

Fig. 66 Radiated Spurious Emission (All Channels, 18 GHz ~26.5 GHz)



A.5 20dB Bandwidth

Method of Measurement: See ANSI C63.10-clause 7.8.7.

Measurement Limit:

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

Measurement Result:

Mode	Channel	20dB Bandwidth (MHz)		Conclusion
		Fig.	Value	
GFSK	0	Fig.67	0.95	/
	39	Fig.68	0.99	
	78	Fig.69	1.02	
$\pi/4$ DQPSK	0	Fig.70	1.26	/
	39	Fig.71	1.26	
	78	Fig.72	1.29	
8DPSK	0	Fig.73	1.26	/
	39	Fig.74	1.26	
	78	Fig.75	1.26	

See below for test graphs.

Conclusion: PASS

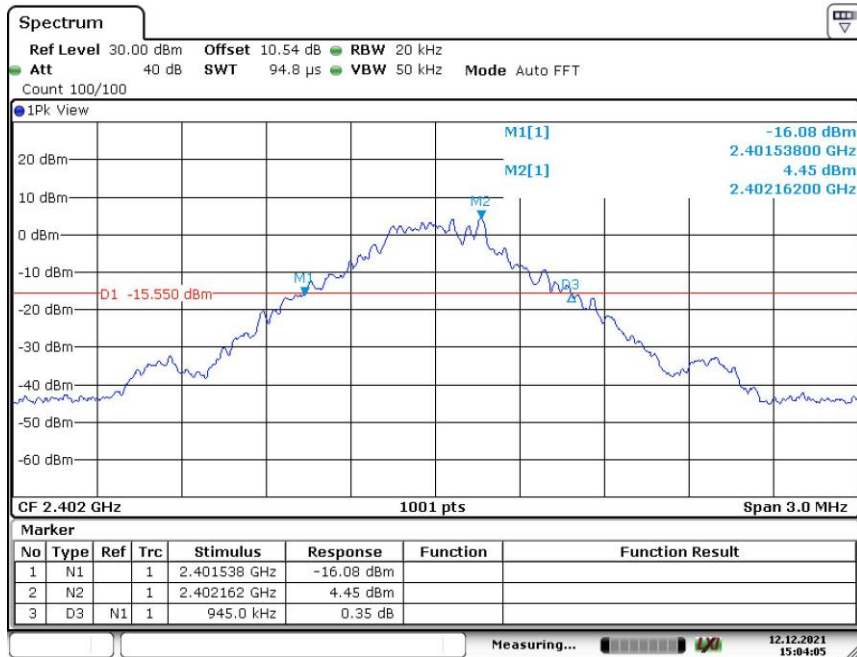


Fig. 67 20dB Bandwidth (GFSK, CH0)

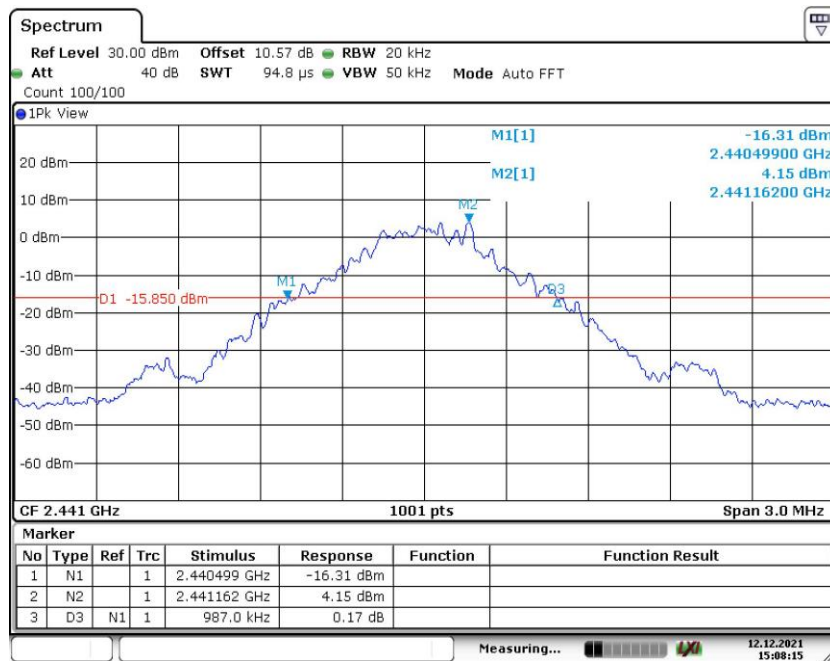


Fig. 68 20dB Bandwidth (GFSK, CH39)

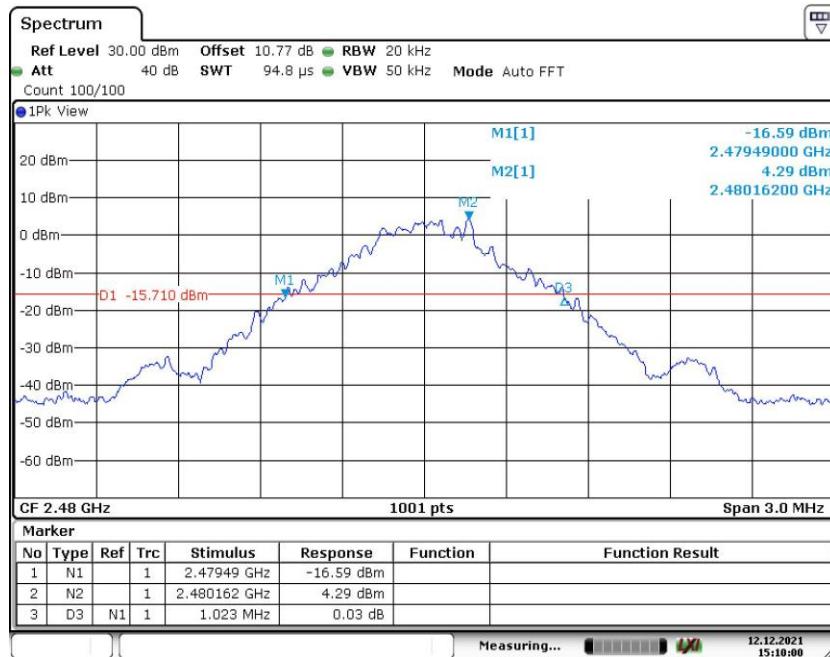


Fig. 69 20dB Bandwidth (GFSK, CH78)

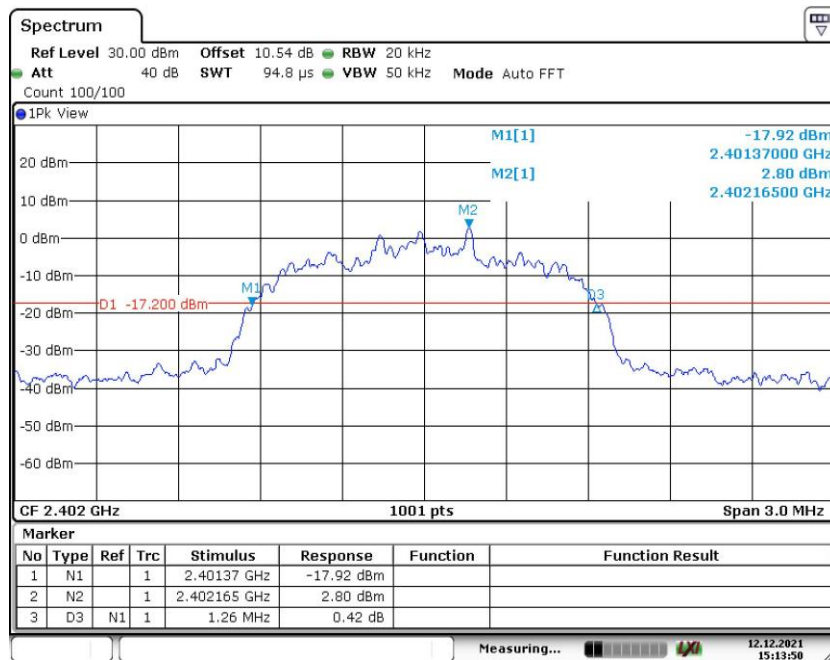


Fig. 70 20dB Bandwidth ($\pi/4$ DQPSK, CH0)



Fig. 71 20dB Bandwidth ($\pi/4$ DQPSK, CH39)



Fig. 72 20dB Bandwidth ($\pi/4$ DQPSK, CH78)

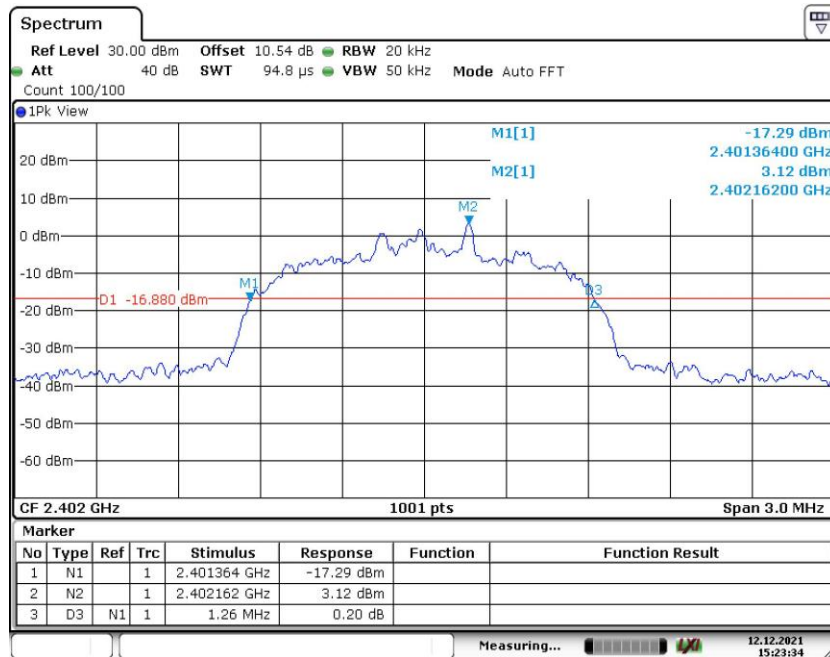


Fig. 73 20dB Bandwidth (8DPSK, CH0)

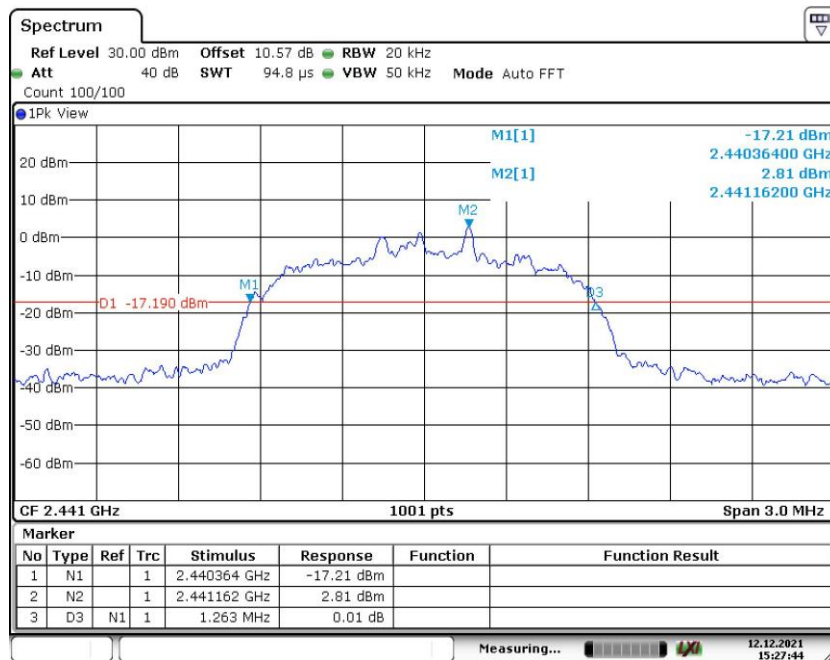


Fig. 74 20dB Bandwidth (8DPSK, CH39)



Fig. 75 20dB Bandwidth (8DPSK, CH78)



A.6 Time of Occupancy (Dwell Time)

Method of Measurement: See ANSI C63.10-clause 7.8.4.

Measurement Limit:

Standard	Limit (s)
FCC 47 CFR Part 15.247(a)	< 0.40

Measurement Results:

Mode	Channel	Packet	BurstWidth (ms)		TotalHops (Num)		Result (s)	Conclusion
			Fig.76	2.86	Fig.77	100		
GFSK	39	DH5	Fig.76	2.86	Fig.77	100	0.286	P
$\pi/4$ DQPSK	39	2-DH5	Fig.78	2.86	Fig.79	80	0.229	P
8DPSK	39	3-DH5	Fig.80	2.86	Fig.81	80	0.229	P

See below for test graphs.

Conclusion: Pass

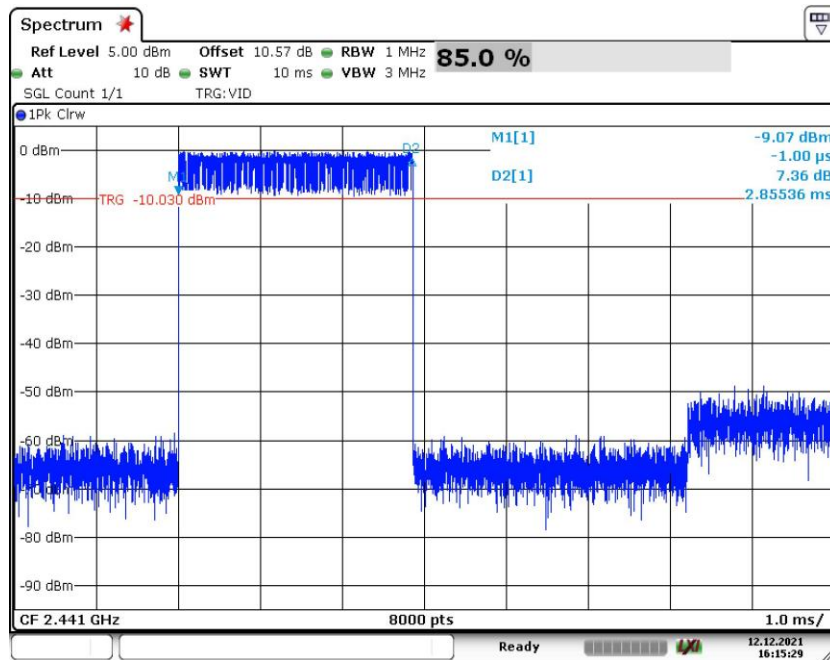


Fig. 76 BurstWidth (Dwell Time) (GFSK, CH39)

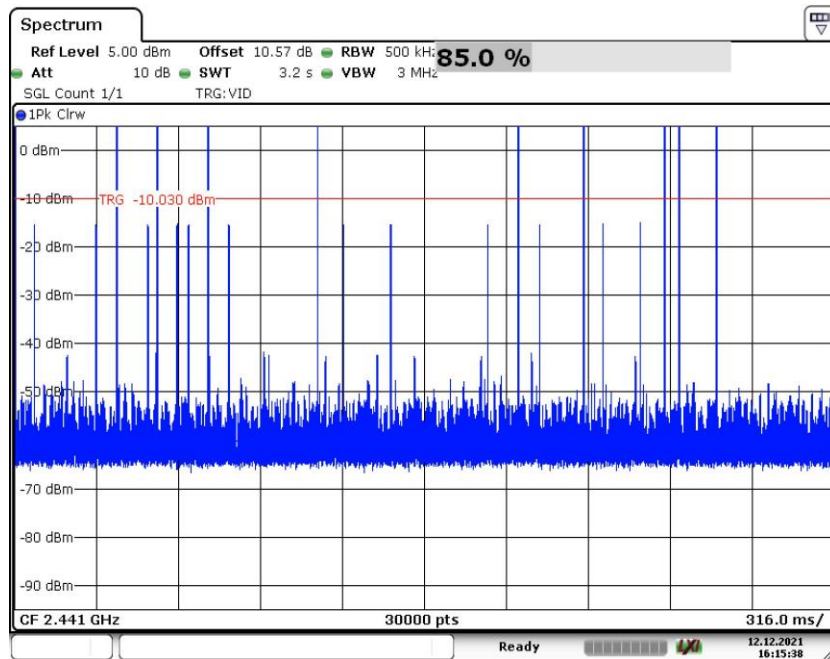


Fig. 77 Number of Burst in Observation Period (Dwell Time) (GFSK, CH39)

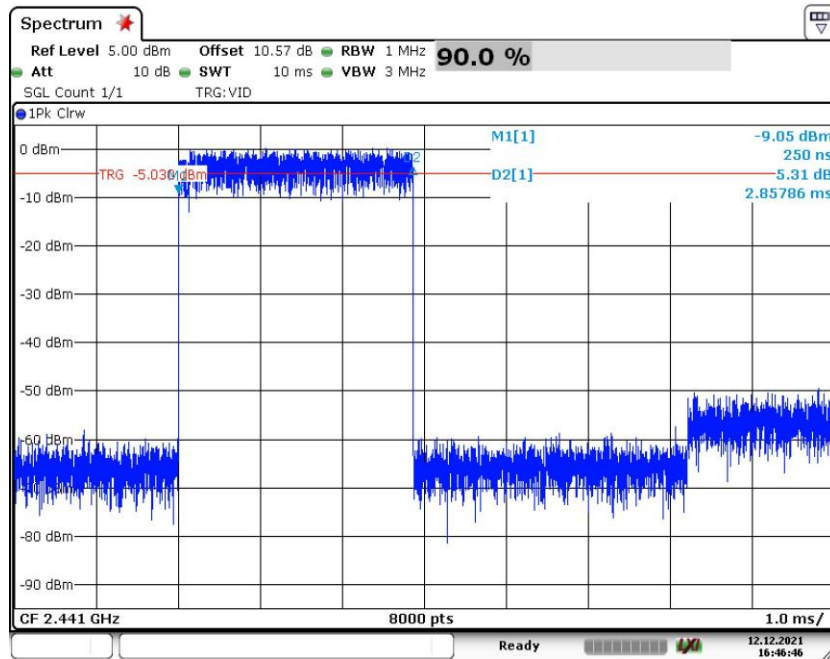


Fig. 78 BurstWidth (Dwell Time) ($\pi/4$ DQPSK, CH39)

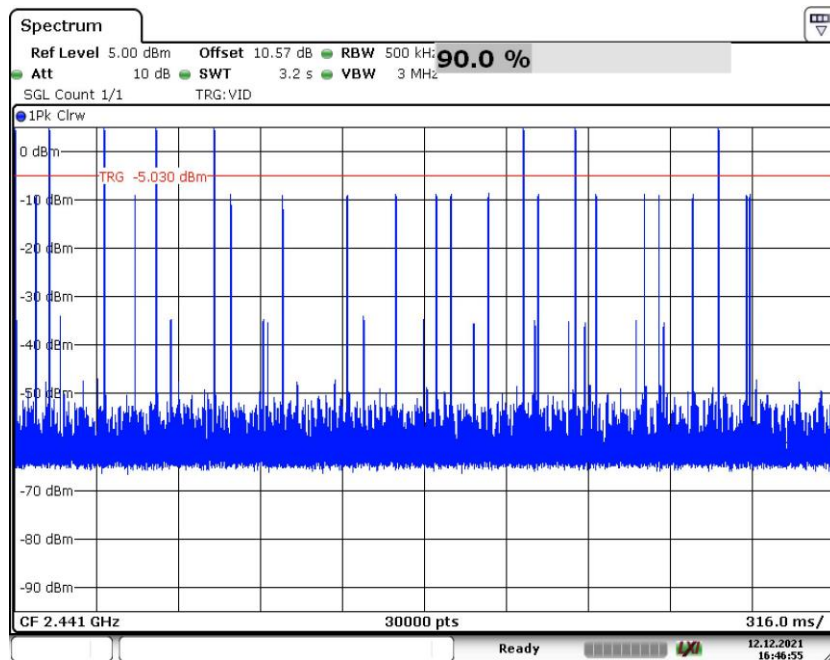


Fig. 79 Number of Burst in Observation Period (Dwell Time) ($\pi/4$ DQPSK, CH39)

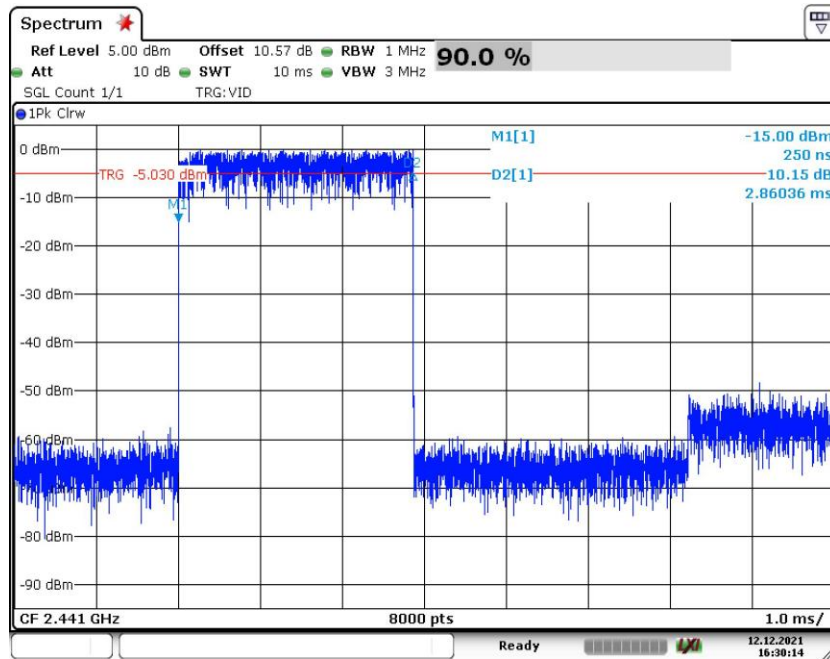


Fig. 80 BurstWidth (Dwell Time) (8DPSK, CH39)

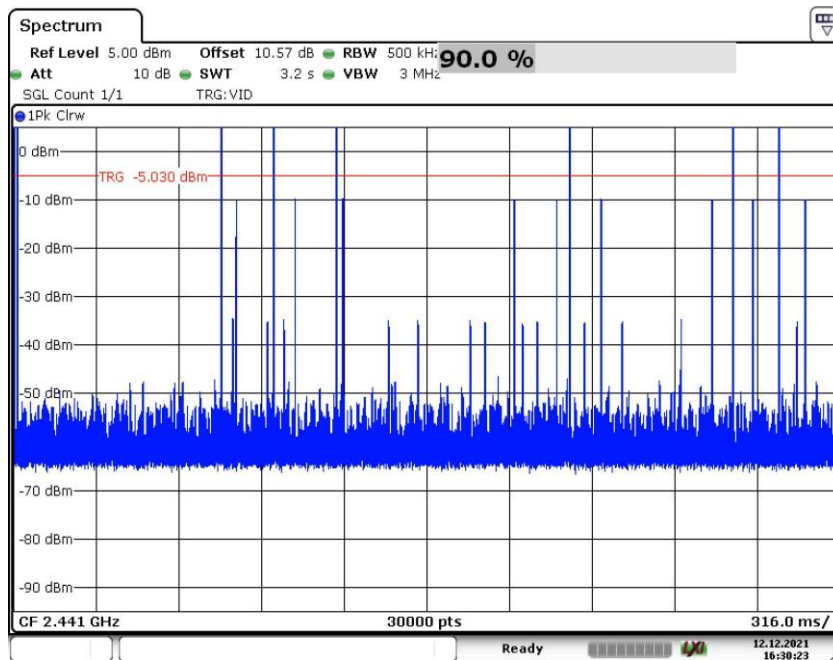


Fig. 81 Number of Burst in Observation Period (Dwell Time) (8DPSK, CH39)



A.7 Number of Hopping Channels

Method of Measurement: See ANSI C63.10-clause 7.8.3.

Measurement Limit:

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

Measurement Results:

Mode	Packet	Number of Hopping Channels	Test results (Num)	Conclusion
GFSK	DH5	Fig.82	79	P
$\pi/4$ DQPSK	2-DH5	Fig.83	79	P
8DPSK	3-DH5	Fig.84	79	P

See below for test graphs.

Conclusion: Pass

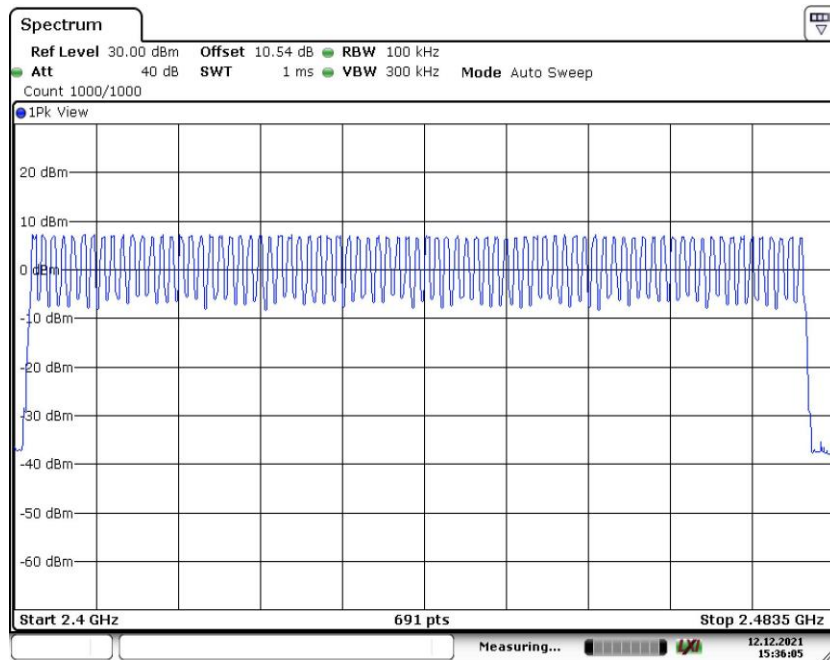


Fig. 82 Number of Hopping Channels (GFSK, Hopping)

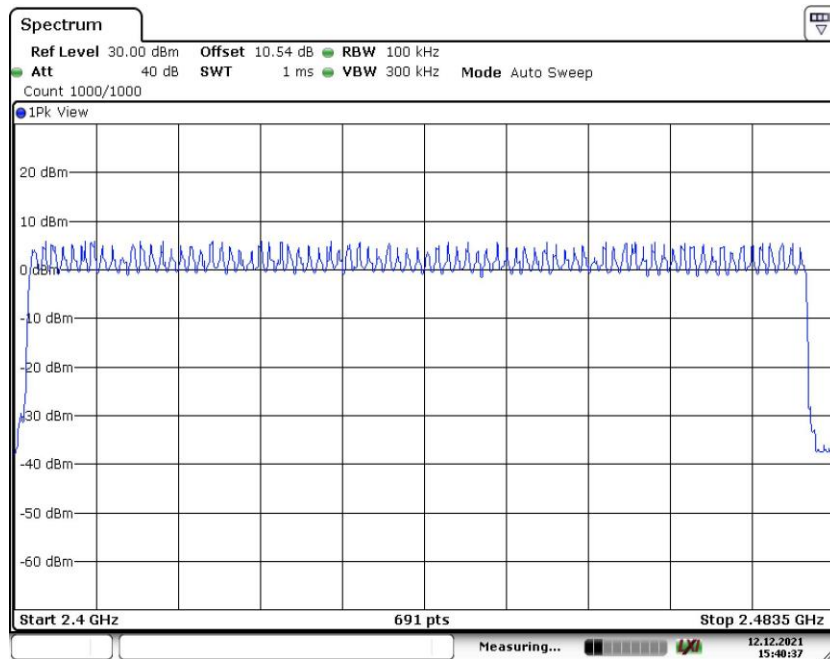


Fig. 83 Number of Hopping Channels ($\pi/4$ DQPSK, Hopping)

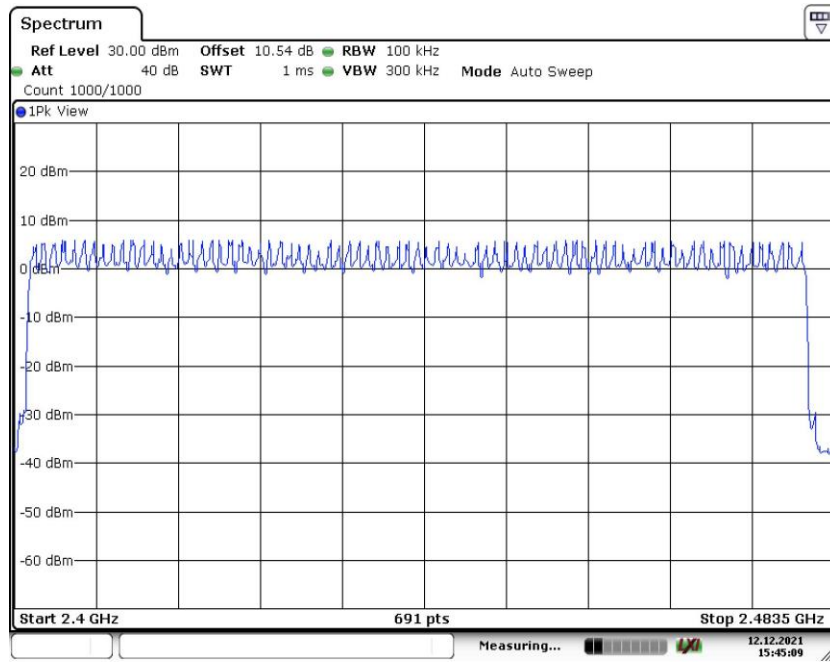


Fig. 84 Number of Hopping Channels (8DPSK, Hopping)



A.8 Carrier Frequency Separation

Method of Measurement: See ANSI C63.10-clause 7.8.2.

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.85	974.00	P
$\pi/4$ DQPSK	39	2-DH5	Fig.86	1009.00	P
8DPSK	39	3-DH5	Fig.87	1000.00	P

See below for test graphs.

Conclusion: Pass

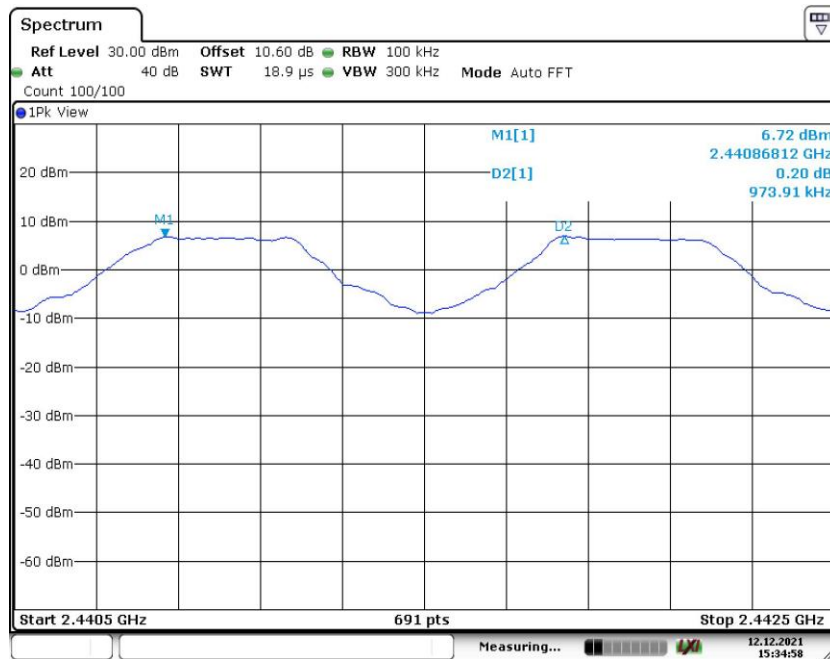


Fig. 85 Carrier Frequency Separation (GFSK, CH39)

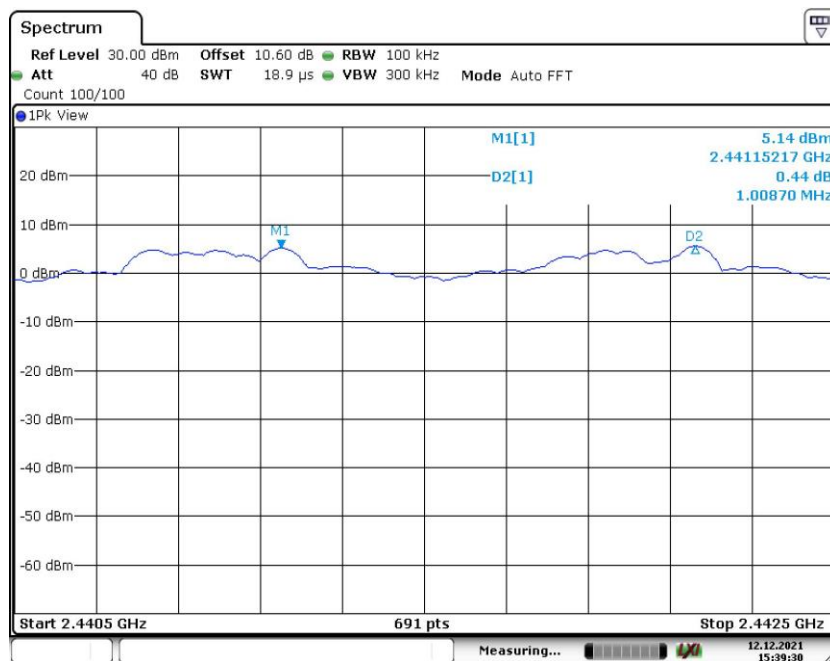


Fig. 86 Carrier Frequency Separation ($\pi/4$ DQPSK, CH39)

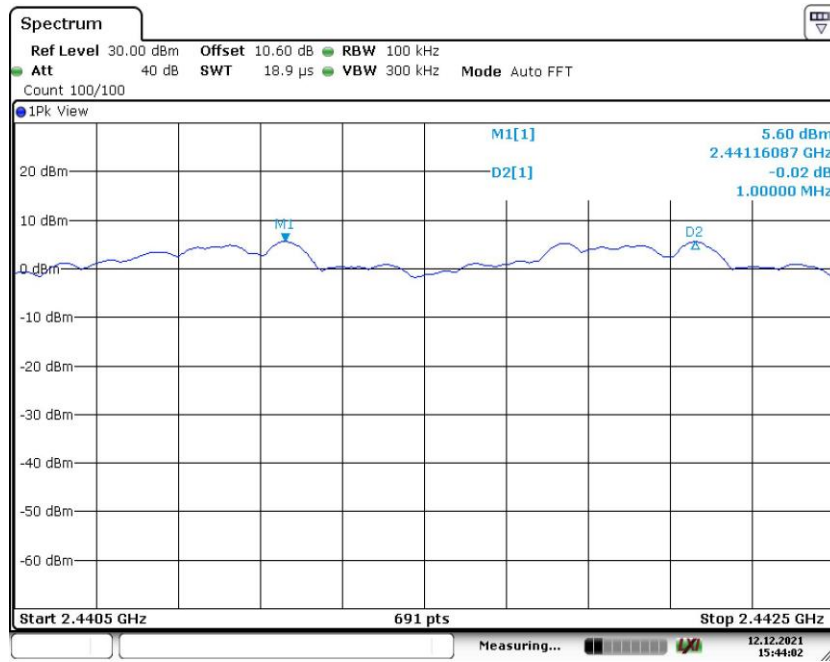


Fig. 87 Carrier Frequency Separation (8DPSK, CH39)



A.9 AC Power line Conducted Emission

Method of Measurement: See ANSI C63.10-clause 6.2

Test Condition:

Voltage (V)	Frequency (Hz)
120	60

Measurement Result and limit:

BT- AE2, AE3

Frequency range (MHz)	Quasi-peak Limit (dBµV)	Average-peak Limit (dBµV)	Result (dBµV)		Conclusion
			Traffic	Idle	
0.15 to 0.5	66 to 56	56 to 46	Fig.88	Fig.89	P
0.5 to 5	56	46			
5 to 30	60	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

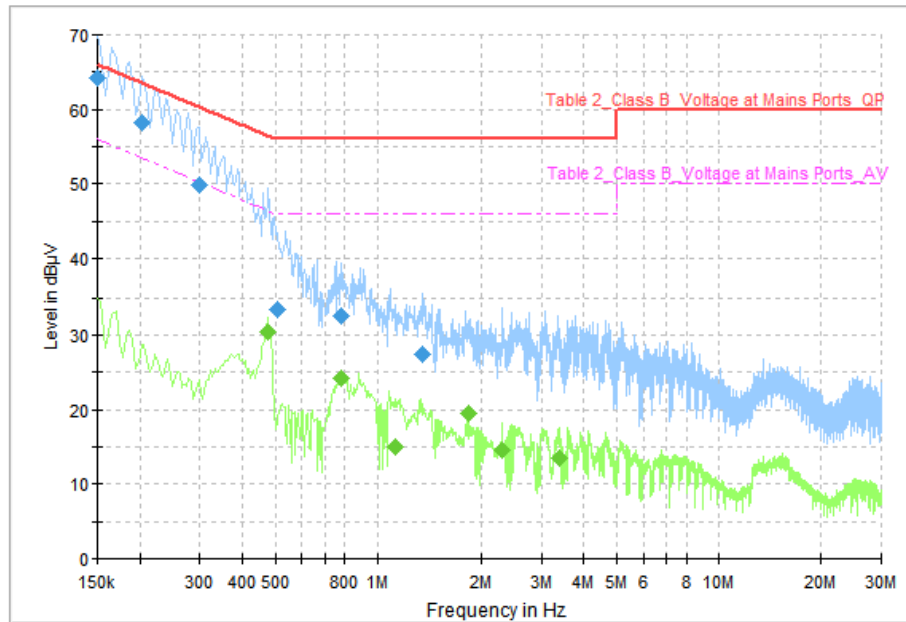


Fig. 88 AC Power line Conducted Emission (Traffic)

Measurement Results: Quasi Peak

Frequency (MHz)	Quasi Peak (dBµV)	Limit (dBµV)	Margin (dB)	Line	Filter	Corr. (dB)
0.150000	64.14	66.00	1.86	N	ON	10
0.202000	58.16	63.53	5.37	L1	ON	10
0.298000	49.80	60.30	10.50	L1	ON	10
0.510000	33.46	56.00	22.54	L1	ON	10
0.778000	32.62	56.00	23.38	L1	ON	10
1.350000	27.47	56.00	28.53	L1	ON	10

Measurement Results: Average

Frequency (MHz)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Filter	Corr. (dB)
0.474000	30.31	46.44	16.13	L1	ON	10
0.786000	24.19	46.00	21.81	L1	ON	10
1.130000	15.07	46.00	30.93	N	ON	10
1.826000	19.39	46.00	26.61	L1	ON	10
2.294000	14.53	46.00	31.48	L1	ON	10
3.374000	13.45	46.00	32.55	L1	ON	10

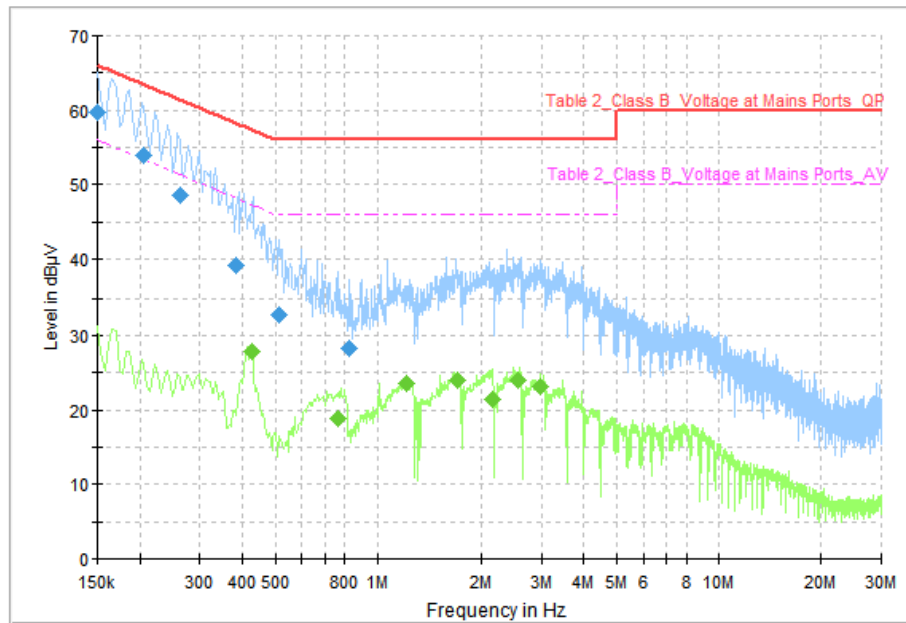


Fig. 89 AC Power line Conducted Emission (Idle)

Measurement Results: Quasi Peak

Frequency (MHz)	Quasi Peak (dBµV)	Limit (dBµV)	Margin (dB)	Line	Filter	Corr. (dB)
0.150000	59.68	66.00	6.32	N	ON	10
0.206000	53.99	63.37	9.37	N	ON	10
0.262000	48.52	61.37	12.84	L1	ON	10
0.382000	39.11	58.24	19.13	L1	ON	10
0.514000	32.69	56.00	23.31	N	ON	10
0.826000	28.20	56.00	27.80	N	ON	10

Measurement Results: Average

Frequency (MHz)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Filter	Corr. (dB)
0.426000	27.81	47.33	19.52	L1	ON	10
0.762000	18.87	46.00	27.13	L1	ON	10
1.218000	23.46	46.00	22.54	L1	ON	10
1.698000	23.89	46.00	22.11	L1	ON	10
2.150000	21.36	46.00	24.64	L1	ON	10
2.554000	24.00	46.00	22.00	L1	ON	10
2.974000	23.04	46.00	22.96	L1	ON	10

END OF REPORT