FCC RF Test Report

APPLICANT	:	Motorola Mobility LLC
EQUIPMENT	:	Mobile Cellular Phone
BRAND NAME	:	Motorola
MODEL NAME	:	XT2175-1
FCC ID	:	IHDT56AC1
STANDARD	:	FCC Part 15 Subpart E §15.407
CLASSIFICATION	:	(NII) Unlicensed National Information Infrastructure
TEST DATE(S)	:	Sep. 08, 2021 ~ Oct. 09, 2021

We, Sporton International (Kunshan) Inc., would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of Sporton International (Kunshan) Inc., the test report shall not be reproduced except in full.

Reviewed by: Jason Jia / Supervisor

Approved by: Alex Wang / Manager

Sporton International (Kunshan) Inc.
No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300
People's Republic of China

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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR172703E	Rev. 01	Initial issue of report	Oct. 19, 2021

SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.1	2.1049 & 15.403(i)	26dB & 99% Bandwidth	-	Report only	-
3.2	15.407(a)	Maximum Conducted Output Power	≤ 24 dBm	Pass	-
3.3	15.407(a)	Power Spectral Density	≤ 11 dBm	Pass	-
3.4	15.407(b)	Unwanted Emissions	15.407(b) & 15.209(a)	Pass	Under limit 4.00 dB at 5114.880 MHz
3.5	15.207	AC Conducted Emission	15.207(a)	Pass	Under limit 6.73 dB at 0.206 MHz
3.6	15.203 & 15.407(a)	Antenna Requirement	15.203 & 15.407(a)	Pass	-

Declaration of Conformity:
The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.
Comments and Explanations:
The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

1 General Description

1.1 Applicant

Motorola Mobility LLC
222 W, Merchandise Mart Plaza, Chicago IL 60654 USA

1.2 Manufacturer

Motorola Mobility LLC
222 W, Merchandise Mart Plaza, Chicago IL 60654 USA

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	Mobile Cellular Phone
Brand Name	Motorola
Model Name	XT2175-1
FCC ID	IHDT56AC1
IMEI Code	Conducted: 350506880020187/350506880020195 Conduction: 350506880020864/350506880020872 Radiation: 350506880021441/350506880021458
HW Version	DVT2
SW Version	RRX31.Q3-38
EUT Stage	Identical Prototype

Remark:
The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

1.4 Product Specification of Equipment Under Test

Standards-related Product Specification	
Tx/Rx Frequency Range	5180 MHz ~ 5240 MHz 5260 MHz ~ 5320 MHz 5500 MHz ~ 5700 MHz
Maximum Output Power to Antenna	**<MIMO Ant. 1+2>** **<5180 MHz ~ 5250 MHz>** 802.11a : 20.29 dBm / 0.1069 W 802.11ax HE20 : 18.98 dBm / 0.0791 W 802.11ax HE40 : 18.91 dBm / 0.0778 W 802.11ax HE80 : 17.93 dBm / 0.0621 W 802.11ax HE160 : 17.19 dBm / 0.0524 W **<5260 MHz ~ 5320 MHz>** 802.11a : 20.08 dBm / 0.1019 W 802.11ax HE20 : 18.87 dBm / 0.0771 W 802.11ax HE40 : 18.93 dBm / 0.0782 W 802.11ax HE80 : 18.17 dBm / 0.0656 W **<5500 MHz ~ 5700 MHz >** 802.11a : 20.33 dBm / 0.1079 W 802.11ax HE20 : 19.22 dBm / 0.0836 W 802.11ax HE40 : 19.28 dBm / 0.0847 W 802.11ax HE80 : 17.40 dBm / 0.0550 W
99% Occupied Bandwidth	**<MIMO Ant. 1+2>** **<5180 MHz ~ 5250 MHz>** 802.11a : 17.46 MHz 802.11ax HE20 : 19.54 MHz 802.11ax HE40 : 38.12 MHz 802.11ax HE80 : 77.20 MHz 802.11ax HE160 : 156.96 MHz **<5260 MHz ~ 5320 MHz >** 802.11a : 17.46 MHz 802.11ax HE20 : 19.58 MHz 802.11ax HE40 : 38.20 MHz 802.11ax HE80 : 77.20 MHz **<5500 MHz ~ 5700 MHz >** 802.11a : 17.18 MHz 802.11ax HE20 : 19.58 MHz 802.11ax HE40 : 38.04 MHz 802.11ax HE80 : 77.20 MHz
Antenna Type / Gain	**<5150 MHz ~ 5250 MHz>** <Ant. 1> : IFA Antenna with gain -8.3 dBi <Ant. 2> : IFA Antenna with gain -6.6 dBi **<5250 MHz ~ 5350 MHz>** <Ant. 1> : IFA Antenna with gain -7.3 dBi <Ant. 2> : IFA Antenna with gain -6.5 dBi **<5470 MHz ~ 5725 MHz>** <Ant. 1> : IFA Antenna with gain -7.1 dBi <Ant. 2> : IFA Antenna with gain -6.7 dBi
Type of Modulation	802.11a/n : OFDM (BPSK / QPSK / 16QAM / 64QAM) 802.11ac/ax : OFDM (BPSK / QPSK / 16QAM / 64QAM / 256QAM / 1024QAM)

Antenna Function Description		Ant. 1	Ant. 2
	802.11 a/n/ac/ax MIMO	V	V

Note:

1. WLAN operation in 5600 MHz ~ 5650 MHz is notched.
2. WLAN 5G Ant. 1 / Ant. 2 corresponding to EUT Photo Ant. 6 / Ant. 7
3. For 802.11n/11ac/11ax of 20M/40M/80M modes, the full testing assessed 802.11ax HE20/HE40/HE80 by referring to the maximum output power.
4. 802.11ax support OFDMA full RU tone and partial RU tone, both full RU and partial RU-left (for low CH) and partial RU-right (for high CH) are tested, only the worse data were reported.

1.5 Modification of EUT

No modifications are made to the EUT during all test items.

1.6 Specification of Accessory

Specification of Accessory				
AC Adapter 1(US)	**Brand Name**	Motorola(Salcomp)	**Model Name**	MC-331
AC Adapter 1(EU)	**Brand Name**	Motorola(Salcomp)	**Model Name**	MC-332
AC Adapter 1(UK)	**Brand Name**	Motorola(Salcomp)	**Model Name**	MC-333
AC Adapter 1(AR)	**Brand Name**	Motorola(Salcomp)	**Model Name**	MC-336
AC Adapter 1(BR)	**Brand Name**	Motorola(Salcomp)	**Model Name**	MC-337
AC Adapter 1(PRC)	**Brand Name**	Motorola(Salcomp)	**Model Name**	MC-338
AC Adapter 1(CHILE)	**Brand Name**	Motorola(Salcomp)	**Model Name**	MC-339
AC Adapter 2(US)	**Brand Name**	Motorola(Chenyang)	**Model Name**	MC-331
AC Adapter 2(EU)	**Brand Name**	Motorola(Chenyang)	**Model Name**	MC-332
AC Adapter 2(AR)	**Brand Name**	Motorola(Chenyang)	**Model Name**	MC-336
AC Adapter 2(BR)	**Brand Name**	Motorola(Chenyang)	**Model Name**	MC-337
AC Adapter 3(US)	**Brand Name**	Motorola(Acbel)	**Model Name**	MC-331
AC Adapter 3(EU)	**Brand Name**	Motorola(Acbel)	**Model Name**	MC-332
AC Adapter 3(UK)	**Brand Name**	Motorola(Acbel)	**Model Name**	MC-333
Battery	**Brand Name**	Motorola(ATL)	**Model Name**	MB50
Earphone 1	**Brand Name**	Motorola(Lyand)	**Model Name**	MH191(SH38C81577)
Earphone 2	**Brand Name**	Motorola(LCHSE)	**Model Name**	MH191(SH38C81576)
Type C to Audio Cable	**Brand Name**	Motorola(Luxshare)	**Model Name**	SC18C27844
Type C to HDMI Cable	**Brand Name**	Motorola(Linxee)	**Model Name**	SC18D02146
USB Cable 1	**Brand Name**	Motorola(Saibao)	**Model Name**	SC18D22297
USB Cable 2	**Brand Name**	Motorola(Cabletech)	**Model Name**	SC18D22298
USB Cable 3	**Brand Name**	Motorola(Luxshare)	**Model Name**	SC18D22299

1.7 Testing Location

Sporton International (Kunshan) Inc. is accredited to ISO/IEC 17025:2017 by American Association for Laboratory Accreditation with Certificate Number 5145.02.

Test Firm	Sporton International (Kunshan) Inc.		
Test Site Location	No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300 People's Republic of China TEL : +86-512-57900158 FAX : +86-512-57900958		
Test Site No.	**Sporton Site No.**	**FCC Designation No.**	**FCC Test Firm Registration No.**
	CO01-KS 03CH05-KS TH01-KS	CN1257	314309

1.8 Test Software

Item	Site	Manufacturer	Name	Version
1.	03CH05-KS	AUDIX	E3	6.2009-8-24al
2.	CO01-KS	AUDIX	E3	6.2009-8-24

1.9 Applicable Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- 47 CFR Part 15 Subpart E
- FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.
- FCC KDB 662911 D01 Multiple Transmitter Output v02r01.
- ANSI C63.10-2013

Remark:

1. All test items were verified and recorded according to the standards and without any deviation during the test.
2. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.

2 Test Configuration of Equipment Under Test

a. The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application. Frequency range investigated: conduction emission (150 kHz to 30 MHz), radiation emission (9 kHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower). For radiated measurement, pre-scanned in three orthogonal panels, X, Y, Z. The worst cases (Y plane) were recorded in this report.

b. AC power line Conducted Emission was tested under maximum output power.

2.1 Carrier Frequency and Channel

Frequency Band	Channel	Freq.(MHz)	Channel	Freq.(MHz)
5150-5250 MHz U-NII-1	36	5180	44	5220
	38*	5190	46*	5230
	40	5200	48	5240
	42#	5210	-	-

Frequency Band	Channel	Freq.(MHz)	Channel	Freq.(MHz)
5250-5350 MHz U-NII-2A	52	5260	60	5300
	54*	5270	62*	5310
	56	5280	64	5320
	58#	5290	-	-

Frequency Band	Channel	Freq.(MHz)	Channel	Freq.(MHz)
5470-5725 MHz U-NII-2C	100	5500	112	5560
	102*	5510	116	5580
	104	5520	132	5660
	106#	5530	134*	5670
	108	5540	136	5680
	110*	5550	140	5700

Frequency Band	Channel	Freq.(MHz)	Channel	Freq.(MHz)
U-NII-1 + U-NII-2A Straddle Channel	50$	5250	-	-

Note:

1. The above Frequency and Channel in "*" were 802.11n HT40/11ac VHT40/11ax HE40.
2. The above Frequency and Channel in "#" were 802.11ac VHT80 /11ax HE80.
3. The above Frequency and Channel in "$" were 802.11ac VHT160/11ax HE160.

2.2 Test Mode

Final test modes are considering the modulation and worse data rates as below table.

MIMO Mode

Modulation	Data Rate
802.11a	6 Mbps
802.11ax HE20	MCS0
802.11ax HE40	MCS0
802.11ax HE80	MCS0
802.11ax HE160	MCS0

Co-location
GSM850 + 802.11ax HE160 CH50 + BLE v5.2 CH39
GSM850 + 802.11ax HE160 CH50 + 802.11ax HE20 CH01

Test Cases	
AC Conducted Emission	Mode 1 : GSM850 Idle + Bluetooth Link + WLAN Link(5G) + USB Cable 1(Charging from Adapter 1)
Remark: For Radiated Test Cases, The tests were performance with Adapter 1 and USB Cable 1.	

Ch. #		U-NII-1	U-NII-2A	U-NII-2C
		802.11a	802.11a	802.11a
L	Low	36	52	100
M	Middle	44	60	116
H	High	48	64	140

Ch. #		U-NII-1	U-NII-2A	U-NII-2C
		802.11ax HE20	802.11ax HE20	802.11ax HE20
L	Low	36	52	100
M	Middle	44	60	116
H	High	48	64	140

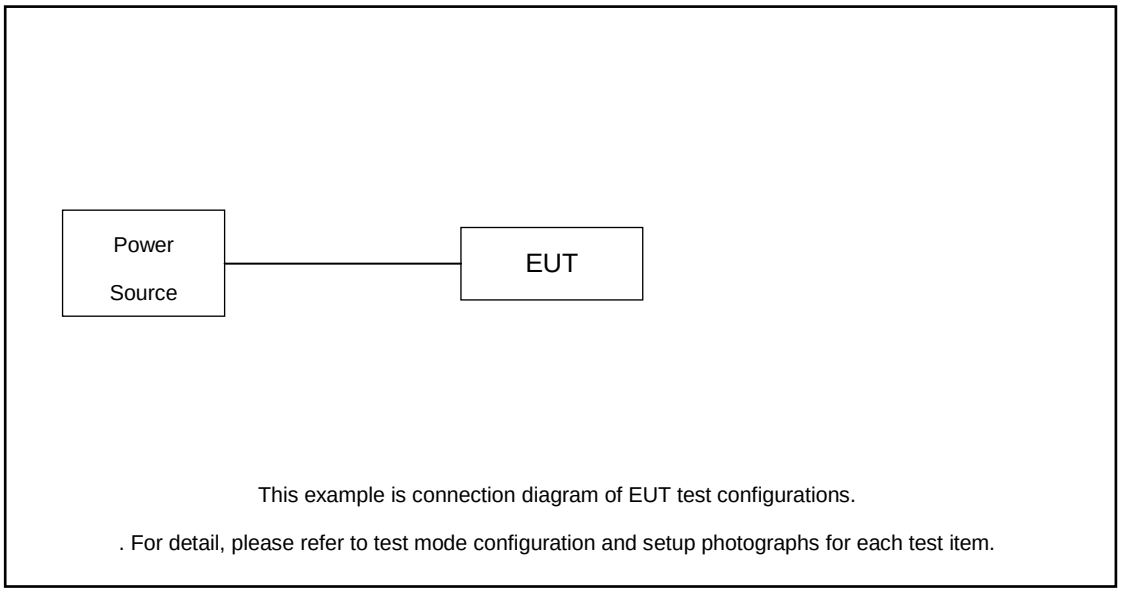
Ch. #		U-NII-1	U-NII-2A	U-NII-2C
		802.11ax HE40	802.11ax HE40	802.11ax HE40
L	Low	38	54	102
M	Middle	-	-	110
H	High	46	62	134

Ch. #		U-NII-1	U-NII-2A	U-NII-2C
		802.11ax HE80	802.11ax HE80	802.11ax HE80
L	Low	-	-	-
M	Middle	42	58	106
H	High	-	-	-

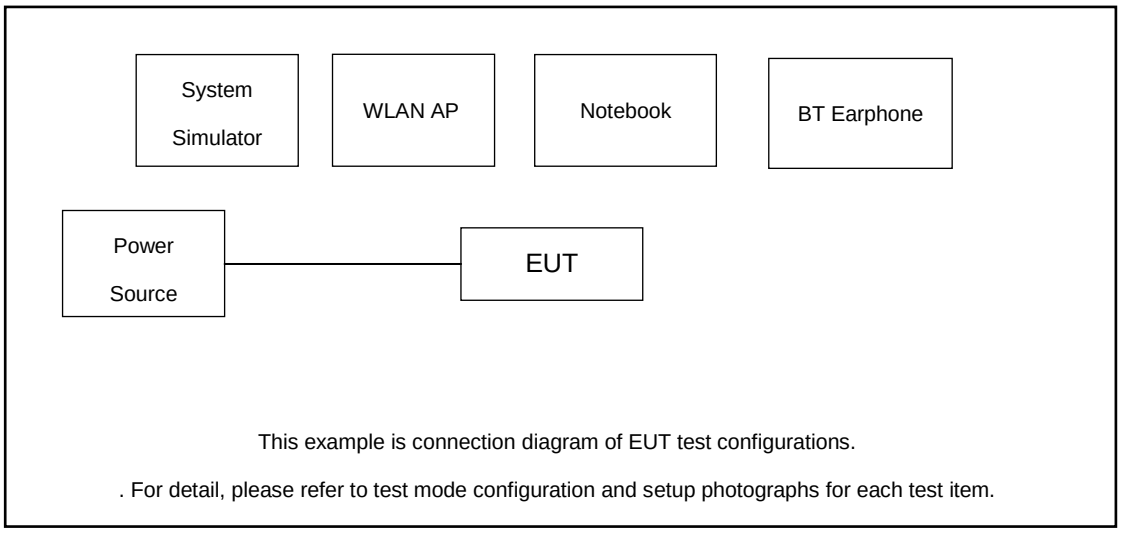
Ch. #		U-NII-1 + U-NII-2A
		802.11ax HE160
L	Low	-
M	Middle	50
H	High	-

2.3 Connection Diagram of Test System

For Radiated Emission



For Conducted Emission



2.4 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	System Simulator	R&S	CMU 200	N/A	N/A	Unshielded, 1.8 m
2.	WLAN AP	D-link	DIR-655	KA21R655B1	N/A	Unshielded,1.8m
3.	Notebook	Lenovo	G480	QDS-BRCM1050I	N/A	AC I/P: Unshielded, 1.8 m DC O/P: Shielded, 1.8 m
4.	Bluetooth Earphone	Lenovo	LBH308	N/A	N/A	N/A

2.5 EUT Operation Test Setup

For WLAN RF test items, an engineering test program was provided and enabled to make EUT continuous transmit.

For AC power line conducted emissions, the EUT was set to connect with the WLAN AP under large package sizes transmission.

2.6 Measurement Results Explanation Example

For all conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss between EUT conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly the EUT RF output level.

Example :

The spectrum analyzer offset is derived from RF cable loss.

Offset = RF cable loss.

Following shows an offset computation example with cable loss 7.2 dB.

Offset(dB) = RF cable loss(dB).

= 7.2 (dB)

3 Test Result

3.1 26dB & 99% Occupied Bandwidth Measurement

3.1.1 Description of 26dB & 99% Occupied Bandwidth

This section is for reporting purpose only.

There is no restriction limits for bandwidth.

For Straddle Channel, According to KDB 789033 D02 General UNII Test Procedures New Rules v02r01, If the power and PSD of the devices are uniform and comply with the lower limits specified for the U-NII-2 bands, a single measurement over the entire emission bandwidth can be performed to show compliance.

3.1.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.1.3 Test Procedures

1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01. Section C) Emission bandwidth
2. Set RBW = approximately 1% of the emission bandwidth.
3. Set the VBW > RBW.
4. Detector = Peak.
5. Trace mode = max hold
6. Measure the maximum width of the emission that is 26 dB down from the peak of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.
7. For 99% Bandwidth Measurement, the spectrum analyzer's resolution bandwidth (RBW) is set 1MHz and set the Video bandwidth (VBW) ≥ 3 * RBW.
8. Measure and record the results in the test report.

3.1.4 Test Setup

3.1.5 Test Result of 26dB & 99% Occupied Bandwidth

Please refer to Appendix A.

3.2 Maximum Conducted Output Power Measurement

3.2.1 Limit of Maximum Conducted Output Power

<FCC 14-30 CFR 15.407>

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.

For the 5.25–5.725 GHz bands, 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.

For Straddle Channel, According to KDB 789033 D02 General UNII Test Procedures New Rules v02r01, If the power and PSD of the devices are uniform and comply with the lower limits specified for the U-NII-2 bands, a single measurement over the entire emission bandwidth can be performed to show compliance.

If transmitting antennas of directional gain greater than 6 dBi are used, the peak output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

Note that U-NII-2 band, 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 the maximum permitted e.i.r.p. of 1 W.

3.2.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.2.3 Test Procedures

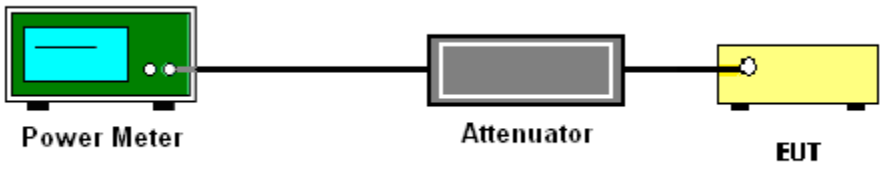
The testing follows Method PM of FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.

Method PM (Measurement using an RF average power meter):

1. Measurement is performed using a wideband RF power meter.
2. The EUT is configured to transmit continuously with a consistent duty cycle at its maximum power control level.
3. Measure the average power of the transmitter, and the average power is corrected with duty factor, 10 log(1/x), where x is the duty cycle.
4. For MIMO mode, the measure-and-sum technique should be used for measuring the in-band transmit power of a device.

For Straddle Channel, According to KDB 789033 D02 General UNII Test Procedures New Rules v02r01, If the power and PSD of the devices are uniform and comply with the lower limits specified for the U-NII-2 bands, a single measurement over the entire emission bandwidth can be performed to show compliance.

3.2.4 Test Setup



3.2.5 Test Result of Maximum Conducted Output Power

FCC U-NII-1 MIMO													
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Average Conducted Power with duty factor (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)			Pass/Fail
					Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2		
11a	6Mbps	2	36	5180	16.44	16.35	19.41	24.00		-6.60			Pass
11a	6Mbps	2	40	5200	17.05	16.91	19.99	24.00		-6.60			Pass
11a	6Mbps	2	48	5240	17.31	17.24	20.29	24.00		-6.60			Pass
HT20	MCS0	2	36	5180	16.18	14.74	18.53	24.00		-6.60			Pass
HT20	MCS0	2	40	5200	16.21	14.83	18.58	24.00		-6.60			Pass
HT20	MCS0	2	48	5240	16.29	15.18	18.78	24.00		-6.60			Pass
HT40	MCS0	2	38	5190	16.24	15.02	18.68	24.00		-6.60			Pass
HT40	MCS0	2	46	5230	16.30	15.38	18.87	24.00		-6.60			Pass
VHT20	MCS0	2	36	5180	16.21	14.76	18.56	24.00		-6.60			Pass
VHT20	MCS0	2	40	5200	16.23	14.85	18.60	24.00		-6.60			Pass
VHT20	MCS0	2	48	5240	16.33	15.23	18.83	24.00		-6.60			Pass
VHT40	MCS0	2	38	5190	16.43	15.06	18.81	24.00		-6.60			Pass
VHT40	MCS0	2	46	5230	16.31	15.41	18.89	24.00		-6.60			Pass
VHT80	MCS0	2	42	5210	15.08	14.48	17.80	24.00		-6.60			Pass
VHT160	MCS0	2	50	5250	14.34	13.75	17.06	24.00		-6.60			Pass

FCC U-NII-1 MIMO														
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	RU Config.	Average Conducted Power with duty factor (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)			Pass/Fail
						Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2		
HE20	MCS0	2	36	5180	Full	16.16	14.91	18.59	24.00		-6.60			Pass
HE20	MCS0	2	36	5180	26/0	5.17	5.62	8.41	24.00		-6.60			Pass
HE20	MCS0	2	36	5180	52/37	7.12	7.72	10.44	24.00		-6.60			Pass
HE20	MCS0	2	36	5180	106/53	11.21	10.66	13.95	24.00		-6.60			Pass
HE20	MCS0	2	40	5200	Full	16.25	14.96	18.66	24.00		-6.60			Pass
HE20	MCS0	2	48	5240	Full	16.45	15.42	18.98	24.00		-6.60			Pass
HE20	MCS0	2	48	5240	26/8	5.68	5.64	8.67	24.00		-6.60			Pass
HE20	MCS0	2	48	5240	52/40	8.73	8.16	11.46	24.00		-6.60			Pass
HE20	MCS0	2	48	5240	106/54	11.43	11.14	14.30	24.00		-6.60			Pass
HE40	MCS0	2	38	5190	Full	16.41	15.16	18.84	24.00		-6.60			Pass
HE40	MCS0	2	38	5190	242/61	11.81	11.69	14.76	24.00		-6.60			Pass
HE40	MCS0	2	46	5230	Full	16.31	15.45	18.91	24.00		-6.60			Pass
HE40	MCS0	2	46	5230	242/62	12.28	11.46	14.90	24.00		-6.60			Pass
HE80	MCS0	2	42	5210	Full	15.12	14.70	17.93	24.00		-6.60			Pass
HE80	MCS0	2	42	5210	484/65	10.89	10.92	13.92	24.00		-6.60			Pass
HE160	MCS0	2	50	5250	Full	14.48	13.86	17.19	24.00		-6.60			Pass
HE160	MCS0	2	50	5250	996/67	11.56	11.65	14.62	24.00		-6.60			Pass
HE160	MCS0	2	50	5250	996/S67	11.97	11.56	14.78	24.00		-6.60			Pass

FCC U-NII-2A MIMO													
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Average Conducted Power with duty factor (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)		EIRP Power Limit (dBm)	Pass/Fail
					Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2		
11a	6Mbps	2	52	5260	17.19	16.72	19.97	23.98		-6.50		26.99	Pass
11a	6Mbps	2	56	5280	17.35	16.76	20.08	23.98		-6.50		26.99	Pass
11a	6Mbps	2	64	5320	17.27	16.22	19.79	23.98		-6.50		26.99	Pass
HT20	MCS0	2	52	5260	16.06	15.21	18.67	23.98		-6.50		26.99	Pass
HT20	MCS0	2	56	5280	16.13	15.22	18.71	23.98		-6.50		26.99	Pass
HT20	MCS0	2	64	5320	16.38	14.96	18.74	23.98		-6.50		26.99	Pass
HT40	MCS0	2	54	5270	16.31	15.35	18.87	23.98		-6.50		26.99	Pass
HT40	MCS0	2	62	5310	16.09	15.17	18.66	23.98		-6.50		26.99	Pass
VHT20	MCS0	2	52	5260	16.08	15.23	18.69	23.98		-6.50		26.99	Pass
VHT20	MCS0	2	56	5280	16.27	15.22	18.79	23.98		-6.50		26.99	Pass
VHT20	MCS0	2	64	5320	16.43	15.03	18.80	23.98		-6.50		26.99	Pass
VHT40	MCS0	2	54	5270	16.35	15.38	18.90	23.98		-6.50		26.99	Pass
VHT40	MCS0	2	62	5310	16.46	15.18	18.88	23.98		-6.50		26.99	Pass
VHT80	MCS0	2	58	5290	15.35	14.71	18.05	23.98		-6.50		26.99	Pass

FCC U-NII-2A MIMO														
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	RU Config.	Average Conducted Power with duty factor (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)		EIRP Power Limit (dBm)	Pass/Fail
						Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2		
HE20	MCS0	2	52	5260	Full	16.18	15.37	18.80	23.98		-6.50		26.99	Pass
HE20	MCS0	2	52	5260	26/0	5.32	5.51	8.43	23.98		-6.50		26.99	Pass
HE20	MCS0	2	52	5260	52/37	8.31	8.12	11.23	23.98		-6.50		26.99	Pass
HE20	MCS0	2	52	5260	106/53	11.18	10.82	14.01	23.98		-6.50		26.99	Pass
HE20	MCS0	2	56	5280	Full	16.31	15.33	18.86	23.98		-6.50		26.99	Pass
HE20	MCS0	2	64	5320	Full	16.46	15.17	18.87	23.98		-6.50		26.99	Pass
HE20	MCS0	2	64	5320	26/8	5.18	5.29	8.25	23.98		-6.50		26.99	Pass
HE20	MCS0	2	64	5320	52/40	8.39	7.92	11.17	23.98		-6.50		26.99	Pass
HE20	MCS0	2	64	5320	106/54	11.68	10.52	14.15	23.98		-6.50		26.99	Pass
HE40	MCS0	2	54	5270	Full	16.15	15.34	18.77	23.98		-6.50		26.99	Pass
HE40	MCS0	2	54	5270	242/61	12.62	11.96	15.31	23.98		-6.50		26.99	Pass
HE40	MCS0	2	62	5310	Full	16.52	15.23	18.93	23.98		-6.50		26.99	Pass
HE40	MCS0	2	62	5310	242/62	12.46	11.97	15.23	23.98		-6.50		26.99	Pass
HE80	MCS0	2	58	5290	Full	15.49	14.80	18.17	23.98		-6.50		26.99	Pass
HE80	MCS0	2	58	5290	484/66	11.28	10.86	14.09	23.98		-6.50		26.99	Pass

FCC U-NII-2C MIMO												
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Average Conducted Power with duty factor (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)		EIRP Power Limit (dBm)	Pass/Fail
					Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2		
11a	6Mbps	2	100	5500	17.44	15.77	19.70	23.98		-6.70		26.99	Pass
11a	6Mbps	2	116	5580	17.31	16.21	19.81	23.98		-6.70		26.99	Pass
11a	6Mbps	2	140	5700	17.39	17.25	20.33	23.98		-6.70		26.99	Pass
HT20	MCS0	2	100	5500	16.11	13.52	18.02	23.98		-6.70		26.99	Pass
HT20	MCS0	2	116	5580	16.18	15.02	18.65	23.98		-6.70		26.99	Pass
HT20	MCS0	2	140	5700	16.26	15.93	19.11	23.98		-6.70		26.99	Pass
HT40	MCS0	2	102	5510	16.22	13.74	18.16	23.98		-6.70		26.99	Pass
HT40	MCS0	2	110	5550	16.13	14.55	18.42	23.98		-6.70		26.99	Pass
HT40	MCS0	2	134	5670	16.27	16.04	19.17	23.98		-6.70		26.99	Pass
VHT20	MCS0	2	100	5500	16.13	13.54	18.04	23.98		-6.70		26.99	Pass
VHT20	MCS0	2	116	5580	16.22	15.02	18.67	23.98		-6.70		26.99	Pass
VHT20	MCS0	2	140	5700	16.35	16.01	19.19	23.98		-6.70		26.99	Pass
VHT40	MCS0	2	102	5510	16.24	13.77	18.19	23.98		-6.70		26.99	Pass
VHT40	MCS0	2	110	5550	16.14	14.58	18.44	23.98		-6.70		26.99	Pass
VHT40	MCS0	2	134	5670	16.37	16.12	19.26	23.98		-6.70		26.99	Pass
VHT80	MCS0	2	106	5530	15.26	13.04	17.30	23.98		-6.70		26.99	Pass

FCC U-NII-2C MIMO														
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	RU Config.	Average Conducted Power with duty factor (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)		EIRP Power Limit (dBm)	Pass/Fail
						Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2		
HE20	MCS0	2	100	5500	Full	16.16	13.69	18.11	23.98		-6.70		26.99	Pass
HE20	MCS0	2	100	5500	26/0	5.08	4.04	7.60	23.98		-6.70		26.99	Pass
HE20	MCS0	2	100	5500	52/37	9.29	6.88	11.26	23.98		-6.70		26.99	Pass
HE20	MCS0	2	100	5500	106/53	11.95	9.96	14.08	23.98		-6.70		26.99	Pass
HE20	MCS0	2	116	5580	Full	16.36	15.12	18.79	23.98		-6.70		26.99	Pass
HE20	MCS0	2	140	5700	Full	16.33	16.09	19.22	23.98		-6.70		26.99	Pass
HE20	MCS0	2	140	5700	26/8	4.79	5.65	8.25	23.98		-6.70		26.99	Pass
HE20	MCS0	2	140	5700	52/40	9.22	8.99	12.12	23.98		-6.70		26.99	Pass
HE20	MCS0	2	140	5700	106/54	12.02	11.41	14.74	23.98		-6.70		26.99	Pass
HE40	MCS0	2	102	5510	Full	16.18	13.93	18.21	23.98		-6.70		26.99	Pass
HE40	MCS0	2	102	5510	242/61	11.78	9.84	13.93	23.98		-6.70		26.99	Pass
HE40	MCS0	2	110	5550	Full	16.01	14.52	18.34	23.98		-6.70		26.99	Pass
HE40	MCS0	2	134	5670	Full	16.36	16.17	19.28	23.98		-6.70		26.99	Pass
HE40	MCS0	2	134	5670	242/62	12.48	11.74	15.14	23.98		-6.70		26.99	Pass
HE80	MCS0	2	106	5530	Full	15.35	13.15	17.40	23.98		-6.70		26.99	Pass
HE80	MCS0	2	106	5530	484/65	11.39	9.53	13.57	23.98		-6.70		26.99	Pass

3.3 Power Spectral Density Measurement

3.3.1 Limit of Power Spectral Density

<FCC 14-30 CFR 15.407>

For mobile and portable client devices in the 5.15–5.25 GHz band, the maximum power spectral density shall not exceed 11dBm in any 1 megahertz band.

For the 5.25–5.725 GHz bands, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band.

For Straddle Channel, According to KDB 789033 D02 General UNII Test Procedures New Rules v02r01, If the power and PSD of the devices are uniform and comply with the lower limits specified for the U-NII-2 bands, a single measurement over the entire emission bandwidth can be performed to show compliance.

If transmitting antennas of directional gain greater than 6 dBi are used, the peak output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

3.3.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.3.3 Test Procedures

The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.

Section F) Maximum power spectral density.

 # Method SA-2 #

(trace averaging across on and off times of the EUT transmissions, followed by duty cycle correction).

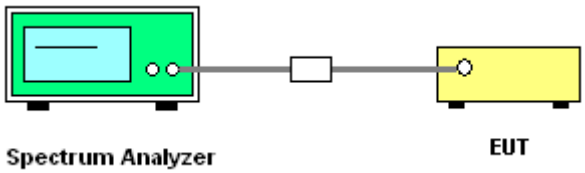
- Measure the duty cycle.
- Set span to encompass the entire emission bandwidth (EBW) of the signal.
- Set RBW = 1 MHz.
- Set VBW ≥ 3 MHz.
- Number of points in sweep ≥ 2 Span / RBW.
- Sweep time = auto.
- Detector = RMS
- Trace average at least 100 traces in power averaging mode.
- Add 10 log(1/x), where x is the duty cycle, to the measured power in order to compute the average power during the actual transmission times. For example, add 10 log(1/0.25) = 6 dB if the duty cycle is 25 percent.

1. The RF output of EUT was connected to the spectrum analyzer by a low loss cable.
2. Each plot has already offset with cable loss, and attenuator loss. Measure the PPSD and record it.
3. For MIMO mode, calculation method follows FCC KDB 662911 D01 Multiple Transmitter Output v02r01.

   Method (b): Measure and sum spectral maxima across the outputs.

   Spectra are measured at each output of the device at the required resolution bandwidth. The maximum value (peak) of each spectrum is determined. These maximum values are then summed mathematically in linear power units across the outputs.

3.3.4 Test Setup



3.3.5 Test Result of Power Spectral Density

Please refer to Appendix A.

3.4 Unwanted Emissions Measurement

This section is to measure unwanted emissions through radiated measurement for band edge spurious emissions and out of band emissions measurement.

3.4.1 Limit of Unwanted Emissions

(1) For transmitters operating in the 5150-5250 MHz band: all emissions outside of the 5150-5350 MHz band shall not exceed an EIRP of –27dBm/MHz.

For transmitters operating in the 5250-5350 MHz band: all emissions outside of the 5150-5350 MHz band shall not exceed an EIRP of -27 dBm/MHz. Devices operating in the 5250-5350 MHz band that generate emissions in the 5150-5250 MHz band must meet all applicable technical requirements for operation in the 5150-5250 MHz band (including indoor use) or alternatively meet an out-of-band emission EIRP limit of -27 dBm/MHz in the 5150-5250 MHz band.

For transmitters operating in the 5470-5725 MHz band: all emissions outside of the 5470-5725 MHz band shall not exceed an EIRP of -27 dBm/MHz.

(2) Unwanted spurious emissions fallen in restricted bands shall comply with the general field strength limits as below table,

Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009 – 0.490	2400/F(kHz)	300
0.490 – 1.705	24000/F(kHz)	30
1.705 – 30.0	30	30
30 – 88	100	3
88 – 216	150	3
216 - 960	200	3
Above 960	500	3

EIRP (dBm)	Field Strength at 3m (dBμV/m)
- 27	68.2

Note: The following formula is used to convert the EIRP to field strength.

$$EIRP = E_{Meas} + 20\log(d_{Meas}) - 104.7$$

where

EIRP is the equivalent isotropically radiated power, in dBm

E_{Meas} is the field strength of the emission at the measurement distance, in dBμV/m

d_{Meas} is the measurement distance, in m

3.4.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.4.3 Test Procedures

1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01. Section G) Unwanted emissions measurement.

   (1) Procedure for Unwanted Emissions Measurements Below 1000MHz

   - RBW = 120 kHz
   - VBW = 300 kHz
   - Detector = Peak
   - Trace mode = max hold

   (2) Procedure for Peak Unwanted Emissions Measurements Above 1000 MHz

   - RBW = 1 MHz
   - VBW ≥ 3 MHz
   - Detector = Peak
   - Sweep time = auto
   - Trace mode = max hold

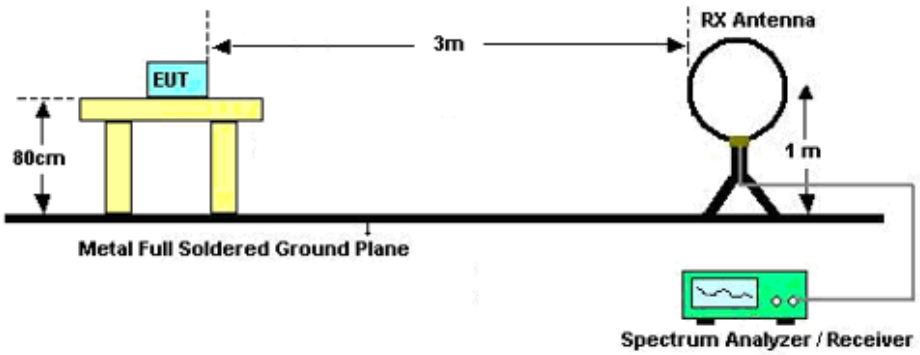
   (3) Procedures for Average Unwanted Emissions Measurements Above 1000MHz

   - RBW = 1 MHz
   - VBW = 10 Hz, when duty cycle is no less than 98 percent.
   - VBW ≥ 1/T, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.

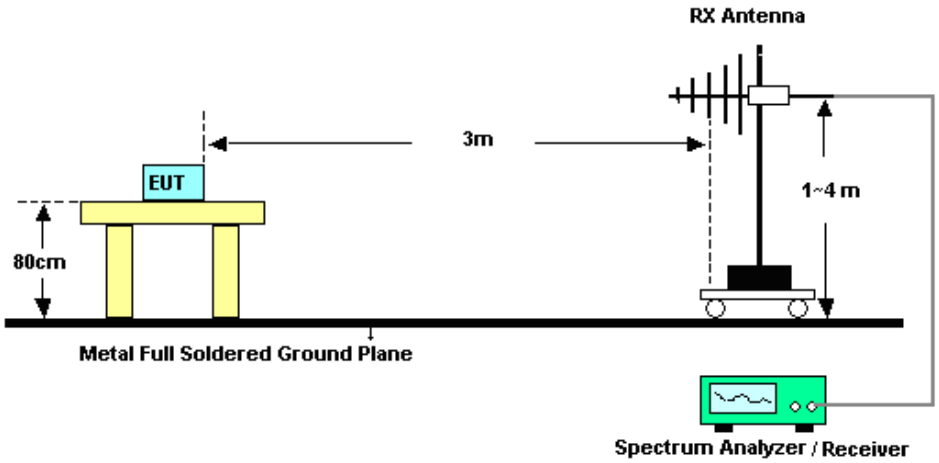
2. The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively above ground.
3. The EUT was set 3 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
4. The antenna is a broadband antenna and its height is adjusted between one meter and four meters above ground to find the maximum value of the field strength for both horizontal polarization and vertical polarization of the antenna.
5. For each suspected emission, the EUT was arranged to its worst case and then adjust the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading.
6. For testing below 1GHz, if the emission level of the EUT in peak mode was 3 dB lower than the limit specified, then peak values of EUT will be reported, otherwise, the emissions will be repeated one by one using the CISPR quasi-peak method and reported.
7. For testing above 1GHz, the emission level of the EUT in peak mode was 20dB lower than peak limit (that means the emission level in average mode also complies with the limit in average mode), then peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.

3.4.4 Test Setup

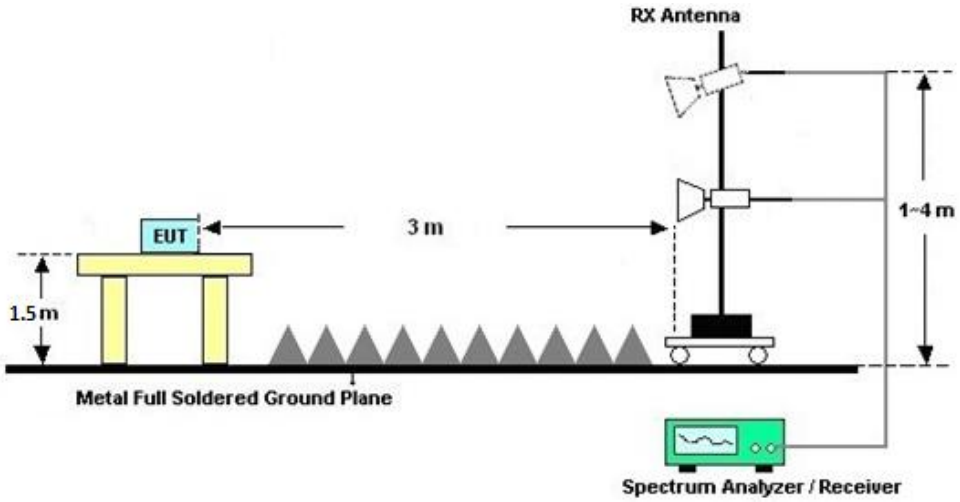
For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



3.4.5 Test Results of Radiated Spurious Emissions (9 kHz ~ 30 MHz)

The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line was not reported.

There is a comparison data of both open-field test site and semi-Anechoic chamber, and the result came out very similar.

3.4.6 Test Result of Radiated Spurious at Band Edges

Please refer to Appendix C.

3.4.7 Duty Cycle

Please refer to Appendix D.

3.4.8 Test Result of Radiated Spurious Emissions (30MHz ~ 10th Harmonic or 40GHz, whichever is lower)

Please refer to Appendix C.

3.5 AC Conducted Emission Measurement

3.5.1 Limit of AC Conducted Emission

For equipment that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table.

Frequency of emission (MHz)	Conducted limit (dBμV)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

*Decreases with the logarithm of the frequency.

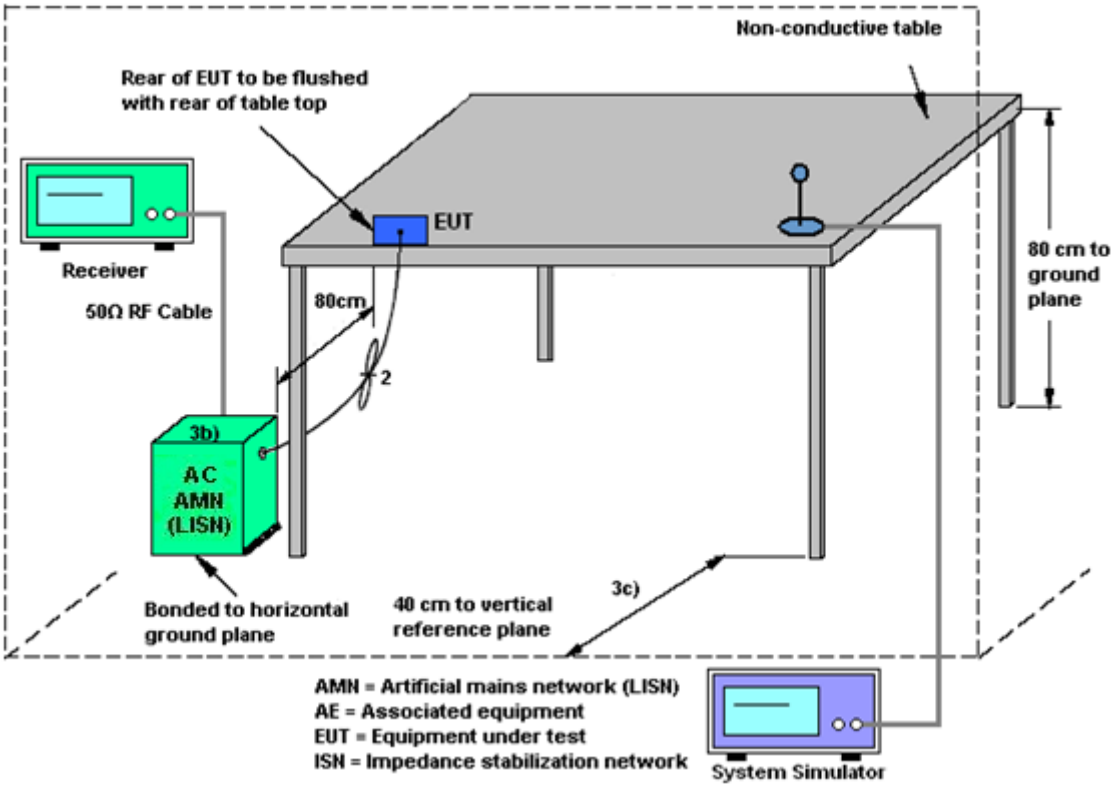
3.5.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.5.3 Test Procedures

1. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connecting to the other LISN.
4. The LISN provides 50 ohm coupling impedance for the measuring instrument.
5. The FCC states that a 50 ohm, 50 microhenry LISN should be used.
6. Both sides of AC line were checked for maximum conducted interference.
7. The frequency range from 150 kHz to 30 MHz was searched.
8. Set the test-receiver system to Peak Detect Function and specified bandwidth with Maximum Hold Mode.

3.5.4 Test Setup



3.5.5 Test Result of AC Conducted Emission

Please refer to Appendix B.

3.6 Antenna Requirements

3.6.1 Standard Applicable

If transmitting antenna directional gain is greater than 6 dBi, both the peak transmit power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

3.6.2 Antenna Anti-Replacement Construction

An embedded-in antenna design is used.

3.6.3 Antenna Gain

<CDD Modes >

FCC KDB 662911 D01 Multiple Transmitter Output v02r01

For CDD transmissions, directional gain is calculated as

Directional gain = GANT + Array Gain, where Array Gain is as follows.

For power spectral density (PSD) measurements on all devices,

Array Gain = 10 log(NANT/NSS=1) dB.

For power measurements on IEEE 802.11 devices,

Array Gain = 0 dB (i.e., no array gain) for NANT ≤ 4.

Directional gain may be calculated by using the formulas applicable to equal gain antennas with GANT set equal to the gain of the antenna having the highest gain;

The EUT supports CDD mode.

For power, the directional gain GANT is set equal to the antenna having the highest gain, i.e., F)2)f)i).

For PSD, the directional gain calculation is following F)2)f)ii) of KDB 662911 D01 v02r01.

The power and PSD limit should be modified if the directional gain of EUT is over 6 dBi,

The directional gain “DG” is calculated as following table.

<CDD Modes>

	Ant. 1 (dBi)	Ant. 2 (dBi)	DG for Power (dBi)	DG for PSD (dBi)	Power Limit Reduction (dB)	PSD Limit Reduction (dB)
Band I	-8.30	-6.60	-6.60	-4.40	0.00	0.00
Band II	-7.30	-6.50	-6.50	-3.88	0.00	0.00
Band III	-7.10	-6.70	-6.70	-3.89	0.00	0.00

Power limit reduction = Composite gain – 6dBi, (min = 0)

PSD limit reduction = Composite gain + PSD Array gain – 6dBi, (min = 0)

4 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	R&S	FSV40	101040	10Hz~40GHz	Nov. 01, 2020	Sep. 08, 2021~ Sep. 17, 2021	Oct. 31, 2021	Conducted (TH01-KS)
Pulse Power Senor	Anritsu	MA2411B	0917070	300MHz~40GHz	Jan. 07, 2021	Sep. 08, 2021~ Sep. 17, 2021	Jan. 06, 2022	Conducted (TH01-KS)
Power Meter	Anritsu	ML2495A	1005002	50MHz Bandwidth	Jan. 07, 2021	Sep. 08, 2021~ Sep. 17, 2021	Jan. 06, 2022	Conducted (TH01-KS)
EMI Test Receiver	Keysight	N9038A	MY56400004	3Hz~8.5GHz;Max 30dBm	Oct. 17, 2020	Oct. 09, 2021	Oct. 16, 2021	Radiation (03CH05-KS)
EXA Spectrum Analyzer	Keysight	N9010A	MY55150244	10Hz-44G,MAX 30dB	Apr. 13, 2021	Oct. 09, 2021	Apr. 12, 2022	Radiation (03CH05-KS)
Loop Antenna	R&S	HFH2-Z2	100321	9kHz~30MHz	Nov. 01, 2020	Oct. 09, 2021	Oct. 31, 2021	Radiation (03CH05-KS)
Bilog Antenna	TeseQ	CBL6111D	49922	30MHz-1GHz	Jun. 04, 2021	Oct. 09, 2021	Jun. 03, 2022	Radiation (03CH05-KS)
Double Ridge Horn Antenna	ETS-Lindgren	3117	00218652	1GHz~18GHz	Apr. 24, 2021	Oct. 09, 2021	Apr. 23, 2022	Radiation (03CH05-KS)
SHF-EHF Horn	Com-power	AH-840	101115	18GHz~40GHz	Nov. 10, 2020	Oct. 09, 2021	Nov. 09, 2021	Radiation (03CH05-KS)
Amplifier	SONOMA	310N	187289	9KHz-1GHz	Apr. 12, 2021	Oct. 09, 2021	Apr. 11, 2022	Radiation (03CH05-KS)
Amplifier	MITEQ	EM18G40GGA	060728	18~40GHz	Jan. 07, 2021	Oct. 09, 2021	Jan. 06, 2022	Radiation (03CH05-KS)
high gain Amplifier	MITEQ	AMF-7D-00101800-30-10P	2012228	1Ghz-18Ghz	Oct. 17, 2020	Oct. 09, 2021	Oct. 16, 2021	Radiation (03CH05-KS)
Amplifier	Keysight	83017A	MY53270316	500MHz~26.5GHz	Oct. 17, 2020	Oct. 09, 2021	Oct. 16, 2021	Radiation (03CH05-KS)
AC Power Source	Chroma	61601	F104090004	N/A	NCR	Oct. 09, 2021	NCR	Radiation (03CH05-KS)
Turn Table	ChamPro	EM 1000-T	060762-T	0~360 degree	NCR	Oct. 09, 2021	NCR	Radiation (03CH05-KS)
Antenna Mast	ChamPro	EM 1000-A	060762-A	1 m~4 m	NCR	Oct. 09, 2021	NCR	Radiation (03CH05-KS)
EMI Receiver	R&S	ESCI7	100768	9kHz~7GHz;	Apr. 21, 2021	Sep. 26, 2021	Apr. 20, 2022	Conduction (CO01-KS)
AC LISN (for auxiliary equipment)	MessTec	AN3016	060103	9kHz~30MHz	Oct. 17, 2020	Sep. 26, 2021	Oct. 16, 2021	Conduction (CO01-KS)
AC LISN	R&S	ENV216	100334	9kHz~30MHz	Oct. 17, 2020	Sep. 26, 2021	Oct. 16, 2021	Conduction (CO01-KS)
AC Power Source	Chroma	61602	ABP000000811	AC 0V~300V, 45Hz~1000Hz	Oct. 17, 2020	Sep. 26, 2021	Oct. 16, 2021	Conduction (CO01-KS)

NCR: No Calibration Required

5 Uncertainty of Evaluation

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI 63.10-2013. All the measurement uncertainty value were shown with a coverage K=2 to indicate 95% level of confidence. The measurement data show herein meets or exceeds the CISPR measurement uncertainty values specified in CISPR 16-4-2 and can be compared directly to specified limit to determine compliance.

Uncertainty of Conducted Emission Measurement (150kHz ~ 30MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**2.94dB**

Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**5.0dB**

Uncertainty of Radiated Emission Measurement (1000 MHz ~ 18000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**5.0dB**

Uncertainty of Radiated Emission Measurement (18000 MHz ~ 40000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**5.0dB**

THE END

Appendix A. Conducted Test Results

Test Engineer :	Albert shi	Temperature :	20~26°C
		Relative Humidity :	40~51%

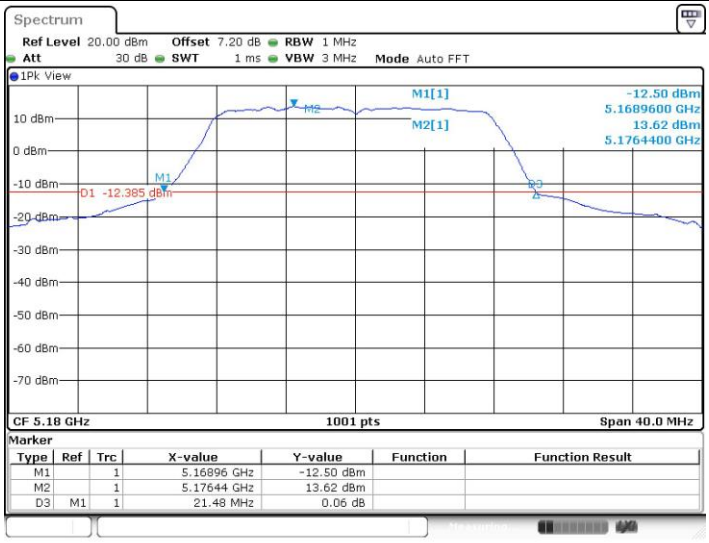
26DB Emission Bandwidth Test Result

TestMode	Antenna	Frequency [MHz]	26db EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A-CDD	Ant1	5180	21.480	5168.960	5190.440	---	---
	Ant2	5180	30.280	5165.760	5196.040	---	---
	Ant1	5200	21.440	5189.040	5210.480	---	---
	Ant2	5200	34.800	5182.240	5217.040	---	---
	Ant1	5240	22.360	5229.040	5251.400	---	---
	Ant2	5240	32.240	5224.560	5256.800	---	---
	Ant1	5260	21.440	5249.040	5270.480	---	---
	Ant2	5260	36.720	5240.000	5276.720	---	---
	Ant1	5280	21.160	5269.280	5290.440	---	---
	Ant2	5280	38.120	5260.000	5298.120	---	---
	Ant1	5320	21.200	5309.280	5330.480	---	---
	Ant2	5320	26.760	5306.840	5333.600	---	---
	Ant1	5500	21.200	5489.320	5510.520	---	---
	Ant2	5500	20.480	5489.760	5510.240	---	---
	Ant1	5580	21.080	5569.360	5590.440	---	---
	Ant2	5580	21.760	5569.080	5590.840	---	---
	Ant1	5700	21.480	5689.080	5710.560	---	---
	Ant2	5700	26.200	5687.040	5713.240	---	---
11AX20MIMO	Ant1	5180	22.840	5168.440	5191.280	---	---
	Ant2	5180	22.640	5168.600	5191.240	---	---
	Ant1	5200	22.640	5188.640	5211.280	---	---
	Ant2	5200	22.880	5188.560	5211.440	---	---
	Ant1	5240	22.560	5228.640	5251.200	---	---
	Ant2	5240	24.400	5226.880	5251.280	---	---
	Ant1	5260	22.520	5248.760	5271.280	---	---
	Ant2	5260	24.000	5248.400	5272.400	---	---
	Ant1	5280	22.440	5268.800	5291.240	---	---
	Ant2	5280	24.440	5268.200	5292.640	---	---
	Ant1	5320	22.600	5308.680	5331.280	---	---
	Ant2	5320	24.040	5307.600	5331.640	---	---
	Ant1	5500	22.600	5488.680	5511.280	---	---
	Ant2	5500	22.720	5488.640	5511.360	---	---

	Ant1	5580	22.400	5568.760	5591.160	---	---
	Ant2	5580	22.560	5568.720	5591.280	---	---
	Ant1	5700	22.680	5688.720	5711.400	---	---
	Ant2	5700	22.560	5688.720	5711.280	---	---
11AX40MIMO	Ant1	5190	41.760	5169.040	5210.800	---	---
	Ant2	5190	41.680	5169.120	5210.800	---	---
	Ant1	5230	41.600	5209.200	5250.800	---	---
	Ant2	5230	41.600	5209.200	5250.800	---	---
	Ant1	5270	41.600	5249.200	5290.800	---	---
	Ant2	5270	42.160	5249.040	5291.200	---	---
	Ant1	5310	41.760	5289.200	5330.960	---	---
	Ant2	5310	41.840	5289.040	5330.880	---	---
	Ant1	5510	41.760	5489.120	5530.880	---	---
	Ant2	5510	41.840	5489.120	5530.960	---	---
	Ant1	5550	41.760	5529.120	5570.880	---	---
	Ant2	5550	41.680	5529.120	5570.800	---	---
	Ant1	5670	41.600	5649.120	5690.720	---	---
	Ant2	5670	41.840	5649.120	5690.960	---	---
11AX80MIMO	Ant1	5210	82.880	5168.560	5251.440	---	---
	Ant2	5210	82.720	5168.720	5251.440	---	---
	Ant1	5290	82.400	5248.720	5331.120	---	---
	Ant2	5290	82.560	5248.560	5331.120	---	---
	Ant1	5530	83.040	5488.400	5571.440	---	---
	Ant2	5530	82.400	5488.880	5571.280	---	---
11AX160MIMO	Ant1	5250	166.080	5167.120	5333.200	---	---
	Ant2	5250	167.360	5166.480	5333.840	---	---

Test Graphs

11A-CDD_Ant1_5180



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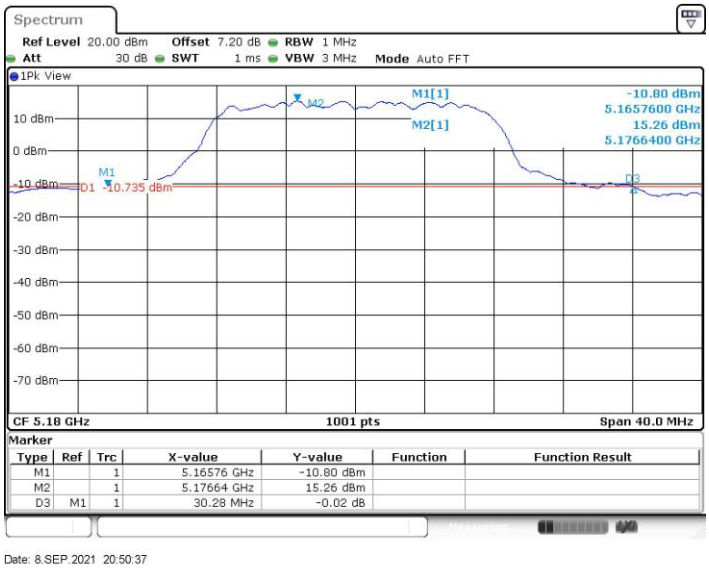

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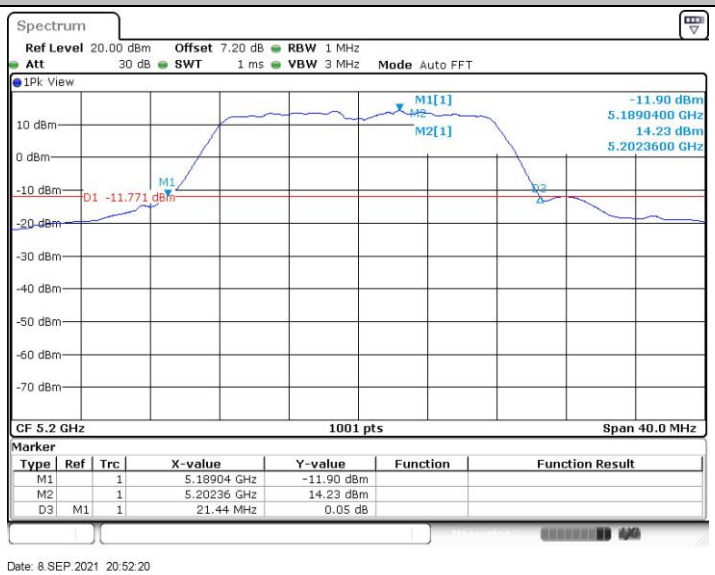

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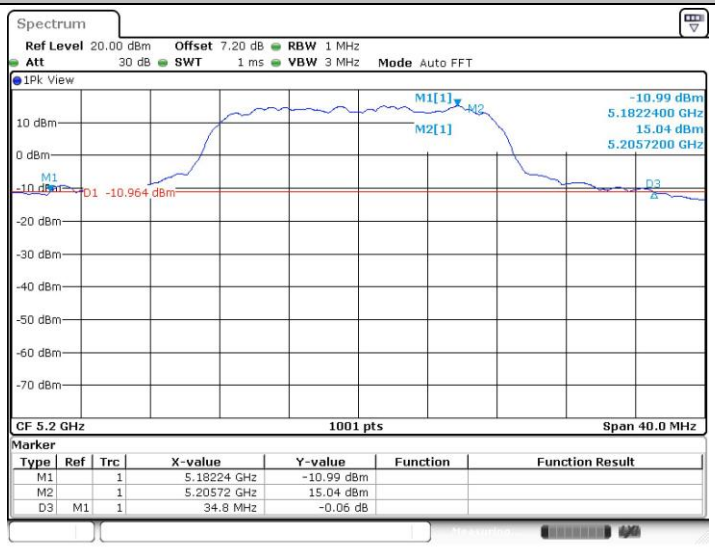

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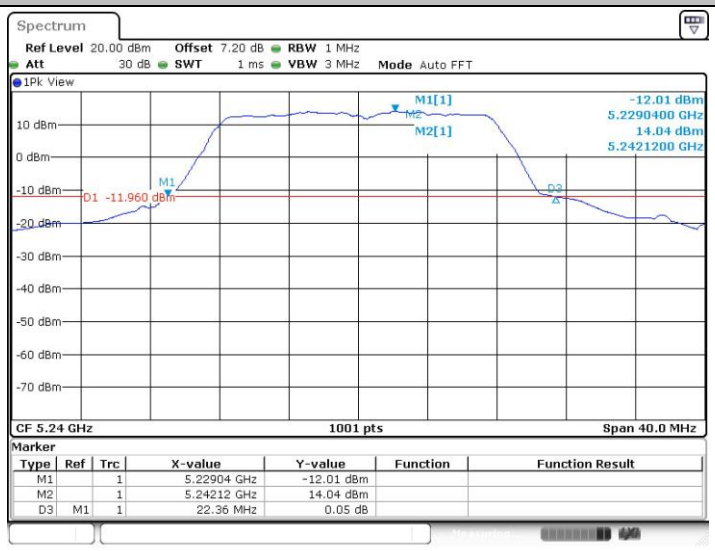

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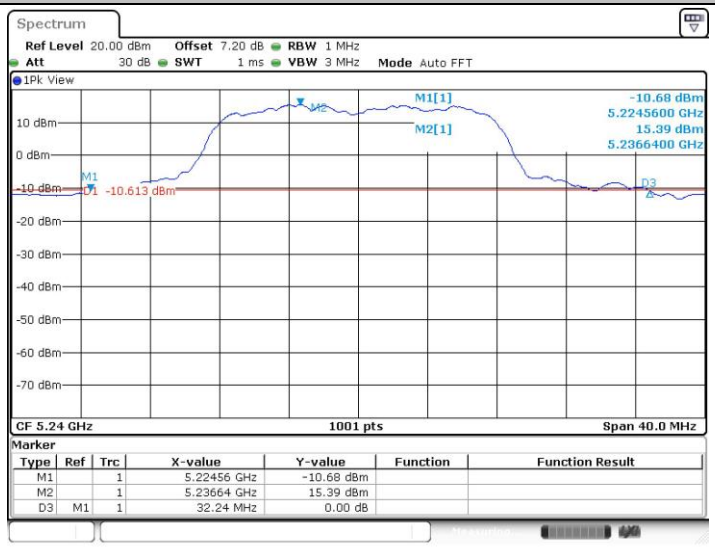

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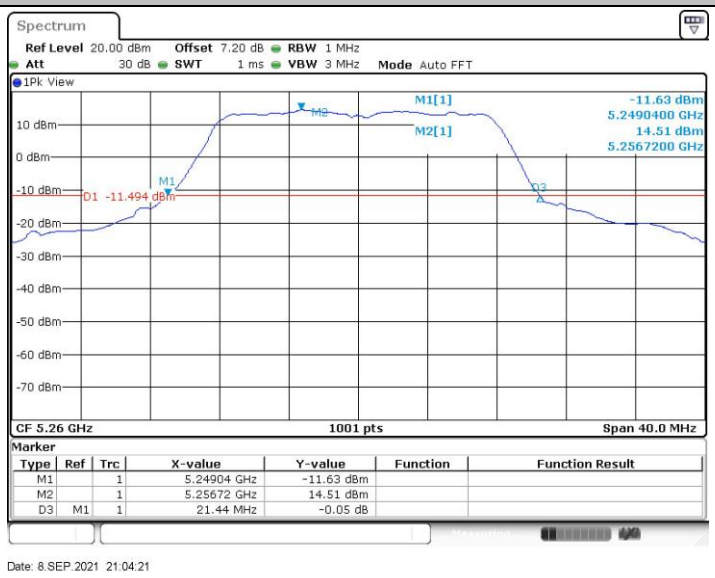

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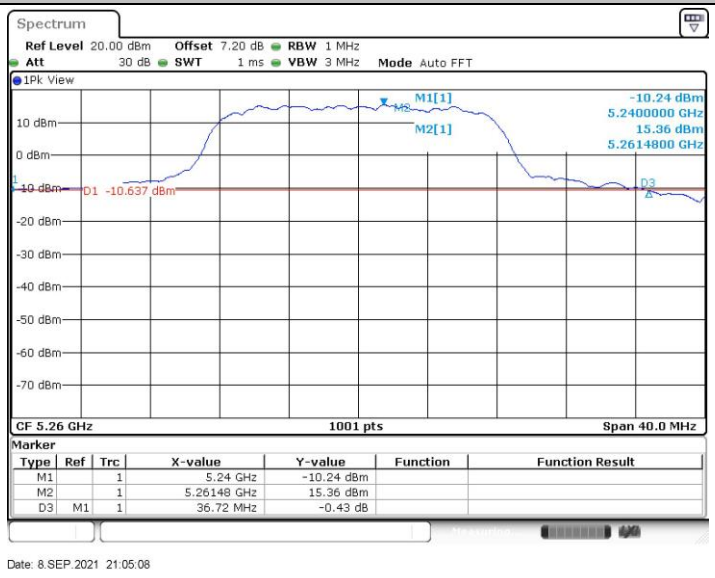

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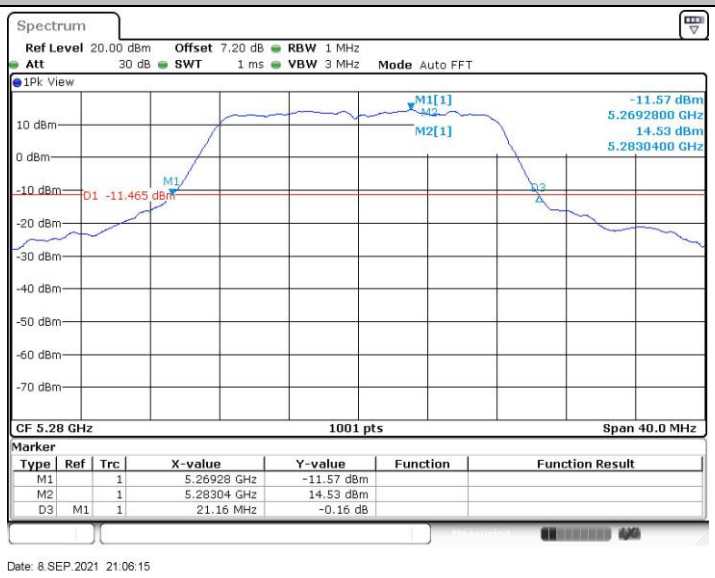

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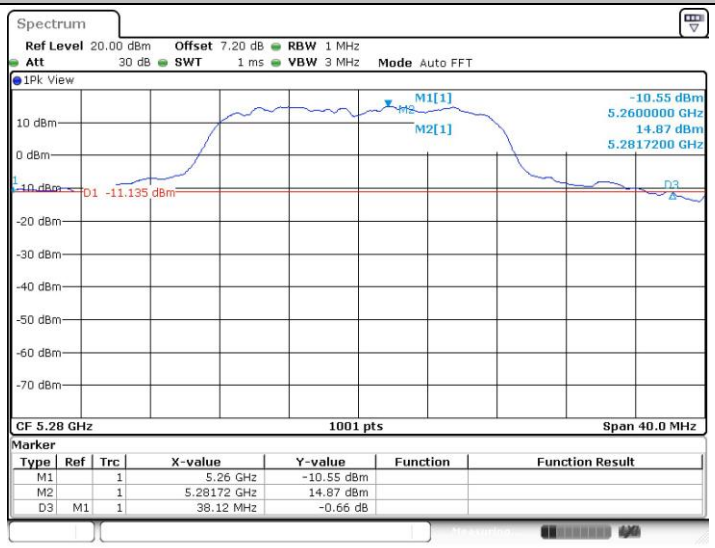

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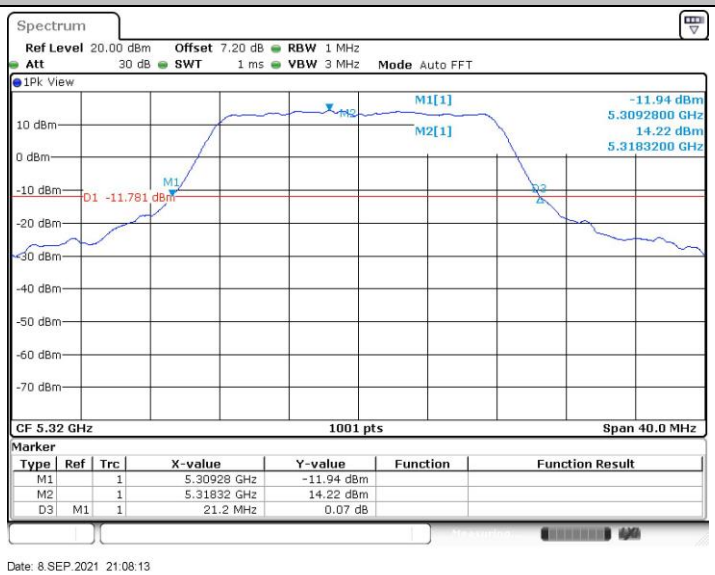

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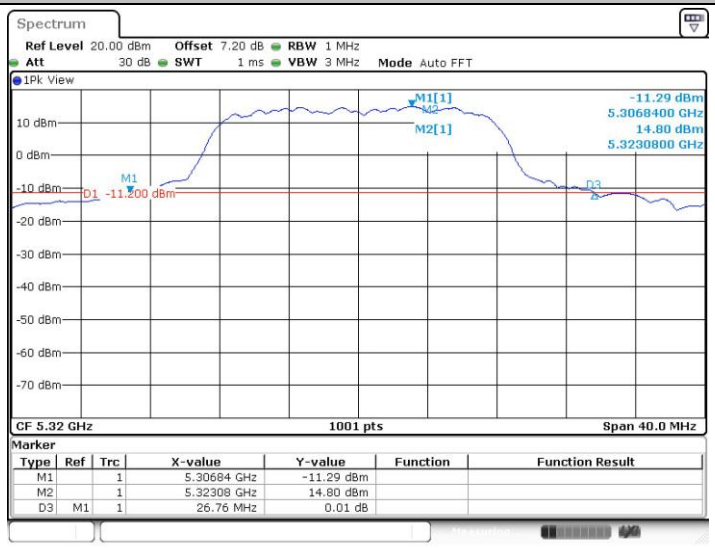

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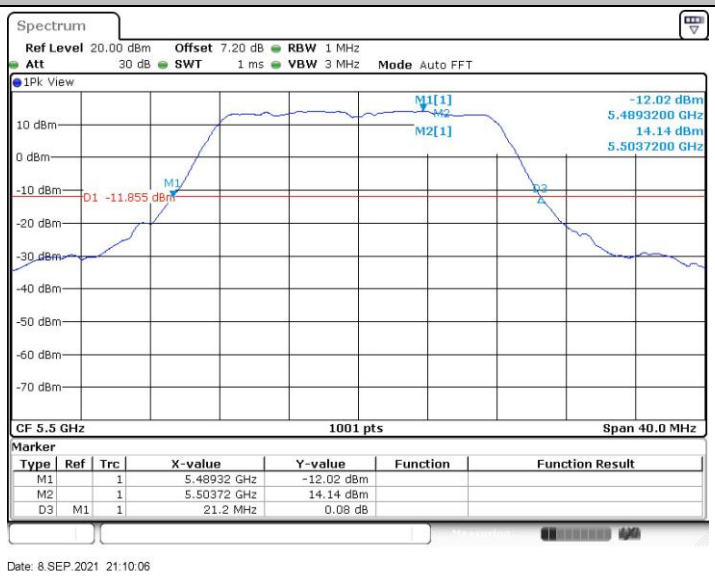

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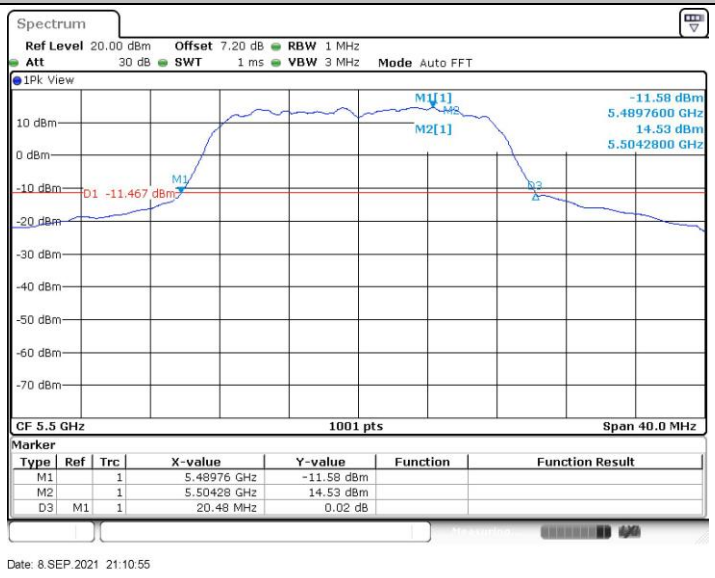

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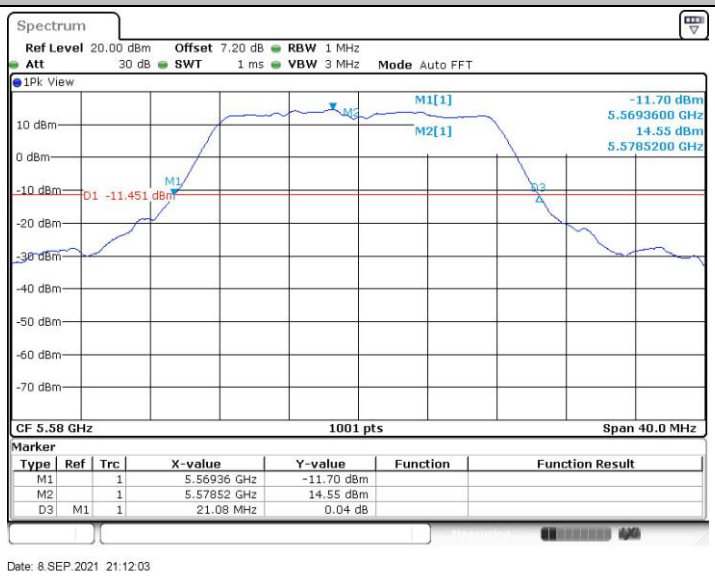

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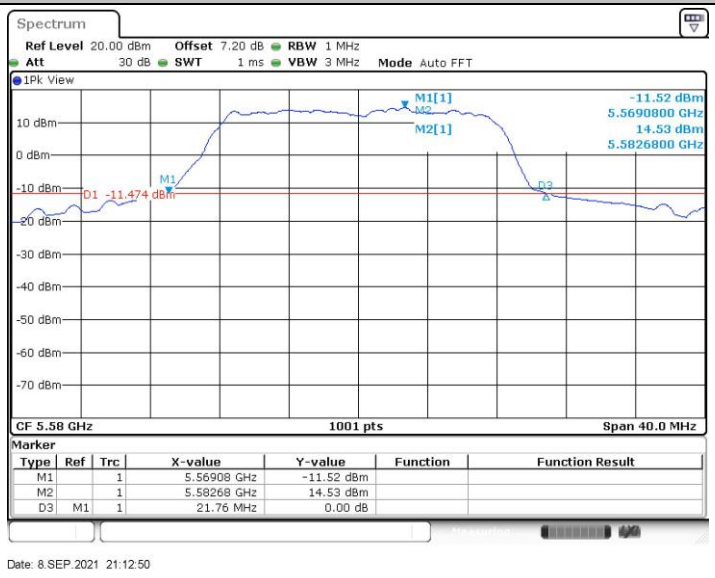

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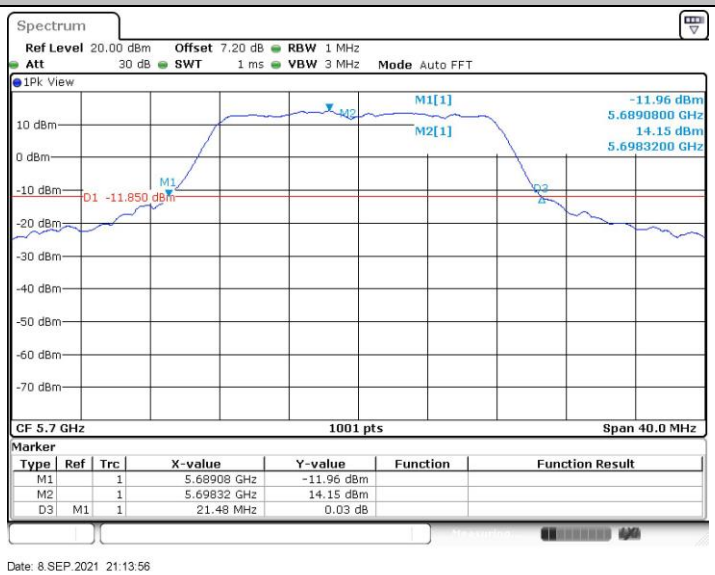

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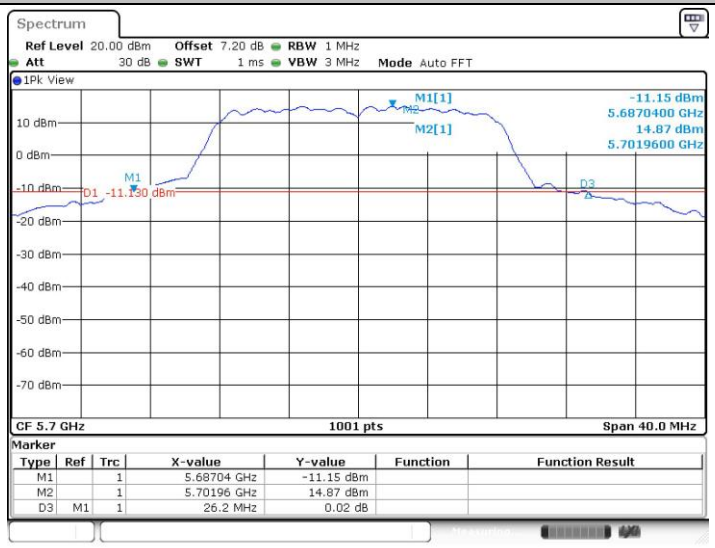

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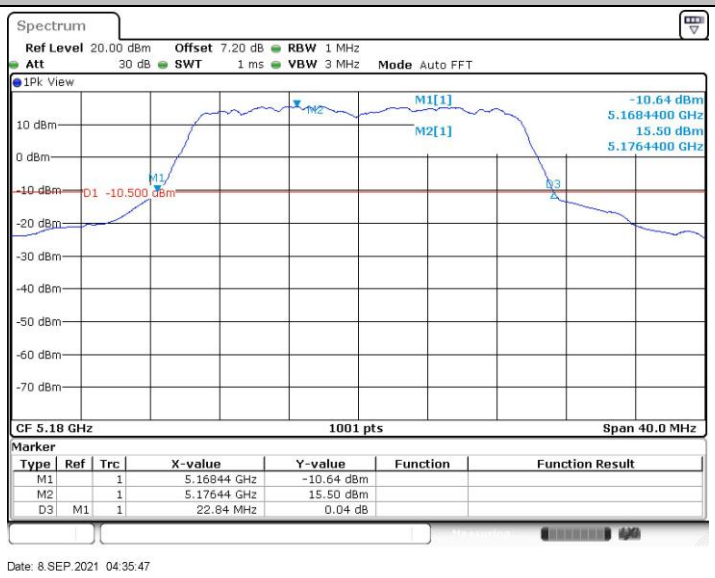

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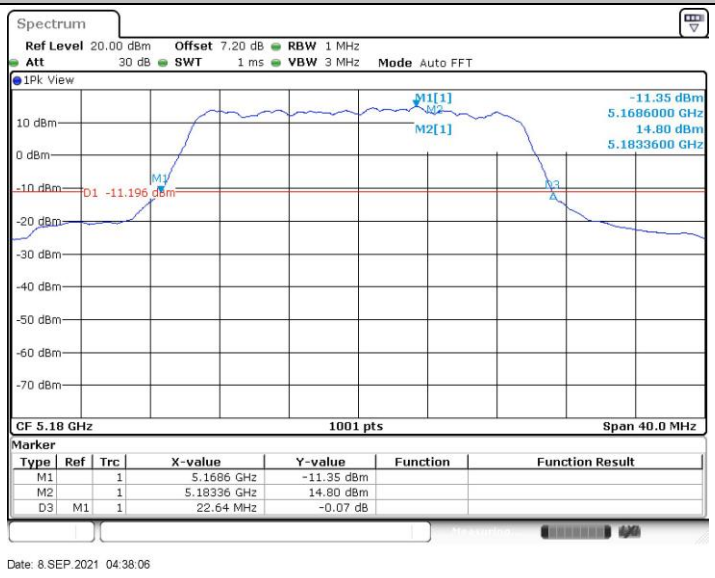

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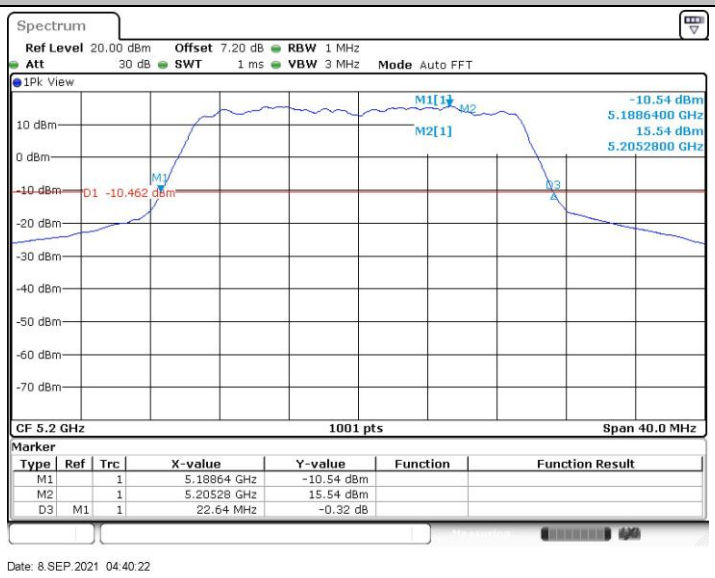

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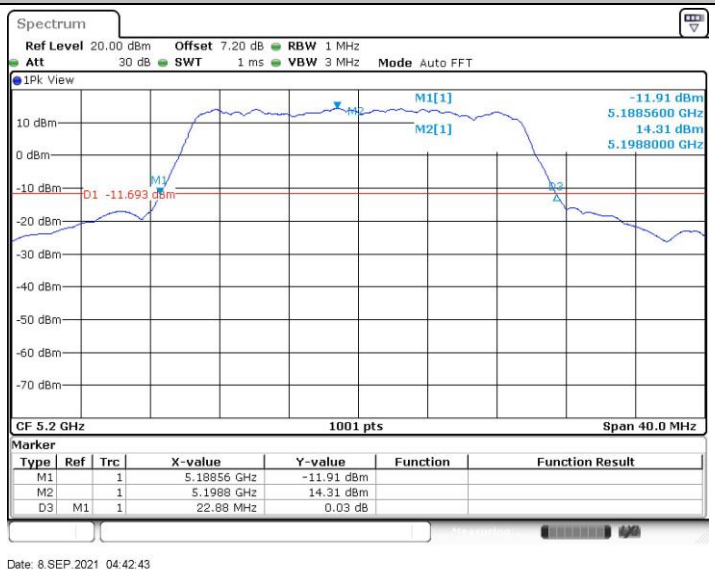

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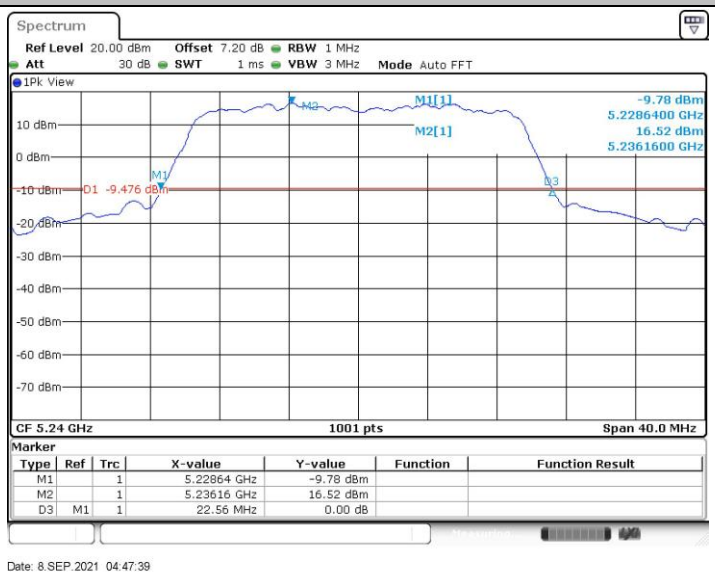

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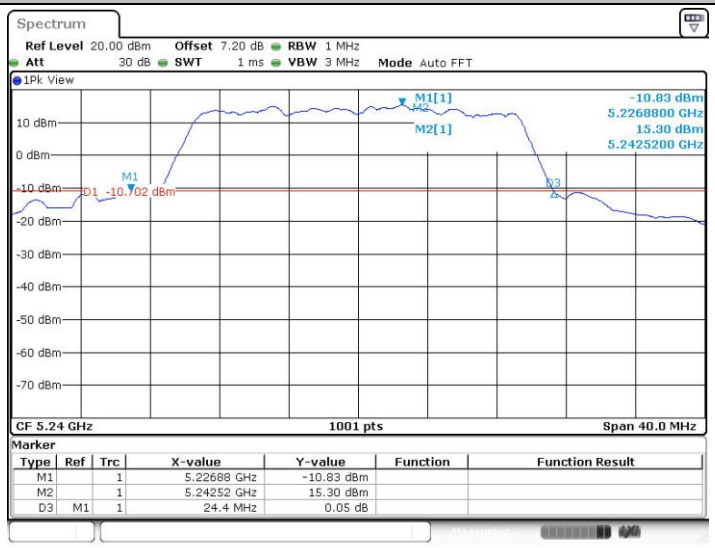

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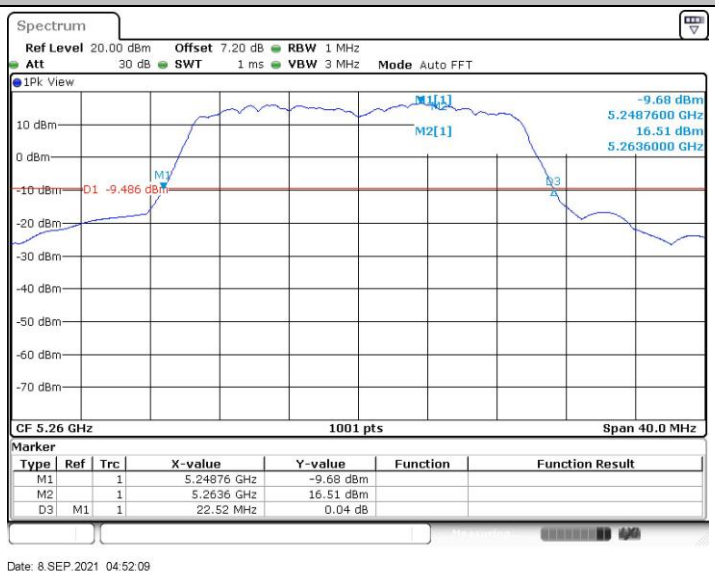

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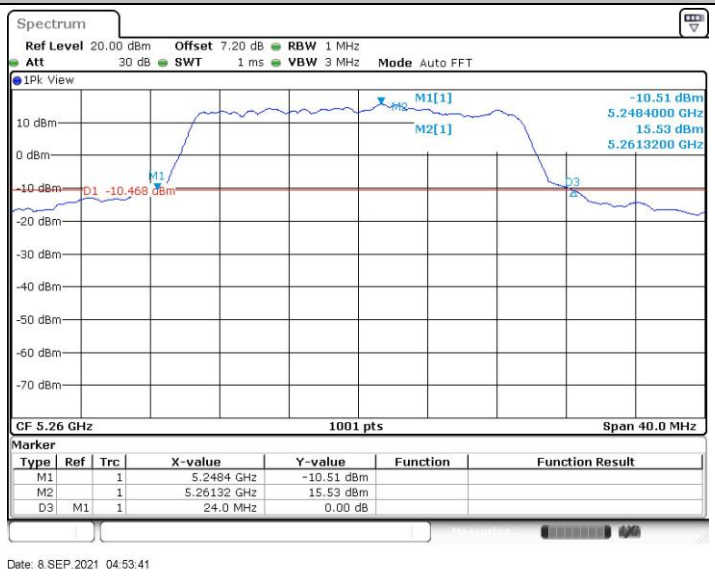

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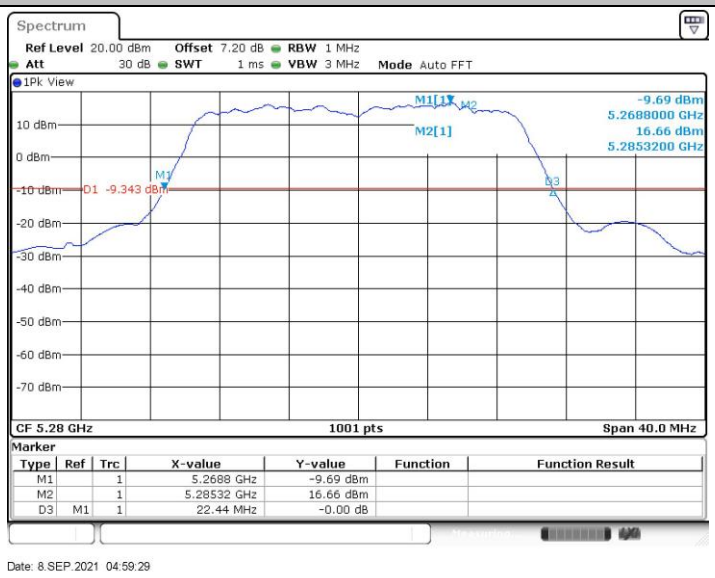

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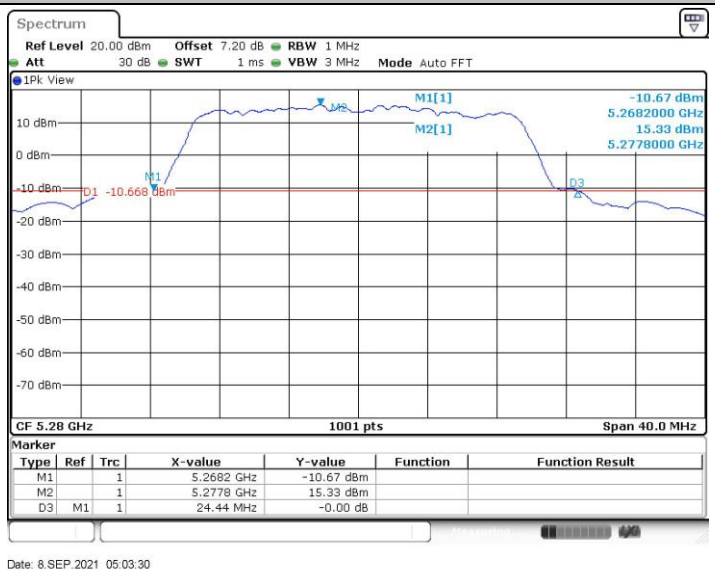

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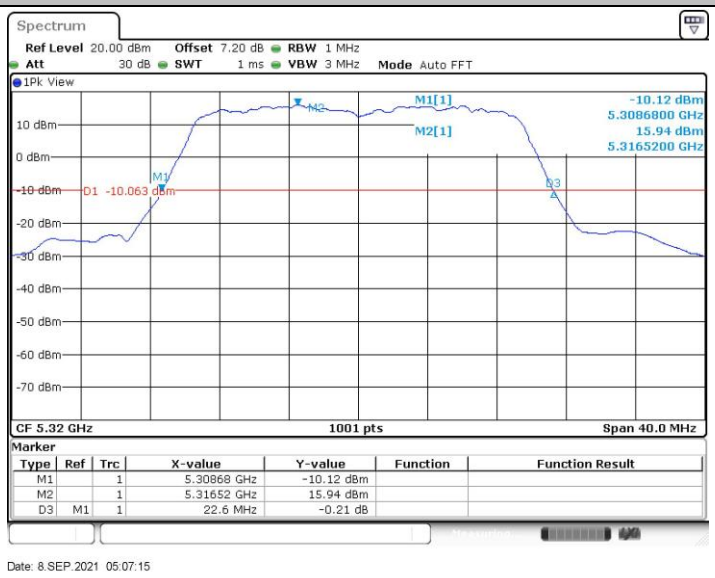

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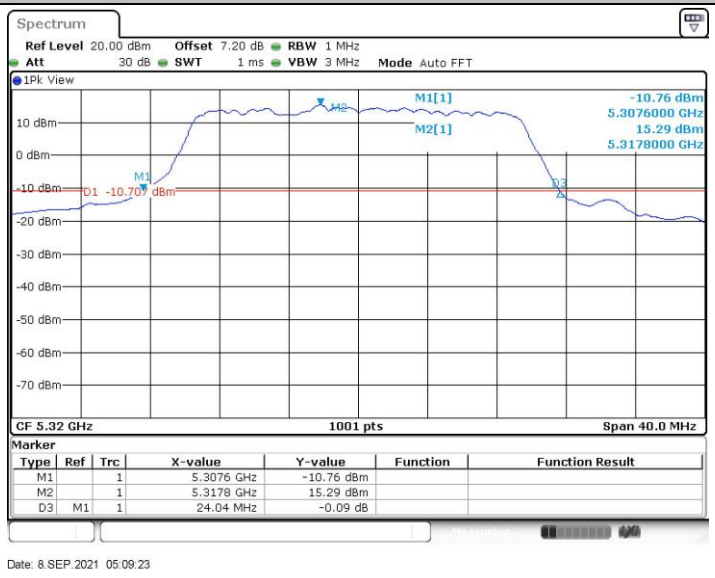

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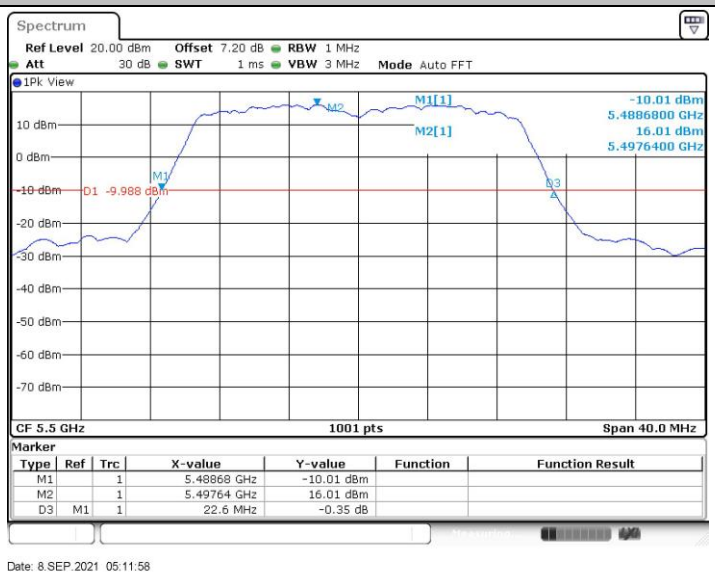

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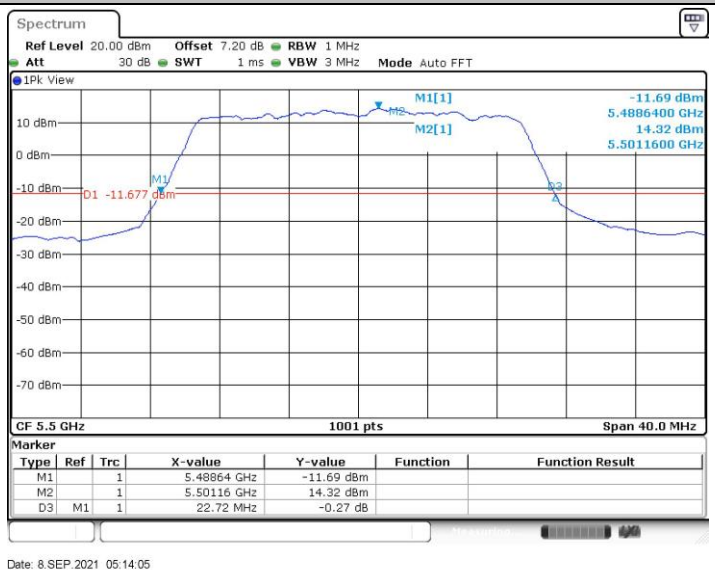

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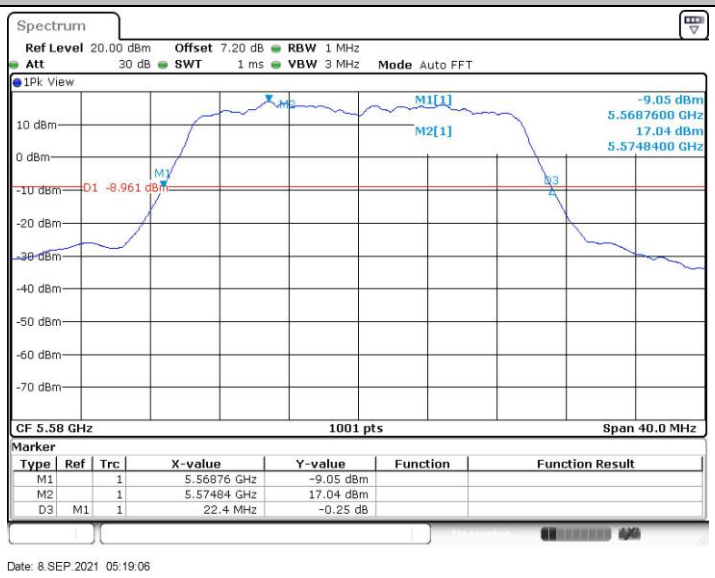

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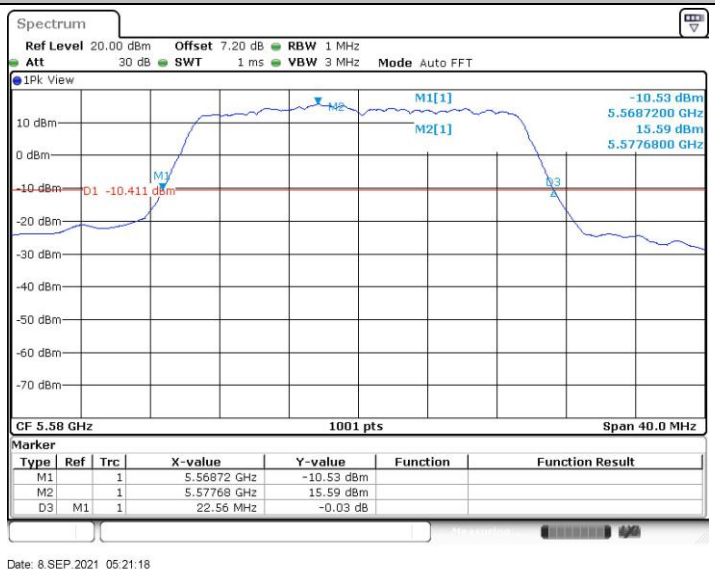

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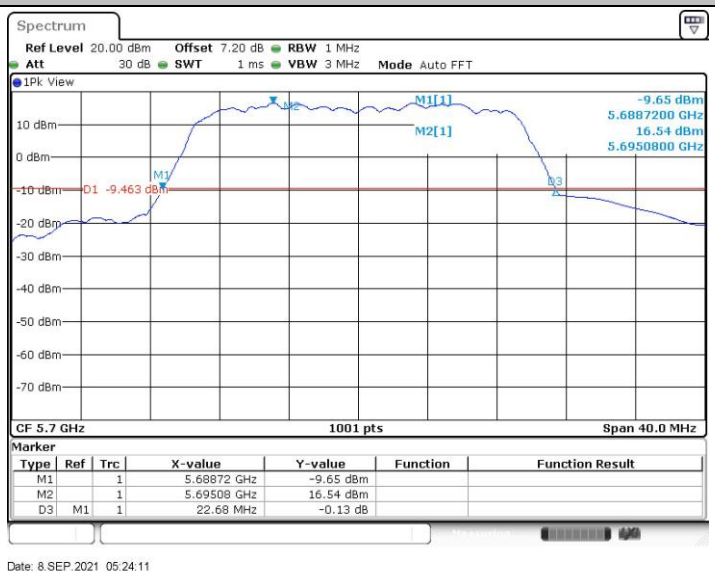

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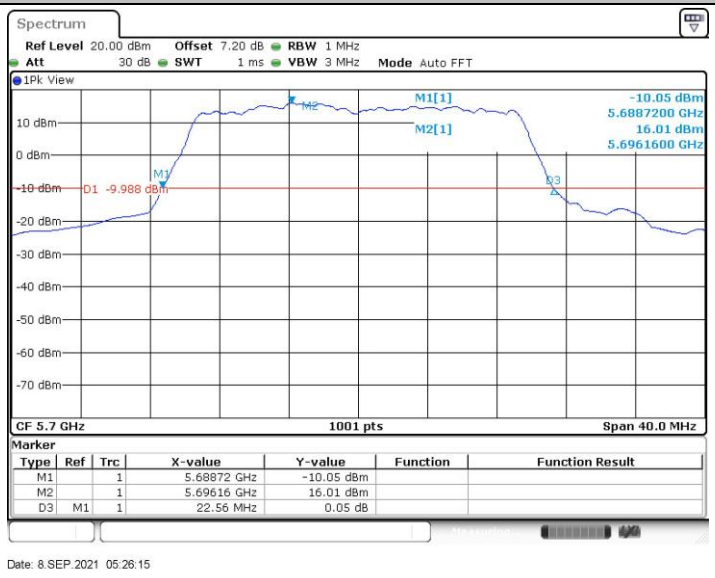

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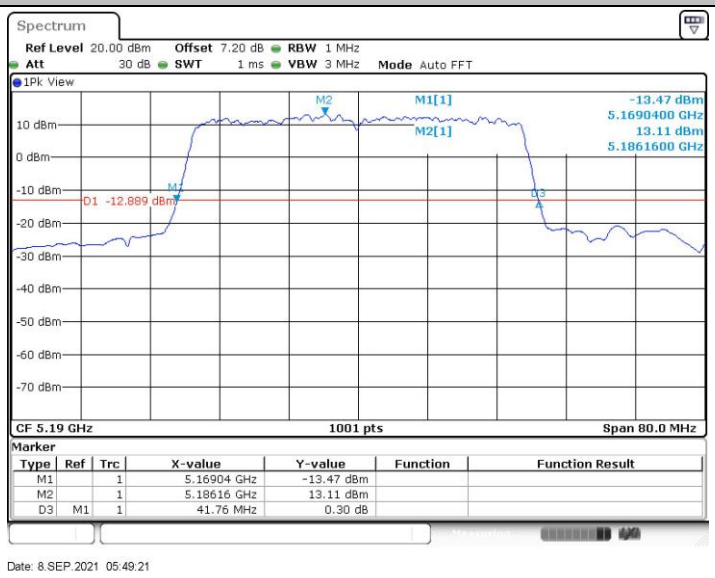

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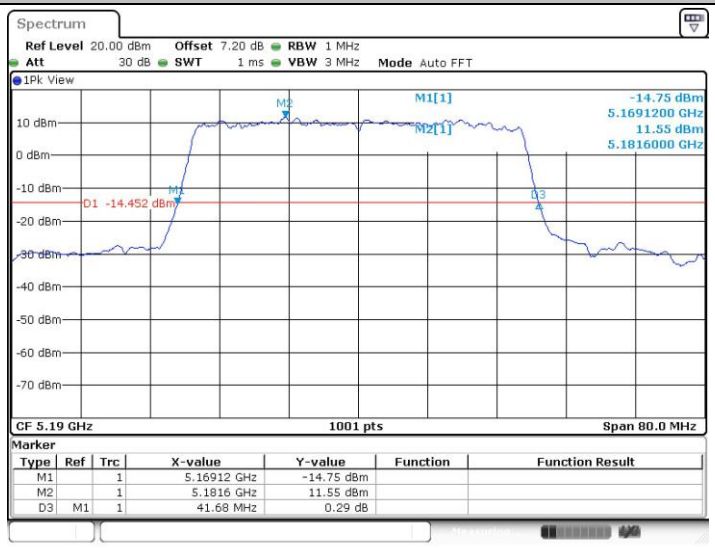

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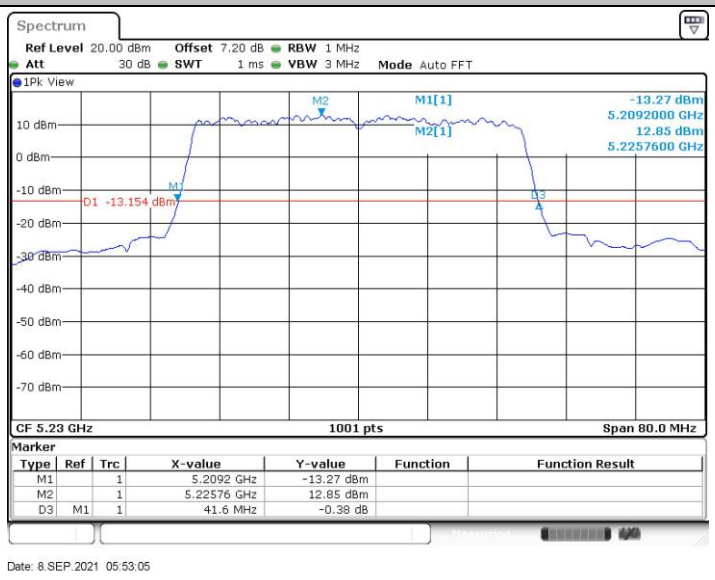

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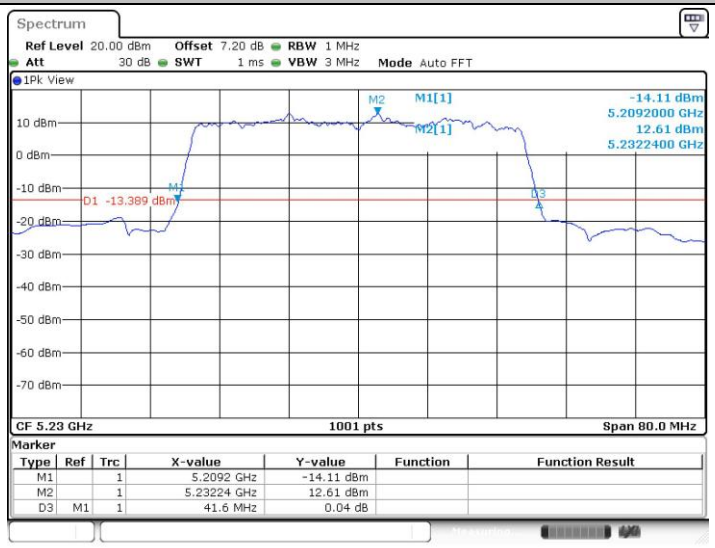

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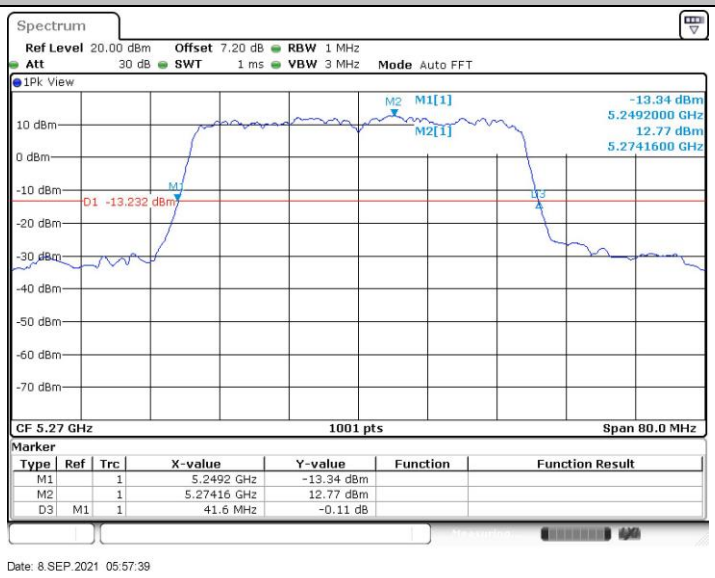

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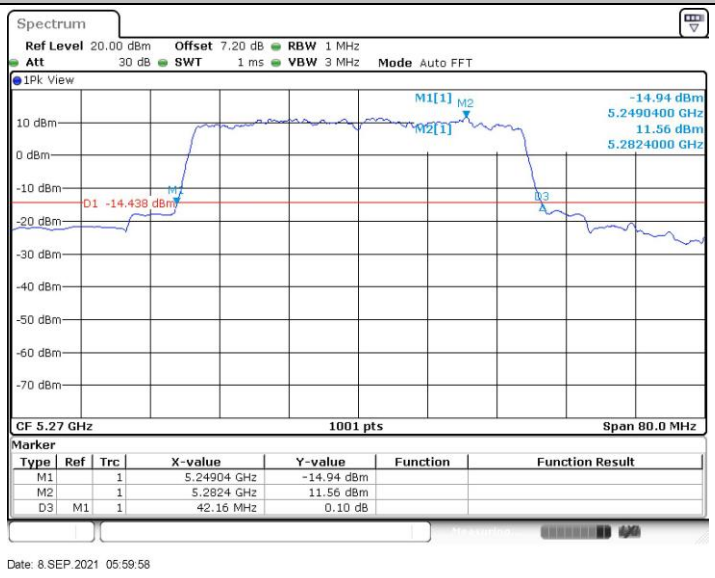

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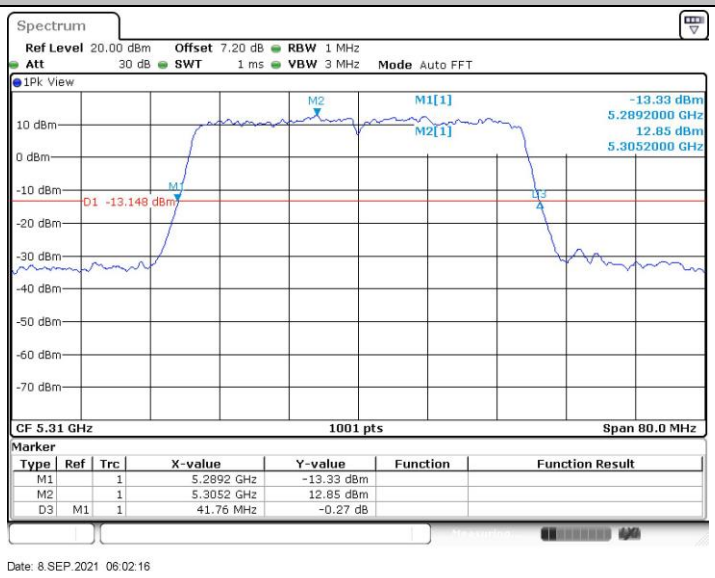

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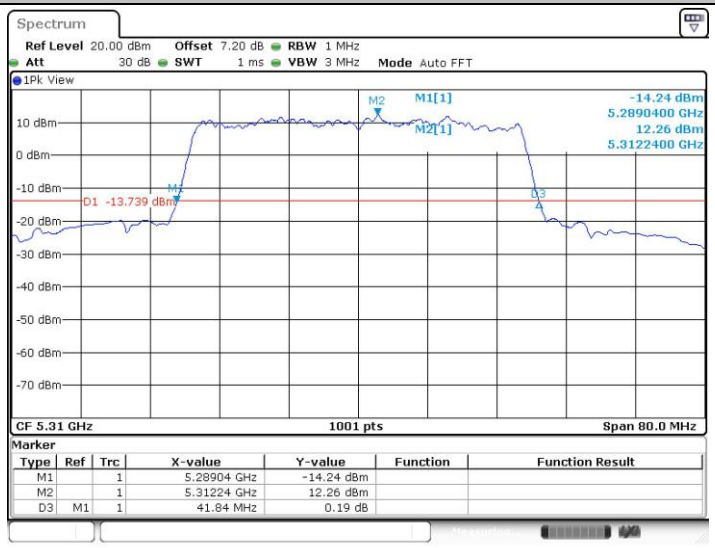

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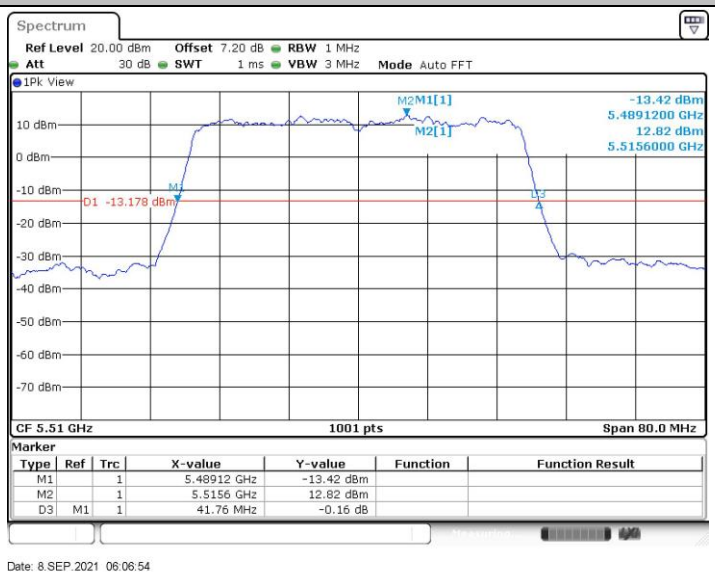

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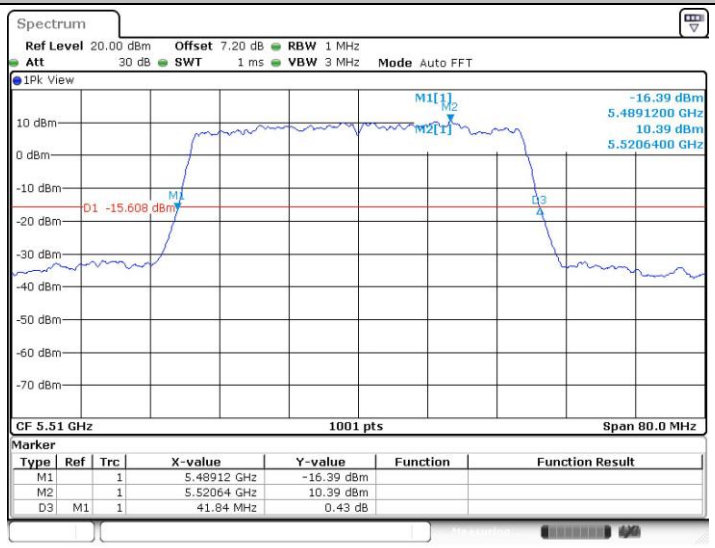

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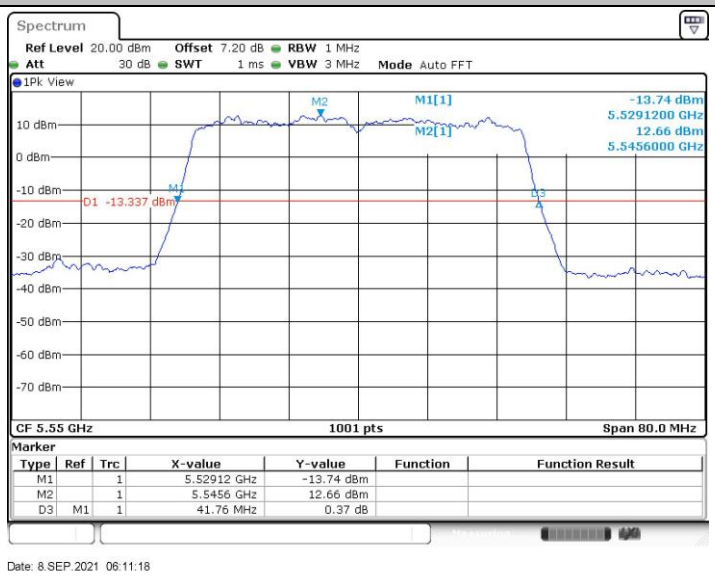

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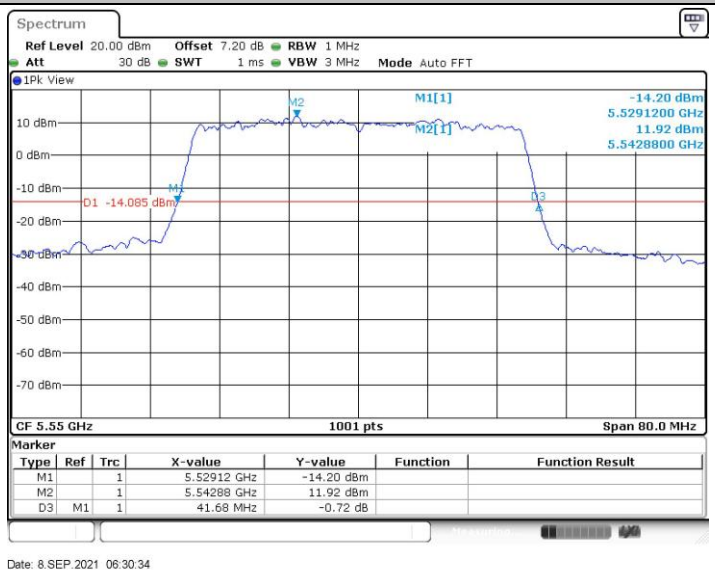
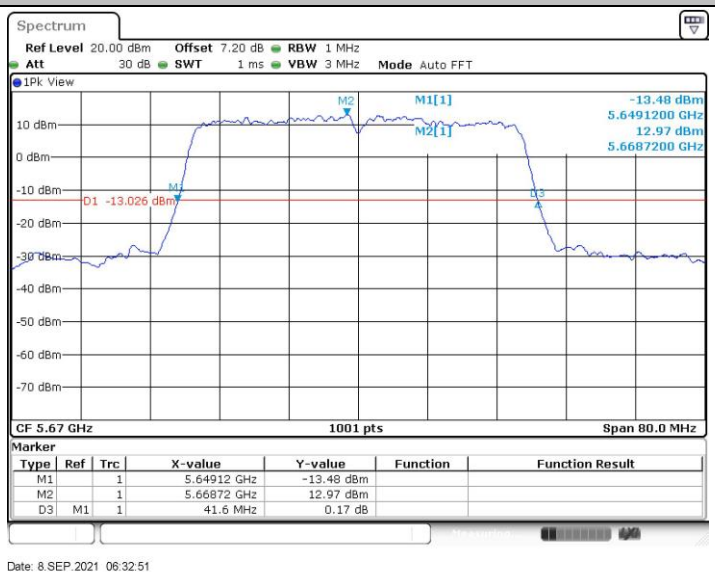
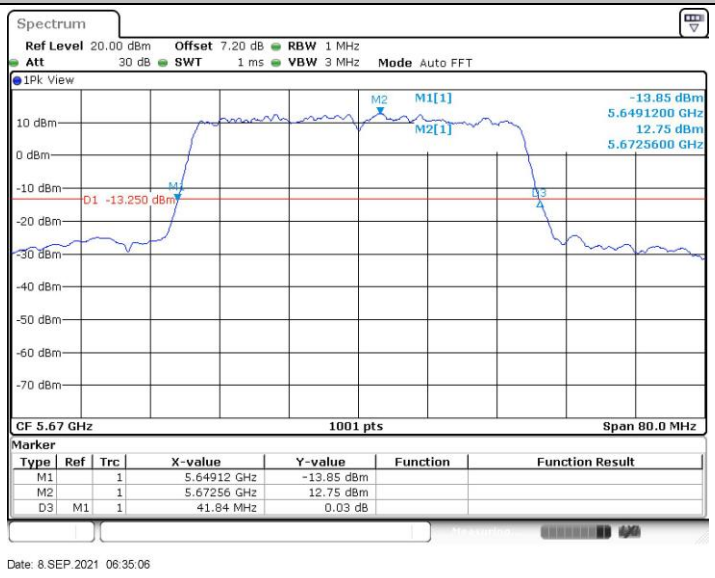
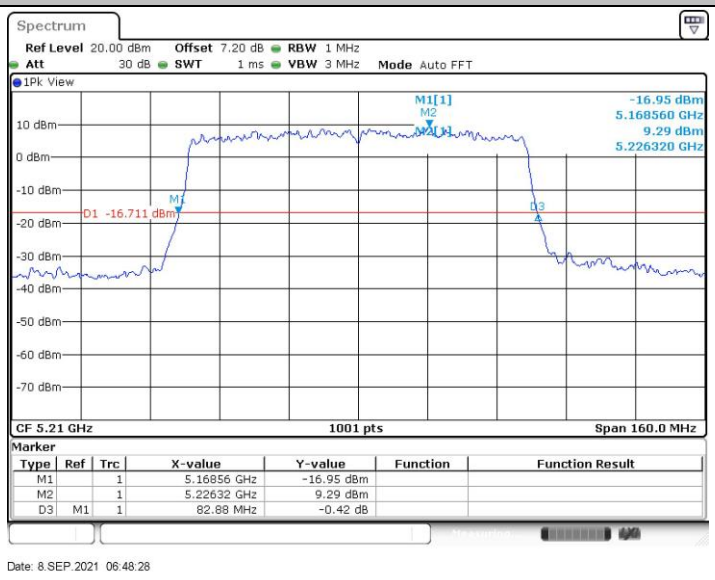


11AX40MIMO_Ant1_5670


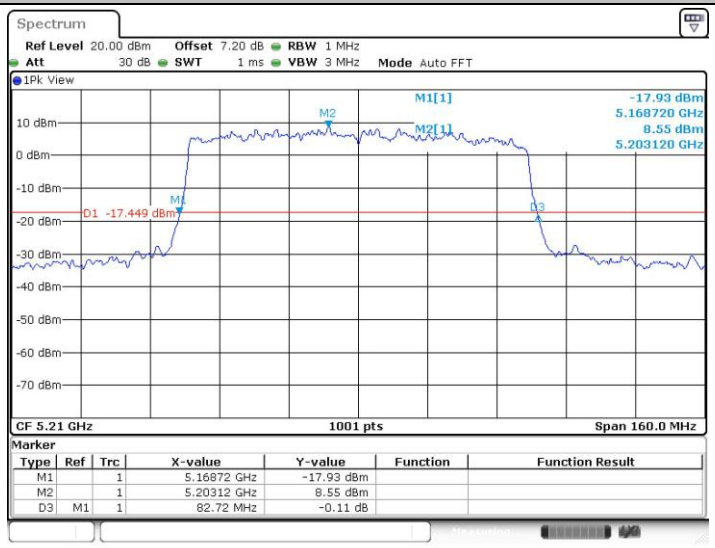
11AX40MIMO_Ant2_5670


11AX80MIMO_Ant1_5210



Date: 8.SEP.2021 06:48:28

11AX80MIMO_Ant2_5210



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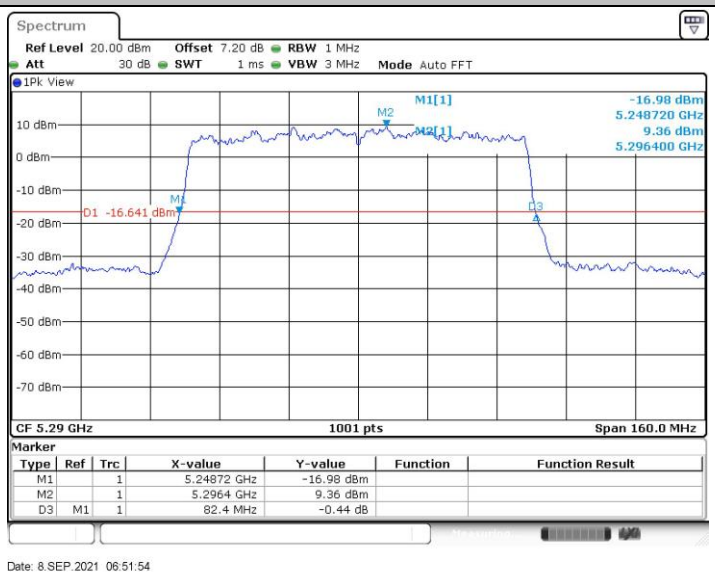
11AX80MIMO_Ant1_5290


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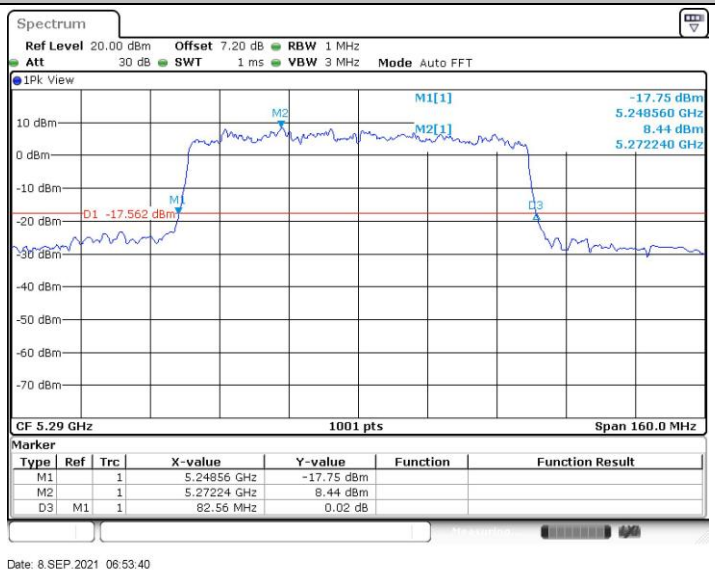
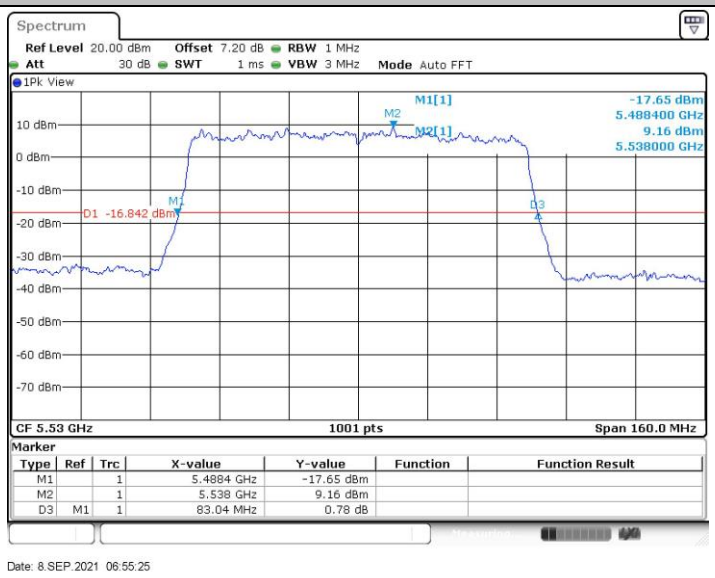
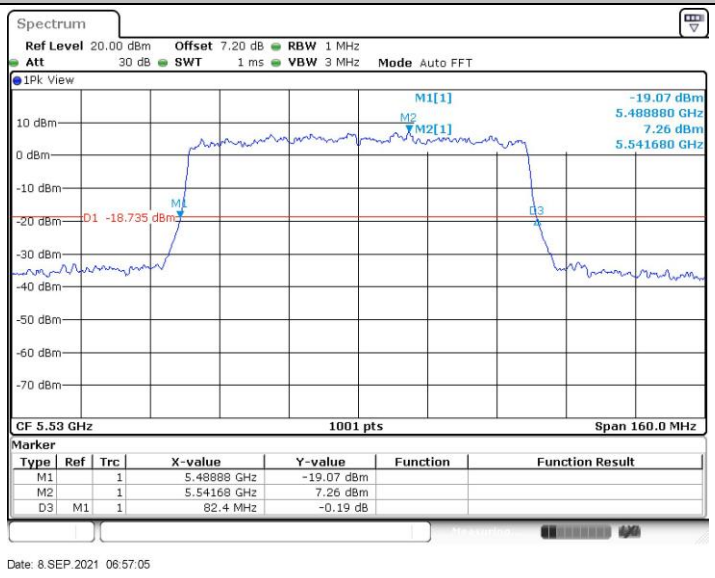
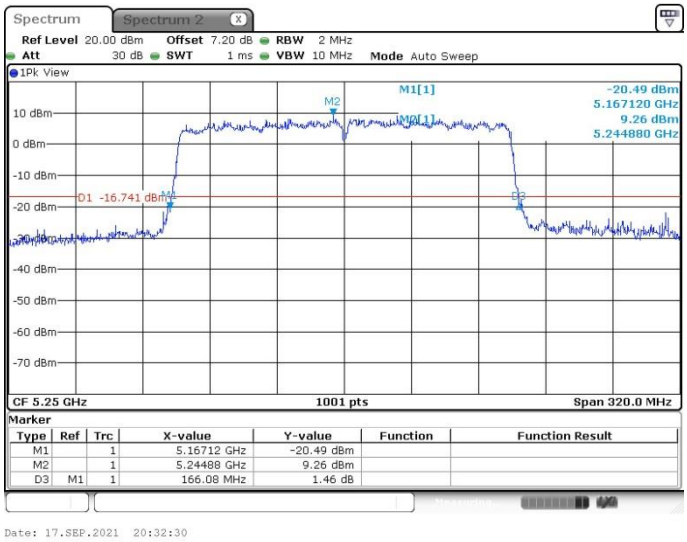
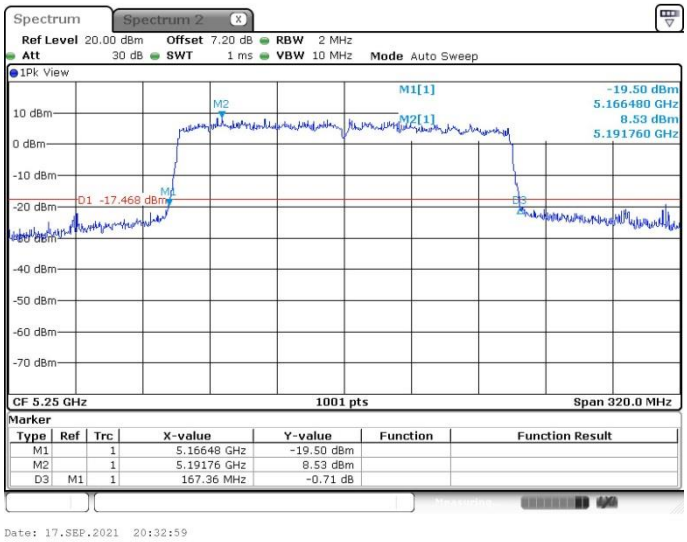


11AX80MIMO_Ant1_5530


11AX80MIMO_Ant2_5530


11AX160MIMO_Ant1_5250


11AX160MIMO_Ant2_5250


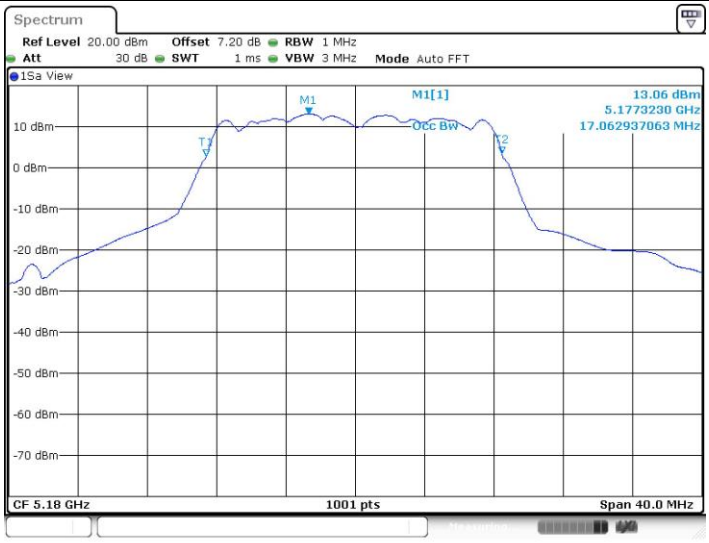
Occupied channel bandwidth Test Result

TestMode	Antenna	Frequency [MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A-CDD	Ant1	5180	17.063	5171.409	5188.472	---	---
	Ant2	5180	17.223	5171.329	5188.551	---	---
	Ant1	5200	17.183	5191.449	5208.631	---	---
	Ant2	5200	17.223	5191.369	5208.591	---	---
	Ant1	5240	17.143	5231.409	5248.551	---	---
	Ant2	5240	17.463	5231.329	5248.791	---	---
	Ant1	5260	17.143	5251.409	5268.551	---	---
	Ant2	5260	17.423	5251.169	5268.591	---	---
	Ant1	5280	17.223	5271.329	5288.551	---	---
	Ant2	5280	17.463	5271.289	5288.751	---	---
	Ant1	5320	17.223	5311.369	5328.591	---	---
	Ant2	5320	17.143	5311.409	5328.551	---	---
	Ant1	5500	17.143	5491.449	5508.591	---	---
	Ant2	5500	16.903	5491.528	5508.432	---	---
	Ant1	5580	17.183	5571.369	5588.551	---	---
	Ant2	5580	17.103	5571.528	5588.631	---	---
	Ant1	5700	17.183	5691.369	5708.551	---	---
	Ant2	5700	17.143	5691.449	5708.591	---	---
11AX20MIMO	Ant1	5180	19.301	5170.330	5189.630	---	---
	Ant2	5180	19.421	5170.210	5189.630	---	---
	Ant1	5200	19.341	5190.330	5209.670	---	---
	Ant2	5200	19.461	5190.330	5209.790	---	---
	Ant1	5240	19.341	5230.250	5249.590	---	---
	Ant2	5240	19.54	5230.210	5249.750	---	---
	Ant1	5260	19.341	5250.250	5269.590	---	---
	Ant2	5260	19.421	5250.290	5269.710	---	---
	Ant1	5280	19.221	5270.330	5289.550	---	---
	Ant2	5280	19.5	5270.210	5289.710	---	---
	Ant1	5320	19.341	5310.250	5329.590	---	---
	Ant2	5320	19.58	5310.170	5329.750	---	---
	Ant1	5500	19.301	5490.330	5509.630	---	---
	Ant2	5500	19.58	5490.170	5509.750	---	---
	Ant1	5580	19.221	5570.330	5589.550	---	---
	Ant2	5580	19.341	5570.330	5589.670	---	---
	Ant1	5700	19.301	5690.370	5709.670	---	---
	Ant2	5700	19.341	5690.370	5709.710	---	---
11AX40MIMO	Ant1	5190	37.882	5170.979	5208.861	---	---

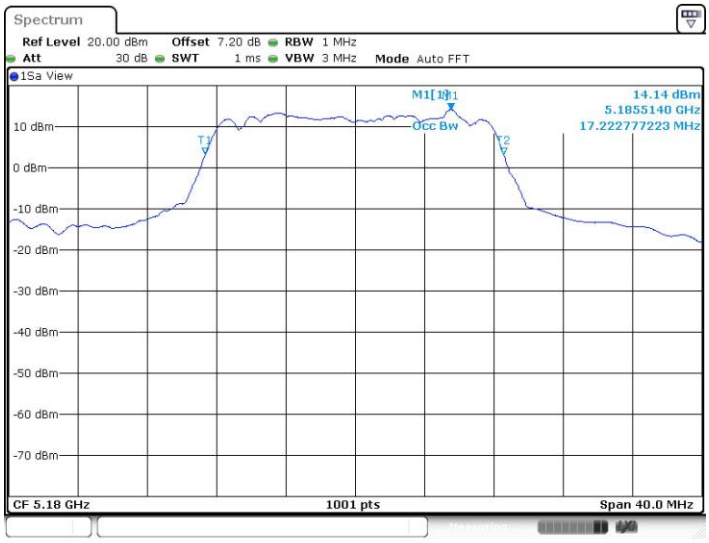
	Ant2	5190	38.122	5170.899	5209.021	---	---
	Ant1	5230	37.962	5211.059	5249.021	---	---
	Ant2	5230	37.962	5210.979	5248.941	---	---
	Ant1	5270	37.802	5251.059	5288.861	---	---
	Ant2	5270	38.202	5250.899	5289.101	---	---
	Ant1	5310	38.122	5290.899	5329.021	---	---
	Ant2	5310	38.122	5290.899	5329.021	---	---
	Ant1	5510	37.962	5491.059	5529.021	---	---
	Ant2	5510	38.042	5490.899	5528.941	---	---
	Ant1	5550	38.042	5530.979	5569.021	---	---
	Ant2	5550	37.962	5531.059	5569.021	---	---
	Ant1	5670	37.722	5651.059	5688.781	---	---
	Ant2	5670	37.802	5651.059	5688.861	---	---
11AX80MIMO	Ant1	5210	77.203	5171.319	5248.521	---	---
	Ant2	5210	77.203	5171.319	5248.521	---	---
	Ant1	5290	77.203	5251.479	5328.681	---	---
	Ant2	5290	77.203	5251.319	5328.521	---	---
	Ant1	5530	77.203	5491.319	5568.521	---	---
	Ant2	5530	77.043	5491.638	5568.681	---	---
11AX160MIMO	Ant1	5250	156.963	5171.678	5328.641	---	---
	Ant2	5250	156.963	5171.359	5328.322	---	---

Test Graphs

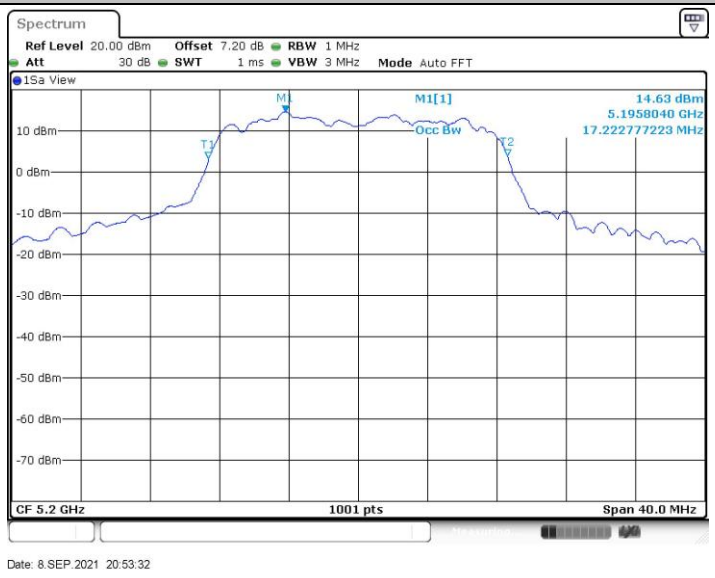
11A-CDD_Ant1_5180



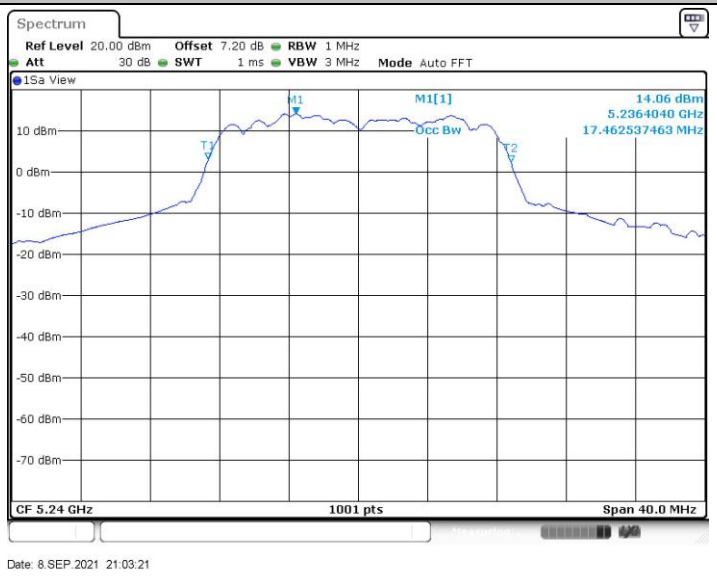
11A-CDD_Ant2_5180

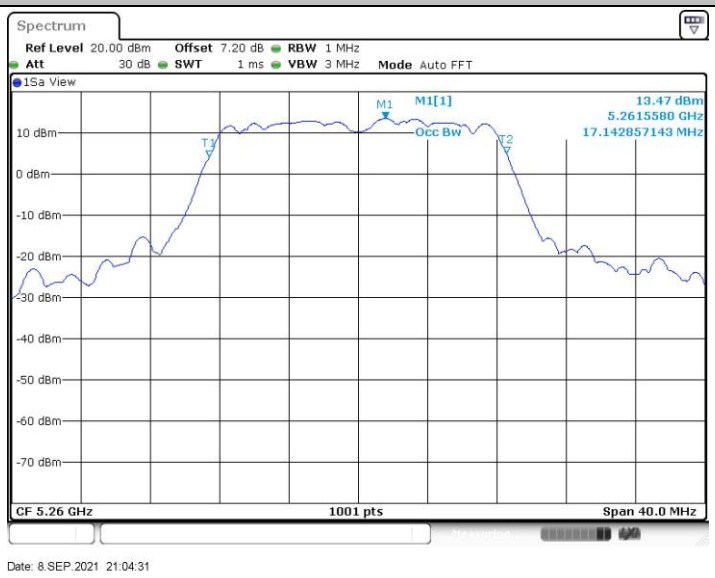


11A-CDD_Ant1_5200


11A-CDD_Ant2_5200


11A-CDD_Ant1_5240


11A-CDD_Ant2_5240


11A-CDD_Ant1_5260


11A-CDD_Ant2_5260