DEKRA Testing and Certification, S.A.U.
Parque Tecnológico de Andalucía,
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C.I.F. A29507456

ISED CABid: ES1909

Lab. Company Number: 4621A

Test Report No:
75285RRF.002A2

Test Report
USA FCC Part 15.247, 15.209
CANADA RSS-247, RSS-Gen

(*) Identification of item tested	Photometric reader for lateral flow test
(*) Trademark	QASSAY
(*) Model and /or type reference	Q1A-DUO-USB (Qassay Lateral Flow Reader Dual)
(*) Other variants/model not tested	Q1A-VIS-USB (Qassay Lateral Flow Reader Visible)
Other identification of the product	FCC ID: 2BD3B 13EA2BD3B IC: 31782-13EA2BD3B
(*) Features	Bluetooth LE HW version: Ver 0x201 SW version: Ver 3
Applicant	P4Q Health S.L.U. Calle Nuestra Señora de la Guía, Número 19, Arbuio 48810 ALONSOTEGI, Bizkaia - España
Test method requested, standard	USA FCC Part 15.247 (10-1-23 Edition): Operation within the bands 902 - 928 MHz, 2400 -2483.5 MHz, and 5725 - 5850 MHz. USA FCC Part 15.209 (10-1-23 Edition): Radiated emission limits; general requirements. CANADA RSS-247 Issue 3 (August 2023). CANADA RSS-Gen Issue 5 amendment 2 (February 2021). Guidance for Performing Compliance Measurements on Digital Transmission System, Frequency Hopping Spread Spectrum System, and Hybrid Systems Devices Operating Under Section 15.247 of the FCC Rules. 558074 D01 Meas Guidance v05r02 dated April 2, 2019. ANSI C63.10-2013: American National Standard for Testing Unlicensed Wireless Devices.
Summary	IN COMPLIANCE
Approved by (name / position & signature)	José Manuel Gómez Galván EMC Consumer & RF Lab. Manager Firmado digitalmente por 53680346W JOSE MANUEL GOMEZ (C:A29507456)
Date of issue	2024-06-07
Report template No	FDT08_24 (*) "Data provided by the client"

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Acronyms

Acronym ID	Acronym Description
BW	Bandwidth
Detector	Detector used
Ebw	Emission Bandwidth
Equipment	Equipment Type
Freq	Frequency
Freq Rng	Frequency Range
Inband Peak Lvl	Inband Peak Level
Lvl	Level
MP	Measurement Point
Mod	Modulation
Mode	MIMO Mode
Occ Ch BW	Occupied Channel Bandwidth
PSD	Power Spectrum Density
PeakPower	Maximum Peak Conducted Output Power
Pol	Polarization
Port	Active Port
Unwanted Freq	Unwanted Emissions Frequency
Unwanted Lvl	Unwanted Emissions Level

Competences and guarantees

DEKRA Testing and Certification S.A.U. is a testing laboratory accredited by the National Accreditation Body (ENAC -Entidad Nacional de Acreditación), to perform the tests indicated in the Certificate No. 51/LE 147.

DEKRA Testing and Certification S.A.U. is an FCC-recognized accredited testing laboratory with appropriate scope of accreditation that covers the performed tests in this report.

DEKRA Testing and Certification S.A.U. is an ISED-recognized accredited testing laboratory, CABid: ES1909, Company Number: 4621A, with the appropriate scope of accreditation that covers the performed tests in this report.

In order to assure the traceability to other national and international laboratories, DEKRA Testing and Certification S.A.U. has a calibration and maintenance program for its measurement equipment.

DEKRA Testing and Certification S.A.U. guarantees the reliability of the data presented in this report, which is the result of the measurements and the tests performed to the item under test on the date and under the conditions stated on the report and, it is based on the knowledge and technical facilities available at DEKRA Testing and Certification S.A.U. at the time of performance of the test.

DEKRA Testing and Certification S.A.U. is liable to the client for the maintenance of the confidentiality of all information related to the item under test and the results of the test.

The results presented in this Test Report apply only to the particular item under test established in this document.

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General conditions

1. This report is only referred to the item that has undergone the test.
2. This report does not constitute or imply on its own an approval of the product by the Certification Bodies or competent Authorities.
3. This document is only valid if complete; no partial reproduction can be made without previous written permission of DEKRA Testing and Certification S.A.U.
4. This test report cannot be used partially or in full for publicity and/or promotional purposes without previous written permission of DEKRA Testing and Certification S.A.U. and the Accreditation Bodies.

Uncertainty

Uncertainty (factor k=2) was calculated according to the DEKRA Testing and Certification S.A.U. internal document PODT000.

The total uncertainty of the measurement system for the radiated emissions of EUT from 30 MHz to 1 GHz is: Measurement uncertainty ≤ ± 5,35 dB with factor (k = 2).

The total uncertainty of the measurement system for the radiated emissions of EUT from 1 GHz to 17 GHz is: Measurement uncertainty ≤ ± 4,32 dB with factor (k = 2).

The total uncertainty of the measurement system for the radiated emissions of EUT from 17 GHz to 26 GHz is: Measurement uncertainty ≤ ± 5,51 dB with factor (k = 2).

The total uncertainty of the measurement system for the conducted testing of EUT is:
RF Peak Output Power: Measurement uncertainty ≤ ± 0,80 dB
RF Average Output Power: Measurement uncertainty ≤ ± 0,99 dB
Power Spectral Density: Measurement uncertainty ≤ ± 0,99 dB
6dB Bandwidth: Measurement uncertainty ≤ ± 2,84 %
Occupied Channel Bandwidth: Measurement uncertainty ≤ ± 1,17 %
Conducted Band-edge spurious emissions: Measurement uncertainty ≤ ± 1,76 dB

Data provided by the client

The following data has been provided by the client:

1. Information relating to the description of the sample ("Identification of the item tested", "Trademark", "Model and/or type reference tested".

2. The sample consists of a Photometric reader for lateral flow test. Photometric reader for lateral flow test for visible and UV strips with the purpose of qualification, semi-quantification and quantification of specific analytes.

3. Models not tested: Qassay Lateral Flow Reader Visible. On the following page, the models have been declared by the supplier as equivalent.

P4Q PROFESSIONALS FOR QUALITY

Dear Ladies and Gentlemen,

I, Aitor Alapont, CEO of P4Q Health, S.L.U. hereby declare through this letter the product design similarities for the Qassay Lateral Flow Reader DUAL and VISIBLE models. Qassay Lateral Flow Reader DUAL and VISIBLE models are photometric lateral flow test analyzers.

Radio and EMC test results from the worst-case configuration (DUAL) are aplicable to all models indicated below.

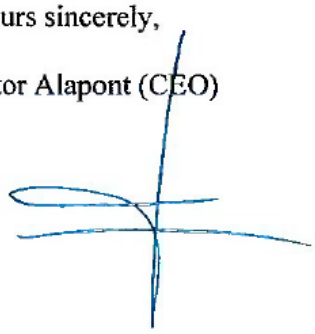
According to the strip type, must be required to excite it with White or UV light. Qassay Lateral Flow Reader DUAL model can iluminate the strip using White or UV light and the VISIBLE model can iluminate the strip only using the White light.

The schematics for both models are the same, the only difference is that the DUAL model mounts both LEDs, D300 (UV) and D301 (White), plus two transistors (Q300 and Q301) to activate one or another, and the VISIBLE model just mounts the D301 (White).

Due to this minimal difference on the schematics, Radio and EMC test results are applicable to both models.

Yours sincerely,

Aitor Alapont (CEO)



DEKRA Testing and Certification S.A.U. declines any responsibility with respect to the information provided by the client and that may affect the validity of results.

Usage of samples

Samples undergoing test have been selected by: The client.

Id	Control Number	Description	Model	Serial Nº	Date of Reception	Application
S/01	75285B_2.1	Qassay Lateral Flow Reader Dual	Qassay	A300452787	2023-10-20	Element Under Test
	75285B_18.1	Micro USB to USB A Cable	-	-	2023-10-20	Auxiliary Element
	75285B_19.1	STLink-V3	STLink-V3	ST 2 - 0032002A3485	2023-10-20	Auxiliary Element
	75285B_20.1	Programming cable	-	-	2023-10-20	Auxiliary Element
	75285B_28.1	PD Fast Charger	CD250	Q1412012397	2023-10-20	Auxiliary Element
	75285B_31.1	USB C to USB C Cable	-	-	2023-10-20	Auxiliary Element
S/02	75285B_6.1	Qassay Lateral Flow Reader Dual	Qassay	A300452783	2023-10-20	Element Under Test

Notes referenced to samples during the project:

Id	Type
S/01	Conducted
S/02	Radiated

Test sample description

Ports…… :	Port name and description	Cable			
		Specified max length [m]	Attached during test	Shielded	Coupled to patient(3)
	USB-C (charge only)	.....	[ ]	[ ]	[ ]
	.....	.....	[ ]	[ ]	[ ]
	.....	.....	[ ]	[ ]	[ ]
	.....	.....	[ ]	[ ]	[ ]
	.....	.....	[ ]	[ ]	[ ]
	.....	.....	[ ]	[ ]	[ ]

Supplementary information to the ports…… :	Type C USB Charging Connector						
Rated power supply .....:	Voltage and Frequency		Reference poles				
			L1	L2	L3	N	PE
	[ ]	AC:	[ ]	[ ]	[ ]	[ ]	[ ]
	[ ]	AC:	[ ]	[ ]	[ ]	[ ]	[ ]
	[X]	DC: USB-C Nom 5V (Min 4,5V Max 5,5V)					
	[ ]	DC:					
Rated Power .....:	< 1 W						
Clock frequencies.....:	32 Mhz						
Other parameters .....:	.....						
Software version .....:	Ver 3						
Hardware version .....:	Ver 0x201						
Dimensions in cm (W x H x D) ....:	44 x 15 x 128 mm						
Mounting position .....:	[ ]	Table top equipment					
	[ ]	Wall/Ceiling mounted equipment					
	[ ]	Floor standing equipment					
	[X]	Hand-held equipment					
	[ ]	Other:					
Modules/parts.....:	Module/parts of test item			Type		Manufacturer	

	LF reader	Q1A-DUO-USB	P4Q Health S.L.U.
	.....	.....	.....
	.....	.....	.....
	.....	.....	.....
Accessories (not part of the test item) .....:	Description	Type	Manufacturer
	USB C wall charger 25W (5V output)	50581	UGREEN
	USB A Powerbank 20.000mAh (5V output)	VXN4304GL	XIAOMI
	ST STLINK-V3SET programmer w/ adapter cables	STLINK-V3SET	ST
	ST NUCLEO-WB55RG evaluation board w/ SMA	NUCLEO-WB55	ST
	.....	.....	.....
	.....	.....	.....
Documents as provided by the applicant.....:	Description	File name	Issue date
	.....	.....	.....
	.....	.....	.....
	.....	.....	.....
	.....	.....	.....

(3) Only for Medical Equipment

Identification of the client

P4Q Health S.L.U.
Calle Nuestra Señora de la Guía, Número 19,
Arbuio 48810 ALONSOTEGI, Bizkaia - España

Testing period and place

Test Location	DEKRA Testing and Certification S.A.U.
Date (start)	2023-10-21
Date (finish)	2023-10-23

Document history

Report number	Date	Description
75285RRF.002	2024-02-02	First release.
75285RRF.002A1	2024-05-30	First modification. On the cover page, in the section “Other variants/models not tested”, model reference for the variant model not tested “Q1A-VIS-USB” is included. The edition year of the standards “USA FCC Part 15.247” and “USA FCC Part 15.209” is changed from 10-1-21 Edition to 10-1-23 Edition. The standard “CANADA RSS-247 Issue 2 (February 2017)” has been chaged to “CANADA RSS-247 Issue 3 (August 2023)”. The antenna gain value has been updated from 4 dBi to 3.8 dBi and consequently the EIRP conducted power results. This report cancels and replaces report 75285RRF.002
75285RRF.002A2	2024-06-07	Second modification. Peak power EIRP values for test “RSS-247 5.4 (d) / FCC 15.247 (b) (3) [Pkcp] Maximum Peak Conducted output power” have been corrected due to an error in the peak power EIRP calculation for Modulation: BTLE 5.0 (GFSK 2 Mbit/s). This report cancels and replaces report 75285RRF.002A1

Environmental conditions

In the control chamber, the following limits were not exceeded during the test:

Temperature	Min. = 15 ºC Max. = 35 ºC
Relative humidity	Min. = 20 % Max. = 75 %

In the semianechoic chamber, the following limits were not exceeded during the test.

Temperature	Min. = 15 ºC Max. = 35 ºC
Relative humidity	Min. = 20 % Max. = 75 %

In the chamber for conducted measurements, the following limits were not exceeded during the test:

Temperature	Min. = 15 ºC Max. = 35 ºC
Relative humidity	Min. = 20 % Max. = 75 %

Remarks and comments

The tests have been performed by the technical personnel: Antonio Manuel Sánchez Carrizo, Jia Hao Luo Chen, Rubén Mora Fernández and Victoria Olmedo Villalba.

Used instrumentation:

Control No.	Equipment	Model	Manufacturer	Next Calibration
07040	EXTENSION FOR OPEN SWITCH UNIT UP TO 40GHz	OSP-B157Wx	Rohde&Schwarz	2025-04-19
07039	Rohde&Schwarz	OSP-B157W8	ROHDE & SCHWARZ	2025-05-25
08661	SHIELDED ROOM	-	SIEPEL	--
08835	SIGNAL AND SPECTRUM ANALYZER 2Hz-50GHz	FSW50	ROHDE AND SCHWARZ	2025-02-08
07552	TEMPERATURE AND HUMIDITY PROBE	HWg-STE	HW GROUP	2024-05-02
00939	TEMPERATURE CHAMBER	VMT 04/35	HERAEUS	2025-01-11
07798	WMS32	WMS32	ROHDE AND SCHWARZ	--
5862	EMI TEST RECEIVER 9kHz-7GHz	ESR7	ROHDE AND SCHWARZ	2025-02-15
7763	HORN ANTENNA 1-18GHz	BBHA 9120D	SCHWARZBECK MESS-ELEKTRONIK	2026-01-16
6495	HORN ANTENNA 18-40GHz	BBHA 9170	SCHWARZBECK	2024-03-19
2932	HYBRID BILOG ANTENNA 30MHz-6GHz	JB6	SUNOL SCIENCES CORPORATION	2023-10-29
7862	PRE-AMPLIFIER G>30dB 18-40GHz	BLMA 1840-3G	BONN ELEKTRONIK	2024-03-14
7769	PREAMPLIFIER 30dB 500MHz-18GHz	BBV 9718 C	SCHWARZBECK	2024-02-15
8130	SEMIANECHOIC ABSORBER LINED CHAMBER	P29419	ALBATROSS	--
8134	SHIELDED ROOM	P29419	ALBATROSS PROJECTS GMBH	--
6157	SIGNAL AND SPECTRUM ANALYZER 10Hz-40GHz	FSV40	ROHDE AND SCHWARZ	2025-01-218
4848	SOFTWARE FOR EMC/RF TESTING	EMC32	ROHDE AND SCHWARZ	--
7550	TEMPERATURE AND HUMIDITY PROBE	HWg-STE	HW GROUP	2024-05-02
7549	TEMPERATURE AND HUMIDITY PROBE	HWg-STE	HW GROUP	2024-05-02

Testing verdicts

Fail	F
Inconclusive	I
Not applicable	N/A
Not measured	N/M
Pass	P

Summary

Bluetooth Low Energy 5.0 (1M, 2M).

FCC PART 15 PARAGRAPH/ RSS-247			
Requirement – Test case		**Verdict**	**Remark**
FCC 15.247 (a)(2) / RSS-247 5.2. (a)	6 dB Bandwidth	P	
FCC 15.247 (b) / RSS-247 5.4. (d)	Maximum output power and antenna gain	P	
FCC 15.247 (d) / RSS-247 5.5.	Band-edge emissions compliance (Transmitter)	P	
FCC 15.247 (e) / RSS-247 5.2. (b)	Power spectral density	P	
FCC 15.247 (d) / RSS-247 5.5.	Emission limitations radiated (Transmitter)	P	
Supplementary information and remarks:			

Appendix A: Test results. Bluetooth Low Energy 5.0 (1M, 2M)

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RSS-247 5.2 (b) / FCC 15.247 (e) [Psd] Power spectral density 35
RSS-247 5.4 (d) / FCC 15.247 (b) (3) [Pkcp] Maximum Peak Conducted output power 43
RSS-247 5.5 / FCC 15.247 (d) [Bndedge] Band-edge emissions compliance (Transmitter) 51
RSS-247 5.5 / FCC 15.247 (d) [RSE] Emission limitations radiated (Transmitter) 62

TEST CONDITIONS

(*): Data provided by the client.

POWER SUPPLY (*):

Vnominal:	5Vdc
Type of Power Supply:	External power supply (USB-C)

ANTENNA (*):

Type of Antenna:	Type F PCB antenna
Maximum Declared Antenna Gain:	3.8dBi

TEST FREQUENCIES (*):

Modulation	Data rates	Low Channel:	Middle Channel	High Channel
BTLE GFSK	1M 1 Mbit/s	2402 MHz	2440 MHz	2480 MHz
BTLE GFSK	2M 2 Mbit/s	2402 MHz	2440 MHz	2480 MHz

During transmitter test the EUT was controlled by a SW tool provided by the client to operate in a continuous transmit mode on the modulation schemes and test channels as required.

CONDUCTED MEASUREMENTS:

The equipment under test was set up in a shielded room and it is connected to the TS8997 using a low loss RF cable. The reading of the spectrum analyser is corrected taking into account the cable loss.

RADIATED MEASUREMENTS:

All radiated tests were performed in a semi-anechoic chamber. The measurement antenna (Bilog antenna for the range between 30 MHz to 1000 MHz and 1 GHz-17 GHz Double ridge horn antenna) is situated at a distance of 3 m and at a distance of 1.5 m for the frequency range 17 GHz-26 GHz (17 GHz-40 GHz horn antenna).

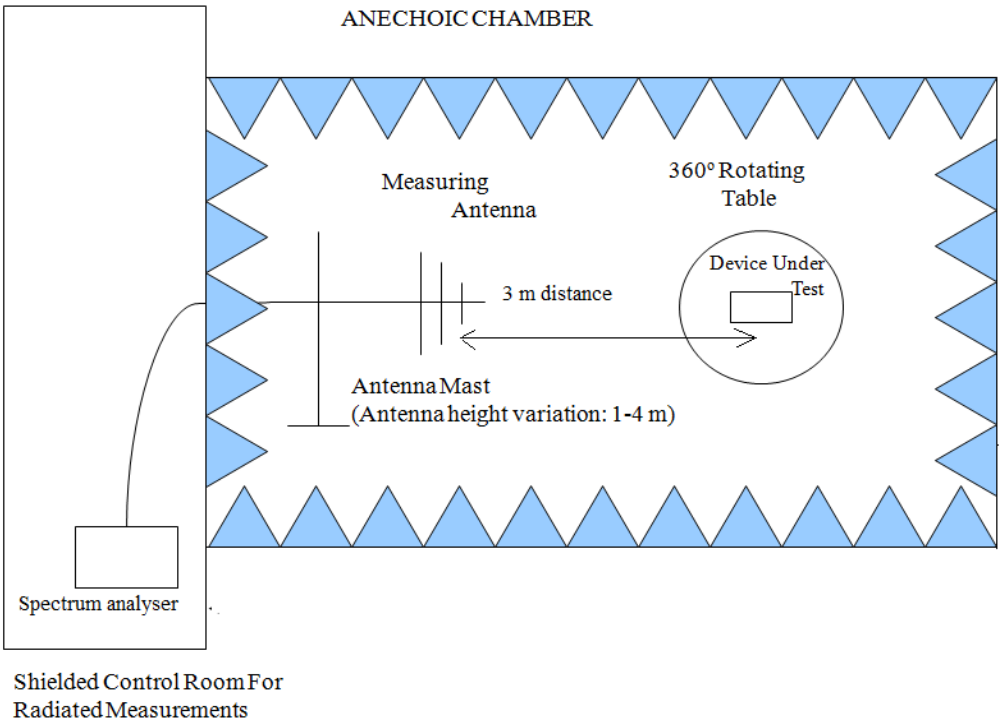
For radiated emissions in the range 17 GHz-26 GHz that is performed at a distance closer than the specified distance, an inverse proportionality factor of 20 dB per decade is used to normalize the measured data for determining compliance.

The equipment under test was set up on a non-conductive platform above the ground plane and the situation and orientation was varied to find the maximum radiated emission. It was also rotated 360º and the antenna height (Bilog antenna and Double ridge horn antenna) was varied from 1 to 4 meters to find the maximum radiated emission.

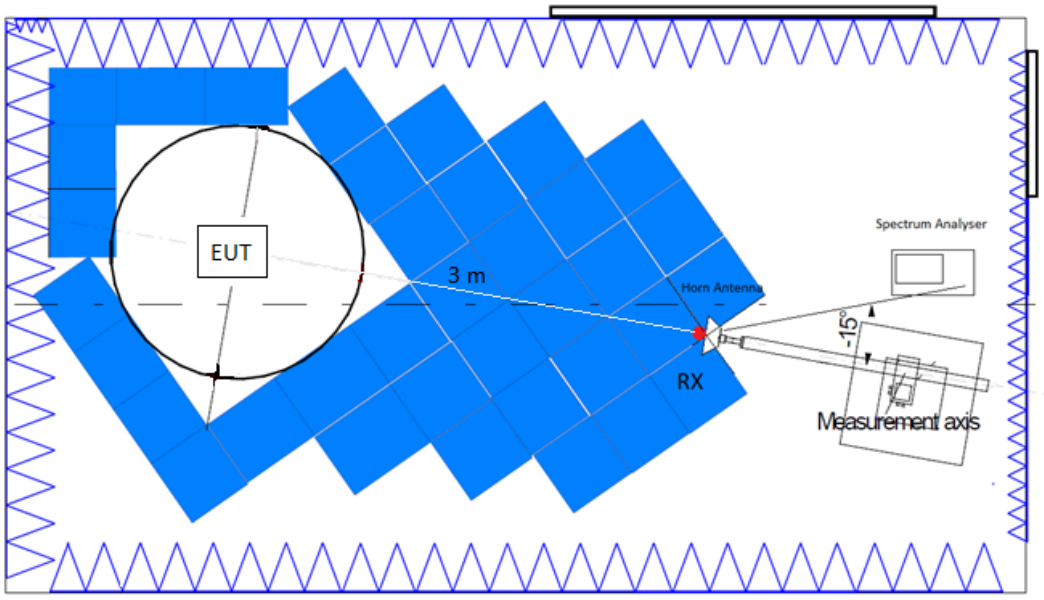
Measurements were made in both horizontal and vertical planes of polarization.

A resolution bandwidth/video bandwidth of 100 kHz / 300 kHz was used for frequencies below 1 GHz and 1 MHz / 3 MHz for frequencies above 1 GHz.

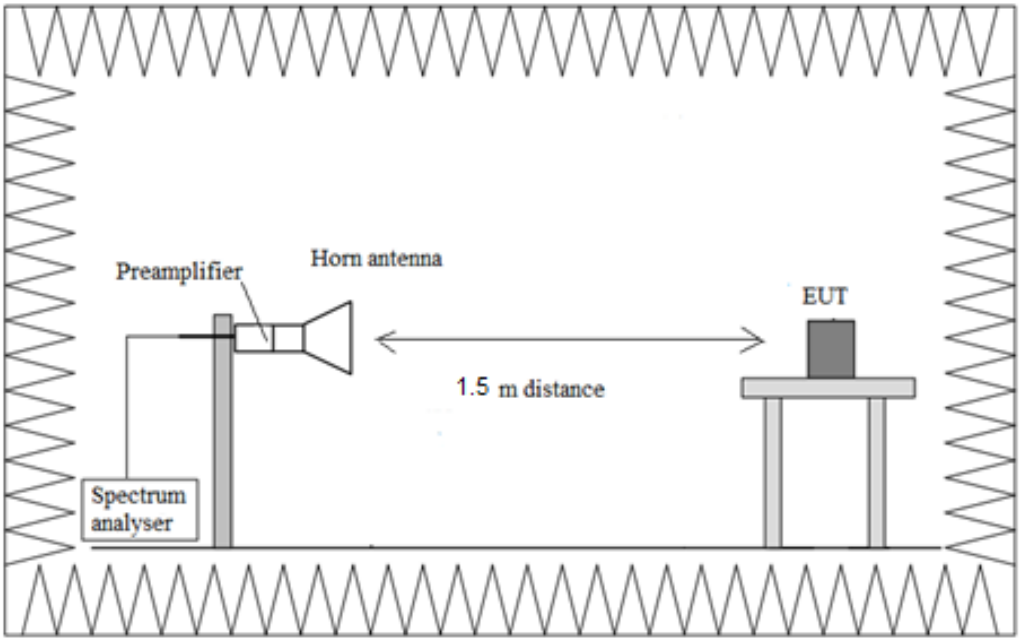
Radiated measurements setup from 30 MHz to 1 GHz:



Radiated measurements setup from 1 GHz to 17 GHz:



Radiated measurements setup f > 17 GHz:



TEST CASES DETAILS

99dBw Occupied Channel Bandwidth 99%

Modulation: BTLE 5.0 (GFSK 1 Mbit/s)

Results

Freq (MHz)	Occ Ch BW (MHz)
2402.00000	1.065
2440.00000	1.085
2480.00000	1.090

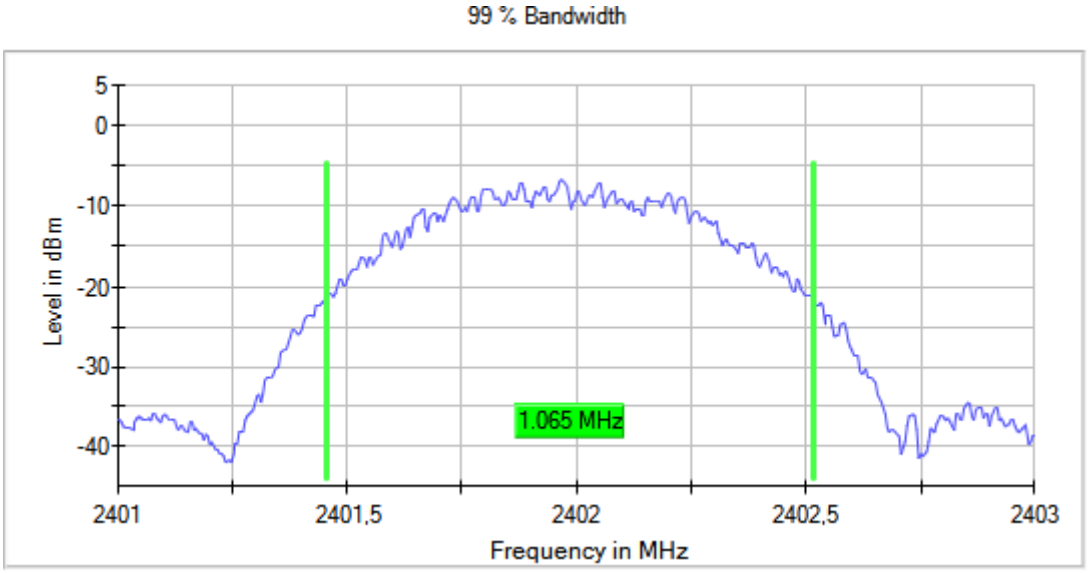
Verdict

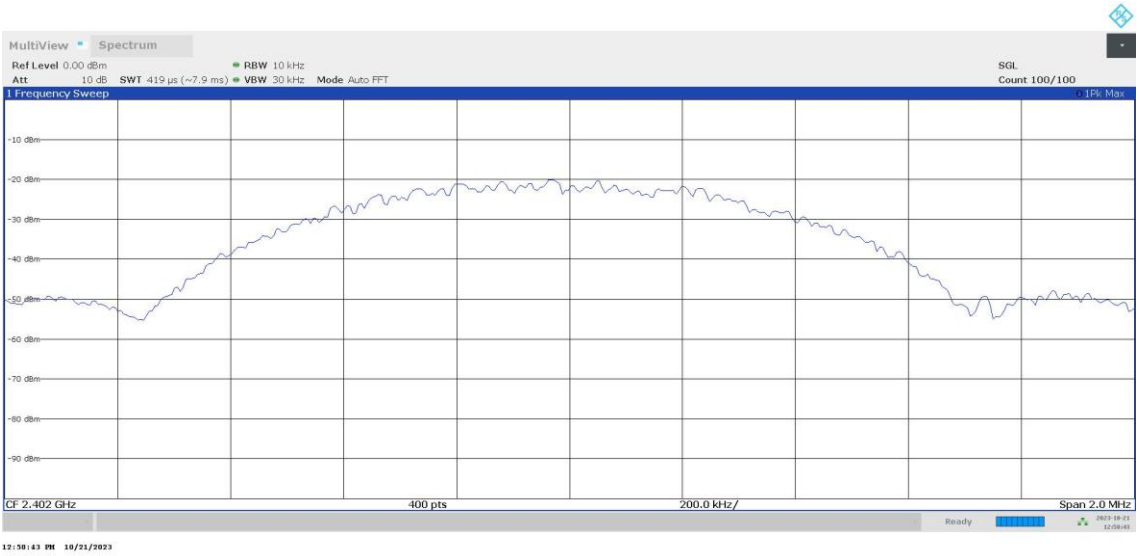
Pass

Attachments

Equipment Type = Digital Transmission System (DTS)	Bandwidth MHz = 1
Modulation = BTLE 5.0 (GFSK 1 Mbit/s)	Frequency MHz = 2402.00000
MIMO Mode = SISO	Active Port = 1

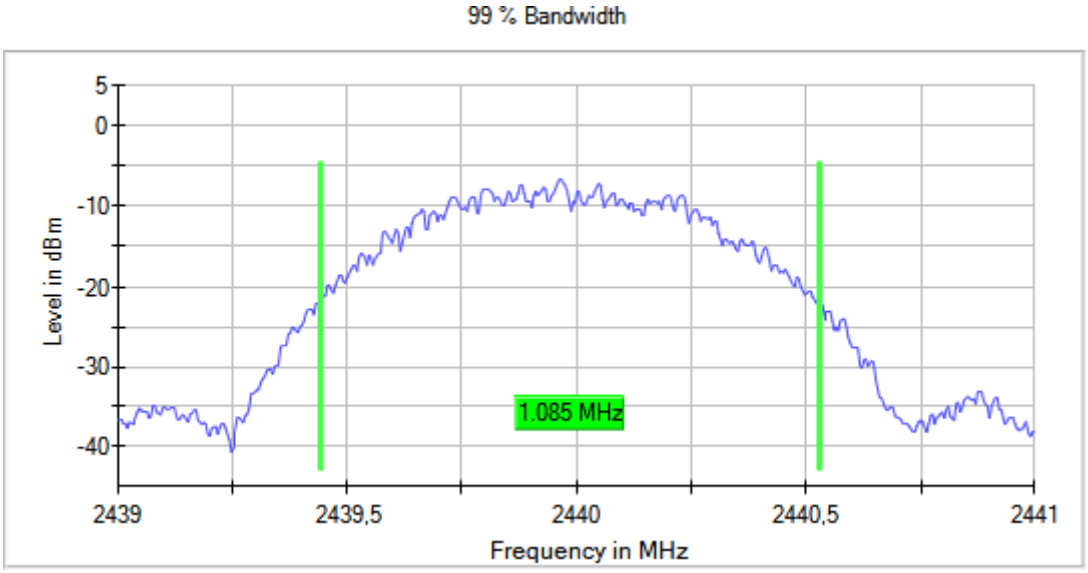
Images:

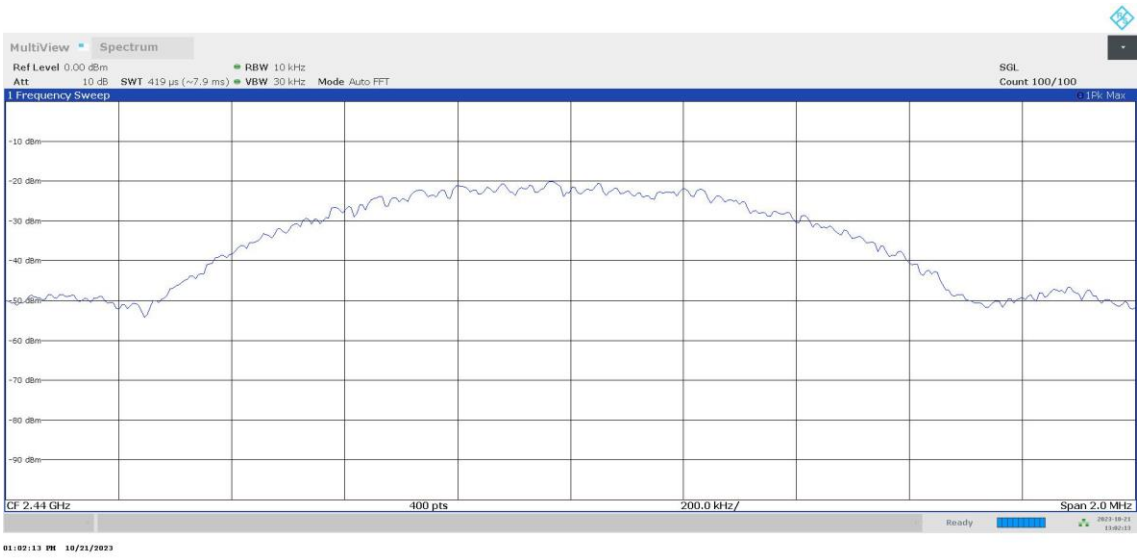




Equipment Type = Digital Transmission System (DTS)
Bandwidth MHz = 1
Modulation = BTLE 5.0 (GFSK 1 Mbit/s)
Frequency MHz = 2440.00000
MIMO Mode = SISO
Active Port = 1

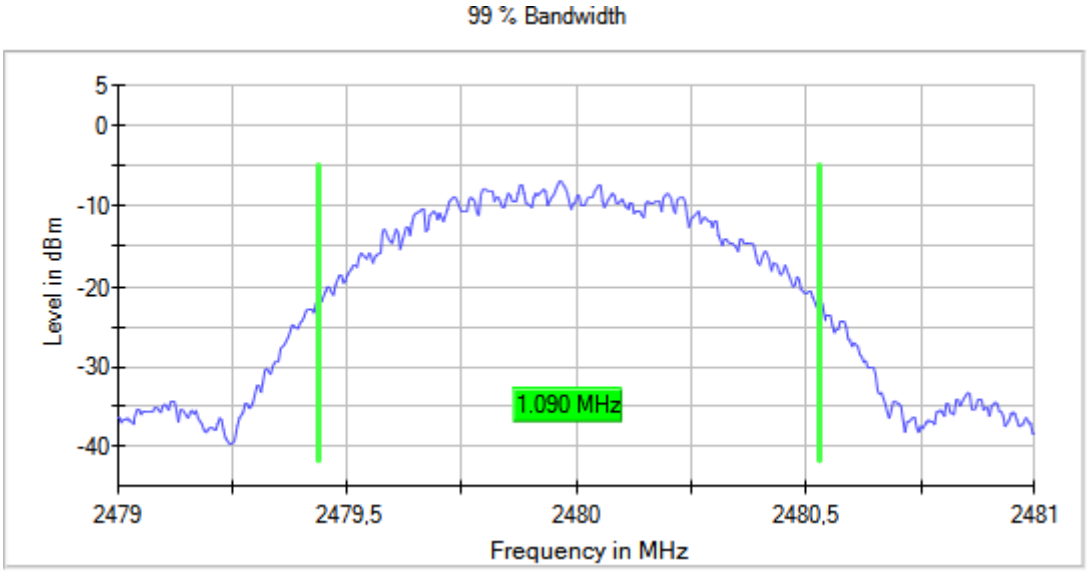
Images:

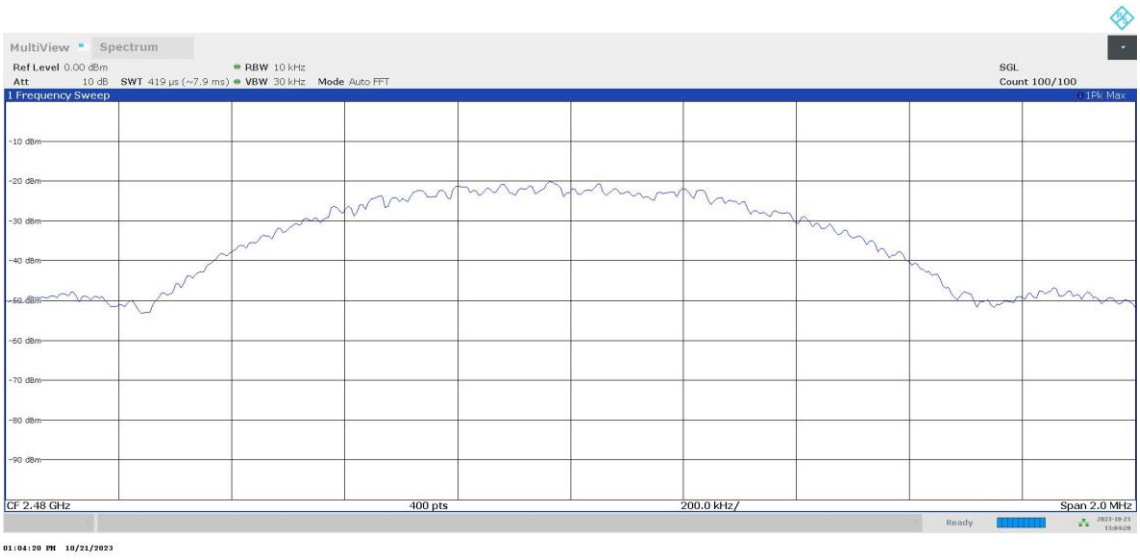




Equipment Type = Digital Transmission System (DTS)
Bandwidth MHz = 1
Modulation = BTLE 5.0 (GFSK 1 Mbit/s)
Frequency MHz = 2480.00000
MIMO Mode = SISO
Active Port = 1

Images:





Modulation: BTLE 5.0 (GFSK 2 Mbit/s)

Results

Freq (MHz)	Occ Ch BW (MHz)
2402.00000	2.150
2440.00000	2.180
2480.00000	2.180

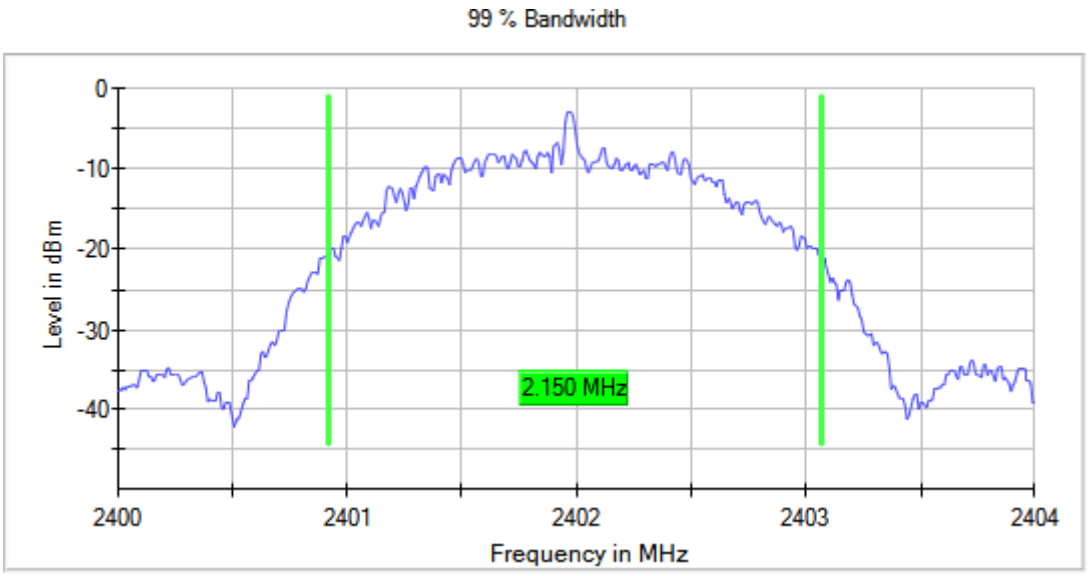
Verdict

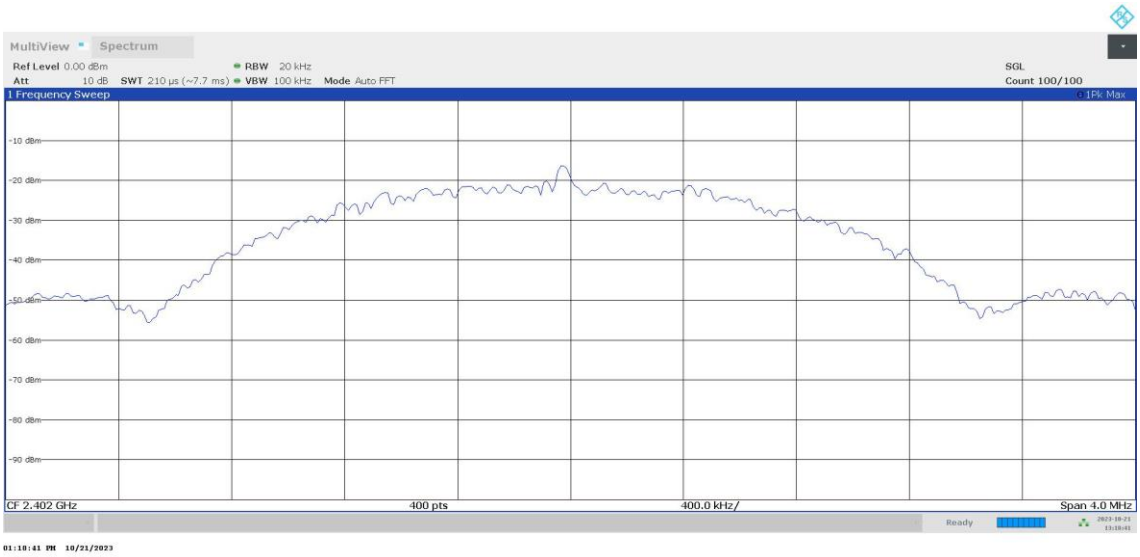
Pass

Attachments

Equipment Type = Digital Transmission System (DTS)	Bandwidth MHz = 2
Modulation = BTLE 5.0 (GFSK 2 Mbit/s)	Frequency MHz = 2402.00000
MIMO Mode = SISO	Active Port = 1

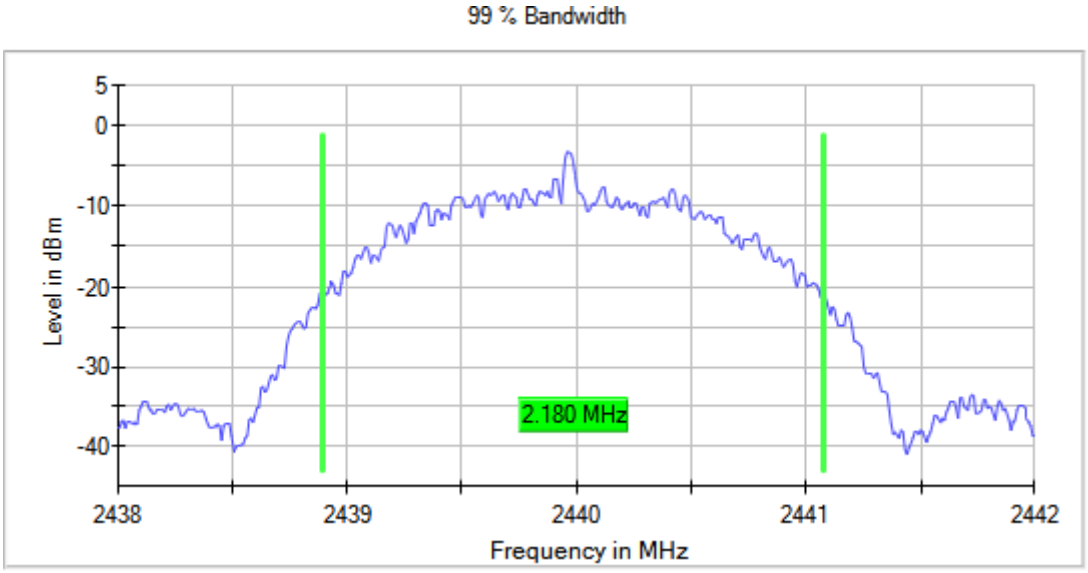
Images:

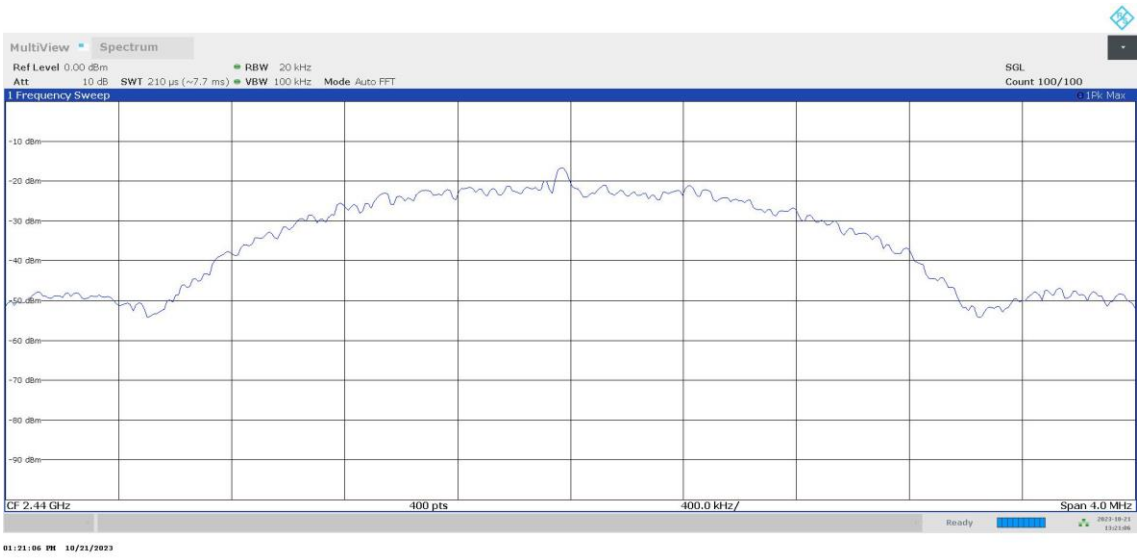




Equipment Type = Digital Transmission System (DTS)	Bandwidth MHz = 2
Modulation = BTLE 5.0 (GFSK 2 Mbit/s)	Frequency MHz = 2440.00000
MIMO Mode = SISO	Active Port = 1

Images:



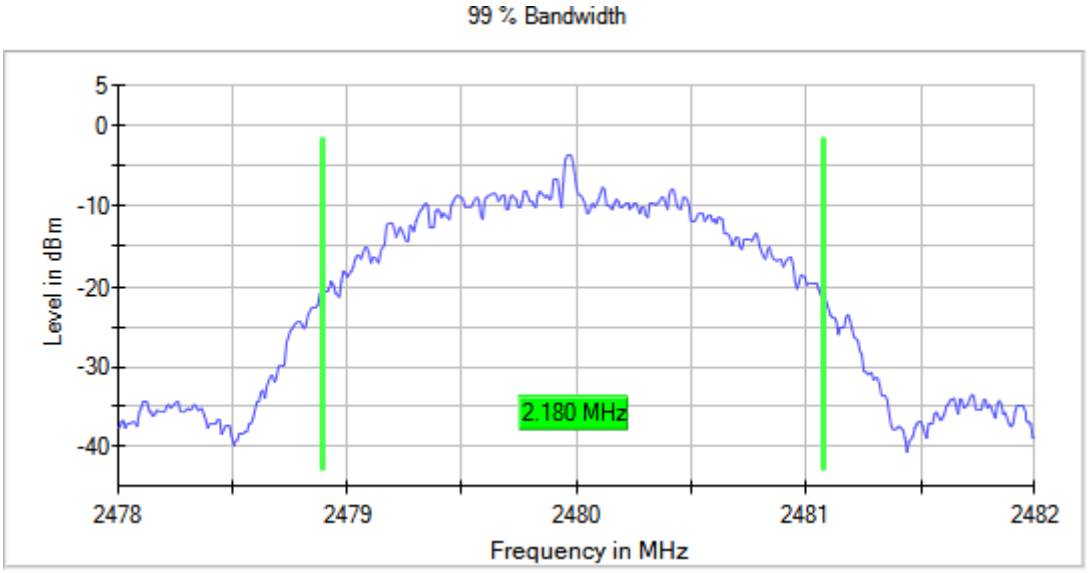


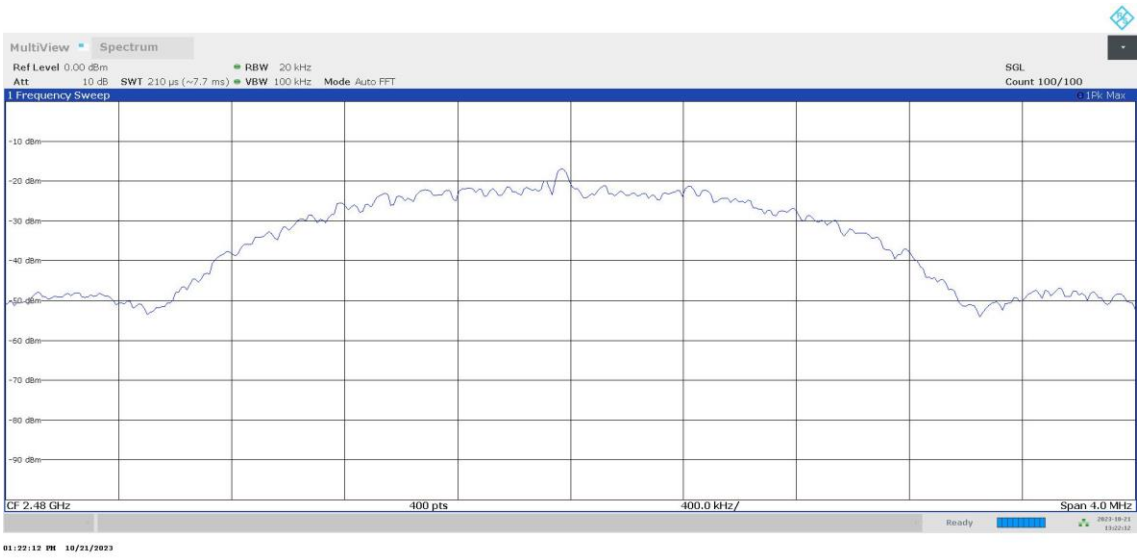
Equipment Type = Digital Transmission System (DTS) Bandwidth MHz = 2

Modulation = BTLE 5.0 (GFSK 2 Mbit/s) Frequency MHz = 2480.00000

MIMO Mode = SISO Active Port = 1

Images:





RSS-247 5.2 (a) / FCC 15.247 (a) (2) [6dBw] 6 dB Bandwidth

Limits

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

Modulation: BTLE 5.0 (GFSK 1 Mbit/s)

Results

Freq (MHz)	Ebw (MHz)
2402.00000	0.792
2440.00000	0.832
2480.00000	0.812

Verdict

Pass

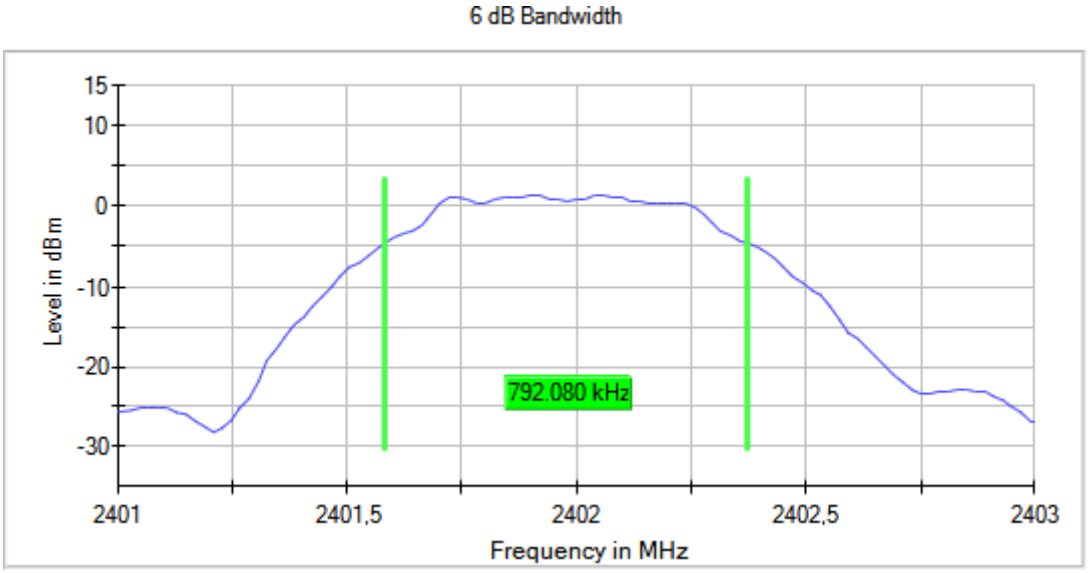
Attachments

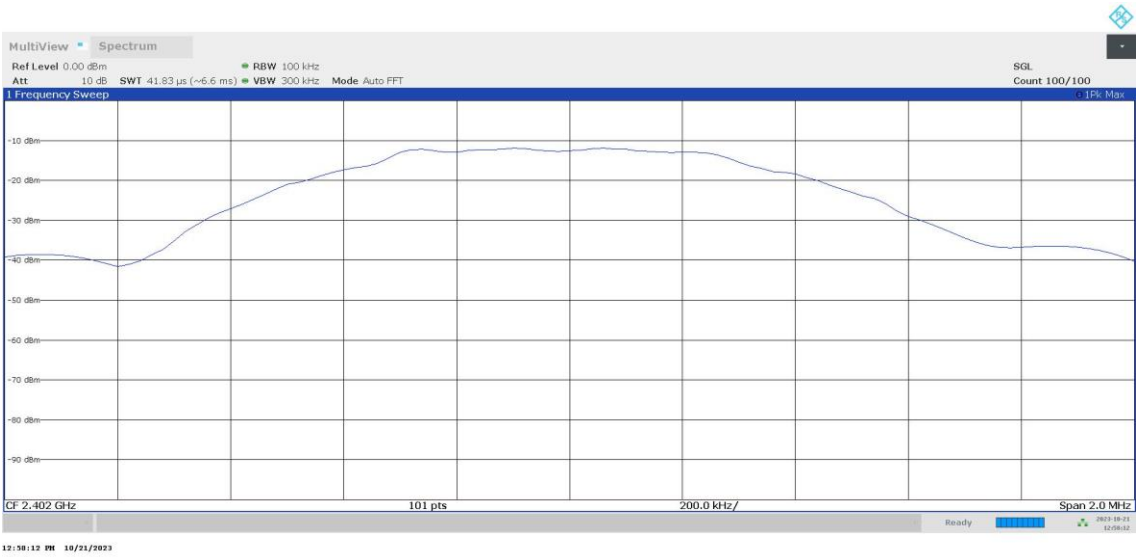
Bandwidth MHz = 1 Modulation = BTLE 5.0 (GFSK 1 Mbit/s)

Frequency MHz = 2402.00000 MIMO Mode = SISO

Active Port = 1

Images:



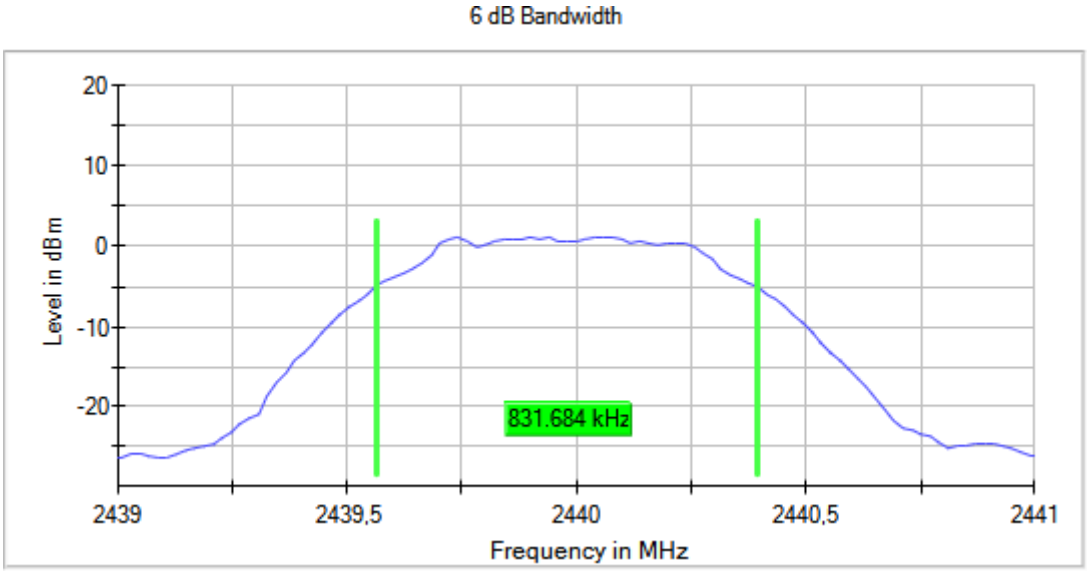


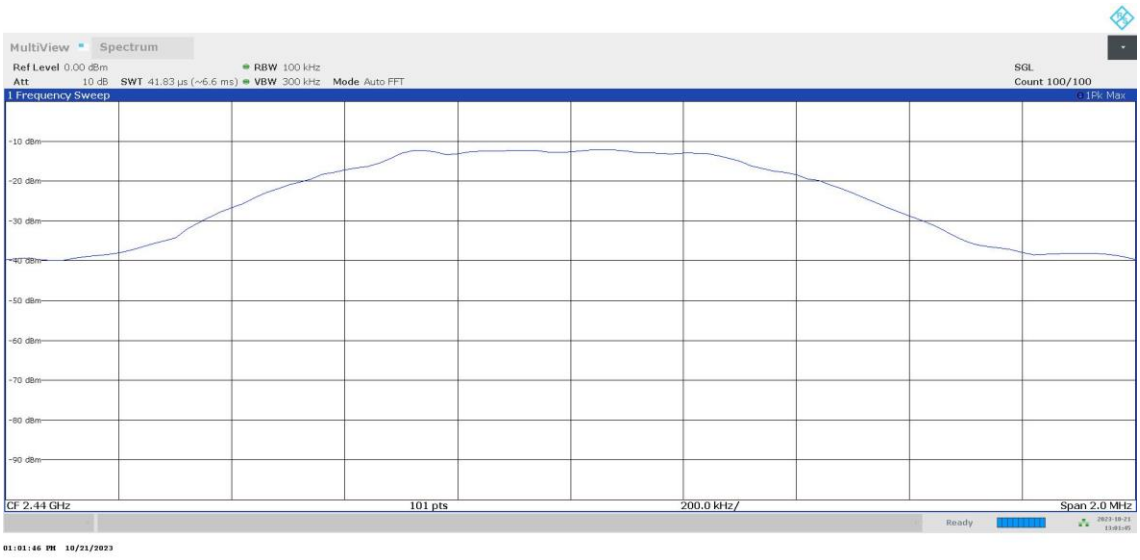
Bandwidth MHz = 1 Modulation = BTLE 5.0 (GFSK 1 Mbit/s)

Frequency MHz = 2440.00000 MIMO Mode = SISO

Active Port = 1

Images:



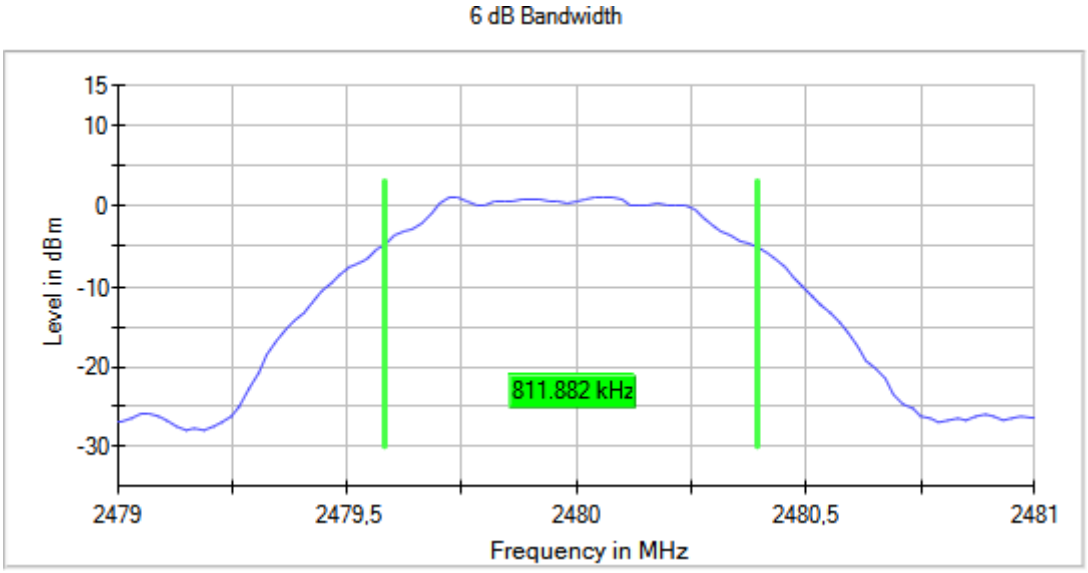


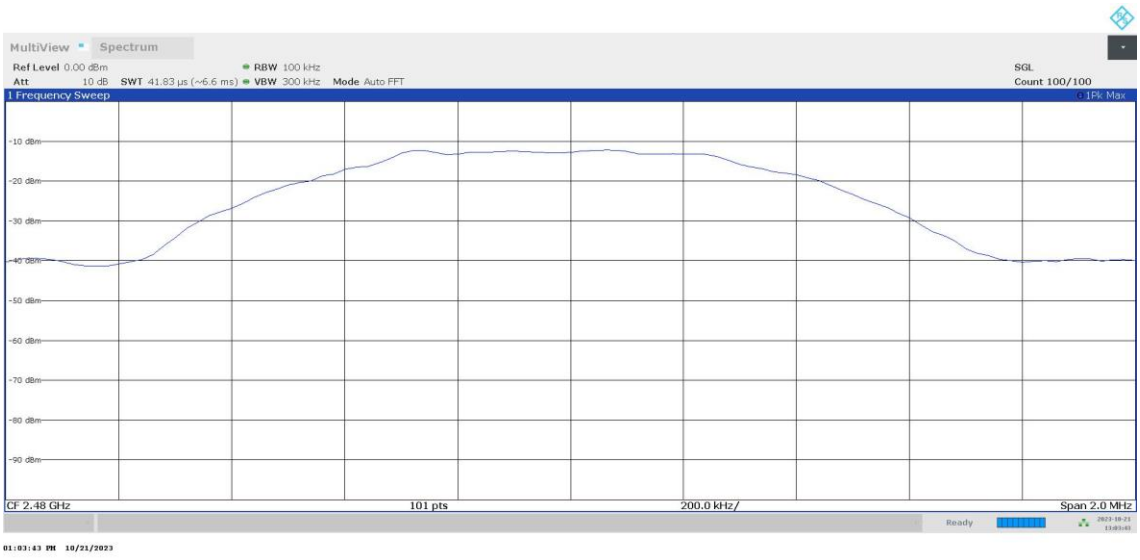
Bandwidth MHz = 1 Modulation = BTLE 5.0 (GFSK 1 Mbit/s)

Frequency MHz = 2480.00000 MIMO Mode = SISO

Active Port = 1

Images:





Modulation: BTLE 5.0 (GFSK 2 Mbit/s)

Results

Freq (MHz)	Ebw (MHz)
2402.00000	1.703
2440.00000	1.743
2480.00000	1.743

Verdict

Pass

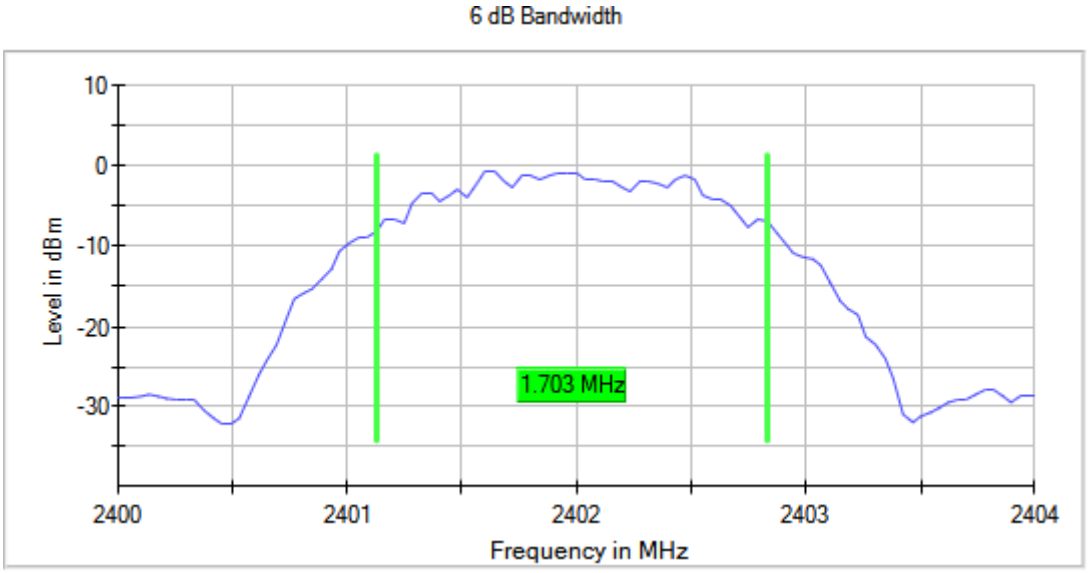
Attachments

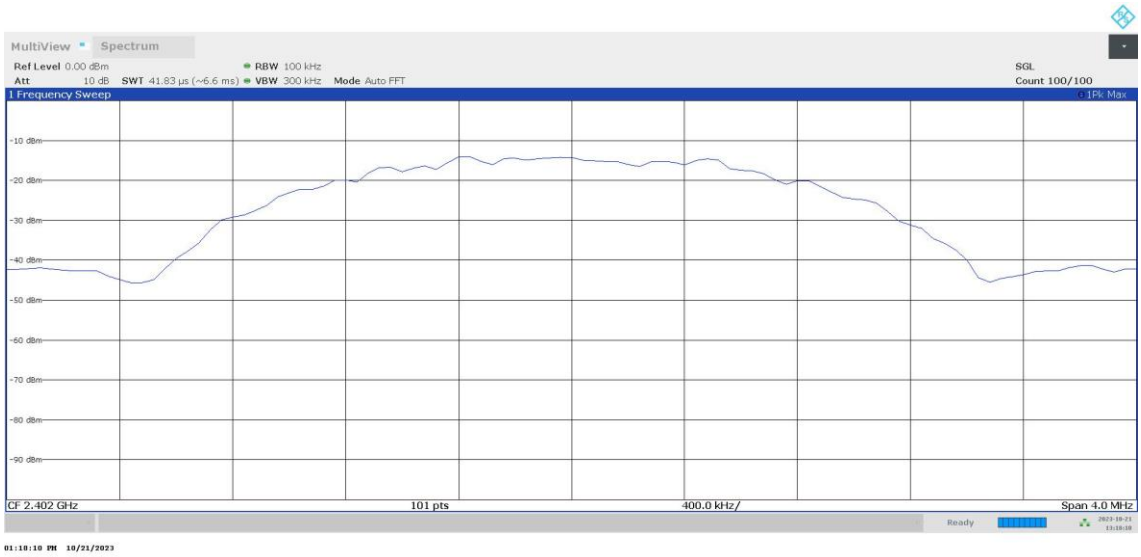
Bandwidth MHz = 2 Modulation = BTLE 5.0 (GFSK 2 Mbit/s)

Frequency MHz = 2402.00000 MIMO Mode = SISO

Active Port = 1

Images:



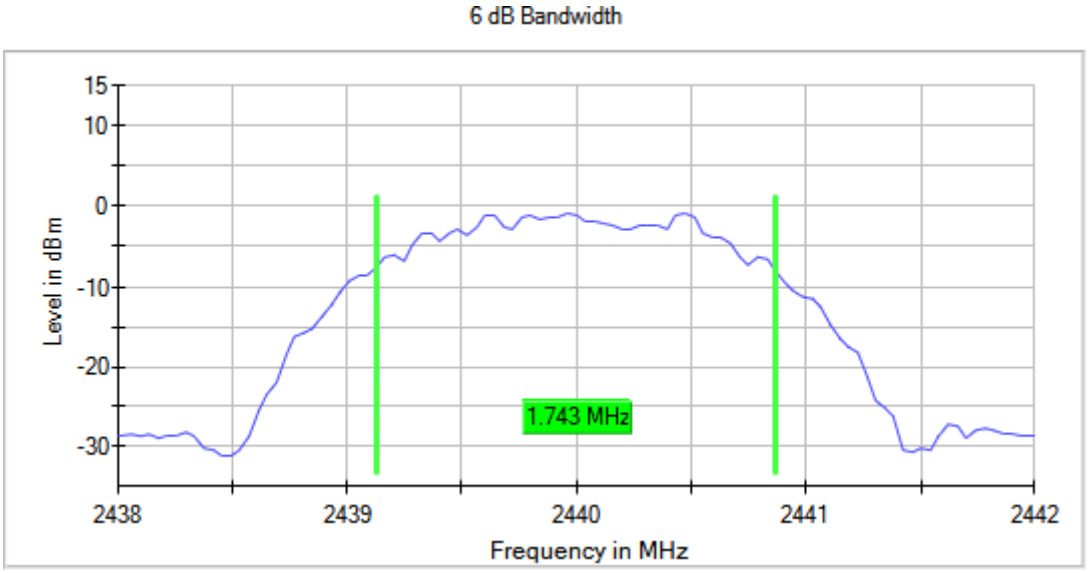


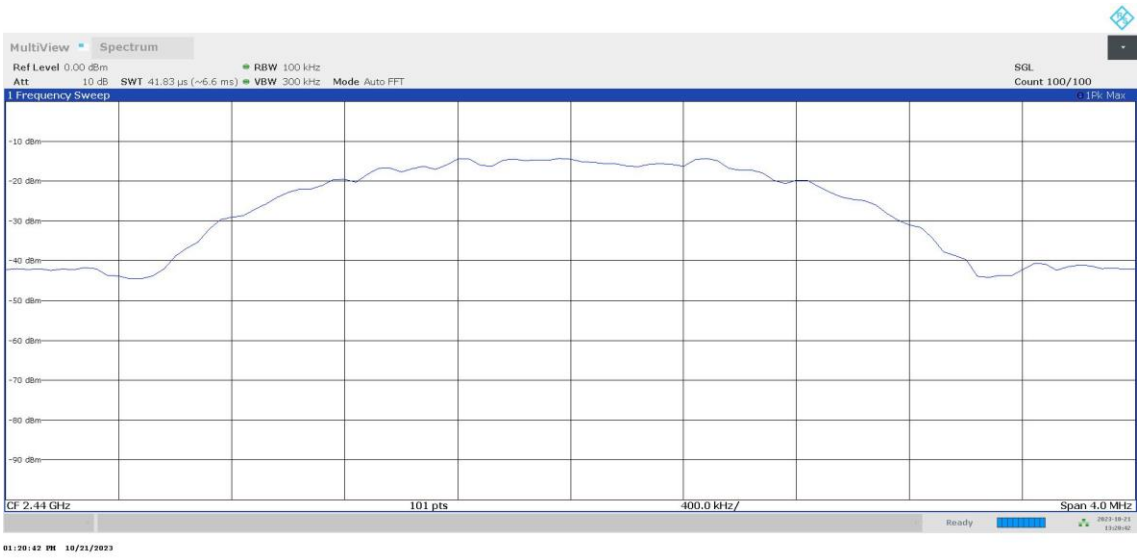
Bandwidth MHz = 2 Modulation = BTLE 5.0 (GFSK 2 Mbit/s)

Frequency MHz = 2440.00000 MIMO Mode = SISO

Active Port = 1

Images:



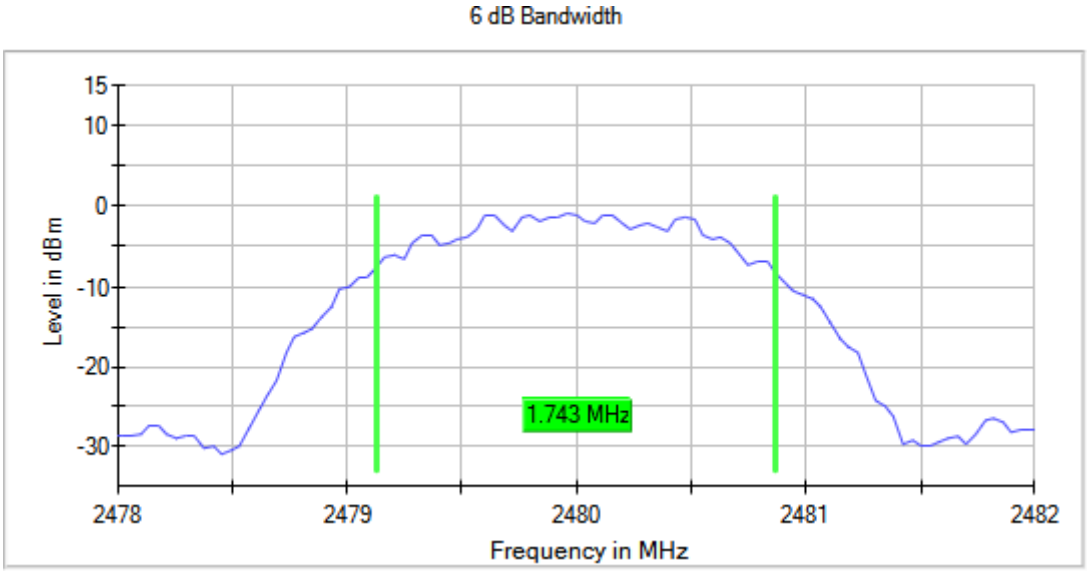


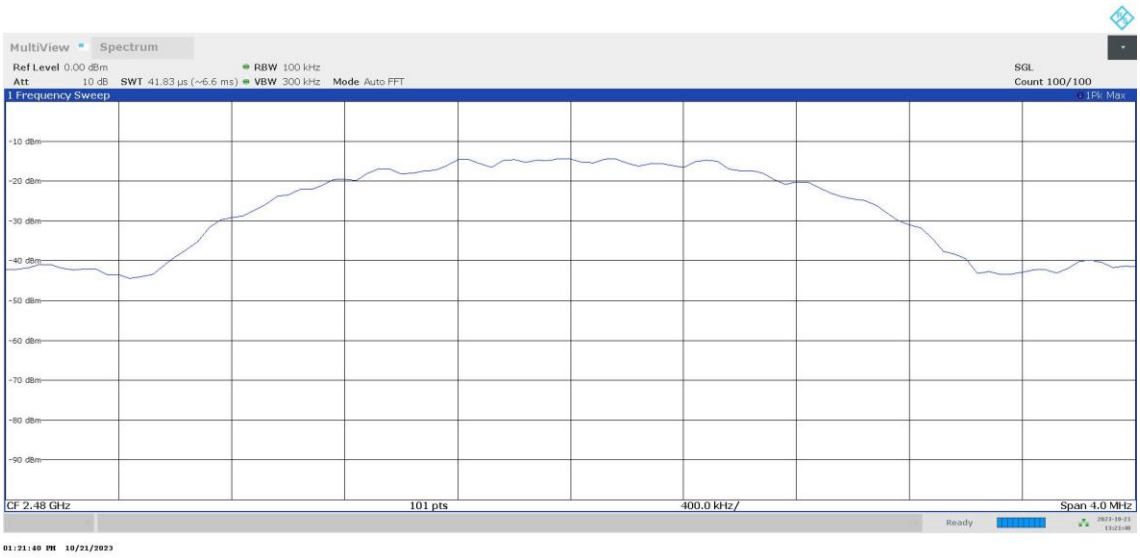
Bandwidth MHz = 2 Modulation = BTLE 5.0 (GFSK 2 Mbit/s)

Frequency MHz = 2480.00000 MIMO Mode = SISO

Active Port = 1

Images:





RSS-247 5.2 (b) / FCC 15.247 (e) [Psd] Power spectral density

Limits

For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

Modulation: BTLE 5.0 (GFSK 1 Mbit/s)

Results

Freq (MHz)	PSD (dBm)
2402.00000	-6.65
2440.00000	-6.57
2480.00000	-6.70

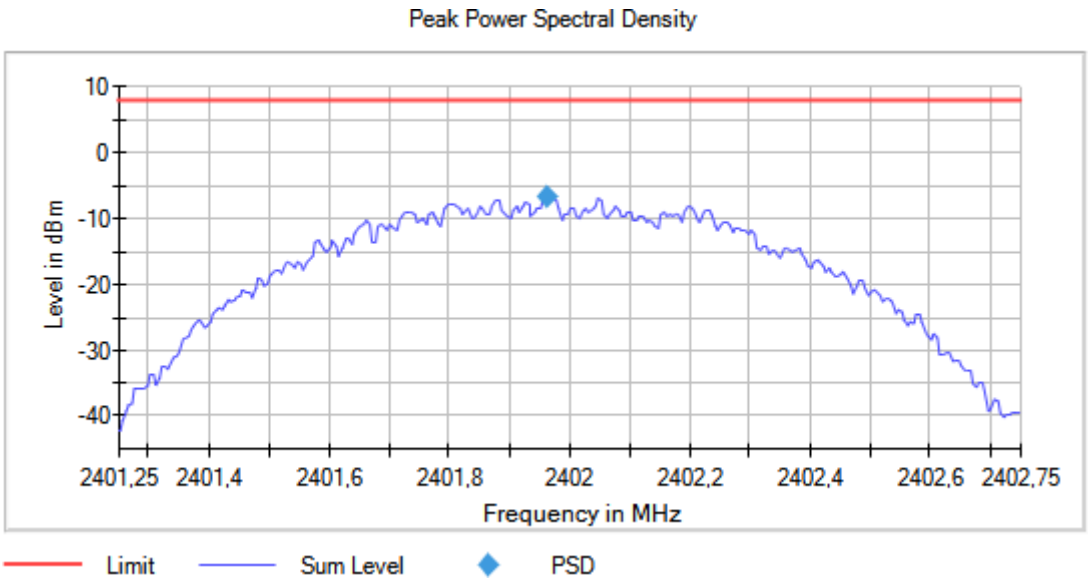
Verdict

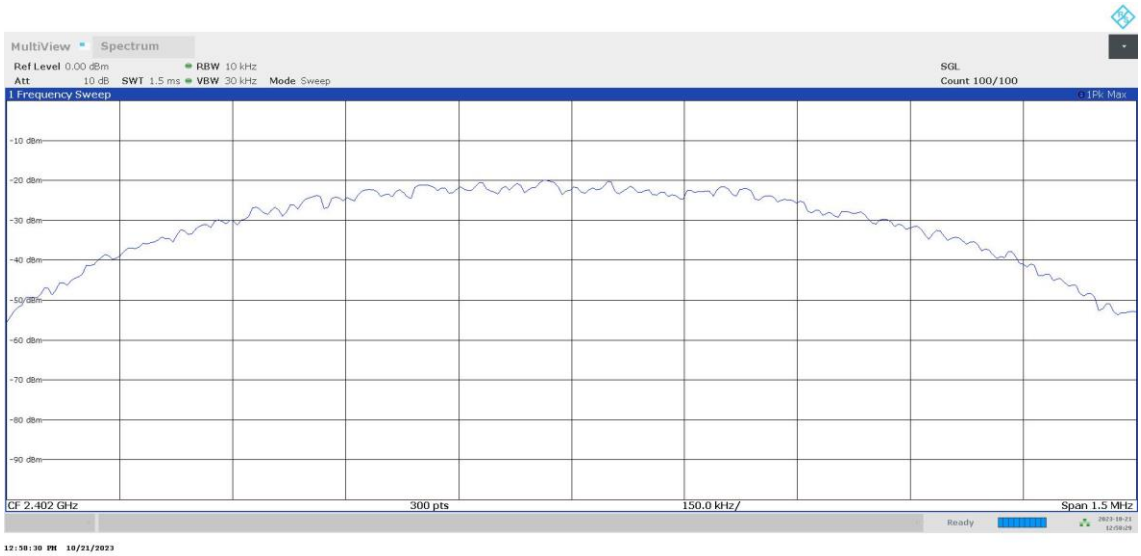
Pass

Attachments

Equipment Type = Digital Transmission System (DTS)	Bandwidth MHz = 1
Modulation = BTLE 5.0 (GFSK 1 Mbit/s)	Frequency MHz = 2402.00000
MIMO Mode = SISO	Active Port = 1

Images:



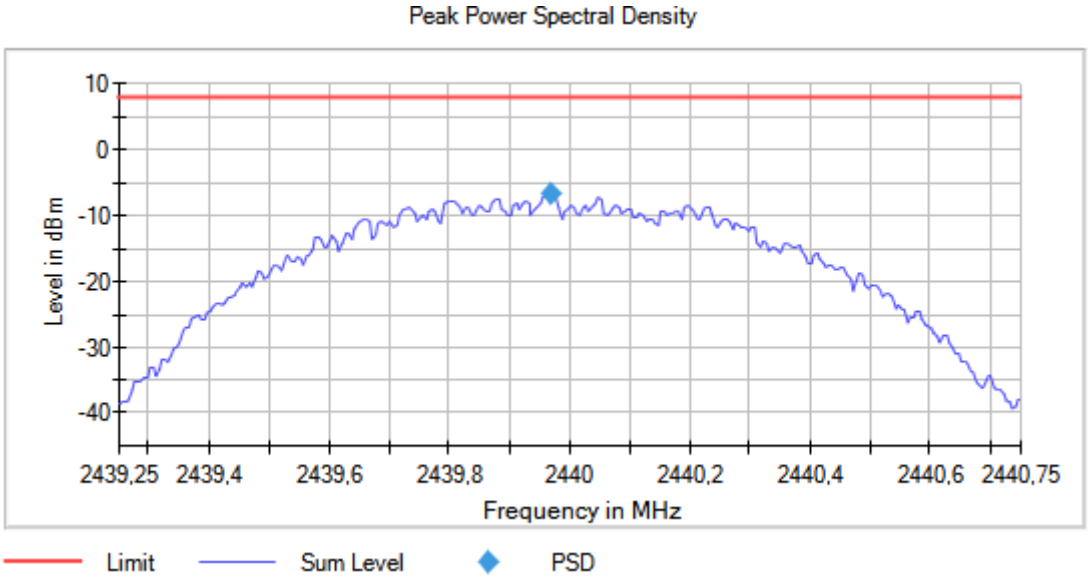


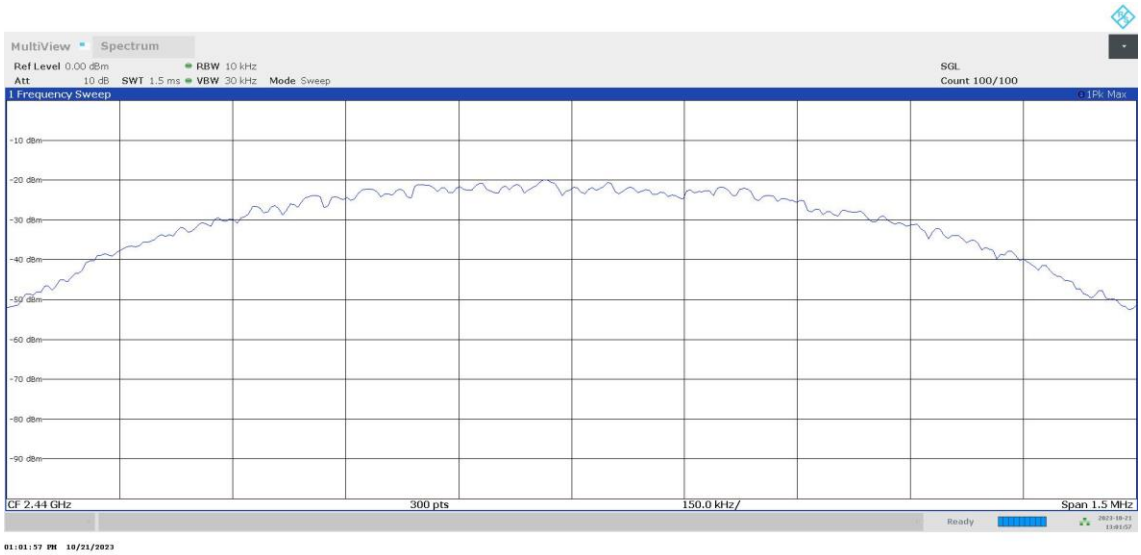
Equipment Type = Digital Transmission System (DTS) Bandwidth MHz = 1

Modulation = BTLE 5.0 (GFSK 1 Mbit/s) Frequency MHz = 2440.00000

MIMO Mode = SISO Active Port = 1

Images:



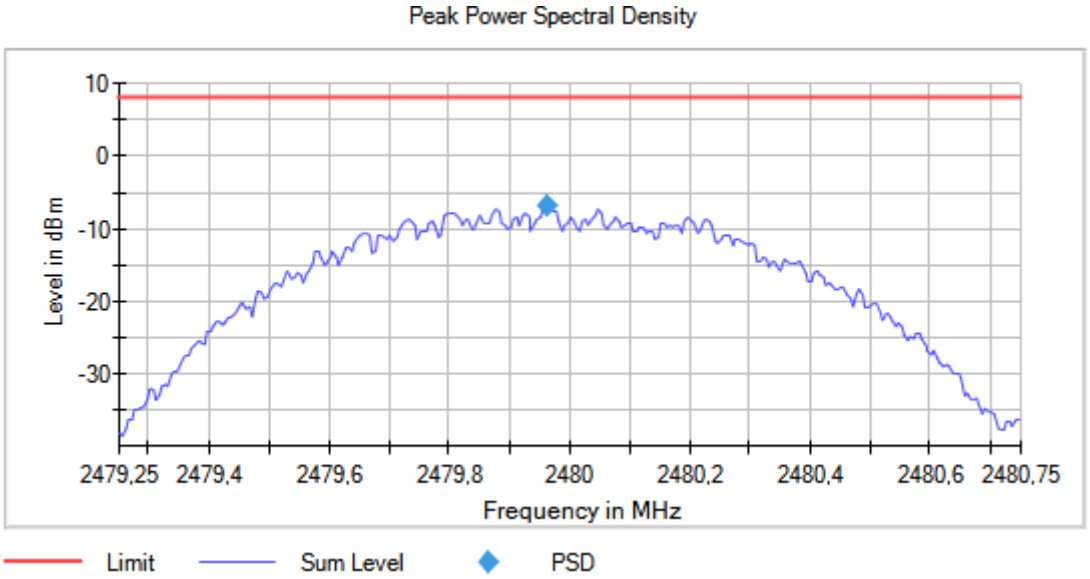


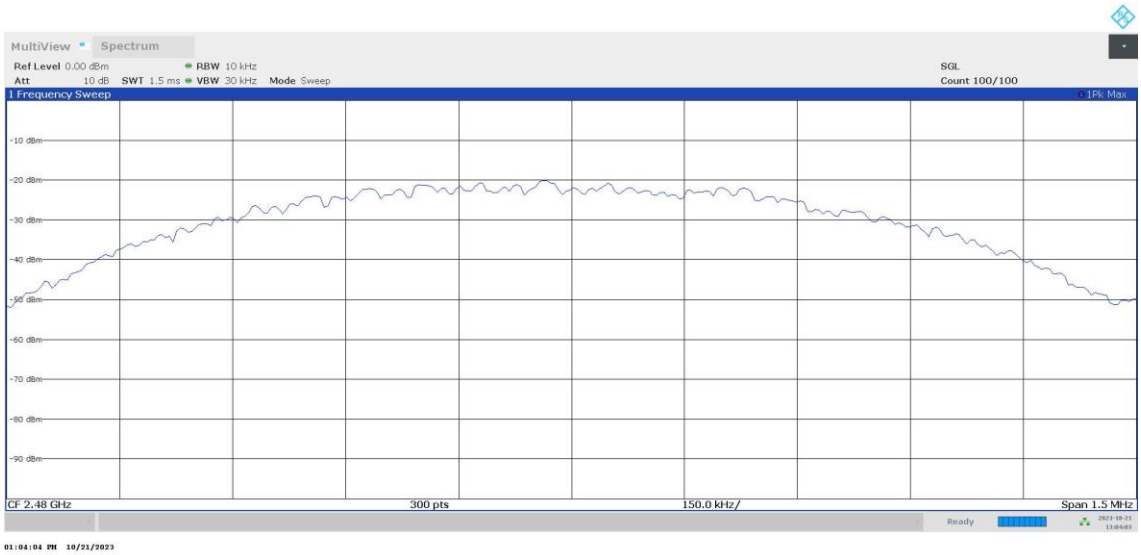
Equipment Type = Digital Transmission System (DTS) Bandwidth MHz = 1

Modulation = BTLE 5.0 (GFSK 1 Mbit/s) Frequency MHz = 2480.00000

MIMO Mode = SISO Active Port = 1

Images:





Modulation: BTLE 5.0 (GFSK 2 Mbit/s)

Results

Freq (MHz)	PSD (dBm)
2402.00000	-7.93
2440.00000	-8.24
2480.00000	-8.51

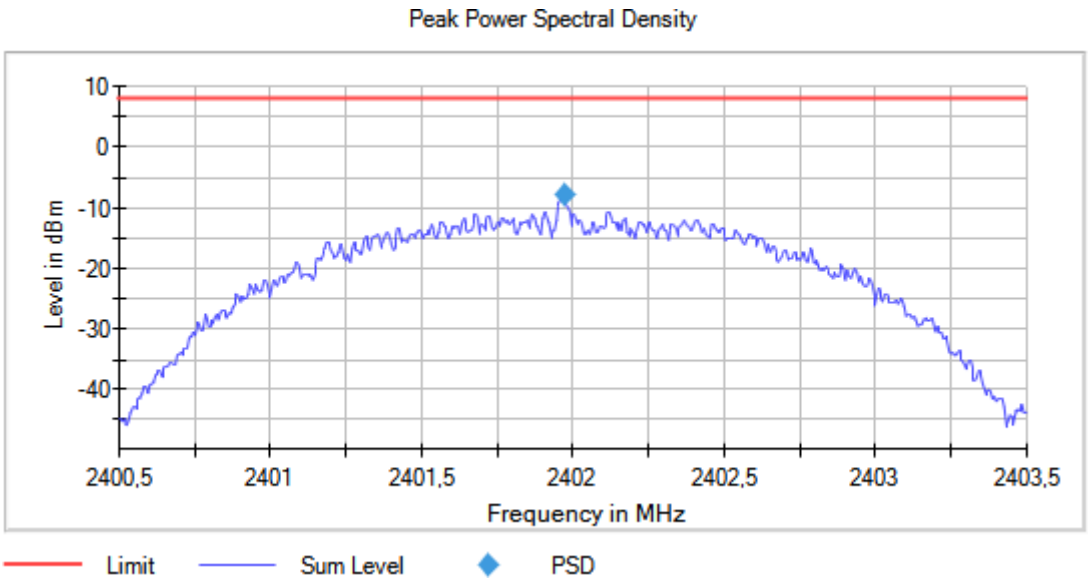
Verdict

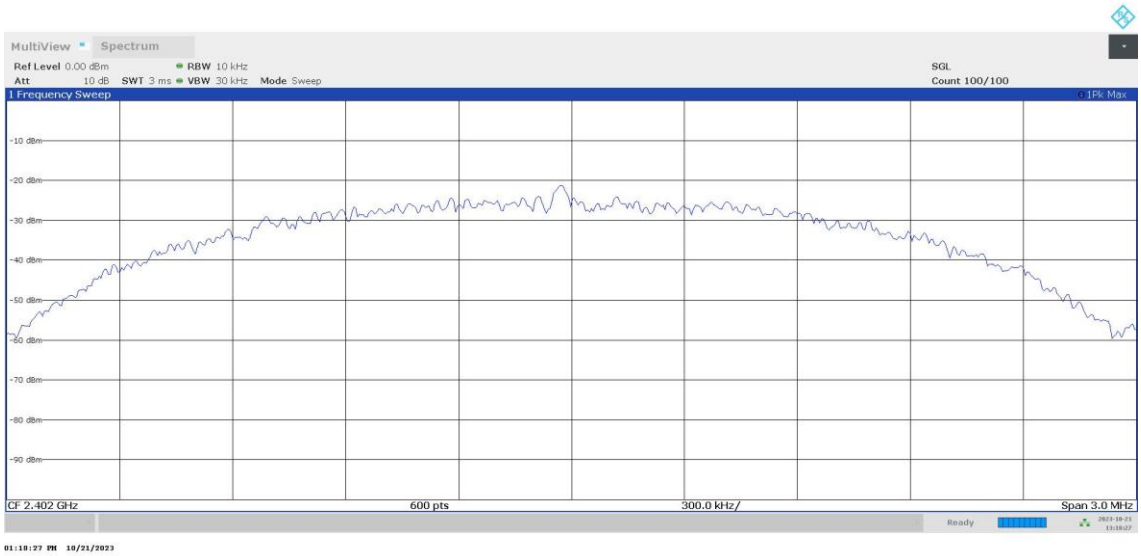
Pass

Attachments

Equipment Type = Digital Transmission System (DTS)	Bandwidth MHz = 2
Modulation = BTLE 5.0 (GFSK 2 Mbit/s)	Frequency MHz = 2402.00000
MIMO Mode = SISO	Active Port = 1

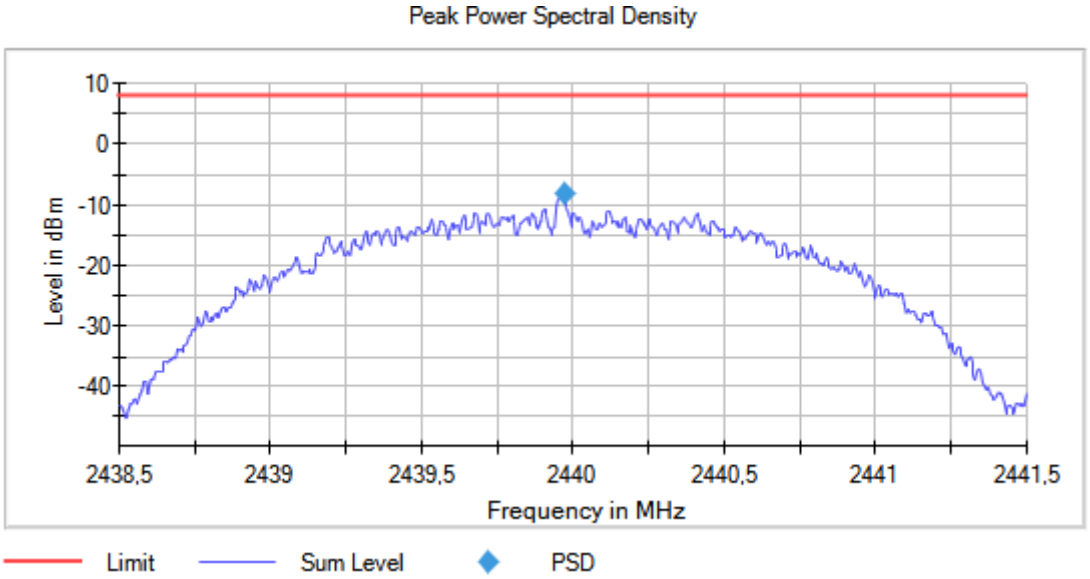
Images:

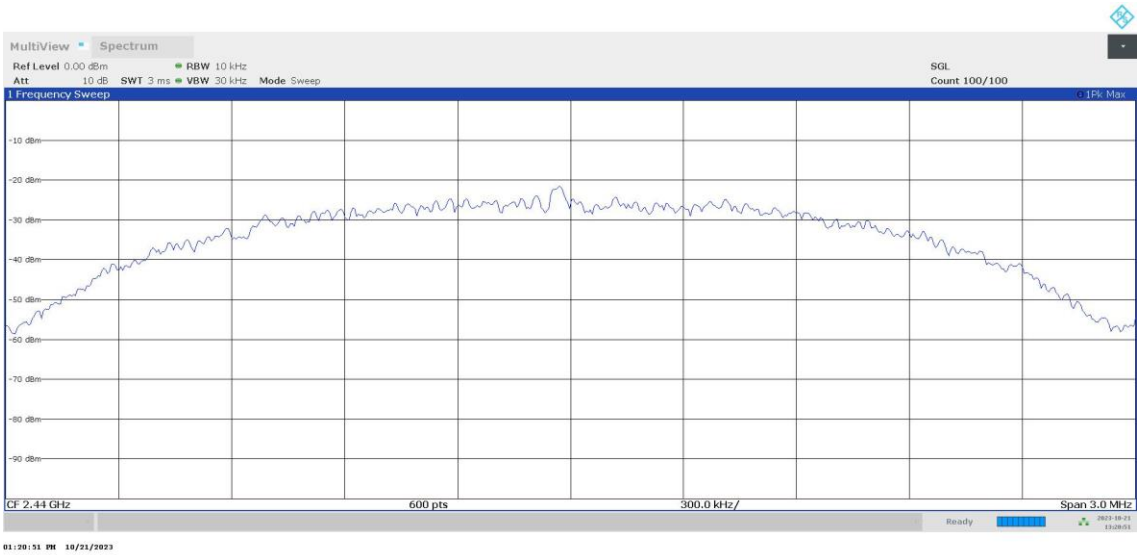




Equipment Type = Digital Transmission System (DTS)	Bandwidth MHz = 2
Modulation = BTLE 5.0 (GFSK 2 Mbit/s)	Frequency MHz = 2440.00000
MIMO Mode = SISO	Active Port = 1

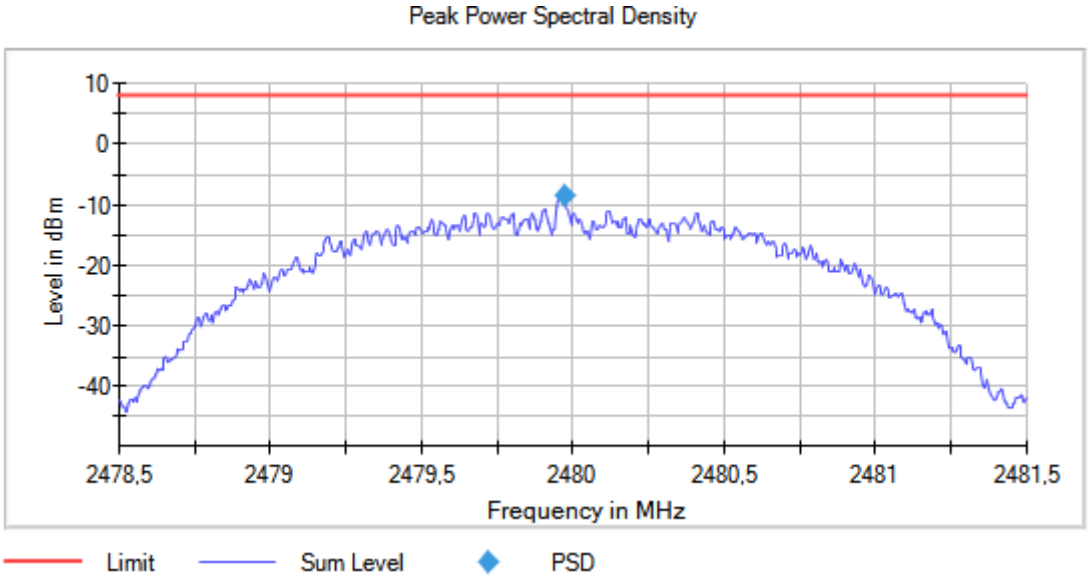
Images:

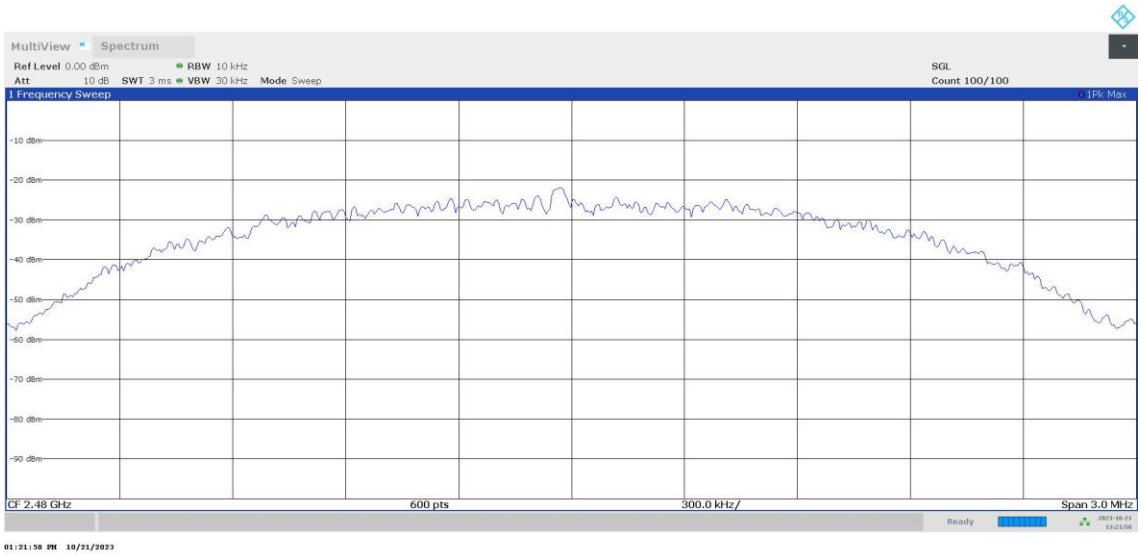




Equipment Type = Digital Transmission System (DTS)
Modulation = BTLE 5.0 (GFSK 2 Mbit/s)
MIMO Mode = SISO
Bandwidth MHz = 2
Frequency MHz = 2480.00000
Active Port = 1

Images:





RSS-247 5.4 (d) / FCC 15.247 (b) (3) [Pkcp] Maximum Peak Conducted output power

Limits

For systems using digital modulation in the 2400-2483.5 MHz band: 1 watt (30 dBm).
The e.i.r.p. shall not exceed 4 W (36 dBm) (RSS-247).

The maximum peak conducted output power level in the fundamental emission was measured using the method according to point 11.9.1.1 ”RBW ≥ DTS bandwidth” of ANSI C.63.10-2013.

The EIRP power (dBm) is calculated by adding the declared maximum antenna gain to the measured conducted power.

Maximum Declared Antenna Gain: +3.8 dBi

Modulation: BTLE 5.0 (GFSK 1 Mbit/s)

Results

Freq (MHz)	Peak Power (dBm)	Peak Power EIRP (dBm)
2402.00000	3.10	6.90
2440.00000	3.07	6.87
2480.00000	2.97	6.17

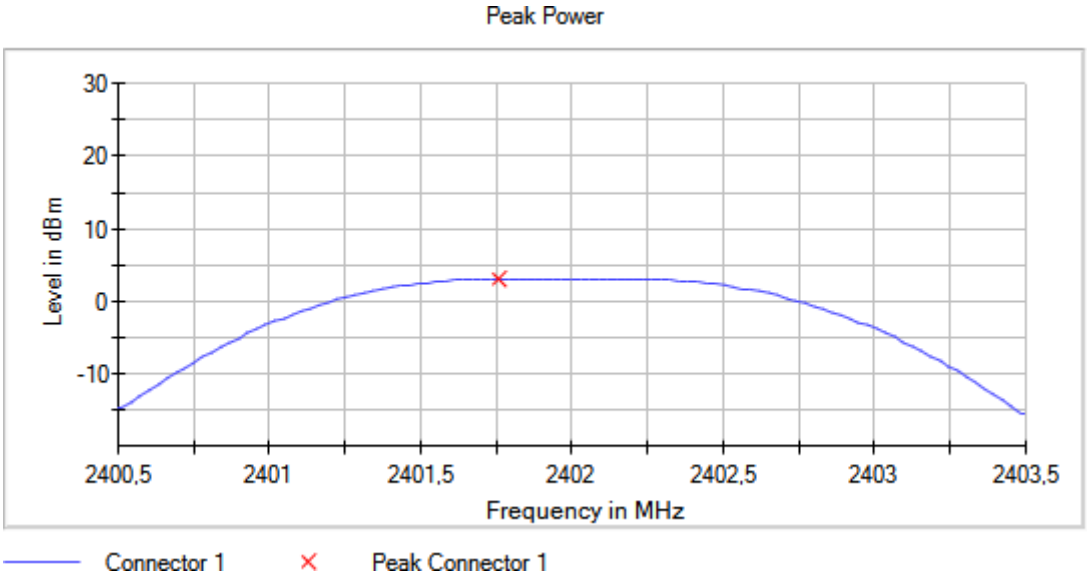
Verdict

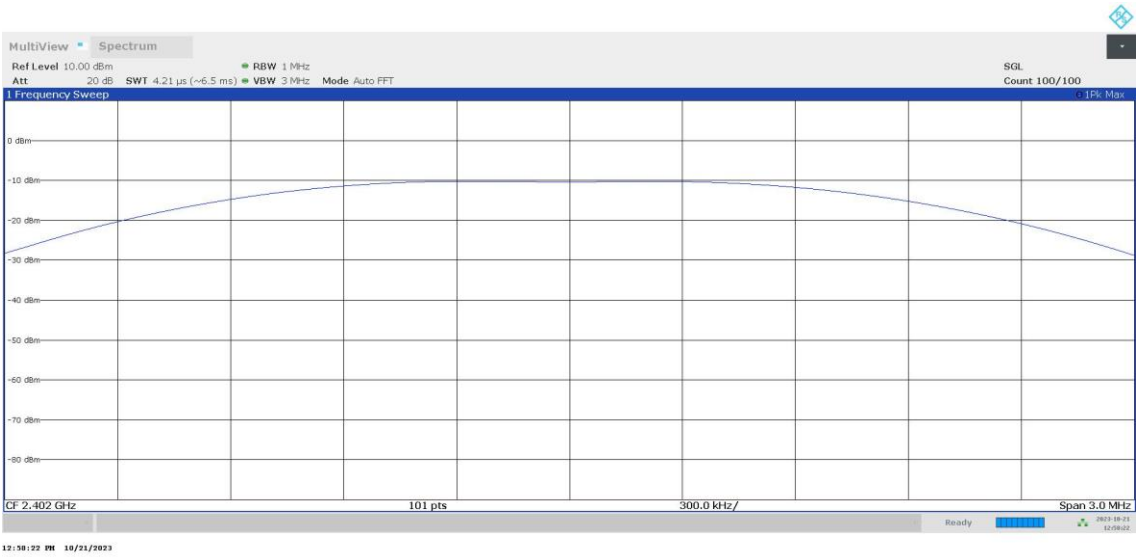
Pass

Attachments

Equipment Type = Digital Transmission System (DTS)	Bandwidth MHz = 1
Modulation = BTLE 5.0 (GFSK 1 Mbit/s)	Frequency MHz = 2402.00000
MIMO Mode = SISO	Active Port = 1

Images:



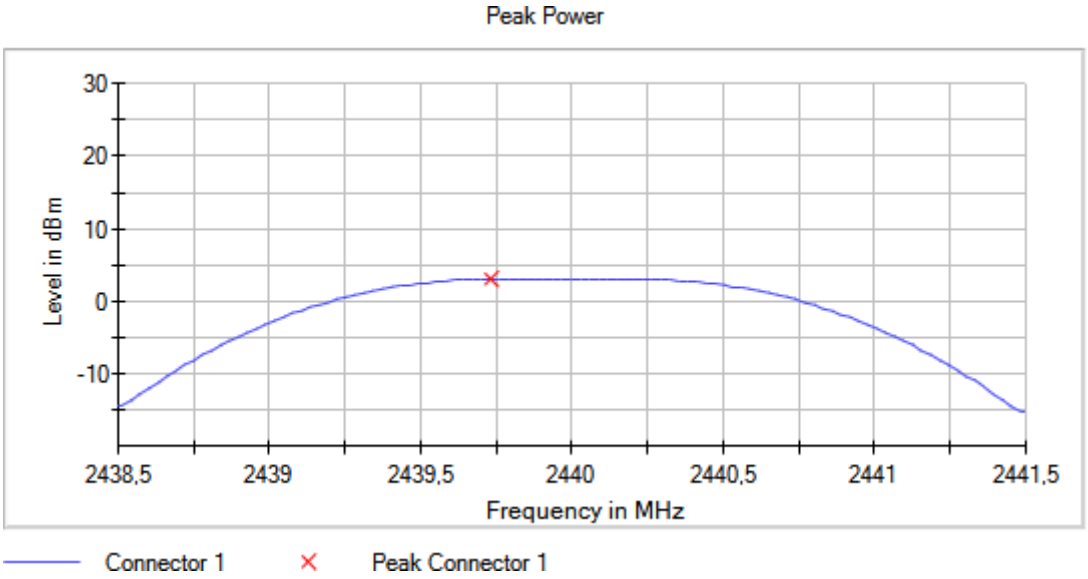


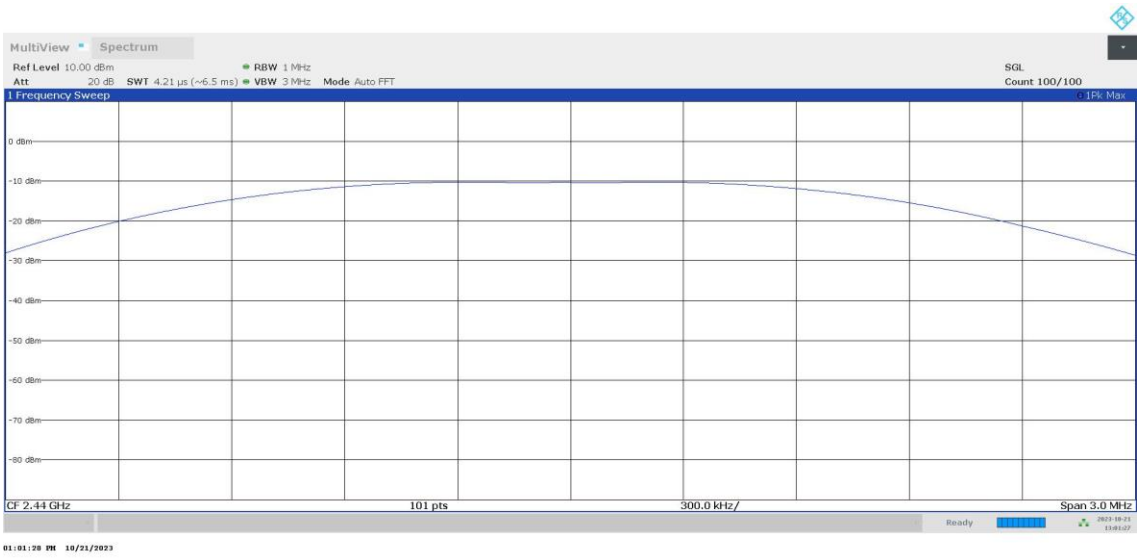
Equipment Type = Digital Transmission System (DTS) Bandwidth MHz = 1

Modulation = BTLE 5.0 (GFSK 1 Mbit/s) Frequency MHz = 2440.00000

MIMO Mode = SISO Active Port = 1

Images:



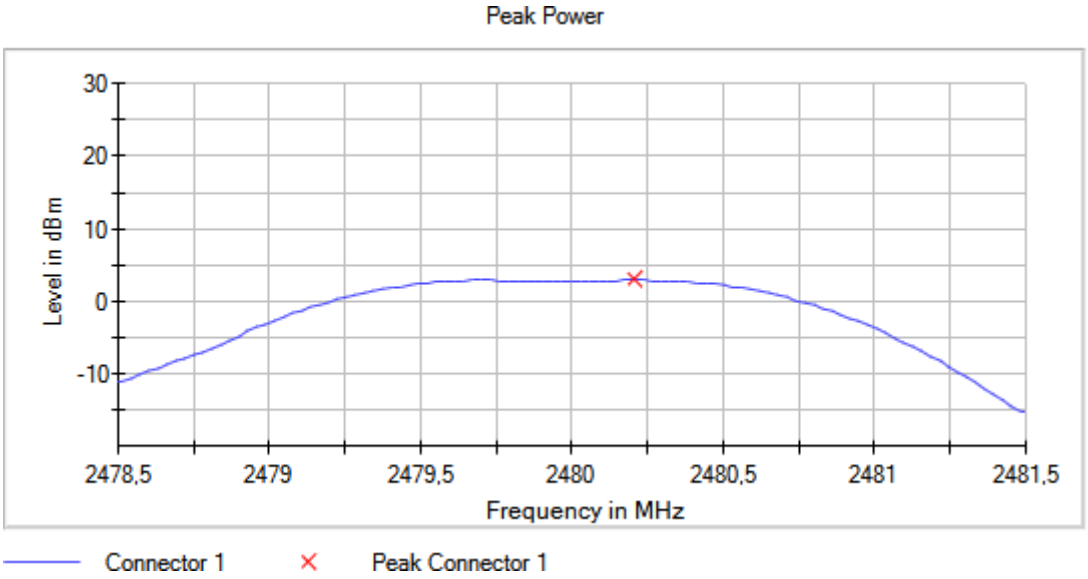


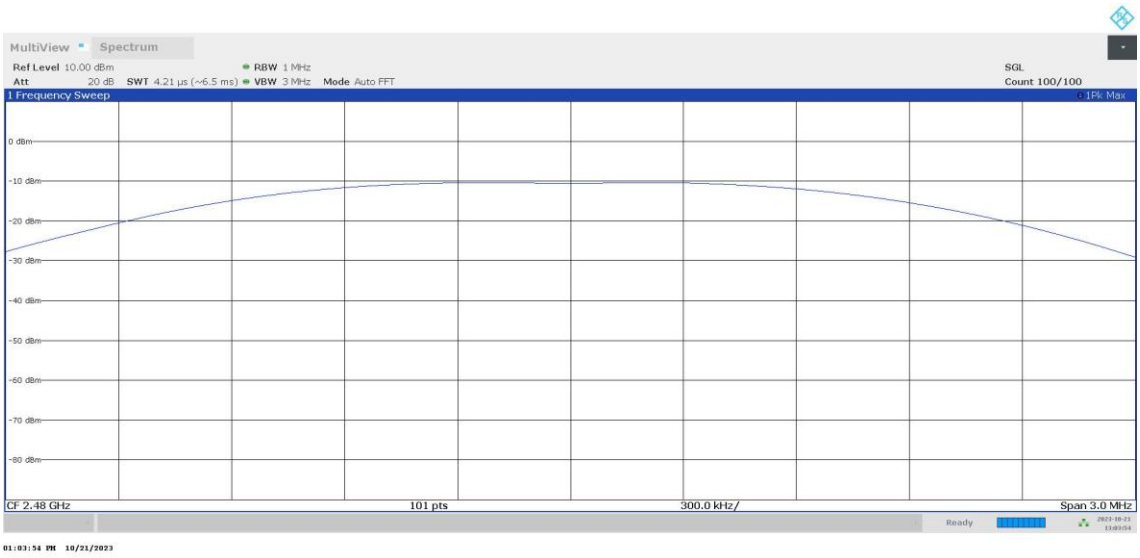
Equipment Type = Digital Transmission System (DTS) Bandwidth MHz = 1

Modulation = BTLE 5.0 (GFSK 1 Mbit/s) Frequency MHz = 2480.00000

MIMO Mode = SISO Active Port = 1

Images:





Modulation: BTLE 5.0 (GFSK 2 Mbit/s)

Results

Freq (MHz)	PeakPower (dBm)	Peak Power EIRP (dBm)
2402.00000	3.27	7.07
2440.00000	3.14	6.94
2480.00000	3.02	6.82

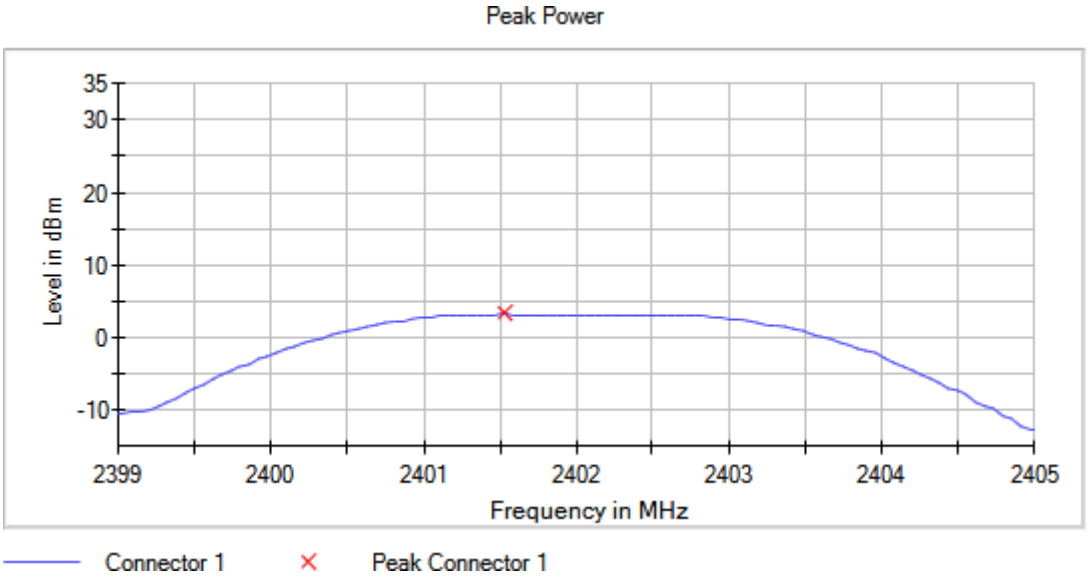
Verdict

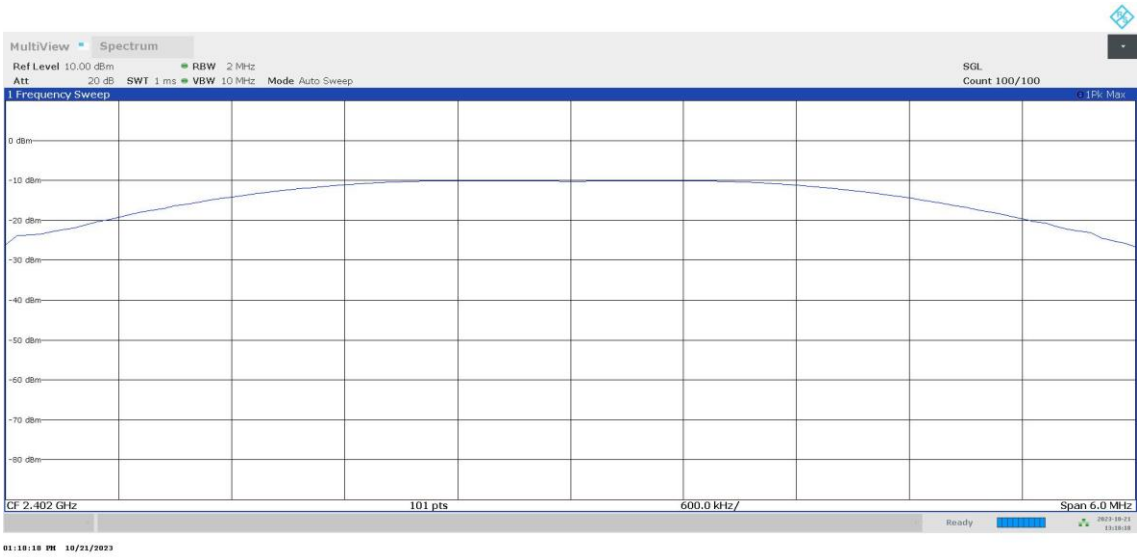
Pass

Attachments

Equipment Type = Digital Transmission System (DTS)	Bandwidth MHz = 2
Modulation = BTLE 5.0 (GFSK 2 Mbit/s)	Frequency MHz = 2402.00000
MIMO Mode = SISO	Active Port = 1

Images:



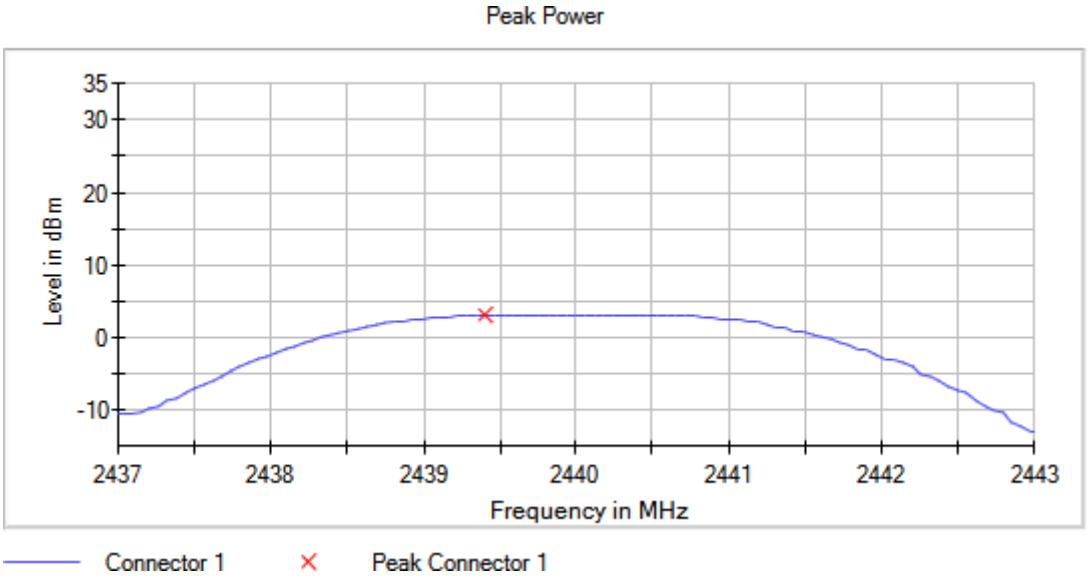


Equipment Type = Digital Transmission System (DTS) Bandwidth MHz = 2

Modulation = BTLE 5.0 (GFSK 2 Mbit/s) Frequency MHz = 2440.00000

MIMO Mode = SISO Active Port = 1

Images:

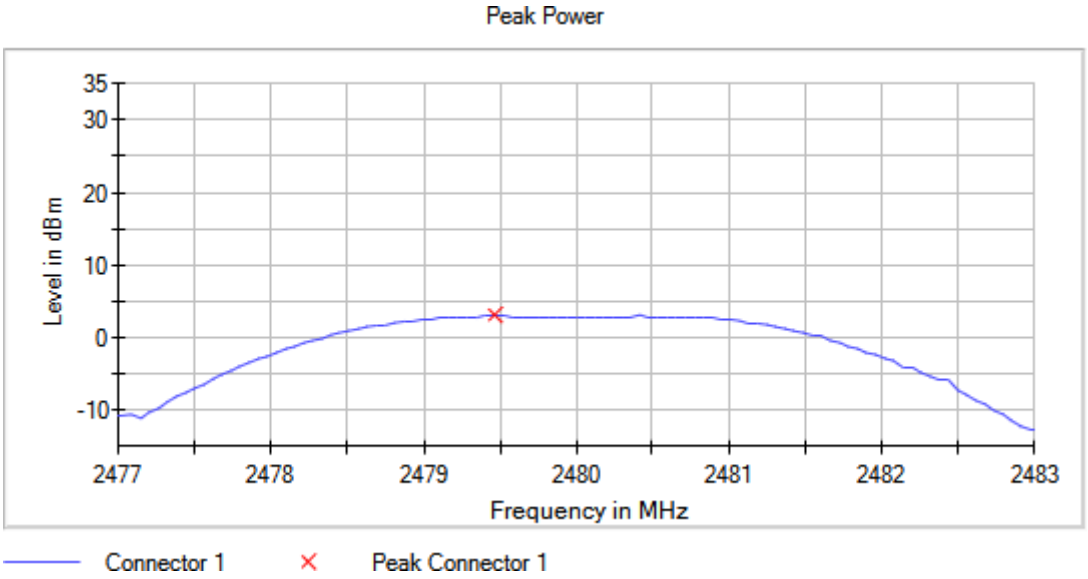


Equipment Type = Digital Transmission System (DTS) Bandwidth MHz = 2

Modulation = BTLE 5.0 (GFSK 2 Mbit/s) Frequency MHz = 2480.00000

MIMO Mode = SISO Active Port = 1

Images:



RSS-247 5.5 / FCC 15.247 (d) [Bndedge] Band-edge emissions compliance (Transmitter)

Limits

In any 100 kHz bandwidths outside the frequency band in which the intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, the attenuation required under this paragraph shall be 30 dB instead of 20 dB.

Modulation: BTLE 5.0 (GFSK 1 Mbit/s)

Results

Freq (MHz)	Freq (MHz)	Lvl (dBm)	Limit (dBm)
2402.00000	2399.975000	-30.1	-11.691
	2399.875000	-30.2	
	2399.825000	-30.2	
	2399.925000	-30.3	
	2399.725000	-30.7	
	2399.775000	-30.7	
	2399.675000	-30.8	
	2399.625000	-32.2	
	2399.575000	-32.3	
	2399.525000	-32.3	
	2399.425000	-32.9	
	2399.475000	-32.9	
	2399.275000	-33.1	
	2399.225000	-33.2	
	2399.375000	-33.2	
2480.00000	2483.575000	-36.5	-11.796
	2483.625000	-36.7	
	2483.675000	-36.8	
	2483.525000	-36.9	
	2483.725000	-37.3	
	2484.425000	-37.7	
	2484.375000	-38.1	
	2484.325000	-38.1	
	2483.925000	-38.1	
	2483.975000	-38.1	
	2484.475000	-38.2	

Freq (MHz)	Freq (MHz)	Lvl (dBm)	Limit (dBm)
	2484.075000	-38.2	
	2484.025000	-38.3	
	2484.125000	-38.3	
	2483.825000	-38.3	

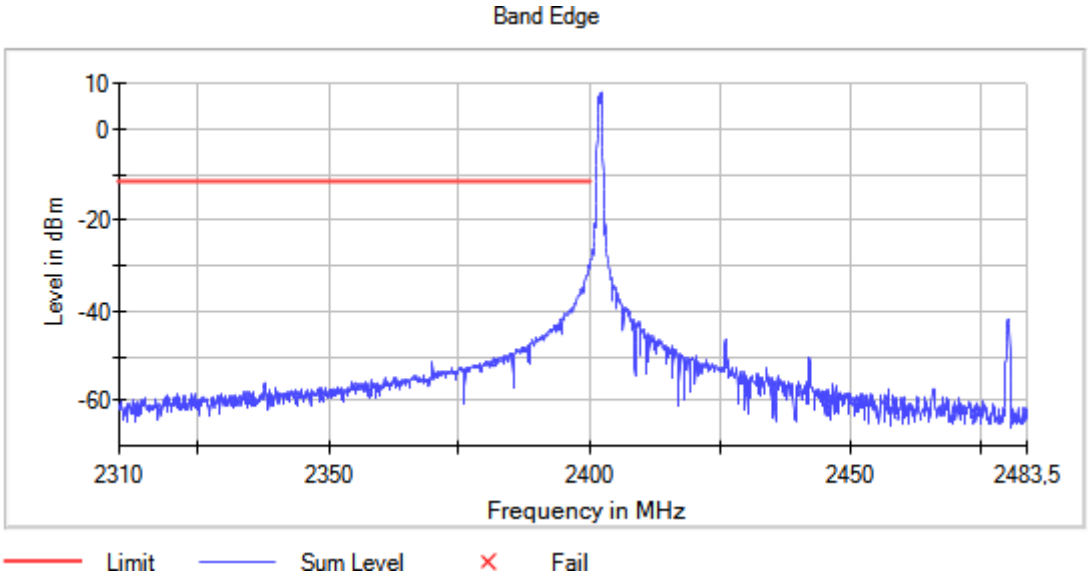
Verdict

Pass

Attachments

Equipment Type = Digital Transmission System (DTS)
Bandwidth MHz = 1
Modulation = BTLE 5.0 (GFSK 1 Mbit/s)
Frequency MHz = 2402.00000
MIMO Mode = SISO
Measurement Point = 1
Active Port = 1

Images:



Tables:
Spectrum Analyzer Parameters 1

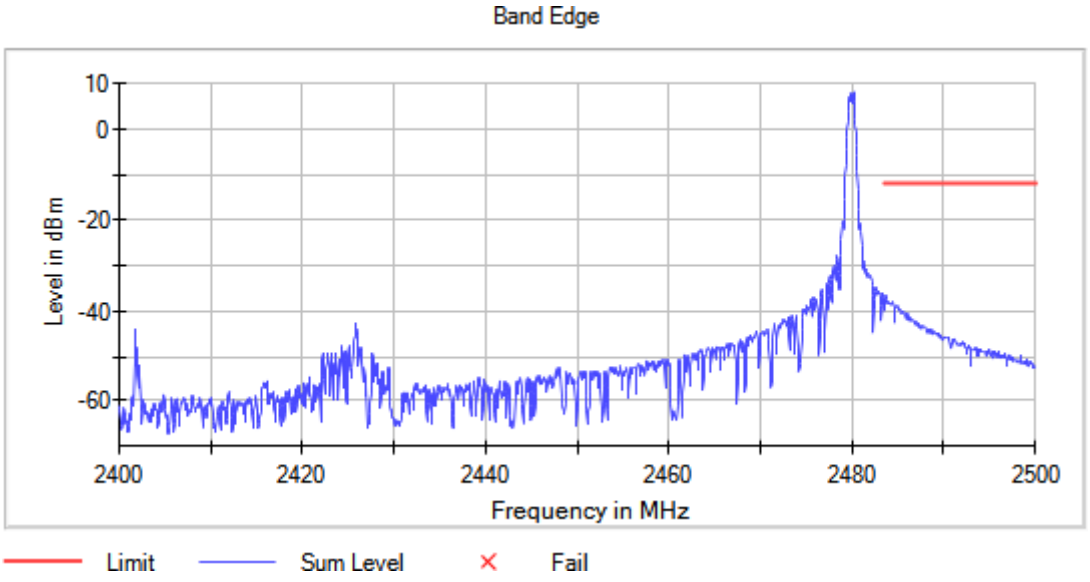
Setting	Instrument Value	Target Value
Start Frequency	2.31000 GHz	2.31000 GHz
Stop Frequency	2.40000 GHz	2.40000 GHz
Span	90.000 MHz	90.000 MHz
RBW	100.000 kHz	<= 100.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	1800	~ 1800
Sweeptime	1.800 ms	AUTO
Reference Level	10.000 dBm	10.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	28 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.00 dB	0.50 dB

Spectrum Analyzer Parameters 2

Setting	Instrument Value	Target Value
Start Frequency	2.40000 GHz	2.40000 GHz
Stop Frequency	2.48350 GHz	2.48350 GHz
Span	83.500 MHz	83.500 MHz
RBW	100.000 kHz	<= 100.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	1670	~ 1670
Sweeptime	1.670 ms	AUTO
Reference Level	10.000 dBm	10.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	12 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.12 dB	0.50 dB

Equipment Type = Digital Transmission System (DTS)
Modulation = BTLE 5.0 (GFSK 1 Mbit/s)
MIMO Mode = SISO
Active Port = 1
Bandwidth MHz = 1
Frequency MHz = 2480.00000
Measurement Point = 1

Images:



Tables:
Spectrum Analyzer Parameters 1

Setting	Instrument Value	Target Value
Start Frequency	2.31000 GHz	2.31000 GHz
Stop Frequency	2.40000 GHz	2.40000 GHz
Span	90.000 MHz	90.000 MHz
RBW	100.000 kHz	<= 100.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	1800	~ 1800
Sweeptime	1.800 ms	AUTO
Reference Level	10.000 dBm	10.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	28 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.00 dB	0.50 dB

Spectrum Analyzer Parameters 2

Setting	Instrument Value	Target Value
Start Frequency	2.40000 GHz	2.40000 GHz
Stop Frequency	2.48350 GHz	2.48350 GHz
Span	83.500 MHz	83.500 MHz
RBW	100.000 kHz	<= 100.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	1670	~ 1670
Sweeptime	1.670 ms	AUTO
Reference Level	10.000 dBm	10.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	12 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.12 dB	0.50 dB

Modulation: BTLE 5.0 (GFSK 2 Mbit/s)

Results

Freq (MHz)	Freq (MHz)	Lvl (dBm)	Limit (dBm)
2402.00000	2399.975000	-21.1	-12.150
	2399.925000	-21.9	
	2399.875000	-24.0	
	2399.825000	-26.9	
	2399.775000	-29.2	
	2399.725000	-30.4	
	2399.575000	-32.0	
	2399.675000	-32.1	
	2399.625000	-32.2	
	2399.525000	-32.5	
	2399.325000	-32.9	
	2399.275000	-33.0	
	2399.225000	-33.3	
	2399.375000	-33.3	
	2398.775000	-34.2	
2480.00000	2483.525000	-36.0	-12.425
	2483.575000	-36.0	
	2483.675000	-36.3	
	2483.625000	-36.5	
	2483.725000	-36.5	
	2483.825000	-37.2	
	2483.775000	-37.3	
	2483.875000	-37.6	
	2483.925000	-38.1	
	2483.975000	-38.6	
	2484.275000	-38.7	
	2484.375000	-38.9	
	2484.475000	-38.9	
	2484.875000	-38.9	
	2484.525000	-38.9	

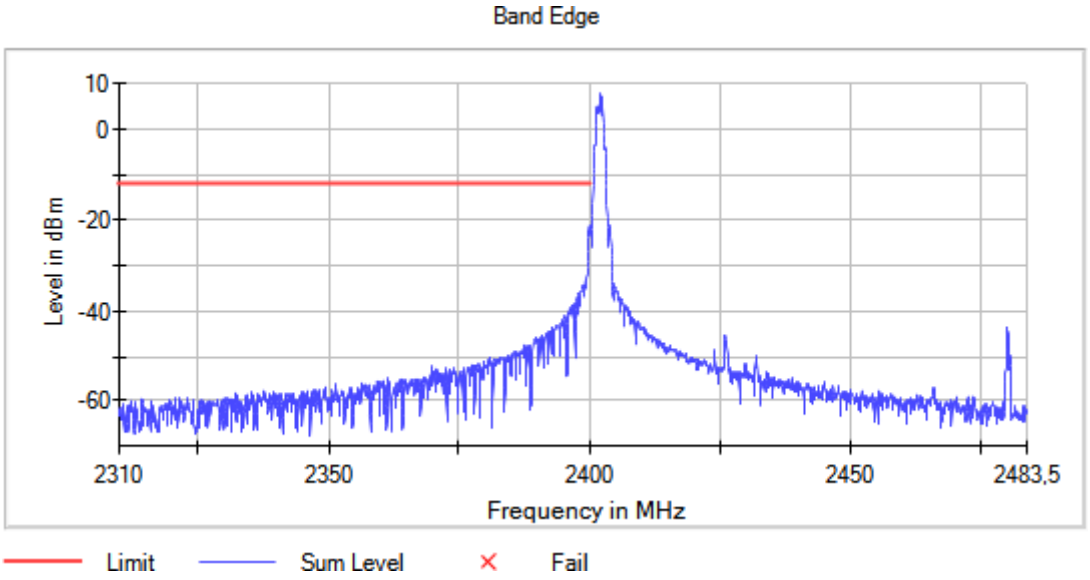
Verdict

Pass

Attachments

Equipment Type = Digital Transmission System (DTS)
Bandwidth MHz = 2
Modulation = BTLE 5.0 (GFSK 2 Mbit/s)
Frequency MHz = 2402.00000
MIMO Mode = SISO
Measurement Point = 1
Active Port = 1

Images:



Tables:
Spectrum Analyzer Parameters 1

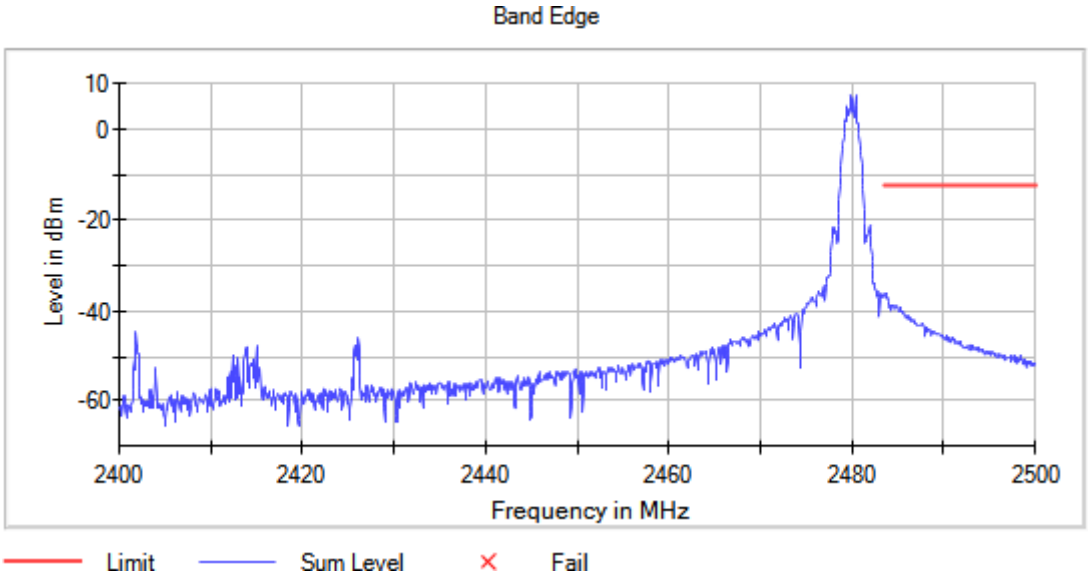
Setting	Instrument Value	Target Value
Start Frequency	2.31000 GHz	2.31000 GHz
Stop Frequency	2.40000 GHz	2.40000 GHz
Span	90.000 MHz	90.000 MHz
RBW	100.000 kHz	<= 100.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	1800	~ 1800
Sweeptime	1.800 ms	AUTO
Reference Level	10.000 dBm	10.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	7 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.08 dB	0.50 dB

Spectrum Analyzer Parameters 2

Setting	Instrument Value	Target Value
Start Frequency	2.40000 GHz	2.40000 GHz
Stop Frequency	2.48350 GHz	2.48350 GHz
Span	83.500 MHz	83.500 MHz
RBW	100.000 kHz	<= 100.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	1670	~ 1670
Sweeptime	1.670 ms	AUTO
Reference Level	10.000 dBm	10.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	15 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.06 dB	0.50 dB

Equipment Type = Digital Transmission System (DTS)
Modulation = BTLE 5.0 (GFSK 2 Mbit/s)
MIMO Mode = SISO
Active Port = 1
Bandwidth MHz = 2
Frequency MHz = 2480.00000
Measurement Point = 1

Images:



Tables:
Spectrum Analyzer Parameters 1

Setting	Instrument Value	Target Value
Start Frequency	2.31000 GHz	2.31000 GHz
Stop Frequency	2.40000 GHz	2.40000 GHz
Span	90.000 MHz	90.000 MHz
RBW	100.000 kHz	<= 100.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	1800	~ 1800
Sweeptime	1.800 ms	AUTO
Reference Level	10.000 dBm	10.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	7 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.08 dB	0.50 dB

Spectrum Analyzer Parameters 2

Setting	Instrument Value	Target Value
Start Frequency	2.40000 GHz	2.40000 GHz
Stop Frequency	2.48350 GHz	2.48350 GHz
Span	83.500 MHz	83.500 MHz
RBW	100.000 kHz	<= 100.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	1670	~ 1670
Sweeptime	1.670 ms	AUTO
Reference Level	10.000 dBm	10.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	15 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.06 dB	0.50 dB

RSS-247 5.5 / FCC 15.247 (d) [RSE] Emission limitations radiated (Transmitter)

Limits

Radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)/RSS-Gen):

Frequency Range (MHz)	Field strength (µV/m)	Field strength (dBµV/m)	Measurement distance (m)
0.009-0.490	2400/F(kHz)	-	300
0.490-1.705	24000/F(kHz)	-	30
1.705 - 30.0	30	-	30
30 - 88	100	40	3
88 - 216	150	43.5	3
216 - 960	200	46	3
Above 960	500	54	3

The emission limits shown in the above table are based on measurements employing CISPR quasi-peak detector except for the frequency bands 9-90 kHz, 110-490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector.

For average radiated emission measurements above 1000 MHz, there is also a limit corresponding to 20 dB above the indicated values in the table is specified when measuring with peak detector function.

RSS-247: Attenuation below the general field strength limits specified in RSS-Gen is not required.

Modulation: BTLE 5.0 (GFSK 1 Mbit/s)

Results

Frequency range 30 MHz – 1 GHz:

- Low Channel:

  No spurious frequencies found at less than 20 dB below the limit.

- Middle Channel:

  No spurious frequencies found at less than 20 dB below the limit.

- High Channel:

  No spurious frequencies found at less than 20 dB below the limit.

Frequency range 1 GHz – 26 GHz:

The results below show the maximum measured levels in the 1 – 26 GHz range including the restricted bands 2.31 – 2.39 GHz and 2.4835 – 2.5 GHz.

Spurious frequencies with peak levels above the average limit (54 dBµV/m at 3 m) are measured with average detector for compliance checking with the average limit.

- Middle Channel:

  No spurious frequencies found at less than 20 dB below the limit.

Spurious frequencies detected at less than 20 dB below the limit:

Freq Rng (GHz)	Freq (MHz)	Unwanted Freq (MHz)	Unwanted Lvl (dBµV/m)	Pol	Detector
[1, 3]	2402.00000	2389.867	68.43	H	PK
[1, 3]	2402.00000	2389.867	50.18	H	AVG
[1, 3]	2480.00000	2483.733	71.17	V	PK
[1, 3]	2480.00000	2483.733	48.55	V	AVG
[1, 3]	2480.00000	2484.067	69.88	V	PK
[1, 3]	2480.00000	2484.067	48.28	V	AVG
[1, 3]	2480.00000	2485.733	70.47	H	PK
[1, 3]	2480.00000	2485.733	48.75	H	AVG

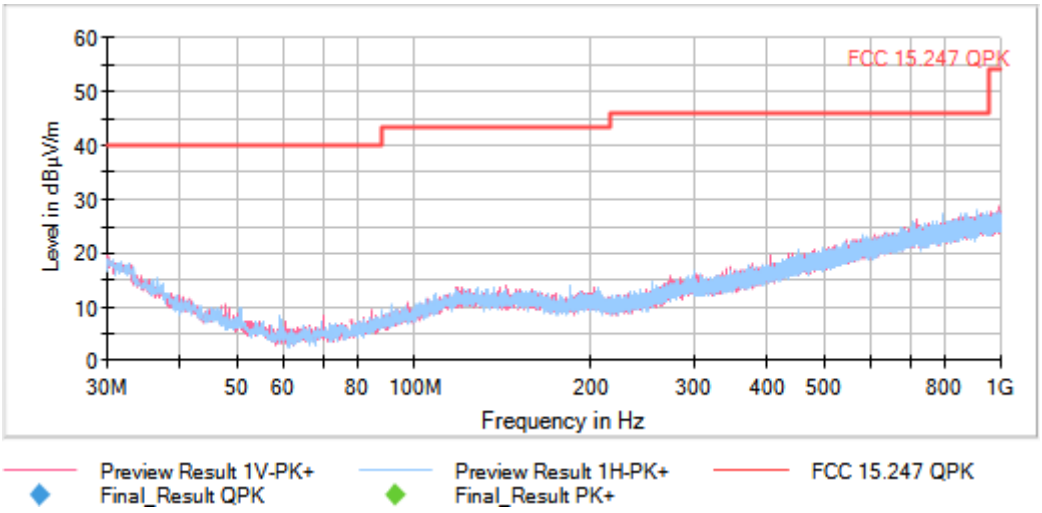
Verdict

Pass

Attachments

Frequency Range GHz = [0.03, 1]
Equipment Type = Digital Transmission System (DTS)
Modulation = BTLE 5.0 (GFSK 1 Mbit/s)
Frequency MHz = 2402.00000
MIMO Mode = SISO
Measurement Point = 1
Active Port = 1

Images:



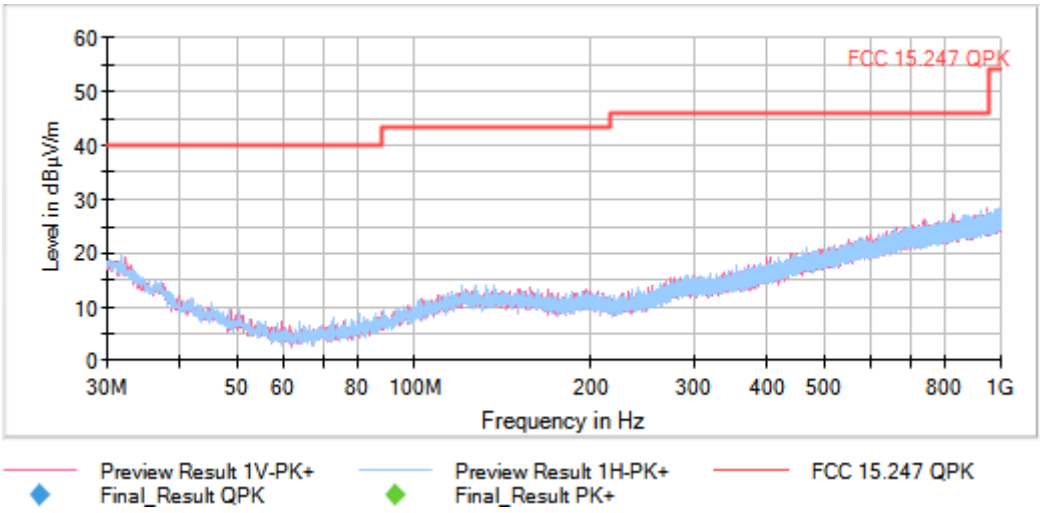
Tables:

Spectrum Analyzer Parameters

	Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamp
	Receiver: [ESR 7]					
	30 MHz - 1 GHz	48,5 kHz	PK+	100 kHz	1 s	20 dB

Frequency Range GHz = [0.03, 1]
Equipment Type = Digital Transmission System (DTS)
Modulation = BTLE 5.0 (GFSK 1 Mbit/s)
Frequency MHz = 2440.00000
MIMO Mode = SISO
Measurement Point = 1
Active Port = 1

Images:

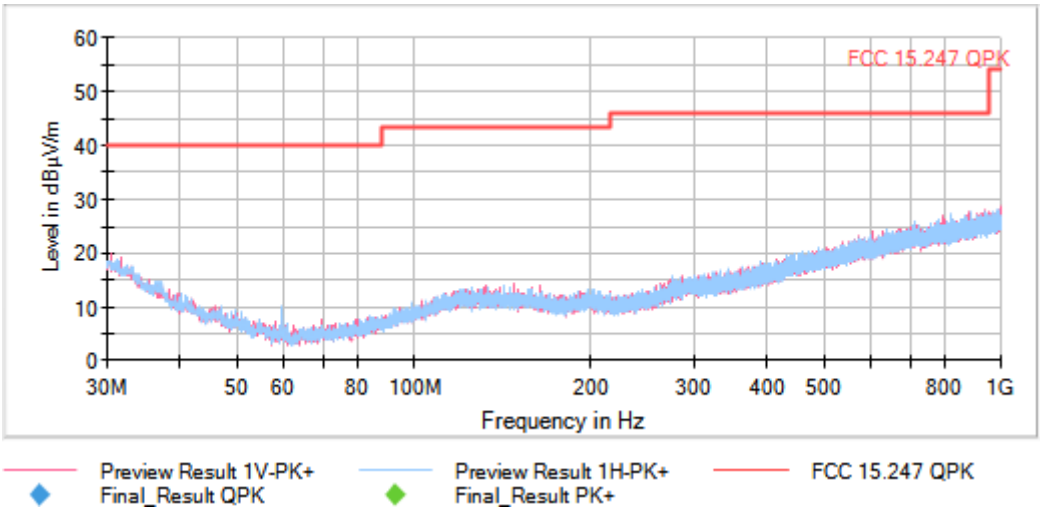


Tables:
Spectrum Analyzer Parameters

	Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamp
	Receiver: [ESR 7]					
	30 MHz - 1 GHz	48,5 kHz	PK+	100 kHz	1 s	20 dB

Frequency Range GHz = [0.03, 1]
Equipment Type = Digital Transmission System (DTS)
Modulation = BTLE 5.0 (GFSK 1 Mbit/s)
Frequency MHz = 2480.00000
MIMO Mode = SISO
Measurement Point = 1
Active Port = 1

Images:



Tables:
Spectrum Analyzer Parameters

	Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamp
	Receiver: [ESR 7]					
	30 MHz - 1 GHz	48,5 kHz	PK+	100 kHz	1 s	20 dB

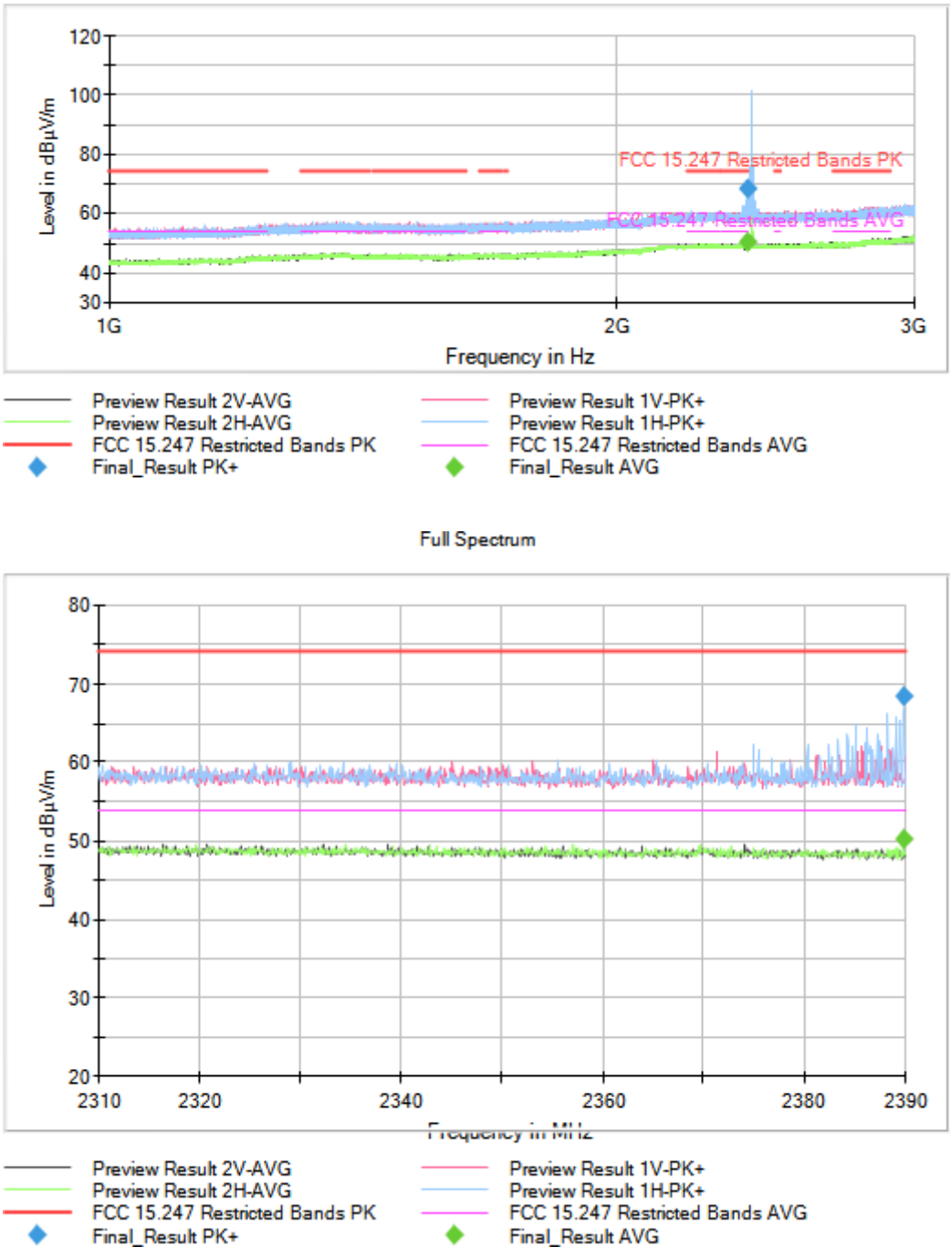
Frequency Range GHz = [1, 3] Equipment Type = Digital Transmission System (DTS)

Modulation = BTLE 5.0 (GFSK 1 Mbit/s) Frequency MHz = 2402.00000

MIMO Mode = SISO Measurement Point = 1

Active Port = 1

Images:



Full Spectrum

Tables:

Spectrum Analyzer Parameters

	Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamp
	Receiver: [FSV 40]					
	1 GHz - 3 GHz	66,667 kHz	PK+ ; AVG	1 MHz	1 s	0 dB

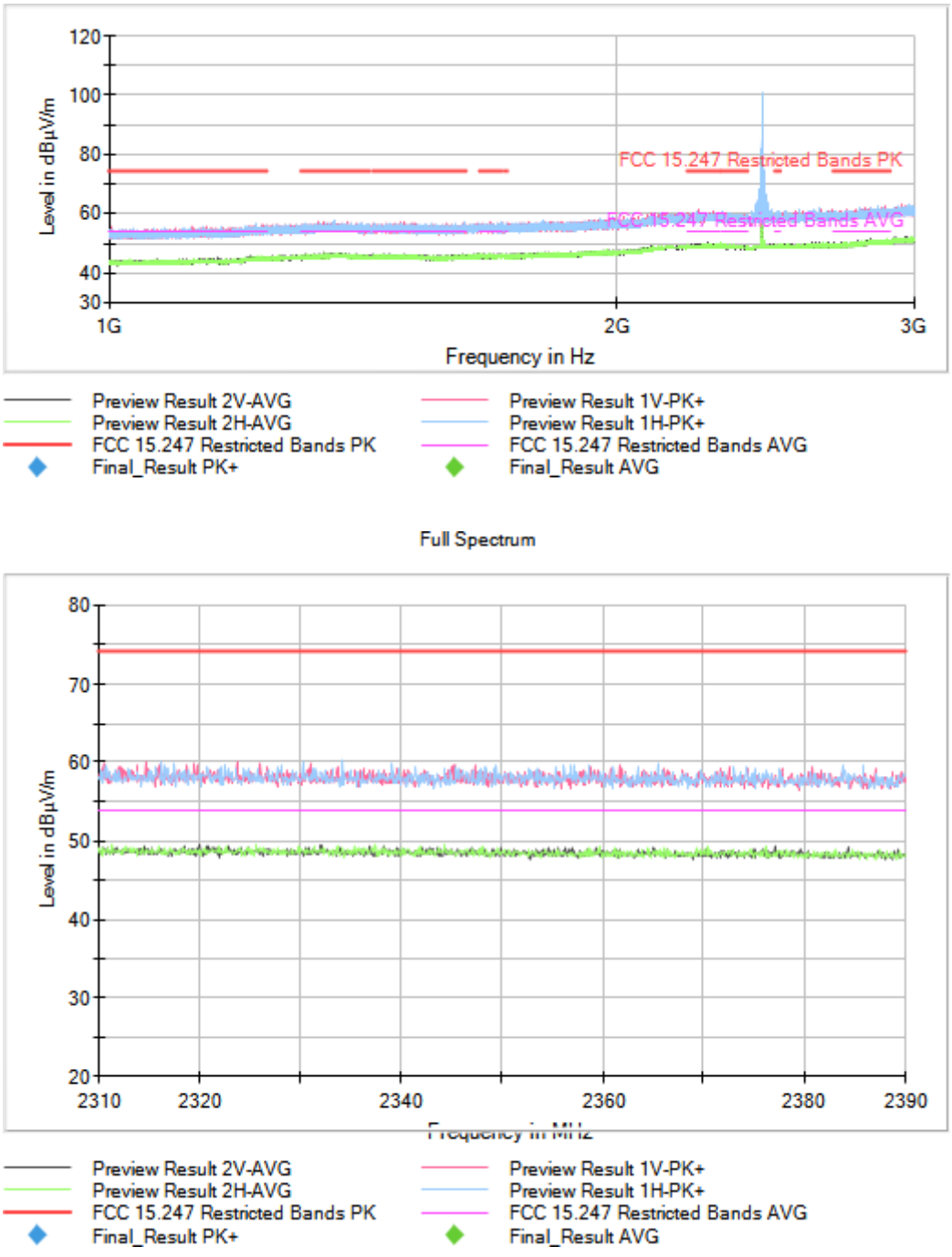
Frequency Range GHz = [1, 3] Equipment Type = Digital Transmission System (DTS)

Modulation = BTLE 5.0 (GFSK 1 Mbit/s) Frequency MHz = 2440.00000

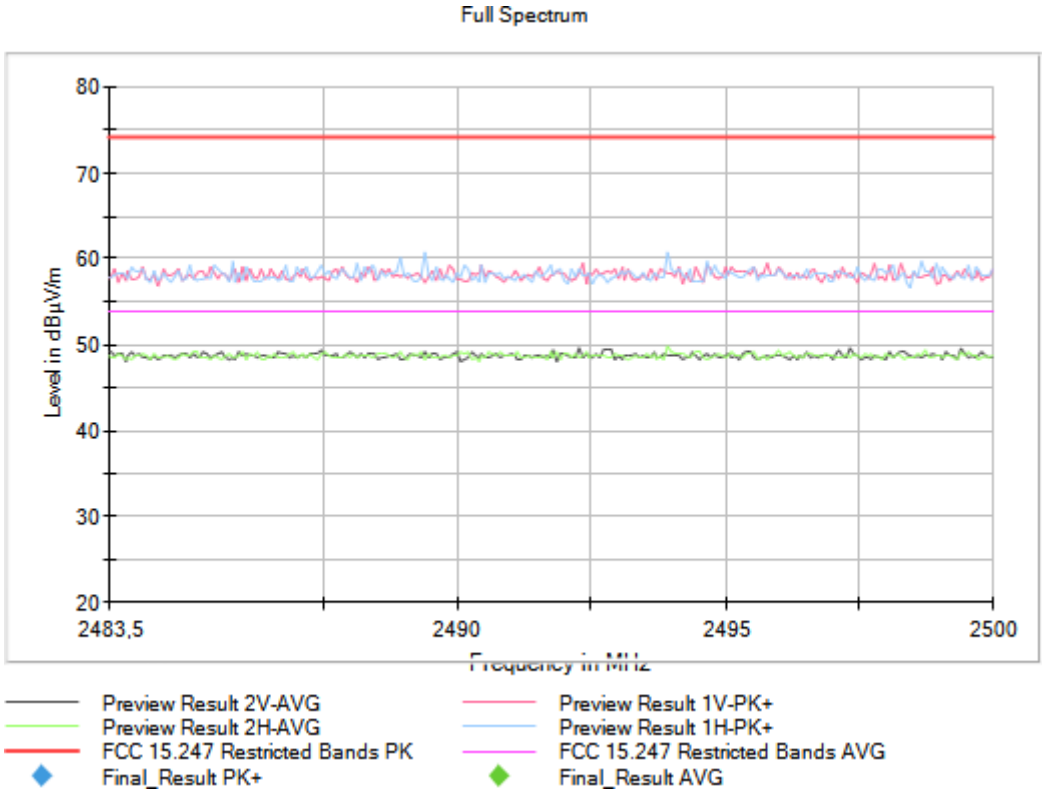
MIMO Mode = SISO Measurement Point = 1

Active Port = 1

Images:



Full Spectrum



Tables:

Spectrum Analyzer Parameters

	Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamp
	Receiver: [FSV 40]					
	1 GHz - 3 GHz	66,667 kHz	PK+ ; AVG	1 MHz	1 s	0 dB

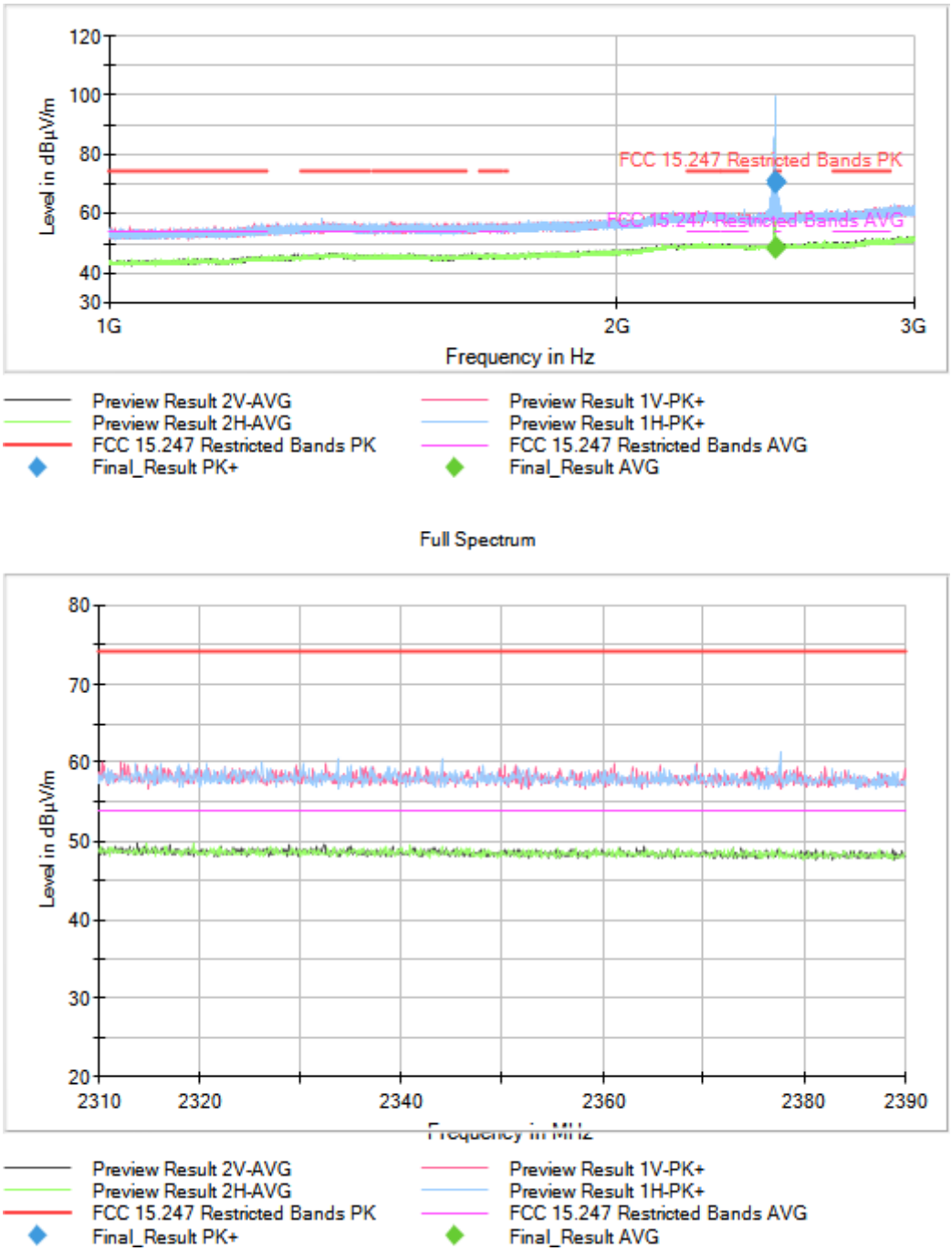
Frequency Range GHz = [1, 3] Equipment Type = Digital Transmission System (DTS)

Modulation = BTLE 5.0 (GFSK 1 Mbit/s) Frequency MHz = 2480.00000

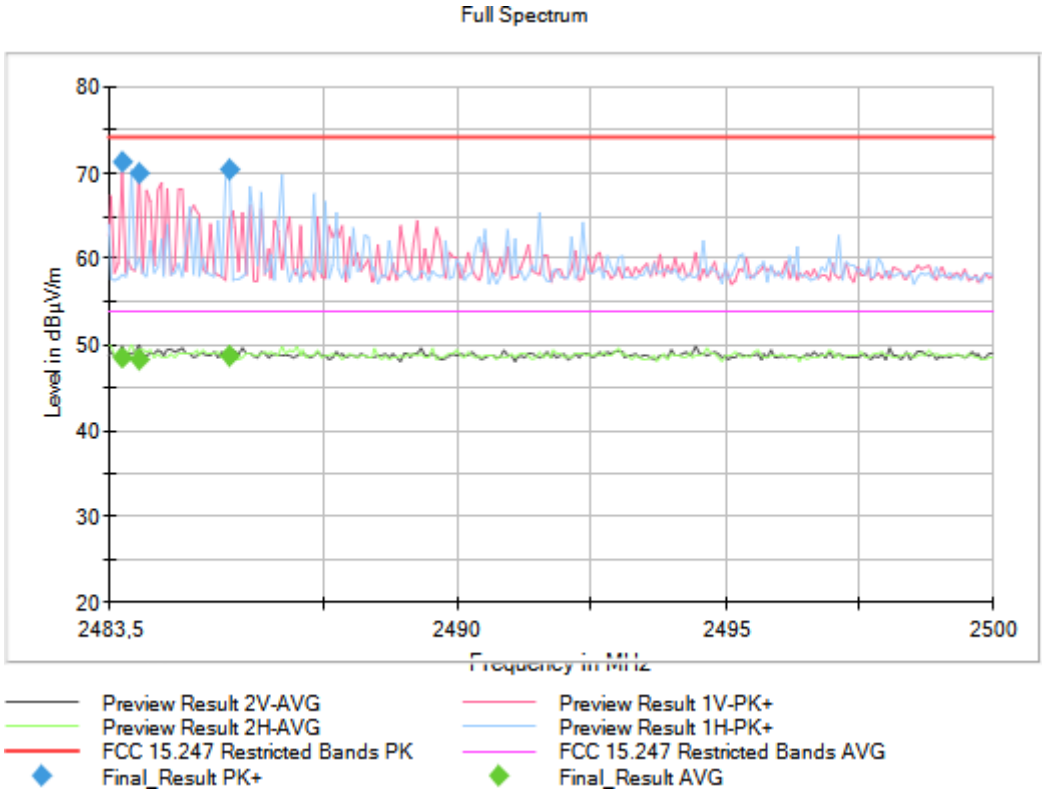
MIMO Mode = SISO Measurement Point = 1

Active Port = 1

Images:



Full Spectrum



Tables:

Spectrum Analyzer Parameters

	Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamp
	Receiver: [FSV 40]					
	1 GHz - 3 GHz	66,667 kHz	PK+ ; AVG	1 MHz	1 s	0 dB

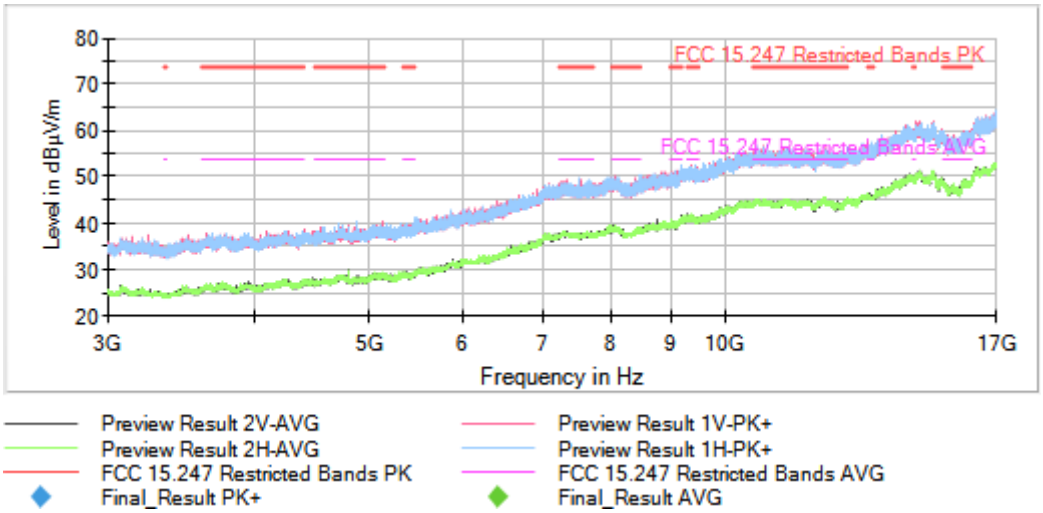
Frequency Range GHz = [3, 17] Equipment Type = Digital Transmission System (DTS)

Modulation = BTLE 5.0 (GFSK 1 Mbit/s) Frequency MHz = 2402.00000

MIMO Mode = SISO Measurement Point = 1

Active Port = 1

Images:



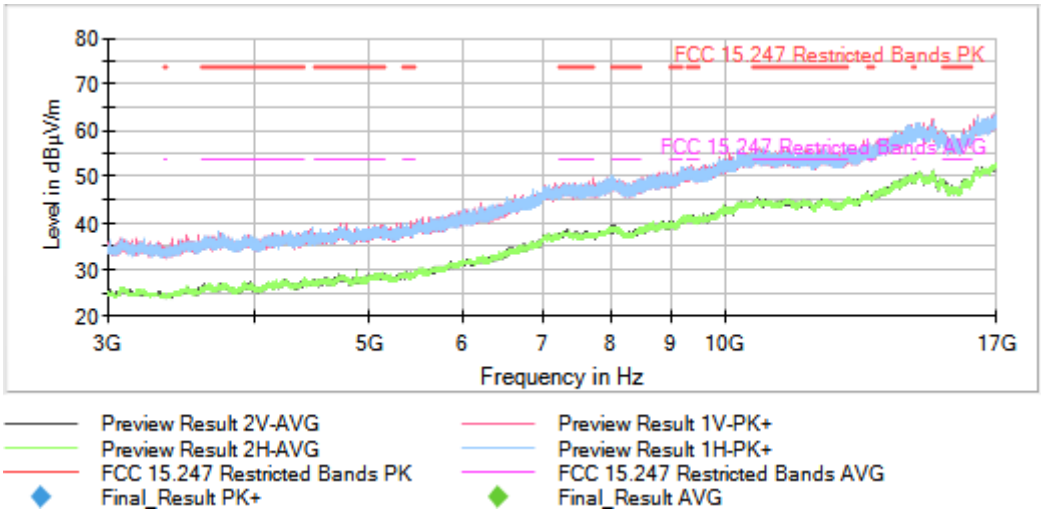
Tables:

Spectrum Analyzer Parameters

	Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamp
	Receiver: [FSV 40]					
	3 GHz - 17 GHz	500 kHz	PK+ ; AVG	1 MHz	1 s	0 dB

Frequency Range GHz = [3, 17]
Equipment Type = Digital Transmission System (DTS)
Modulation = BTLE 5.0 (GFSK 1 Mbit/s)
Frequency MHz = 2440.00000
MIMO Mode = SISO
Measurement Point = 1
Active Port = 1

Images:

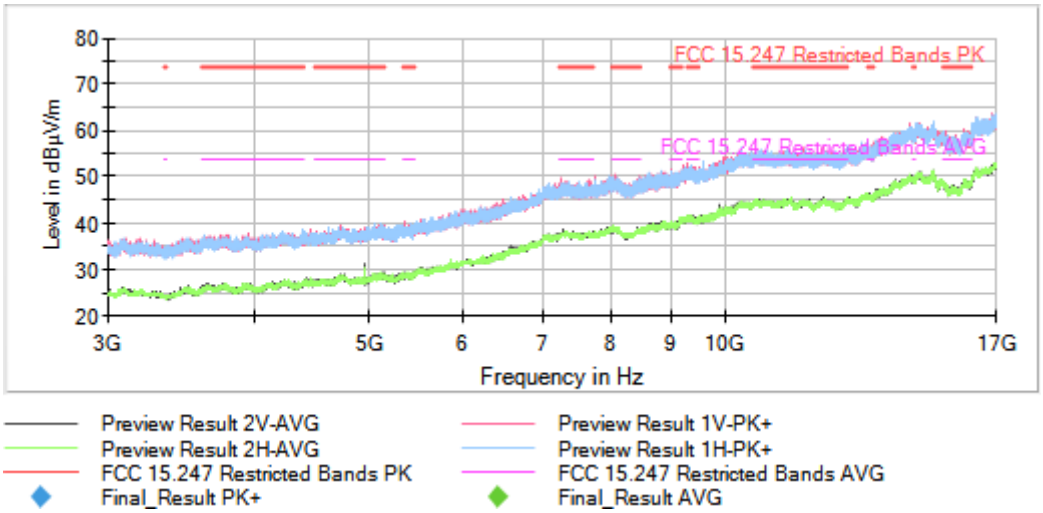


Tables:
Spectrum Analyzer Parameters

	Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamp
	Receiver: [FSV 40]					
	3 GHz - 17 GHz	500 kHz	PK+ ; AVG	1 MHz	1 s	0 dB

Frequency Range GHz = [3, 17]
Equipment Type = Digital Transmission System (DTS)
Modulation = BTLE 5.0 (GFSK 1 Mbit/s)
Frequency MHz = 2480.00000
MIMO Mode = SISO
Measurement Point = 1
Active Port = 1

Images:



Tables:
Spectrum Analyzer Parameters

	Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamp
	Receiver: [FSV 40]					
	3 GHz - 17 GHz	500 kHz	PK+ ; AVG	1 MHz	1 s	0 dB

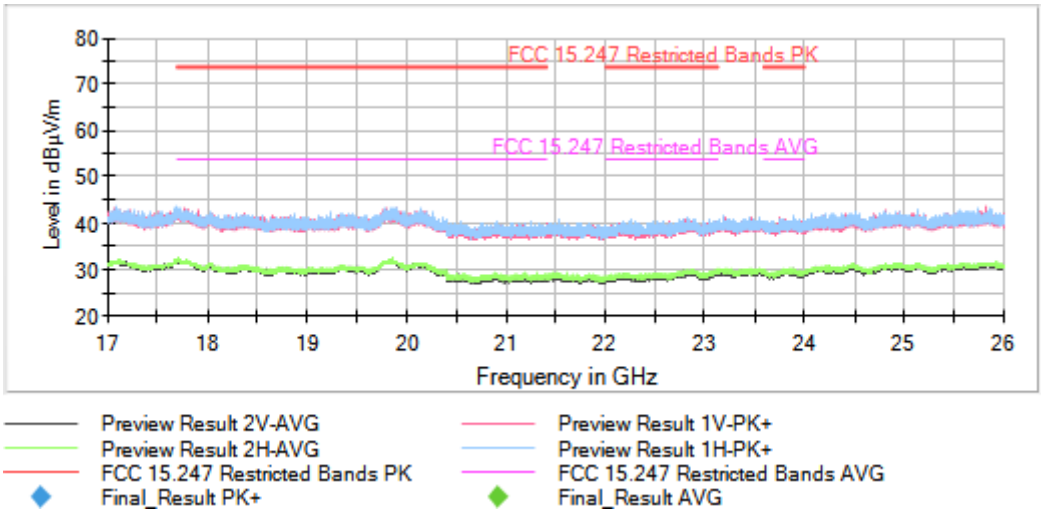
Frequency Range GHz = [17, 26] Equipment Type = Digital Transmission System (DTS)

Modulation = BTLE 5.0 (GFSK 1 Mbit/s) Frequency MHz = 2402.00000

MIMO Mode = SISO Measurement Point = 1

Active Port = 1

Images:



Tables:

Spectrum Analyzer Parameters

	Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamp
	Receiver: [FSV 40]					
	17 GHz - 26 GHz	500 kHz	PK+ ; AVG	1 MHz	1 s	0 dB

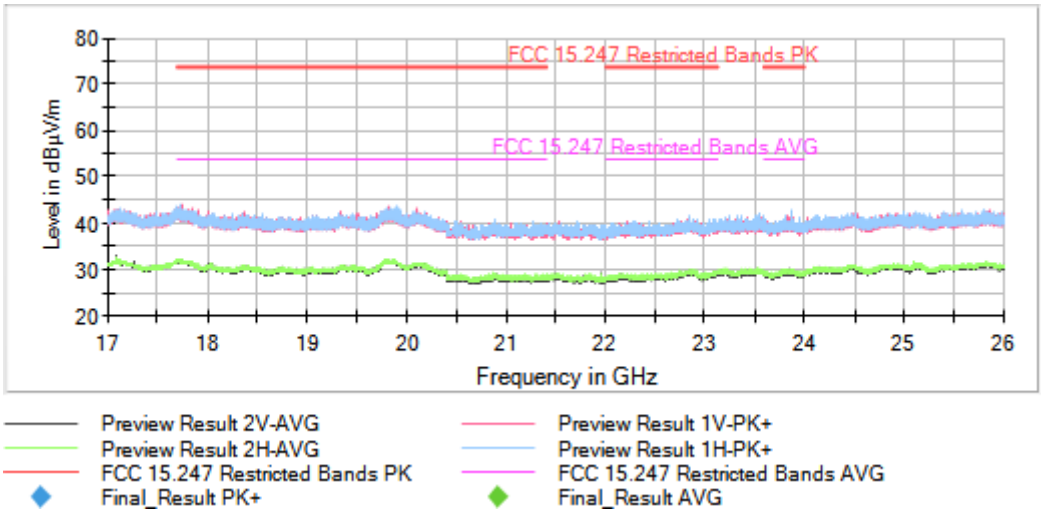
Frequency Range GHz = [17, 26] Equipment Type = Digital Transmission System (DTS)

Modulation = BTLE 5.0 (GFSK 1 Mbit/s) Frequency MHz = 2440.00000

MIMO Mode = SISO Measurement Point = 1

Active Port = 1

Images:



Tables:

Spectrum Analyzer Parameters

	Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamp
	Receiver: [FSV 40]					
	17 GHz - 26 GHz	500 kHz	PK+ ; AVG	1 MHz	1 s	0 dB

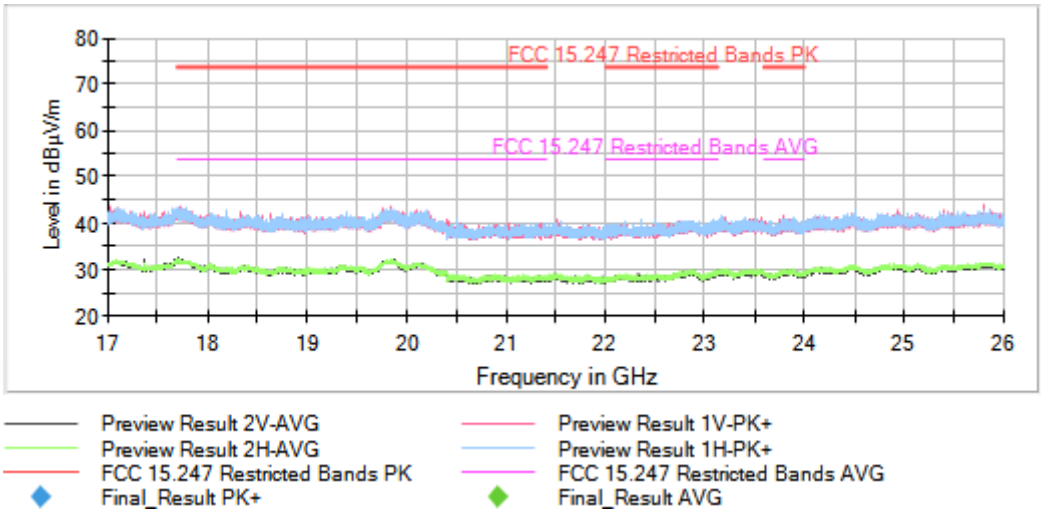
Frequency Range GHz = [17, 26] Equipment Type = Digital Transmission System (DTS)

Modulation = BTLE 5.0 (GFSK 1 Mbit/s) Frequency MHz = 2480.00000

MIMO Mode = SISO Measurement Point = 1

Active Port = 1

Images:



Tables:

Spectrum Analyzer Parameters

	Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamp
	Receiver: [FSV 40]					
	17 GHz - 26 GHz	500 kHz	PK+ ; AVG	1 MHz	1 s	0 dB

Modulation: BTLE 5.0 (GFSK 2 Mbit/s)

Results

Frequency range 30 MHz – 1 GHz:

- Low Channel:

  No spurious frequencies found at less than 20 dB below the limit.

- Middle Channel:

  No spurious frequencies found at less than 20 dB below the limit.

- High Channel:

  No spurious frequencies found at less than 20 dB below the limit.

Frequency range 1 GHz – 26 GHz:

The results below show the maximum measured levels in the 1 – 26 GHz range including the restricted bands 2.31 – 2.39 GHz and 2.4835 – 2.5 GHz.

Spurious frequencies with peak levels above the average limit (54 dBµV/m at 3 m) are measured with average detector for compliance checking with the average limit.

Spurious frequencies detected at less than 20 dB below the limit:

Freq Rng (GHz)	Equipment	Freq (MHz)	Port	Unwanted Freq (MHz)	Unwanted Lvl (dBµV/m)	Pol	Detector
[1, 3]	Digital Transmission System (DTS)	2402.00000	1	2385.667	63.97	H	PK
				2385.667	47.92	H	AVG
				2388.400	66.06	H	PK
				2388.400	47.82	H	AVG
				2389.867	66.54	H	PK
				2389.867	47.56	H	AVG
		2480.00000		2484.067	73.35	H	PK
				2484.067	48.78	H	AVG
				2484.667	72.33	H	PK
				2484.667	48.64	H	AVG
				2486.267	61.76	H	PK
				2486.267	48.23	H	AVG
[3, 17]		2440.00000		4882.500	39.66	H	PK
		2480.00000		4960.000	40.10	V	PK

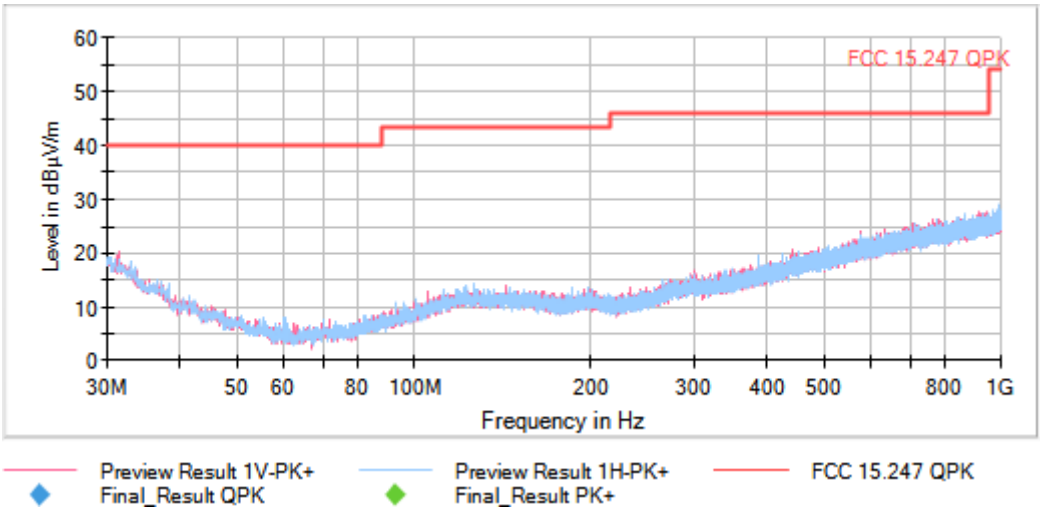
Verdict

Pass

Attachments

Frequency Range GHz = [0.03, 1]
Equipment Type = Digital Transmission System (DTS)
Modulation = BTLE 5.0 (GFSK 2 Mbit/s)
Frequency MHz = 2402.00000
MIMO Mode = SISO
Measurement Point = 1
Active Port = 1

Images:



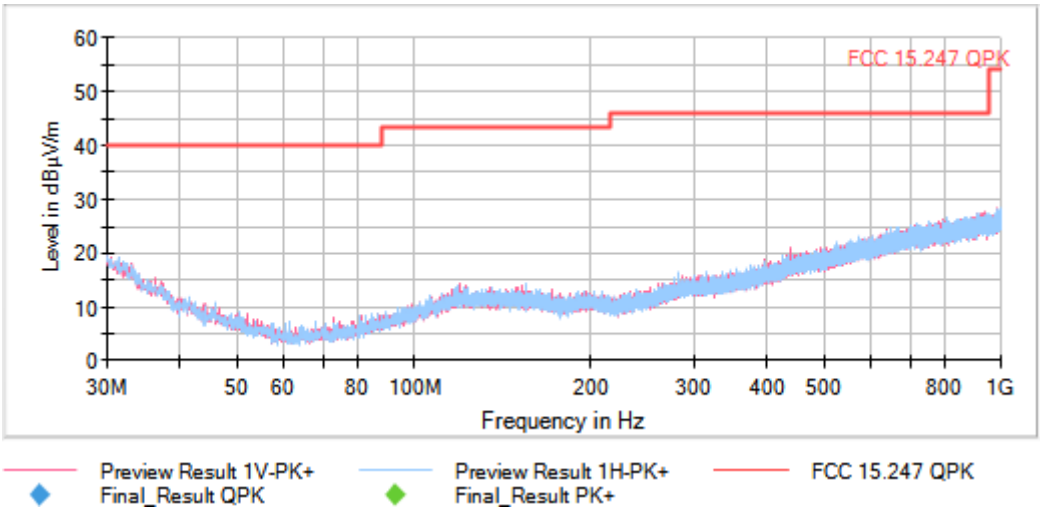
Tables:

Spectrum Analyzer Parameters

	Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamp
	Receiver: [ESR 7]					
	30 MHz - 1 GHz	48,5 kHz	PK+	100 kHz	1 s	20 dB

Frequency Range GHz = [0.03, 1]
Equipment Type = Digital Transmission System (DTS)
Modulation = BTLE 5.0 (GFSK 2 Mbit/s)
Frequency MHz = 2440.00000
MIMO Mode = SISO
Measurement Point = 1
Active Port = 1

Images:

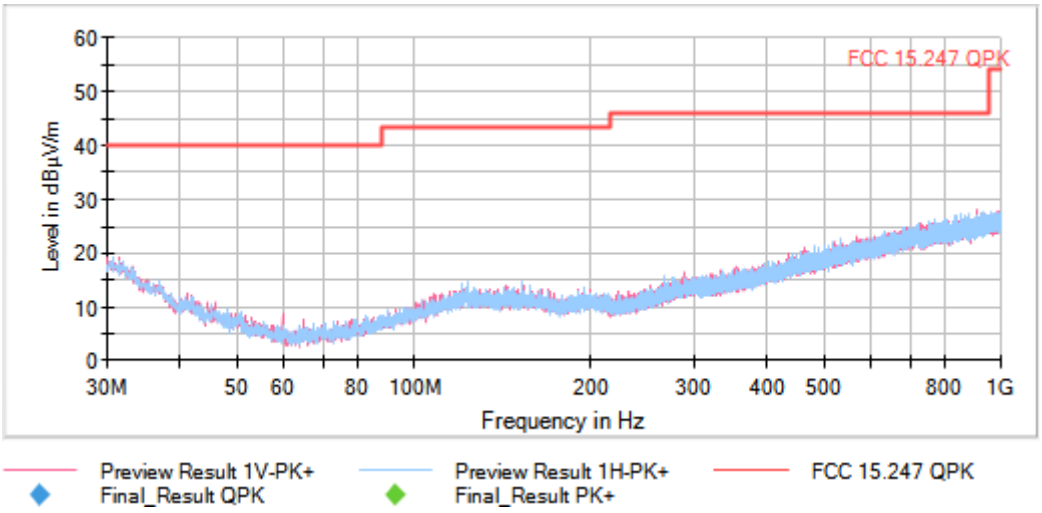


Tables:
Spectrum Analyzer Parameters

	Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamp
	Receiver: [ESR 7]					
	30 MHz - 1 GHz	48,5 kHz	PK+	100 kHz	1 s	20 dB

Frequency Range GHz = [0.03, 1]
Equipment Type = Digital Transmission System (DTS)
Modulation = BTLE 5.0 (GFSK 2 Mbit/s)
Frequency MHz = 2480.00000
MIMO Mode = SISO
Measurement Point = 1
Active Port = 1

Images:



Tables:
Spectrum Analyzer Parameters

	Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamp
	Receiver: [ESR 7]					
	30 MHz - 1 GHz	48,5 kHz	PK+	100 kHz	1 s	20 dB

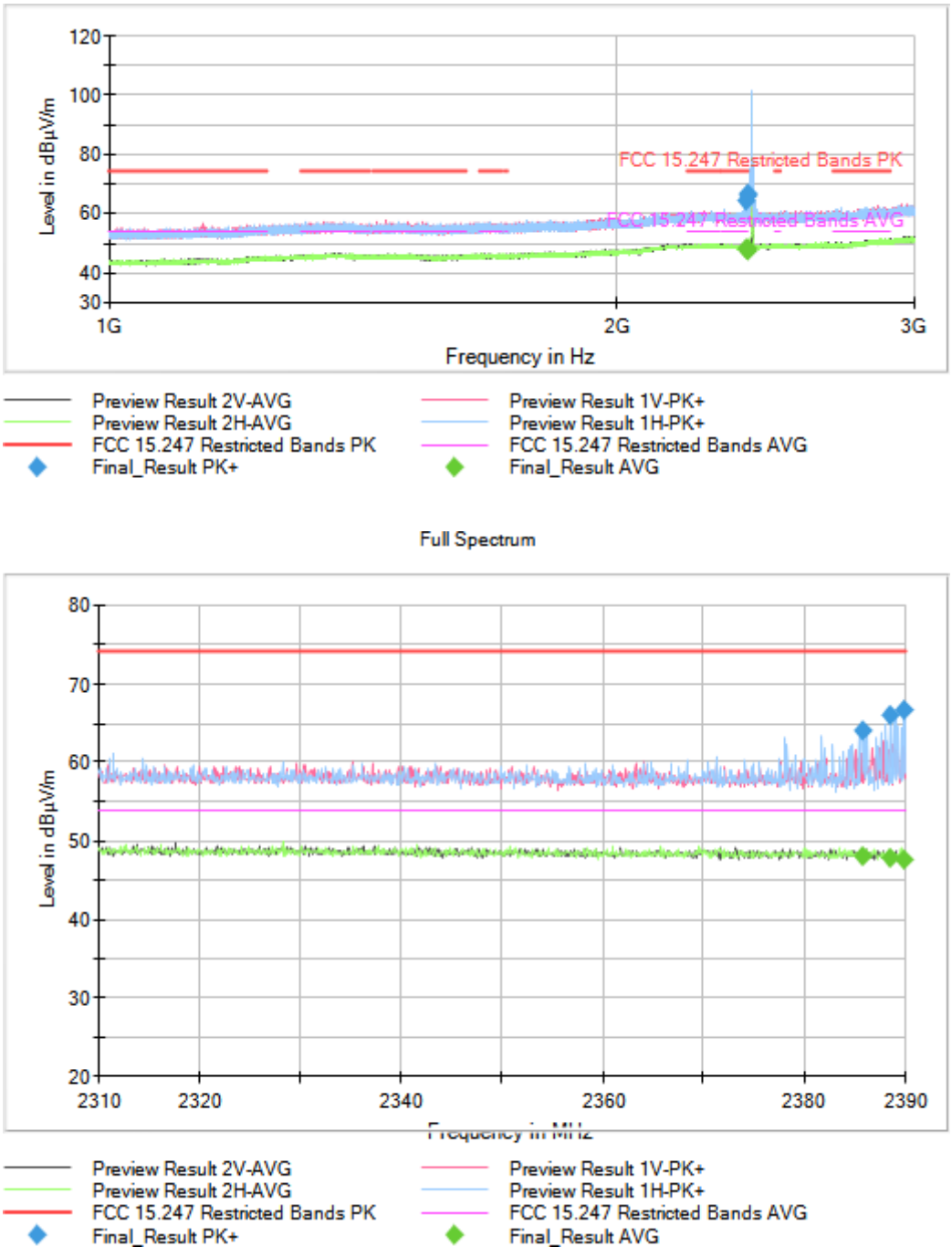
Frequency Range GHz = [1, 3] Equipment Type = Digital Transmission System (DTS)

Modulation = BTLE 5.0 (GFSK 2 Mbit/s) Frequency MHz = 2402.00000

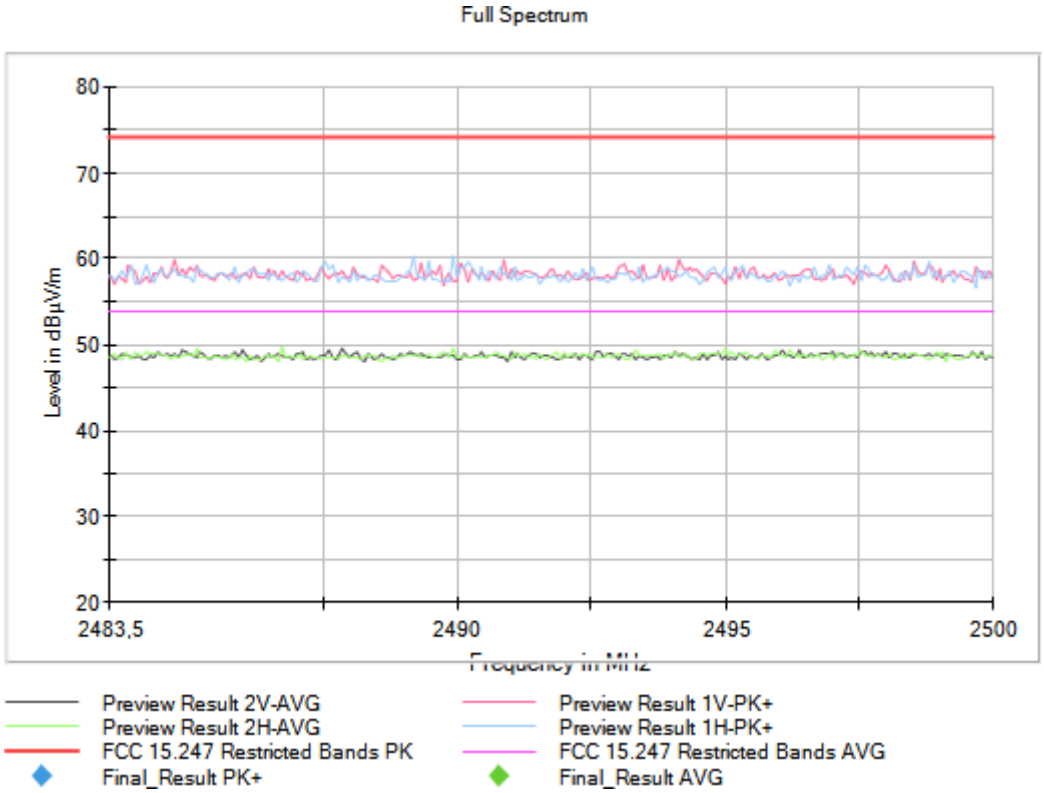
MIMO Mode = SISO Measurement Point = 1

Active Port = 1

Images:



Full Spectrum



Tables:

Spectrum Analyzer Parameters

	Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamp
	Receiver: [FSV 40]					
	1 GHz - 3 GHz	66,667 kHz	PK+ ; AVG	1 MHz	1 s	0 dB

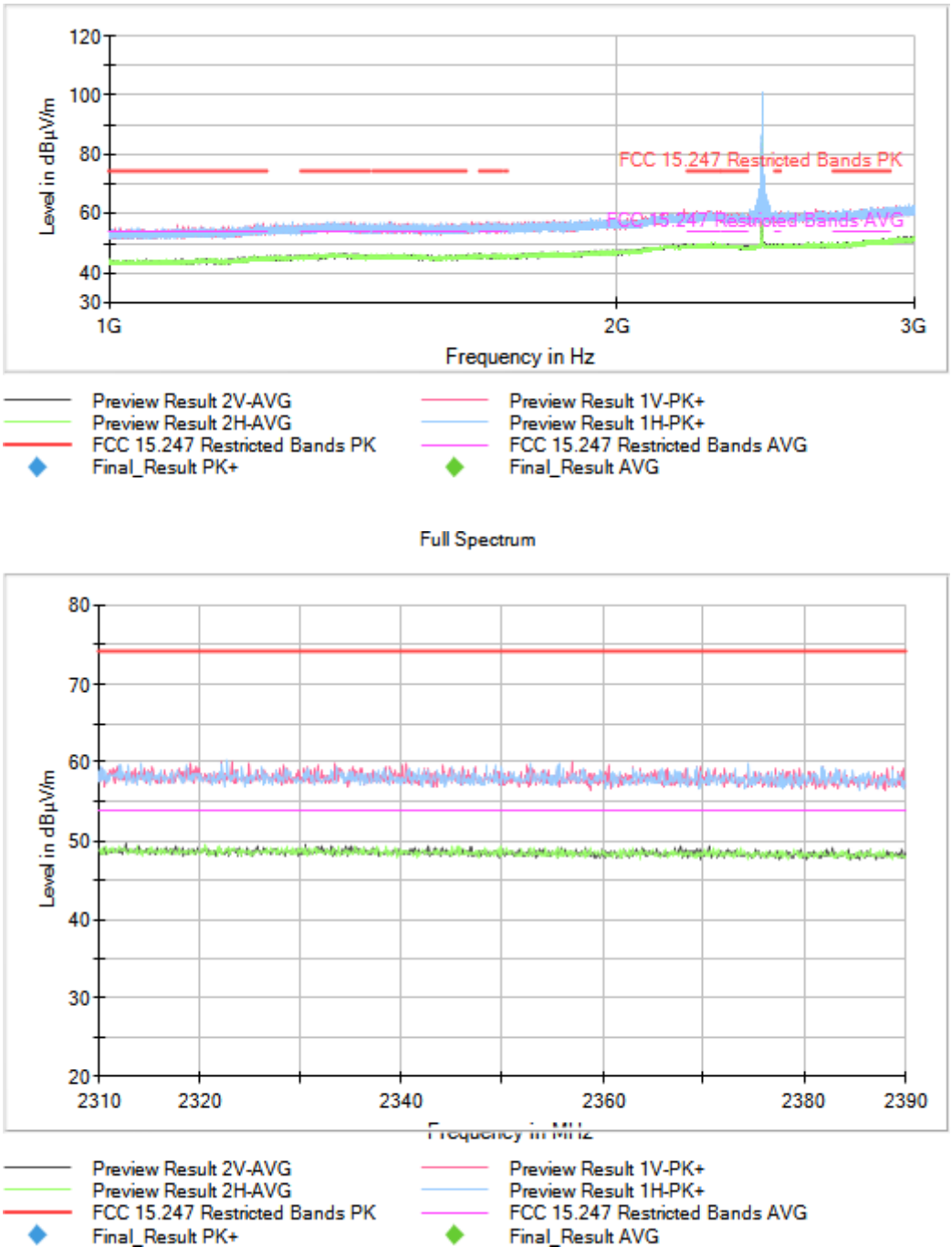
Frequency Range GHz = [1, 3] Equipment Type = Digital Transmission System (DTS)

Modulation = BTLE 5.0 (GFSK 2 Mbit/s) Frequency MHz = 2440.00000

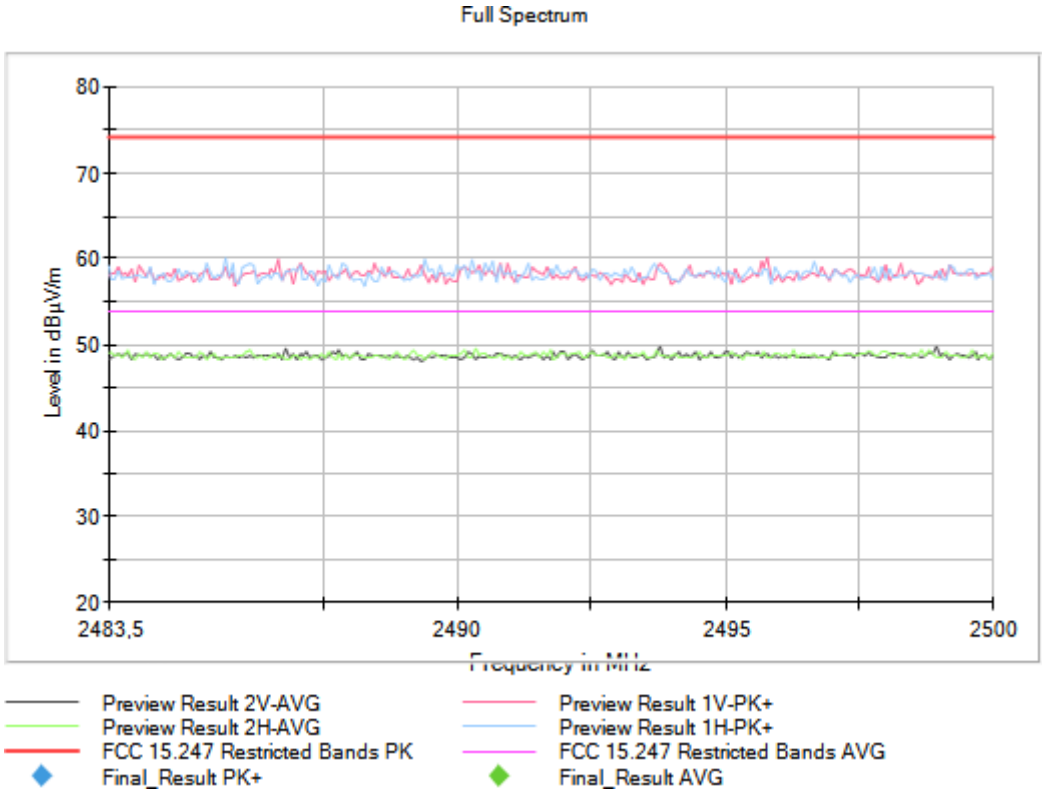
MIMO Mode = SISO Measurement Point = 1

Active Port = 1

Images:



Full Spectrum



Tables:

Spectrum Analyzer Parameters

	Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamp
	Receiver: [FSV 40]					
	1 GHz - 3 GHz	66,667 kHz	PK+ ; AVG	1 MHz	1 s	0 dB

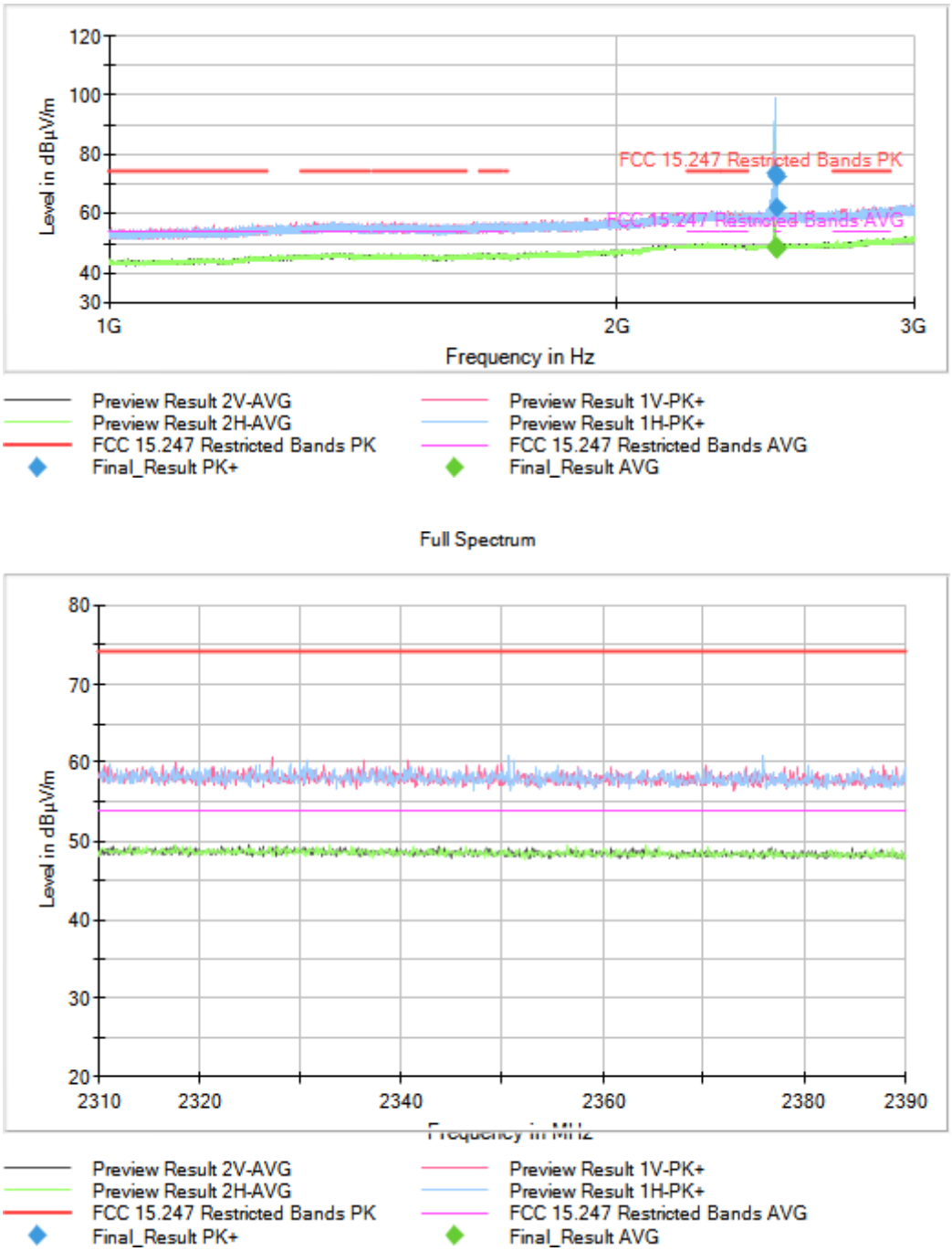
Frequency Range GHz = [1, 3] Equipment Type = Digital Transmission System (DTS)

Modulation = BTLE 5.0 (GFSK 2 Mbit/s) Frequency MHz = 2480.00000

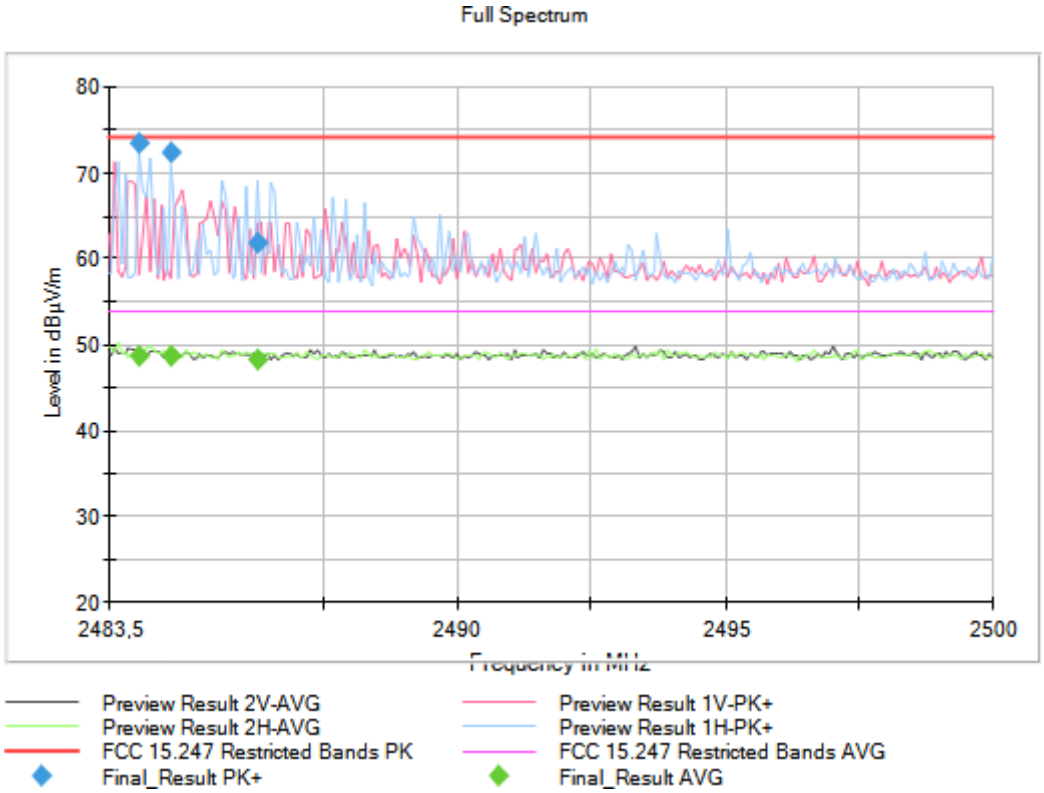
MIMO Mode = SISO Measurement Point = 1

Active Port = 1

Images:



Full Spectrum



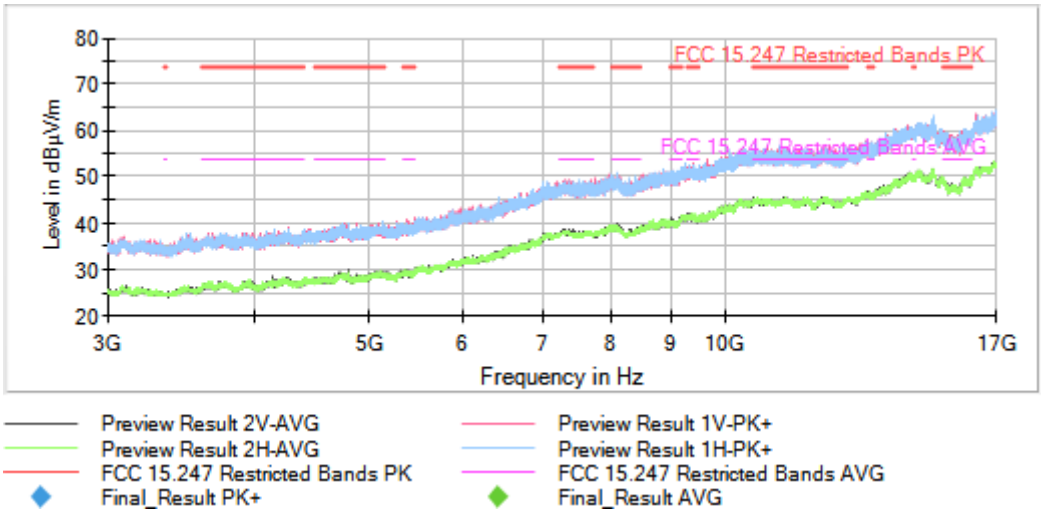
Tables:

Spectrum Analyzer Parameters

	Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamp
	Receiver: [FSV 40]					
	1 GHz - 3 GHz	66,667 kHz	PK+ ; AVG	1 MHz	1 s	0 dB

Frequency Range GHz = [3, 17]
Equipment Type = Digital Transmission System (DTS)
Modulation = BTLE 5.0 (GFSK 2 Mbit/s)
Frequency MHz = 2402.00000
MIMO Mode = SISO
Measurement Point = 1
Active Port = 1

Images:

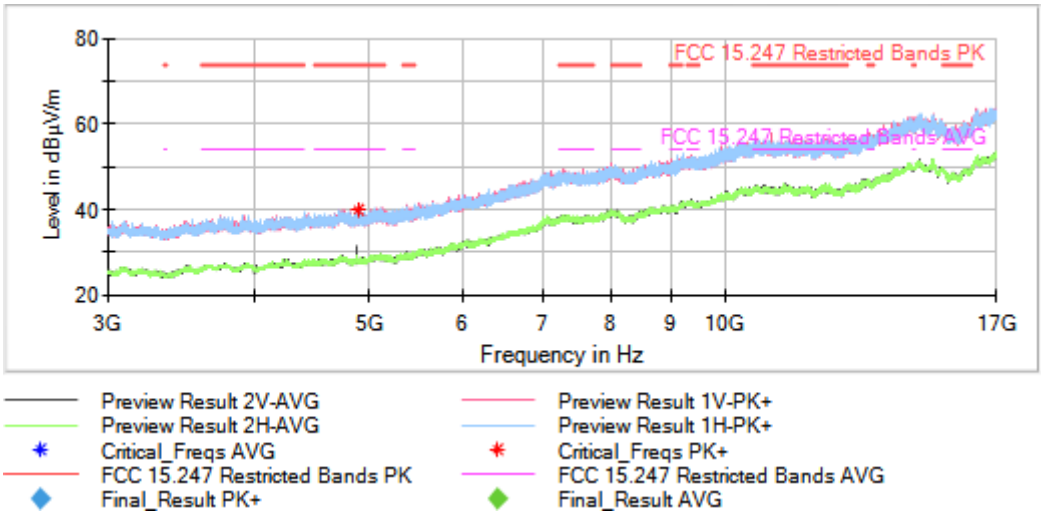


Tables:
Spectrum Analyzer Parameters

	Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamp
	Receiver: [FSV 40]					
	3 GHz - 17 GHz	500 kHz	PK+ ; AVG	1 MHz	1 s	0 dB

Frequency Range GHz = [3, 17]
Equipment Type = Digital Transmission System (DTS)
Modulation = BTLE 5.0 (GFSK 2 Mbit/s)
Frequency MHz = 2440.00000
MIMO Mode = SISO
Measurement Point = 1
Active Port = 1

Images:

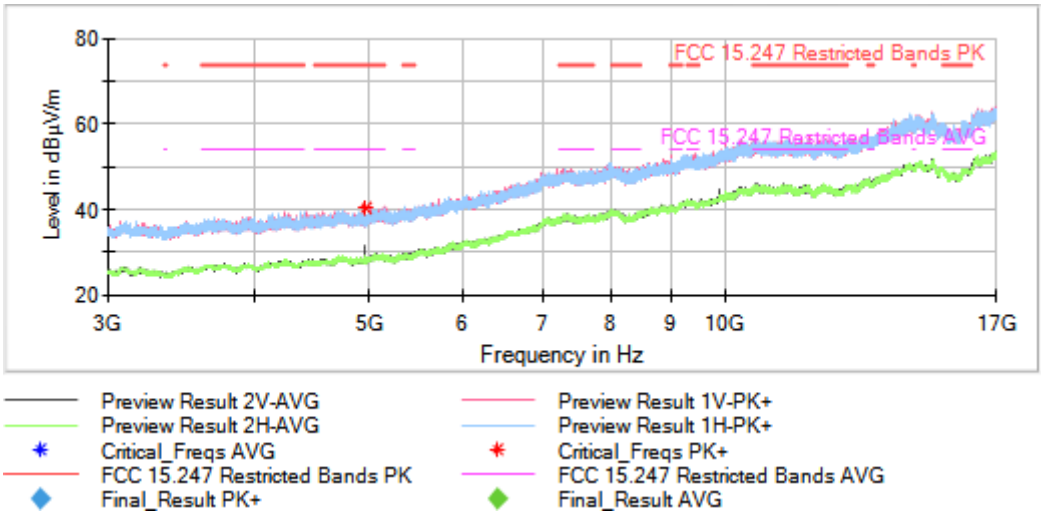


Tables:
Spectrum Analyzer Parameters

	Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamp
	Receiver: [FSV 40]					
	3 GHz - 17 GHz	500 kHz	PK+ ; AVG	1 MHz	1 s	0 dB

Frequency Range GHz = [3, 17]
Equipment Type = Digital Transmission System (DTS)
Modulation = BTLE 5.0 (GFSK 2 Mbit/s)
Frequency MHz = 2480.00000
MIMO Mode = SISO
Measurement Point = 1
Active Port = 1

Images:



Tables:
Spectrum Analyzer Parameters

	Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamp
	Receiver: [FSV 40]					
	3 GHz - 17 GHz	500 kHz	PK+ ; AVG	1 MHz	1 s	0 dB

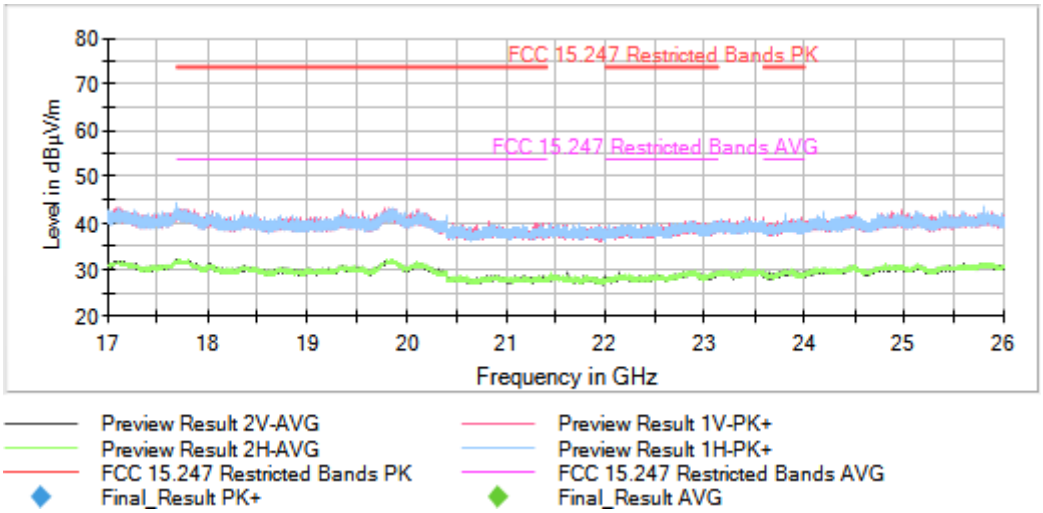
Frequency Range GHz = [17, 26] Equipment Type = Digital Transmission System (DTS)

Modulation = BTLE 5.0 (GFSK 2 Mbit/s) Frequency MHz = 2402.00000

MIMO Mode = SISO Measurement Point = 1

Active Port = 1

Images:



Tables:

Spectrum Analyzer Parameters

	Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamp
	Receiver: [FSV 40]					
	17 GHz - 26 GHz	500 kHz	PK+ ; AVG	1 MHz	1 s	0 dB

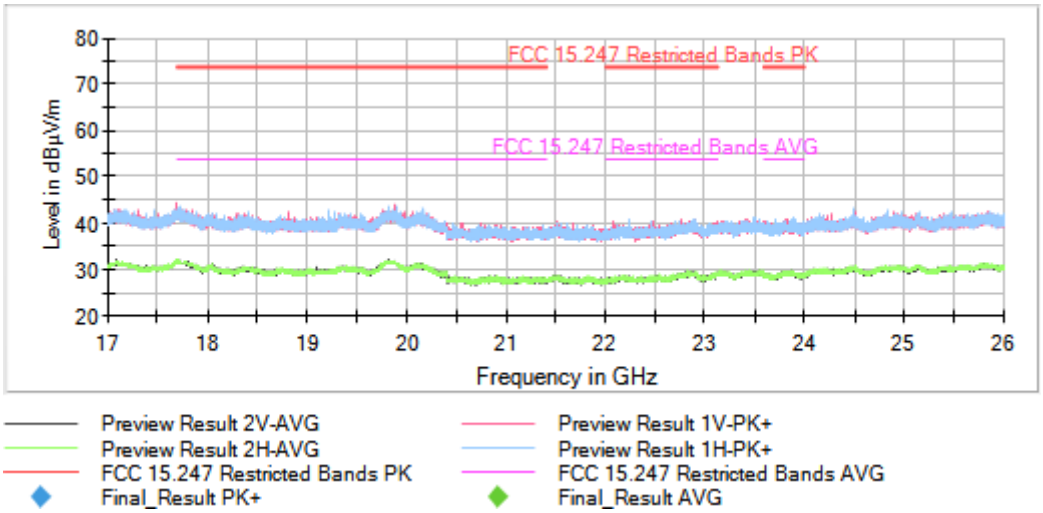
Frequency Range GHz = [17, 26] Equipment Type = Digital Transmission System (DTS)

Modulation = BTLE 5.0 (GFSK 2 Mbit/s) Frequency MHz = 2440.00000

MIMO Mode = SISO Measurement Point = 1

Active Port = 1

Images:



Tables:

Spectrum Analyzer Parameters

	Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamp
	Receiver: [FSV 40]					
	17 GHz - 26 GHz	500 kHz	PK+ ; AVG	1 MHz	1 s	0 dB

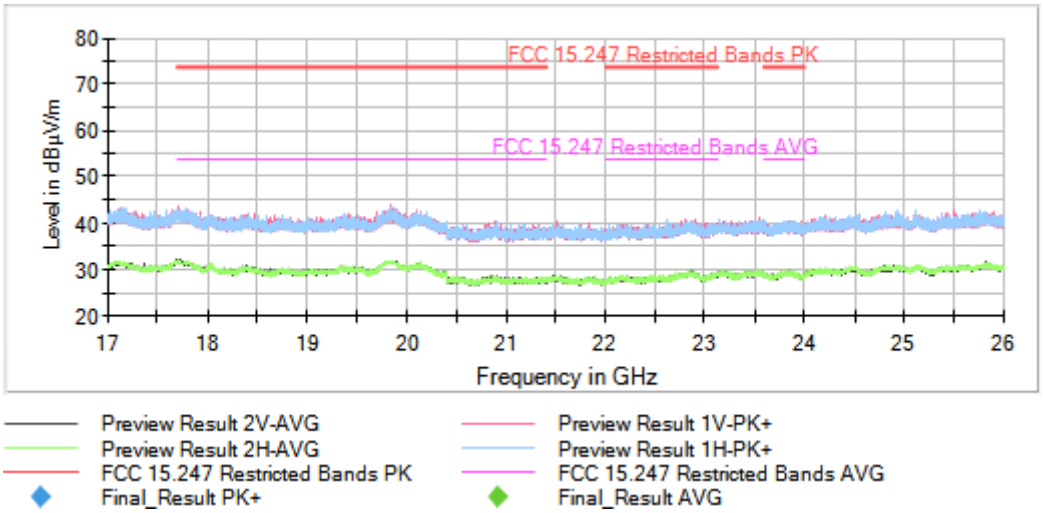
Frequency Range GHz = [17, 26] Equipment Type = Digital Transmission System (DTS)

Modulation = BTLE 5.0 (GFSK 2 Mbit/s) Frequency MHz = 2480.00000

MIMO Mode = SISO Measurement Point = 1

Active Port = 1

Images:



Tables:

Spectrum Analyzer Parameters

	Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamp
	Receiver: [FSV 40]					
	17 GHz - 26 GHz	500 kHz	PK+ ; AVG	1 MHz	1 s	0 dB