



Keyway Testing Technology (Guangdong) Co., Ltd
Room 2102, Building 6, Dongyi Intelligent Equipment New Energy Vehicle Park,
No.30 of Tangxia District, Dongshen Road, Tangxia Town, Dongguan, 523710,
People's Republic of China

E.U.T:	POWERED SPEAKERS
Model Number:	DVPS1.0
Trade Name:	DUM
Date of Receipt:	Aug 28, 2025
Date of Test:	Aug 28 ~ Nov 17, 2025
FCC ID:	2A8L3-DVPS2025
IC ID:	29087-DVPS000001

A.1 DUTY CYCLE

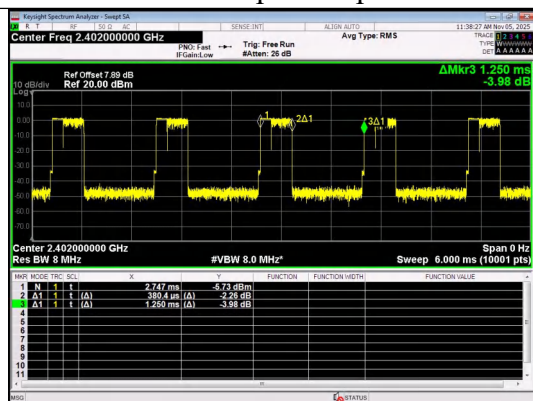
Test Result

Modulation	Packets	Channel	On Time (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle (linear)	Duty Cycle Factor (dB)	1/T
GFSK	DH1	0	0.373	1.250	29.81	0.2981	5.2564	2.6810
		39	0.372	1.249	29.78	0.2978	5.2608	2.6882
		78	0.372	1.249	29.78	0.2978	5.2608	2.6882
$\pi/4$ DQPSK	2-DH1	0	0.380	1.249	30.40	0.3040	5.1713	2.6316
		39	0.380	1.250	30.44	0.3044	5.1656	2.6316
		78	0.380	1.250	30.44	0.3044	5.1656	2.6316
8DPSK	3-DH1	0	0.380	1.250	30.44	0.3044	5.1656	2.6316
		39	0.380	1.249	30.40	0.3040	5.1713	2.6316
		78	0.380	1.249	30.40	0.3040	5.1713	2.6316

Note: input compensation coefficient (dB)= Cable Loss (dB)

Test Graphs

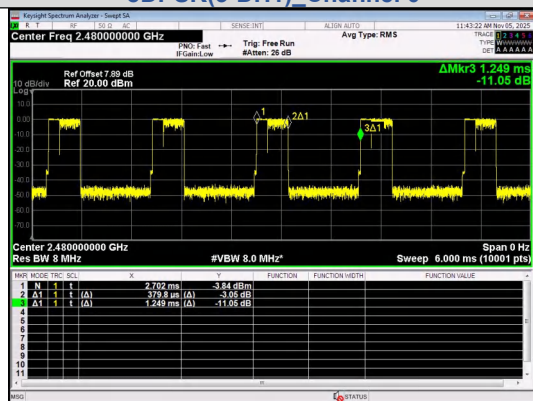




8DPSK(3-DH1)_Channel 0



8DPSK(3-DH1)_Channel 39



8DPSK(3-DH1)_Channel 78

A.2 DWELL TIME

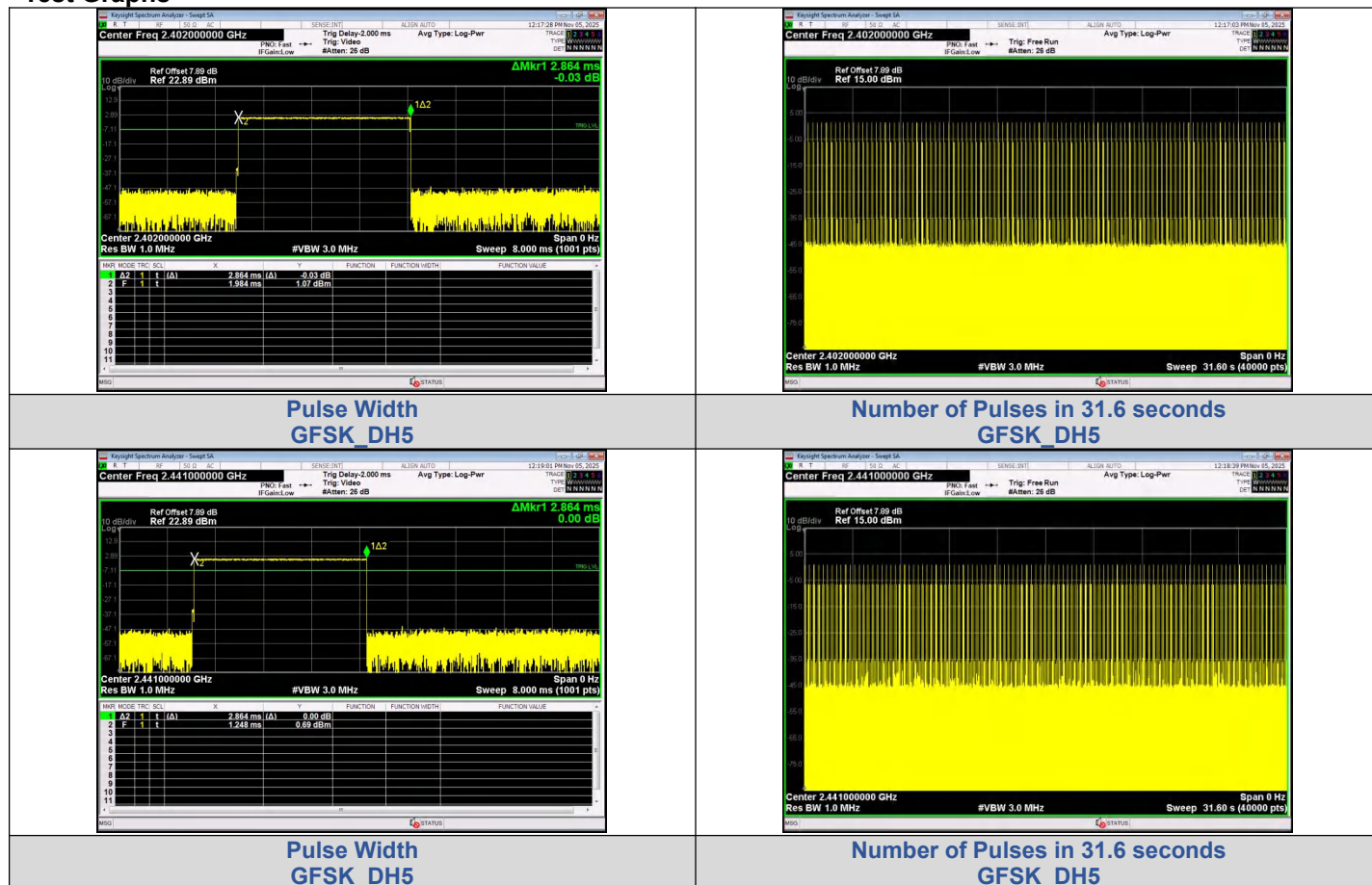
Test Result

Modulation	Packet	Channel	Pulse Width (ms)	Number of Pulses in 31.6 seconds	Dwell Time (ms)	Limit (ms)	Result
GFSK	DH5	Hopping	2.864	106	303.58	< 400	PASS
	DH5		2.864	107	306.45		PASS
	DH5		2.864	106	303.58		PASS
$\pi/4$ DQPSK	2-DH5		2.880	107	308.16		PASS
	2-DH5		2.880	106	305.28		PASS
	2-DH5		2.864	106	303.58		PASS
8DPSK	3-DH5		2.880	106	305.28		PASS
	3-DH5		2.880	107	308.16		PASS
	3-DH5		2.880	107	308.16		PASS

Note: Dwell time=Pulse time(ms)*Number of Pulses in 31.6 seconds

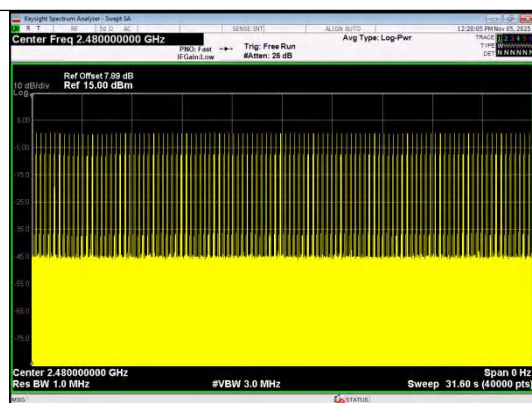
Note: input compensation coefficient (dB)= Cable Loss (dB)

Test Graphs

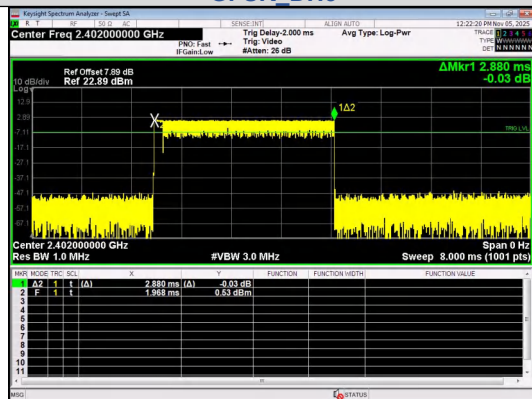




Pulse Width
GFSK_DH5



Number of Pulses in 31.6 seconds
GFSK_DH5



Pulse Width
 $\pi/4$ DQPSK_2-DH5



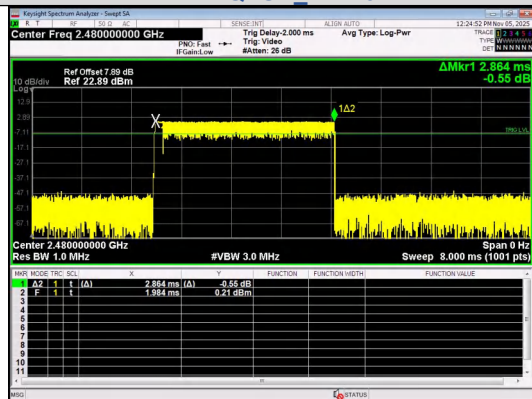
Number of Pulses in 31.6 seconds
 $\pi/4$ DQPSK_2-DH5



Pulse Width
 $\pi/4$ DQPSK_2-DH5



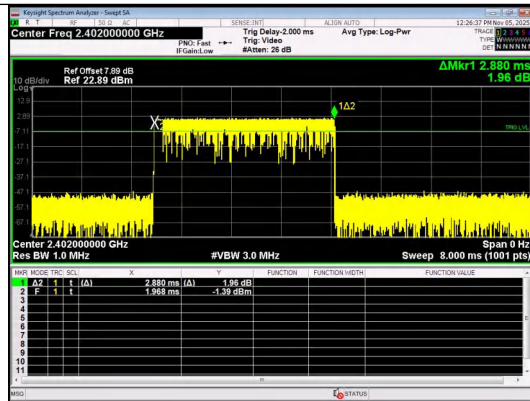
Number of Pulses in 31.6 seconds
 $\pi/4$ DQPSK_2-DH5



Pulse Width
 $\pi/4$ DQPSK_2-DH5



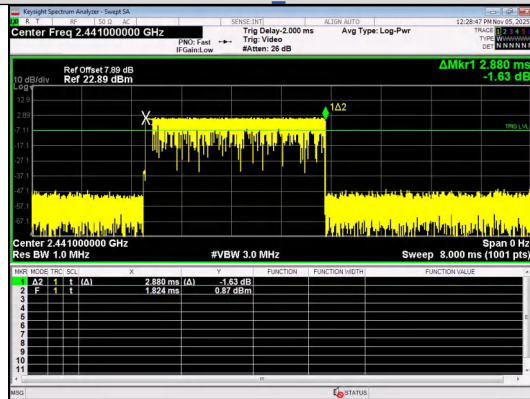
Number of Pulses in 31.6 seconds
 $\pi/4$ DQPSK_2-DH5



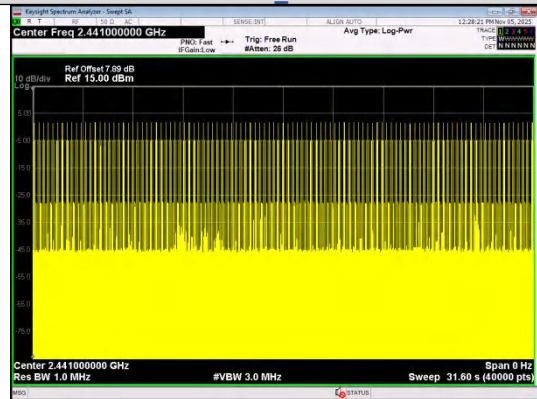
**Pulse Width
8DPSK_3-DH5**



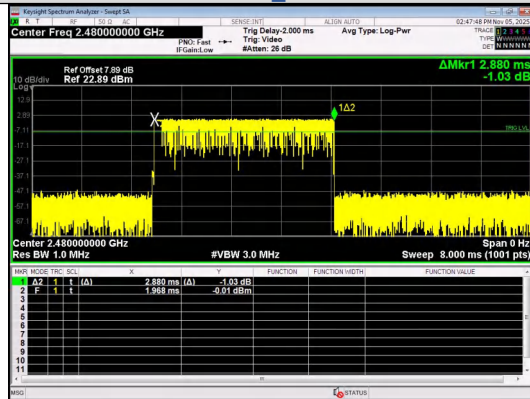
**Number of Pulses in 31.6 seconds
8DPSK_3-DH5**



**Pulse Width
8DPSK_3-DH5**



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



**Pulse Width
8DPSK_3-DH5**



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



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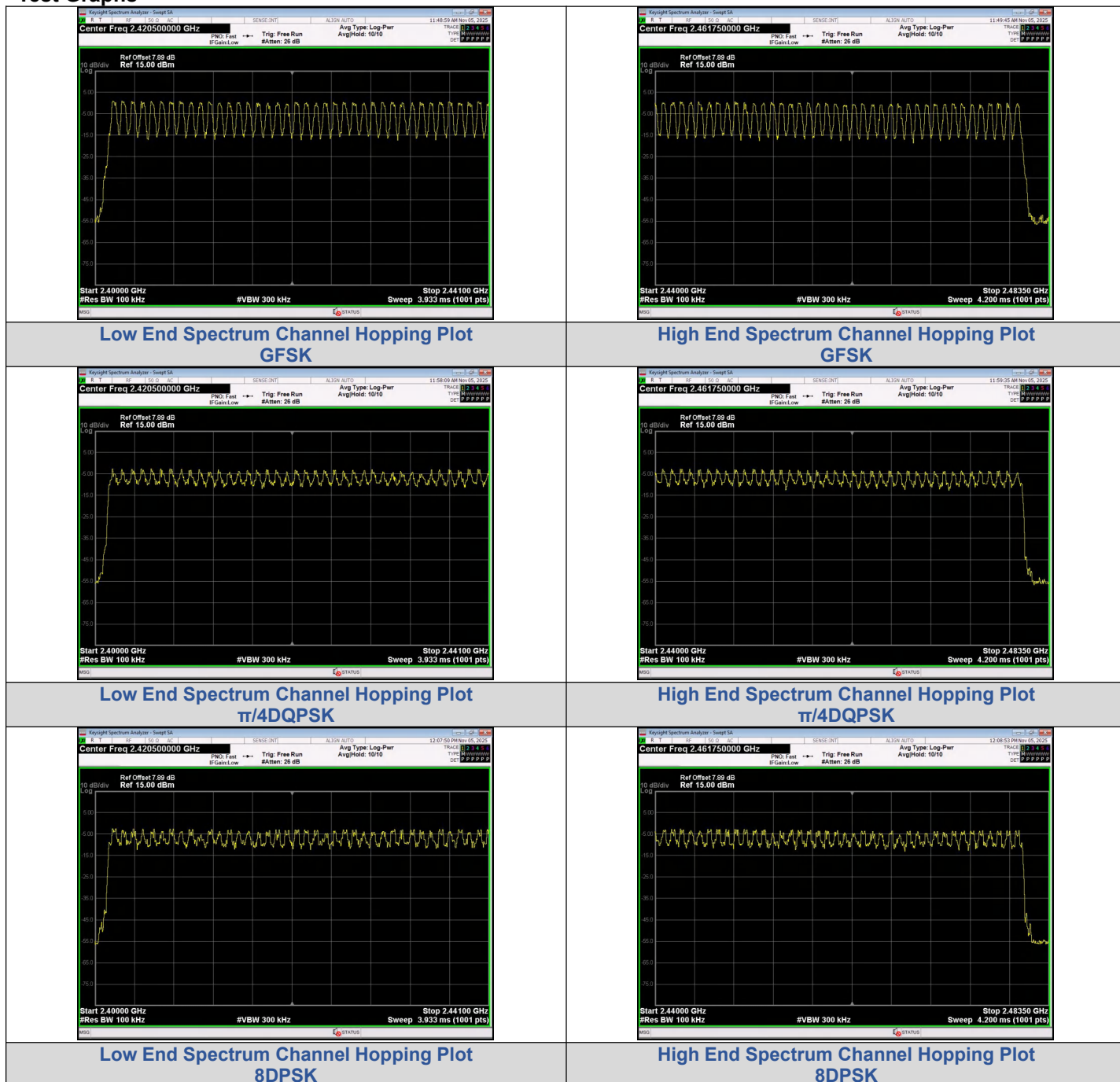
A.3 NUMBER OF HOPPING CHANNEL

Test Result

Modulation	Packet	Number of Hopping Channel	Limit	Result
GFSK	DH1	79	15	PASS
$\pi/4$ DQPSK	2-DH1	79	15	PASS
8DPSK	3-DH1	79	15	PASS

Note: input compensation coefficient (dB)= Cable Loss (dB)

Test Graphs



A.4 CONDUCTED PEAK OUTPUT POWER

Test Result

Modulation	Packet Type	Channel	Peak Output Power (dBm)	Peak Output Power (mW)	Max. Avg. Power (dBm)	Limit (dBm)	Result
GFSK	DH1	0	1.27	1.34	None	≤30	PASS
		39	1.05	1.27	None		PASS
		78	0.33	1.08	None		PASS
π/4DQPSK	2-DH1	0	1.75	1.50	None		PASS
		39	1.39	1.38	None		PASS
		78	0.74	1.19	None		PASS
8DPSK	3-DH1	0	1.93	1.56	None		PASS
		39	1.59	1.44	None		PASS
		78	1.00	1.26	None		PASS

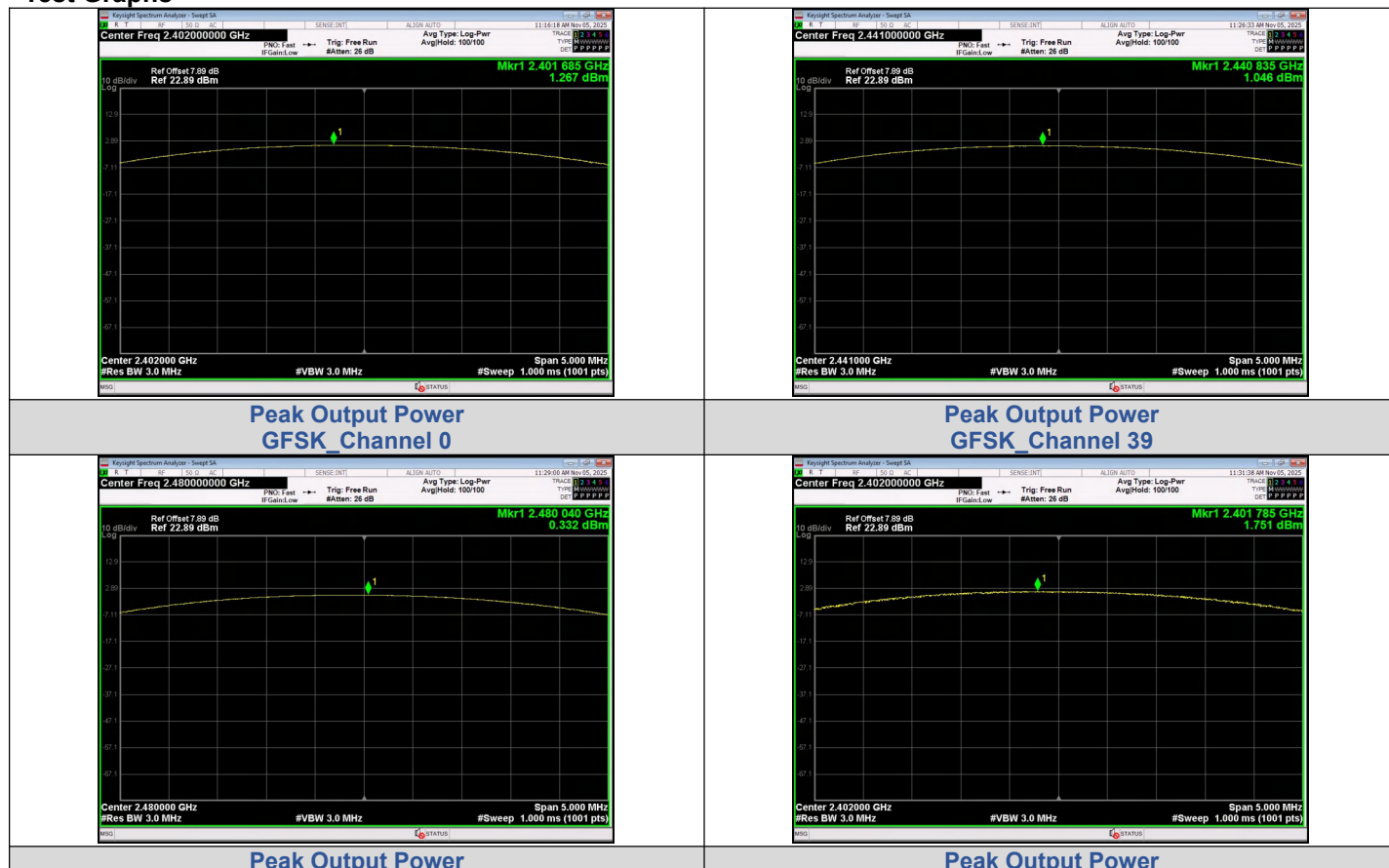
Note: input compensation coefficient (dB)= Cable Loss (dB)

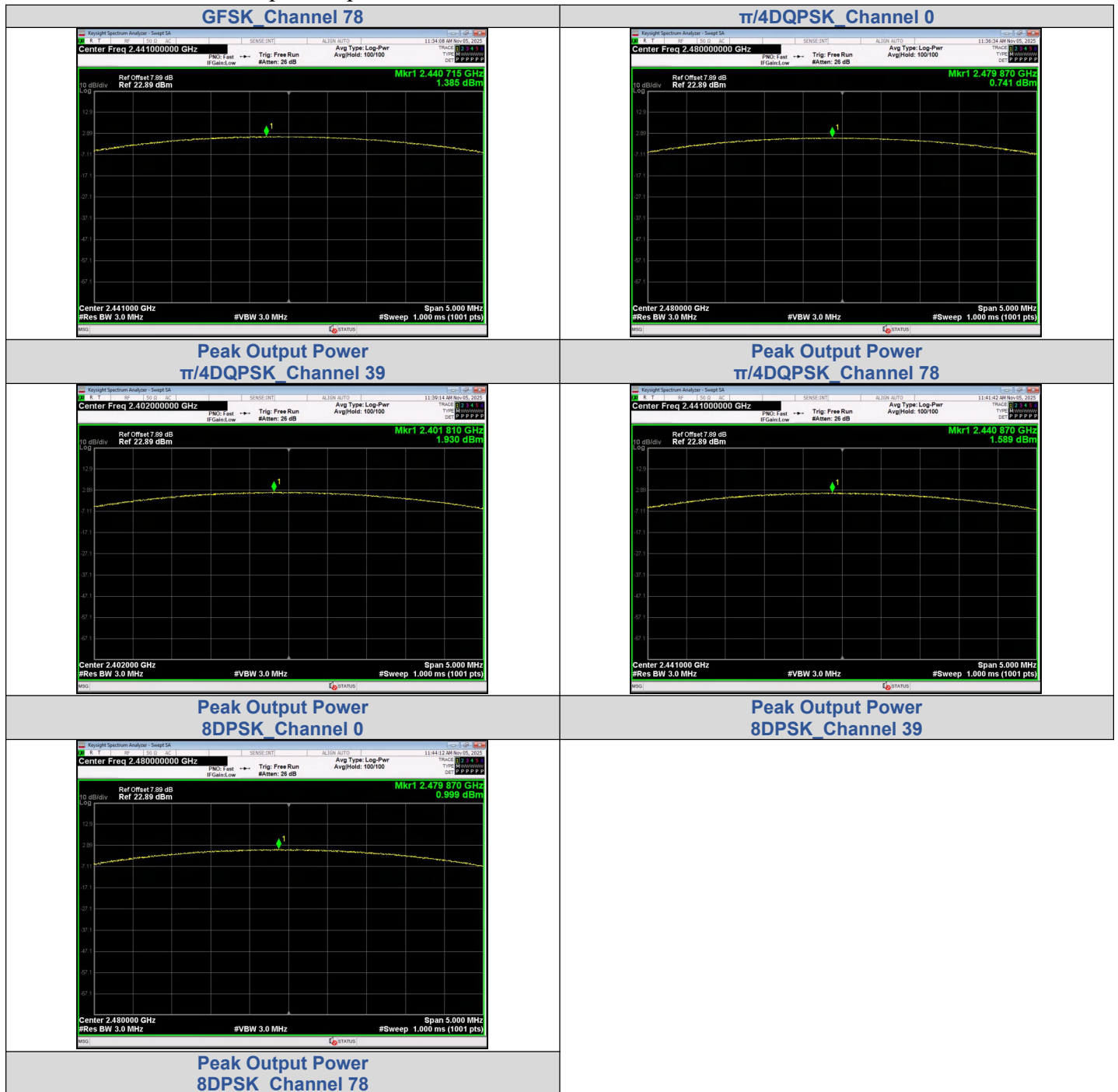
Modulation	Packet Type	Channel	Peak Output Power (dBm)	Peak Power Limit (dBm)	ISED EIRP (dBm)	ISED EIRP Limit (dBm)	Max. Avg. Power (dBm)	Result
GFSK	DH1	0	1.27	≤30	-2.93	≤36.02	None	PASS
		39	1.05	≤30	-3.15	≤36.02	None	PASS
		78	0.33	≤30	-3.87	≤36.02	None	PASS
π/4DQPSK	2-DH1	0	1.75	≤30	-2.45	≤36.02	None	PASS
		39	1.39	≤30	-2.81	≤36.02	None	PASS
		78	0.74	≤30	-3.46	≤36.02	None	PASS
8DPSK	3-DH1	0	1.93	≤30	-2.27	≤36.02	None	PASS
		39	1.59	≤30	-2.61	≤36.02	None	PASS
		78	1.00	≤30	-3.2	≤36.02	None	PASS

Note: EIRP=Output Power+ANT Gain

Note: input compensation coefficient (dB)= Cable Loss (dB)

Test Graphs







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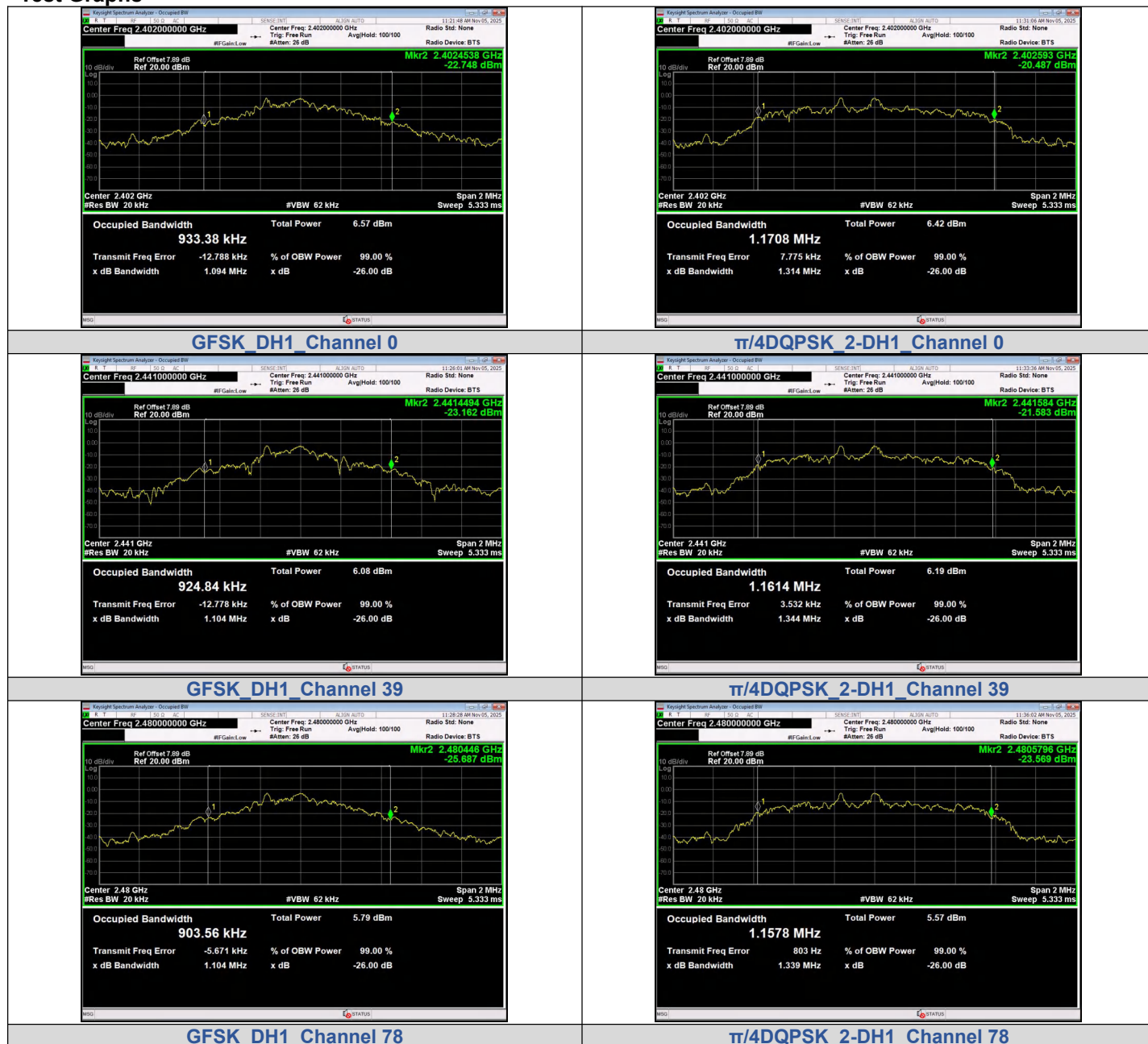
A.5 99% BANDWIDTH

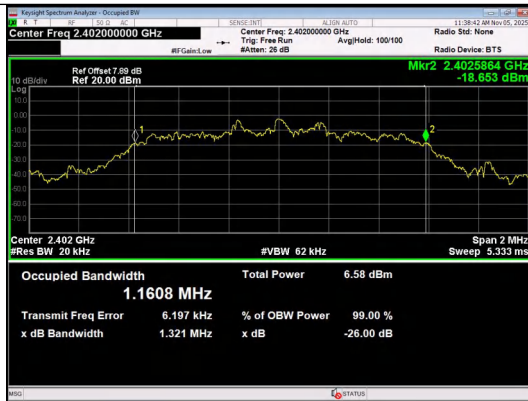
Test Result

Modulation	Channel	Center Frequency (MHz)	99% BW (MHz)
GFSK	0	2402	0.93338
	39	2441	0.92484
	78	2480	0.90356
π /4DQPSK	0	2402	1.1708
	39	2441	1.1614
	78	2480	1.1578
8DPSK	0	2402	1.1608
	39	2441	1.1596
	78	2480	1.1676

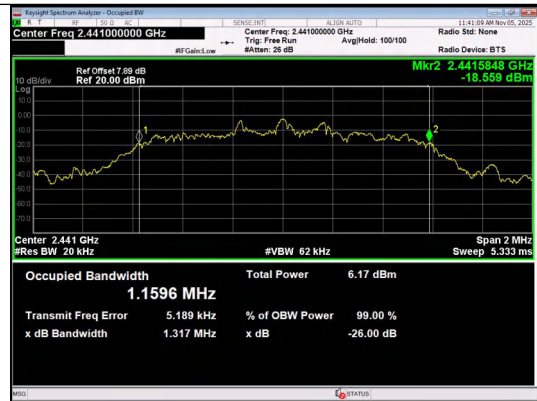
Note: input compensation coefficient (dB)= Cable Loss (dB)

Test Graphs

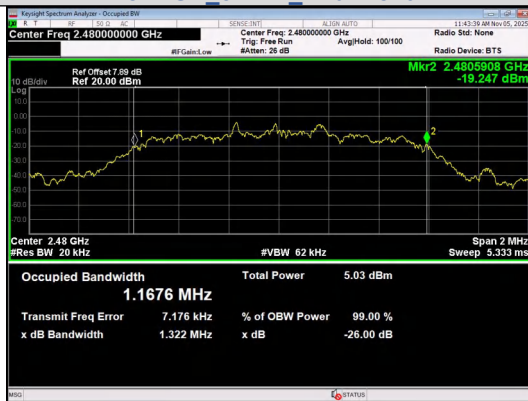




8DPSK_3-DH1_Channel 0



8DPSK_3-DH1_Channel 39



8DPSK_3-DH1_Channel 78



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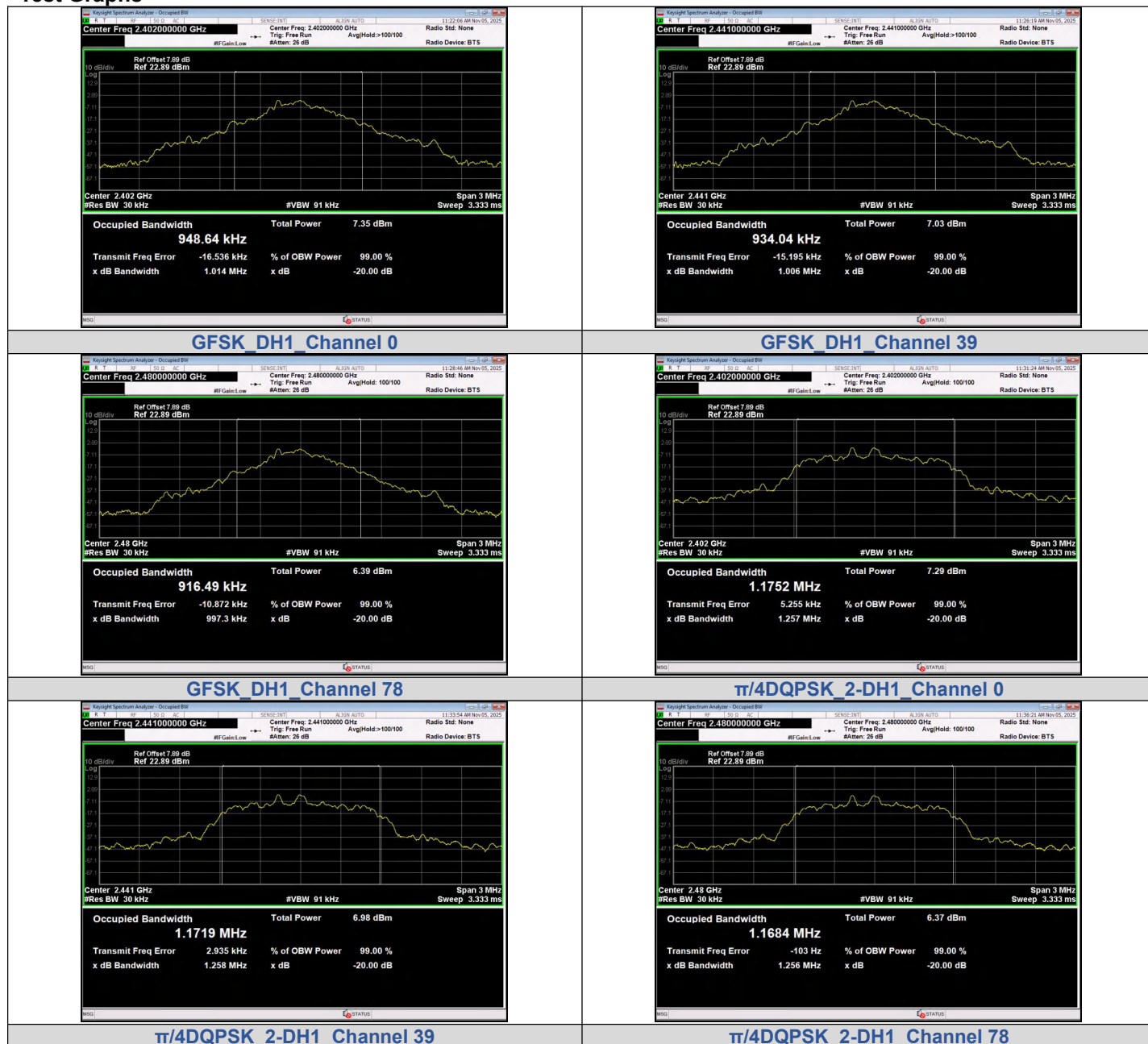
A.6 20DB BANDWIDTH

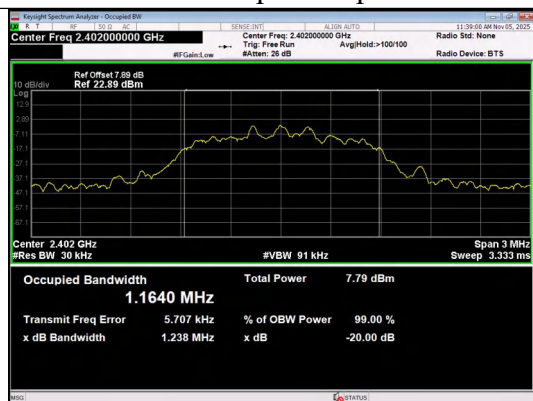
Test Result

Modulation	Channel	Center Frequency (MHz)	20 dB Bandwidth (MHz)
GFSK	0	2402 MHz	1.014
	39	2441 MHz	1.006
	78	2480 MHz	0.9973
π /4QPSK	0	2402 MHz	1.257
	39	2441 MHz	1.258
	78	2480 MHz	1.256
8DPSK	0	2402 MHz	1.238
	39	2441 MHz	1.238
	78	2480 MHz	1.233

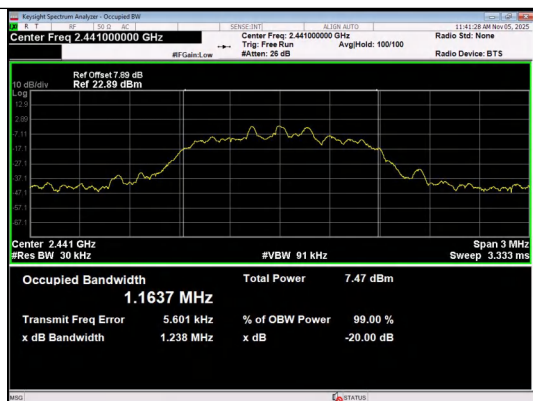
Note: input compensation coefficient (dB)= Cable Loss (dB)

Test Graphs

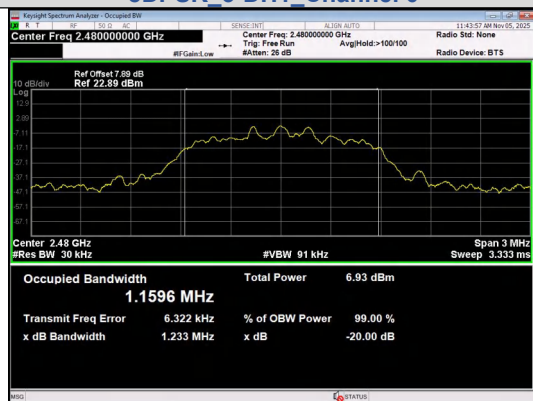




8DPSK_3-DH1_Channel 0



8DPSK_3-DH1_Channel 39



8DPSK_3-DH1_Channel 78

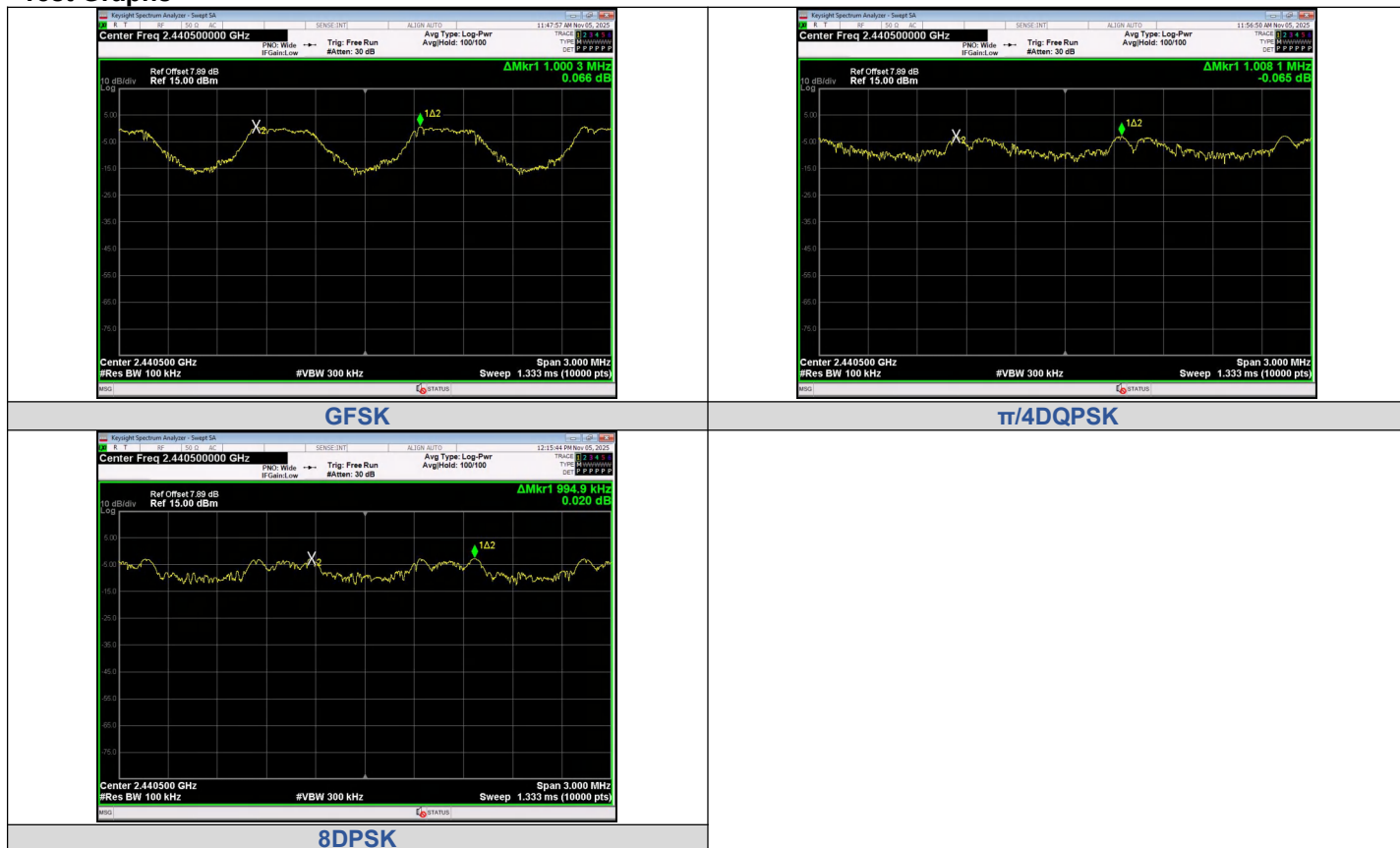
A.7 CARRIER FREQUENCIES SEPARATION

Test Result

Modulation	Packet	Left Center frequency (MHz)	Right Center frequency (MHz)	Hopping Frequency Separation (MHz)	Limit (MHz)	Result
GFSK	DH1	2439.8362	2440.8365	1.0003	0.676	PASS
$\pi/4$ DQPSK	2-DH1	2439.8362	2440.8443	1.0081	0.839	PASS
8DPSK	3-DH1	2440.1728	2441.1677	0.9949	0.825	PASS

Note: input compensation coefficient (dB)= Cable Loss (dB)

Test Graphs



A.8 CONDUCTED SPURIOUS & BAND EDGE EMISSION

Test Result Non-Hopping

Modulation	Packet	Channel	OOB Emission Frequency (MHz)	OOB Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result
GFSK	DH1	0	2398.14	-53.791	-19.1	-34.691	PASS
			2400.00	-53.985	-19.1	-34.885	PASS
			21142.0	-46.268	-19.1	-27.168	PASS
		39	21582.2	-45.968	-19.41	-26.558	PASS
		78	2483.50	-55.509	-20.02	-35.489	PASS
			21163.3	-46.942	-20.02	-26.922	PASS
$\pi/4$ DQPSK	2-DH1	0	2400.00	-51.637	-19.06	-32.577	PASS
			2528.31	-42.848	-19.06	-23.788	PASS
		39	21125.2	-45.792	-19.46	-26.332	PASS
		78	2483.50	-55.309	-20.03	-35.279	PASS
			21167.6	-46.662	-20.03	-26.632	PASS
			21615.2	-46.336	-19.86	-26.476	PASS
8DPSK	3-DH1	0	2400.00	-53.352	-19.05	-34.302	PASS
			21567.8	-47.125	-19.05	-28.075	PASS
		39	24846.4	-46.998	-19.33	-27.668	PASS
		78	2483.50	-55.808	-19.86	-35.948	PASS
			21615.2	-46.336	-19.86	-26.476	PASS
			21615.2	-46.336	-19.86	-26.476	PASS

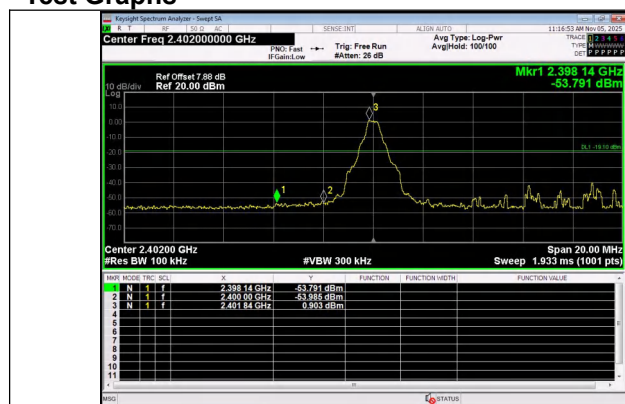
Note: input compensation coefficient (dB)= Cable Loss (dB)

Hopping

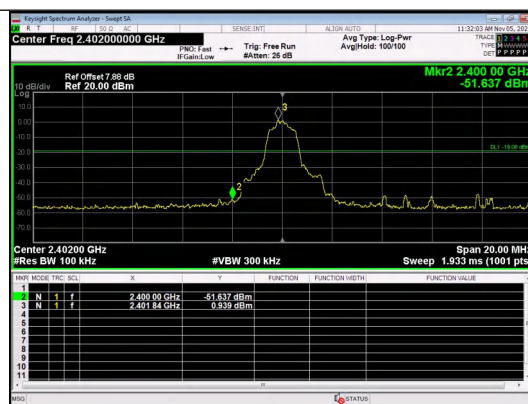
Hopping							
Modulation	Packet	Channel	OOB Emission Frequency (MHz)	OOB Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result
GFSK	DH1	Hopping	2392.24	-52.077	-19.13	-32.947	PASS
			2400.00	-52.981	-19.13	-33.851	PASS
			2483.50	-52.540	-20.06	-32.480	PASS
π/4DQPSK	2-DH1		2393.42	-51.719	-22.53	-29.189	PASS
			2400.00	-55.314	-22.53	-32.784	PASS
			2483.50	-55.112	-23.47	-31.642	PASS
8DPSK	3-DH1		2391.20	-53.286	-22.5	-30.786	PASS
			2400.00	-54.851	-22.5	-32.351	PASS
			2483.50	-55.782	-23.42	-32.362	PASS
Note: input compensation coefficient (dB)= Cable Loss (dB)							

Note: input compensation coefficient (dB)= Cable Loss (dB)

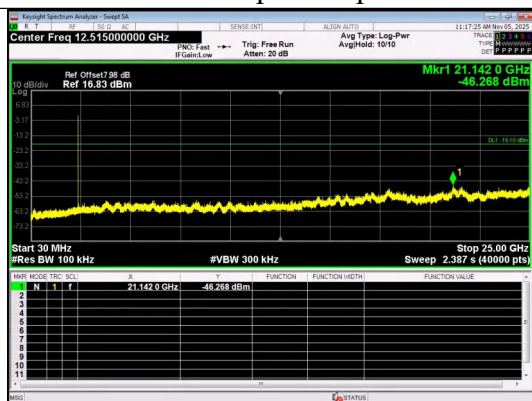
Test Graphs



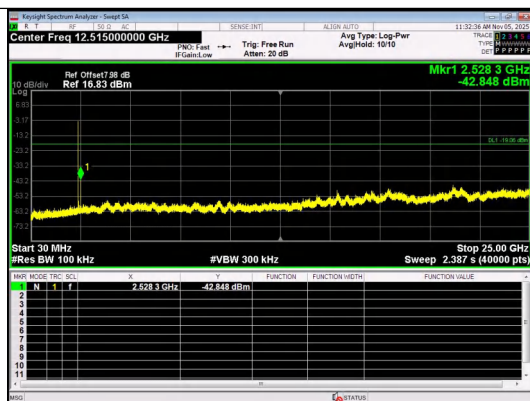
Out Of Band Emission
GFSK_DH1_Channel 0



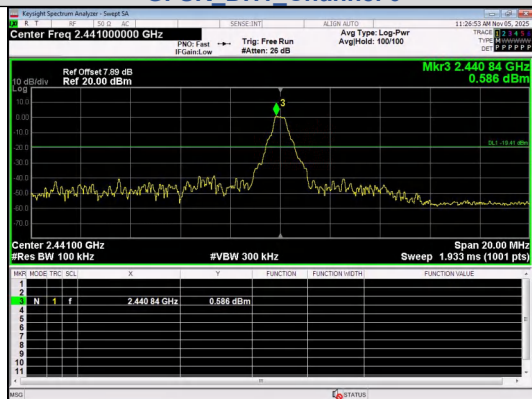
Out Of Band Emission
 $\pi/4$ DQPSK_2-DH1_Channel 0



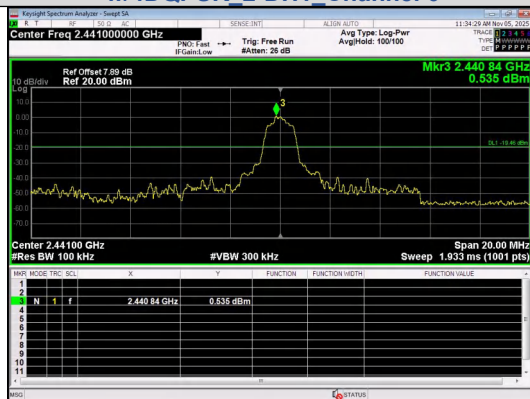
30.0 MHz - 25000.0 MHz
GFSK_DH1_Channel 0



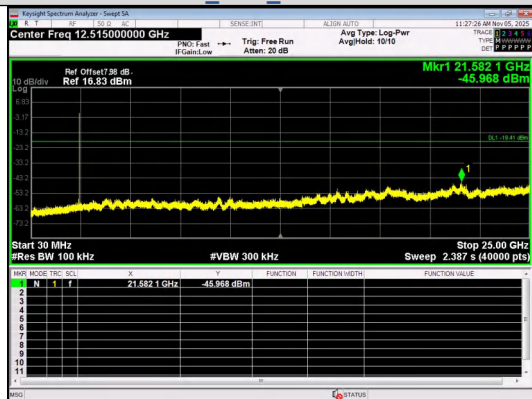
30.0 MHz - 25000.0 MHz
 $\pi/4$ DQPSK_2-DH1_Channel 0



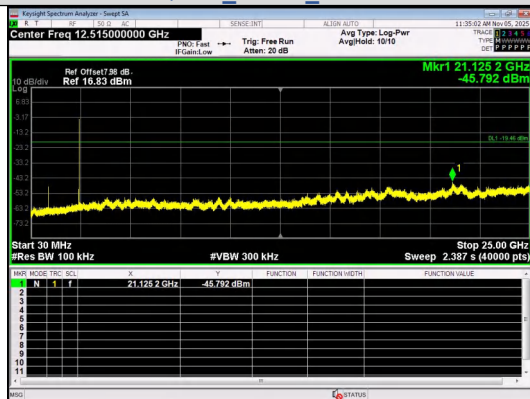
Out Of Band Emission
GFSK_DH1_Channel 39



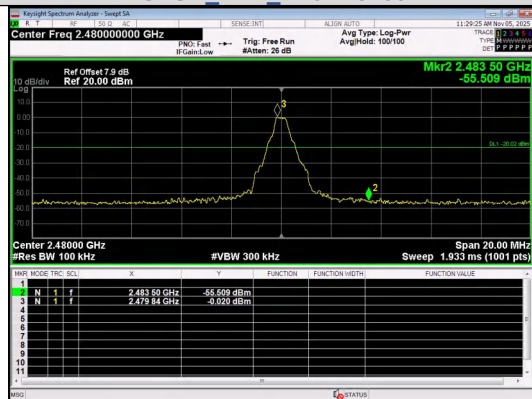
Out Of Band Emission
 $\pi/4$ DQPSK_2-DH1_Channel 39



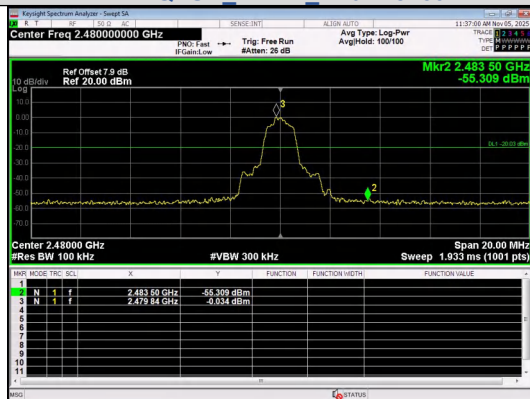
30.0 MHz - 25000.0 MHz
GFSK_DH1_Channel 39



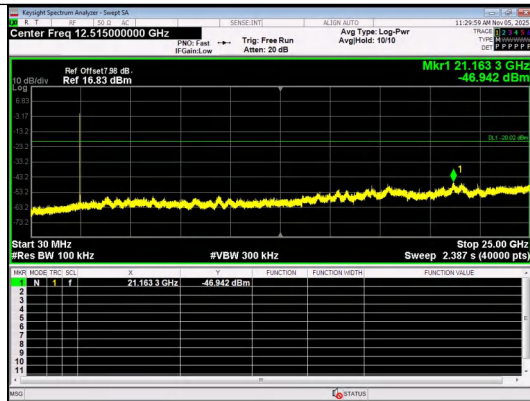
30.0 MHz - 25000.0 MHz
 $\pi/4$ DQPSK_2-DH1_Channel 39



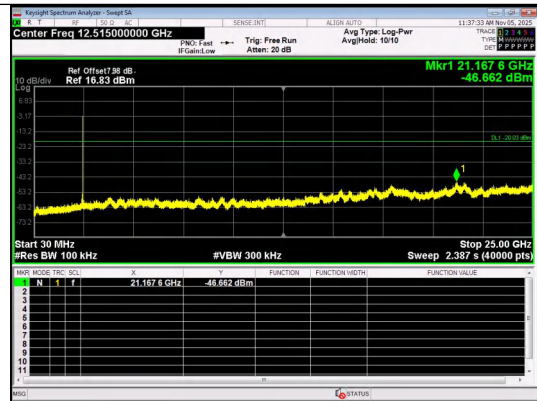
Out Of Band Emission
GFSK_DH1_Channel 78



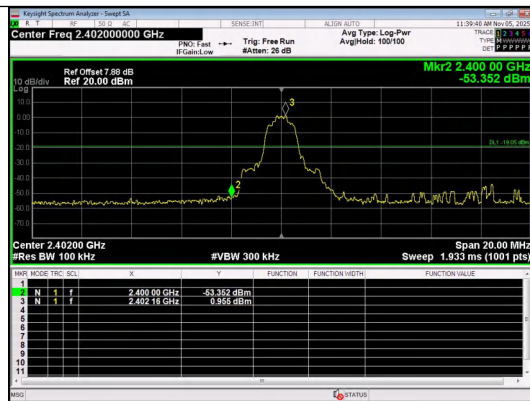
Out Of Band Emission
 $\pi/4$ DQPSK_2-DH1_Channel 78



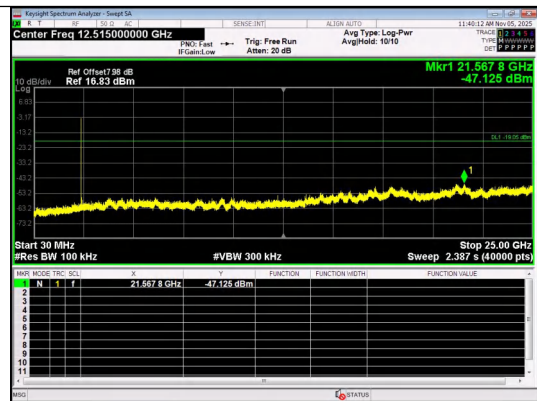
30.0 MHz - 25000.0 MHz
GFSK_DH1_Channel 78



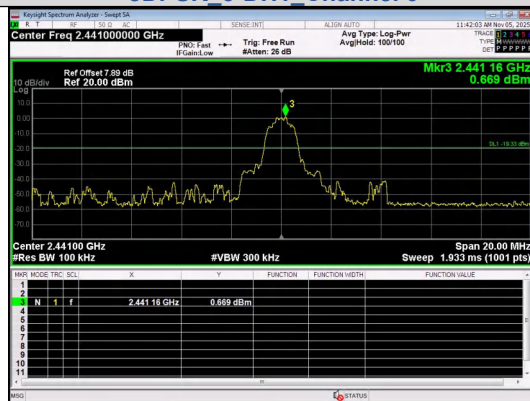
30.0 MHz - 25000.0 MHz
 $\pi/4$ DQPSK_2-DH1_Channel 78



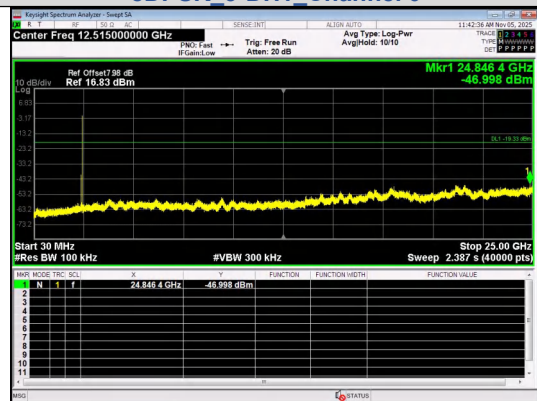
Out Of Band Emission
8DPSK_3-DH1_Channel 0



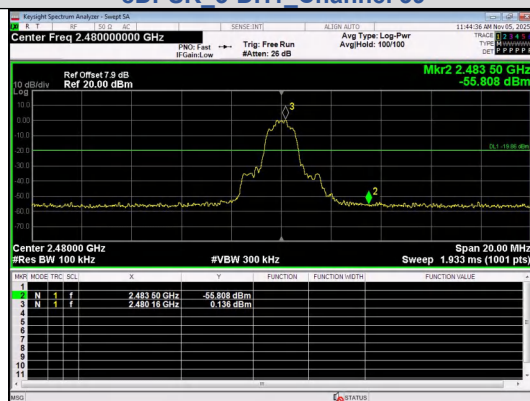
30.0 MHz - 25000.0 MHz
8DPSK_3-DH1_Channel 0



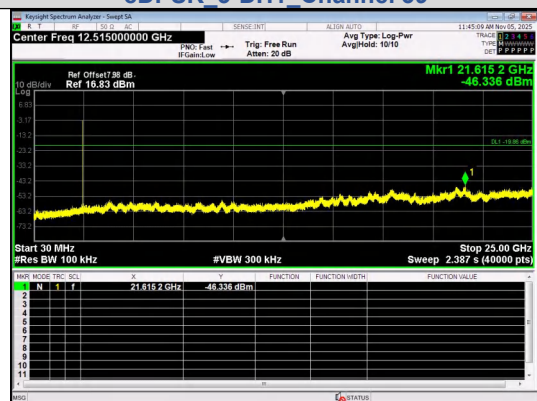
Out Of Band Emission
8DPSK_3-DH1_Channel 39



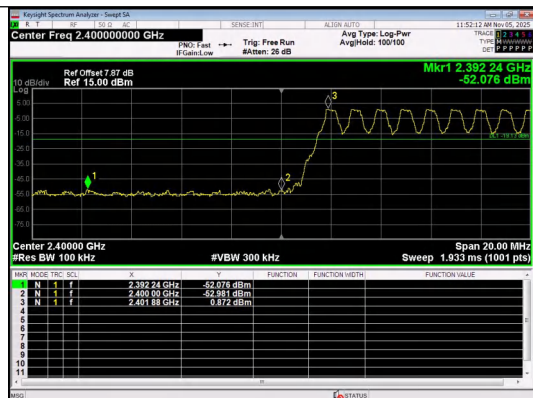
30.0 MHz - 25000.0 MHz
8DPSK_3-DH1_Channel 39



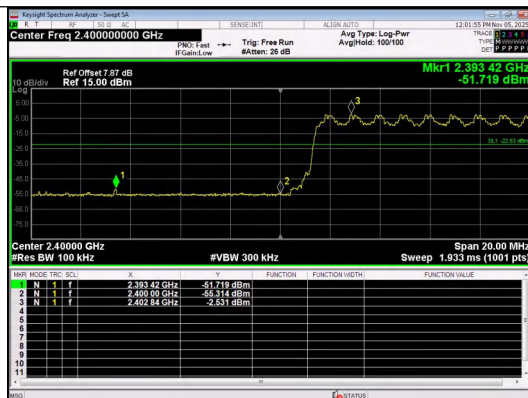
Out Of Band Emission
8DPSK_3-DH1_Channel 78



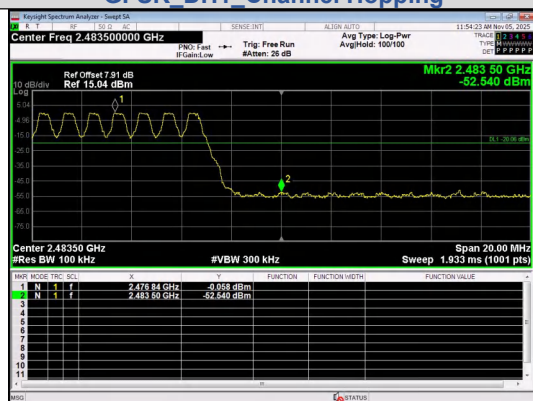
30.0 MHz - 25000.0 MHz
8DPSK_3-DH1_Channel 78



**Out Of Band Emission(Left)
GFSK_DH1_Channel Hopping**



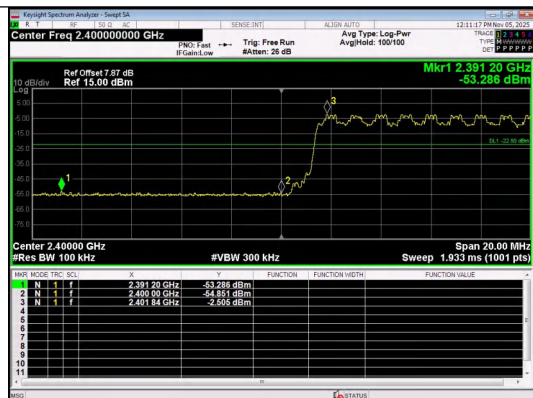
**Out Of Band Emission(Left)
 $\pi/4$ DQPSK_2-DH1_Channel Hopping**



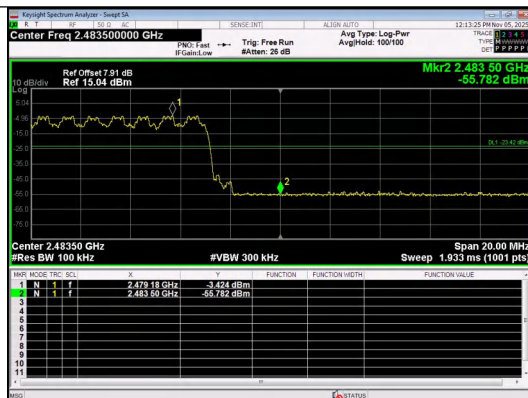
**Out Of Band Emission(Right)
GFSK_DH1_Channel Hopping**



**Out Of Band Emission(Right)
 $\pi/4$ DQPSK_2-DH1_Channel Hopping**



**Out Of Band Emission(Left)
8DPSK_3-DH1_Channel Hopping**



**Out Of Band Emission(Right)
8DPSK_3-DH1_Channel Hopping**