FCC RADIO TEST REPORT

FCC ID	:	**Q3K-5XACULCHG**
Equipment	:	**5 GHz Outdoor PtP/PtMP High Gain Radio Unit**
Brand Name	:	**RADWIN 2000, RADWIN 5000**
Model name	:	**Alpha INT, SU-Air INT, SU-Pro INT**
Applicant	:	**Radwin Ltd. Habarzel 27 Tel Aviv ISRAEL**
Manufacturer	:	**Radwin Ltd. Habarzel 27 Tel Aviv ISRAEL**
Standard	:	**FCC Part 15 Subpart E §15.407**

The product was received on Oct. 31, 2018 and testing was started from Nov. 07, 2018 and completed on Nov. 15, 2018. We, SPORTON INTERNATIONAL INC., would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.

The report must not be used by the client to claim product certification, approval, or endorsement by TAF or any agency of government.

The test results in this 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.

Approved by: Joseph Lin

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
FR8O3134C	01	Initial issue of report	Nov. 28, 2018

Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
3.1	15.403 (i)	6dB & 26dB Bandwidth	Pass	-
3.1	2.1049	99% Occupied Bandwidth	Reporting only	-
3.2	15.407 (a)	Maximum Conducted Output Power	Pass	-
3.3	15.407 (a)	Power Spectral Density	Pass	-
3.4	15.407(b)	Unwanted Emissions	Pass	Under limit 0.17 dB at 17490.000 MHz
3.5	15.207	AC Conducted Emission	Pass	Under limit 7.91 dB at 0.463 MHz
3.6	15.407 (c)	Automatically Discontinue Transmission	Pass	-
3.7	15.203 & 15.407 (a)	Antenna Requirement	Pass	-

Declaration of Conformity:
The judgment of conformity in the report is based on the measurement results excluding the measurement uncertainty.
Comments and Explanations:
None

Reviewed by: Wii Chang

Report Producer: Polly Tsai

1 General Description

1.1 Product Feature of Equipment Under Test

Wireless 2.4GHz and Wireless 5GHz

Product Specification subjective to this standard	
Antenna Type	Wireless 2.4GHz: Printed PCB Antenna Wireless 5GHz: Integrated FP Xpole Antenna

1.2 Modification of EUT

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

1.3 Testing Location

Sporton Lab is accredited to ISO 17025 by Taiwan Accreditation Foundation (TAF code : 1190) and the FCC designation No. TW1190 and TW0007 under the FCC 2.948(e) by Mutual Recognition Agreement (MRA) in FCC Test.

Test Site	SPORTON INTERNATIONAL INC.	
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

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

Test Site	SPORTON INTERNATIONAL INC.
Test Site Location	No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.) TEL: +886-3-327-0868 FAX: +886-3-327-0855
Test Site No.	**Sporton Site No.**
	03CH13-HY

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

1.4 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.
- 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).

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

2.1 Carrier Frequency and Channel

Frequency Band	Freq. (MHz)			
5725-5850 MHz Band 4 (U-NII-3)	5730	5735	5740	5745
	5750	5755	5760	5765
	5770	5775	5780	5785
	5790	5795	5800	5805
	5810	5815	5820	5825
	5830	5835	5840	5845

2.2 Test Mode

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

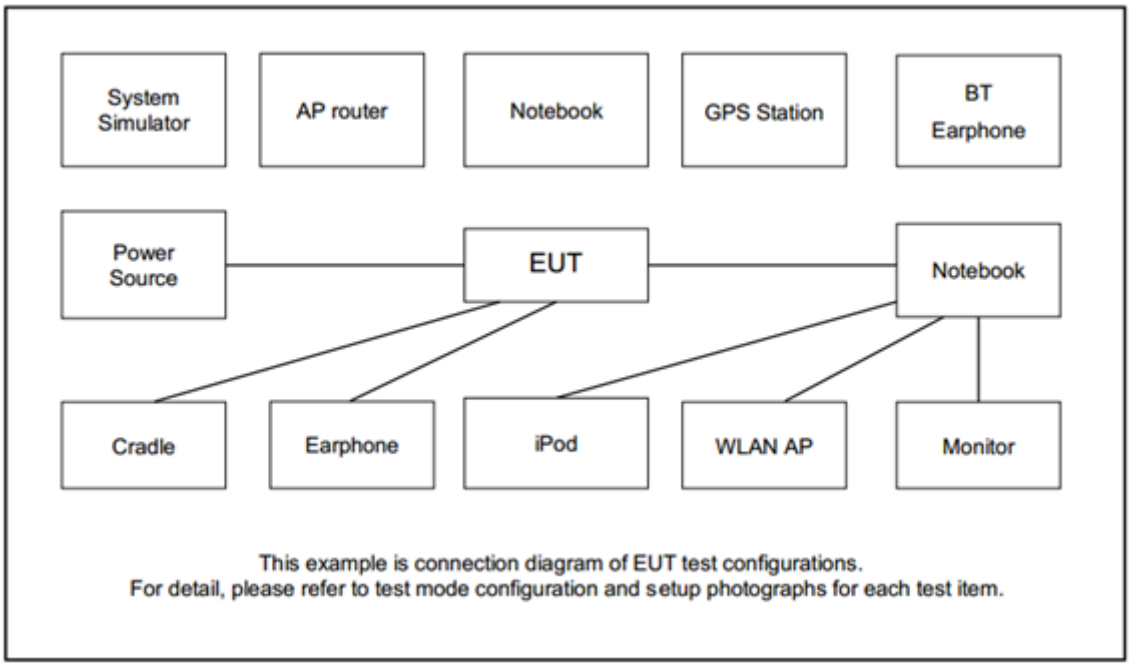
MIMO Mode

Channel Bandwidth	Data Rate
10 MHz	**MCS8**
20 MHz	**MCS8**
40 MHz	**MCS9**
80 MHz	**MCS9**

Test Cases	
AC Conducted Emission	Mode 1 : Wireless (5GHz) Tx + LAN Link + POE Adapter

BW		10 MHz	20 MHz	40 MHz	80 MHz
L	Low	5730	5735	5745	5765
M	Middle	5785	5785	5785	5785
H	High	5845	5840	5830	5810

2.3 Connection Diagram of Test System



2.4 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	Notebook	Vostro	Vostro3360	FCC DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m

2.5 EUT Operation Test Setup

The RF test items, utility “Radwin Radio Test Tool” 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.

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.

Offset = RF cable loss + attenuator factor.

Following shows an offset computation example with cable loss 4.2 dB and 10dB attenuator.

Offset(dB) = RF cable loss(dB) + attenuator factor(dB).

= 4.2 + 10 = 14.2 (dB)

3 Test Result

3.1 6dB and 26dB and 99% Occupied Bandwidth Measurement

3.1.1 Description of 6dB and 26dB and 99% Occupied Bandwidth

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

26dB and 99% Occupied bandwidth are reporting only.

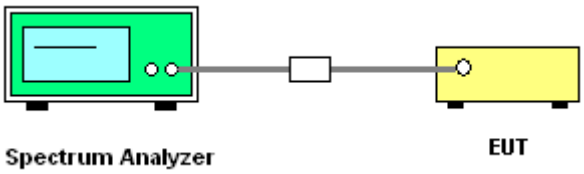
3.1.2 Measuring Instruments

See list of measuring equipment 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 for the band 5.725-5.85GHz
2. Set RBW = 100kHz.
3. Set the VBW ≥ 3 x RBW.
4. Detector = Peak.
5. Trace mode = max hold
6. Measure the maximum width of the emission that is 6 dB down from the peak of the emission.
7. Measure and record the results in the test report.

3.1.4 Test Setup



3.1.5 Test Result of 6dB Bandwidth

Please refer to Appendix A.

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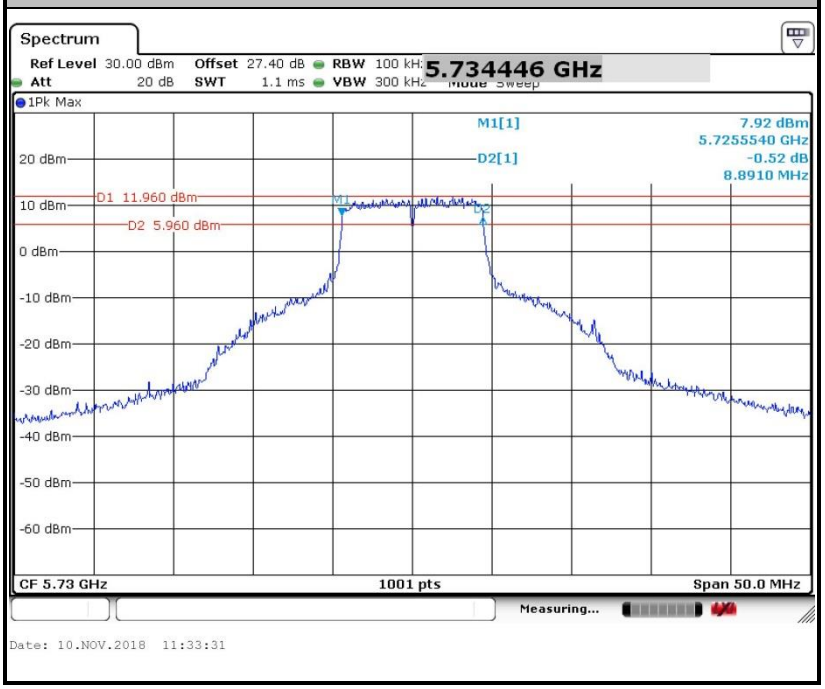
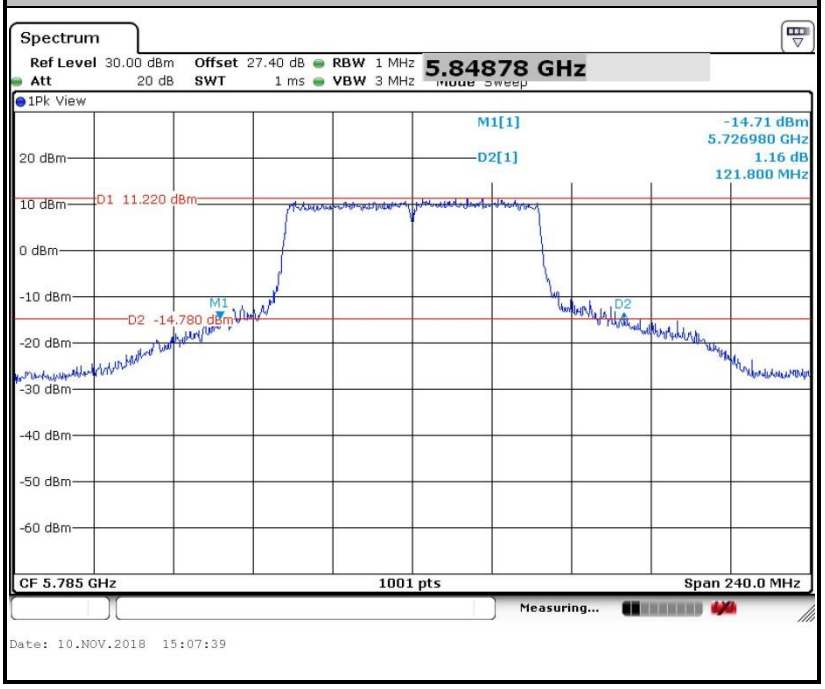
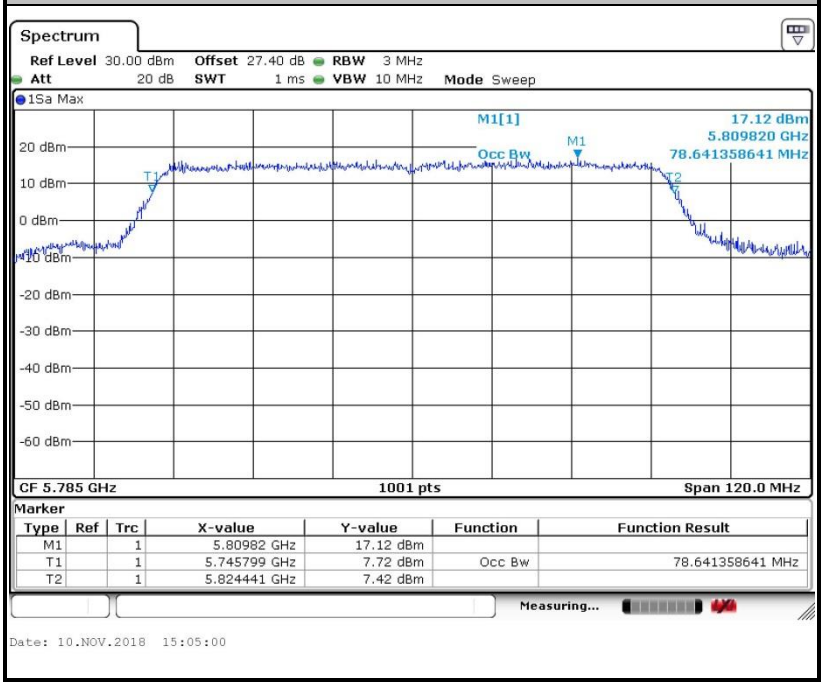
Minimum 6dB Bandwidth



Maximum 26dB Bandwidth



Maximum 99% Occupied Bandwidth



Note: The occupied channel bandwidth is maintained within the band of operation for all of the modulations.

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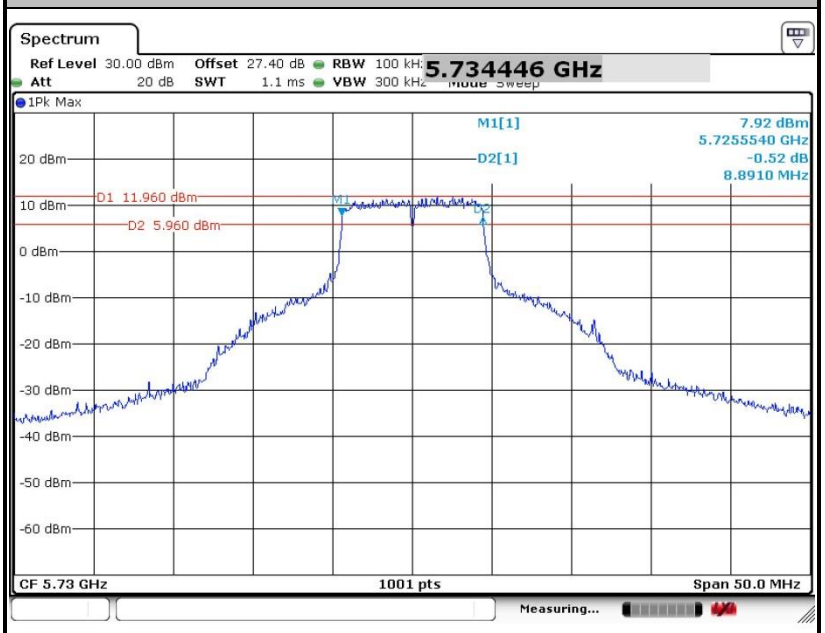
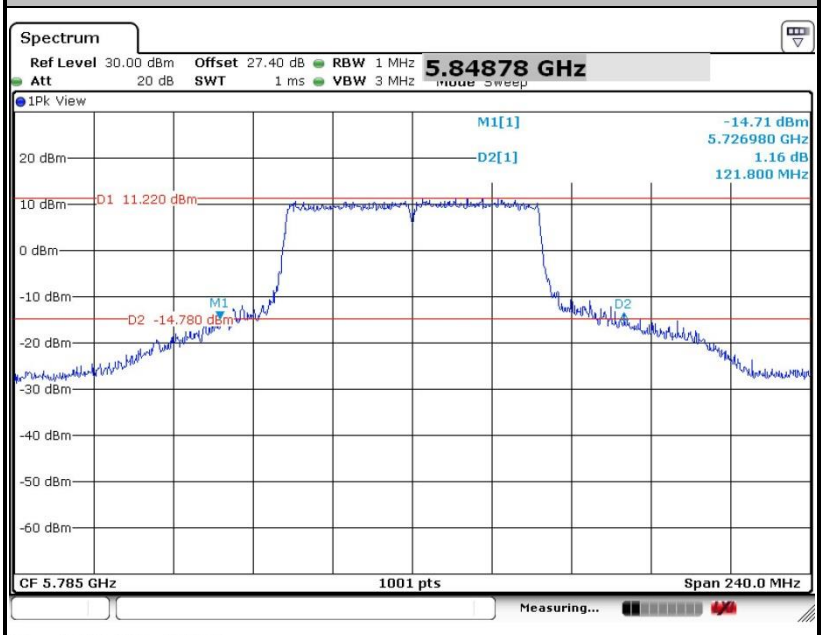
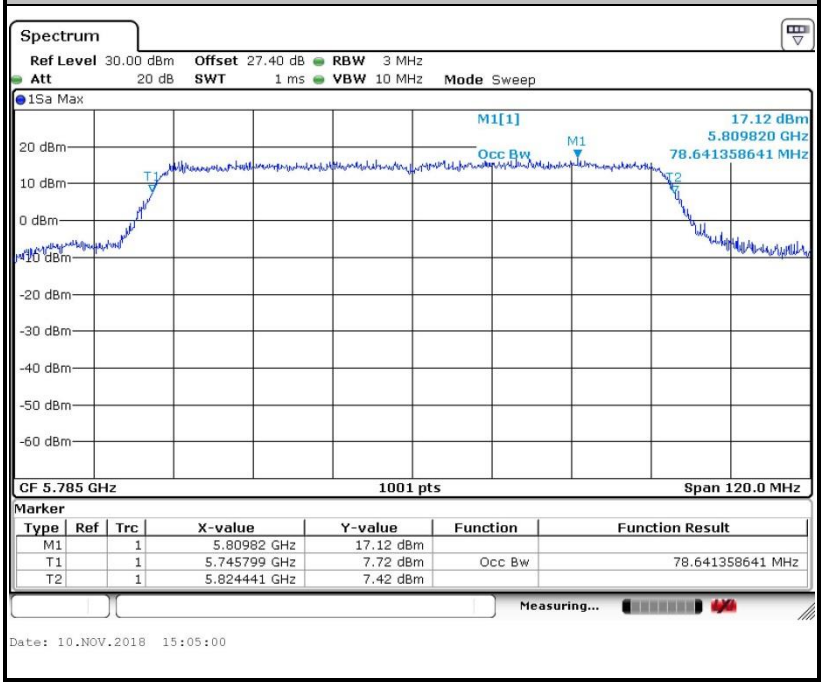
Minimum 6dB Bandwidth



Maximum 26dB Bandwidth



Maximum 99% Occupied Bandwidth



Note: The occupied channel bandwidth is maintained within the band of operation for all of the modulations.

3.2 Maximum Conducted Output Power Measurement

3.2.1 Limit of Maximum Conducted Output Power

For the band 5.725–5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W.

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.

3.2.2 Measuring Instruments

See list of measuring equipment of this test report.

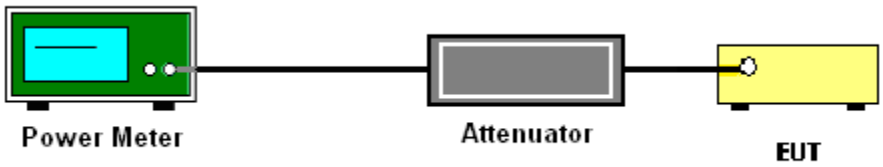
3.2.3 Test Procedures

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.

3.2.4 Test Setup



3.2.5 Test Result of Maximum Conducted Output Power

Please refer to Appendix A.

3.3 Power Spectral Density Measurement

3.3.1 Limit of Power Spectral Density

For the band 5.725–5.85 GHz, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band.

If transmitting antennas of directional gain greater than 6 dBi are used, 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

See list of measuring equipment 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).

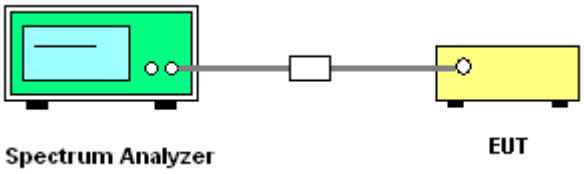
- Measure the duty cycle.
- Set span to encompass the entire emission bandwidth (EBW) of the signal.
- Set RBW = 300 kHz.
- Set VBW ≥ 1 MHz.
- Number of points in sweep ≥ 2 Span / RBW.
- Sweep time = auto.
- Detector = RMS
- Trace average at least 100 traces in power averaging mode.
- Add 10 log(500kHz/RBW) to the test result.
- 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 (c): Measure and add 10 log(N_{ANT}) dB.

   With this technique, spectrum measurements are performed at each output of the device, but rather than summing the spectra or the spectral peaks across the outputs, the quantity 10 log(N_{ANT}) dB is added to each spectrum value before comparing to the emission limit. The addition of 10 log(N_{ANT}) dB serves to apportion the emission limit among the N_{ANT} outputs so that each output is permitted to contribute no more than $1/N_{ANT}$ th of the PSD limit.

3.3.4 Test Setup



3.3.5 Test Result of Power Spectral Density

Please refer to Appendix A.

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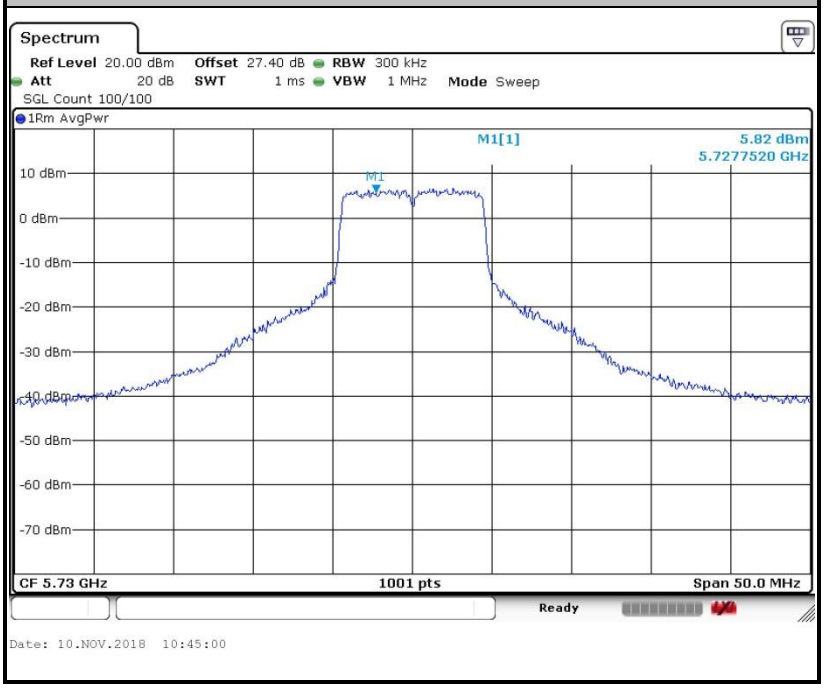
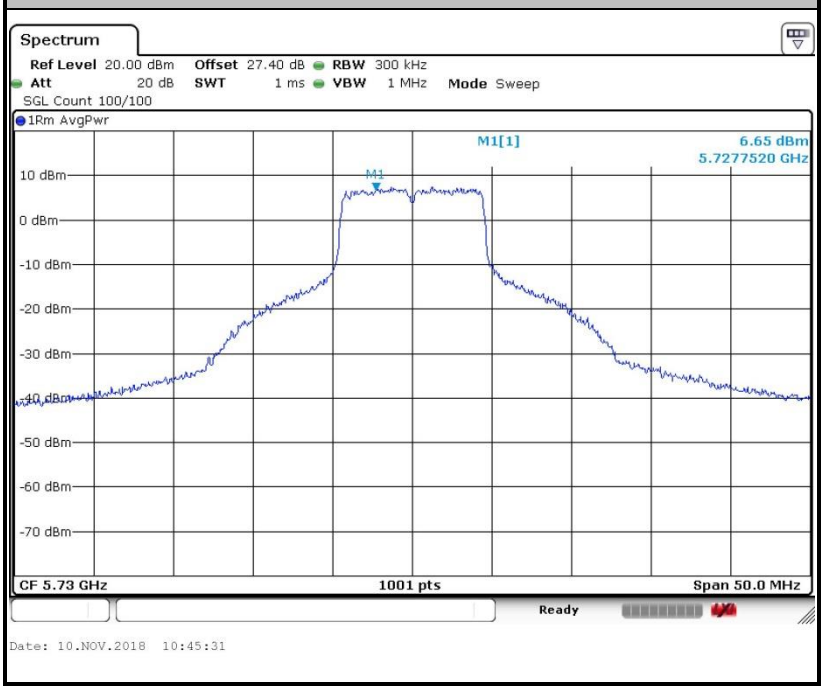
Worst Case Power Density (dBm/MHz) for MIMO Ant. 1



Worst Case Power Density (dBm/MHz) for MIMO Ant. 2



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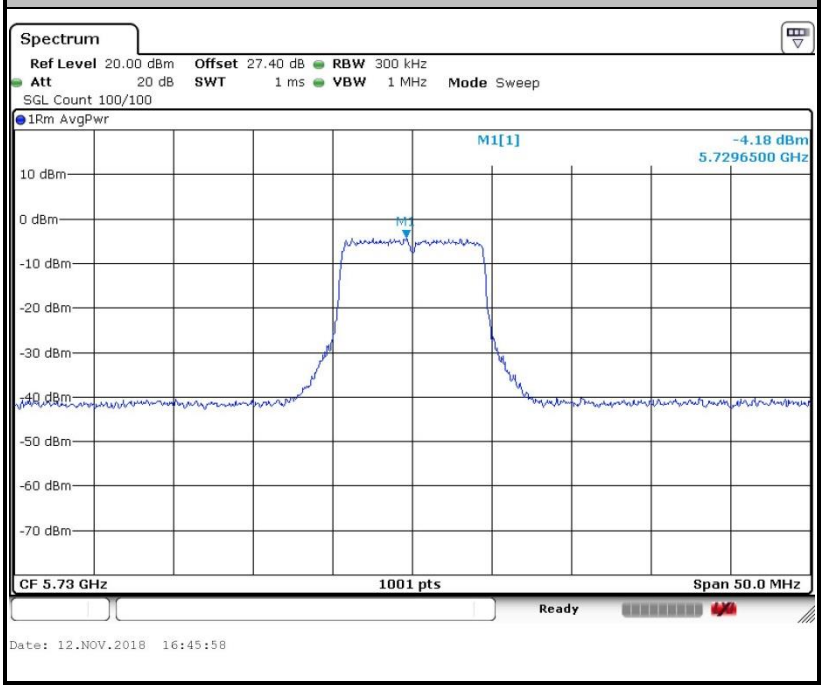
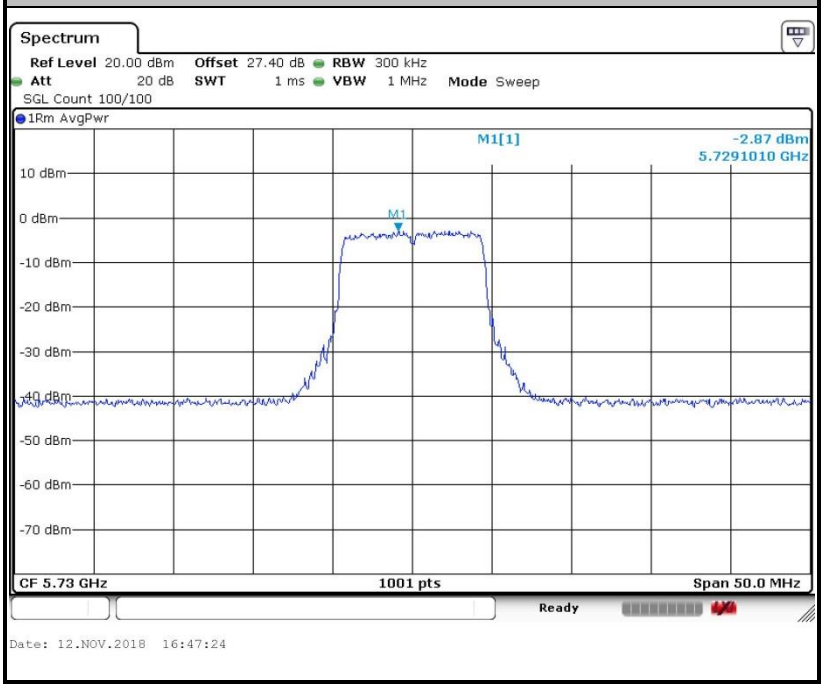
Worst Case Power Density (dBm/MHz) for MIMO Ant. 1



Worst Case Power Density (dBm/MHz) for MIMO Ant. 2



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 5.725-5.85 GHz band:

15.407(b)(4)(i) All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

(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.

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

EIRP (dBm/MHz)	Field Strength at 3m (dBμV/m)
- 27	68.23

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

(i) Section 15.407(b)(1) to (b)(3) specify the unwanted emission limits 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.[3]

(ii) Section 15.407(b)(4) specifies the unwanted emission limit for the U-NII-3 band. A band emissions mask is specified in Section 15.407(b)(4)(i). The emission limits are in terms of a Peak detector. An alternative to the band emissions mask is specified in Section 15.407(b)(4)(ii). The alternative limits are based on the highest antenna gain specified in the filing. There are also marketing and importation restrictions for the devices using the alternative limit.[4]

Note 3: An out-of-band emission that complies with both the average and peak limits of Section 15.209 is not required to satisfy the -27 dBm/MHz peak emission limit.

Note 4: Only devices with antenna gains of 10 dBi or less may be approved using the emission limits specified in Section 15.247(d) till March 2, 2018; all other devices operating in this band must use the mask specified in Section 15.407(b)(4)(i).

3.4.2 Measuring Instruments

See list of measuring equipment of this test report.

3.4.3 Test Procedures

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

(1) Procedure for Unwanted Emissions Measurements Below 1000MHz

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

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

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

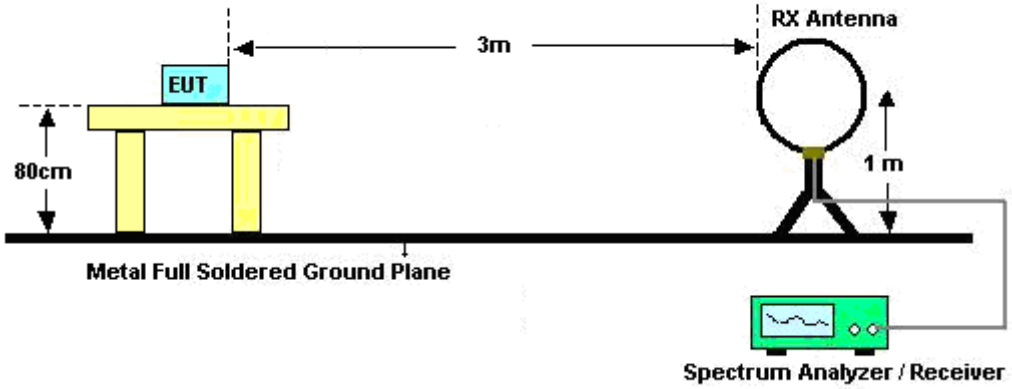
(3) Procedures for Average Unwanted Emissions Measurements Above 1000MHz

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

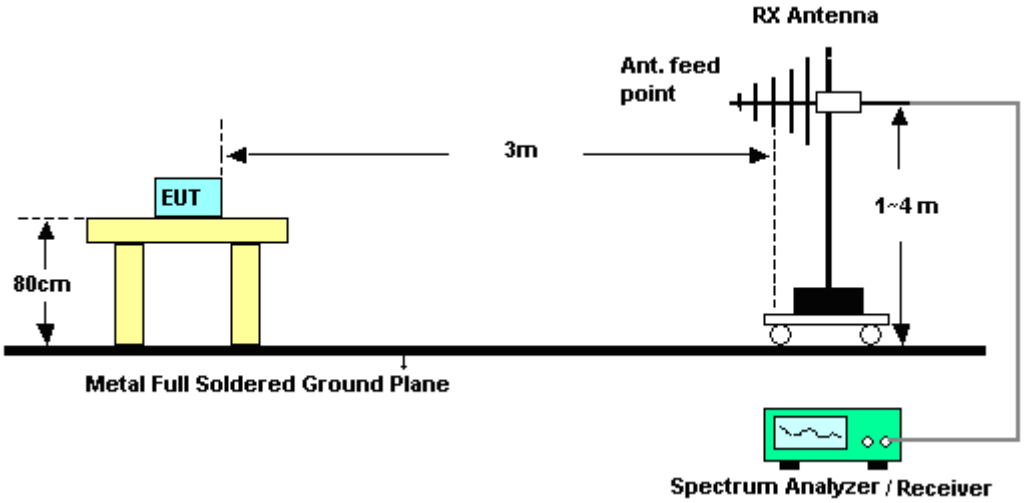
2. The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively above ground.
3. The EUT was set 3 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
4. The antenna is a broadband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

3.4.4 Test Setup

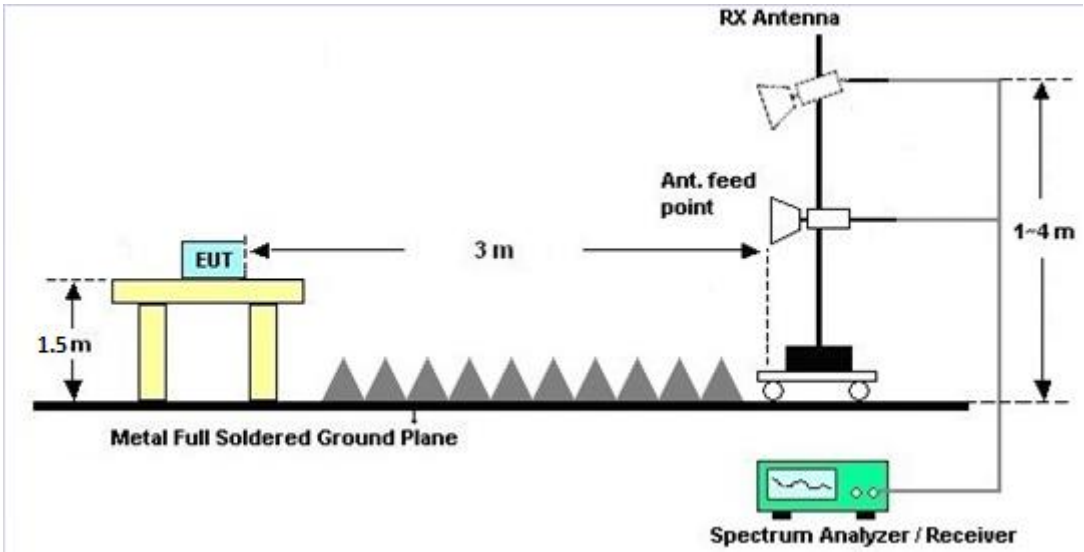
For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



3.4.5 Test Results of Radiated 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.

3.4.6 Test Result of Radiated Band Edges

Please refer to Appendix C and D.

3.4.7 Duty Cycle

Please refer to Appendix E.

3.4.8 Test Result of Unwanted Radiated Emission (30MHz ~ 10th Harmonic)

Please refer to Appendix C and D.

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.

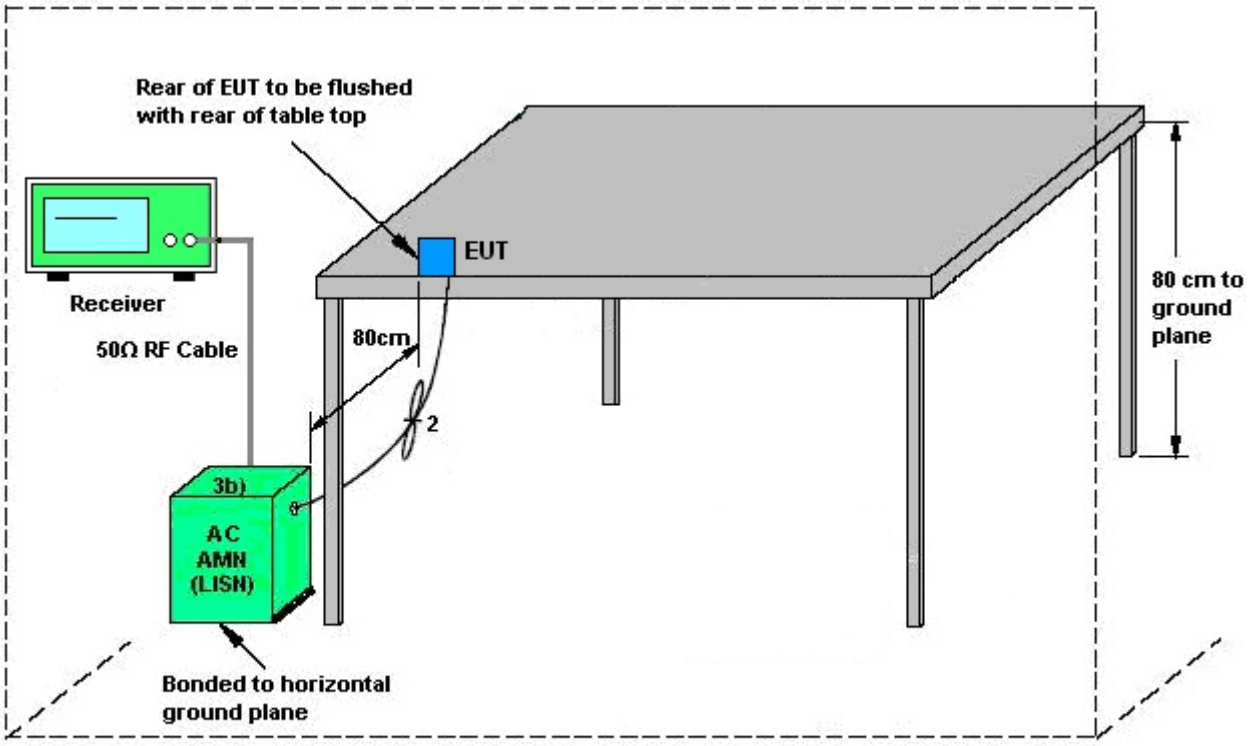
3.5.2 Measuring Instruments

See list of measuring equipment 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



AMN = Artificial mains network (LISN)
AE = Associated equipment
EUT = Equipment under test
ISN = Impedance stabilization network

3.5.5 Test Result of AC Conducted Emission

Please refer to Appendix B.

3.6 Automatically Discontinue Transmission

3.6.1 Limit of Automatically Discontinue Transmission

The device shall automatically discontinue transmission in case of either absence of information to transmit or operational failure. These provisions are not intended to preclude the transmission of control or signaling information or the use of repetitive codes used by certain digital technologies to complete frame or burst intervals. Applicants shall include in their application for equipment authorization to describe how this requirement is met.

3.6.2 Measuring Instruments

See list of measuring equipment of this test report.

3.6.3 Test Result of Automatically Discontinue Transmission

While the EUT is not transmitting any information, the EUT can automatically discontinue transmission and become standby mode for power saving. The EUT can detect the controlling signal of ACK message transmitting from remote device and verify whether it shall resend or discontinue transmission.

3.7 Antenna Requirements

3.7.1 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.

3.7.2 Antenna Anti-Replacement Construction

An embedded-in antenna design is used.

3.7.3 Antenna Gain

FCC KDB 662911 D01 Multiple Transmitter Output v02r01

For CDD transmissions, directional gain is calculated as

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

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

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

For power measurements on IEEE 802.11 devices,

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

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

The EUT supports CDD mode.

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

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

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

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

<PTP>

	Ant 1 (dBi)	Ant 2 (dBi)	DG for Power (dBi)	DG for PSD (dBi)	Power Limit Reduction (dB)	PSD Limit Reduction (dB)
Band IV	22.00	22.00	22.00	22.00	0.00	0.00

<PTMP>

	Ant 1 (dBi)	Ant 2 (dBi)	DG for Power (dBi)	DG for PSD (dBi)	Power Limit Reduction (dB)	PSD Limit Reduction (dB)
Band IV	22.00	22.00	22.00	22.00	16.00	16.00

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
Power Meter	Anritsu	ML2495A	1218006	N/A	Oct. 08, 2018	Nov. 09, 2018~ Nov. 14, 2018	Oct. 07, 2019	Conducted (TH05-HY)
Power Sensor	Anritsu	MA2411B	1207363	300MHz~40GHz	Oct. 08, 2018	Nov. 09, 2018~ Nov. 14, 2018	Oct. 07, 2019	Conducted (TH05-HY)
Spectrum Analyzer	Rohde & Schwarz	FSV 30	100895	9kHz~30GHz	Apr. 20, 2018	Nov. 09, 2018~ Nov. 14, 2018	Apr. 19, 2019	Conducted (TH05-HY)
Switch Box & RF Cable	Burgeon	ETF-058	EC1300484	N/A	Mar. 01, 2018	Nov. 09, 2018~ Nov. 14, 2018	Feb. 28, 2019	Conducted (TH05-HY)
AC Power Source	ChainTek	APC-1000W	N/A	N/A	N/A	Nov. 08, 2018	N/A	Conduction (CO05-HY)
EMI Test Receiver	Rohde & Schwarz	ESR3	102388	9KHz~3.6GHz	Dec. 08, 2017	Nov. 08, 2018	Dec. 07, 2018	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100080	9kHz~30MHz	Nov. 30, 2017	Nov. 08, 2018	Nov. 29, 2018	Conduction (CO05-HY)
Software	Rohde & Schwarz	EMC32 V10.30	N/A	N/A	N/A	Nov. 08, 2018	N/A	Conduction (CO05-HY)
LF Cable	HUBER + SUHNER	RG-214/U	LF01	N/A	Jan. 03, 2018	Nov. 08, 2018	Jan. 02, 2019	Conduction (CO05-HY)
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100851	N/A	Jan. 03, 2018	Nov. 08, 2018	Jan. 02, 2019	Conduction (CO05-HY)

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100488	9 kHz~30 MHz	Nov. 23, 2017	Nov. 07, 2018~ Nov. 15, 2018	Nov. 22, 2018	Radiation (03CH13-HY)
Bilog Antenna	TESEQ	CBL 6111D&00800 N1D01N-06	40103&07	30MHz to 1GHz	Jan. 10, 2018	Nov. 07, 2018~ Nov. 15, 2018	Jan. 09, 2019	Radiation (03CH13-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-1241	1GHz ~ 18GHz	Jun. 29, 2018	Nov. 07, 2018~ Nov. 15, 2018	Jun. 28, 2019	Radiation (03CH13-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170584	18GHz- 40GHz	Nov. 27, 2017	Nov. 07, 2018~ Nov. 15, 2018	Nov. 26, 2018	Radiation (03CH13-HY)
Amplifier	Sonoma-Instrument	310 N	187282	9KHz~1GHz	Dec. 21, 2016	Nov. 07, 2018~ Nov. 15, 2018	Dec. 20, 2018	Radiation (03CH13-HY)
Preamplifier	MITEQ	AMF-7D-00101800-30-10P	1590074	1GHz~18GHz	May 21, 2018	Nov. 07, 2018~ Nov. 15, 2018	May 20, 2019	Radiation (03CH13-HY)
Preamplifier	Keysight	83017A	MY53270147	1GHz~26.5GHz	Feb. 02, 2018	Nov. 07, 2018~ Nov. 15, 2018	Feb. 01, 2019	Radiation (03CH13-HY)
Amplifier	MITEQ	TTA1840-35-HG	1871923	18GHz~40GHz, VSWR : 2.5:1 max	Jul. 16, 2018	Nov. 07, 2018~ Nov. 15, 2018	Jul. 15, 2019	Radiation (03CH13-HY)
EMI Test Receiver	Agilent	N9038A (MXE)	MY53290053	20Hz to 26.5GHz	Jan. 16, 2018	Nov. 07, 2018~ Nov. 15, 2018	Jan. 15, 2019	Radiation (03CH13-HY)
Spectrum Analyzer	Keysight	N9010A	MY55370526	10Hz~44GHz	Mar. 15, 2018	Nov. 07, 2018~ Nov. 15, 2018	Mar. 14, 2019	Radiation (03CH13-HY)
Antenna Mast	EMEC	AM-BS-4500-B	N/A	1m~4m	N/A	Nov. 07, 2018~ Nov. 15, 2018	N/A	Radiation (03CH13-HY)
Turn Table	EMEC	TT2000	N/A	0~360 Degree	N/A	Nov. 07, 2018~ Nov. 15, 2018	N/A	Radiation (03CH13-HY)
Filter	Wainwright	WLKS1200-8SS	SN3	1.2G Low Pass	Nov. 02, 2018	Nov. 07, 2018~ Nov. 15, 2018	Nov. 01, 2019	Radiation (03CH13-HY)
Filter	Wainwright	WHKX8-5872.5-6750-18000-40ST	SN4	6.75 GHz Highpass	May 22, 2018	Nov. 07, 2018~ Nov. 15, 2018	May 21, 2019	Radiation (03CH13-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 126E	0030/126E	30M-18G	Jan. 22, 2018	Nov. 07, 2018~ Nov. 15, 2018	Jan. 21, 2019	Radiation (03CH13-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	335041/4	30M-18G	Jan. 22, 2018	Nov. 07, 2018~ Nov. 15, 2018	Jan. 21, 2019	Radiation (03CH13-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY24961/4	30M~18GHz	Jan. 22, 2018	Nov. 07, 2018~ Nov. 15, 2018	Jan. 21, 2019	Radiation (03CH13-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	MY2859/2	30M~40GHz	Mar. 14, 2018	Nov. 07, 2018~ Nov. 15, 2018	Mar. 13, 2019	Radiation (03CH13-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	MY4274/2	30M~40GHz	Mar. 14, 2018	Nov. 07, 2018~ Nov. 15, 2018	Mar. 13, 2019	Radiation (03CH13-HY)
Software	AUDIX	E3 6.2009-8-24c	RK-001124	N/A	N/A	Nov. 07, 2018~ Nov. 15, 2018	N/A	Radiation (03CH13-HY)

5 Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	2.2

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	4.9

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	5.4

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	4.3

Appendix A. Test Result of Conducted Test Items

<PTP>

Test Engineer:	Tommy Lee	Temperature:	21~25	°C
Test Date:	2018/11/9~2018/11/14	Relative Humidity:	51~54	%

Report Number : FR8O3134C

TEST RESULTS DATA
6dB and 26dB EBW and 99% OBW

Band IV											
Ch. BW (MHz)	Data Rate	NTX	Freq. (MHz)	99% Bandwidth (MHz)		26dB Bandwidth (MHz)		6 dB Bandwidth (MHz)		6 dB Bandwidth Min. Limit (MHz)	Pass/Fail
				Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2		
10	MCS8	2	5730	9.99	11.84	22.73	23.68	8.94	8.89	0.5	Pass
10	MCS8	2	5785	9.84	9.49	21.78	20.28	8.94	8.94	0.5	Pass
10	MCS8	2	5845	9.44	9.54	18.78	18.93	8.94	8.94	0.5	Pass
20	MCS8	2	5735	20.73	24.33	45.91	45.85	17.73	17.68	0.5	Pass
20	MCS8	2	5785	23.08	18.83	47.23	38.72	17.73	17.68	0.5	Pass
20	MCS8	2	5840	19.68	20.58	44.96	44.12	17.73	17.73	0.5	Pass
40	MCS9	2	5745	47.05	49.05	80.68	82.24	36.50	36.32	0.5	Pass
40	MCS9	2	5785	56.74	45.45	93.27	83.44	36.41	36.41	0.5	Pass
40	MCS9	2	5830	71.43	69.53	104.78	99.86	36.50	36.41	0.5	Pass
80	MCS9	2	5765	78.28	78.04	88.71	86.79	76.40	76.40	0.5	Pass
80	MCS9	2	5785	78.64	78.64	121.80	111.49	76.40	76.40	0.5	Pass
80	MCS9	2	5810	78.40	78.64	111.73	115.08	76.40	76.40	0.5	Pass

TEST RESULTS DATA
Average Power Table

Band IV														
Ch. BW (MHz)	Data Rate	NTX	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	
10	MCS8	2	5730	0.46	0.48	20.28	21.29	23.83	30.00		22.00		Pass
10	MCS8	2	5785	0.46	0.48	20.01	20.11	23.07	30.00		22.00		Pass
10	MCS8	2	5845	0.46	0.48	18.17	18.66	21.44	30.00		22.00		Pass
20	MCS8	2	5735	0.72	0.67	21.77	22.53	25.18	30.00		22.00		Pass
20	MCS8	2	5785	0.72	0.67	22.01	22.07	25.05	30.00		22.00		Pass
20	MCS8	2	5840	0.72	0.67	20.90	21.68	24.32	30.00		22.00		Pass
40	MCS9	2	5745	1.00	1.02	22.10	22.33	25.23	30.00		22.00		Pass
40	MCS9	2	5785	1.00	1.02	22.52	22.26	25.40	30.00		22.00		Pass
40	MCS9	2	5830	1.00	1.02	23.42	24.02	26.74	30.00		22.00		Pass
80	MCS9	2	5765	1.86	1.82	17.89	18.07	20.99	30.00		22.00		Pass
80	MCS9	2	5785	1.86	1.82	20.03	20.15	23.10	30.00		22.00		Pass
80	MCS9	2	5810	1.86	1.82	19.88	20.16	23.03	30.00		22.00		Pass

Report Number : FR8O3134C

TEST RESULTS DATA
Power Spectral Density

Band IV																
Ch. BW (MHz)	Data Rate	NTX	Freq. (MHz)	Duty Factor (dB)		10log (500kHz /RBW) Factor (dB)		Average Power Density (dBm/500kHz)			Average PSD Limit (dBm/500kHz)		DG (dBi)		Pass /Fail
				Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2	
10	MCS8	2	5730	0.46	0.48	2.22		8.50	9.35	12.36	30.00		22.00		Pass
10	MCS8	2	5785	0.46	0.48	2.22		8.98	8.66	11.99	30.00		22.00		Pass
10	MCS8	2	5845	0.46	0.48	2.22		6.52	7.28	10.29	30.00		22.00		Pass
20	MCS8	2	5735	0.72	0.67	2.22		7.81	8.58	11.59	30.00		22.00		Pass
20	MCS8	2	5785	0.72	0.67	2.22		7.70	7.62	10.71	30.00		22.00		Pass
20	MCS8	2	5840	0.72	0.67	2.22		6.85	7.52	10.53	30.00		22.00		Pass
40	MCS9	2	5745	1.00	1.02	2.22		4.94	5.27	8.28	30.00		22.00		Pass
40	MCS9	2	5785	1.00	1.02	2.22		5.02	4.78	8.03	30.00		22.00		Pass
40	MCS9	2	5830	1.00	1.02	2.22		6.32	6.91	9.92	30.00		22.00		Pass
80	MCS9	2	5765	1.86	1.82	2.22		-1.89	-1.73	1.28	30.00		22.00		Pass
80	MCS9	2	5785	1.86	1.82	2.22		-0.28	0.03	3.04	30.00		22.00		Pass
80	MCS9	2	5810	1.86	1.82	2.22		-0.26	0.25	3.26	30.00		22.00		Pass

Note: PSD Sum = Max PSD(Ant. 1, Ant. 2) + 10 log (n)

Report Number : FR8O3134C

<PTMP>

Test Engineer:	Tommy Lee/Derek Hsu	Temperature:	21~25	°C
Test Date:	2018/11/9~2018/11/14	Relative Humidity:	51~54	%

Report Number : FR8O3134C

TEST RESULTS DATA
6dB and 26dB EBW and 99% OBW

Band IV											
Ch. BW (MHz)	Data Rate	NTX	Freq. (MHz)	99% Bandwidth (MHz)		26dB Bandwidth (MHz)		6 dB Bandwidth (MHz)		6 dB Bandwidth Min. Limit (MHz)	Pass/Fail
				Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2		
10	MCS8	2	5730	9.99	11.84	22.73	23.68	8.94	8.89	0.5	Pass
10	MCS8	2	5785	9.84	9.49	21.78	20.28	8.94	8.94	0.5	Pass
10	MCS8	2	5845	9.44	9.54	18.78	18.93	8.94	8.94	0.5	Pass
20	MCS8	2	5735	20.73	24.33	45.91	45.85	17.73	17.68	0.5	Pass
20	MCS8	2	5785	23.08	18.83	47.23	38.72	17.73	17.68	0.5	Pass
20	MCS8	2	5840	19.68	20.58	44.96	44.12	17.73	17.73	0.5	Pass
40	MCS9	2	5745	47.05	49.05	80.68	82.24	36.50	36.32	0.5	Pass
40	MCS9	2	5785	56.74	45.45	93.27	83.44	36.41	36.41	0.5	Pass
40	MCS9	2	5830	71.43	69.53	104.78	99.86	36.50	36.41	0.5	Pass
80	MCS9	2	5765	78.28	78.04	88.71	86.79	76.40	76.40	0.5	Pass
80	MCS9	2	5785	78.64	78.64	121.80	111.49	76.40	76.40	0.5	Pass
80	MCS9	2	5810	78.40	78.64	111.73	115.08	76.40	76.40	0.5	Pass

TEST RESULTS DATA
Average Power Table

Band IV														
Ch. BW (MHz)	Data Rate	NTX	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	
10	MCS8	2	5730	0.46	0.48	9.59	11.22	13.50	14.00		22.00		Pass
10	MCS8	2	5785	0.46	0.48	10.27	10.51	13.41	14.00		22.00		Pass
10	MCS8	2	5845	0.46	0.48	9.85	10.91	13.43	14.00		22.00		Pass
20	MCS8	2	5735	0.72	0.67	10.36	11.49	13.97	14.00		22.00		Pass
20	MCS8	2	5785	0.72	0.67	10.64	10.70	13.68	14.00		22.00		Pass
20	MCS8	2	5840	0.72	0.67	10.22	11.17	13.73	14.00		22.00		Pass
40	MCS9	2	5745	1.00	1.02	10.84	11.12	13.99	14.00		22.00		Pass
40	MCS9	2	5785	1.00	1.02	10.55	10.42	13.50	14.00		22.00		Pass
40	MCS9	2	5830	1.00	1.02	10.38	11.41	13.94	14.00		22.00		Pass
80	MCS9	2	5765	1.86	1.82	10.80	11.04	13.93	14.00		22.00		Pass
80	MCS9	2	5785	1.86	1.82	10.91	11.06	13.99	14.00		22.00		Pass
80	MCS9	2	5810	1.86	1.82	10.89	11.06	13.98	14.00		22.00		Pass

Report Number : FR8O3134C

TEST RESULTS DATA
Power Spectral Density

Band IV																
Ch. BW (MHz)	Data Rate	NTX	Freq. (MHz)	Duty Factor (dB)		10log (500kHz /RBW) Factor (dB)		Average Power Density (dBm/500kHz)			Average PSD Limit (dBm/500kHz)		DG (dBi)		Pass /Fail
				Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2	
10	MCS8	2	5730	0.46	0.48	2.22		-1.50	-0.17	2.84	14.00		22.00		Pass
10	MCS8	2	5785	0.46	0.48	2.22		-1.33	-1.24	1.77	14.00		22.00		Pass
10	MCS8	2	5845	0.46	0.48	2.22		-1.49	-0.32	2.69	14.00		22.00		Pass
20	MCS8	2	5735	0.72	0.67	2.22		-3.24	-2.28	0.73	14.00		22.00		Pass
20	MCS8	2	5785	0.72	0.67	2.22		-2.80	-3.17	0.21	14.00		22.00		Pass
20	MCS8	2	5840	0.72	0.67	2.22		-3.06	-2.53	0.48	14.00		22.00		Pass
40	MCS9	2	5745	1.00	1.02	2.22		-5.54	-5.27	-2.26	14.00		22.00		Pass
40	MCS9	2	5785	1.00	1.02	2.22		-6.26	-6.31	-3.25	14.00		22.00		Pass
40	MCS9	2	5830	1.00	1.02	2.22		-6.27	-5.36	-2.35	14.00		22.00		Pass
80	MCS9	2	5765	1.86	1.82	2.22		-8.47	-8.09	-5.08	14.00		22.00		Pass
80	MCS9	2	5785	1.86	1.82	2.22		-8.41	-7.90	-4.89	14.00		22.00		Pass
80	MCS9	2	5810	1.86	1.82	2.22		-8.13	-7.80	-4.79	14.00		22.00		Pass

Note: PSD Sum = Max PSD(Ant. 1, Ant. 2) + 10 log (n)

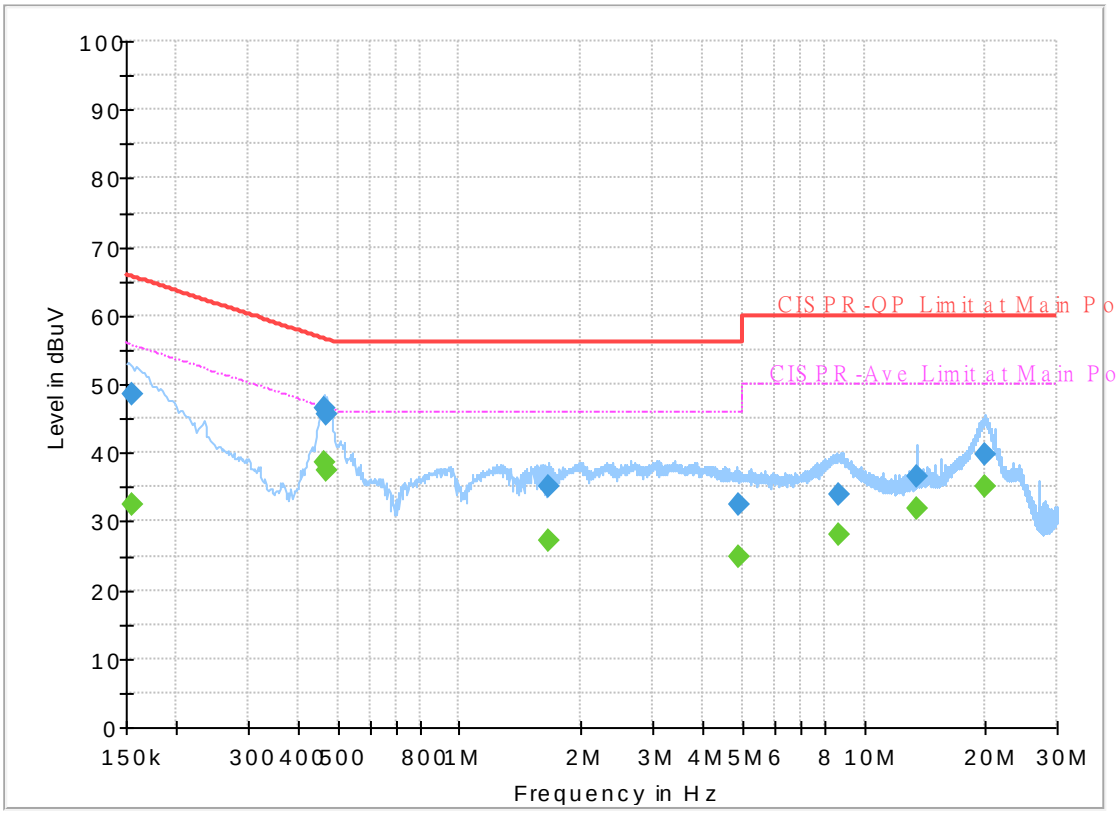
Appendix B. AC Conducted Emission Test Results

Test Engineer :	Jimmy Chang and Rick Lin	**Temperature :**	24~26℃
		Relative Humidity :	52~53%

EUT Information

Report NO :	8O3134
Test Mode :	Mode 1
Test Voltage :	120Vac/60Hz
Phase :	Line

Full Spectrum

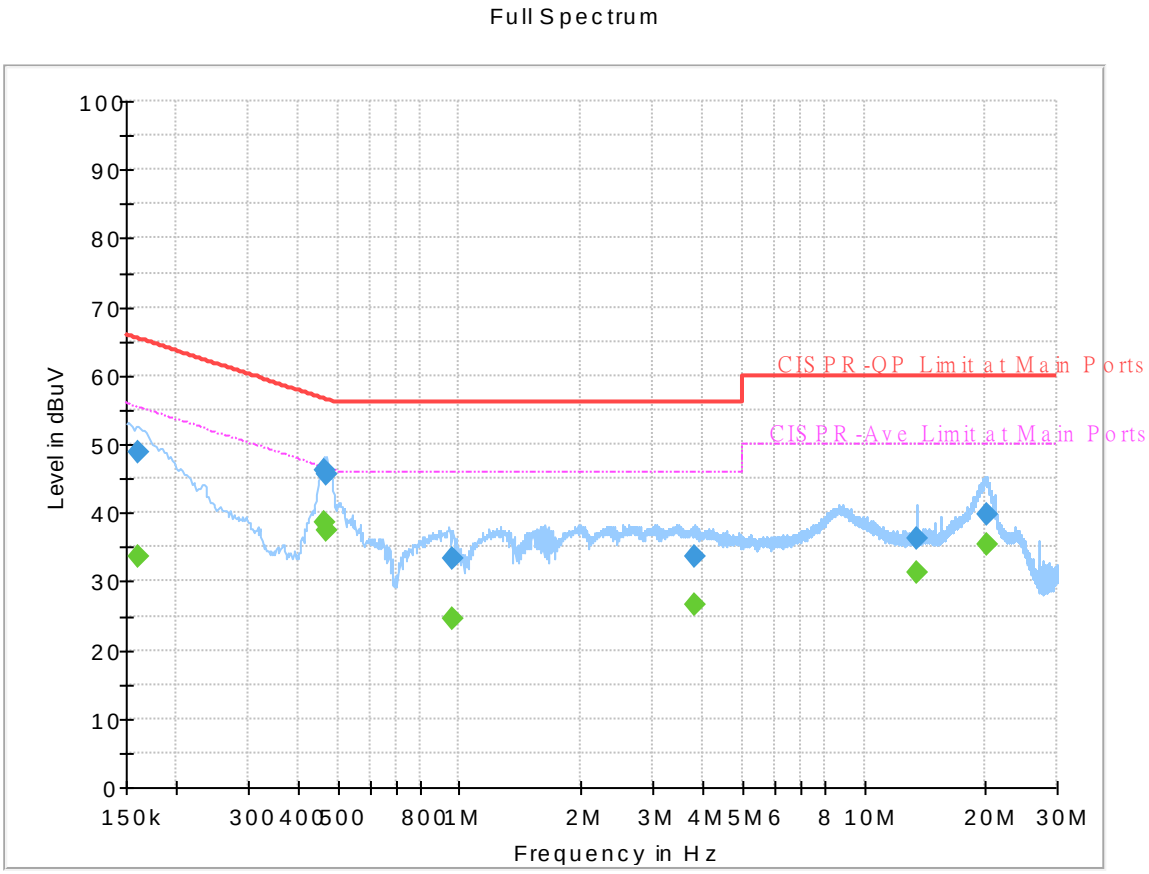


Final_Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.154500	---	32.55	55.75	23.20	L1	OFF	19.5
0.154500	48.60	---	65.75	17.15	L1	OFF	19.5
0.462750	---	38.73	46.64	7.91	L1	OFF	19.5
0.462750	46.37	---	56.64	10.27	L1	OFF	19.5
0.469500	---	37.52	46.52	9.00	L1	OFF	19.5
0.469500	45.72	---	56.52	10.80	L1	OFF	19.5
1.655250	---	27.09	46.00	18.91	L1	OFF	19.6
1.655250	35.07	---	56.00	20.93	L1	OFF	19.6
4.913250	---	24.87	46.00	21.13	L1	OFF	19.6
4.913250	32.53	---	56.00	23.47	L1	OFF	19.6
8.704500	---	28.01	50.00	21.99	L1	OFF	19.7
8.704500	34.04	---	60.00	25.96	L1	OFF	19.7
13.560000	---	31.82	50.00	18.18	L1	OFF	19.7
13.560000	36.52	---	60.00	23.48	L1	OFF	19.7
19.828500	---	35.11	50.00	14.89	L1	OFF	19.8
19.828500	39.79	---	60.00	20.21	L1	OFF	19.8

EUT Information

Report NO :	8O3134
Test Mode :	Mode 1
Test Voltage :	120Vac/60Hz
Phase :	Neutral



Final_Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.161250	---	33.55	55.40	21.85	N	OFF	19.5
0.161250	48.93	---	65.40	16.47	N	OFF	19.5
0.462750	---	38.62	46.64	8.02	N	OFF	19.5
0.462750	46.18	---	56.64	10.46	N	OFF	19.5
0.469500	---	37.48	46.52	9.04	N	OFF	19.5
0.469500	45.55	---	56.52	10.97	N	OFF	19.5
0.962250	---	24.52	46.00	21.48	N	OFF	19.5
0.962250	33.36	---	56.00	22.64	N	OFF	19.5
3.797250	---	26.73	46.00	19.27	N	OFF	19.6
3.797250	33.71	---	56.00	22.29	N	OFF	19.6
13.560000	---	31.23	50.00	18.77	N	OFF	19.8
13.560000	36.22	---	60.00	23.78	N	OFF	19.8
20.073750	---	35.40	50.00	14.60	N	OFF	19.9
20.073750	39.91	---	60.00	20.09	N	OFF	19.9

Appendix C. Radiated Spurious Emission

Test Engineer :	Alex Jheng, Fu Chen, and Wilson Wu	Temperature :	24.5~24.8°C
		Relative Humidity :	50~51%

Band 4 - 5725~5850MHz

Channel Bandwidth 10MHz (Band Edge @ 3m)

	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1+2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
Ch. BW 10MHz 5730MHz		5613	51.62	-16.58	68.2	40.37	32.04	8.85	29.64	177	3	P	H
		5700	67.85	-37.35	105.2	56.52	32.17	8.83	29.67	177	3	P	H
		5719.8	107.25	-3.49	110.74	95.9	32.21	8.82	29.68	177	3	P	H
		5724	116.06	-3.86	119.92	104.71	32.21	8.82	29.68	177	3	P	H
	*	5730	134.81	-	-	123.46	32.21	8.82	29.68	177	3	P	H
	*	5730	126.36	-	-	115.01	32.21	8.82	29.68	177	3	A	H
		5626.4	51.69	-16.51	68.2	40.42	32.07	8.84	29.64	168	0	P	V
		5699.8	69.46	-35.59	105.05	58.13	32.17	8.83	29.67	168	0	P	V
		5718.6	103.3	-7.11	110.41	91.95	32.21	8.82	29.68	168	0	P	V
		5724.8	116	-5.74	121.74	104.65	32.21	8.82	29.68	168	0	P	V
	*	5730	133.72	-	-	122.37	32.21	8.82	29.68	168	0	P	V
	*	5730	125.76	-	-	114.41	32.21	8.82	29.68	168	0	A	V

Ant. 1+2	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)
		5631	50.97	-17.23	68.2	39.71	32.07	8.84	29.65	177	2	P	H
		5692.6	58.28	-41.46	99.74	46.95	32.17	8.83	29.67	177	2	P	H
		5717.8	64.86	-45.32	110.18	53.51	32.21	8.82	29.68	177	2	P	H
		5720.6	59.97	-52.2	112.17	48.62	32.21	8.82	29.68	177	2	P	H
	*	5785	131.98	-	-	120.61	32.29	8.8	29.72	177	2	P	H
	*	5785	123.91	-	-	112.54	32.29	8.8	29.72	177	2	A	H
		5853.2	68.37	-46.53	114.9	56.88	32.38	8.85	29.74	177	2	P	H
		5859.6	66.47	-43.04	109.51	54.96	32.41	8.85	29.75	177	2	P	H
		5875.8	58.91	-45.7	104.61	47.36	32.43	8.87	29.75	177	2	P	H
		5934.8	51.12	-17.08	68.2	39.48	32.5	8.92	29.78	177	2	P	H
Ch. BW 10MHz 5785MHz													
		5608.6	50.98	-17.22	68.2	39.73	32.04	8.85	29.64	172	360	P	V
		5695.2	66.46	-35.2	101.66	55.13	32.17	8.83	29.67	172	360	P	V
		5718.8	70.28	-40.18	110.46	58.93	32.21	8.82	29.68	172	360	P	V
		5724.4	64.24	-56.59	120.83	52.89	32.21	8.82	29.68	172	360	P	V
	*	5785	131.93	-	-	120.56	32.29	8.8	29.72	172	360	P	V
	*	5785	123.78	-	-	112.41	32.29	8.8	29.72	172	360	A	V
		5854.4	69.04	-43.13	112.17	57.52	32.41	8.85	29.74	172	360	P	V
		5867.4	67.61	-39.72	107.33	56.09	32.41	8.86	29.75	172	360	P	V
		5878.2	66.29	-36.53	102.82	54.74	32.43	8.87	29.75	172	360	P	V
		5939.2	51.89	-16.31	68.2	40.21	32.53	8.93	29.78	172	360	P	V

Ant. 1+2	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)
	*	5845	129.76	-	-	118.28	32.38	8.84	29.74	174	1	P	H
	*	5845	120.59	-	-	109.11	32.38	8.84	29.74	174	1	A	H
		5850	115.27	-6.93	122.2	103.78	32.38	8.85	29.74	174	1	P	H
		5855	90.52	-20.28	110.8	79	32.41	8.85	29.74	174	1	P	H
		5875.4	62.43	-42.47	104.9	50.88	32.43	8.87	29.75	174	1	P	H
		5942.4	51.58	-16.62	68.2	39.9	32.53	8.93	29.78	174	1	P	H
Ch. BW													
10MHz	*	5845	129.02	-	-	117.54	32.38	8.84	29.74	179	1	P	V
5845MHz	*	5845	120.54	-	-	109.06	32.38	8.84	29.74	179	1	A	V
		5850	111.64	-10.56	122.2	100.15	32.38	8.85	29.74	179	1	P	V
		5855.2	86.75	-23.99	110.74	75.23	32.41	8.85	29.74	179	1	P	V
		5877	71.58	-32.13	103.71	60.03	32.43	8.87	29.75	179	1	P	V
		5929	51.4	-16.8	68.2	39.75	32.5	8.92	29.77	179	1	P	V
													V

Remark

1. No other spurious found.
2. All results are PASS against Peak and Average limit line.

Band 4 5725~5850MHz

Channel Bandwidth 10MHz (Harmonic @ 3m)

Ant. 1+2	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)
Ch. BW 10MHz 5730MHz		11460	59.32	-14.68	74	62.95	39.96	12.73	56.32	110	14	P	H
		11460	51.27	-2.73	54	54.9	39.96	12.73	56.32	110	14	A	H
		17190	67.07	-1.13	68.2	67.8	40.66	15.09	56.48	198	318	P	H
		11460	59.09	-14.91	74	62.72	39.96	12.73	56.32	302	341	P	V
		11460	50.58	-3.42	54	54.21	39.96	12.73	56.32	302	341	A	V
		17190	64.48	-3.72	68.2	65.21	40.66	15.09	56.48	294	351	P	V
Ch. BW 10MHz 5785MHz		11570	57.96	-16.04	74	61.72	39.76	12.78	56.3	146	23	P	H
		11570	49	-5	54	52.76	39.76	12.78	56.3	146	23	A	H
		17355	66.95	-1.25	68.2	67.35	41.26	15.15	56.81	166	19	P	H
		11570	57.22	-16.78	74	60.98	39.76	12.78	56.3	132	19	P	V
		11570	47.28	-6.72	54	51.04	39.76	12.78	56.3	132	19	A	V
		17355	57.77	-10.43	68.2	58.17	41.26	15.15	56.81	100	0	P	V
Ch. BW 10MHz 5845MHz		11690	58.76	-15.24	74	62.69	39.52	12.85	56.3	287	26	P	H
		11690	49.99	-4.01	54	53.92	39.52	12.85	56.3	287	26	A	H
		17535	66.59	-1.61	68.2	66.15	42.31	15.23	57.1	221	43	P	H
		11690	59.38	-14.62	74	63.31	39.52	12.85	56.3	110	347	P	V
		11690	49.33	-4.67	54	53.26	39.52	12.85	56.3	110	347	A	V
		17535	53.49	-14.71	68.2	53.05	42.31	15.23	57.1	100	0	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 4 5725~5850MHz

Channel Bandwidth 20MHz (Band Edge @ 3m)

Ant. 1+2	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)
Ch. BW 20MHz 5735MHz		5608.8	53.35	-14.85	68.2	42.1	32.04	8.85	29.64	175	3	P	H
		5699.8	84.16	-20.89	105.05	72.83	32.17	8.83	29.67	175	3	P	H
		5720	109.41	-1.39	110.8	98.06	32.21	8.82	29.68	175	3	P	H
		5725	114.36	-7.84	122.2	103.01	32.21	8.82	29.68	175	3	P	H
	*	5735	131.51	-	-	120.14	32.24	8.82	29.69	175	3	P	H
	*	5735	123.7		-	112.33	32.24	8.82	29.69	175	3	A	H
		5650	54.04	-14.16	68.2	42.73	32.12	8.84	29.65	175	1	P	V
		5699.8	86.61	-18.44	105.05	75.28	32.17	8.83	29.67	175	1	P	V
		5719.6	110.24	-0.45	110.69	98.89	32.21	8.82	29.68	175	1	P	V
		5725	115.26	-6.94	122.2	103.91	32.21	8.82	29.68	175	1	P	V
	*	5735	130.99	-	-	119.62	32.24	8.82	29.69	175	1	P	V
	*	5735	123.52		-	112.15	32.24	8.82	29.69	175	1	A	V

Ant. 1+2	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)
Ch. BW 20MHz 5785MHz		5620	51.92	-16.28	68.2	40.64	32.07	8.85	29.64	176	2	P	H
		5698.2	63.28	-40.59	103.87	51.95	32.17	8.83	29.67	176	2	P	H
		5719.8	68.07	-42.67	110.74	56.72	32.21	8.82	29.68	176	2	P	H
		5724.4	68.69	-52.14	120.83	57.34	32.21	8.82	29.68	176	2	P	H
	*	5785	129.8	-	-	118.43	32.29	8.8	29.72	176	2	P	H
	*	5785	121.79		-	110.42	32.29	8.8	29.72	176	2	A	H
		5851.8	70.7	-47.4	118.1	59.21	32.38	8.85	29.74	176	2	P	H
		5858.4	70.63	-39.22	109.85	59.12	32.41	8.85	29.75	176	2	P	H
		5879.8	64.13	-37.5	101.63	52.58	32.43	8.87	29.75	176	2	P	H
		5946	51.31	-16.89	68.2	39.63	32.53	8.93	29.78	176	2	P	H
		5648	52.62	-15.58	68.2	41.34	32.09	8.84	29.65	172	360	P	V
		5695.4	66.98	-34.83	101.81	55.65	32.17	8.83	29.67	172	360	P	V
		5710	71.07	-36.93	108	59.74	32.19	8.82	29.68	172	360	P	V
		5723.6	70.2	-48.81	119.01	58.85	32.21	8.82	29.68	172	360	P	V
	*	5785	130.41	-	-	119.04	32.29	8.8	29.72	172	360	P	V
	*	5785	122.6		-	111.23	32.29	8.8	29.72	172	360	A	V
		5850.8	73.28	-47.1	120.38	61.79	32.38	8.85	29.74	172	360	P	V
		5857.8	72.51	-37.5	110.01	61	32.41	8.85	29.75	172	360	P	V
		5876.8	69.39	-34.47	103.86	57.84	32.43	8.87	29.75	172	360	P	V
		5946.2	51.93	-16.27	68.2	40.25	32.53	8.93	29.78	172	360	P	V

Ant. 1+2	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)
Ch. BW 20MHz 5840MHz	*	5840	129.03	-	-	117.55	32.38	8.84	29.74	171	1	P	H
	*	5840	120.86		-	109.38	32.38	8.84	29.74	171	1	A	H
		5850.2	110.08	-11.66	121.74	98.59	32.38	8.85	29.74	171	1	P	H
		5857.4	98.51	-11.62	110.13	86.99	32.41	8.85	29.74	171	1	P	H
		5875.6	73.11	-31.64	104.75	61.56	32.43	8.87	29.75	171	1	P	H
		5930.6	51.79	-16.41	68.2	40.14	32.5	8.92	29.77	171	1	P	H
	*	5840	128.54	-	-	117.06	32.38	8.84	29.74	177	360	P	V
	*	5840	120.78		-	109.3	32.38	8.84	29.74	177	360	A	V
		5850.6	113.11	-7.72	120.83	101.62	32.38	8.85	29.74	177	360	P	V
		5857.4	98.92	-11.21	110.13	87.4	32.41	8.85	29.74	177	360	P	V
		5877.4	77.87	-25.55	103.42	66.32	32.43	8.87	29.75	177	360	P	V
		5940.6	52.27	-15.93	68.2	40.59	32.53	8.93	29.78	177	360	P	V

Remark

1. No other spurious found.
2. All results are PASS against Peak and Average limit line.

Band 4 5725~5850MHz

Channel Bandwidth 20MHz (Harmonic @ 3m)

Ant. 1+2	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)
Ch. BW 20MHz 5735MHz		11470	58.36	-15.64	74	62	39.94	12.73	56.31	201	44	P	H
		11470	48.39	-5.61	54	52.03	39.94	12.73	56.31	201	44	A	H
		17205	64.12	-4.08	68.2	64.82	40.72	15.09	56.51	157	353	P	H
		11470	53.61	-20.39	74	57.25	39.94	12.73	56.31	150	19	P	V
		11470	44.37	-9.63	54	48.01	39.94	12.73	56.31	150	19	A	V
		17205	57.44	-10.76	68.2	58.14	40.72	15.09	56.51	100	0	P	V
Ch. BW 20MHz 5785MHz		11570	57.69	-16.31	74	61.45	39.76	12.78	56.3	146	23	P	H
		11570	48.53	-5.47	54	52.29	39.76	12.78	56.3	146	23	A	H
		17355	67.95	-0.25	68.2	68.35	41.26	15.15	56.81	165	19	P	H
		11570	55.46	-18.54	74	59.22	39.76	12.78	56.3	132	19	P	V
		11570	47.33	-6.67	54	51.09	39.76	12.78	56.3	132	19	A	V
		17355	55.28	-12.92	68.2	55.68	41.26	15.15	56.81	100	0	P	V
Ch. BW 20MHz 5840MHz		11680	59.51	-14.49	74	63.41	39.56	12.84	56.3	203	4	P	H
		11680	48.68	-5.32	54	52.58	39.56	12.84	56.3	203	4	A	H
		17520	66.69	-1.51	68.2	66.51	42.06	15.22	57.1	208	322	P	H
		11680	58.43	-15.57	74	62.33	39.56	12.84	56.3	201	339	P	V
		11680	47.31	-6.69	54	51.21	39.56	12.84	56.3	201	339	A	V
		17520	56.33	-11.87	68.2	56.15	42.06	15.22	57.1	100	0	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 4 5725~5850MHz

Channel Bandwidth 40MHz (Band Edge @ 3m)

Ant. 1+2	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)
Ch. BW 40MHz 5745MHz		5649.6	65.38	-2.82	68.2	54.07	32.12	8.84	29.65	182	2	P	H
		5699.6	95.39	-9.52	104.91	84.06	32.17	8.83	29.67	182	2	P	H
		5717.8	107.36	-2.82	110.18	96.01	32.21	8.82	29.68	182	2	P	H
		5724.6	107.46	-13.83	121.29	96.11	32.21	8.82	29.68	182	2	P	H
	*	5745	128.01	-	-	116.65	32.24	8.81	29.69	182	2	P	H
	*	5745	120.93	-	-	109.57	32.24	8.81	29.69	182	2	A	H
		5851.8	72.1	-46	118.1	60.61	32.38	8.85	29.74	182	2	P	H
		5855.8	75.92	-34.66	110.58	64.4	32.41	8.85	29.74	182	2	P	H
		5878	66.31	-36.66	102.97	54.76	32.43	8.87	29.75	182	2	P	H
		5932.4	52.27	-15.93	68.2	40.62	32.5	8.92	29.77	182	2	P	H
		5649.8	63.75	-4.45	68.2	52.44	32.12	8.84	29.65	176	360	P	V
		5698.8	96.69	-7.63	104.32	85.36	32.17	8.83	29.67	176	360	P	V
		5717.8	108.06	-2.12	110.18	96.71	32.21	8.82	29.68	176	360	P	V
		5724.6	108.76	-12.53	121.29	97.41	32.21	8.82	29.68	176	360	P	V
	*	5745	127.64	-	-	116.28	32.24	8.81	29.69	176	360	P	V
	*	5745	120.37	-	-	109.01	32.24	8.81	29.69	176	360	A	V
		5851.2	70.27	-49.19	119.46	58.78	32.38	8.85	29.74	176	360	P	V
		5855.8	73.93	-36.65	110.58	62.41	32.41	8.85	29.74	176	360	P	V
		5876.2	68.4	-35.91	104.31	56.85	32.43	8.87	29.75	176	360	P	V
		5949.4	50.66	-17.54	68.2	38.98	32.53	8.93	29.78	176	360	P	V

Ant. 1+2	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)
		5649	51.92	-16.28	68.2	40.64	32.09	8.84	29.65	179	3	P	H
		5696.4	65.57	-36.98	102.55	54.24	32.17	8.83	29.67	179	3	P	H
		5718.2	77.95	-32.35	110.3	66.6	32.21	8.82	29.68	179	3	P	H
		5723	79.81	-37.83	117.64	68.46	32.21	8.82	29.68	179	3	P	H
	*	5785	127.59	-	-	116.22	32.29	8.8	29.72	179	3	P	H
	*	5785	119.49	-	-	108.12	32.29	8.8	29.72	179	3	A	H
		5853.4	77.6	-36.85	114.45	66.11	32.38	8.85	29.74	179	3	P	H
		5861.2	78.09	-30.97	109.06	66.57	32.41	8.86	29.75	179	3	P	H
		5885.6	67.69	-29.64	97.33	56.14	32.43	8.88	29.76	179	3	P	H
		5932.8	51.37	-16.83	68.2	39.72	32.5	8.92	29.77	179	3	P	H
Ch. BW 40MHz 5785MHz													
		5649.8	53.04	-15.16	68.2	41.73	32.12	8.84	29.65	177	1	P	V
		5699.6	69.28	-35.63	104.91	57.95	32.17	8.83	29.67	177	1	P	V
		5712.6	77.38	-31.35	108.73	66.05	32.19	8.82	29.68	177	1	P	V
		5721.6	79.27	-35.18	114.45	67.92	32.21	8.82	29.68	177	1	P	V
	*	5785	127.98	-	-	116.61	32.29	8.8	29.72	177	1	P	V
	*	5785	120.31	-	-	108.94	32.29	8.8	29.72	177	1	A	V
		5851.2	80.53	-38.93	119.46	69.04	32.38	8.85	29.74	177	1	P	V
		5856.2	79.04	-31.42	110.46	67.52	32.41	8.85	29.74	177	1	P	V
		5875.8	74.11	-30.5	104.61	62.56	32.43	8.87	29.75	177	1	P	V
		5925	51.72	-16.48	68.2	40.08	32.5	8.91	29.77	177	1	P	V

Ant. 1+2	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)
Ch. BW 40MHz 5830MHz		5614.8	52.85	-15.35	68.2	41.6	32.04	8.85	29.64	174	2	P	H
		5699.8	64.88	-40.17	105.05	53.55	32.17	8.83	29.67	174	2	P	H
		5719.6	70.24	-40.45	110.69	58.89	32.21	8.82	29.68	174	2	P	H
		5721.6	70.78	-43.67	114.45	59.43	32.21	8.82	29.68	174	2	P	H
	*	5830	128.33	-	-	116.87	32.36	8.83	29.73	174	2	P	H
	*	5830	120.61	-	-	109.15	32.36	8.83	29.73	174	2	A	H
		5854.8	108.25	-3.01	111.26	96.73	32.41	8.85	29.74	174	2	P	H
		5856	107.74	-2.78	110.52	96.22	32.41	8.85	29.74	174	2	P	H
		5876	94.73	-9.73	104.46	83.18	32.43	8.87	29.75	174	2	P	H
		5925.4	67.76	-0.44	68.2	56.12	32.5	8.91	29.77	174	2	P	H
		5649.8	53.3	-14.9	68.2	41.99	32.12	8.84	29.65	170	360	P	V
		5700	71.88	-33.32	105.2	60.55	32.17	8.83	29.67	170	360	P	V
		5715.8	74.71	-34.92	109.63	63.38	32.19	8.82	29.68	170	360	P	V
		5724.8	75.73	-46.01	121.74	64.38	32.21	8.82	29.68	170	360	P	V
	*	5830	128.21	-	-	116.75	32.36	8.83	29.73	170	360	P	V
	*	5830	120.73	-	-	109.27	32.36	8.83	29.73	170	360	A	V
		5851.8	108.96	-9.14	118.1	97.47	32.38	8.85	29.74	170	360	P	V
		5856.6	105.73	-4.62	110.35	94.21	32.41	8.85	29.74	170	360	P	V
		5875.2	94.94	-10.11	105.05	83.39	32.43	8.87	29.75	170	360	P	V
		5925.6	66.69	-1.51	68.2	55.05	32.5	8.91	29.77	170	360	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 4 5725~5850MHz

Channel Bandwidth 40MHz (Harmonic @ 3m)

Ant. 1+2	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)
Ch. BW 40MHz 5745MHz		11490	58.65	-15.35	74	62.29	39.92	12.74	56.3	285	34	P	H
		11490	49.97	-4.03	54	53.61	39.92	12.74	56.3	285	34	A	H
		17235	59.38	-8.82	68.2	60	40.84	15.11	56.57	100	0	P	H
		11490	56.44	-17.56	74	60.08	39.92	12.74	56.3	289	18	P	V
		11490	50.55	-3.45	54	54.19	39.92	12.74	56.3	289	18	A	V
		17235	59.41	-8.79	68.2	60.03	40.84	15.11	56.57	100	0	P	V
Ch. BW 40MHz 5785MHz		11570	57.91	-16.09	74	61.67	39.76	12.78	56.3	195	47	P	H
		11570	45.45	-8.55	54	49.21	39.76	12.78	56.3	195	47	A	H
		17355	66.41	-1.79	68.2	66.81	41.26	15.15	56.81	166	16	P	H
		11570	55.36	-18.64	74	59.12	39.76	12.78	56.3	201	46	P	V
		11570	42.47	-11.53	54	46.23	39.76	12.78	56.3	201	46	A	V
		17355	53.07	-15.13	68.2	53.47	41.26	15.15	56.81	100	0	P	V
Ch. BW 40MHz 5830MHz		11660	60.32	-13.68	74	64.2	39.59	12.83	56.3	217	58	P	H
		11660	49.83	-4.17	54	53.71	39.59	12.83	56.3	217	58	A	H
		17490	68.03	-0.17	68.2	68.16	41.74	15.21	57.08	209	57	P	H
		11660	57.29	-16.71	74	61.17	39.59	12.83	56.3	197	352	P	V
		11660	46.99	-7.01	54	50.87	39.59	12.83	56.3	197	352	A	V
		17490	59.98	-8.22	68.2	60.11	41.74	15.21	57.08	100	0	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 4 5725~5850MHz

Channel Bandwidth 80MHz (Band Edge @ 3m)

Ant. 1+2	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)
Ch. BW 80MHz 5765MHz		5641.8	62.53	-5.67	68.2	51.25	32.09	8.84	29.65	179	2	P	H
		5667.6	79.53	-1.73	81.26	68.22	32.14	8.83	29.66	179	2	P	H
		5719.6	91.16	-19.53	110.69	79.81	32.21	8.82	29.68	179	2	P	H
		5725	100.79	-21.41	122.2	89.44	32.21	8.82	29.68	179	2	P	H
	*	5765	121.94	-	-	110.58	32.26	8.81	29.71	179	2	P	H
	*	5765	115.01	-	-	103.65	32.26	8.81	29.71	179	2	A	H
		5853.2	84.23	-30.67	114.9	72.74	32.38	8.85	29.74	179	2	P	H
		5859.8	84.12	-25.33	109.45	72.61	32.41	8.85	29.75	179	2	P	H
		5875.2	69.53	-35.52	105.05	57.98	32.43	8.87	29.75	179	2	P	H
		5929.6	53.29	-14.91	68.2	41.64	32.5	8.92	29.77	179	2	P	H
		5643	58.03	-10.17	68.2	46.75	32.09	8.84	29.65	172	0	P	V
		5667.2	79.46	-1.5	80.96	68.15	32.14	8.83	29.66	172	0	P	V
		5720	89.87	-20.93	110.8	78.52	32.21	8.82	29.68	172	0	P	V
		5724.8	100.92	-20.82	121.74	89.57	32.21	8.82	29.68	172	0	P	V
	*	5765	121.48	-	-	110.12	32.26	8.81	29.71	172	0	P	V
	*	5765	114.33	-	-	102.97	32.26	8.81	29.71	172	0	A	V
		5853	80.59	-34.77	115.36	69.1	32.38	8.85	29.74	172	0	P	V
		5857.2	80.54	-29.64	110.18	69.02	32.41	8.85	29.74	172	0	P	V
		5875	69.6	-35.6	105.2	58.05	32.43	8.87	29.75	172	0	P	V
		5928	51.64	-16.56	68.2	39.99	32.5	8.92	29.77	172	0	P	V

	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1+2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
Ch. BW 80MHz 5785MHz		5649.8	67.36	-0.84	68.2	56.05	32.12	8.84	29.65	178	1	P	H
		5694	86.45	-14.33	100.78	75.12	32.17	8.83	29.67	178	1	P	H
		5719.8	91.71	-19.03	110.74	80.36	32.21	8.82	29.68	178	1	P	H
		5722.4	93.12	-23.15	116.27	81.77	32.21	8.82	29.68	178	1	P	H
	*	5785	122.5	-	-	111.13	32.29	8.8	29.72	178	1	P	H
	*	5785	116.12	-	-	104.75	32.29	8.8	29.72	178	1	A	H
		5852.6	91.78	-24.49	116.27	80.29	32.38	8.85	29.74	178	1	P	H
		5860	90.14	-19.26	109.4	78.63	32.41	8.85	29.75	178	1	P	H
		5880	86.84	-14.65	101.49	75.29	32.43	8.87	29.75	178	1	P	H
		5925.2	64.64	-3.56	68.2	53	32.5	8.91	29.77	178	1	P	H
		5644.8	62.97	-5.23	68.2	51.69	32.09	8.84	29.65	176	1	P	V
		5695.8	86.27	-15.83	102.1	74.94	32.17	8.83	29.67	176	1	P	V
		5715.4	92.49	-17.02	109.51	81.16	32.19	8.82	29.68	176	1	P	V
		5722.2	93.02	-22.8	115.82	81.67	32.21	8.82	29.68	176	1	P	V
	*	5785	122.9	-	-	111.53	32.29	8.8	29.72	176	1	P	V
	*	5785	115.95	-	-	104.58	32.29	8.8	29.72	176	1	A	V
		5850.6	90.53	-30.3	120.83	79.04	32.38	8.85	29.74	176	1	P	V
		5859.8	90.75	-18.7	109.45	79.24	32.41	8.85	29.75	176	1	P	V
		5879.8	86.63	-15	101.63	75.08	32.43	8.87	29.75	176	1	P	V
		5931	63.35	-4.85	68.2	51.7	32.5	8.92	29.77	176	1	P	V

	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1+2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
Ch. BW 80MHz 5810MHz		5620.6	52.39	-15.81	68.2	41.12	32.07	8.84	29.64	176	2	P	H
		5699.4	67.93	-36.83	104.76	56.6	32.17	8.83	29.67	176	2	P	H
		5713.6	82.67	-26.34	109.01	71.34	32.19	8.82	29.68	176	2	P	H
		5723.6	81.52	-37.49	119.01	70.17	32.21	8.82	29.68	176	2	P	H
	*	5810	121.96	-	-	110.55	32.33	8.81	29.73	176	2	P	H
	*	5810	115.54	-	-	104.13	32.33	8.81	29.73	176	2	A	H
		5850	101.1	-21.1	122.2	89.61	32.38	8.85	29.74	176	2	P	H
		5855.6	93.57	-17.06	110.63	82.05	32.41	8.85	29.74	176	2	P	H
		5921.6	68.66	-2.05	70.71	57.02	32.5	8.91	29.77	176	2	P	H
		5925.6	61.83	-6.37	68.2	50.19	32.5	8.91	29.77	176	2	P	H
		5650	54.57	-13.63	68.2	43.26	32.12	8.84	29.65	176	0	P	V
		5698.6	72.71	-31.46	104.17	61.38	32.17	8.83	29.67	176	0	P	V
		5713.6	83.47	-25.54	109.01	72.14	32.19	8.82	29.68	176	0	P	V
		5724.8	83.18	-38.56	121.74	71.83	32.21	8.82	29.68	176	0	P	V
	*	5810	121.46	-	-	110.05	32.33	8.81	29.73	176	0	P	V
	*	5810	115.49	-	-	104.08	32.33	8.81	29.73	176	0	A	V
		5850.2	100.59	-21.15	121.74	89.1	32.38	8.85	29.74	176	0	P	V
		5855.8	94.29	-16.29	110.58	82.77	32.41	8.85	29.74	176	0	P	V
		5913.2	75.82	-1.08	76.9	64.21	32.48	8.9	29.77	176	0	P	V
		5928	64.43	-3.77	68.2	52.78	32.5	8.92	29.77	176	0	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 4 5725~5850MHz

Channel Bandwidth 80MHz (Harmonic @ 3m)

Ant. 1+2	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)
Ch. BW 80MHz 5765MHz		11530	47.41	-26.59	74	51.07	39.87	12.77	56.3	100	0	P	H
		17295	49.03	-19.17	68.2	49.5	41.08	15.14	56.69	100	0	P	H
		11530	47.55	-26.45	74	51.21	39.87	12.77	56.3	100	0	P	V
		17295	48.53	-19.67	68.2	49	41.08	15.14	56.69	100	0	P	V
Ch. BW 80MHz 5785MHz		11570	48.49	-25.51	74	52.25	39.76	12.78	56.3	100	0	P	H
		17355	51.7	-16.5	68.2	52.1	41.26	15.15	56.81	100	0	P	H
		11570	46.72	-27.28	74	50.48	39.76	12.78	56.3	100	0	P	V
		17355	49.1	-19.1	68.2	49.5	41.26	15.15	56.81	100	0	P	V
Ch. BW 80MHz 5810MHz		11620	49.55	-24.45	74	53.38	39.66	12.81	56.3	100	0	P	H
		17430	50.71	-17.49	68.2	50.98	41.5	15.19	56.96	100	0	P	H
		11620	46.6	-27.4	74	50.43	39.66	12.81	56.3	100	0	P	V
		17430	49.49	-18.71	68.2	49.76	41.5	15.19	56.96	100	0	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Emission below 1GHz

Channel Bandwidth 40MHz (LF @ 3m)

	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1+2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
Ch. BW 40MHz LF		107.76	33.39	-10.11	43.5	47.64	16.67	1.37	32.29	100	0	P	H
		121.8	30.82	-12.68	43.5	44.3	17.42	1.39	32.29	-	-	P	H
		257.34	32.12	-13.88	46	42.68	19.66	1.97	32.19	-	-	P	H
		366.5	33.58	-12.42	46	42.45	20.93	2.34	32.14	-	-	P	H
		858.6	32.39	-13.61	46	31.46	29.11	3.53	31.71	-	-	P	H
		955.2	34.18	-11.82	46	30.57	30.91	3.71	31.01	-	-	P	H
													H
													H
													H
													H
													H
													H
		38.91	29.81	-10.19	40	41.04	20.27	0.83	32.33	100	0	P	V
		58.62	28.21	-11.79	40	47.36	12.18	0.98	32.31	-	-	P	V
		107.76	31.61	-11.89	43.5	45.86	16.67	1.37	32.29	-	-	P	V
		433.7	31.45	-14.55	46	38.2	22.9	2.52	32.17	-	-	P	V
		766.9	34.38	-11.62	46	34.96	28.18	3.29	32.05	-	-	P	V
		944	33.71	-12.29	46	30.83	30.3	3.69	31.11	-	-	P	V
													V
													V
													V
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													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+2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11b CH 01 2412MHz		2390	55.45	-18.55	74	54.51	32.22	4.58	35.86	103	308	P	H
		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 D. Radiated Spurious Emission Plots

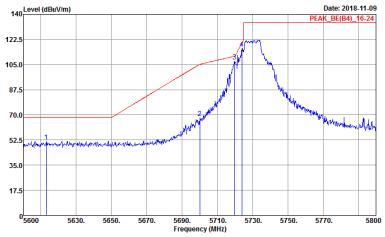
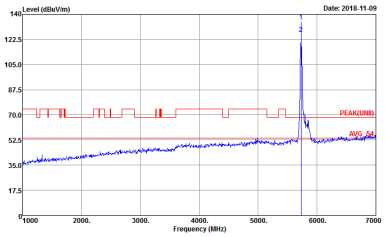
Test Engineer :	Alex Jheng, Fu Chen, and Wilson Wu	**Temperature :**	24.5~24.8°C
		Relative Humidity :	50~51%

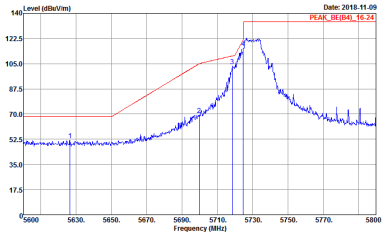
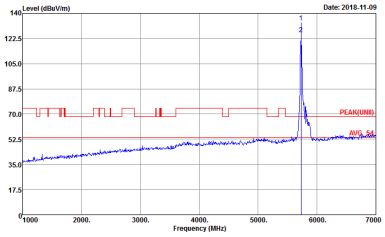
Note symbol

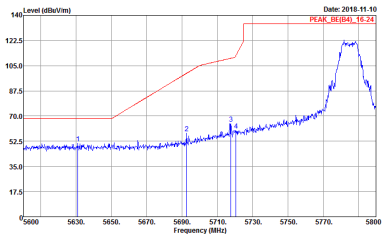
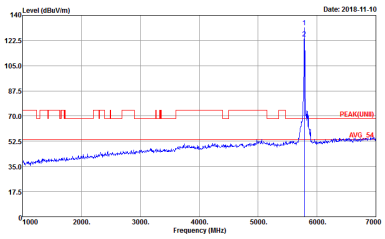
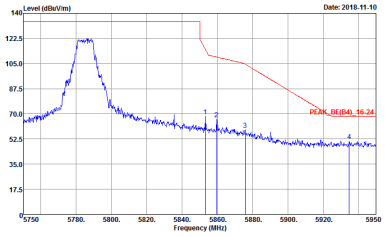
-L	**Low channel location**
-R	**High channel location**

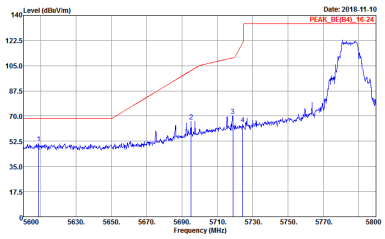
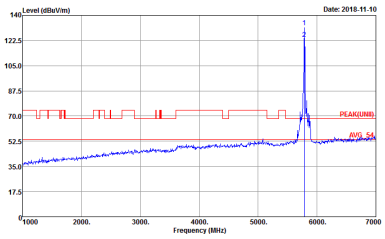
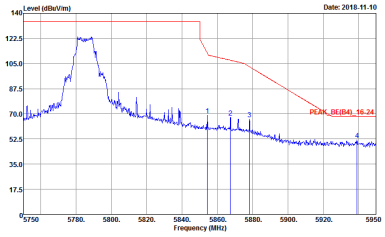
Band 4 - 5725~5850MHz

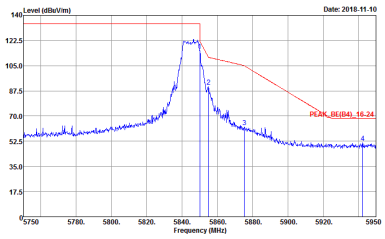
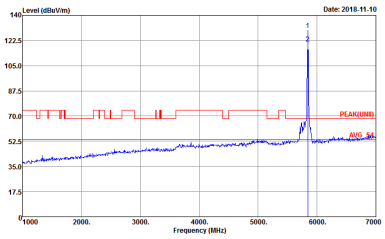
Channel Bandwidth 10MHz (Band Edge @ 3m)

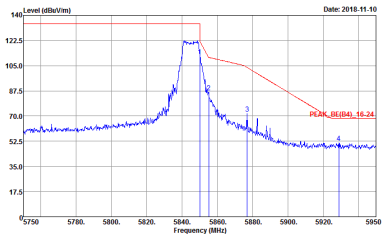
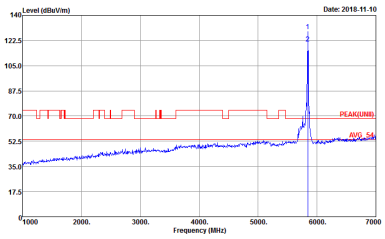
	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	Ch. BW 10MHz 5730MHz	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH13-HY Condition : PEAK_8E(84)_16-24 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 8O3134 Mode : 30 Power : 22.5	 Site : 03CH13-HY Condition : PEAK(UNII) 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 8O3134 Mode : 30 Power : 22.5

	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	Ch. BW 10MHz 5730MHz	
1+2	Vertical	Fundamental
Peak	 Site : 03CH13-HY Condition : PEAK_BE(B4)_16-24 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 8O3134 Mode : 30 Power : 22.5	 Site : 03CH13-HY Condition : PEAK(UNII) 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 8O3134 Mode : 30 Power : 22.5

	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	Ch. BW 10MHz 5785MHz	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH13-HY Condition : PEAK_BE(B4)_16-24 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 8O3134 Mode : 31 Power : 19.5	 Site : 03CH13-HY Condition : PEAK(UNII) 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 8O3134 Mode : 31 Power : 19.5
Peak	 Site : 03CH13-HY Condition : PEAK_BE(B4)_16-24 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 8O3134 Mode : 31 Power : 19.5	Left blank

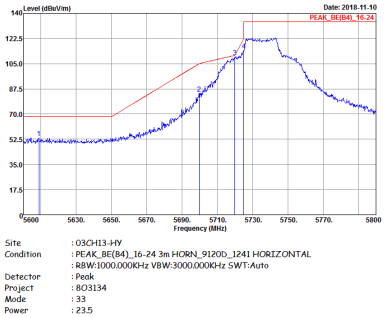
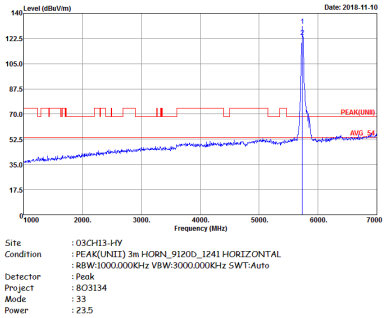
	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	Ch. BW 10MHz 5785MHz	
1+2	Vertical	Fundamental
Peak	 Site : 03CH13-HY Condition : PEAK_BE(B4)_16-24 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 8O3134 Mode : 31 Power : 19.5	 Site : 03CH13-HY Condition : PEAK(UNII) 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 8O3134 Mode : 31 Power : 19.5
Peak	 Site : 03CH13-HY Condition : PEAK_BE(B4)_16-24 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 8O3134 Mode : 31 Power : 19.5	Left blank

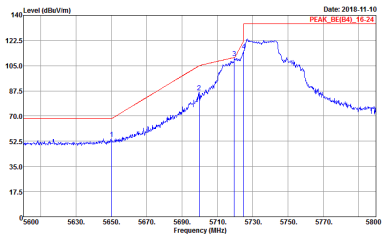
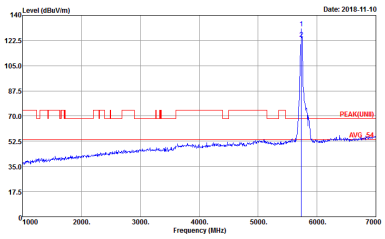
	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	Ch. BW 10MHz 5845MHz	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH13-HY Condition : PEAK_BE(B4)_16-24 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 8O3134 Mode : 32 Power : 18.5	 Site : 03CH13-HY Condition : PEAK(UNII) 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 8O3134 Mode : 32 Power : 18.5

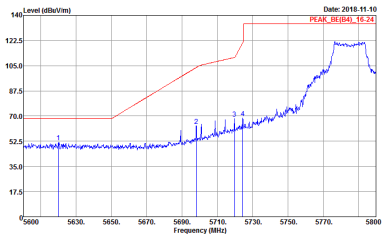
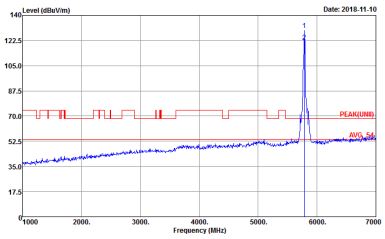
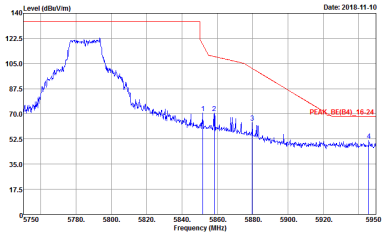
	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	Ch. BW 10MHz 5845MHz	
1+2	Vertical	Fundamental
Peak	 Site : 03CH13-HY Condition : PEAK_BE(B4)_16-24 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 8O3134 Mode : 32 Power : 18.5	 Site : 03CH13-HY Condition : PEAK(UNII) 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 8O3134 Mode : 32 Power : 18.5

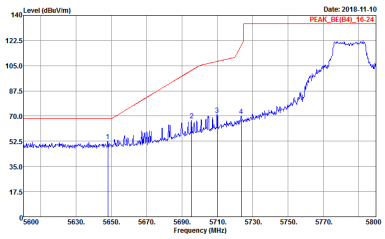
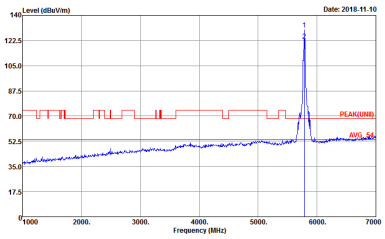
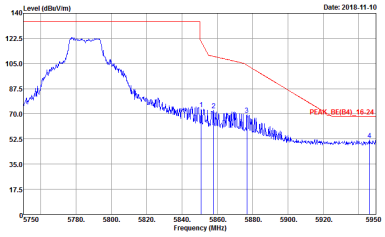
Band 4 5725~5850MHz

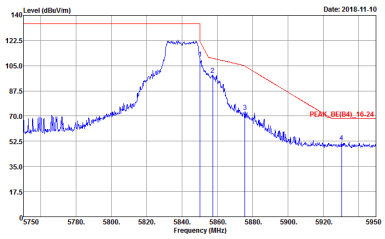
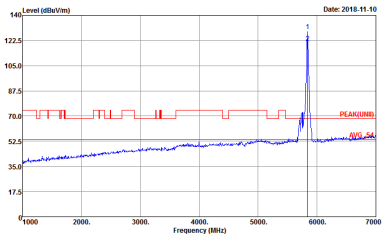
Channel Bandwidth 20MHz (Band Edge @ 3m)

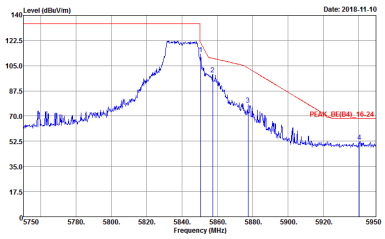
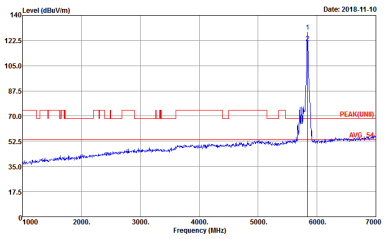
	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	Ch. BW 20MHz 5735MHz	
1+2	Horizontal	Fundamental
Peak		

	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	Ch. BW 20MHz 5735MHz	
1+2	Vertical	Fundamental
Peak Avg.	 Site : 03CH13-HY Condition : PEAK_BE(B4)_16-24 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 8O3134 Mode : 33 Power : 23.5	 Site : 03CH13-HY Condition : PEAK(UNII) 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 8O3134 Mode : 33 Power : 23.5

	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	Ch. BW 20MHz 5785MHz	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH13-HY Condition : PEAK_BE(B4)_16-24 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 8O3134 Mode : 34 Power : 21.5	 Site : 03CH13-HY Condition : PEAK(UNII) 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 8O3134 Mode : 34 Power : 21.5
Peak	 Site : 03CH13-HY Condition : PEAK_BE(B4)_16-24 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 8O3134 Mode : 34 Power : 21.5	Left blank

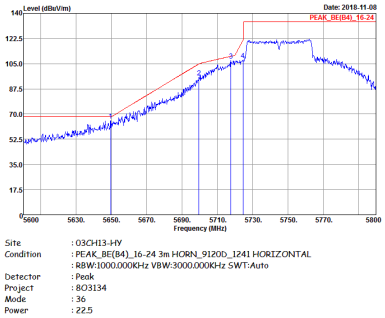
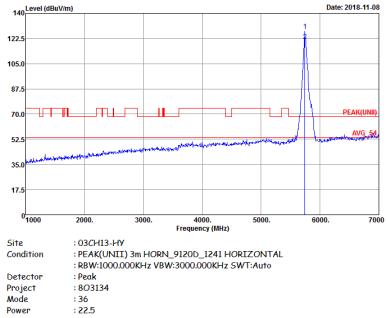
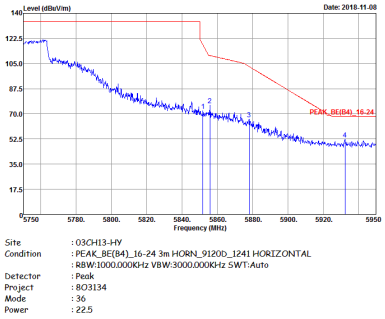
	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	Ch. BW 20MHz 5785MHz	
1+2	Vertical	Fundamental
Peak	 Site : 03CH13-HY Condition : PEAK_BE(B4)_16-24 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 8O3134 Mode : 34 Power : 21.5	 Site : 03CH13-HY Condition : PEAK(UNII) 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 8O3134 Mode : 34 Power : 21.5
Peak	 Site : 03CH13-HY Condition : PEAK_BE(B4)_16-24 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 8O3134 Mode : 34 Power : 21.5	Left blank

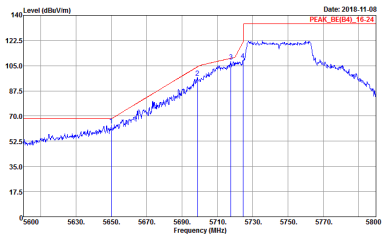
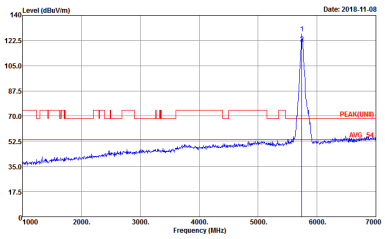
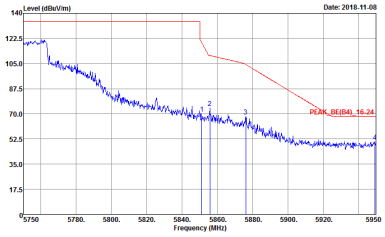
	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	Ch. BW 20MHz 5840MHz	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH13-HY Condition : PEAK_BE(B4)_16-24 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 8O3134 Mode : 35 Power : 21.5	 Site : 03CH13-HY Condition : PEAK(UNII) 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 8O3134 Mode : 35 Power : 21.5

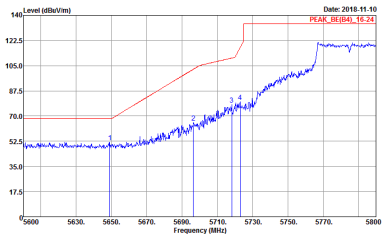
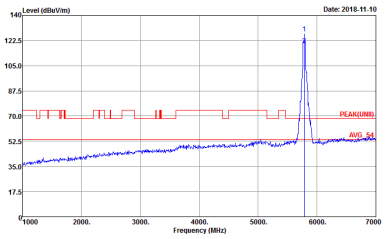
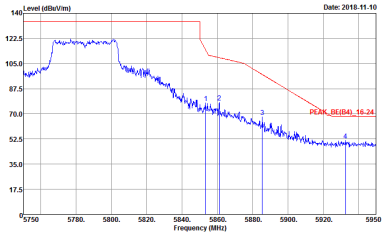
	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	Ch. BW 20MHz 5840MHz	
1+2	Vertical	Fundamental
Peak Avg.	 Site : 03CH13-HY Condition : PEAK_BE(B4)_16-24 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 8O3134 Mode : 35 Power : 21.5	 Site : 03CH13-HY Condition : PEAK(UNII) 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 8O3134 Mode : 35 Power : 21.5

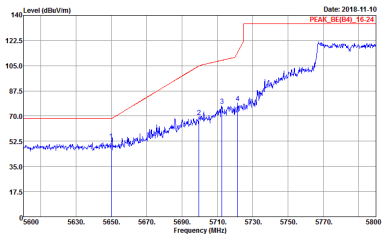
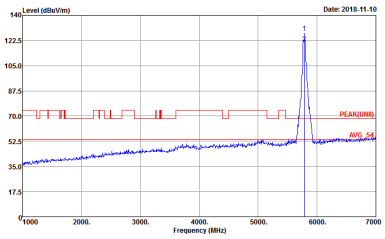
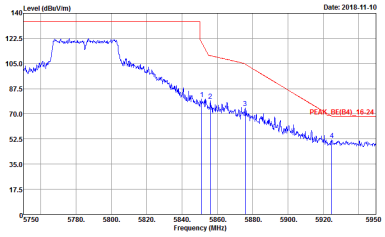
Band 4 5725~5850MHz

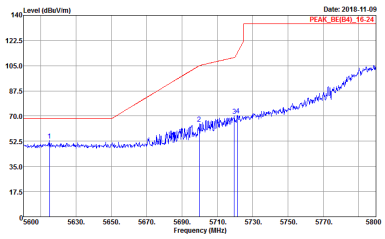
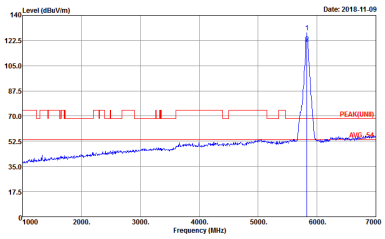
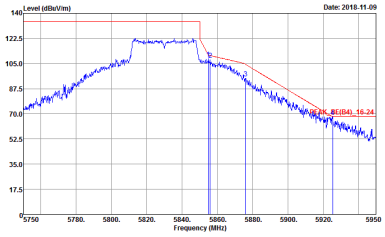
Channel Bandwidth 40MHz (Band Edge @ 3m)

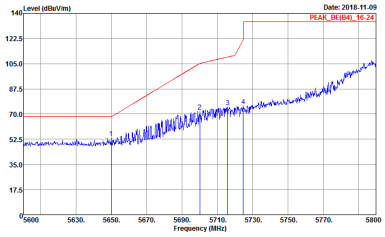
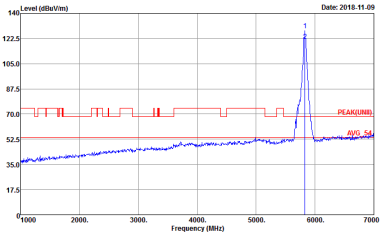
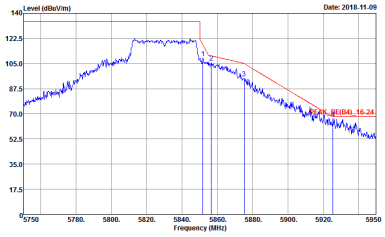
	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	Ch. BW 40MHz 5745MHz	
1+2	Horizontal	Fundamental
Peak		
Peak		Left blank

	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	Ch. BW 40MHz 5745MHz	
1+2	Vertical	Fundamental
Peak	 Site : 03CH13-HY Condition : PEAK_BE(B4)_16-24 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 8O3134 Mode : 36 Power : 22.5	 Site : 03CH13-HY Condition : PEAK(UNII) 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 8O3134 Mode : 36 Power : 22.5
Peak	 Site : 03CH13-HY Condition : PEAK_BE(B4)_16-24 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 8O3134 Mode : 36 Power : 22.5	Left blank

	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	Ch. BW 40MHz 5785MHz	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH13-HY Condition : PEAK_BE(B4)_16-24 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 8O3134 Mode : 37 Power : 21.5	 Site : 03CH13-HY Condition : PEAK(UNII) 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 8O3134 Mode : 37 Power : 21.5
Peak	 Site : 03CH13-HY Condition : PEAK_BE(B4)_16-24 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 8O3134 Mode : 37 Power : 21.5	Left blank

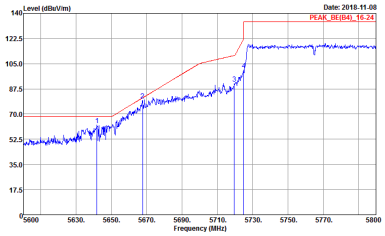
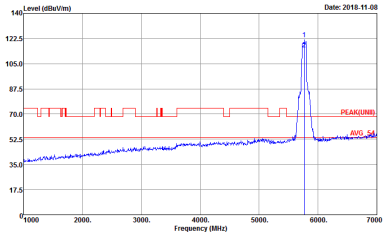
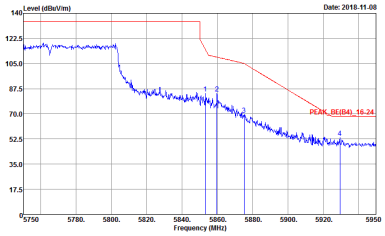
	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	Ch. BW 40MHz 5785MHz	
1+2	Vertical	Fundamental
Peak	 Site : 03CH13-HY Condition : PEAK_BE(B4)_16-24 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 8O3134 Mode : 37 Power : 21.5	 Site : 03CH13-HY Condition : PEAK(UNII) 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 8O3134 Mode : 37 Power : 21.5
Peak	 Site : 03CH13-HY Condition : PEAK_BE(B4)_16-24 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 8O3134 Mode : 37 Power : 21.5	Left blank

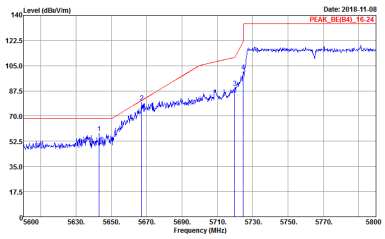
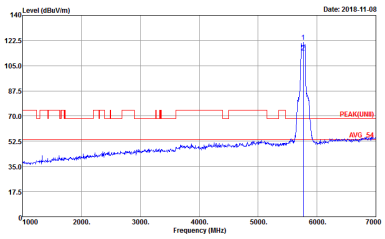
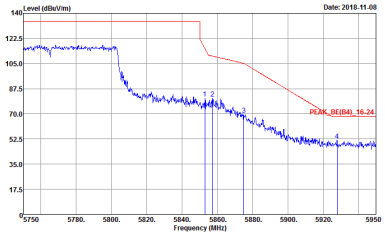
	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	Ch. BW 40MHz 5830MHz	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH13-HY Condition : PEAK_BE(B4)_16-24 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 8O3134 Mode : 38 Power : 23	 Site : 03CH13-HY Condition : PEAK(UNII) 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 8O3134 Mode : 38 Power : 23
Peak	 Site : 03CH13-HY Condition : PEAK_BE(B4)_16-24 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 8O3134 Mode : 38 Power : 23	Left blank

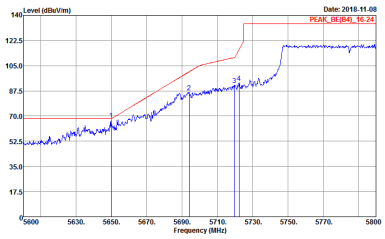
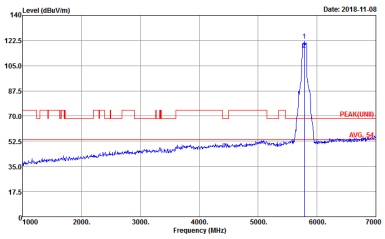
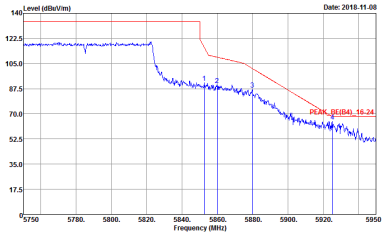
	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	Ch. BW 40MHz 5830MHz	
1+2	Vertical	Fundamental
Peak	 Site : 03CH13-HY Condition : PEAK_BE(B4)_16-24 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 8O3134 Mode : 38 Power : 23	 Site : 03CH13-HY Condition : PEAK(UNII) 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 8O3134 Mode : 38 Power : 23
Peak	 Site : 03CH13-HY Condition : PEAK_BE(B4)_16-24 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 8O3134 Mode : 38 Power : 23	Left blank

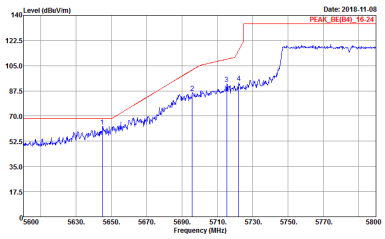
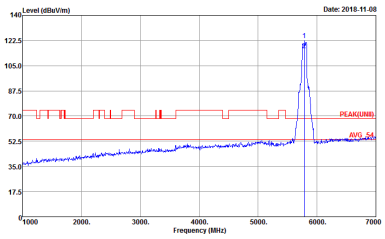
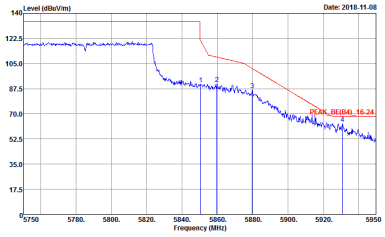
Band 4 5725~5850MHz

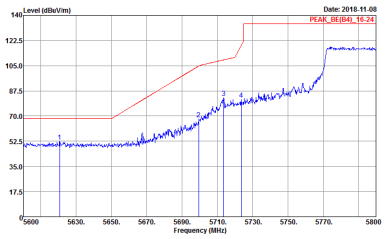
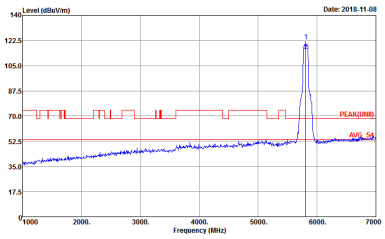
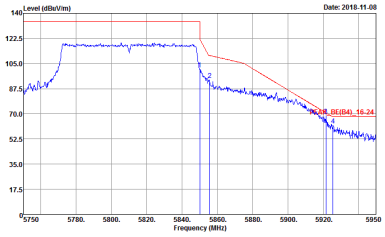
Channel Bandwidth 80MHz (Band Edge @ 3m)

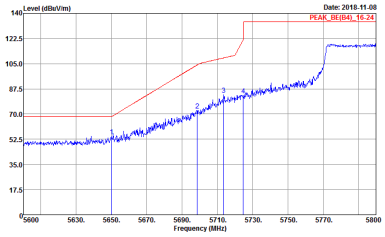
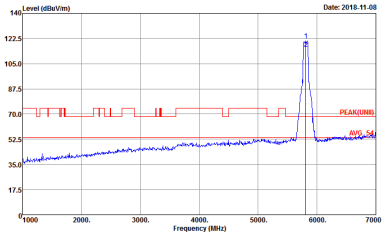
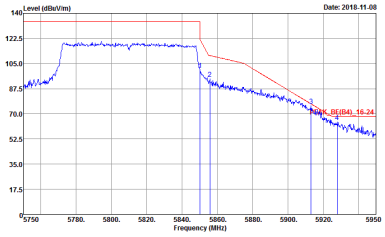
	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	Ch. BW 80MHz 5765MHz	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH13-HY Condition : PEAK_BE(B4)_16-24 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 8O3134 Mode : 39 Power : 17.5	 Site : 03CH13-HY Condition : PEAK(UNII) 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 8O3134 Mode : 39 Power : 17.5
Peak	 Site : 03CH13-HY Condition : PEAK_BE(B4)_16-24 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 8O3134 Mode : 39 Power : 17.5	Left blank

	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	Ch. BW 80MHz 5765MHz	
1+2	Vertical	Fundamental
Peak	 Site : 03CH13-HY Condition : PEAK_BE(B4)_16-24 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 8O3134 Mode : 39 Power : 17.5	 Site : 03CH13-HY Condition : PEAK(UNII) 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 8O3134 Mode : 39 Power : 17.5
Peak	 Site : 03CH13-HY Condition : PEAK_BE(B4)_16-24 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 8O3134 Mode : 39 Power : 17.5	Left blank

	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	Ch. BW 80MHz 5785MHz	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH13-HY Condition : PEAK_BE(B4)_16-24 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 8O3134 Mode : 40 Power : 19.5	 Site : 03CH13-HY Condition : PEAK(UNII) 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 8O3134 Mode : 40 Power : 19.5
Peak	 Site : 03CH13-HY Condition : PEAK_BE(B4)_16-24 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 8O3134 Mode : 40 Power : 19.5	Left blank

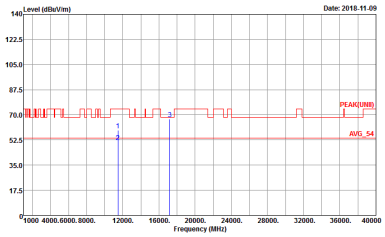
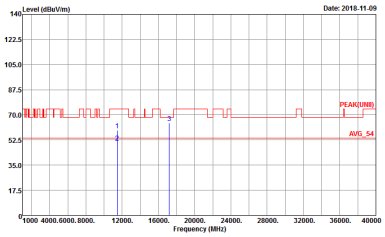
	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	Ch. BW 80MHz 5785MHz	
1+2	Vertical	Fundamental
Peak	 Site : 03CH13-HY Condition : PEAK_BE(B4)_16-24 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 8O3134 Mode : 40 Power : 19.5	 Site : 03CH13-HY Condition : PEAK(UNII) 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 8O3134 Mode : 40 Power : 19.5
Peak	 Site : 03CH13-HY Condition : PEAK_BE(B4)_16-24 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 8O3134 Mode : 40 Power : 19.5	Left blank

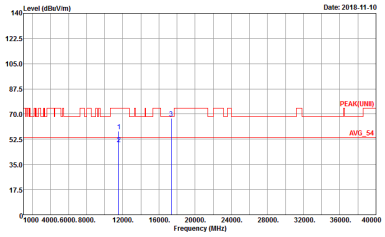
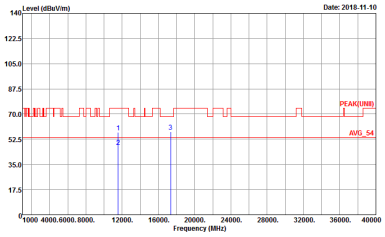
	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	Ch. BW 80MHz 5810MHz	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH13-HY Condition : PEAK_BE(B4)_16-24 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 8O3134 Mode : 41 Power : 19.5	 Site : 03CH13-HY Condition : PEAK(UNII) 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 8O3134 Mode : 41 Power : 19.5
Peak	 Site : 03CH13-HY Condition : PEAK_BE(B4)_16-24 3m HORN_9120D_1241 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 8O3134 Mode : 41 Power : 19.5	Left blank

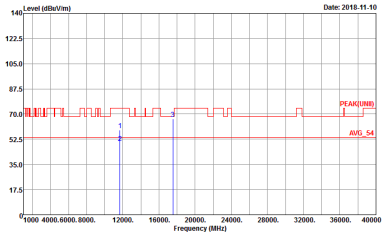
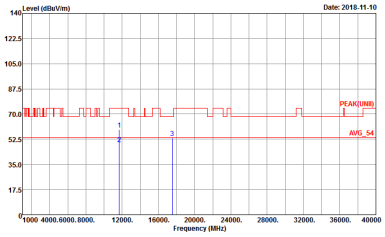
	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	Ch. BW 80MHz 5810MHz	
1+2	Vertical	Fundamental
Peak	 Site : 03CH13-HY Condition : PEAK_BE(B4)_16-24 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 8O3134 Mode : 41 Power : 19.5	 Site : 03CH13-HY Condition : PEAK(UNII) 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 8O3134 Mode : 41 Power : 19.5
Peak	 Site : 03CH13-HY Condition : PEAK_BE(B4)_16-24 3m HORN_9120D_1241 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 8O3134 Mode : 41 Power : 19.5	Left blank

Band 4 - 5725~5850MHz

Channel Bandwidth 10MHz (Harmonic @ 3m)

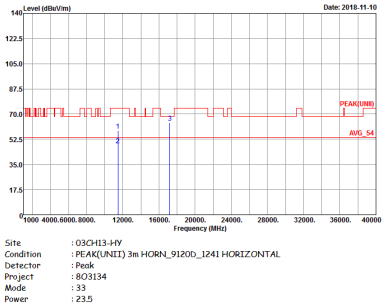
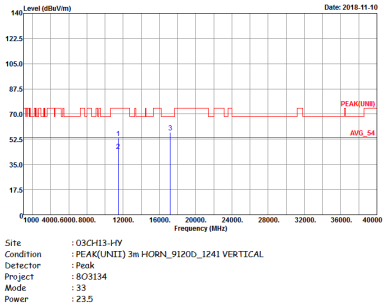
	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	Ch. BW 10MHz 5730MHz	
1+2	Horizontal	Vertical
Peak Avg.	 Site : 03CH13-HY Condition : PEAK(UNII) 3m HORN_9120D_1241 HORIZONTAL Detector : Peak Project : 8O3134 Mode : 30 Power : 22.5	 Site : 03CH13-HY Condition : PEAK(UNII) 3m HORN_9120D_1241 VERTICAL Detector : Peak Project : 8O3134 Mode : 30 Power : 22.5

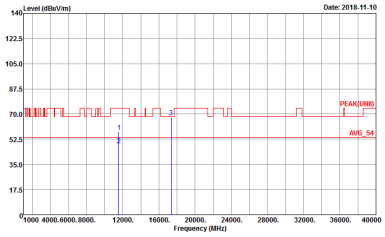
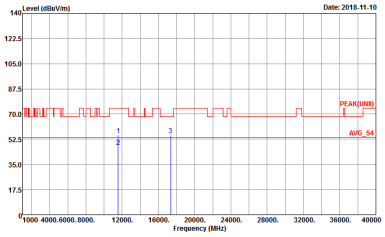
	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	Ch. BW 10MHz 5785MHz	
1+2	Horizontal	Vertical
Peak Avg.	 Site : 03CH13-HY Condition : PEAK(UNII) 3m HORN_9120D_1241 HORIZONTAL Detector : Peak Project : 8O3134 Mode : 31 Power : 19.5	 Site : 03CH13-HY Condition : PEAK(UNII) 3m HORN_9120D_1241 VERTICAL Detector : Peak Project : 8O3134 Mode : 31 Power : 19.5

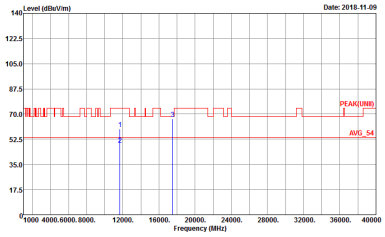
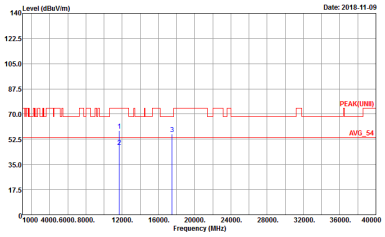
	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	Ch. BW 10MHz 5845MHz	
1+2	Horizontal	Vertical
Peak Avg.	 Site : 03CH13-HY Condition : PEAK(UNII) 3m HORN_9120D_1241 HORIZONTAL Detector : Peak Project : 8O3134 Mode : 32 Power : 18.5	 Site : 03CH13-HY Condition : PEAK(UNII) 3m HORN_9120D_1241 VERTICAL Detector : Peak Project : 8O3134 Mode : 32 Power : 18.5

Band 4 5725~5850MHz

Channel Bandwidth 20MHz (Harmonic @ 3m)

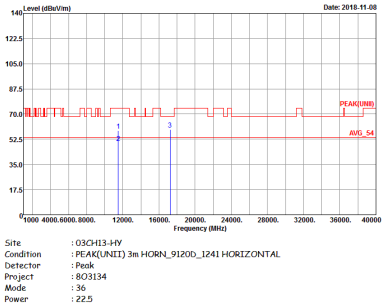
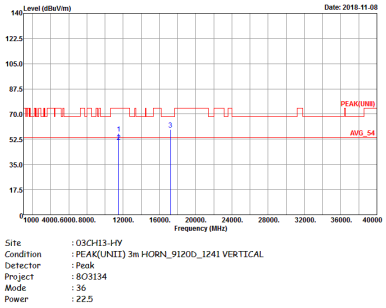
	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	Ch. BW 20MHz 5735MHz	
1+2	Horizontal	Vertical
Peak Avg.		

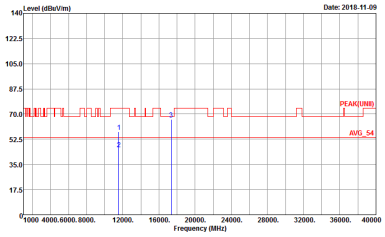
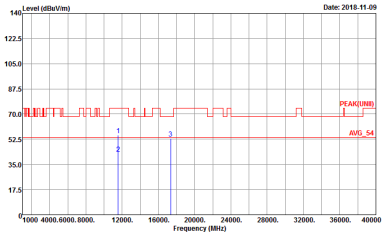
	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	Ch. BW 20MHz 5785MHz	
1+2	Horizontal	Vertical
Peak Avg.	 Site : 03CH13-HY Condition : PEAK(UNII) 3m HORN_9120D_1241 HORIZONTAL Detector : Peak Project : 8O3134 Mode : 34 Power : 21.5	 Site : 03CH13-HY Condition : PEAK(UNII) 3m HORN_9120D_1241 VERTICAL Detector : Peak Project : 8O3134 Mode : 34 Power : 21.5

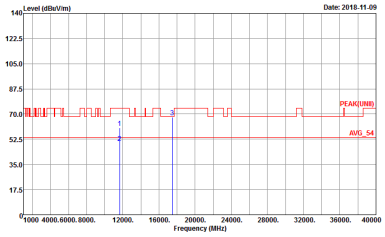
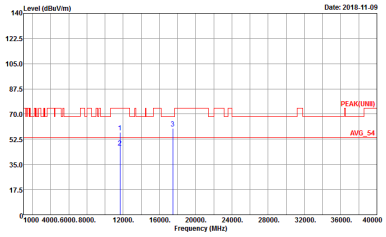
	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	Ch. BW 20MHz 5840MHz	
1+2	Horizontal	Vertical
Peak Avg.	 Site : 03CH13-HY Condition : PEAK(UNII) 3m HORN_9120D_1241 HORIZONTAL Detector : Peak Project : 8O3134 Mode : 35 Power : 21.5	 Site : 03CH13-HY Condition : PEAK(UNII) 3m HORN_9120D_1241 VERTICAL Detector : Peak Project : 8O3134 Mode : 35 Power : 21.5

Band 4 5725~5850MHz

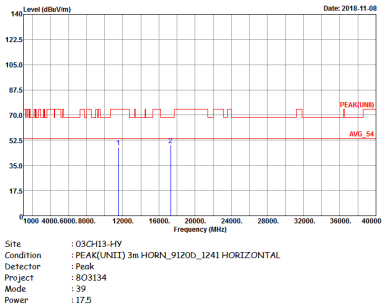
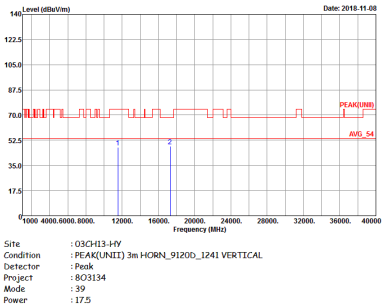
Channel Bandwidth 40MHz (Harmonic @ 3m)

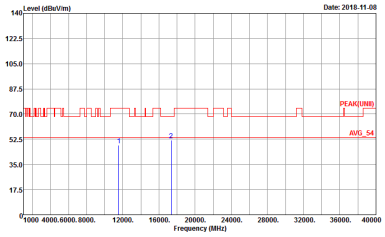
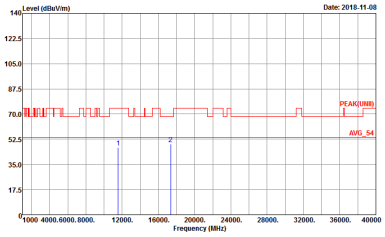
	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	Ch. BW 40MHz 5745MHz	
1+2	Horizontal	Vertical
Peak Avg.		

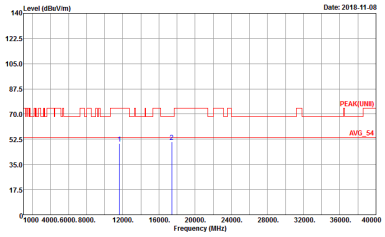
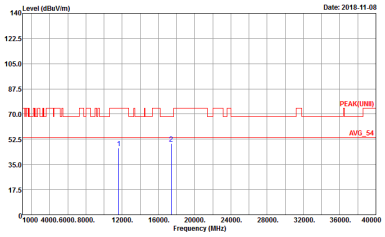
	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	Ch. BW 40MHz 5785MHz	
1+2	Horizontal	Vertical
Peak Avg.	 Site : 03CH13-HY Condition : PEAK(UNII) 3m HORN_9120D_1241 HORIZONTAL Detector : Peak Project : 8O3134 Mode : 37 Power : 21.5	 Site : 03CH13-HY Condition : PEAK(UNII) 3m HORN_9120D_1241 VERTICAL Detector : Peak Project : 8O3134 Mode : 37 Power : 21.5

	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	Ch. BW 40MHz 5830MHz	
1+2	Horizontal	Vertical
Peak Avg.	 Site : 03CH13-HY Condition : PEAK(UNII) 3m HORN_9120D_1241 HORIZONTAL Detector : Peak Project : 8O3134 Mode : 38 Power : 23	 Site : 03CH13-HY Condition : PEAK(UNII) 3m HORN_9120D_1241 VERTICAL Detector : Peak Project : 8O3134 Mode : 38 Power : 23

Band 4 5725~5850MHz
Channel Bandwidth 80MHz (Harmonic @ 3m)

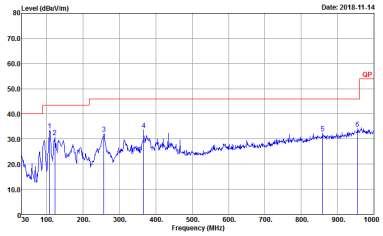
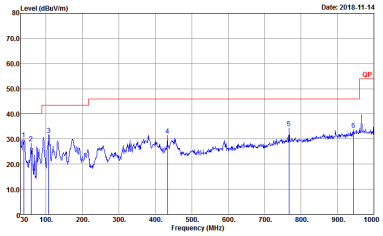
	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	Ch. BW 80MHz 5765MHz	
1+2	Horizontal	Vertical
Peak Avg.		

	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	Ch. BW 80MHz 5785MHz	
1+2	Horizontal	Vertical
Peak Avg.	 Site : 03CH13-HY Condition : PEAK(UNII) 3m HORN_9120D_1241 HORIZONTAL Detector : Peak Project : 8O3134 Mode : 40 Power : 19.5	 Site : 03CH13-HY Condition : PEAK(UNII) 3m HORN_9120D_1241 VERTICAL Detector : Peak Project : 8O3134 Mode : 40 Power : 19.5

	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	Ch. BW 80MHz 5810MHz	
1+2	Horizontal	Vertical
Peak Avg.	 Site : 03CH13-HY Condition : PEAK(UNII) 3m HORN_9120D_1241 HORIZONTAL Detector : Peak Project : 8O3134 Mode : 41 Power : 19.5	 Site : 03CH13-HY Condition : PEAK(UNII) 3m HORN_9120D_1241 VERTICAL Detector : Peak Project : 8O3134 Mode : 41 Power : 19.5

Emission below 1GHz

5GHz Channel Bandwidth 40MHz (LF)

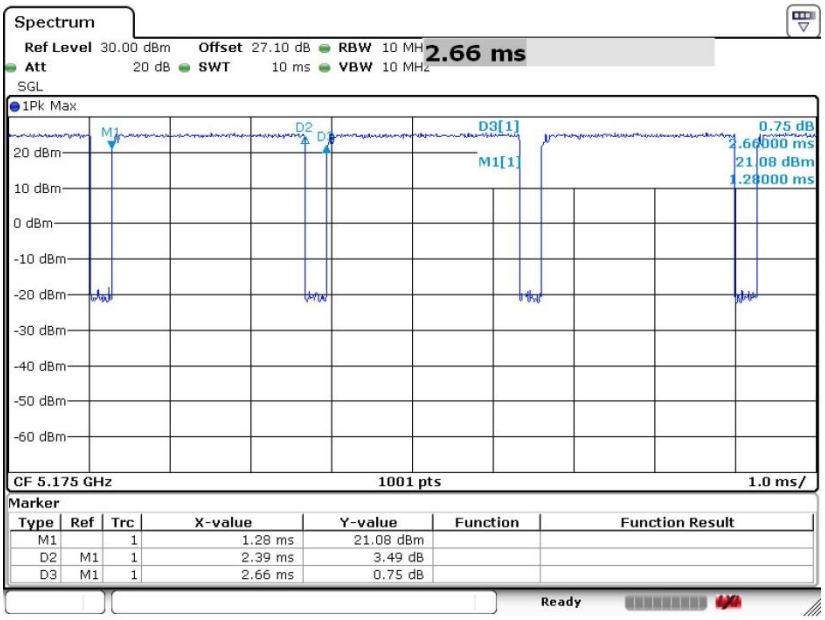
	5GHz 5725~5850MHz	
ANT	Ch. BW 40MHz LF	
1+2	Horizontal	Vertical
QP / Peak	 Site : 03CH13-HY Condition : QP 3m BILO6_40103 HORIZONTAL Detector : Peak Project : 8O3134 Mode : 42	 Site : 03CH13-HY Condition : QP 3m BILO6_40103 VERTICAL Detector : Peak Project : 8O3134 Mode : 42

Appendix E. Duty Cycle Plots

Antenna	Channel Bandwidth	Duty Cycle(%)	T(us)	1/T(kHz)	VBW Setting	Duty Factor(dB)
1+2	10 MHz for Ant. 1	89.85	2390.00	0.42	1kHz	0.46
1+2	10 MHz for Ant. 2	89.47	2380.00	0.42	1kHz	0.48
1+2	20 MHz for Ant. 1	84.78	1170.00	0.85	1kHz	0.72
1+2	20 MHz for Ant. 2	85.61	1190.00	0.84	1kHz	0.67
1+2	40 MHz for Ant. 1	79.37	600.00	1.67	3kHz	1.00
1+2	40 MHz for Ant. 2	79.05	600.00	1.67	3kHz	1.02
1+2	80 MHz for Ant. 1	65.22	300.00	3.33	10kHz	1.86
1+2	80 MHz for Ant. 2	65.79	300.00	3.33	10kHz	1.82

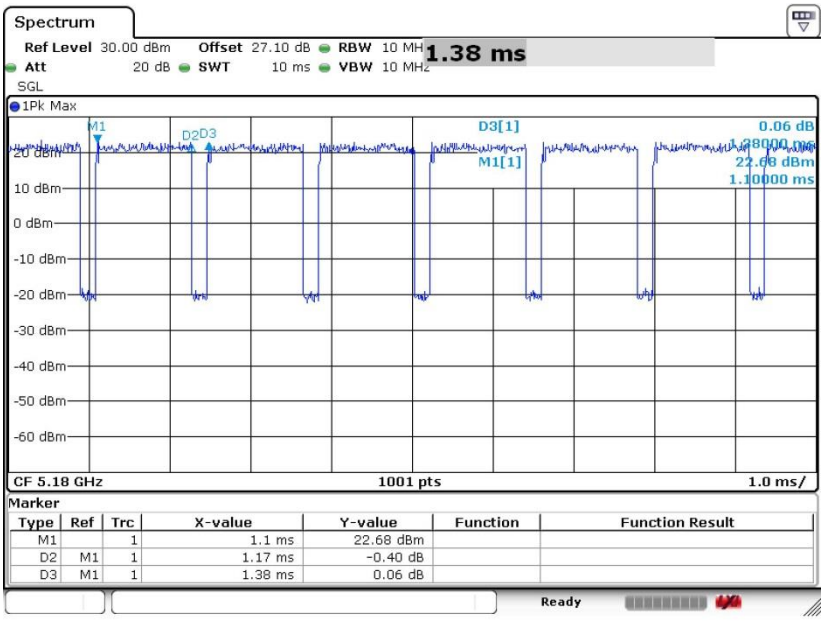
MIMO <Ant. 1>

10 MHz



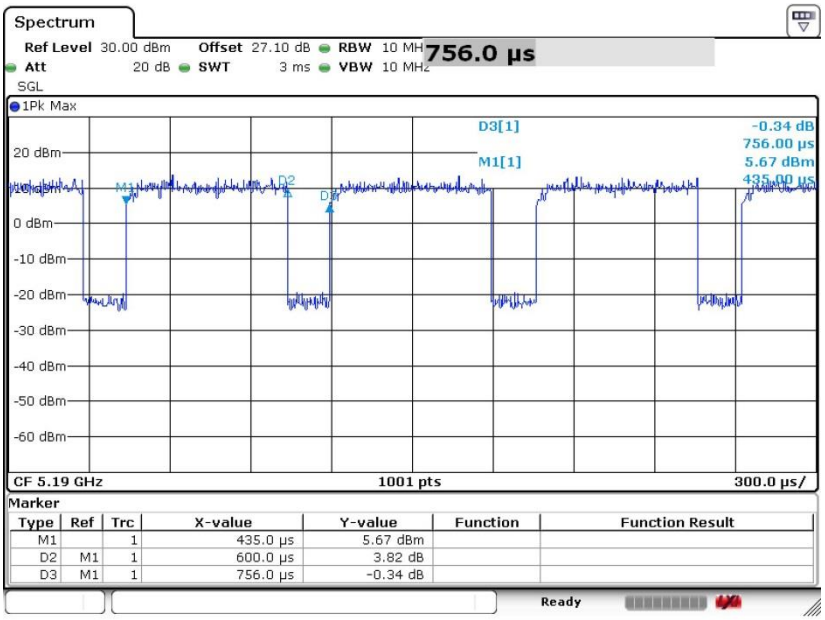
Date: 9.NOV.2018 09:50:28

20 MHz



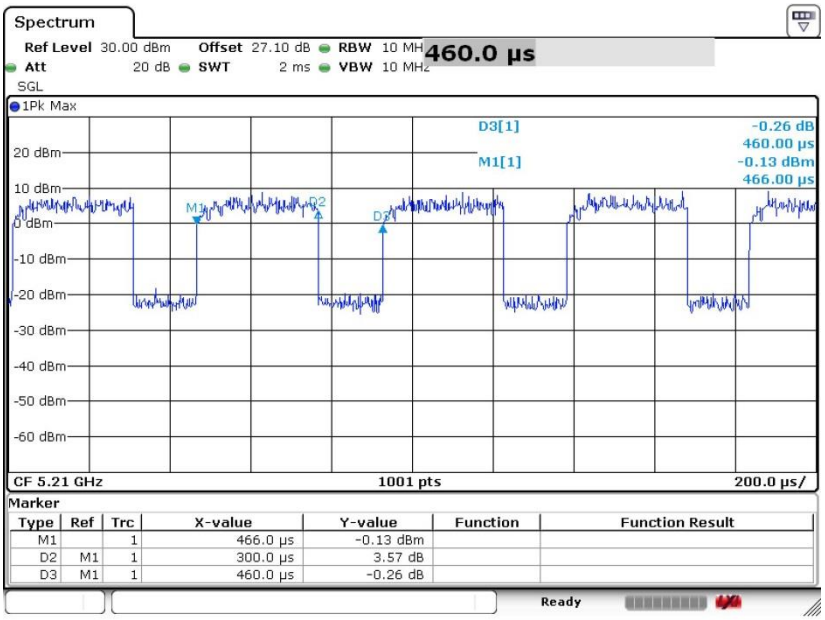
Date: 9.NOV.2018 11:35:26

40 MHz



Date: 9.NOV.2018 14:09:28

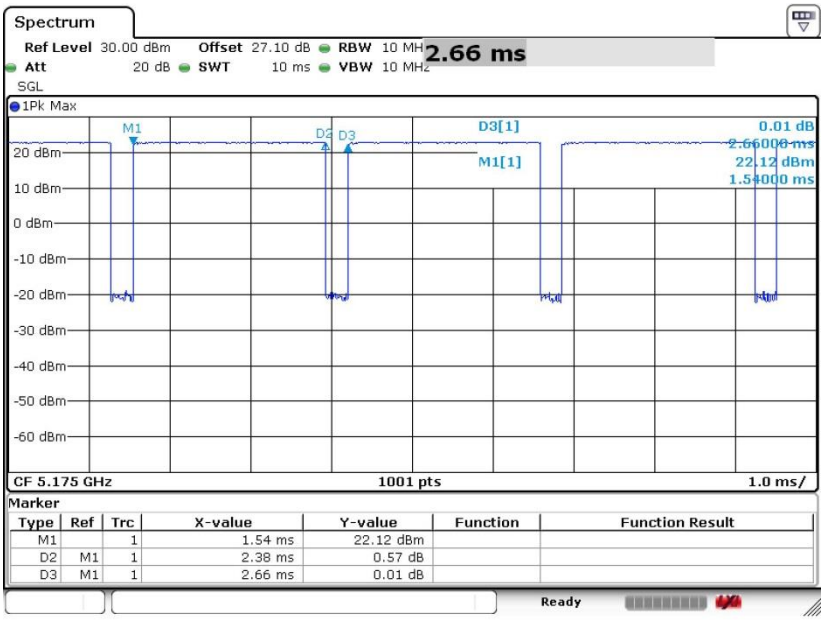
80 MHz



Date: 9.NOV.2018 14:57:32

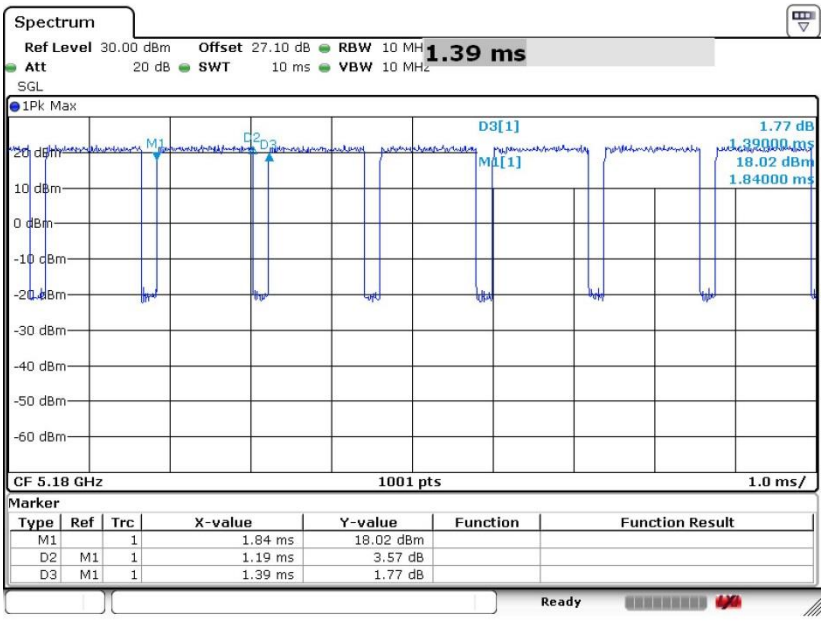
MIMO <Ant. 2>

10 MHz



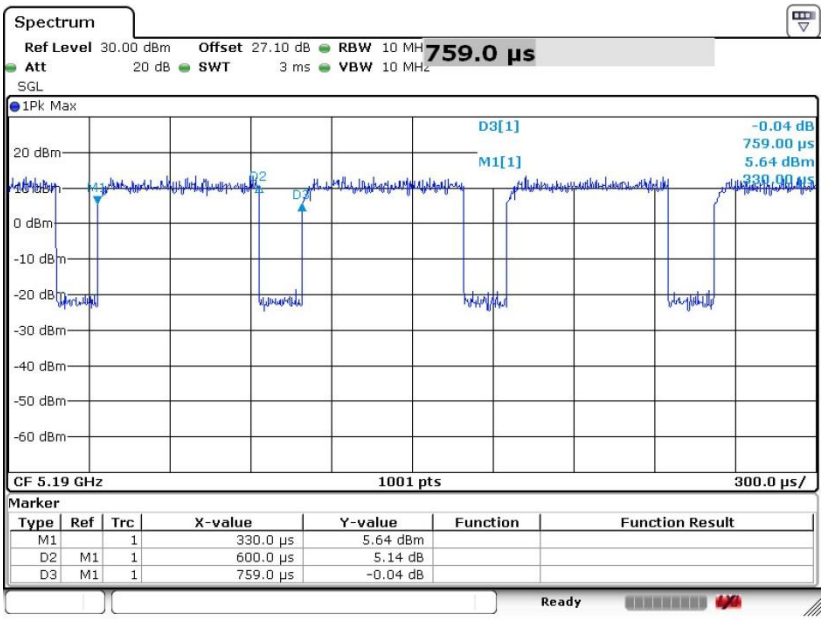
Date: 9.NOV.2018 09:51:31

20 MHz



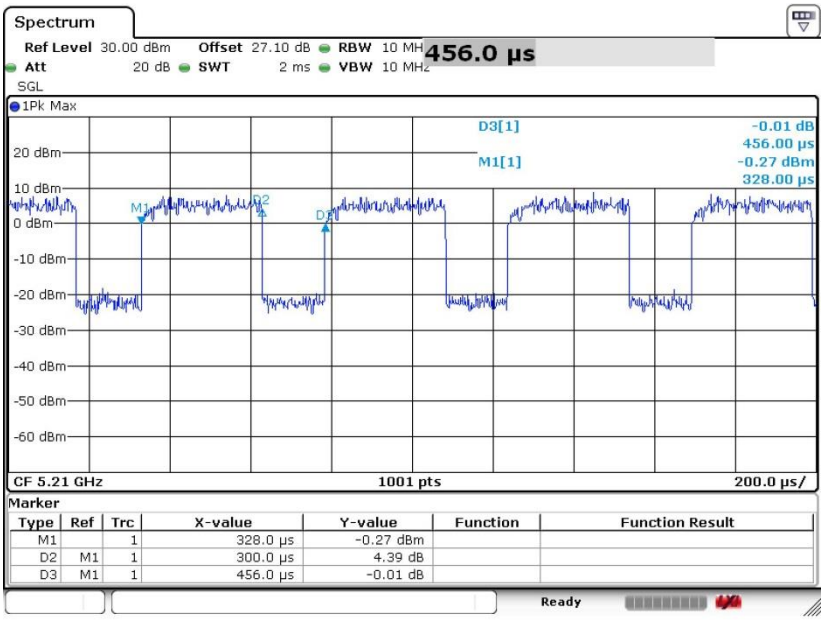
Date: 9.NOV.2018 11:36:29

40 MHz



Date: 9.NOV.2018 14:12:37

80 MHz



Date: 9.NOV.2018 14:58:54