

ISED CABid: ES1909

Lab. Company Number: 4621A

Test Report No:

81801RRF.003A2

Test Report

USA FCC Part 15.247, 15.209

CANADA RSS-247, RSS-Gen

(*) Identification of item tested	Digital Control Panel for caravanning industry
(*) Trademark	Truma
(*) Model and /or type reference	iNet X Panel 2 (47000-00264)
Other identification of the product	FCC ID: 2ADPZ-INETX2 IC: 12552A-INETX2
(*) Features	Bluetooth LE HW version: EWY-221-01 (AXTR0004.01 Truma_iNetXPnl-1v2) SW version: 24125.1.0.22
Applicant	Truma Gerätetechnik GmbH & Co. KG Wernher-von-Braun-Straße 12, 85640 Putzbrunn ; Germany
Test method requested, standard	USA FCC Part 15.247 (10-1-25 Edition): Operation within the bands 902 - 928 MHz, 2400 -2483.5 MHz, and 5725 - 5850 MHz. USA FCC Part 15.209 (10-1-25 Edition): Radiated emission limits; general requirements. CANADA RSS-247 Issue 4 (July 2025). 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 C63.10-2020 / Cor.1-2023 / C63.10a-2024 / Errata to C63.10a-2024: 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 
Date of issue	2026-09-03
Report template No	FDT08_25 (*) "Data provided by the client"

Firmado digitalmente por 53680346W JOSE MANUEL GOMEZ (CA29507456) Fecha: 2026.09.03 08:12:56 +02'00'

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Acronyms

Acronym ID	Acronym Description
	E.I.R.P.
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
Occ Ch BW	Occupied Channel Bandwidth
Operation Band	Operation Band
PSD	Power Spectral Density
Peak Power	Maximum Peak Conducted Output Power
Pol	Polarization
Port	Active Port
RU	Resource Unit
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 $\leq \pm 5,35$ 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 $\leq \pm 4,32$ 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 $\leq \pm 5,51$ 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 $\leq \pm 0,80$ dB

RF Average Output Power: Measurement uncertainty $\leq \pm 0,99$ dB

Power Spectral Density: Measurement uncertainty $\leq \pm 0,99$ dB

6dB Bandwidth: Measurement uncertainty $\leq \pm 2,84$ %

Occupied Channel Bandwidth: Measurement uncertainty $\leq \pm 1,17$ %

Conducted Band-edge spurious emissions: Measurement uncertainty $\leq \pm 1,76$ 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 Digital Control Panel for caravanning industry. Standard 4.3 " touchscreen panel of the Truma iNet X System to control devices in a recreation vehicle.

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. The laboratory is not responsible for such information and it is not covered by accreditation.

Usage of samples

Samples undergoing test have been selected by: The client.

Id	Control Number	Description	Model	Serial N°	Date of Reception	Application
S/01	81801B_3.1	Digital Control Panel for caravanning industry	iNet X Panel 2 (47000-00264)	36085003	2025-04-04	Element Under Test
S/01	81801B_13.1	USB TTL Cable	-	-	2025-04-04	Auxiliary Element
S/01	81801B_21.1	Bannana Cable	-	-	2025-04-04	Auxiliary Element
S/01	81801B_22.1	Module Circuit Board	-	-	2025-04-04	Auxiliary Element

Notes referenced to samples during the project:

Id	Type
S/01	All tests.

Test sample description

Ports..... :	Port name and description	Cable					
		Specified max length [m]	Attached during test		Shielded		
	DC power thr CAN	< 6m	[X]		[]		
	CAN	< 9m	[X]		[]		
	TIN	< 9m	[X]		[]		
	RV-C	< 9m	[X]		[]		
	CI	< 9m	[X]		[]		
	Indoor T sensor Outdoor T sensor	< 2m	[X]		[]		
Supplementary information to the ports..... :							
Rated power supply :	Voltage and Frequency		Reference poles				
			L1	L2	L3	N	PE
	[]	AC:	[]	[]	[]	[]	[]
	[]	AC:	[]	[]	[]	[]	[]

	☒	DC: 12Vdc car battery, 8 - 16.5Vdc), 24VDC for 60sec, reverse polarity protected	
	☐	DC:	
Rated Power..... :	300mA (avg), 800mA (max)		
Clock frequencies..... :	See table attached		
Other parameters..... :			
Software version..... :	24125.1.0.22		
Hardware version..... :	EWY-221-01 (AXTR0004.01 Truma_iNetXPnl-1v2)		
Dimensions in cm (W x H x D) ... :	13.58x8.85x3.09		
Mounting position..... :	☐	Table top equipment	
	☒	Wall/Ceiling mounted equipment	
	☐	Floor standing equipment	
	☐	Hand-held equipment	
	☐	Other:	
Modules/parts..... :	Module/parts of test item	Type	Manufacturer
	iNetX Panel 2 (47000-00264)		Truma
Accessories (not part of the test item)..... :	Description	Type	Manufacturer
			
Documents as provided by the applicant..... :	Description	File name	Issue date
			

Identification of the client

Psicontrol NV
Steverlyncklaan 15, 8900 Ieper, BELGIUM

Testing period and place

Test Location	DEKRA TESTING AND CERTIFICATION S.A.U. C/ Severo Ochoa, 6 - Parque Tecnológico de Andalucía; 29590 Campanillas (Málaga) (Location B)
Date (start)	2025-04-22
Date (finish)	2025-06-24

Document history

Report number	Date	Description
81801RRF.003	2025-10-01	First release.
81801RRF.003A1	2026-07-28	Second release. Modification due to typos and missing information. This test report cancels and replaces to 81801RRF.003
81801RRF.003A2	2026-09-03	Third release. Modification due to typos. This test report cancels and replaces to 81801RRF.003A1

Environmental conditions

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

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

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

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

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

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

Remarks and comments

The tests have been performed by the technical personnel: Antonio Maireles and Álvaro Gutiérrez Naranjo.

Used instrumentation:

Control No.	Equipment	Model	Manufacturer	Next Calibration
07445	DC POWER SUPPLY 30V/5A	U8002A	KEYSIGHT TECHNOLOGIES	--
07760	DIGITAL MULTIMETER	175	FLUKE	2025-11-07
07817	EMI TEST RECEIVER 2Hz-44GHz	ESW44	ROHDE AND SCHWARZ	2026-07-01
06609	ETHERNET TEMPERATURE AND HUMIDITY LOGGER	HWg-STE	HW GROUP	2026-04-21
06615	ETHERNET TEMPERATURE AND HUMIDITY LOGGER	HWg-STE	HW GROUP	2026-04-24
04953	HIGH PASS FILTER 1.1-8GHz	WHK10-990-1100-8000-40SS	WAINWRIGHT INSTRUMENTS	2026-02-14
09029	HIGH PASS FILTER 17-40 GHZ	STHP-17-40G-92	TEMSTRON/TEM WELL	2026-04-02
08770	HIGH PASS FILTER 3-18 GHZ	ST-3GA2833-HS	TEMSTRON/TEM WELL	2025-08-02
06496	HORN ANTENNA 1-18GHz	BBHA 9120 D	SCHWARZBECK	2026-12-01
04657	HORN ANTENNA 18-40GHz	BBHA 9170	SCHWARZBECK	2026-06-12
06143	HYBRID BILOG ANTENNA 30MHz-6GHz	3142E	ETS LINDGREN	2027-01-22
07656	LOW PASS FILTER TEMSTRON/TEMWELL DC - 1 GHZ	ST-1GA3250-LS	TEMSTRON/TEM WELL	2026-02-03
07193	MULTI-DEVICE CONTROLLER	CO3000	INNCO	--
03783	PRE-AMPLIFIER G>30dB 1GHz-18GHz	BLMA 0118-3A	BONN ELEKTRONIK	2026-03-17
06142	PRE-AMPLIFIER G>38dB 30MHz-6GHz	BLNA 0360-01N	BONN ELEKTRONIK	2025-07-25
06144	PRE-AMPLIFIER G>40dB 10MHz-6GHz	BLNA 0160-01N	BONN ELEKTRONIK	2025-07-22
06791	SEMIANECHOIC ABSORBER LINED CHAMBER IV	FACT 3 200 STP	ETS LINDGREN	--
06668	SIGNAL AND SPECTRUM ANALYZER 10Hz-40GHz	FSV40	ROHDE AND SCHWARZ	2027-04-01
04848	SOFTWARE FOR EMC/RF TESTING	EMC32	ROHDE AND SCHWARZ	--

Testing verdicts

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

Summary

Bluetooth Low Energy (2M, 1M).

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	
<u>Supplementary information and remarks:</u>			
None.			

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

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[Psd] Power Spectral Density	78

TEST CONDITIONS

(*): Data provided by the client.

POWER SUPPLY (*):

Vnominal: 12 Vdc car battery, 8 - 16.5 Vdc), 24 Vdc for 60 s, reverse polarity protected V
Type of Power Supply: Battery

ANTENNA (*):

Type of Antenna: Integrated Printed Inverted F Antenna
Maximum Declared Antenna Gain: +3.3 dBi

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.



TEST CASES DETAILS

FCC 47 CFR Part 15.247 / RSS-247 99dBw Occupied Channel Bandwidth 99%

Limits

The occupied bandwidth or the “99% emission bandwidth” is defined as the frequency range between two points, one above and the other below the carrier frequency, within which 99% of the total transmitted power of the fundamental transmitted emission is contained.

Modulation: BTLE 5.2 (GFSK 1 Mbit/s)

Results

Operation Band (MHz)	Equipment	Freq (MHz)	Occ Ch BW (MHz)
[2400, 2483.5]	Digital Transmission System (DTS)	2402.00000	1.090
		2440.00000	1.100
		2480.00000	1.090

Verdict

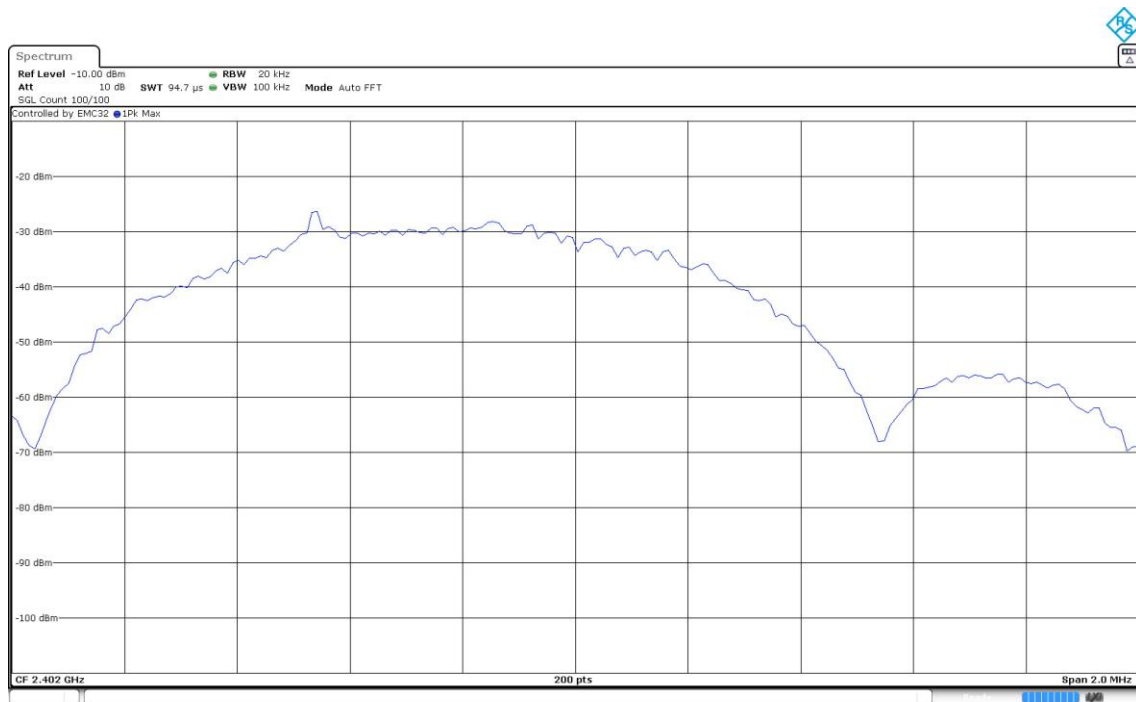
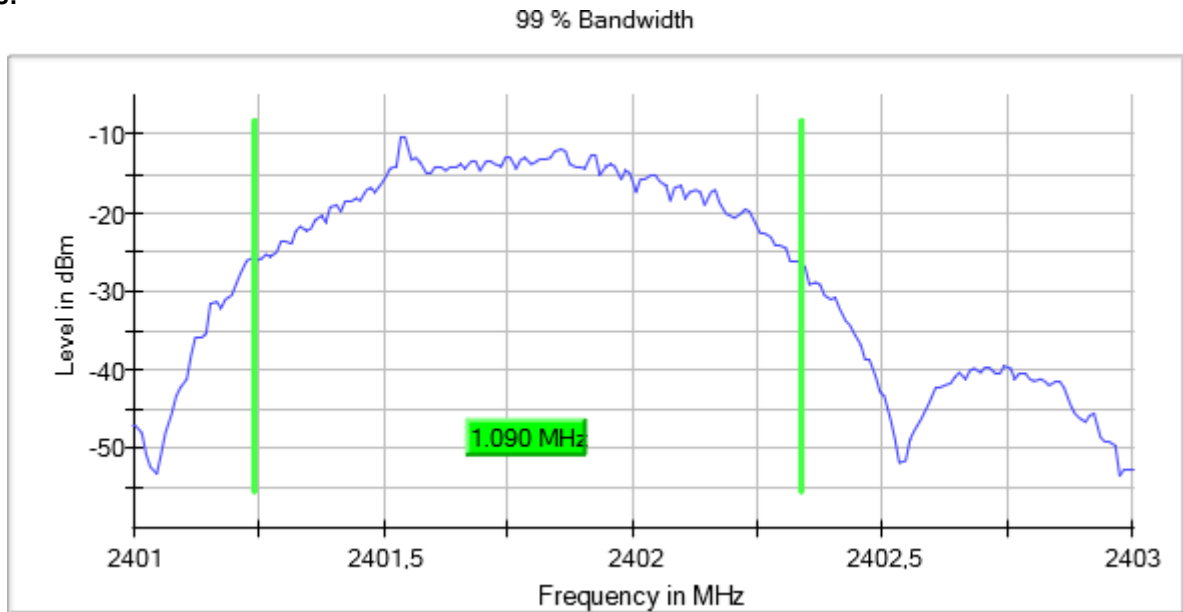
Pass

Attachments

Operation Band MHz = [2400, 2483.5] Equipment Type = Digital Transmission System (DTS)

Frequency MHz = 2402.00000 Modulation = BTLE 5.2 (GFSK 1 Mbit/s)

Images:

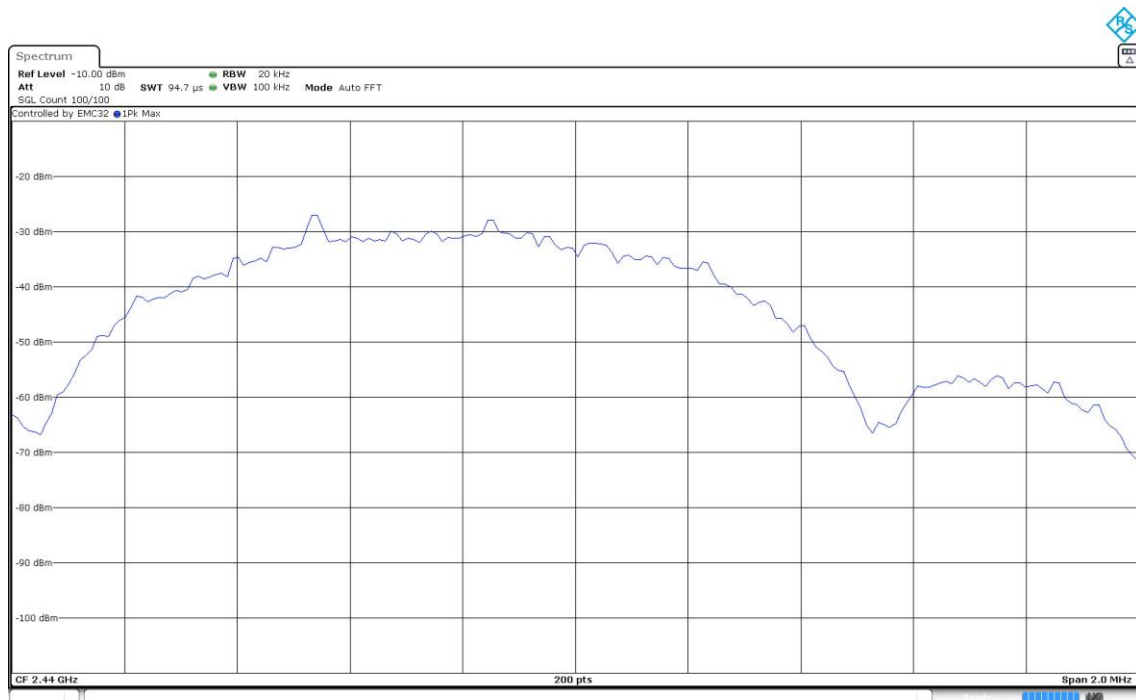
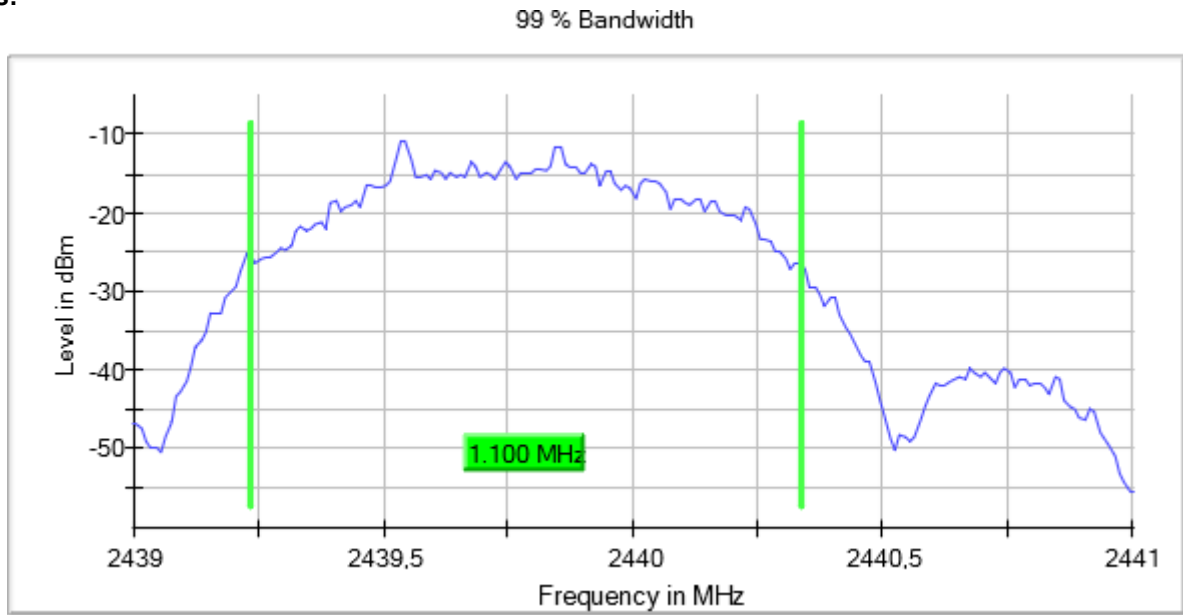


Operation Band MHz = [2400, 2483.5] Equipment Type = Digital Transmission System (DTS)

Frequency MHz = 2440.00000

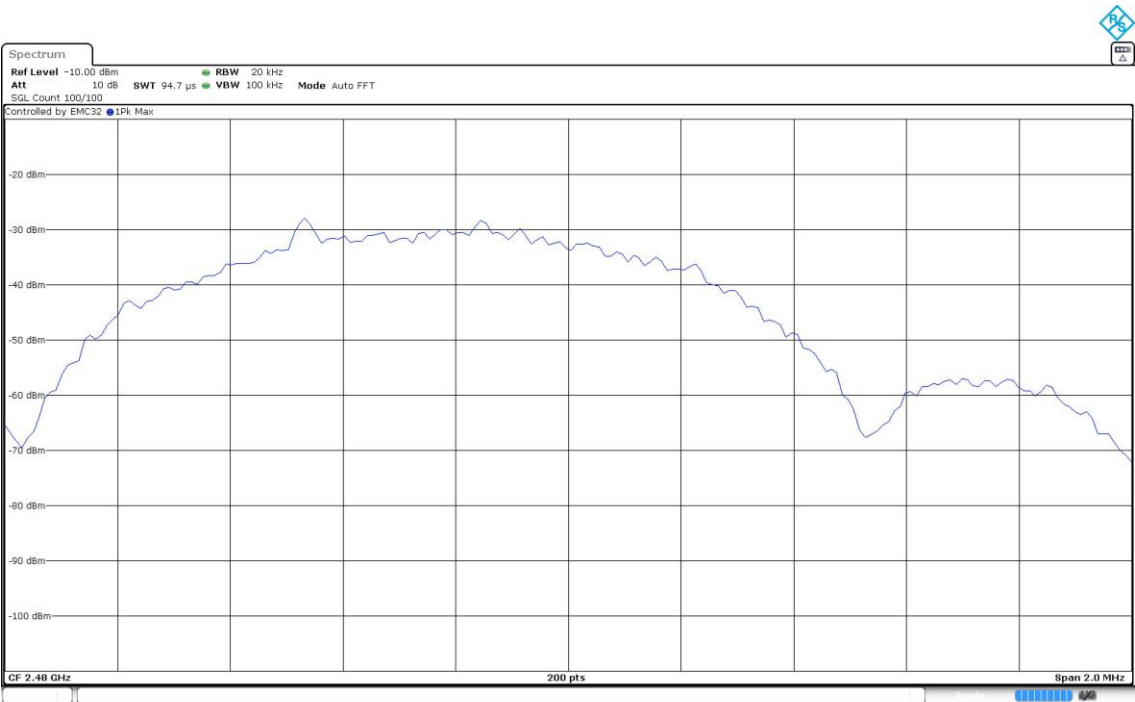
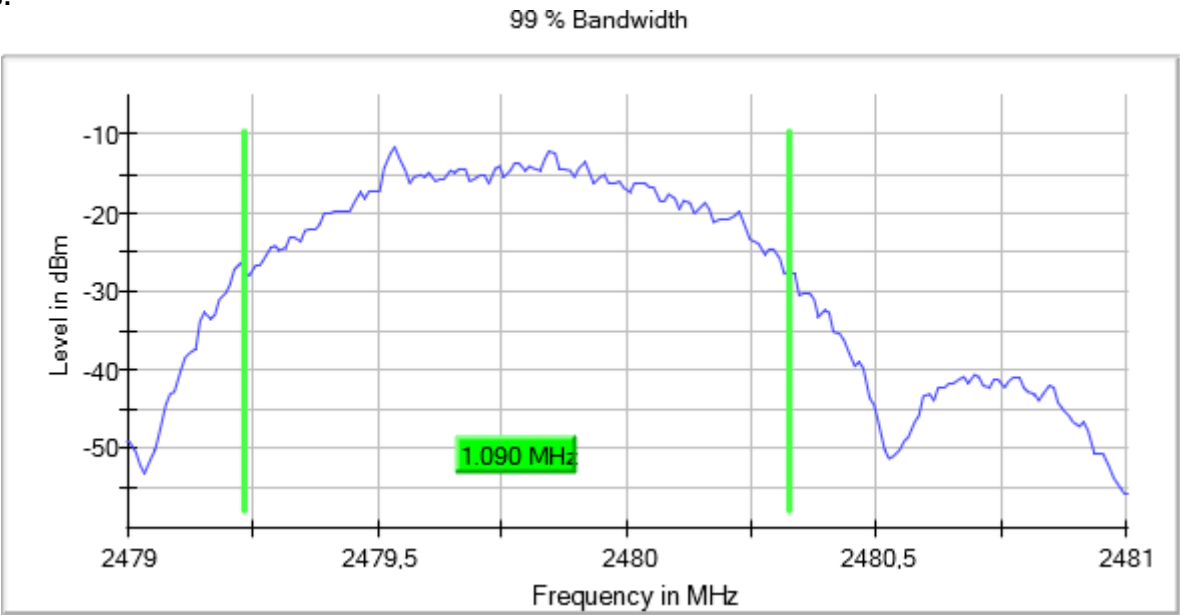
Modulation = BTLE 5.2 (GFSK 1 Mbit/s)

Images:



Operation Band MHz = [2400, 2483.5] Equipment Type = Digital Transmission System (DTS)
Frequency MHz = 2480.00000 Modulation = BTLE 5.2 (GFSK 1 Mbit/s)

Images:



Modulation: BTLE 5.2 (GFSK 2 Mbit/s)

Results

Operation Band (MHz)	Equipment	Freq (MHz)	Occ Ch BW (MHz)
[2400, 2483.5]	Digital Transmission System (DTS)	2402.00000	2.099
		2440.00000	2.099
		2480.00000	2.099

Verdict

Pass

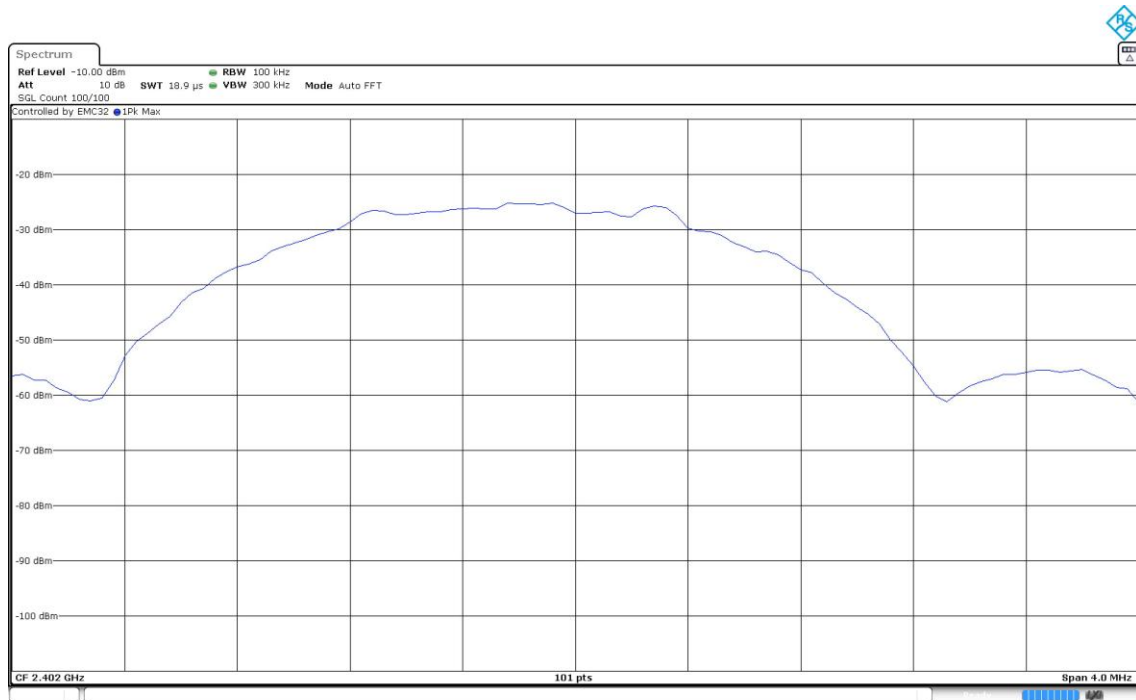
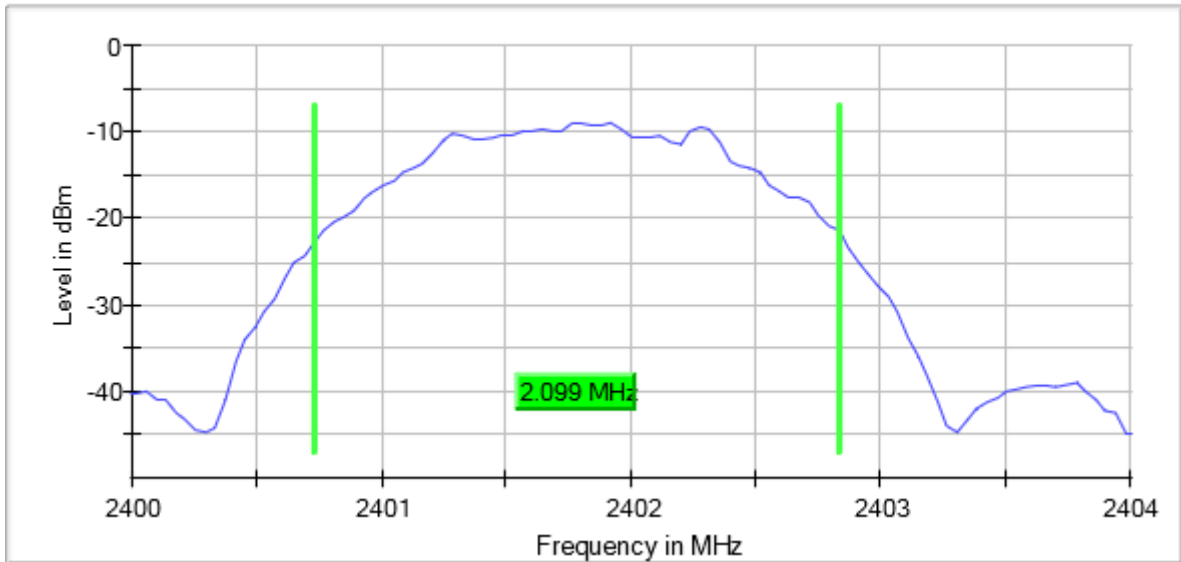
Attachments

Operation Band MHz = [2400, 2483.5] Equipment Type = Digital Transmission System (DTS)

Frequency MHz = 2402.00000 Modulation = BTLE 5.2 (GFSK 2 Mbit/s)

Images:

99 % Bandwidth

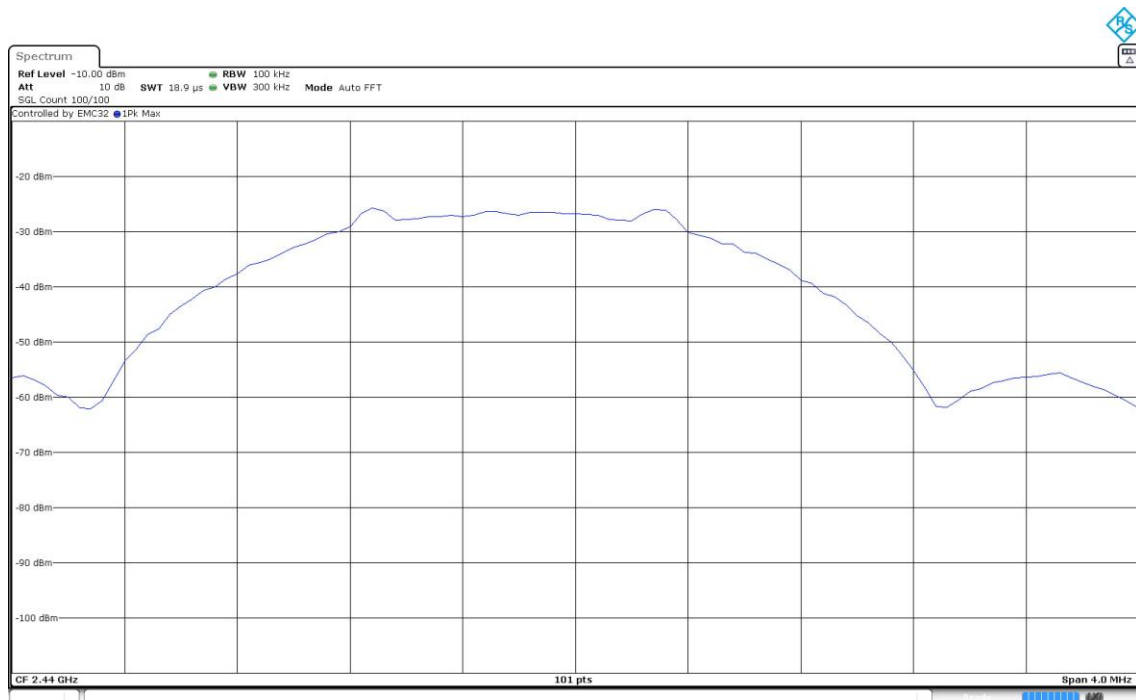
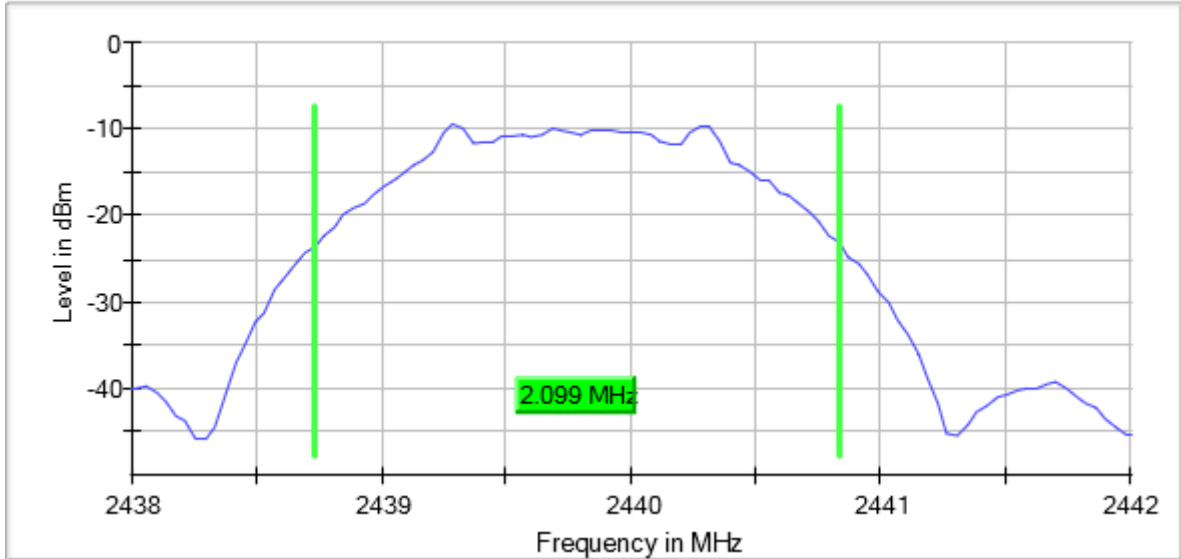


Operation Band MHz = [2400, 2483.5] Equipment Type = Digital Transmission System (DTS)

Frequency MHz = 2440.00000 Modulation = BTLE 5.2 (GFSK 2 Mbit/s)

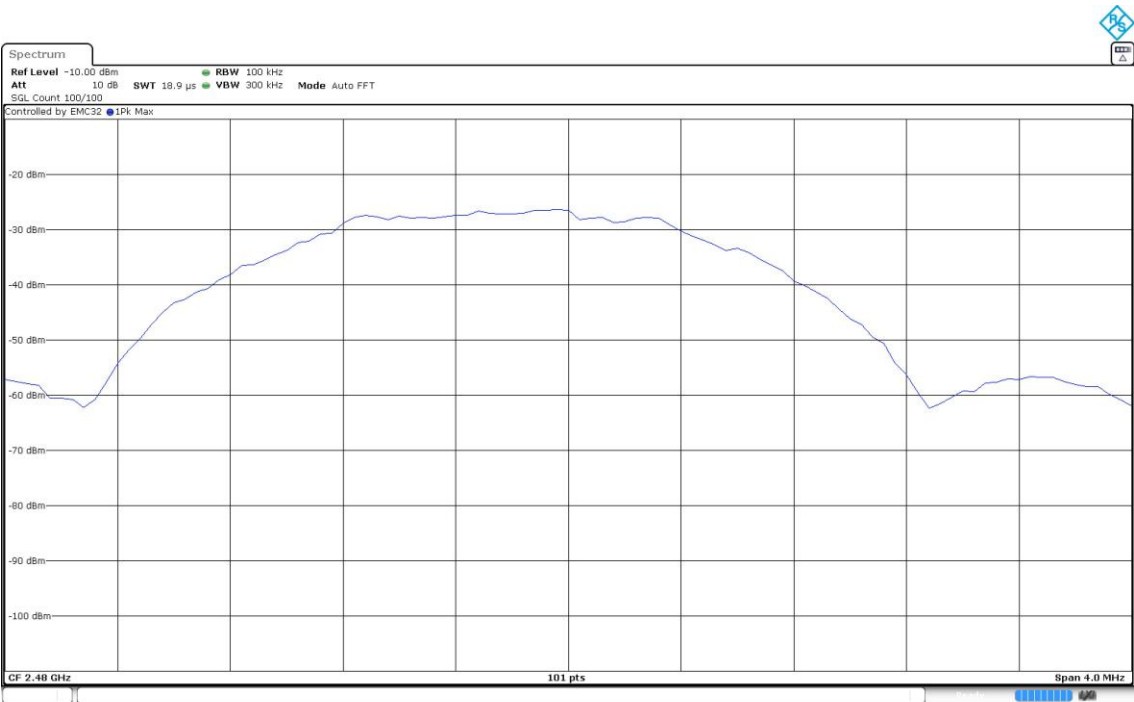
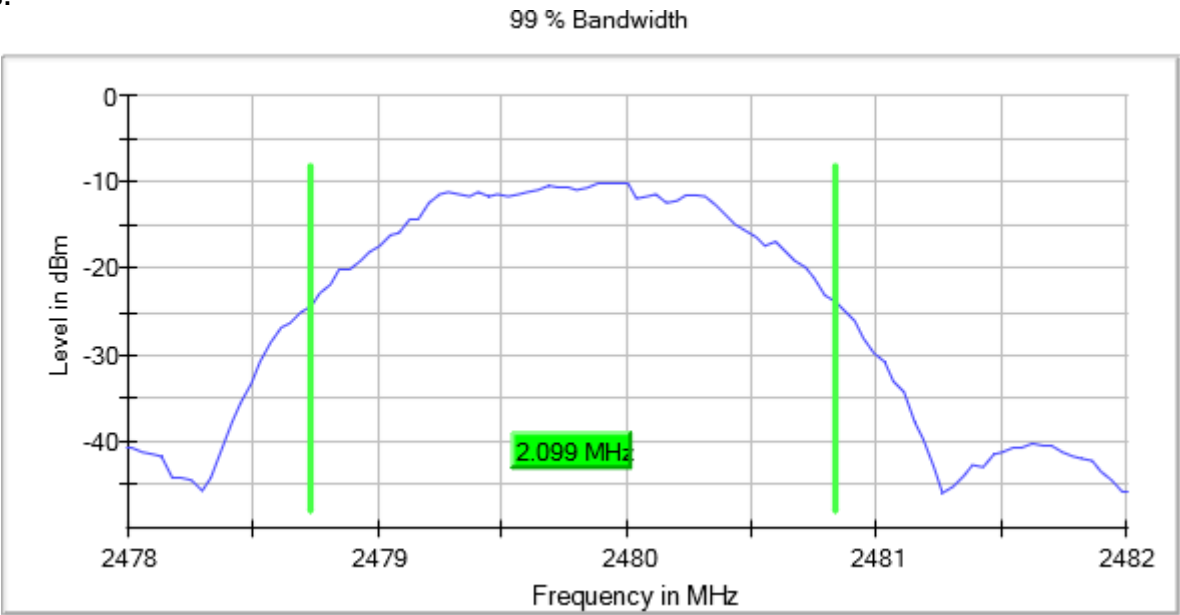
Images:

99 % Bandwidth



Operation Band MHz = [2400, 2483.5] Equipment Type = Digital Transmission System (DTS)
Frequency MHz = 2480.00000 Modulation = BTLE 5.2 (GFSK 2 Mbit/s)

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 5.2 (GFSK 1 Mbit/s)

Results

Operation Band (MHz)	Equipment	Freq (MHz)	Ebw (MHz)
[2400, 2483.5]	Digital Transmission System (DTS)	2402.00000	0.733
		2440.00000	0.752
		2480.00000	0.752

Verdict

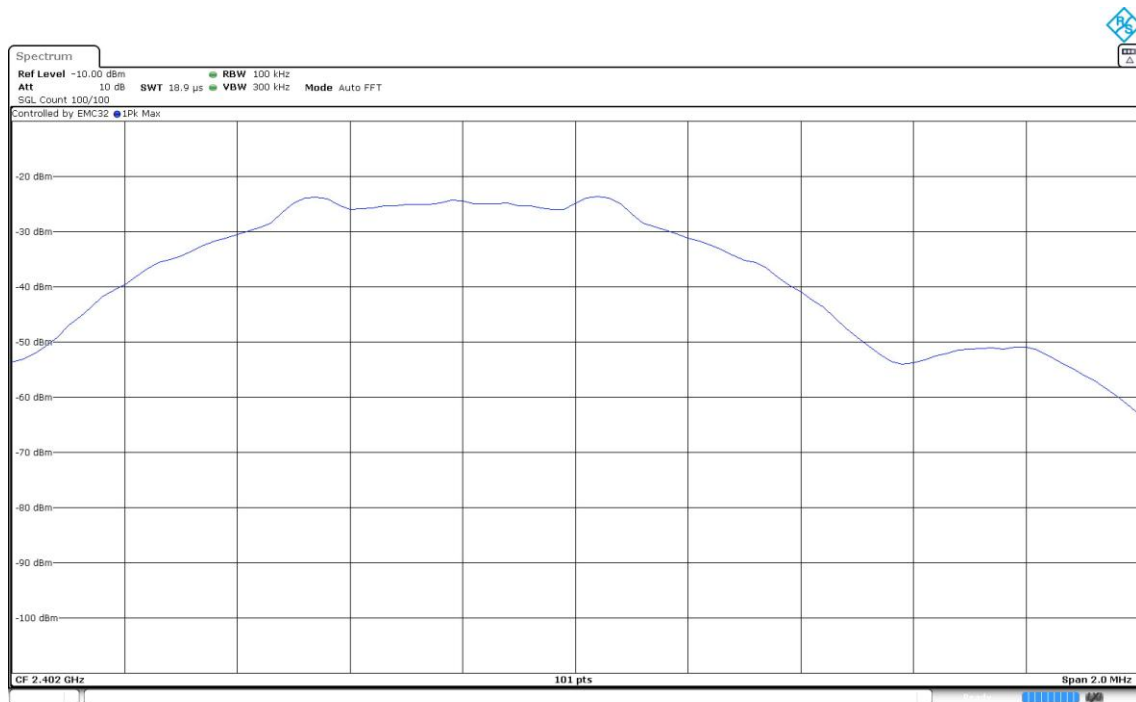
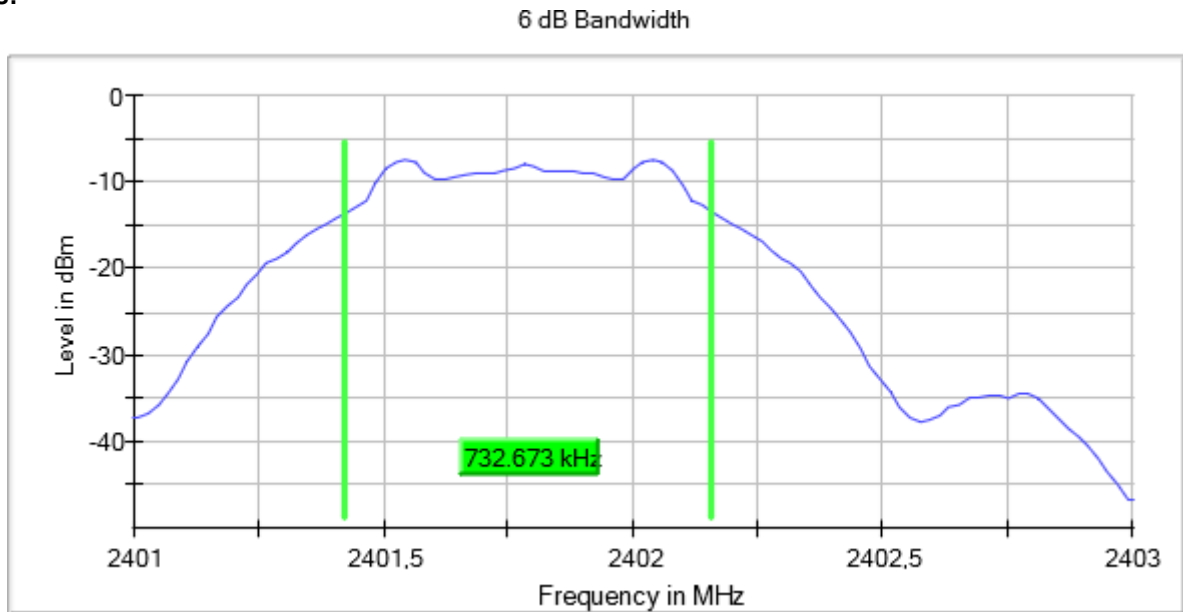
Pass

Attachments

Operation Band MHz = [2400, 2483.5] Equipment Type = Digital Transmission System (DTS)

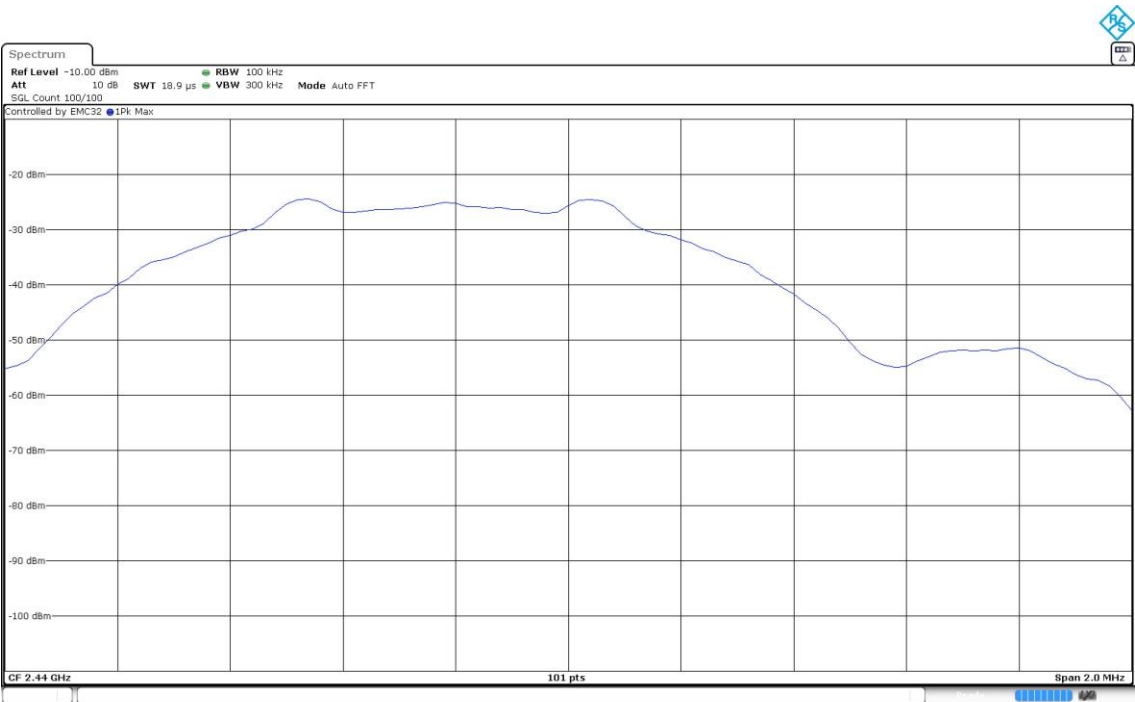
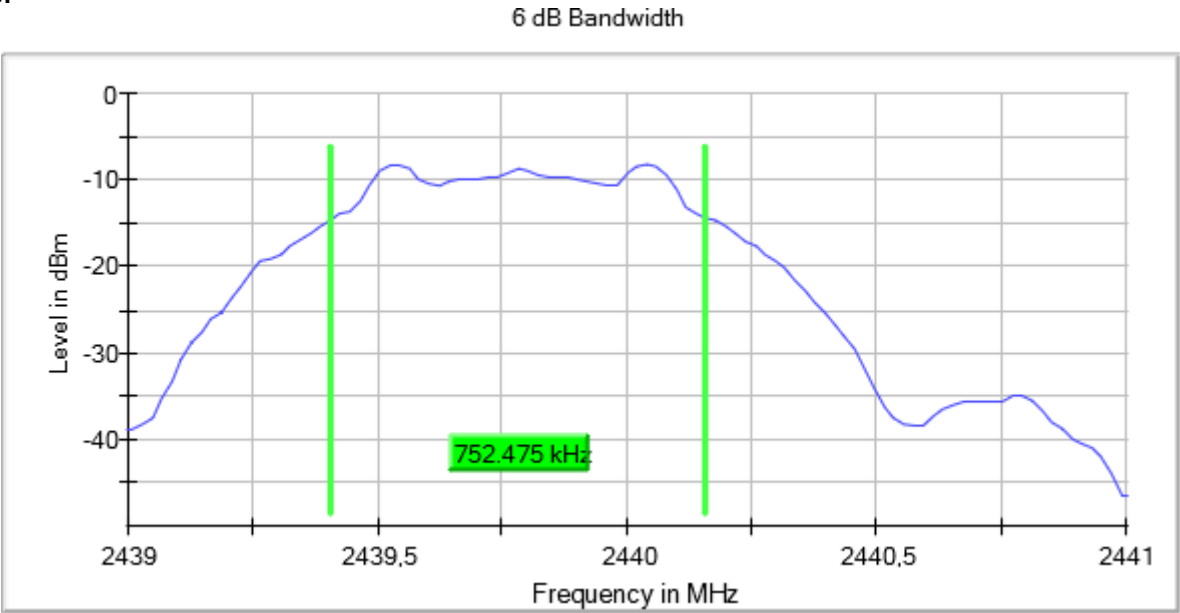
Frequency MHz = 2402.00000 Modulation = BTLE 5.2 (GFSK 1 Mbit/s)

Images:



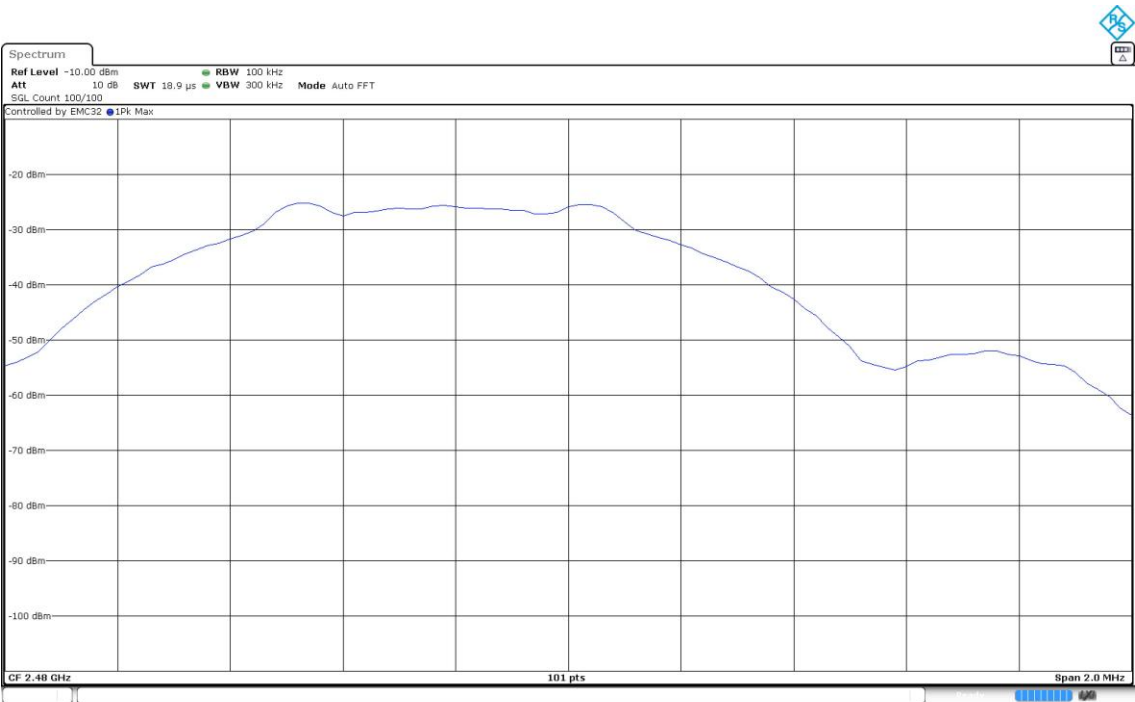
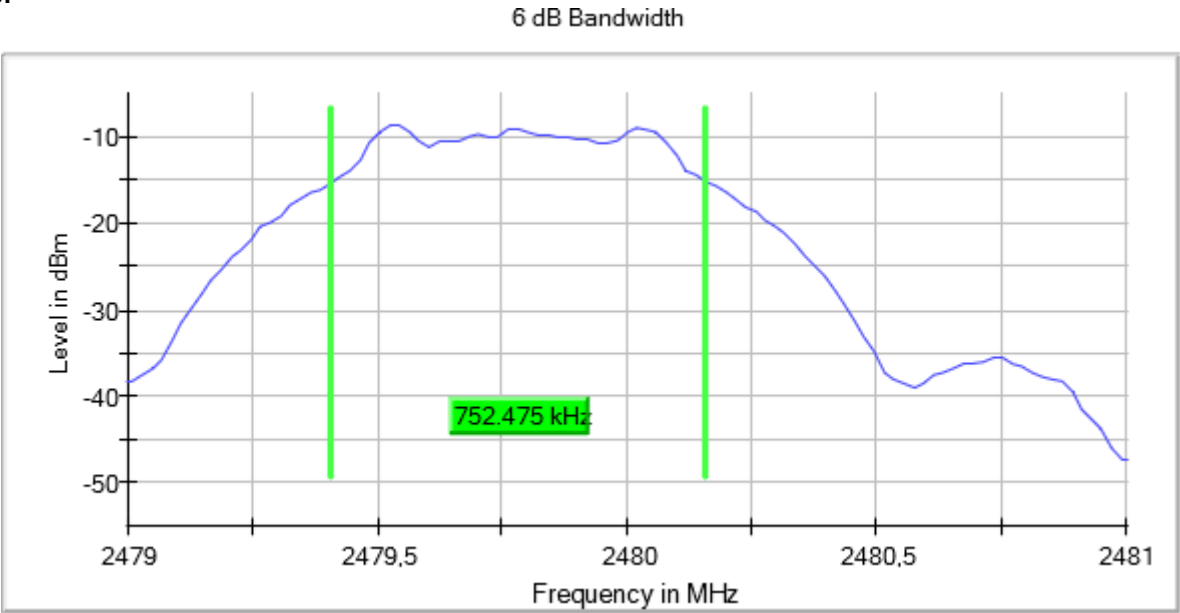
Operation Band MHz = [2400, 2483.5] Equipment Type = Digital Transmission System (DTS)
Frequency MHz = 2440.00000 Modulation = BTLE 5.2 (GFSK 1 Mbit/s)

Images:



Operation Band MHz = [2400, 2483.5] Equipment Type = Digital Transmission System (DTS)
Frequency MHz = 2480.00000 Modulation = BTLE 5.2 (GFSK 1 Mbit/s)

Images:



Modulation: BTLE 5.2 (GFSK 2 Mbit/s)

Results

Operation Band (MHz)	Equipment	Freq (MHz)	Ebw (MHz)
[2400, 2483.5]	Digital Transmission System (DTS)	2402.00000	1.426
		2440.00000	1.545
		2480.00000	1.465

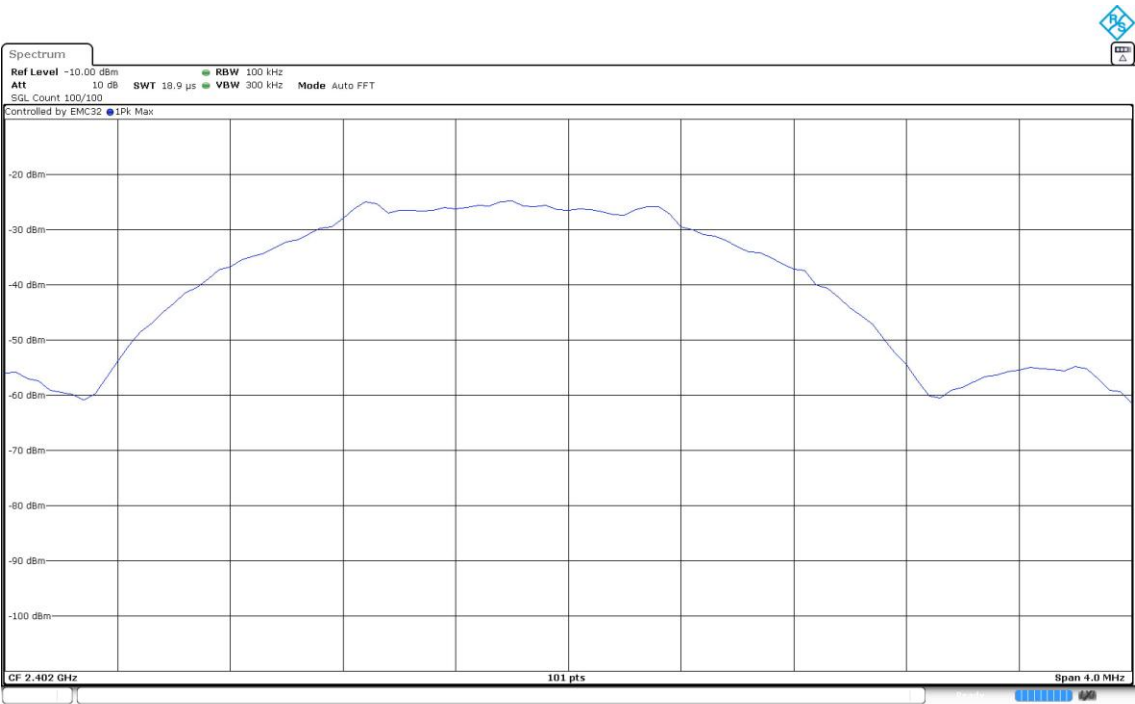
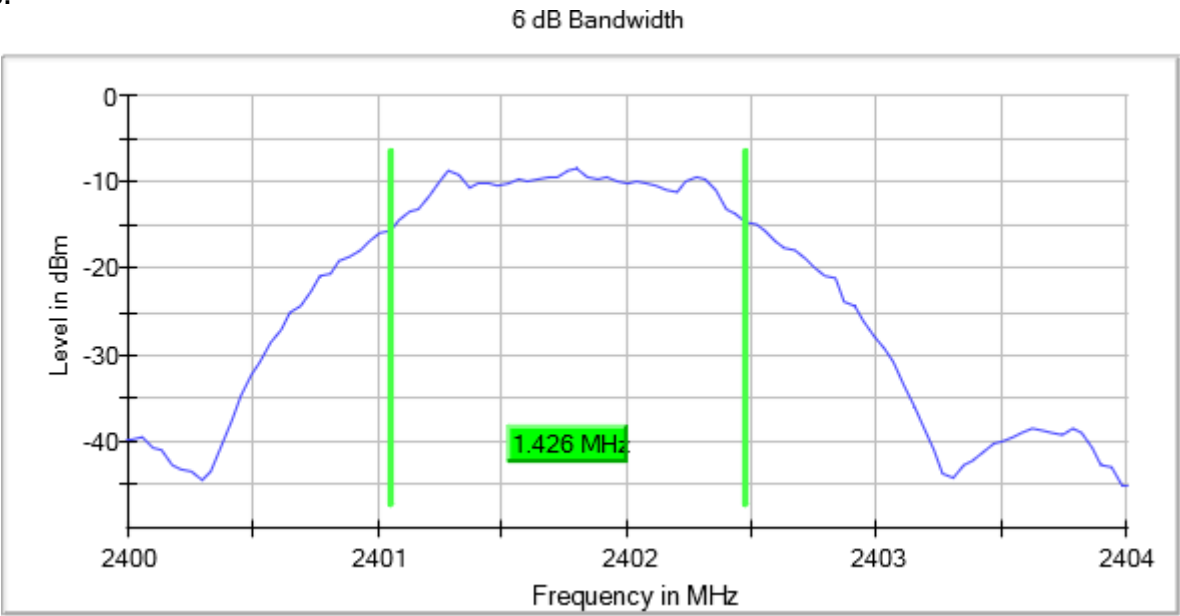
Verdict

Pass

Attachments

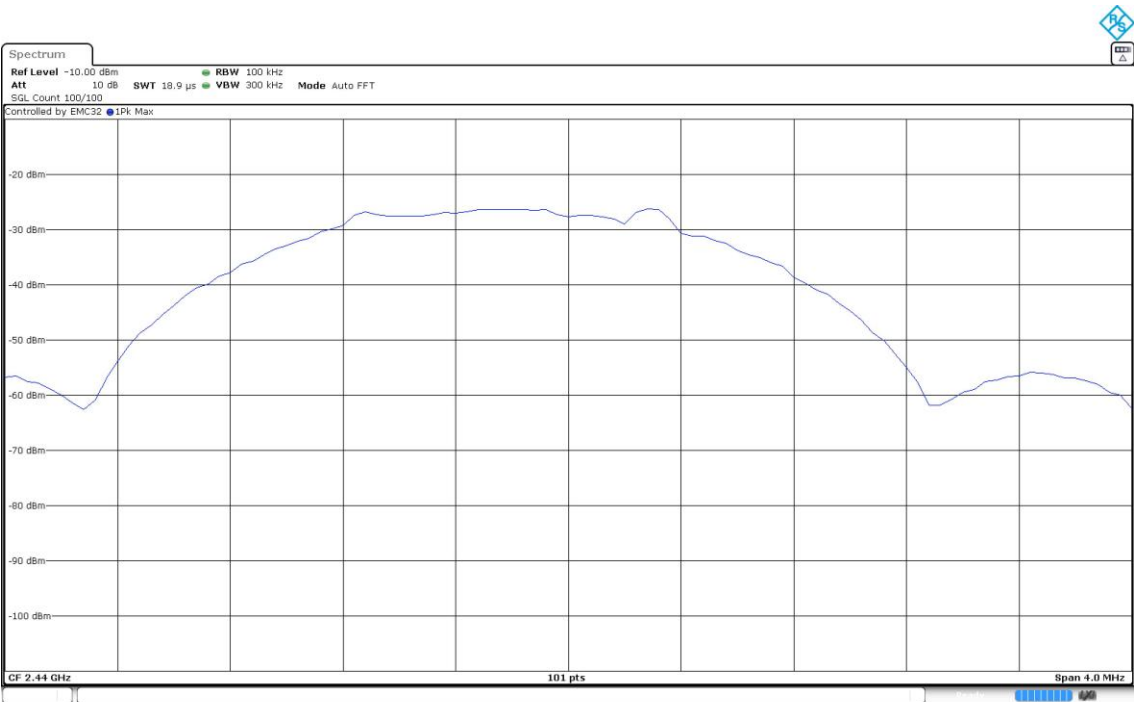
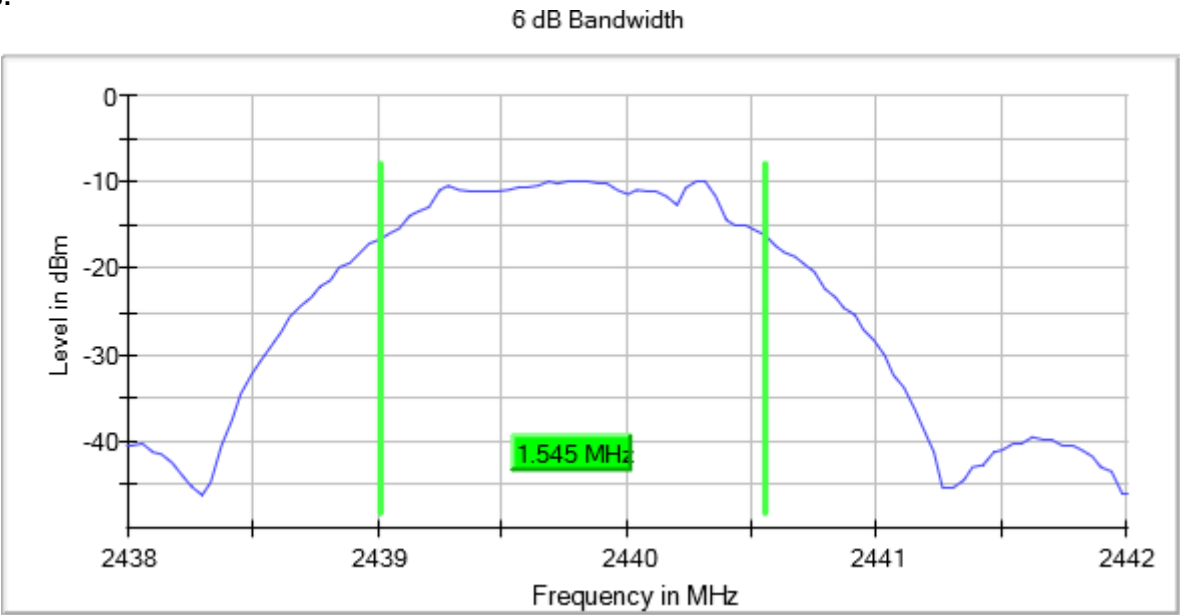
Operation Band MHz = [2400, 2483.5] Equipment Type = Digital Transmission System (DTS)
Frequency MHz = 2402.00000 Modulation = BTLE 5.2 (GFSK 2 Mbit/s)

Images:



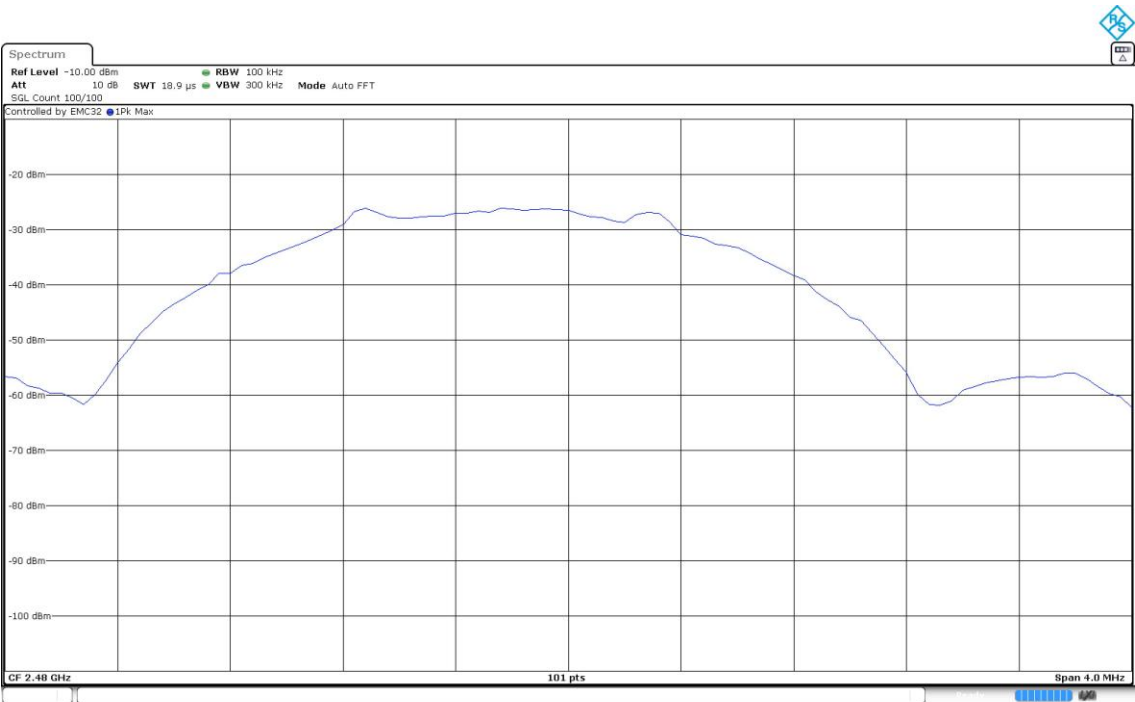
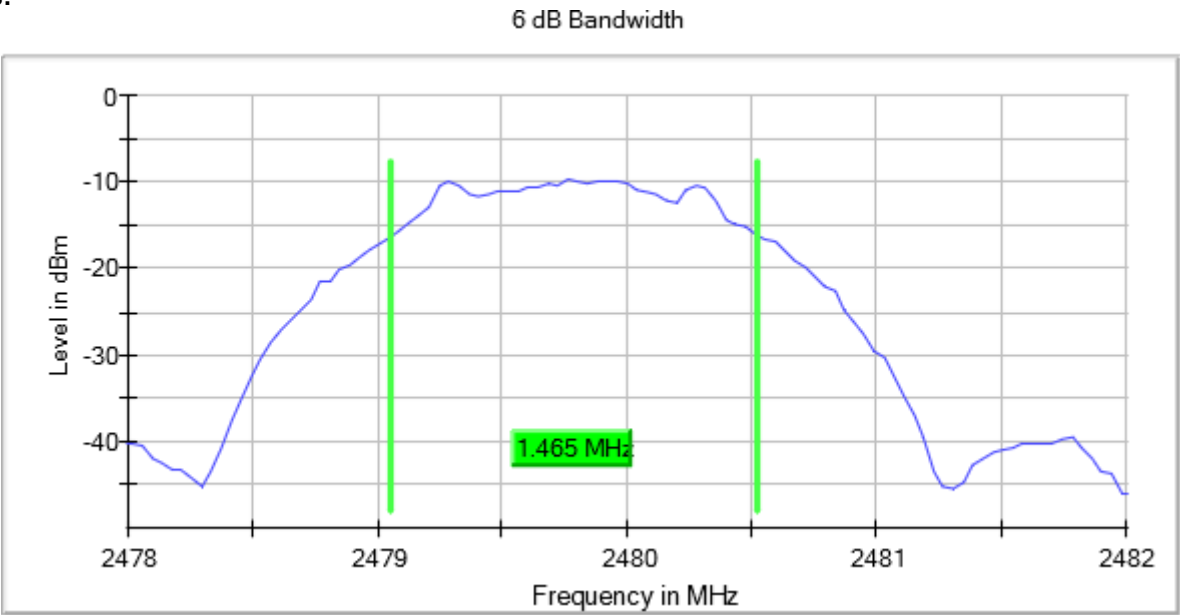
Operation Band MHz = [2400, 2483.5] Equipment Type = Digital Transmission System (DTS)
Frequency MHz = 2440.00000 Modulation = BTLE 5.2 (GFSK 2 Mbit/s)

Images:



Operation Band MHz = [2400, 2483.5] Equipment Type = Digital Transmission System (DTS)
Frequency MHz = 2480.00000 Modulation = BTLE 5.2 (GFSK 2 Mbit/s)

Images:



RSS-247 5.4 / FCC 15.247 (b) [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) (Canada).

Modulation: BTLE 5.2 (GFSK 1 Mbit/s)

Results

Operation Band (MHz)	Equipment	Freq (MHz)	Peak Power (dBm)	E.I.R.P. (dBm)
[2400, 2483.5]	Digital Transmission System (DTS)	2402.00000	-7.0260	-3.7260
		2440.00000	-7.8960	-4.5960
		2480.00000	-8.2530	-4.9530

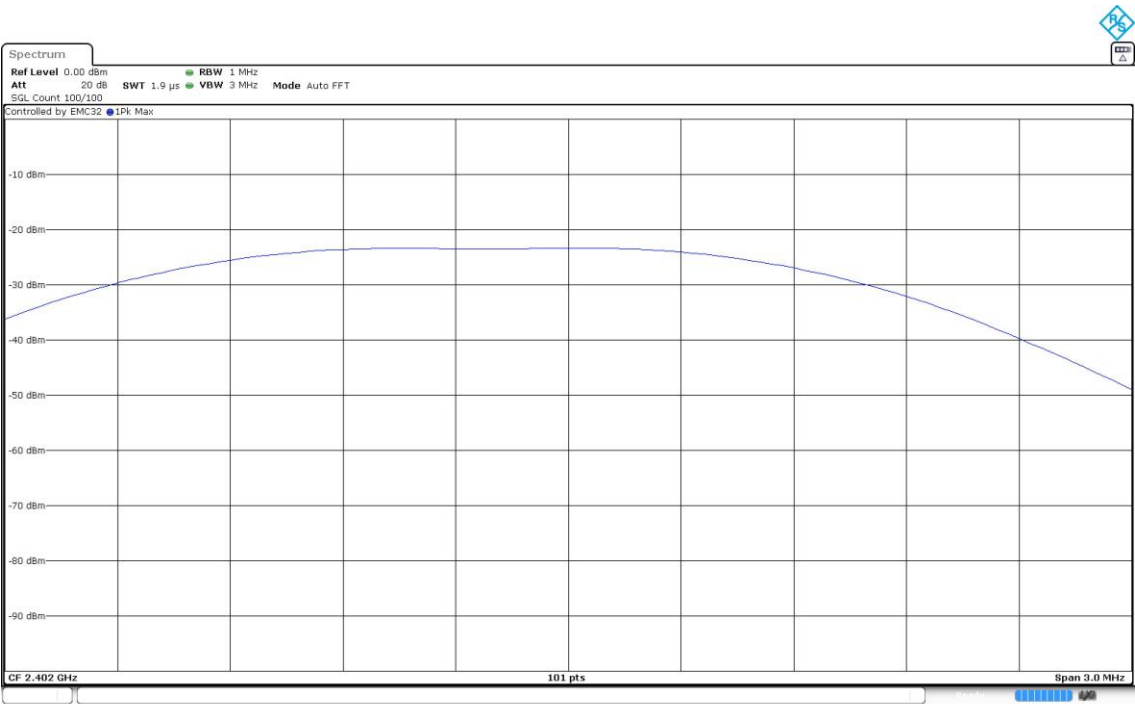
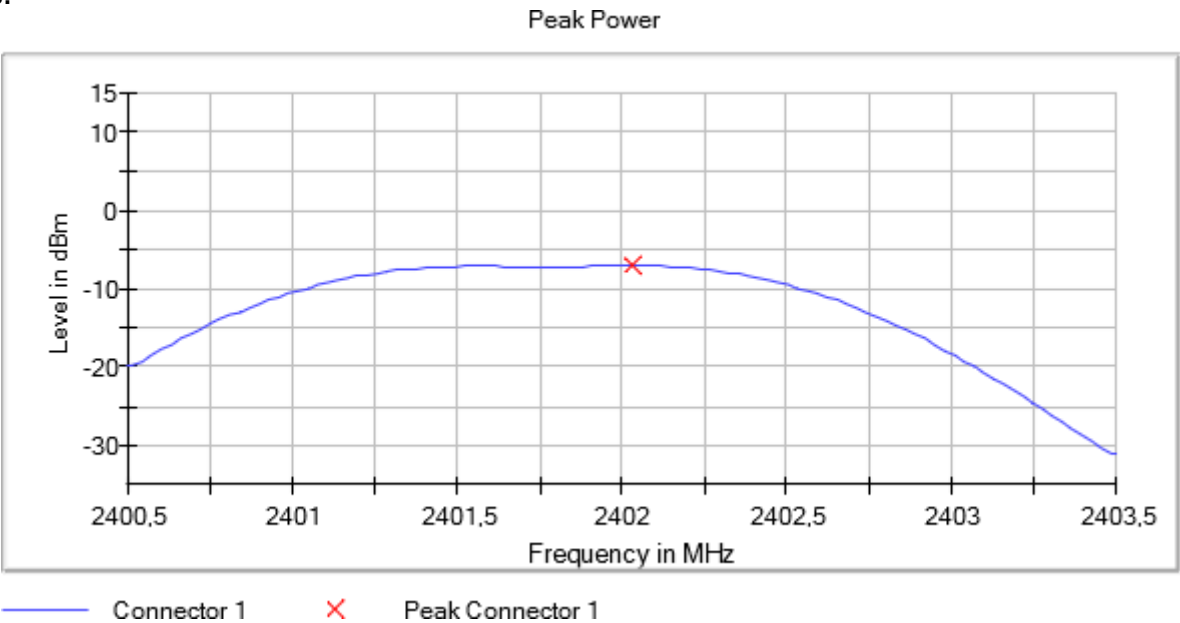
Verdict

Pass

Attachments

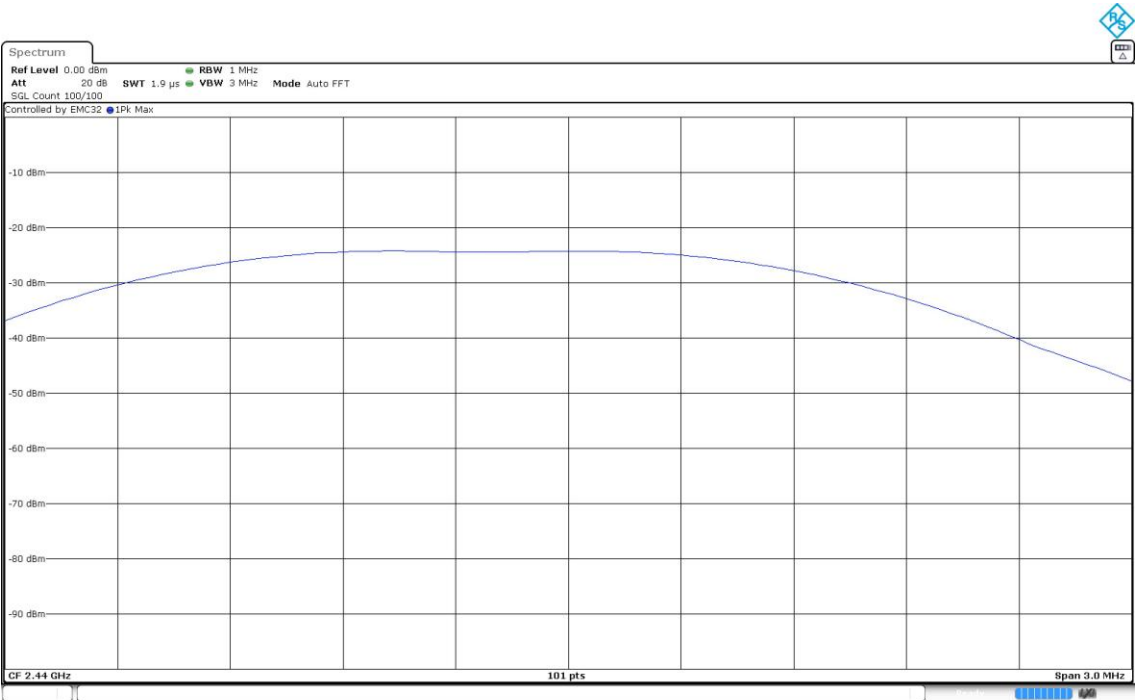
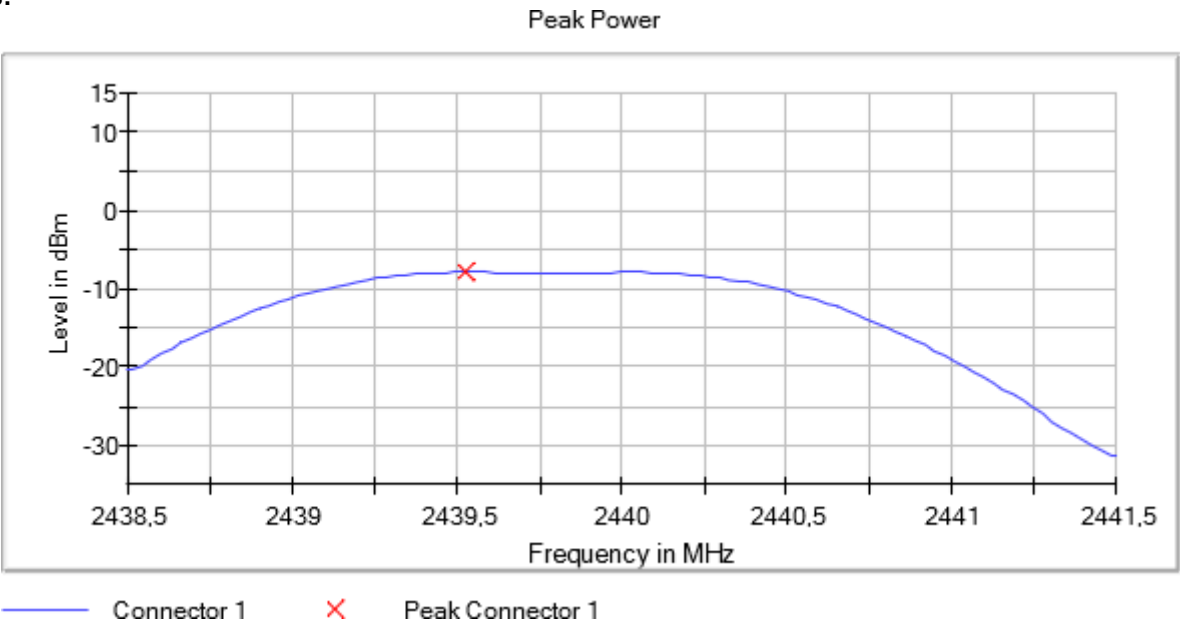
Operation Band MHz = [2400, 2483.5] Equipment Type = Digital Transmission System (DTS)
Frequency MHz = 2402.00000 Modulation = BTLE 5.2 (GFSK 1 Mbit/s)

Images:



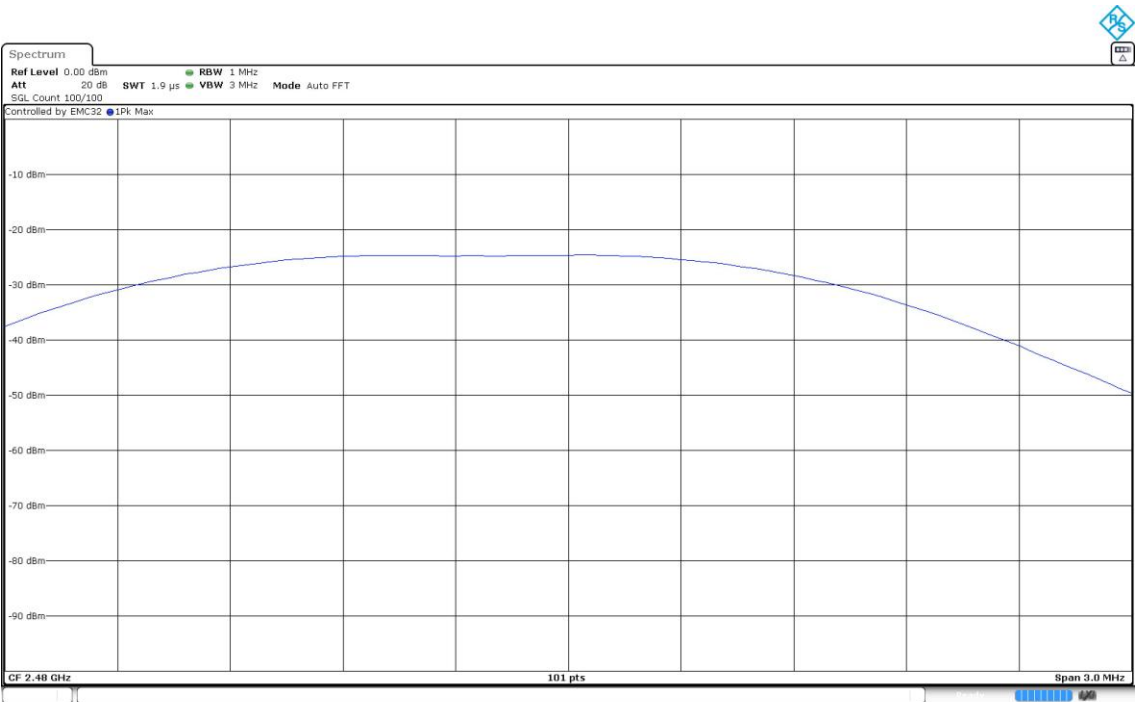
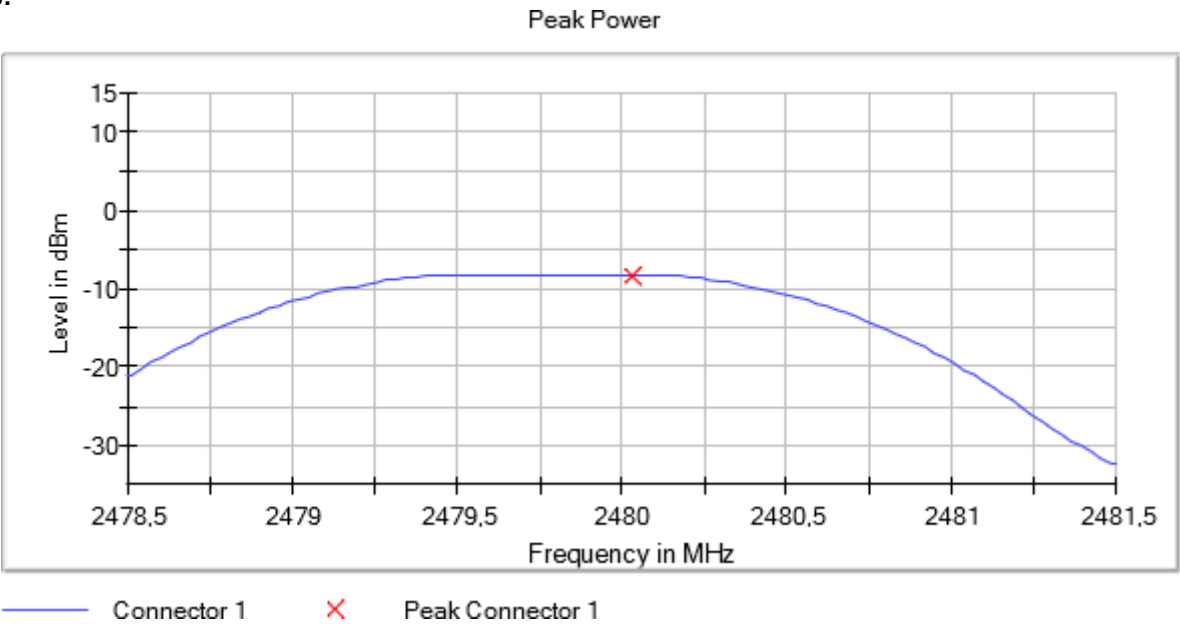
Operation Band MHz = [2400, 2483.5] Equipment Type = Digital Transmission System (DTS)
Frequency MHz = 2440.00000 Modulation = BTLE 5.2 (GFSK 1 Mbit/s)

Images:



Operation Band MHz = [2400, 2483.5] Equipment Type = Digital Transmission System (DTS)
Frequency MHz = 2480.00000 Modulation = BTLE 5.2 (GFSK 1 Mbit/s)

Images:



Modulation: BTLE 5.2 (GFSK 2 Mbit/s)

Results

Operation Band (MHz)	Equipment	Freq (MHz)	Peak Power (dBm)	E.I.R.P. (dBm)
[2400, 2483.5]	Digital Transmission System (DTS)	2402.00000	-6.8880	-3.5880
		2440.00000	-7.7720	-4.4720
		2480.00000	-8.1130	-4.8130

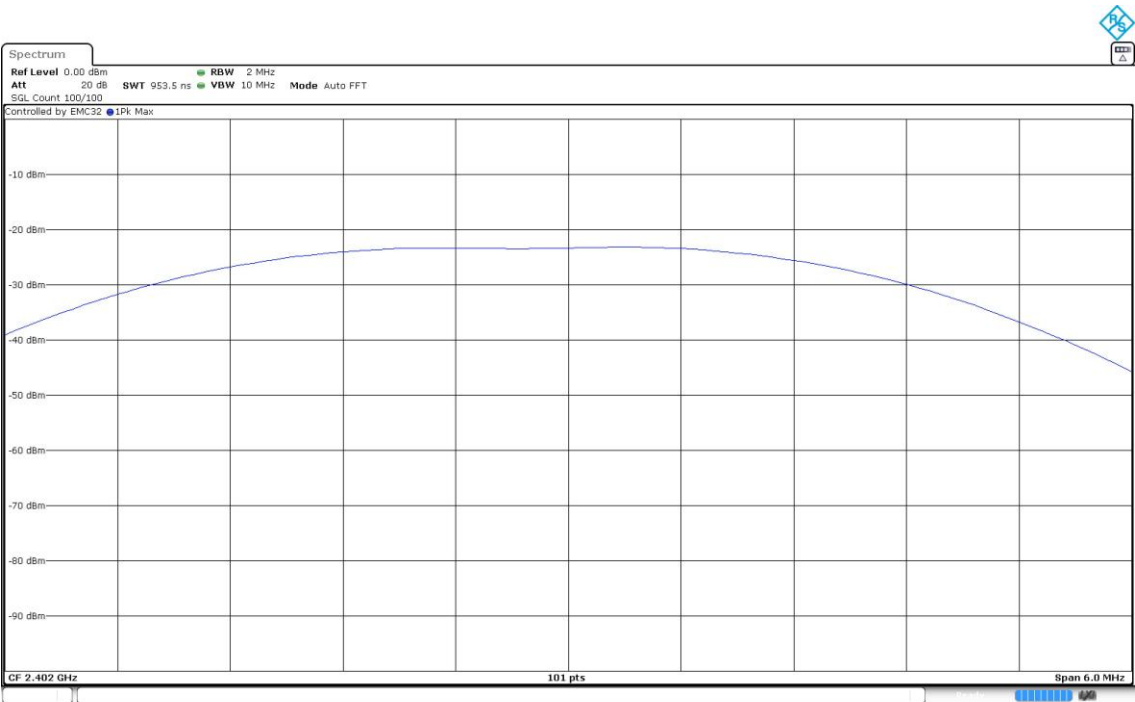
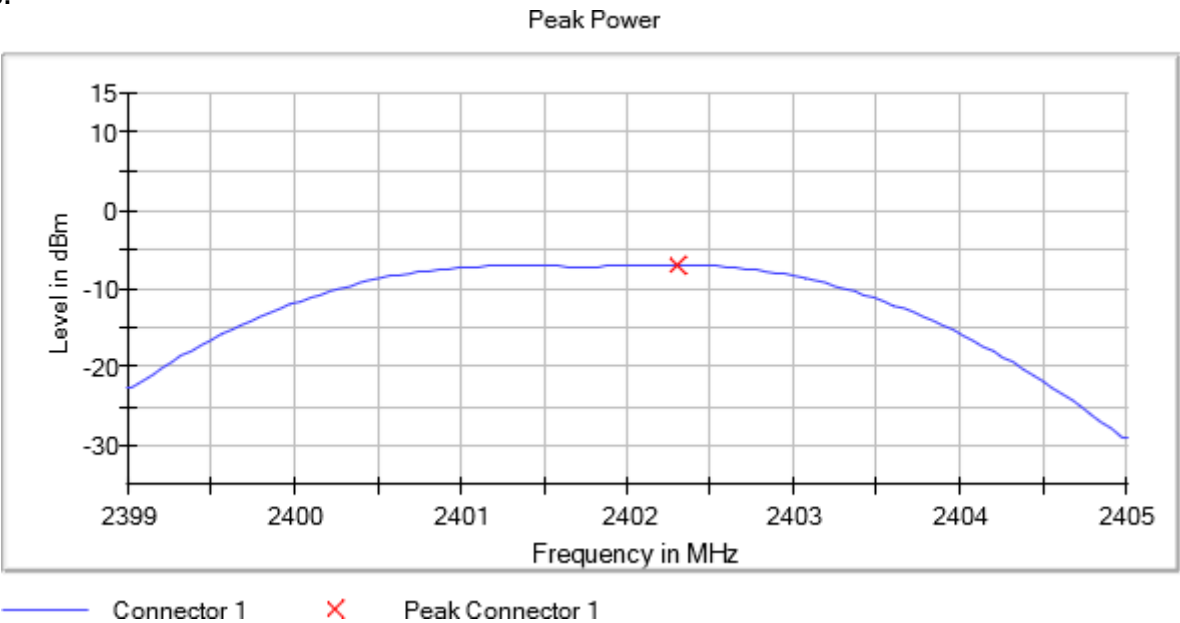
Verdict

Pass

Attachments

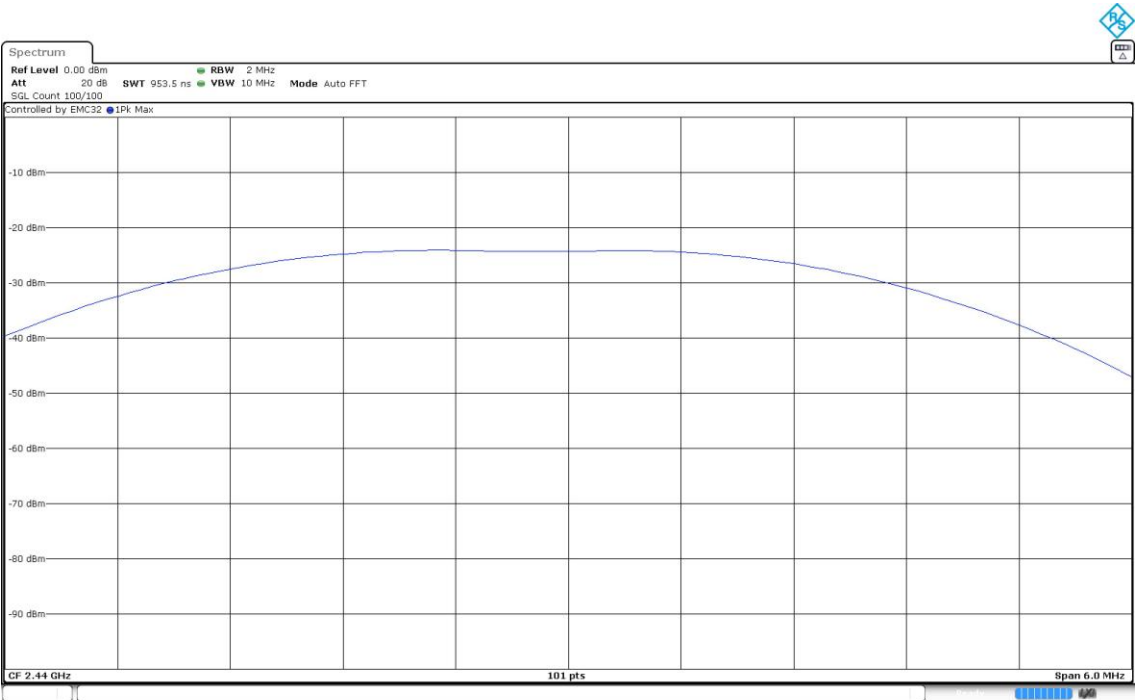
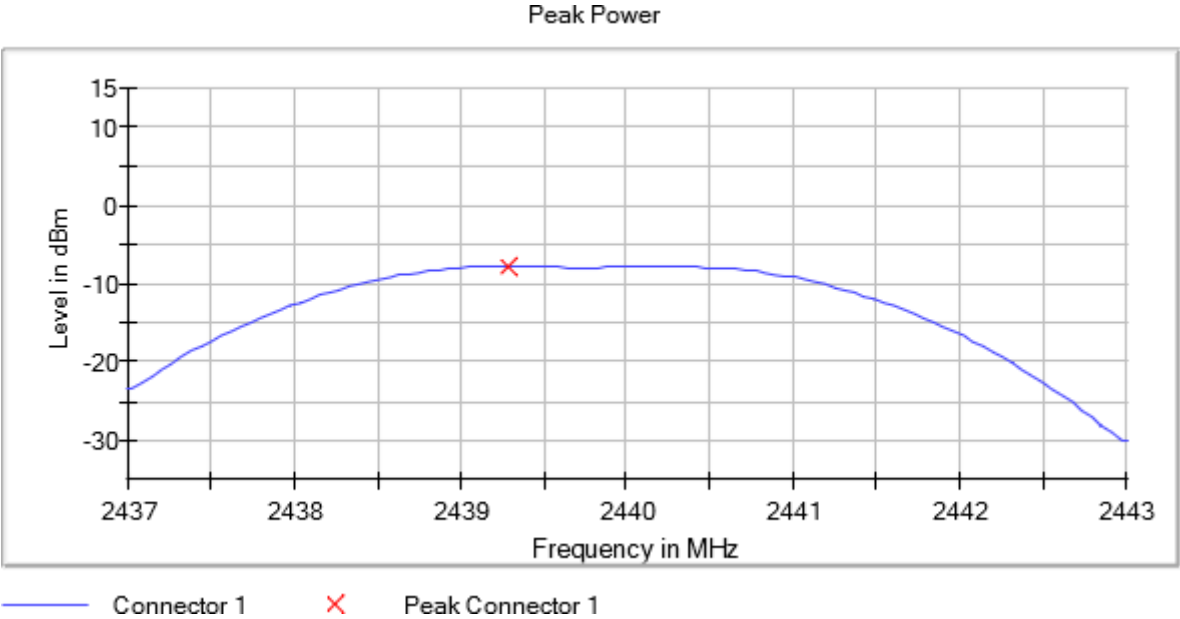
Operation Band MHz = [2400, 2483.5] Equipment Type = Digital Transmission System (DTS)
Frequency MHz = 2402.00000 Modulation = BTLE 5.2 (GFSK 2 Mbit/s)

Images:



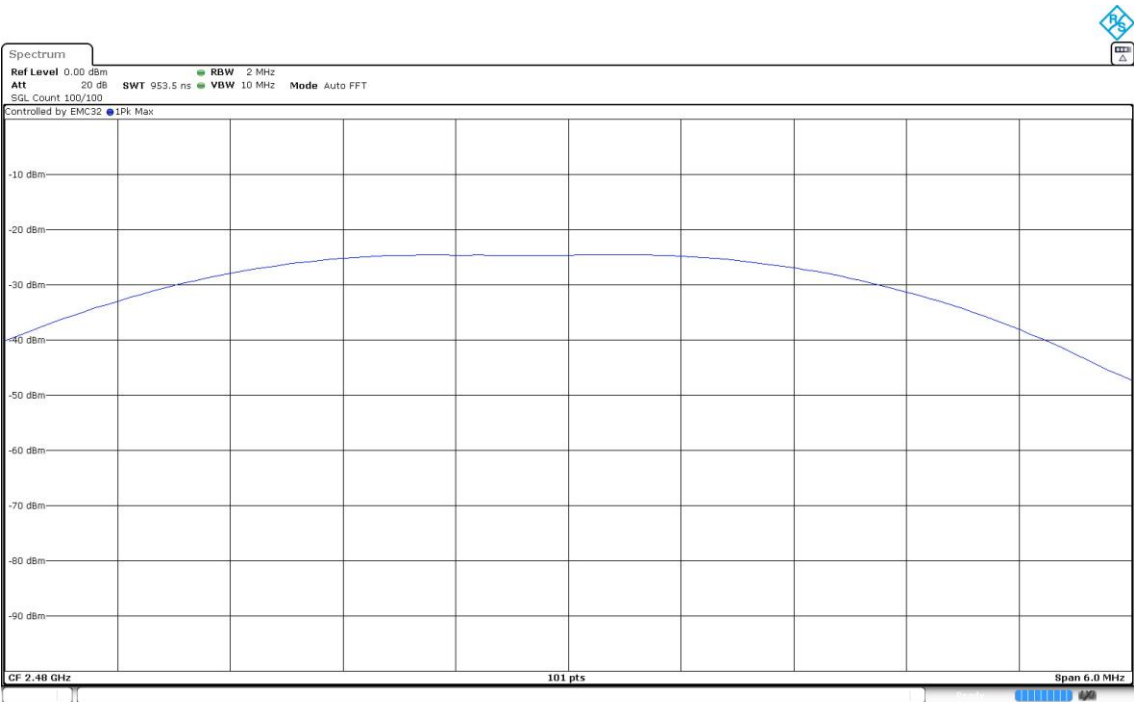
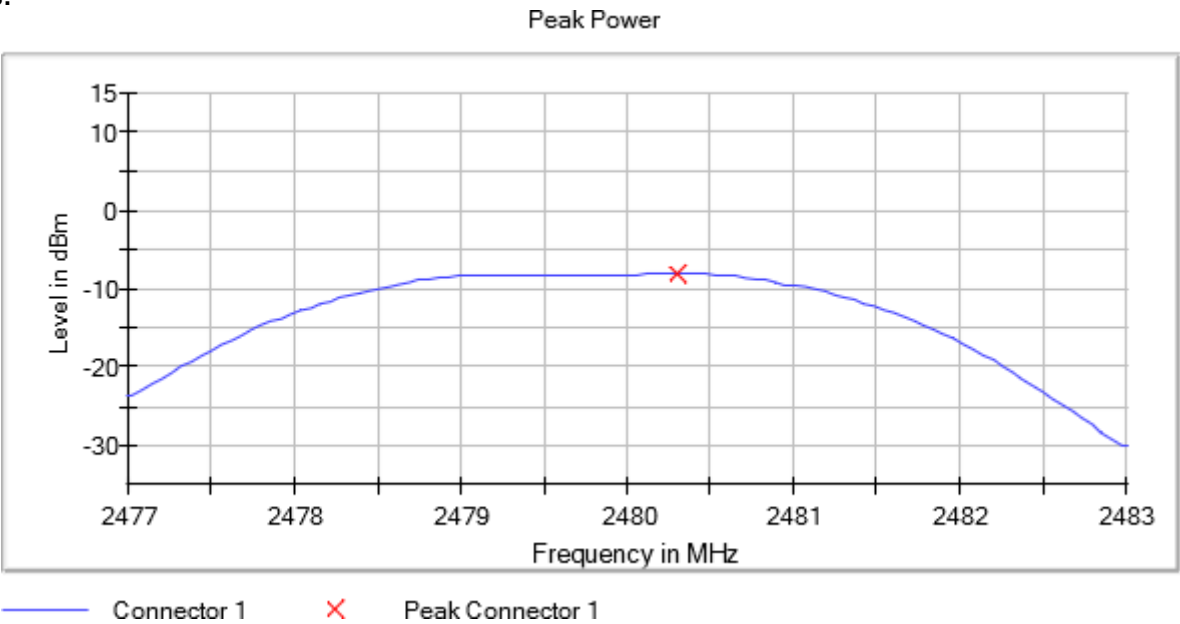
Operation Band MHz = [2400, 2483.5] Equipment Type = Digital Transmission System (DTS)
Frequency MHz = 2440.00000 Modulation = BTLE 5.2 (GFSK 2 Mbit/s)

Images:



Operation Band MHz = [2400, 2483.5] Equipment Type = Digital Transmission System (DTS)
Frequency MHz = 2480.00000 Modulation = BTLE 5.2 (GFSK 2 Mbit/s)

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 5.2 (GFSK 1 Mbit/s)

Results

Operation Band (MHz)	Equipment	Freq (MHz)	Freq (MHz)	Lvl (dBm)
[2400, 2483.5]	Digital Transmission System (DTS)	2402.00000	2399.825000	-49.1
[2400, 2483.5]	Digital Transmission System (DTS)	2402.00000	2399.875000	-49.2
[2400, 2483.5]	Digital Transmission System (DTS)	2402.00000	2399.775000	-49.4
[2400, 2483.5]	Digital Transmission System (DTS)	2402.00000	2399.925000	-49.6
[2400, 2483.5]	Digital Transmission System (DTS)	2402.00000	2310.625000	-50.0
[2400, 2483.5]	Digital Transmission System (DTS)	2402.00000	2310.675000	-50.3
[2400, 2483.5]	Digital Transmission System (DTS)	2402.00000	2342.325000	-50.4
[2400, 2483.5]	Digital Transmission System (DTS)	2402.00000	2327.025000	-50.6
[2400, 2483.5]	Digital Transmission System (DTS)	2402.00000	2392.075000	-50.6
[2400, 2483.5]	Digital Transmission System (DTS)	2402.00000	2326.975000	-50.7
[2400, 2483.5]	Digital Transmission System (DTS)	2402.00000	2324.125000	-50.8
[2400, 2483.5]	Digital Transmission System (DTS)	2402.00000	2329.025000	-50.8
[2400, 2483.5]	Digital Transmission System (DTS)	2402.00000	2328.975000	-50.8
[2400, 2483.5]	Digital Transmission System (DTS)	2402.00000	2324.075000	-50.9
[2400, 2483.5]	Digital Transmission System (DTS)	2402.00000	2341.225000	-50.9
[2400, 2483.5]	Digital Transmission System (DTS)	2480.00000	2485.725000	-50.1
[2400, 2483.5]	Digital Transmission System (DTS)	2480.00000	2484.375000	-50.2

Operation Band (MHz)	Equipment	Freq (MHz)	Freq (MHz)	Lvl (dBm)
[2400, 2483.5]	Digital Transmission System (DTS)	2480.00000	2485.675000	-50.2
[2400, 2483.5]	Digital Transmission System (DTS)	2480.00000	2484.325000	-50.2
[2400, 2483.5]	Digital Transmission System (DTS)	2480.00000	2492.425000	-51.0
[2400, 2483.5]	Digital Transmission System (DTS)	2480.00000	2492.475000	-51.1
[2400, 2483.5]	Digital Transmission System (DTS)	2480.00000	2483.925000	-51.1
[2400, 2483.5]	Digital Transmission System (DTS)	2480.00000	2484.425000	-51.1
[2400, 2483.5]	Digital Transmission System (DTS)	2480.00000	2483.975000	-51.2
[2400, 2483.5]	Digital Transmission System (DTS)	2480.00000	2484.225000	-51.2
[2400, 2483.5]	Digital Transmission System (DTS)	2480.00000	2486.575000	-51.3
[2400, 2483.5]	Digital Transmission System (DTS)	2480.00000	2484.275000	-51.3
[2400, 2483.5]	Digital Transmission System (DTS)	2480.00000	2487.125000	-51.4
[2400, 2483.5]	Digital Transmission System (DTS)	2480.00000	2484.525000	-51.5
[2400, 2483.5]	Digital Transmission System (DTS)	2480.00000	2489.525000	-51.5

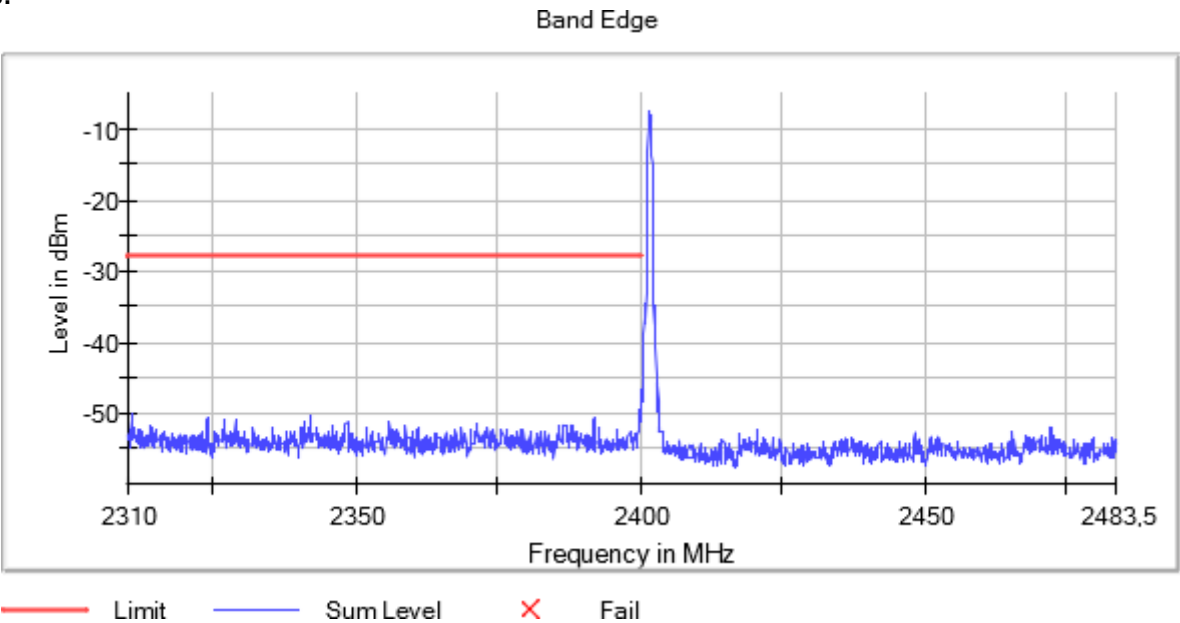
Verdict

Pass

Attachments

Operation Band MHz = [2400, 2483.5] Equipment Type = Digital Transmission System (DTS)
Frequency MHz = 2402.00000 Modulation = BTLE 5.2 (GFSK 1 Mbit/s)

Images:



Tables:

Spectrum Analyzer Parameters 1

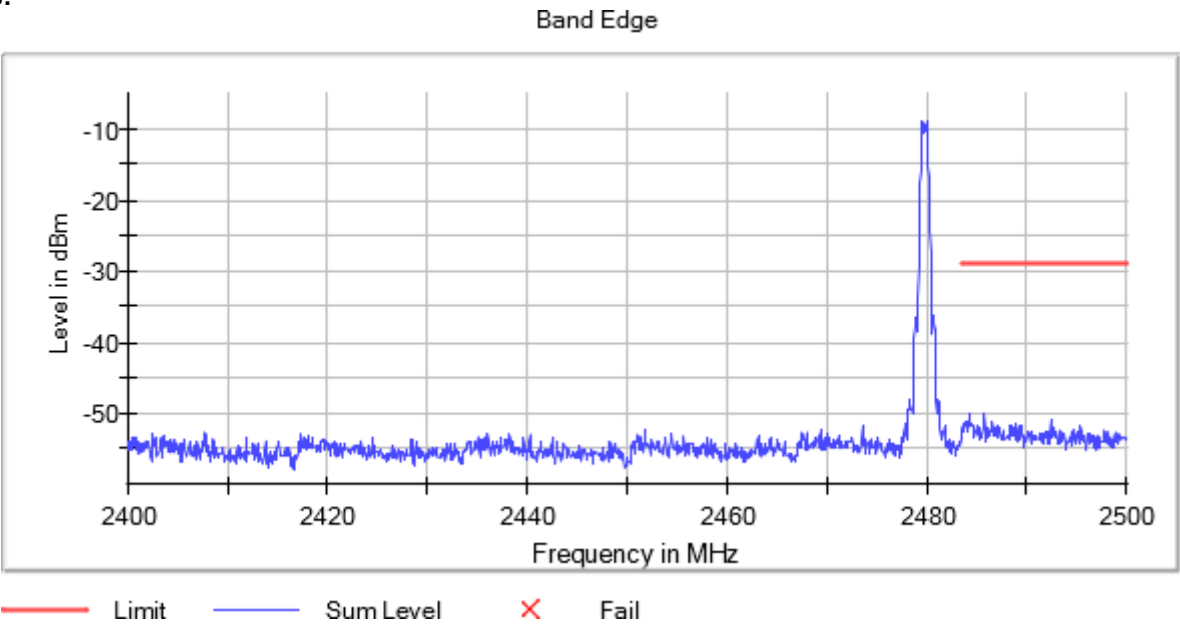
Setting	Instrument Value	Target Value
Start Frequency	2.31000 GHz	2.31000 GHz
Stop Frequency	2.40000 GHz	2.40000 GHz
Span	90.000 MHz	90.000 MHz
RBW	100.000 kHz	<= 100.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	1800	~ 1800
Sweeptime	113.672 µs	AUTO
Reference Level	10.000 dBm	10.000 dBm
Attenuation	30.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	FFT	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	4 / 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	94.727 µs	AUTO
Reference Level	10.000 dBm	10.000 dBm
Attenuation	30.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	FFT	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	5 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.30 dB	0.50 dB

Operation Band MHz = [2400, 2483.5] Equipment Type = Digital Transmission System (DTS)
Frequency MHz = 2480.00000 Modulation = BTLE 5.2 (GFSK 1 Mbit/s)

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	113.672 µs	AUTO
Reference Level	10.000 dBm	10.000 dBm
Attenuation	30.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	FFT	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	4 / 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	94.727 µs	AUTO
Reference Level	10.000 dBm	10.000 dBm
Attenuation	30.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	FFT	AUTO
Preamplifier	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	5 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.30 dB	0.50 dB

Modulation: BTLE 5.2 (GFSK 2 Mbit/s)

Results

Operation Band (MHz)	Equipment	Freq (MHz)	Freq (MHz)	Lvl (dBm)
[2400, 2483.5]	Digital Transmission System (DTS)	2402.00000	2399.975000	-37.1
[2400, 2483.5]	Digital Transmission System (DTS)	2402.00000	2399.825000	-37.2
[2400, 2483.5]	Digital Transmission System (DTS)	2402.00000	2399.875000	-37.2
[2400, 2483.5]	Digital Transmission System (DTS)	2402.00000	2399.925000	-37.3
[2400, 2483.5]	Digital Transmission System (DTS)	2402.00000	2399.775000	-37.9
[2400, 2483.5]	Digital Transmission System (DTS)	2402.00000	2399.725000	-40.0
[2400, 2483.5]	Digital Transmission System (DTS)	2402.00000	2399.675000	-40.6
[2400, 2483.5]	Digital Transmission System (DTS)	2402.00000	2399.625000	-42.8
[2400, 2483.5]	Digital Transmission System (DTS)	2402.00000	2399.575000	-44.1
[2400, 2483.5]	Digital Transmission System (DTS)	2402.00000	2399.525000	-45.6
[2400, 2483.5]	Digital Transmission System (DTS)	2402.00000	2399.475000	-47.4
[2400, 2483.5]	Digital Transmission System (DTS)	2402.00000	2399.425000	-48.8
[2400, 2483.5]	Digital Transmission System (DTS)	2402.00000	2398.975000	-49.8
[2400, 2483.5]	Digital Transmission System (DTS)	2402.00000	2398.925000	-49.9
[2400, 2483.5]	Digital Transmission System (DTS)	2402.00000	2399.375000	-50.1
[2400, 2483.5]	Digital Transmission System (DTS)	2480.00000	2485.175000	-50.1
[2400, 2483.5]	Digital Transmission System (DTS)	2480.00000	2483.525000	-50.3
[2400, 2483.5]	Digital Transmission System (DTS)	2480.00000	2483.575000	-50.3
[2400, 2483.5]	Digital Transmission System (DTS)	2480.00000	2485.225000	-50.4
[2400, 2483.5]	Digital Transmission System (DTS)	2480.00000	2488.075000	-50.6
[2400, 2483.5]	Digital Transmission System (DTS)	2480.00000	2488.125000	-50.6
[2400, 2483.5]	Digital Transmission System (DTS)	2480.00000	2483.625000	-50.7
[2400, 2483.5]	Digital Transmission System (DTS)	2480.00000	2485.475000	-50.8

Operation Band (MHz)	Equipment	Freq (MHz)	Freq (MHz)	Lvl (dBm)
[2400, 2483.5]	Digital Transmission System (DTS)	2480.00000	2484.525000	-50.8
[2400, 2483.5]	Digital Transmission System (DTS)	2480.00000	2485.525000	-50.9
[2400, 2483.5]	Digital Transmission System (DTS)	2480.00000	2487.475000	-50.9
[2400, 2483.5]	Digital Transmission System (DTS)	2480.00000	2487.125000	-51.1
[2400, 2483.5]	Digital Transmission System (DTS)	2480.00000	2487.775000	-51.2
[2400, 2483.5]	Digital Transmission System (DTS)	2480.00000	2487.725000	-51.2
[2400, 2483.5]	Digital Transmission System (DTS)	2480.00000	2495.475000	-51.3

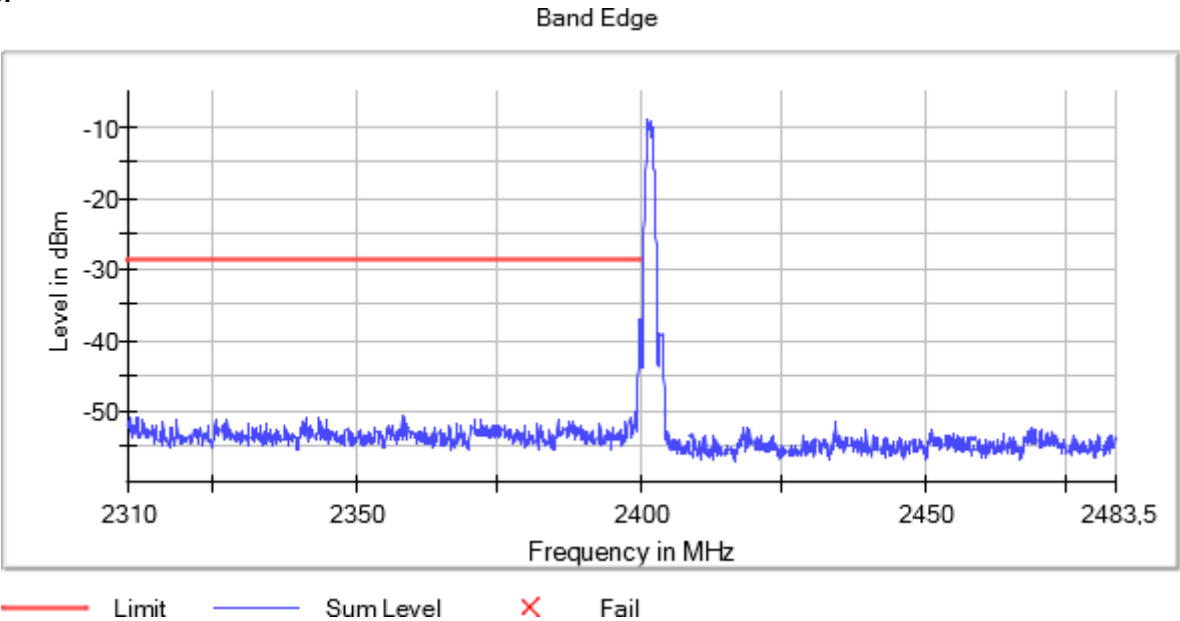
Verdict

Pass

Attachments

Operation Band MHz = [2400, 2483.5] Equipment Type = Digital Transmission System (DTS)
Frequency MHz = 2402.00000 Modulation = BTLE 5.2 (GFSK 2 Mbit/s)

Images:



Tables:

Spectrum Analyzer Parameters 1

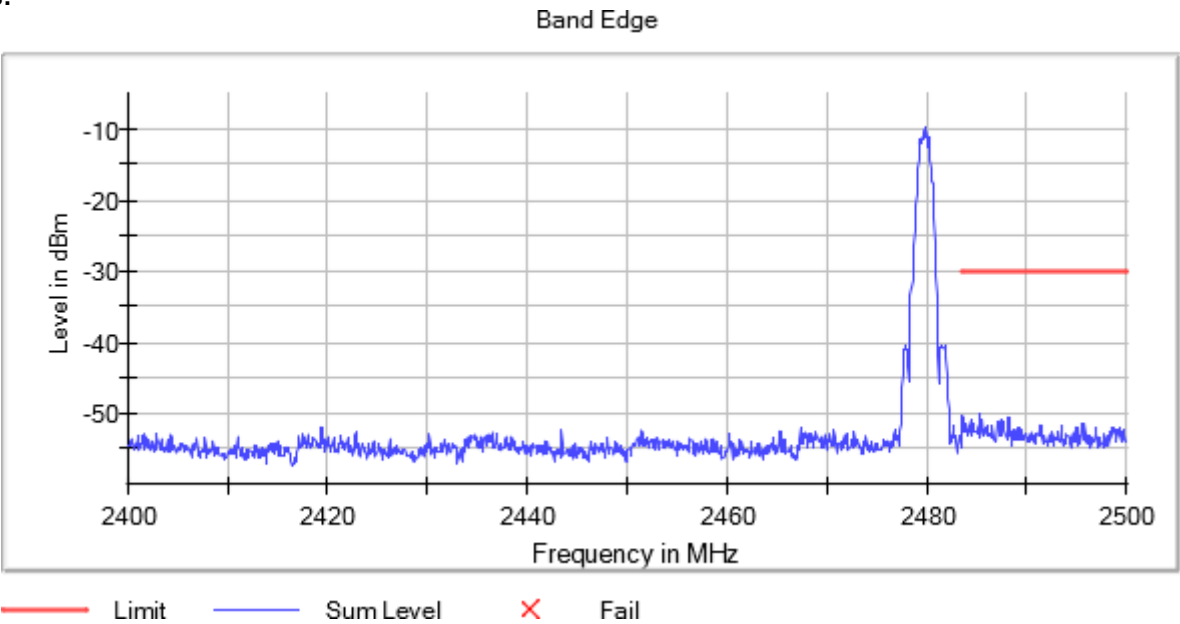
Setting	Instrument Value	Target Value
Start Frequency	2.31000 GHz	2.31000 GHz
Stop Frequency	2.40000 GHz	2.40000 GHz
Span	90.000 MHz	90.000 MHz
RBW	100.000 kHz	<= 100.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	1800	~ 1800
Sweeptime	113.672 µs	AUTO
Reference Level	10.000 dBm	10.000 dBm
Attenuation	30.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	FFT	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	9 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.35 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	94.727 µs	AUTO
Reference Level	10.000 dBm	10.000 dBm
Attenuation	30.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	FFT	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	11 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.01 dB	0.50 dB

Operation Band MHz = [2400, 2483.5] Equipment Type = Digital Transmission System (DTS)
Frequency MHz = 2480.00000 Modulation = BTLE 5.2 (GFSK 2 Mbit/s)

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	113.672 µs	AUTO
Reference Level	10.000 dBm	10.000 dBm
Attenuation	30.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	FFT	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	9 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.35 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	94.727 µs	AUTO
Reference Level	10.000 dBm	10.000 dBm
Attenuation	30.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
SweepType	FFT	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	11 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.01 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 ($\mu\text{V/m}$)	Field strength (dB $\mu\text{V/m}$)	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.

Frequency range tested for Radiated emissions:

Start frequency: no radiofrequency signal generated in the device found below 10th sub-harmonic, no further investigation required.

Stop frequency: it has been performed the radiated spurious emissions until 10th harmonic.

Modulation: BTLE (GFSK 1 Mbit/s)

Results

Frequency range 30 MHz – 1 GHz:

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

Freq Rng (GHz)	Operation Band (MHz)	Equipment	Freq (MHz)	Port	Unwanted Freq (MHz)	Unwanted Lvl (dBμV/m)	Pol	Detector
[0.03, 1]	[2400, 2483.5]	Digital Transmission System (DTS)	2402.00000	1	30.825	31.35	H	QP
					30.825	36.12	H	PK
					49.255	32.13	V	PK
					49.255	29.61	V	QP
					95.475	32.33	V	PK
					95.475	28.20	V	QP
					143.490	33.41	V	PK
					143.490	29.76	V	QP
					191.408	37.72	V	PK
					191.408	33.67	V	QP
					837.186	26.95	V	QP
					837.186	32.34	V	PK
			2440.00000		30.873	34.84	H	QP
					30.873	37.77	H	PK
					48.042	28.48	V	QP
					48.042	33.43	V	PK
					95.523	32.90	V	PK
					95.523	28.59	V	QP
					143.829	31.20	V	QP
					143.829	34.01	V	PK
					191.020	36.96	V	PK
					191.020	31.91	V	QP
					931.470	30.18	V	QP
					931.470	35.49	V	PK
			2480.00000		30.825	36.77	H	PK
					30.825	33.01	H	QP
					39.748	32.48	H	PK
					39.748	30.00	H	QP
					95.475	30.99	V	PK
					95.475	28.27	V	QP
					144.411	16.29	V	QP
					144.411	29.20	V	PK
					192.136	28.36	V	QP

Freq Rng (GHz)	Operation Band (MHz)	Equipment	Freq (MHz)	Port	Unwanted Freq (MHz)	Unwanted Lvl (dBµV/m)	Pol	Detector
					192.136	34.51	V	PK
					932.827	34.56	V	PK
					932.827	29.42	V	QP

Frequency range 1 GHz – 26 GHz:

Not spurious frequencies detected at less than 20 dB below the limit.

Verdict

Pass

Attachments

Frequency Range GHz = [0.03, 1]

Operation Band MHz = [2400, 2483.5]

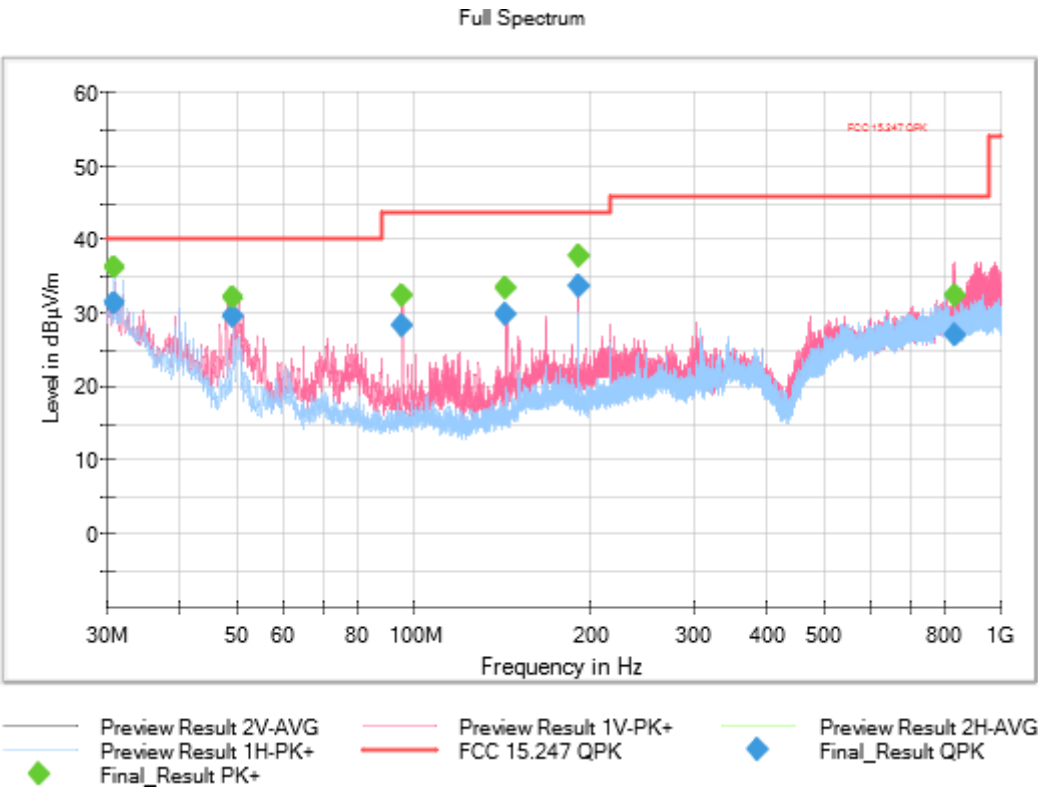
Equipment Type = Digital Transmission System (DTS)

Frequency MHz = 2402.00000

Active Port = 1

Modulation = BTLE (GFSK 1 Mbit/s)

Images:



Tables:

Spectrum Analyzer Parameters

	Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamp
	Receiver: [ESW 44]					
	30 MHz - 1 GHz	48,5 kHz	PK+	100 kHz	1 s	0 dB

Frequency Range GHz = [1, 17]

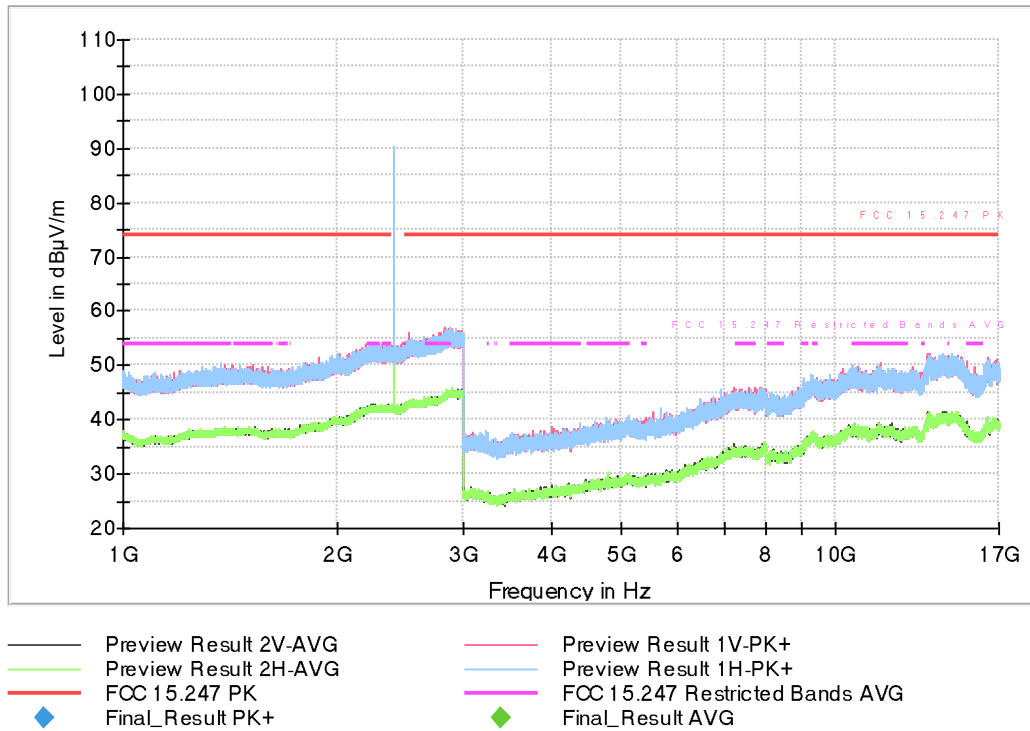
Operation Band MHz = [2400, 2483.5]

Equipment Type = Digital Transmission System (DTS) Frequency MHz = 2402.00000

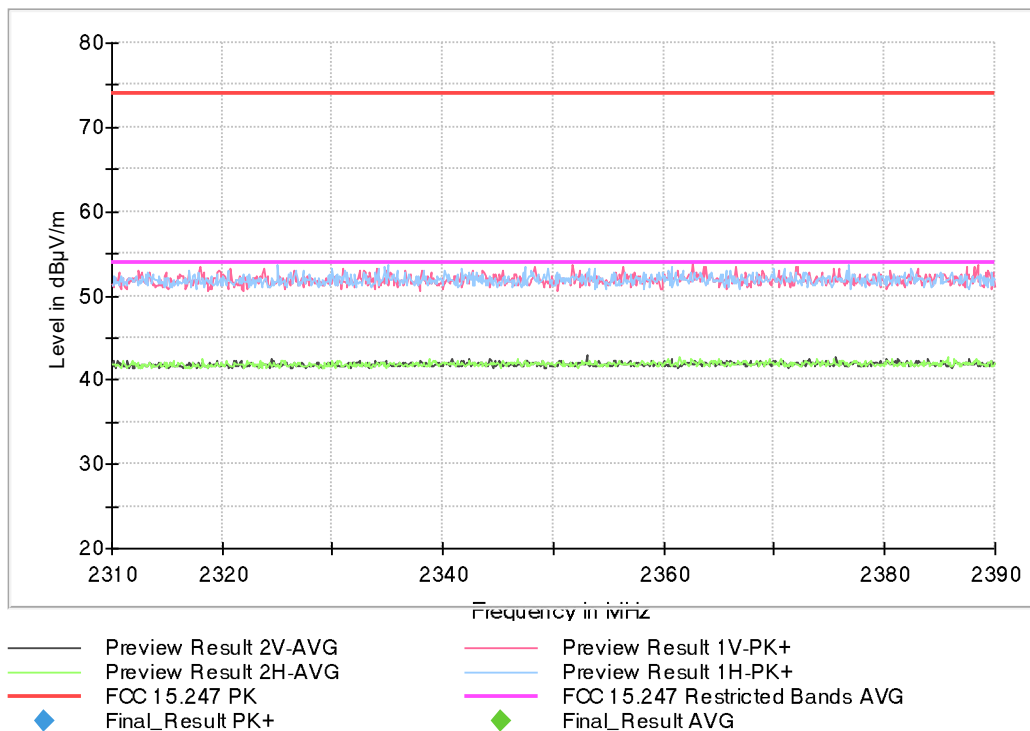
Active Port = 1

Modulation = BTLE (GFSK 1 Mbit/s)

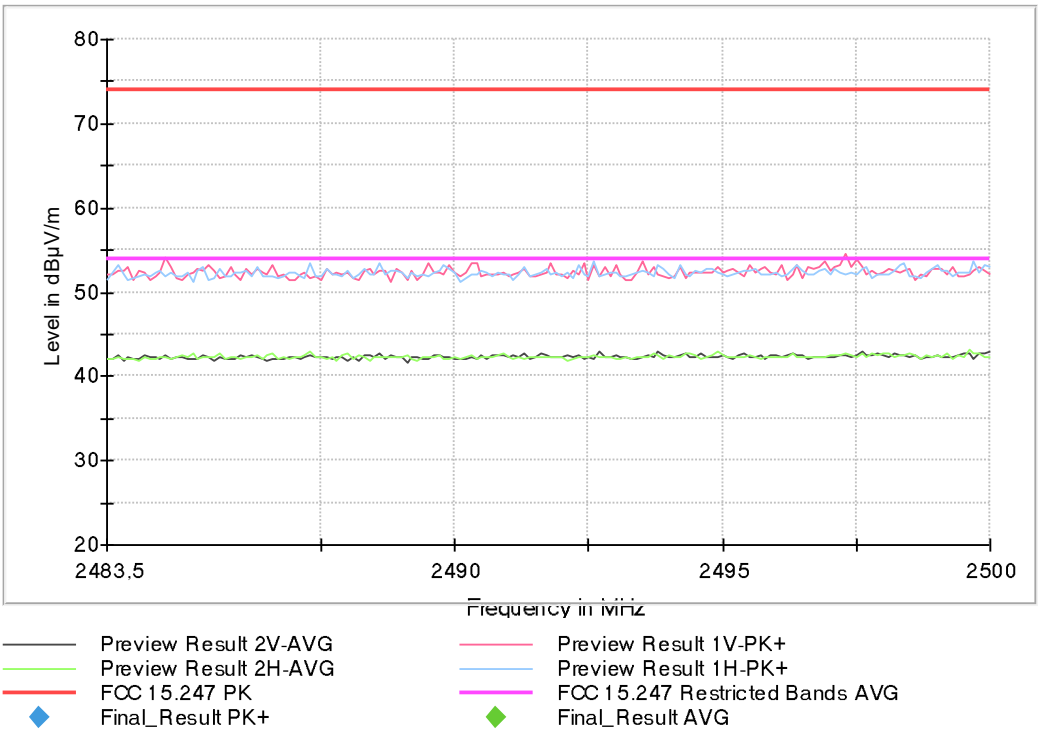
Full Spectrum



Full Spectrum



Full Spectrum



Tables:

Spectrum Analyzer Parameters

Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamp
1 GHz - 3 GHz	200 kHz	PK+ ; AVG	1 MHz	1 s	0 dB
3 GHz - 17 GHz	466,667 kHz	PK+ ; AVG	1 MHz	1 s	0 dB

Frequency Range GHz = [17, 26]

Operation Band MHz = [2400, 2483.5]

Equipment Type = Digital Transmission System (DTS)

Frequency MHz = 2402.00000

Active Port = 1

Modulation = BTLE (GFSK 1 Mbit/s)

Full Spectrum



Tables:
Spectrum Analyzer Parameters

Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamp
17 GHz - 26 GHz	300 kHz	PK+ ; AVG	1 MHz	1 s	0 dB

Frequency Range GHz = [0.03, 1]

Operation Band MHz = [2400, 2483.5]

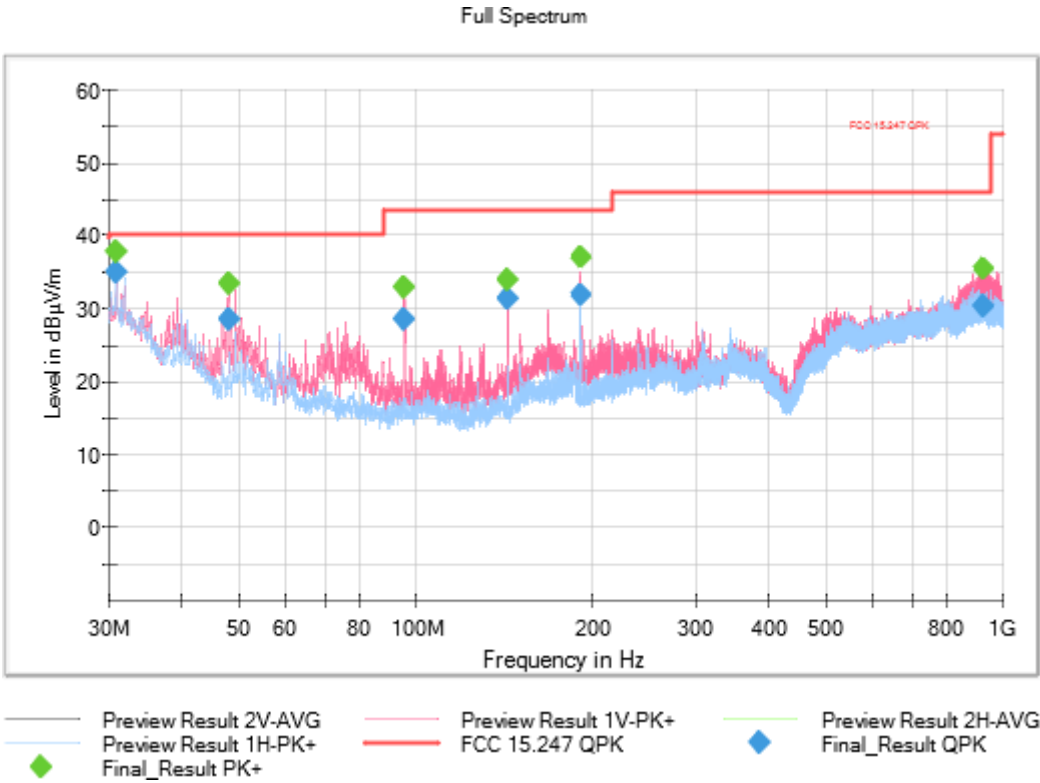
Equipment Type = Digital Transmission System (DTS)

Frequency MHz = 2440.00000

Active Port = 1

Modulation = BTLE (GFSK 1 Mbit/s)

Images:



Tables:

Spectrum Analyzer Parameters

	Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamp
	Receiver: [ESW 44]					
	30 MHz - 1 GHz	48,5 kHz	PK+	100 kHz	1 s	0 dB

Frequency Range GHz = [1, 17]

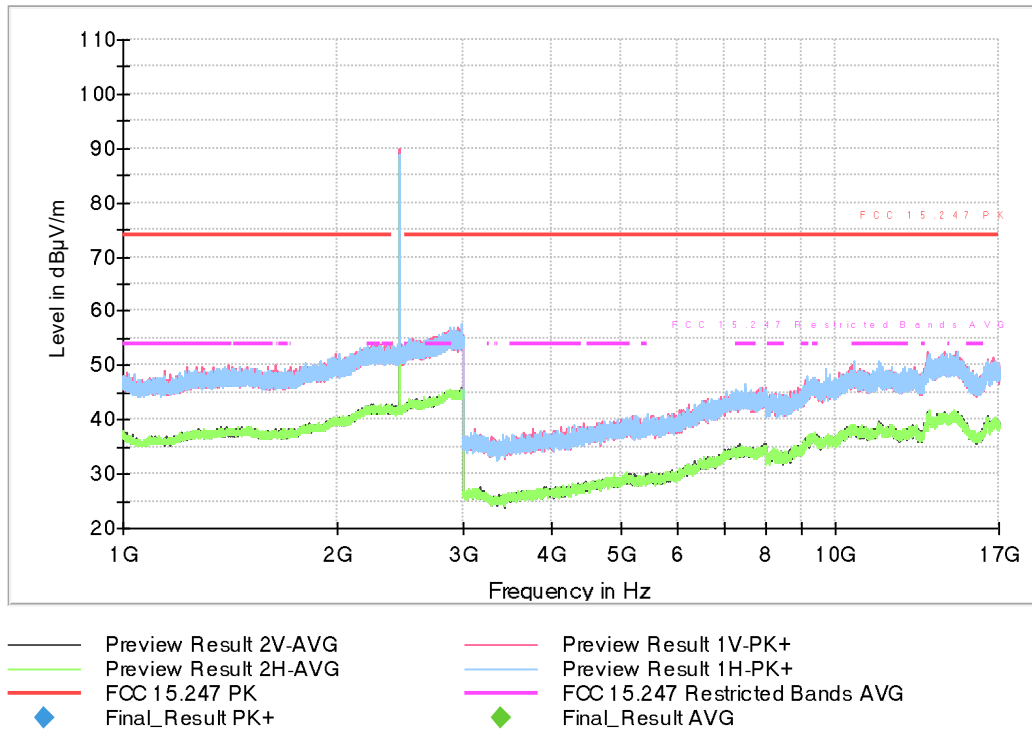
Operation Band MHz = [2400, 2483.5]

Equipment Type = Digital Transmission System (DTS) Frequency MHz = 2440.00000

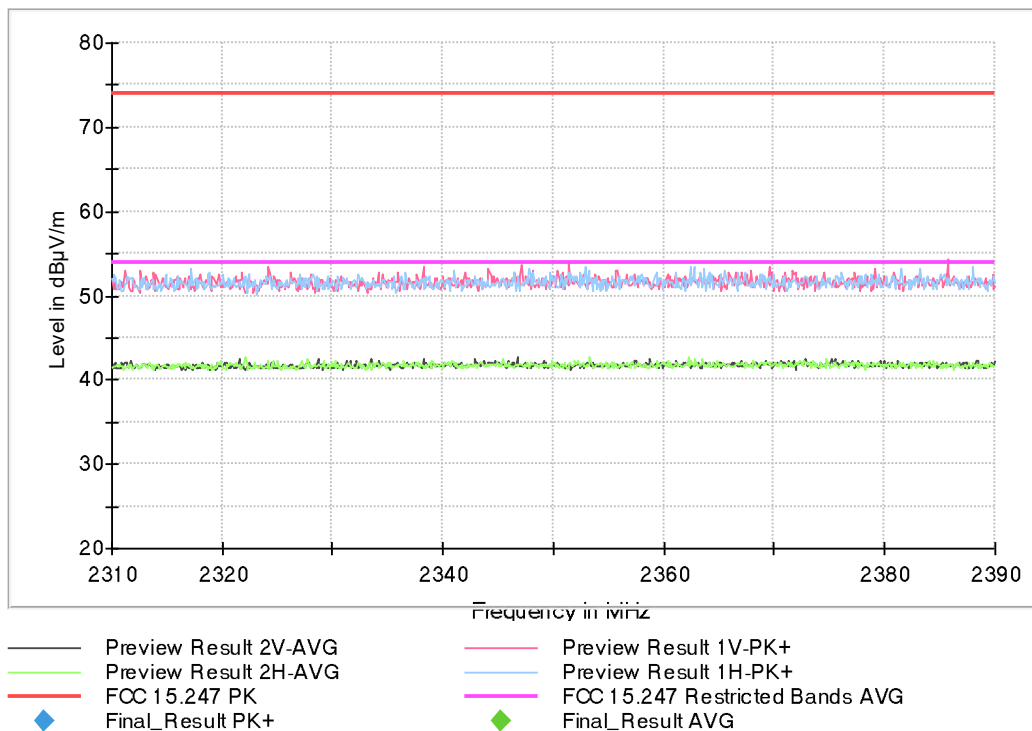
Active Port = 1

Modulation = BTLE (GFSK 1 Mbit/s)

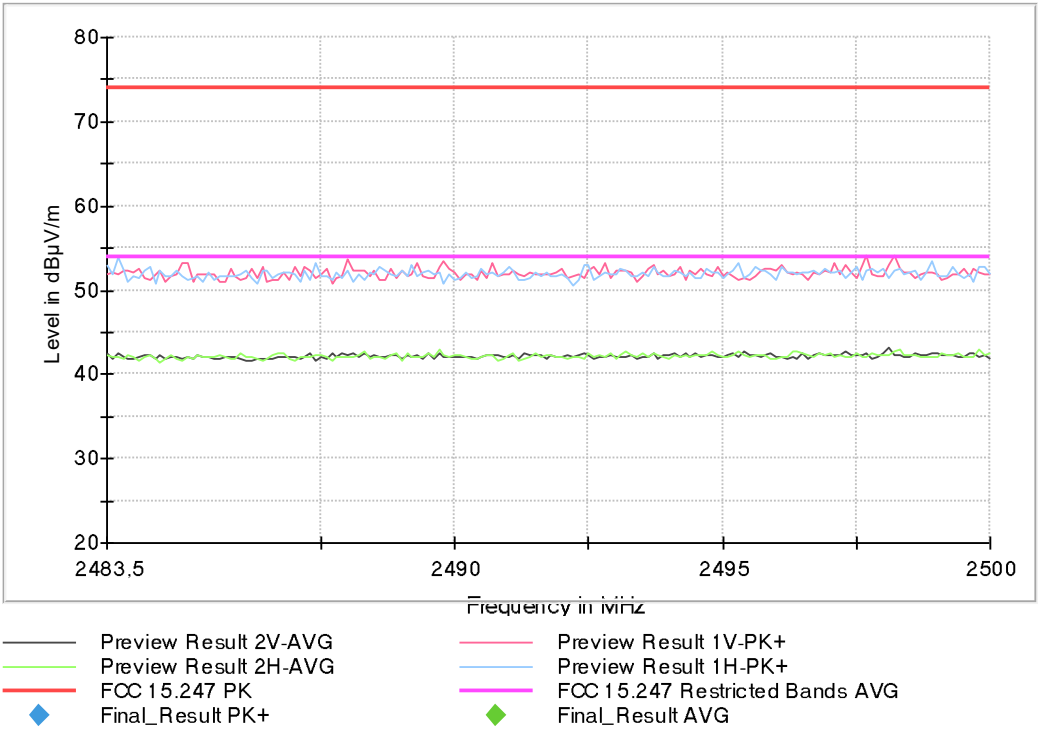
Full Spectrum



Full Spectrum



Full Spectrum



Tables:
Spectrum Analyzer Parameters

Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamp
1 GHz - 3 GHz	200 kHz	PK+ ; AVG	1 MHz	1 s	0 dB
3 GHz - 17 GHz	466,667 kHz	PK+ ; AVG	1 MHz	1 s	0 dB

Frequency Range GHz = [17, 26]

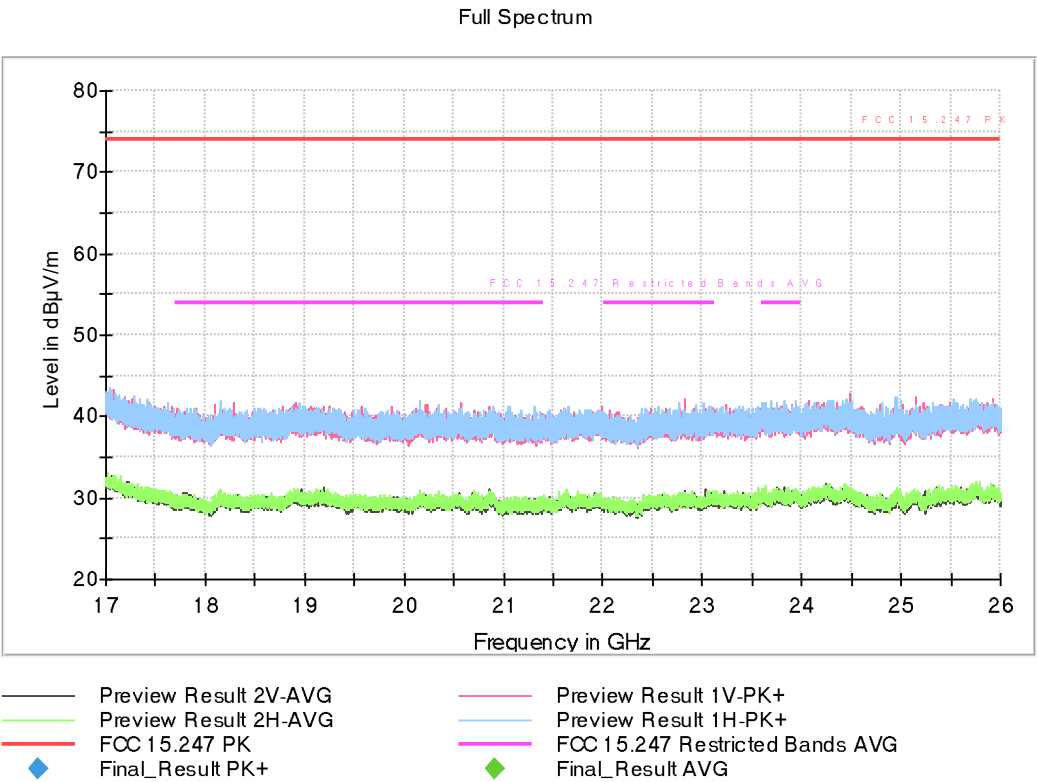
Operation Band MHz = [2400, 2483.5]

Equipment Type = Digital Transmission System (DTS)

Frequency MHz = 2440.00000

Active Port = 1

Modulation = BTLE (GFSK 1 Mbit/s)



Tables:
Spectrum Analyzer Parameters

Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamp
17 GHz - 26 GHz	300 kHz	PK+ ; AVG	1 MHz	1 s	0 dB

Frequency Range GHz = [0.03, 1]

Operation Band MHz = [2400, 2483.5]

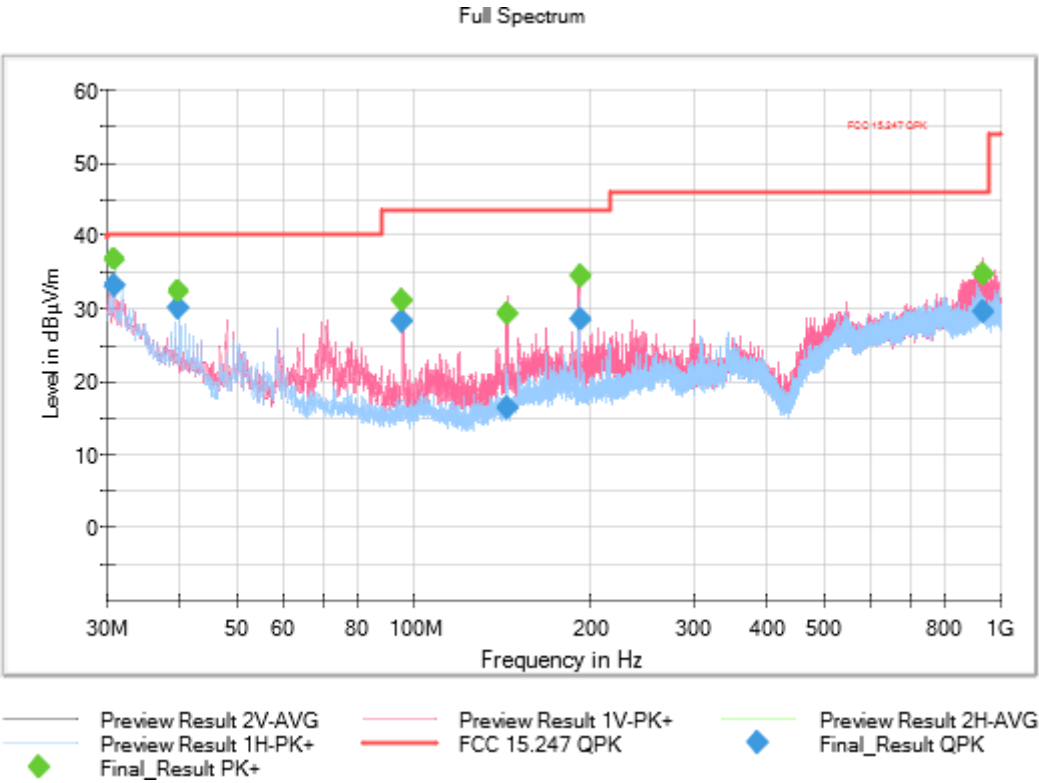
Equipment Type = Digital Transmission System (DTS)

Frequency MHz = 2480.00000

Active Port = 1

Modulation = BTLE (GFSK 1 Mbit/s)

Images:



Tables:

Spectrum Analyzer Parameters

	Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamp
	Receiver: [ESW 44]					
	30 MHz - 1 GHz	48,5 kHz	PK+	100 kHz	1 s	0 dB

Frequency Range GHz = [1, 17]

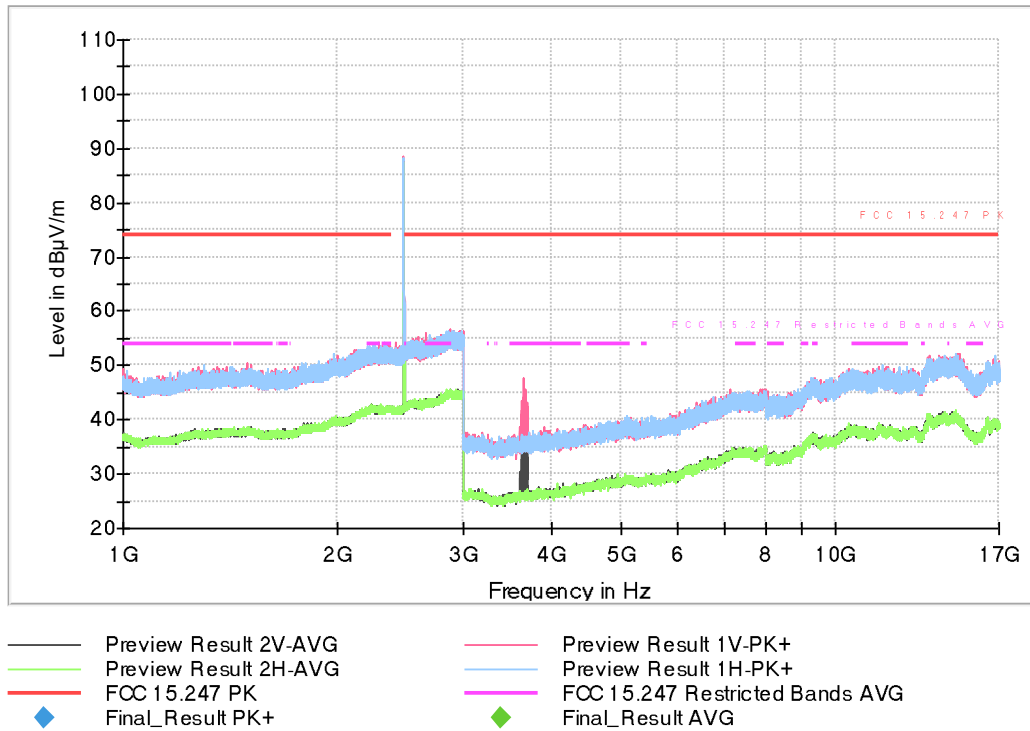
Operation Band MHz = [2400, 2483.5]

Equipment Type = Digital Transmission System (DTS) Frequency MHz = 2480.00000

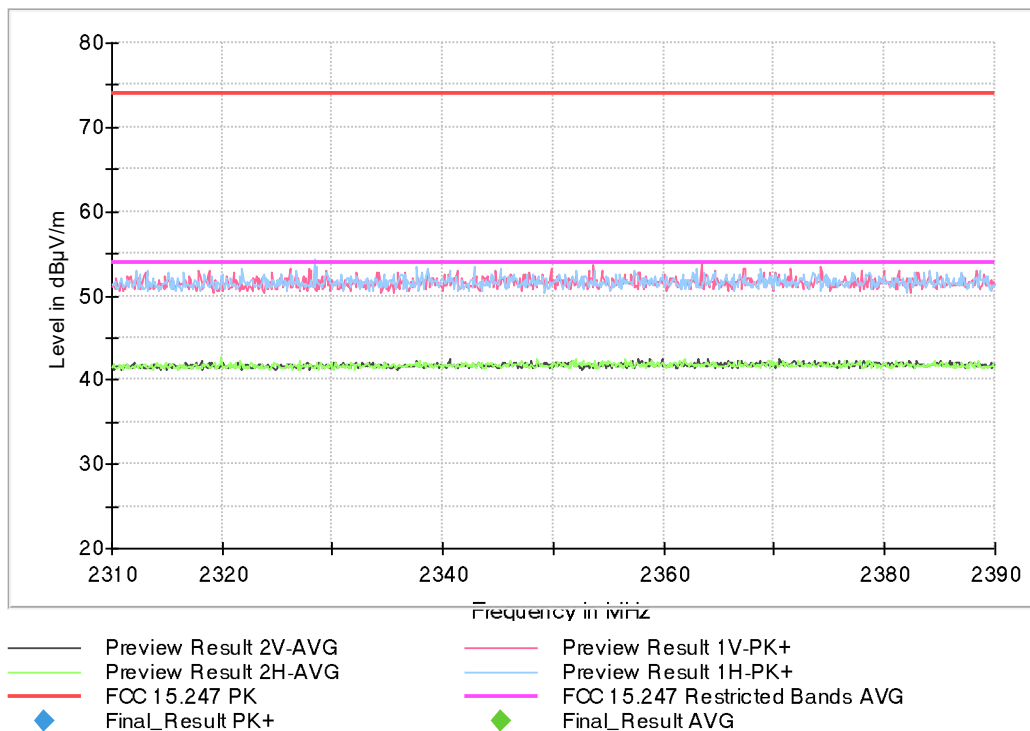
Active Port = 1

Modulation = BTLE (GFSK 1 Mbit/s)

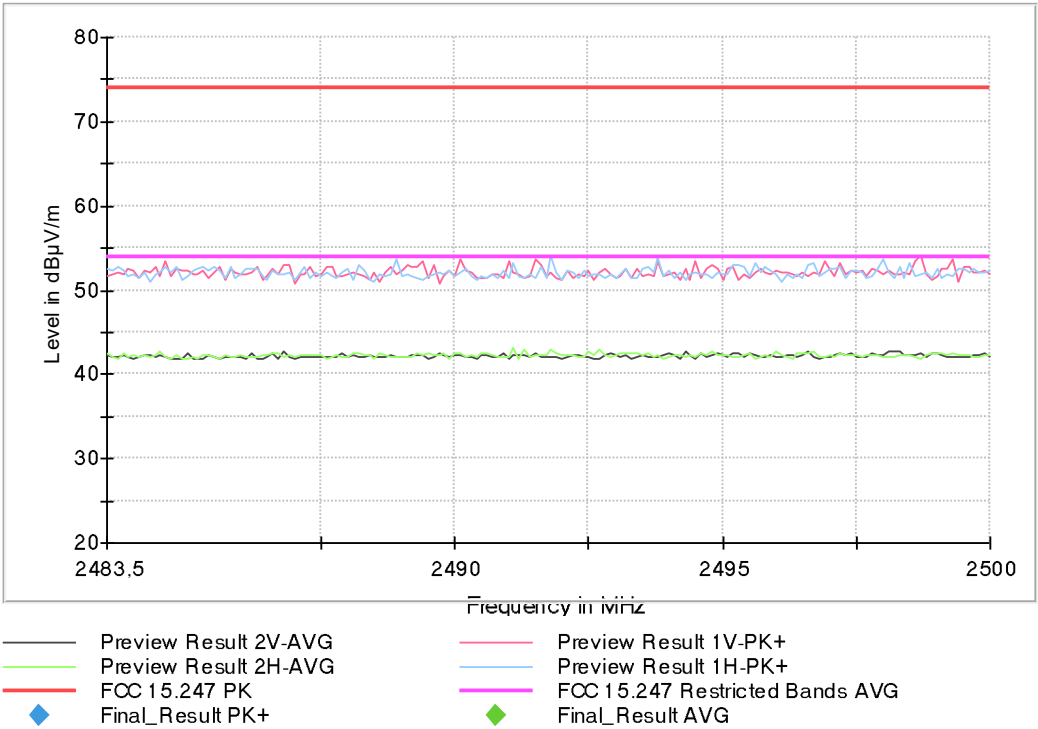
Full Spectrum



Full Spectrum



Full Spectrum



Tables:
Spectrum Analyzer Parameters

Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamp
1 GHz - 3 GHz	200 kHz	PK+ ; AVG	1 MHz	1 s	0 dB
3 GHz - 17 GHz	466,667 kHz	PK+ ; AVG	1 MHz	1 s	0 dB

Frequency Range GHz = [17, 26]

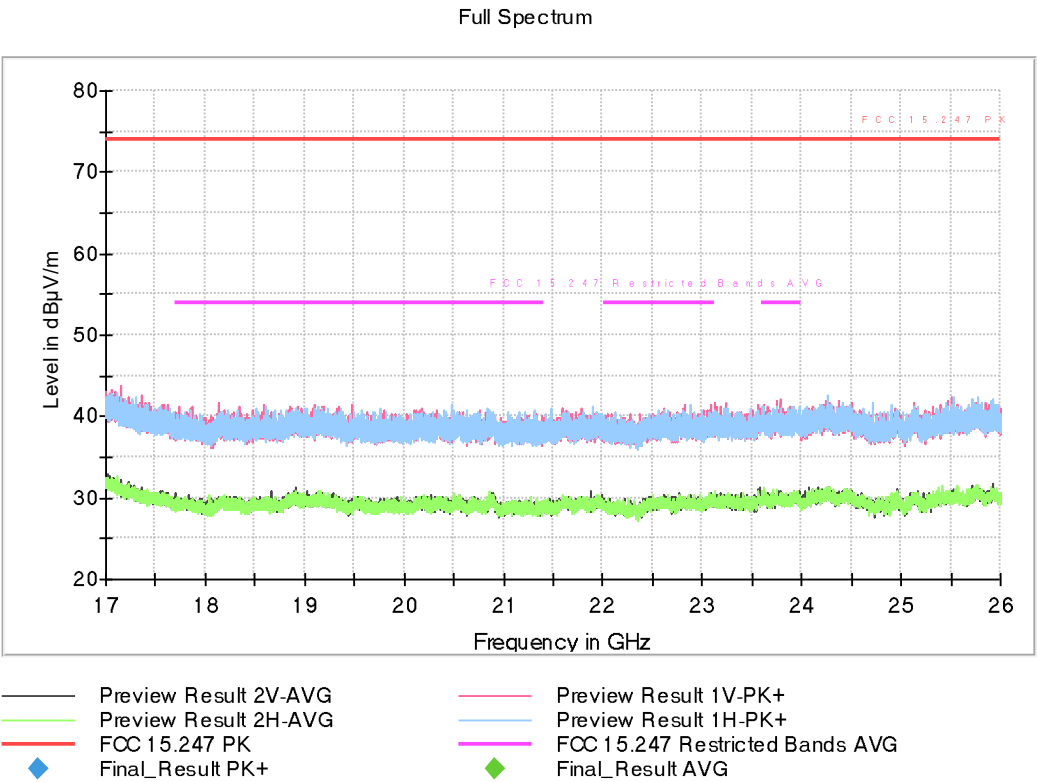
Operation Band MHz = [2400, 2483.5]

Equipment Type = Digital Transmission System (DTS)

Frequency MHz = 2480.00000

Active Port = 1

Modulation = BTLE (GFSK 1 Mbit/s)



Tables:
Spectrum Analyzer Parameters

Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamp
17 GHz - 26 GHz	300 kHz	PK+ ; AVG	1 MHz	1 s	0 dB

Modulation: BTLE (GFSK 2 Mbit/s)

Results

Frequency range 30 MHz – 1 GHz:

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

Freq Rng (GHz)	Operation Band (MHz)	Equipment	Freq (MHz)	Port	Unwanted Freq (MHz)	Unwanted Lvl (dBμV/m)	Pol	Detector
[0.03, 1]	[2400, 2483.5]	Digital Transmission System (DTS)	2402.00000	1	31.988	31.58	H	QP
					31.988	35.49	H	PK
					48.042	27.18	V	QP
					48.042	29.93	V	PK
					95.912	28.48	V	PK
					95.912	25.84	V	QP
					143.829	30.97	V	QP
					143.829	33.32	V	PK
					191.699	20.44	V	QP
					191.699	27.67	V	PK
					926.377	34.51	V	PK
					926.377	29.78	V	QP
			2440.00000		31.988	27.45	H	QP
					31.988	32.78	H	PK
					71.079	24.65	V	QP
					71.079	29.02	V	PK
					95.912	33.73	V	PK
					95.912	31.71	V	QP
					191.796	32.38	V	QP
					191.796	37.14	V	PK
					213.427	24.28	V	PK
					213.427	16.69	V	QP
					927.250	29.28	V	QP
					927.250	35.06	V	PK
			2480.00000		30.825	36.76	H	PK
					30.825	33.04	H	QP
					73.844	25.03	V	QP
					73.844	29.25	V	PK
					95.621	24.68	V	QP
					95.621	28.32	V	PK
					182.193	24.10	H	PK
					182.193	16.96	H	QP
					191.311	35.86	V	PK

Freq Rng (GHz)	Operation Band (MHz)	Equipment	Freq (MHz)	Port	Unwanted Freq (MHz)	Unwanted Lvl (dBµV/m)	Pol	Detector
					191.311	29.98	V	QP
					945.680	33.88	V	PK
					945.680	28.79	V	QP

Frequency range 1 GHz – 17 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.

Freq Rng (GHz)	Freq (MHz)	Unwanted Freq (MHz)	Unwanted Lvl (dBµV/m)	Pol	Detector	Margin (dB)	Height (cm)	Pol	Azimuth (deg)
[1, 17]	2480.00000	2483.8000	43.88	V	PK	10.12	267.0	V	134.0
			54.91	V	AVG	19.09	267.0	V	134.0

Frequency range 17 GHz – 26 GHz:

Not spurious frequencies detected at less than 20 dB below the limit.

Verdict

Pass

Attachments

Frequency Range GHz = [0.03, 1]

Operation Band MHz = [2400, 2483.5]

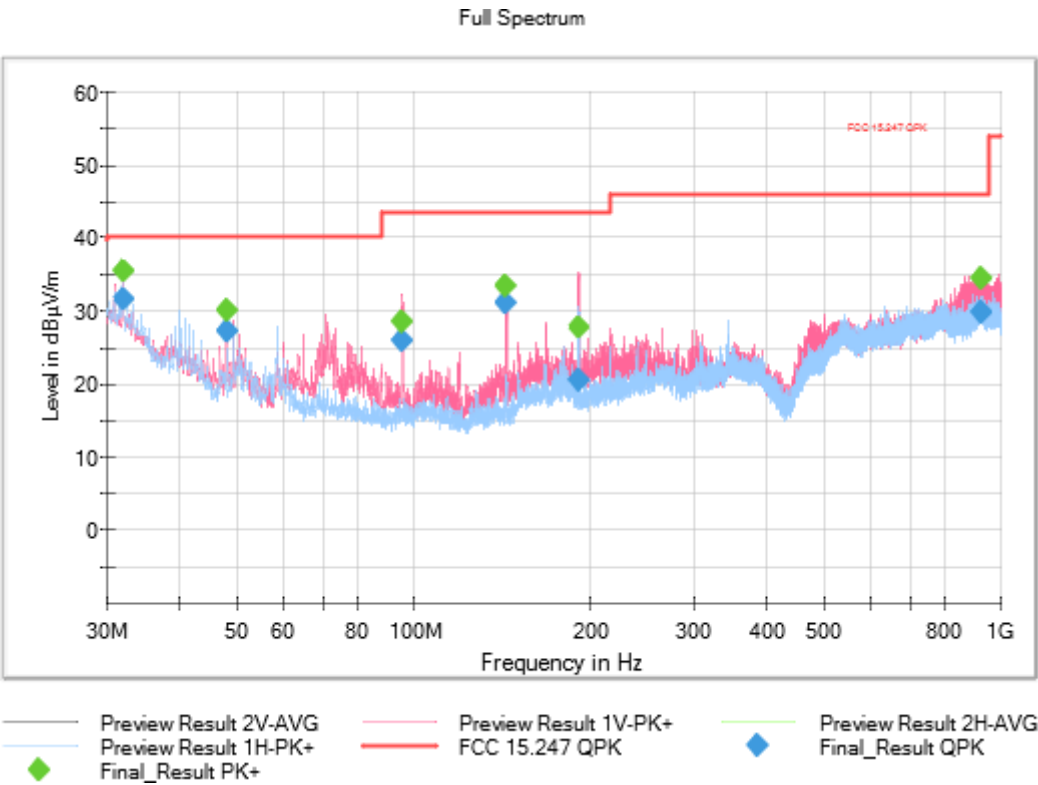
Equipment Type = Digital Transmission System (DTS)

Frequency MHz = 2402.00000

Active Port = 1

Modulation = BTLE (GFSK 2 Mbit/s)

Images:



Tables:

Spectrum Analyzer Parameters

	Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamp
	Receiver: [ESW 44]					
	30 MHz - 1 GHz	48,5 kHz	PK+	100 kHz	1 s	0 dB

Frequency Range GHz = [1, 17]

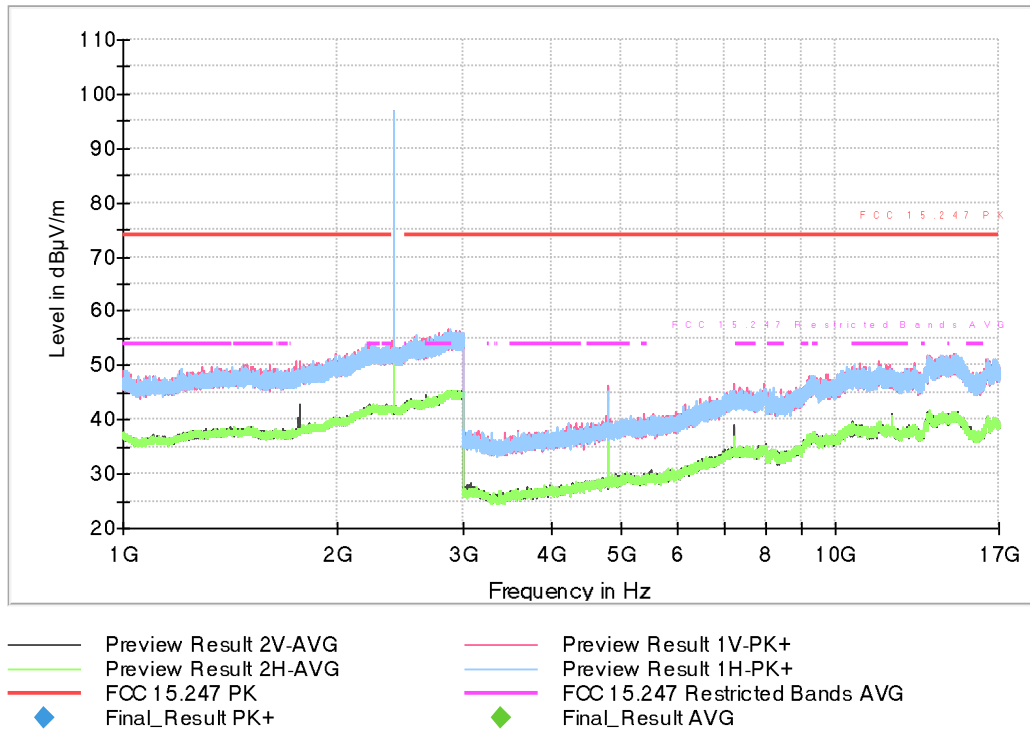
Operation Band MHz = [2400, 2483.5]

Equipment Type = Digital Transmission System (DTS) Frequency MHz = 2402.00000

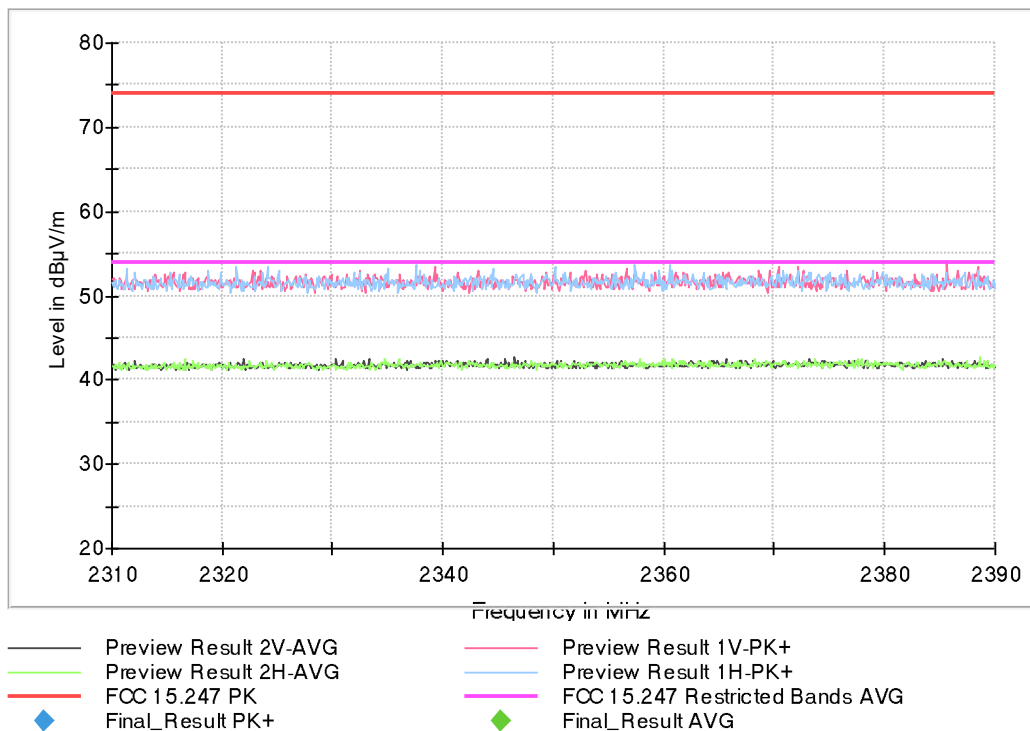
Active Port = 1

Modulation = BTLE (GFSK 2 Mbit/s)

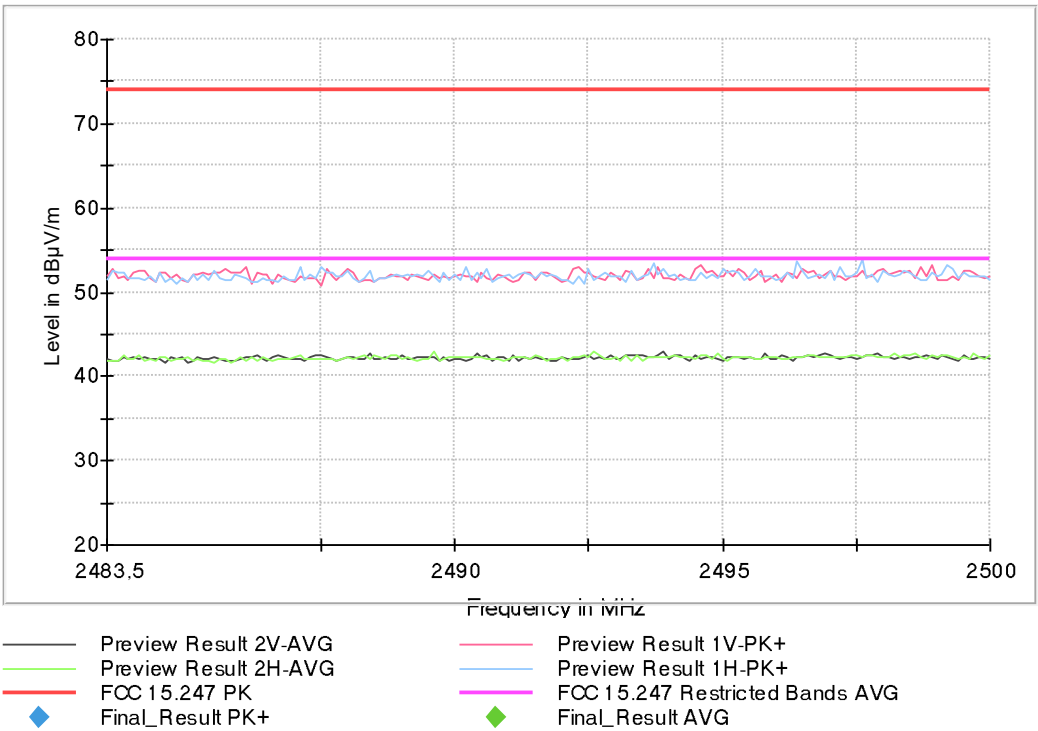
Full Spectrum



Full Spectrum



Full Spectrum



Tables:
Spectrum Analyzer Parameters

Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamp
1 GHz - 3 GHz	200 kHz	PK+ ; AVG	1 MHz	1 s	0 dB
3 GHz - 17 GHz	466,667 kHz	PK+ ; AVG	1 MHz	1 s	0 dB

Frequency Range GHz = [17, 26]

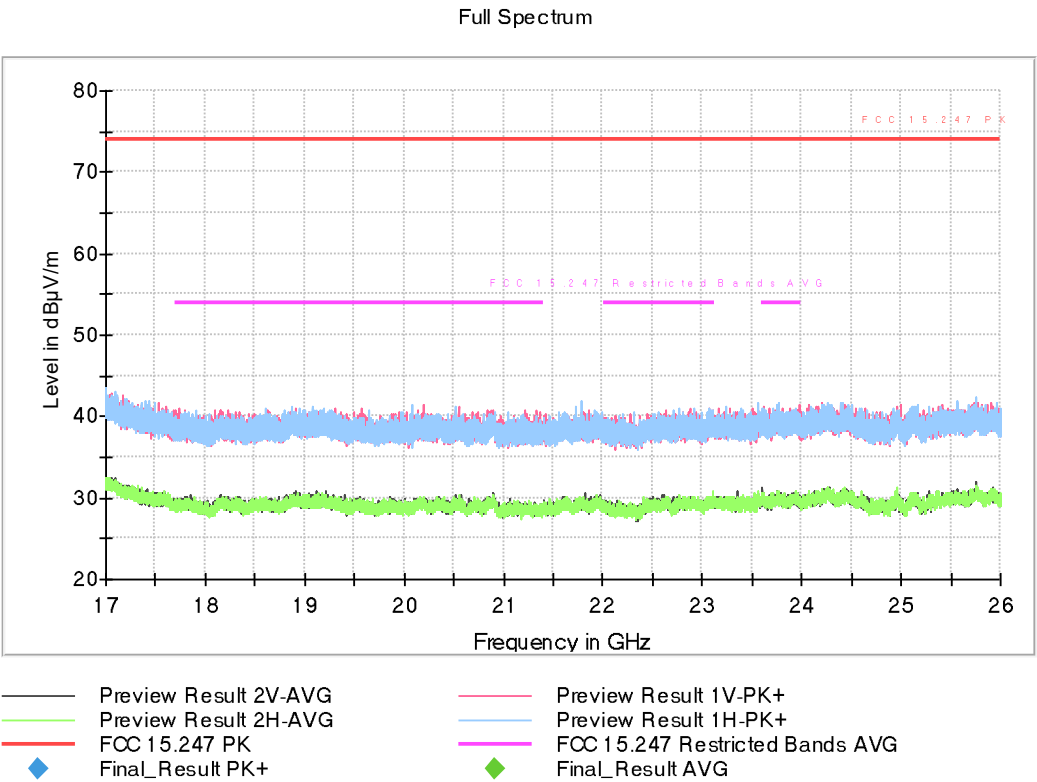
Operation Band MHz = [2400, 2483.5]

Equipment Type = Digital Transmission System (DTS)

Frequency MHz = 2402.00000

Active Port = 1

Modulation = BTLE (GFSK 2 Mbit/s)



Tables:
Spectrum Analyzer Parameters

Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamp
17 GHz - 26 GHz	300 kHz	PK+ ; AVG	1 MHz	1 s	0 dB

Frequency Range GHz = [0.03, 1]

Operation Band MHz = [2400, 2483.5]

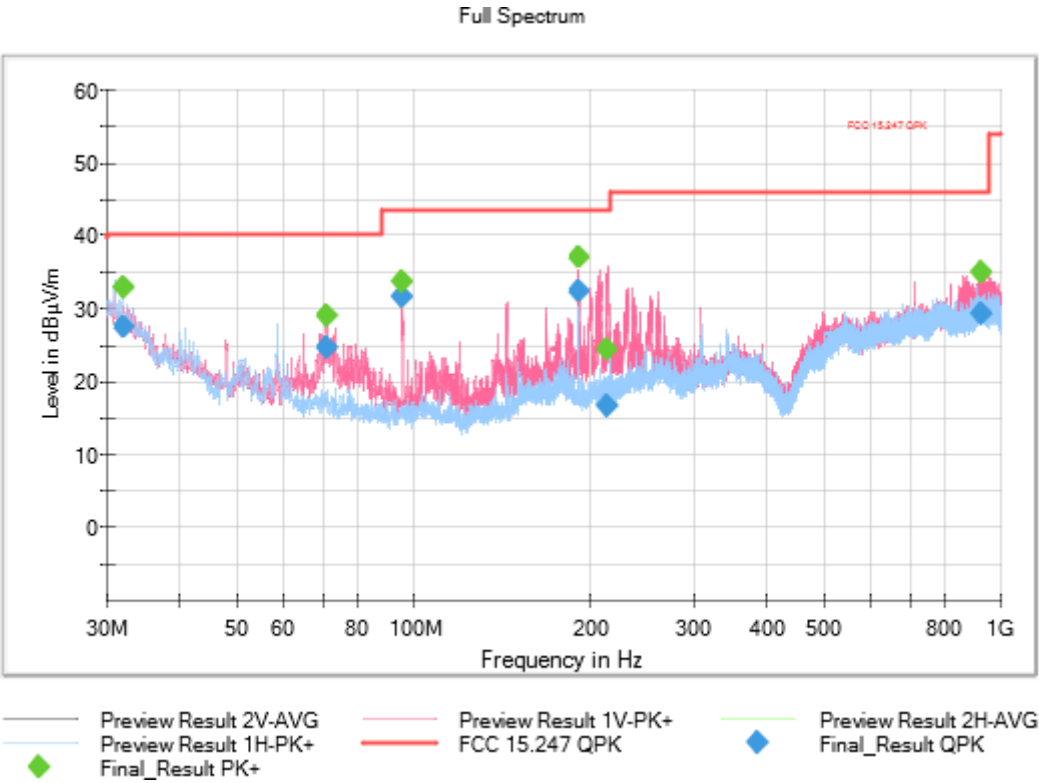
Equipment Type = Digital Transmission System (DTS)

Frequency MHz = 2440.00000

Active Port = 1

Modulation = BTLE (GFSK 2 Mbit/s)

Images:



Tables:

Spectrum Analyzer Parameters

	Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamp
	Receiver: [ESW 44]					
	30 MHz - 1 GHz	48,5 kHz	PK+	100 kHz	1 s	0 dB

Frequency Range GHz = [1, 17]

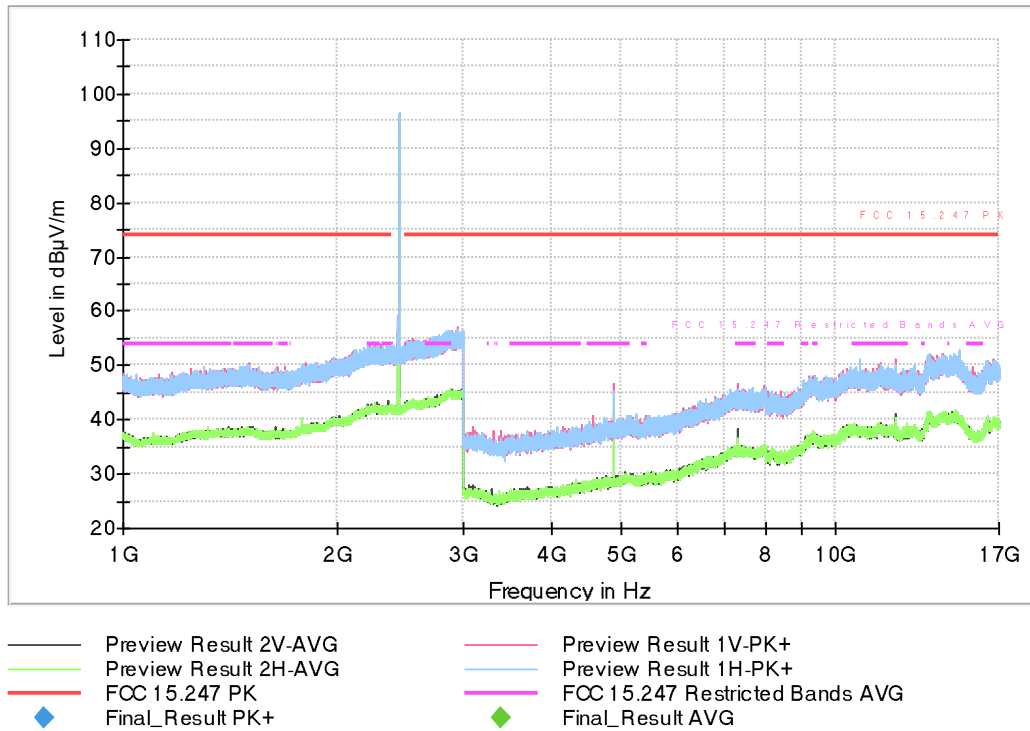
Operation Band MHz = [2400, 2483.5]

Equipment Type = Digital Transmission System (DTS) Frequency MHz = 2440.00000

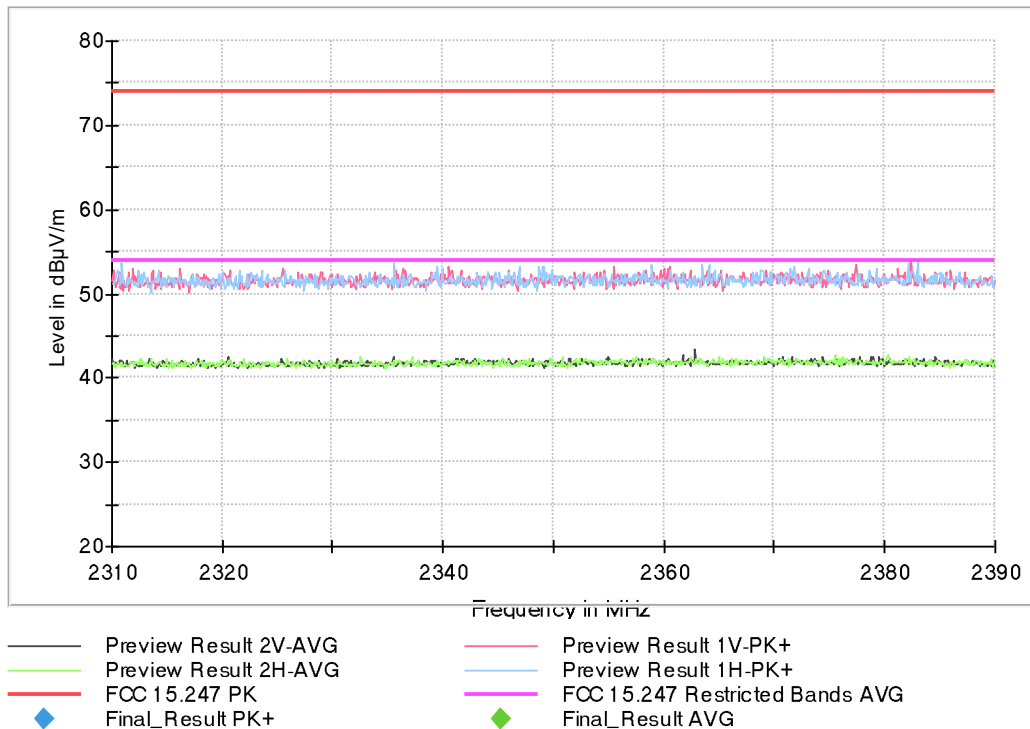
Active Port = 1

Modulation = BTLE (GFSK 2 Mbit/s)

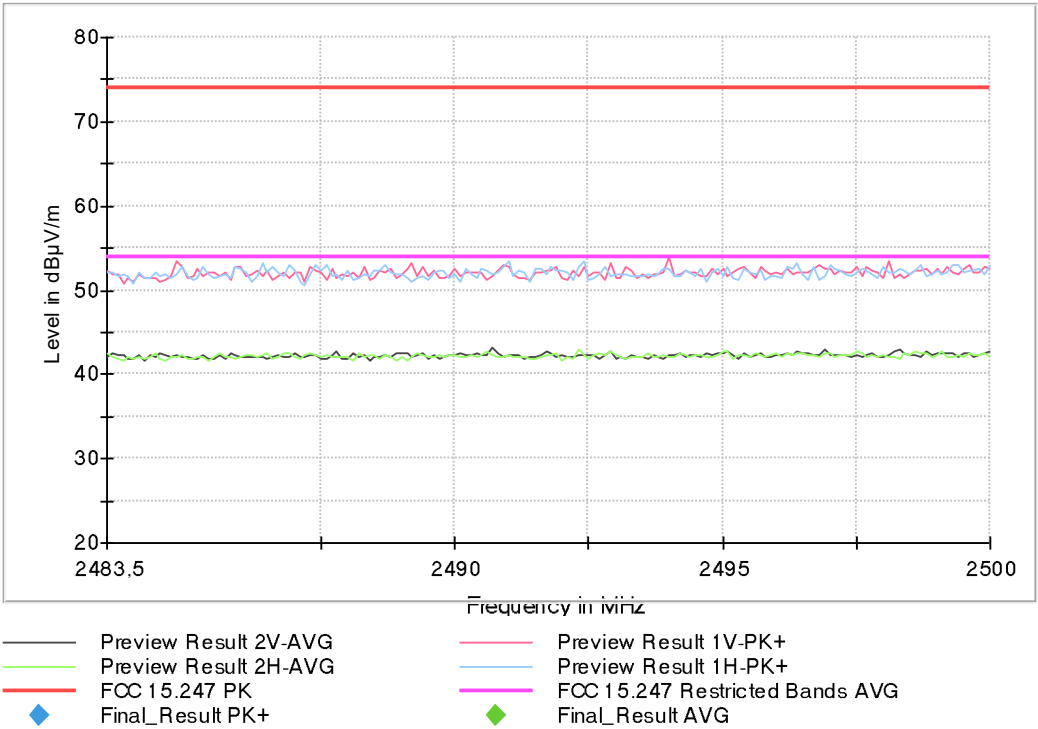
Full Spectrum



Full Spectrum



Full Spectrum



Tables:
Spectrum Analyzer Parameters

Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamp
1 GHz - 3 GHz	200 kHz	PK+ ; AVG	1 MHz	1 s	0 dB
3 GHz - 17 GHz	466,667 kHz	PK+ ; AVG	1 MHz	1 s	0 dB

Frequency Range GHz = [17, 26]

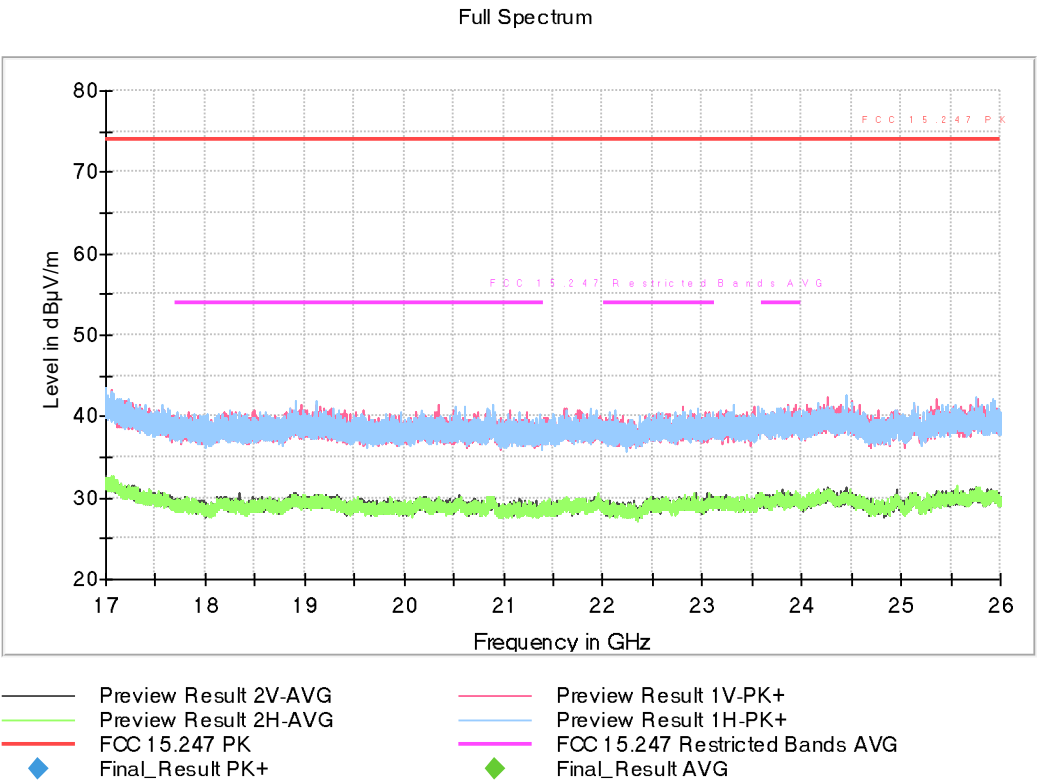
Operation Band MHz = [2400, 2483.5]

Equipment Type = Digital Transmission System (DTS)

Frequency MHz = 2440.00000

Active Port = 1

Modulation = BTLE (GFSK 2 Mbit/s)



Tables:
Spectrum Analyzer Parameters

Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamp
17 GHz - 26 GHz	300 kHz	PK+ ; AVG	1 MHz	1 s	0 dB

Frequency Range GHz = [0.03, 1]

Operation Band MHz = [2400, 2483.5]

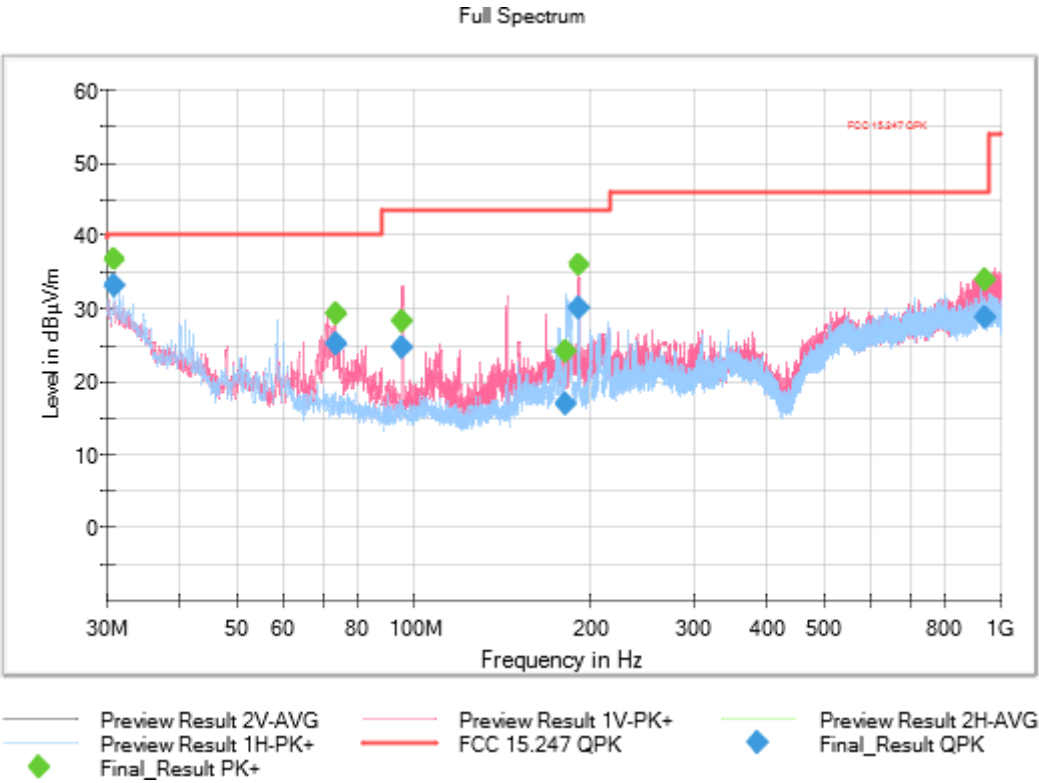
Equipment Type = Digital Transmission System (DTS)

Frequency MHz = 2480.00000

Active Port = 1

Modulation = BTLE (GFSK 2 Mbit/s)

Images:



Tables:

Spectrum Analyzer Parameters

	Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamp
	Receiver: [ESW 44]					
	30 MHz - 1 GHz	48,5 kHz	PK+	100 kHz	1 s	0 dB

Frequency Range GHz = [1, 17]

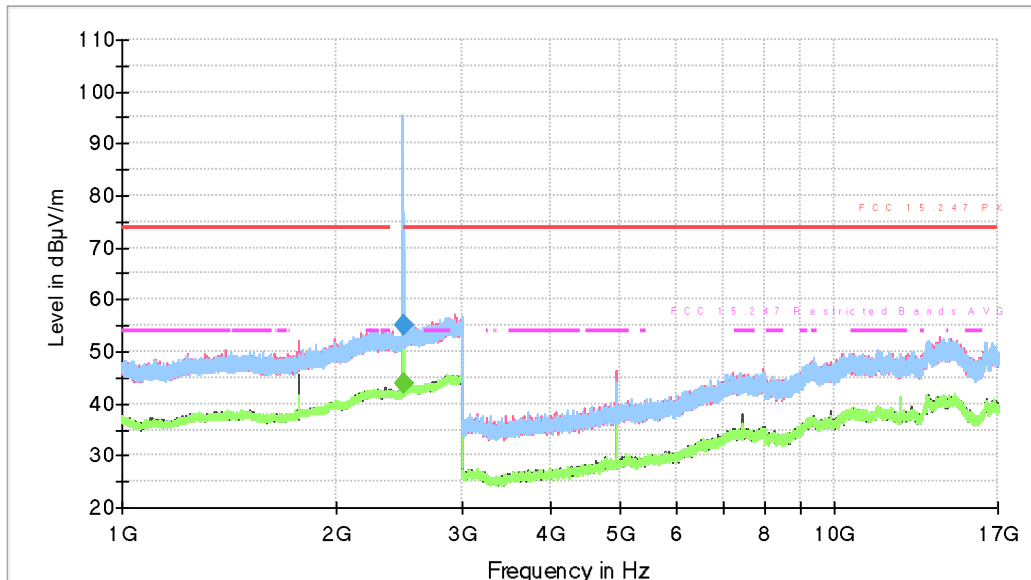
Operation Band MHz = [2400, 2483.5]

Equipment Type = Digital Transmission System (DTS) Frequency MHz = 2480.00000

Active Port = 1

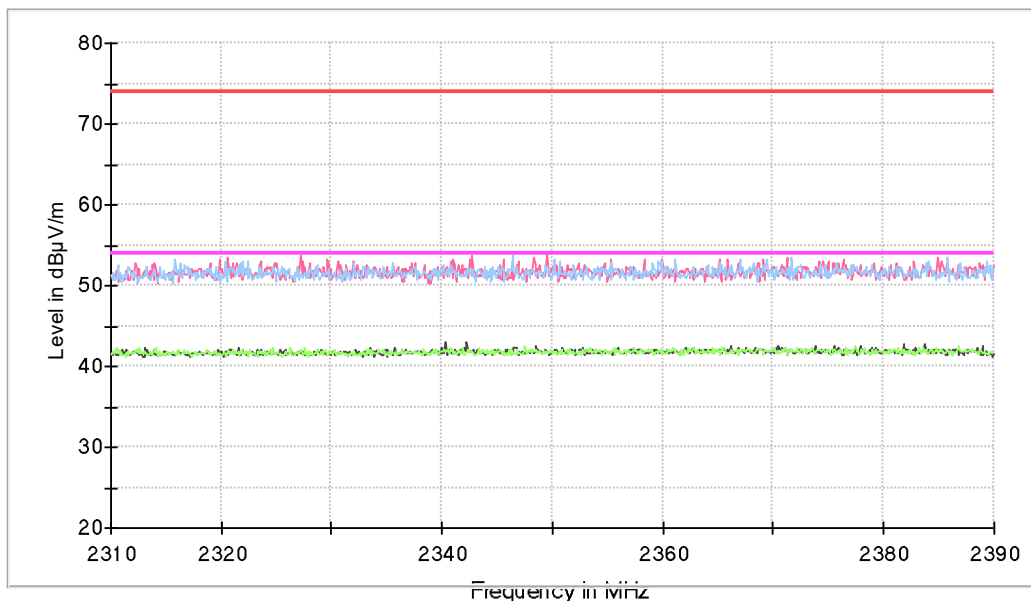
Modulation = BTLE (GFSK 2 Mbit/s)

Full Spectrum



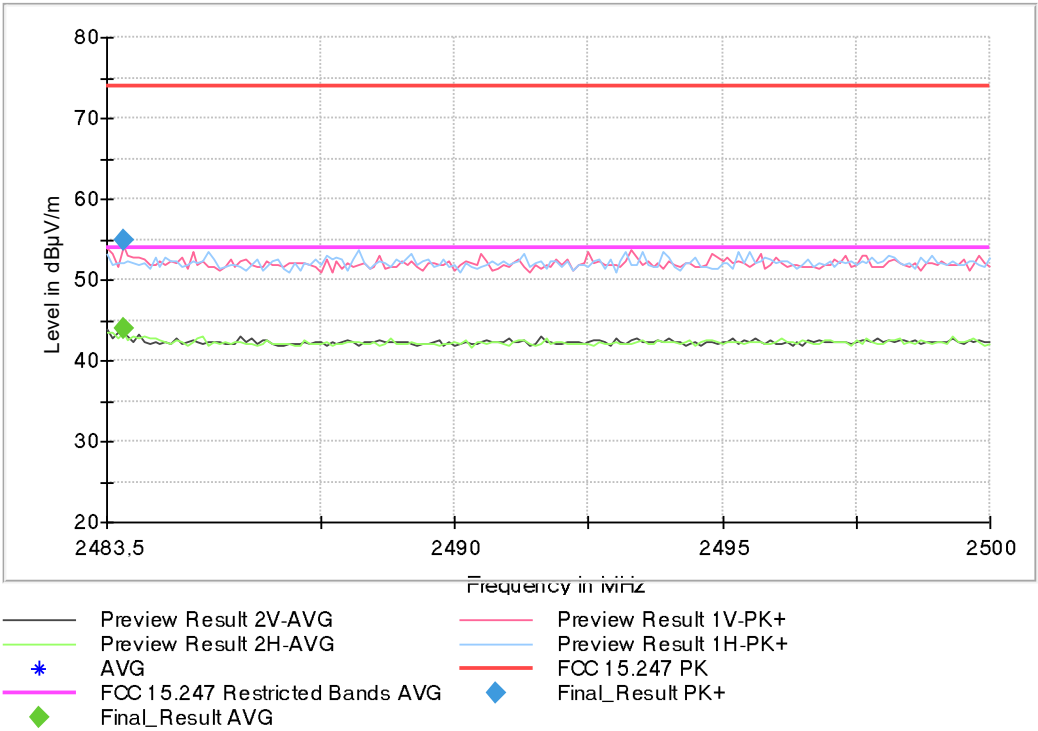
— Preview Result 2V-AVG
 — Preview Result 2H-AVG
 * AVG
 — FCC 15.247 Restricted Bands AVG
 ◆ Final_Result AVG
 — Preview Result 1V-PK+
 — Preview Result 1H-PK+
 — FCC 15.247 PK
 ◆ Final_Result PK+

Full Spectrum



— Preview Result 2V-AVG
 — Preview Result 2H-AVG
 * AVG
 — FCC 15.247 Restricted Bands AVG
 ◆ Final_Result AVG
 — Preview Result 1V-PK+
 — Preview Result 1H-PK+
 — FCC 15.247 PK
 ◆ Final_Result PK+

Full Spectrum



Tables:
Spectrum Analyzer Parameters

Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamp
1 GHz - 3 GHz	200 kHz	PK+ ; AVG	1 MHz	1 s	0 dB
3 GHz - 17 GHz	466,667 kHz	PK+ ; AVG	1 MHz	1 s	0 dB

Frequency Range GHz = [17, 26]

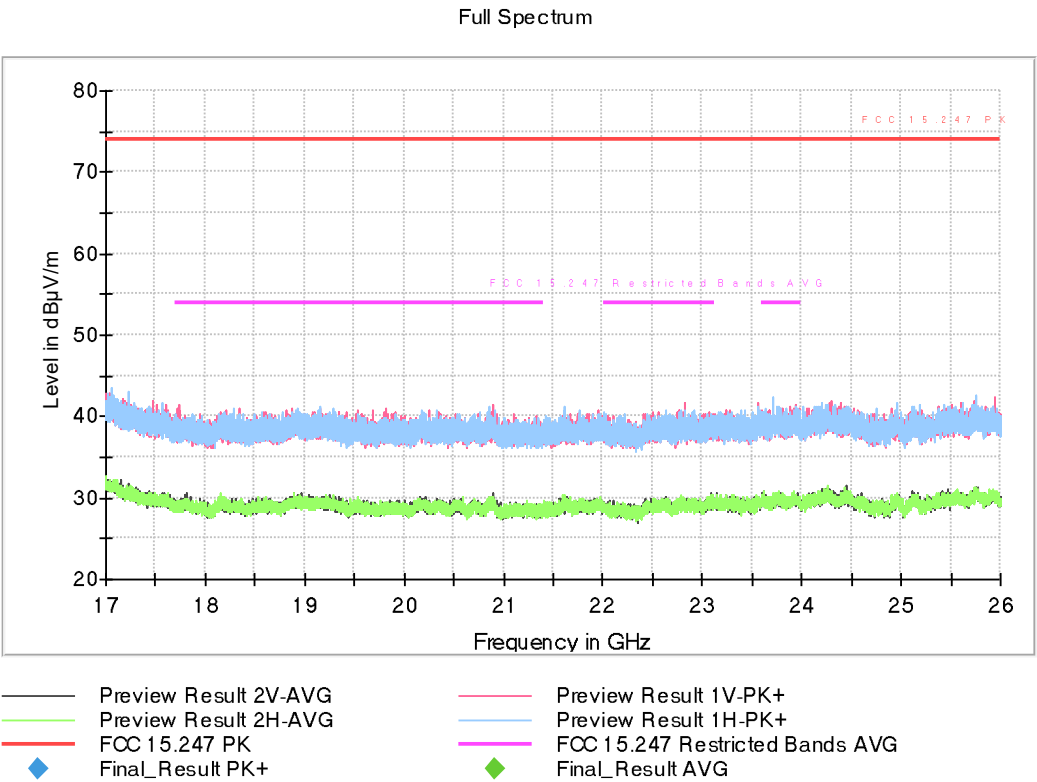
Operation Band MHz = [2400, 2483.5]

Equipment Type = Digital Transmission System (DTS)

Frequency MHz = 2480.00000

Active Port = 1

Modulation = BTLE (GFSK 2 Mbit/s)



Tables:
Spectrum Analyzer Parameters

Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamp
17 GHz - 26 GHz	300 kHz	PK+ ; AVG	1 MHz	1 s	0 dB

[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 5.2 (GFSK 1 Mbit/s)

Results

Operation Band (MHz)	Equipment	Freq (MHz)	PSD (dBm)
[2400, 2483.5]	Digital Transmission System (DTS)	2402.00000	-11.63
		2440.00000	-12.27
		2480.00000	-12.82

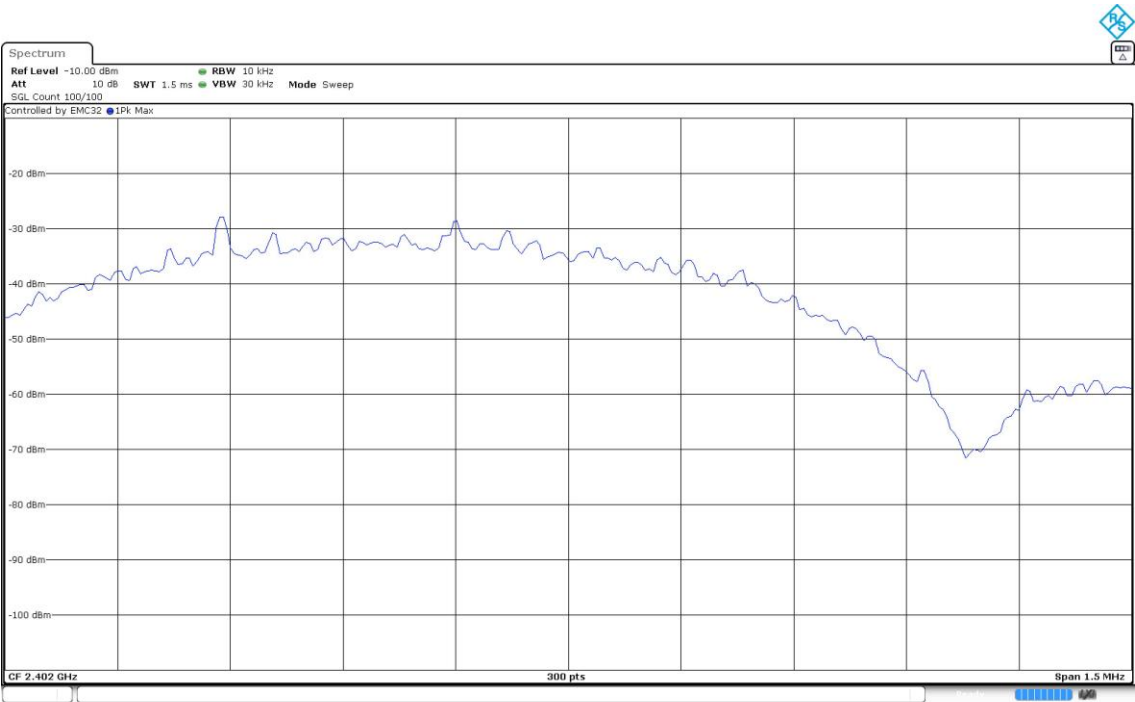
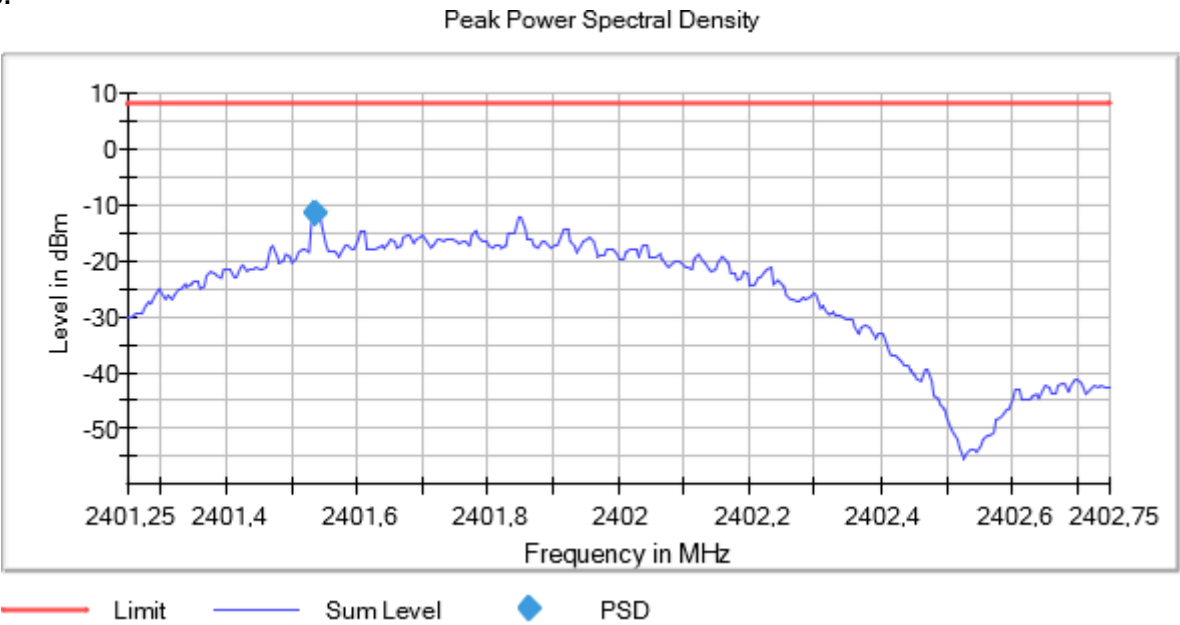
Verdict

Pass

Attachments

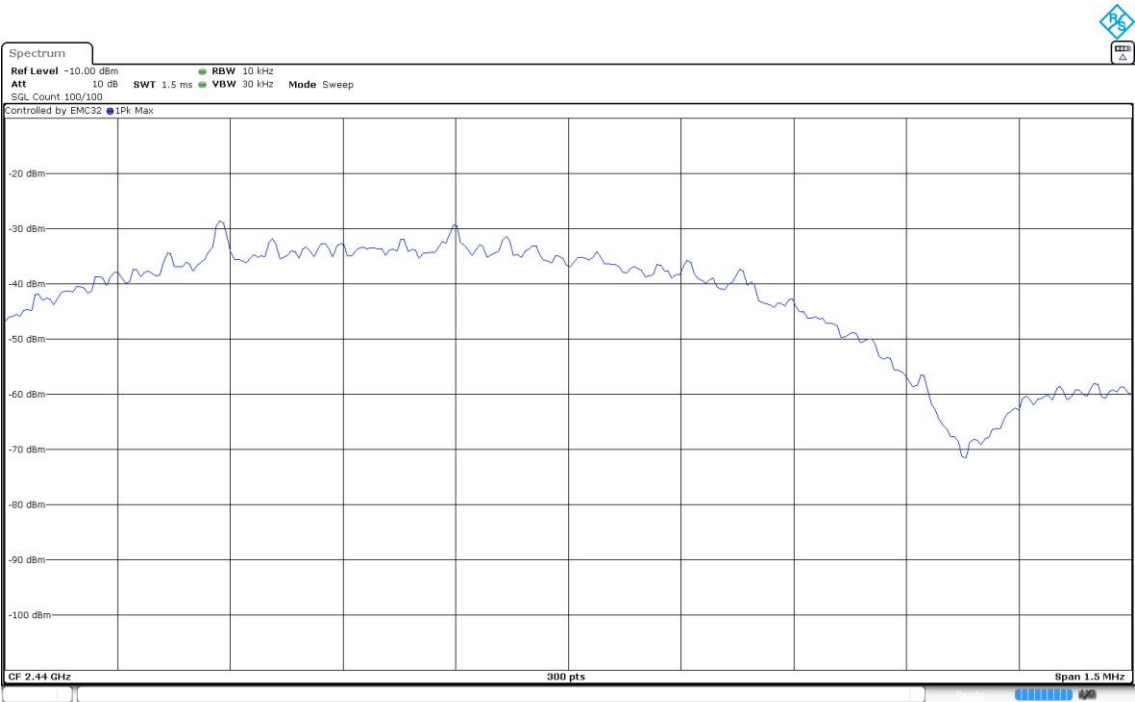
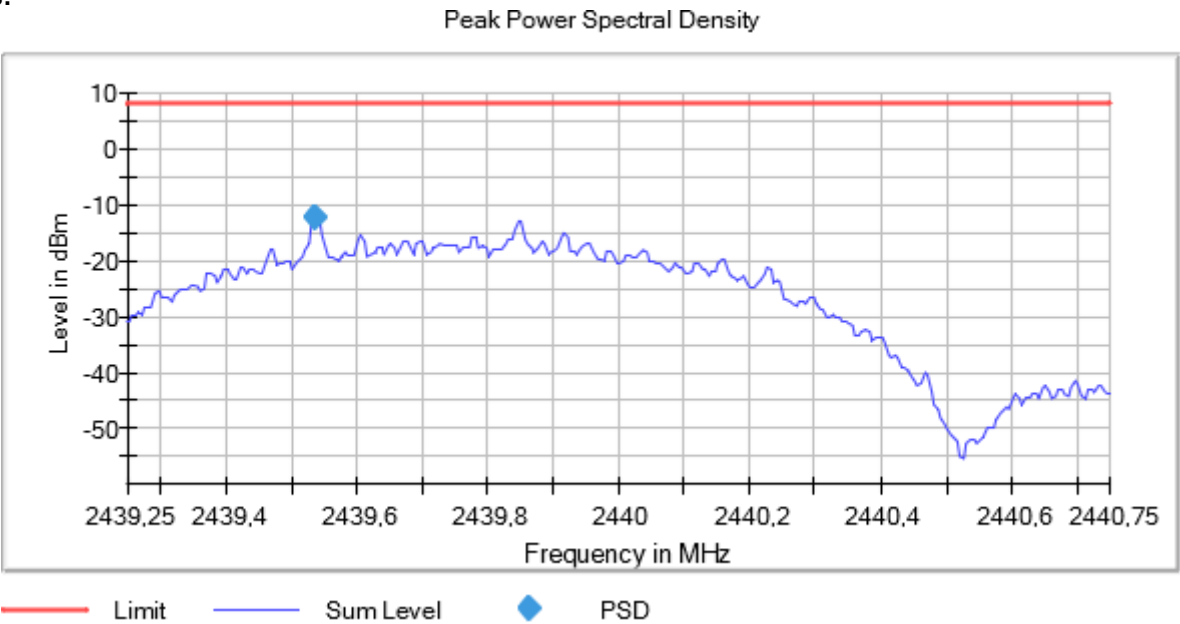
Operation Band MHz = [2400, 2483.5] Equipment Type = Digital Transmission System (DTS)
Frequency MHz = 2402.00000 Modulation = BTLE 5.2 (GFSK 1 Mbit/s)

Images:



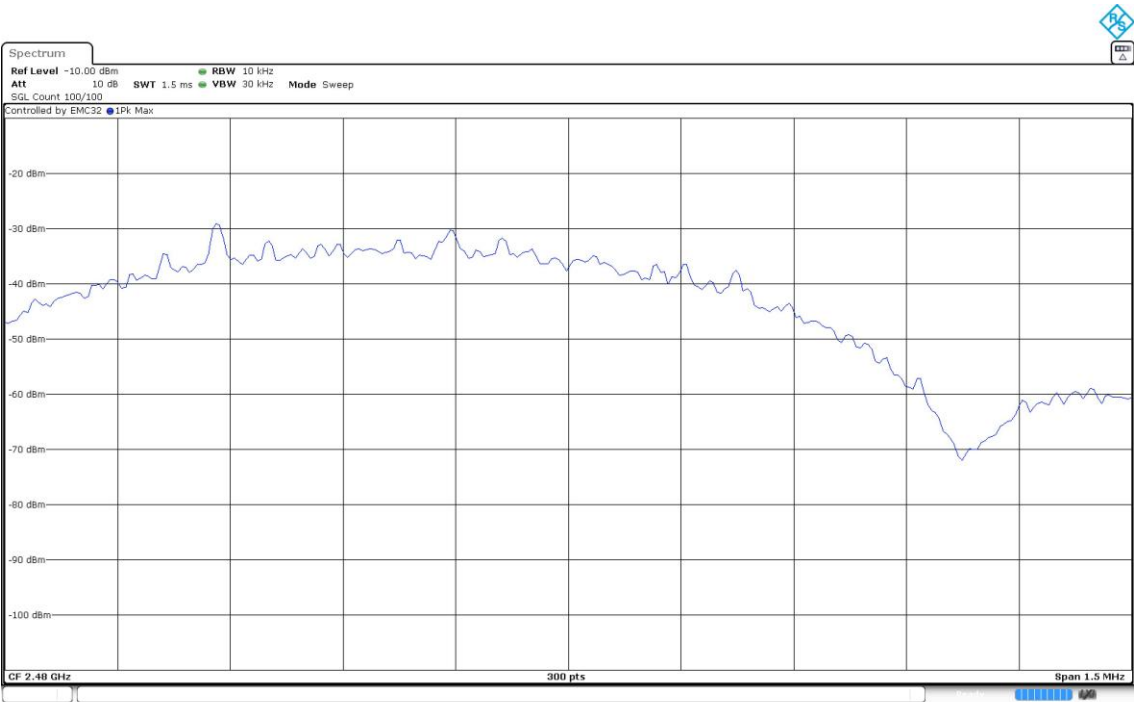
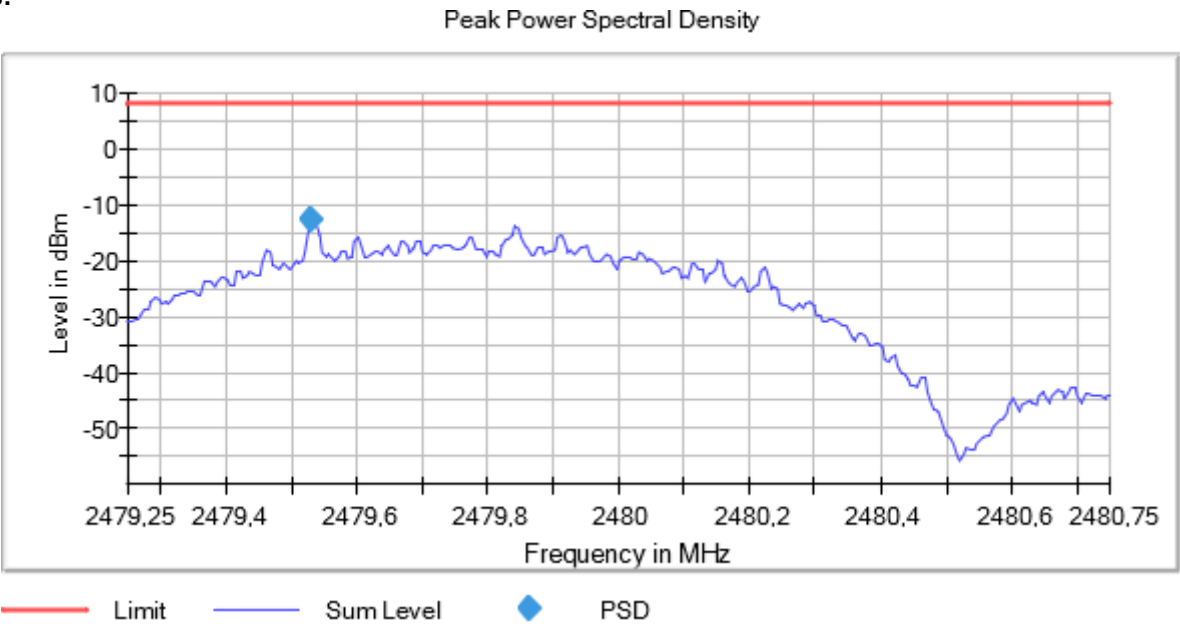
Operation Band MHz = [2400, 2483.5] Equipment Type = Digital Transmission System (DTS)
Frequency MHz = 2440.00000 Modulation = BTLE 5.2 (GFSK 1 Mbit/s)

Images:



Operation Band MHz = [2400, 2483.5] Equipment Type = Digital Transmission System (DTS)
Frequency MHz = 2480.00000 Modulation = BTLE 5.2 (GFSK 1 Mbit/s)

Images:



Modulation: BTLE 5.2 (GFSK 2 Mbit/s)

Results

Operation Band (MHz)	Equipment	Freq (MHz)	PSD (dBm)
[2400, 2483.5]	Digital Transmission System (DTS)	2402.00000	-14.39
		2440.00000	-14.95
		2480.00000	-15.40

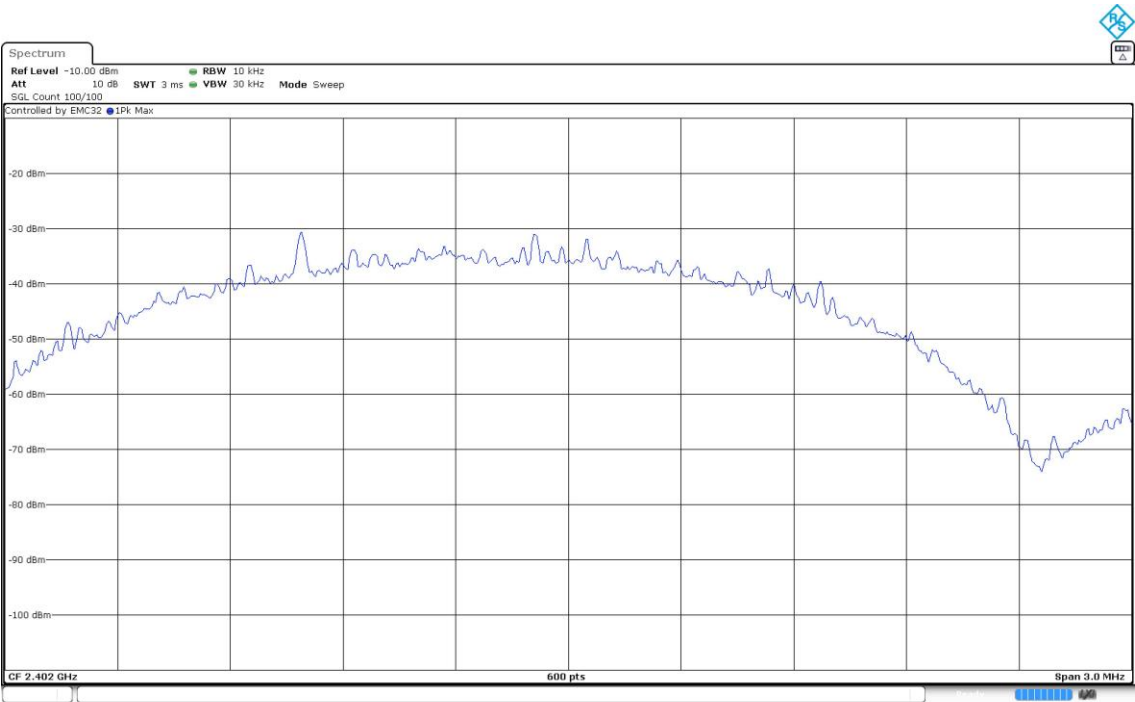
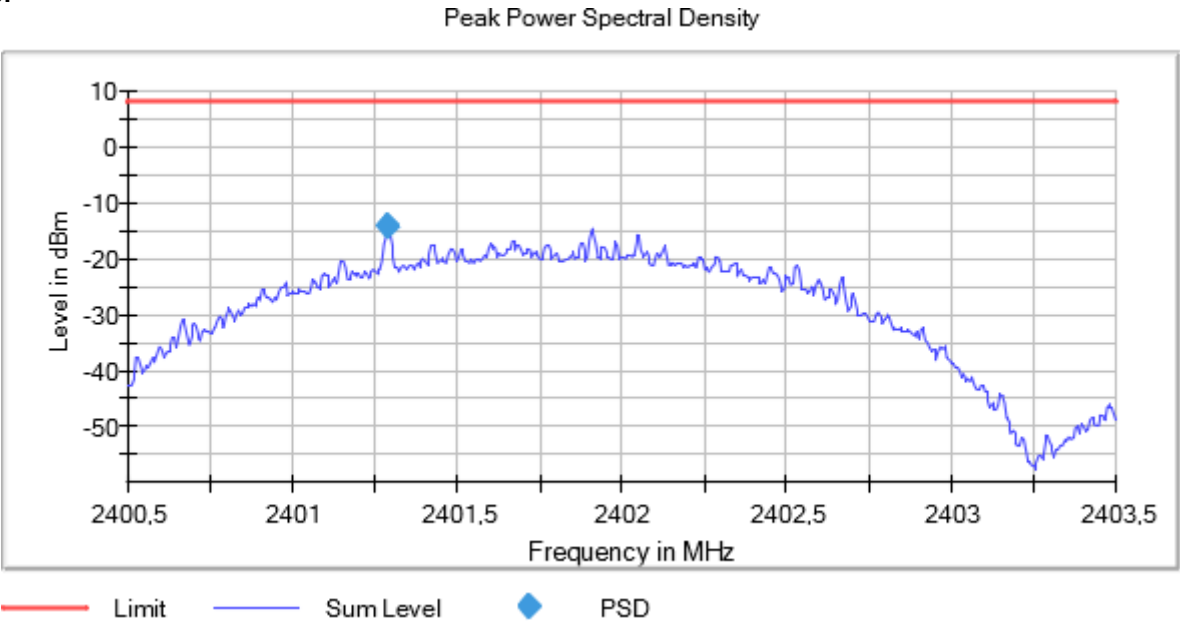
Verdict

Pass

Attachments

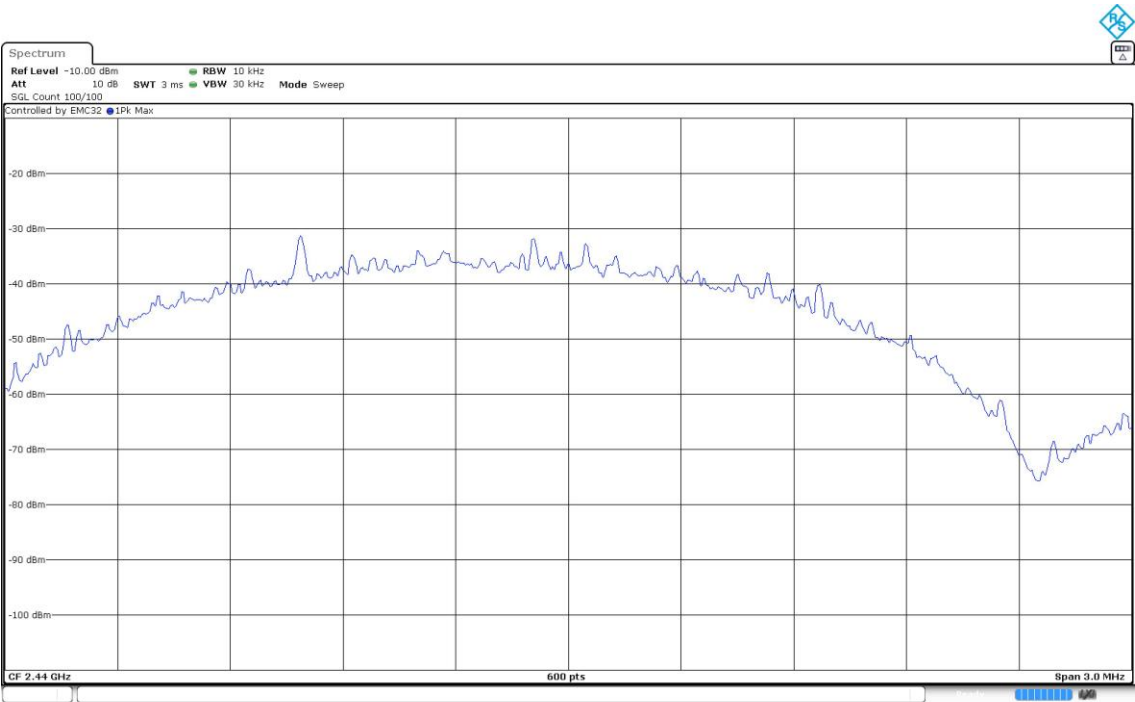
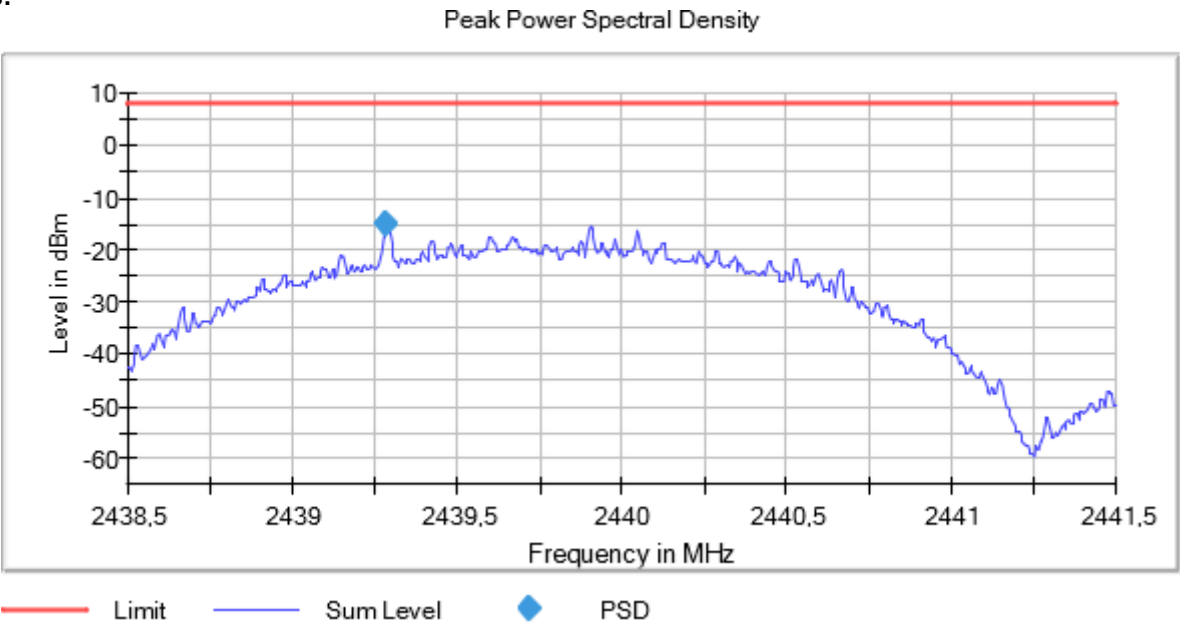
Operation Band MHz = [2400, 2483.5] Equipment Type = Digital Transmission System (DTS)
Frequency MHz = 2402.00000 Modulation = BTLE 5.2 (GFSK 2 Mbit/s)

Images:



Operation Band MHz = [2400, 2483.5] Equipment Type = Digital Transmission System (DTS)
Frequency MHz = 2440.00000 Modulation = BTLE 5.2 (GFSK 2 Mbit/s)

Images:



Operation Band MHz = [2400, 2483.5] Equipment Type = Digital Transmission System (DTS)
Frequency MHz = 2480.00000 Modulation = BTLE 5.2 (GFSK 2 Mbit/s)

Images:

