



FCC LISTED, REGISTRATION
NUMBER: 2764.01

ISED LISTED REGISTRATION
NUMBER: 23595-1

Test Report No:
4852ERM.018A1

Partial Test Report

USA FCC Part 15.247, 15.205, 15.207, 15.209; & CANADA RSS-247, RSS-Gen
Radio Frequency Devices. Operation within the bands 902 - 928 MHz, 2400 -2483.5 MHz,
and 5725 - 5850 MHz

Digital Transmission Systems (DTSs), Frequency Hopping Systems (FHSs) and
License-Exempt Local Area Network (LE-LAN) Devices.

(*) Identification of item tested	Automotive Infotainment System
(*) Trademark	Garmin
(*) Model and /or type reference	PCI3L3R1
(*) Derived model not tested	--
Other identification of the product	FCC ID: IPH-06780 IC: 1792A-06780 HVIN: A06780
(*) Features	AM/FM/DAB(SXM US version), W-LAN 2.4GHz /5GHz MIMO / SISO - no DFS Bands, AP / Client, Bluetooth 5.2 LE & EDR, GNSS multiple
Manufacturer	Garmin International, Inc. 1200 E. 151st Street Olathe, KS 66062
Test method requested, standard	USA FCC Part 15.247 (11-18-2024): Operation within the bands 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz. USA FCC Part 15.205 (11-18-2024): Restricted bands of operation. USA FCC Part 15.209 (11-18-2024) Edition: Radiated emission limits; general requirements. USA FCC Part 15.207 (11-18-2024 Edition): Conducted limits; general requirements CANADA RSS-247 Issue 4 (July 2025). CANADA RSS-Gen Issue 5 (April 2018)/A1 (March 2019)/A2 (Feb 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/Cor1-2023+C63.10a-2024+Errata to C63.10a-2024: American National Standard for Testing Unlicensed Wireless Devices.
Summary	See Appendix A
Approved by (name / position & signature)	Domingo Galvez EMC&RF Lab Manager 
Date of issue	2026-03-18
Report template No	FDT08_25 (*) "Data provided by the client"

Digitally signed by Domingo Galvez
DN: cn=Domingo Galvez, o=DEKRA
Certification Inc., ou=Regulatory Lab
Manager,
email=domingo.galvez@dekra.com,
c=US

ACRONYMS	3
COMPETENCES AND GUARANTEES	3
GENERAL CONDITIONS	4
UNCERTAINTY	4
DATA PROVIDED BY THE CLIENT	4
USAGE OF SAMPLES	5
TEST SAMPLE DESCRIPTION	6
IDENTIFICATION OF THE CLIENT	7
TESTING PERIOD AND PLACE	7
DOCUMENT HISTORY	7
ENVIRONMENTAL CONDITIONS	8
REMARKS AND COMMENTS	8
TESTING VERDICTS	9
SUMMARY	9
LIST OF EQUIPMENT USED DURING THE TEST	10
APPENDIX A: TEST RESULTS. BTLE, BTEDR, WLAN.....	11

Acronyms

Acronym ID	Acronym Description
Detector	Detector used
Equipment	Equipment Type
Freq	Frequency
Freq Rng	Frequency Range
MP	Measurement Point
Mod	Modulation
Operation Band	Operation Band
Pol	Polarization
Port	Active Port
RU	Resource Unit
Unwanted Freq	Unwanted Emissions Frequency
Unwanted Lvl	Unwanted Emissions Level

Competences and guarantees

DEKRA Certification Inc. is a testing laboratory accredited by A2LA (The American Association for Laboratory Accreditation), to perform the tests indicated in the Certificate 2764.01 and CAB ID US0215.

DEKRA Certification Inc. is a testing laboratory competent to carry out the tests described in this report.

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

DEKRA Certification Inc. 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 Certification at the time of performance of the test.

DEKRA Certification Inc. 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.

IMPORTANT: No parts of this report may be reproduced or quoted out of context, in any form or by any means, except in full, without the previous written permission of DEKRA Certification Inc.

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 Certification Inc.
4. This test report cannot be used partially or in full for publicity and/or promotional purposes without previous written permission of DEKRA Certification Inc. and the Accreditation Bodies.

Uncertainty

Uncertainty (factor $k=2$) was calculated according to the DEKRA Certification internal document PODT000.

Test case	Frequency (MHz)	U ($k=2$)	Units
Radiated Spurious Emission	30-180	4.27	dB
	180-1000	3.14	dB
	1000-18000	3.30	dB
	18000-40000	3.49	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 is including: GNSS (GPS, Galileo, Beidou, Glonass), AM/FM/DAB (ROW/ECE), AM/FM/SXM (NA), AM/FM, WLAN 2.4 & 5GHz, Bluetooth.

DEKRA 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.

The sample(s) is composed of the following elements, accessories and auxiliary equipment:

Id	Control Number	Description	Model	Serial N°	Date of Reception	Application
S/01	4852/06	Head Unit	PCI3L3R1	-	2025-08-20	Element Under Test
S/01	4852/07	Main harness (Coding A - Black)	207599	-	2025-08-20	Accessory
S/01	4852/08	USB 2.0 Type A to TGS Fakra cable (Coding D -Violet)	203292	-	2025-08-20	Accessory
S/01	4852/09	Quad Mate AX Z to SMA 300mm (Coding C - Blue)	204019	-	2025-08-20	Accessory
S/01	4852/10	Laptop	Latitude 5550	6L0Z594	2025-08-20	Accessory
S/01	4852/50	BTWL Antenna	A1779052902/002	-	2025-08-20	Accessory
S/01	4852/52	BTWL Antenna	A1779052902/002	-	2025-08-20	Accessory
S/01	4852/56	BTWL Antenna	A1779052902/002	-	2025-08-20	Accessory
S/01	4852/57	BTWL Antenna	A1779052902/002	-	2025-08-20	Accessory

Notes referenced to samples during the project:

Id	Note
S/01	Sample S/01, was used for the following test(s): All Radiated tests indicated in appendix A

Test sample description

Test Sample description (compulsory information for EMC and RF testing services)

Ports..... :	Port name and description		Cable				
			Specified max length [m]	Attached during test	Shielded	Coupled to patient ⁽³⁾	
	Main Connector A & B		2	[X]	[]	[]	
	AVB Amplifier connector,		.....	[X]	[]	[]	
	Vout Display connector		.....	[X]	[]	[]	
	HDBaseT connector, Ethernet / Logging connector		.....	[X]	[]	[]	
	USB2.0 TGS connector, USB 2.0 MMB		.....	[X]	[]	[]	
BT / WLAN connector, CSB Quad antenna connector, GNSS antenna connector		.....	[X]	[]	[]		
Supplementary information to the ports..... :	CSB TV antenna connector (loaded), Vin cameras connector (loaded), Camera control connector (loaded)						
Rated power supply :	Voltage and Frequency		Reference poles				
			L1	L2	L3	N	PE
	[]	AC:	[]	[]	[]	[]	[]
	[]	AC:	[]	[]	[]	[]	[]
	[X]	DC: 9-16V nominal 12 VDC by vehicle battery					
[]	DC:						
Rated Power..... :	No Data Provided						
Clock frequencies..... :	No Data Provided						
Other parameters..... :	-40C to +65C						
Software version..... :	E230.1						
Hardware version..... :	D1.2						
Dimensions in cm (W x H x D)..... :	220 x 161 x 78mm (mm)						
Mounting position..... :	[]	Table top equipment					
	[]	Wall/Ceiling mounted equipment					
	[]	Floor standing equipment					
	[]	Hand-held equipment					
	[X]	Other: Cluster in the car with separate antennas built into the cockpit of vehicle					
Modules/parts :	Module/parts of test item		Type		Manufacturer		
	No Data Provided		.....		.....		
							
							
							
Accessories (not part of the test item)..... :	Description		Type		Manufacturer		
	Antennas		.....		.....		
	Display		.....		.....		
	Laptop		.....		.....		
	any other equipment to make device functional		.....		.....		
							
							

Documents as provided by the applicant	Description	File name	Issue date
	Declaration Equipment Data	FDT30	2026-01-22
	Guide for RF testing scope v12	.....	2025-08-21
	RF sample operating instruction v15	.....	2025-08-21
	GNSS instruction v12	.....	2025-10-08

(3) Only for Medical Equipment

Identification of the client

Garmin International, Inc.
17150 W. 118th Terrace
Olathe, KS 66061
USA

Testing period and place

Test Location	DEKRA Certification Inc. 405 Glenn Dr. Suite 12, Sterling, VA 20164 United States of America
Date (start)	2025-08-27
Date (finish)	2025-09-18

Document history

Report number	Date	Description
4852ERM.018	2026-02-26	First release.
4852ERM.018A1	2026-03-18	Second release. Added the justification for LR 30-1 GHz

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. = 30 % Max. = 60 %
Air pressure	Min. = 860mbar Max. = 1060mbar

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

Temperature	Min. = 15 °C Max. = 35 °C
Relative humidity	Min. = 30 % Max. = 60 %
Air pressure	Min. = 860mbar Max. = 1060mbar

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. = 30 % Max. = 60 %
Air pressure	Min. = 860mbar Max. = 1060mbar

Remarks and comments

The tests have been performed by the technical personnel: Yuqi Wang, Victor Albrecht, Yuri Barone and Koji Nishimoto.

Testing verdicts

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

Summary

Requirement – Test case	FCC PART 15 PARAGRAPH / RSS-247	Verdict	Remark
RSS-Gen / FCC 15.207 - Continuous conducted emission on Power leads		N/M	Refer 1
RSS-Gen / RSS-247 - [99dBW] Transmitter 99% Occupied Bandwidth		N/M	Refer 1
RSS-247 / FCC 15.247 - [20dBW] 20 dB Bandwidth		N/M	Refer 1
RSS-247 / FCC 15.247 - [CFS] Carrier Frequency Separation		N/M	Refer 1
RSS-247 / FCC 15.247 - [DwT] Time of Occupancy (Dwell Time)		N/M	Refer 1
RSS-247 / FCC 15.247 - [NHC] Number of hopping channels		N/M	Refer 1
RSS-247 / FCC 15.247 - [6dBw] 6 dB Bandwidth		N/M	Refer 1
RSS-247 / FCC 15.247 - [Avcp] Maximum Average Conducted Output Power		N/M	Refer 1
RSS-247 / FCC 15.247 - [Pkcp] Maximum Average Conducted Output Power		N/M	Refer 1
RSS-247 / FCC 15.247 - [Bndedge] Band-edge emissions compliance (Transmitter)		N/M	Refer 1
RSS-247 / FCC 15.247 - [RSE] Emission limitations radiated (Transmitter)		P	--
RSS-247 / FCC 15.247 - [Psd] Power spectral density		N/M	Refer 1

Supplementary information and remarks:

- Only Radiated spurious emission test was requested

List of equipment used during the test

FCC 47 CFR Part 15.247 / RSS-247

Test Equipment for RSS-247 5.5 / FCC 15.247 (d) [RSE]

Control Num	Equipment	Manufacturer	Serial	Model	Next calibration
01014	FSV40 SIGNAL ANALYZER 40GHZ	RHODE & SCHWARZ	101626	FSV40	2025-10-04
01481	SEMI-ANECHOIC CHAMBER	FRANKONIA	-	SAC-3 Square L	---
01010	ESR7 EMI TEST RECEIVER	RHODE & SCHWARZ	101790	ESR7	2027-04-11
01108	ETHERNET SNMP THERMOMETER	HW GROUP	60038026954	HWg-STE Plain	2025-10-18
01213	CONTROL ROOM	FRANKONIA	F169021-1	CR	---
01473	ETHERNET SNMP THERMOMETER	HW GROUP	60038038777	HWg-STE Plain	2025-10-24
01111	ETHERNET SNMP THERMOMETER	HW GROUP	60038026577	HWg-STE Plain	2025-10-24
01564	CONTROL ROOM 2	FRANKONIA	F219025-1	CR	---
01567	FRANKONIA TRANSPARENT RF SQUARE TEST TABLE	FRANKONIA	RFSqtab02	RF Sq table	---
01179	SEMI-ANECHOIC CHAMBER	FRANKONIA	F169021	SAC 3plus 'L'	---
01057	3115 DOUBLE-RIDGED WAVEGUIDE HORN ANTENNA (750 MHz-18 GHz)	ETS LINDGREN	00211373	3115	2026-07-18
01566	FRANKONIA TRANSPARENT RF SQUARE TEST TABLE	FRANKONIA	RFSqtab01	RF Sq table	---
01065	3142E BICONILOG ANTENNA	ETS LINDGREN	00208587	3142E	2028-02-03
01056	3116C DOUBLE-RIDGED WAVEGUIDE HORN ANTENNA (18-40GHz)	ETS LINDGREN	00213179	3116C	2026-02-23
00981	LOW NOISE PREAMPLIFIER (1-18GHz)	BONN ELEKTRONIK	1711156B	BLMA0118-2A	2026-02-21
01472	ETHERNET SNMP THERMOMETER	HW GROUP	60038038794	HWg-STE Plain	2025-10-24
01314	WIRELESS MEASUREMENT SOFTWARE R&S EMC32	RHODE & SCHWARZ	1040-OT102236	---	---

Appendix A: Test results. BTLE, BTEDR, WLAN

Appendix A

PRODUCT INFORMATION 13

DESCRIPTION OF TEST CONDITIONS 14

TEST CASES DETAILS 17

 FCC 47 CFR PART 15.247 / RSS-247 17

 RSS-247 / FCC 15.247 - [RSE] Emission limitations radiated (Transmitter)..... 17

product information

The following information is provided by the client

Information	Description
Modulation	BTLE: GFSK BTEDR: GFSK , DPQSK, 8DPSK WLAN: CCK, DSSS, OFDM (BPSK QPSK, 16/64QAM)
Operating Frequency Range	BTLE: 2400 - 2483.5 MHz BTEDR: 2400 - 2483.5 MHz WLAN: 2400 - 2480 MHz
Nominal Channel Bandwidth	BTLE: 2 MHz, BTEDR: 1MHz WLAN: 20 MHz
RF Output Power	BTLE: <10mW eirp BTEDR: <10mW eirp WLAN: target Power 9dBm conducted
Antenna type	External antenna
Antenna gain	BTLE: 0.1 dBi BTEDR: 0.1 dBi WLAN: 0.1 dBi
Nominal Voltage	
- Supply Voltage	12 Vdc
- Type of power source	DC voltage
Equipment type	Bluetooth LE Bluetooth Classic (BR & EDR) WLAN according to IEEE 802.11 a/b/g/n/ac/ax

Description of test conditions

During transmitter test the EUT was being controlled by the SW tool to operate in a continuous transmit mode on the test channel as required and in each of the different modulation modes.

BLUETOOTH LOW ENERGY

Test Conditions	Description
TC/01 (1 Mbps)	<u>Power supply (V):</u> $V_{\text{nominal}} = 12 \text{ VDC}$ Data Rate: 1 Mbps Bandwidth: 1 MHz <u>Test Frequencies for conducted/Radiated tests:</u> Lowest range: 2402 MHz Middle channel: 2440 MHz Highest range: 2480 MHz
TC/02 (2 Mbps)	<u>Power supply (V):</u> $V_{\text{nominal}} = 12 \text{ VDC}$ Data Rate: 2 Mbps Bandwidth: 2 MHz <u>Test Frequencies for Conducted/Radiated tests:</u> Lowest range: 2402 MHz Middle channel: 2440 MHz Highest range: 2480 MHz

Note (1): A pre-scan was performed to determine the worst-case scenario. Worst-case scenario detected is shown in the test results.

The data rate of 2 Mbps was selected based on preliminary testing that indicated this rate represents the worst-case scenario.

BLUETOOTH BR/EDR

Test Conditions	Description
TC/01	<u>Power supply (V):</u> Vnominal = 12 VDC <u>Modulation:</u> GFSK <u>Test Frequencies for conducted/Radiated tests:</u> Lowest range: 2402 MHz Middle channel: 2441 MHz Highest range: 2480 MHz
TC/02	<u>Power supply (V):</u> Vnominal = 12 VDC <u>Modulation:</u> PI/4-DQPSK <u>Test Frequencies for Conducted/Radiated tests:</u> Lowest range: 2402 MHz Middle channel: 2441 MHz Highest range: 2480 MHz
TC/03	<u>Power supply (V):</u> Vnominal = 12 VDC <u>Modulation:</u> 8-DPSK <u>Test Frequencies for Conducted/Radiated tests:</u> Lowest range: 2402 MHz Middle channel: 2441 MHz Highest range: 2480 MHz

Note (1): A pre-scan was performed to determine the worst-case scenario. Worst-case scenario detected is shown in the test results.

The data rates of 1-DH5 for GFSK, 2-DH5 for pi/4DQPSK, 3-DH5 for 8DPSK were selected based on the preliminary testing that identified those rates corresponding to the worst cases

WLAN 802.11

Test Conditions	Description
TC/01 ⁽¹⁾ (b mode)	<u>Power supply (V):</u> $V_{\text{nominal}} = 12 \text{ VDC}$ <u>Channel Bandwidth:</u> 20 MHz <u>Test Frequencies for Conducted/Radiated tests:</u> SISOA Lowest channel: 2412 MHz Middle channel: 2437 MHz Highest channel: 2462 MHz
TC/02 ⁽¹⁾ (g mode)	<u>Power supply (V):</u> $V_{\text{nominal}} = 12 \text{ VDC}$ <u>Channel Bandwidth:</u> 20 MHz <u>Test Frequencies for Conducted/Radiated tests:</u> SISOA Lowest channel: 2412 MHz Middle channel: 2437 MHz Highest channel: 2462 MHz
TC/03 ⁽¹⁾ (n mode)	<u>Power supply (V):</u> $V_{\text{nominal}} = 12 \text{ VDC}$ <u>Channel Bandwidth:</u> 20 MHz <u>Test Frequencies for Conducted tests:</u> SISOA Lowest channel: 2412 MHz Middle channel: 2437 MHz Highest channel: 2462 MHz
TC/04 ⁽¹⁾ (ax mode)	<u>Power supply (V):</u> $V_{\text{nominal}} = 12 \text{ VDC}$ <u>Channel Bandwidth:</u> 20 MHz <u>Test Frequencies for Conducted/Radiated tests:</u> SISOA Lowest channel: 2412 MHz Middle channel: 2437 MHz Highest channel: 2462 MHz

Note (1): For spurious emissions OFDM/OFDMA modes a preliminary scan was performed to determine the worst case. The following tables and plots show the results for the worst case in DSSS modulation (802.11b) and OFDM modulation (802.11n20).

The data rates of 1 Mbps for 802.11b, and MCS0 for 802.11n20 were selected based on the preliminary testing that identified those rates corresponding to the worst cases.

Test cases details

FCC 47 CFR Part 15.247 / RSS-247

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

Limits

USA FCC Part 15.407 (05-05-2025):

FCC Rules and Regulations 47 CFR Part 15, Subpart C, Secs. 15.247:

(d) In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated 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, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in Secs. 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Secs. 15.205(a), must also comply with the radiated emission limits specified in Secs. 15.209(a) (see Secs. 15.205(c)).

FCC Rules and Regulations 47 CFR Part 15, Subpart C, Secs. 15.209:

(a) the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table.

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 ⁽¹⁾	40	3
88 - 216	150 ⁽¹⁾	43.5	3
216 - 960	200 ⁽¹⁾	46	3
Above 960	500	54	3

Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54–72 MHz, 76–88 MHz, 174–216 MHz or 470–806 MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g., Secs. 15.231 and 15.241

(d) The emission limits shown in the above table are based on measurements employing a 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.

(f) In accordance with Secs. 15.33(a), in some cases the emissions from an intentional radiator must be measured to beyond the tenth harmonic of the highest fundamental frequency designed to be emitted by the intentional radiator because of the incorporation of a digital device. If measurements above the tenth harmonic are so required, the radiated emissions above the tenth harmonic shall comply with the general radiated emission limits applicable to the incorporated digital device, as shown in Secs. 15.109 and as based on the frequency of the emission being measured, or, except for emissions contained in the restricted frequency bands shown in Secs. 15.205, the limit on spurious emissions specified for the intentional radiator, whichever is the higher limit. Emissions which must be measured above the tenth harmonic of the highest fundamental frequency designed to be emitted by the intentional radiator and which fall within the restricted bands shall comply with the general radiated emission limits in Secs. 15.109 that are applicable to the incorporated digital device.

• FCC Rules and Regulations 47 CFR Part 15, Subpart C, Secs. 15.109:

(g) As an alternative to the radiated emission limits shown in paragraphs (a) and (b) of this section, digital devices may be shown to comply with the standards contained in the Third Edition of the International Special Committee on Radio Interference (CISPR), Pub. 22, "Information Technology Equipment—Radio Disturbance Characteristics—Limits and Methods of Measurement" (incorporated by reference, see § 15.38). In addition:

(2) If, in accordance with § 15.33 of this part, measurements must be performed above 1000 MHz, compliance above 1000 MHz shall be demonstrated with the emission limit in paragraph (a) or (b) of this section, as appropriate. Measurements above 1000 MHz may be performed at the distance specified in the CISPR 22 publications for measurements below 1000 MHz provided the limits in paragraphs (a) and (b) of this section are extrapolated to the new measurement distance using an inverse linear distance extrapolation factor (20 dB/decade), e.g., the radiated limit above 1000 MHz for a Class B digital device is 150 µV/m, as measured at a distance of 10 meters.

Frequency range (MHz)	Class A limits		Class B limits	
	AVG Limit for 3 m ⁽¹⁾ (dBµV/m)	PK Limit for 3 m ^(1,2) (dBµV/m)	AVG Limit for 3 m ⁽¹⁾ (dBµV/m)	PK Limit for 3 m ^(1,2) (dBµV/m)
1000 - 3000	60	80	54	74
3000 - 6000	60	80	54	74
6000 - 40000 ⁽³⁾	60	80	54	74

- Limits are specified by FCC at a distance of 10m and extrapolated here for 3m by adding inverse linear distance (1/d) proportionality factor of 20dB/decade, used per §15.31(f)(1)
- Frequencies above 1 GHz, the limit on peak radio frequency emissions is 20 dB above the maximum permitted average emission limit applicable to the equipment under test, as per §15.35(b)
- According with the CISPR 22 (third Edition) There are no limits in the frequency range of 6 - 40 GHz, so expand the frequency range beyond 6GHz using the same limits.

• **FCC Rules and Regulations 47 CFR Part 15, Subpart C, Secs. 15.205:**

- (1) Except as shown in paragraph (d) of this section, only spurious emissions are permitted in any of the frequency bands listed below:

(MHz)	(MHz)	(MHz)	(GHz)
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
¹ 0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	⁽²⁾
13.36-13.41			

¹ Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz

² Above 38.6

CANADA RSS-247 Issue 4 (July 2025):

2.4 RSS-Gen compliance

Equipment being certified under this standard shall also comply with the general requirements set out in Radio Standards Specification RSS-Gen, General Requirements for Compliance of Radio Apparatus. Where contradictions exist between this standard and RSS-Gen, this standard shall take precedence.

CANADA RSS-Gen Issue 5 (April 2018):

8.9 Transmitter emission limits:

Except where otherwise indicated in the applicable RSS, radiated emissions shall comply with the field strength limits shown in table 5 and table 6. Additionally, the level of any transmitter unwanted emission shall not exceed the level of the transmitter's fundamental emission.

General field strength limits at frequencies above 30 MHz

Frequency Range (MHz)	Field strength ($\mu\text{V/m}$)	Field strength (dB $\mu\text{V/m}$)	Measurement distance (m)
30 - 88	100	40	3
88 - 216	150	43.5	3
216 - 960	200	46	3
Above 960	500	54	3

General field strength limits at frequencies below 30 MHz

Frequency Range (MHz)	Field strength ($\mu\text{A/m}$)	Field strength (dB $\mu\text{A/m}$)	Measurement distance (m)
0.009-0.490 ⁽¹⁾	6.37/F(kHz)	-	300
0.490-1.705	63.7/F(kHz)	-	30
1.705 - 30.0	0.08	-	30

- The emission limits for the ranges 9-90 kHz and 110-490 kHz are based on measurements employing a linear average detector.

RSS-Gen Issue 5, Secs 8.10:

Restricted frequency bands, identified in table 7, are designated primarily for safety-of-life services (distress calling and certain aeronautical activities), certain satellite downlinks, radio astronomy and some government uses.

- c) Unwanted emissions that do not fall within the restricted frequency bands listed in table 7 shall comply either with the limits specified in the applicable RSS or with those specified in table 5 and table 6.

Table 7 – Restricted frequency bands

(MHz)	(MHz)	(MHz)	(GHz)
0.090-0.110	16.42-16.423	1435-1626.5	13.25-13.4
0.495-0.505	16.69475-16.69525	1645.5-1646.5	14.47-14.5
2.1735-2.1905	16.80425-16.80475	1660-1710	15.35-16.2
3.020 - 3.026	25.5-25.67	1718.8-1722.2	17.7-21.4
4.125-4.128	37.5-38.25	2200-2300	22.01-23.12
4.17725-4.17775	73-74.6	2310-2390	23.6-24.0
4.20725-4.20775	74.8-75.2	2483.5-2500	31.2-31.8
5.677 - 5.683	108-121.94	2655-2900	36.43-36.5
6.215-6.218	123-138	3260-3267	Above 38.6
6.26775-6.26825	149.9-150.05	3332-3339	
6.31175-6.31225	156.52475-156.52525	3345.8-3358	
8.291-8.294	156.7-156.9	3500-4400	
8.362-8.366	162.0125-167.17	4.5-5.15	
8.37625-8.38675	167.72-173.2	5.35-5.46	
8.41425-8.41475	240-285	7.25-7.75	
12.29-12.293	322-335.4	8.025-8.5	
12.51975-12.52025	399.9-410	9.0-9.2	
12.57675-12.57725	608-614	9.3-9.5	
13.36-13.41	960-1427	10.6-12.7	

TEST SETUP:

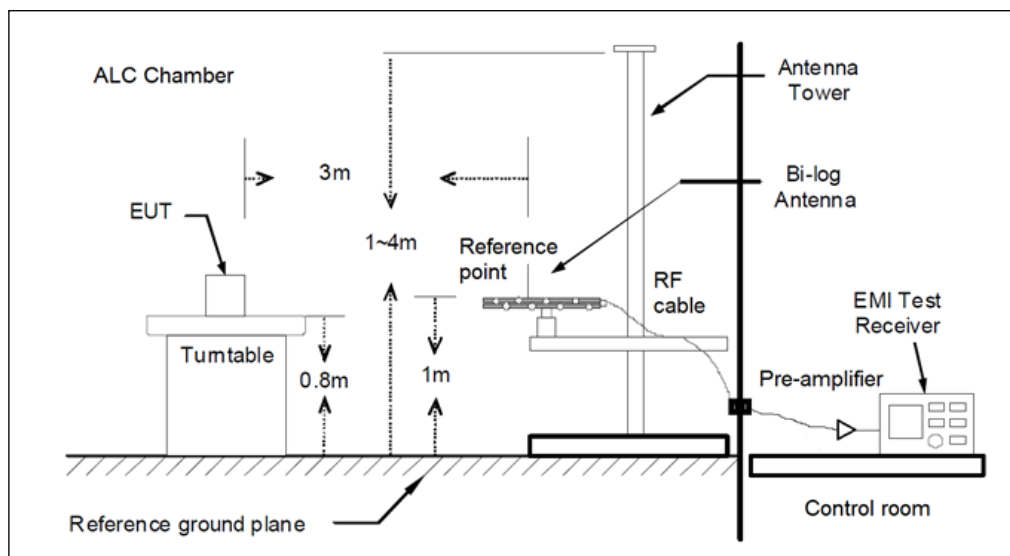
All radiated tests were performed in a semi-anechoic chamber. The measurement antenna is situated at 3 m for the frequency ranges 30-1000 MHz (Bilog antenna) and 1-18 GHz (Double ridge horn antennas) and at 1m for the frequency range 18-26 GHz (Double ridge horn antennas).

For radiated emissions in the range 18-26 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.

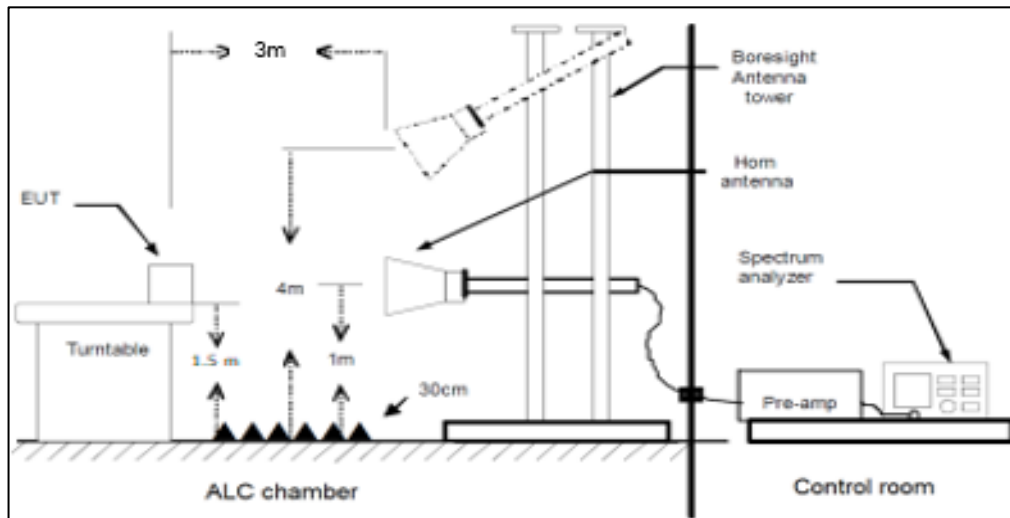
The equipment under test was set up on a non-conductive platform above the ground plane and the situation and orientation was varied to find the maximum radiated emission. It was also rotated 360° and the antenna height was varied from 1 to 4 meters to find the maximum radiated emission.

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

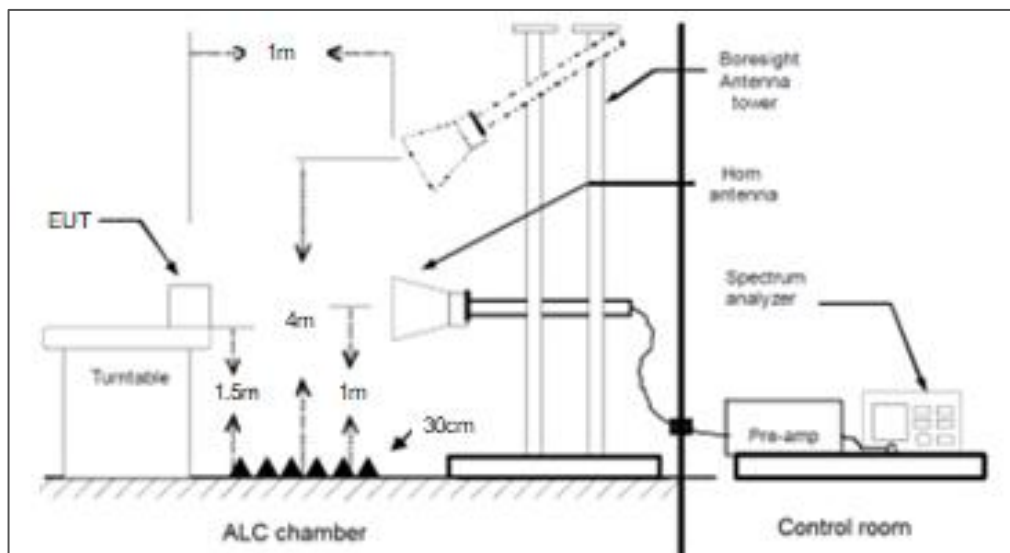
The field strength is calculated by adding correction factor to the measured level from the spectrum analyzer. This correction factor includes antenna factor, cable loss and pre-amplifiers gain.



Radiated measurements Setup $f < 1$ GHz



Radiated measurements setup $1 < f < 18$ GHz



Radiated measurements setup $f > 18$ GHz.

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.

Frequency range 30 MHz – 1000 MHz

The spurious emissions below 1 GHz do not depend on the operating channel and mode selected in the EUT.

The results in the following plots and tables show the maximum measured levels in the 30-1000 MHz range.

Modulation: BT (GFSK 1-DH5)

Results

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]	Frequency Hopping Spread Spectrum systems (DSS)	2402.00000	1	37.566	15.50	H	QP	
					73.311	10.90	H	QP	
					171.329	14.40	H	QP	
					264.885	22.20	V	QP	
					404.226	23.00	V	QP	
					608.944	28.70	H	QP	
[1, 18]			2441.00000		1124.500	40.50	V	AVG	
					2402.000	87.60	H	AVG	
					12010.000	43.50	H	AVG	
					2480.00000	1125.000	40.00	H	AVG
						2441.000	87.40	H	AVG
						11968.500	44.00	V	AVG
[18, 26]			2402.00000			1600.000	41.10	H	AVG
					2480.000	88.00	V	AVG	
			2441.00000		4911.000	40.40	H	AVG	
					2480.00000	19948.000	39.90	H	AVG
			23003.500			40.40	H	AVG	
			19834.000			39.80	H	AVG	
23050.500	40.50	V	AVG						
					20159.500	39.70	H	AVG	
					23829.500	41.20	V	AVG	

Verdict

Pass

Attachments

Frequency Range GHz = [0.03, 1]

Operation Band MHz = [2400, 2483.5]

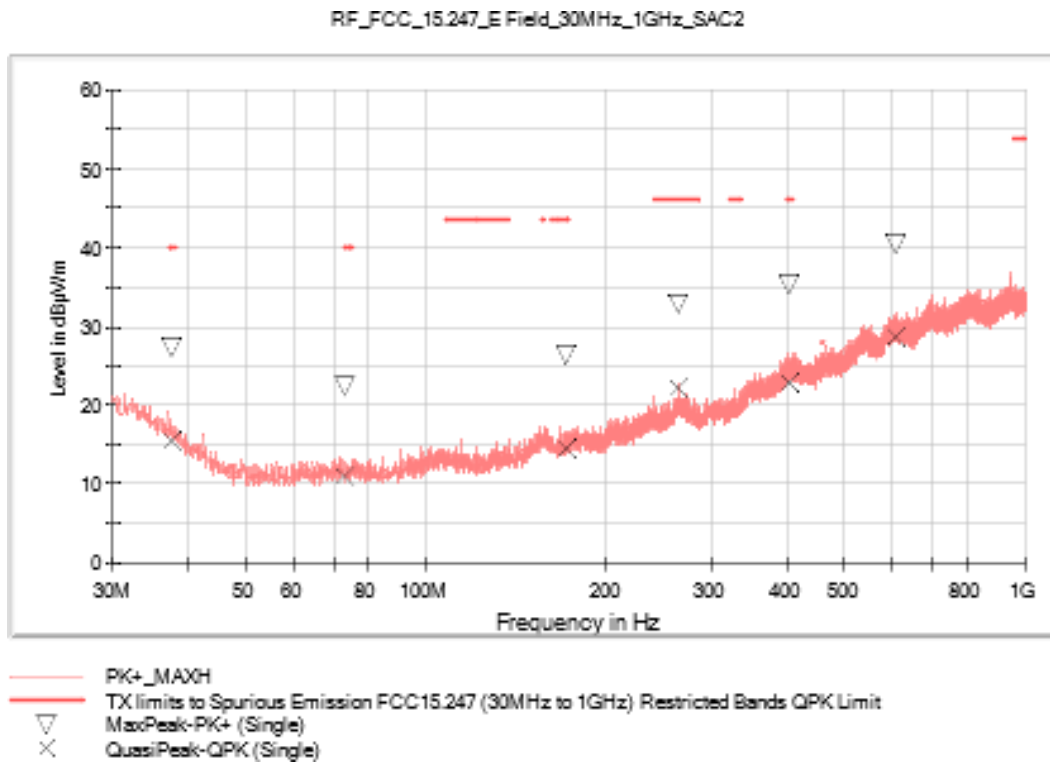
Equipment Type = Frequency Hopping Spread Spectrum systems (DSS)

Frequency MHz = 2402.00000

Active Port = 1

Modulation = BT (GFSK 1-DH5)

Images:



Frequency Range GHz = [1, 18]

Operation Band MHz = [2400,
2483.5]

Equipment Type = Frequency Hopping Spread Spectrum systems
(DSS)

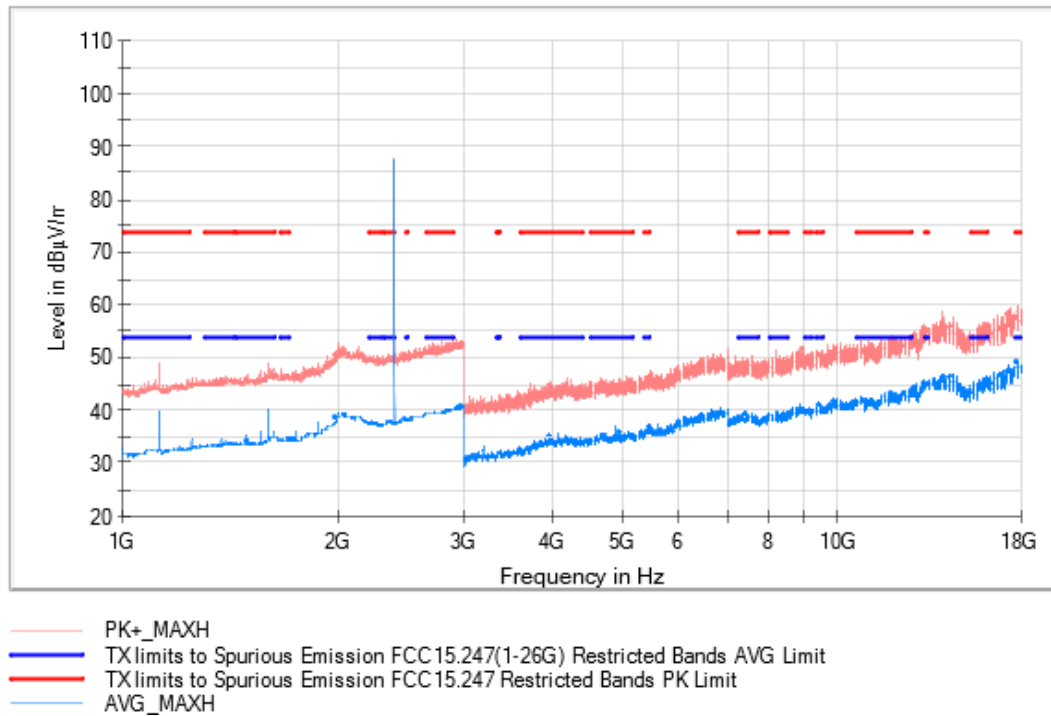
Frequency MHz = 2402.00000

Active Port = 1

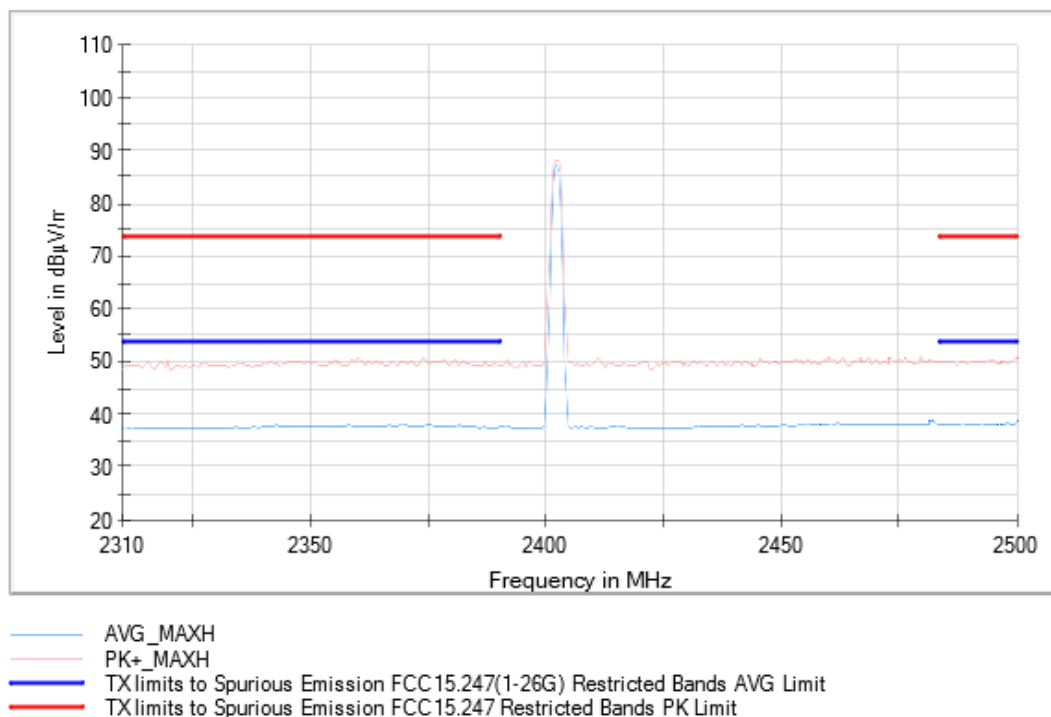
Modulation = BT (GFSK 1-DH5)

Images:

RF_FCC_15.247_E Field_1GHz_18GHz_HPF



Copy of RF_FCC_15.247_E Field_1GHz_18GHz_HPF



Frequency Range GHz = [1, 18]

Operation Band MHz = [2400,
2483.5]

Equipment Type = Frequency Hopping Spread Spectrum systems
(DSS)

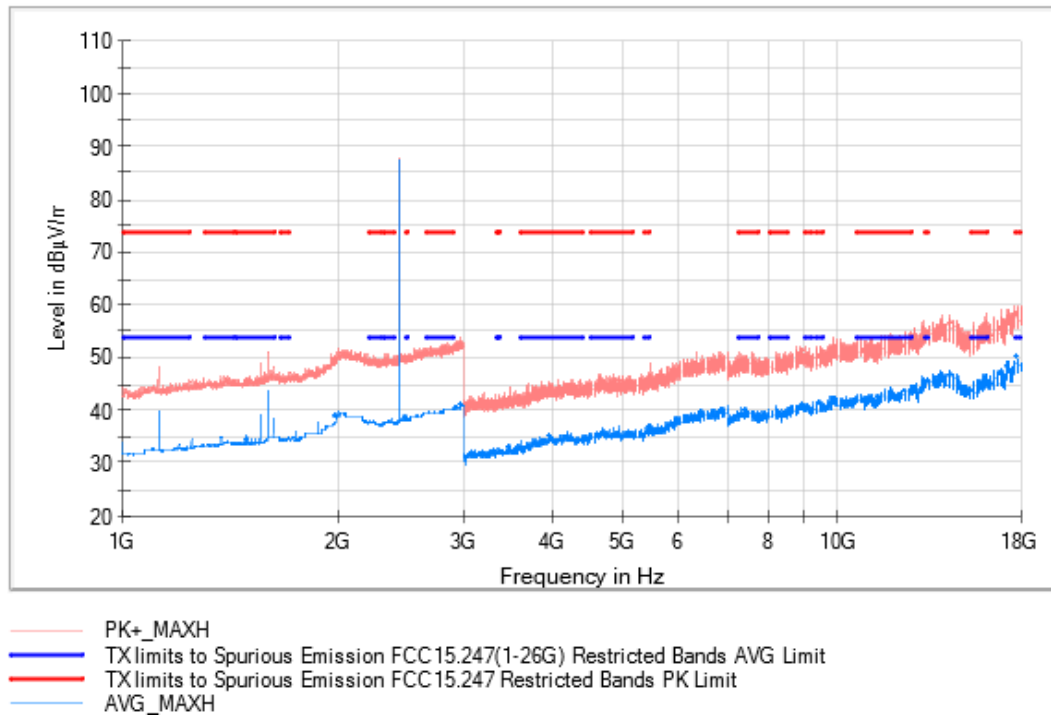
Frequency MHz = 2441.00000

Active Port = 1

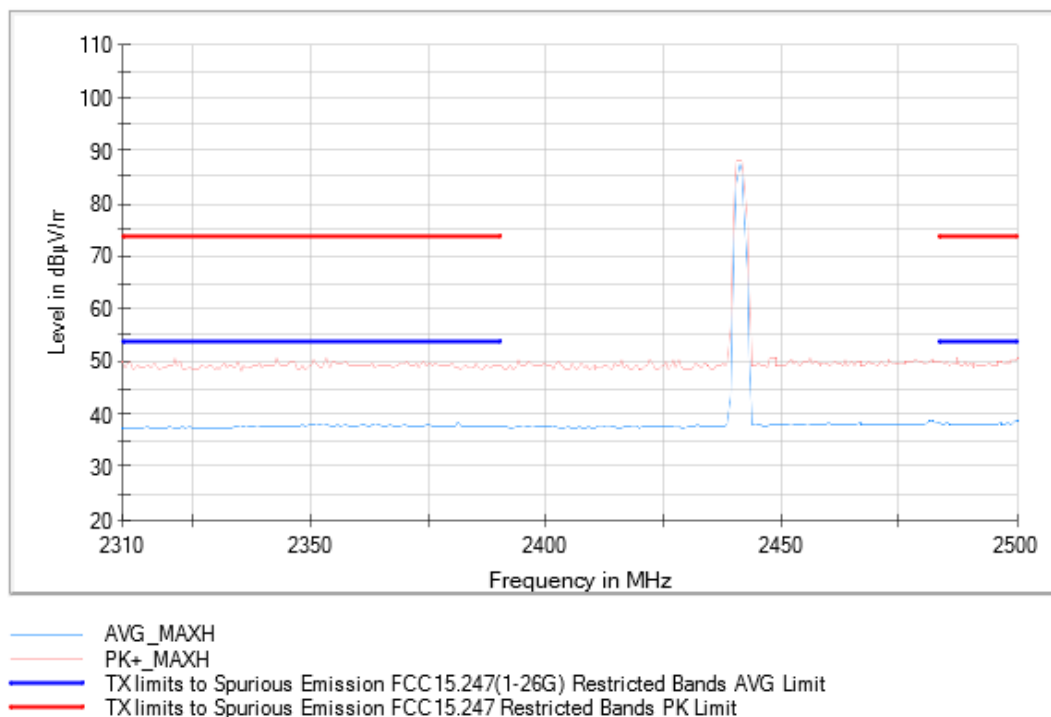
Modulation = BT (GFSK 1-DH5)

Images:

RF_FCC_15.247_E Field_1GHz_18GHz_HPF



Copy of RF_FCC_15.247_E Field_1GHz_18GHz_HPF



Frequency Range GHz = [1, 18]

Operation Band MHz = [2400,
2483.5]

Equipment Type = Frequency Hopping Spread Spectrum systems
(DSS)

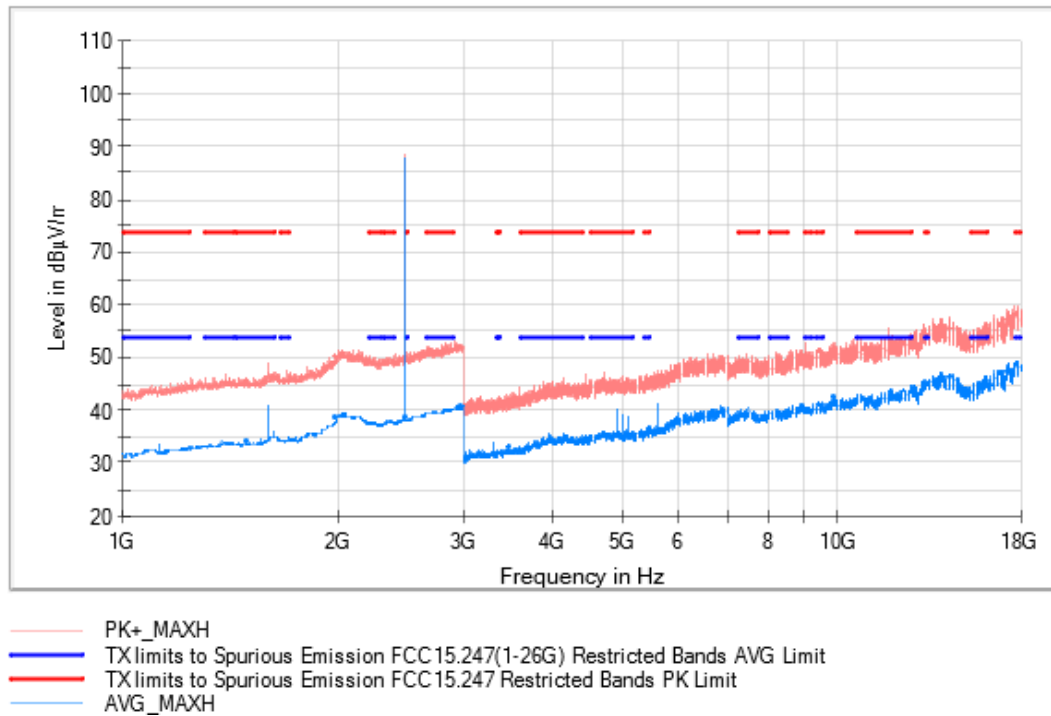
Frequency MHz = 2480.00000

Active Port = 1

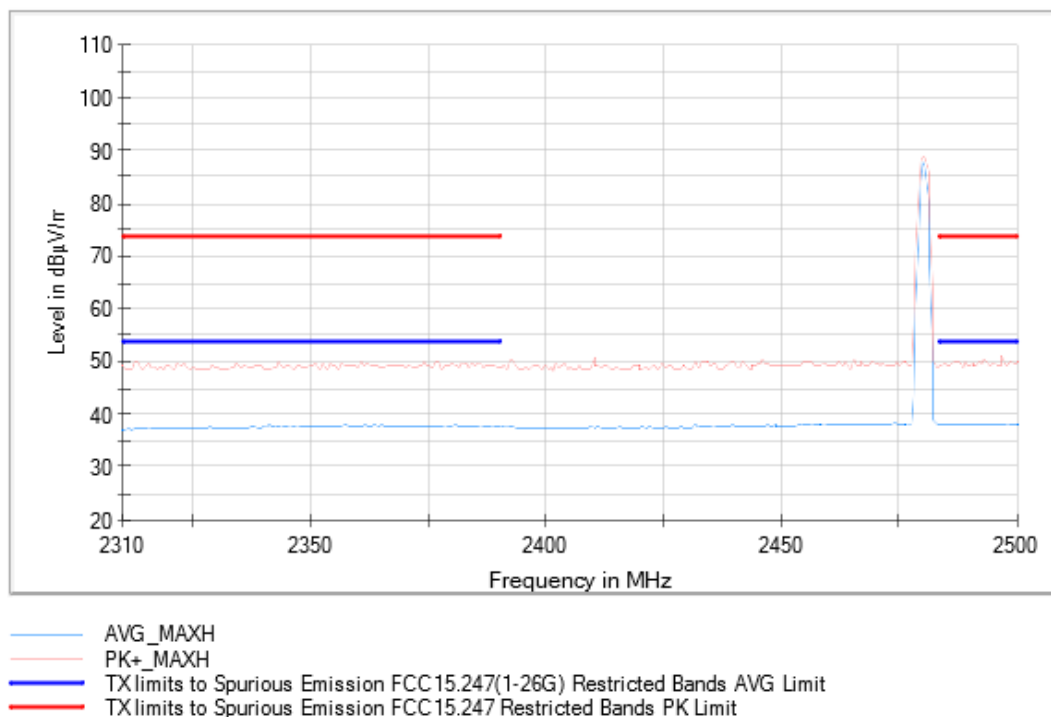
Modulation = BT (GFSK 1-DH5)

Images:

RF_FCC_15.247_E Field_1GHz_18GHz_HPF



Copy of RF_FCC_15.247_E Field_1GHz_18GHz_HPF



Frequency Range GHz = [18, 26]

Operation Band MHz = [2400,
2483.5]

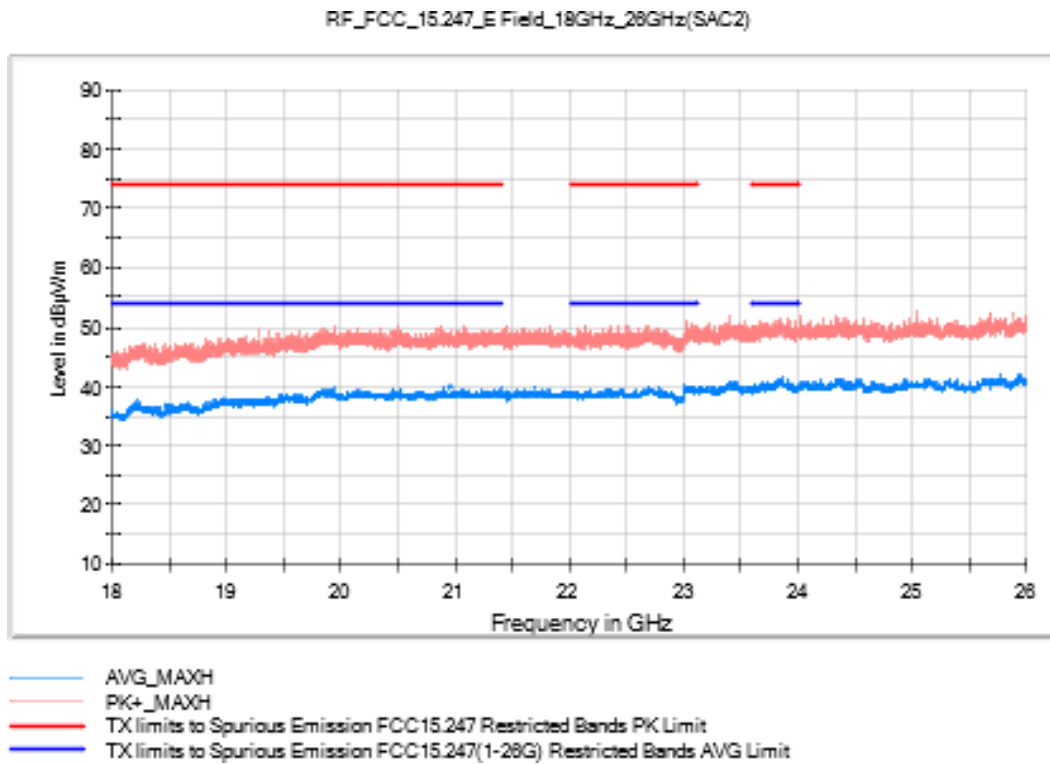
Equipment Type = Frequency Hopping Spread Spectrum systems
(DSS)

Frequency MHz = 2402.00000

Active Port = 1

Modulation = BT (GFSK 1-DH5)

Images:



Frequency Range GHz = [18, 26]

Operation Band MHz = [2400,
2483.5]

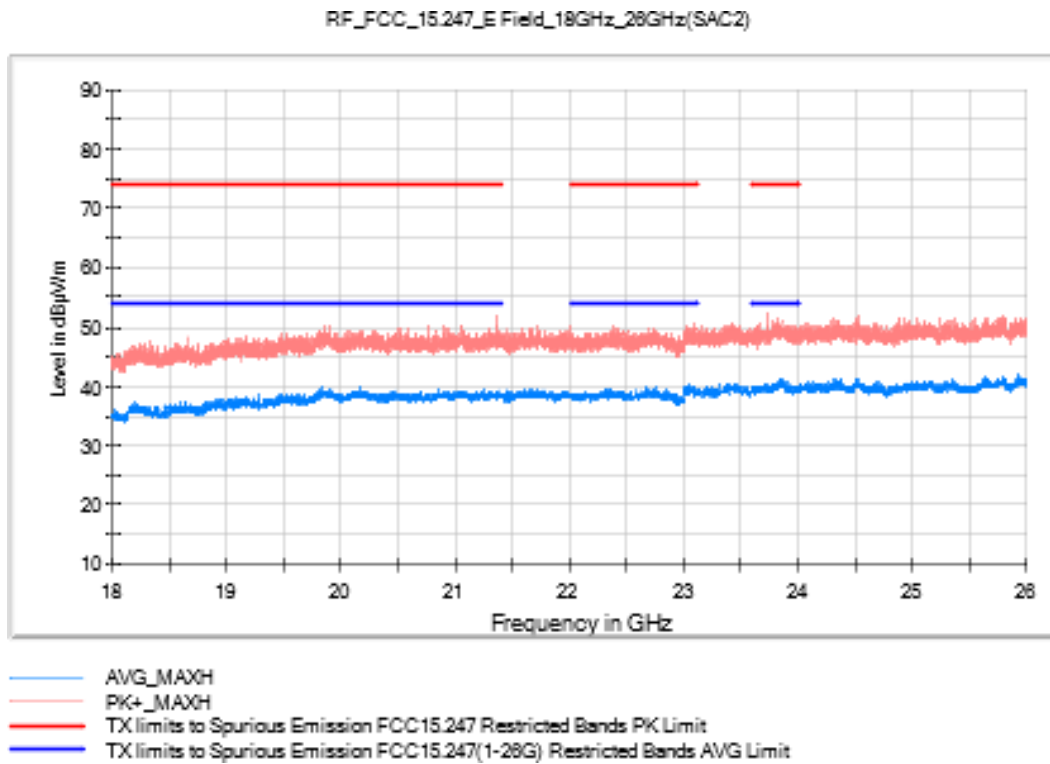
Equipment Type = Frequency Hopping Spread Spectrum systems
(DSS)

Frequency MHz = 2441.00000

Active Port = 1

Modulation = BT (GFSK 1-DH5)

Images:



Frequency Range GHz = [18, 26]

Operation Band MHz = [2400,
2483.5]

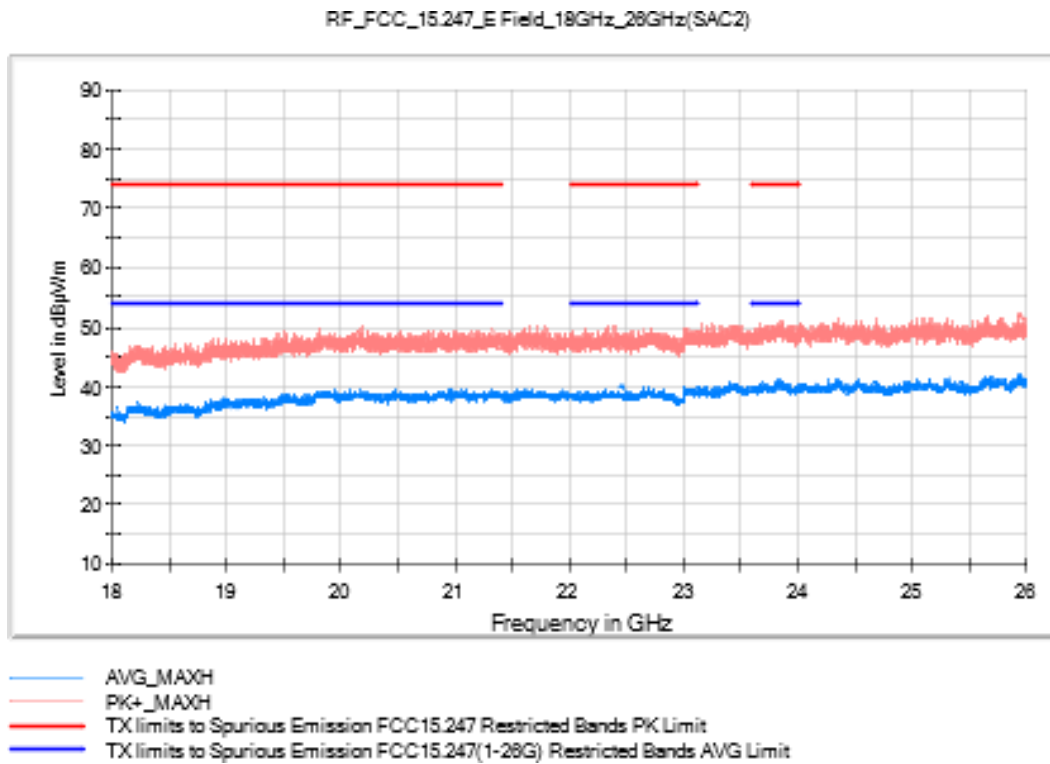
Equipment Type = Frequency Hopping Spread Spectrum systems
(DSS)

Frequency MHz = 2480.00000

Active Port = 1

Modulation = BT (GFSK 1-DH5)

Images:



Modulation: BT (Pi/4 DQPSK 2-DH5)
Results

Freq Rng (GHz)	Operation Band (MHz)	Equipment	Freq (MHz)	Port	Unwanted Freq (MHz)	Unwanted Lvl (dBµV/m)	Pol	Detector	
[1, 18]	[2400, 2483.5]	Frequency Hopping Spread Spectrum systems (DSS)	2402.00000	1	1600.000	37.70	V	AVG	
					2402.500	87.40	H	AVG	
					12326.000	43.70	V	AVG	
			2441.00000		1600.000	37.60	H	AVG	
					2441.000	84.90	H	AVG	
					5045.000	37.80	H	AVG	
			2480.00000		1600.000	37.60	H	AVG	
					2441.000	84.90	H	AVG	
					5045.000	37.80	H	AVG	
[18, 26]	[2400, 2483.5]	Frequency Hopping Spread Spectrum systems (DSS)	2402.00000	1	19053.000	38.50	V	AVG	
					23834.000	41.30	V	AVG	
					19885.000	39.60	H	AVG	
			2441.00000		23863.000	40.90	H	AVG	
					2480.00000	19453.000	39.50	V	AVG
						23863.500	41.10	H	AVG

Verdict

Pass

Attachments

Frequency Range GHz = [1, 18]

Operation Band MHz = [2400, 2483.5]

Equipment Type = Frequency Hopping Spread Spectrum systems (DSS)

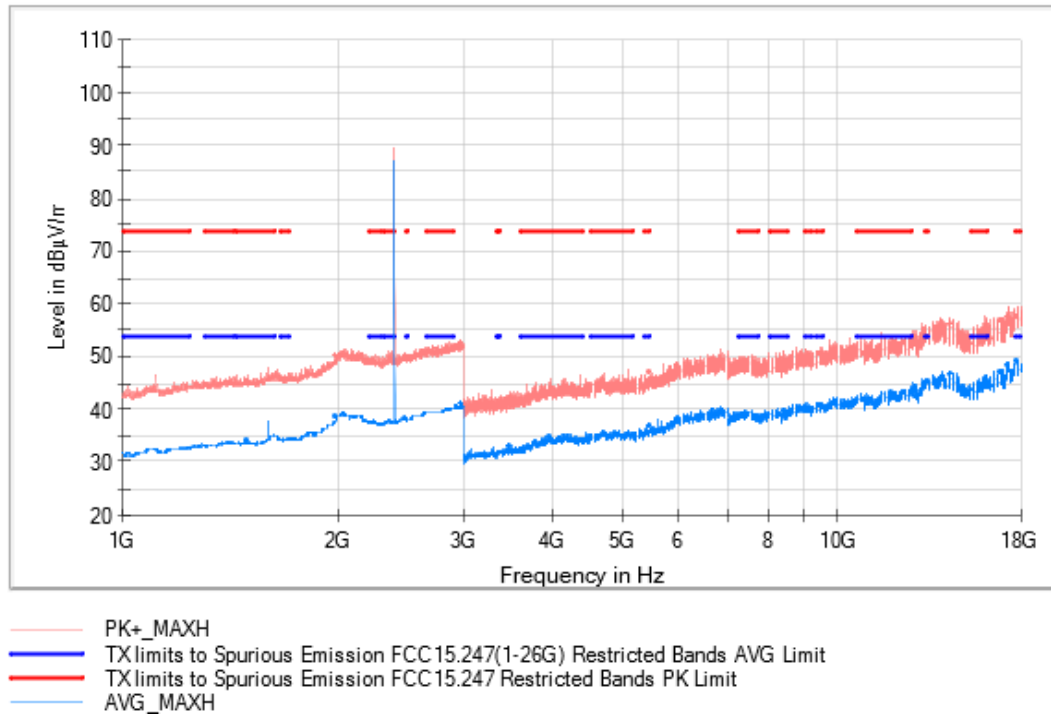
Frequency MHz = 2402.00000

Active Port = 1

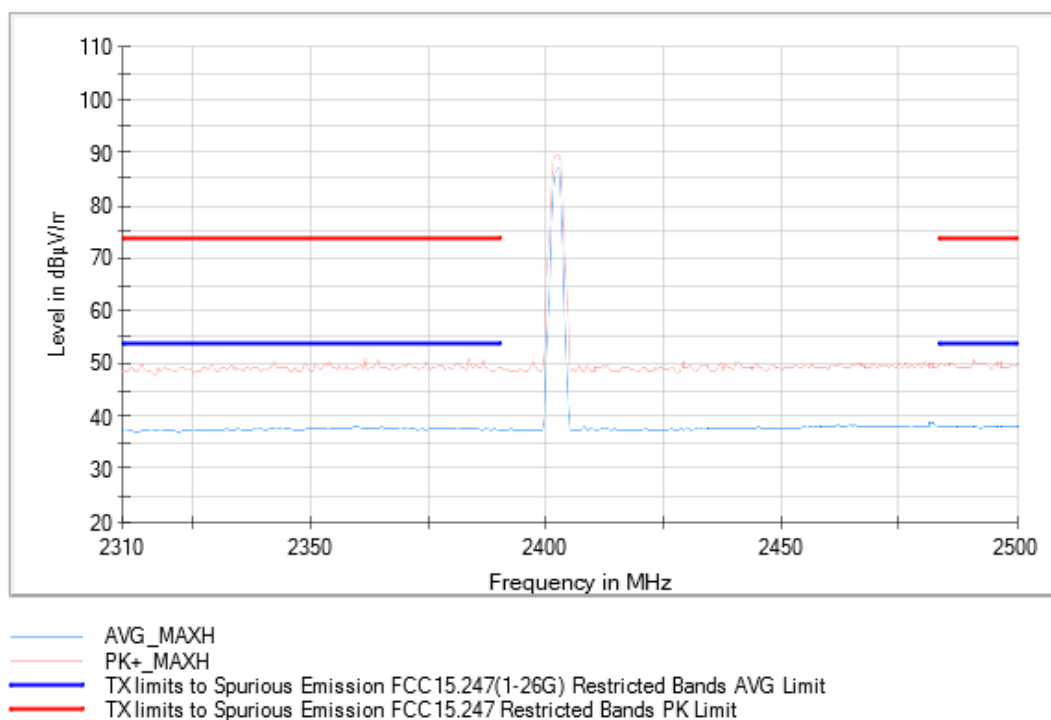
Modulation = BT (Pi/4 DQPSK 2-DH5)

Images:

RF_FCC_15.247_E Field_1GHz_18GHz_HPF



Copy of RF_FCC_15.247_E Field_1GHz_18GHz_HPF



Frequency Range GHz = [1, 18]

Operation Band MHz = [2400, 2483.5]

Equipment Type = Frequency Hopping Spread Spectrum systems (DSS)

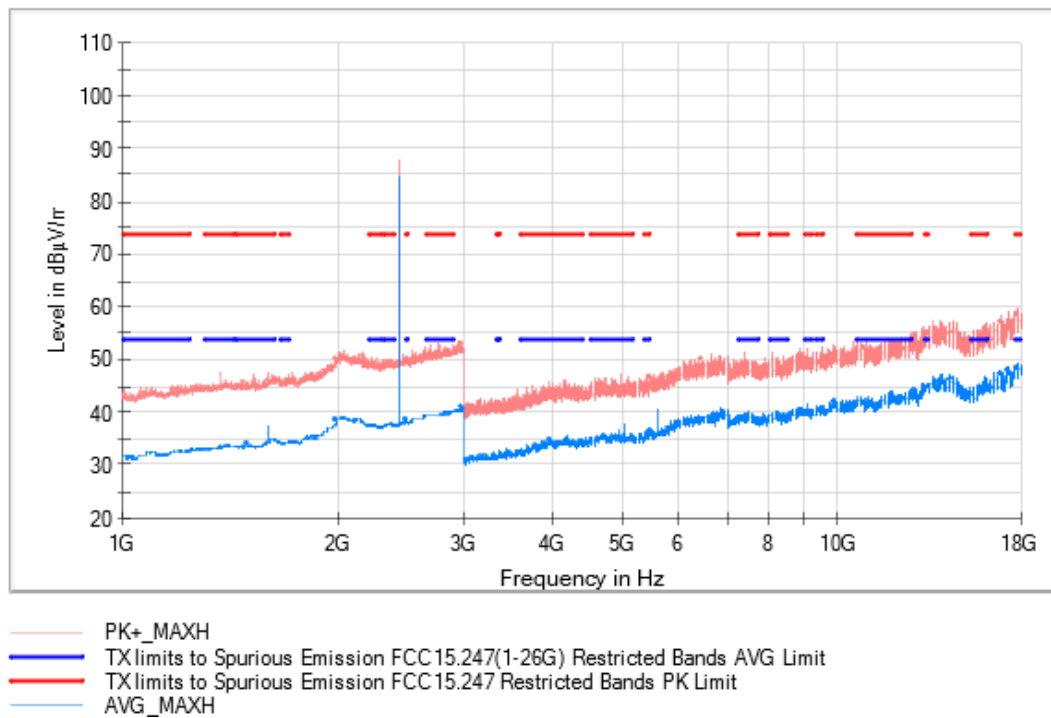
Frequency MHz = 2441.00000

Active Port = 1

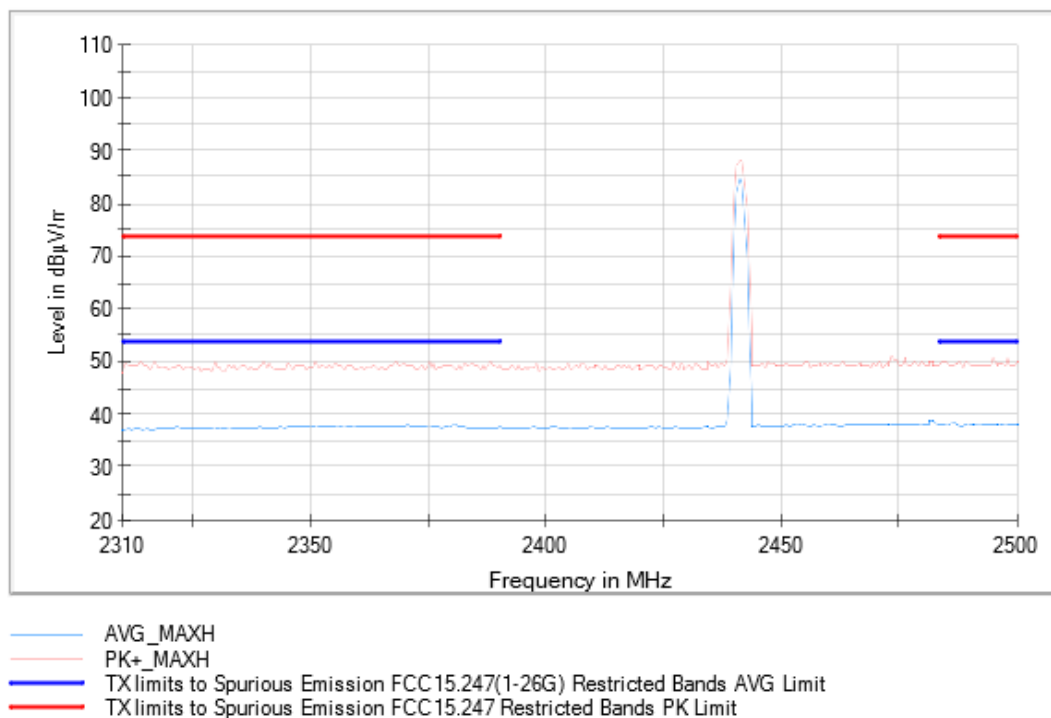
Modulation = BT (Pi/4 DQPSK 2-DH5)

Images:

RF_FCC_15.247_E Field_1GHz_18GHz_HPF



Copy of RF_FCC_15.247_E Field_1GHz_18GHz_HPF



Frequency Range GHz = [1, 18]

Operation Band MHz = [2400, 2483.5]

Equipment Type = Frequency Hopping Spread Spectrum systems (DSS)

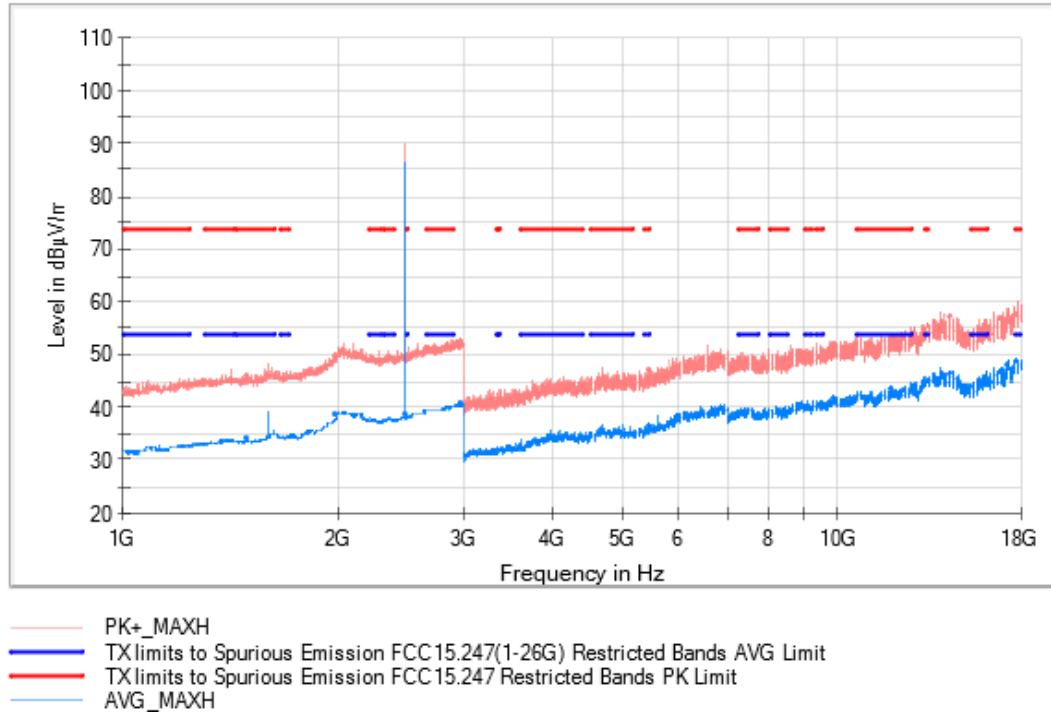
Frequency MHz = 2480.00000

Active Port = 1

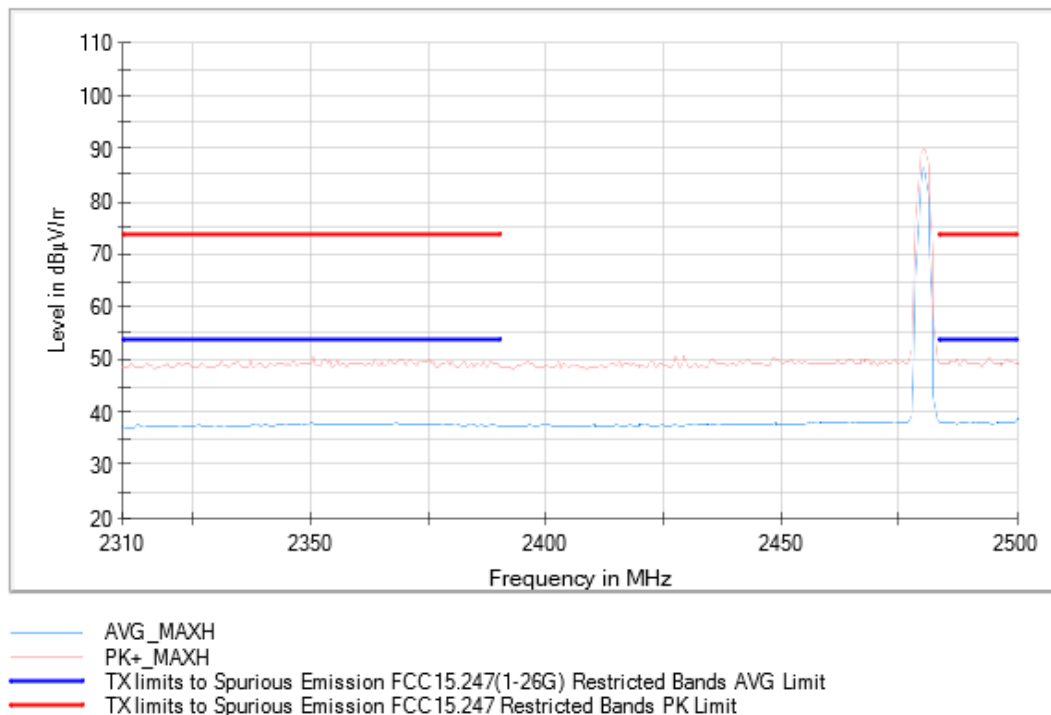
Modulation = BT (Pi/4 DQPSK 2-DH5)

Images:

RF_FCC_15.247_E Field_1GHz_18GHz_HPF



Copy of RF_FCC_15.247_E Field_1GHz_18GHz_HPF



Frequency Range GHz = [18, 26]

Operation Band MHz = [2400, 2483.5]

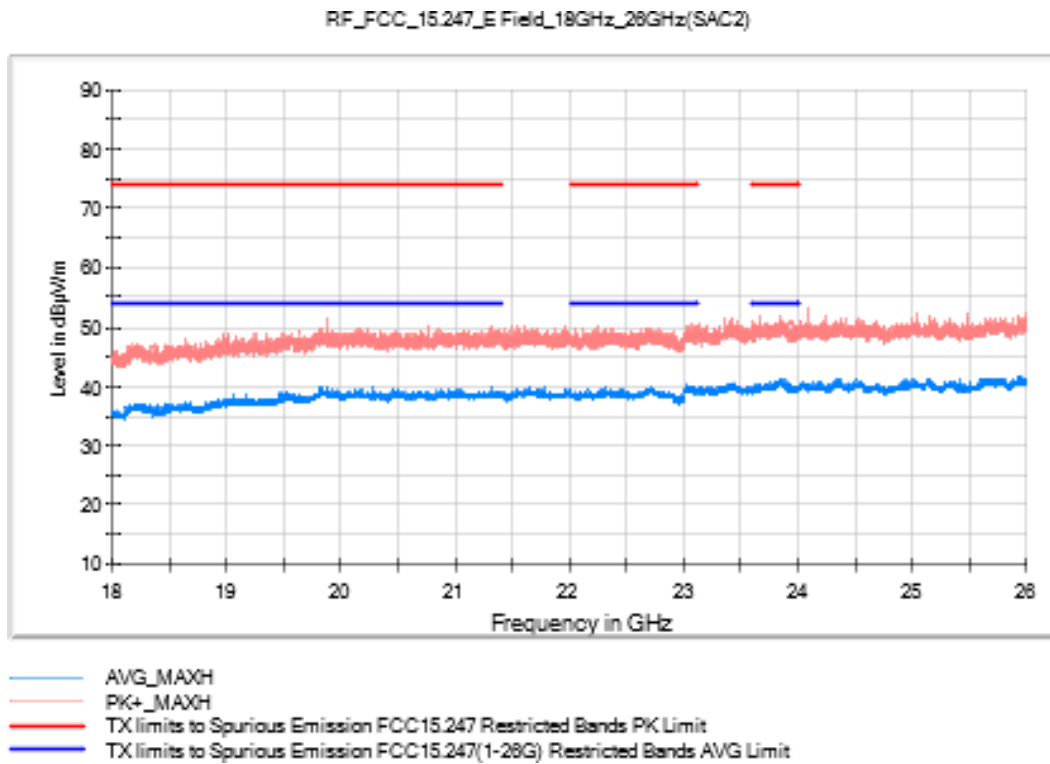
Equipment Type = Frequency Hopping Spread Spectrum systems (DSS)

Frequency MHz = 2402.00000

Active Port = 1

Modulation = BT (Pi/4 DQPSK 2-DH5)

Images:



Frequency Range GHz = [18, 26]

Operation Band MHz = [2400, 2483.5]

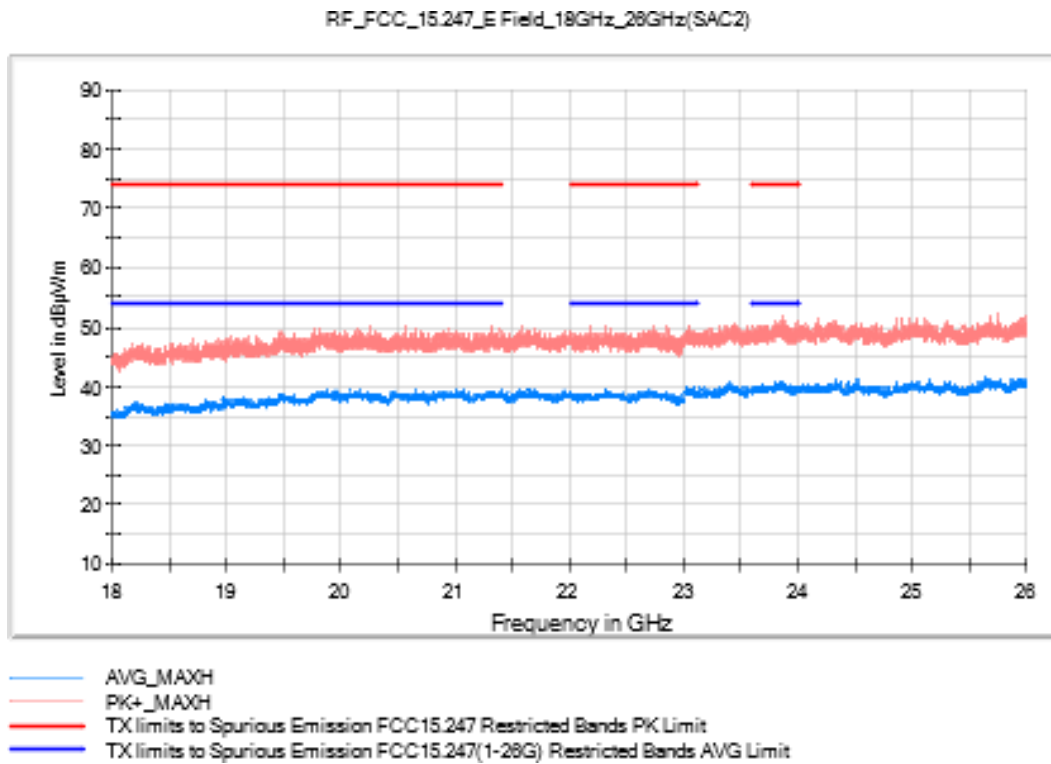
Equipment Type = Frequency Hopping Spread Spectrum systems (DSS)

Frequency MHz = 2441.00000

Active Port = 1

Modulation = BT (Pi/4 DQPSK 2-DH5)

Images:



Frequency Range GHz = [18, 26]

Operation Band MHz = [2400, 2483.5]

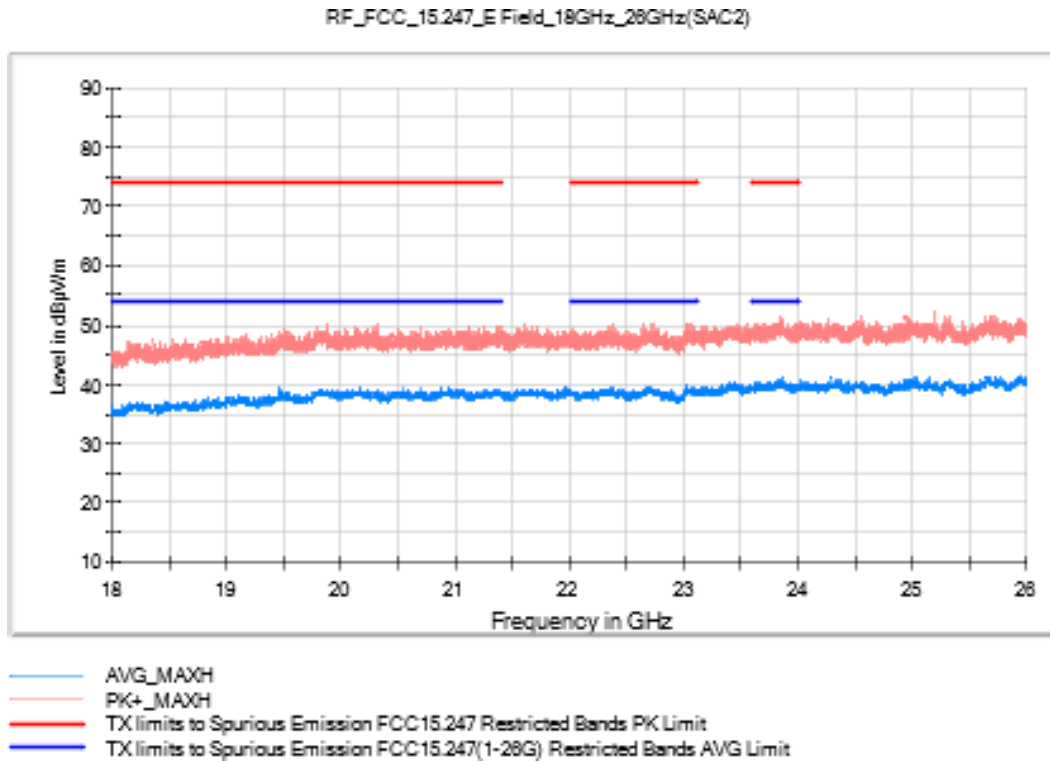
Equipment Type = Frequency Hopping Spread Spectrum systems (DSS)

Frequency MHz = 2480.00000

Active Port = 1

Modulation = BT (Pi/4 DQPSK 2-DH5)

Images:



Modulation: BT (8DPSK 3-DH5)
Results

Freq Rng (GHz)	Operation Band (MHz)	Equipment	Freq (MHz)	Port	Unwanted Freq (MHz)	Unwanted Lvl (dBµV/m)	Pol	Detector
[1, 18]	[2400, 2483.5]	Frequency Hopping Spread Spectrum systems (DSS)	2402.00000	1	1600.000	39.70	H	AVG
					2402.500	87.10	H	AVG
					4930.000	40.80	H	AVG
			2441.00000		1600.000	39.80	V	AVG
					2441.000	84.20	H	AVG
					5136.500	38.10	H	AVG
			2480.00000		1600.000	40.80	H	AVG
					2480.000	86.20	V	AVG
					11660.000	42.50	H	AVG
[18, 26]	2402.00000	19828.000	39.50	V	AVG			
		23864.500	41.40	H	AVG			
		19817.500	39.60	H	AVG			
		23823.500	41.10	V	AVG			
		20157.000	39.50	H	AVG			
		22683.500	40.10	H	AVG			

Verdict

Pass

Attachments

Frequency Range GHz = [1, 18]

Operation Band MHz = [2400, 2483.5]

Equipment Type = Frequency Hopping Spread Spectrum systems (DSS)

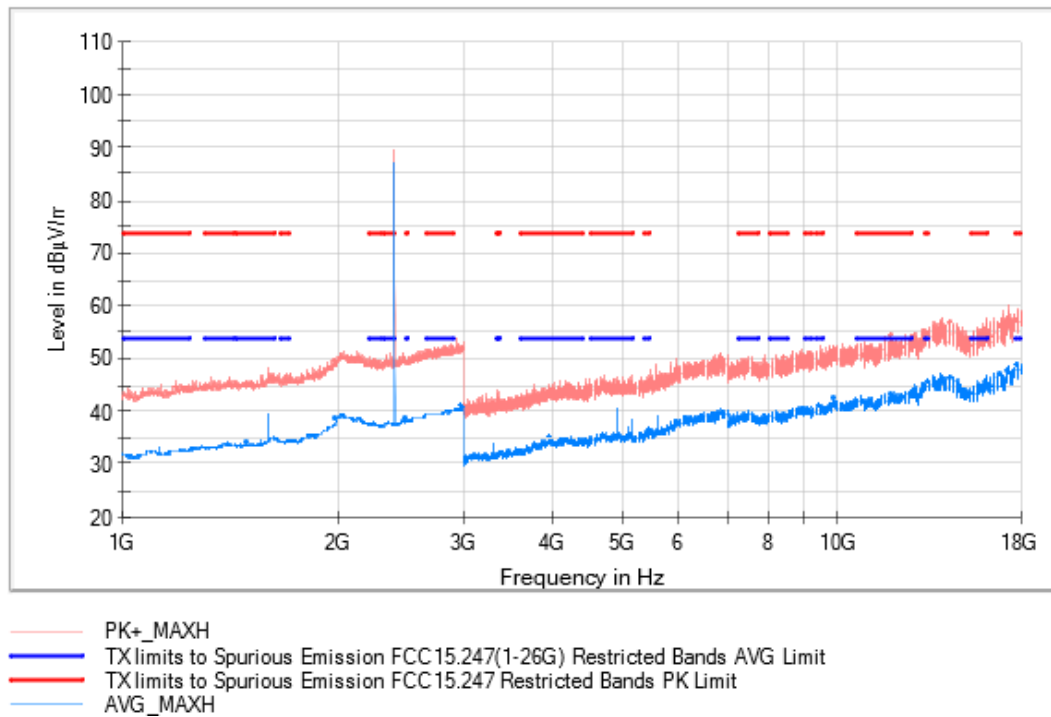
Frequency MHz = 2402.00000

Active Port = 1

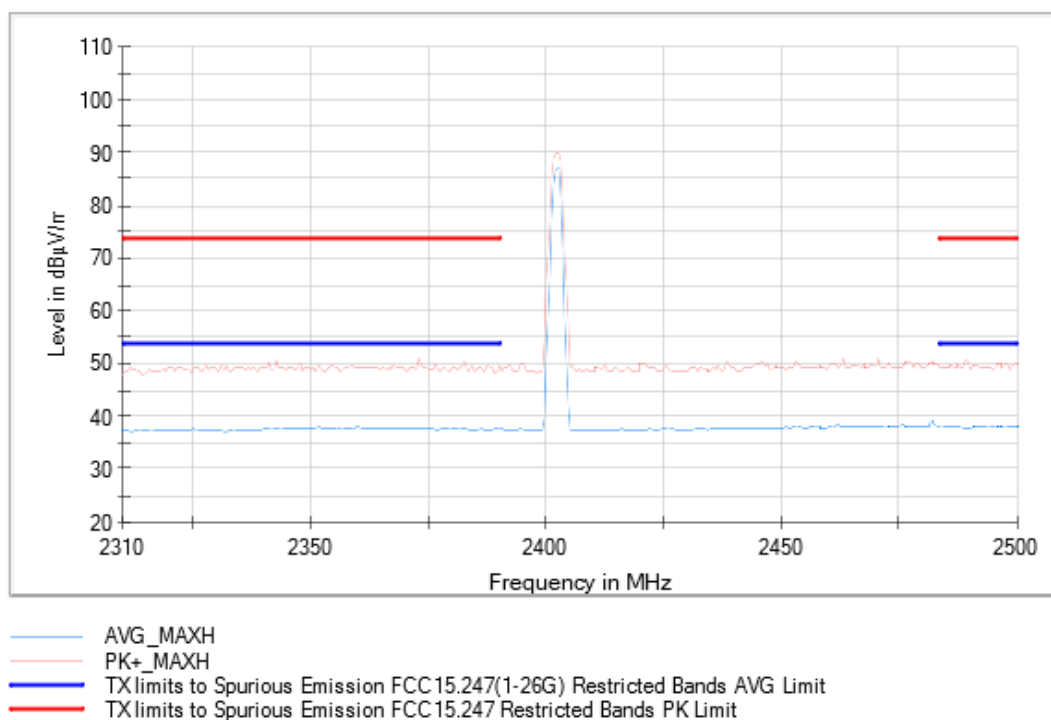
Modulation = BT (8DPSK 3-DH5)

Images:

RF_FCC_15.247_E Field_1GHz_18GHz_HPF



Copy of RF_FCC_15.247_E Field_1GHz_18GHz_HPF



Frequency Range GHz = [1, 18]

Operation Band MHz = [2400,
2483.5]

Equipment Type = Frequency Hopping Spread Spectrum systems
(DSS)

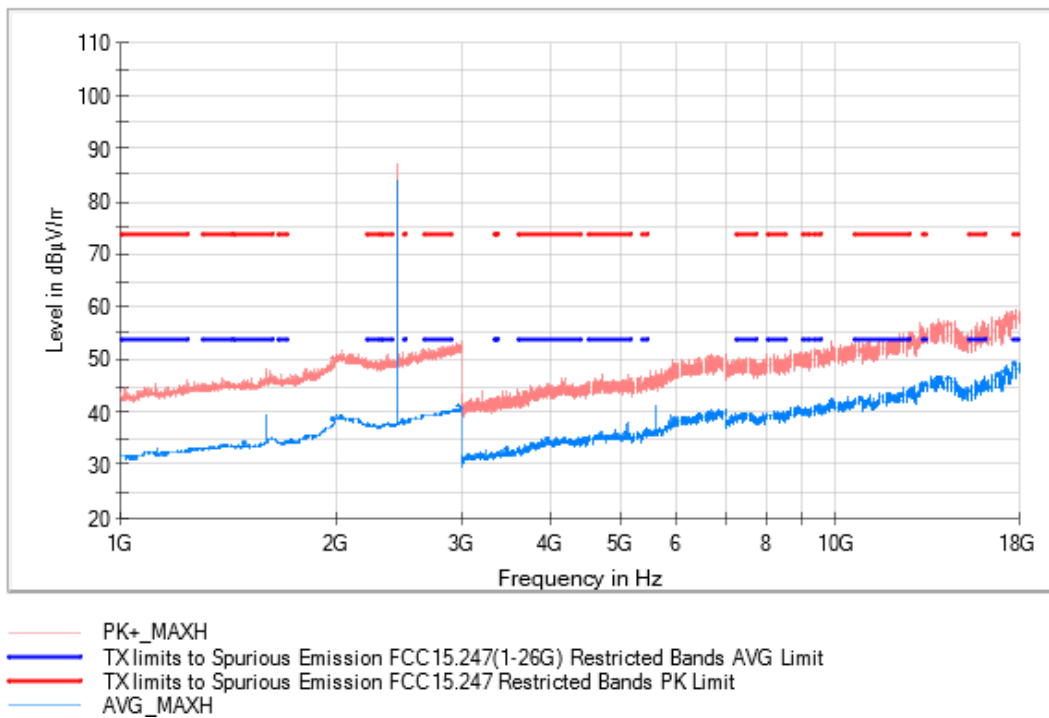
Frequency MHz = 2441.00000

Active Port = 1

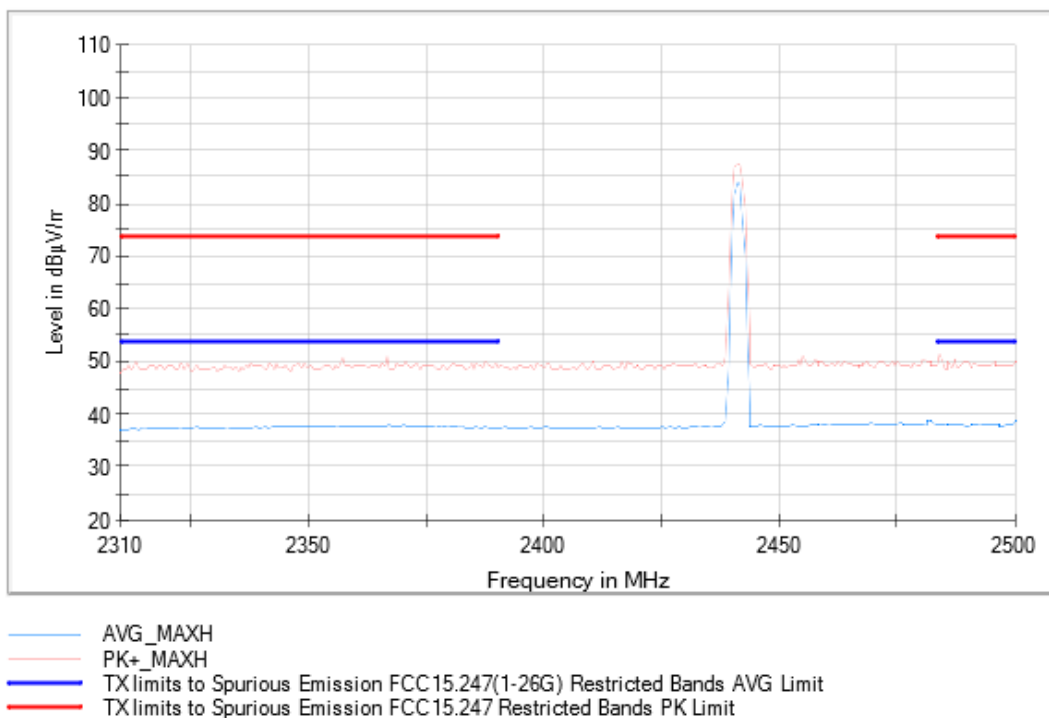
Modulation = BT (8DPSK 3-DH5)

Images:

RF_FCC_15.247_E Field_1GHz_18GHz_HPF



Copy of RF_FCC_15.247_E Field_1GHz_18GHz_HPF



Frequency Range GHz = [1, 18]

Operation Band MHz = [2400,
2483.5]

Equipment Type = Frequency Hopping Spread Spectrum systems
(DSS)

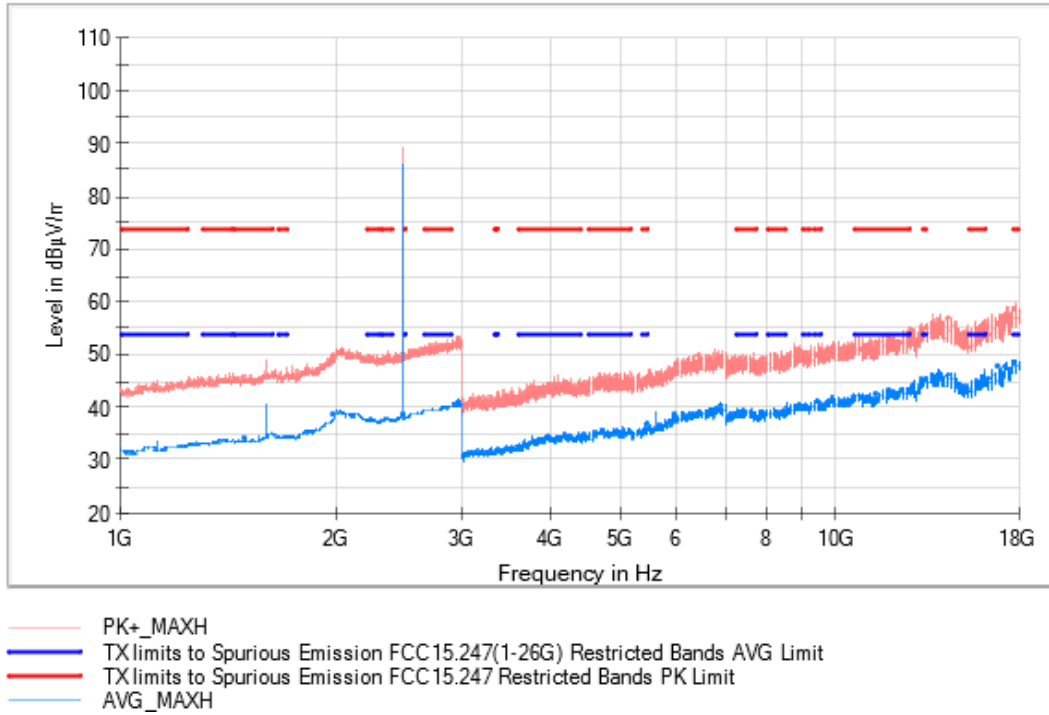
Frequency MHz = 2480.00000

Active Port = 1

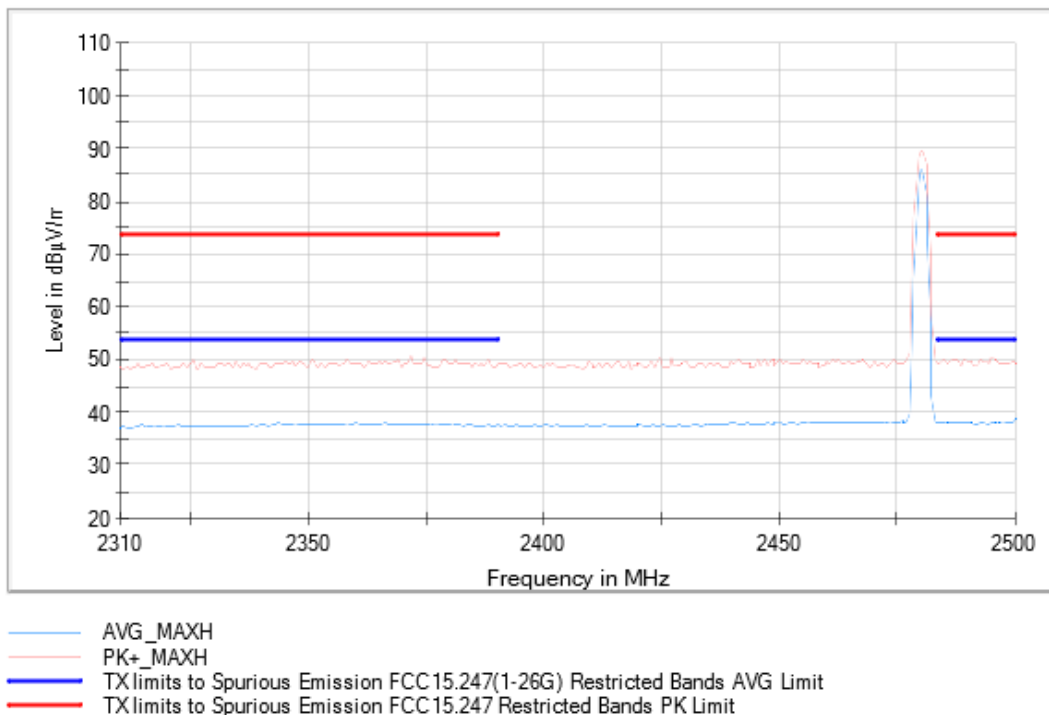
Modulation = BT (8DPSK 3-DH5)

Images:

RF_FCC_15.247_E Field_1GHz_18GHz_HPF



Copy of RF_FCC_15.247_E Field_1GHz_18GHz_HPF



Frequency Range GHz = [18, 26]

Operation Band MHz = [2400,
2483.5]

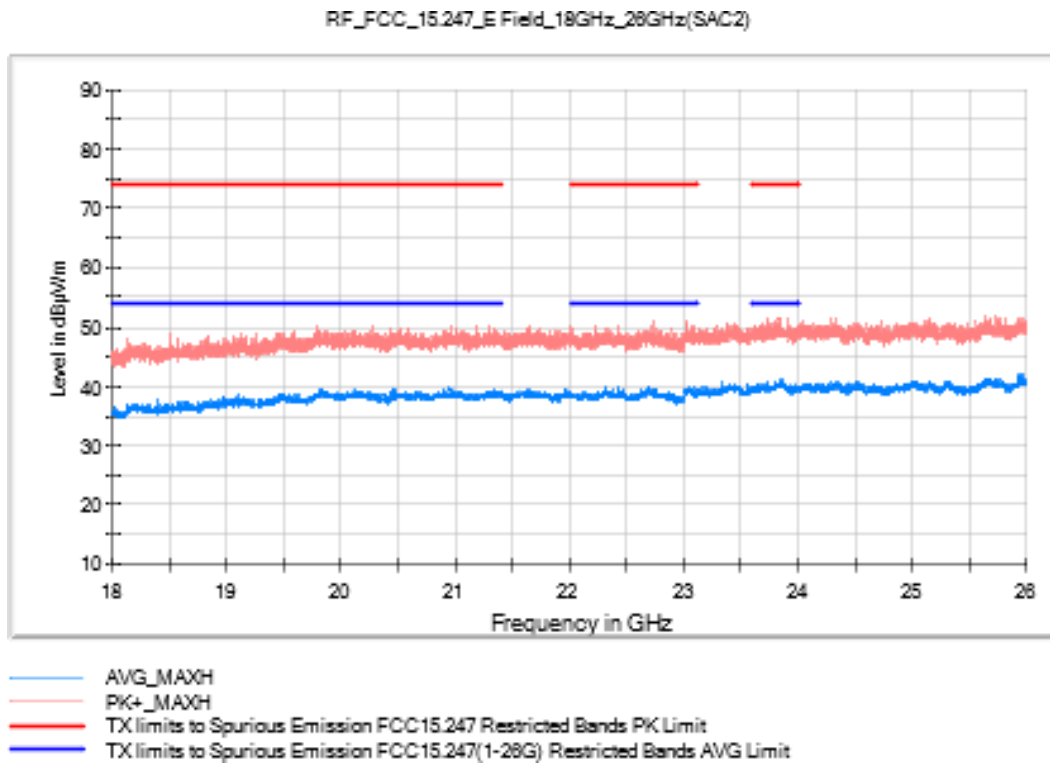
Equipment Type = Frequency Hopping Spread Spectrum systems
(DSS)

Frequency MHz = 2402.00000

Active Port = 1

Modulation = BT (8DPSK 3-DH5)

Images:



Frequency Range GHz = [18, 26]

Operation Band MHz = [2400,
2483.5]

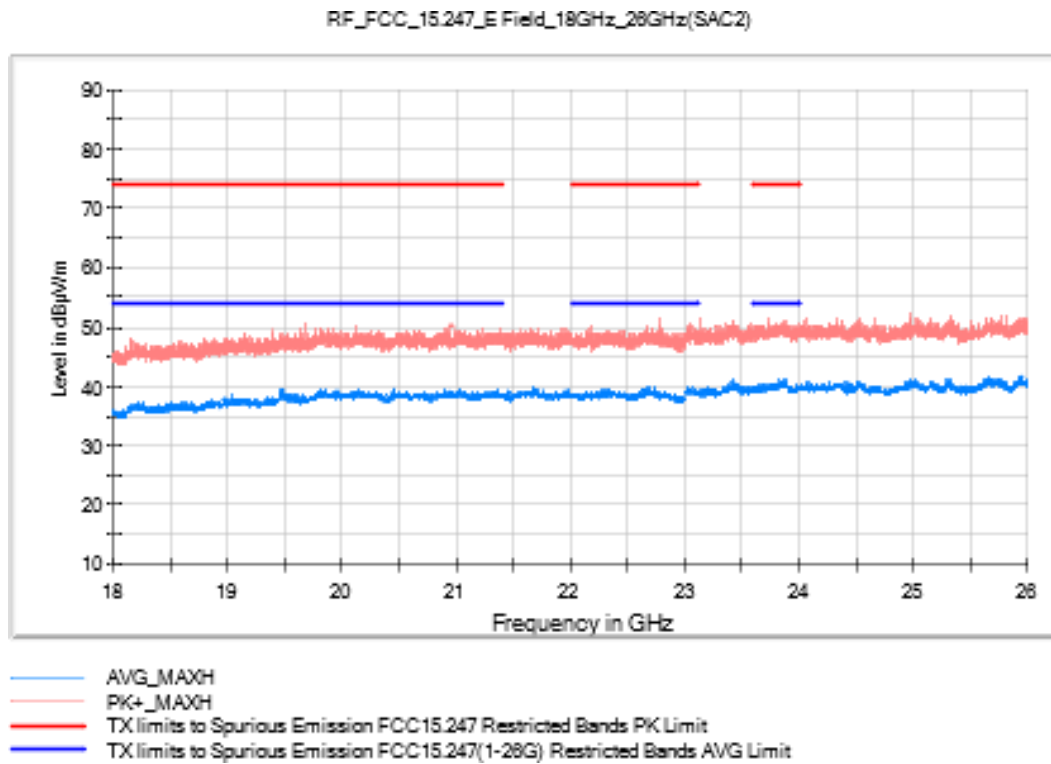
Equipment Type = Frequency Hopping Spread Spectrum systems
(DSS)

Frequency MHz = 2441.00000

Active Port = 1

Modulation = BT (8DPSK 3-DH5)

Images:



Frequency Range GHz = [18, 26]

Operation Band MHz = [2400,
2483.5]

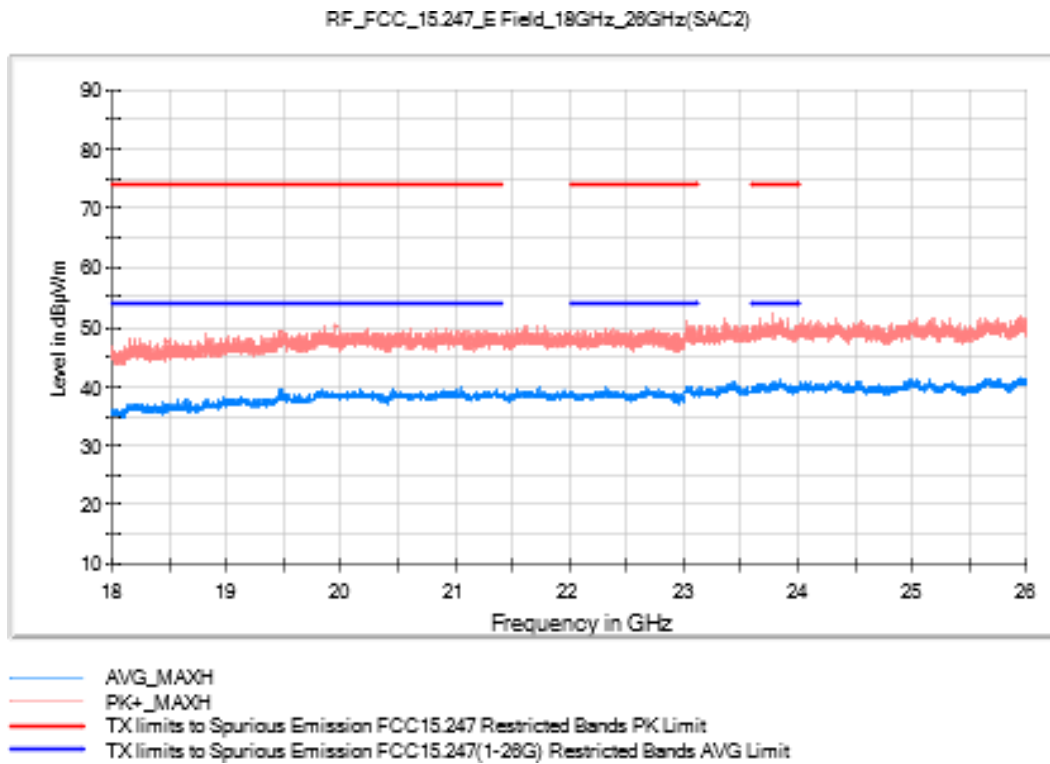
Equipment Type = Frequency Hopping Spread Spectrum systems
(DSS)

Frequency MHz = 2480.00000

Active Port = 1

Modulation = BT (8DPSK 3-DH5)

Images:



Frequency range 30 MHz – 1000 MHz

The spurious emissions below 1 GHz do not depend on the operating channel and mode selected in the EUT.

The results in the following plots and tables show the maximum measured levels in the 30-1000 MHz range.

Modulation: BTLE 5.0 (GFSK 1 Mbit/s)

Results

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	38.099	15.30	V	QP
					73.359	10.80	H	QP
					166.673	13.90	H	QP
					266.050	22.10	H	QP
					405.778	23.20	V	QP
					608.168	28.70	H	QP
					1600.000	40.10	V	AVG
[1, 18]			2402.500		87.00	H	AVG	
			11958.500		43.70	V	AVG	
			1600.000		41.50	H	AVG	
			2440.000		85.90	H	AVG	
			4795.500		38.40	V	AVG	
			1600.000		41.40	H	AVG	
			2480.000		86.50	V	AVG	
			4829.500		38.90	H	AVG	
[18, 26]			2402.00000		20876.500	39.70	H	AVG
					23863.500	41.40	V	AVG
			2440.00000		21327.500	40.20	V	AVG
					22710.000	40.50	H	AVG
			2480.00000		19481.000	39.20	H	AVG
					23824.000	41.30	V	AVG

Verdict

Pass

Attachments

Frequency Range GHz = [0.03, 1]

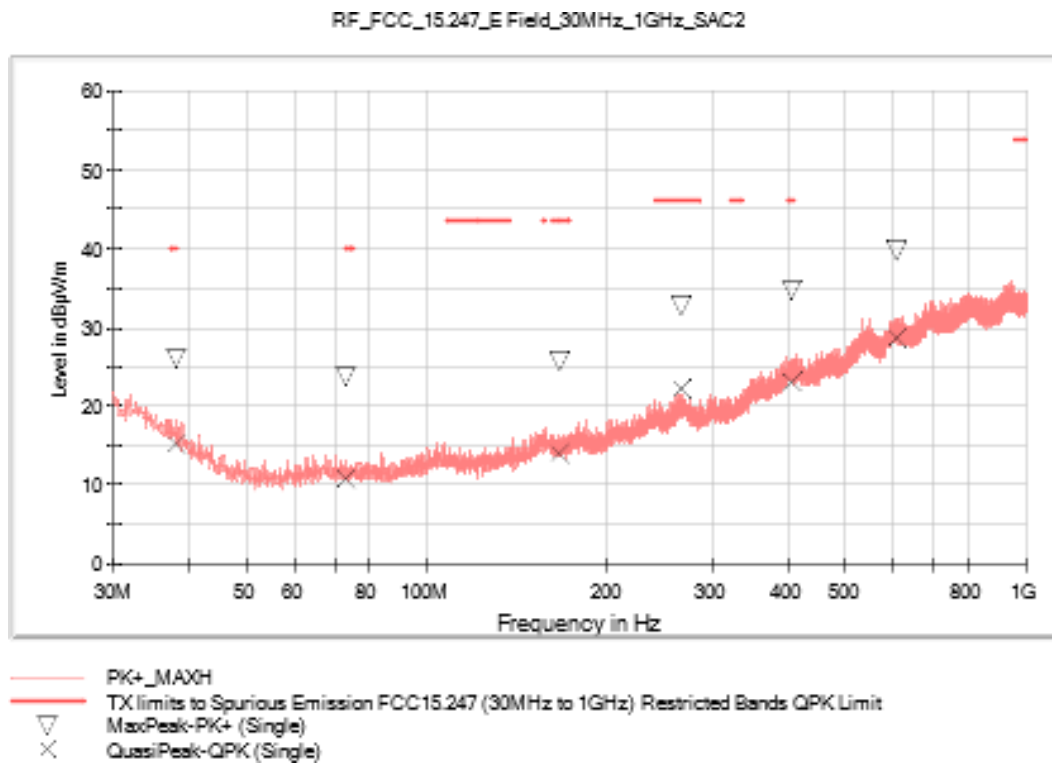
Operation Band MHz = [2400, 2483.5]

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

Active Port = 1

Modulation = BTLE 5.0 (GFSK 1 Mbit/s)

Images:



Frequency Range GHz = [1, 18]

Operation Band MHz = [2400, 2483.5]

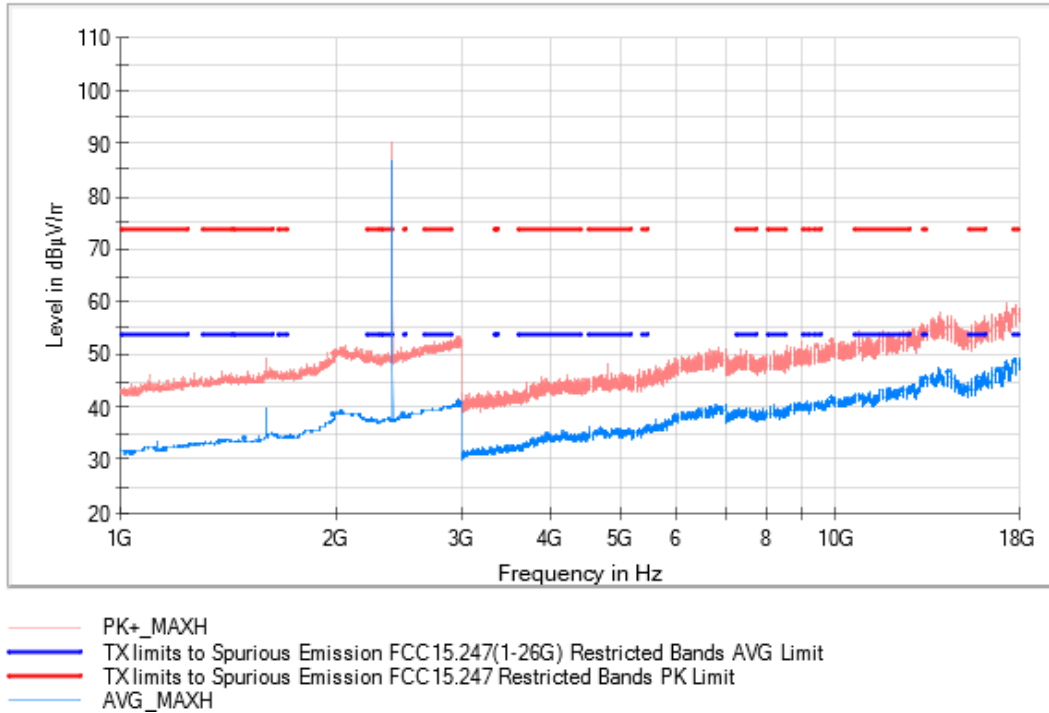
Equipment Type = Digital Transmission System (DTS) Frequency MHz = 2402.00000

Active Port = 1

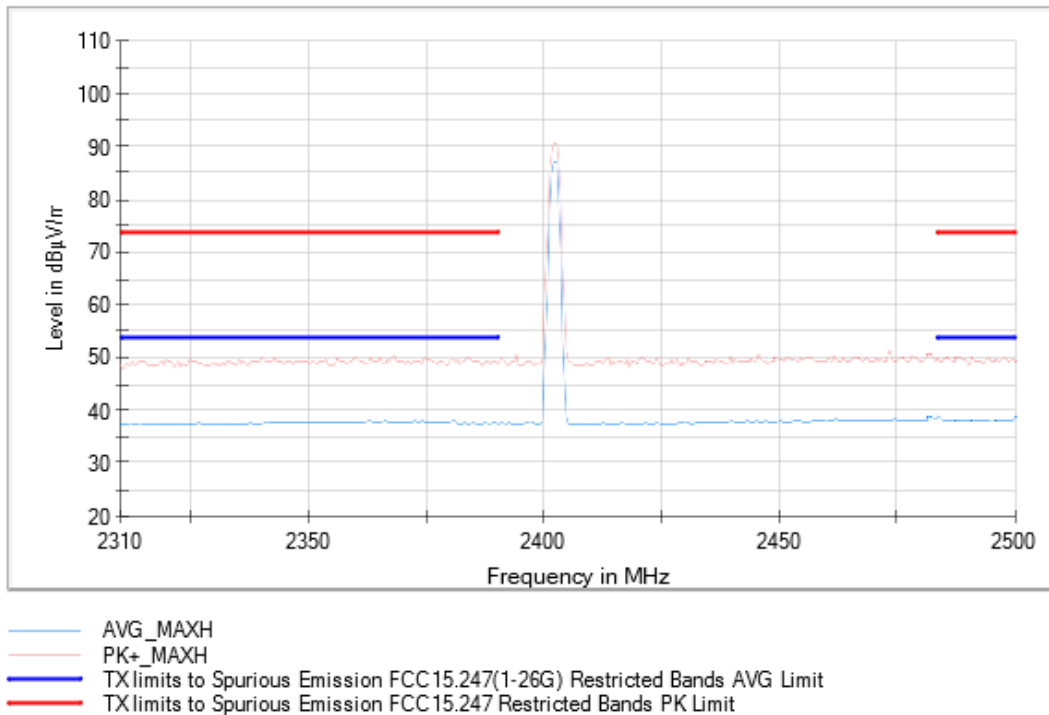
Modulation = BTLE 5.0 (GFSK 1 Mbit/s)

Images:

RF_FCC_15.247_E Field_1GHz_18GHz_HPF



Copy of RF_FCC_15.247_E Field_1GHz_18GHz_HPF



Frequency Range GHz = [1, 18]

Operation Band MHz = [2400, 2483.5]

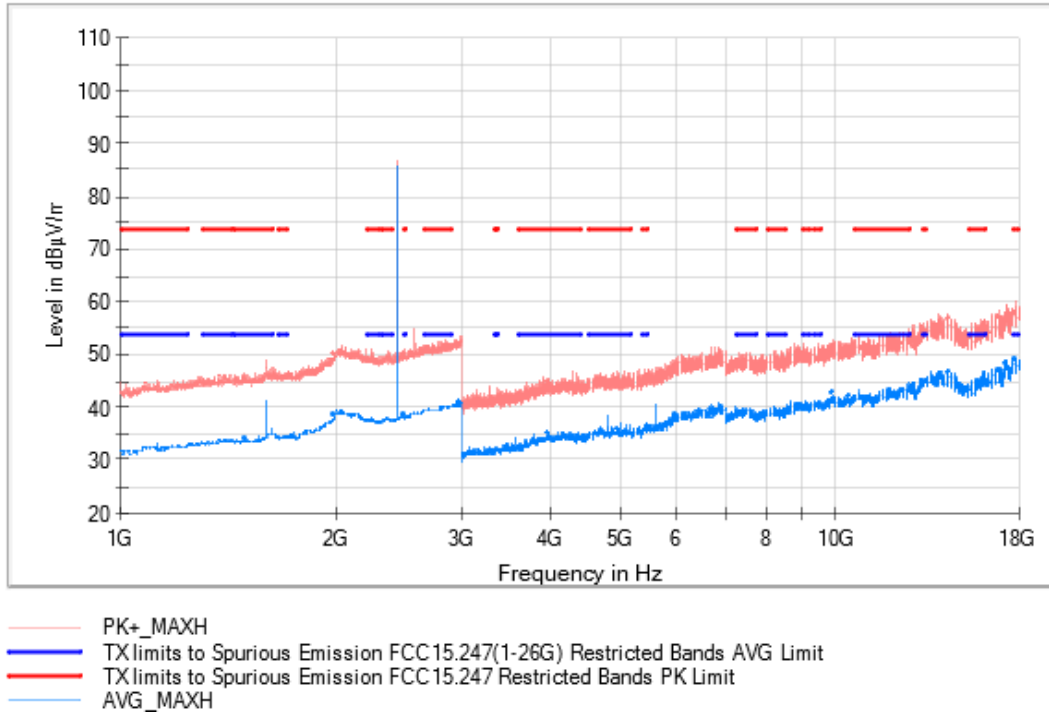
Equipment Type = Digital Transmission System (DTS) Frequency MHz = 2440.00000

Active Port = 1

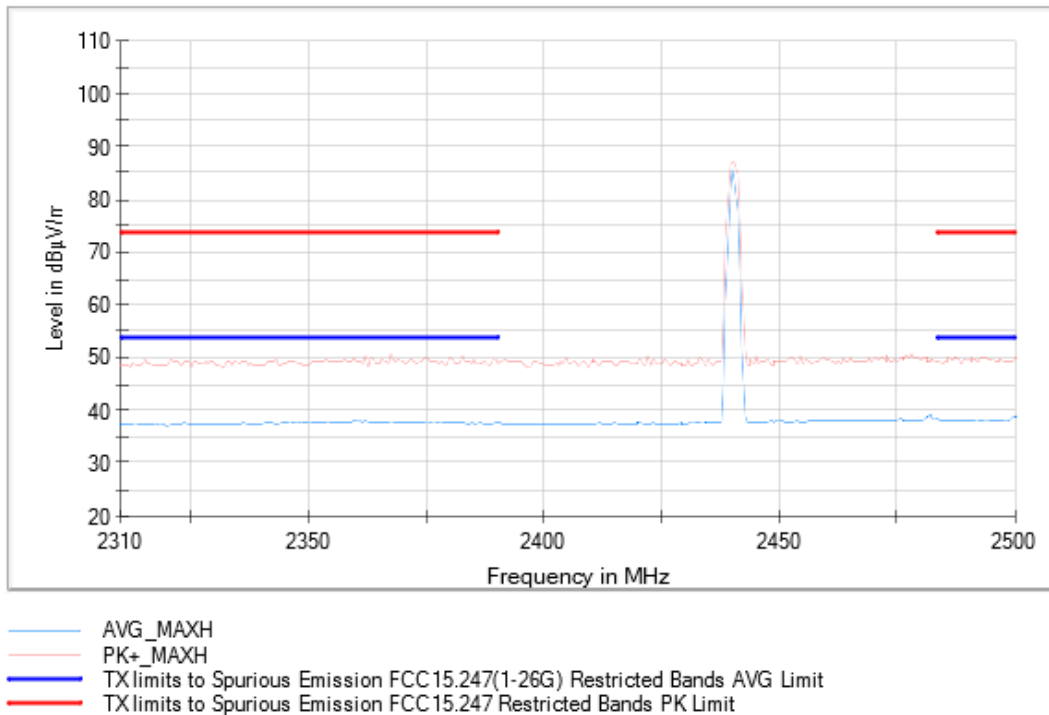
Modulation = BTLE 5.0 (GFSK 1 Mbit/s)

Images:

RF_FCC_15.247_E Field_1GHz_18GHz_HPF



Copy of RF_FCC_15.247_E Field_1GHz_18GHz_HPF



Frequency Range GHz = [1, 18]

Operation Band MHz = [2400, 2483.5]

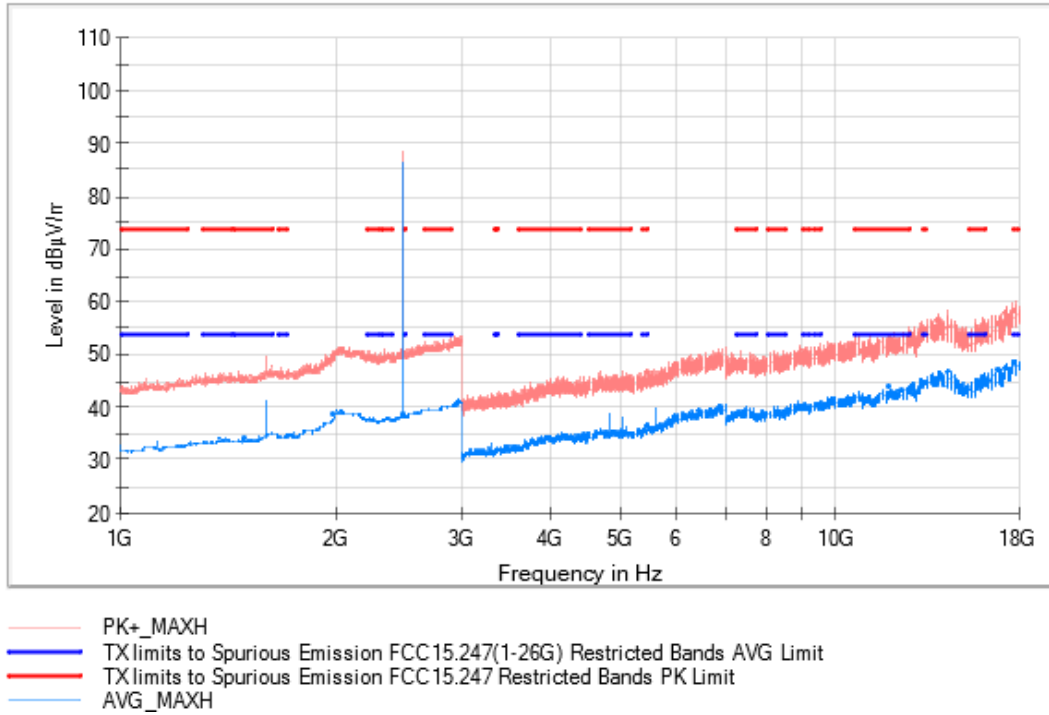
Equipment Type = Digital Transmission System (DTS) Frequency MHz = 2480.00000

Active Port = 1

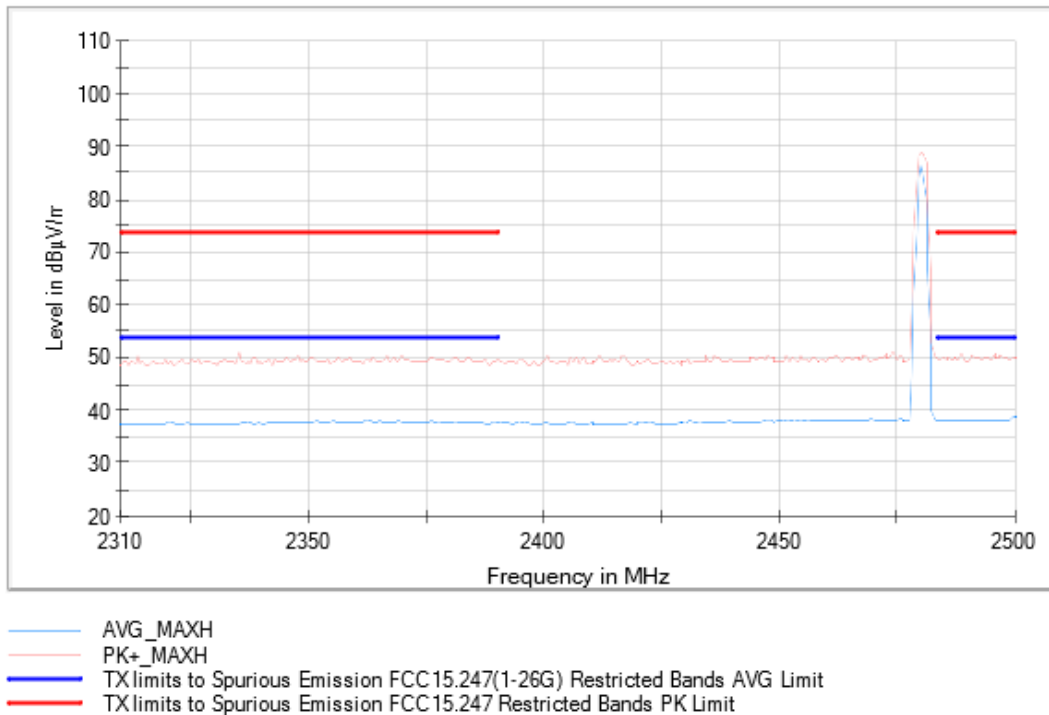
Modulation = BTLE 5.0 (GFSK 1 Mbit/s)

Images:

RF_FCC_15.247_E Field_1GHz_18GHz_HPF



Copy of RF_FCC_15.247_E Field_1GHz_18GHz_HPF



Frequency Range GHz = [18, 26]

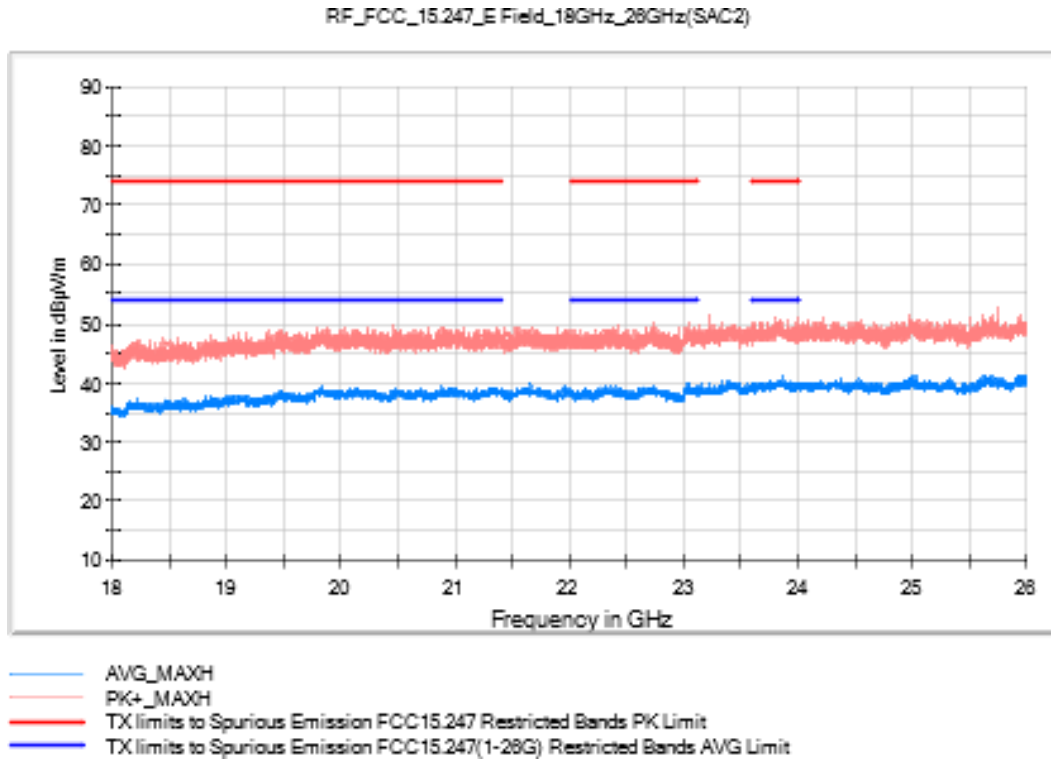
Operation Band MHz = [2400, 2483.5]

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

Active Port = 1

Modulation = BTLE 5.0 (GFSK 1 Mbit/s)

Images:



Frequency Range GHz = [18, 26]

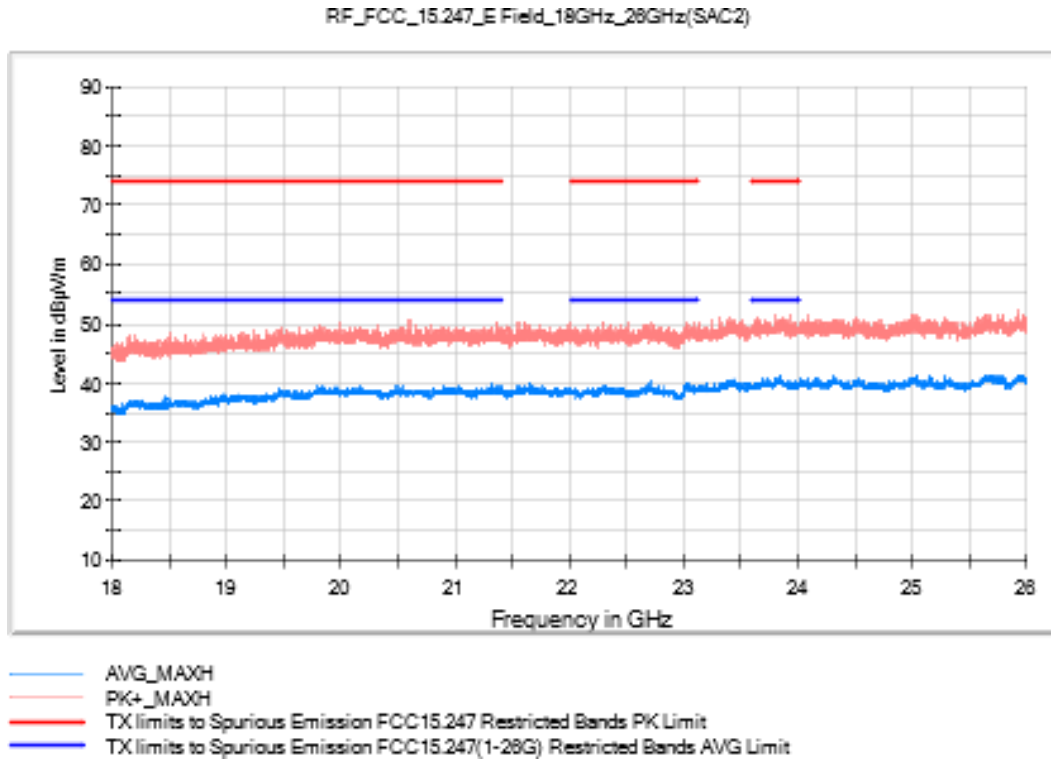
Operation Band MHz = [2400, 2483.5]

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

Active Port = 1

Modulation = BTLE 5.0 (GFSK 1 Mbit/s)

Images:



Frequency Range GHz = [18, 26]

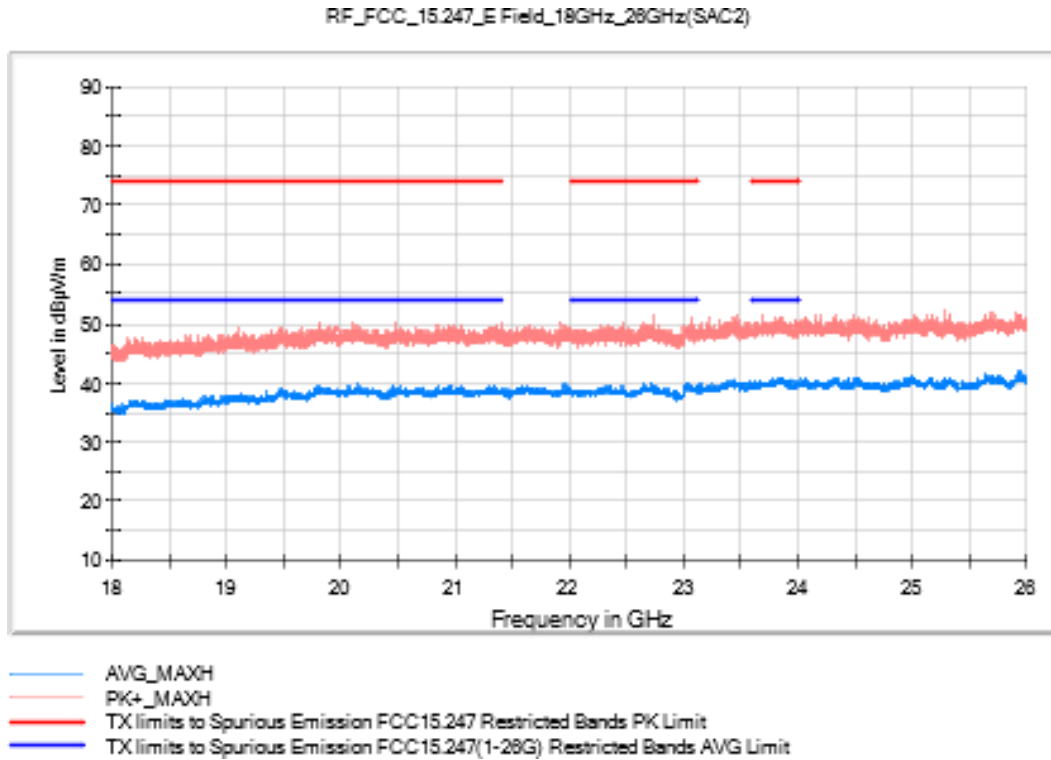
Operation Band MHz = [2400, 2483.5]

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

Active Port = 1

Modulation = BTLE 5.0 (GFSK 1 Mbit/s)

Images:



Modulation: BTLE 5.0 (GFSK 2 Mbit/s)
Results

Freq Rng (GHz)	Operation Band (MHz)	Equipment	Freq (MHz)	Port	Unwanted Freq (MHz)	Unwanted Lvl (dBμV/m)	Pol	Detector
[1, 18]	[2400, 2483.5]	Digital Transmission System (DTS)	2402.00000	1	1600.000	40.70	V	AVG
					2402.000	85.00	H	AVG
					11644.500	43.60	V	AVG
			2440.00000		1600.000	40.90	H	AVG
					2440.000	85.50	H	AVG
					12385.500	43.70	V	AVG
			2480.00000		1600.000	43.40	V	AVG
					2480.000	86.70	V	AVG
					12274.500	44.20	H	AVG
[18, 26]				1	19467.000	39.30	H	AVG
					23871.000	40.90	H	AVG
					19968.500	39.60	H	AVG
					21275.000	39.80	H	AVG
					19835.000	39.80	H	AVG
					23022.500	40.40	V	AVG

Verdict

Pass

Attachments

Frequency Range GHz = [1, 18]

Operation Band MHz = [2400, 2483.5]

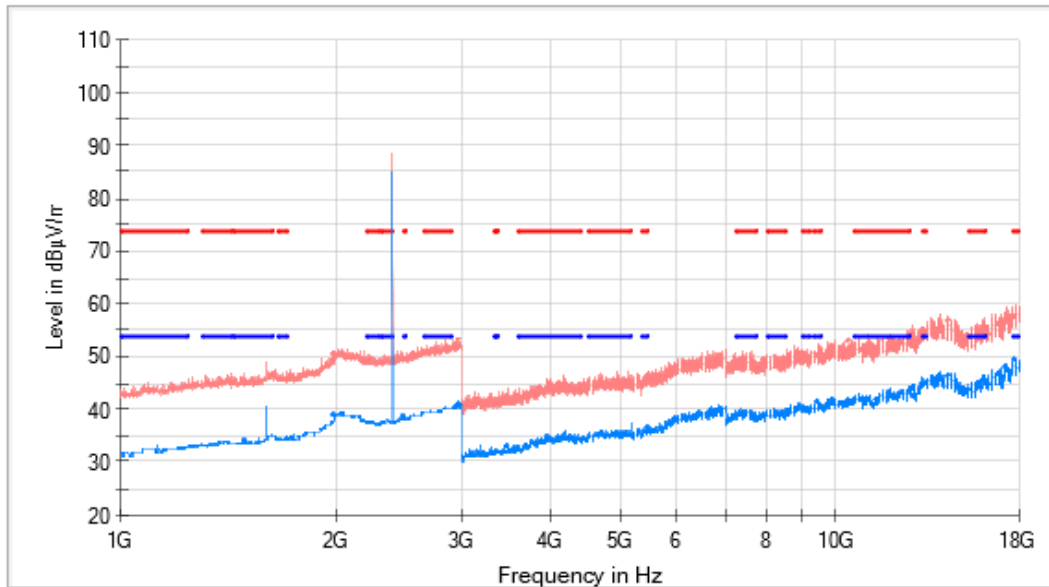
Equipment Type = Digital Transmission System (DTS) Frequency MHz = 2402.00000

Active Port = 1

Modulation = BTLE 5.0 (GFSK 2 Mbit/s)

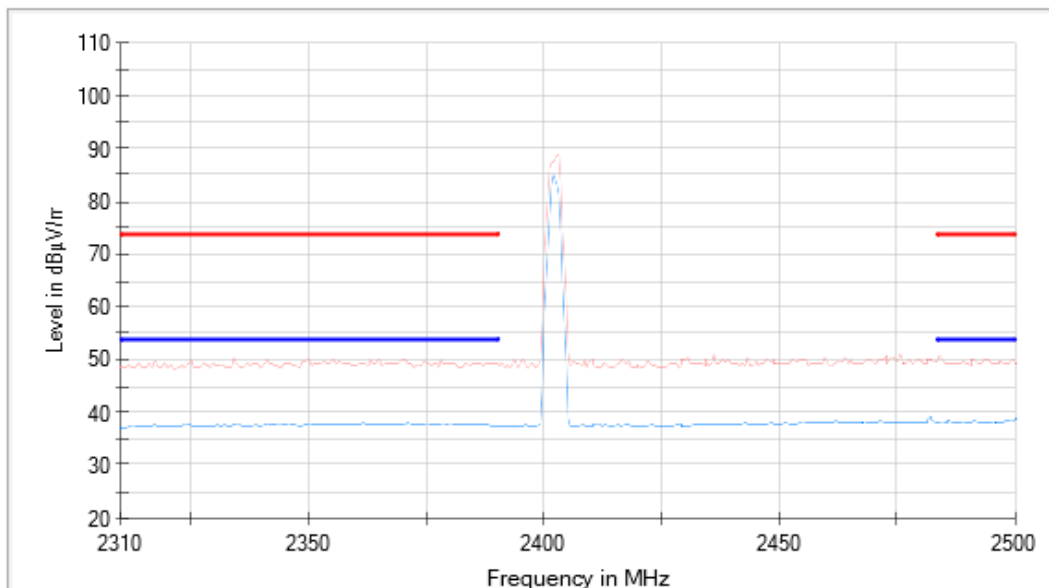
Images:

RF_FCC_15.247_E Field_1GHz_18GHz_HPF



— PK+ MAXH
— TX limits to Spurious Emission FCC 15.247(1-26G) Restricted Bands AVG Limit
— TX limits to Spurious Emission FCC 15.247 Restricted Bands PK Limit
— AVG MAXH

Copy of RF_FCC_15.247_E Field_1GHz_18GHz_HPF



— AVG MAXH
— PK+ MAXH
— TX limits to Spurious Emission FCC 15.247(1-26G) Restricted Bands AVG Limit
— TX limits to Spurious Emission FCC 15.247 Restricted Bands PK Limit

Frequency Range GHz = [1, 18]

Operation Band MHz = [2400, 2483.5]

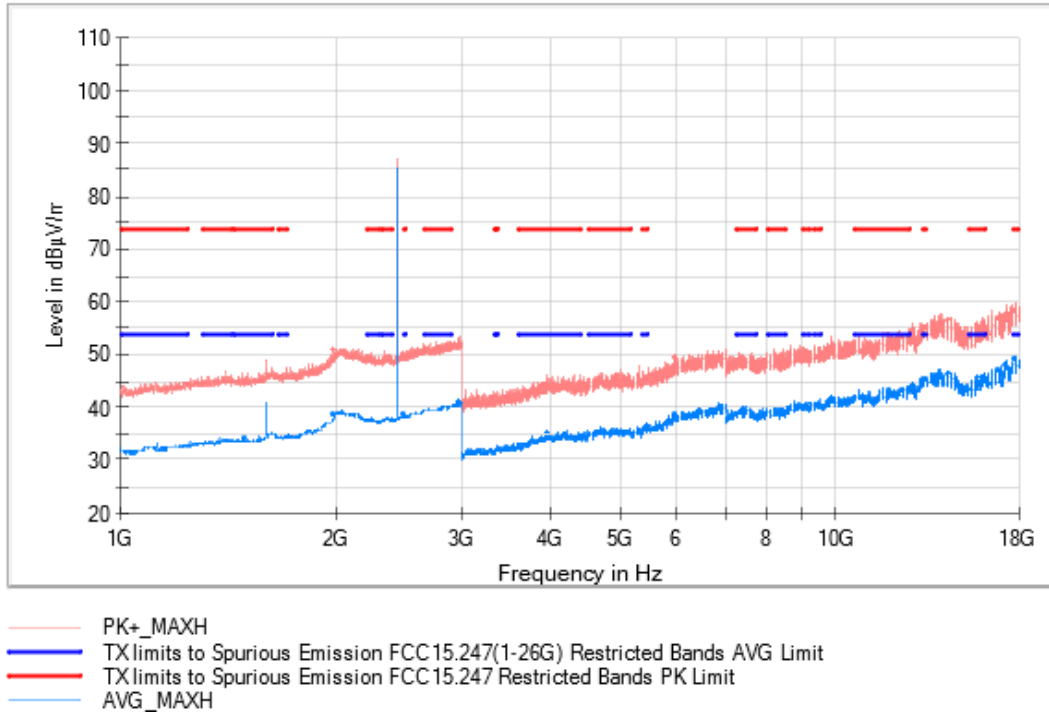
Equipment Type = Digital Transmission System (DTS) Frequency MHz = 2440.00000

Active Port = 1

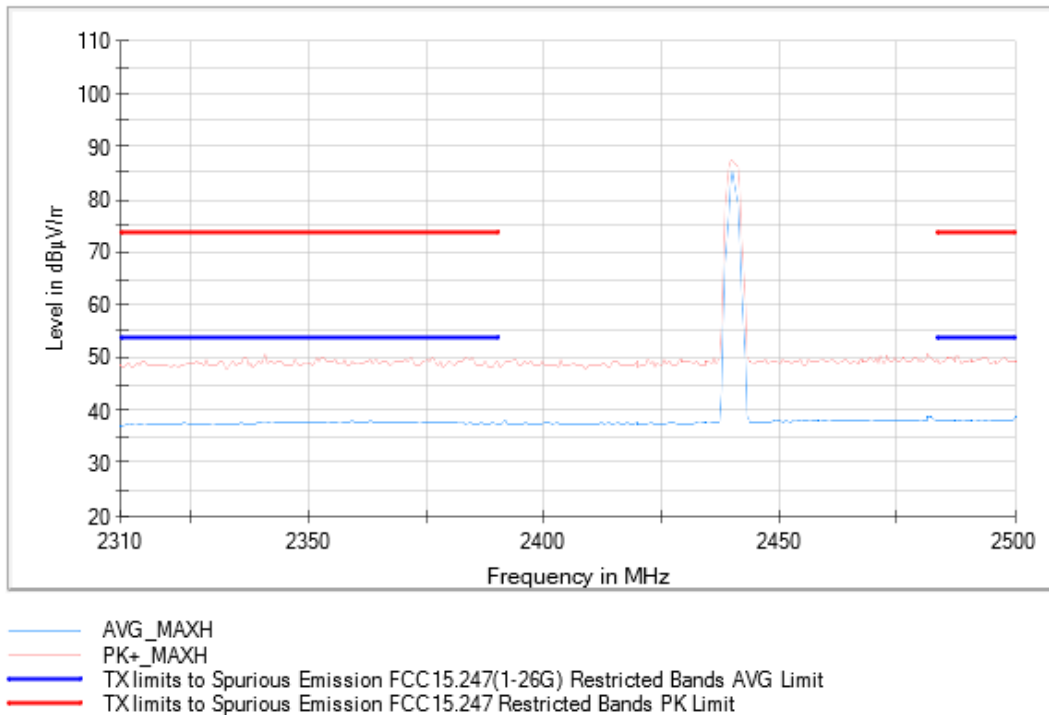
Modulation = BTLE 5.0 (GFSK 2 Mbit/s)

Images:

RF_FCC_15.247_E Field_1GHz_18GHz_HPF



Copy of RF_FCC_15.247_E Field_1GHz_18GHz_HPF



Frequency Range GHz = [1, 18]

Operation Band MHz = [2400, 2483.5]

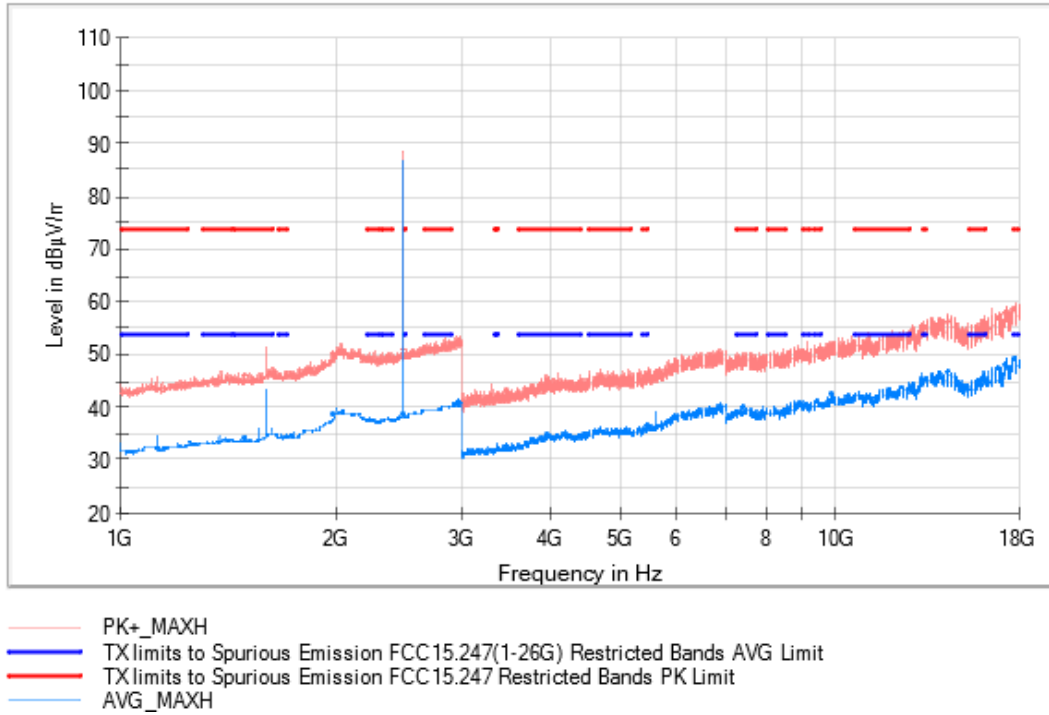
Equipment Type = Digital Transmission System (DTS) Frequency MHz = 2480.00000

Active Port = 1

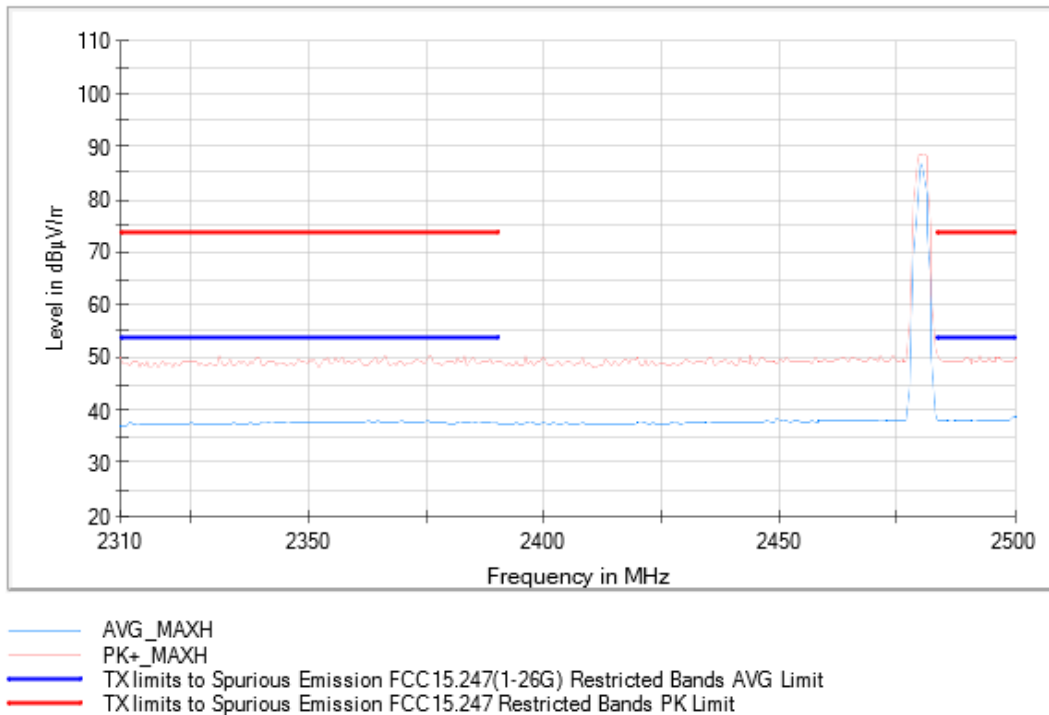
Modulation = BTLE 5.0 (GFSK 2 Mbit/s)

Images:

RF_FCC_15.247_E Field_1GHz_18GHz_HPF



Copy of RF_FCC_15.247_E Field_1GHz_18GHz_HPF



Frequency Range GHz = [18, 26]

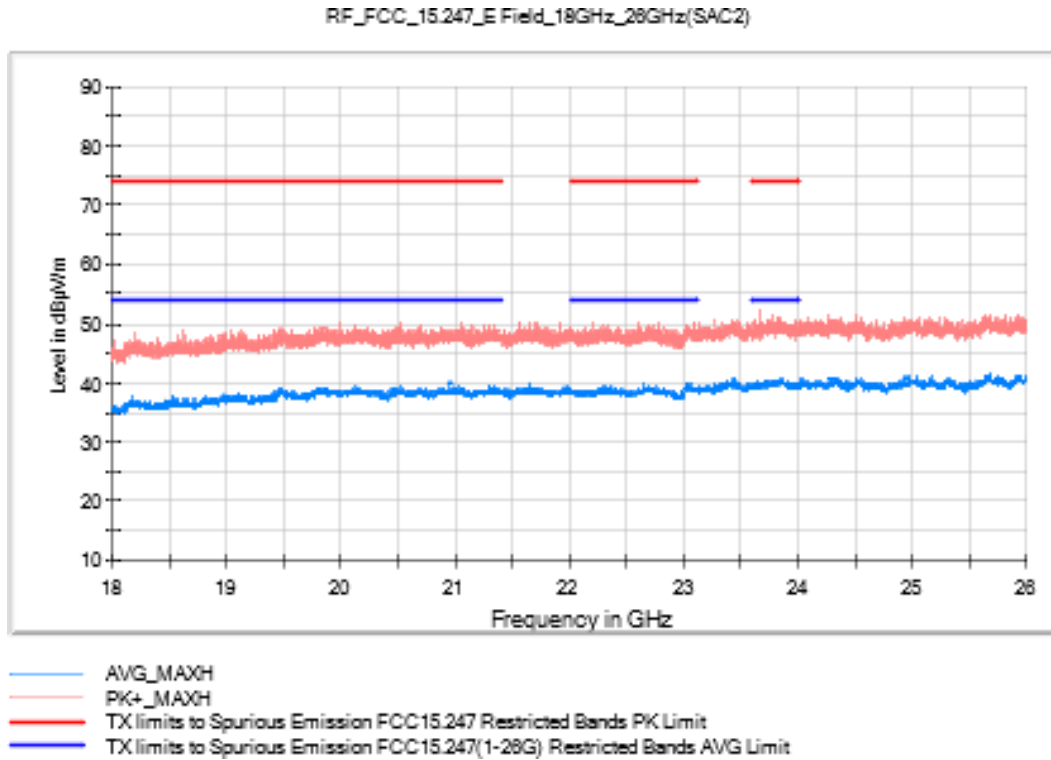
Operation Band MHz = [2400, 2483.5]

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

Active Port = 1

Modulation = BTLE 5.0 (GFSK 2 Mbit/s)

Images:



Frequency Range GHz = [18, 26]

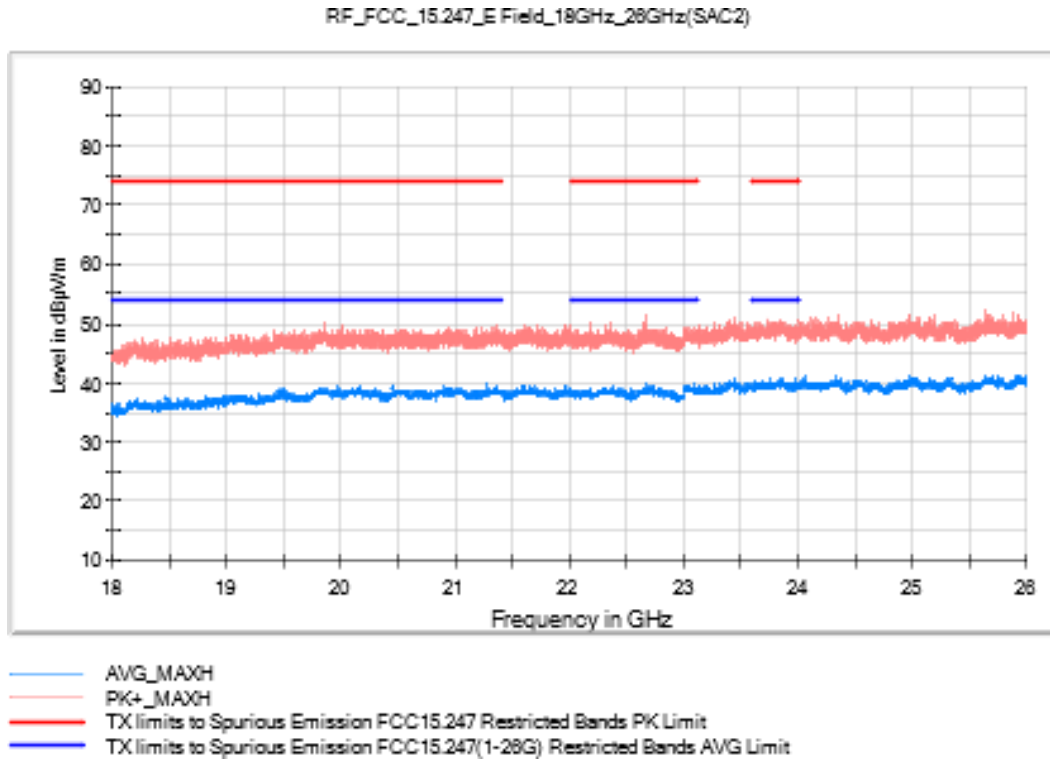
Operation Band MHz = [2400, 2483.5]

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

Active Port = 1

Modulation = BTLE 5.0 (GFSK 2 Mbit/s)

Images:



Frequency Range GHz = [18, 26]

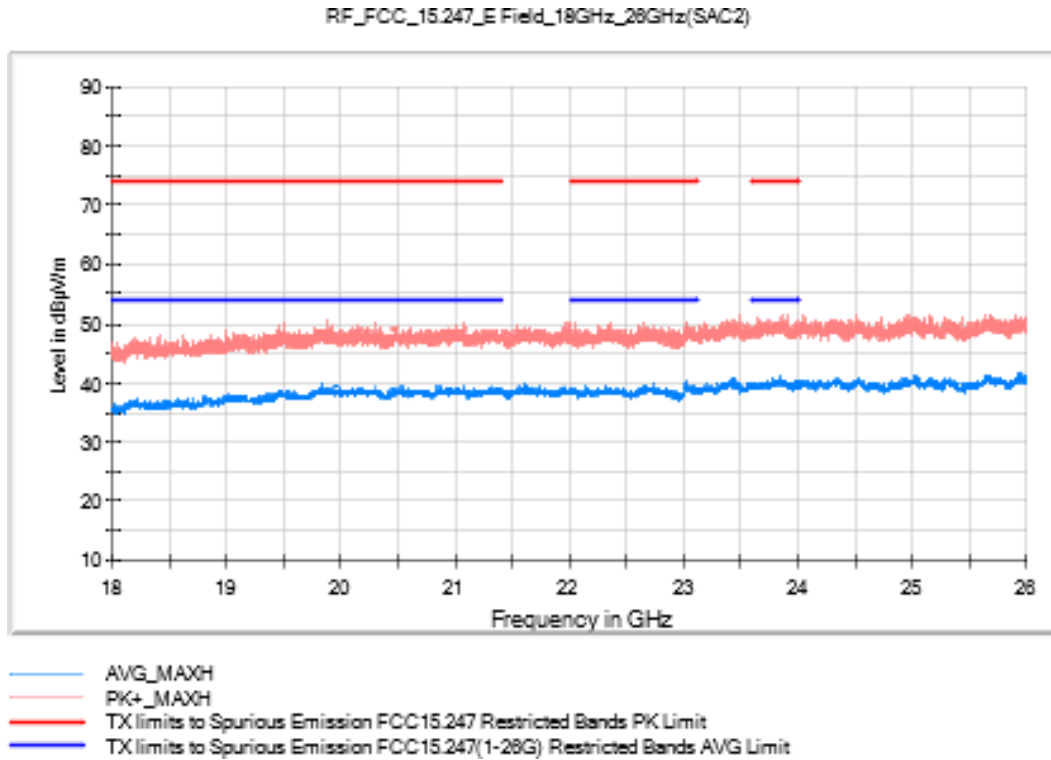
Operation Band MHz = [2400, 2483.5]

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

Active Port = 1

Modulation = BTLE 5.0 (GFSK 2 Mbit/s)

Images:



Frequency range 30 MHz – 1000 MHz

The spurious emissions below 1 GHz do not depend on the operating channel and mode selected in the EUT.

The results in the following plots and tables show the maximum measured levels in the 30-1000 MHz range.

Modulation: 802.11b (DSSS 1 Mbit/s)

Results

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)	2412.00000	1	37.663	15.50	V	QP			
					73.068	10.80	V	QP			
					172.202	14.40	V	QP			
					264.061	22.00	V	QP			
					407.961	23.20	V	QP			
					610.206	28.90	V	QP			
[1, 18]			2437.00000		1600.000	42.00	H	AVG			
					2413.000	89.20	H	AVG			
					11868.000	43.40	H	AVG			
					2462.00000	1600.000	44.30	V	AVG		
						2438.000	88.40	H	AVG		
						11683.000	42.80	V	AVG		
[18, 26]			2412.00000			1594.000	34.30	V	AVG		
					2463.000	87.70	V	AVG			
			2437.00000		15985.500	45.70	V	AVG			
					21296.000	39.50	H	AVG			
			2462.00000		23829.500	41.10	V	AVG			
					20487.500	39.90	V	AVG			
								23850.500	41.30	H	AVG
								20692.000	39.40	H	AVG
					23858.000	41.30	V	AVG			

Verdict

Pass

Attachments

Frequency Range GHz = [0.03, 1]

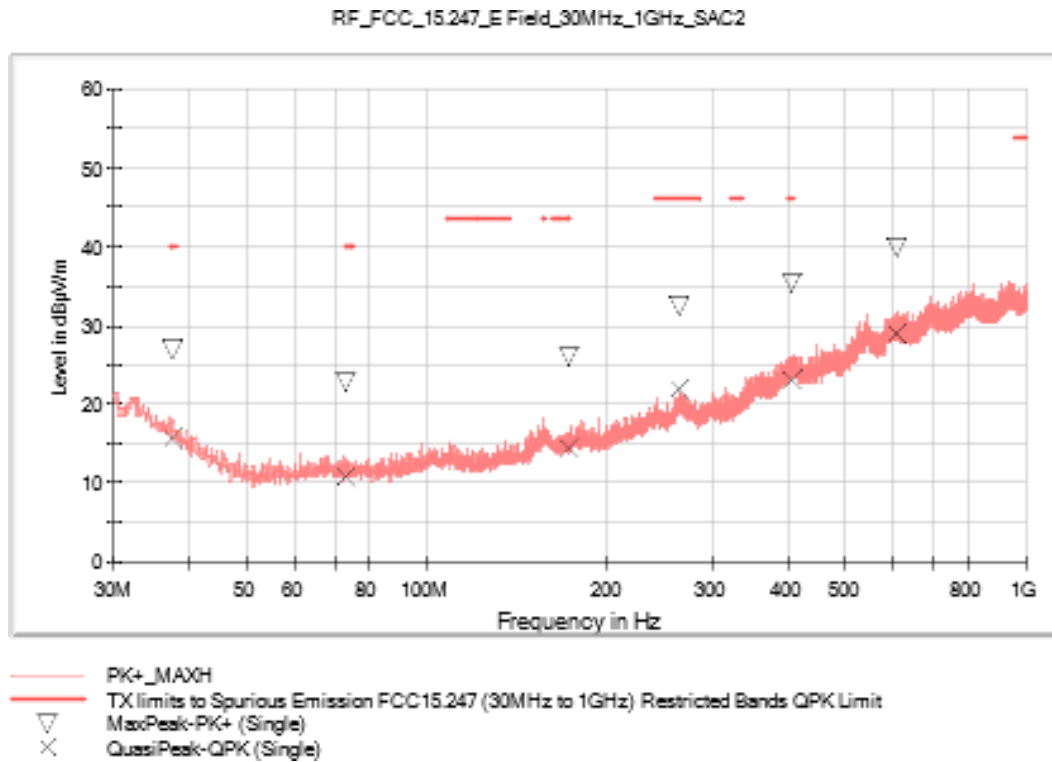
Operation Band MHz = [2400, 2483.5]

Equipment Type = Digital Transmission System (DTS) Frequency MHz = 2412.00000

Active Port = 1

Modulation = 802.11b (DSSS 1 Mbit/s)

Images:



Frequency Range GHz = [1, 18]

Operation Band MHz = [2400, 2483.5]

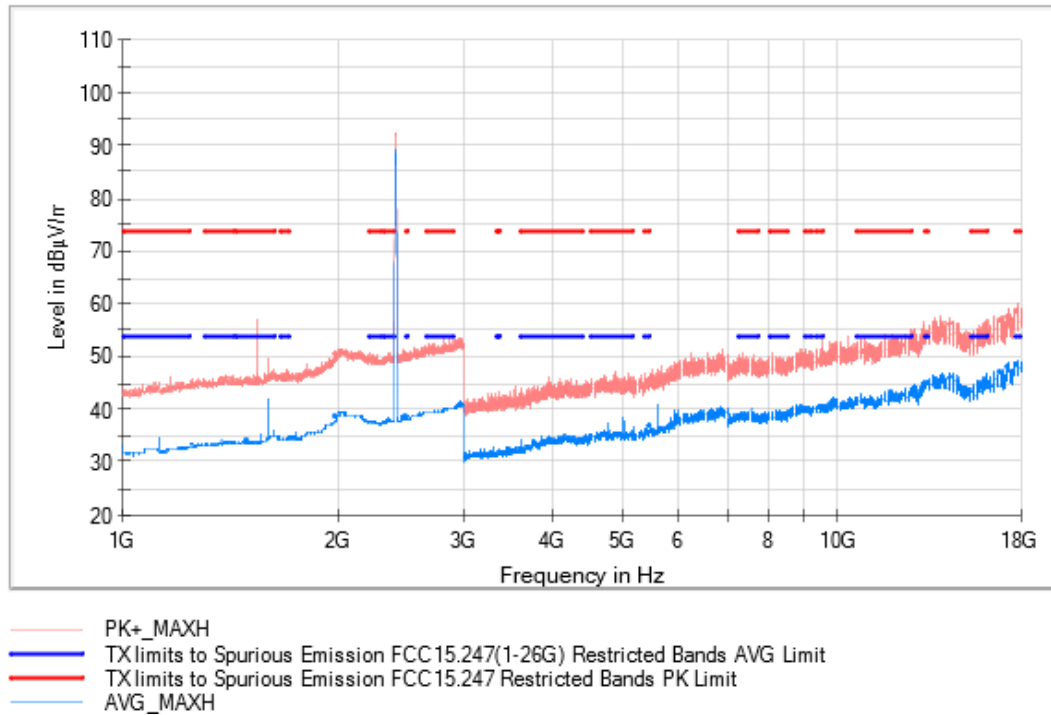
Equipment Type = Digital Transmission System (DTS) Frequency MHz = 2412.00000

Active Port = 1

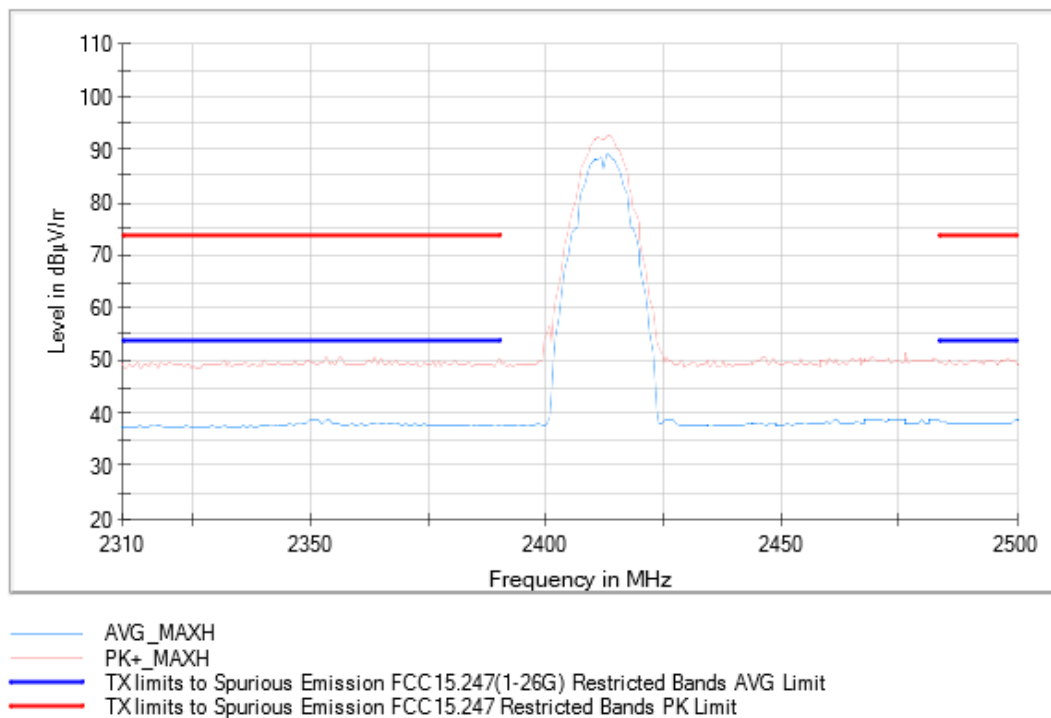
Modulation = 802.11b (DSSS 1 Mbit/s)

Images:

RF_FCC_15.247_E Field_1GHz_18GHz_HPF



Copy of RF_FCC_15.247_E Field_1GHz_18GHz_HPF



Frequency Range GHz = [1, 18]

Operation Band MHz = [2400, 2483.5]

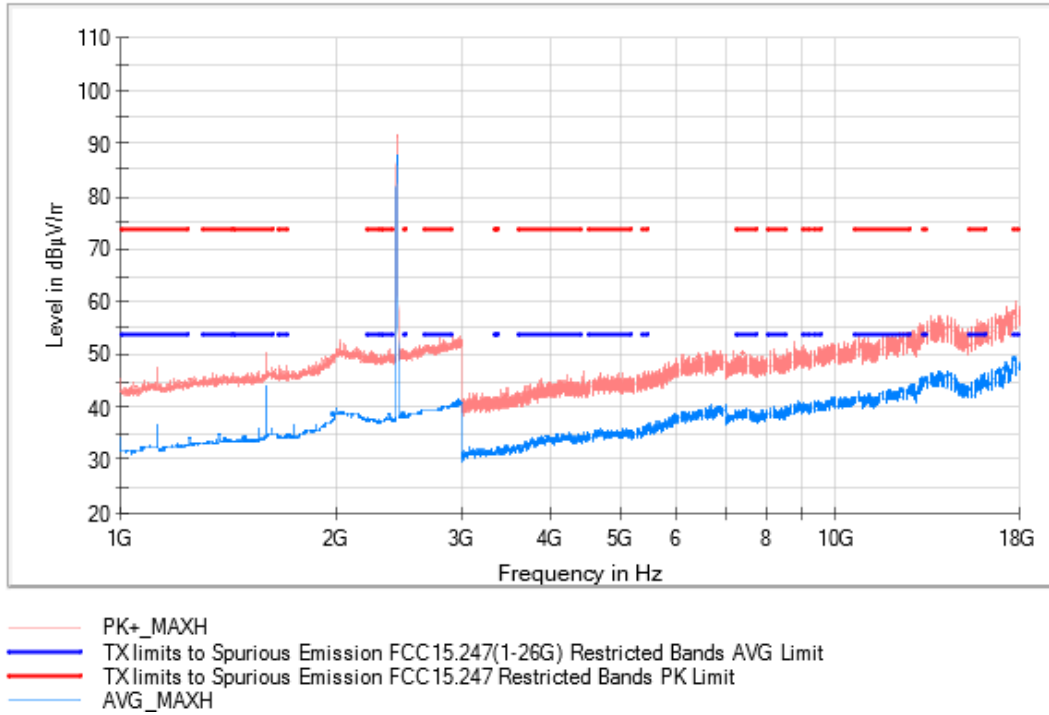
Equipment Type = Digital Transmission System (DTS) Frequency MHz = 2437.00000

Active Port = 1

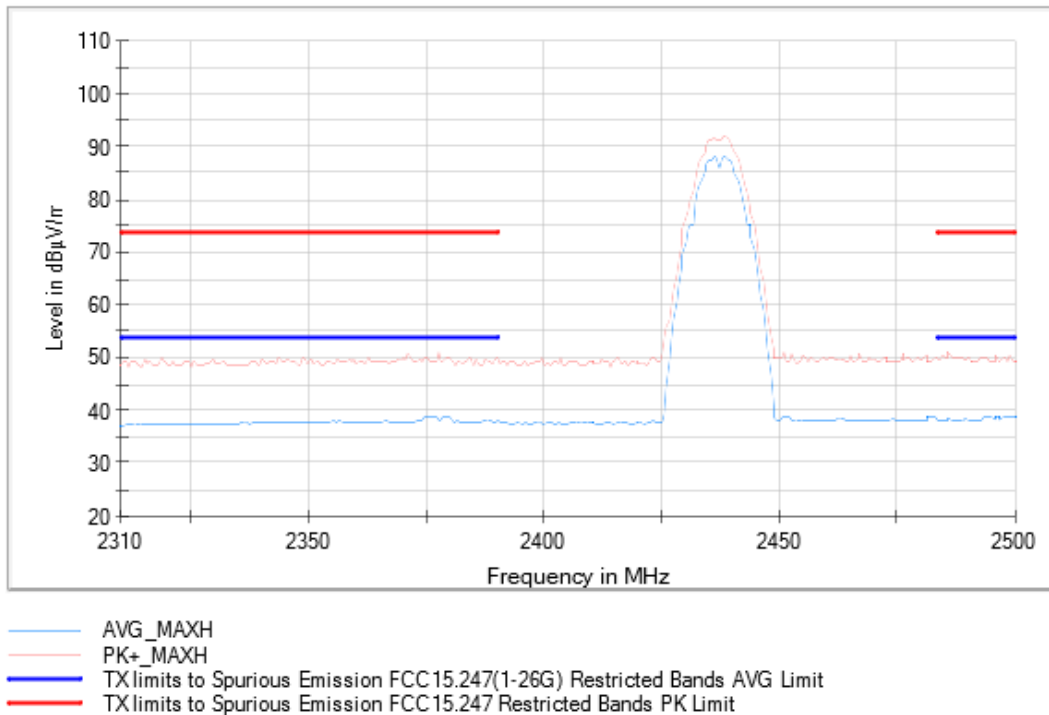
Modulation = 802.11b (DSSS 1 Mbit/s)

Images:

RF_FCC_15.247_E Field_1GHz_18GHz_HPF



Copy of RF_FCC_15.247_E Field_1GHz_18GHz_HPF



Frequency Range GHz = [1, 18]

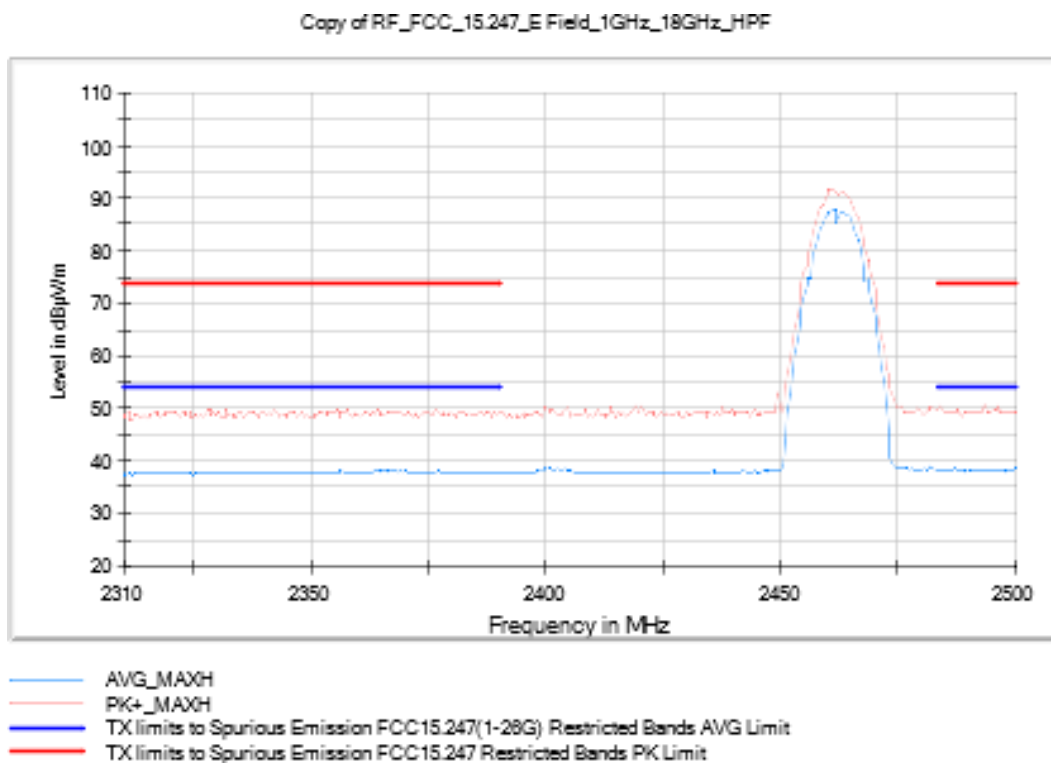
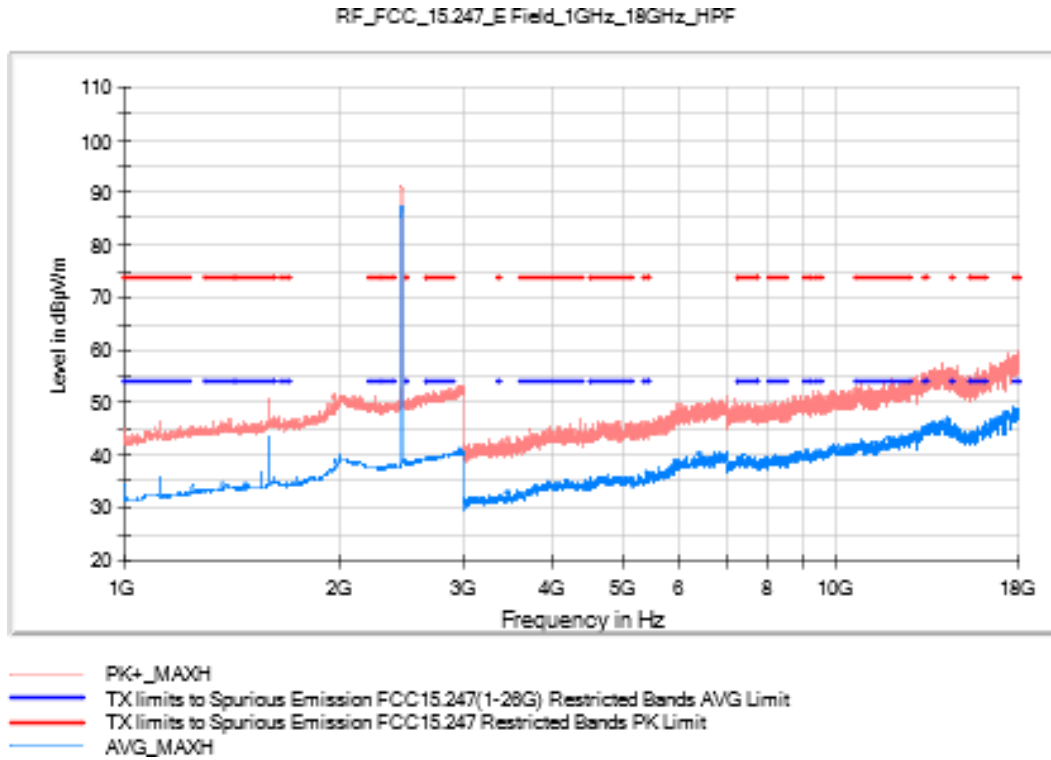
Operation Band MHz = [2400, 2483.5]

Equipment Type = Digital Transmission System (DTS) Frequency MHz = 2462.00000

Active Port = 1

Modulation = 802.11b (DSSS 1 Mbit/s)

Images:



Frequency Range GHz = [18, 26]

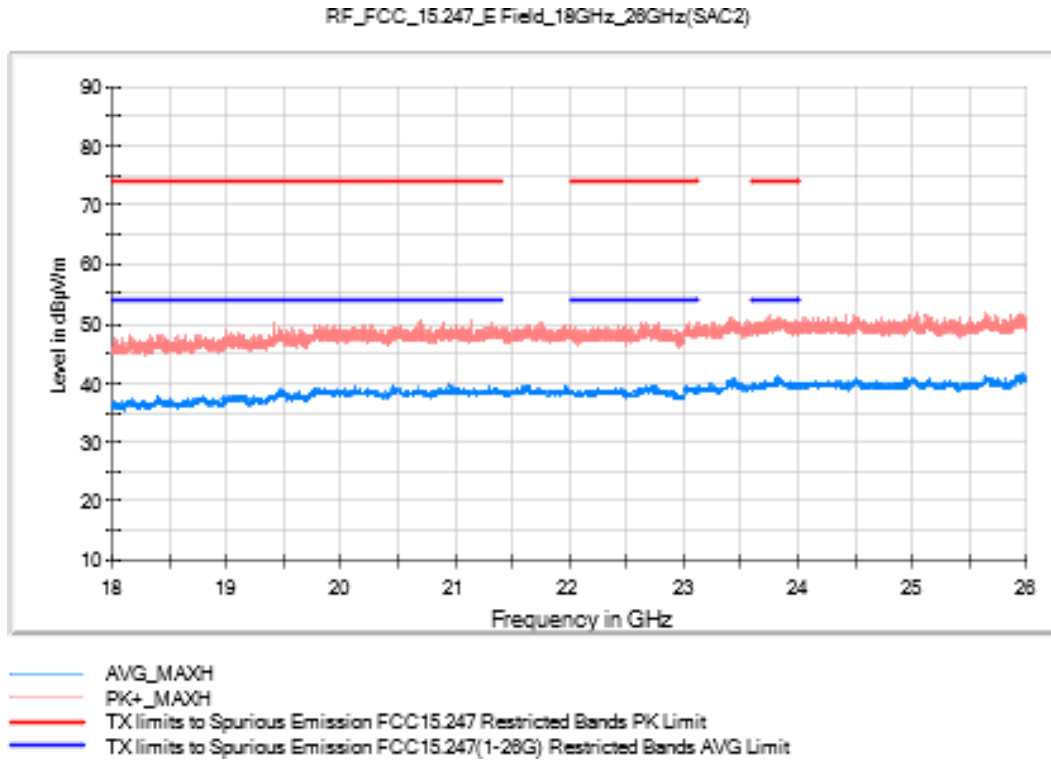
Operation Band MHz = [2400, 2483.5]

Equipment Type = Digital Transmission System (DTS) Frequency MHz = 2412.00000

Active Port = 1

Modulation = 802.11b (DSSS 1 Mbit/s)

Images:



Frequency Range GHz = [18, 26]

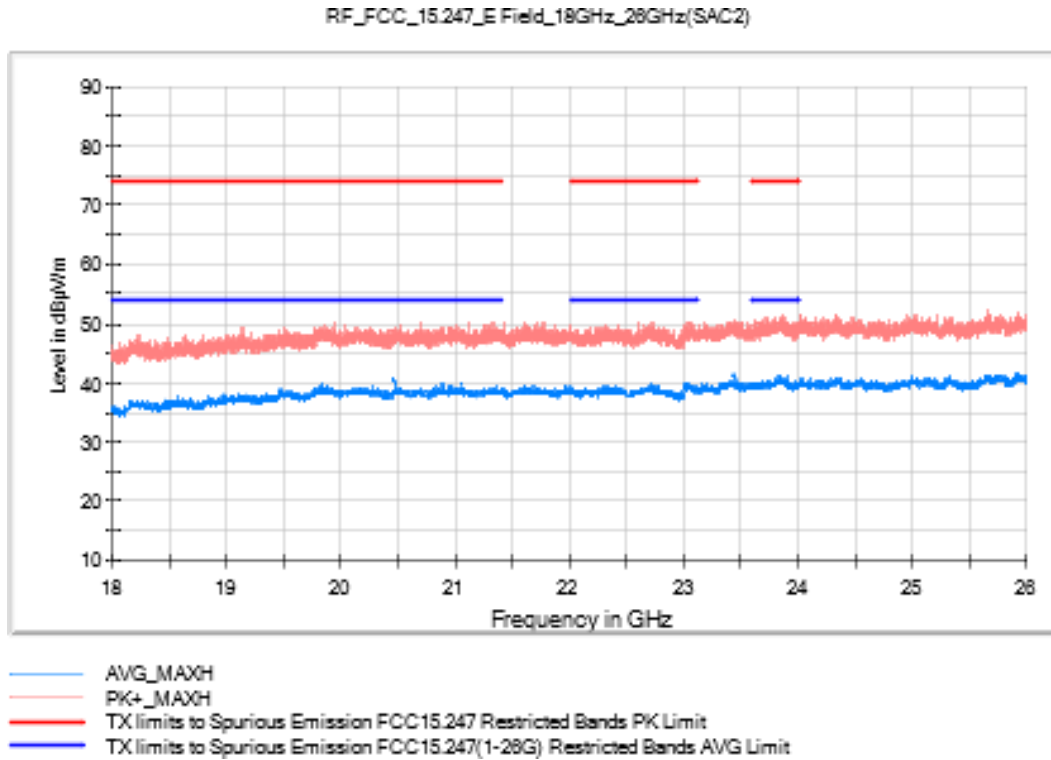
Operation Band MHz = [2400, 2483.5]

Equipment Type = Digital Transmission System (DTS) Frequency MHz = 2437.00000

Active Port = 1

Modulation = 802.11b (DSSS 1 Mbit/s)

Images:



Frequency Range GHz = [18, 26]

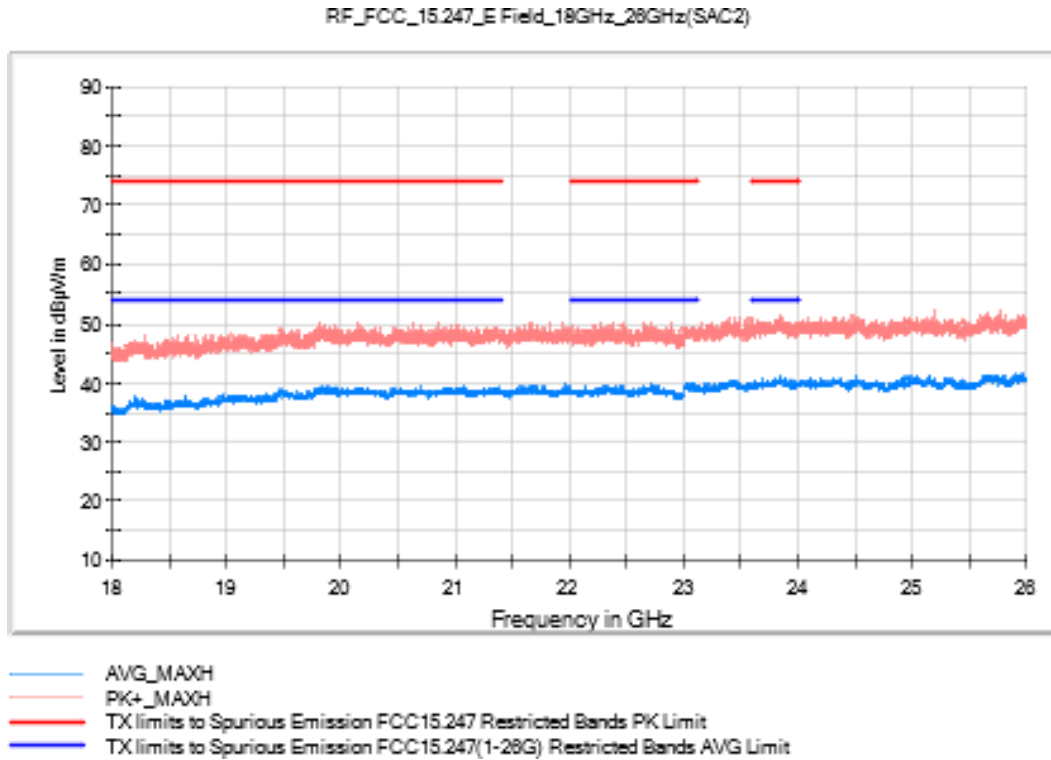
Operation Band MHz = [2400, 2483.5]

Equipment Type = Digital Transmission System (DTS) Frequency MHz = 2462.00000

Active Port = 1

Modulation = 802.11b (DSSS 1 Mbit/s)

Images:



Modulation: 802.11n HT20 (OFDM MCS0)
Results

Freq Rng (GHz)	Operation Band (MHz)	Equipment	Freq (MHz)	Port	Unwanted Freq (MHz)	Unwanted Lvl (dBμV/m)	Pol	Detector
[1, 18]	[2400, 2483.5]	Digital Transmission System (DTS)	2412.00000	1	1600.000	47.70	V	AVG
					2415.000	83.80	V	AVG
					7525.500	39.60	V	AVG
			2437.00000		1125.000	47.10	H	AVG
					2434.000	84.70	V	AVG
					4636.000	36.40	V	AVG
			2462.00000		1600.000	47.60	V	AVG
					2459.500	85.30	V	AVG
					16151.500	47.00	V	AVG
[18, 26]				1	20712.000	39.70	V	AVG
					23069.000	40.80	H	AVG
					19007.500	38.40	V	AVG
					22661.000	40.30	V	AVG
					20846.500	40.00	H	AVG
					22655.000	40.50	H	AVG

Verdict

Pass

Attachments

Frequency Range GHz = [1, 18]

Operation Band MHz = [2400, 2483.5]

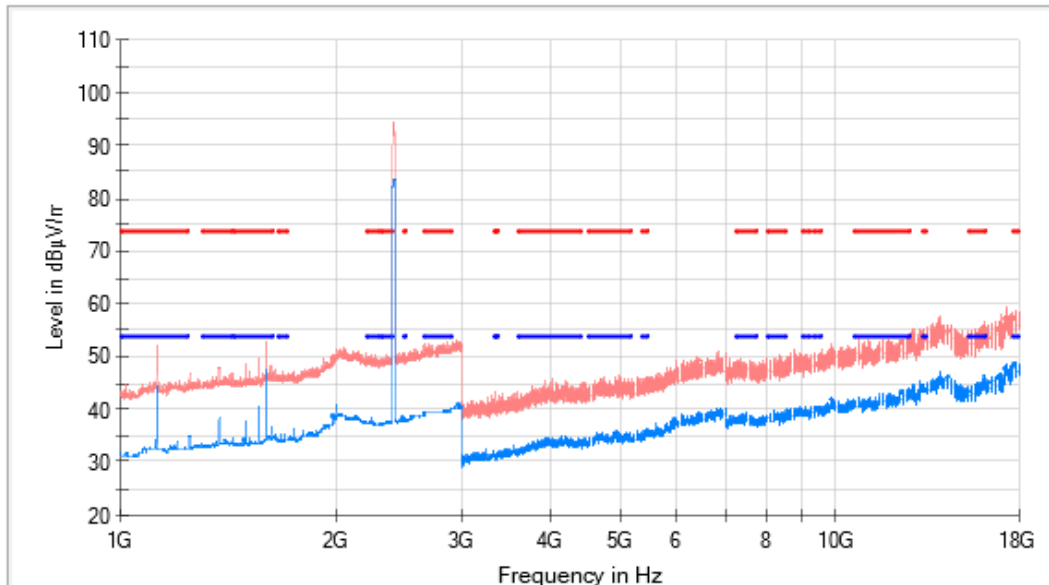
Equipment Type = Digital Transmission System (DTS) Frequency MHz = 2412.00000

Active Port = 1

Modulation = 802.11n HT20 (OFDM MCS0)

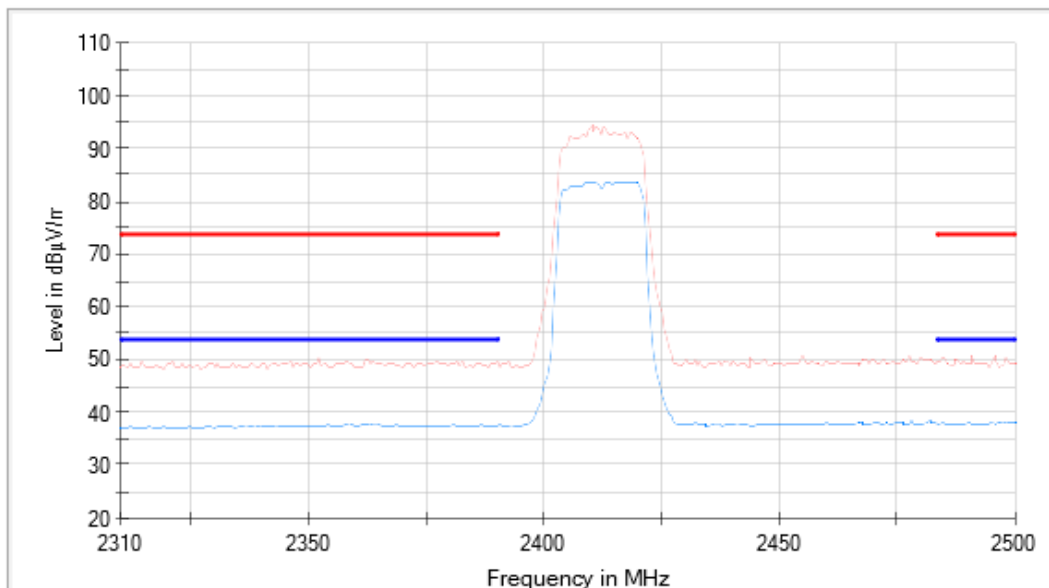
Images:

RF_FCC_15.247_E Field_1GHz_18GHz_HPF



PK+_MAXH
TXlimits to Spurious Emission FCC15.247(1-26G) Restricted Bands AVG Limit
TXlimits to Spurious Emission FCC15.247 Restricted Bands PK Limit
AVG_MAXH

Copy of RF_FCC_15.247_E Field_1GHz_18GHz_HPF



AVG_MAXH
PK+_MAXH
TXlimits to Spurious Emission FCC15.247(1-26G) Restricted Bands AVG Limit
TXlimits to Spurious Emission FCC15.247 Restricted Bands PK Limit

Frequency Range GHz = [1, 18]

Operation Band MHz = [2400, 2483.5]

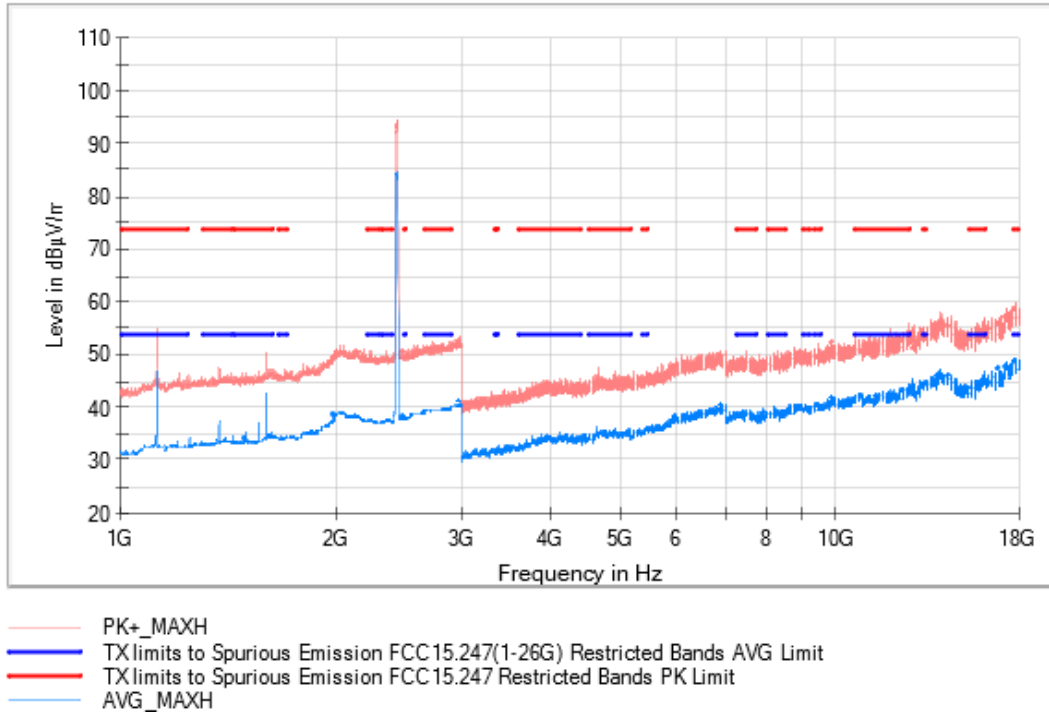
Equipment Type = Digital Transmission System (DTS) Frequency MHz = 2437.00000

Active Port = 1

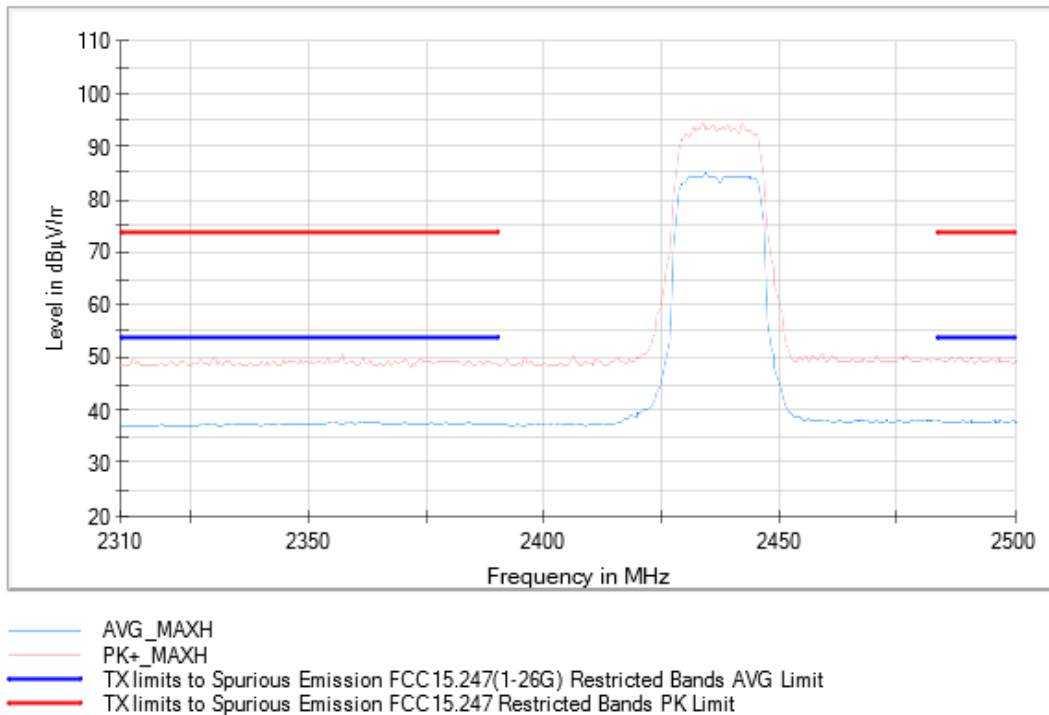
Modulation = 802.11n HT20 (OFDM MCS0)

Images:

RF_FCC_15.247_E Field_1GHz_18GHz_HPF



Copy of RF_FCC_15.247_E Field_1GHz_18GHz_HPF



Frequency Range GHz = [1, 18]

Operation Band MHz = [2400, 2483.5]

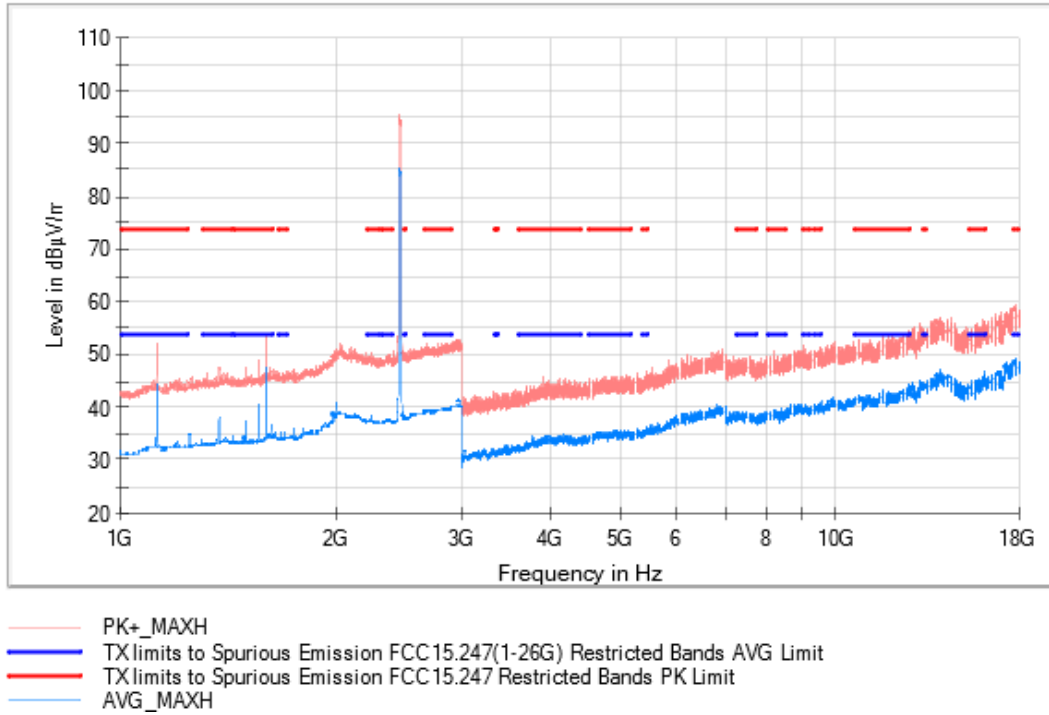
Equipment Type = Digital Transmission System (DTS) Frequency MHz = 2462.00000

Active Port = 1

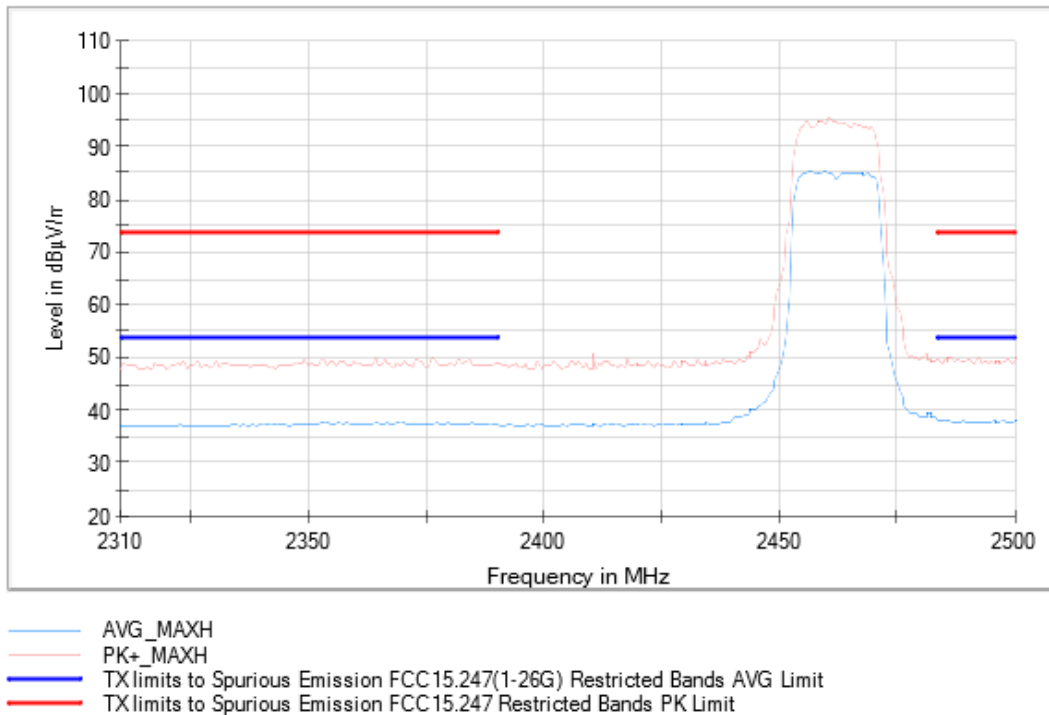
Modulation = 802.11n HT20 (OFDM MCS0)

Images:

RF_FCC_15.247_E Field_1GHz_18GHz_HPF



Copy of RF_FCC_15.247_E Field_1GHz_18GHz_HPF



Frequency Range GHz = [18, 26]

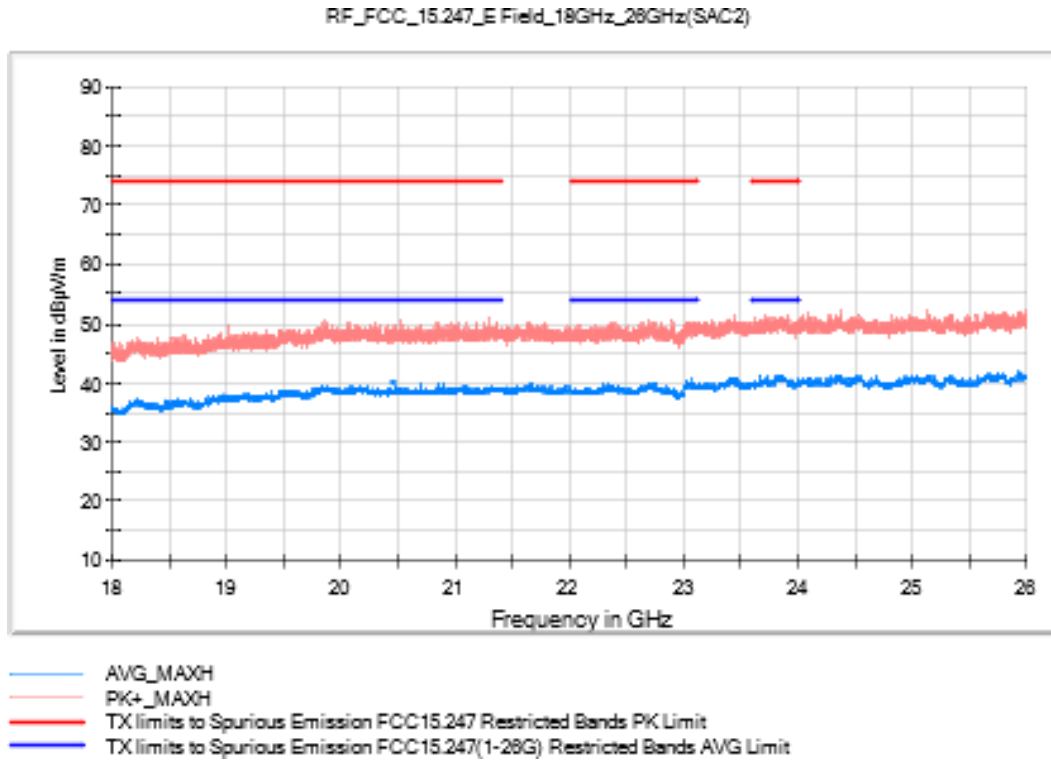
Operation Band MHz = [2400, 2483.5]

Equipment Type = Digital Transmission System (DTS) Frequency MHz = 2412.00000

Active Port = 1

Modulation = 802.11n HT20 (OFDM MCS0)

Images:



Frequency Range GHz = [18, 26]

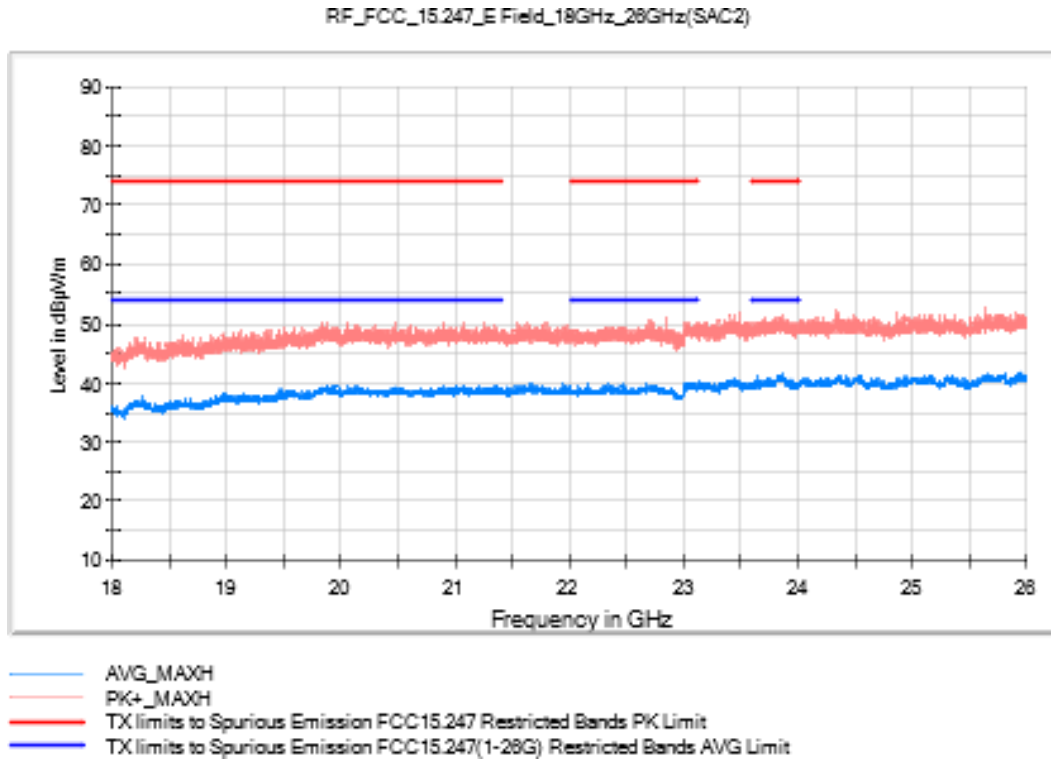
Operation Band MHz = [2400, 2483.5]

Equipment Type = Digital Transmission System (DTS) Frequency MHz = 2437.00000

Active Port = 1

Modulation = 802.11n HT20 (OFDM MCS0)

Images:



Frequency Range GHz = [18, 26]

Operation Band MHz = [2400, 2483.5]

Equipment Type = Digital Transmission System (DTS) Frequency MHz = 2452.00000

Active Port = 1

Modulation = 802.11n HT20 (OFDM MCS0)

Images:

