

		Fig.79		
	DH5	Fig.80	213.61	P
		Fig.81		

**Conclusion: PASS**

**Test graphs as below:**

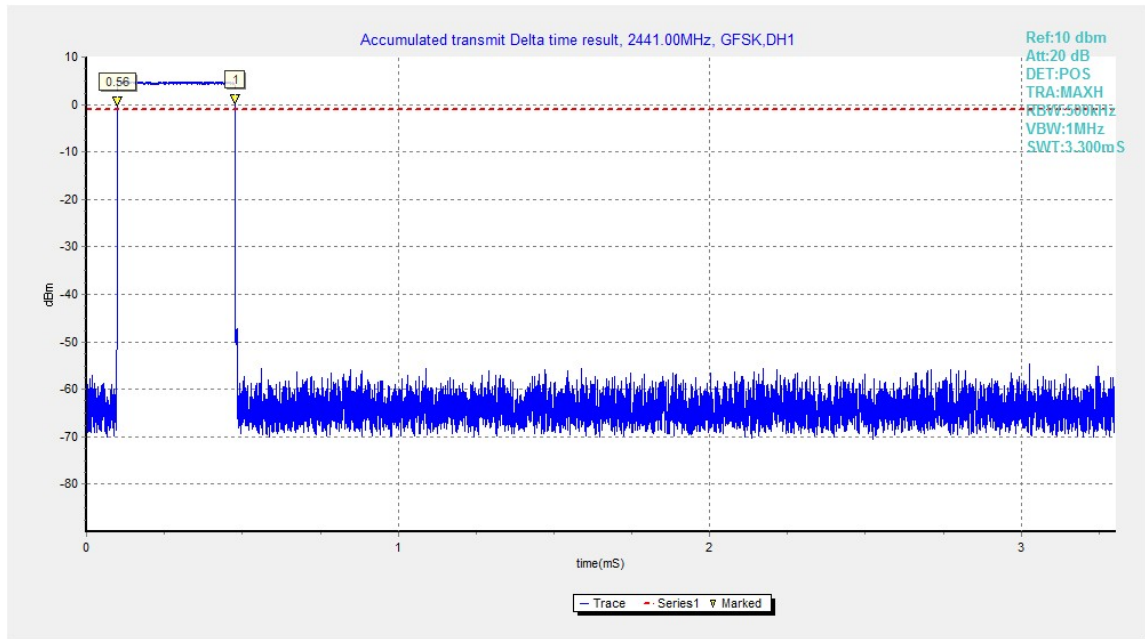


Fig.64. Time of occupancy (Dwell Time): Channel 39, Packet DH1

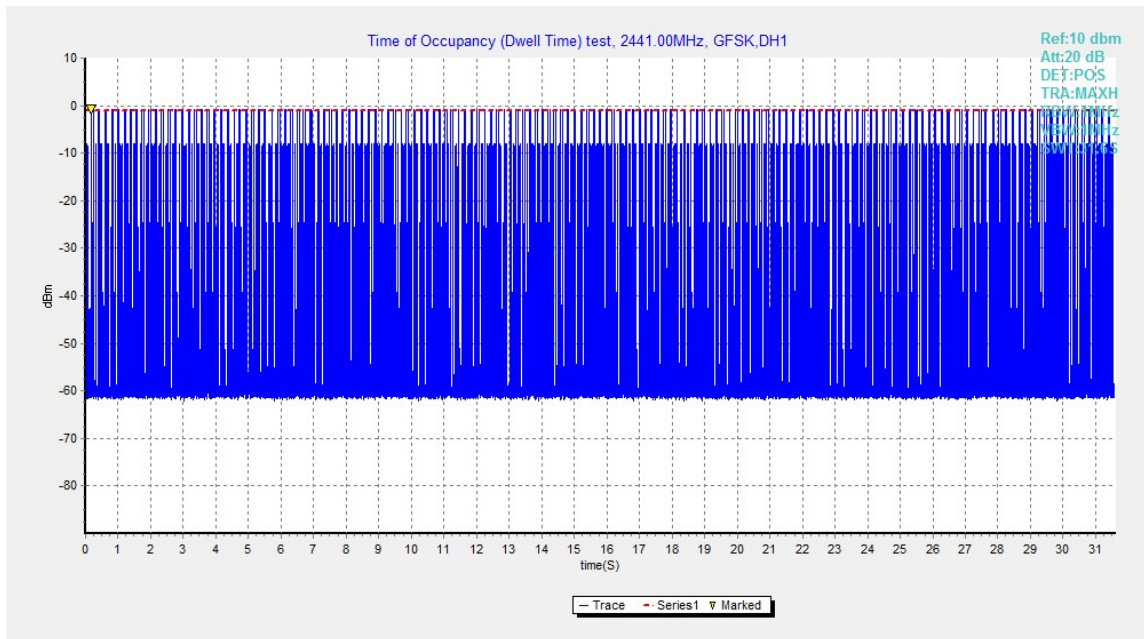


Fig.65. Number of Transmissions Measurement:Channel 39,Packet DH1

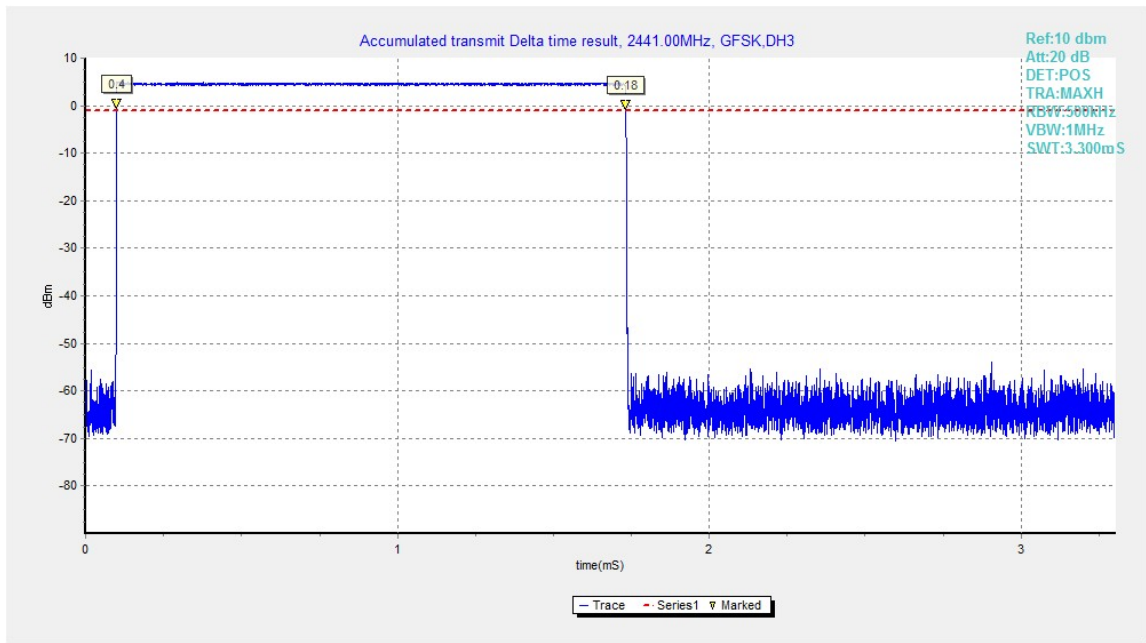


Fig.66. Time of occupancy (Dwell Time): Channel 39, Packet DH3

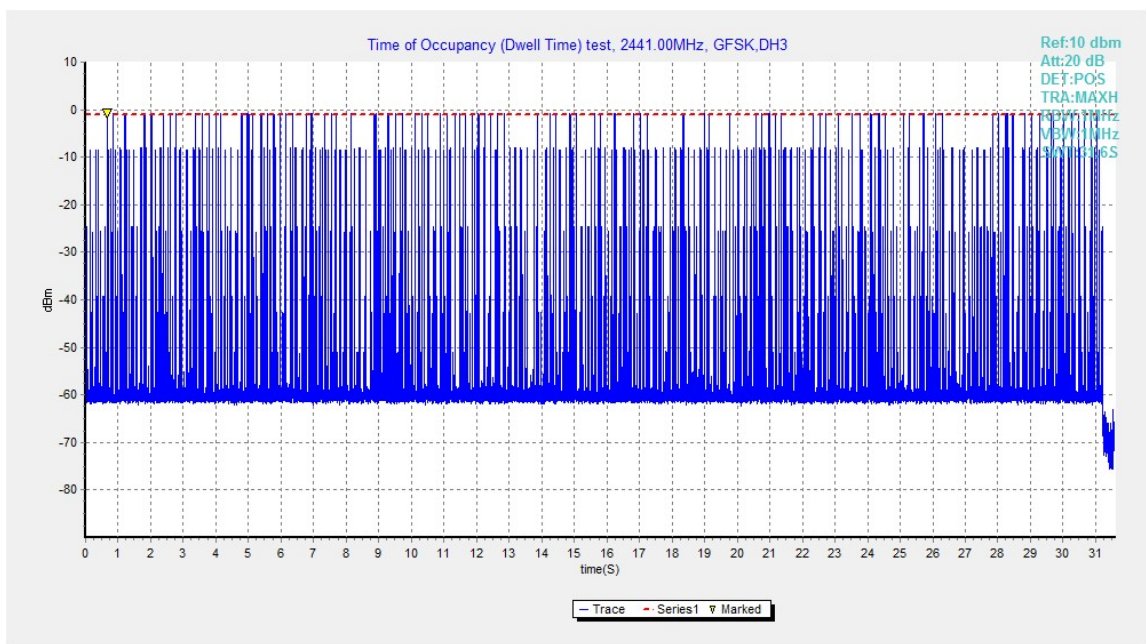


Fig.67. Number of Transmissions Measurement:Channel 39,Packet DH3

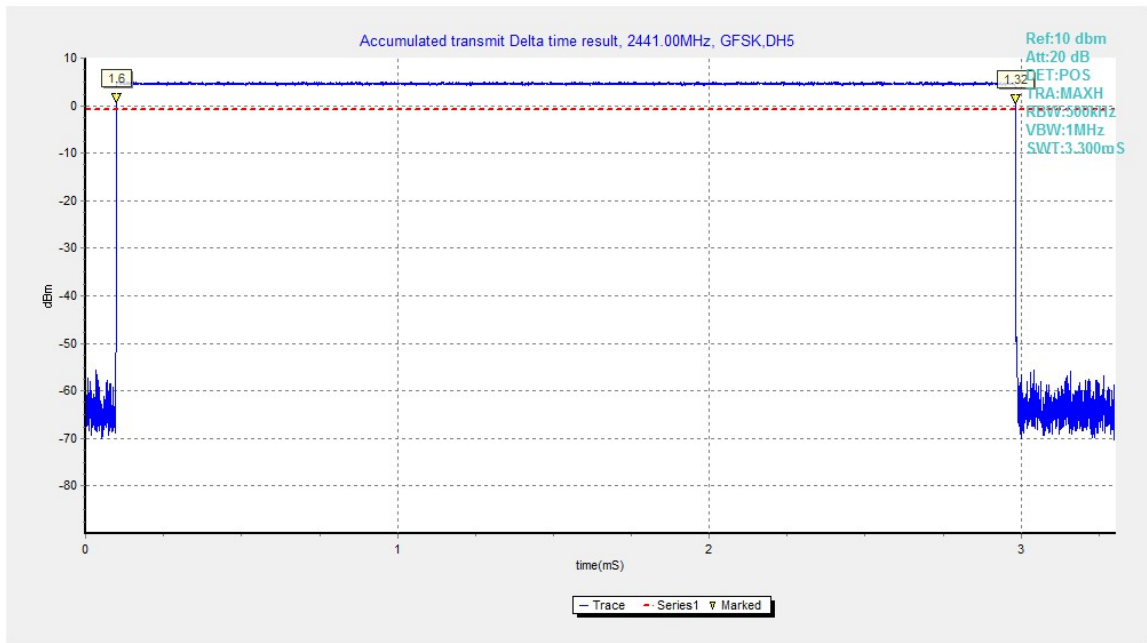


Fig.68. Time of occupancy (Dwell Time): Channel 39, Packet DH5

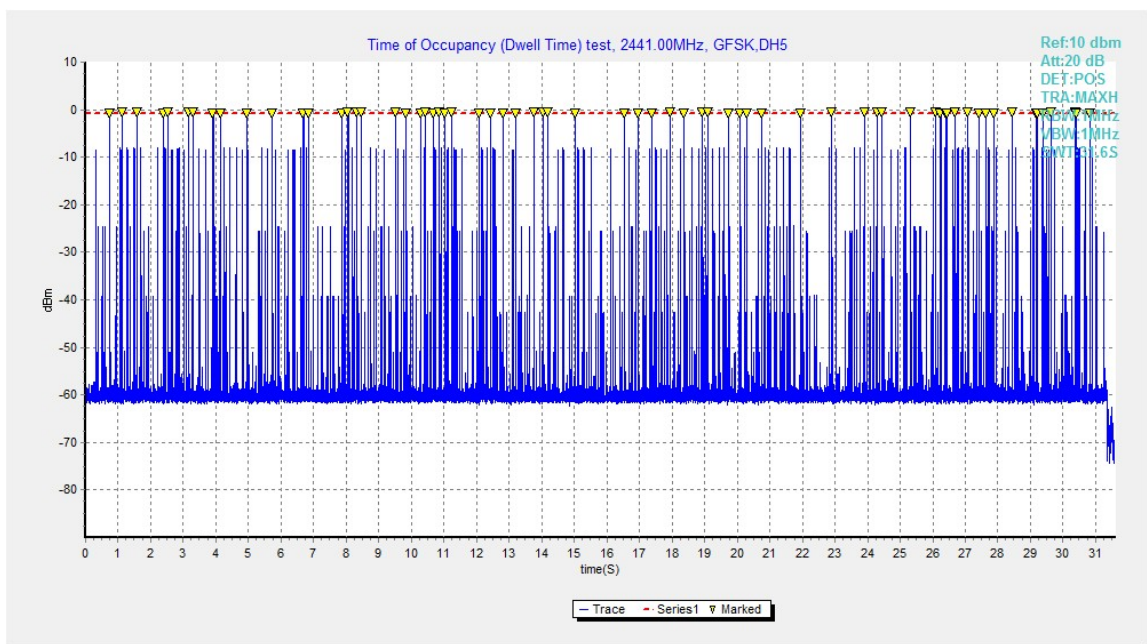


Fig.69. Number of Transmissions Measurement:Channel 39,Packet DH5

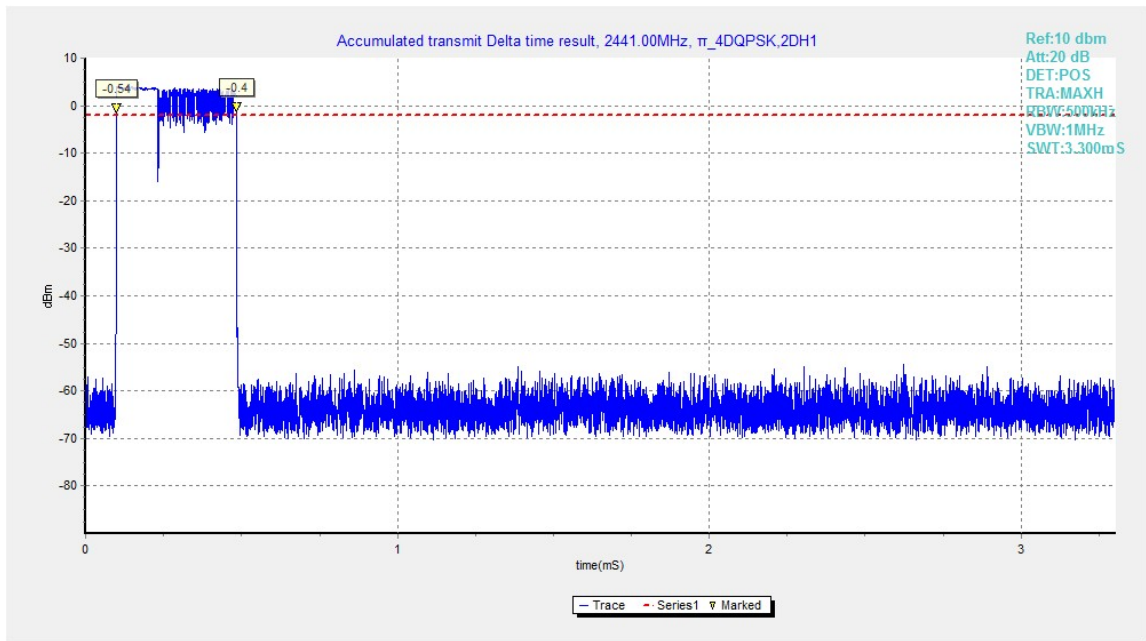


Fig.70. Time of occupancy (Dwell Time): Channel 39, Packet 2-DH1

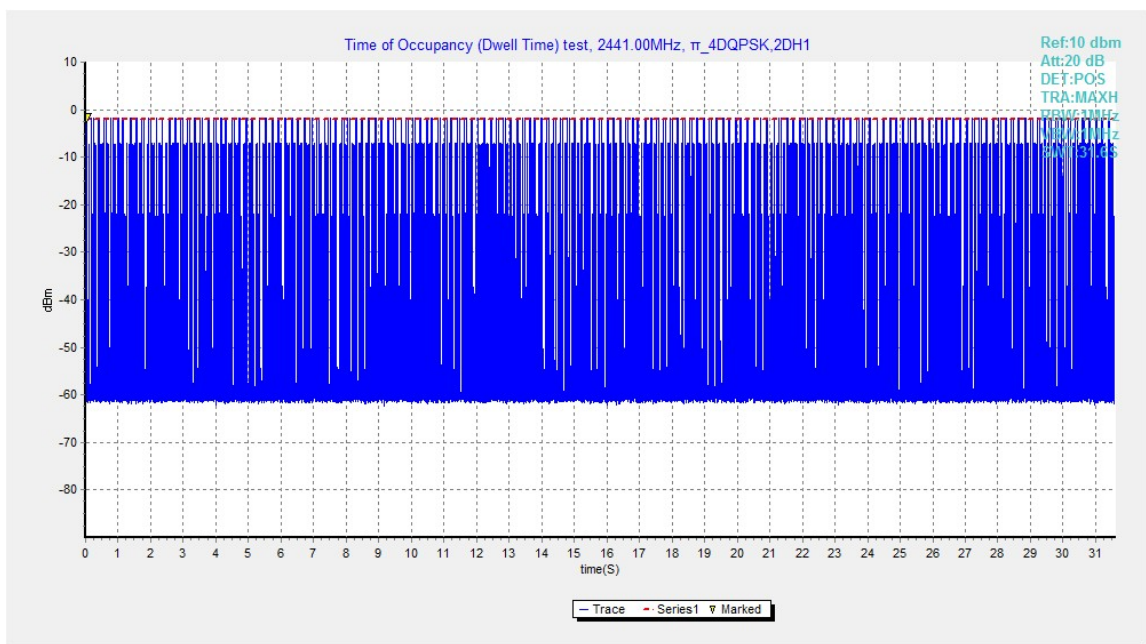


Fig.71. Number of Transmissions Measurement:Channel 39,Packet 2-DH1



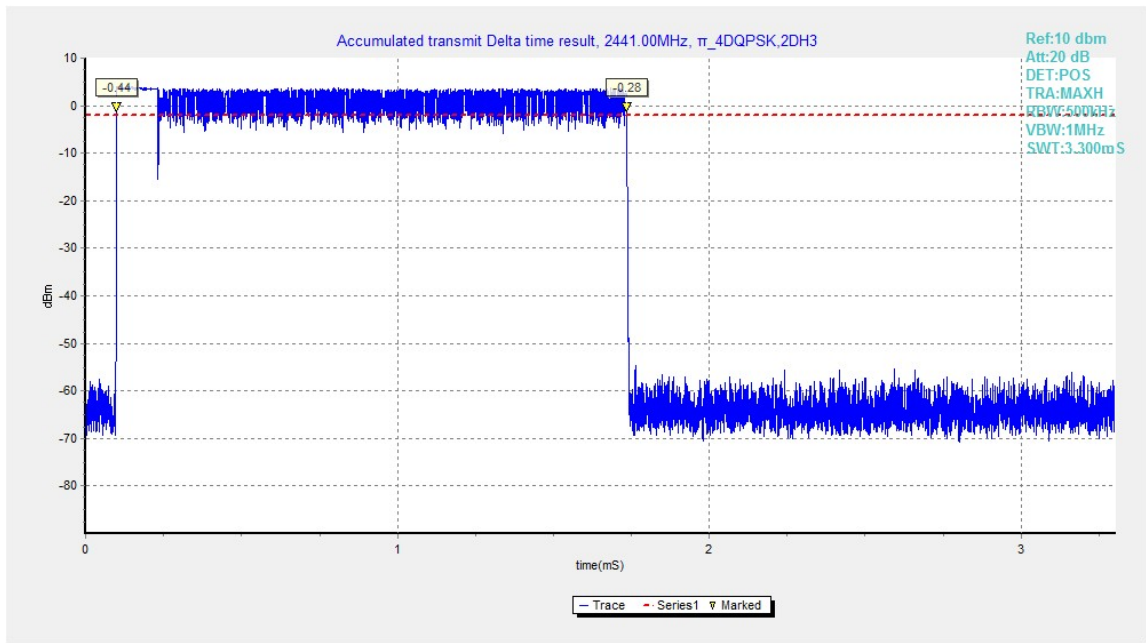


Fig.72. Time of occupancy (Dwell Time): Channel 39, Packet 2-DH3

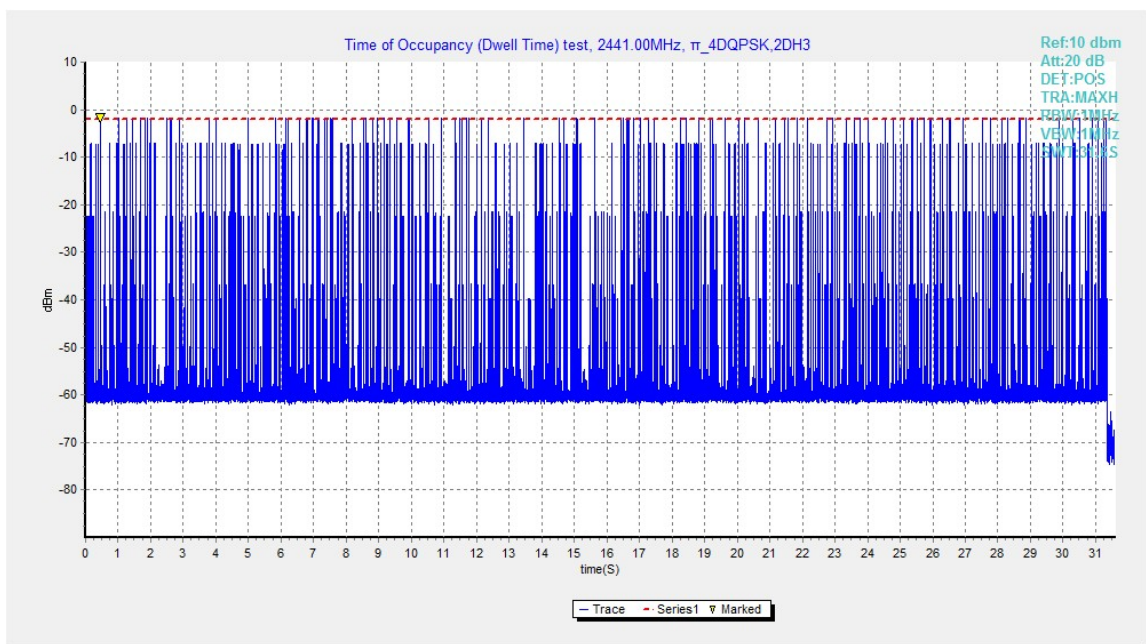


Fig.73. Number of Transmissions Measurement:Channel 39,Packet 2-DH3

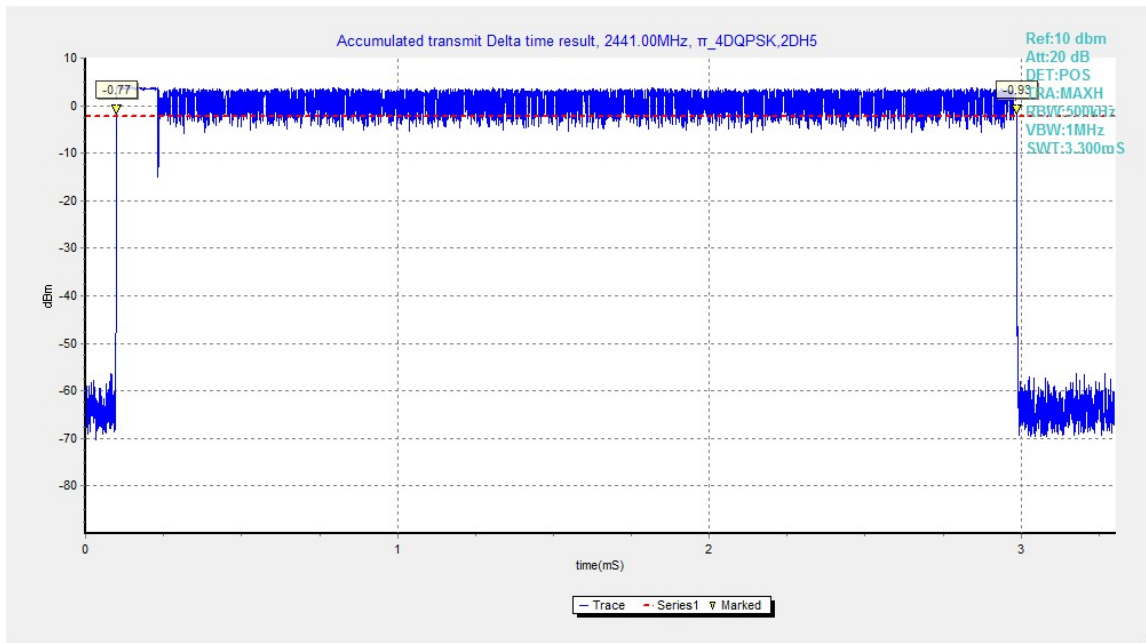


Fig.74. Time of occupancy (Dwell Time): Channel 39, Packet 2-DH5

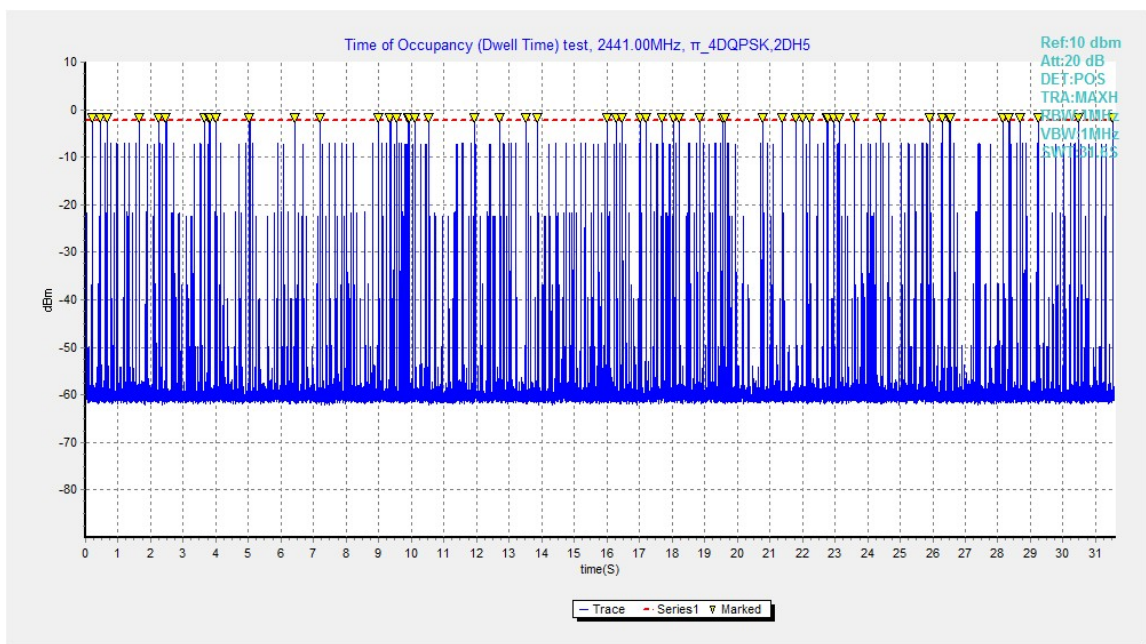


Fig.75. Number of Transmissions Measurement:Channel 39,Packet 2-DH5

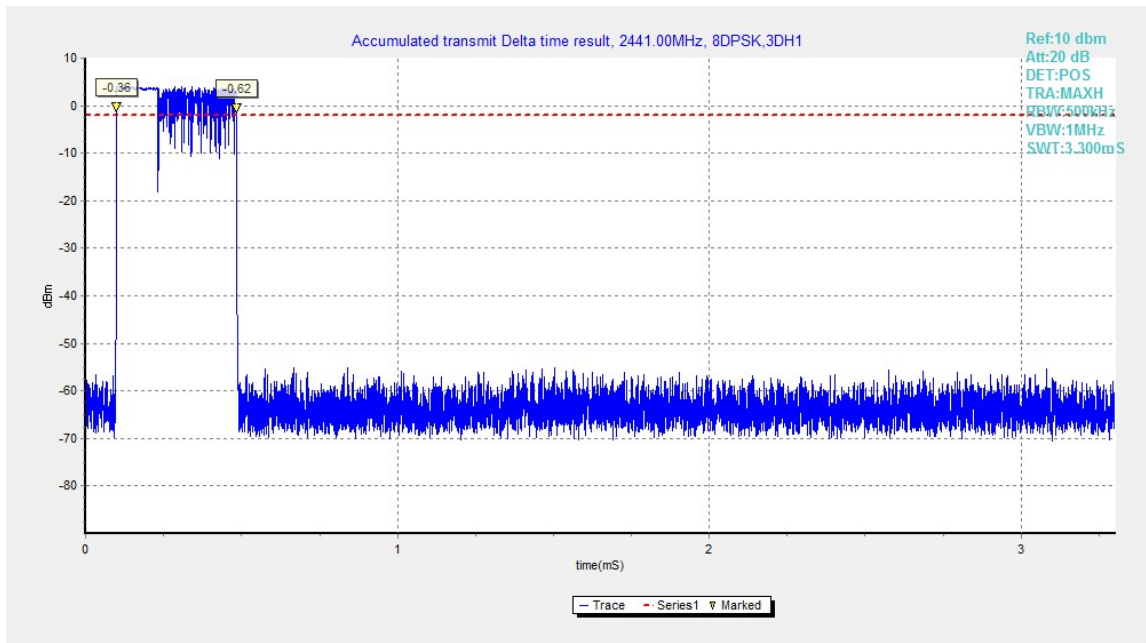


Fig.76. Time of occupancy (Dwell Time): Channel 39, Packet 3-DH1

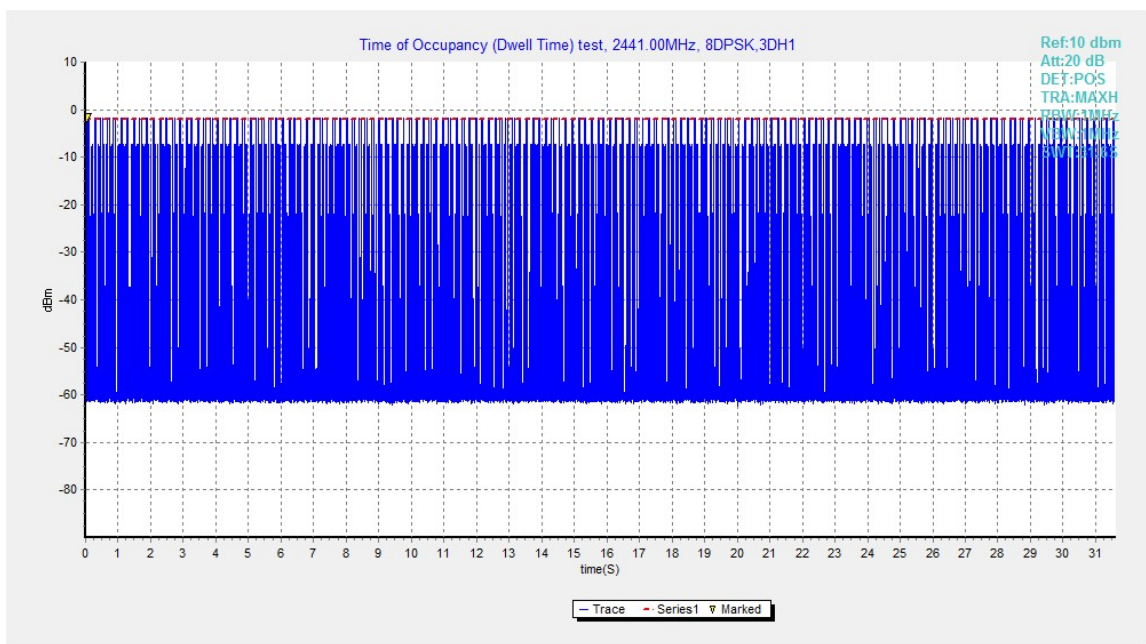


Fig.77. Number of Transmissions Measurement:Channel 39,Packet 3-DH1

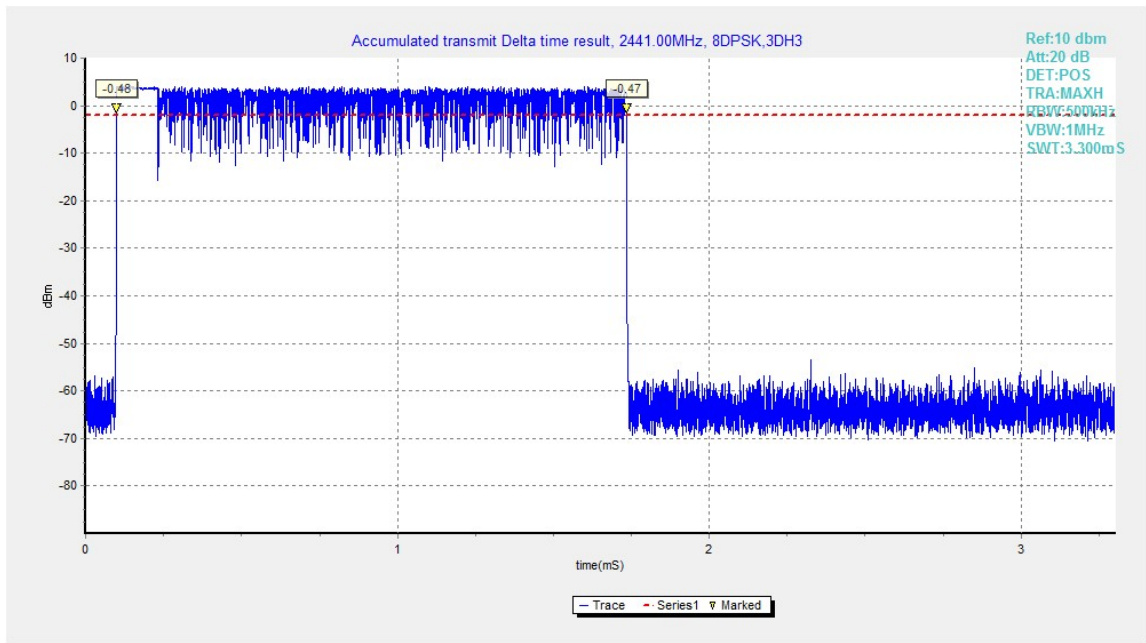


Fig.78. Time of occupancy (Dwell Time): Channel 39, Packet 3-DH3

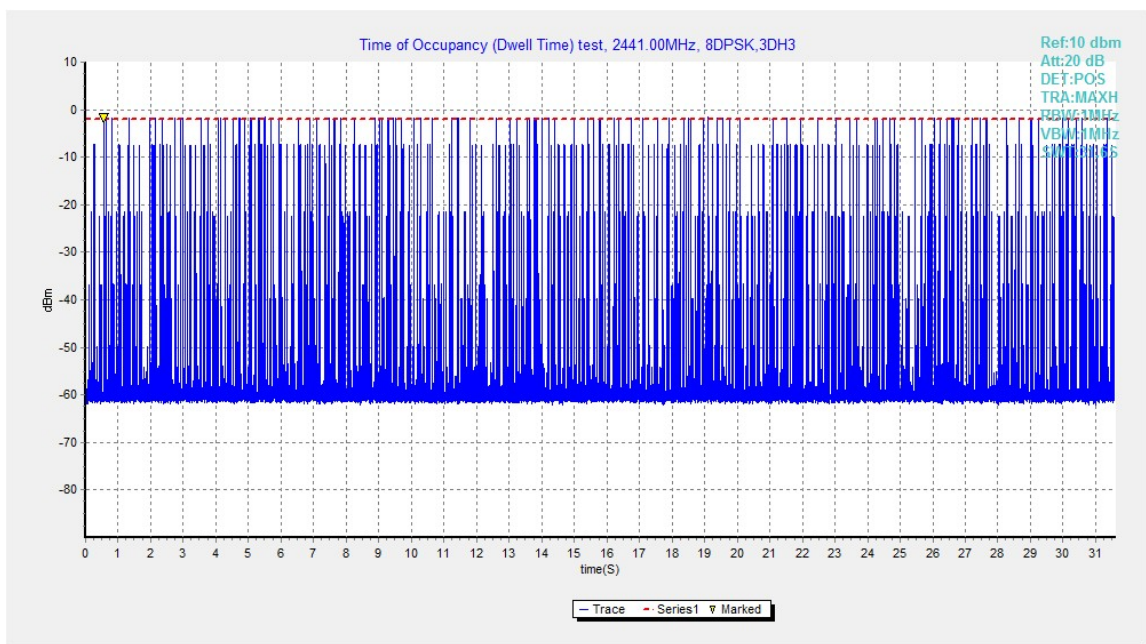


Fig.79. Number of Transmissions Measurement:Channel 39,Packet 3-DH3



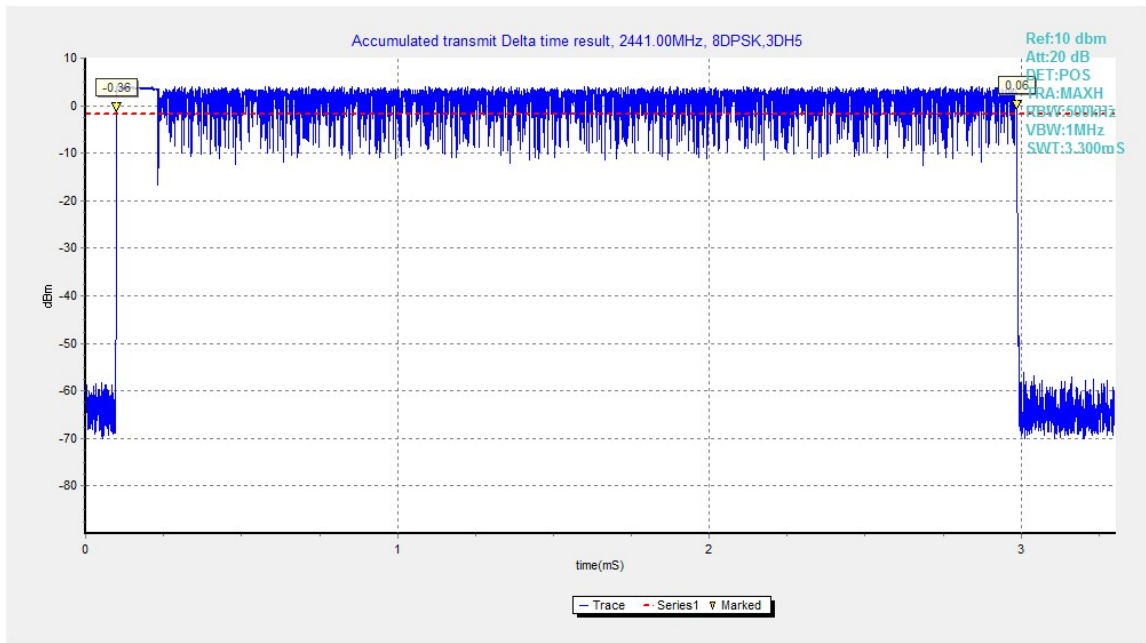


Fig.80. Time of occupancy (Dwell Time): Channel 39, Packet 3-DH5

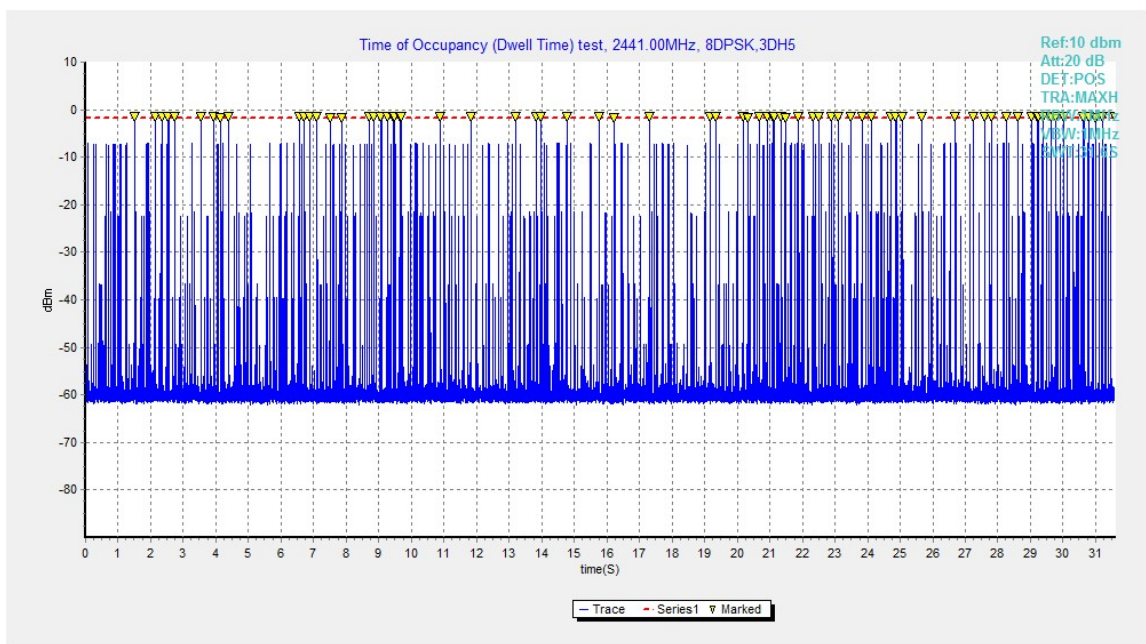


Fig.81. Number of Transmissions Measurement:Channel 39,Packet 3-DH5

## 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.82	944.25	NA
39	Fig.83	950.25	NA
78	Fig.84	943.50	NA

#### For $\pi/4$ DQPSK

Channel	20dB Bandwidth (kHz)		Conclusion
0	Fig.85	1271.25	NA
39	Fig.86	1276.50	NA
78	Fig.87	1274.25	NA

#### For 8DPSK

Channel	20dB Bandwidth (kHz)		Conclusion
0	Fig.88	1291.50	NA
39	Fig.89	1275.75	NA
78	Fig.90	1270.50	NA

**Conclusion: NA**

**Test graphs as below:**

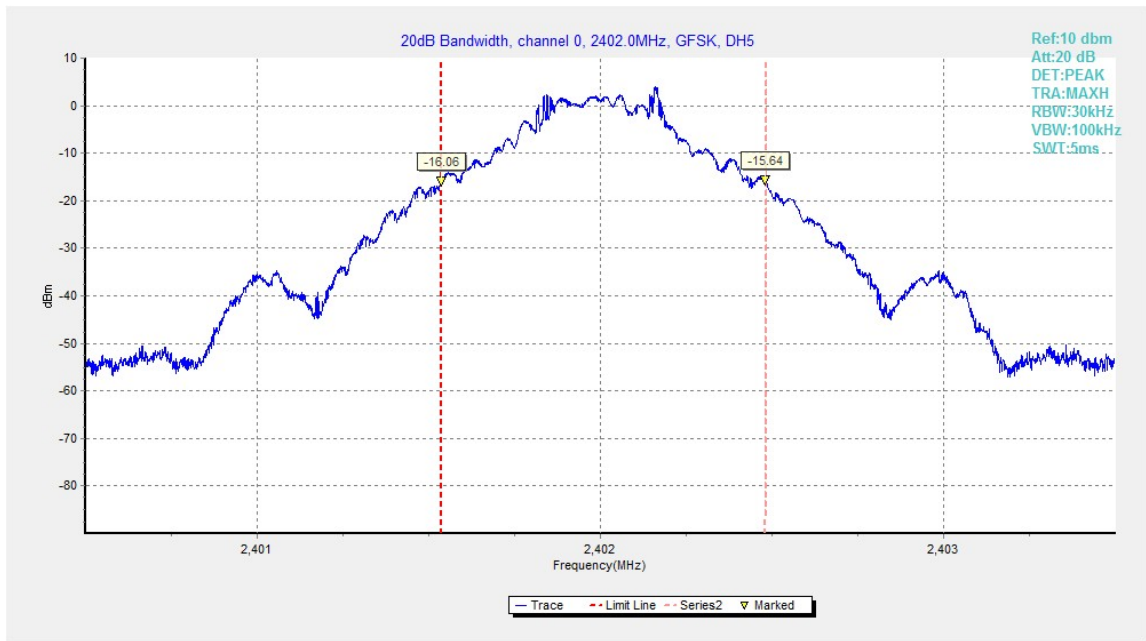


Fig.82. 20dB Bandwidth: GFSK, Channel 0

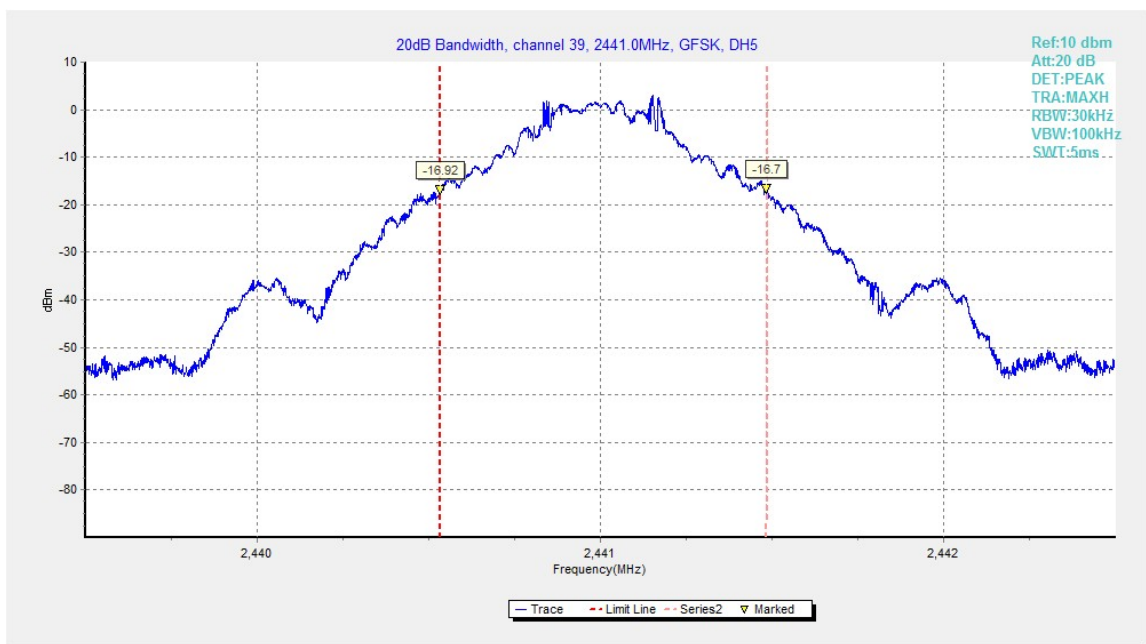


Fig.83. 20dB Bandwidth: GFSK, Channel 39

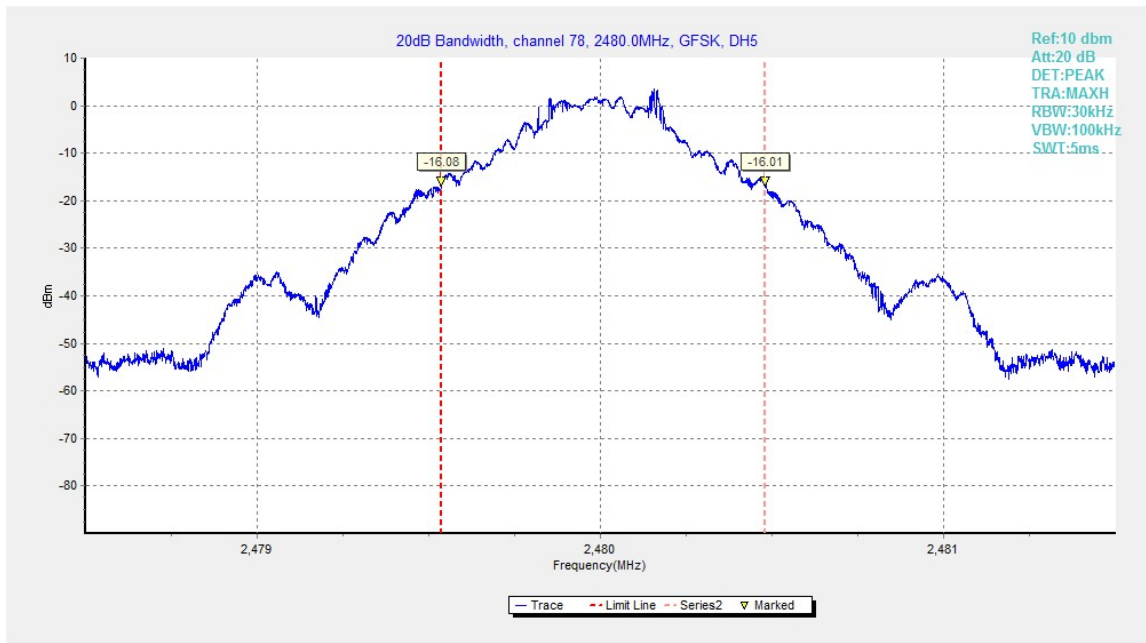


Fig.84. 20dB Bandwidth: GFSK, Channel 78

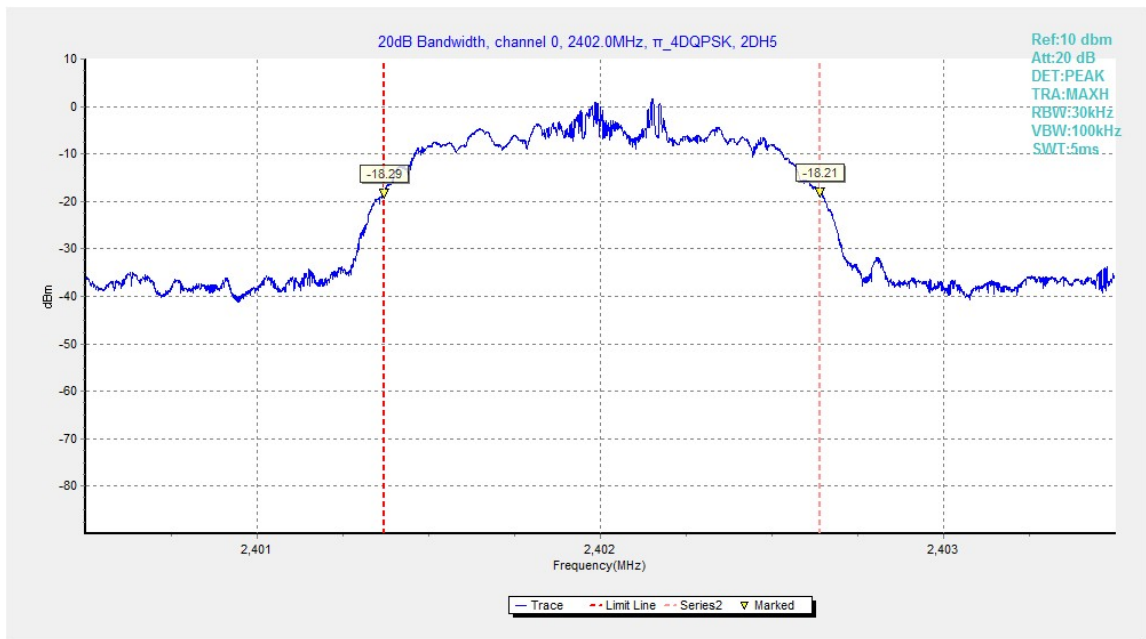


Fig.85. 20dB Bandwidth:  $\pi/4$  DQPSK, Channel 0



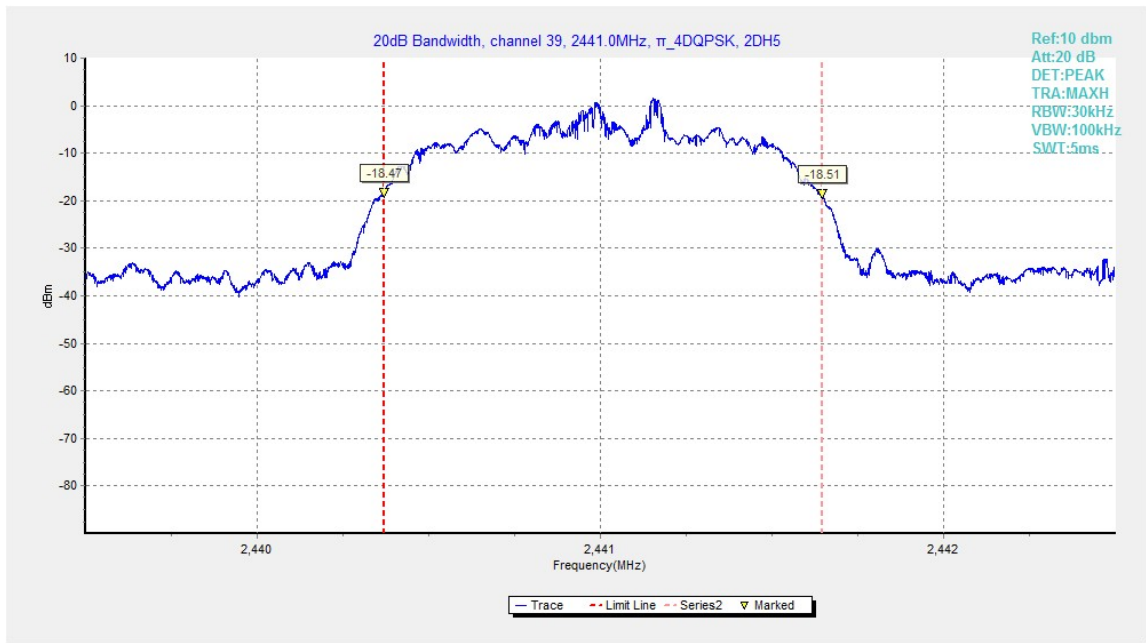


Fig.86. 20dB Bandwidth:  $\pi/4$  DQPSK, Channel 39

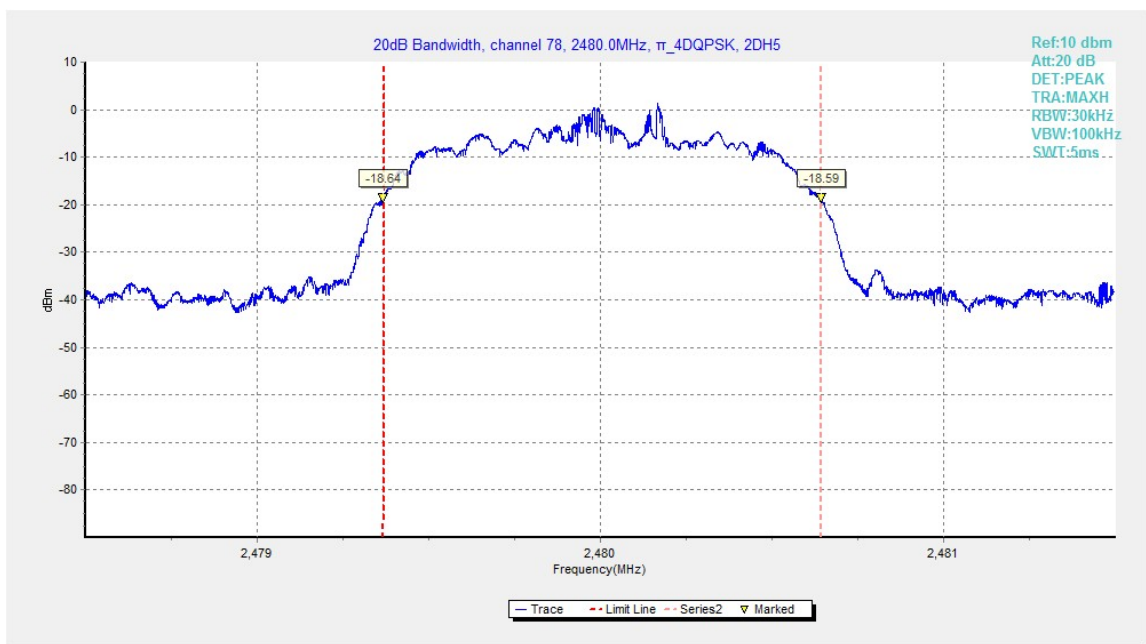


Fig.87. 20dB Bandwidth:  $\pi/4$  DQPSK, Channel 78

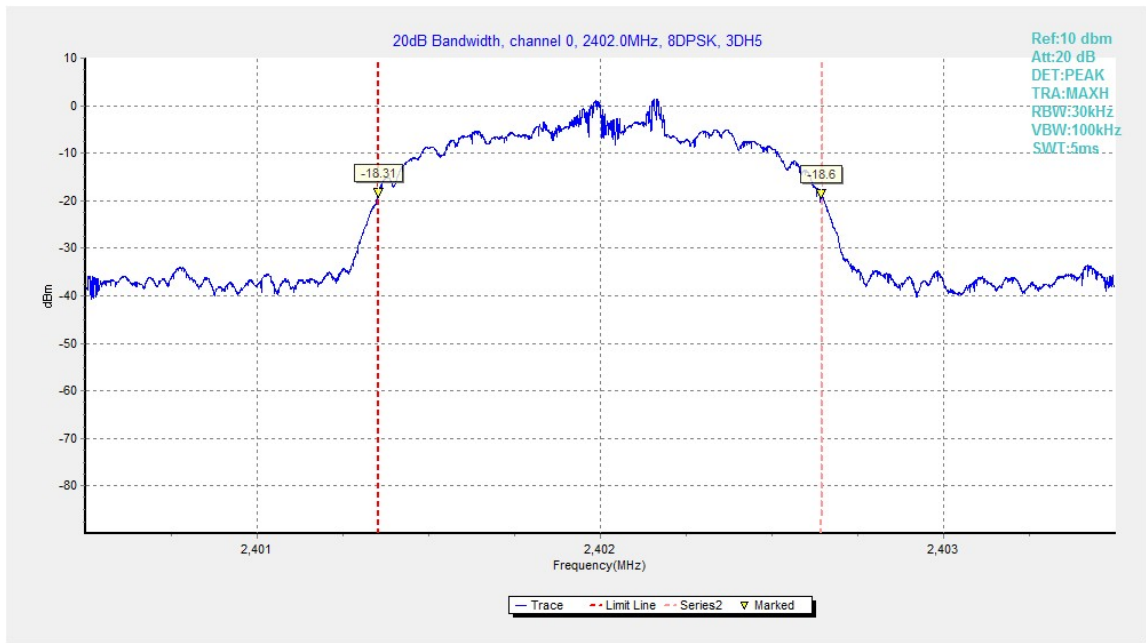


Fig.88. 20dB Bandwidth: 8DPSK, Channel 0

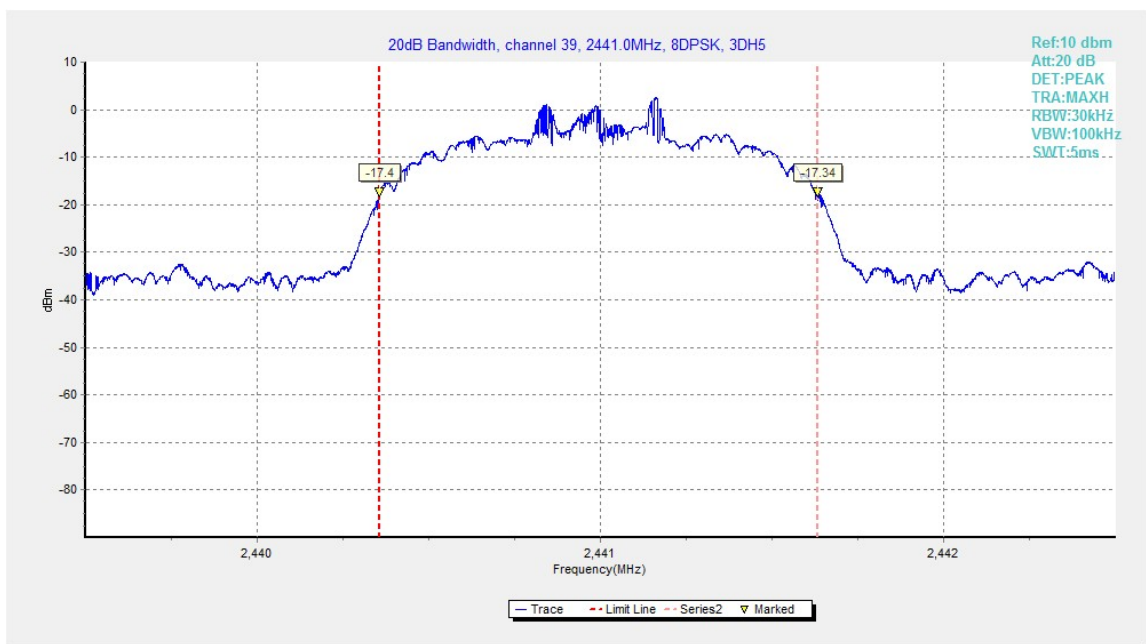


Fig.89. 20dB Bandwidth: 8DPSK, Channel 39

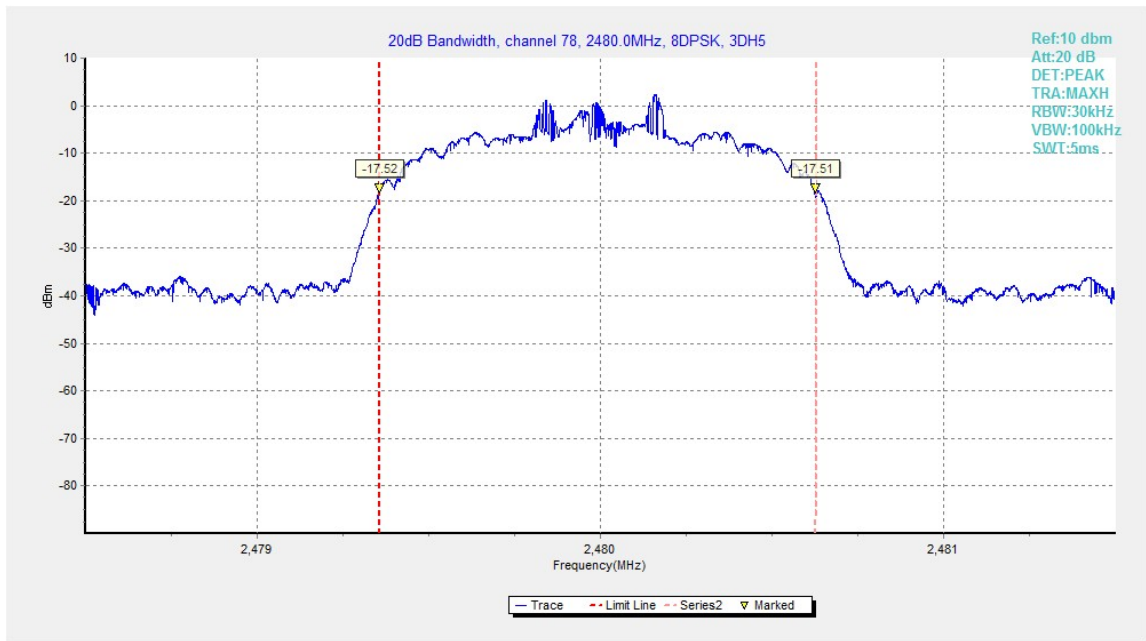


Fig.90. 20dB Bandwidth: 8DPSK, Channel 78

## 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.91	1003.50	P

#### For $\pi/4$ DQPSK

Channel	Carrier frequency separation (kHz)	Conclusion	
39	Fig.92	1299.75	P

#### For 8DPSK

Channel	Carrier frequency separation (kHz)	Conclusion	
39	Fig.93	1329.75	P

**Conclusion: PASS**

**Test graphs as below:**



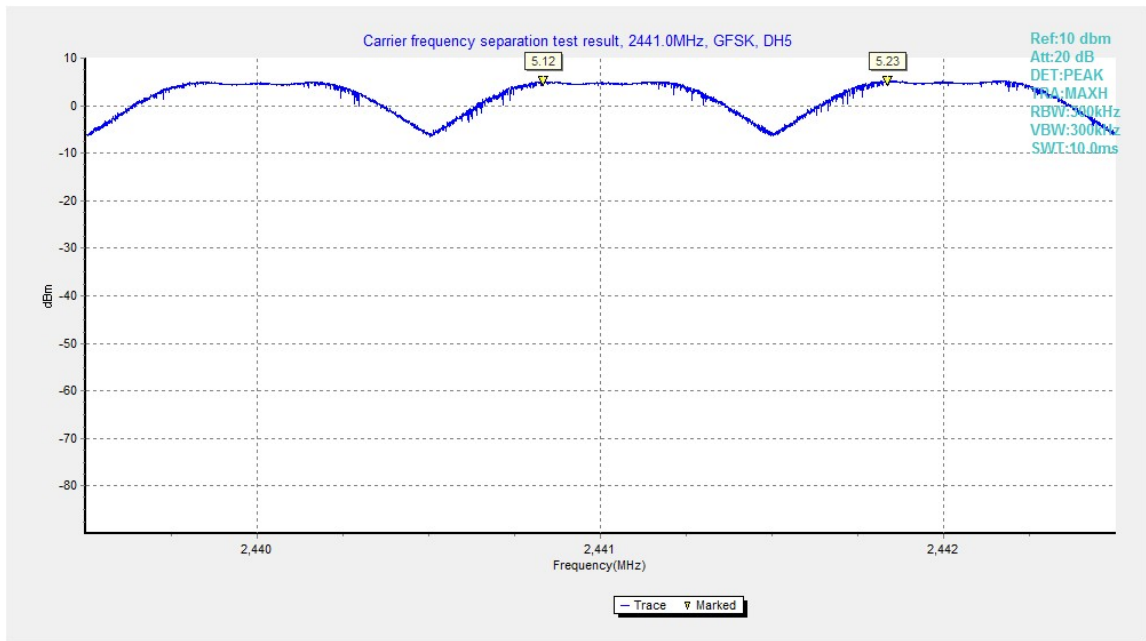


Fig.91. Carrier frequency separation measurement: GFSK, Channel 39

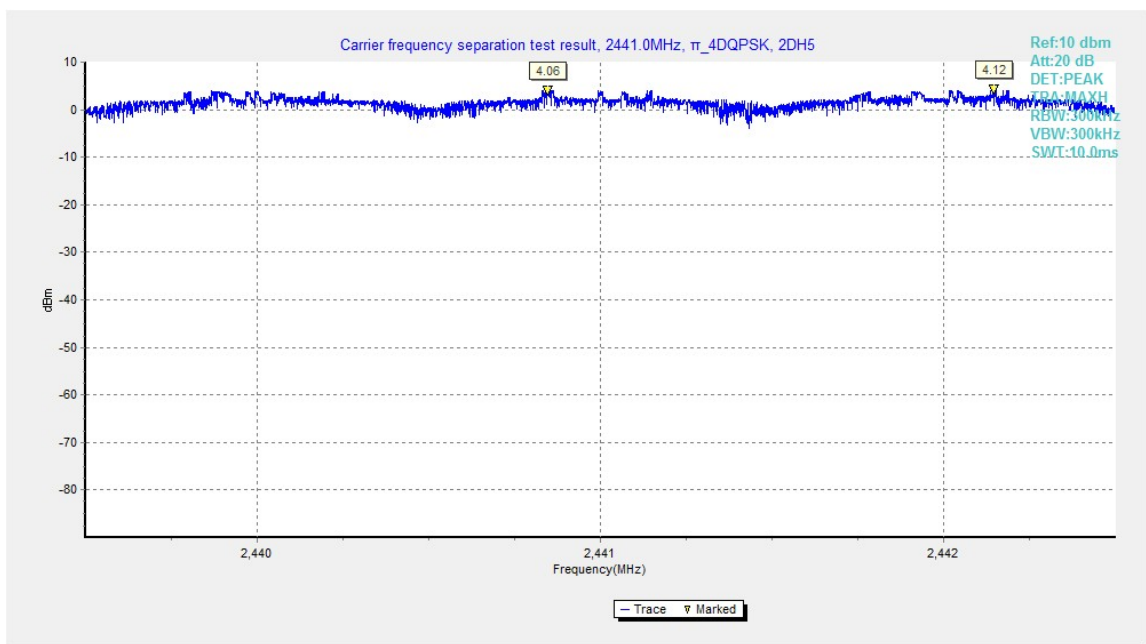


Fig.92. Carrier frequency separation measurement:  $\pi/4$  DQPSK, Channel 39

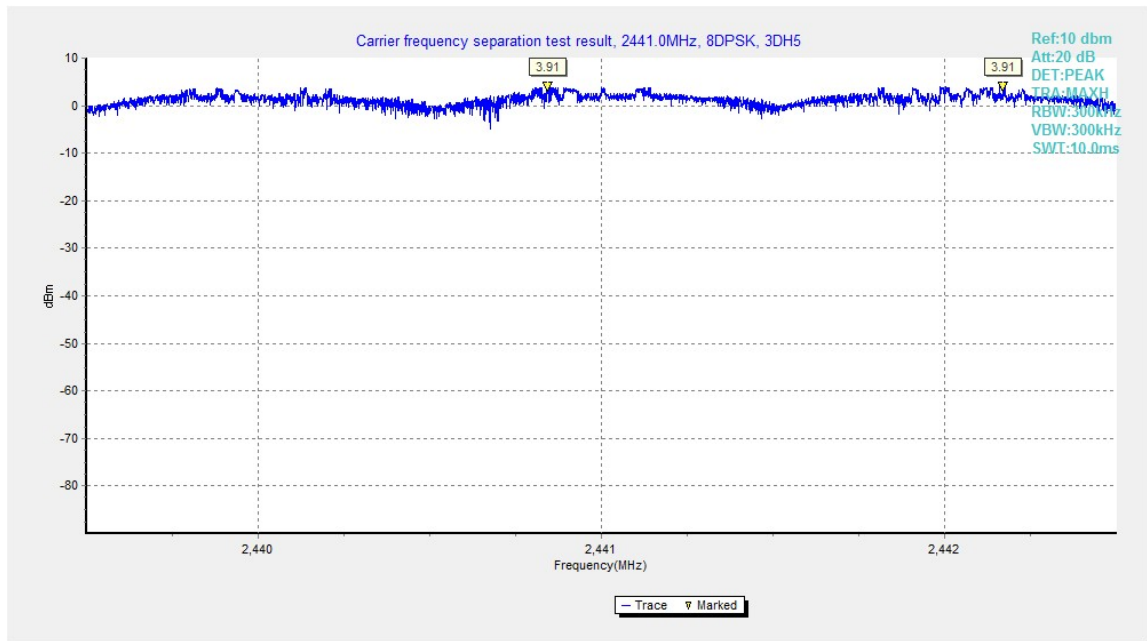


Fig.93. Carrier frequency separation measurement: 8DPSK, Channel 39

## 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.94	P
40~78	Fig.95	

#### For $\pi/4$ DQPSK

Channel	Number of hopping channels	Conclusion
0~39	Fig.96	P
40~78	Fig.97	

#### For 8DPSK

Channel	Number of hopping channels	Conclusion
0~39	Fig.98	P
40~78	Fig.99	

**Conclusion: PASS**

**Test graphs as below:**