

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

Results

NHp	Avg COT (ms)
113	312.250

Verdict

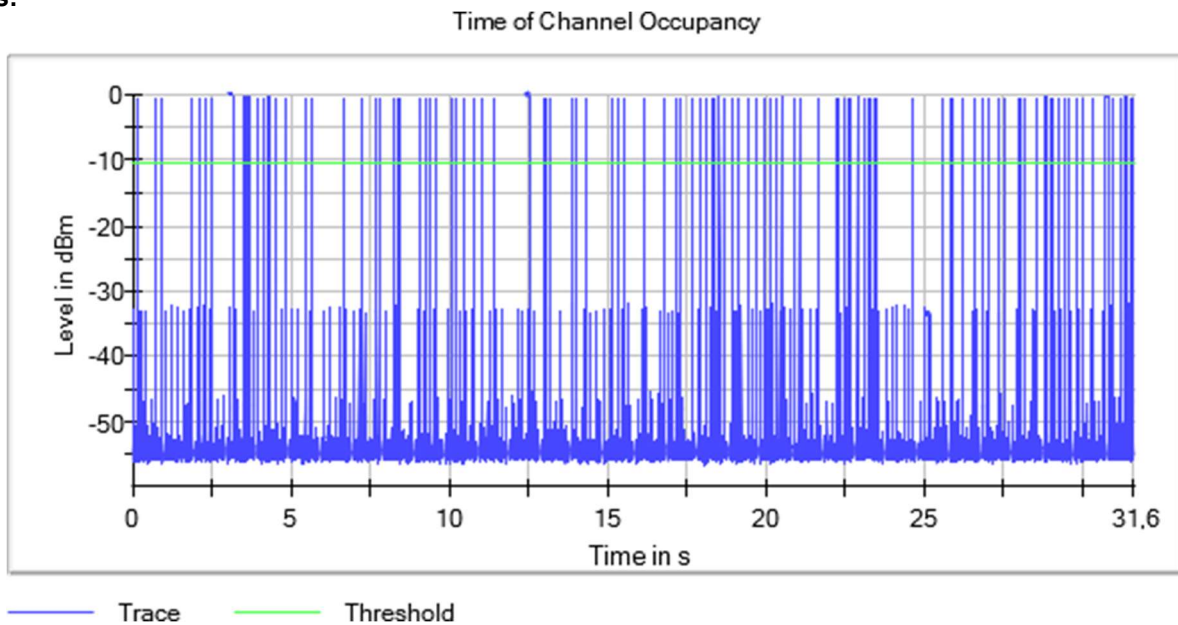
Pass

Uncertainty

Measurement uncertainty (%) $< \pm 0.53$

Operation Band MHz = [2400, 2483.5], Equipment Type = Frequency Hopping Spread Spectrum systems (DSS), Modulation = BT (Pi/4 DQPSK 2-DH5)

Images:



Modulation: BT (8DPSK 3-DH5)

Results

NHp	Avg COT (ms)
116	318.800

Verdict

Pass

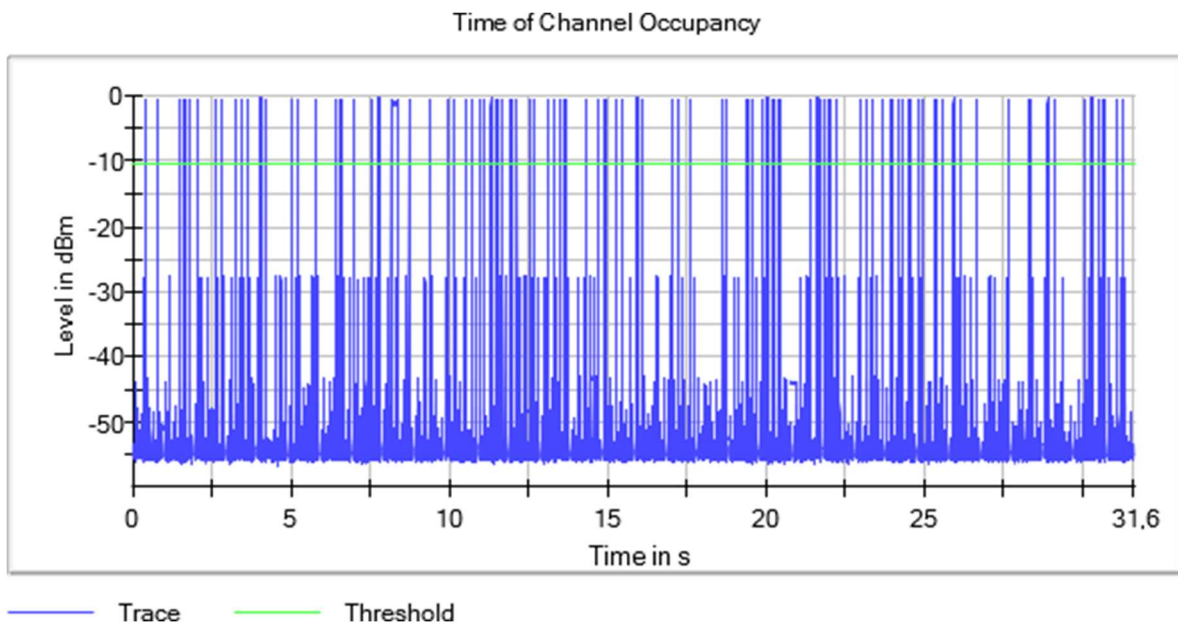
Uncertainty

Measurement uncertainty (%) $< \pm 0.53$

Attachments

Operation Band MHz = [2400, 2483.5], Equipment Type = Frequency Hopping Spread Spectrum systems (DSS), Modulation = BT (8DPSK 3-DH5)

Images:



RSS-247 5.1 (d) / FCC 15.247 (a) (1) (iii) [NHC] Number of hopping channels

Limits

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

Modulation: BT (GFSK 1-DH5)

Results

NHC
79

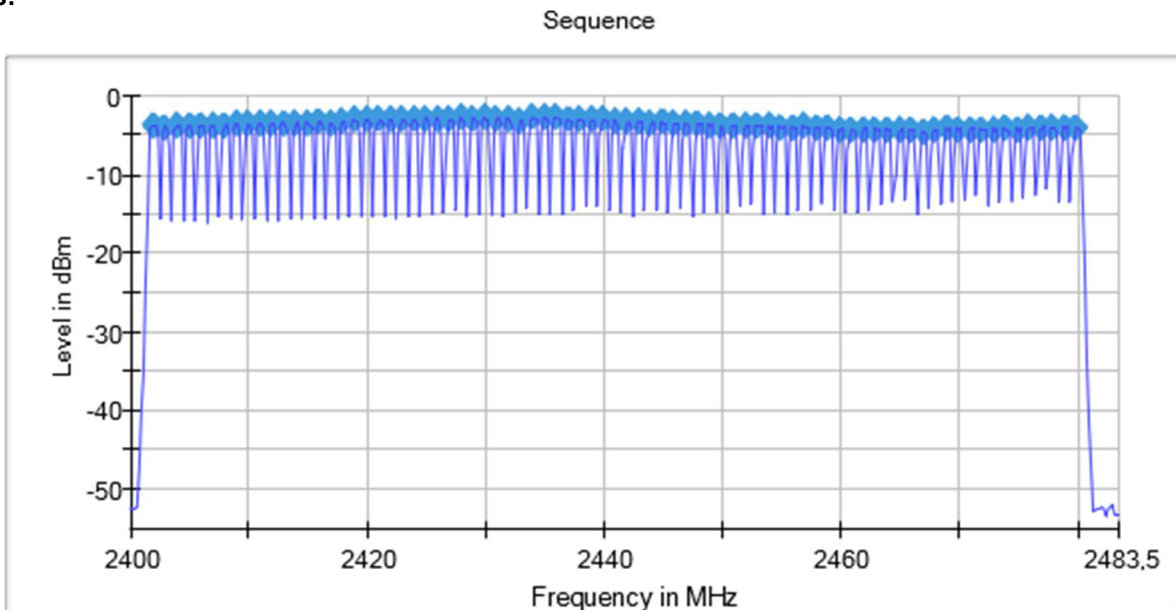
Verdict

Pass

Attachments

Operation Band MHz = [2400, 2483.5], Equipment Type = Frequency Hopping Spread Spectrum systems (DSS), Modulation = BT (GFSK 1-DH5)

Images:



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

Results

Operation Band (MHz)	Equipment	NHC
[2400, 2483.5]	Frequency Hopping Spread Spectrum systems (DSS)	79

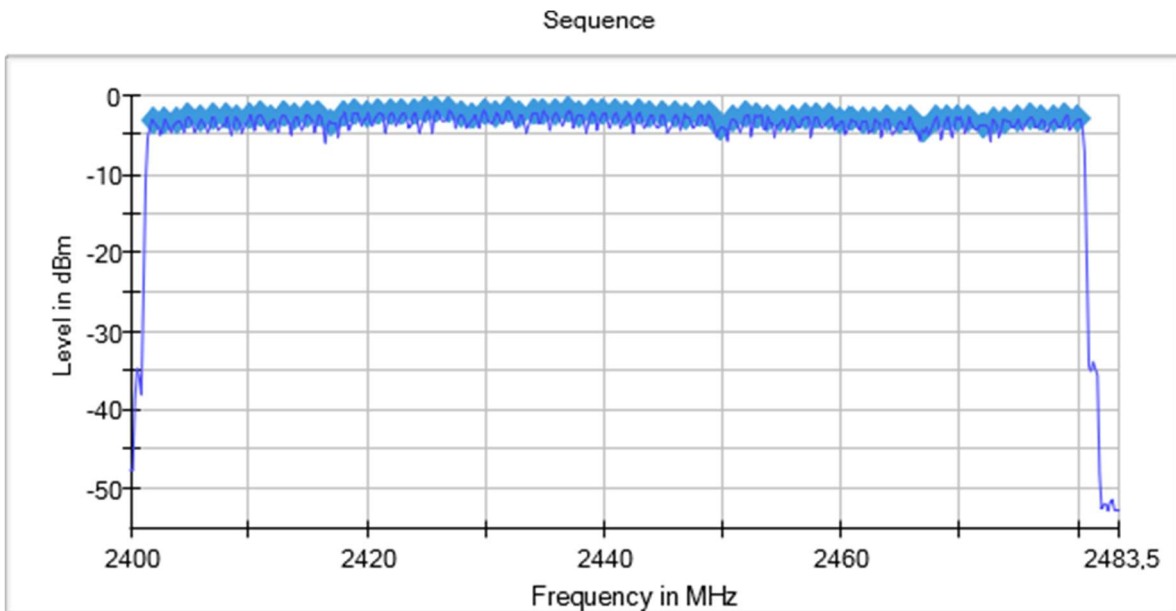
Verdict

Pass

Attachments

Operation Band MHz = [2400, 2483.5], Equipment Type = Frequency Hopping Spread Spectrum systems (DSS), Modulation = BT (Pi/4 DQPSK 2-DH5)

Images:



Modulation: BT (8DPSK 3-DH5)

Results

NHC
79

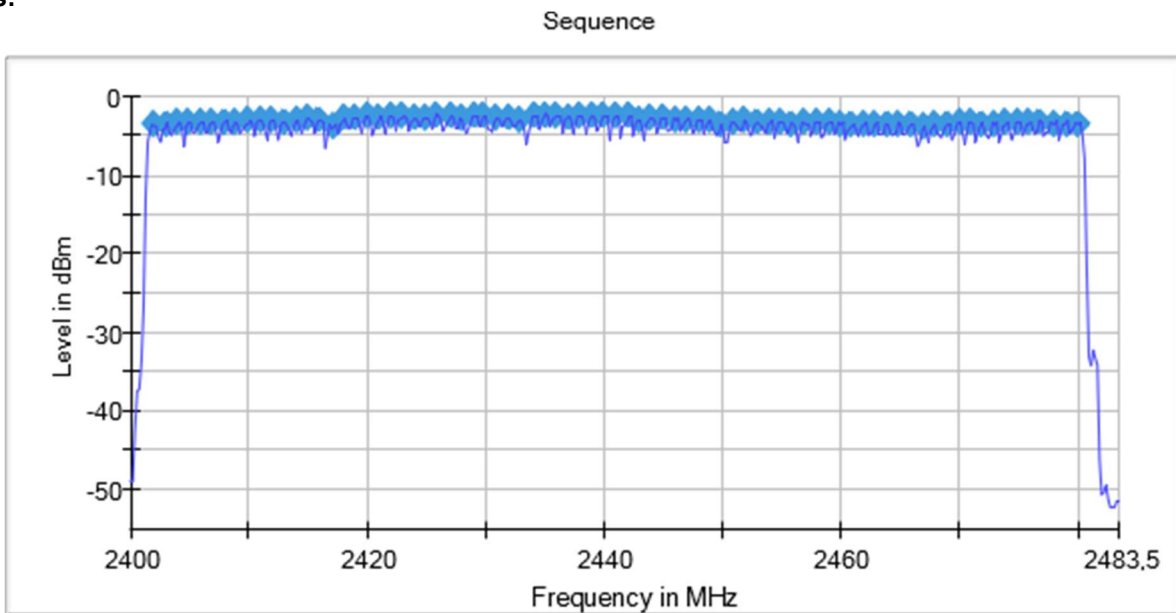
Verdict

Pass

Attachments

Operation Band MHz = [2400, 2483.5], Equipment Type = Frequency Hopping Spread Spectrum systems (DSS), Modulation = BT (8DPSK 3-DH5)

Images:



FCC 15.247 (b) / RSS-247 5.4 (b) Maximum peak output power and antenna gain

Limits

For frequency hopping systems operating in the 2400-2483.5 MHz band employing at least 75 hopping channels: 1 watt (30 dBm). The e.i.r.p. shall not exceed 4 W (RSS-247).

Modulation: BT (GFSK 1-DH5)

Results

Freq (MHz)	Peak Power (dBm)	Maximum Conducted Power (dBm)
2402.00000	-3.6	-4.3
2441.00000	-3.6	-4.3
2480.00000	-2.9	-3.6

Verdict

Pass

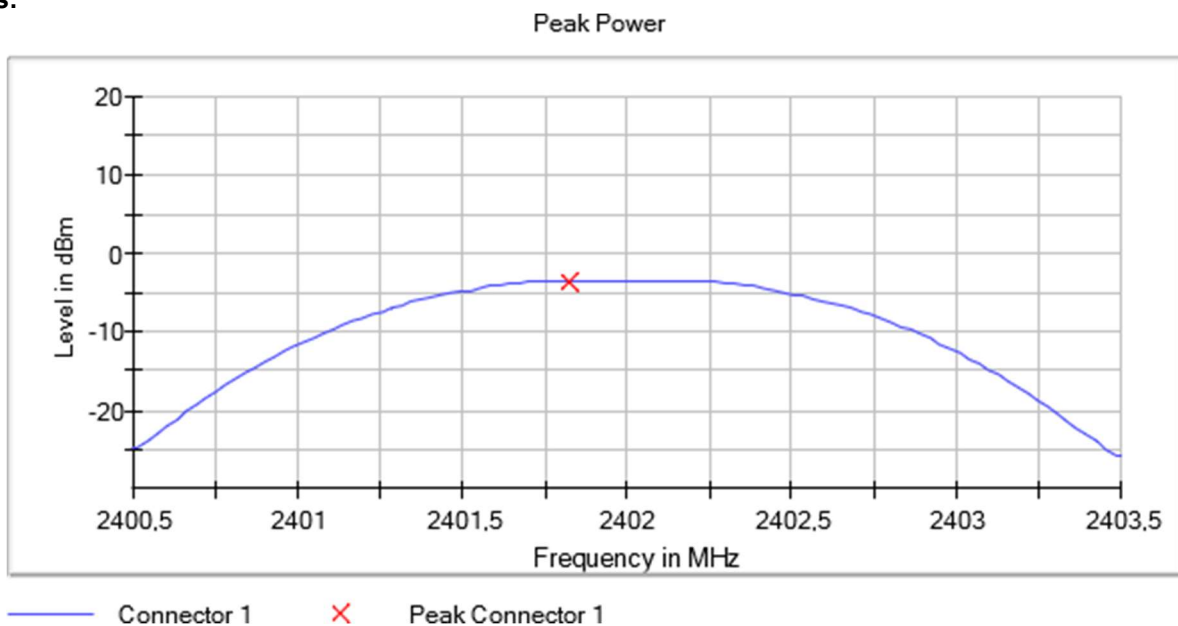
Uncertainty

Measurement uncertainty (dB) < ±0.80

Attachments

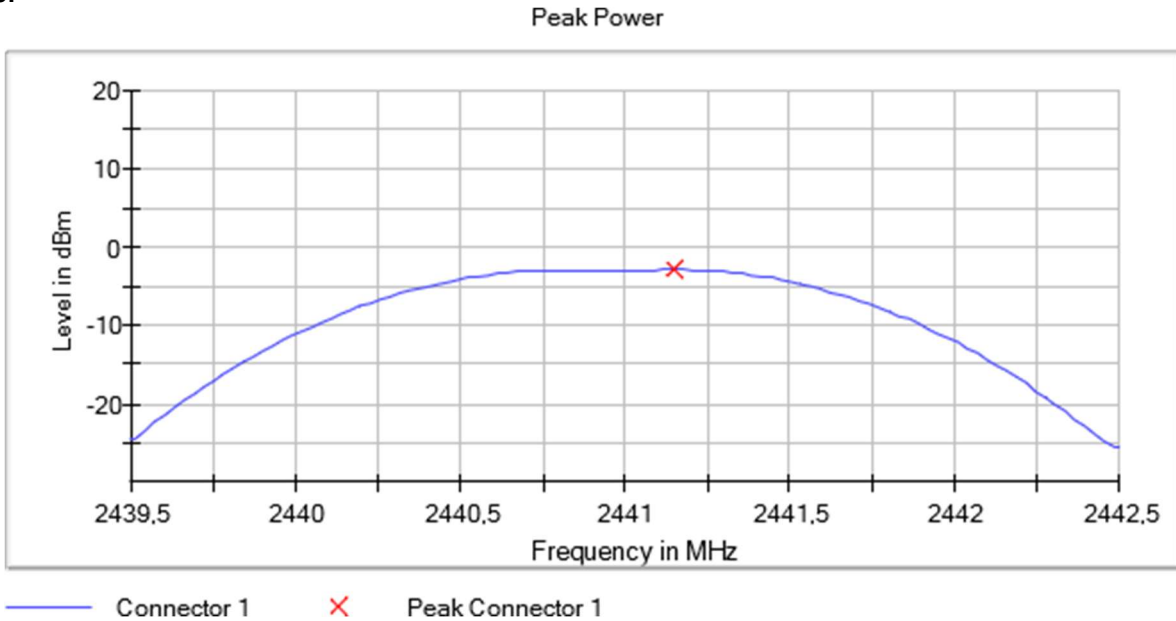
Operation Band MHz = [2400, 2483.5], Frequency MHz = 2402.00000, Equipment Type = Frequency Hopping Spread Spectrum systems (DSS), Modulation = BT (GFSK 1-DH5)

Images:



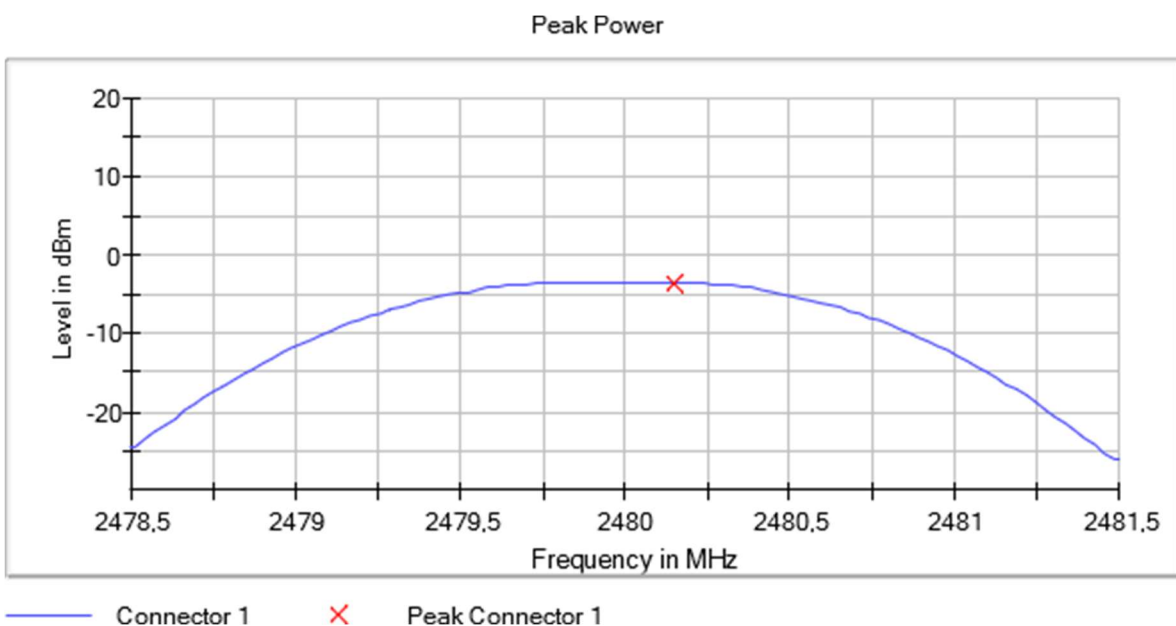
Operation Band MHz = [2400, 2483.5], Frequency MHz = 2441.00000, Equipment Type = Frequency Hopping Spread Spectrum systems (DSS), Modulation = BT (GFSK 1-DH5)

Images:



Operation Band MHz = [2400, 2483.5], Frequency MHz = 2480.00000, Equipment Type = Frequency Hopping Spread Spectrum systems (DSS), Modulation = BT (GFSK 1-DH5)

Images:



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

Results

Freq (MHz)	Maximum EIRP Power (dBm)	Maximum Conducted Power (dBm)
2402.00000	-1.0	-1.7
2441.00000	-0.1	-0.8
2480.00000	-0.7	-1.4

Verdict

Pass

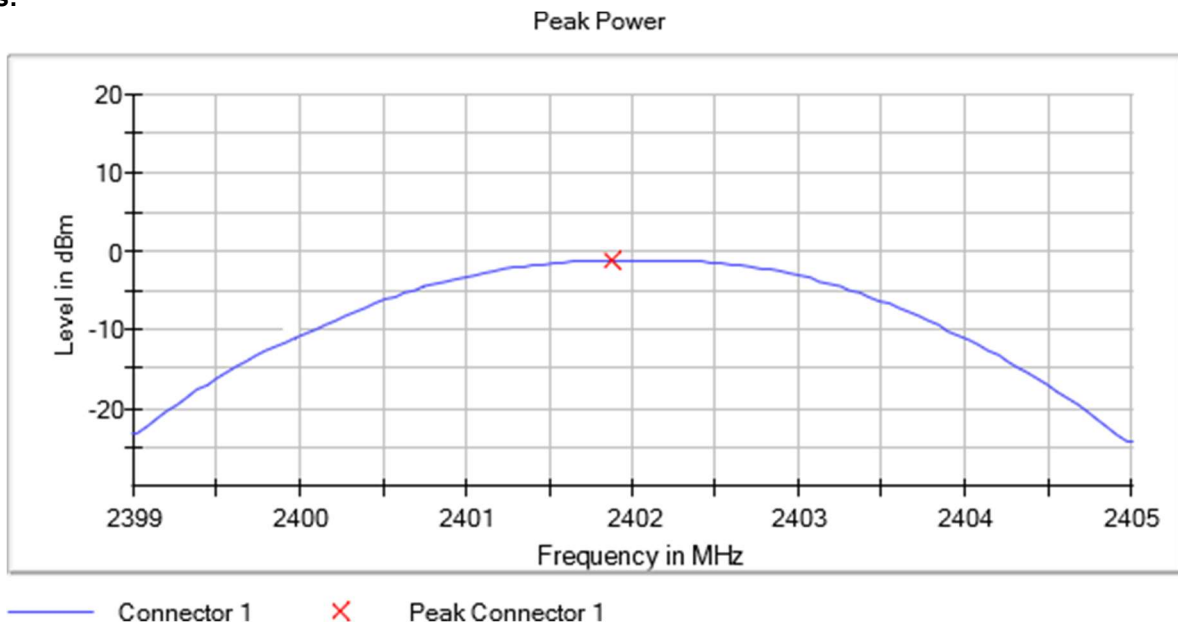
Uncertainty

Measurement uncertainty (dB) < ±0.80

Attachments

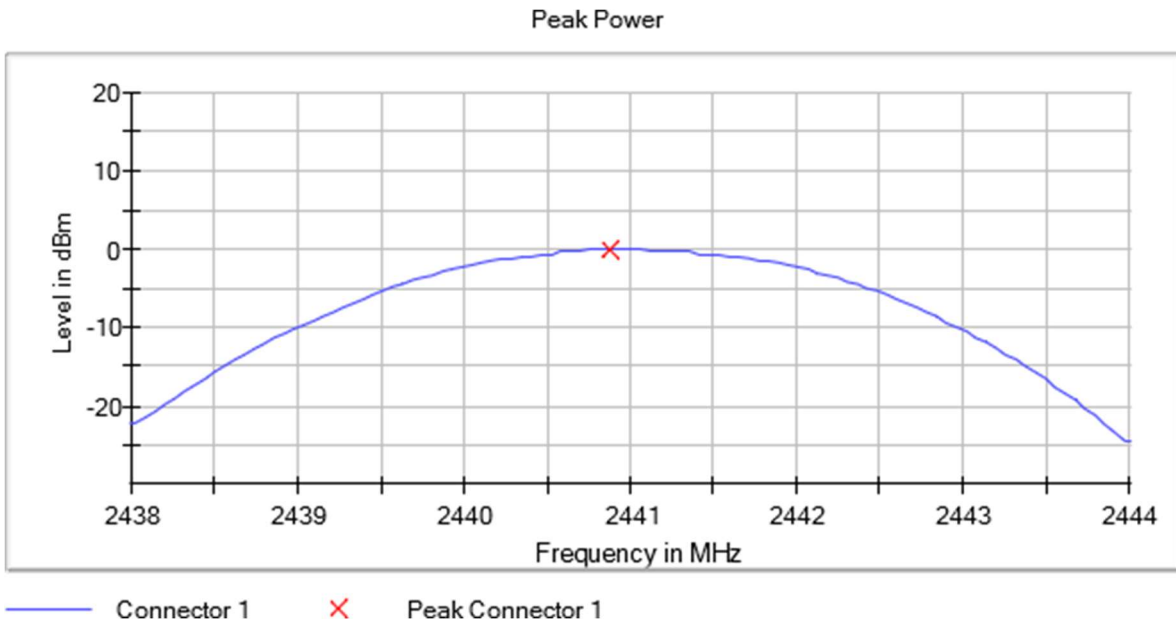
Operation Band MHz = [2400, 2483.5], Frequency MHz = 2402.00000, Equipment Type = Frequency Hopping Spread Spectrum systems (DSS), Modulation = BT (Pi/4 DQPSK 2-DH5)

Images:



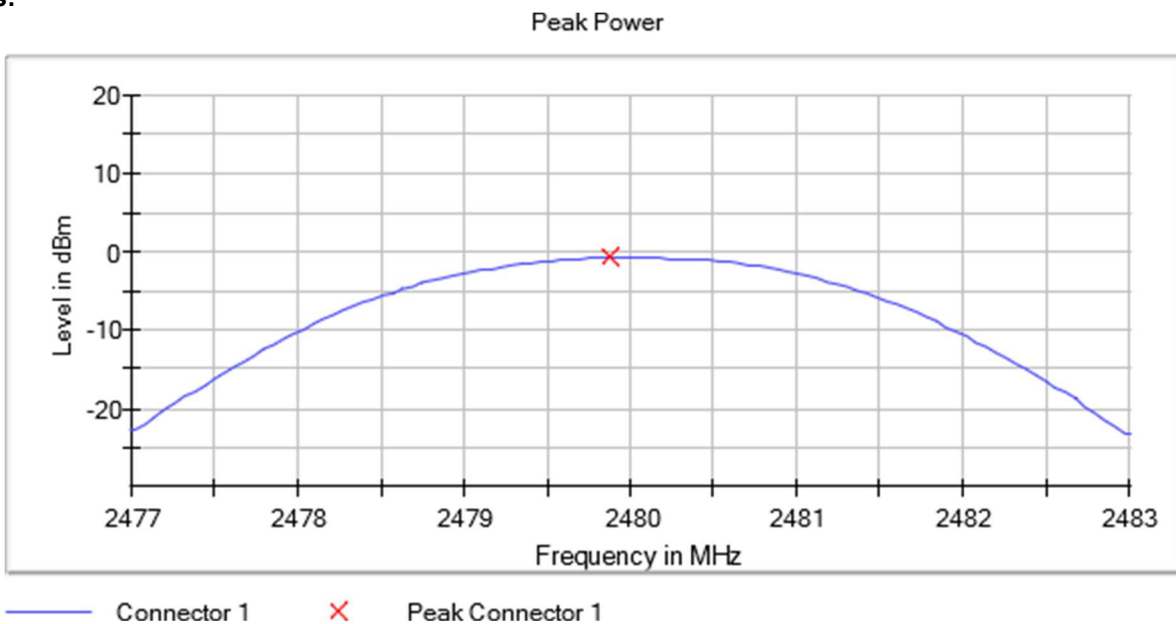
Operation Band MHz = [2400, 2483.5], Frequency MHz = 2441.00000, Equipment Type = Frequency Hopping Spread Spectrum systems (DSS), Modulation = BT (Pi/4 DQPSK 2-DH5)

Images:



Operation Band MHz = [2400, 2483.5], Frequency MHz = 2480.00000, Equipment Type = Frequency Hopping Spread Spectrum systems (DSS), Modulation = BT (Pi/4 DQPSK 2-DH5)

Images:



Modulation: BT (8DPSK 3-DH5)

Results

Freq (MHz)	Maximum EIRP Power (dBm)	Maximum Conducted Power (dBm)
2402.00000	-0.4	-1.1
2441.00000	0.2	-0.5
2480.00000	-0.3	-1.0

Verdict

Pass

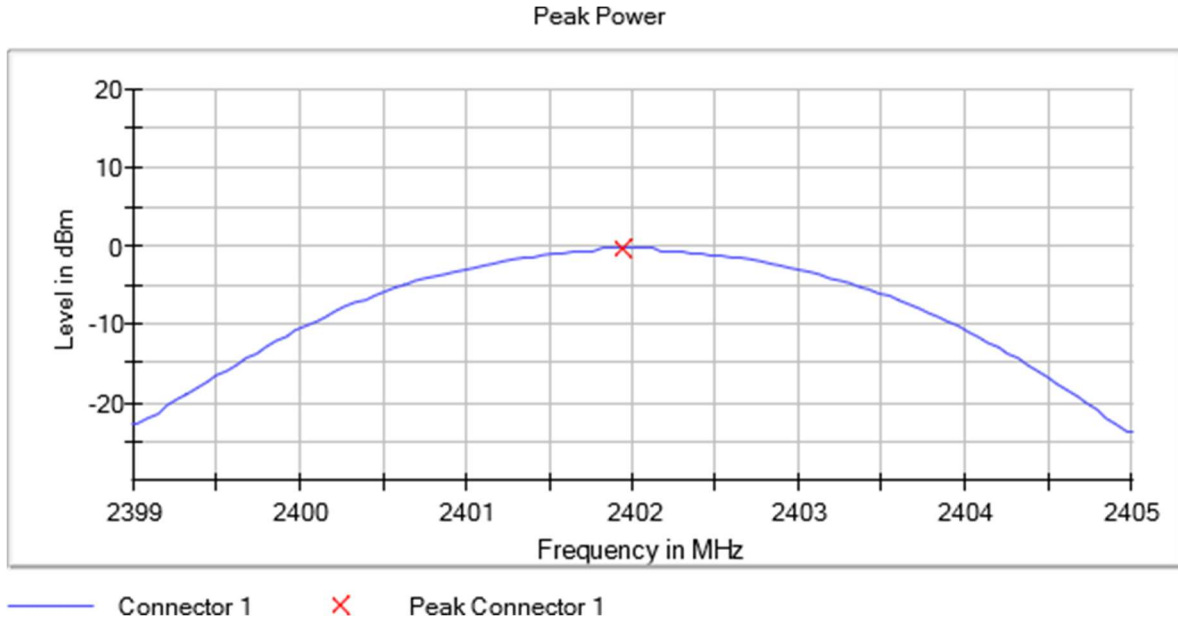
Uncertainty

Measurement uncertainty (dB) < ±0.80

Attachments

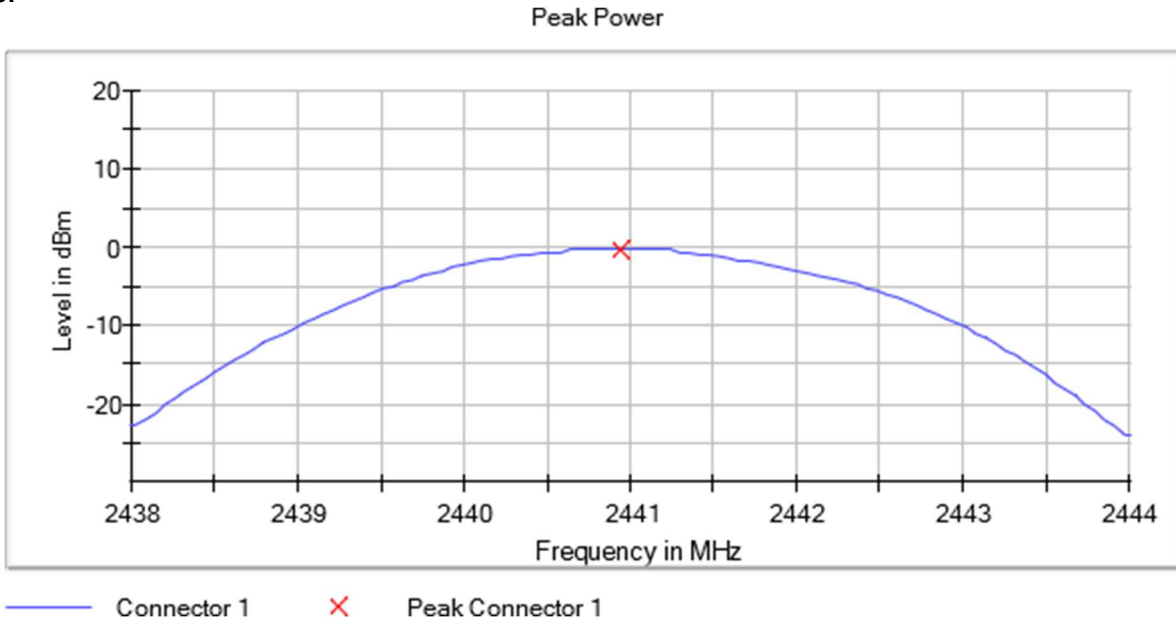
Operation Band MHz = [2400, 2483.5], Frequency MHz = 2402.00000, Equipment Type = Frequency Hopping Spread Spectrum systems (DSS), Modulation = BT (8DPSK 3-DH5)

Images:



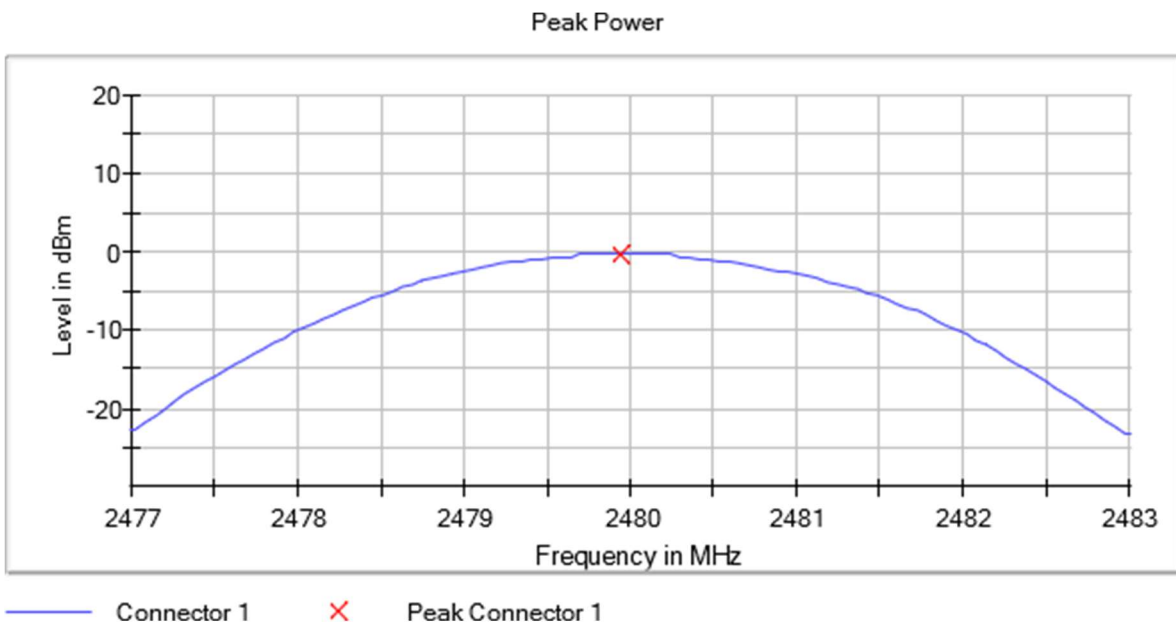
Operation Band MHz = [2400, 2483.5], Frequency MHz = 2441.00000, Equipment Type = Frequency Hopping Spread Spectrum systems (DSS), Modulation = BT (8DPSK 3-DH5)

Images:



Operation Band MHz = [2400, 2483.5], Frequency MHz = 2480.00000, Equipment Type = Frequency Hopping Spread Spectrum systems (DSS), Modulation = BT (8DPSK 3-DH5)

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: BT (GFSK 1-DH5)

Results

Radiated measurements were used to show compliance with the limits in the restricted bands 2.31-2.39 GHz and 2.4835-2.5 GHz.

Verdict

Pass

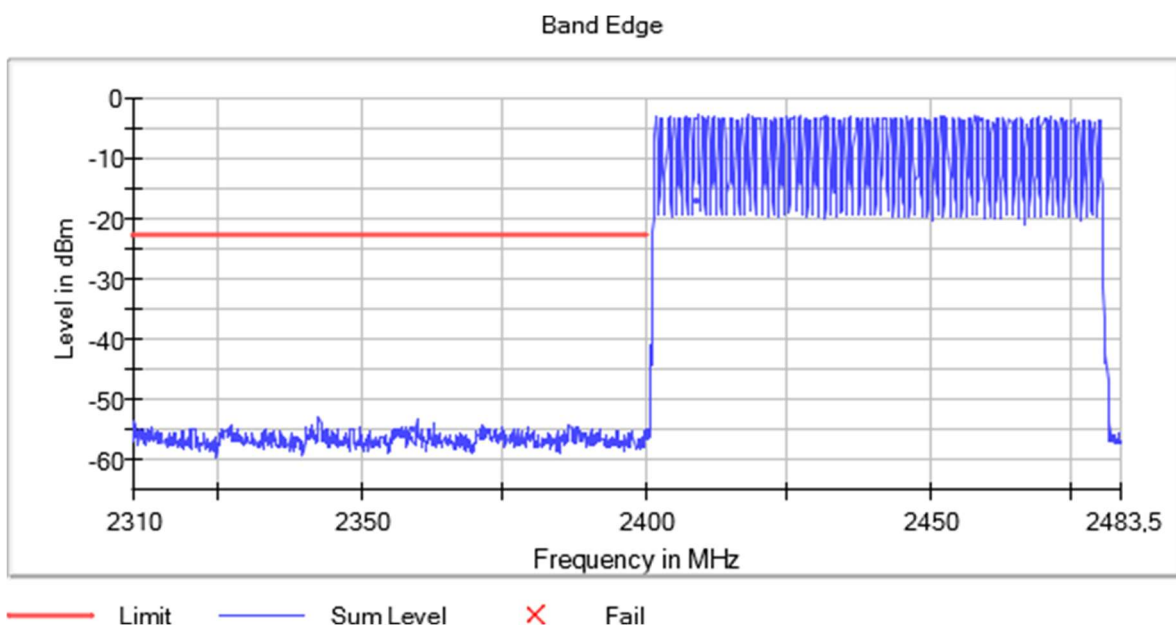
Uncertainty

Measurement uncertainty (dB) $< \pm 1.53$

Attachments

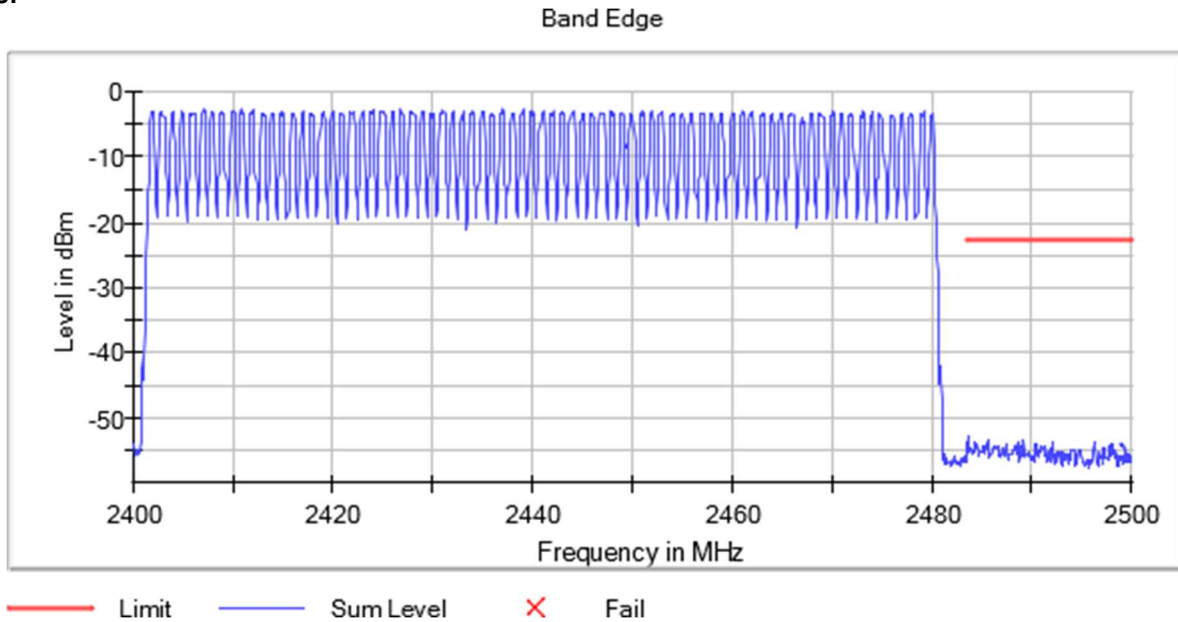
Operation Band MHz = [2400, 2483.5], Equipment Type = Frequency Hopping Spread Spectrum systems (DSS), Modulation = BT (GFSK 1-DH5), Measurement Point = 1

Images:



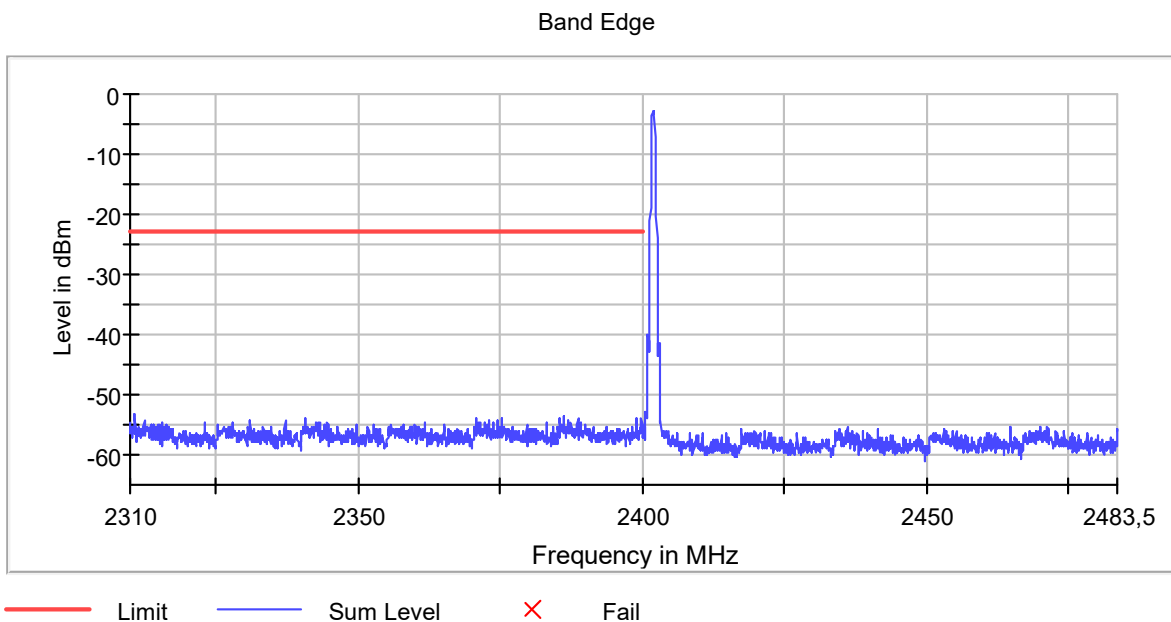
Operation Band MHz = [2400, 2483.5], Equipment Type = Frequency Hopping Spread Spectrum systems (DSS), Modulation = BT (GFSK 1-DH5), Measurement Point = 1

Images:



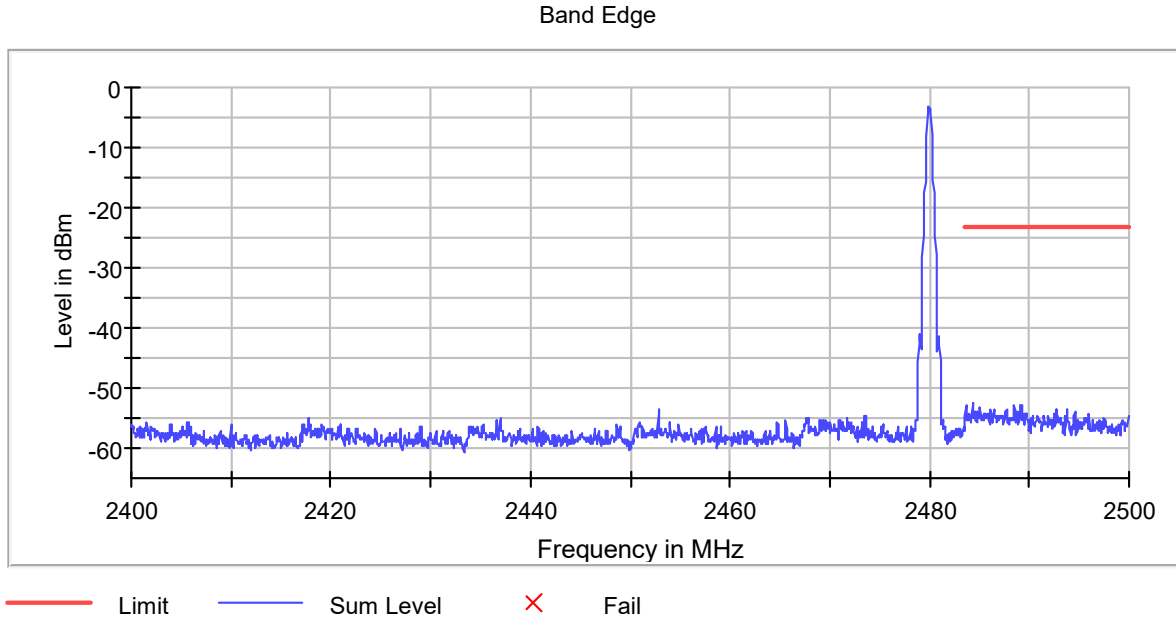
Operation Band MHz = [2400, 2483.5], Frequency MHz = 2402.00000, Equipment Type = Frequency Hopping Spread Spectrum systems (DSS), Modulation = BT (GFSK 1-DH5), Measurement Point = 1

Images:



Operation Band MHz = [2400, 2483.5], Frequency MHz = 2480.00000, Equipment Type = Frequency Hopping Spread Spectrum systems (DSS), Modulation = BT (GFSK 1-DH5), Measurement Point = 1

Images:



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

Results

Radiated measurements were used to show compliance with the limits in the restricted bands 2.31-2.39 GHz and 2.4835-2.5 GHz.

Verdict

Pass

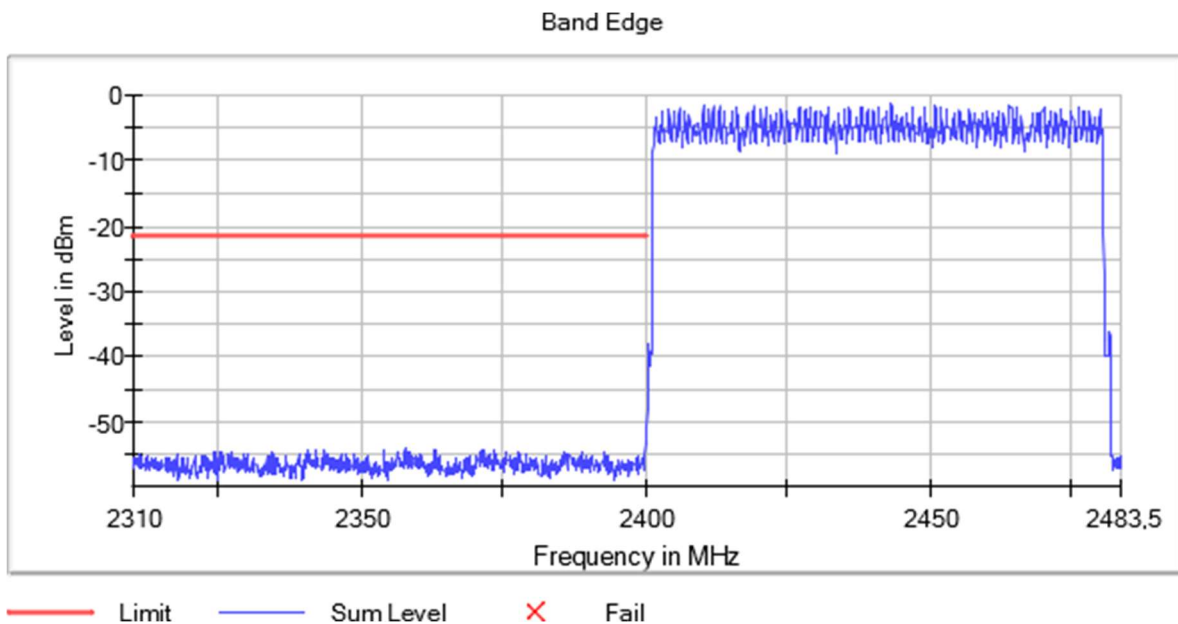
Uncertainty

Measurement uncertainty (dB) $< \pm 1.53$

Attachments

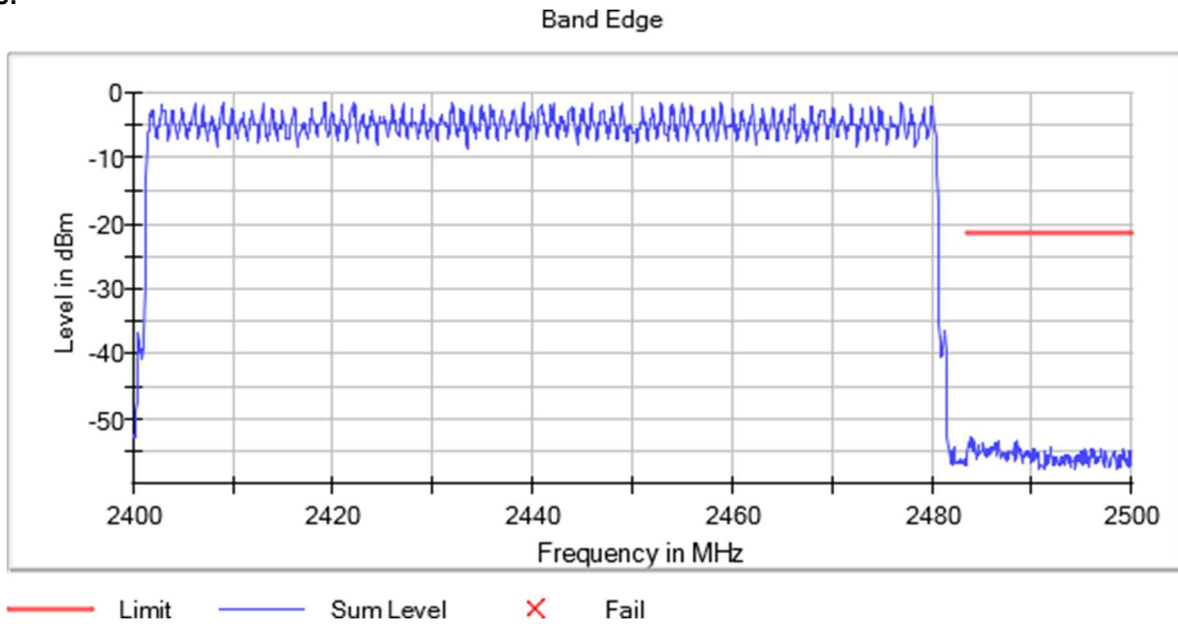
Operation Band MHz = [2400, 2483.5], Equipment Type = Frequency Hopping Spread Spectrum systems (DSS), Modulation = BT (Pi/4 DQPSK 2-DH5), Measurement Point = 1

Images:



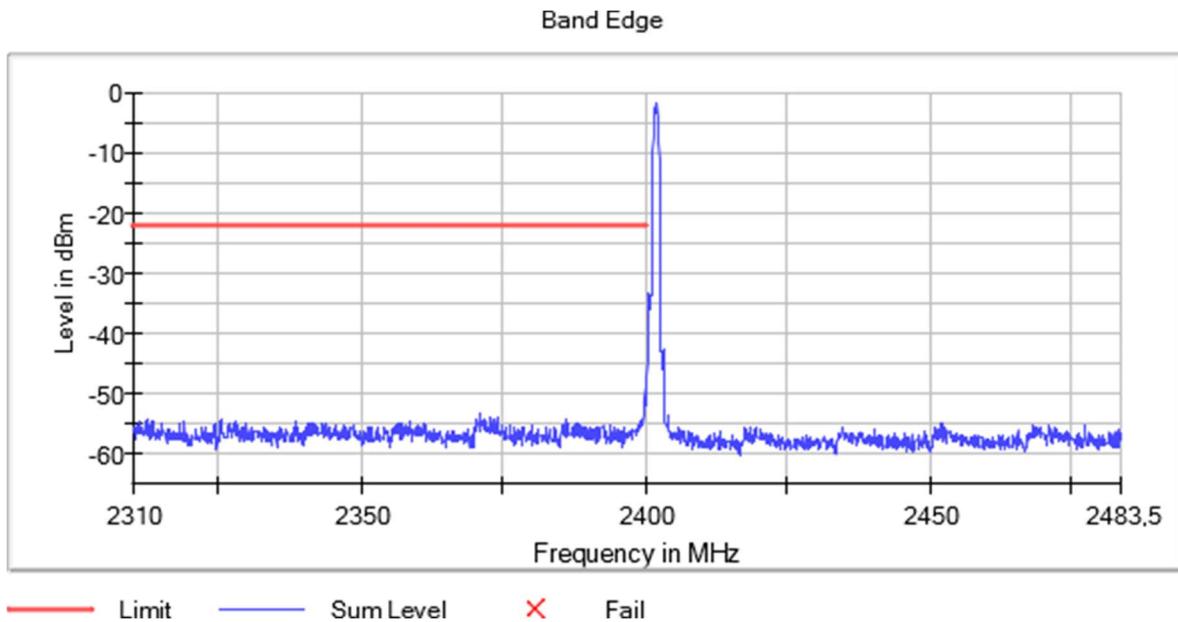
Operation Band MHz = [2400, 2483.5], Equipment Type = Frequency Hopping Spread Spectrum systems (DSS), Modulation = BT (Pi/4 DQPSK 2-DH5), Measurement Point = 1

Images:



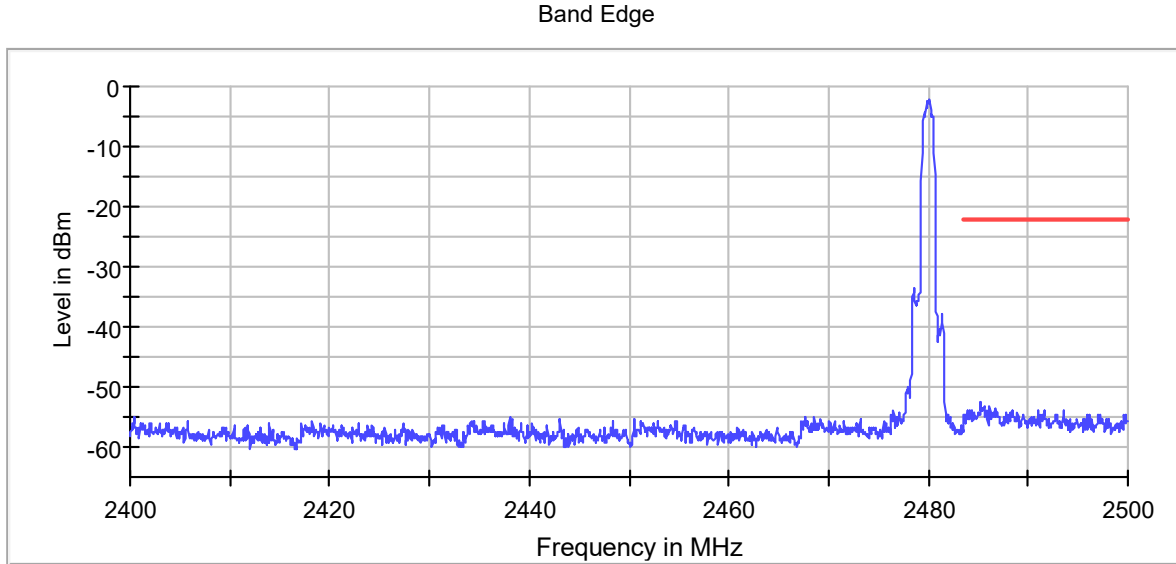
Operation Band MHz = [2400, 2483.5], Frequency MHz = 2402.00000, Equipment Type = Frequency Hopping Spread Spectrum systems (DSS), Modulation = BT (Pi/4 DQPSK 2-DH5), Measurement Point = 1

Images:



Operation Band MHz = [2400, 2483.5], Frequency MHz = 2480.00000, Equipment Type = Frequency Hopping Spread Spectrum systems (DSS), Modulation = BT (Pi/4 DQPSK 2-DH5), Measurement Point = 1

Images:



— Limit — Sum Level × Fail

Modulation: BT (8DPSK 3-DH5)

Results

Radiated measurements were used to show compliance with the limits in the restricted bands 2.31-2.39 GHz and 2.4835-2.5 GHz.

Verdict

Pass

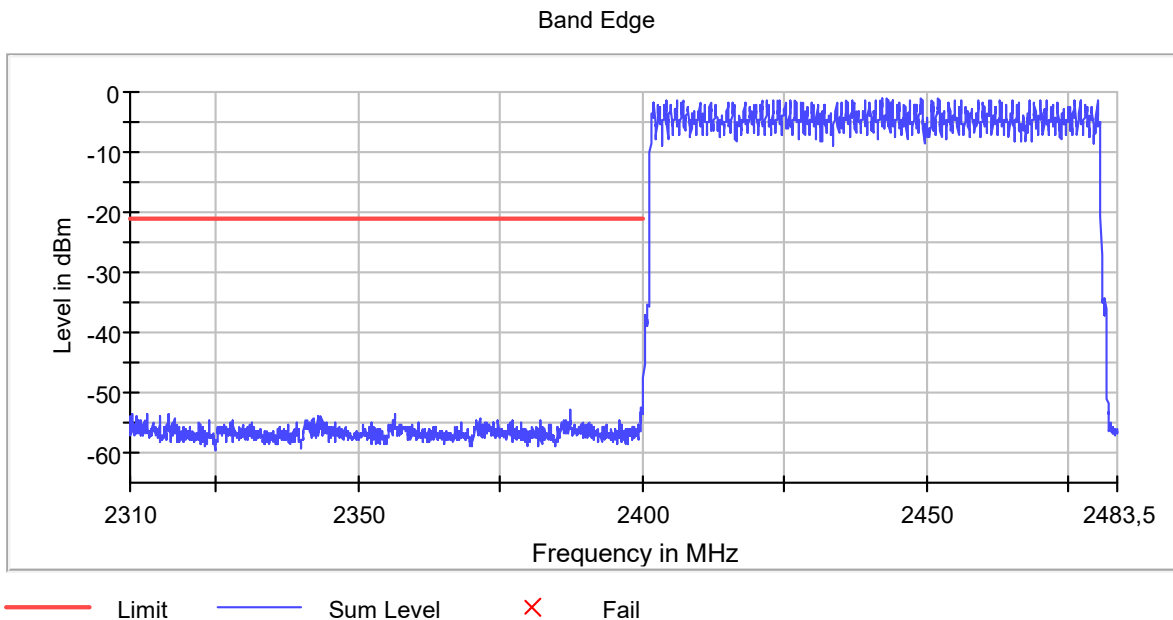
Uncertainty

Measurement uncertainty (dB) $< \pm 1.53$

Attachments

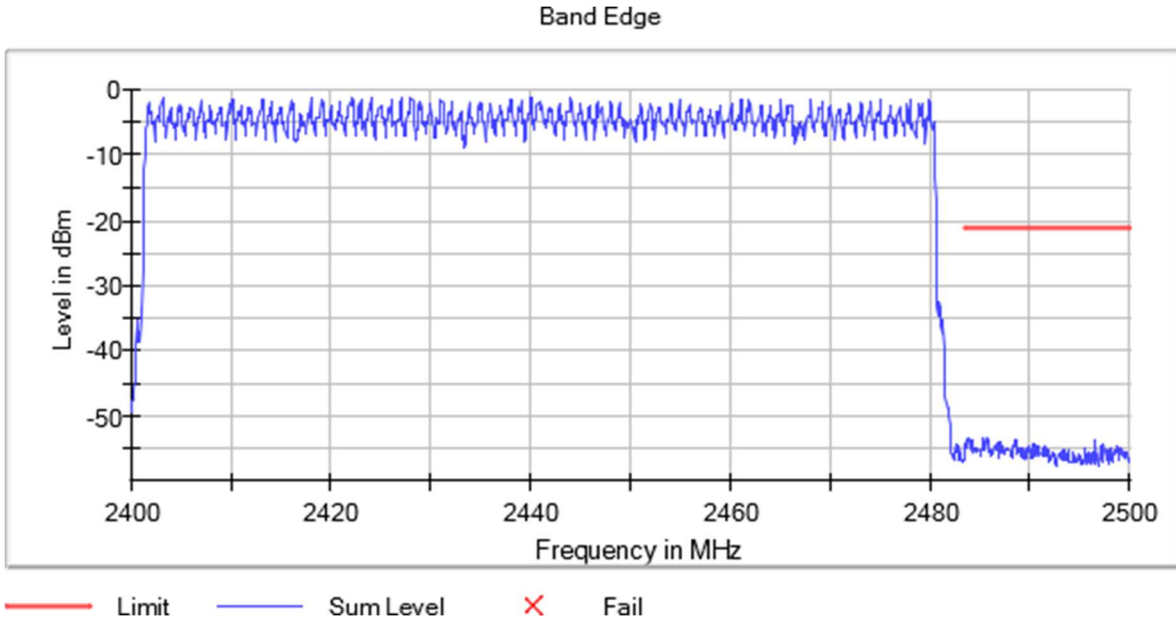
Operation Band MHz = [2400, 2483.5], Equipment Type = Frequency Hopping Spread Spectrum systems (DSS), Modulation = BT (8DPSK 3-DH5), Measurement Point = 1

Images:



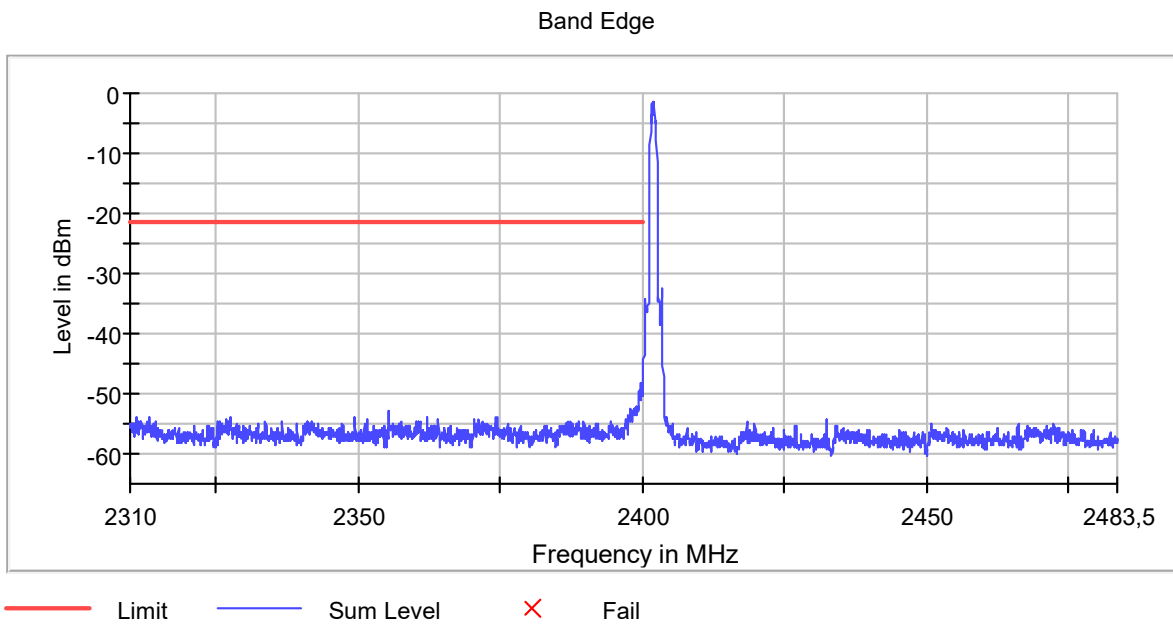
Operation Band MHz = [2400, 2483.5], Equipment Type = Frequency Hopping Spread Spectrum systems (DSS), Modulation = BT (8DPSK 3-DH5), Measurement Point = 1

Images:



Operation Band MHz = [2400, 2483.5], Frequency MHz = 2402.00000, Equipment Type = Frequency Hopping Spread Spectrum systems (DSS), Modulation = BT (8DPSK 3-DH5), Measurement Point = 1

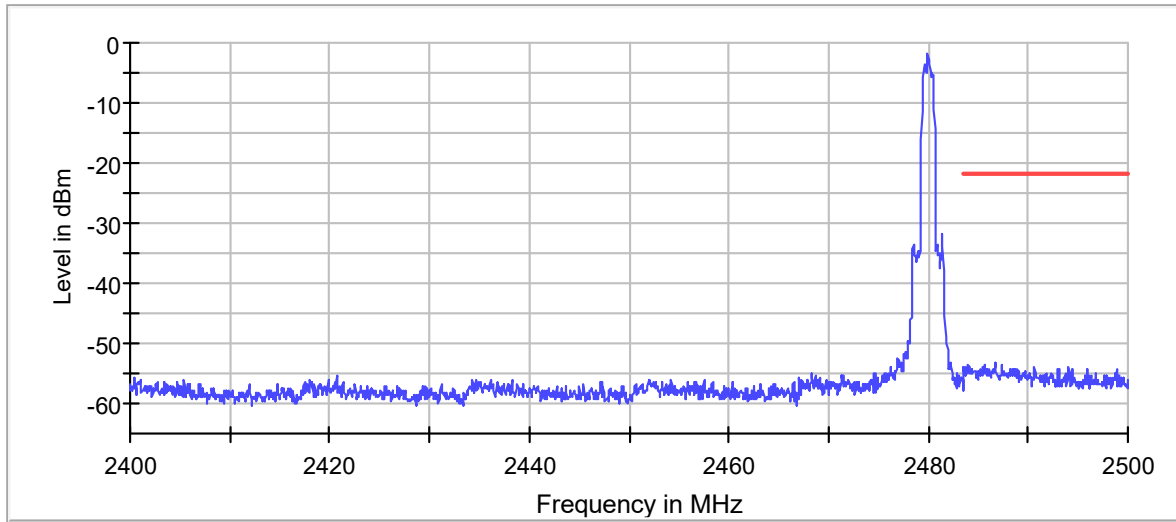
Images:



Operation Band MHz = [2400, 2483.5], Frequency MHz = 2480.00000, Equipment Type = Frequency Hopping Spread Spectrum systems (DSS), Modulation = BT (8DPSK 3-DH5), Measurement Point = 1

Images:

Band Edge



— Limit — Sum Level × Fail

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 ($\mu\text{V}/\text{m}$)	Field strength ($\text{dB}\mu\text{V}/\text{m}$)	Measurement distance (m)
0.009-0.490	2400/F(kHz)	-	300
0.490-1.705	24000/F(kHz)	-	30
1.705 - 30.0	30	-	30
30 - 88	100	40	3
88 - 216	150	43.5	3
216 - 960	200	46	3
Above 960	500	54	3

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

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

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

Modulation: BT (GFSK 1-DH5)

Results

Freq (MHz)	Freq Rng (GHz)	Unwanted Freq (MHz)	Unwanted Lvl (dBµV/m)	Pol	Detector	
2402.00000	[0.03, 1]	131.203333	18.15	V	PK	
2402.00000		131.203333	15.22	V	QP	
2402.00000		353.204000	33.45	H	PK	
2402.00000		353.204000	29.15	H	QP	
2402.00000		43.709333	17.57	V	PK	
2402.00000		43.709333	12.04	V	QP	
2402.00000		47.977333	19.31	V	PK	
2402.00000		47.977333	16.08	V	QP	
2402.00000		570.775000	29.26	V	PK	
2402.00000		570.775000	24.44	V	QP	
2402.00000		889.258333	29.89	H	PK	
2402.00000		889.258333	24.93	H	QP	
2402.00000		[1, 3]	2350.120000	42.83	V	AVG
2402.00000			2367.240000	54.04	V	PK
2480.00000	2492.781000		43.58	V	AVG	
2480.00000	2493.722000		54.22	V	PK	

Verdict

Pass

Uncertainty

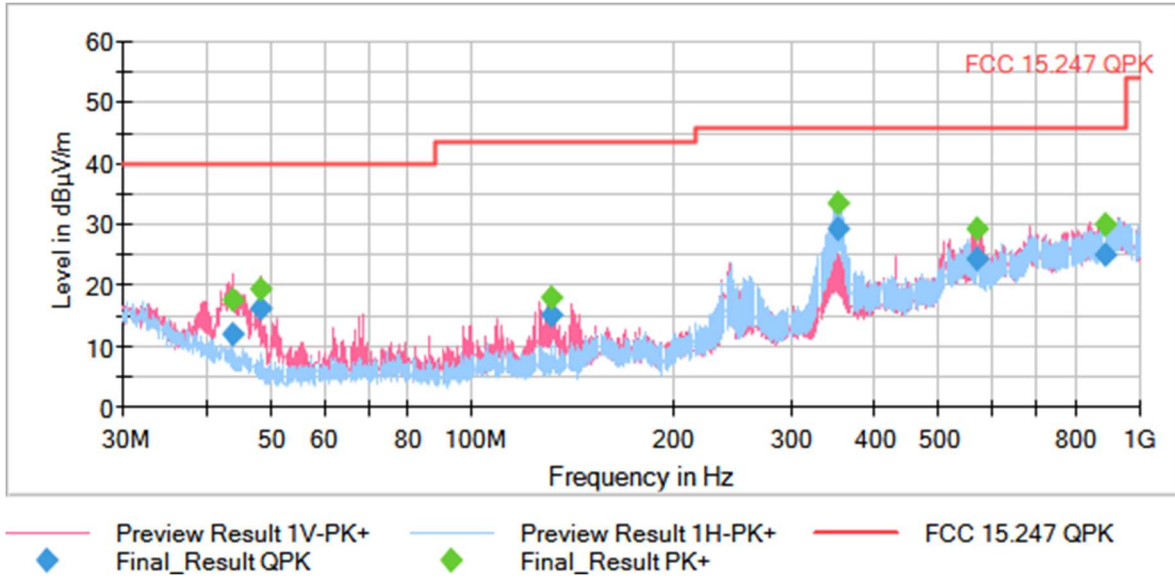
Measurement Uncertainty (dB):

- 0.03 GHz < f < 1 GHz: <± 5.07
- 1 GHz < f < 3 GHz: <± 4.00
- 3 GHz < f < 17 GHz: <± 5.08
- 17 GHz < f < 26 GHz: <± 5.33

Attachments

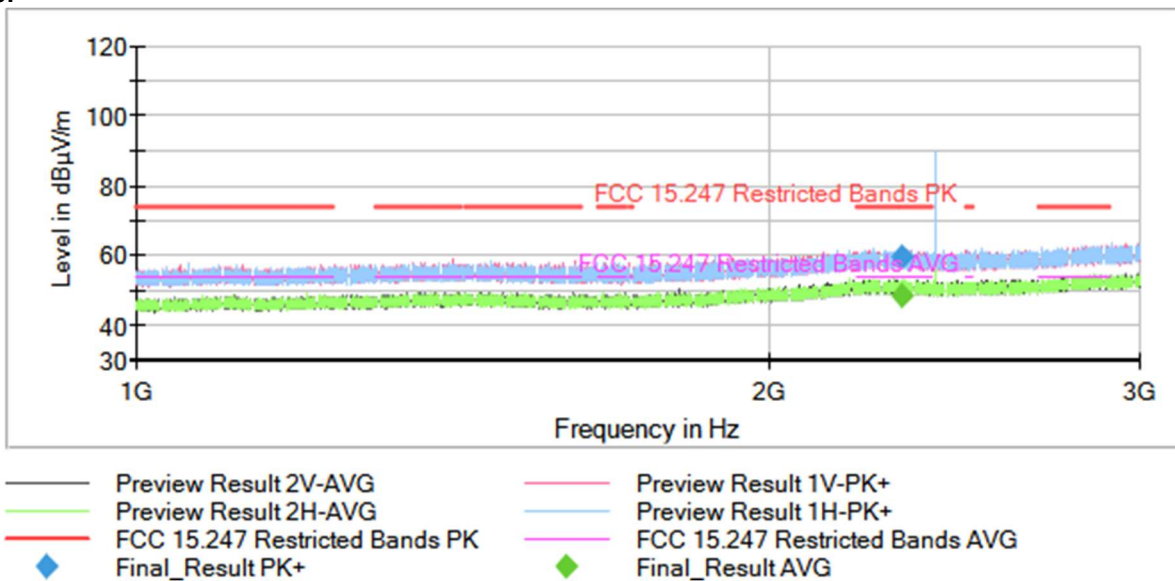
Operation Band MHz = [2400, 2483.5], Frequency MHz = The spurious frequencies detected do not depend neither on the operating channel, Equipment Type = Frequency Hopping Spread Spectrum systems (DSS), Modulation = BT (GFSK 1-DH5), Frequency Range GHz = [0.03, 1], Measurement Point = 1

Images:

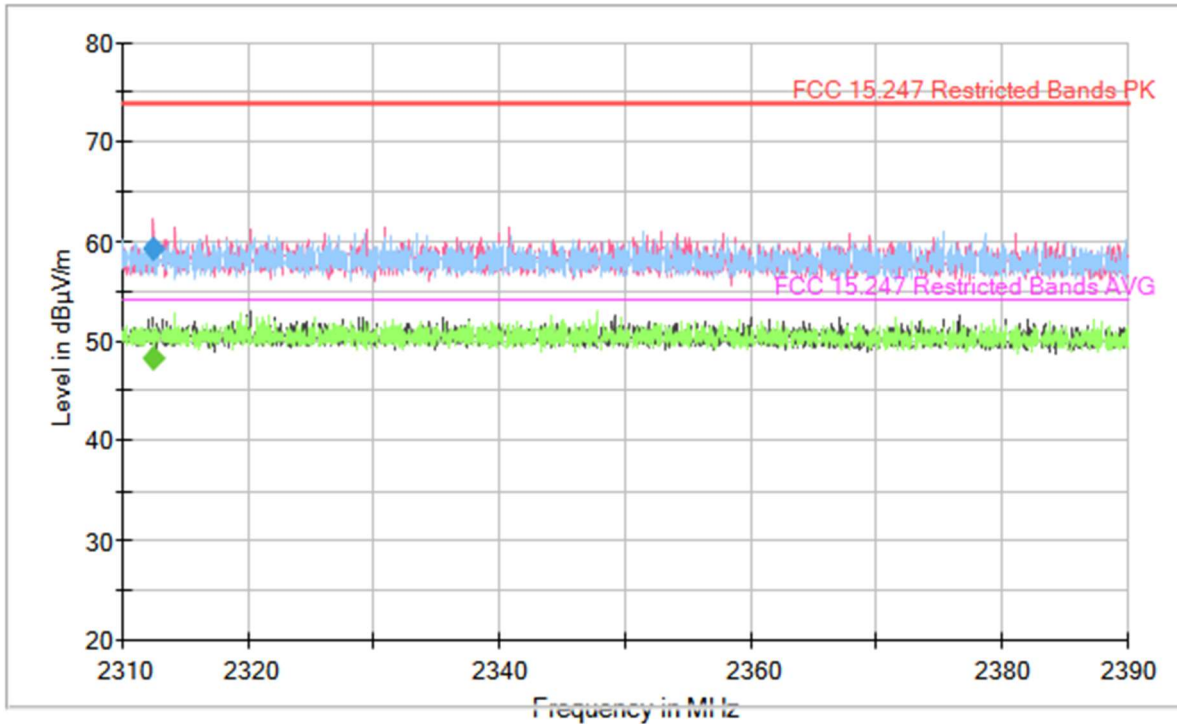


Operation Band MHz = [2400, 2483.5], Frequency MHz = 2402.00000, Equipment Type = Frequency Hopping Spread Spectrum systems (DSS), Modulation = BT (GFSK 1-DH5), Frequency Range GHz = [1, 3], Measurement Point = 1

Images:

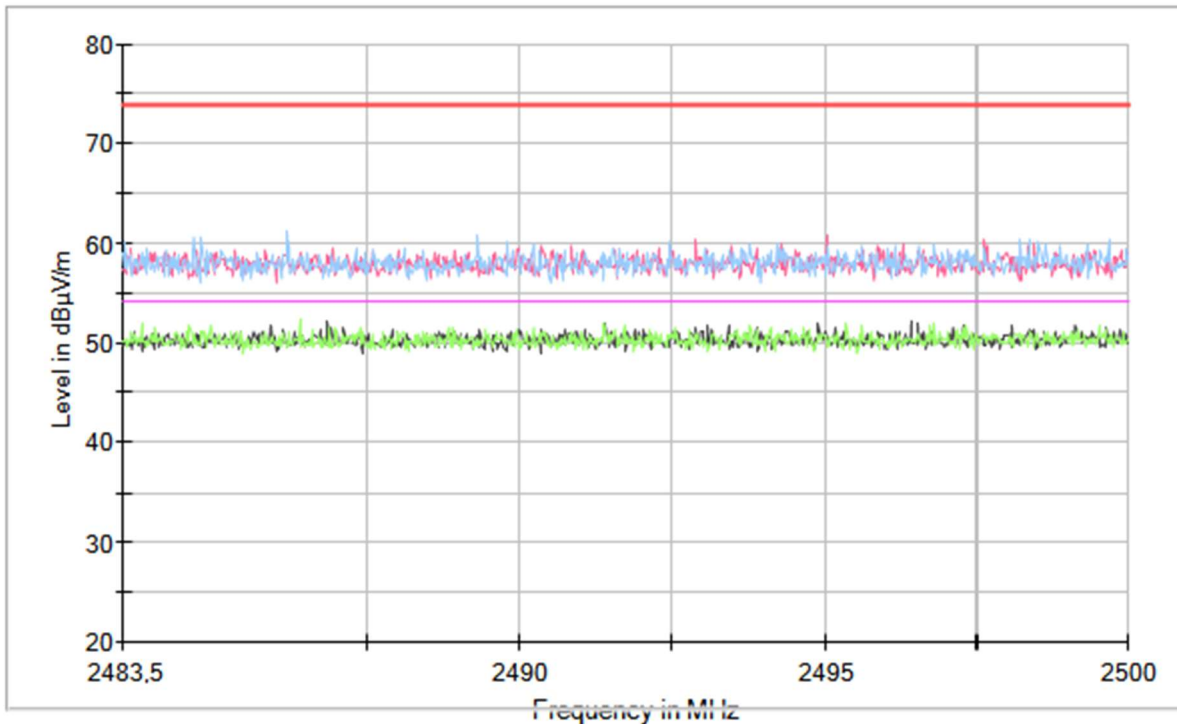


Full Spectrum



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

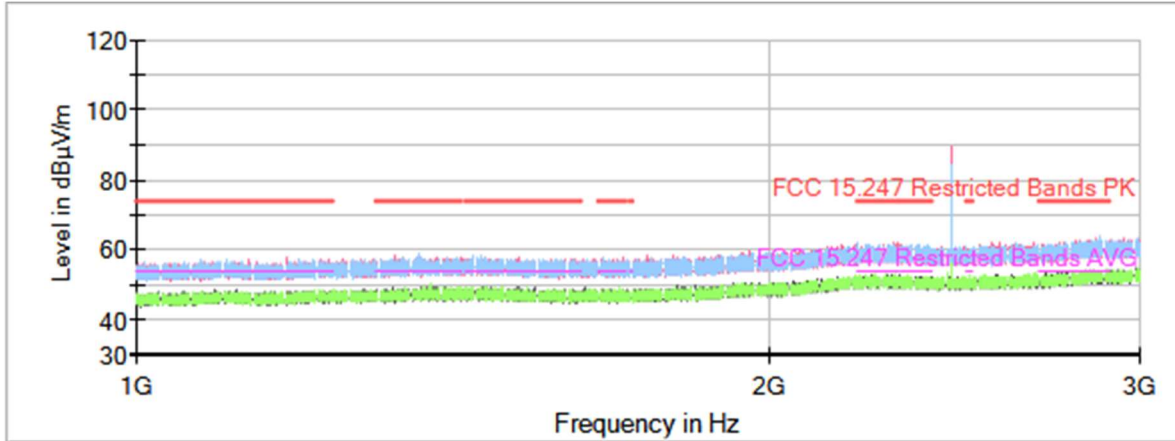
Full Spectrum



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

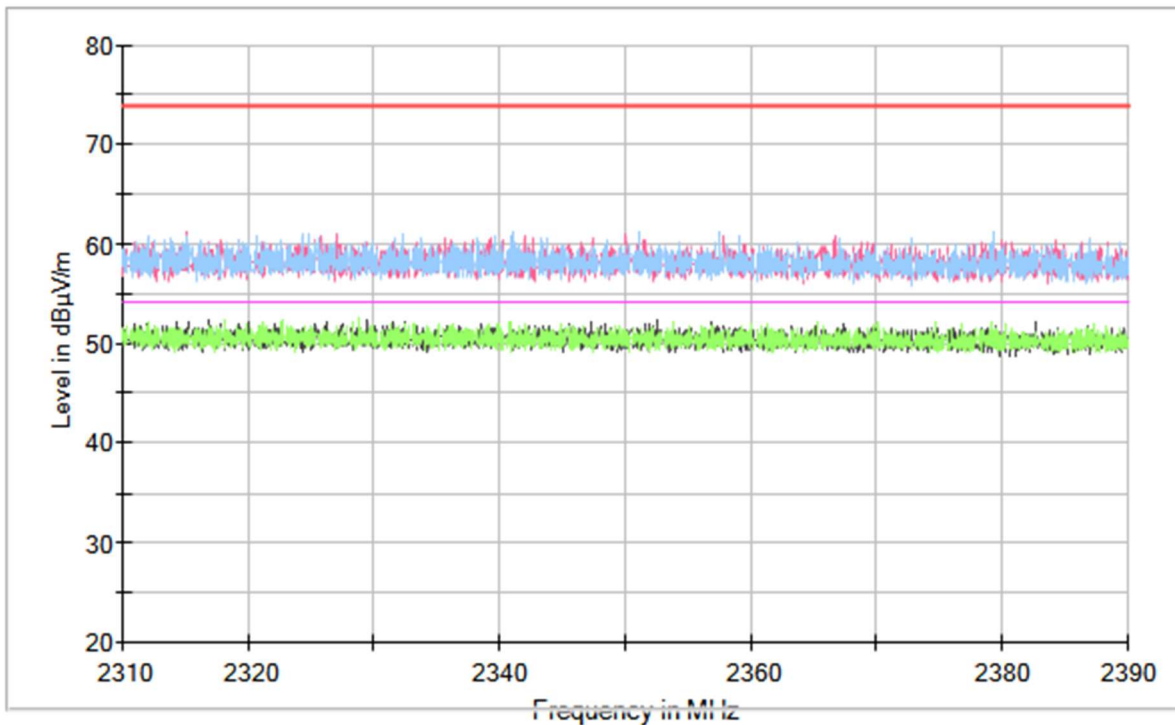
Operation Band MHz = [2400, 2483.5], Frequency MHz = 2441.00000, Equipment Type = Frequency Hopping Spread Spectrum systems (DSS), Modulation = BT (GFSK 1-DH5), Frequency Range GHz = [1, 3], Measurement Point = 1

Images:



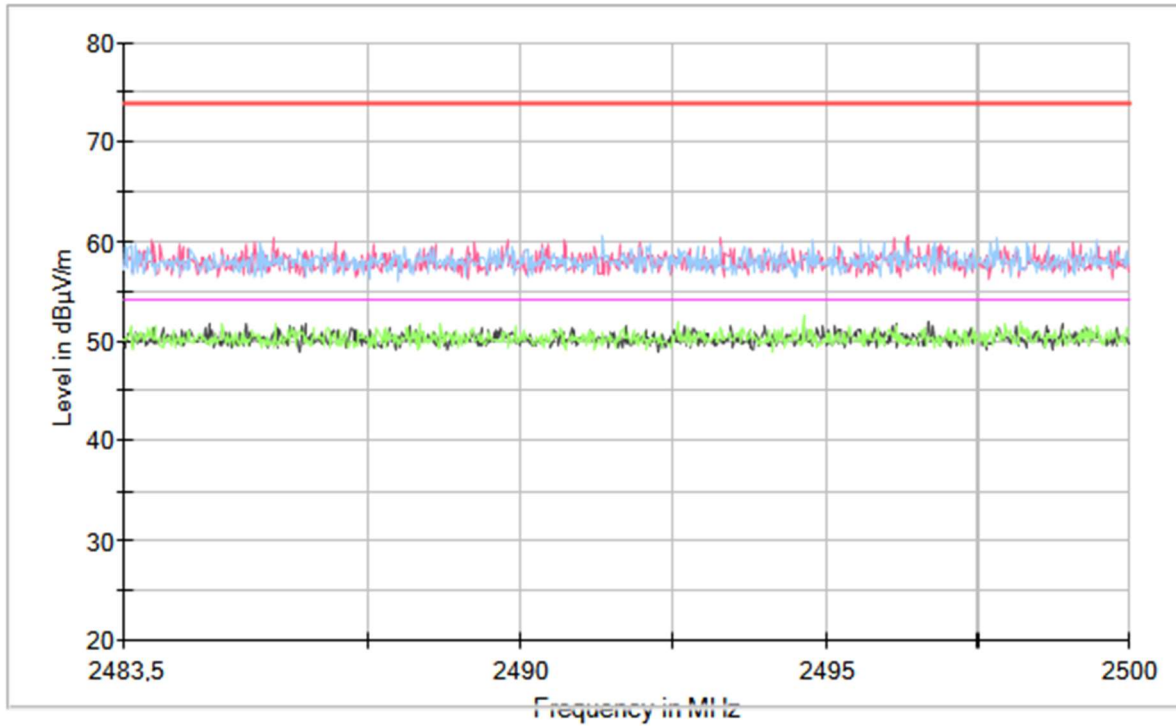
- | | | | |
|---|--------------------------------|---|---------------------------------|
| — | Preview Result 2V-AVG | — | Preview Result 1V-PK+ |
| — | Preview Result 2H-AVG | — | Preview Result 1H-PK+ |
| — | FCC 15.247 Restricted Bands PK | — | FCC 15.247 Restricted Bands AVG |
| ◆ | Final_Result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

Full Spectrum



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

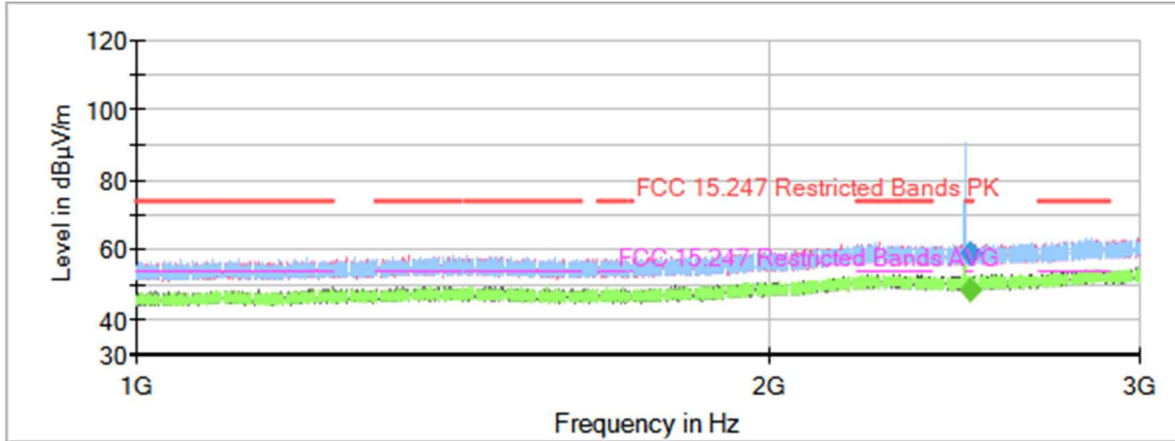
Full Spectrum



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

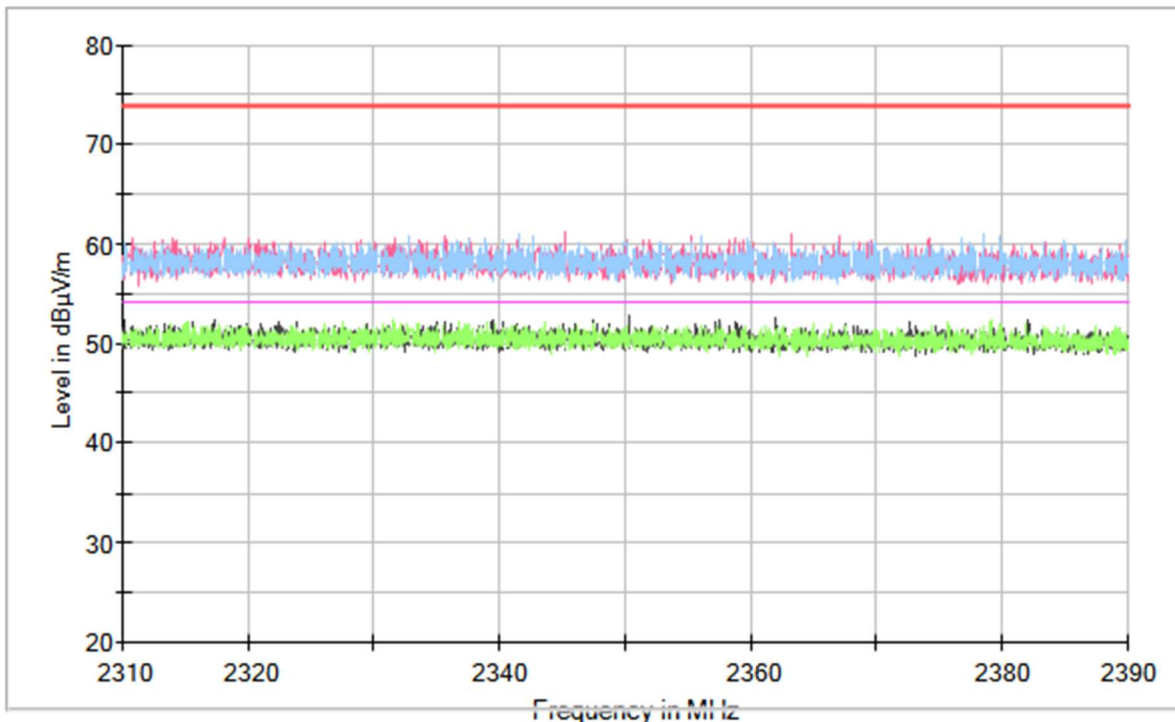
Operation Band MHz = [2400, 2483.5], Frequency MHz = 2480.00000, Equipment Type = Frequency Hopping Spread Spectrum systems (DSS), Modulation = BT (GFSK 1-DH5), Frequency Range GHz = [1, 3], Measurement Point = 1

Images:



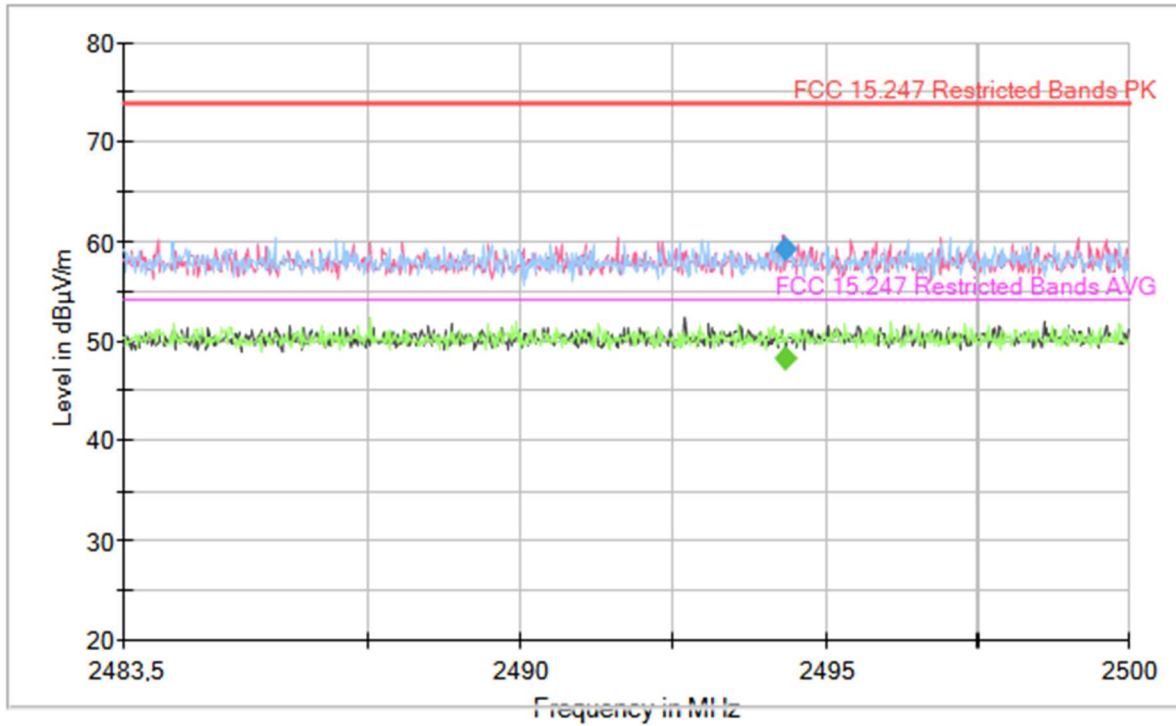
- Preview Result 2V-AVG
- Preview Result 2H-AVG
- FCC 15.247 Restricted Bands PK
- ◆ Final_Result PK+
- Preview Result 1V-PK+
- Preview Result 1H-PK+
- FCC 15.247 Restricted Bands AVG
- ◆ Final_Result AVG

Full Spectrum



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

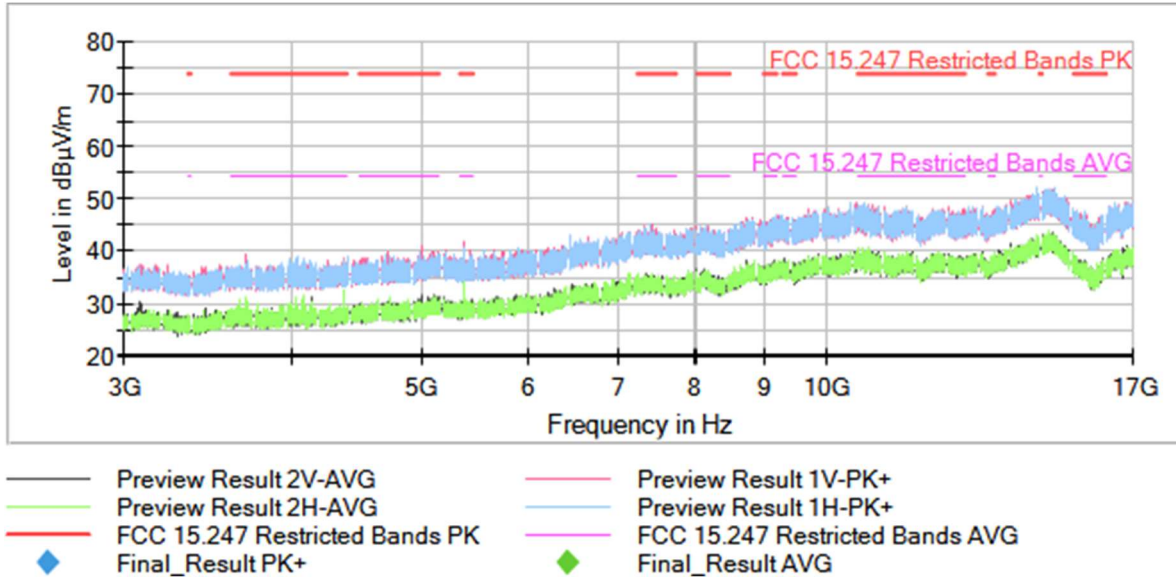
Full Spectrum



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

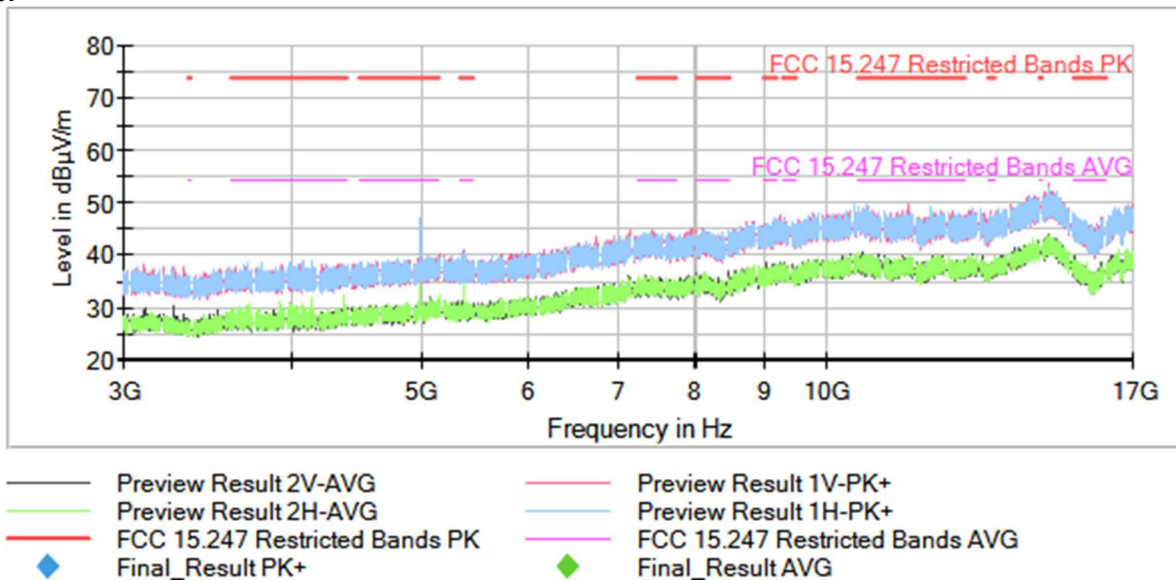
Operation Band MHz = [2400, 2483.5], Frequency MHz = 2402.00000, Equipment Type = Frequency Hopping Spread Spectrum systems (DSS), Modulation = BT (GFSK 1-DH5), Frequency Range GHz = [3, 17], Measurement Point = 1

Images:



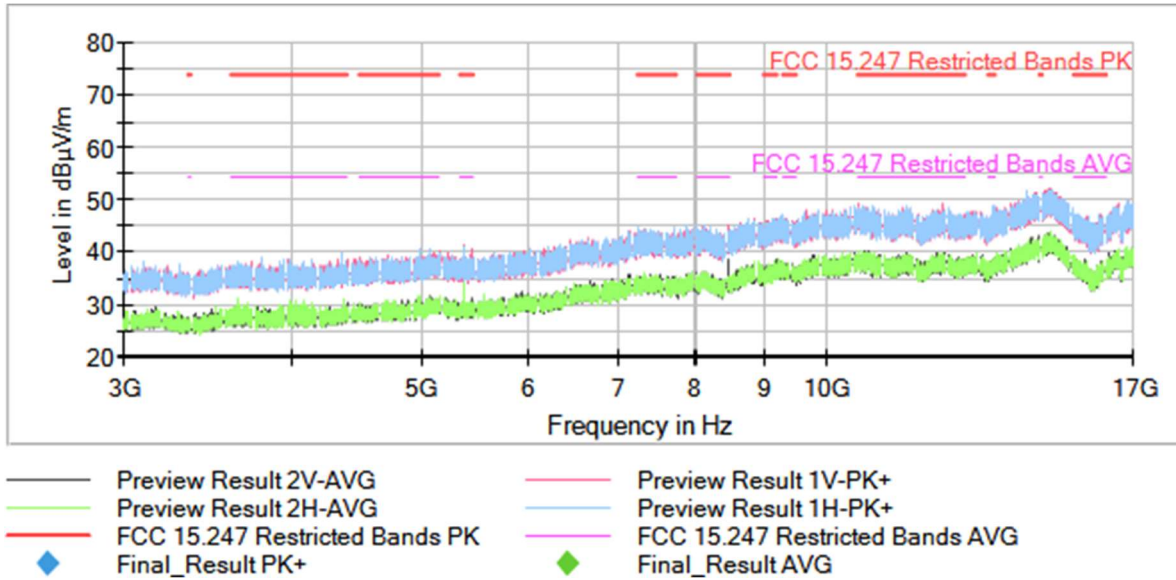
Operation Band MHz = [2400, 2483.5], Frequency MHz = 2441.00000, Equipment Type = Frequency Hopping Spread Spectrum systems (DSS), Modulation = BT (GFSK 1-DH5), Frequency Range GHz = [3, 17], Measurement Point = 1

Images:



Operation Band MHz = [2400, 2483.5], Frequency MHz = The spurious frequencies detected do not depend neither on the operating channel, Equipment Type = Frequency Hopping Spread Spectrum systems (DSS), Modulation = BT (GFSK 1-DH5), Frequency Range GHz = [3, 17], Measurement Point = 1

Images:



Operation Band MHz = [2400, 2483.5], Frequency MHz = The spurious frequencies detected do not depend neither on the operating channel, Equipment Type = Frequency Hopping Spread Spectrum systems (DSS), Modulation = BT (GFSK 1-DH5), Frequency Range GHz = [17, 26], Measurement Point = 1

Images:

