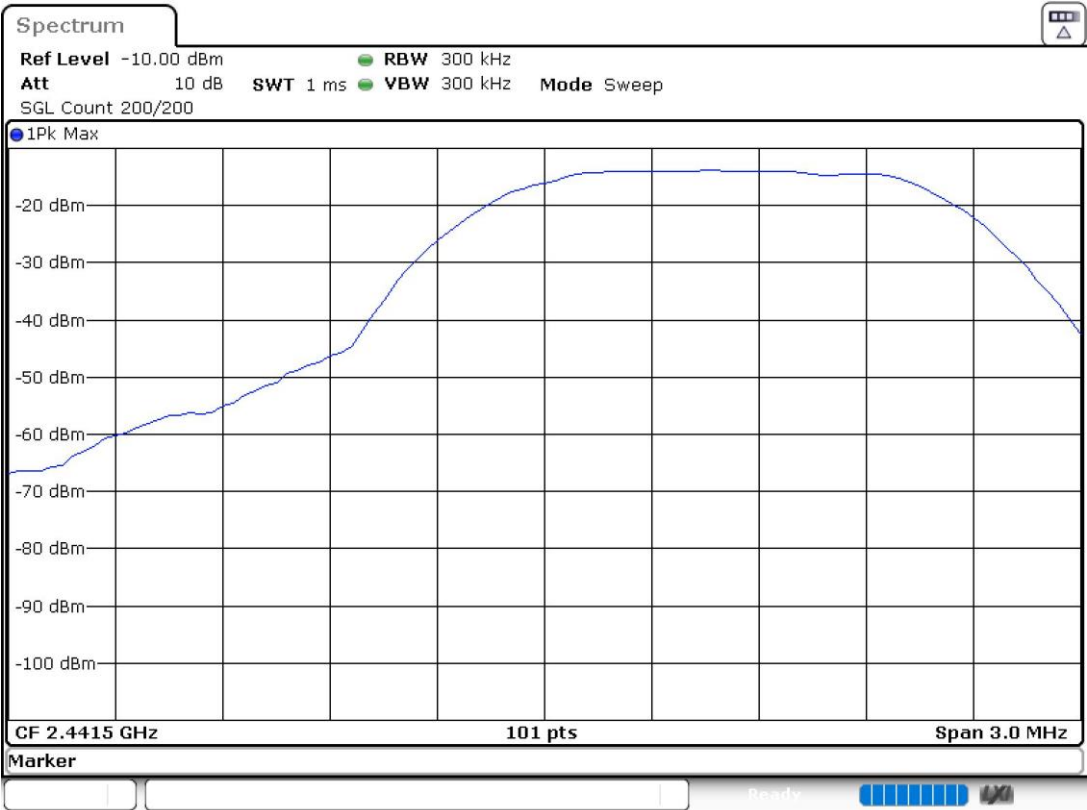




RSS-247 6.2.3.1 (b) / FCC 15.247 (a) (1) (iii) Time of Occupancy (Dwell Time)

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	Freq (MHz)	NHp	Avg COT (ms)
Frequency Hopping Spread Spectrum systems (DSS)	2402.00000	106	307.190
	2441.00000	100	289.780
	2480.00000	98	283.920

Verdict

Pass

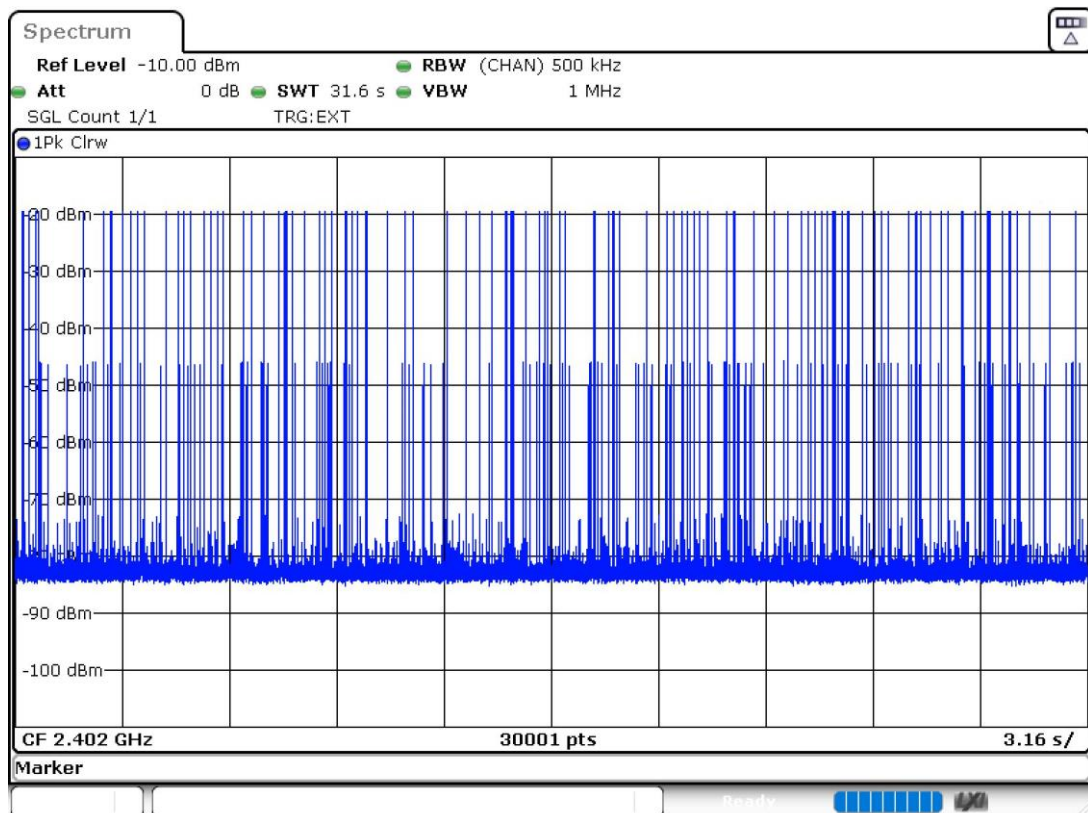
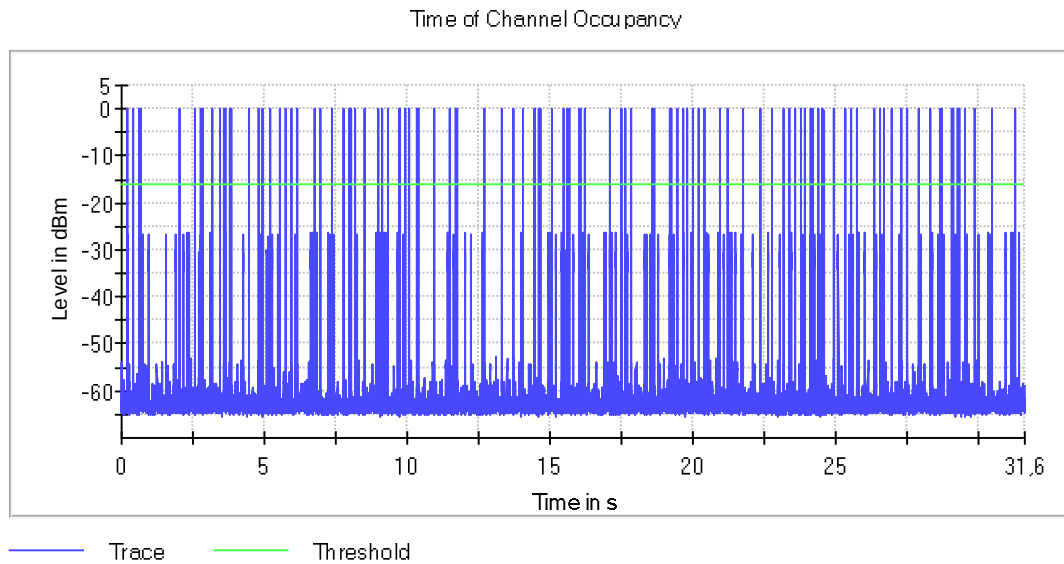
Attachments

Equipment Type = Frequency Hopping Spread Spectrum systems (DSS) Active Port = 1

Modulation = BT (GFSK 1-DH5)

Frequency = 2402.00000

Images:

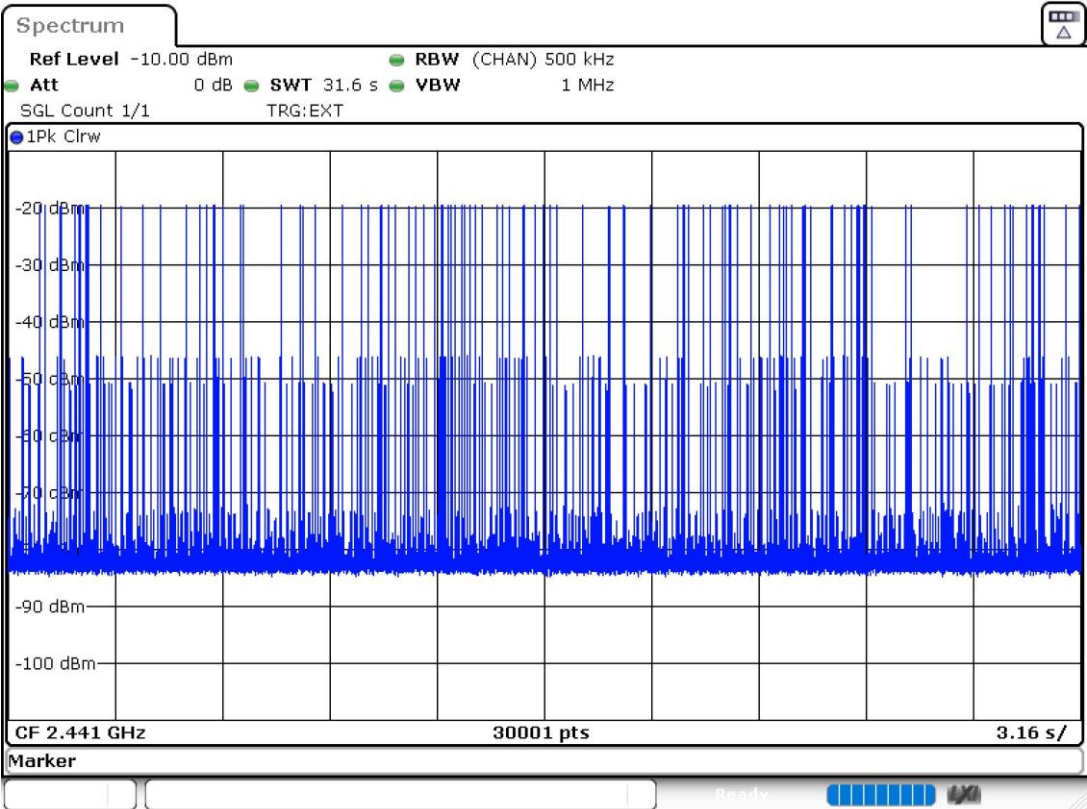
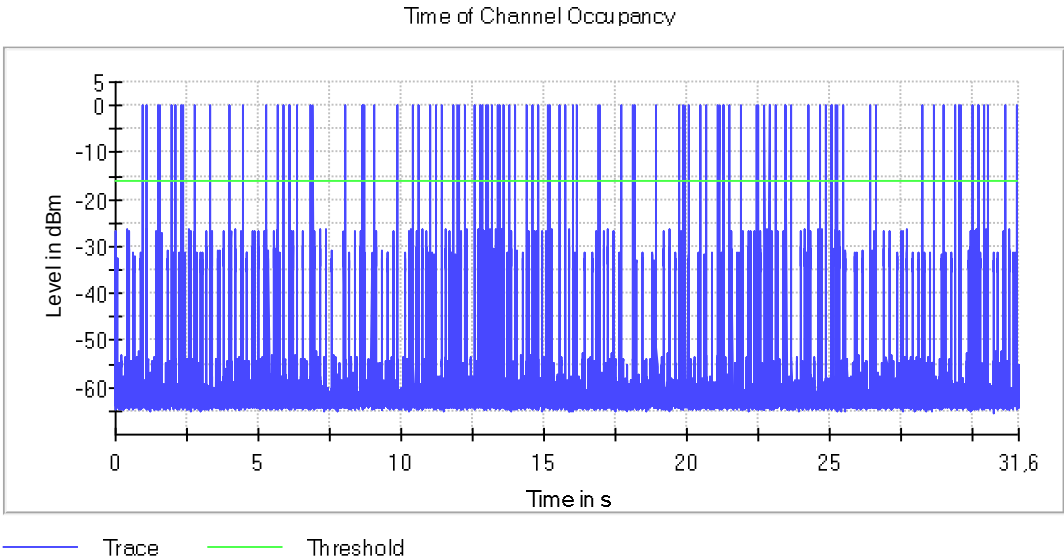


Equipment Type = Frequency Hopping Spread Spectrum systems (DSS) Active Port = 1

Modulation = BT (GFSK 1-DH5)

Frequency = 2441.00000

Images:

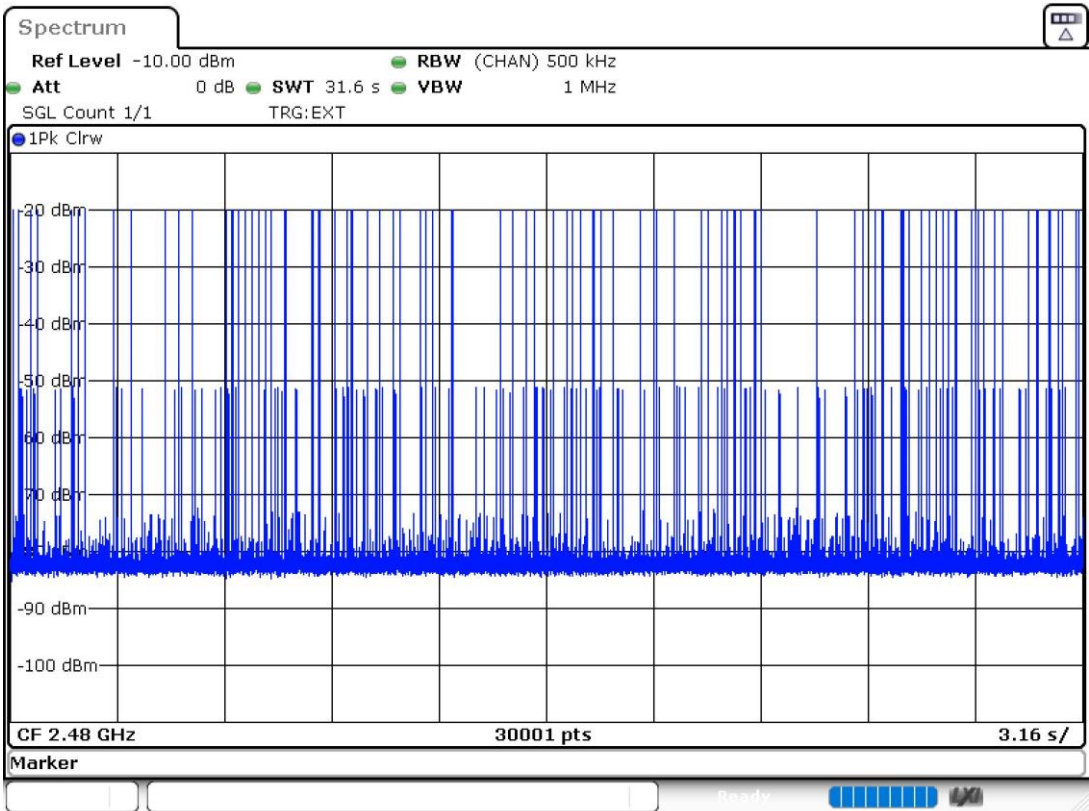
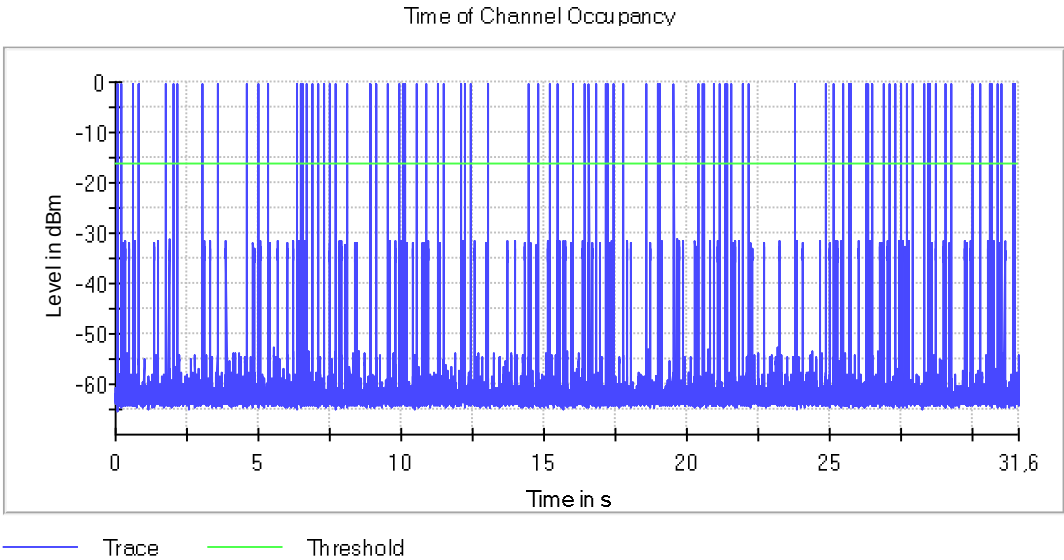


Equipment Type = Frequency Hopping Spread Spectrum systems (DSS) Active Port = 1

Modulation = BT (GFSK 1-DH5)

Frequency = 2480.00000

Images:



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

Results

Equipment	Freq (MHz)	NHp	Avg COT (ms)
Frequency Hopping Spread Spectrum systems (DSS)	2402.00000	103	298.050
	2441.00000	111	321.110
	2480.00000	103	297.270

Verdict

Pass

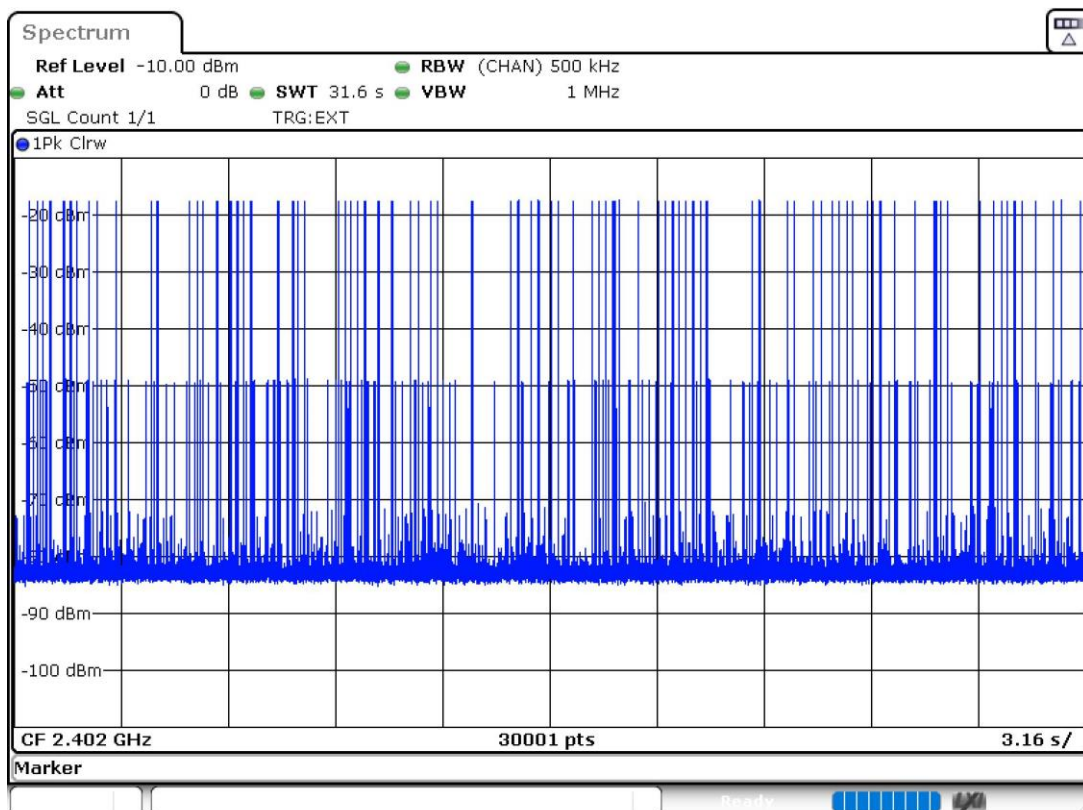
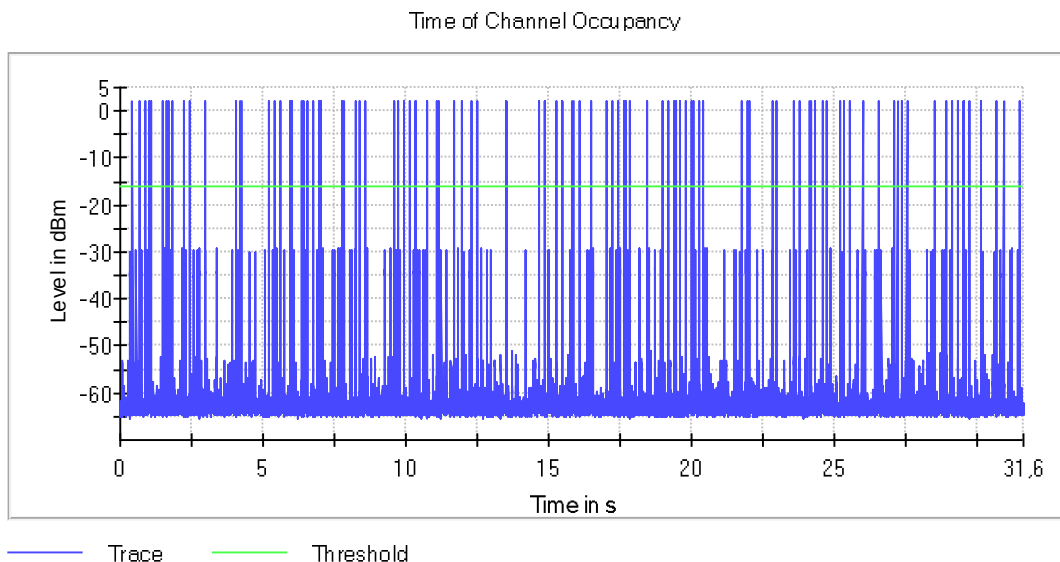
Attachments

Equipment Type = Frequency Hopping Spread Spectrum systems (DSS) Active Port = 1

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

Frequency = 2402.00000

Images:

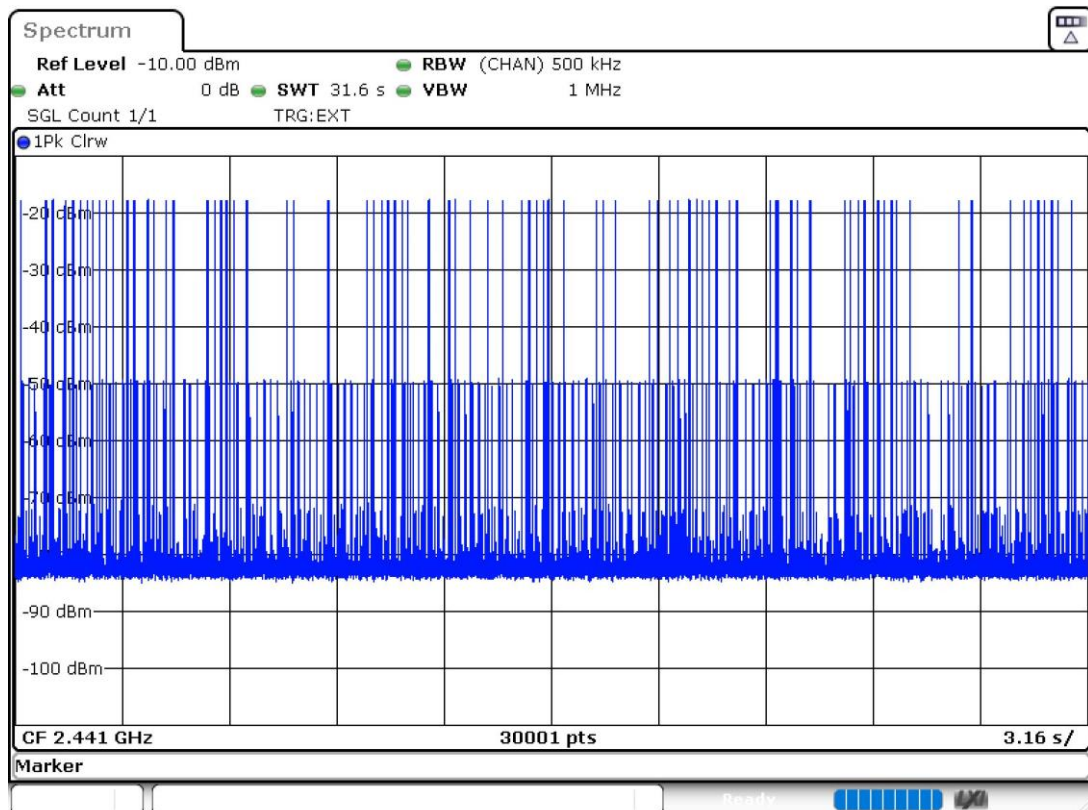
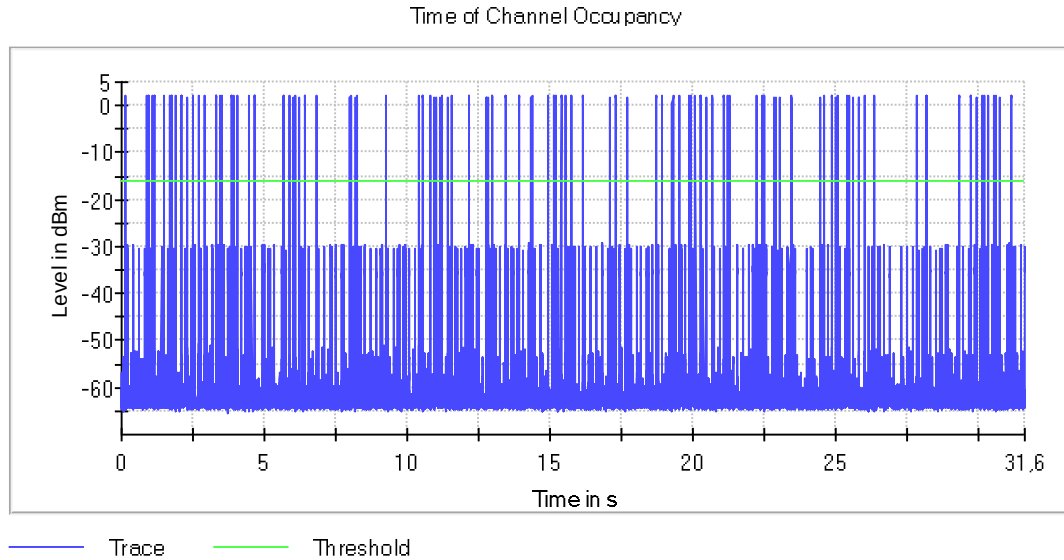


Equipment Type = Frequency Hopping Spread Spectrum systems (DSS) Active Port = 1

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

Frequency = 2441.00000

Images:

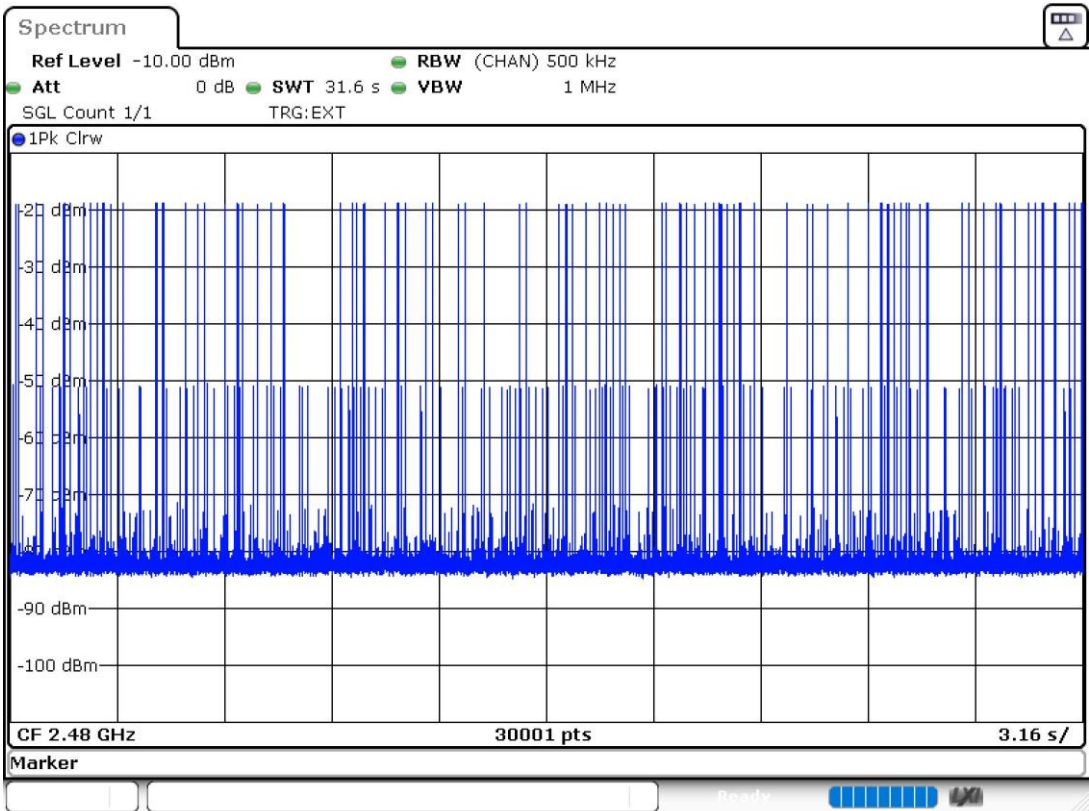
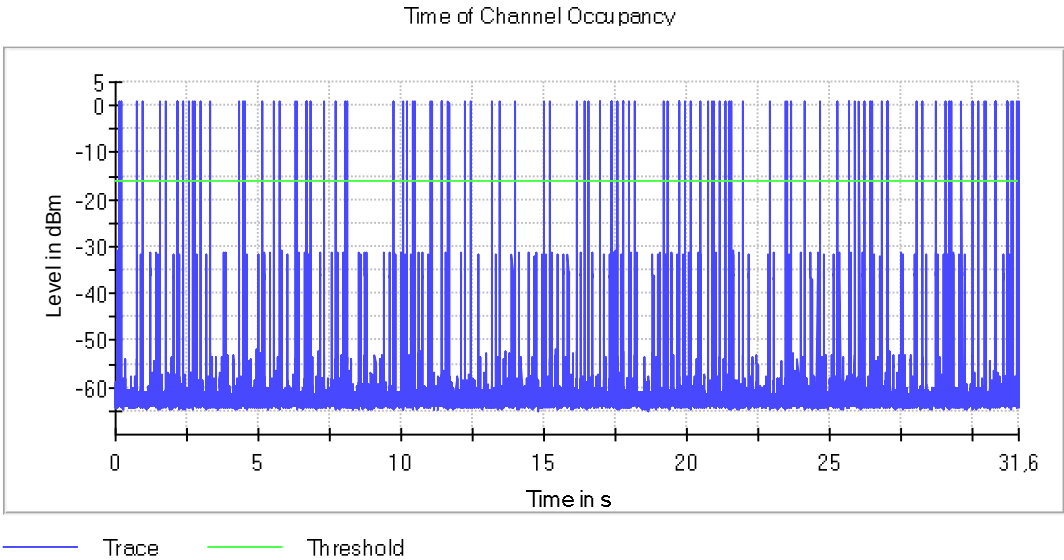


Equipment Type = Frequency Hopping Spread Spectrum systems (DSS) Active Port = 1

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

Frequency = 2480.00000

Images:



Modulation: BT (8DPSK 3-DH5)

Results

Equipment	Freq (MHz)	NHp	Avg COT (ms)
Frequency Hopping Spread Spectrum systems (DSS)	2402.00000	98	284.390
	2441.00000	124	359.880
	2480.00000	104	301.610

Verdict

Pass

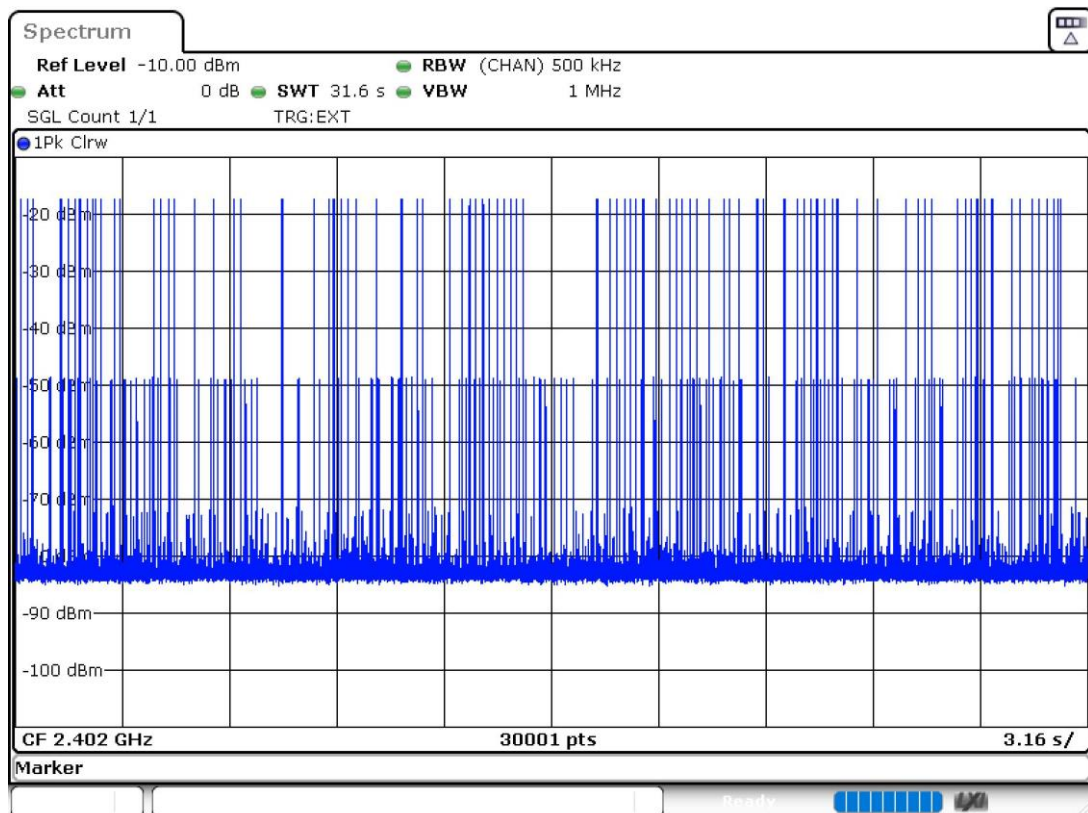
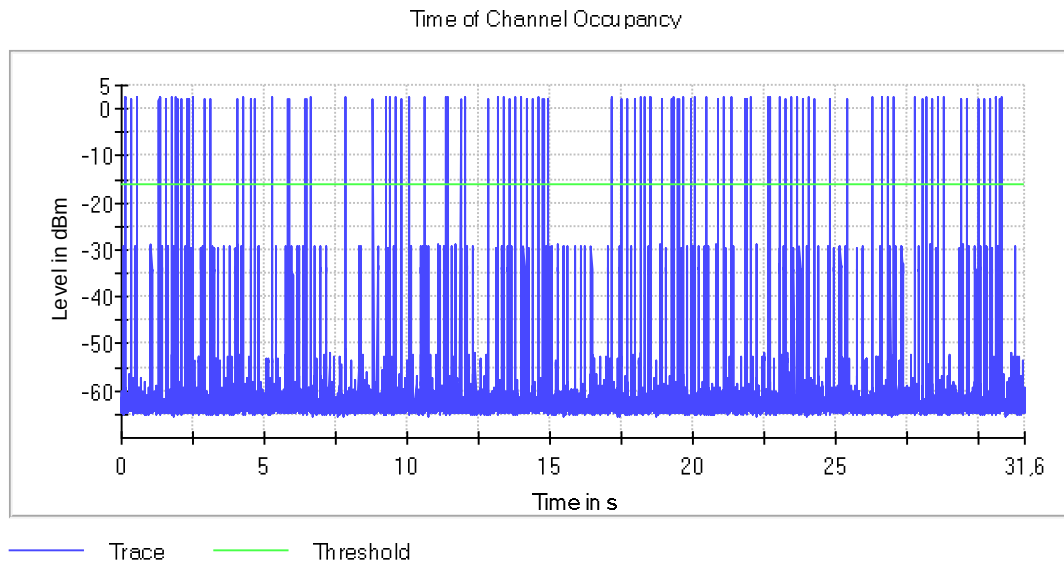
Attachments

Equipment Type = Frequency Hopping Spread Spectrum systems (DSS) Active Port = 1

Modulation = BT (8DPSK 3-DH5)

Frequency = 2402.00000

Images:

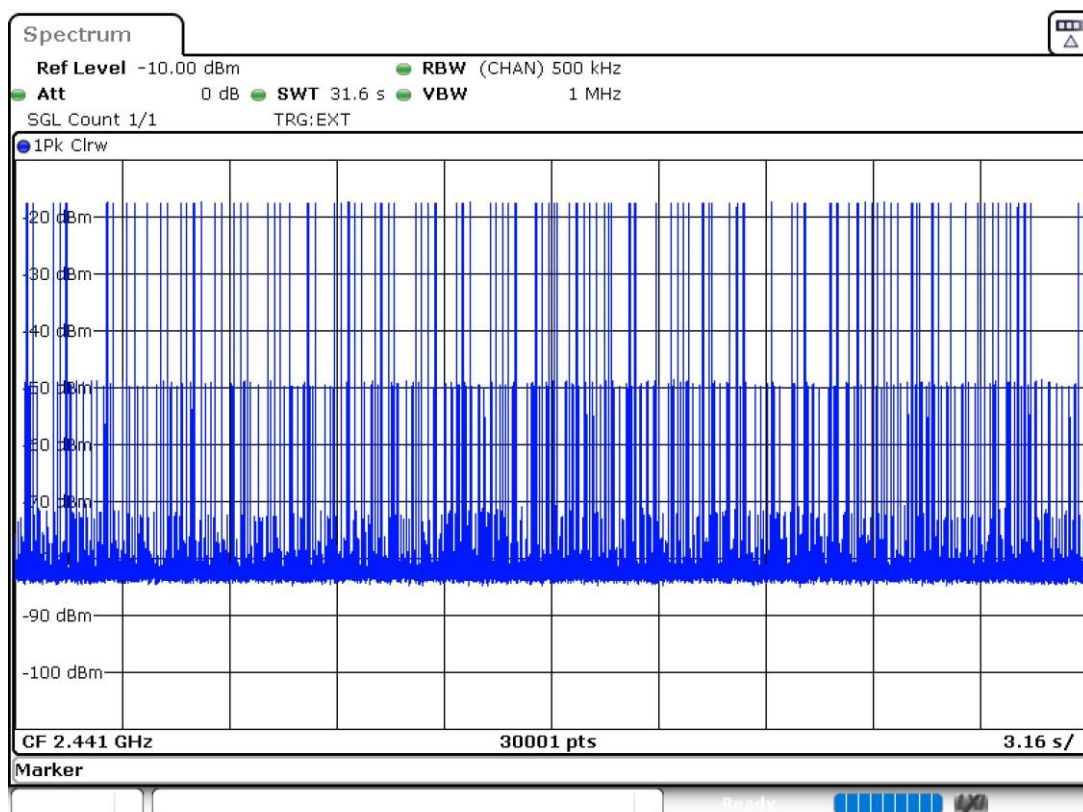
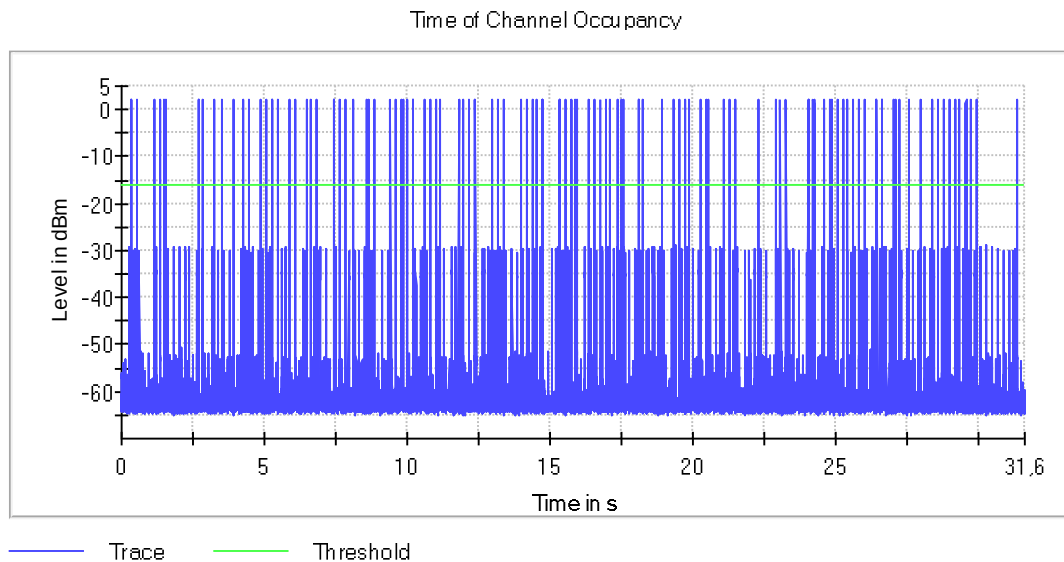


Equipment Type = Frequency Hopping Spread Spectrum systems (DSS) Active Port = 1

Modulation = BT (8DPSK 3-DH5)

Frequency = 2441.00000

Images:

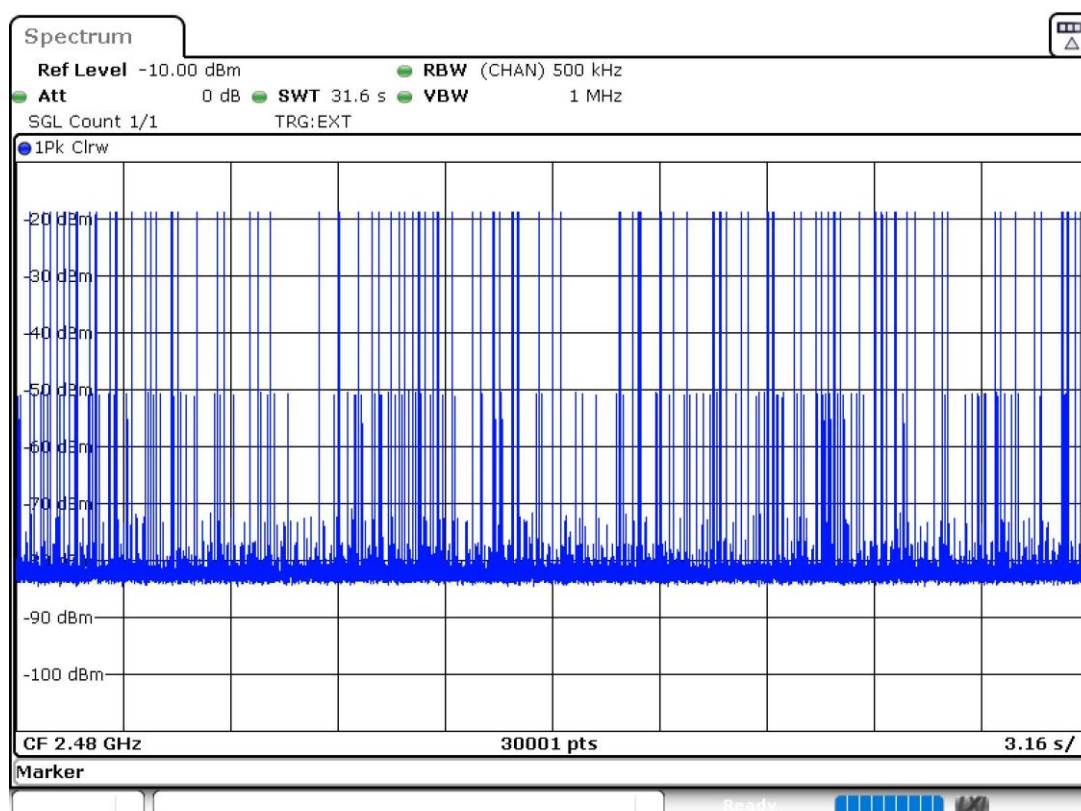
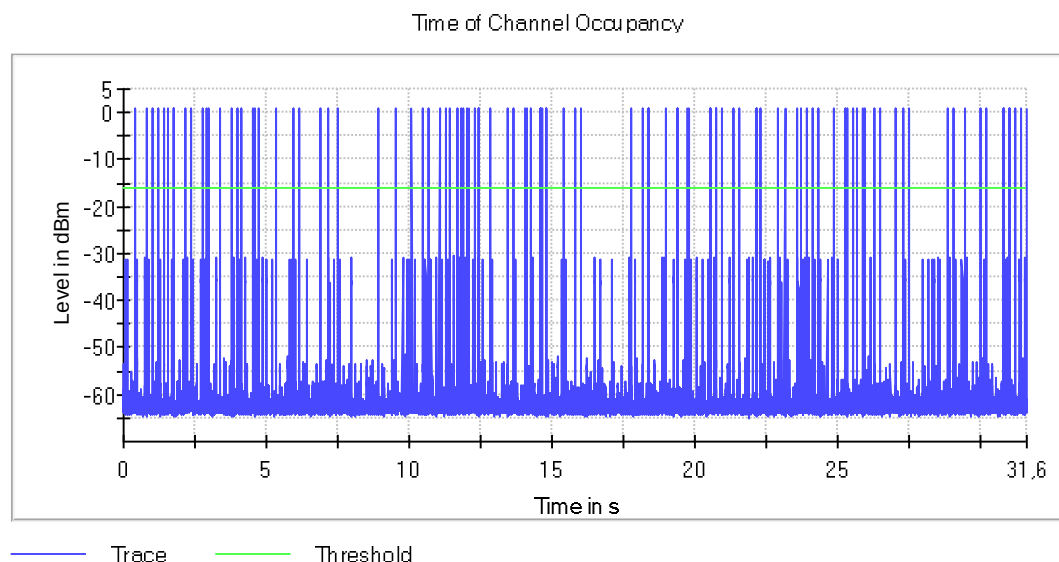


Equipment Type = Frequency Hopping Spread Spectrum systems (DSS) Active Port = 1

Modulation = BT (8DPSK 3-DH5)

Frequency = 2480.00000

Images:



RSS-247 6.2.3.1 (b) / 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	NHC
Frequency Hopping Spread Spectrum systems (DSS)	79

Verdict

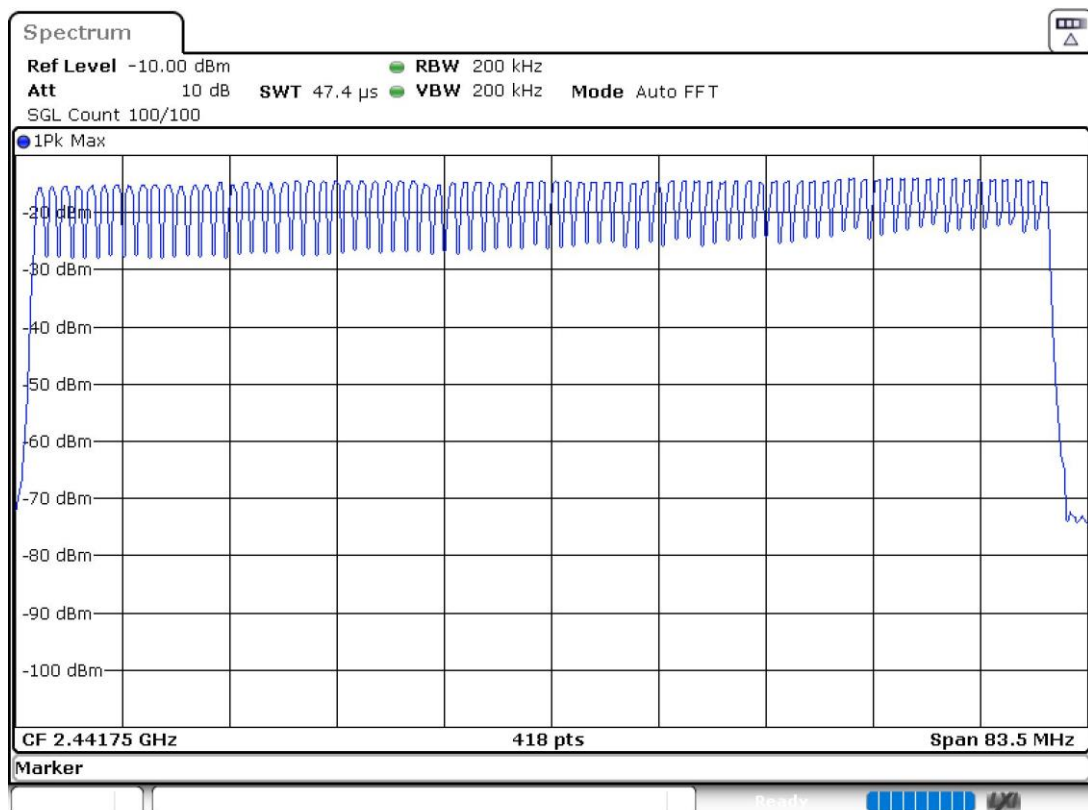
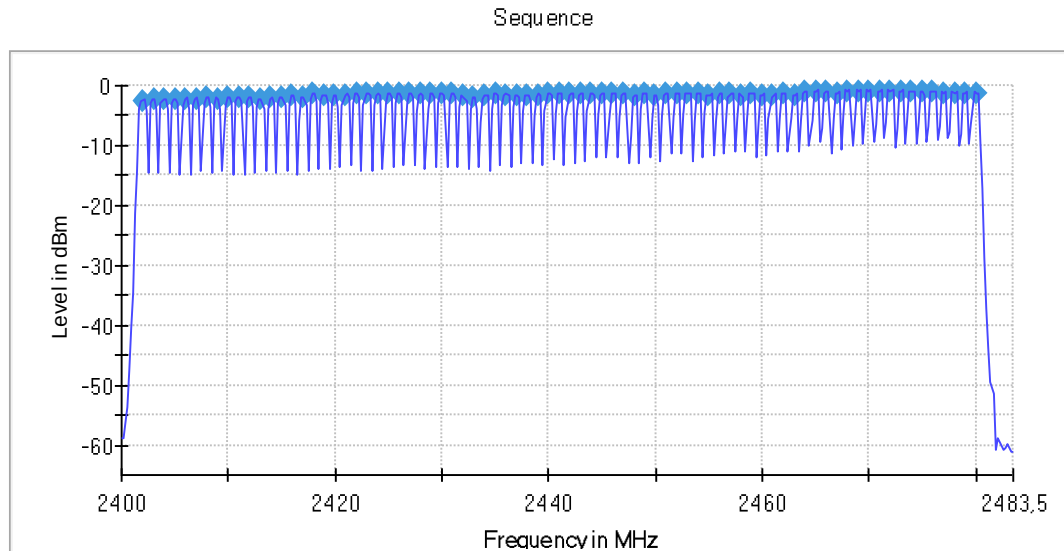
Pass

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	NHC
Frequency Hopping Spread Spectrum systems (DSS)	80

Verdict

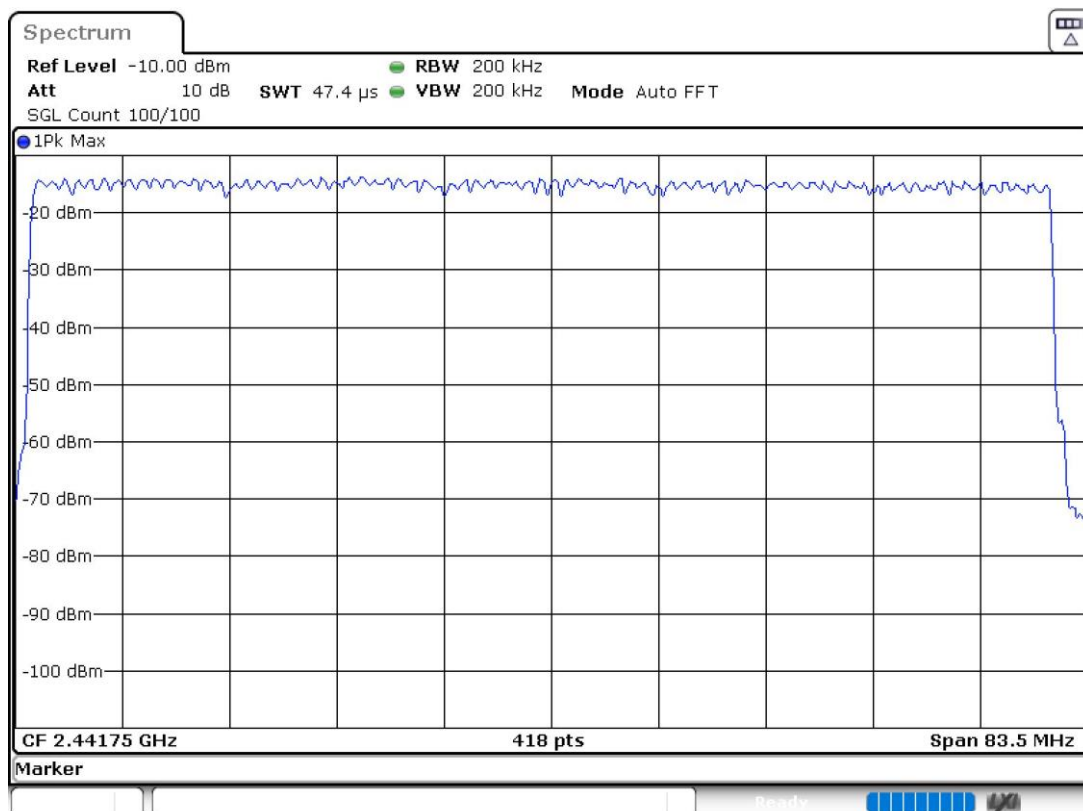
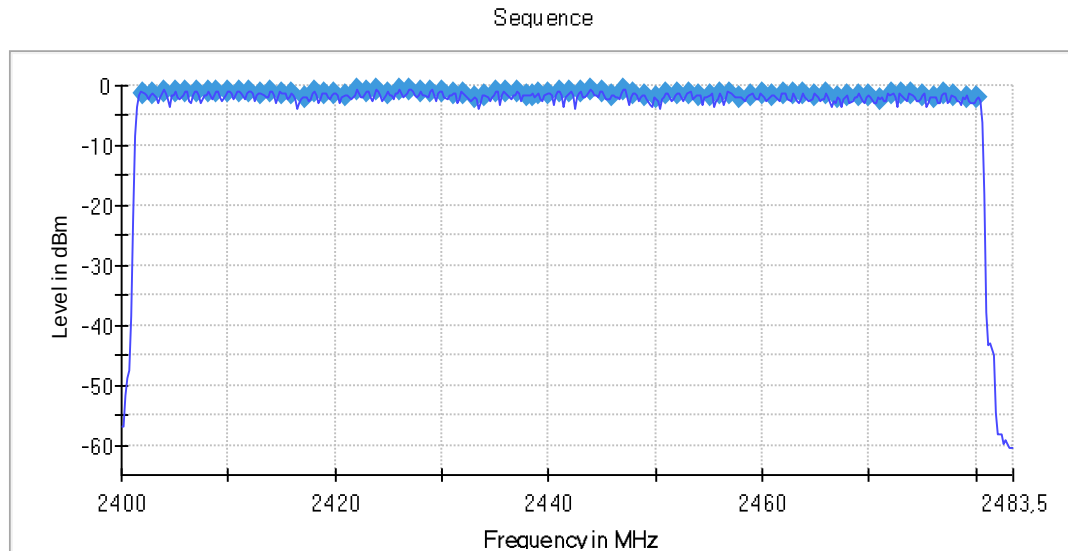
Pass

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	NHC
Frequency Hopping Spread Spectrum systems (DSS)	80

Verdict

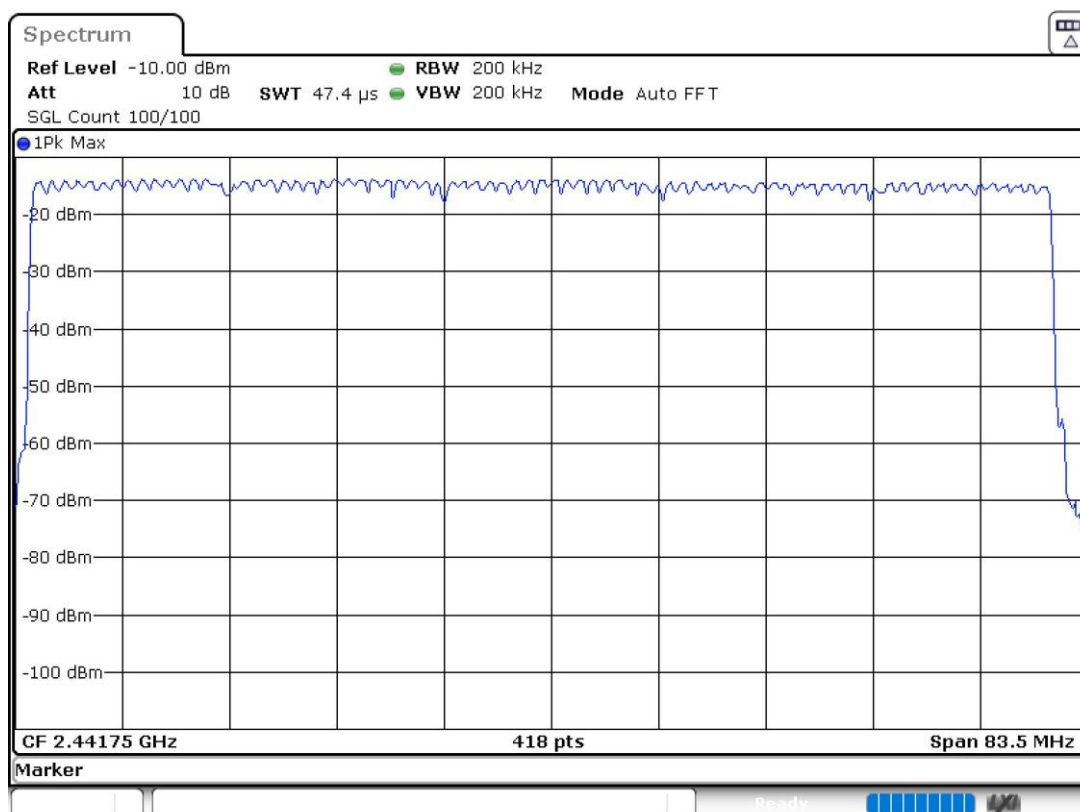
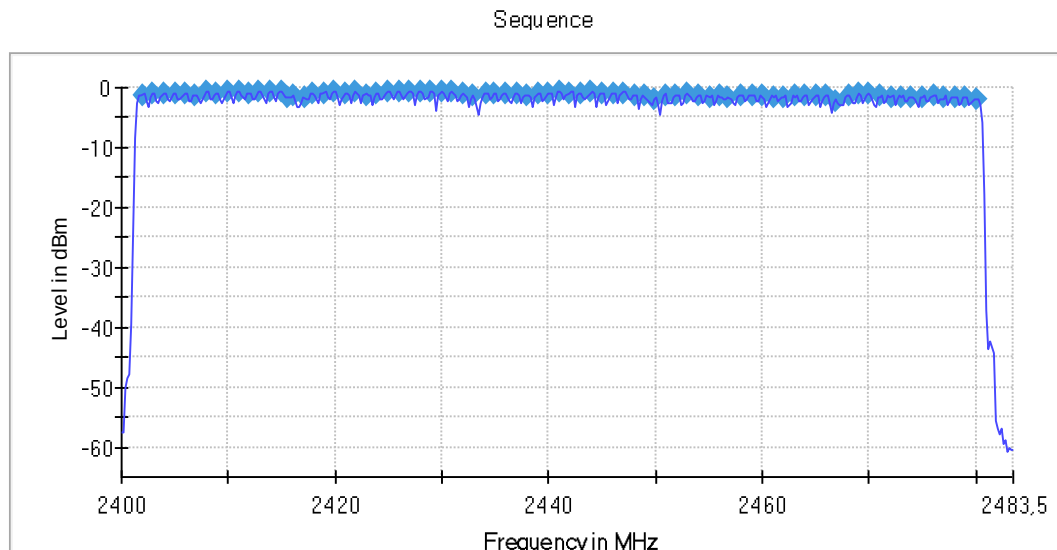
Pass

Attachments

Equipment Type = Frequency Hopping Spread Spectrum systems (DSS) Active Port = 1

Modulation = BT (8DPSK 3-DH5)

Images:



RSS-247 6.3.2 / FCC 15.247 (b) Maximum Peak Conducted Output Power

Limits

FCC 15.247 (b) (1)

For frequency hopping systems operating in the 2400-2483.5 MHz band employing at least 75 non-overlapping hopping channels, and all frequency hopping systems in the 5725-5850 MHz band: 1 watt. For all other frequency hopping systems in the 2400-2483.5 MHz band: 0.125 watts.

RSS 6.2.3.2

For FHSs operating in the band 2400-2483.5 MHz, the maximum peak conducted output power shall not exceed 1.0 W if the hopset uses 75 or more hopping channels; the maximum peak conducted output power shall not exceed 0.125 W if the hopset uses less than 75 hopping channels.

The e.i.r.p. shall not exceed 4 W, except as provided in section 6.5(a) and (b).

Results

The maximum peak conducted output power level of the fundamental emission was measured according to clause 7.8.5 “Output power test procedure for frequency-hopping spread-spectrum (FHSS) devices” of ANSI C63.10-2020 + Cor.1-2023 + C63.10a-2024 + Errata to C63.10a-2024: American National Standard for Testing Unlicensed Wireless Devices.

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

The maximum directional gain of the antenna is less than 6 dBi and therefore the maximum output power is not required to be reduced from the stated values.

Modulation: BT (GFSK 1-DH5)

Results

Equipment	Freq (MHz)	Peak Power (dBm)	E.I.R.P. (dBm)
Frequency Hopping Spread Spectrum systems (DSS)	2402.00000	-2.093	1.307
	2441.00000	-1.290	2.110
	2480.00000	-0.858	2.542

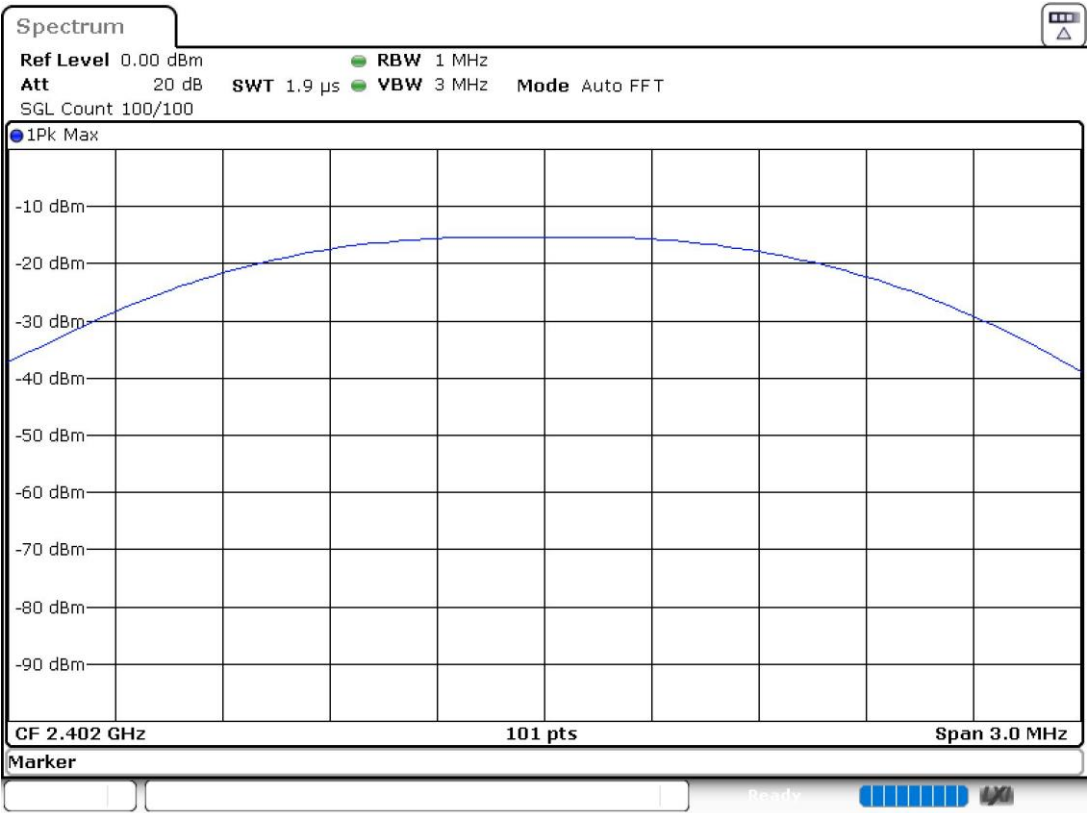
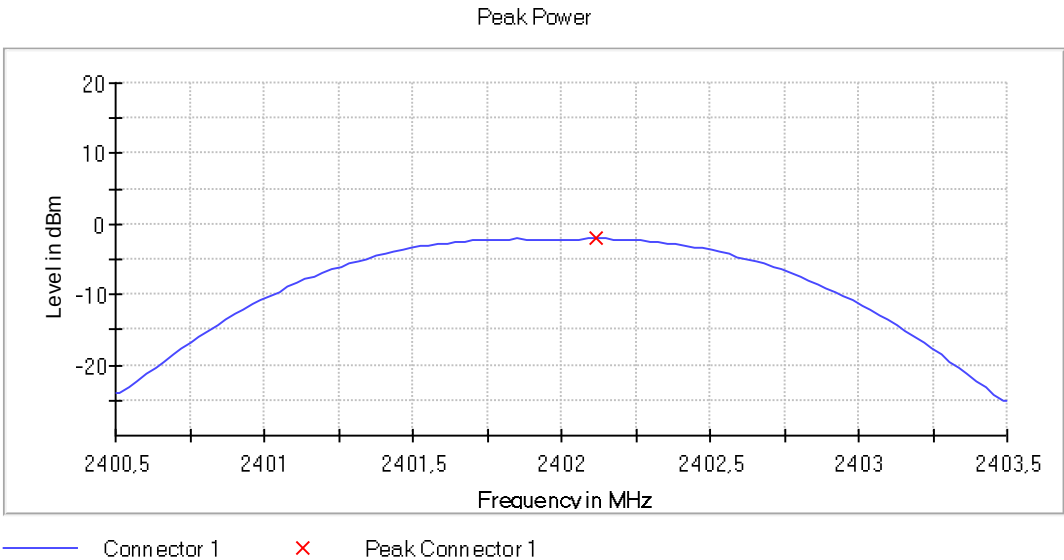
Verdict

Pass

Attachments

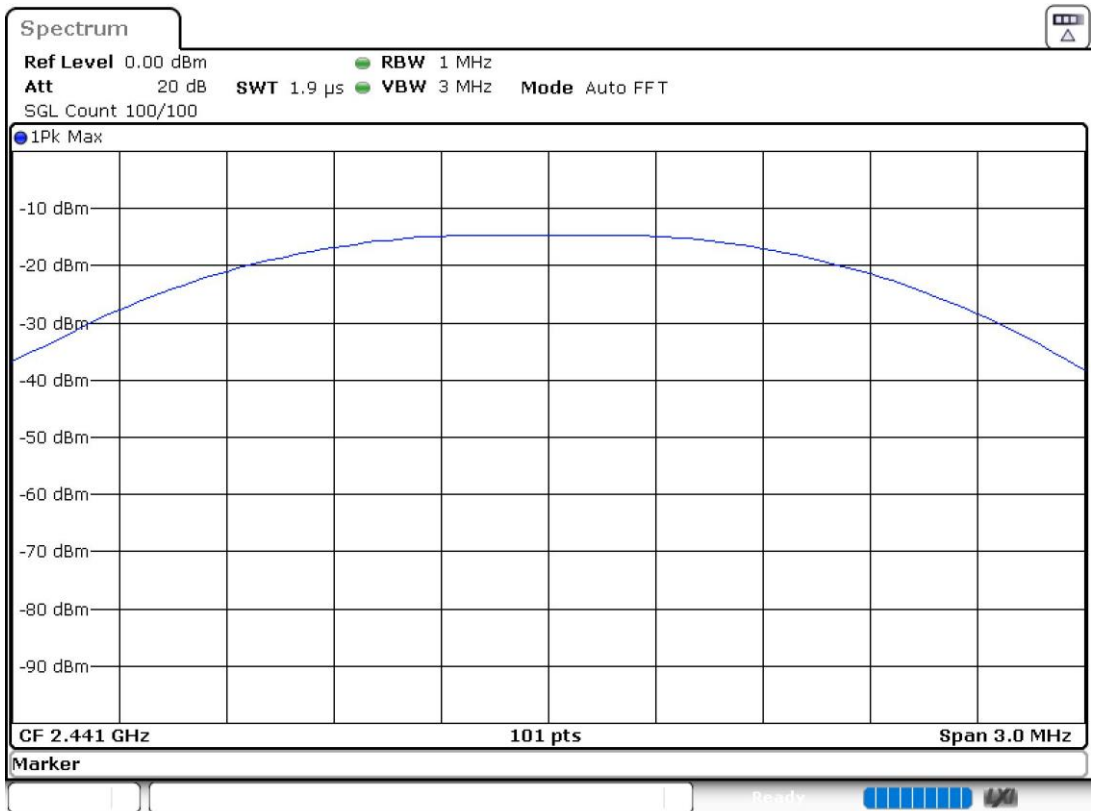
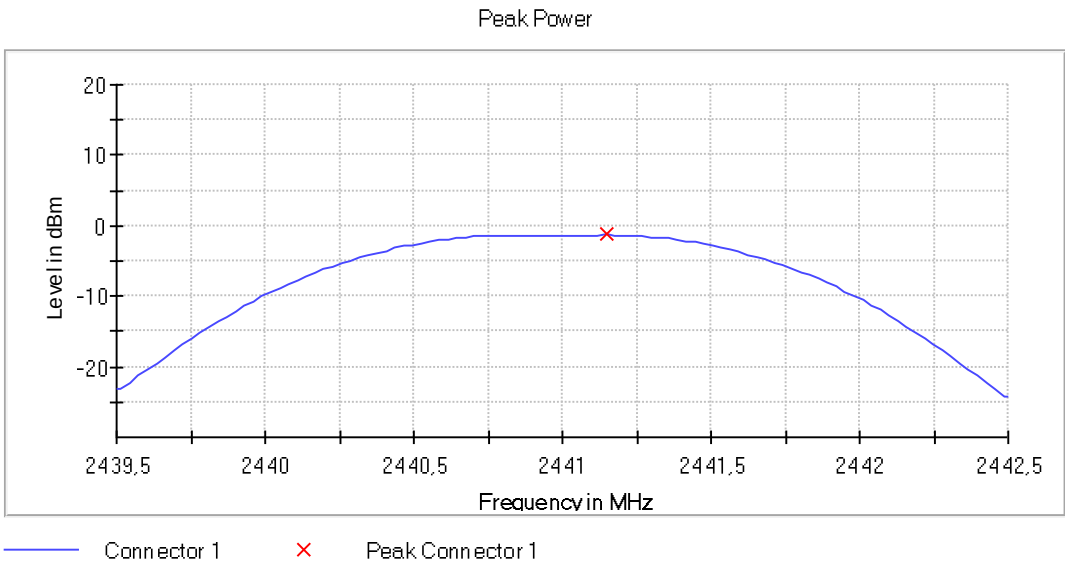
Operation Band MHz = [2400, 2483.5] Equipment Type = Frequency Hopping Spread Spectrum systems (DSS)
Frequency MHz = 2402.00000 Active Port = 1
Modulation = BT (GFSK 1-DH5)

Images:



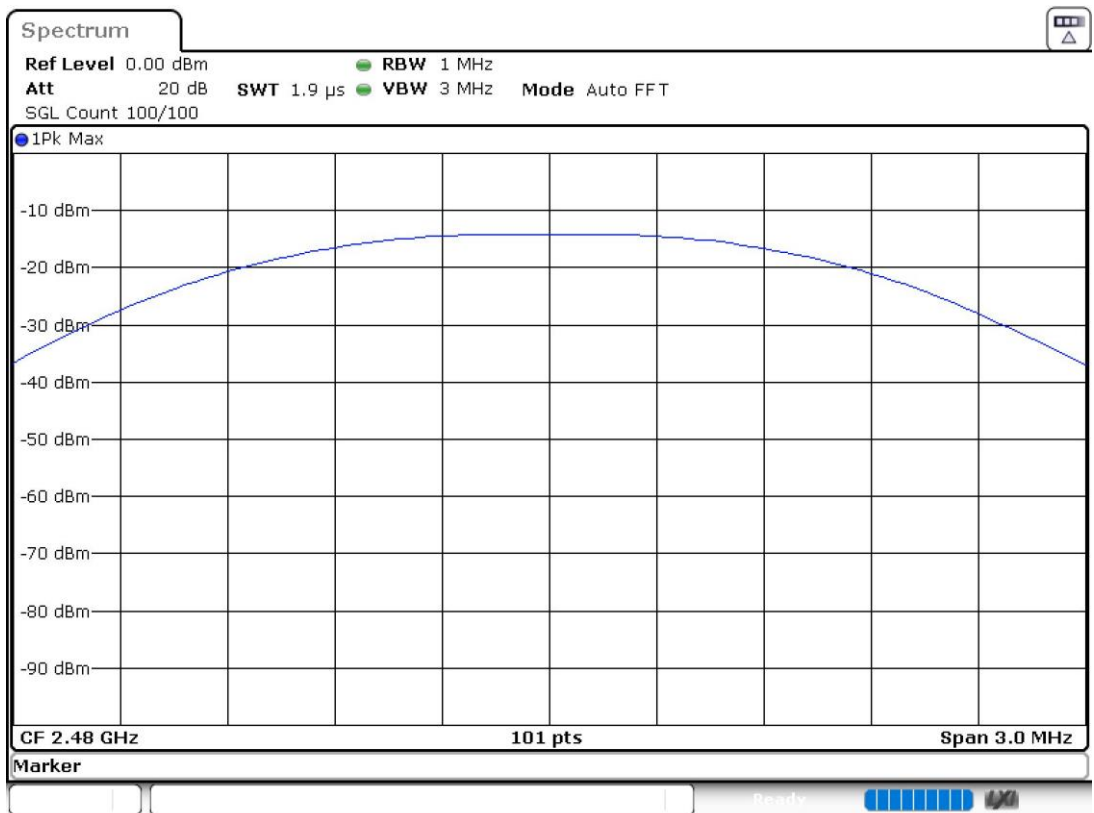
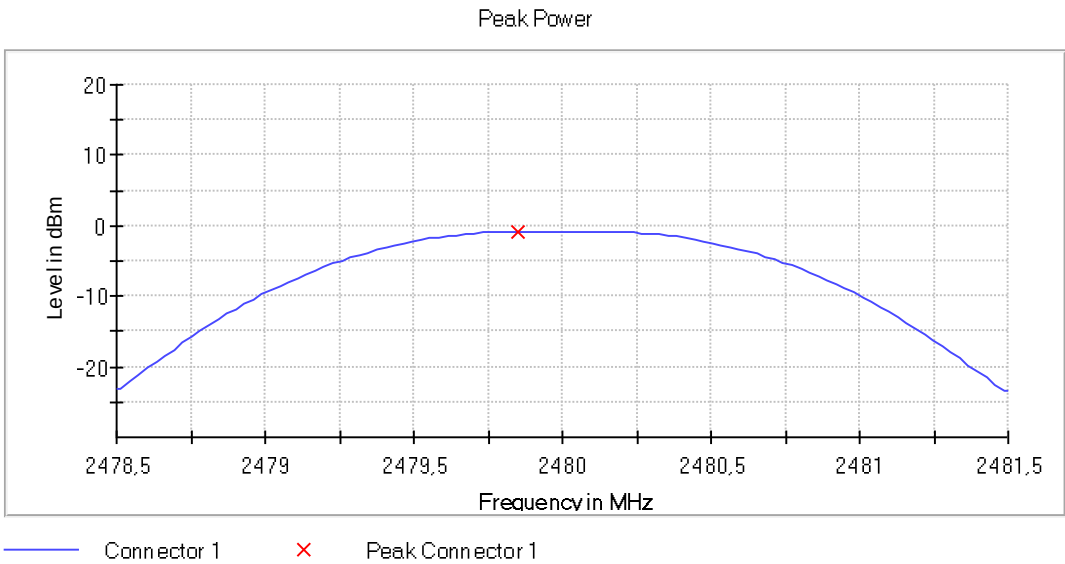
Operation Band MHz = [2400, 2483.5] Equipment Type = Frequency Hopping Spread Spectrum systems (DSS)
Frequency MHz = 2441.00000 Active Port = 1
Modulation = BT (GFSK 1-DH5)

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

Equipment	Freq (MHz)	Peak Power (dBm)	E.I.R.P. (dBm)
Frequency Hopping Spread Spectrum systems (DSS)	2402.00000	1.249	4.649
	2441.00000	1.319	4.719
	2480.00000	0.732	4.132

Verdict

Pass

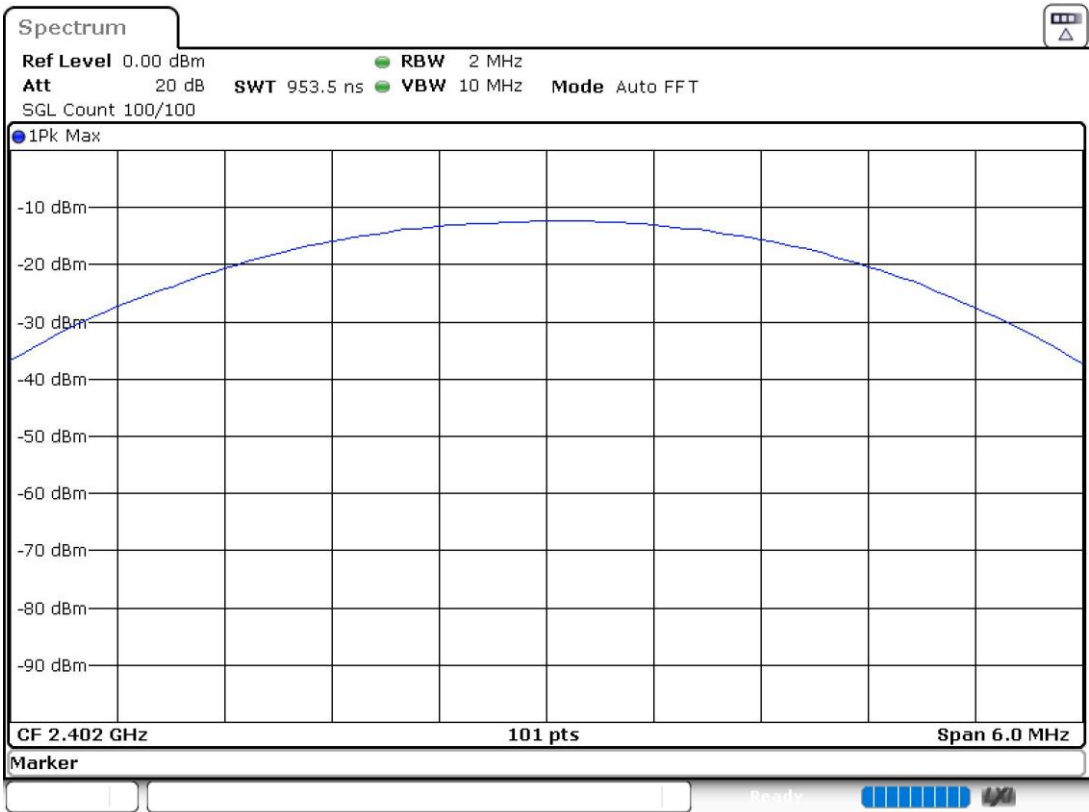
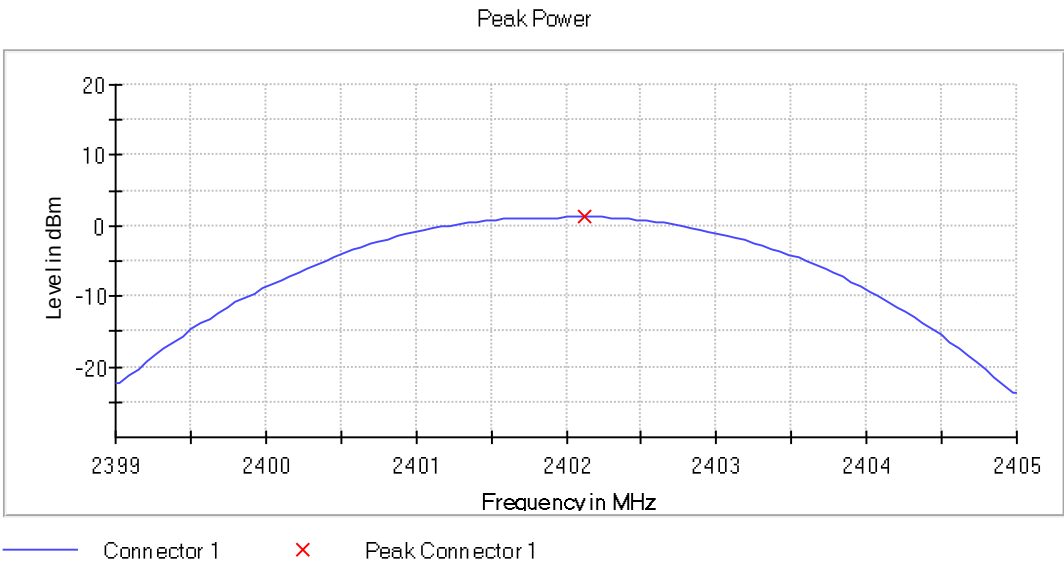
Attachments

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:

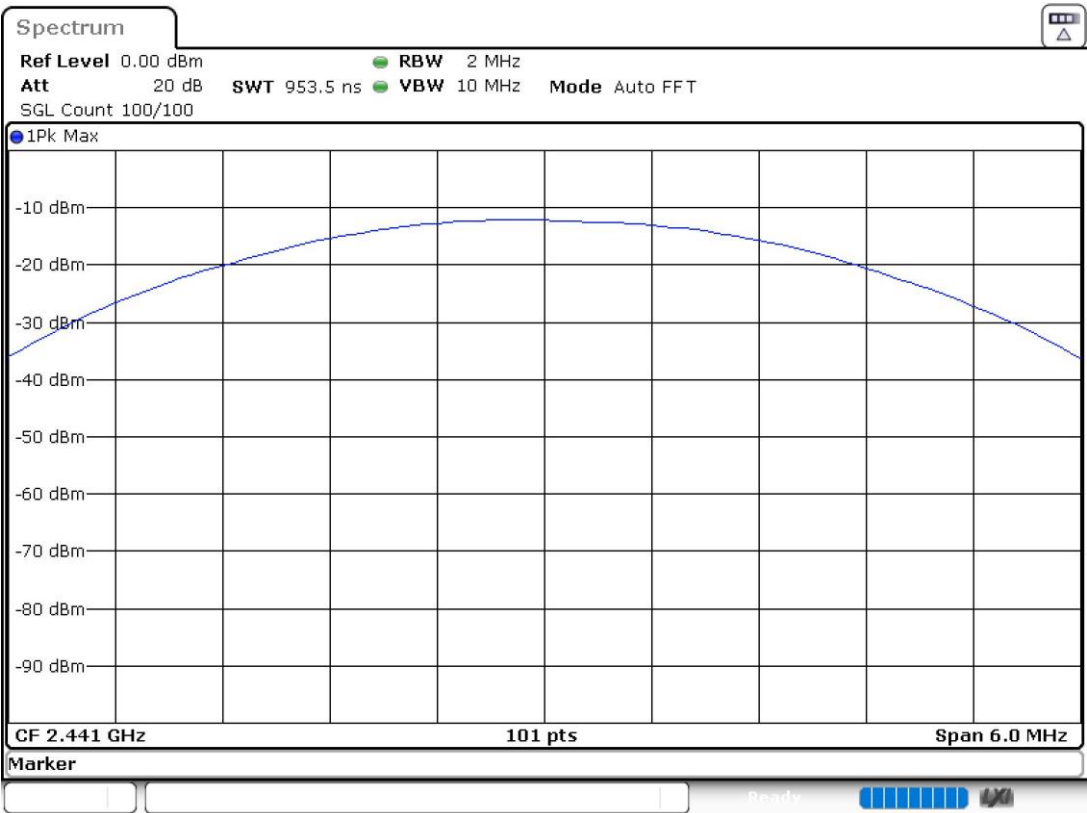
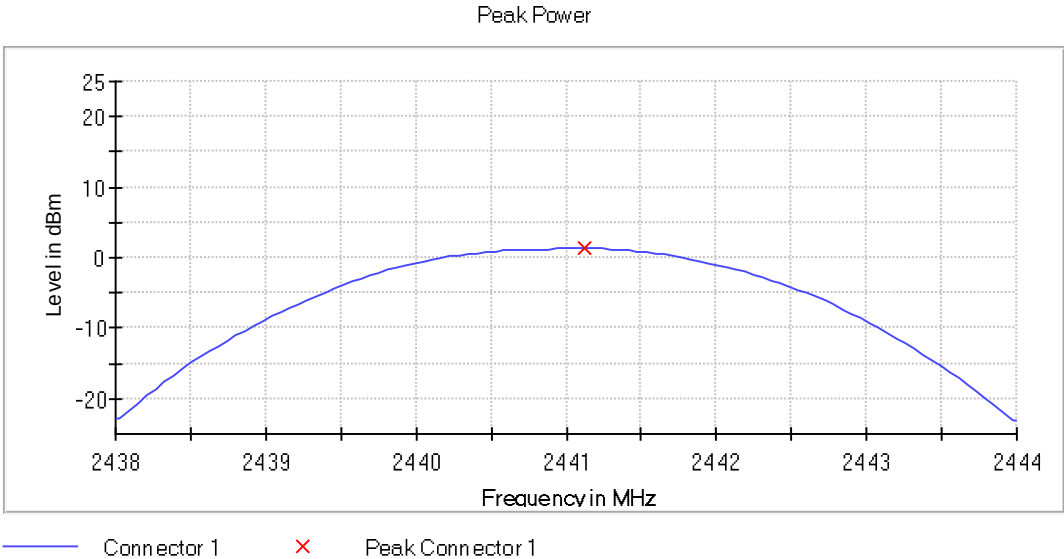


Operation Band MHz = [2400, 2483.5] Equipment Type = Frequency Hopping Spread Spectrum systems (DSS)

Frequency MHz = 2441.00000 Active Port = 1

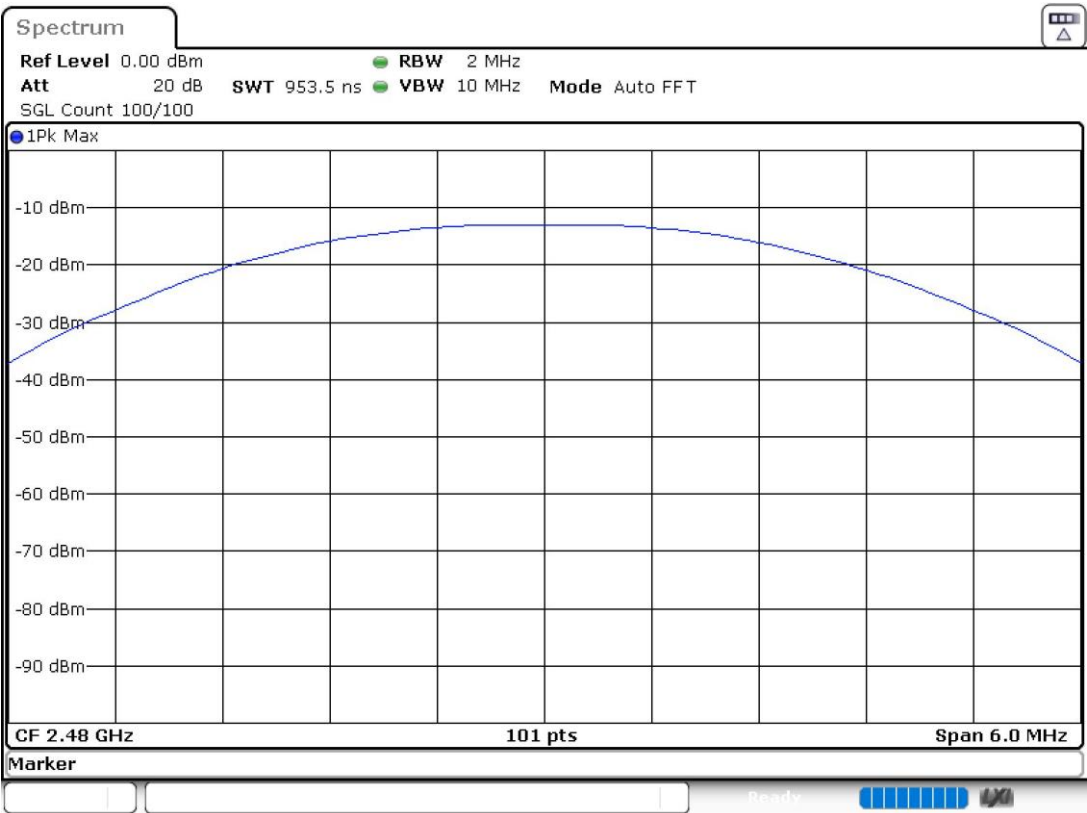
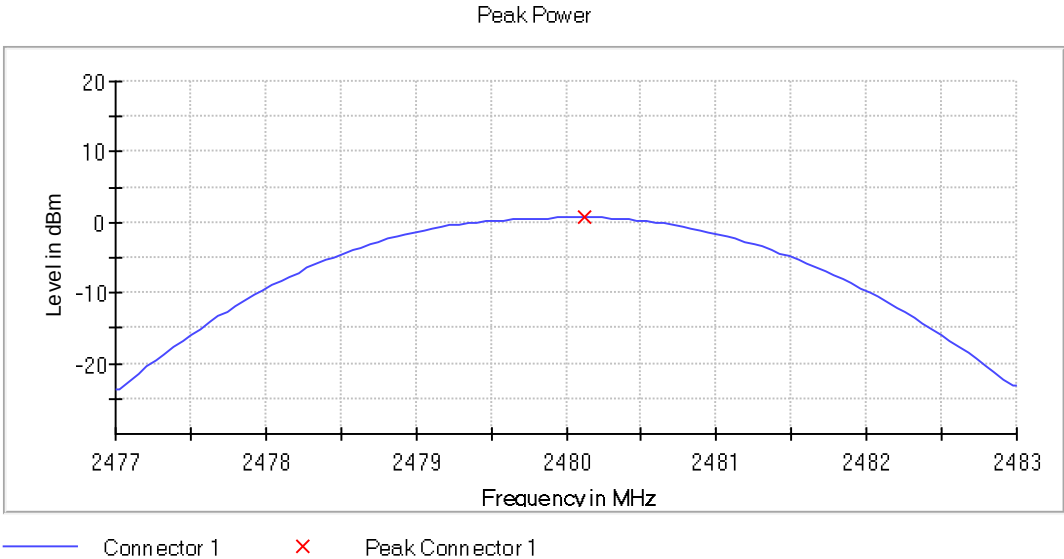
Modulation = BT (Pi/4 DQPSK 2-DH5)

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

Equipment	Freq (MHz)	Peak Power (dBm)	E.I.R.P. (dBm)
Frequency Hopping Spread Spectrum systems (DSS)	2402.00000	1.639	5.039
	2441.00000	1.707	5.107
	2480.00000	0.907	4.307

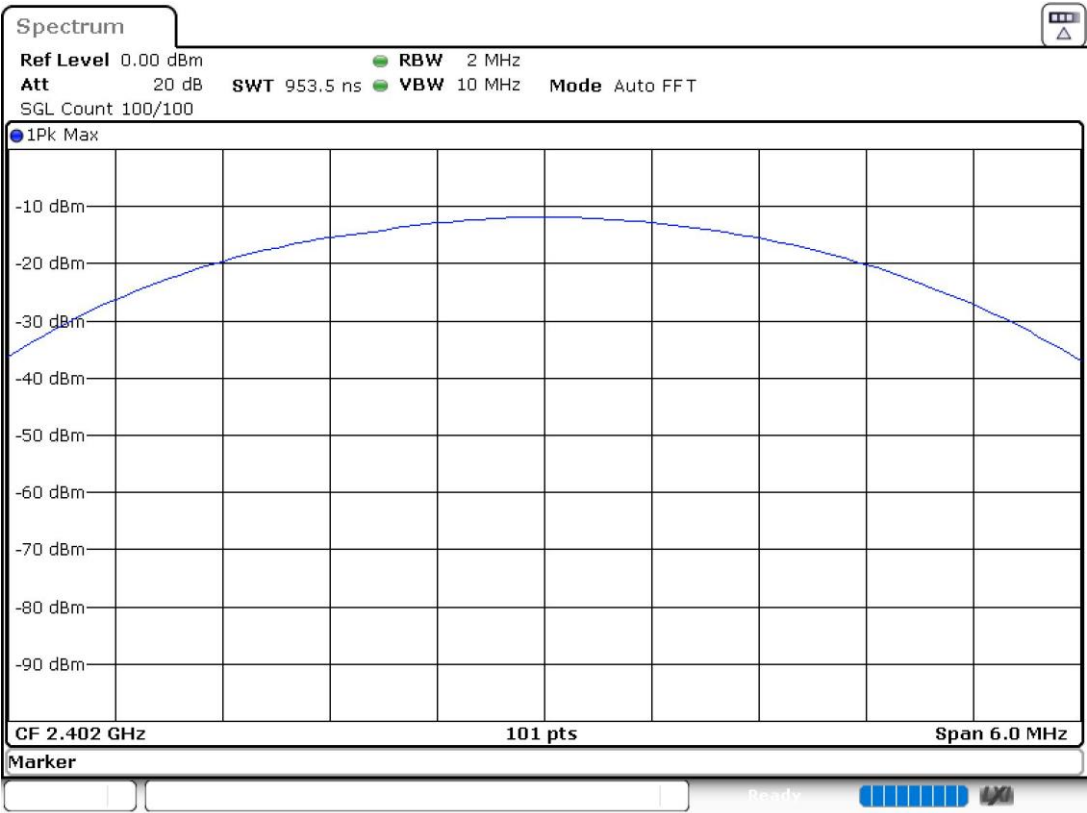
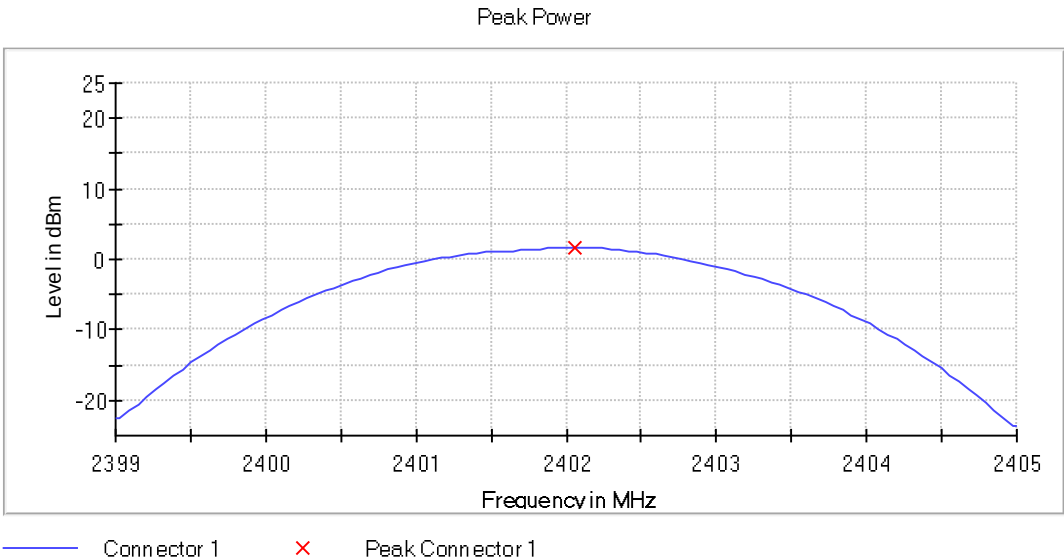
Verdict

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 (8DPSK 3-DH5)

Images:



Operation Band MHz = [2400,
2483.5]

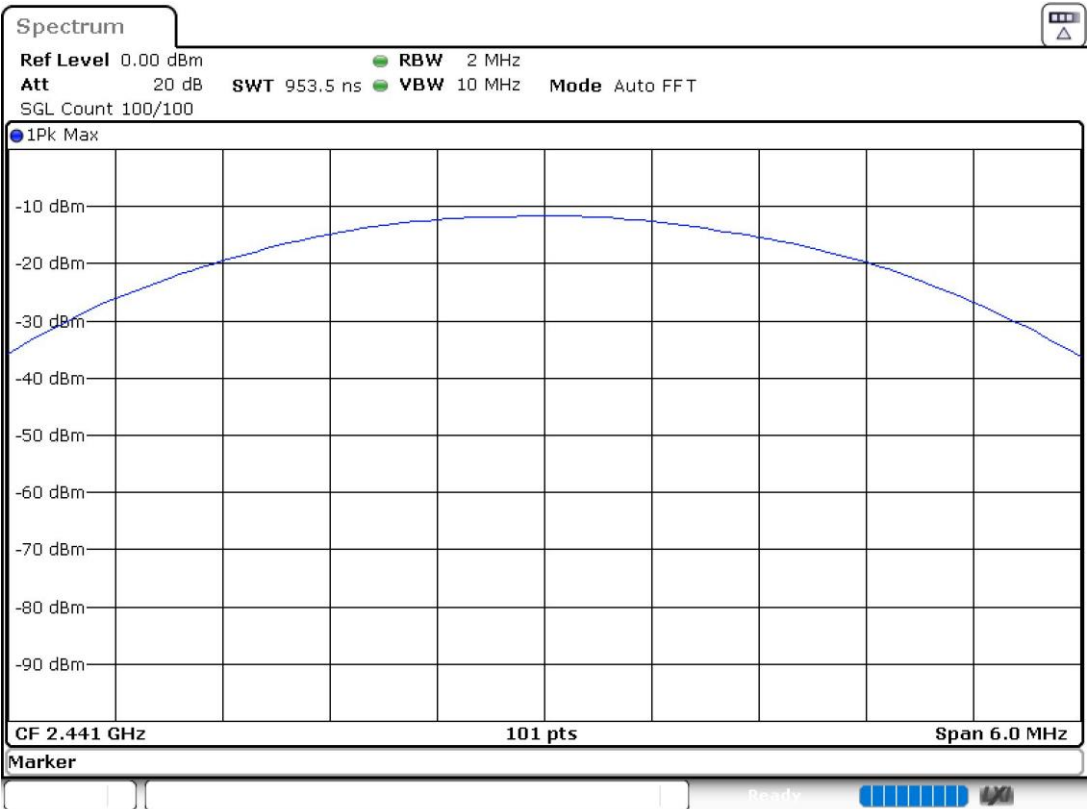
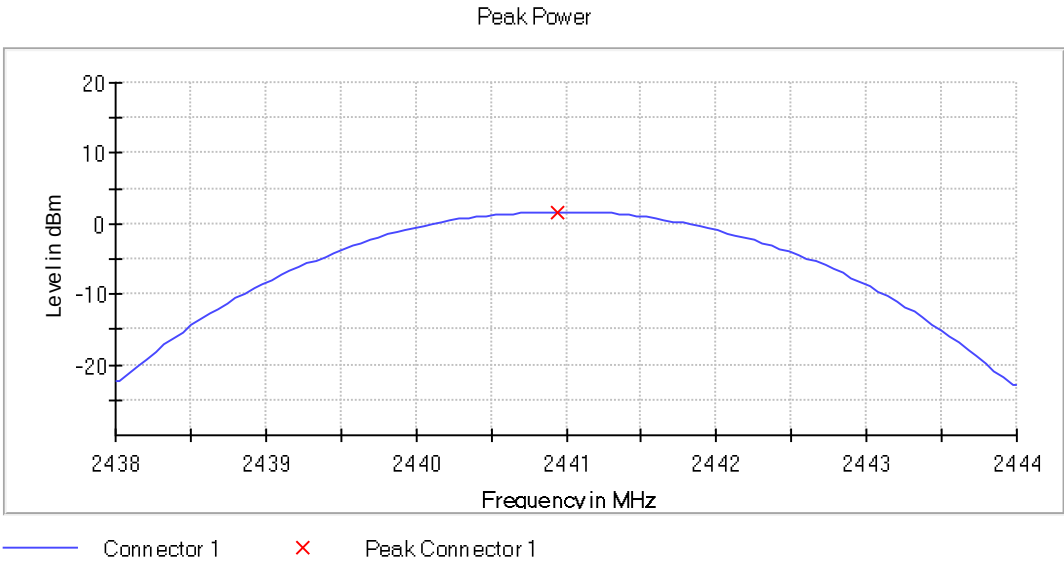
Equipment Type = Frequency Hopping Spread Spectrum systems
(DSS)

Frequency MHz = 2441.00000

Active Port = 1

Modulation = BT (8DPSK 3-DH5)

Images:



Operation Band MHz = [2400,
2483.5]

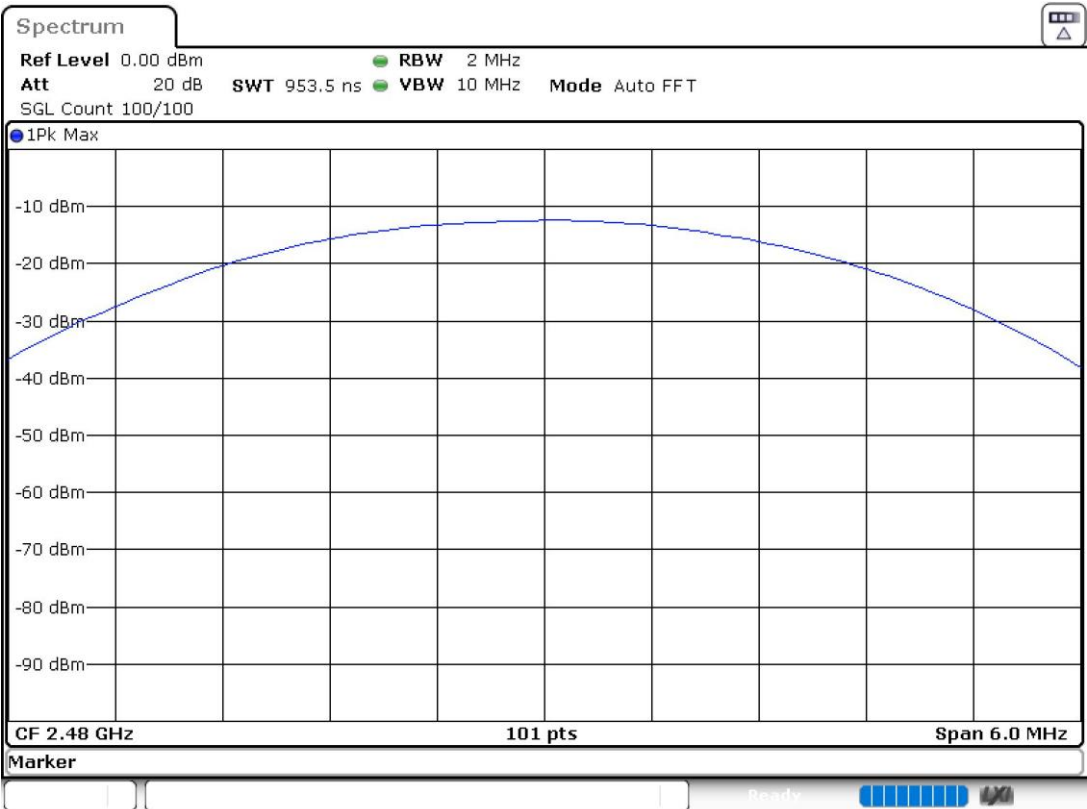
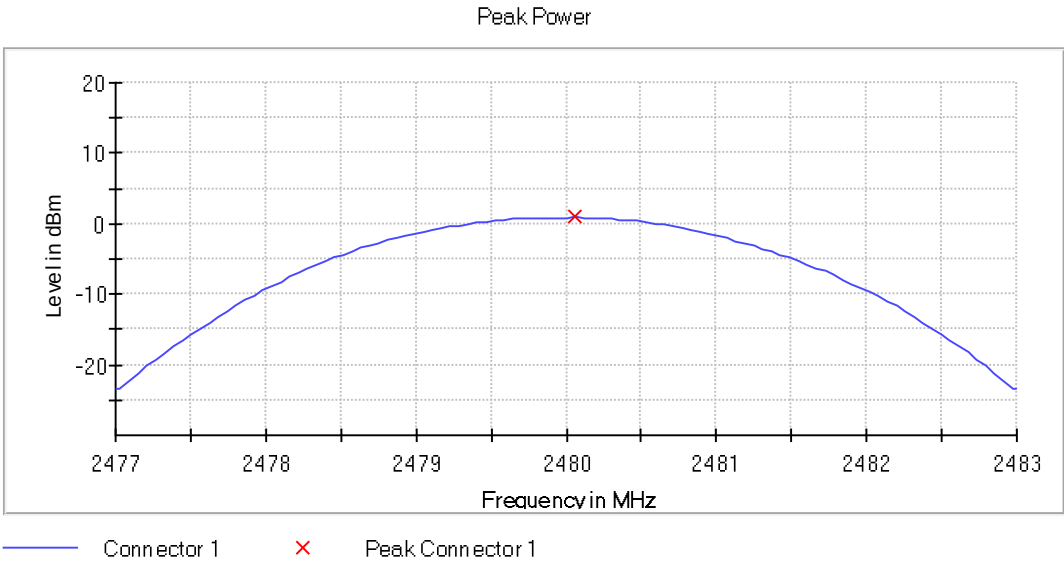
Equipment Type = Frequency Hopping Spread Spectrum systems
(DSS)

Frequency MHz = 2480.00000

Active Port = 1

Modulation = BT (8DPSK 3-DH5)

Images:



RSS-247 6.6 / 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.

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.

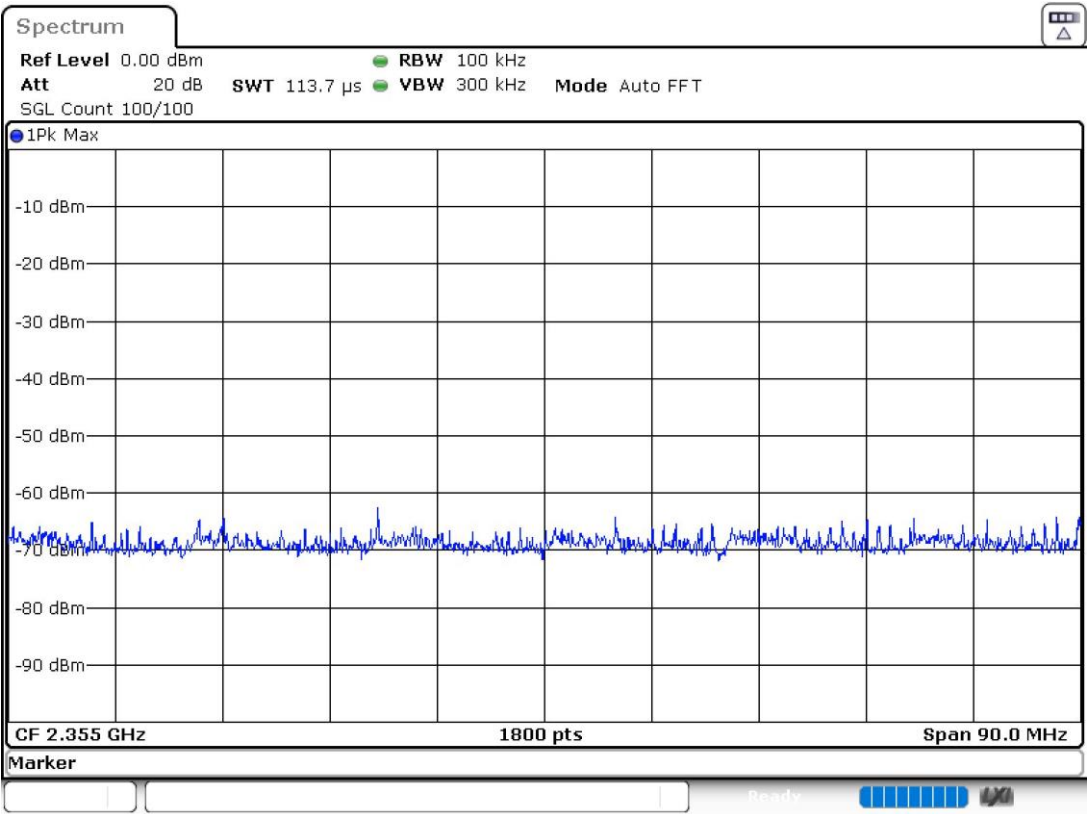
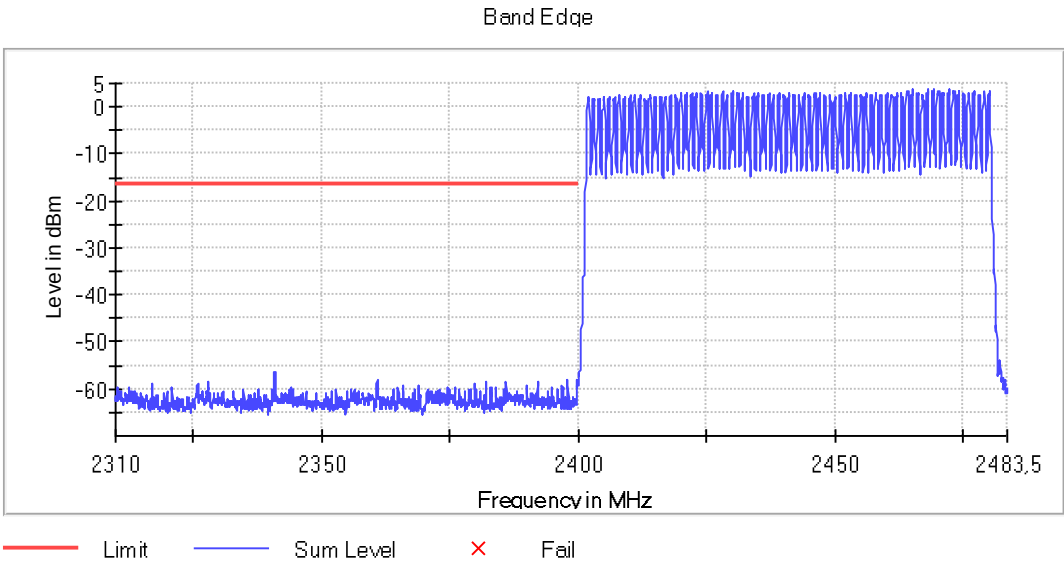
Verdict

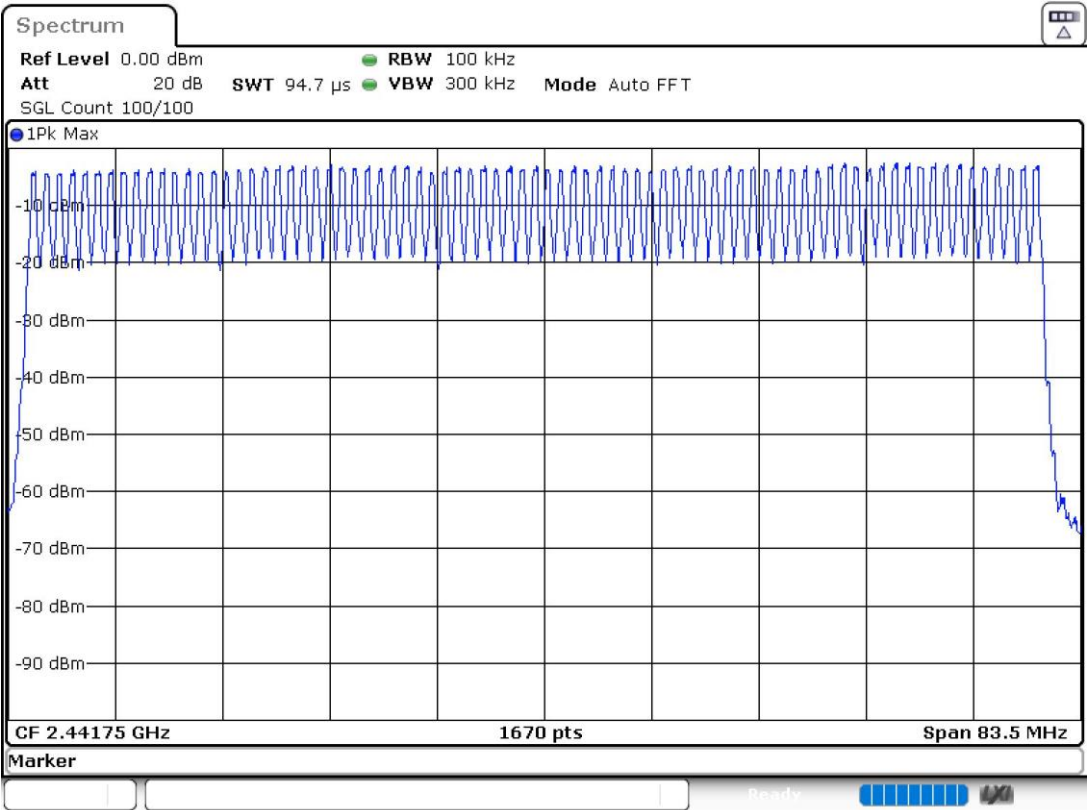
Pass

Attachments

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

Images:





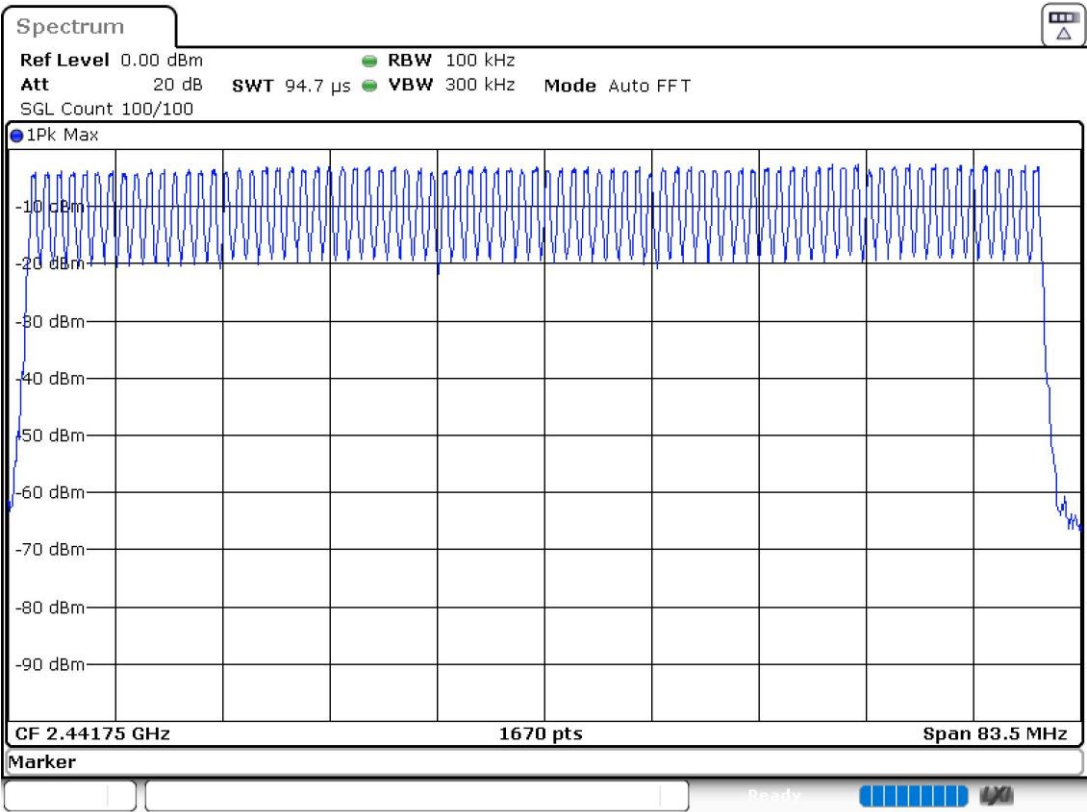
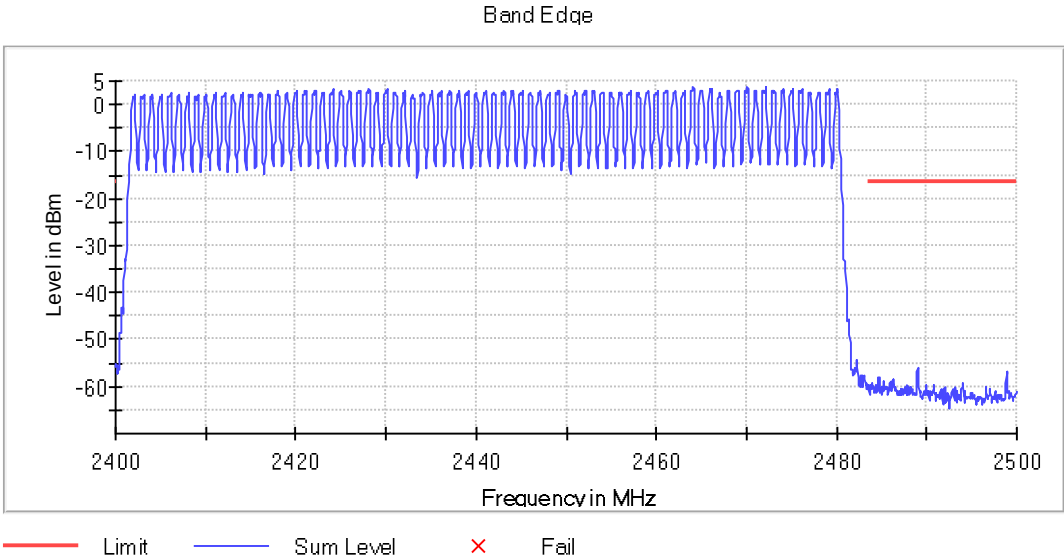
Operation Band MHz = [2400,
2483.5]

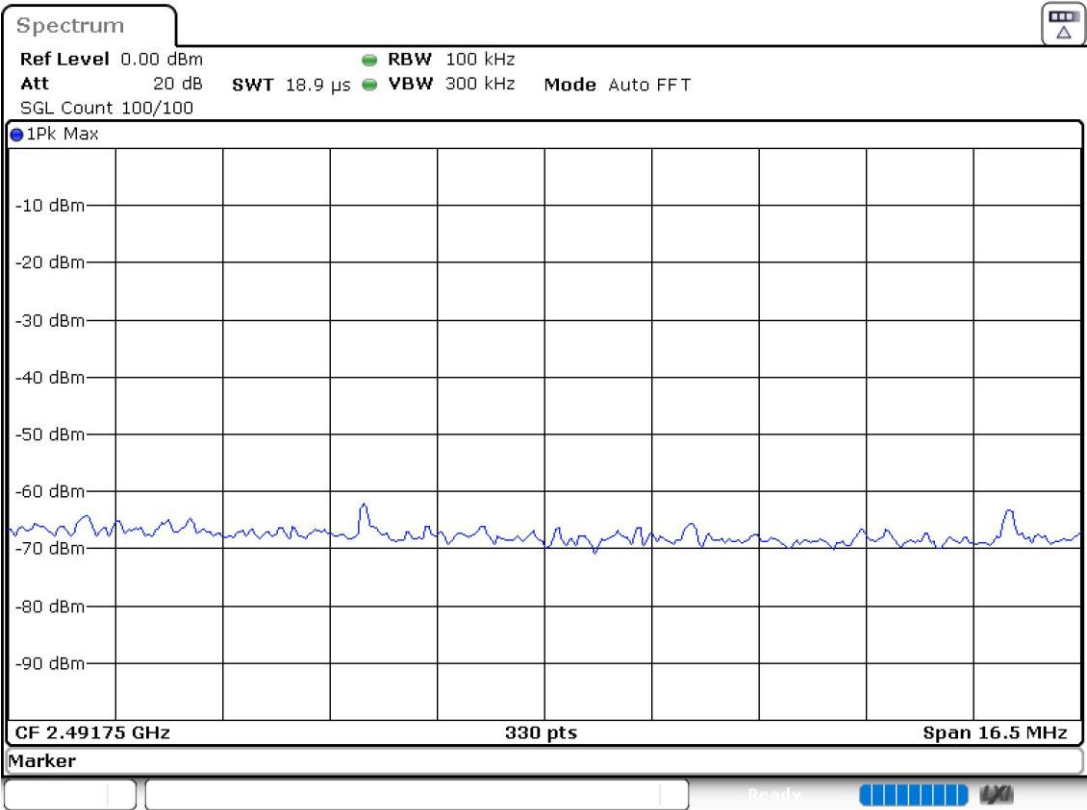
Equipment Type = Frequency Hopping Spread Spectrum systems
(DSS)

Modulation = BT (GFSK 1-DH5)

Active Port = 1

Images:





Operation Band MHz = [2400,
2483.5]

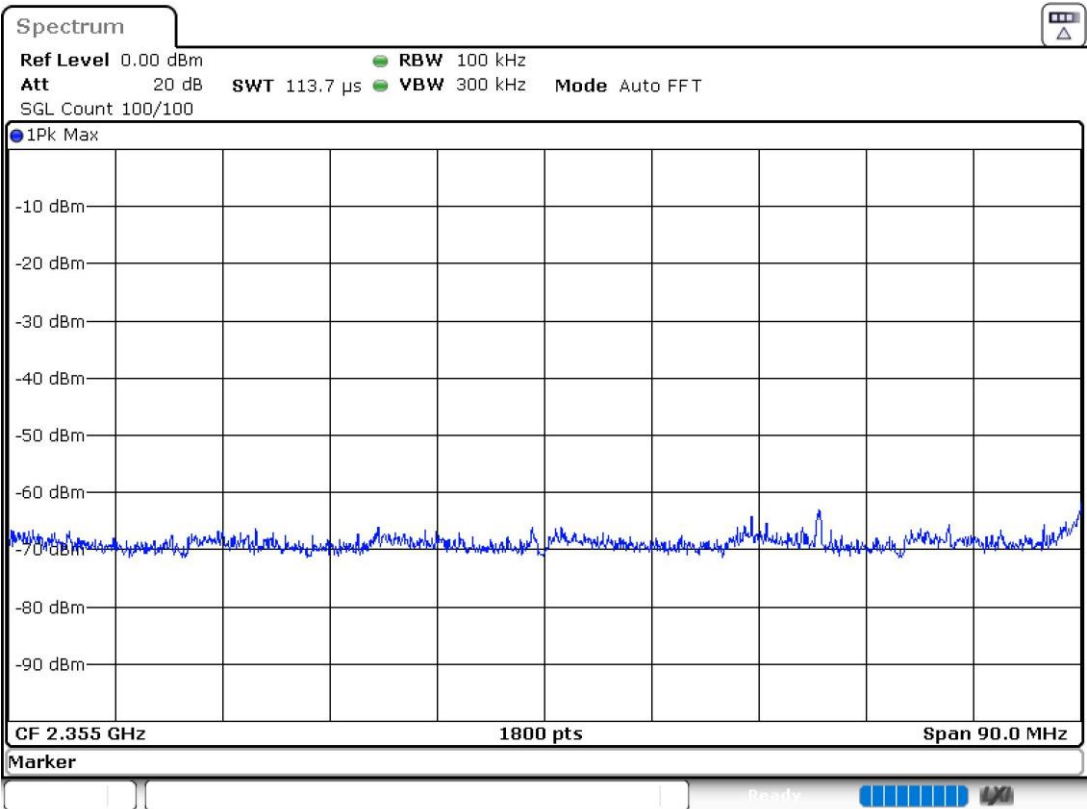
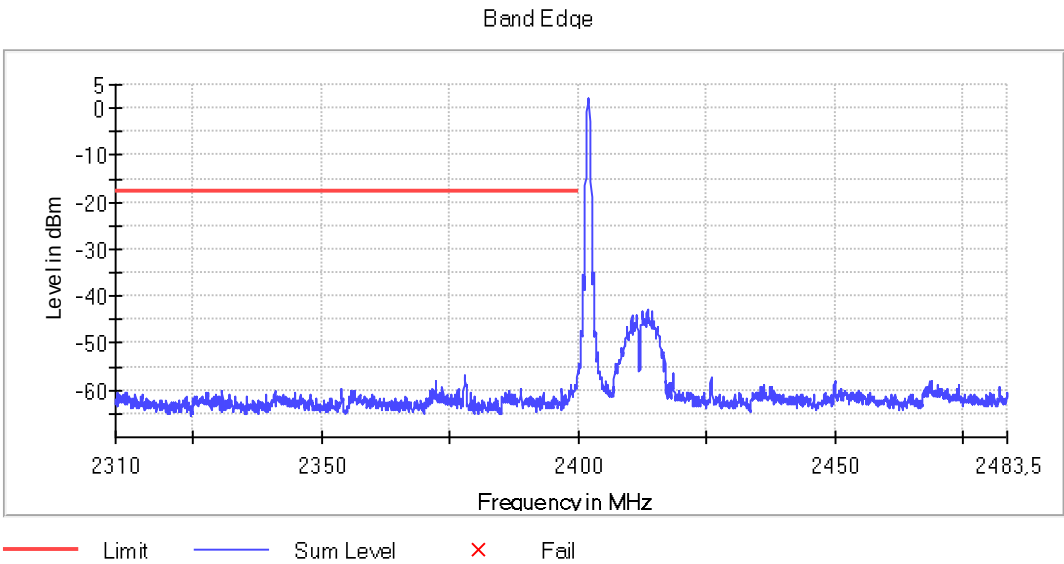
Equipment Type = Frequency Hopping Spread Spectrum systems
(DSS)

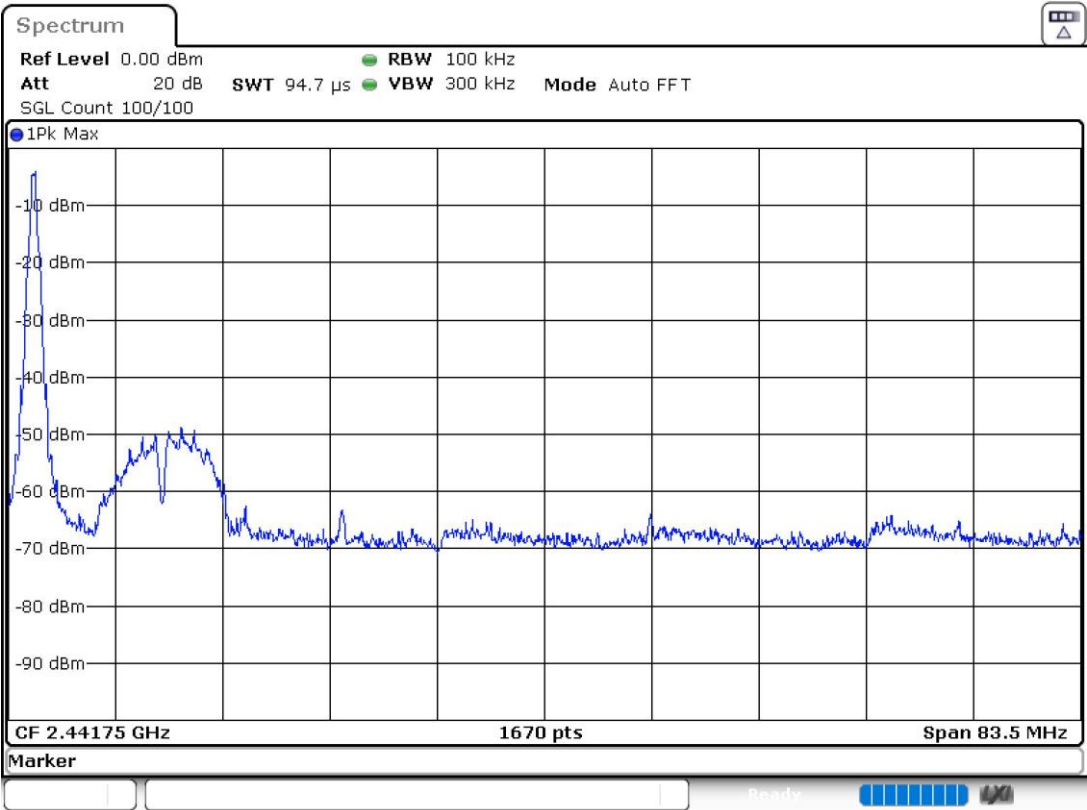
Frequency MHz = 2402.00000

Active Port = 1

Modulation = BT (GFSK 1-DH5)

Images:





Operation Band MHz = [2400,
2483.5]

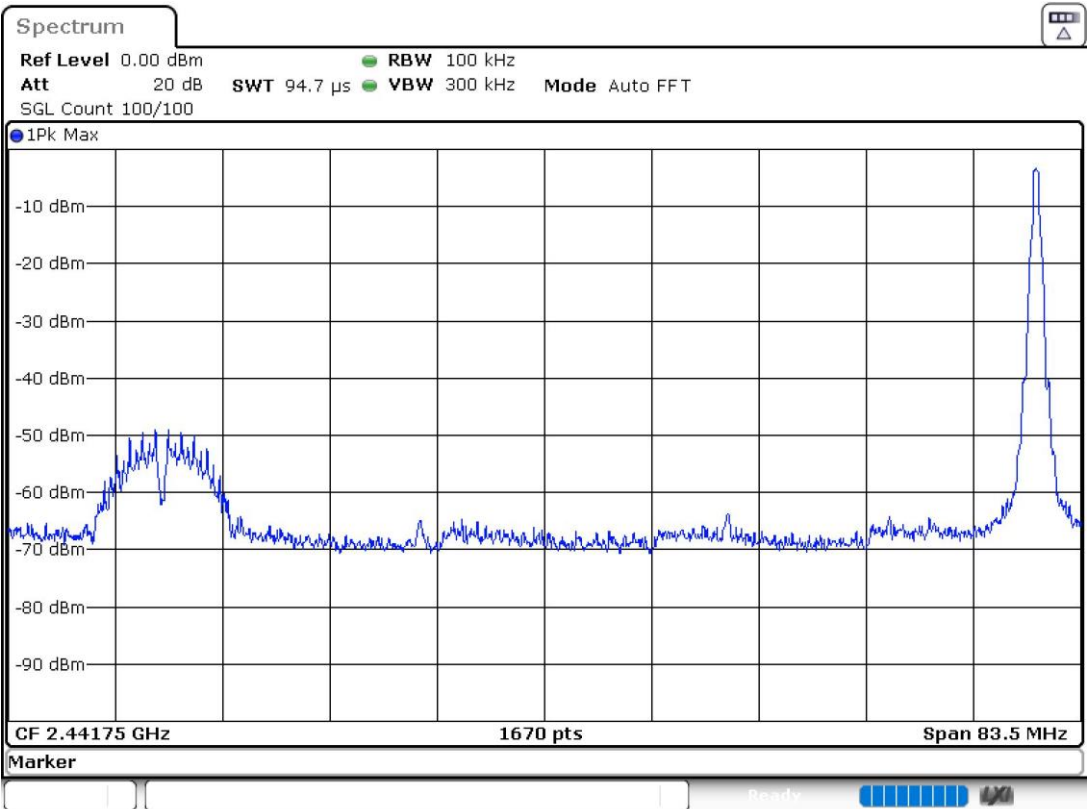
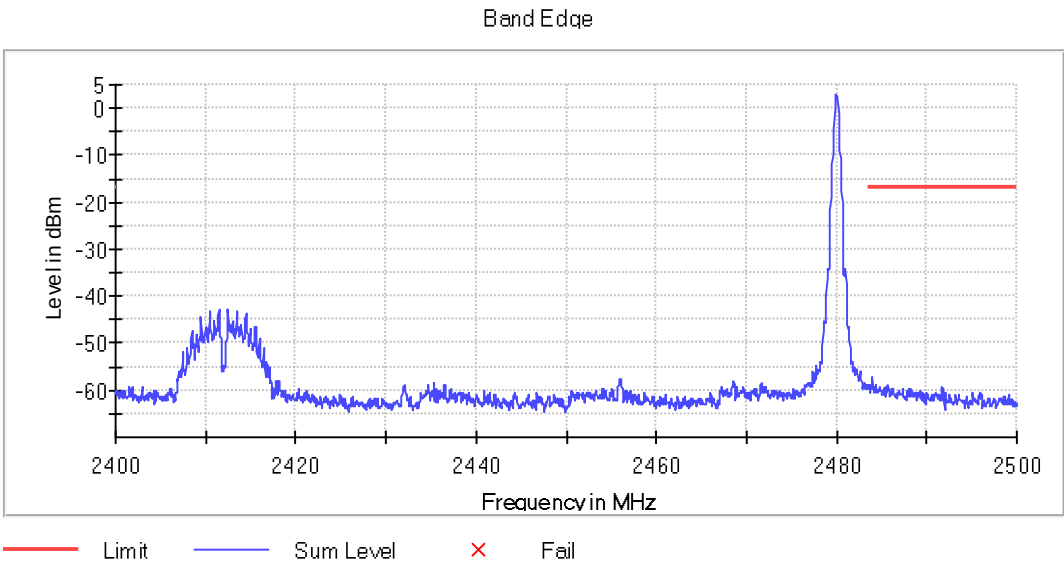
Equipment Type = Frequency Hopping Spread Spectrum systems
(DSS)

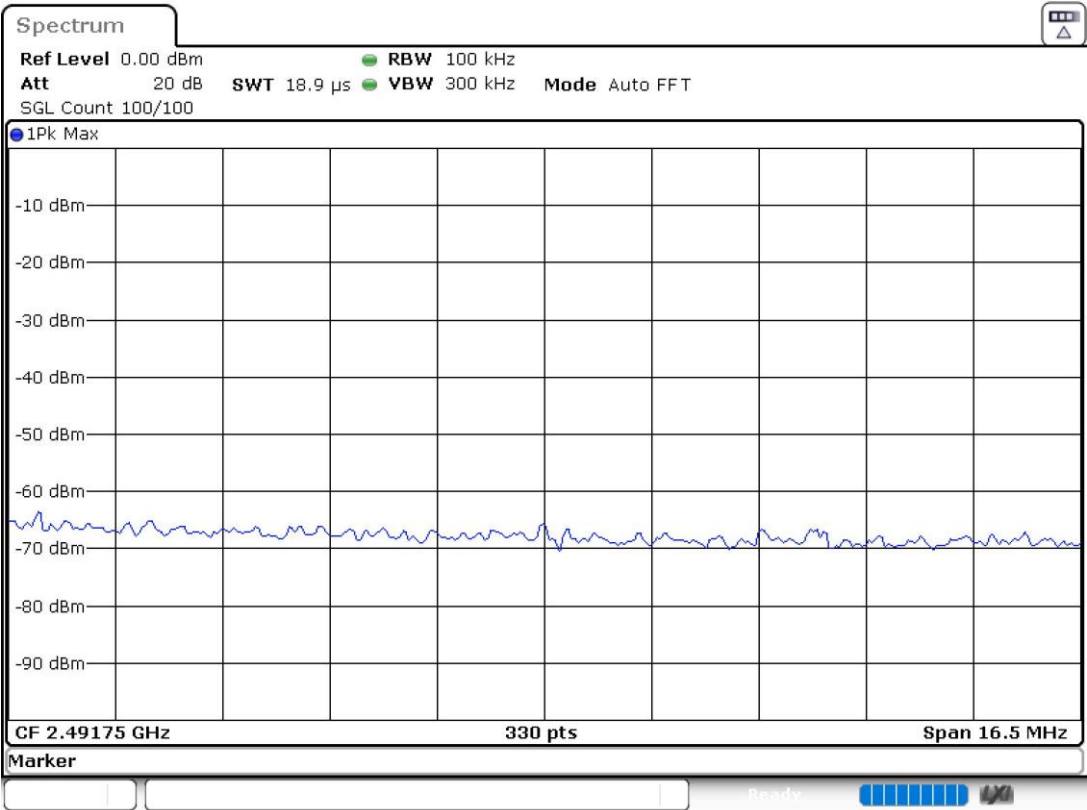
Frequency MHz = 2480.00000

Active Port = 1

Modulation = BT (GFSK 1-DH5)

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

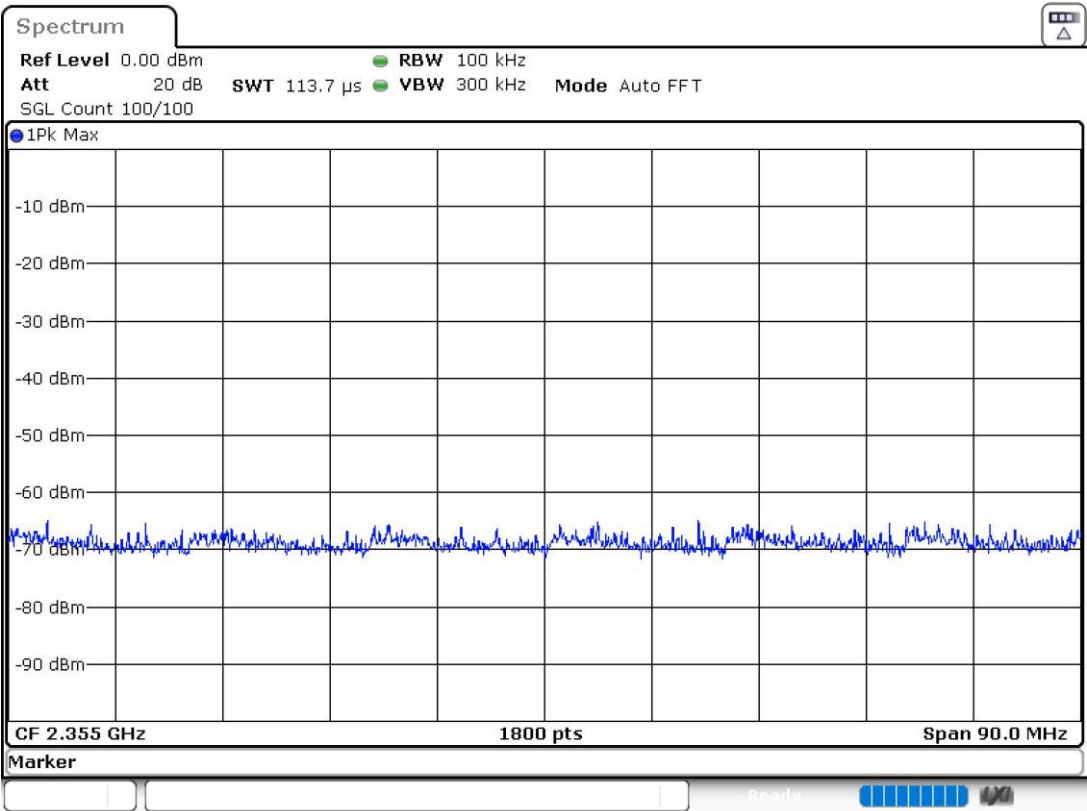
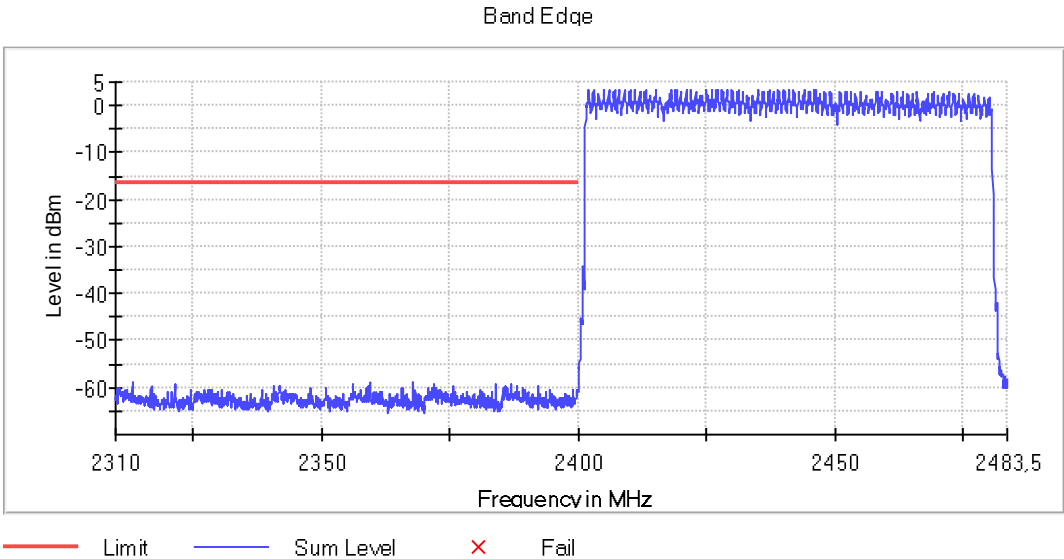
Pass

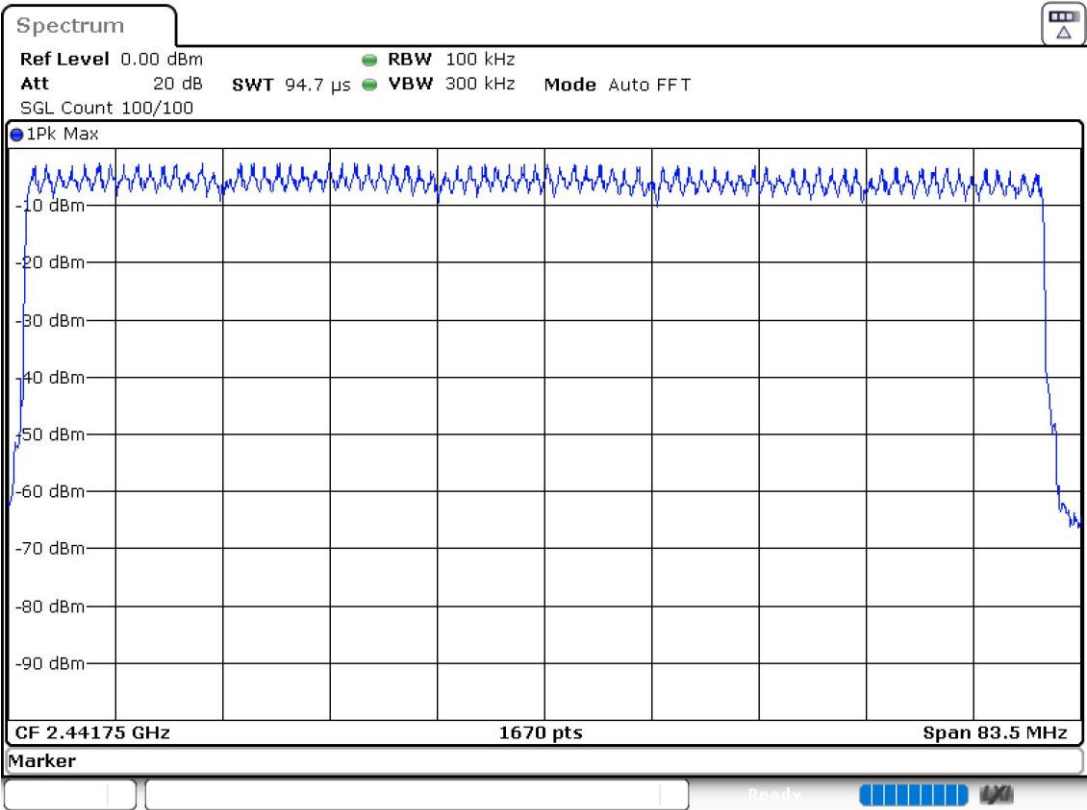
Attachments

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

Modulation = BT (Pi/4 DQPSK 2-DH5) Active Port = 1

Images:

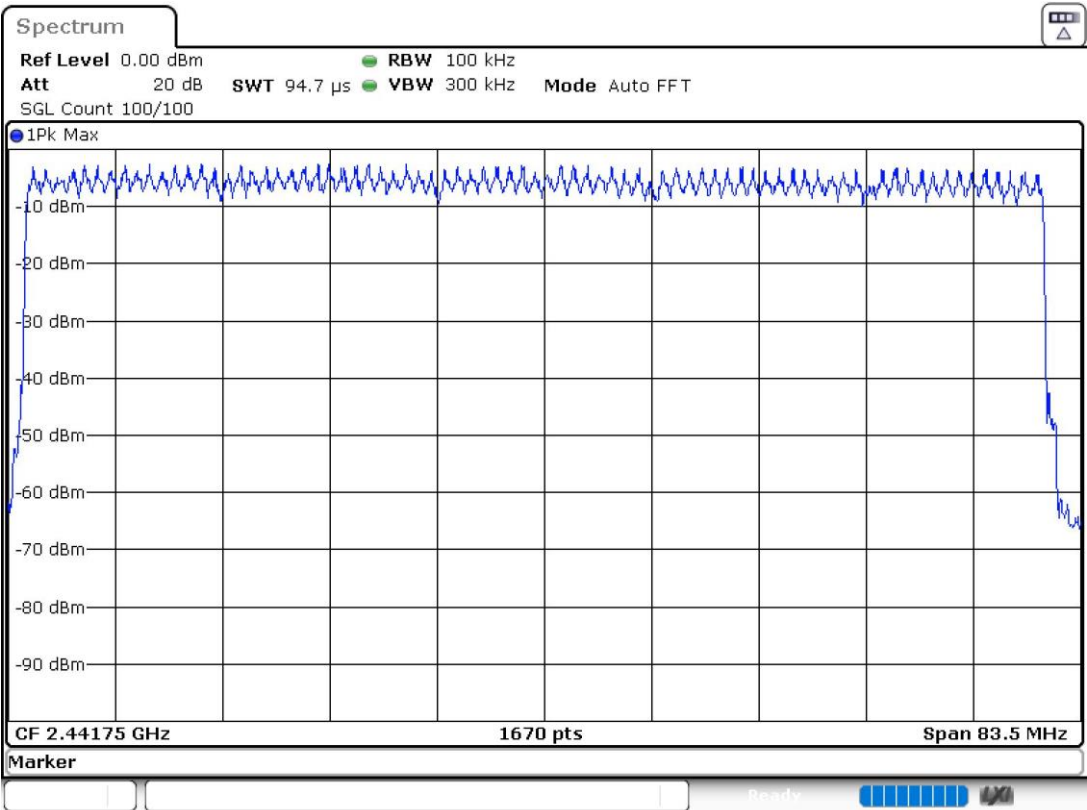
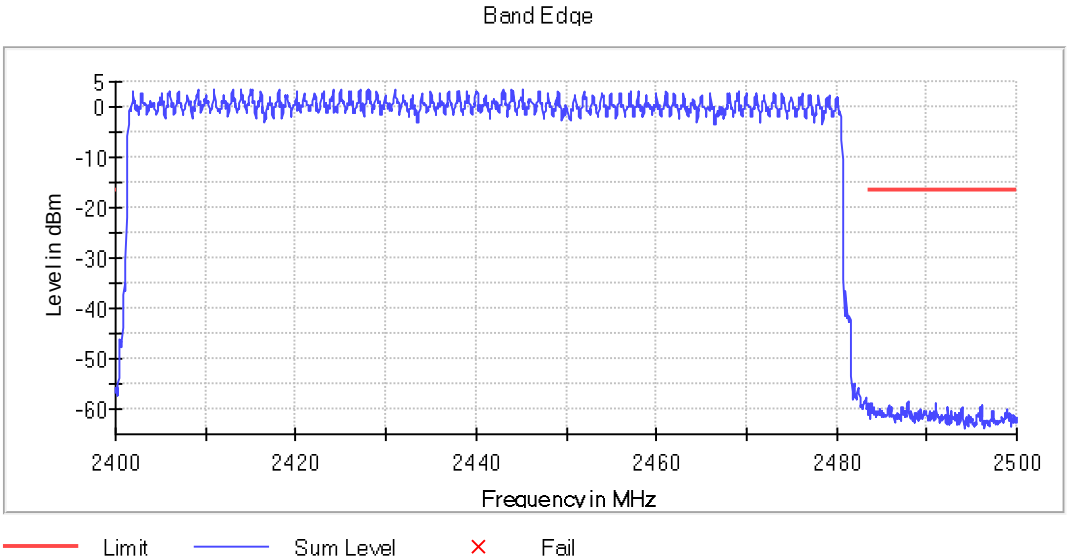


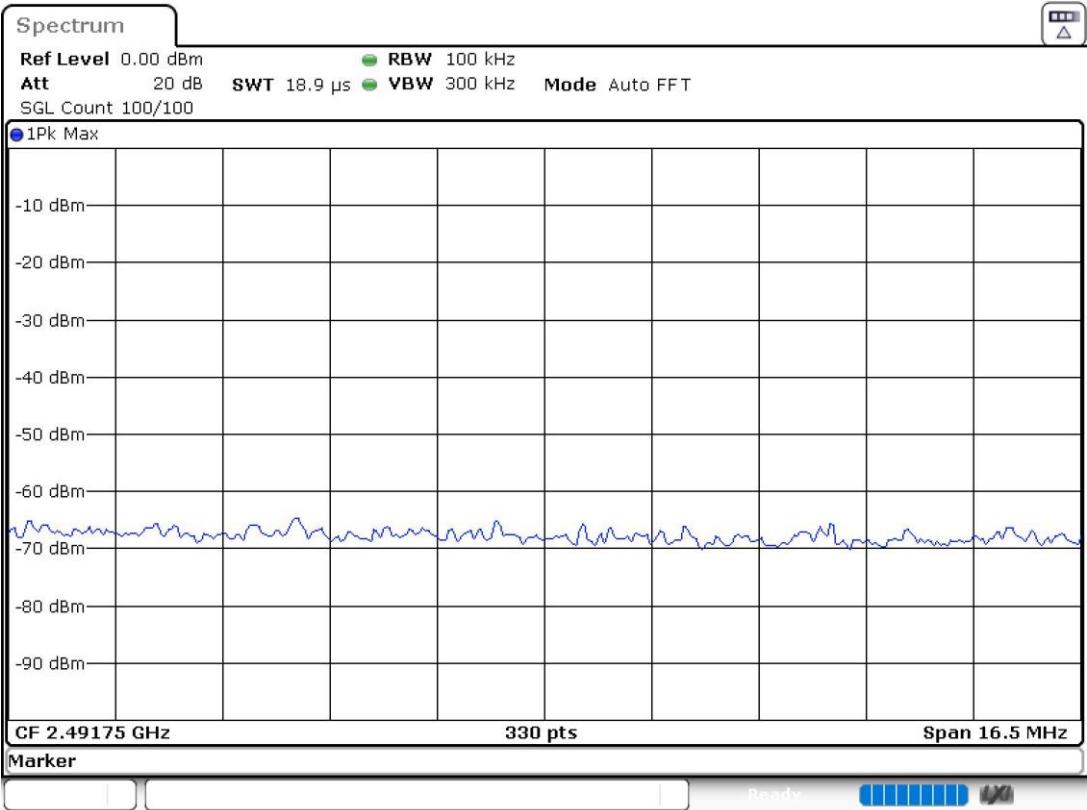


Operation Band MHz = [2400, 2483.5] Equipment Type = Frequency Hopping Spread Spectrum systems (DSS)

Modulation = BT (Pi/4 DQPSK 2-DH5) Active Port = 1

Images:





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:

