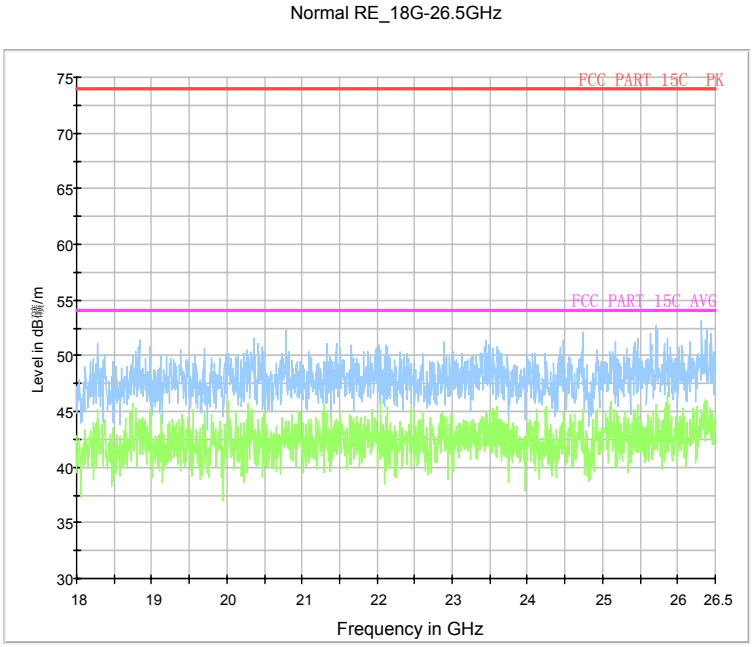


Fig.81. Radiated emission: π/4 DQPSK, 18 GHz - 26 GHz

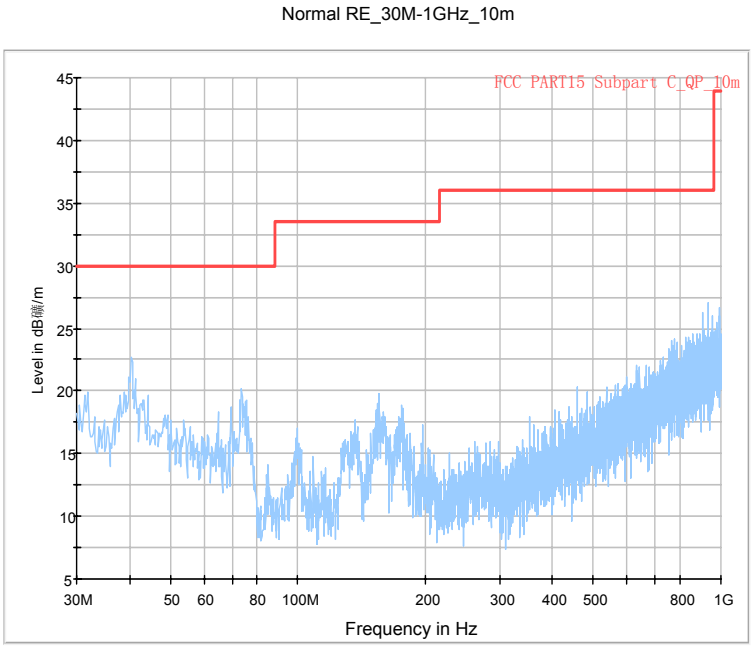


Fig.82. Radiated emission: 8DPSK, Channel 0, 30 MHz - 1 GHz

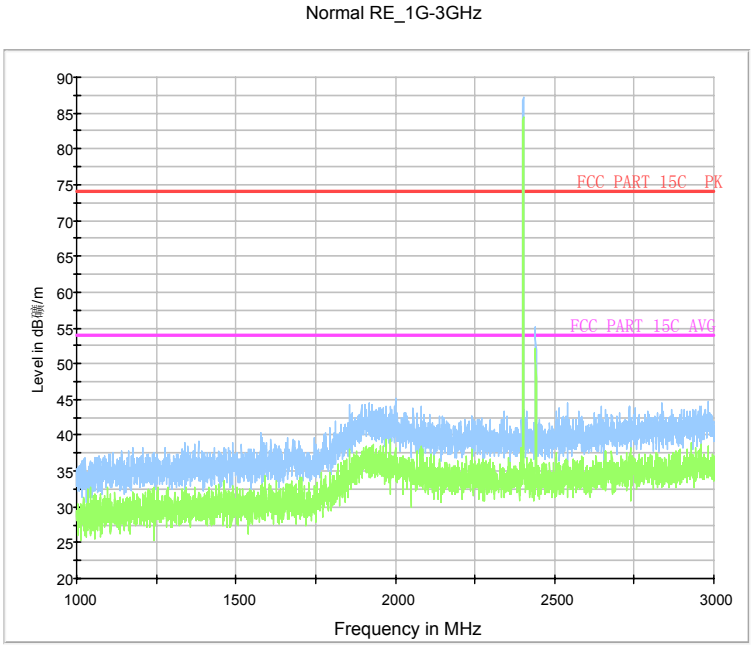


Fig.83. Radiated emission: 8DPSK, Channel 0, 1 GHz - 3 GHz

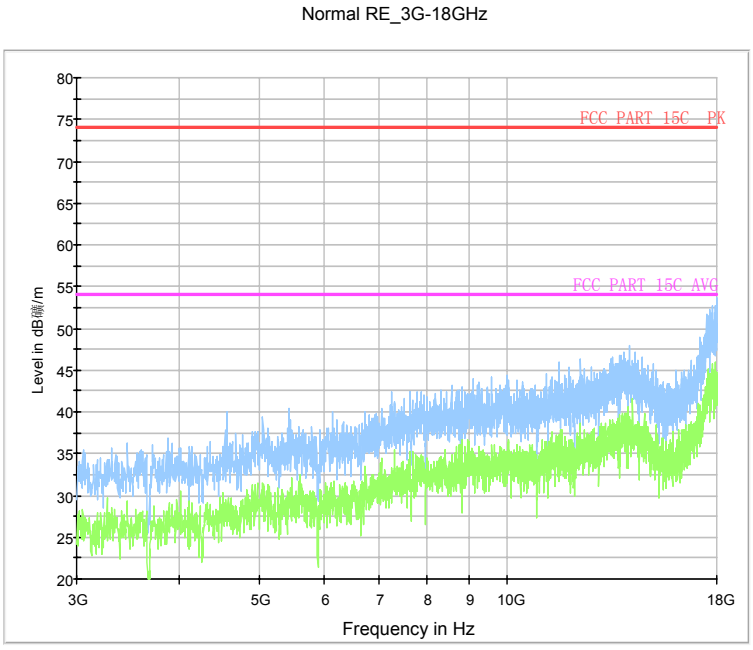


Fig.84. Radiated emission: 8DPSK, Channel 0, 3 GHz - 18 GHz

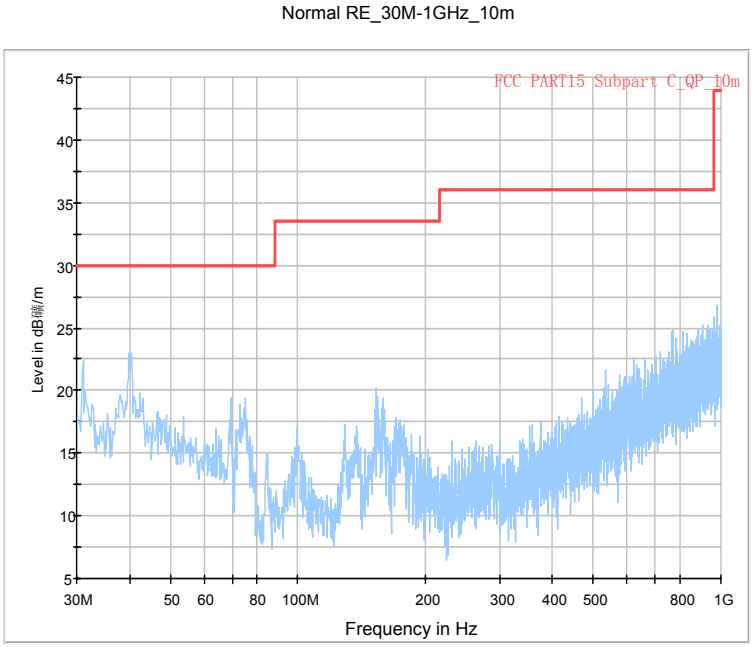


Fig.85. Radiated emission: 8DPSK, Channel 39, 30 MHz - 1 GHz

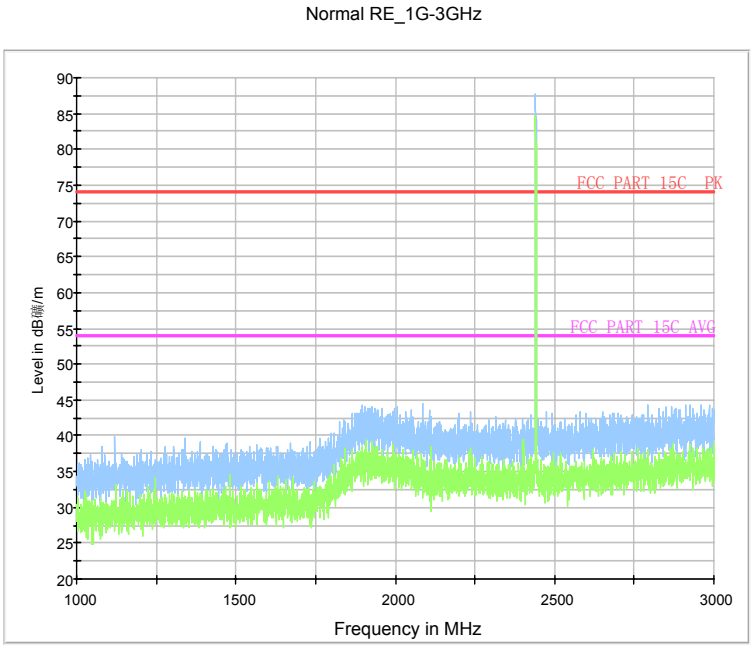


Fig.86. Radiated emission: 8DPSK, Channel 39, 1 GHz - 3 GHz

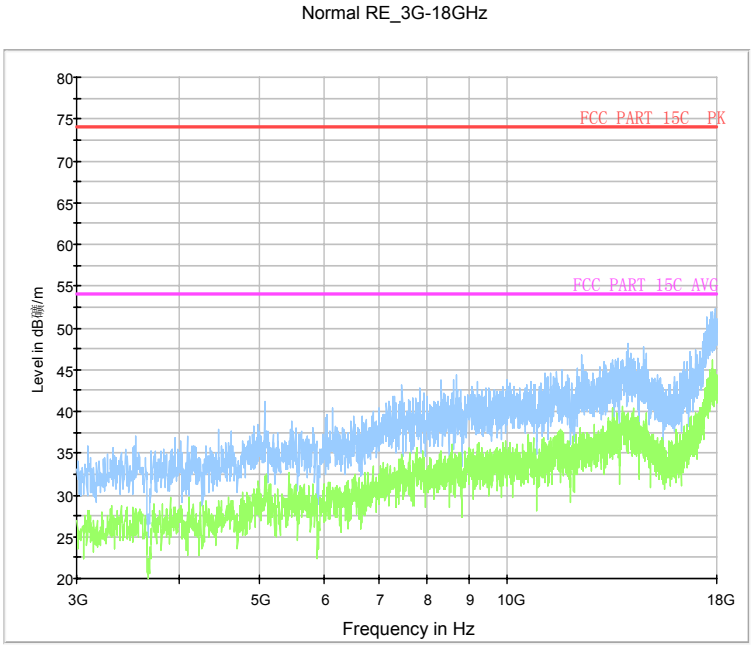


Fig.87. Radiated emission: 8DPSK, Channel 39, 3 GHz - 18 GHz

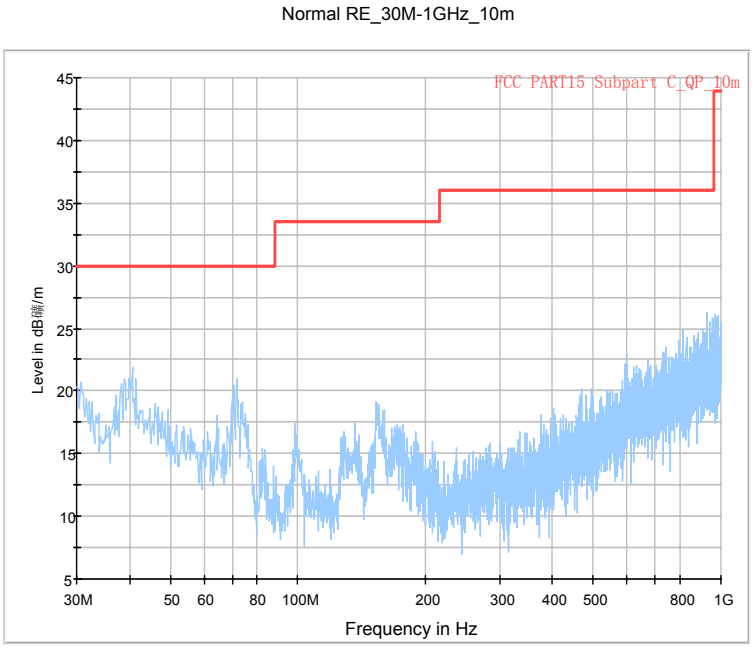


Fig.88. Radiated emission: 8DPSK, Channel 78, 30 MHz - 1 GHz

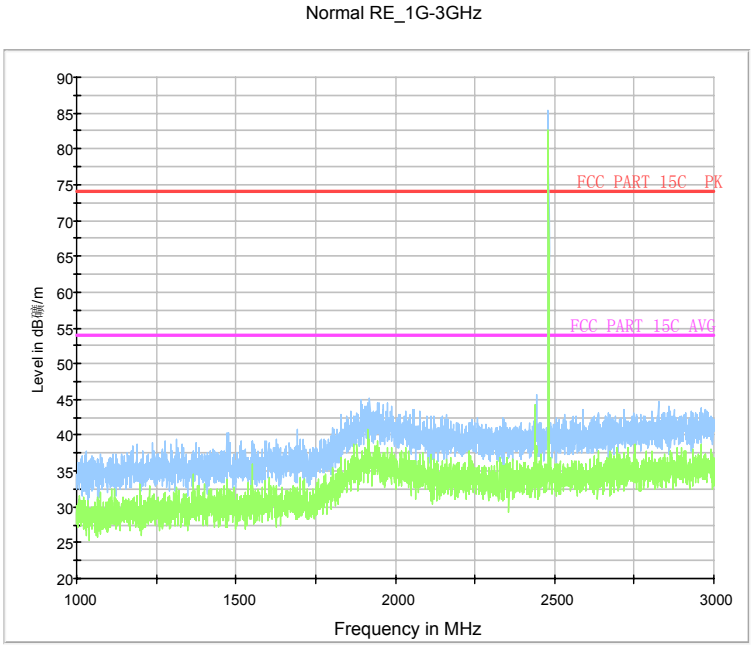


Fig.89. Radiated emission: 8DPSK, Channel 78, 1 GHz - 3 GHz

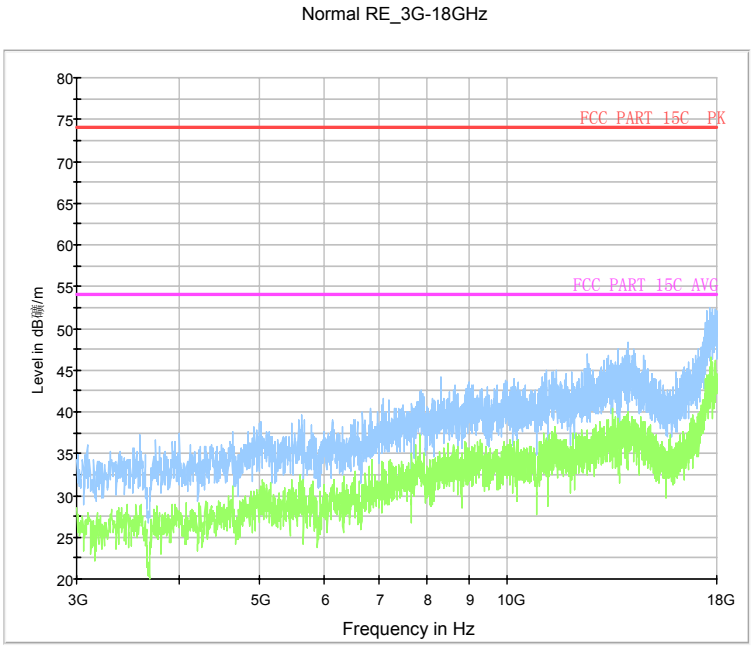


Fig.90. Radiated emission: 8DPSK, Channel 78, 3 GHz - 18 GHz

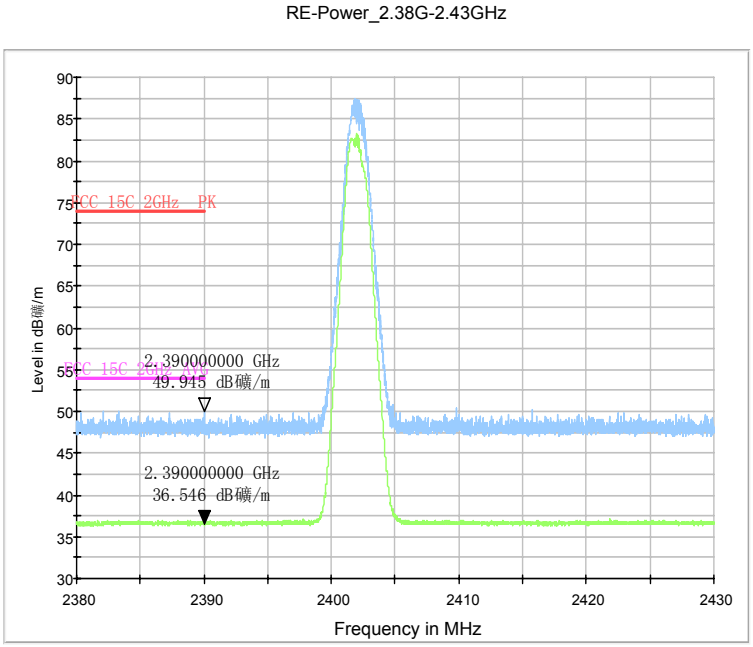


Fig.91. Radiated emission (Power): 8DPSK, low channel

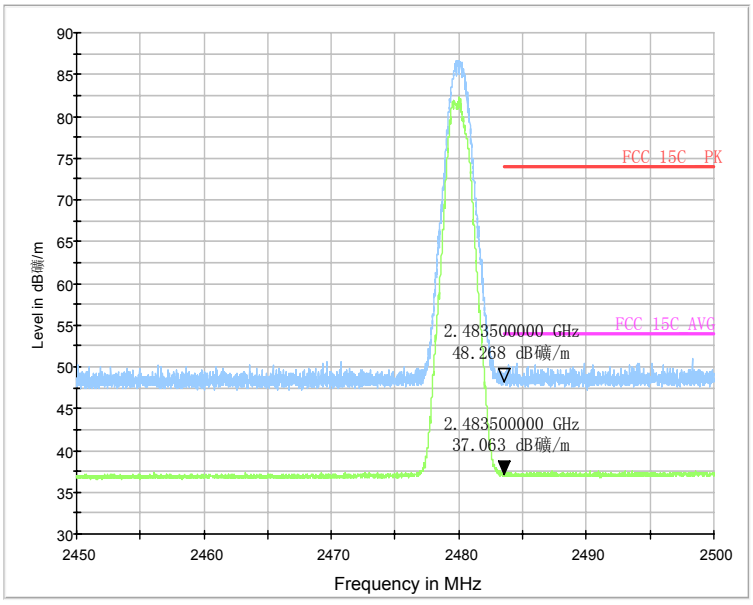


Fig.92. Radiated emission (Power): 8DPSK, high channel

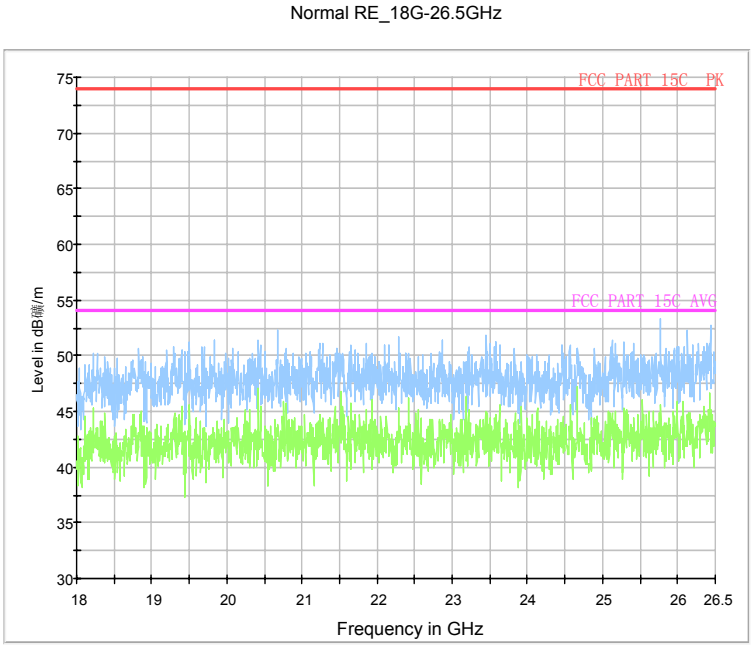


Fig.93. Radiated emission: 8DPSK, 18 GHz - 26 GHz

A.6. Time of Occupancy (Dwell Time)

Measurement Limit:

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

The measurement is made according to ANSI C63.10

According to Part 15.247(a) (1)(iii),the average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed. So the dwell time results below are calculated by the width per pulse (Fig.85 e.g.)×0.4s×79.

Measurement Result:

For GFSK

Channel	Packet	Dwell Time (ms)		Conclusion
39	DH1	Fig.85	108.51	P
		Fig.86		
	DH3	Fig.87	177.06	P
		Fig.88		
	DH5	Fig.89	162.29	P
		Fig.90		

For π/4 DQPSK

Channel	Packet	Dwell Time (ms)		Conclusion
39	DH1	Fig.91	107.38	P
		Fig.92		
	DH3	Fig.93	189.14	P
		Fig.94		
	DH5	Fig.95	179.68	P
		Fig.96		

For 8DPSK

Channel	Packet	Dwell Time (ms)		Conclusion
39	DH1	Fig.97	103.19	P
		Fig.98		
	DH3	Fig.99	185.85	P
		Fig.100		
	DH5	Fig.101	194.53	P
		Fig.102		

Conclusion: PASS

Test graphs as below:

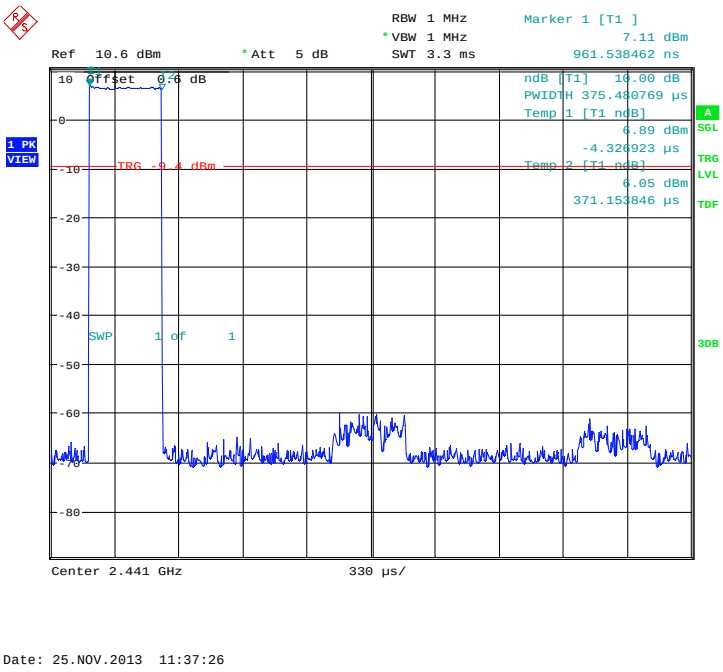


Fig.94. Time of occupancy (Dwell Time): Channel 39, Packet DH1

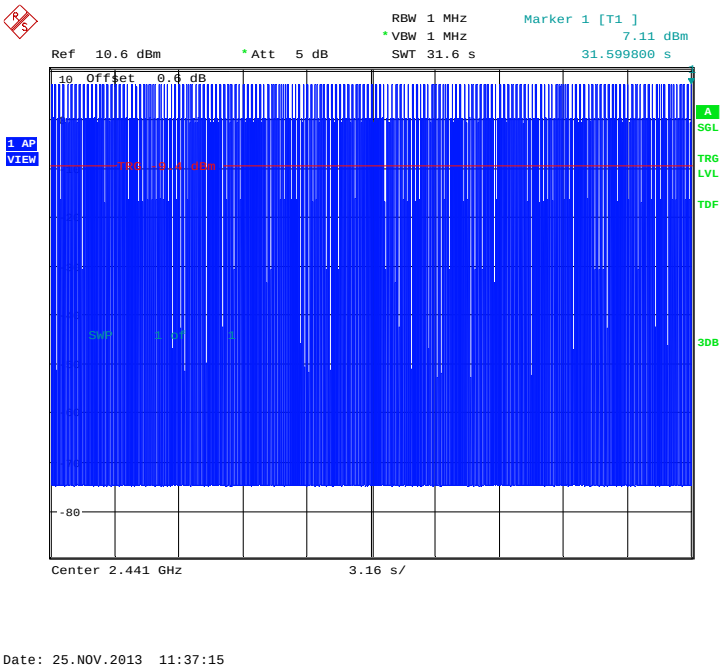


Fig.95. Number of Transmissions Measurement:Channel 39,Packet DH1

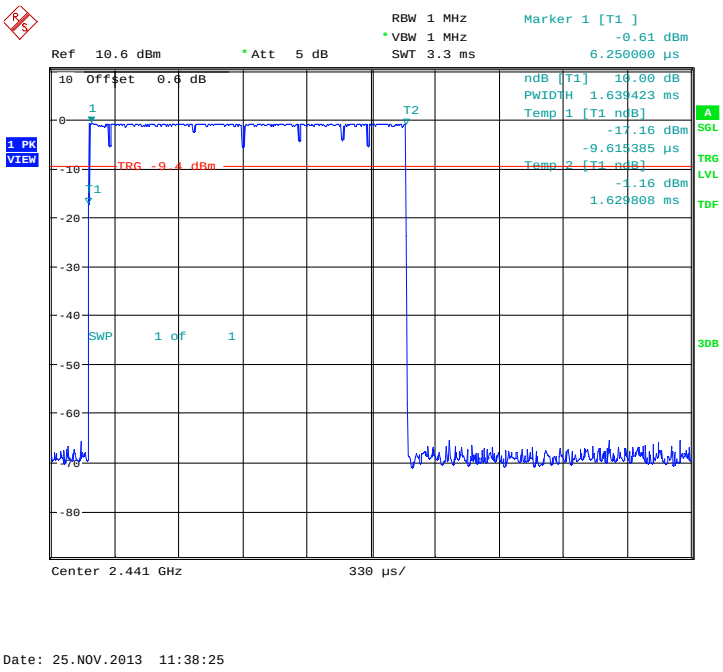


Fig.96. Time of occupancy (Dwell Time): Channel 39, Packet DH3

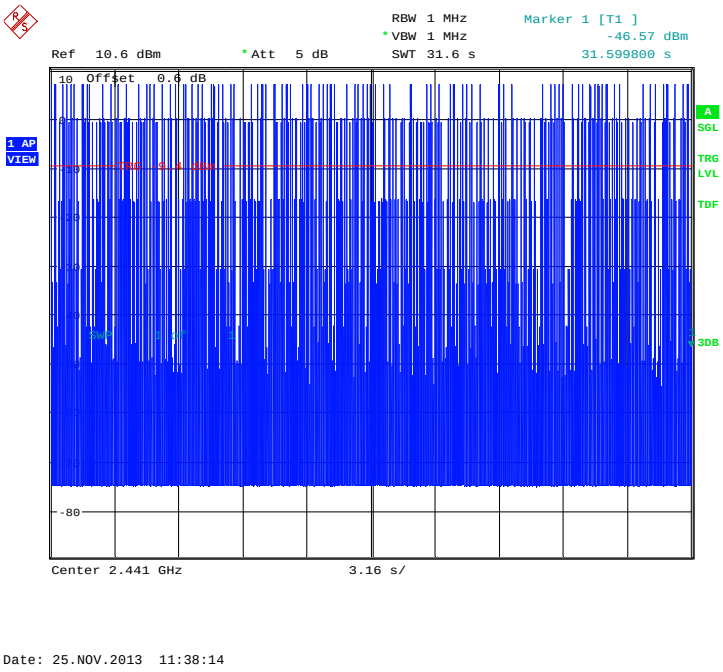


Fig.97. Number of Transmissions Measurement:Channel 39,Packet DH3

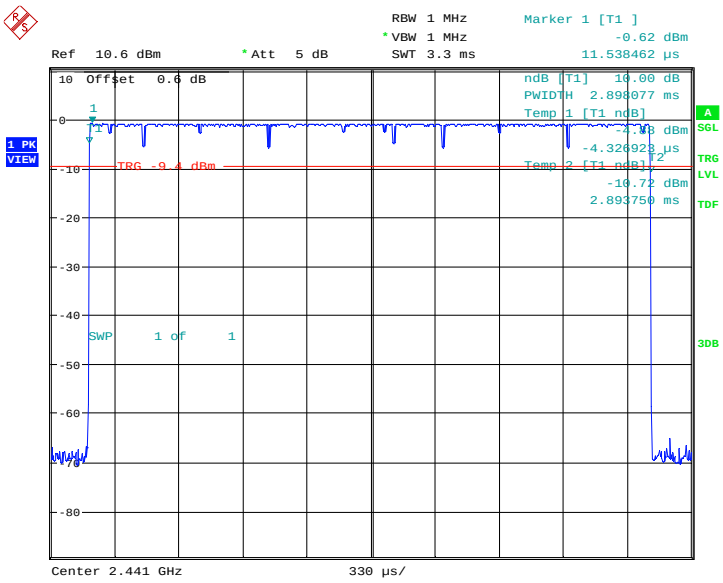


Fig.98. Time of occupancy (Dwell Time): Channel 39, Packet DH5

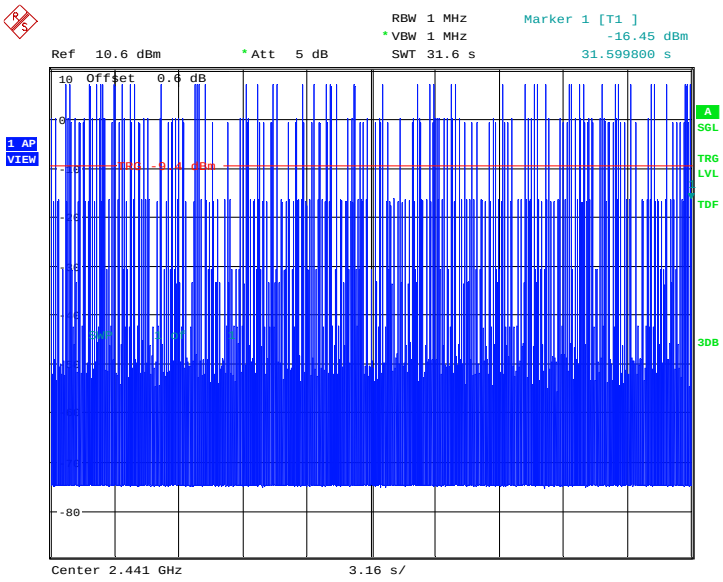


Fig.99. Number of Transmissions Measurement:Channel 39,Packet DH5

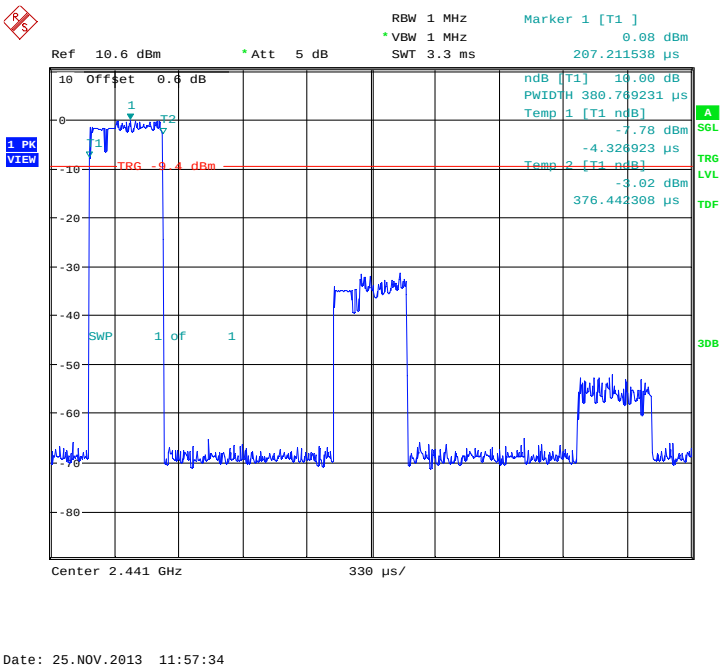


Fig.100. Time of occupancy (Dwell Time): Channel 39, Packet 2-DH1

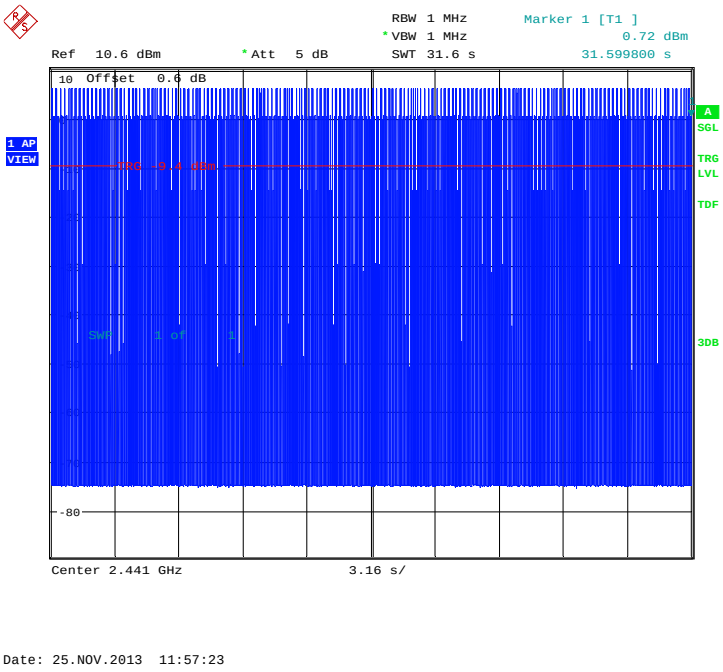


Fig.101. Number of Transmissions Measurement:Channel 39,Packet 2-DH1

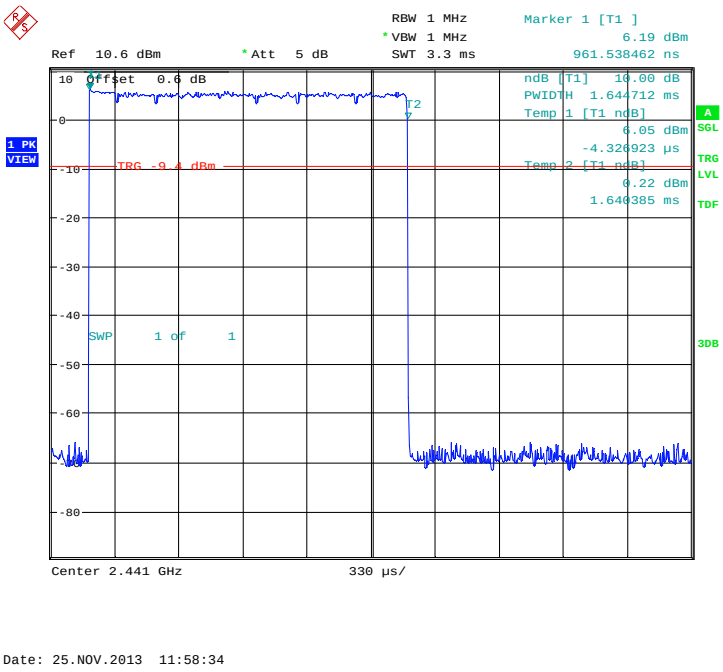


Fig.102. Time of occupancy (Dwell Time): Channel 39, Packet 2-DH3

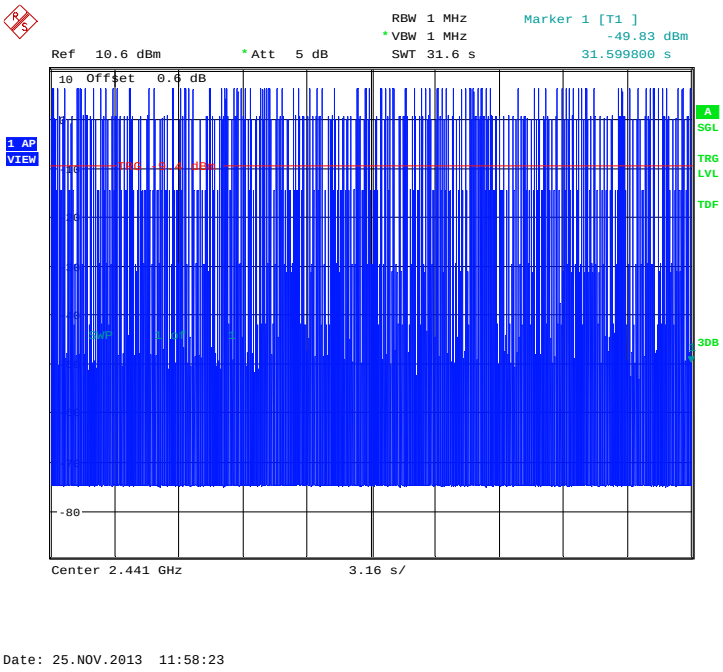


Fig.103. Number of Transmissions Measurement:Channel 39,Packet 2-DH3

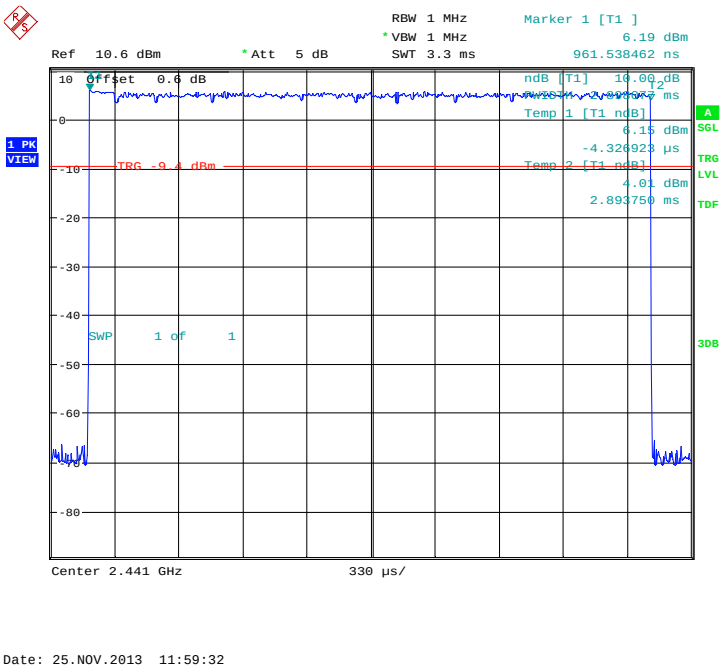


Fig.104. Time of occupancy (Dwell Time): Channel 39, Packet 2-DH5

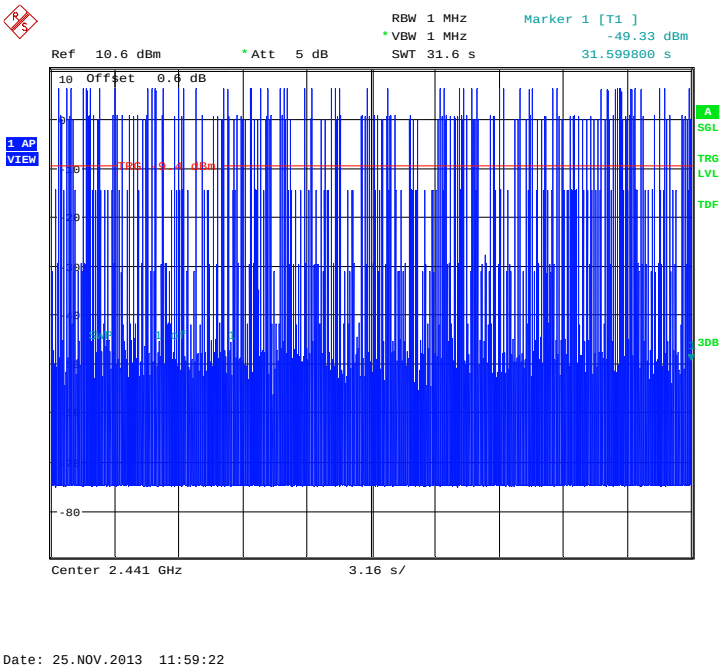


Fig.105. Number of Transmissions Measurement:Channel 39,Packet 2-DH5

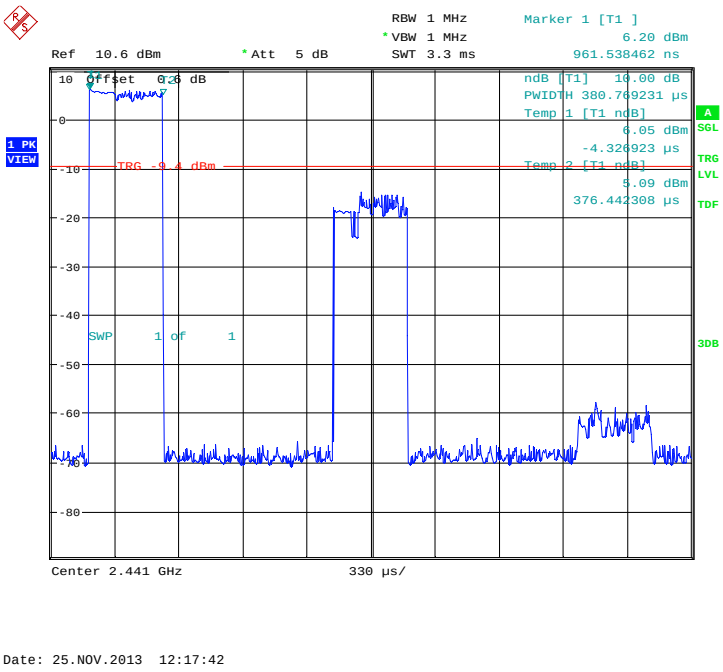


Fig.106. Time of occupancy (Dwell Time): Channel 39, Packet 3-DH1

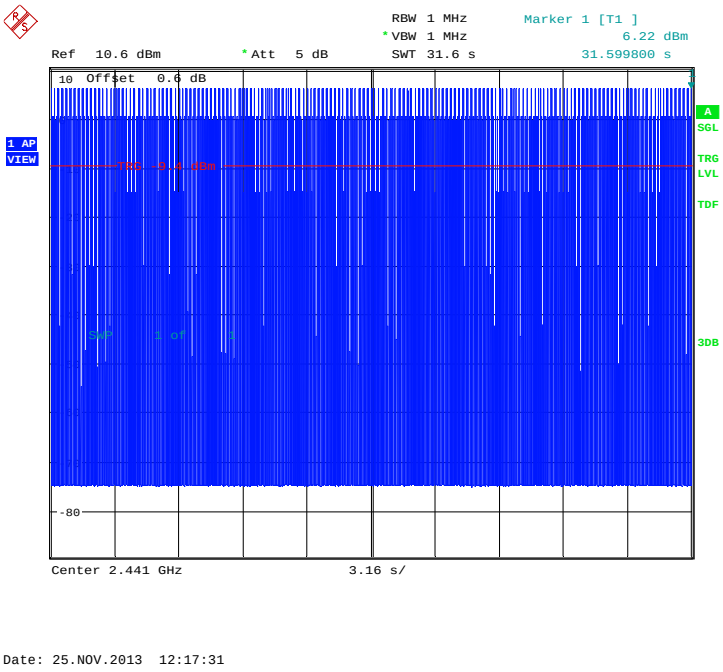


Fig.107. Number of Transmissions Measurement:Channel 39,Packet 3-DH1

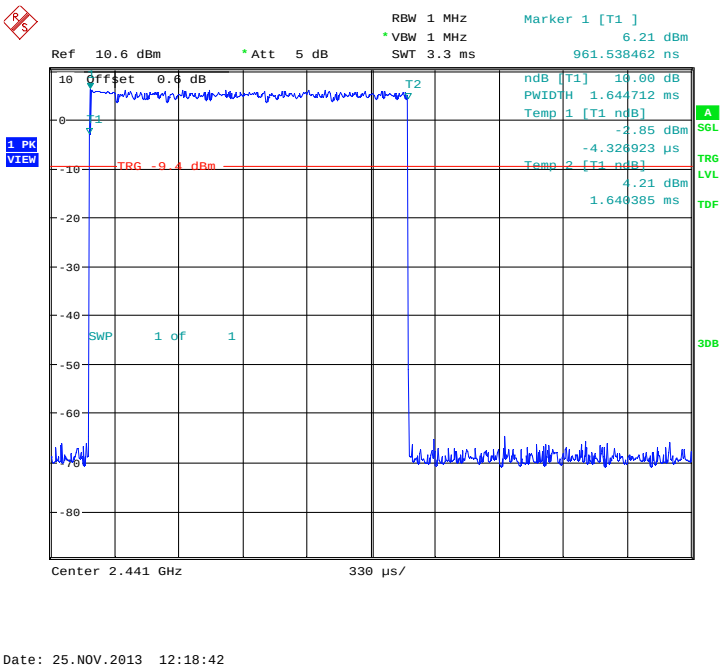


Fig.108. Time of occupancy (Dwell Time): Channel 39, Packet 3-DH3

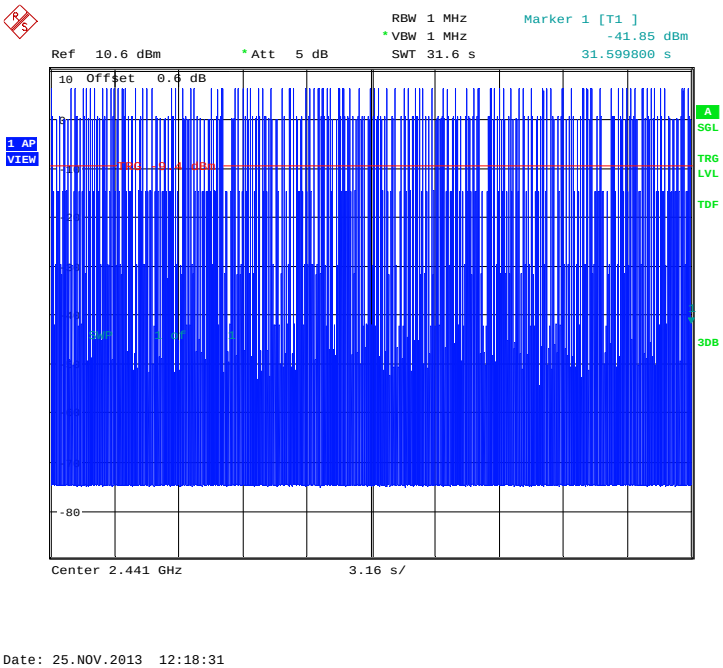


Fig.109. Number of Transmissions Measurement:Channel 39,Packet 3-DH3

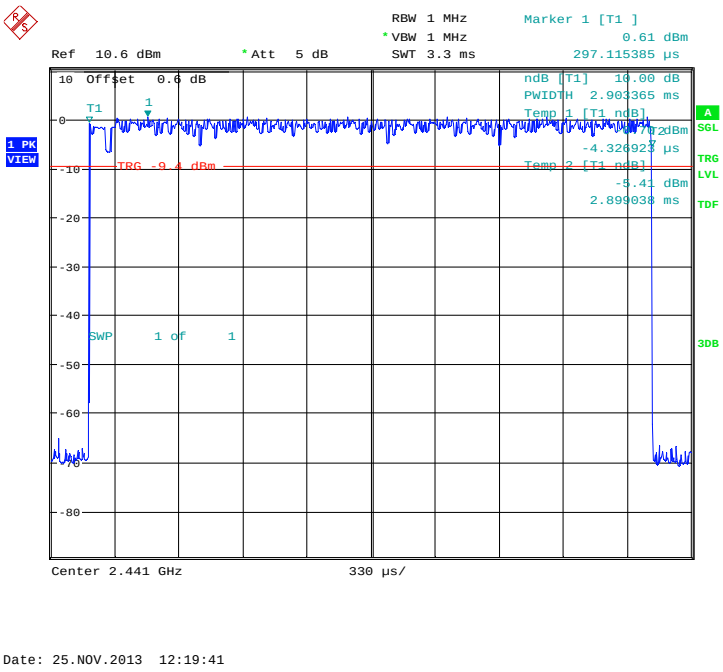


Fig.110. Time of occupancy (Dwell Time): Channel 39, Packet 3-DH5

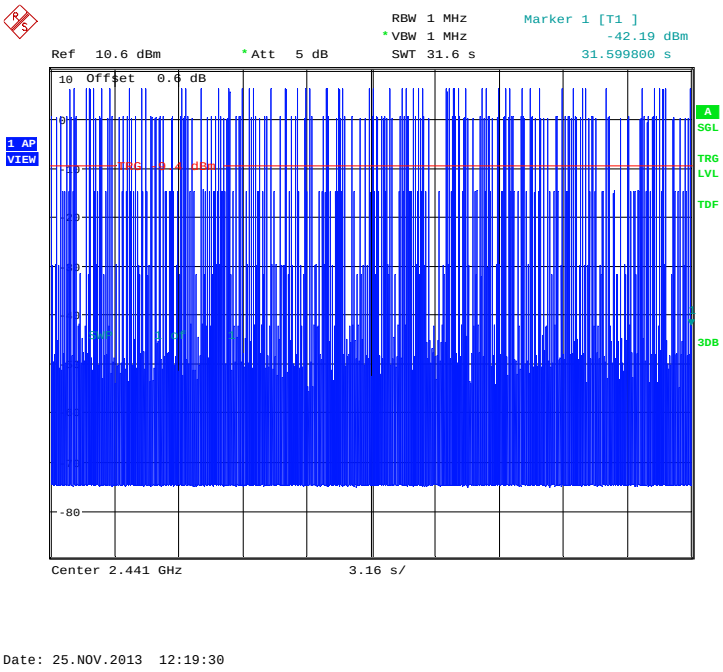


Fig.111. Number of Transmissions Measurement:Channel 39,Packet 3-DH5

A.7. 20dB Bandwidth

Measurement Limit:

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

The measurement is made according to ANSI C63.10

* 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.103	870.19	NA
39	Fig.104	870.19	NA
78	Fig.105	870.19	NA

Forπ/4 DQPSK

Channel	20dB Bandwidth (kHz)		Conclusion
0	Fig.106	1274.04	NA
39	Fig.107	1259.62	NA
78	Fig.108	1274.04	NA

For 8DPSK

Channel	20dB Bandwidth (kHz)		Conclusion
0	Fig.109	1288.46	NA
39	Fig.110	1211.54	NA
78	Fig.111	1269.23	NA

Conclusion: NA

Test graphs as below:

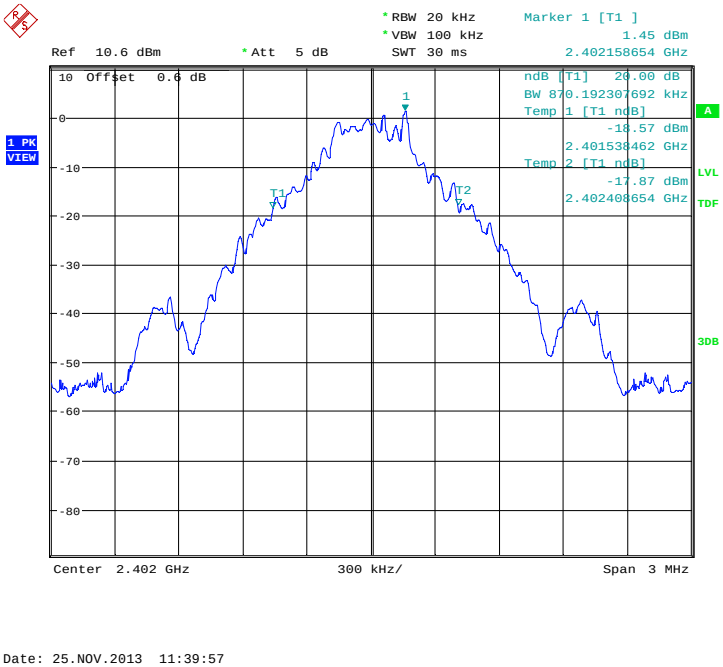


Fig.112. 20dB Bandwidth: GFSK, Channel 0

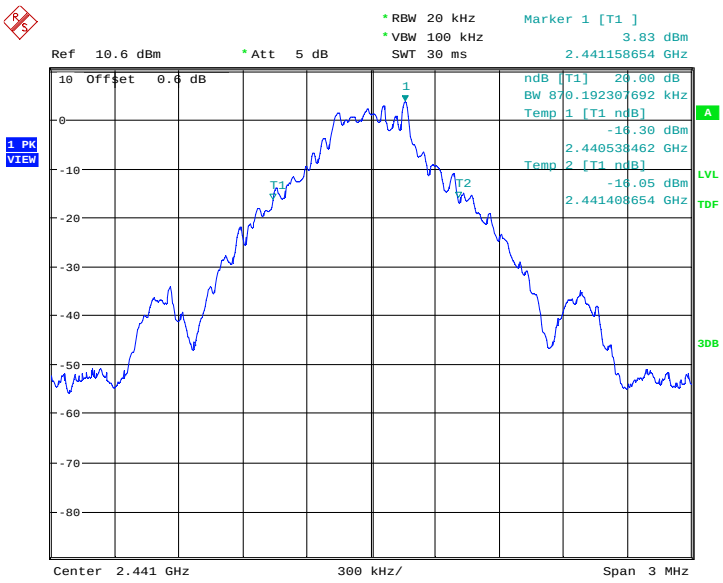


Fig.113. 20dB Bandwidth: GFSK, Channel 39

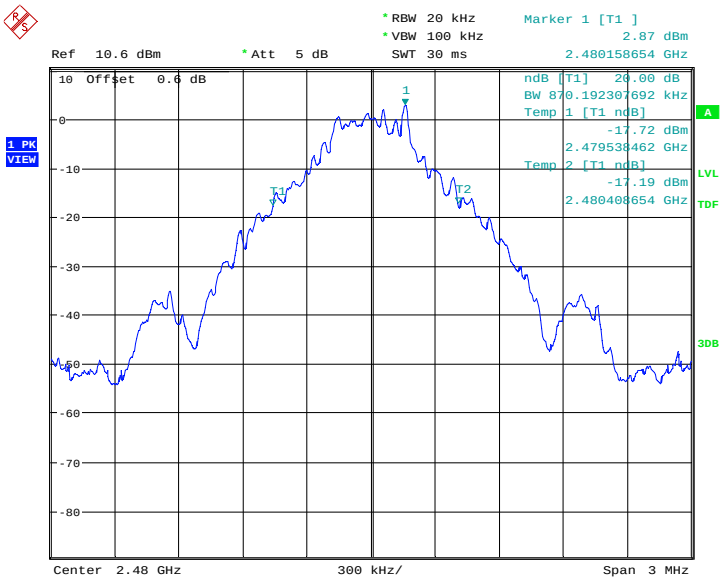


Fig.114. 20dB Bandwidth: GFSK, Channel 78

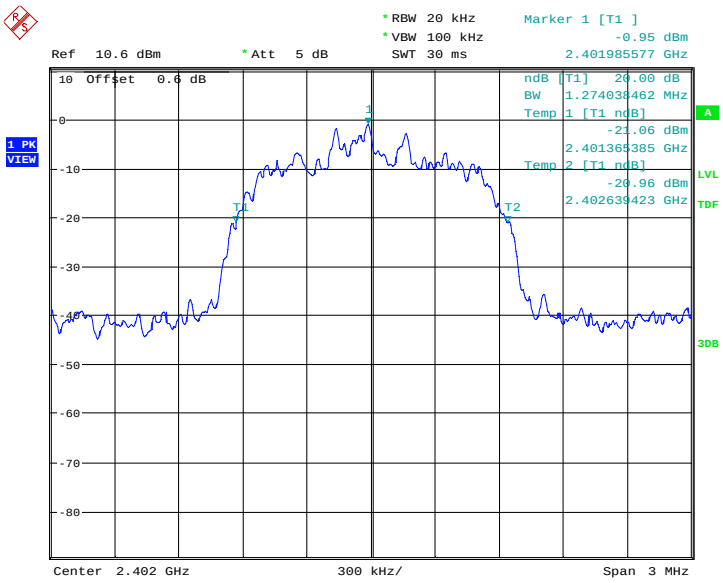


Fig.115. 20dB Bandwidth: π/4 DQPSK, Channel 0

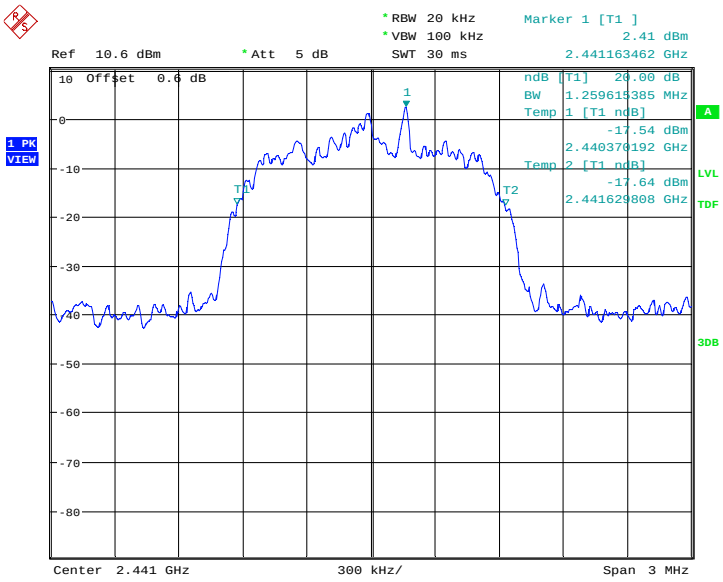
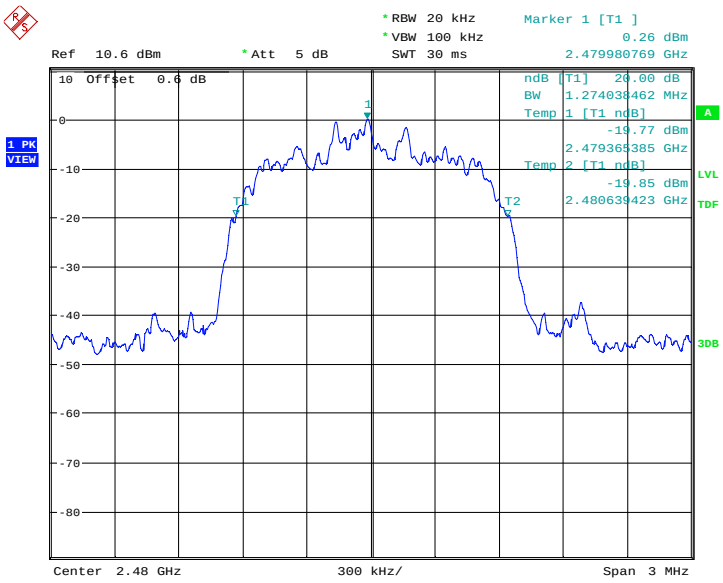
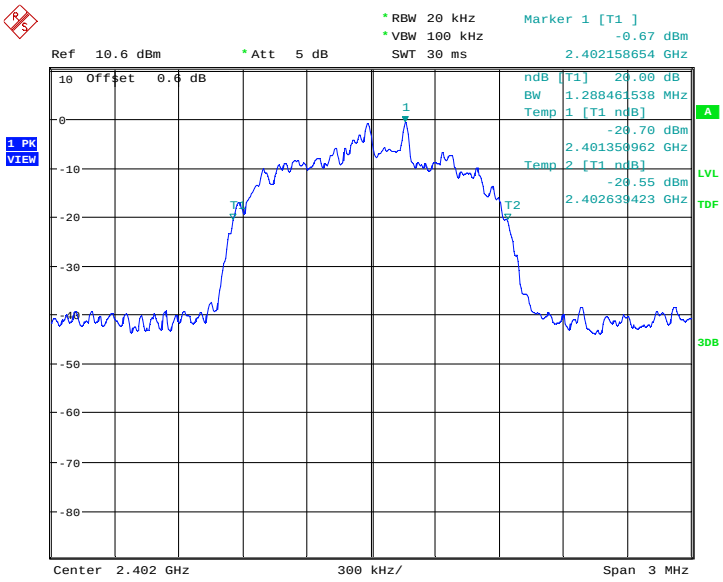


Fig.116. 20dB Bandwidth: π/4 DQPSK, Channel 39



Date: 25.NOV.2013 12:01:08

Fig.117. 20dB Bandwidth: π/4 DQPSK, Channel 78



Date: 25.NOV.2013 12:20:14

Fig.118. 20dB Bandwidth: 8DPSK, Channel 0

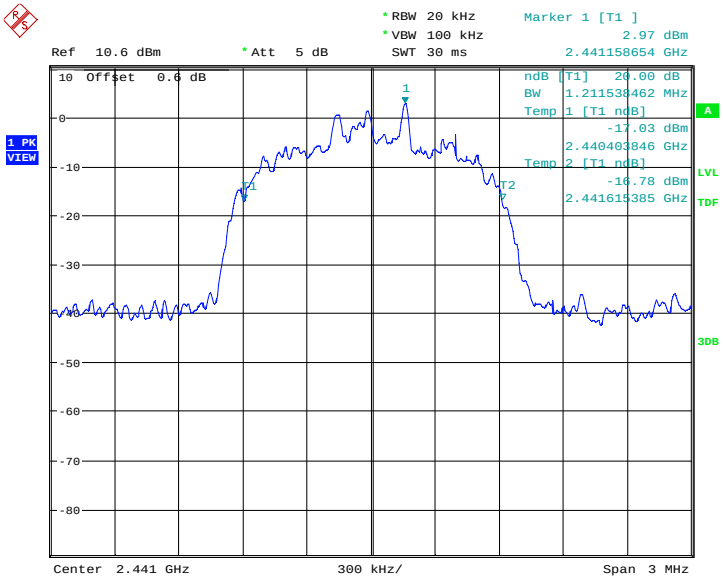


Fig.119. 20dB Bandwidth: 8DPSK, Channel 39

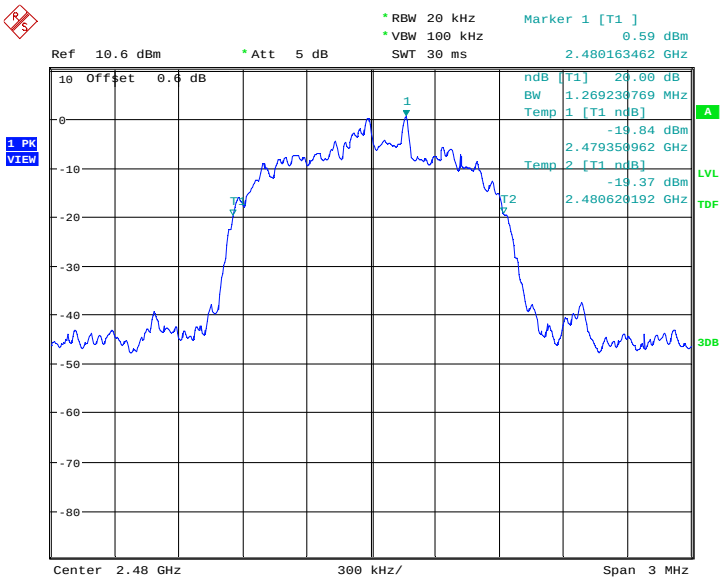


Fig.120. 20dB Bandwidth: 8DPSK, Channel 78

A.8. Carrier Frequency Separation

Measurement Limit:

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

The measurement is made according to ANSI C63.10

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

Measurement Result:

For GFSK

Channel	Carrier frequency separation (kHz)		Conclusion
39	Fig.112	1134.62	P

For π/4 DQPSK

Channel	Carrier frequency separation (kHz)		Conclusion
39	Fig.113	971.15	P

For 8DPSK

Channel	Carrier frequency separation (kHz)		Conclusion
39	Fig.114	1134.62	P

Conclusion: PASS

Test graphs as below:

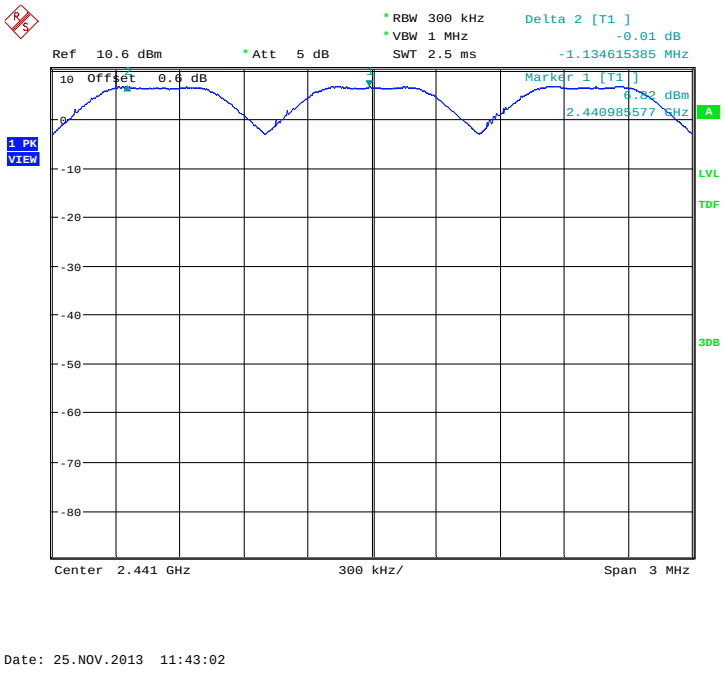


Fig.121. Carrier frequency separation measurement: GFSK, Channel 39

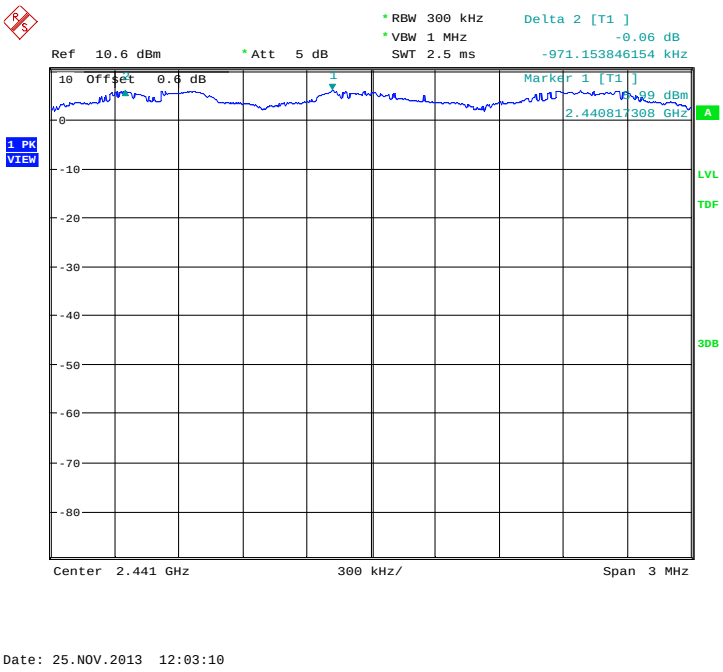


Fig.122. Carrier frequency separation measurement: π/4 DQPSK, Channel 39

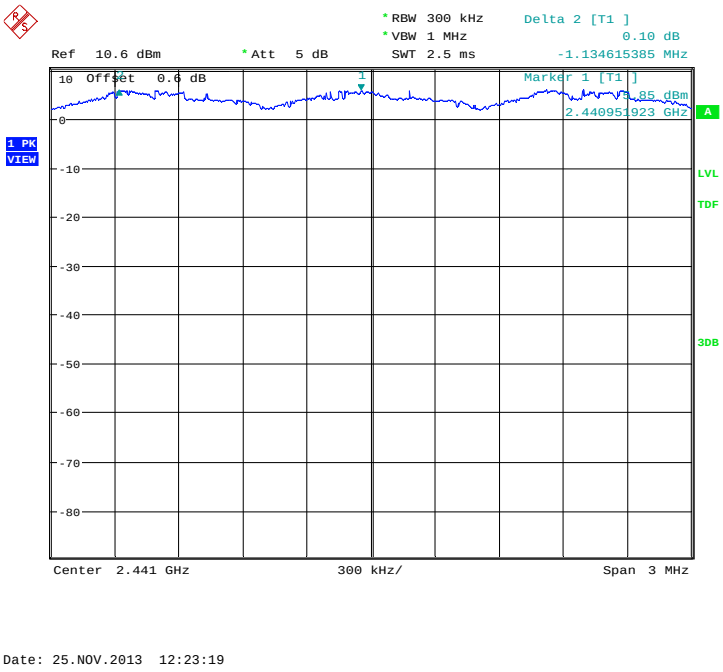


Fig.123. Carrier frequency separation measurement: 8DPSK, Channel 39

A.9. Number of Hopping Channels

Measurement Limit:

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

The measurement is made according to ANSI C63.10

Measurement Result:

For GFSK

Channel	Number of hopping channels		Conclusion
0~39	Fig.115	79	P
40~78	Fig.116		

Forπ/4 DQPSK

Channel	Number of hopping channels		Conclusion
0~39	Fig.117	79	P
40~78	Fig.118		

For 8DPSK

Channel	Number of hopping channels		Conclusion
0~39	Fig.119	79	P
40~78	Fig.120		

Conclusion: PASS

Test graphs as below:

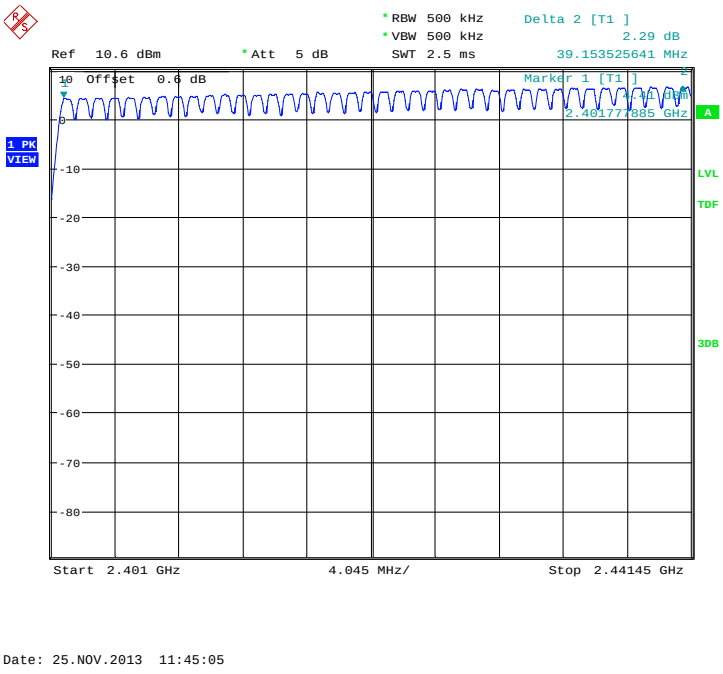


Fig.124. Number of hopping frequencies: GFSK, Channel 0 - 39

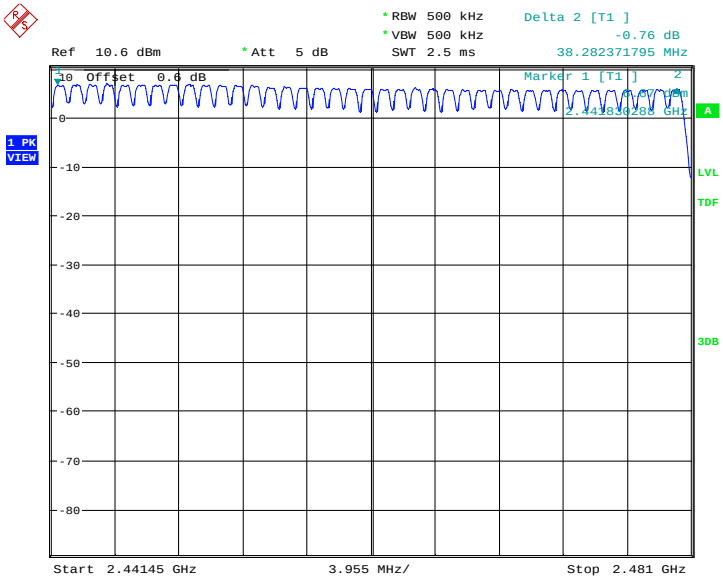


Fig.125. Number of hopping frequencies: GFSK, Channel 40 - 78

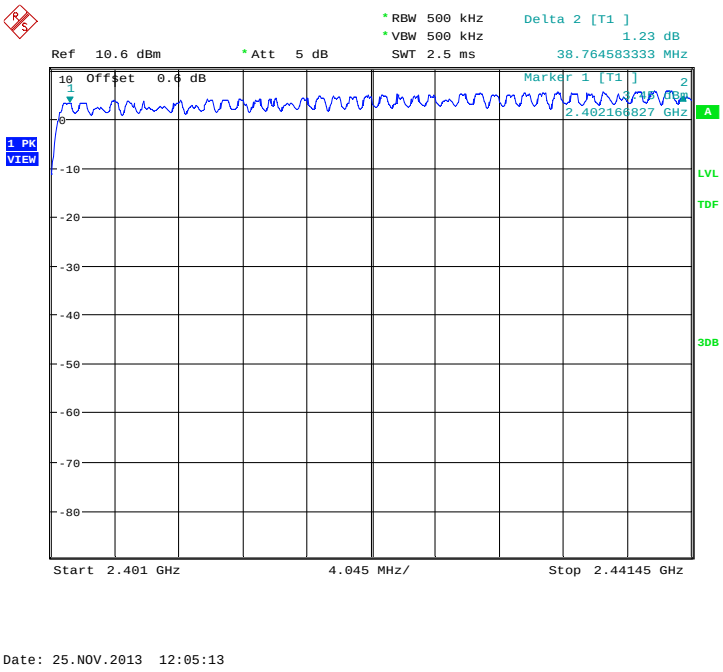


Fig.126. Number of hopping frequencies: π/4 DQPSK, Channel 0 - 39

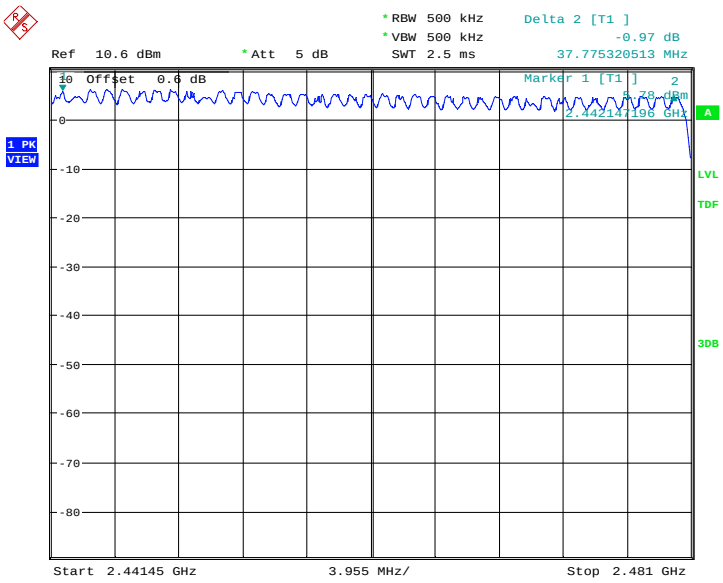


Fig.127. Number of hopping frequencies: π/4 DQPSK, Channel 40 - 78

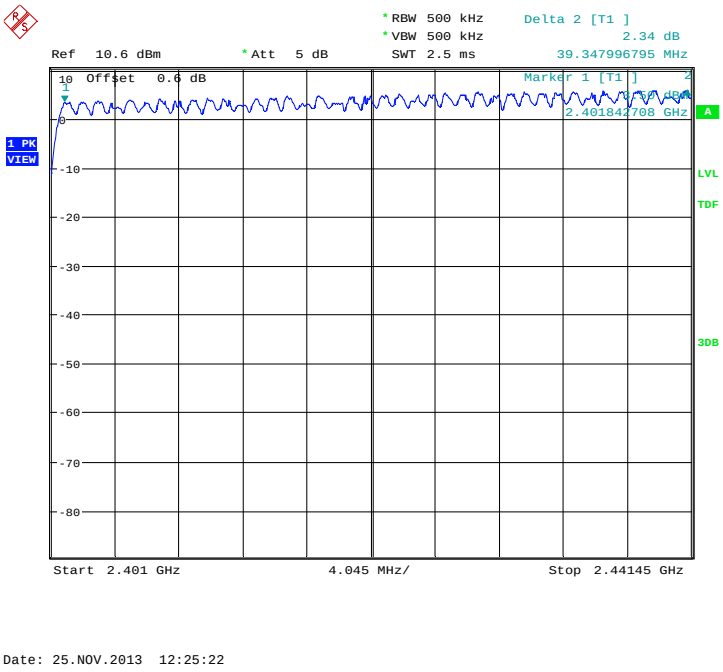


Fig.128. Number of hopping frequencies: 8DPSK, Channel 0 - 39

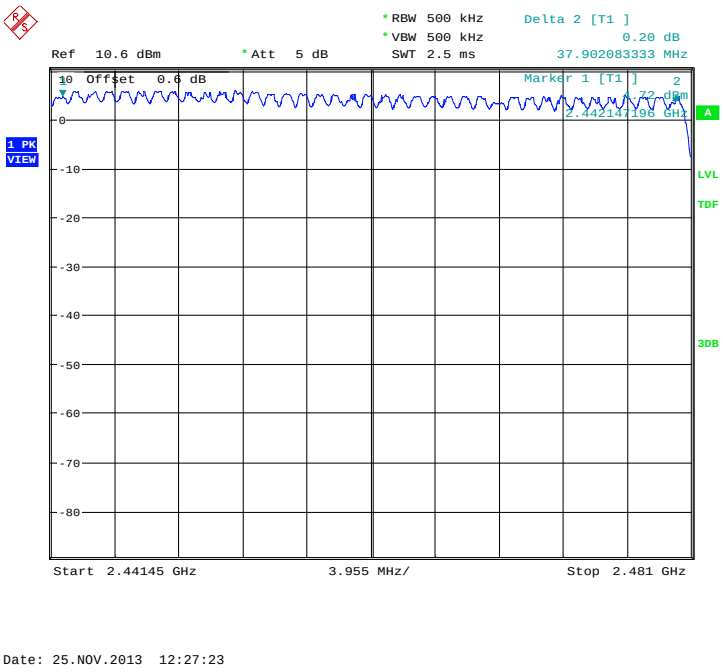


Fig.129. Number of hopping frequencies: 8DPSK, Channel 40 - 78

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 (dBμV)	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)

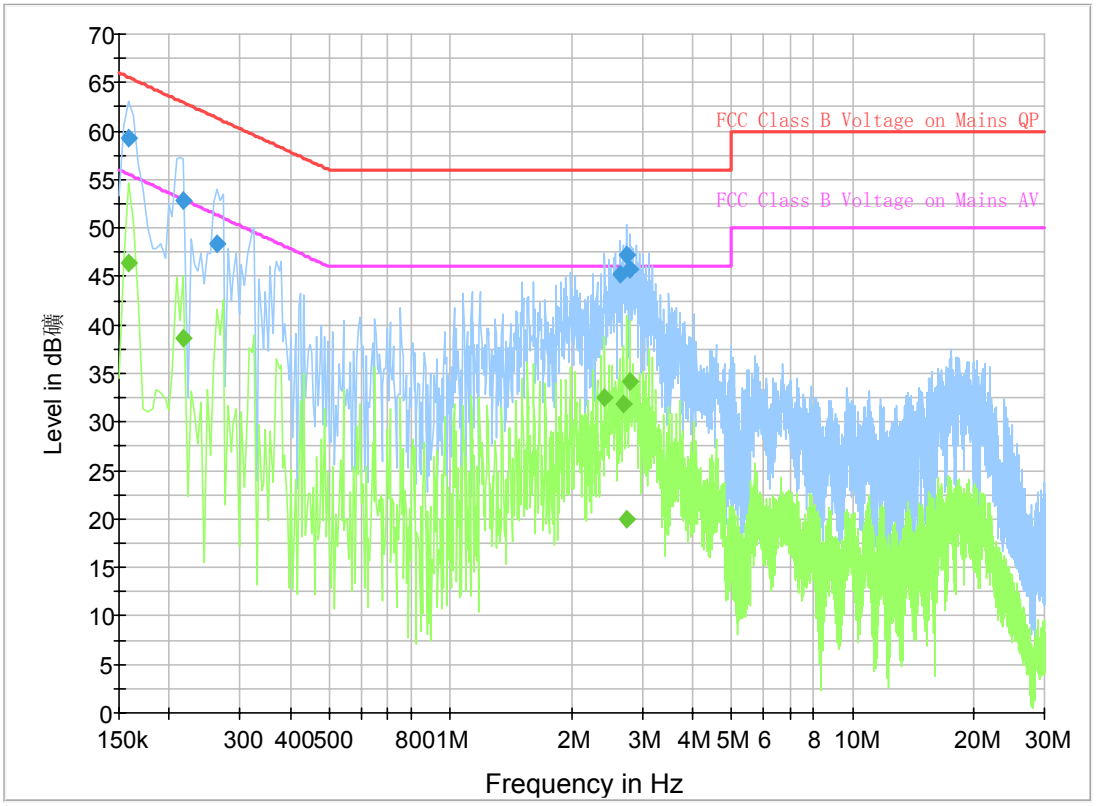
Frequency range (MHz)	Average Limit (dBμV)	Conclusion
0.15 to 0.5	56 to 46	P
0.5 to 5	46	
5 to 30	50	
NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.		

The measurement is made according to ANSI C63.10

Conclusion: PASS

Test graphs as below:

Traffic:



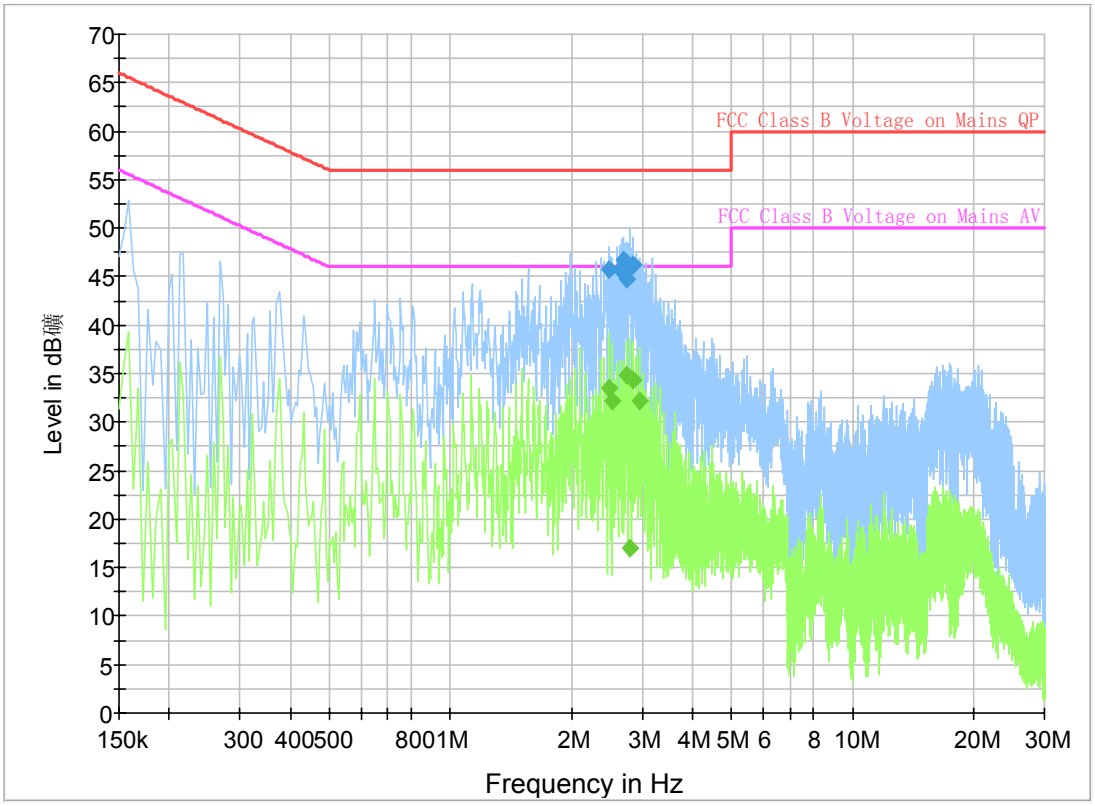
Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.159000	59.2	GND	L1	9.8	6.3	65.5
0.217500	52.8	GND	L1	9.8	10.1	62.9
0.262500	48.3	GND	L1	9.8	13.1	61.4
2.638500	45.3	GND	L1	9.7	10.7	56.0
2.742000	47.2	GND	L1	9.7	8.8	56.0
2.800500	45.7	GND	L1	9.7	10.3	56.0

Final Result 2

Frequency (MHz)	Average (dBµV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.159000	46.3	GND	L1	9.8	9.2	55.5
0.217500	38.7	GND	L1	9.8	14.3	52.9
2.422500	32.6	GND	L1	9.7	13.4	46.0
2.683500	31.9	GND	L1	9.7	14.1	46.0
2.742000	19.9	GND	L1	9.7	26.1	46.0
2.800500	34.1	GND	L1	9.7	11.9	46.0

IDLE：



Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
2.476500	45.8	GND	L1	9.7	10.2	56.0
2.638500	45.7	GND	L1	9.7	10.3	56.0
2.692500	46.6	GND	L1	9.7	9.4	56.0
2.751000	44.7	GND	L1	9.7	11.3	56.0
2.796000	46.0	GND	L1	9.7	10.0	56.0
2.854500	46.3	GND	L1	9.7	9.7	56.0

Final Result 2

Frequency (MHz)	Average (dBµV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
2.476500	33.6	GND	L1	9.7	12.4	46.0
2.535000	32.2	GND	L1	9.7	13.8	46.0
2.746500	34.8	GND	L1	9.7	11.2	46.0
2.796000	17.0	GND	L1	9.7	29.0	46.0
2.854500	34.3	GND	L1	9.7	11.7	46.0
2.958000	32.2	GND	L1	9.7	13.8	46.0

***** END OF REPORT BODY *****