

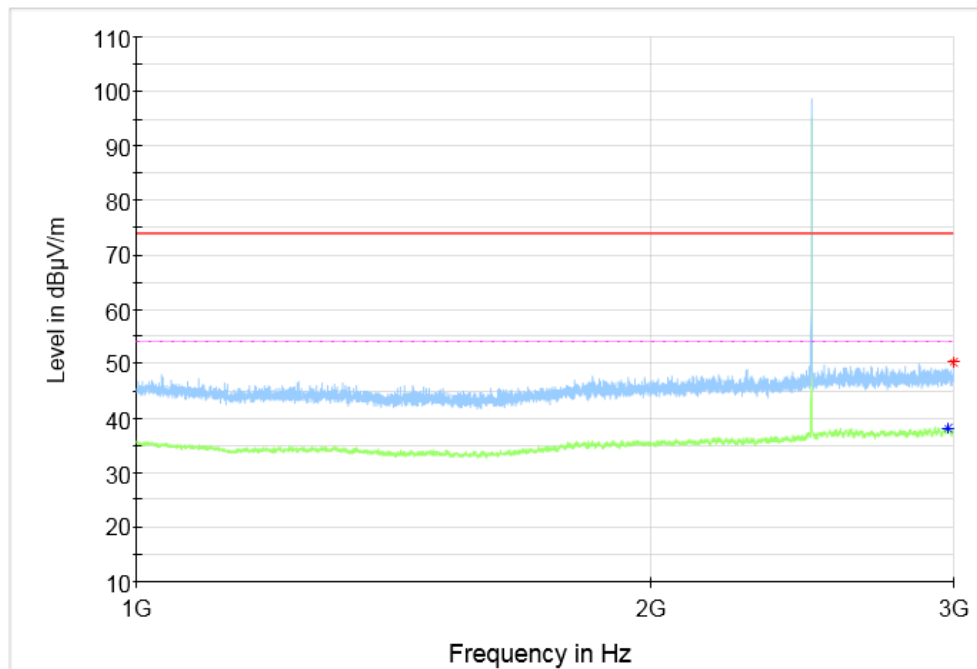


Fig. 62 Radiated Spurious Emission (8DPSK, Ch78, 1 GHz ~3 GHz)

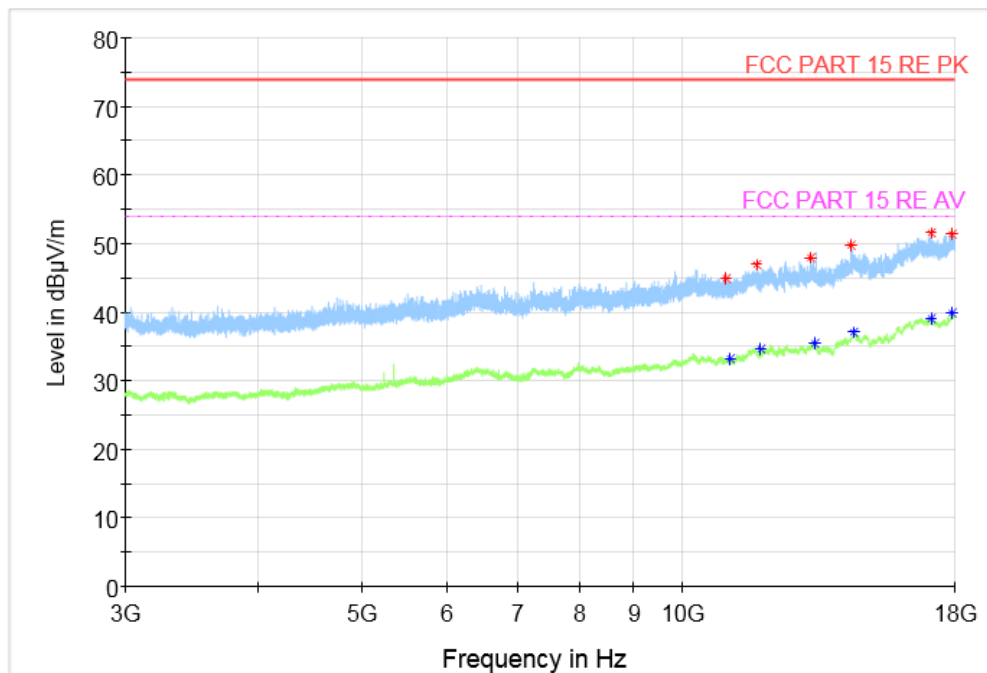


Fig. 63 Radiated Spurious Emission (8DPSK, Ch78, 3 GHz ~18 GHz)

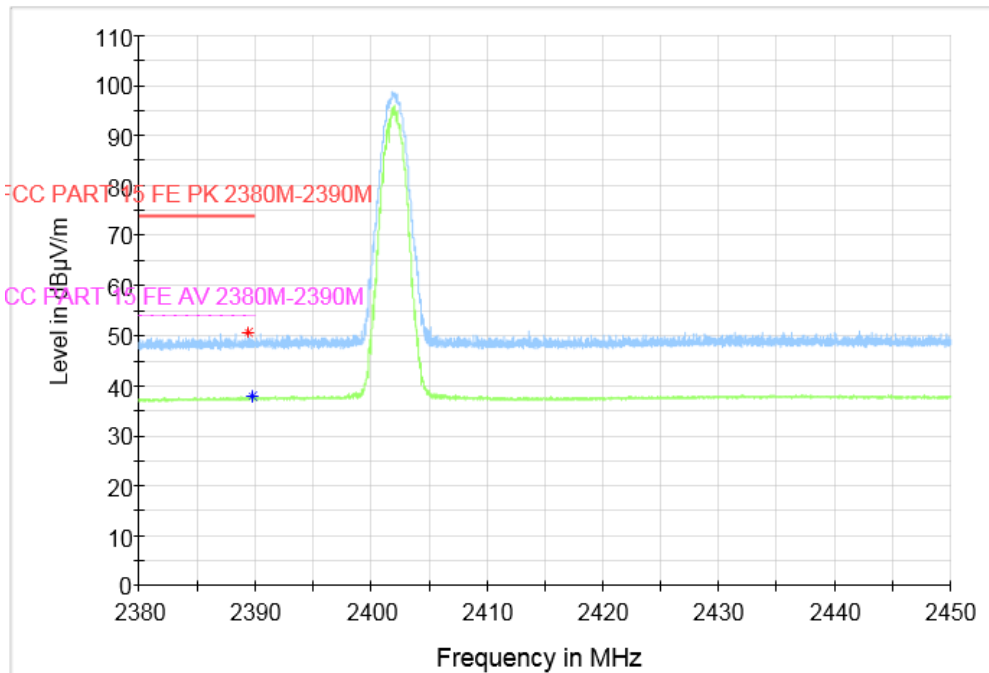


Fig. 64 Radiated Band Edges (8DPSK, Ch0, 2380GHz~2450GHz)

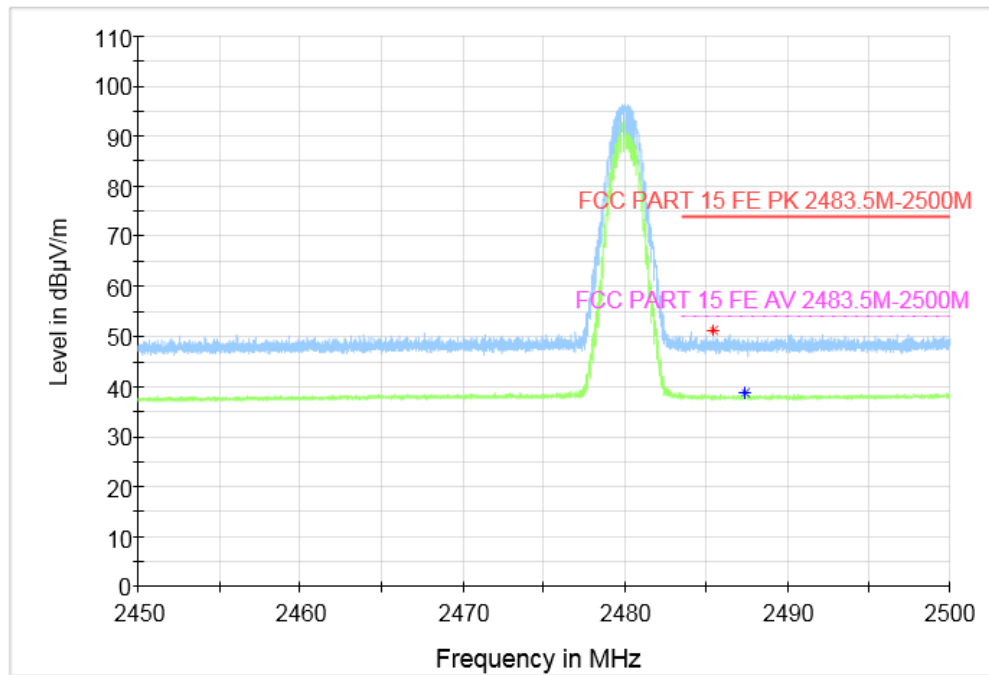


Fig. 65 Radiated Band Edges (8DPSK, Ch78, 2450GHz~2500GHz)

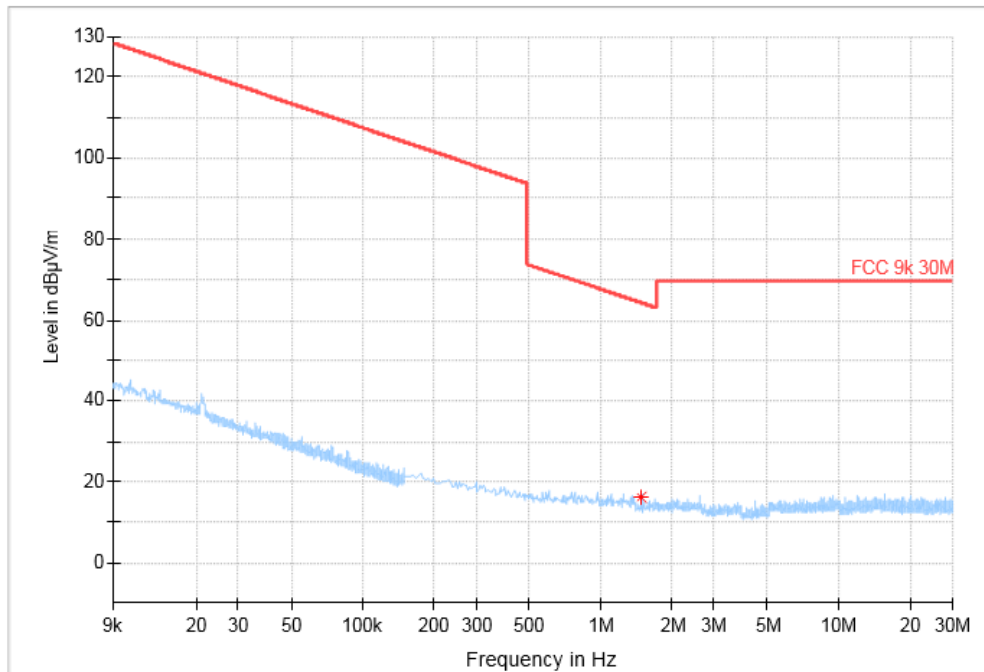


Fig. 66 Radiated Spurious Emission (All Channels, 9 kHz ~30 MHz)

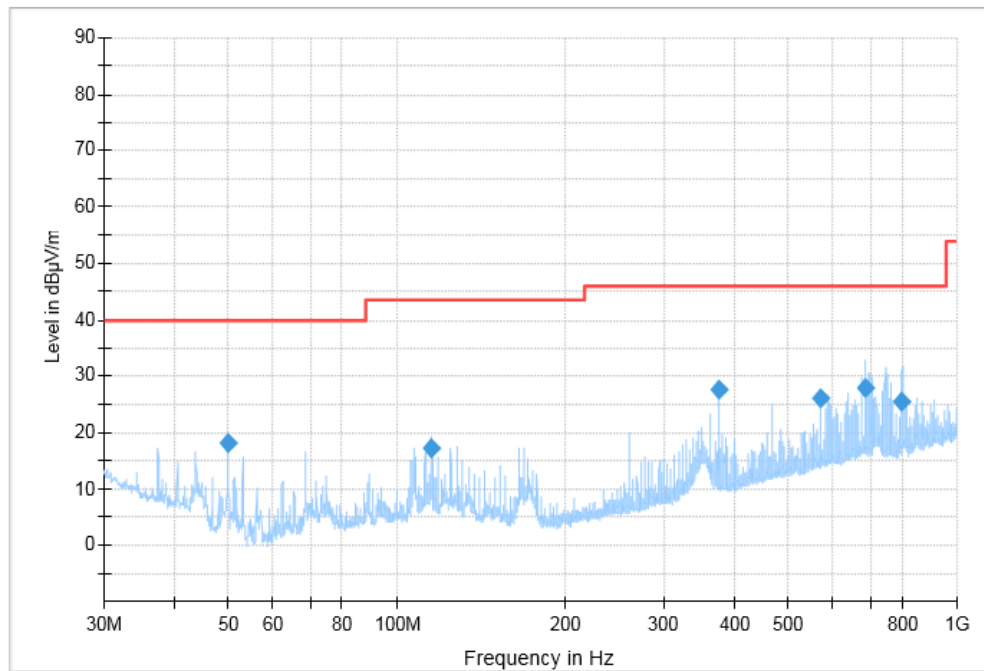


Fig. 67 Radiated Spurious Emission (All Channels, 30 MHz ~1 GHz)

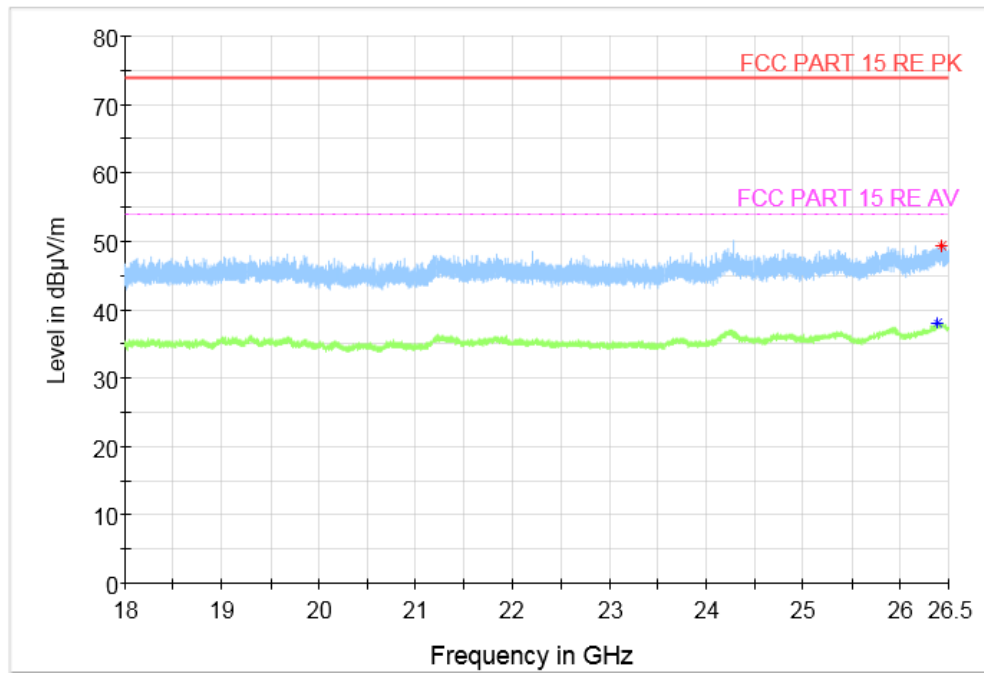


Fig. 68 Radiated Spurious Emission (All Channels, 18 GHz ~26.5 GHz)

A.5 20dB Bandwidth

Measurement Limit:

Standard	Limit (kHz)
FCC 47 CFR Part 15.247 (a)	/

Measurement Result:

Mode	Channel	20dB Bandwidth (KHz)		conclusion
GFSK	0	Fig.69	943.50	/
	39	Fig.70	944.25	
	78	Fig.71	945.00	
$\pi/4$ DQPSK	0	Fig.72	1276.50	/
	39	Fig.73	1293.00	
	78	Fig.74	1270.50	
8DPSK	0	Fig.75	1290.00	/
	39	Fig.76	1291.50	
	78	Fig.77	1260.75	

See below for test graphs.

Conclusion: PASS

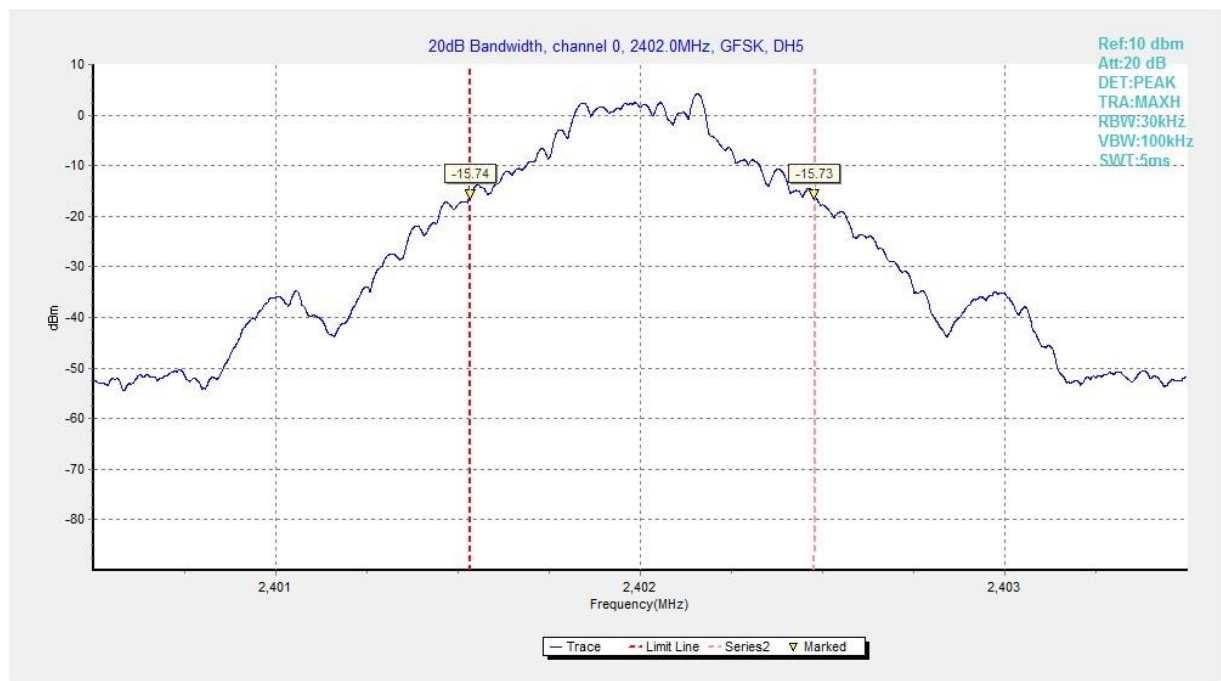


Fig. 69 20dB Bandwidth (GFSK, Ch 0)

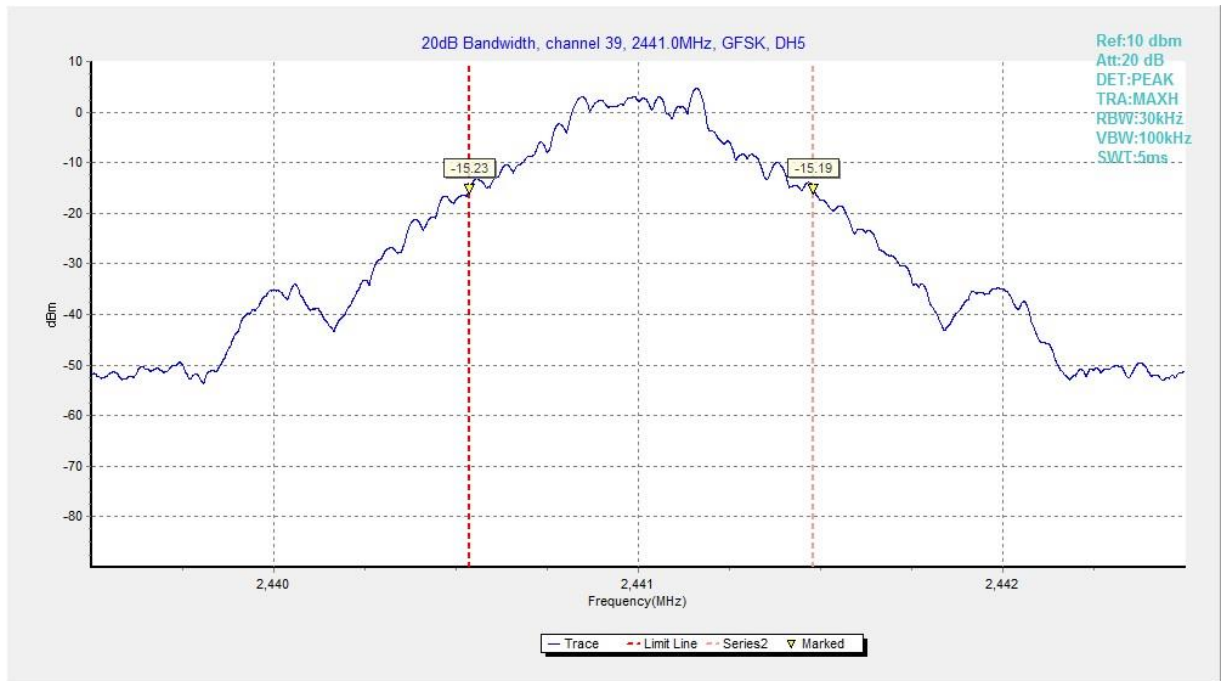


Fig. 70 20dB Bandwidth (GFSK, Ch 39)

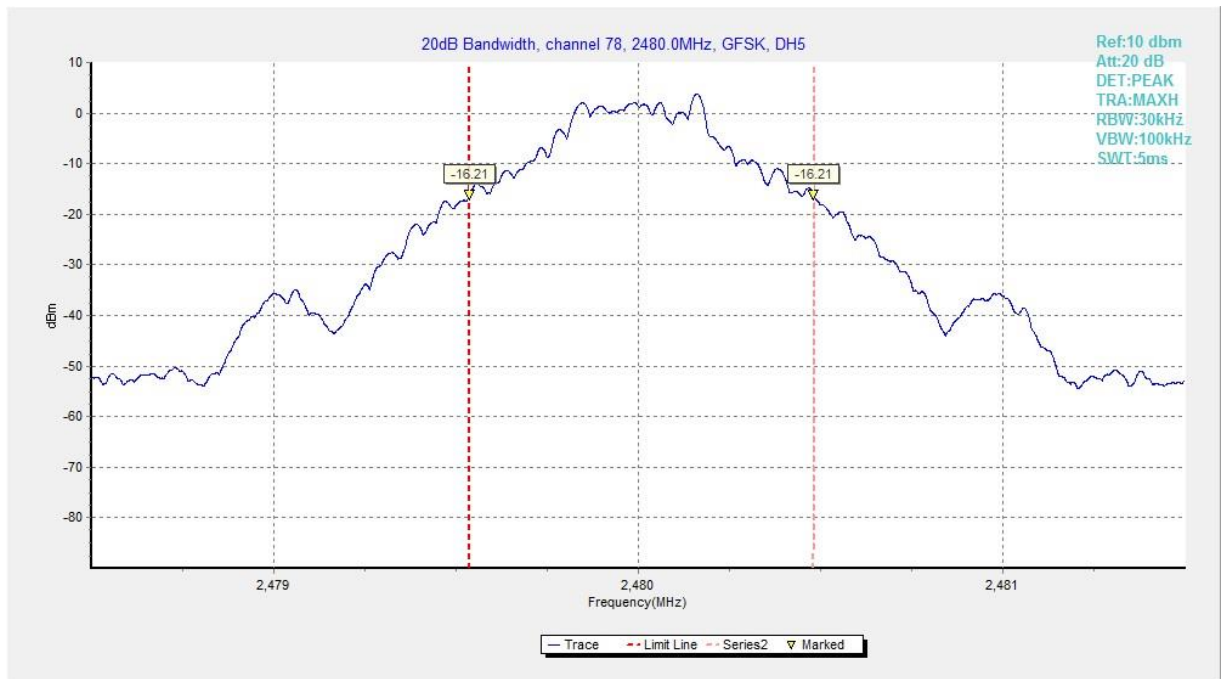


Fig. 71 20dB Bandwidth (GFSK, Ch 78)

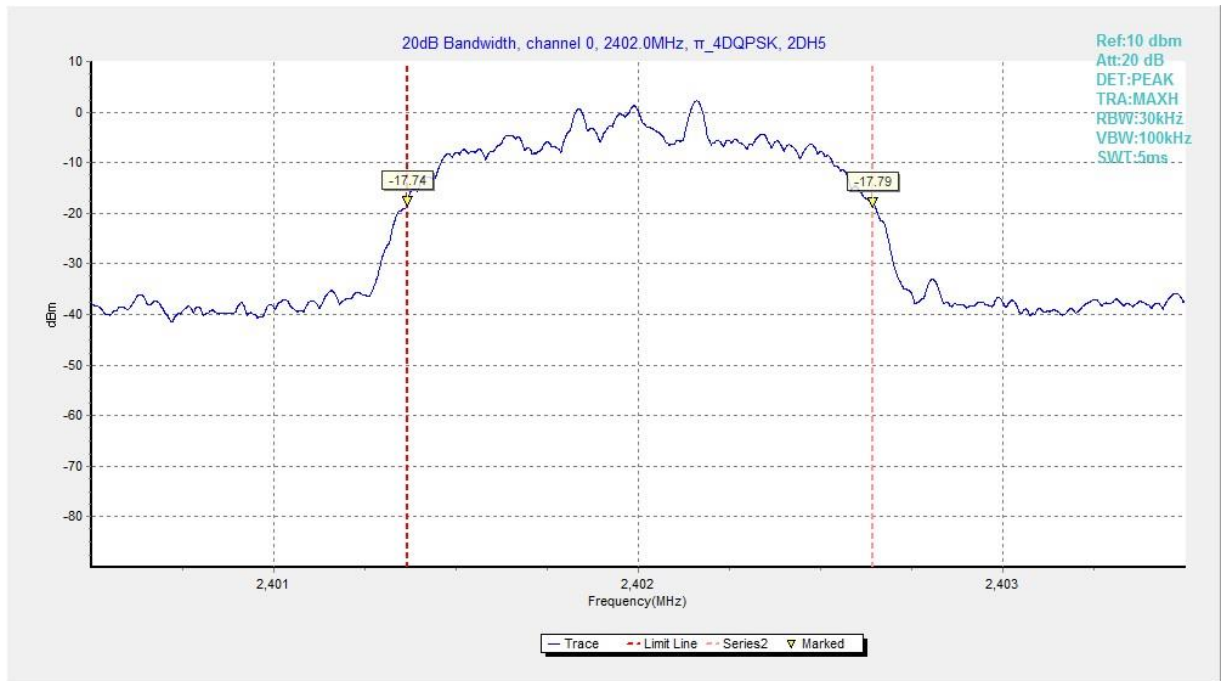


Fig. 72 20dB Bandwidth ($\pi/4$ DQPSK, Ch 0)

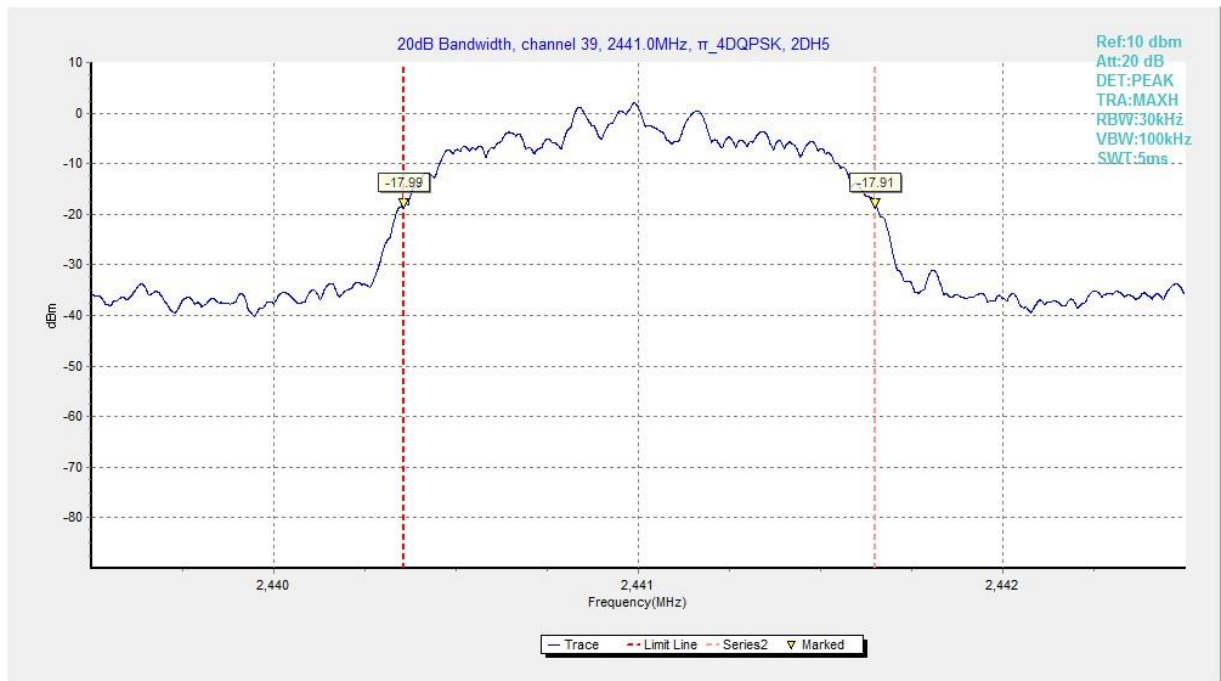


Fig. 73 20dB Bandwidth ($\pi/4$ DQPSK, Ch 39)

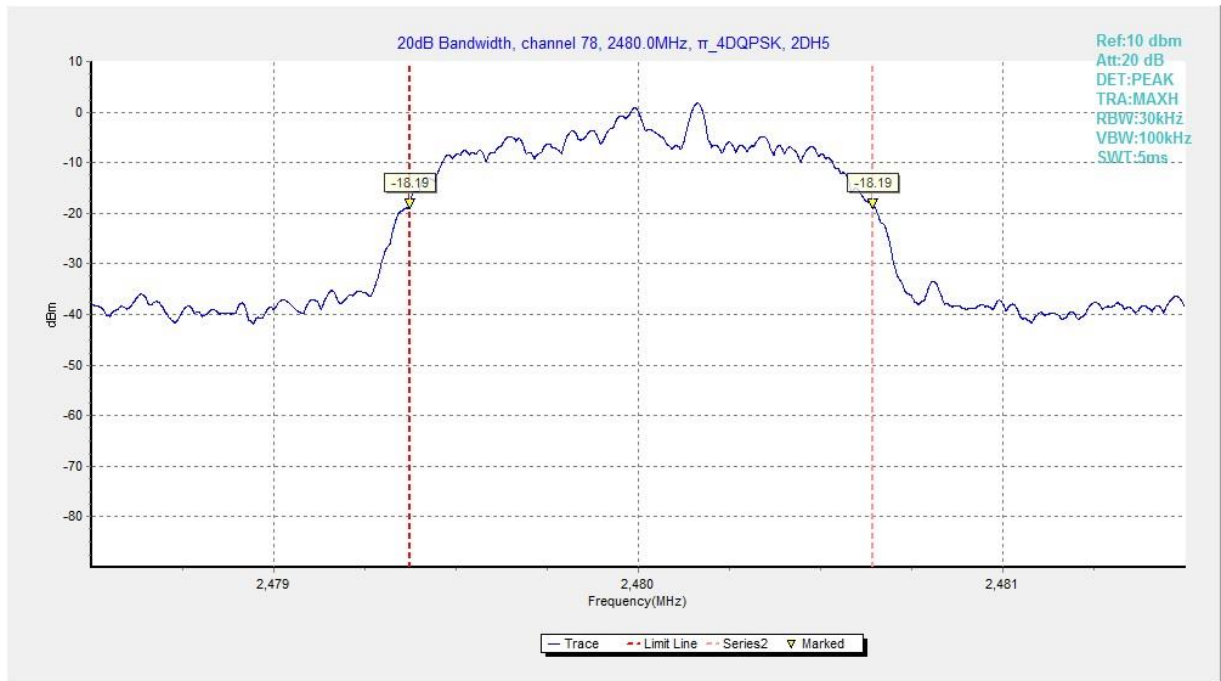


Fig. 74 20dB Bandwidth ($\pi/4$ DQPSK, Ch 78)

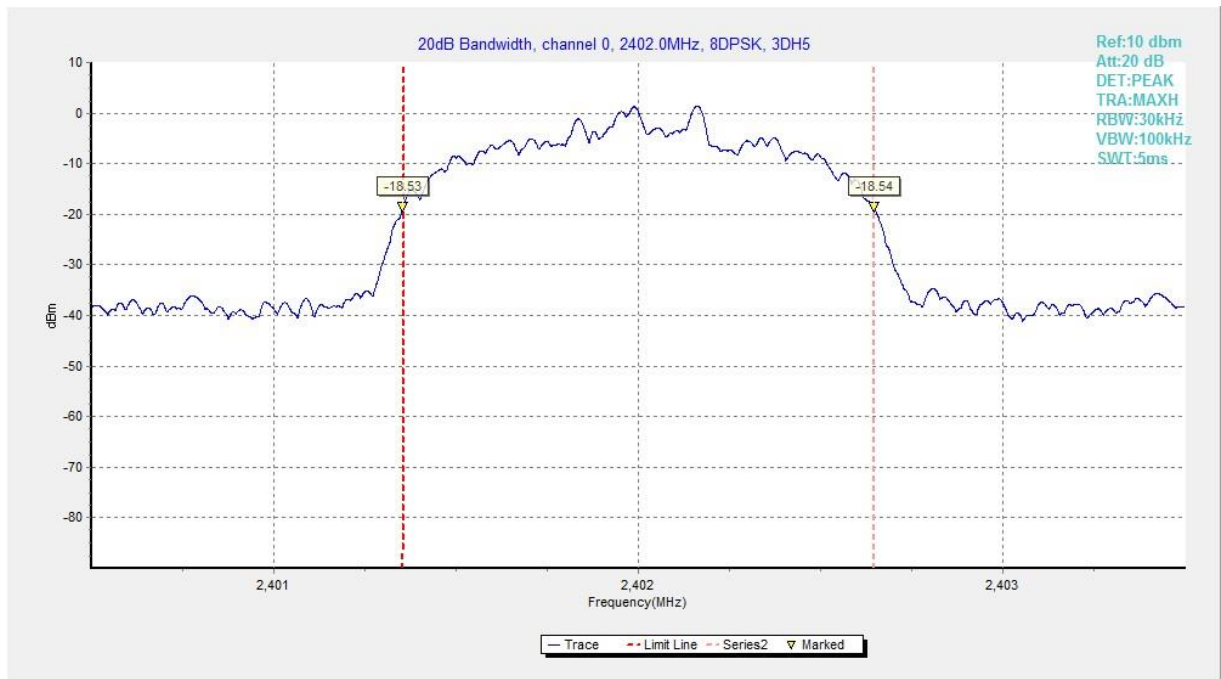


Fig. 75 20dB Bandwidth (8DPSK, Ch 0)

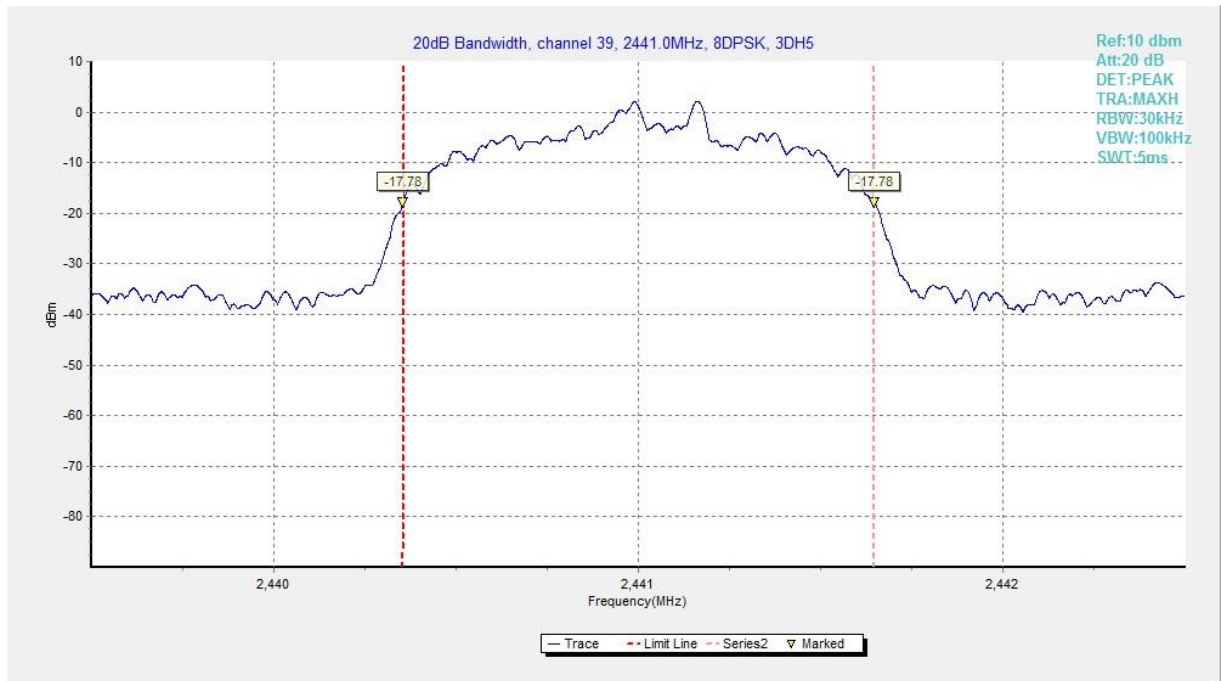


Fig. 76 20dB Bandwidth (8DPSK, Ch 39)

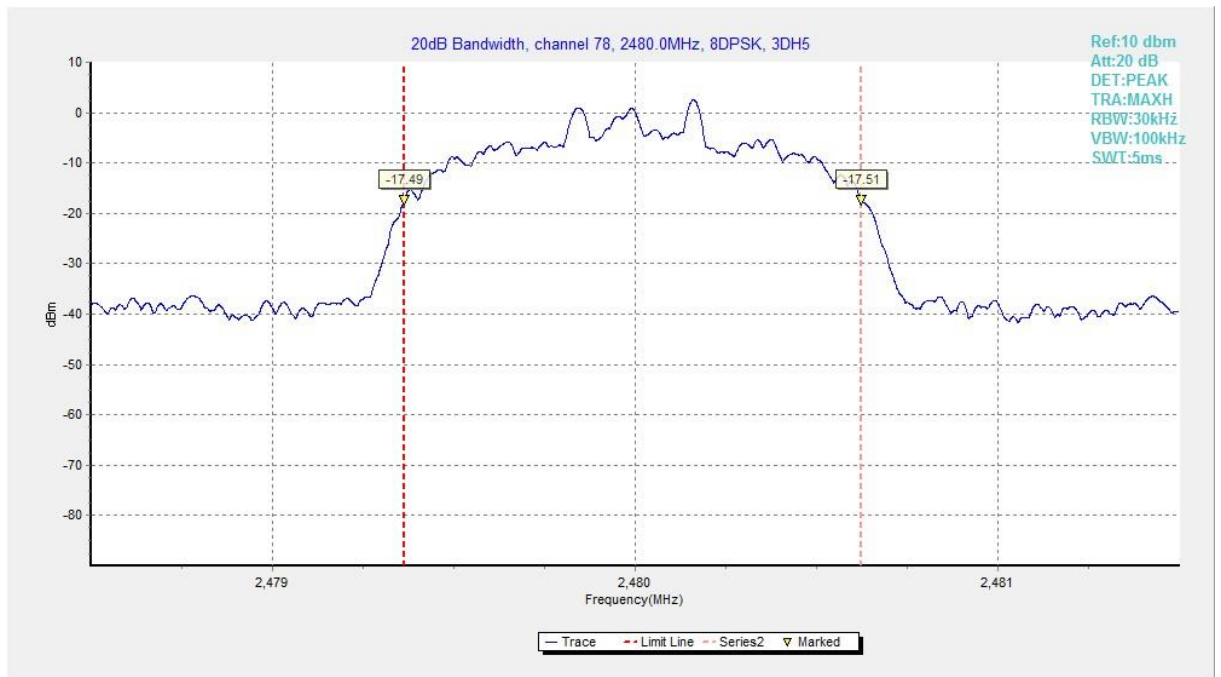


Fig. 77 20dB Bandwidth (8DPSK, Ch 78)

A.6 Time of Occupancy (Dwell Time)

Measurement Limit:

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

Measurement Results:

Mode	Channel	Packet	Dwell Time(ms)		Conclusion
GFSK	39	DH5	Fig.78	307.44	P
			Fig.79		
$\pi/4$ DQPSK	39	2-DH5	Fig.80	307.81	P
			Fig.81		
8DPSK	39	3-DH5	Fig.82	306.87	P
			Fig.83		

See below for test graphs.

Conclusion: Pass

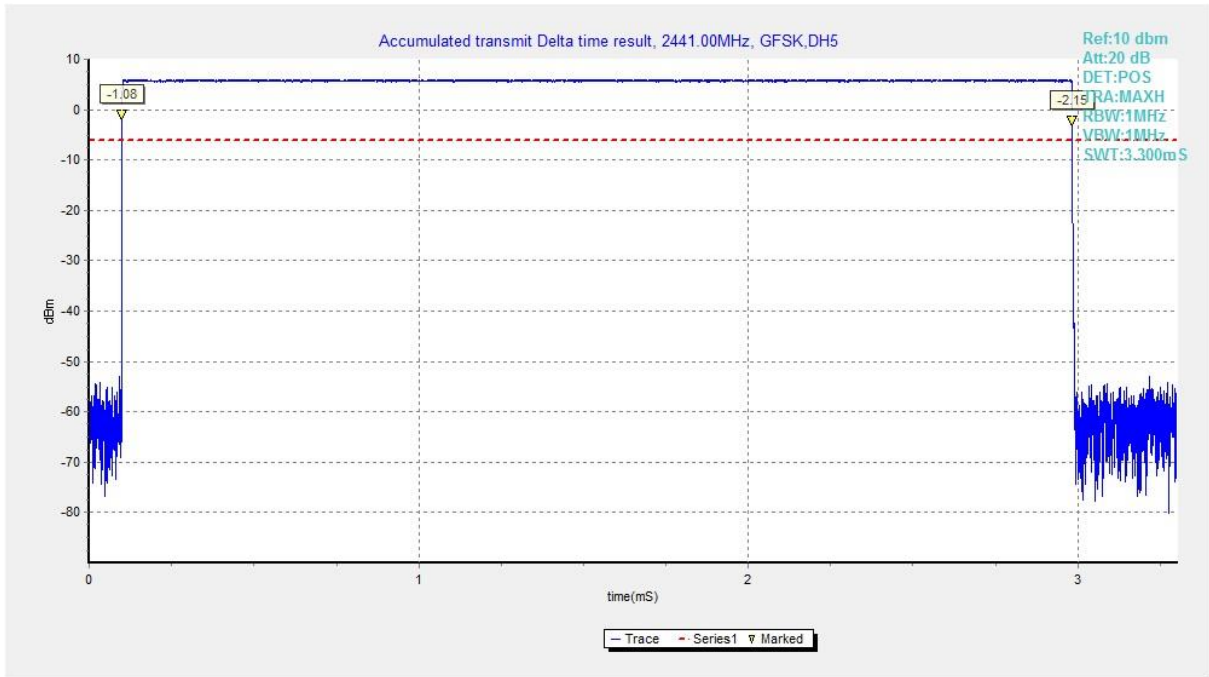


Fig. 78 Time of Occupancy(Dwell Time) (GFSK, Ch39)

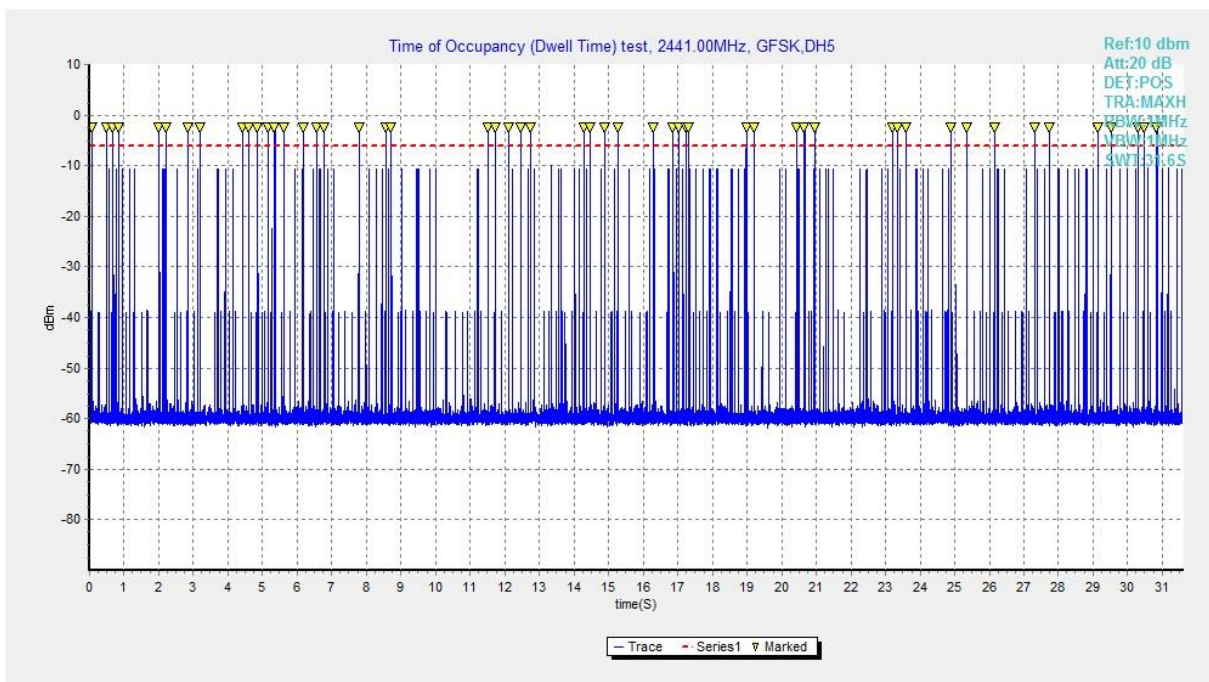


Fig. 79 Time of Occupancy(Dwell Time) (GFSK, Ch39)

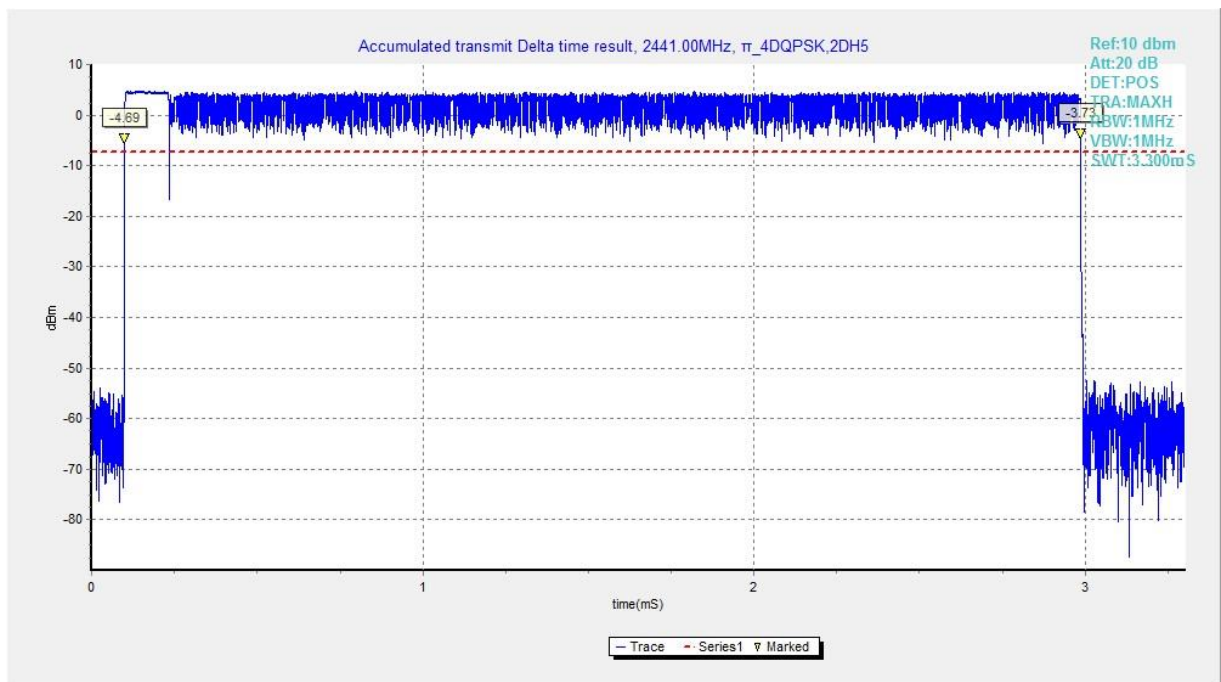


Fig. 80 Time of Occupancy(Dwell Time) (π_4 DQPSK, Ch39)

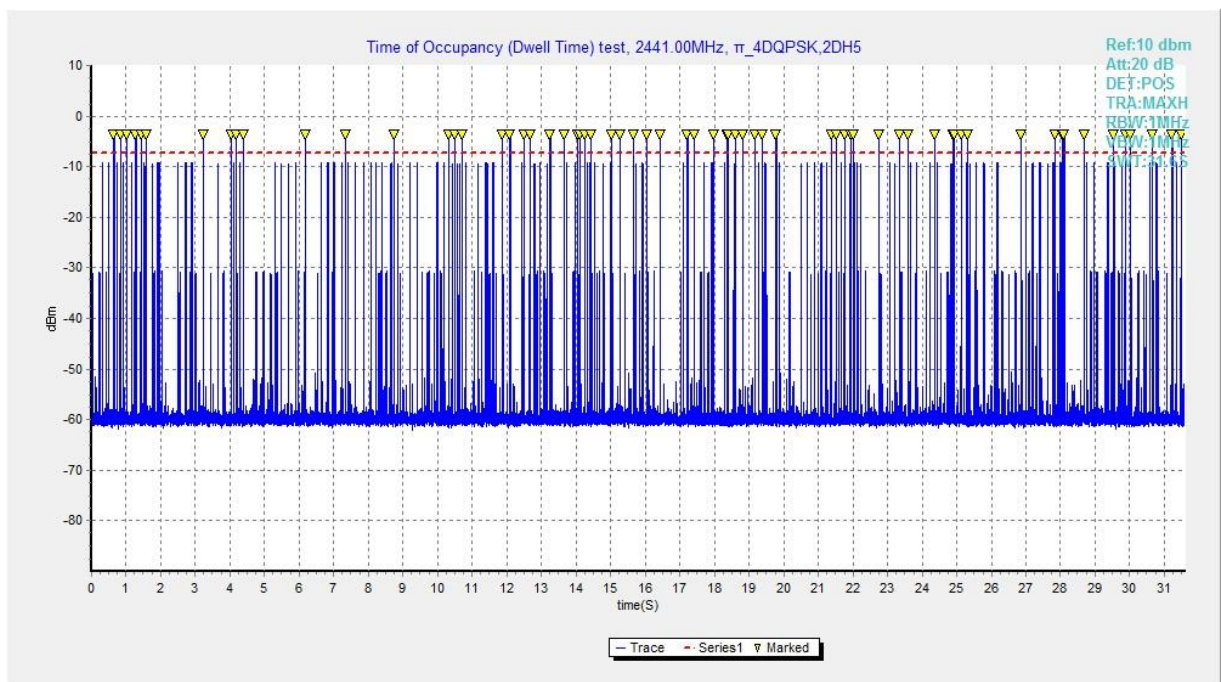


Fig. 81 Time of Occupancy(Dwell Time) (π_4 DQPSK, Ch39)

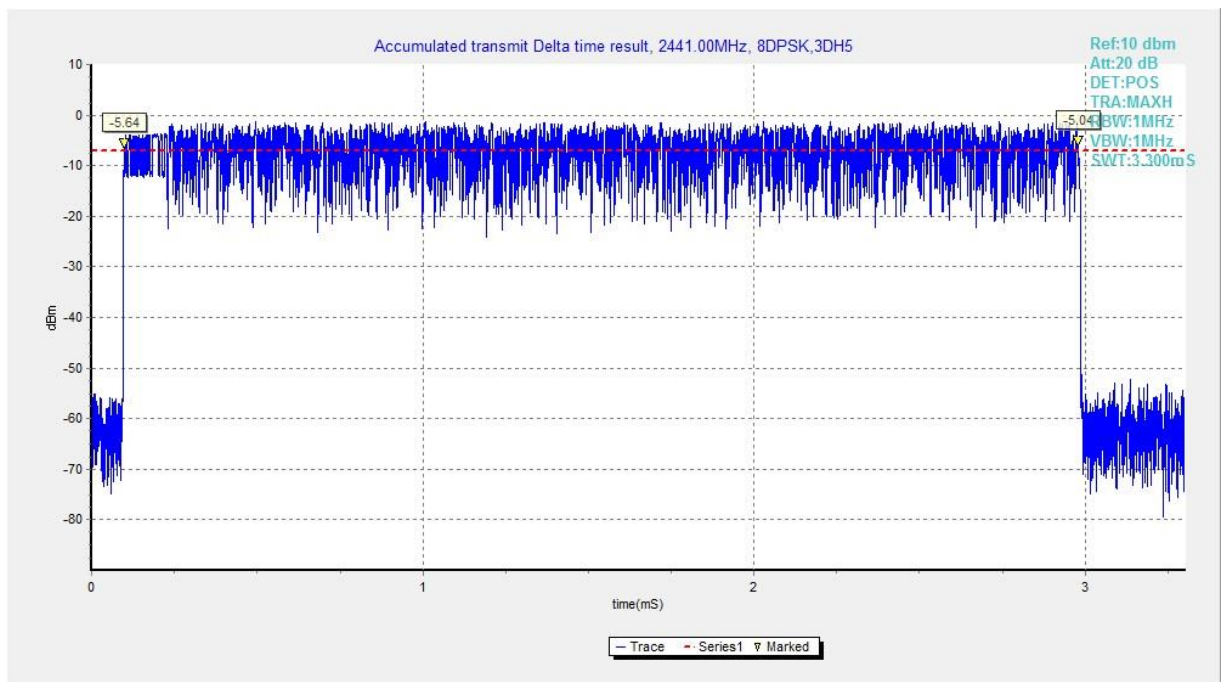


Fig. 82 Time of Occupancy(Dwell Time) (8DPSK, Ch39)

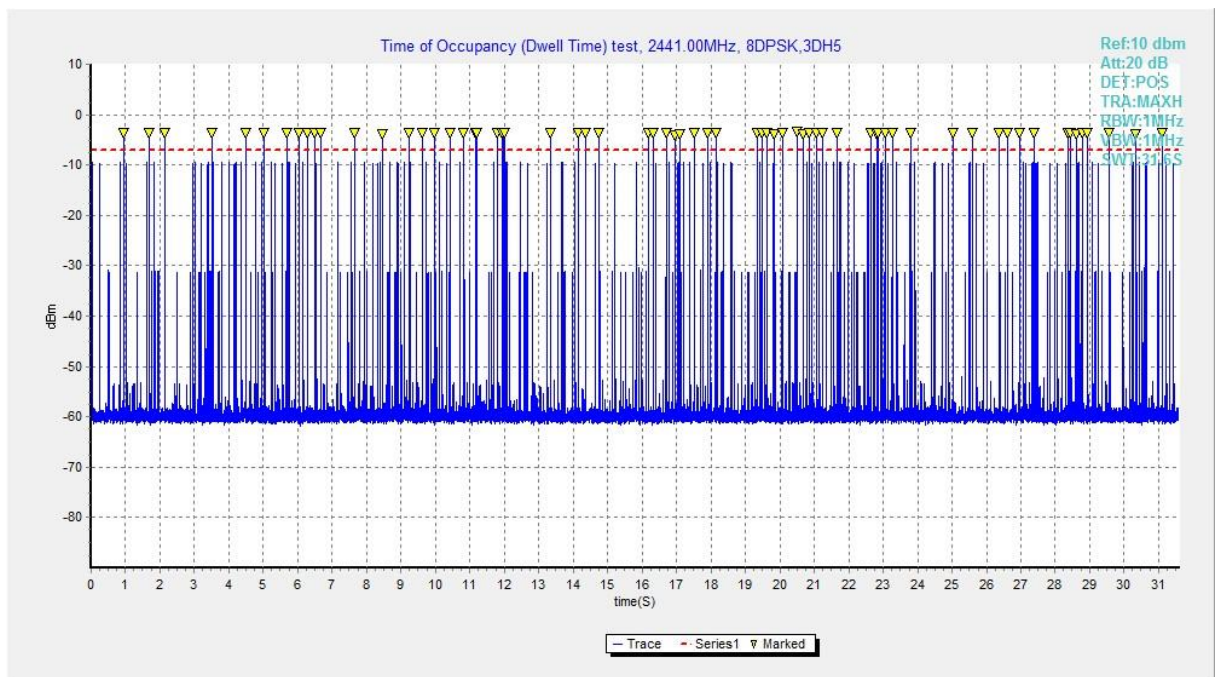


Fig. 83 Time of Occupancy(Dwell Time) (8DPSK, Ch39)

A.7 Number of Hopping Channels

Measurement Limit:

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

Measurement Results:

Mode	Packet	Number of hopping		Test result	Conclusion
GFSK	DH5	Fig.84	Fig.85	79	P
$\pi/4$ DQPSK	2-DH5	Fig.86	Fig.87	79	P
8DPSK	3-DH5	Fig.88	Fig.89	79	P

See below for test graphs.

Conclusion: Pass

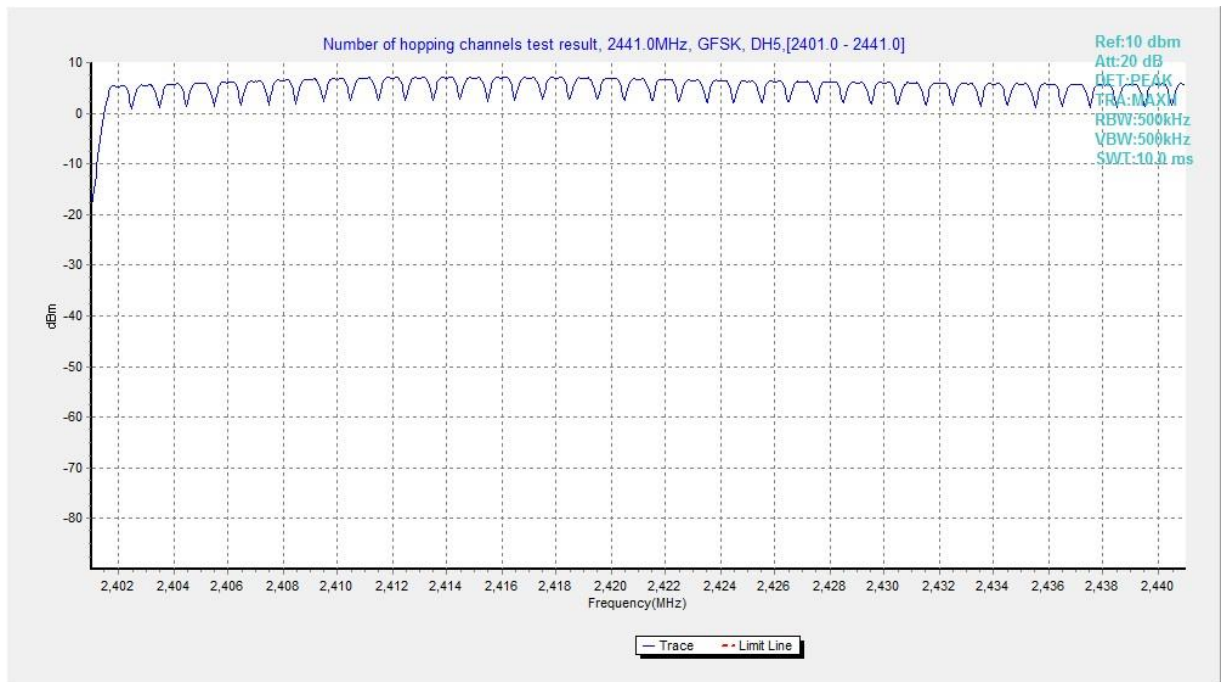


Fig. 84 Hopping channel ch0~39 (GFSK, Ch39)

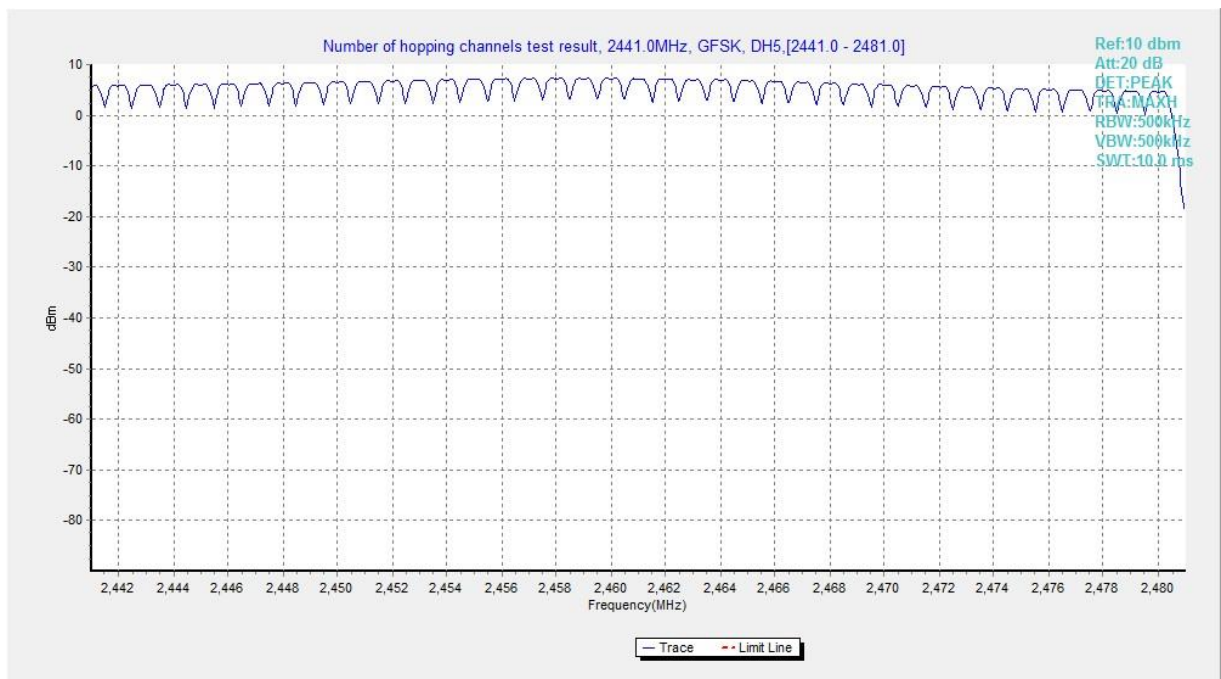


Fig. 85 Hopping channel ch39~78 (GFSK, Ch39)

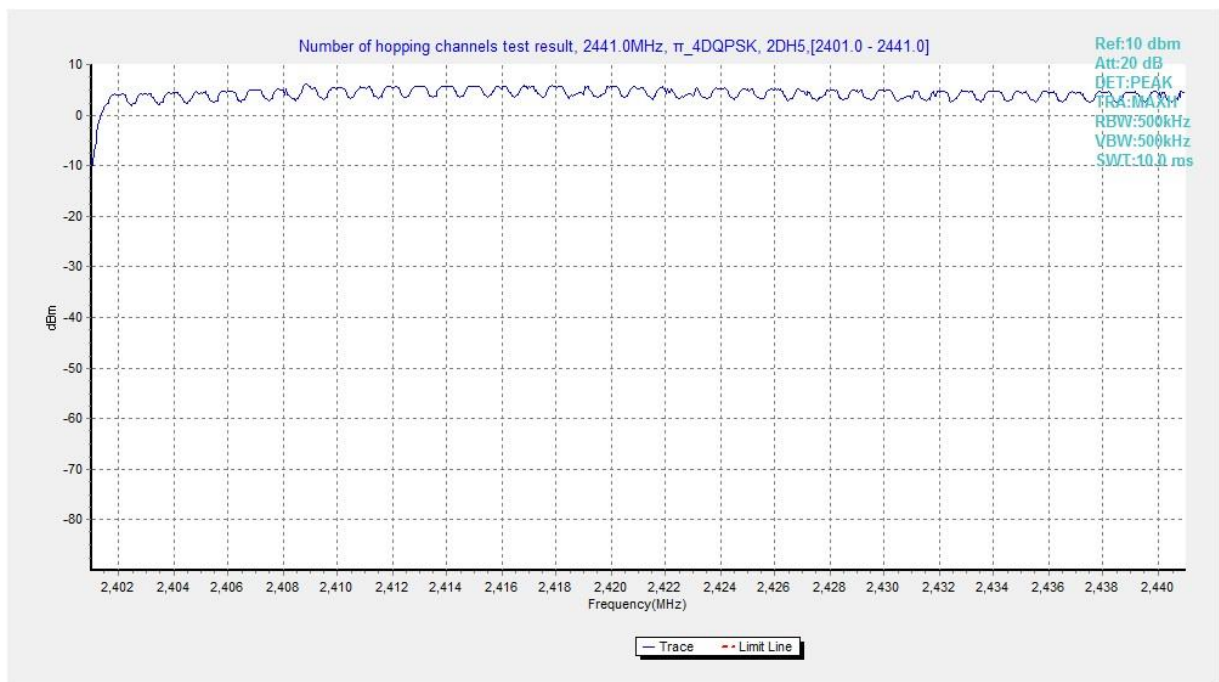


Fig. 86 Hopping channel ch0~39 ($\pi/4$ DQPSK, Ch39)

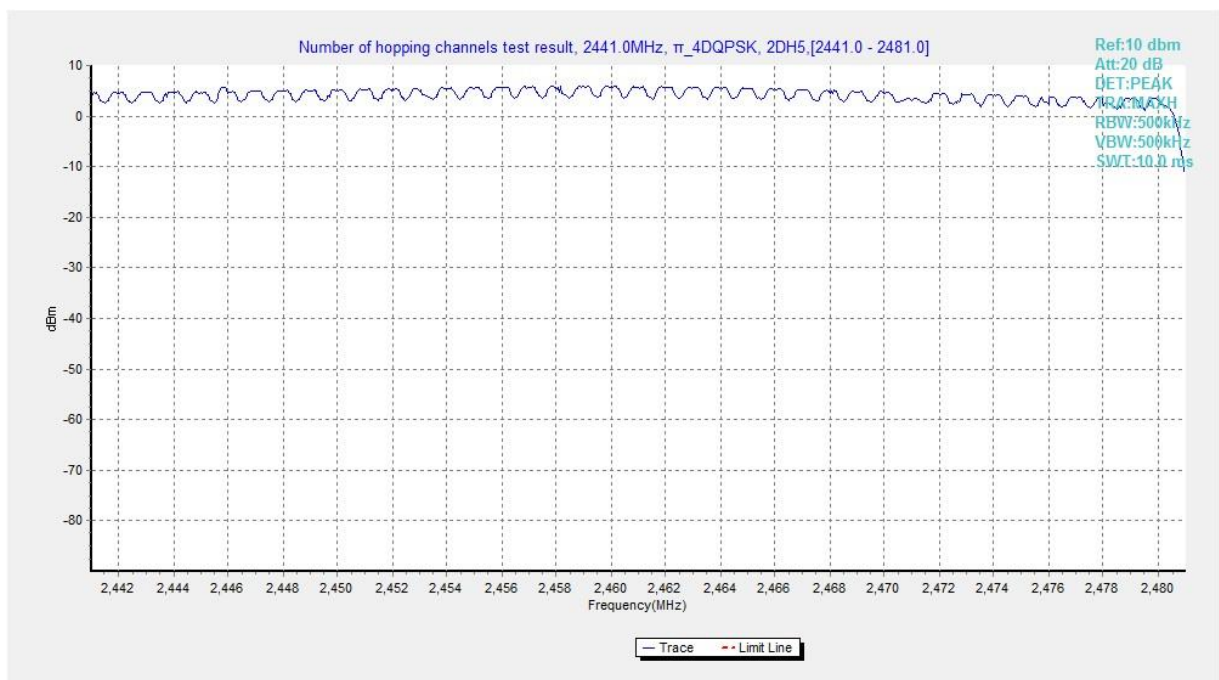


Fig. 87 Hopping channel ch39~78 ($\pi/4$ DQPSK, Ch39)

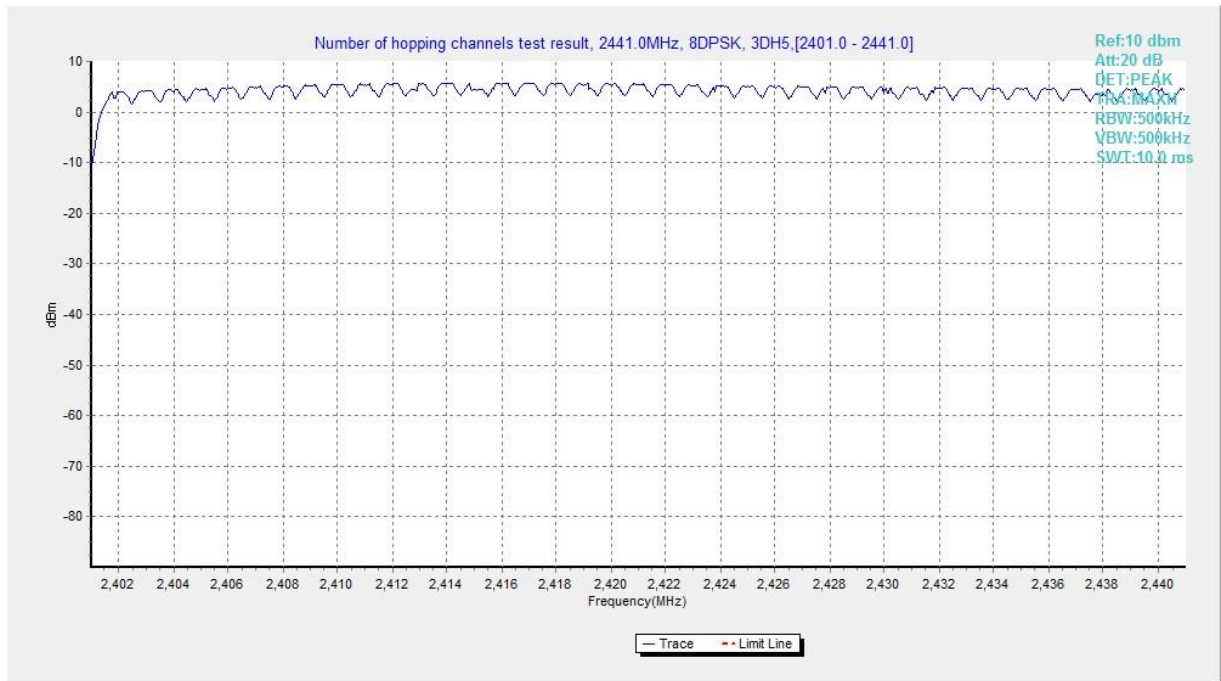


Fig. 88 Hopping channel ch0~39 (8DPSK, Ch39)

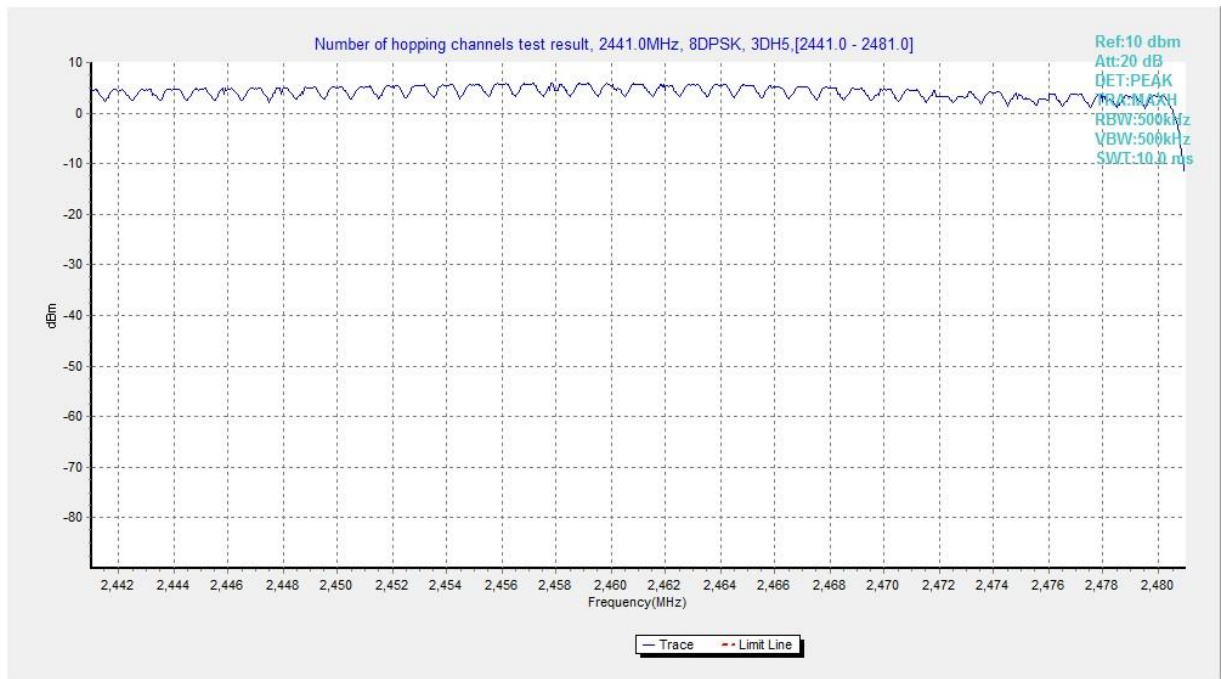


Fig. 89 Hopping channel ch39~78 (8DPSK, Ch39)

A.8 Carrier Frequency Separation

Measurement Limit:

Standard	Limit
FCC 47 CFR Part 15.247(a)	By a minimum of 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater

Measurement Results:

Mode	Channel	Packet	Separation of hopping channels	Test result (KHz)	Conclusion
GFSK	39	DH5	Fig.90	997.50	P
$\pi/4$ DQPSK	39	2-DH5	Fig.91	1023.00	P
8DPSK	39	3-DH5	Fig.92	999.75	P

See below for test graphs.

Conclusion: Pass

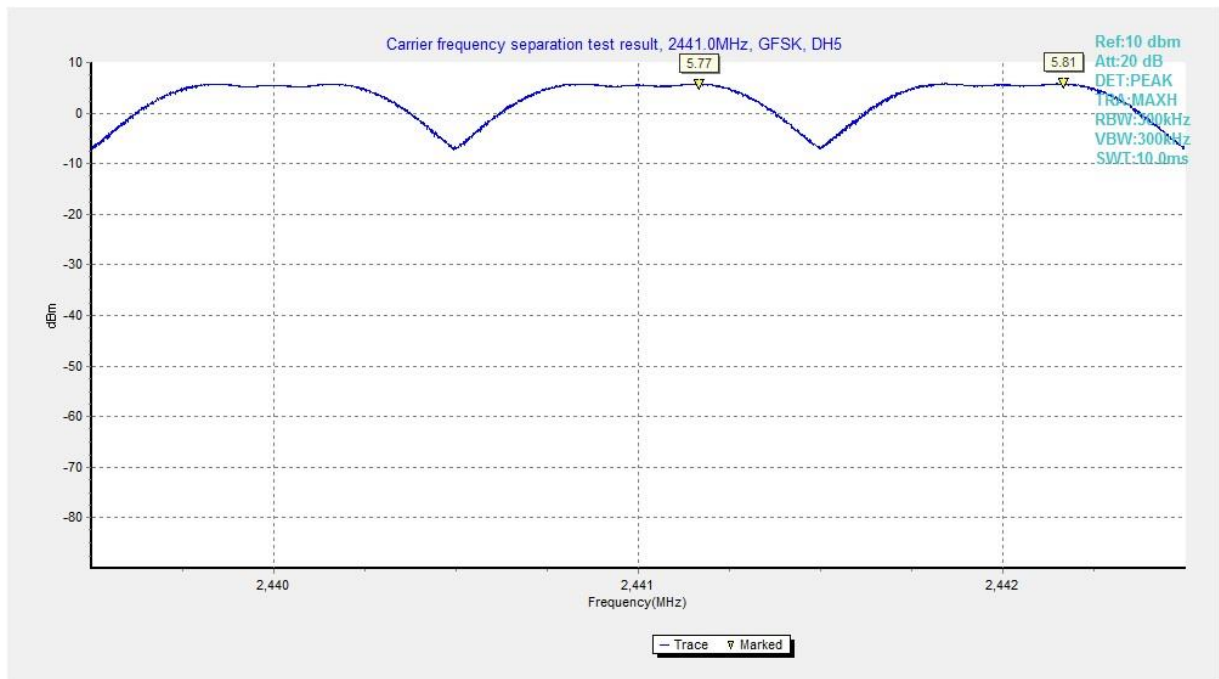


Fig. 90 Carrier Frequency Separation (GFSK, Ch39)

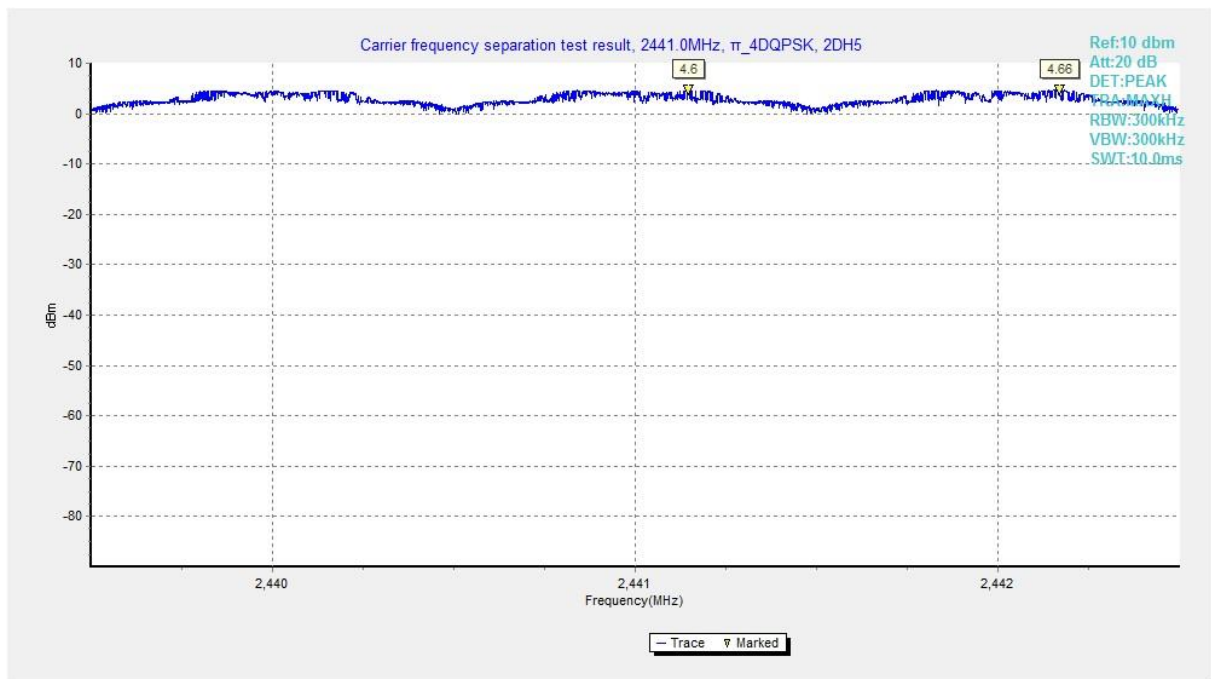


Fig. 91 Carrier Frequency Separation ($\pi/4$ DQPSK, Ch39)

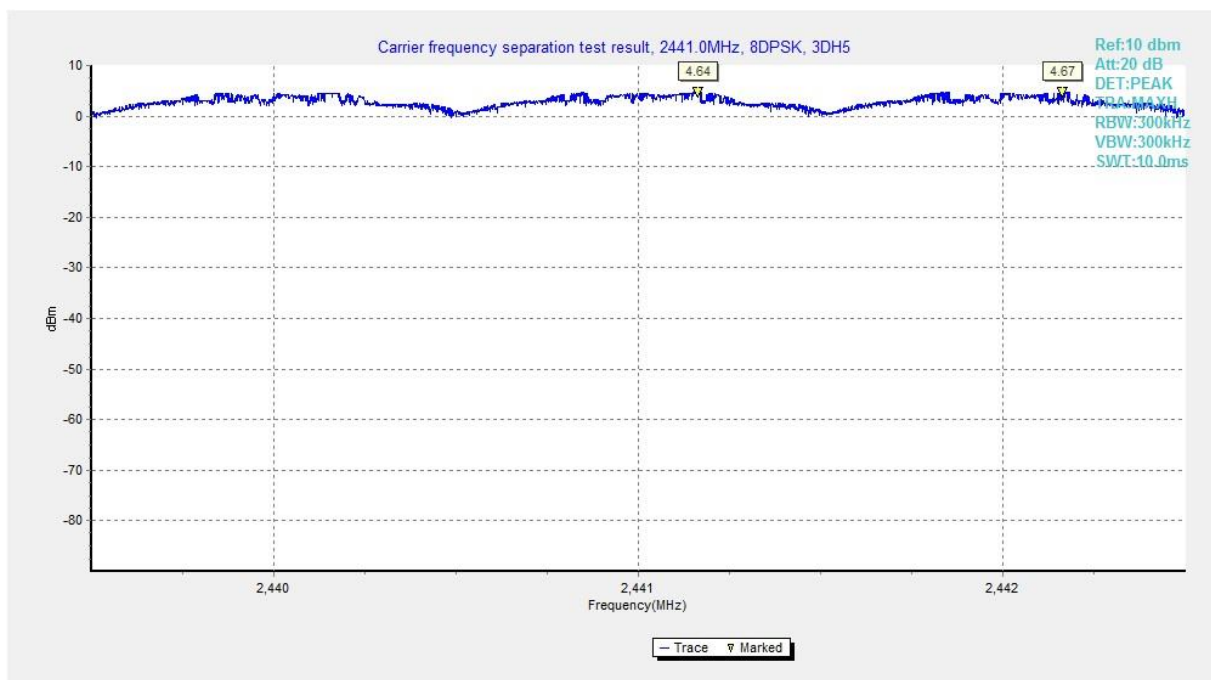


Fig. 92 Carrier Frequency Separation (8DPSK, Ch39)

A.9 AC Power line Conducted Emission

Test Condition:

Voltage (V)	Frequency (Hz)
120	60

Measurement Result and limit:

BT (Quasi-peak Limit)

Frequency range (MHz)	Quasi-peak Limit (dB μ V)	Result (dB μ V)		Conclusion
		Traffic	Idle	
0.15 to 0.5	66 to 56	Fig.93	Fig.94	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.

BT (Average Limit)

Frequency range (MHz)	Average-peak Limit (dB μ V)	Result (dB μ V)		Conclusion
		Traffic	Idle	
0.15 to 0.5	56 to 46	Fig.93	Fig.94	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.

Note: The measurement results include the L1 and N measurements.

See below for test graphs.

Conclusion: Pass

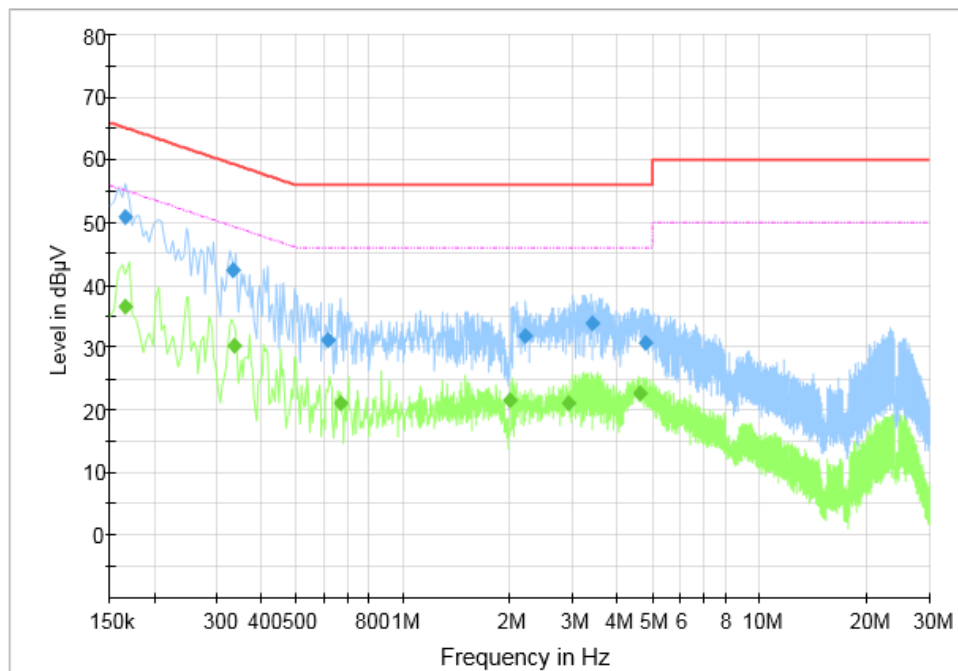


Fig. 93 AC Powerline Conducted Emission (Traffic)

Measurement Results: Quasi Peak

Frequency (MHz)	Quasi Peak (dBμV)	Limit (dBμV)	Margin (dB)	Line	Filter	Corr. (dB)
0.166	50.99	65.16	14.16	N	ON	9.6
0.332	42.48	59.40	16.92	L1	ON	9.6
0.616	31.19	56.00	24.81	N	ON	9.6
2.200	31.76	56.00	24.24	N	ON	9.7
3.400	33.85	56.00	22.15	N	ON	9.7
4.804	30.72	56.00	25.28	N	ON	9.7

Measurement Results : Average

Frequency (MHz)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Line	Filter	Corr. (dB)
0.166	36.59	55.16	18.57	N	ON	9.6
0.336	30.35	49.30	18.95	L1	ON	9.6
0.668	21.17	46.00	24.83	N	ON	9.6
1.984	21.49	46.00	24.51	N	ON	9.7
2.900	21.16	46.00	24.84	N	ON	9.7
4.636	22.75	46.00	23.25	N	ON	9.7

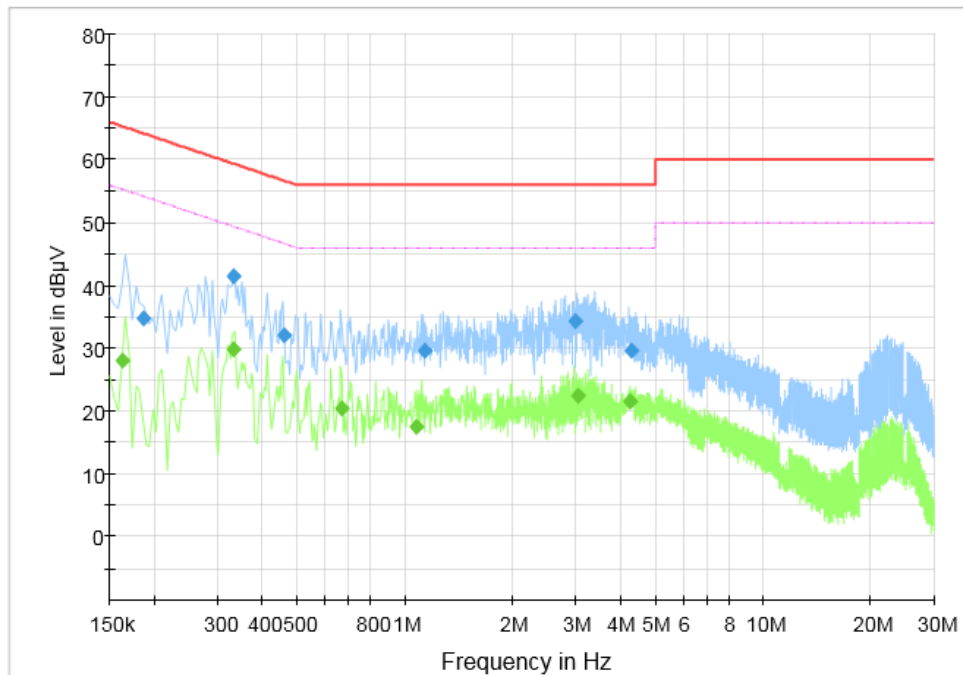


Fig. 94 AC Power line Conducted Emission (Idle)

Measurement Results: Quasi Peak

Frequency (MHz)	Quasi Peak (dBμV)	Limit (dBμV)	Margin (dB)	Line	Filter	Corr. (dB)
0.186	34.75	64.21	29.47	N	ON	9.6
0.332	41.39	59.40	18.01	N	ON	9.6
0.460	31.99	56.69	24.70	N	ON	9.6
1.140	29.55	56.00	26.45	L1	ON	9.7
2.980	34.43	56.00	21.57	N	ON	9.7
4.300	29.67	56.00	26.33	N	ON	9.7

Measurement Results : Average

Frequency (MHz)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Line	Filter	Corr. (dB)
0.162	28.13	55.36	27.23	N	ON	9.6
0.332	29.80	49.40	19.60	L1	ON	9.6
0.668	20.43	46.00	25.57	N	ON	9.6
1.076	17.52	46.00	28.48	L1	ON	9.7
3.048	22.44	46.00	23.56	N	ON	9.7
4.260	21.62	46.00	24.38	L1	ON	9.7

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