

Fig. 87 Time of Occupancy(Dwell Time) (GFSK, Ch39)

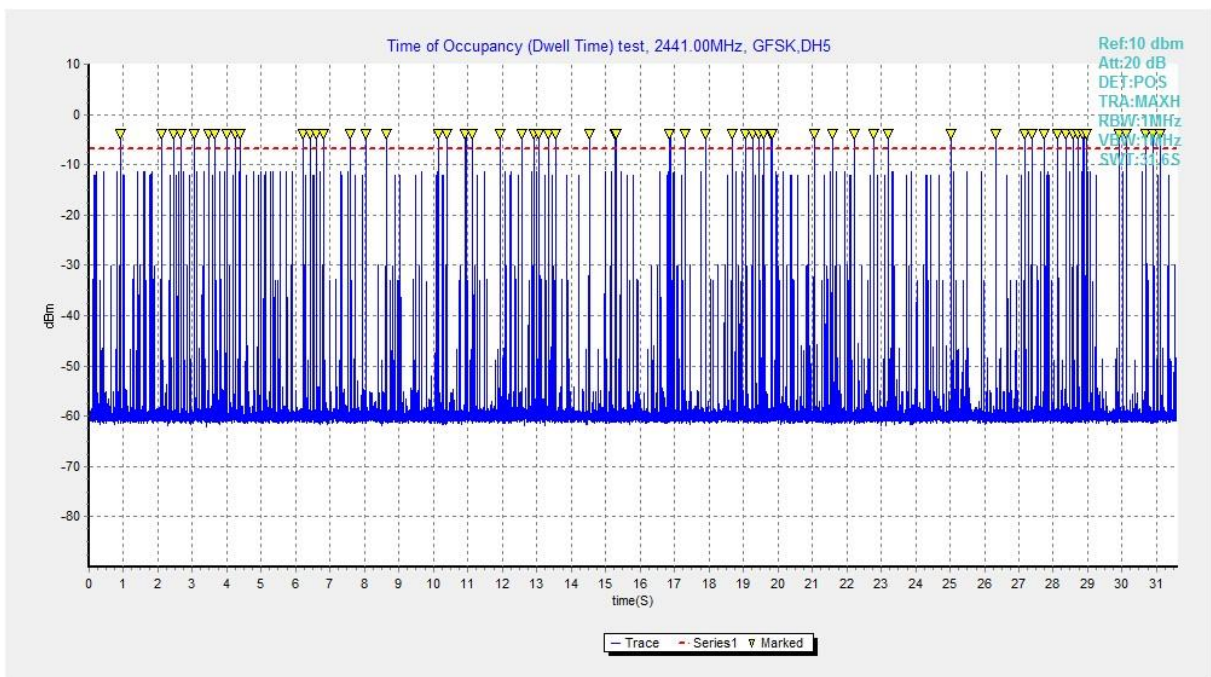


Fig. 88 Time of Occupancy(Dwell Time) (GFSK, Ch39)

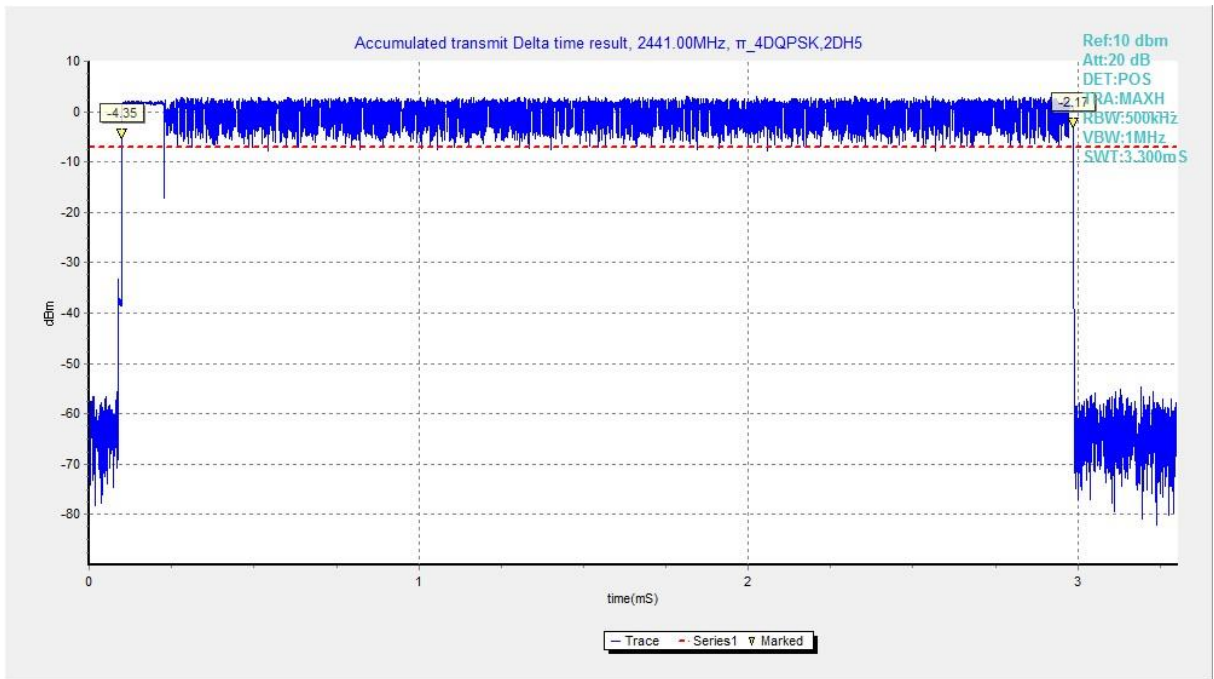


Fig. 89 Time of Occupancy(Dwell Time) (π_4 DQPSK, Ch39)

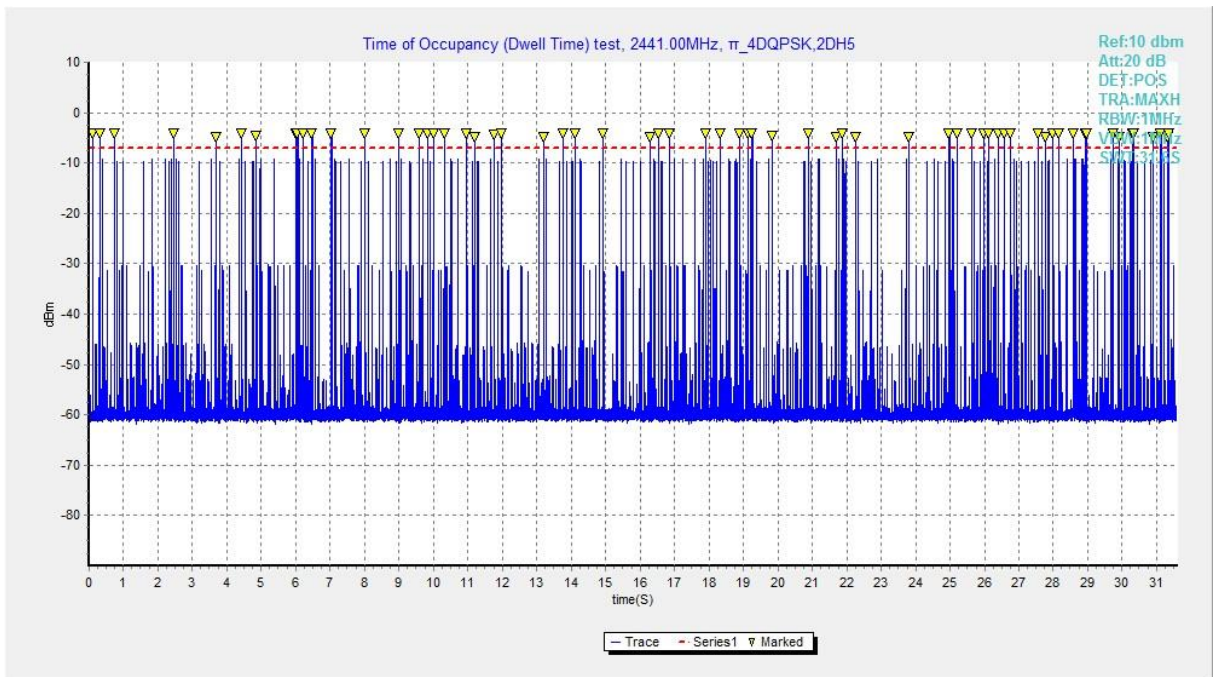


Fig. 90 Time of Occupancy(Dwell Time) (π_4 DQPSK, Ch39)

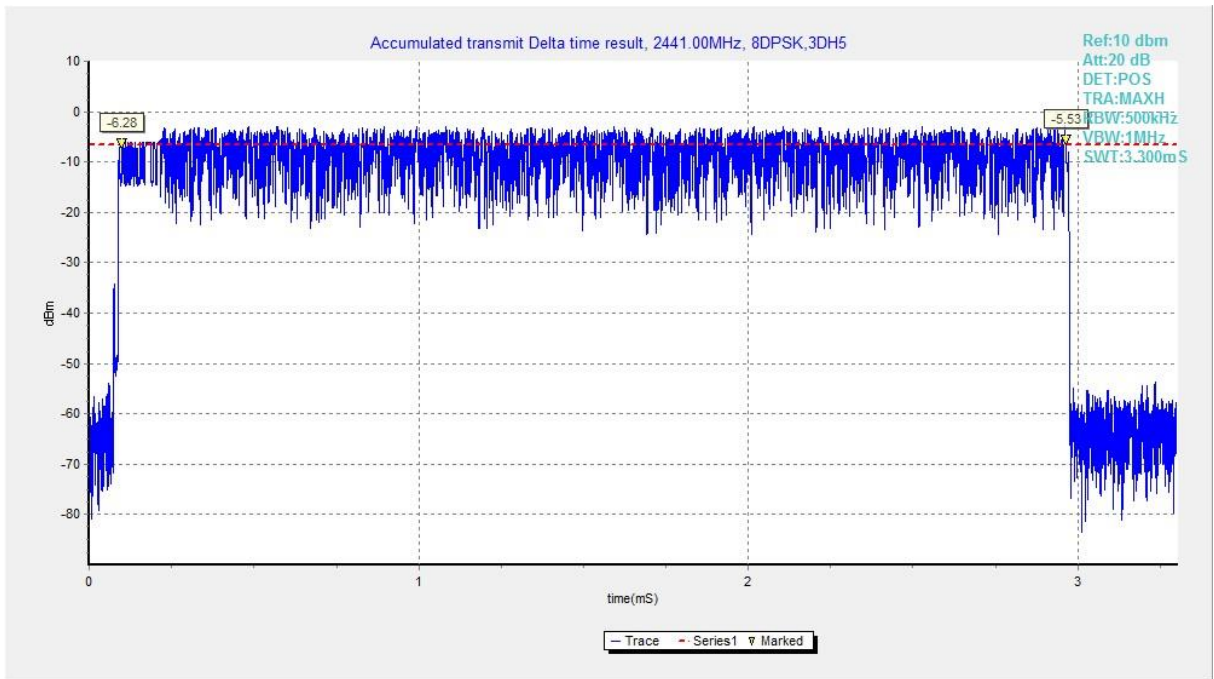


Fig. 91 Time of Occupancy(Dwell Time) (8DPSK, Ch39)

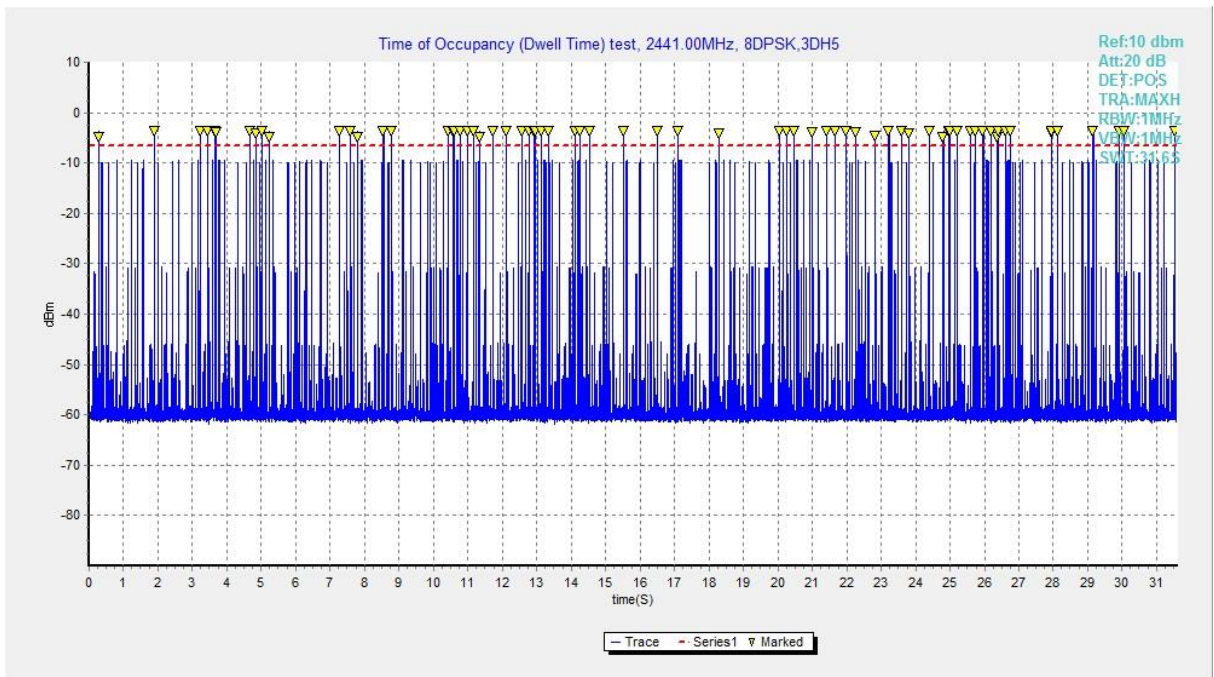


Fig. 92 Time of Occupancy(Dwell Time) (8DPSK, Ch39)

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.93	Fig.94	79	P
$\pi/4$ DQPSK	2-DH5	Fig.95	Fig.96	79	P
8DPSK	3-DH5	Fig.97	Fig.98	79	P

See below for test graphs.

Conclusion: Pass

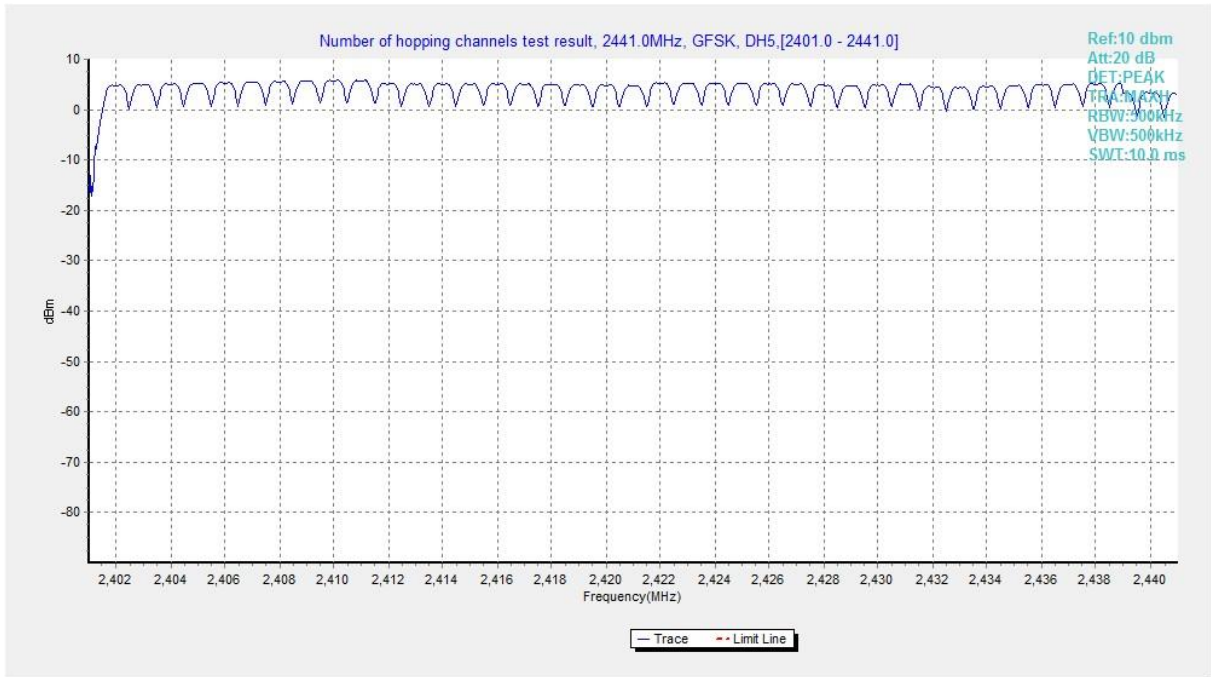


Fig. 93 Hopping channel ch0~39 (GFSK, Ch39)

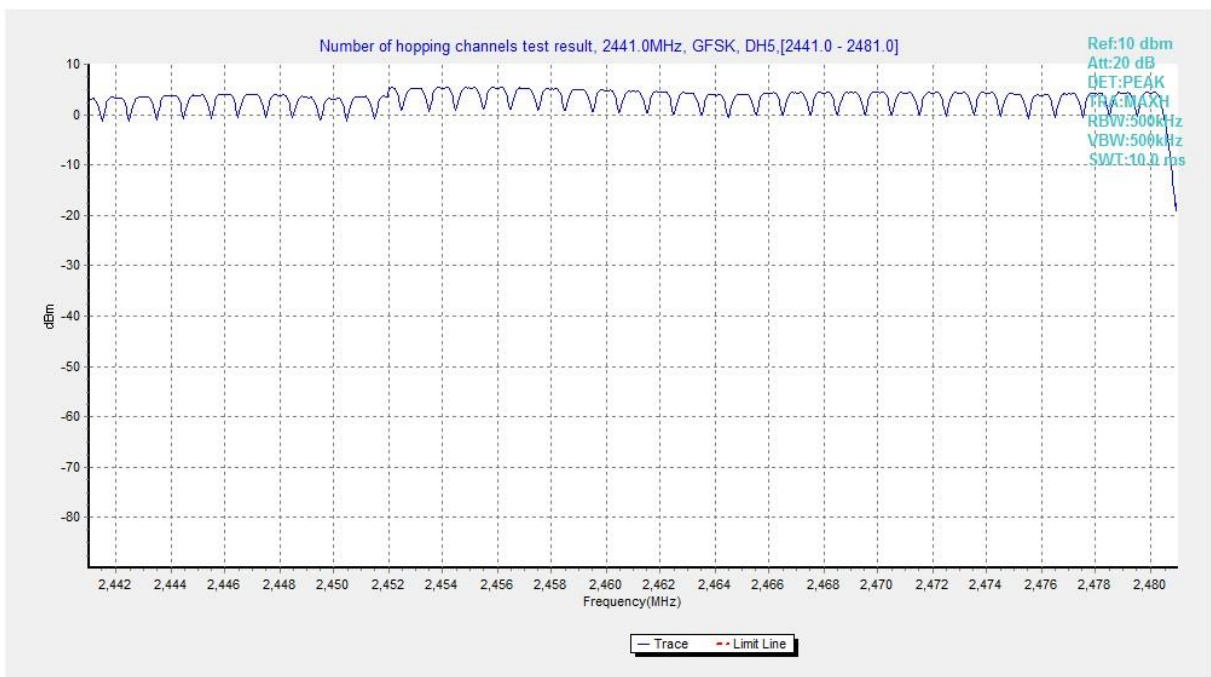


Fig. 94 Hopping channel ch39~78 (GFSK, Ch39)



Fig. 95 Hopping channel ch0~39 ($\pi/4$ DQPSK, Ch39)

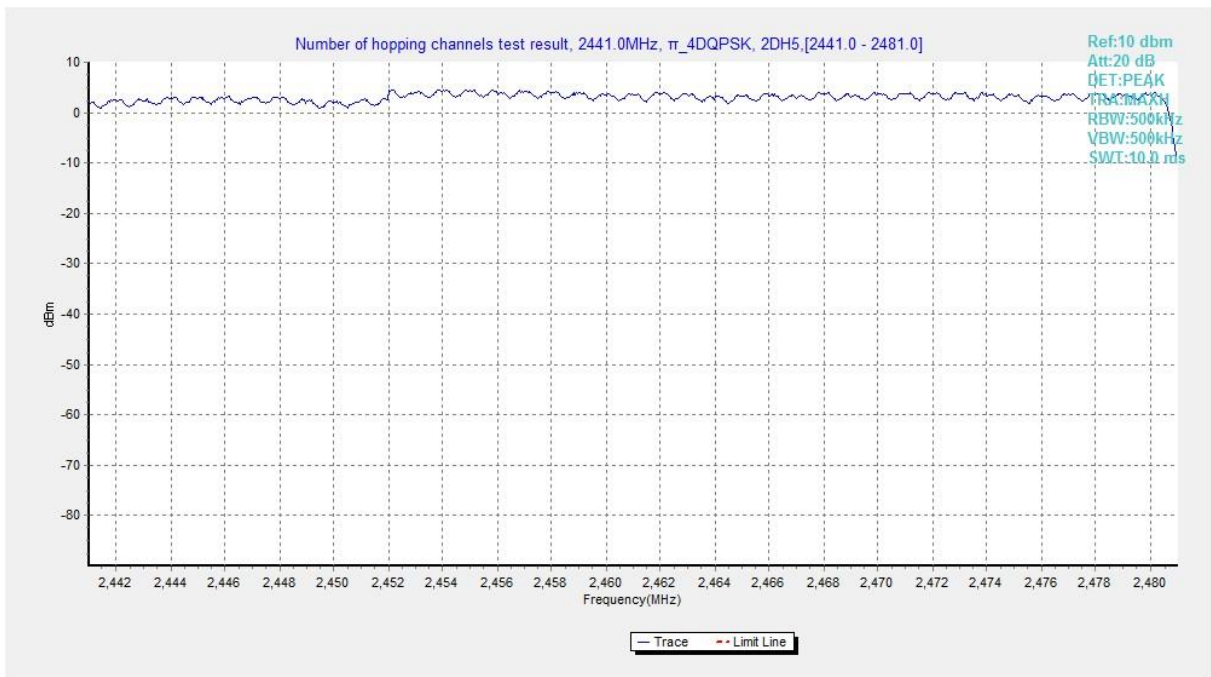


Fig. 96 Hopping channel ch39~78 ($\pi/4$ DQPSK, Ch39)

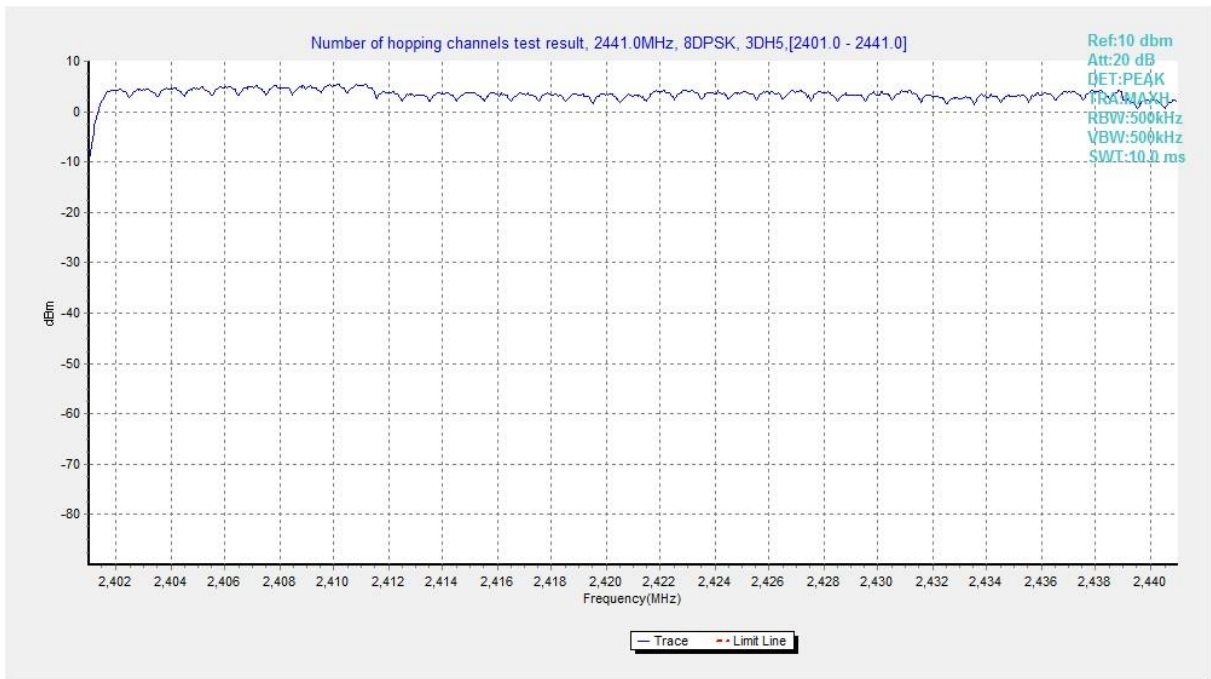


Fig. 97 Hopping channel ch0~39 (8DPSK, Ch39)

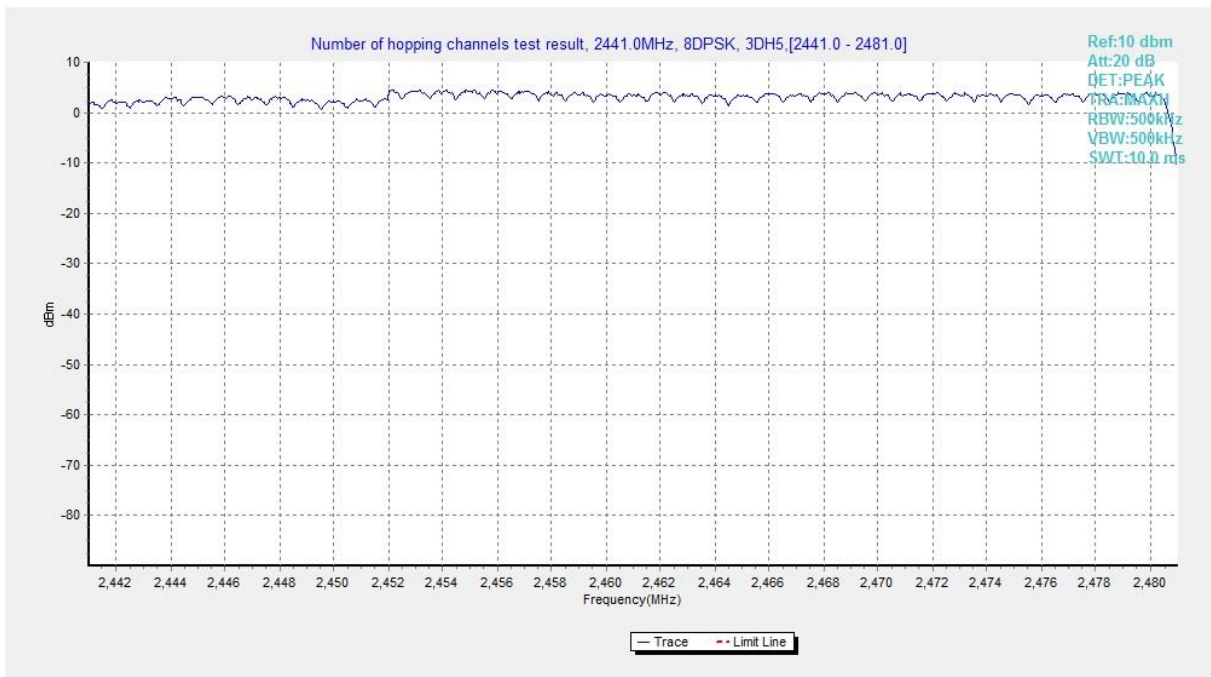


Fig. 98 Hopping channel ch39~78 (8DPSK, Ch39)

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.99	998.25	P
$\pi/4$ DQPSK	39	2-DH5	Fig.100	1010.25	P
8DPSK	39	3-DH5	Fig.101	1005.00	P

See below for test graphs.

Conclusion: Pass

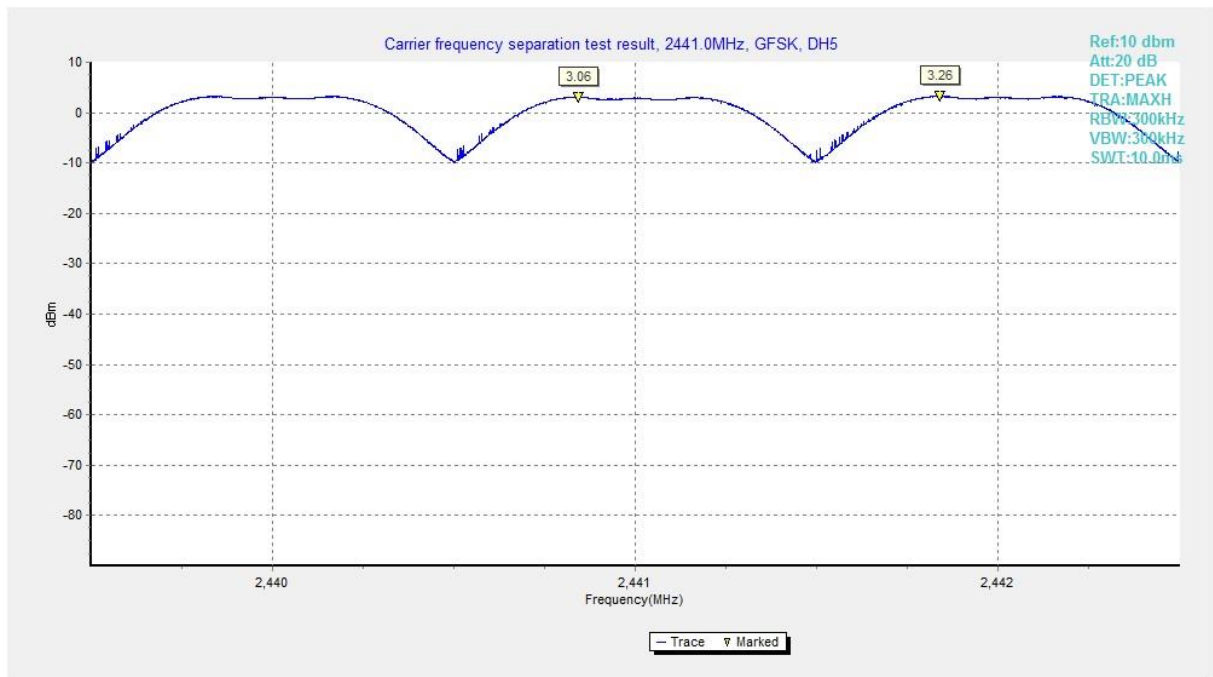


Fig. 99 Carrier Frequency Separation (GFSK, Ch39)

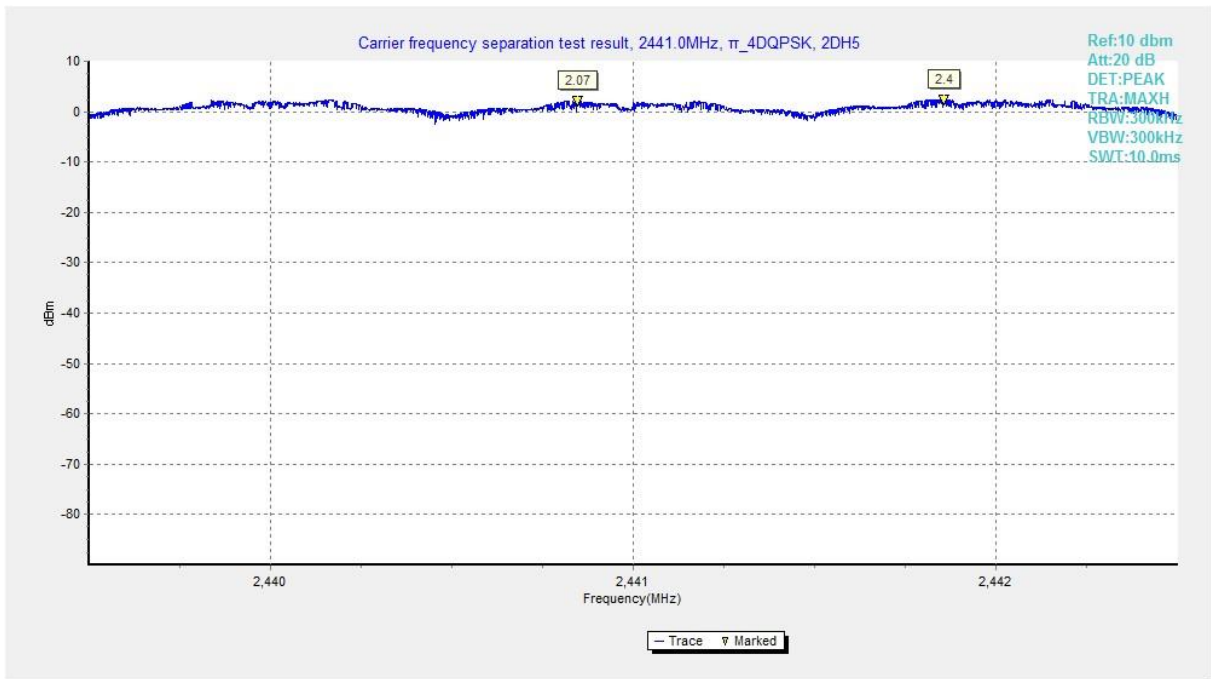


Fig. 100 Carrier Frequency Separation ($\pi/4$ DQPSK, Ch39)

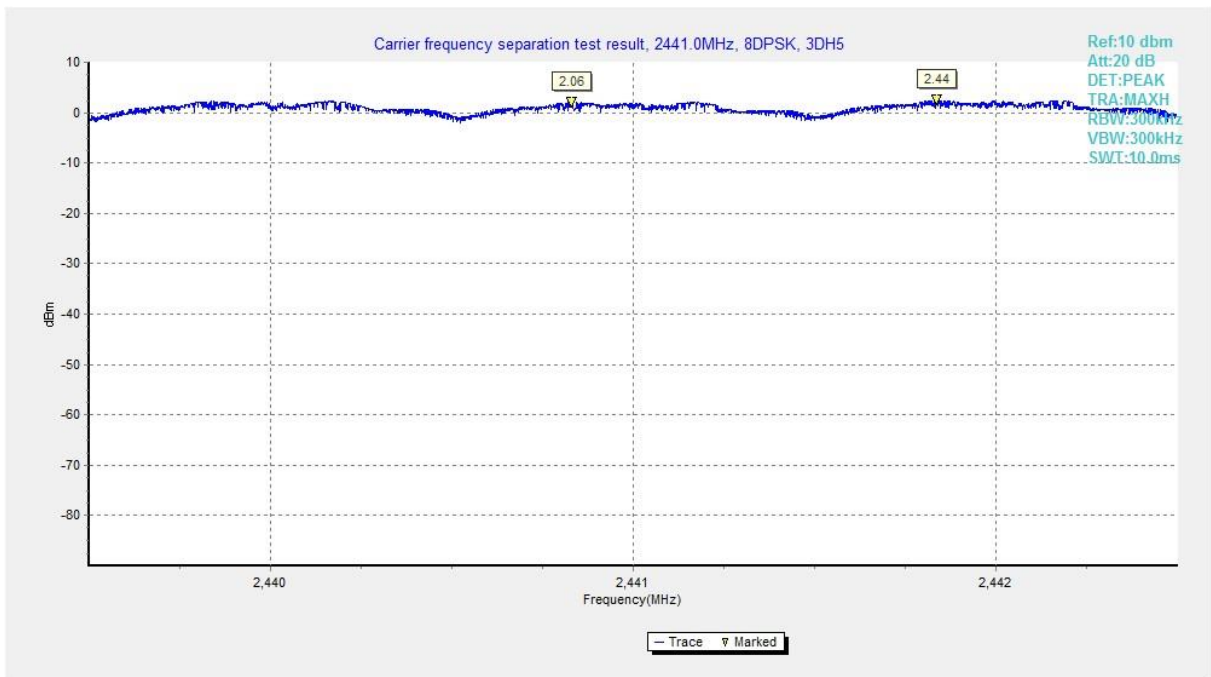


Fig. 101 Carrier Frequency Separation (8DPSK, Ch39)

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.102	Fig.103	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 102	Fig 103	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

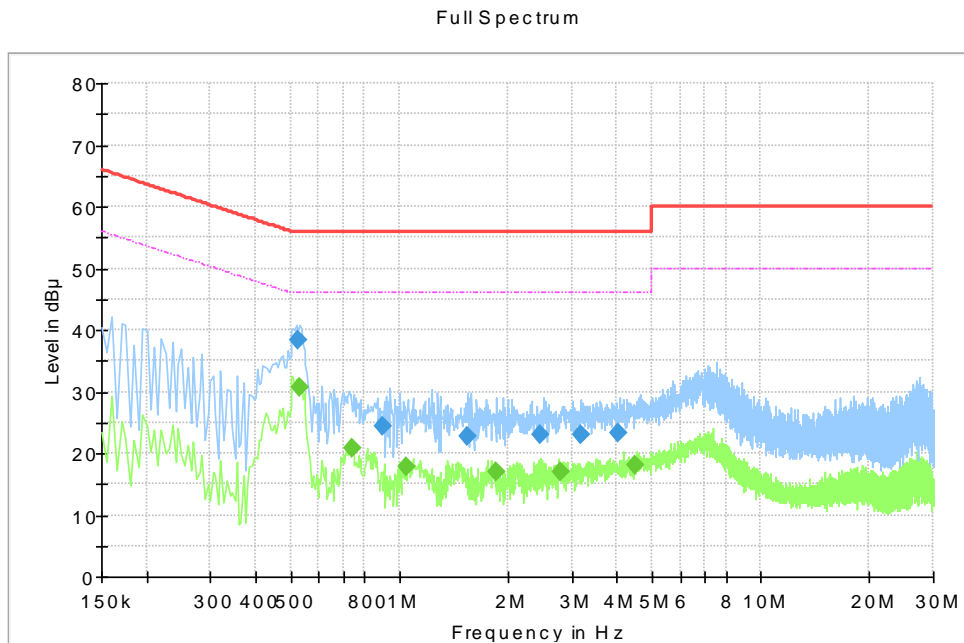


Fig. 102 AC Powerline Conducted Emission (Traffic)

Measurement Results: Quasi Peak

Frequency (MHz)	Quasi Peak (dBµV)	Limit (dBµV)	Margin (dB)	Line	Filter	Corr. (dB)
0.525	38.45	56.00	17.55	L1	ON	9.6
0.895	24.40	56.00	31.60	N	ON	9.7
1.545	22.82	56.00	33.18	N	ON	9.7
2.455	23.11	56.00	32.89	L1	ON	9.7
3.180	23.14	56.00	32.86	L1	ON	9.7
4.035	23.23	56.00	32.77	L1	ON	9.7

Measurement Results : Average

Frequency (MHz)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Filter	Corr. (dB)
0.530	30.79	46.00	15.21	L1	ON	9.6
0.740	20.89	46.00	25.11	L1	ON	9.6
1.050	17.68	46.00	28.32	L1	ON	9.7
1.845	17.11	46.00	28.89	L1	ON	9.7
2.800	16.91	46.00	29.09	L1	ON	9.7
4.500	18.20	46.00	27.80	L1	ON	9.7

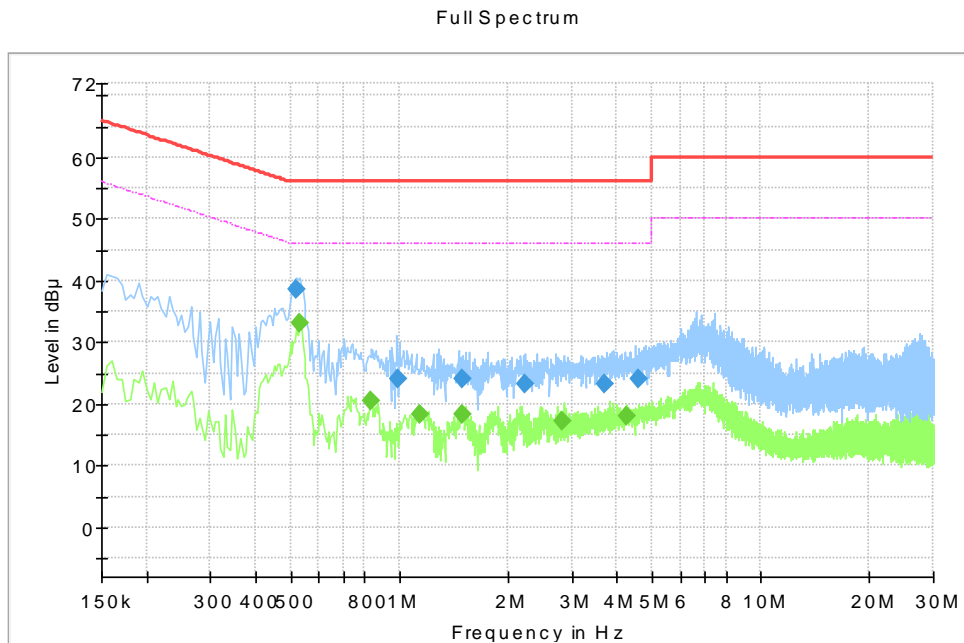


Fig. 103 AC Power line Conducted Emission (Idle)

Measurement Results: Quasi Peak

Frequency (MHz)	Quasi Peak (dBµV)	Limit (dBµV)	Margin (dB)	Line	Filter	Corr. (dB)
0.520	38.510	56.000	17.49	L1	ON	9.600
0.990	23.990	56.000	32.01	L1	ON	9.600
1.490	24.160	56.000	31.84	N	ON	9.700
2.215	23.100	56.000	32.90	L1	ON	9.700
3.705	23.290	56.000	32.71	L1	ON	9.700
4.580	24.040	56.000	31.96	L1	ON	9.700

Measurement Results : Average

Frequency (MHz)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Filter	Corr. (dB)
0.530	32.980	46.000	13.020	L1	ON	9.600
0.835	20.610	46.000	25.390	L1	ON	9.600
1.145	18.290	46.000	27.710	L1	ON	9.700
1.500	18.430	46.000	27.570	L1	ON	9.700
2.825	17.320	46.000	28.680	L1	ON	9.700
4.235	18.150	46.000	27.850	L1	ON	9.700

END OF REPORT