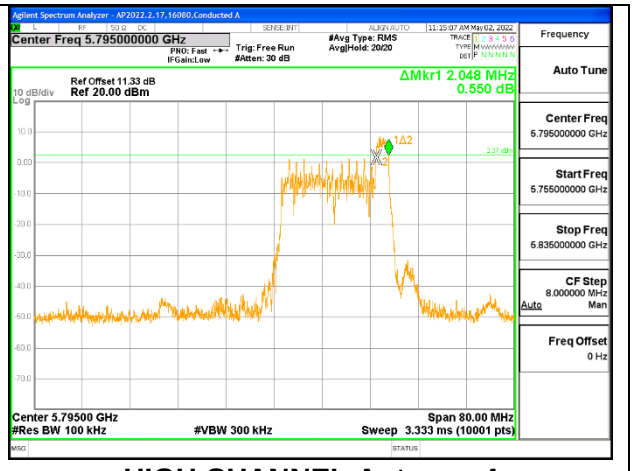
2TX Antenna 1 + Antenna 4 CDD OFDMA MODE: 26-Tones, RU Index 17

Channel	Frequency (MHz)	6 dB BW Antenna 1 (MHz)	6 dB BW Antenna 4 (MHz)	Minimum Limit (MHz)
High	5795	2.144	2.048	0.5

HIGH CHANNEL



HIGH CHANNEL Antenna 1

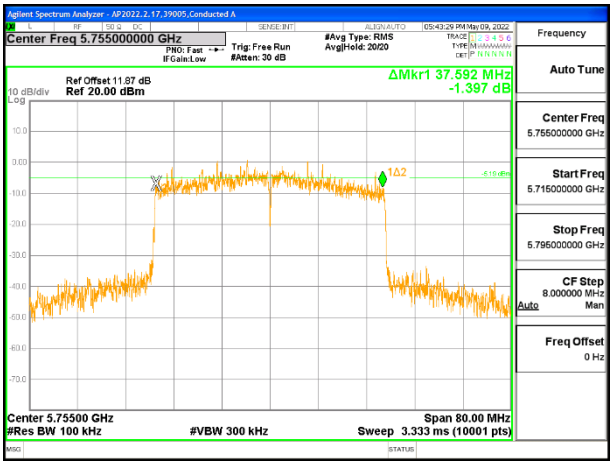


HIGH CHANNEL Antenna 4

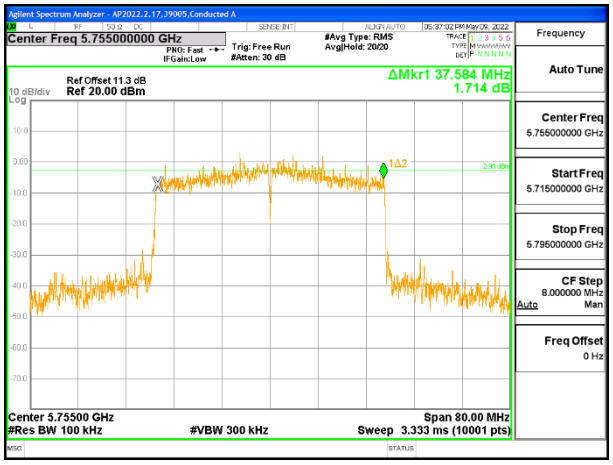
2TX Antenna 1 + Antenna 4 CDD OFDMA MODE: 484-Tones, RU Index 65

Channel	Frequency (MHz)	6 dB BW Antenna 1 (MHz)	6 dB BW Antenna 4 (MHz)	Minimum Limit (MHz)
Low	5755	37.592	37.584	0.5
High	5795	37.824	37.720	0.5

LOW CHANNEL

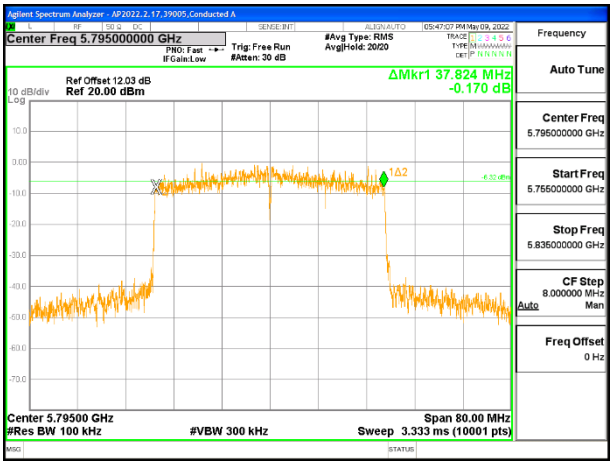


LOW CHANNEL Antenna 1

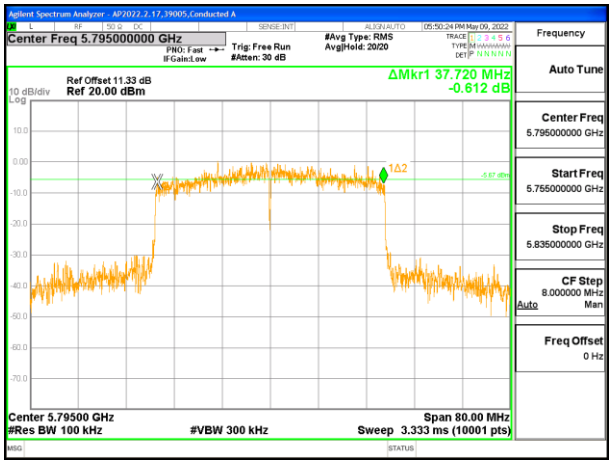


LOW CHANNEL Antenna 4

HIGH CHANNEL



HIGH CHANNEL Antenna 1



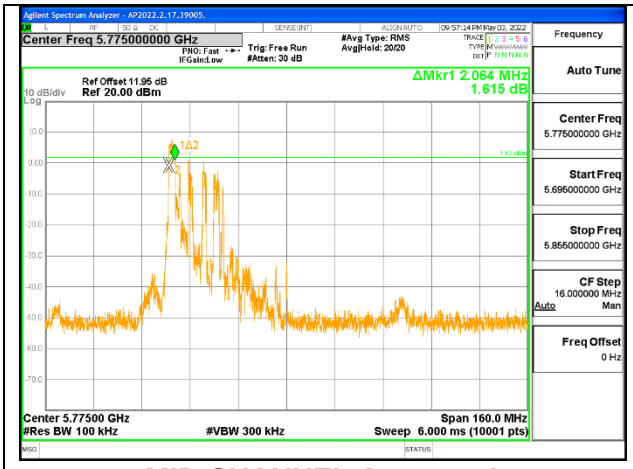
HIGH CHANNEL Antenna 4

9.4.3. **802.11ax HE80 MODE 2TX IN THE 5.8GHz BAND**

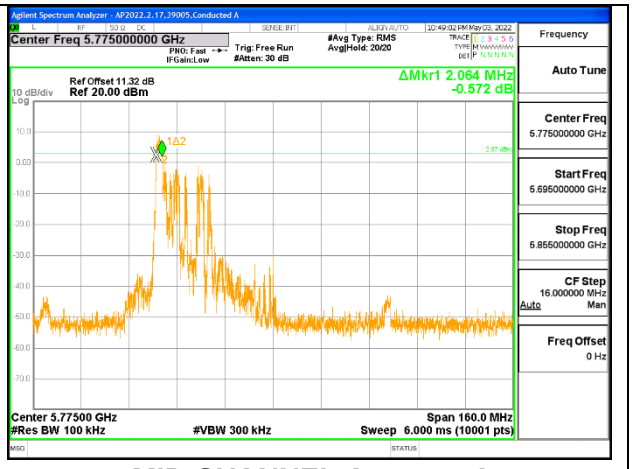
2TX Antenna 1 + Antenna 4 CDD OFDMA MODE: 26-Tones, RU Index 0

Channel	Frequency (MHz)	6 dB BW Antenna 1 (MHz)	6 dB BW Antenna 4 (MHz)	Minimum Limit (MHz)
Mid	5775	2.064	2.064	0.5

MID CHANNEL



MID CHANNEL Antenna 1

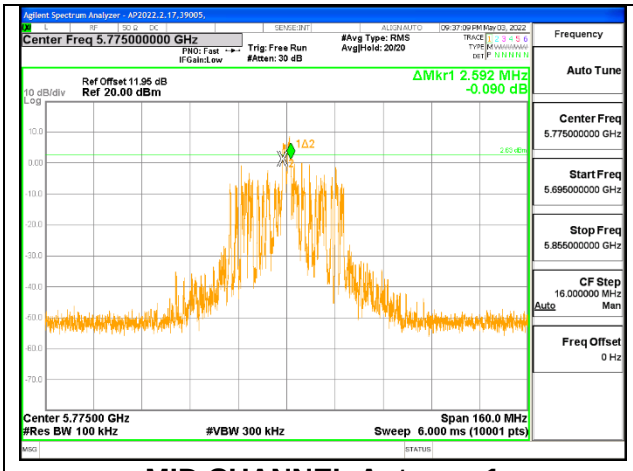


MID CHANNEL Antenna 4

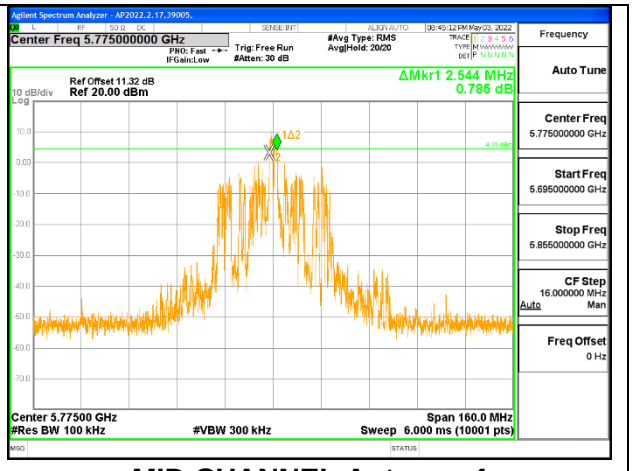
2TX Antenna 1 + Antenna 4 CDD OFDMA MODE: 26-Tones, RU Index 18

Channel	Frequency (MHz)	6 dB BW Antenna 1 (MHz)	6 dB BW Antenna 4 (MHz)	Minimum Limit (MHz)
Mid	5775	2.592	2.544	0.5

MID CHANNEL



MID CHANNEL Antenna 1

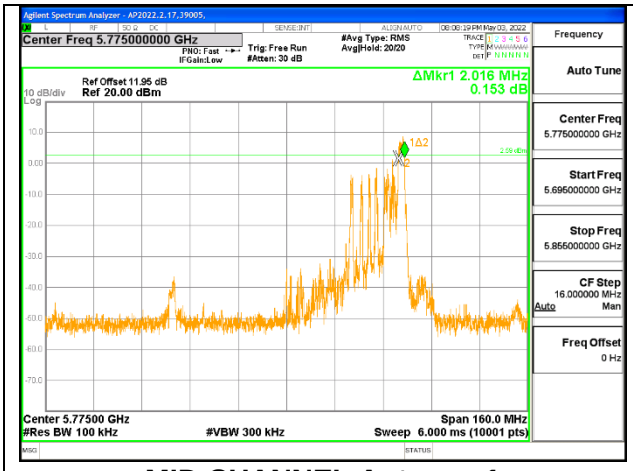


MID CHANNEL Antenna 4

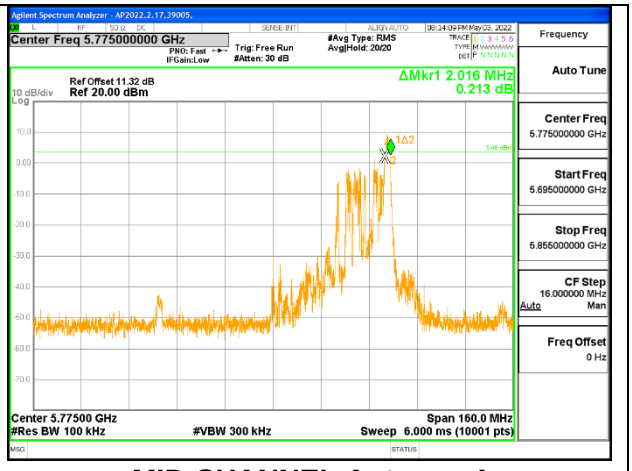
2TX Antenna 1 + Antenna 4 CDD OFDMA MODE: 26-Tones, RU Index 36

Channel	Frequency (MHz)	6 dB BW Antenna 1 (MHz)	6 dB BW Antenna 4 (MHz)	Minimum Limit (MHz)
Mid	5775	2.016	2.016	0.5

MID CHANNEL



MID CHANNEL Antenna 1

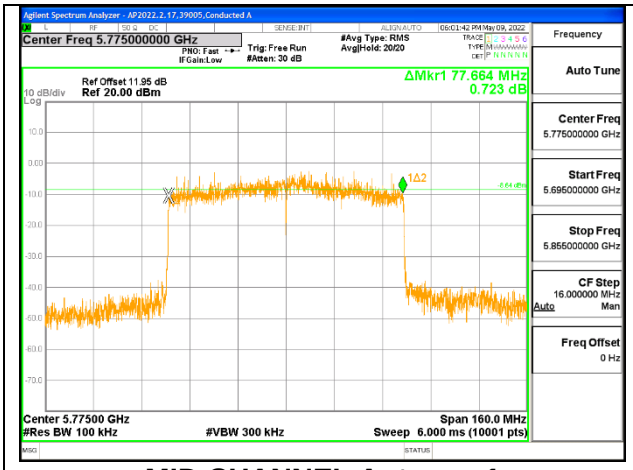


MID CHANNEL Antenna 4

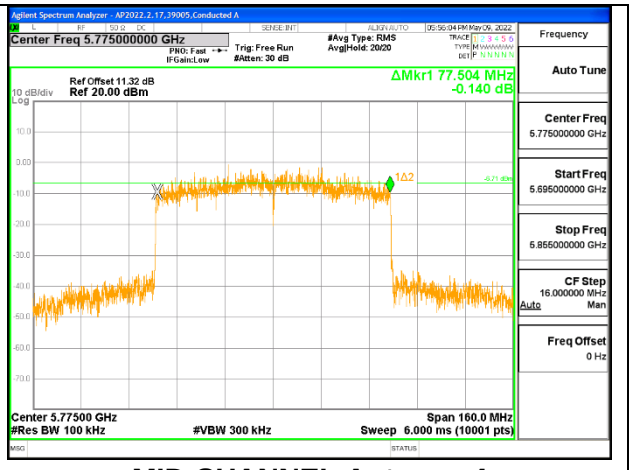
2TX Antenna 1 + Antenna 4 CDD OFDMA MODE: 996-Tones, RU Index 67

Channel	Frequency (MHz)	6 dB BW Antenna 1 (MHz)	6 dB BW Antenna 4 (MHz)	Minimum Limit (MHz)
Mid	5775	77.664	77.504	0.5

MID CHANNEL



MID CHANNEL Antenna 1



MID CHANNEL Antenna 4

9.5. OUTPUT POWER AND PSD

LIMITS

FCC §15.407

Band 5.15–5.25 GHz

(iv) For mobile and portable client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

Bands 5.25-5.35 GHz and 5.47-5.725 GHz

The maximum conducted output power over the frequency bands 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 megahertz. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

Band 5.725-5.85 GHz

The maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information.

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Band 5.15-5.25 GHz

The maximum e.i.r.p. shall not exceed 200 mW or 10 + 10 log10B, dBm, whichever power is less. B is the 99% emission bandwidth in megahertz. The e.i.r.p. spectral density shall not exceed 10 dBm in any 1.0 MHz band.

Band 5.25-5.35 GHz

The maximum conducted output power shall not exceed 250 mW or 11 + 10 log10B, dBm, whichever is less. The power spectral density shall not exceed 11 dBm in any 1.0 MHz band.

The maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 log10B, dBm, whichever is less. B is the 99% emission bandwidth in megahertz. Note that devices with a maximum e.i.r.p. greater than 500 mW shall implement TPC in order to have the capability to operate at least 6 dB beLOW CHANNEL the maximum permitted e.i.r.p. of 1 W.

Bands 5.47-5.6 GHz and 5.65-5.725 GHz

The maximum conducted output power shall not exceed 250 mW or 11 + 10 log10B, dBm, whichever is less. The power spectral density shall not exceed 11 dBm in any 1.0 MHz band.

The maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 log10B, dBm, whichever is less. B is the 99% emission bandwidth in megahertz. Note that devices with a maximum e.i.r.p. greater than 500 mW shall implement TPC in order to have the capability to operate at least 6 dB beLOW CHANNEL the maximum permitted e.i.r.p. of 1 W.

Band 5.725-5.85 GHz

The maximum conducted output power shall not exceed 1 W. The power spectral density shall not exceed 30 dBm in any 500 kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications and multiple collocated transmitters transmitting the same information.

TEST PROCEDURE

The measurement method used for output power is KDB 789033 D02 v02r01, Section E.3.b (Method PM-G) was used.

The measurement method used for power spectral density is KDB 789033 D02 v02r01, Section F

The power output was measured on the EUT antenna port using SMA cable with 10dB attenuator connected to a power meter via wideband average power sensor. Gated average output power was read directly from power meter.

DIRECTIONAL ANTENNA GAIN

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:

Antenna 1 and Antenna 3:

Band (GHz)	Chain 0 Antenna 1 Gain (dBi)	Chain 1 Antenna 3 Gain (dBi)	Uncorrelated Chains Directional Gain (dBi)	Correlated Chains Directional Gain (dBi)
5.2	4.1	4.8	4.46	7.47
5.3	3.5	4.7	4.14	7.13
5.6	4.4	5.1	4.76	7.77
5.8	4.8	4.4	4.60	7.61

Antenna 1 and Antenna 4 (wort-case correlation directional gain in **bold):**

Band (GHz)	Chain 0 Antenna 1 Gain (dBi)	Chain 1 Antenna 4 Gain (dBi)	Uncorrelated Chains Directional Gain (dBi)	Correlated Chains Directional Gain (dBi)
5.2	4.1	4.9	4.52	7.52
5.3	3.5	5.6	4.68	7.62
5.6	4.4	6.2	5.39	8.36
5.8	**4.8**	**5.7**	**5.27**	**8.27**

Antenna 2 and Antenna 3:

Band (GHz)	Chain 0 Antenna 2 Gain (dBi)	Chain 1 Antenna 3 Gain (dBi)	Uncorrelated Chains Directional Gain (dBi)	Correlated Chains Directional Gain (dBi)
5.2	4.3	4.8	4.56	7.56
5.3	4.9	4.7	4.80	7.81
5.6	4.7	5.1	4.90	7.91
5.8	4.6	4.4	4.50	7.51

Antenna 2 and Antenna 4 (wort-case correlation directional gain in **bold):**

Band (GHz)	Chain 0 Antenna 2 Gain (dBi)	Chain 1 Antenna 4 Gain (dBi)	Uncorrelated Chains Directional Gain (dBi)	Correlated Chains Directional Gain (dBi)
5.2	**4.3**	**4.9**	**4.61**	**7.62**
5.3	**4.9**	**5.6**	**5.26**	**8.27**
5.6	**4.7**	**6.2**	**5.51**	**8.49**
5.8	4.6	5.7	5.18	8.18

Directional Gain value was determined using the following formula:

Uncorrelated Directional Gain dBi = 10 log [(10^(Ant 1/10) + 10^(Ant 2/10)/2]

Correlated Directional Gain dBi = 10 log [(10^ (Ant 1/20) + 10^ (Ant 2/20)^2)/2]

Uncorrelated Directional Gain sample calculation:

4.61dBi = 10 log [(10^(4.310) + 10^(4.9/10)/2]

Correlated Directional Gain sample calculation:

7.62 dBi = 10 log [(10^(4.3/20) + 10^ (4.9/20)^2)/2]

RESULTS

9.5.1. 802.11ax HE20 MODE 2TX IN THE 5.2GHz BAND (FCC)

2TX Antenna 2 + Antenna 4 CDD OFDMA MODE: 26-Tones, RU Index 0

Test Engineer:	RA39005 and ZS160880
Test Date:	4/25/2022 to 4/29/2022

Antenna Gain and Limits

Channel	Frequency (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)	Power Limit (dBm)	PSD Limit (dBm/1MHz)
Low	5180	4.61	7.62	24.00	9.38

Duty Cycle CF (dB)	2.02	**Included in Calculations of Corr'd PSD**

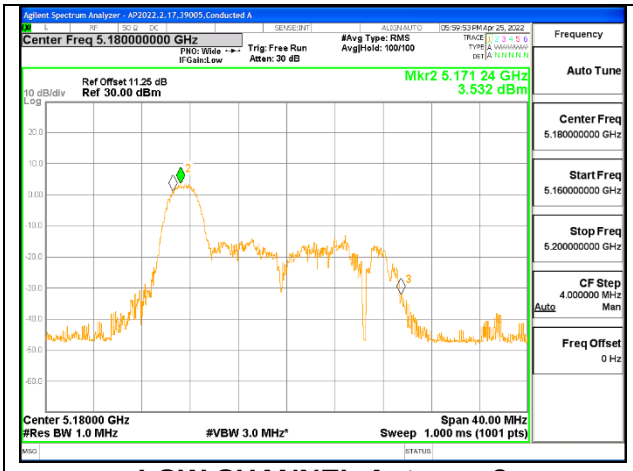
Output Power Results

Channel	Frequency (MHz)	Antenna 2 Meas Power (dBm)	Antenna 4 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5180	8.67	8.53	11.61	24.00	-12.39

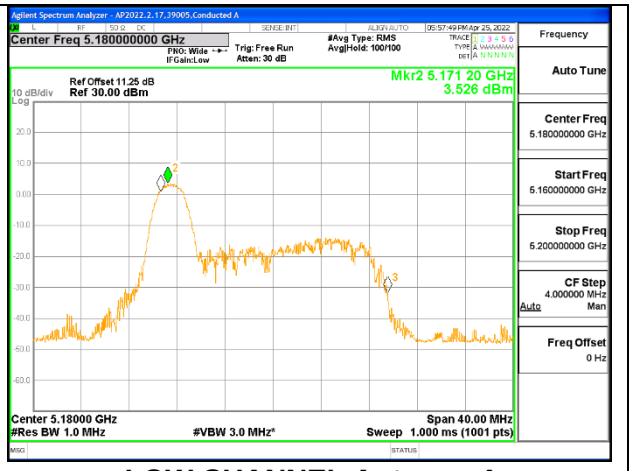
PSD Results

Channel	Frequency (MHz)	Antenna 2 Meas PSD (dBm/1MHz)	Antenna 4 Meas PSD (dBm/1MHz)	Total Corr'd PSD (dBm/1MHz)	PSD Limit (dBm/1MHz)	PSD Margin (dB)
Low	5180	3.532	3.526	8.56	9.38	-0.82

LOW CHANNEL



LOW CHANNEL Antenna 2



LOW CHANNEL Antenna 4

2TX Antenna 2 + Antenna 4 CDD OFDMA MODE: 26-Tones, RU Index 4

Test Engineer:	RA39005 and ZS160880
Test Date:	4/25/2022 to 4/29/2022

Antenna Gain and Limits

Channel	Frequency (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)	Power Limit (dBm)	PSD Limit (dBm/1MHz)
Mid	5200	4.61	7.62	24.00	9.38

Duty Cycle CF (dB)	2.02	**Included in Calculations of Corr'd PSD**

Output Power Results

Channel	Frequency (MHz)	Antenna 2 Meas Power (dBm)	Antenna 4 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Mid	5200	8.87	9.18	12.04	24.00	-11.96

PSD Results

Channel	Frequency (MHz)	Antenna 2 Meas PSD (dBm/1MHz)	Antenna 4 Meas PSD (dBm/1MHz)	Total Corr'd PSD (dBm/1MHz)	PSD Limit (dBm/1MHz)	PSD Margin (dB)
Mid	5200	3.096	3.548	8.36	9.38	-1.02

MID CHANNEL

MID CHANNEL Antenna 2

MID CHANNEL Antenna 4

2TX Antenna 2 + Antenna 4 CDD OFDMA MODE: 26-Tones, RU Index 8

Test Engineer:	RA39005 and ZS160880
Test Date:	4/25/2022 to 4/29/2022

Antenna Gain and Limits

Channel	Frequency (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)	Power Limit (dBm)	PSD Limit (dBm/1MHz)
High	5240	4.61	7.62	24.00	9.38

Duty Cycle CF (dB)	2.02	**Included in Calculations of Corr'd PSD**

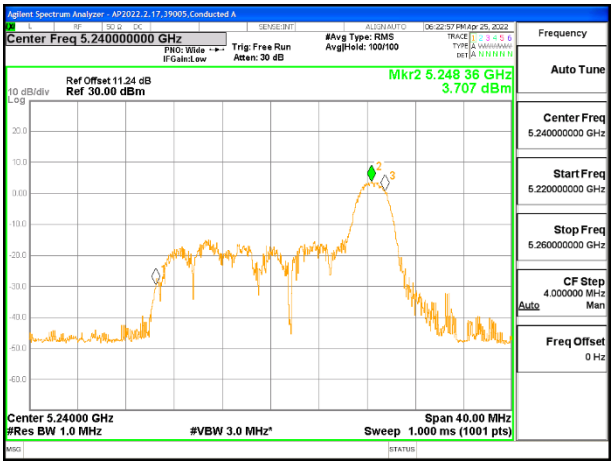
Output Power Results

Channel	Frequency (MHz)	Antenna 2 Meas Power (dBm)	Antenna 4 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
High	5240	9.03	9.31	12.18	24.00	-11.82

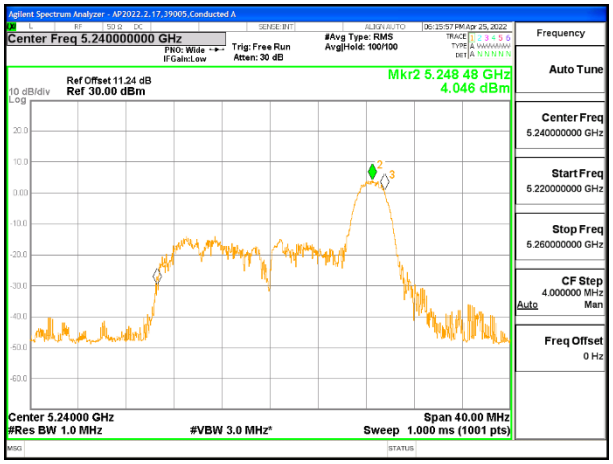
PSD Results

Channel	Frequency (MHz)	Antenna 2 Meas PSD (dBm/1MHz)	Antenna 4 Meas PSD (dBm/1MHz)	Total Corr'd PSD (dBm/1MHz)	PSD Limit (dBm/1MHz)	PSD Margin (dB)
High	5240	3.707	4.046	8.91	9.38	-0.47

HIGH CHANNEL



HIGH CHANNEL Antenna 2



HIGH CHANNEL Antenna 4

2TX Antenna 2 + Antenna 4 CDD OFDMA MODE: 242-Tones, RU Index 61

Test Engineer:	RA39005 and ZS160880
Test Date:	4/20/2022 to 4/29/2022

Antenna Gain and Limits

Channel	Frequency (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)	Power Limit (dBm)	PSD Limit (dBm/1MHz)
Low	5180	4.61	7.62	24.00	9.38
Mid	5200	4.61	7.62	24.00	9.38
High	5240	4.61	7.62	24.00	9.38

Duty Cycle CF (dB)	2.91	**Included in Calculations of Corr'd PSD**

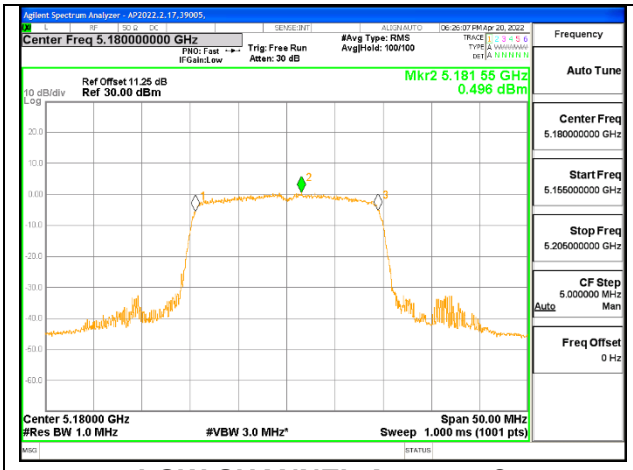
Output Power Results

Channel	Frequency (MHz)	Antenna 2 Meas Power (dBm)	Antenna 4 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5180	15.15	15.75	18.47	24.00	-5.53
Mid	5200	15.20	15.62	18.43	24.00	-5.57
High	5240	15.73	15.91	18.83	24.00	-5.17

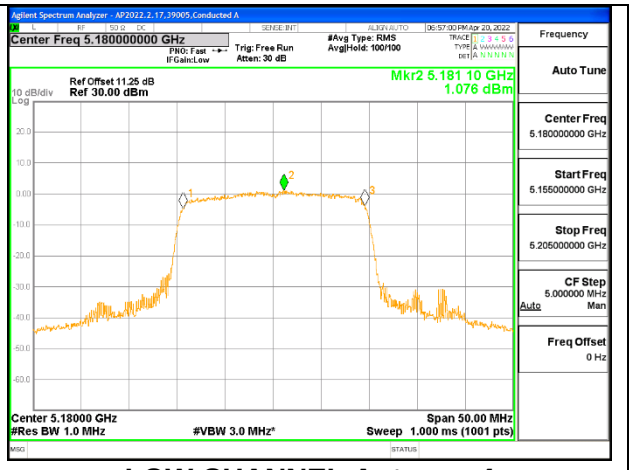
PSD Results

Channel	Frequency (MHz)	Antenna 2 Meas PSD (dBm/1MHz)	Antenna 4 Meas PSD (dBm/1MHz)	Total Corr'd PSD (dBm/1MHz)	PSD Limit (dBm/1MHz)	PSD Margin (dB)
Low	5180	0.496	1.076	6.72	9.38	-2.66
Mid	5200	0.688	0.887	6.71	9.38	-2.67
High	5240	0.632	0.651	6.56	9.38	-2.82

LOW CHANNEL

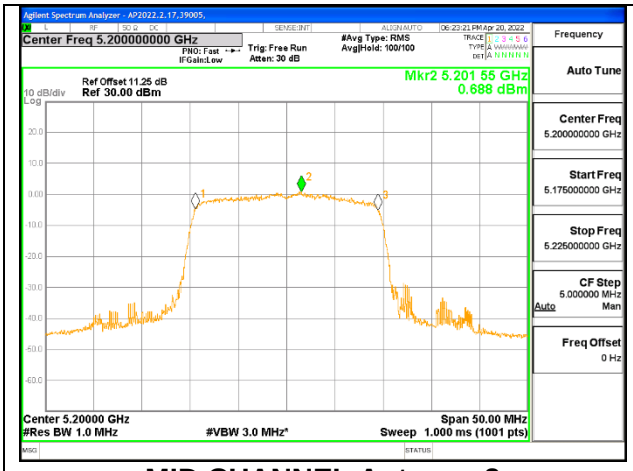


LOW CHANNEL Antenna 2



LOW CHANNEL Antenna 4

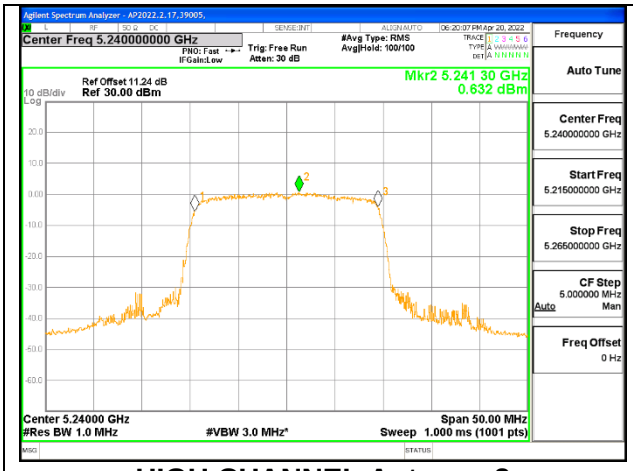
MID CHANNEL



MID CHANNEL Antenna 2

MID CHANNEL Antenna 4

HIGH CHANNEL



HIGH CHANNEL Antenna 2

HIGH CHANNEL Antenna 4