TEST REPORT
On behalf of

TRISPORT AG

Product Name:	HOI CROSS PRO	HOI TOUR+
Model No.:	CT1063-400US, CT1063-900US	EM1060-400US, EM1060-900US

FCC ID: 2BB2MCT1063-400US

Prepared For: TRISPORT AG
Boesch 67 CH-6331 Huenenberg

Prepared By: Audix Technology (Shanghai) Co., Ltd.
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TESTING
NVLAP LAB CODE 200371-0

Report No. : ACI-F24096
Date of Test : 2024.01.09-09.03
Date of Report : 2024.09.04

The statement is based on a single evaluation of one sample of the above-mentioned products. It does not imply an assessment of the whole production and does not permit the use of the test lab logo.
The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the U.S. Government.

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TEST REPORT

Applicant	:	TRISPORT AG
EUT Description	:	HOI CROSS PRO, HOI TOUR+
	(A) Model No.	: Refer to Sec.2.1
	(B) Power Supply	: AC 120V/60Hz
	(C) Test Voltage	: AC 120V/60Hz

Test Procedure Used:

FCC RULES AND REGULATIONS PART 15 SUBPART C
AND ANSI C63.10-2013

The device described above is tested by Audix Technology (Shanghai) Co., Ltd. to determine the maximum emission levels emanating from the device. The maximum emission levels are compared to the FCC Part 15 Subpart C limits.

The test results are contained in this test report and Audix Technology (Shanghai) Co., Ltd. is assumed full responsibility for the accuracy and completeness of these measurements. This report also shows that the EUT (M/N: Refer to Sec2.1), which was tested is technically compliance with the FCC limits.

This report applies to above tested Sample only. This report shall not be reproduced in part without written approval of Audix Technology (Shanghai) Co., Ltd.

The test results for EUT's BLE/WIFI (2.4G)/WIFI (5G)/DFS function are contained in No.ACI-F24095, ACI-F24097, ACI-F24098, ACI-F24099 report.

Date of Test : 2024.01.09-09.03 Date of Report : 2024.09.04

Producer : _____
JAREY LU / Deputy Assistant Manager

Review : _____
LVY LV / Deputy Assistant Manager

AUDIX®
For and on behalf of
Audix Technology (Shanghai) Co., Ltd.

Signatory : _____
Authorized Signature(s) KAMP CHEN / Manager

1 SUMMARY OF STANDARDS AND RESULTS

1.1 Description of Standards and Results

The result is determined according to the decision rules of customer selection in the ASC-403 application service form.
1. According to IEC GUIDE 115 Procedure 2 and ILAC-G8, the uncertainties value is not used in determining the PASS/FAIL results.
2. If the required specification or standard already contains the decision rules, it will be carried out in accordance with the regulations or standard documents or the requirements of the competent units. If the required specification or standard does not contain a decision rule, the same paragraph 1.
3. If your company has a required decision rule, it will be implemented in accordance with the requirements and ISO/IEC Guide 98-4 specifications.

The EUT have been tested according to the applicable standards as referenced below:

Description / Test Item	Test Standard	Results	Meets Limit
EMISSION			
Conducted Emission	FCC RULES AND REGULATIONS PART 15 SUBPART C AND ANSI C63.10:2013	Pass	15.207
Radiated Emission	FCC RULES AND REGULATIONS PART 15 SUBPART C AND ANSI C63.10:2013	Pass	15.209(a) 15.205(a)(c)
20 dB Bandwidth Measurement	FCC RULES AND REGULATIONS PART 15 SUBPART C AND ANSI C63.10:2013	Pass	15.247(a)(1)
Carrier Frequency Separation Measurement	FCC RULES AND REGULATIONS PART 15 SUBPART C AND ANSI C63.10:2013	Pass	15.247(a)(1)
Number of Hopping Frequencies Measurement	FCC RULES AND REGULATIONS PART 15 SUBPART C AND ANSI C63.10:2013	Pass	15.247(a)(1)(iii)
Dwell Time Measurement	FCC RULES AND REGULATIONS PART 15 SUBPART C AND ANSI C63.10:2013	Pass	15.247(a)(1)(iii)
Maximum Peak Output Power Measurement	FCC RULES AND REGULATIONS PART 15 SUBPART C AND ANSI C63.10:2013	Pass	15.247(b)(1)
Band Edge Measurement	FCC RULES AND REGULATIONS PART 15 SUBPART C AND ANSI C63.10:2013	Pass	15.247(d)
Emission Limitations Measurement	FCC RULES AND REGULATIONS PART 15 SUBPART C AND ANSI C63.10:2013	Pass	15.247(d)
Antenna Requirement	FCC RULES AND REGULATIONS PART 15 SUBPART C AND ANSI C63.10:2013	Pass	15.203
N/A is an abbreviation for Not Applicable.			

2 GENERAL INFORMATION

2.1 Description of Equipment Under Test

Type of EUT : ☑ Production ☐ Pre-product ☐ Pro-type

Product Name	HOI CROSS PRO	HOI TOUR+
Model Number	CT1063-400US, CT1063-900US	EM1060-400US, EM1060-900US

Note#1 : The difference between Models as below:

Model	CT1063-400US	CT1063-900US
Difference	Just the color is different.	

Model	EM1060-400US	EM1060-900US
Difference	Just the color is different.	

Model	CT1063-400US, CT1063-900US	EM1060-400US, EM1060-900US
Difference	The electronic part are all the same except the mechanical structures were different	

Note#2 : Acording the differece as above, we selected Model CT1063-400US for main test and model EM1060-400US, for differential test in current report.

Test Model : CT1063-400US, EM1060-400US

Note#3 : The EUT shipped with RF module that listed ad below:

Module	Radio Technology	Condition	Modular or not
WLT5283M	BLE	In use	N/A
ICT-M	BLE	In use	Single Modular
	Wifi2.4G	In use	
SKI.WB668BS.3	BLE	No use	N/A
	BREDR	In use	
	WIFI2.4G	In use	
	WIFI5G	In use	
GEM3NFC	NFC	In use	Single Modular
Note: The EUT shipped with two Single Modular. The first one is “ICT-M”, which the FCC ID is “2AC7Z-ESPS3WROOM1”. And the second one is “GEM3NFC”, which the FCC ID is “XRH-NPE109”.			

Note#4 : According to the information as above, we test module “WLT5283M” and “SKI.WB668BS.3” to report.

Radio Tech. in current report : Listed as below:

Item	SKI.WB668BS.3
Radio Technology	BREDR
Chanel Frequency	2402MHz-2480MHz
Modulation	GFSK, π/4DQPSK, 8DPSK.
Data Rate	Up to 3Mbps

Antenna Info. : The Module “SKI.WB668BS.3” shipped with three ANT port, the usage details listed as below:

ANT port:	CNF1	CNF2	CNF3
Connector:	IPEX	IPEX	IPEX
Condition:	In used for Bluetooth	In used for WIFI	In used for WIFI
Transmit Type:	1T2X	2T2X	
Antenna Type:	PIFA	PIFA	PIFA
Antenna Gain:	3 dBi	3 dBi	3 dBi

Applicant : TRISPORT AG
Boesch 67 CH-6331 Huenenberg

Manufacturer : Same as Applicant.

2.2 EUT Specifications Assessed in Current Report

Mode	Modulation	Data Rate(Mbps)
BR	GFSK	1
EDR	π/4-DQPSK, 8DPSK	Up to 3

Channel List			
Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)
00	2402	40	2442
01	2403	41	2443
02	2404	42	2444
03	2405	43	2445
…	…	…	…
…	…	…	…
…	…	…	…
36	2438	76	2478
37	2439	77	2479
38	2440	78	2480
39	2441		

2.3 Test Information

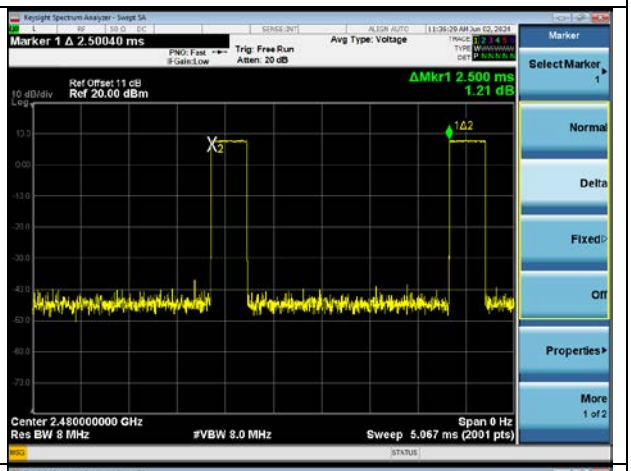
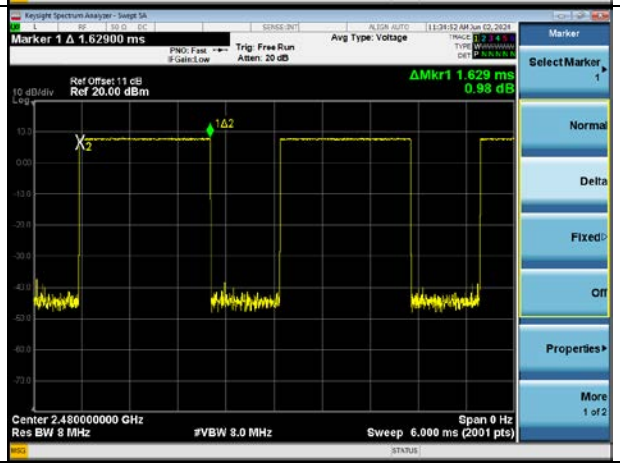
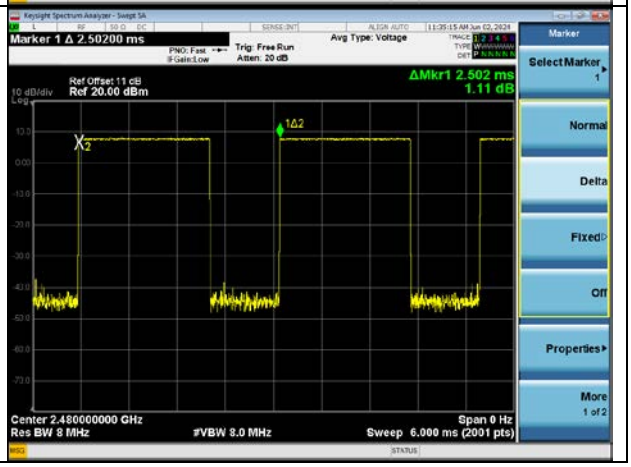
The test software " sscom5.13.1.exe" was used to control EUT work in TX mode, Power Setting and select test channel.

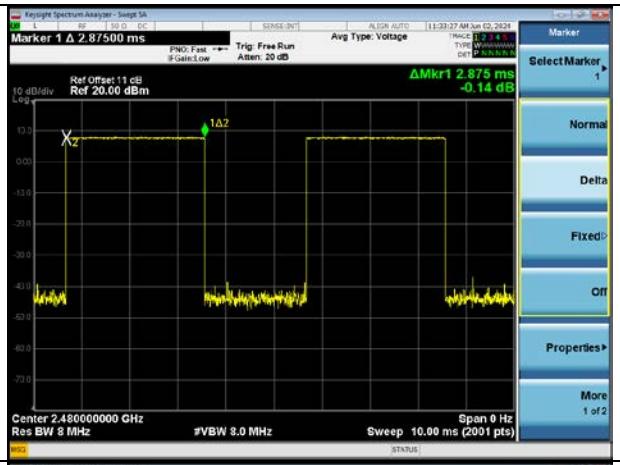
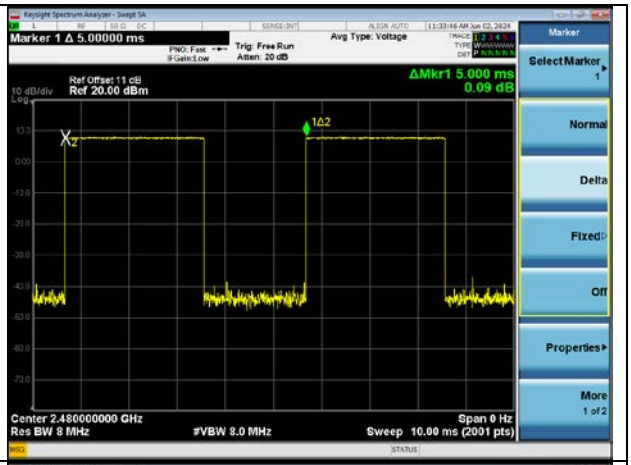
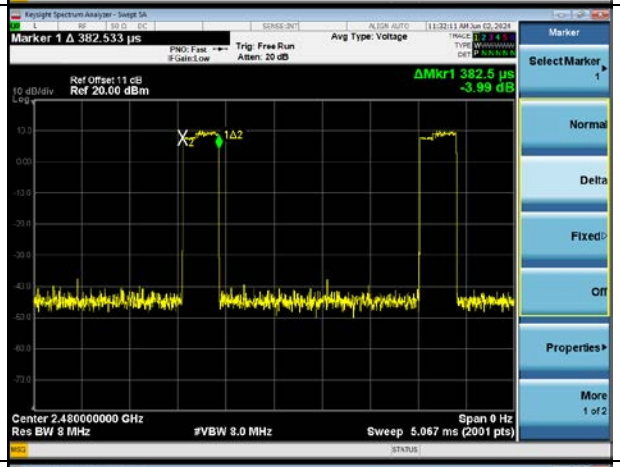
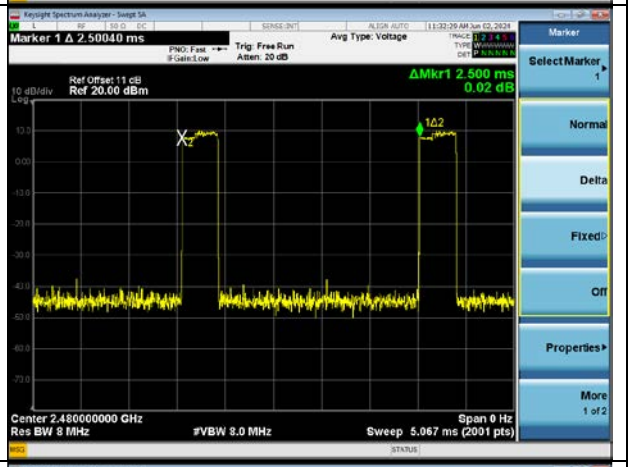
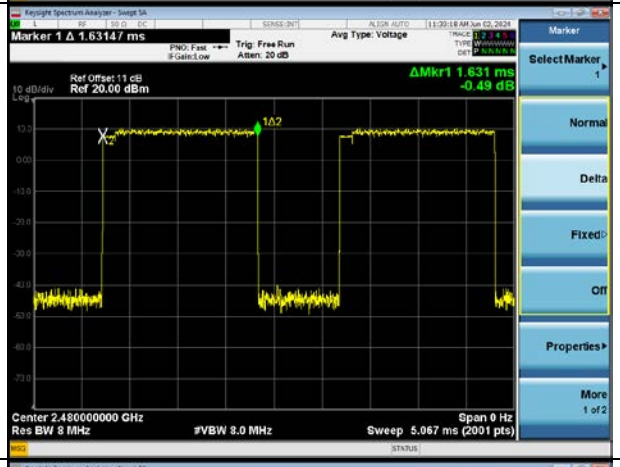
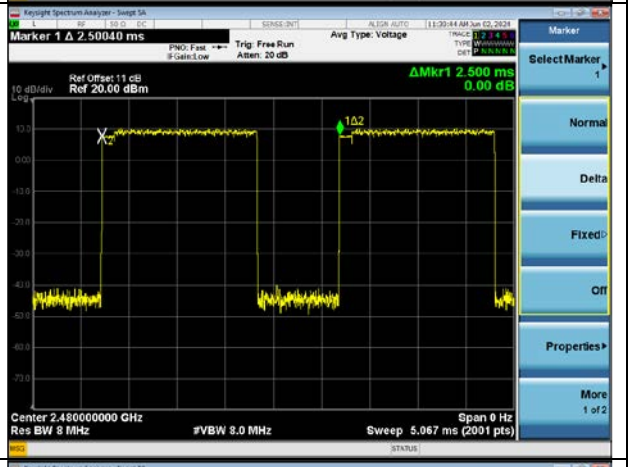
Mode	data rate (Mbps)	pwrlvl Setting	Test Channel		Frequency (MHz)
DH1	1	5	Low:	00	2402
		5	Middle:	39	2441
		5	High:	78	2480
		5	Hopping:	--	--
DH3	1	5	Low:	00	2402
		5	Middle:	39	2441
		5	High:	78	2480
		5	Hopping:	--	--
DH5	1	5	Low:	00	2402
		5	Middle:	39	2441
		5	High:	78	2480
		5	Hopping:	--	--
3DH1	3	5	Low:	00	2402
		5	Middle:	39	2441
		5	High:	78	2480
		5	Hopping:	--	--
3DH3	3	5	Low:	00	2402
		5	Middle:	39	2441
		5	High:	78	2480
		5	Hopping:	--	--

3DH5	3	5	Low:	00	2402
		5	Middle:	39	2441
		5	High:	78	2480
		5	Hopping:	--	--

2.4 Duty Cycle Check

Mode	Transmission Duration (ms)	Transmission Period (ms)	Duty Cycle (%)	1/Ton (kHz)
DH1	0.3724	2.5	14.90	2.7
DH3	1.629	2.502	65.11	0.6
DH5	2.875	5	57.50	0.3
3DH1	0.3825	2.5	15.30	2.6
3DH3	1.631	2.5	65.24	0.6
3DH5	2.885	5	57.70	0.3

Mode	Ton	Ton+off
DH1		
DH3		

DH5		
3DH1		
3DH3		
3DH5		

2.5 Sample Description

Test Item	Model Number	Sample Number	Date of receipted
Conducted Emission	CT1063-400US	E20231017179-03/03	2023.10.17
	EM1060-400US	E20231017180-01/01	2023.10.17
Radiated Emission	CT1063-400US	E20231017179-03/03	2023.10.17
	EM1060-400US	E20231017180-01/01	2023.10.17
Conducted RF Test	CT1063-400US	E20231017179a-03/03	2023.10.17

2.6 Supported equipment

Brand	:	Acer
Product Name:	:	Notebook PC
Model Name	:	TravelMate P238 series
Model Number	:	N15W8
Product Name	:	Test Fixture
Product Function	:	USB to TTL

2.7 Description of Test Facility

Name of Firm	:	Audix Technology (Shanghai) Co., Ltd.
Site Location	:	3F, Building 34, No. 680 Guiping Rd., Caohejing, Hi-Tech Park, Shanghai 200233, China
Accredited by NVLAP, Lab Code	:	200371-0
FCC Designation Number	:	CN5027
Test Firm Registration Number	:	954668

3 CONDUCTED EMISSION TEST

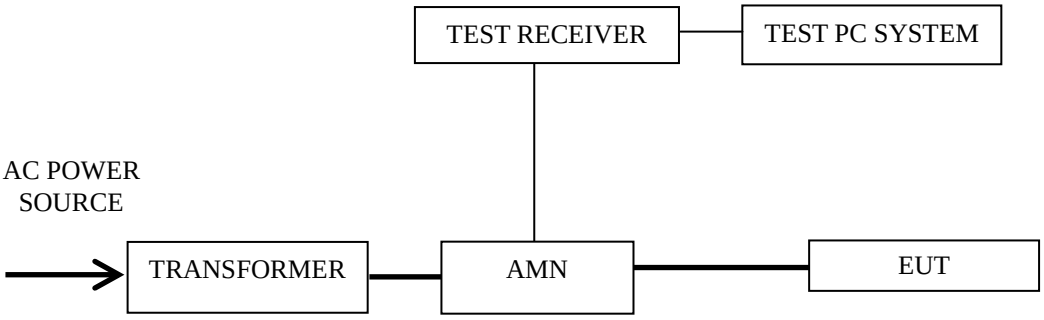
3.1 Test Equipment

The following test equipments are used during the conducted emission test in a shielded room:

Item	Type	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Interval
1.	Test Receiver	R&S	ESCI	101302	2024.02.22	1 Year
2.	Artificial Mains Network (AMN)	R&S	ESH2-Z5	843890/011	2024.02.22	1 Year
3.	Fixed Attenuator	SHYL	TTS-1	001	2024.02.22	1 Year
4.	50Ω Coaxial Switch	ANRITSU	MP59B	6200655086	2024.02.22	1 Year
5.	Coaxial Cable	HANWEI	RG223/U	KJ09052	2024.02.22	1 Year
6.	Software	Audix	e3	210616	--	--

3.2 Block Diagram of Test Setup

3.2.1 Conducted Disturbance Test Setup



—— : Signal Line
—— : Power Line

3.3 Conducted Emission Limits (§15.207)

Frequency Range (MHz)	Limits dB(μV)	
	Quasi-peak	Average
0.15 ~ 0.5	66~56	56~46
0.5 ~ 5	56	46
5 ~ 30	60	50

NOTE 1 – The lower limit shall apply at the transition frequencies.

NOTE 2 – The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz~0.50 MHz

3.4 Test Configuration

The EUT (listed in Sec.2.1) was installed as shown on Sec.3.2 to meet FCC requirement and operating in a manner which tends to maximize its emission level in a normal application.

3.5 Operating Condition of EUT

3.5.1 Setup the EUT as shown in Sec. 3.2.

3.5.2 Turn on the power of all equipment.

3.5.3 Turn the EUT on the test mode, and then test.

3.6 Test Procedures

The EUT was placed upon a insulating support, which is 0.1 m above the horizontal conducting ground plane and 0.4 m from a vertical reference plane. The EUT was connected to the power mains through an Artificial Mains Network (AMN) to provide a 50 Ω coupling impedance for the measuring equipment. Both sides of AC line (Line & Neutral) were checked to find out the maximum conducted emission according to FCC Part 15 Subpart C and ANSI C63.10: 2013 requirements during conducted disturbance test.

The I.F. bandwidth of Test Receiver ESCI was set at 9 kHz.

The frequency range from 150 kHz to 30 MHz was checked.

Test with a dummy load in lieu of the antenna to determine compliance with Section 15.207 limits within the transmitter's fundamental emission band. (According to KDB 174176 D01 Line Conducted FAQ)

The test modes were done on conducted disturbance test and all the test results are listed in Sec. 3.7

3.7 Test Results

< PASS >

The frequency and amplitude of the highest conducted emission relative the limit is reported. All the emissions not reported below are too low against the FCC limit.

Worst case emission:
(Test Model: CT1063-400US)

No.	Operation	Mode	Channel	Frequency	Data Page
1.	Transmitting	DH1	00	2402 MHz	P15-16

(Test Model: EM1060-400US)

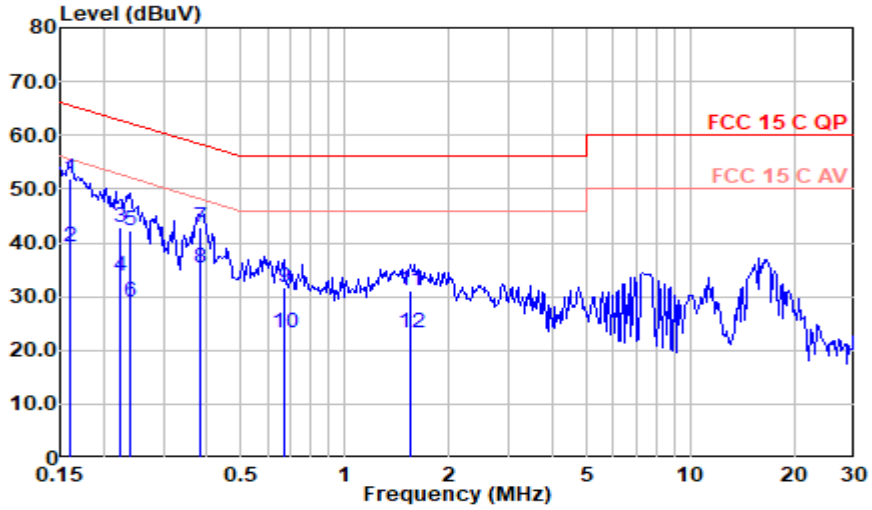
No.	Operation	Mode	Channel	Frequency	Data Page
1.	Transmitting	DH1	00	2402 MHz	P17-18

NOTE 1 – Emission Level = Read Level + AMN Factor +Aux Factor + Cable Loss
Margin = Limits - Emission Level
NOTE 2 – "QP" means "Quasi-Peak" values
NOTE 3 – The emission levels which not reported are too low against the official limit.

Worst case emission

Test Date:	2024.09.03	Temp./Hum.:	22°C/51%RH	Test By:	Jarey

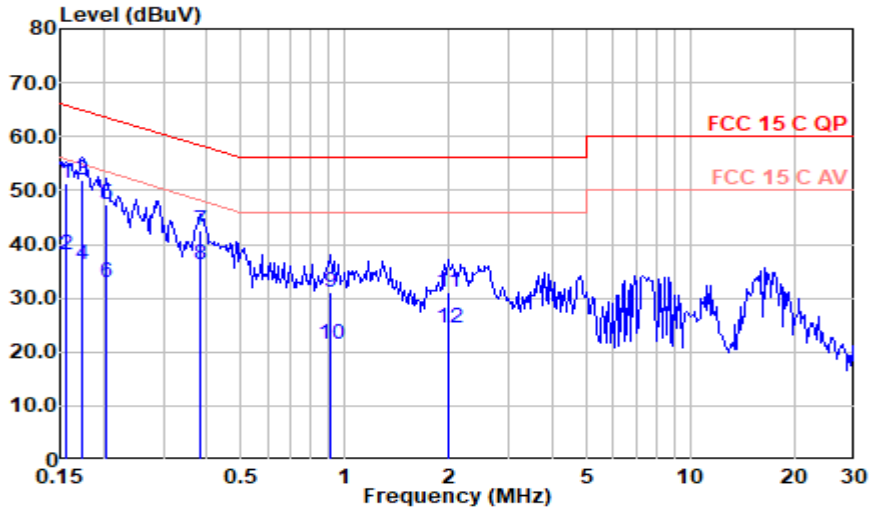
Mode: DH1 CH2402MHz **Model: CT1063-400US**



Polarization at Line

Frequency (MHz)	Meter Reading dB (μV)	AMN Factor (dB)	Aux Factor (dB)	Cable Loss (dB)	Emission Level dB (μV)	Limits dB (μV)	Margin (dB)	Remark
0.161	42.38	0.20	9.49	0.00	52.07	65.42	13.35	QP
0.161	29.44	0.20	9.49	0.00	39.13	55.42	16.29	Average
0.223	33.31	0.20	9.49	0.00	43.00	62.70	19.70	QP
0.223	24.23	0.20	9.49	0.00	33.92	52.70	18.78	Average
0.239	32.53	0.20	9.49	0.00	42.22	62.12	19.90	QP
0.239	19.25	0.20	9.49	0.00	28.94	52.12	23.18	Average
0.382	33.31	0.20	9.49	0.00	43.00	58.24	15.24	QP
0.382	25.53	0.20	9.49	0.00	35.22	48.24	13.02	Average
0.666	22.11	0.20	9.49	0.04	31.84	56.00	24.16	QP
0.666	13.51	0.20	9.49	0.04	23.24	46.00	22.76	Average
1.551	21.11	0.30	9.49	0.10	31.00	56.00	25.00	QP
1.551	13.31	0.30	9.49	0.10	23.20	46.00	22.80	Average

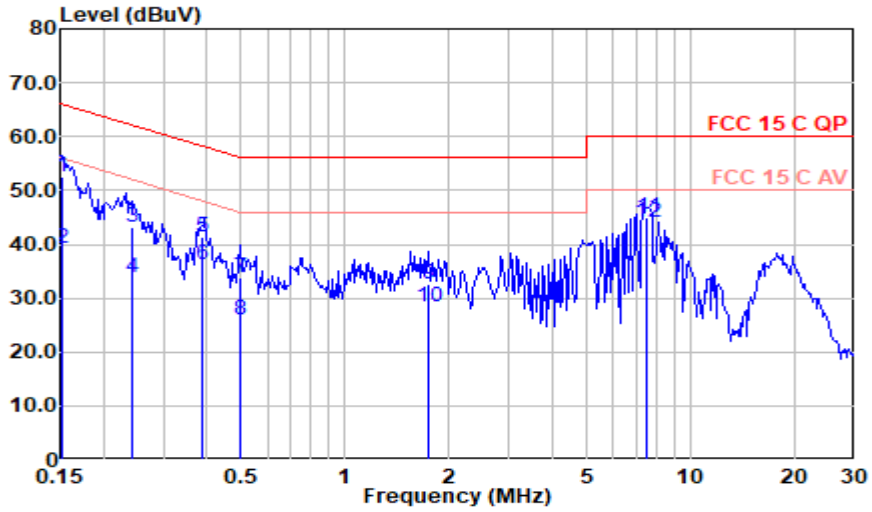
Mode: DH1 CH2402MHz **Model: CT1063-400US**



Polarization at Neutral

Frequency (MHz)	Meter Reading dB (μV)	AMN Factor (dB)	Aux Factor (dB)	Cable Loss (dB)	Emission Level dB (μV)	Limits dB (μV)	Margin (dB)	Remark
0.156	41.56	0.20	9.49	0.00	51.25	65.67	14.42	QP
0.156	28.26	0.20	9.49	0.00	37.95	55.67	17.72	Average
0.174	42.37	0.20	9.49	0.00	52.06	64.76	12.70	QP
0.174	26.54	0.20	9.49	0.00	36.23	54.76	18.53	Average
0.204	37.61	0.20	9.49	0.00	47.30	63.44	16.14	QP
0.204	23.26	0.20	9.49	0.00	32.95	53.44	20.49	Average
0.382	32.96	0.20	9.49	0.00	42.65	58.24	15.59	QP
0.382	26.60	0.20	9.49	0.00	36.29	48.24	11.95	Average
0.907	21.37	0.20	9.49	0.09	31.14	56.00	24.86	QP
0.907	11.54	0.20	9.49	0.09	21.31	46.00	24.69	Average
1.989	21.27	0.20	9.49	0.10	31.06	56.00	24.94	QP
1.989	14.53	0.20	9.49	0.10	24.32	46.00	21.68	Average

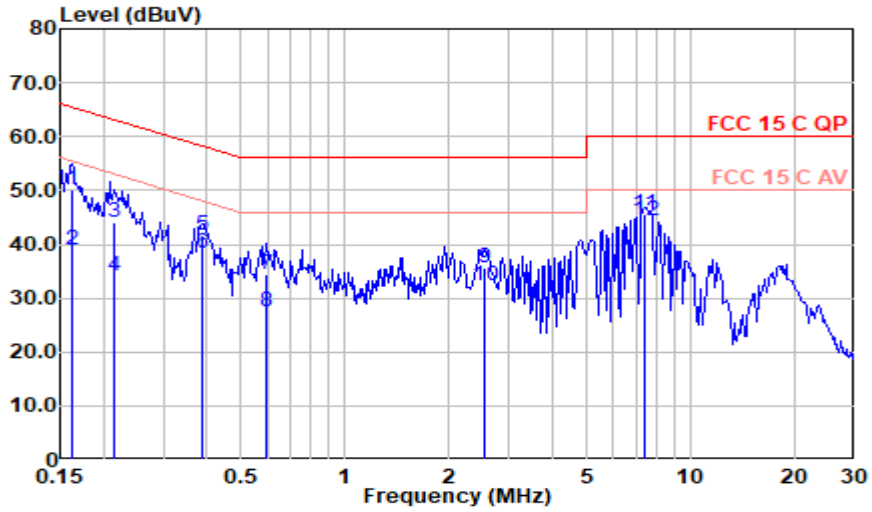
Mode: DH1 CH2402MHz **Model: EM1060-400US**



Polarization at Line

Frequency (MHz)	Meter Reading dB (μV)	AMN Factor (dB)	Aux Factor (dB)	Cable Loss (dB)	Emission Level dB (μV)	Limits dB (μV)	Margin (dB)	Remark
0.151	42.83	0.20	9.49	0.00	52.52	65.92	13.40	QP
0.151	29.48	0.20	9.49	0.00	39.17	55.92	16.74	Average
0.242	33.43	0.20	9.49	0.00	43.12	62.04	18.92	QP
0.242	24.24	0.20	9.49	0.00	33.93	52.04	18.10	Average
0.386	31.75	0.20	9.49	0.00	41.44	58.16	16.72	QP
0.386	26.57	0.20	9.49	0.00	36.26	48.16	11.89	Average
0.499	24.18	0.20	9.49	0.00	33.87	56.01	22.14	QP
0.499	16.42	0.20	9.49	0.00	26.11	46.01	19.90	Average
1.748	22.82	0.30	9.49	0.10	32.71	56.00	23.29	QP
1.748	18.48	0.30	9.49	0.10	28.37	46.00	17.63	Average
7.534	35.07	0.20	9.49	0.16	44.92	60.00	15.08	QP
7.534	34.31	0.20	9.49	0.16	44.16	50.00	5.84	Average

Mode: DH1 CH2402MHz **Model: EM1060-400US**



Polarization at Neutral

Frequency (MHz)	Meter Reading dB (μV)	AMN Factor (dB)	Aux Factor (dB)	Cable Loss (dB)	Emission Level dB (μV)	Limits dB (μV)	Margin (dB)	Remark
0.162	40.38	0.20	9.49	0.00	50.07	65.34	15.27	QP
0.162	29.14	0.20	9.49	0.00	38.83	55.34	16.51	Average
0.215	34.50	0.20	9.49	0.00	44.19	63.03	18.83	QP
0.215	24.35	0.20	9.49	0.00	34.04	53.03	18.99	Average
0.386	32.12	0.20	9.49	0.00	41.81	58.16	16.35	QP
0.386	28.51	0.20	9.49	0.00	38.20	48.16	9.95	Average
0.591	24.56	0.20	9.49	0.02	34.28	56.00	21.72	QP
0.591	17.76	0.20	9.49	0.02	27.47	46.00	18.53	Average
2.550	25.75	0.20	9.49	0.10	35.54	56.00	20.46	QP
2.550	22.57	0.20	9.49	0.10	32.36	46.00	13.64	Average
7.386	35.81	0.20	9.49	0.16	45.66	60.00	14.34	QP
7.386	34.38	0.20	9.49	0.16	44.23	50.00	5.77	Average

4 RADIATED EMISSION TEST

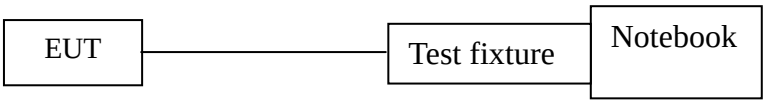
4.1 Test Equipment

The following test equipment are used during the radiated emission test in a semi-anechoic chamber:

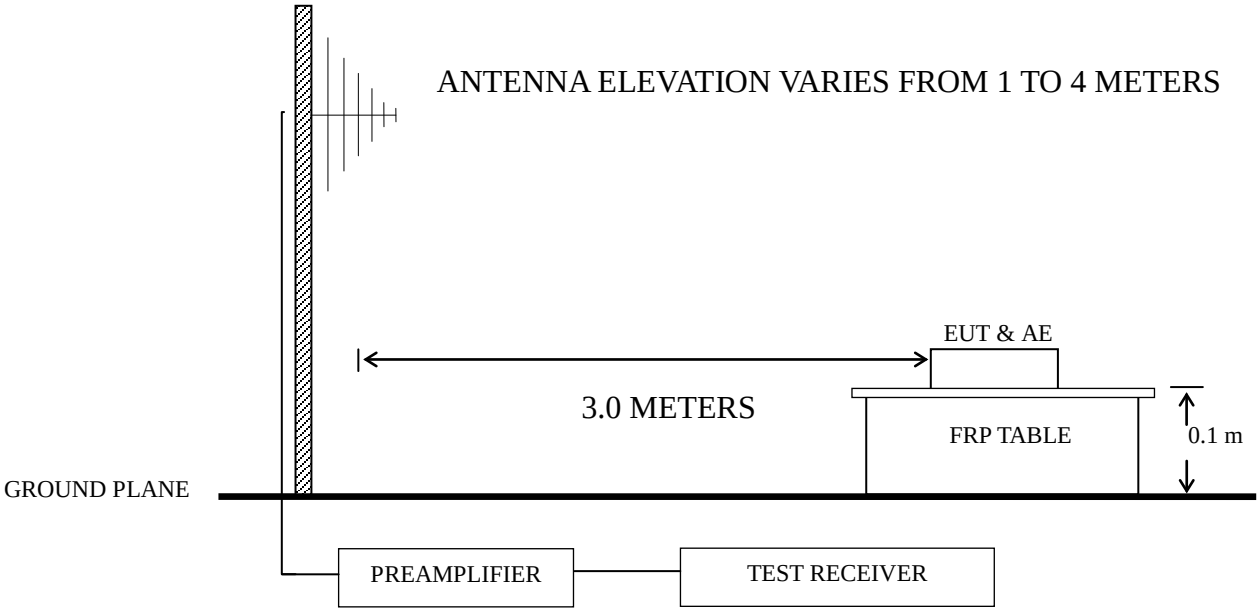
Item	Type	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Interval
1.	Preamplifier	Agilent	8447D	2944A10548	2024.02.22	1 Year
2.	Preamplifier	HP	8449B	3008A00864	2024.02.22	1 Year
3.	EXA Signal Analyzer	Agilent	N9010A	MY52221182	2023.08.09	1 Year
4.	Test Receiver	R&S	ESCI	101303	2024.02.22	1 Year
5.	Bilog Antenna+6dB Attenuator	Schwarzbeck	VULB 9168+EMCI-N-6-06	707+AT-N0637	2023.08.09	1 Year
6.	Horn Antenna	EMCO	3115	96074878	2023.08.02	1 Year
7.	Horn Antenna	EMCO	3116	00062643	2023.01.30	2 Year
8.	Cavity Band Rejection Filter	Microwave	WT-A3882-R 10	WT200312-1-1	2024.02.22	1 Year
9.	Coaxial Switch	Anritsu	MP59B	6200655086	2024.02.22	1 Year
10.	Coaxial Cable	SCHAFFNER	RG 212U-MIL C 17+N1K50-E W0630-N1K5 0-15m-1	RE-10m-001/ RE-15m-002	2024.02.22	1 Year
11.	Software	Audix	e3	v9.210616	--	--

4.2 Block Diagram of Test Setup

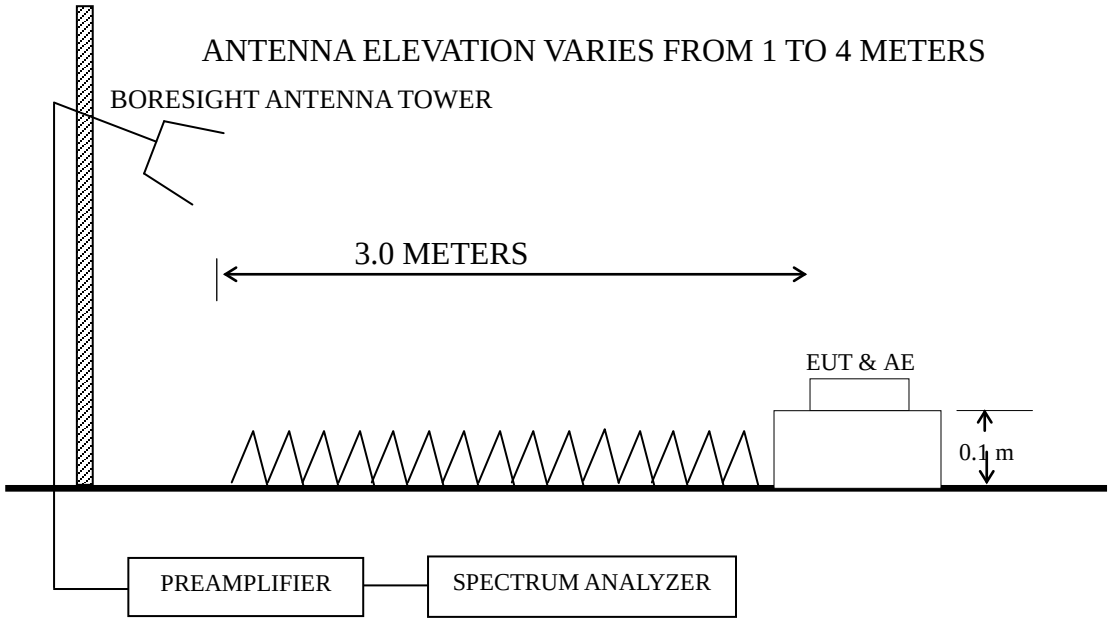
4.2.1 EUT & Peripherals



4.2.2 Below 1GHz



4.2.3 Above 1GHz



4.3 Radiated Emission Limit (§15.209)

Frequency (MHz)	Distance (m)	Field strength limits (μV/m)	
		(μV/m)	dB(μV/m)
30 ~ 88	3	100	40.0
88 ~ 216	3	150	43.5
216 ~ 960	3	200	46.0
Above 960	3	500	54.0

NOTE 1 - Emission Level dB (μV/m) = 20 log Emission Level (μV/m)
NOTE 2 - The tighter limit applies at the band edges.
NOTE 3 - Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.
NOTE 4 - The limits shown are based on Quasi-peak value detector below or equal to 1GHz and Average value detector above 1GHz.
NOTE 5 - Above 1 GHz, the limit on peak emission is 20 dB above the maximum permitted average emission limit applicable to the EUT

4.4 Test Configuration

The EUT (listed in Sec.2.1) and the simulators (listed in Sec.2.2) were installed as shown on Sec.4.2 to meet FCC requirements and operating in a manner that tends to maximize its emission level in a normal application.

4.5 Operating Condition of EUT

4.5.1 Setup the EUT as shown in Sec. 3.2.

4.5.2 Turn the EUT on.

4.5.3 Connect the EUT and the TTL terminal of Test Fixture through three HCI cables of EUT, as follows (VCC to DC3V3, TX to RXD, RX to TXD, GND to GND). Plug the USB terminal of Test Fixture to the USB port of Notebook PC.

4.5.4 Use the software as section 2.3 to select the test mode, and then test.

4.5.5 Repeat step 3.5.3 and 3.5.4, until the test of all modes finished.

4.6 Test Procedures

Radiated emission test applies to harmonics/spurs that fall in the restricted bands listed in Section 15.205. The maximum permitted average field strength is listed in Section 15.209. A pre-amp is necessary for this measurement. For measurement above 1 GHz, set RBW = 1MHz, VBW = 10 Hz, Sweep: Auto. If the emission is pulsed, modify the unit for continuous operation; use the settings shown above, then correct the reading by subtracting the peak-average correction factor, derived from the appropriate duty cycle calculation.

The EUT was placed on a 0.1m high insulating support on a turntable. The turntable rotated 360 degrees to determine the position of the maximum emission level. The EUT was set 3 meters away from the receiving antenna, which was mounted on an antenna tower. The antenna moved up and down between 1 meter and 4 meters to find out the maximum emission level. Broadband antenna (Calibrated Bilog Antenna) or Horn antenna was used as receiving antenna. Both horizontal and vertical polarizations of the antenna

were set on measurement. In order to find the maximum emission, all of the interference cables were manipulated according to ANSI C63.10: 2013 requirements during radiated emission test.

The bandwidth of Test Receiver R&S ESCI was set at 120 kHz from 30MHz to 1000MHz.

The bandwidth of Agilent N9010A was set at 1MHz for above 1GHz.

The frequency range from 30 MHz to 25 GHz (Up to 10^{th} harmonics from fundamental frequency) was checked.

All the test results are listed in Sec.3.7.

4.7 Test Results

<PASS>

The frequency and amplitude of the highest radiated emission relative the limit is reported. All the emissions not reported below are too low against the FCC limit.

Frequency range: below 1GHz (Worst case emission):
(Test Model: CT1063-400US)

No.	Operation	Mode	Channel	Frequency	Data Page
1.	Transmitting	1DH1	00	2402MHz	P25-26

(Test Model: EM1060-400US)

No.	Operation	Mode	Channel	Frequency	Data Page
1.	Transmitting	1DH1	00	2402MHz	P27-28

Frequency range: above 1GHz:
(Test Model: CT1063-400US)

No.	Operation	Mode	Channel	Frequency	Data Page
1.	Transmitting	DH1	00	2402 MHz	P29-30
2.			39	2441 MHz	P31-32
3.			78	2480 MHz	P33-34
4.			Hopping		P35-36
5.		DH3	78	2480 MHz	P37-38
6.		DH5	78	2480 MHz	P39-40
7.		3DH1	78	2480 MHz	P41-42
8.		3DH3	78	2480 MHz	P43-44
9.		3DH5	78	2480 MHz	P45-46

(Test Model: EM1060-400US)

No.	Operation	Mode	Channel	Frequency	Data Page
1.	Transmitting	DH5	78	2480 MHz	P47-48

Band-Edge and Restricted bands:
(Test Model: CT1063-400US)

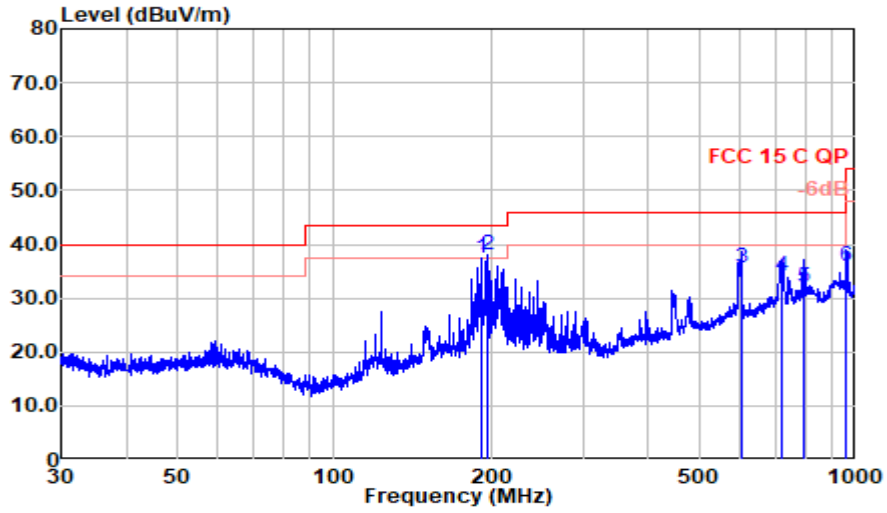
No.	Operation	Mode	Channel	Frequency	Data Page
1.	Transmitting	DH1	00	2402 MHz	P49-50
2.			78	2480 MHz	P51-52
3.		DH3	00	2402 MHz	P53-54
4.			78	2480 MHz	P55-56
5.		DH5	00	2402 MHz	P57-58
6.			78	2480 MHz	P59-60
7.		3DH1	00	2402 MHz	P61-62
8.			78	2480 MHz	P63-64
9.		3DH3	00	2402 MHz	P65-66
10.			78	2480 MHz	P67-68
11.		3DH5	00	2402 MHz	P69-70
12.			78	2480 MHz	P71-72

NOTE 1 – Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin = Limits - Emission Level.
NOTE 2 – “QP” means “Quasi-Peak” values.
NOTE 3 – 0°was the table front facing the antenna. Degree is calculated from 0°clockwise facing the antenna.
NOTE 4 – The emission levels which not reported are too low against the official limit.
NOTE 5 – The emission levels recorded below is data of EUT configured in Standing direction, for this direction was the maximum emission direction during the test. The Side & Lying direction are not a normal use and too low against the official limit to be reported.
NOTE 6 – All reading are Quasi-Peak values below or equal to 1GHz, Peak and Average values above 1GHz.
For above 1GHz test, if the peak measured value complies with the average limit, it is unnecessary to perform an average measurement.
NOTE 7 – The frequency range 2310-2390MHz & 2483.5-2500MHz were tested for Restricted bands.

Radiated emission < 1GHz

Test Date:	2024.03.03	Temp./Hum.:	22℃/51%RH	Test By:	Jarey

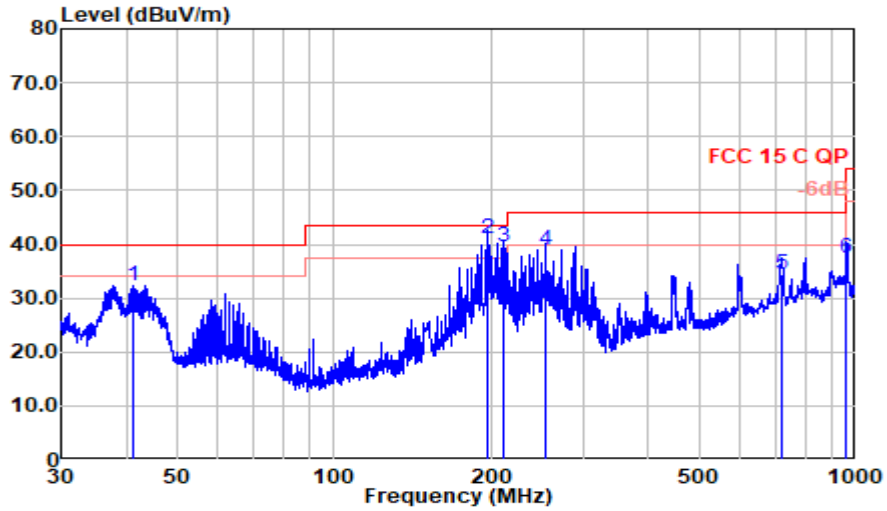
Mode: 1DH1 CH2402MHz **Model: CT1063-400US**



Polarization at Horizontal

Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
192.082	48.45	16.59	1.56	29.30	37.30	43.50	6.20	QP
197.546	49.57	16.20	1.59	29.30	38.05	43.50	5.45	QP
602.482	36.15	25.65	2.83	28.99	35.64	46.00	10.36	QP
721.726	32.67	26.90	2.95	28.41	34.11	46.00	11.89	QP
792.006	28.98	28.04	3.12	28.05	32.10	46.00	13.90	QP
960.477	30.47	29.51	3.37	27.34	36.01	54.00	17.99	QP

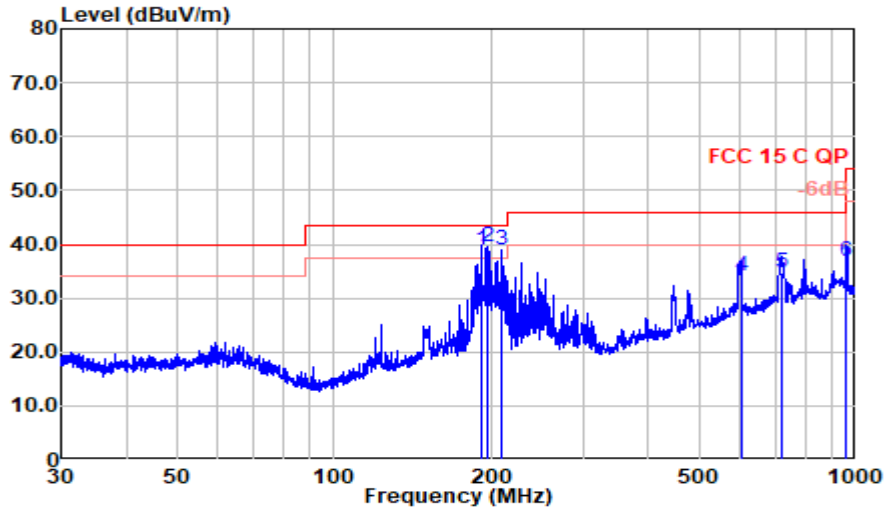
Mode: 1DH1 CH2402MHz **Model: CT1063-400US**



Polarization at Vertical

Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
41.277	42.10	19.43	0.70	29.90	32.33	40.00	7.67	QP
197.546	52.50	16.20	1.59	29.30	40.99	43.50	2.51	QP
211.898	51.23	15.86	1.62	29.24	39.47	43.50	4.03	QP
254.728	48.65	17.79	1.74	29.13	39.05	46.00	6.95	QP
720.462	33.10	26.90	2.95	28.42	34.53	46.00	11.47	QP
960.477	31.84	29.51	3.37	27.34	37.38	54.00	16.62	QP

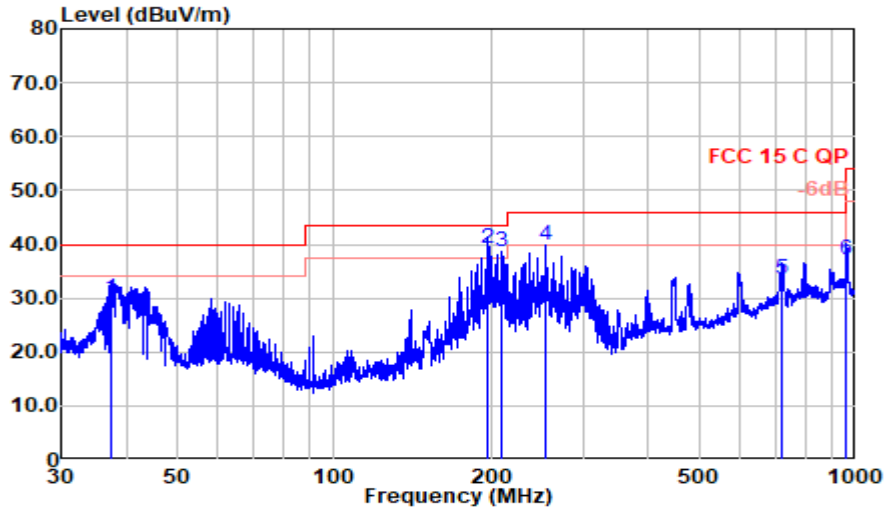
Mode: 1DH1 CH2402MHz **Model: EM1060-400US**



Polarization at Horizontal

Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
192.082	50.12	16.59	1.56	29.30	38.97	43.50	4.53	QP
197.546	51.00	16.20	1.59	29.30	39.48	43.50	4.02	QP
208.946	50.75	15.90	1.61	29.25	39.01	43.50	4.49	QP
602.482	34.49	25.65	2.83	28.99	33.98	46.00	12.02	QP
724.261	33.34	26.90	2.95	28.40	34.79	46.00	11.21	QP
960.477	31.43	29.51	3.37	27.34	36.97	54.00	17.03	QP

Mode: 1DH1 CH2402MHz **Model: EM1060-400US**



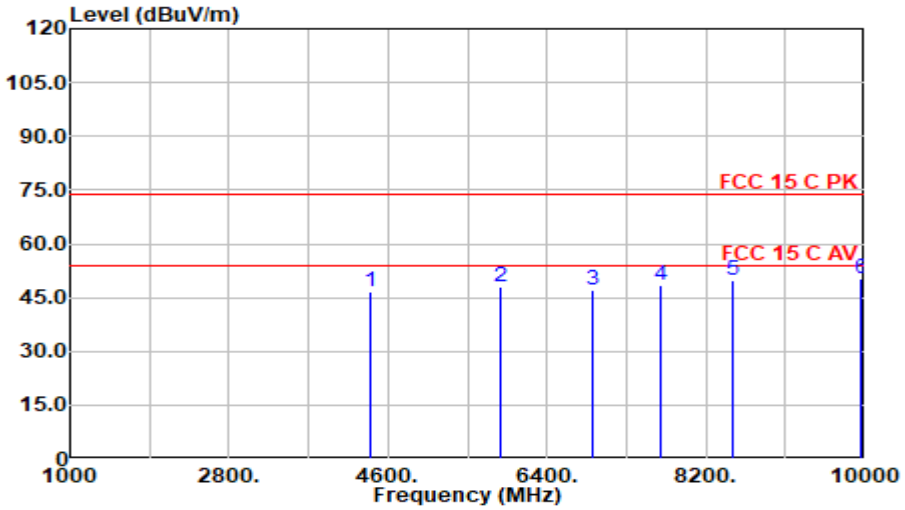
Polarization at Vertical

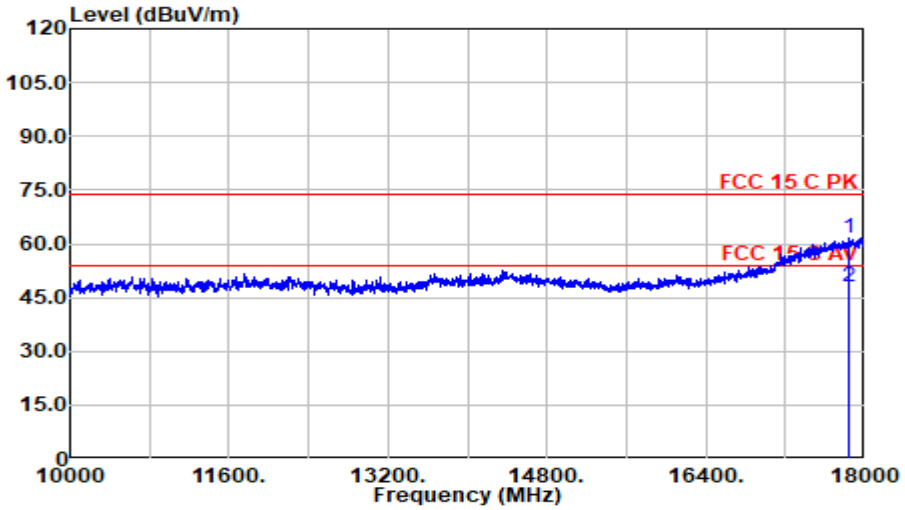
Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
37.285	40.22	18.90	0.67	29.90	29.89	40.00	10.11	QP
197.546	50.86	16.20	1.59	29.30	39.35	43.50	4.15	QP
208.946	50.26	15.90	1.61	29.25	38.52	43.50	4.98	QP
255.175	49.51	17.80	1.74	29.12	39.93	46.00	6.07	QP
724.261	32.21	26.90	2.95	28.40	33.66	46.00	12.34	QP
958.794	31.66	29.50	3.36	27.35	37.18	46.00	8.82	QP

Radiated Emission > 1GHz

Test Date:	2024.03.04	Temp./Hum.:	22℃/51%RH	Test By:	Jarey

Mode: DH1 2402MHz **Model: CT1063-400US**

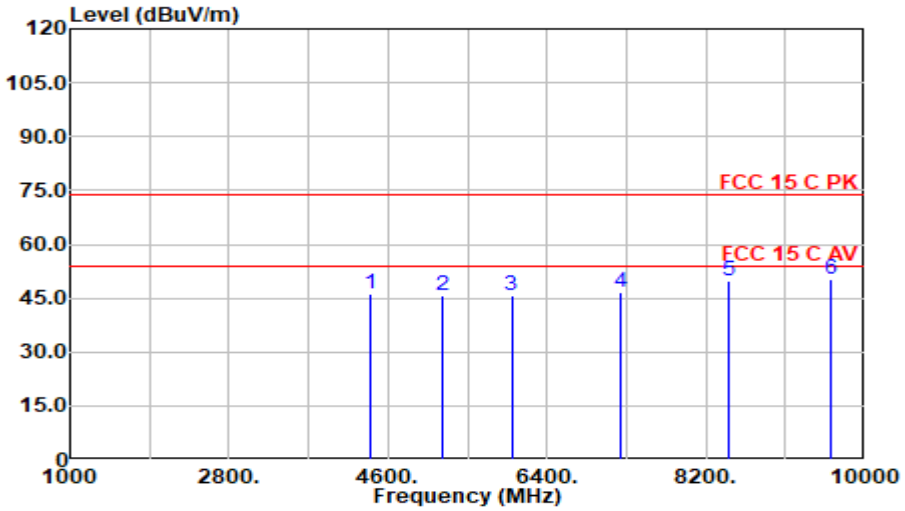


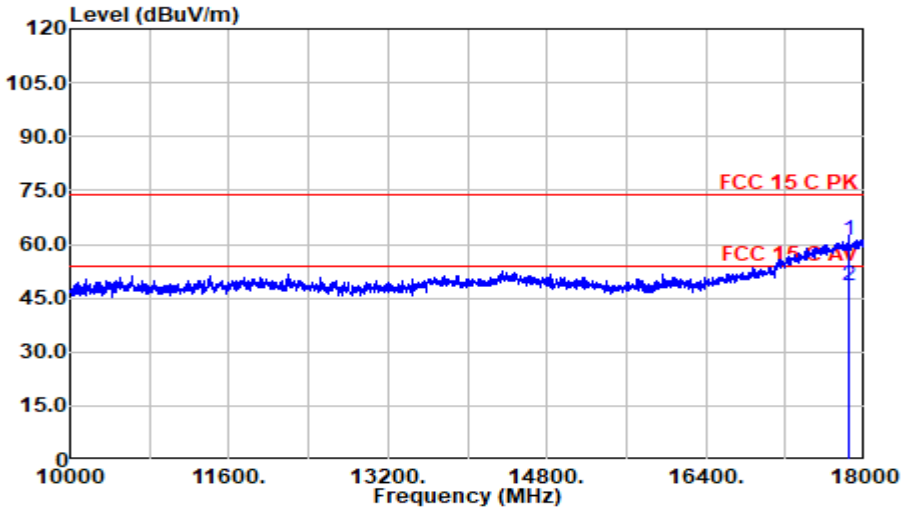


Polarization at Horizontal

Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
4393.000	42.09	32.39	7.20	34.83	46.84	74.00	27.16	Peak
5864.500	40.53	33.89	8.34	34.60	48.16	74.00	25.84	Peak
6922.000	36.97	35.54	9.19	34.60	47.10	74.00	26.90	Peak
7682.500	36.64	36.80	9.99	34.81	48.62	74.00	25.38	Peak
8510.500	35.85	38.20	10.48	34.79	49.74	74.00	24.26	Peak
9955.000	35.20	38.39	11.41	34.60	50.40	74.00	23.60	Peak
17836.000	30.69	47.14	16.05	32.25	61.62	74.00	12.38	Peak
17836.000	17.27	47.14	16.05	32.25	48.21	54.00	5.79	Average

Mode: DH1 2402MHz **Model: CT1063-400US**

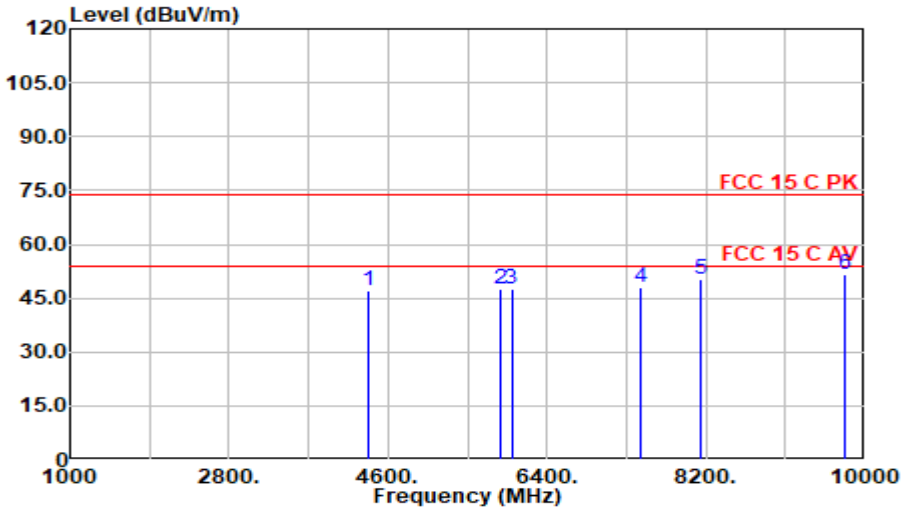


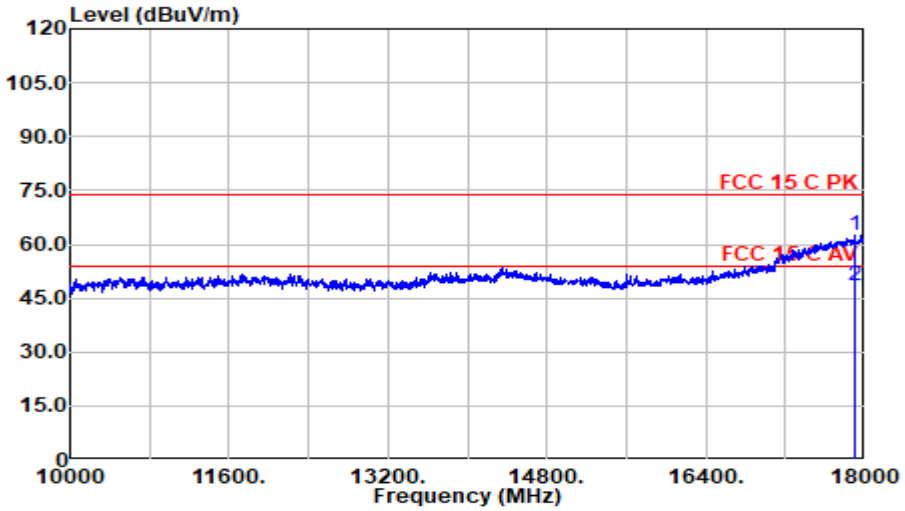


Polarization at Vertical

Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
4402.000	41.34	32.41	7.20	34.83	46.12	74.00	27.88	Peak
5221.000	38.39	33.86	7.95	34.60	45.60	74.00	28.40	Peak
5999.500	37.71	34.20	8.42	34.60	45.73	74.00	28.27	Peak
7232.500	35.53	36.43	9.51	34.67	46.79	74.00	27.21	Peak
8461.000	35.80	38.20	10.46	34.80	49.66	74.00	24.34	Peak
9608.500	35.68	38.20	11.14	34.64	50.38	74.00	23.62	Peak
17844.000	30.37	47.14	16.06	32.25	61.33	74.00	12.67	Peak
17844.000	17.44	47.14	16.06	32.25	48.40	54.00	5.60	Average

Mode: DH1 2441MHz **Model: CT1063-400US**

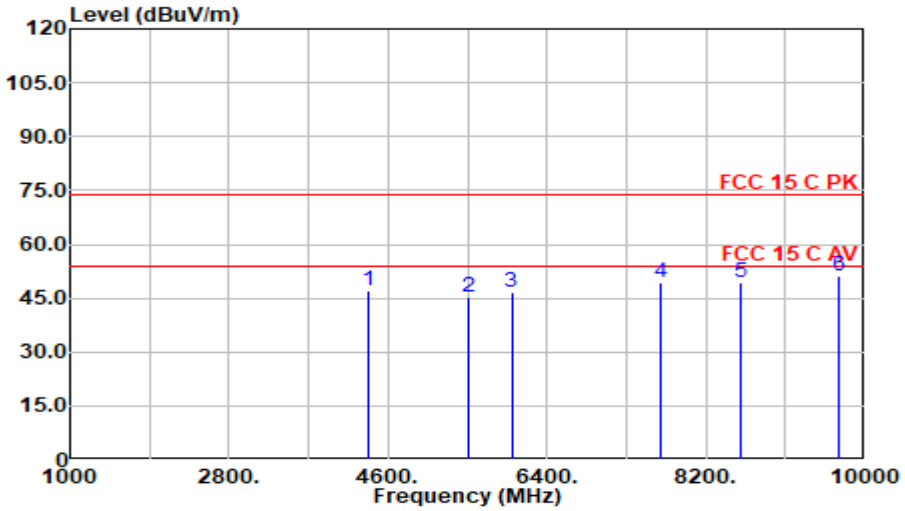


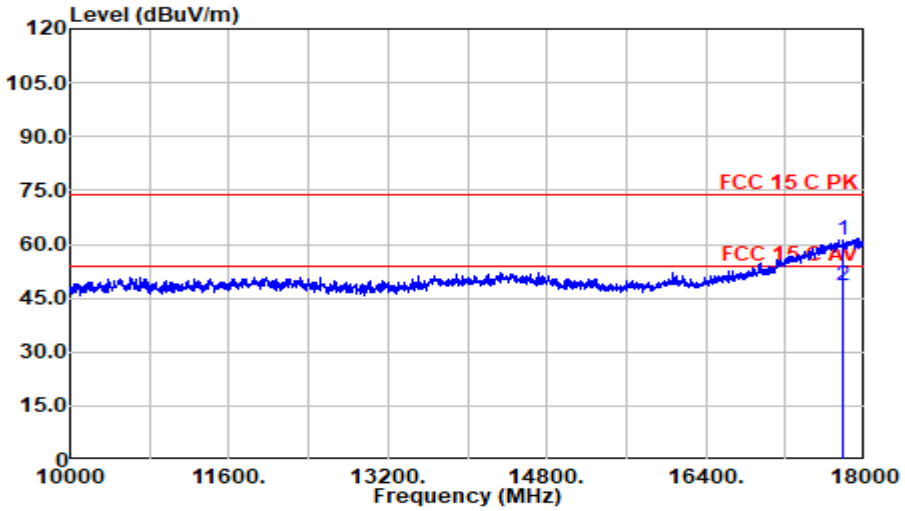


Polarization at Horizontal

Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
4379.500	42.58	32.36	7.18	34.84	47.28	74.00	26.72	Peak
5864.500	39.70	33.89	8.34	34.60	47.33	74.00	26.67	Peak
5999.500	39.44	34.20	8.42	34.60	47.46	74.00	26.54	Peak
7453.000	36.12	36.89	9.75	34.74	48.02	74.00	25.98	Peak
8141.500	37.30	37.47	10.36	34.87	50.25	74.00	23.75	Peak
9766.000	36.74	38.10	11.27	34.62	51.48	74.00	22.52	Peak
17896.000	31.25	47.20	16.14	32.23	62.35	74.00	11.65	Peak
17896.000	17.42	47.20	16.14	32.23	48.53	54.00	5.47	Average

Mode: DH1 2440MHz **Model: CT1063-400US**

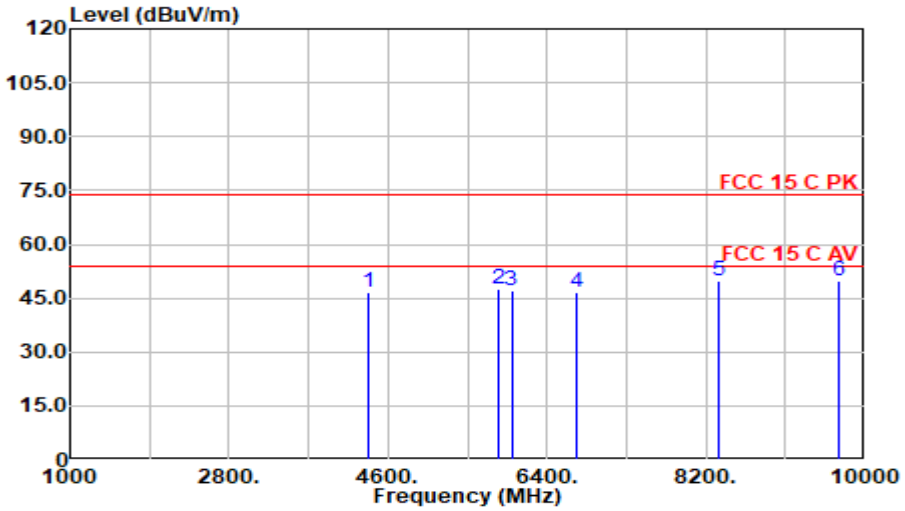


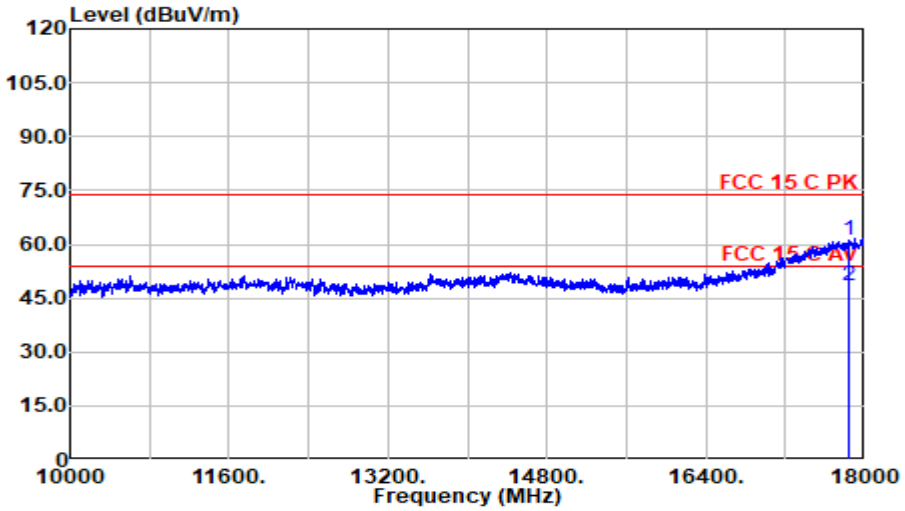


Polarization at Vertical

Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
4379.500	42.55	32.36	7.18	34.84	47.25	74.00	26.75	Peak
5522.500	37.72	34.15	8.14	34.60	45.42	74.00	28.58	Peak
5999.500	38.53	34.20	8.42	34.60	46.54	74.00	27.46	Peak
7687.000	37.34	36.80	9.99	34.81	49.32	74.00	24.68	Peak
8600.500	35.51	38.10	10.51	34.78	49.34	74.00	24.66	Peak
9703.000	36.54	38.10	11.22	34.63	51.22	74.00	22.78	Peak
17788.000	30.56	47.08	15.98	32.26	61.35	74.00	12.65	Peak
17788.000	17.46	47.08	15.98	32.26	48.25	54.00	5.75	Average

Mode: DH1 2480MHz **Model: CT1063-400US**

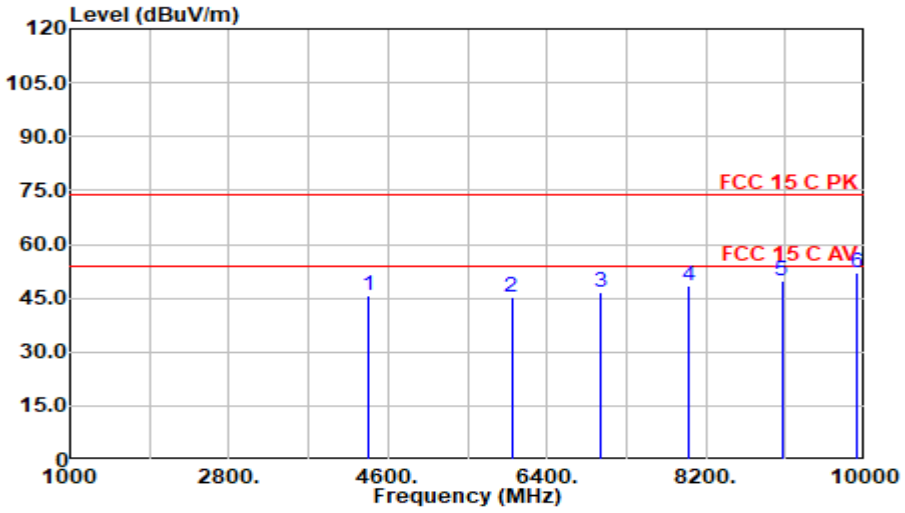


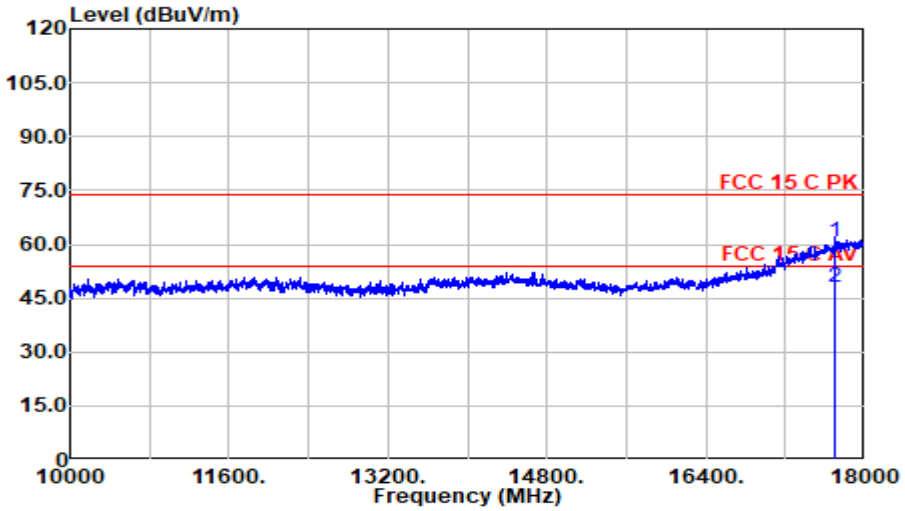


Polarization at Horizontal

Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
4379.500	41.99	32.36	7.18	34.84	46.69	74.00	27.31	Peak
5846.500	40.04	33.81	8.33	34.60	47.58	74.00	26.42	Peak
5999.500	38.86	34.20	8.42	34.60	46.87	74.00	27.13	Peak
6737.500	37.09	35.30	9.04	34.60	46.84	74.00	27.16	Peak
8353.000	36.13	38.10	10.43	34.83	49.83	74.00	24.17	Peak
9712.000	35.29	38.10	11.22	34.63	49.99	74.00	24.01	Peak
17848.000	30.18	47.15	16.07	32.24	61.15	74.00	12.85	Peak
17848.000	17.42	47.15	16.07	32.24	48.39	54.00	5.61	Average

Mode: DH1 2480MHz **Model: CT1063-400US**

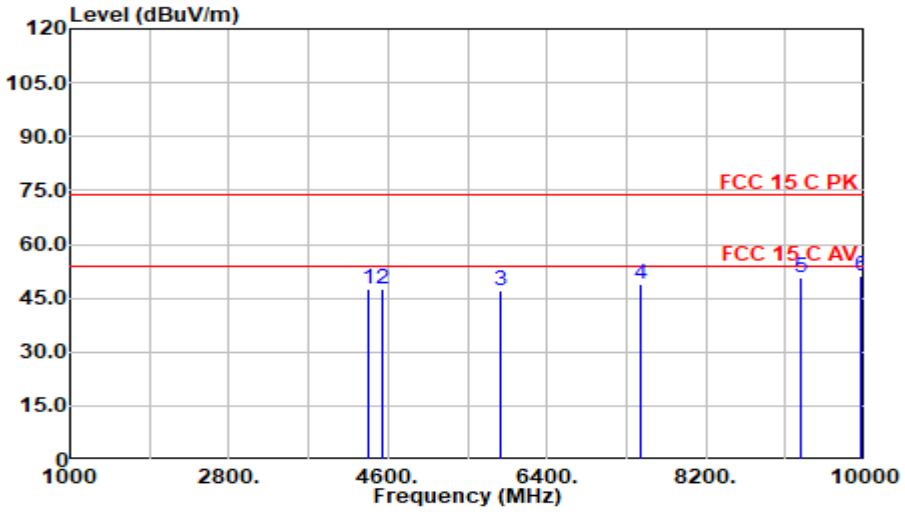


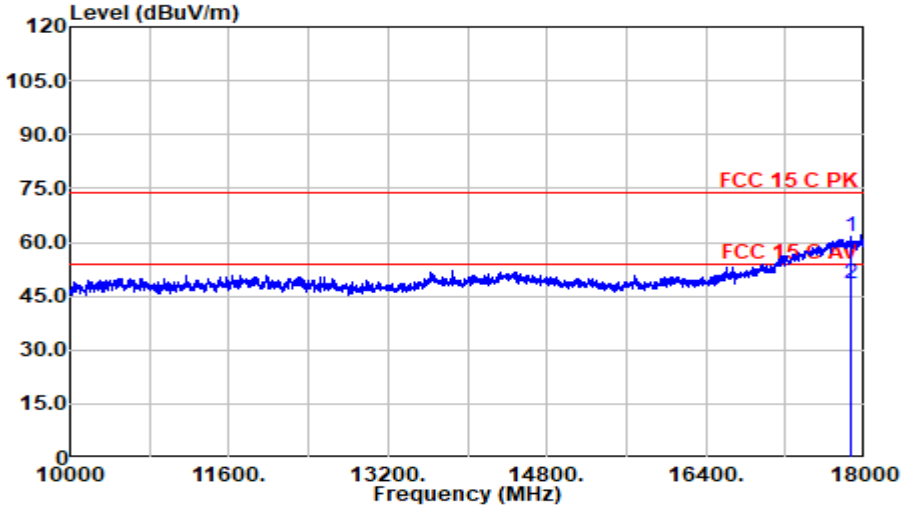


Polarization at Vertical

Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
4388.500	40.94	32.38	7.19	34.83	45.67	74.00	28.33	Peak
5999.500	37.46	34.20	8.42	34.60	45.47	74.00	28.53	Peak
7012.000	36.16	35.60	9.26	34.60	46.42	74.00	27.58	Peak
8002.000	35.71	37.20	10.31	34.90	48.33	74.00	25.67	Peak
9059.500	35.39	38.30	10.68	34.69	49.68	74.00	24.32	Peak
9919.000	36.90	38.40	11.39	34.61	52.07	74.00	21.93	Peak
17704.000	30.38	46.91	15.85	32.29	60.86	74.00	13.14	Peak
17704.000	17.44	46.91	15.85	32.29	47.91	54.00	6.09	Average

Mode: DH1 Hopping **Model: CT1063-400US**

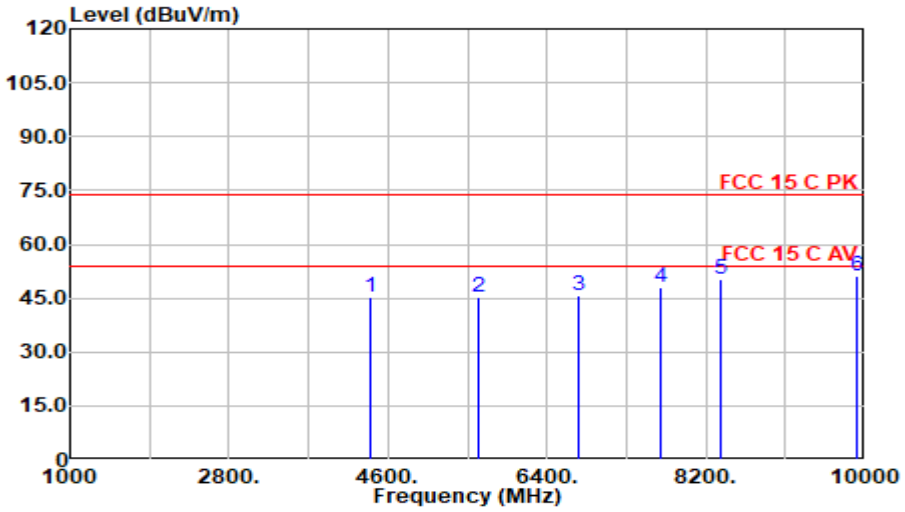


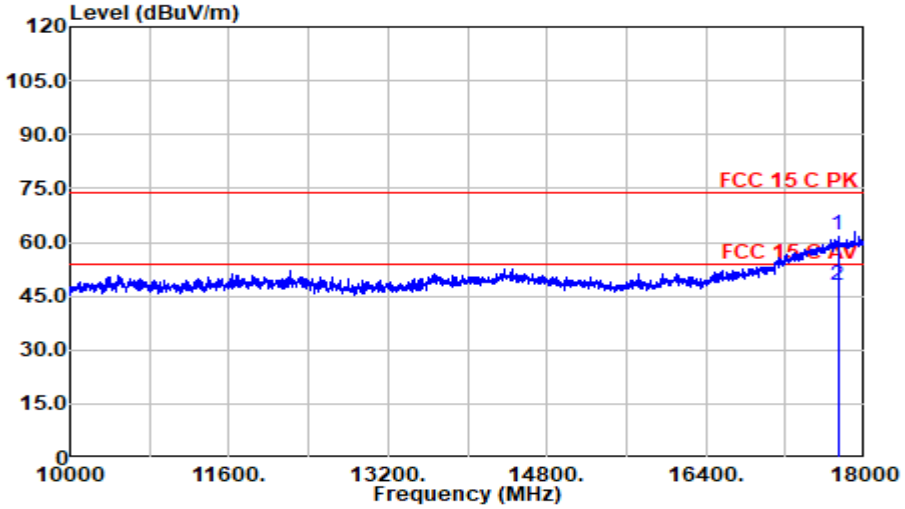


Polarization at Horizontal

Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
4379.500	42.84	32.36	7.18	34.84	47.54	74.00	26.46	Peak
4546.000	42.54	32.42	7.36	34.77	47.55	74.00	26.45	Peak
5864.500	39.45	33.89	8.34	34.60	47.08	74.00	26.92	Peak
7466.500	37.01	36.87	9.76	34.74	48.90	74.00	25.10	Peak
9284.500	36.55	38.13	10.87	34.67	50.88	74.00	23.12	Peak
9950.500	35.87	38.40	11.41	34.60	51.07	74.00	22.93	Peak
17856.000	30.48	47.16	16.08	32.24	61.48	74.00	12.52	Peak
17856.000	17.25	47.16	16.08	32.24	48.24	54.00	5.76	Average

Mode: DH1 Hopping **Model: CT1063-400US**

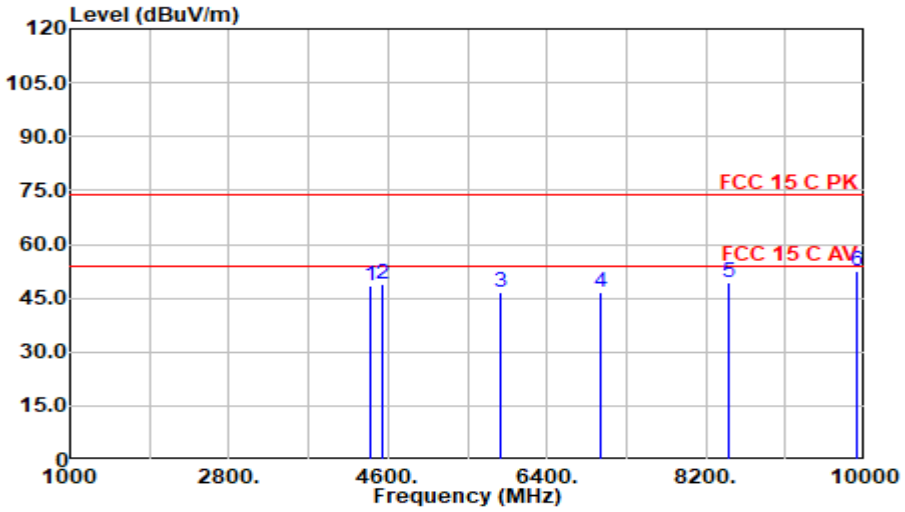


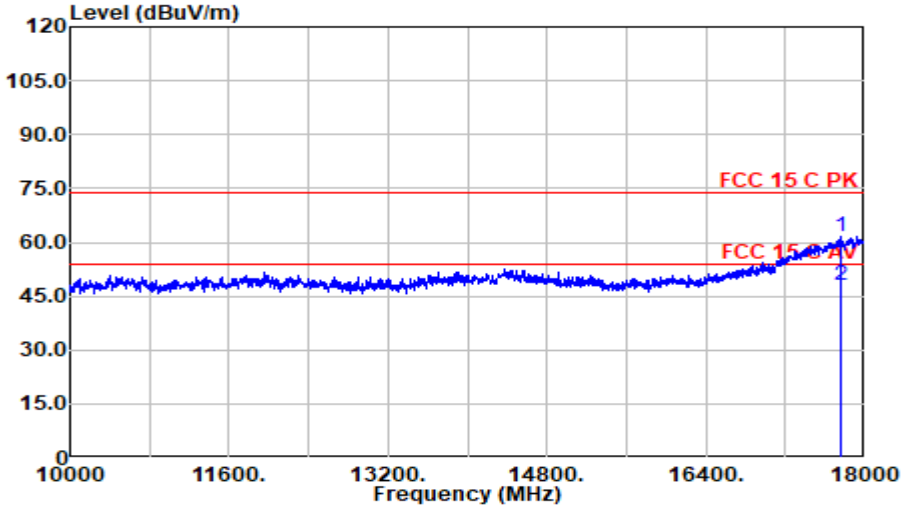


Polarization at Vertical

Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
4393.000	40.43	32.39	7.20	34.83	45.18	74.00	28.82	Peak
5635.000	37.64	33.93	8.21	34.60	45.18	74.00	28.82	Peak
6760.000	36.02	35.38	9.06	34.60	45.86	74.00	28.14	Peak
7682.500	36.14	36.80	9.99	34.81	48.12	74.00	25.88	Peak
8366.500	36.63	38.10	10.43	34.82	50.34	74.00	23.66	Peak
9901.000	36.00	38.40	11.37	34.61	51.16	74.00	22.84	Peak
17728.000	31.57	46.96	15.89	32.28	62.14	74.00	11.86	Peak
17728.000	17.26	46.96	15.89	32.28	47.82	54.00	6.18	Average

Mode: DH3 2480MHz **Model: CT1063-400US**

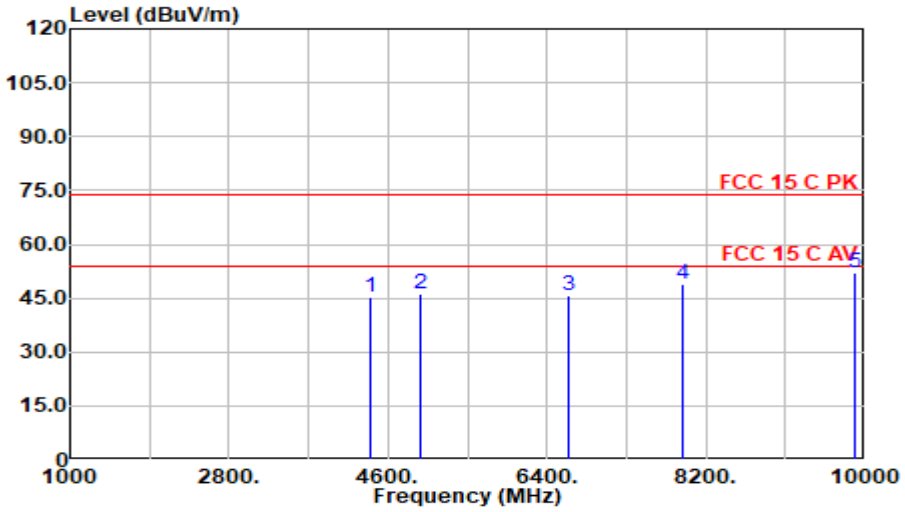


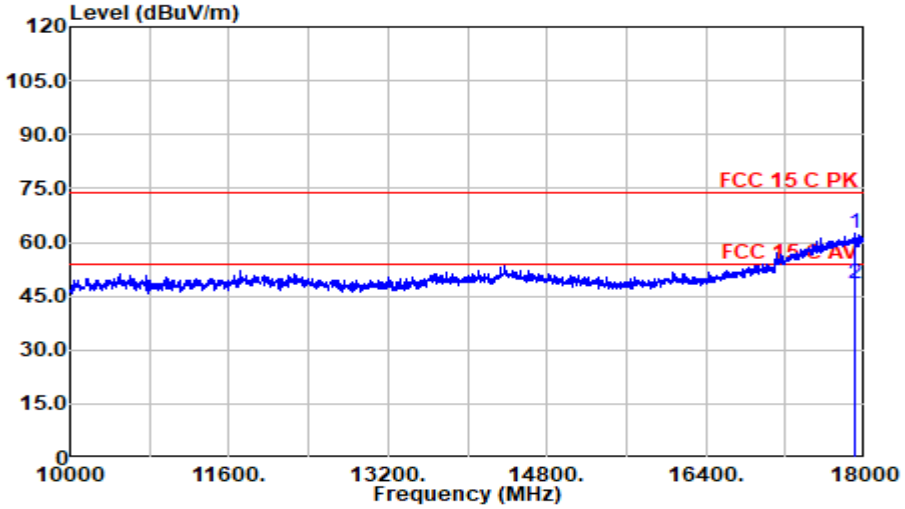


Polarization at Horizontal

Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
4397.500	43.87	32.40	7.20	34.83	48.64	74.00	25.36	Peak
4546.000	43.71	32.42	7.36	34.77	48.71	74.00	25.29	Peak
5864.500	39.22	33.89	8.34	34.60	46.85	74.00	27.15	Peak
7012.000	36.49	35.60	9.26	34.60	46.75	74.00	27.25	Peak
8461.000	35.54	38.20	10.46	34.80	49.40	74.00	24.60	Peak
9910.000	37.39	38.40	11.38	34.61	52.56	74.00	21.44	Peak
17768.000	30.85	47.04	15.95	32.27	61.57	74.00	12.43	Peak
17768.000	17.49	47.04	15.95	32.27	48.20	54.00	5.80	Average

Mode: DH3 2480MHz **Model: CT1063-400US**

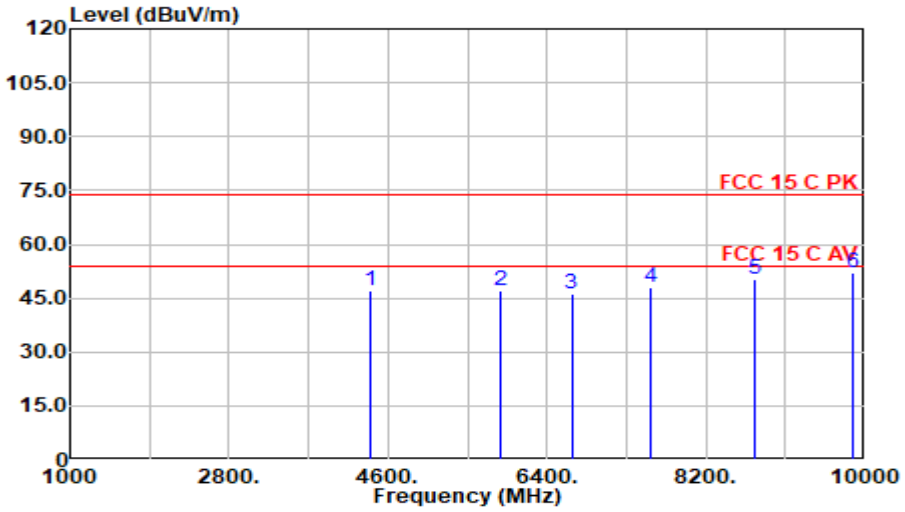


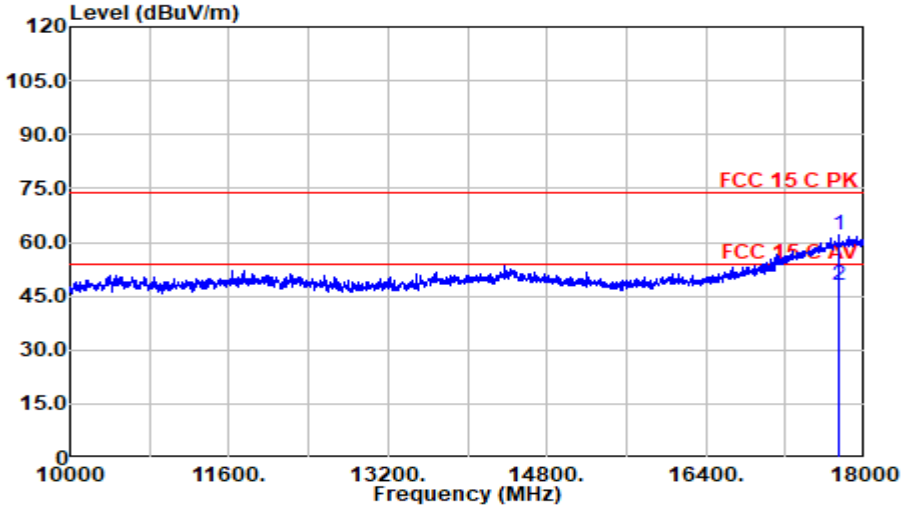


Polarization at Vertical

Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
4393.000	40.38	32.39	7.20	34.83	45.12	74.00	28.88	Peak
4960.000	39.90	33.24	7.77	34.61	46.30	74.00	27.70	Peak
6652.000	36.30	34.90	8.98	34.60	45.58	74.00	28.42	Peak
7943.500	36.21	37.31	10.25	34.88	48.90	74.00	25.10	Peak
9887.500	37.10	38.35	11.36	34.61	52.20	74.00	21.80	Peak
17896.000	31.57	47.20	16.14	32.23	62.68	74.00	11.32	Peak
17896.000	17.26	47.20	16.14	32.23	48.36	54.00	5.64	Average

Mode: DH5 2480MHz **Model: CT1063-400US**

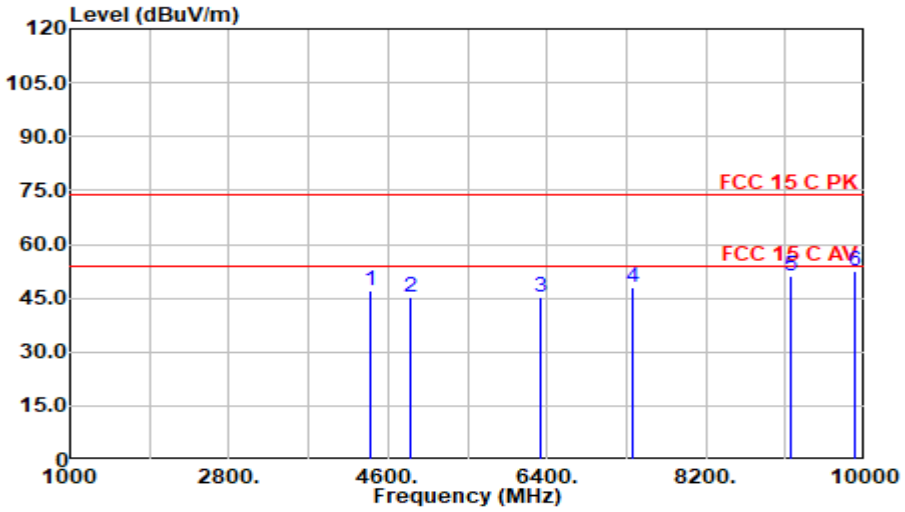


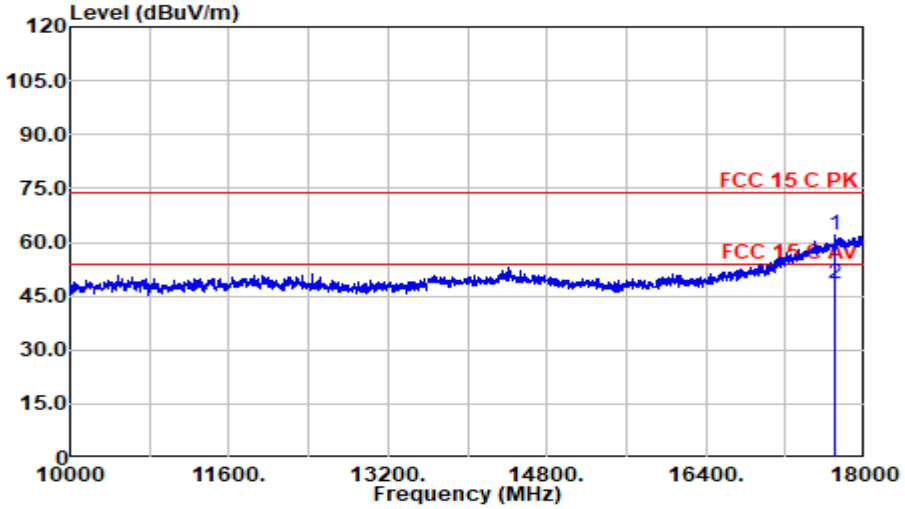


Polarization at Horizontal

Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
4397.500	42.56	32.40	7.20	34.83	47.32	74.00	26.68	Peak
5864.500	39.32	33.89	8.34	34.60	46.95	74.00	27.05	Peak
6679.000	37.04	34.96	9.00	34.60	46.40	74.00	27.60	Peak
7583.500	36.08	36.70	9.89	34.78	47.89	74.00	26.11	Peak
8758.000	36.33	37.90	10.56	34.75	50.04	74.00	23.96	Peak
9865.000	37.14	38.26	11.34	34.61	52.13	74.00	21.87	Peak
17732.000	31.59	46.96	15.90	32.28	62.17	74.00	11.83	Peak
17732.000	17.56	46.96	15.90	32.28	48.14	54.00	5.86	Average

Mode: DH5 2480MHz **Model: CT1063-400US**

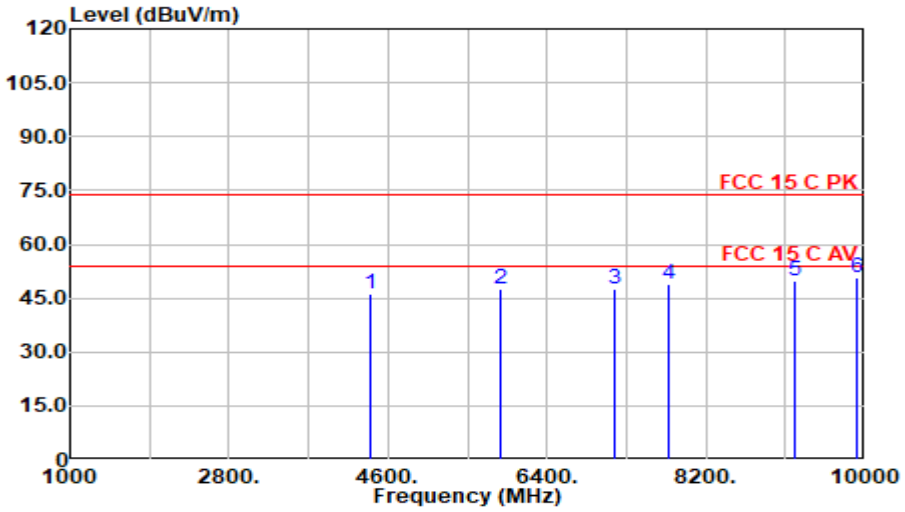


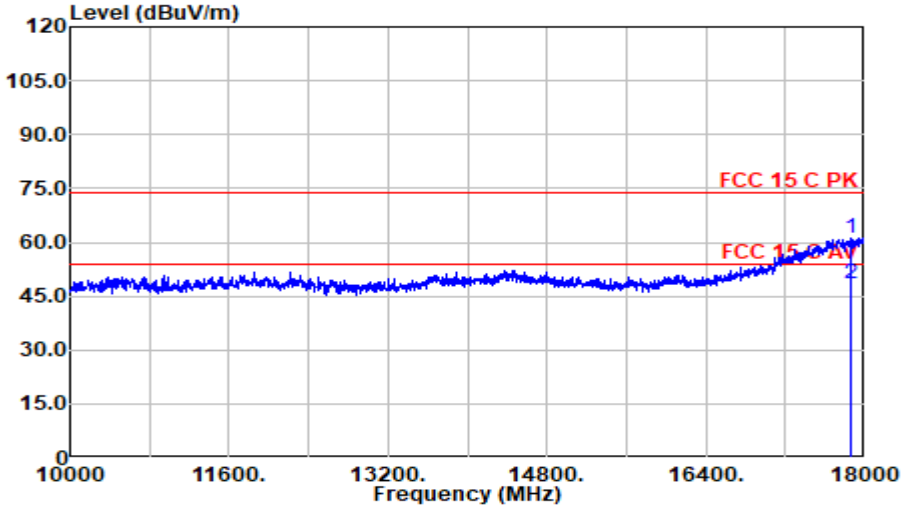


Polarization at Vertical

Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
4397.500	42.54	32.40	7.20	34.83	47.31	74.00	26.69	Peak
4852.000	39.03	33.21	7.67	34.65	45.25	74.00	28.75	Peak
6323.500	36.64	34.70	8.70	34.60	45.44	74.00	28.56	Peak
7367.500	35.99	36.90	9.66	34.71	47.84	74.00	26.16	Peak
9172.000	36.67	38.24	10.78	34.68	51.01	74.00	22.99	Peak
9878.500	37.63	38.31	11.35	34.61	52.69	74.00	21.31	Peak
17692.000	31.45	46.85	15.84	32.29	61.85	74.00	12.15	Peak
17692.000	17.95	46.85	15.84	32.29	48.34	54.00	5.66	Average

Mode: 3DH1 2480MHz **Model: CT1063-400US**

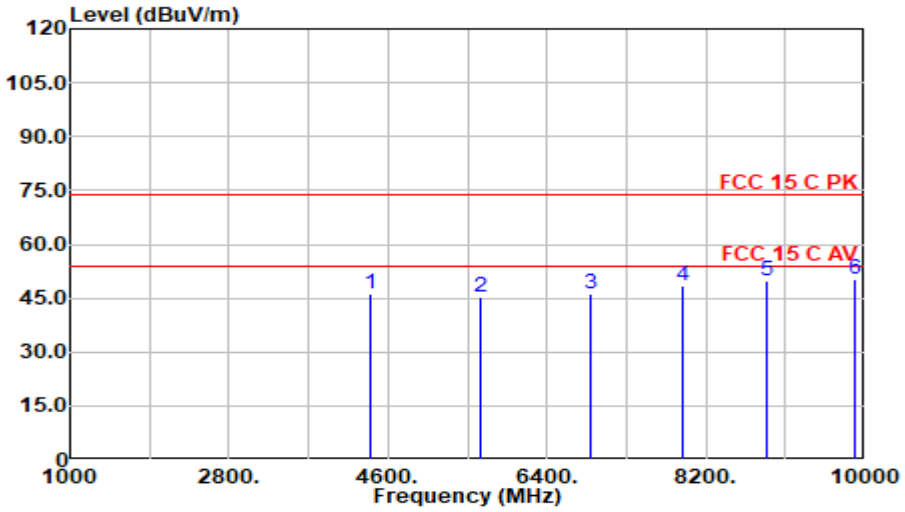


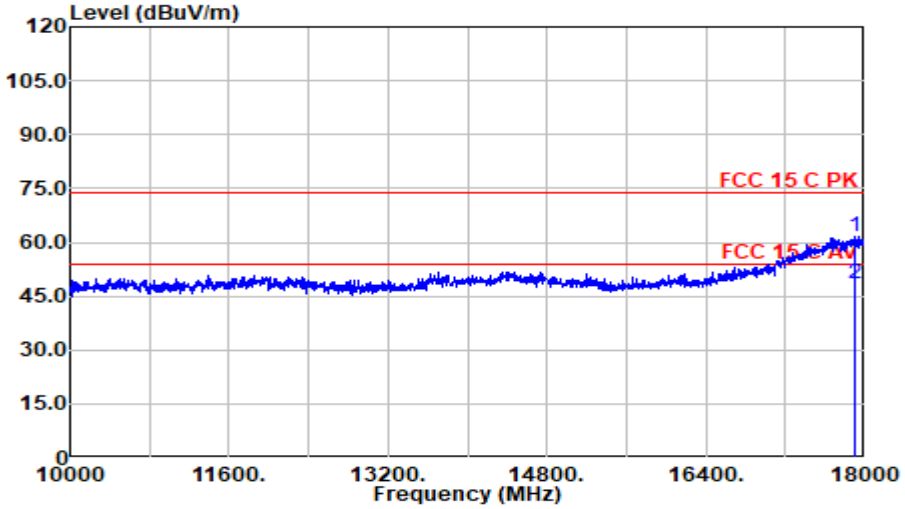


Polarization at Horizontal

Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
4397.500	41.41	32.40	7.20	34.83	46.17	74.00	27.83	Peak
5864.500	40.06	33.89	8.34	34.60	47.69	74.00	26.31	Peak
7156.000	36.72	36.01	9.42	34.65	47.50	74.00	26.50	Peak
7772.500	36.92	36.95	10.08	34.84	49.12	74.00	24.88	Peak
9199.000	35.18	38.30	10.80	34.68	49.60	74.00	24.40	Peak
9910.000	35.65	38.40	11.38	34.61	50.82	74.00	23.18	Peak
17852.000	30.12	47.15	16.07	32.24	61.10	74.00	12.90	Peak
17852.000	17.41	47.15	16.07	32.24	48.39	54.00	5.61	Average

Mode: 3DH1 2480MHz **Model: CT1063-400US**

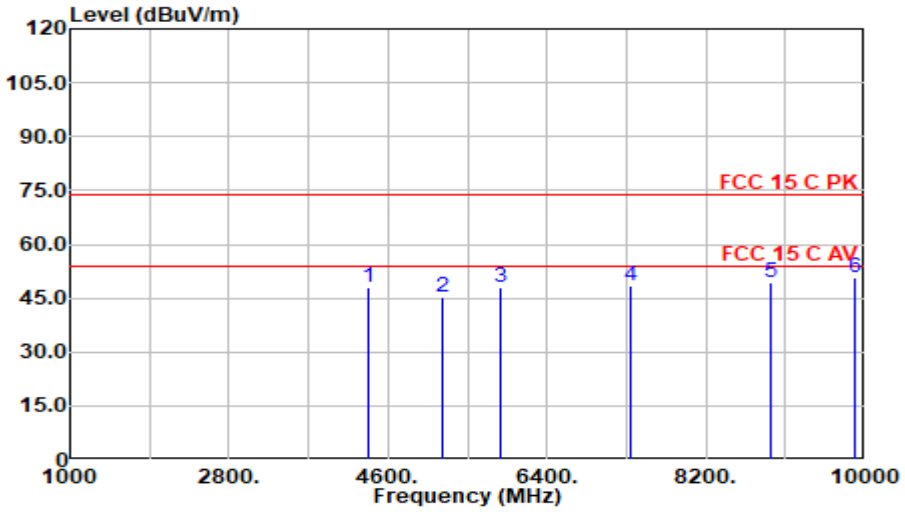


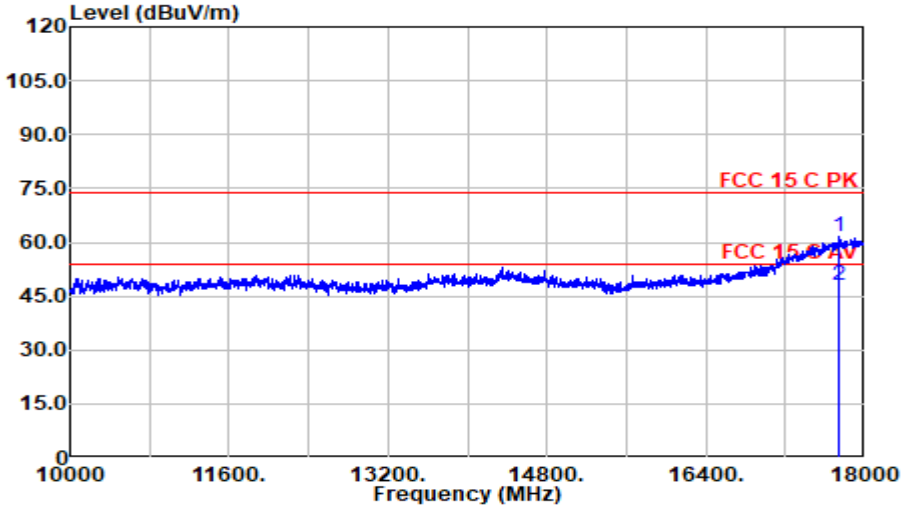


Polarization at Vertical

Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
4397.500	41.39	32.40	7.20	34.83	46.16	74.00	27.84	Peak
5639.500	37.64	33.92	8.21	34.60	45.18	74.00	28.82	Peak
6904.000	36.01	35.51	9.18	34.60	46.10	74.00	27.90	Peak
7934.500	35.55	37.33	10.24	34.88	48.24	74.00	25.76	Peak
8897.500	35.74	38.09	10.60	34.72	49.71	74.00	24.29	Peak
9896.500	34.98	38.39	11.37	34.61	50.12	74.00	23.88	Peak
17896.000	30.43	47.20	16.14	32.23	61.53	74.00	12.47	Peak
17896.000	17.24	47.20	16.14	32.23	48.35	54.00	5.65	Average

Mode: 3DH3 2480MHz **Model: CT1063-400US**

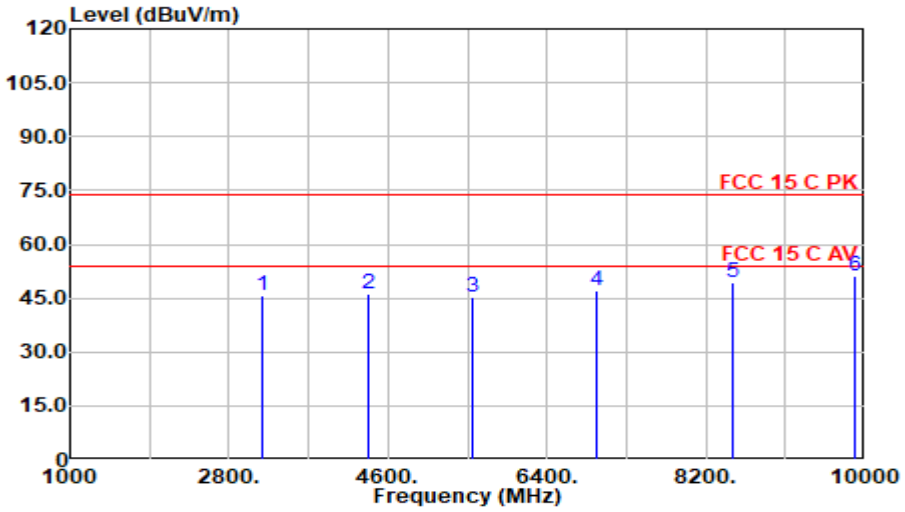


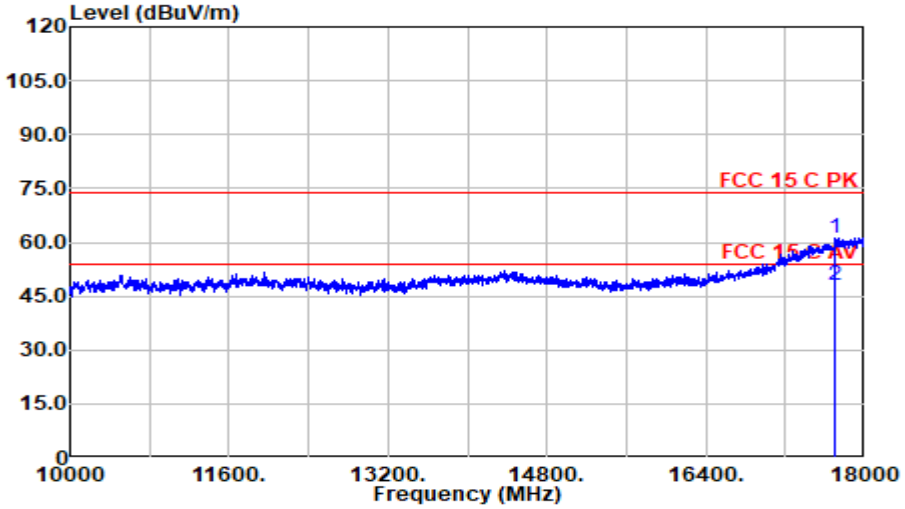


Polarization at Horizontal

Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
4379.500	43.49	32.36	7.18	34.84	48.19	74.00	25.81	Peak
5225.500	37.96	33.85	7.96	34.60	45.17	74.00	28.83	Peak
5864.500	40.24	33.89	8.34	34.60	47.87	74.00	26.13	Peak
7358.500	36.69	36.90	9.65	34.71	48.53	74.00	25.47	Peak
8924.500	35.27	38.05	10.61	34.71	49.21	74.00	24.79	Peak
9896.500	35.75	38.39	11.37	34.61	50.89	74.00	23.11	Peak
17744.000	30.93	46.99	15.91	32.28	61.55	74.00	12.45	Peak
17744.000	17.59	46.99	15.91	32.28	48.22	54.00	5.78	Average

Mode: 3DH3 2480MHz **Model: CT1063-400US**

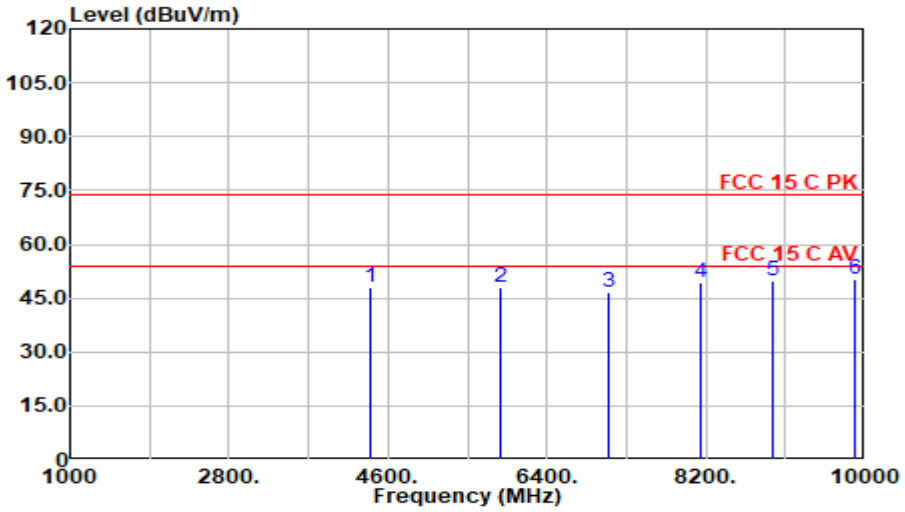


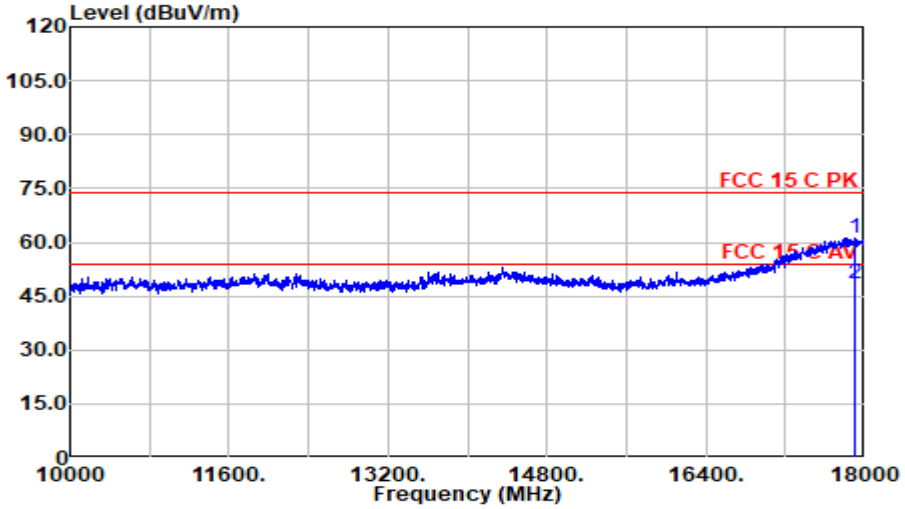


Polarization at Vertical

Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
3169.000	43.99	30.98	6.04	35.32	45.68	74.00	28.32	Peak
4384.000	41.38	32.37	7.19	34.84	46.10	74.00	27.90	Peak
5558.500	37.55	34.08	8.16	34.60	45.20	74.00	28.80	Peak
6971.500	36.88	35.60	9.23	34.60	47.11	74.00	26.89	Peak
8497.000	35.65	38.20	10.47	34.80	49.53	74.00	24.47	Peak
9887.500	36.16	38.35	11.36	34.61	51.26	74.00	22.74	Peak
17700.000	30.89	46.90	15.85	32.29	61.35	74.00	12.65	Peak
17700.000	17.49	46.90	15.85	32.29	47.95	54.00	6.05	Average

Mode: 3DH5 2480MHz **Model: CT1063-400US**

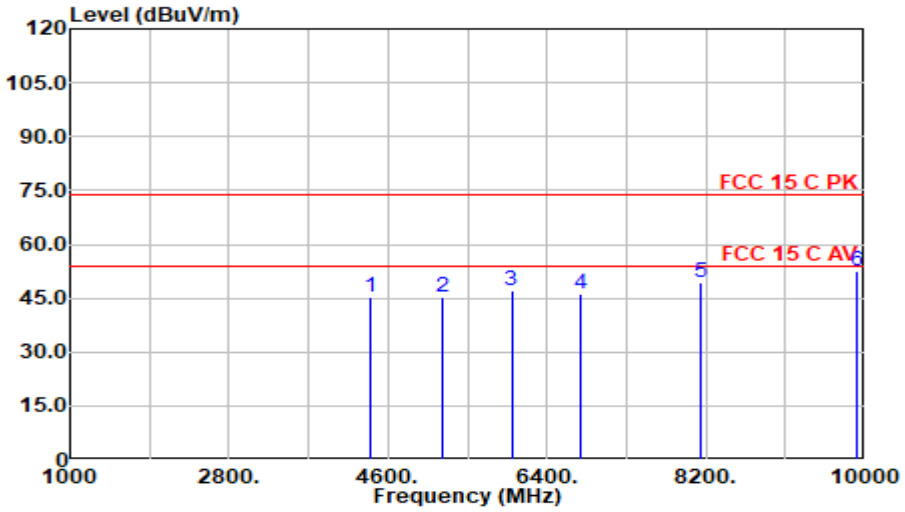


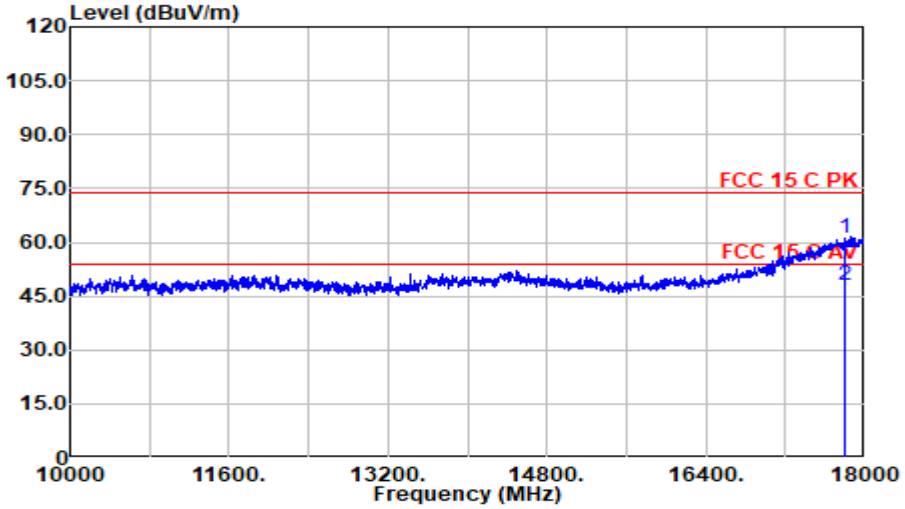


Polarization at Horizontal

Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
4397.500	43.07	32.40	7.20	34.83	47.84	74.00	26.16	Peak
5864.500	40.27	33.89	8.34	34.60	47.90	74.00	26.10	Peak
7102.000	36.08	35.81	9.36	34.63	46.62	74.00	27.38	Peak
8141.500	36.30	37.47	10.36	34.87	49.25	74.00	24.75	Peak
8947.000	35.89	38.01	10.61	34.71	49.80	74.00	24.20	Peak
9892.000	34.93	38.37	11.37	34.61	50.05	74.00	23.95	Peak
17892.000	30.22	47.19	16.13	32.23	61.31	74.00	12.69	Peak
17892.000	17.23	47.19	16.13	32.23	48.32	54.00	5.68	Average

Mode: 3DH5 2480MHz **Model: CT1063-400US**

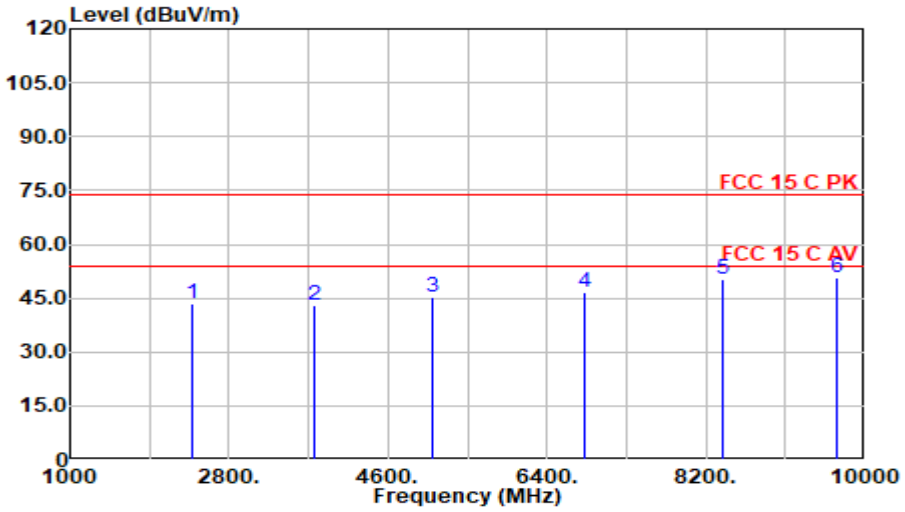


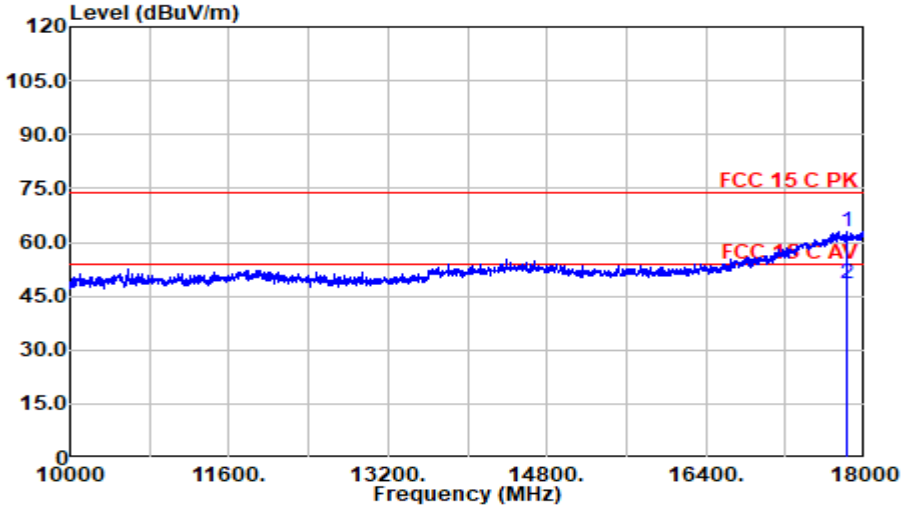


Polarization at Vertical

Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
4393.000	40.48	32.39	7.20	34.83	45.23	74.00	28.77	Peak
5207.500	38.25	33.88	7.95	34.60	45.48	74.00	28.52	Peak
5999.500	39.27	34.20	8.42	34.60	47.29	74.00	26.71	Peak
6787.000	36.20	35.33	9.08	34.60	46.01	74.00	27.99	Peak
8137.000	36.25	37.45	10.36	34.87	49.18	74.00	24.82	Peak
9910.000	37.20	38.40	11.38	34.61	52.37	74.00	21.63	Peak
17800.000	30.49	47.10	16.00	32.26	61.33	74.00	12.67	Peak
17800.000	17.15	47.10	16.00	32.26	47.99	54.00	6.01	Average

Mode: DH5 CH2480MHz **Model: EM1060-400US**

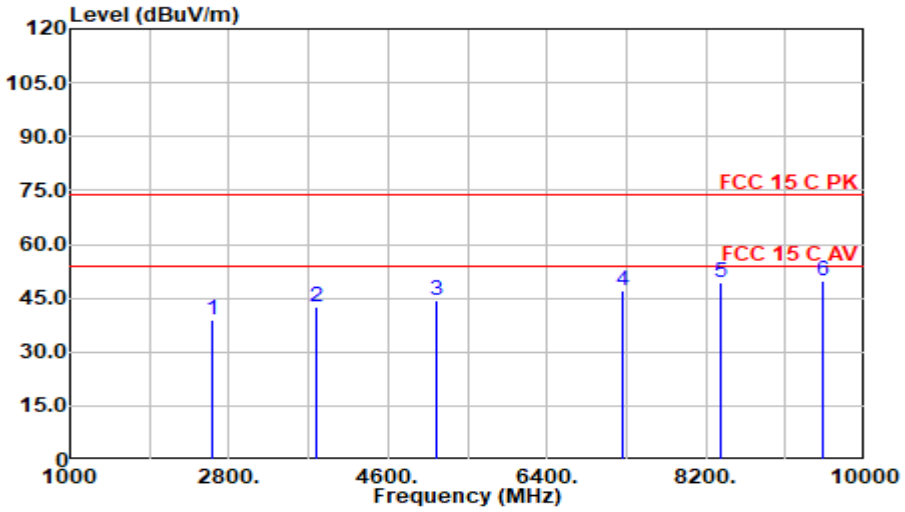


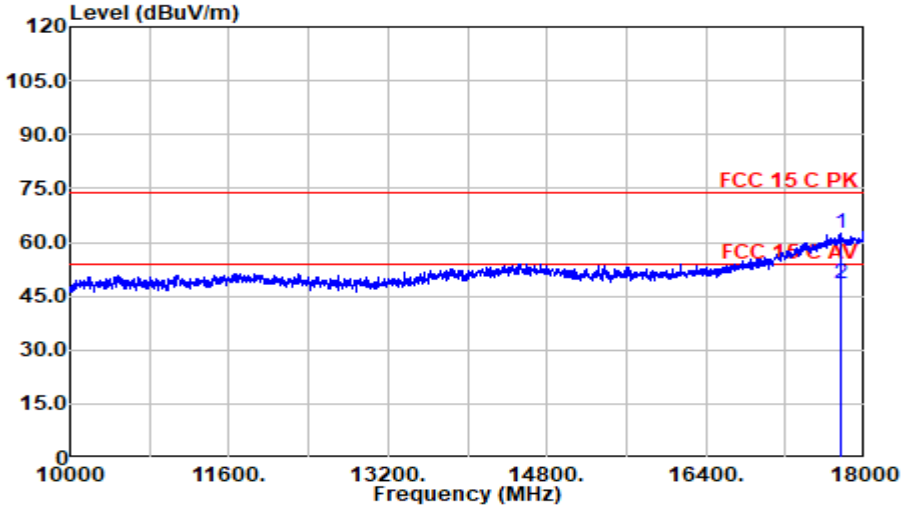


Polarization at Horizontal

Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
2377.000	45.40	28.51	5.38	36.03	43.25	74.00	30.75	Peak
3775.250	39.28	32.35	6.57	35.08	43.13	74.00	30.87	Peak
5097.000	38.60	33.59	7.87	34.60	45.47	74.00	28.53	Peak
6831.000	36.85	35.36	9.12	34.60	46.73	74.00	27.27	Peak
8395.000	36.51	38.10	10.44	34.82	50.23	74.00	23.77	Peak
9678.500	36.18	38.14	11.20	34.63	50.88	74.00	23.12	Peak
17817.250	32.16	47.12	16.02	32.25	63.04	74.00	10.96	Peak
17817.250	17.42	47.12	16.02	32.25	48.30	54.00	5.70	Average

Mode: DH5 CH2480MHz **Model: EM1060-400US**





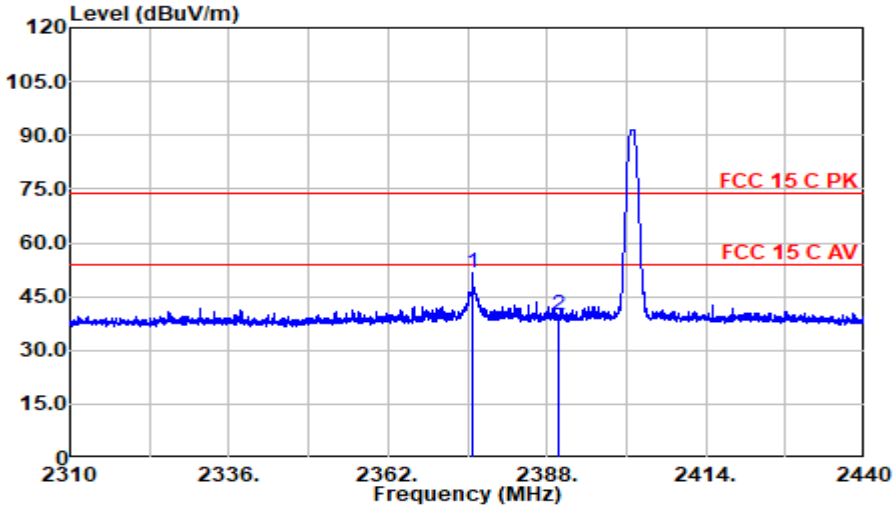
Polarization at Vertical

Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
2619.250	40.19	29.02	5.58	35.77	39.03	74.00	34.97	Peak
3792.250	38.82	32.45	6.59	35.07	42.79	74.00	31.21	Peak
5143.750	37.29	33.95	7.90	34.60	44.55	74.00	29.45	Peak
7247.500	35.87	36.58	9.53	34.68	47.30	74.00	26.70	Peak
8365.250	35.73	38.10	10.43	34.82	49.44	74.00	24.56	Peak
9521.250	35.18	38.31	11.07	34.65	49.92	74.00	24.08	Peak
17749.250	31.84	47.00	15.92	32.27	62.48	74.00	11.52	Peak
17749.250	17.68	47.00	15.92	32.27	48.33	54.00	5.67	Average

Band-Edge and Restricted bands:

Test Date:	2024.03.17	Temp./Hum.:	22°C/51%RH	Test By:	Jarey

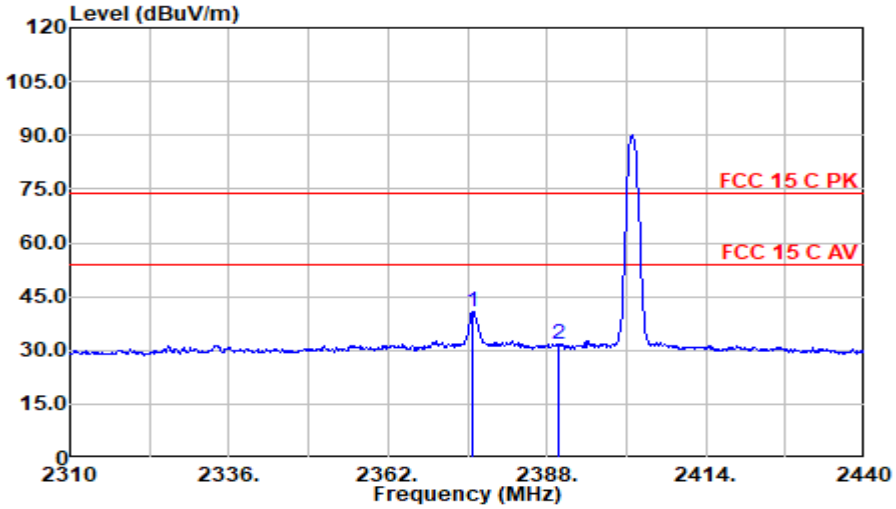
Mode: DH1 CH2402MHz



Polarization at Horizontal

Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
2375.877	53.84	28.50	5.38	36.03	51.68	74.00	22.32	Peak
2390.000	42.13	28.56	5.39	36.02	40.07	74.00	33.93	Peak

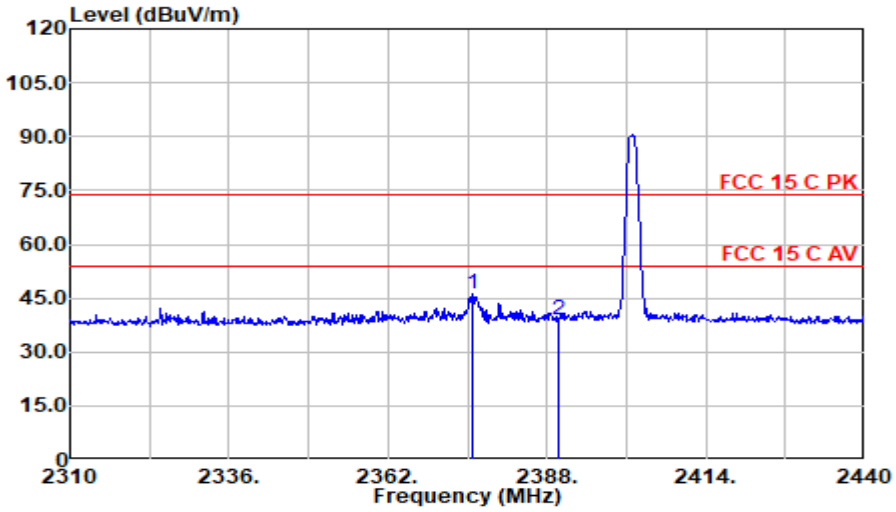
Mode: DH1 CH2402MHz



Polarization at Horizontal

Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
2375.910	43.04	28.50	5.38	36.03	40.89	54.00	13.11	Average
2390.000	33.78	28.56	5.39	36.02	31.71	54.00	22.29	Average

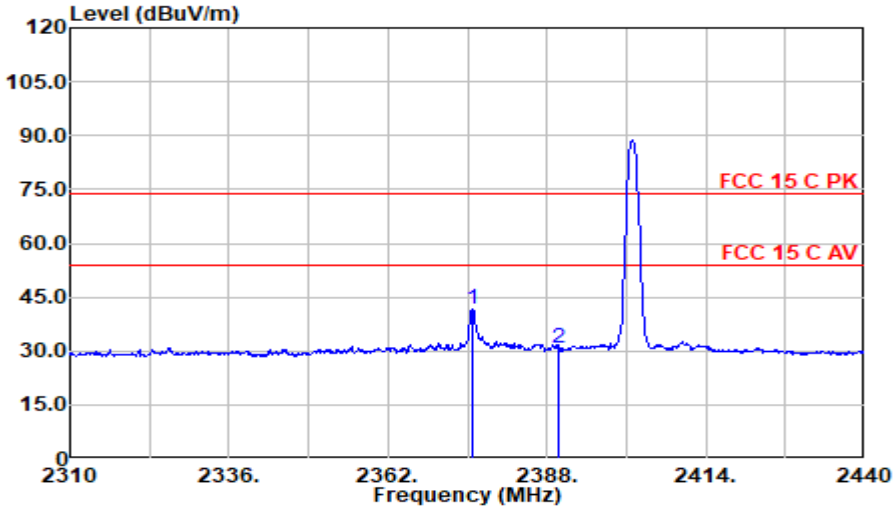
Mode: DH1 CH2402MHz



Polarization at Vertical

Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
2375.780	48.46	28.50	5.38	36.03	46.31	74.00	27.69	Peak
2390.000	40.83	28.56	5.39	36.02	38.76	74.00	35.24	Peak

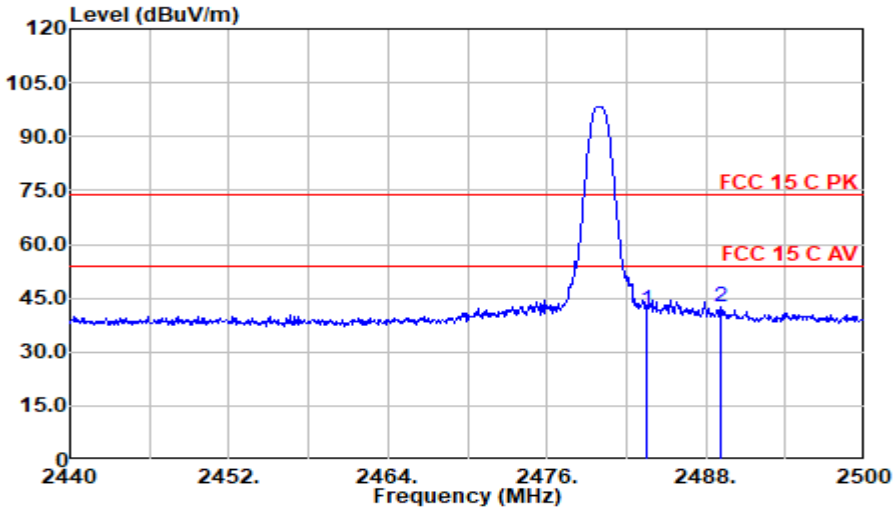
Mode: DH1 CH2402MHz



Polarization at Vertical

Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
2375.910	43.81	28.50	5.38	36.03	41.66	54.00	12.34	Average
2390.000	33.03	28.56	5.39	36.02	30.96	54.00	23.04	Average

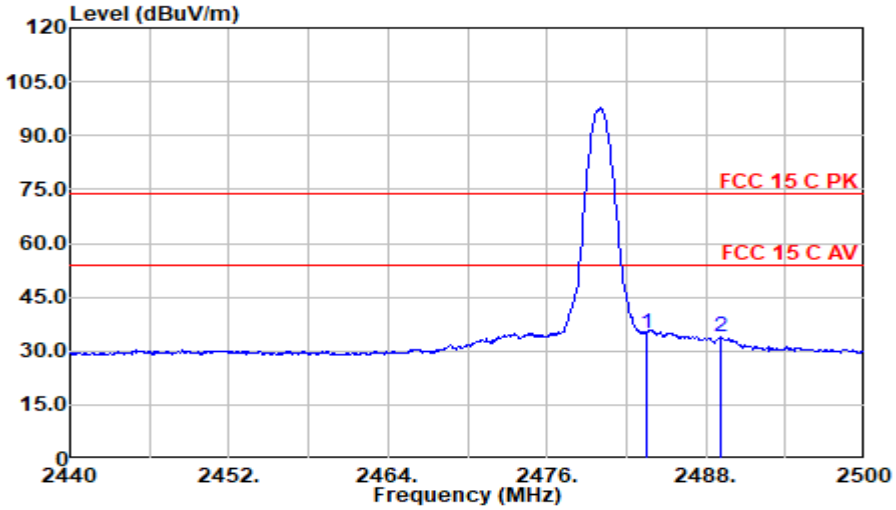
Mode: DH1 CH2480MHz



Polarization at Horizontal

Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
2483.500	43.51	28.63	5.47	35.91	41.70	74.00	32.30	Peak
2489.140	44.16	28.66	5.47	35.91	42.39	74.00	31.61	Peak

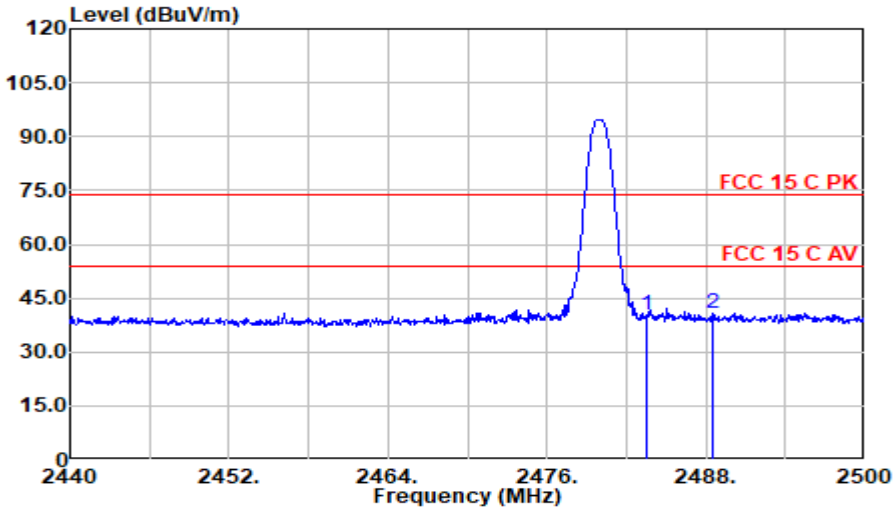
Mode: DH1 CH2480MHz



Polarization at Horizontal

Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
2483.500	36.82	28.63	5.47	35.91	35.01	54.00	18.99	Average
2489.140	35.66	28.66	5.47	35.91	33.89	54.00	20.11	Average

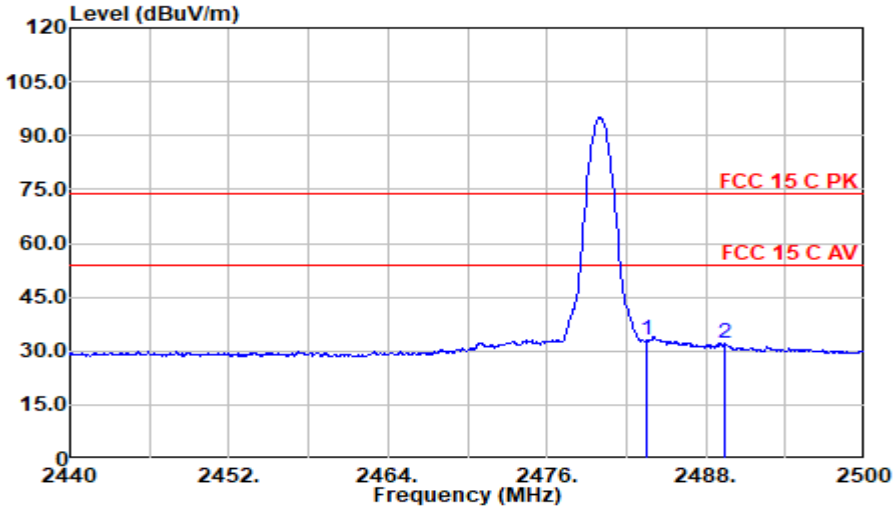
Mode: DH1 CH2480MHz



Polarization at Vertical

Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
2483.500	42.02	28.63	5.47	35.91	40.21	74.00	33.79	Peak
2488.540	42.57	28.65	5.47	35.91	40.79	74.00	33.21	Peak

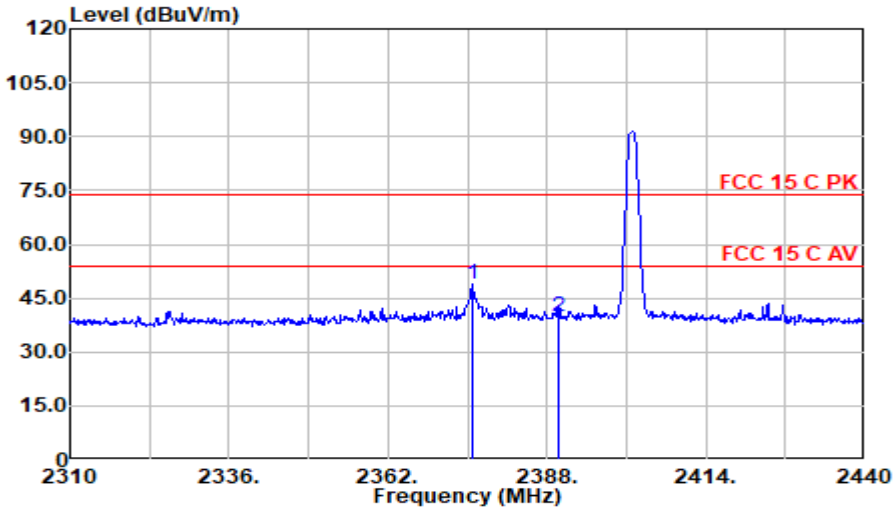
Mode: DH1 CH2480MHz



Polarization at Vertical

Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
2483.500	34.74	28.63	5.47	35.91	32.93	54.00	21.07	Average
2489.440	33.91	28.66	5.47	35.91	32.14	54.00	21.86	Average

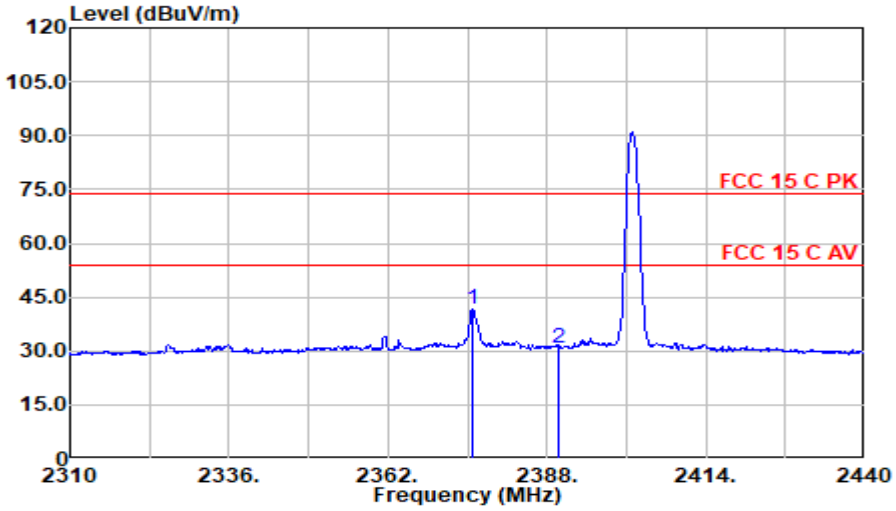
Mode: DH3 CH2402MHz



Polarization at Horizontal

Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
2375.780	51.17	28.50	5.38	36.03	49.01	74.00	24.99	Peak
2390.000	42.06	28.56	5.39	36.02	39.99	74.00	34.01	Peak

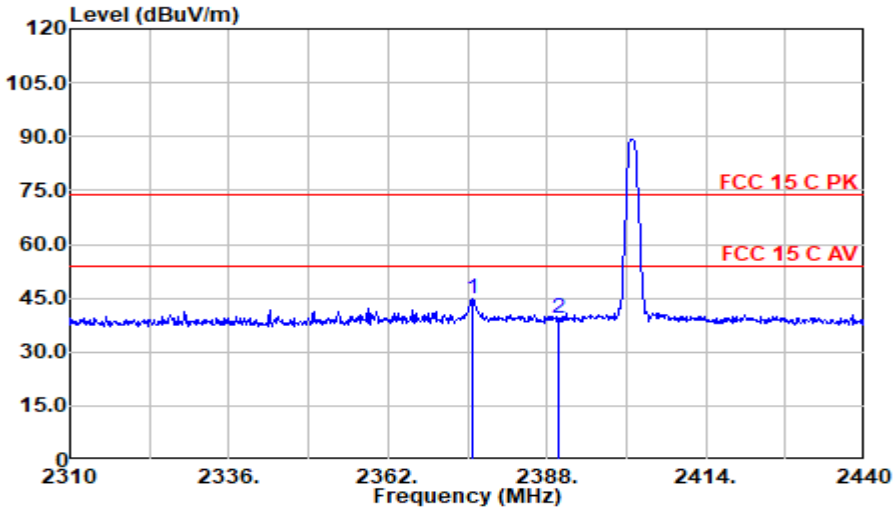
Mode: DH3 CH2402MHz



Polarization at Horizontal

Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
2375.910	43.89	28.50	5.38	36.03	41.74	54.00	12.26	Average
2390.000	32.93	28.56	5.39	36.02	30.86	54.00	23.14	Average

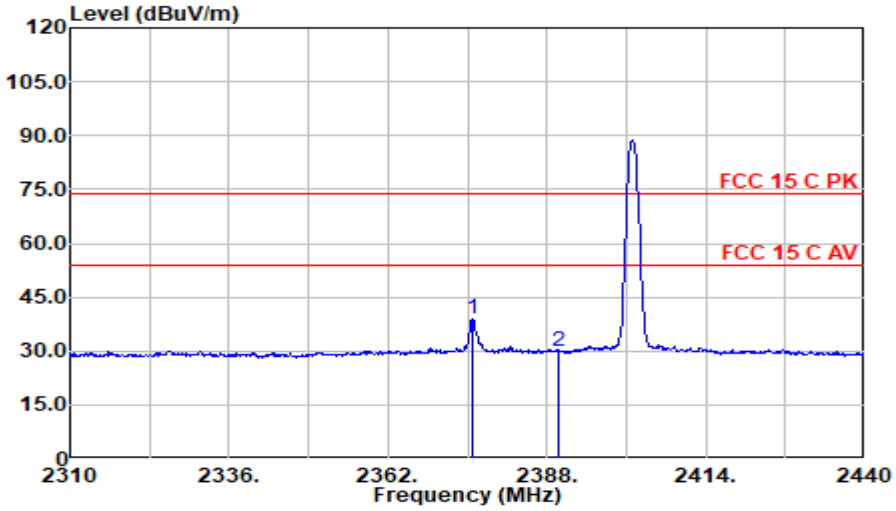
Mode: DH3 CH2402MHz



Polarization at Vertical

Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
2375.780	46.80	28.50	5.38	36.03	44.65	74.00	29.35	Peak
2390.000	41.57	28.56	5.39	36.02	39.50	74.00	34.50	Peak

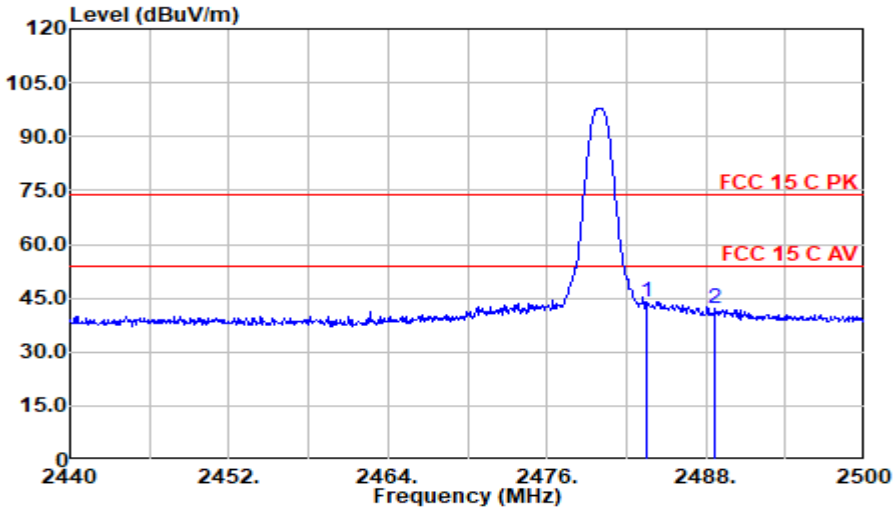
Mode: DH3 CH2402MHz



Polarization at Vertical

Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
2375.910	41.12	28.50	5.38	36.03	38.96	54.00	15.04	Average
2390.000	32.14	28.56	5.39	36.02	30.07	54.00	23.93	Average

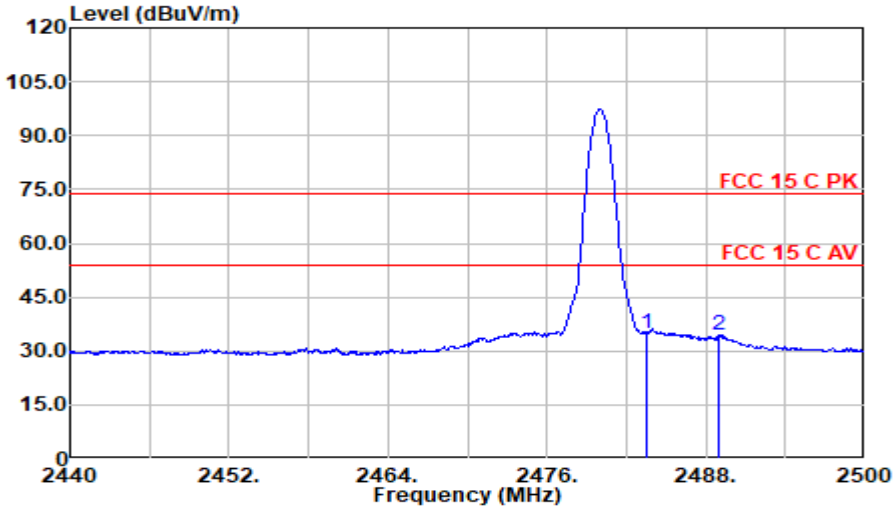
Mode: DH3 CH2480MHz



Polarization at Horizontal

Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
2483.500	45.61	28.63	5.47	35.91	43.80	74.00	30.20	Peak
2488.720	43.96	28.66	5.47	35.91	42.18	74.00	31.82	Peak

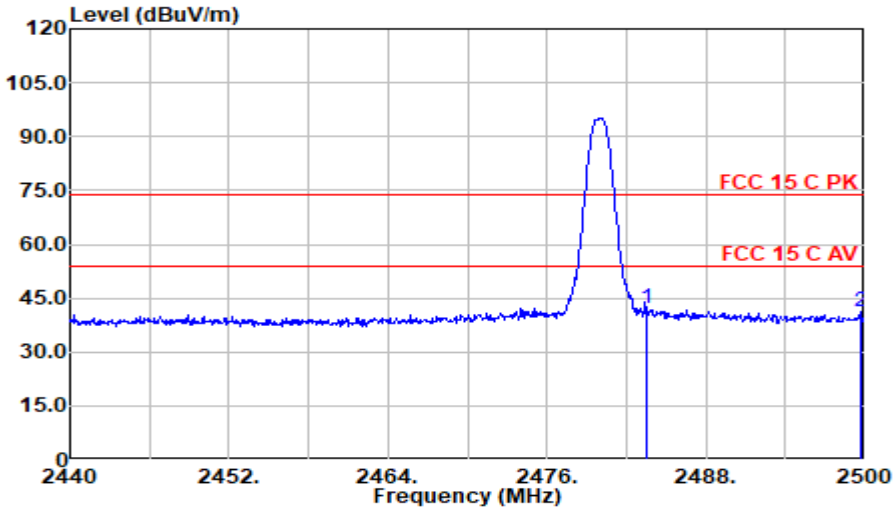
Mode: DH3 CH2480MHz



Polarization at Horizontal

Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
2483.500	36.80	28.63	5.47	35.91	34.99	54.00	19.01	Average
2488.960	36.16	28.66	5.47	35.91	34.39	54.00	19.61	Average

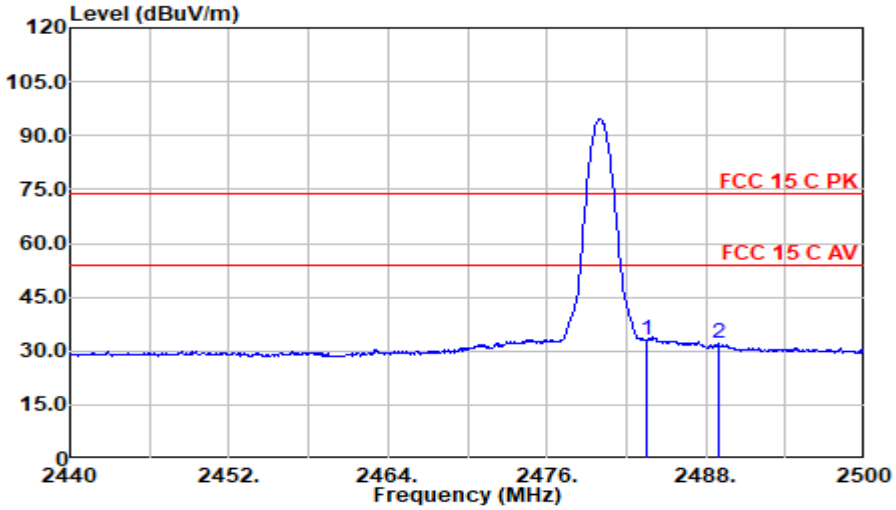
Mode: DH3 CH2480MHz



Polarization at Vertical

Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
2483.500	43.90	28.63	5.47	35.91	42.09	74.00	31.91	Peak
2499.640	42.98	28.70	5.48	35.90	41.27	74.00	32.73	Peak

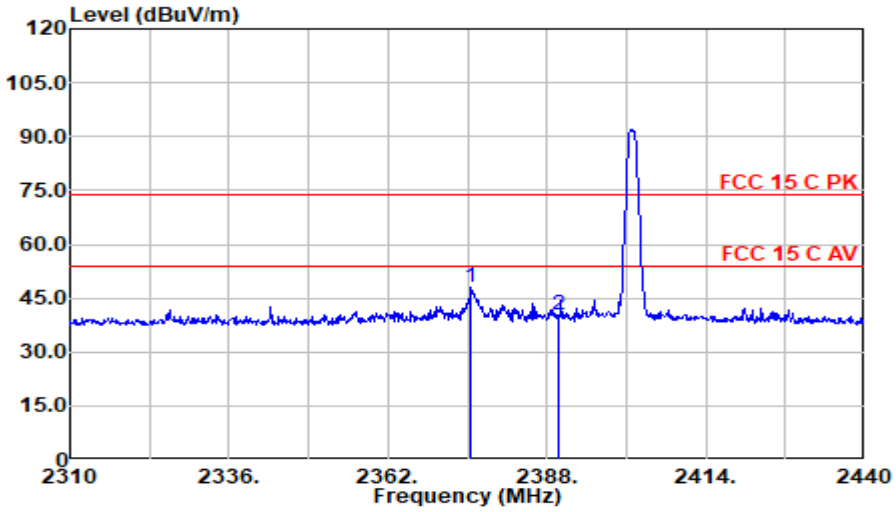
Mode: DH3 CH2480MHz



Polarization at Vertical

Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
2483.500	34.78	28.63	5.47	35.91	32.97	54.00	21.03	Average
2488.960	33.71	28.66	5.47	35.91	31.93	54.00	22.07	Average

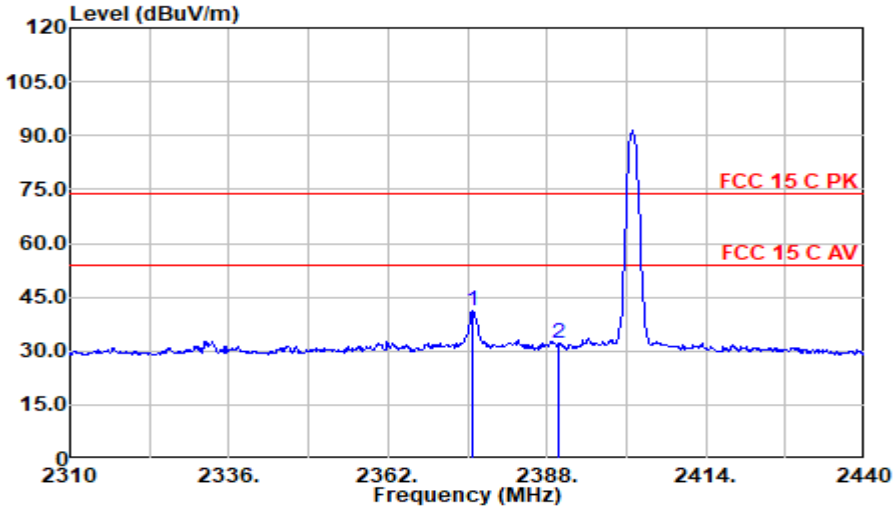
Mode: DH5 CH2402MHz



Polarization at Horizontal

Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
2375.650	49.99	28.50	5.38	36.03	47.83	74.00	26.17	Peak
2390.000	42.38	28.56	5.39	36.02	40.31	74.00	33.69	Peak

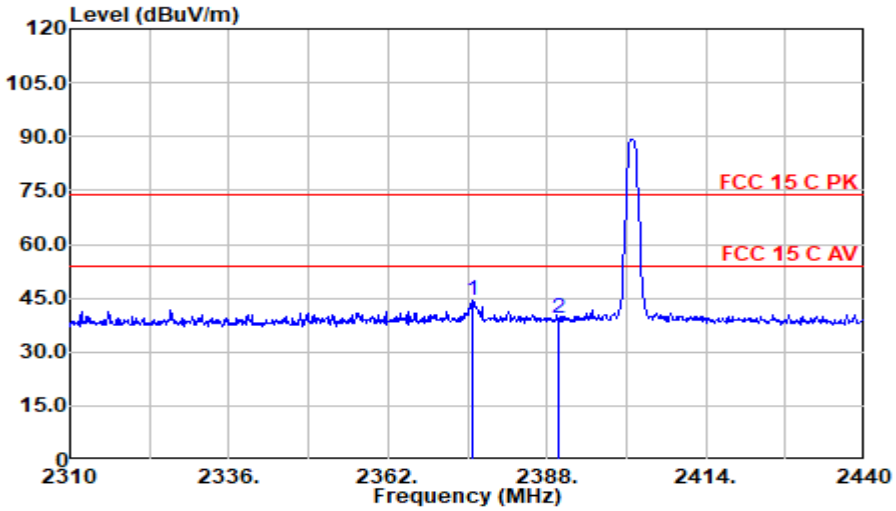
Mode: DH5 CH2402MHz



Polarization at Horizontal

Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
2375.910	43.48	28.50	5.38	36.03	41.32	54.00	12.68	Average
2390.000	34.12	28.56	5.39	36.02	32.05	54.00	21.95	Average

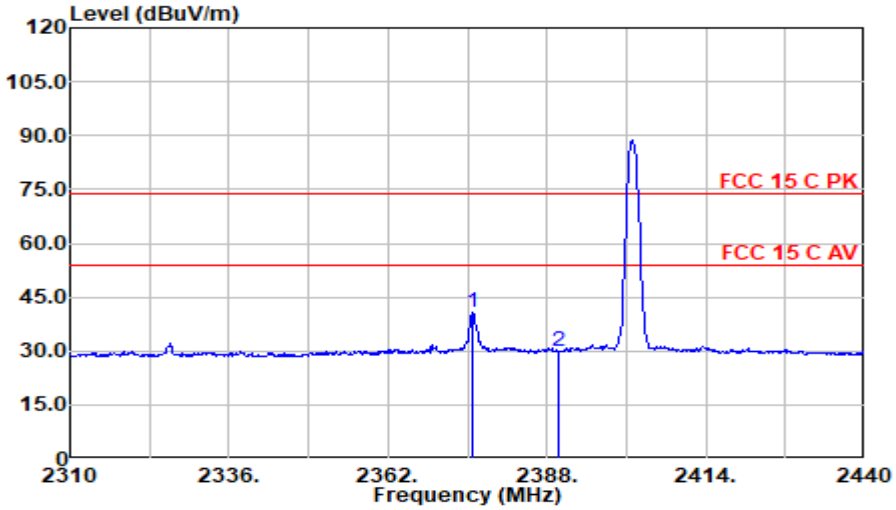
Mode: DH5 CH2402MHz



Polarization at Vertical

Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
2375.780	46.35	28.50	5.38	36.03	44.20	74.00	29.80	Peak
2390.000	41.52	28.56	5.39	36.02	39.45	74.00	34.55	Peak

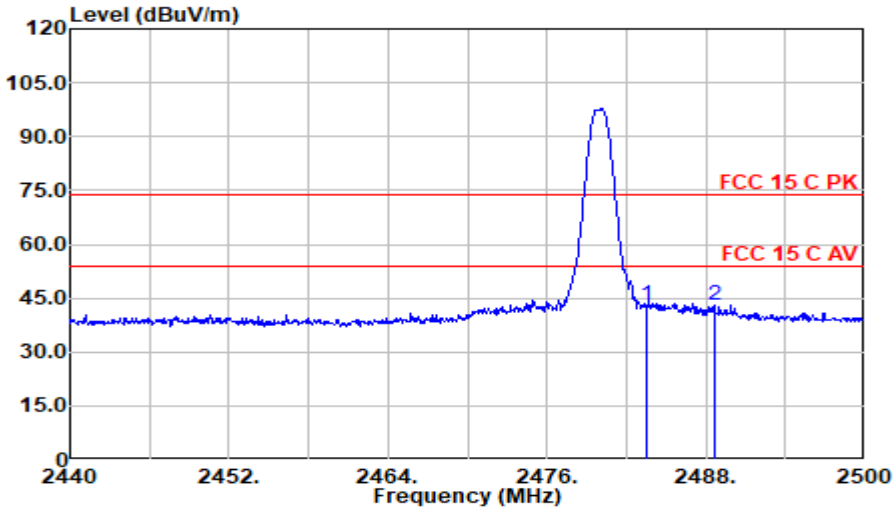
Mode: DH5 CH2402MHz



Polarization at Vertical

Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
2375.910	43.10	28.50	5.38	36.03	40.95	54.00	13.05	Average
2390.000	31.75	28.56	5.39	36.02	29.68	54.00	24.32	Average

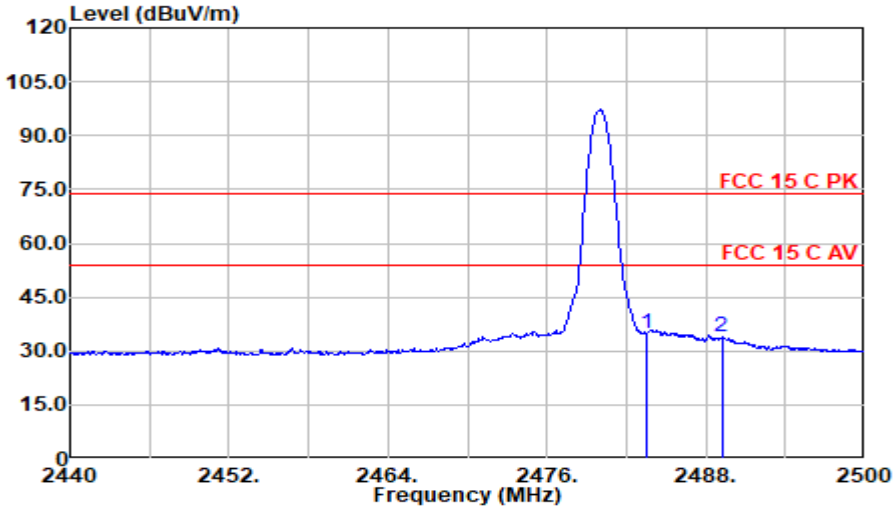
Mode: DH5 CH2480MHz



Polarization at Horizontal

Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
2483.500	44.78	28.63	5.47	35.91	42.97	74.00	31.03	Peak
2488.600	44.98	28.65	5.47	35.91	43.20	74.00	30.80	Peak

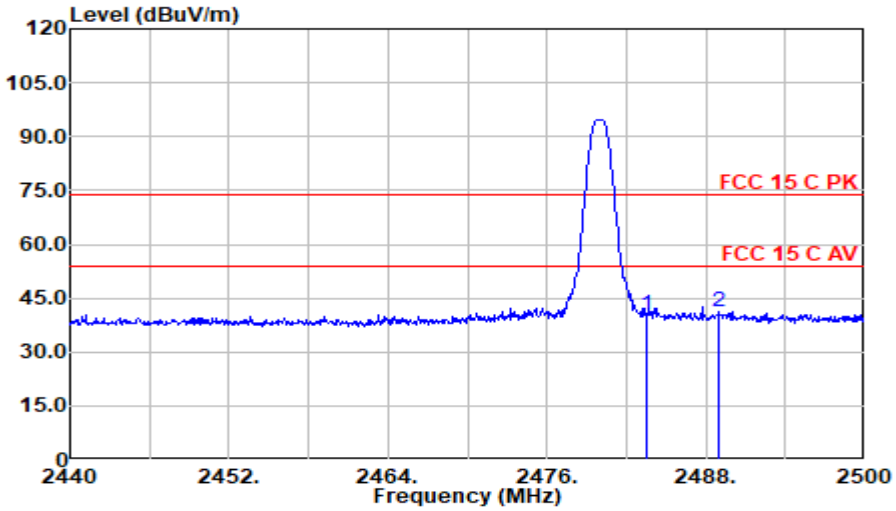
Mode: DH5 CH2480MHz



Polarization at Horizontal

Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
2483.500	36.84	28.63	5.47	35.91	35.03	54.00	18.97	Average
2489.200	35.60	28.66	5.47	35.91	33.82	54.00	20.18	Average

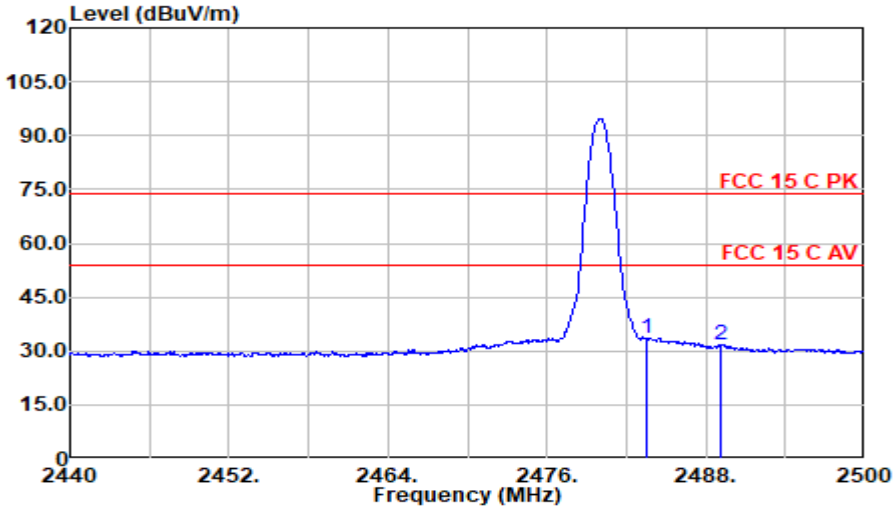
Mode: DH5 CH2480MHz



Polarization at Vertical

Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
2483.500	42.32	28.63	5.47	35.91	40.51	74.00	33.49	Peak
2488.960	43.08	28.66	5.47	35.91	41.30	74.00	32.70	Peak

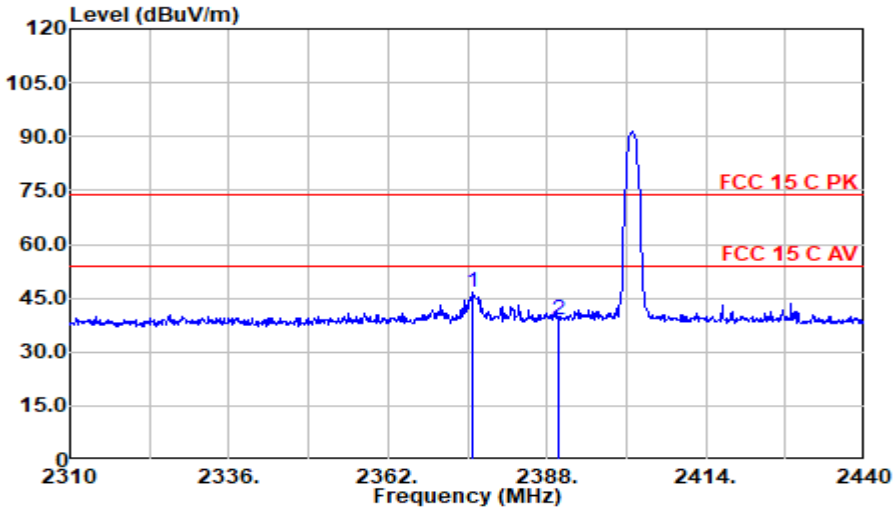
Mode: DH5 CH2480MHz



Polarization at Vertical

Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
2483.500	35.19	28.63	5.47	35.91	33.38	54.00	20.62	Average
2489.080	33.63	28.66	5.47	35.91	31.85	54.00	22.15	Average

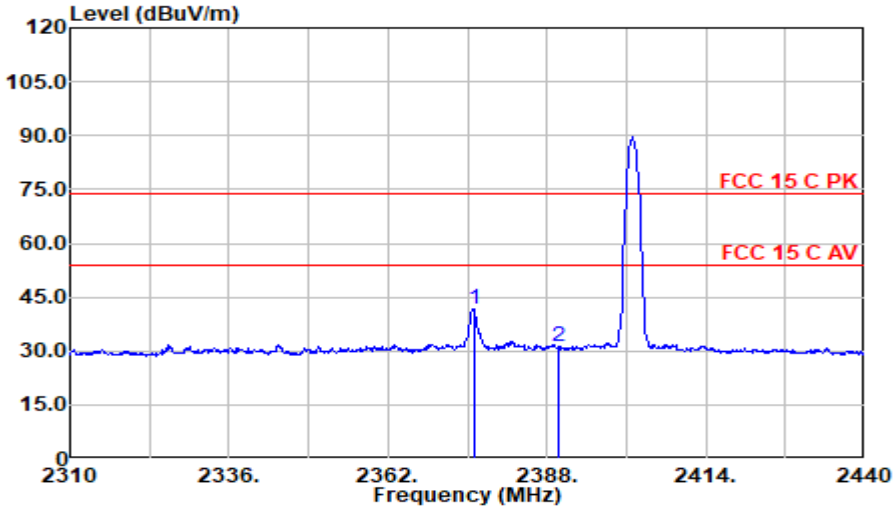
Mode: 3DH1 CH2402MHz



Polarization at Horizontal

Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
2375.910	48.59	28.50	5.38	36.03	46.44	74.00	27.56	Peak
2390.000	41.14	28.56	5.39	36.02	39.07	74.00	34.93	Peak

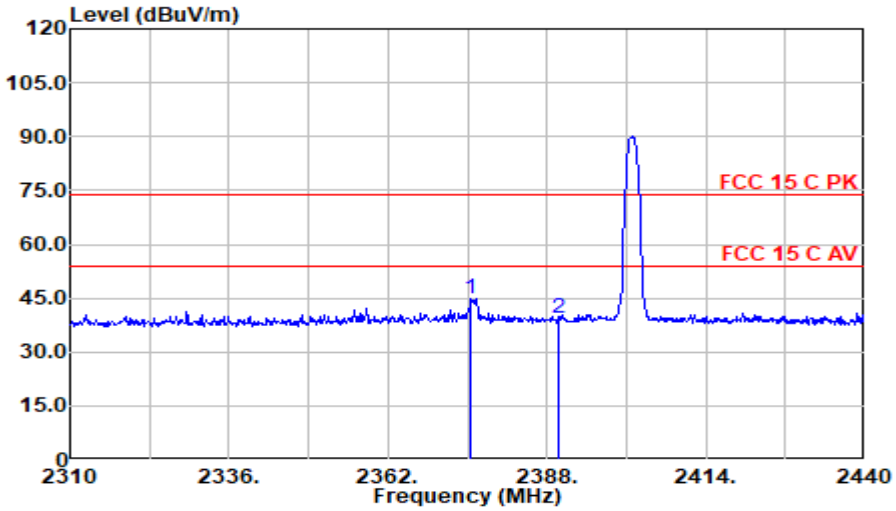
Mode: 3DH1 CH2402MHz



Polarization at Horizontal

Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
2376.040	43.92	28.50	5.38	36.03	41.77	54.00	12.23	Average
2390.000	33.44	28.56	5.39	36.02	31.37	54.00	22.63	Average

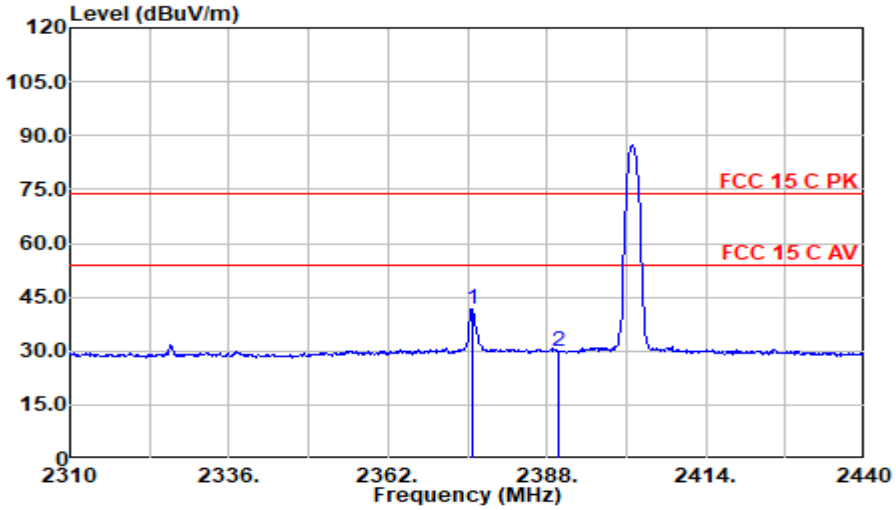
Mode: 3DH1 CH2402MHz



Polarization at Vertical

Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
2375.650	47.07	28.50	5.38	36.03	44.91	74.00	29.09	Peak
2390.000	41.39	28.56	5.39	36.02	39.32	74.00	34.68	Peak

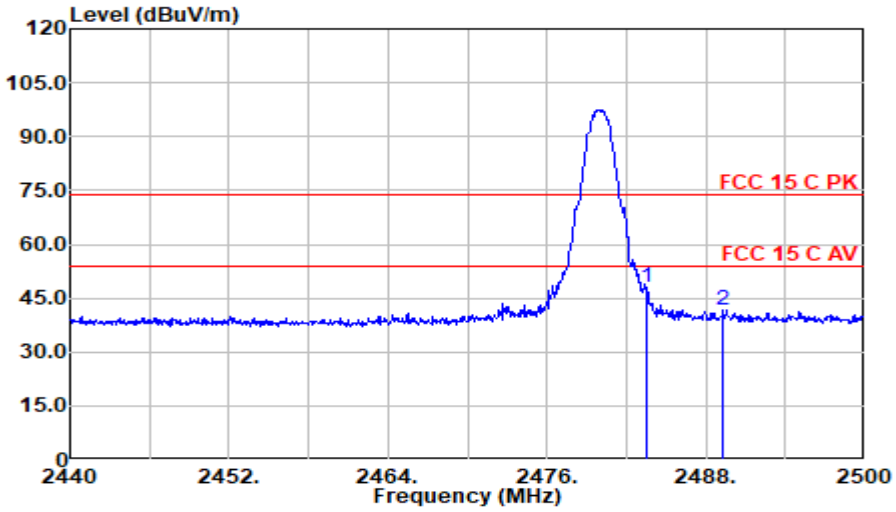
Mode: 3DH1 CH2402MHz



Polarization at Vertical

Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
2375.910	44.04	28.50	5.38	36.03	41.88	54.00	12.12	Average
2390.000	32.16	28.56	5.39	36.02	30.09	54.00	23.91	Average

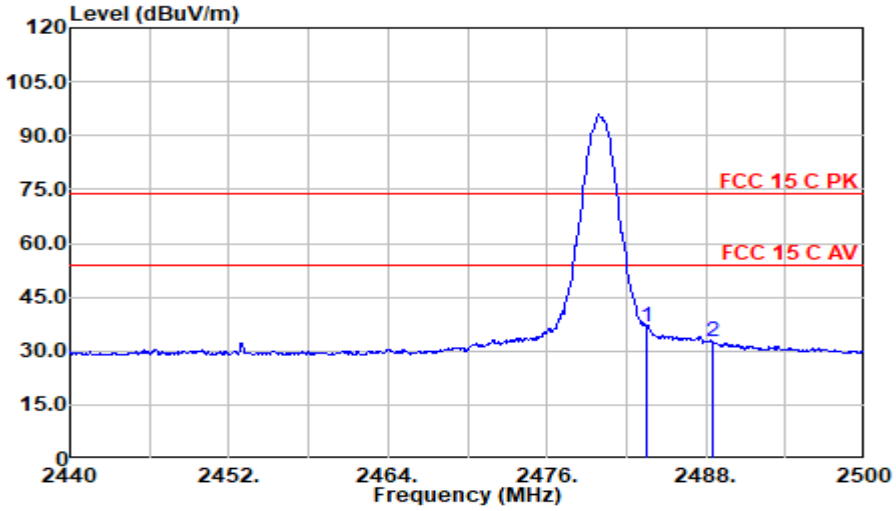
Mode: 3DH1 CH2480MHz



Polarization at Horizontal

Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
2483.500	49.66	28.63	5.47	35.91	47.85	74.00	26.15	Peak
2489.320	43.57	28.66	5.47	35.91	41.80	74.00	32.20	Peak

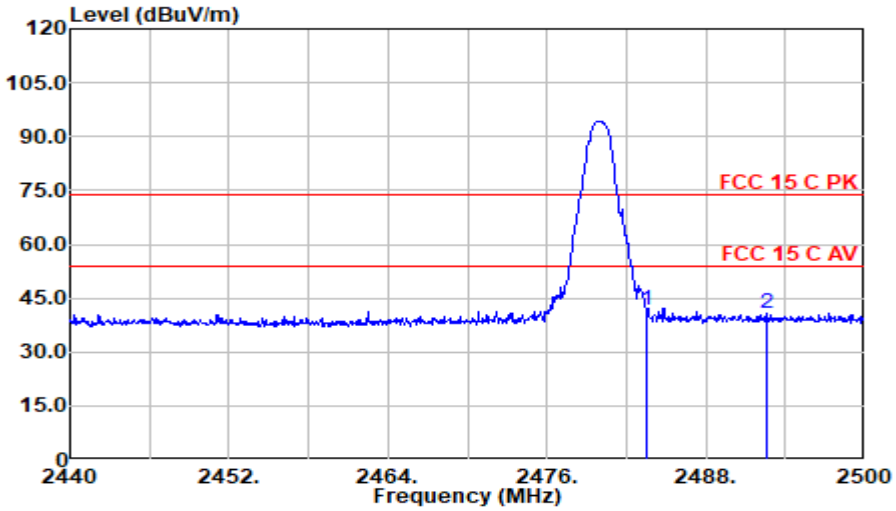
Mode: 3DH1 CH2480MHz



Polarization at Horizontal

Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
2483.500	38.67	28.63	5.47	35.91	36.86	54.00	17.14	Average
2488.480	34.36	28.65	5.47	35.91	32.58	54.00	21.42	Average

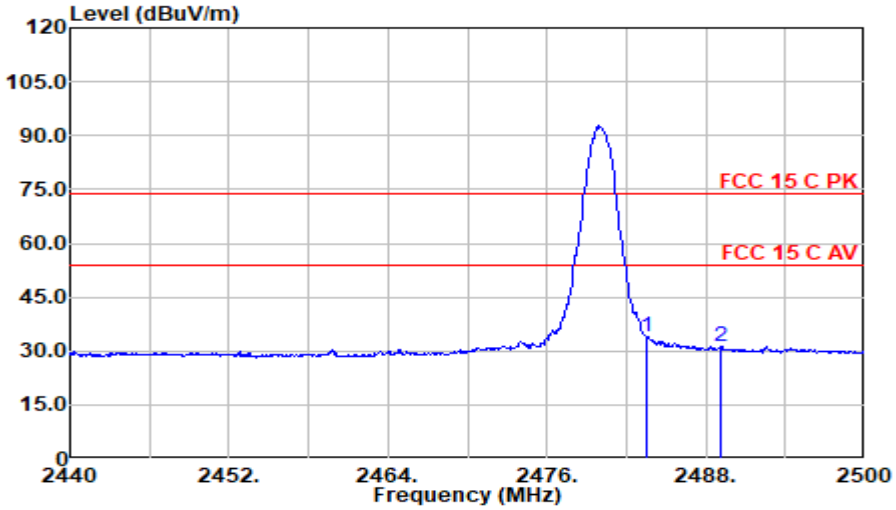
Mode: 3DH1 CH2480MHz



Polarization at Vertical

Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
2483.500	43.63	28.63	5.47	35.91	41.82	74.00	32.18	Peak
2492.620	42.63	28.67	5.48	35.90	40.88	74.00	33.12	Peak

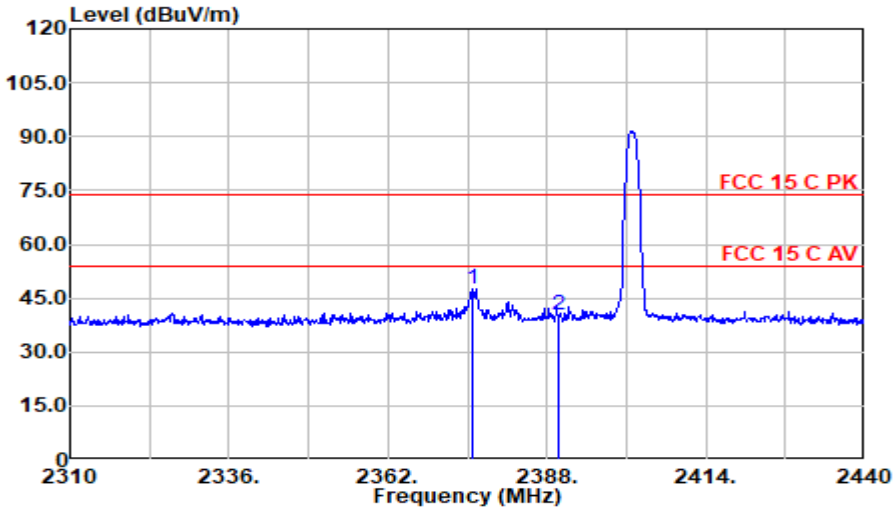
Mode: 3DH1 CH2480MHz



Polarization at Vertical

Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
2483.500	35.69	28.63	5.47	35.91	33.89	54.00	20.11	Average
2489.140	32.91	28.66	5.47	35.91	31.13	54.00	22.87	Average

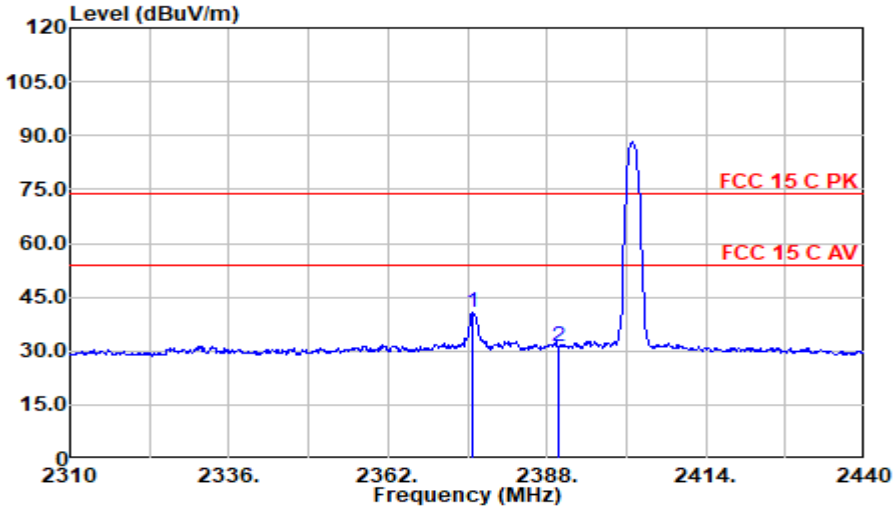
Mode: 3DH3 CH2402MHz



Polarization at Horizontal

Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
2375.910	49.82	28.50	5.38	36.03	47.67	74.00	26.33	Peak
2390.000	42.34	28.56	5.39	36.02	40.27	74.00	33.73	Peak

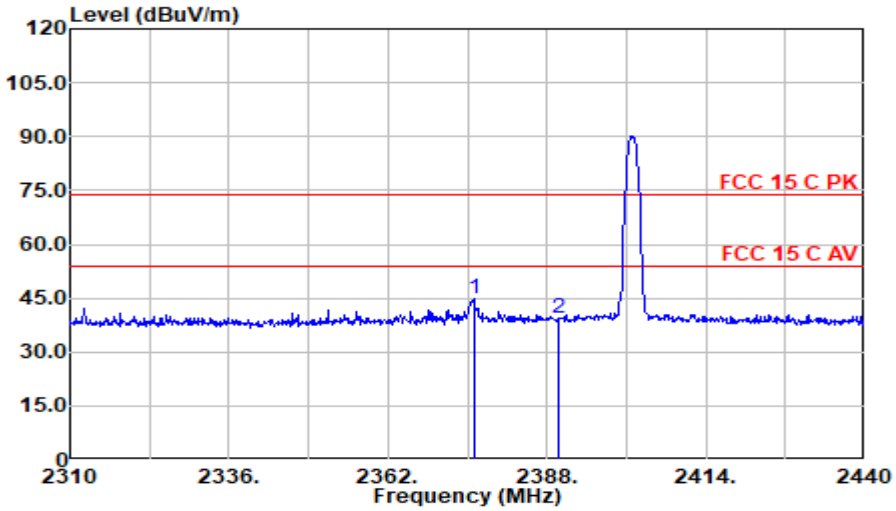
Mode: 3DH3 CH2402MHz



Polarization at Horizontal

Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
2375.780	42.75	28.50	5.38	36.03	40.59	54.00	13.41	Average
2390.000	33.44	28.56	5.39	36.02	31.37	54.00	22.63	Average

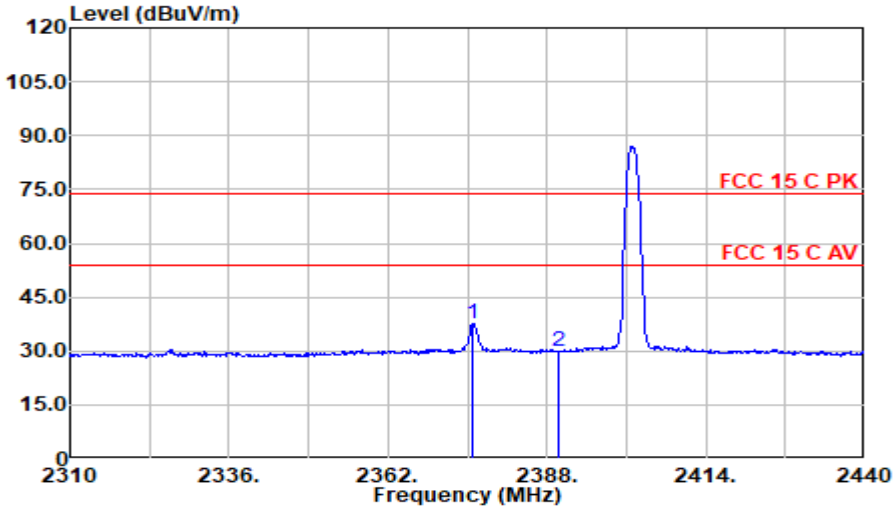
Mode: 3DH3 CH2402MHz



Polarization at Vertical

Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
2376.170	46.98	28.51	5.38	36.03	44.83	74.00	29.17	Peak
2390.000	41.33	28.56	5.39	36.02	39.26	74.00	34.74	Peak

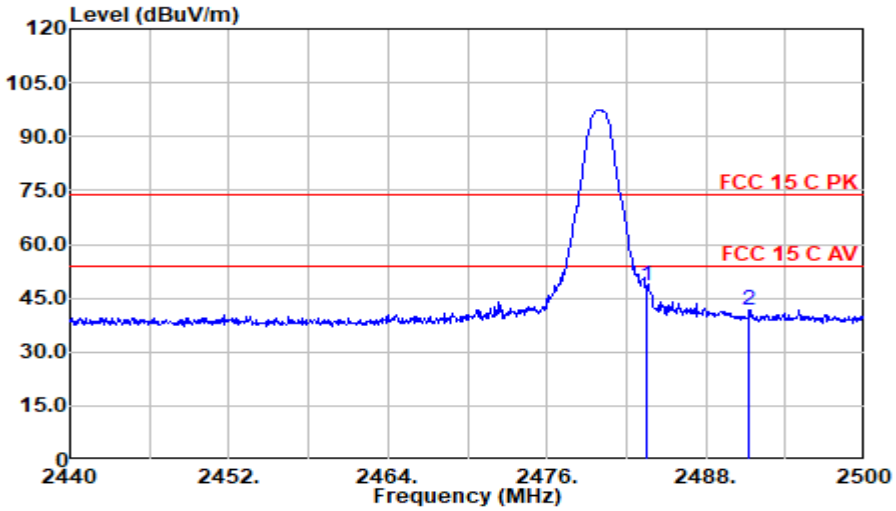
Mode: 3DH3 CH2402MHz



Polarization at Vertical

Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
2375.910	39.85	28.50	5.38	36.03	37.70	54.00	16.30	Average
2390.000	32.18	28.56	5.39	36.02	30.11	54.00	23.89	Average

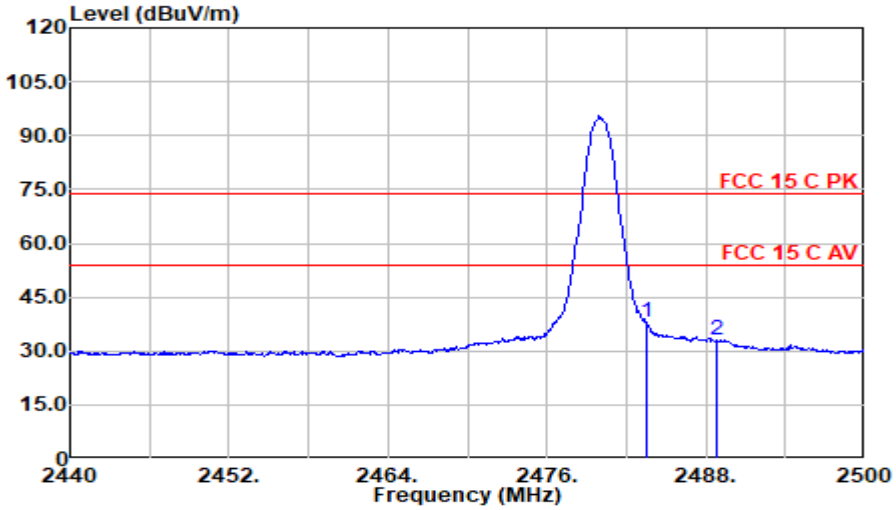
Mode: 3DH3 CH2480MHz



Polarization at Horizontal

Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
2483.500	50.09	28.63	5.47	35.91	48.28	74.00	25.72	Peak
2491.300	43.35	28.67	5.48	35.90	41.59	74.00	32.41	Peak

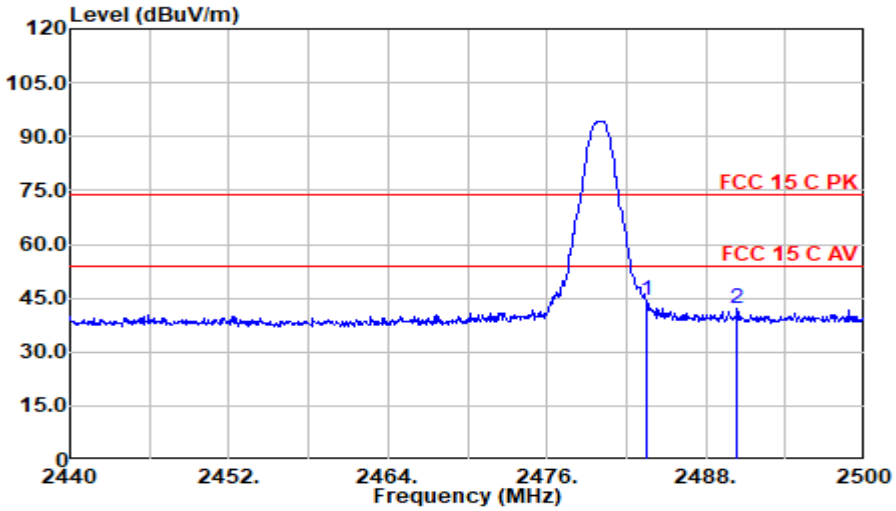
Mode: 3DH3 CH2480MHz



Polarization at Horizontal

Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
2483.500	39.77	28.63	5.47	35.91	37.96	54.00	16.04	Average
2488.780	34.97	28.66	5.47	35.91	33.20	54.00	20.80	Average

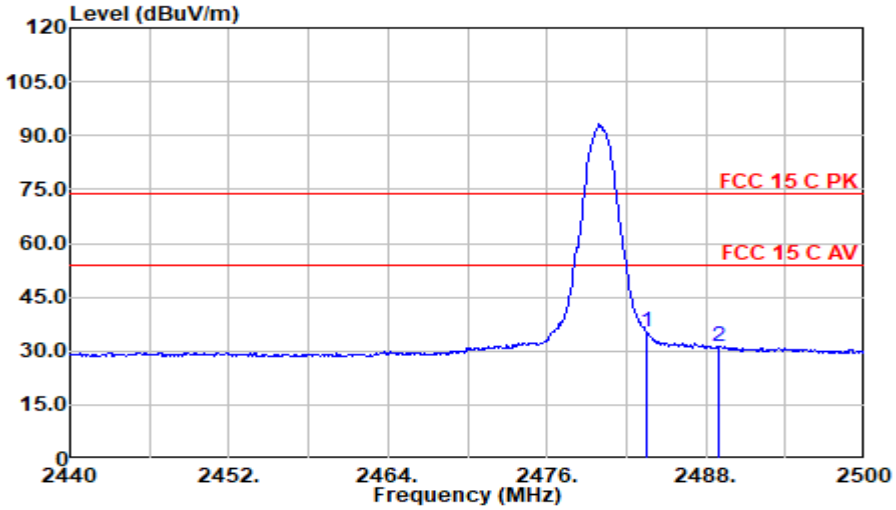
Mode: 3DH3 CH2480MHz



Polarization at Vertical

Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
2483.500	46.12	28.63	5.47	35.91	44.31	74.00	29.69	Peak
2490.400	43.68	28.66	5.48	35.91	41.92	74.00	32.08	Peak

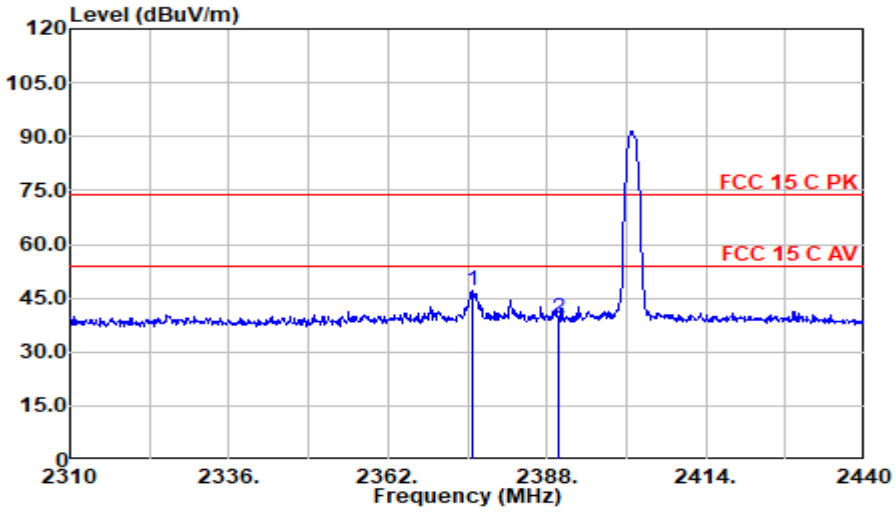
Mode: 3DH3 CH2480MHz



Polarization at Vertical

Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
2483.500	37.30	28.63	5.47	35.91	35.49	54.00	18.51	Average
2489.020	33.19	28.66	5.47	35.91	31.41	54.00	22.59	Average

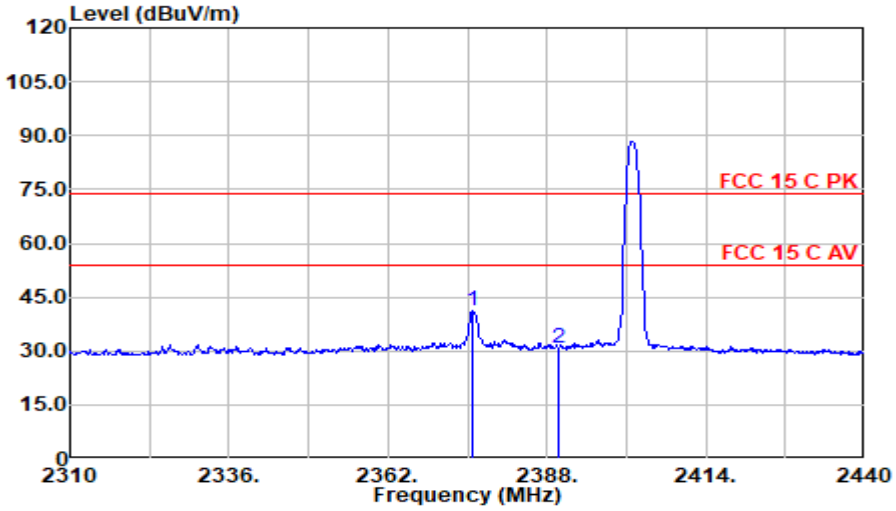
Mode: 3DH5 CH2402MHz



Polarization at Horizontal

Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
2375.910	49.38	28.50	5.38	36.03	47.23	74.00	26.77	Peak
2390.000	41.56	28.56	5.39	36.02	39.49	74.00	34.51	Peak

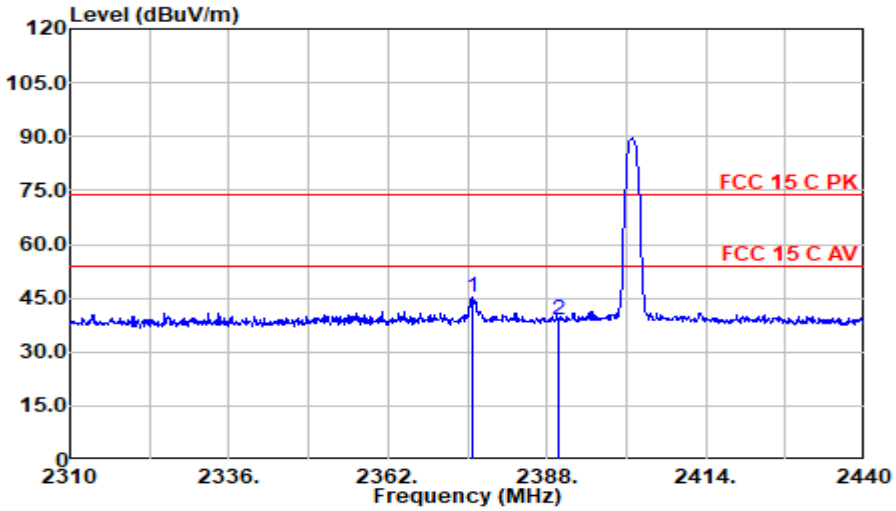
Mode: 3DH5 CH2402MHz



Polarization at Horizontal

Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
2375.910	43.49	28.50	5.38	36.03	41.34	54.00	12.66	Average
2390.000	32.96	28.56	5.39	36.02	30.89	54.00	23.11	Average

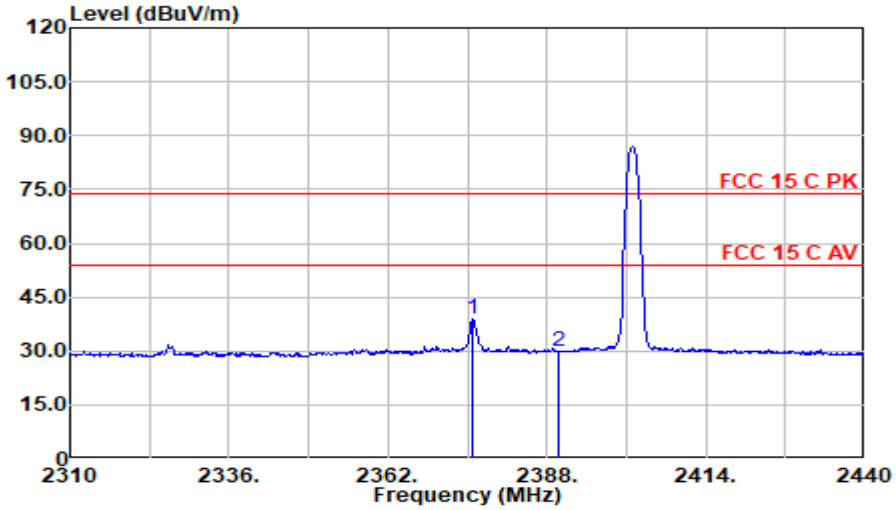
Mode: 3DH5 CH2402MHz



Polarization at Vertical

Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
2375.780	47.23	28.50	5.38	36.03	45.08	74.00	28.92	Peak
2390.000	40.94	28.56	5.39	36.02	38.87	74.00	35.13	Peak

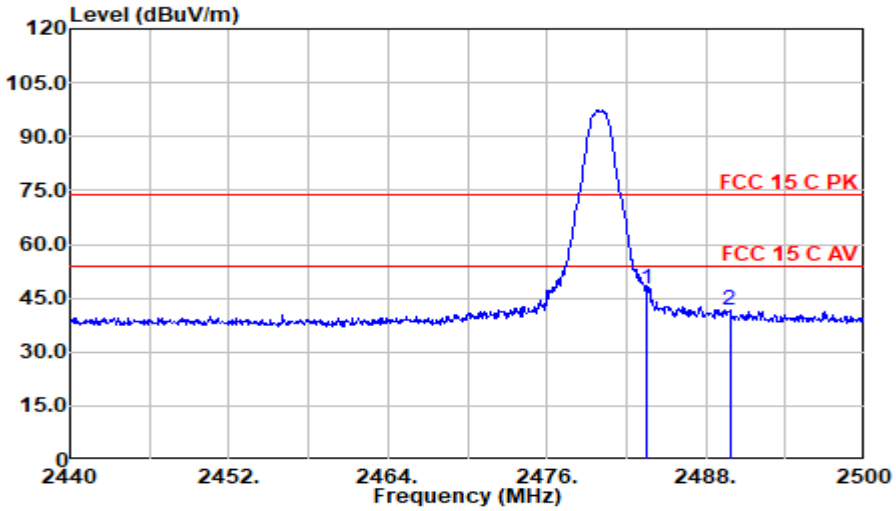
Mode: 3DH5 CH2402MHz



Polarization at Vertical

Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
2375.910	40.97	28.50	5.38	36.03	38.81	54.00	15.19	Average
2390.000	31.93	28.56	5.39	36.02	29.86	54.00	24.14	Average

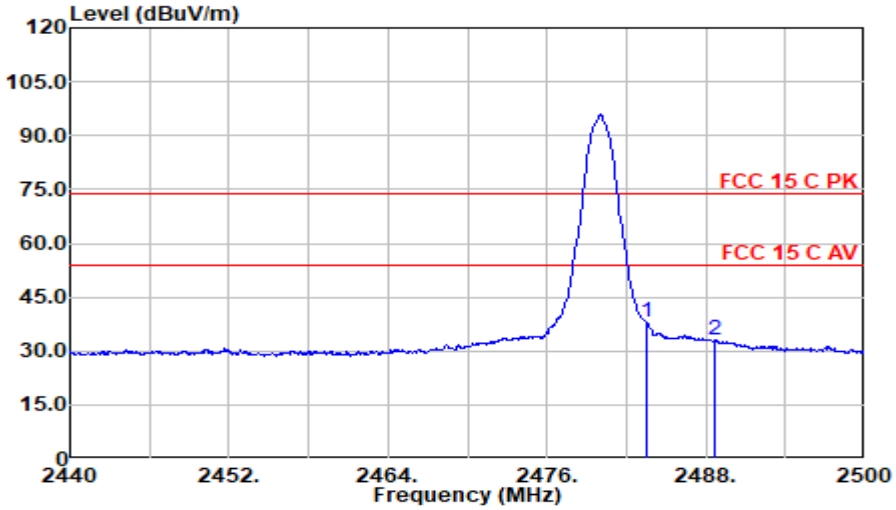
Mode: 3DH5 CH2480MHz



Polarization at Horizontal

Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
2483.500	49.23	28.63	5.47	35.91	47.42	74.00	26.58	Peak
2489.800	43.57	28.66	5.47	35.91	41.80	74.00	32.20	Peak

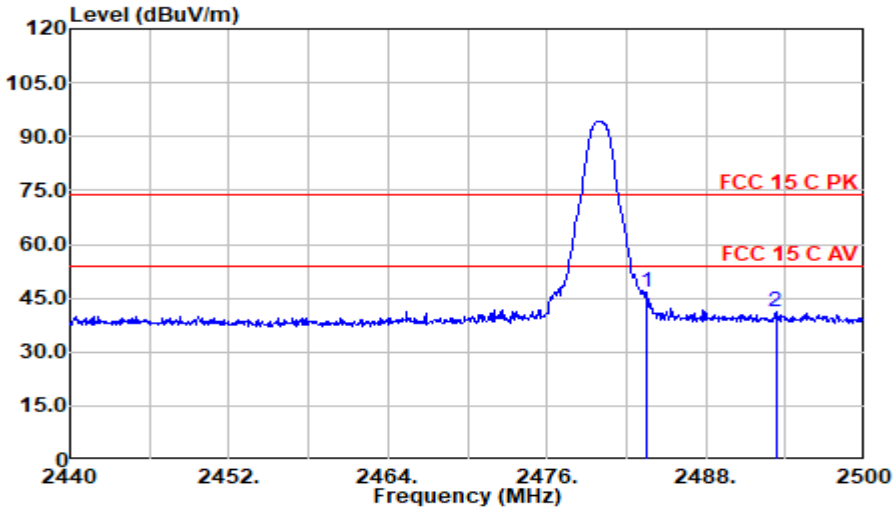
Mode: 3DH5 CH2480MHz



Polarization at Horizontal

Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
2483.500	40.03	28.63	5.47	35.91	38.22	54.00	15.78	Average
2488.720	34.85	28.66	5.47	35.91	33.07	54.00	20.93	Average

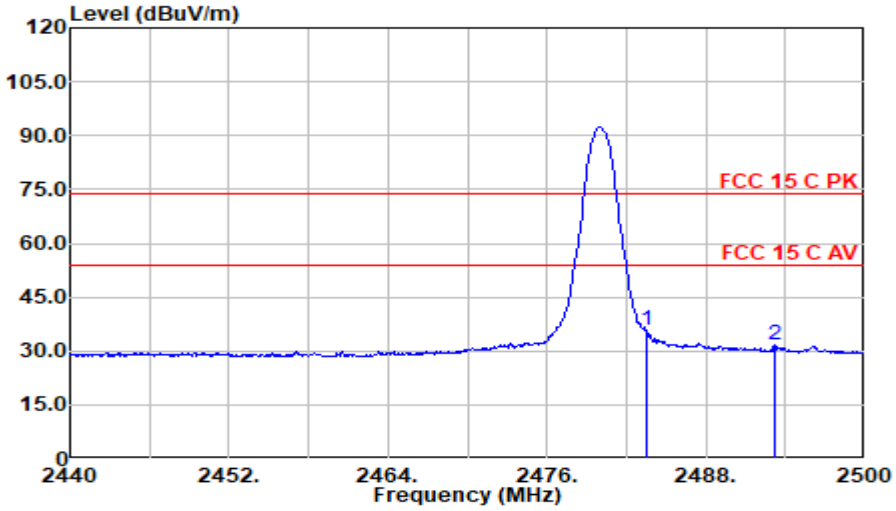
Mode: 3DH5 CH2480MHz



Polarization at Vertical

Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
2483.500	48.66	28.63	5.47	35.91	46.85	74.00	27.15	Peak
2493.280	42.98	28.67	5.48	35.90	41.22	74.00	32.78	Peak

Mode: 3DH5 CH2480MHz



Polarization at Vertical

Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
2483.500	37.53	28.63	5.47	35.91	35.72	54.00	18.28	Average
2493.160	33.34	28.67	5.48	35.90	31.59	54.00	22.41	Average

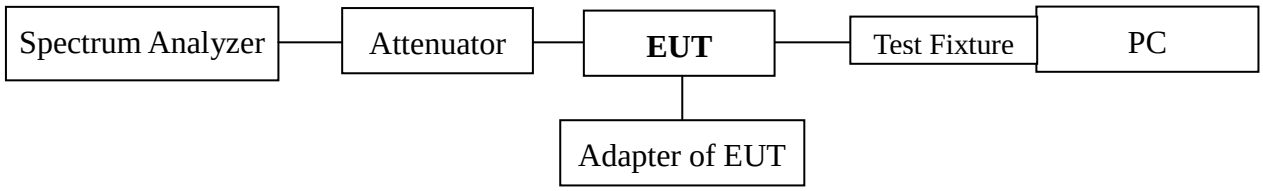
5 20DB BANDWIDTH MEASUREMENT

5.1 Test Equipment

The following test equipment was used during the Emission Bandwidth measurement:

Item	Type	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Interval
1.	Spectrum Analyzer	Agilent	N9010A	MY52221182	2023.08.09	1 Year
2.	RF Cable	Mini-Circuits	FLC-3FT-SM SM+	22022838	2023.08.09	1 Year
3.	10 dB Attenuator	Mini-Circuits	BW-S10W2+	001	2023.08.09	1 Year

5.2 Block Diagram of Test Setup



5.3 Specification Limits (§15.247(a)(1))

Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater. Alternatively, frequency hopping systems operating in the 2400-2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater, provided the systems operate with an output power no greater than 125 mW.

5.4 Operating Condition of EUT

The software as section 2.3 was used to enable the EUT to change the test mode one by one.

5.5 Test Procedure

The transmitter output was connected to the spectrum analyzer. The bandwidth of 20 dB bandwidth was measure by spectrum analyzer with settings: Span = between 2.0 times and 5.0 times of the OBW, RBW = 1% to 5% of the OBW, VBW ≥ 3 × RBW, Detector = Peak, Trace = Max Hold.
Use the “x dB” bandwidth function of the instrument, set it as “-20 dB” to measure and report the 20dB bandwidth.

The test procedure is defined in ANSI C63.10-2013 (the 6.9.2 Measurement Procedure “ Occupied bandwidth—relative measurement procedure” was used).

5.6 Test Results

PASSED.

All the test results are attached in next pages.

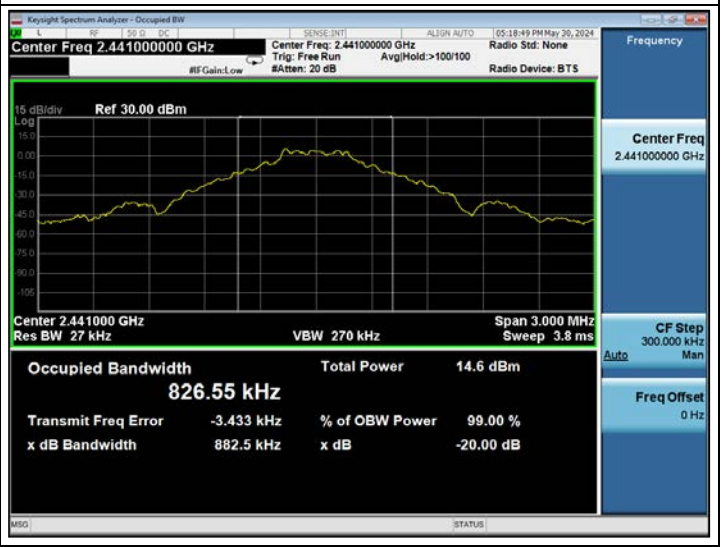
(Test Date: 2024.05.30 Temperature: 23℃ Humidity: 51 %)

Mode	Channel	Frequency (MHz)	**20 dB Bandwidth (kHz)**	**2/3 20 dB Bandwidth (kHz)**
BT DH1	00	2402	**883**	**588.7**
	39	2441	**882.5**	**588.3**
	78	2480	**881**	**587.3**
BT DH3	00	2402	**946.3**	**630.9**
	39	2441	**946.3**	**630.9**
	78	2480	**946.9**	**631.3**
BT DH5	00	2402	**864.61**	**576.4**
	39	2441	**955.2**	**636.8**
	78	2480	**954.3**	**636.2**
BT 3DH1	00	2402	**1273**	**848.7**
	39	2441	**1273**	**848.7**
	78	2480	**1272**	**848.0**
BT 3DH3	00	2402	**1287**	**858.0**
	39	2441	**1287**	**858.0**
	78	2480	**1287**	**858.0**
BT 3DH5	00	2402	**1298**	**865.3**
	39	2441	**1296**	**864.0**
	78	2480	**1297**	**864.7**

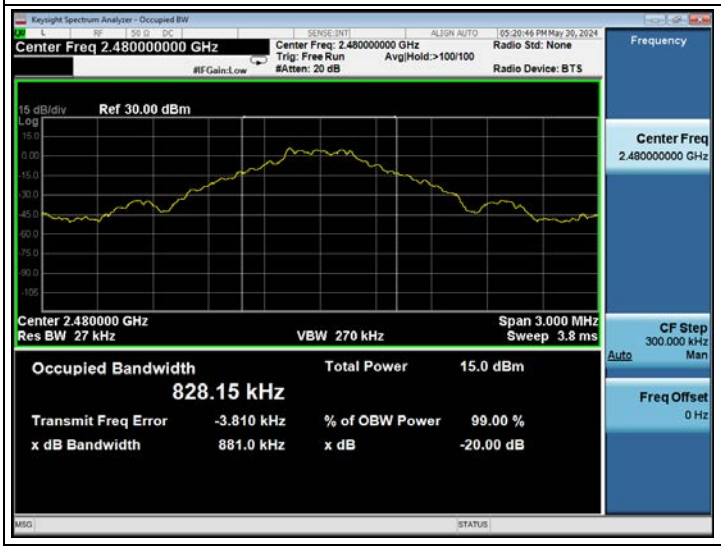
DH1

CH2402

CH2441



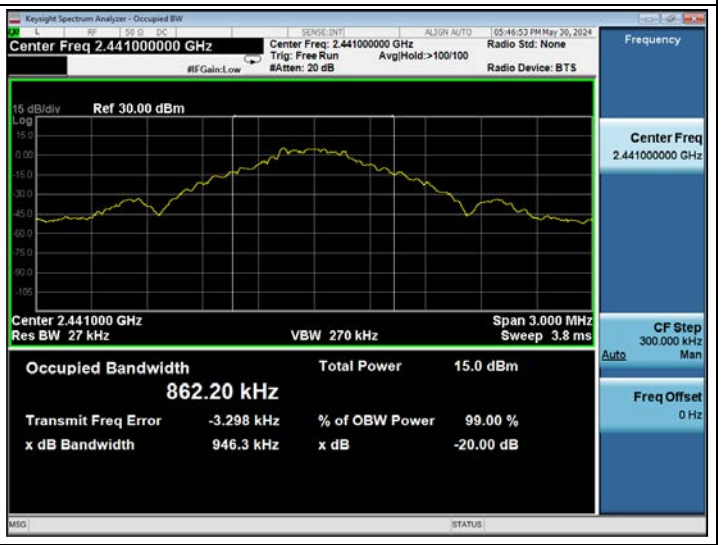
CH2480



DH3

CH2402

CH2441

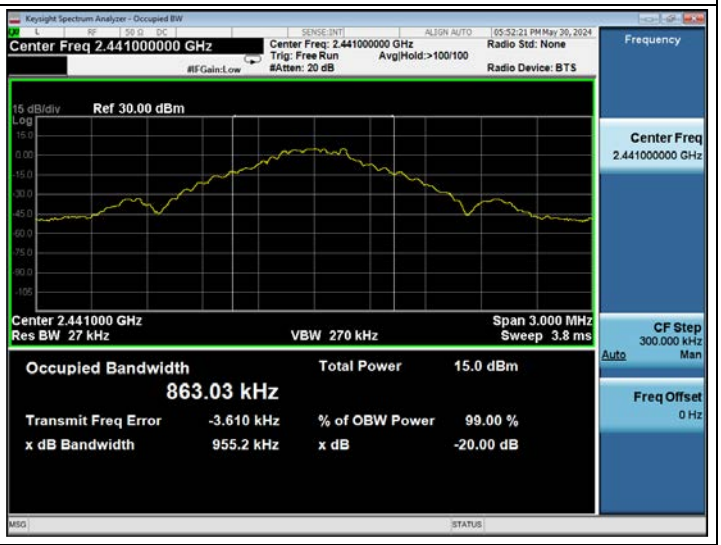


CH2480

DH5

CH2402

CH2441

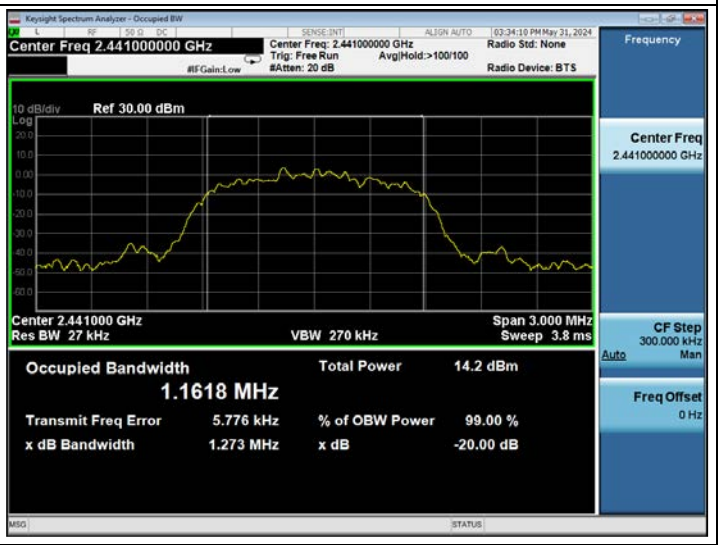


CH2480

3DH1

CH2402

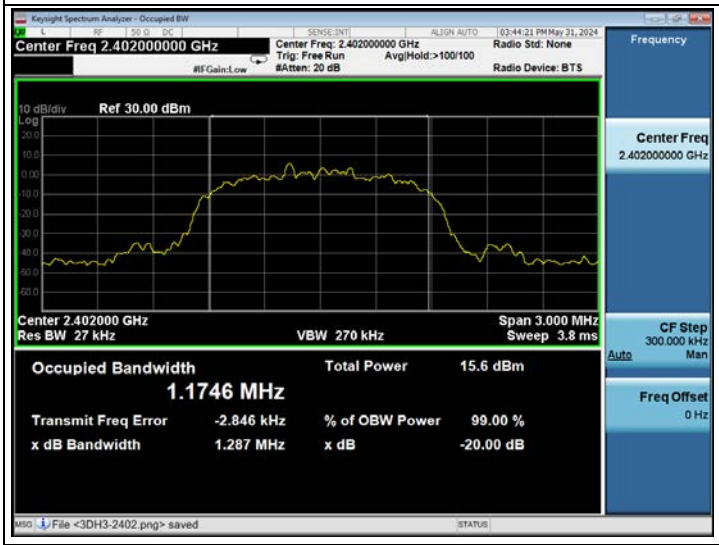
CH2441



CH2480

3DH3

CH2402



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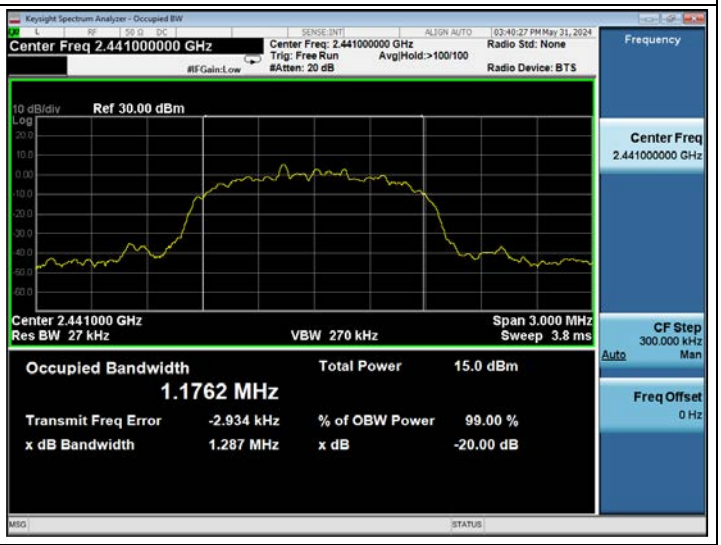
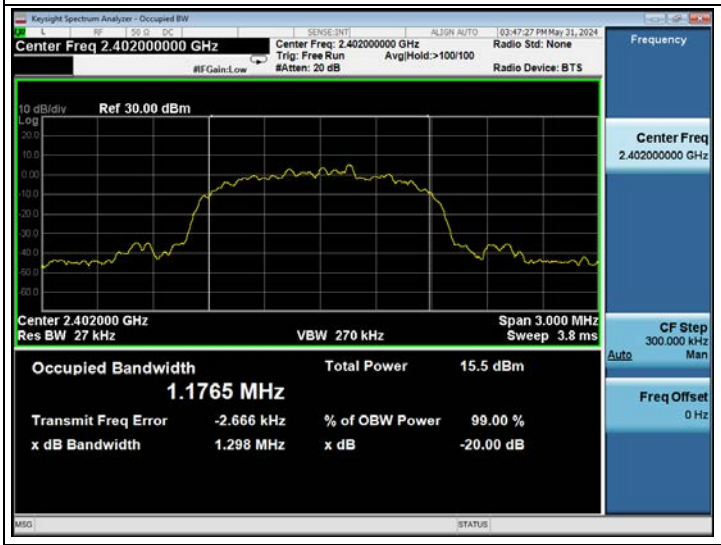


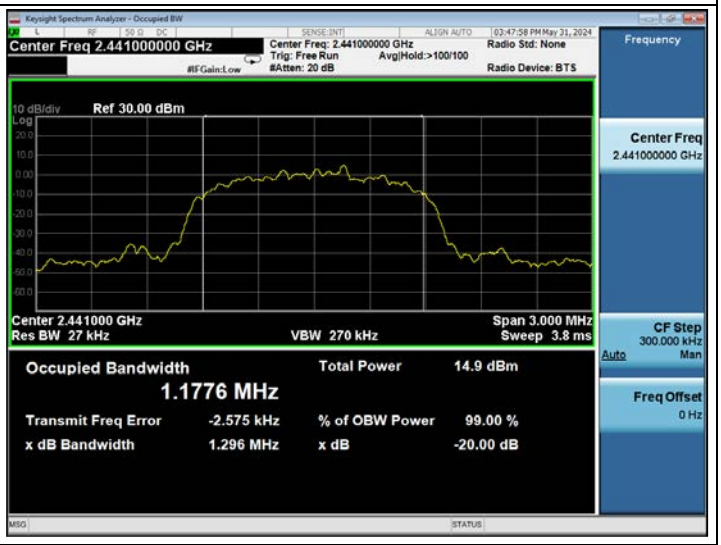
CH2480

3DH5

CH2402



CH2441



CH2480

6 CARRIER FREQUENCY SEPARATION MEASUREMENT

6.1 Test Equipment

The following test equipment was used during the Emission Bandwidth measurement:

Item	Type	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Interval
1.	Spectrum Analyzer	Agilent	N9010A	MY52221182	2023.08.09	1 Year
2.	RF Cable	Mini-Circuits	FLC-3FT-SM SM+	22022838	2023.08.09	1 Year
3.	10 dB Attenuator	Mini-Circuits	BW-S10W2+	001	2023.08.09	1 Year

6.2 Block Diagram of Test Setup

The Same as Section. 5.2

6.3 Specification Limits (§15.247(a)(1))

Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater. Alternatively, frequency hopping systems operating in the 2400-2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater, provided the systems operate with an output power no greater than 125 mW.

6.4 Operating Condition of EUT

The software as section 2.3 was used to enable the EUT to have its hopping function enabled.

6.5 Test Procedure

The transmitter output was connected to the spectrum analyzer.
The EUT must have its hopping function enabled. Use the following spectrum analyzer settings:
a) Span = wide enough to capture the peaks of two adjacent channels
b) RBW: Start with the RBW set to approximately 30% of the channel spacing; adjust as necessary to best identify the center of each individual channel.
c) VBW ≥ RBW
d) Sweep = auto
e) Detector function = peak
f) Trace = max hold
g) Allow the trace to stabilize. Use the marker-delta function to determine the separation between the peaks of the adjacent channels.

The test procedure is defined in ANSI C63.10-2013 (the 7.8.2 Measurement Procedure “Carrier frequency separation” was used).

6.6 Test Results

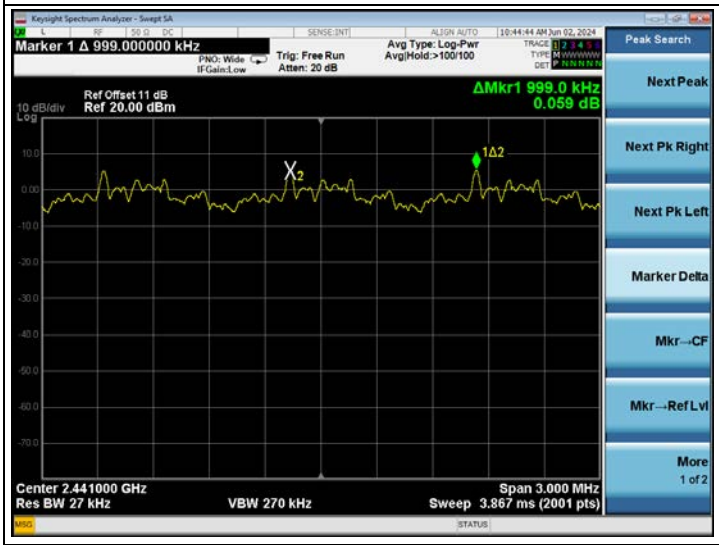
PASSED.

All the test results are attached in next pages.

(Test Date: 2024.06.02 Temperature: 23℃ Humidity: 51 %)

Mode	Channel	**Separation (kHz)**	**Limit (kHz)**
BT DH1	Hopping	**999**	**588.7**
BT DH3	Hopping	**1005**	**631.3**
BT DH5	Hopping	**999**	**636.8**
BT 3DH1	Hopping	**999**	**848.7**
BT 3DH3	Hopping	**999**	**858.0**
BT 3DH5	Hopping	**1000.5**	**865.3**

Note: As The EUT output power less than 0.125W, the 2/3 20dB bandwidth was provided as the limit of this measurement.

DH1-Hopping	DH3-Hopping
	
DH5-Hopping	3DH1-Hopping
	
3DH3-Hopping	3DH5-Hopping
	

7 NUMBER OF HOPPING FREQUENCIES MEASUREMENT

7.1 Test Equipment

The following test equipment was used during the Emission Bandwidth measurement:

Item	Type	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Interval
1.	Spectrum Analyzer	Agilent	N9010A	MY52221182	2023.08.09	1 Year
2.	RF Cable	Mini-Circuits	FLC-3FT-SM SM+	22022838	2023.08.09	1 Year
3.	10 dB Attenuator	Mini-Circuits	BW-S10W2+	001	2023.08.09	1 Year

7.2 Block Diagram of Test Setup

The Same as Section. 5.2

7.3 Specification Limits (§15.247(a)(1)(iii))

Frequency hopping systems in the 2400-2483.5 MHz band shall use at least 15 channels.

7.4 Operating Condition of EUT

The software as section 2.3 was used to enable the EUT to have its hopping function enabled.

7.5 Test Procedure

The transmitter output was connected to the spectrum analyzer.
The EUT must have its hopping function enabled. Use the following spectrum analyzer settings:
a) Span = the frequency band of operation.
b) RBW: To identify clearly the individual channels, set the RBW to less than 30% of the channel spacing or the 20 dB bandwidth, whichever is smaller.
c) VBW ≥ RBW
d) Sweep = auto
e) Detector function = peak
f) Trace = max hold
g) Allow the trace to stabilize. It might prove necessary to break the span up into subranges to show clearly all of the hopping frequencies.

The test procedure is defined in ANSI C63.10-2013 (the 7.8.3 Measurement Procedure “Number of Hopping Frequencies” was used).

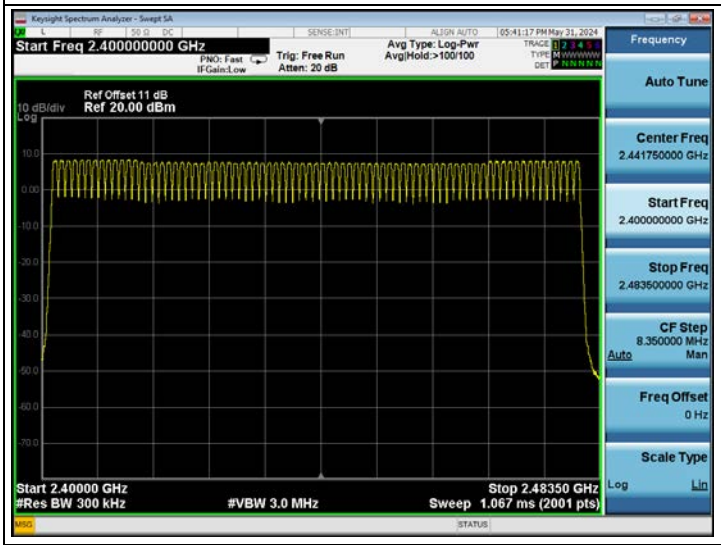
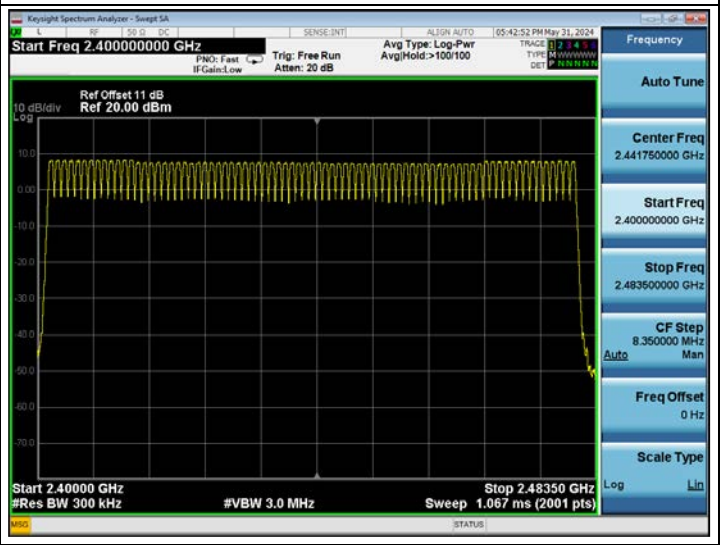
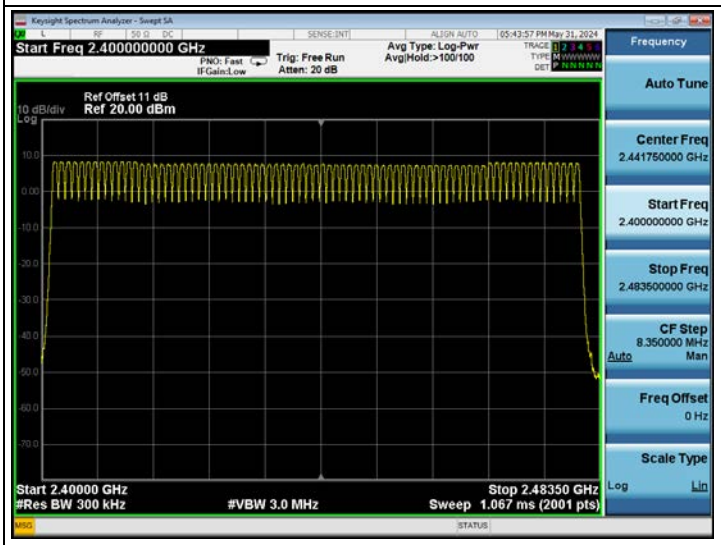
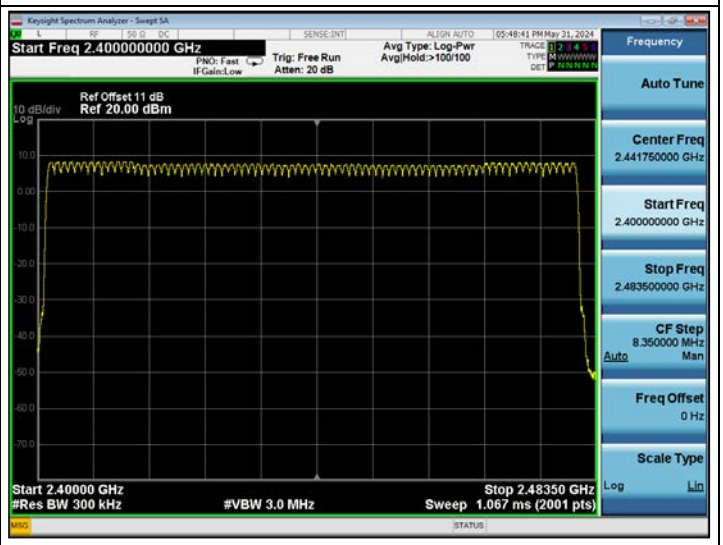
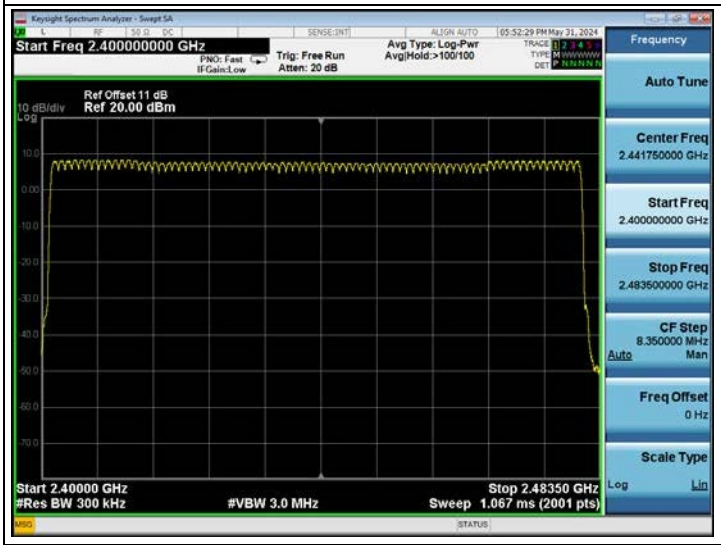
7.6 Test Results

PASSED.

All the test results are attached in next pages.

(Test Date: 2024.05.30 Temperature: 23℃ Humidity: 51 %)

Mode	Channel	**Number of Hopping Frequencies**
BT DH1	Hopping	**79**
BT DH3	Hopping	**79**
BT DH5	Hopping	**79**
BT 3DH1	Hopping	**79**
BT 3DH3	Hopping	**79**
BT 3DH5	Hopping	**79**

DH1-Hopping	DH3-Hopping
	
DH5-Hopping	3DH1-Hopping
	
3DH3-Hopping	3DH5-Hopping
	

8 DWELL TIME MEASUREMENT

8.1 Test Equipment

The following test equipment was used during the Emission Bandwidth measurement:

Item	Type	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Interval
1.	Spectrum Analyzer	Agilent	N9010A	MY52221182	2023.08.09	1 Year
2.	RF Cable	Mini-Circuits	FLC-3FT-SM SM+	22022838	2023.08.09	1 Year
3.	10 dB Attenuator	Mini-Circuits	BW-S10W2+	001	2023.08.09	1 Year

8.2 Block Diagram of Test Setup

The Same as Section. 5.2

8.3 Specification Limits (§15.247(a)(1)(iii))

Frequency hopping systems in the 2400-2483.5 MHz band shall use at least 15 channels. The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed.

8.4 Operating Condition of EUT

The software as section 2.3 was used to enable the EUT to have its hopping function enabled.

8.5 Test Procedure

The transmitter output was connected to the spectrum analyzer.
The EUT must have its hopping function enabled. Use the following spectrum analyzer settings:
a) Span = zero span, centered on a hopping channel.
b) RBW shall be ≤ channel spacing and where possible RBW should be set >> 1 / T, where T is the expected dwell time per channel.
c) Sweep: As necessary to capture the entire dwell time per hopping channel.
d) Detector function: Peak.
e) Trace: Max hold.

Use the marker-delta function to determine the transmit time per hop. If this value varies with different modes of operation (data rate, modulation format, number of hopping channels, etc.), then repeat this test for each variation in transmit time.

Repeat the measurement using a longer sweep time to determine the number of hops over the period specified in the requirements. The sweep time shall be equal to, or less than, the period specified in the requirements.

Determine the number of hops over the sweep time and calculate the total number of hops in the period specified in the requirements, using the following equation:

(Number of hops in the period specified in the requirements) =
(number of hops on spectrum analyzer) × (period specified in the requirements / analyzer sweep time)

The average time of occupancy is calculated from the transmit time per hop multiplied by the number of hops in the period specified in the requirements. If the number of hops in a specific time varies with different modes of operation (data rate, modulation format, number of hopping channels, etc.), then repeat this test for each variation.

The test procedure is defined in ANSI C63.10-2013 (the 7.8.4 Measurement Procedure “Time of occupancy (dwell time)” was used).

8.6 Test Results

PASSED.

All the test results are attached in next pages.

(Test Date: 2024.08.20 Temperature: 23℃ Humidity: 51 %)

Period specified in the requirements (s):

Mode	Period (s)	the number of hopping channels employed	Period specified in the requirements (s)
BT DH1	0.4	79	31.6
BT DH3	0.4	79	31.6
BT DH5	0.4	79	31.6
BT 3DH1	0.4	79	31.6
BT 3DH3	0.4	79	31.6
BT 3DH5	0.4	79	31.6

Number of Hops in period specified in the requirements:

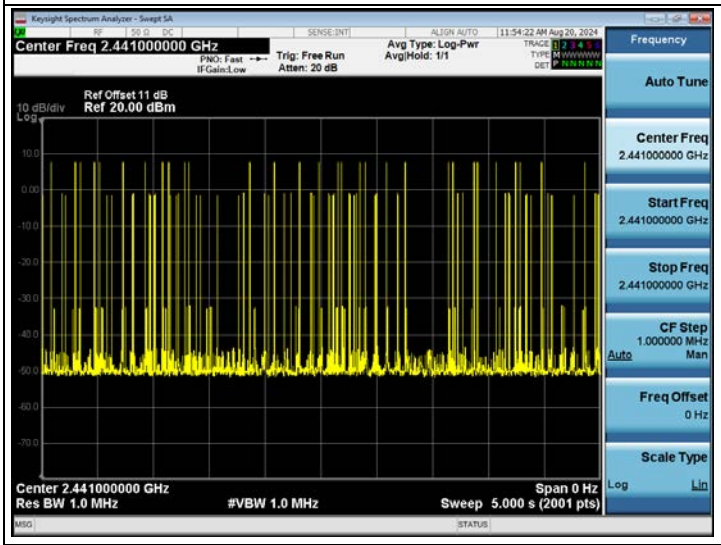
Mode	Number of Hops on SA	SA Sweep time (s)	Period specified in the requirements (s)	Number of Hops in period specified in the requirements
BT DH1	30	5	31.6	189.6
BT DH3	22	5	31.6	139.04
BT DH5	13	5	31.6	82.16
BT 3DH1	30	5	31.6	189.6
BT 3DH3	29	5	31.6	183.28
BT 3DH5	11	5	31.6	69.52

Dwell Time:

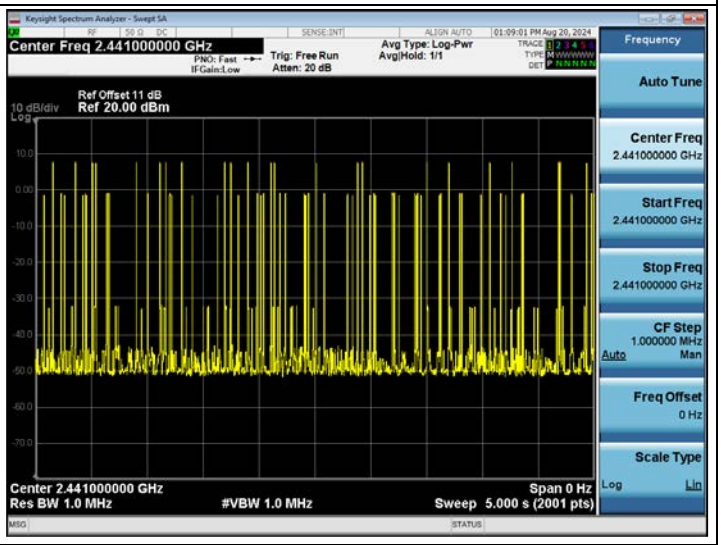
Mode	Number of Hops in period specified in the requirements	Transmit time per hop (ms)	**Dwell Time (ms)**	Limit (ms)
BT DH1	189.6	0.372	**70.5**	400
BT DH3	139.04	1.628	**226.4**	400
BT DH5	82.16	2.88	**236.6**	400
BT 3DH1	189.6	0.384	**72.8**	400
BT 3DH3	183.28	1.632	**299.1**	400
BT 3DH5	69.52	2.88	**200.2**	400

Number of Hops on SA

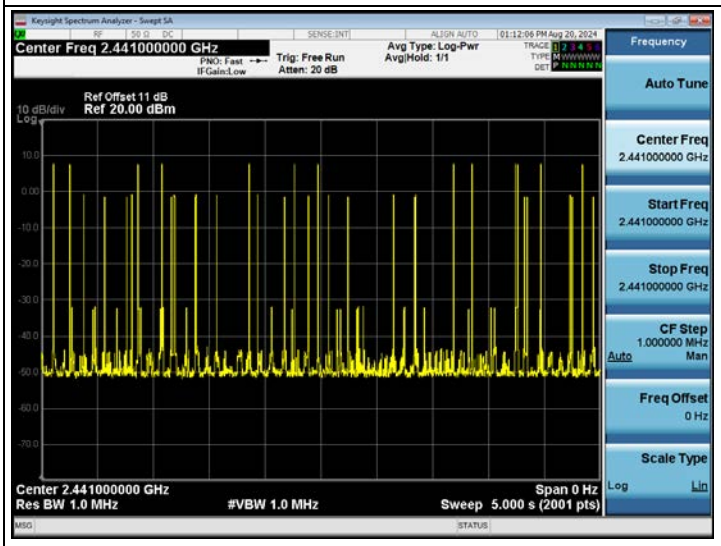
DH1-Hopping



DH3-Hopping

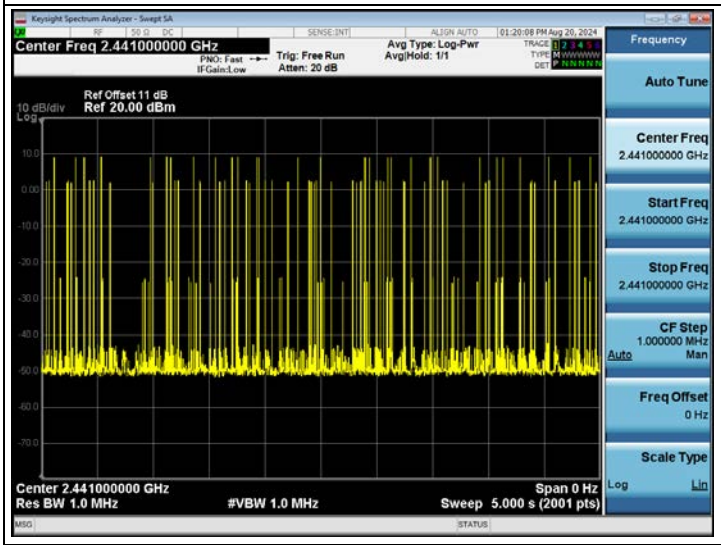


DH5-Hopping

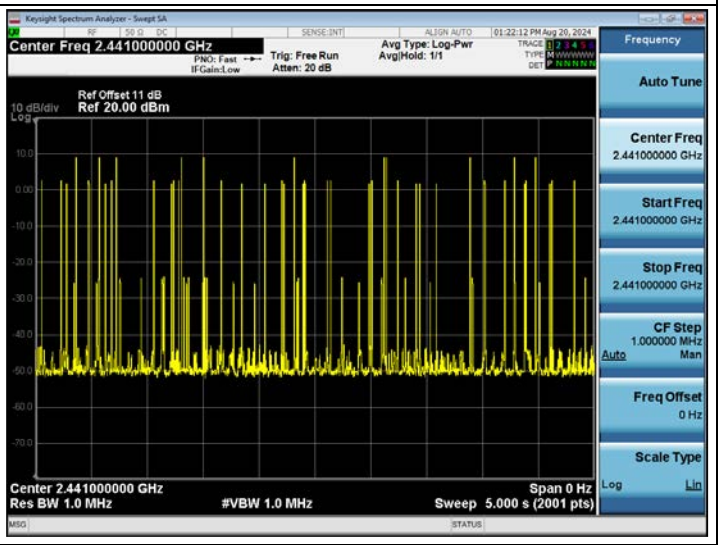


3DH1-Hopping

3DH3-Hopping

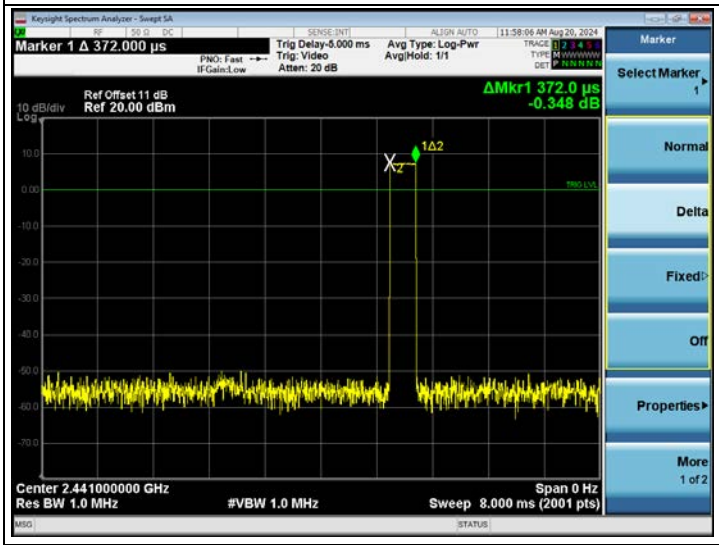


3DH5-Hopping

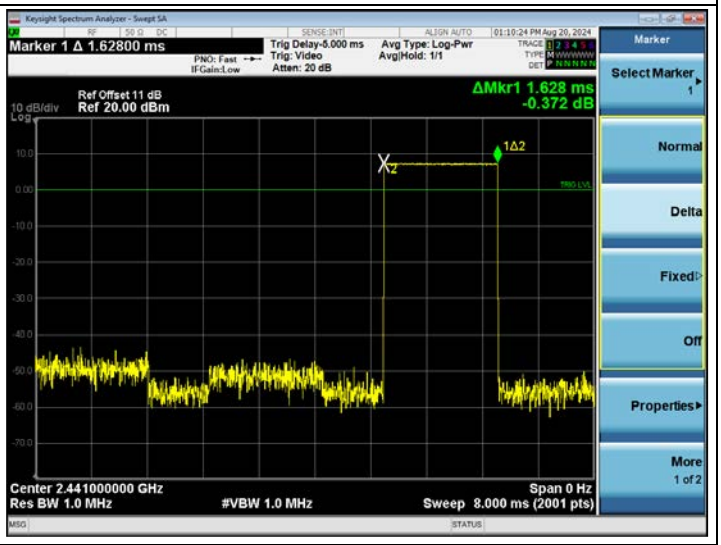


Transmit time per hop

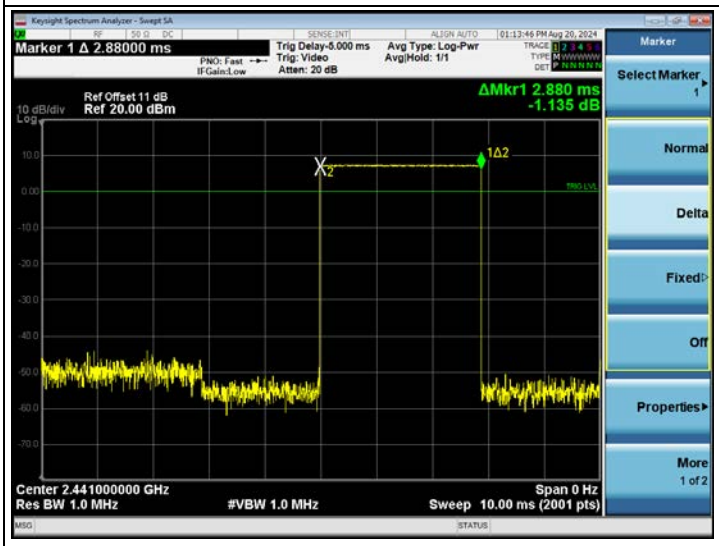
DH1-Hopping



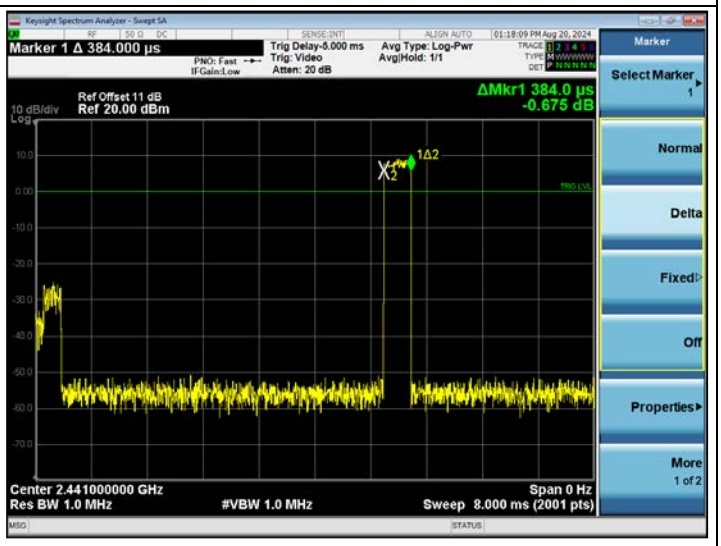
DH3-Hopping



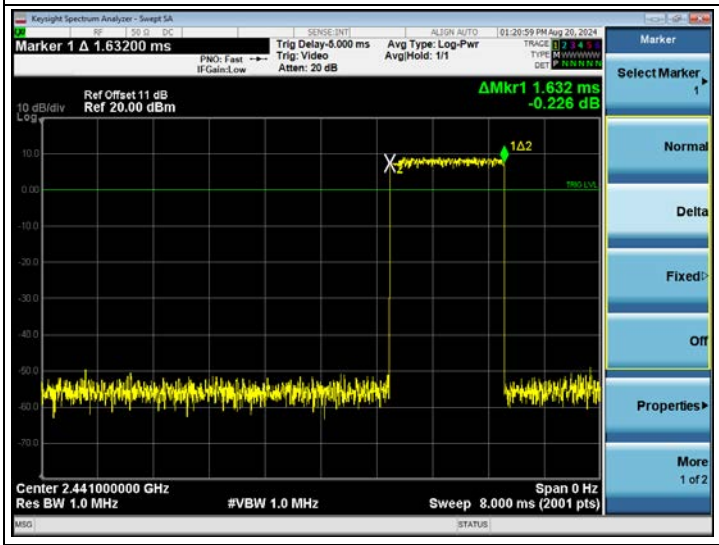
DH5-Hopping



3DH1-Hopping



3DH3-Hopping



3DH5-Hopping