FCC RADIO TEST REPORT

FCC ID	:	**LDK-SMST9105AXI**
Equipment	:	**Catalyst 9105AX 802.11ax Access Point, Catalyst 1105AX 802.11ax Access Point**
Brand Name	:	**Cisco**
Model Name	:	**C9105AXI-B, C9105AXI-C, C9105AXI-D, C9105AXI-F, C9105AXI-N, C9105AXI-S, C9105AXI-K, C9105AXI-x, C1105AXI-B, C1105AXI-C, C1105AXI-D, C1105AXI-F, C1105AXI-N, C1105AXI-S, C1105AXI-K, C1105AXI-x (Refer to section 1.1.5 for more details)**
Applicant	:	**Cisco Systems, Inc. 125 West Tasman Drive, San Jose, California, United States, 95134-1706**
Manufacturer	:	**Cisco Systems, Inc. 125 West Tasman Drive, San Jose, California, United States, 95134-1706**
Standard	:	**47 CFR FCC Part 15.247**

The product was received on Apr. 20, 2020, and testing was started from Apr. 28, 2020 and completed on Jun. 01, 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 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.

Cliff Chang

Approved by: Cliff Chang

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
FR992016-02AE	01	Initial issue of report	Jun. 10, 2020

Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
1.1.2	15.203	Antenna Requirement	PASS	-
3.1	15.207	AC Power-line Conducted Emissions	PASS	-
3.2	15.247(a)	DTS Bandwidth	PASS	-
3.3	15.247(b)	Maximum Conducted Output Power	PASS	-
3.4	15.247(e)	Power Spectral Density	PASS	-
3.5	15.247(d)	Emissions in Non-restricted Frequency Bands	PASS	-
3.6	15.247(d)	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:
1. The test configuration, test mode and test software were written in this test report are declared by the manufacturer. 2. 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: Sandy Chuang

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	2405-2480	11-26 [16]

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.
- Nss-Min is the minimum number of spatial streams.
- Nant is the number of outputs. e.g., 2(2,3) means have 2 outputs for port 2 and port 3. 2 means have 2 outputs for port 1 and port 2.

1.1.2 Antenna Information

Ant.	Port	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	1	PEGATRON	WIFI_1 ANT	IFA (Inverted-F antenna)	I-PEX	Note 1
2	2	PEGATRON	WIFI_2 ANT	IFA (Inverted-F antenna)	I-PEX	
3	1	PEGATRON	BLE ANT	IFA (Inverted-F antenna)	I-PEX	

Note 1:

Ant.	Port	Gain (dBi)										
		WLAN 2.4GHz			WLAN 5GHz					Bluetooth / Zigbee		
		2400 MHz	2450 MHz	2500 MHz	5150 MHz	5300 MHz	5500 MHz	5700 MHz	5850 MHz	2400 MHz	2450 MHz	2500 MHz
1	1	3.03	3.43	3.02	4.28	4.48	4.63	4.89	4.52	-	-	-
2	2	2.92	3.41	3.11	4.68	4.52	4.49	4.66	4.72	-	-	-
3	1	-	-	-	-	-	-	-	-	2.08	2.30	2.18

Note 2: The above information was declared by manufacturer.
Note 3:

For 2.4GHz function:

For IEEE 802.11 b/g/n/ax (1TX/1RX):

Only Port 1 can be used as transmitting/receiving antenna.

For IEEE 802.11 b/g/n/ax (2TX/2RX):

Port 1 and Port 2 can be used as transmitting/receiving antenna.

Port 1 and Port 2 could transmit/receive simultaneously.

For 5GHz function:

For IEEE 802.11a/n/ac/ax (1TX/1RX):

Only Port 1 can be used as transmitting/receiving antenna.

For IEEE 802.11a/n/ac/ax (2TX/2RX):

Port 1 and Port 2 can be used as transmitting/receiving antenna.

Port 1 and Port 2 could transmit/receive simultaneously.

For Bluetooth function:

Only Port 1 can be used as transmitting/receiving antenna.

For Zigbee function:

Only Port 1 can be used as transmitting/receiving antenna.

1.1.3 Mode Test Duty Cycle

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
Zigbee	1	0	n/a (DC>=0.98)	n/a (DC>=0.98)

Note:
- DC is Duty Cycle.
- DCF is Duty Cycle Factor.

1.1.4 EUT Operational Condition

EUT Power Type	From PoE			
Beamforming Function	☒	With beamforming	☐	Without beamforming
	The product has beamforming function for n/ax in 2.4GHz and a/n/ac/ax in 5GHz.			
Test Software Version	Feb14 2020 05:22:27 version 17.18.2 (r782430 WLTEST)			

Note: The above information was declared by manufacturer.

1.1.5 Table for Multiple Listing

The equipment names/model names in the following table are all refer to the identical product.

Equipment Name	Model Name	Description
Catalyst 9105AX 802.11ax Access Point	C9105AXI-B	All the models are identical, the difference equipment names/model names for difference marketing strategy.
	C9105AXI-C	
	C9105AXI-D	
	C9105AXI-F	
	C9105AXI-N	
	C9105AXI-S	
	C9105AXI-K	
	C9105AXI-x (x can be A-Z, regional country code)	
Catalyst 1105AX 802.11ax Access Point	C1105AXI-B	
	C1105AXI-C	
	C1105AXI-D	
	C1105AXI-F	
	C1105AXI-N	
	C1105AXI-S	
	C1105AXI-K	
	C1105AXI-x (x can be A-Z, regional country code)	

From the above models, model: C9105AXI-B was selected as representative model for the test and its data was recorded in this report.

1.2 Applicable Standards

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

- 47 CFR FCC Part 15
- 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	Owen Hsu	22.5-23.8°C / 56-58%	Apr. 28, 2020 May 28, 2020
Radiated (Cabinet_Above 1GHz)	03CH06-CB	RJ Huang	21.9-22.4°C / 57-60 %	Apr. 30, 2020~ Jun. 01, 2020
Radiated (Below 1GHz)	03CH06-CB	Stim Sung	22.4-23.3°C / 57-60 %	May 19, 2020
AC Conduction	CO02-CB	GN Hou	22~24°C / 65~68%	May 28, 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)	4.3 dB	Confidence levels of 95%
Radiated Emission (1GHz ~ 18GHz)	4.3 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	5.1 dB	Confidence levels of 95%
Conducted Emission	2.4 dB	Confidence levels of 95%
Output Power Measurement	1.5 dB	Confidence levels of 95%
Power Density Measurement	2.4 dB	Confidence levels of 95%
Bandwidth Measurement	2%	Confidence levels of 95%

2 Test Configuration of EUT

2.1 Test Channel Mode

Mode	Power Setting
Zigbee	-
2405MHz	5
2440MHz	5
2480MHz	1

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	CTX
1	EUT_2.4GHz + PoE
2	EUT_5GHz + PoE
3	EUT_Bluetooth LE + PoE
4	EUT_Zigbee + PoE
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	CTX
	The EUT was performed at X axis, Y axis and Z axis position for Emissions in Restricted Frequency Bands above 1GHz. The worst case was found at Z axis in 2.4GHz, Zigbee and at X axis in 5GHz, Bluetooth LE, thus the measurement will follow this same test configuration.
1	EUT in Z axis_2.4GHz + PoE
2	EUT in X axis_5GHz + PoE
3	EUT in X axis_Bluetooth LE + PoE
4	EUT in Z axis_Zigbee + PoE
For operating mode 1 is the worst case and it was record in this test report.	
Operating Mode > 1GHz	CTX (Cabinet)
	The EUT was performed at X axis, Y axis and Z axis position. The worst case was found at Z axis, thus the measurement will follow this same test configuration.
1	EUT in Z axis_Zigbee

The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis - Co-location RF Exposure Evaluation
Operating Mode	
1	WLAN 2.4GHz + WLAN 5GHz + Bluetooth LE
2	WLAN 2.4GHz + WLAN 5GHz + Zigbee
Refer to Sporton Test Report No.: FA992016-02 for Co-location RF Exposure Evaluation.	

Note: It was supplied power by PoE for EUT, and the PoE is for measurement only, would not be marketed.

<For Conducted emissions and Radiated measurement (below 1GHz)>

Equipment	Brand Name	Model Name	FCC ID
PoE	PHIHONG	POE29U-1AT(PL)	N/A

<For other tests>

Equipment	Brand Name	Model Name	FCC ID
PoE	CERIO	POE-G30	N/A

2.3 EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

2.4 Accessories

Accessories				
No.	**Equipment Name**	**Brand Name**	**Model Name**	**Remark**
1	Mounting bracket*1	Cisco	AIR-AP-BRACKET-8	-

2.5 Support Equipment

For AC Conduction:

Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
A	PoE	PHIHONG	POE29U-1AT(PL)	N/A

For Radiated (below 1GHz):

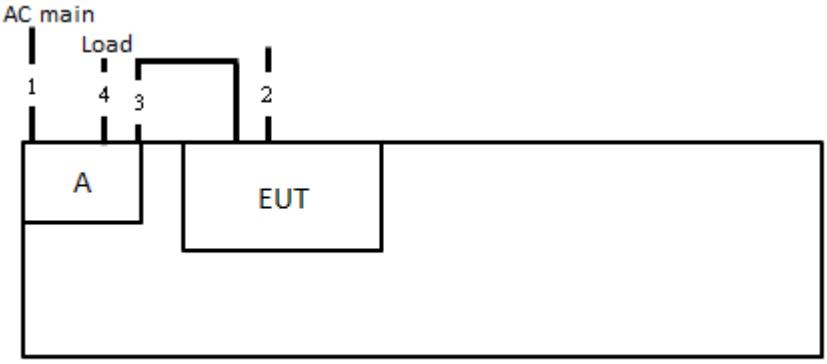
Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
A	PoE	PHIHONG	POE29U-1AT(PL)	N/A
B	Notebook	DELL	E4300	N/A

For Radiated (above 1GHz) and RF Conducted:

Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
A	PoE	CERIO	POE-G30	N/A
B	Notebook	DELL	E4300	N/A
C	Fixture	TEXAS INSTRUMENTS	LAUNCHXL-CC26X2R1	N/A

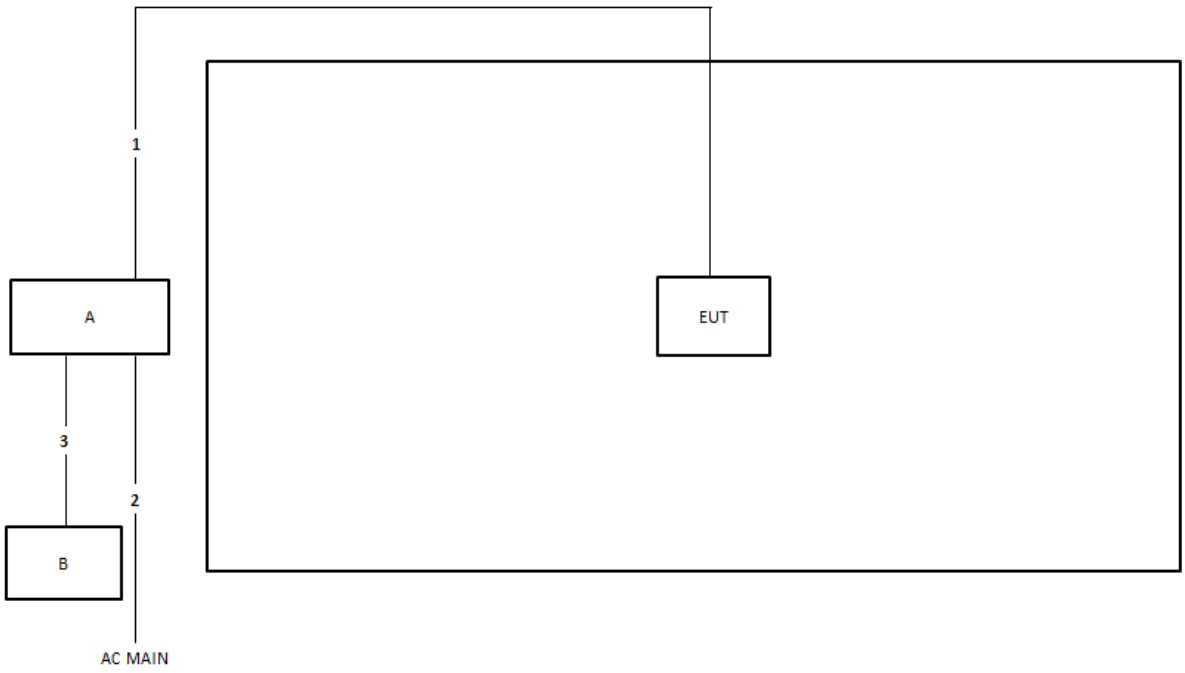
2.6 Test Setup Diagram

Test Setup Diagram – AC Line Conducted Emission Test



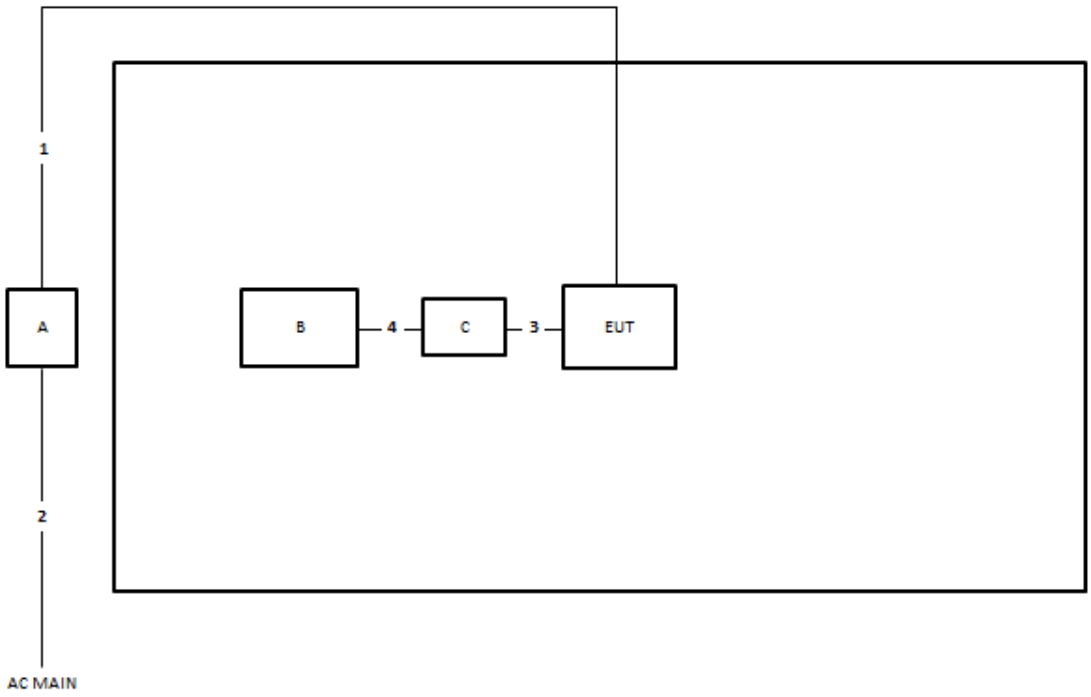
Item	Connection	Shielded	Length
1	Power cable	No	1.5m
2	RS232 to RJ-45 console cable	No	1.9m
3	RJ-45 cable	No	1.5m
4	RJ-45 cable	No	1.5m

Test Setup Diagram - Radiated Test < 1GHz



Item	Connection	Shielded	Length
1	RJ-45 cable	No	10m
2	Power cable	No	1.5m
3	RJ-45 cable	No	1.5m

Test Setup Diagram - Radiated Test > 1GHz



Item	Connection	Shielded	Length
1	RJ-45 cable	No	10m
2	Power cable	No	1.5m
3	Pin cable	No	0.1m
4	USB cable	Yes	1m

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

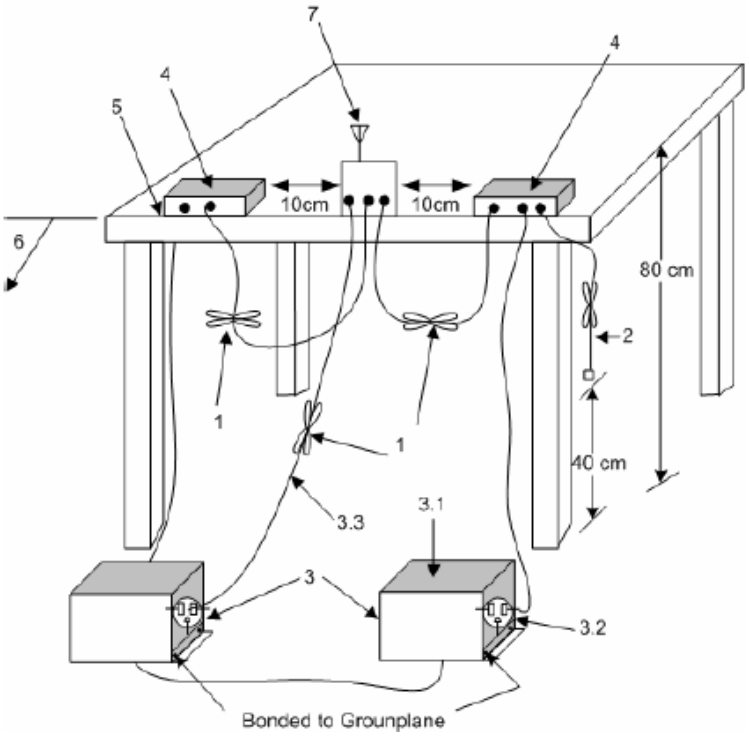
Refer a test equipment and calibration data table in this test report.

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

AC Power-line Conducted Emissions



1—Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 cm to 40 cm long.
2—The I/O cables that are not connected to an accessory shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
3—EUT connected to one LISN. Unused LISN measuring port connectors shall be terminated in 50 Ω loads. LISN may be placed on top of, or immediately beneath, reference ground plane.
3.1—All other equipment powered from additional LISN(s).
3.2—A multiple-outlet strip may be used for multiple power cords of non-EUT equipment.
3.3—LISN at least 80 cm from nearest part of EUT chassis.
4—Non-EUT components of EUT system being tested.
5—Rear of EUT, including peripherals, shall all be aligned and flush with edge of tabletop.
6—Edge of tabletop shall be 40 cm removed from a vertical conducting plane that is bonded to the ground plane.
7—Antenna can be integral or detachable. If detachable, then the antenna shall be attached for this test.

3.1.5 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 ≥ 500 kHz.

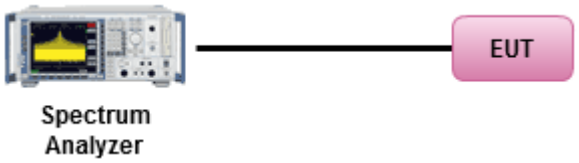
3.2.2 Measuring Instruments

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

Emission Bandwidth


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)	
	▪ If $G_{TX} > 6$ dBi, then $P_{Out} = 30 – (G_{TX} – 6)$ 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 ≥ 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 ≥ 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: $P_{total} = P_1 + P_2 + \ldots + P_n$ (calculated in linear unit [mW] and transfer to log unit [dBm]) $EIRP_{total} = P_{total} + DG$

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

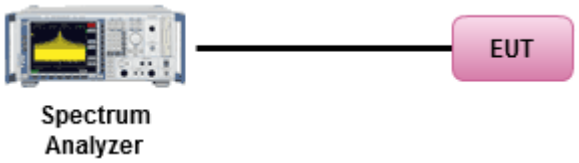
3.4.2 Measuring Instruments

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

Power Spectral Density


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

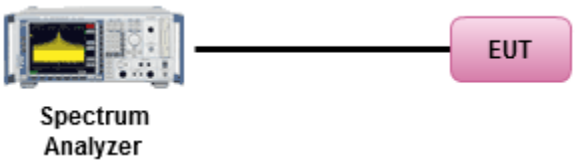
Refer a test equipment and calibration data table in this test report.

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

Emissions in Non-restricted Frequency Bands



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

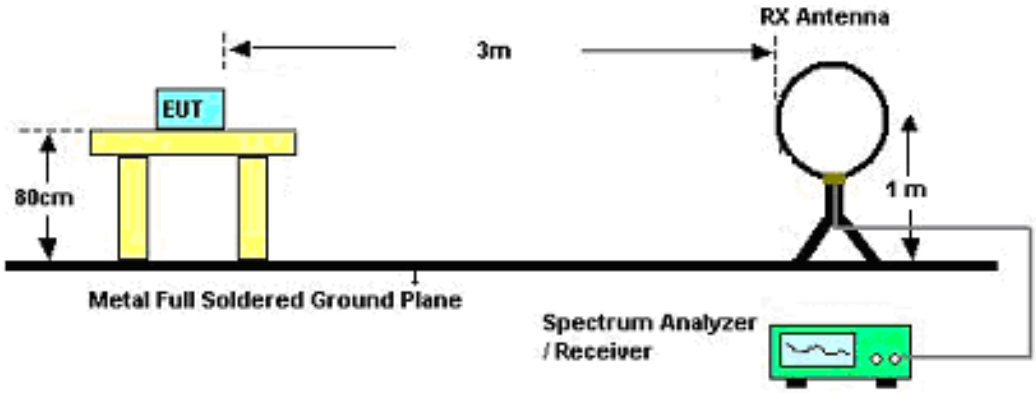
Test Method			
▪ The average emission levels shall be measured in [duty cycle ≥ 98 or duty factor].			
▪ Refer as ANSI C63.10, clause 6.10.3 band-edge testing shall be performed at the lowest frequency channel and highest frequency channel within the allowed operating band.			
▪ For the transmitter unwanted 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 ≥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≥1/T).
		☐	Refer as ANSI C63.10, clause 11.12.2.5.3 (Reduced VBW). VBW ≥ 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.		

Test Method	
▪ For conducted and cabinet radiation measurement, refer as FCC KDB 558074, clause 8.6 & C63.10 clause 11.12.2.2.	
	▪ For conducted unwanted emissions into non-restricted bands (relative emission limits). Devices with multiple transmit chains: Refer as FCC KDB 662911, when testing out-of-band and spurious emissions against relative emission limits, tests may be performed on each output individually without summing or adding 10 log(N) if the measurements are made relative to the in-band emissions on the individual outputs.
	▪ 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.

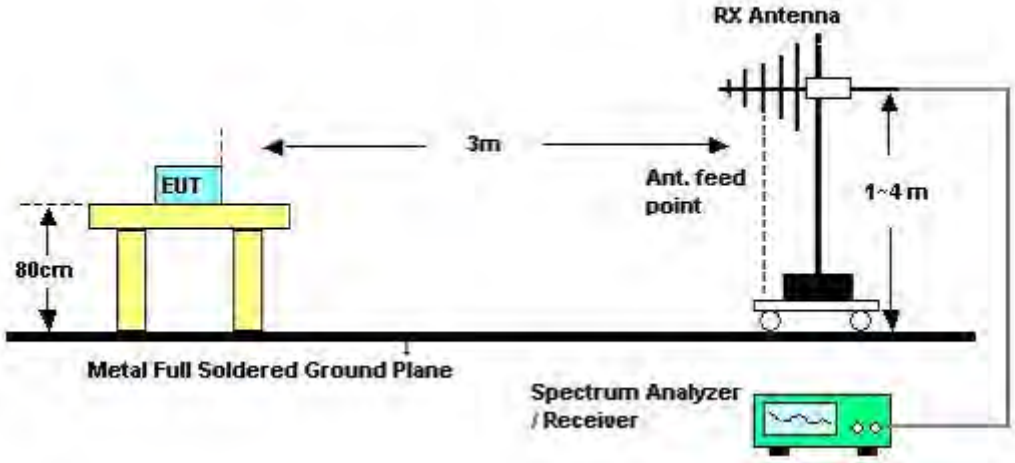
3.6.4 Test Setup

Radiated - Emissions in Restricted Frequency Bands

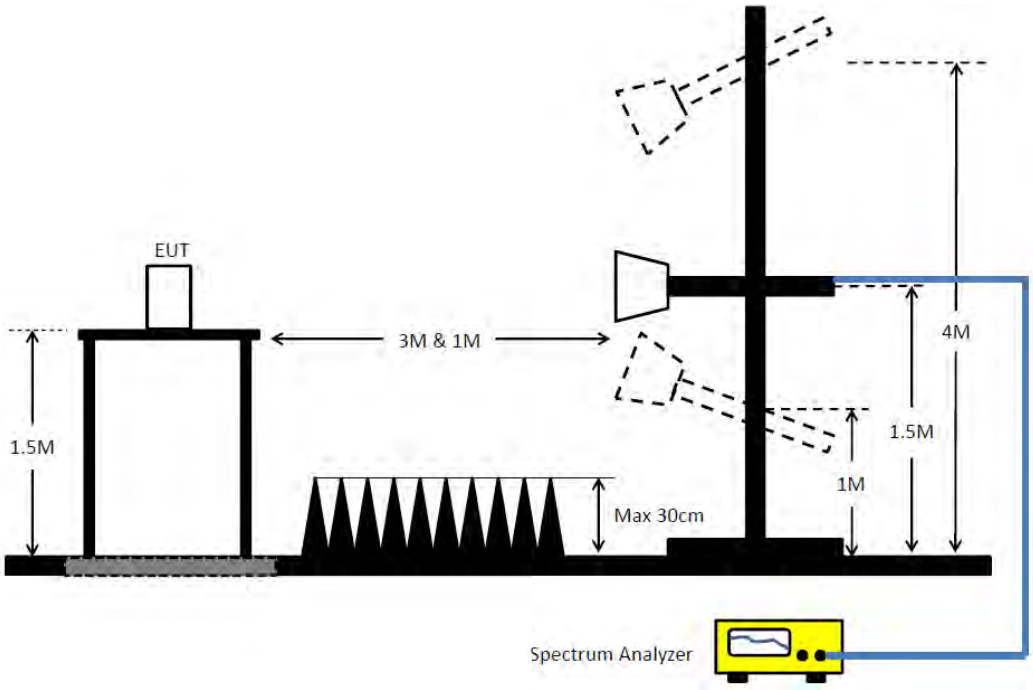
9kHz ~30MHz



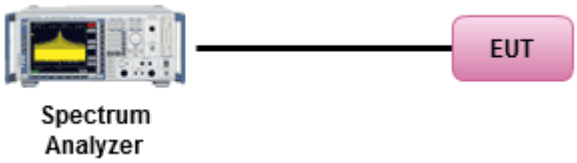
30MHz~1GHz



Above 1GHz



Conducted - Emissions in Restricted Frequency Bands



3.6.5 Measurement Results Calculation

The measured Level is calculated using:
Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = 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
LISN	Schwarzbeck	NSLK 8127	8127650	9kHz ~ 30MHz	Nov. 21, 2019	Nov. 20, 2020	Conduction (CO02-CB)
LISN	Schwarzbeck	NSLK 8127	8127478	9kHz ~ 30MHz	Oct. 30, 2019	Oct. 29, 2020	Conduction (CO02-CB)
EMI Receiver	Agilent	N9038A	MY52260140	9kHz ~ 8.4GHz	Mar. 10, 2020	Mar. 09, 2021	Conduction (CO02-CB)
COND Cable	Woken	Cable	2	0.15MHz ~ 30MHz	Oct. 21, 2019	Oct. 20, 2020	Conduction (CO02-CB)
Software	Audix	E3	6.120210n	-	N.C.R.	N.C.R.	Conduction (CO02-CB)
Loop Antenna	Teseq	HLA 6120	24155	9kHz - 30 MHz	Apr. 13, 2020	Apr. 12, 2021	Radiation (03CH06-CB)
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	SCHWARZBECK	BBHA9120D	9120D-1292	1GHz~18GHz	Jul. 17, 2019	Jul. 16, 2020	Radiation (03CH06-CB)
Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170507	15GHz ~ 40GHz	Jun. 12, 2019	Jun. 11, 2020	Radiation (03CH06-CB)
Pre-Amplifier	Agilent	310N	187290	0.1MHz ~ 1GHz	Apr. 28, 2020	Apr. 27, 2021	Radiation (03CH06-CB)
Pre-Amplifier	Agilent	83017A	MY53270064	0.5GHz ~ 26.5GHz	May 08, 2019	May 07, 2020	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-HG	1864479	18GHz ~ 40GHz	Jul. 03, 2019	Jul. 02, 2020	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 15, 2019	May 14, 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)

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
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)
Spectrum analyzer	R&S	FSV40	101027	9kHz~40GHz	Jul. 02, 2019	Jul. 01, 2020	Conducted (TH01-CB)
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.

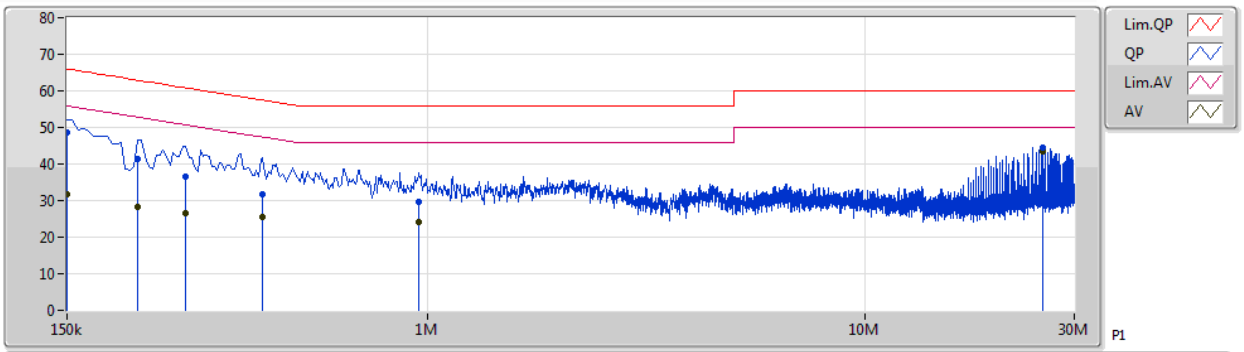
NCR means Non-Calibration required.

Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition
Mode 2	Pass	AV	25.337M	43.53	50.00	-6.47	10.88	Line

Mode 2

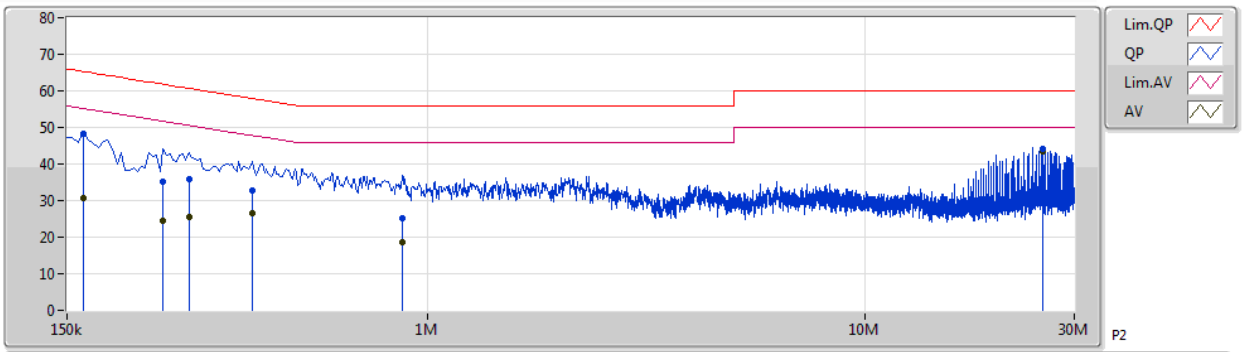
28/05/2020



Type	Freq	Level	Limit	Margin	Factor	Condition	Comment	Raw	AF	CL	AT
	(Hz)	(dBuV)	(dBuV)	(dB)	(dB)			(dBuV)	(dB)	(dB)	(dB)
QP	150k	48.48	66.00	-17.52	10.20	Line	-	38.28	0.05	0.05	10.10
AV	150k	31.87	56.00	-24.13	10.20	Line	-	21.67	0.05	0.05	10.10
QP	217.5k	41.40	62.92	-21.52	10.22	Line	-	31.18	0.05	0.07	10.10
AV	217.5k	28.36	52.92	-24.56	10.22	Line	-	18.14	0.05	0.07	10.10
QP	280.5k	36.39	60.80	-24.41	10.22	Line	-	26.17	0.05	0.07	10.10
AV	280.5k	26.62	50.80	-24.18	10.22	Line	-	16.40	0.05	0.07	10.10
QP	420k	31.76	57.45	-25.69	10.23	Line	-	21.53	0.05	0.08	10.10
AV	420k	25.68	47.45	-21.77	10.23	Line	-	15.45	0.05	0.08	10.10
QP	955.5k	29.54	56.00	-26.46	10.28	Line	-	19.26	0.06	0.12	10.10
AV	955.5k	24.20	46.00	-21.80	10.28	Line	-	13.92	0.06	0.12	10.10
QP	25.337M	44.40	60.00	-15.60	10.88	Line	-	33.52	0.53	0.23	10.12
AV	25.337M	43.53	50.00	-6.47	10.88	Line	"Worst"	32.65	0.53	0.23	10.12

Mode 2

28/05/2020



Type	Freq	Level	Limit	Margin	Factor	Condition	Comment	Raw	AF	CL	AT
	(Hz)	(dBuV)	(dBuV)	(dB)	(dB)			(dBuV)	(dB)	(dB)	(dB)
QP	163.5k	48.19	65.27	-17.08	10.21	Neutral	-	37.98	0.05	0.06	10.10
AV	163.5k	30.63	55.27	-24.64	10.21	Neutral	-	20.42	0.05	0.06	10.10
QP	249k	35.34	61.79	-26.45	10.22	Neutral	-	25.12	0.05	0.07	10.10
AV	249k	24.44	51.79	-27.35	10.22	Neutral	-	14.22	0.05	0.07	10.10
QP	285k	35.80	60.67	-24.87	10.23	Neutral	-	25.57	0.05	0.08	10.10
AV	285k	25.62	50.67	-25.05	10.23	Neutral	-	15.39	0.05	0.08	10.10
QP	397.5k	32.68	57.91	-25.23	10.23	Neutral	-	22.45	0.05	0.08	10.10
AV	397.5k	26.68	47.91	-21.23	10.23	Neutral	-	16.45	0.05	0.08	10.10
QP	874.5k	25.28	56.00	-30.72	10.27	Neutral	-	15.01	0.06	0.11	10.10
AV	874.5k	18.49	46.00	-27.51	10.27	Neutral	-	8.22	0.06	0.11	10.10
QP	25.337M	44.22	60.00	-15.78	10.67	Neutral	-	33.55	0.32	0.23	10.12
AV	25.337M	43.44	50.00	-6.56	10.67	Neutral	"Worst"	32.77	0.32	0.23	10.12

Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
2.4-2.4835GHz	-	-	-	-	-
Zigbee	1.588M	2.58M	2M58G1D	1.556M	2.567M

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

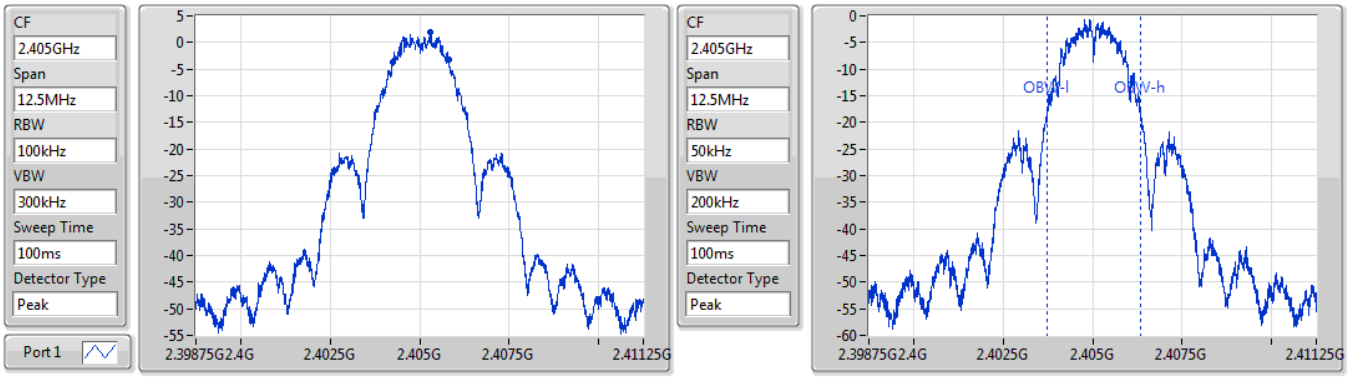
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
Zigbee	-	-	-	-
2405MHz	Pass	500k	1.575M	2.58M
2440MHz	Pass	500k	1.588M	2.574M
2480MHz	Pass	500k	1.556M	2.567M

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

Zigbee EBW

2405MHz

29/04/2020

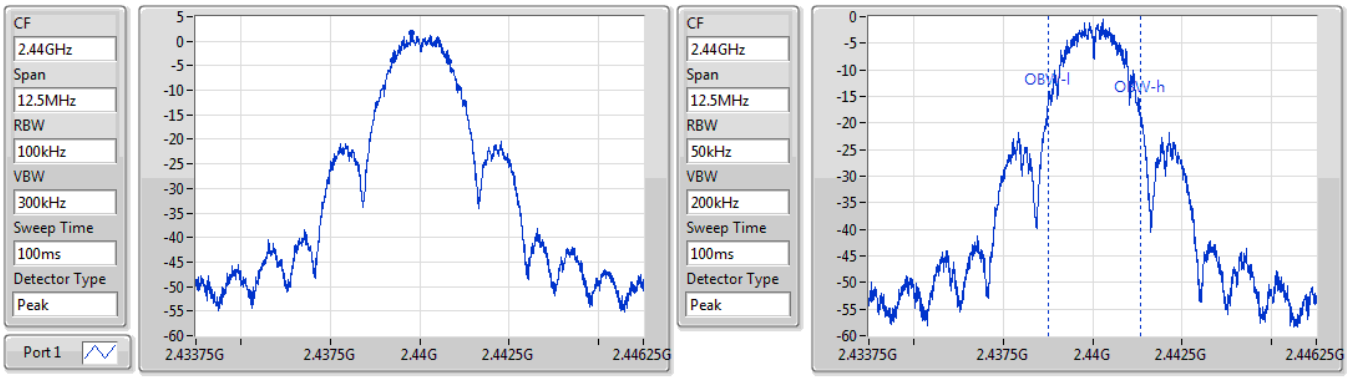


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.575M	2.404244G	2.405819G	2.58M	2.403744G	2.406324G	500k	1

Zigbee EBW

2440MHz

29/04/2020

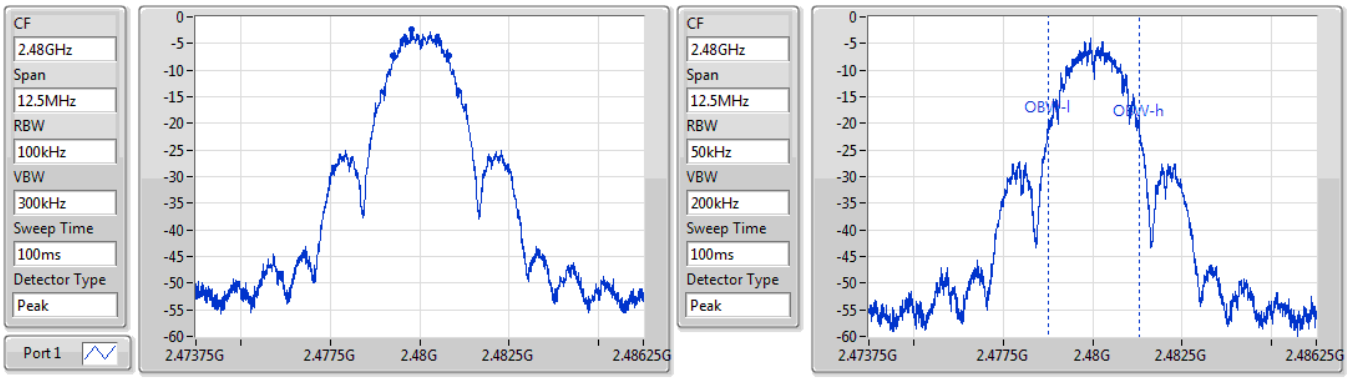


6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.588M	2.439244G	2.440831G	2.574M	2.438751G	2.441324G	500k	1

Zigbee **EBW**

2480MHz

29/04/2020



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.556M	2.479256G	2.480813G	2.567M	2.478751G	2.481318G	500k	1

Summary

Mode	Total Power (dBm)	Total Power (W)	EIRP (dBm)	EIRP (W)
2.4-2.4835GHz	-	-	-	-
Zigbee	5.32	0.00340	7.58	0.00573

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Total Power (dBm)	Power Limit (dBm)	EIRP Power (dBm)
Zigbee	-	-	-	-	-	-
2405MHz	Pass	2.08	5.32	5.32	30.00	7.40
2440MHz	Pass	2.30	5.28	5.28	30.00	7.58
2480MHz	Pass	2.18	1.08	1.08	30.00	3.26

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

Summary

Mode	PD (dBm/RBW)
2.4-2.4835GHz	-
Zigbee	-10.74

RBW = 500 kHz for 5.725-5.85GHz band / 1MHz for other band;

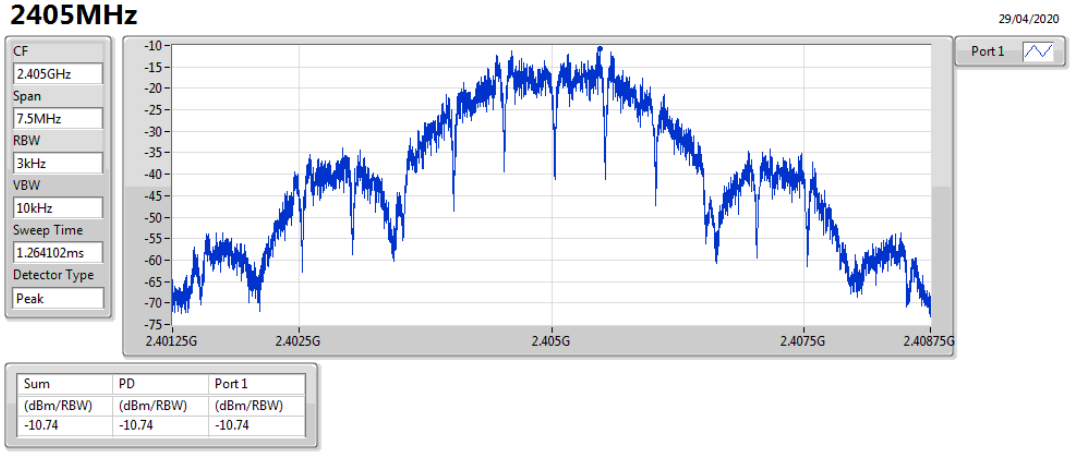
Result

Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
Zigbee	-	-	-	-	-
2405MHz	Pass	2.08	-10.74	-10.74	8.00
2440MHz	Pass	2.30	-11.94	-11.94	8.00
2480MHz	Pass	2.18	-15.66	-15.66	8.00

DG = Directional Gain; **RBW** = 500 kHz for 5.725-5.85GHz band / 1MHz for other band;
PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; **Port X** = Port X power density;

Zigbee **PSD**

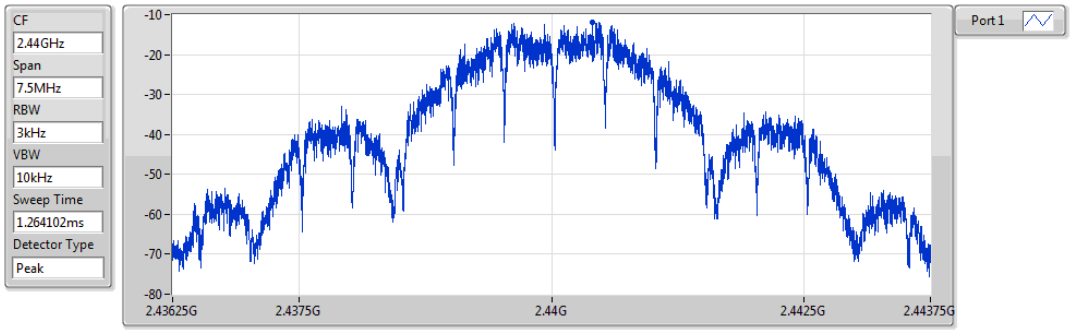
2405MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-10.74	-10.74	-10.74

Zigbee **PSD**

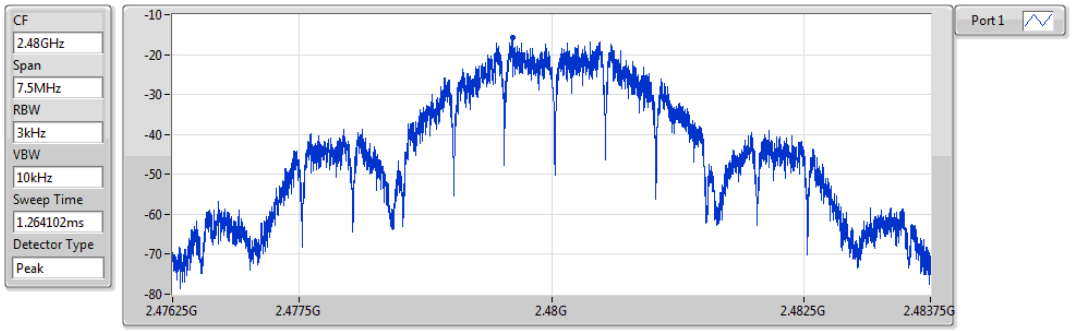
2440MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-11.94	-11.94	-11.94

Zigbee **PSD**

2480MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-15.66	-15.66	-15.66

Summary

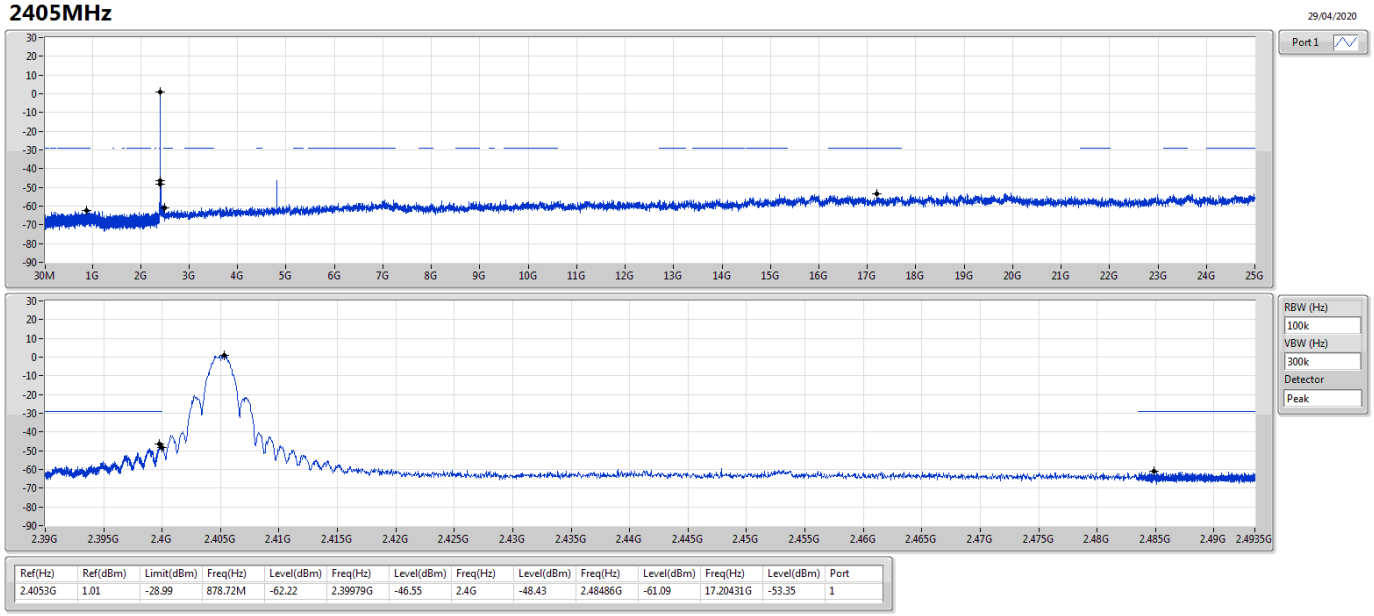
Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Zigbee	Pass	2.4053G	1.01	-28.99	878.72M	-62.22	2.39979G	-46.55	2.4G	-48.43	2.48486G	-61.09	17.20431G	-53.35	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	2.4053G	1.01	-28.99	878.72M	-62.22	2.39979G	-46.55	2.4G	-48.43	2.48486G	-61.09	17.20431G	-53.35	1
2440MHz	Pass	2.4053G	1.01	-28.99	879.01M	-62.33	2.39197G	-61.51	2.4835G	-63.76	2.48793G	-59.22	24.6202G	-52.55	1
2480MHz	Pass	2.4053G	1.01	-28.99	2.30298G	-62.67	2.39504G	-61.08	2.4835G	-47.00	2.48352G	-47.00	24.60051G	-53.03	1

Zigbee **CSE NdB**

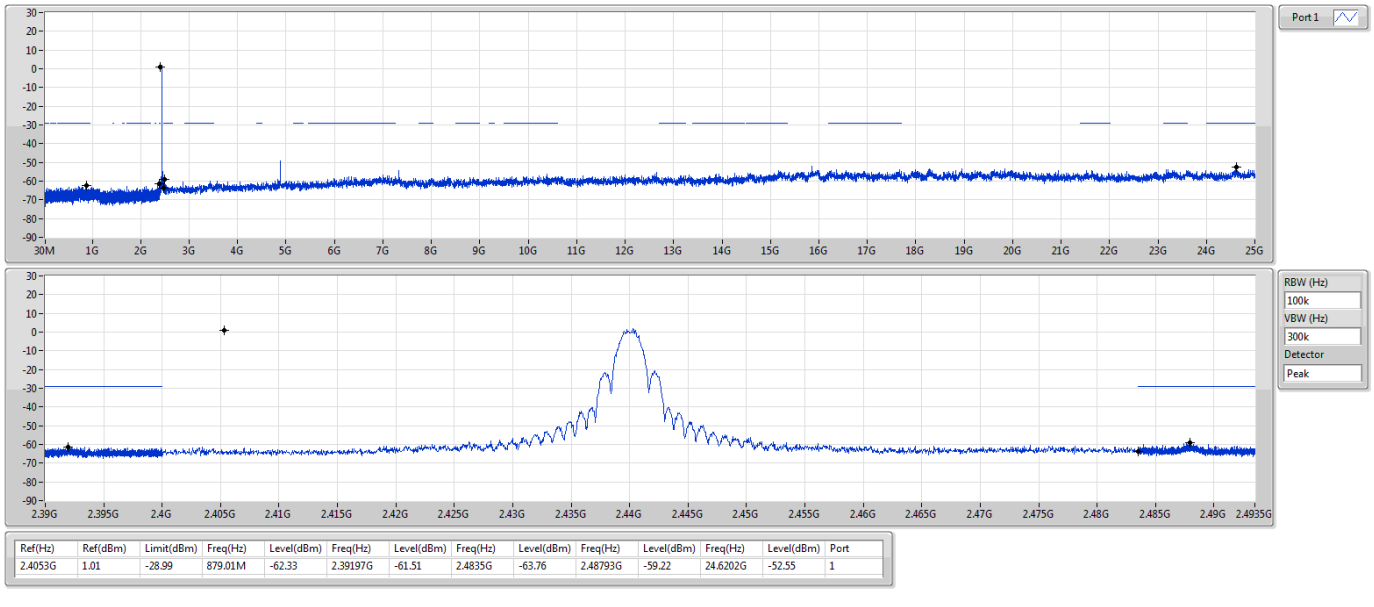
2405MHz



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
2.4053G	1.01	-28.99	878.72M	-62.22	2.39979G	-46.55	2.4G	-48.43	2.48486G	-61.09	17.20431G	-53.35	1

Zigbee **CSE NdB**

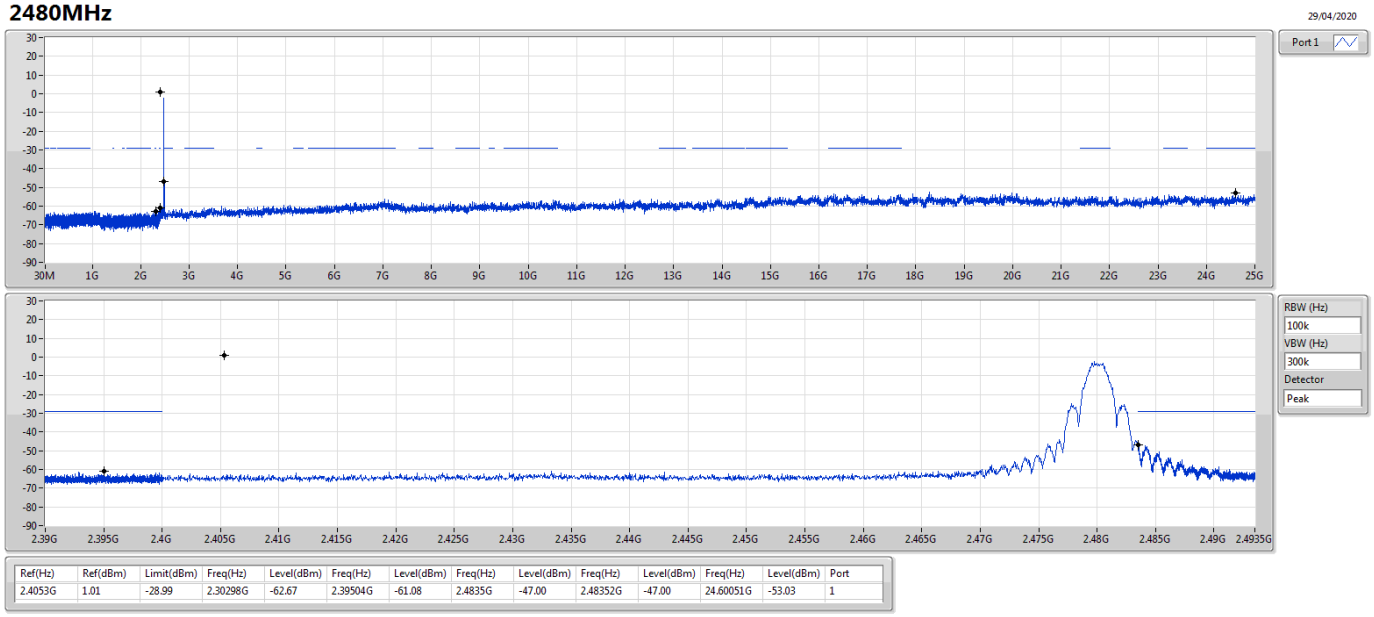
2440MHz



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
2.4053G	1.01	-28.99	879.01M	-62.33	2.39197G	-61.51	2.4835G	-63.76	2.48793G	-59.22	24.6202G	-52.55	1

Zigbee **CSE NdB**

2480MHz



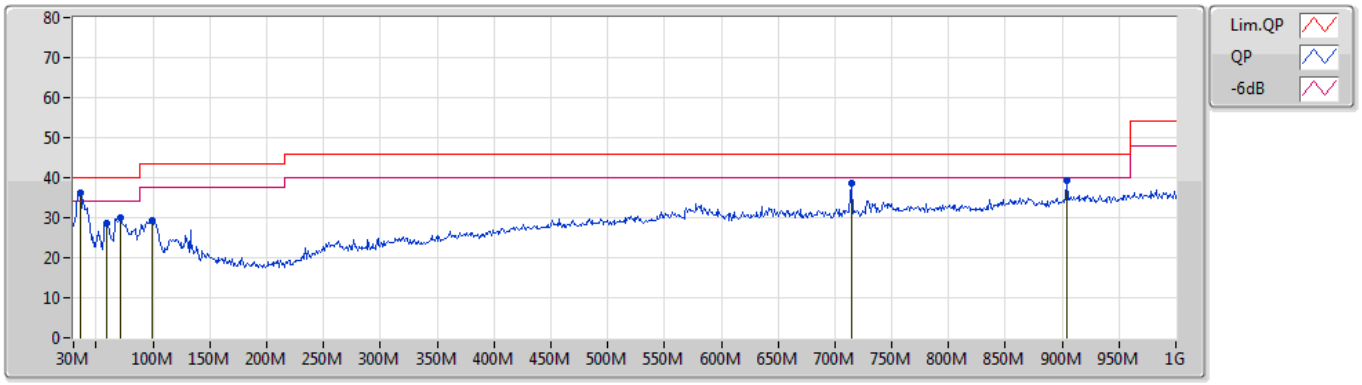
Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.4053G	1.01	-28.99	2.30298G	-62.67	2.39504G	-61.08	2.4835G	-47.00	2.48352G	-47.00	24.60051G	-53.03	1

Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Condition
Mode 1	Pass	PK	35.82M	36.33	40.00	-3.67	Vertical

Mode 1

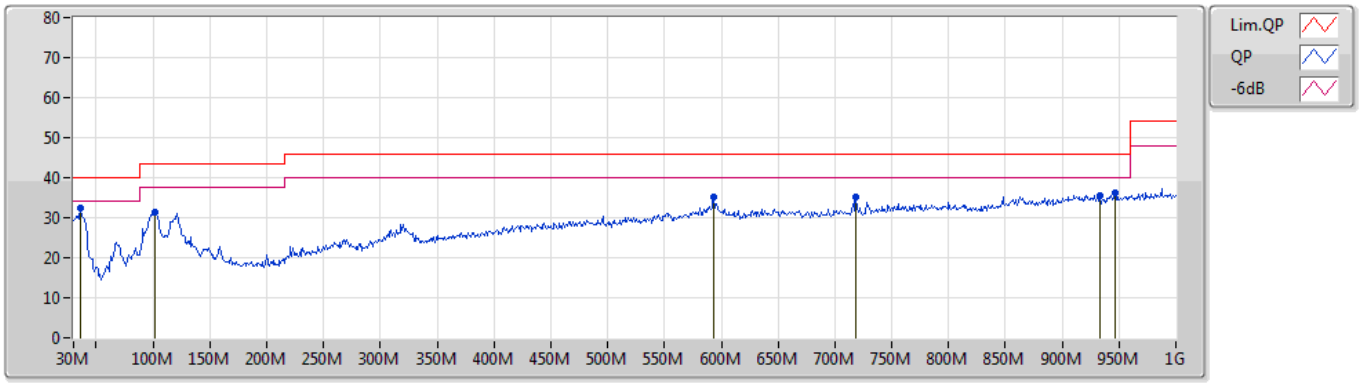
19/05/2020



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)
PK	35.82M	36.33	40.00	-3.67	-9.67	3	Vertical	0	1.00	"Worst"	46.00	21.21	1.60	32.48
PK	59.1M	28.67	40.00	-11.33	-18.74	3	Vertical	22	3.00	-	47.41	12.22	1.58	32.54
PK	70.74M	29.83	40.00	-10.17	-18.60	3	Vertical	99	1.50	-	48.43	12.13	1.71	32.44
PK	98.87M	29.44	43.50	-14.06	-13.80	3	Vertical	166	1.00	-	43.24	16.47	2.08	32.35
PK	714.82M	38.67	46.00	-7.33	-1.72	3	Vertical	357	3.00	-	40.39	25.01	5.59	32.32
PK	903.97M	39.29	46.00	-6.71	1.49	3	Vertical	252	2.00	-	37.80	26.60	6.60	31.71

Mode 1

19/05/2020



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)
PK	35.82M	32.54	40.00	-7.46	-9.67	3	Horizontal	0	1.50	"Worst"	42.21	21.21	1.60	32.48
PK	101.78M	31.27	43.50	-12.23	-13.45	3	Horizontal	93	2.00	-	44.72	16.81	2.12	32.38
PK	593.57M	35.21	46.00	-10.79	-2.49	3	Horizontal	276	2.00	-	37.70	24.68	5.07	32.24
PK	718.7M	35.15	46.00	-10.85	-1.61	3	Horizontal	30	1.00	-	36.76	25.07	5.61	32.29
PK	933.07M	35.61	46.00	-10.39	1.66	3	Horizontal	211	2.00	-	33.95	26.58	6.60	31.52
PK	946.65M	36.18	46.00	-9.82	1.90	3	Horizontal	273	1.25	-	34.28	26.73	6.60	31.43

For Radiated Cabinet:

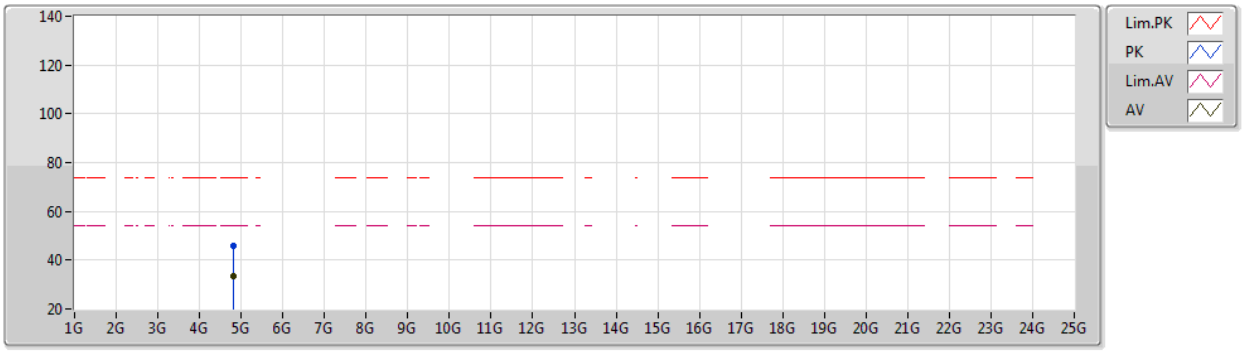
Summary

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	4.80898G	35.07	54.00	-18.93	3	Horizontal	141	2.59	-

Zigbee

30/04/2020

2405MHz_TX



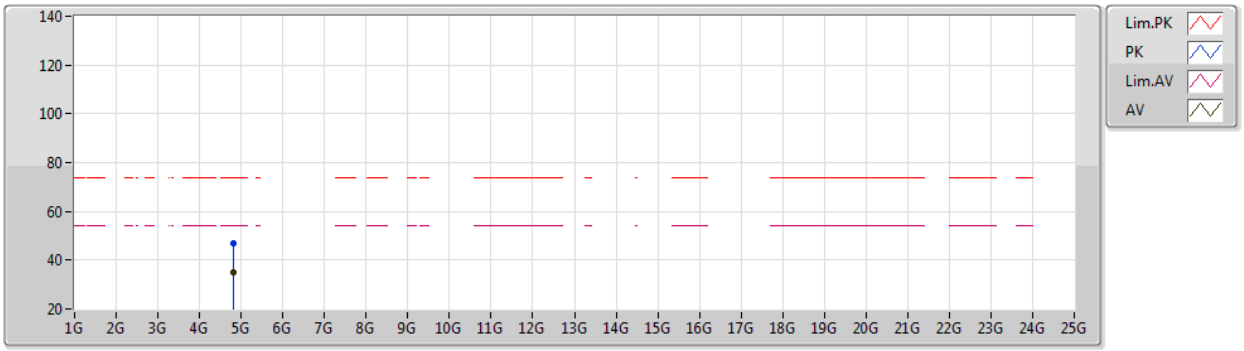
EUT Z_1TX
Setting 5
01-D-R-5

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	4.80878G	45.85	74.00	-28.15	41.20	3	Vertical	53	2.57	-	31.01	5.31	31.67
AV	4.81098G	33.57	54.00	-20.43	28.91	3	Vertical	53	2.57	-	31.01	5.32	31.67

Zigbee

30/04/2020

2405MHz_TX



EUT Z_1TX
Setting 5
01-D-R-5

Type	Freq	Level	Limit	Margin	Raw	Dist	Condition	Azimuth	Height	Comment	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(m)		(°)	(m)		(dB)	(dB)	(dB)
PK	4.81178G	46.78	74.00	-27.22	42.12	3	Horizontal	141	2.59	-	31.01	5.32	31.67
AV	4.80898G	35.07	54.00	-18.93	30.42	3	Horizontal	141	2.59	-	31.01	5.31	31.67

For Conducted Harmonic (1~3GHz):

Summary

Mode	Result	F-Start (Hz)	F-Stop (Hz)	Type	Freq (Hz)	DG (dBi)	P1 (dBm)	Psum (dBm)	EIRP (dBm)	Limit (dBm)	Margin (dB)
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-
Zigbee	Pass	2.4935G	3G	AV	2.53592G	2.30	-61.84	-61.84	-59.54	-41.20	*-18.34*

DG = Directional Gain;
PX=Port X; **Psum**=P1+.P2+...PX

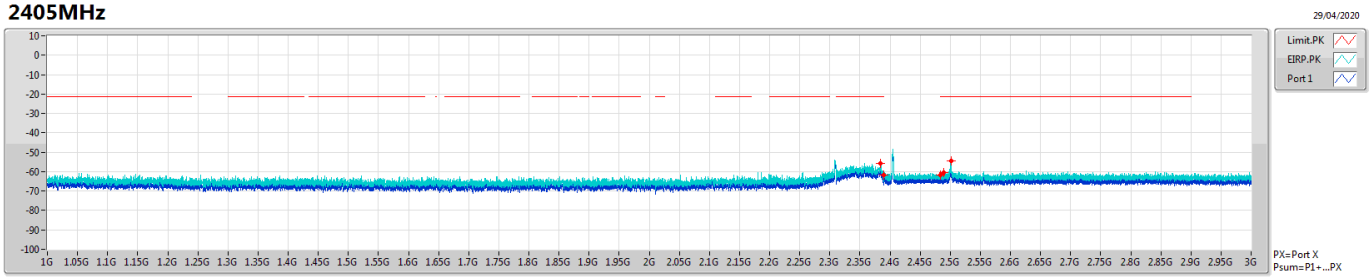
Result

Mode	Result	F-Start (Hz)	F-Stop (Hz)	Type	Freq (Hz)	DG (dBi)	P1 (dBm)	Psum (dBm)	EIRP (dBm)	Limit (dBm)	Margin (dB)
Zigbee	-	-	-	-	-	-	-	-	-	-	-
2405MHz	Pass	1G	2.39G	AV	2.31008G	2.08	-66.23	-66.23	-64.15	-41.20	-22.95
2405MHz	Pass	2.39G	2.4G	AV	2.39G	2.08	-73.74	-73.74	-71.66	-41.20	-30.46
2405MHz	Pass	2.4G	2.4835G	AV	2.4835G	2.08	-74.81	-74.81	-72.73	-41.20	-31.53
2405MHz	Pass	2.4835G	2.4935G	AV	2.4933G	2.08	-72.56	-72.56	-70.48	-41.20	-29.28
2405MHz	Pass	2.4935G	3G	AV	2.50097G	2.08	-62.59	-62.59	-60.51	-41.20	-19.31
2405MHz	Pass	1G	2.39G	PK	2.38461G	2.08	-57.68	-57.68	-55.60	-21.20	-34.40
2405MHz	Pass	2.39G	2.4G	PK	2.39G	2.08	-63.71	-63.71	-61.63	-21.20	-40.43
2405MHz	Pass	2.4G	2.4835G	PK	2.4835G	2.08	-63.97	-63.97	-61.89	-21.20	-40.69
2405MHz	Pass	2.4835G	2.4935G	PK	2.4894G	2.08	-62.44	-62.44	-60.36	-21.20	-39.16
2405MHz	Pass	2.4935G	3G	PK	2.50135G	2.08	-56.34	-56.34	-54.26	-21.20	-33.06
2440MHz	Pass	1G	2.39G	AV	2.3443G	2.30	-62.88	-62.88	-60.58	-41.20	-19.38
2440MHz	Pass	2.39G	2.4G	AV	2.39G	2.30	-74.29	-74.29	-71.99	-41.20	-30.79
2440MHz	Pass	2.4G	2.4835G	AV	2.4835G	2.30	-74.74	-74.74	-72.44	-41.20	-31.24
2440MHz	Pass	2.4835G	2.4935G	AV	2.49346G	2.30	-71.72	-71.72	-69.42	-41.20	-28.22
2440MHz	Pass	2.4935G	3G	AV	2.53592G	2.30	-61.84	-61.84	-59.54	-41.20	-18.34
2440MHz	Pass	1G	2.39G	PK	2.34448G	2.30	-57.02	-57.02	-54.72	-21.20	-33.52
2440MHz	Pass	2.39G	2.4G	PK	2.39G	2.30	-64.10	-64.10	-61.80	-21.20	-40.60
2440MHz	Pass	2.4G	2.4835G	PK	2.4835G	2.30	-64.41	-64.41	-62.11	-21.20	-40.91
2440MHz	Pass	2.4835G	2.4935G	PK	2.49032G	2.30	-61.25	-61.25	-58.95	-21.20	-37.75
2440MHz	Pass	2.4935G	3G	PK	2.53541G	2.30	-55.50	-55.50	-53.20	-21.20	-32.00
2480MHz	Pass	1G	2.39G	AV	2.38427G	2.18	-67.82	-67.82	-65.64	-41.20	-24.44
2480MHz	Pass	2.39G	2.4G	AV	2.39G	2.18	-75.19	-75.19	-73.01	-41.20	-31.81
2480MHz	Pass	2.4G	2.4835G	AV	2.4835G	2.18	-74.07	-74.07	-71.89	-41.20	-30.69
2480MHz	Pass	2.4835G	2.4935G	AV	2.49278G	2.18	-71.78	-71.78	-69.60	-41.20	-28.40
2480MHz	Pass	2.4935G	3G	AV	2.57606G	2.18	-65.65	-65.65	-63.47	-41.20	-22.27
2480MHz	Pass	1G	2.39G	PK	2.38409G	2.18	-60.90	-60.90	-58.72	-21.20	-37.52
2480MHz	Pass	2.39G	2.4G	PK	2.39G	2.18	-65.47	-65.47	-63.29	-21.20	-42.09
2480MHz	Pass	2.4G	2.4835G	PK	2.4835G	2.18	-64.72	-64.72	-62.54	-21.20	-41.34
2480MHz	Pass	2.4835G	2.4935G	PK	2.49328G	2.18	-61.23	-61.23	-59.05	-21.20	-37.85
2480MHz	Pass	2.4935G	3G	PK	2.51756G	2.18	-59.00	-59.00	-56.82	-21.20	-35.62

DG = Directional Gain;
PX=Port X; **Psum**=P1+.P2+...PX

Zigbee **CSE-PK**

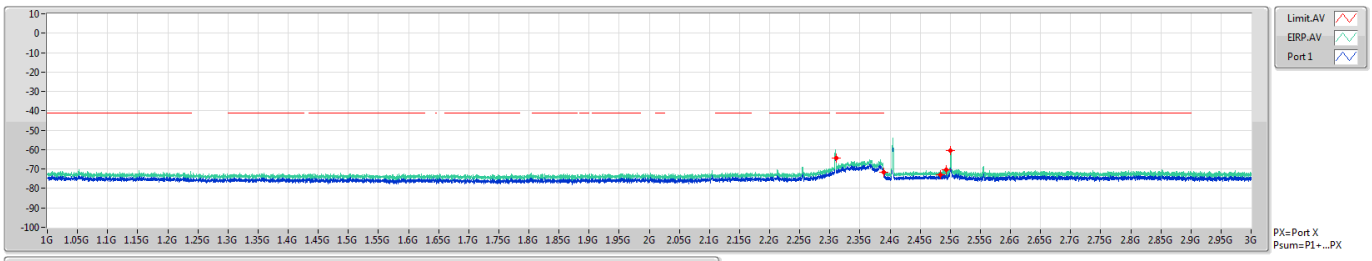
2405MHz



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	EIRP(dBm)	Limit(dBm)	Margin(dB)	DG(dBi)	Refl(dB)	Psum(dBm)	P1(dBm)
1G	2.39G	1M	PK	2.38461G	-55.60	-21.20	-34.40	2.08	0.00	-57.68	-57.68
2.39G	2.4G	1M	PK	2.39G	-61.63	-21.20	-40.43	2.08	0.00	-63.71	-63.71
2.4G	2.4835G	1M	PK	2.4835G	-61.89	-21.20	-40.69	2.08	0.00	-63.97	-63.97
2.4835G	2.4935G	1M	PK	2.4894G	-60.36	-21.20	-39.16	2.08	0.00	-62.44	-62.44
2.4935G	3G	1M	PK	2.50135G	-54.26	-21.20	-33.06	2.08	0.00	-56.34	-56.34

Zigbee **CSE-AV**

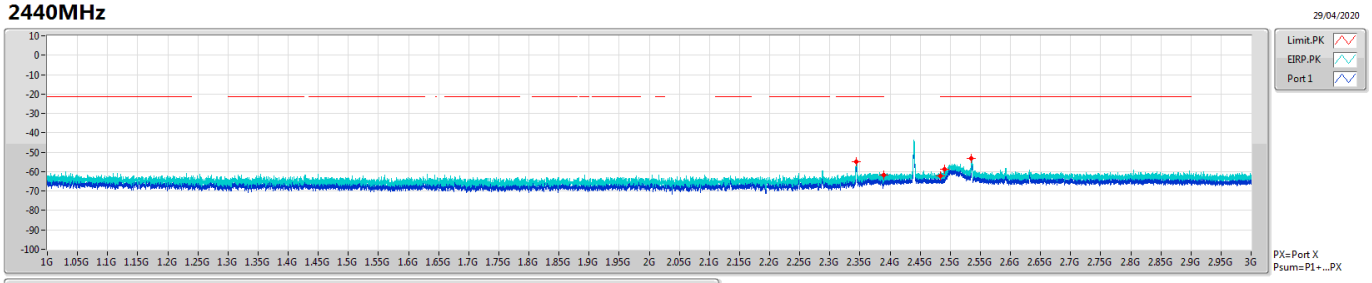
2405MHz



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	EIRP(dBm)	Limit(dBm)	Margin(dB)	DG(dBi)	Refl(dB)	Psum(dBm)	P1(dBm)
1G	2.39G	1M	AV	2.31008G	-64.15	-41.20	-22.95	2.08	0.00	-66.23	-66.23
2.39G	2.4G	1M	AV	2.39G	-71.66	-41.20	-30.46	2.08	0.00	-73.74	-73.74
2.4G	2.4835G	1M	AV	2.4835G	-72.73	-41.20	-31.53	2.08	0.00	-74.81	-74.81
2.4835G	2.4935G	1M	AV	2.4933G	-70.48	-41.20	-29.28	2.08	0.00	-72.56	-72.56
2.4935G	3G	1M	AV	2.50097G	-60.51	-41.20	-19.31	2.08	0.00	-62.59	-62.59

Zigbee **CSE-PK**

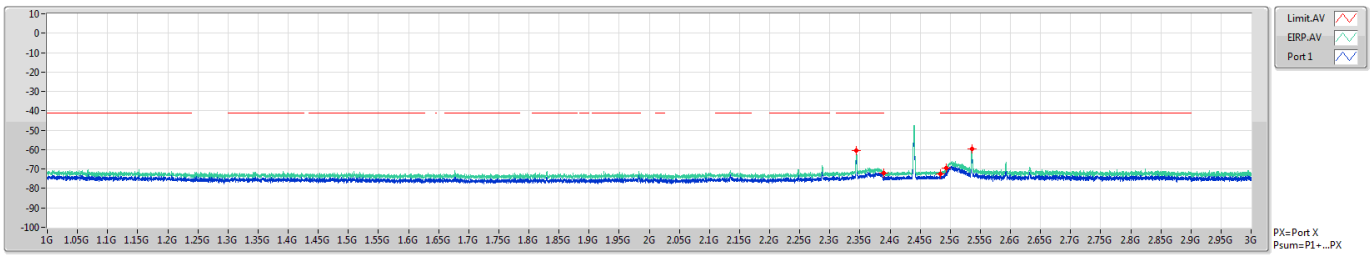
2440MHz



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	EIRP(dBm)	Limit(dBm)	Margin(dB)	DG(dBi)	Refl(dB)	Psum(dBm)	P1(dBm)
1G	2.39G	1M	PK	2.34448G	-54.72	-21.20	-33.52	2.30	0.00	-57.02	-57.02
2.39G	2.4G	1M	PK	2.39G	-61.80	-21.20	-40.60	2.30	0.00	-64.10	-64.10
2.4G	2.4835G	1M	PK	2.4835G	-62.11	-21.20	-40.91	2.30	0.00	-64.41	-64.41
2.4835G	2.4935G	1M	PK	2.49032G	-58.95	-21.20	-37.75	2.30	0.00	-61.25	-61.25
2.4935G	3G	1M	PK	2.53541G	-53.20	-21.20	-32.00	2.30	0.00	-55.50	-55.50

Zigbee **CSE-AV**

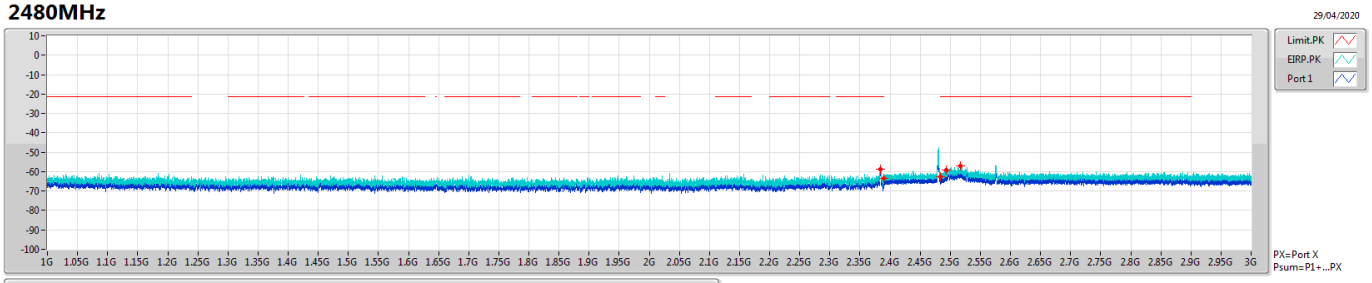
2440MHz



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	EIRP(dBm)	Limit(dBm)	Margin(dB)	DG(dBi)	Refl(dB)	Psum(dBm)	P1(dBm)
1G	2.39G	1M	AV	2.3443G	-60.58	-41.20	-19.38	2.30	0.00	-62.88	-62.88
2.39G	2.4G	1M	AV	2.39G	-71.99	-41.20	-30.79	2.30	0.00	-74.29	-74.29
2.4G	2.4835G	1M	AV	2.4835G	-72.44	-41.20	-31.24	2.30	0.00	-74.74	-74.74
2.4835G	2.4935G	1M	AV	2.49346G	-69.42	-41.20	-28.22	2.30	0.00	-71.72	-71.72
2.4935G	3G	1M	AV	2.53592G	-59.54	-41.20	-18.34	2.30	0.00	-61.84	-61.84

Zigbee **CSE-PK**

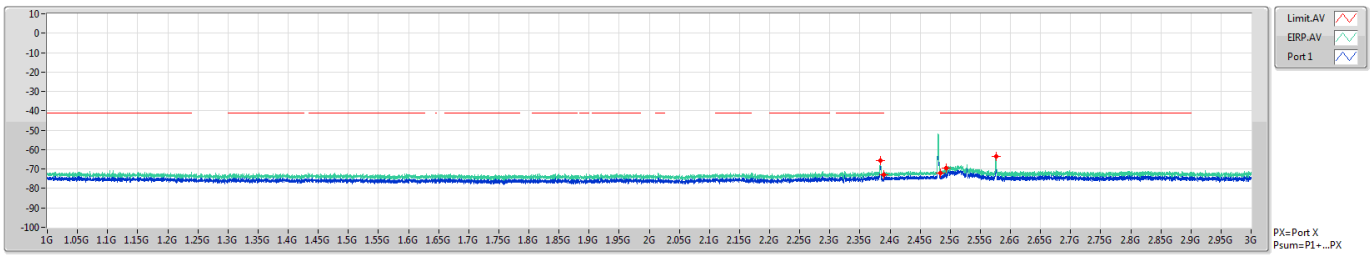
2480MHz



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	EIRP(dBm)	Limit(dBm)	Margin(dB)	DG(dBi)	Refl(dB)	Psum(dBm)	P1(dBm)
1G	2.39G	1M	PK	2.38409G	-58.72	-21.20	-37.52	2.18	0.00	-60.90	-60.90
2.39G	2.4G	1M	PK	2.39G	-63.29	-21.20	-42.09	2.18	0.00	-65.47	-65.47
2.4G	2.4835G	1M	PK	2.4835G	-62.54	-21.20	-41.34	2.18	0.00	-64.72	-64.72
2.4835G	2.4935G	1M	PK	2.49328G	-59.05	-21.20	-37.85	2.18	0.00	-61.23	-61.23
2.4935G	3G	1M	PK	2.51756G	-56.82	-21.20	-35.62	2.18	0.00	-59.00	-59.00

Zigbee **CSE-AV**

2480MHz



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	EIRP(dBm)	Limit(dBm)	Margin(dB)	DG(dBi)	Refl(dB)	Psum(dBm)	P1(dBm)
1G	2.39G	1M	AV	2.38427G	-65.64	-41.20	-24.44	2.18	0.00	-67.82	-67.82
2.39G	2.4G	1M	AV	2.39G	-73.01	-41.20	-31.81	2.18	0.00	-75.19	-75.19
2.4G	2.4835G	1M	AV	2.4835G	-71.89	-41.20	-30.69	2.18	0.00	-74.07	-74.07
2.4835G	2.4935G	1M	AV	2.49278G	-69.60	-41.20	-28.40	2.18	0.00	-71.78	-71.78
2.4935G	3G	1M	AV	2.57606G	-63.47	-41.20	-22.27	2.18	0.00	-65.65	-65.65

For Conducted Harmonic (3~25GHz):

Summary

Mode	Result	F-Start (Hz)	F-Stop (Hz)	Type	Freq (Hz)	DG (dBi)	P1 (dBm)	Psum (dBm)	EIRP (dBm)	Limit (dBm)	Margin (dB)
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-
Zigbee	Pass	3G	7.5G	AV	4.881G	2.30	-54.53	-54.53	-52.23	-41.20	-11.03

DG = Directional Gain;
PX=Port X; **Psum**=P1+.P2+...PX

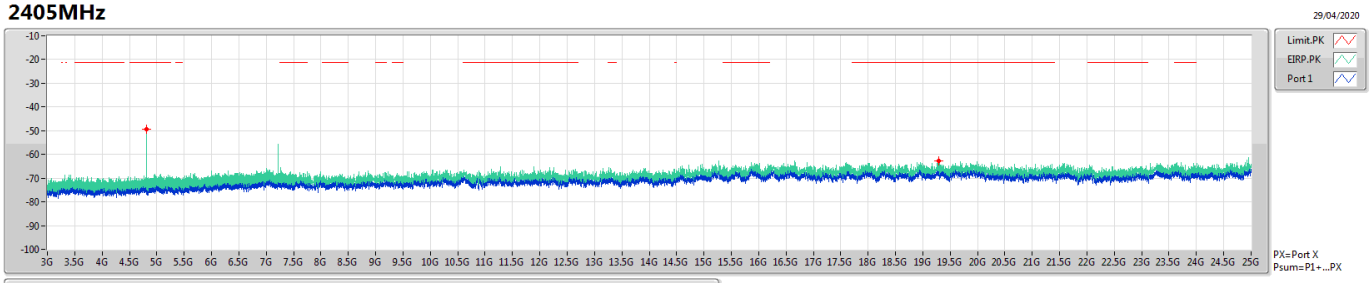
Result

Mode	Result	F-Start (Hz)	F-Stop (Hz)	Type	Freq (Hz)	DG (dBi)	P1 (dBm)	Psum (dBm)	EIRP (dBm)	Limit (dBm)	Margin (dB)
Zigbee	-	-	-	-	-	-	-	-	-	-	-
2405MHz	Pass	3G	7.5G	AV	4.809G	2.08	-56.88	-56.88	-54.80	-41.20	-13.60
2405MHz	Pass	7.5G	25G	AV	18.95594G	2.08	-73.94	-73.94	-71.86	-41.20	-30.66
2405MHz	Pass	3G	7.5G	PK	4.809G	2.08	-51.48	-51.48	-49.40	-21.20	-28.20
2405MHz	Pass	7.5G	25G	PK	19.29719G	2.08	-64.91	-64.91	-62.83	-21.20	-41.63
2440MHz	Pass	3G	7.5G	AV	4.881G	2.30	-54.53	-54.53	-52.23	-41.20	-11.03
2440MHz	Pass	7.5G	25G	AV	18.9275G	2.30	-74.21	-74.21	-71.91	-41.20	-30.71
2440MHz	Pass	3G	7.5G	PK	4.881G	2.30	-49.50	-49.50	-47.20	-21.20	-26.00
2440MHz	Pass	7.5G	25G	PK	19.89875G	2.30	-64.82	-64.82	-62.52	-21.20	-41.32
2480MHz	Pass	3G	7.5G	AV	4.95919G	2.18	-64.54	-64.54	-62.36	-41.20	-21.16
2480MHz	Pass	7.5G	25G	AV	18.27125G	2.18	-73.83	-73.83	-71.65	-41.20	-30.45
2480MHz	Pass	3G	7.5G	PK	4.96088G	2.18	-58.32	-58.32	-56.14	-21.20	-34.94
2480MHz	Pass	7.5G	25G	PK	19.5925G	2.18	-63.90	-63.90	-61.72	-21.20	-40.52

DG = Directional Gain;
PX=Port X; **Psum**=P1+.P2+...PX

Zigbee **CSE-PK**

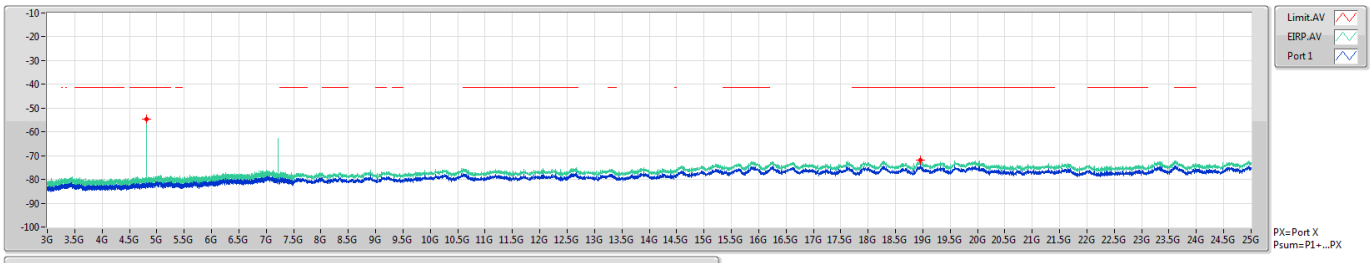
2405MHz



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	EIRP(dBm)	Limit(dBm)	Margin(dB)	DG(dBi)	Refl(dB)	Psum(dBm)	P1(dBm)
3G	7.5G	1M	PK	4.809G	-49.40	-21.20	-28.20	2.08	0.00	-51.48	-51.48
7.5G	25G	1M	PK	19.29719G	-62.83	-21.20	-41.63	2.08	0.00	-64.91	-64.91

Zigbee **CSE-AV**

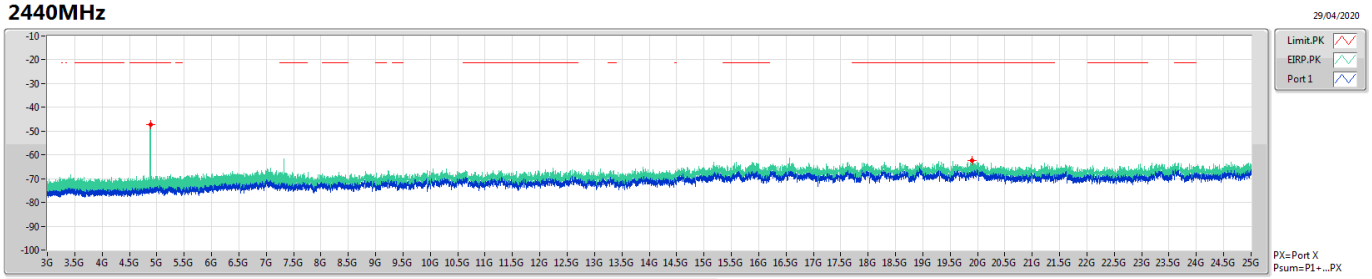
2405MHz



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	EIRP(dBm)	Limit(dBm)	Margin(dB)	DG(dBi)	Refl(dB)	Psum(dBm)	P1(dBm)
3G	7.5G	1M	AV	4.809G	-54.80	-41.20	-13.60	2.08	0.00	-56.88	-56.88
7.5G	25G	1M	AV	18.95594G	-71.86	-41.20	-30.66	2.08	0.00	-73.94	-73.94

Zigbee **CSE-PK**

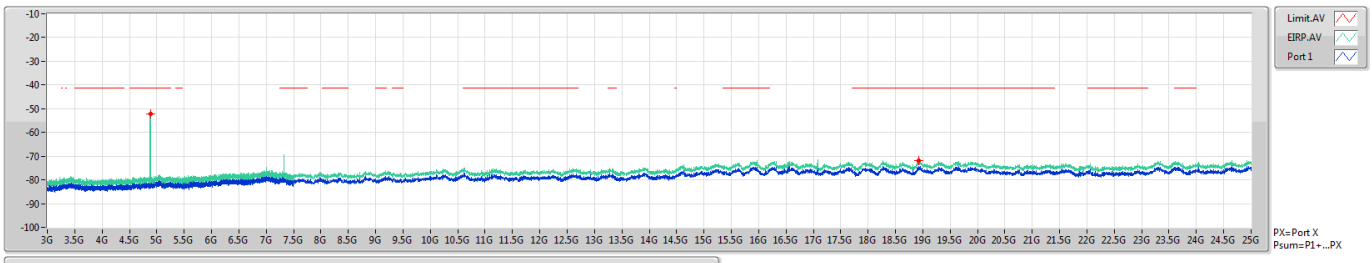
2440MHz



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	EIRP(dBm)	Limit(dBm)	Margin(dB)	DG(dBi)	Refl(dB)	Psum(dBm)	P1(dBm)
3G	7.5G	1M	PK	4.881G	-47.20	-21.20	-26.00	2.30	0.00	-49.50	-49.50
7.5G	25G	1M	PK	19.89875G	-62.52	-21.20	-41.32	2.30	0.00	-64.82	-64.82

Zigbee **CSE-AV**

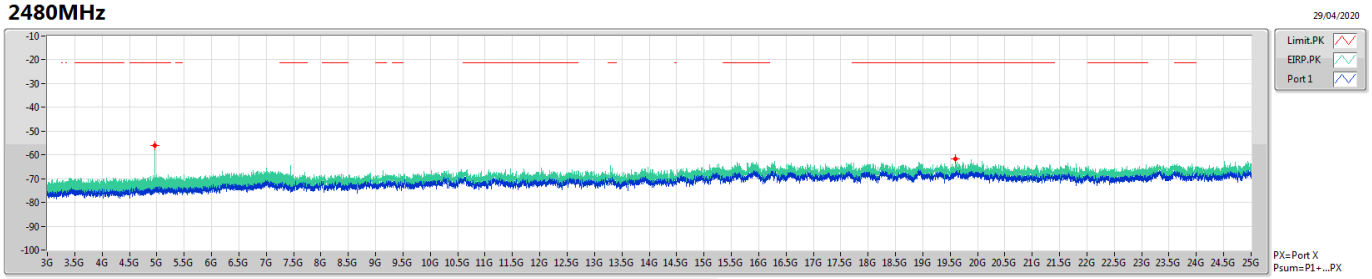
2440MHz



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	EIRP(dBm)	Limit(dBm)	Margin(dB)	DG(dBi)	Refl(dB)	Psum(dBm)	P1(dBm)
3G	7.5G	1M	AV	4.881G	-52.23	-41.20	-11.03	2.30	0.00	-54.53	-54.53
7.5G	25G	1M	AV	18.9275G	-71.91	-41.20	-30.71	2.30	0.00	-74.21	-74.21

Zigbee **CSE-PK**

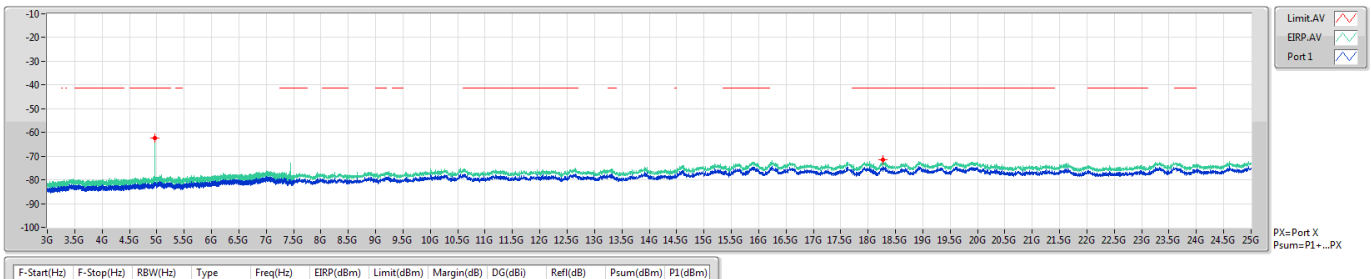
2480MHz



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	EIRP(dBm)	Limit(dBm)	Margin(dB)	DG(dBi)	Refl(dB)	Psum(dBm)	P1(dBm)
3G	7.5G	1M	PK	4.96088G	-56.14	-21.20	-34.94	2.18	0.00	-58.32	-58.32
7.5G	25G	1M	PK	19.5925G	-61.72	-21.20	-40.52	2.18	0.00	-63.90	-63.90

Zigbee **CSE-AV**

2480MHz



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	EIRP(dBm)	Limit(dBm)	Margin(dB)	DG(dBi)	Refl(dB)	Psum(dBm)	P1(dBm)
3G	7.5G	1M	AV	4.95919G	-62.36	-41.20	-21.16	2.18	0.00	-64.54	-64.54
7.5G	25G	1M	AV	18.27125G	-71.65	-41.20	-30.45	2.18	0.00	-73.83	-73.83

For Conducted Bandedge:

Summary

Mode	Result	F-Start (Hz)	F-Stop (Hz)	Type	Freq (Hz)	DG (dBi)	P1 (dBm)	Psum (dBm)	EIRP (dBm)	Limit (dBm)	Margin (dB)
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-
Zigbee	Pass	2.4G	2.4835G	AV	2.4835G	2.18	-43.72	-43.72	-41.54	-41.20	-0.34

DG = Directional Gain;
PX=Port X; **Psum**=P1+.P2+...PX

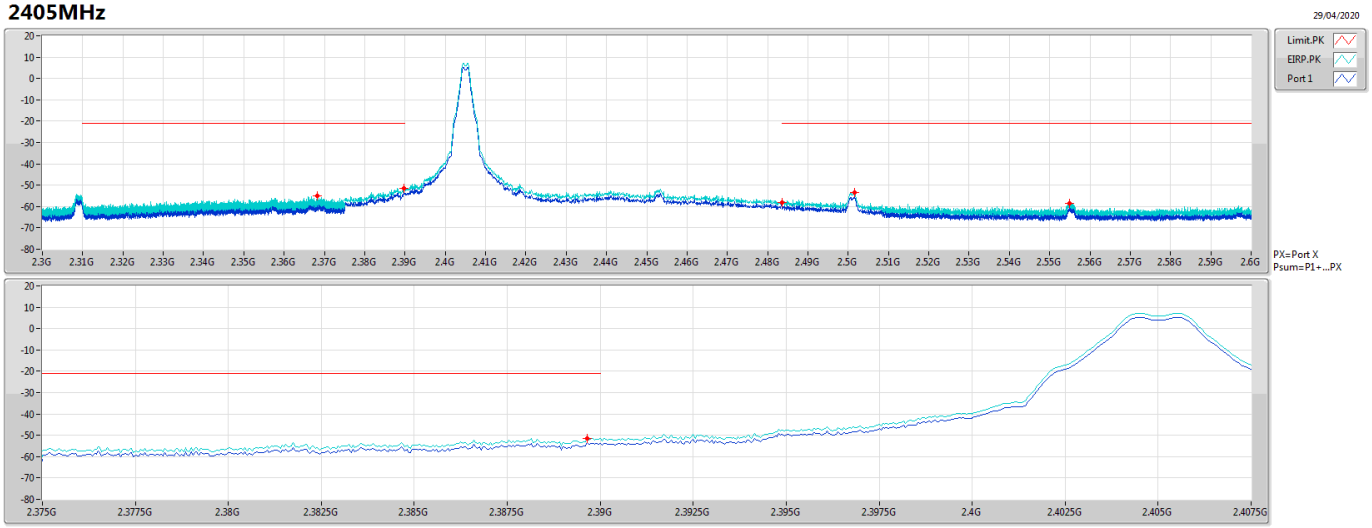
Result

Mode	Result	F-Start (Hz)	F-Stop (Hz)	Type	Freq (Hz)	DG (dBi)	P1 (dBm)	Psum (dBm)	EIRP (dBm)	Limit (dBm)	Margin (dB)
Zigbee	-	-	-	-	-	-	-	-	-	-	-
2405MHz	Pass	2.3G	2.375G	AV	2.36629G	2.08	-66.83	-66.83	-64.75	-41.20	-23.55
2405MHz	Pass	2.375G	2.4G	AV	2.3899G	2.08	-62.49	-62.49	-60.41	-41.20	-19.21
2405MHz	Pass	2.4G	2.4835G	AV	2.4835G	2.08	-70.46	-70.46	-68.38	-41.20	-27.18
2405MHz	Pass	2.4835G	2.5085G	AV	2.50115G	2.08	-61.72	-61.72	-59.64	-41.20	-18.44
2405MHz	Pass	2.5085G	2.6G	AV	2.55544G	2.08	-69.10	-69.10	-67.02	-41.20	-25.82
2405MHz	Pass	2.3G	2.375G	PK	2.36832G	2.08	-56.89	-56.89	-54.81	-21.20	-33.61
2405MHz	Pass	2.375G	2.4G	PK	2.38965G	2.08	-53.58	-53.58	-51.50	-21.20	-30.30
2405MHz	Pass	2.4G	2.4835G	PK	2.4835G	2.08	-60.33	-60.33	-58.25	-21.20	-37.05
2405MHz	Pass	2.4835G	2.5085G	PK	2.50165G	2.08	-55.64	-55.64	-53.56	-21.20	-32.36
2405MHz	Pass	2.5085G	2.6G	PK	2.55494G	2.08	-60.45	-60.45	-58.37	-21.20	-37.17
2440MHz	Pass	2.3G	2.375G	AV	2.34414G	2.30	-62.82	-62.82	-60.52	-41.20	-19.32
2440MHz	Pass	2.375G	2.4G	AV	2.388G	2.30	-68.45	-68.45	-66.15	-41.20	-24.95
2440MHz	Pass	2.4G	2.4835G	AV	2.4835G	2.30	-67.43	-67.43	-65.13	-41.20	-23.93
2440MHz	Pass	2.4835G	2.5085G	AV	2.4879G	2.30	-62.80	-62.80	-60.50	-41.20	-19.30
2440MHz	Pass	2.5085G	2.6G	AV	2.53613G	2.30	-62.35	-62.35	-60.05	-41.20	-18.85
2440MHz	Pass	2.3G	2.375G	PK	2.34346G	2.30	-56.21	-56.21	-53.91	-21.20	-32.71
2440MHz	Pass	2.375G	2.4G	PK	2.37885G	2.30	-57.84	-57.84	-55.54	-21.20	-34.34
2440MHz	Pass	2.4G	2.4835G	PK	2.4835G	2.30	-57.73	-57.73	-55.43	-21.20	-34.23
2440MHz	Pass	2.4835G	2.5085G	PK	2.4876G	2.30	-54.41	-54.41	-52.11	-21.20	-30.91
2440MHz	Pass	2.5085G	2.6G	PK	2.53643G	2.30	-55.73	-55.73	-53.43	-21.20	-32.23
2480MHz	Pass	2.3G	2.375G	AV	2.32465G	2.18	-72.44	-72.44	-70.26	-41.20	-29.06
2480MHz	Pass	2.375G	2.4G	AV	2.38385G	2.18	-63.94	-63.94	-61.76	-41.20	-20.56
2480MHz	Pass	2.4G	2.4835G	AV	2.4835G	2.18	-43.72	-43.72	-41.54	-41.20	-0.34
2480MHz	Pass	2.4835G	2.5085G	AV	2.4835G	2.18	-44.42	-44.42	-42.24	-41.20	-1.04
2480MHz	Pass	2.5085G	2.6G	AV	2.57605G	2.18	-64.13	-64.13	-61.95	-41.20	-20.75
2480MHz	Pass	2.3G	2.375G	PK	2.32509G	2.18	-62.85	-62.85	-60.67	-21.20	-39.47
2480MHz	Pass	2.375G	2.4G	PK	2.3845G	2.18	-56.91	-56.91	-54.73	-21.20	-33.53
2480MHz	Pass	2.4G	2.4835G	PK	2.4835G	2.18	-37.63	-37.63	-35.45	-21.20	-14.25
2480MHz	Pass	2.4835G	2.5085G	PK	2.4835G	2.18	-39.50	-39.50	-37.32	-21.20	-16.12
2480MHz	Pass	2.5085G	2.6G	PK	2.57548G	2.18	-57.19	-57.19	-55.01	-21.20	-33.81

DG = Directional Gain;
PX=Port X; **Psum**=P1+.P2+...PX

Zigbee **CSE-PK**

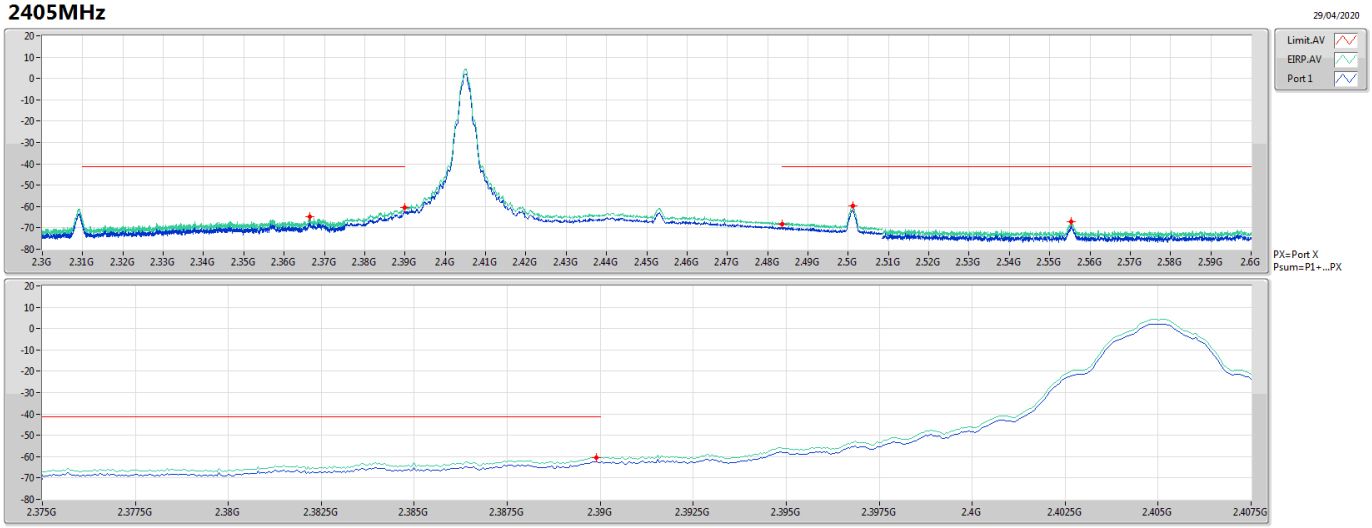
2405MHz



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	EIRP(dBm)	Limit(dBm)	Margin(dB)	DG(dBi)	Refl(dB)	Psum(dBm)	P1(dBm)
2.3G	2.375G	1M	PK	2.36832G	-54.81	-21.20	-33.61	2.08	0.00	-56.89	-56.89
2.375G	2.4G	1M	PK	2.38965G	-51.50	-21.20	-30.30	2.08	0.00	-53.58	-53.58
2.4G	2.4835G	1M	PK	2.4835G	-58.25	-21.20	-37.05	2.08	0.00	-60.33	-60.33
2.4835G	2.5085G	1M	PK	2.50165G	-53.56	-21.20	-32.36	2.08	0.00	-55.64	-55.64
2.5085G	2.6G	1M	PK	2.55494G	-58.37	-21.20	-37.17	2.08	0.00	-60.45	-60.45

Zigbee **CSE-AV**

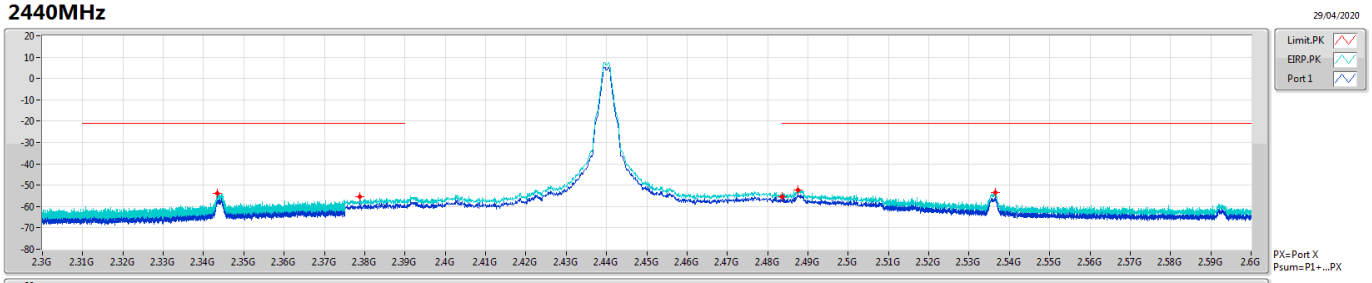
2405MHz

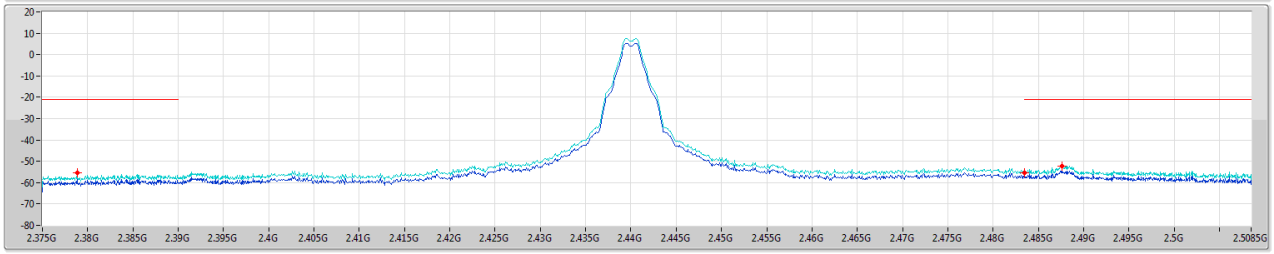


F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	EIRP(dBm)	Limit(dBm)	Margin(dB)	DG(dBi)	Refl(dB)	Psum(dBm)	P1(dBm)
2.3G	2.375G	1M	AV	2.36629G	-64.75	-41.20	-23.55	2.08	0.00	-66.83	-66.83
2.375G	2.4G	1M	AV	2.3899G	-60.41	-41.20	-19.21	2.08	0.00	-62.49	-62.49
2.4G	2.4835G	1M	AV	2.4835G	-68.38	-41.20	-27.18	2.08	0.00	-70.46	-70.46
2.4835G	2.5085G	1M	AV	2.50115G	-59.64	-41.20	-18.44	2.08	0.00	-61.72	-61.72
2.5085G	2.6G	1M	AV	2.55544G	-67.02	-41.20	-25.82	2.08	0.00	-69.10	-69.10

Zigbee **CSE-PK**

2440MHz

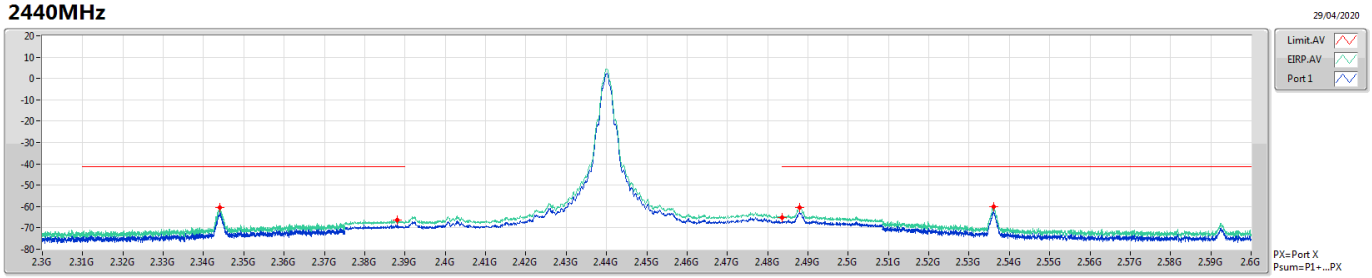


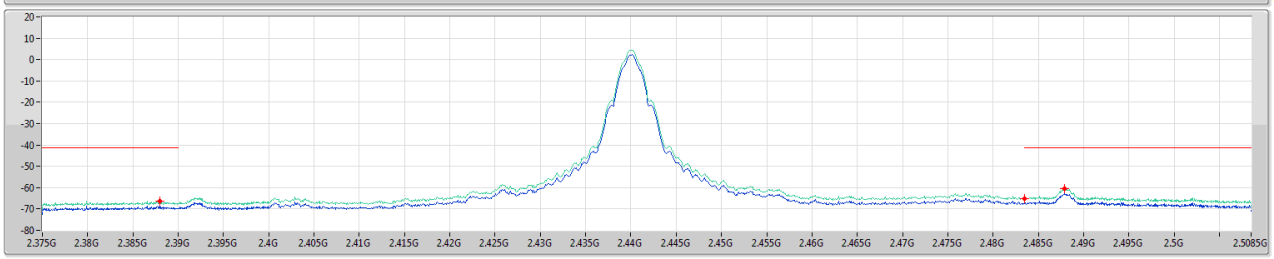


F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	EIRP(dBm)	Limit(dBm)	Margin(dB)	DG(dBi)	Refl(dB)	Psum(dBm)	P1(dBm)
2.3G	2.375G	1M	PK	2.34346G	-53.91	-21.20	-32.71	2.30	0.00	-56.21	-56.21
2.375G	2.4G	1M	PK	2.37885G	-55.54	-21.20	-34.34	2.30	0.00	-57.84	-57.84
2.4G	2.4835G	1M	PK	2.4835G	-55.43	-21.20	-34.23	2.30	0.00	-57.73	-57.73
2.4835G	2.5085G	1M	PK	2.4876G	-52.11	-21.20	-30.91	2.30	0.00	-54.41	-54.41
2.5085G	2.6G	1M	PK	2.53643G	-53.43	-21.20	-32.23	2.30	0.00	-55.73	-55.73

Zigbee **CSE-AV**

2440MHz

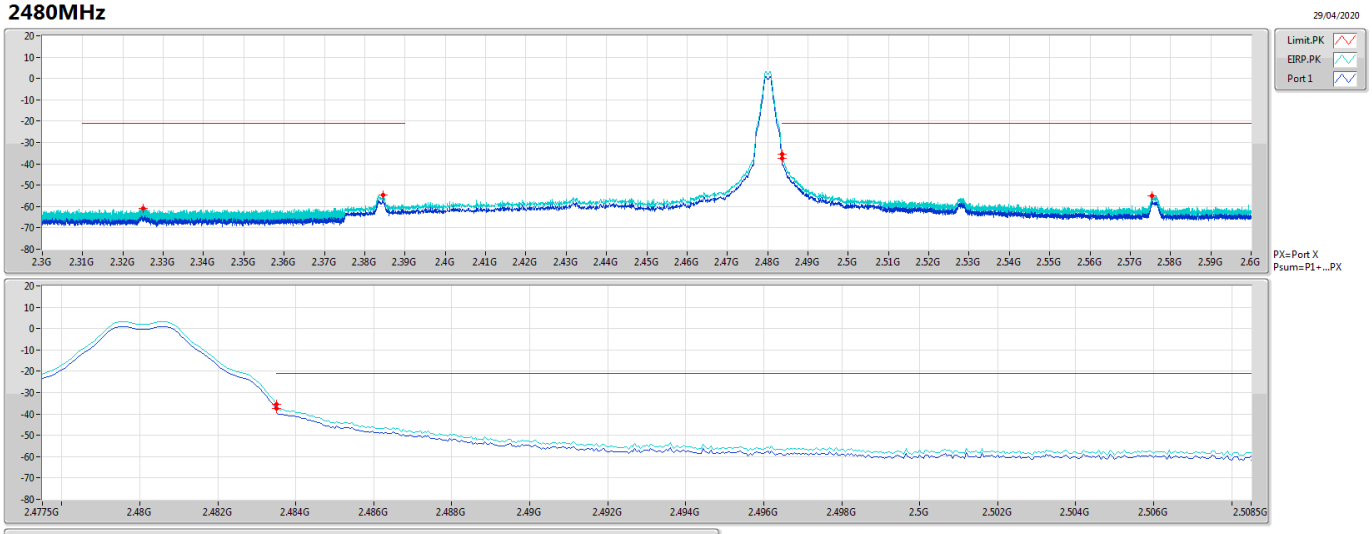




F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	EIRP(dBm)	Limit(dBm)	Margin(dB)	DG(dBi)	Refl(dB)	Psum(dBm)	P1(dBm)
2.3G	2.375G	1M	AV	2.34414G	-60.52	-41.20	-19.32	2.30	0.00	-62.82	-62.82
2.375G	2.4G	1M	AV	2.388G	-66.15	-41.20	-24.95	2.30	0.00	-68.45	-68.45
2.4G	2.4835G	1M	AV	2.4835G	-65.13	-41.20	-23.93	2.30	0.00	-67.43	-67.43
2.4835G	2.5085G	1M	AV	2.4879G	-60.50	-41.20	-19.30	2.30	0.00	-62.80	-62.80
2.5085G	2.6G	1M	AV	2.53613G	-60.05	-41.20	-18.85	2.30	0.00	-62.35	-62.35

Zigbee **CSE-PK**

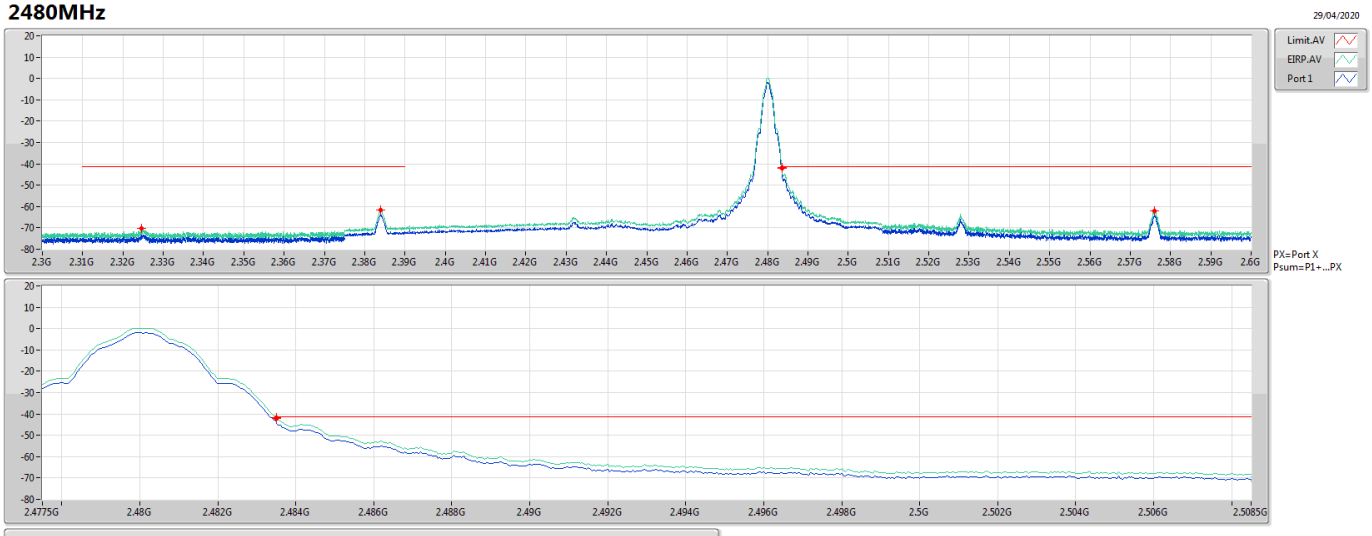
2480MHz



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	EIRP(dBm)	Limit(dBm)	Margin(dB)	DG(dBi)	Refl(dB)	Psum(dBm)	P1(dBm)
2.3G	2.375G	1M	PK	2.32509G	-60.67	-21.20	-39.47	2.18	0.00	-62.85	-62.85
2.375G	2.4G	1M	PK	2.3845G	-54.73	-21.20	-33.53	2.18	0.00	-56.91	-56.91
2.4G	2.4835G	1M	PK	2.4835G	-35.45	-21.20	-14.25	2.18	0.00	-37.63	-37.63
2.4835G	2.5085G	1M	PK	2.4835G	-37.32	-21.20	-16.12	2.18	0.00	-39.50	-39.50
2.5085G	2.6G	1M	PK	2.57548G	-55.01	-21.20	-33.81	2.18	0.00	-57.19	-57.19

Zigbee **CSE-AV**

2480MHz



F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	Type	Freq(Hz)	EIRP(dBm)	Limit(dBm)	Margin(dB)	DG(dBi)	Refl(dB)	Psum(dBm)	P1(dBm)
2.3G	2.375G	1M	AV	2.32465G	-70.26	-41.20	-29.06	2.18	0.00	-72.44	-72.44
2.375G	2.4G	1M	AV	2.38385G	-61.76	-41.20	-20.56	2.18	0.00	-63.94	-63.94
2.4G	2.4835G	1M	AV	2.4835G	-41.54	-41.20	-0.34	2.18	0.00	-43.72	-43.72
2.4835G	2.5085G	1M	AV	2.4835G	-42.24	-41.20	-1.04	2.18	0.00	-44.42	-44.42
2.5085G	2.6G	1M	AV	2.57605G	-61.95	-41.20	-20.75	2.18	0.00	-64.13	-64.13