

### A.4 CONDUCTED OUT OF BAND EMISSION

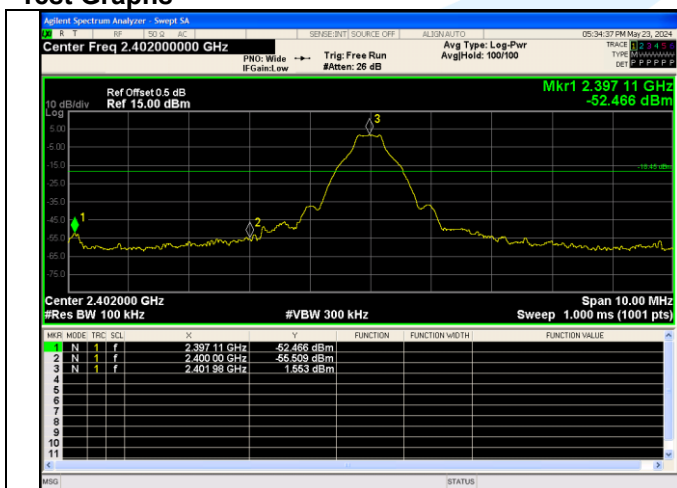
Test Result  
Non-Hopping

Modulation	Packet	Channel	OOB Emission Frequency (MHz)	OOB Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	
GFSK	DH5	0	2397.11	-52.466	-18.45	-34.016	PASS	
			2400.00	-55.509	-18.45	-37.059	PASS	
			4803.60	-24.798	-18.45	-6.348	PASS	
		39	4881.67	-22.753	-18.32	-4.433	PASS	
			78	2483.50	-59.814	-18.93	-40.884	PASS
				4959.70	-23.765	-18.93	-4.835	PASS
π/4DQPSK	2-DH5	0	2400.00	-48.463	-18.63	-29.833	PASS	
			4804.26	-24.501	-18.63	-5.871	PASS	
		39	4882.30	-26.468	-18.4	-8.068	PASS	
			78	2483.50	-57.612	-18.94	-38.672	PASS
		4960.33		-27.560	-18.94	-8.620	PASS	
		8DPSK	3-DH5	0	2400.00	-53.275	-18.56	-34.715
4804.26	-27.016				-18.56	-8.456	PASS	
39	4882.30			-27.320	-18.43	-8.890	PASS	
	78			2483.50	-57.021	-19.03	-37.991	PASS
4959.70				-22.174	-19.03	-3.144	PASS	

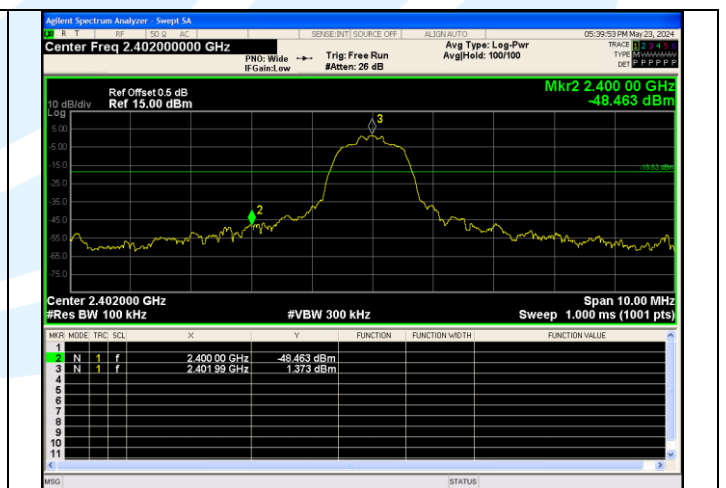
Hopping

Modulation	Packet	Channel	OOB Emission Frequency (MHz)	OOB Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result
GFSK	DH5	Hopping	2398.20	-55.538	-18.48	-37.058	PASS
			2400.00	-56.945	-18.48	-38.465	PASS
			2483.50	-60.590	-18.94	-41.650	PASS
π/4DQPSK	2-DH5		2397.07	-53.907	-18.68	-35.227	PASS
			2400.00	-54.908	-18.68	-36.228	PASS
			2483.50	-59.439	-19.06	-40.379	PASS
8DPSK	3-DH5		2398.15	-53.571	-18.73	-34.841	PASS
			2400.00	-54.791	-18.73	-36.061	PASS
			2483.50	-57.966	-19.2	-38.766	PASS

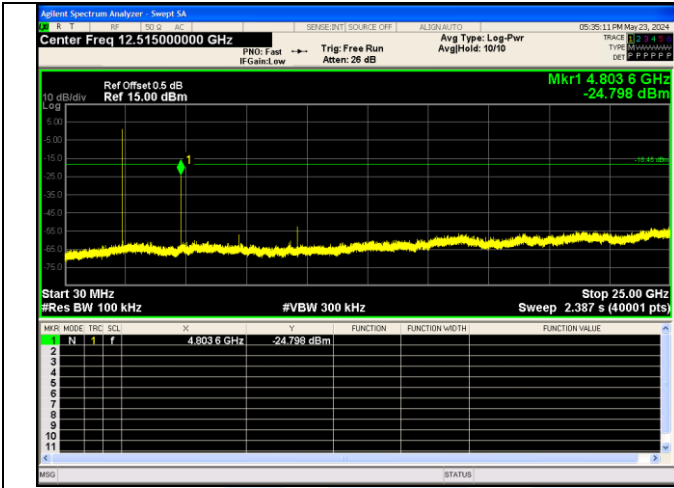
### Test Graphs



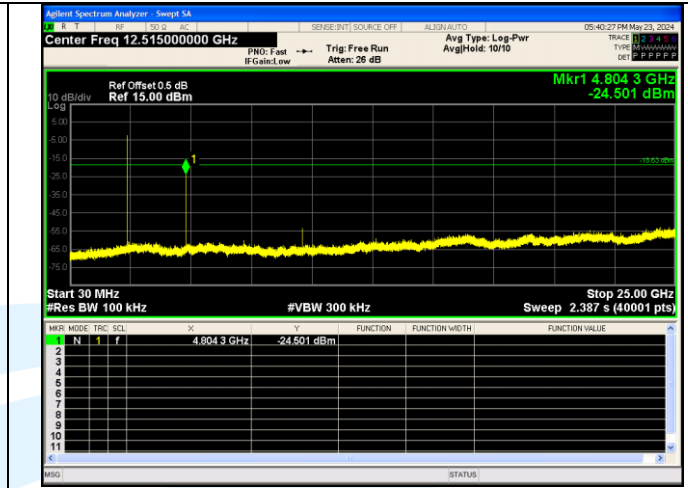
Out Of Band Emission  
GFSK\_DH5\_Channel 0



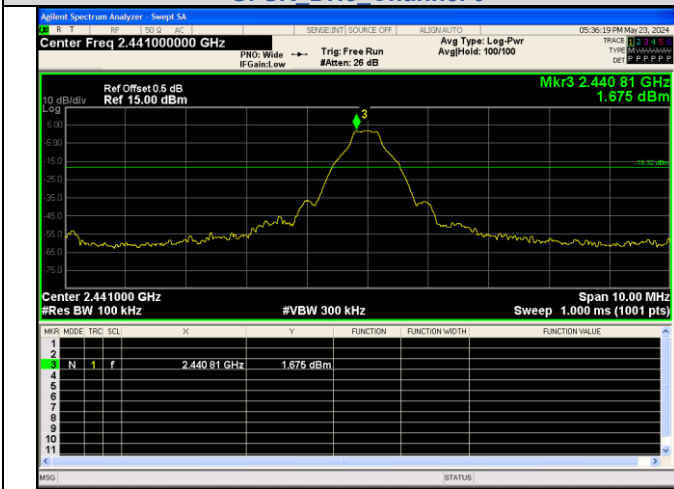
Out Of Band Emission  
π/4DQPSK\_2-DH5\_Channel 0



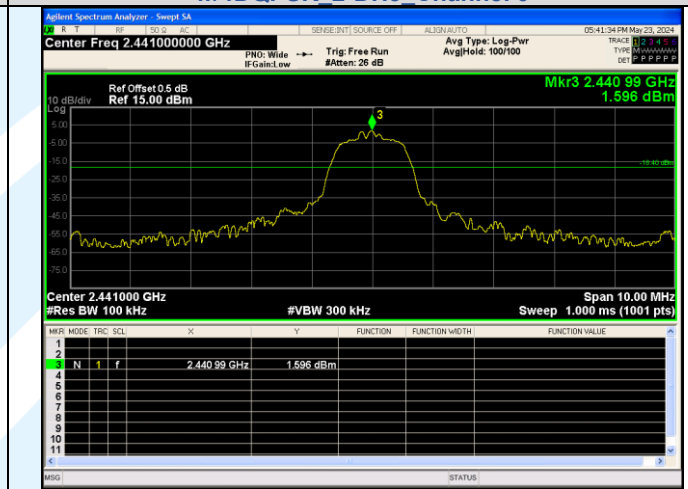
30.0 MHz - 25000.0 MHz  
GFSK DH5 Channel 0



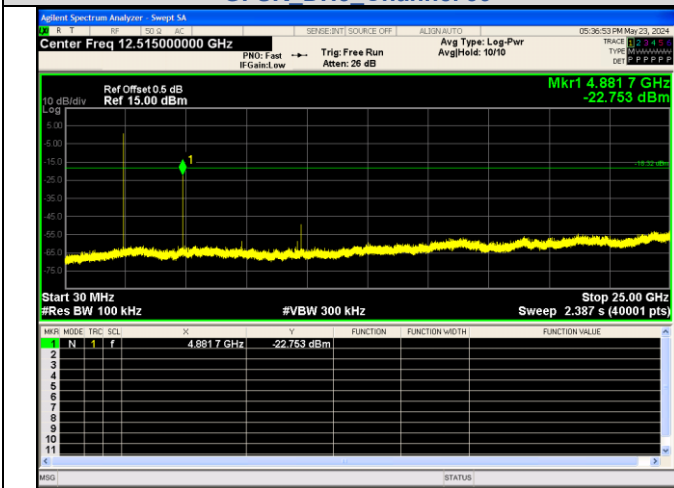
30.0 MHz - 25000.0 MHz  
 $\pi/4$ DQPSK 2-DH5 Channel 0



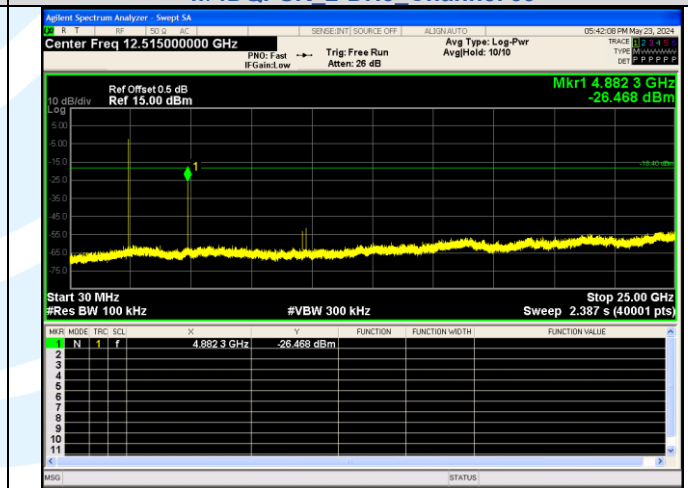
Out Of Band Emission  
GFSK DH5 Channel 39



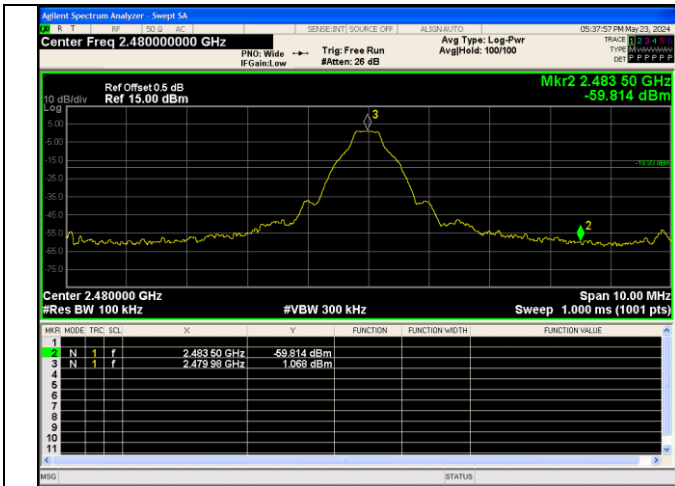
Out Of Band Emission  
 $\pi/4$ DQPSK 2-DH5 Channel 39



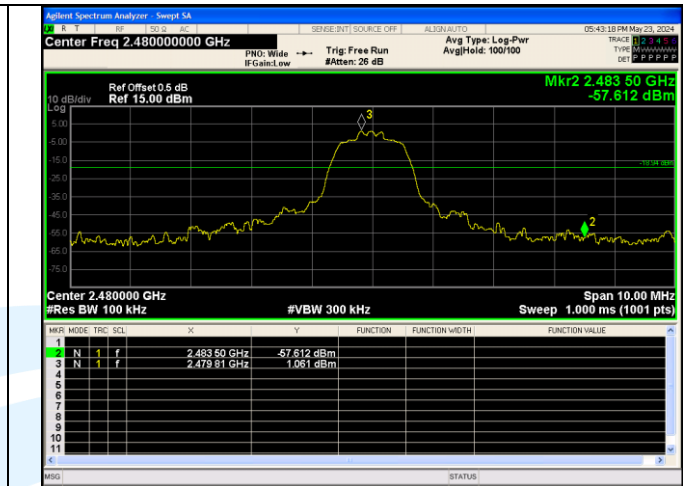
30.0 MHz - 25000.0 MHz  
GFSK DH5 Channel 39



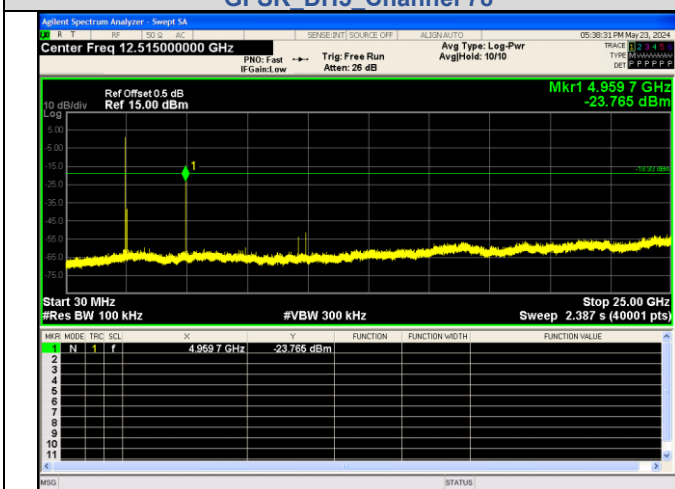
30.0 MHz - 25000.0 MHz  
 $\pi/4$ DQPSK 2-DH5 Channel 39



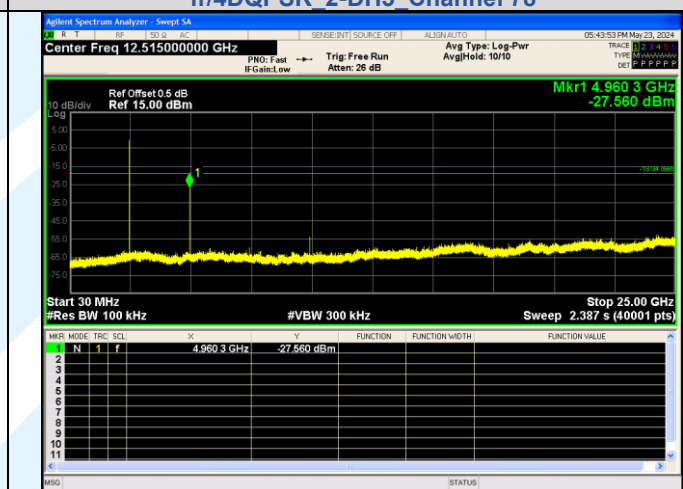
**Out Of Band Emission  
GFSK DH5 Channel 78**



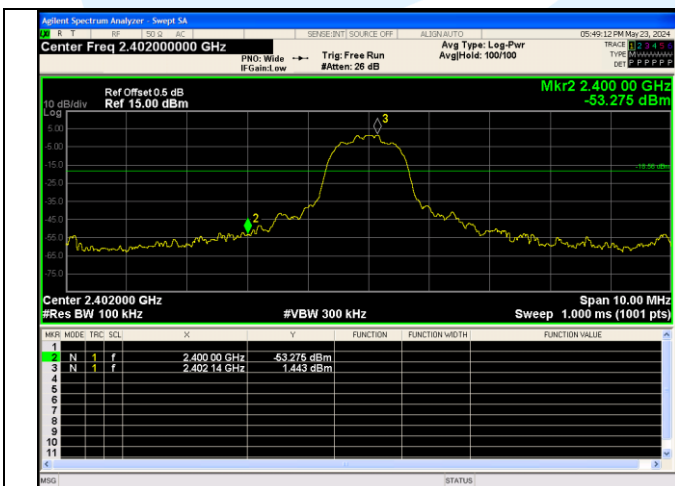
**Out Of Band Emission  
 $\pi/4$ DQPSK 2-DH5 Channel 78**



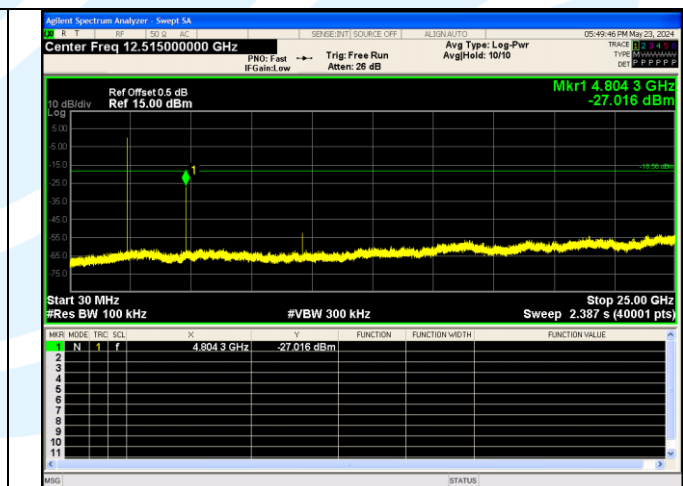
**30.0 MHz - 25000.0 MHz  
GFSK DH5 Channel 78**



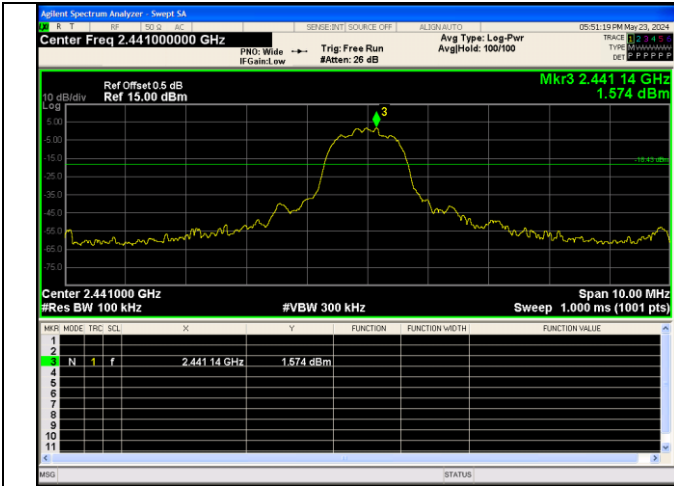
**30.0 MHz - 25000.0 MHz  
 $\pi/4$ DQPSK 2-DH5 Channel 78**



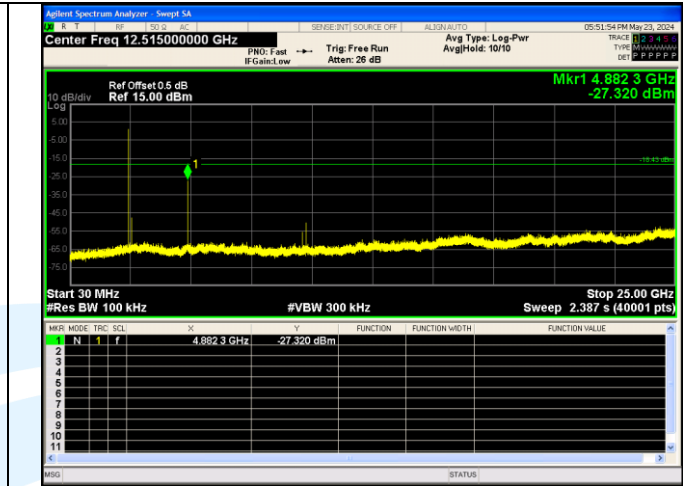
**Out Of Band Emission  
8DPSK 3-DH5 Channel 0**



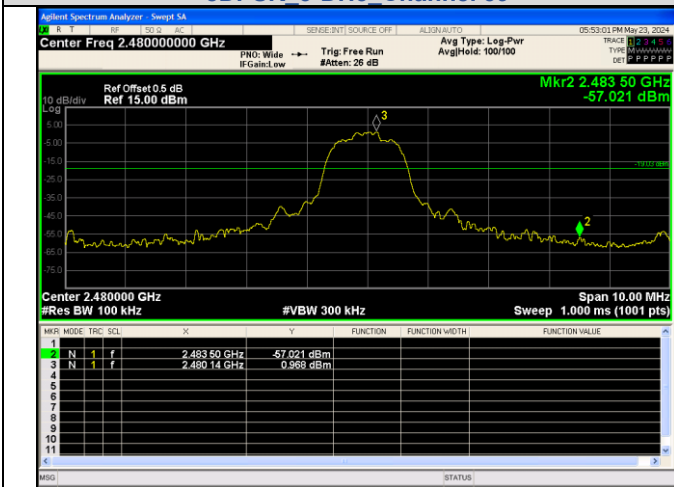
**30.0 MHz - 25000.0 MHz  
8DPSK 3-DH5 Channel 0**



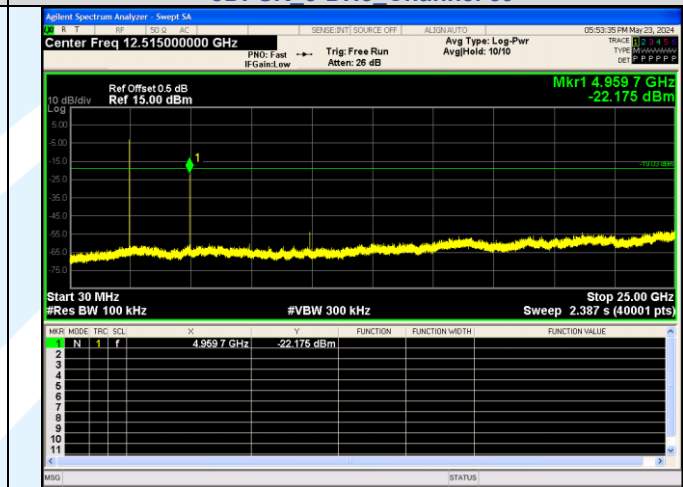
**Out Of Band Emission  
8DPSK 3-DH5 Channel 39**



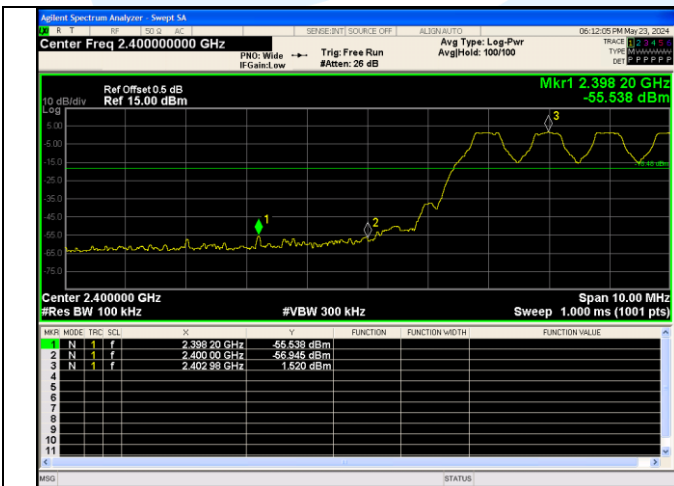
**30.0 MHz - 25000.0 MHz  
8DPSK 3-DH5 Channel 39**



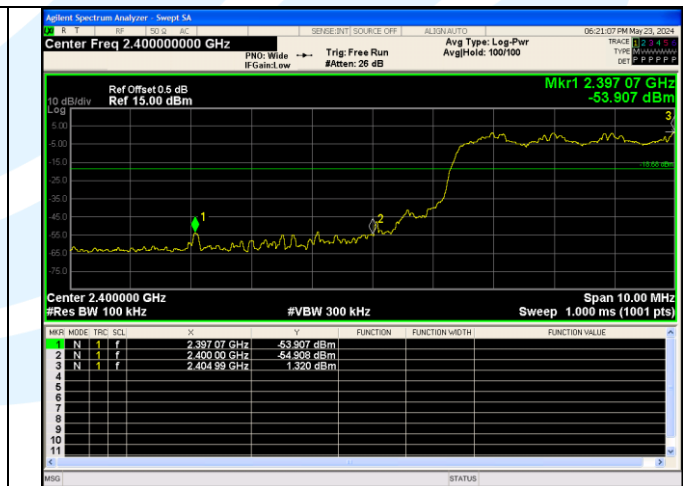
**Out Of Band Emission  
8DPSK 3-DH5 Channel 78**



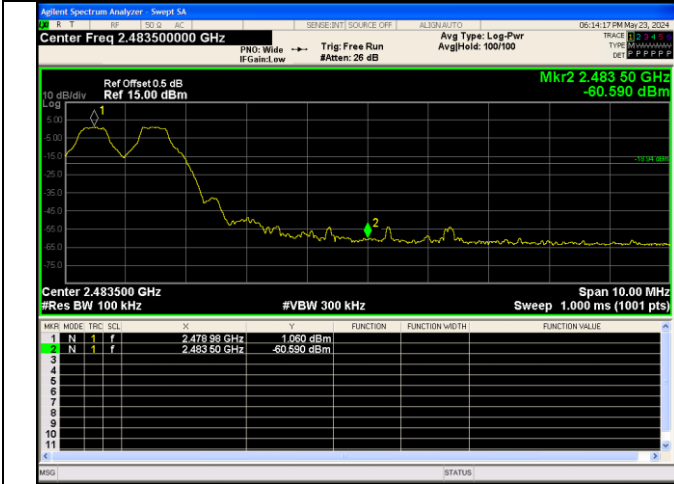
**30.0 MHz - 25000.0 MHz  
8DPSK 3-DH5 Channel 78**



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



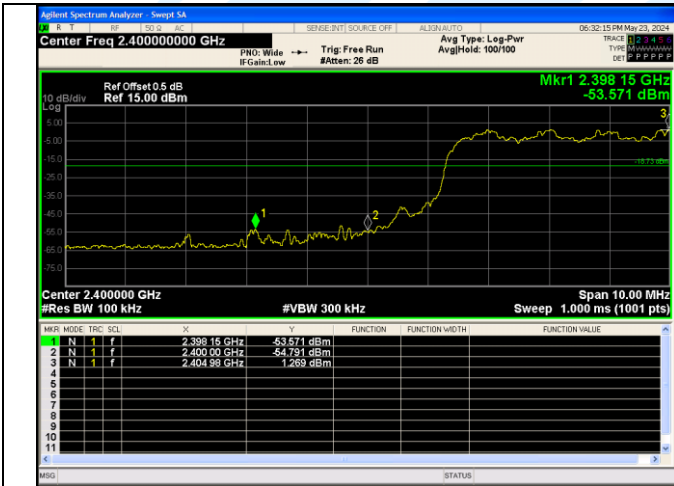
**Out Of Band Emission(Left)  
 $\pi/4$ DQPSK 2-DH5 Channel Hopping**



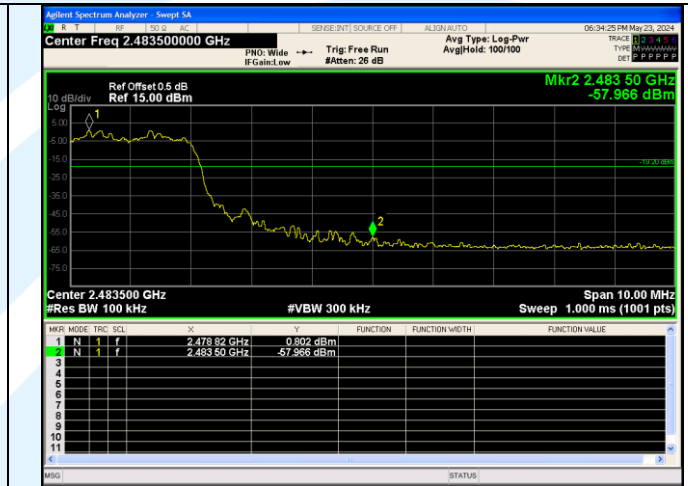
Out Of Band Emission(Right)  
GFSK\_DH5\_Channel Hopping



Out Of Band Emission(Right)  
 $\pi/4$ DQPSK\_2-DH5\_Channel Hopping



Out Of Band Emission(Left)  
8DPSK\_3-DH5\_Channel Hopping



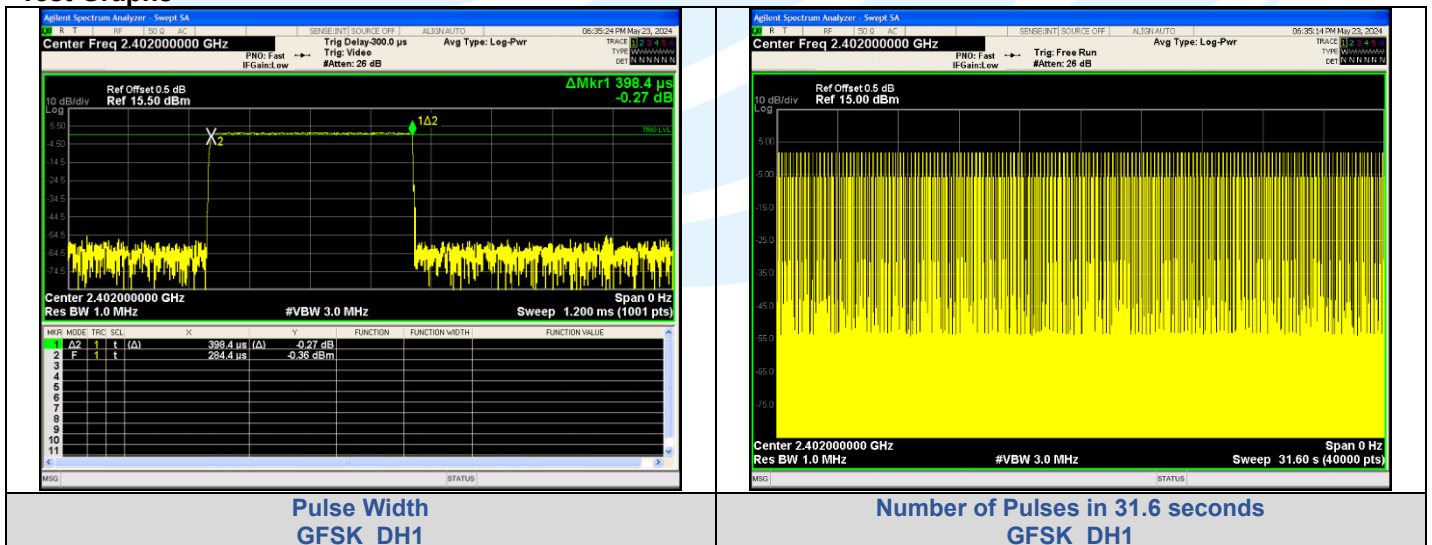
Out Of Band Emission(Right)  
8DPSK\_3-DH5\_Channel Hopping

### A.5 DWELL TIME

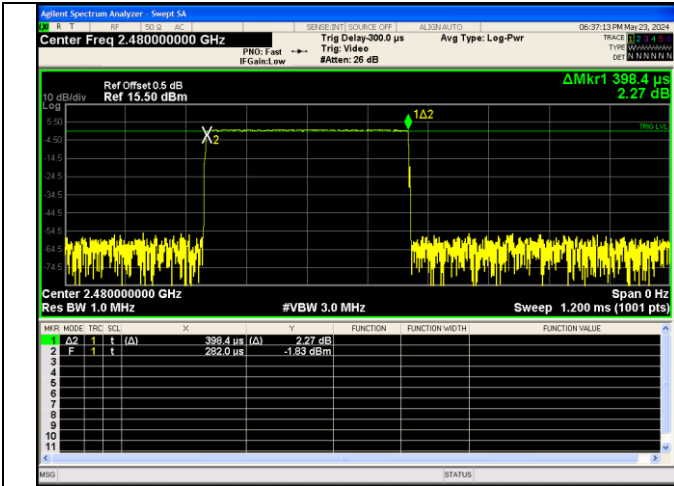
#### Test Result

Modulation	Packet	Channel	Pulse Width (ms)	Number of Pulses in 31.6 seconds	Dwell Time (ms)	Limit (ms)	Result
GFSK	DH1	CH0 (2402MHz)	0.3984	317	126.29	< 400	PASS
	DH1	CH78 (2480MHz)	0.3984	317	126.29		PASS
	DH3	CH0 (2402MHz)	1.656	160	264.96		PASS
	DH3	CH78 (2480MHz)	1.656	156	258.34		PASS
	DH5	CH0 (2402MHz)	2.896	101	292.5		PASS
	DH5	CH78 (2480MHz)	2.912	101	294.11		PASS
$\pi$ /4DQPSK	2-DH1	CH0 (2402MHz)	0.4080	315	128.52		PASS
	2-DH1	CH78 (2480MHz)	0.4080	317	129.34		PASS
	2-DH3	CH0 (2402MHz)	1.656	157	259.99		PASS
	2-DH3	CH78 (2480MHz)	1.680	159	267.12		PASS
	2-DH5	CH0 (2402MHz)	2.912	99	288.29		PASS
	2-DH5	CH78 (2480MHz)	2.912	104	302.85		PASS
8DPSK	3-DH1	CH0 (2402MHz)	0.4104	316	129.69		PASS
	3-DH1	CH78 (2480MHz)	0.4104	317	130.1		PASS
	3-DH3	CH0 (2402MHz)	1.680	160	268.8		PASS
	3-DH3	CH78 (2480MHz)	1.644	157	258.11		PASS
	3-DH5	CH0 (2402MHz)	2.912	115	334.88		PASS
	3-DH5	CH78 (2480MHz)	2.912	100	291.2		PASS

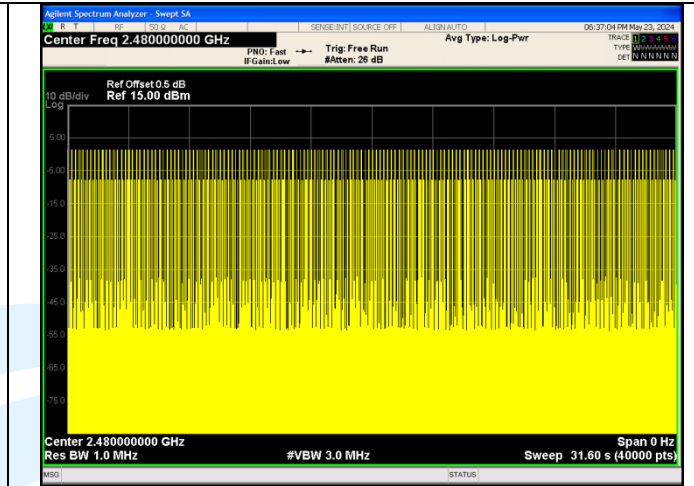
#### Test Graphs







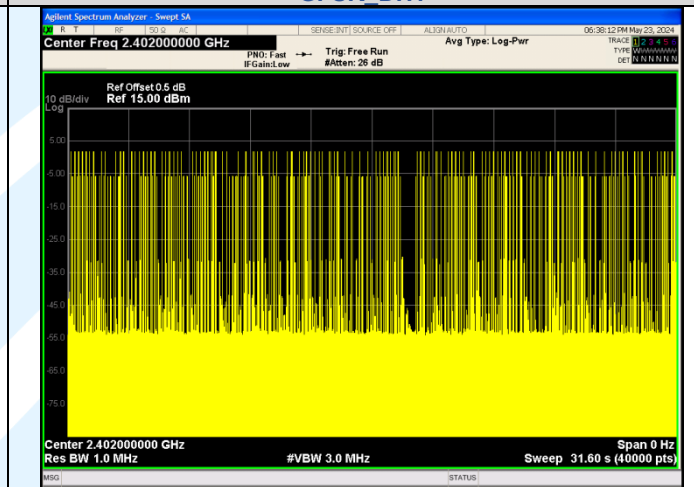
**Pulse Width  
GFSK\_DH1**



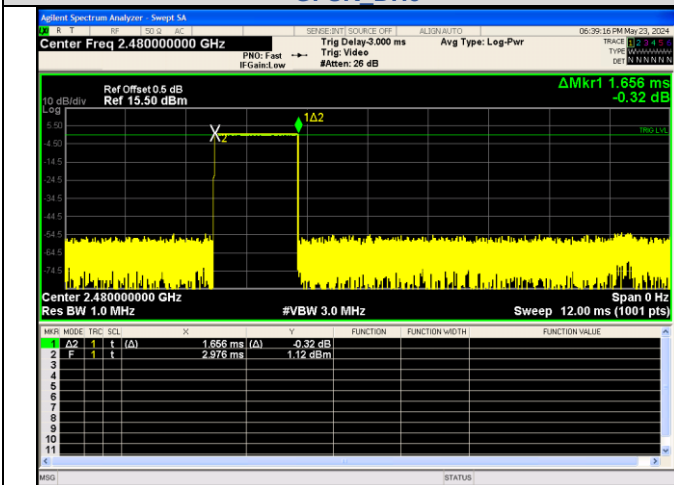
**Number of Pulses in 31.6 seconds  
GFSK\_DH1**



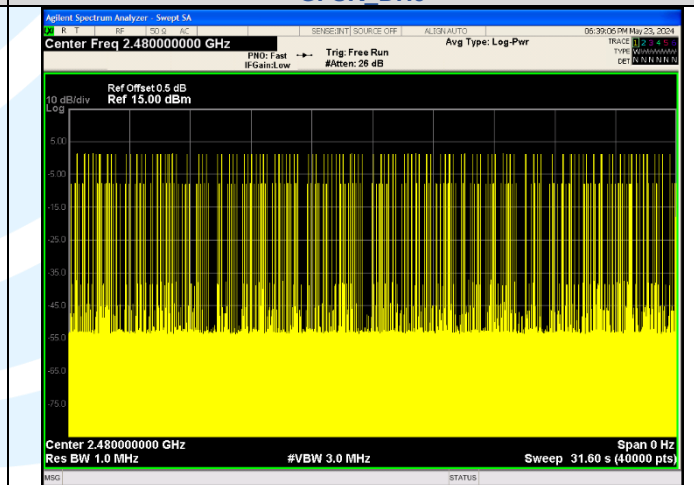
**Pulse Width  
GFSK\_DH3**



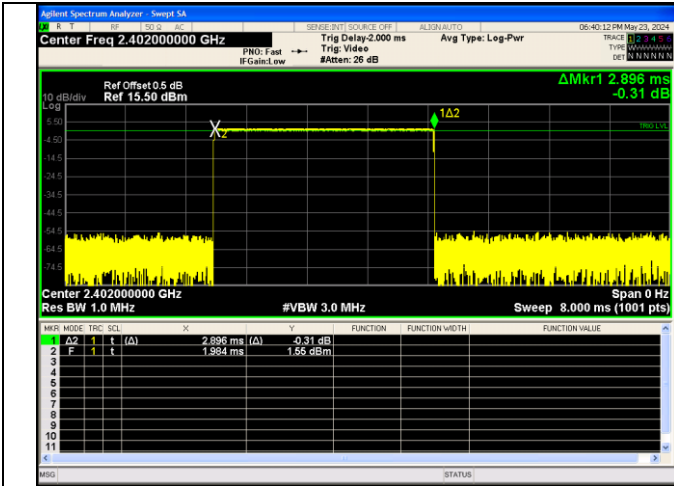
**Number of Pulses in 31.6 seconds  
GFSK\_DH3**



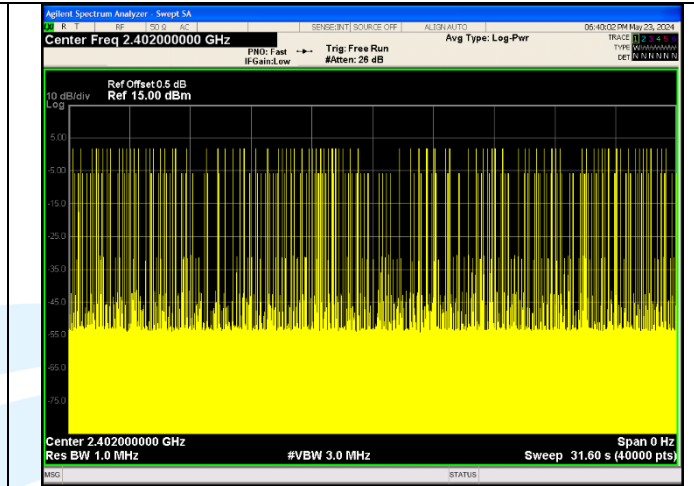
**Pulse Width  
GFSK\_DH3**



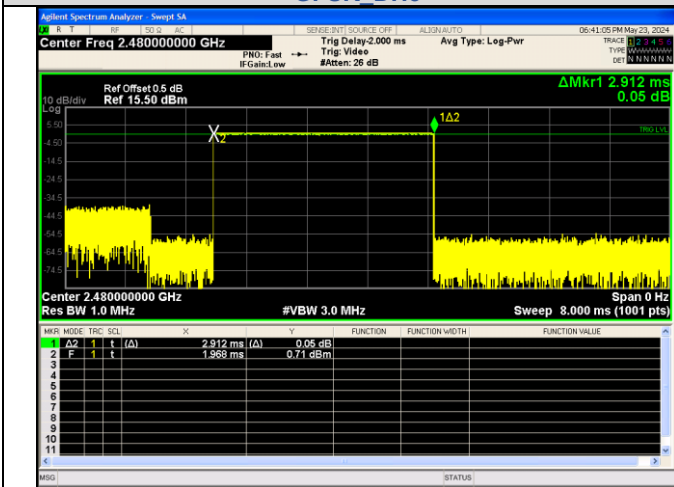
**Number of Pulses in 31.6 seconds  
GFSK\_DH3**



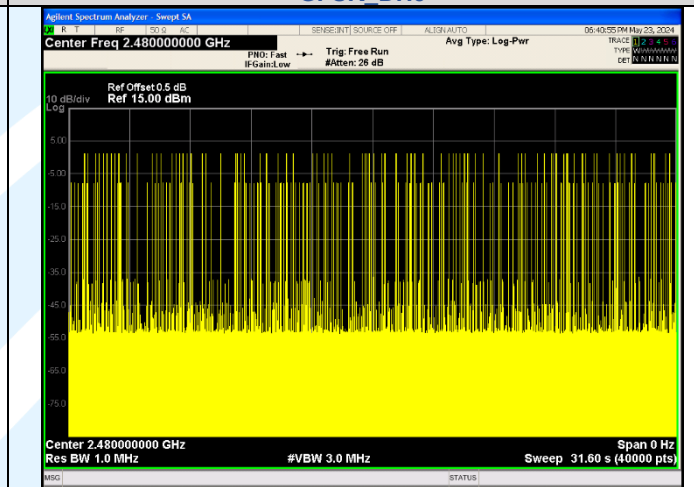
Pulse Width  
GFSK DH5



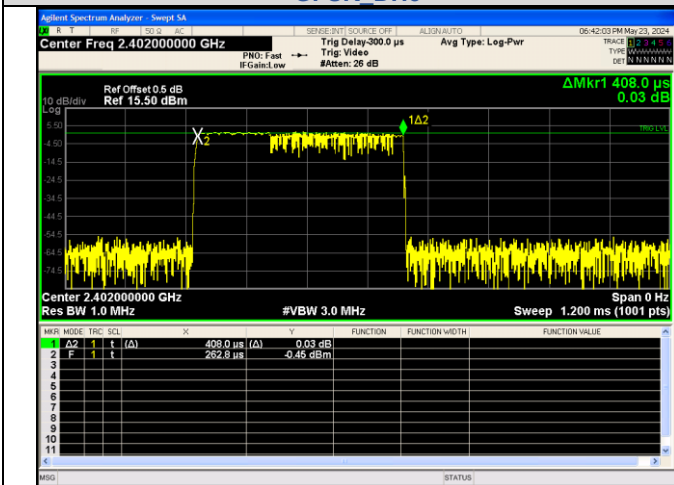
Number of Pulses in 31.6 seconds  
GFSK DH5



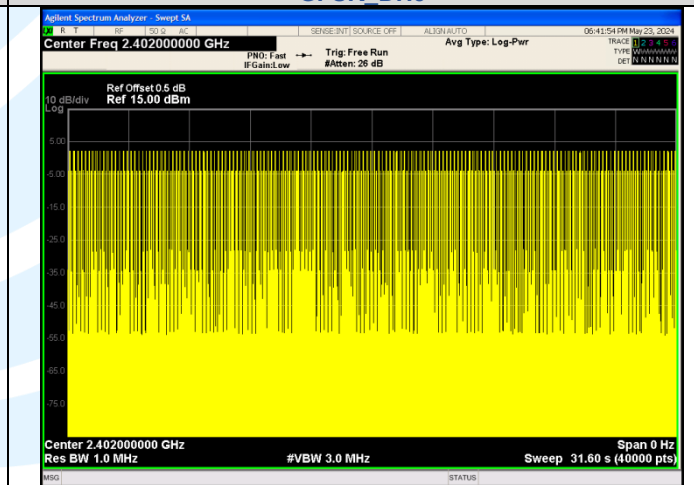
Pulse Width  
GFSK DH5



Number of Pulses in 31.6 seconds  
GFSK DH5

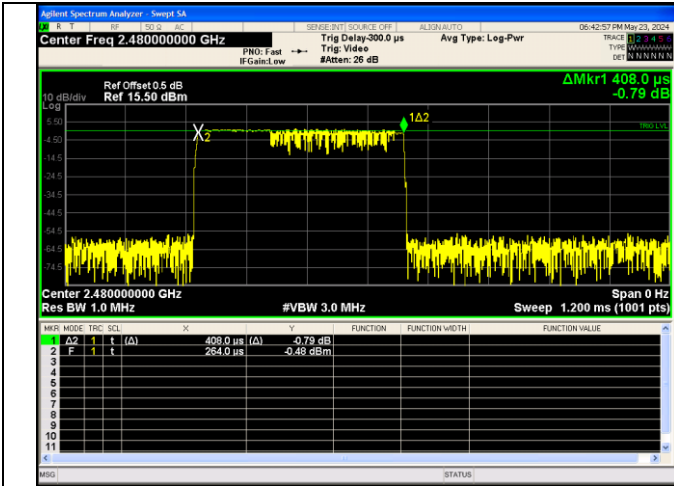


Pulse Width  
π/4DQPSK 2-DH1

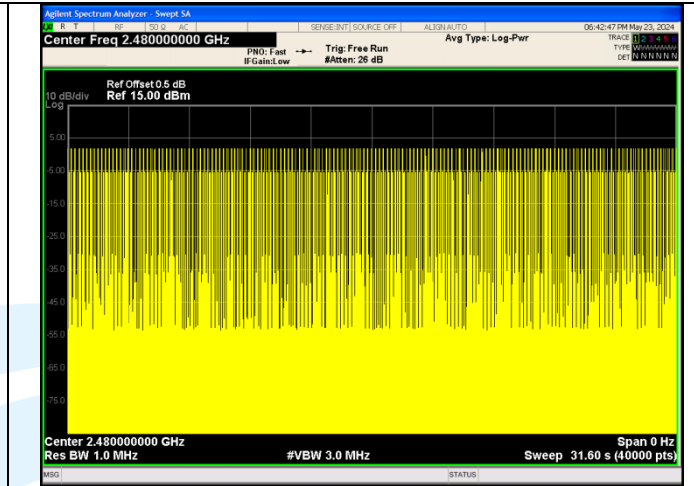


Number of Pulses in 31.6 seconds  
π/4DQPSK 2-DH1

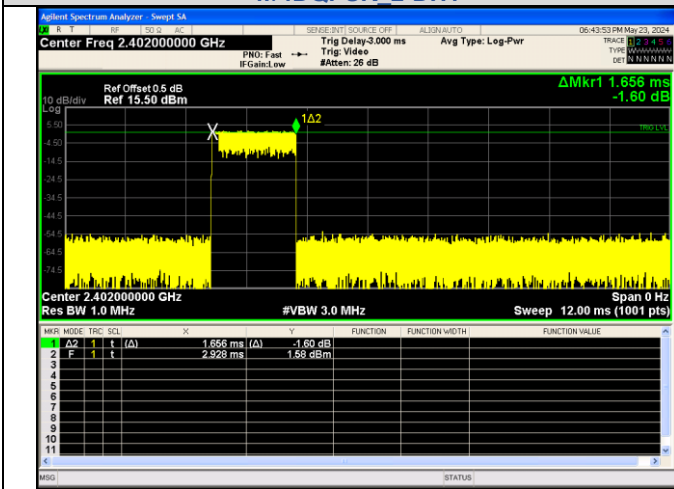




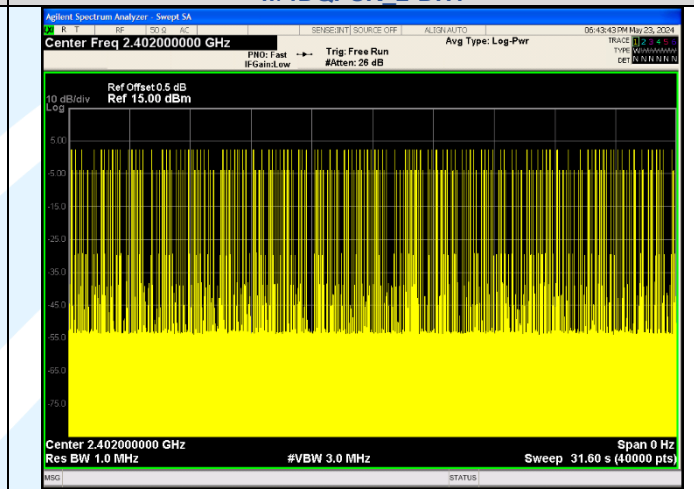
**Pulse Width**  
 **$\pi/4$ DQPSK 2-DH1**



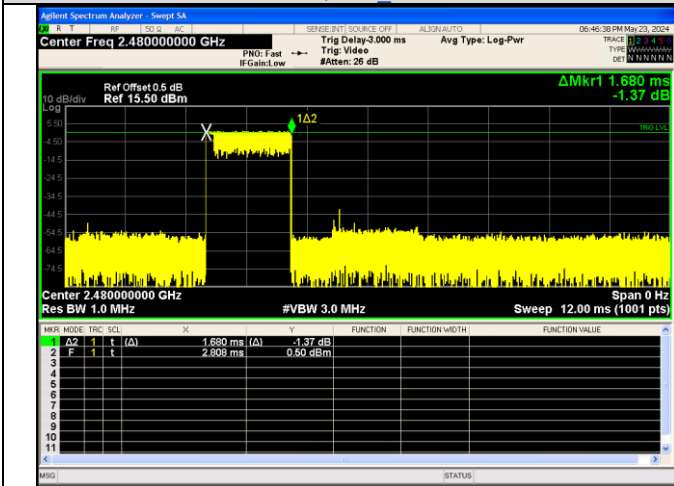
**Number of Pulses in 31.6 seconds**  
 **$\pi/4$ DQPSK 2-DH1**



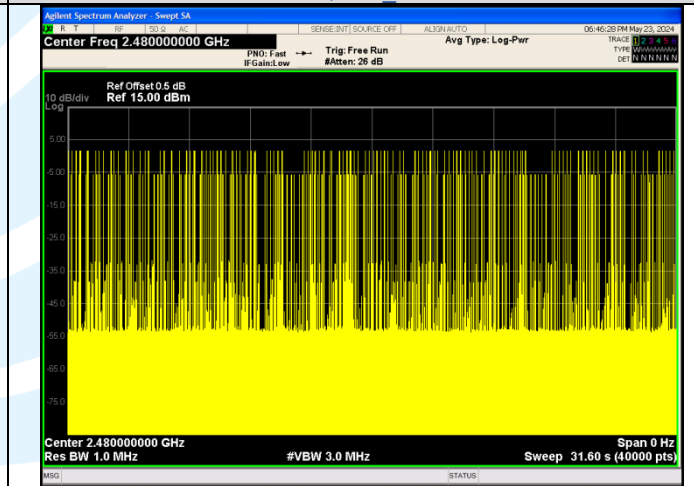
**Pulse Width**  
 **$\pi/4$ DQPSK 2-DH3**



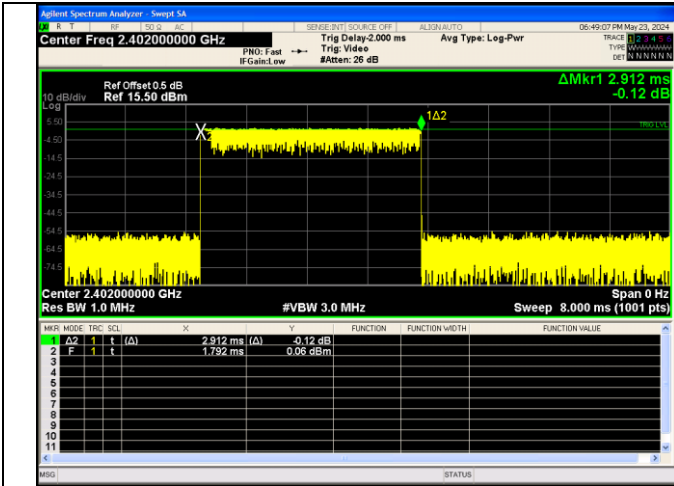
**Number of Pulses in 31.6 seconds**  
 **$\pi/4$ DQPSK 2-DH3**



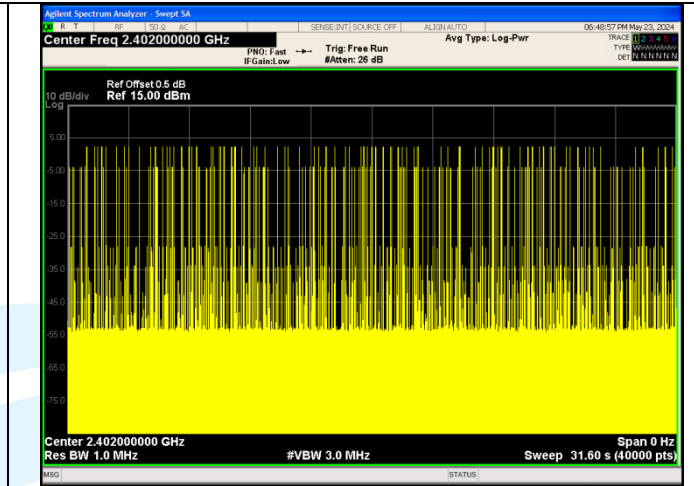
**Pulse Width**  
 **$\pi/4$ DQPSK 2-DH3**



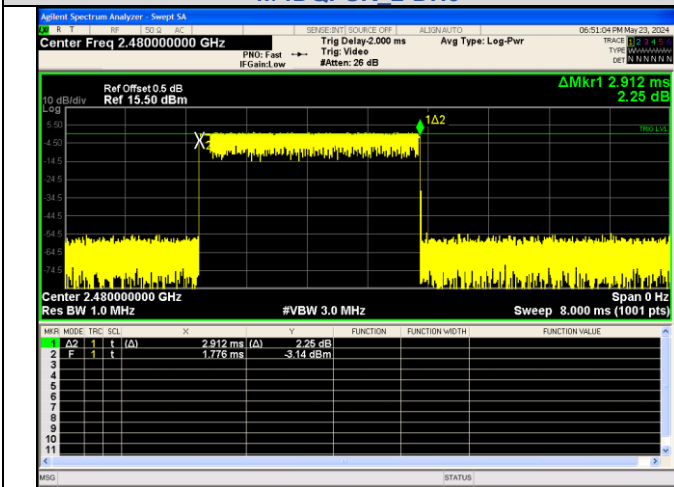
**Number of Pulses in 31.6 seconds**  
 **$\pi/4$ DQPSK 2-DH3**



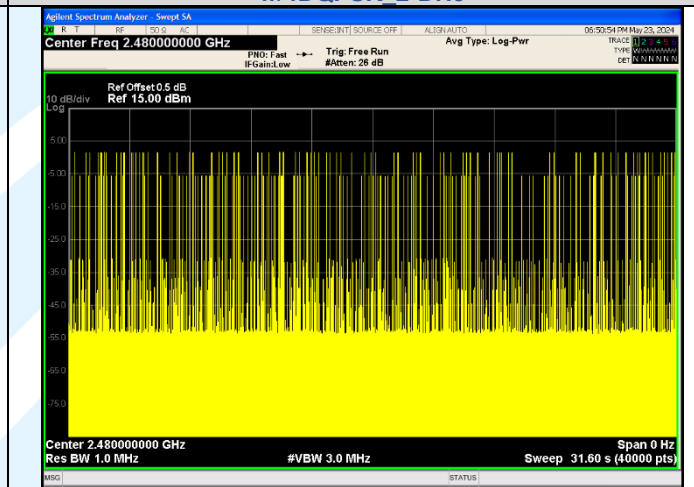
Pulse Width  
 $\pi$ /4DQPSK 2-DH5



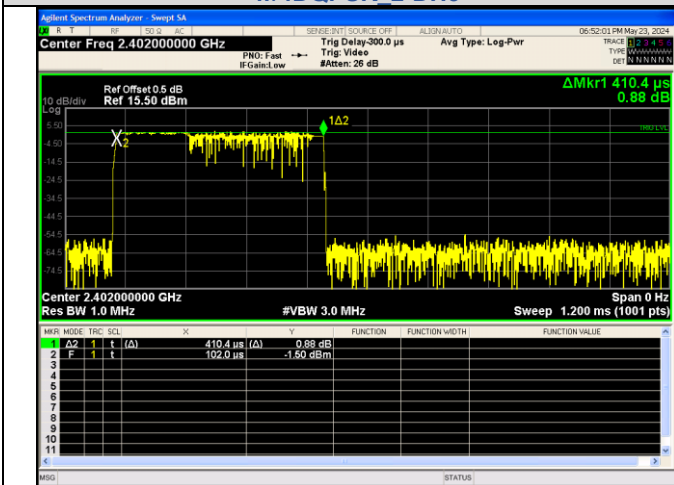
Number of Pulses in 31.6 seconds  
 $\pi$ /4DQPSK 2-DH5



Pulse Width  
 $\pi$ /4DQPSK 2-DH5



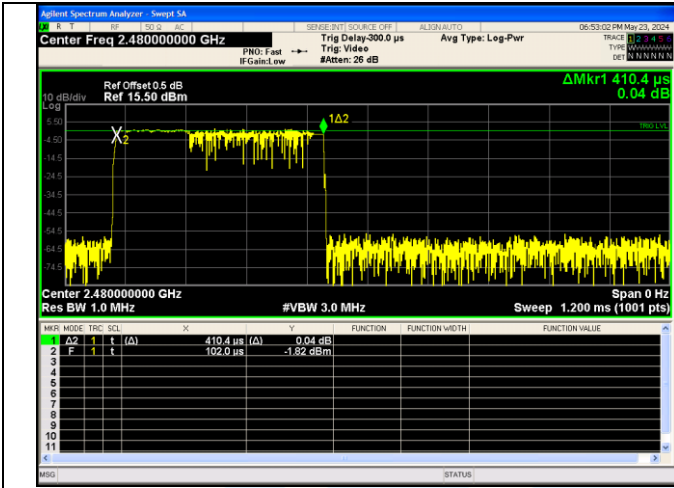
Number of Pulses in 31.6 seconds  
 $\pi$ /4DQPSK 2-DH5



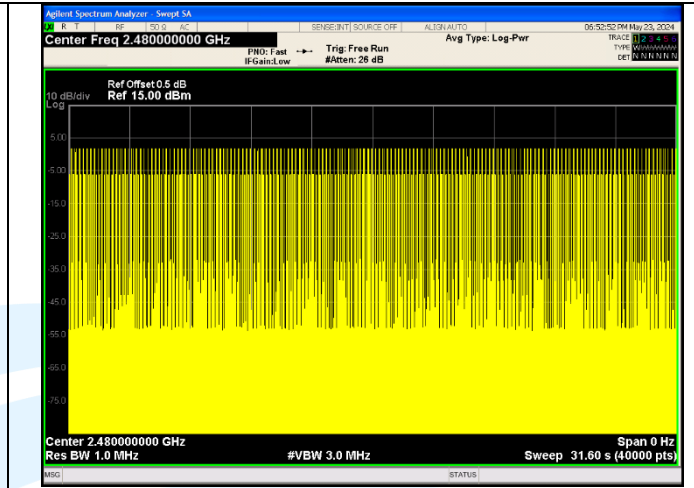
Pulse Width  
 8DPSK 3-DH1



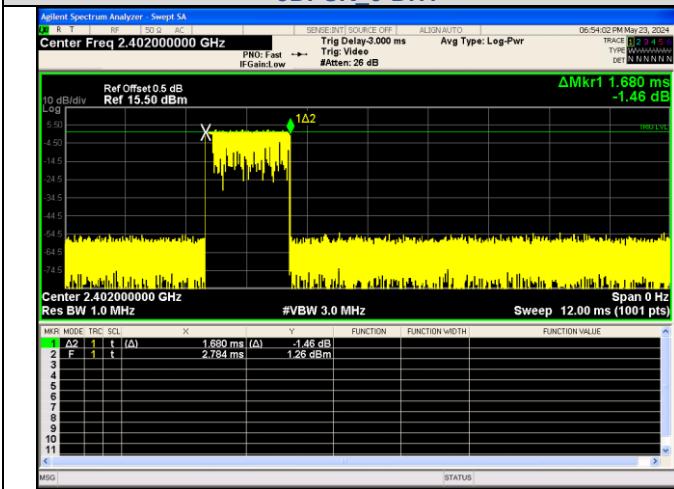
Number of Pulses in 31.6 seconds  
 8DPSK 3-DH1



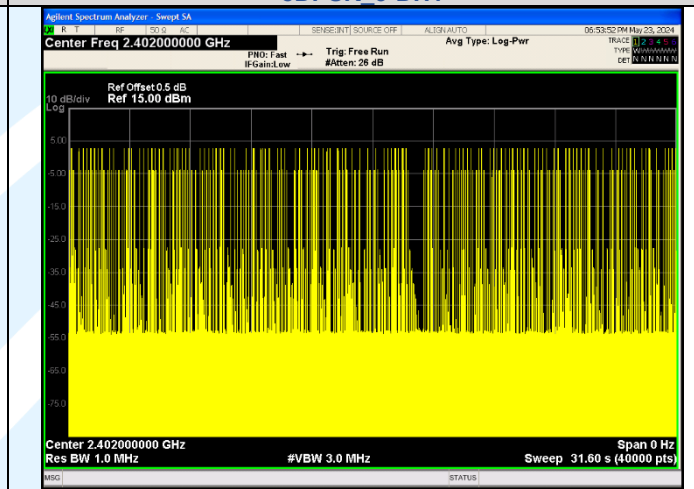
**Pulse Width  
8DPSK 3-DH1**



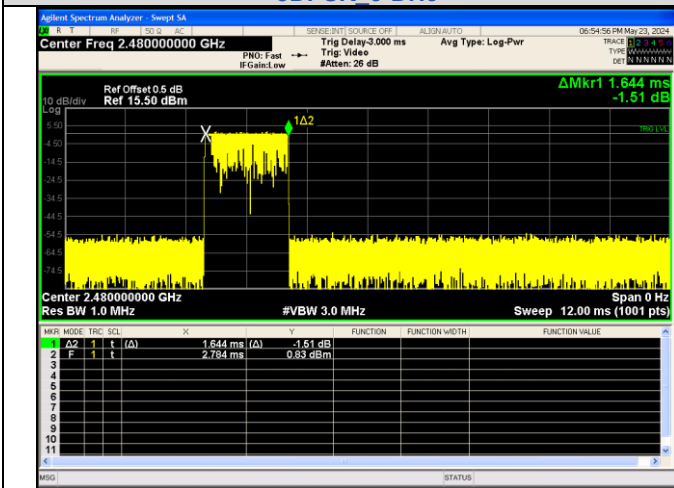
**Number of Pulses in 31.6 seconds  
8DPSK 3-DH1**



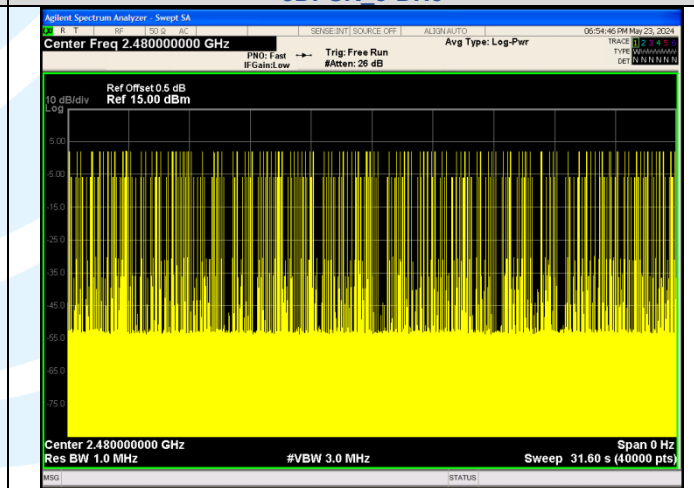
**Pulse Width  
8DPSK 3-DH3**



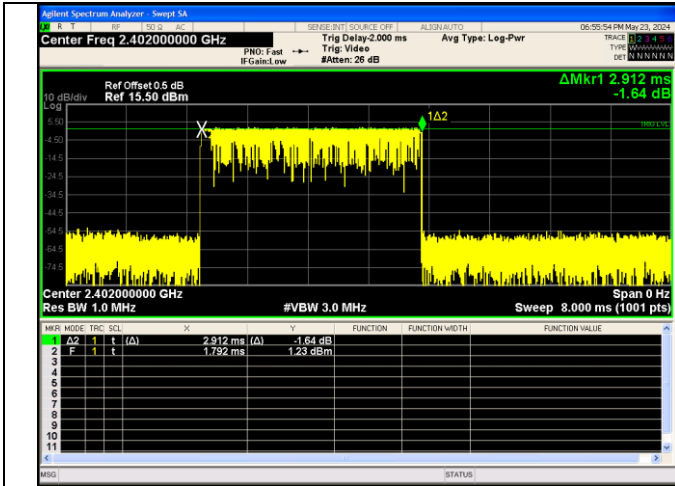
**Number of Pulses in 31.6 seconds  
8DPSK 3-DH3**



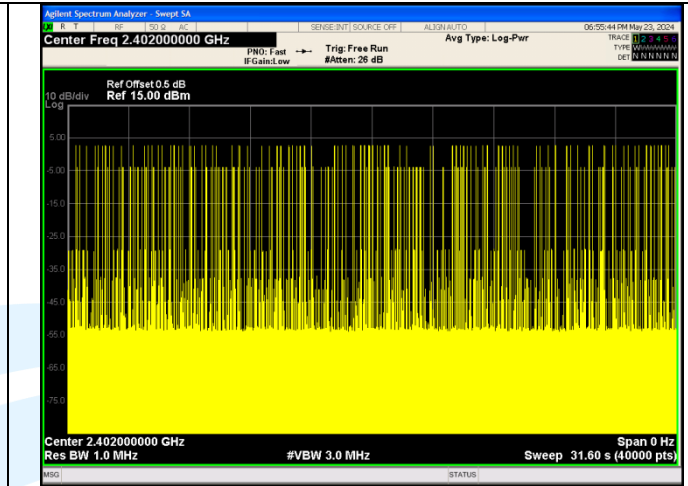
**Pulse Width  
8DPSK 3-DH3**



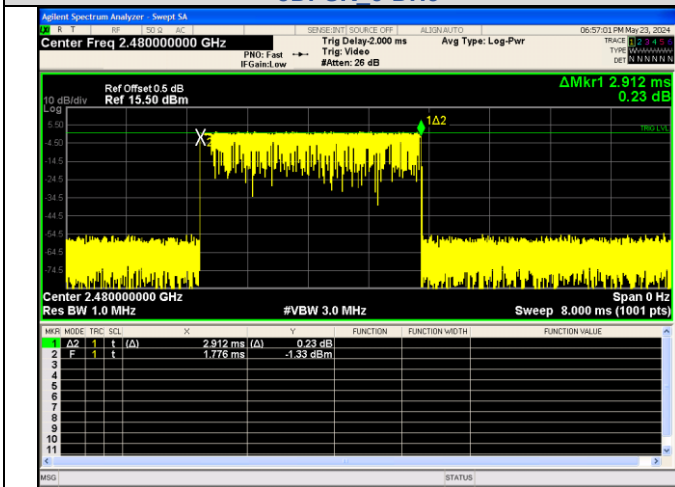
**Number of Pulses in 31.6 seconds  
8DPSK 3-DH3**



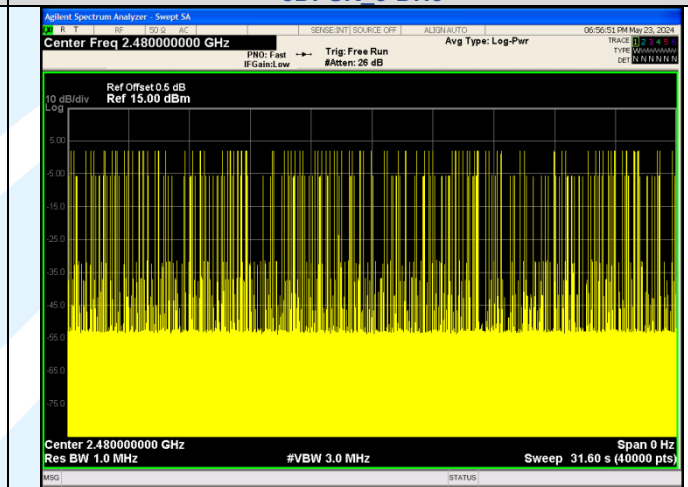
**Pulse Width  
8DPSK\_3-DH5**



**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**

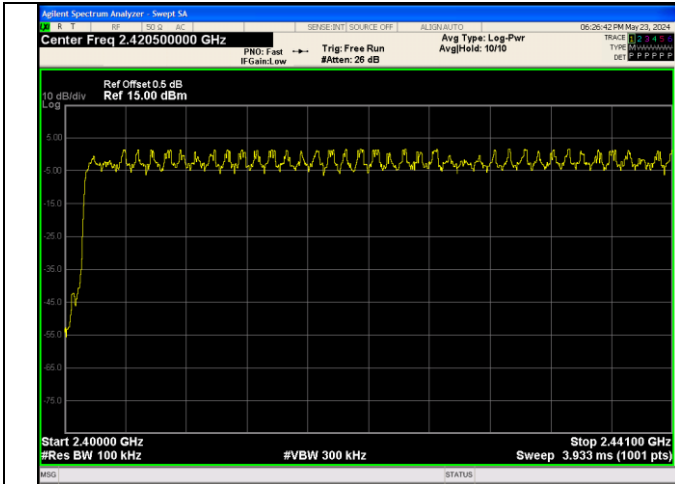
## A.6 NUMBER OF HOPPING CHANNEL

### Test Result

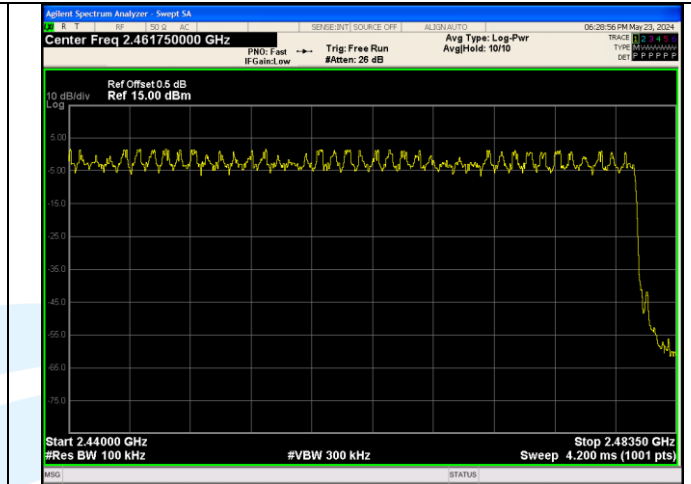
Modulation	Packet	Number of Hopping Channel	Limit	Result
GFSK	DH5	79	15	PASS
$\pi/4$ DQPSK	2-DH5	79	15	PASS
8DPSK	3-DH5	79	15	PASS

### Test Graphs





Low End Spectrum Channel Hopping Plot  
8DPSK



High End Spectrum Channel Hopping Plot  
8DPSK

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UTTR-RF-FCCPART15.247-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 \*\*\*

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