

For all channels	18 GHz ~ 26 GHz	Fig.68	P
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For $\pi/4$ DQPSK

Channel	Frequency Range	Test Results	Conclusion
Ch 0 2402 MHz	1 GHz ~ 3 GHz	Fig.69	P
	3 GHz ~ 18 GHz	Fig.70	P
Ch 39 2441 MHz	30 MHz ~ 1 GHz	Fig.71	P
	1 GHz ~ 3 GHz	Fig.72	P
	3 GHz ~ 18 GHz	Fig.73	P
Ch 78 2480 MHz	1 GHz ~ 3 GHz	Fig.74	P
	3 GHz ~ 18 GHz	Fig.75	P
Power	2.38GHz~2.4GHz---L	Fig.76	P
Power	2.45GHz~2.5GHz---H	Fig.77	P
For all channels	18 GHz ~ 26 GHz	Fig.78	P

For 8DPSK

Channel	Frequency Range	Test Results	Conclusion
Ch 0 2402 MHz	1 GHz ~ 3 GHz	Fig.79	P
	3 GHz ~ 18 GHz	Fig.80	P
Ch 39 2441 MHz	30 MHz ~ 1 GHz	Fig.81	P
	1 GHz ~ 3 GHz	Fig.82	P
	3 GHz ~ 18 GHz	Fig.83	P
Ch 78 2480 MHz	1 GHz ~ 3 GHz	Fig.84	P
	3 GHz ~ 18 GHz	Fig.85	P
Power	2.38GHz~2.4GHz---L	Fig.86	P
Power	2.45GHz~2.5GHz---H	Fig.87	P
For all channels	18 GHz ~ 26 GHz	Fig.88	P

GFSK Ch 0 - Average

Frequency(MHz)	Result(dBuv/m)	Cable Loss(dB)	Antenna Factor	PMea(dBuv/m)	Polarization
2382.975	50.1	2.9	32.0	15.240	H
2385.000	50.2	2.9	32.0	15.311	V
4804.500	38.3	-17.3	34.5	21.123	H
7206.000	40.0	-16.4	36.1	20.317	V
9607.500	39.5	-18.2	37.0	20.794	H
12010.500	42.8	-17.4	39.3	20.823	H

GFSK Ch 39 - Average

Frequency(MHz)	Result(dBuv/m)	Cable Loss(dB)	Antenna Factor	PMea(dBuv/m)	Polarization
2434.750	50.1	2.9	32.0	15.210	H
2448.500	50.4	2.9	32.3	15.175	H
4882.500	36.9	-18.5	34.5	20.945	H
7323.000	38.0	-18.5	36.1	20.438	V

9765.000	40.0	-17.8	37.2	20.592	V
12205.500	41.9	-17.8	39.2	20.449	H

GFSK Ch 78 - Average

Frequency(MHz)	Result(dBuv/m)	Cable Loss(dB)	Antenna Factor	PMea(dBuv/m)	Polarization
2483.575	51.6	2.9	32.8	15.915	H
2475.500	51.1	2.9	33.0	15.191	H
4960.500	37.5	-18.2	34.5	21.189	H
7440.000	39.9	-16.9	36.0	20.760	V
9921.000	40.8	-17.1	37.4	20.486	V
12400.500	41.8	-17.5	39.1	20.150	H

GFSK Ch 0 – Peak

Frequency(MHz)	Result(dBuv/m)	Cable Loss(dB)	Antenna Factor	PMea(dBuv/m)	Polarization
2381.540	53.9	2.9	32.0	19.03	H
23822.050	53.7	2.9	32.0	18.76	V
4804.500	47.5	-17.3	34.5	30.232	H
7206.000	49.8	-16.4	36.1	30.133	V
9607.500	51.5	-18.2	37.0	32.790	H
12016.500	52.3	-17.3	39.3	30.378	H

GFSK Ch 39 - Peak

Frequency(MHz)	Result(dBuv/m)	Cable Loss(dB)	Antenna Factor	PMea(dBuv/m)	Polarization
2411.800	51.8	2.9	32.0	16.91	H
2448.400	52.2	2.9	32.3	16.97	H
4882.500	48.3	-18.5	34.5	32.428	H
7323.000	48.3	-18.5	36.1	30.727	V
9763.500	48.3	-17.8	37.2	31.185	V
12205.500	48.3	-17.8	39.2	30.732	H

GFSK Ch 78 - Peak

Frequency(MHz)	Result(dBuv/m)	Cable Loss(dB)	Antenna Factor	PMea(dBuv/m)	Polarization
24835.000	57.5	2.9	32.8	21.78	H
2483.600	56.3	2.9	33.0	20.36	H
4960.500	47.5	-18.2	34.5	31.228	H
7440.000	49.9	-16.9	36.0	30.806	V
9921.000	51.5	-17.1	37.4	31.222	V
12400.500	52.2	-17.5	39.1	30.512	H

$\pi/4$ DQPSK Ch 0 - Average

Frequency(MHz)	Result(dBuv/m)	Cable Loss(dB)	Antenna Factor	PMea(dBuv/m)	Polarization
2388.750	50.1	2.9	32.0	15.234	H
2383.000	50.1	2.9	32.0	15.246	V
4804.500	38.1	-17.3	34.5	20.883	H
7206.000	39.8	-16.4	36.1	20.084	V
9607.500	39.2	-18.2	37.0	20.428	V
12016.500	42.1	-17.3	39.3	20.149	V

$\pi/4$ DQPSK Ch 39 - Average

Frequency(MHz)	Result(dBuv/m)	Cable Loss(dB)	Antenna Factor	PMea(dBuv/m)	Polarization
2436.000	50.1	2.9	32.0	15.167	H
2446.000	50.6	2.9	32.2	15.411	V
4882.500	36.9	-18.5	34.5	20.908	V
7323.000	38.0	-18.5	36.1	20.383	V
9763.500	40.0	-17.8	37.2	20.554	V
12205.500	41.8	-17.8	39.2	20.334	H

$\pi/4$ DQPSK Ch 78 - Average

Frequency(MHz)	Result(dBuv/m)	Cable Loss(dB)	Antenna Factor	PMea(dBuv/m)	Polarization
2483.500	53.2	2.9	32.8	17.524	H
2466.000	50.9	2.9	32.8	15.228	V
4960.500	37.4	-18.2	34.5	21.119	H
7440.000	39.7	-16.9	36.0	20.617	V
9921.000	40.7	-17.1	37.4	20.423	H
12400.500	41.6	-17.5	39.1	20.003	H

$\pi/4$ DQPSK Ch 0 – Peak

Frequency(MHz)	Result(dBuv/m)	Cable Loss(dB)	Antenna Factor	PMea(dBuv/m)	Polarization
2389.100	54.0	2.9	32.0	19.17	H
2384.900	53.9	2.9	32.0	18.99	V
4804.500	47.6	-17.3	34.5	31.328	H
7206.000	50.0	-16.4	36.1	30.856	V
9607.500	51.4	-18.2	37.0	31.122	V
12016.500	52.3	-17.3	39.3	30.612	V

$\pi/4$ DQPSK Ch 39 - Peak

Frequency(MHz)	Result(dBuv/m)	Cable Loss(dB)	Antenna Factor	PMea(dBuv/m)	Polarization
2402.000	53.3	2.9	32.0	18.46	H
2403.400	52.4	2.9	32.2	17.21	V
4882.500	48.6	-18.5	34.5	32.649	V
7323.000	48.3	-18.5	36.1	30.688	V
9763.500	50.5	-17.8	37.2	31.047	V
12205.500	51.7	-17.8	39.2	30.254	H

$\pi/4$ DQPSK Ch 78 - Peak

Frequency(MHz)	Result(dBuv/m)	Cable Loss(dB)	Antenna Factor	PMea(dBuv/m)	Polarization
2483.500	57.5	2.9	32.8	21.78	H
2483.525	56.0	2.9	32.8	20.35	V
4960.500	47.6	-18.2	34.5	31.328	H
7440.000	50.0	-16.9	36.0	30.856	V
9921.000	51.4	-17.1	37.4	31.122	H
12400.500	52.3	-17.5	39.1	30.612	H

8DPSK Ch 0 - Average

Frequency(MHz)	Result(dBuv/m)	Cable Loss(dB)	Antenna Factor	PMea(dBuv/m)	Polarization
2387.210	50.1	2.9	32.0	15.281	H
2380.750	50.2	2.9	32.1	15.252	V
4804.500	38.2	-17.3	34.5	20.940	H
7206.000	40.0	-16.4	36.1	20.296	V
9609.000	39.3	-18.3	37.0	20.551	H
12100.500	42.3	-17.2	39.3	20.326	H

8DPSK Ch 39 - Average

Frequency(MHz)	Result(dBuv/m)	Cable Loss(dB)	Antenna Factor	PMea(dBuv/m)	Polarization
2434.500	50.0	2.9	31.9	15.176	H
2446.000	50.6	2.9	32.2	15.477	H
4882.500	36.9	-18.5	34.5	20.978	H
7323.000	38.2	-18.5	36.1	20.617	V
9765.000	40.0	-17.8	37.2	20.566	V
12205.500	41.7	-17.8	39.2	20.307	H

8DPSK Ch 78 - Average

Frequency(MHz)	Result(dBuv/m)	Cable Loss(dB)	Antenna Factor	PMea(dBuv/m)	Polarization
2483.500	52.6	2.9	32.8	16.945	H
2456.750	50.7	2.9	32.5	15.263	V
4960.500	37.7	-18.2	34.5	21.346	H
7440.000	39.9	-16.9	36.0	20.742	H
9921.000	40.8	-17.1	37.4	20.494	V
12400.500	41.8	-17.5	39.1	20.110	H

8DPSK Ch 0 – Peak

Frequency(MHz)	Result(dBuv/m)	Cable Loss(dB)	Antenna Factor	PMea(dBuv/m)	Polarization
2385.390	54.0	2.9	32.0	19.10	H
2380.665	54.3	2.9	32.1	19.30	V
4804.500	47.6	-17.3	34.5	30.41	H
7206.000	49.8	-16.4	36.1	30.06	V
9607.500	51.7	-18.2	37.0	32.95	H
12016.500	52.5	-17.3	39.3	30.52	H

8DPSK Ch 39 - Peak

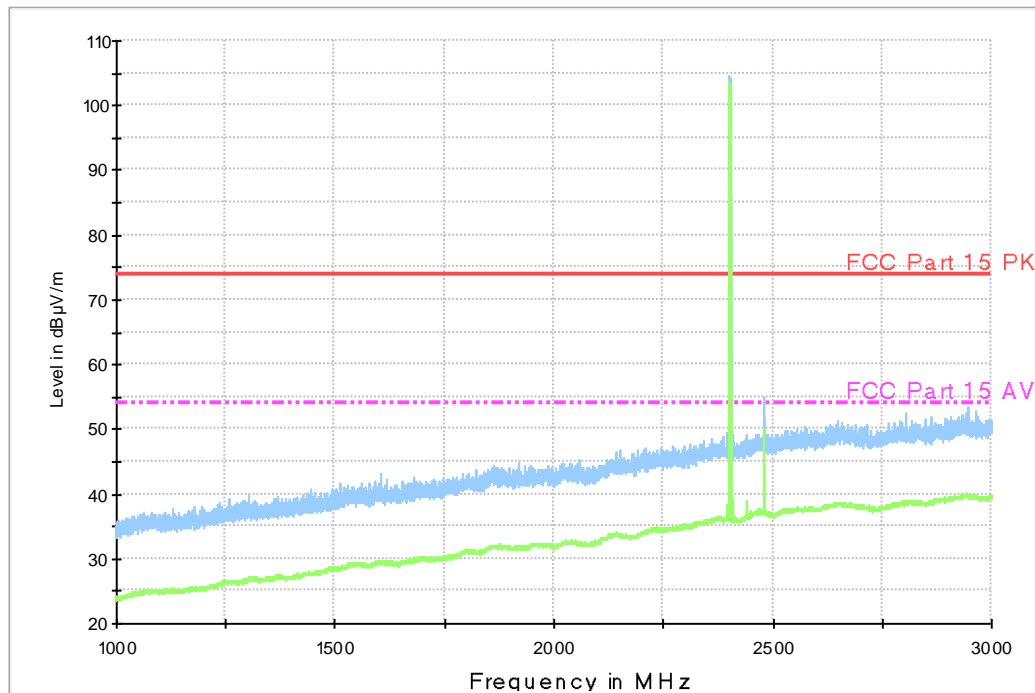
Frequency(MHz)	Result(dBuv/m)	Cable Loss(dB)	Antenna Factor	PMea(dBuv/m)	Polarization
2469.400	52.6	2.9	31.9	17.80	H
2462.600	51.9	2.9	32.2	16.71	H
4882.500	48.6	-18.5	34.5	32.65	H
7323.000	48.5	-18.5	36.1	30.94	V
9763.500	50.5	-17.8	37.2	31.02	V
12205.500	52.3	-17.8	39.2	30.90	H

8DPSK Ch 78 - Peak

Frequency(MHz)	Result(dBuv/m)	Cable Loss(dB)	Antenna Factor	PMea(dBuv/m)	Polarization
24835.000	58.5	2.9	32.8	22.80	H
2484.250	55.4	2.9	32.5	19.95	V
4960.500	47.7	-18.2	34.5	31.40	H
7440.000	49.9	-16.9	36.0	30.82	H
9921.000	51.6	-17.1	37.4	31.30	V
12400.500	52.4	-17.5	39.1	30.78	H

Test graphs as below:

RE - 1GHz-3GHz



Note: the spike over the limit is the Bluetooth carrier frequency and coming from the radio equipment.

Fig.58. Radiated emission: GFSK, Channel 0, 1 GHz - 3 GHz

RE - 3GHz-18GHz

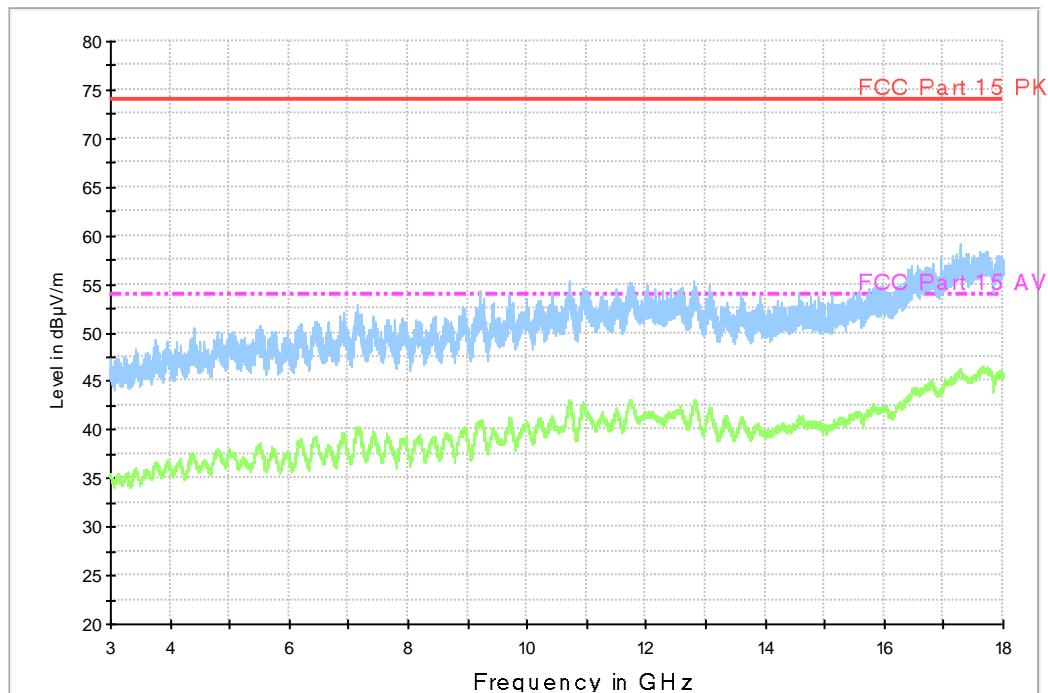


Fig.59. Radiated emission: GFSK, Channel 0, 3 GHz - 18 GHz

RE 9kHz-30MHz_ESC13

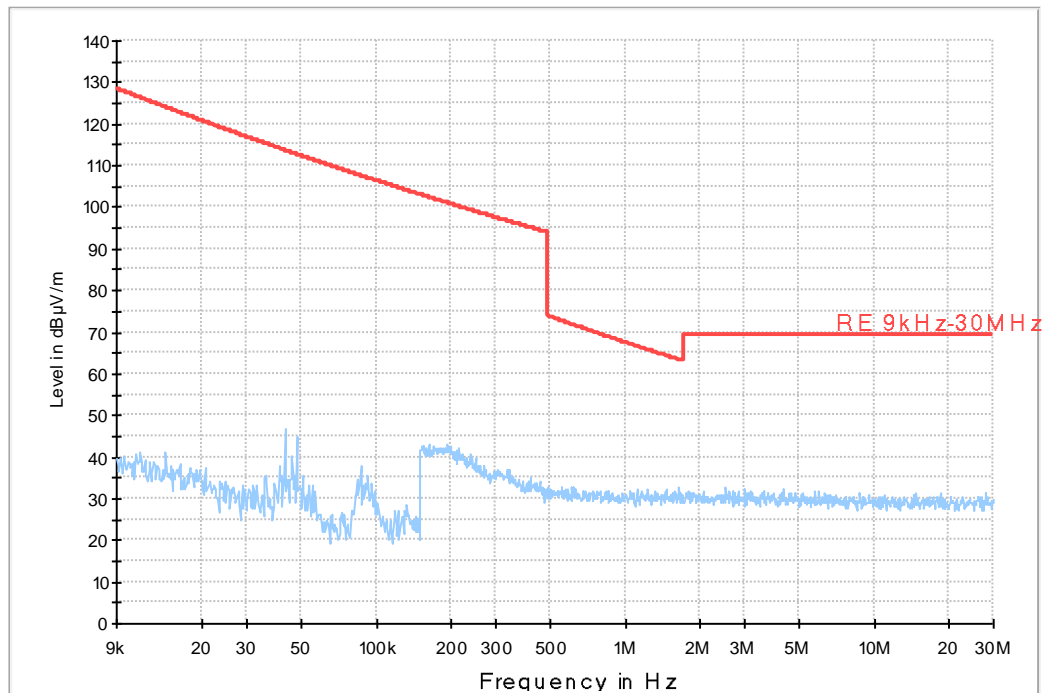


Fig.60. Radiated emission: GFSK, Channel 39, 9 kHz - 30 MHz

RE 30MHz-1GHz

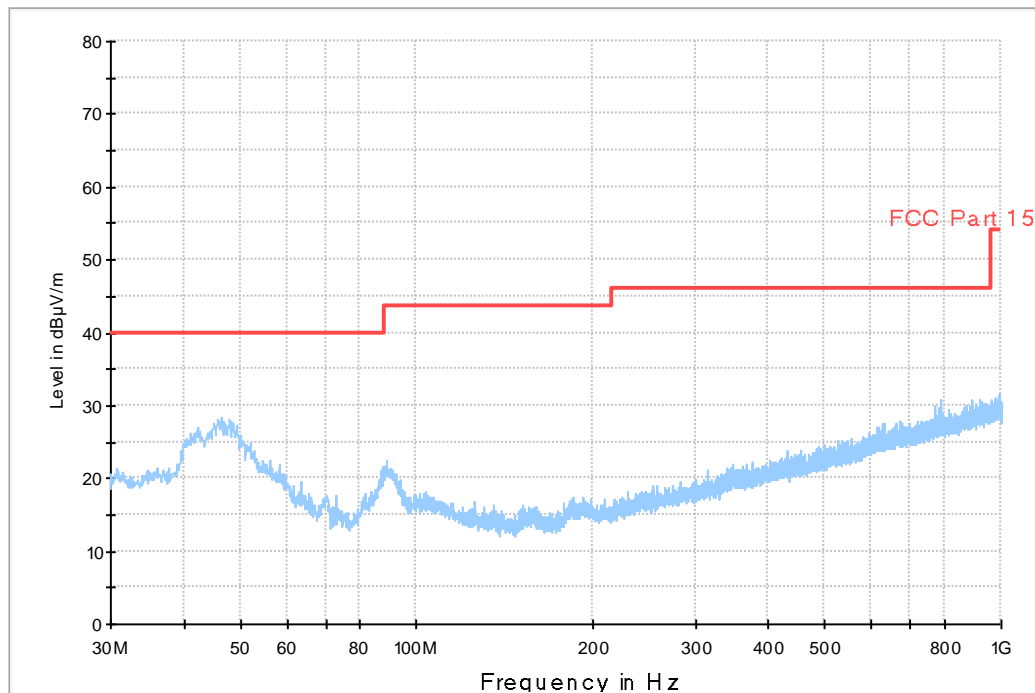
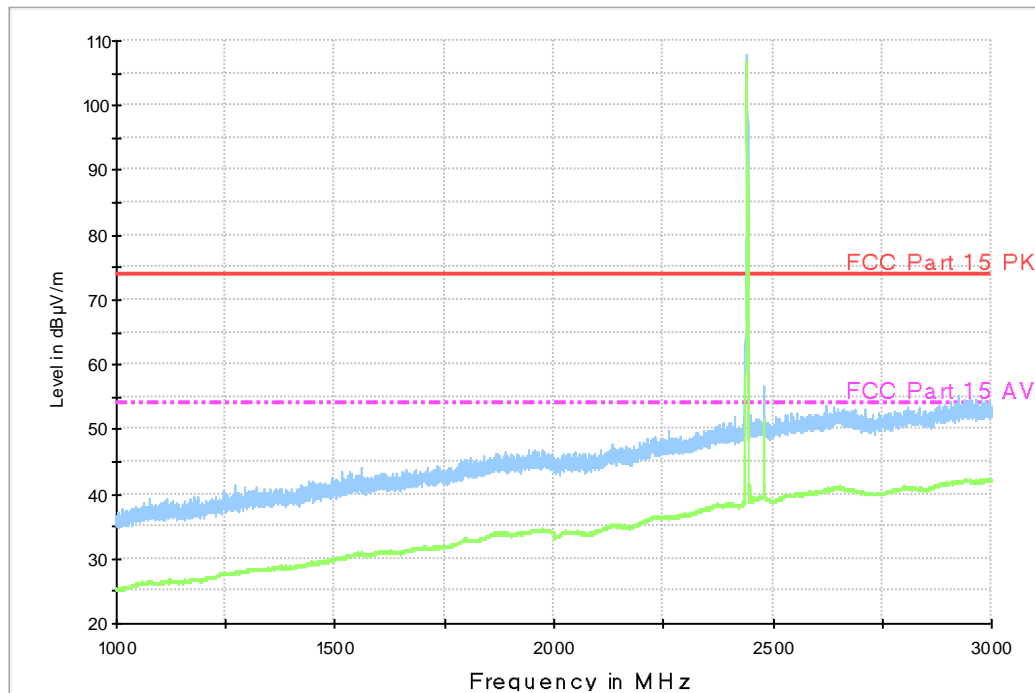


Fig.61. Radiated emission: GFSK, Channel 39, 30 MHz - 1 GHz

RE - 1GHz-3GHz



Note: the spike over the limit is the Bluetooth carrier frequency and coming from the radio equipment.

Fig.62. Radiated emission: GFSK, Channel 39, 1 GHz - 3 GHz

RE - 3GHz-18GHz

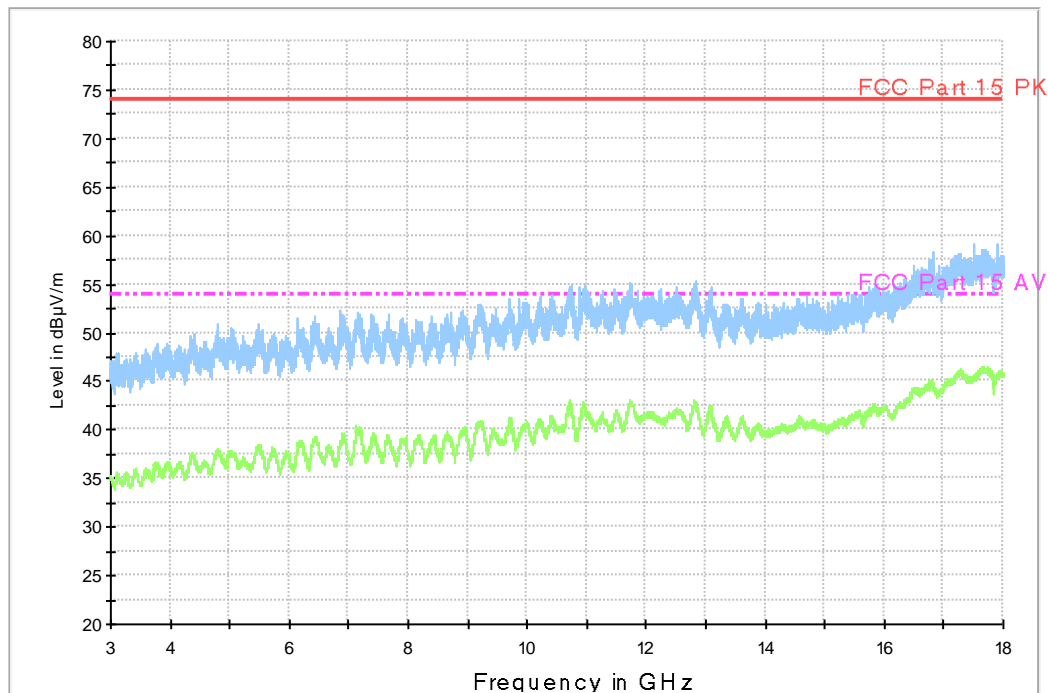
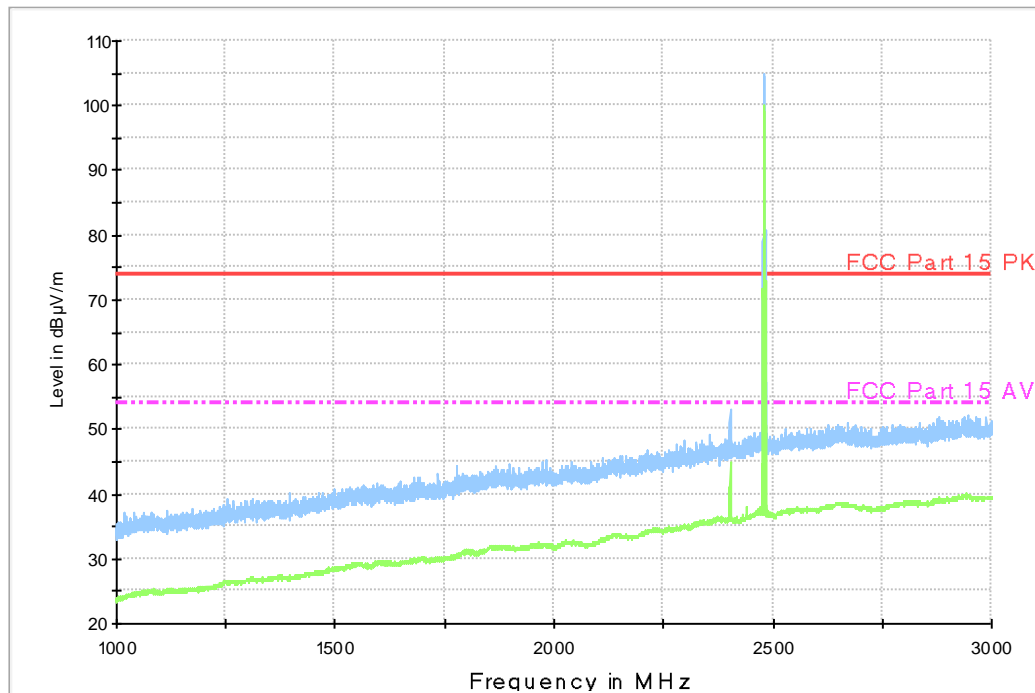


Fig.63. Radiated emission: GFSK, Channel 39, 3 GHz - 18 GHz

RE - 1GHz-3GHz



Note: the spike over the limit is the Bluetooth carrier frequency and coming from the radio equipment.

Fig.64. Radiated emission: GFSK, Channel 78, 1 GHz - 3 GHz

RE - 3GHz-18GHz

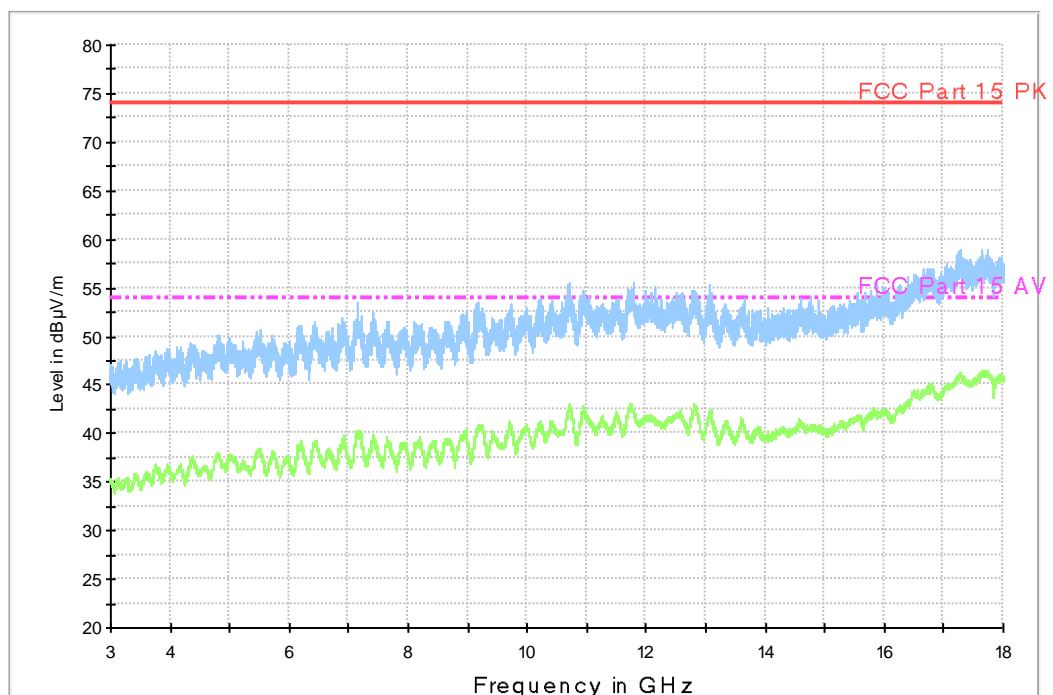


Fig.65. Radiated emission: GFSK, Channel 78, 3 GHz - 18 GHz

RE - Power-2.38GHz-2.45GHz_ESCI3

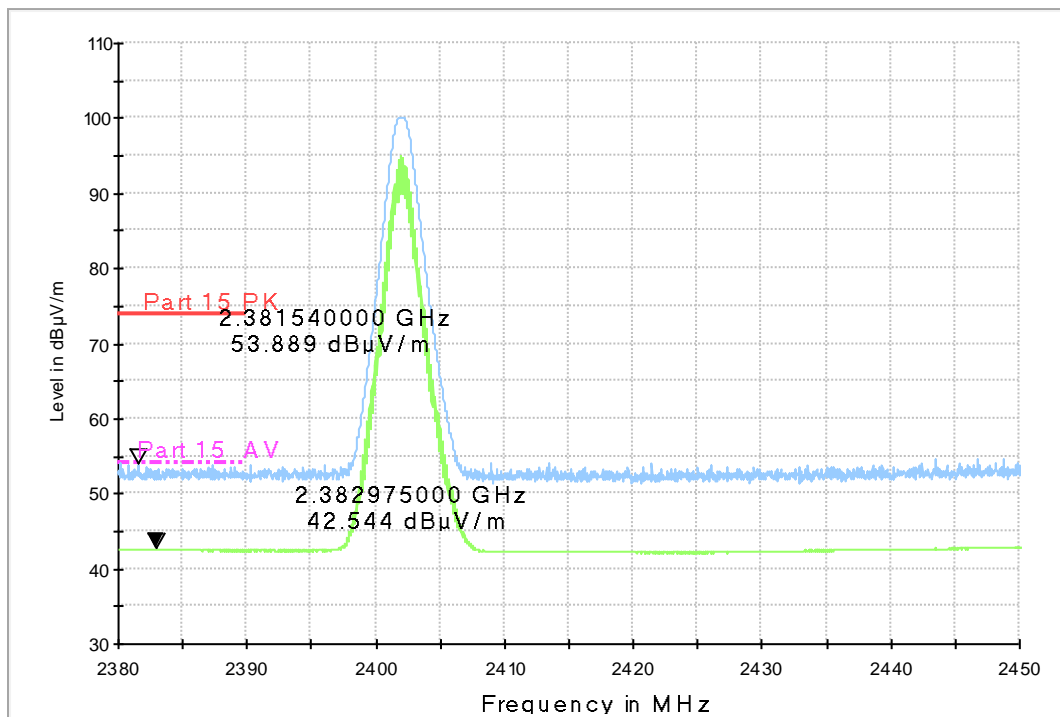


Fig.66. Radiated emission (Power): GFSK, low channel

RE - Power-2.45GHz-2.5GHz_ESCI3

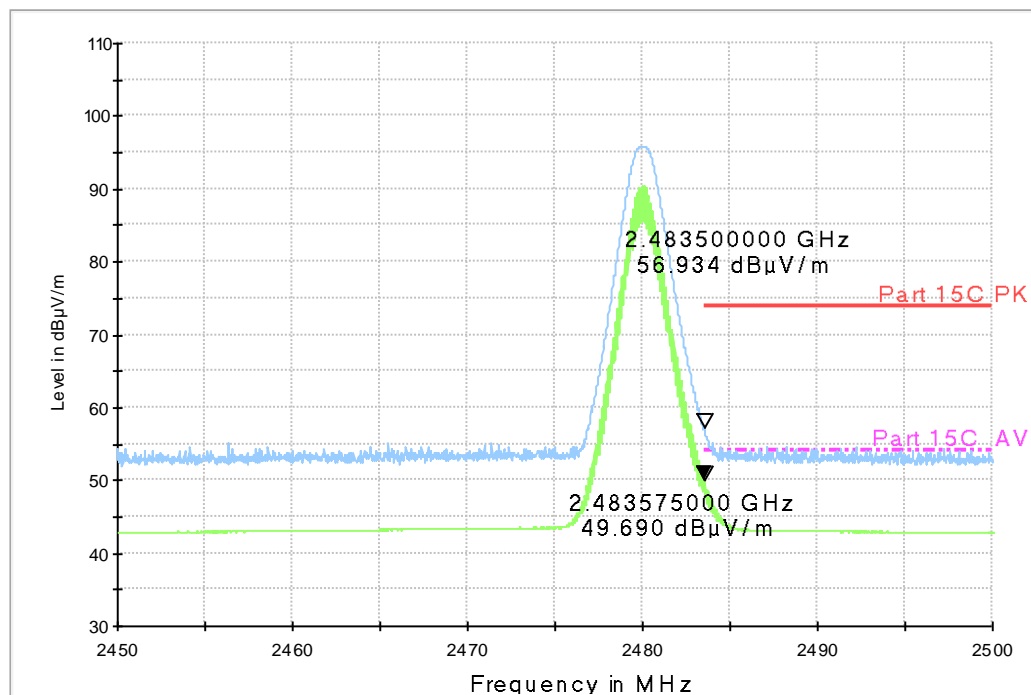


Fig.67. Radiated emission (Power) GFSK, high channel

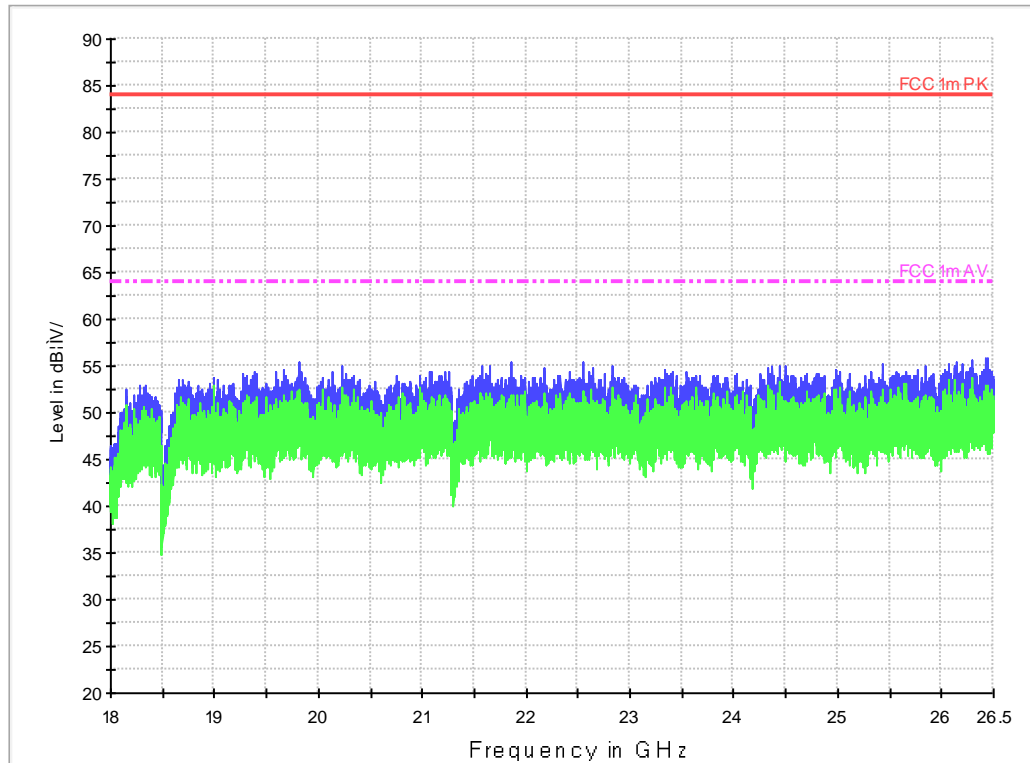
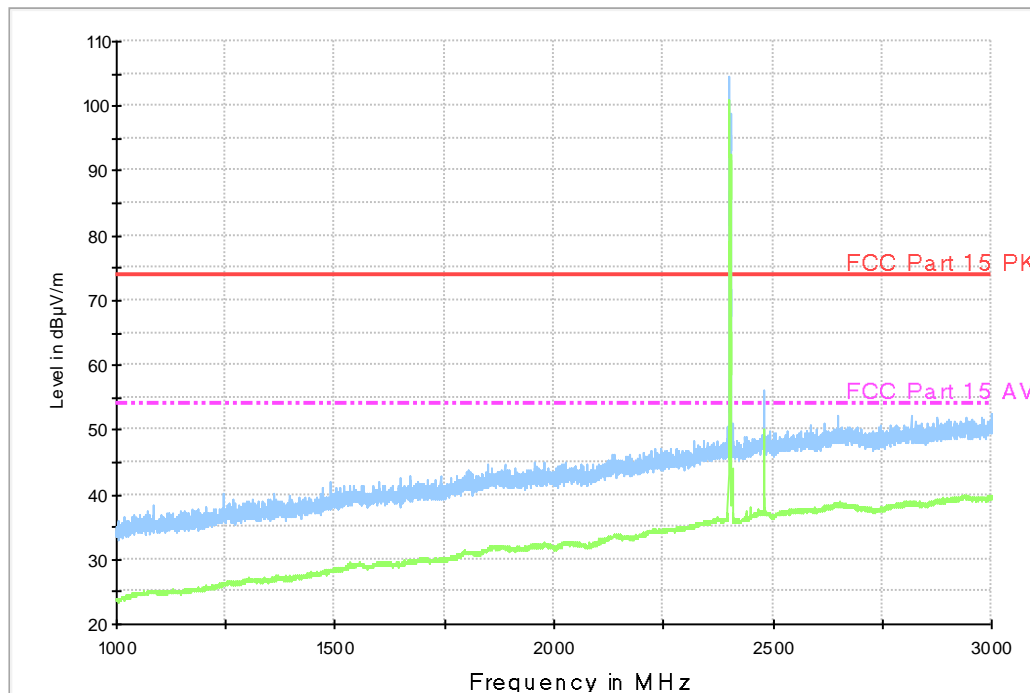


Fig.68. Radiated emission: GFSK, 18 GHz - 26 GHz

RE - 1GHz-3GHz



Note: the spike over the limit is the Bluetooth carrier frequency and coming from the radio equipment.

Fig.69. Radiated emission: $\pi/4$ DQPSK, Channel 0, 1 GHz - 3 GHz

RE - 3GHz-18GHz

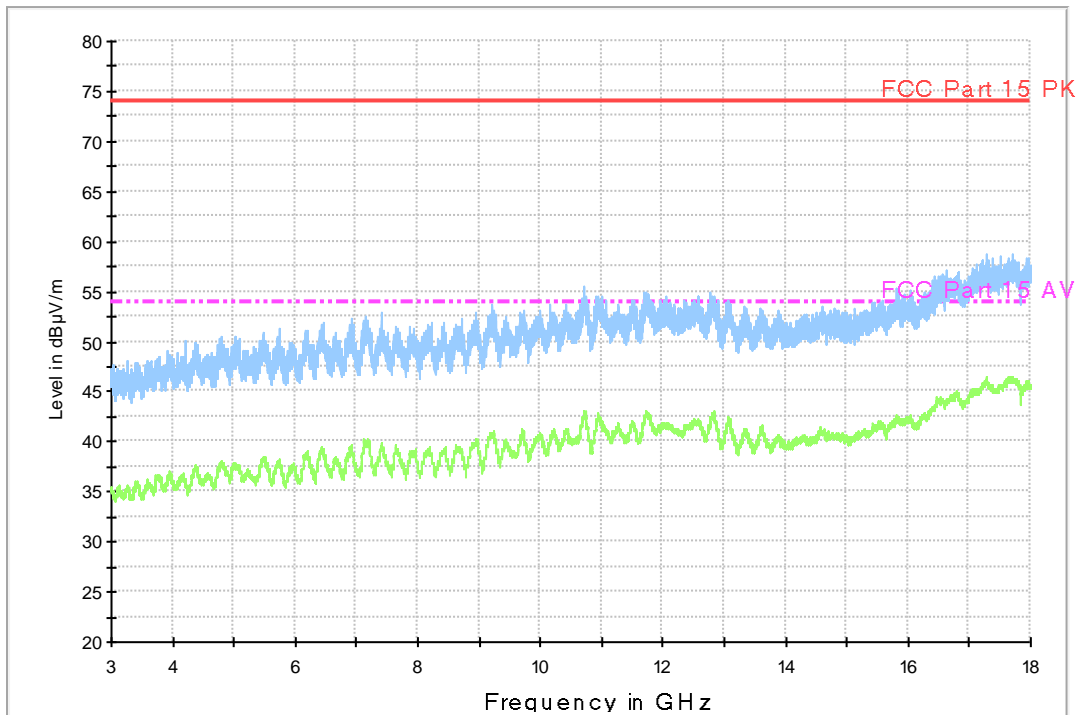


Fig.70. Radiated emission: $\pi/4$ DQPSK, Channel 0, 3 GHz - 18 GHz

RE 30MHz-1GHz

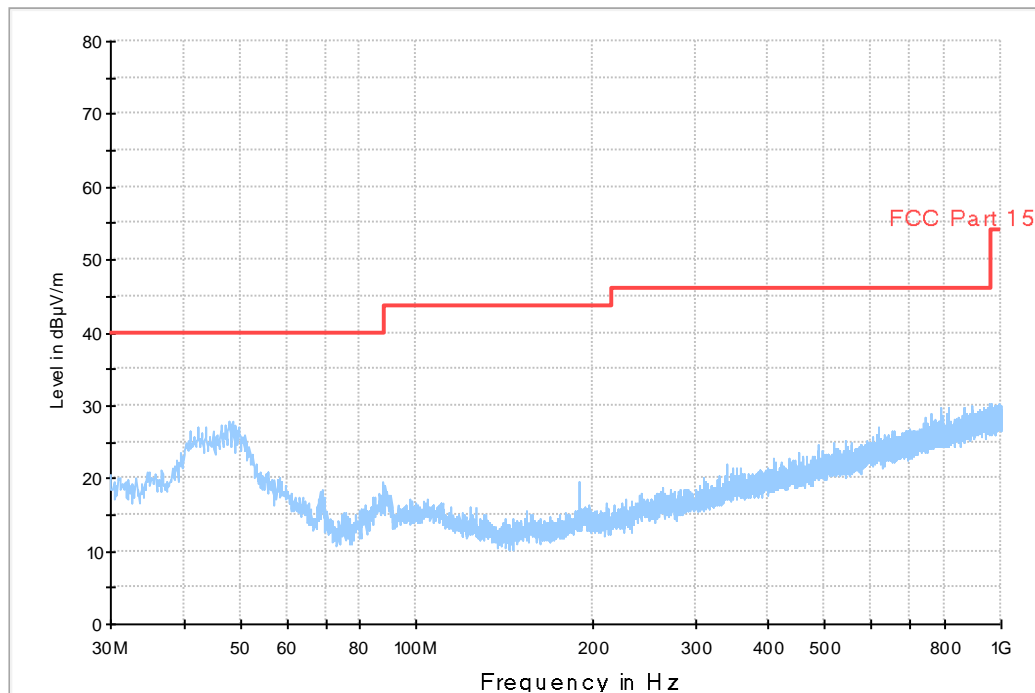
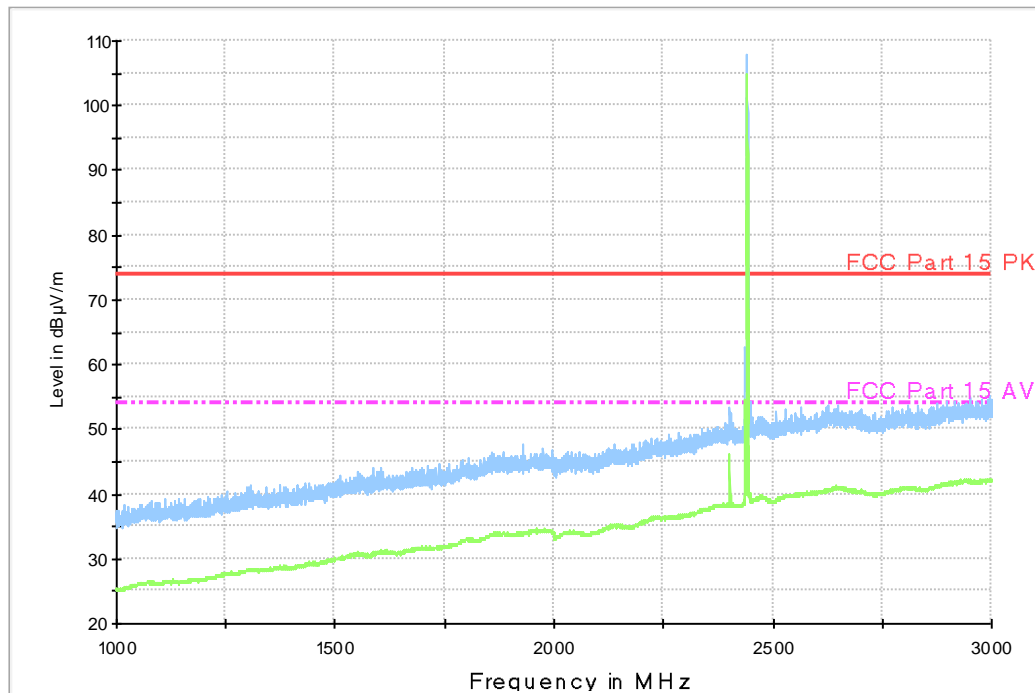


Fig.71. Radiated emission: $\pi/4$ DQPSK, Channel 39, 30 MHz - 1 GHz

RE - 1GHz-3GHz



Note: the spike over the limit is the Bluetooth carrier frequency and coming from the radio equipment.

Fig.72. Radiated emission: $\pi/4$ DQPSK, Channel 39, 1 GHz - 3 GHz

RE - 3GHz-18GHz

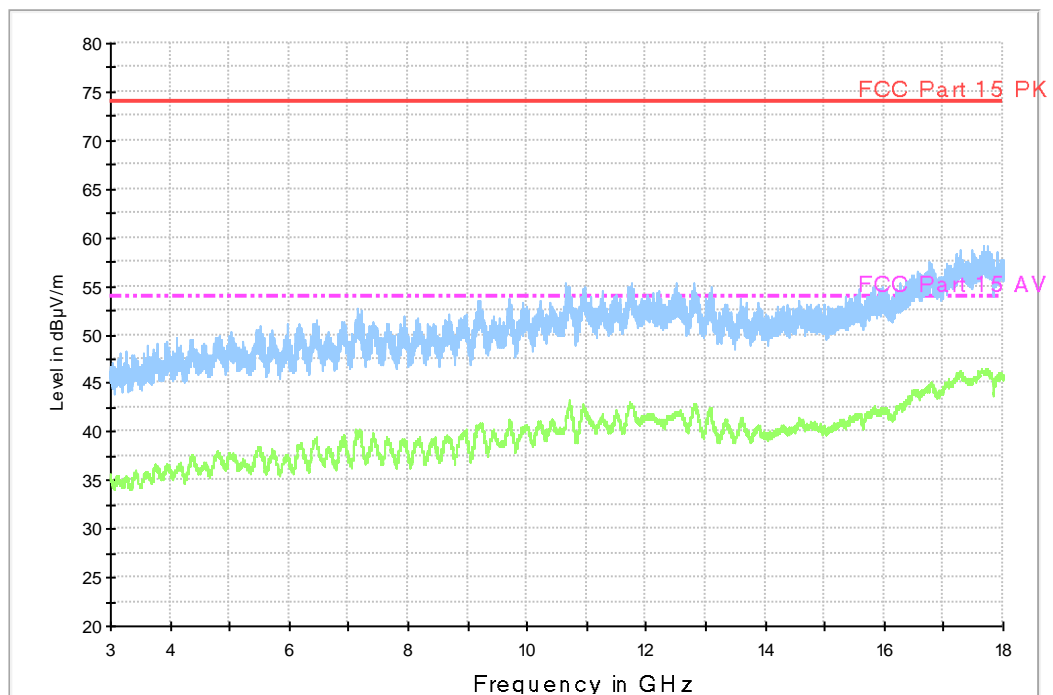
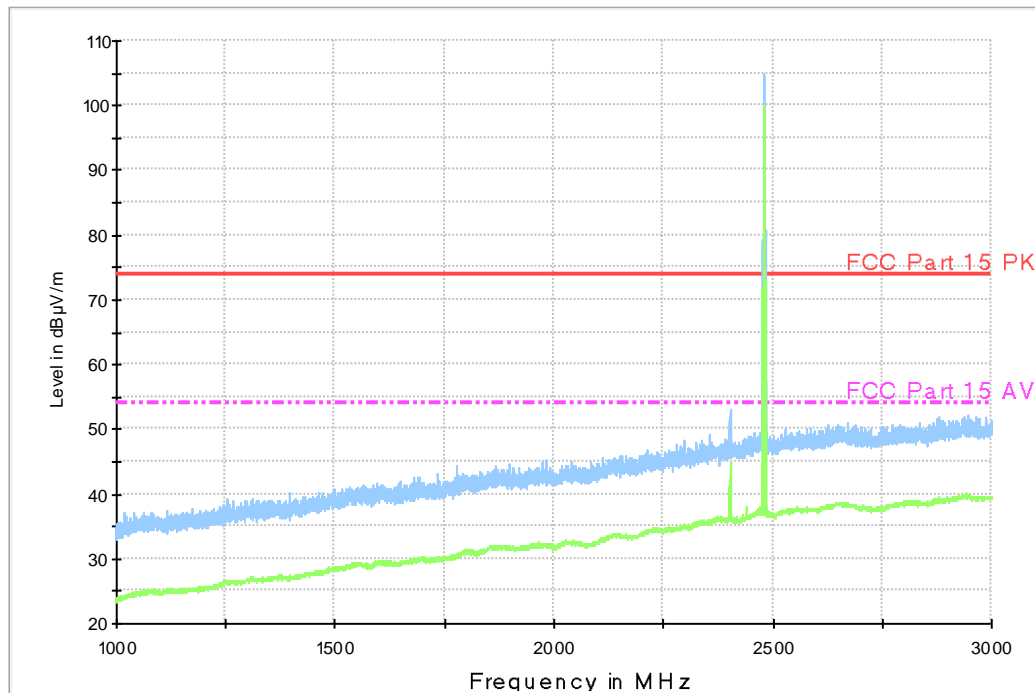


Fig.73. Radiated emission: $\pi/4$ DQPSK, Channel 39, 3 GHz - 18 GHz

RE - 1GHz-3GHz



Note: the spike over the limit is the Bluetooth carrier frequency and coming from the radio equipment.

Fig.74. Radiated emission: $\pi/4$ DQPSK, Channel 78, 1 GHz - 3 GHz

RE - 3GHz-18GHz

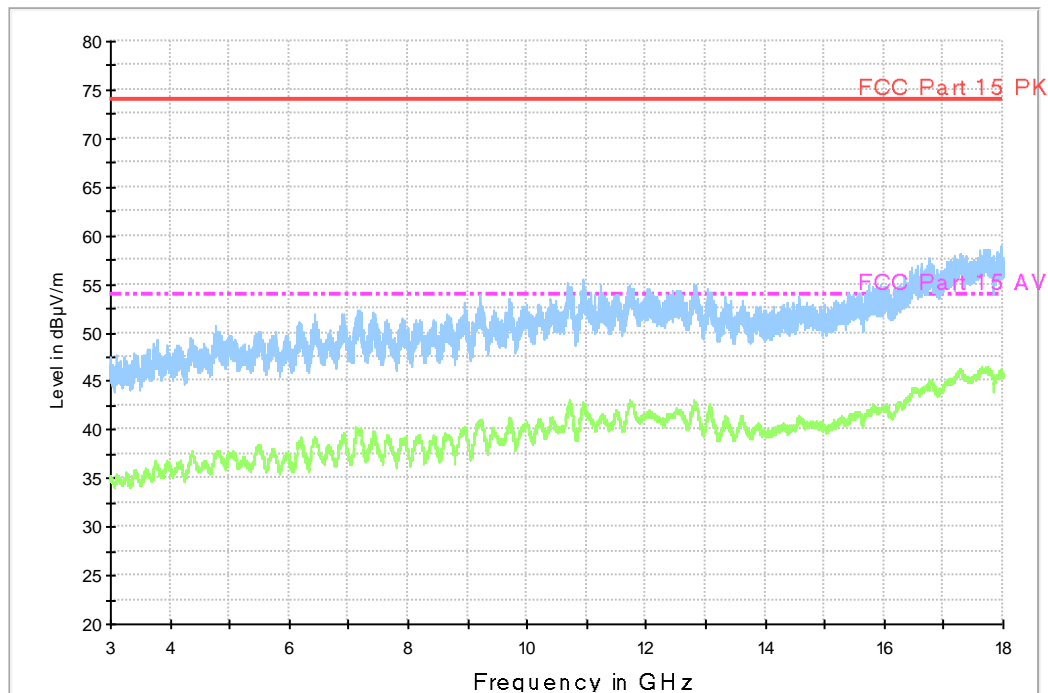


Fig.75. Radiated emission: $\pi/4$ DQPSK, Channel 78, 3 GHz - 18 GHz

RE - Power-2.38GHz-2.45GHz_ESCI3

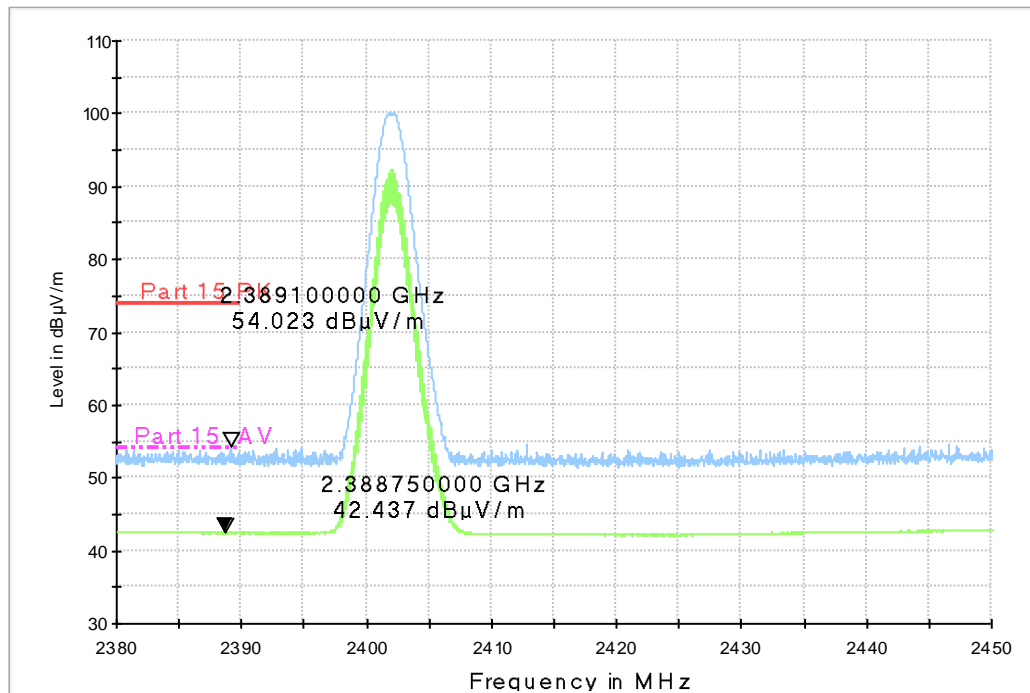


Fig.76. Radiated emission (Power): $\pi/4$ DQPSK, low channel

RE - Power-2.45GHz-2.5GHz_ESCI3

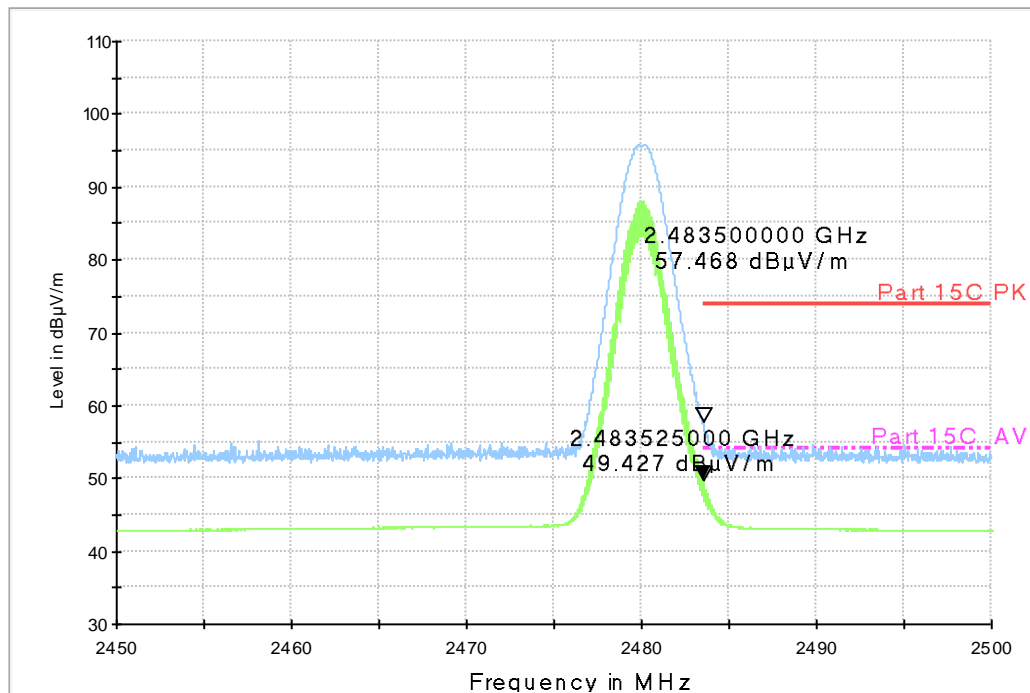


Fig.77. Radiated emission (Power): $\pi/4$ DQPSK, high channel

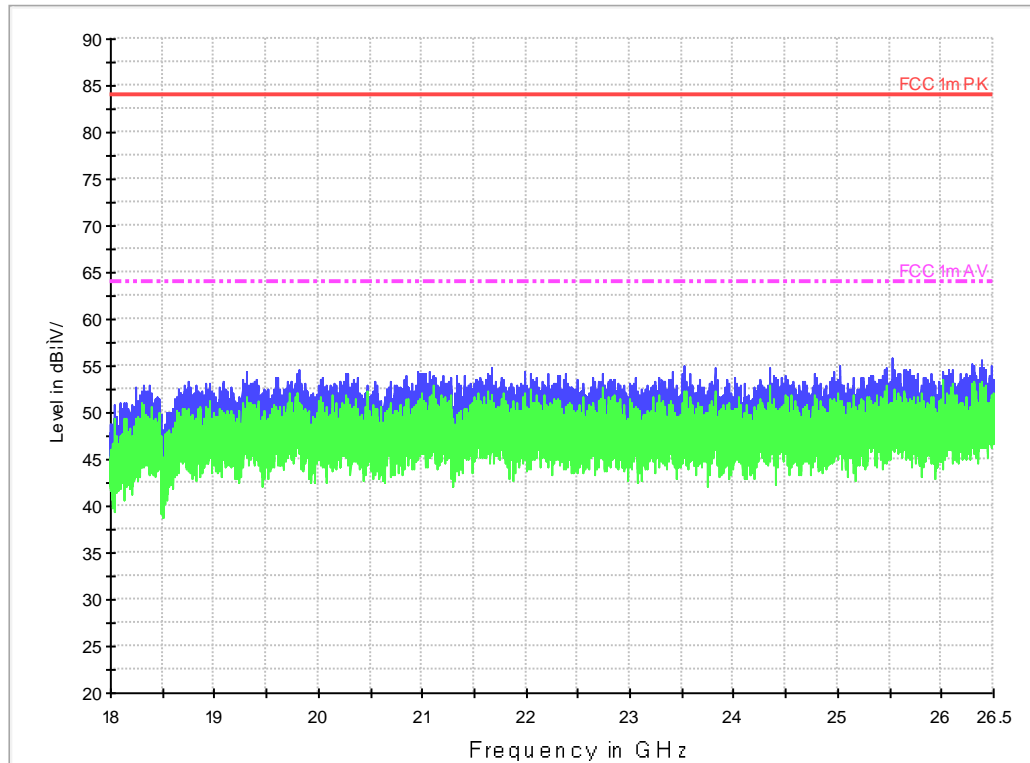
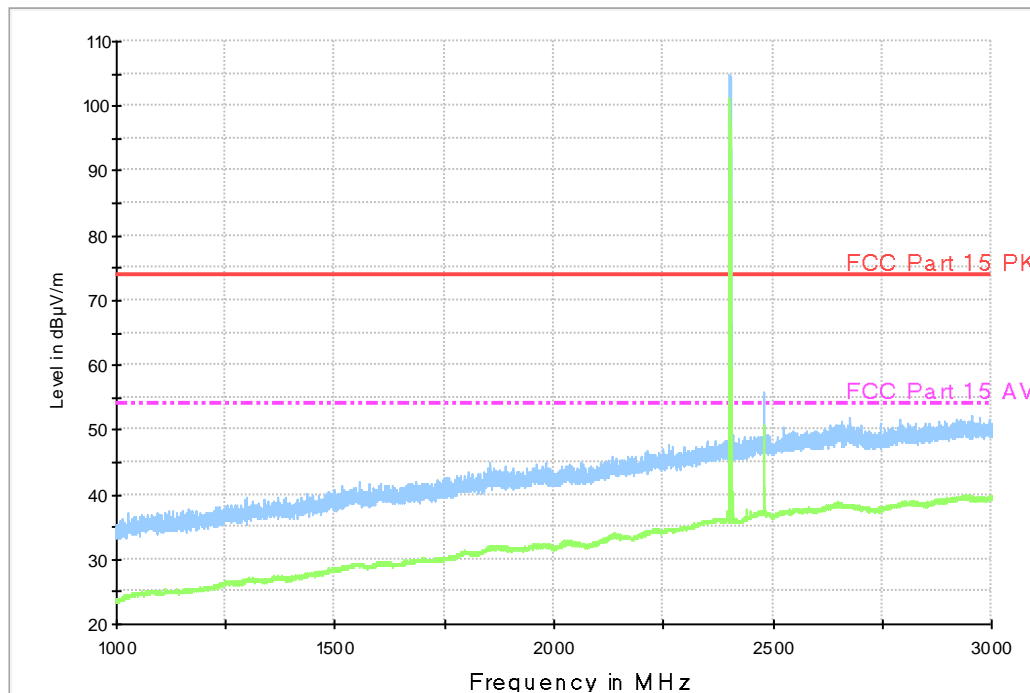


Fig.78. Radiated emission: $\pi/4$ DQPSK, 18 GHz - 26 GHz

RE - 1GHz-3GHz



Note: the spike over the limit is the Bluetooth carrier frequency and coming from the radio equipment.

Fig.79. Radiated emission: 8DPSK, Channel 0, 1 GHz - 3 GHz

RE - 3GHz-18GHz

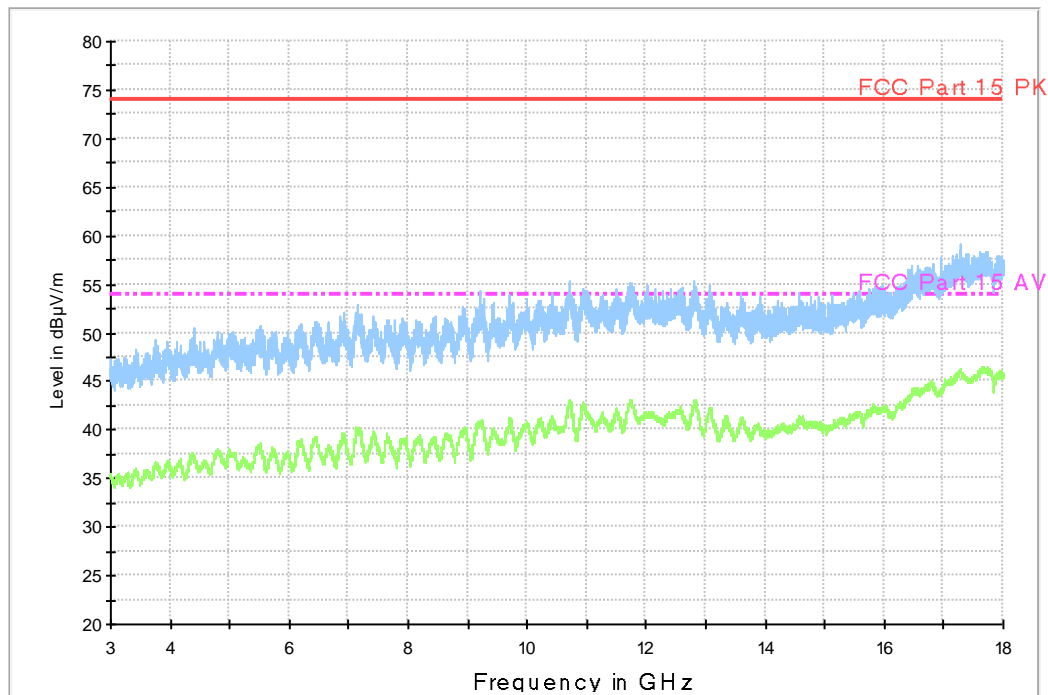


Fig.80. Radiated emission: 8DPSK, Channel 0, 3 GHz - 18 GHz

RE 30MHz-1GHz

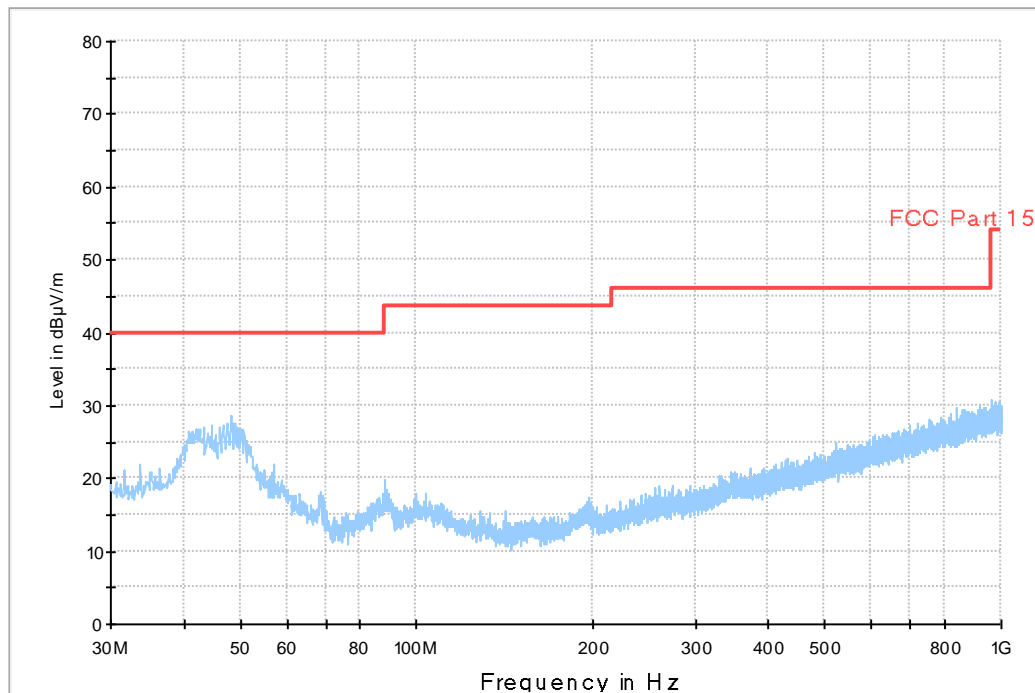
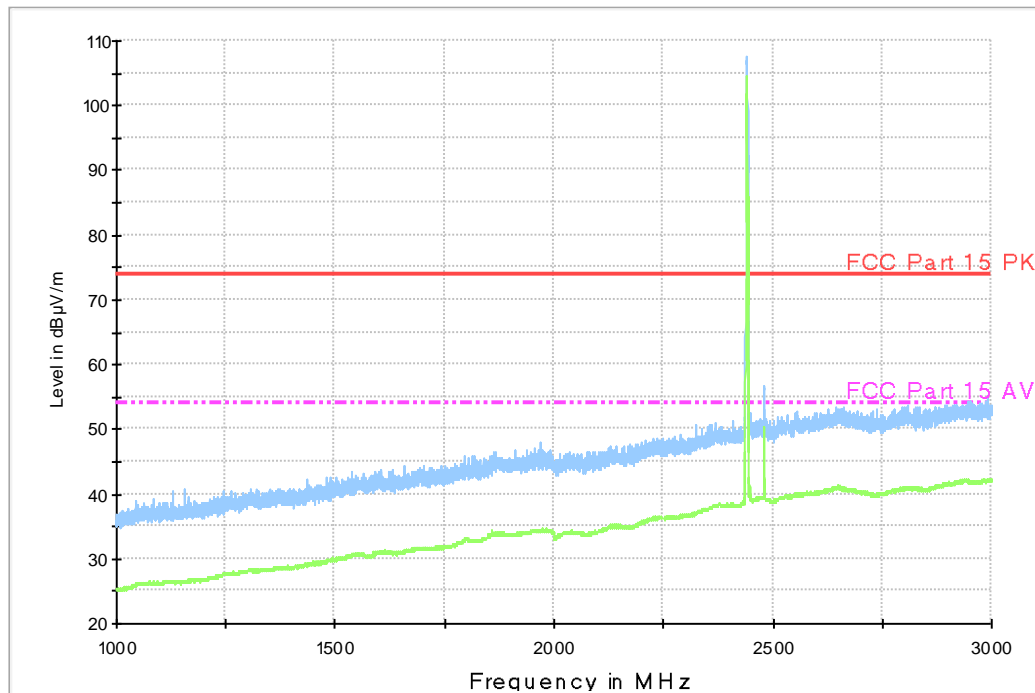


Fig.81. Radiated emission: 8DPSK, Channel 39, 30 MHz - 1 GHz

RE - 1GHz-3GHz



Note: the spike over the limit is the Bluetooth carrier frequency and coming from the radio equipment.

Fig.82. Radiated emission: 8DPSK, Channel 39, 1 GHz - 3 GHz

RE - 3GHz-18GHz

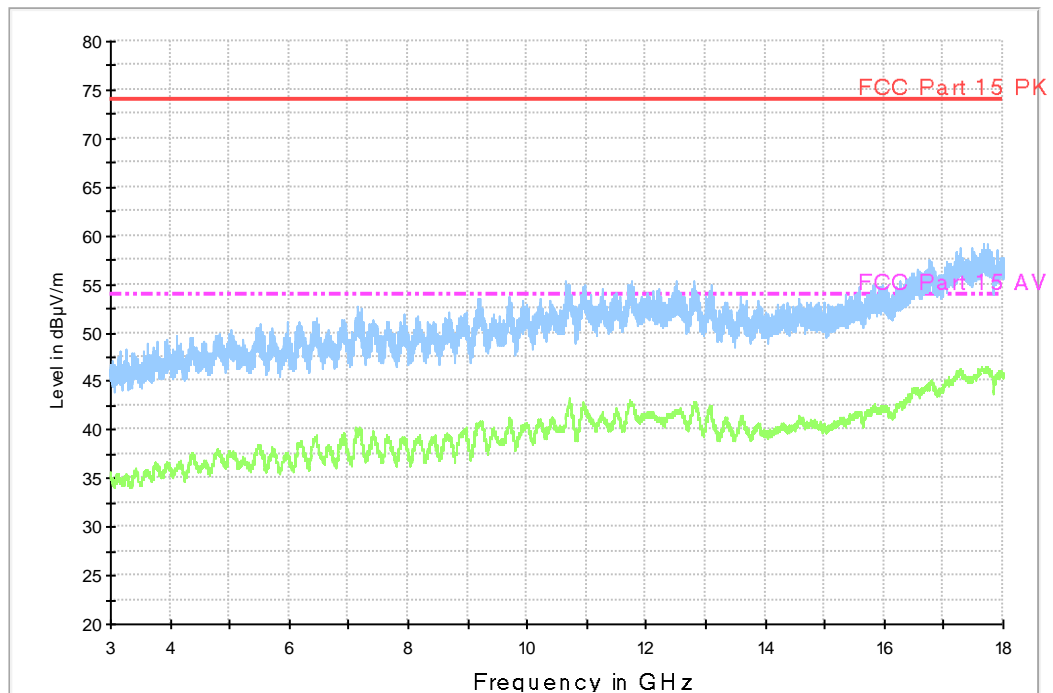
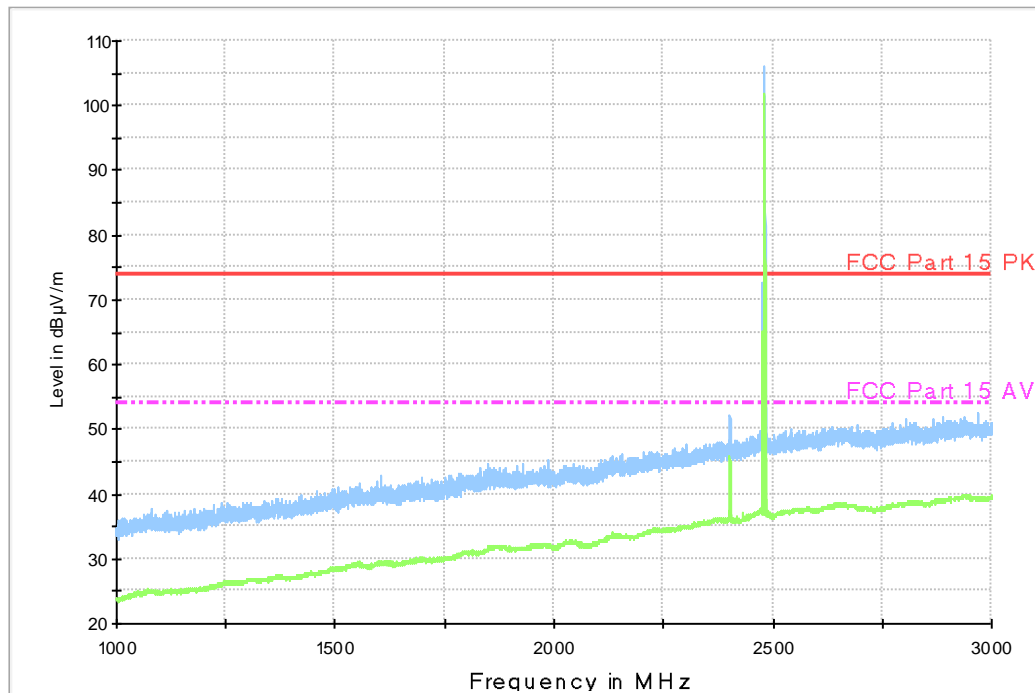


Fig.83. Radiated emission: 8DPSK, Channel 39, 3 GHz - 18 GHz

RE - 1GHz-3GHz



Note: the spike over the limit is the Bluetooth carrier frequency and coming from the radio equipment.

Fig.84. Radiated emission: 8DPSK, Channel 78, 1 GHz - 3 GHz

RE - 3GHz-18GHz

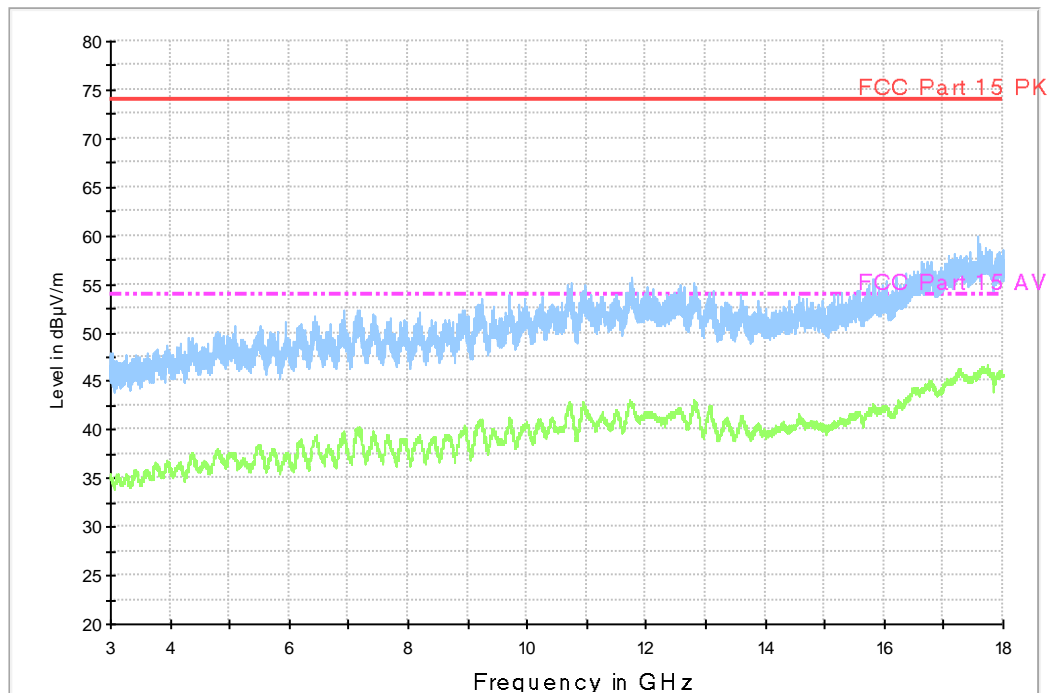


Fig.85. Radiated emission: 8DPSK, Channel 78, 3 GHz - 18 GHz

RE - Power-2.38GHz-2.45GHz_ESCI3

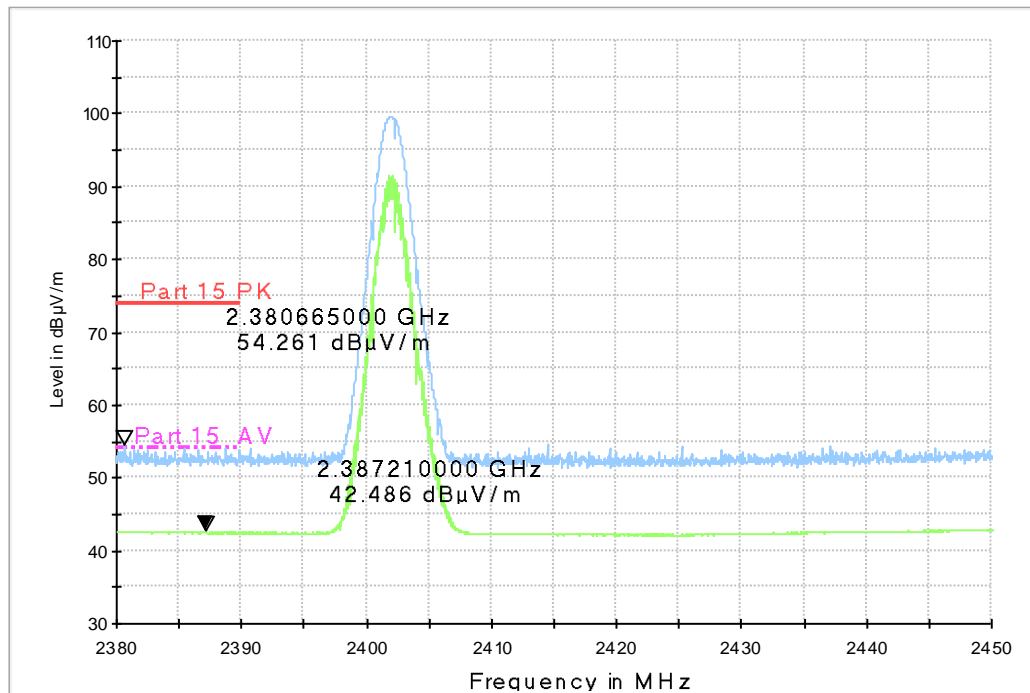


Fig.86. Radiated emission (Power): 8DPSK, low channel

RE - Power-2.45GHz-2.5GHz_ESCI3

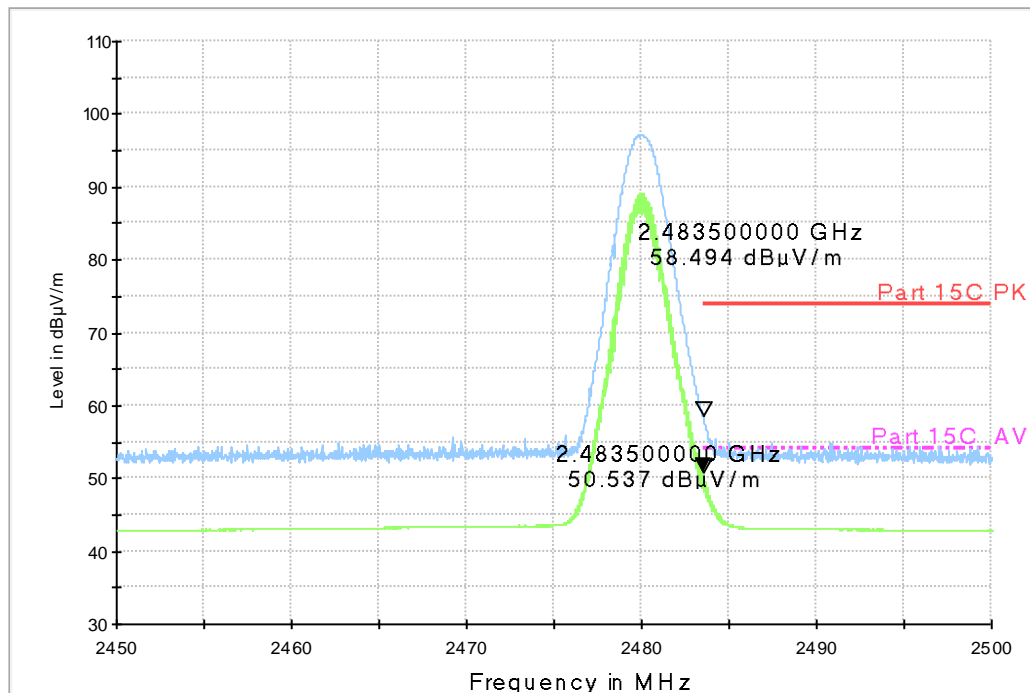


Fig.87. Radiated emission (Power): 8DPSK, high channel

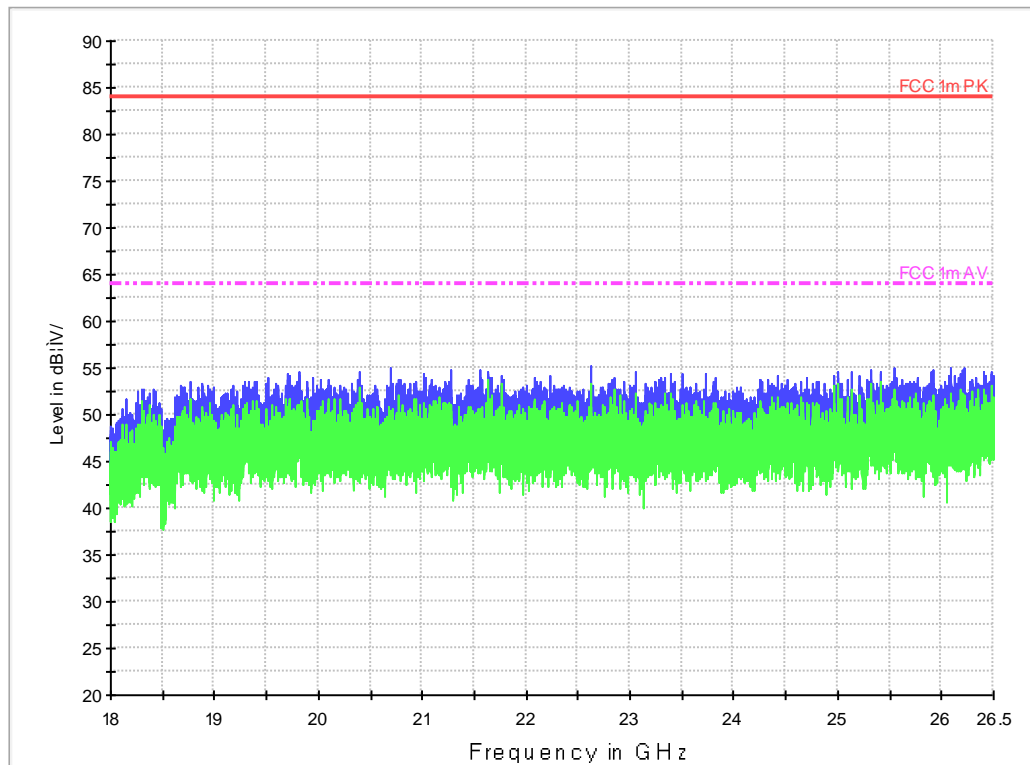


Fig.88. Radiated emission: 8DPSK, 18 GHz - 26 GHz

A.6. Time of Occupancy (Dwell Time)

Method of Measurement: See ANSI C63.10-clause 7.8.4

The EUT must have its hopping function enabled. Use the following spectrum analyzer settings:

- Span = zero span, centered on a hopping channel
- RBW = 1 MHz
- VBW \geq RBW
- Sweep = as necessary to capture the entire dwell time per hopping channel
- Detector function = peak
- Trace = max hold

Measure a pulse time in time domain at middle frequency and then count the hopping number in 31.6s(which equals with 0.4 multiply 79) of middle frequency ,then multiply the pulse time and hopping number and record them.

Measurement Limit:

Standard	Limit (ms)
FCC 47 CFR Part 15.247(a) (1)(iii)	< 400

Measurement Result:

For GFSK

Channel	Packet	Dwell Time (ms)		Conclusion
39	DH1	Fig.89	121.81	P
	DH3	Fig.90	261.89	P
	DH5	Fig.91	307.74	P

For $\pi/4$ DQPSK

Channel	Packet	Dwell Time (ms)		Conclusion
39	DH1	Fig.92	123.71	P
	DH3	Fig.93	262.18	P
	DH5	Fig.94	308.00	P

For 8DPSK

Channel	Packet	Dwell Time (ms)		Conclusion
39	DH1	Fig.95	123.60	P

	DH3	Fig.96	262.02	P
	DH5	Fig.97	306.50	P

Conclusion: PASS

Test graphs as below:

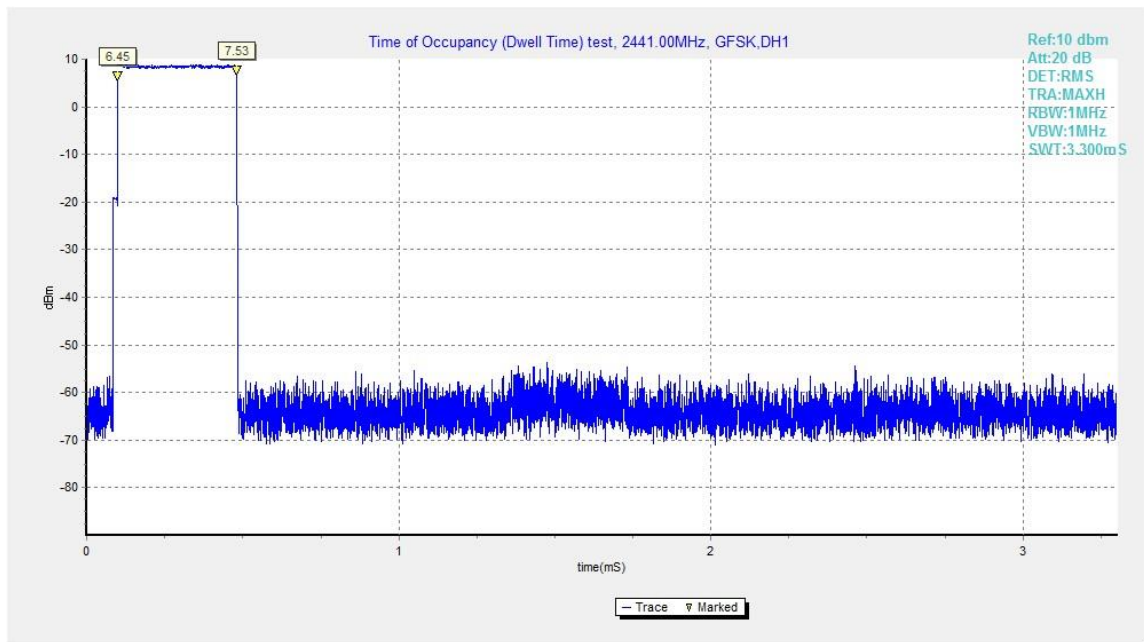


Fig.89. Time of occupancy (Dwell Time): Channel 39, Packet DH1

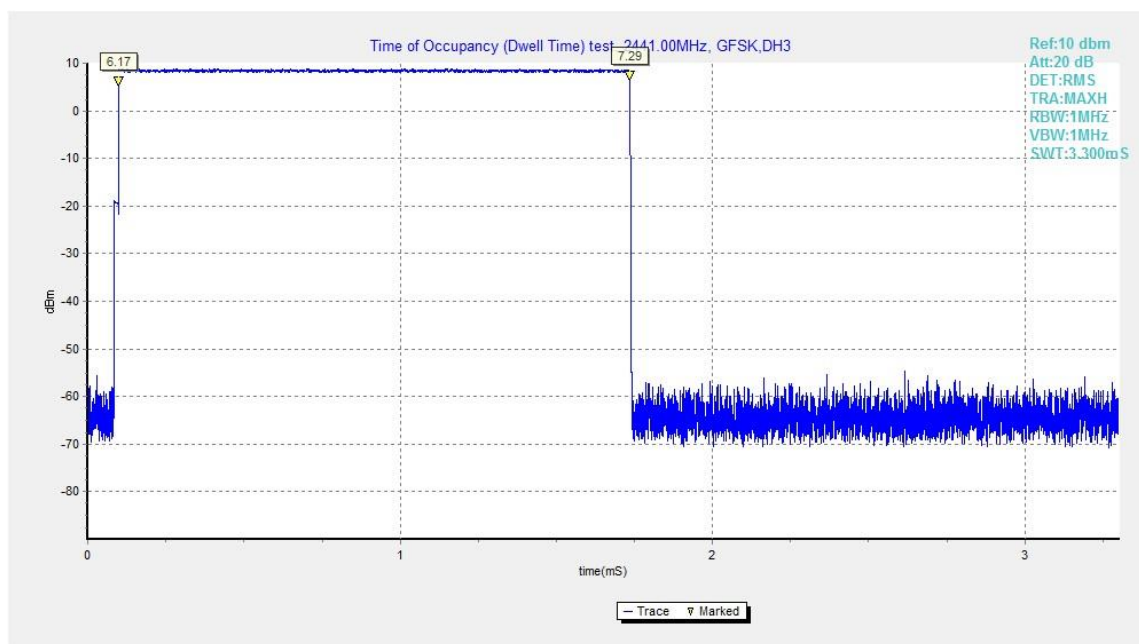


Fig.90. Time of occupancy (Dwell Time): Channel 39, Packet DH3

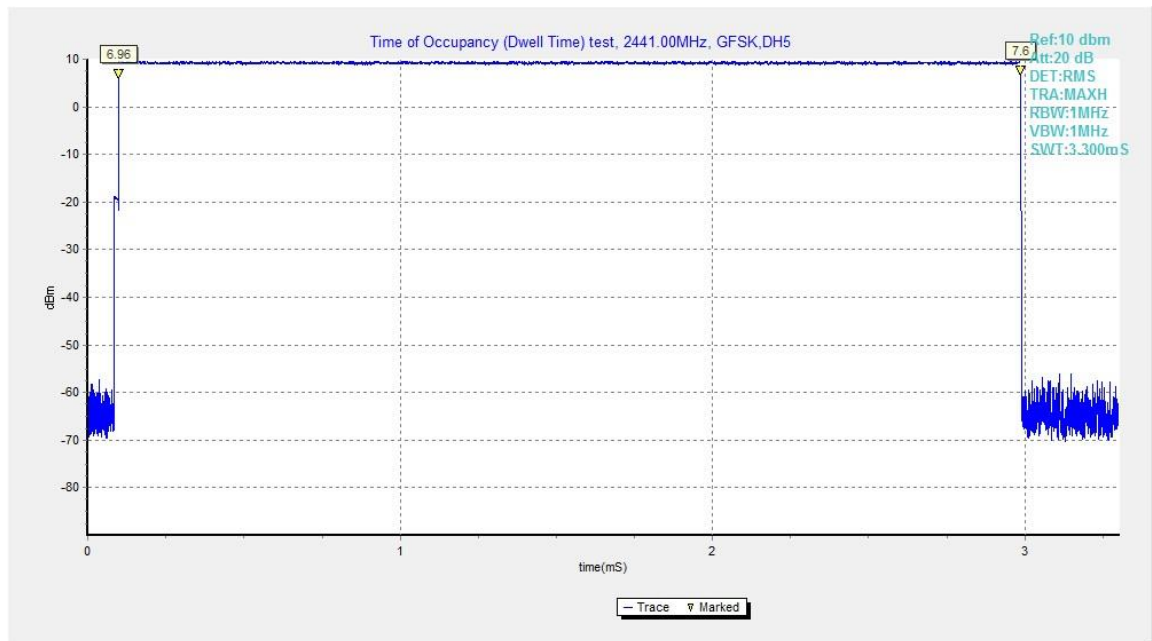


Fig.91. Time of occupancy (Dwell Time): Channel 39, Packet DH5

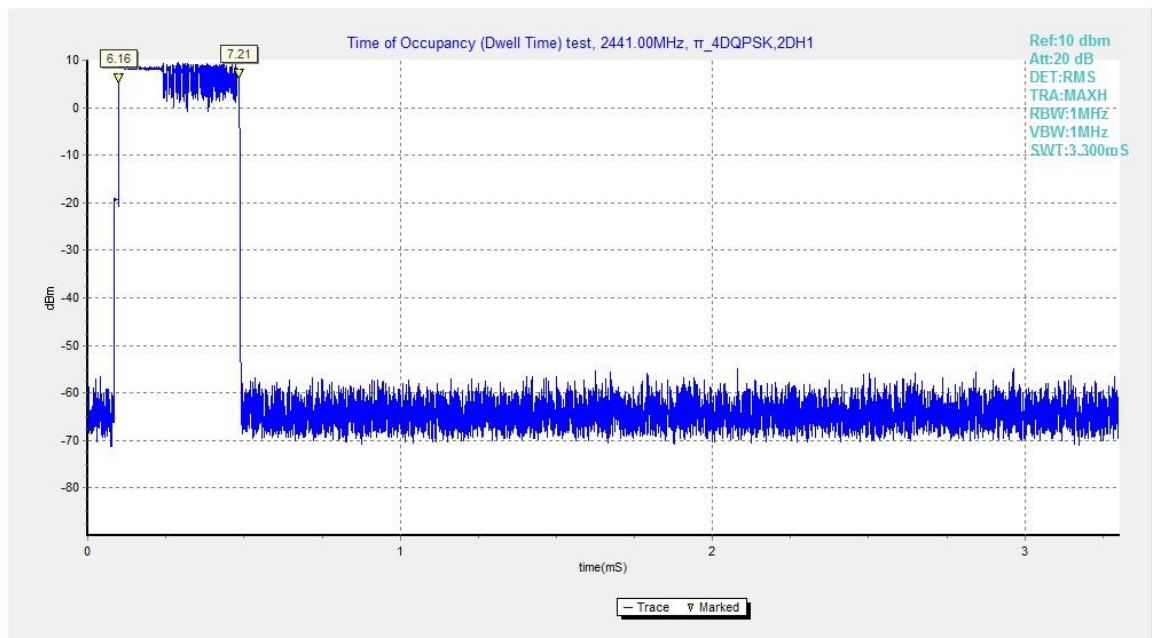


Fig.92. Time of occupancy (Dwell Time): Channel 39, Packet 2-DH1

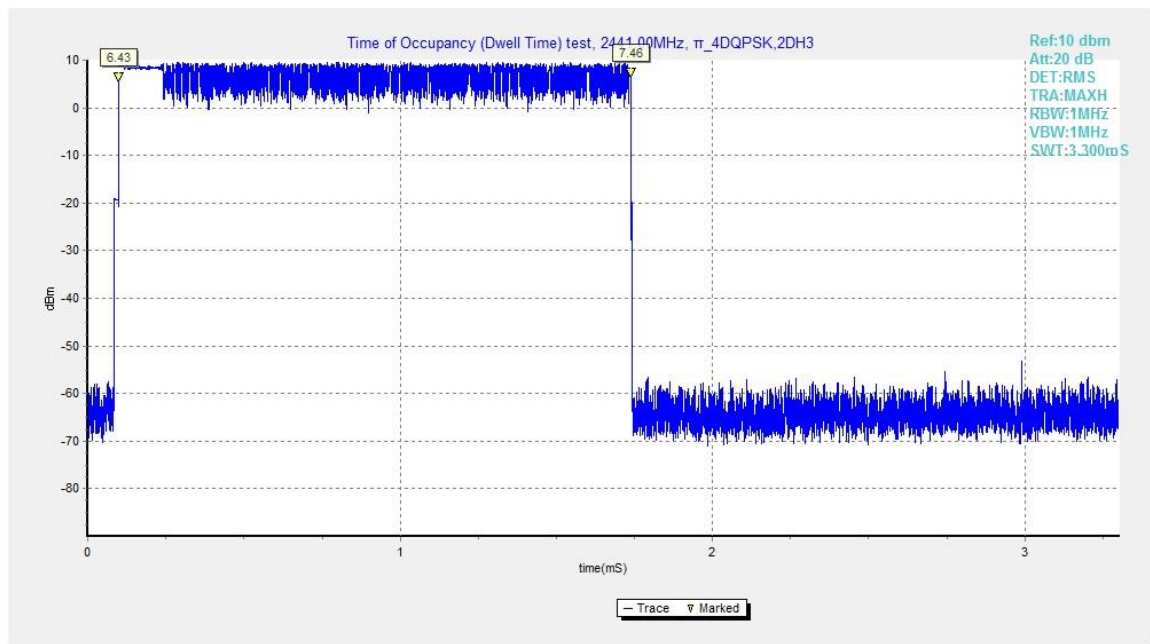


Fig.93. Time of occupancy (Dwell Time): Channel 39, Packet 2-DH3

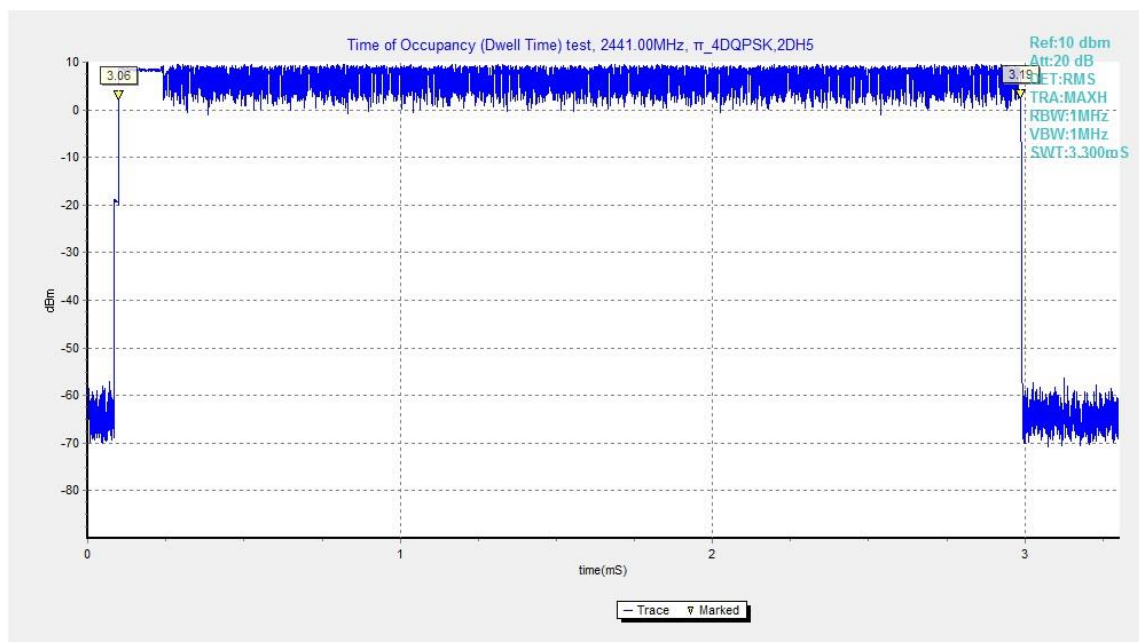


Fig.94. Time of occupancy (Dwell Time): Channel 39, Packet 2-DH5

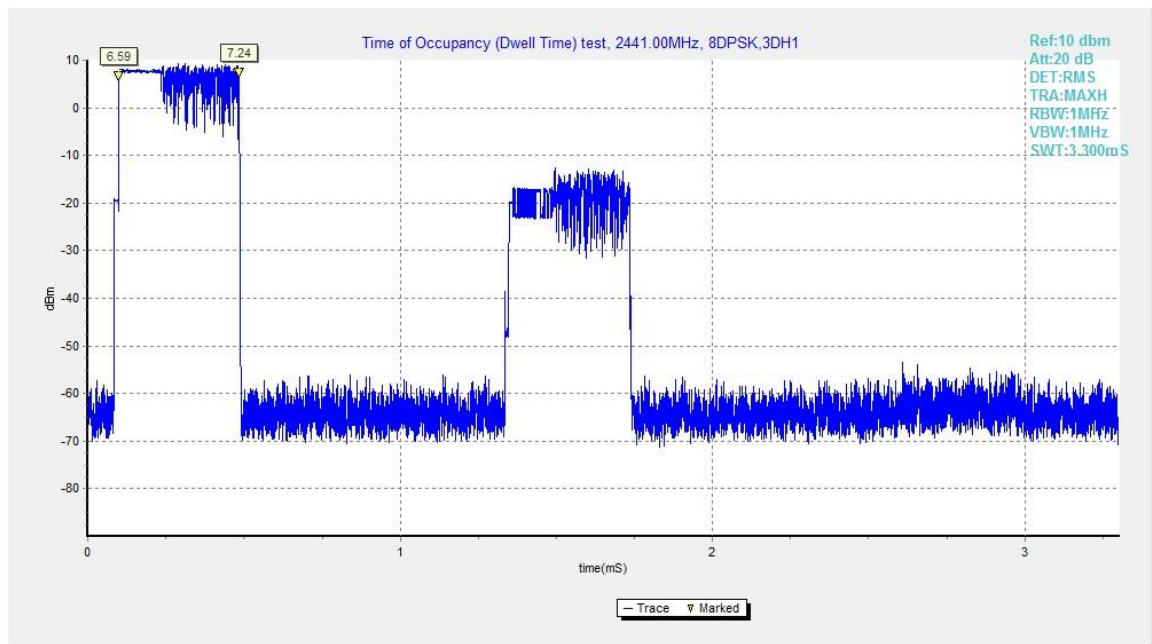


Fig.95. Time of occupancy (Dwell Time): Channel 39, Packet 3-DH1

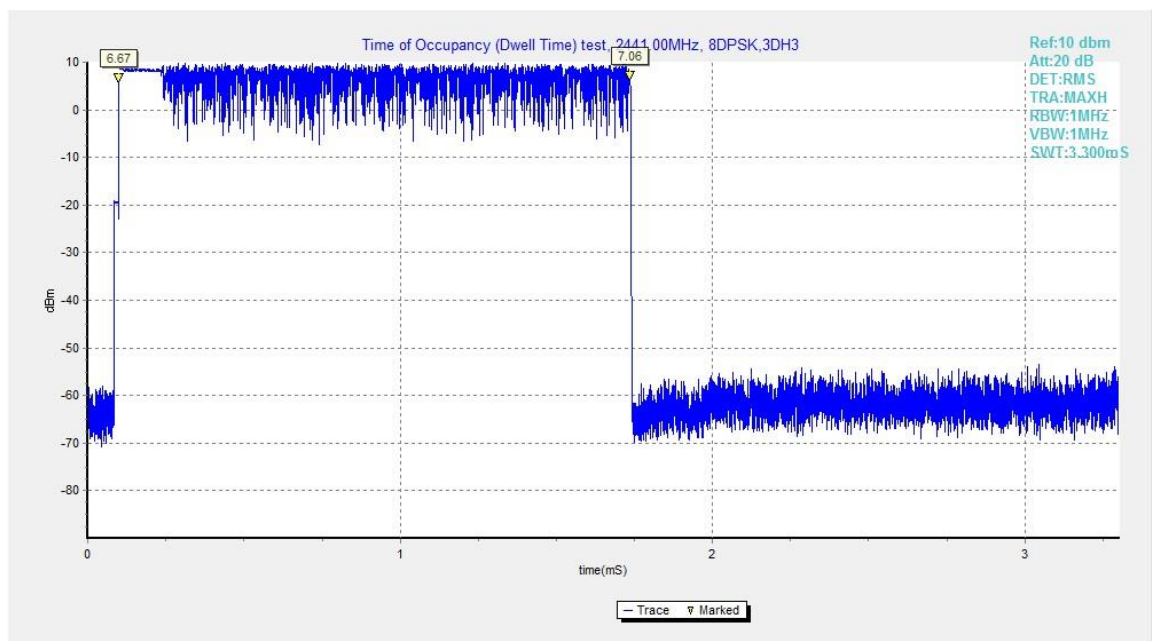


Fig.96. Time of occupancy (Dwell Time): Channel 39, Packet 3-DH3

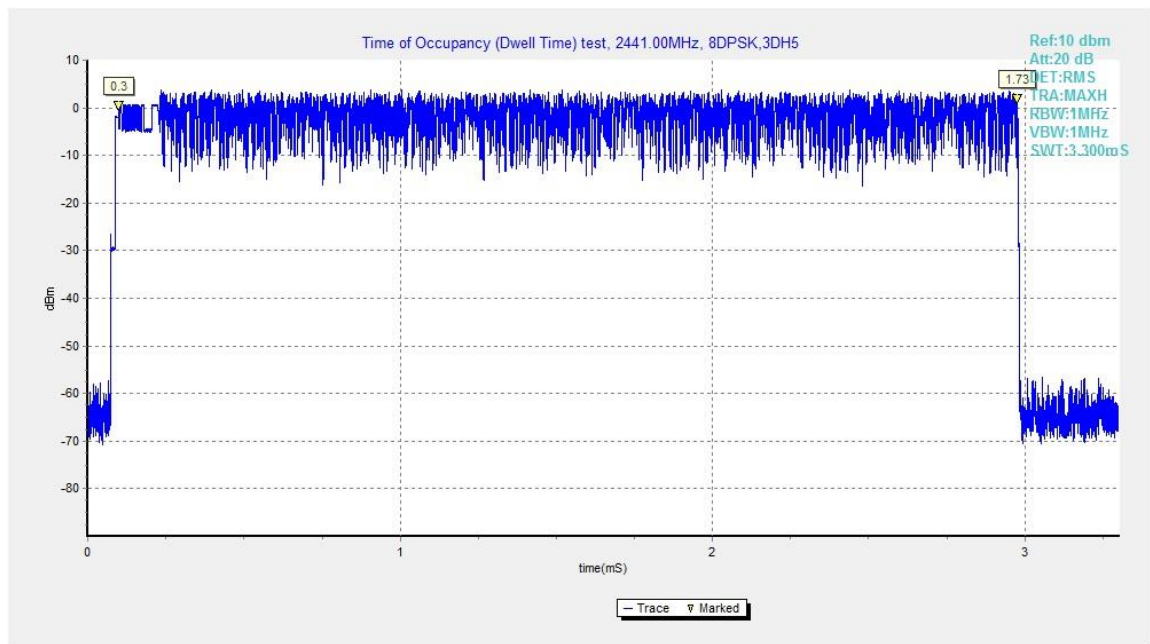


Fig.97. Time of occupancy (Dwell Time): Channel 39, Packet 3-DH5

A.7. 20dB Bandwidth

Method of Measurement: See ANSI C63.10-clause 6.9.2

Measurement Procedure - Unwanted Emissions

1. Set RBW = 30kHz.
2. Set VBW = 100 kHz.
3. Set span to 3MHz
4. Detector = peak.
5. Trace Mode = max hold.
6. Sweep = auto couple.
7. Allow the trace to stabilize (this may take some time, depending on the extent of the span).

Measurement Limit:

Standard	Limit
FCC 47 CFR Part 15.247(a)(1)	NA *

Use NdB Down function of the SA to measure the 20dB Bandwidth

* Comment: This test case is not required according to the latest FCC 47 CFR Part 15.247. But the test results are necessary for “carrier frequency separation” test case, in Annex A.8.

Measurement Results:

For GFSK

Channel	20dB Bandwidth (kHz)		Conclusion
0	Fig.98	938.00	NA
39	Fig.99	945.00	NA
78	Fig.100	941.00	NA

For $\pi/4$ DQPSK

Channel	20dB Bandwidth (kHz)		Conclusion
0	Fig.101	1317.00	NA
39	Fig.102	1277.00	NA
78	Fig.103	1308.00	NA

For 8DPSK

Channel	20dB Bandwidth (kHz)		Conclusion
0	Fig.104	1277.00	NA
39	Fig.105	1293.00	NA
78	Fig.106	1276.00	NA

Conclusion: NA

Test graphs as below:

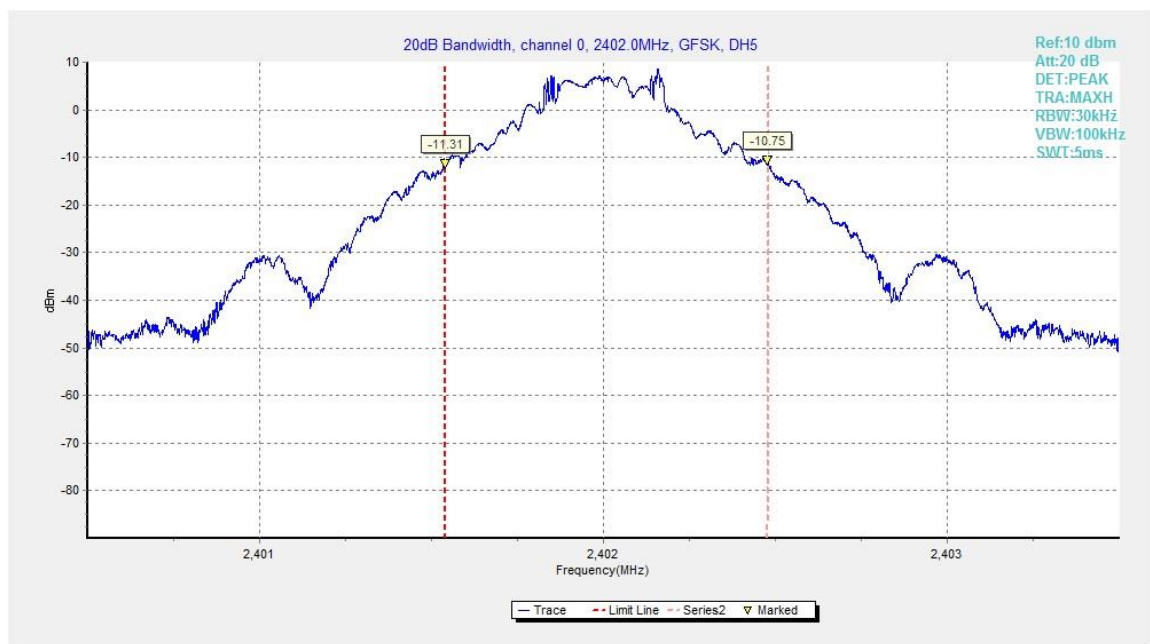


Fig.98. 20dB Bandwidth: GFSK, Channel 0

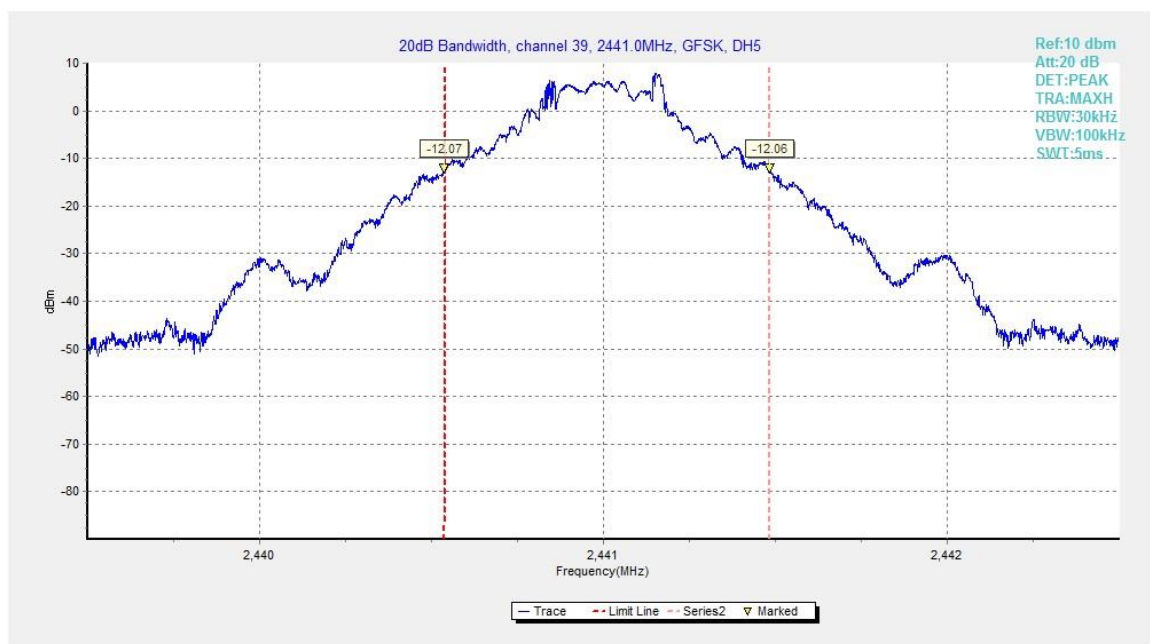


Fig.99. 20dB Bandwidth: GFSK, Channel 39

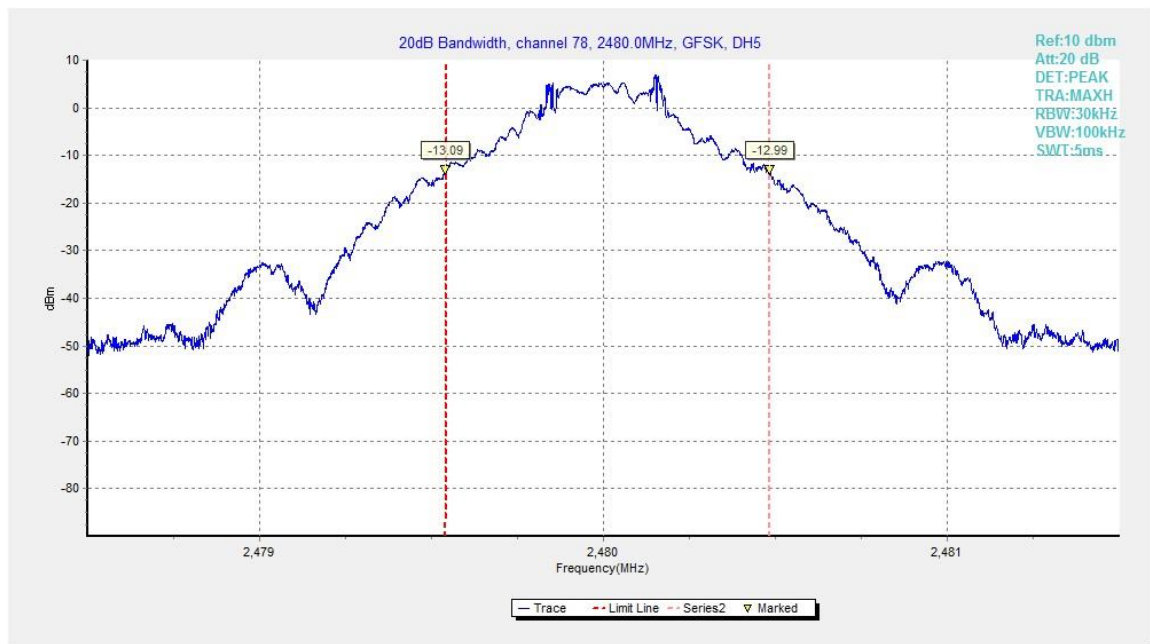


Fig.100. 20dB Bandwidth: GFSK, Channel 78

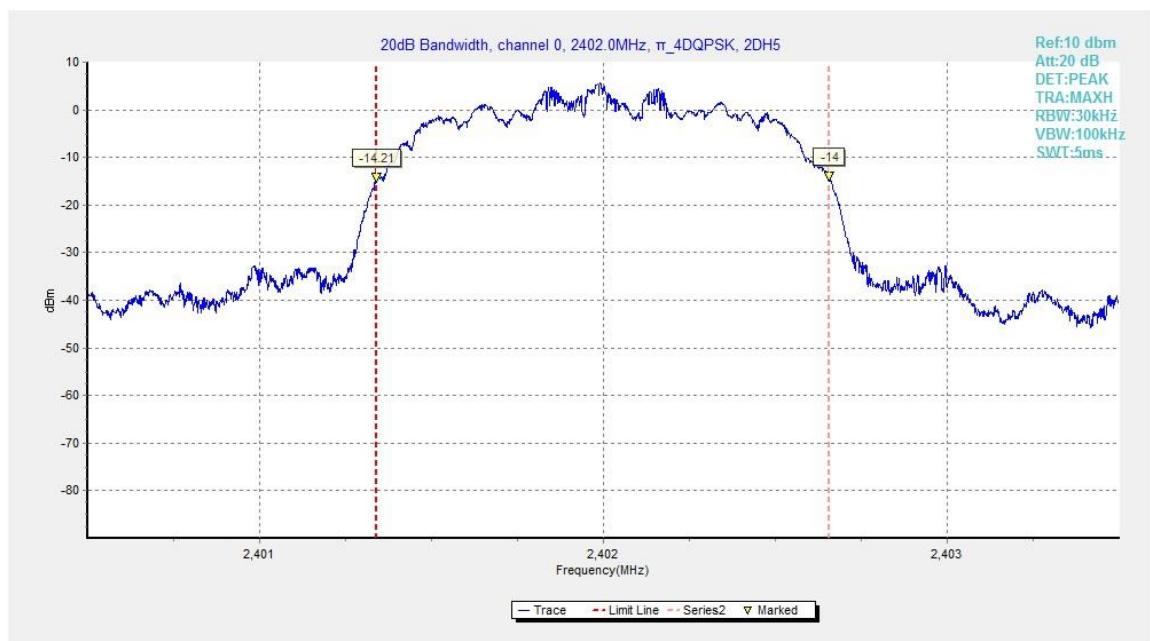


Fig.101. 20dB Bandwidth: $\pi/4$ DQPSK, Channel 0

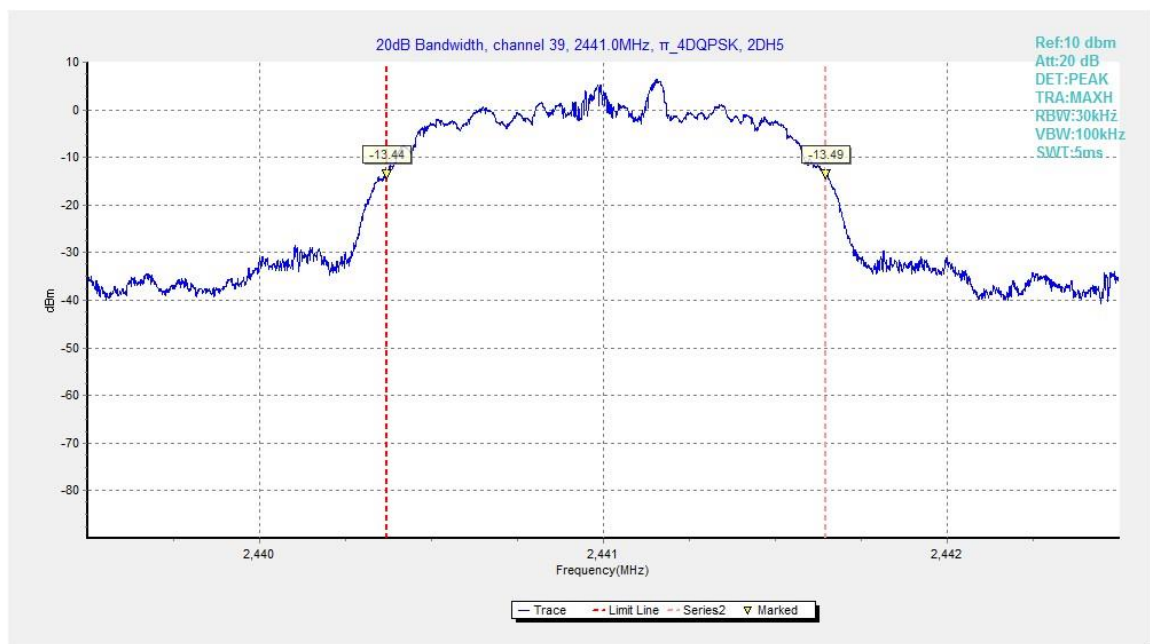


Fig.102. 20dB Bandwidth: $\pi/4$ DQPSK, Channel 39

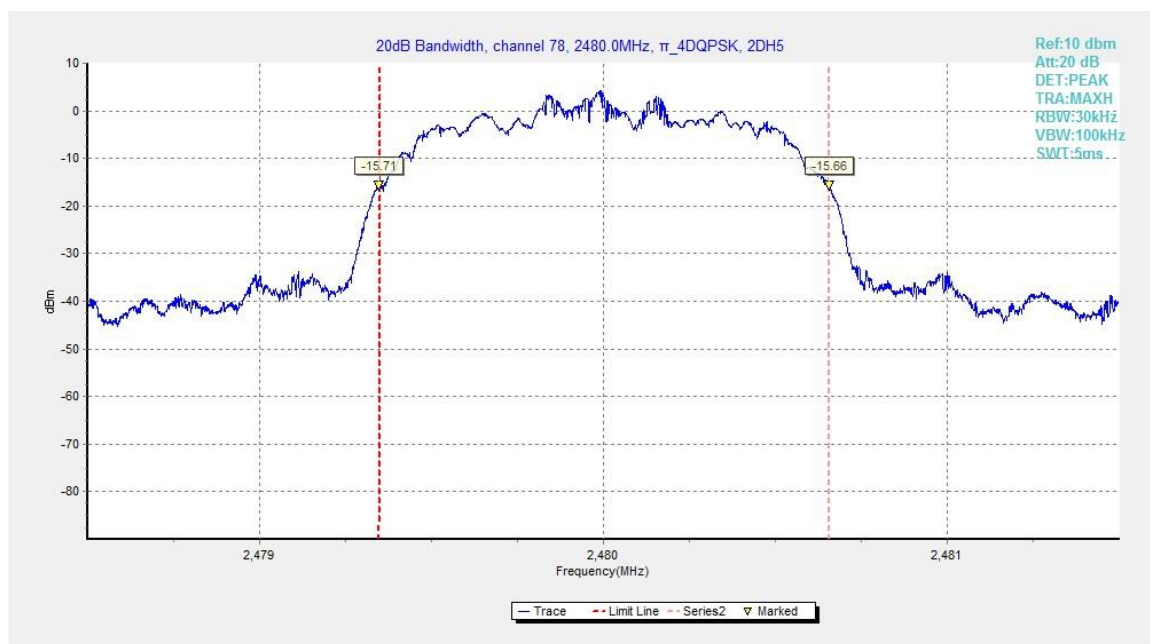


Fig.103. 20dB Bandwidth: $\pi/4$ DQPSK, Channel 78

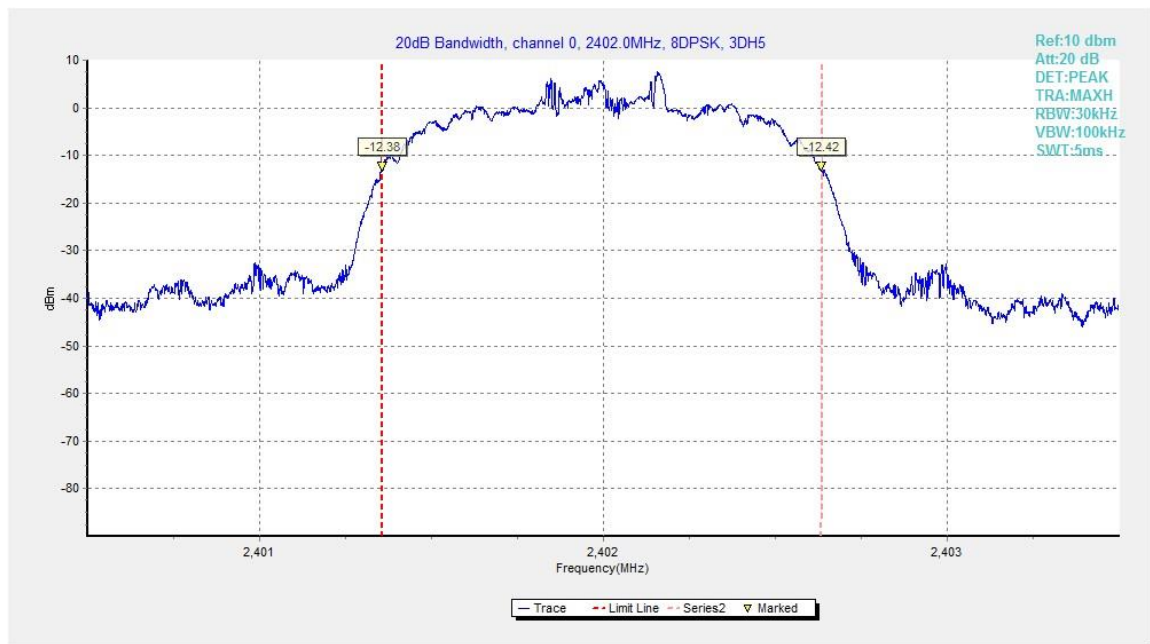


Fig.104. 20dB Bandwidth: 8DPSK, Channel 0

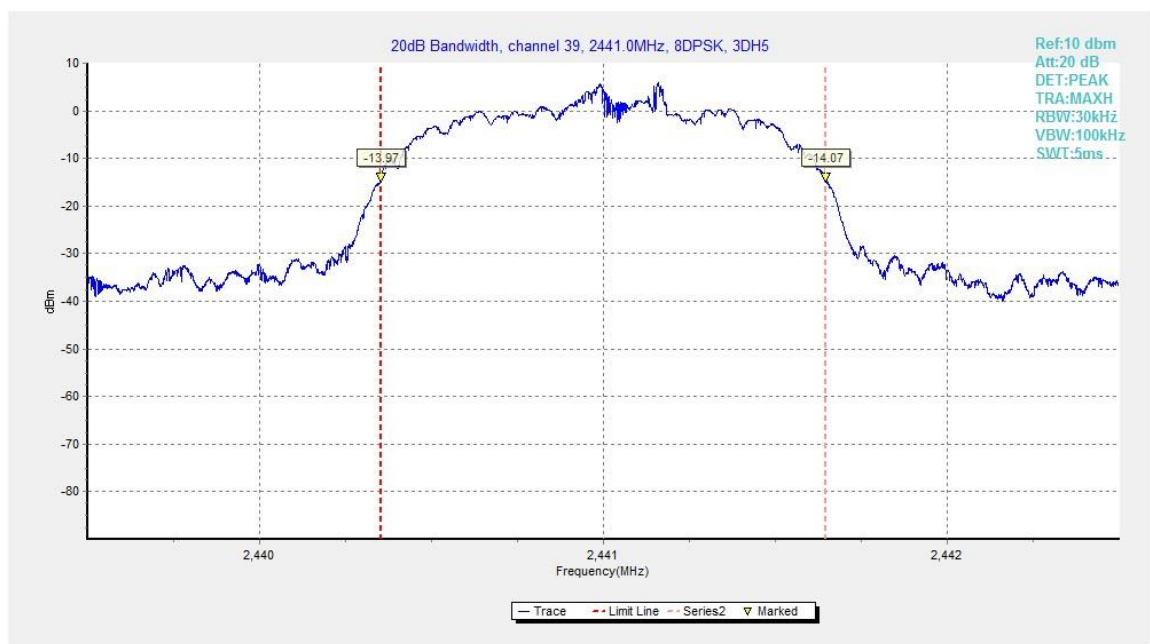


Fig.105. 20dB Bandwidth: 8DPSK, Channel 39

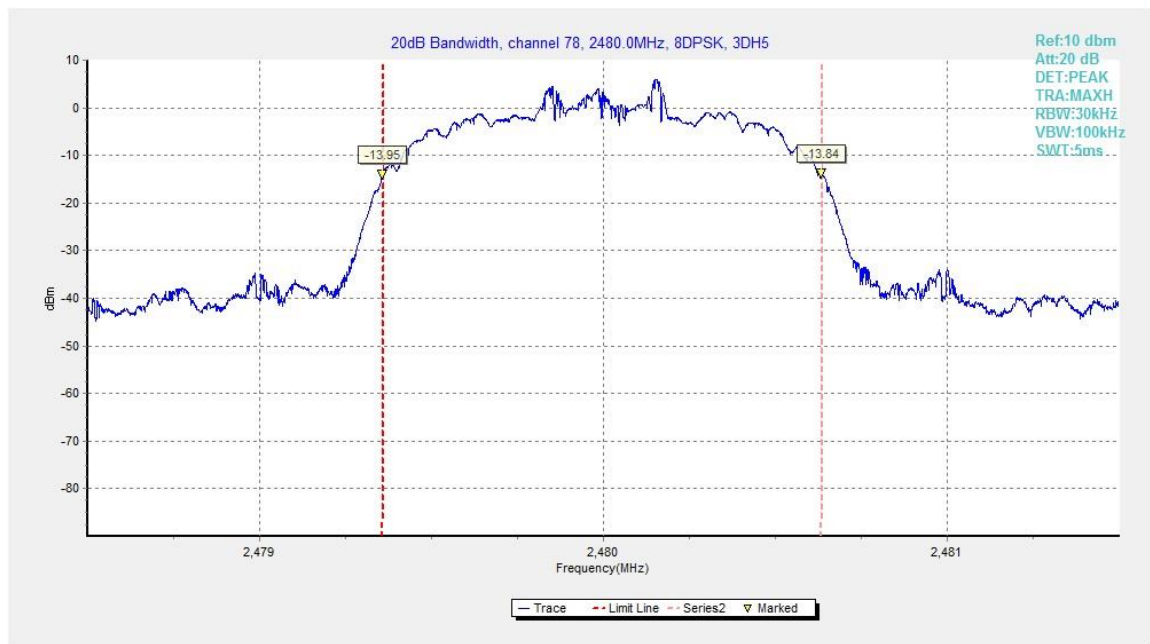


Fig.106. 20dB Bandwidth: 8DPSK, Channel 78

A.8. Carrier Frequency Separation

Method of Measurement: See ANSI C63.10-clause 7.8.2

The EUT must have its hopping function enabled. Use the following spectrum analyzer settings:

- Span = 3MHz
- RBW=300kHz
- VBW=300kHz
- Sweep = auto
- Detector function = peak
- Trace = max hold
- Allow the trace to stabilize

Search the peak marks of the middle frequency and adjacent channel, then record the separation between them.

* Comment: This limit should be over 25 kHz or $(2/3) * 20\text{dB}$ bandwidth, whichever is greater.

Measurement Limit:

Standard	Limit(kHz)
FCC 47 CFR Part 15.247(a)(1)	over 25 kHz or $(2/3) * 20\text{dB}$ bandwidth

Measurement Result:

For GFSK

Channel	Carrier frequency separation (kHz)		Conclusion
39	Fig.107	974.00	P

For $\pi/4$ DQPSK

Channel	Carrier frequency separation (kHz)		Conclusion
39	Fig.108	1166.00	P

For 8DPSK

Channel	Carrier frequency separation (kHz)		Conclusion
39	Fig.109	1126.00	P

Conclusion: PASS

Test graphs as below:

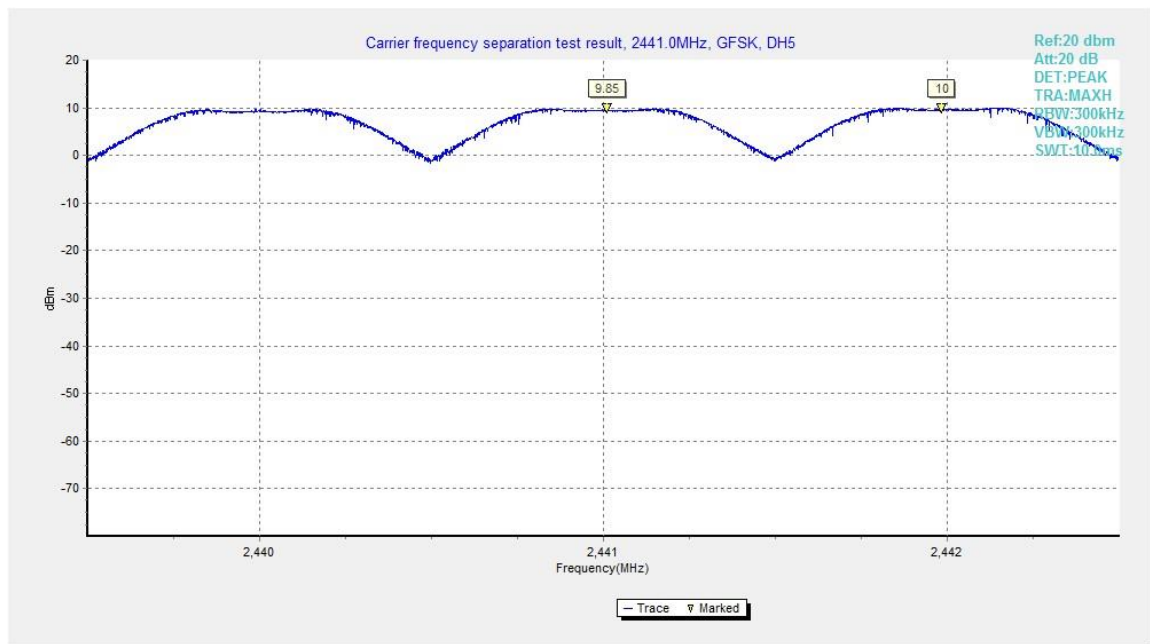


Fig.107. Carrier frequency separation measurement: GFSK, Channel 39

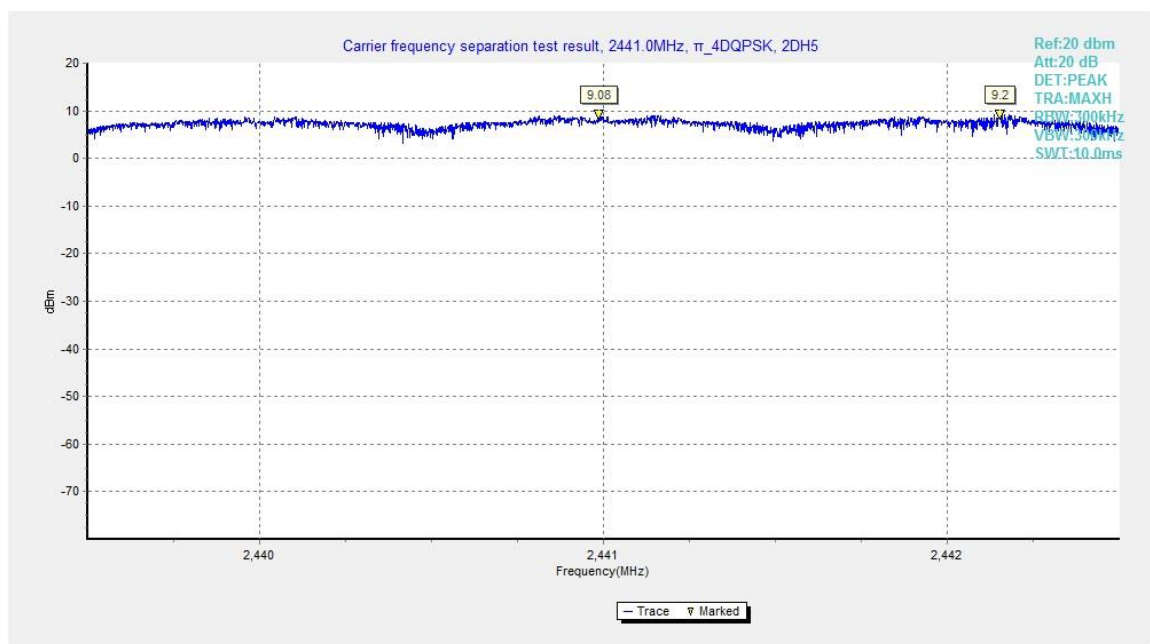


Fig.108. Carrier frequency separation measurement: $\pi/4$ DQPSK, Channel 39

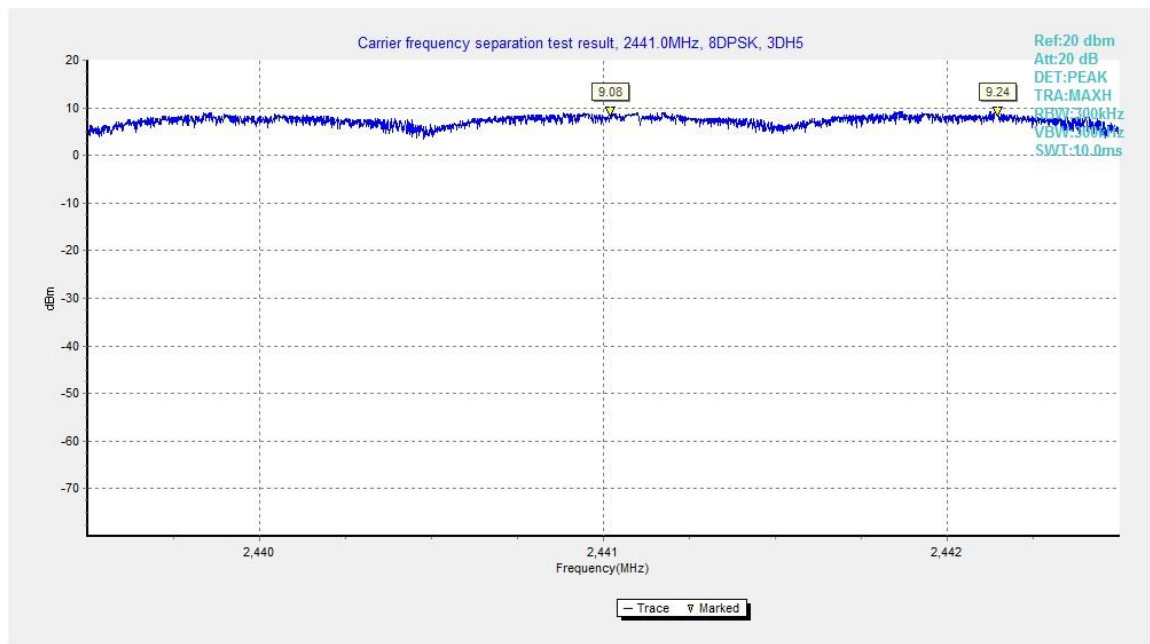


Fig.109. Carrier frequency separation measurement: 8DPSK, Channel 39

A.9. Number of Hopping Channels

Method of Measurement: See ANSI C63.10-clause 7.8.3

The EUT must have its hopping function enabled. Use the following spectrum analyzer settings:

- Span = the frequency band of operation
- RBW = 500kHz
- VBW = 500kHz
- Sweep = auto
- Detector function = peak
- Trace = max hold
- Allow the trace to stabilize

It might prove necessary to break the span up into subranges to show clearly all of the hopping frequencies. Compliance of an EUT with the appropriate regulatory limit shall be determined for the number of hopping channels. A plot of the data shall be included in the test report.

Measurement Limit:

Standard	Limit
FCC 47 CFR Part 15.247(a) (1)(iii)	At least 15 non-overlapping channels

Measurement Result:

For GFSK

Channel	Number of hopping channels		Conclusion
0~39	Fig.110	79	P
40~78	Fig.111		

For $\pi/4$ DQPSK

Channel	Number of hopping channels		Conclusion
0~39	Fig.112	79	P
40~78	Fig.113		

For 8DPSK

Channel	Number of hopping channels		Conclusion
0~39	Fig.114	79	P
40~78	Fig.115		

Conclusion: PASS

Test graphs as below:

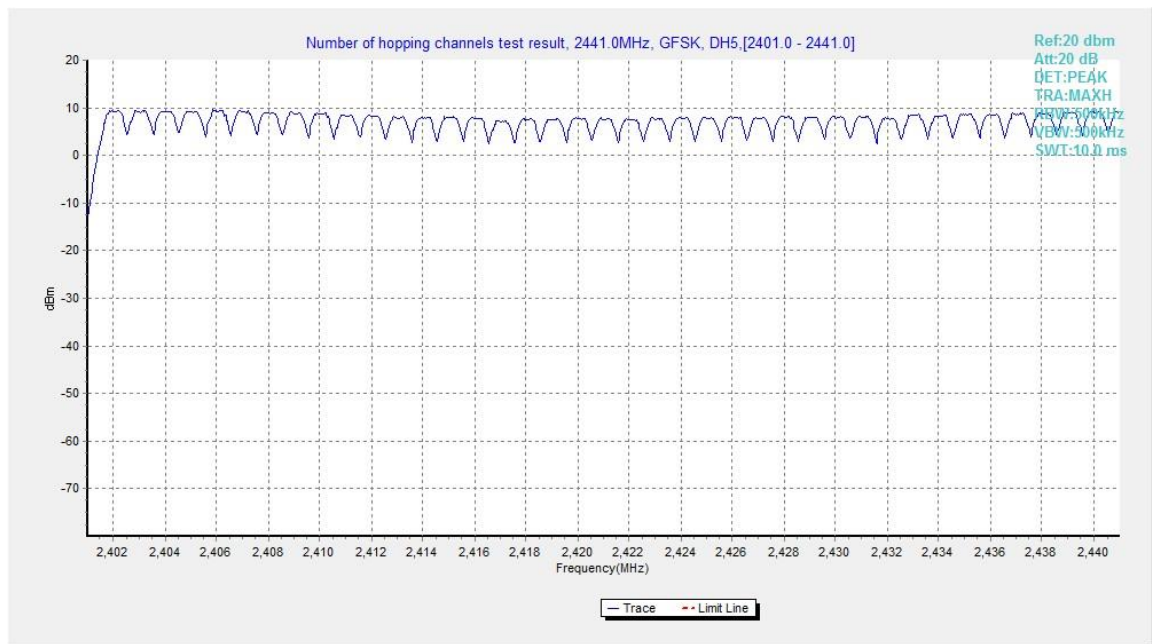


Fig.110. Number of hopping frequencies: GFSK, Channel 0 - 39

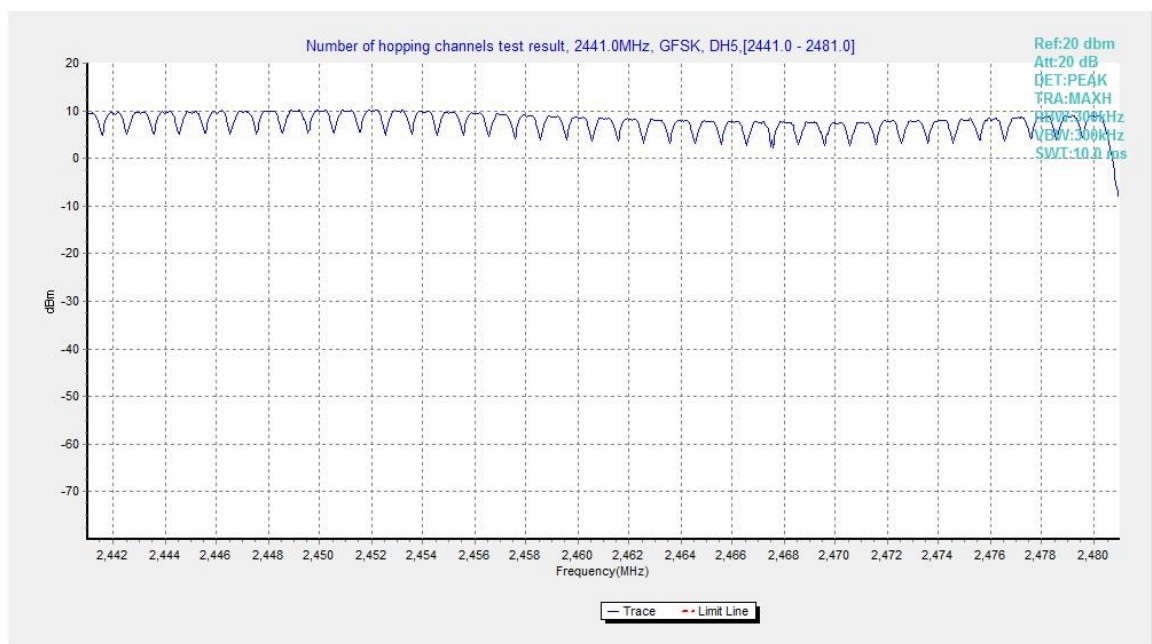


Fig.111. Number of hopping frequencies: GFSK, Channel 40 - 78

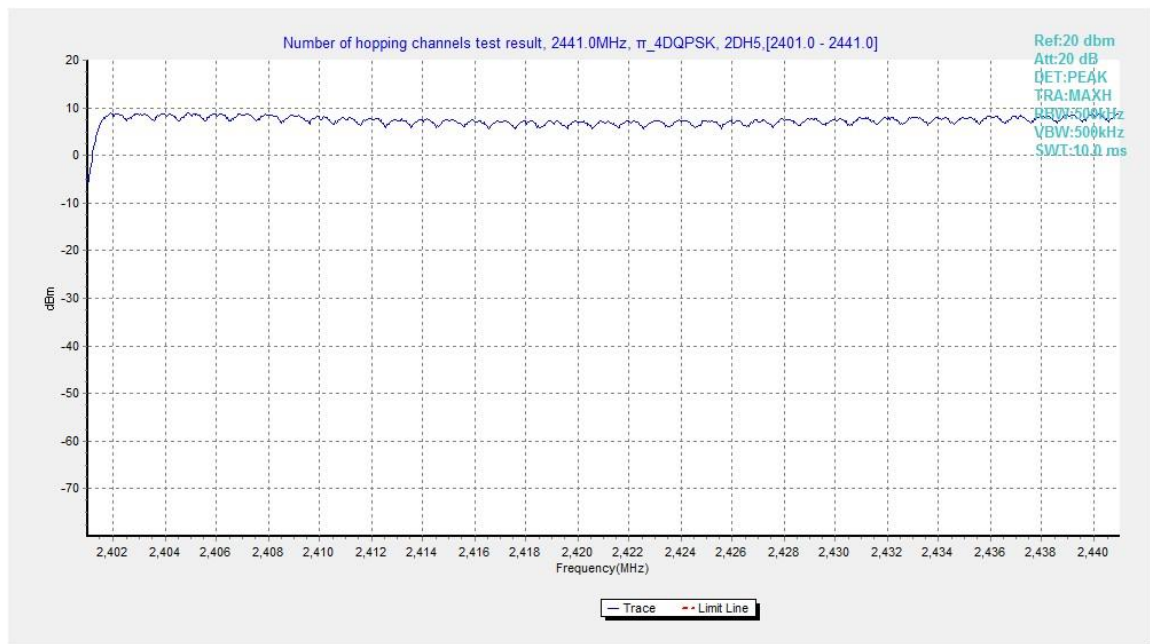


Fig.112. Number of hopping frequencies: $\pi/4$ DQPSK, Channel 0 - 39

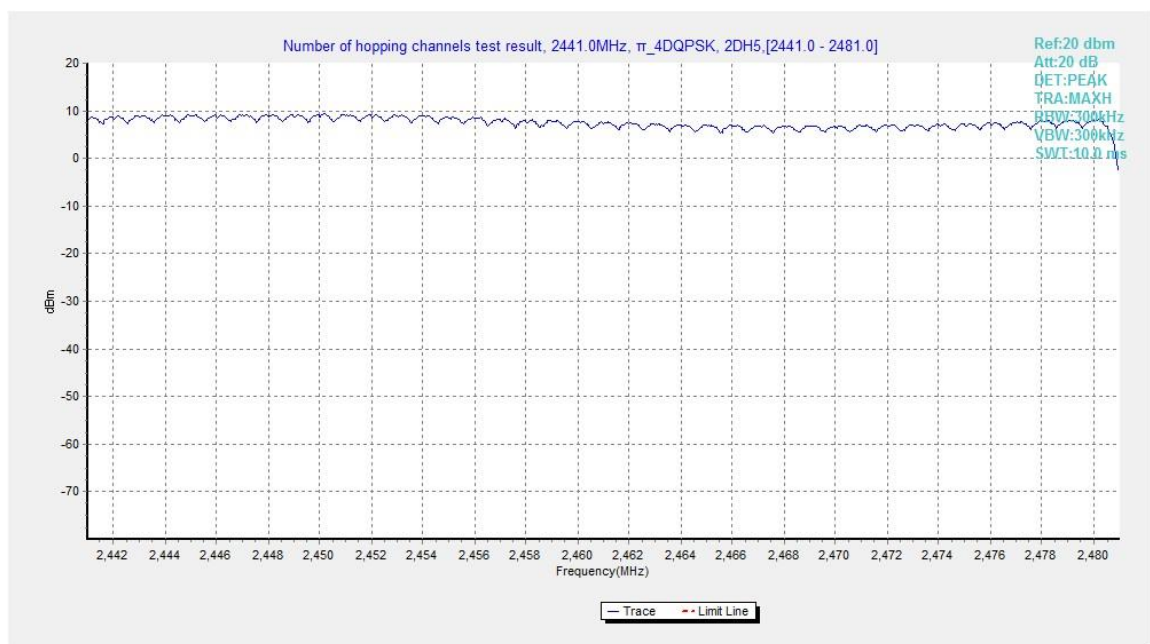


Fig.113. Number of hopping frequencies: $\pi/4$ DQPSK, Channel 40 - 78

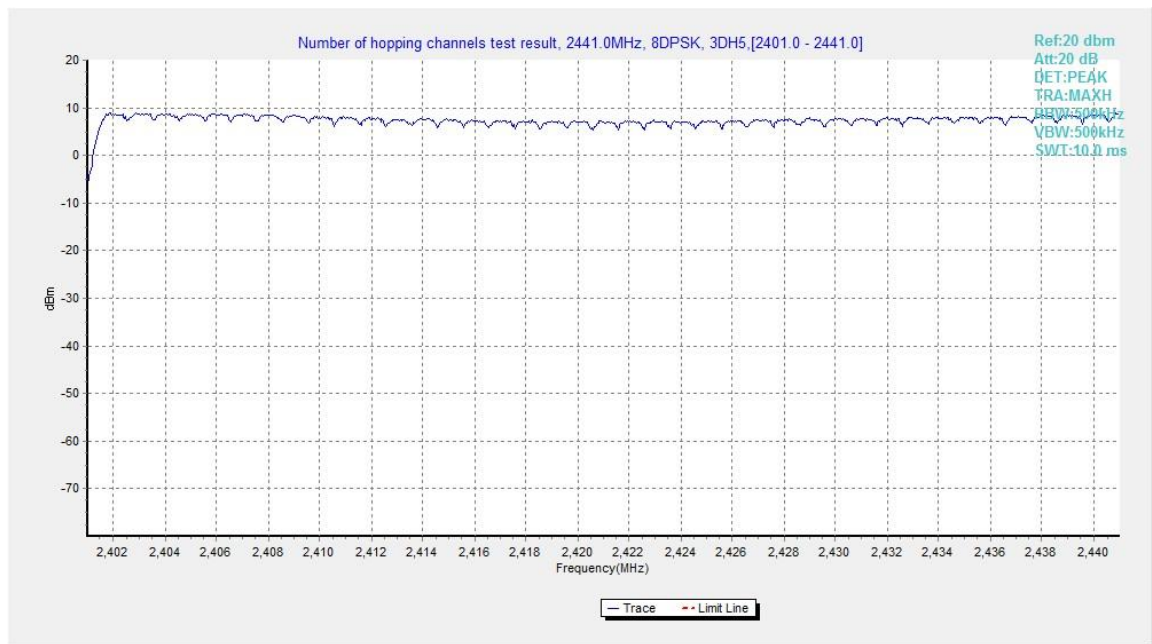


Fig.114. Number of hopping frequencies: 8DPSK, Channel 0 - 39

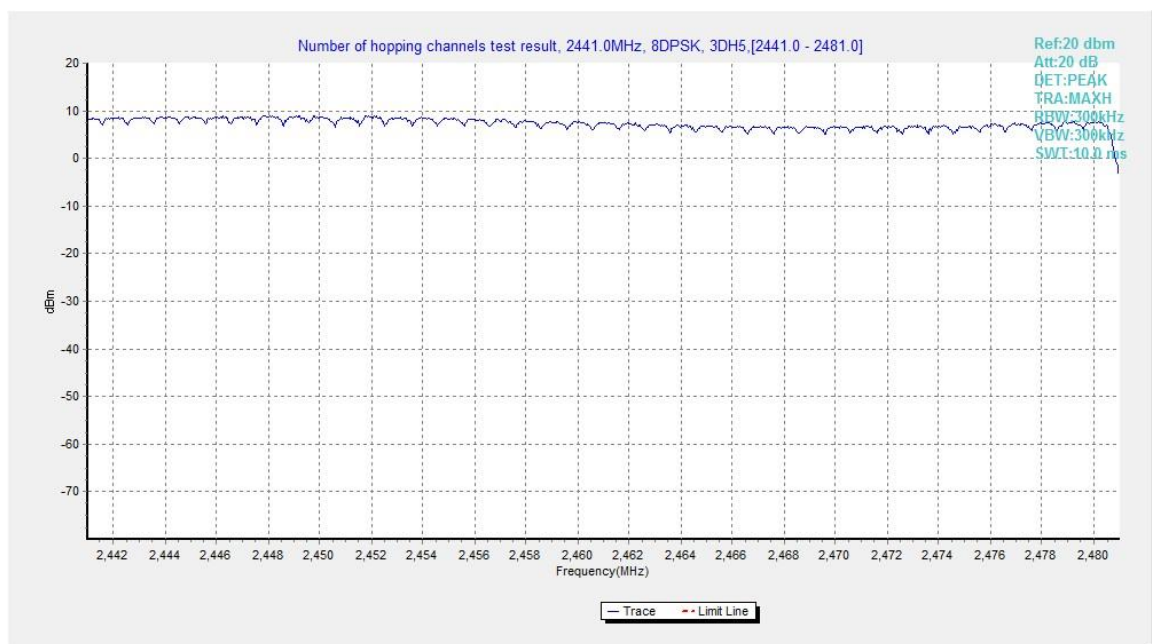


Fig.115. Number of hopping frequencies: 8DPSK, Channel 40 - 78

A.10. AC Powerline Conducted Emission

Test Condition

Voltage (V)	Frequency (Hz)
120	60

Measurement Result and limit:

Bluetooth (Quasi-peak Limit)

Frequency range (MHz)	Quasi-peak Limit (dB μ V)	Conclusion
0.15 to 0.5	66 to 56	P
0.5 to 5	56	
5 to 30	60	

NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.

Bluetooth (Average Limit)

Frequency range (MHz)	Average Limit (dB μ V)	Conclusion
0.15 to 0.5	56 to 46	P
0.5 to 5	46	
5 to 30	50	

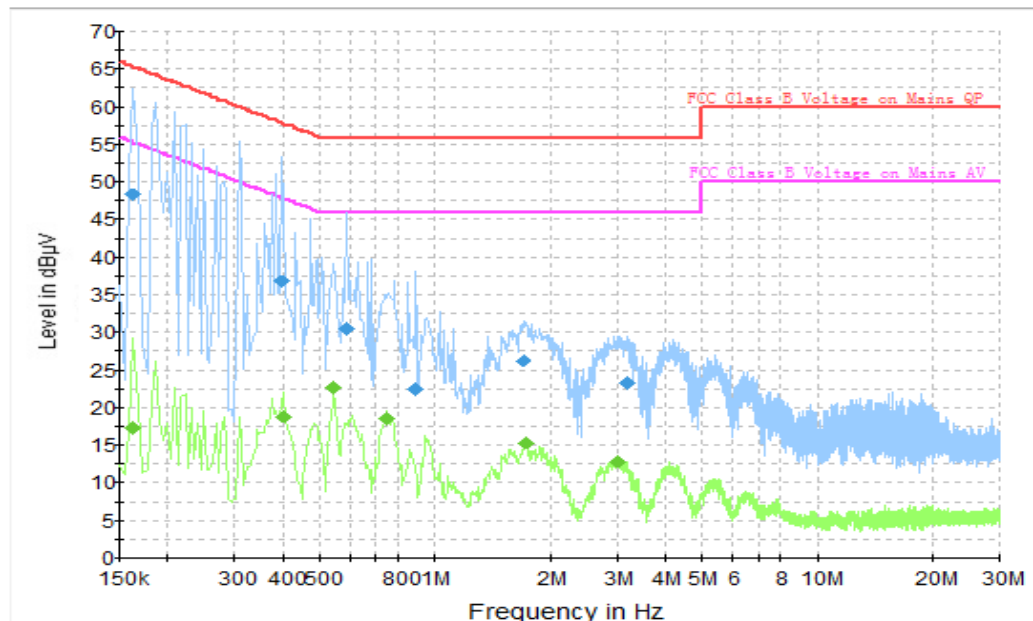
NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.

The measurement is made according to ANSI C63.10

Conclusion: PASS

Test graphs as below:

Traffic:



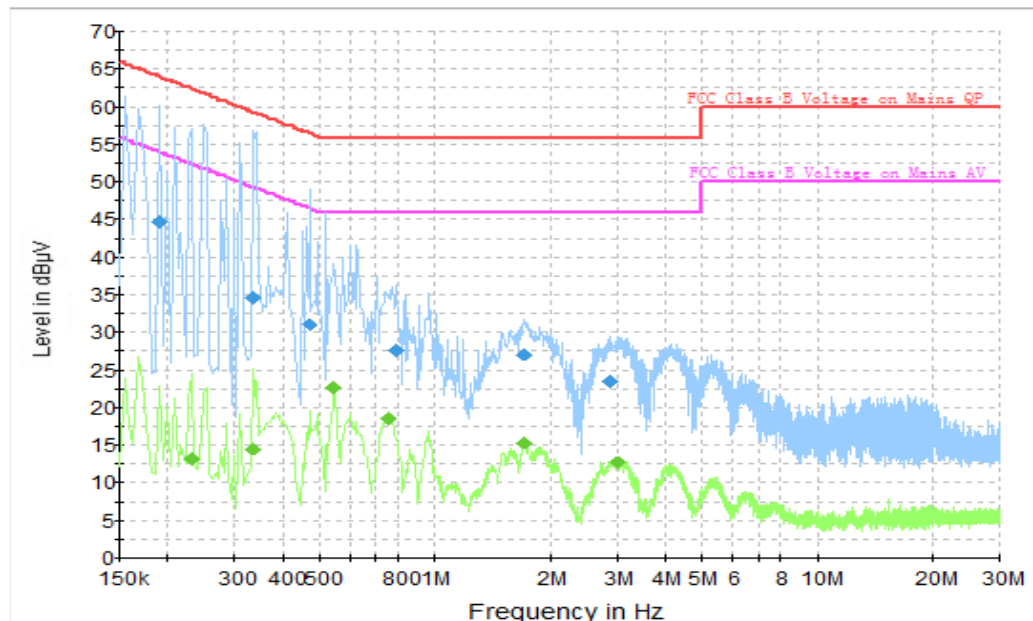
Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.163500	48.3	2000.0	9.000	On	N	19.9	17.0	65.3
0.397500	36.9	2000.0	9.000	On	L1	19.9	21.0	57.9
0.586500	30.6	2000.0	9.000	On	L1	19.8	25.4	56.0
0.888000	22.5	2000.0	9.000	On	N	19.8	33.5	56.0
1.693500	26.3	2000.0	9.000	On	N	19.7	29.7	56.0
3.169500	23.2	2000.0	9.000	On	L1	19.3	32.8	56.0

Final Result 2

Frequency (MHz)	QuasiPeak (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.163500	17.3	2000.0	9.000	On	N	19.9	38.0	55.3
0.402000	18.9	2000.0	9.000	On	N	19.9	28.9	47.8
0.541500	22.7	2000.0	9.000	On	N	19.9	23.3	46.0
0.748500	18.5	2000.0	9.000	On	N	19.8	27.5	46.0
1.725000	15.3	2000.0	9.000	On	N	19.7	30.7	46.0
3.021000	12.8	2000.0	9.000	On	N	19.1	33.2	46.0

Idle:



Final Result 1

Frequency (MHz)	QuasiPeak (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.190500	44.7	2000.0	9.000	On	L1	19.8	19.3	64.0
0.334500	34.7	2000.0	9.000	On	N	19.9	24.6	59.3
0.469500	31.1	2000.0	9.000	On	N	19.9	25.5	56.5
0.793500	27.5	2000.0	9.000	On	N	19.8	28.5	56.0
1.716000	27.0	2000.0	9.000	On	N	19.7	29.0	56.0
2.877000	23.5	2000.0	9.000	On	L1	18.9	32.5	56.0

Final Result 2

Frequency (MHz)	QuasiPeak (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.231000	13.2	2000.0	9.000	On	L1	19.8	39.2	52.4
0.334500	14.5	2000.0	9.000	On	N	19.9	34.8	49.3
0.541500	22.5	2000.0	9.000	On	N	19.9	23.5	46.0
0.757500	18.5	2000.0	9.000	On	N	19.8	27.5	46.0
1.711500	15.3	2000.0	9.000	On	N	19.7	30.7	46.0
3.016500	12.6	2000.0	9.000	On	N	19.1	33.4	46.0

END OF REPORT