

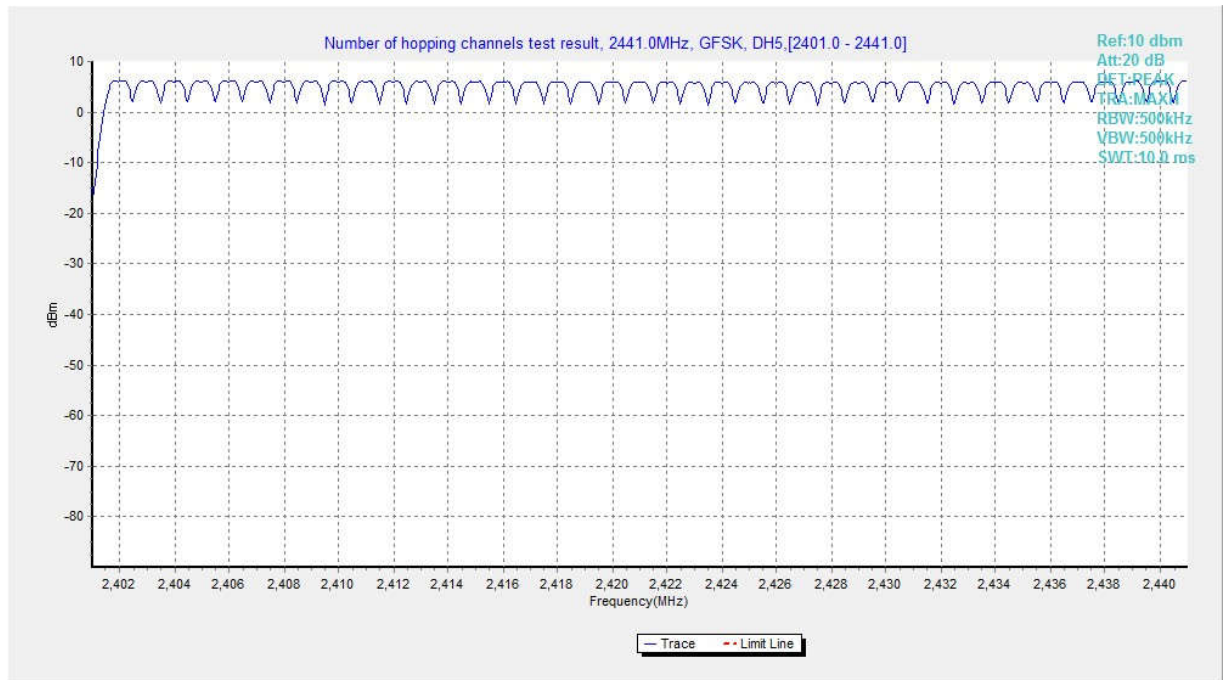


Fig. 75 Hopping channel ch0~39 (GFSK, Ch39)

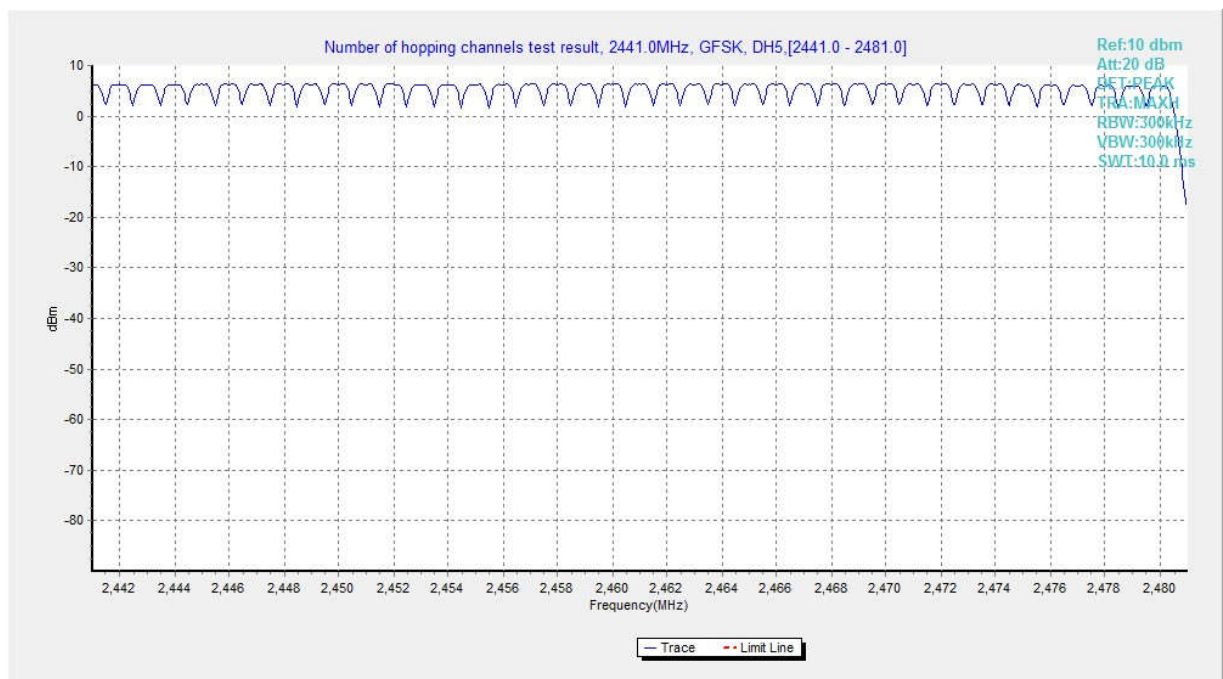


Fig. 76 Hopping channel ch39~78 (GFSK, Ch39)

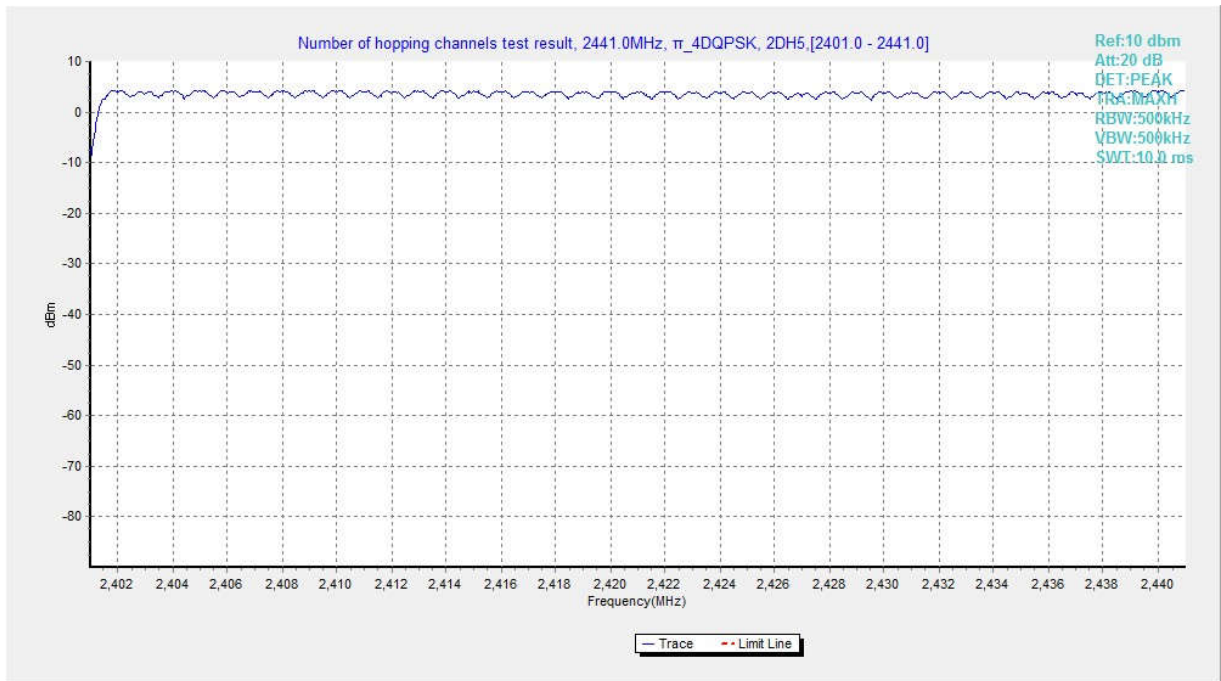


Fig. 77 Hopping channel ch0~39 ($\pi/4$ DQPSK, Ch39)

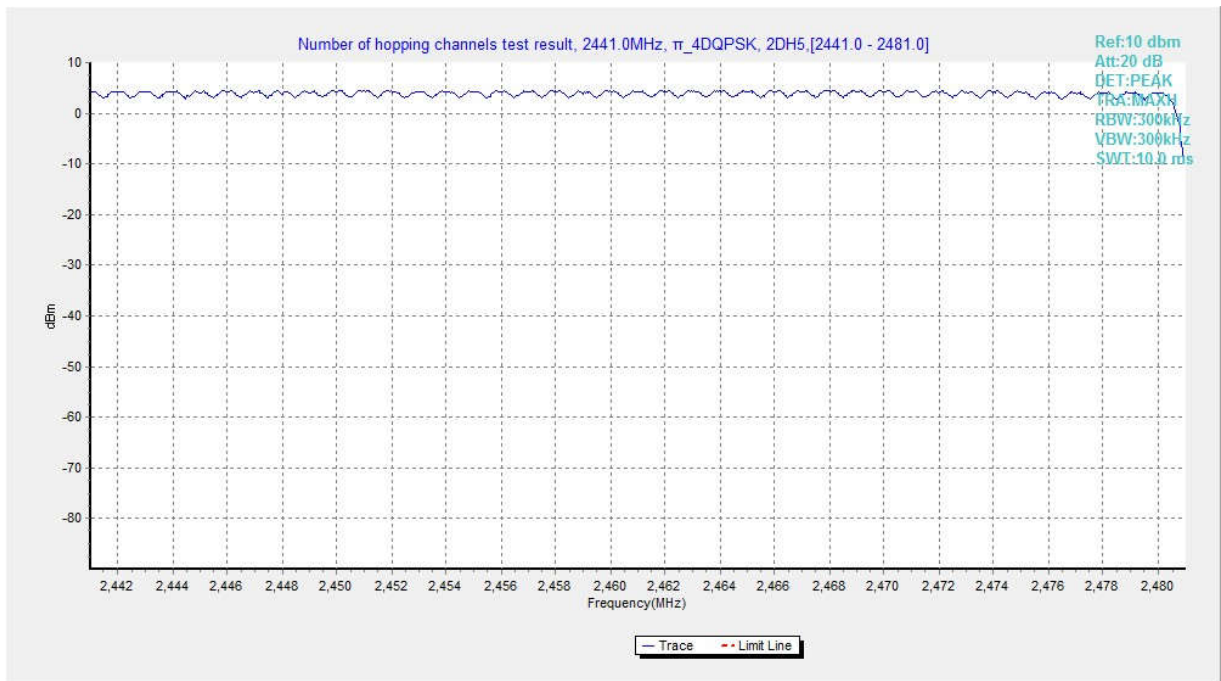


Fig. 78 Hopping channel ch39~78 ($\pi/4$ DQPSK, Ch39)

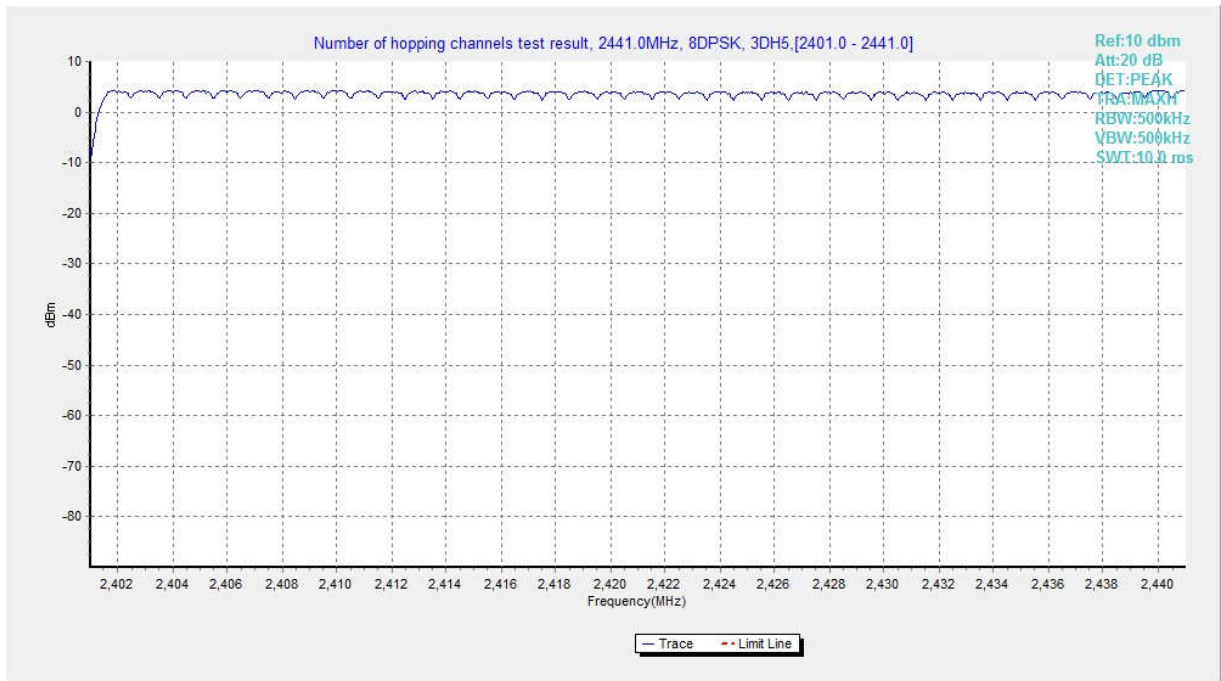


Fig. 79 Hopping channel ch0~39 (8DPSK, Ch39)

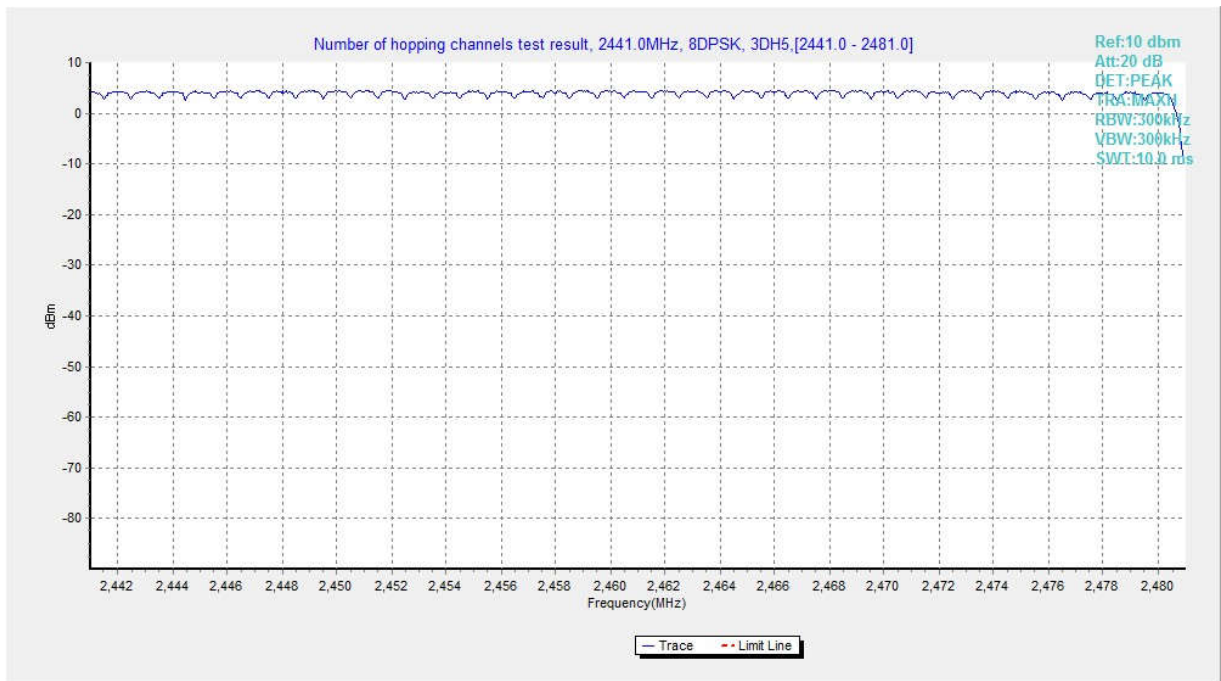


Fig. 80 Hopping channel ch39~78 (8DPSK, Ch39)

A.8 Carrier Frequency Separation

Measurement Limit:

Standard	Limit
FCC 47 CFR Part 15.247(a) & RSS-247 Section 5.1	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.81	1004.25	P
$\pi/4$ DQPSK	39	2-DH5	Fig.82	1147.50	P
8DPSK	39	3-DH5	Fig.83	1007.25	P

See below for test graphs.

Conclusion: Pass

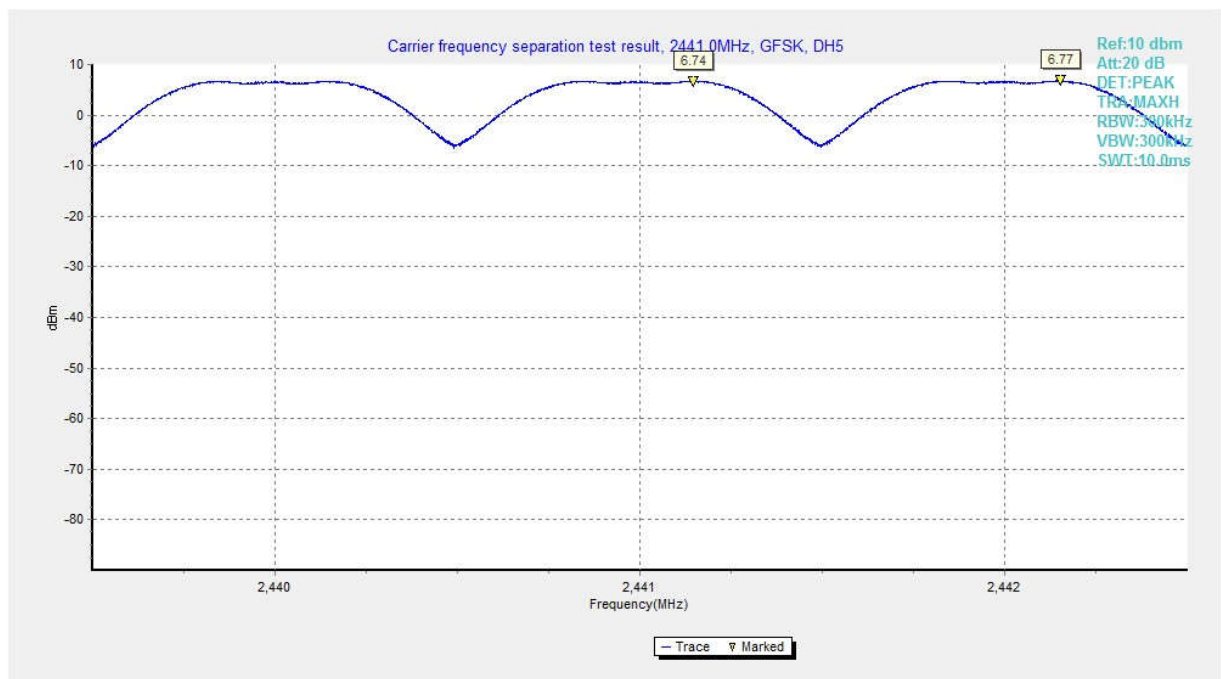


Fig. 81 Carrier Frequency Separation (GFSK, Ch39)

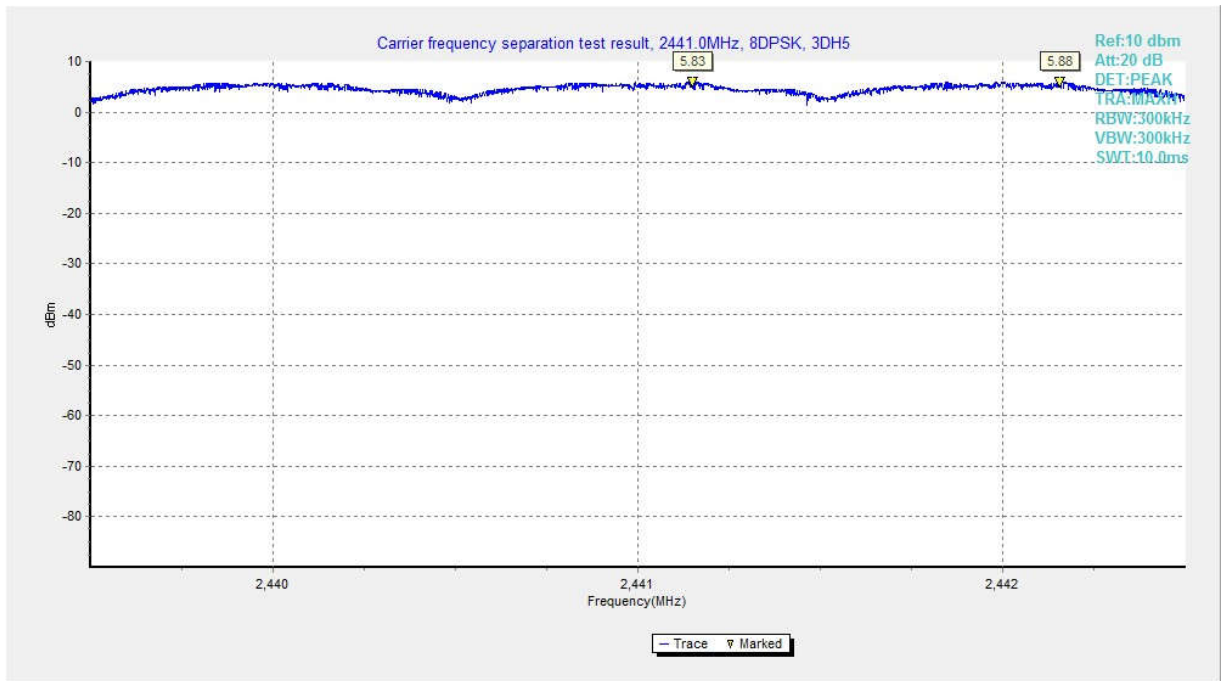


Fig. 82 Carrier Frequency Separation ($\pi/4$ DQPSK, Ch39)

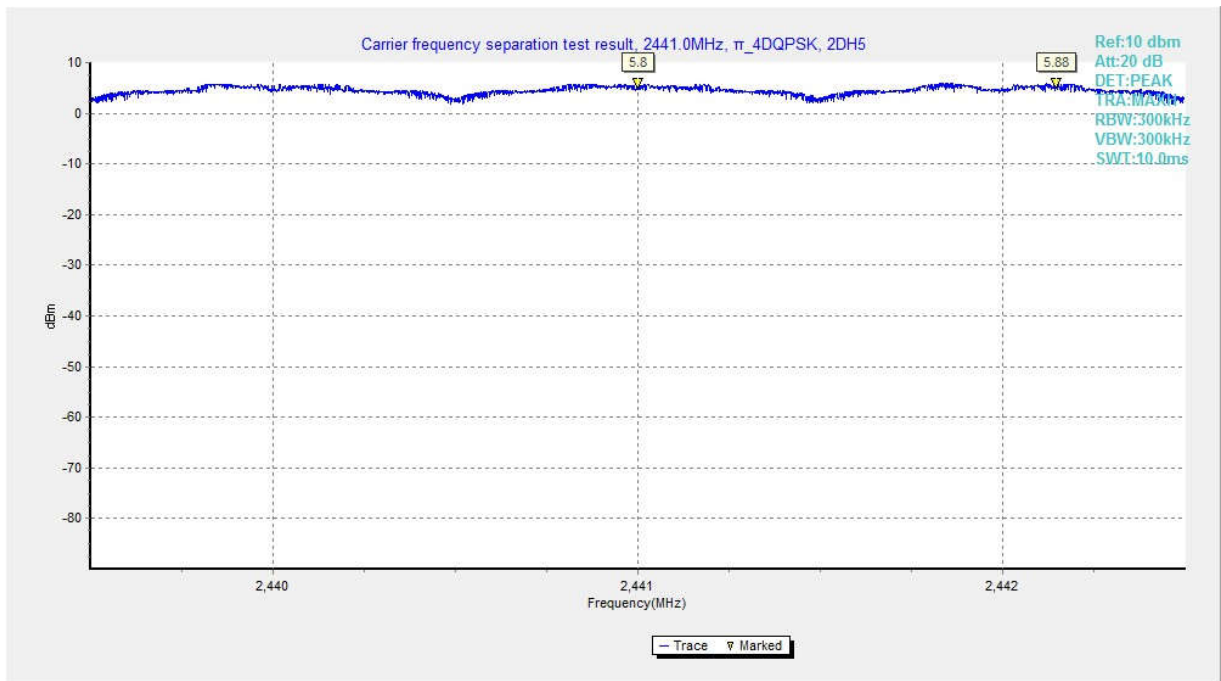


Fig. 83 Carrier Frequency Separation (8DPSK, Ch39)

A.9 Occupied Bandwidth

Measurement Limit:

Standard	Limit
RSS-Gen Section 4 6.6	/

Measurement Results:

For GFSK

Channel	Occupied Bandwidth (KHz)	Conclusion
0	Fig.84 1012.25	/
39	Fig.85 1012.75	/
78	Fig.86 1012.75	/

For $\pi/4$ DQPSK

Channel	Occupied Bandwidth (MHz)	Conclusion
0	Fig.87 976.76	/
39	Fig.88 959.26	/
78	Fig.89 962.26	/

For 8DPSK

Channel	Occupied Bandwidth (MHz)	Conclusion
0	Fig.90 1068.23	/
39	Fig.91 1047.74	/
78	Fig.92 1060.74	/

See below for test graphs.

Conclusion: PASS

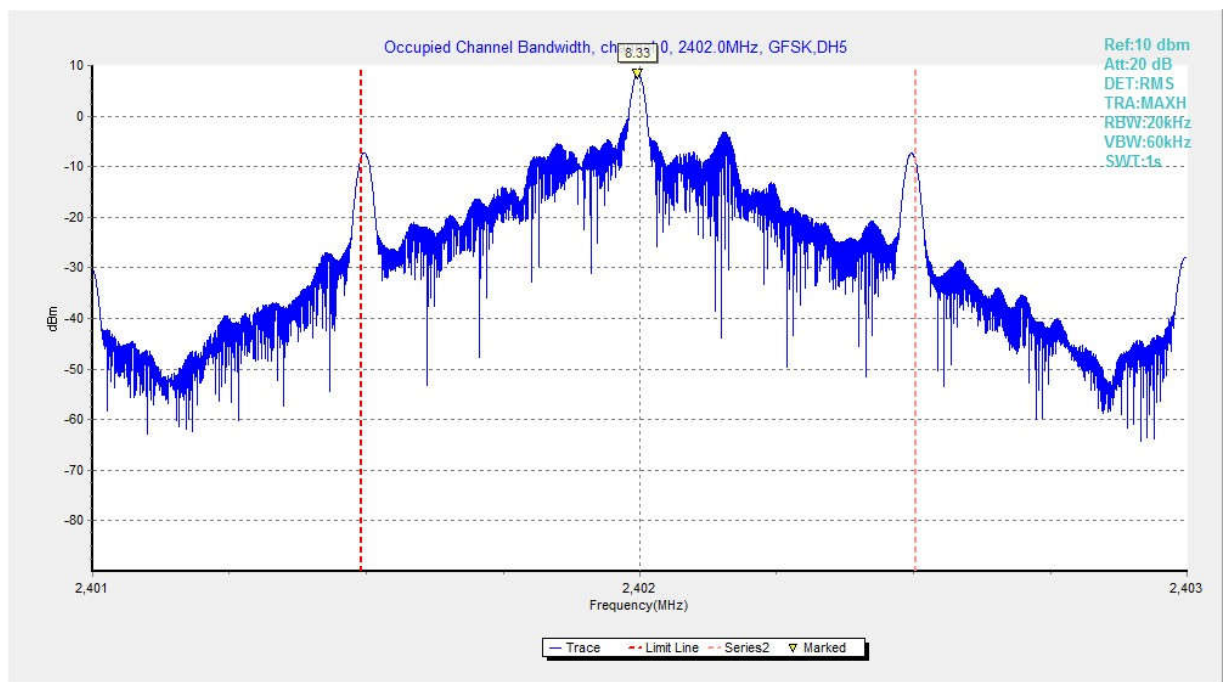


Fig. 84 Occupied Bandwidth: GFSK, Channel 0

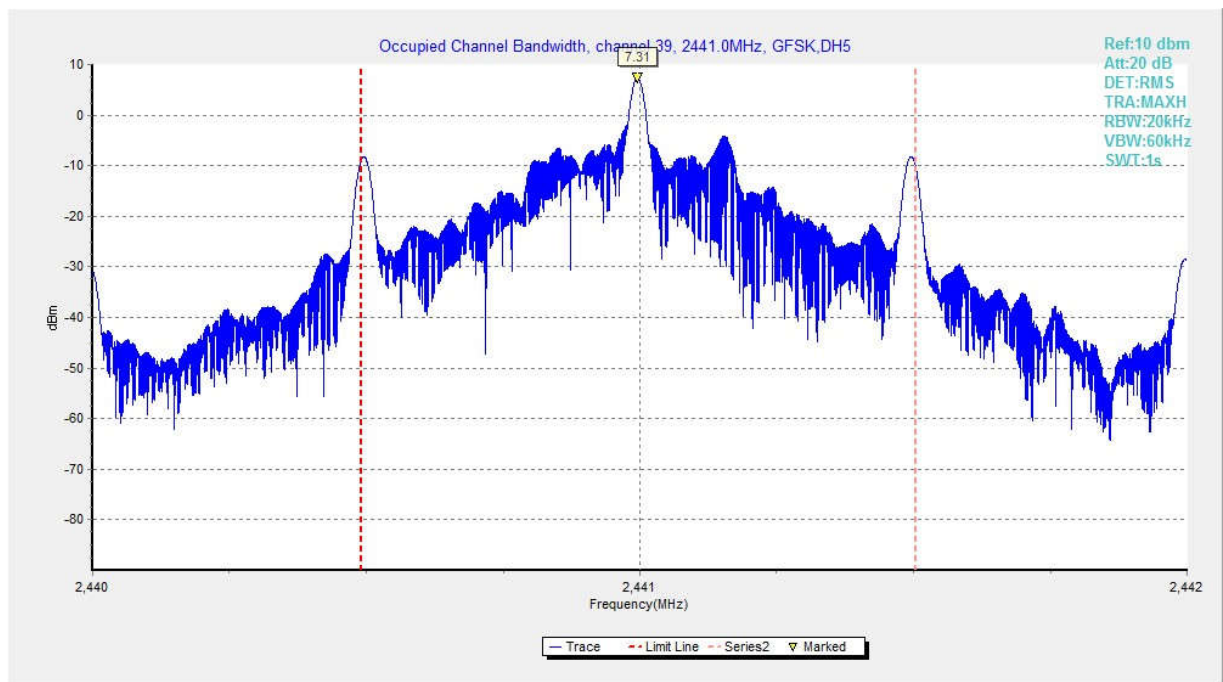


Fig. 85 Occupied Bandwidth: GFSK, Channel 39

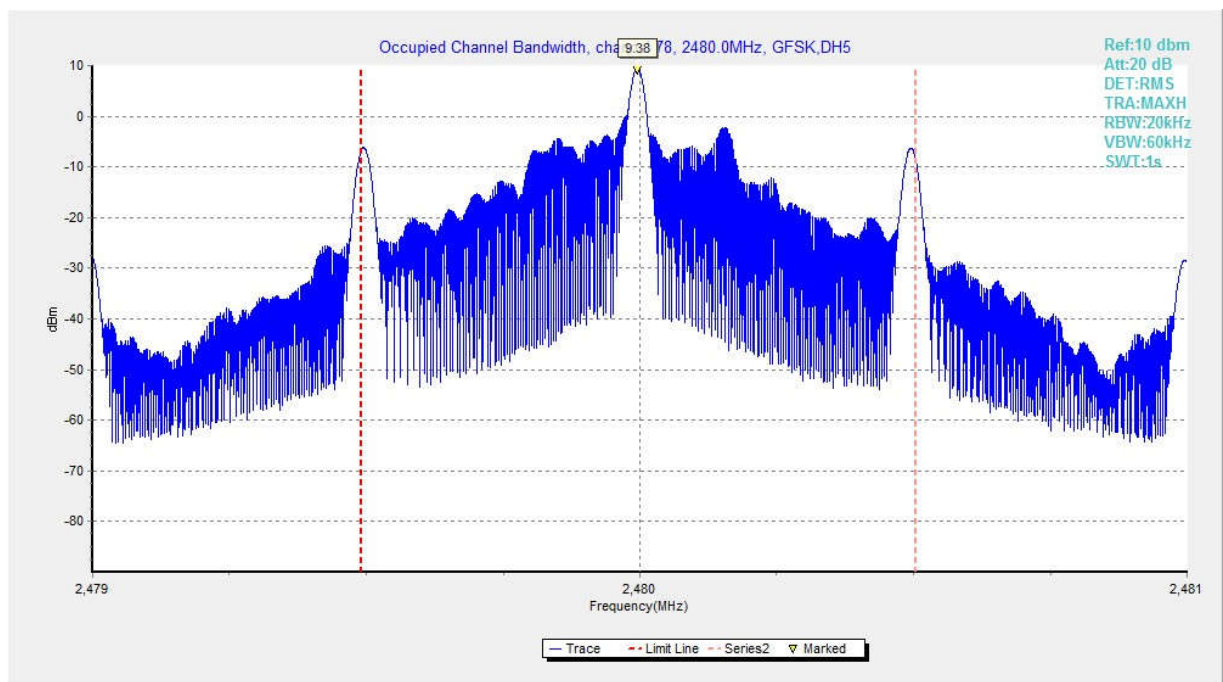


Fig. 86 Occupied Bandwidth: GFSK, Channel 78

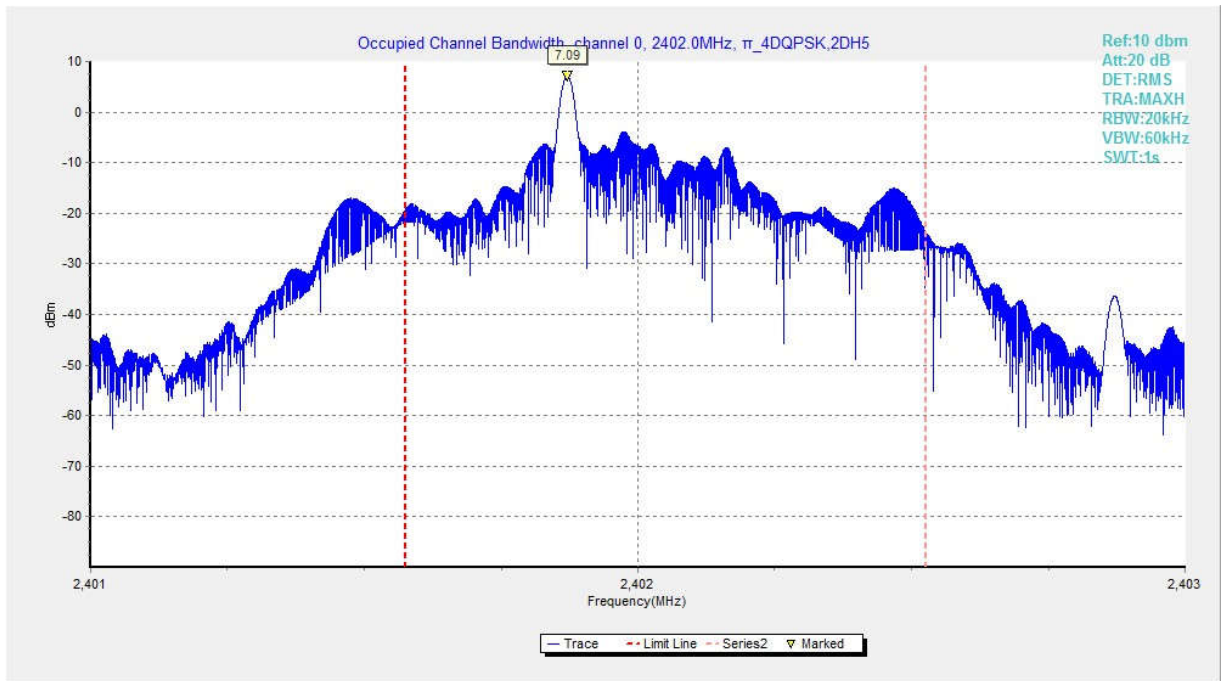


Fig. 87 Occupied Bandwidth: $\pi/4$ DQPSK, Channel 0

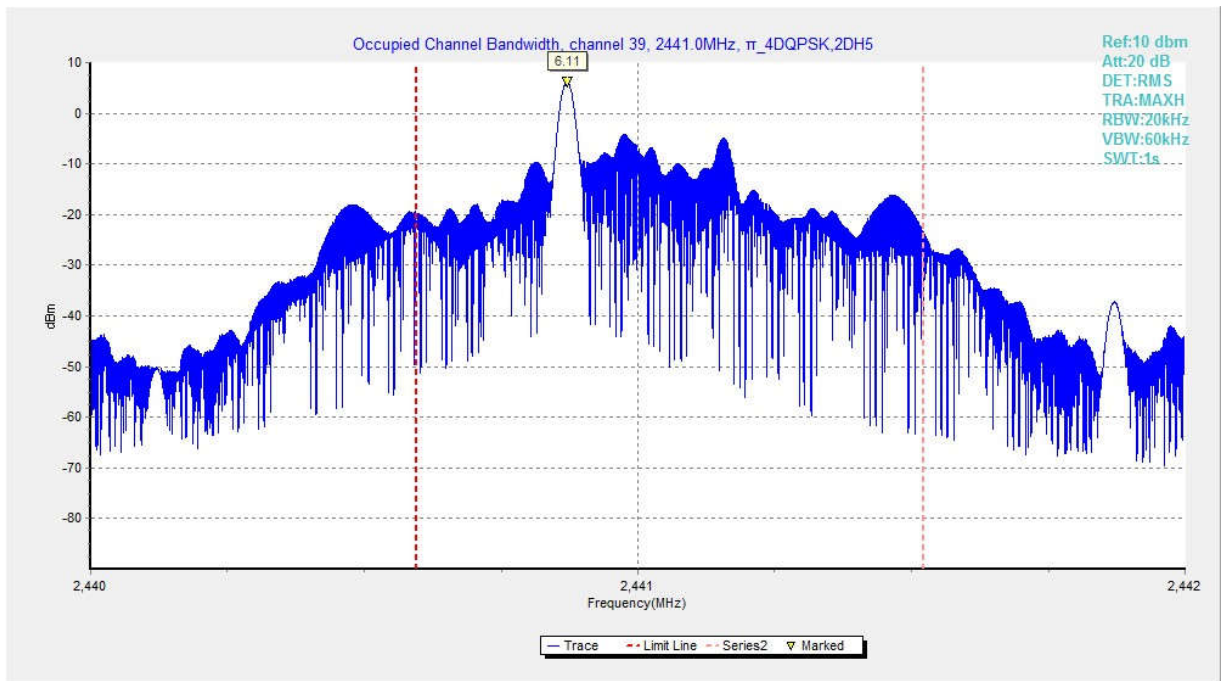


Fig. 88 Occupied Bandwidth: $\pi/4$ DQPSK, Channel 39

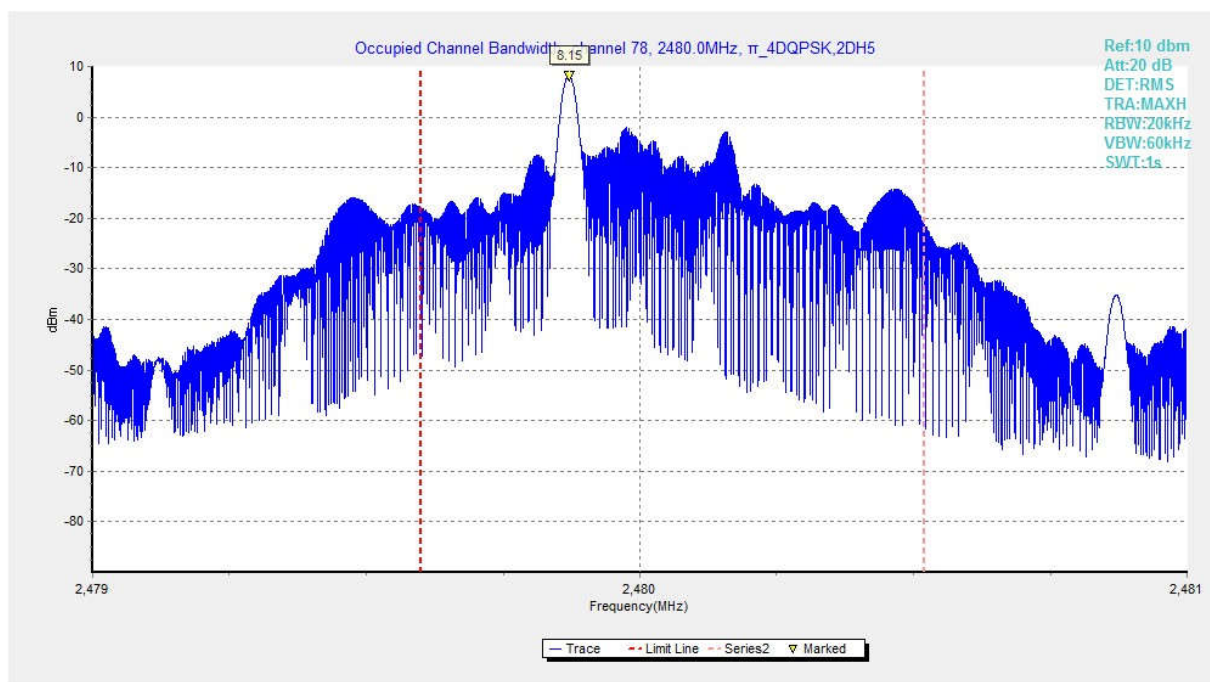


Fig. 89 Occupied Bandwidth: $\pi/4$ DQPSK, Channel 78

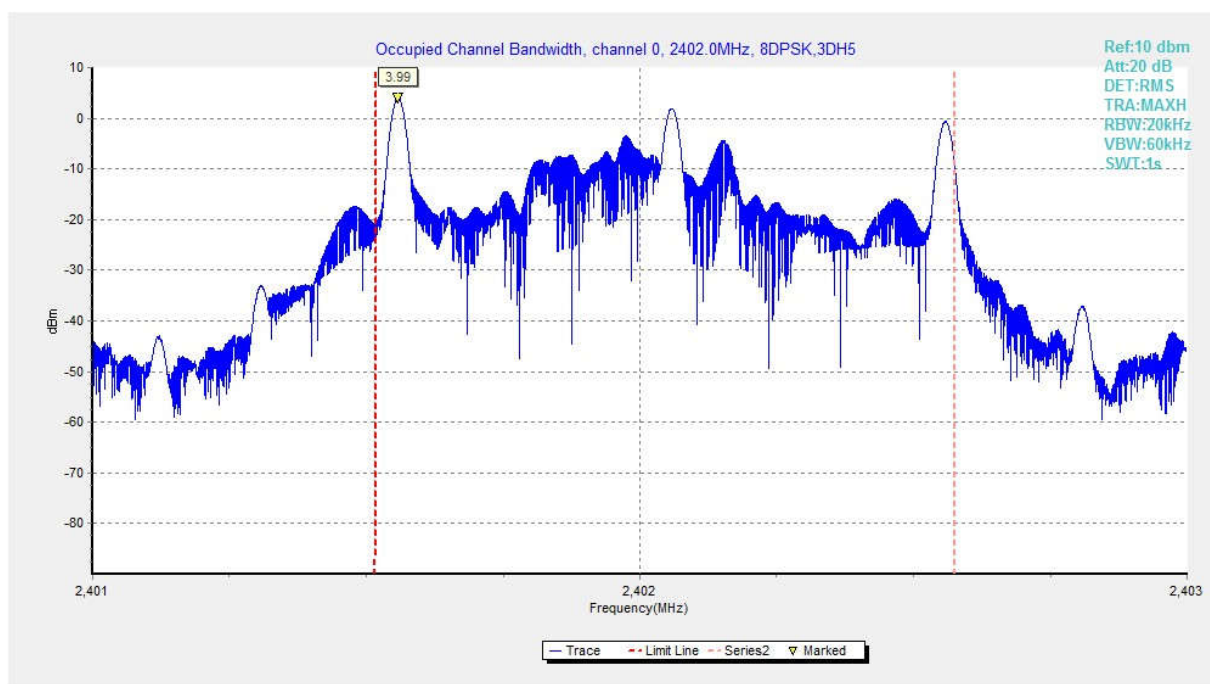


Fig. 90 Occupied Bandwidth: 8DPSK, Channel 0

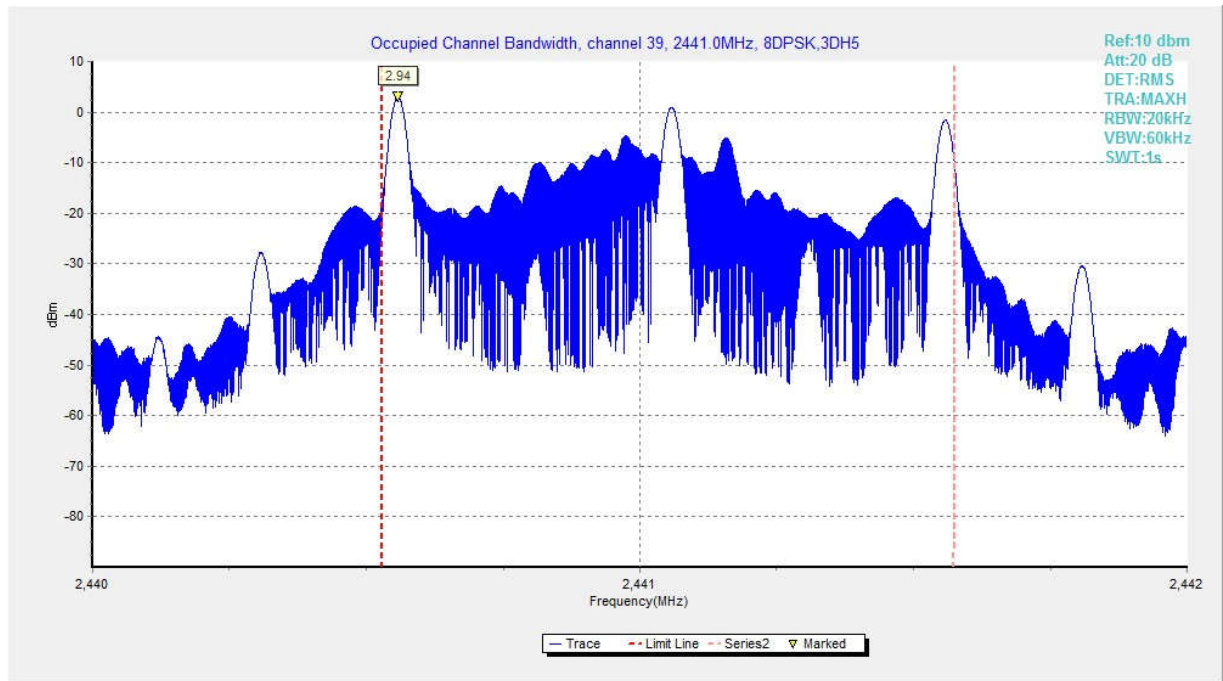


Fig. 91 Occupied Bandwidth: 8DPSK, Channel 39

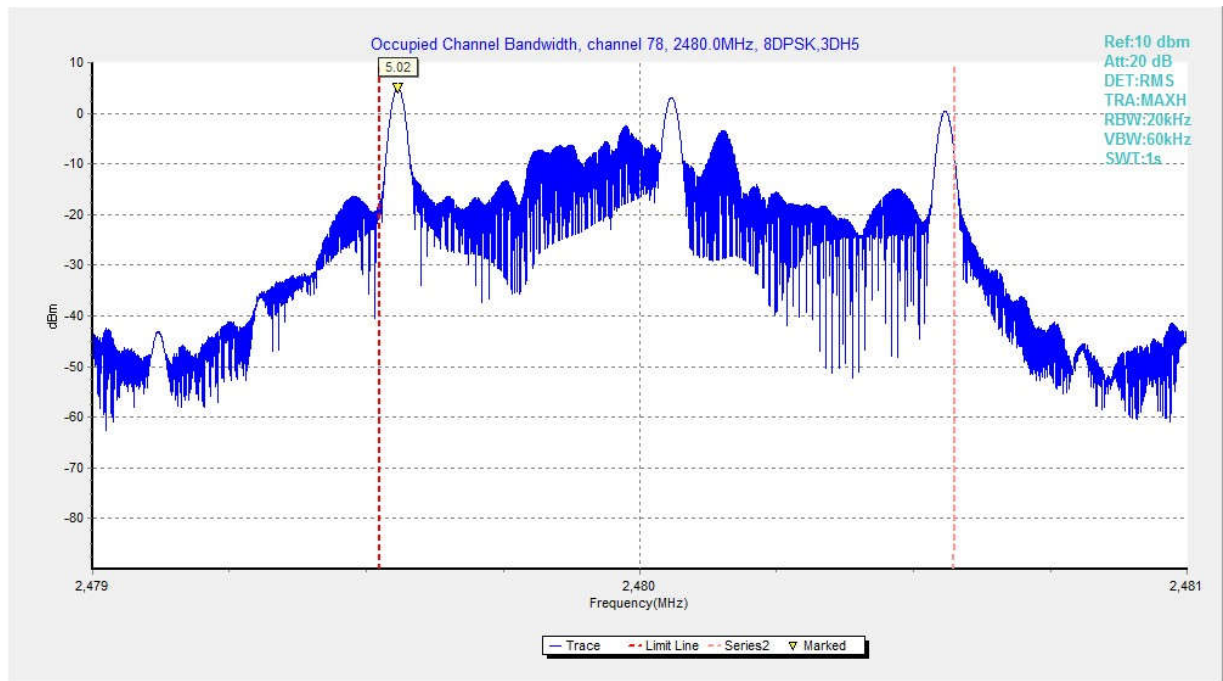


Fig. 92 Occupied Bandwidth: 8DPSK, Channel 78

A.10 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

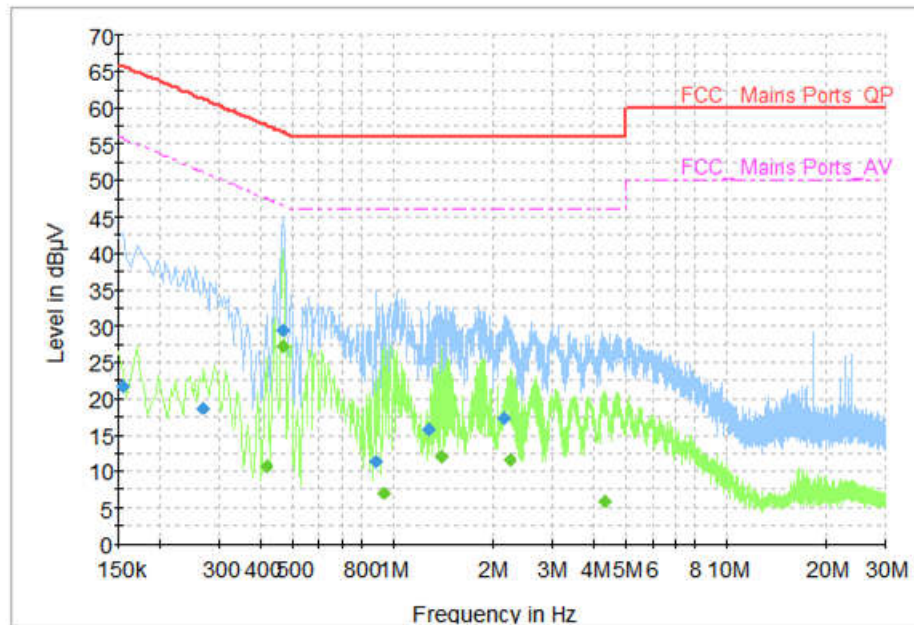


Fig. 93 AC Powerline Conducted Emission (Traffic)

Measurement Results: Quasi Peak

Frequency (MHz)	Quasi Peak (dBμV)	Limit (dBμV)	Margin (dB)	Line	Filter	Corr. (dB)
0.154000	21.76	65.78	44.02	N	ON	9.6
0.270000	18.76	61.12	42.36	N	ON	9.6
0.466000	29.48	56.59	27.11	L1	ON	9.7
0.894000	11.20	56.00	44.80	L1	ON	9.7
1.278000	15.63	56.00	40.37	L1	ON	9.7
2.150000	17.36	56.00	38.64	L1	ON	9.7

Measurement Results : Average

Frequency (MHz)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Line	Filter	Corr. (dB)
0.414000	10.78	47.57	36.79	N	ON	9.7
0.466000	27.08	46.59	19.50	N	ON	9.7
0.938000	7.00	46.00	39.00	N	ON	9.7
1.394000	11.94	46.00	34.06	N	ON	9.7
2.246000	11.57	46.00	34.43	N	ON	9.7
4.302000	5.74	46.00	40.26	N	ON	9.7

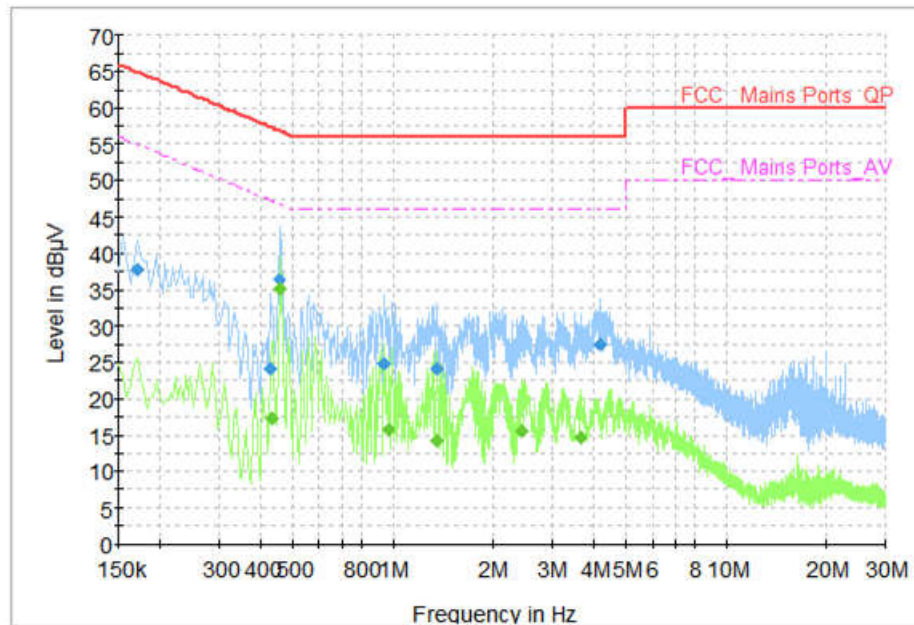


Fig. 94 AC Power line Conducted Emission (Idle)

Measurement Results: Quasi Peak

Frequency (MHz)	Quasi Peak (dBμV)	Limit (dBμV)	Margin (dB)	Line	Filter	Corr. (dB)
0.170000	37.81	64.96	27.15	N	ON	9.6
0.426000	24.15	57.33	33.18	L1	ON	9.7
0.454000	36.38	56.80	20.42	N	ON	9.7
0.942000	24.83	56.00	31.17	L1	ON	9.7
1.354000	24.21	56.00	31.79	L1	ON	9.7
4.194000	27.46	56.00	28.54	L1	ON	9.7

Measurement Results : Average

Frequency (MHz)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Line	Filter	Corr. (dB)
0.430000	17.23	47.25	30.02	N	ON	9.7
0.458000	35.17	46.73	11.56	N	ON	9.6
0.966000	15.62	46.00	30.38	N	ON	9.7
1.350000	14.24	46.00	31.76	N	ON	9.7
2.414000	15.51	46.00	30.49	N	ON	9.7
3.642000	14.60	46.00	31.40	N	ON	9.7

END OF REPORT