

B.3 CARRIER FREQUENCIES SEPARATION

Modulation	Packet	Left Center frequency (MHz)	Right Center frequency (MHz)	Hopping Frequency Separation (MHz)	Limit (MHz)	Result
GFSK	DH5	2440.1632	2441.1632	1	0.632	PASS
$\pi/4$ DQPSK	2-DH5	2439.862	2440.9976	1.1356	0.852	PASS
8DPSK	3-DH5	2439.9916	2440.9841	0.9925	0.865	PASS

Test Graphs



B.4 CONDUCTED OUT OF BAND EMISSION

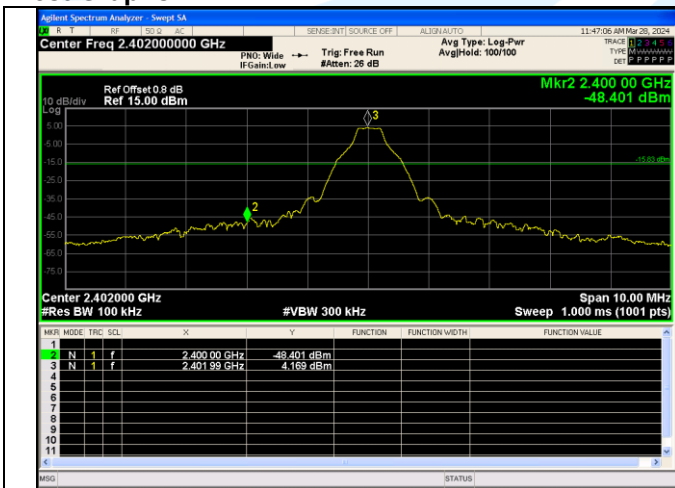
Non-Hopping

Modulation	Packet	Channel	OOB Emission Frequency (MHz)	OOB Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result
GFSK	DH5	0	2400.00	-48.401	-15.83	-32.571	PASS
			24272.7	-52.453	-15.83	-36.623	PASS
		39	24545.5	-53.053	-15.82	-37.233	PASS
			2483.50	-56.603	-16.7	-39.903	PASS
			24332.0	-51.482	-16.7	-34.782	PASS
π/4DQPSK	2-DH5	0	2400.00	-47.406	-16.0	-31.406	PASS
			24917.0	-52.558	-16.0	-36.558	PASS
		39	24946.3	-51.441	-16.04	-35.401	PASS
			2483.50	-56.299	-16.99	-39.309	PASS
			24928.8	-52.436	-16.99	-35.446	PASS
8DPSK	3-DH5	0	2400.00	-45.641	-15.84	-29.801	PASS
			24299.0	-52.552	-15.84	-36.712	PASS
		39	24223.4	-52.207	-16.2	-36.007	PASS
			2483.50	-59.572	-16.9	-42.672	PASS
			24348.9	-52.033	-16.9	-35.133	PASS

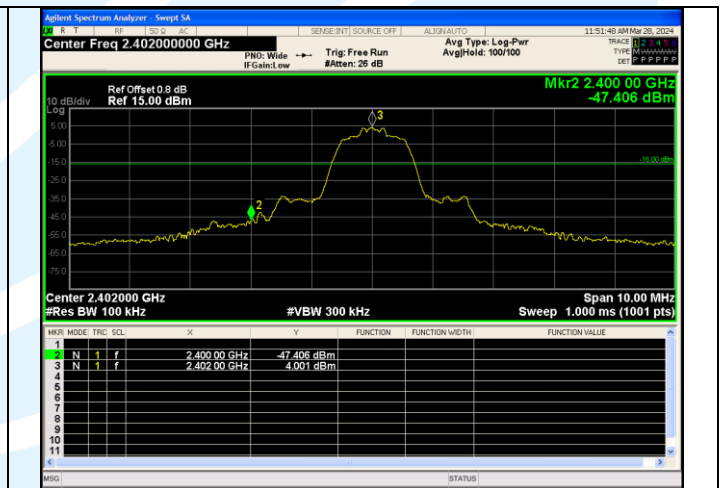
Hopping

Modulation	Packet	Channel	OOB Emission Frequency (MHz)	OOB Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result
GFSK	DH5	Hopping	2400.00	-52.377	-15.74	-36.637	PASS
			2483.50	-55.346	-16.62	-38.726	PASS
π/4DQPSK	2-DH5		2400.00	-49.717	-15.81	-33.907	PASS
			2483.50	-56.370	-16.72	-39.650	PASS
8DPSK	3-DH5		2400.00	-48.603	-15.66	-32.943	PASS
			2483.50	-56.127	-16.56	-39.567	PASS

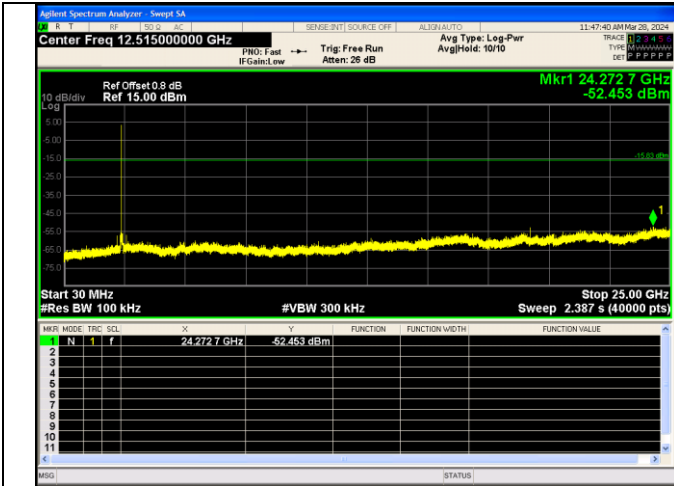
Test Graphs



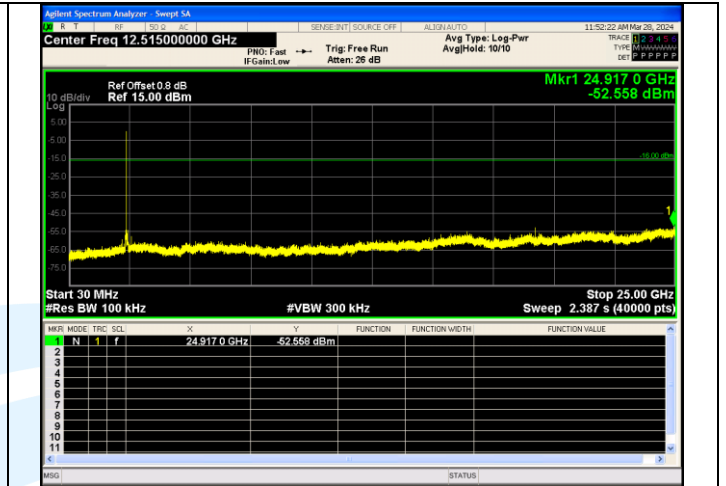
Out Of Band Emission
GFSK_DH5_Channel 0



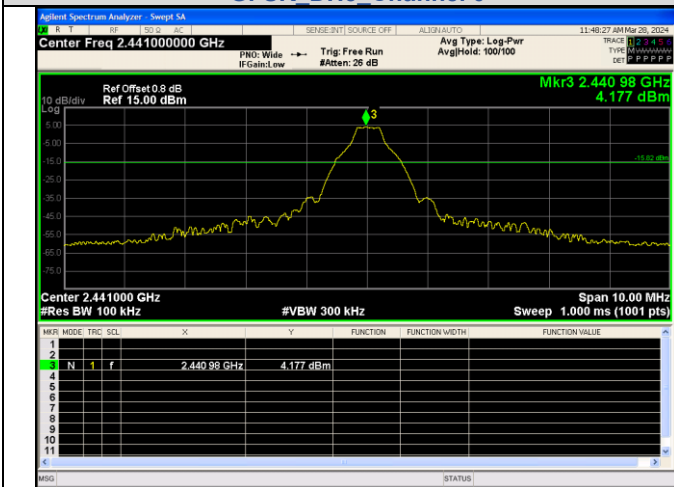
Out Of Band Emission
π/4DQPSK_2-DH5_Channel 0



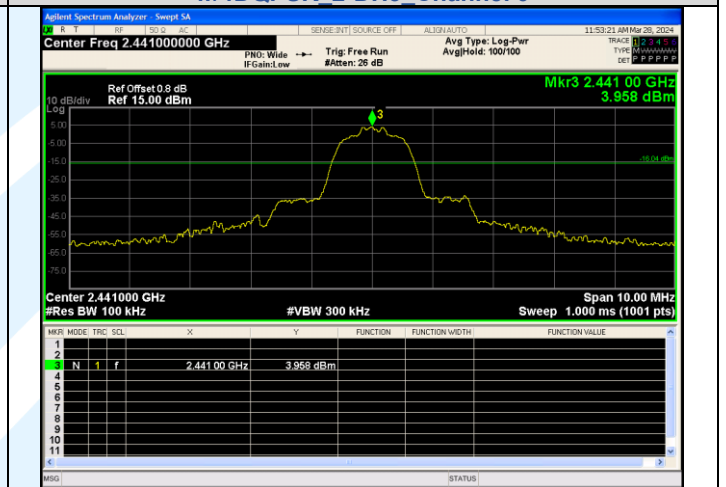
**Spurious Emission
GFSK DH5 Channel 0**



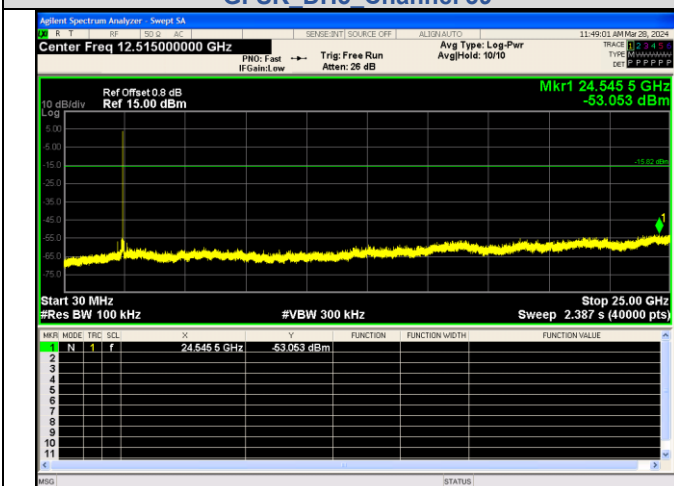
**Spurious Emission
 $\pi/4$ DQPSK 2-DH5 Channel 0**



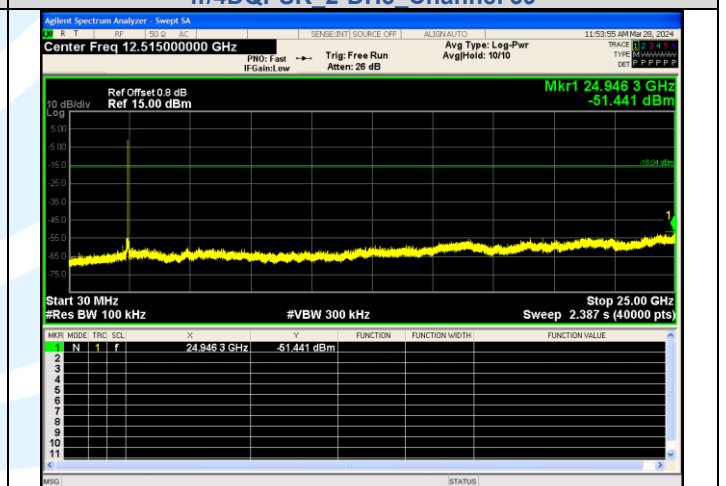
**Out Of Band Emission
GFSK DH5 Channel 39**



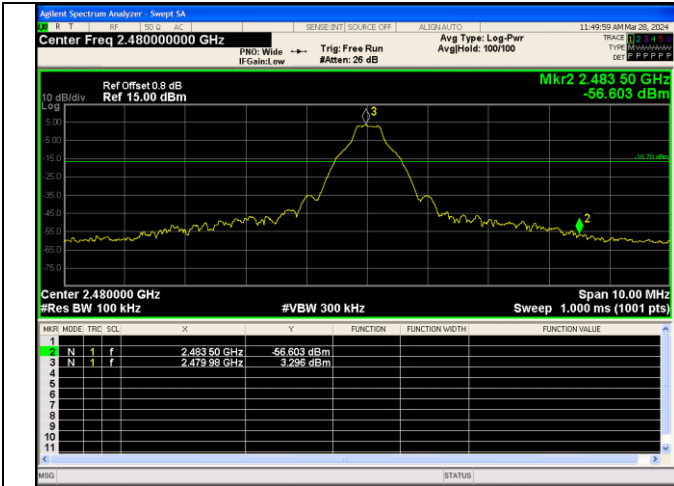
**Out Of Band Emission
 $\pi/4$ DQPSK 2-DH5 Channel 39**



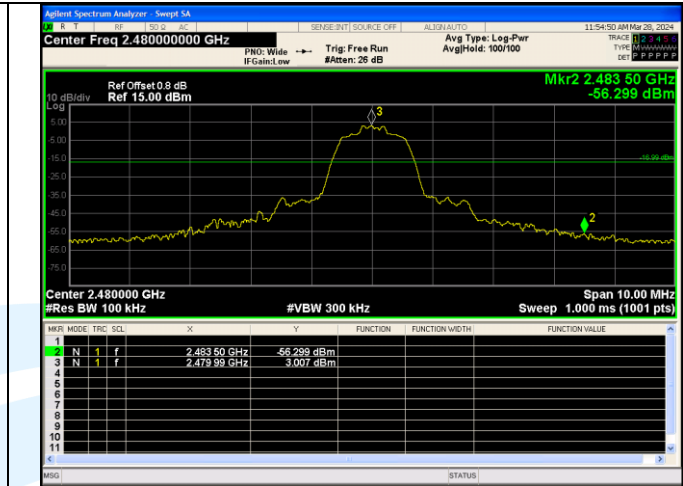
**Spurious Emissions
GFSK DH5 Channel 39**



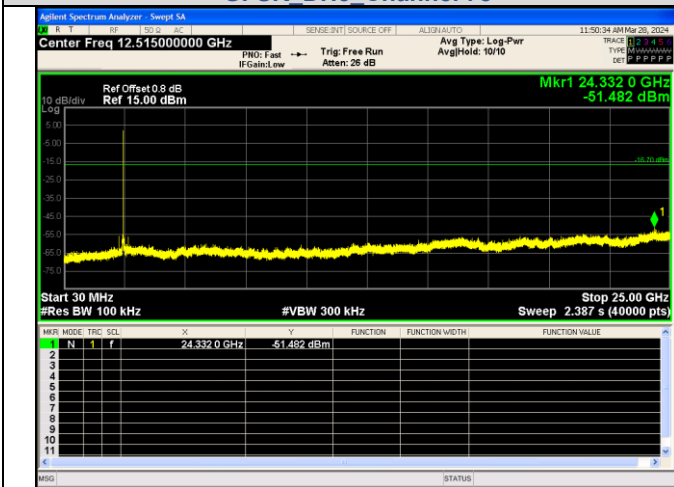
**Spurious Emissions
 $\pi/4$ DQPSK 2-DH5 Channel 39**



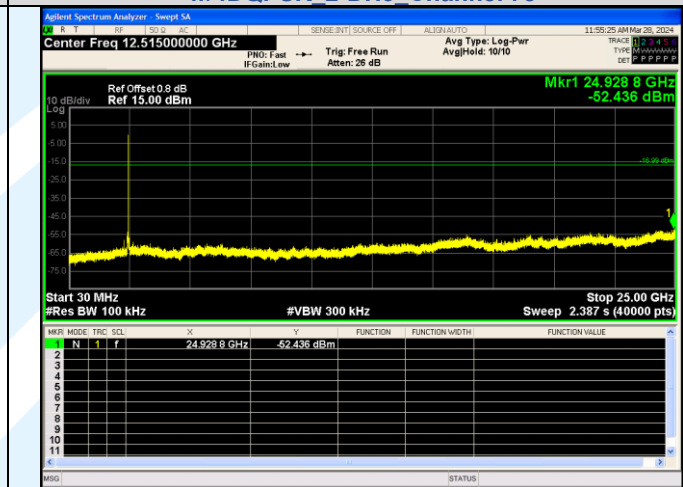
**Out Of Band Emission
GFSK DH5 Channel 78**



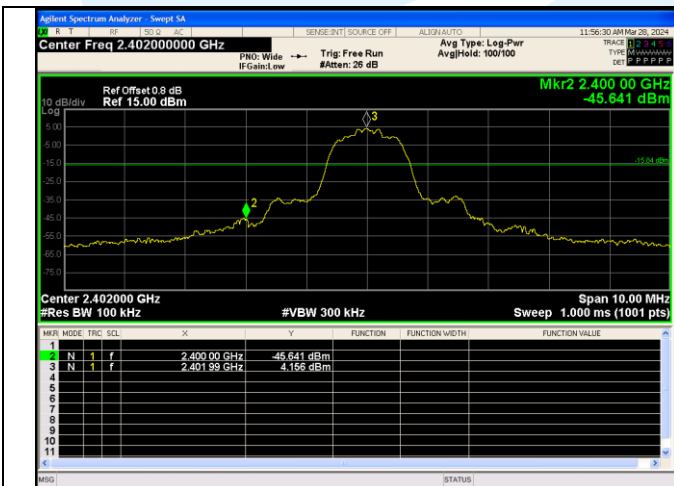
**Out Of Band Emission
 $\pi/4$ DQPSK 2-DH5 Channel 78**



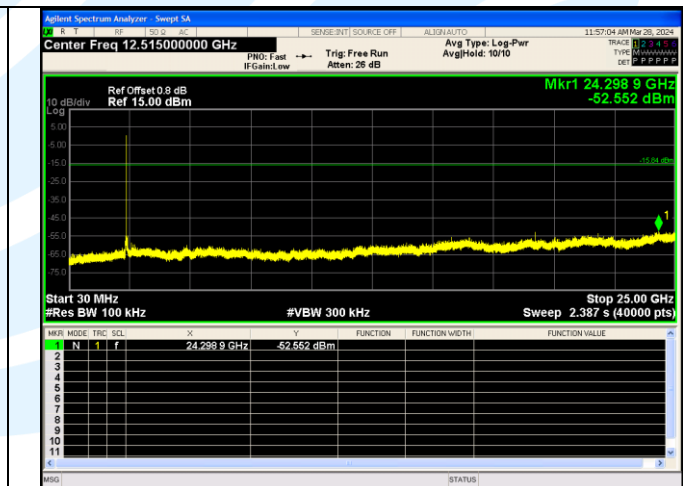
**Spurious Emission
GFSK DH5 Channel 78**



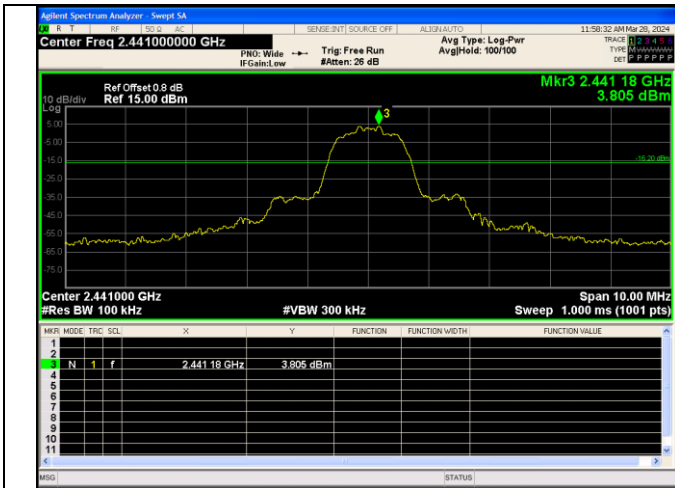
**Spurious Emission
 $\pi/4$ DQPSK 2-DH5 Channel 78**



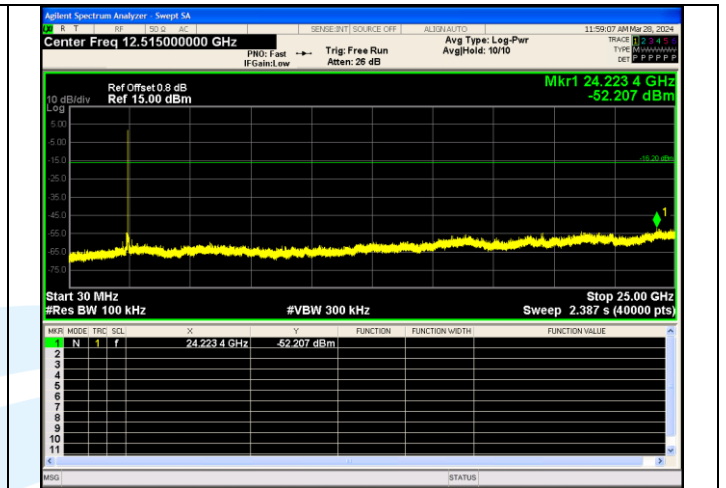
**Out Of Band Emission
8DPSK 3-DH5 Channel 0**



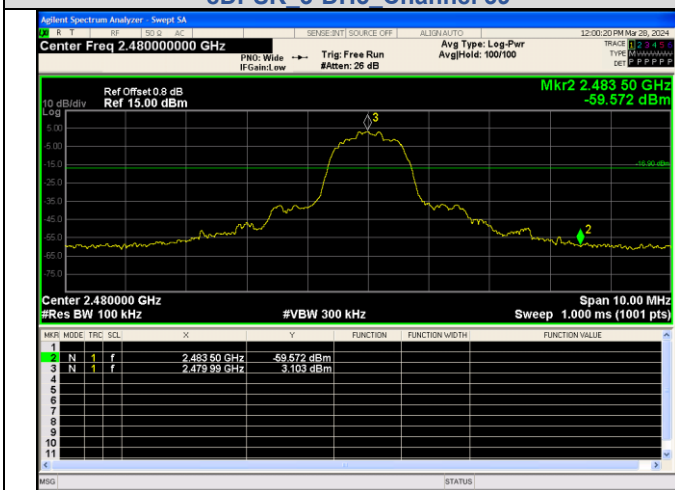
**Spurious Emission
8DPSK 3-DH5 Channel 0**



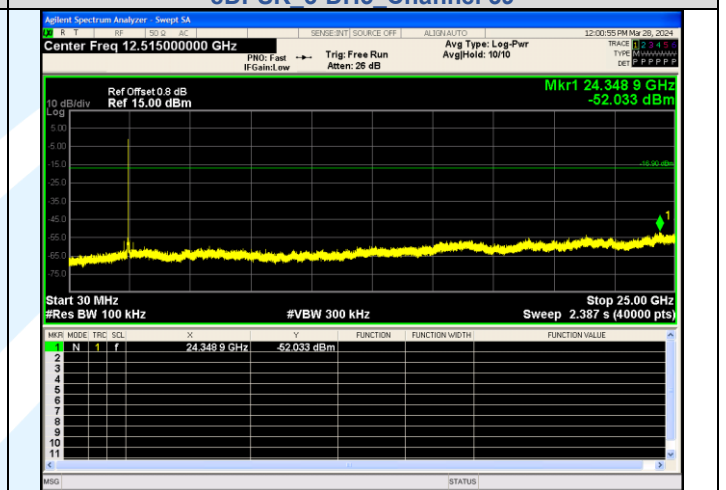
**Out Of Band Emission
8DPSK 3-DH5 Channel 39**



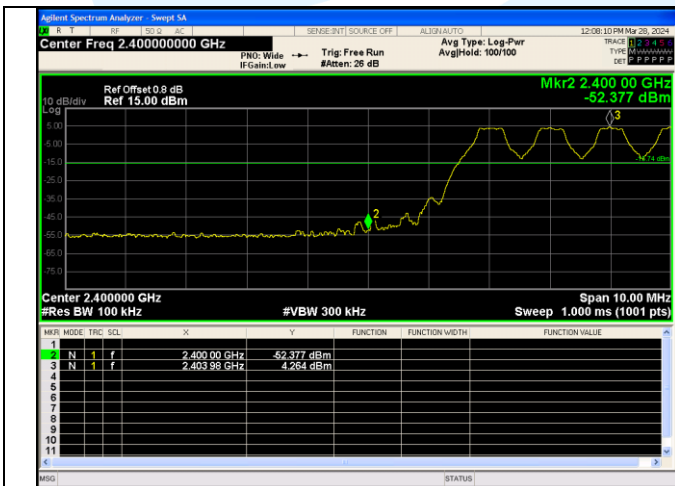
**Spurious Emissions
8DPSK 3-DH5 Channel 39**



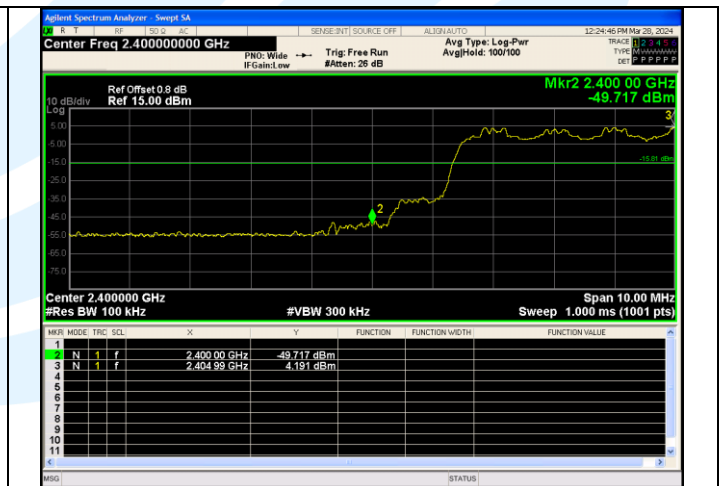
**Out Of Band Emission
8DPSK 3-DH5 Channel 78**



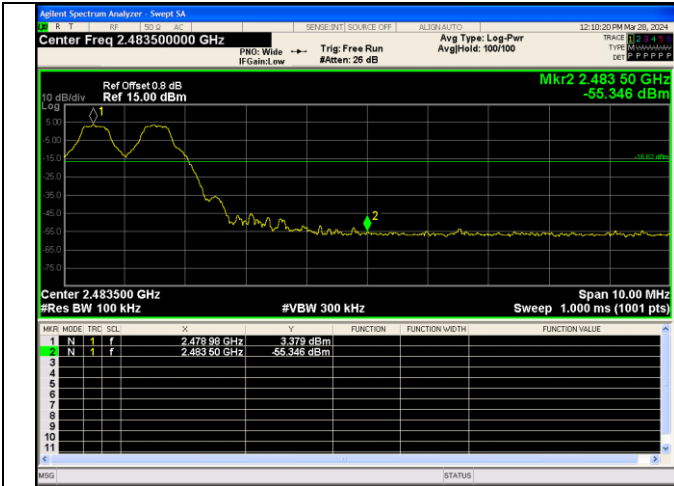
**Spurious Emission
8DPSK 3-DH5 Channel 78**



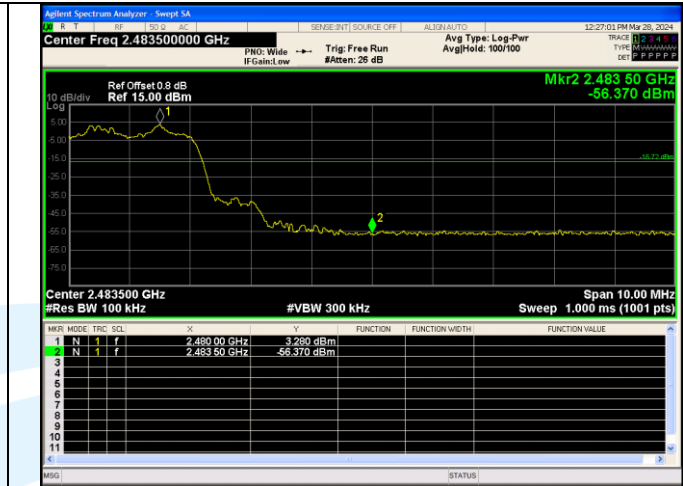
**Out Of Band Emission(Left)
GFSK DH5 Channel Hopping**



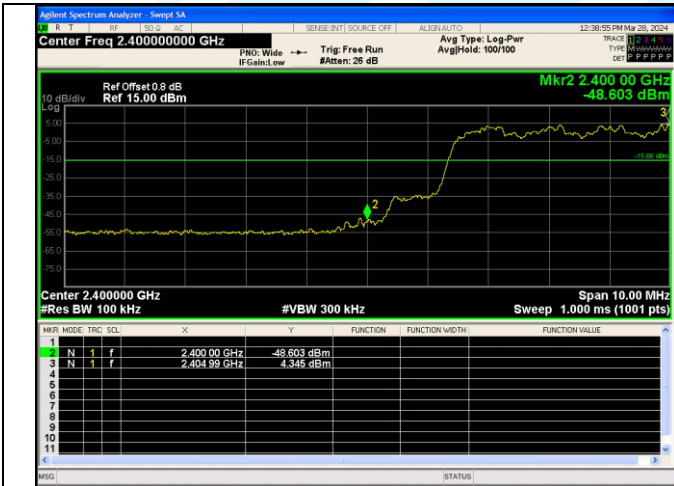
**Out Of Band Emission(Left)
π/4DQPSK 2-DH5 Channel Hopping**



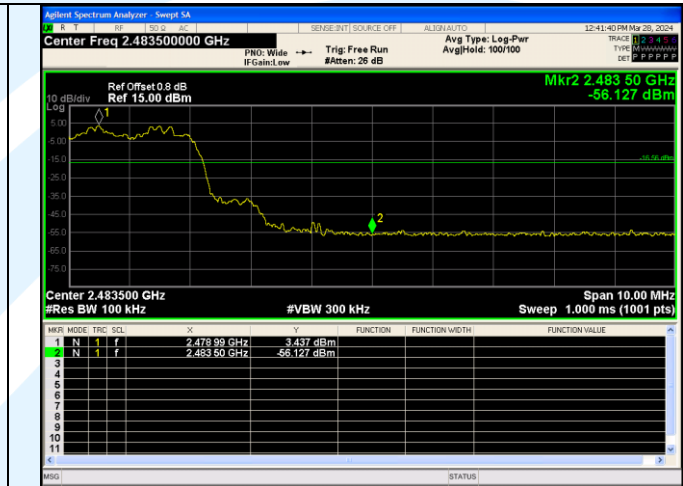
Out Of Band Emission(Right)
GFSK_DH5_Channel Hopping



Out Of Band Emission(Right)
 $\pi/4$ DQPSK_2-DH5_Channel Hopping



Out Of Band Emission(Left)
8DPSK_3-DH5_Channel Hopping

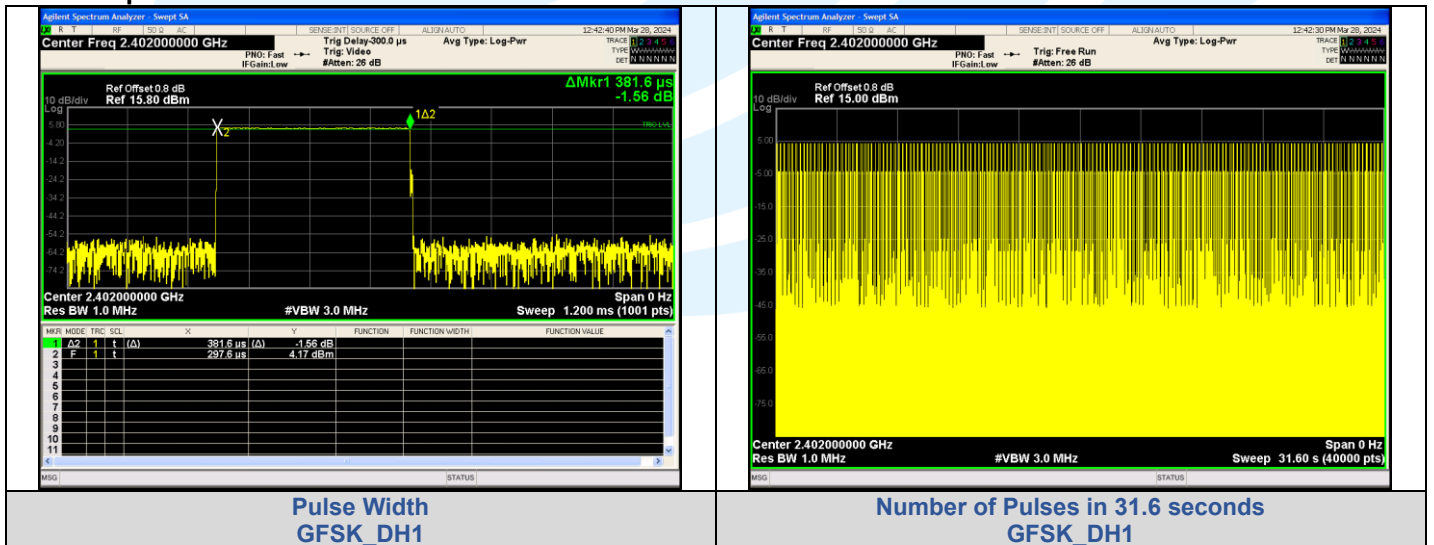


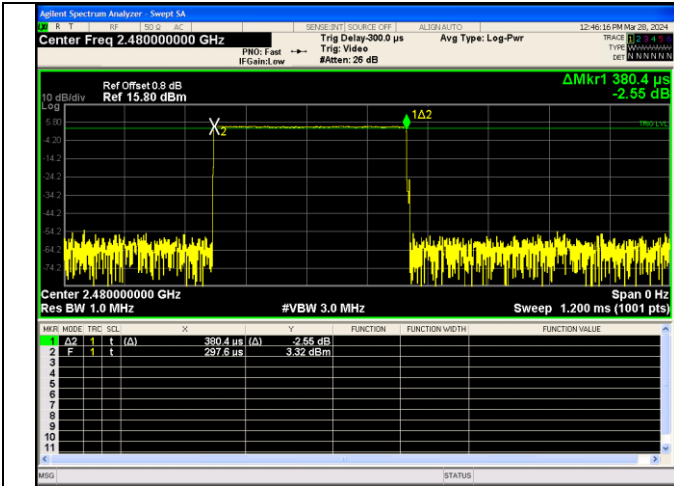
Out Of Band Emission(Right)
8DPSK_3-DH5_Channel Hopping

B.5 DWELL TIME

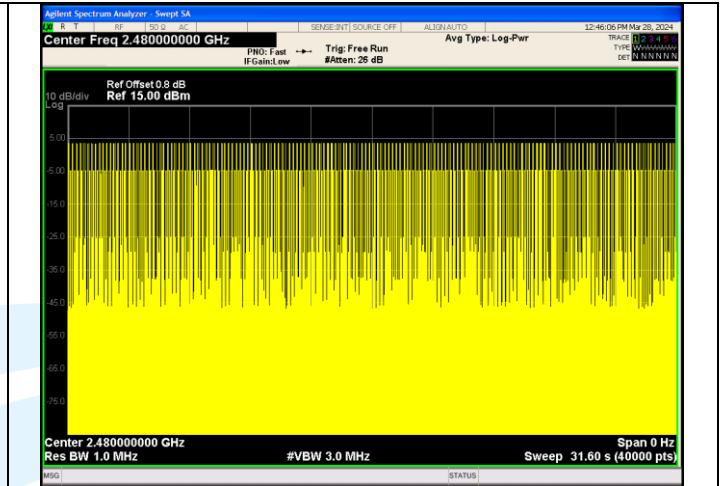
Modulation	Packet	Channel	Pulse Width (ms)	Number of Pulses in 31.6 seconds	Dwell Time (ms)	Limit (ms)	Result
GFSK	DH1	CH0 (2402MHz)	0.3816	319	121.73	< 400	PASS
	DH1	CH78 (2480MHz)	0.3804	319	121.35		PASS
	DH3	CH0 (2402MHz)	1.632	164	267.65		PASS
	DH3	CH78 (2480MHz)	1.632	150	244.8		PASS
	DH5	CH0 (2402MHz)	2.872	116	333.15		PASS
	DH5	CH78 (2480MHz)	2.880	105	302.4		PASS
π/4DQPSK	2-DH1	CH0 (2402MHz)	0.3900	316	123.24		PASS
	2-DH1	CH78 (2480MHz)	0.3900	313	122.07		PASS
	2-DH3	CH0 (2402MHz)	1.656	156	258.34		PASS
	2-DH3	CH78 (2480MHz)	1.632	162	264.38		PASS
	2-DH5	CH0 (2402MHz)	2.880	109	313.92		PASS
	2-DH5	CH78 (2480MHz)	2.880	97	279.36		PASS
8DPSK	3-DH1	CH0 (2402MHz)	0.3900	316	123.24		PASS
	3-DH1	CH78 (2480MHz)	0.3900	316	123.24		PASS
	3-DH3	CH0 (2402MHz)	1.632	165	269.28		PASS
	3-DH3	CH78 (2480MHz)	1.632	163	266.02		PASS
	3-DH5	CH0 (2402MHz)	2.896	102	295.39		PASS
	3-DH5	CH78 (2480MHz)	2.880	114	328.32		PASS

Test Graphs

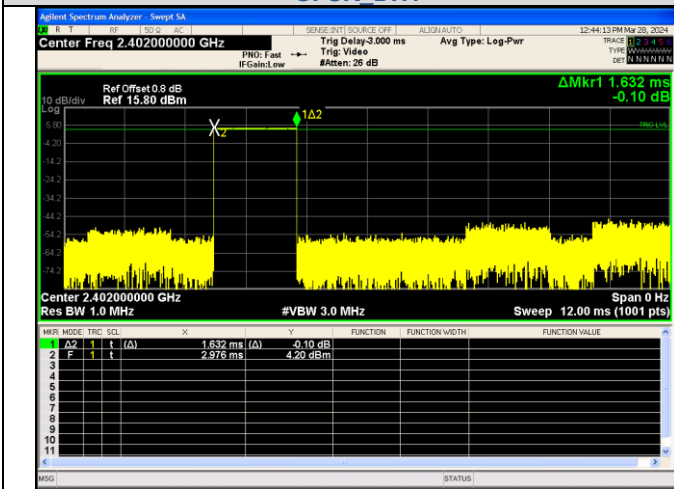




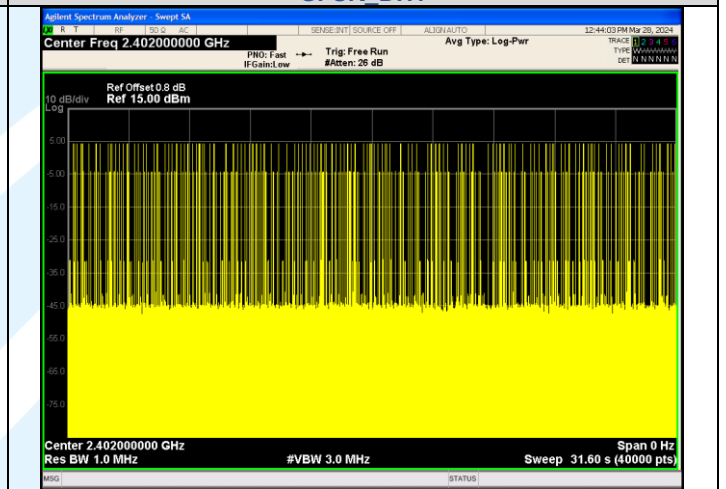
**Pulse Width
GFSK_DH1**



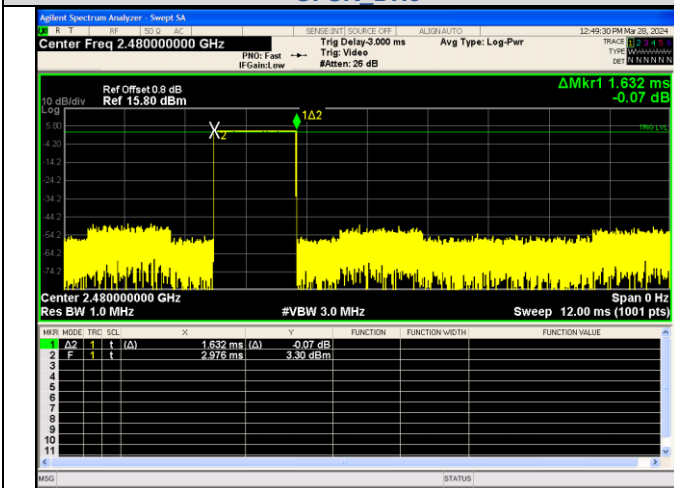
**Number of Pulses in 31.6 seconds
GFSK_DH1**



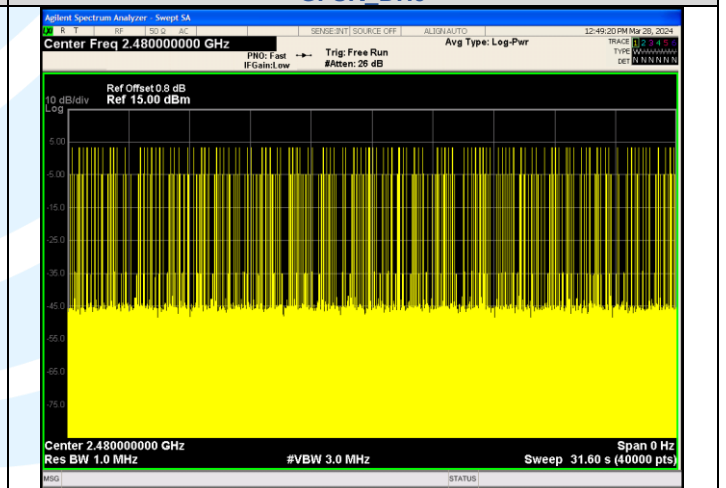
**Pulse Width
GFSK_DH3**



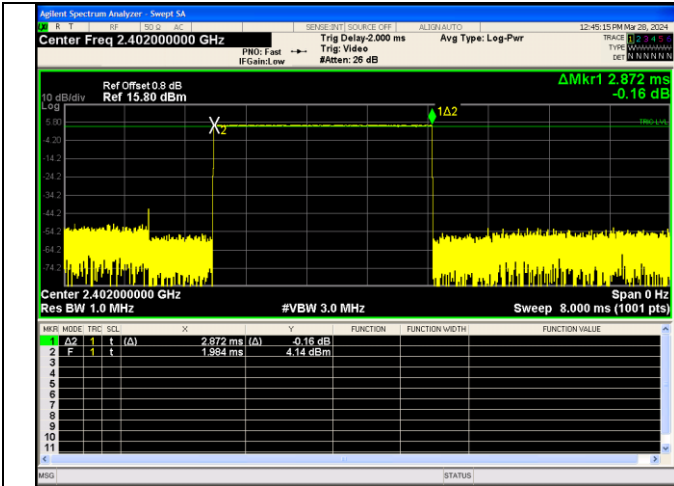
**Number of Pulses in 31.6 seconds
GFSK_DH3**



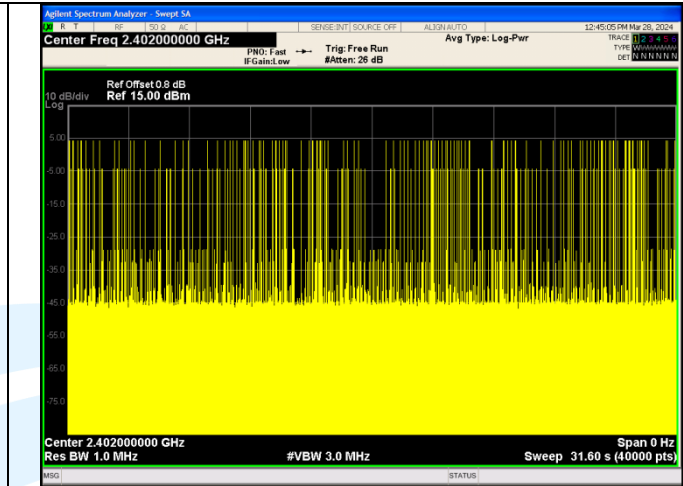
**Pulse Width
GFSK_DH3**



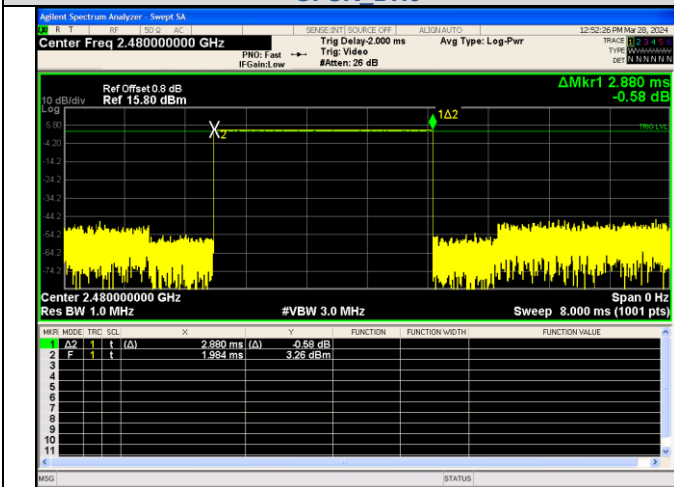
**Number of Pulses in 31.6 seconds
GFSK_DH3**



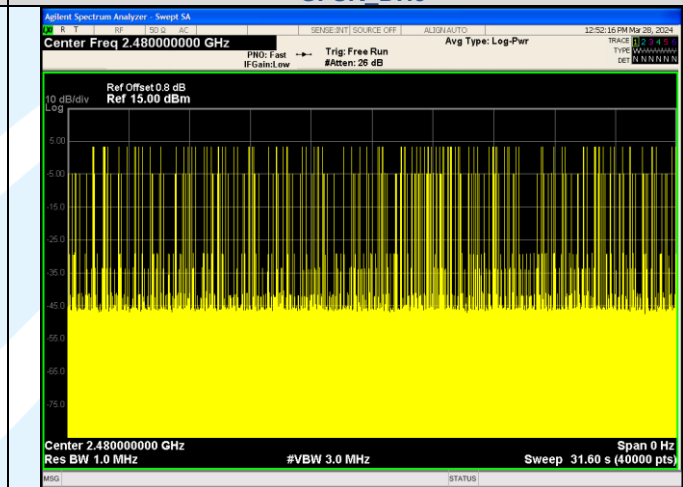
**Pulse Width
GFSK DH5**



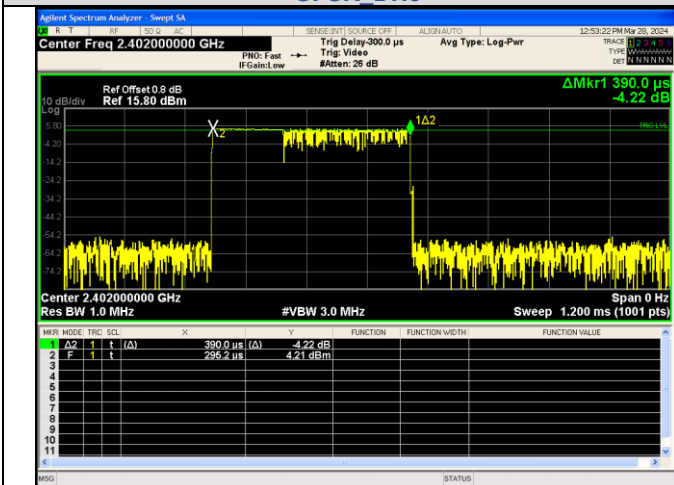
**Number of Pulses in 31.6 seconds
GFSK DH5**



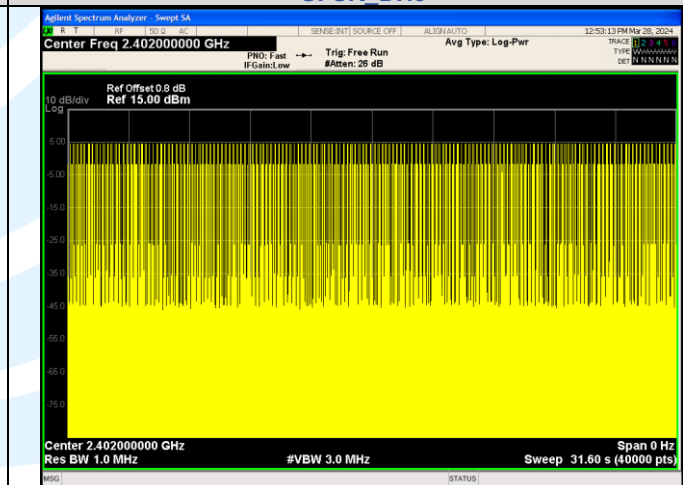
**Pulse Width
GFSK DH5**



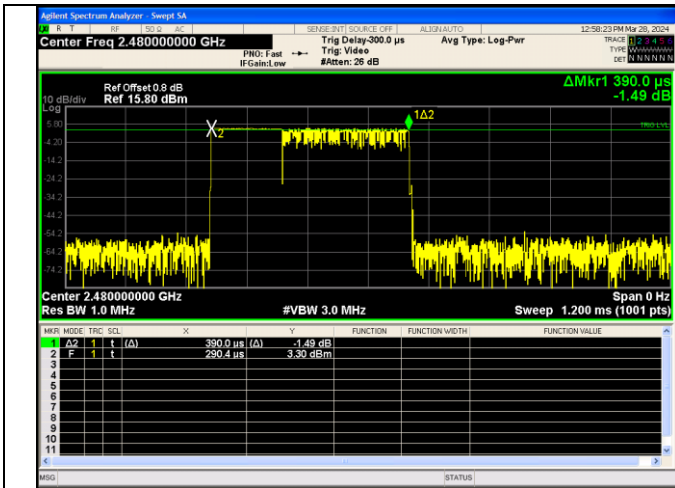
**Number of Pulses in 31.6 seconds
GFSK DH5**



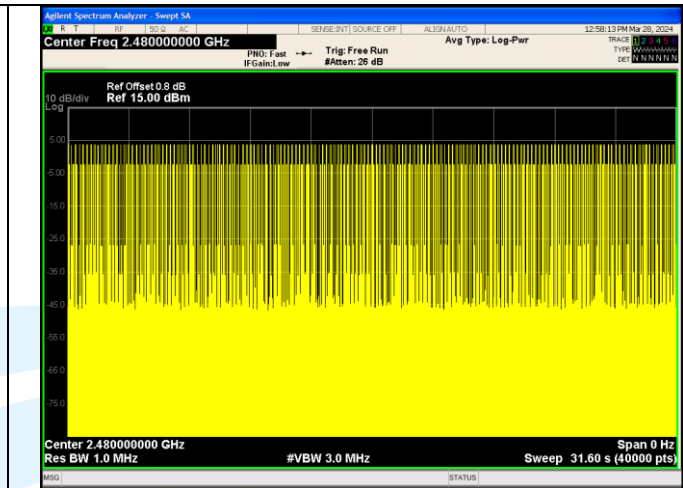
**Pulse Width
 $\pi/4$ DQPSK 2-DH1**



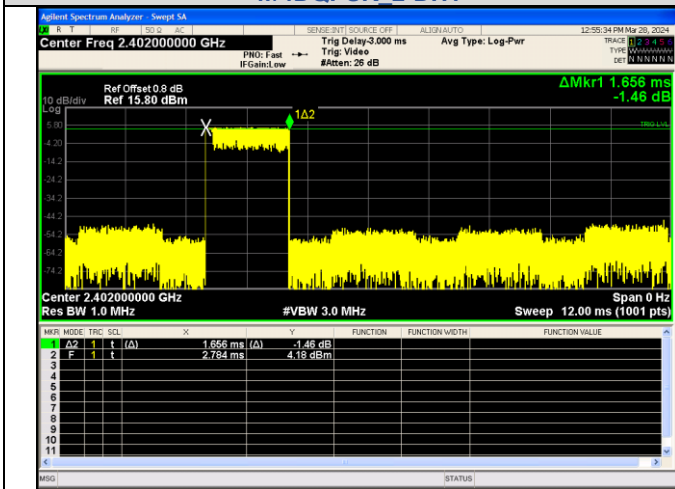
**Number of Pulses in 31.6 seconds
 $\pi/4$ DQPSK 2-DH1**



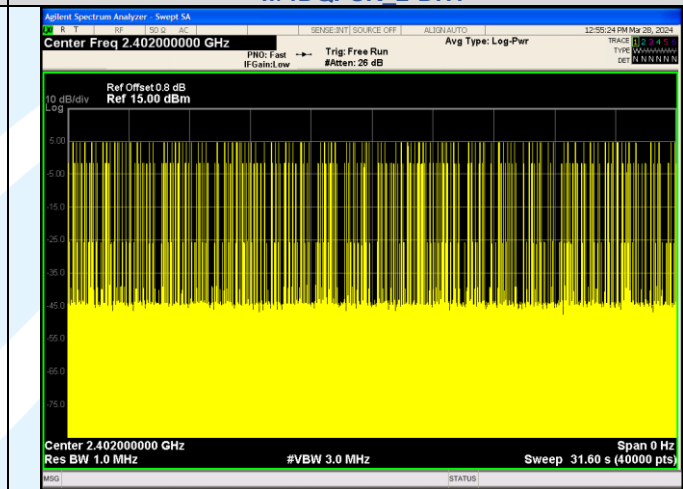
Pulse Width
 $\pi/4$ DQPSK 2-DH1



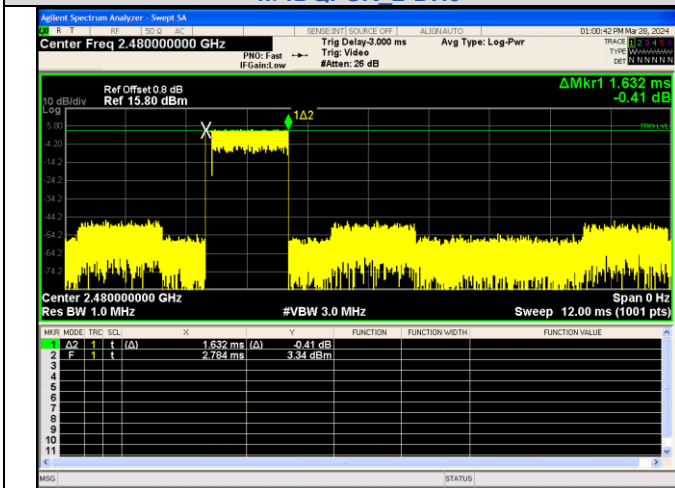
Number of Pulses in 31.6 seconds
 $\pi/4$ DQPSK 2-DH1



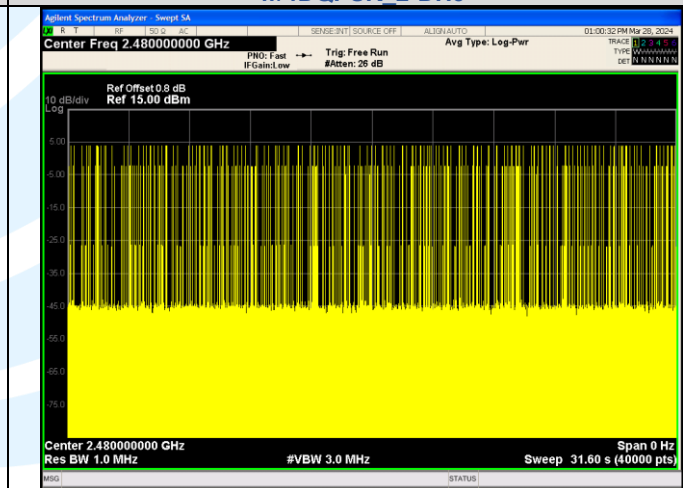
Pulse Width
 $\pi/4$ DQPSK 2-DH3



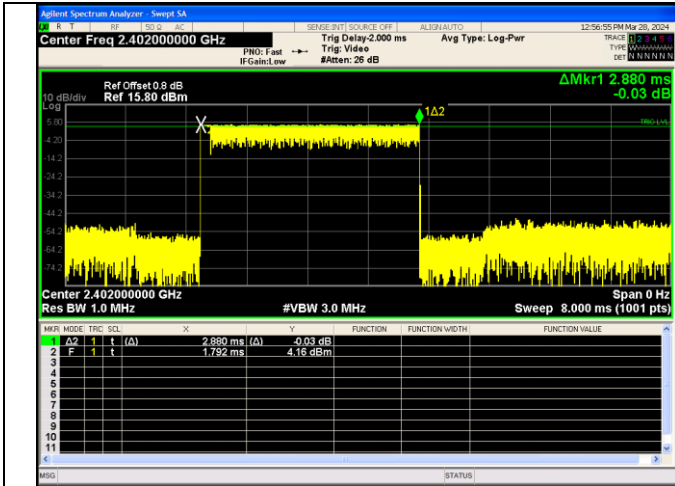
Number of Pulses in 31.6 seconds
 $\pi/4$ DQPSK 2-DH3



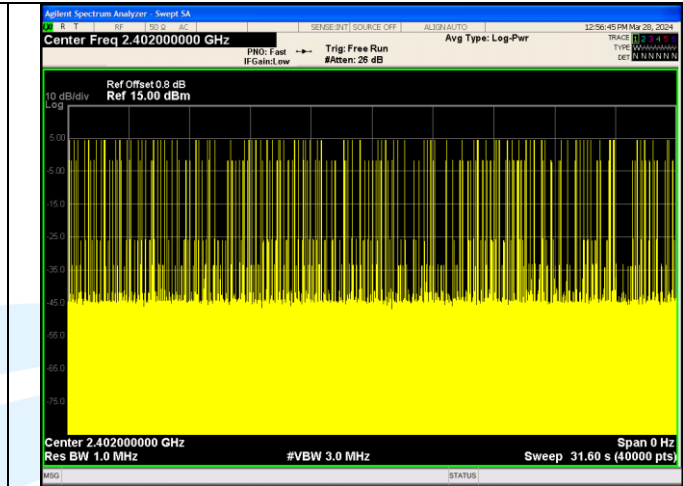
Pulse Width
 $\pi/4$ DQPSK 2-DH3



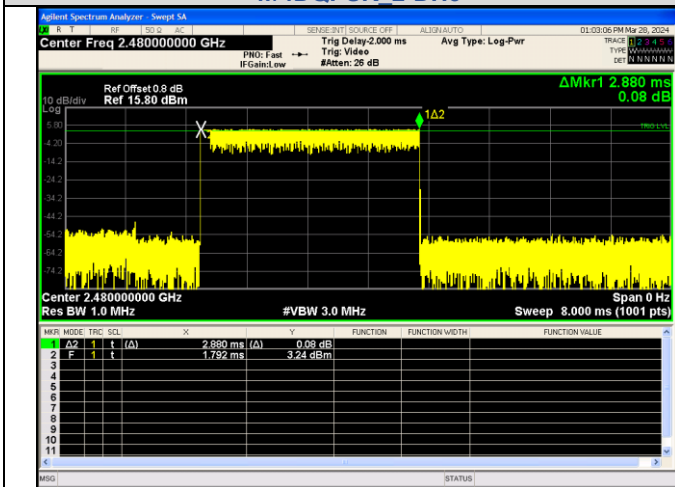
Number of Pulses in 31.6 seconds
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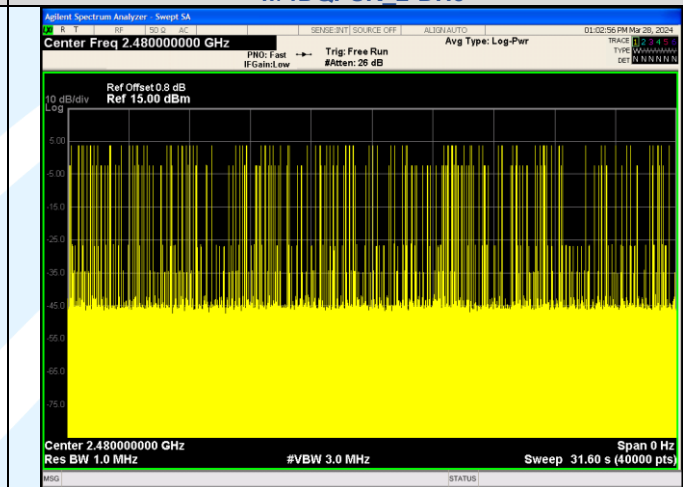
Pulse Width
 π /4DQPSK 2-DH5



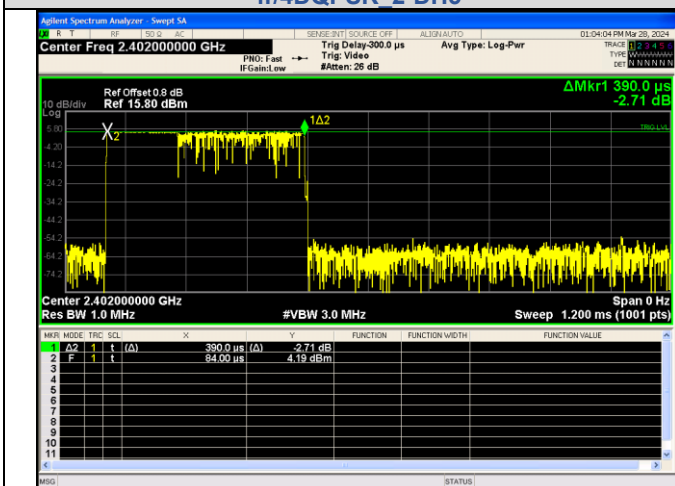
Number of Pulses in 31.6 seconds
 π /4DQPSK 2-DH5



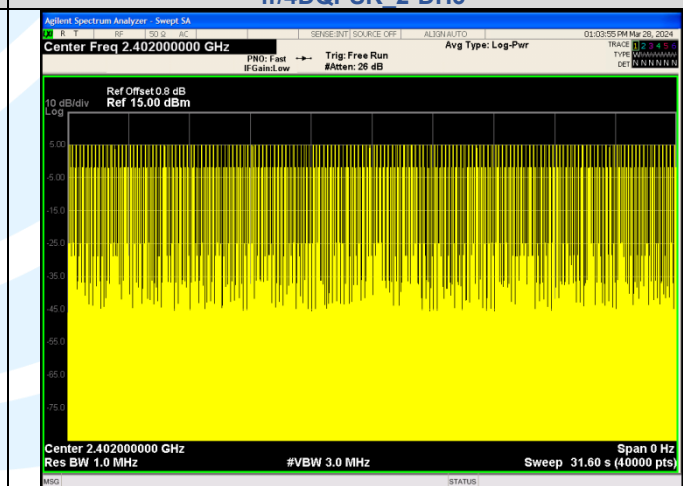
Pulse Width
 π /4DQPSK 2-DH5



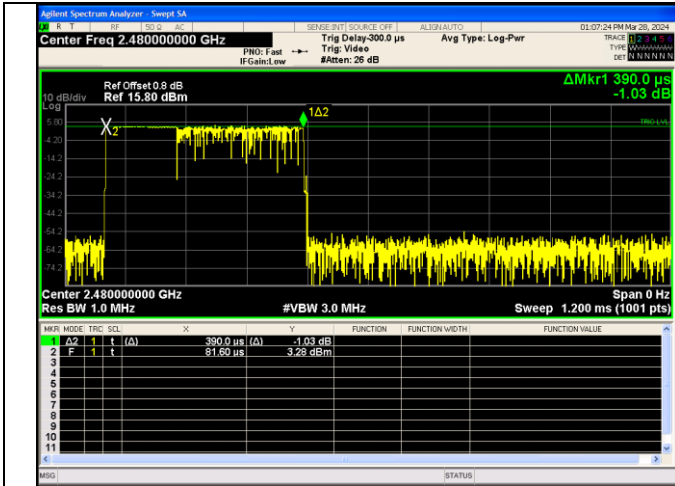
Number of Pulses in 31.6 seconds
 π /4DQPSK 2-DH5



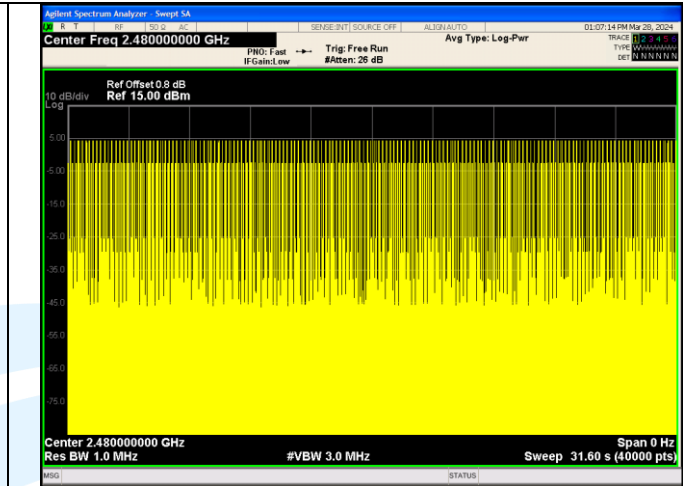
Pulse Width
8DPSK 3-DH1



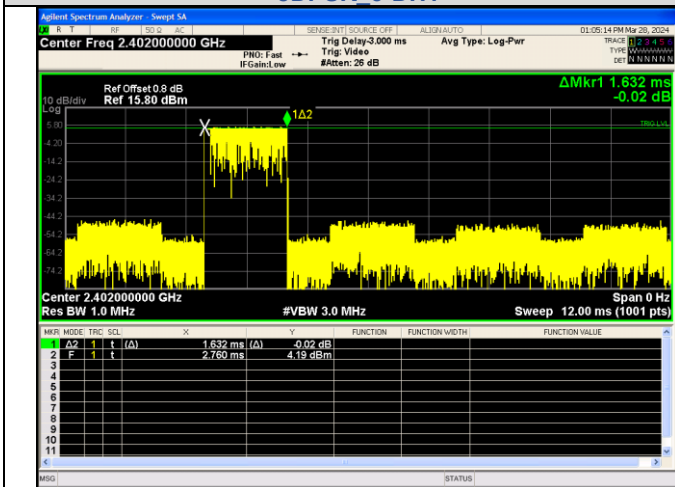
Number of Pulses in 31.6 seconds
8DPSK 3-DH1



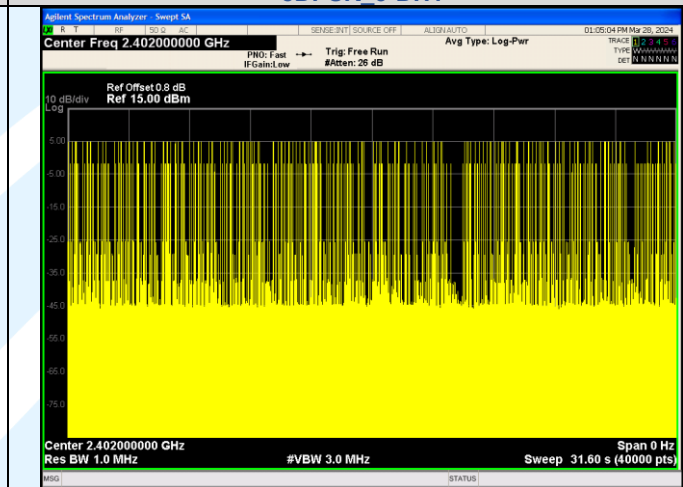
**Pulse Width
8DPSK 3-DH1**



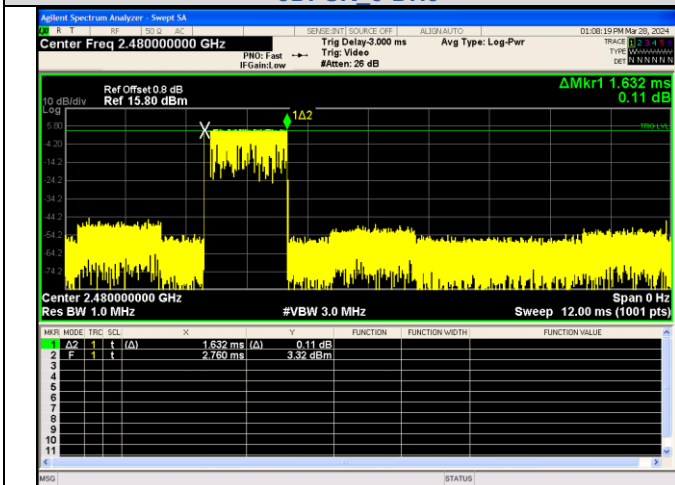
**Number of Pulses in 31.6 seconds
8DPSK 3-DH1**



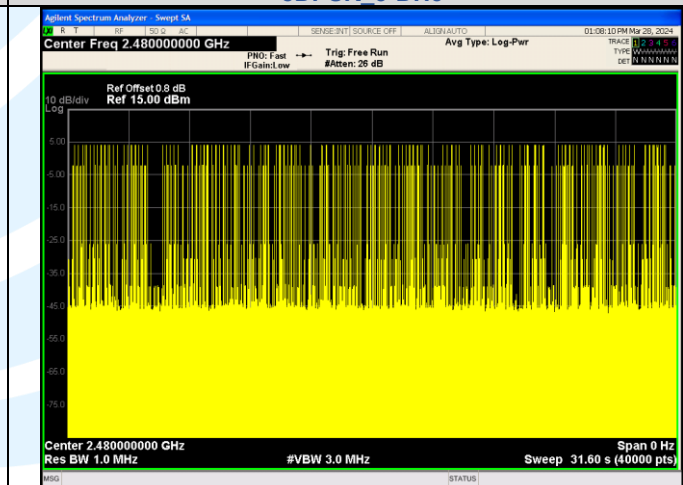
**Pulse Width
8DPSK 3-DH3**



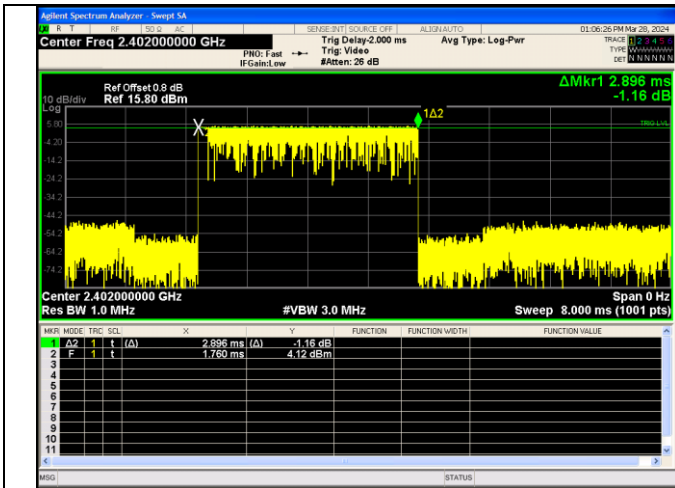
**Number of Pulses in 31.6 seconds
8DPSK 3-DH3**



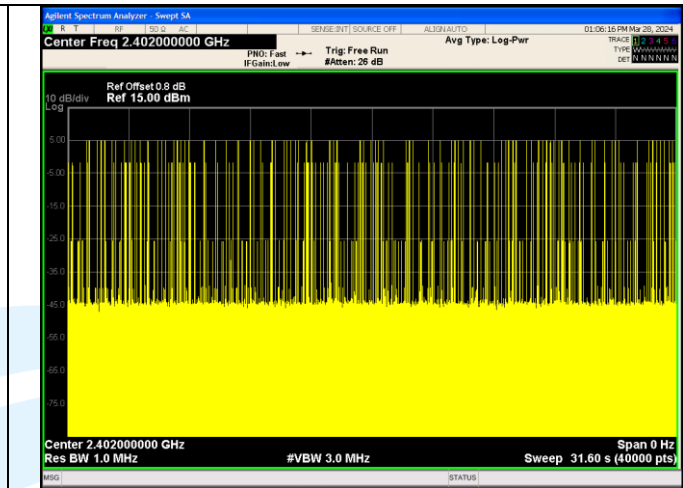
**Pulse Width
8DPSK 3-DH3**



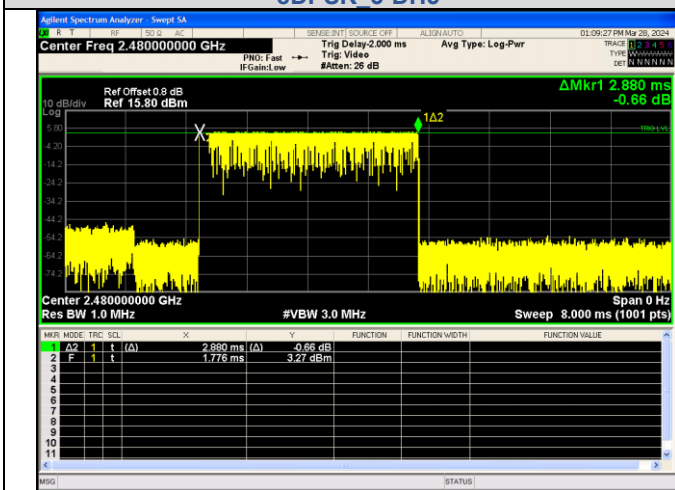
**Number of Pulses in 31.6 seconds
8DPSK 3-DH3**



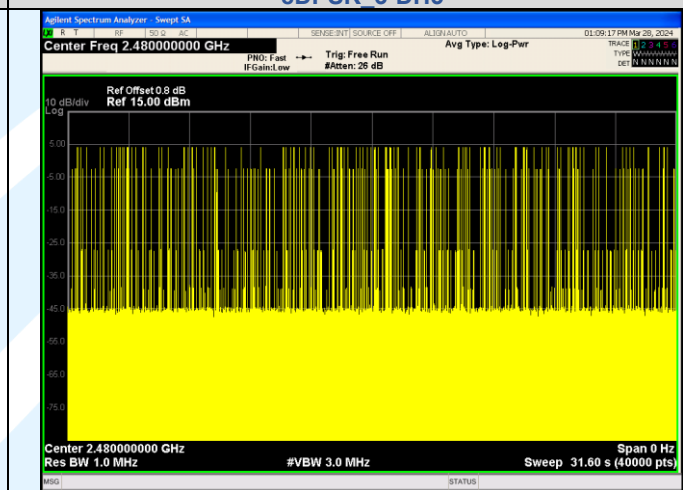
**Pulse Width
8DPSK_3-DH5**



**Number of Pulses in 31.6 seconds
8DPSK_3-DH5**



**Pulse Width
8DPSK_3-DH5**

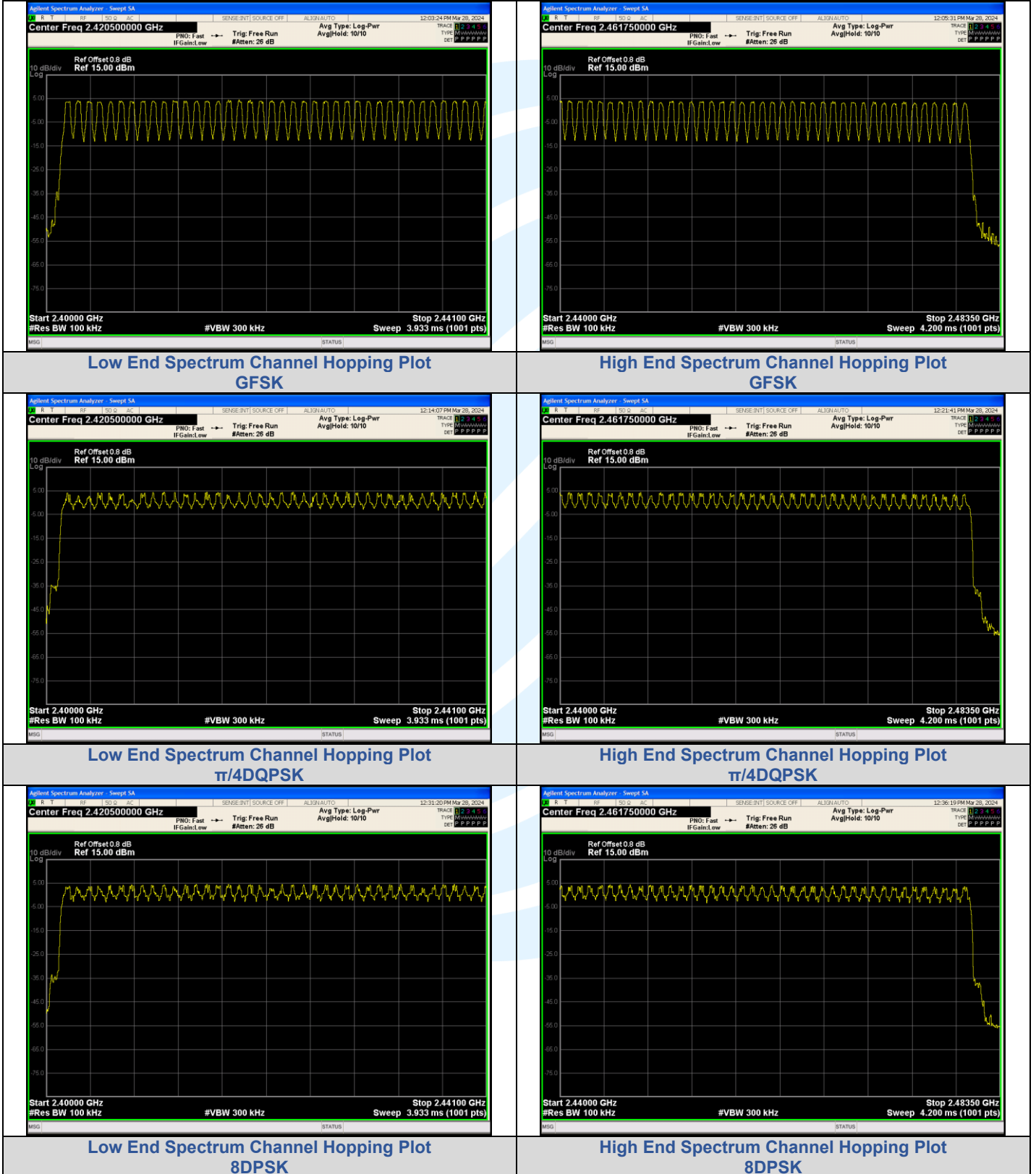


**Number of Pulses in 31.6 seconds
8DPSK_3-DH5**

B.6 NUMBER OF HOPPING CHANNEL

Modulation	Packet	Number of Hopping Channel	Limit	Result
GFSK	DH5	79	15	PASS
$\pi/4$ DQPSK	2-DH5	79	15	PASS
8DPSK	3-DH5	79	15	PASS

Test Graphs



Shenzhen UnionTrust Quality and Technology Co., Ltd.

Address: Unit D/E of 9/F and 16/F, Block A, Building 6, Baoneng science and technology park, Longhua district, Shenzhen, China

Tel: +86-755-28230888

Fax: +86-755-28230886

E-mail: info@uttlab.com

<http://www.uttlab.com>

UTTR-RF-RSS247-V1.1

APPENDIX 1 PHOTOS OF TEST SETUP

See test photos attached in Appendix 1 for the actual connections between Product and support equipment.

APPENDIX 2 PHOTOS OF EUT CONSTRUCTIONAL DETAILS

Refer to Appendix 2 for EUT external and internal photos.

*** End of Report ***

The test report is effective only with both signature and specialized stamp. The result(s) shown in this report refer only to the sample(s) tested. Without written approval of UnionTrust, this report can't be reproduced except in full.
