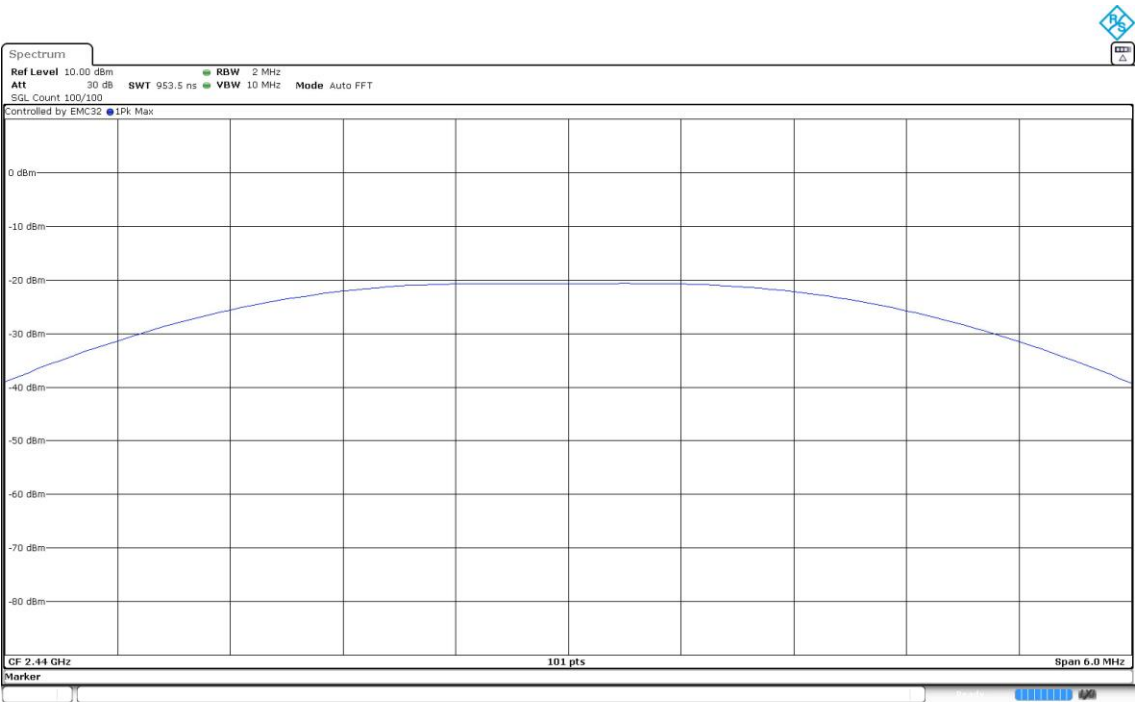
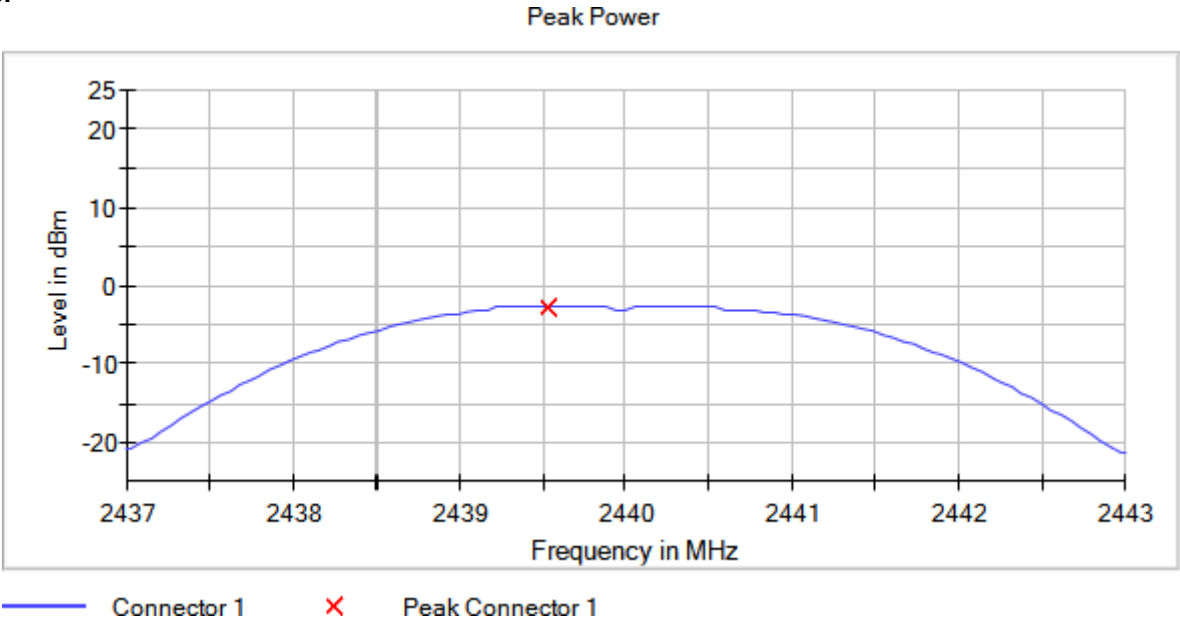


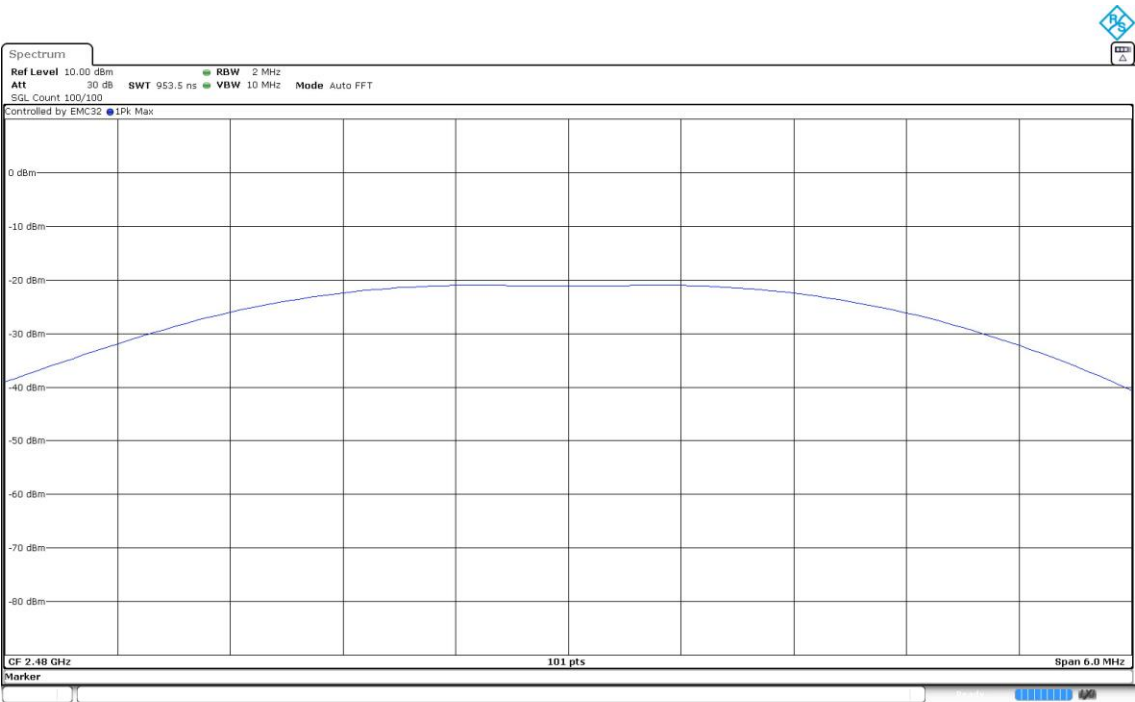
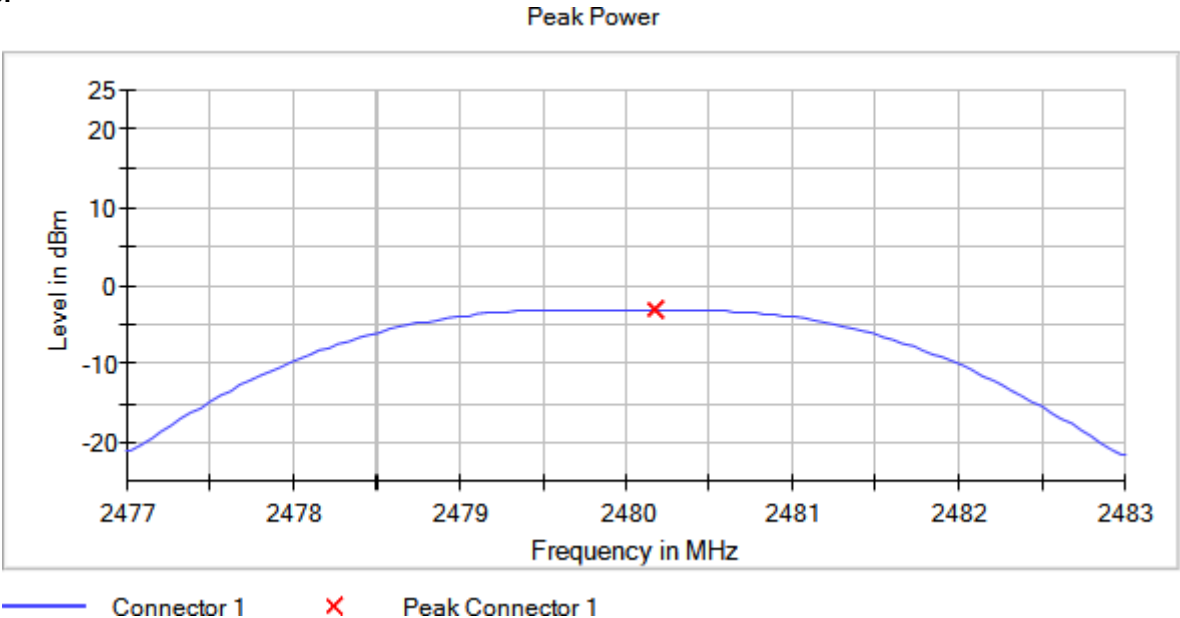
Operation Band MHz = [2400, 2483.5] Equipment Type = Digital Transmission System (DTS)
Frequency MHz = 2440.00000 Active Port = 3
Modulation = BTLE 5.2 (GFSK 2 Mbit/s)

Images:



Operation Band MHz = [2400, 2483.5] Equipment Type = Digital Transmission System (DTS)
Frequency MHz = 2480.00000 Active Port = 3
Modulation = BTLE 5.2 (GFSK 2 Mbit/s)

Images:



RSS-247 5.5 / FCC 15.247 (d) 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.

Results

Modulation: BTLE 5.2 (GFSK 1 Mbit/s)

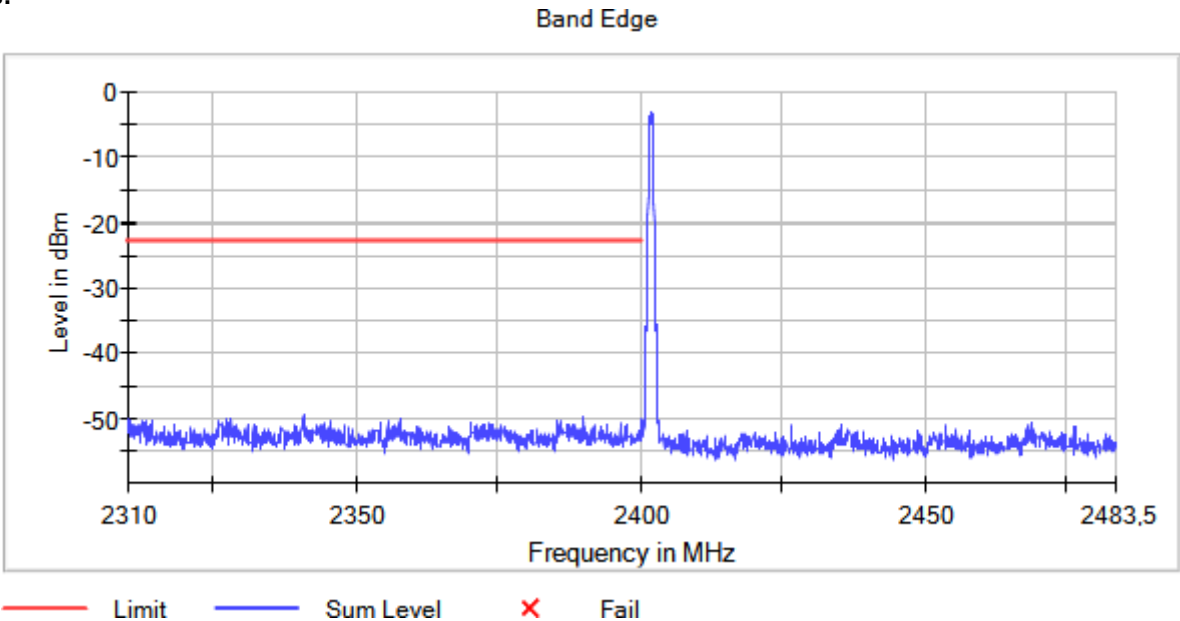
Verdict

Pass

Attachments

Operation Band MHz = [2400, 2483.5] Equipment Type = Digital Transmission System (DTS)
Frequency MHz = 2402.00000 Active Port = 3
Modulation = BTLE 5.2 (GFSK 1 Mbit/s)

Images:



Tables:

Spectrum Analyzer Parameters 1

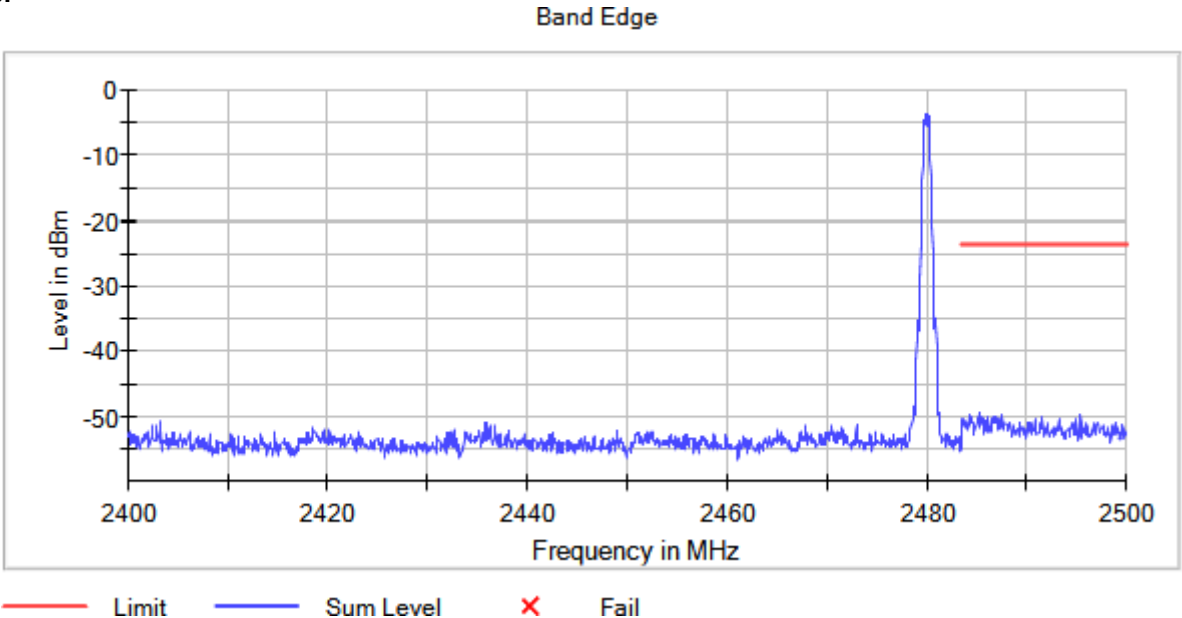
Setting	Instrument Value	Target Value
Start Frequency	2.31000 GHz	2.31000 GHz
Stop Frequency	2.40000 GHz	2.40000 GHz
Span	90.000 MHz	90.000 MHz
RBW	100.000 kHz	<= 100.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	1800	~ 1800
Sweeptime	113.672 µs	AUTO
Reference Level	10.000 dBm	10.000 dBm
Attenuation	30.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	FFT	AUTO
Preamplifier	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	6 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.44 dB	0.50 dB

Operation Band MHz = [2400, 2483.5] Equipment Type = Digital Transmission System (DTS)
Frequency MHz = 2480.00000 Active Port = 3
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	6 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.44 dB	0.50 dB

Results

Modulation: BTLE 5.2 (GFSK 2 Mbit/s)

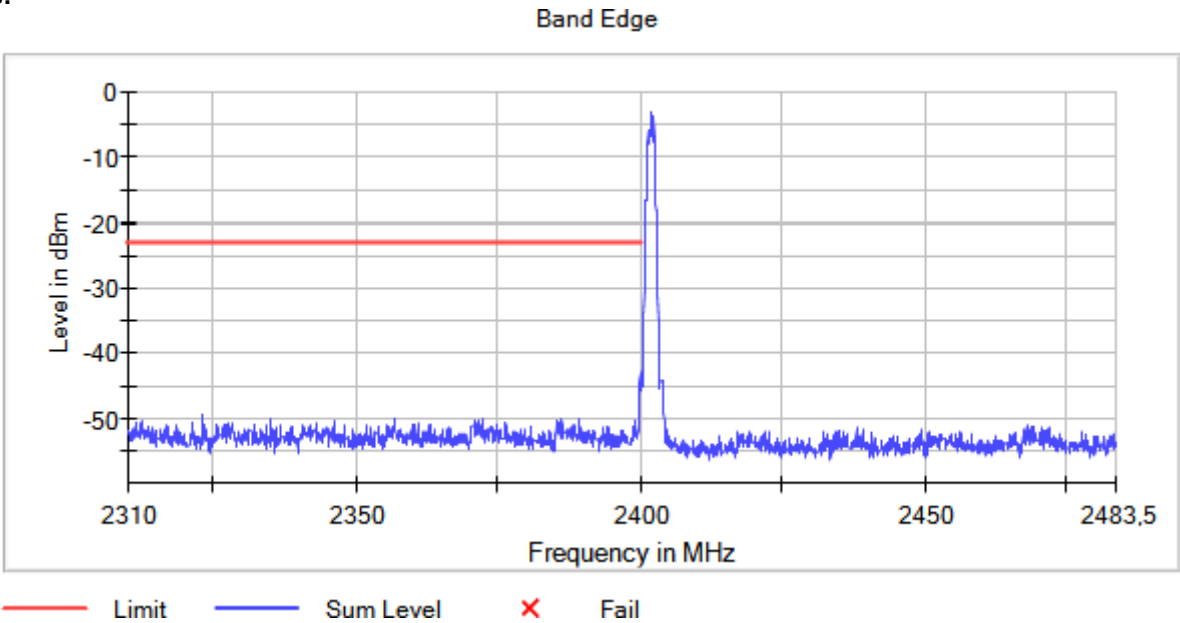
Verdict

Pass

Attachments

Operation Band MHz = [2400, 2483.5] Equipment Type = Digital Transmission System (DTS)
Frequency MHz = 2402.00000 Active Port = 3
Modulation = BTLE 5.2 (GFSK 2 Mbit/s)

Images:



Tables:

Spectrum Analyzer Parameters 1

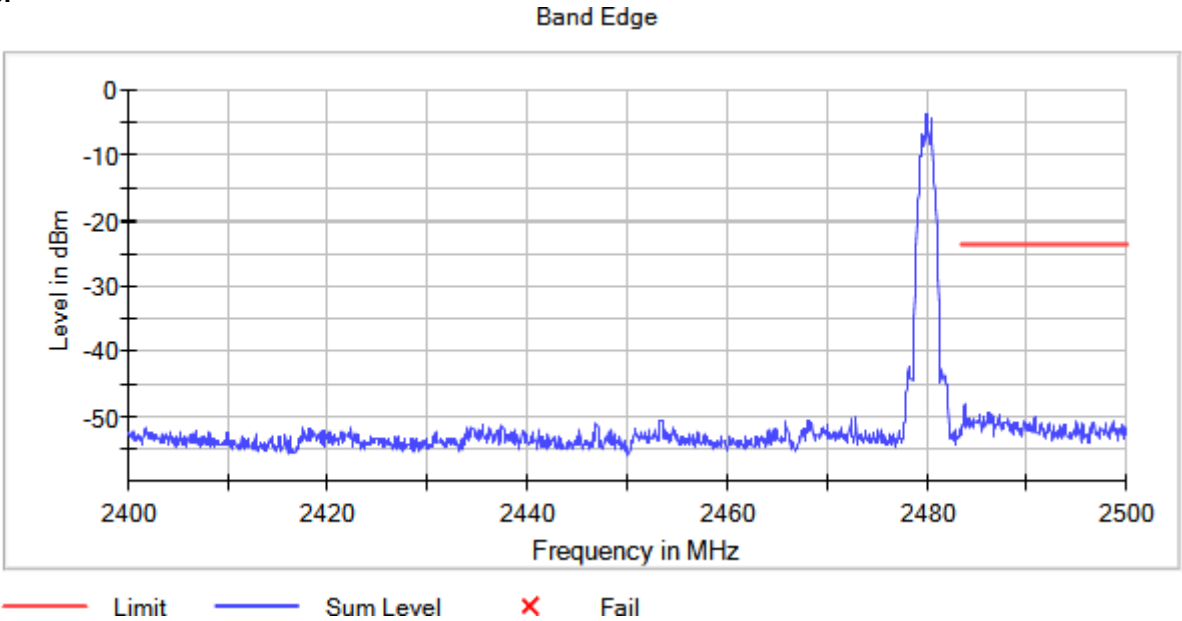
Setting	Instrument Value	Target Value
Start Frequency	2.31000 GHz	2.31000 GHz
Stop Frequency	2.40000 GHz	2.40000 GHz
Span	90.000 MHz	90.000 MHz
RBW	100.000 kHz	<= 100.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	1800	~ 1800
Sweeptime	113.672 µs	AUTO
Reference Level	10.000 dBm	10.000 dBm
Attenuation	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	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	6 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.19 dB	0.50 dB

Operation Band MHz = [2400, 2483.5] Equipment Type = Digital Transmission System (DTS)
Frequency MHz = 2480.00000 Active Port = 3
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	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	6 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.19 dB	0.50 dB

RSS-247 5.5 / FCC 15.247 (d) 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 ($\text{dB}\mu\text{V/m}$)	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

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)	2480.00000	3	79.228	15.88	V	QP
					79.228	20.80	V	PK

Modulation: BTLE (GFSK 2 Mbit/s)

Results

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

Verdict

Pass

Attachments

Frequency Range GHz = [0.03, 1]

Equipment Type = Digital Transmission System (DTS)

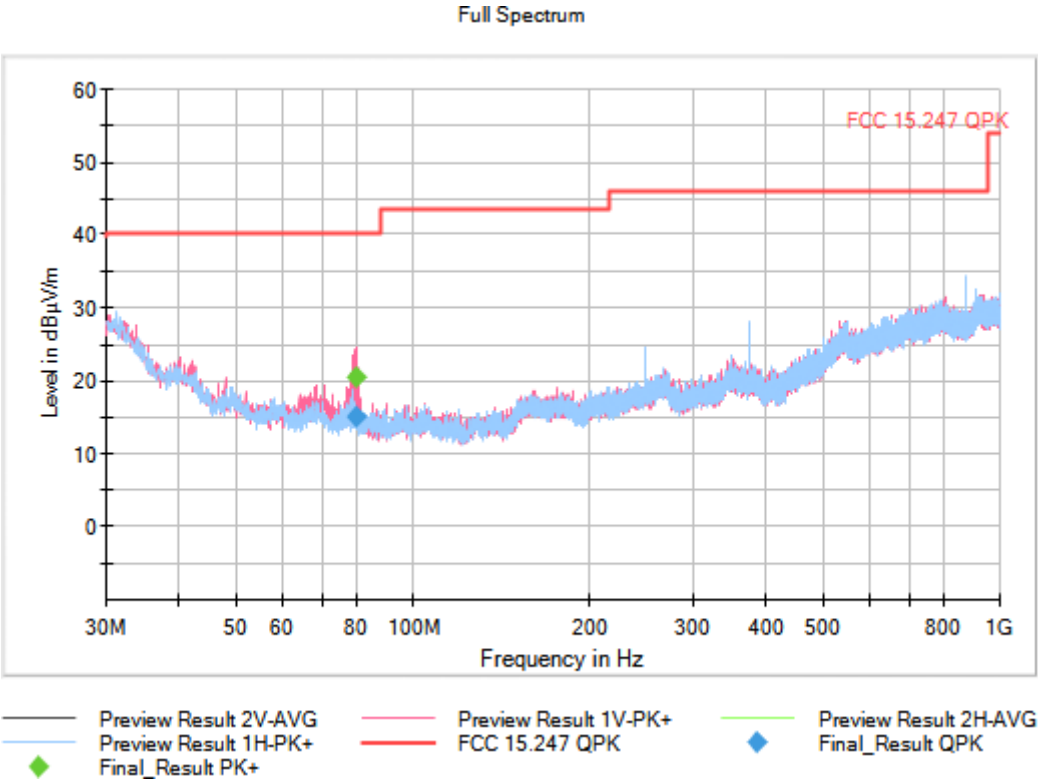
Active Port = 3

Operation Band MHz = [2400, 2483.5]

Frequency MHz = The spurious frequencies detected do not depend on the operating channel.

Modulation = The spurious frequencies detected do not depend on the modulation.

Images:



Tables:

Spectrum Analyzer Parameters

Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamp
30 MHz - 1 GHz	48,5 kHz	PK+	100 kHz	1 s	0 dB

Frequency Range GHz = [1, 17]

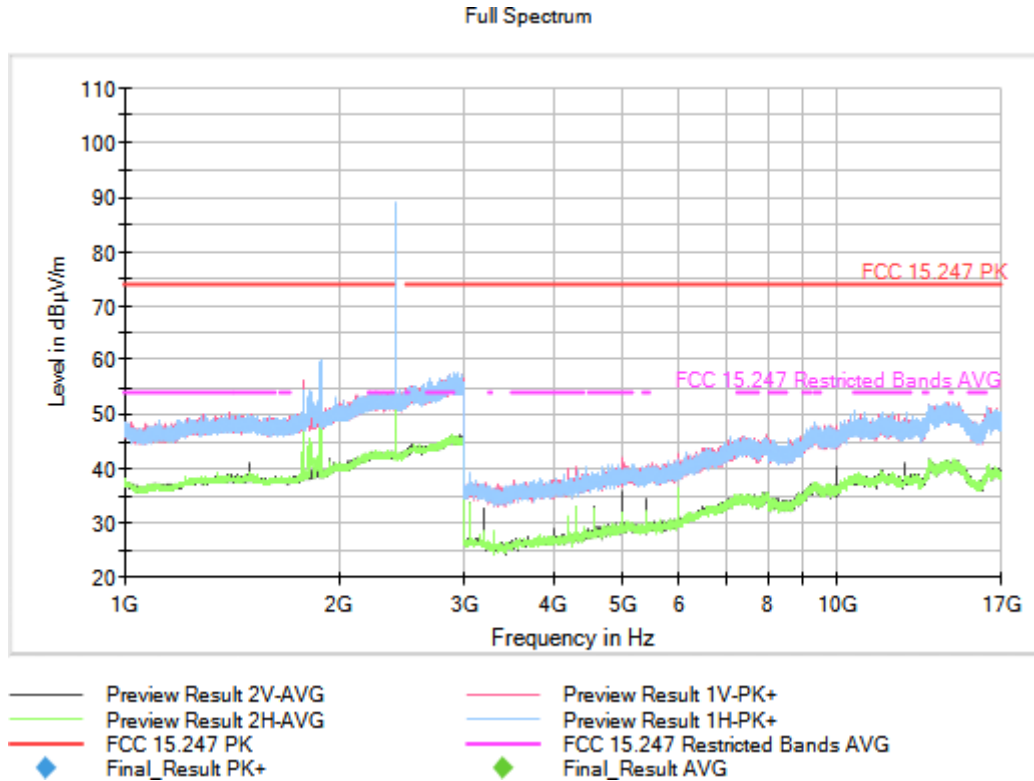
Operation Band MHz = [2400, 2483.5]

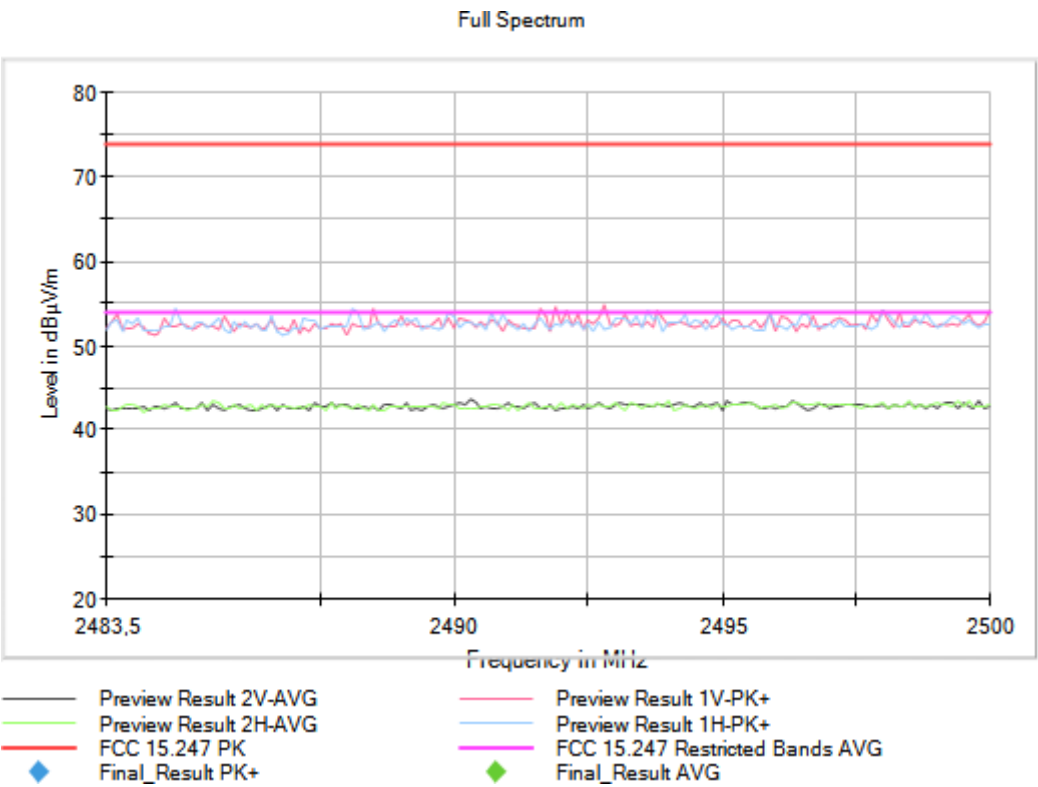
Equipment Type = Digital Transmission System (DTS) Frequency MHz = 2402.00000

Active Port = 3

Modulation = BTLE (GFSK 1 Mbit/s)

Images:





Frequency Range GHz = [1, 17]

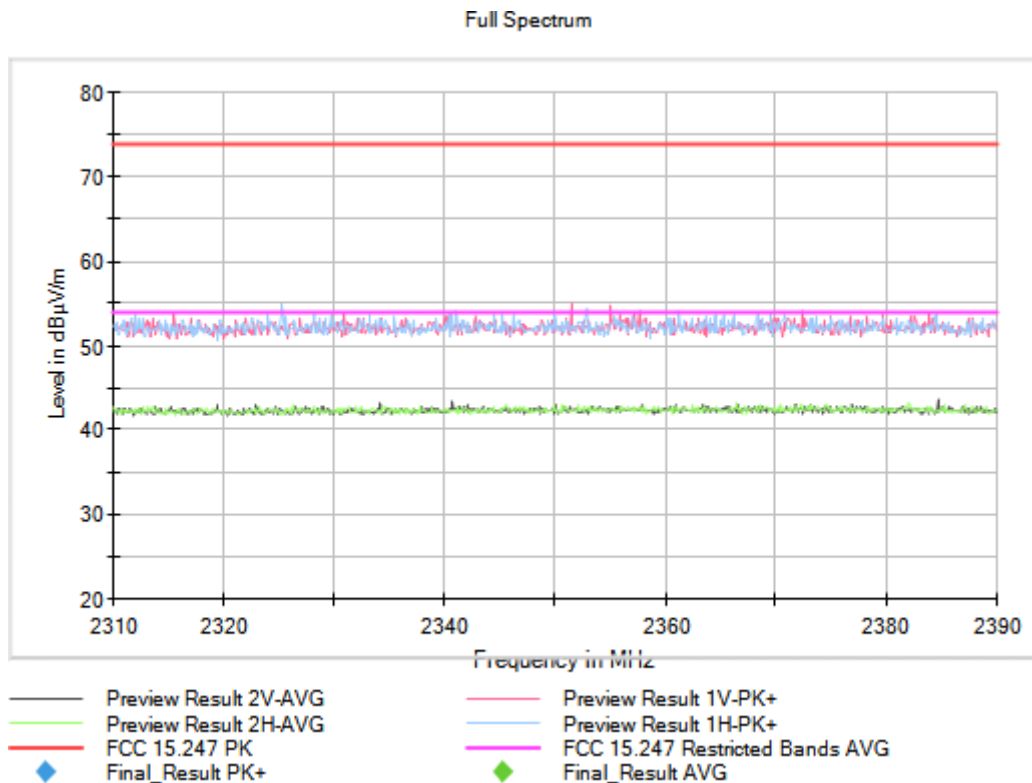
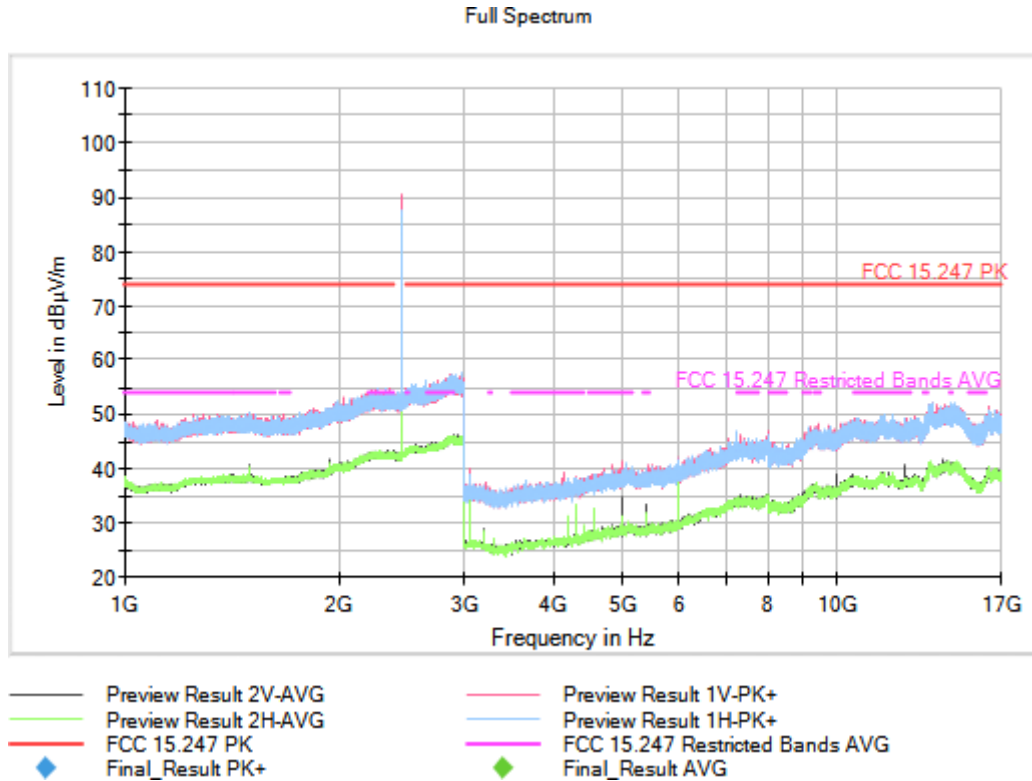
Operation Band MHz = [2400, 2483.5]

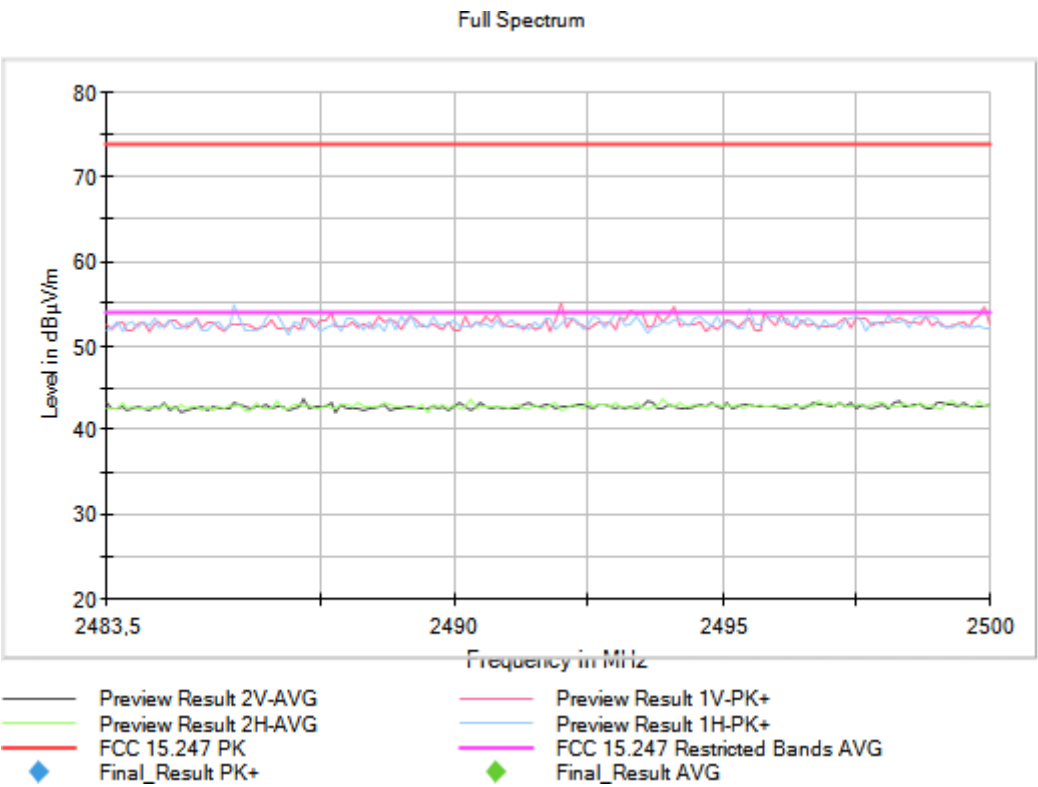
Equipment Type = Digital Transmission System (DTS) Frequency MHz = 2440.00000

Active Port = 3

Modulation = BTLE (GFSK 1 Mbit/s)

Images:





Frequency Range GHz = [1, 17]

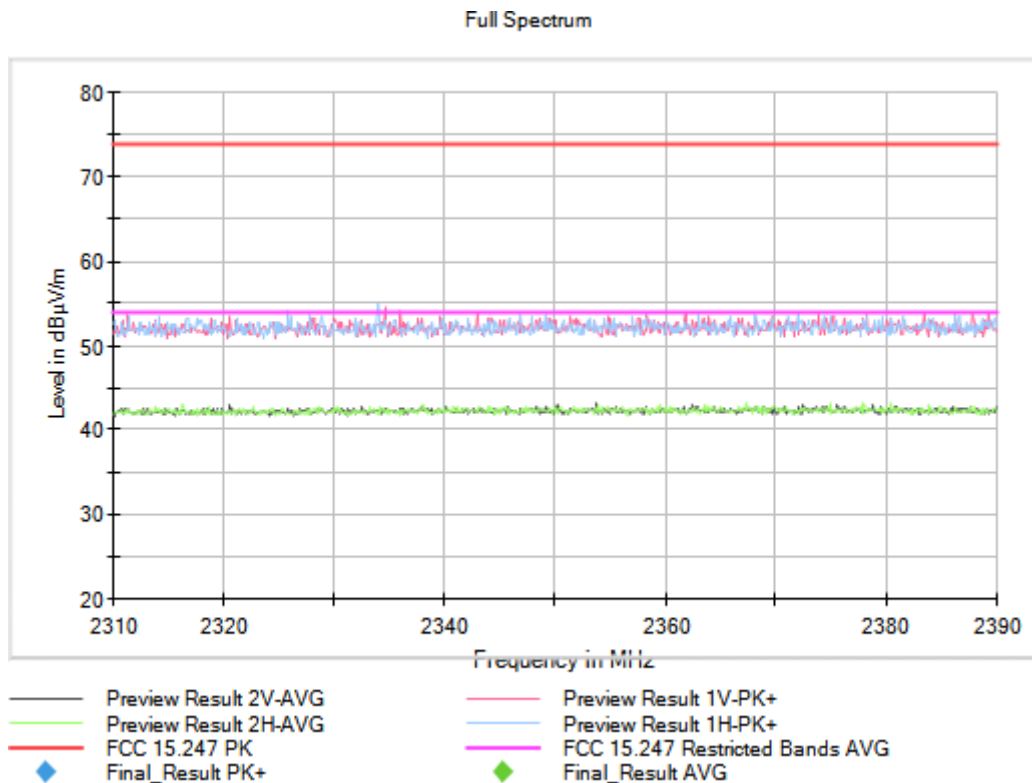
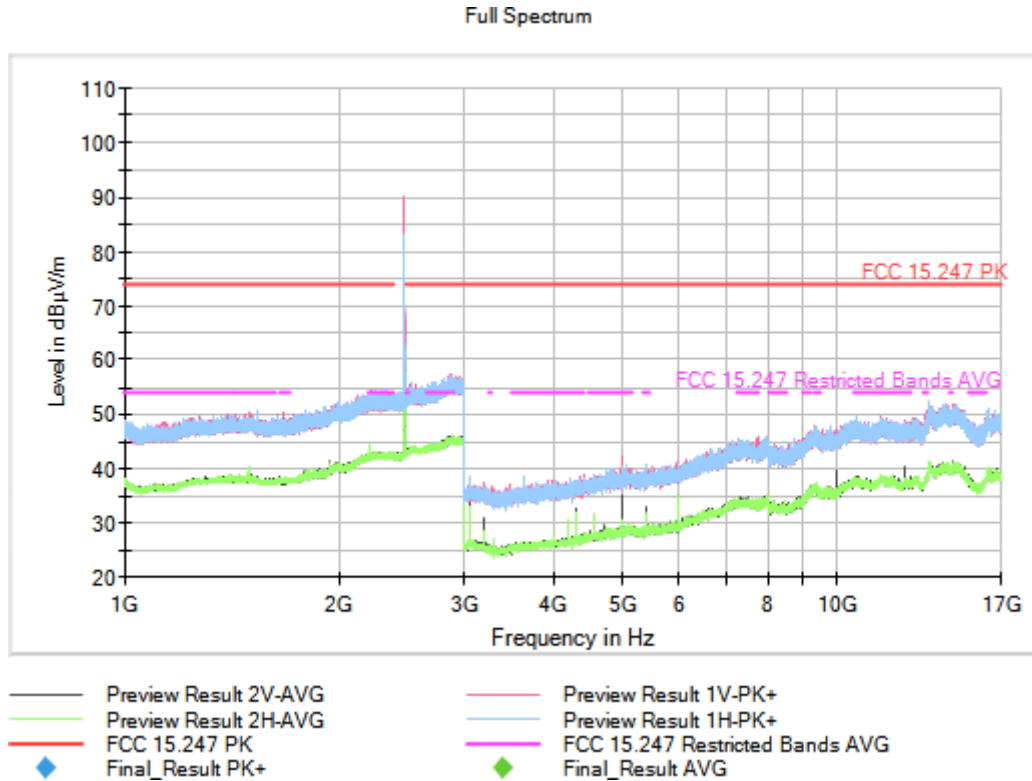
Operation Band MHz = [2400, 2483.5]

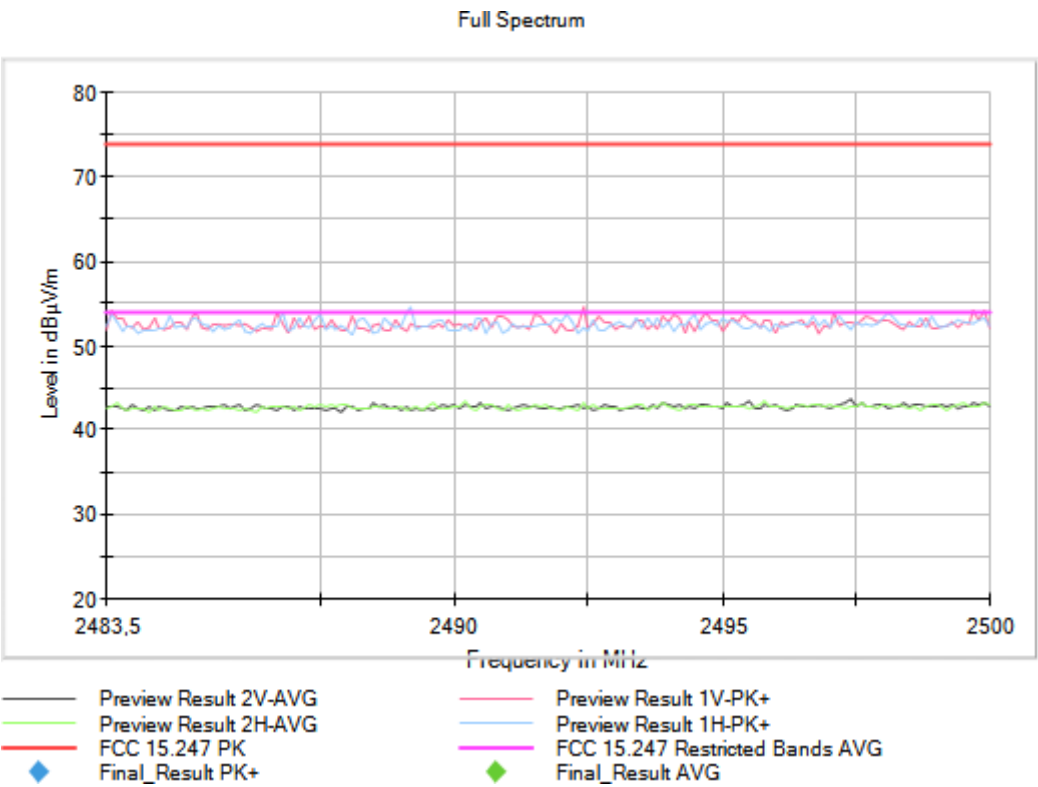
Equipment Type = Digital Transmission System (DTS) Frequency MHz = 2480.00000

Active Port = 3

Modulation = BTLE (GFSK 1 Mbit/s)

Images:





Frequency Range GHz = [1, 17]

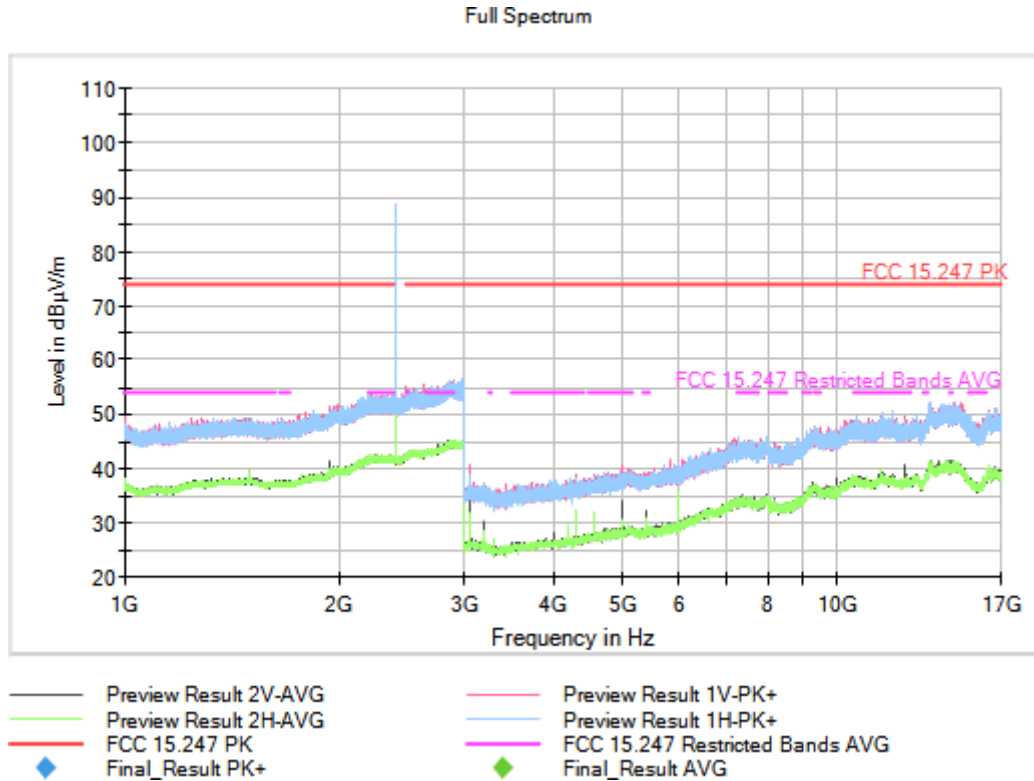
Operation Band MHz = [2400, 2483.5]

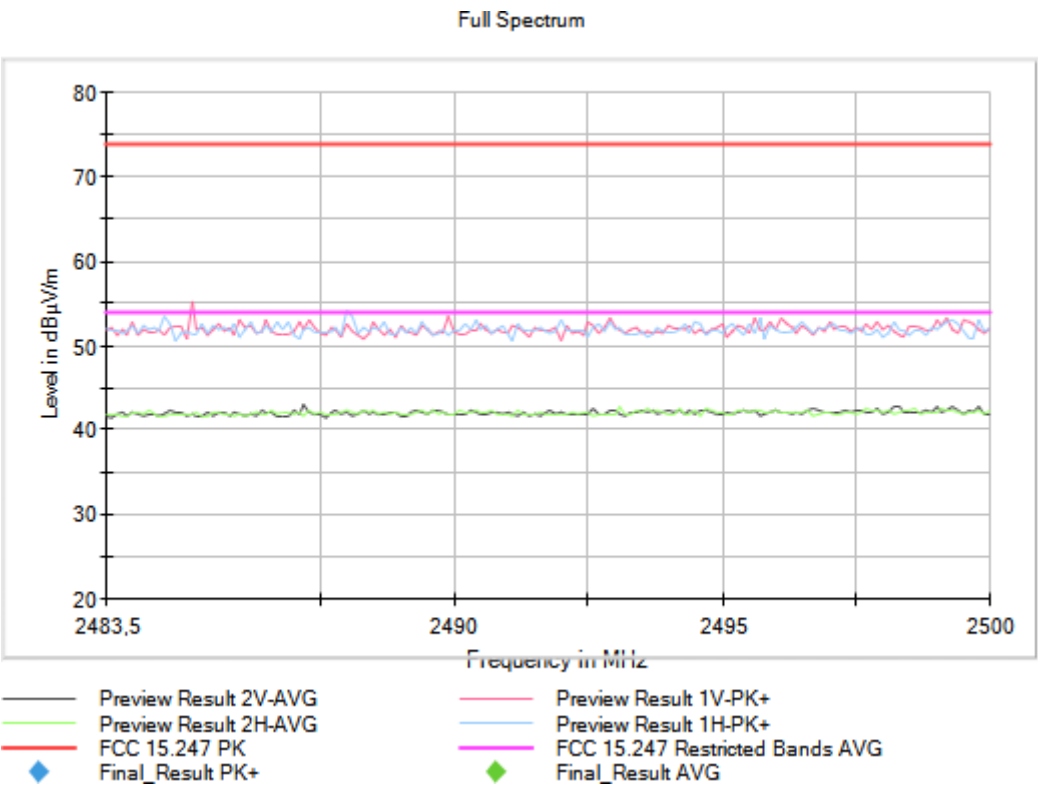
Equipment Type = Digital Transmission System (DTS) Frequency MHz = 2402.00000

Active Port = 3

Modulation = BTLE (GFSK 2 Mbit/s)

Images:





Frequency Range GHz = [1, 17]

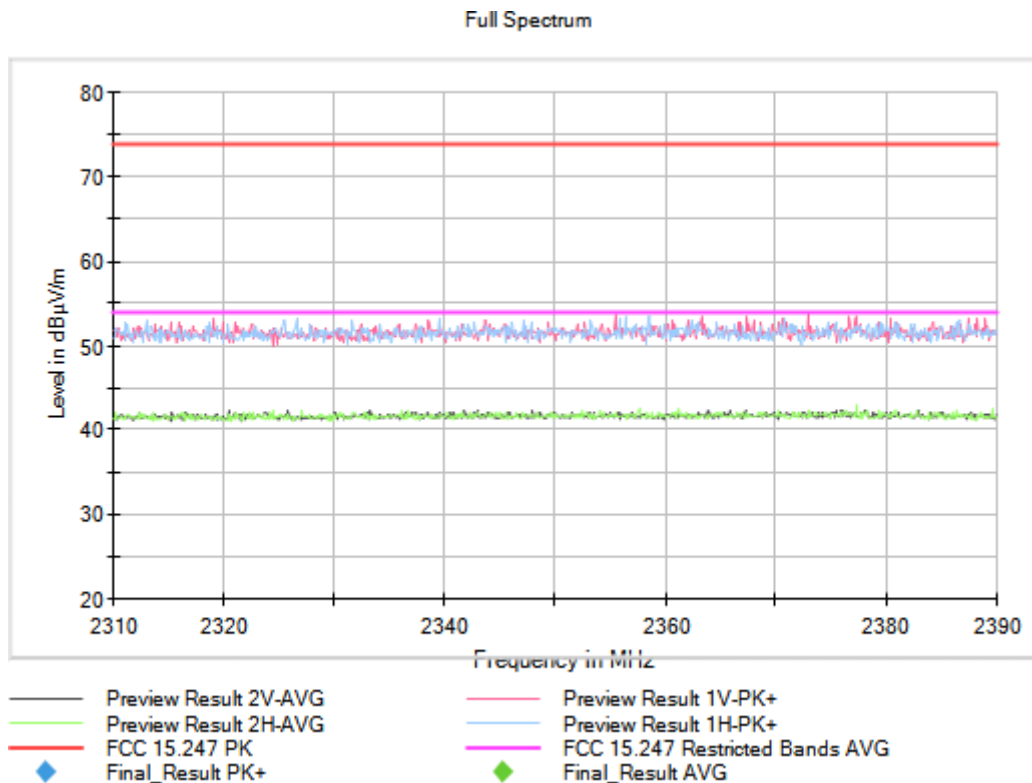
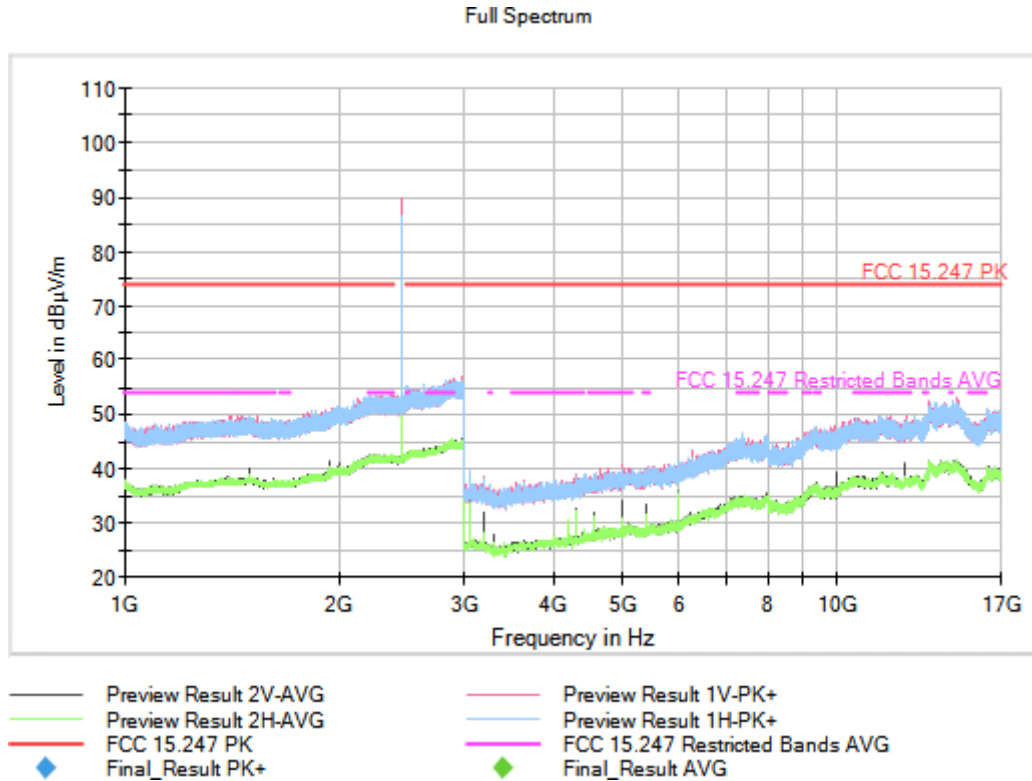
Operation Band MHz = [2400, 2483.5]

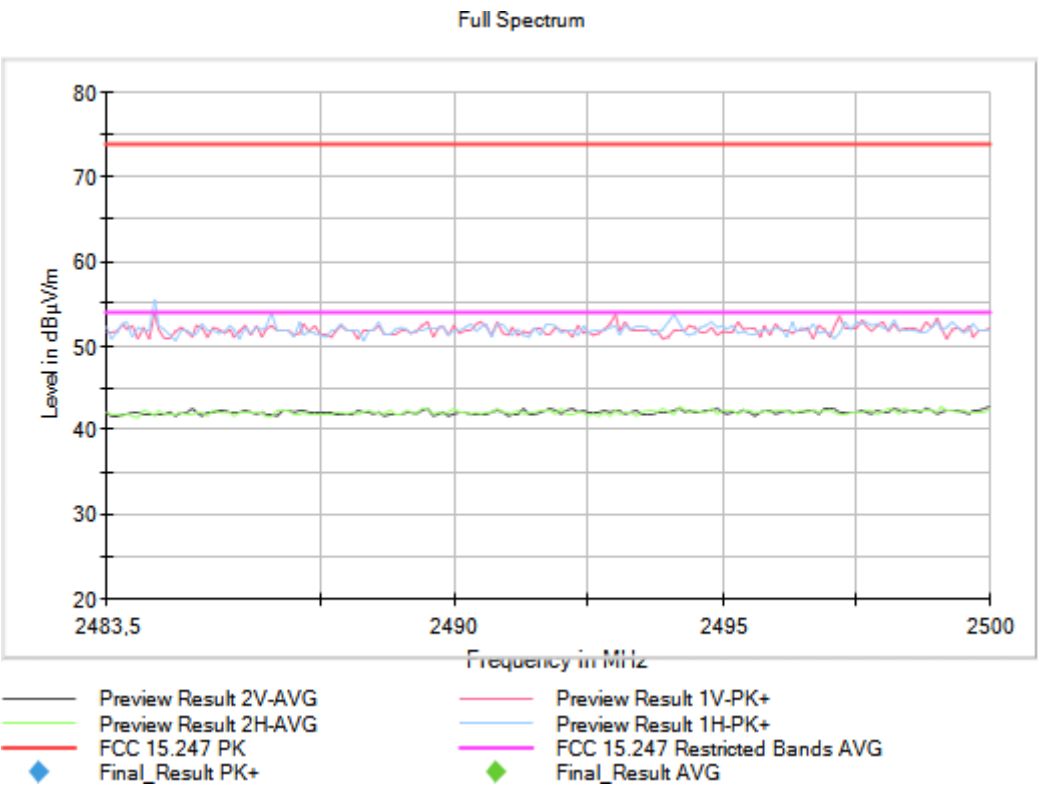
Equipment Type = Digital Transmission System (DTS) Frequency MHz = 2440.00000

Active Port = 3

Modulation = BTLE (GFSK 2 Mbit/s)

Images:





Frequency Range GHz = [1, 17]

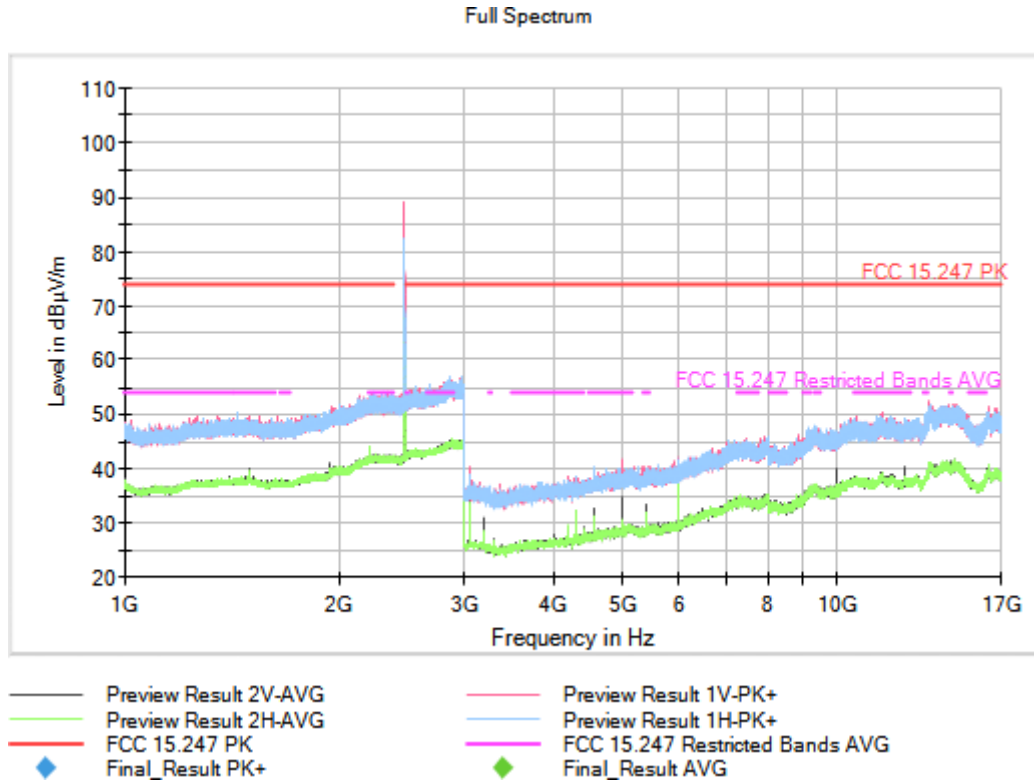
Operation Band MHz = [2400, 2483.5]

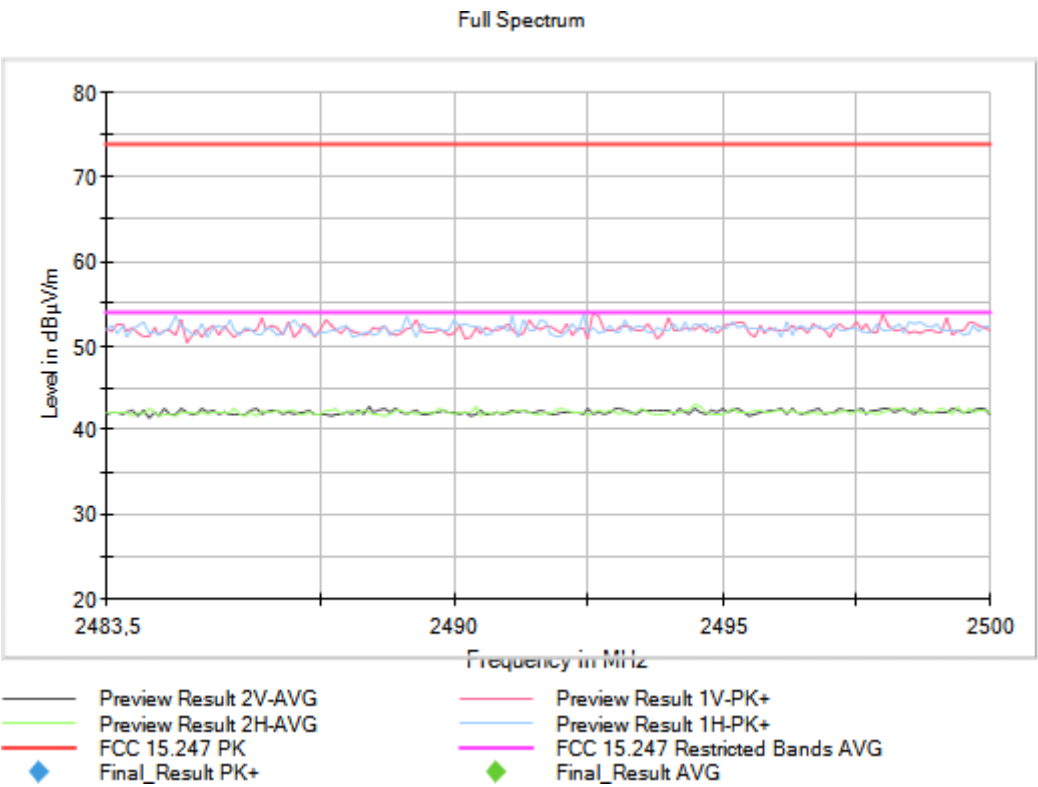
Equipment Type = Digital Transmission System (DTS) Frequency MHz = 2480.00000

Active Port = 3

Modulation = BTLE (GFSK 2 Mbit/s)

Images:





Tables:
Spectrum Analyzer Parameters

Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamp
1 GHz - 2,39 GHz	400 kHz	PK+	1 MHz	0,01 s	0 dB
2,39 GHz - 2,484 GHz	40 kHz	PK+	100 kHz	0,01 s	0 dB
2,484 GHz - 3 GHz	400 kHz	PK+	1 MHz	0,01 s	0 dB
3 GHz - 17 GHz	400 kHz	PK+	1 MHz	0,01 s	0 dB

Frequency Range GHz = [17, 26]

Equipment Type = Digital Transmission
System (DTS)

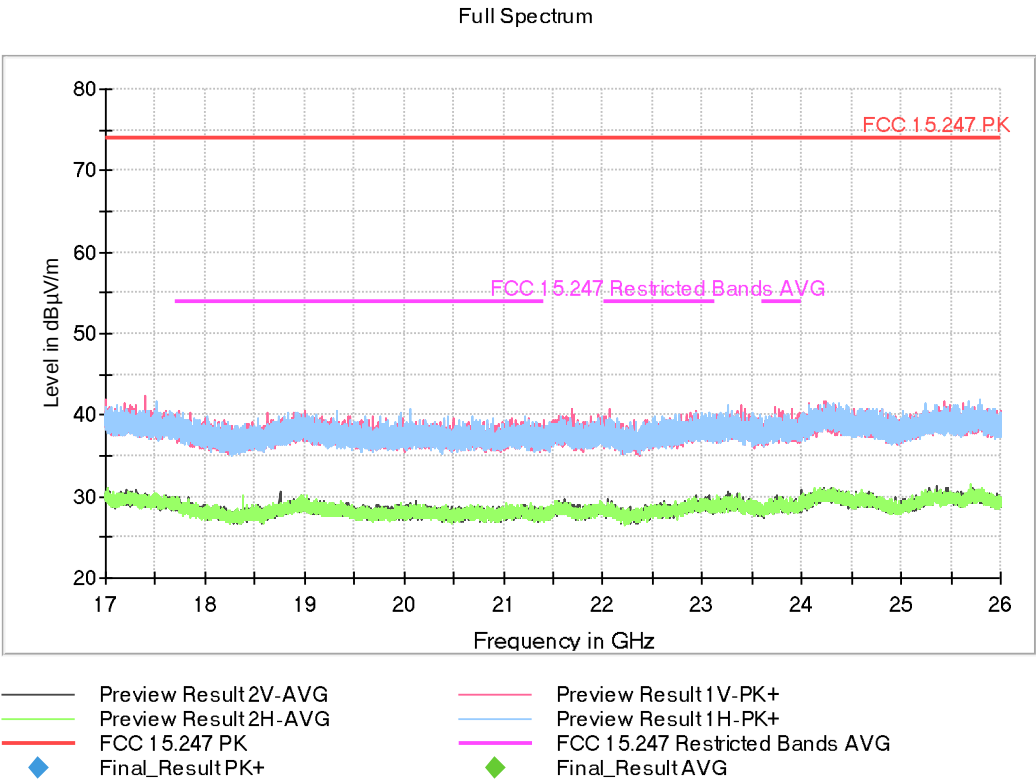
Active Port = 3

Operation Band MHz = [2400, 2483.5]

Frequency MHz = The spurious frequencies detected do not depend on the operating channel.

Modulation = The spurious frequencies detected do not depend on the modulation.

Images:



Tables:

Spectrum Analyzer Parameters

Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamp
17 GHz - 26 GHz	400 kHz	PK+	1 MHz	0,01 s	0 dB

Appendix C: Test results. CHIPSET 002 Bluetooth BR EDR

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<i>Occupied Channel Bandwidth 99%</i>	143
<i>RSS-247 5.1 (b) / FCC 15.247 (a) (1) 20 dB Bandwidth</i>	155
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<i>RSS-247 5.5 / FCC 15.247 (d) Emission limitations radiated (Transmitter)</i>	230

TEST CONDITIONS

(*): Data provided by the client.

POWER SUPPLY (*):

Vnominal: 12 Vdc
Type of Power Supply: Battery

ANTENNA (*):

Technology	Antenna Gain	Type
BR EDR	+0.1 dBi	External

TEST FREQUENCIES (*):

Modulation	Data rates	Low Channel:	Middle Channel	High Channel
BT GFSK	1-DH5	2402 MHz	2441 MHz	2480 MHz
BTEDR PI/4 DQPSK	2-DH5	2402 MHz	2441 MHz	2480 MHz
BTEDR 8DPSK	3-DH5	2402 MHz	2441 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.



RADIATED MEASUREMENTS:

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

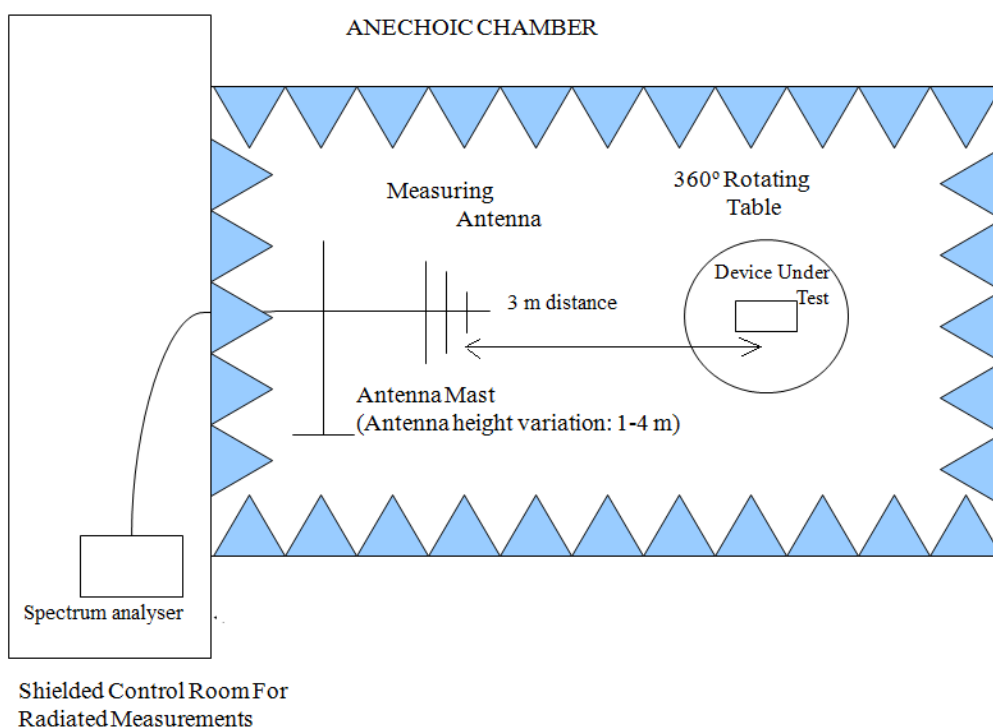
For radiated emissions in the range 17 GHz-26 GHz that is performed at a distance closer than the specified distance, an inverse proportionality factor of 20 dB per decade is used to normalize the measured data for determining compliance.

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

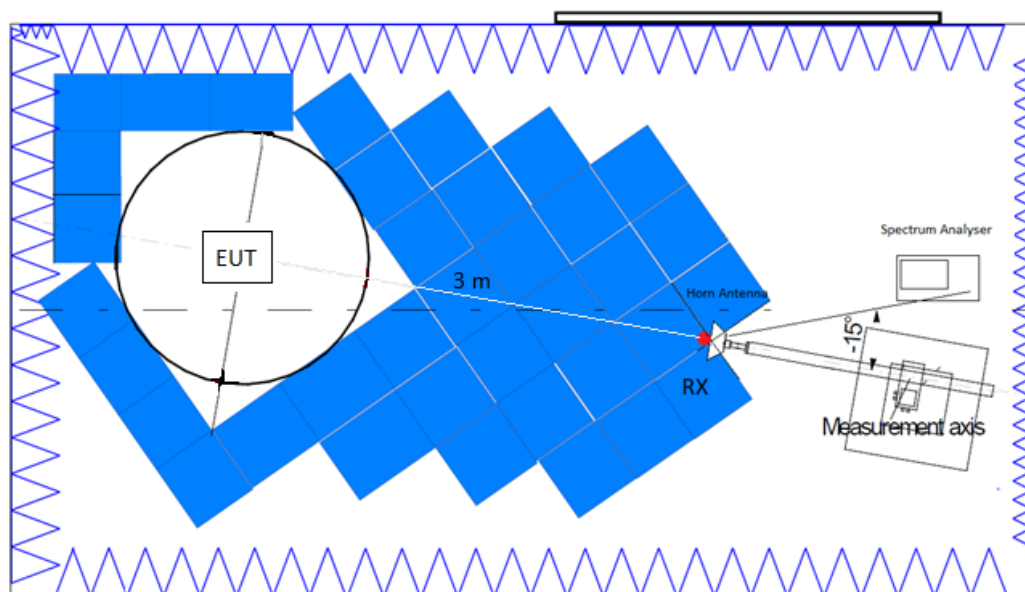
Measurements were made in both horizontal and vertical planes of polarization.

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

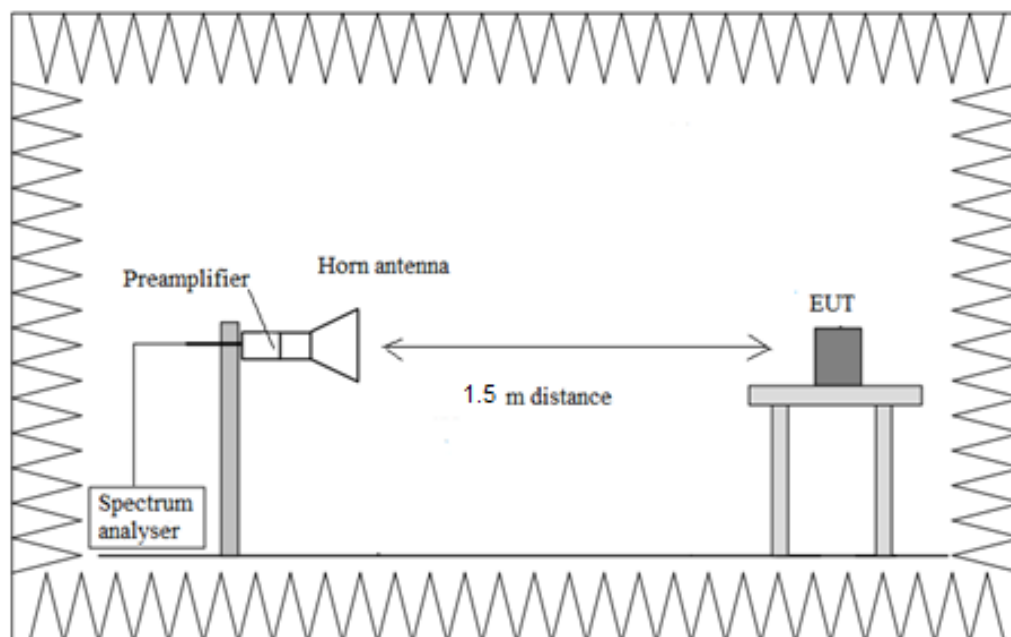
Radiated measurements setup from 30 MHz to 1 GHz:



Radiated measurements setup from 1 GHz to 17 GHz:



Radiated measurements setup $f > 17$ GHz:



TEST CASES DETAILS

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

Limits

RSS-Gen 6.7 / FCC 2.1049 - Occupied Channel Bandwidth 99%

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: BT (GFSK 1-DH5)

Results

Operation Band (MHz)	Equipment	Freq (MHz)	Port	Occ Ch BW (MHz)
[2400, 2483.5]	Frequency Hopping Spread Spectrum systems (DSS)	2402.00000	1	0.835
		2441.00000		0.835
		2480.00000		0.835

Attachments

Operation Band MHz = [2400,
2483.5]

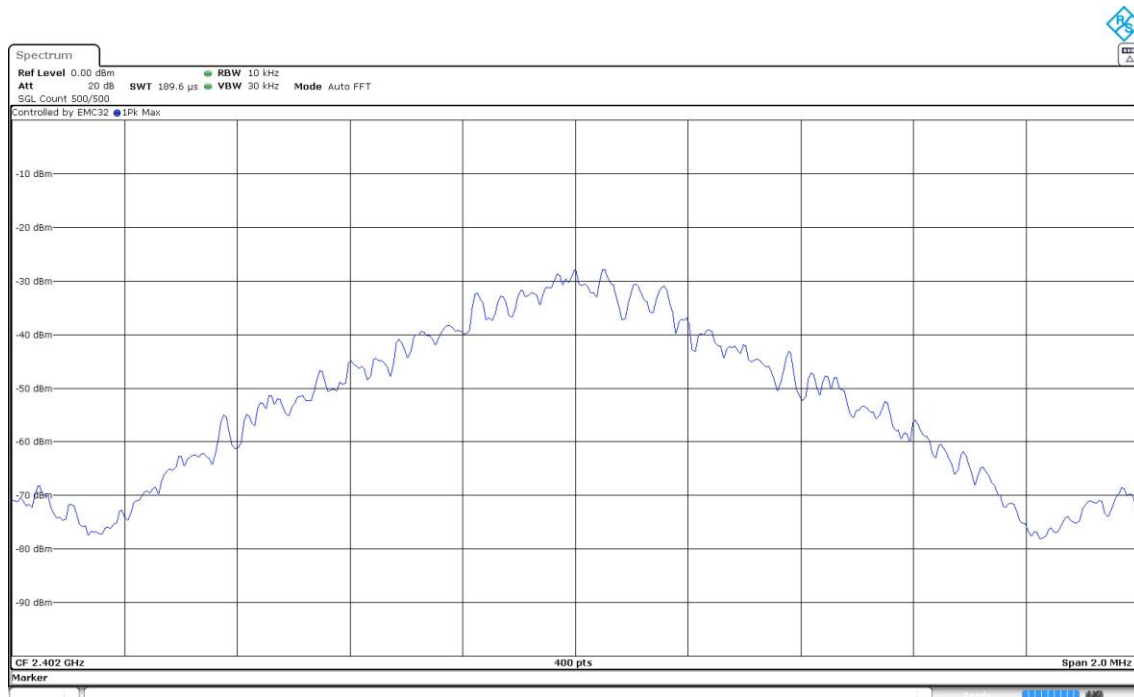
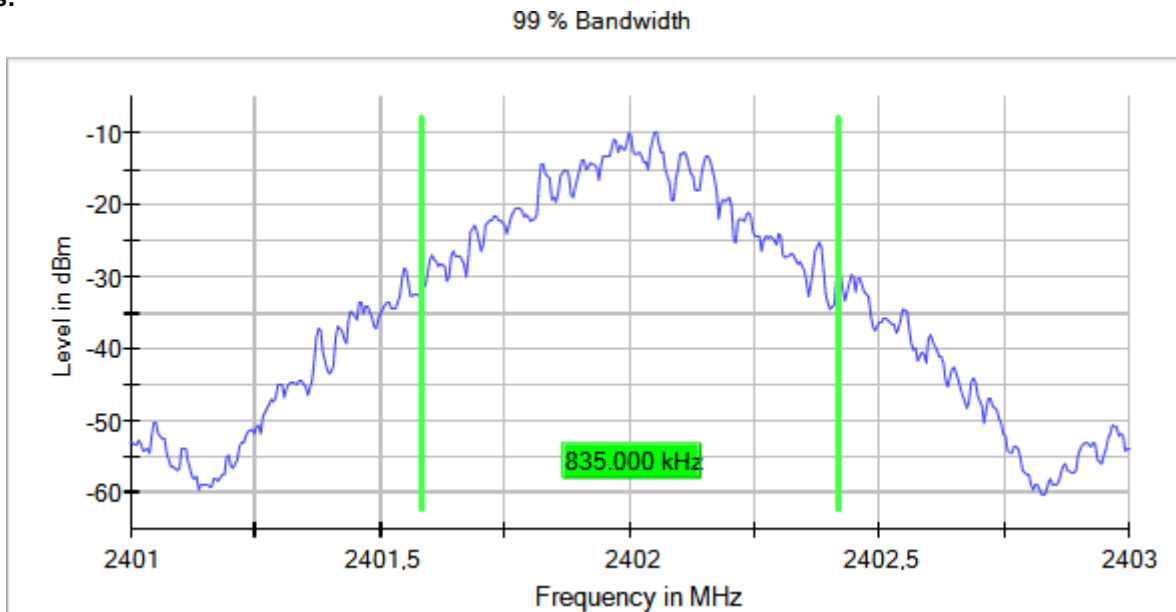
Equipment Type = Frequency Hopping Spread Spectrum systems
(DSS)

Frequency MHz = 2402.00000

Active Port = 1

Modulation = BT (GFSK 1-DH5)

Images:



Operation Band MHz = [2400,
2483.5]

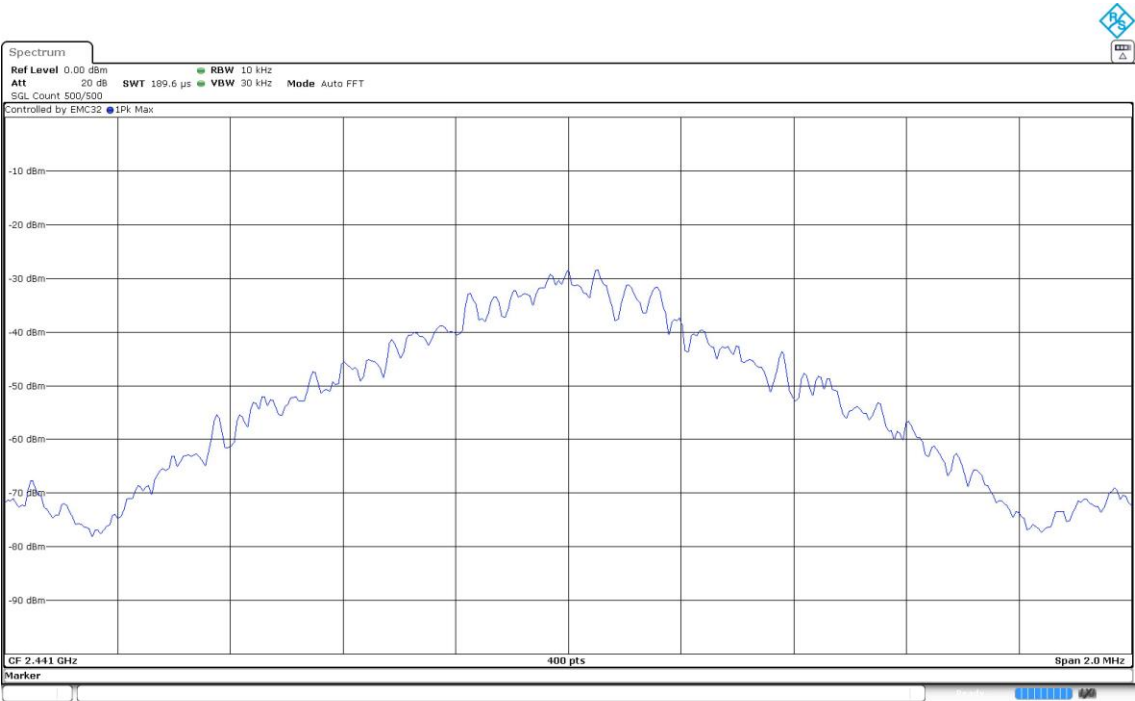
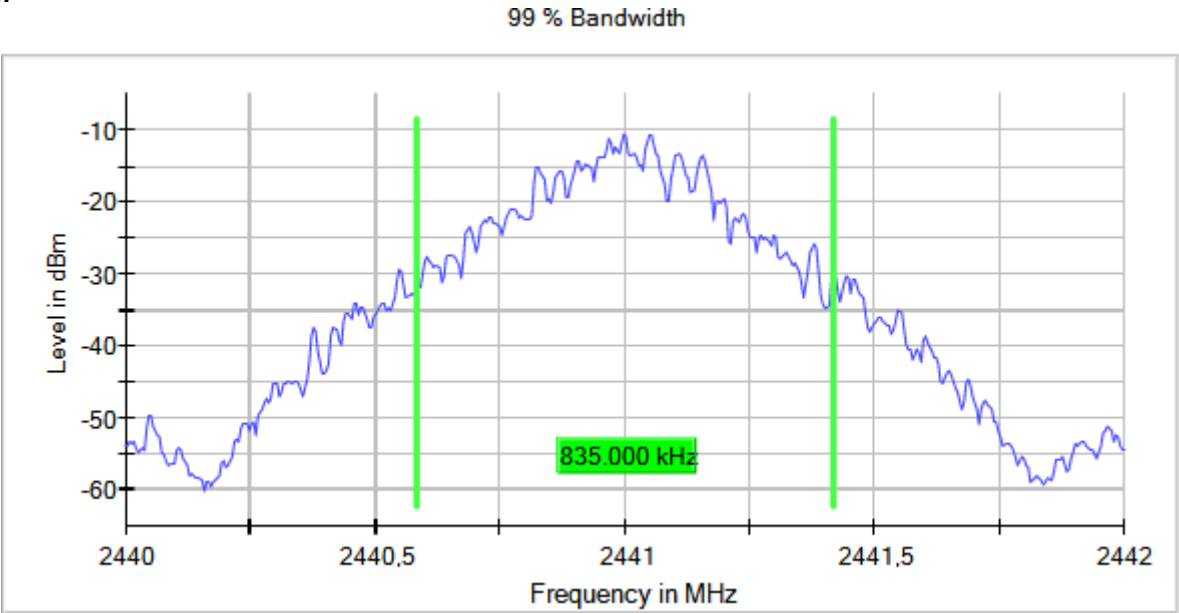
Equipment Type = Frequency Hopping Spread Spectrum systems
(DSS)

Frequency MHz = 2441.00000

Active Port = 1

Modulation = BT (GFSK 1-DH5)

Images:



Operation Band MHz = [2400,
2483.5]

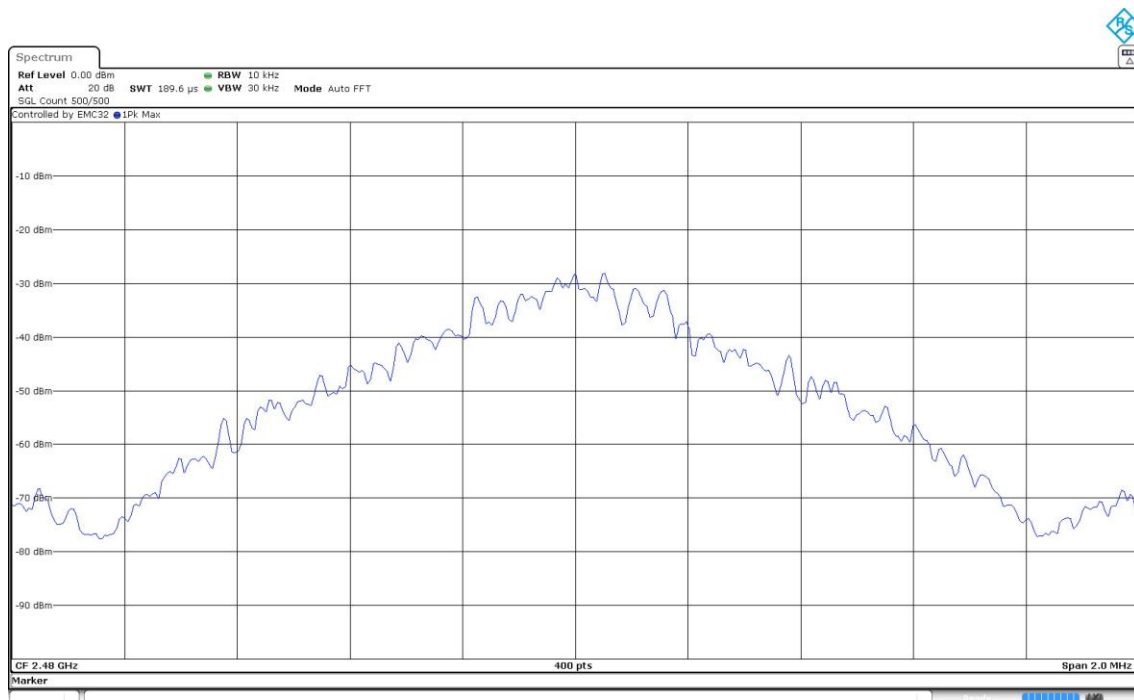
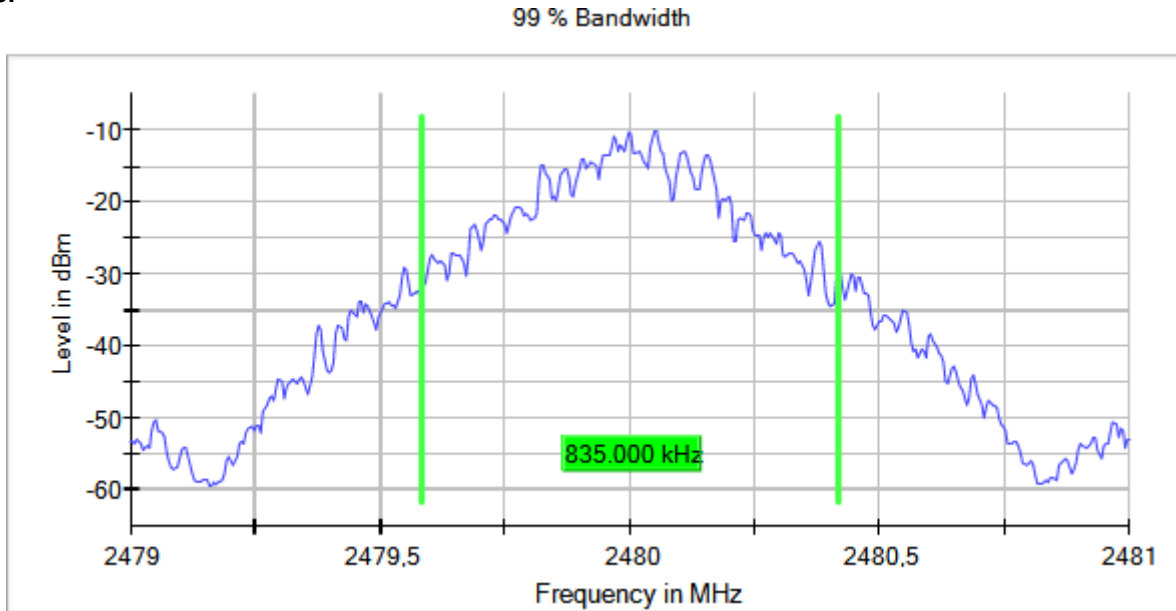
Equipment Type = Frequency Hopping Spread Spectrum systems
(DSS)

Frequency MHz = 2480.00000

Active Port = 1

Modulation = BT (GFSK 1-DH5)

Images:



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

Results

Operation Band (MHz)	Equipment	Freq (MHz)	Port	Occ Ch BW (MHz)
[2400, 2483.5]	Frequency Hopping Spread Spectrum systems (DSS)	2402.00000	1	1.170
		2441.00000		1.170
		2480.00000		1.170

Attachments

Operation Band MHz = [2400, 2483.5]

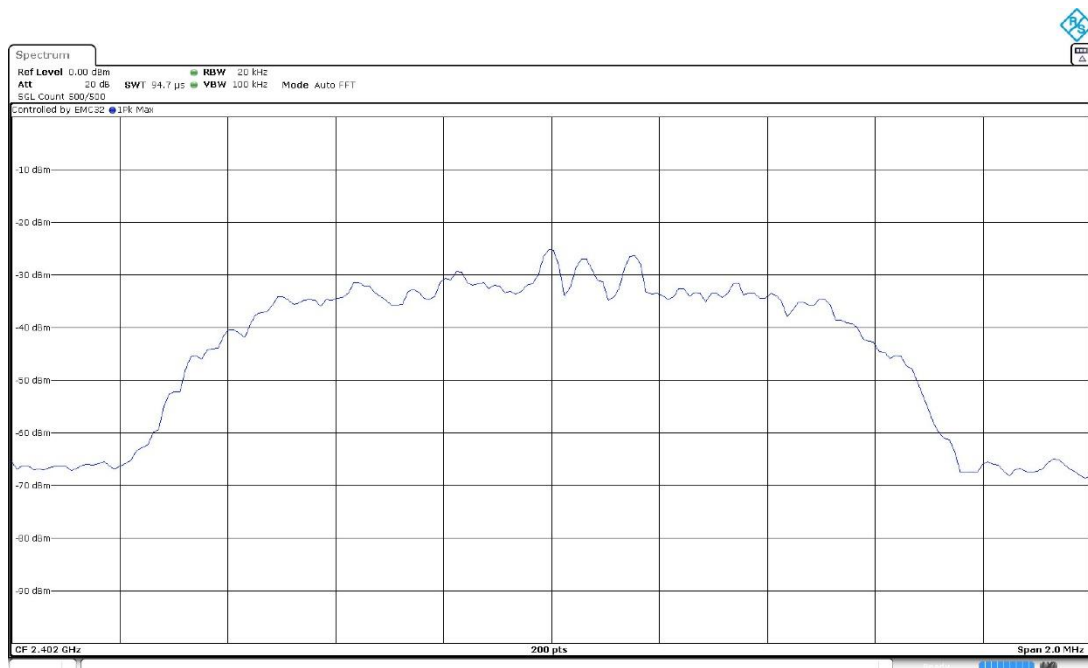
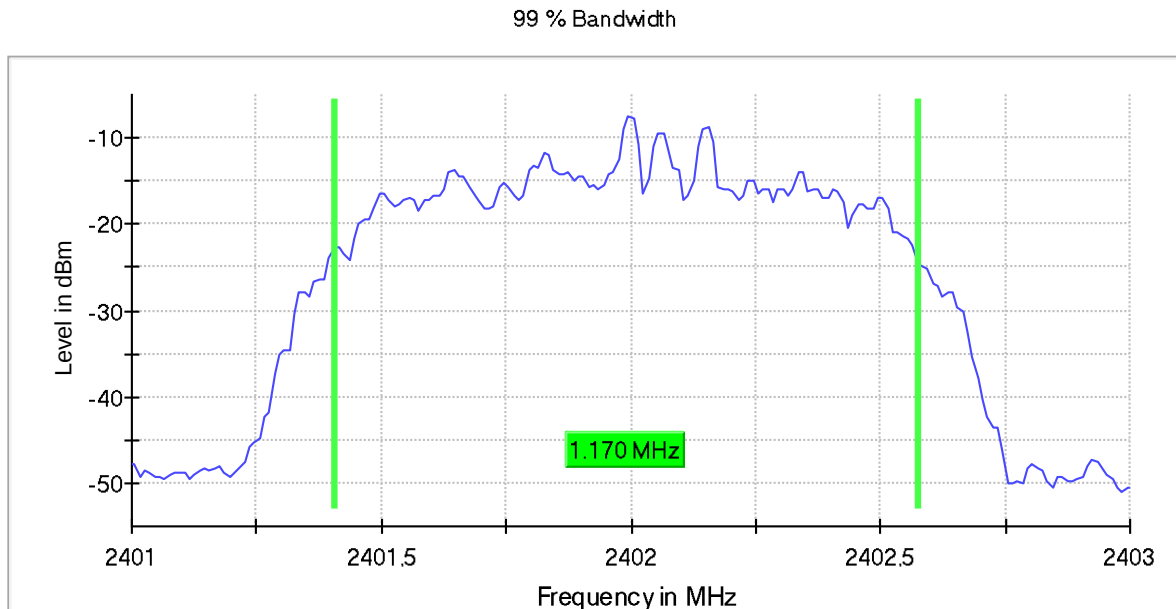
Equipment Type = Frequency Hopping Spread Spectrum systems (DSS)

Frequency MHz = 2402.00000

Active Port = 1

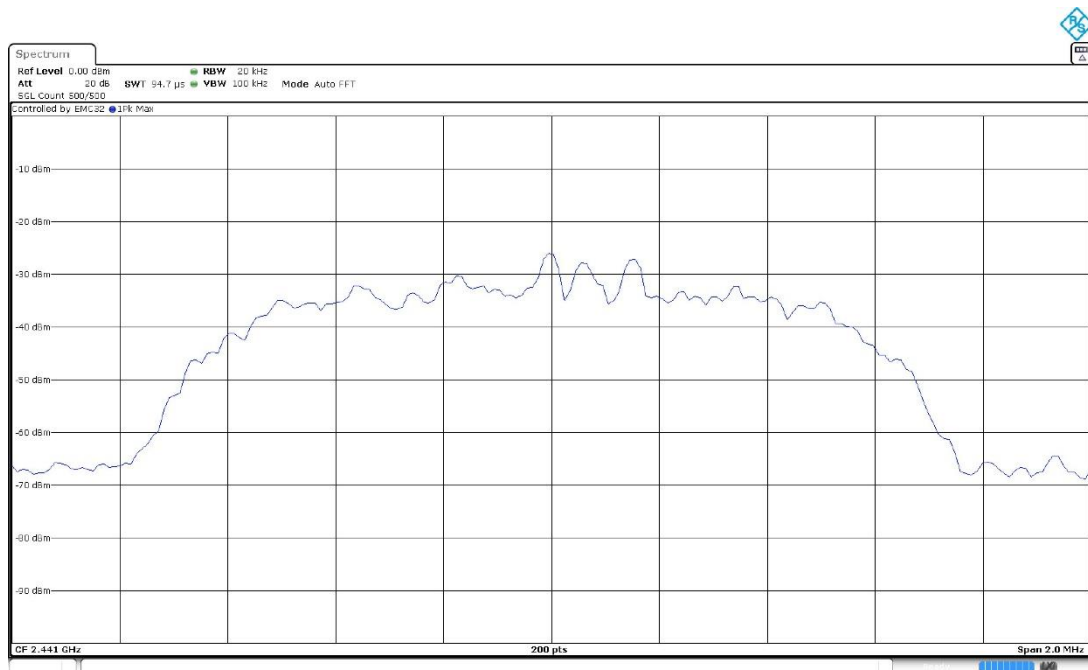
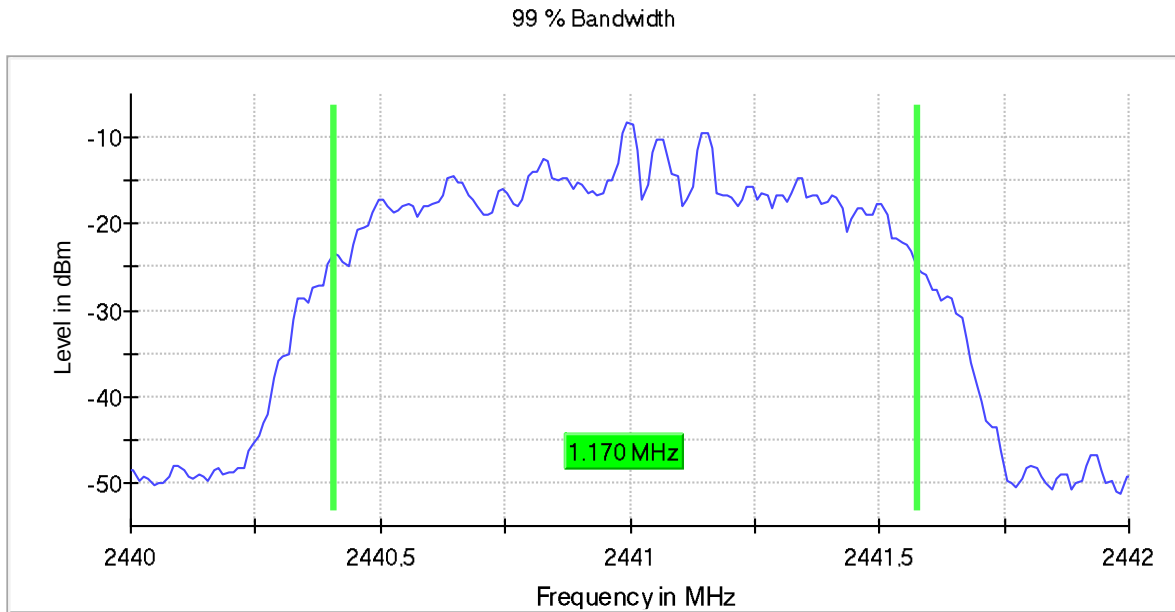
Modulation = BT (PI/4 DQPSK 2-DH5)

Images:



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:



Operation Band MHz = [2400, 2483.5]

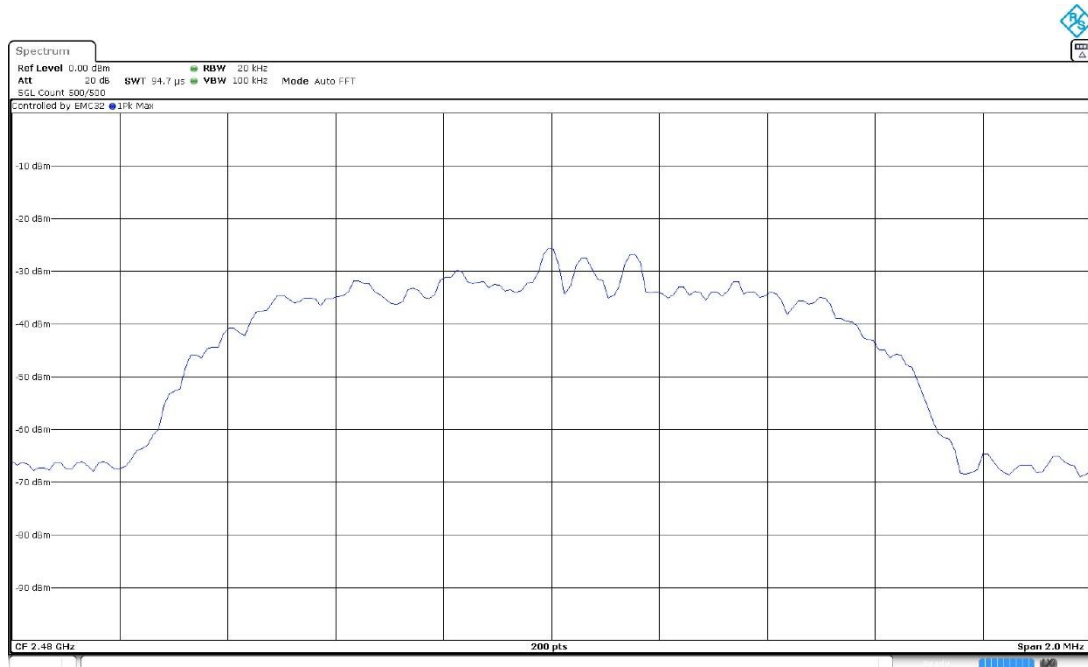
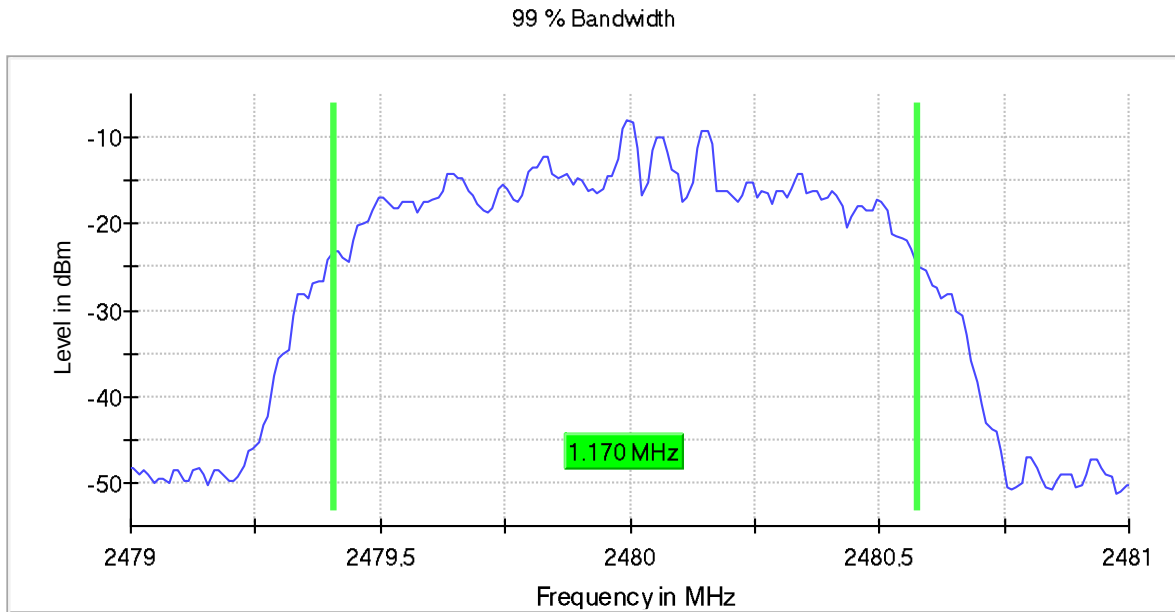
Equipment Type = Frequency Hopping Spread Spectrum systems (DSS)

Frequency MHz = 2480.00000

Active Port = 1

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

Images:



Modulation: BT (8DPSK 3-DH5)

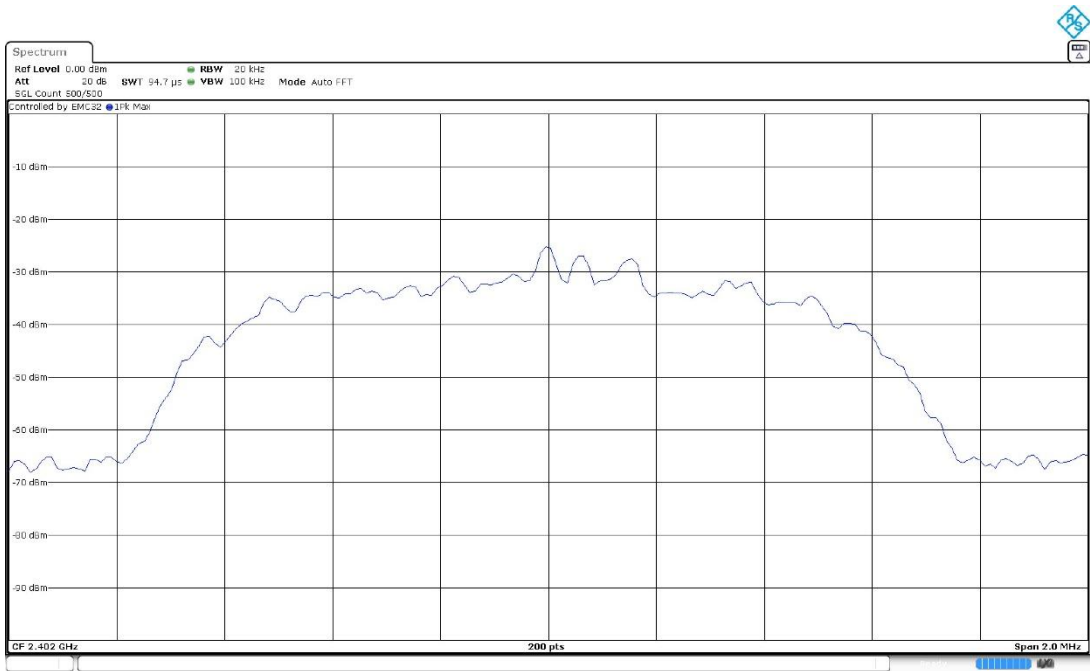
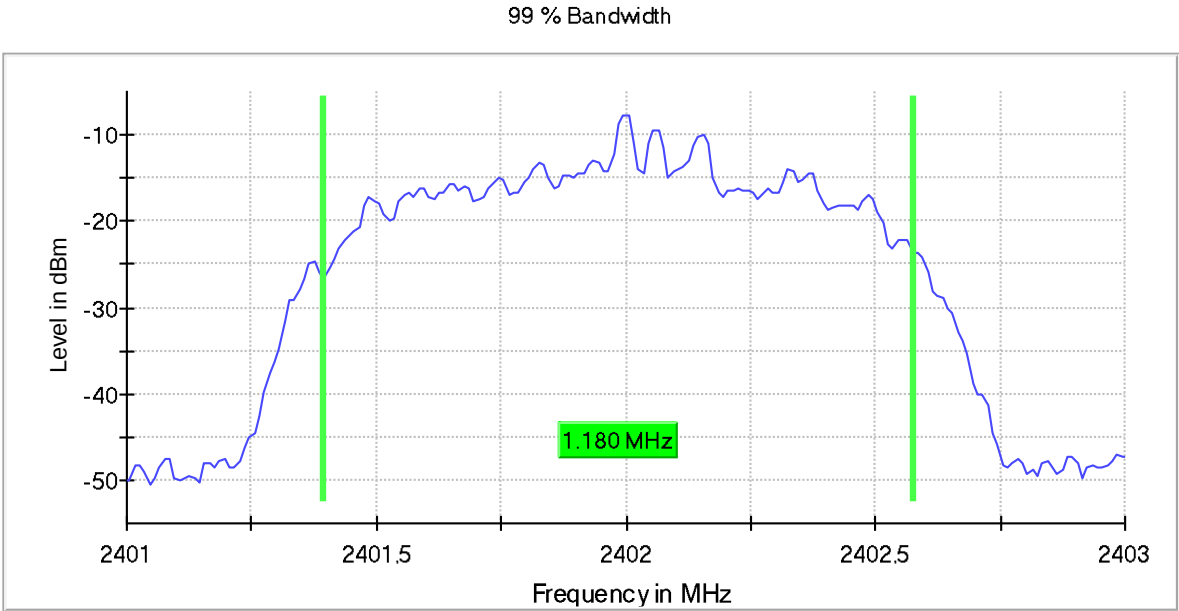
Results

Operation Band (MHz)	Equipment	Freq (MHz)	Port	Occ Ch BW (MHz)
[2400, 2483.5]	Frequency Hopping Spread Spectrum systems (DSS)	2402.00000	1	1.180
		2441.00000		1.180
		2480.00000		1.180

Attachments

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:



Operation Band MHz = [2400,
2483.5]

Equipment Type = Frequency Hopping Spread Spectrum systems
(DSS)

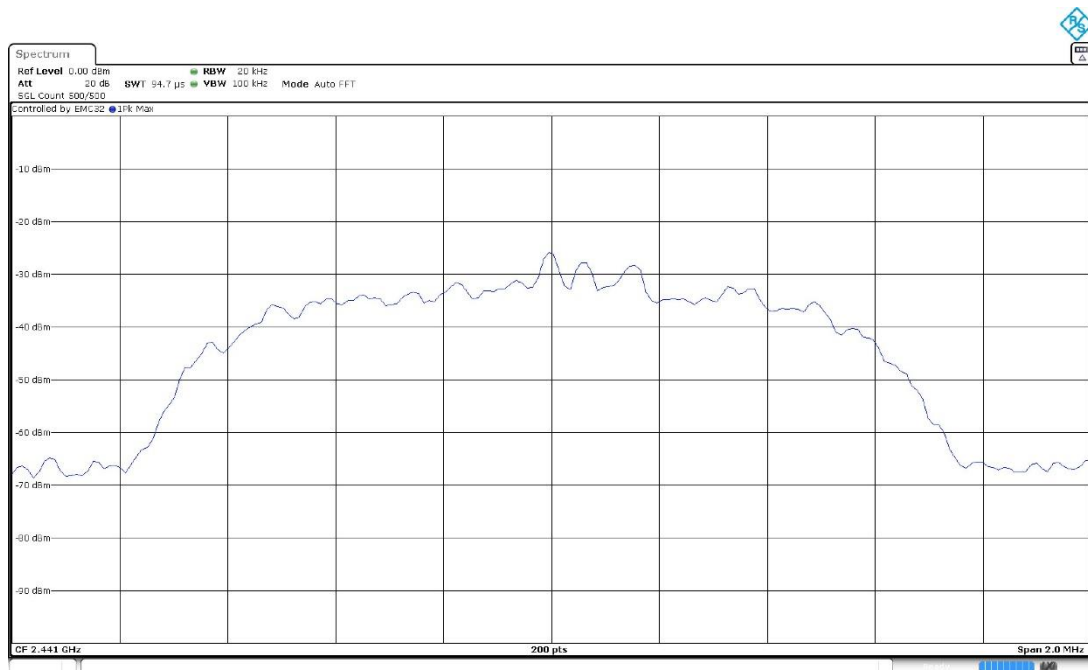
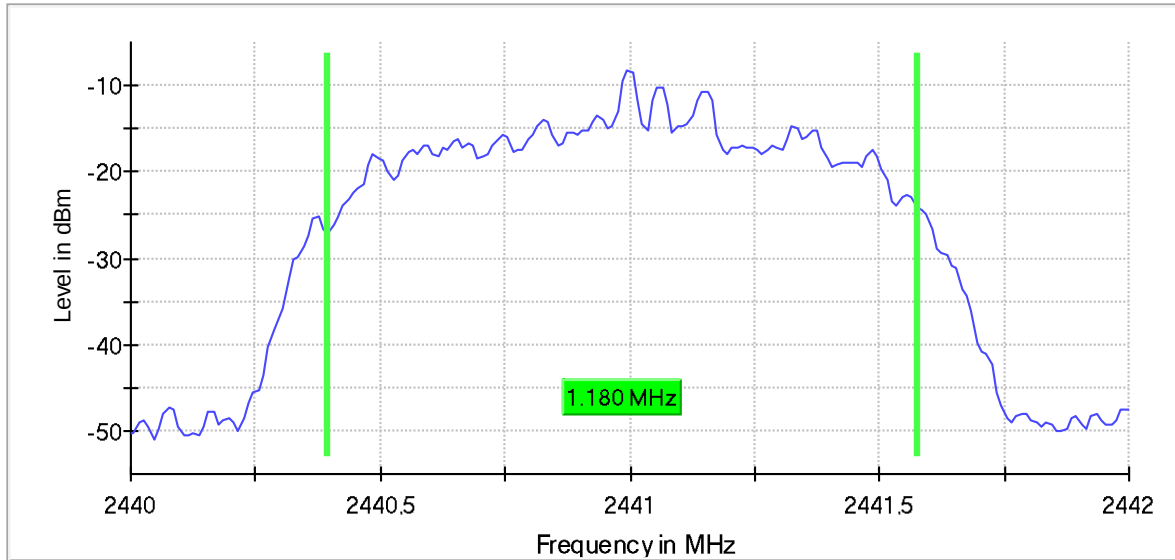
Frequency MHz = 2441.00000

Active Port = 1

Modulation = BT (8DPSK 3-DH5)

Images:

99 % Bandwidth



Operation Band MHz = [2400,
2483.5]

Equipment Type = Frequency Hopping Spread Spectrum systems
(DSS)

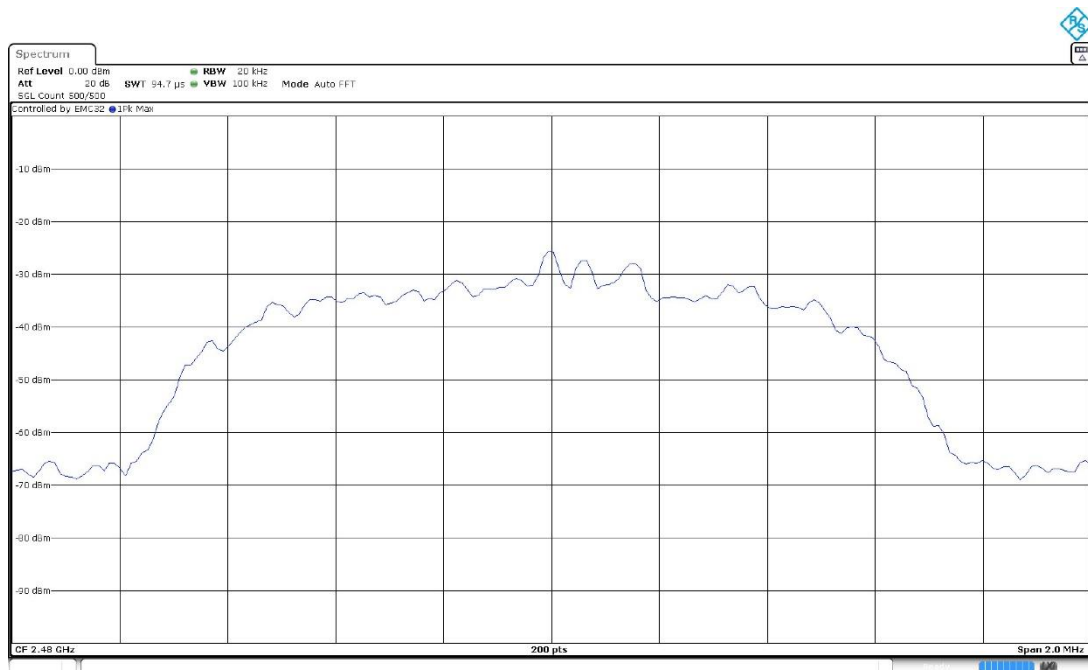
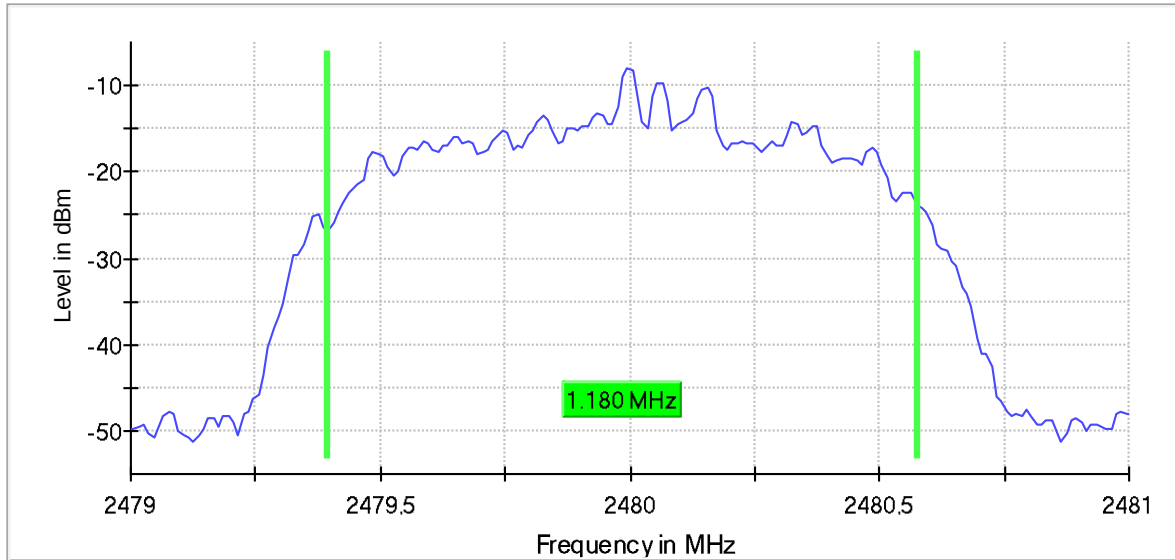
Frequency MHz = 2480.00000

Active Port = 1

Modulation = BT (8DPSK 3-DH5)

Images:

99 % Bandwidth



RSS-247 5.1 (b) / FCC 15.247 (a) (1) 20 dB Bandwidth

Limits

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

Modulation: BT (GFSK 1-DH5)

Results

Equipment	Freq (MHz)	Port	Ebw (MHz)
Frequency Hopping Spread Spectrum systems (DSS)	2402.00000	1	0.910
	2441.00000		0.910
	2480.00000		0.905

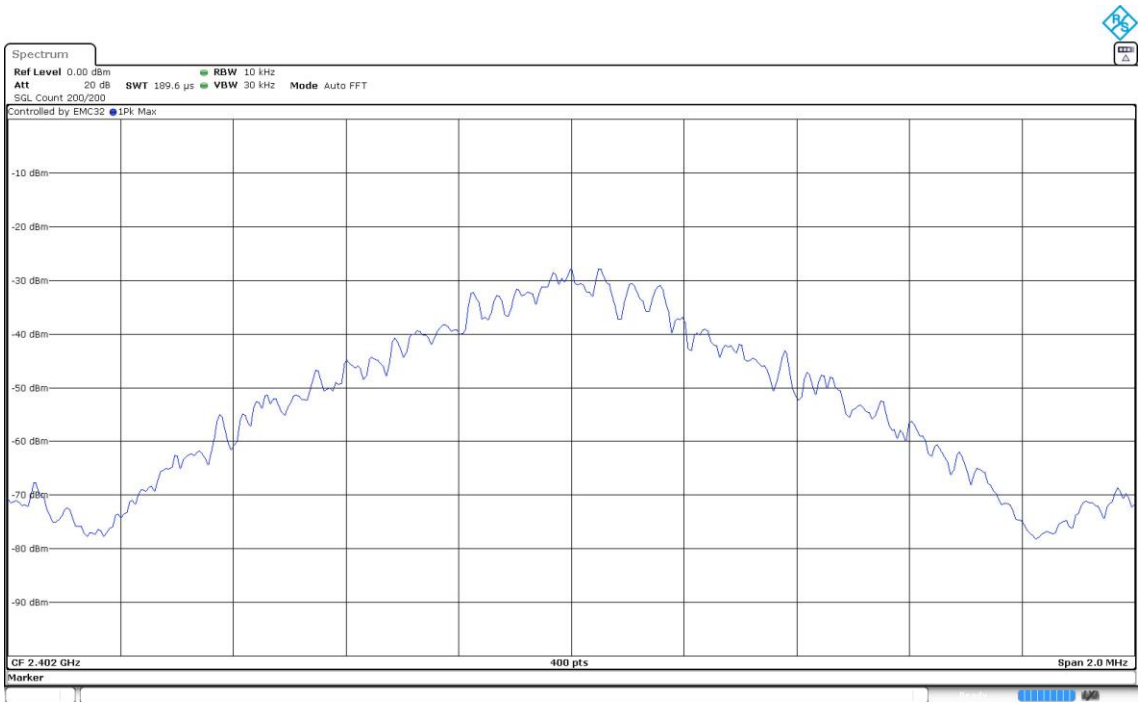
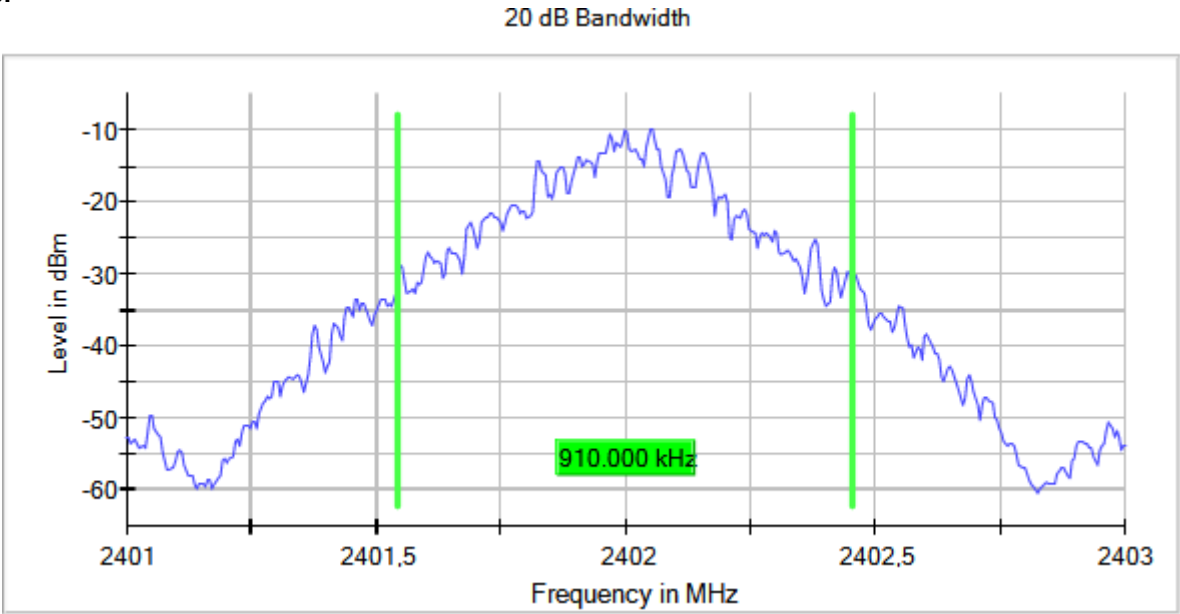
Verdict

Pass

Attachments

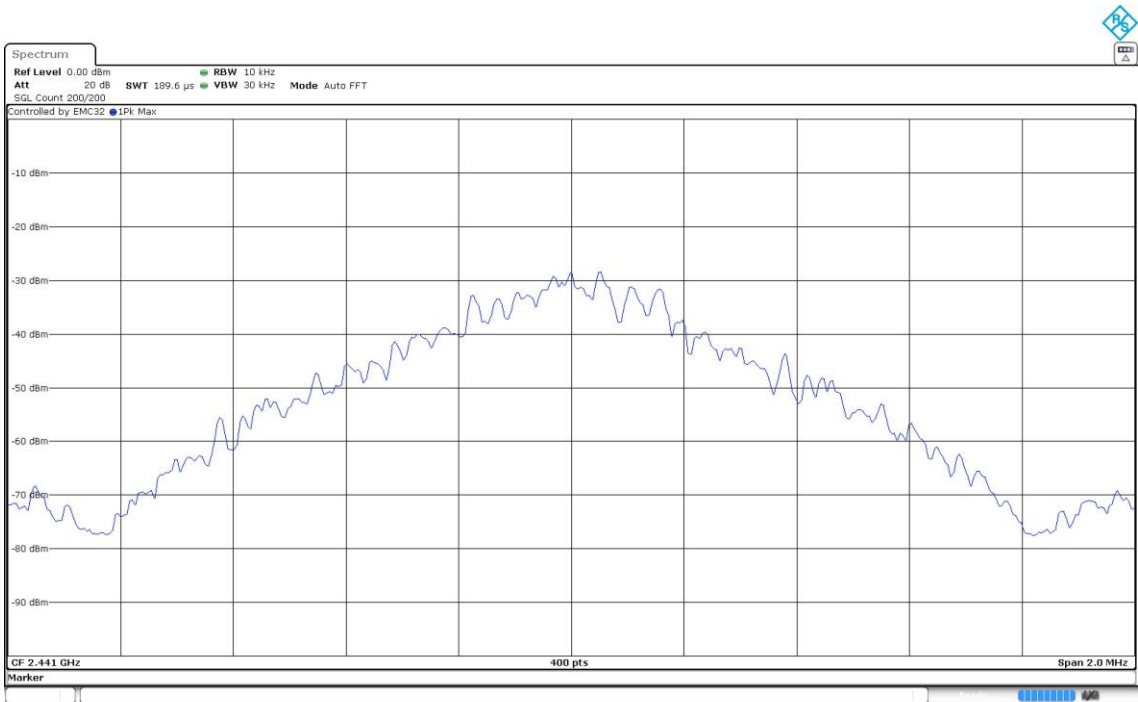
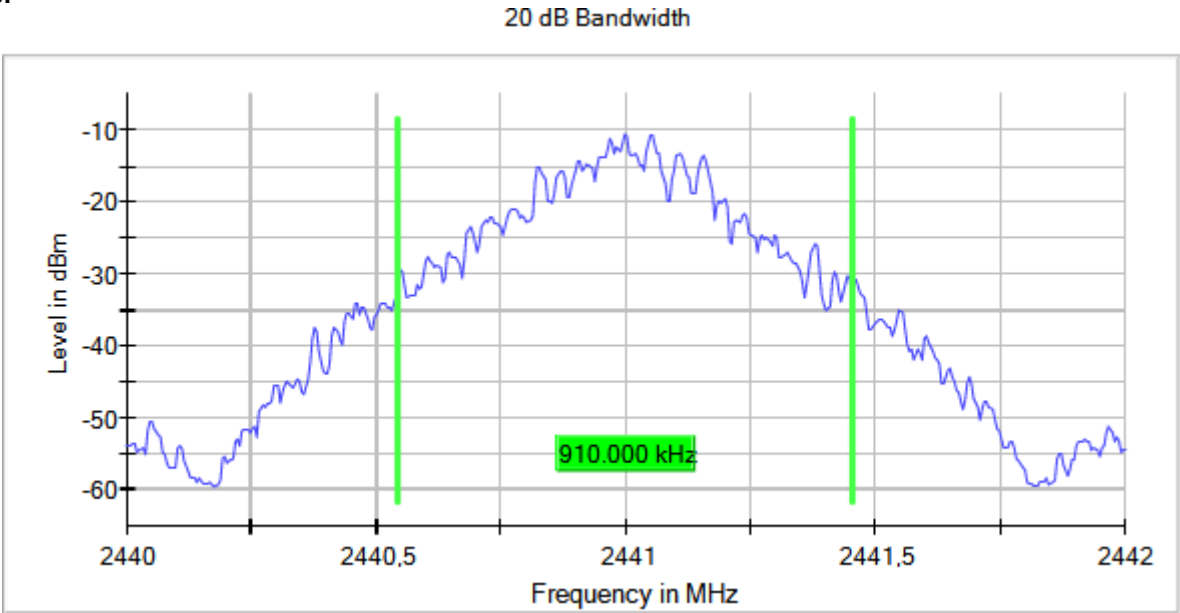
Equipment Type = Frequency Hopping Spread Spectrum systems (DSS) Frequency MHz = 2402.00000
Active Port = 1 Modulation = BT (GFSK 1-DH5)

Images:



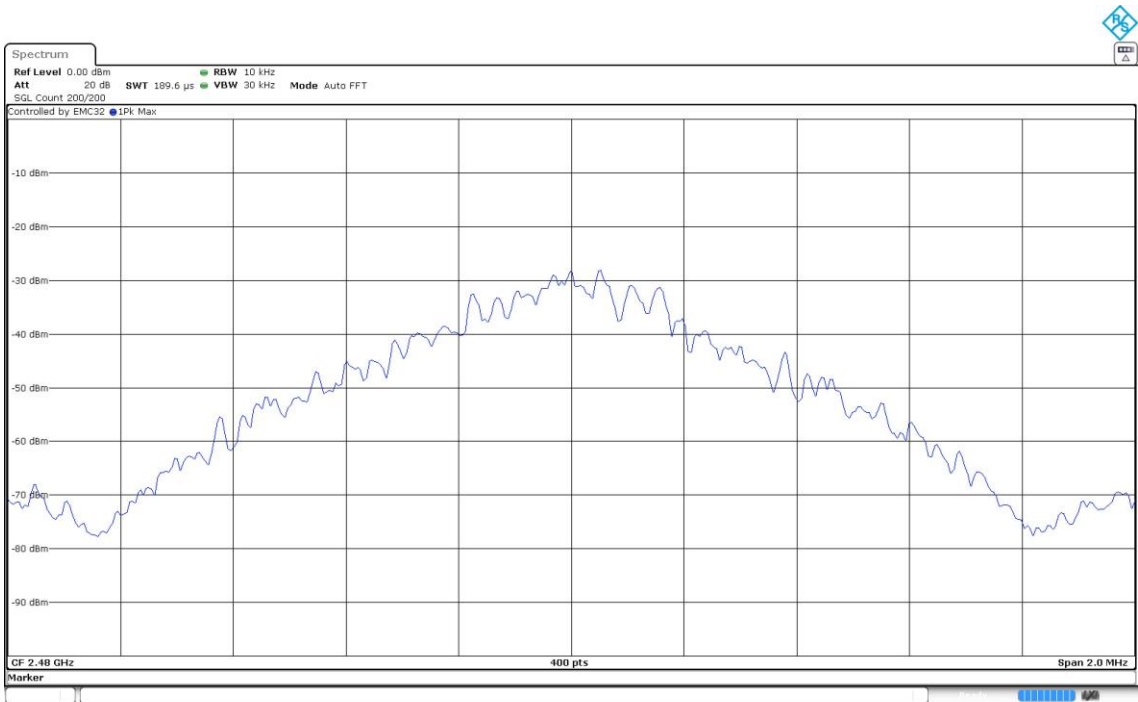
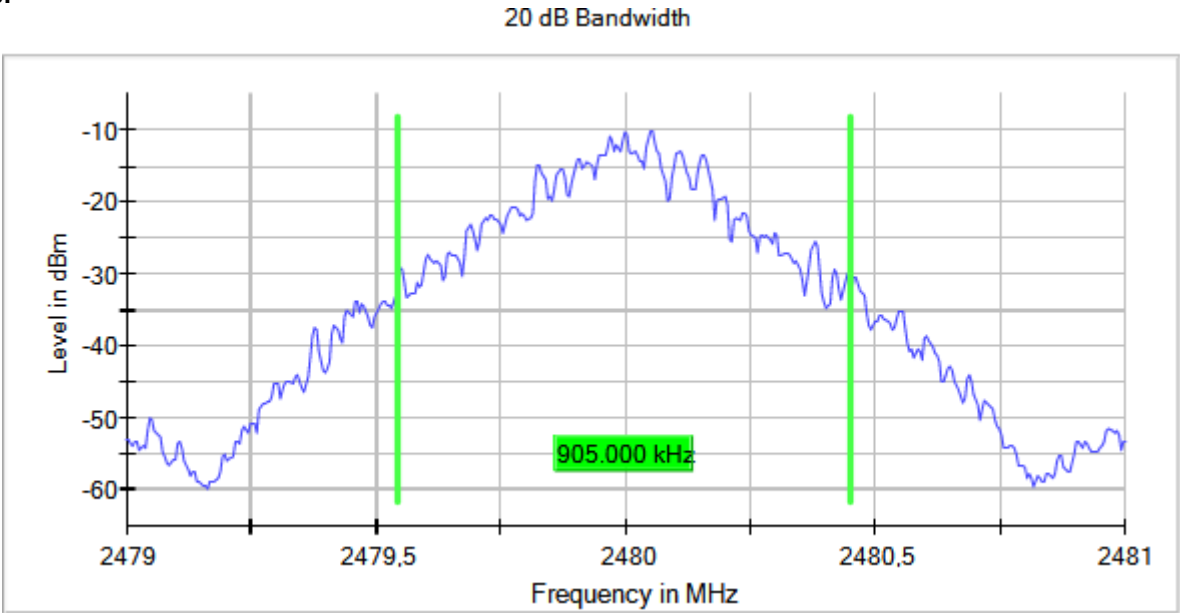
Equipment Type = Frequency Hopping Spread Spectrum systems (DSS) Frequency MHz = 2441.00000
Active Port = 1 Modulation = BT (GFSK 1-DH5)

Images:



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

Equipment	Freq (MHz)	Port	Ebw (MHz)
Frequency Hopping Spread Spectrum systems (DSS)	2402.00000	1	1.265
	2441.00000		1.265
	2480.00000		1.265

Verdict

Pass

Attachments

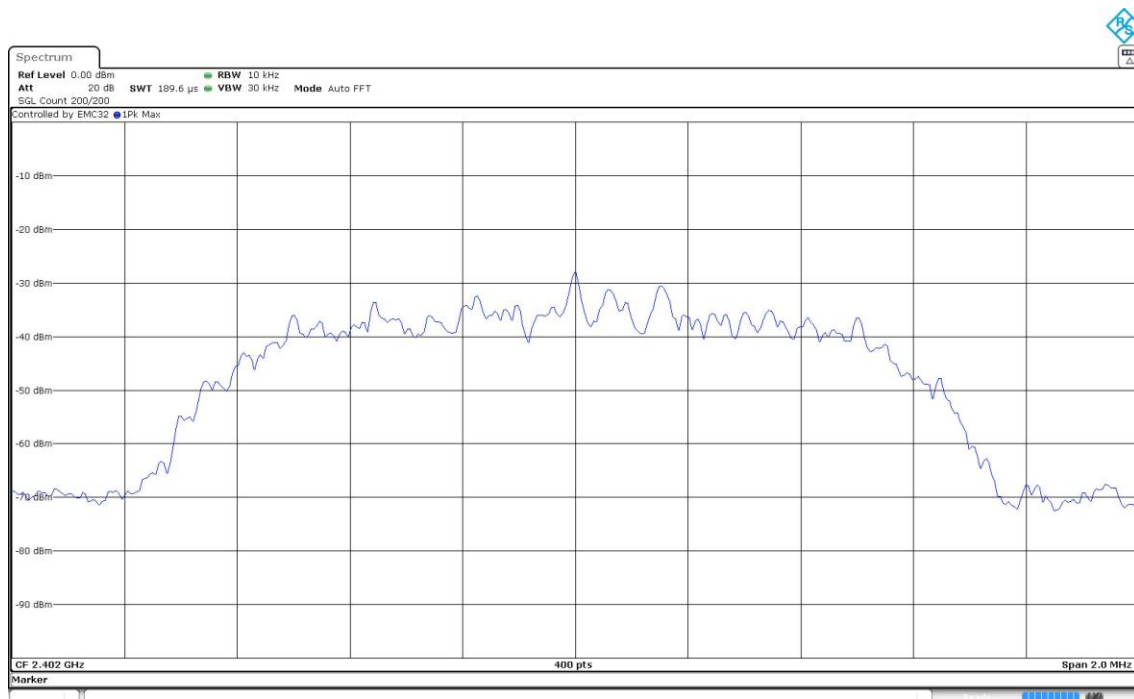
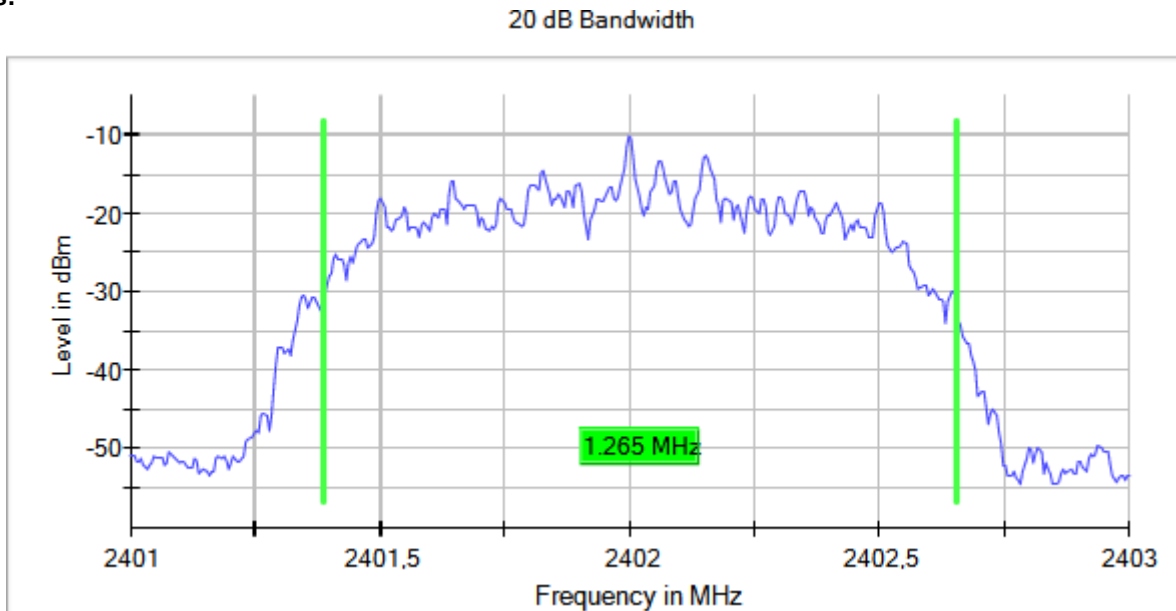
Equipment Type = Frequency Hopping Spread Spectrum systems (DSS)

Active Port = 1

Frequency MHz = 2402.00000

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

Images:



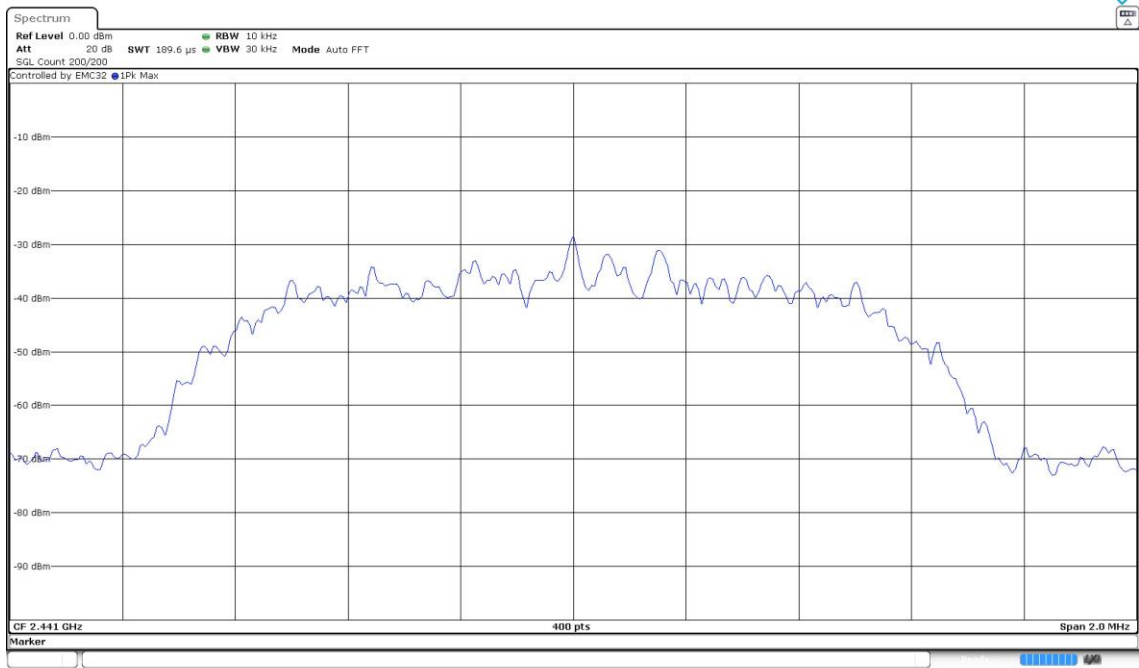
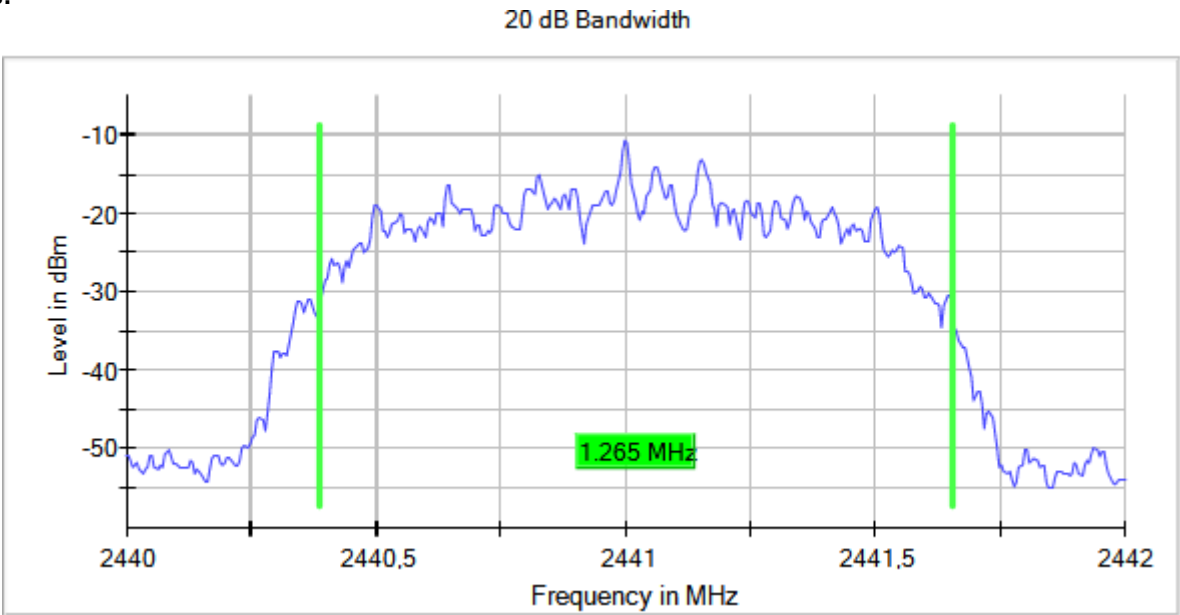
Equipment Type = Frequency Hopping Spread Spectrum systems (DSS)

Frequency MHz = 2441.00000

Active Port = 1

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

Images:



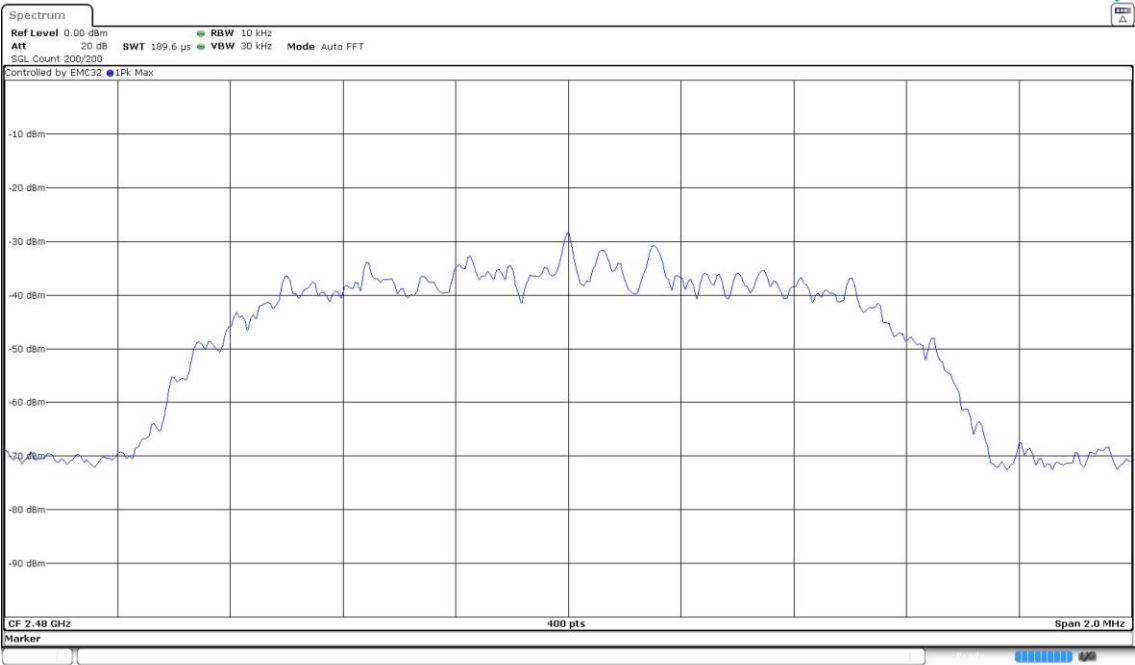
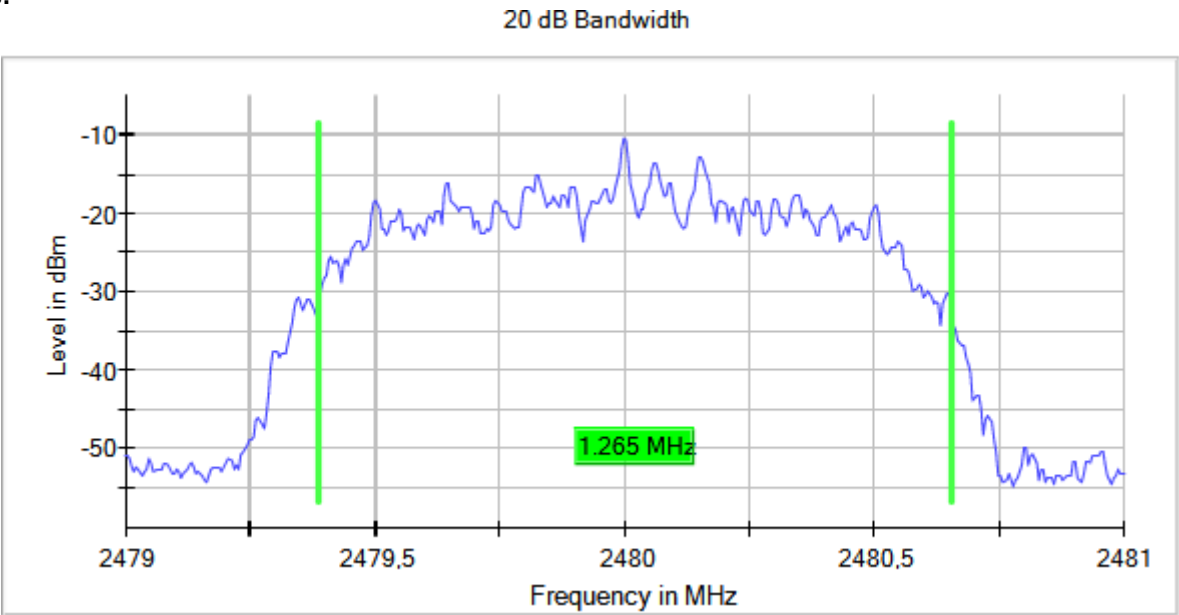
Equipment Type = Frequency Hopping Spread Spectrum systems (DSS)

Active Port = 1

Frequency MHz = 2480.00000

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

Images:



Modulation: BT (8DPSK 3-DH5)

Results

Equipment	Freq (MHz)	Port	Ebw (MHz)
Frequency Hopping Spread Spectrum systems (DSS)	2402.00000	1	1.265
	2441.00000		1.265
	2480.00000		1.265

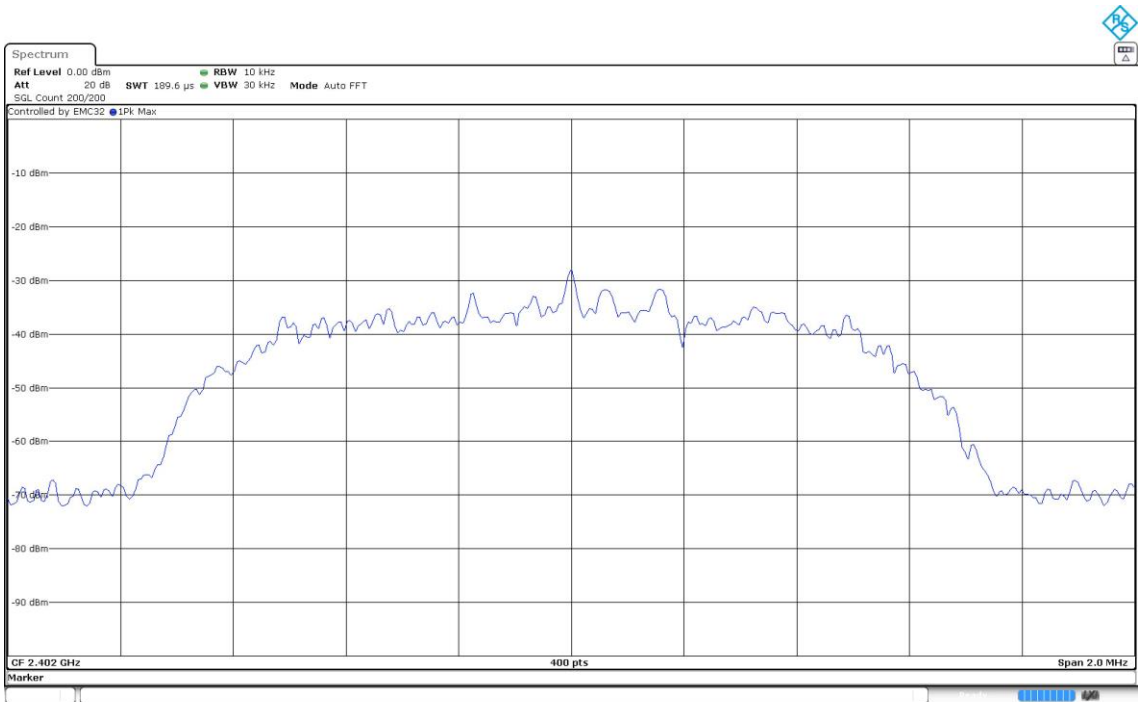
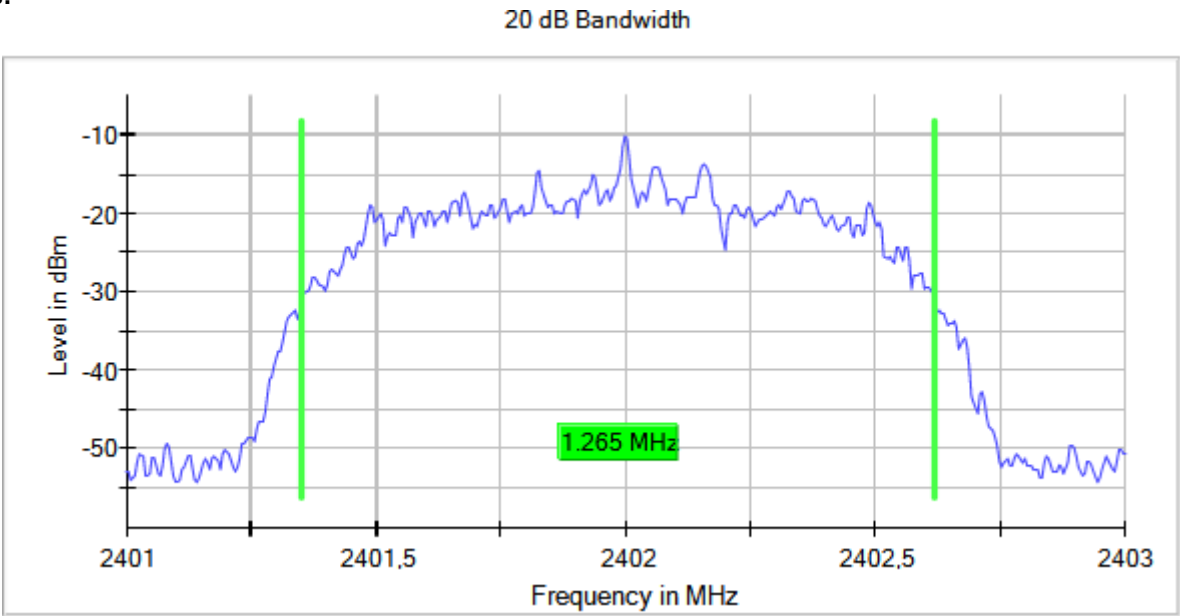
Verdict

Pass

Attachments

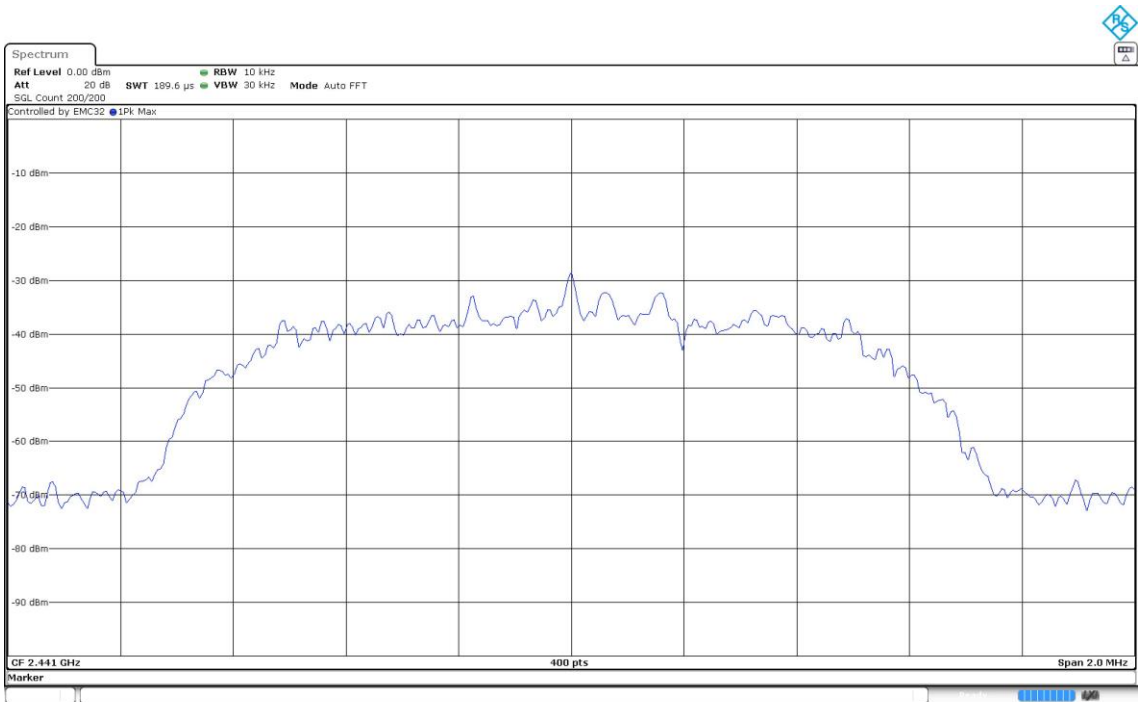
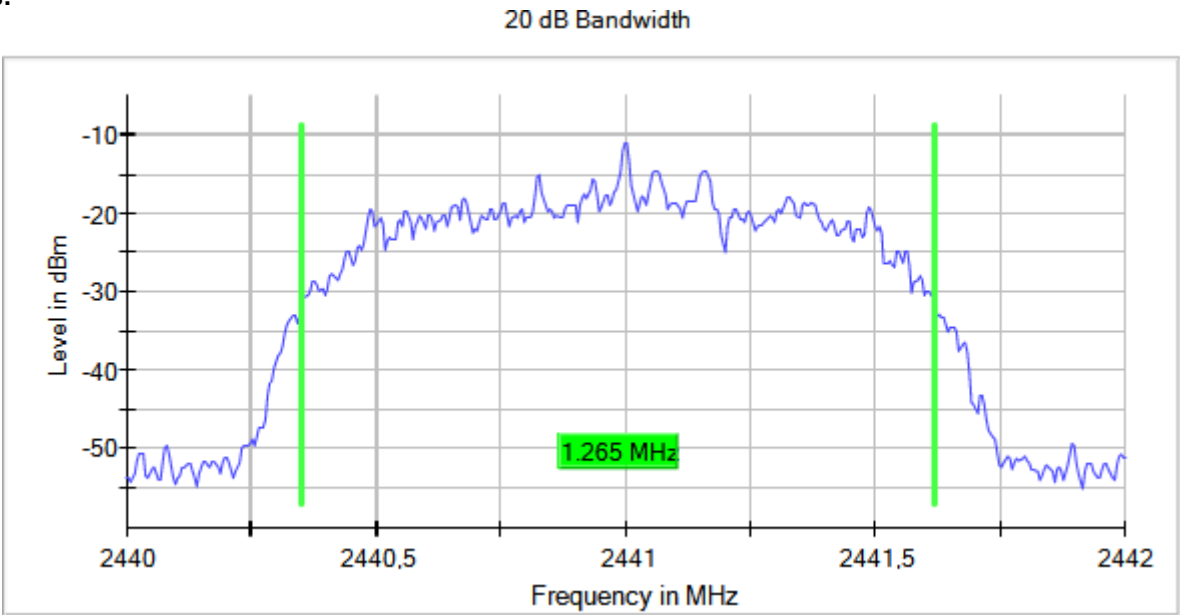
Equipment Type = Frequency Hopping Spread Spectrum systems (DSS) Frequency MHz = 2402.00000
Active Port = 1 Modulation = BT (8DPSK 3-DH5)

Images:



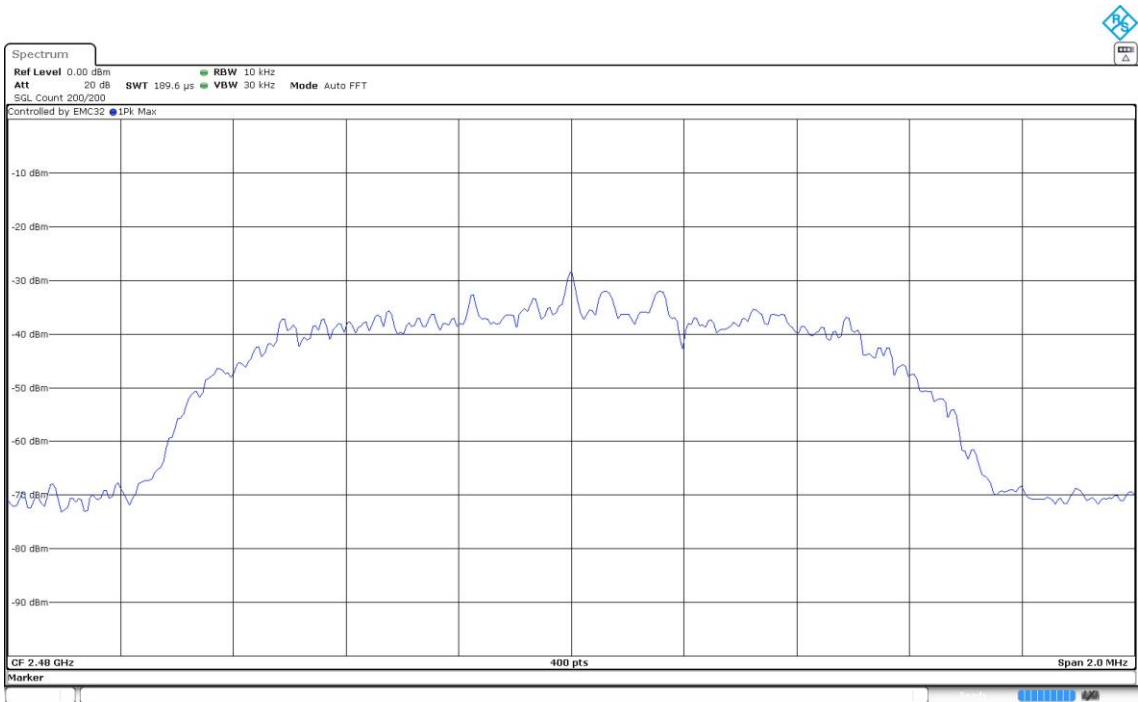
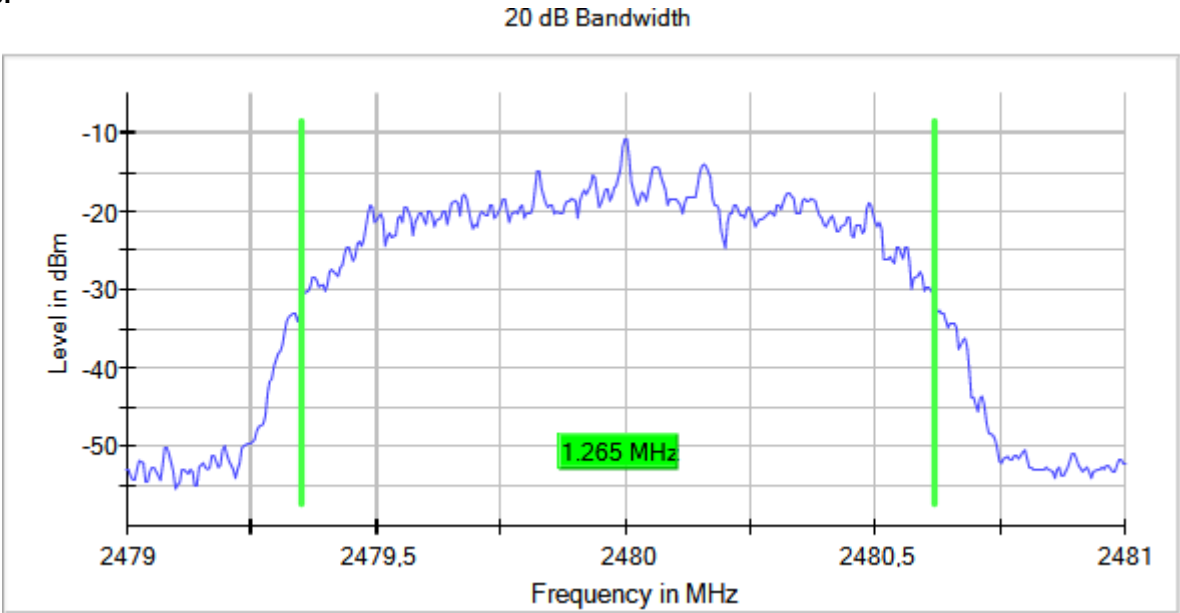
Equipment Type = Frequency Hopping Spread Spectrum systems (DSS) Frequency MHz = 2441.00000
Active Port = 1 Modulation = BT (8DPSK 3-DH5)

Images:



Equipment Type = Frequency Hopping Spread Spectrum systems (DSS) Frequency MHz = 2480.00000
Active Port = 1 Modulation = BT (8DPSK 3-DH5)

Images:



RSS-247 5.1 (b) / FCC 15.247 (a) (1) Carrier Frequency Separation

Limits

Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater.

Modulation: BT (GFSK 1-DH5)

Results

Equipment	Port	Freq Sep (MHz)
Frequency Hopping Spread Spectrum systems (DSS)	1	0.98

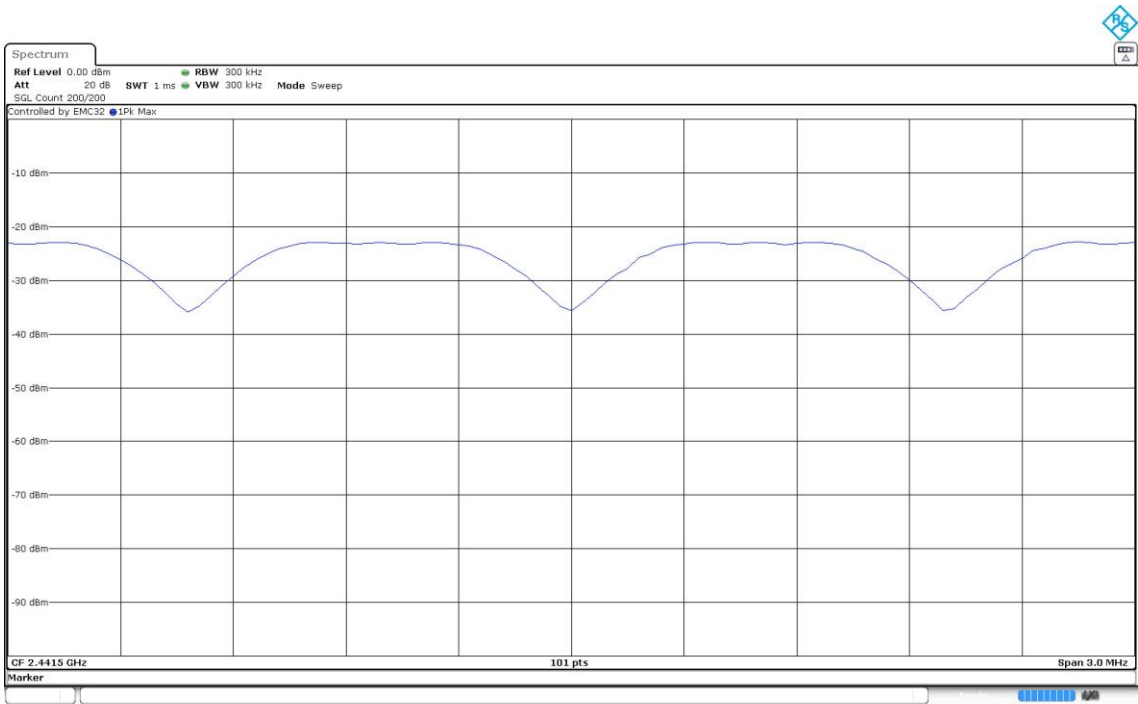
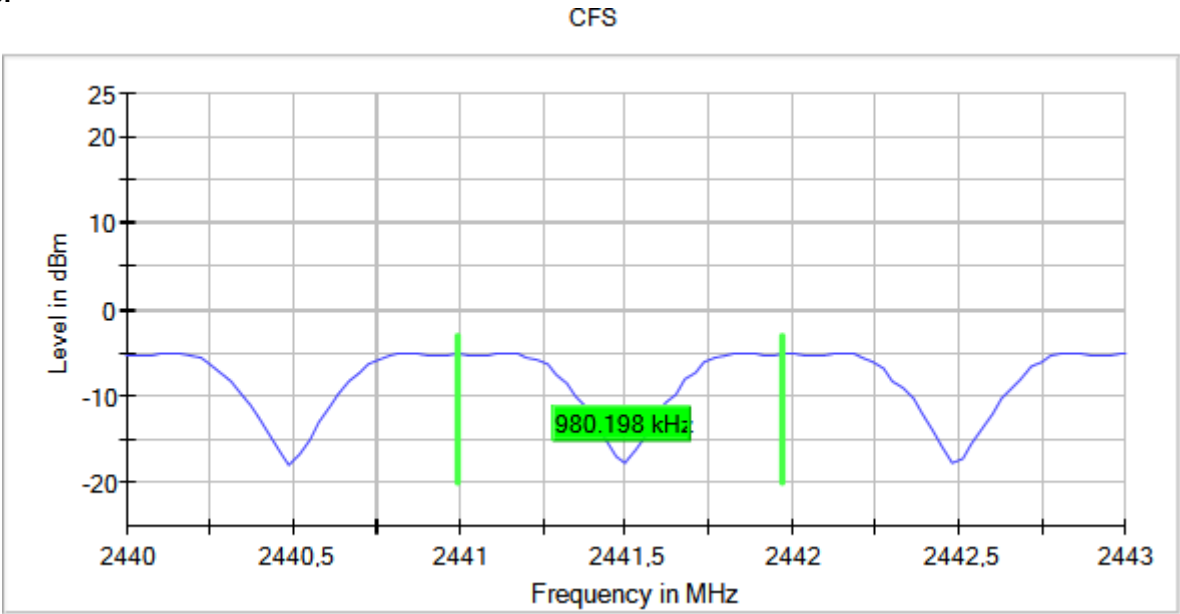
Verdict

Pass

Attachments

Equipment Type = Frequency Hopping Spread Spectrum systems (DSS) Active Port = 1
Modulation = BT (GFSK 1-DH5)

Images:



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

Results

Equipment	Port	Freq Sep (MHz)
Frequency Hopping Spread Spectrum systems (DSS)	1	1.01

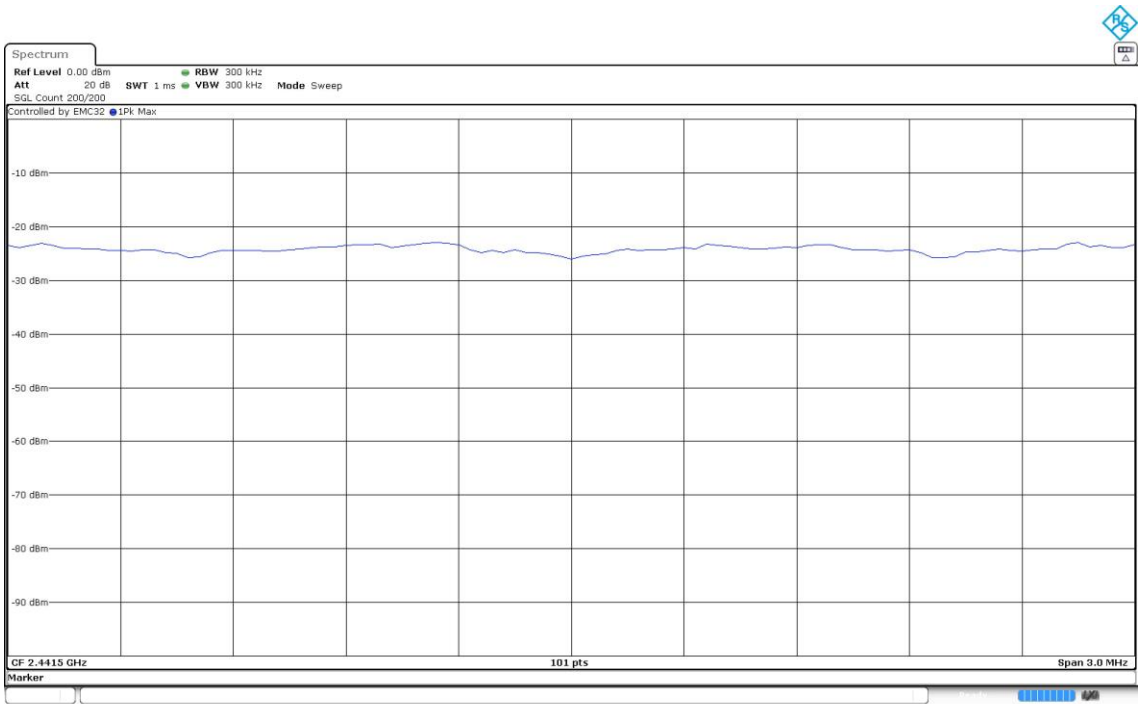
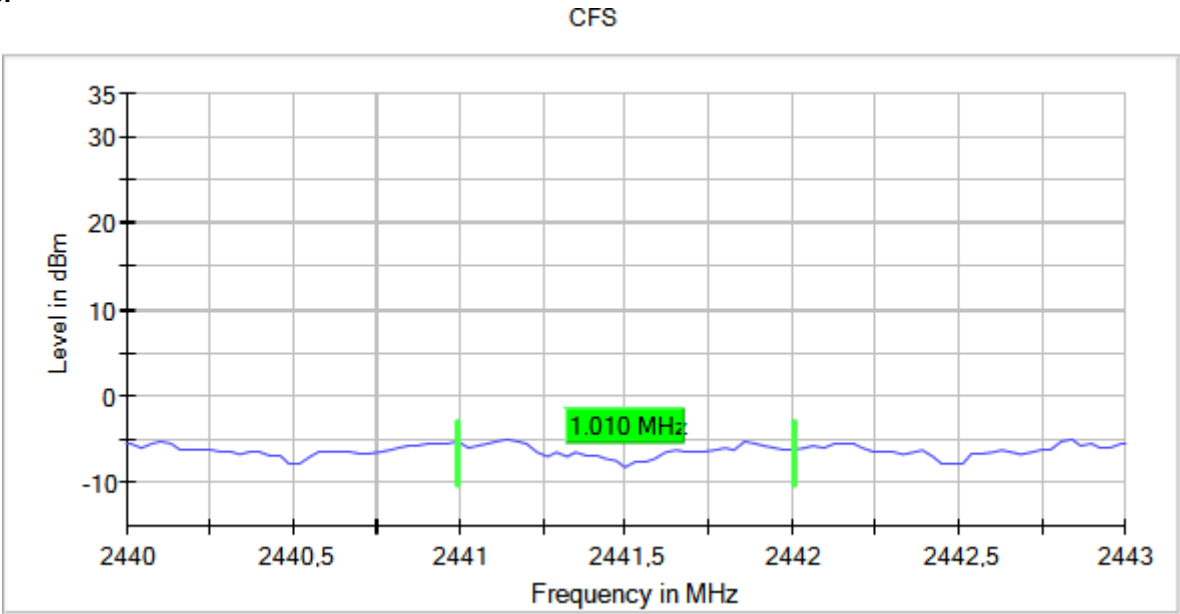
Verdict

Pass

Attachments

Equipment Type = Frequency Hopping Spread Spectrum systems (DSS) Active Port = 1
Modulation = BT (PI/4 DQPSK 2-DH5)

Images:



Modulation: BT (8DPSK 3-DH5)

Results

Equipment	Port	Freq Sep (MHz)
Frequency Hopping Spread Spectrum systems (DSS)	1	1.01

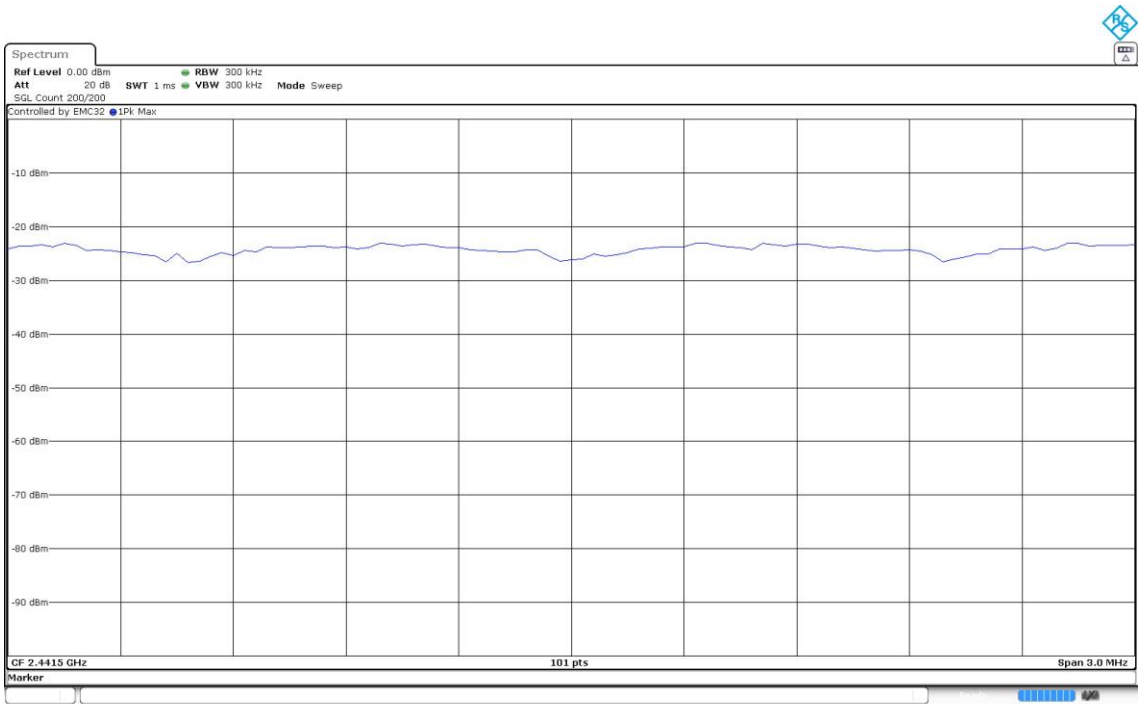
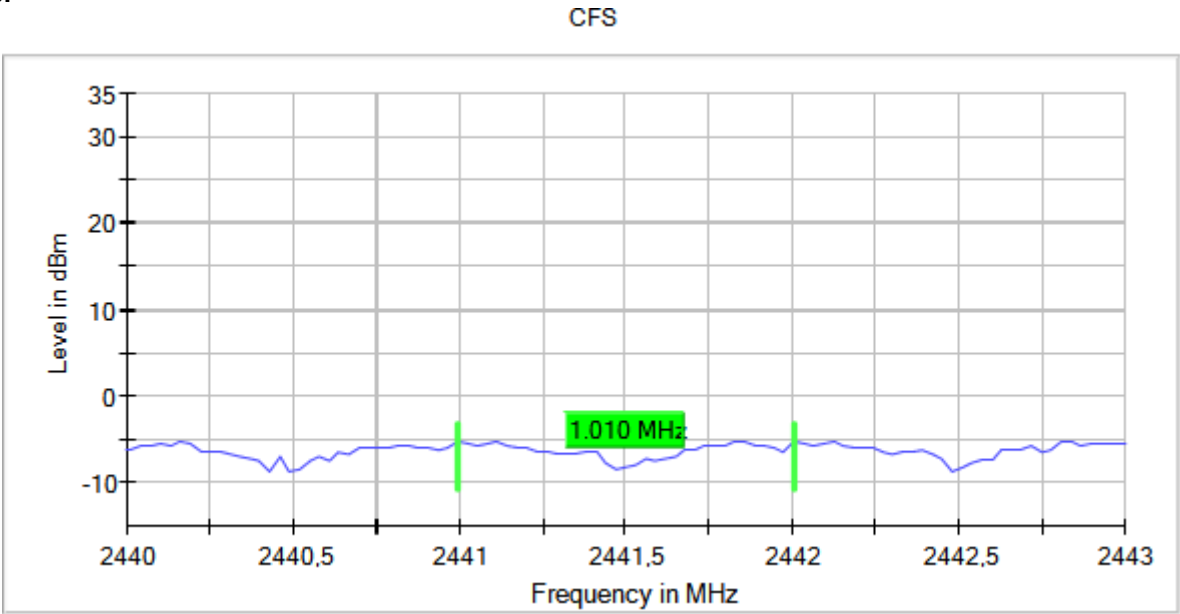
Verdict

Pass

Attachments

Equipment Type = Frequency Hopping Spread Spectrum systems (DSS) Active Port = 1
Modulation = BT (8DPSK 3-DH5)

Images:



RSS-247 5.1 (d) / FCC 15.247 (a) (1) (iii) Time of Occupancy (Dwell Time)

Limits

The average time of occupancy on any channel shall not be greater than 0.4 seconds (400 ms) within a period of 0.4 seconds multiplied by the number of hopping channels employed = 0.4 x 79= 31.6 seconds.

Modulation: BT (GFSK 1-DH5)

Results

Equipment	Port	NHp	Avg COT (ms)
Frequency Hopping Spread Spectrum systems (DSS)	1	103	300.69
		116	338.39
		118	344.08

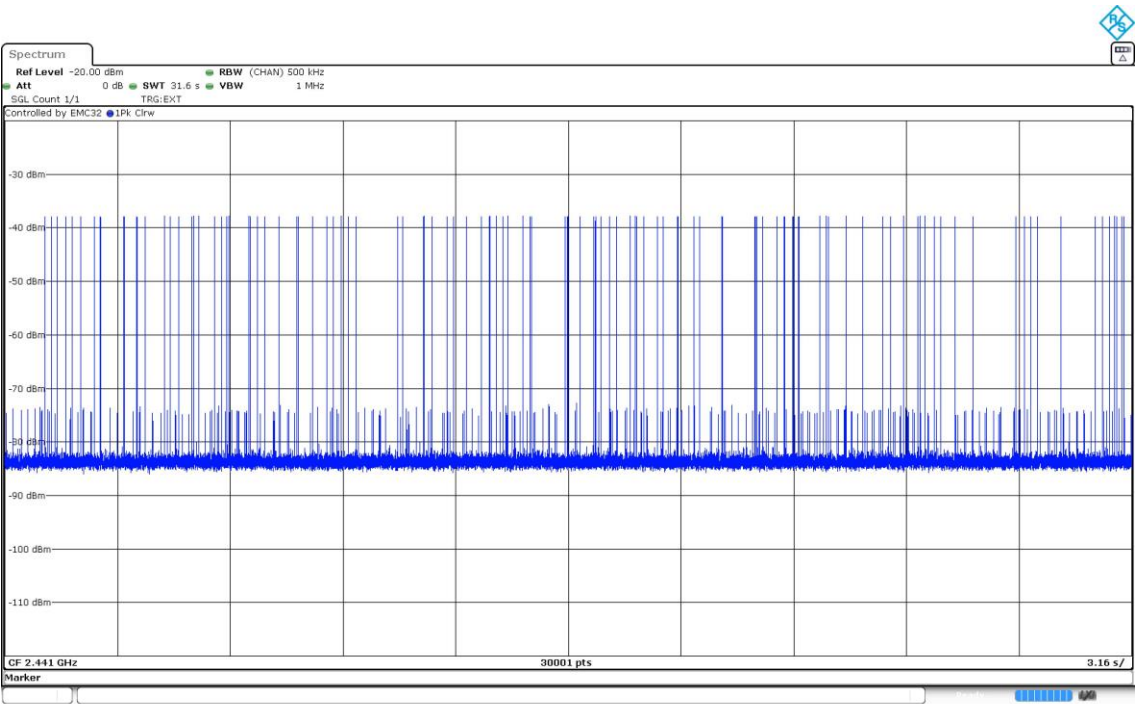
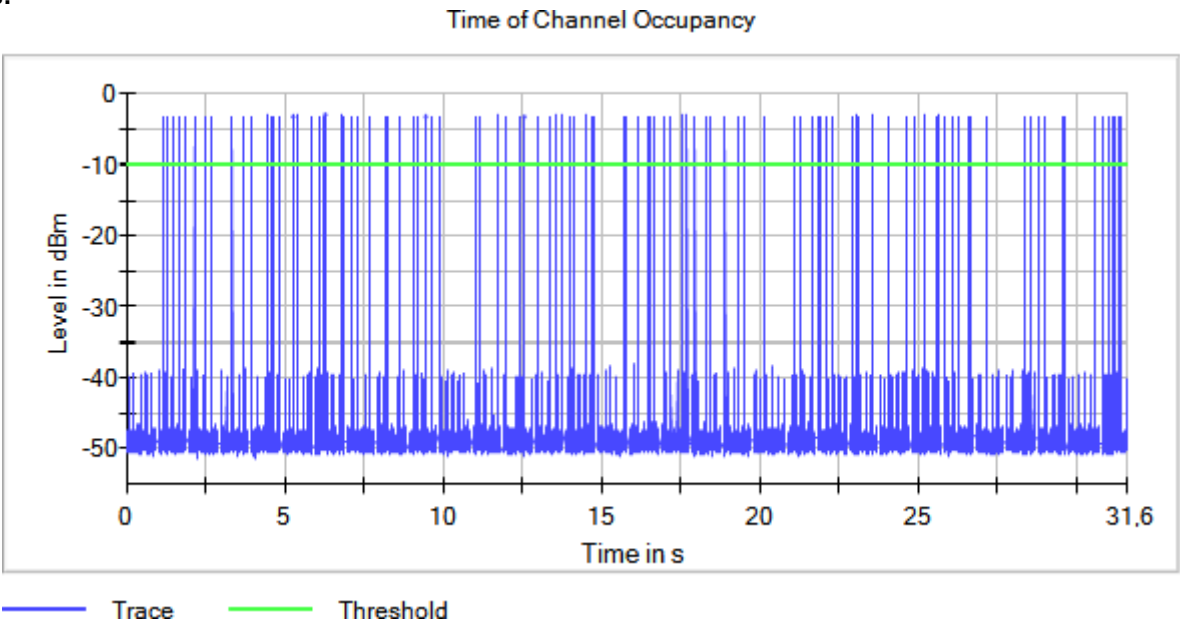
Verdict

Pass

Attachments

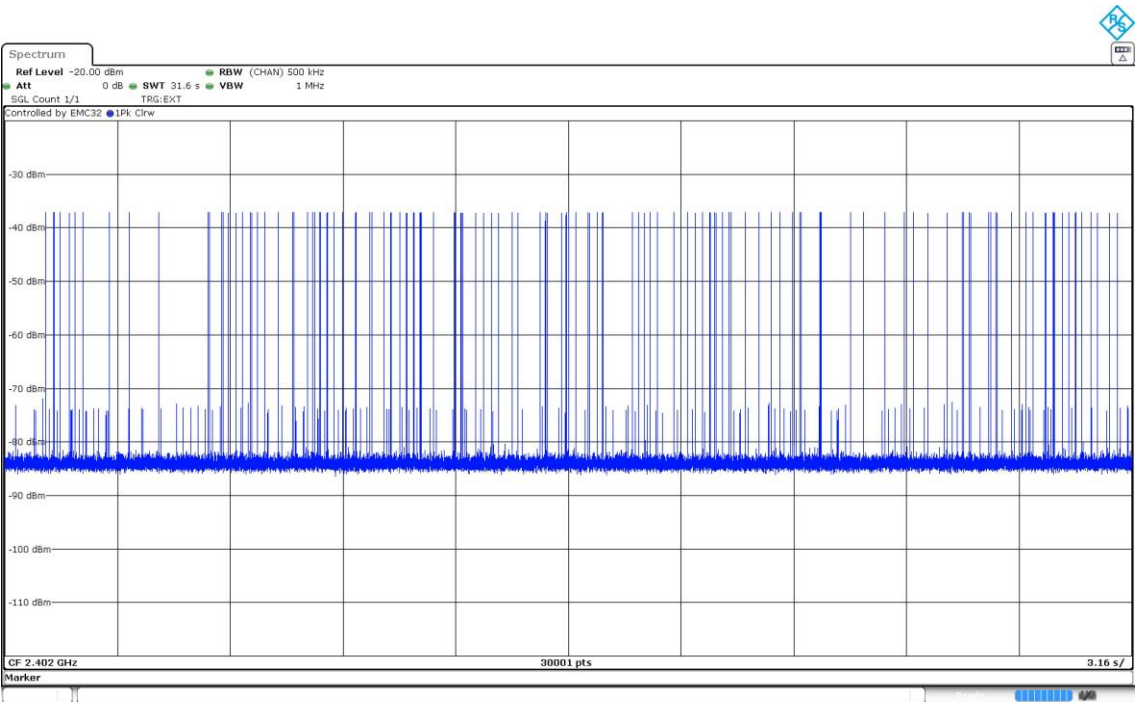
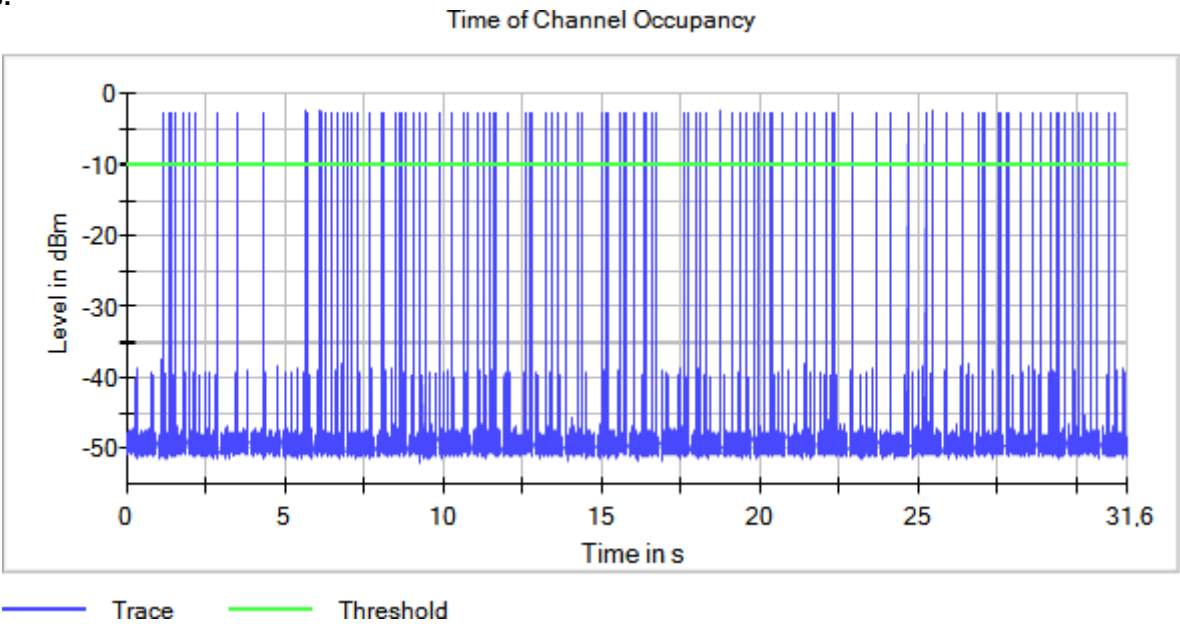
Equipment Type = Frequency Hopping Spread Spectrum systems (DSS) Active Port = 1
Modulation = BT (GFSK 1-DH5)

Images:



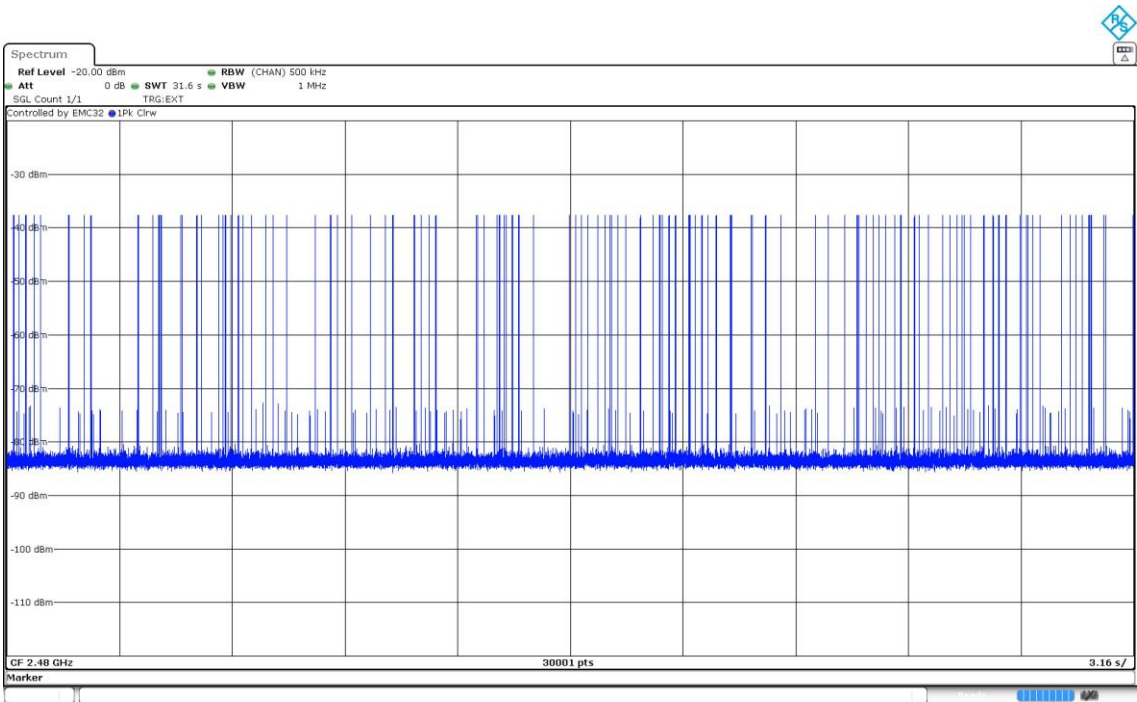
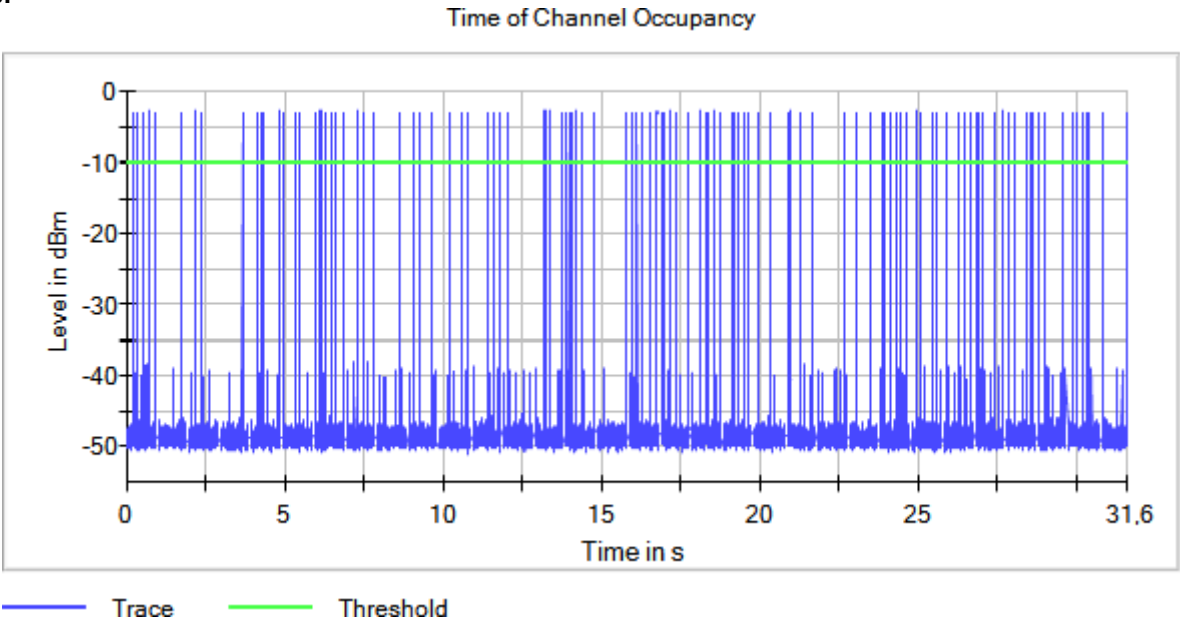
Equipment Type = Frequency Hopping Spread Spectrum systems (DSS) Active Port = 1
Modulation = BT (GFSK 1-DH5)

Images:



Equipment Type = Frequency Hopping Spread Spectrum systems (DSS) Active Port = 1
Modulation = BT (GFSK 1-DH5)

Images:



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

Results

Equipment	Port	NHp	Avg COT (ms)
Frequency Hopping Spread Spectrum systems (DSS)	1	111	244.52
		112	258.63
		97	233.26

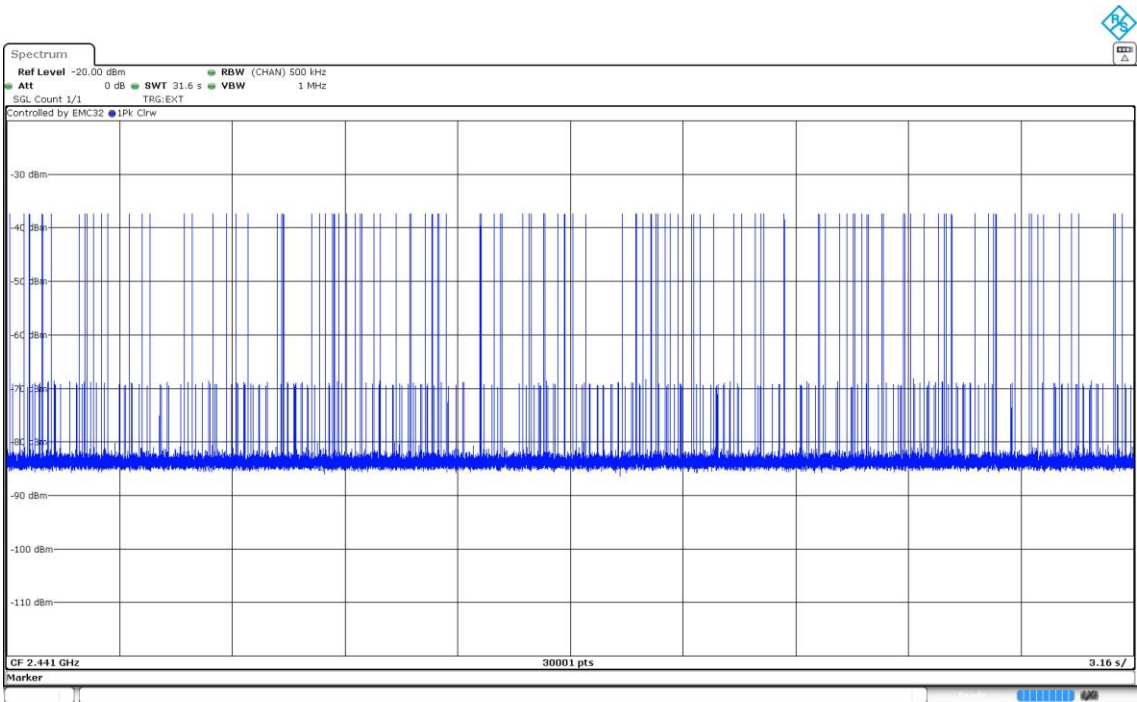
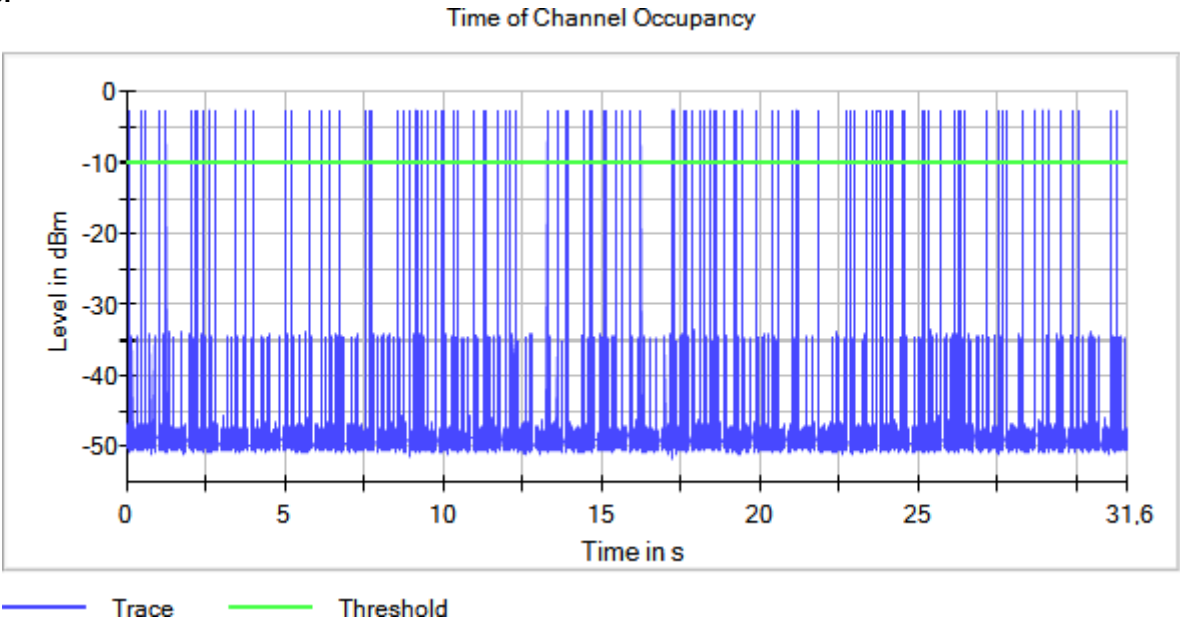
Verdict

Pass

Attachments

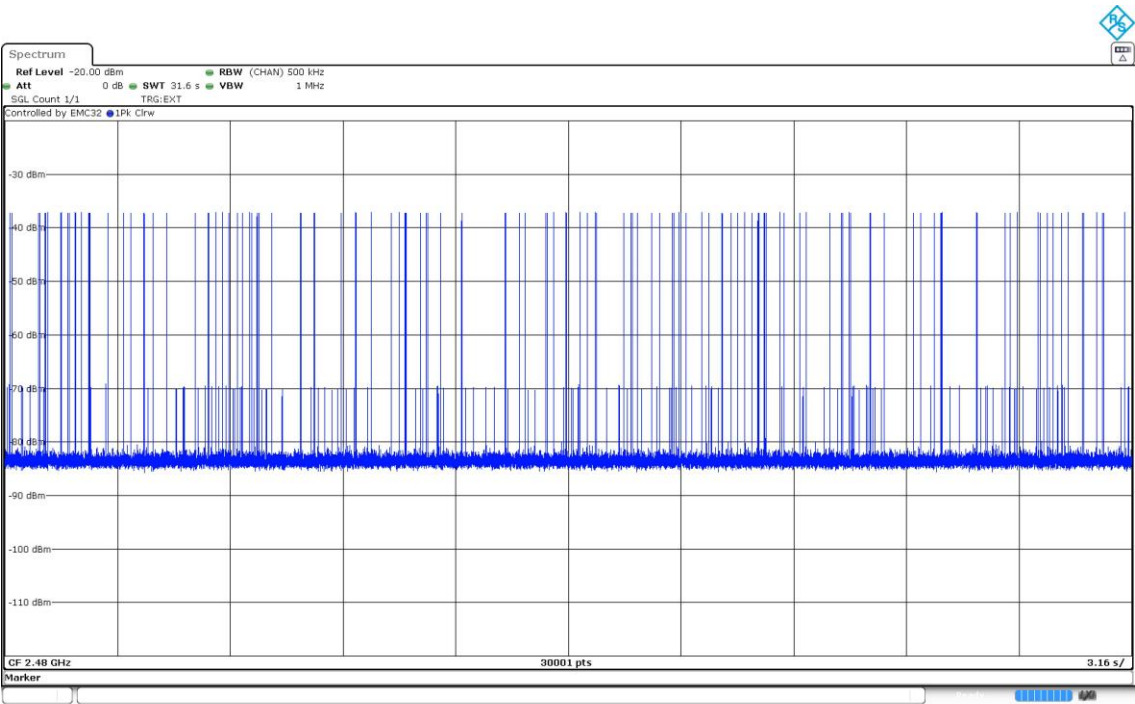
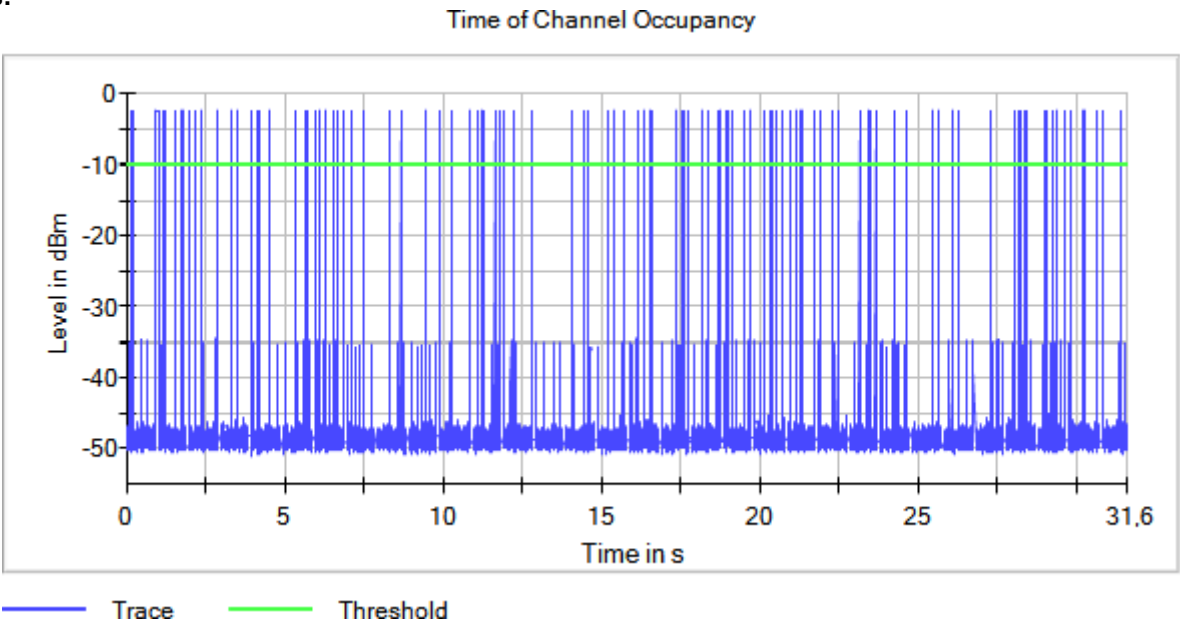
Equipment Type = Frequency Hopping Spread Spectrum systems (DSS) Active Port = 1
Modulation = BT (PI/4 DQPSK 2-DH5)

Images:



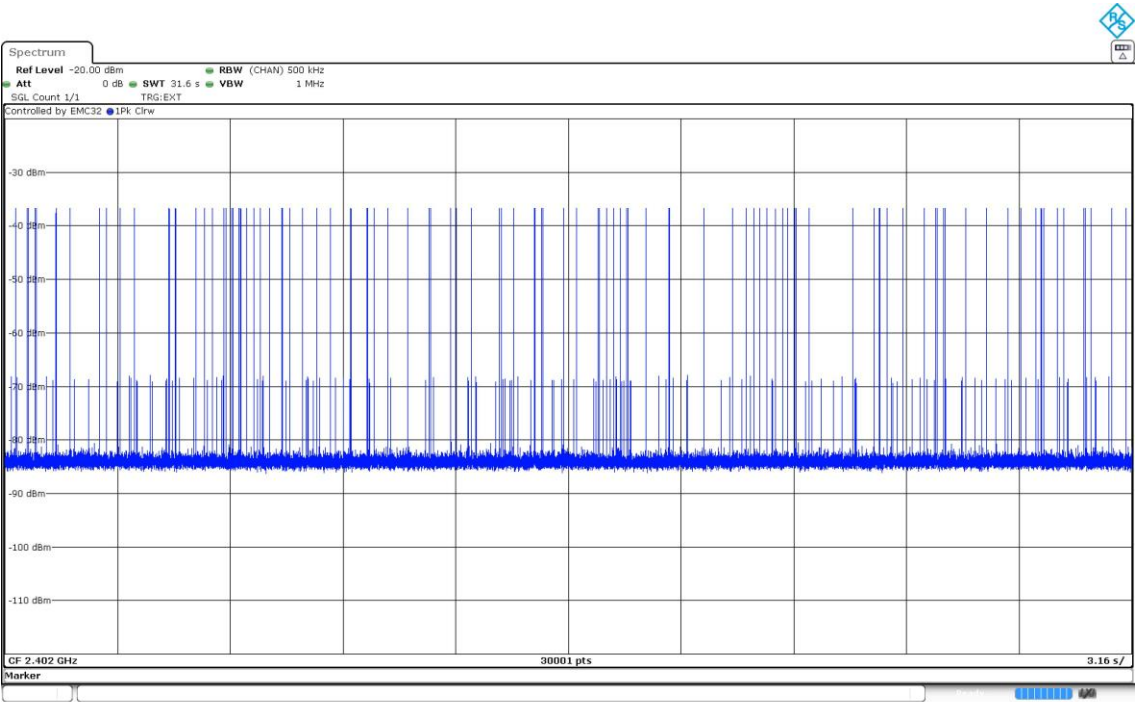
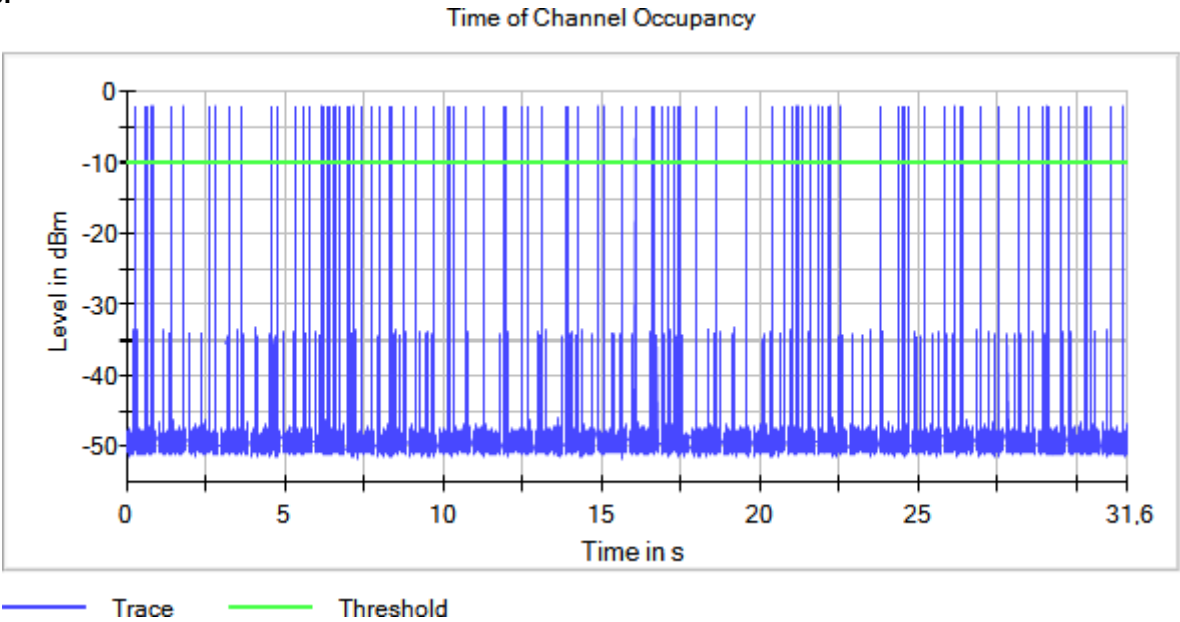
Equipment Type = Frequency Hopping Spread Spectrum systems (DSS) Active Port = 1
Modulation = BT (PI/4 DQPSK 2-DH5)

Images:



Equipment Type = Frequency Hopping Spread Spectrum systems (DSS) Active Port = 1
Modulation = BT (PI/4 DQPSK 2-DH5)

Images:



Modulation: BT (8DPSK 3-DH5)

Results

Equipment	Port	NHp	Avg COT (ms)
Frequency Hopping Spread Spectrum systems (DSS)	1	112	240.10
		109	251.20
		116	259.84

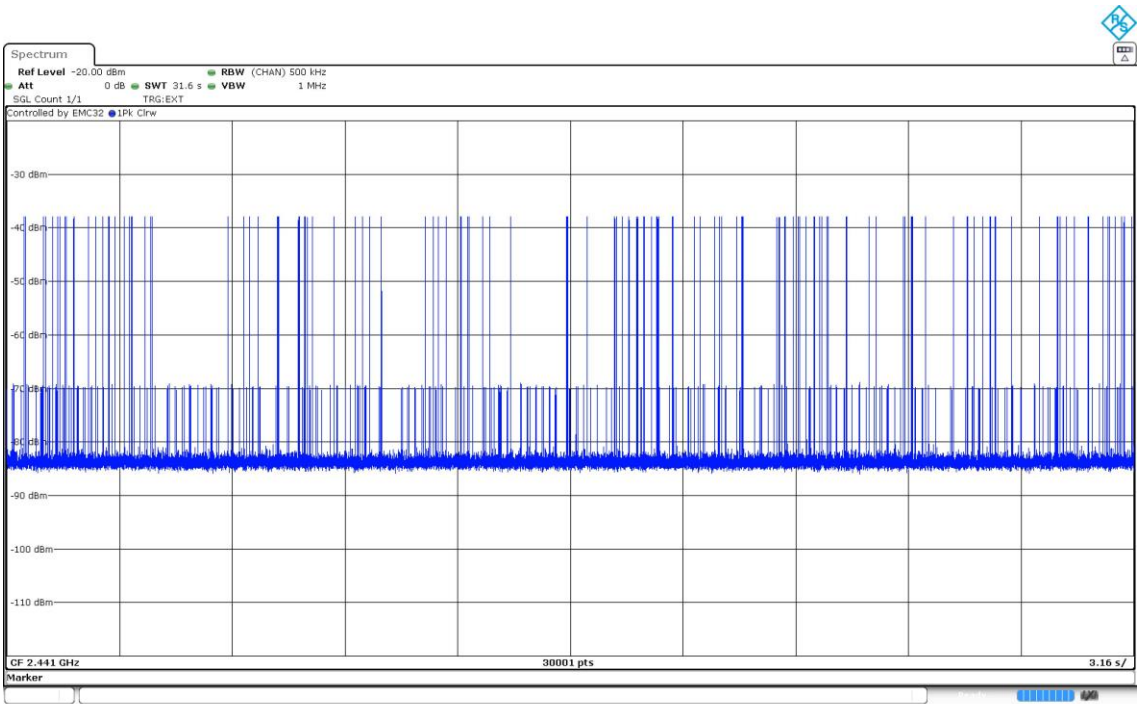
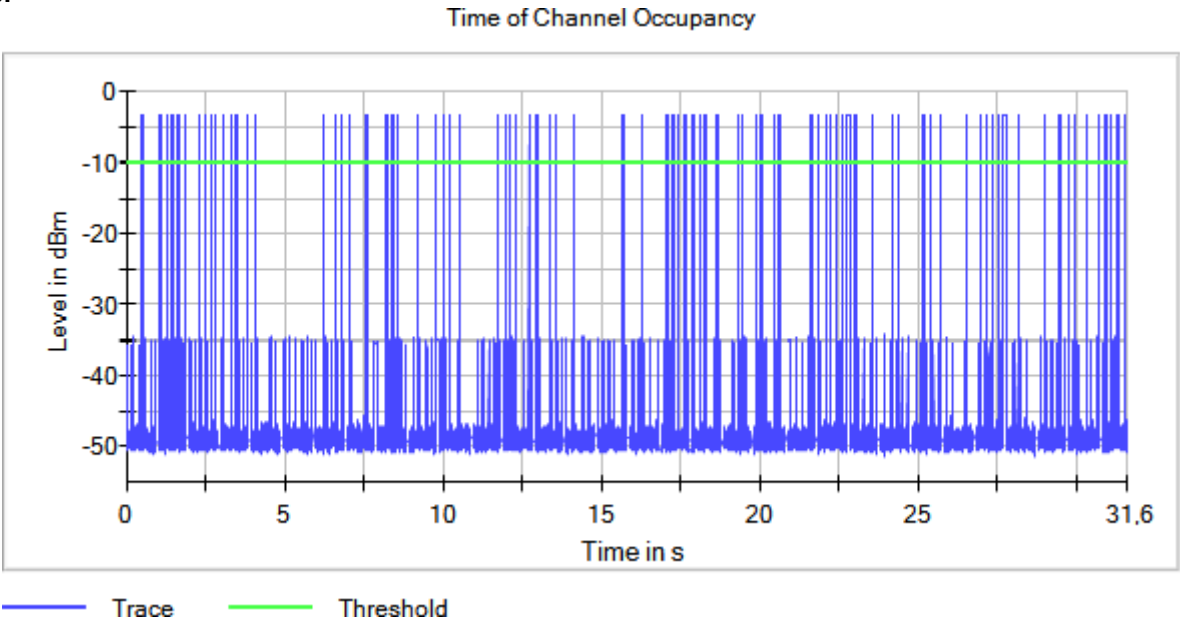
Verdict

Pass

Attachments

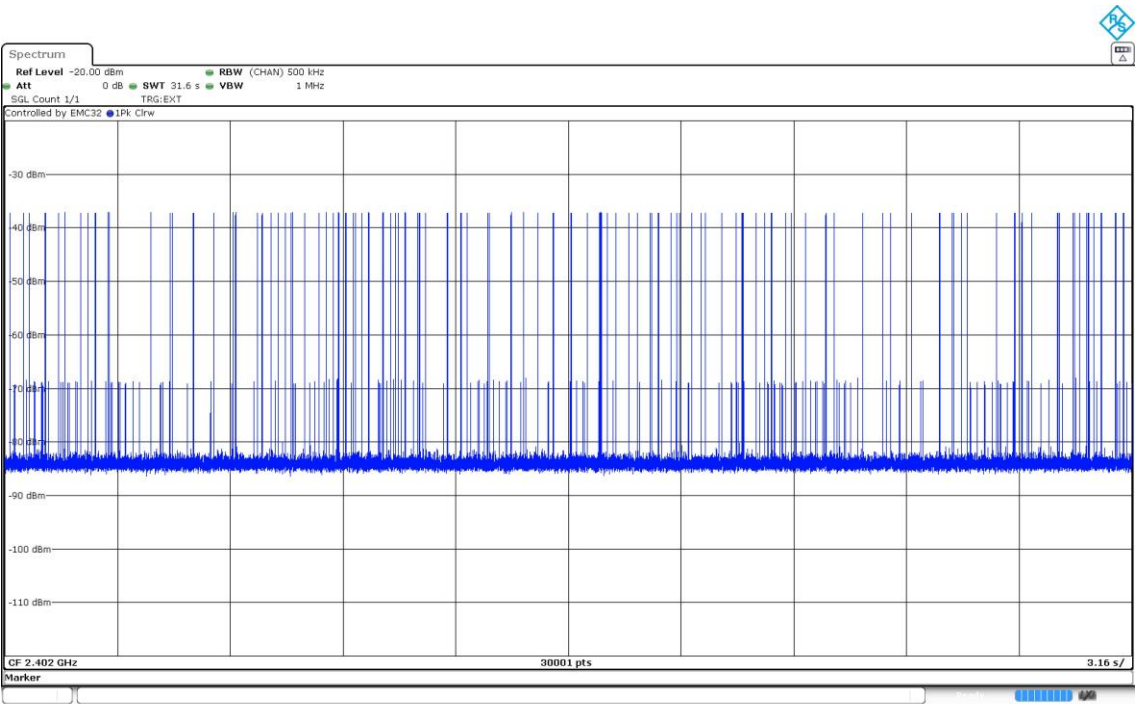
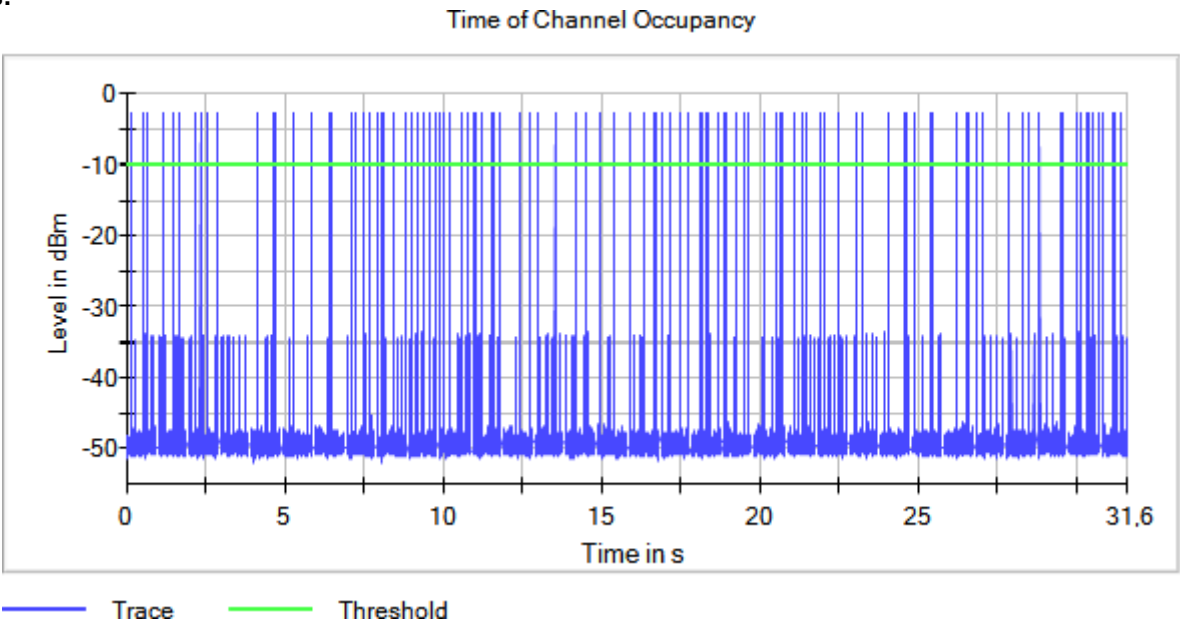
Equipment Type = Frequency Hopping Spread Spectrum systems (DSS) Active Port = 1
Modulation = BT (8DPSK 3-DH5)

Images:



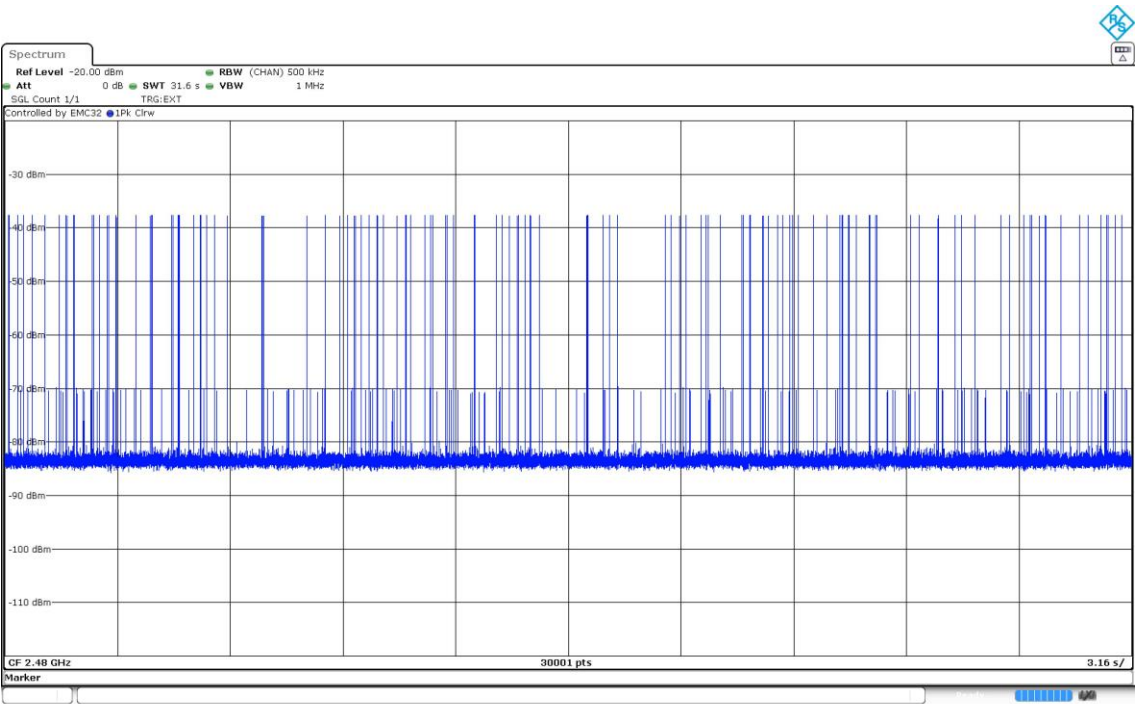
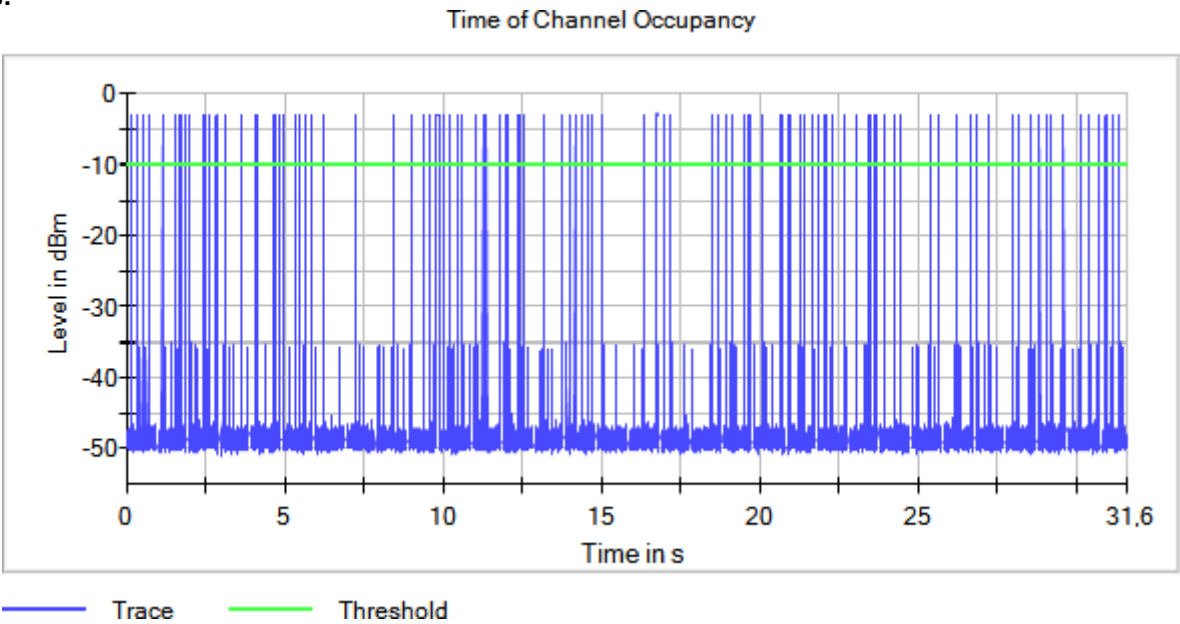
Equipment Type = Frequency Hopping Spread Spectrum systems (DSS) Active Port = 1
Modulation = BT (8DPSK 3-DH5)

Images:



Equipment Type = Frequency Hopping Spread Spectrum systems (DSS) Active Port = 1
Modulation = BT (8DPSK 3-DH5)

Images:



RSS-247 5.1 (d) / FCC 15.247 (a) (1) (iii) 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

Equipment	Port	NHC
Frequency Hopping Spread Spectrum systems (DSS)	1	79

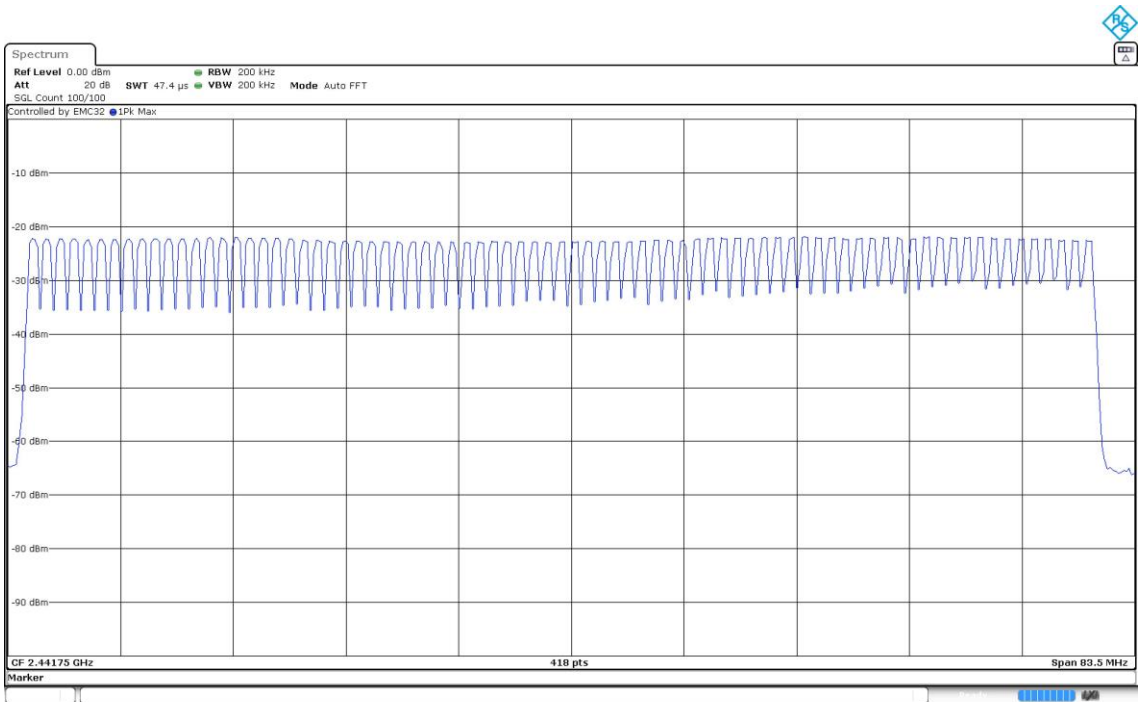
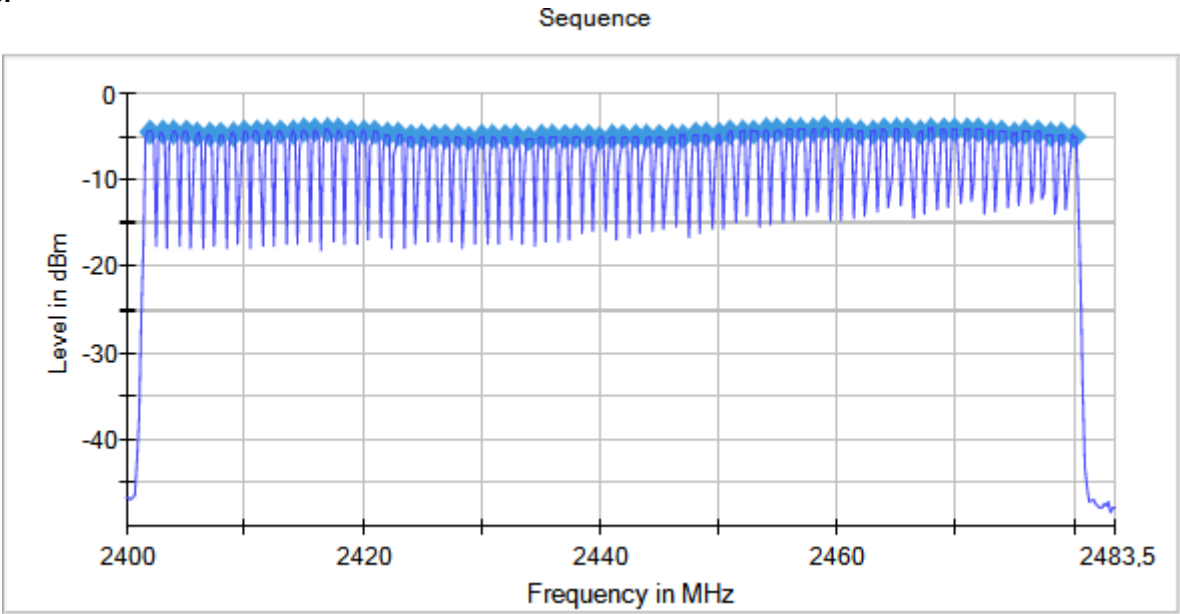
Verdict

Pass

Attachments

Equipment Type = Frequency Hopping Spread Spectrum systems (DSS) Active Port = 1
Modulation = BT (GFSK 1-DH5)

Images:



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

Results

Equipment	Port	NHC
Frequency Hopping Spread Spectrum systems (DSS)	1	79

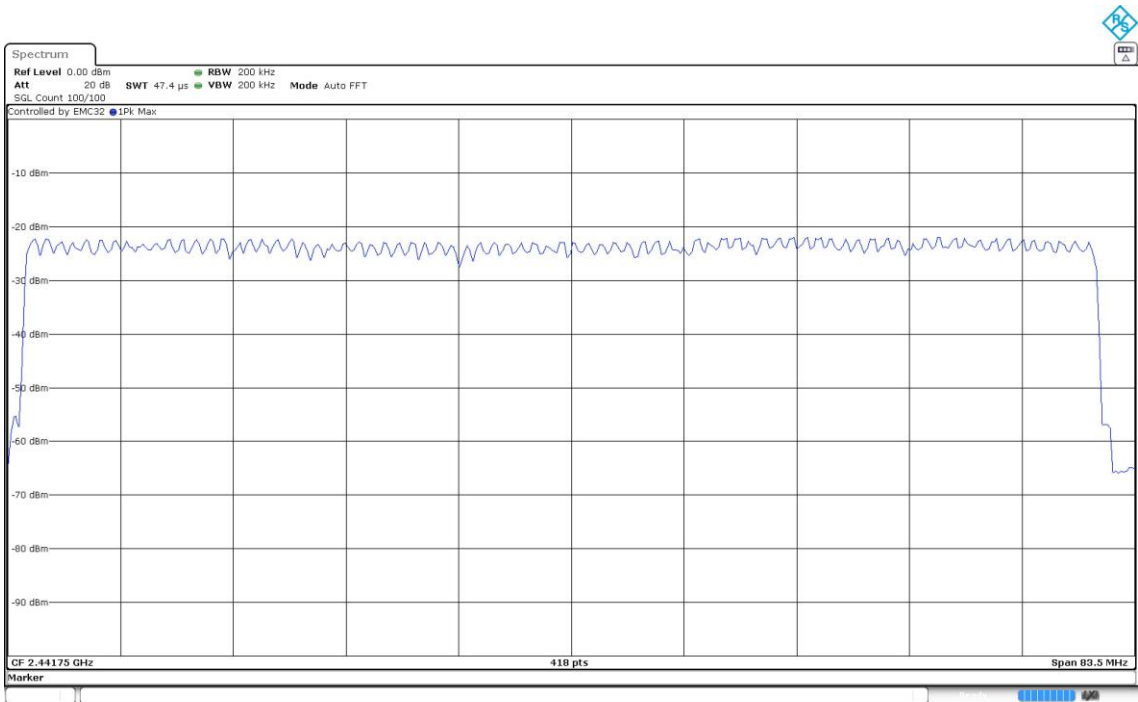
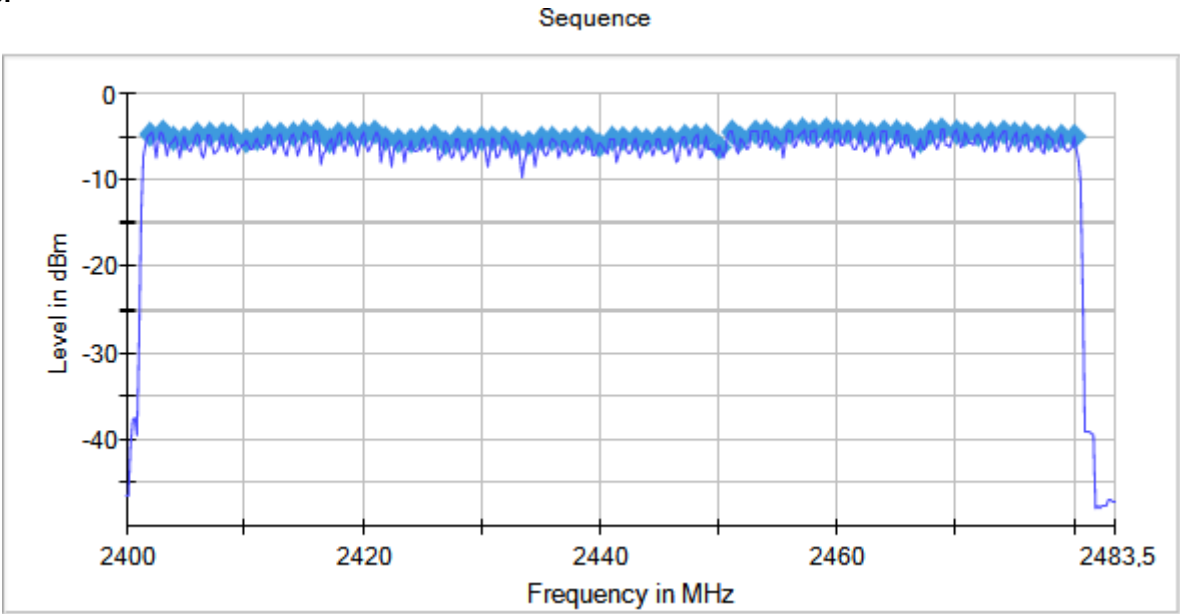
Verdict

Pass

Attachments

Equipment Type = Frequency Hopping Spread Spectrum systems (DSS) Active Port = 1
Modulation = BT (PI/4 DQPSK 2-DH5)

Images:



Modulation: BT (8DPSK 3-DH5)

Results

Equipment	Port	NHC
Frequency Hopping Spread Spectrum systems (DSS)	1	79

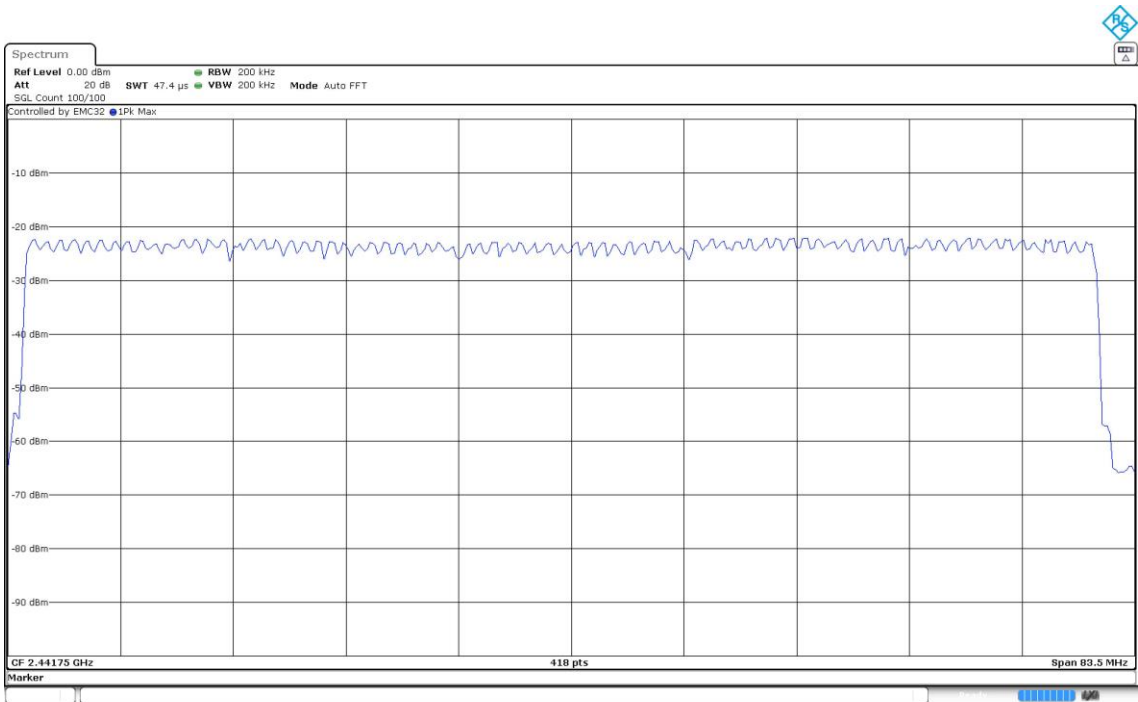
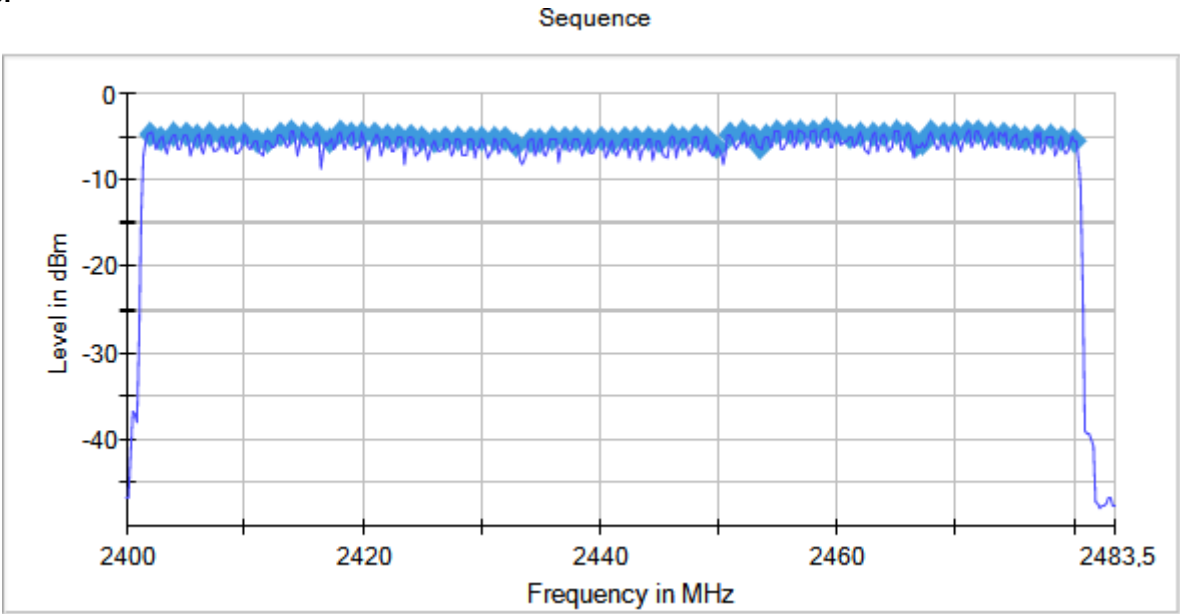
Verdict

Pass

Attachments

Equipment Type = Frequency Hopping Spread Spectrum systems (DSS) Active Port = 1
Modulation = BT (8DPSK 3-DH5)

Images:



RSS-247 5.4 / FCC 15.247 (b) Maximum Peak Conducted Output Power

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

Operation Band (MHz)	Equipment	Freq (MHz)	Port	Peak Power (dBm)	E.I.R.P. (dBm)
[2400, 2483.5]	Frequency Hopping Spread Spectrum systems (DSS)	2402.00000	1	-4.2060	-4.1060
		2441.00000		-4.7470	-4.6470
		2480.00000		-4.4510	-4.3510

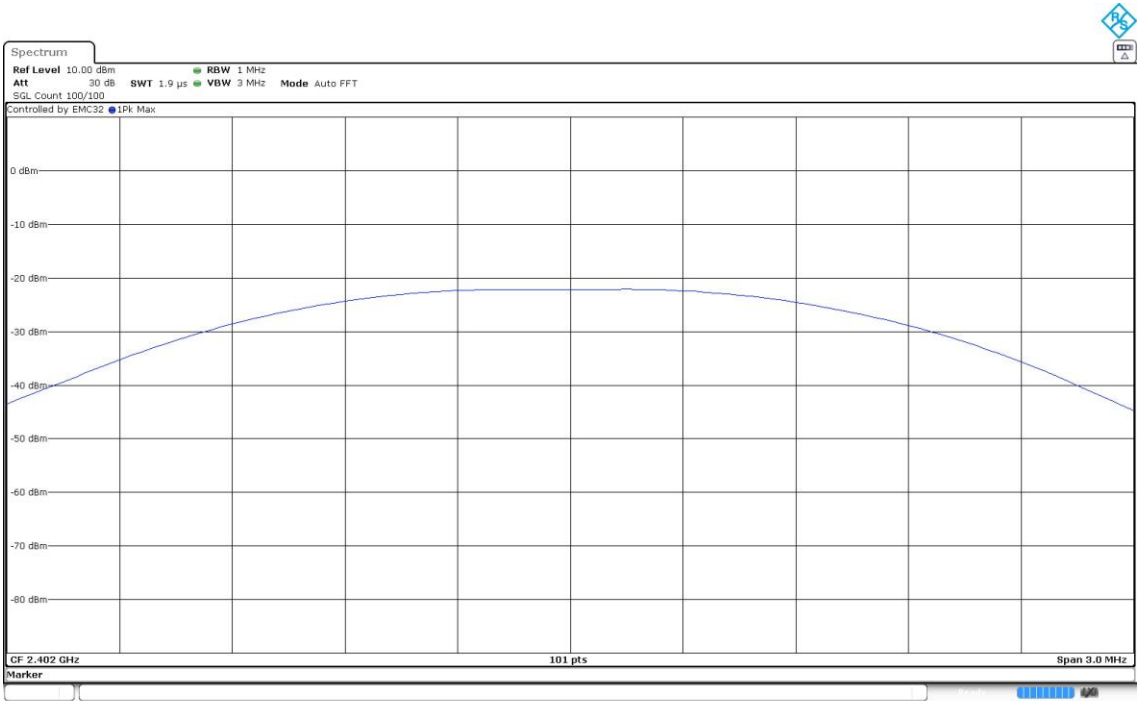
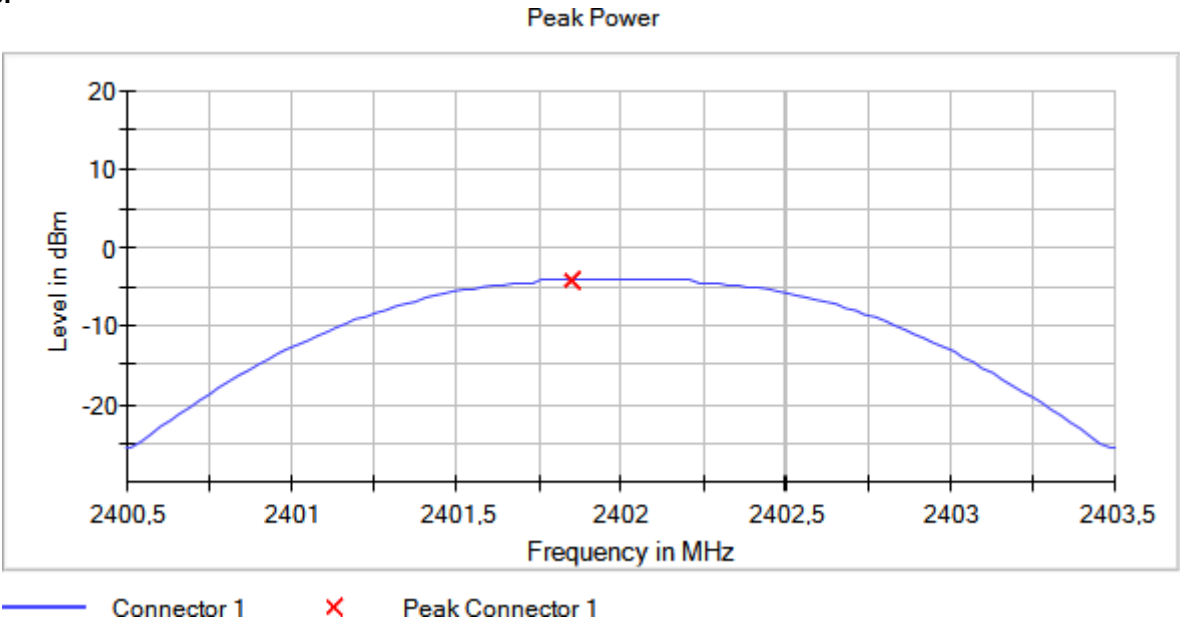
Verdict

Pass

Attachments

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:



Operation Band MHz = [2400, 2483.5]

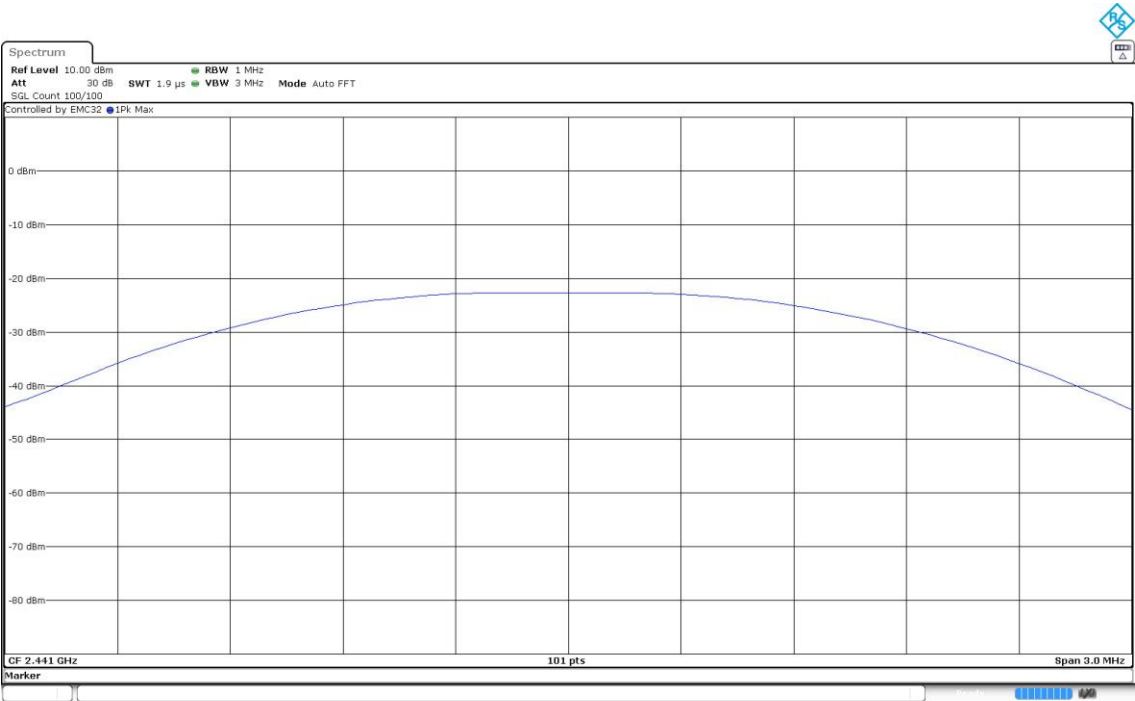
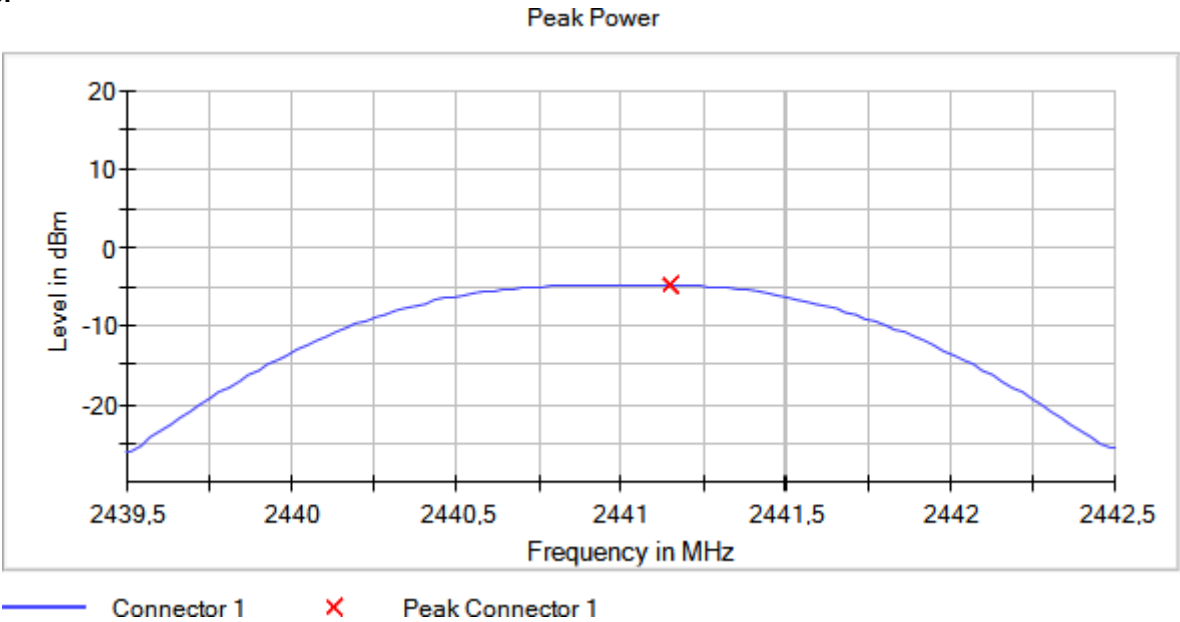
Equipment Type = Frequency Hopping Spread Spectrum systems (DSS)

Frequency MHz = 2441.00000

Active Port = 1

Modulation = BT (GFSK 1-DH5)

Images:



Operation Band MHz = [2400,
2483.5]

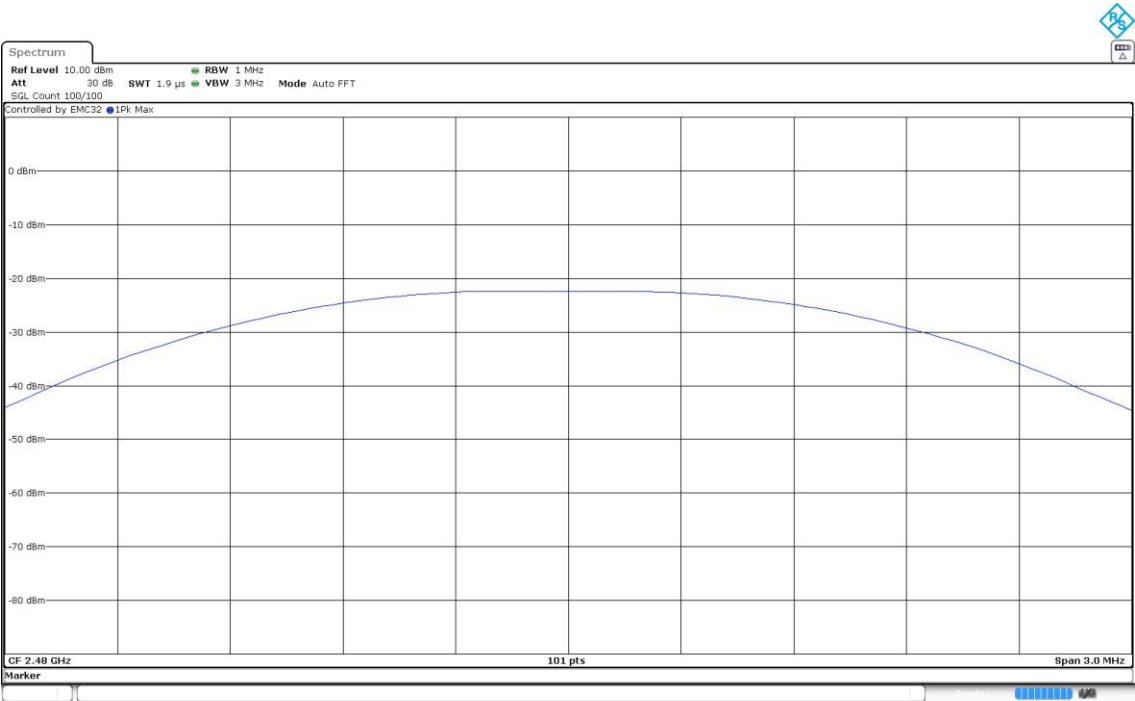
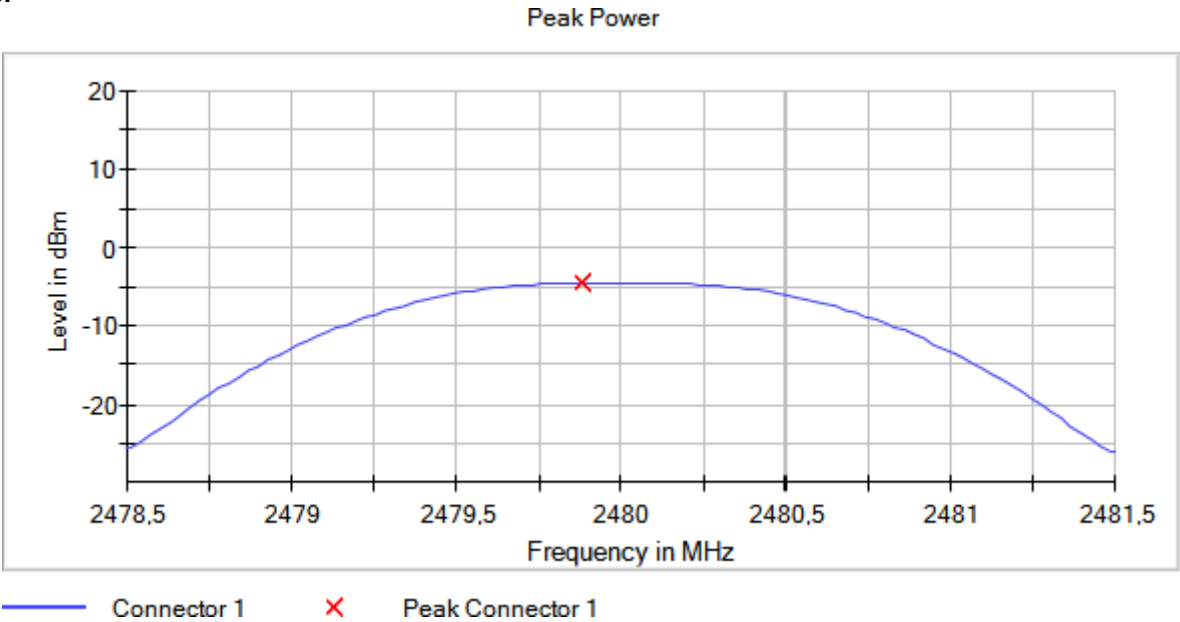
Equipment Type = Frequency Hopping Spread Spectrum systems
(DSS)

Frequency MHz = 2480.00000

Active Port = 1

Modulation = BT (GFSK 1-DH5)

Images:



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

Results

Operation Band (MHz)	Equipment	Freq (MHz)	Port	Peak Power (dBm)	E.I.R.P. (dBm)
[2400, 2483.5]	Frequency Hopping Spread Spectrum systems (DSS)	2402.00000	1	-3.1390	-3.0390
		2441.00000		-3.7030	-3.6030
		2480.00000		-3.2650	-3.1650

Verdict

Pass

Attachments

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:

