

Fig. 73 Time of Occupancy (Dwell Time) ( $\pi/4$  DQPSK, Ch39)

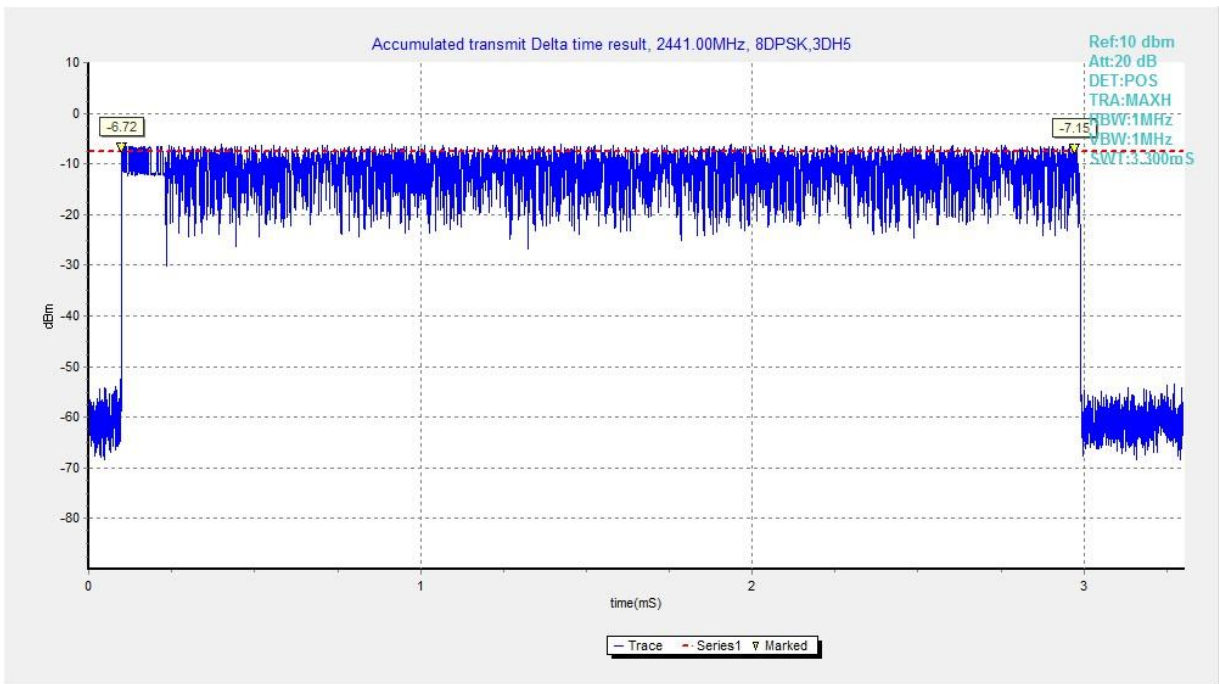


Fig. 74 Time of Occupancy (Dwell Time) (8DPSK, Ch39)

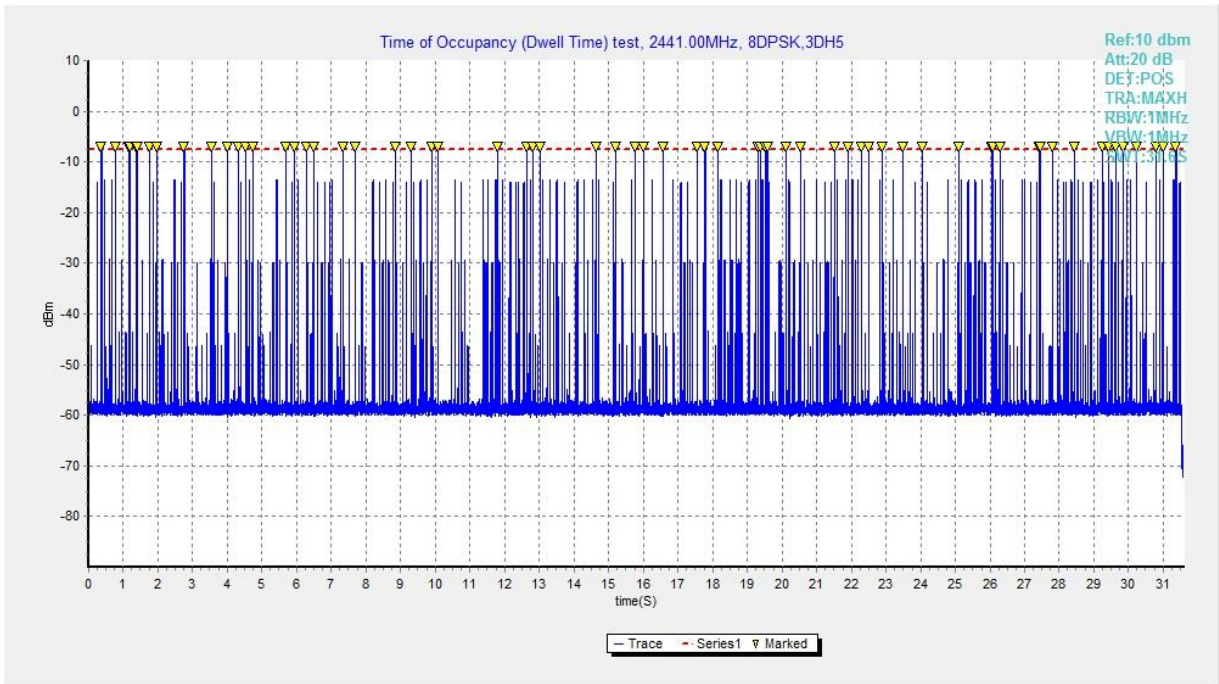


Fig. 75 Time of Occupancy (Dwell Time) (8DPSK, Ch39)

### 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 channels		Test result	Conclusion
GFSK	DH5	Fig.76	Fig.77	79	<b>P</b>
$\pi/4$ DQPSK	2-DH5	Fig.78	Fig.79	79	<b>P</b>
8DPSK	3-DH5	Fig.80	Fig.81	79	<b>P</b>

See below for test graphs.

Conclusion: Pass

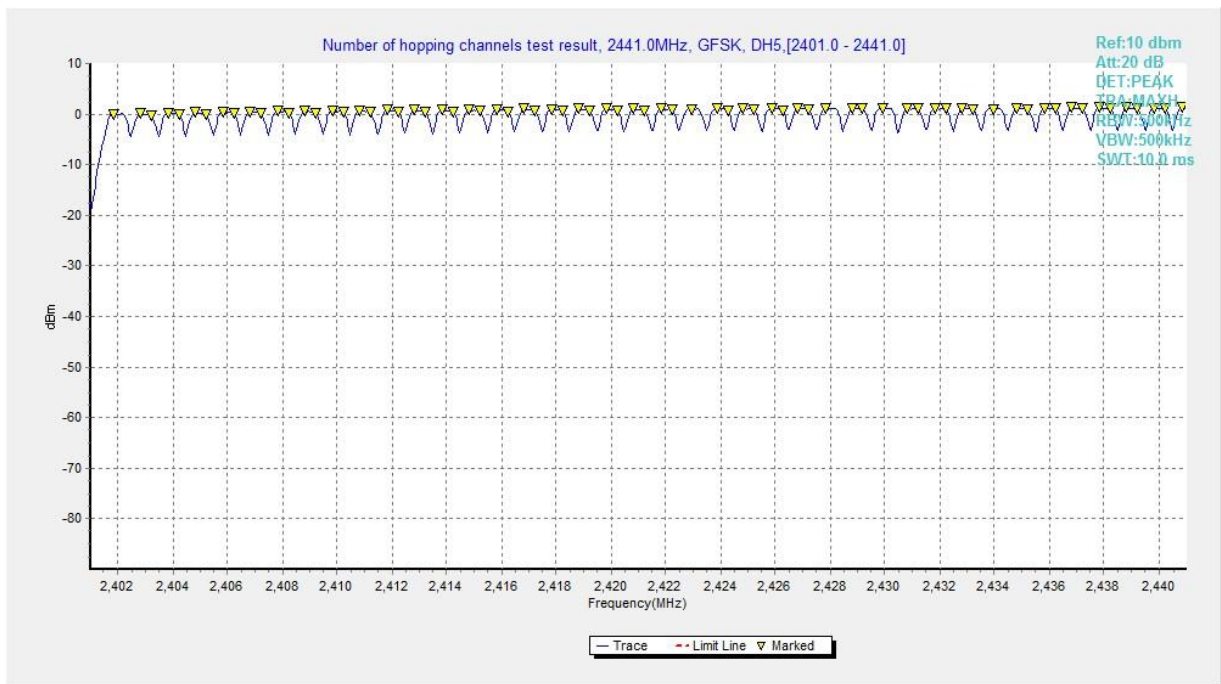


Fig. 76 Hopping channel ch0~39 (GFSK, Ch39)

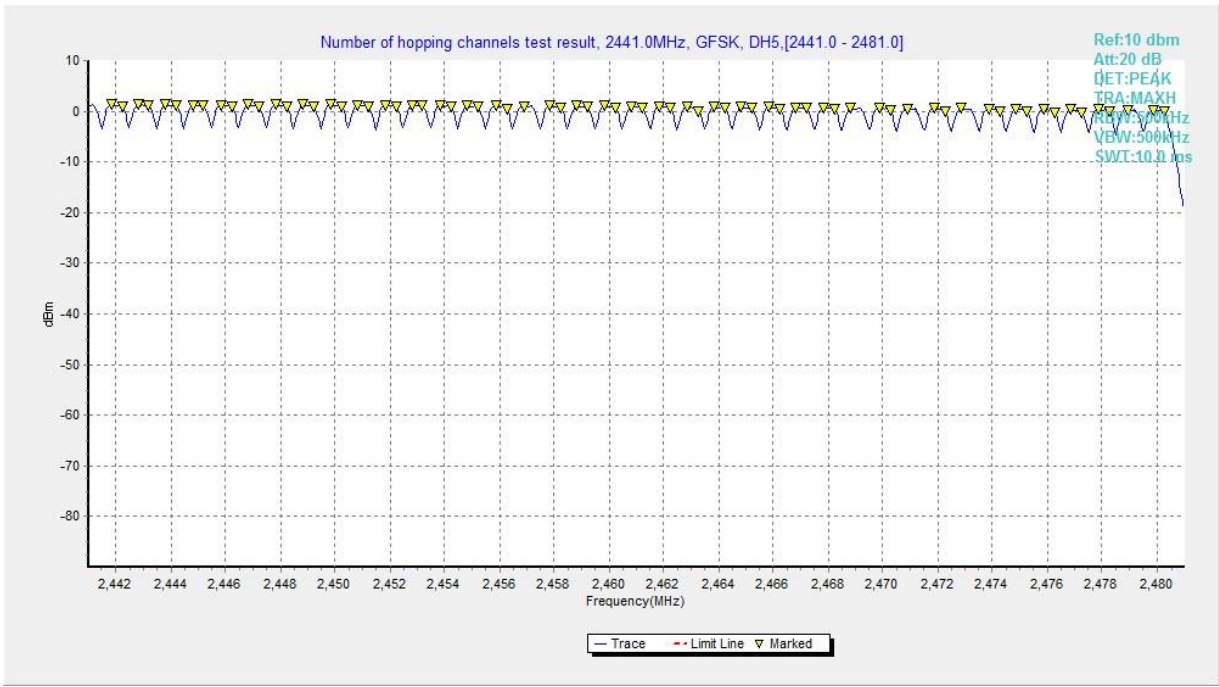


Fig. 77 Hopping channel ch40~78 (GFSK, Ch39)

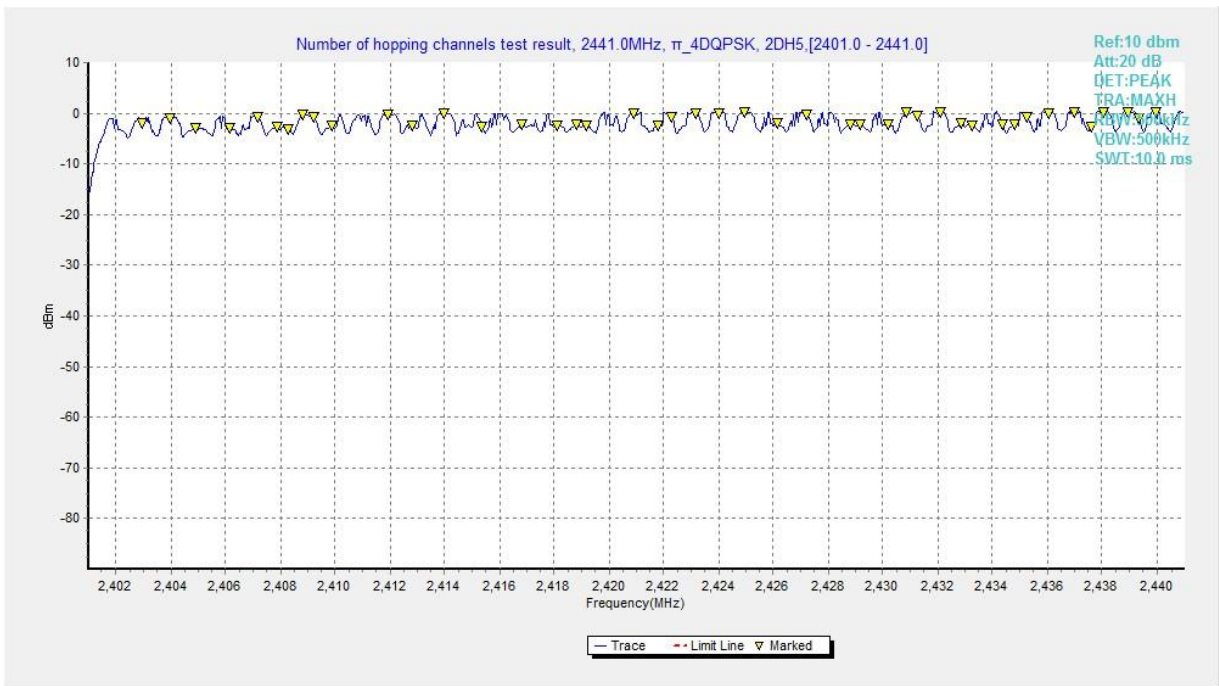


Fig. 78 Hopping channel ch0~39 ( $\pi/4$  DQPSK, Ch39)



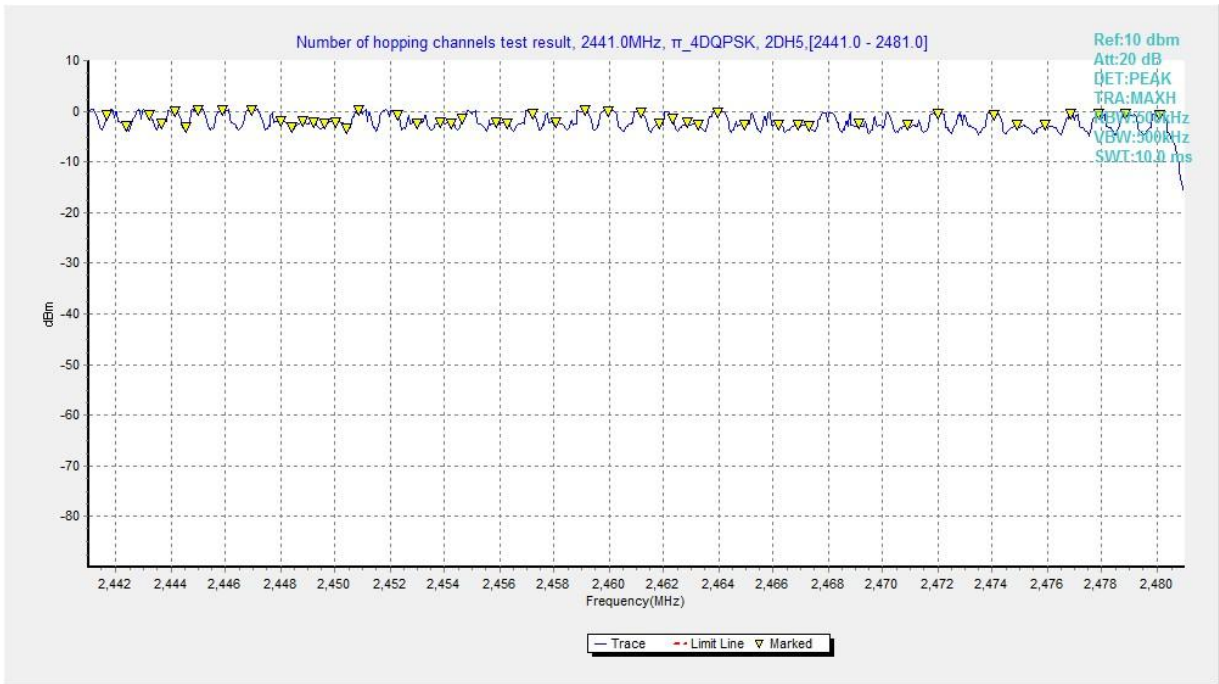


Fig. 79 Hopping channel ch40~78 ( $\pi/4$  DQPSK, Ch39)

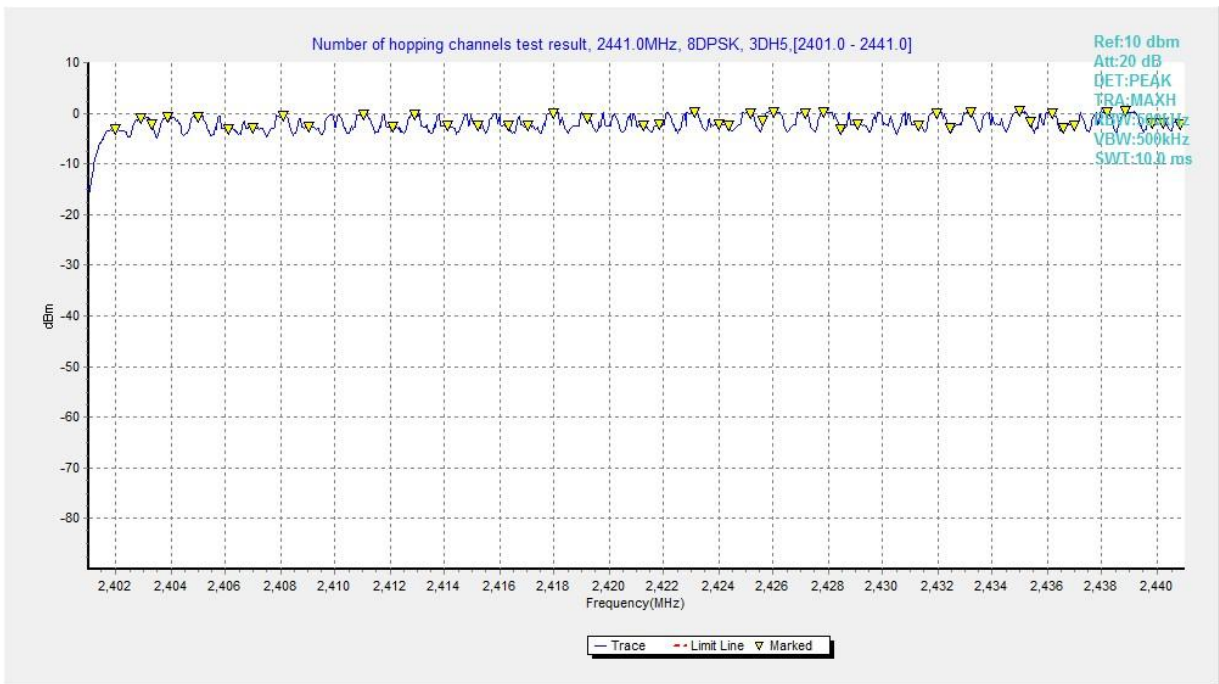


Fig. 80 Hopping channel ch0~39 (8DPSK, Ch39)

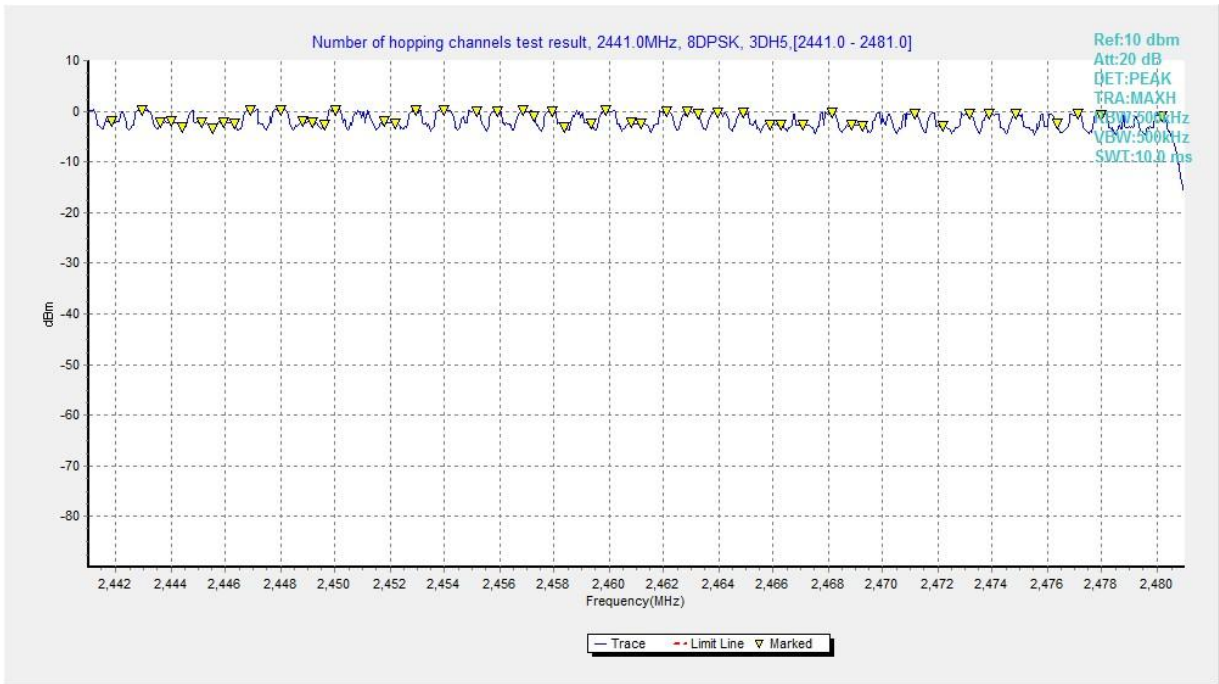


Fig. 81 Hopping channel ch40~78 (8DPSK, Ch39)

### 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 (MHz)	Conclusion
GFSK	39	DH5	Fig.82	1.00	<b>P</b>
$\pi/4$ DQPSK	39	2-DH5	Fig.83	1.00	<b>P</b>
8DPSK	39	3-DH5	Fig.84	1.00	<b>P</b>

See below for test graphs.

Conclusion: Pass

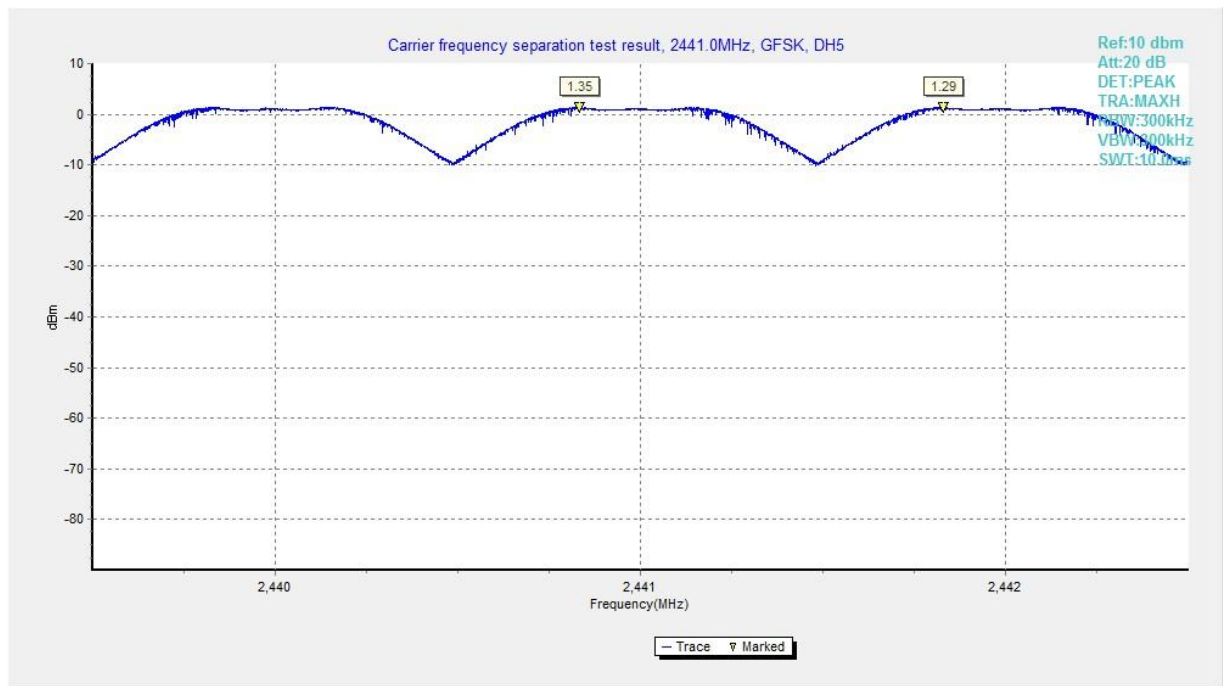


Fig. 82 Carrier Frequency Separation (GFSK, Ch39)

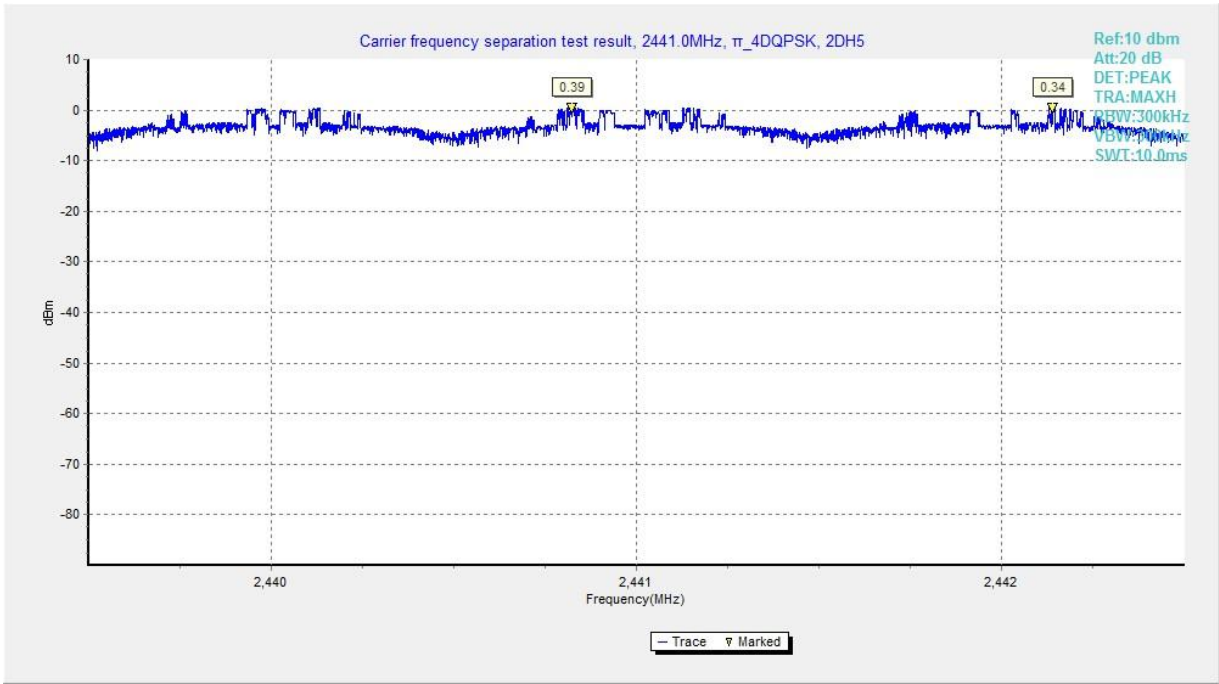


Fig. 83 Carrier Frequency Separation ( $\pi$  /4 DQPSK, Ch39)

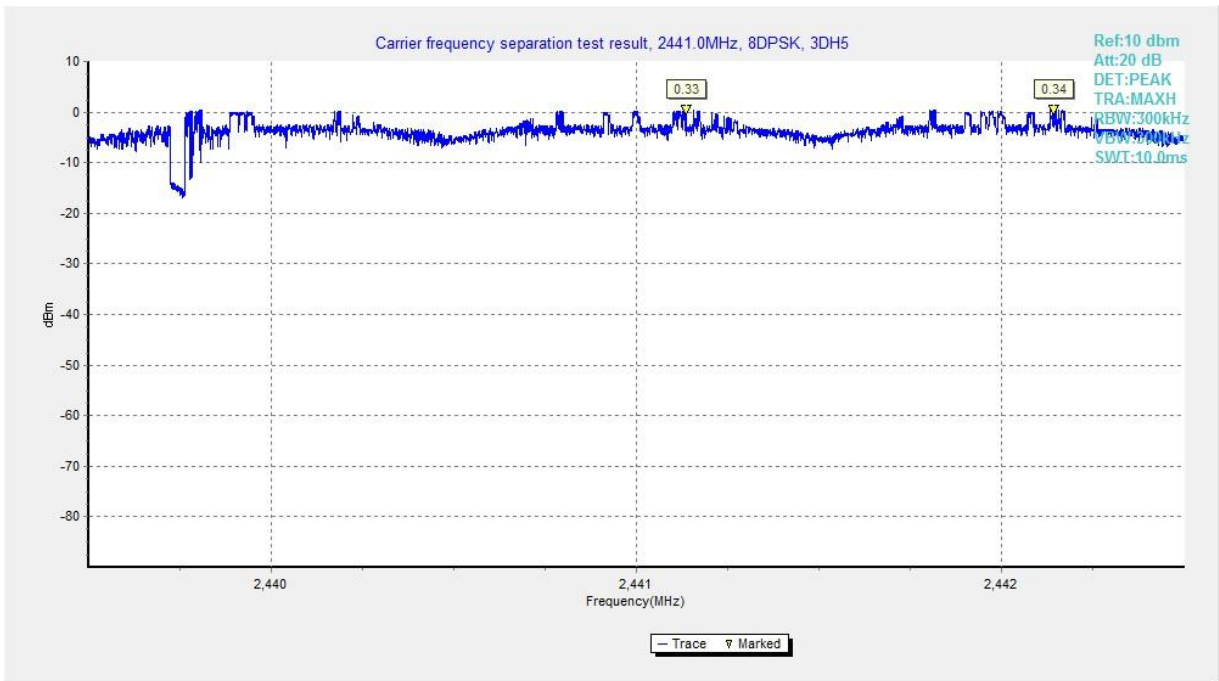


Fig. 84 Carrier Frequency Separation (8DPSK, Ch39)



## A.9 AC Power line Conducted Emission

### Test Condition:

Voltage (V)	Frequency (Hz)
120	60

### Measurement Result and limit:

BT (Quasi-peak Limit) - AE2

Frequency range (MHz)	Quasi-peak Limit (dB $\mu$ V)	Result (dB $\mu$ V)		Conclusion
		Traffic	Idle	
0.15 to 0.5	66 to 56	Fig.85	Fig.86	<b>P</b>
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) - AE2

Frequency range (MHz)	Average-peak Limit (dB $\mu$ V)	Result (dB $\mu$ V)		Conclusion
		Traffic	Idle	
0.15 to 0.5	56 to 46	Fig.85	Fig.86	<b>P</b>
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**

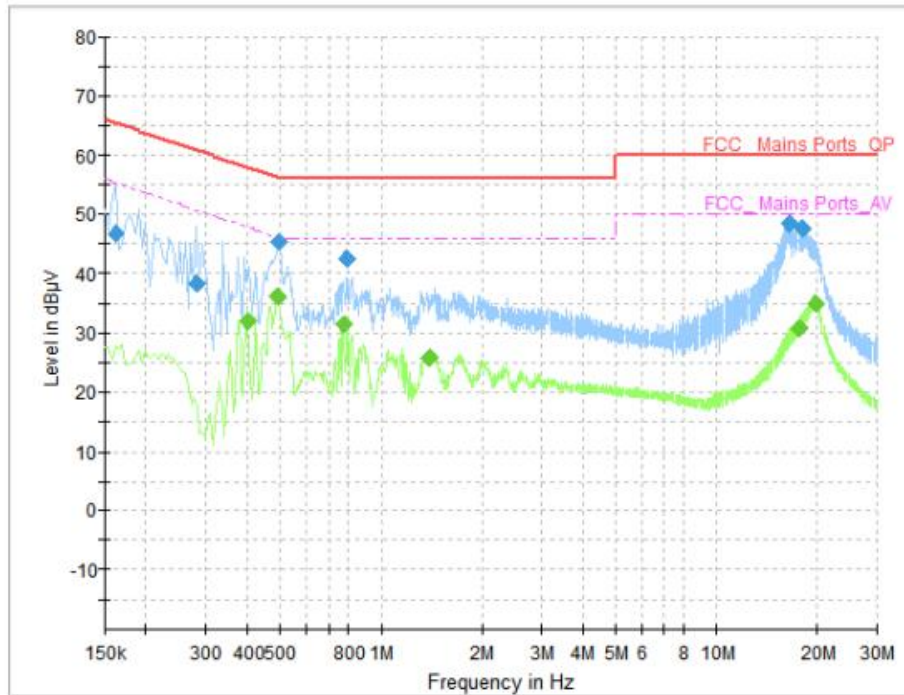


Fig. 85 AC Powerline Conducted Emission (Traffic, AE2, 120V)

**Measurement Results: Quasi Peak**

Frequency (MHz)	Quasi Peak (dBµV)	Limit (dBµV)	Margin (dB)	Line	Filter	Corr. (dB)
0.162000	46.74	65.36	18.62	L1	ON	10
0.282000	38.49	60.76	22.27	N	ON	10
0.498000	45.28	56.03	10.76	N	ON	10
0.794000	42.48	56.00	13.52	L1	ON	10
16.482000	48.50	60.00	11.50	L1	ON	10
18.078000	47.57	60.00	12.43	L1	ON	10

**Measurement Results: Average**

Frequency (MHz)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Filter	Corr. (dB)
0.402000	31.84	47.81	15.98	L1	ON	10
0.490000	36.28	46.17	9.89	L1	ON	10
0.774000	31.53	46.00	14.47	L1	ON	10
1.394000	25.77	46.00	20.23	L1	ON	10
17.530000	30.90	50.00	19.10	N	ON	11
19.694000	34.96	50.00	15.04	L1	ON	10

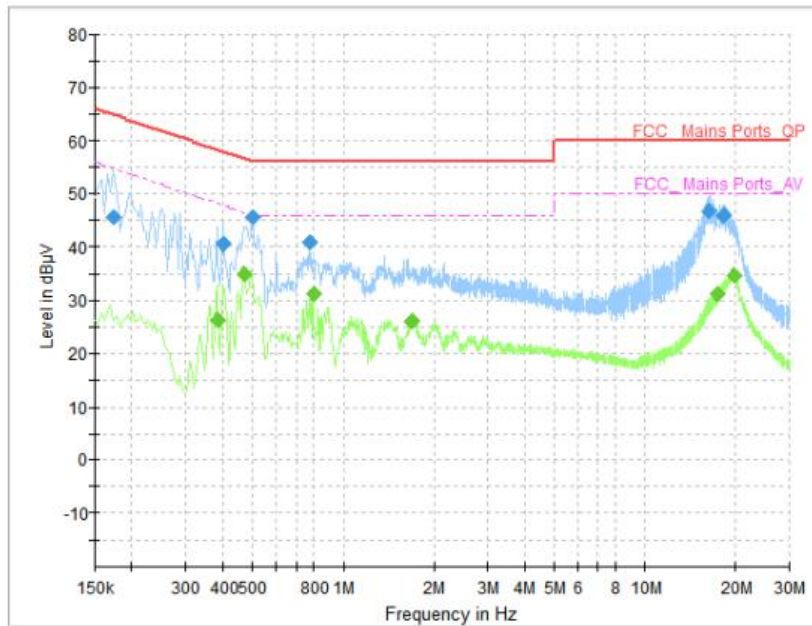


Fig. 86 AC Power line Conducted Emission (Idle, AE2, 120V)

**Measurement Results: Quasi Peak**

Frequency (MHz)	Quasi Peak (dBµV)	Limit (dBµV)	Margin (dB)	Line	Filter	Corr. (dB)
0.174000	45.58	64.77	19.19	L1	ON	10
0.402000	40.64	57.81	17.18	L1	ON	10
0.502000	45.54	56.00	10.46	L1	ON	10
0.778000	40.92	56.00	15.08	L1	ON	10
16.322000	46.72	60.00	13.28	L1	ON	10
18.142000	46.04	60.00	13.96	L1	ON	10

**Measurement Results: Average**

Frequency (MHz)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Filter	Corr. (dB)
0.382000	26.38	48.24	21.86	L1	ON	10
0.470000	34.91	46.51	11.61	L1	ON	10
0.798000	31.15	46.00	14.85	L1	ON	10
1.690000	26.01	46.00	19.99	L1	ON	10
17.518000	30.98	50.00	19.02	N	ON	11
19.738000	34.64	50.00	15.36	N	ON	10

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