



FCC RADIO TEST REPORT

FCC ID : UZ7MC220J
Equipment : Mobile computer
Brand Name : Zebra
Model Name : MC220J
Applicant : Zebra Technologies Corporation
1 Zebra Plaza, Holtsville, NY 11742
Manufacturer : Zebra Technologies Corporation
1 Zebra Plaza, Holtsville, NY 11742
Standard : FCC Part 15 Subpart E §15.407

The product was received on Jun. 12, 2020 and testing was started from Jun. 30, 2020 and completed on Aug. 08, 2020. We, SPORTON INTERNATIONAL INC., EMC & Wireless Communications Laboratory, 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 variant report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, the test report shall not be reproduced except in full.

Louis Wu

Approved by: Louis Wu

SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory

No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.)



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History of this test report

Report No.	Version	Description	Issued Date									
FR040803-03D	01	This is a variant report for MC220J (FCC ID: UZ7MC220J), and the differences between this model name and MC220K (FCC ID: UZ7MC220K) are as listed below:	Sep. 01, 2020									
		<table><tr><td>Item/Model</td><td>MC220K</td><td>MC220J</td></tr><tr><td>Camera</td><td>O</td><td>X</td></tr><tr><td>NFC</td><td>O</td><td>X</td></tr></table>		Item/Model	MC220K	MC220J	Camera	O	X	NFC	O	X
		Item/Model		MC220K	MC220J							
		Camera		O	X							
NFC	O	X										
All the test cases were performed on original report which can be referred to Sporton Report Number FR040803-02E as appendix F. Based on the original report, the test cases were verified.												
FR040803-03D	02	Revising history description.	Sep. 02, 2020									

Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
-	15.403(i)	26dB Bandwidth	Not Required	-
-	2.1049	99% Occupied Bandwidth	Not Required	-
3.1	15.407(a)	Maximum Conducted Output Power	Pass	-
-	15.407(a)	Power Spectral Density	Not Required	-
3.2	15.407(b)	Unwanted Emissions	Pass	Under limit 1.32 dB at 5725.480 MHz
3.3	15.207	AC Conducted Emission	Pass	Under limit 16.45 dB at 0.168 MHz
-	15.407(c)	Automatically Discontinue Transmission	Not Required	-
3.4	15.203 15.407(a)	Antenna Requirement	Pass	-

Note: Not required means after assessing, test items are not necessary to carry out.

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.

Reviewed by: Wii Chang

Report Producer: Amy Chen

1 General Description

1.1 Product Feature of Equipment Under Test

Product Feature	
Equipment	Mobile computer
Brand Name	Zebra
Model Name	MC220J
FCC ID	UZ7MC220J
EUT supports Radios application	WLAN 11a/b/g/n HT20/HT40 WLAN 11ac VHT20/VHT40/VHT80 Bluetooth BR/EDR/LE
HW Version	EV1
SW Version	10-11-31.00-QG-U00-PRD-HEL-04
OS Version	Android 10
MFD	02JUN20
EUT Stage	Engineering Sample

Remark: The above EUT's information was declared by manufacturer.

Specification of Accessories				
AC Adapter	Brand Name	Zebra	Part Number	PWR-WUA5V12W0US
Battery	Brand Name	Zebra	Part Number	BT-000418-10
USB Cable (TypeA plug to TypeC plug)	Brand Name	Zebra	Part Number	CBL-TC2X-USBC-01
Trigger Handle	Brand Name	Zebra	Part Number	TRG-MC2X-SNP1-01
Holster 1	Brand Name	Zebra	Part Number	SG-MC2X-HLSTR-01
Holster 2	Brand Name	Zebra	Part Number	SG-MC3021212-01R

1.2 Product Specification of Equipment Under Test

Product Specification subjective to this standard	
Tx/Rx Frequency Range	5180 MHz ~ 5240 MHz 5260 MHz ~ 5320 MHz 5500 MHz ~ 5720 MHz
Maximum Output Power to Antenna	802.11a : 22.20 dBm / 0.1660 W 802.11n HT20 : 22.00 dBm / 0.1585 W 802.11n HT40 : 22.00 dBm / 0.1585 W 802.11ac VHT20: 22.10 dBm / 0.1622 W 802.11ac VHT40: 22.10 dBm / 0.1622 W 802.11ac VHT80: 21.70 dBm / 0.1479 W
Type of Modulation	802.11a/n : OFDM (BPSK / QPSK / 16QAM / 64QAM) 802.11ac : OFDM (BPSK / QPSK / 16QAM / 64QAM / 256QAM)
Antenna Type / Gain	<5180 MHz ~ 5240 MHz> Monopole Antenna with gain 2.34 dBi <5260 MHz ~ 5320 MHz> Monopole Antenna with gain 2.34 dBi <5500 MHz ~ 5700 MHz > Monopole Antenna with gain 4.26 dBi

1.3 Modification of EUT

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

1.4 Testing Location

Test Site	SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory		
Test Site Location	No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.) TEL: +886-3-327-3456 FAX: +886-3-328-4978		
Test Site No.	Sporton Site No.		
	TH05-HY	CO05-HY	03CH07-HY

Note: The test site complies with ANSI C63.4 2014 requirement.

FCC designation No.: TW1190

1.5 Applicable Standards

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

- ♦ FCC Part 15 Subpart E
- ♦ FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.
- ♦ FCC KDB 414788 D01 Radiated Test Site v01r01.
- ♦ 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. The TAF code is not including all the FCC KDB listed without accreditation.
3. 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 (Z 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 Band 1 (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 Band 2 (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 Band 3 (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)
TDWR Channel	118*	5590	124	5620
	120	5600	126*	5630
	122 [#]	5610	128	5640

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
Straddle Channel	138 [#]	5690	144	5720
	142*	5710		

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.

Modulation	Data Rate
802.11a	6 Mbps
802.11n HT20	MCS0
802.11n HT40	MCS0
802.11ac VHT20	MCS0
802.11ac VHT40	MCS0
802.11ac VHT80	MCS0

Test Cases	
AC Conducted Emission	Mode 1 : WLAN (5GHz) Link + Bluetooth Link + USB Cable (Charging from AC Adapter) + Battery

Ch. #		Band I : 5150-5250 MHz	Band II : 5250-5350 MHz
		802.11a	802.11a
L	Low	36	-
M	Middle	-	-
H	High	-	64

Ch. #		Band III : 5470-5725MHz
		802.11ac VHT20
L	Low	-
M	Middle	-
H	High	140

Ch. #		Band I : 5150-5250 MHz	Band II : 5250-5350 MHz	Band III : 5470-5725MHz
		802.11ac VHT40	802.11ac VHT40	802.11ac VHT40
L	Low	38	-	-
M	Middle	-	-	-
H	High	-	62	134

Ch. #		Band I : 5150-5250 MHz	Band II : 5250-5350 MHz	Band III : 5470-5725MHz
		802.11ac VHT80	802.11ac VHT80	802.11ac VHT80
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.



802.11a RF Output Power (dBm)		
Power vs. Channel		
Channel	Frequency (MHz)	Data Rate (bps)
		6M
CH 036	5180	21.90
CH 044	5220	21.30
CH 048	5240	21.10
CH 052	5260	21.40
CH 060	5300	21.30
CH 064	5320	19.90
CH 100	5500	22.20
CH 116	5580	21.40
CH 140	5700	20.00
CH 144*	5720	21.30

Note: The above Frequency and Channel in "*" were straddle Channel.

802.11n HT20 RF Output Power (dBm)		
Power vs. Channel		
Channel	Frequency (MHz)	MCS Index
		MCS0
CH 036	5180	22.00
CH 044	5220	21.10
CH 048	5240	21.00
CH 052	5260	21.20
CH 060	5300	21.30
CH 064	5320	19.70
CH 100	5500	21.50
CH 116	5580	21.30
CH 140	5700	19.40
CH 144*	5720	21.20

Note: The above Frequency and Channel in "*" were straddle Channel.



802.11n HT40 RF Output Power (dBm)		
Power vs. Channel		
Channel	Frequency (MHz)	MCS Index
		MCS0
CH 038	5190	18.20
CH 046	5230	20.80
CH 054	5270	22.00
CH 062	5310	15.70
CH 102	5510	18.20
CH 110	5550	21.20
CH 134	5670	20.70
CH 142*	5710	20.90

Note: The above Frequency and Channel in "*" were straddle Channel.

802.11ac VHT20 RF Output Power (dBm)		
Power vs. Channel		
Channel	Frequency (MHz)	MCS Index
		MCS0
CH 036	5180	22.10
CH 044	5220	21.20
CH 048	5240	21.10
CH 052	5260	21.30
CH 060	5300	21.40
CH 064	5320	19.80
CH 100	5500	21.60
CH 116	5580	21.40
CH 140	5700	19.50
CH 144*	5720	21.30

Note: The above Frequency and Channel in "*" were straddle Channel.



802.11ac VHT40 RF Output Power (dBm)		
Power vs. Channel		
Channel	Frequency (MHz)	MCS Index
		MCS0
CH 038	5190	18.30
CH 046	5230	20.90
CH 054	5270	22.10
CH 062	5310	15.80
CH 102	5510	18.30
CH 110	5550	21.30
CH 134	5670	20.80
CH 142*	5710	21.00

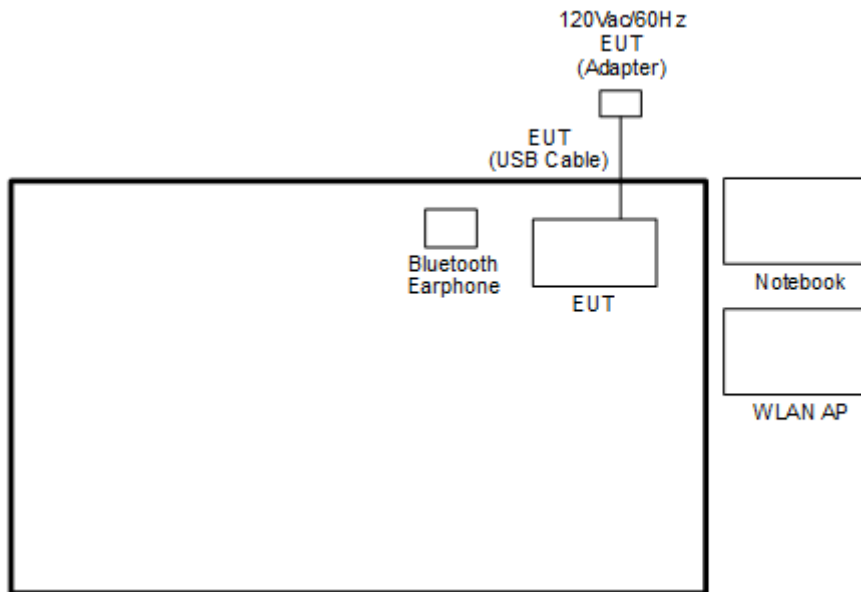
Note: The above Frequency and Channel in "*" were straddle Channel.

802.11ac VHT80 RF Output Power (dBm)		
Power vs. Channel		
Channel	Frequency (MHz)	MCS Index
		MCS0
CH 042	5210	18.40
CH 058	5290	16.00
CH 106	5530	15.10
CH 122	5610	20.50
CH 138*	5690	21.70

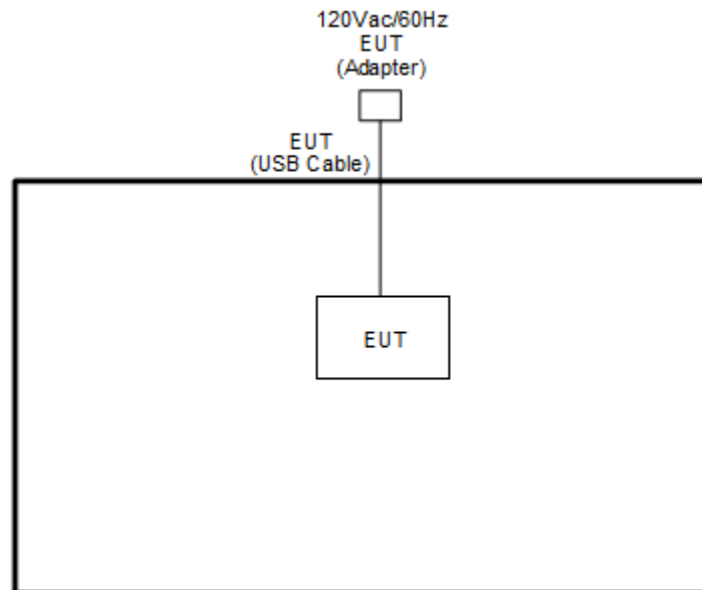
Note: The above Frequency and Channel in "*" were straddle Channel.

2.3 Connection Diagram of Test System

<AC Conducted Emission Mode>



<WLAN Tx Mode>



2.4 Support Unit used in test configuration and system

Item	Equipment	Brand Name	Model Name	FCC ID	Data Cable	Power Cord
1.	Bluetooth Earphone	Sony Ericsson	MW600	PY7DDA-2029	N/A	N/A
2.	WLAN AP	ASUS	RT-AC66U	MSQ-RTAC66U	N/A	Unshielded, 1.8 m
3.	Notebook	DELL	Latitude 3400	FCC DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
4.	SD Card	SanDisk	MicroSD HC	FCC DoC	N/A	N/A

2.5 EUT Operation Test Setup

The RF test items, utility "QRCT V4.0.00142.0" was installed in Notebook which was programmed in order to make the EUT get into the engineering modes to provide channel selection, power level, data rate and the application type and for continuous transmitting signals.

3 Test Result

3.1 Maximum Conducted Output Power Measurement

3.1.1 Limit of Maximum Conducted Output Power

<FCC 14-30 CFR 15.407>

For the 5.15–5.25 GHz bands:

- 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 an indoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W.

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.

3.1.2 Measuring Instruments

See list of measuring equipment of this test report.

3.1.3 Test Procedures

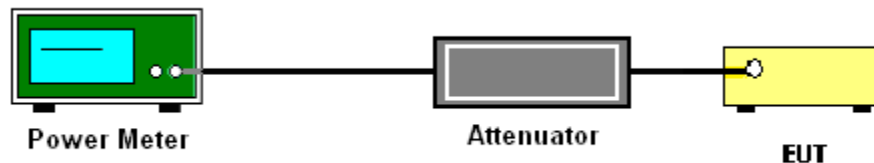
The testing follows Method PM-G of FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.

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

1. Measurement is performed using a wideband RF power meter.
2. The EUT is configured to transmit at its maximum power control level.
3. Measure the average power of the transmitter
4. Since the measurement is made only during the ON time of the transmitter, no duty cycle correction factor is required.

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.

3.1.4 Test Setup





3.1.5 Test Result of Maximum Conducted Output Power

Test Engineer :	Tommy Lee	Temperature :	22.8~24.8 °C
		Relative Humidity :	52.3~54.3 %

FCC Band I single antenna												
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Average Conducted Power (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	1	36	5180	21.90	-	-	24.00	-	2.34	-	Pass
11a	6Mbps	1	44	5220	21.30	-		24.00	-	2.34	-	Pass
11a	6Mbps	1	48	5240	21.10	-		24.00	-	2.34	-	Pass
HT20	MCS0	1	36	5180	22.00	-		24.00	-	2.34	-	Pass
HT20	MCS0	1	44	5220	21.10	-		24.00	-	2.34	-	Pass
HT20	MCS0	1	48	5240	21.00	-		24.00	-	2.34	-	Pass
HT40	MCS0	1	38	5190	18.20	-		24.00	-	2.34	-	Pass
HT40	MCS0	1	46	5230	20.80	-		24.00	-	2.34	-	Pass
VHT20	MCS0	1	36	5180	22.10	-		24.00	-	2.34	-	Pass
VHT20	MCS0	1	44	5220	21.20	-		24.00	-	2.34	-	Pass
VHT20	MCS0	1	48	5240	21.10	-		24.00	-	2.34	-	Pass
VHT40	MCS0	1	38	5190	18.30	-		24.00	-	2.34	-	Pass
VHT40	MCS0	1	46	5230	20.90	-		24.00	-	2.34	-	Pass
VHT80	MCS0	1	42	5210	18.40	-		24.00	-	2.34	-	Pass



FCC Band II single antenna													
Mod.	Data Rate	NTX	CH	Freq. (MHz)	Average Conducted Power (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	1	52	5260	21.40	-	-	23.98	-	2.34	-	26.99	Pass
11a	6Mbps	1	60	5300	21.30	-		23.98	-	2.34	-	26.99	Pass
11a	6Mbps	1	64	5320	19.90	-		23.98	-	2.34	-	26.99	Pass
HT20	MCS0	1	52	5260	21.20	-		23.98	-	2.34	-	26.99	Pass
HT20	MCS0	1	60	5300	21.30	-		23.98	-	2.34	-	26.99	Pass
HT20	MCS0	1	64	5320	19.70	-		23.98	-	2.34	-	26.99	Pass
HT40	MCS0	1	54	5270	22.00	-		23.98	-	2.34	-	26.99	Pass
HT40	MCS0	1	62	5310	15.70	-		23.98	-	2.34	-	26.99	Pass
VHT20	MCS0	1	52	5260	21.30	-		23.98	-	2.34	-	26.99	Pass
VHT20	MCS0	1	60	5300	21.40	-		23.98	-	2.34	-	26.99	Pass
VHT20	MCS0	1	64	5320	19.80	-		23.98	-	2.34	-	26.99	Pass
VHT40	MCS0	1	54	5270	22.10	-		23.98	-	2.34	-	26.99	Pass
VHT40	MCS0	1	62	5310	15.80	-		23.98	-	2.34	-	26.99	Pass
VHT80	MCS0	1	58	5290	16.00	-		23.98	-	2.34	-	26.99	Pass



FCC Band III single antenna													
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Average Conducted Power (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	1	100	5500	22.20	-	-	23.98	-	4.26	-	26.99	Pass
11a	6Mbps	1	116	5580	21.40	-		23.98	-	4.26	-	26.99	Pass
11a	6Mbps	1	140	5700	20.00	-		23.98	-	4.26	-	26.99	Pass
HT20	MCS0	1	100	5500	21.50	-		23.98	-	4.26	-	26.99	Pass
HT20	MCS0	1	116	5580	21.30	-		23.98	-	4.26	-	26.99	Pass
HT20	MCS0	1	140	5700	19.40	-		23.98	-	4.26	-	26.99	Pass
HT40	MCS0	1	102	5510	18.20	-		23.98	-	4.26	-	26.99	Pass
HT40	MCS0	1	110	5550	21.20	-		23.98	-	4.26	-	26.99	Pass
HT40	MCS0	1	134	5670	20.70	-		23.98	-	4.26	-	26.99	Pass
VHT20	MCS0	1	100	5500	21.60	-		23.98	-	4.26	-	26.99	Pass
VHT20	MCS0	1	116	5580	21.40	-		23.98	-	4.26	-	26.99	Pass
VHT20	MCS0	1	140	5700	19.50	-		23.98	-	4.26	-	26.99	Pass
VHT40	MCS0	1	102	5510	18.30	-		23.98	-	4.26	-	26.99	Pass
VHT40	MCS0	1	110	5550	21.30	-		23.98	-	4.26	-	26.99	Pass
VHT40	MCS0	1	134	5670	20.80	-		23.98	-	4.26	-	26.99	Pass
VHT80	MCS0	1	106	5530	15.10	-		23.98	-	4.26	-	26.99	Pass
VHT80	MCS0	1	122	5610	20.50	-		23.98	-	4.26	-	26.99	Pass

FCC Band III straddle channel single antenna													
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Average Conducted Power (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	1	144	5720	21.30	-	-	23.98	-	4.26	-	26.99	Pass
HT20	MCS0	1	144	5720	21.20	-		23.98	-	4.26	-	26.99	Pass
HT40	MCS0	1	142	5710	20.90	-		23.98	-	4.26	-	26.99	Pass
VHT20	MCS0	1	144	5720	21.30	-		23.98	-	4.26	-	26.99	Pass
VHT40	MCS0	1	142	5710	21.00	-		23.98	-	4.26	-	26.99	Pass
VHT80	MCS0	1	138	5690	21.70	-		23.98	-	4.26	-	26.99	Pass

3.2 Unwanted Emissions Measurement

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

3.2.1 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 5470-5600 MHz and 5650-5725MHz band: all emissions outside of the 5470-5600 MHz and 5650-5725MHz 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

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

$$E = \frac{1000000\sqrt{30P}}{3} \quad \mu\text{V/m, where P is the eirp (Watts)}$$

EIRP (dBm)	Field Strength at 3m (dBμV/m)
- 27	68.3

(3) KDB789033 D02 v02r01 G)2)c)

- (i) Sections 15.407(b)(1-3) specifies the unwanted emissions limit for the U-NII-1 and U-NII-2 bands. As specified, emissions above 1000 MHz that are outside of the restricted bands are subject to a peak emission limit of -27 dBm/MHz.
- (ii) Section 15.407(b)(4) specifies the unwanted emissions limit for the U-NII-3 band. A band emissions mask is specified in Section 15.407(b)(4)(i). The emission limits are based on the use of a peak detector.

3.2.2 Measuring Instruments

See list of measuring equipment of this test report.

3.2.3 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

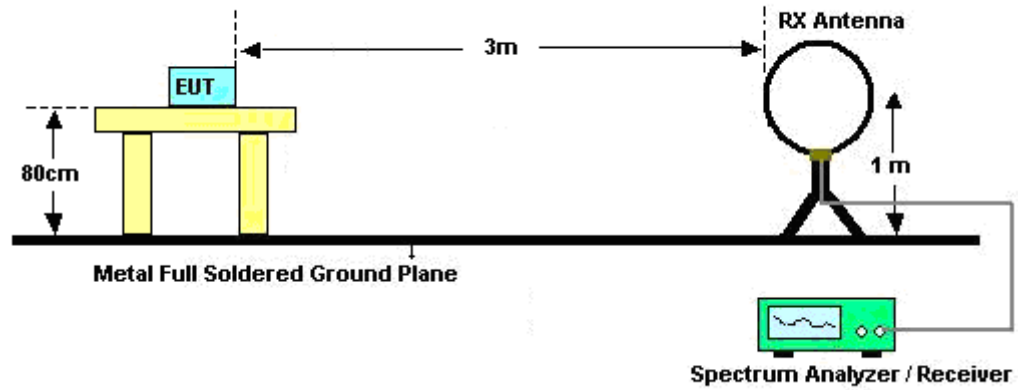
- RBW = 1 MHz
- VBW ≥ 3 MHz
- Detector = Peak
- Sweep time = auto
- Trace mode = max hold

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

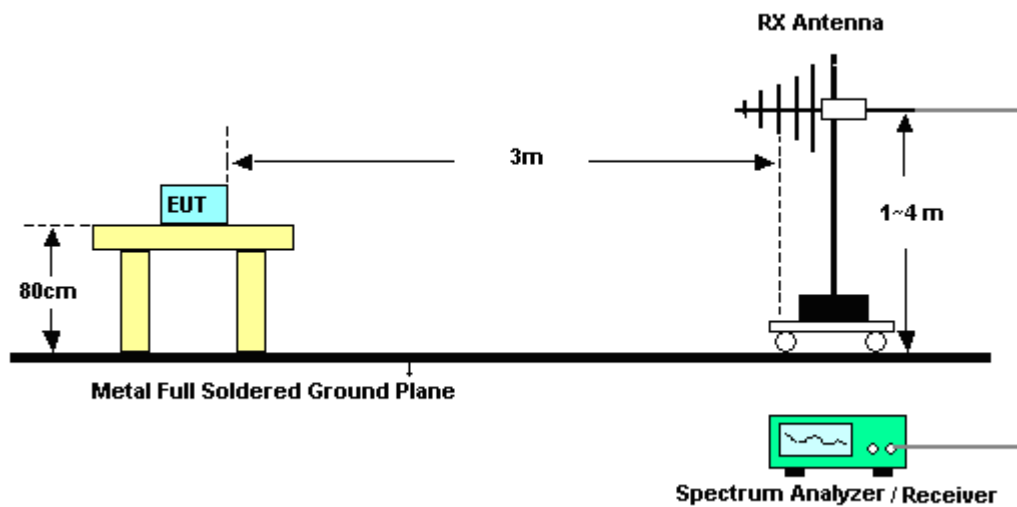
- RBW = 1 MHz
 - VBW = 10 Hz, when duty cycle is no less than 98 percent.
 - $VBW \geq 1/T$, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.
2.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

3.2.4 Test Setup

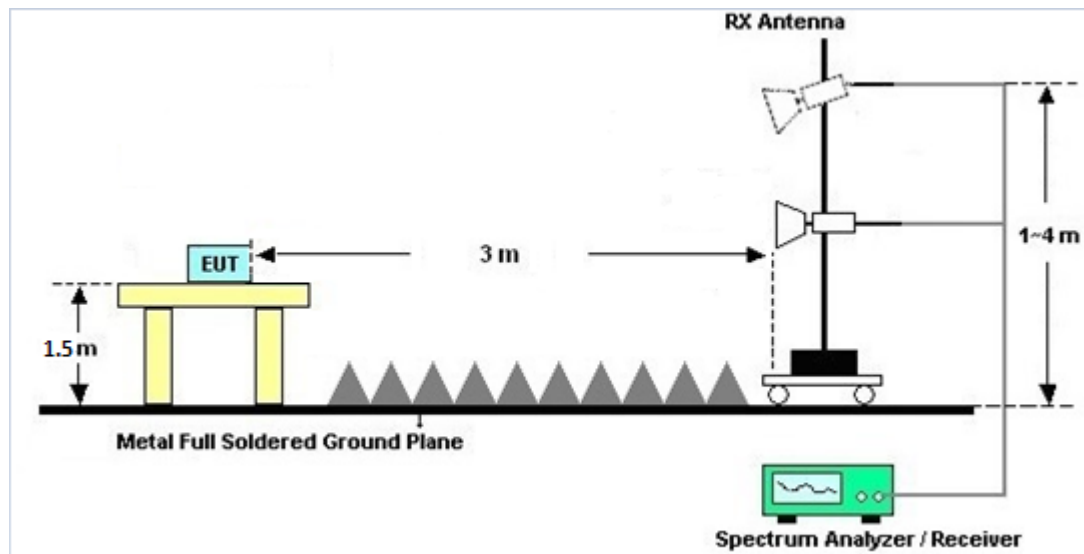
For radiated emissions below 30MHz



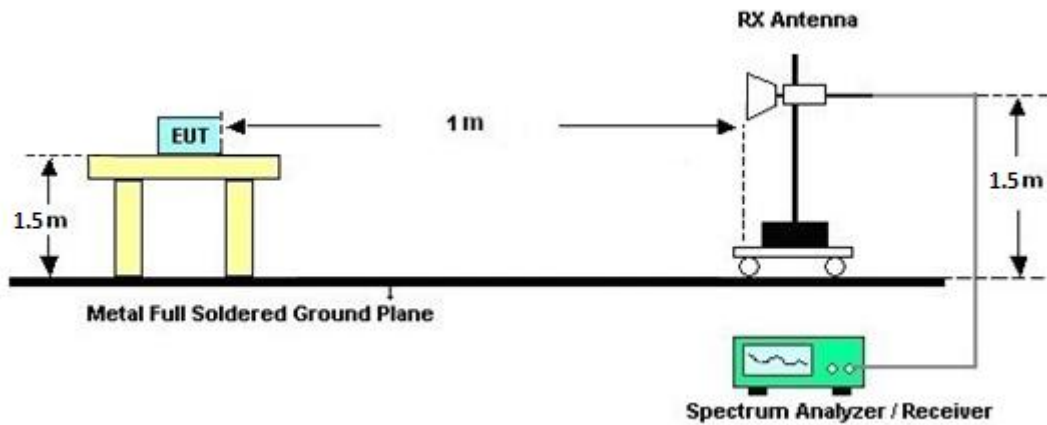
For radiated emissions from 30MHz to 1GHz



For radiated emissions from 1GHz to 18GHz



For radiated emissions above 18GHz





3.2.5 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 alternative test site - semi-Anechoic chamber according to 414788 D01 Radiated Test Site v01r01, and the result came out very similar.

3.2.6 Test Result of Radiated Spurious at Band Edges

Please refer to Appendix B and C.

3.2.7 Duty Cycle

Please refer to Appendix D.

3.2.8 Test Result of Radiated Spurious Emissions (30MHz ~ 10th Harmonic)

Please refer to Appendix B and C.

3.3 AC Conducted Emission Measurement

3.3.1 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 (dB μ V)	
	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.

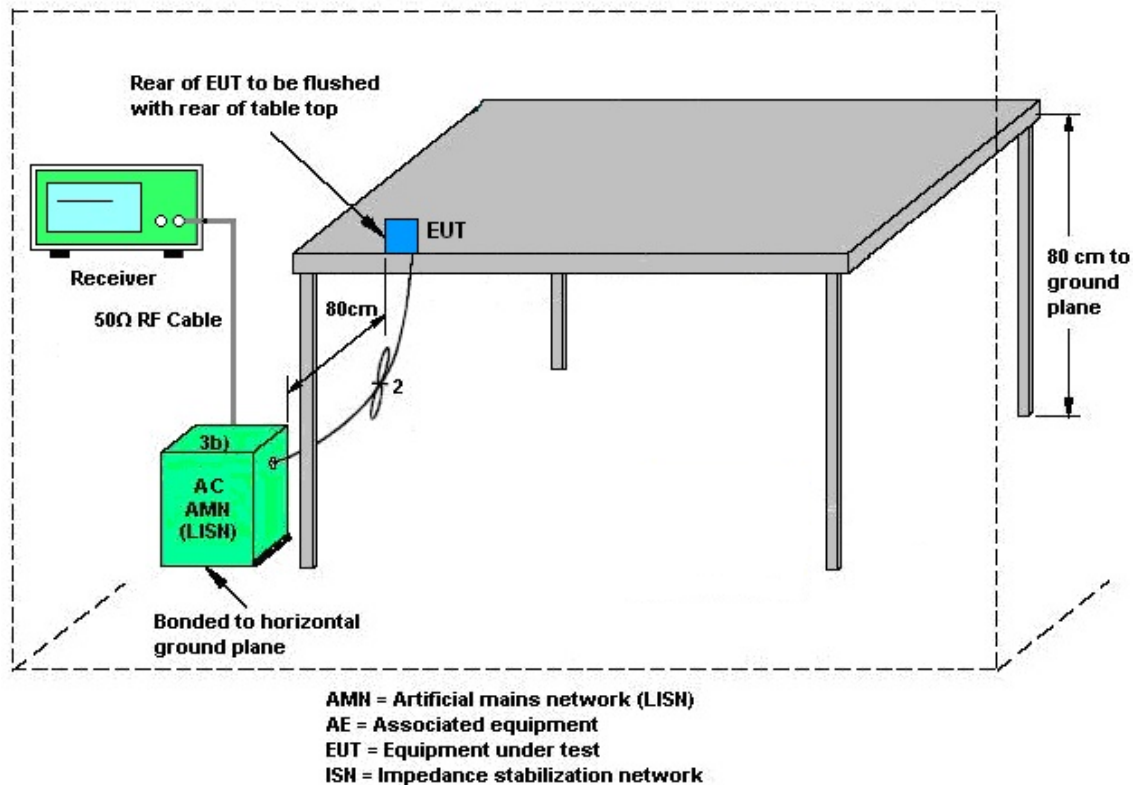
3.3.2 Measuring Instruments

See list of measuring equipment of this test report.

3.3.3 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.

3.3.4 Test Setup



3.3.5 Test Result of AC Conducted Emission

Please refer to Appendix B.



3.4 Antenna Requirements

3.4.1 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.

3.4.2 Antenna Anti-Replacement Construction

An embedded-in antenna design is used.

3.4.3 Antenna Gain

The antenna peak gain of EUT is less than 6 dBi. Therefore, it is not necessary to reduce maximum peak output power limit.



4 List of Measuring Equipment

Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Bilog Antenna	TESEQ	CBL 6111D & 00800N1D01N-06	35419 & 03	30MHz~1GHz	Apr. 29, 2020	Jul. 24, 2020~ Aug. 08, 2020	Apr. 28, 2021	Radiation (03CH07-HY)
Double Ridge Horn Antenna	ESCO	3117	00075962	1GHz ~ 18GHz	Dec. 06, 2019	Jul. 24, 2020~ Aug. 08, 2020	Dec. 05, 2020	Radiation (03CH07-HY)
EMI Test Receiver	Agilent	N9038A (MXE)	MY53290053	20Hz~26.5GHz	May 21, 2020	Jul. 24, 2020~ Aug. 08, 2020	May 20, 2021	Radiation (03CH07-HY)
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100315	9 kHz~30 MHz	Dec. 26, 2019	Jul. 24, 2020~ Aug. 08, 2020	Dec. 25, 2020	Radiation (03CH07-HY)
Preamplifier	MITEQ	AMF-7D-0010 1800-30-10P	1590075	1GHz~18GHz	Apr. 23, 2020	Jul. 24, 2020~ Aug. 08, 2020	Apr. 22, 2021	Radiation (03CH07-HY)
Preamplifier	COM-POWER	PA-103A	161241	10MHz~1GHz	May 19, 2020	Jul. 24, 2020~ Aug. 08, 2020	May 18, 2021	Radiation (03CH07-HY)
Preamplifier	Agilent	8449B	3008A02362	1GHz~26.5GHz	Nov. 01, 2019	Jul. 24, 2020~ Aug. 08, 2020	Oct. 31, 2020	Radiation (03CH07-HY)
Notch Filter	Wainwright	WRCJV12-569 5-5725-5850-5 880-40SS	SN1	5G Band 4	Mar. 15, 2020	Jul. 24, 2020~ Aug. 08, 2020	Mar. 14, 2021	Radiation (03CH07-HY)
Filter	Wainwright	WHKX8-5872. 5-6750-18000-40ST	SN7	6.75GHz High Pass Filter	Aug. 22, 2019	Jul. 24, 2020~ Aug. 08, 2020	Aug. 21, 2020	Radiation (03CH07-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	MY2858/2,801 606/2	18GHz~40GHz	Feb. 25, 2020	Jul. 24, 2020~ Aug. 08, 2020	Feb. 24, 2021	Radiation (03CH07-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY24971/4, MY28655/4	9kHz~30MHz	Feb. 25, 2020	Jul. 24, 2020~ Aug. 08, 2020	Feb. 24, 2021	Radiation (03CH07-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY28655/4, MY24971/4, MY15682/4	30MHz~1GHz	Feb. 25, 2020	Jul. 24, 2020~ Aug. 08, 2020	Feb. 24, 2021	Radiation (03CH07-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY28655/4, MY24971/4, MY15682/4	1GHz~18GHz	Feb. 25, 2020	Jul. 24, 2020~ Aug. 08, 2020	Feb. 24, 2021	Radiation (03CH07-HY)
Controller	ChainTek	Chaintek 3000	N/A	Control Turn table	N/A	Jul. 24, 2020~ Aug. 08, 2020	N/A	Radiation (03CH07-HY)
Controller	Max-Full	MF7802	MF780208368	Control Ant Mast	N/A	Jul. 24, 2020~ Aug. 08, 2020	N/A	Radiation (03CH07-HY)
Antenna Mast	Max-Full	MFA520BS	N/A	1m~4m	N/A	Jul. 24, 2020~ Aug. 08, 2020	N/A	Radiation (03CH07-HY)
Turn Table	ChainTek	Chaintek 3000	N/A	0~360 Degree	N/A	Jul. 24, 2020~ Aug. 08, 2020	N/A	Radiation (03CH07-HY)
USB Data Logger	TECPEL	TR-32	HE17XB2495	N/A	N/A	Jul. 24, 2020~ Aug. 08, 2020	N/A	Radiation (03CH07-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170251	18GHz~40GHz	Nov. 26, 2019	Jul. 24, 2020~ Aug. 08, 2020	Nov. 25, 2020	Radiation (03CH07-HY)
Software	Audix	E3 6.2009-8-24	N/A	N/A	N/A	Jul. 24, 2020~ Aug. 08, 2020	N/A	Radiation (03CH07-HY)
Preamplifier	EMEC	EM18G40G	060715	18GHz~40GHz	Dec. 13, 2019	Jul. 24, 2020~ Aug. 08, 2020	Dec. 12, 2020	Radiation (03CH07-HY)



Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
AC Power Source	ChainTek	APC-1000W	N/A	N/A	N/A	Jun. 30, 2020	N/A	Conduction (CO05-HY)
EMI Test Receiver	Rohde & Schwarz	ESR3	102388	9kHz~3.6GHz	Nov. 15, 2019	Jun. 30, 2020	Nov. 14, 2020	Conduction (CO05-HY)
Hygrometer	Testo	608-H1	34913912	N/A	Nov. 07, 2019	Jun. 30, 2020	Nov. 06, 2020	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100081	9kHz~30MHz	Nov. 15, 2019	Jun. 30, 2020	Nov. 14, 2020	Conduction (CO05-HY)
Software	Rohde & Schwarz	EMC32 V10.30	N/A	N/A	N/A	Jun. 30, 2020	N/A	Conduction (CO05-HY)
LF Cable	HUBER + SUHNER	RG-214/U	LF01	N/A	Jan. 02, 2020	Jun. 30, 2020	Jan. 01, 2021	Conduction (CO05-HY)
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100851	N/A	Jan. 02, 2020	Jun. 30, 2020	Jan. 01, 2021	Conduction (CO05-HY)
Hygrometer	Testo	608-H1	34893241	N/A	Mar. 02, 2020	Jul. 23, 2020~ Jul. 28, 2020	Mar. 01, 2021	Conducted (TH05-HY)
Power Sensor	DARE	RPR3006W	16I00054SNO10	10MHz~6GHz	Dec. 23, 2019	Jul. 23, 2020~ Jul. 28, 2020	Dec. 22, 2020	Conducted (TH05-HY)
Signal Analyzer	Rohde & Schwarz	FSV40	101397	10Hz~40GHz	Nov. 15, 2019	Jul. 23, 2020~ Jul. 28, 2020	Nov. 14, 2020	Conducted (TH05-HY)
Switch Box & RF Cable	Burgeon	ETF-058	EC1300484	N/A	Aug. 22, 2019	Jul. 23, 2020~ Jul. 28, 2020	Aug. 21, 2020	Conducted (TH05-HY)

5 Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	2.3
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Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	4.7
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Uncertainty of Radiated Emission Measurement (1000 MHz ~ 18000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	5.3
---	-----

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	5.0
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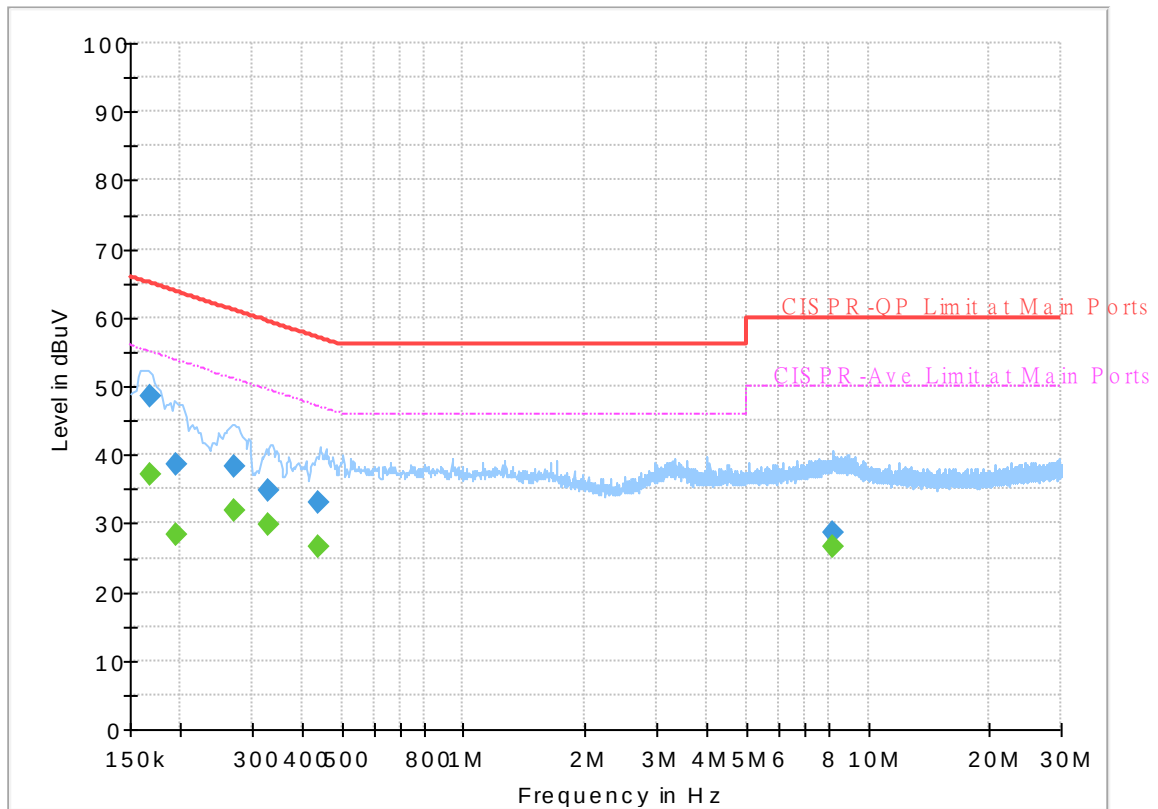
Appendix A. AC Conducted Emission Test Results

Test Engineer :	Tom Lee	Temperature :	23~25℃
		Relative Humidity :	42~50%

EUT Information

Report NO : 040803-03
Test Mode : Mode 1
Test Voltage : 120Vac/60Hz
Phase : Line

Full Spectrum



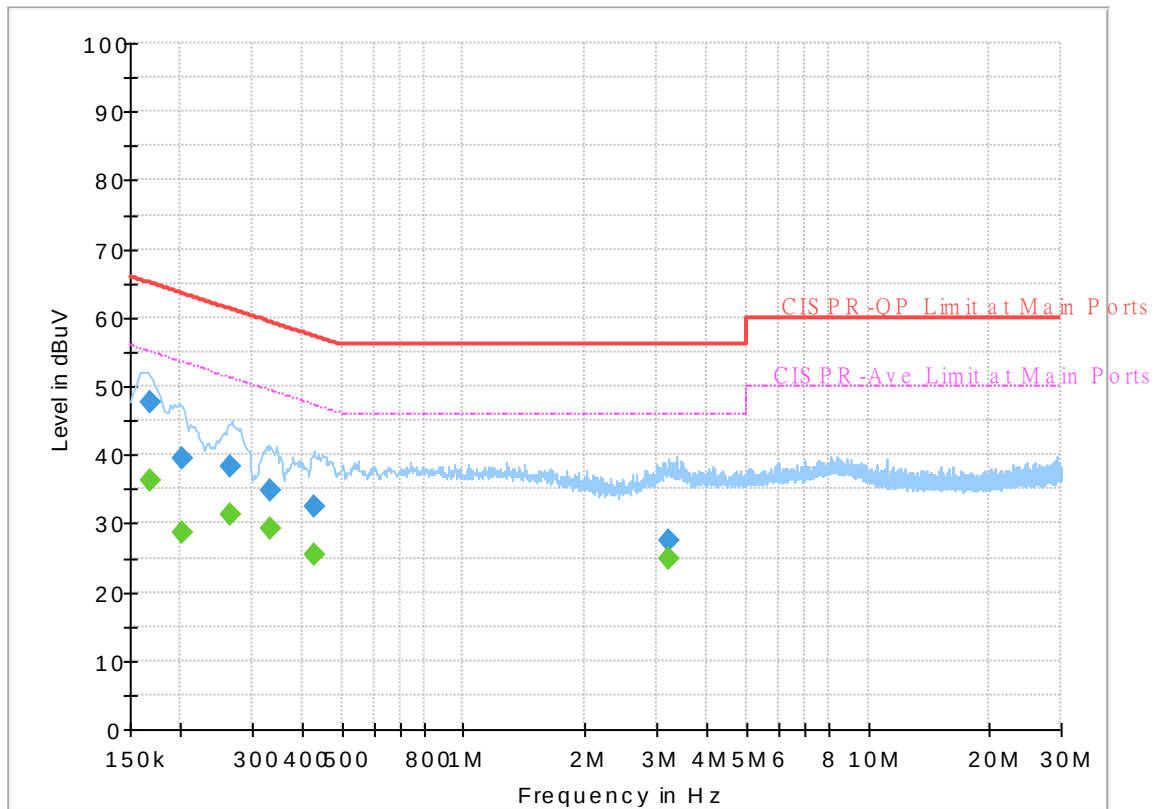
Final_Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.168000	---	37.17	55.06	17.89	L1	OFF	19.6
0.168000	48.61	---	65.06	16.45	L1	OFF	19.6
0.195090	---	28.39	53.82	25.43	L1	OFF	19.6
0.195090	38.57	---	63.82	25.25	L1	OFF	19.6
0.270330	---	31.89	51.11	19.22	L1	OFF	19.6
0.270330	38.29	---	61.11	22.82	L1	OFF	19.6
0.329550	---	29.68	49.46	19.78	L1	OFF	19.6
0.329550	34.74	---	59.46	24.72	L1	OFF	19.6
0.438000	---	26.67	47.10	20.43	L1	OFF	19.6
0.438000	33.04	---	57.10	24.06	L1	OFF	19.6
8.162160	---	26.57	50.00	23.43	L1	OFF	20.0
8.162160	28.63	---	60.00	31.37	L1	OFF	20.0

EUT Information

Report NO : 040803-03
Test Mode : Mode 1
Test Voltage : 120Vac/60Hz
Phase : Neutral

Full Spectrum



Final Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.168000	---	36.25	55.06	18.81	N	OFF	19.5
0.168000	47.58	---	65.06	17.48	N	OFF	19.5
0.201750	---	28.72	53.54	24.82	N	OFF	19.5
0.201750	39.49	---	63.54	24.05	N	OFF	19.5
0.266280	---	31.15	51.23	20.08	N	OFF	19.5
0.266280	38.18	---	61.23	23.05	N	OFF	19.5
0.334500	---	29.26	49.34	20.08	N	OFF	19.5
0.334500	34.78	---	59.34	24.56	N	OFF	19.5
0.427830	---	25.51	47.30	21.79	N	OFF	19.5
0.427830	32.44	---	57.30	24.86	N	OFF	19.5
3.223500	---	24.81	46.00	21.19	N	OFF	19.6
3.223500	27.38	---	56.00	28.62	N	OFF	19.6



Appendix B. Radiated Spurious Emission

Test Engineer :	Jesse Wang, Stan Hsieh, and Ken Wu	Temperature :	23~25°C
		Relative Humidity :	51~53%

Band 1 - 5150~5250MHz

WIFI 802.11a (Band Edge @ 3m)

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Path Loss	Preampl Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11a CH 36 5180MHz		5147.16	54.61	-19.39	74	44.07	34.4	11.56	35.42	275	339	P	H
		5150	46.66	-7.34	54	36.12	34.4	11.56	35.42	275	339	A	H
	*	5180	111.13	-	-	100.49	34.47	11.58	35.41	275	339	P	H
	*	5180	103.75	-	-	93.11	34.47	11.58	35.41	275	339	A	H
													H
													H
		5150	53.55	-20.45	74	43.01	34.4	11.56	35.42	391	0	P	V
		5150	46.48	-7.52	54	35.94	34.4	11.56	35.42	391	0	A	V
	*	5180	111.66	-	-	101.02	34.47	11.58	35.41	391	0	P	V
	*	5180	103.85	-	-	93.21	34.47	11.58	35.41	391	0	A	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

**Band 1 5150~5250MHz****WIFI 802.11a (Harmonic @ 3m)**

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11a CH 36 5180MHz		10360	43.26	-24.94	68.2	47.24	37.47	17.58	59.03	100	0	P	H
		15540	44.51	-29.49	74	39.53	40.1	21.65	56.77	100	0	P	H
													H
													H
		10360	43.34	-24.86	68.2	47.32	37.47	17.58	59.03	100	0	P	V
		15540	45.14	-28.86	74	40.16	40.1	21.65	56.77	100	0	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

**Band 1 5150~5250MHz****WIFI 802.11ac VHT40 (Band Edge @ 3m)**

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT40 CH 38 5190MHz		5150	54.75	-19.25	74	44.21	34.4	11.56	35.42	400	336	P	H
		5149.76	49.5	-4.5	54	38.96	34.4	11.56	35.42	400	336	A	H
	*	5190	105.13	-	-	94.48	34.47	11.59	35.41	400	336	P	H
	*	5190	96.73	-	-	86.08	34.47	11.59	35.41	400	336	A	H
		5418.84	47.27	-26.73	74	36.07	34.7	11.83	35.33	400	336	P	H
		5423.04	40.54	-13.46	54	29.33	34.7	11.84	35.33	400	336	A	H
		5150	56.52	-17.48	74	45.98	34.4	11.56	35.42	365	351	P	V
		5149.76	50.84	-3.16	54	40.3	34.4	11.56	35.42	365	351	A	V
	*	5190	106.34	-	-	95.69	34.47	11.59	35.41	365	351	P	V
	*	5190	98.15	-	-	87.5	34.47	11.59	35.41	365	351	A	V
		5414.08	48.28	-25.72	74	37.08	34.7	11.83	35.33	365	351	P	V
		5446.84	40.82	-13.18	54	29.58	34.7	11.86	35.32	365	351	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

**Band 1 5150~5250MHz****WIFI 802.11ac VHT40 (Harmonic @ 3m)**

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT40 CH 38 5190MHz		10380	43.12	-25.08	68.2	47.06	37.48	17.6	59.02	100	0	P	H
		15570	46.24	-27.76	74	41.13	40.2	21.68	56.77	100	0	P	H
													H
													H
		10380	42.75	-25.45	68.2	46.69	37.48	17.6	59.02	100	0	P	V
		15570	45.86	-28.14	74	40.75	40.2	21.68	56.77	100	0	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 1 5150~5250MHz

WIFI 802.11ac VHT80 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT80 CH 42 5210MHz		5142.22	54.91	-19.09	74	44.38	34.4	11.55	35.42	393	337	P	H
		5150	49.22	-4.78	54	38.68	34.4	11.56	35.42	393	337	A	H
	*	5210	102.41	-	-	91.7	34.5	11.61	35.4	393	337	P	H
	*	5210	94.61	-	-	83.9	34.5	11.61	35.4	393	337	A	H
		5350	48.59	-25.41	74	37.68	34.5	11.76	35.35	393	337	P	H
		5352.76	40.84	-13.16	54	29.93	34.5	11.76	35.35	393	337	A	H
		5144.56	58.11	-15.89	74	47.58	34.4	11.55	35.42	341	351	P	V
		5149.24	51.3	-2.7	54	40.76	34.4	11.56	35.42	341	351	A	V
	*	5210	103.81	-	-	93.1	34.5	11.61	35.4	341	351	P	V
	*	5210	95.41	-	-	84.7	34.5	11.61	35.4	341	351	A	V
		5444.32	48.39	-25.61	74	37.15	34.7	11.86	35.32	341	351	P	V
		5356.68	41.01	-12.99	54	30.1	34.5	11.76	35.35	341	351	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

**Band 1 5150~5250MHz****WIFI 802.11ac VHT80 (Harmonic @ 3m)**

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT80 CH 42 5210MHz		10420	43.28	-24.92	68.2	47.12	37.52	17.63	58.99	100	0	P	H
		15630	45.87	-28.13	74	40.52	40.4	21.71	56.76	100	0	P	H
													H
													H
		10420	43.71	-24.49	68.2	47.55	37.52	17.63	58.99	100	0	P	V
		15630	45.45	-28.55	74	40.1	40.4	21.71	56.76	100	0	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 2 - 5250~5350MHz
WIFI 802.11a (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11a CH 64 5320MHz	*	5320	111.4	-	-	100.4	34.63	11.73	35.36	376	344	P	H
	*	5320	103.2	-	-	92.2	34.63	11.73	35.36	376	344	A	H
		5352.64	58.21	-15.79	74	47.3	34.5	11.76	35.35	376	344	P	H
		5350.08	48.64	-5.36	54	37.73	34.5	11.76	35.35	376	344	A	H
													H
													H
	*	5320	111.5	-	-	100.5	34.63	11.73	35.36	363	352	P	V
	*	5320	103.51	-	-	92.51	34.63	11.73	35.36	363	352	A	V
		5352.32	57.49	-16.51	74	46.58	34.5	11.76	35.35	363	352	P	V
		5350.08	49.6	-4.4	54	38.69	34.5	11.76	35.35	363	352	A	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

**Band 2 5250~5350MHz****WIFI 802.11a (Harmonic @ 3m)**

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11a CH 64 5320MHz		10640	44.17	-29.83	74	47.61	37.63	17.79	58.86	100	0	P	H
		15960	45.98	-28.02	74	39.96	40.8	21.93	56.71	100	0	P	H
													H
													H
		10640	43.96	-30.04	74	47.4	37.63	17.79	58.86	100	0	P	V
		15960	46.63	-27.37	74	40.61	40.8	21.93	56.71	100	0	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 2 5250~5350MHz

WIFI 802.11ac VHT40 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT40 CH 62 5310MHz		5148.75	48.91	-25.09	74	38.37	34.4	11.56	35.42	195	13	P	H
		5128.8	40.96	-13.04	54	30.48	34.37	11.54	35.43	195	13	A	H
	*	5310	105.78	-	-	94.79	34.63	11.72	35.36	195	13	P	H
	*	5310	97.48	-	-	86.49	34.63	11.72	35.36	195	13	A	H
		5351.28	58.16	-15.84	74	47.25	34.5	11.76	35.35	195	13	P	H
		5350.8	51.88	-2.12	54	40.97	34.5	11.76	35.35	195	13	A	H
		5123.9	48.47	-25.53	74	37.99	34.37	11.54	35.43	348	350	P	V
		5075.25	41.02	-12.98	54	30.74	34.23	11.49	35.44	348	350	A	V
	*	5310	104.7	-	-	93.71	34.63	11.72	35.36	348	350	P	V
	*	5310	96.08	-	-	85.09	34.63	11.72	35.36	348	350	A	V
		5350.32	55.53	-18.47	74	44.62	34.5	11.76	35.35	348	350	P	V
		5350.08	47.74	-6.26	54	36.83	34.5	11.76	35.35	348	350	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

**Band 2 5250~5350MHz****WIFI 802.11ac VHT40 (Harmonic @ 3m)**

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT40 CH 62 5310MHz		10620	43.72	-30.28	74	47.19	37.62	17.78	58.87	100	0	P	H
		15930	46.08	-27.92	74	40.08	40.8	21.91	56.71	100	0	P	H
													H
													H
		10620	44.35	-29.65	74	47.82	37.62	17.78	58.87	100	0	P	V
		15930	46.54	-27.46	74	40.54	40.8	21.91	56.71	100	0	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 2 5250~5350MHz

WIFI 802.11ac VHT80 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT80 CH 58 5290MHz		5146.65	48.7	-25.3	74	38.17	34.4	11.55	35.42	186	12	P	H
		5132.3	41.17	-12.83	54	30.69	34.37	11.54	35.43	186	12	A	H
	*	5290	102.02	-	-	91.07	34.63	11.69	35.37	186	12	P	H
	*	5290	93.61	-	-	82.66	34.63	11.69	35.37	186	12	A	H
		5364.48	61.86	-12.14	74	50.87	34.57	11.77	35.35	186	12	P	H
		5350.32	52.05	-1.95	54	41.14	34.5	11.76	35.35	186	12	A	H
		5053.55	49.01	-24.99	74	38.88	34.1	11.48	35.45	330	350	P	V
		5118.65	41.07	-12.93	54	30.64	34.33	11.53	35.43	330	350	A	V
	*	5290	100.56	-	-	89.61	34.63	11.69	35.37	330	350	P	V
	*	5290	92.26	-	-	81.31	34.63	11.69	35.37	330	350	A	V
		5364.72	58.88	-15.12	74	47.89	34.57	11.77	35.35	330	350	P	V
		5350.8	48.53	-5.47	54	37.62	34.5	11.76	35.35	330	350	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

**Band 2 5250~5350MHz****WIFI 802.11ac VHT80 (Harmonic @ 3m)**

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT80 CH 58 5290MHz		10580	43.12	-25.08	68.2	46.66	37.6	17.75	58.89	100	0	P	H
		15870	47.32	-26.68	74	41.43	40.74	21.87	56.72	100	0	P	H
													H
													H
		10580	44.04	-24.16	68.2	47.58	37.6	17.75	58.89	100	0	P	V
		15870	46.34	-27.66	74	40.45	40.74	21.87	56.72	100	0	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

**Band 3 - 5470~5725MHz****WIFI 802.11ac VHT20 (Band Edge @ 3m)**

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT20 CH 140 5700MHz	*	5700	112.29	-	-	100.41	35	12.2	35.32	184	3	P	H
	*	5700	103.79	-	-	91.91	35	12.2	35.32	184	3	A	H
		5725.48	66.88	-1.32	68.2	54.95	35	12.25	35.32	184	3	P	H
													H
													H
													H
	*	5700	106.18	-	-	94.3	35	12.2	35.32	317	352	P	V
	*	5700	97.79	-	-	85.91	35	12.2	35.32	317	352	A	V
		5725.56	62.09	-6.11	68.2	50.16	35	12.25	35.32	317	352	P	V
													V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

**Band 3 - 5470~5725MHz****WIFI 802.11ac VHT20 (Harmonic @ 3m)**

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT20 CH 140 5700MHz		11400	45.21	-28.79	74	46.44	38.1	18.41	57.74	100	0	P	H
		17100	49.79	-18.41	68.2	41.19	42	22.87	56.27	100	0	P	H
													H
													H
		11400	46.36	-27.64	74	47.59	38.1	18.41	57.74	100	0	P	V
		17100	49.27	-18.93	68.2	40.67	42	22.87	56.27	100	0	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 3 - 5470~5725MHz

WIFI 802.11ac VHT40 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT40 CH 134 5670MHz		5400.05	48.16	-25.84	74	36.98	34.7	11.81	35.33	194	354	P	H
		5466.9	46.38	-21.82	68.2	35	34.8	11.89	35.31	194	354	P	H
		5455.35	40.48	-13.52	54	29.23	34.7	11.87	35.32	194	354	A	H
	*	5670	111.19	-	-	99.5	34.85	12.16	35.32	194	354	P	H
	*	5670	102.39	-	-	90.7	34.85	12.16	35.32	194	354	A	H
		5726.675	66.15	-2.05	68.2	54.22	35	12.25	35.32	194	354	P	H
		5393.4	47.2	-26.8	74	36.11	34.63	11.8	35.34	321	350	P	V
		5466.2	47.26	-20.94	68.2	35.88	34.8	11.89	35.31	321	350	P	V
		5448	40.59	-13.41	54	29.34	34.7	11.87	35.32	321	350	A	V
	*	5670	104.99	-	-	93.3	34.85	12.16	35.32	321	350	P	V
	*	5670	96.78	-	-	85.09	34.85	12.16	35.32	321	350	A	V
		5725.275	59.01	-9.19	68.2	47.08	35	12.25	35.32	321	350	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

**Band 3 - 5470~5725MHz****WIFI 802.11ac VHT40 (Harmonic @ 3m)**

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT40 CH 134 5670MHz		11340	45.71	-28.29	74	47.21	38.03	18.35	57.88	100	0	P	H
		17010	50.02	-18.18	68.2	41.28	42.17	22.81	56.24	100	0	P	H
													H
													H
		11340	47.39	-26.61	74	48.89	38.03	18.35	57.88	100	0	P	V
		17010	49.25	-18.95	68.2	40.51	42.17	22.81	56.24	100	0	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 3 5470~5725MHz

WIFI 802.11ac VHT80 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT80 CH 106 5530MHz		5458.72	58.83	-15.17	74	47.56	34.7	11.88	35.31	214	12	P	H
		5465.44	59.31	-8.89	68.2	47.93	34.8	11.89	35.31	214	12	P	H
		5458.72	49.61	-4.39	54	38.34	34.7	11.88	35.31	214	12	A	H
	*	5530	103.19	-	-	91.6	34.93	11.96	35.3	214	12	P	H
	*	5530	94.39	-	-	82.8	34.93	11.96	35.3	214	12	A	H
		5756.495	48.02	-20.18	68.2	36.05	35	12.3	35.33	214	12	P	H
		5454.4	51	-23	74	39.75	34.7	11.87	35.32	250	338	P	V
		5464.24	56.45	-11.75	68.2	45.08	34.8	11.88	35.31	250	338	P	V
		5459.44	45.32	-8.68	54	34.05	34.7	11.88	35.31	250	338	A	V
	*	5530	98.09	-	-	86.5	34.93	11.96	35.3	250	338	P	V
	*	5530	89.89	-	-	78.3	34.93	11.96	35.3	250	338	A	V
		5757.755	48.81	-19.39	68.2	36.84	35	12.3	35.33	250	338	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

**Band 3 5470~5725MHz****WIFI 802.11ac VHT80 (Harmonic @ 3m)**

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT80 CH 106 5530MHz		11060	45.51	-28.49	74	48.06	37.9	18.1	58.55	100	0	P	H
		16590	46.65	-21.55	68.2	38.82	41.77	22.45	56.39	100	0	P	H
													H
													H
		11060	43.93	-30.07	74	46.48	37.9	18.1	58.55	100	0	P	V
		16590	47.5	-20.7	68.2	39.67	41.77	22.45	56.39	100	0	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Emission above 18GHz
5GHz WIFI 802.11ac VHT80 (SHF)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
5GHz 802.11ac VHT80 SHF		30.54	30.78	-9.22	40	35.72	24.12	0.94	30.01	100	0	P	H
		47.01	25.72	-14.28	40	38.91	15.63	1.16	29.99	-	-	P	H
		125.58	24.69	-18.81	43.5	35.09	17.54	1.88	29.96	-	-	P	H
		768.3	31.03	-14.97	46	27.86	27.79	4.72	29.52	-	-	P	H
		874	32.58	-13.42	46	27.55	28.84	5.04	29.11	-	-	P	H
		955.9	34.93	-11.07	46	27.5	30.5	5.28	28.67	-	-	P	H
													H
													H
													H
													H
													H
													H
		30	31.04	-8.96	40	35.79	24.32	0.93	30.01	100	0	P	V
		61.05	27.75	-12.25	40	44.63	11.78	1.31	29.99	-	-	P	V
		81.84	28.03	-11.97	40	42.96	13.46	1.51	29.98	-	-	P	V
		749.4	30.41	-15.59	46	27.37	27.79	4.64	29.56	-	-	P	V
		831.3	31.26	-14.74	46	27.38	28.04	4.92	29.3	-	-	P	V
		941.2	34.56	-11.44	46	28	29.75	5.24	28.75	-	-	P	V
													V
													V
													V
													V
													V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against limit line.												



Note symbol

*	Fundamental Frequency which can be ignored. However, the level of any unwanted emissions shall not exceed the level of the fundamental frequency.
!	Test result is over limit line.
P/A	P eak or A verage
H/V	H orizontal or V ertical

A calculation example for radiated spurious emission is shown as below:

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11b		2390	55.45	-18.55	74	54.51	32.22	4.58	35.86	103	308	P	H
CH 01													
2412MHz		2390	43.54	-10.46	54	42.6	32.22	4.58	35.86	103	308	A	H

1. Path Loss(dB) = Cable loss(dB) + Filter loss(dB) + Attenuator loss(dB)
2. Level(dBμV/m) = Antenna Factor(dB/m) + Path Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)
3. Over Limit(dB) = Level(dBμV/m) – Limit Line(dBμV/m)

For Peak Limit @ 2390MHz:

1. Level(dBμV/m)
 = Antenna Factor(dB/m) + Path Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)
 = 32.22(dB/m) + 4.58(dB) + 54.51(dBμV) – 35.86 (dB)
 = 55.45 (dBμV/m)
2. Over Limit(dB)
 = Level(dBμV/m) – Limit Line(dBμV/m)
 = 55.45(dBμV/m) – 74(dBμV/m)
 = -18.55(dB)

For Average Limit @ 2390MHz:

1. Level(dBμV/m)
 = Antenna Factor(dB/m) + Path Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)
 = 32.22(dB/m) + 4.58(dB) + 42.6(dBμV) – 35.86 (dB)
 = 43.54 (dBμV/m)
2. Over Limit(dB) = Level(dBμV/m) – Limit Line(dBμV/m)
 = 43.54(dBμV/m) – 54(dBμV/m)
 = -10.46(dB)

Both peak and average measured complies with the limit line, so test result is “PASS”.



Appendix C. Radiated Spurious Emission

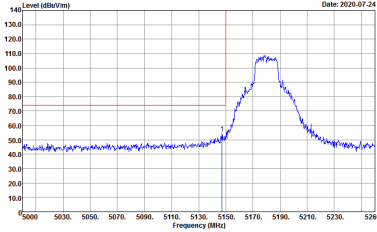
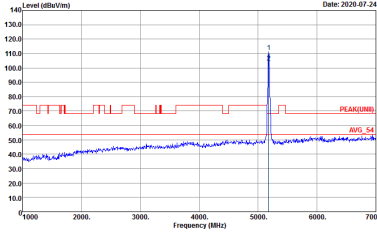
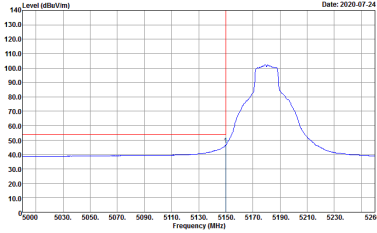
Test Engineer :	Jesse Wang, Stan Hsieh, and Ken Wu	Temperature :	23~25°C
		Relative Humidity :	51~53%

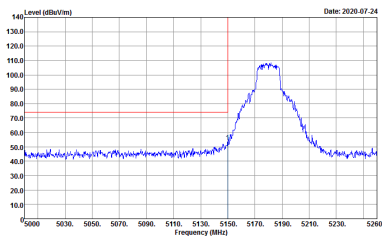
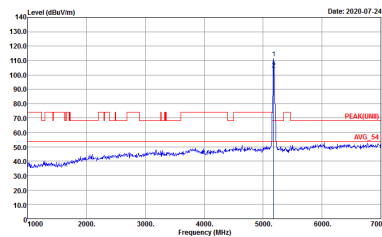
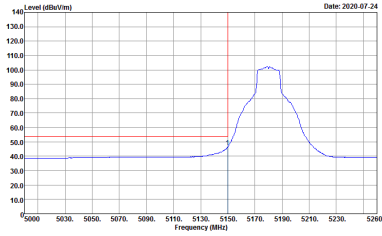
Note symbol

-L	Low channel location
-R	High channel location



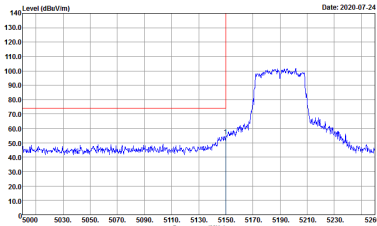
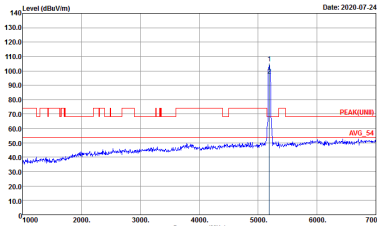
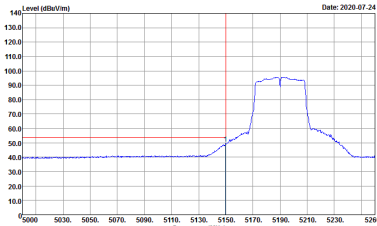
Band 1 - 5150~5250MHz
WIFI 802.11a (Band Edge @ 3m)

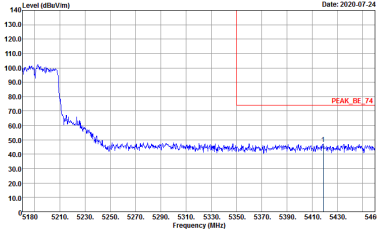
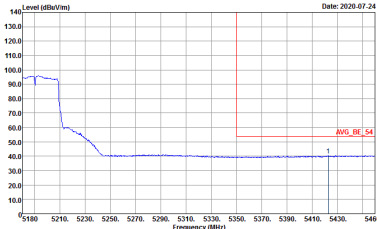
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11a CH36 5180MHz	
1	Horizontal	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 HORIZONTAL Detector : Peak Project : 040803-03 Mode : 1	 Site : 03CH07-HY Condition : PEAK(FUN) 3m HF_ANT_00075962 HORIZONTAL Detector : Peak Project : 040803-03 Mode : 1
Avg.	 Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00075962 HORIZONTAL Detector : Peak Project : 040803-03 Mode : 1	Left blank

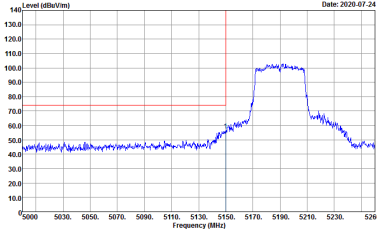
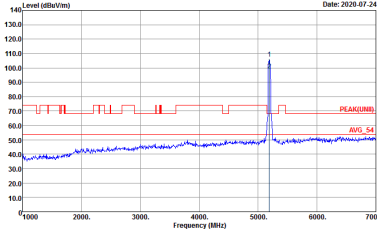
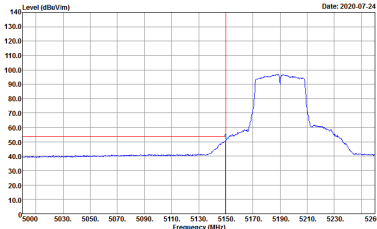
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11a CH36 5180MHz	
1	Vertical	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 VERTICAL Detector : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Project : Peak Mode : 040803-03 : 1	 Site : 03CH07-HY Condition : PEAK(UNII) 3m HF_ANT_00075962 VERTICAL Detector : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Project : Peak Mode : 040803-03 : 1
	 Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00075962 VERTICAL Detector : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Project : Peak Mode : 040803-03 : 1	Left blank

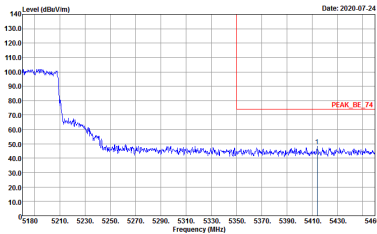
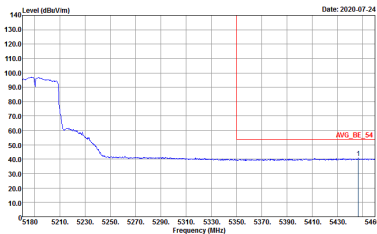


Band 1 5150~5250MHz
WIFI 802.11ac VHT40 (Band Edge @ 3m)

WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT40 CH38 5190MHz - L	
1	Horizontal	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 HORIZONTAL Detector : Peak Project : 040803-03 Mode : 7	 Site : 03CH07-HY Condition : PEAK(UNB) 3m HF_ANT_00075962 HORIZONTAL Detector : Peak Project : 040803-03 Mode : 7
Avg.	 Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00075962 HORIZONTAL Detector : Peak Project : 040803-03 Mode : 7	Left blank

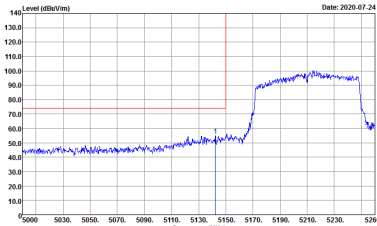
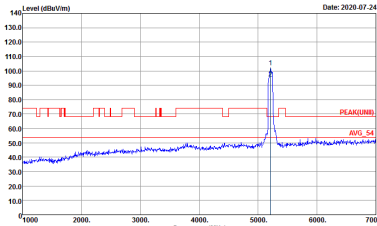
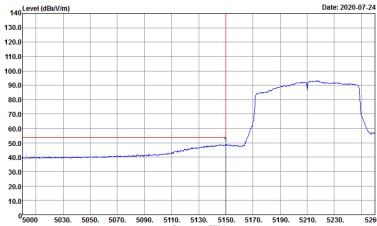
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT40 CH38 5190MHz - R	
1	Horizontal	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 HORIZONTAL Detector : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Project : 040803-03 Mode : 7	Left blank
Avg.	 Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00075962 HORIZONTAL Detector : RBW:1000.000kHz VBW:3.000kHz SWT:Auto Project : 040803-03 Mode : 7	Left blank

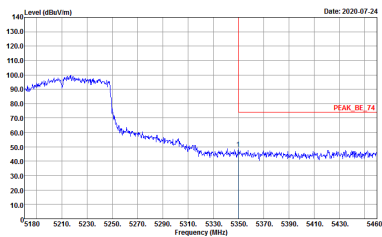
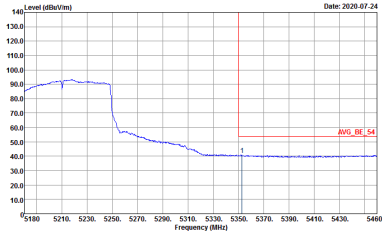
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT40 CH38 5190MHz - L	
1	Vertical	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 VERTICAL Detector : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Project : 040803-03 Mode : 7	 Site : 03CH07-HY Condition : PEAK(UNII) 3m HF_ANT_00075962 VERTICAL Detector : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Project : 040803-03 Mode : 7
	 Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00075962 VERTICAL Detector : RBW:1000.000kHz VBW:3.000kHz SWT:Auto Project : 040803-03 Mode : 7	Left blank

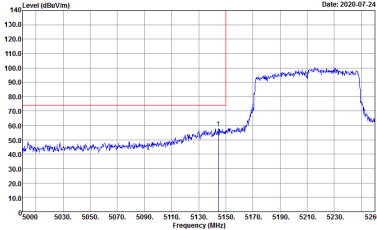
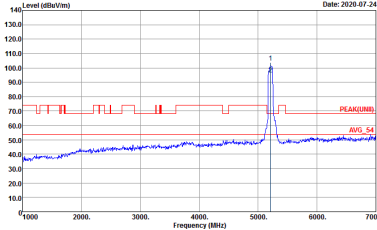
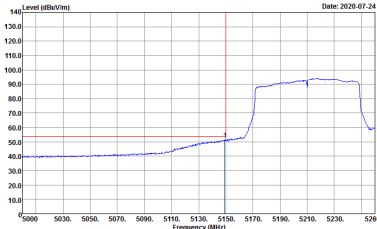
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT40 CH38 5190MHz - R	
1	Vertical	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 VERTICAL Detector : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Project : 040803-03 Mode : 7	Left blank
Avg.	 Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00075962 VERTICAL Detector : RBW:1000.000kHz VBW:3.000kHz SWT:Auto Project : 040803-03 Mode : 7	Left blank



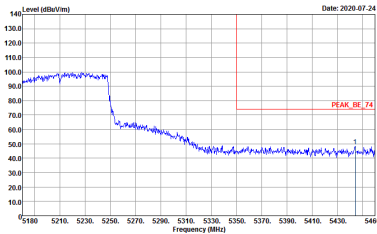
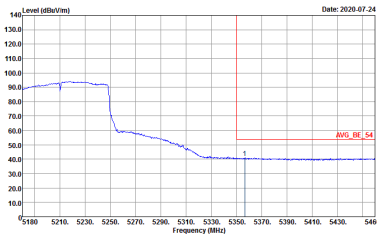
Band 1 5150~5250MHz
WIFI 802.11ac VHT80 (Band Edge @ 3m)

WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH42 5210MHz - L	
1	Horizontal	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 HORIZONTAL Detector : Peak Project : 040803-03 Mode : 9	 Site : 03CH07-HY Condition : PEAK(UNII) 3m HF_ANT_00075962 HORIZONTAL Detector : Peak Project : 040803-03 Mode : 9
Avg.	 Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00075962 HORIZONTAL Detector : Peak Project : 040803-03 Mode : 9	Left blank

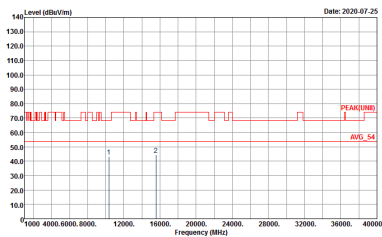
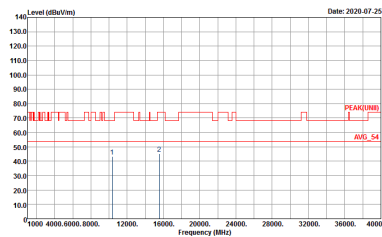
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH42 5210MHz - R	
1	Horizontal	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 HORIZONTAL Detector : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Project : 040803-03 Mode : 9	Left blank
Avg.	 Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00075962 HORIZONTAL Detector : RBW:1000.000kHz VBW:3.000kHz SWT:Auto Project : 040803-03 Mode : 9	Left blank

WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH42 5210MHz - L	
1	Vertical	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74.3m HF_ANT_00075962 VERTICAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Project : Peak Mode : 040803-03 Date: 2020-07-24	 Site : 03CH07-HY Condition : PEAK(UNII) 3m HF_ANT_00075962 VERTICAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Project : Peak Mode : 040803-03 Date: 2020-07-24
Avg.	 Site : 03CH07-HY Condition : AVG_BE_54.3m HF_ANT_00075962 VERTICAL Detector : RBW:1000.000KHz VBW:3.000KHz SWT:Auto Project : Peak Mode : 040803-03 Date: 2020-07-24	Left blank



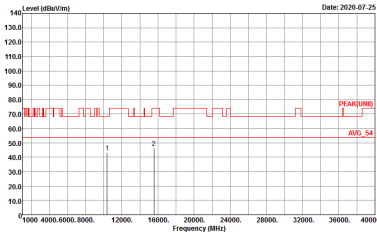
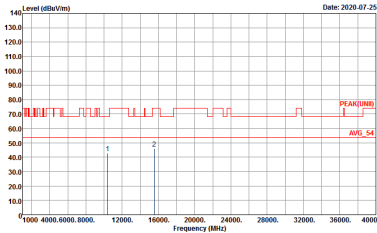
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH42 5210MHz - R	
1	Vertical	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 VERTICAL Detector : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Project : 040803-03 Mode : 9	Left blank
Avg.	 Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00075962 VERTICAL Detector : RBW:1000.000kHz VBW:3.000kHz SWT:Auto Project : 040803-03 Mode : 9	Left blank

Band 1 - 5150~5250MHz
WIFI 802.11a (Harmonic @ 3m)

WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11a CH36 5180MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH07-HY Condition : PEAK(UM) 3m HF_ANT_00075962 HORIZONTAL Detector : Peak Project : 040803-03 Mode : 1	 Site : 03CH07-HY Condition : PEAK(UM) 3m HF_ANT_00075962 VERTICAL Detector : Peak Project : 040803-03 Mode : 1

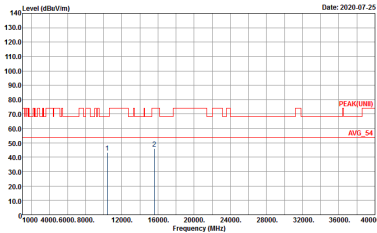
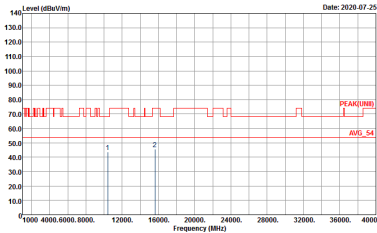


Band 1 5150~5250MHz
WIFI 802.11ac VHT40 (Harmonic @ 3m)

WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11ac VHT40 CH38 5190MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH07-HY Condition : PEAK(UNII) 3m HF_ANT_00075962 HORIZONTAL Detector : Peak Project : 040803-03 Mode : 7	 Site : 03CH07-HY Condition : PEAK(UNII) 3m HF_ANT_00075962 VERTICAL Detector : Peak Project : 040803-03 Mode : 7

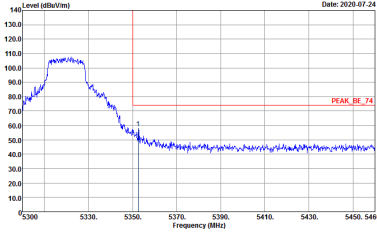
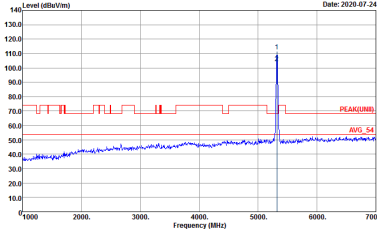
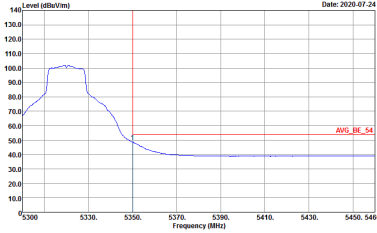


Band 1 5150~5250MHz
WIFI 802.11ac VHT80 (Harmonic @ 3m)

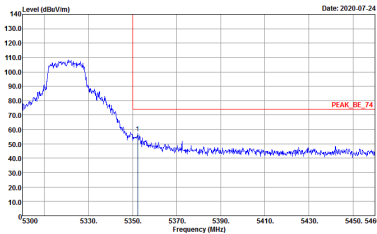
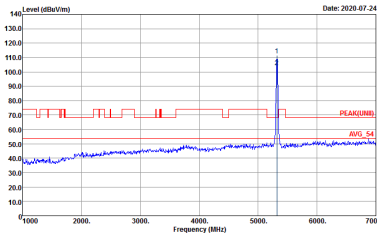
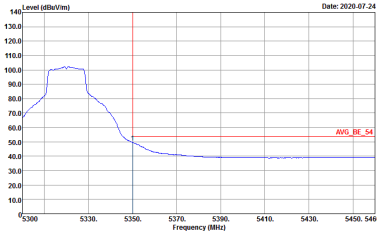
WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11ac VHT80 CH42 5210MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH07-HY Condition : PEAK(UNII) 3m HF_ANT_00075962 HORIZONTAL Detector : Peak Project : 040803-03 Mode : 9	 Site : 03CH07-HY Condition : PEAK(UNII) 3m HF_ANT_00075962 VERTICAL Detector : Peak Project : 040803-03 Mode : 9



Band 2 - 5250~5350MHz
WIFI 802.11a (Band Edge @ 3m)

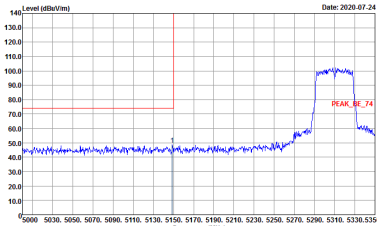
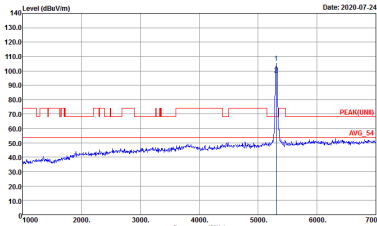
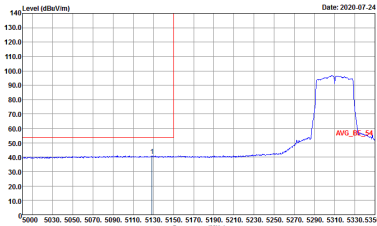
WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11a CH64 5320MHz	
1	Horizontal	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 HORIZONTAL Detector : Peak Project : 040803-03 Mode : 12	 Site : 03CH07-HY Condition : PEAK(FUN) 3m HF_ANT_00075962 HORIZONTAL Detector : Peak Project : 040803-03 Mode : 12
Avg.	 Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00075962 HORIZONTAL Detector : Peak Project : 040803-03 Mode : 12	Left blank



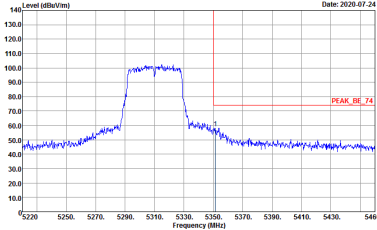
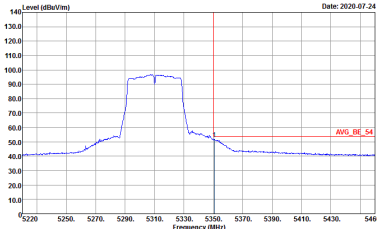
WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11a CH64 5320MHz	
1	Vertical	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 VERTICAL Detector : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Project : Peak Mode : 040803-03 Date: 2020-07-24	 Site : 03CH07-HY Condition : PEAK(FUN) 3m HF_ANT_00075962 VERTICAL Detector : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Project : Peak Mode : 040803-03 Date: 2020-07-24
Avg.	 Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00075962 VERTICAL Detector : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Project : Peak Mode : 040803-03 Date: 2020-07-24	Left blank



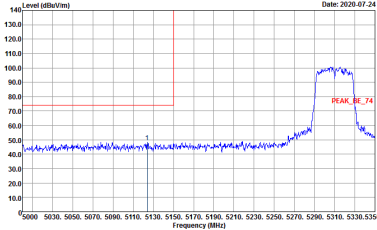
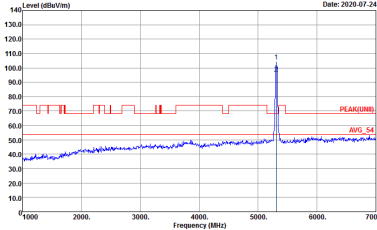
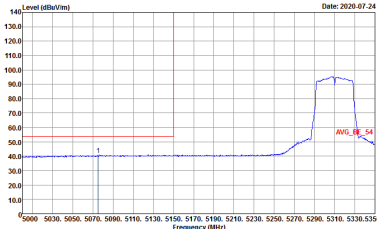
Band 2 5250~5350MHz
WIFI 802.11ac VHT40 (Band Edge @ 3m)

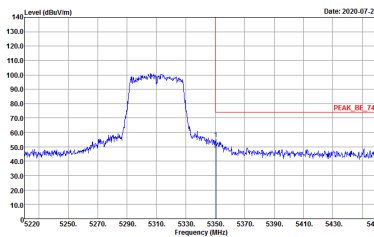
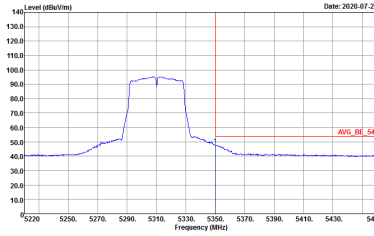
WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11ac VHT40 CH62 5310 - L	
1	Horizontal	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 HORIZONTAL Detector : Peak Project : 040803-03 Mode : 17	 Site : 03CH07-HY Condition : PEAK(UNB) 3m HF_ANT_00075962 HORIZONTAL Detector : Peak Project : 040803-03 Mode : 17
Avg.	 Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00075962 HORIZONTAL Detector : Peak Project : 040803-03 Mode : 17	Left blank



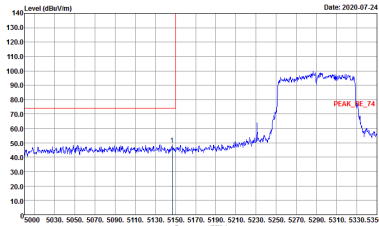
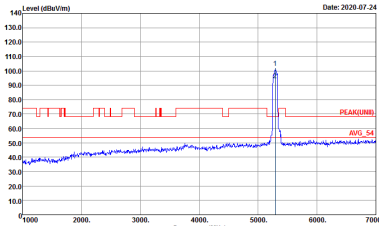
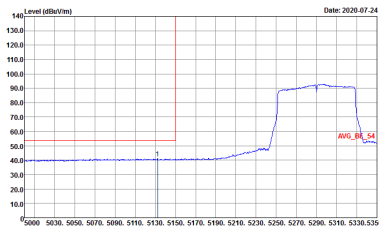
WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11ac VHT40 CH62 5310 - R	
1	Horizontal	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 HORIZONTAL Detector : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Project : 040803-03 Mode : 17	Left blank
Avg.	 Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00075962 HORIZONTAL Detector : RBW:1000.000kHz VBW:3.000kHz SWT:Auto Project : 040803-03 Mode : 17	Left blank



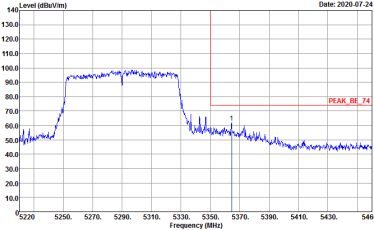
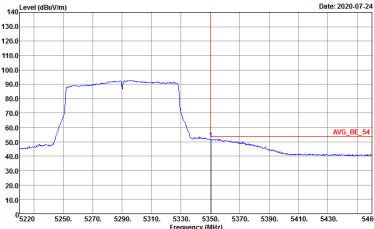
WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11ac VHT40 CH62 5310 - L	
1	Vertical	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 VERTICAL Detector : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Project : Peak Mode : 040803-03 17	 Site : 03CH07-HY Condition : PEAK(UMB) 3m HF_ANT_00075962 VERTICAL Detector : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Project : Peak Mode : 040803-03 17
Avg.	 Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00075962 VERTICAL Detector : RBW:1000.000kHz VBW:3.000kHz SWT:Auto Project : Peak Mode : 040803-03 17	Left blank

WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11ac VHT40 CH62 5310 - R	
1	Vertical	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 VERTICAL Detector : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Project : 040803-03 Mode : 17	Left blank
Avg.	 Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00075962 VERTICAL Detector : RBW:1000.000kHz VBW:3.000kHz SWT:Auto Project : 040803-03 Mode : 17	Left blank

Band 2 5250~5350MHz
WIFI 802.11ac VHT80 (Band Edge @ 3m)

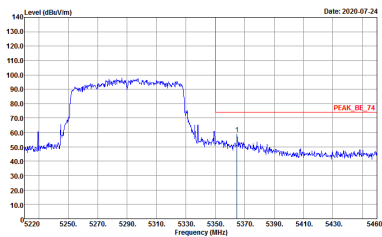
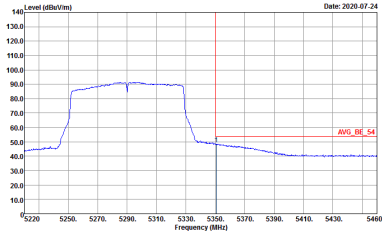
WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH58 5290MHz - L	
1	Horizontal	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 HORIZONTAL Detector : Peak Project : 040803-03 Mode : 18	 Site : 03CH07-HY Condition : PEAK(UNB) 3m HF_ANT_00075962 HORIZONTAL Detector : Peak Project : 040803-03 Mode : 18
Avg.	 Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00075962 HORIZONTAL Detector : Peak Project : 040803-03 Mode : 18	Left blank



WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH58 5290MHz - R	
1	Horizontal	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 HORIZONTAL Detector : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Project : Peak Project : 040803-03 Mode : 18	Left blank
Avg.	 Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00075962 HORIZONTAL Detector : RBW:1000.000kHz VBW:3.000kHz SWT:Auto Project : Peak Project : 040803-03 Mode : 18	Left blank



WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH58 5290MHz - L	
1	Vertical	Fundamental
Peak	Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 VERTICAL Detector : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Project : Peak Mode : 040803-03 18	Site : 03CH07-HY Condition : PEAK(UNII) 3m HF_ANT_00075962 VERTICAL Detector : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Project : Peak Mode : 040803-03 18
Avg.	Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00075962 VERTICAL Detector : RBW:1000.000kHz VBW:3.000kHz SWT:Auto Project : Peak Mode : 040803-03 18	Left blank

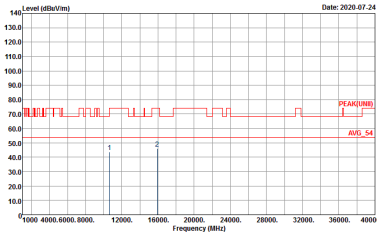
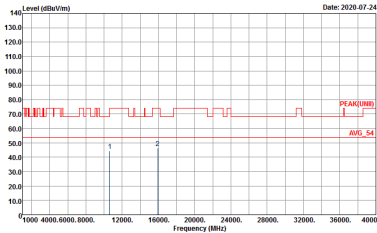
WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH58 5290MHz - R	
1	Vertical	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 VERTICAL Detector : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Project : 040803-03 Mode : 18	Left blank
Avg.	 Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00075962 VERTICAL Detector : RBW:1000.000kHz VBW:3.000kHz SWT:Auto Project : 040803-03 Mode : 18	Left blank

**Band 2 - 5250~5350MHz****WIFI 802.11a (Harmonic @ 3m)**

WIFI	Band 2 5250~5350MHz Harmonic @ 3m	
ANT	802.11a CH64 5320MHz	
1	Horizontal	Vertical
Peak Avg.	Site : 03CH07-HY Condition : PEAK(AVG) 3m HF_ANT_00075962 HORIZONTAL Detector : Peak Project : 040803-03 Mode : 12	Site : 03CH07-HY Condition : PEAK(AVG) 3m HF_ANT_00075962 VERTICAL Detector : Peak Project : 040803-03 Mode : 12

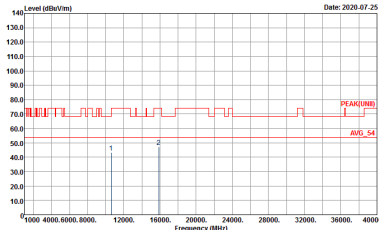
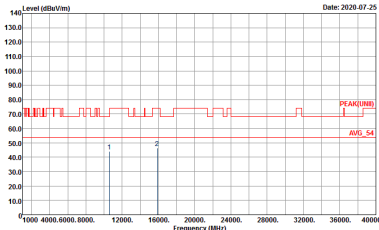


Band 2 5250~5350MHz
WIFI 802.11ac VHT40 (Harmonic @ 3m)

WIFI	Band 2 5250~5350MHz Harmonic @ 3m	
ANT	802.11ac VHT40 CH62 5310	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH07-HY Condition : PEAK(UNII) 3m HF_ANT_00075962 HORIZONTAL Detector : Peak Project : 040803-03 Mode : 17	 Site : 03CH07-HY Condition : PEAK(UNII) 3m HF_ANT_00075962 VERTICAL Detector : Peak Project : 040803-03 Mode : 17

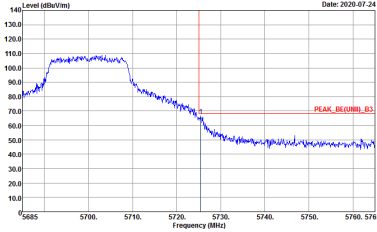
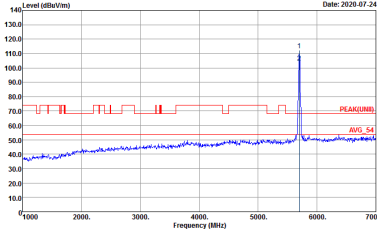


Band 2 5250~5350MHz
WIFI 802.11ac VHT80 (Harmonic @ 3m)

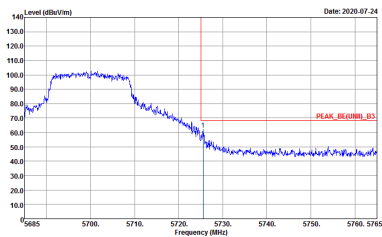
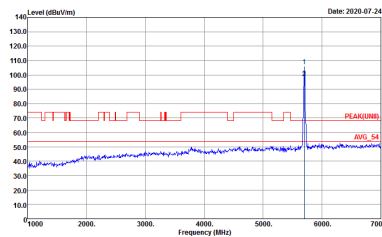
WIFI	Band 2 5250~5350MHz Harmonic @ 3m	
ANT	802.11ac VHT80 CH58 5290MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH07-HY Condition : PEAK(UNI) 3m HF_ANT_00075962 HORIZONTAL Detector : Peak Project : 040803-03 Mode : 18	 Site : 03CH07-HY Condition : PEAK(UNI) 3m HF_ANT_00075962 VERTICAL Detector : Peak Project : 040803-03 Mode : 18



Band 3 - 5470~5725MHz
WIFI 802.11ac VHT20 (Band Edge @ 3m)

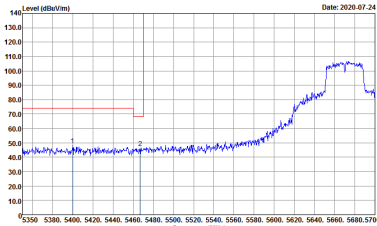
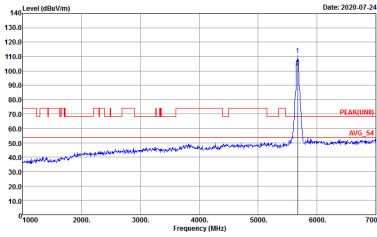
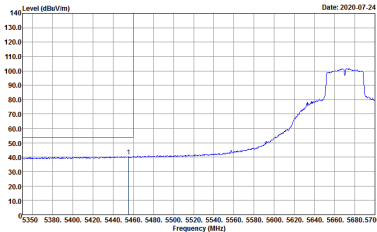
WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11ac VHT20 CH140 5700MHz	
1	Horizontal	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE(LNII)_B3 3m HF ANT_00075962 HORIZONTAL Detector : Peak Project : 040803-03 Mode : 25	 Site : 03CH07-HY Condition : PEAK(LNII) 3m HF ANT_00075962 HORIZONTAL Detector : Peak Project : 040803-03 Mode : 25

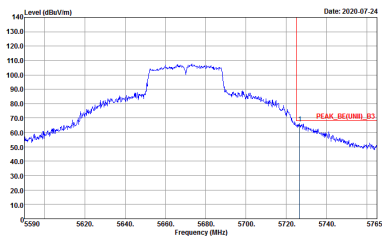


WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11ac VHT20 CH140 5700MHz	
1	Vertical	Fundamental
Peak	 Site : ESCH07-HY Condition : PEAK_BE(UNI)_B3 3m HF ANT_00075962 VERTICAL Detector : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Project : Peak Mode : 040803-03 Date: 2020-07-24	 Site : ESCH07-HY Condition : PEAK(UNI)_3m HF ANT_00075962 VERTICAL Detector : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Project : Peak Mode : 040803-03 Date: 2020-07-24

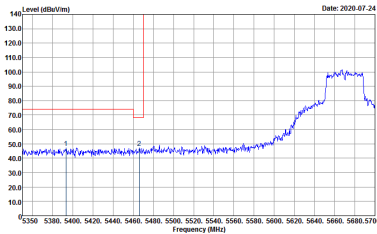
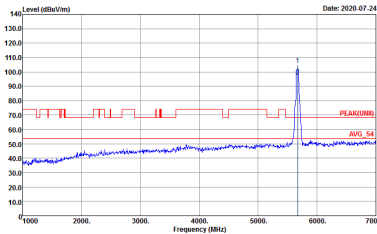
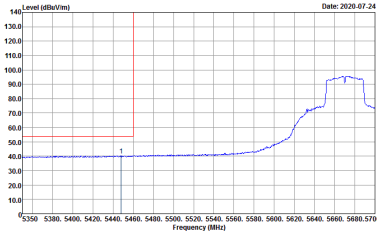


Band 3 5470~5725MHz
WIFI 802.11ac VHT40 (Band Edge @ 3m)

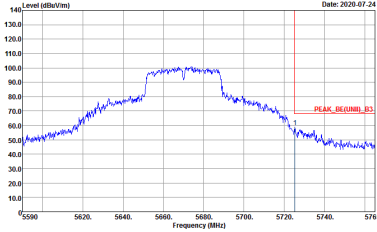
WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11ac VHT40 CH134 5670MHz - L	
1	Horizontal	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE(UNII)_B3 3m HF_ANT_00075962 HORIZONTAL Detector : Peak Project : 040803-03 Mode : 29	 Site : 03CH07-HY Condition : PEAK(UNII) 3m HF_ANT_00075962 HORIZONTAL Detector : Peak Project : 040803-03 Mode : 29
Avg.	 Site : 03CH07-HY Condition : AVG_BE(UNII)_B3 3m HF_ANT_00075962 HORIZONTAL Detector : Peak Project : 040803-03 Mode : 29	Left blank

WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11ac VHT40 CH134 5670MHz - R	
1	Horizontal	Fundamental
Peak	 Site : ESCH07-HY Condition : PEAK_BE(UNII)_B3 3m HF ANT_00075962 HORIZONTAL Detector : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Project : 040803-03 Mode : Z9	Left blank



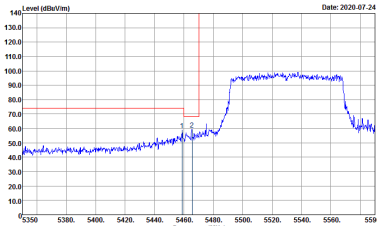
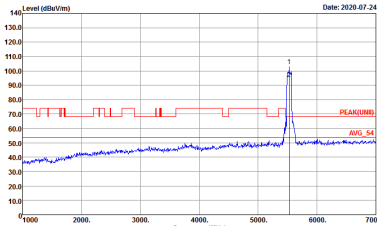
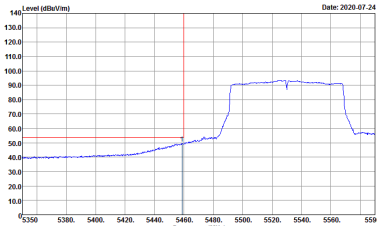
WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11ac VHT40 CH134 5670MHz - L	
1	Vertical	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE(UNI)_B3 3m HF ANT_00075962 VERTICAL Detector : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Project : Peak Mode : 040803-03 Date: 2020-07-24	 Site : 03CH07-HY Condition : PEAK(UNI)_B3 3m HF ANT_00075962 VERTICAL Detector : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Project : Peak Mode : 040803-03 Date: 2020-07-24
Avg.	 Site : 03CH07-HY Condition : AVG_BE(UNI)_B3 3m HF ANT_00075962 VERTICAL Detector : RBW:1000.000kHz VBW:3.000kHz SWT:Auto Project : Peak Mode : 040803-03 Date: 2020-07-24	Left blank



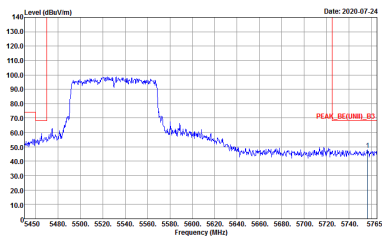
WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11ac VHT40 CH134 5670MHz - R	
1	Vertical	Fundamental
Peak	 Site : ESCH07-HY Condition : PEAK_BE(UNII)_B3 3m HF ANT_00075962 VERTICAL Detector : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Project : 040803-03 Mode : Z9	Left blank



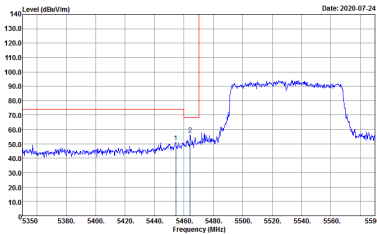
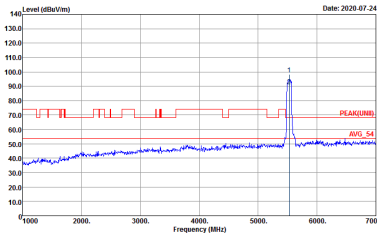
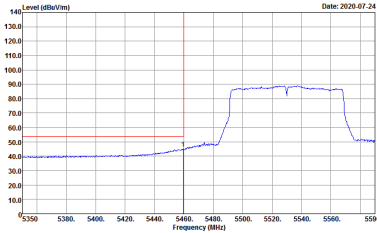
Band 3 5470~5725MHz
WIFI 802.11ac VHT80 (Band Edge @ 3m)

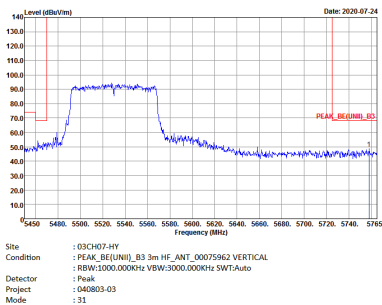
WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH106 5530MHz - L	
1	Horizontal	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE(UNII)_B3 3m HF_ANT_00075962 HORIZONTAL Detector : Peak Project : 040803-03 Mode : 31	 Site : 03CH07-HY Condition : PEAK(UNII) 3m HF_ANT_00075962 HORIZONTAL Detector : Peak Project : 040803-03 Mode : 31
Avg.	 Site : 03CH07-HY Condition : AVG_BE(UNII)_B3 3m HF_ANT_00075962 HORIZONTAL Detector : Peak Project : 040803-03 Mode : 31	Left blank



WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH106 5530MHz - R	
1	Horizontal	Fundamental
Peak	 Site : ESCH07-HY Condition : PEAK_BE(UNII)_B3 3m HF ANT_00075962 HORIZONTAL Detector : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Project : 040803-03 Mode : 31 Date: 2020-07-24	Left blank

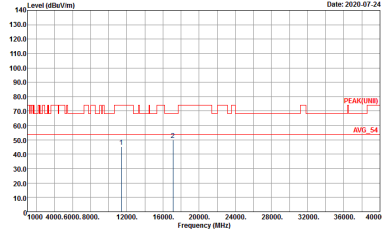
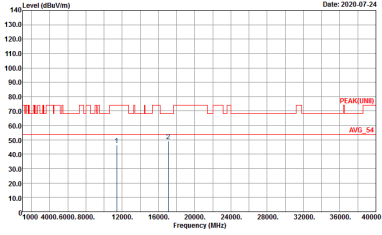


WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH106 5530MHz - L	
1	Vertical	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE(UNII)_B3 3m HF_ANT_00075962 VERTICAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Project : Peak Mode : 040803-03 Date: 2020-07-24	 Site : 03CH07-HY Condition : PEAK(UNII)_B3 3m HF_ANT_00075962 VERTICAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Project : Peak Mode : 040803-03 Date: 2020-07-24
Avg.	 Site : 03CH07-HY Condition : AVG_BE(UNII)_B3 3m HF_ANT_00075962 VERTICAL Detector : RBW:1000.000KHz VBW:3.000KHz SWT:Auto Project : Peak Mode : 040803-03 Date: 2020-07-24	Left blank

WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH106 5530MHz - R	
1	Vertical	Fundamental
Peak		Left blank

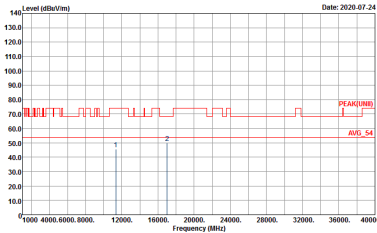
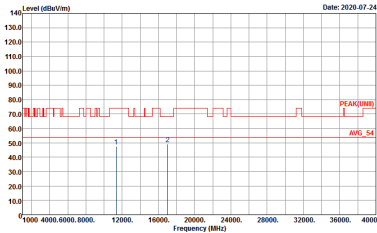


Band 3 - 5470~5725MHz
WIFI 802.11ac VHT20 (Harmonic @ 3m)

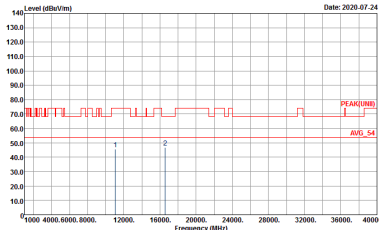
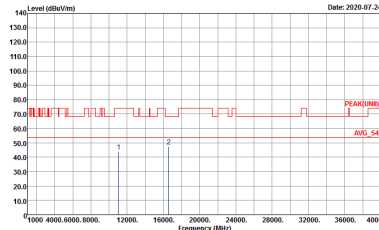
WIFI	Band 3 5470~5725MHz Harmonic @ 3m	
ANT	802.11ac VHT20 CH140 5700MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH07-HY Condition : PEAK(UNB) 3m HF_ANT_00075962 HORIZONTAL Detector : Peak Project : 040803-03 Mode : 25	 Site : 03CH07-HY Condition : PEAK(UNB) 3m HF_ANT_00075962 VERTICAL Detector : Peak Project : 040803-03 Mode : 25



Band 3 5470~5725MHz
WIFI 802.11ac VHT40 (Harmonic @ 3m)

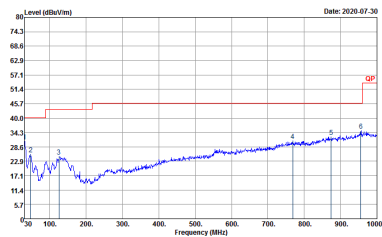
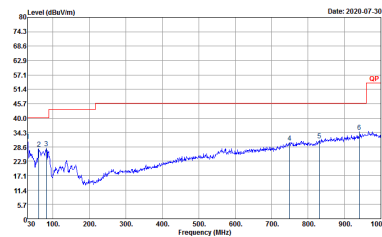
WIFI	Band 3 5470~5725MHz Harmonic @ 3m	
ANT	802.11ac VHT40 CH134 5670MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH07-HY Condition : PEAK(UNII) 3m HF_ANT_00075962 HORIZONTAL Detector : Peak Project : 040803-03 Mode : 29	 Site : 03CH07-HY Condition : PEAK(UNII) 3m HF_ANT_00075962 VERTICAL Detector : Peak Project : 040803-03 Mode : 29

Band 3 5470~5725MHz
WIFI 802.11ac VHT80 (Harmonic @ 3m)

WIFI	Band 3 5470~5725MHz Harmonic @ 3m	
ANT	802.11ac VHT80 CH106 5530MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH07-HY Condition : PEAK(UNII) 3m HF_ANT_00075962 HORIZONTAL Detector : Peak Project : 040803-03 Mode : 31	 Site : 03CH07-HY Condition : PEAK(UNII) 3m HF_ANT_00075962 VERTICAL Detector : Peak Project : 040803-03 Mode : 31



Emission below 1GHz
5GHz WIFI 802.11ac VHT20 (LF)

WIFI	5GHz WIFI	
ANT	802.11ac VHT20 LF	
1	Horizontal	Vertical
QP / Peak	 Site : 03CH07-HY Condition : QP 3m LF-ANT-35419(G) HORIZONTAL Detector : Peak Project : 040803-03 Mode : 44	 Site : 03CH07-HY Condition : QP 3m LF-ANT-35419(G) VERTICAL Detector : Peak Project : 040803-03 Mode : 44

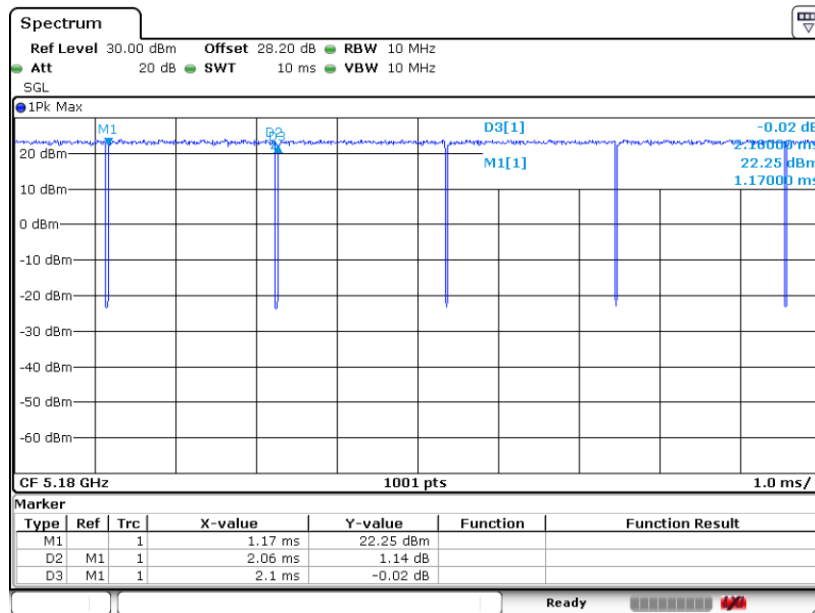


Appendix D. Duty Cycle Plots

Band	Duty Cycle(%)	T(us)	1/T(kHz)	VBW Setting	Duty Factor(dB)
802.11a	98.10	-	-	10Hz	0.08
5GHz 802.11ac VHT20	97.98	1940	0.52	1kHz	0.09
5GHz 802.11ac VHT40	95.96	950	1.05	3kHz	0.18
5GHz 802.11ac VHT80	92.22	462	2.16	3kHz	0.35

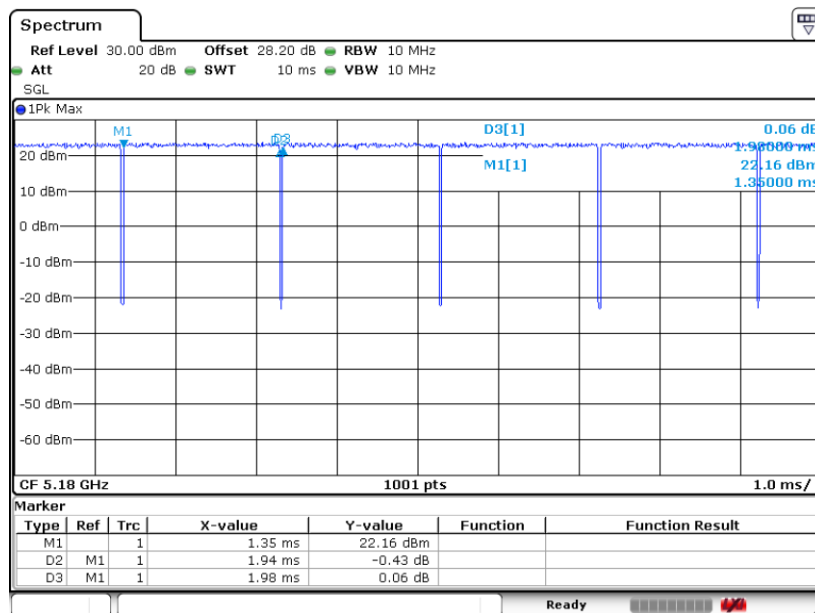


802.11a



Date: 23.JUL.2020 11:01:24

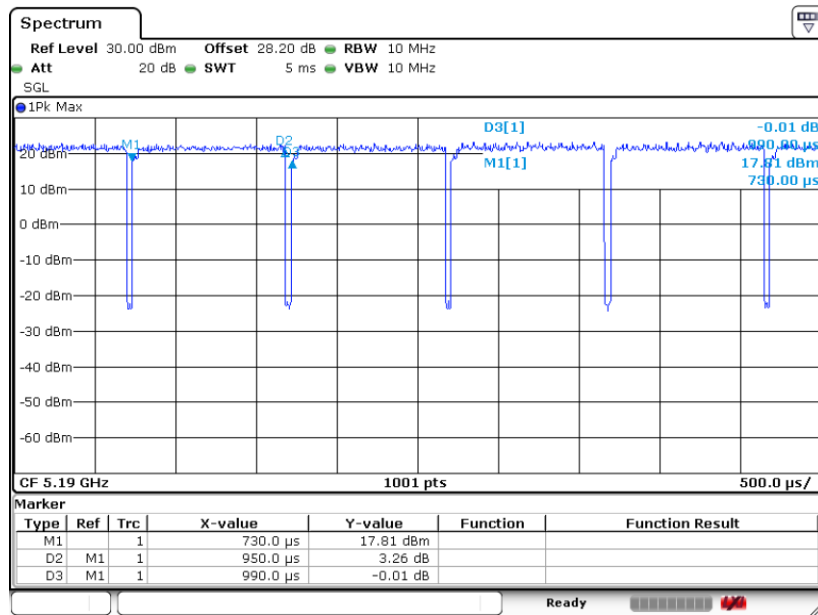
802.11ac VHT20



Date: 23.JUL.2020 11:22:50

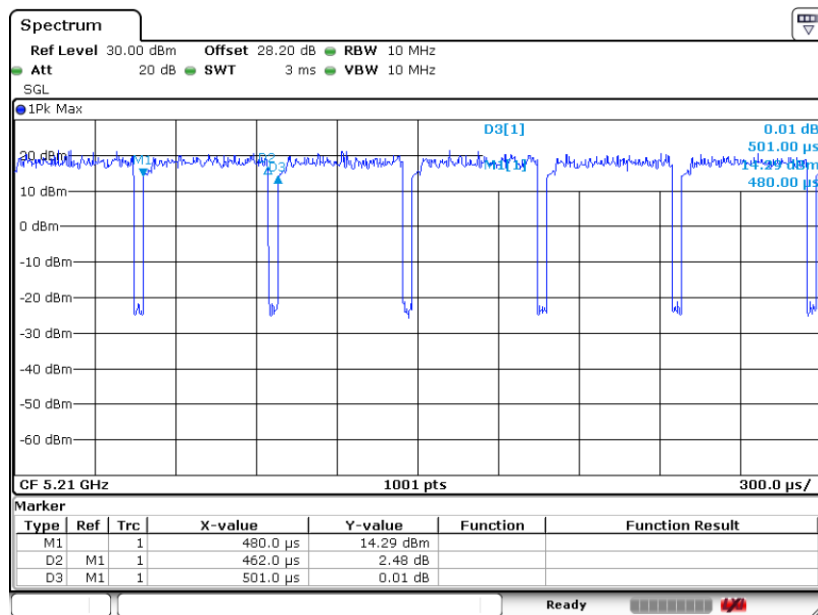


802.11ac VHT40



Date: 23.JUL.2020 11:35:22

802.11ac VHT80



Date: 23.JUL.2020 11:42:52