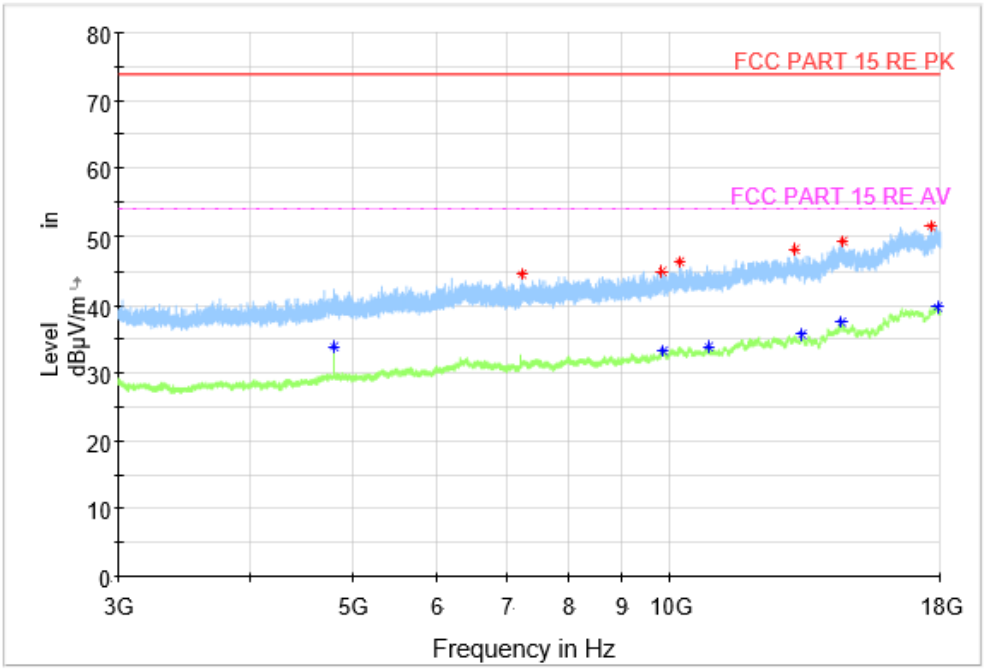

Fig. 43 Radiated Spurious Emission (GFSK, Ch0, 3 GHz ~18 GHz)

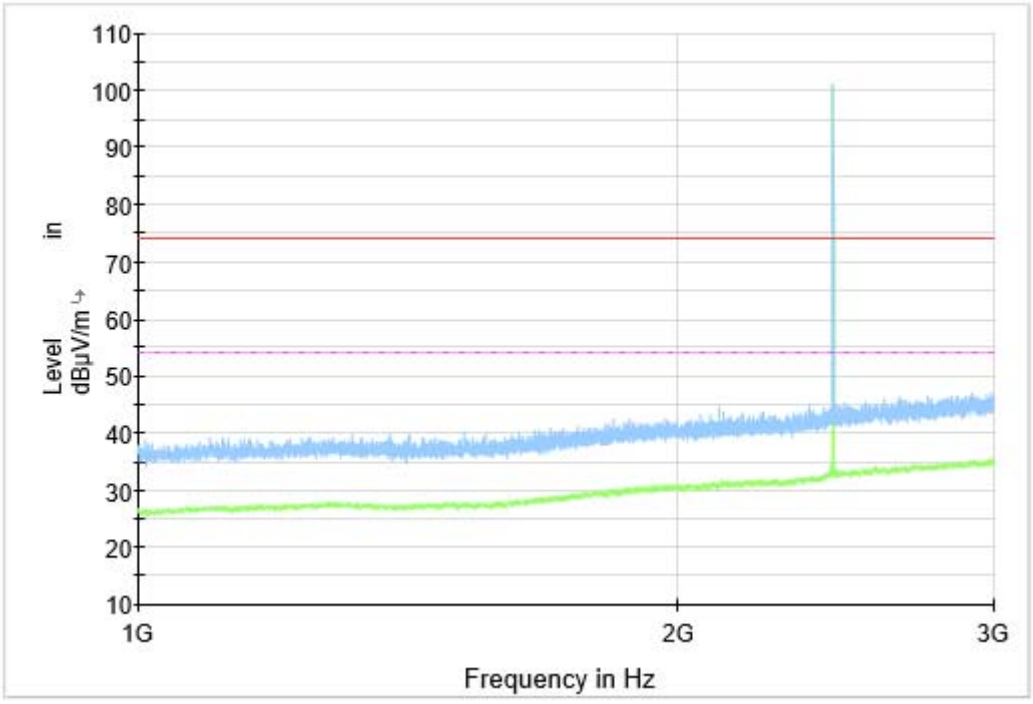

Fig. 44 Radiated Spurious Emission (GFSK, Ch39, 1 GHz ~3 GHz)

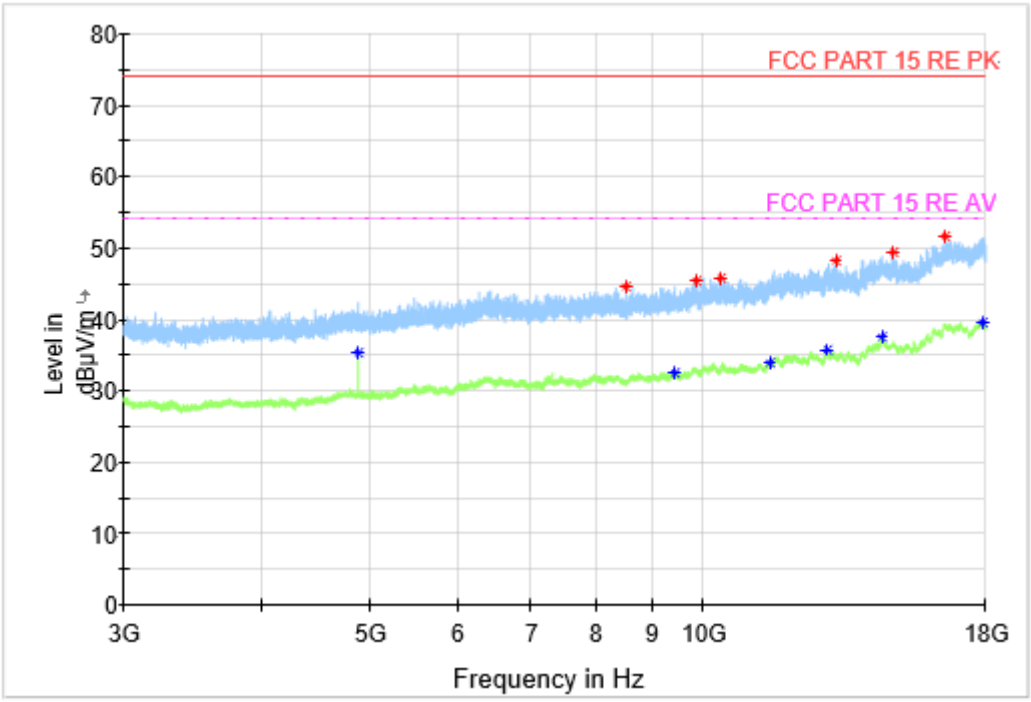

Fig. 45 Radiated Spurious Emission (GFSK, Ch39, 3 GHz ~18 GHz)

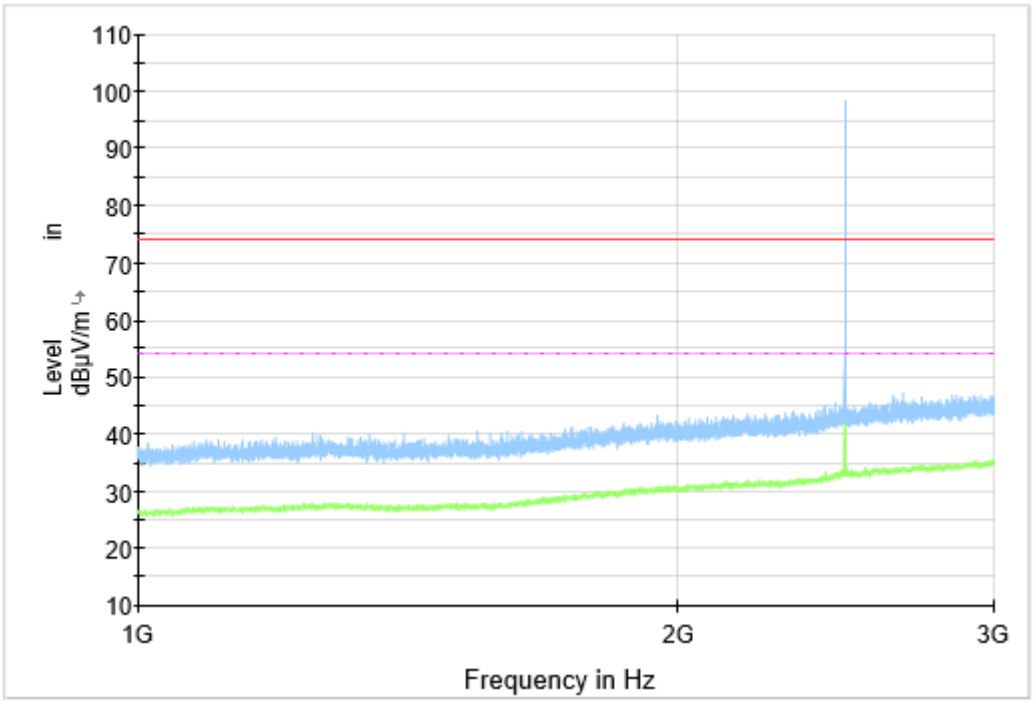

Fig. 46 Radiated Spurious Emission (GFSK, Ch78, 1 GHz ~3 GHz)

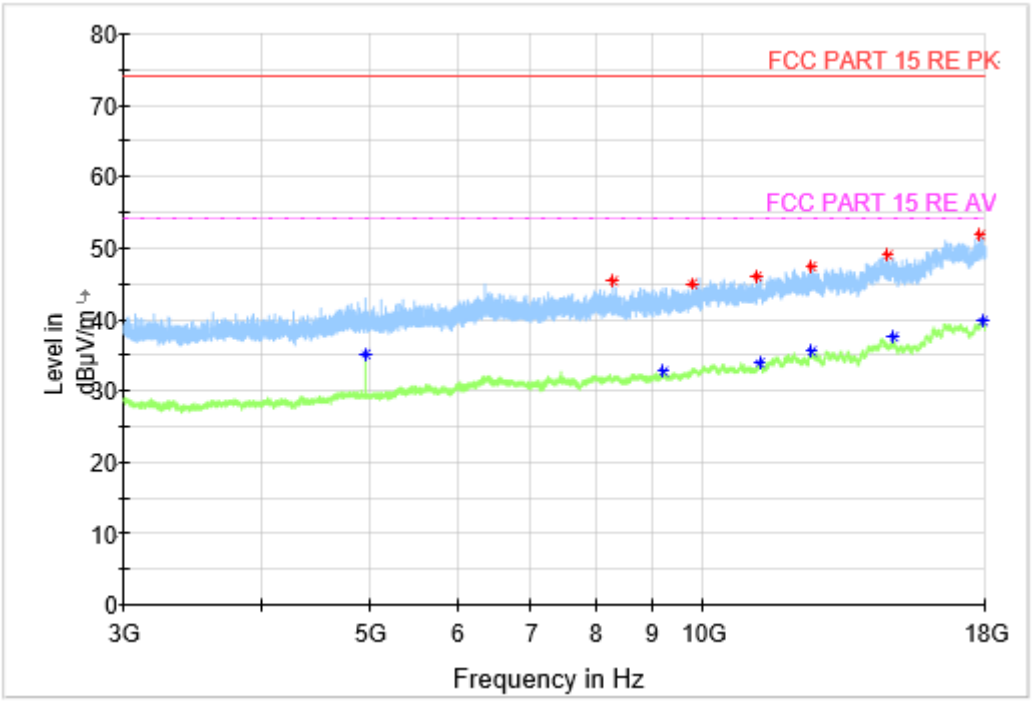

Fig. 47 Radiated Spurious Emission (GFSK, Ch78, 3 GHz ~18 GHz)

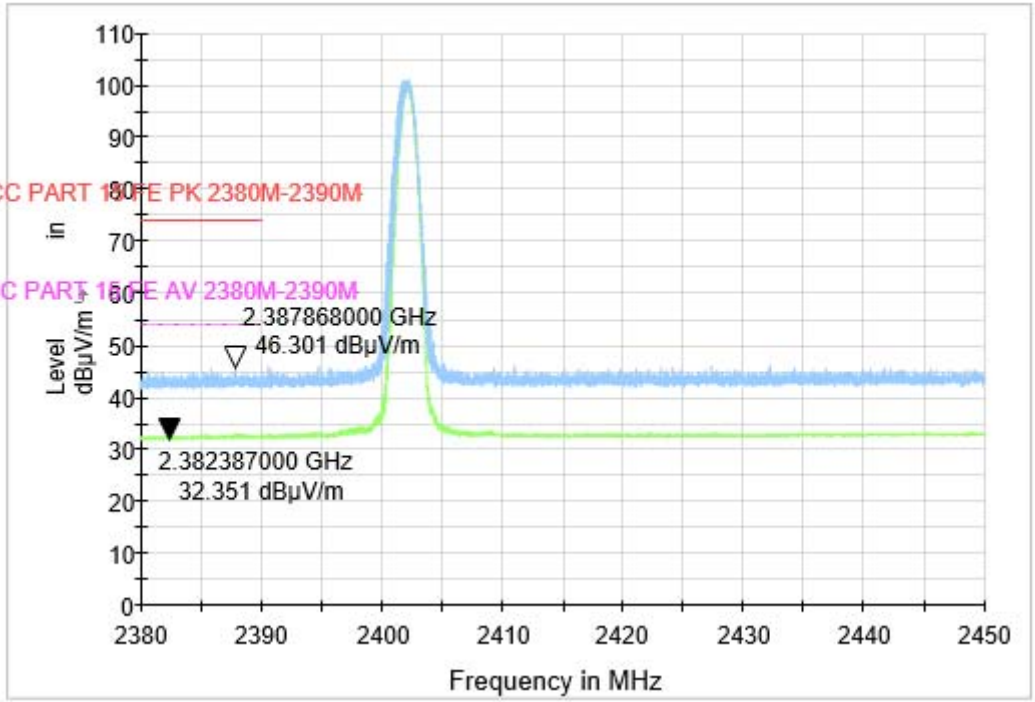

Fig. 48 Radiated Band Edges (GFSK, Ch0, 2380GHz~2450GHz)

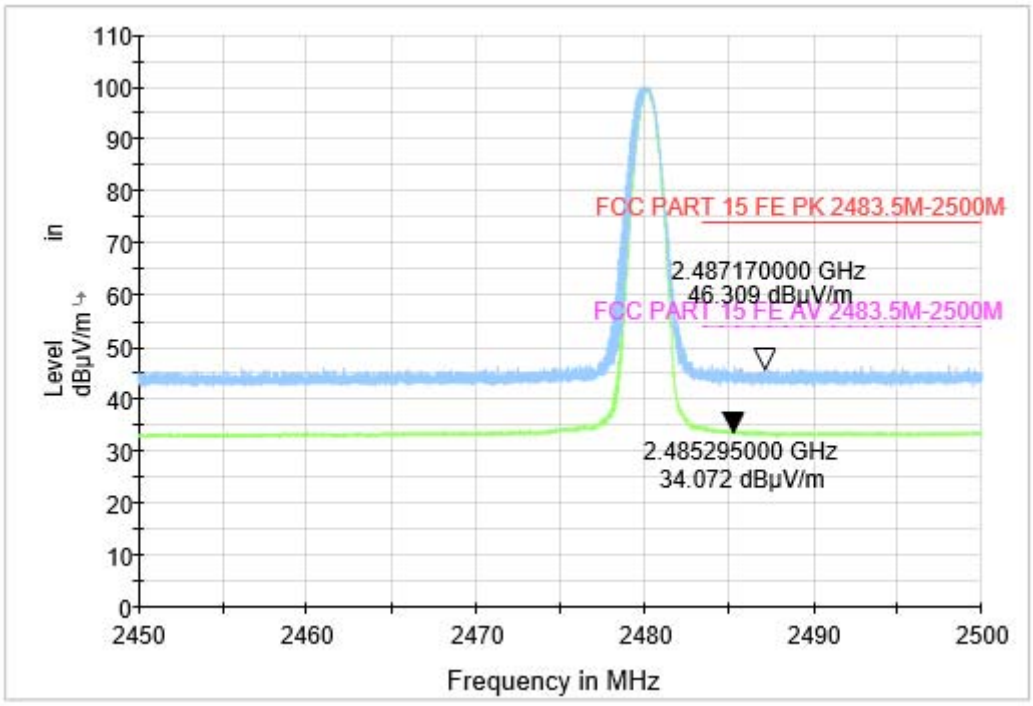

Fig. 49 Radiated Band Edges (GFSK, Ch78, 2450GHz~2500GHz)

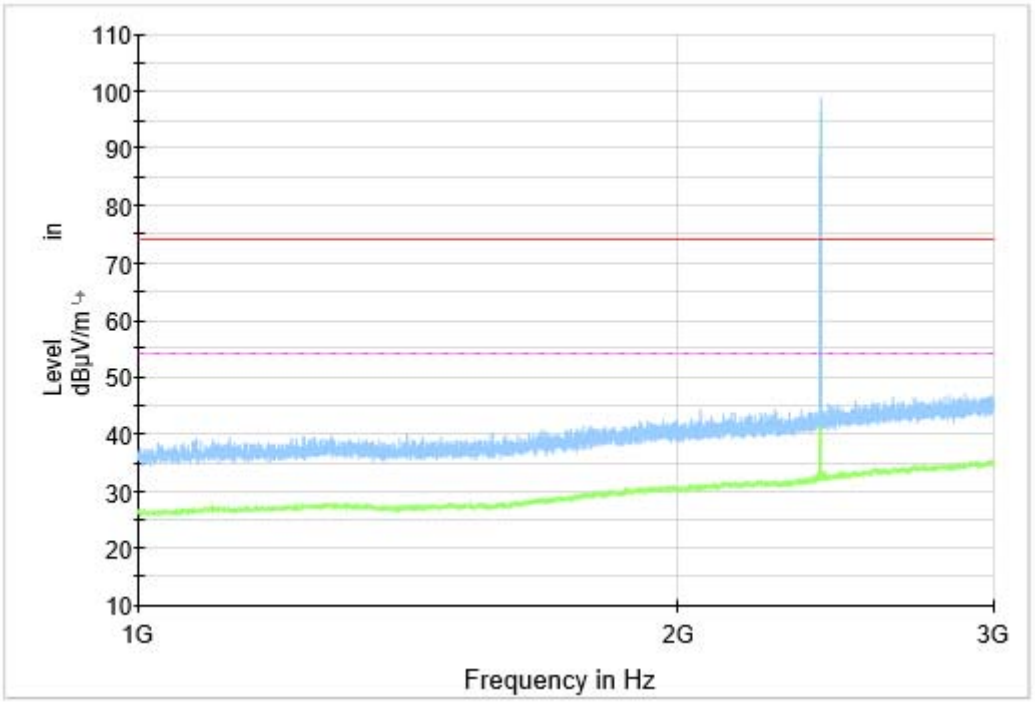

Fig. 50 Radiated Spurious Emission (π /4 DQPSK, Ch0, 1 GHz ~3 GHz)

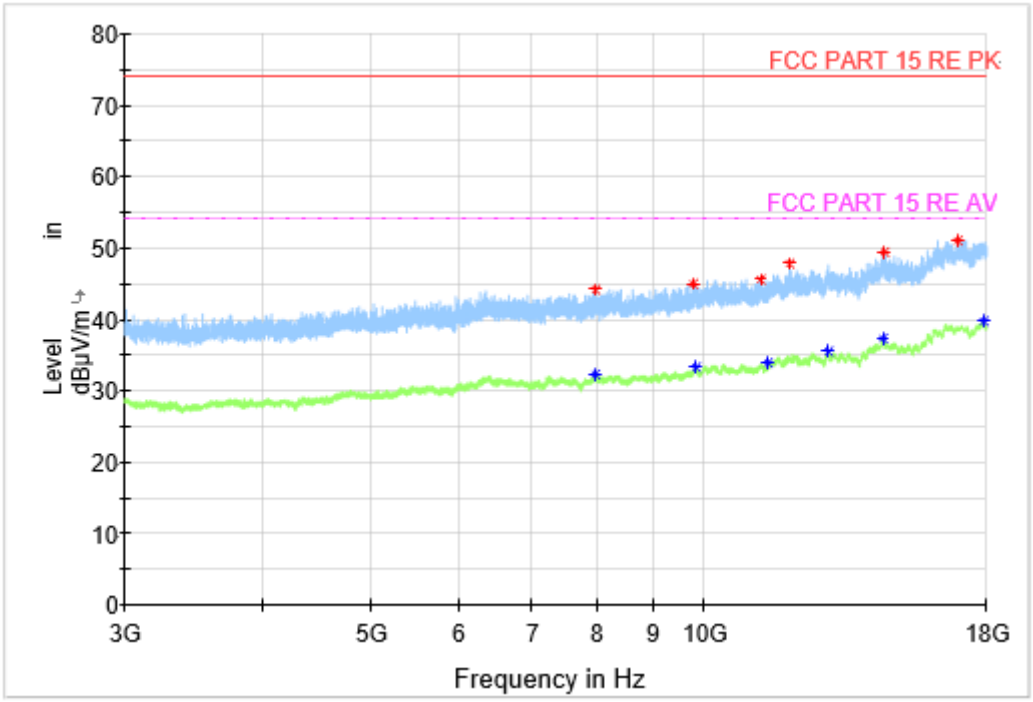

Fig. 51 Radiated Spurious Emission (π /4 DQPSK, Ch0, 3 GHz ~18 GHz)

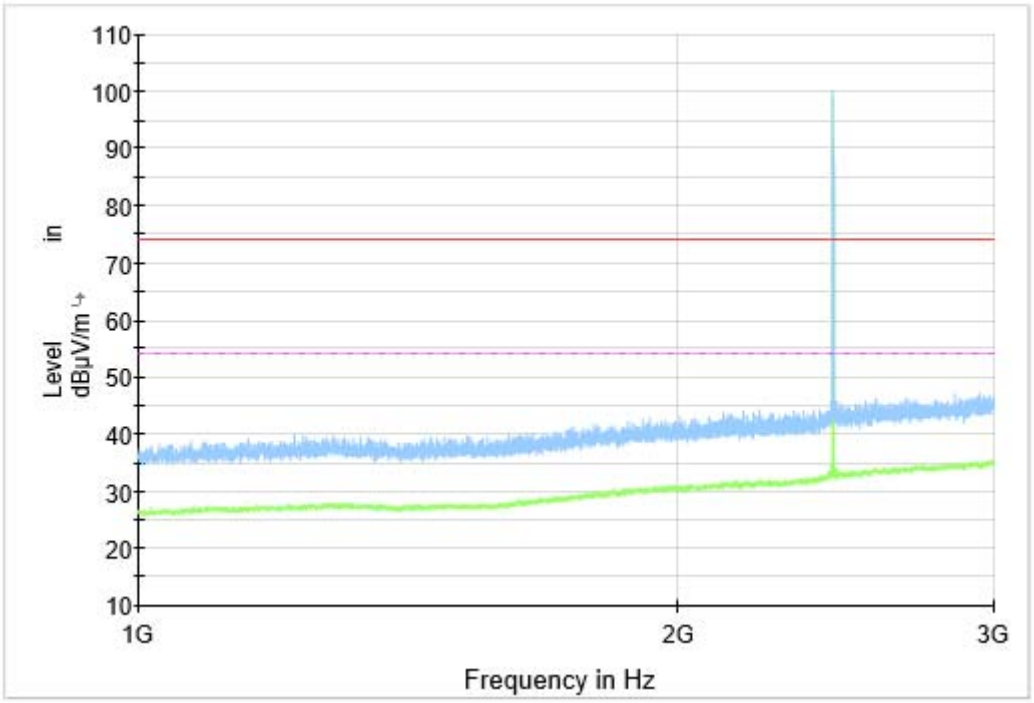

Fig. 52 Radiated Spurious Emission (π /4 DQPSK, Ch39, 1 GHz ~3 GHz)

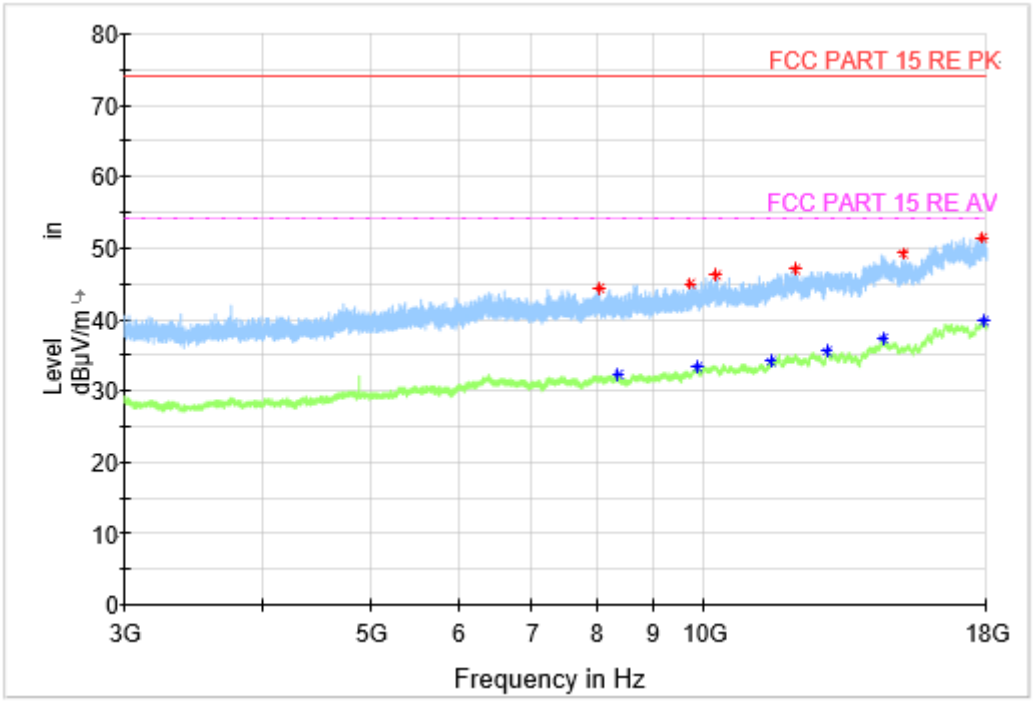

Fig. 53 Radiated Spurious Emission (π /4 DQPSK, Ch39, 3 GHz ~18 GHz)

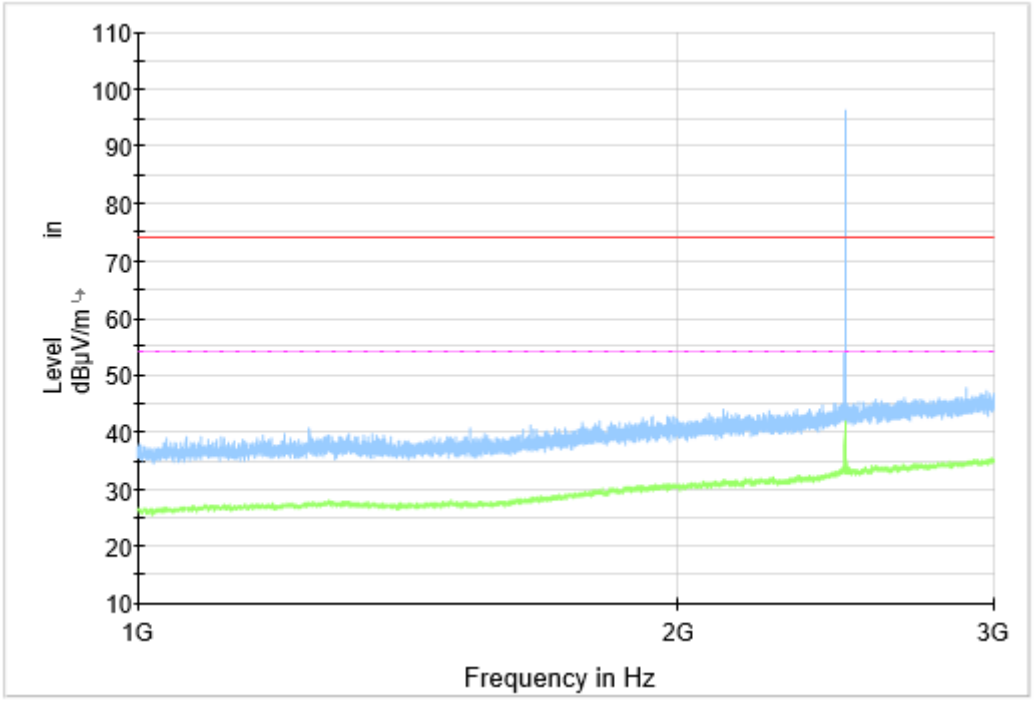

Fig. 54 Radiated Spurious Emission (π /4 DQPSK, Ch78, 1 GHz ~3 GHz)

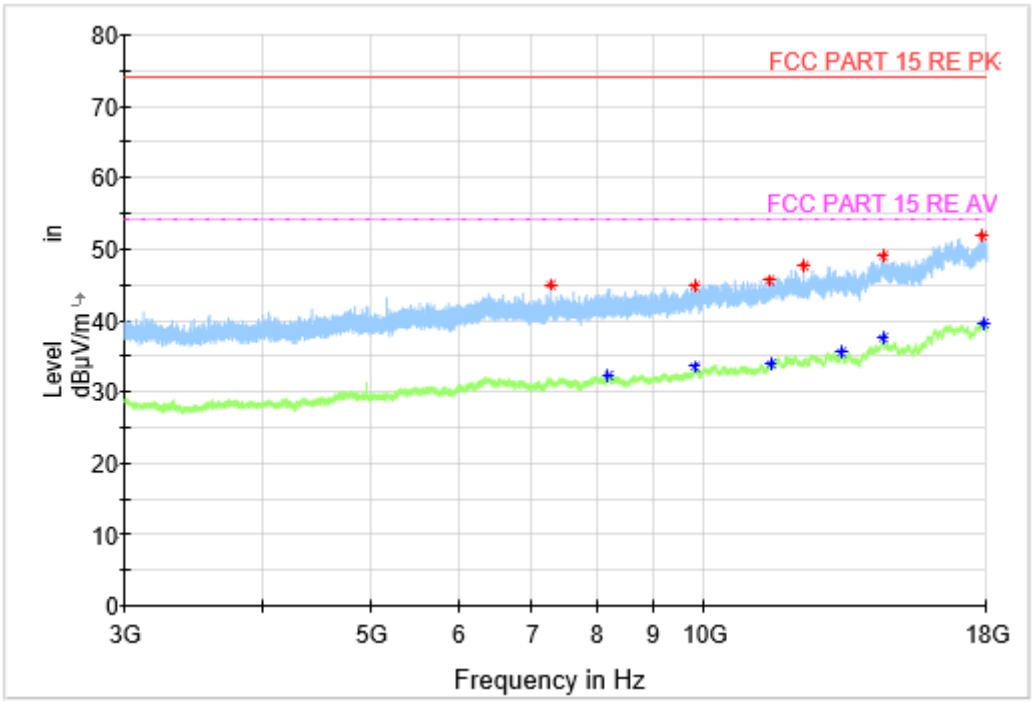

Fig. 55 Radiated Spurious Emission (π /4 DQPSK, Ch78, 3 GHz ~18 GHz)

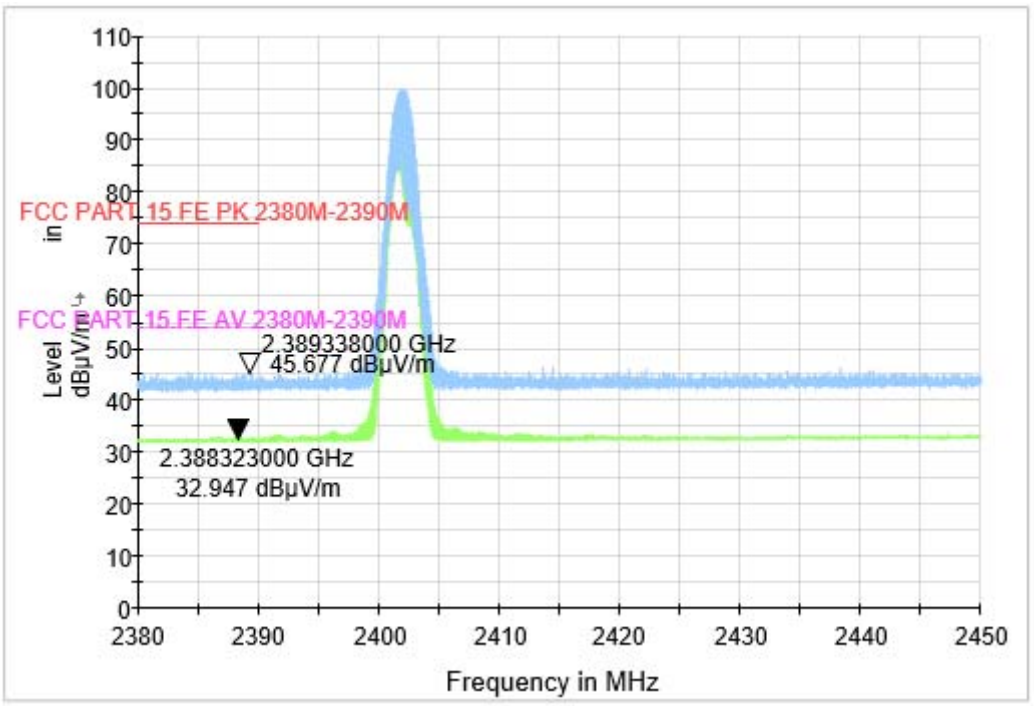

Fig. 56 Radiated Band Edges (π /4 DQPSK, Ch0, 2380GHz~2450GHz)

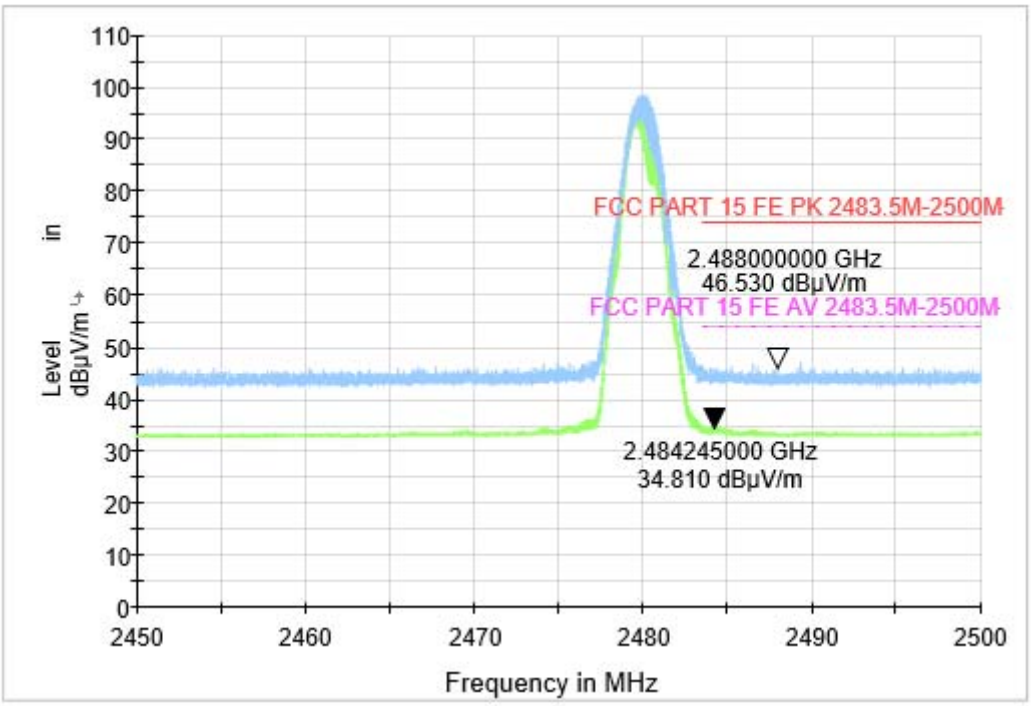

Fig. 57 Radiated Band Edges (π /4 DQPSK, Ch78, 2450GHz~2500GHz)

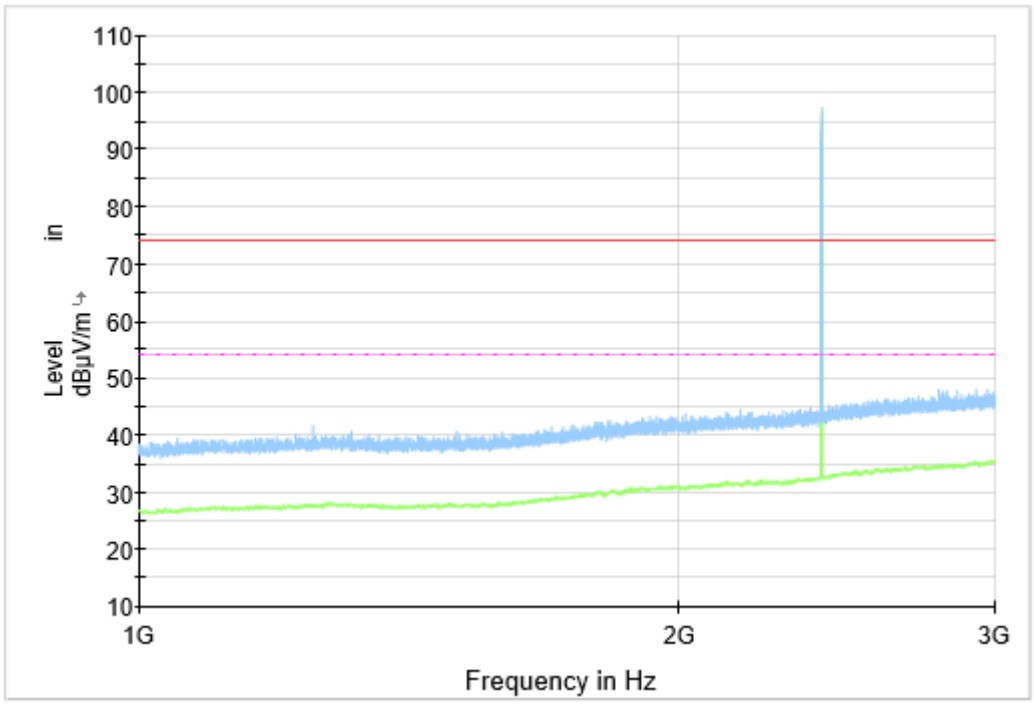

Fig. 58 Radiated Spurious Emission (8DPSK, Ch0, 1 GHz ~3 GHz)

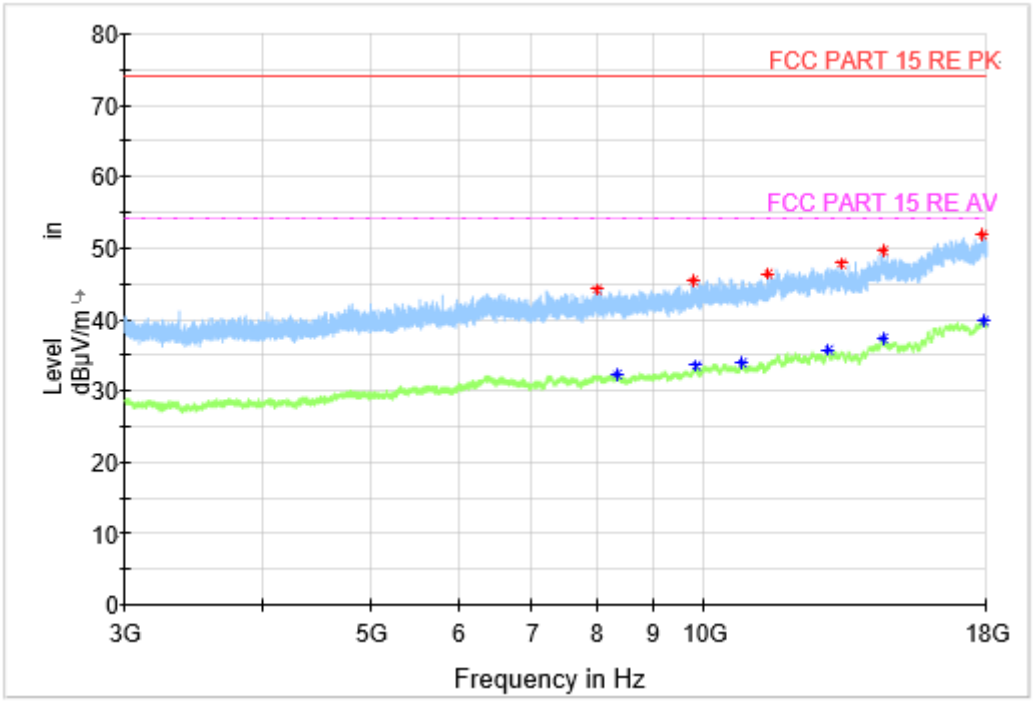

Fig. 59 Radiated Spurious Emission (8DPSK, Ch0, 3 GHz ~18 GHz)

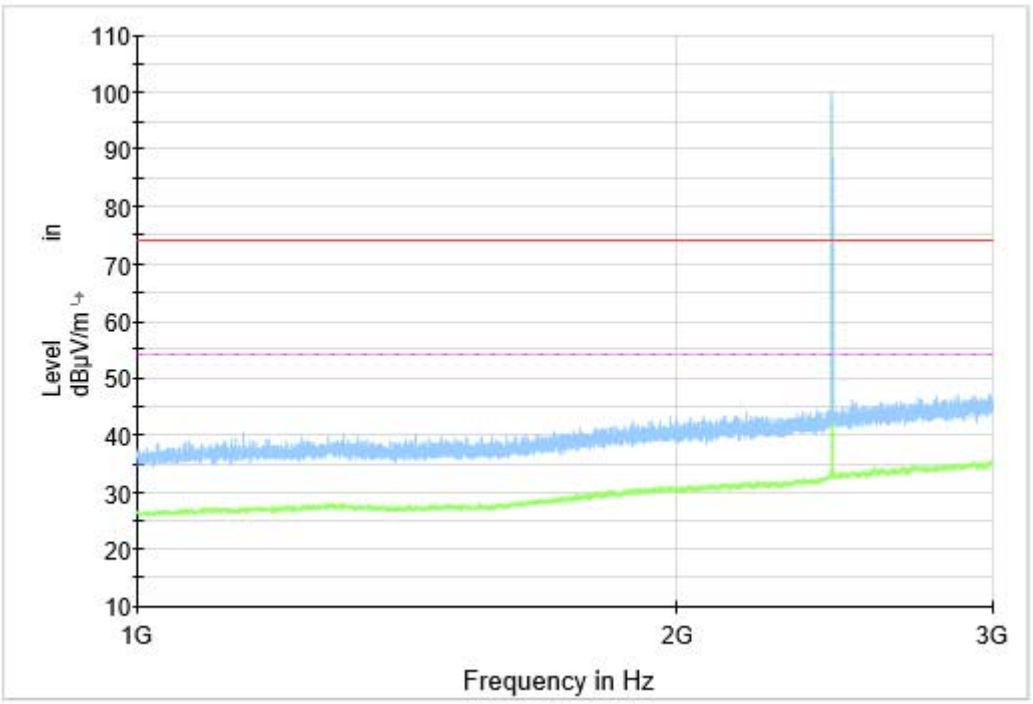

Fig. 60 Radiated Spurious Emission (8DPSK, Ch39, 1 GHz ~3 GHz)

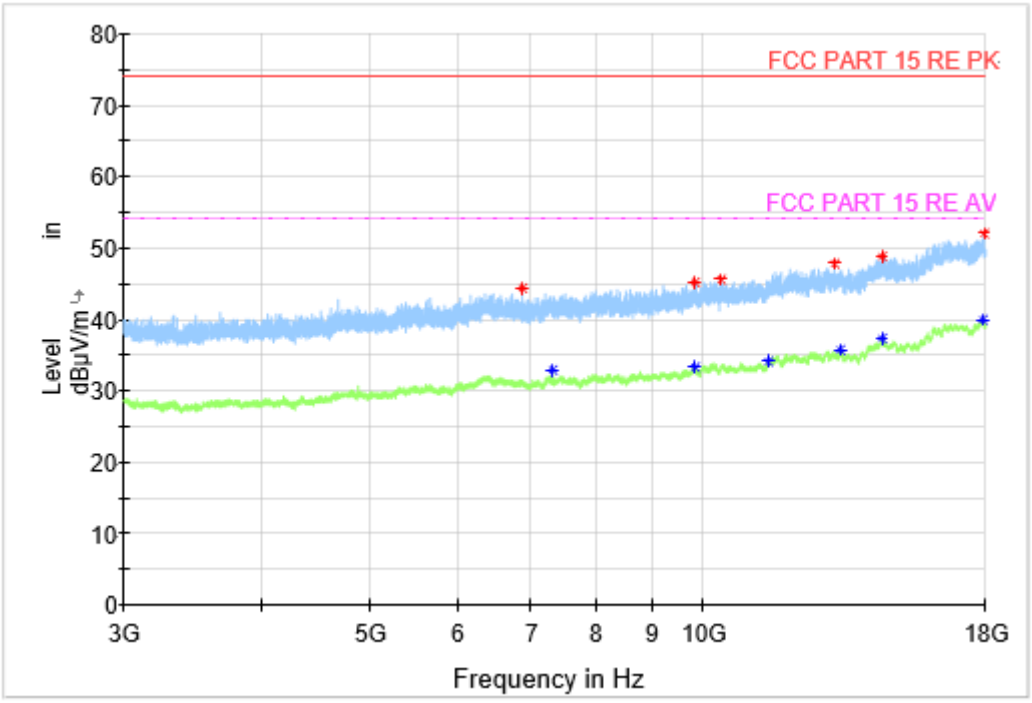

Fig. 61 Radiated Spurious Emission (8DPSK, Ch39, 3 GHz ~18 GHz)

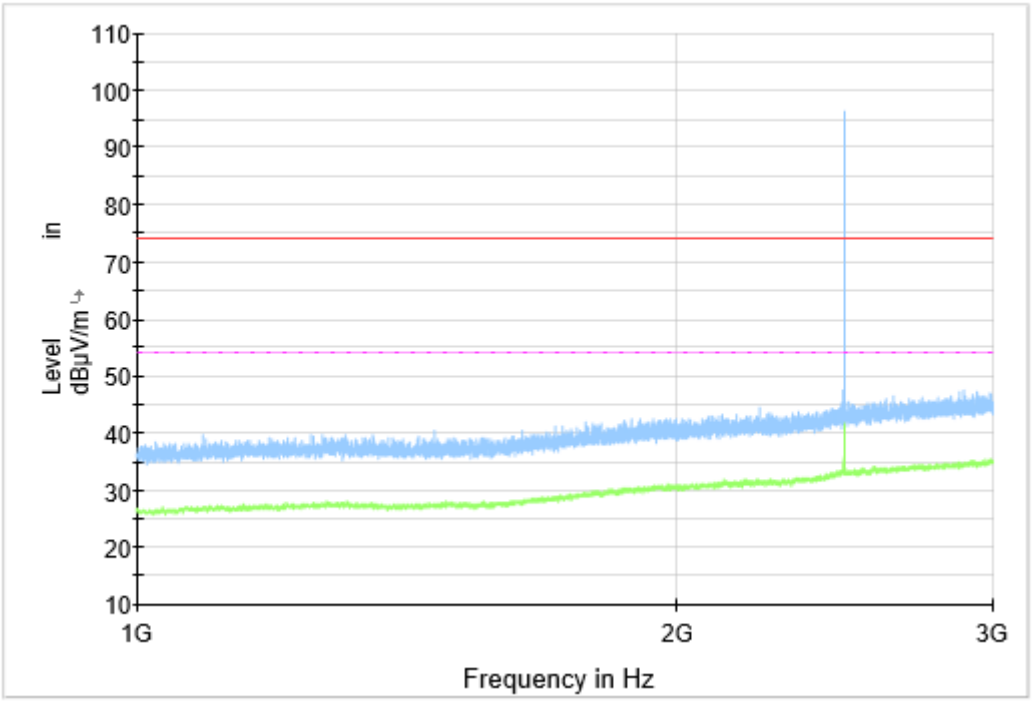

Fig. 62 Radiated Spurious Emission (8DPSK, Ch78, 1 GHz ~3 GHz)

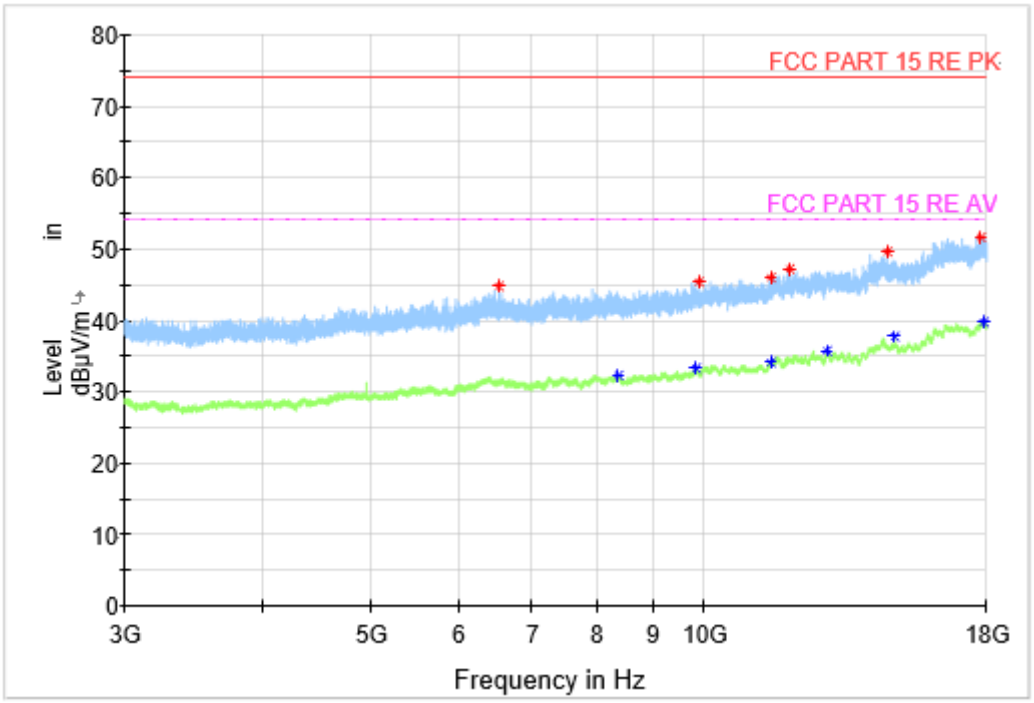

Fig. 63 Radiated Spurious Emission (8DPSK, Ch78, 3 GHz ~18 GHz)

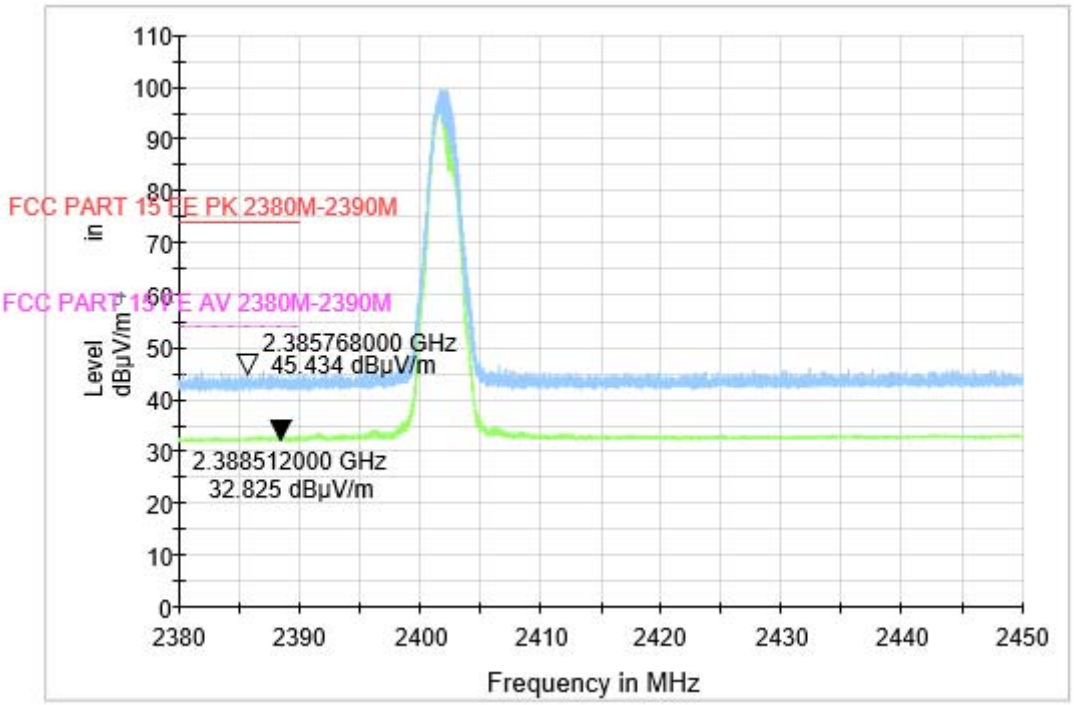

Fig. 64 Radiated Band Edges (8DPSK, Ch0, 2380GHz~2450GHz)

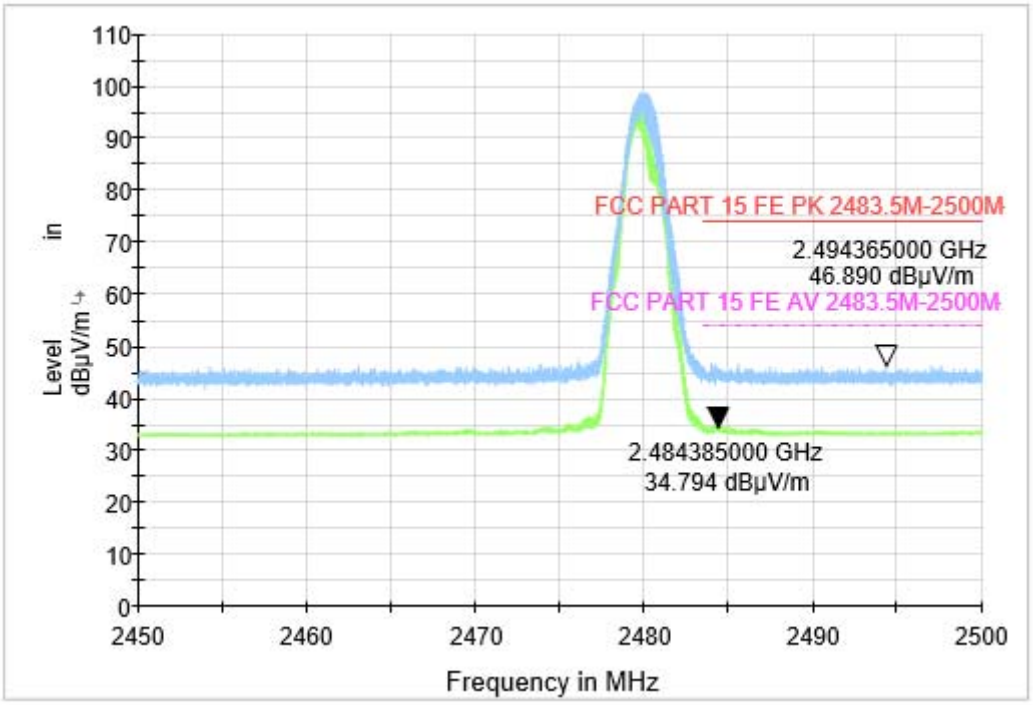

Fig. 65 Radiated Band Edges (8DPSK, Ch78, 2450GHz~2500GHz)

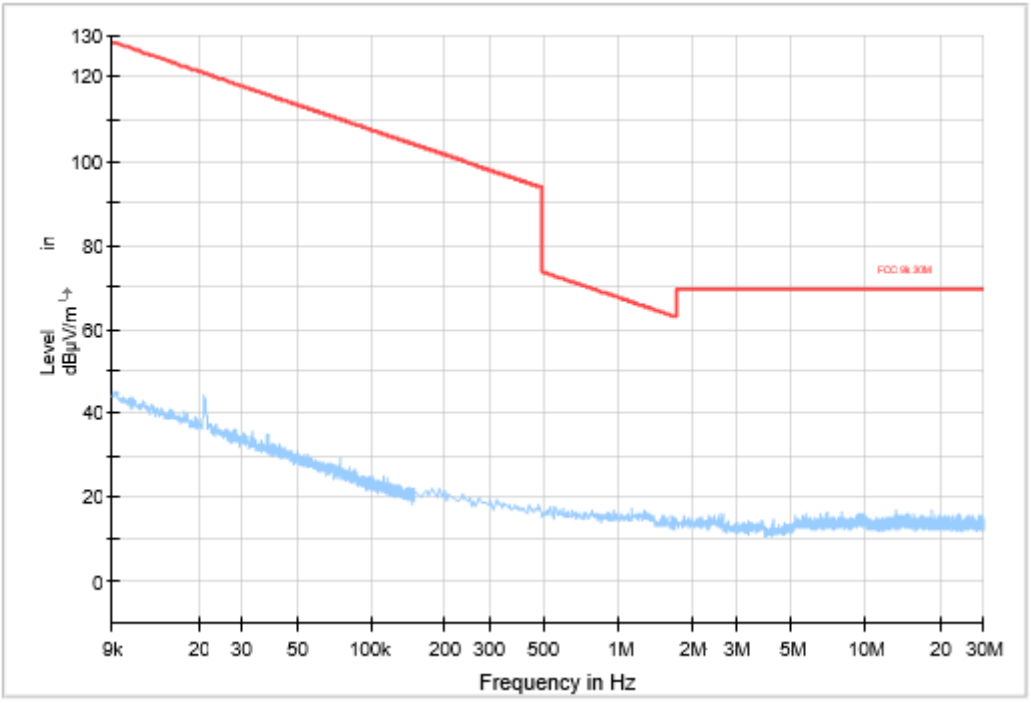

Fig. 66 Radiated Spurious Emission (All Channels, 9 kHz ~30 MHz)

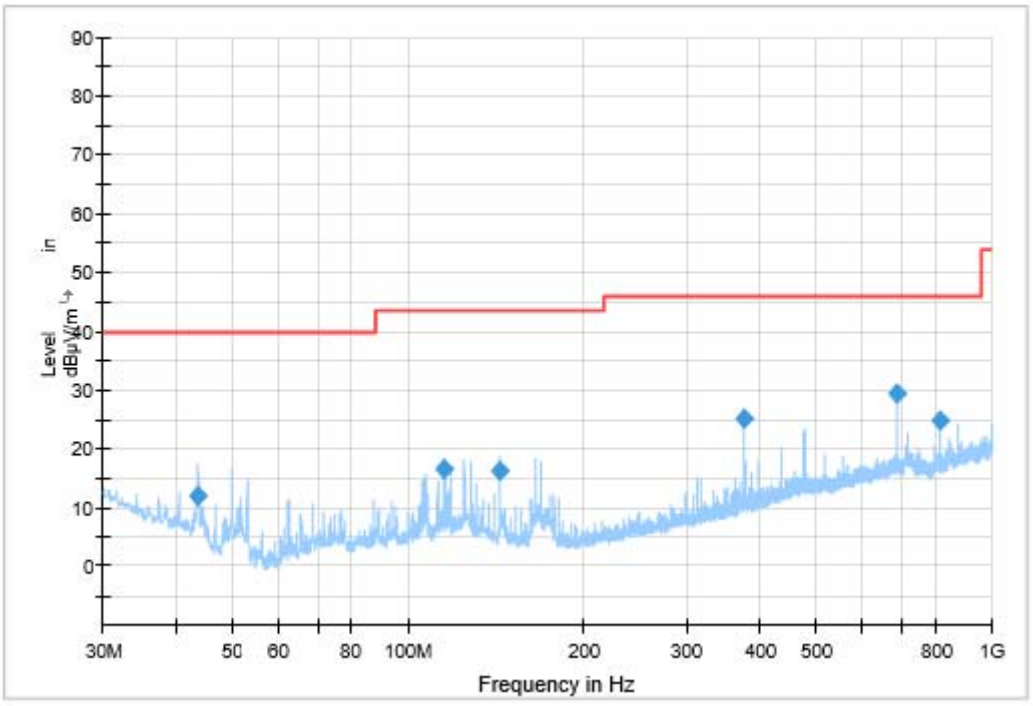

Fig. 67 Radiated Spurious Emission (All Channels, 30 MHz ~1 GHz)

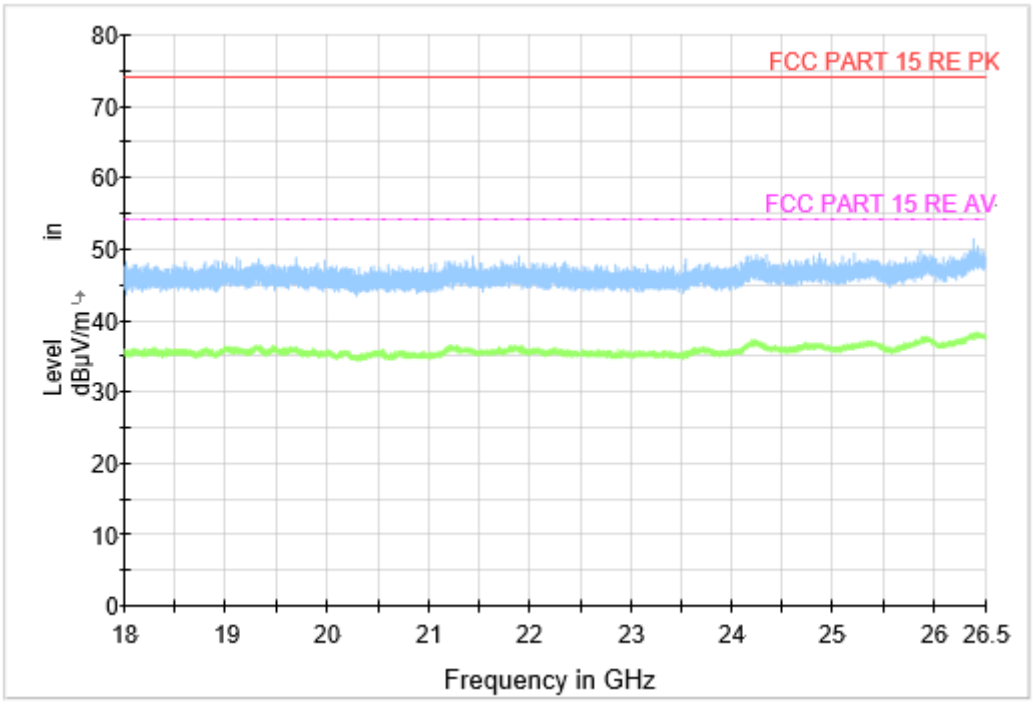

Fig. 68 Radiated Spurious Emission (All Channels, 18 GHz ~26.5 GHz)

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	1041.75	/
	39	Fig.70	1032.75	
	78	Fig.71	953.25	
π /4 DQPSK	0	Fig.72	1280.25	/
	39	Fig.73	1281.75	
	78	Fig.74	1268.25	
8DPSK	0	Fig.75	1258.50	/
	39	Fig.76	1287.00	
	78	Fig.77	1263.00	

See below for test graphs.

Conclusion: PASS

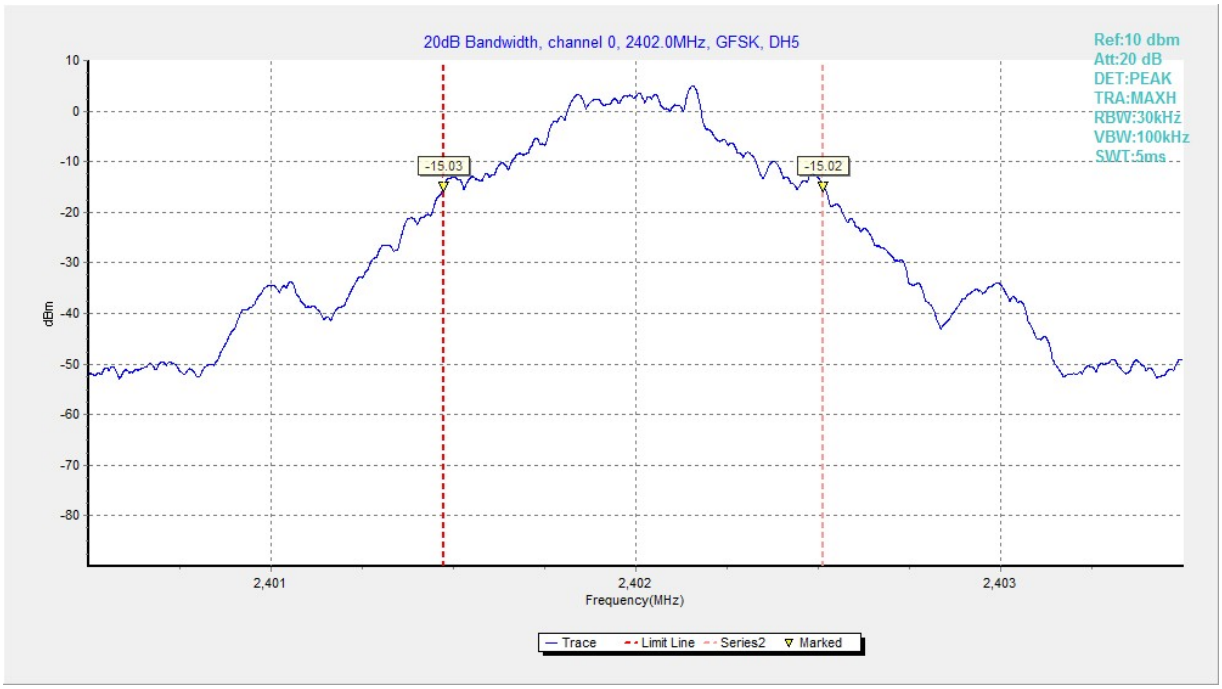

Fig. 69 20dB Bandwidth (GFSK, Ch 0)

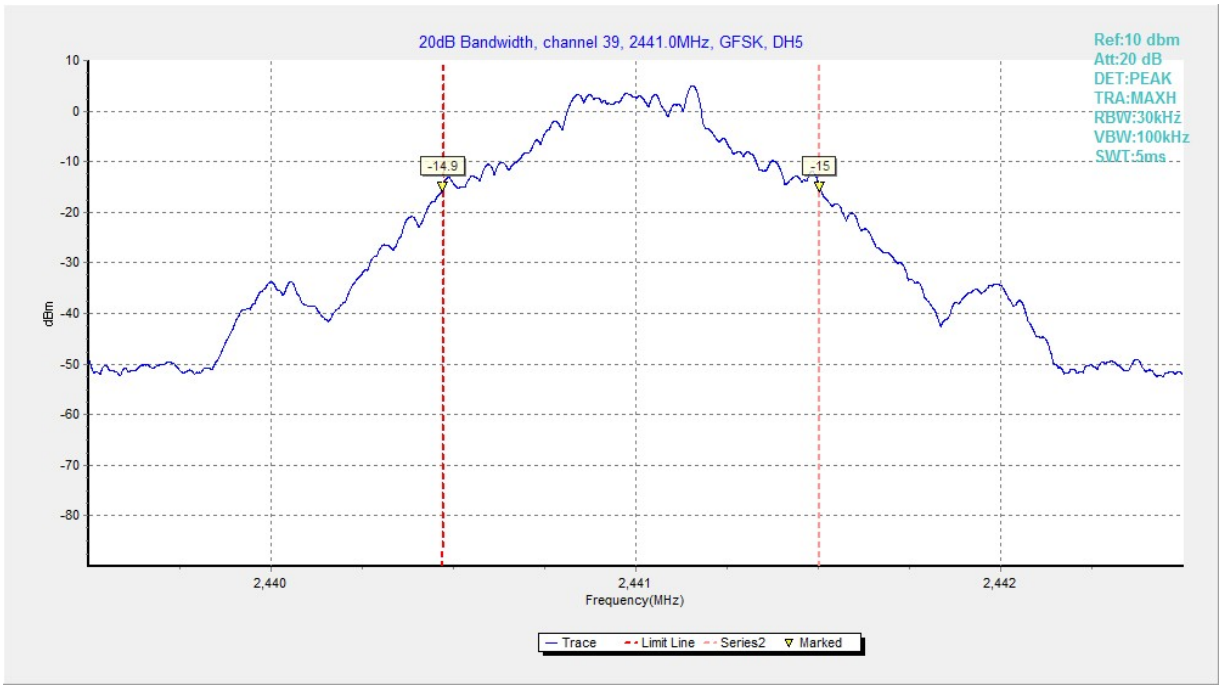

Fig. 70 20dB Bandwidth (GFSK, Ch 39)

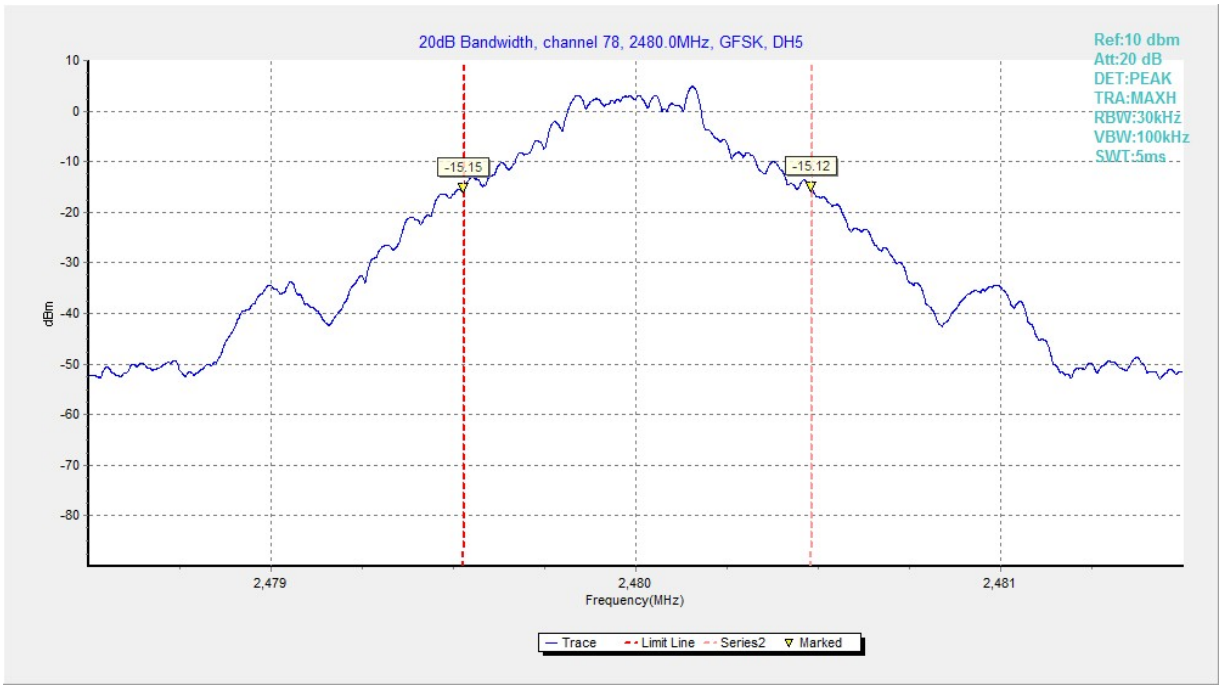

Fig. 71 20dB Bandwidth (GFSK, Ch 78)

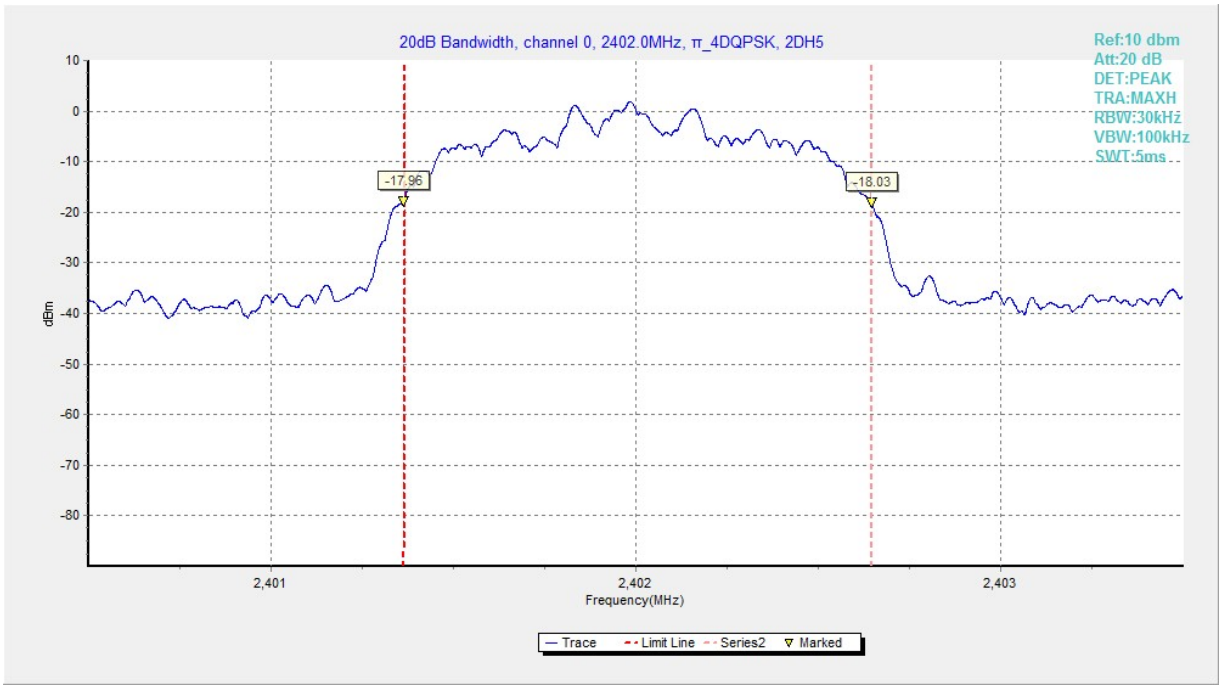

Fig. 72 20dB Bandwidth (π /4 DQPSK, Ch 0)

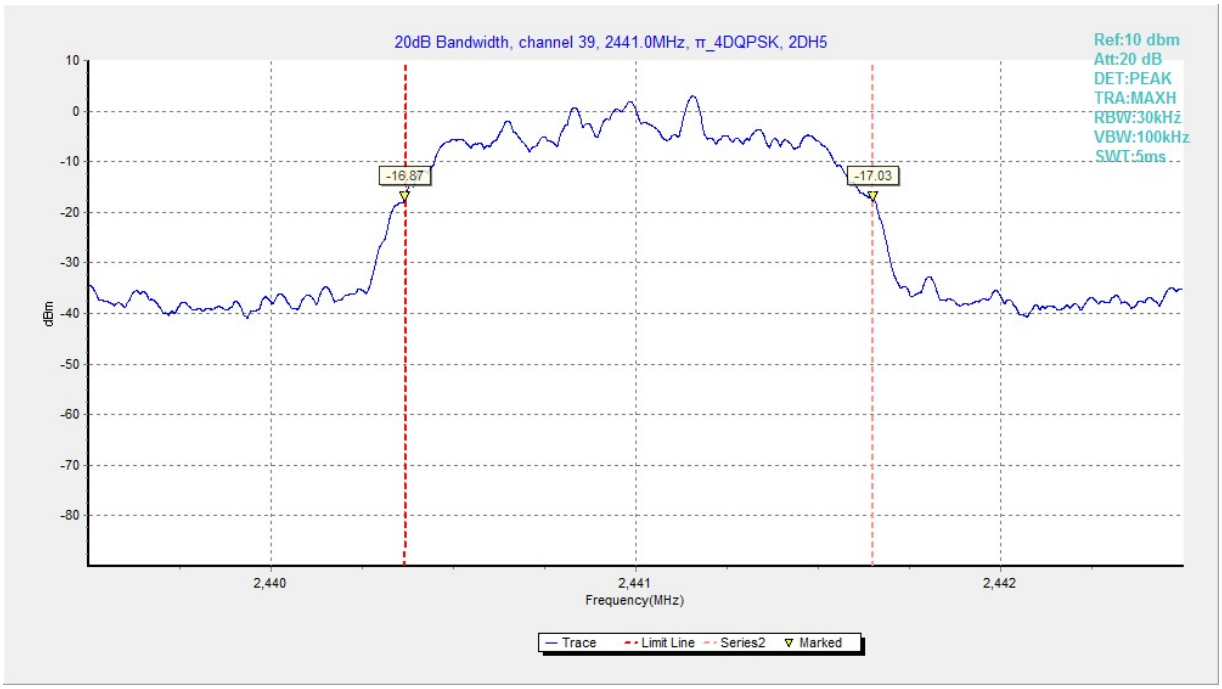

Fig. 73 20dB Bandwidth (π /4 DQPSK, Ch 39)

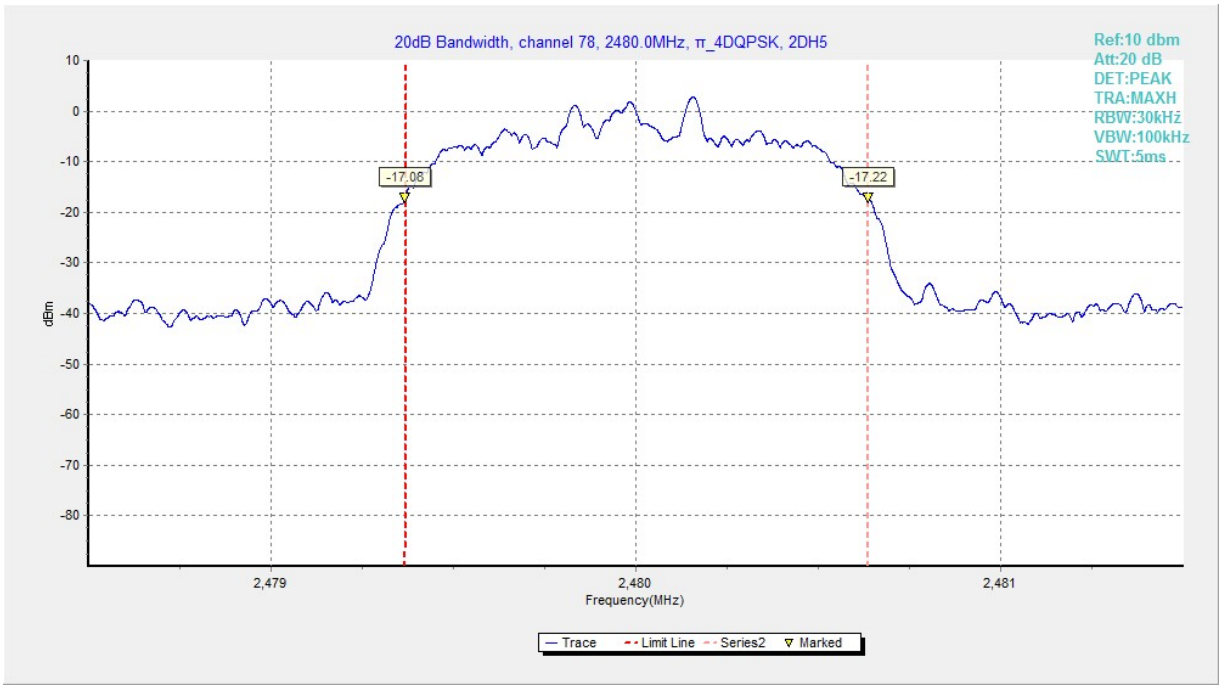

Fig. 74 20dB Bandwidth (π /4 DQPSK, Ch 78)

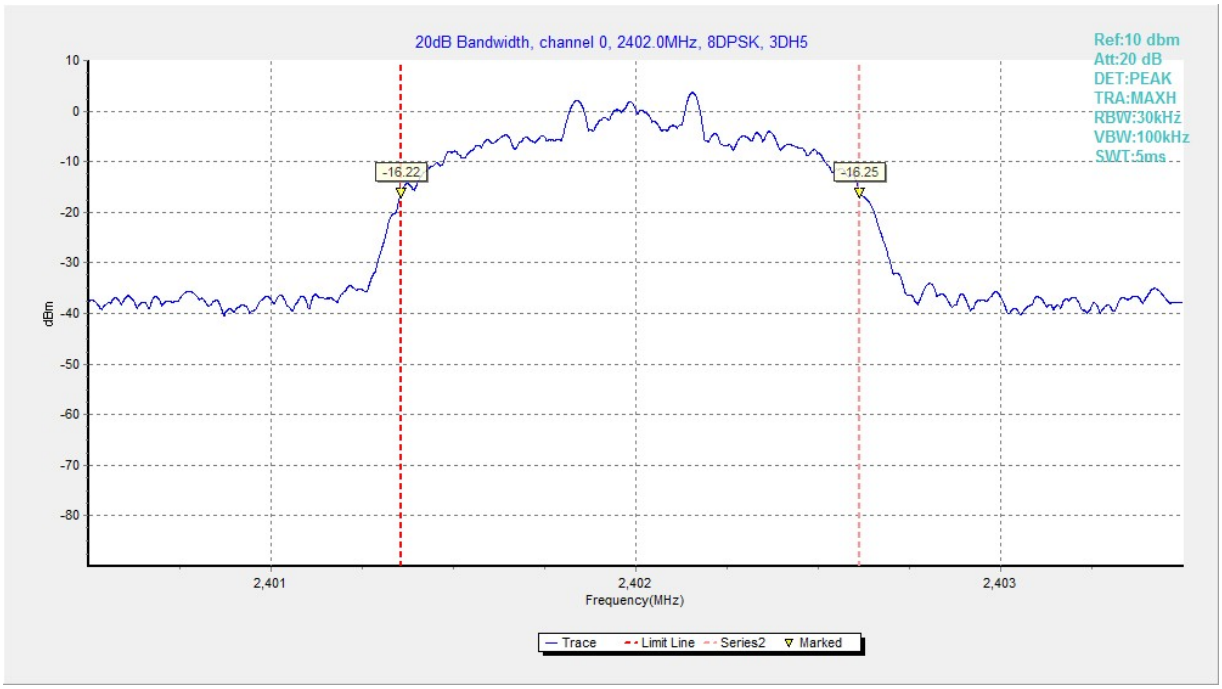

Fig. 75 20dB Bandwidth (8DPSK, Ch 0)

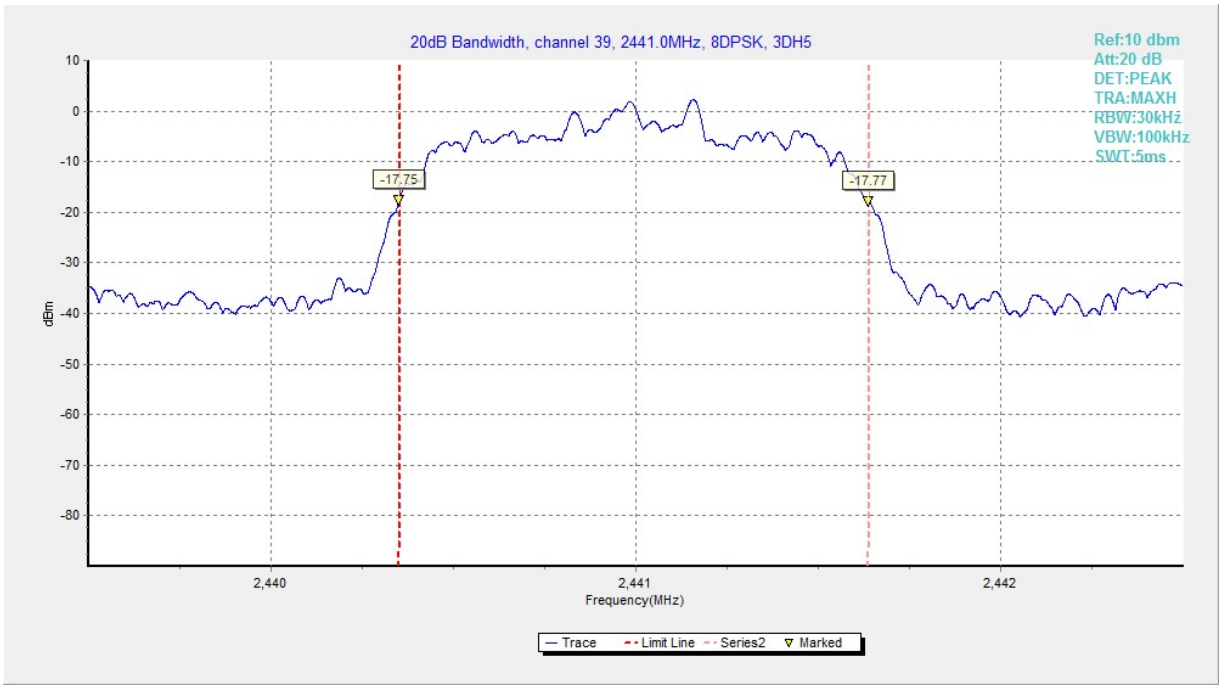

Fig. 76 20dB Bandwidth (8DPSK, Ch 39)

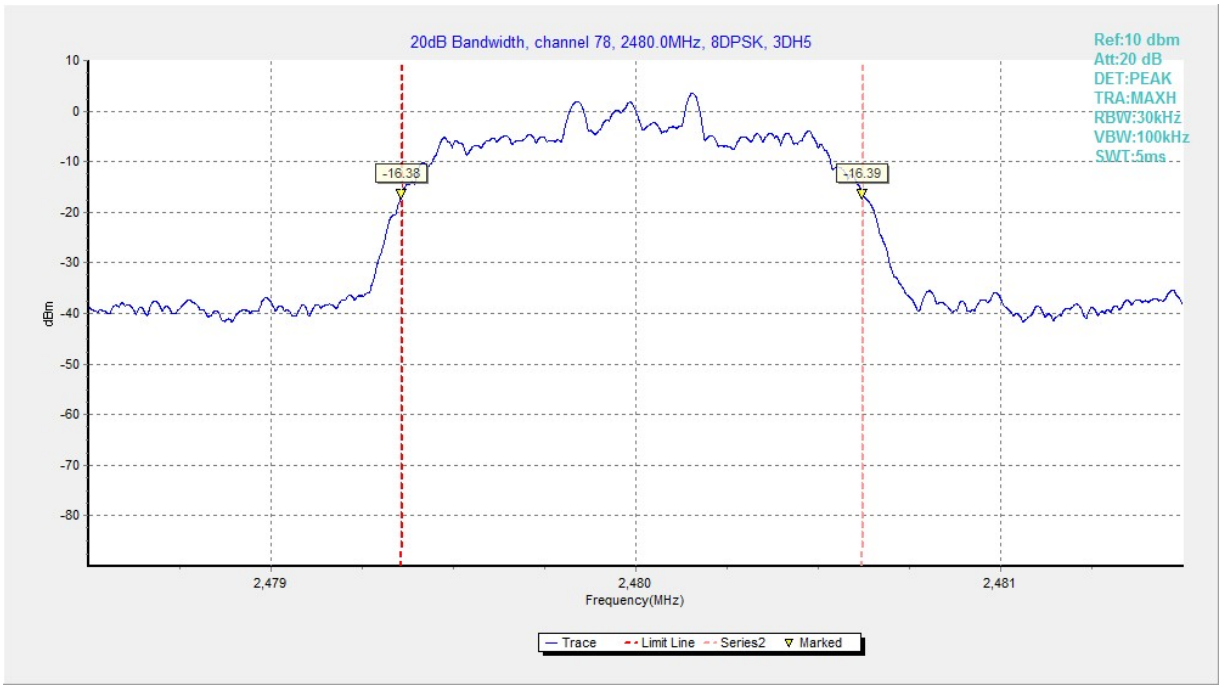

Fig. 77 20dB Bandwidth (8DPSK, Ch 78)

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	198.86	**P**
			Fig.79		
π/4 DQPSK	39	2-DH5	Fig.80	164.08	**P**
			Fig.81		
8DPSK	39	3-DH5	Fig.82	228.10	**P**
			Fig.83		

See below for test graphs.

Conclusion: Pass

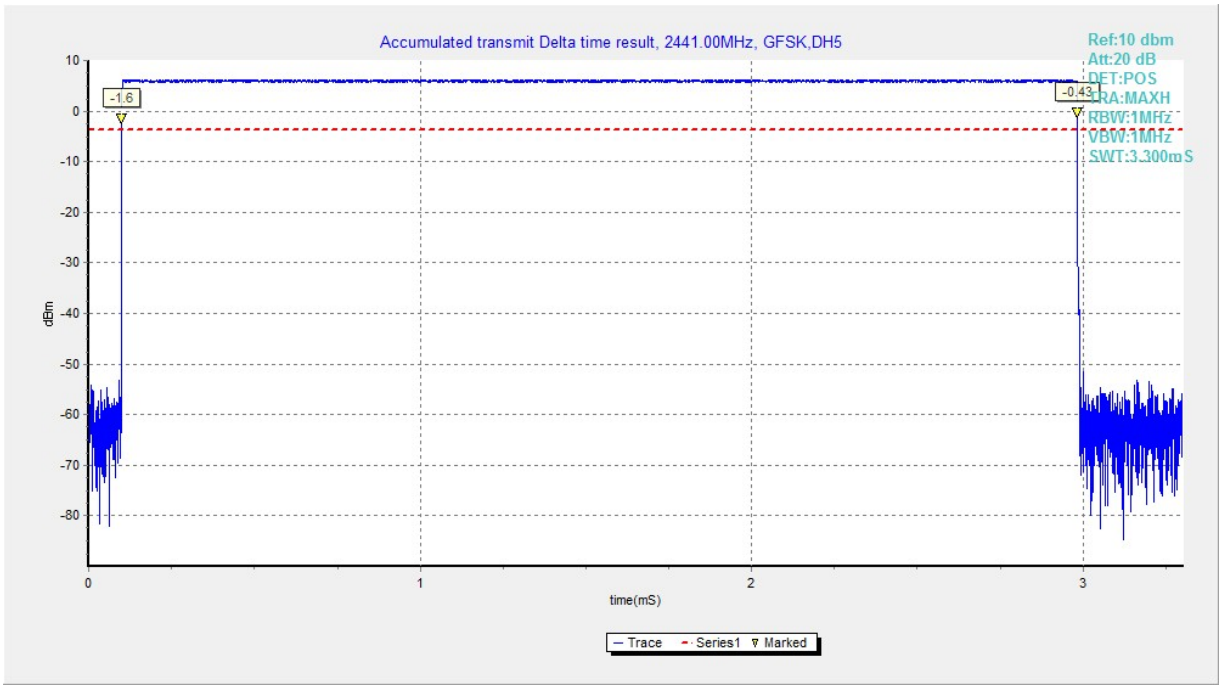

Fig. 78 Time of Occupancy (Dwell Time) (GFSK, Ch39)

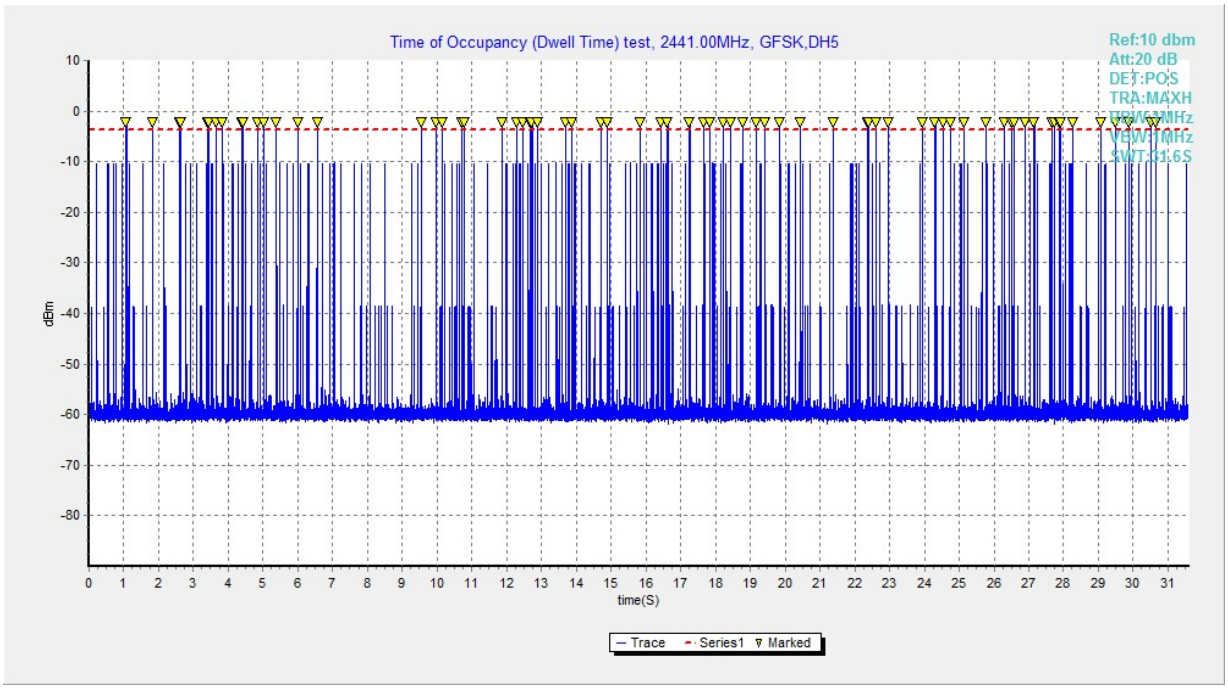

Fig. 79 Time of Occupancy (Dwell Time) (GFSK, Ch39)

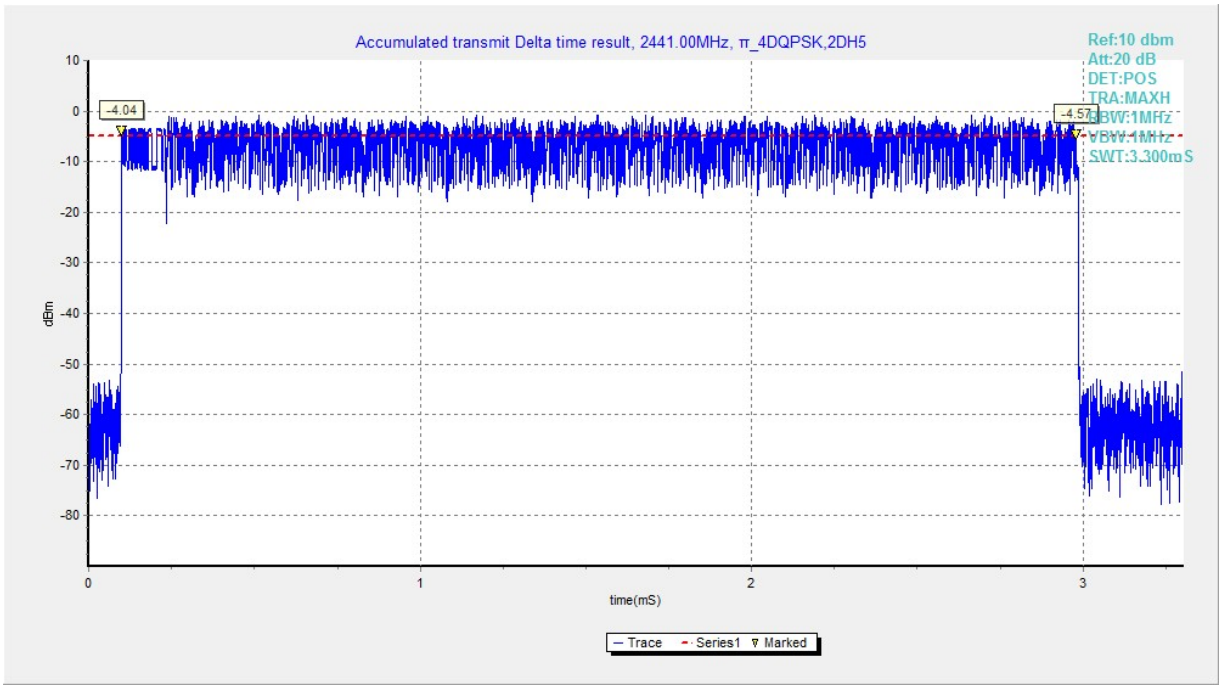

Fig. 80 Time of Occupancy (Dwell Time) (π /4 DQPSK, Ch39)

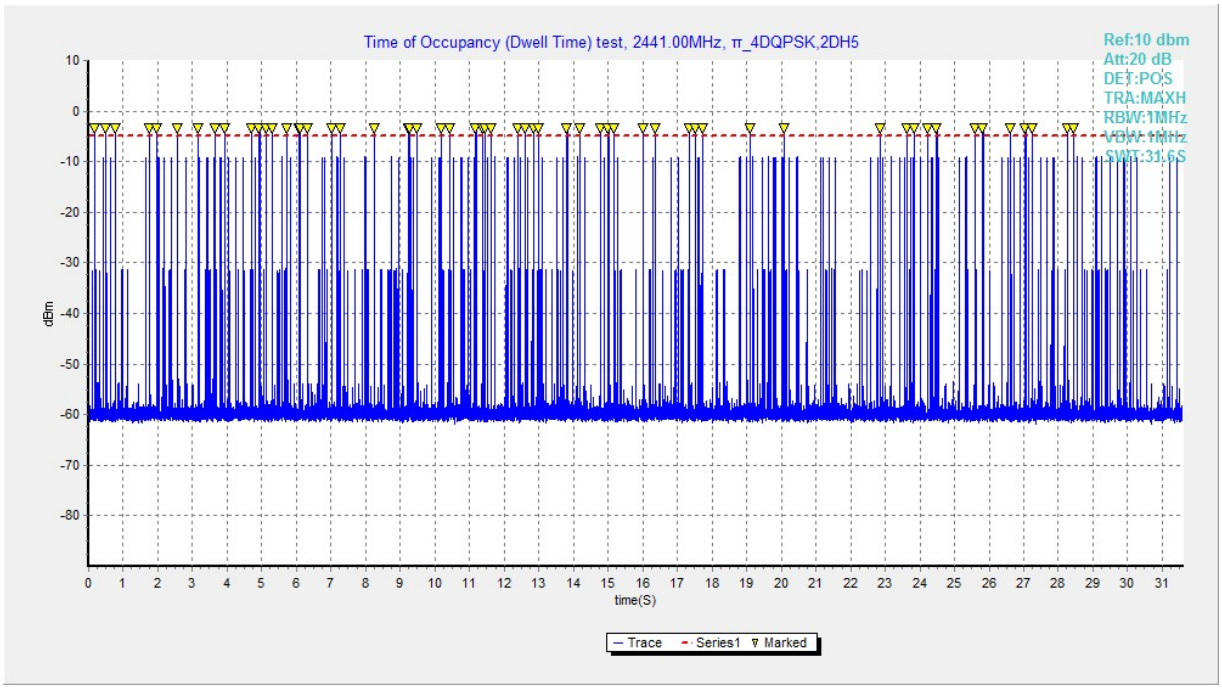

Fig. 81 Time of Occupancy (Dwell Time) (π /4 DQPSK, Ch39)

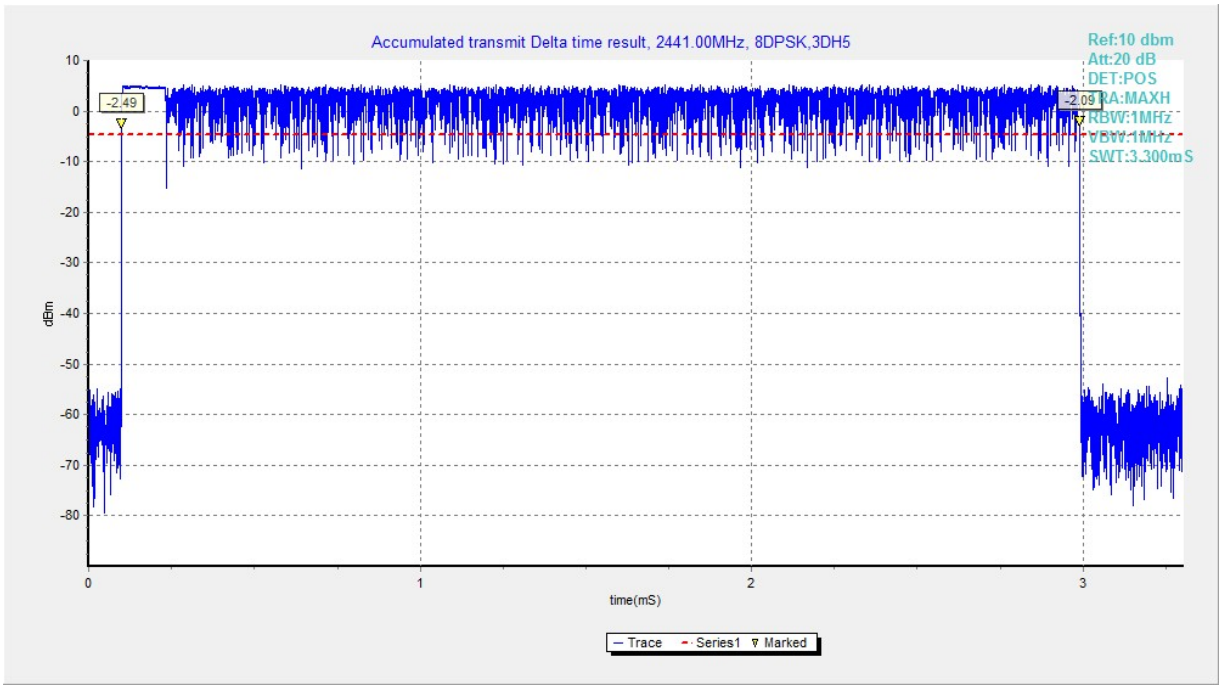

Fig. 82 Time of Occupancy (Dwell Time) (8DPSK, Ch39)

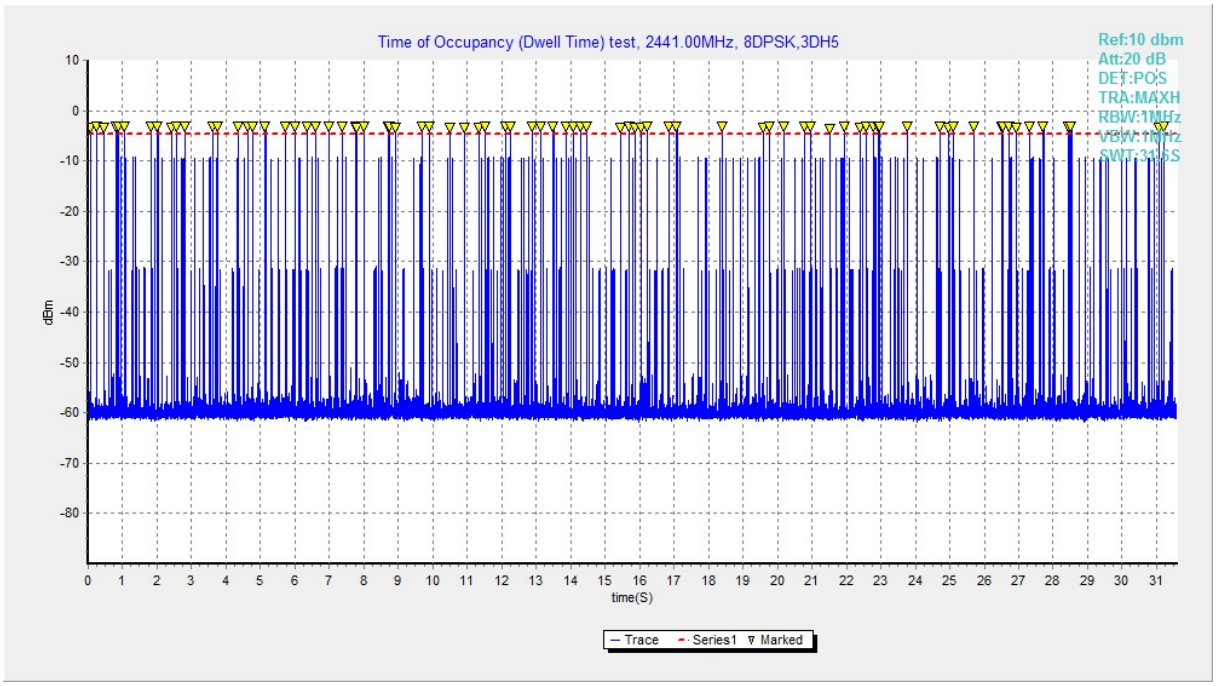

Fig. 83 Time of Occupancy (Dwell Time) (8DPSK, Ch39)

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**
π/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

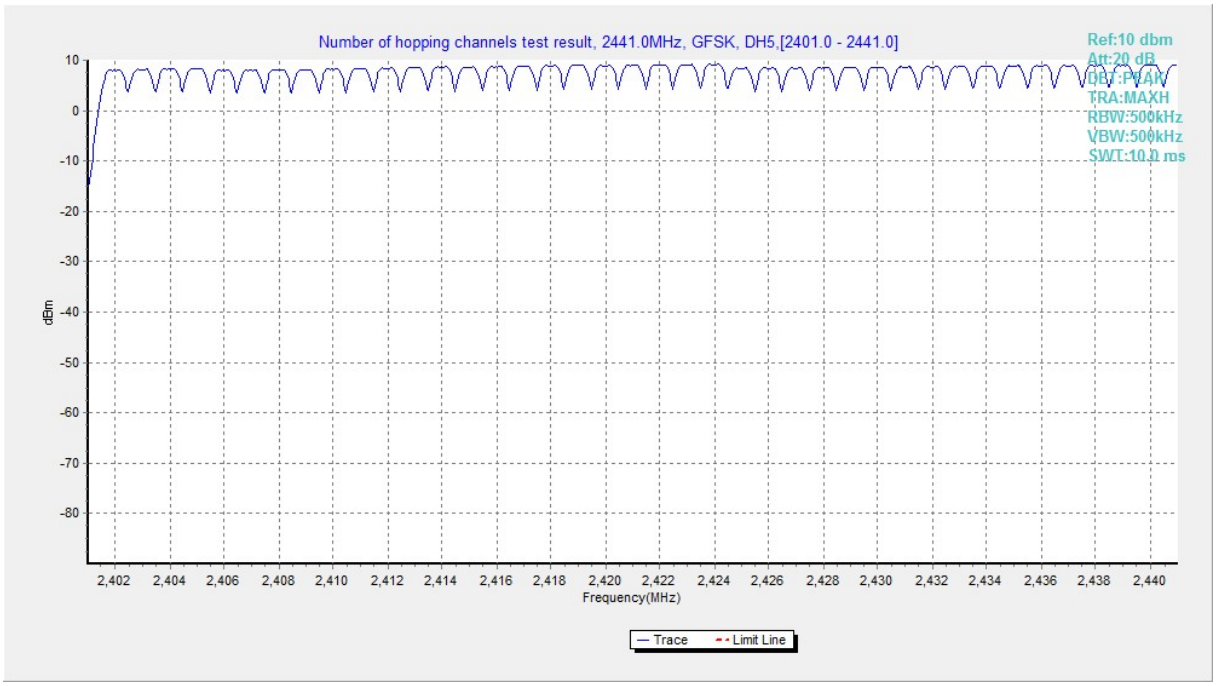

Fig. 84 Hopping channel ch0~39 (GFSK, Ch39)

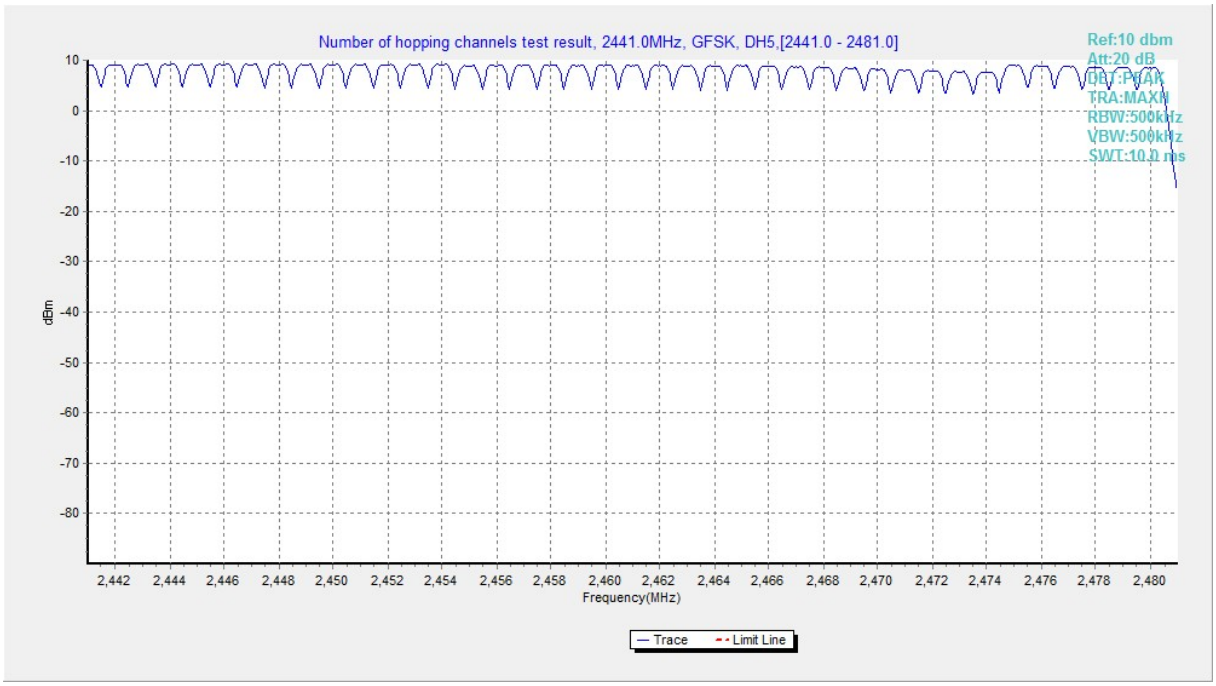

Fig. 85 Hopping channel ch39~78 (GFSK, Ch39)

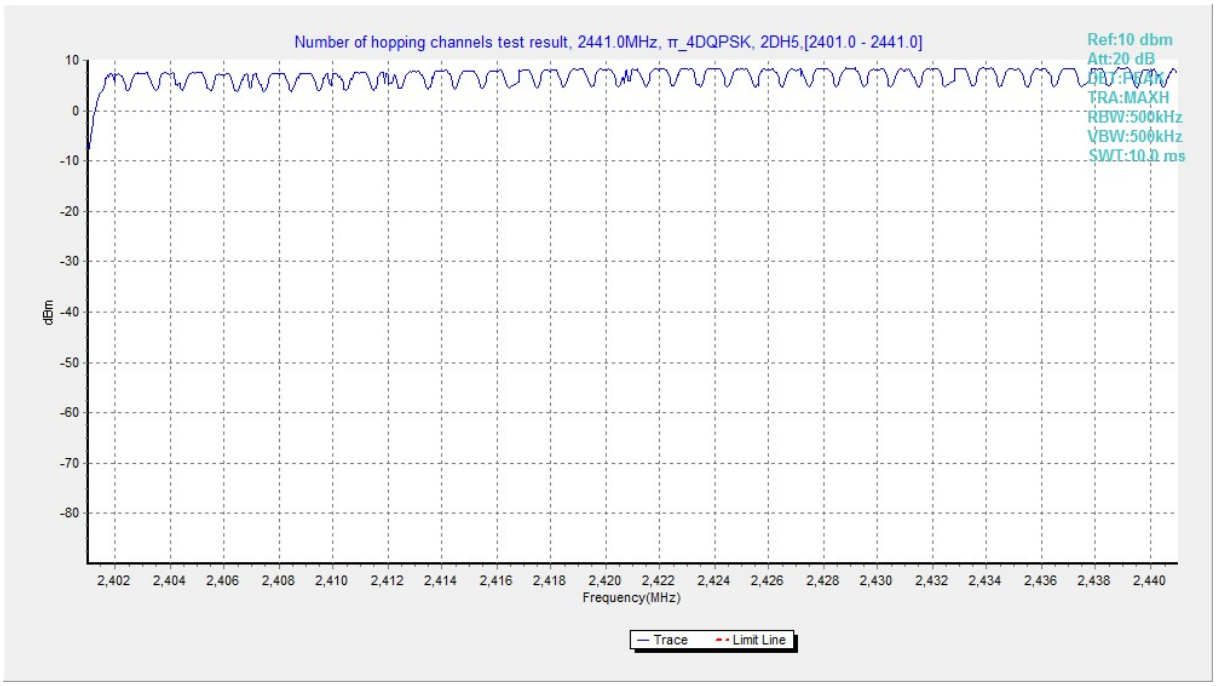

Fig. 86 Hopping channel ch0~39 (π /4 DQPSK, Ch39)

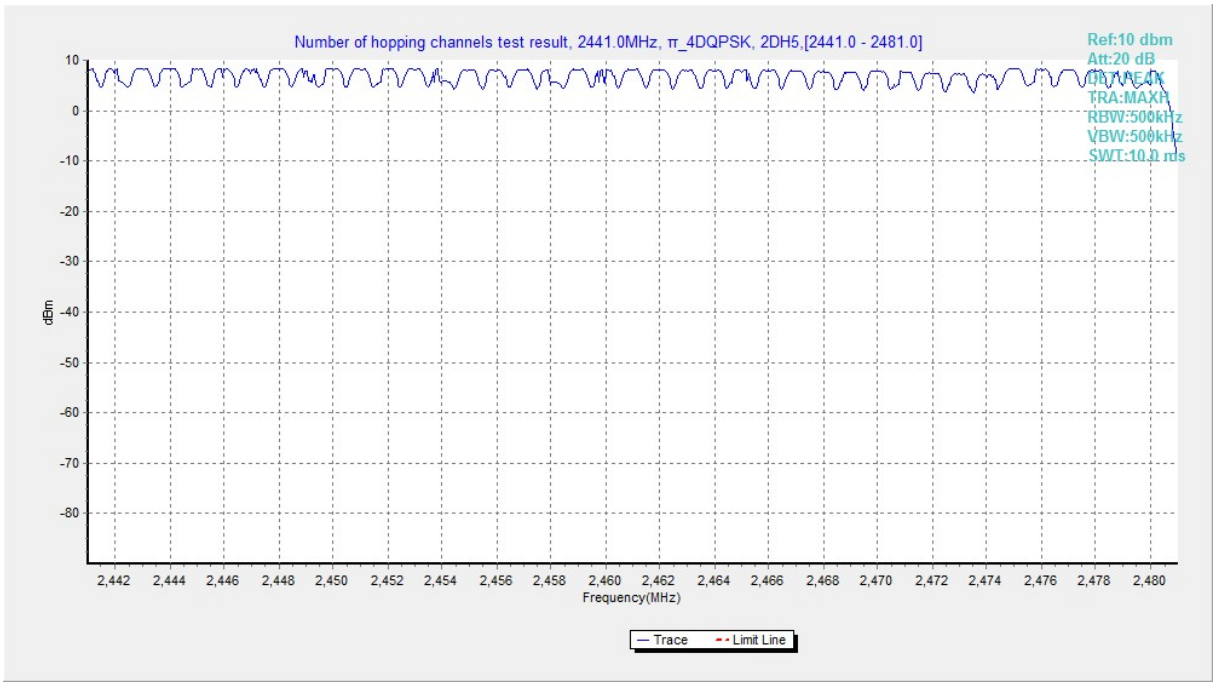

Fig. 87 Hopping channel ch39~78 (π /4 DQPSK, Ch39)

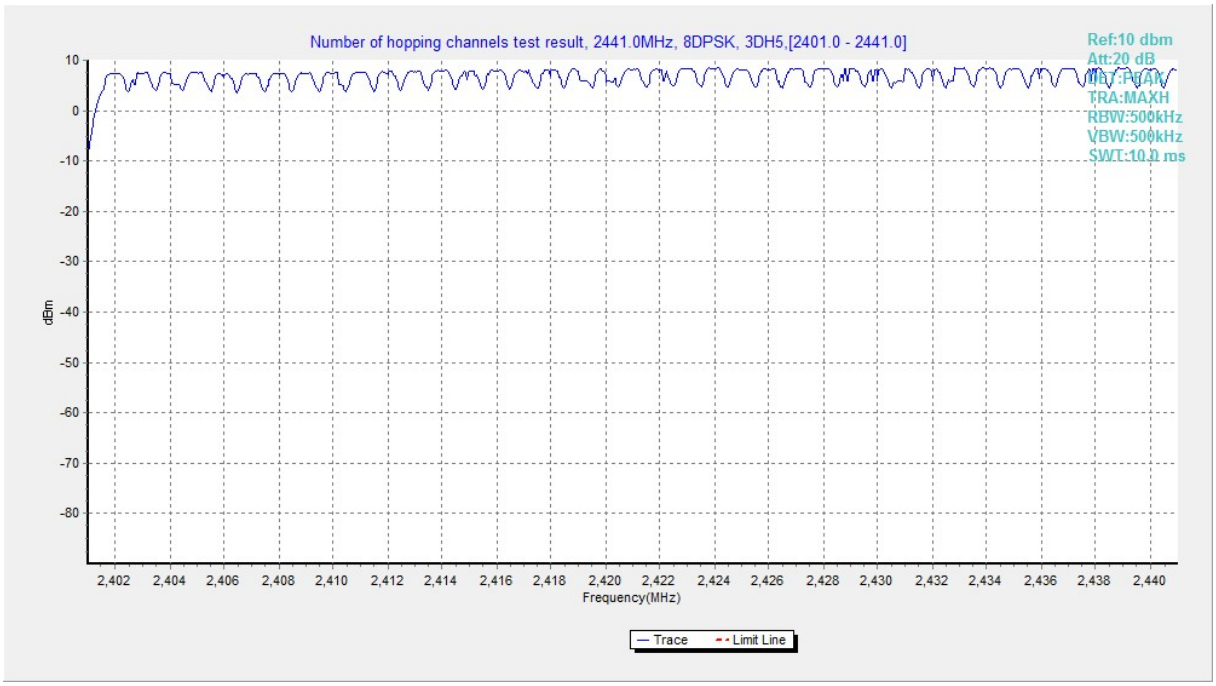

Fig. 88 Hopping channel ch0~39 (8DPSK, Ch39)

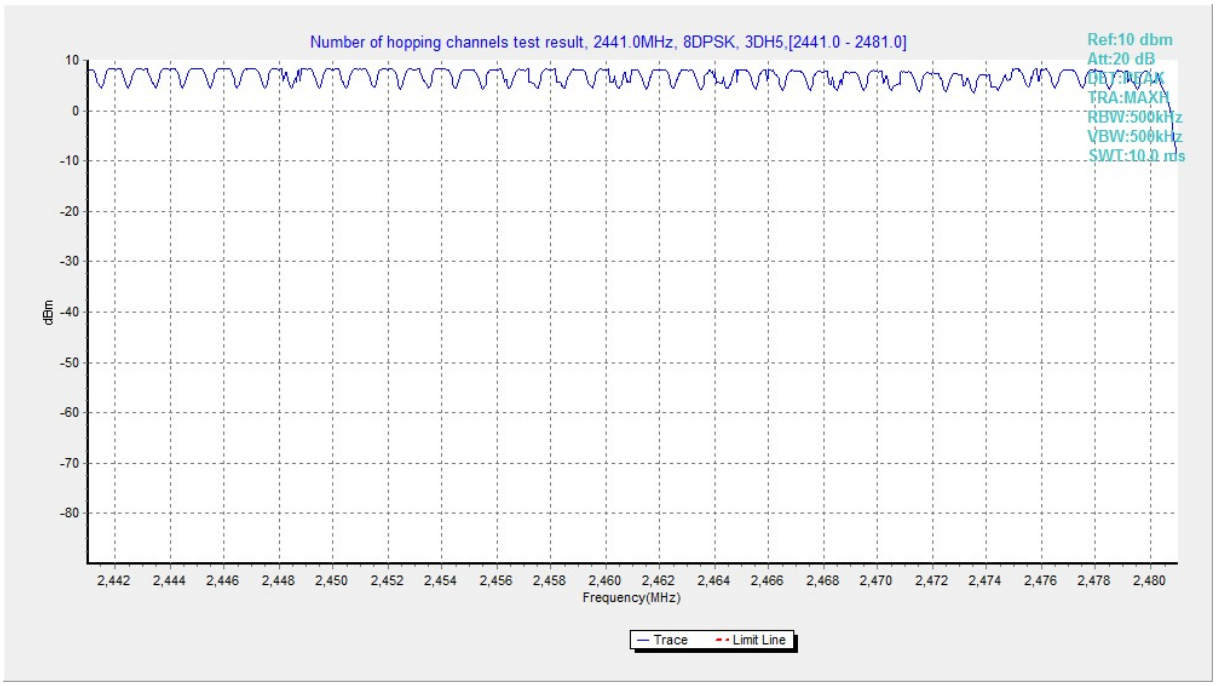

Fig. 89 Hopping channel ch39~78 (8DPSK, Ch39)

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	1014.00	**P**
π /4 DQPSK	39	2-DH5	Fig.91	1018.25	**P**
8DPSK	39	3-DH5	Fig.92	1018.50	**P**

See below for test graphs.

Conclusion: Pass

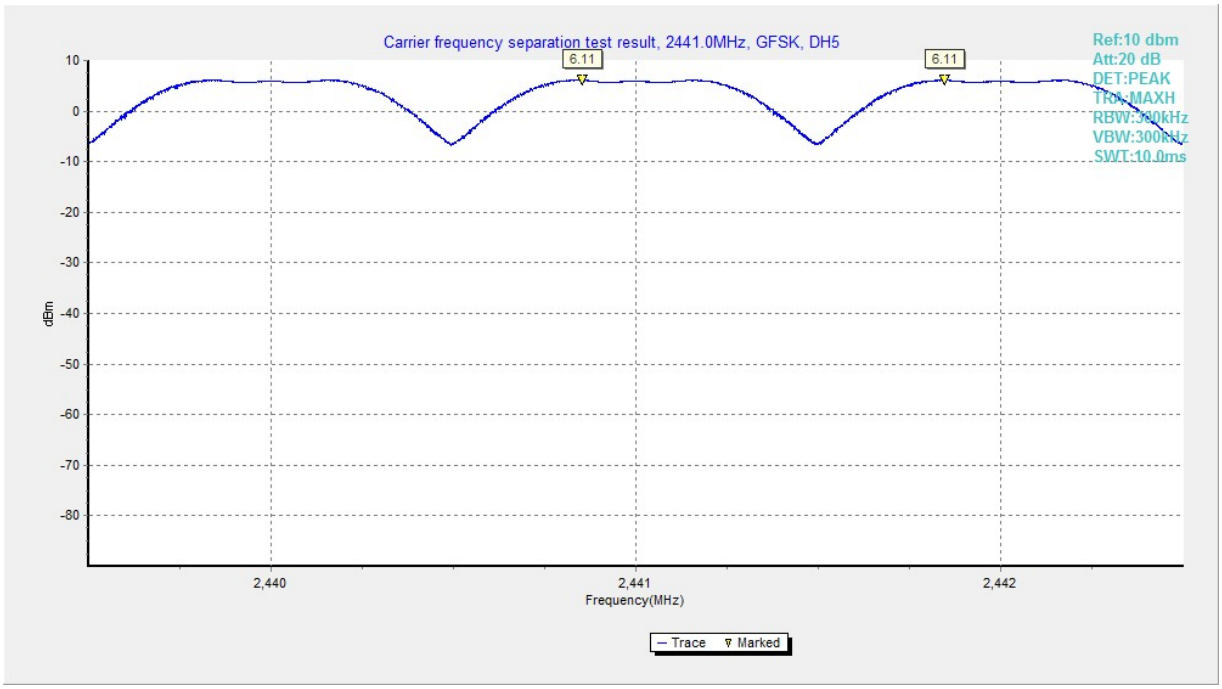

Fig. 90 Carrier Frequency Separation (GFSK, Ch39)

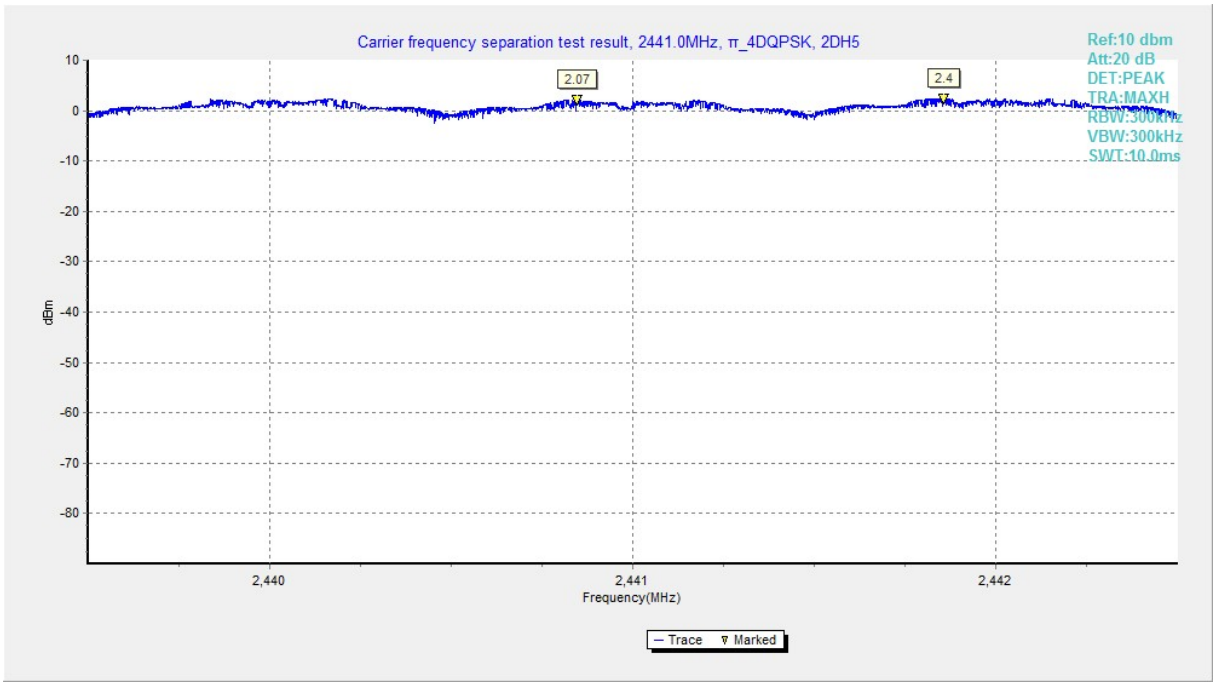

Fig. 91 Carrier Frequency Separation (π /4 DQPSK, Ch39)

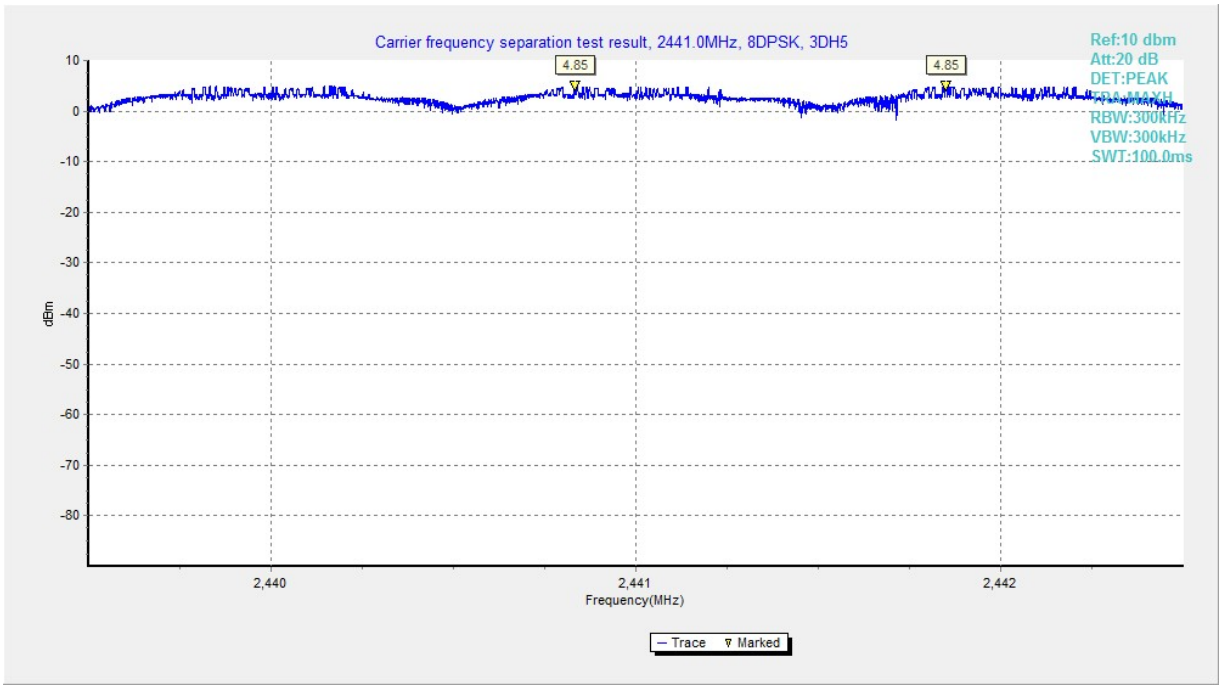

Fig. 92 Carrier Frequency Separation (8DPSK, Ch39)

A.9 AC Power line Conducted Emission

Test Condition:

Voltage（V）	Frequency（Hz）
120	60

Measurement Result and limit:

BT (Quasi-peak Limit)-AE2-1

Frequency range (MHz)	Quasi-peak Limit (dBμV)	Result (dBμV)		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) -AE2-1

Frequency range (MHz)	Average-peak Limit (dBμV)	Result (dBμV)		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.				

BT (Quasi-peak Limit) –AE2-2

Frequency range (MHz)	Quasi-peak Limit (dBμV)	Result (dBμV)		Conclusion
		Traffic	Idle	
0.16 to 0.5	66 to 56	Fig.95	Fig.96	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) -AE2-2

Frequency range (MHz)	Average-peak Limit (dBμV)	Result (dBμV)		Conclusion
		Traffic	Idle	
0.15 to 0.5	56 to 46	Fig.95	Fig.96	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.

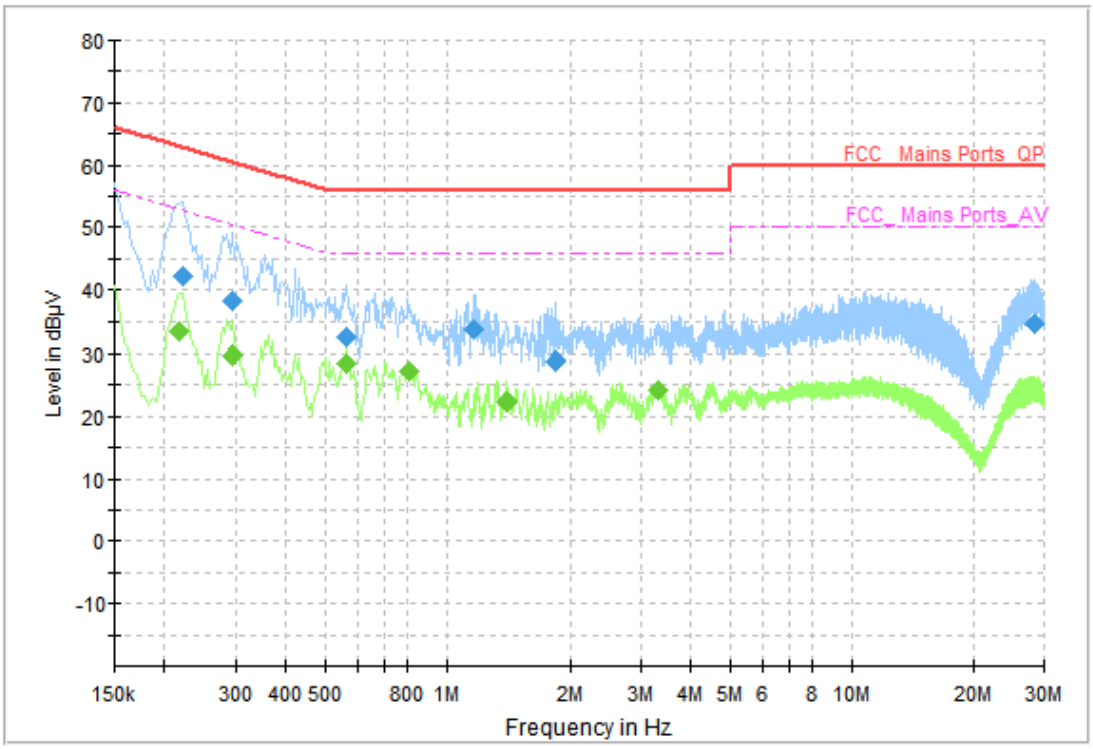

Fig. 93 AC Power line Conducted Emission (Traffic)

Measurement Results: Quasi Peak

Frequency (MHz)	Quasi Peak (dBµV)	Limit (dBµV)	Margin (dB)	Line	Filter	Corr. (dB)
0.222000	42.22	62.74	20.52	N	ON	9.6
0.294000	38.21	60.41	22.20	N	ON	9.7
0.566000	32.59	56.00	23.41	N	ON	9.7
1.170000	33.56	56.00	22.44	N	ON	9.7
1.842000	28.67	56.00	27.33	N	ON	9.7
28.302000	34.66	60.00	25.34	L1	ON	9.7

Measurement Results: Average

Frequency (MHz)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Filter	Corr. (dB)
0.218000	33.22	52.90	19.67	N	ON	9.6
0.294000	29.69	50.41	20.72	N	ON	9.6
0.562000	28.35	46.00	17.65	N	ON	9.7
0.810000	27.31	46.00	18.69	N	ON	9.7
1.406000	22.42	46.00	23.58	N	ON	9.7
3.298000	24.22	46.00	21.78	N	ON	9.7

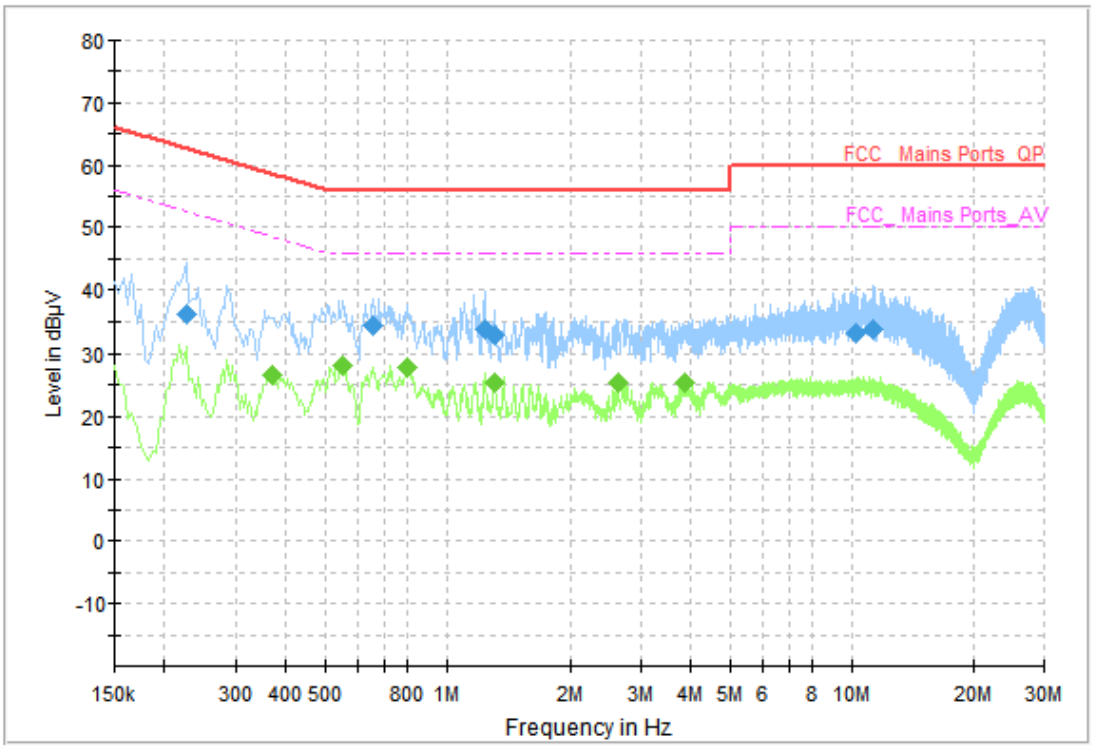

Fig. 94 AC Power line Conducted Emission (Idle)

Measurement Results: Quasi Peak

Frequency (MHz)	Quasi Peak (dBµV)	Limit (dBµV)	Margin (dB)	Line	Filter	Corr. (dB)
0.226000	35.96	62.60	26.64	N	ON	9.6
0.658000	34.17	56.00	21.83	N	ON	9.7
1.242000	33.73	56.00	22.27	N	ON	9.7
1.310000	32.60	56.00	23.40	N	ON	9.7
10.226000	33.02	60.00	26.98	N	ON	9.7
11.246000	33.58	60.00	26.42	N	ON	9.7

Measurement Results: Average

Frequency (MHz)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Filter	Corr. (dB)
0.370000	26.56	48.50	21.94	N	ON	9.6
0.550000	28.13	46.00	17.87	N	ON	9.7
0.802000	27.85	46.00	18.15	N	ON	9.7
1.310000	25.43	46.00	20.57	N	ON	9.7
2.630000	25.33	46.00	20.67	N	ON	9.7
3.874000	25.44	46.00	20.56	N	ON	9.7

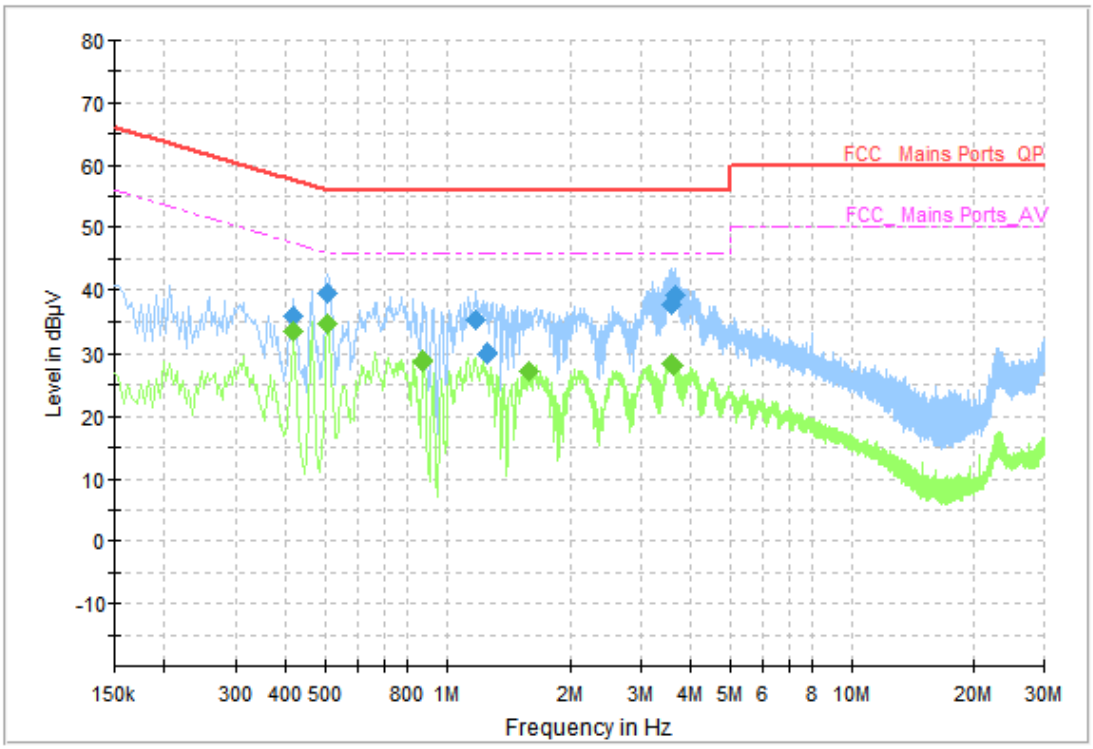

Fig. 95 AC Power line Conducted Emission (Traffic)

Measurement Results: Quasi Peak

Frequency (MHz)	Quasi Peak (dBµV)	Limit (dBµV)	Margin (dB)	Line	Filter	Corr. (dB)
0.418000	35.79	57.49	21.69	N	ON	9.7
0.506000	39.46	56.00	16.54	N	ON	9.7
1.186000	35.20	56.00	20.80	N	ON	9.7
1.262000	30.12	56.00	25.88	L1	ON	9.7
3.554000	37.58	56.00	18.42	N	ON	9.7
3.634000	39.03	56.00	16.97	N	ON	9.7

Measurement Results: Average

Frequency (MHz)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Filter	Corr. (dB)
0.414000	33.35	47.57	14.22	N	ON	9.7
0.506000	34.53	46.00	11.47	N	ON	9.7
0.874000	28.69	46.00	17.31	N	ON	9.7
1.590000	27.36	46.00	18.64	N	ON	9.7
3.590000	28.61	46.00	17.39	N	ON	9.7
3.618000	28.17	46.00	17.83	N	ON	9.7

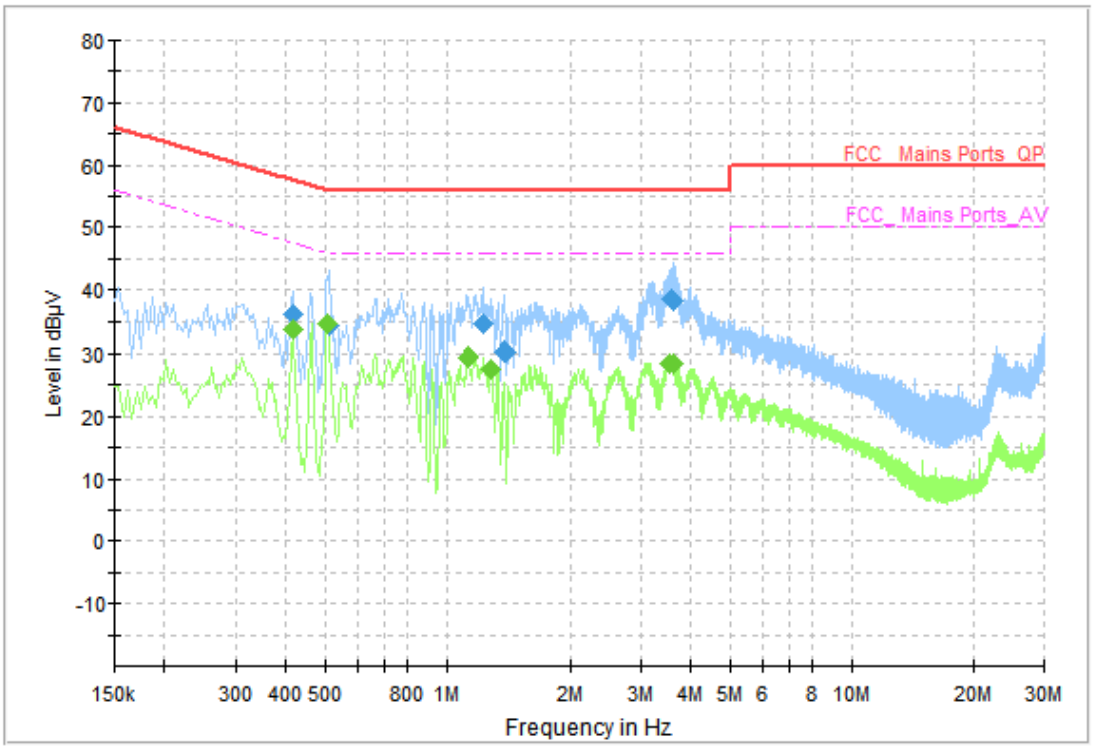

Fig. 96 AC Power line Conducted Emission (Idle)

Measurement Results: Quasi Peak

Frequency (MHz)	Quasi Peak (dBµV)	Limit (dBµV)	Margin (dB)	Line	Filter	Corr. (dB)
0.414000	36.19	57.57	21.38	N	ON	9.6
0.514000	34.37	56.00	21.63	N	ON	9.7
1.230000	34.59	56.00	21.41	N	ON	9.7
1.394000	30.45	56.00	25.55	N	ON	9.7
3.574000	38.47	56.00	17.53	N	ON	9.7
3.618000	38.33	56.00	17.67	N	ON	9.7

Measurement Results: Average

Frequency (MHz)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Filter	Corr. (dB)
0.414000	33.55	47.57	14.02	N	ON	9.6
0.506000	34.57	46.00	11.43	N	ON	9.7
1.130000	29.49	46.00	16.51	N	ON	9.7
1.290000	27.66	46.00	18.34	N	ON	9.7
3.550000	28.54	46.00	17.46	N	ON	9.7
3.630000	28.62	46.00	17.38	N	ON	9.7

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