



NCC RADIO TEST REPORT

Equipment : Wireless Access Point
Brand Name : Ruckus
Model Name : R850
Applicant : Ruckus Wireless Inc.
350 W. Java Dr., Sunnyvale CA 94089 USA
Manufacturer : Ruckus Wireless Inc.
350 W. Java Dr., Sunnyvale CA 94089 USA
Standard : LP0002 Section 3.10.1 (2018-01-10)

The product was received on May 08, 2020, and testing was started from Jun. 19, 2020 and completed on Jul. 31, 2020. We, SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.10-2013 and shown compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, the test report shall not be reproduced except in full.



Approved by: Sam Chen

SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory
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TEL : 886-3-656-9065
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Report Template No.: CB-A10_9 Ver1.2



Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
1.1.2	3.10.1.4	Antenna Requirement	PASS	-
3.1	2.3	AC Power-line Conducted Emissions	PASS	-
3.2	3.10.1.6	DTS Bandwidth	PASS	-
3.3	3.10.1.2	Maximum Conducted Output Power	PASS	-
3.4	3.10.1.6	Power Spectral Density	PASS	-
3.5	3.10.1.5	Emissions in Non-restricted Frequency Bands	PASS	-
3.6	3.10.1.5	Emissions in Restricted Frequency Bands	PASS	-

Declaration of Conformity:

The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.

Comments and Explanations:

The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

Reviewed by: Sam Chen

Report Producer: Cindy Peng



1 General Description

1.1 Information

1.1.1 RF General Information

Frequency Range (MHz)	IEEE Std.	Ch. Frequency (MHz)	Channel Number
2400-2483.5	802.15.4	2405-2475	11-25 [15]

Band	Mode	BWch (MHz)	Nant
2.4-2.4835GHz	Zigbee	5	1TX

Note:

- ♦ Zigbee uses a O-QPSK (250kbps) modulation.
- ♦ BWch is the nominal channel bandwidth.



1.1.2 Antenna Information

Ant.	Port			Brand	Model Name	Type	Connector	Gain (dBi)		Polarization
	WLAN 2.4GHz	WLAN 5GHz						WLAN 2.4GHz	WLAN 5GHz	
		4TX/ 4RX	8TX/ 8RX							
1	1	-	1	Ruckus	Stamped Metal Antenna	Omni Integrated PCB	N/A	0	1.5	Vertical
2	2	-	2	Ruckus	Stamped Metal Antenna	Omni Integrated PCB	N/A	0	1.5	Vertical
3	-	-	3	Ruckus	Hamal	Omni Integrated PCB	N/A	-	1.5	Horizontal
4	-	-	4	Ruckus	Corzar	Omni Integrated PCB	N/A	-	1.5	Vertical
5	-	1	5	Ruckus	Corzar	Omni Integrated PCB	N/A	-	1.5	Vertical
6	-	2	6	Ruckus	Corzar	Omni Integrated PCB	N/A	-	1.5	Vertical
7	-	3	7	Ruckus	Hamal	Omni Integrated PCB	N/A	-	1.5	Horizontal
8	-	4	8	Ruckus	Corzar	Omni Integrated PCB	N/A	-	1.5	Vertical
9	3	-	-	Ruckus	Hadar	Omni Integrated PCB	N/A	0	-	Horizontal
10	4	-	-	Ruckus	Corzar	Omni Integrated PCB	N/A	0	-	Vertical
Ant.	Port			Brand	Model Name	Type	Connector	Gain (dBi)		Polarization
	Bluetooth	Zigbee						Bluetooth	Zigbee	
11	1		1	Ruckus	IOT	Omni Integrated PCB	N/A	0.55	0.55	Vertical

Note1: The above information was declared by manufacturer.

Note2:

For WLAN 2.4GHz Function:

11b/g/n/ax (4TX/4RX): Port 1, Port 2, Port 3 and Port 4 could transmit/receive simultaneously.

For WLAN 5GHz Function:

11a/n/ac/ax (4TX/4RX): Port 1, Port 2, Port 3 and Port 4 could transmit/receive simultaneously.

11a/n/ac/ax (8TX/8RX): Port 1, Port 2, Port 3, Port 4, Port 5, Port 6, Port 7 and Port 8 could transmit/receive simultaneously.

For Bluetooth Function (1TX/1RX):

Only Port 1 can be used as transmitting/receiving.

For Zigbee Function (1TX/1RX):

Only Port 1 can be used as transmitting/receiving.

**1.1.3 Mode Test Duty Cycle**

Mode	DC	DCF(dB)	T(s)	VBW(Hz) $\geq 1/T$
Zigbee	1	0	n/a (DC $\geq$ 0.98)	n/a (DC $\geq$ 0.98)

Note:

- ♦ DC is Duty Cycle.
- ♦ DCF is Duty Cycle Factor.

1.1.4 EUT Operational Condition

EUT Power Type	From power adapter or PoE		
Function	☒ Point-to-multipoint	☐ Point-to-point	
Test Software Version	ttermpro.exe		

Note: The above information was declared by manufacturer.



1.2 Applicable Standards

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

- ♦ NCC LP0002 (2018-01-10)
- ♦ ANSI C63.10-2013

The following reference test guidance is not within the scope of accreditation of TAF.

- ♦ FCC KDB 558074 D01 v05r02
- ♦ FCC KDB 662911 D01 v02r01
- ♦ FCC KDB 414788 D01 v01r01

1.3 Testing Location Information

Testing Location		
☐	HWA YA	ADD : No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.) TEL : 886-3-327-3456 FAX : 886-3-327-0973
☒	JHUBEI	ADD : No.8, Lane 724, Bo-ai St., Jhubei City, HsinChu County 302, Taiwan, R.O.C. TEL : 886-3-656-9065 FAX : 886-3-656-9085

Test Condition	Test Site No.	Test Engineer	Test Environment	Test Date
RF Conducted	TH01-CB	Serway Li	25~26.4°C / 59~64%	Jun. 22, 2020~Jul. 16, 2020
Radiated Below 1GHz (Intentional – CTX)	03CH05-CB	Eason Chen	27.7~29.6°C / 58~59%	Jul. 21, 2020~Jul. 30, 2020
	03CH06-CB	Eason Chen	26.9~28.8°C / 58~61%	Jul. 21, 2020~Jul. 30, 2020
Radiated Above 1GHz (Intentional – CTX)	03CH02-CB	Brian Sun	28.3~28.6°C / 58~62%	Jun. 19, 2020
Radiated Below 1GHz and Above 1GHz (Unintentional – CRX)	03CH05-CB	Eason Chen	27.7~29.6°C / 58~59%	Jul. 21, 2020~Jul. 30, 2020
	03CH06-CB	Eason Chen	26.9~28.8°C / 58~61%	Jul. 21, 2020~Jul. 30, 2020
AC Conduction	CO01-CB	GN Hou	22~23°C / 59~61%	Jul. 21, 2020~Jul. 31, 2020

Test site Designation No. TW0006 with FCC.

Test site registered number IC 4086D with Industry Canada.

1.4 Measurement Uncertainty

ISO/IEC 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report. The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor (k=2))

Test Items	Uncertainty	Remark
Conducted Emission (150kHz ~ 30MHz)	2.0 dB	Confidence levels of 95%
Radiated Emission (30MHz ~ 1,000MHz)	5.6 dB	Confidence levels of 95%
Radiated Emission (1GHz ~ 18GHz)	4.9 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	4.6 dB	Confidence levels of 95%
Conducted Emission	2.8 dB	Confidence levels of 95%
Output Power Measurement	1.4 dB	Confidence levels of 95%
Power Density Measurement	2.8 dB	Confidence levels of 95%
Bandwidth Measurement	0.39%	Confidence levels of 95%



2 Test Configuration of EUT

2.1 Test Channel Mode

Mode	Power Setting
Zigbee	-
2405MHz	16
2440MHz	16
2475MHz	16

2.2 The Worst Case Measurement Configuration

The Worst Case Mode for Following Conformance Tests	
Tests Item	AC power-line conducted emissions
Condition	AC power-line conducted measurement for line and neutral
Operating Mode	Intentional – CTX
1	EUT + Adapter (WLAN 2.4GHz)
2	EUT + Adapter (WLAN 5GHz)
3	EUT + Adapter (Bluetooth)
4	EUT + Adapter (Zigbee)
5	EUT + PoE (WLAN 2.4GHz)
6	EUT + PoE (WLAN 5GHz)
7	EUT + PoE (Bluetooth)
8	EUT + PoE (Zigbee)
For operating mode 8 is the worst case and it was record in this test report.	
Operating Mode	Unintentional – CRX
1	EUT + Adapter (WLAN 2.4GHz)
2	EUT + Adapter (WLAN 5GHz)
3	EUT + Adapter (Bluetooth)
4	EUT + Adapter (Zigbee)
5	EUT + PoE (WLAN 2.4GHz)
6	EUT + PoE (WLAN 5GHz)
7	EUT + PoE (Bluetooth)
8	EUT + PoE (Zigbee)
For operating mode 2 is the worst case and it was record in this test report.	

The Worst Case Mode for Following Conformance Tests	
Tests Item	DTS Bandwidth Maximum Conducted Output Power Power Spectral Density Emissions in Non-restricted Frequency Bands
Test Condition	Conducted measurement at transmit chains



The Worst Case Mode for Following Conformance Tests	
Tests Item	Emissions in Restricted Frequency Bands
Test Condition	Radiated measurement If EUT consist of multiple antenna assembly (multiple antenna are used in EUT regardless of spatial multiplexing MIMO configuration), the radiated test should be performed with highest antenna gain of each antenna type.
Operating Mode < 1GHz	Intentional – CTX
The EUT was performed at Y axis and Z axis position for Emissions in Restricted Frequency Bands test. 1. For WLAN 2.4GHz: EUT Y axis generated the worst test result for Restricted Frequency Bands Intentional 1GHz~10th Harmonic test, thus the measurement for Emissions in Restricted Frequency Bands Below 1GHz Intentional – CTX test will follow this same test configuration. 2. For WLAN 5GHz: EUT Z axis generated the worst test result for Restricted Frequency Bands Intentional 1GHz~10th Harmonic test, thus the measurement for Emissions in Restricted Frequency Bands Below 1GHz Intentional – CTX test will follow this same test configuration. 3. For Bluetooth: EUT Y axis generated the worst test result for Restricted Frequency Bands Intentional 1GHz~10th Harmonic test, thus the measurement for Emissions in Restricted Frequency Bands Below 1GHz Intentional – CTX test will follow this same test configuration. 4. For Zigbee: EUT Y axis generated the worst test result for Restricted Frequency Bands Intentional 1GHz~10th Harmonic test, thus the measurement for Emissions in Restricted Frequency Bands Below 1GHz Intentional – CTX test will follow this same test configuration.	
For WLAN 5GHz: There are two modes of EUT for WLAN 5GHz. One is 8TX mode, and the other is 4TX mode. 8TX mode is the highest power was selected to test and record in this report.	
1	EUT Y axis + Adapter (WLAN 2.4GHz)
2	EUT Z axis + Adapter (WLAN 5GHz - 8TX mode)
3	EUT Y axis + Adapter (Bluetooth)
4	EUT Y axis + Adapter (Zigbee)
5	EUT Y axis + PoE (WLAN 2.4GHz)
6	EUT Z axis + PoE (WLAN 5GHz - 8TX mode)
7	EUT Y axis + PoE (Bluetooth)
8	EUT Y axis + PoE (Zigbee)
For operating mode 2 is the worst case and it was record in this test report.	
Operating Mode < 1GHz	Unintentional – CRX
The EUT was performed at Y axis and Z axis position for Emissions in Restricted Frequency Bands test. 1. For WLAN 2.4GHz: EUT Y axis generated the worst test result for Restricted Frequency Bands Intentional 1GHz~10th Harmonic test, thus the measurement for Emissions in Restricted Frequency Bands Below 1GHz Unintentional – CRX test will follow this same test configuration. 2. For WLAN 5GHz: EUT Z axis generated the worst test result for Restricted Frequency Bands A Intentional 1GHz~10th Harmonic test, thus the measurement for Emissions in Restricted Frequency Bands Below 1GHz Unintentional – CRX test will follow this same test configuration. 3. For Bluetooth: EUT Y axis generated the worst test result for Restricted Frequency Bands Intentional 1GHz~10th Harmonic test thus the measurement for Emissions in Restricted Frequency	

Bands Below 1GHz Unintentional – CRX test will follow this same test configuration.	
4. For Zigbee: EUT Y axis generated the worst test result for Restricted Frequency Bands Intentional 1GHz~10 th Harmonic test, thus the measurement for Emissions in Restricted Frequency Bands Below 1GHz Intentional – CTX test will follow this same test configuration.	
For WLAN 5GHz: There are two modes of EUT for WLAN 5GHz. One is 8TX mode, and the other is 4TX mode. 8TX mode is the highest power was selected to test and record in this report.	
1	EUT Y axis + Adapter (WLAN 2.4GHz)
2	EUT Z axis + Adapter (WLAN 5GHz - 8TX mode)
3	EUT Y axis + Adapter (Bluetooth)
4	EUT Y axis + Adapter (Zigbee)
5	EUT Y axis + PoE (WLAN 2.4GHz)
6	EUT Z axis + PoE (WLAN 5GHz - 8TX mode)
7	EUT Y axis + PoE (Bluetooth)
8	EUT Y axis + PoE (Zigbee)
For operating mode 1 is the worst case and it was record in this test report.	
Operating Mode Unintentional 1GHz~5th Harmonic	Unintentional – CRX
The EUT was performed at Y axis and Z axis position for Emissions in Restricted Frequency Bands test.	
1. For WLAN 2.4GHz: EUT Y axis generated the worst test result for Restricted Frequency Bands Intentional 1GHz~10 th Harmonic test, thus the measurement for Emissions in Restricted Frequency Bands Unintentional 1GHz~5 th Harmonic test will follow this same test configuration.	
2. For WLAN 5GHz: EUT Z axis generated the worst test result for Restricted Frequency Bands Intentional 1GHz~10 th Harmonic test, thus the measurement for Emissions in Restricted Frequency Bands Unintentional 1GHz~5 th Harmonic test will follow this same test configuration.	
3. For Bluetooth: EUT Y axis generated the worst test result for Restricted Frequency Bands Intentional 1GHz~10 th Harmonic test, thus the measurement for Emissions in Restricted Frequency Bands Below 1GHz Unintentional 1GHz~5 th Harmonic test will follow this same test configuration.	
4. For Zigbee: EUT Y axis generated the worst test result for Restricted Frequency Bands Intentional 1GHz~10 th Harmonic test, thus the measurement for Emissions in Restricted Frequency Bands Below 1GHz Unintentional 1GHz~5 th Harmonic test will follow this same test configuration.	
The EUT could be powered by adapter or PoE. EUT + Adapter generated the worst test result for Restricted Frequency Bands Below 1GHz Unintentional – CRX test, thus the measurement for Emissions in Restricted Frequency Bands Unintentional 1GHz~5 th Harmonic test will follow this same test configuration.	
For WLAN 5GHz: There are two modes of EUT for WLAN 5GHz. One is 8TX mode, and the other is 4TX mode. 8TX mode is the highest power was selected to test and record in this report.	
1	EUT Y axis + Adapter (WLAN 2.4GHz)
2	EUT Z axis + Adapter (WLAN 5GHz - 8TX mode)
3	EUT Y axis + Adapter (Bluetooth)
4	EUT Y axis + Adapter (Zigbee)



For operating mode 2 is the worst case and it was record in this test report.

Operating Mode
Intentional 1GHz~10th
Harmonic

Intentional – CTX

The EUT was performed at Y axis and Z axis position for Emissions in Restricted Frequency Bands test, and the worst case was found at Y axis. So the measurement will follow this same test configuration.

1

EUT Y axis + Adapter

Note1: The EUT could be powered by adapter or PoE. The adapter and PoE were for measurement only, it would not be marketed.

Equipment	Brand Name	Model Name	FCC ID
Adapter	Ruckus	740-64277-001	N/A
PoE	Ruckus	GRT-480125A	N/A

Note2: The applicant declared that the accessories of this case were for measurement only and it would not be marketed. The accessories will be provided and inspected by the laboratory (or the applicant).

2.3 EUT Operation during Test

The EUT was programmed to be in continuously transmitting/receiving mode.

2.4 Accessories

N/A



2.5 Support Equipment

For AC Conduction (Intentional-CTX):

Support Equipment					
No.	Equipment	Brand Name	Model Name	FCC ID	Remark
A	PoE/LAN NB	DELL	E6430	N/A	Provided by Lab.
B	Flash disk3.0	Transcend	JetFlash-700	N/A	Provided by Lab.
C	PoE	Ruckus	GRT-480125A	N/A	Provided by applicant.

For AC Conduction (Unintentional-CRX):

Support Equipment					
No.	Equipment	Brand Name	Model Name	FCC ID	Remark
A	LAN NB	DELL	E6430	N/A	Provided by Lab.
B	Flash disk3.0	Transcend	JetFlash-700	N/A	Provided by Lab.
C	Adapter	Ruckus	740-64277-001	N/A	Provided by applicant.

For Radiated (Below 1GHz: Intentional-CTX):

Support Equipment					
No.	Equipment	Brand Name	Model Name	FCC ID	Remark
A	LAN NB	DELL	E4300	N/A	Provided by Lab.
B	Flash disk3.0	Silicon Power	B06	N/A	Provided by Lab.
C	Adapter	Ruckus	740-64277-001	N/A	Provided by applicant.

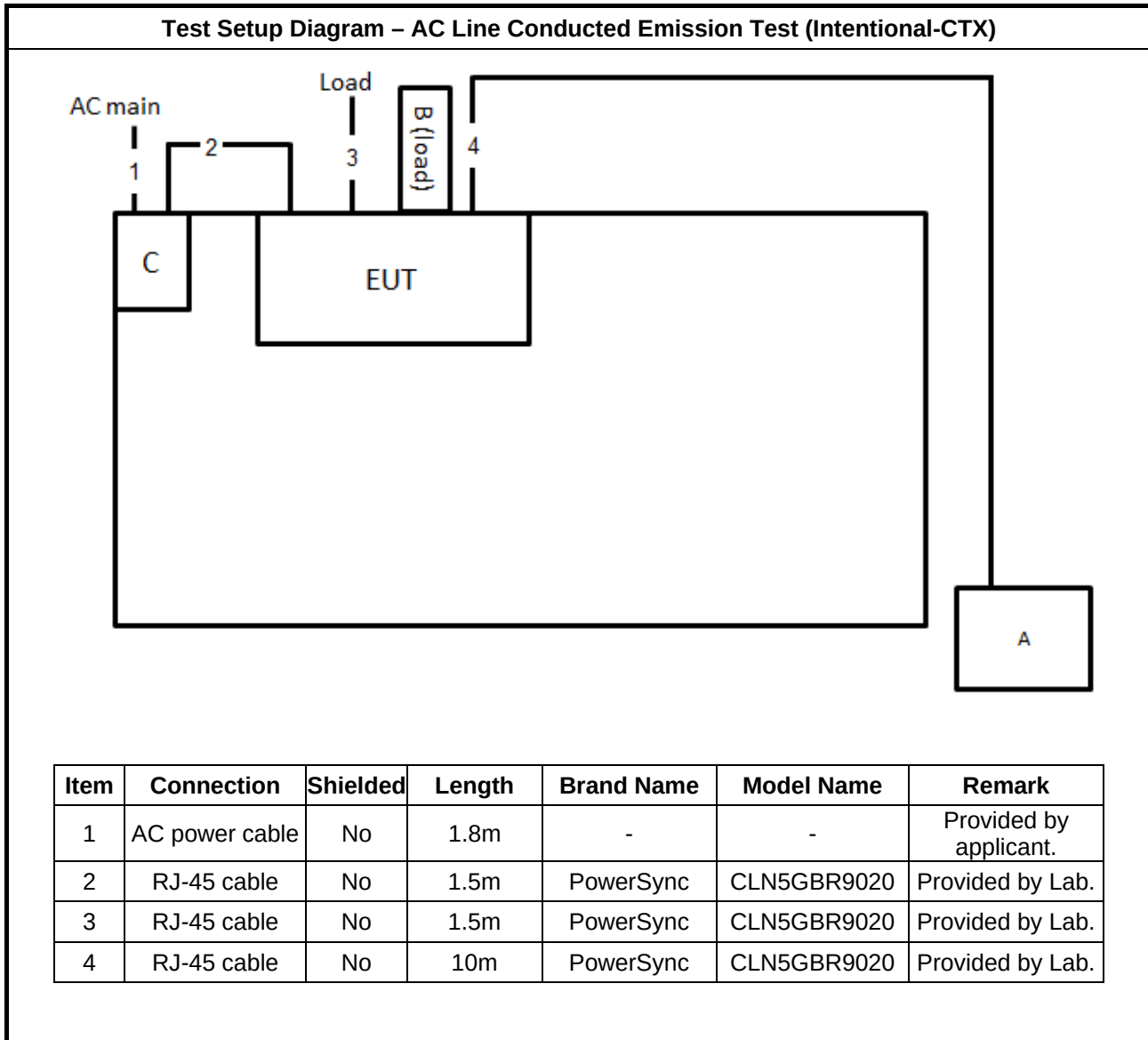
For Radiated (Below 1GHz: Unintentional-CRX / Above 1GHz: Unintentional 1GHz~5th Harmonic):

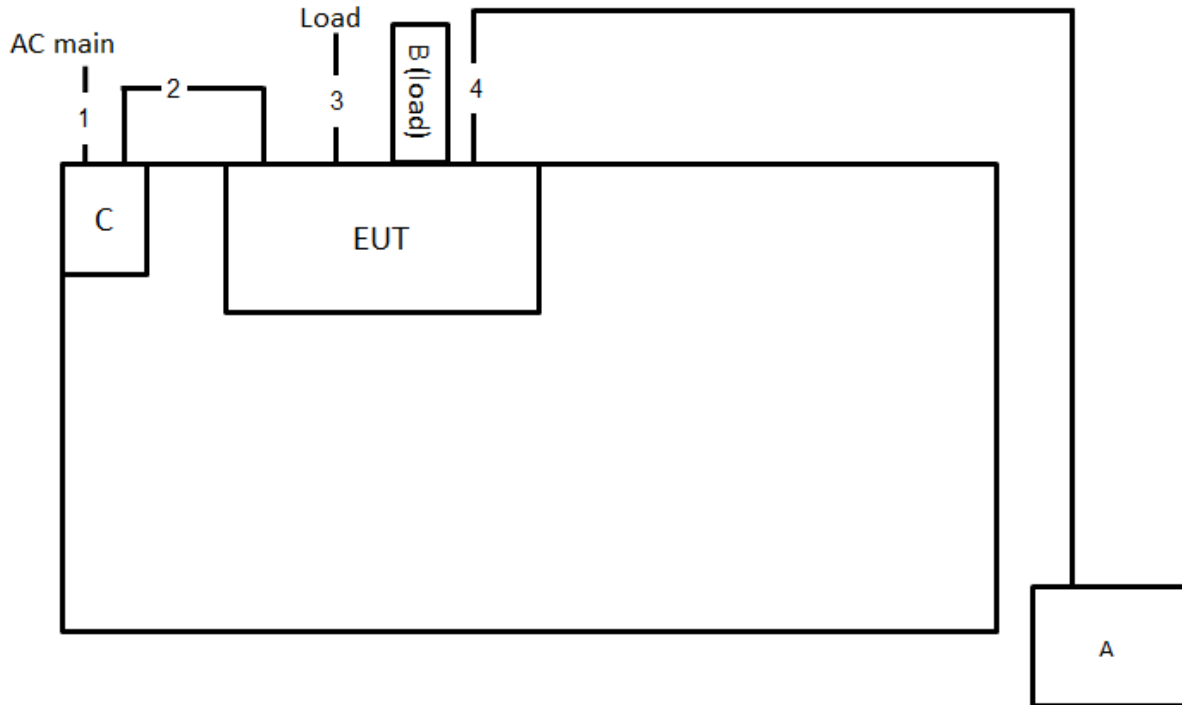
Support Equipment					
No.	Equipment	Brand Name	Model Name	FCC ID	Remark
A	LAN NB	DELL	E4300	N/A	Provided by Lab.
B	Flash disk3.0	Silicon Power	B06	N/A	Provided by Lab.
C	Adapter	Ruckus	740-64277-001	N/A	Provided by applicant.

For Radiated (Above 1GHz: Intentional 1GHz~10th Harmonic) and RF Conducted:

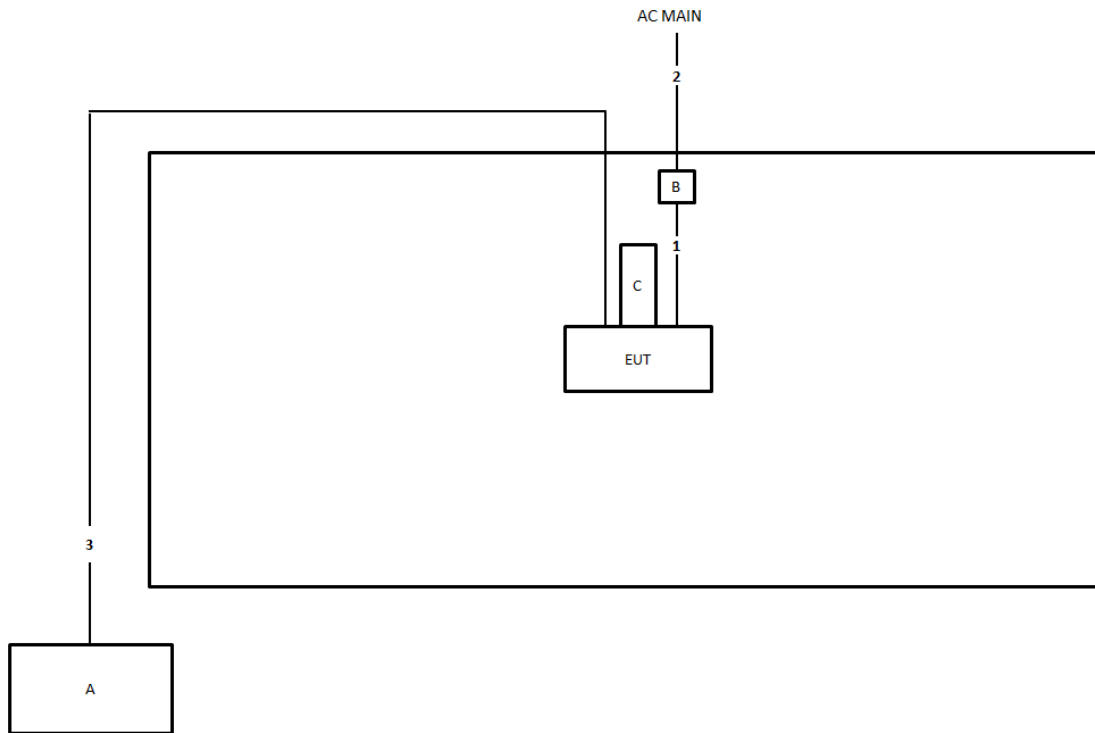
Support Equipment					
No.	Equipment	Brand Name	Model Name	FCC ID	Remark
A	LAN NB	DELL	E4300	N/A	Provided by Lab.
B	Adapter	Ruckus	740-64277-001	N/A	Provided by applicant.

2.6 Test Setup Diagram

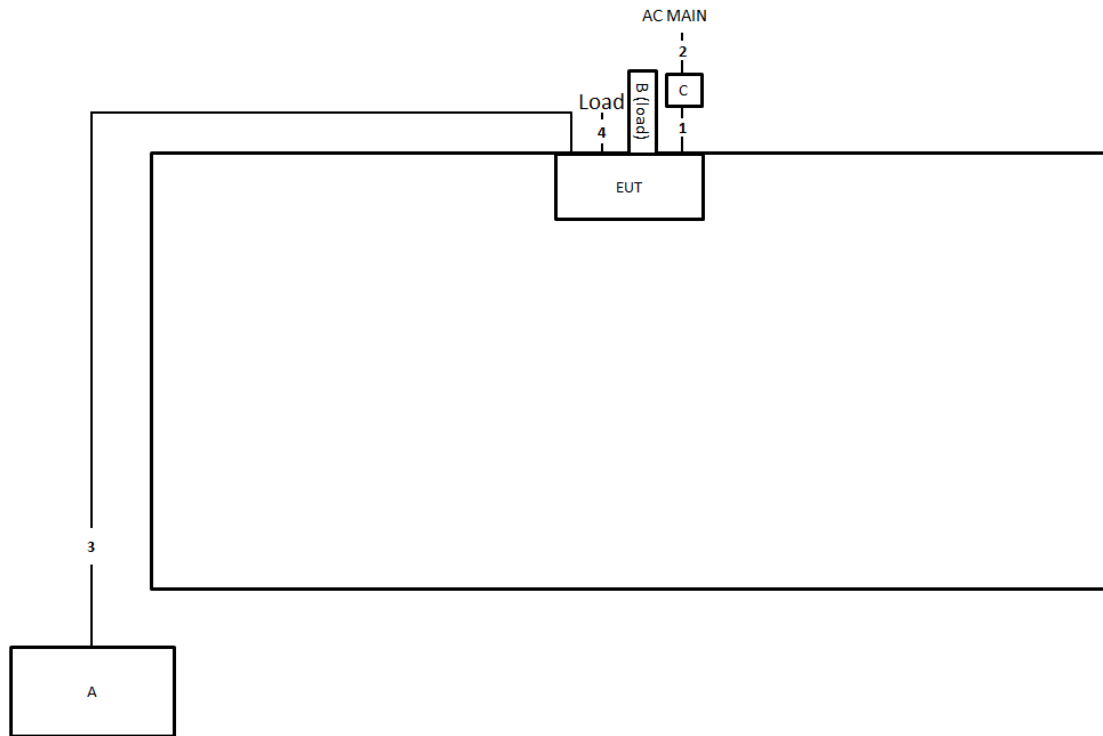


Test Setup Diagram – AC Line Conducted Emission Test (Unintentional-CRX)


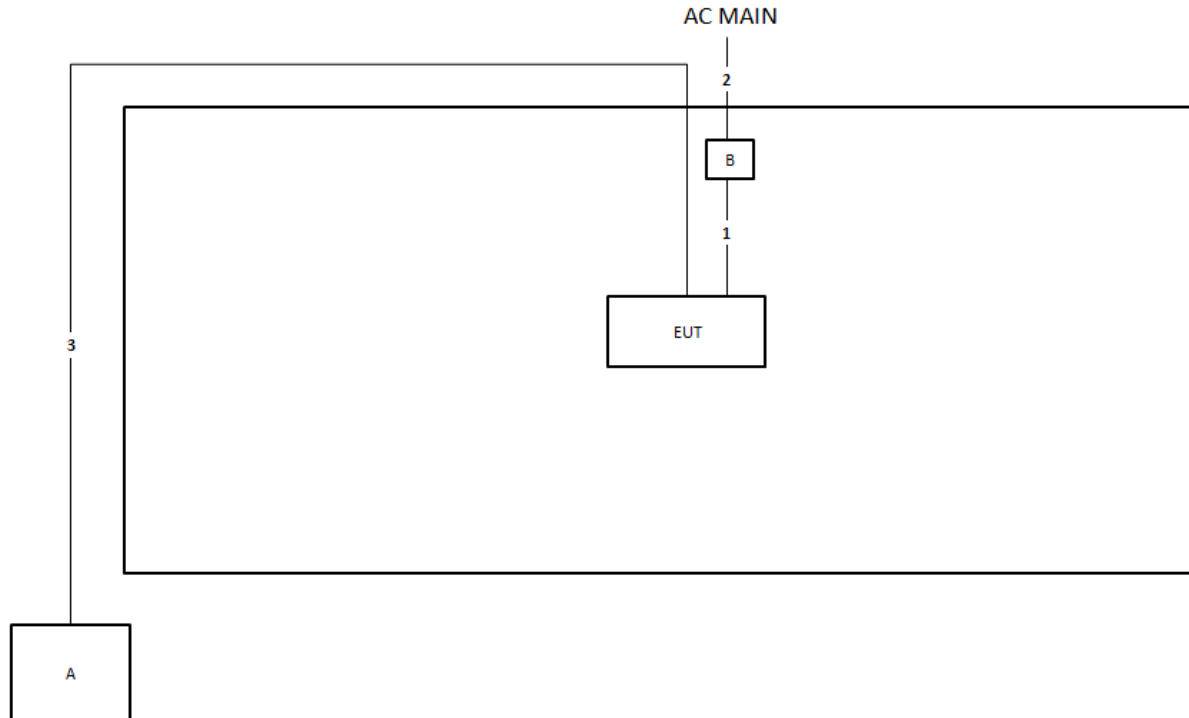
Item	Connection	Shielded	Length	Brand Name	Model Name	Remark
1	AC power cable	No	1.8m	-	-	Provided by Lab.
2	DC power cable	No	1.2m	Ruckus	740-64277-001	Provided by applicant.
3	RJ-45 cable	No	1.5m	PowerSync	CLN5GBR9020	Provided by Lab.
4	RJ-45 cable	No	10m	PowerSync	CLN5GBR9020	Provided by Lab.

Test Setup Diagram - Radiated Test (Below 1GHz: Intentional-CTX)


Item	Connection	Shielded	Length	Brand Name	Model Name	Remark
1	DC Power cable	No	1.2m	Ruckus	740-64277-001	Provided by applicant.
2	AC Power cable	No	1.8m	-	-	Provided by Lab.
3	RJ-45 cable	No	10m	PowerSync	CLN5GBR9020	Provided by Lab.

Test Setup Diagram - Radiated Test (Below 1GHz: Unintentional-CRX / Above 1GHz: Unintentional 1GHz~5th Harmonic)


Item	Connection	Shielded	Length	Brand Name	Model Name	Remark
1	DC power cable	No	1.2m	Ruckus	740-64277-001	Provided by applicant.
2	AC power cable	No	1.8m	-	-	Provided by Lab.
3	RJ-45 cable	No	10m	PowerSync	CLN5GBR9020	Provided by Lab.
4	RJ-45 cable	No	1.5m	PowerSync	CLN5GBR9020	Provided by Lab.

Test Setup Diagram - Radiated Test (Above 1GHz: Intentional 1GHz~10th Harmonic)


Item	Connection	Shielded	Length	Brand Name	Model Name	Remark
1	DC power cable	No	1.2m	Ruckus	740-64277-001	Provided by applicant.
2	AC power cable	No	1.8m	-	-	Provided by Lab.
3	RJ-45 cable	No	10m	PowerSync	CLN5GBR9020	Provided by Lab.



3 Transmitter Test Result

3.1 AC Power-line Conducted Emissions

3.1.1 AC Power-line Conducted Emissions Limit

AC Power-line Conducted Emissions Limit		
Frequency Emission (MHz)	Quasi-Peak	Average
0.15-0.5	66 - 56 *	56 - 46 *
0.5-5	56	46
5-30	60	50

Note 1: * Decreases with the logarithm of the frequency.

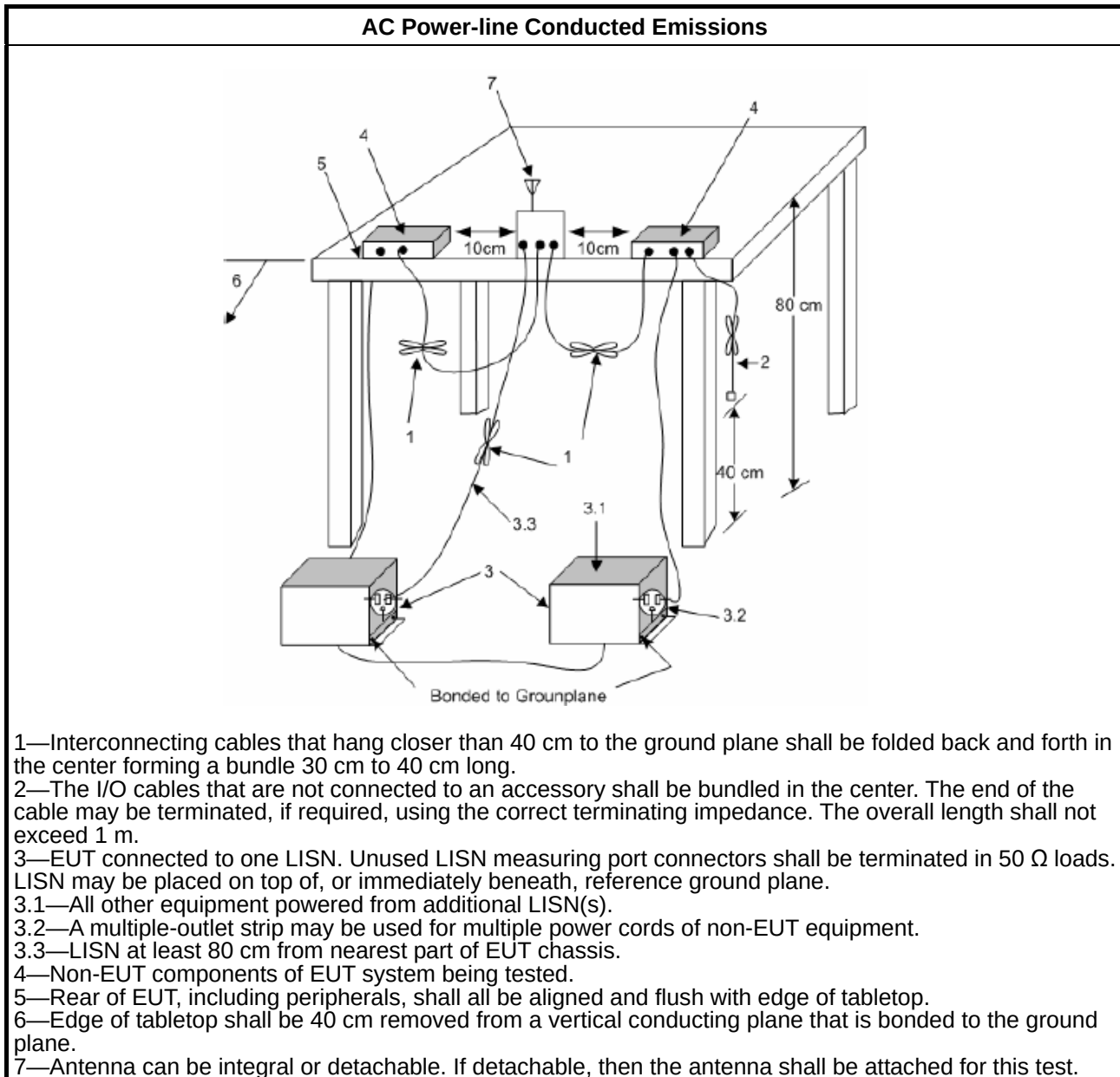
3.1.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

3.1.3 Test Procedures

Test Method
☒ Refer as ANSI C63.10-2013, clause 6.2 for AC power-line conducted emissions.

3.1.4 Test Setup



3.1.5 Measurement Results Calculation

The measured Level is calculated using:

- Corrected Reading (dBuV) = LISN Factor + Cable Loss + Read Level = Level
- Margin = - Limit + (Read Level + LISN Factor + Cable Loss)

3.1.6 Test Result of AC Power-line Conducted Emissions

Refer as Appendix A

3.2 DTS Bandwidth

3.2.1 6dB Bandwidth Limit

6dB Bandwidth Limit	
Systems using digital modulation techniques:	
▪	6 dB bandwidth $\geq$ 500 kHz.

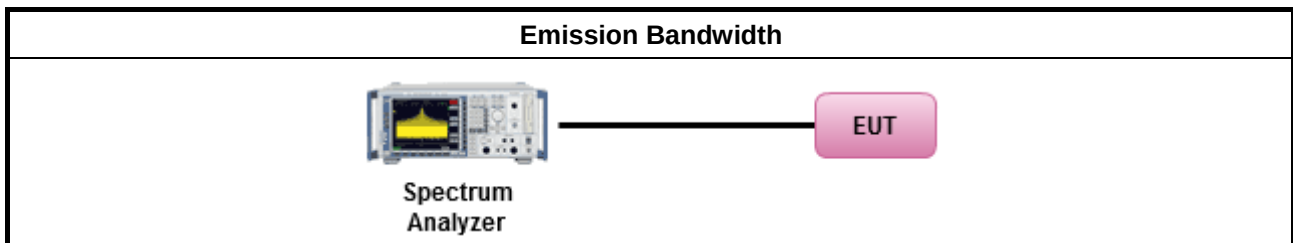
3.2.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

3.2.3 Test Procedures

Test Method	
▪	For the emission bandwidth shall be measured using one of the options below:
☒	Refer as FCC KDB 558074, clause 8.2 & C63.10 clause 11.8.1 Option 1 for 6 dB bandwidth measurement.
☐	Refer as FCC KDB 558074, clause 8.2 & C63.10 clause 11.8.2 Option 2 for 6 dB bandwidth measurement.
☐	Refer as ANSI C63.10, clause 6.9.1 for occupied bandwidth testing.

3.2.4 Test Setup



3.2.5 Test Result of Emission Bandwidth

Refer as Appendix B

3.3 Maximum Conducted Output Power

3.3.1 Maximum Conducted Output Power Limit

Maximum Conducted Output Power Limit	
	If $G_{TX} \leq 6$ dBi, then $P_{Out} \leq 30$ dBm (1 W)
	Point-to-multipoint systems (P2M): If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)$ dBm
	Point-to-point systems (P2P): If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)/3$ dBm
	Smart antenna system (SAS):
	- Single beam: If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)/3$ dBm - Overlap beam: If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)/3$ dBm - Aggregate power on all beams: If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)/3 + 8$ dB dBm
P_{Out} = maximum peak conducted output power or maximum conducted output power in dBm, G_{TX} = the maximum transmitting antenna directional gain in dBi.	

3.3.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

3.3.3 Test Procedures

Test Method	
Maximum Peak Conducted Output Power	
☐	Refer as FCC KDB 558074, clause 8.3.1.1 & C63.10 clause 11.9.1.1 (RBW $\geq$ EBW method).
☐	Refer as FCC KDB 558074, clause 8.3.1.3 & C63.10 clause 11.9.1.3 (peak power meter).
Maximum Conducted Output Power	
[duty cycle $\geq$ 98% or external video / power trigger]	
☐	Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.2 Method AVGSA-1.
☐	Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.3 Method AVGSA-1A. (alternative)
duty cycle < 98% and average over on/off periods with duty factor	
☐	Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.4 Method AVGSA-2.
☐	Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.5 Method AVGSA-2A (alternative)
☐	Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.6 Method AVGSA-3
☐	Refer as FCC KDB 558074, clause 8.3.2.2 & C63.10 clause 11.9.2.2.7 Method AVGSA-3A (alternative)
Measurement using a power meter (PM)	
☐	Refer as FCC KDB 558074, clause 8.3.2.3 & C63.10 clause 11.9.2.3.1 Method AVGPM (using an RF average power meter).
☒	Refer as FCC KDB 558074, clause 8.3.2.3 & C63.10 clause 11.9.2.3.2 Method AVGPM-G (using an gate RF average power meter).

▪ For conducted measurement.

- If the EUT supports multiple transmit chains using options given below:
Refer as FCC KDB 662911, In-band power measurements. Using the measure-and-sum approach, measured all transmit ports individually. Sum the power (in linear power units e.g., mW) of all ports for each individual sample and save them.
- If multiple transmit chains, EIRP calculation could be following as methods:

$$P_{\text{total}} = P_1 + P_2 + \dots + P_n$$
 (calculated in linear unit [mW] and transfer to log unit [dBm])

$$\text{EIRP}_{\text{total}} = P_{\text{total}} + \text{DG}$$

3.3.4 Test Setup

Maximum Conducted Output Power (Power Meter)



3.3.5 Test Result of Maximum Conducted Output Power

Refer as Appendix C

3.4 Power Spectral Density

3.4.1 Power Spectral Density Limit

Power Spectral Density Limit
Power Spectral Density (PSD) ≤ 8 dBm/3kHz

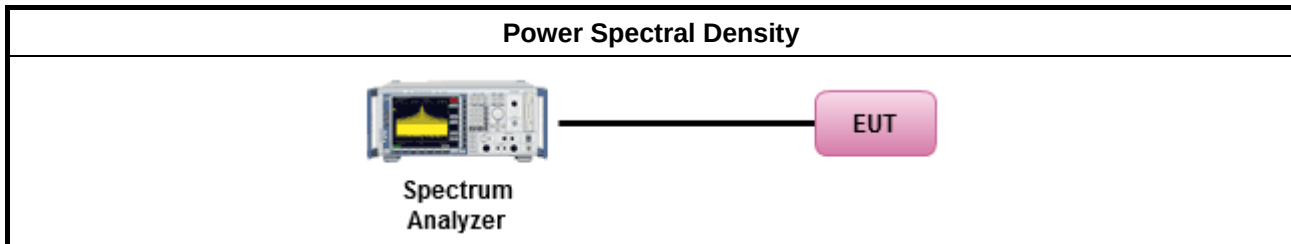
3.4.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

3.4.3 Test Procedures

Test Method	
Peak power spectral density procedures that the same method as used to determine the conducted output power. If maximum peak conducted output power was measured to demonstrate compliance to the output power limit, then the peak PSD procedure below (Method PKPSD) shall be used. If maximum conducted output power was measured to demonstrate compliance to the output power limit, then one of the average PSD procedures shall be used, as applicable based on the following criteria (the peak PSD procedure is also an acceptable option).	
☒	Refer as FCC KDB 558074, clause 8.4 & C63.10 clause 11.10 Method Max. PSD.
For conducted measurement.	
If The EUT supports multiple transmit chains using options given below:	
☐	Option 1: Measure and sum the spectra across the outputs. Refer as FCC KDB 662911, In-band power spectral density (PSD). Sample all transmit ports simultaneously using a spectrum analyzer for each transmit port. Where the trace bin-by-bin of each transmit port summing can be performed. (i.e., in the first spectral bin of output 1 is summed with that in the first spectral bin of output 2 and that from the first spectral bin of output 3, and so on up to the NTX output to obtain the value for the first frequency bin of the summed spectrum.). Add up the amplitude (power) values for the different transmit chains and use this as the new data trace.
☐	Option 2: Measure and sum spectral maxima across the outputs. With this technique, spectra are measured at each output of the device at the required resolution bandwidth. The maximum value (peak) of each spectrum is determined. These maximum values are then summed mathematically in linear power units across the outputs. These operations shall be performed separately over frequency spans that have different out-of-band or spurious emission limits,
☐	Option 3: Measure and add 10 log(N) dB, where N is the number of transmit chains. Refer as FCC KDB 662911, In-band power spectral density (PSD). Performed at each transmit chains and each transmit chains shall be compared with the limit have been reduced with 10 log(N). Or each transmit chains shall be add 10 log(N) to compared with the limit.

3.4.4 Test Setup



3.4.5 Test Result of Power Spectral Density

Refer as Appendix D

3.5 Emissions in Non-restricted Frequency Bands

3.5.1 Emissions in Non-restricted Frequency Bands Limit

Un-restricted Band Emissions Limit	
RF output power procedure	Limit (dBc)
Peak output power procedure	20
Average output power procedure	30
Note 1: If the peak output power procedure is used to measure the fundamental emission power to demonstrate compliance to requirements, then the peak conducted output power measured within any 100 kHz outside the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum measured in-band peak PSD level. Note 2: If the average output power procedure is used to measure the fundamental emission power to demonstrate compliance to requirements, then the power in any 100 kHz outside of the authorized frequency band shall be attenuated by at least 30 dB relative to the maximum measured in-band average PSD level.	

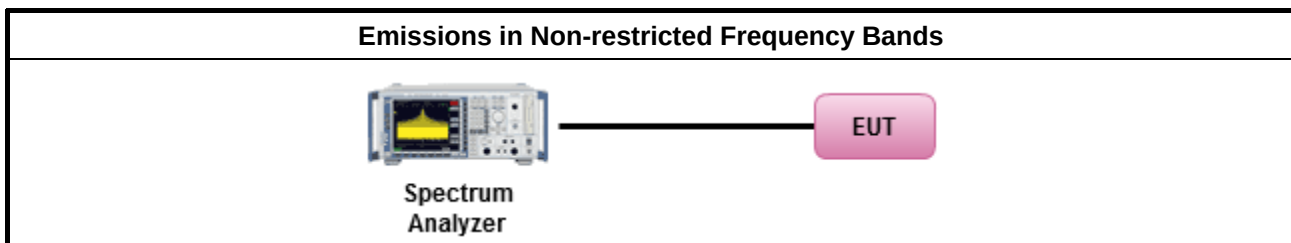
3.5.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

3.5.3 Test Procedures

Test Method
Refer as FCC KDB 558074, clause 8.5 for unwanted emissions into non-restricted bands.

3.5.4 Test Setup



3.5.5 Test Result of Emissions in Non-restricted Frequency Bands

Refer as Appendix E

3.6 Emissions in Restricted Frequency Bands

3.6.1 Emissions in Restricted Frequency Bands Limit

Restricted Band Emissions Limit			
Frequency Range (MHz)	Field Strength (uV/m)	Field Strength (dBuV/m)	Measure Distance (m)
0.009~0.490	2400/F(kHz)	48.5 - 13.8	300
0.490~1.705	24000/F(kHz)	33.8 - 23	30
1.705~30.0	30	29	30
30~88	100	40	3
88~216	150	43.5	3
216~960	200	46	3
Above 960	500	54	3

Note 1: Test distance for frequencies at or above 30 MHz, measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse of linear distance for field-strength measurements, inverse of linear distance-squared for power-density measurements).

Note 2: Test distance for frequencies at below 30 MHz, measurements may be performed at a distance closer than the EUT limit distance; however, an attempt should be made to avoid making measurements in the near field. When performing measurements below 30 MHz at a closer distance than the limit distance, the results shall be extrapolated to the specified distance by either making measurements at a minimum of two or more distances on at least one radial to determine the proper extrapolation factor or by using the square of an inverse linear distance extrapolation factor (40 dB/decade). The test report shall specify the extrapolation method used to determine compliance of the EUT.

Note 3: Using the distance of 1m during the test for above 18 GHz, and the test value to correct for the distance factor at 3m.

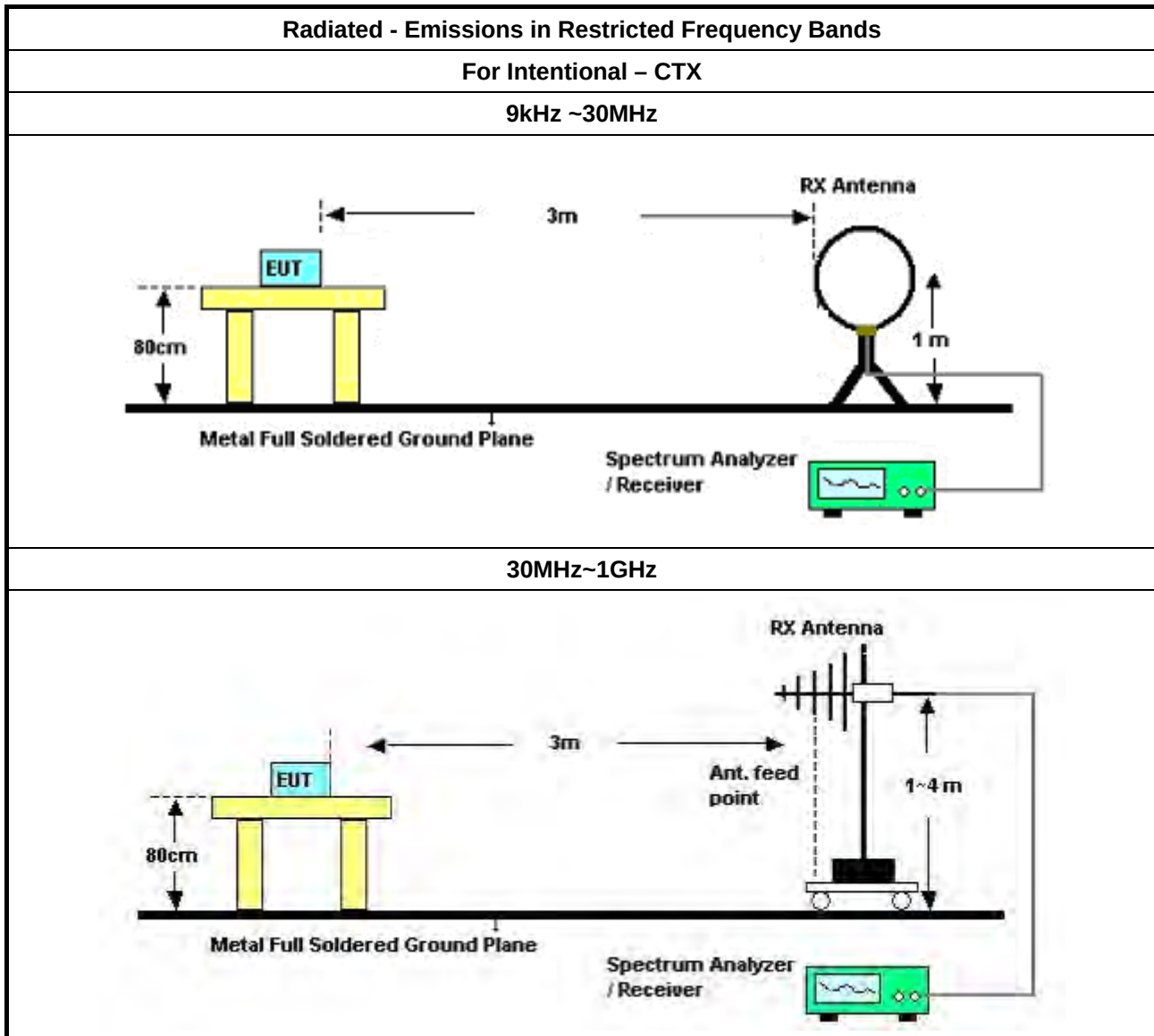
3.6.2 Measuring Instruments

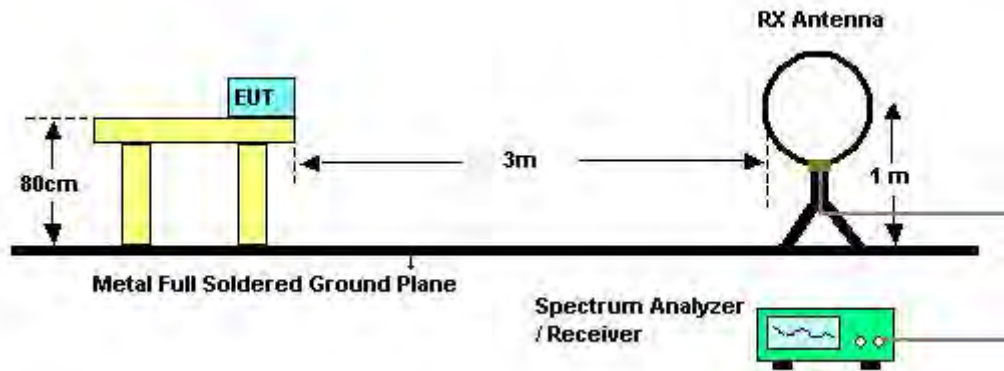
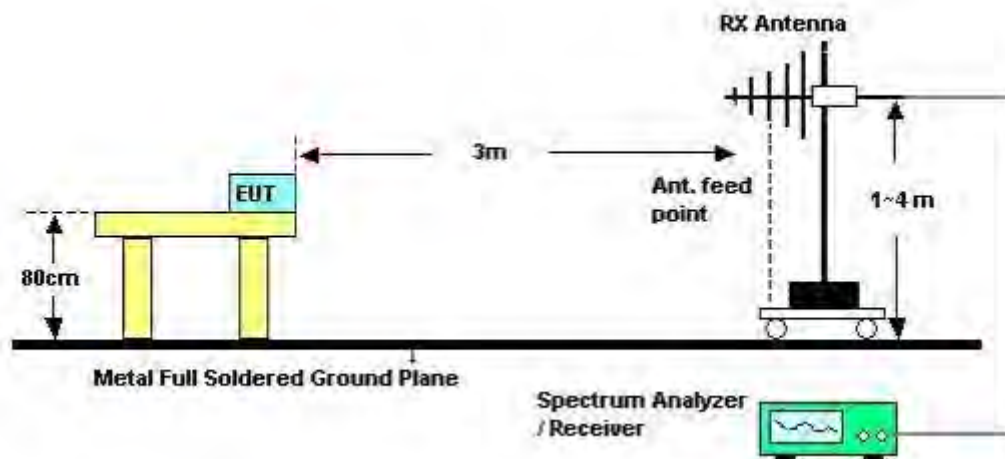
Refer a test equipment and calibration data table in this test report.

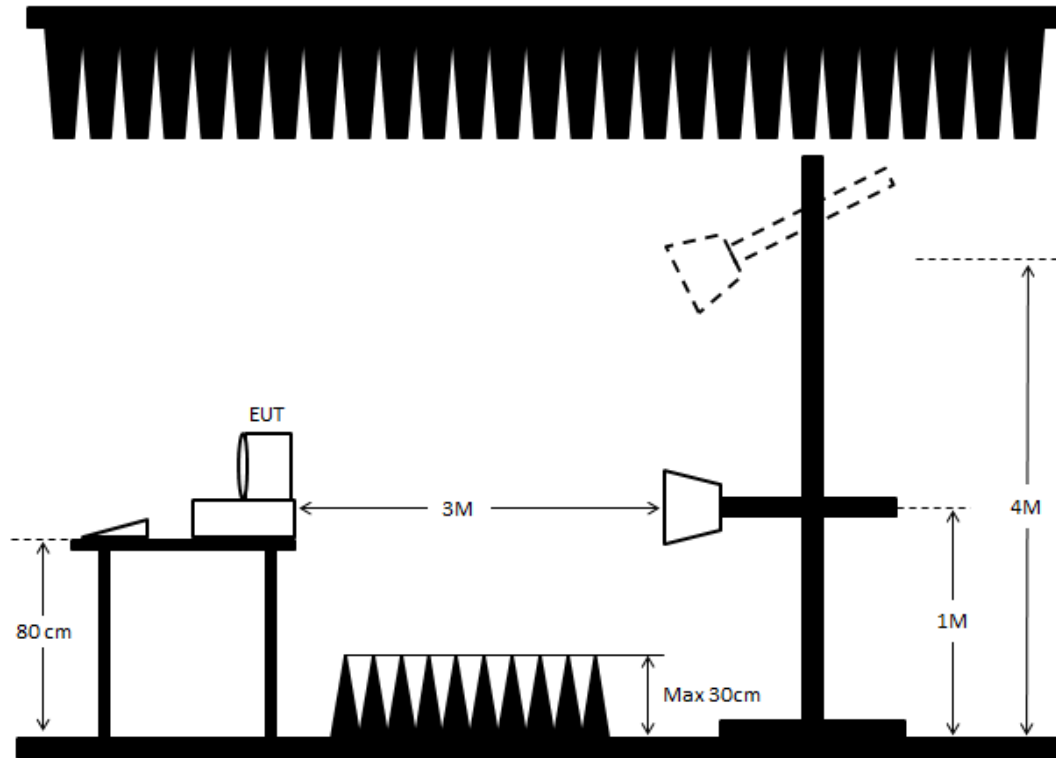
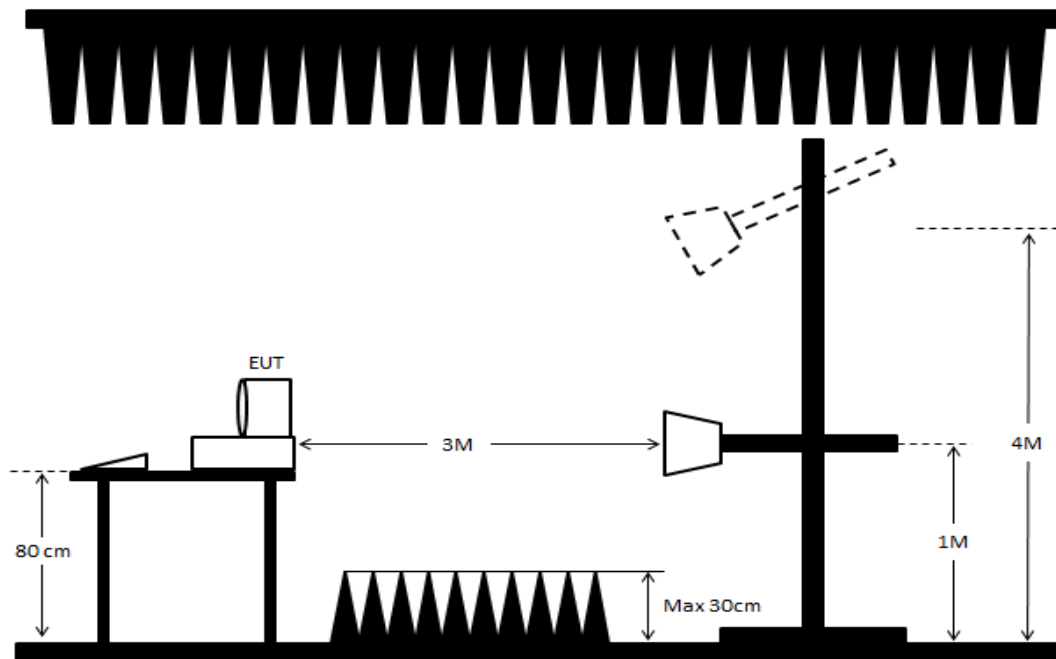
3.6.3 Test Procedures

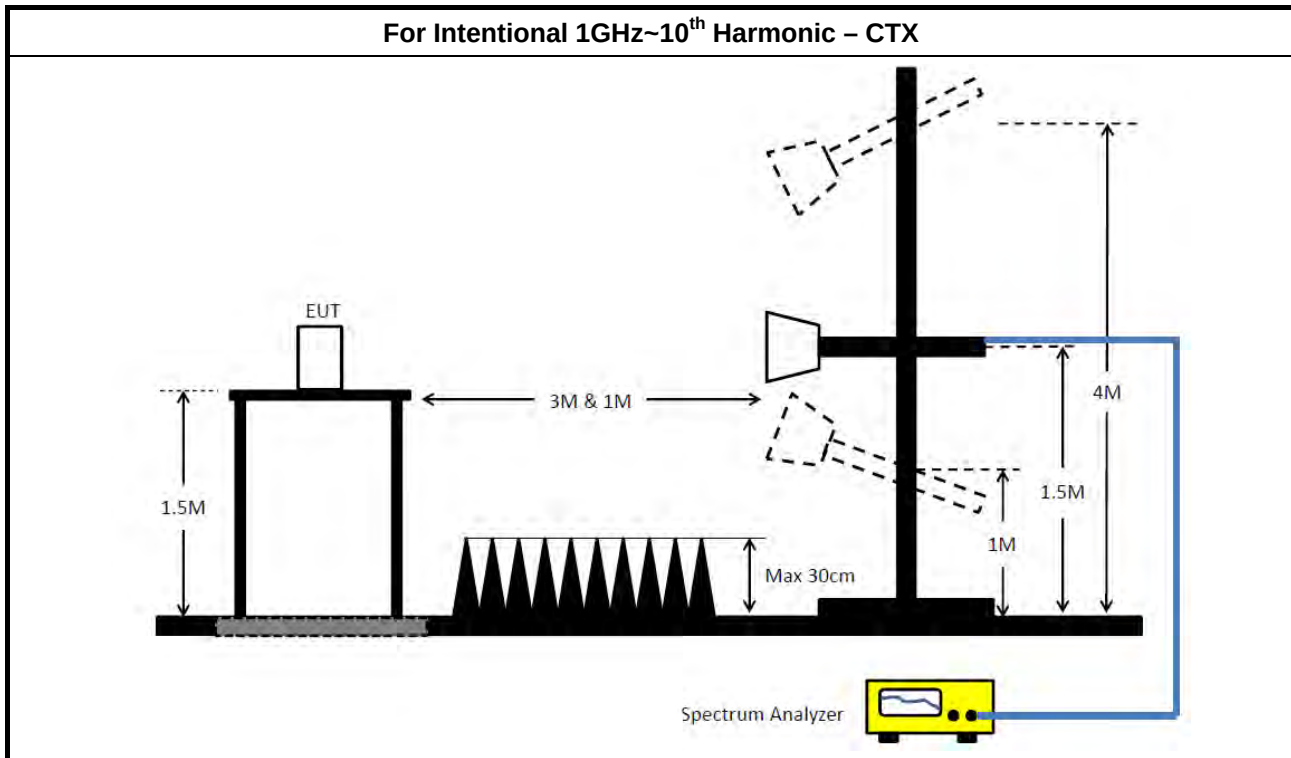
Test Method	
The average emission levels shall be measured in [duty cycle ≥ 98 or duty factor].	
Refer as ANSI C63.10, clause 6.10.3 band-edge testing shall be performed at the lowest frequency channel and highest frequency channel within the allowed operating band.	
For the transmitter unwanted emissions shall be measured using following options below:	
	Refer as FCC KDB 558074, clause 8.6 for unwanted emissions into restricted bands.
	☐ Refer as FCC KDB 558074, clause 8.6 & C63.10 clause 11.12.2.5.1(trace averaging for duty cycle $\geq 98\%$).
	☐ Refer as FCC KDB 558074, clause 8.6 & C63.10 clause 11.12.2.5.2(trace averaging + duty factor).
	☒ Refer as FCC KDB 558074, clause 8.6 & C63.10 clause 11.12.2.5.3(Reduced VBW $\geq 1/T$).
	☐ Refer as ANSI C63.10, clause 11.12.2.5.3 (Reduced VBW). VBW $\geq 1/T$, where T is pulse time.
	☐ Refer as ANSI C63.10, clause 7.5 average value of pulsed emissions.
	☒ Refer as FCC KDB 558074, clause 8.6 & C63.10 clause 11.12.2.4 measurement procedure peak limit.
For the transmitter band-edge emissions shall be measured using following options below:	
	Refer as FCC KDB 558074 clause 8.7 & c63.10 clause 11.13.1, When the performing peak or average radiated measurements, emissions within 2 MHz of the authorized band edge may be measured using the marker-delta method described below.
	Refer as FCC KDB 558074, clause 8.7 (ANSI C63.10, clause 6.10.6) for marker-delta method for band-edge measurements.
	Refer as FCC KDB 558074, clause 8.7 for narrower resolution bandwidth (100kHz) using the band power and summing the spectral levels (i.e., 1 MHz).
	For conducted unwanted emissions into restricted bands (absolute emission limits). Devices with multiple transmit chains using options given below: (1) Measure and sum the spectra across the outputs or (2) Measure and add 10 log(N) dB
	For FCC KDB 662911 The methodology described here may overestimate array gain, thereby resulting in apparent failures to satisfy the out-of-band limits even if the device is actually compliant. In such cases, compliance may be demonstrated by performing radiated tests around the frequencies at which the apparent failures occurred.

3.6.4 Test Setup



For Unintentional – CRX
9kHz ~30MHz

30MHz~1GHz


For Unintentional 1GHz~5th Harmonic – CRX (1,000~18,000 MHz)

For Unintentional 1GHz~5th Harmonic – CRX (18,000~30,000 MHz)




3.6.5 Measurement Results Calculation

The measured Level is calculated using:

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor (if applicable) = Level.

3.6.6 Emissions in Restricted Frequency Bands (Below 30MHz)

There is a comparison data of both open-field test site and alternative test site - semi-Anechoic chamber according to KDB414788 Radiated Test Site, and the result came out very similar.

All amplitude of spurious emissions that are attenuated by more than 20 dB below the permissible value has no need to be reported.

The radiated emissions were investigated from 9 kHz or the lowest frequency generated within the device, up to the 10 harmonic or 40 GHz, whichever is appropriate.

3.6.7 Test Result of Emissions in Restricted Frequency Bands

Refer as Appendix F



4 Test Equipment and Calibration Data

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
EMI Receiver	Agilent	N9038A	My52260123	9kHz ~ 8.45GHz	Feb. 26, 2020	Feb. 25, 2021	Conduction (CO01-CB)
LISN	F.C.C.	FCC-LISN-50-16-2	04083	150kHz ~ 100MHz	Dec. 25, 2019	Dec. 24, 2020	Conduction (CO01-CB)
LISN	Schwarzbeck	NSLK 8127	8127647	9kHz ~ 30MHz	Feb. 25, 2020	Feb. 24, 2021	Conduction (CO01-CB)
Pulse Limiter	Rohde&Schwarz	ESH3-Z2	100430	9kHz ~ 30MHz	Jan. 31, 2020	Jan. 30, 2021	Conduction (CO01-CB)
COND Cable	Woken	Cable	Low cable-CO01	9kHz ~ 30MHz	May 20, 2020	May 19, 2021	Conduction (CO01-CB)
Software	Audix	E3	6.120210n	-	N.C.R.	N.C.R.	Conduction (CO01-CB)
Loop Antenna	Teseq	HLA 6120	24155	9kHz - 30 MHz	Apr. 13, 2020	Apr. 12, 2021	Radiation (03CH05-CB)
Bilog Antenna with 6dB Attenuator	TESEQ & EMCI	CBL 6112D & N-6-06	35236 & AT-N0610	30MHz ~ 2GHz	Mar. 27, 2020	Mar. 26, 2021	Radiation (03CH05-CB)
Horn Antenna	SCHWARZBECK	BBHA9120D	BBHA 9120D-1291	1GHz~18GHz	Oct. 05, 2019	Oct. 04, 2020	Radiation (03CH05-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Jun. 27, 2019	Jun. 26, 2020	Radiation (03CH05-CB)
Pre-Amplifier	EMCI	EMC330N	980331	20MHz ~ 3GHz	Apr. 28, 2020	Apr. 27, 2021	Radiation (03CH05-CB)
Pre-Amplifier	EMCI	EMC12630SE	980287	1GHz ~ 26.5GHz	Apr. 15, 2020	Apr. 14, 2021	Radiation (03CH05-CB)
Pre-Amplifier	EMCI	EMC12630SE	980287	1GHz ~ 26.5GHz	Jul. 03, 2020	Jul. 02, 2021	Radiation (03CH05-CB)
Pre-Amplifier	MITEQ	TTA1840-35-HG	1864479	18GHz ~ 40GHz	Jul. 08, 2020	Jul. 07, 2021	Radiation (03CH05-CB)
Spectrum Analyzer	R&S	FSP40	100304	9kHz ~ 40GHz	Aug. 15, 2019	Aug. 14, 2020	Radiation (03CH05-CB)
EMI Test Receiver	R&S	ESCS	826547/017	9kHz ~ 2.75GHz	May 13, 2020	May 12, 2021	Radiation (03CH05-CB)
RF Cable-low	Woken	RG402	LOW Cable-04+23	30MHz~1GHz	Oct. 07, 2019	Oct. 06, 2020	Radiation (03CH05-CB)
RF Cable-high	Woken	RG402	High Cable-28	1GHz~18GHz	Oct. 07, 2019	Oct. 06, 2020	Radiation (03CH05-CB)
RF Cable-high	Woken	RG402	High Cable-04+28	1GHz~18GHz	Feb. 01, 2020	Jan. 31, 2021	Radiation (03CH05-CB)
RF Cable-high	Woken	RG402	High Cable-40G#1	18GHz ~ 40 GHz	Jul. 16, 2020	Jul. 15, 2021	Radiation (03CH05-CB)
RF Cable-high	Woken	RG402	High Cable-40G#2	18GHz ~ 40 GHz	Jul. 16, 2020	Jul. 15, 2021	Radiation (03CH05-CB)
Loop Antenna	Teseq	HLA 6120	24155	9kHz - 30 MHz	Apr. 13, 2020	Apr. 12, 2021	Radiation (03CH06-CB)



Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
Bilog Antenna with 6 dB attenuator	TESEQ & EMCI	CBL6112D & N-6-06	37878 & AT-N0606	20MHz ~ 2GHz	Aug. 03, 2019	Aug. 02, 2020	Radiation (03CH06-CB)
Horn Antenna	COM-POWER	AH-118	071028	1GHz ~ 18GHz	Jun. 09, 2020	Jun. 08, 2021	Radiation (03CH06-CB)
Pre-Amplifier	EMCI	EMC330N	980391	20MHz ~ 3GHz	May 21, 2020	May 20, 2021	Radiation (03CH06-CB)
Pre-Amplifier	Agilent	83017A	MY53270064	0.5GHz ~ 26.5GHz	May 07, 2020	May 06, 2021	Radiation (03CH06-CB)
Pre-Amplifier	MITEQ	TTA1840-35-H G	1864479	18GHz ~ 40GHz	Jul. 03, 2019	Jul. 02, 2020	Radiation (03CH06-CB)
Pre-Amplifier	MITEQ	TTA1840-35-H G	1864479	18GHz ~ 40GHz	Jul. 08, 2020	Jul. 07, 2021	Radiation (03CH06-CB)
Spectrum analyzer	R&S	FSP40	100080	9kHz~40GHz	Oct. 21, 2019	Oct. 20, 2020	Radiation (03CH06-CB)
EMI Test Receiver	R&S	ESCS	826547/017	9kHz ~ 2.75GHz	May 13, 2020	May 12, 2021	Radiation (03CH06-CB)
RF Cable-low	HUBER+SUHNER	RG402	Low Cable-05+24	30MHz~1GHz	Oct. 07, 2019	Oct. 06, 2020	Radiation (03CH06-CB)
RF Cable-high	HUBER+SUHNER	RG402	High Cable-05	1GHz~18GHz	Oct. 07, 2019	Oct. 06, 2020	Radiation (03CH06-CB)
RF Cable-high	HUBER+SUHNER	RG402	High Cable-05+24	1GHz~18GHz	Oct. 07, 2019	Oct. 06, 2020	Radiation (03CH06-CB)
RF Cable-high	Woken	RG402	High Cable-40G#1	18GHz ~ 40 GHz	Jul. 24, 2019	Jul. 23, 2020	Radiation (03CH06-CB)
RF Cable-high	Woken	RG402	High Cable-40G#2	18GHz ~ 40 GHz	Jul. 24, 2019	Jul. 23, 2020	Radiation (03CH06-CB)
Horn Antenna	EMCO	3115	9610-4976	1GHz ~ 18GHz	Apr. 21, 2020	Apr. 20, 2021	Radiation (03CH02-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Jun. 27, 2019	Jun. 26, 2020	Radiation (03CH02-CB)
Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170507	15GHz ~ 40GHz	Jun. 11, 2020	Jun. 10, 2021	Radiation (03CH02-CB)
Pre-Amplifier	Agilent	83017A	MY39501305	1GHz ~ 26.5GHz	Aug. 22, 2018	Aug. 21, 2019	Radiation (03CH02-CB)
Pre-Amplifier	MITEQ	TTA1840-35-H G	1864479	18GHz ~ 40GHz	Jul. 03, 2019	Jul. 02, 2020	Radiation (03CH02-CB)
Spectrum Analyzer	R&S	FSP40	100304	9kHz ~ 40GHz	Aug. 15, 2019	Aug. 14, 2020	Radiation (03CH02-CB)
High Cable	Woken	RG402	High Cable-18	1GHz ~ 18GHz	Oct. 07, 2019	Oct. 06, 2020	Radiation (03CH02-CB)
High Cable	Woken	RG402	High Cable-18+19	1GHz ~ 18GHz	Oct. 07, 2019	Oct. 06, 2020	Radiation (03CH02-CB)
RF Cable-high	Woken	RG402	High Cable-40G#1	18GHz ~ 40 GHz	Jul. 24, 2019	Jul. 23, 2020	Radiation (03CH02-CB)
RF Cable-high	Woken	RG402	High Cable-40G#2	18GHz ~ 40 GHz	Jul. 24, 2019	Jul. 23, 2020	Radiation (03CH02-CB)
Spectrum analyzer	R&S	FSV40	100979	9kHz~40GHz	May 05, 2020	May 04, 2021	Conducted (TH01-CB)



Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
RF Cable-high	Woken	RG402	High Cable-06	1 GHz – 26.5 GHz	Oct. 07, 2019	Oct. 06, 2020	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-07	1 GHz –26.5 GHz	Oct. 07, 2019	Oct. 06, 2020	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-08	1 GHz –26.5 GHz	Oct. 07, 2019	Oct. 06, 2020	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-09	1 GHz –26.5 GHz	Oct. 07, 2019	Oct. 06, 2020	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-10	1 GHz –26.5 GHz	Oct. 07, 2019	Oct. 06, 2020	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-28	1 GHz –26.5 GHz	Nov. 18, 2019	Nov. 17, 2020	Conducted (TH01-CB)
Power Sensor	Agilent	E9327A	US40442088	50MHz~18GHz	Feb. 07, 2020	Feb. 06, 2021	Conducted (TH01-CB)
Power Meter	Agilent	E4416A	GB41291199	50MHz~18GHz	Feb. 07, 2020	Feb. 06, 2021	Conducted (TH01-CB)

Note: Calibration Interval of instruments listed above is one year.

N.C.R. means Non-Calibration required.



AC Power-line Conducted Emissions Result

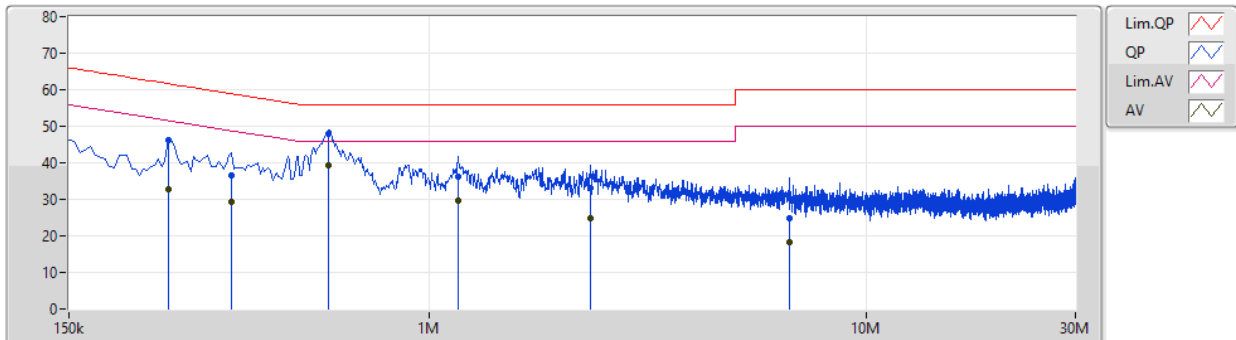
Appendix A

Summary of Intentional – CTX

Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 8	Pass	AV	586.5k	40.07	46.00	-5.93	Neutral

Mode 8

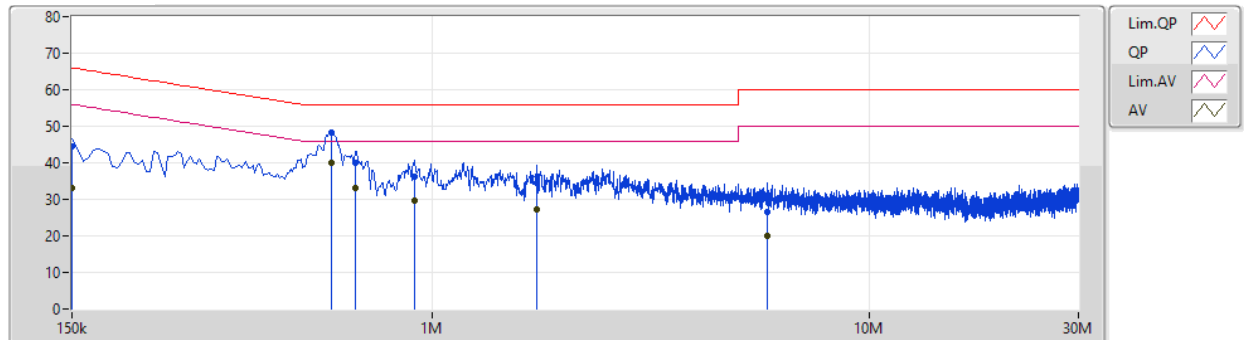
31/07/2020



Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	AF (dB)	CL (dB)	AT (dB)			
QP	253.5k	46.22	61.64	-15.42	9.87	Line	-	36.35	0.04	0.03	9.80			
AV	253.5k	32.77	51.64	-18.87	9.87	Line	-	22.90	0.04	0.03	9.80			
QP	352.5k	36.62	58.91	-22.29	9.88	Line	-	26.74	0.04	0.03	9.81			
AV	352.5k	29.37	48.91	-19.54	9.88	Line	-	19.49	0.04	0.03	9.81			
QP	586.5k	47.80	56.00	-8.20	9.88	Line	-	37.92	0.04	0.03	9.81			
AV	586.5k	39.42	46.00	-6.58	9.88	Line	"Worst"	29.54	0.04	0.03	9.81			
QP	1.163M	36.23	56.00	-19.77	9.92	Line	-	26.31	0.05	0.05	9.82			
AV	1.163M	29.56	46.00	-16.44	9.92	Line	-	19.64	0.05	0.05	9.82			
QP	2.342M	32.98	56.00	-23.02	9.98	Line	-	23.00	0.07	0.08	9.83			
AV	2.342M	24.77	46.00	-21.23	9.98	Line	-	14.79	0.07	0.08	9.83			
QP	6.653M	24.95	60.00	-35.05	10.14	Line	-	14.81	0.13	0.14	9.87			
AV	6.653M	18.14	50.00	-31.86	10.14	Line	-	8.00	0.13	0.14	9.87			

Mode 8

31/07/2020



Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	AF (dB)	CL (dB)	AT (dB)			
QP	150k	44.50	66.00	-21.50	9.86	Neutral	-	34.64	0.04	0.03	9.79			
AV	150k	33.13	56.00	-22.87	9.86	Neutral	-	23.27	0.04	0.03	9.79			
QP	586.5k	48.26	56.00	-7.74	9.89	Neutral	-	38.37	0.05	0.03	9.81			
AV	586.5k	40.07	46.00	-5.93	9.89	Neutral	"Worst"	30.18	0.05	0.03	9.81			
QP	667.5k	40.14	56.00	-15.86	9.91	Neutral	-	30.23	0.05	0.04	9.82			
AV	667.5k	33.01	46.00	-12.99	9.91	Neutral	-	23.10	0.05	0.04	9.82			
QP	910.5k	36.31	56.00	-19.69	9.92	Neutral	-	26.39	0.06	0.04	9.82			
AV	910.5k	29.51	46.00	-16.49	9.92	Neutral	-	19.59	0.06	0.04	9.82			
QP	1.734M	34.37	56.00	-21.63	9.96	Neutral	-	24.41	0.07	0.06	9.83			
AV	1.734M	27.37	46.00	-18.63	9.96	Neutral	-	17.41	0.07	0.06	9.83			
QP	5.829M	26.52	60.00	-33.48	10.12	Neutral	-	16.40	0.12	0.14	9.86			
AV	5.829M	19.90	50.00	-30.10	10.12	Neutral	-	9.78	0.12	0.14	9.86			



AC Power-line Conducted Emissions Result

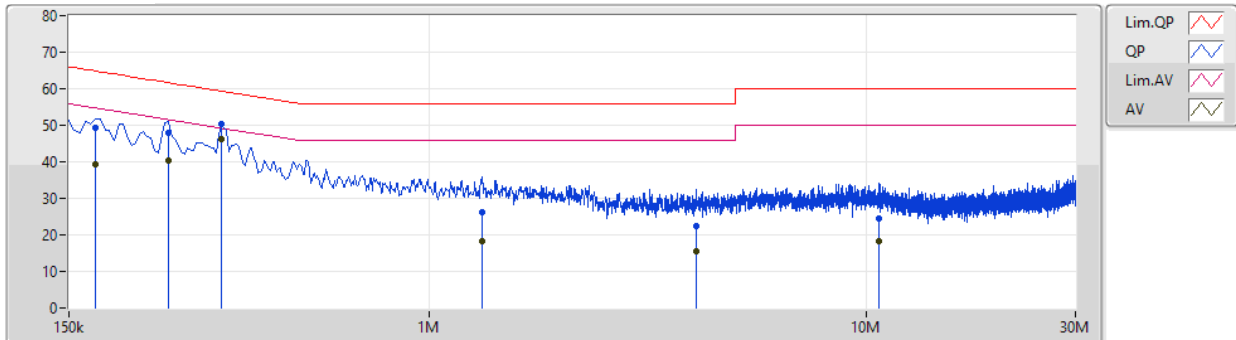
Appendix A

Summary of Unintentional – CRX

Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 2	Pass	AV	334.5k	46.27	49.35	-3.08	Neutral

Mode 2

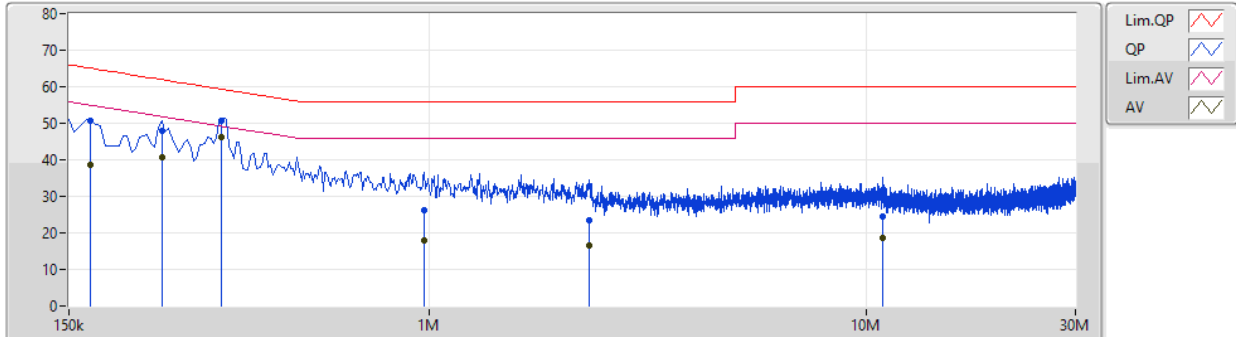
23/07/2020



Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	AF (dB)	CL (dB)	AT (dB)			
QP	172.5k	49.38	64.83	-15.45	9.87	Line	-	39.51	0.05	0.03	9.79			
AV	172.5k	39.29	54.83	-15.54	9.87	Line	-	29.42	0.05	0.03	9.79			
QP	253.5k	47.93	61.64	-13.71	9.87	Line	-	38.06	0.04	0.03	9.80			
AV	253.5k	40.36	51.64	-11.28	9.87	Line	-	30.49	0.04	0.03	9.80			
QP	334.5k	50.51	59.35	-8.84	9.87	Line	-	40.64	0.04	0.03	9.80			
AV	334.5k	46.23	49.35	-3.12	9.87	Line	"Worst"	36.36	0.04	0.03	9.80			
QP	1.32M	26.19	56.00	-29.81	9.92	Line	-	16.27	0.05	0.05	9.82			
AV	1.32M	18.39	46.00	-27.61	9.92	Line	-	8.47	0.05	0.05	9.82			
QP	4.065M	22.47	56.00	-33.53	10.03	Line	-	12.44	0.09	0.13	9.81			
AV	4.065M	15.55	46.00	-30.45	10.03	Line	-	5.52	0.09	0.13	9.81			
QP	10.64M	24.55	60.00	-35.45	10.26	Line	-	14.29	0.18	0.16	9.92			
AV	10.64M	18.31	50.00	-31.69	10.26	Line	-	8.05	0.18	0.16	9.92			

Mode 2

23/07/2020



Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	AF (dB)	CL (dB)	AT (dB)			
QP	168k	50.70	65.06	-14.36	9.86	Neutral	-	40.84	0.04	0.03	9.79			
AV	168k	38.58	55.06	-16.48	9.86	Neutral	-	28.72	0.04	0.03	9.79			
QP	244.5k	47.92	61.95	-14.03	9.87	Neutral	-	38.05	0.04	0.03	9.80			
AV	244.5k	40.69	51.95	-11.26	9.87	Neutral	-	30.82	0.04	0.03	9.80			
QP	334.5k	50.54	59.35	-8.81	9.87	Neutral	-	40.67	0.04	0.03	9.80			
AV	334.5k	46.27	49.35	-3.08	9.87	Neutral	"Worst"	36.40	0.04	0.03	9.80			
QP	973.5k	26.19	56.00	-29.81	9.92	Neutral	-	16.27	0.06	0.04	9.82			
AV	973.5k	18.08	46.00	-27.92	9.92	Neutral	-	8.16	0.06	0.04	9.82			
QP	2.315M	23.47	56.00	-32.53	9.98	Neutral	-	13.49	0.07	0.08	9.83			
AV	2.315M	16.45	46.00	-29.55	9.98	Neutral	-	6.47	0.07	0.08	9.83			
QP	10.892M	24.61	60.00	-35.39	10.26	Neutral	-	14.35	0.17	0.17	9.92			
AV	10.892M	18.47	50.00	-31.53	10.26	Neutral	-	8.21	0.17	0.17	9.92			

**Summary**

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
2.4-2.4835GHz	-	-	-	-	-
Zigbee	1.669M	2.255M	2M26G1D	1.656M	2.236M

Max-N dB = Maximum 6dB down bandwidth; **Max-OBW** = Maximum 99% occupied bandwidth;

Min-N dB = Minimum 6dB down bandwidth; **Min-OBW** = Minimum 99% occupied bandwidth;

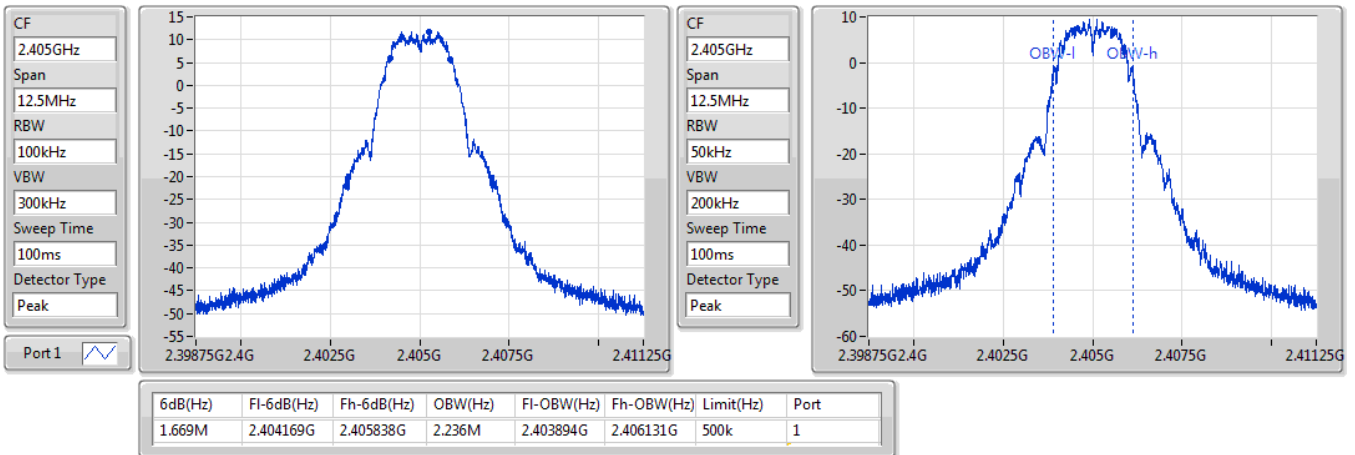
Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
Zigbee	-	-	-	-
2405MHz	Pass	500k	1.669M	2.236M
2440MHz	Pass	500k	1.656M	2.255M
2475MHz	Pass	500k	1.663M	2.255M

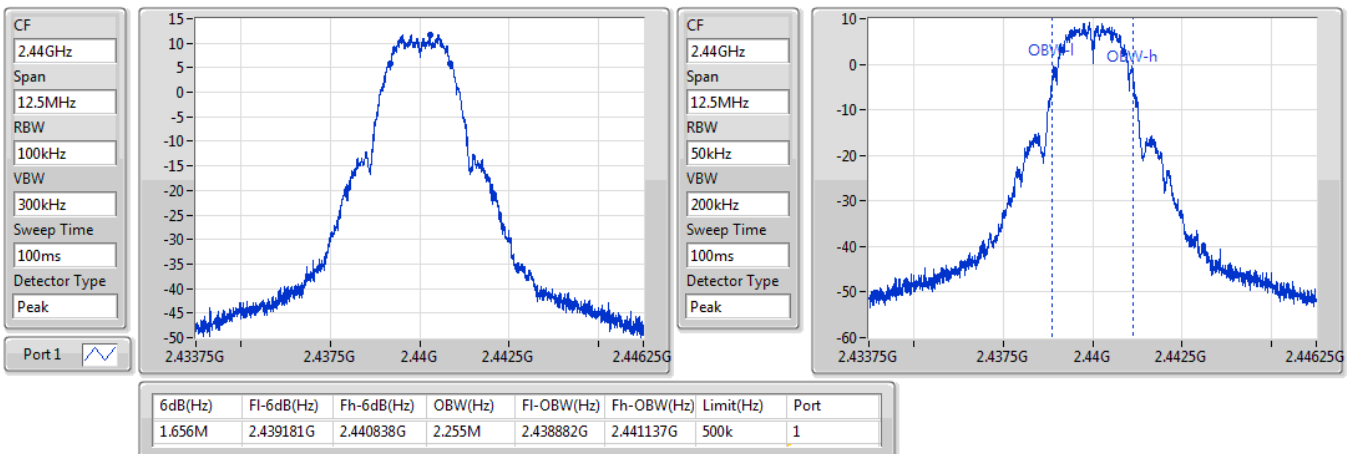
Port X-N dB = Port X 6dB down bandwidth; **Port X-OBW** = Port X 99% occupied bandwidth;

Zigbee
2405MHz
EBW

16/07/2020


Zigbee
2440MHz
EBW

16/07/2020

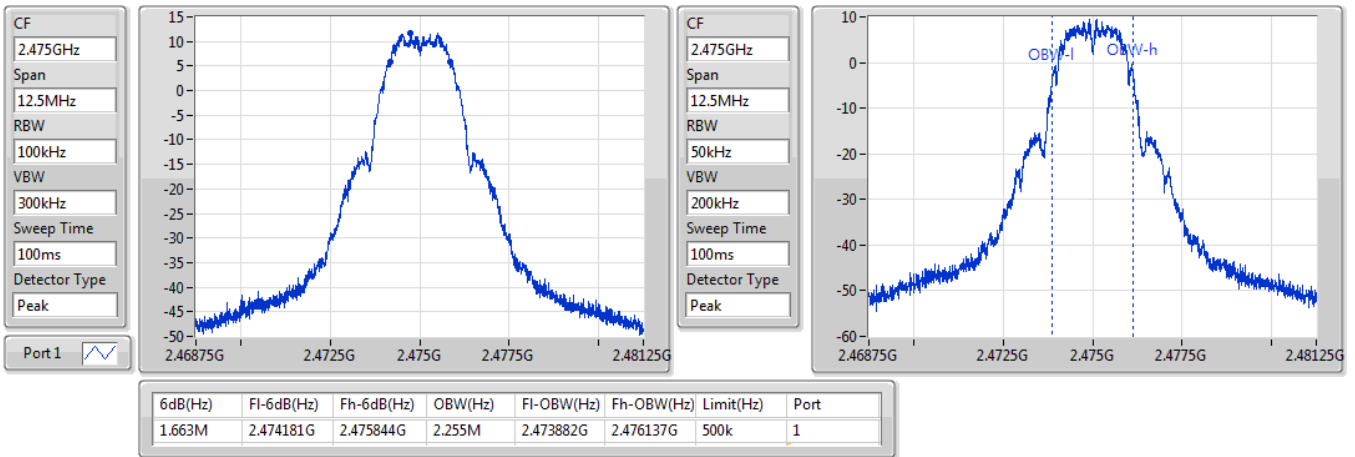


Zigbee

2475MHz

EBW

16/07/2020





Average Power Result

Appendix C

Summary

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
Zigbee	15.89	0.03882



Average Power Result

Appendix C

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Total Power (dBm)	Power Limit (dBm)
Zigbee	-	-	-	-	-
2405MHz	Pass	0.55	15.74	15.74	30.00
2440MHz	Pass	0.55	15.89	15.89	30.00
2475MHz	Pass	0.55	15.65	15.65	30.00

DG = Directional Gain; **Port X** = Port X output power



PSD Result

Appendix D

Summary

Mode	PD (dBm/RBW)
2.4-2.4835GHz	-
Zigbee	-0.52

RBW=3 kHz.



Result

Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
Zigbee	-	-	-	-	-
2405MHz	Pass	0.55	-1.33	-1.33	8.00
2440MHz	Pass	0.55	-0.52	-0.52	8.00
2475MHz	Pass	0.55	-1.44	-1.44	8.00

DG = Directional Gain; RBW=3 kHz;

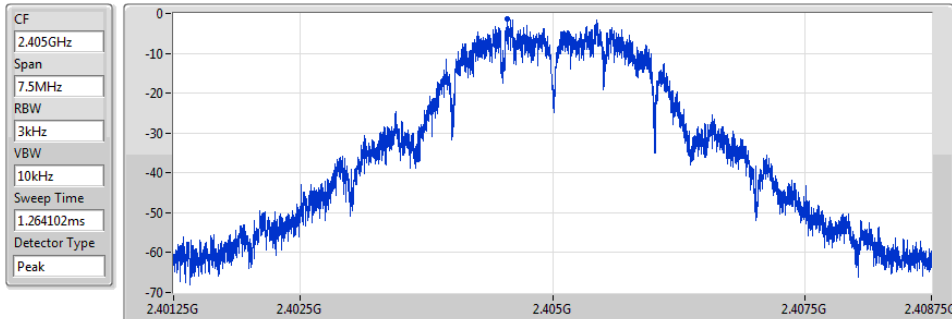
PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; **Port X** = Port X power density;

Zigbee

2405MHz

PSD

16/07/2020



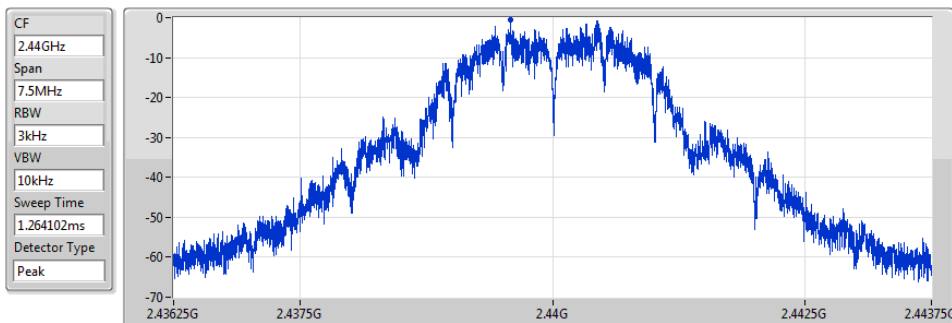
Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-1.33	-1.33	-1.33

Zigbee

2440MHz

PSD

16/07/2020



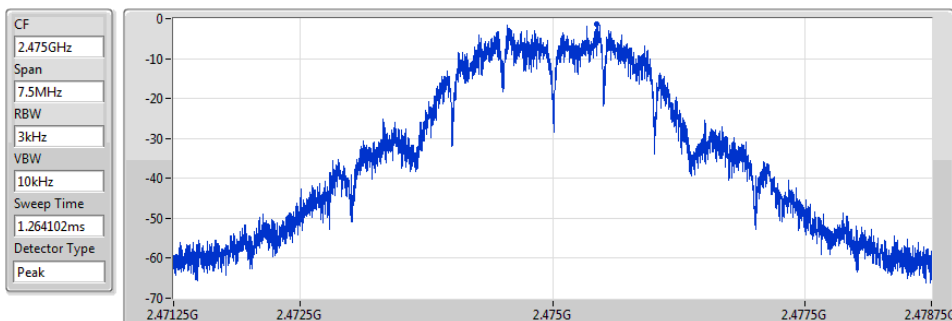
Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-0.52	-0.52	-0.52

Zigbee

2475MHz

PSD

16/07/2020



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-1.44	-1.44	-1.44



Summary

Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Zigbee	Pass	2.43975G	11.86	-18.14	831.81M	-62.70	2.39994G	-44.98	2.4G	-46.60	2.4908G	-62.28	7.21705G	-44.74	1

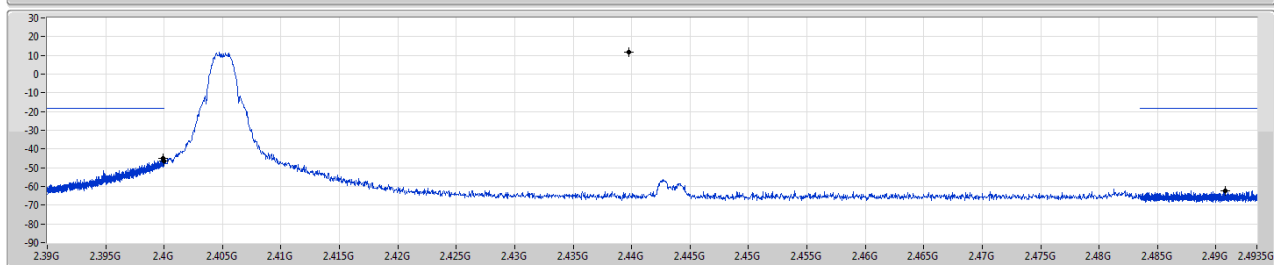
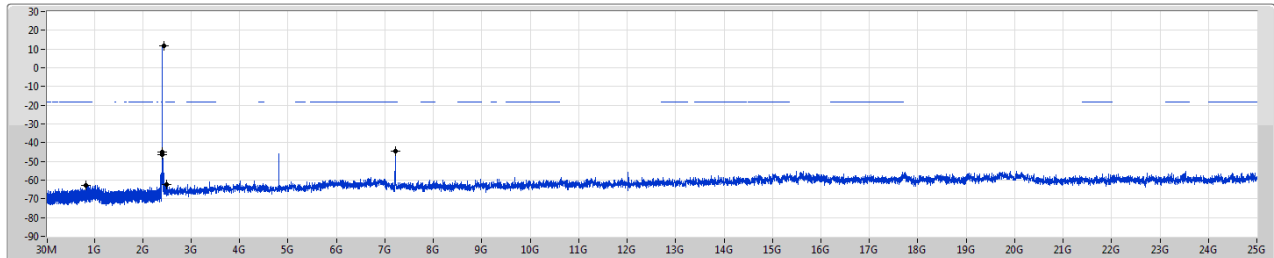
Result

Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
Zigbee	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2405MHz	Pass	2.43975G	11.86	-18.14	831.81M	-62.70	2.39994G	-44.98	2.4G	-46.60	2.4908G	-62.28	7.21705G	-44.74	1
2440MHz	Pass	2.43975G	11.86	-18.14	1.977G	-63.03	2.39306G	-62.27	2.4835G	-64.74	2.49149G	-62.09	17.66569G	-55.20	1
2475MHz	Pass	2.43975G	11.86	-18.14	54.19M	-64.00	2.39003G	-63.17	2.4835G	-58.38	2.48423G	-58.55	24.54143G	-55.48	1

Zigbee 2405MHz

CSE NdB

16/07/2020

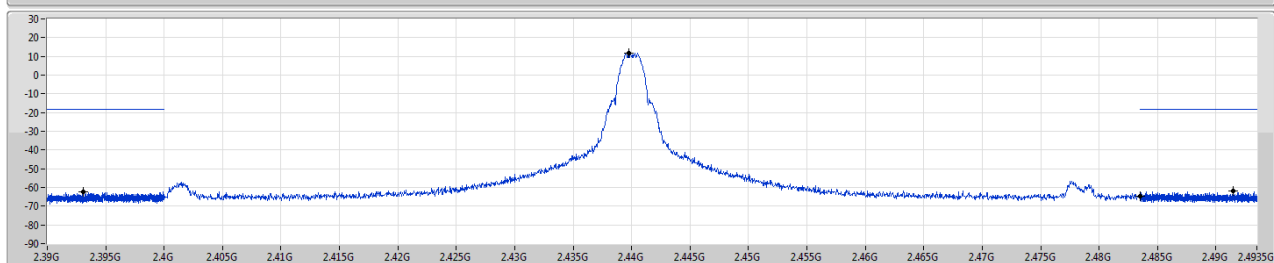
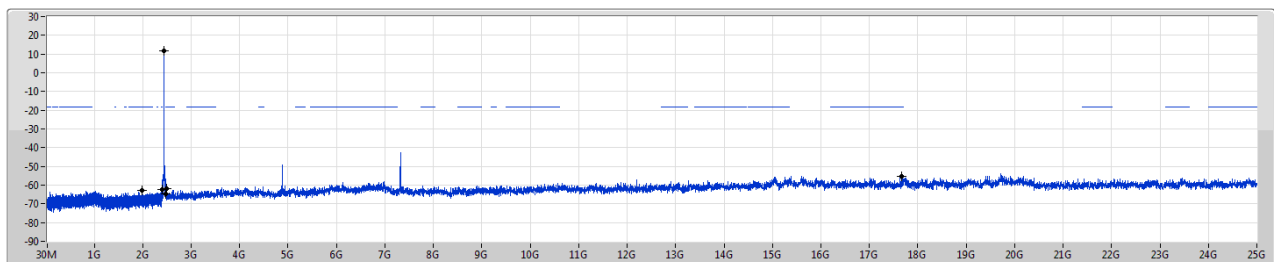


Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.43975G	11.86	-18.14	831.81M	-62.70	2.39994G	-44.98	2.4G	-46.60	2.4908G	-62.28	7.21705G	-44.74	1

Zigbee 2440MHz

CSE NdB

16/07/2020



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.43975G	11.86	-18.14	1.977G	-63.03	2.39306G	-62.27	2.4835G	-64.74	2.49149G	-62.09	17.66509G	-55.20	1

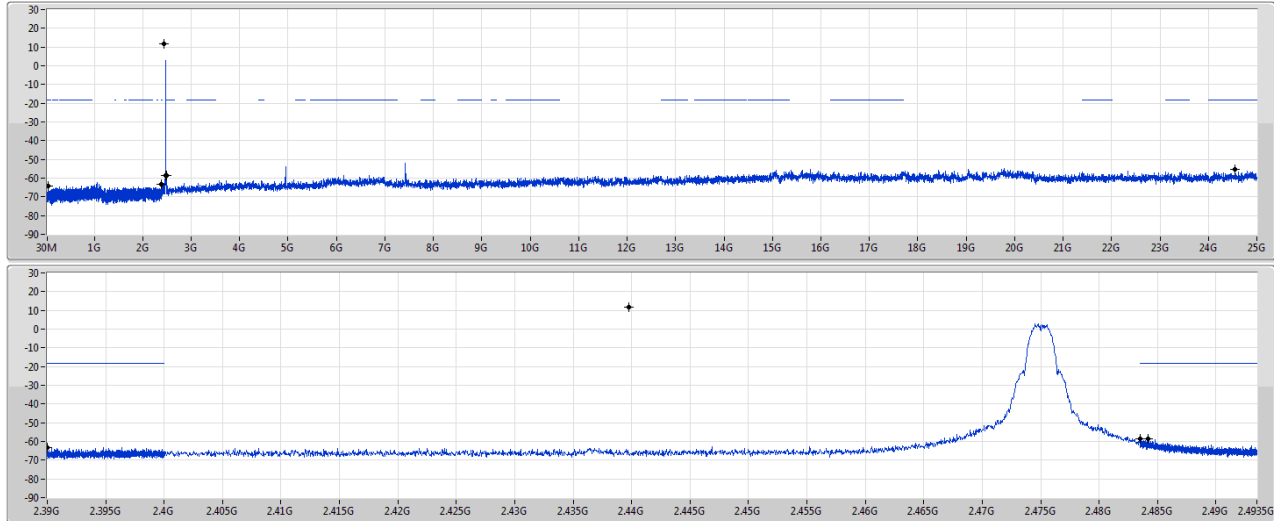
Zigbee

2475MHz

CSE NdB

16/07/2020

Port 1



RBW (Hz)
100k
VBW (Hz)
300k
Detector
Peak

Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.43975G	11.86	-18.14	54.19M	-64.00	2.39003G	-63.17	2.4835G	-58.38	2.48423G	-58.55	2.454143G	-55.48	1

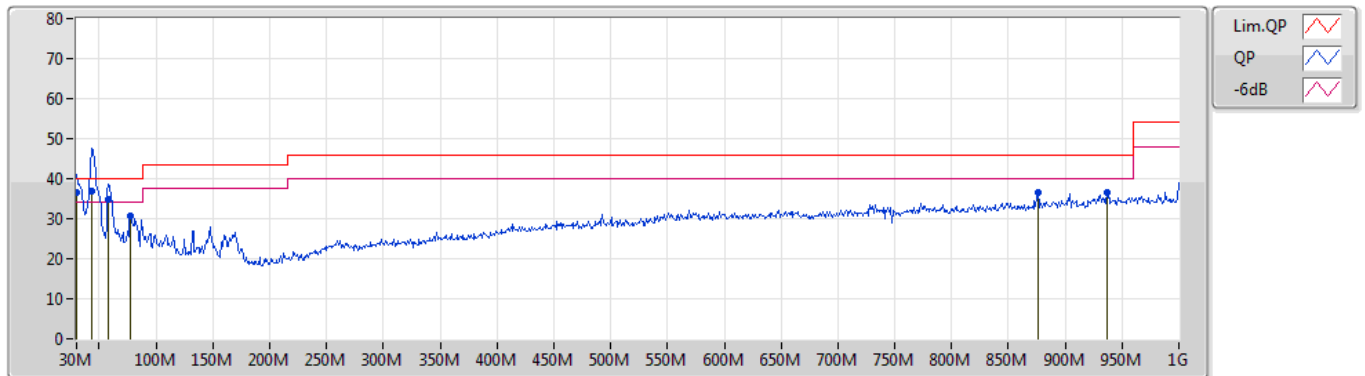


Summary of Below 1GHz: Intentional-CTX

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Condition
Mode 2	Pass	QP	43.58M	36.98	40.00	-3.02	Vertical

Mode 2

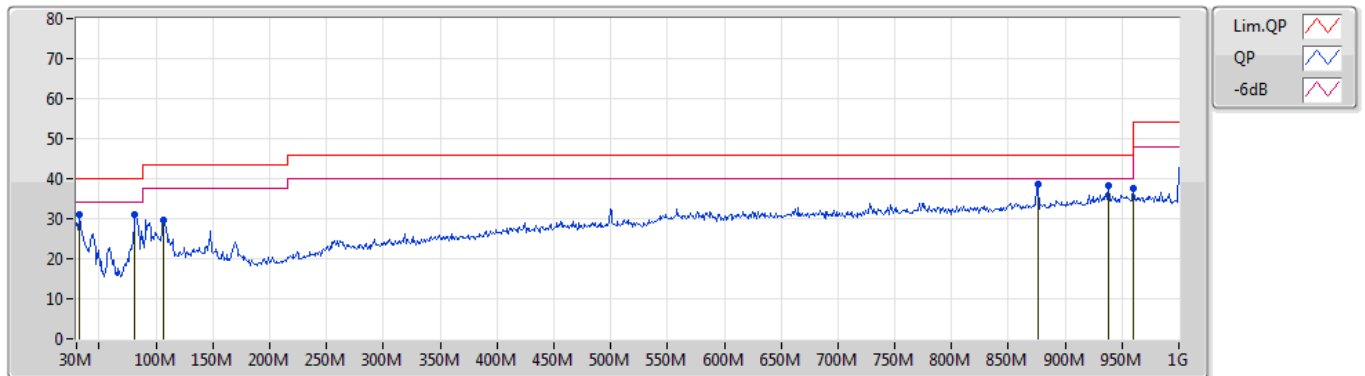
21/07/2020



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV/m)	(dB/m)	(dB)	(dB)
QP	30M	36.64	40.00	-3.36	-5.56	3	Vertical	360	1.00	-	42.20	24.21	1.50	31.27
QP	43.58M	36.98	40.00	-3.02	-12.82	3	Vertical	272	1.00	"Worst"	49.80	17.06	1.60	31.48
QP	58.13M	34.89	40.00	-5.11	-17.71	3	Vertical	0	1.25	-	52.60	12.31	1.56	31.58
PK	77.53M	30.73	40.00	-9.27	-17.40	3	Vertical	5	1.25	-	48.13	12.47	1.84	31.71
PK	875.84M	36.45	46.00	-9.55	0.22	3	Vertical	176	1.25	-	36.23	26.36	6.36	32.50
PK	936.95M	36.67	46.00	-9.33	0.67	3	Vertical	142	1.25	-	36.00	26.60	6.60	32.53

Mode 2

21/07/2020



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV/m)	AF (dB/m)	CL (dB)	PA (dB)
PK	32.91M	31.08	40.00	-8.92	-7.02	3	Horizontal	9	1.00	-	38.10	22.70	1.56	31.28
PK	81.41M	30.88	40.00	-9.12	-16.68	3	Horizontal	69	2.00	-	47.56	13.13	1.90	31.71
PK	106.63M	29.76	43.50	-13.74	-12.30	3	Horizontal	258	2.00	-	42.06	17.24	2.17	31.71
PK	875.84M	38.59	46.00	-7.41	0.22	3	Horizontal	134	1.25	"Worst"	38.37	26.36	6.36	32.50
PK	937.92M	38.16	46.00	-7.84	0.68	3	Horizontal	151	1.00	-	37.48	26.61	6.60	32.53
PK	960M	37.62	54.00	-16.38	0.99	3	Horizontal	137	1.00	-	36.63	26.93	6.60	32.54

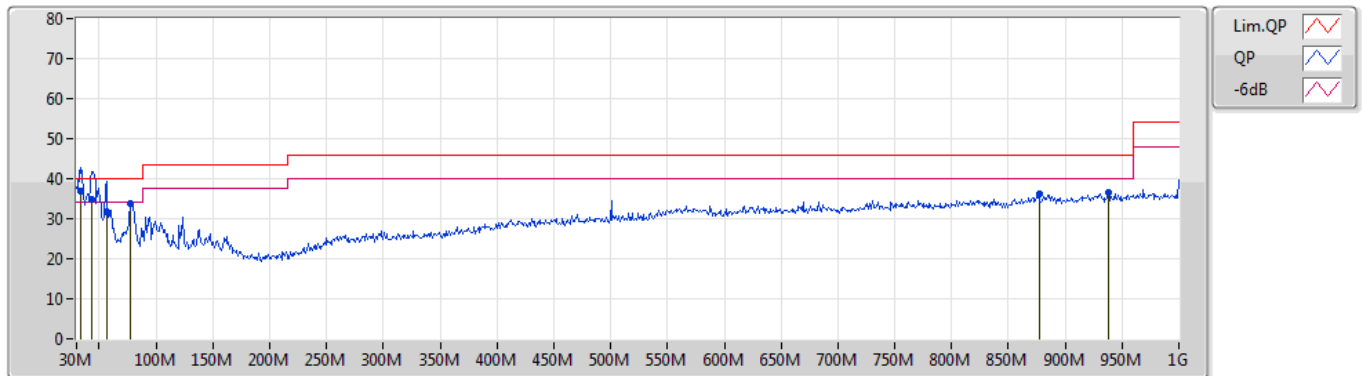


Summary of Below 1GHz: Unintentional-CRX

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Condition
Mode 1	Pass	QP	33.88M	36.91	40.00	-3.09	Vertical

Mode 1

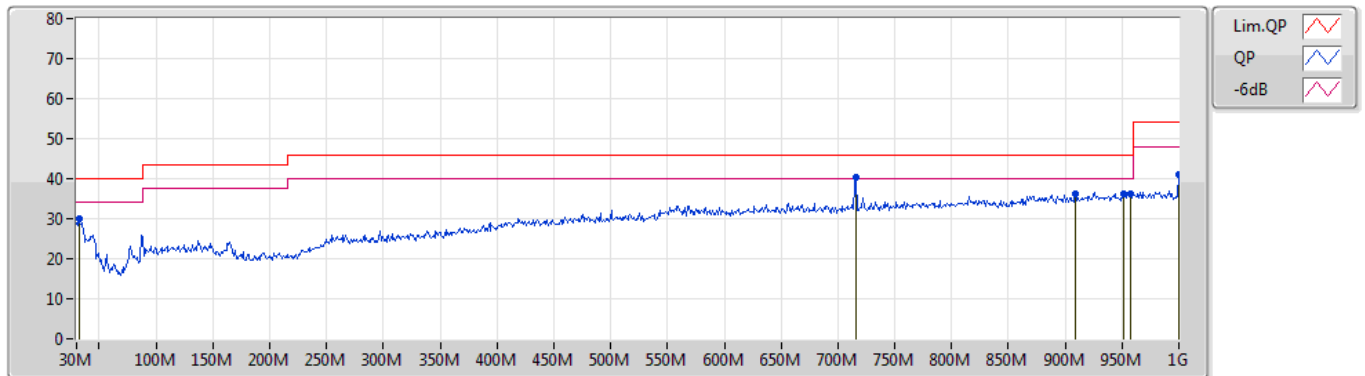
21/07/2020



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV/m)	AF (dB/m)	CL (dB)	PA (dB)
QP	33.88M	36.91	40.00	-3.09	-7.59	3	Vertical	247	1.00	"Worst"	44.50	22.11	1.58	31.28
QP	43.58M	34.78	40.00	-5.22	-12.82	3	Vertical	104	1.00	-	47.60	17.06	1.60	31.48
QP	56.19M	31.89	40.00	-8.11	-17.61	3	Vertical	359	1.50	-	49.50	12.48	1.52	31.61
PK	77.53M	33.93	40.00	-6.07	-17.40	3	Vertical	360	1.25	-	51.33	12.47	1.84	31.71
PK	876.81M	36.37	46.00	-9.63	0.24	3	Vertical	277	1.25	-	36.13	26.37	6.37	32.50
PK	937.92M	36.55	46.00	-9.45	0.68	3	Vertical	161	1.25	-	35.87	26.61	6.60	32.53

Mode 1

21/07/2020



Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	Raw (dBuV/m)	AF (dB/m)	CL (dB)	PA (dB)
PK	31.94M	29.99	40.00	-10.01	-6.33	3	Horizontal	77	1.00	-	36.32	23.40	1.54	31.27
PK	715.79M	40.28	46.00	-5.72	-1.88	3	Horizontal	215	2.00	"Worst"	42.16	25.03	5.59	32.50
PK	908.82M	36.25	46.00	-9.75	0.77	3	Horizontal	126	2.00	-	35.48	26.68	6.60	32.51
PK	951.5M	36.14	46.00	-9.86	0.87	3	Horizontal	109	2.00	-	35.27	26.81	6.60	32.54
PK	957.32M	36.08	46.00	-9.92	0.95	3	Horizontal	126	2.00	-	35.13	26.89	6.60	32.54
PK	1G	40.98	54.00	-13.02	1.38	3	Horizontal	183	1.50	-	39.60	27.33	6.60	32.55

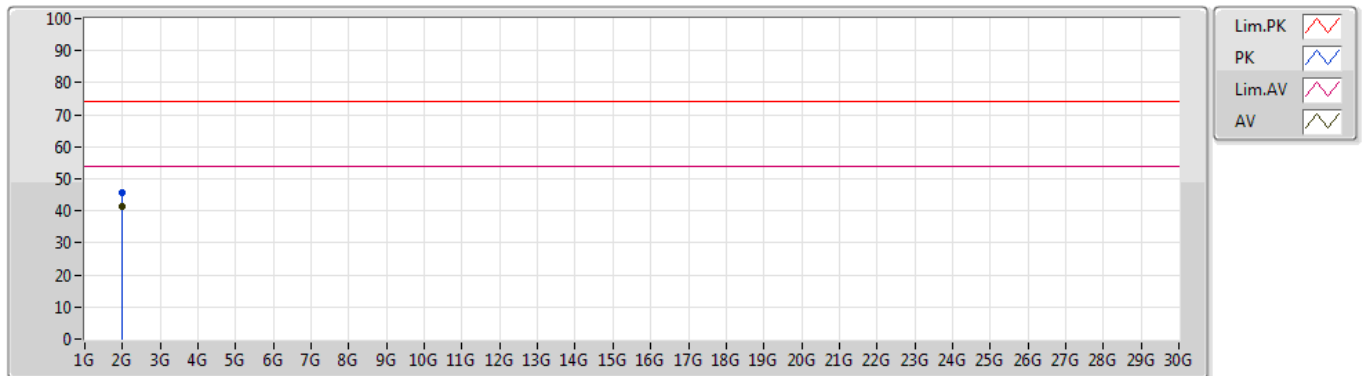


Summary of Above 1GHz: Unintentional 1GHz~5th Harmonic

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Condition
Mode 2	Pass	AV	2.00005G	41.20	54.00	-12.80	Vertical

Mode 2

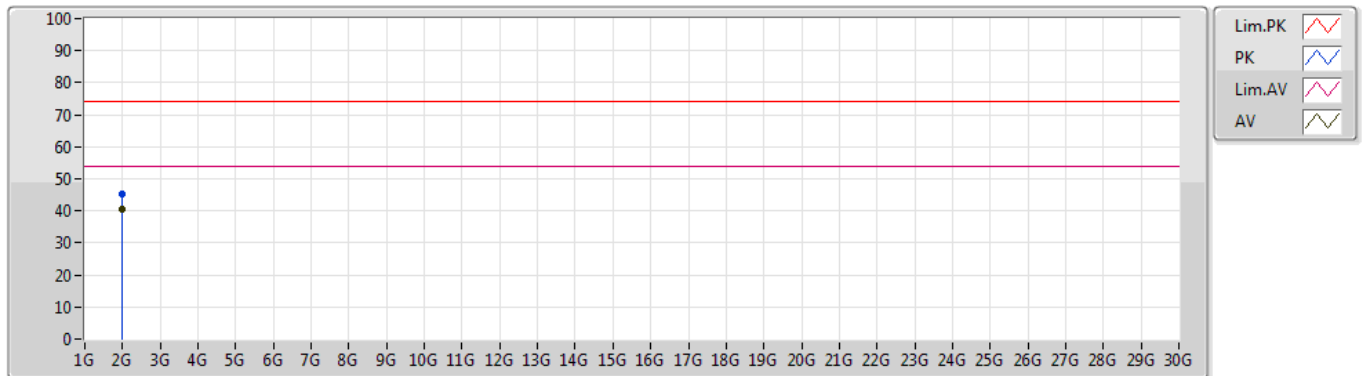
22/07/2020



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
PK	2.00001G	45.66	74.00	-28.34	-6.48	3	Vertical	184	1.62	-	52.14	26.00	3.90	36.38
AV	2.00005G	41.20	54.00	-12.80	-6.48	3	Vertical	184	1.62	"Worst"	47.68	26.00	3.90	36.38

Mode 2

22/07/2020



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)		(dBuV)	(dB)	(dB)	(dB)
PK	2.00021G	45.07	74.00	-28.93	-6.48	3	Horizontal	140	1.08	-	51.55	26.00	3.90	36.38
AV	2.00003G	40.67	54.00	-13.33	-6.48	3	Horizontal	140	1.08	"Worst"	47.15	26.00	3.90	36.38



RSE TX above 1GHz Result

Appendix F.2

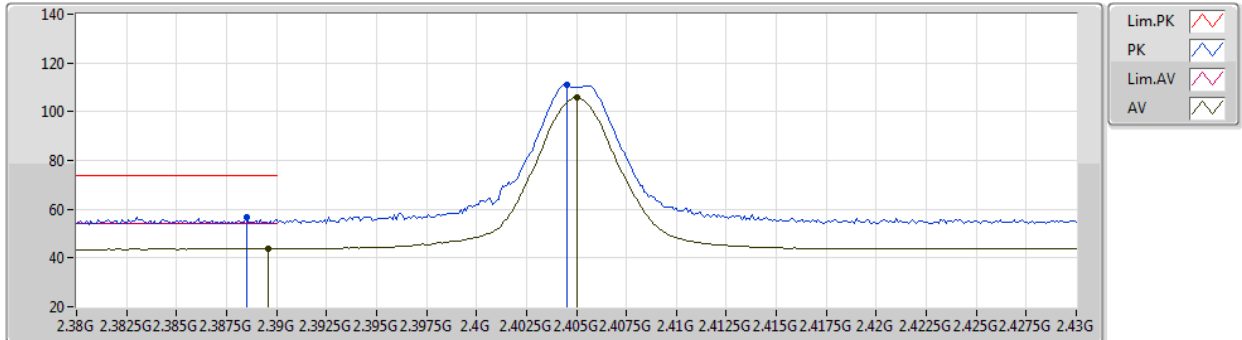
Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-
Zigbee	Pass	AV	2.4835G	53.57	54.00	-0.43	3	Horizontal	316	2.07	-

Zigbee

2405MHz_TX

19/06/2020



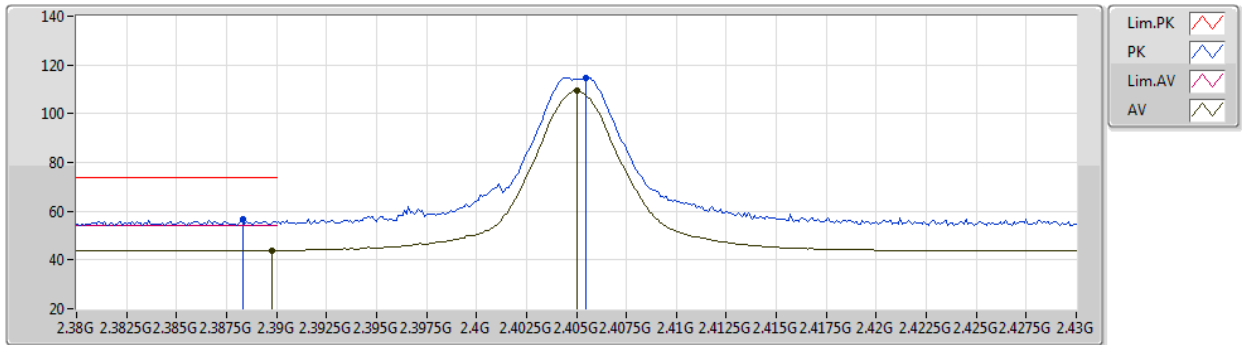
EUT Y_1TX
Setting 16
02-C-E-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.3885G	56.91	74.00	-17.09	25.14	3	Vertical	0	1.00	-	28.27	3.50	-
AV	2.3896G	43.64	54.00	-10.36	11.87	3	Vertical	0	1.00	-	28.27	3.50	-
PK	2.4045G	110.86	Inf	-Inf	79.05	3	Vertical	0	1.00	-	28.31	3.50	-
AV	2.405G	105.65	Inf	-Inf	73.83	3	Vertical	0	1.00	-	28.32	3.50	-

Zigbee

2405MHz_TX

19/06/2020



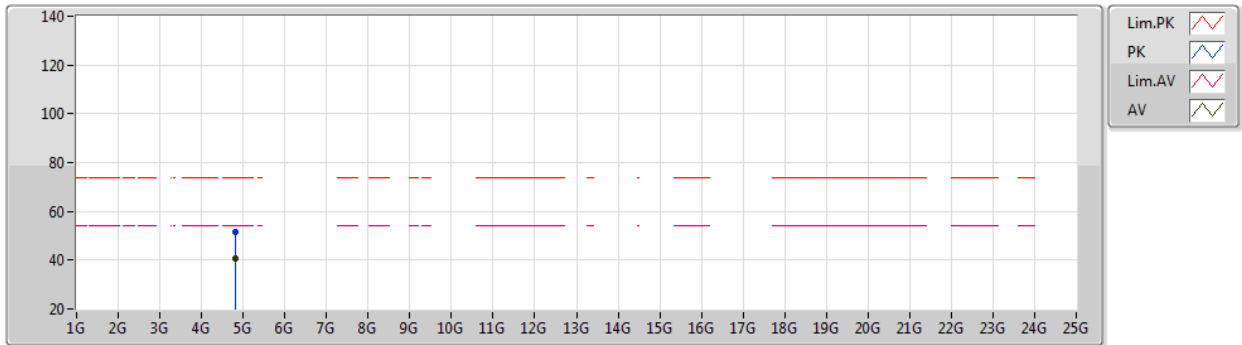
EUT Y_1TX
Setting 16
02-C-E-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.3883G	56.72	74.00	-17.28	24.96	3	Horizontal	49	2.36	-	28.26	3.50	-
AV	2.3898G	43.90	54.00	-10.10	12.13	3	Horizontal	49	2.36	-	28.27	3.50	-
PK	2.4055G	114.71	Inf	-Inf	82.88	3	Horizontal	49	2.36	-	28.32	3.51	-
AV	2.405G	109.55	Inf	-Inf	77.73	3	Horizontal	49	2.36	-	28.32	3.50	-

Zigbee

2405MHz_TX

19/06/2020



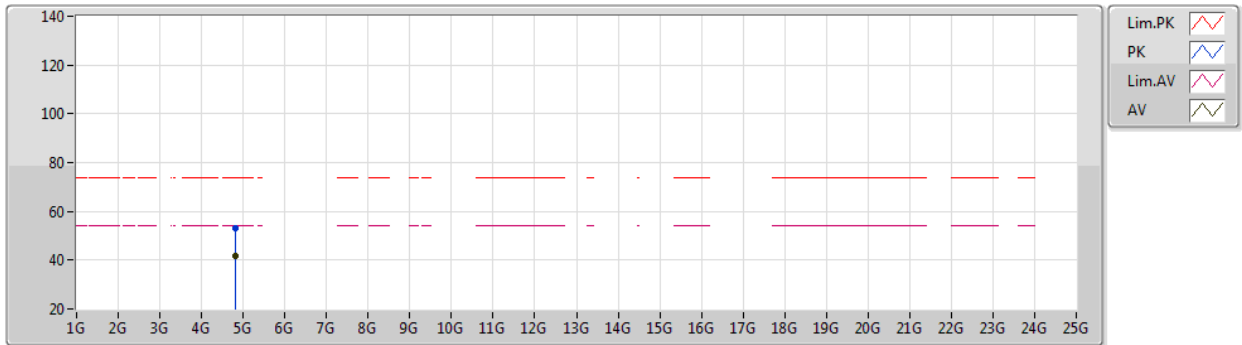
EUT Y_1TX
Setting 16
02-C-E-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	4.811G	51.56	74.00	-22.44	44.68	3	Vertical	5	2.48	-	32.84	5.81	31.77
AV	4.809G	40.84	54.00	-13.16	33.97	3	Vertical	5	2.48	-	32.84	5.80	31.77

Zigbee

2405MHz_TX

19/06/2020



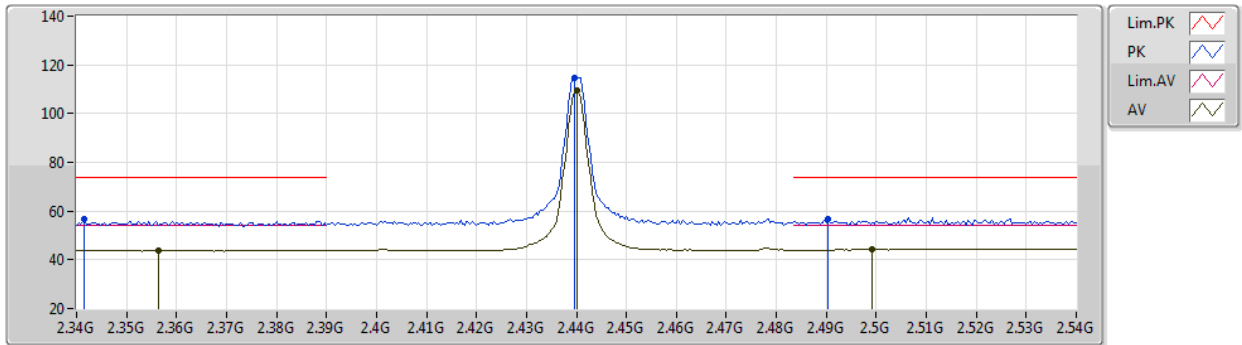
EUT Y_1TX
Setting 16
02-C-E-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	4.80894G	52.87	74.00	-21.13	46.00	3	Horizontal	10	1.41	-	32.84	5.80	31.77
AV	4.80899G	41.86	54.00	-12.14	34.99	3	Horizontal	10	1.41	-	32.84	5.80	31.77

Zigbee

2440MHz_TX

19/06/2020



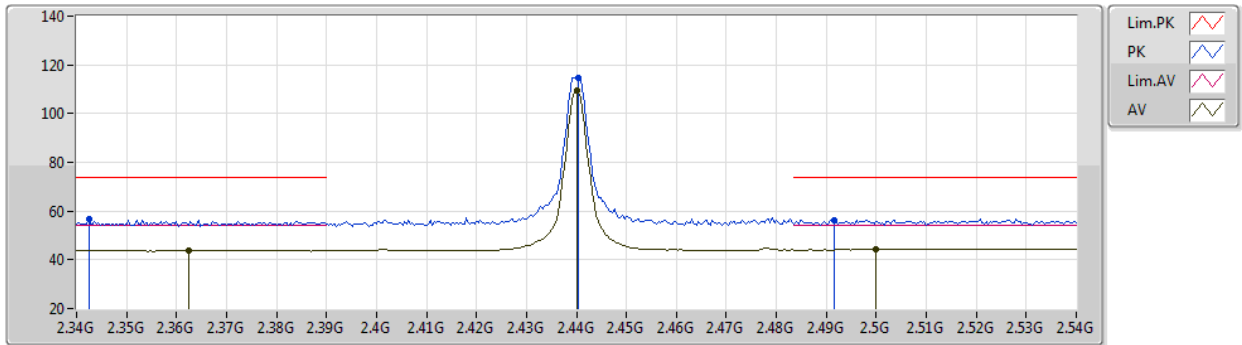
EUT Y_1TX
Setting 16
02-C-E-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.3416G	56.56	74.00	-17.44	24.94	3	Vertical	56	1.69	-	28.12	3.50	-
AV	2.3564G	43.70	54.00	-10.30	12.03	3	Vertical	56	1.69	-	28.17	3.50	-
PK	2.4396G	114.70	Inf	-Inf	82.74	3	Vertical	56	1.69	-	28.42	3.54	-
AV	2.44G	109.60	Inf	-Inf	77.64	3	Vertical	56	1.69	-	28.42	3.54	-
PK	2.4904G	56.55	74.00	-17.45	24.39	3	Vertical	56	1.69	-	28.57	3.59	-
AV	2.4992G	44.16	54.00	-9.84	11.96	3	Vertical	56	1.69	-	28.60	3.60	-

Zigbee

2440MHz_TX

19/06/2020



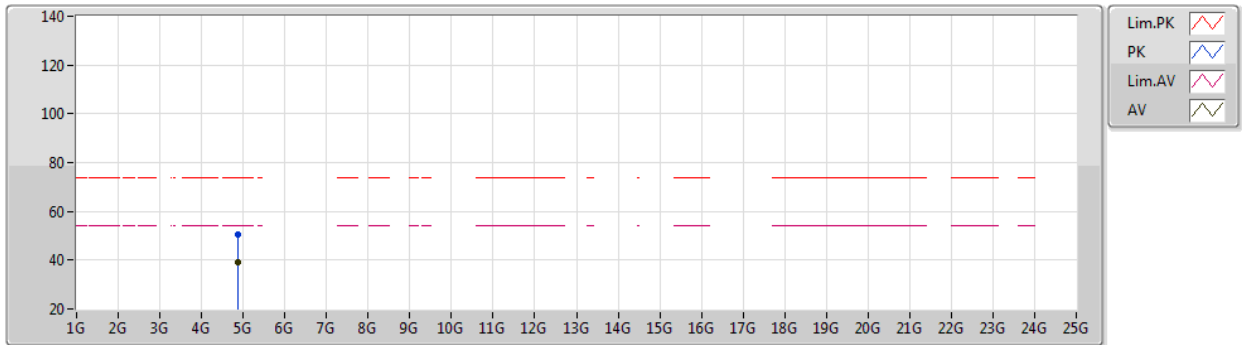
EUT Y_1TX
Setting 16
02-C-E-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.3424G	56.73	74.00	-17.27	25.10	3	Horizontal	55	1.71	-	28.13	3.50	-
AV	2.3624G	43.69	54.00	-10.31	12.00	3	Horizontal	55	1.71	-	28.19	3.50	-
PK	2.4404G	114.81	Inf	-Inf	82.85	3	Horizontal	55	1.71	-	28.42	3.54	-
AV	2.44G	109.73	Inf	-Inf	77.77	3	Horizontal	55	1.71	-	28.42	3.54	-
PK	2.4916G	56.15	74.00	-17.85	23.99	3	Horizontal	55	1.71	-	28.57	3.59	-
AV	2.5G	44.20	54.00	-9.80	12.00	3	Horizontal	55	1.71	-	28.60	3.60	-

Zigbee

2440MHz_TX

19/06/2020



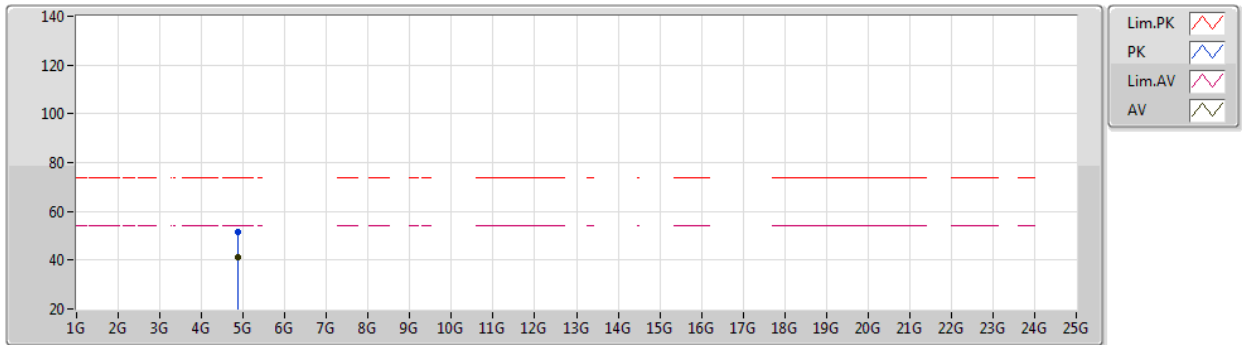
EUT Y_1TX
Setting 16
02-C-E-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	4.88106G	50.61	74.00	-23.39	43.45	3	Vertical	6	2.41	-	33.12	5.84	31.80
AV	4.88099G	39.20	54.00	-14.80	32.04	3	Vertical	6	2.41	-	33.12	5.84	31.80

Zigbee

2440MHz_TX

19/06/2020



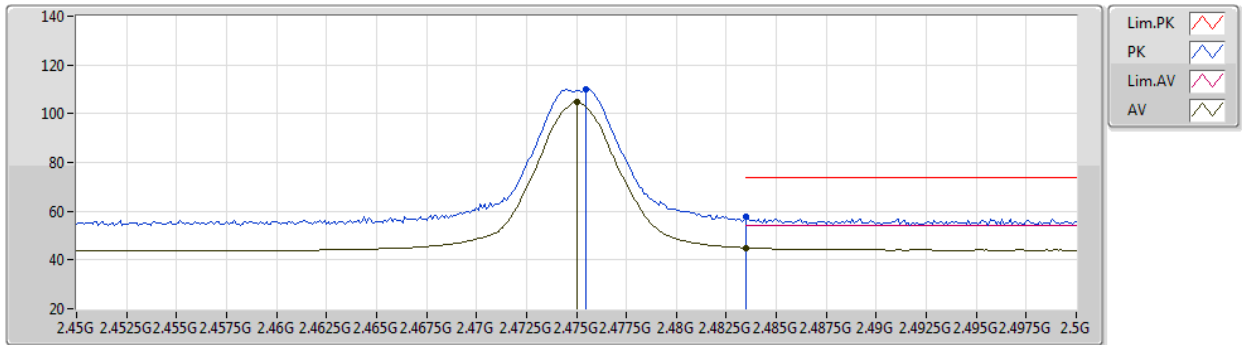
EUT Y_1TX
Setting 16
02-C-E-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	4.8812G	51.77	74.00	-22.23	44.61	3	Horizontal	349	2.05	-	33.12	5.84	31.80
AV	4.881G	40.96	54.00	-13.04	33.80	3	Horizontal	349	2.05	-	33.12	5.84	31.80

Zigbee

2475MHz_TX

19/06/2020



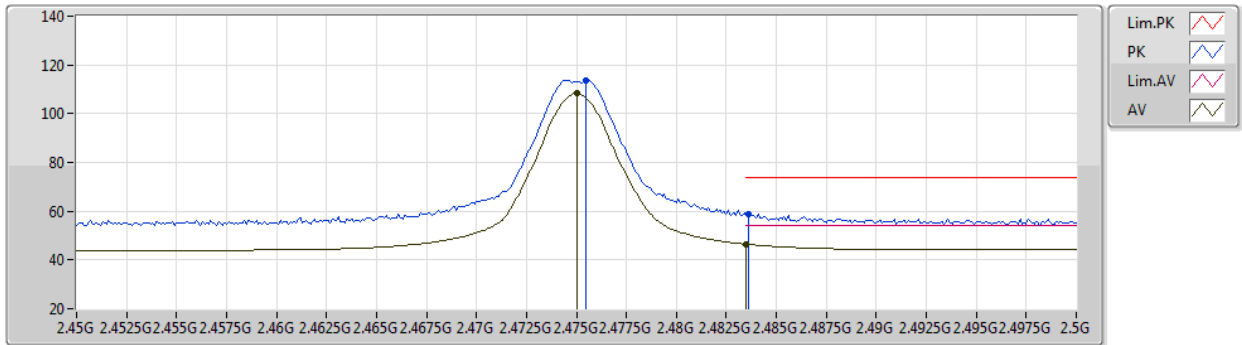
EUT Y_1TX
Setting 16
02-C-E-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.4755G	109.82	Inf	-Inf	77.71	3	Vertical	334	1.43	-	28.53	3.58	-
AV	2.475G	104.74	Inf	-Inf	72.63	3	Vertical	334	1.43	-	28.53	3.58	-
PK	2.4835G	57.51	74.00	-16.49	25.38	3	Vertical	334	1.43	-	28.55	3.58	-
AV	2.4835G	44.96	54.00	-9.04	12.83	3	Vertical	334	1.43	-	28.55	3.58	-

Zigbee

2475MHz_TX

19/06/2020



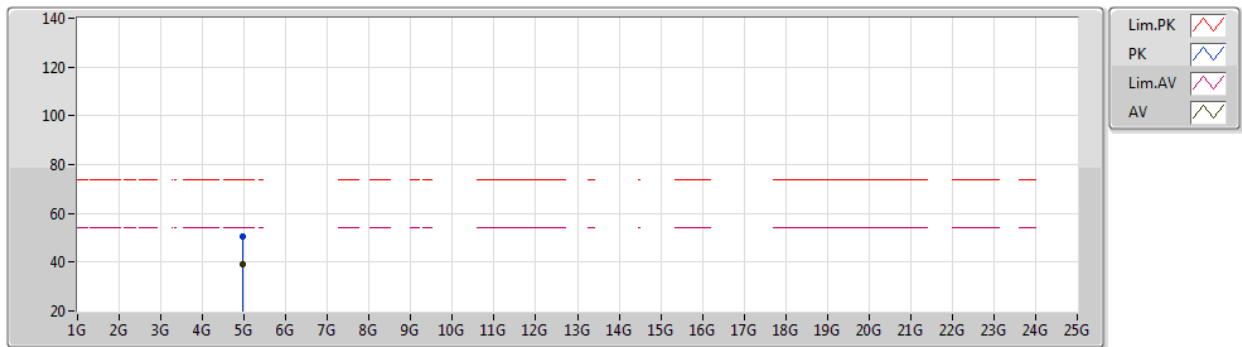
EUT Y_1TX
Setting 16
02-C-E-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	2.4755G	113.59	Inf	-Inf	81.48	3	Horizontal	318	2.06	-	28.53	3.58	-
AV	2.475G	108.49	Inf	-Inf	76.38	3	Horizontal	318	2.06	-	28.53	3.58	-
PK	2.4836G	58.70	74.00	-15.30	26.57	3	Horizontal	318	2.06	-	28.55	3.58	-
AV	2.4835G	46.42	54.00	-7.58	14.29	3	Horizontal	318	2.06	-	28.55	3.58	-

Zigbee

2475MHz_TX

19/06/2020



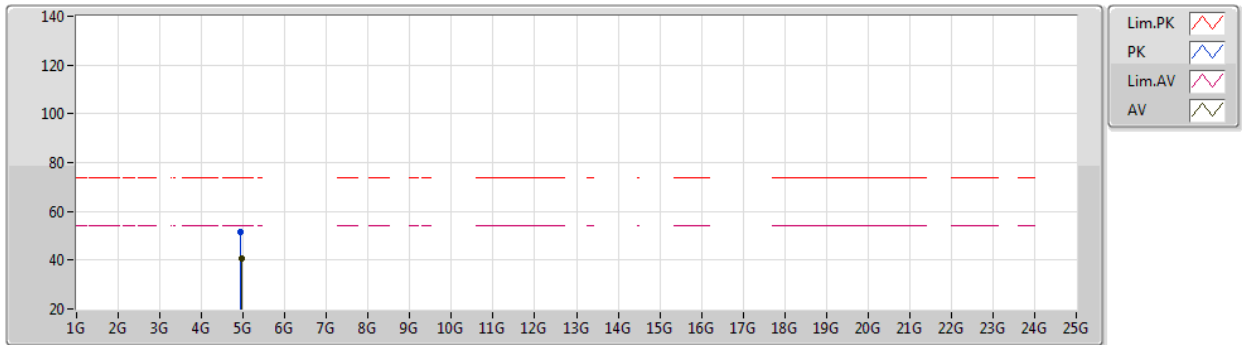
EUT Y_1TX
Setting 16
02-C-E-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	4.95099G	50.28	74.00	-23.72	42.98	3	Vertical	8	1.78	-	33.25	5.88	31.83
AV	4.951G	39.13	54.00	-14.87	31.83	3	Vertical	8	1.78	-	33.25	5.88	31.83

Zigbee

2475MHz_TX

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EUT Y_1TX
Setting 16
02-C-E-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)
PK	4.94876G	51.48	74.00	-22.52	44.18	3	Horizontal	348	1.89	-	33.25	5.87	31.82
AV	4.95102G	40.66	54.00	-13.34	33.36	3	Horizontal	348	1.89	-	33.25	5.88	31.83