TEST REPORT

Report Number: R14634918-E6a

Applicant	:	Sony Corporation 1-7-1 Konan Minato-ku Tokyo, 108-0075, Japan
FCC ID	:	PY7-12907W
EUT Description	:	GSM/WCDMA/LTE/5G Phone with BT, DTS/UNII a/b/g/n/ac/ax, GPS, WPT & NFC
Test Standard(s)	:	FCC 47 CFR PART 15 SUBPART E

Date Of Issue:
2023-03-16

Prepared by:
UL LLC
12 Laboratory Dr.
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TEL: (919)549-1400

CERT #0751.06

REPORT REVISION HISTORY

Rev.	Issue Date	Revisions	Revised By
V1	2023-02-24	Initial Issue	B. Kiewra
V2	2023-03-08	Corrected typos in Section 3	B. Kiewra
V3	2023-03-16	Added clarification to the 2Tx covering 1Tx note in section 6.5	B. Kiewra

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: Sony Corporation
1-7-1 Konan Minato-ku
Tokyo, 108-0075, Japan

EUT DESCRIPTION: GSM/WCDMA/LTE/5G Phone with BT, DTS/UNII a/b/g/n/ac/ax, GPS, WPT & NFC

SERIAL NUMBER: QV7700E1FN, QV7700FRFN, QV70015FA

SAMPLE RECEIPT DATE: 2022-12-12

DATE TESTED: 2023-01-31 to 2023-02-13

APPLICABLE STANDARDS	
STANDARD	**TEST RESULTS**
CFR 47 Part 15 Subpart E	Refer to Section 2

UL LLC tested the above equipment in accordance with the requirements set forth in the above standards. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. It is the manufacturer's responsibility to assure that additional production units of this model are manufactured with identical electrical and mechanical components. All samples tested were in good operating condition throughout the entire test program. Measurement Uncertainties are published for informational purposes only and were not taken into account unless noted otherwise.

This document may not be altered or revised in any way unless done so by UL LLC and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL LLC will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by a2La, NIST, or any agency of the U.S. government.

Approved & Released
For UL LLC By:

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Consumer, Medical and IT Segment
UL LLC

Prepared By:

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Consumer, Medical and IT Segment
UL LLC

2. TEST RESULT SUMMARY

This report contains data/info provided by the customer which can impact the validity of results. UL LLC is only responsible for the validity of results after the integration of the data provided by the customer.
Below is a list of the data/info provided by the customer:
1) Antenna gain and type (see section 6.3)
2) Worst-case data rates (see section 6.5)

Note - This report pertains to the 802.11a/n/ac mode in the 5.6 GHz band requirements of the EUT.

FCC Clause	Requirement	Result	Comment
See Comment	Duty Cycle	Reporting purposes only	Per ANSI C63.10, Section 12.2.
See Comment	26dB BW		Per ANSI C63.10 Section 6.9.2
15.407 (a) (2), (h) (1)	Output Power	Compliant	None
15.407 (a) (2)	PSD		
15.209, 15.205, 15.407 (b) (3)	Radiated Emissions		
15.207	AC Mains Conducted Emissions	See comment	Results report in UL test report R14634918-E5b.

3. TEST METHODOLOGY

The tests documented in this report were performed in accordance with;
- FCC 47 CFR Part 2
- FCC 47 CFR Part 15,
- FCC KDB 662911 D01 v02r01,
- FCC KDB 789033 D02 v02r01,
- KDB 414788 D01 Radiated Test Site v01r01
- ANSI C63.10-2013

4. FACILITIES AND ACCREDITATION

UL LLC is accredited by A2LA, certification # 0751.06, for all testing performed within the scope of this report. Testing was performed at the locations noted below.

	Address	ISED CABID	ISED Company Number	FCC Registration
☐	Building: 12 Laboratory Dr RTP, NC 27709, U.S.A	US0067	2180C	825374
☒	Building: 2800 Perimeter Park Dr. Suite B Morrisville, NC 27560, U.S.A		27265	

5. DECISION RULES AND MEASUREMENT UNCERTAINTY

5.1. METROLOGICAL TRACEABILITY

All test and measuring equipment utilized to perform the tests documented in this report are calibrated on a regular basis, with a maximum time between calibrations of one year or the manufacturers' recommendation, whichever is less, and where applicable is traceable to recognized national standards.

5.2. DECISION RULES

The Decision Rule is based on Simple Acceptance in accordance with ISO Guide 98-4:2012 Clause 8.2. (Measurement uncertainty is not taken into account when stating conformity with a specified requirement.)

5.3. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

PARAMETER	U_{Lab}
Radio Frequency (Spectrum Analyzer)	141.2 Hz
Occupied Channel Bandwidth	1.22%
RF output power, conducted	1.3 dB (PK) 0.45 dB (AV)
Power Spectral Density, conducted	2.47 dB
Unwanted Emissions, conducted	1.94 dB
All emissions, radiated	6.01 dB

Uncertainty figures are valid to a confidence level of 95%.

5.4. SAMPLE CALCULATION

RADIATED EMISSIONS

Where relevant, the following sample calculation is provided:
Field Strength (dBuV/m) = Measured Voltage (dBuV) + Antenna Factor (dB/m) + Cable Loss (dB) – Preamp Gain (dB)
36.5 dBuV + 18.7 dB/m + 0.6 dB – 26.9 dB = 28.9 dBuV/m

MAINS CONDUCTED EMISSIONS

Where relevant, the following sample calculation is provided:
Final Voltage (dBuV) = Measured Voltage (dBuV) + Cable Loss (dB) + Limiter Factor (dB) + LISN Insertion Loss.
36.5 dBuV + 0 dB +10.1 dB+ 0 dB = 46.6 dBuV

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6. EQUIPMENT UNDER TEST

6.1. EUT DESCRIPTION

The EUT is a GSM/WCDMA/LTE/5G Phone with BT, DTS/UNII a/b/g/n/ac/ax, GPS, WPT & NFC. This report covers the 802.11a/n/ac mode in the 5.6 GHz band testing requirements of the EUT.

6.2. MAXIMUM OUTPUT POWER

The transmitter has a maximum conducted output power as follows:

Frequency Range (MHz)	Mode	Output Power (dBm)	Output Power (mW)
5.6 GHz band, 2TX			
5500-5720	802.11a	13.18	20.80
5500-5720	802.11n HT20	13.23	21.04
5510-5710	802.11n HT40	13.77	23.82
5530-5690	802.11ac VHT80	13.58	22.80
5570	802.11ac VHT160	13.30	21.38

6.3. DESCRIPTION OF AVAILABLE ANTENNAS

The antenna(s) gain and type, as provided by the manufacturer' are as follows:

Chain	Designation in Documentation	Type	Frequency Range (MHz)	Maximum Gain (dBi)
0	WiFi Main	Loop	5500-5700	0.53
1	WiFi Sub	Monopole	5500-5700	-0.43

6.4. SOFTWARE AND FIRMWARE

The firmware verstion installed during testing was 0.81.

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6.5. WORST-CASE CONFIGURATION AND MODE

The fundamental of the EUT was investigated in three orthogonal orientations X,Y,Z, it was determined that Y orientation was worst-case orientation; therefore, all final radiated testing was performed with the EUT in Y orientation.

Band edge was performed with the EUT set to transmit on low and high channels. Radiated spurious and harmonic emissions between 1GHz and 18GHz were performed with the EUT set to transmit at the worst-case mode/channel based on power and PSD and can be found in report R14634918-E6b.

Radiated emissions below 1GHz, above 18GHz, and power line conducted emission were performed with the EUT set to transmit at the channel/mode with highest output power/PSD as worst-case scenario and can be found in report R14634918-E5b.

Worst-case data rates as provided by the client were:

802.11a mode: 6 Mbps
802.11n HT20mode: MCS0
802.11n HT40mode: MCS0
802.11ac VHT80 mode: MCS0 (Nss = 1)
802.11ac VHT160 mode: MCS0 (Nss = 1)

All testing performed in 2Tx mode (NSS=1), where power per chain is equivalent to the 1Tx power on each chain. Based on preliminary testing, this allows 2Tx testing to cover all 1Tx testing.

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6.6. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	**Manufacturer**	**Model**	**Serial Number**	**FCC ID**
Laptop	Dell	Inspiron 15 3000	5KPQJP3	NA
AC Adaptor	Sony	XQZ-UC1	1821W34209742	NA
Headphones	Sony	MDR-EX15AP	NA	NA

I/O CABLES

I/O Cable List						
Cable No.	**Port**	**# of Identical Ports**	**Connector Type**	**Cable Type**	**Cable Length (m)**	**Remarks**
1	USB-C	1	USB-C	Shielded	<3m	XQZ-UB1
2	Aux	1	AUX	Shielded	<3m	Headphones

TEST SETUP

The EUT is connected to a host laptop computer and configured via test software before the tests. Test software exercised the radio card.

SETUP DIAGRAM

Please refer to R14634918-EP5 for setup diagrams

7. MEASUREMENT METHOD

On Time and Duty Cycle: KDB 789033 D02 v02r01, Section B.

26 dB Emission BW: KDB 789033 D02 v02r01, Section C.1

Conducted Output Power: KDB 789033 D02 v02r01, Section E.3.b (Method PM-G)

Power Spectral Density: KDB 789033 D02 v02r01, Section F

Unwanted emissions in restricted bands: KDB 789033 D02 v02r01, Sections G.3, G.5, and G.6.

Unwanted emissions in non-restricted bands: KDB 789033 D02 v02r01, Sections G.3 and G.5.

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8. TEST AND MEASUREMENT EQUIPMENT

The following test and measurement equipment was utilized for the tests documented in this report:

Test Equipment Used - Wireless Conducted Measurement Equipment

Equipment ID	Description	Manufacturer	Model Number	Last Cal.	Next Cal.
SA0025	Spectrum Analyzer	Keysight Technologies	N9030A	2022-05-02	2023-05-02
PWM005	RF Power Meter	Keysight Technologies	N1912A	2022-09-02	2024-09-02
PWM001 (PRE0136343)	RF Power Meter	Keysight Technologies	N1912A	2022-08-30	2023-08-30
PWS001 (PRE0137347)	Peak and Avg Power Sensor, 50MHz to 18GHz	Keysight Technologies	N1921A	2022-07-07	2023-07-07
PWS002	Peak and Avg Power Sensor, 50MHz to 18GHz	Keysight Technologies	N1921A	2022-09-27	2023-09-27
PWS005	Peak and Avg Power Sensor, 50MHz to 18GHz	Keysight Technologies	N1921A	2022-06-15	2023-06-15
HI0090	Environmental Meter	Fisher Scientific	15-077-963	2022-07-20	2023-07-20
76021	DC Regulated Power Supply	CircuitSpecialists.Com	CSI3005X5	NA	NA
SOFTEMI	Antenna Port Software	UL	Version 2022.8.16	NA	NA
MM0167 (PRE0126458)	True RMS Multimeter	Agilent	U1232A	2021-08-17	2023-08-17
CBL091	Micro-Coax UTiFLEX Cable Assembly, Low Loss,40Ghz	Carlisle Interconnect Technologies	UFA147A-2-0360-200200	2022-02-15	2023-02-15
CBL092	Micro-Coax UTiFLEX Cable Assembly, Low Loss,40Ghz	Carlisle Interconnect Technologies	UFA147A-2-0360-200200	2022-02-15	2023-02-15
226561	SMA Coaxial 10dB Attenuator 25MHz-18GHz	CentricRF	C18S2-10	2022-05-03	2023-05-03
226563	SMA Coaxial 10dB Attenuator 25MHz-18GHz	CentricRF	C18S2-10	2022-05-03	2023-05-03

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Test Equipment Used - Radiated Disturbance Emissions Test Equipment (Morrisville – Chamber 1)

Equipment ID	Description	Manufacturer	Model Number	Last Cal.	Next Cal.
1-18 GHz					
AT0072	Double-Ridged Waveguide Horn Antenna, 1 to 18 GHz	ETS Lindgren	3117	2022-05-11	2023-05-11
Gain-Loss Chains					
C1-SAC03	Gain-loss string: 1-18GHz	Various	Various	2022-12-02	2023-12-02
Receiver & Software					
206496	Spectrum Analyzer	Rohde & Schwarz	ESW44	2022-02-15	2023-02-15
SOFTEMI	EMI Software	UL	Version 9.5 (18 Oct 2021)		
Additional Equipment used					
200539	Environmental Meter	Fisher Scientific	15-077-963 s/n 181474341	2022-10-05	2023-10-05

Test Equipment Used - Radiated Disturbance Emissions Test Equipment (Morrisville – Chamber 2)

Equipment ID	Description	Manufacturer/Brand	Model Number	Last Cal.	Next Cal.
1-18 GHz					
206211	Double-Ridged Waveguide Horn Antenna, 1 to 18 GHz	ETS Lindgren	3117	2022-03-21	2023-03-21
Gain-Loss Chains					
C2-SAC03	Gain-loss string: 1-18GHz	Various	Various	2022-05-10	2023-05-10
Receiver & Software					
197955	Spectrum Analyzer	Rohde & Schwarz	ESW44	2022-03-08	2023-03-08
SOFTEMI	EMI Software	UL	Version 9.5 (18 Oct 2021)		
Additional Equipment used					
210642	Environmental Meter	Fisher Scientific	15-077-963 s/n 210701942	2021-08-16	2023-08-16

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9. ANTENNA PORT TEST RESULTS

9.1. ON TIME AND DUTY CYCLE

LIMITS

None; for reporting purposes only.

PROCEDURE

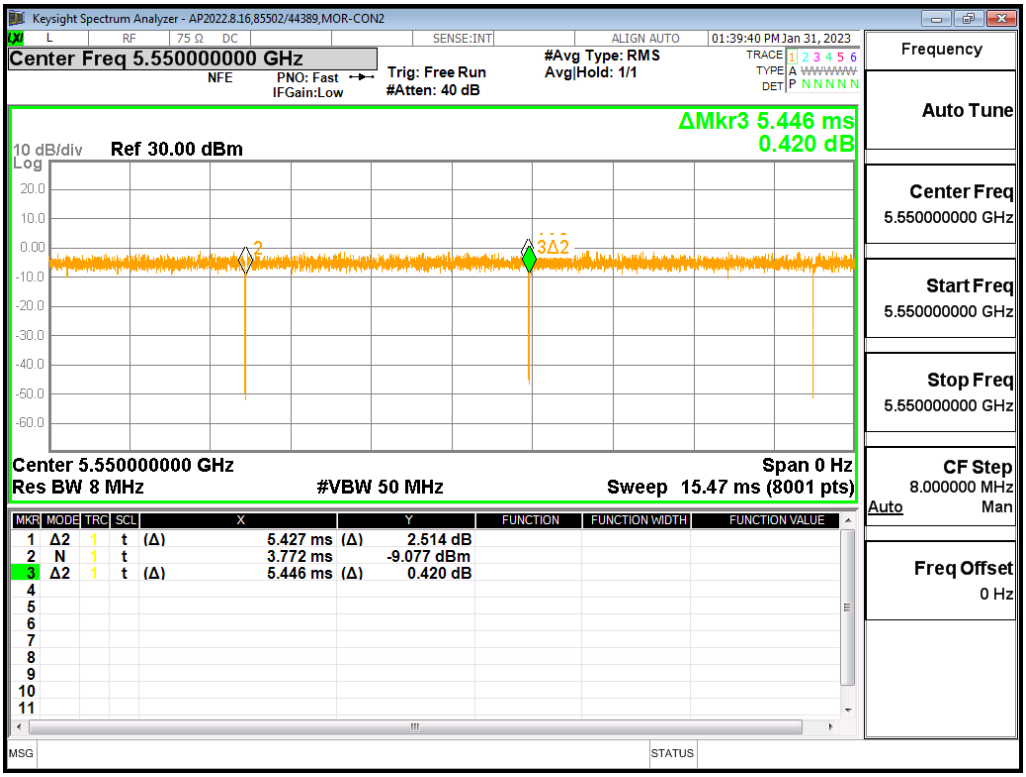
KDB 558074 Zero-Span Spectrum Analyzer Method.

ON TIME AND DUTY CYCLE RESULTS

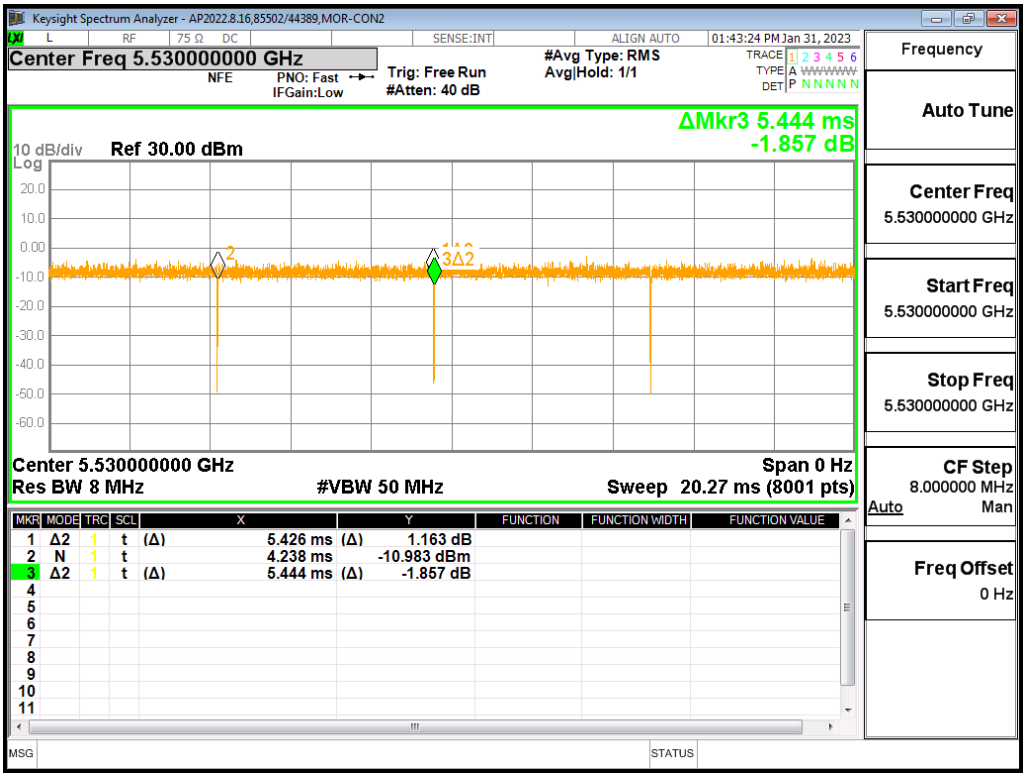
Mode	ON Time B (msec)	Period (msec)	Duty Cycle x (linear)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	1/B Minimum VBW (kHz)
802.11a	2.095	2.114	0.991	99.10	0.00	0.010
802.11n HT20	5.426	5.447	0.996	99.61	0.00	0.010
802.11n HT40	5.427	5.446	0.997	99.65	0.00	0.010
802.11ac VHT80	5.426	5.444	0.997	99.67	0.00	0.010
802.11ac VHT160	5.426	5.447	0.996	99.61	0.00	0.010

DUTY CYCLE 802.11a

DUTY CYCLE 802.11n HT20



DUTY CYCLE 802.11n HT40



DUTY CYCLE 802.11ac VHT80

DUTY CYCLE 802.11ac VHT160

9.2. 26 dB BANDWIDTH

LIMITS

None; for reporting purposes only.

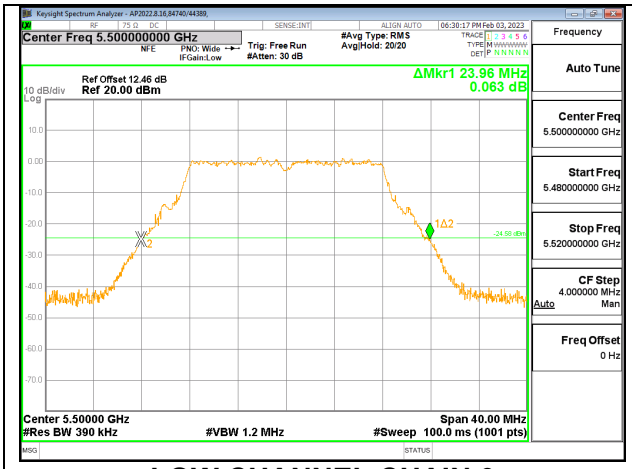
RESULTS

9.2.1. 802.11a MODE IN THE 5.6 GHz BAND

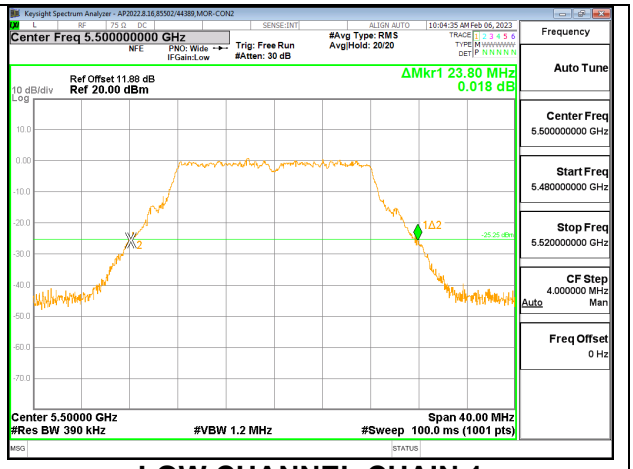
2TX Chain 0 + Chain 1 CDD MODE

Channel	Frequency (MHz)	26 dB Bandwidth Chain 0 (MHz)	26 dB Bandwidth Chain 1 (MHz)
Low	5500	23.96	23.80
Mid	5580	24.00	23.88
High	5700	23.96	23.88
144	5720	17.00	16.92

LOW CHANNEL

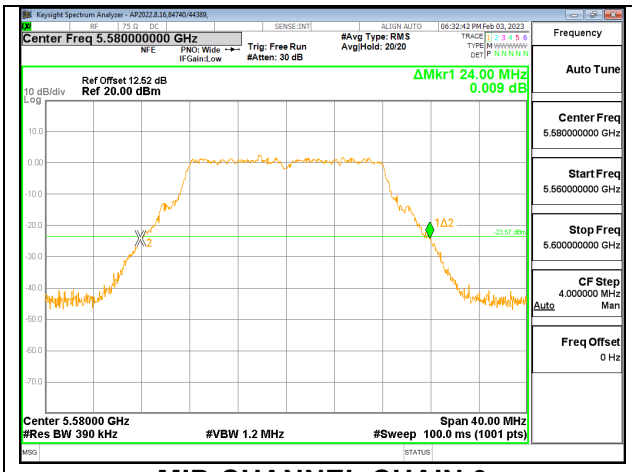


LOW CHANNEL CHAIN 0

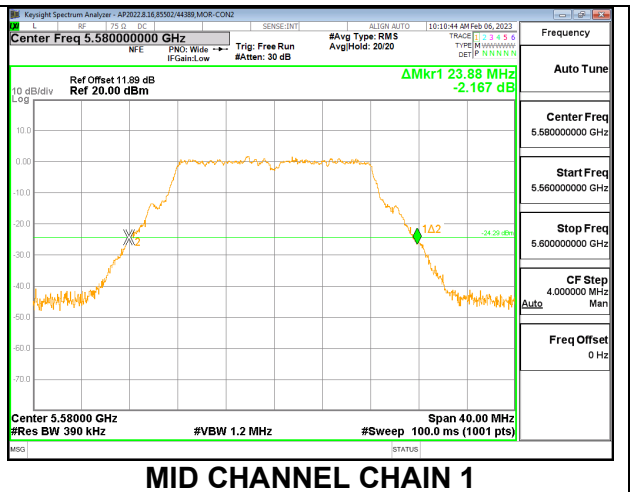


LOW CHANNEL CHAIN 1

MID CHANNEL

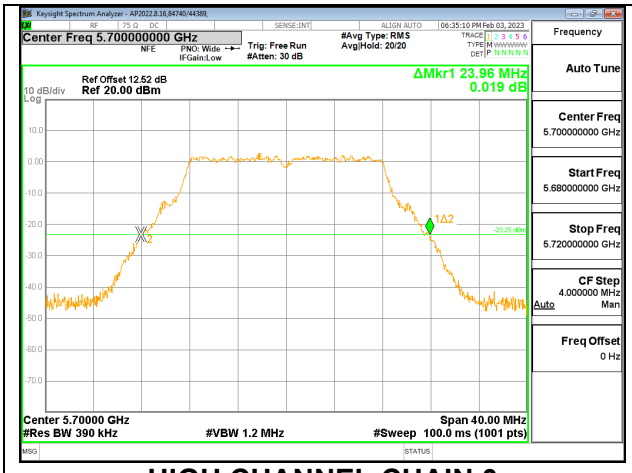


MID CHANNEL CHAIN 0

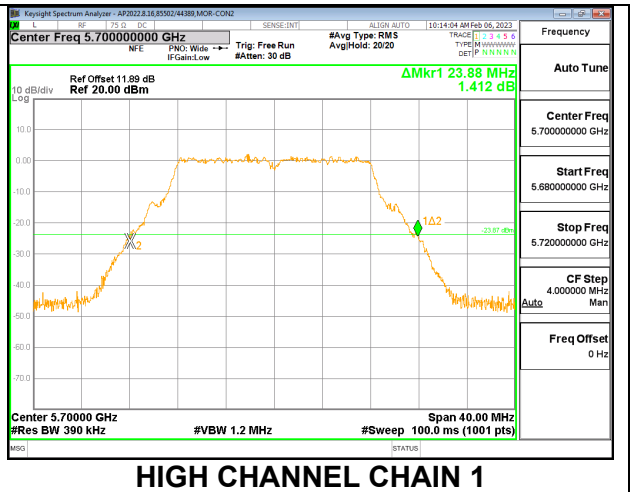


MID CHANNEL CHAIN 1

HIGH CHANNEL

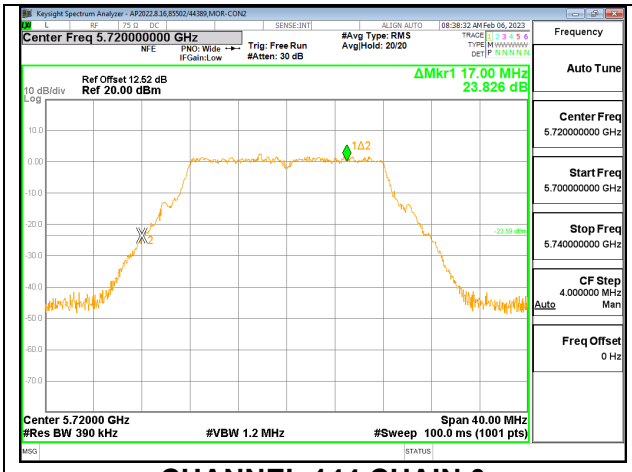


HIGH CHANNEL CHAIN 0

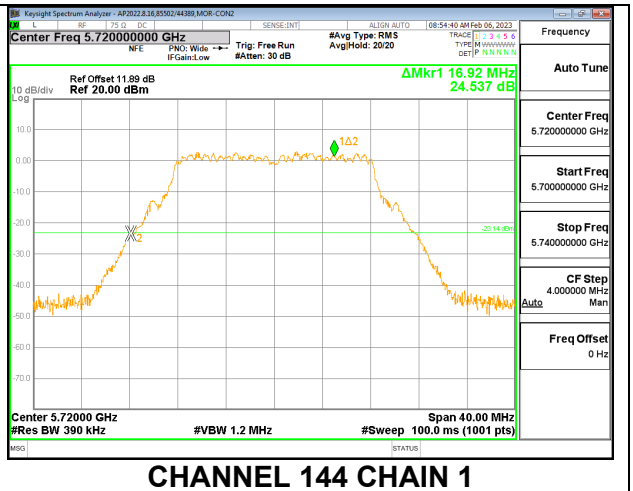


HIGH CHANNEL CHAIN 1

CHANNEL 144



CHANNEL 144 CHAIN 0



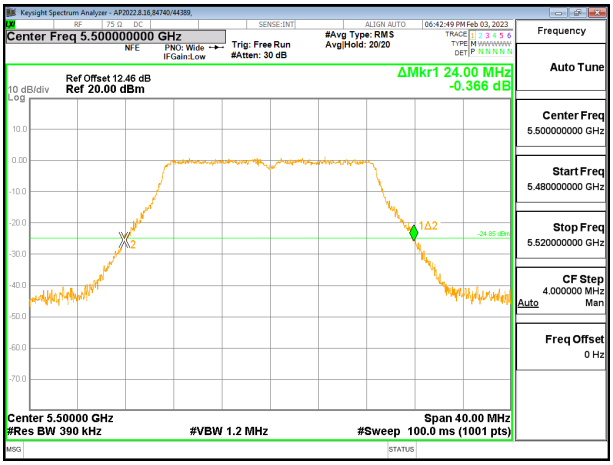
CHANNEL 144 CHAIN 1

9.2.2. 802.11n HT20 MODE IN THE 5.6 GHz BAND

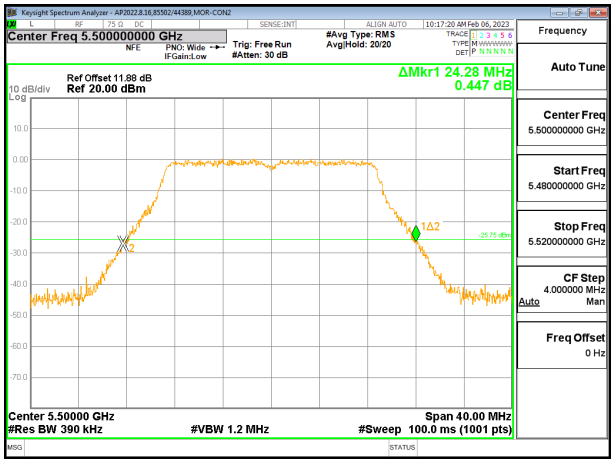
2TX Chain 0 + Chain 1 CDD MODE

Channel	Frequency (MHz)	26 dB Bandwidth Chain 0 (MHz)	26 dB Bandwidth Chain 1 (MHz)
Low	5500	24.00	24.28
Mid	5580	23.88	23.84
High	5700	23.68	24.04
144	5720	16.96	17.12

LOW CHANNEL



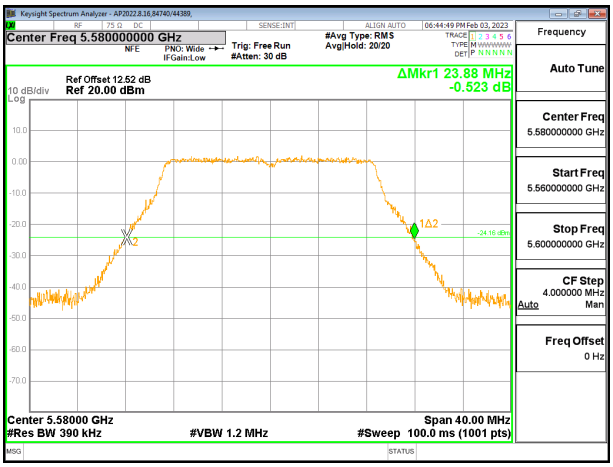
LOW CHANNEL CHAIN 0



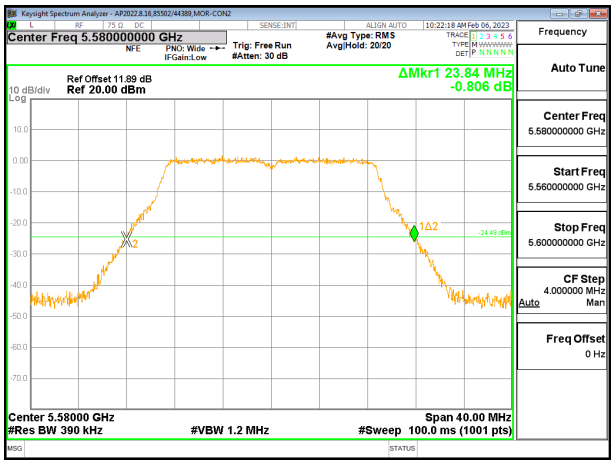
LOW CHANNEL CHAIN 1

=

MID CHANNEL

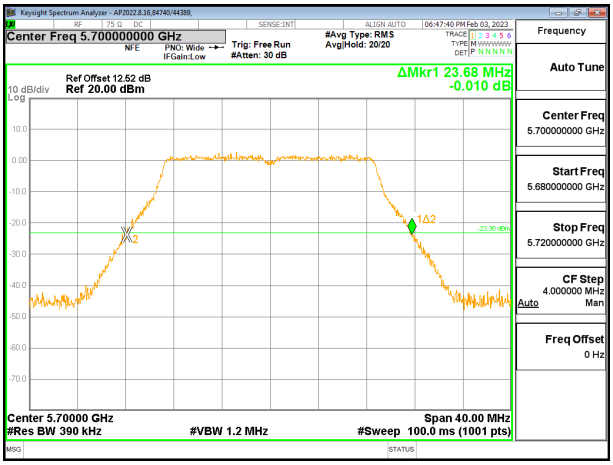


MID CHANNEL CHAIN 0

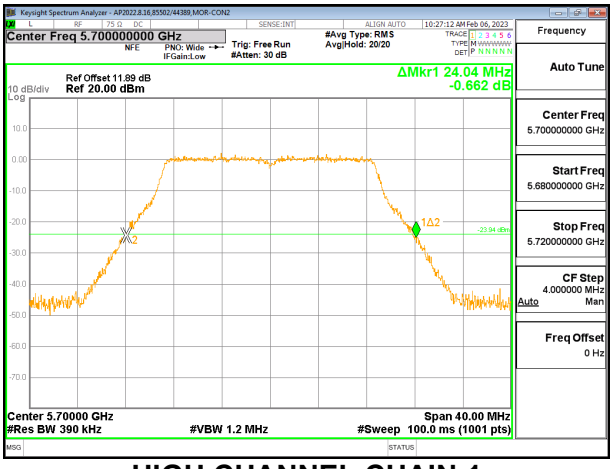


MID CHANNEL CHAIN 1

HIGH CHANNEL

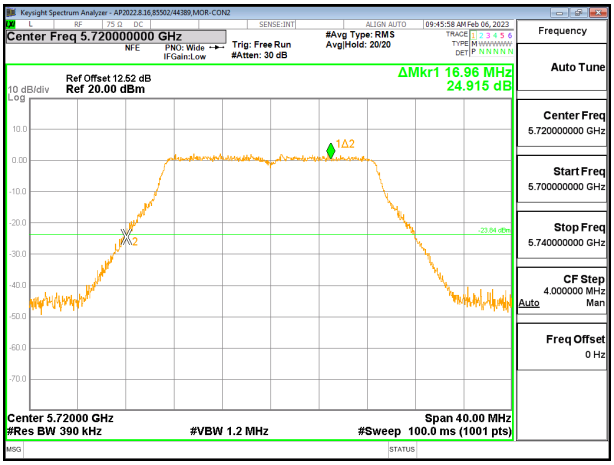


HIGH CHANNEL CHAIN 0

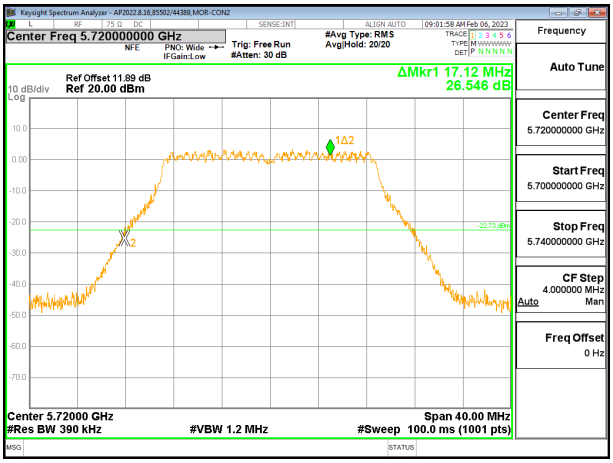


HIGH CHANNEL CHAIN 1

CHANNEL 144



CHANNEL 144 CHAIN 0



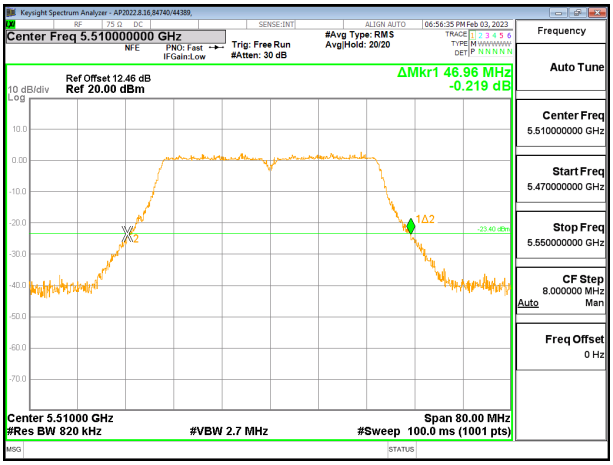
CHANNEL 144 CHAIN 1

9.2.3. 802.11n HT40 MODE IN THE 5.6 GHz BAND

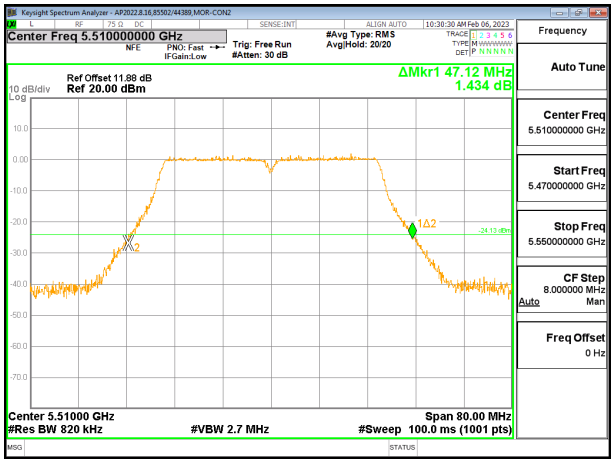
2TX Chain 0 + Chain 1 CDD MODE

Channel	Frequency (MHz)	26 dB Bandwidth Chain 0 (MHz)	26 dB Bandwidth Chain 1 (MHz)
Low	5510	46.96	47.12
Mid	5550	46.80	47.04
High	5670	46.72	46.64
142	5710	38.60	38.60

LOW CHANNEL

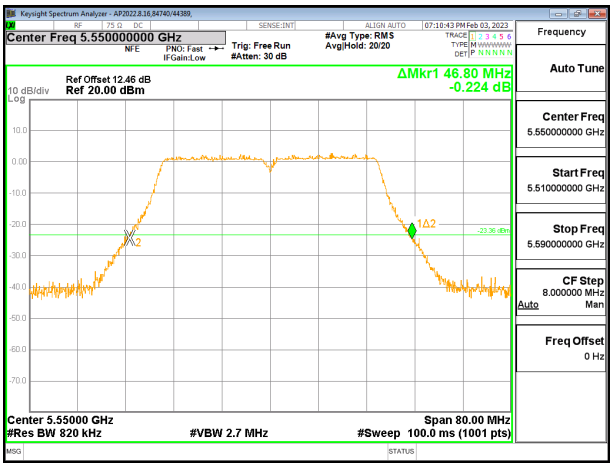


LOW CHANNEL CHAIN 0

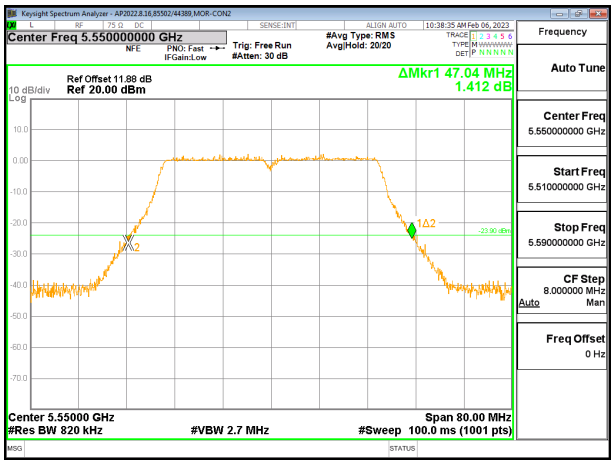


LOW CHANNEL CHAIN 1

MID CHANNEL

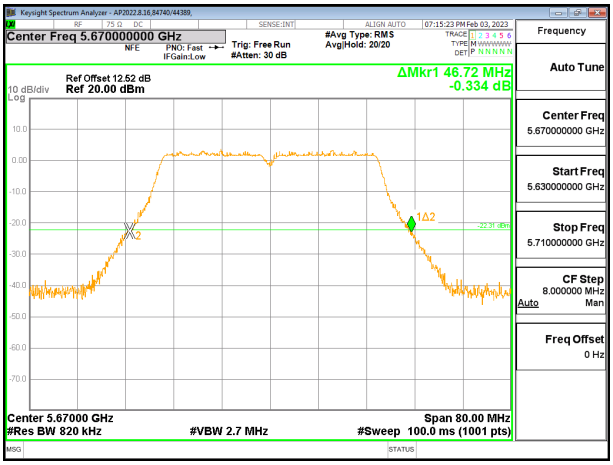


MID CHANNEL CHAIN 0

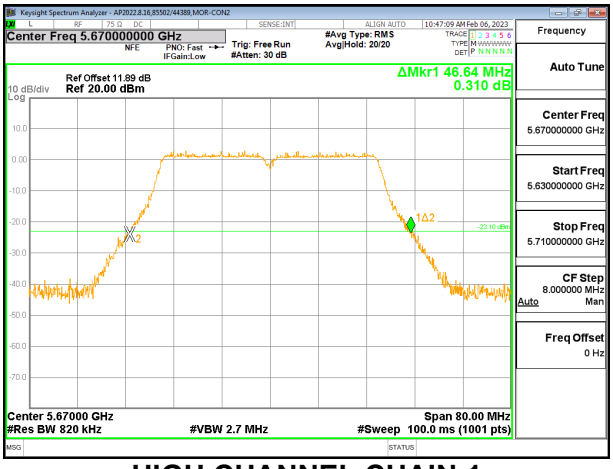


MID CHANNEL CHAIN 1

HIGH CHANNEL

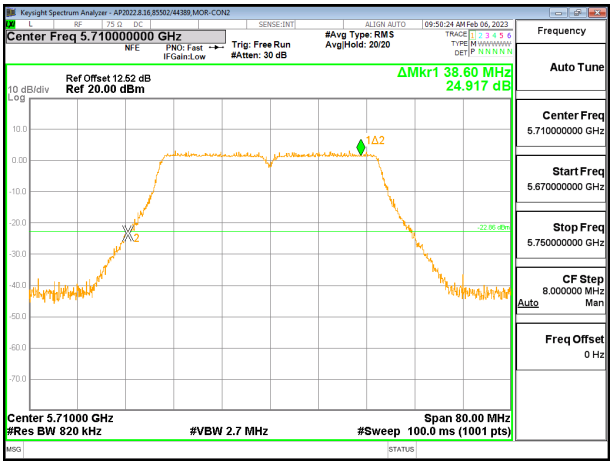


HIGH CHANNEL CHAIN 0

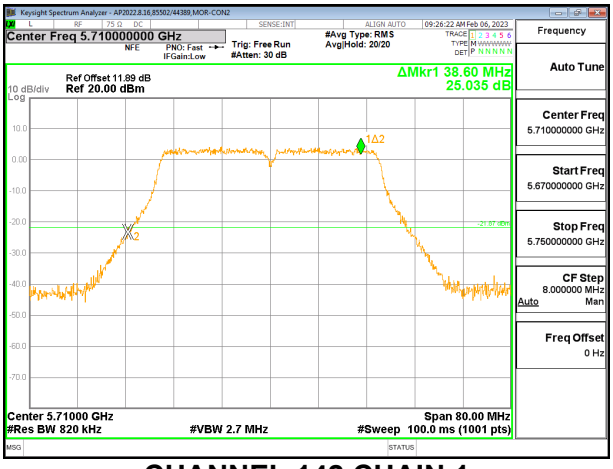


HIGH CHANNEL CHAIN 1

CHANNEL 142



CHANNEL 142 CHAIN 0



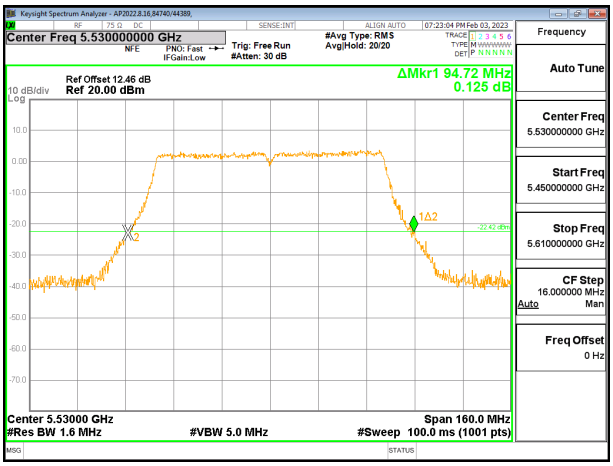
CHANNEL 142 CHAIN 1

9.2.4. 802.11ac VHT80 MODE IN THE 5.6 GHz BAND

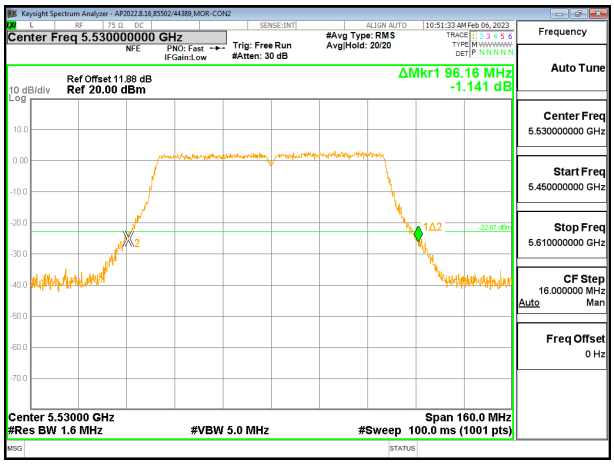
2TX Chain 0 + Chain 1 CDD MODE

Channel	Frequency (MHz)	26 dB Bandwidth Chain 0 (MHz)	26 dB Bandwidth Chain 1 (MHz)
Low	5530	97.42	96.16
High	5610	94.24	94.56
138	5690	83.00	81.56

LOW CHANNEL

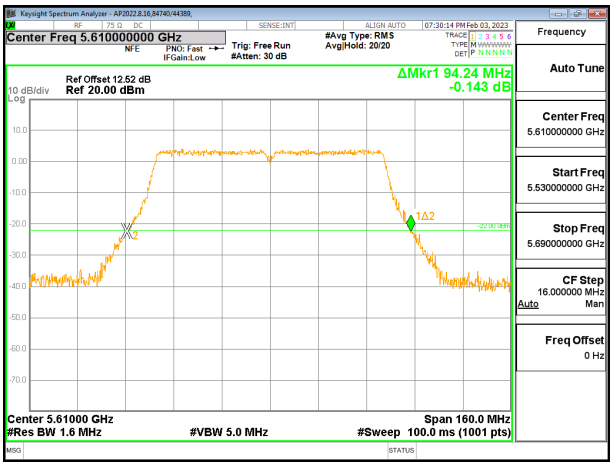


LOW CHANNEL CHAIN 0

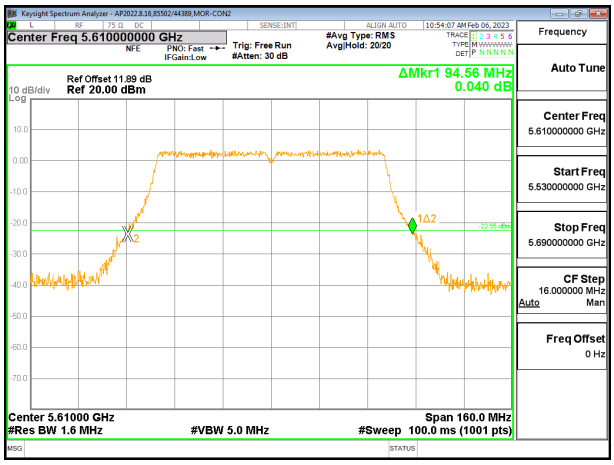


LOW CHANNEL CHAIN 1

HIGH CHANNEL

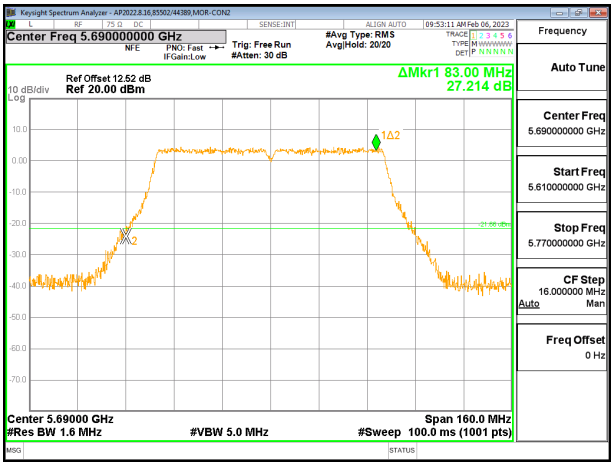


HIGH CHANNEL CHAIN 0

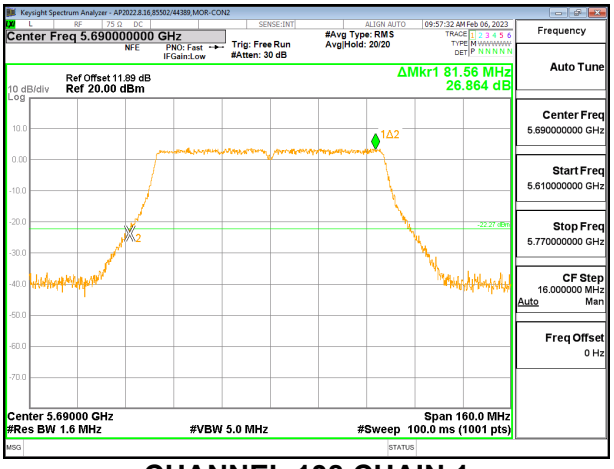


HIGH CHANNEL CHAIN 1

CHANNEL 138



CHANNEL 138 CHAIN 0



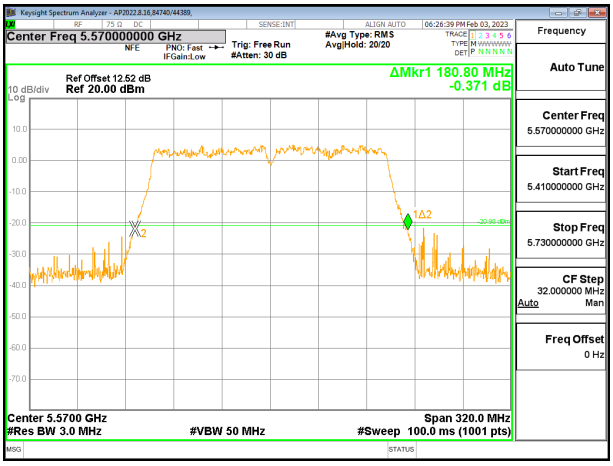
CHANNEL 138 CHAIN 1

9.2.5. 802.11ac VHT160 MODE IN THE 5.6 GHz BAND

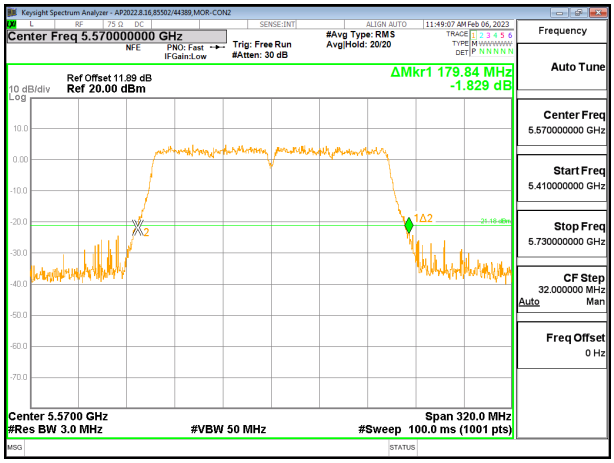
2TX Chain 0 + Chain 1 CDD MODE

Channel	Frequency (MHz)	26 dB Bandwidth Chain 0 (MHz)	26 dB Bandwidth Chain 1 (MHz)
Low	5570	180.80	179.84

LOW CHANNEL



LOW CHANNEL CHAIN 0



LOW CHANNEL CHAIN 1

9.3. OUTPUT POWER AND PSD

LIMITS

FCC §15.407

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.

TEST PROCEDURE

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

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

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)	Chain 0 Antenna Gain (dBi)	Chain 1 Antenna Gain (dBi)	Uncorrelated Chains Directional Gain (dBi)	Correlated Chains Directional Gain (dBi)
5500-5720	0.53	-0.43	0.08	3.07

RESULTS

9.3.1. 802.11a MODE IN THE 5.6 GHz BAND

2TX Chain 0 + Chain 1 CDD MODE (FCC)

Test Engineer:	85502/40882
Test Date:	2022-02-15 and 2022-02-17

Bandwidth, Antenna Gain, and Limits

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)	Power Limit (dBm)	PSD Limit (dBm/ 1MHz)
Low	5500	23.80	0.08	3.07	24.00	11.00
Mid	5580	23.88	0.08	3.07	24.00	11.00
High	5700	23.88	0.08	3.07	24.00	11.00
144	5720	16.92	0.08	3.07	23.28	11.00

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

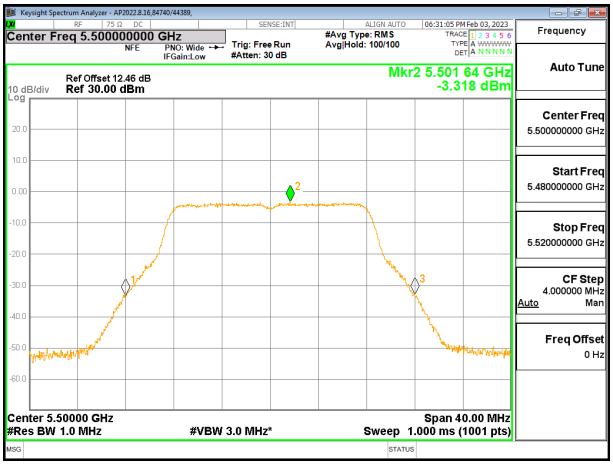
Output Power Results

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	9.79	9.65	12.73	24.00	-11.27
Mid	5580	10.24	9.63	12.96	24.00	-11.04
High	5700	10.16	10.18	13.18	24.00	-10.82
144	5720	10.12	10.01	13.08	23.28	-10.21

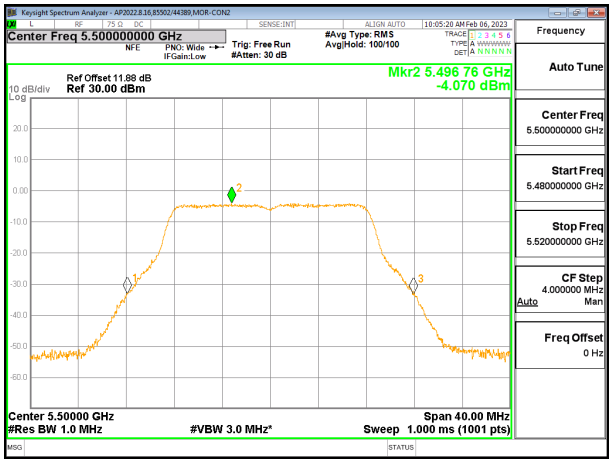
PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm/ 1MHz)	Chain 1 Meas PSD (dBm/ 1MHz)	Total Corr'd PSD (dBm/ 1MHz)	PSD Limit (dBm/ 1MHz)	PSD Margin (dB)
Low	5500	-3.32	-4.07	-0.67	11.00	-11.67
Mid	5580	-2.60	-3.23	0.10	11.00	-10.90
High	5700	-2.30	-3.09	0.34	11.00	-10.66
144	5720	-2.76	-2.69	0.29	11.00	-10.71

LOW CHANNEL

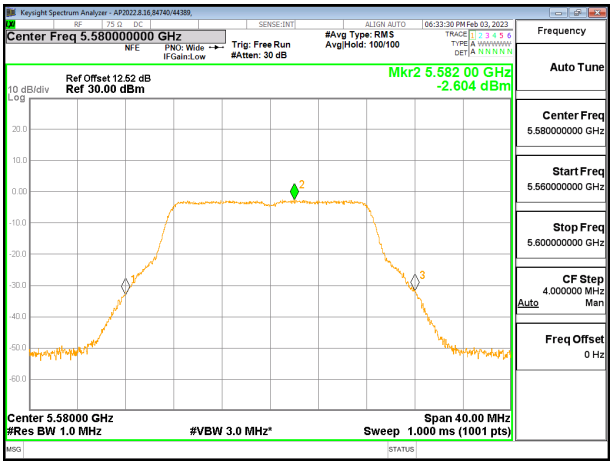


LOW CHANNEL CHAIN 0

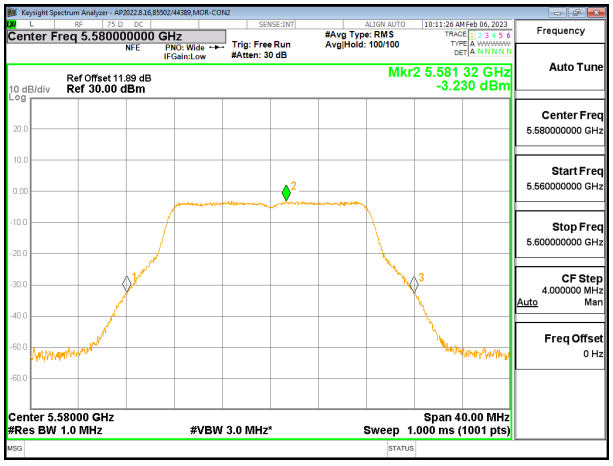


LOW CHANNEL CHAIN 1

MID CHANNEL

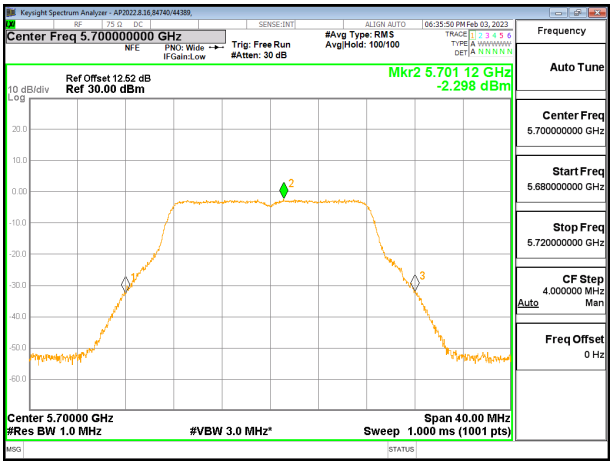


MID CHANNEL CHAIN 0

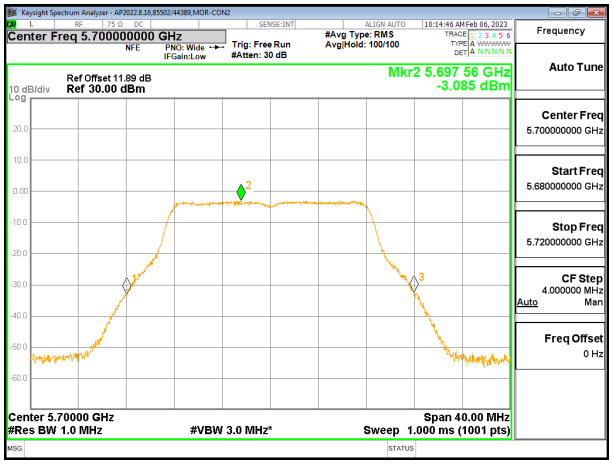


MID CHANNEL CHAIN 1

HIGH CHANNEL

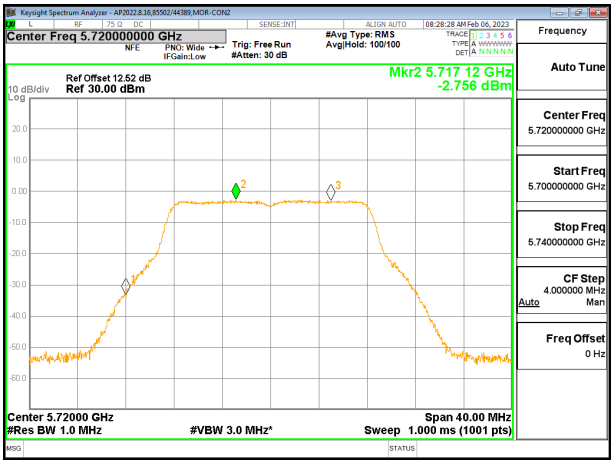


HIGH CHANNEL CHAIN 0

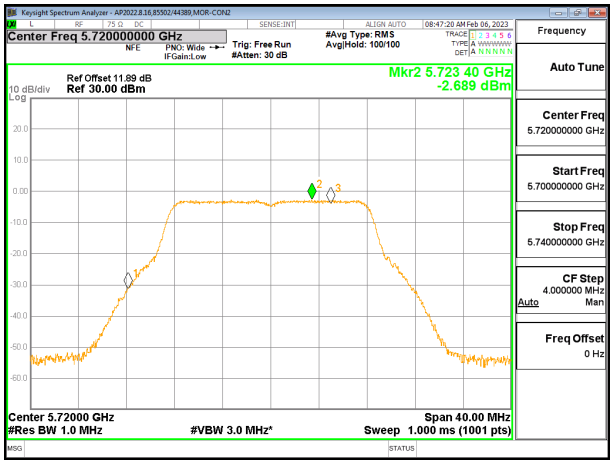


HIGH CHANNEL CHAIN 1

CHANNEL 144



CHANNEL 144 CHAIN 0



CHANNEL 144 CHAIN 1

9.3.2. 802.11n HT20 MODE IN THE 5.6 GHz BAND

2TX Chain 0 + Chain 1 CDD MODE (FCC)

Test Engineer:	85502/40882
Test Date:	2022-02-15 and 2022-02-17

Bandwidth, Antenna Gain, and Limits

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)	Power Limit (dBm)	PSD Limit (dBm/ 1MHz)
Low	5500	24.00	0.08	3.07	24.00	11.00
Mid	5580	23.84	0.08	3.07	24.00	11.00
High	5700	23.68	0.08	3.07	24.00	11.00
144	5720	16.96	0.08	3.07	23.29	11.00

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

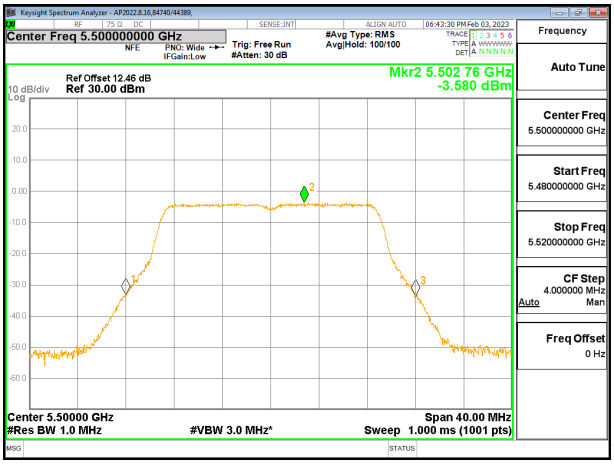
Output Power Results

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	9.94	9.75	12.86	24.00	-11.14
Mid	5580	10.28	9.70	13.01	24.00	-10.99
High	5700	10.20	10.23	13.23	24.00	-10.77
144	5720	10.22	10.17	13.21	23.29	-10.09

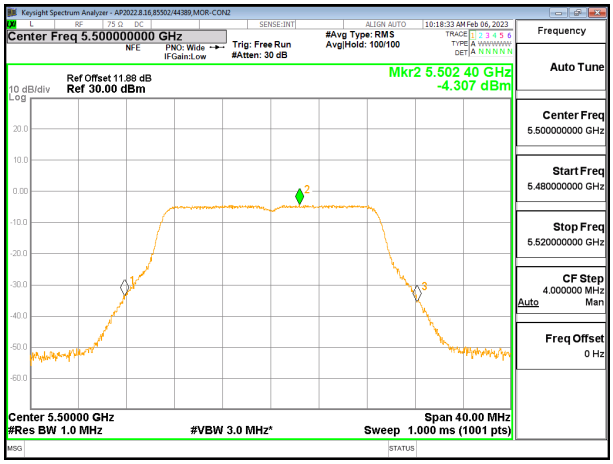
PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm/ 1MHz)	Chain 1 Meas PSD (dBm/ 1MHz)	Total Corr'd PSD (dBm/ 1MHz)	PSD Limit (dBm/ 1MHz)	PSD Margin (dB)
Low	5500	-3.58	-4.31	-0.92	11.00	-11.92
Mid	5580	-3.02	-3.60	-0.29	11.00	-11.29
High	5700	-2.74	-3.36	-0.03	11.00	-11.03
144	5720	-3.00	-2.84	0.09	11.00	-10.91

LOW CHANNEL

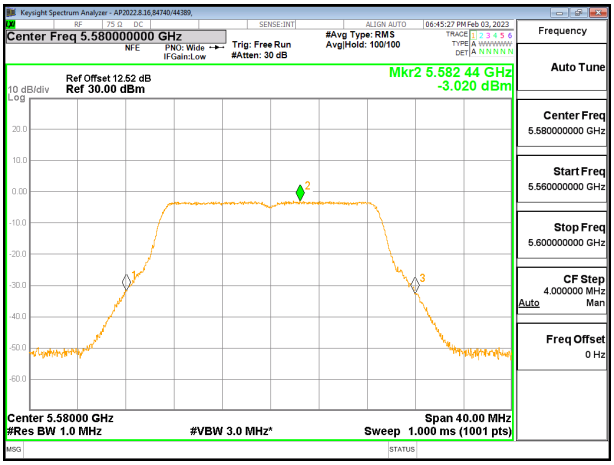


LOW CHANNEL CHAIN 0

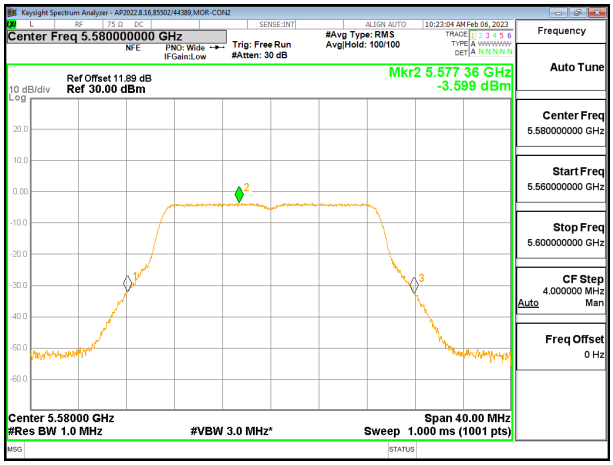


LOW CHANNEL CHAIN 1

MID CHANNEL

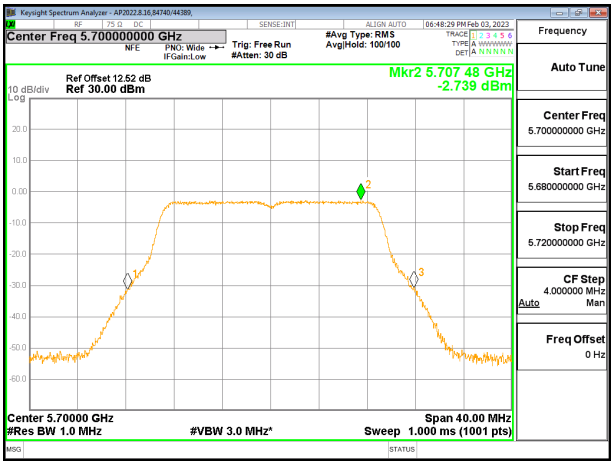


MID CHANNEL CHAIN 0

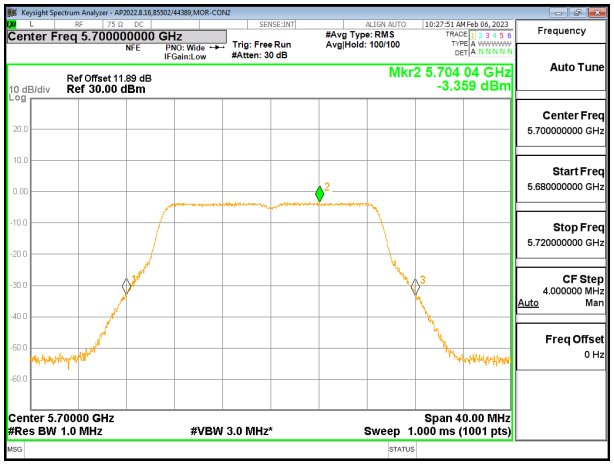


MID CHANNEL CHAIN 1

HIGH CHANNEL

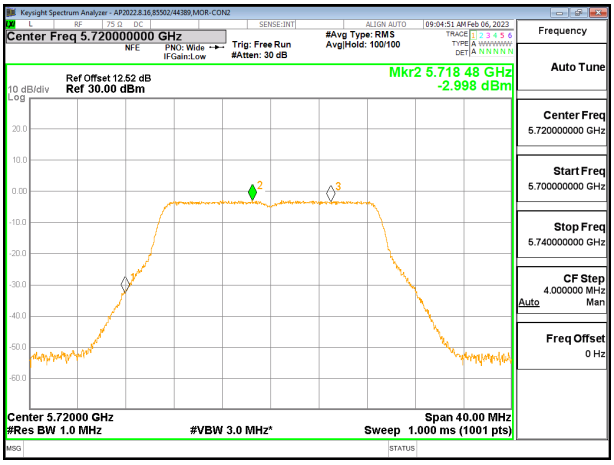


HIGH CHANNEL CHAIN 0

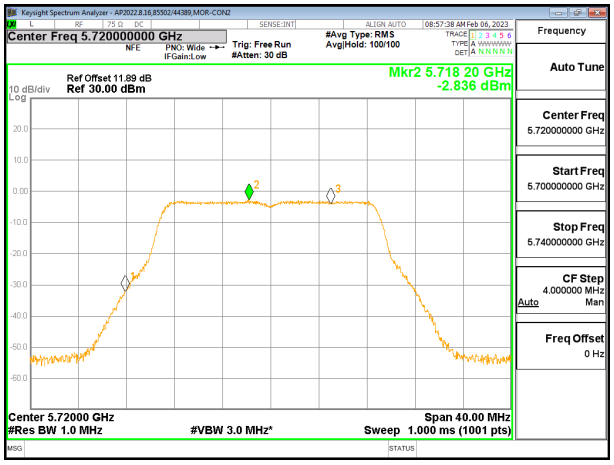


HIGH CHANNEL CHAIN 1

CHANNEL 144



CHANNEL 144 CHAIN 0



CHANNEL 144 CHAIN 1

9.3.3. 802.11n HT40 MODE IN THE 5.6 GHz BAND

2TX Chain 0 + Chain 1 CDD MODE (FCC)

Test Engineer:	85502/40882
Test Date:	2022-02-15 and 2022-02-17

Bandwidth, Antenna Gain, and Limits

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)	Power Limit (dBm)	PSD Limit (dBm/ 1MHz)
Low	5510	46.96	0.08	3.07	24.00	11.00
Mid	5550	46.80	0.08	3.07	24.00	11.00
High	5670	46.64	0.08	3.07	24.00	11.00
142	5710	38.60	0.08	3.07	24.00	11.00

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

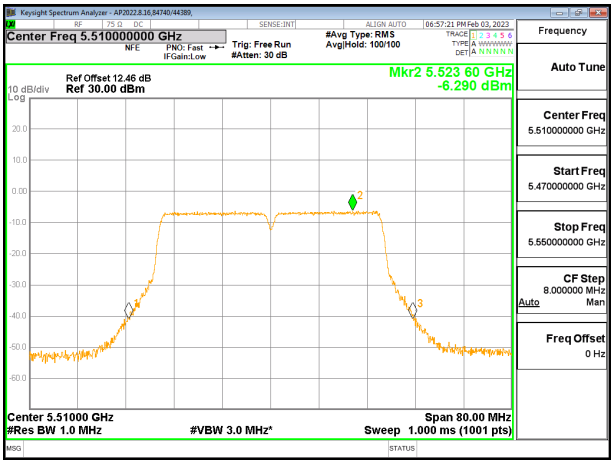
Output Power Results

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	10.48	10.45	13.48	24.00	-10.52
Mid	5550	10.56	10.39	13.49	24.00	-10.51
High	5670	11.04	10.46	13.77	24.00	-10.23
142	5710	10.76	10.75	13.77	24.00	-10.23

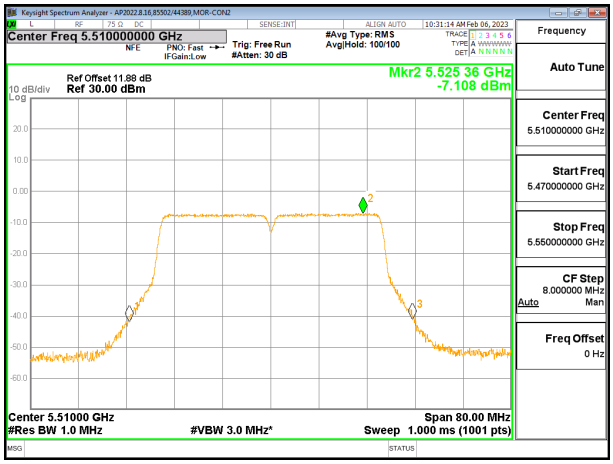
PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm/ 1MHz)	Chain 1 Meas PSD (dBm/ 1MHz)	Total Corr'd PSD (dBm/ 1MHz)	PSD Limit (dBm/ 1MHz)	PSD Margin (dB)
Low	5510	-6.29	-7.11	-3.67	11.00	-14.67
Mid	5550	-5.99	-6.56	-3.26	11.00	-14.26
High	5670	-5.44	-6.19	-2.78	11.00	-13.78
142	5710	-5.69	-5.46	-2.56	11.00	-13.56

LOW CHANNEL

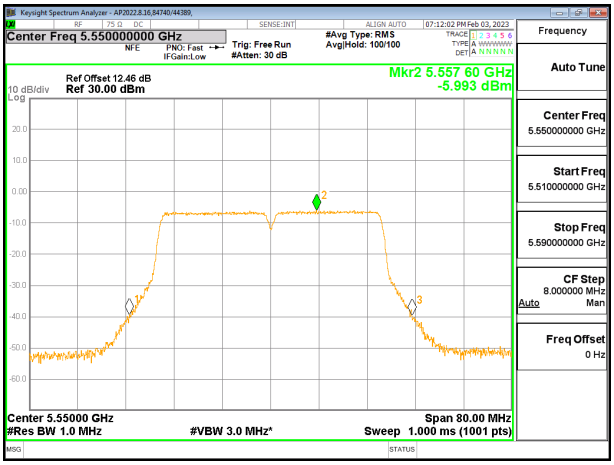


LOW CHANNEL CHAIN 0

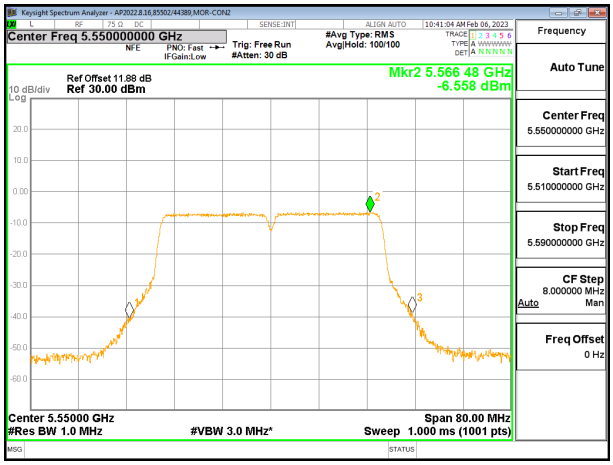


LOW CHANNEL CHAIN 1

MID CHANNEL

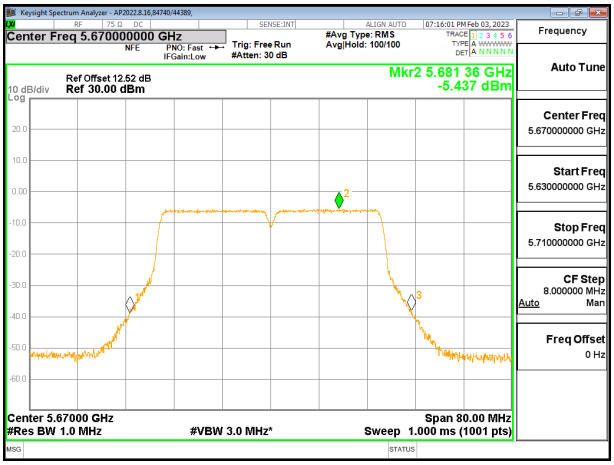


MID CHANNEL CHAIN 0

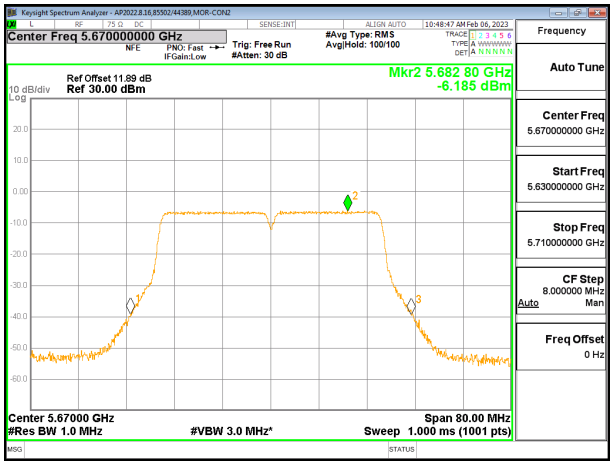


MID CHANNEL CHAIN 1

HIGH CHANNEL

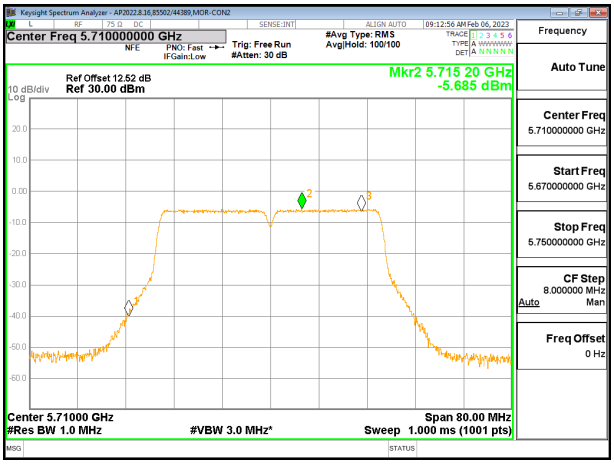


HIGH CHANNEL CHAIN 0

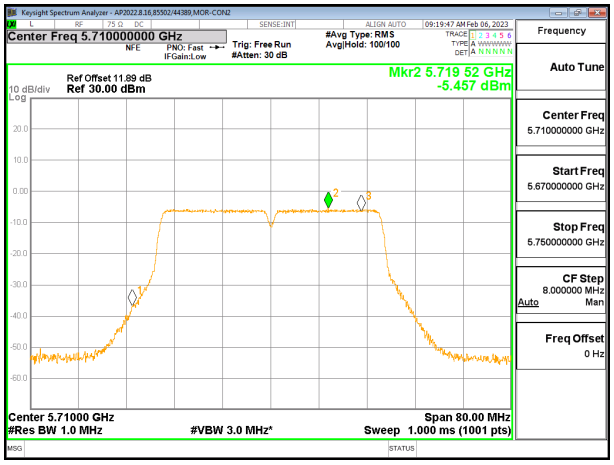


HIGH CHANNEL CHAIN 1

CHANNEL 142



CHANNEL 142 CHAIN 0



CHANNEL 142 CHAIN 1

9.3.4. 802.11ac VHT80 MODE IN THE 5.6 GHz BAND

2TX Chain 0 + Chain 1 CDD MODE (FCC)

Test Engineer:	85502/40882
Test Date:	2022-02-15 and 2022-02-17

Bandwidth, Antenna Gain, and Limits

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)	Power Limit (dBm)	PSD Limit (dBm/ 1MHz)
Low	5530	96.16	0.08	3.07	24.00	11.00
High	5610	94.24	0.08	3.07	24.00	11.00
138	5690	81.56	0.08	3.07	24.00	11.00

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

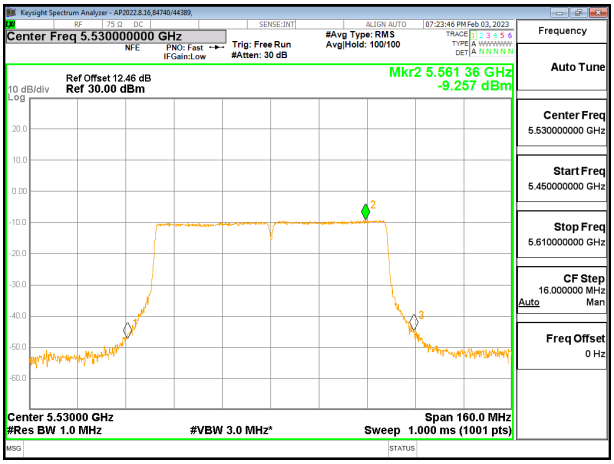
Output Power Results

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	5530	10.30	10.04	13.18	24.00	-10.82
High	5610	10.60	9.79	13.22	24.00	-10.78
138	5690	10.83	10.30	13.58	24.00	-10.42

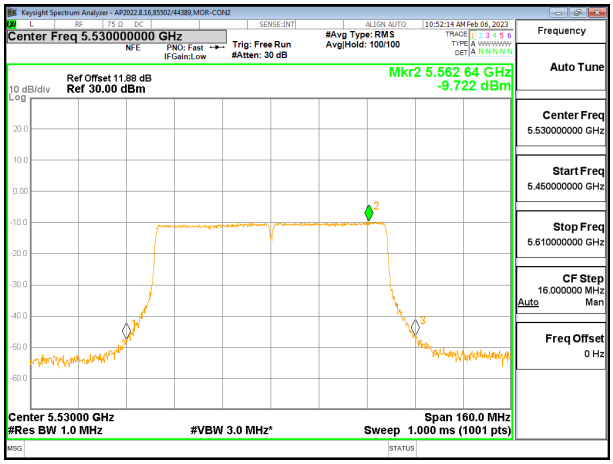
PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm/ 1MHz)	Chain 1 Meas PSD (dBm/ 1MHz)	Total Corr'd PSD (dBm/ 1MHz)	PSD Limit (dBm/ 1MHz)	PSD Margin (dB)
Low	5530	-9.26	-9.72	-6.47	11.00	-17.47
High	5610	-8.70	-9.39	-6.02	11.00	-17.02
138	5690	-8.79	-9.11	-5.94	11.00	-16.94

LOW CHANNEL

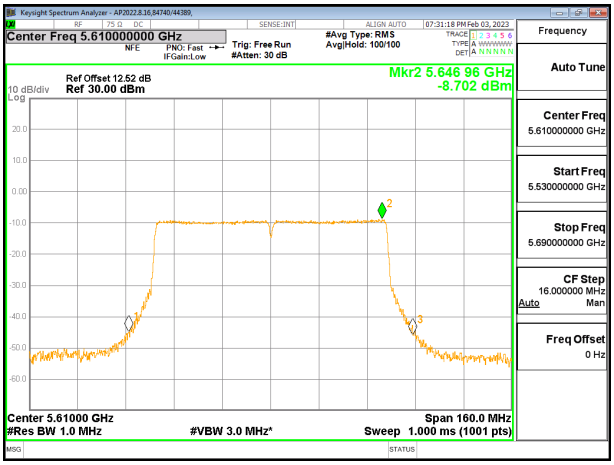


LOW CHANNEL CHAIN 0

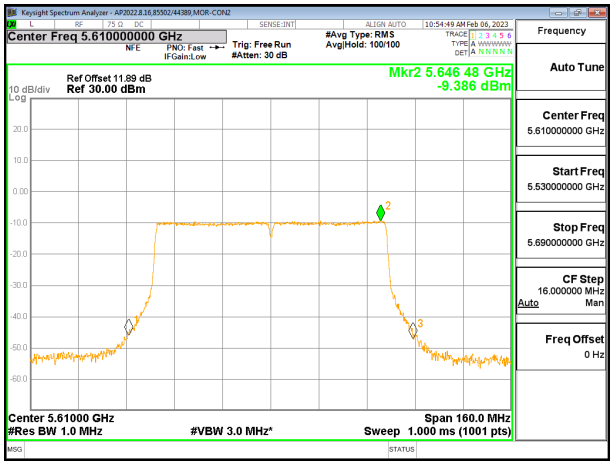


LOW CHANNEL CHAIN 1

HIGH CHANNEL

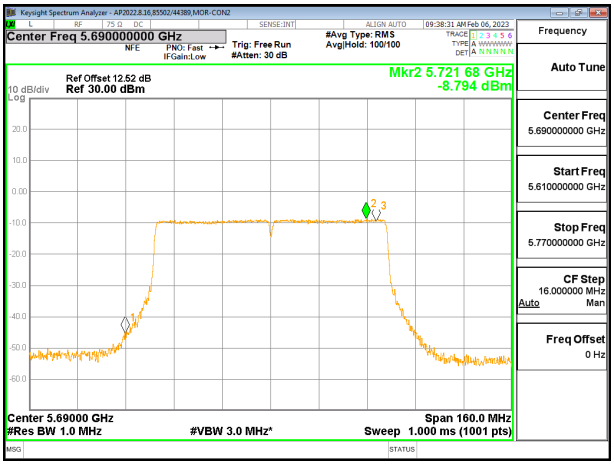


HIGH CHANNEL CHAIN 0

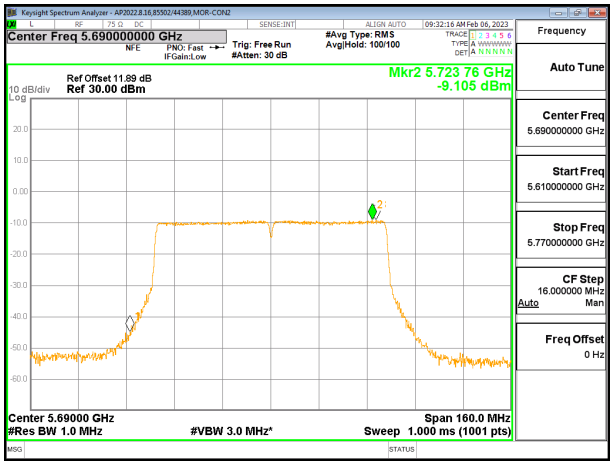


HIGH CHANNEL CHAIN 1

CHANNEL 138



CHANNEL 138 CHAIN 0



CHANNEL 138 CHAIN 1

9.3.5. 802.11ac VHT160 MODE IN THE 5.6 GHz BAND

2TX Chain 0 + Chain 1 CDD MODE (FCC)

Test Engineer:	85502/40882
Test Date:	2022-02-15 and 2022-02-17

Bandwidth, Antenna Gain, and Limits

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)	Power Limit (dBm)	PSD Limit (dBm/ 1MHz)
Low	5570	179.84	0.08	3.07	24.00	11.00
Duty Cycle CF (dB)		0.00	**Included in Calculations of Corr'd PSD**			

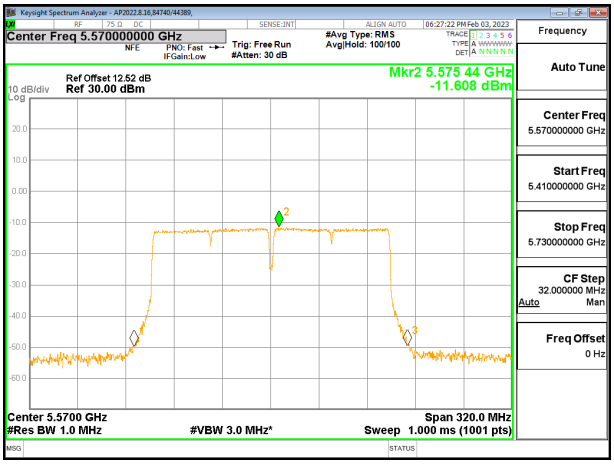
Output Power Results

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	5570	10.43	10.15	13.30	24.00	-10.70

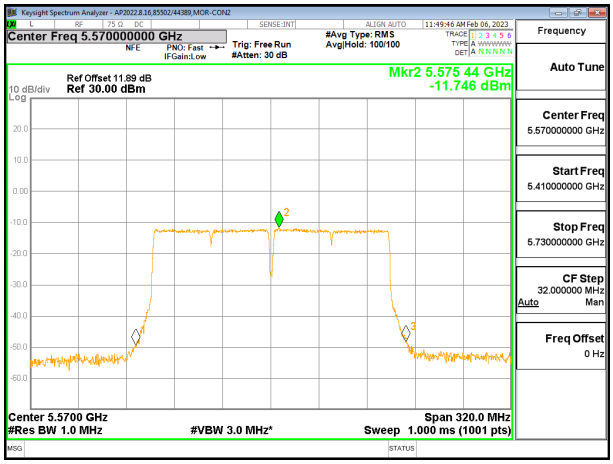
PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm/ 1MHz)	Chain 1 Meas PSD (dBm/ 1MHz)	Total Corr'd PSD (dBm/ 1MHz)	PSD Limit (dBm/ 1MHz)	PSD Margin (dB)
Low	5530	-11.61	-11.75	-8.67	11.00	-19.67

LOW CHANNEL



LOW CHANNEL CHAIN 0



LOW CHANNEL CHAIN 1

10. RADIATED TEST RESULTS

LIMITS

FCC §15.205 and §15.209 - Restricted bands
FCC §15.407(b)(1-3) - Non-Restricted bands

After January 01, 2019 for Outside of the Restricted Bands Emissions

Frequency Range (MHz)	Field Strength Limit (uV/m) at 3 m	Field Strength Limit (dBuV/m) at 3 m
30 - 88	100	40
88 - 216	150	43.5
216 - 960	200	46
Above 960	500	54

TEST PROCEDURE

The EUT is placed on a non-conducting table 1.5 m above the ground plane for measurement above 1GHz. The antenna to EUT distance is 3 meters. The EUT is configured in accordance with ANSI C63.10. The EUT is set to transmit in a continuous mode.

For pre-scans above 1 GHz the resolution bandwidth is set to 1 MHz; the video bandwidth is set to 3MHz for peak measurements.

For final measurements above 1 GHz the resolution bandwidth is set to 1 MHz; the video bandwidth is set to 3 MHz for peak measurements and as applicable for linear voltage average measurements.

The spectrum from 1GHz to 18GHz is investigated with the transmitter set to transmit at the lowest, middle, and highest channels in the 5 GHz bands.

The frequency range of interest is monitored at a fixed antenna height and EUT azimuth. The EUT is rotated through 360 degrees to maximize emissions received. The antenna is scanned from 1 to 4 meters above the ground plane to further maximize the emission. Measurements are made with the antenna polarized in both the vertical and the horizontal positions.

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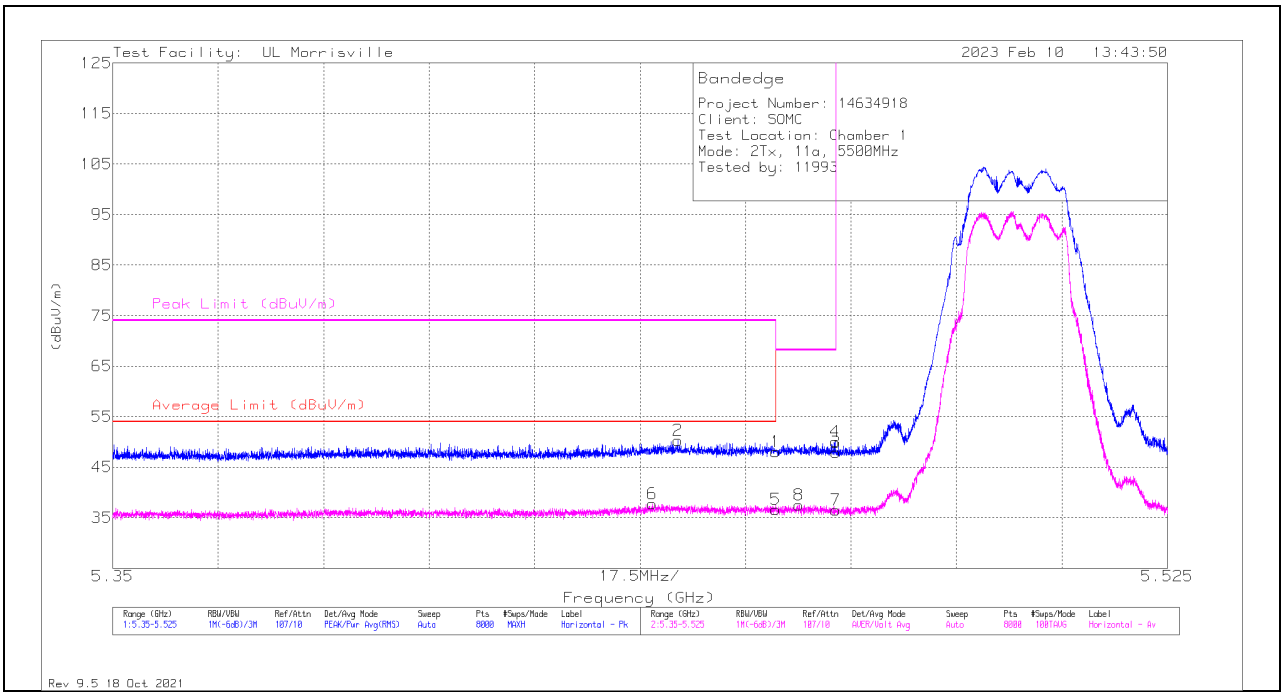
10.1. TRANSMITTER ABOVE 1 GHz

10.1.1. TX ABOVE 1 GHz 802.11a MODE IN THE 5.6 GHz BAND

2TX Chain 0 + Chain 1 CDD MODE

BANDEDGE (LOW CHANNEL)

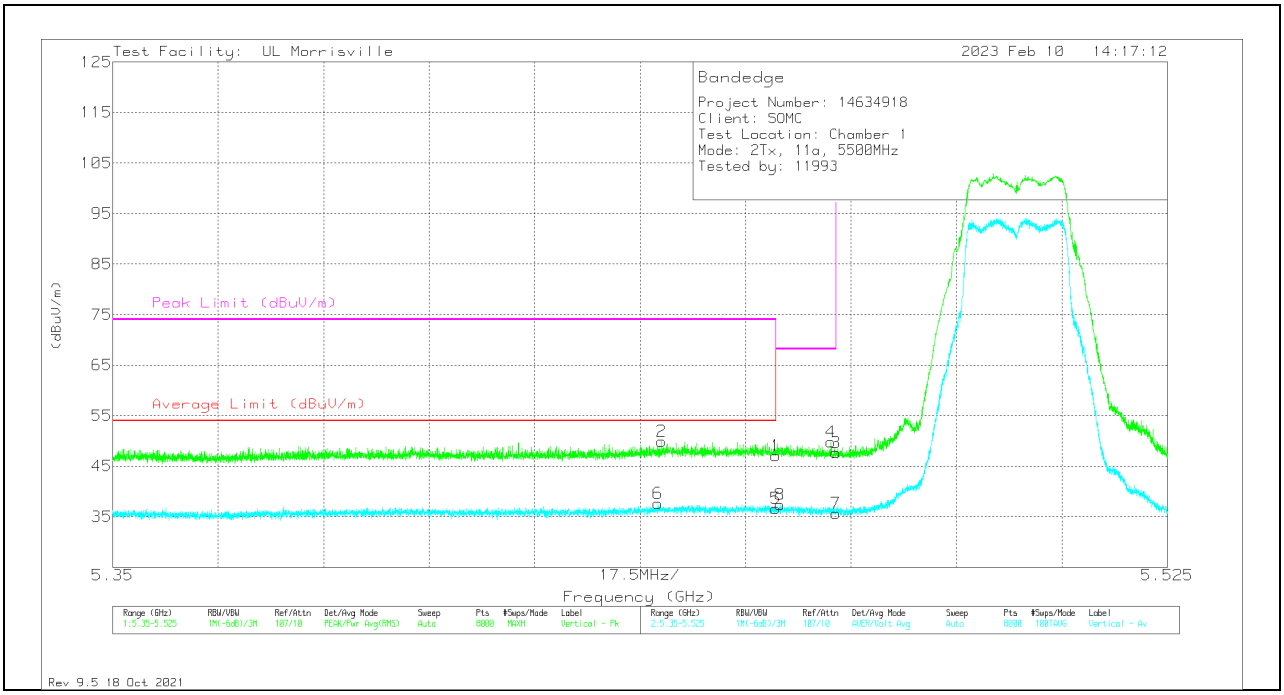
HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 5.45998	35.99	Pk	34.4	-22.3	48.09	-	-	74	-25.91	268	103	H
2	* ** 5.44377	38.08	Pk	34.4	-22.2	50.28	-	-	74	-23.72	268	103	H
5	* ** 5.45998	24.57	ADV	34.4	-22.3	36.67	54	-17.33	-	-	268	102	H
6	* ** 5.43957	25.51	ADV	34.4	-22.2	37.71	54	-16.29	-	-	268	102	H
8	5.46385	25.45	ADV	34.4	-22.3	37.55	-	-	-	-	268	102	H
4	5.46989	38.09	Pk	34.4	-22.4	50.09	-	-	68.2	-18.11	268	103	H
3	5.46998	35.97	Pk	34.4	-22.4	47.97	-	-	68.2	-20.23	268	103	H
7	5.46998	24.46	ADV	34.4	-22.4	36.46	-	-	-	-	268	102	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
ADV - Linear Voltage Average

VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 5.45998	35.02	Pk	34.4	-22.3	47.12	-	-	74	-26.88	242	107	V
2	* ** 5.44108	37.64	Pk	34.4	-22.1	49.94	-	-	74	-24.06	242	107	V
5	* ** 5.45998	24.52	ADV	34.4	-22.3	36.62	54	-17.38	-	-	242	107	V
6	* ** 5.44047	25.31	ADV	34.4	-22.1	37.61	54	-16.39	-	-	242	107	V
8	5.46075	25.27	ADV	34.4	-22.3	37.37	-	-	-	-	242	107	V
4	5.46917	37.84	Pk	34.4	-22.4	49.84	-	-	68.2	-18.36	242	107	V
3	5.46998	35.72	Pk	34.4	-22.4	47.72	-	-	68.2	-20.48	242	107	V
7	5.46998	23.68	ADV	34.4	-22.4	35.68	-	-	-	-	242	107	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
ADV - Linear Voltage Average

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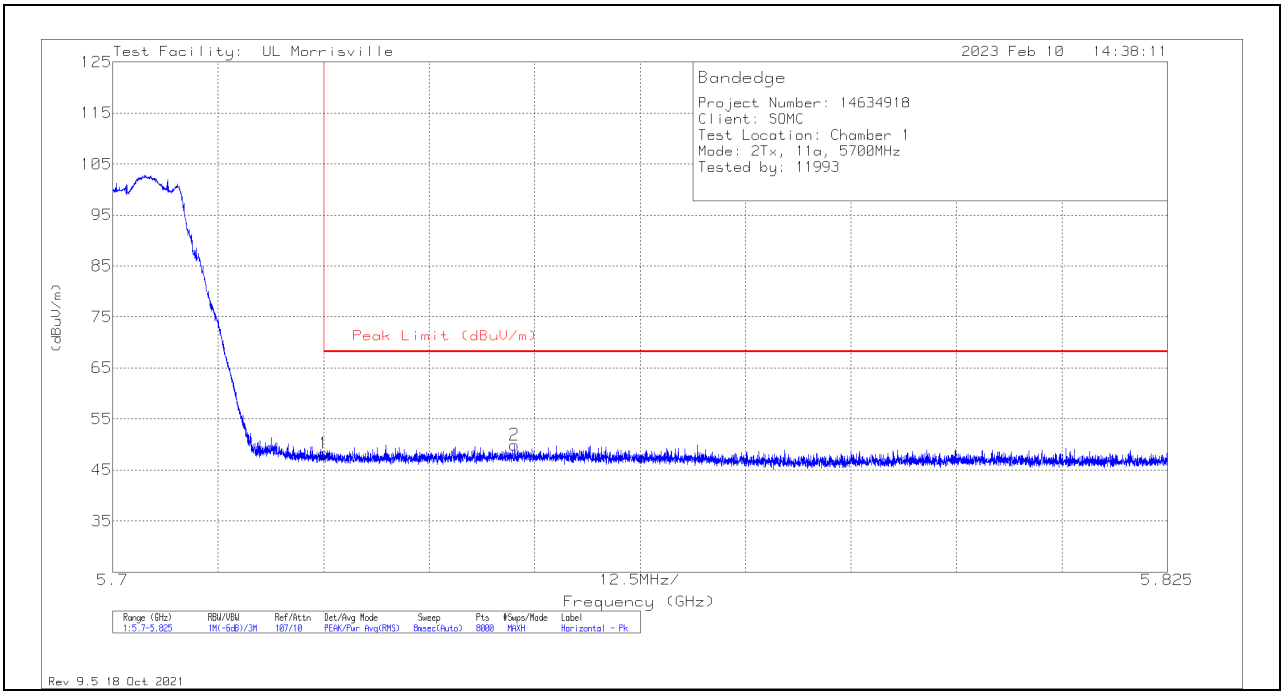
BANDEDGE (HIGH CHANNEL)

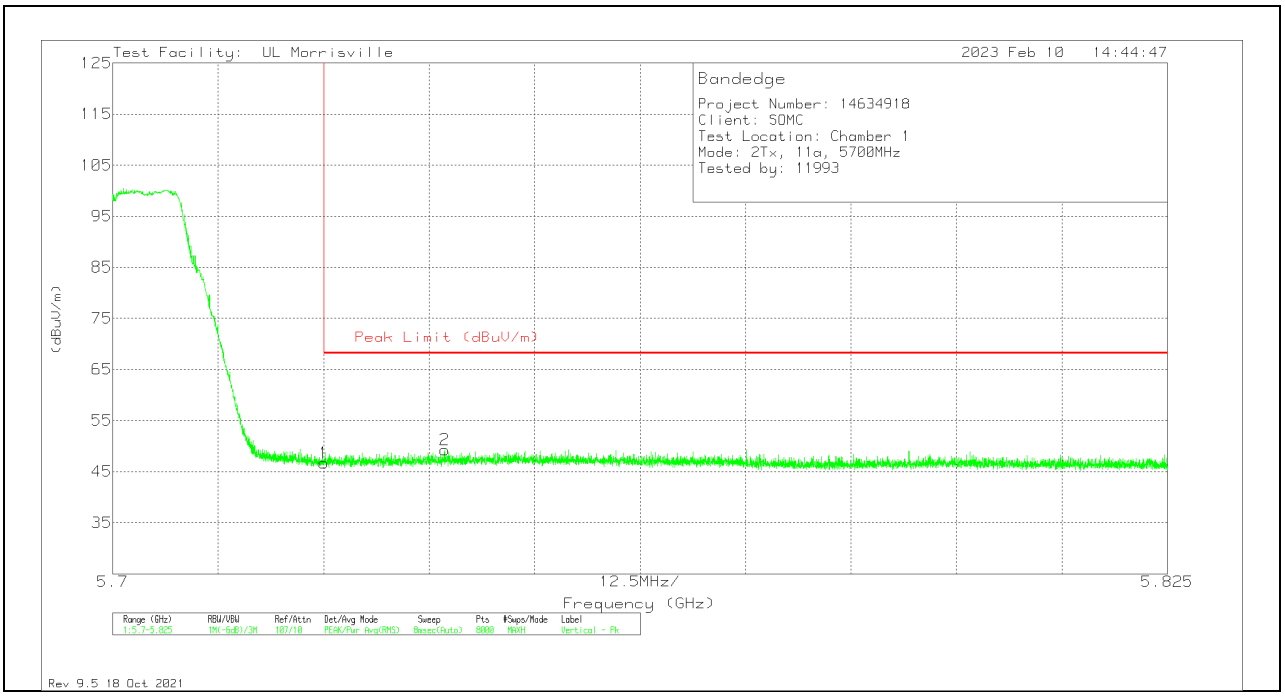
HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	36.01	Pk	34.7	-22.4	48.31	68.2	-19.89	268	104	H
2	5.74762	37.23	Pk	34.7	-22	49.93	68.2	-18.27	268	104	H

Pk - Peak detector

VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	34.41	Pk	34.7	-22.4	46.71	68.2	-21.49	241	101	V
2	5.73933	36.76	Pk	34.7	-22.2	49.26	68.2	-18.94	241	101	V

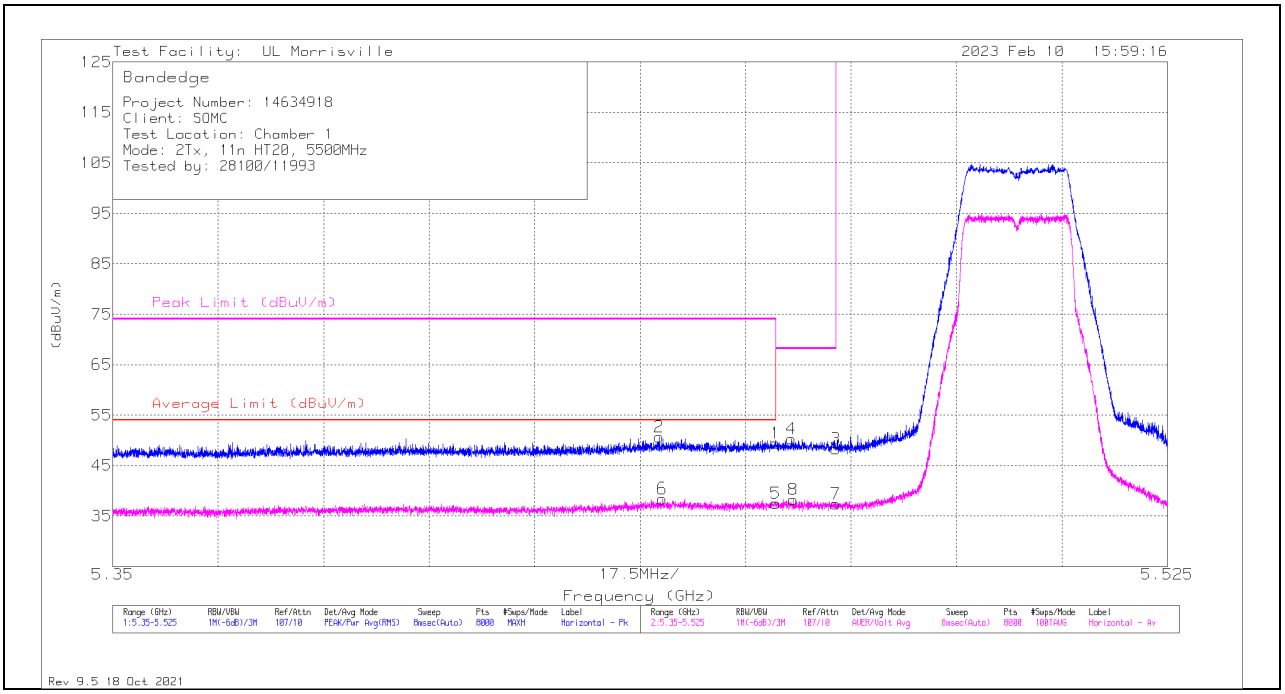
Pk - Peak detector

10.1.2. TX ABOVE 1 GHz 802.11n HT20 MODE IN THE 5.6 GHz BAND

2TX Chain 0 + Chain 1 CDD MODE

BANDEDGE (LOW CHANNEL)

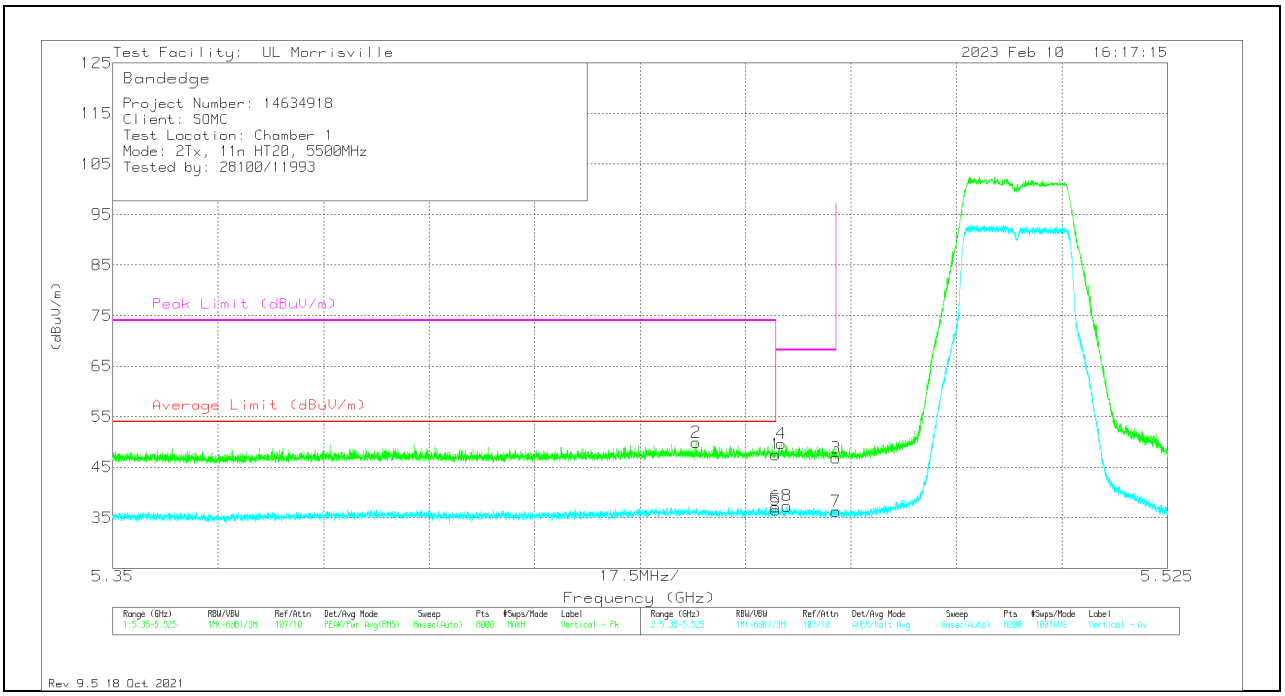
HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 (dB/m)	Gain/Loss (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 5.45998	37.34	Pk	34.4	-22.3	0	49.44	-	-	74	-24.56	270	110	H
2	* ** 5.44064	38.4	Pk	34.4	-22.1	0	50.7	-	-	74	-23.3	270	110	H
5	* ** 5.45998	25.46	ADV	34.4	-22.3	0	37.56	54	-16.44	-	-	270	110	H
6	* ** 5.44121	26.13	ADV	34.4	-22.1	0	38.43	54	-15.57	-	-	270	110	H
4	5.46261	38.22	Pk	34.4	-22.3	0	50.32	-	-	68.2	-17.88	270	110	H
8	5.46289	26.11	ADV	34.4	-22.3	0	38.21	-	-	-	-	270	110	H
3	5.46998	36.29	Pk	34.4	-22.4	0	48.29	-	-	68.2	-19.91	270	110	H
7	5.46998	25.39	ADV	34.4	-22.4	0	37.39	-	-	-	-	270	110	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
ADV - Linear Voltage Average

VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 (dB/m)	Gain/Loss (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 5.45998	35.4	Pk	34.4	-22.3	0	47.5	-	-	74	-26.5	245	120	V
2	* ** 5.44677	37.86	Pk	34.4	-22.3	0	49.96	-	-	74	-24.04	245	120	V
5	* ** 5.45998	24.43	ADV	34.4	-22.3	0	36.53	54	-17.47	-	-	245	120	V
6	* ** 5.45996	25.01	ADV	34.4	-22.3	0	37.11	54	-16.89	-	-	245	120	V
4	5.46092	37.62	Pk	34.4	-22.3	0	49.72	-	-	68.2	-18.48	245	120	V
8	5.46184	25.22	ADV	34.4	-22.3	0	37.32	-	-	-	-	245	120	V
3	5.46998	34.79	Pk	34.4	-22.4	0	46.79	-	-	68.2	-21.41	245	120	V
7	5.46998	24.24	ADV	34.4	-22.4	0	36.24	-	-	-	-	245	120	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
ADV - Linear Voltage Average

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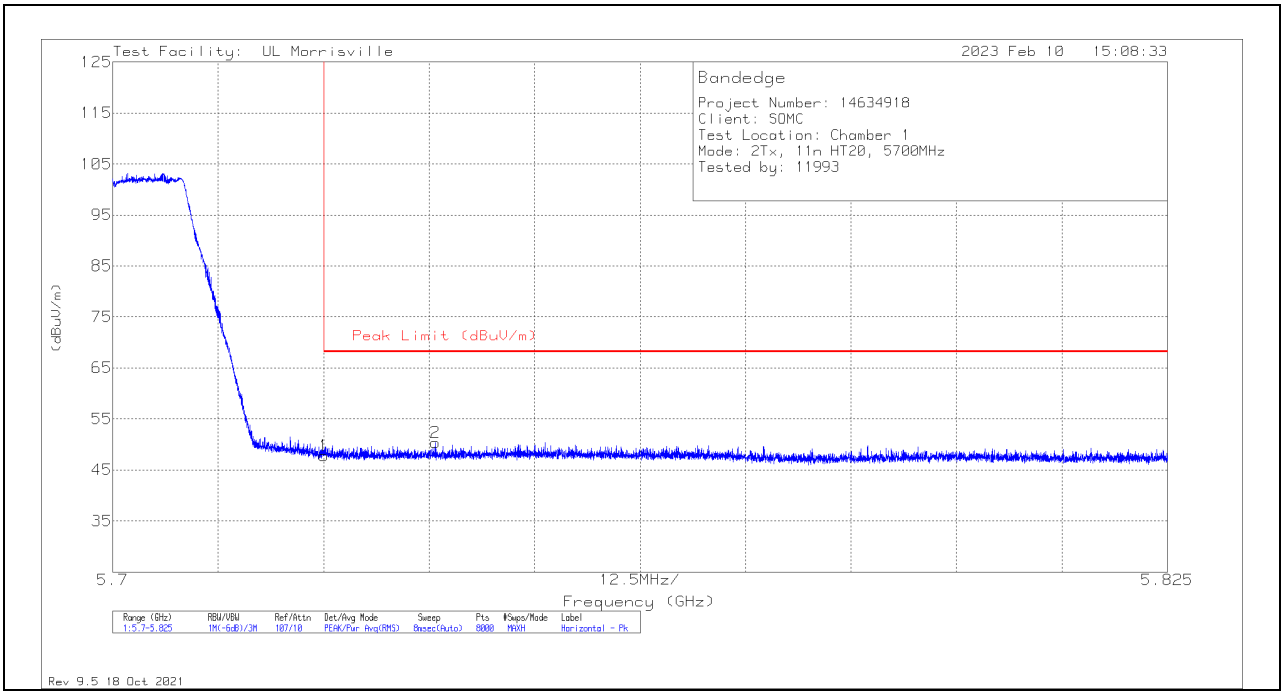
BANDEDGE (HIGH CHANNEL)

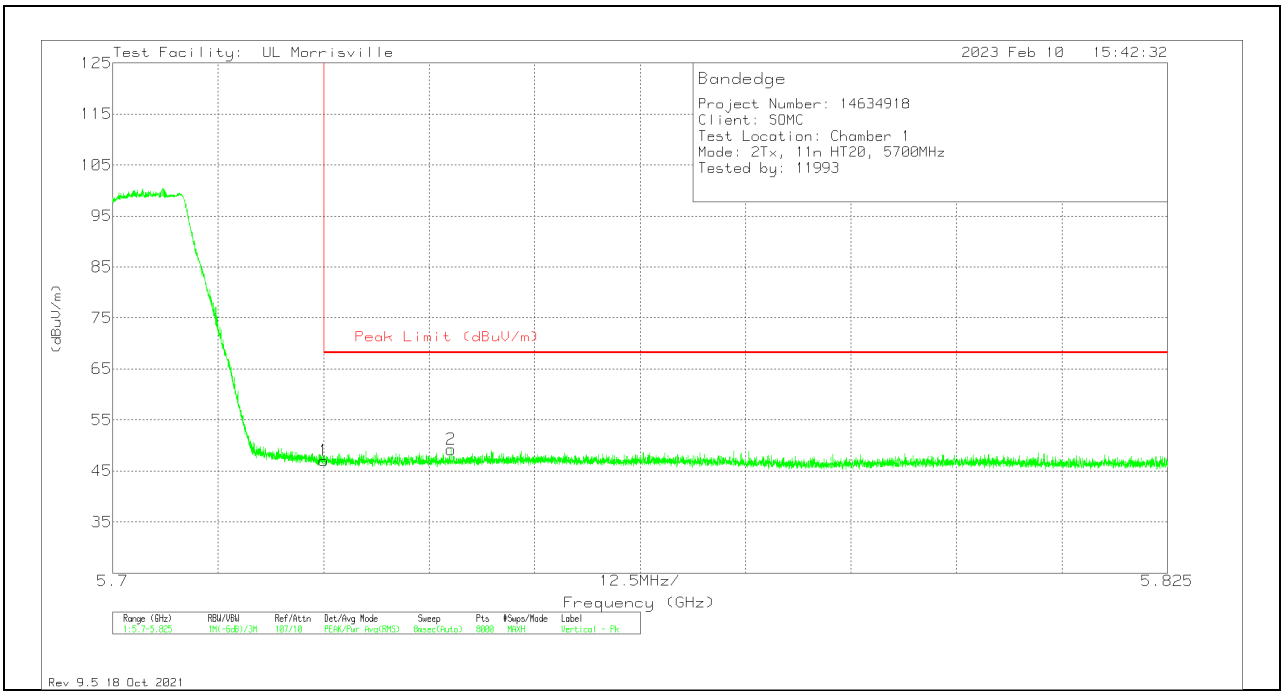
HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	35.47	Pk	34.7	-22.4	47.77	68.2	-20.43	265	103	H
2	5.73824	37.93	Pk	34.7	-22.3	50.33	68.2	-17.87	265	103	H

Pk - Peak detector

VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 (dB/m)	Gain/Loss (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	34.76	Pk	34.7	-22.4	0	47.06	68.2	-21.14	260	116	V
2	5.74011	36.7	Pk	34.7	-22.2	0	49.2	68.2	-19	260	116	V

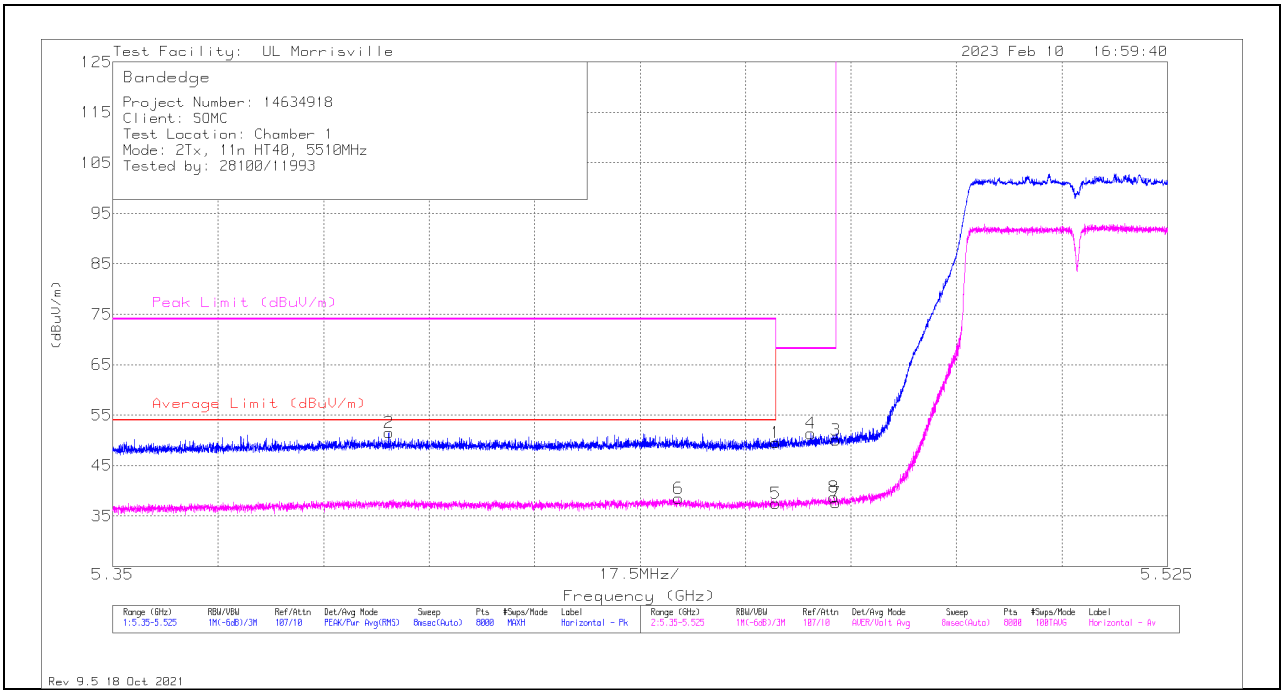
Pk - Peak detector

10.1.3. TX ABOVE 1 GHz 802.11n HT40 MODE IN THE 5.6 GHz BAND

2TX Chain 0 + Chain 1 CDD MODE

BANDEDGE (LOW CHANNEL)

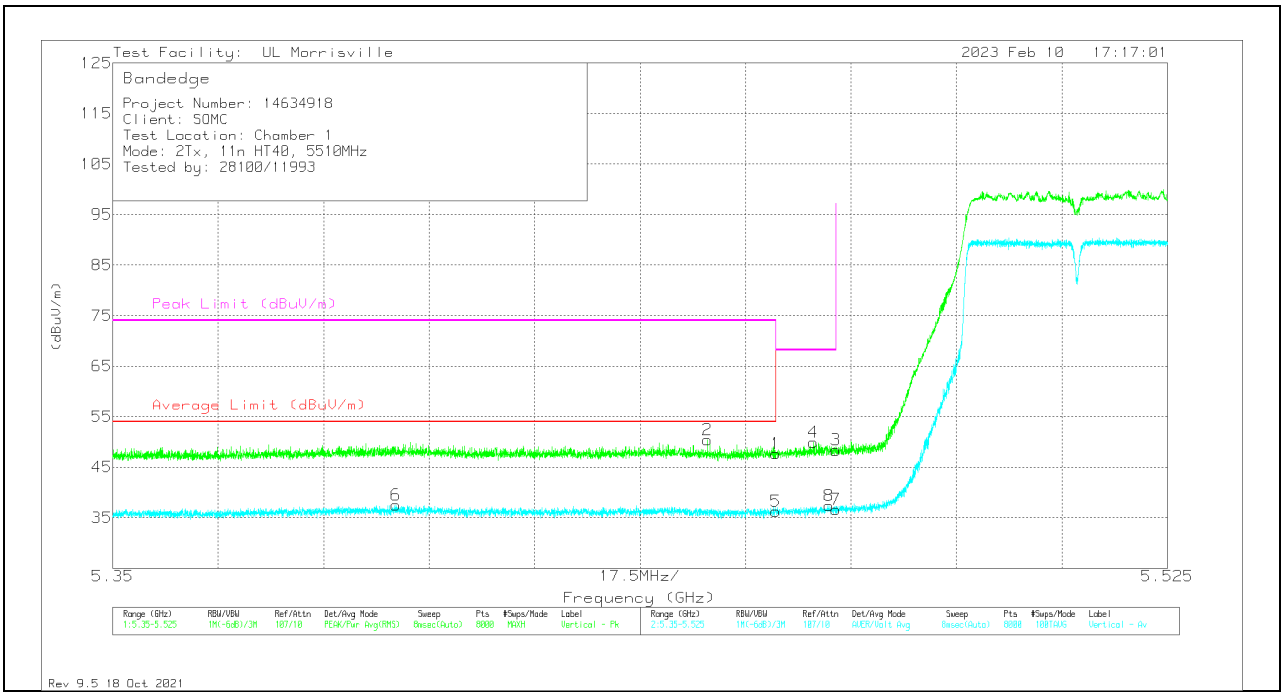
HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 (dB/m)	Gain/Loss (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 5.45998	37.47	Pk	34.4	-22.3	0	49.57	-	-	74	-24.43	269	104	H
2	* ** 5.39581	39.36	Pk	34.4	-22.2	0	51.56	-	-	74	-22.44	269	104	H
5	* ** 5.45998	25.38	ADV	34.4	-22.3	0	37.48	54	-16.52	-	-	269	103	H
6	* ** 5.44392	26.35	ADV	34.4	-22.2	0	38.55	54	-15.45	-	-	269	103	H
4	5.4658	39.25	Pk	34.4	-22.3	0	51.35	-	-	68.2	-16.85	269	104	H
8	5.46967	26.8	ADV	34.4	-22.4	0	38.8	-	-	-	-	269	103	H
3	5.46998	38.1	Pk	34.4	-22.4	0	50.1	-	-	68.2	-18.1	269	104	H
7	5.46998	25.61	ADV	34.4	-22.4	0	37.61	-	-	-	-	269	103	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
ADV - Linear Voltage Average

VERTICAL RESULT

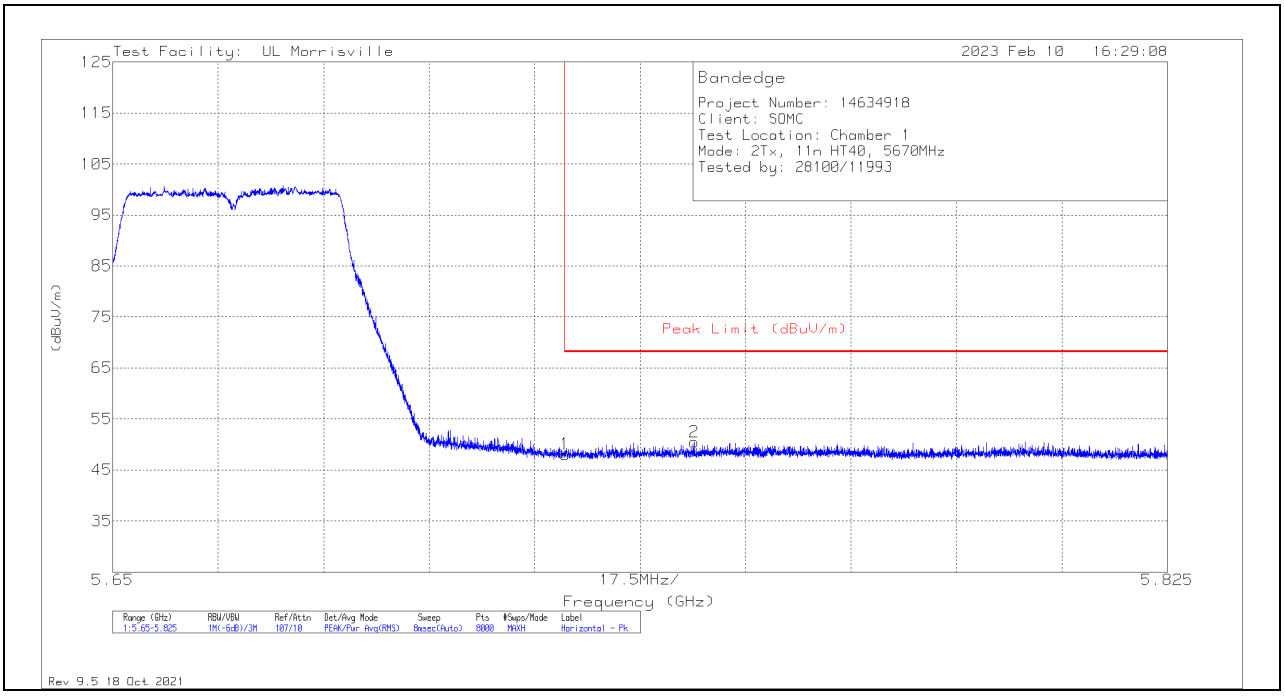


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 (dB/m)	Gain/Loss (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 5.45998	35.61	Pk	34.4	-22.3	0	47.71	-	-	74	-26.29	237	105	V
2	* ** 5.44867	38.36	Pk	34.4	-22.4	0	50.36	-	-	74	-23.64	237	105	V
5	* ** 5.45998	24.2	ADV	34.4	-22.3	0	36.3	54	-17.7	-	-	237	105	V
6	* ** 5.39702	25.36	ADV	34.4	-22.2	0	37.56	54	-16.44	-	-	237	105	V
4	5.46628	37.85	Pk	34.4	-22.3	0	49.95	-	-	68.2	-18.25	237	105	V
8	5.4688	25.42	ADV	34.4	-22.4	0	37.42	-	-	-	-	237	105	V
3	5.46998	36.37	Pk	34.4	-22.4	0	48.37	-	-	68.2	-19.83	237	105	V
7	5.46998	24.68	ADV	34.4	-22.4	0	36.68	-	-	-	-	237	105	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
ADV - Linear Voltage Average

BANDEDGE (HIGH CHANNEL)

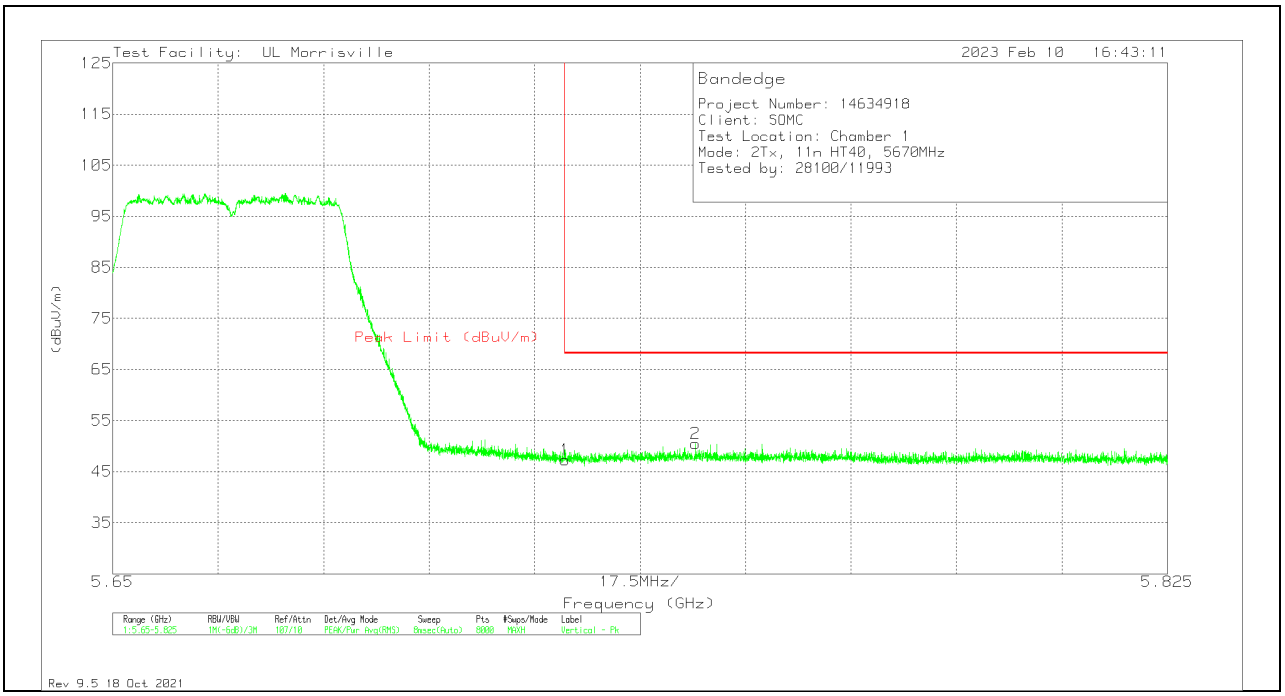
HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 (dB/m)	Gain/Loss (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.72502	35.79	Pk	34.7	-22.4	0	48.09	68.2	-20.11	266	115	H
2	5.7465	37.9	Pk	34.7	-22.1	0	50.5	68.2	-17.7	266	115	H

Pk - Peak detector

VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 (dB/m)	Gain/Loss (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.72502	34.94	Pk	34.7	-22.4	0	47.24	68.2	-20.96	241	103	V
2	5.7467	37.87	Pk	34.7	-22.1	0	50.47	68.2	-17.73	241	103	V

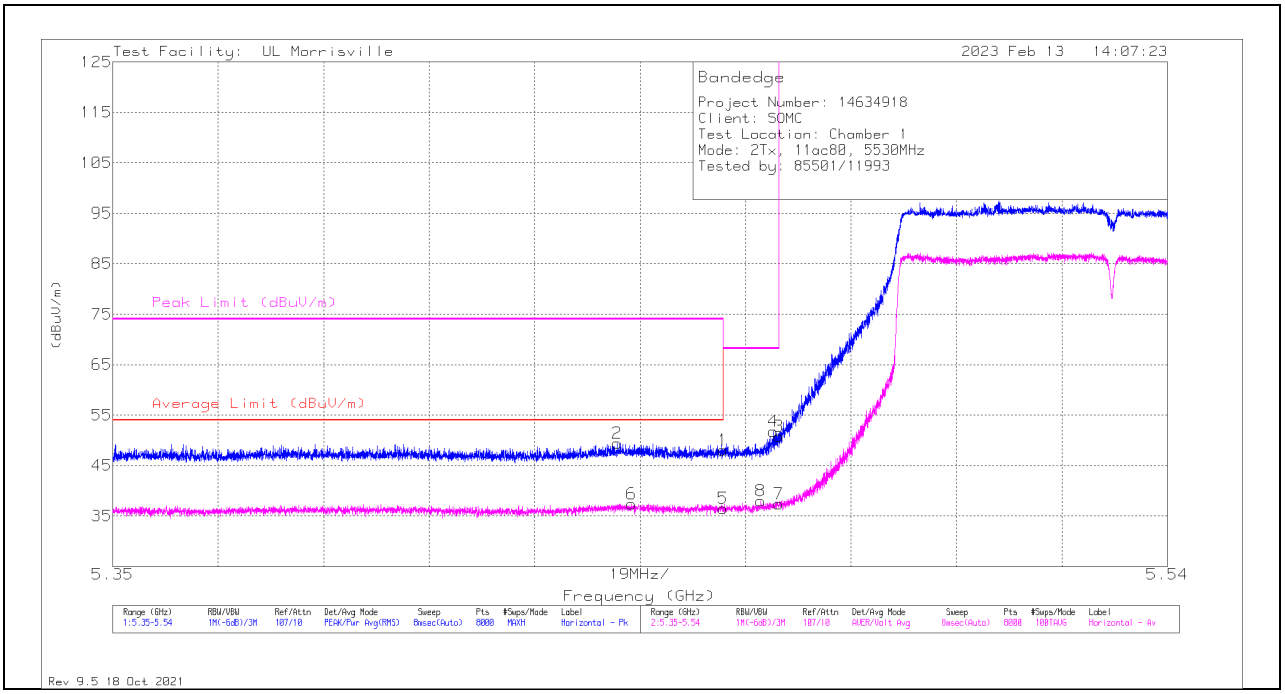
Pk - Peak detector

10.1.4. TX ABOVE 1 GHz 802.11ac VHT80 MODE IN THE 5.6 GHz BAND

2TX Chain 0 + Chain 1 CDD MODE

BANDEDGE (LOW CHANNEL)

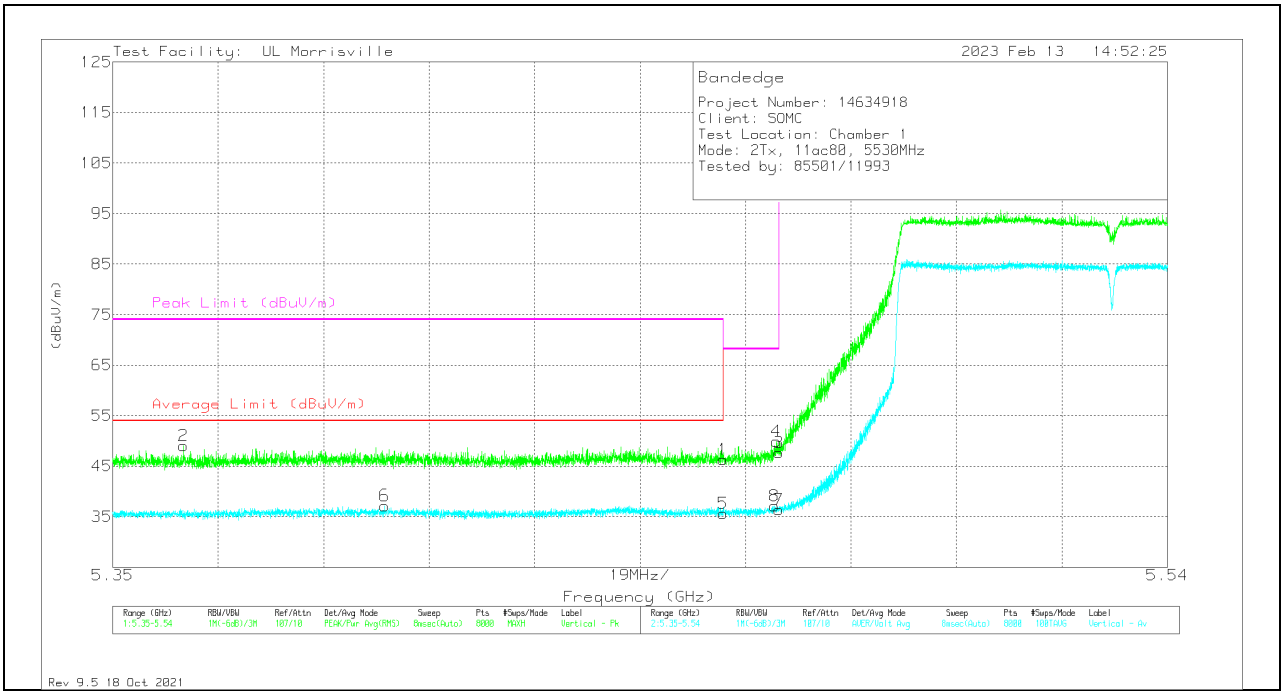
HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 5.45998	35.96	Pk	34.4	-22.3	48.06	-	-	74	-25.94	26	212	H
2	* ** 5.44086	37.11	Pk	34.4	-22.1	49.41	-	-	74	-24.59	26	212	H
5	* ** 5.45998	24.38	ADV	34.4	-22.3	36.48	54	-17.52	-	-	26	212	H
6	* ** 5.44342	25.21	ADV	34.4	-22.2	37.41	54	-16.59	-	-	26	212	H
8	5.46677	26	ADV	34.4	-22.4	38	-	-	-	-	26	212	H
4	5.46893	39.76	Pk	34.4	-22.4	51.76	-	-	68.2	-16.44	26	212	H
3	5.46998	38.76	Pk	34.4	-22.4	50.76	-	-	68.2	-17.44	26	212	H
7	5.46998	25.33	ADV	34.4	-22.4	37.33	-	-	-	-	26	212	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
ADV - Linear Voltage Average

VERTICAL RESULT

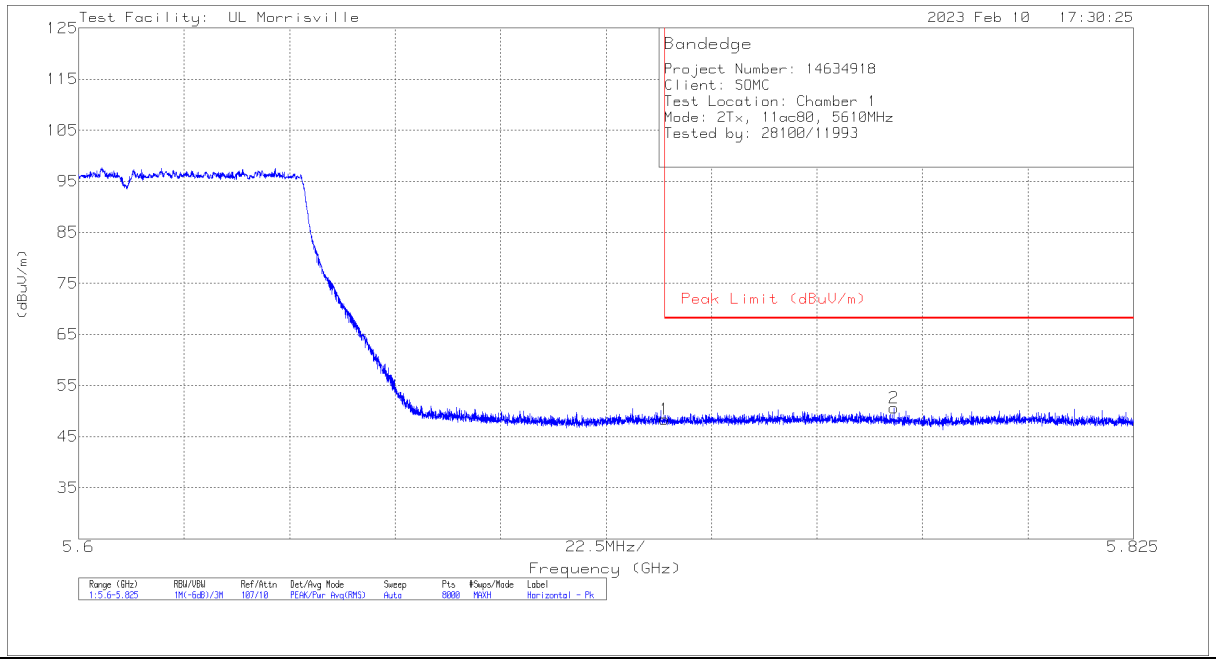


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 5.45998	34.19	Pk	34.4	-22.3	46.29	-	-	74	-27.71	70	283	V
2	* ** 5.36276	37.07	Pk	34.4	-22.4	49.07	-	-	74	-24.93	70	283	V
5	* ** 5.45998	23.57	ADV	34.4	-22.3	35.67	54	-18.33	-	-	70	283	V
6	* ** 5.399	24.99	ADV	34.4	-22.2	37.19	54	-16.81	-	-	70	283	V
8	5.46919	25.18	ADV	34.4	-22.4	37.18	-	-	-	-	70	283	V
4	5.4695	37.93	Pk	34.4	-22.4	49.93	-	-	68.2	-18.27	70	283	V
3	5.46998	35.71	Pk	34.4	-22.4	47.71	-	-	68.2	-20.49	70	283	V
7	5.46998	24.36	ADV	34.4	-22.4	36.36	-	-	-	-	70	283	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
ADV - Linear Voltage Average

BANDEDGE (HIGH CHANNEL)

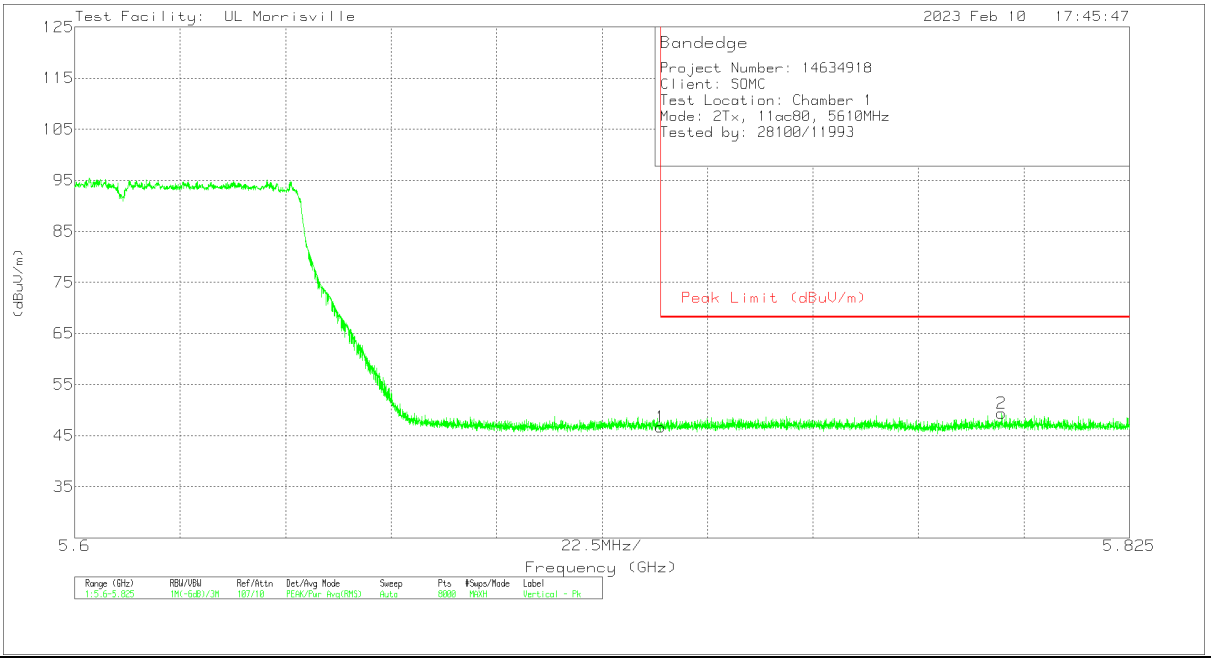
HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 (dB/m)	Gain/Loss (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.72501	36.12	Pk	34.7	-22.4	0	48.42	68.2	-19.78	268	111	H
2	5.77395	37.86	Pk	34.8	-22.1	0	50.56	68.2	-17.64	268	111	H

Pk - Peak detector

VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 (dB/m)	Gain/Loss (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.72501	34.39	Pk	34.7	-22.4	0	46.69	68.2	-21.51	237	105	V
2	5.79778	36.56	Pk	34.8	-22	0	49.36	68.2	-18.84	237	105	V

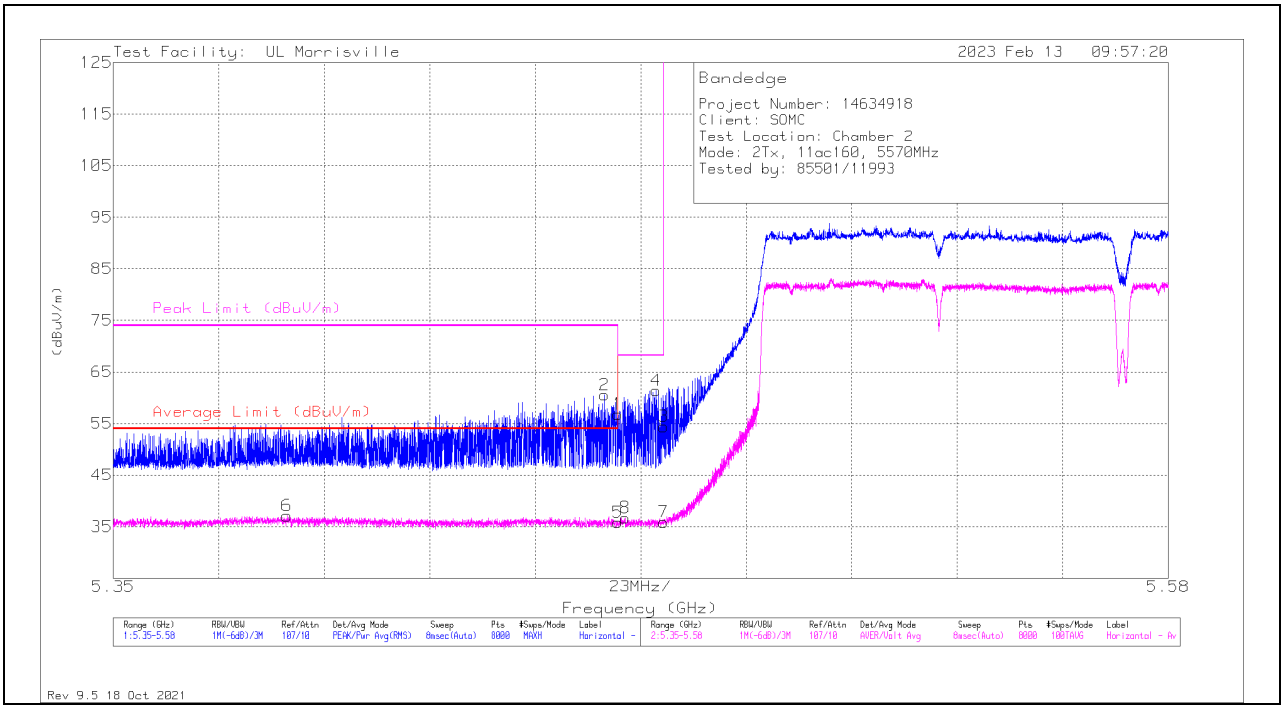
Pk - Peak detector

10.1.5. TX ABOVE 1 GHz 802.11ac VHT160 MODE IN THE 5.6 GHz BAND

2TX Chain 0 + Chain 1 CDD MODE

BANDEDGE (LOW EDGE)

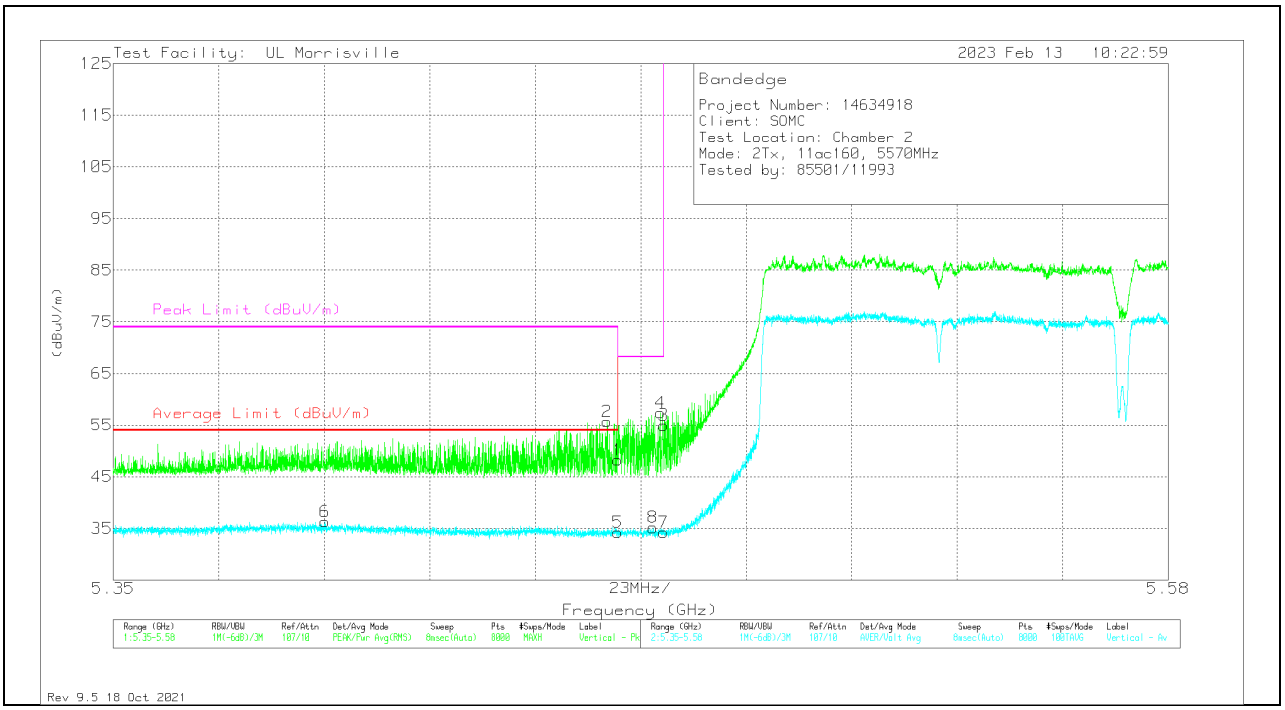
HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 5.45998	44.69	Pk	34.4	-22.3	56.79	-	-	74	-17.21	19	117	H
2	* ** 5.45711	48.52	Pk	34.4	-22.4	60.52	-	-	74	-13.48	19	117	H
5	* ** 5.45998	23.72	ADV	34.4	-22.3	35.82	54	-18.18	-	-	19	117	H
6	* ** 5.38787	24.92	ADV	34.4	-22.2	37.12	54	-16.88	-	-	19	117	H
8	5.46159	24.6	ADV	34.4	-22.3	36.7	-	-	-	-	19	117	H
4	5.46838	49.4	Pk	34.4	-22.4	61.4	-	-	68.2	-6.8	19	117	H
3	5.46999	42.41	Pk	34.4	-22.4	54.41	-	-	68.2	-13.79	19	117	H
7	5.46999	23.89	ADV	34.4	-22.4	35.89	-	-	-	-	19	117	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
ADV - Linear Voltage Average

VERTICAL RESULT

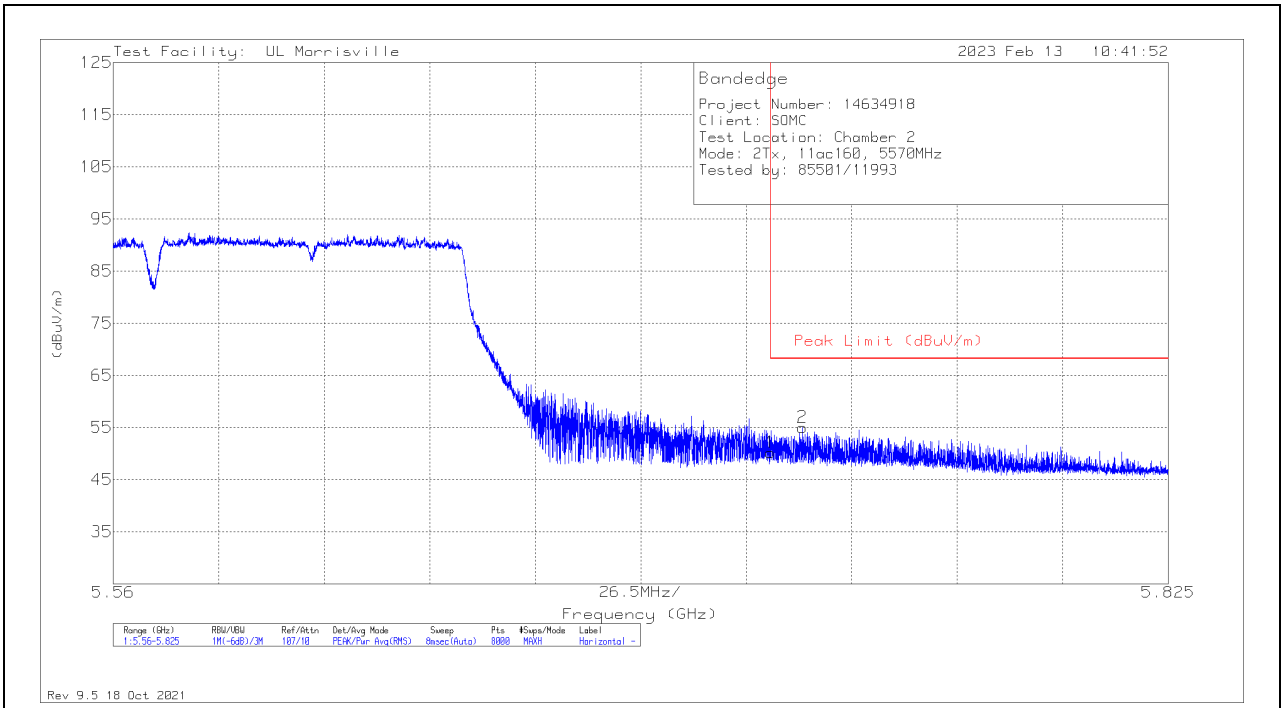


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 5.45998	36.15	Pk	34.4	-22.3	48.25	-	-	74	-25.75	147	193	V
2	* ** 5.45768	43.66	Pk	34.4	-22.4	55.66	-	-	74	-18.34	147	193	V
5	* ** 5.45998	22.11	ADV	34.4	-22.3	34.21	54	-19.79	-	-	147	193	V
6	* ** 5.39618	24.08	ADV	34.4	-22.2	36.28	54	-17.72	-	-	147	193	V
8	5.4676	23.16	ADV	34.4	-22.4	35.16	-	-	-	-	147	193	V
4	5.46927	45.37	Pk	34.4	-22.4	57.37	-	-	68.2	-10.83	147	193	V
3	5.46999	42.97	Pk	34.4	-22.4	54.97	-	-	68.2	-13.23	147	193	V
7	5.46999	22.21	ADV	34.4	-22.4	34.21	-	-	-	-	147	193	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
ADV - Linear Voltage Average

BANDEDGE (UPPER EDGE)

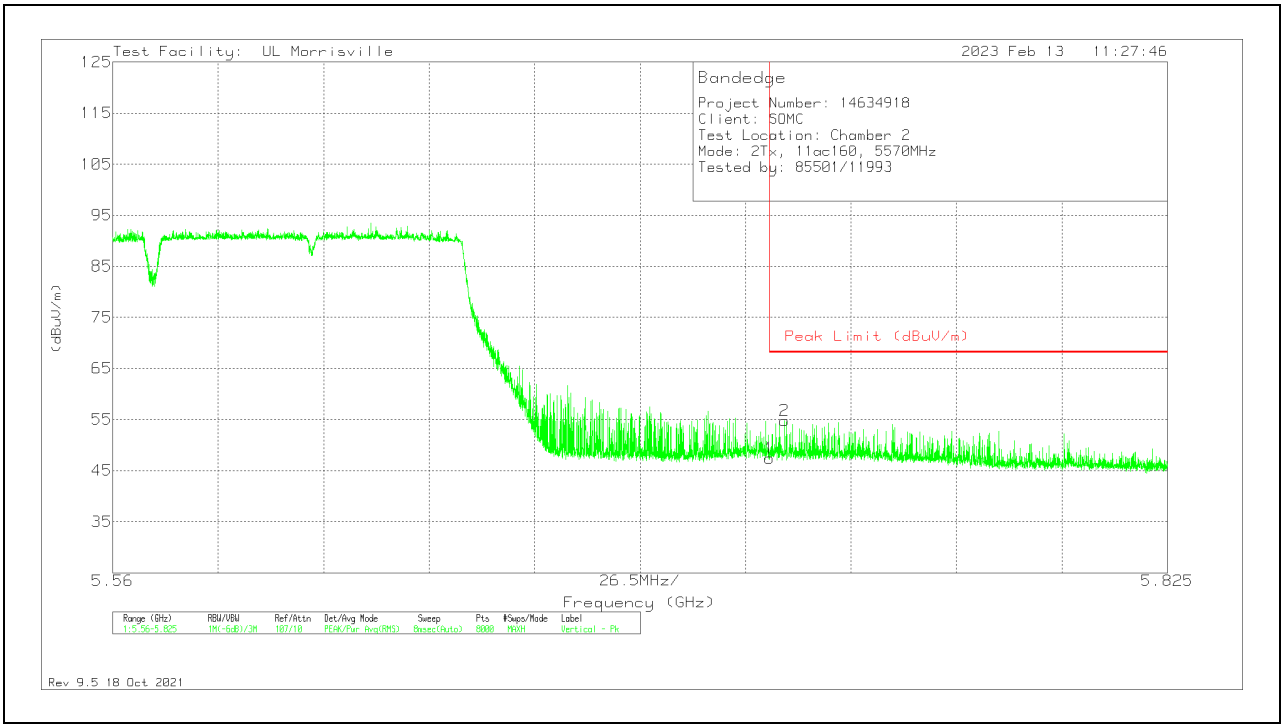
HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.72502	37.88	Pk	34.7	-22.4	50.18	68.2	-18.02	22	243	H
2	5.7331	42.72	Pk	34.7	-22.4	55.02	68.2	-13.18	22	243	H

Pk - Peak detector

VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.72502	35.15	Pk	34.7	-22.4	47.45	68.2	-20.75	43	303	V
2	5.72879	42.5	Pk	34.7	-22.4	54.8	68.2	-13.4	43	303	V

Pk - Peak detector

11. SETUP PHOTOS

Please refer to R14634918-EP5 for setup photos

END OF TEST REPORT

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