



FCC RF Test Report

APPLICANT : Motorola Mobility LLC
EQUIPMENT : Mobile Cellular Phone
BRAND NAME : Motorola
MODEL NAME : XT2205-1, XT2205-2
FCC ID : IHDT56AE7
STANDARD : FCC Part 15 Subpart E §15.407
CLASSIFICATION : (NII) Unlicensed National Information Infrastructure
TEST DATE(S) : Apr. 22, 2022 ~ May 20, 2022

We, Sporton International Inc. (Kunshan), 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.

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

Jason Jia

Approved by: Jason Jia



Sporton International Inc. (Kunshan)

**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
FR240834F	Rev. 01	Initial issue of report	Jun. 06, 2022



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/MHz	Pass	-
3.4	15.407(b)	Unwanted Emissions	15.407(b) & 15.209(a)	Pass	Under limit 3.11 dB at 5352.40 MHz
3.5	15.207	AC Conducted Emission	15.207(a)	Pass	Under limit 10.42 dB at 0.168 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	XT2205-1, XT2205-2
FCC ID	IHDT56AE7
IMEI Code	Conducted: 357910940014128 Conduction: 357910940014755 Radiation: 357910940013435
HW Version	DVT2
SW Version	S2ST32.48
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	<p><MIMO Ant.1+2> <5180 MHz ~ 5240 MHz> 802.11a : 20.50 dBm / 0.1122 W 802.11n HT20 : 20.40 dBm / 0.1096 W 802.11n HT40 : 20.61 dBm / 0.1151 W 802.11ac VHT20 : 20.32 dBm / 0.1076 W 802.11ac VHT40 : 20.52 dBm / 0.1127 W 802.11ac VHT80 : 15.05 dBm / 0.0320 W 802.11ax HE20 : 18.56 dBm / 0.0718 W 802.11ax HE40 : 18.62 dBm / 0.0728 W 802.11ax HE80 : 14.30 dBm / 0.0269 W</p> <p><5260 MHz ~ 5320 MHz> 802.11a : 20.23 dBm / 0.1054 W 802.11n HT20 : 20.33 dBm / 0.1079 W 802.11n HT40 : 20.21 dBm / 0.1050 W 802.11ac VHT20 : 20.25 dBm / 0.1059 W 802.11ac VHT40 : 20.13 dBm / 0.1030 W 802.11ac VHT80 : 14.76 dBm / 0.0299 W 802.11ax HE20 : 18.26 dBm / 0.0670 W 802.11ax HE40 : 18.22 dBm / 0.0664 W 802.11ax HE80 : 13.95 dBm / 0.0248 W</p> <p><5500 MHz ~ 5700 MHz > 802.11a : 19.73 dBm / 0.0940 W 802.11n HT20 : 19.83 dBm / 0.0962 W 802.11n HT40 : 20.38 dBm / 0.1091 W 802.11ac VHT20 : 19.76 dBm / 0.0946 W 802.11ac VHT40 : 20.25 dBm / 0.1059 W 802.11ac VHT80 : 13.48 dBm / 0.0223 W 802.11ax HE20 : 18.62 dBm / 0.0728 W 802.11ax HE40 : 18.66 dBm / 0.0735 W 802.11ax HE80 : 14.52 dBm / 0.0283 W</p>
99% Occupied Bandwidth	<p><MIMO Ant. 1+2> <5180 MHz ~ 5240 MHz> 802.11a : 17.50 MHz 802.11n HT20 : 18.58 MHz 802.11n HT40 : 37.24 MHz 802.11ac VHT80 : 76.88 MHz 802.11ax HE20 : 19.14 MHz 802.11ax HE40 : 37.88 MHz 802.11ax HE80 : 78.16 MHz</p> <p><5260 MHz ~ 5320 MHz> 802.11a : 17.66 MHz 802.11n HT20 : 18.58 MHz 802.11n HT40 : 37.32 MHz 802.11ac VHT80 : 77.20 MHz 802.11ax HE20 : 19.14 MHz 802.11ax HE40 : 37.88 MHz 802.11ax HE80 : 78.32 MHz</p> <p><5500 MHz ~ 5700 MHz > 802.11a : 18.98 MHz</p>



	802.11n HT20 : 19.86 MHz 802.11n HT40 : 38.44 MHz 802.11ac VHT80 : 77.52 MHz 802.11ax HE20 : 19.14 MHz 802.11ax HE40 : 38.04 MHz 802.11ax HE80 : 78.64 MHz		
Antenna Type / Gain	<5180 MHz ~ 5240 MHz> <Ant. 1> : Loop Antenna with gain -6.0 dBi <Ant. 2> : ILA Antenna with gain -6.0 dBi <5260 MHz ~ 5320 MHz> <Ant. 1> : Loop Antenna with gain -6.0 dBi <Ant. 2> : ILA Antenna with gain -6.0 dBi <5500 MHz ~ 5700 MHz> <Ant. 1> : Loop Antenna with gain -6.5 dBi <Ant. 2> : ILA Antenna with gain -6.0 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. For 802.11n HT20/HT40 & 802.11ac VHT20/VHT40 mode, the whole testing have assessed only 802.11n HT20/HT40 by referring to the higher output power.
3. 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) test Power/PSD/RSE, the full RU power > partial RU, therefore the full RU perform full test and Partial RU verified power/PSD/RSE.
4. WIFI MIMO only support STBC by manufacturer declared.
5. WLAN 5G Ant. 1 / Ant. 2 corresponding to EUT Photo Ant. 2 / Ant. 9.

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	Brand Name	Motorola(Salom)	Model Name	MC-301
AC Adapter 2	Brand Name	Motorola(Acbel)	Model Name	MC-301
Battery	Brand Name	Motorola(ATL)	Model Name	NF50
USB Cable 1	Brand Name	Motorola(Saibao)	Model Name	SC18D13215
USB Cable 2	Brand Name	Motorola(Cabletech)	Model Name	SC18D13216
USB Cable 3	Brand Name	Motorola(Luxshare)	Model Name	SC18D13217

1.7 Testing Location

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

Test Firm	Sporton International Inc. (Kunshan)		
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 03CH04-KS 03CH06-KS	CN1257	314309

Sporton International Inc. (Shenzhen) is accredited to ISO/IEC 17025:2017 by American Association for Laboratory Accreditation with Certificate Number 5145.01.

Test Firm	Sporton International Inc. (Shenzhen)		
Test Site Location	1/F, 2/F, Bldg 5, Shiling Industrial Zone, Xinwei Village, Xili, Nanshan, Shenzhen, 518055 People's Republic of China TEL: +86-755-86379589 FAX: +86-755-86379595		
Test Site No.	Sporton Site No.	FCC Designation No.	FCC Test Firm Registration No.
	TH01-SZ	CN1256	421272

Test data subcontracted: conducted test items in section 3.1 ~ 3.3 of this report.



1.8 Test Software

Item	Site	Manufacturer	Name	Version
1.	03CH04-KS	AUDIX	E3	6.2009-8-24a
2.	03CH06-KS	AUDIX	E3	6.2009-8-24al
3.	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 (X 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)
5180-5240 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)
5260-5320 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)
5500- 5700 MHz 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

Note:

1. The above Frequency and Channel in "*" were 802.11n HT40 and 802.11ac VHT40.
2. The above Frequency and Channel in "[#]" were 802.11ac VHT80.



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
802.11n HT20	MCS0
802.11n HT40	MCS0
802.11ac VHT80	MCS0
802.11ax HE20	MCS0
802.11ax HE40	MCS0
802.11ax HE80	MCS0

RSE Co-location
802.11an HT40 CH62 + LTE Band 30 Link

Test Cases	
AC Conducted Emission	Mode 1 : GSM850 Idle + Bluetooth Link + WLAN Link(5G) + USB Cable 1(Charging from Adapter 1) + Battery 1
Remark:	
1. The AC Conduction and RSE are tested with accessories from the worst case of Part 15B report.	
2. RSE Co-location mode are combination from the worst WLAN TX mode and WWAN Link mode.	

Ch. #		U-NII-1:5180-5240 MHz	U-NII-2A:5260-5320 MHz	U-NII-2C:5500- 5700 MHz
		802.11a	802.11a	802.11a
L	Low	36	52	100
M	Middle	44	60	116
H	High	48	64	140

Ch. #		U-NII-1:5180-5240 MHz	U-NII-2A:5260-5320 MHz	U-NII-2C:5500- 5700 MHz
		802.11n HT20	802.11n HT20	802.11n HT20
L	Low	36	52	100
M	Middle	44	60	116
H	High	48	64	140



Ch. #		U-NII-1:5180-5240 MHz	U-NII-2A:5260-5320 MHz	U-NII-2C:5500- 5700 MHz
		802.11n HT40	802.11n HT40	802.11n HT40
L	Low	38	54	102
M	Middle	-	-	110
H	High	46	62	134

Ch. #		U-NII-1:5180-5240 MHz	U-NII-2A:5260-5320 MHz	U-NII-2C:5500- 5700 MHz
		802.11ac VHT80	802.11ac VHT80	802.11ac VHT80
L	Low	-	-	106
M	Middle	42	58	-
H	High	-	-	-

Ch. #		U-NII-1 : 5150-5250 MHz	U-NII-2A : 5250-5350 MHz	U-NII-2C : 5470-5725MHz
		802.11ax HE20	802.11ax HE20	802.11ax HE20
L	Low	36	52	100
M	Middle	44	60	116
H	High	48	64	140

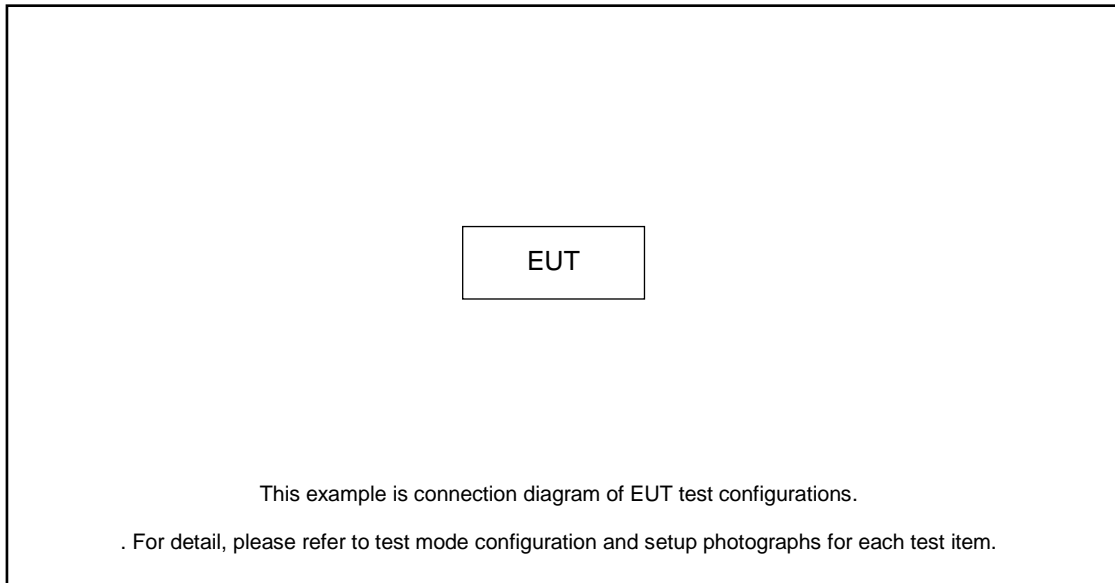
Ch. #		U-NII-1 : 5150-5250 MHz	U-NII-2A : 5250-5350 MHz	U-NII-2C : 5470-5725MHz
		802.11ax HE40	802.11ax HE40	802.11ax HE40
L	Low	38	54	102
M	Middle	-	-	110
H	High	46	62	134

Ch. #		U-NII-1 : 5150-5250 MHz	U-NII-2A : 5250-5350 MHz	U-NII-2C : 5470-5725MHz
		802.11ax HE80	802.11ax HE80	802.11ax HE80
L	Low	-	-	106
M	Middle	42	58	-
H	High	-	-	-

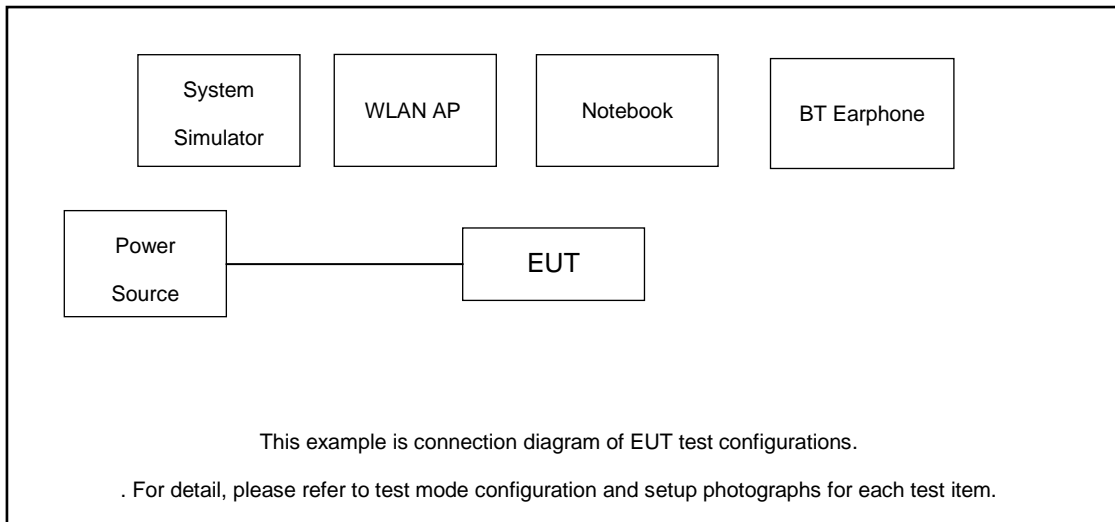
Remark: For radiation spurious emission, the final modulation and the worst data rate was reference the max RF conducted power.

2.3 Connection Diagram of Test System

For Radiated Emission



For AC 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.	LTE Base Station	Anritus	MT8821C	N/A	N/A	Unshielded,1.8m
2.	WLAN AP	D-link	DIR-655	KA21R655B1	N/A	Unshielded,1.8m
3.	Bluetooth Earphone	Lenovo	LBH308	N/A	N/A	N/A
4.	Notebook	Lenovo	G480	QDS-BRCM1050I	N/A	AC I/P: Unshielded, 1.8 m DC O/P: Shielded, 1.8 m

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 and attenuator factor 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 and attenuator factor.

$$\text{Offset} = \text{RF cable loss} + \text{attenuator factor}.$$

Following shows an offset computation example with cable loss 5.81 dB and 20dB attenuator.

$$\begin{aligned} \text{Offset(dB)} &= \text{RF cable loss(dB)} + \text{attenuator factor(dB)}. \\ &= 5.81 + 20 = 25.81(\text{dB}) \end{aligned}$$

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.

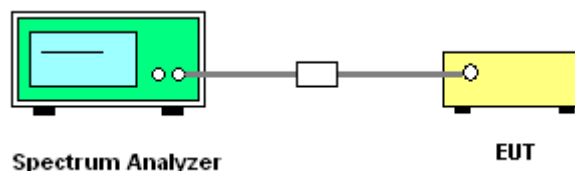
3.1.2 Measuring Instruments

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 1% to 5% of the OBW and set the Video bandwidth (VBW) $\geq 3 * RBW$.
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.

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.

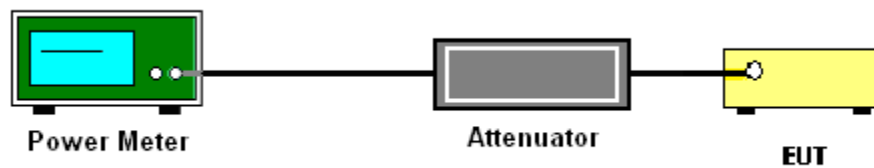
3.2.3 Test Procedures

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.

3.2.4 Test Setup





3.2.5 Test Result of Maximum Conducted Output Power

U-NII-1															
Mod.	Data Rate	NT X	CH.	RU Config	Freq. (MHz)	Duty Factor (dB)		Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)		Pass/Fail
						Ant 1	Ant 2	Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2	
11a	6Mbps	2	36	-	5180	0.12	0.15	15.12	13.75	17.50	24.00		-6.00	Pass	
11a	6Mbps	2	44	-	5220	0.12	0.15	18.08	16.70	20.46	24.00		-6.00	Pass	
11a	6Mbps	2	48	-	5240	0.12	0.15	18.04	16.85	20.50	24.00		-6.00	Pass	
HT20	MCS0	2	36	-	5180	0.13	0.16	13.60	12.24	15.99	24.00		-6.00	Pass	
HT20	MCS0	2	44	-	5220	0.13	0.16	17.95	16.58	20.33	24.00		-6.00	Pass	
HT20	MCS0	2	48	-	5240	0.13	0.16	17.87	16.85	20.40	24.00		-6.00	Pass	
HT40	MCS0	2	38	-	5190	0.26	0.33	13.33	12.00	15.73	24.00		-6.00	Pass	
HT40	MCS0	2	46	-	5230	0.26	0.33	18.23	16.85	20.61	24.00		-6.00	Pass	
VHT20	MCS0	2	36	-	5180	0.13	0.13	13.56	12.17	15.93	24.00		-6.00	Pass	
VHT20	MCS0	2	44	-	5220	0.13	0.13	17.91	16.49	20.27	24.00		-6.00	Pass	
VHT20	MCS0	2	48	-	5240	0.13	0.13	17.82	16.74	20.32	24.00		-6.00	Pass	
VHT40	MCS0	2	38	-	5190	0.26	0.26	13.28	11.89	15.65	24.00		-6.00	Pass	
VHT40	MCS0	2	46	-	5230	0.26	0.26	18.19	16.71	20.52	24.00		-6.00	Pass	
VHT80	MCS0	2	42	-	5210	0.50	0.50	12.64	11.35	15.05	24.00		-6.00	Pass	
HE20	MCS0	2	36	Full	5180	0.17	0.21	13.37	12.41	15.93	24.00		-6.00	Pass	
				26/0		0.17	0.21	6.84	6.03	9.46	24.00		-6.00	Pass	
				52/37		0.17	0.21	9.81	8.83	12.36	24.00		-6.00	Pass	
				106/53		0.17	0.21	12.44	11.53	15.02	24.00		-6.00	Pass	
			44	Full	5220	0.17	0.21	16.05	14.98	18.56	24.00		-6.00	Pass	
			48	Full	5240	0.17	0.21	15.99	14.89	18.48	24.00		-6.00	Pass	
				26/8		0.17	0.21	7.00	6.08	9.57	24.00		-6.00	Pass	
				52/40		0.17	0.21	9.89	9.01	12.48	24.00		-6.00	Pass	
106/54	0.17	0.21		13.03		12.10	15.60	24.00		-6.00	Pass				
HE40	MCS0	2	38	Full	5190	0.39	0.39	13.14	12.02	15.63	24.00		-6.00	Pass	
				242/61		0.39	0.39	14.43	13.26	16.89	24.00		-6.00	Pass	
			46	Full	5230	0.39	0.39	16.20	14.92	18.62	24.00		-6.00	Pass	
				242/62		0.39	0.39	14.41	13.40	16.94	24.00		-6.00	Pass	
HE80	MCS0	2	42	Full	5210	0.69	0.71	11.87	10.61	14.30	24.00		-6.00	Pass	
				484/65		0.69	0.71	8.74	7.62	11.23	24.00		-6.00	Pass	
				484/66		0.69	0.71	8.67	7.51	11.14	24.00		-6.00	Pass	



U-NII-2A																
Mod.	Data Rate	NT X	CH	RU Config	Freq. (MHz)	Duty Factor (dB)		Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)		EIRP Power Limit (dBm)	Pass/Fail
						Ant 1	Ant 2	Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2		
11a	6Mbps	2	52	-	5260	0.12	0.15	17.49	16.82	20.18	23.98	-6.00	26.99	Pass		
11a	6Mbps	2	60	-	5300	0.12	0.15	17.33	17.10	20.23	23.98	-6.00	26.99	Pass		
11a	6Mbps	2	64	-	5320	0.12	0.15	14.30	14.13	17.23	23.98	-6.00	26.99	Pass		
HT20	MCS0	2	52	-	5260	0.13	0.16	17.64	16.97	20.33	23.98	-6.00	26.99	Pass		
HT20	MCS0	2	60	-	5300	0.13	0.16	17.31	16.96	20.15	23.98	-6.00	26.99	Pass		
HT20	MCS0	2	64	-	5320	0.13	0.16	13.94	13.79	16.88	23.98	-6.00	26.99	Pass		
HT40	MCS0	2	54	-	5270	0.26	0.33	17.58	16.78	20.21	23.98	-6.00	26.99	Pass		
HT40	MCS0	2	62	-	5310	0.26	0.33	13.69	13.52	16.62	23.98	-6.00	26.99	Pass		
VHT20	MCS0	2	52	-	5260	0.13	0.13	17.58	16.87	20.25	23.98	-6.00	26.99	Pass		
VHT20	MCS0	2	60	-	5300	0.13	0.13	17.22	16.86	20.05	23.98	-6.00	26.99	Pass		
VHT20	MCS0	2	64	-	5320	0.13	0.13	13.89	13.72	16.82	23.98	-6.00	26.99	Pass		
VHT40	MCS0	2	54	-	5270	0.26	0.26	17.48	16.73	20.13	23.98	-6.00	26.99	Pass		
VHT40	MCS0	2	62	-	5310	0.26	0.26	13.64	13.40	16.53	23.98	-6.00	26.99	Pass		
VHT80	MCS0	2	58	-	5290	0.50	0.50	11.93	11.57	14.76	23.98	-6.00	26.99	Pass		
HE20	MCS0	2	52	Full	5260	0.17	0.21	15.62	14.85	18.26	23.98	-6.00	26.99	Pass		
				26/0		0.17	0.21	7.06	6.50	9.80	23.98	-6.00	26.99	Pass		
				52/37		0.17	0.21	9.26	8.73	12.01	23.98	-6.00	26.99	Pass		
				106/53		0.17	0.21	12.48	11.92	15.22	23.98	-6.00	26.99	Pass		
			60	Full	5300	0.17	0.21	15.58	14.83	18.23	23.98	-6.00	26.99	Pass		
			64	Full	5320	0.17	0.21	14.02	13.53	16.79	23.98	-6.00	26.99	Pass		
				26/8		0.17	0.21	6.82	6.54	9.69	23.98	-6.00	26.99	Pass		
				52/40		0.17	0.21	9.10	8.90	12.01	23.98	-6.00	26.99	Pass		
106/54	0.17	0.21		12.34		12.01	15.19	23.98	-6.00	26.99	Pass					
HE40	MCS0	2	54	Full	5270	0.39	0.39	15.49	14.91	18.22	23.98	-6.00	26.99	Pass		
				242/61		0.39	0.39	13.86	13.31	16.60	23.98	-6.00	26.99	Pass		
			62	Full	5310	0.39	0.39	13.09	12.39	15.77	23.98	-6.00	26.99	Pass		
				242/62		0.39	0.39	13.79	13.42	16.62	23.98	-6.00	26.99	Pass		
HE80	MCS0	2	58	Full	5290	0.69	0.71	11.16	10.71	13.95	23.98	-6.00	26.99	Pass		
				484/65		0.69	0.71	8.86	8.42	11.66	23.98	-6.00	26.99	Pass		
				484/66		0.69	0.71	8.25	8.16	11.22	23.98	-6.00	26.99	Pass		



U-NII-2C																
Mod.	Data Rate	NT X	CH.	RU Config	Freq. (MHz)	Duty Factor (dB)		Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)		EIRP Power Limit (dBm)	Pass/Fail
						Ant 1	Ant 2	Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2		
11a	6Mbps	2	100	-	5500	0.12	0.15	17.30	15.25	19.41	23.98	-6.00	26.99	Pass		
11a	6Mbps	2	116	-	5580	0.12	0.15	17.74	15.37	19.73	23.98	-6.00	26.99	Pass		
11a	6Mbps	2	140	-	5700	0.12	0.15	14.97	13.10	17.15	23.98	-6.00	26.99	Pass		
HT20	MCS0	2	100	-	5500	0.13	0.16	15.83	13.85	17.96	23.98	-6.00	26.99	Pass		
HT20	MCS0	2	116	-	5580	0.13	0.16	17.78	15.57	19.83	23.98	-6.00	26.99	Pass		
HT20	MCS0	2	140	-	5700	0.13	0.16	14.98	12.73	17.01	23.98	-6.00	26.99	Pass		
HT40	MCS0	2	102	-	5510	0.26	0.33	13.63	11.61	15.75	23.98	-6.00	26.99	Pass		
HT40	MCS0	2	110	-	5550	0.26	0.33	18.27	16.24	20.38	23.98	-6.00	26.99	Pass		
HT40	MCS0	2	134	-	5670	0.26	0.33	16.25	13.73	18.18	23.98	-6.00	26.99	Pass		
VHT20	MCS0	2	100	-	5500	0.13	0.13	15.79	13.76	17.90	23.98	-6.00	26.99	Pass		
VHT20	MCS0	2	116	-	5580	0.13	0.13	17.73	15.47	19.76	23.98	-6.00	26.99	Pass		
VHT20	MCS0	2	140	-	5700	0.13	0.13	14.94	12.66	16.96	23.98	-6.00	26.99	Pass		
VHT40	MCS0	2	102	-	5510	0.26	0.26	13.60	11.51	15.69	23.98	-6.00	26.99	Pass		
VHT40	MCS0	2	110	-	5550	0.26	0.26	18.22	15.99	20.25	23.98	-6.00	26.99	Pass		
VHT40	MCS0	2	134	-	5670	0.26	0.26	16.21	13.61	18.11	23.98	-6.00	26.99	Pass		
VHT80	MCS0	2	106	-	5530	0.50	0.50	11.35	9.36	13.48	23.98	-6.00	26.99	Pass		
HE20	MCS0	2	100	Full	5500	0.17	0.21	16.39	14.66	18.62	23.98	-6.00	26.99	Pass		
				26/0		0.17	0.21	8.10	6.79	10.50	23.98	-6.00	26.99	Pass		
				52/37		0.17	0.21	10.45	9.04	12.81	23.98	-6.00	26.99	Pass		
				106/53		0.17	0.21	13.62	12.30	16.02	23.98	-6.00	26.99	Pass		
			140	Full	5700	0.17	0.21	15.17	12.99	17.22	23.98	-6.00	26.99	Pass		
				26/8		0.17	0.21	7.75	5.65	9.84	23.98	-6.00	26.99	Pass		
				52/40		0.17	0.21	10.67	8.39	12.69	23.98	-6.00	26.99	Pass		
				106/54		0.17	0.21	13.86	11.49	15.85	23.98	-6.00	26.99	Pass		
HE40	MCS0	2	102	Full	5510	0.39	0.39	14.49	12.79	16.73	23.98	-6.00	26.99	Pass		
				242/61		0.39	0.39	14.97	13.50	17.31	23.98	-6.00	26.99	Pass		
			134	Full	5670	0.39	0.39	16.25	13.95	18.26	23.98	-6.00	26.99	Pass		
				242/62		0.39	0.39	14.53	12.19	16.53	23.98	-6.00	26.99	Pass		
HE80	MCS0	2	106	Full	5530	0.69	0.71	12.14	10.76	14.52	23.98	-6.00	26.99	Pass		
				484/65		0.69	0.71	9.14	7.63	11.46	23.98	-6.00	26.99	Pass		
				484/66		0.69	0.71	9.33	7.58	11.55	23.98	-6.00	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.

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 \geq 3 MHz.
- Number of points in sweep \geq 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 (a): Measure and sum the spectra across the outputs.

The total final Power Spectral Density is the bin-by-bin summation to obtain the combined spectrum. For the device with 2 transmitter outputs. The spectrum measurements of the individual outputs are all performed with the same span and number of points, the spectrum value in the first spectral bin of output 1 is summed with that in the first spectral bin of output 2 to obtain the value for the first frequency bin of the summed spectrum.

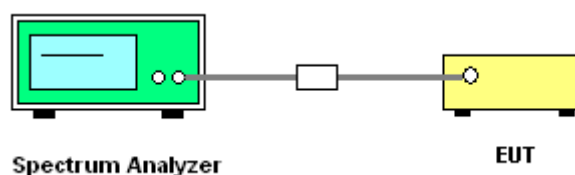
Method (b): Measure and sum spectral maxima across the outputs.

The measurement on each individual output were performed with the same span and number on each individual output. The maximum value (peak) of each spectrum is determined. These maximum values are then summed mathematically in linear power units across the outputs.

Method (c): Measure and add $10 \log(N_{ANT})$ dB, where N_{ANT} is the number of outputs.

The measurement on each individual output were performed with the same span and number on each individual output. The quantity $10 \log(N_{ANT})$ dB is added to each spectrum value before comparing to the emission limit.

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.

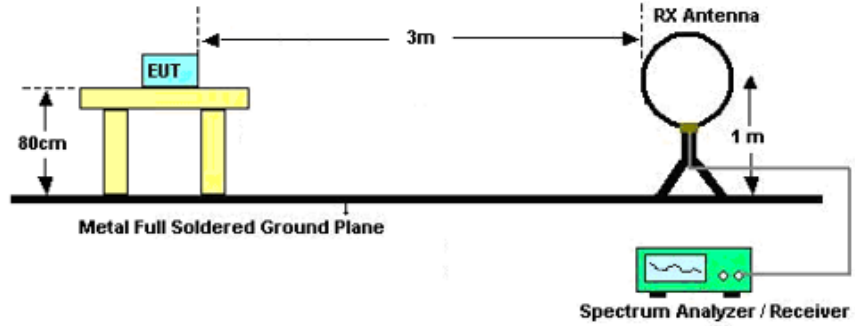


3.4.3 Test Procedures

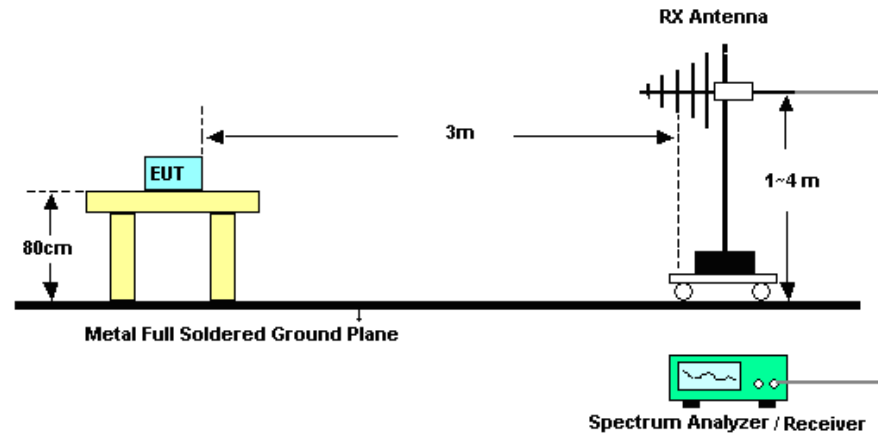
1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01. Section G) Unwanted emissions measurement.
 - (1) Procedure for Unwanted Emissions Measurements Below 1000MHz
 - RBW = 120 kHz
 - VBW = 300 kHz
 - Detector = Peak
 - Trace mode = max hold
 - (2) Procedure for Peak Unwanted Emissions Measurements Above 1000 MHz
 - RBW = 1 MHz
 - VBW \geq 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 \geq 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

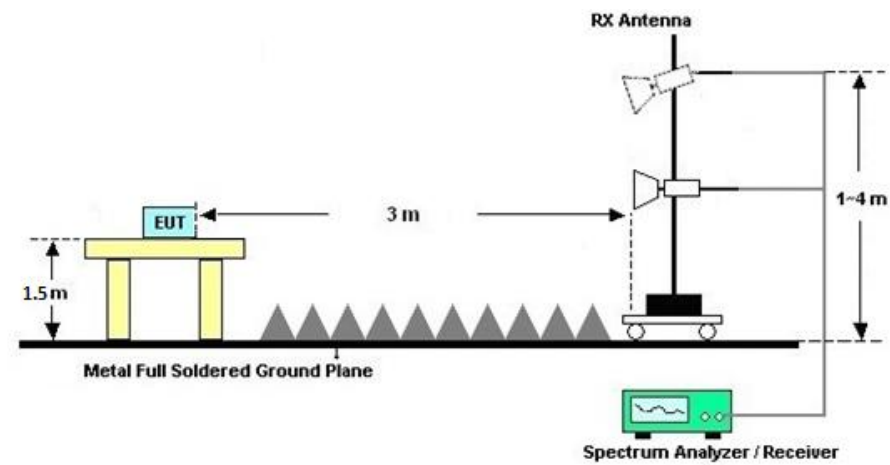
For radiated emissions below 30MHz



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

<STBC Modes>

FCC KDB 662911 D01 Multiple Transmitter Output v02r01

Basic methodology with NANT transmit antennas, each with the same directional gain GANT dBi, being driven by NANT transmitter outputs of equal power, and If all transmit signals are completely uncorrelated with each other,

Directional gain = GANT Max

<STBC Modes>						
	Ant. 1	Ant. 2	DG for Power	DG for PSD	Power Limit Reduction	PSD Limit Reduction
	(dBi)	(dBi)	(dBi)	(dBi)	(dB)	(dB)
Band I	-6.00	-6.00	-6.00	-6.00	0.00	0.00
Band II	-6.00	-6.00	-6.00	-6.00	0.00	0.00
Band III	-6.50	-6.00	-6.00	-6.00	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	Oct. 14, 2021	Apr. 22, 2022~ May 13, 2022	Oct. 13, 2022	Conducted (TH01-KS)
Pulse Power Sensor	Anritsu	MA2411B	0917070	300MHz~40GHz	Jan. 05, 2022	Apr. 22, 2022~ May 13, 2022	Jan. 04, 2023	Conducted (TH01-KS)
Power Meter	Anritsu	ML2495A	1005002	50MHz Bandwidth	Jan. 05, 2022	Apr. 22, 2022~ May 13, 2022	Jan. 04, 2023	Conducted (TH01-KS)
EMI Test Receiver	Keysight	N9038A	MY57290151	3Hz~8.5GHz;Max 30dBm	Jul. 12, 2021	May 19, 2022	Jul. 11, 2022	Radiation (03CH04-KS)
EXA Spectrum Analyzer	Keysight	N9010B	MY57541079	10Hz-44G,MAX 30dB	Oct. 14, 2021	May 19, 2022	Oct. 13, 2022	Radiation (03CH04-KS)
Loop Antenna	R&S	HFH2-Z2	100321	9kHz~30MHz	Oct. 30, 2021	May 19, 2022	Oct. 29, 2022	Radiation (03CH04-KS)
Bilog Antenna	TeseQ	CBL6111D	49922	30MHz-1GHz	May 30, 2021	May 19, 2022	May 29, 2022	Radiation (03CH05-KS)
Horn Antenna	Schwarzbeck	BBHA9120D	1284	1GHz~18GHz	Oct. 18, 2021	May 19, 2022	Oct. 18, 2022	Radiation (03CH04-KS)
SHF-EHF Horn	Com-power	AH-840	101070	18GHz~40GHz	Jan. 05, 2022	May 19, 2022	Jan. 04, 2023	Radiation (03CH04-KS)
Amplifier	Burgeon	BPA-530	102219	0.01MHz~3000MHz	Nov. 01, 2021	May 19, 2022	Oct. 31, 2022	Radiation (03CH04-KS)
Amplifier	MITEQ	EM18G40GG A	060728	18~40GHz	Jan. 05, 2022	May 19, 2022	Jan. 04, 2023	Radiation (03CH04-KS)
high gain Amplifier	MITEQ	AMF-7D-0010 1800-30-10P	2025788	1Ghz-18Ghz	Jul. 30, 2021	May 19, 2022	Jul. 29, 2022	Radiation (03CH04-KS)
Amplifier	Keysight	83017A	MY57280106	500MHz~26.5GHz	Oct. 12, 2021	May 19, 2022	Oct. 11, 2022	Radiation (03CH04-KS)
AC Power Source	Chroma	61601	F104090004	N/A	NCR	May 19, 2022	NCR	Radiation (03CH04-KS)
Turn Table	ChamPro	EM 1000-T	060762-T	0~360 degree	NCR	May 19, 2022	NCR	Radiation (03CH04-KS)
Antenna Mast	ChamPro	EM 1000-A	060762-A	1 m~4 m	NCR	May 19, 2022	NCR	Radiation (03CH04-KS)
EMI Test Receiver	Keysight	N9038A	MY56400004	3Hz~8.5GHz;Max 30dBm	Oct. 16, 2021	May 20, 2022	Oct. 15, 2022	Radiation (03CH06-KS)
EXA Spectrum Analyzer	Keysight	N9010B	MY60242126	10Hz-44GHz	Oct. 26, 2021	May 20, 2022	Oct. 25, 2022	Radiation (03CH06-KS)
Loop Antenna	R&S	HFH2-Z2	100321	9kHz~30MHz	Oct. 30, 2021	May 20, 2022	Oct. 29, 2022	Radiation (03CH06-KS)
Bilog Antenna	TeseQ	CBL6111D	49921	30MHz-1GHz	May 27, 2021	May 20, 2022	May 26, 2022	Radiation (03CH06-KS)
Double Ridge Horn Antenna	ETS-Lindgren	3117	00240138	1GHz~18GHz	Jul. 19, 2021	May 20, 2022	Jul. 18, 2022	Radiation (03CH06-KS)
SHF-EHF Horn	Com-power	AH-840	101093	18GHz~40GHz	Jan. 05, 2022	May 20, 2022	Jan. 04, 2023	Radiation (03CH06-KS)
Amplifier	SONOMA	310N	380827	9KHz ~1GHZ	Jul. 30, 2021	May 20, 2022	Jul. 29, 2022	Radiation (03CH06-KS)
Amplifier	MITEQ	EM18G40GG A	060728	18~40GHz	Jan. 05, 2022	May 20, 2022	Jan. 04, 2023	Radiation (03CH06-KS)
high gain Amplifier	MITEQ	AMF-7D-0010 1800-30-10P	2025788	1Ghz-18Ghz	Jul. 30, 2021	May 20, 2022	Jul. 29, 2022	Radiation (03CH06-KS)
Amplifier	Keysight	83017A	MY53270319	500MHz~26.5GHz	Oct. 14, 2021	May 20, 2022	Oct. 13, 2022	Radiation (03CH06-KS)
AC Power Source	Chroma	61601	F104090004	N/A	NCR	May 20, 2022	NCR	Radiation (03CH06-KS)
Turn Table	ChamPro	EM 1000-T	060762-T	0~360 degree	NCR	May 20, 2022	NCR	Radiation (03CH06-KS)
Antenna Mast	ChamPro	EM 1000-A	060762-A	1 m~4 m	NCR	May 20, 2022	NCR	Radiation (03CH06-KS)
EMI Receiver	R&S	ESCi7	100768	9kHz~7GHz;	Apr. 20, 2022	May 05, 2022	Apr. 19, 2023	Conduction (CO01-KS)
AC LISN (for auxiliary equipment)	MessTec	AN3016	060103	9kHz~30MHz	Oct. 14, 2021	May 05, 2022	Oct. 13, 2022	Conduction (CO01-KS)



AC LISN	R&S	ENV216	100334	9kHz~30MHz	Oct. 14, 2021	May 05, 2022	Oct. 13, 2022	Conduction (CO01-KS)
AC Power Source	Chroma	61602	ABP00000 0811	AC 0V~300V, 45Hz~1000Hz	Oct. 14, 2021	May 05, 2022	Oct. 13, 2022	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 Measurement

Test Item	Uncertainty
Conducted Power	1.34 dB
Conducted Emissions	1.34 dB
Occupied Channel Bandwidth	0.012 MHz
Conducted Power Spectral Density	1.32 dB

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

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

For 03CH04-KS

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))	5.1dB
---	-------

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	5.1dB
---	-------



For 03CH06-KS

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



Appendix A. Conducted Test Results

Test Engineer :	Xueyi Zhang	Temperature :	20~25°C
		Relative Humidity :	45~51%

26DB Emission Bandwidth

Test Result

TestMode	Antenna	Freq(MHz)	26dB EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5180	23.28	5168.96	5192.24	---	---
	Ant2	5180	25.56	5167.32	5192.88	---	---
	Ant1	5220	21.76	5209.28	5231.04	---	---
	Ant2	5220	26.96	5206.60	5233.56	---	---
	Ant1	5240	22.72	5228.32	5251.04	---	---
	Ant2	5240	27.80	5225.80	5253.60	---	---
	Ant1	5260	21.16	5249.52	5270.68	---	---
	Ant2	5260	29.60	5246.76	5276.36	---	---
	Ant1	5300	23.28	5287.40	5310.68	---	---
	Ant2	5300	25.28	5287.36	5312.64	---	---
	Ant1	5320	20.40	5309.72	5330.12	---	---
	Ant2	5320	28.92	5305.16	5334.08	---	---
	Ant1	5500	25.88	5486.48	5512.36	---	---
	Ant2	5500	26.76	5486.48	5513.24	---	---
	Ant1	5580	26.40	5566.52	5592.92	---	---
	Ant2	5580	27.88	5566.88	5594.76	---	---
	Ant1	5700	28.56	5685.52	5714.08	---	---
	Ant2	5700	30.36	5685.56	5715.92	---	---
11N20MIMO	Ant1	5180	24.36	5167.36	5191.72	---	---
	Ant2	5180	28.24	5166.44	5194.68	---	---
	Ant1	5220	22.52	5208.04	5230.56	---	---
	Ant2	5220	29.92	5205.16	5235.08	---	---
	Ant1	5240	23.28	5228.04	5251.32	---	---
	Ant2	5240	29.24	5224.56	5253.80	---	---
	Ant1	5260	22.84	5248.04	5270.88	---	---
	Ant2	5260	28.36	5245.20	5273.56	---	---
	Ant1	5300	23.92	5288.08	5312.00	---	---
	Ant2	5300	27.52	5286.12	5313.64	---	---
	Ant1	5320	22.08	5309.04	5331.12	---	---
	Ant2	5320	28.36	5305.52	5333.88	---	---
	Ant1	5500	28.40	5486.08	5514.48	---	---
	Ant2	5500	29.96	5485.84	5515.80	---	---
	Ant1	5580	28.68	5565.84	5594.52	---	---
	Ant2	5580	29.24	5565.52	5594.76	---	---
	Ant1	5700	29.36	5686.00	5715.36	---	---
	Ant2	5700	30.40	5684.40	5714.80	---	---



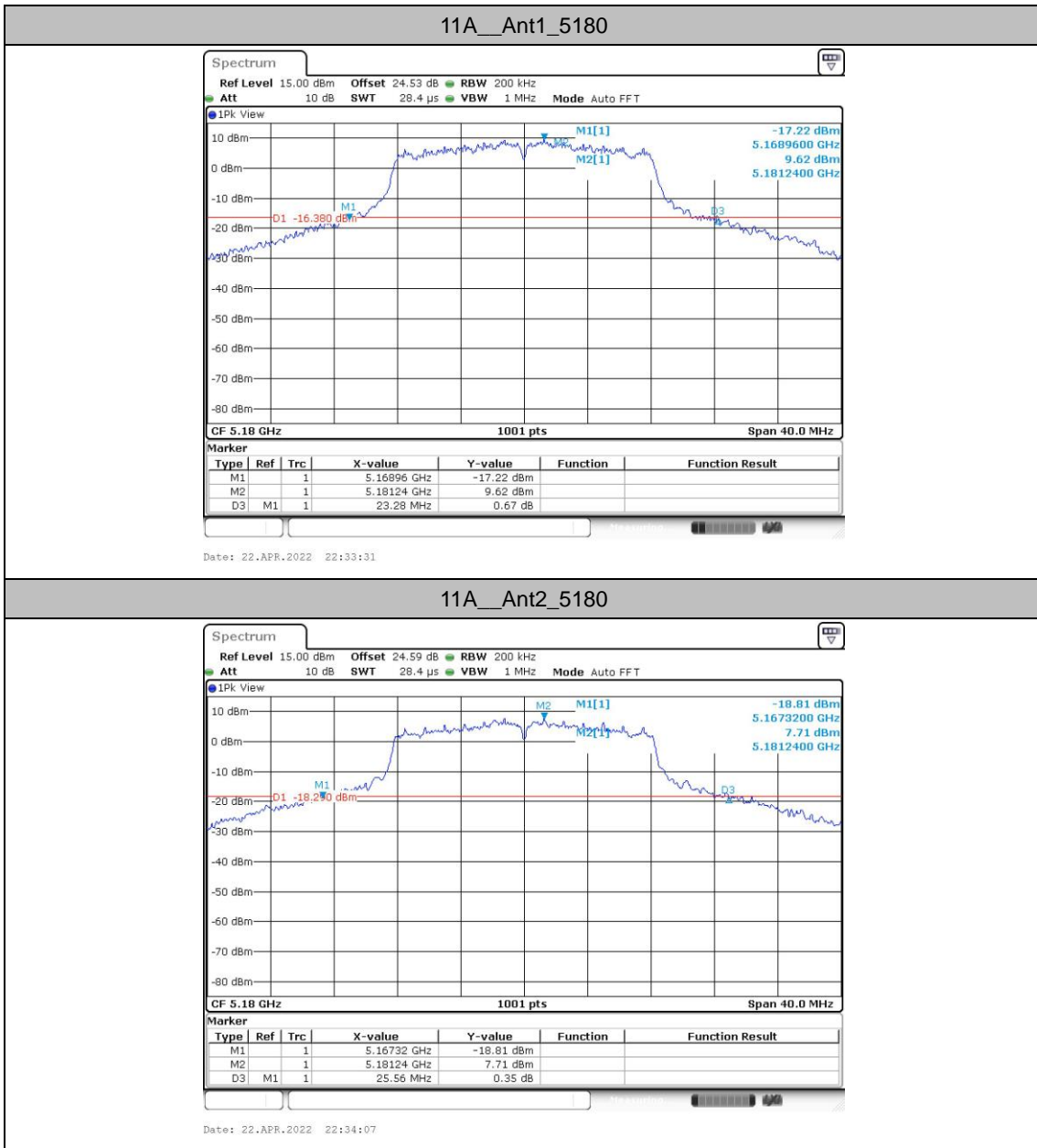
11N40MIMO	Ant1	5190	65.60	5157.36	5222.96	---	---
	Ant2	5190	54.08	5160.64	5214.72	---	---
	Ant1	5230	58.72	5197.36	5256.08	---	---
	Ant2	5230	55.60	5200.56	5256.16	---	---
	Ant1	5270	63.84	5237.44	5301.28	---	---
	Ant2	5270	58.72	5237.44	5296.16	---	---
	Ant1	5310	63.92	5277.36	5341.28	---	---
	Ant2	5310	62.24	5277.52	5339.76	---	---
	Ant1	5510	69.92	5473.04	5542.96	---	---
	Ant2	5510	66.40	5472.24	5538.64	---	---
	Ant1	5550	71.28	5513.04	5584.32	---	---
	Ant2	5550	70.40	5511.04	5581.44	---	---
	Ant1	5670	72.24	5633.12	5705.36	---	---
	Ant2	5670	59.12	5637.44	5696.56	---	---
11AC80MIMO	Ant1	5210	103.04	5160.08	5263.12	---	---
	Ant2	5210	139.20	5140.56	5279.76	---	---
	Ant1	5290	114.72	5227.44	5342.16	---	---
	Ant2	5290	140.48	5221.68	5362.16	---	---
	Ant1	5530	147.84	5454.80	5602.64	---	---
	Ant2	5530	147.68	5455.12	5602.80	---	---
11AX20MIMO	Ant1	5180	21.72	5169.24	5190.96	---	---
	Ant2	5180	21.16	5169.52	5190.68	---	---
	Ant1	5220	21.64	5209.16	5230.80	---	---
	Ant2	5220	21.12	5209.44	5230.56	---	---
	Ant1	5240	21.68	5229.20	5250.88	---	---
	Ant2	5240	21.80	5229.04	5250.84	---	---
	Ant1	5260	21.32	5249.36	5270.68	---	---
	Ant2	5260	21.56	5249.12	5270.68	---	---
	Ant1	5300	21.52	5289.20	5310.72	---	---
	Ant2	5300	21.64	5289.20	5310.84	---	---
	Ant1	5320	21.20	5309.32	5330.52	---	---
	Ant2	5320	21.96	5309.04	5331.00	---	---
	Ant1	5500	21.40	5489.28	5510.68	---	---
	Ant2	5500	21.72	5489.20	5510.92	---	---
	Ant1	5580	21.92	5569.12	5591.04	---	---
	Ant2	5580	21.28	5569.40	5590.68	---	---
	Ant1	5700	21.28	5689.32	5710.60	---	---
	Ant2	5700	21.52	5689.12	5710.64	---	---
11AX40MIMO	Ant1	5190	39.76	5170.08	5209.84	---	---
	Ant2	5190	39.76	5170.08	5209.84	---	---
	Ant1	5230	39.84	5210.08	5249.92	---	---
	Ant2	5230	40.08	5209.76	5249.84	---	---
	Ant1	5270	39.76	5250.08	5289.84	---	---
	Ant2	5270	39.84	5250.08	5289.92	---	---
	Ant1	5310	40.00	5290.00	5330.00	---	---
	Ant2	5310	39.84	5290.08	5329.92	---	---
Ant1	5510	42.48	5487.44	5529.92	---	---	



	Ant2	5510	40.40	5489.68	5530.08	---	---
	Ant1	5550	39.92	5530.00	5569.92	---	---
	Ant2	5550	40.08	5530.08	5570.16	---	---
	Ant1	5670	39.84	5650.00	5689.84	---	---
	Ant2	5670	41.36	5650.08	5691.44	---	---
11AX80MIMO	Ant1	5210	80.64	5169.68	5250.32	---	---
	Ant2	5210	80.96	5169.52	5250.48	---	---
	Ant1	5290	80.80	5249.52	5330.32	---	---
	Ant2	5290	80.80	5249.68	5330.48	---	---
	Ant1	5530	80.96	5489.52	5570.48	---	---
	Ant2	5530	92.80	5478.16	5570.96	---	---



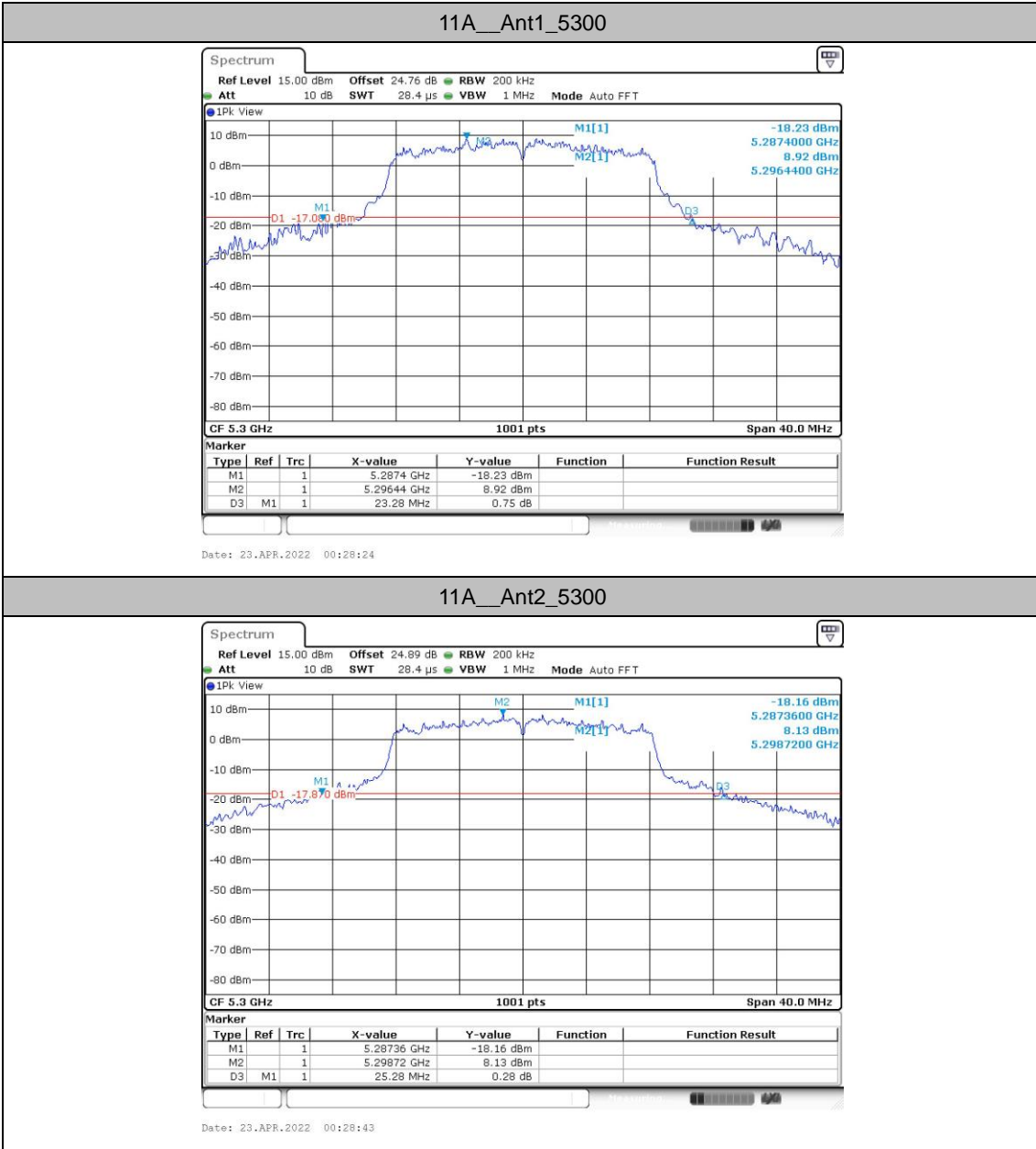
Test Graphs









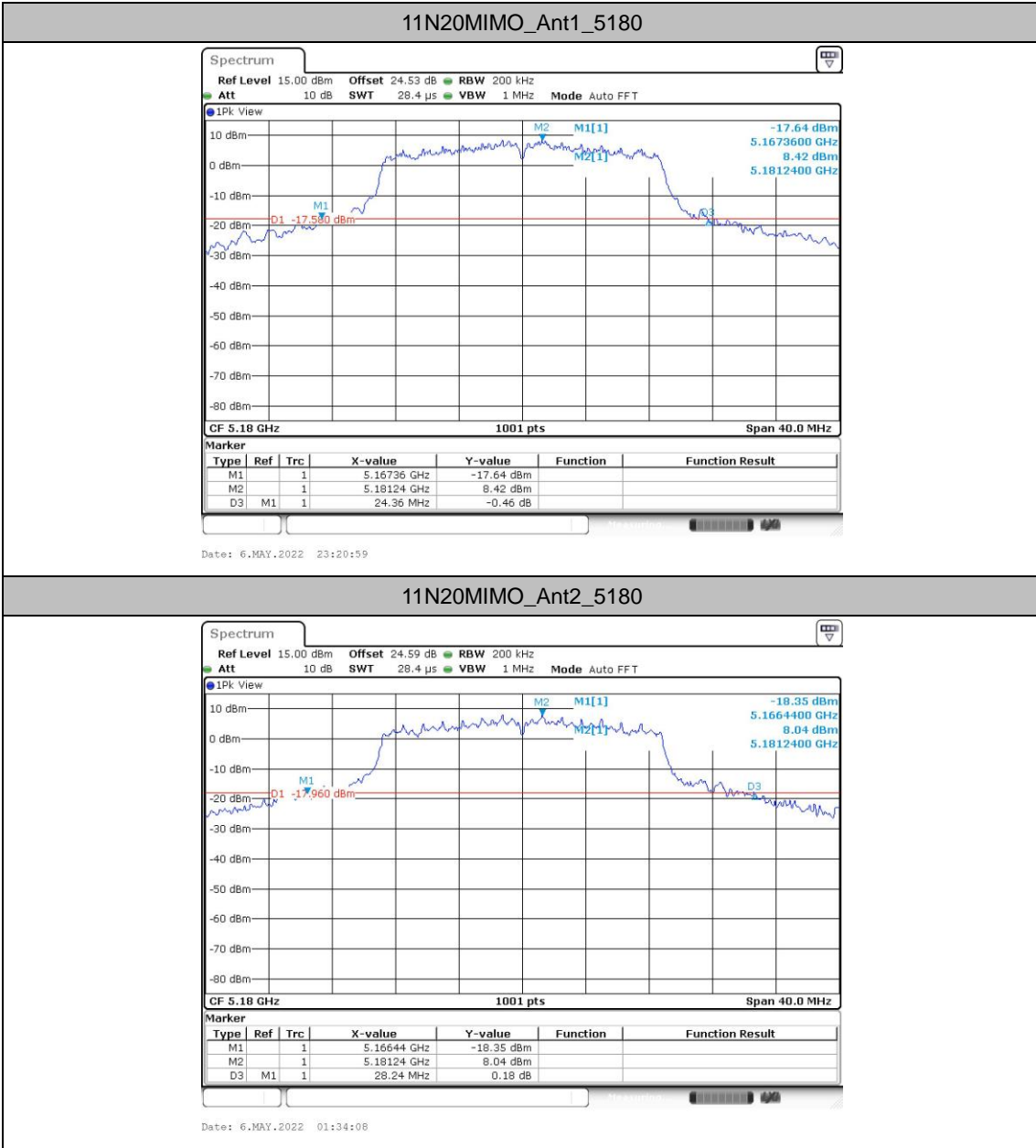


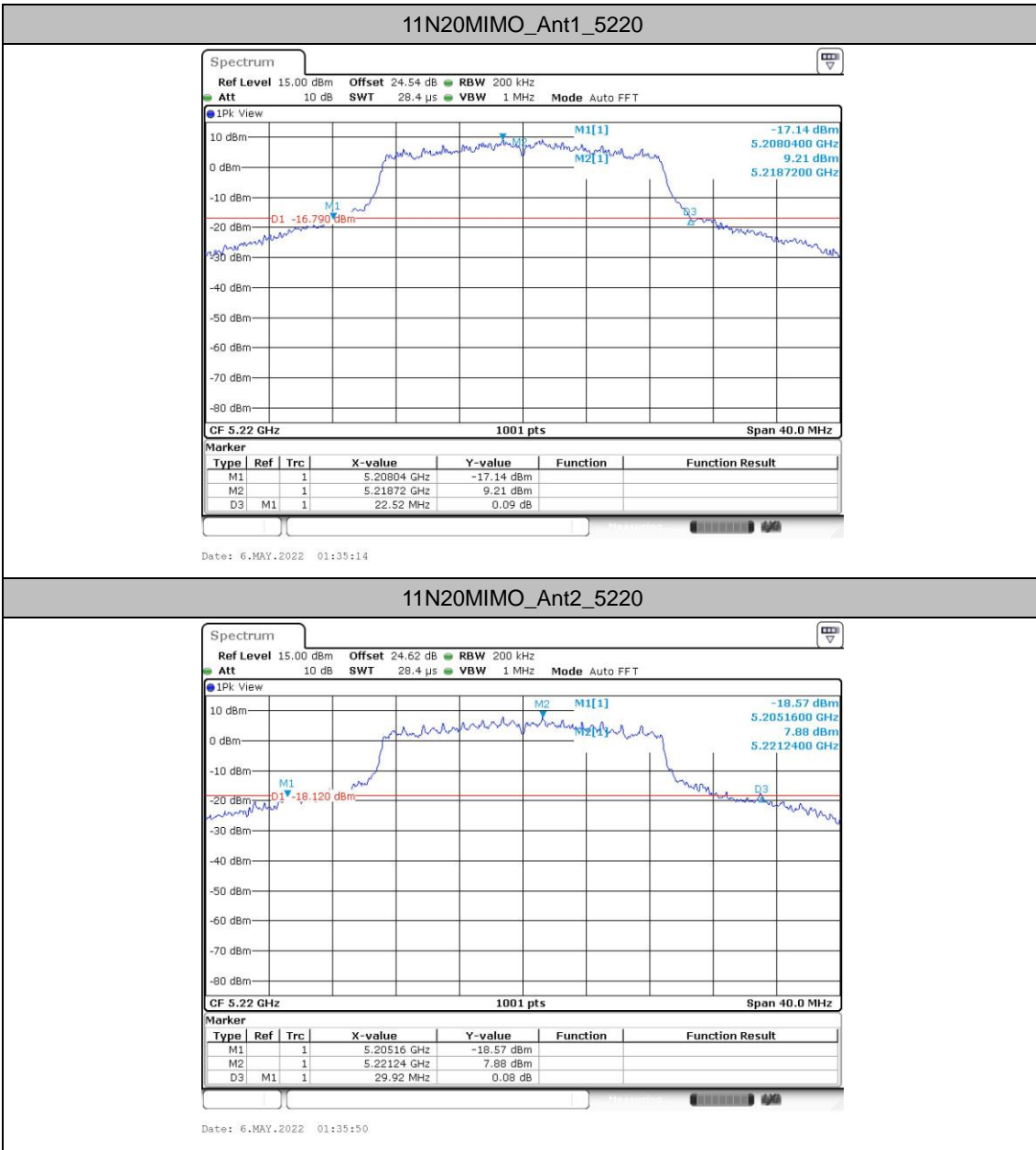


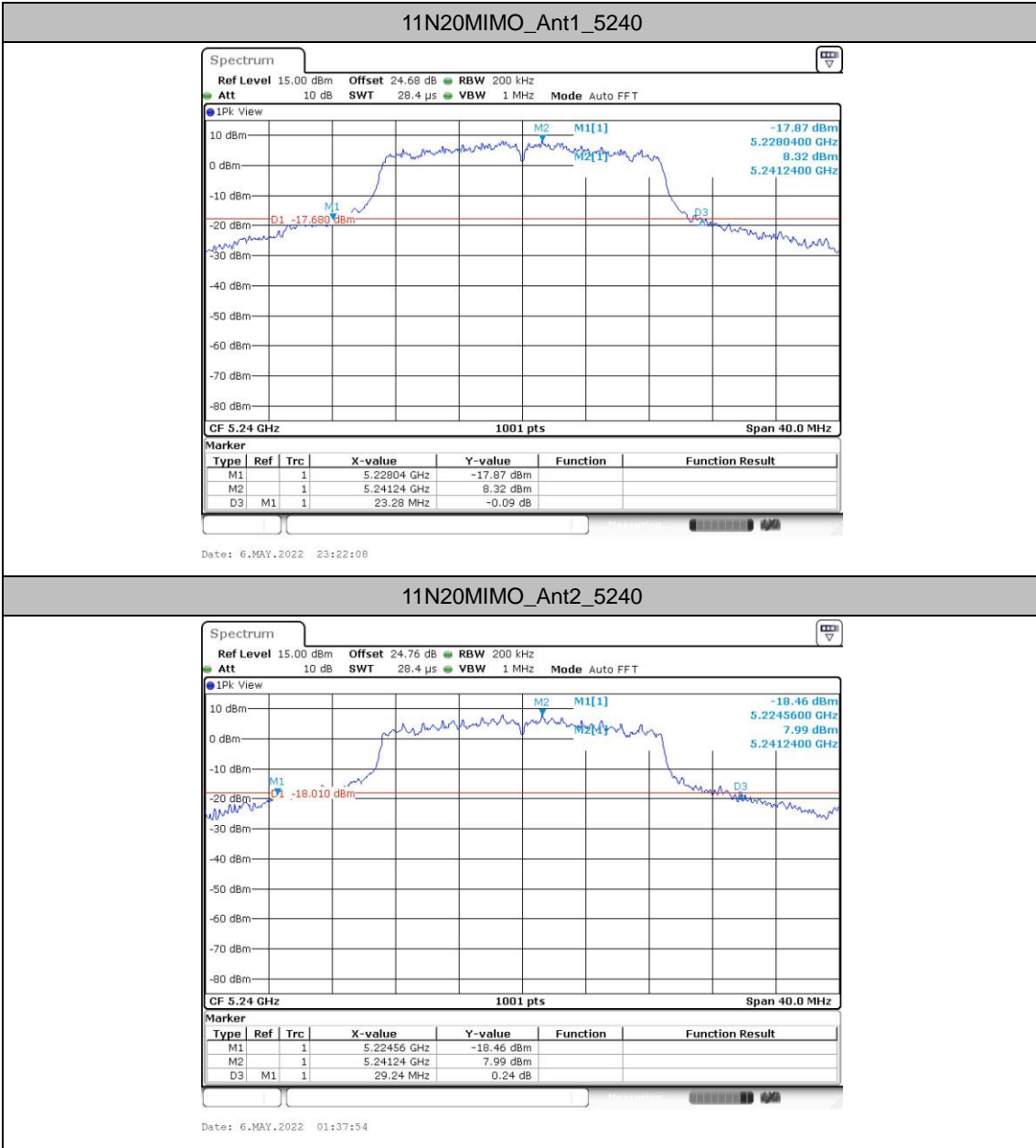




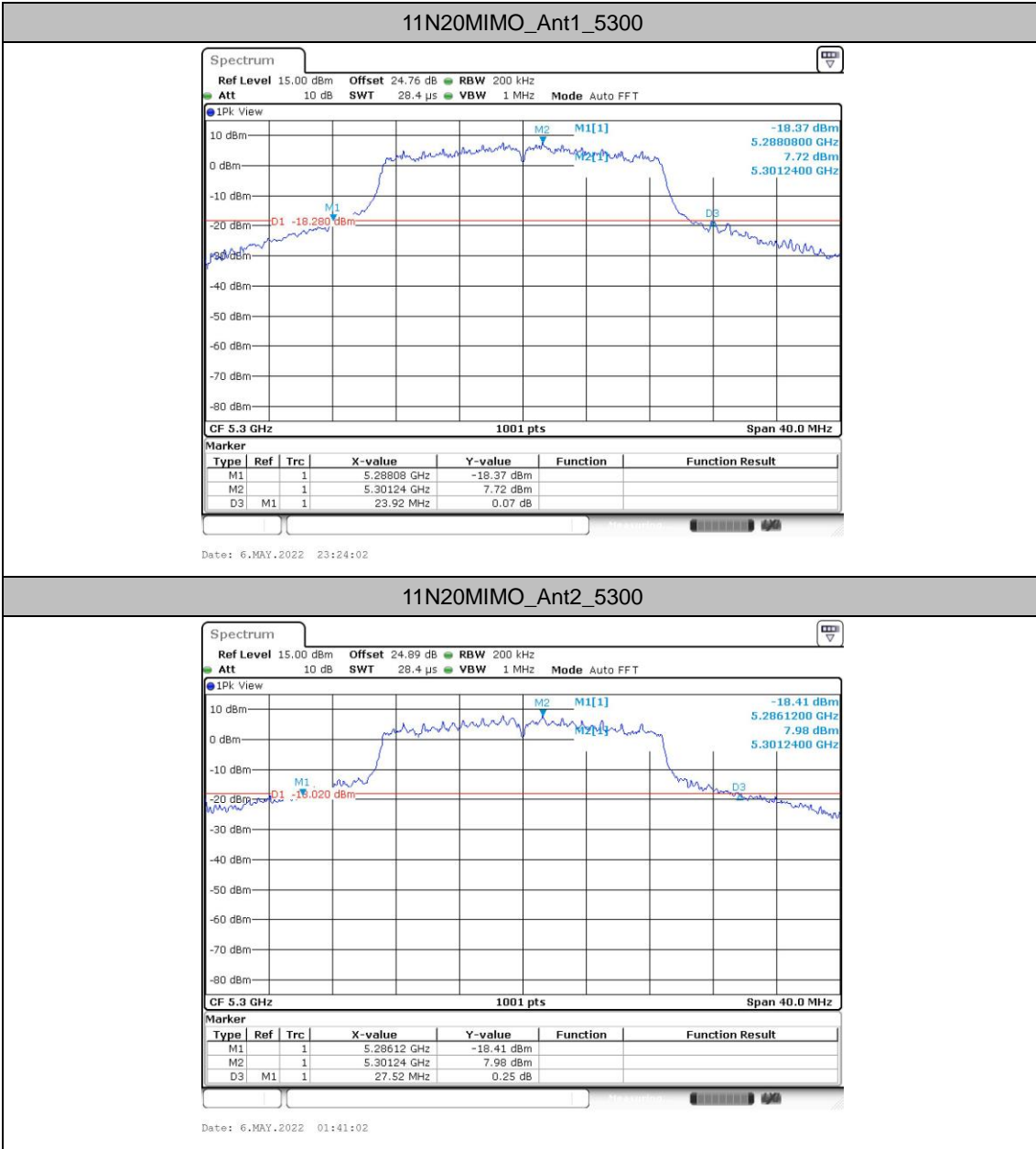

11A_Ant2_5700

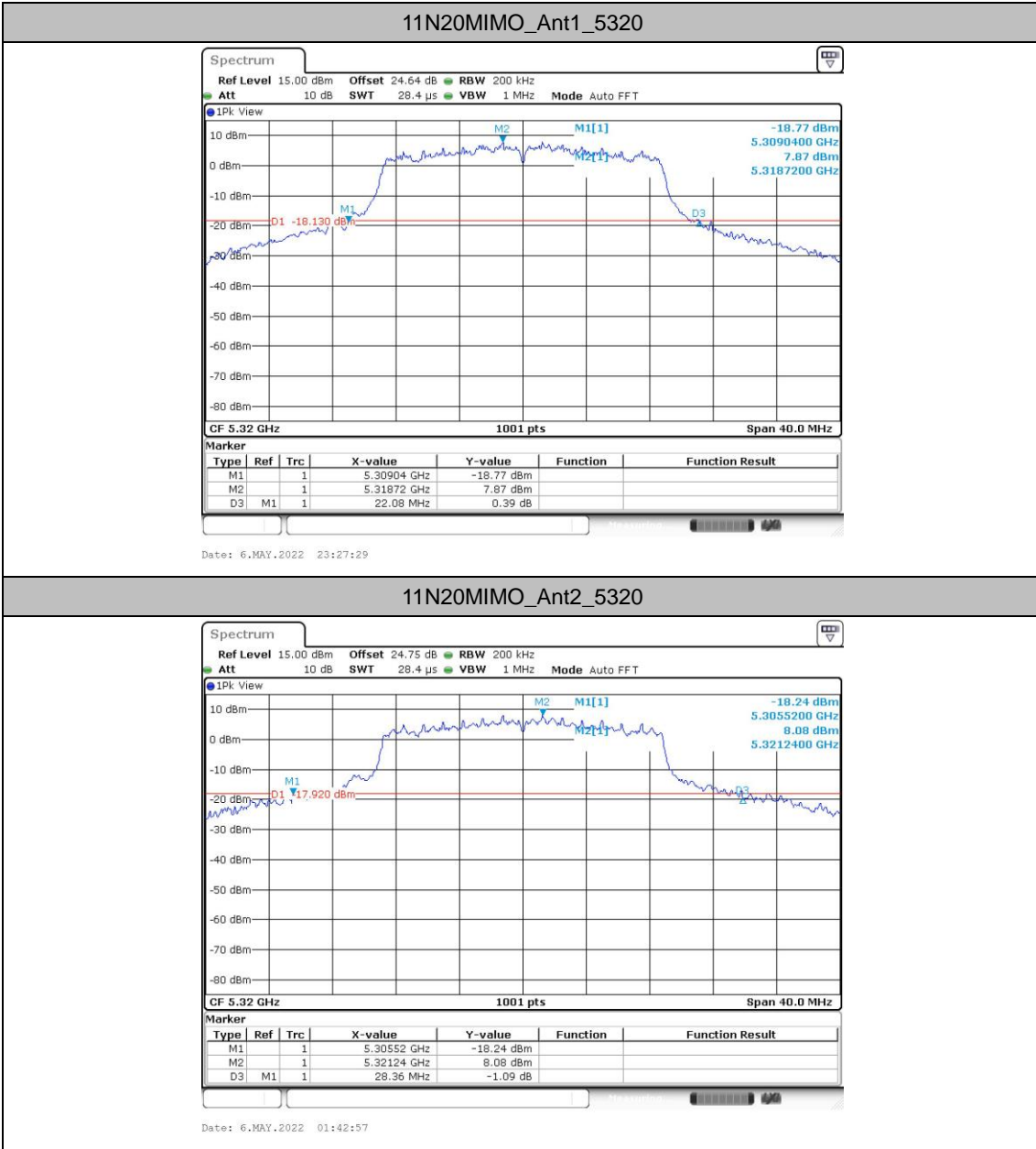


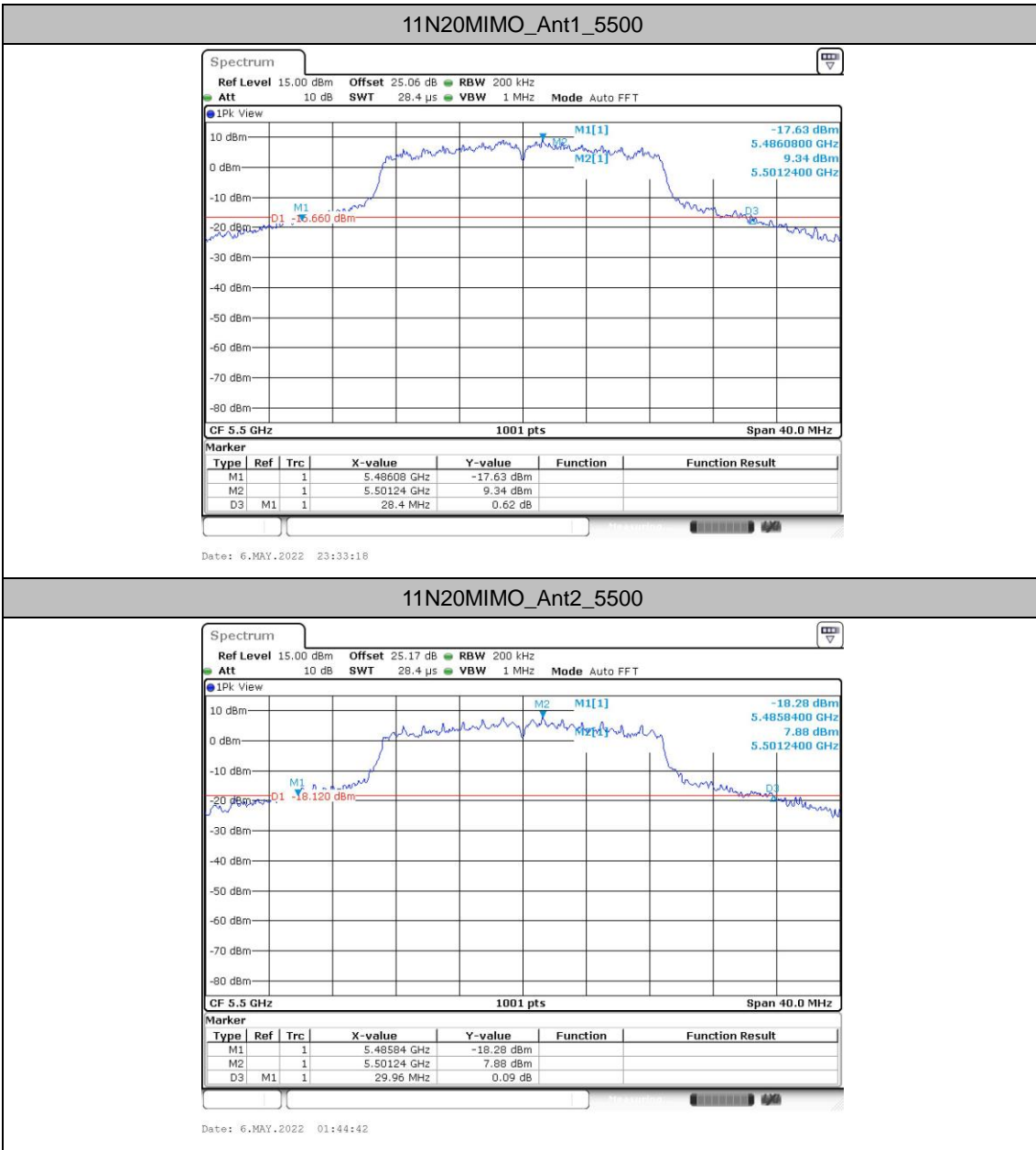











11N20MIMO_Ant2_5500

