



Appendix A

RF Test Data for BT(BDR/EDR) (Conducted Measurement)

Product Name: Wireless speaker

Trade Mark: EASYtec

Test Model: EASYtec NR9015

Environmental Conditions

Temperature:	25.8° C
Relative Humidity:	52.5%
ATM Pressure:	100.0 kPa
Test Engineer:	Sean She
Supervised by:	Eder Zhan

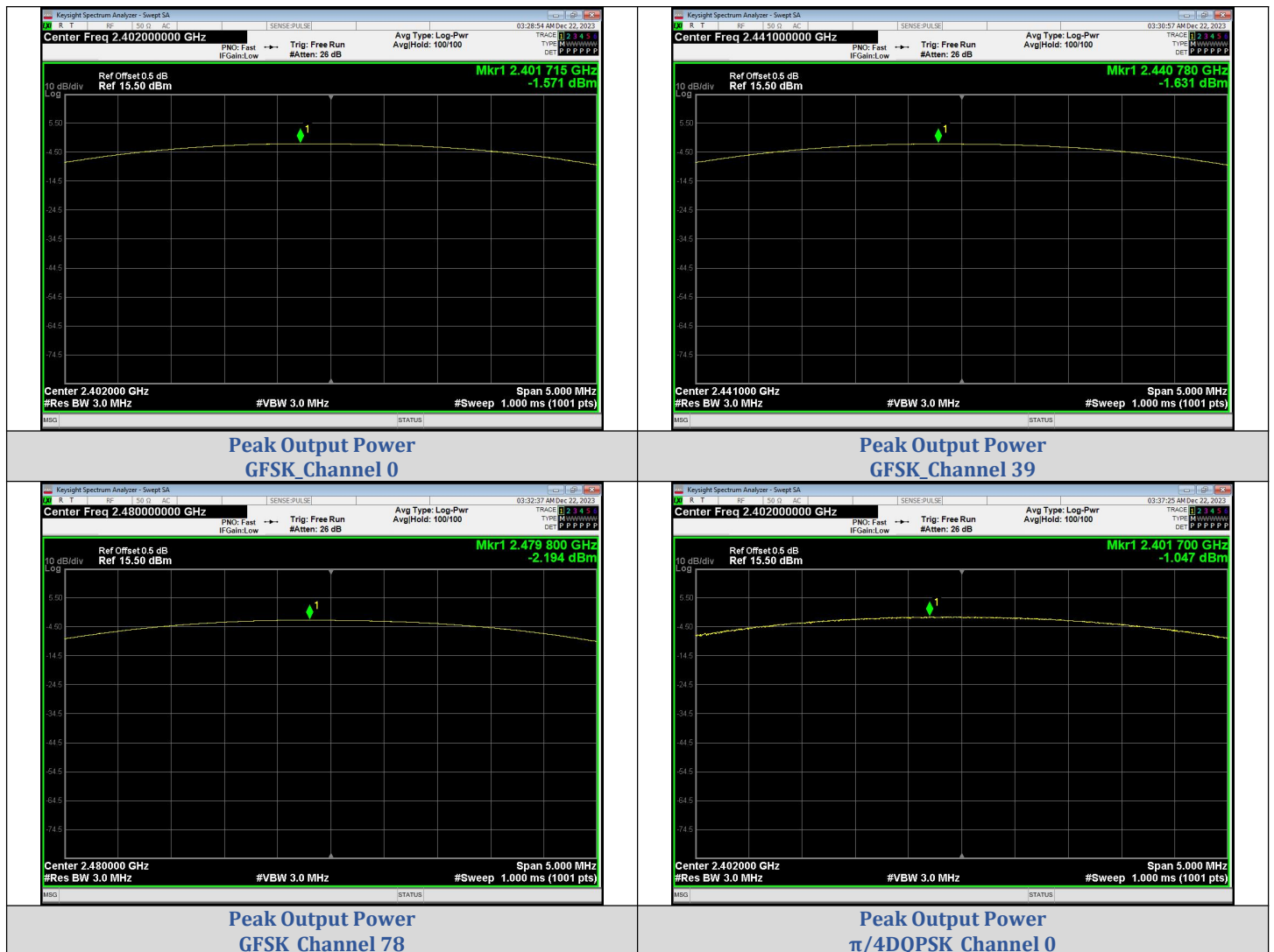


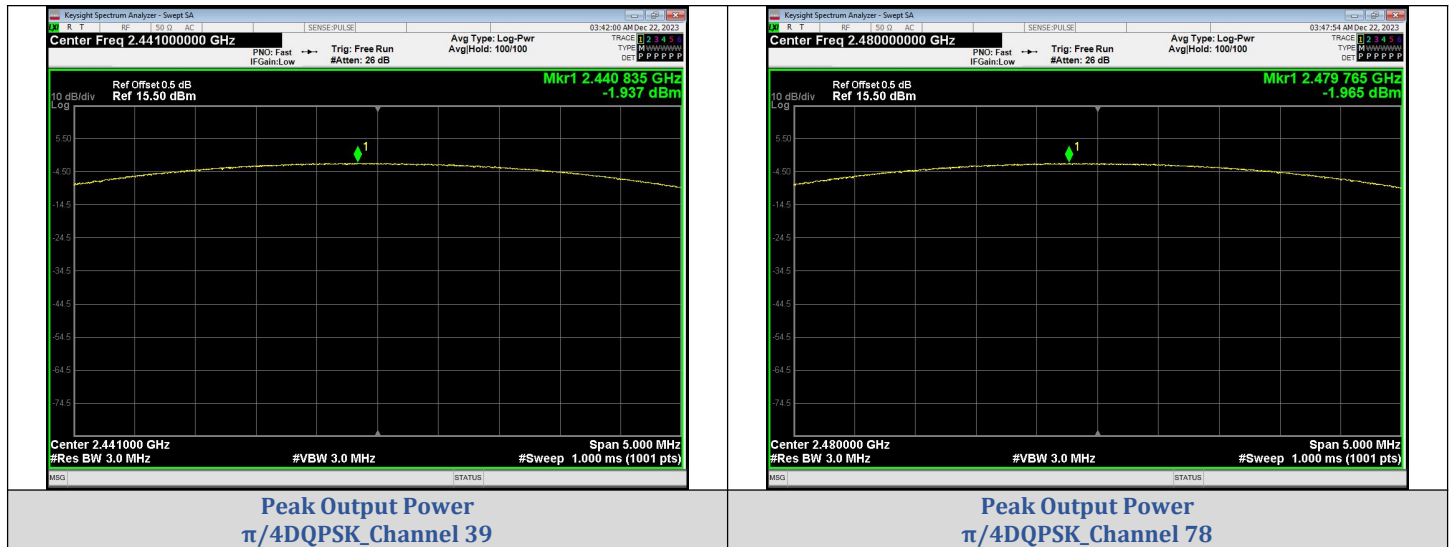
Conducted Peak Output Power

Test Result

Modulation	Packet Type	Channel	Peak Output Power (dBm)	Peak Output Power (mW)	Max. Avg. Power (dBm)	Limit (dBm)	Result
GFSK	DH5	0	-1.571	0.696	None	30	PASS
		39	-1.631	0.687	None		PASS
		78	-2.194	0.603	None		PASS
$\pi/4$ DQPSK	2-DH5	0	-1.047	0.786	None	20.97	PASS
		39	-1.937	0.640	None		PASS
		78	-1.965	0.636	None		PASS

Test Graphs



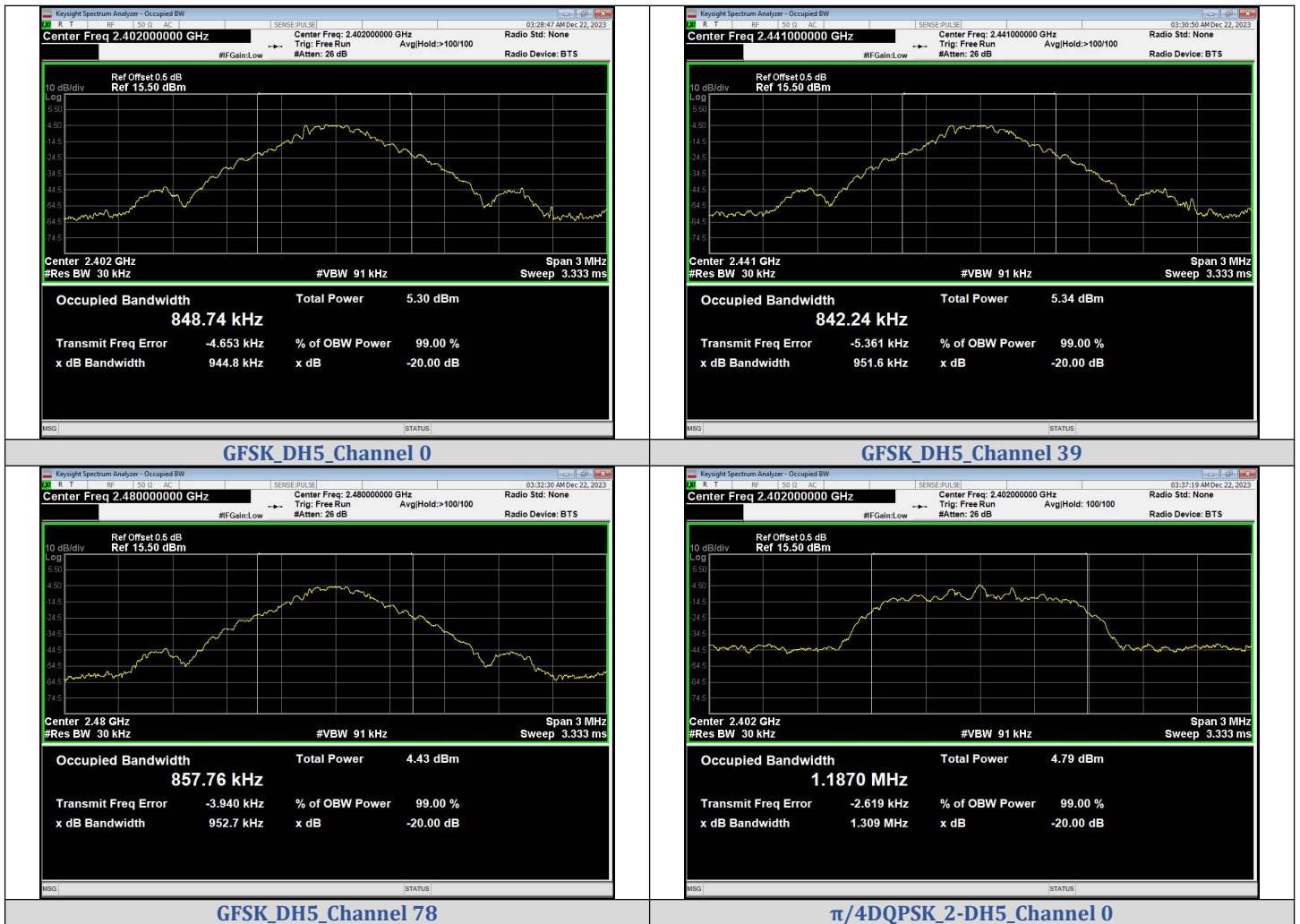


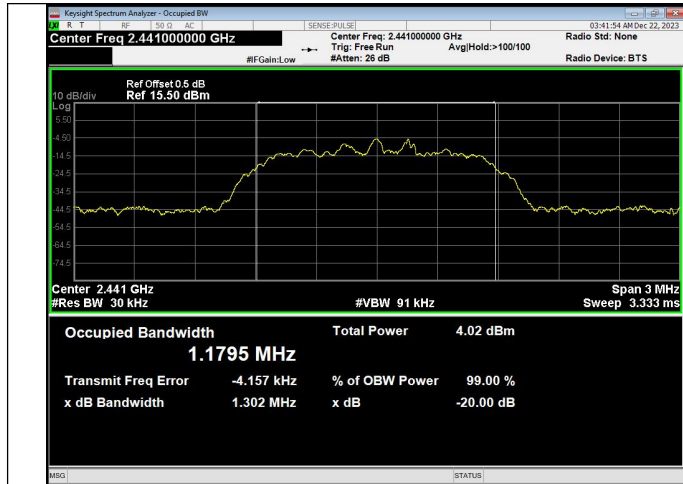


20dB Bandwidth Test Result

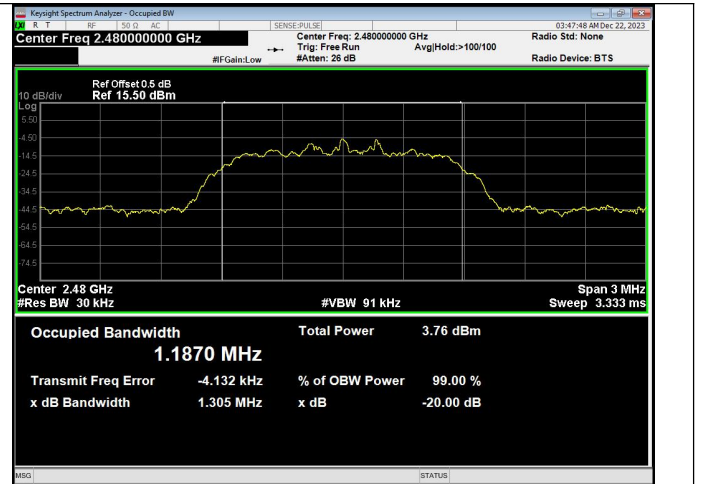
Modulation	Channel	Center Frequency (MHz)	20 dB Bandwidth (MHz)
GFSK	0	2402 MHz	0.9448
	39	2441 MHz	0.9516
	78	2480 MHz	0.9527
$\pi/4$ DQPSK	0	2402 MHz	1.309
	39	2441 MHz	1.302
	78	2480 MHz	1.305

Test Graphs





$\pi/4$ DQPSK_2-DH5_Channel 39



$\pi/4$ DQPSK_2-DH5_Channel 78

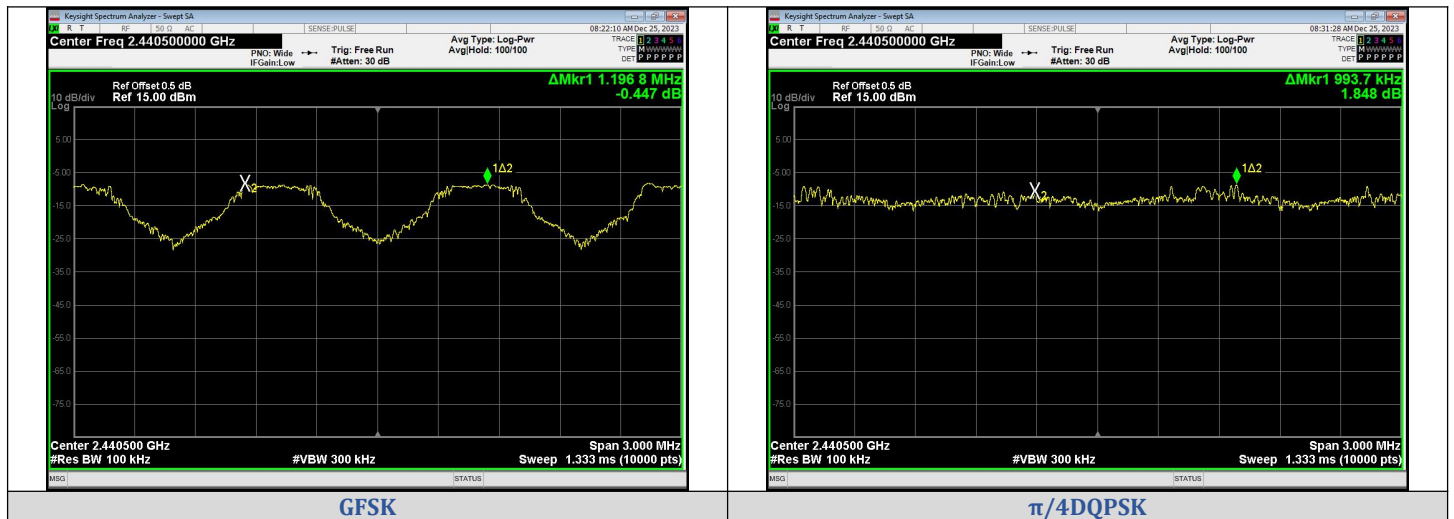


Carrier Frequencies Separation

Test Result

Modulation	Packet	Left Center frequency (MHz)	Right Center frequency (MHz)	Hopping Frequency Separation (MHz)	Limit (MHz)	Result
GFSK	DH5	2439.8446	2441.0414	1.1968	0.634	PASS
$\pi/4$ DQPSK	2-DH5	2440.1905	2441.1842	0.9937	0.868	PASS

Test Graphs





Conducted Out Of Band Emission

Test Result

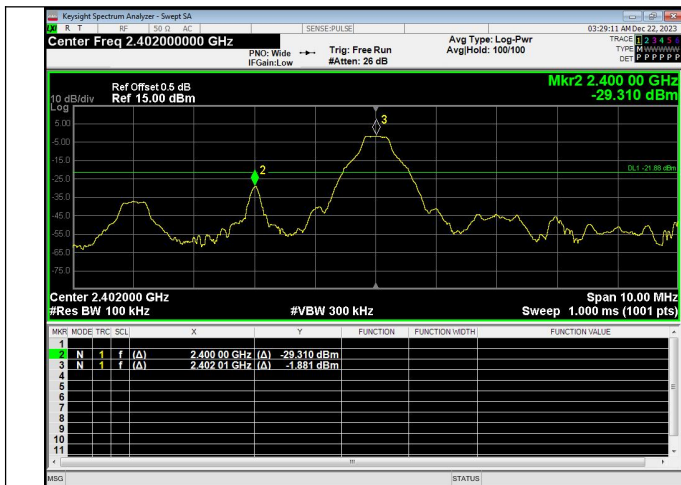
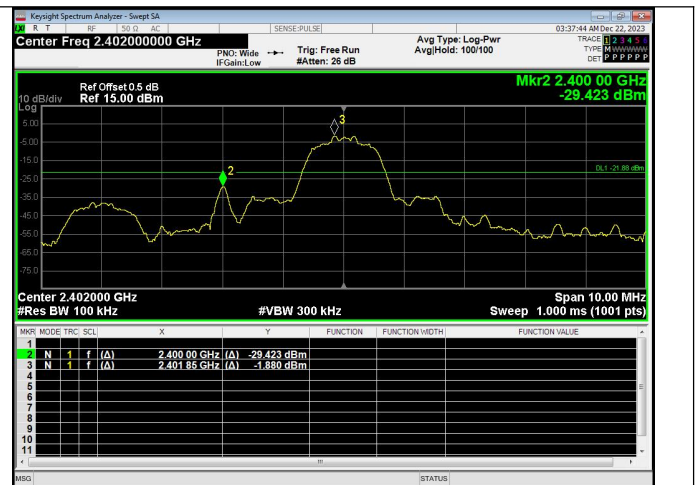
Non-Hopping

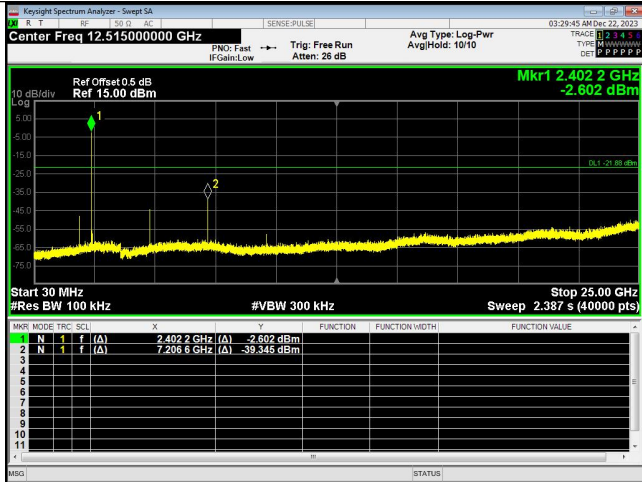
Modulation	Packet	Channel	OOB Emission Frequency (MHz)	OOB Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result
GFSK	DH5	0	2400.00	-29.310	-21.88	-7.430	PASS
			7206.56	-39.345	-21.88	-17.465	PASS
		39	4882.42	-41.864	-21.8	-20.064	PASS
		78	2483.50	-50.122	-22.35	-27.772	PASS
			4959.83	-39.901	-22.35	-17.551	PASS
$\pi/4$ DQPSK	2-DH5	0	2400.00	-29.423	-21.88	-7.543	PASS
			4803.76	-39.669	-21.88	-17.789	PASS
		39	4881.79	-44.582	-22.87	-21.712	PASS
		78	2483.50	-50.506	-22.89	-27.616	PASS
			4959.83	-45.440	-22.89	-22.550	PASS

Hopping

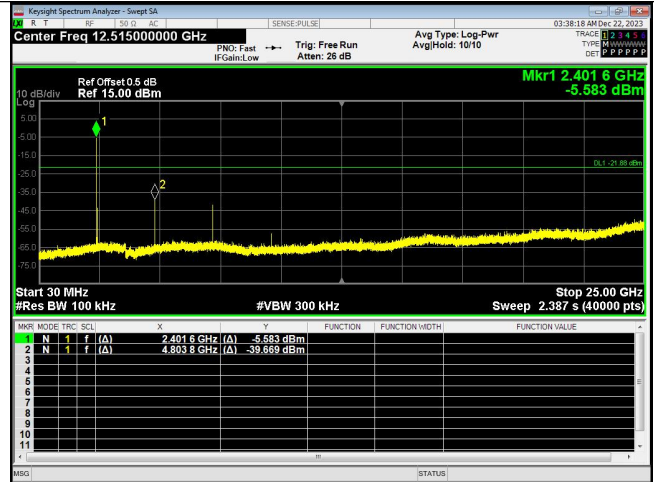
Modulation	Packet	Channel	OOB Emission Frequency (MHz)	OOB Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result
GFSK	DH5	Hopping	2397.04	-62.096	-30.0	-32.096	PASS
			2400.00	-63.647	-30.0	-33.647	PASS
			2483.50	-63.660	-27.92	-35.740	PASS
$\pi/4$ DQPSK	2-DH5	Hopping	2400.00	-62.619	-30.52	-32.099	PASS
			2483.50	-62.819	-28.3	-34.519	PASS

Test Graphs

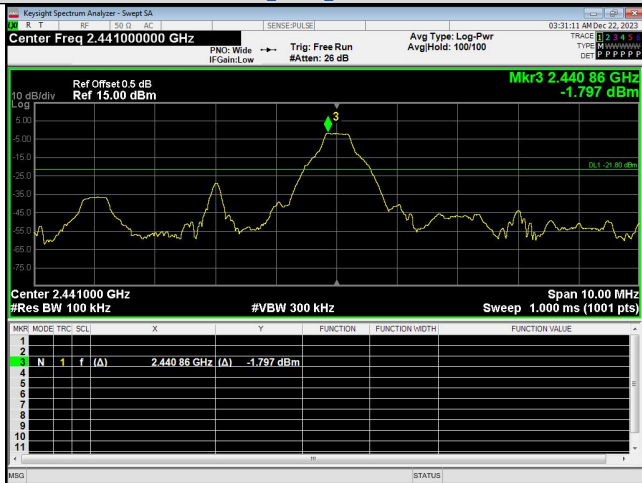
Out Of Band Emission
GFSK_DH5_Channel 0Out Of Band Emission
 $\pi/4$ DQPSK_2-DH5_Channel 0



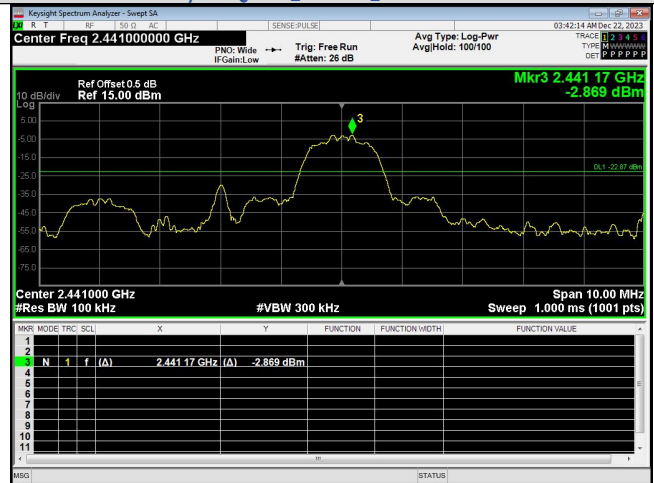
Spurious Emission
GFSK_DH5_Channel 0



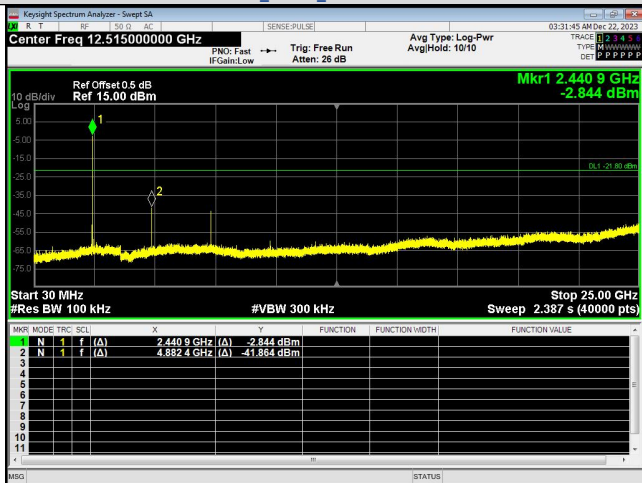
Spurious Emission
 $\pi/4$ DQPSK_2-DH5_Channel 0



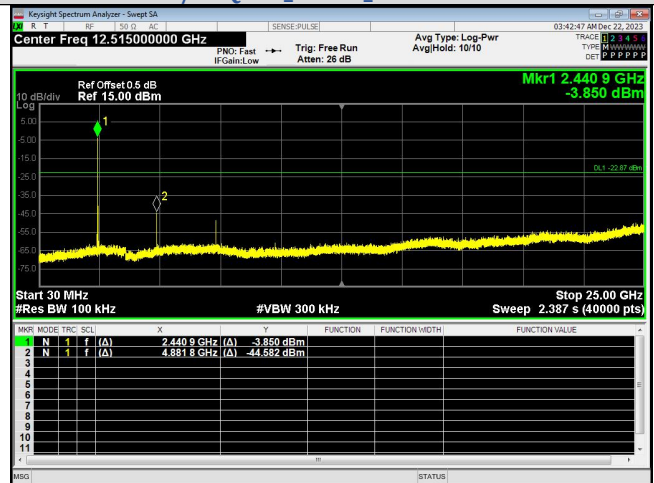
Out Of Band Emission
GFSK_DH5_Channel 39



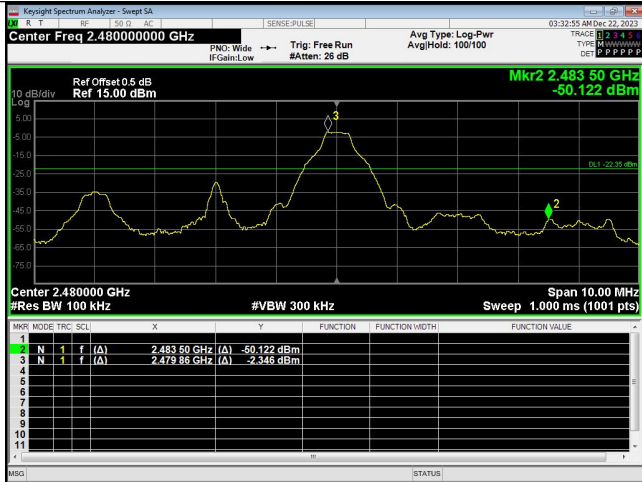
Out Of Band Emission
 $\pi/4$ DQPSK_2-DH5_Channel 39



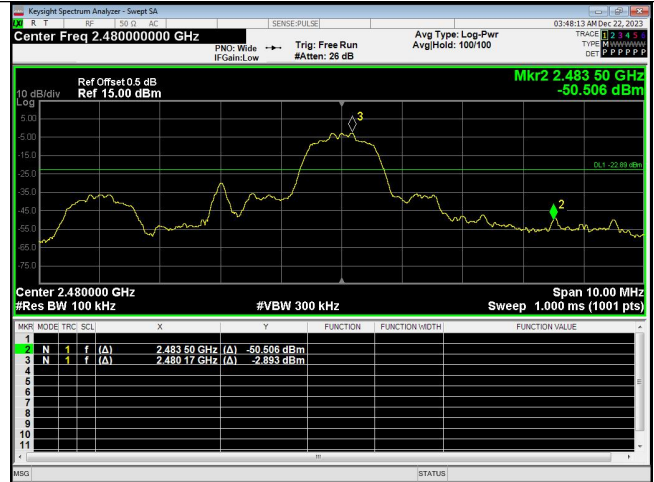
Spurious Emissions
GFSK_DH5_Channel 39



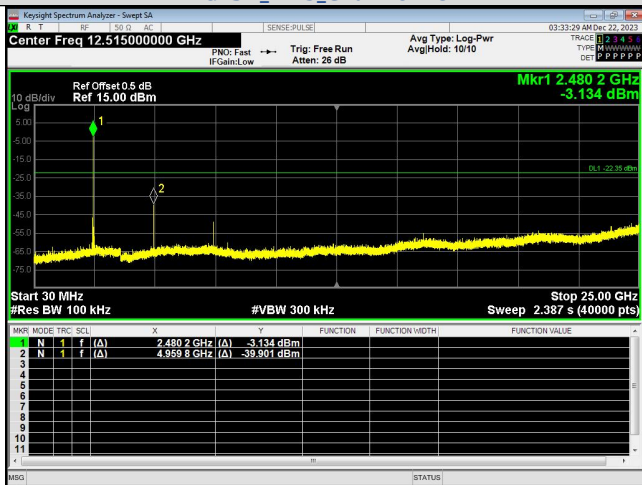
Spurious Emissions
 $\pi/4$ DQPSK_2-DH5_Channel 39



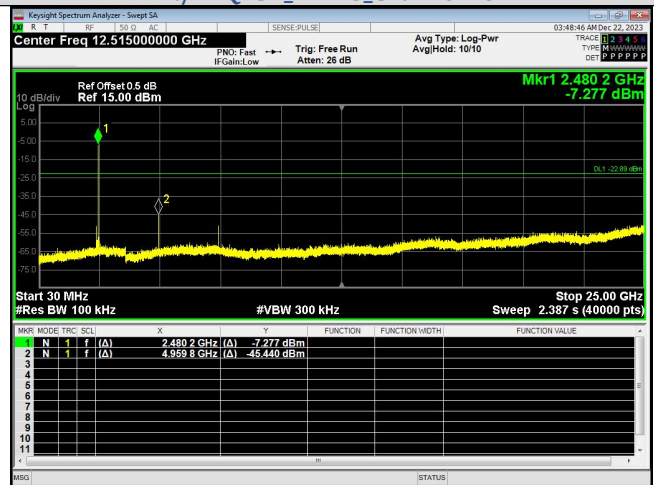
Out Of Band Emission
GFSK_DH5_Channel 78



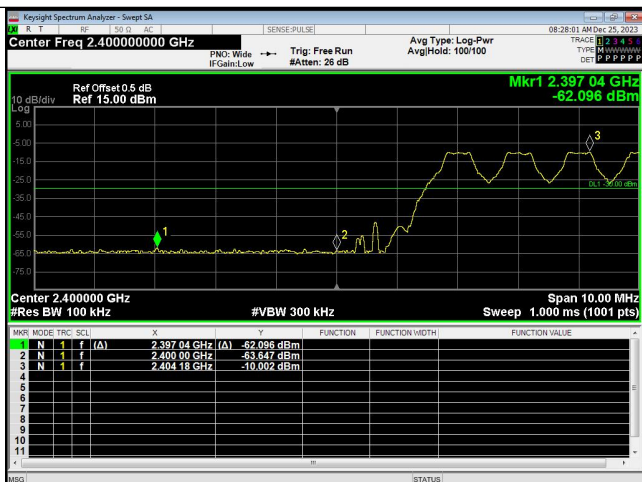
Out Of Band Emission
 $\pi/4$ DQPSK_2-DH5_Channel 78



Spurious Emission
GFSK_DH5_Channel 78



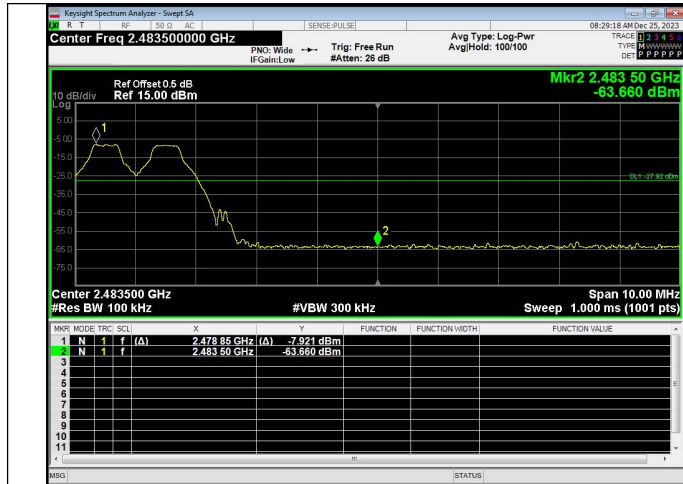
Spurious Emission
 $\pi/4$ DQPSK_2-DH5_Channel 78



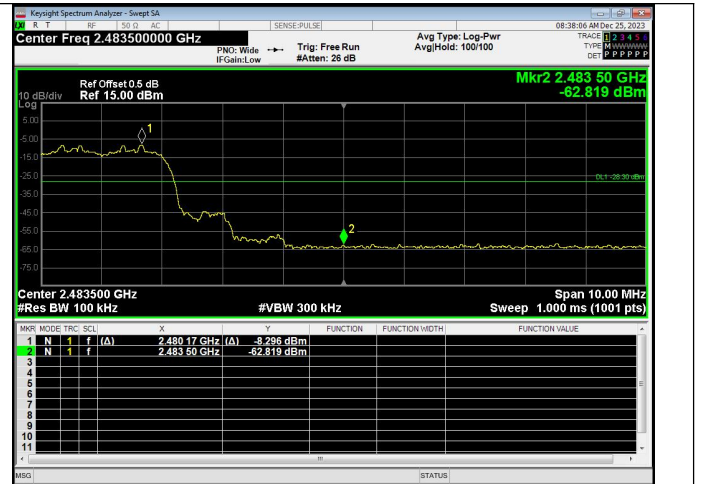
Out Of Band Emission (Left)
GFSK_DH5_Channel Hopping



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

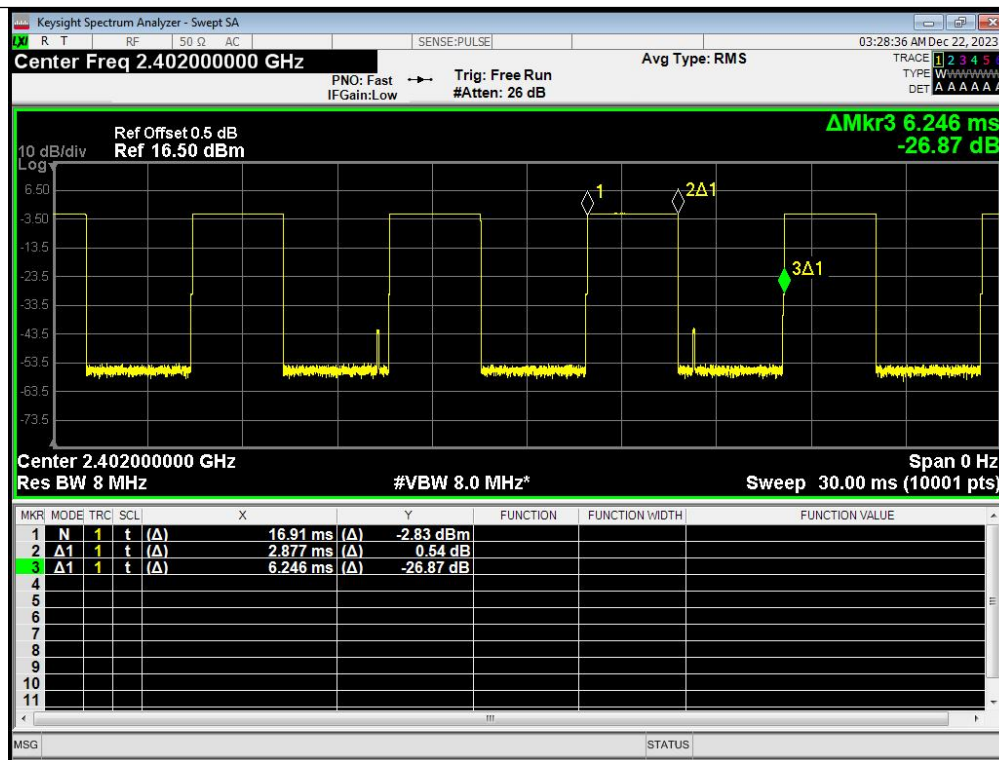


Duty Cycle

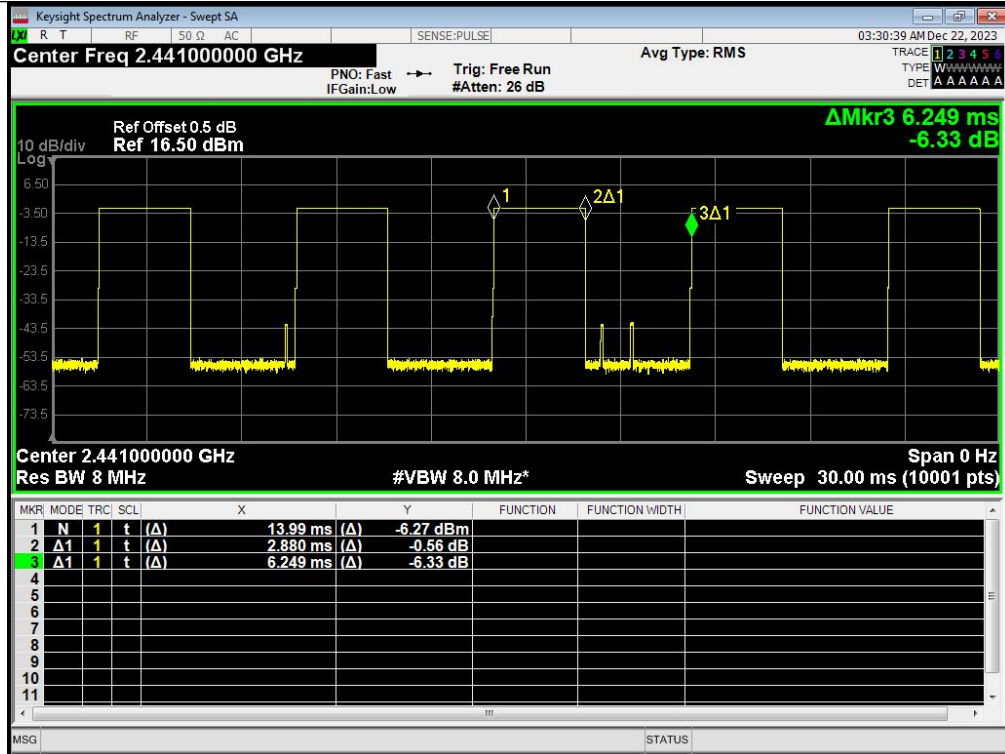
Test Result

Modulation	Packets	Channel	On Time (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle (linear)	Duty Cycle Factor (dB)
GFSK	DH5	0	2.877	6.246	46.06	0.4606	3.3668
		39	2.880	6.249	46.09	0.4609	3.3639
		78	2.877	6.246	46.06	0.4606	3.3668
$\pi/4$ DQPSK	2-DH5	0	2.886	6.249	46.18	0.4618	3.3555
		39	2.883	6.246	46.16	0.4616	3.3573
		78	2.886	6.246	46.21	0.4621	3.3526

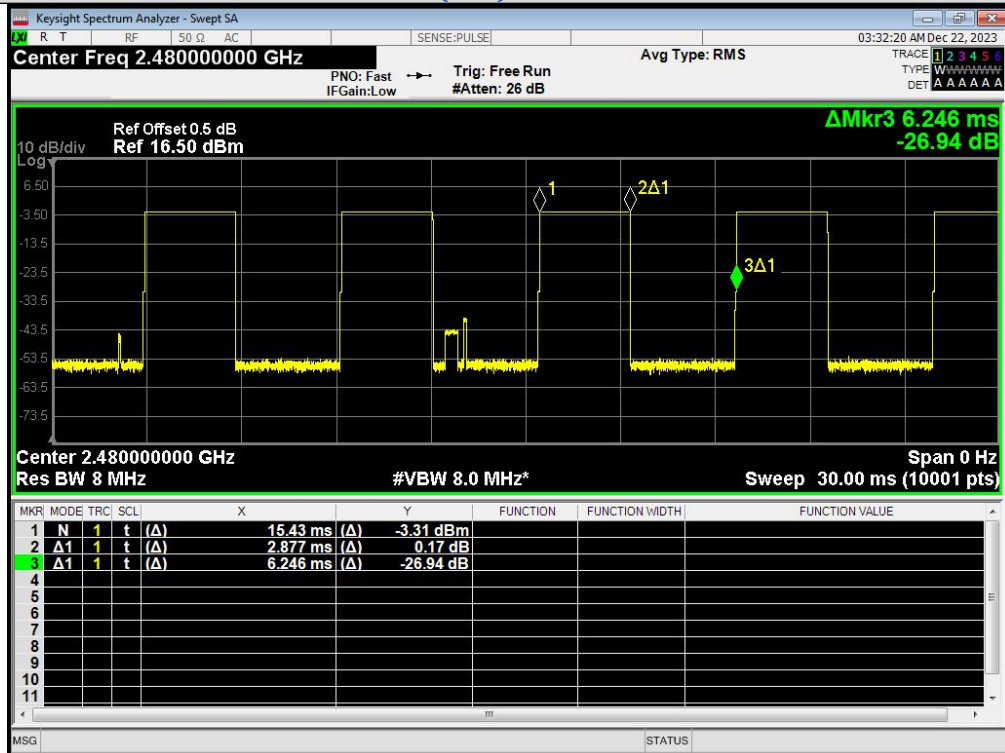
Test Graphs



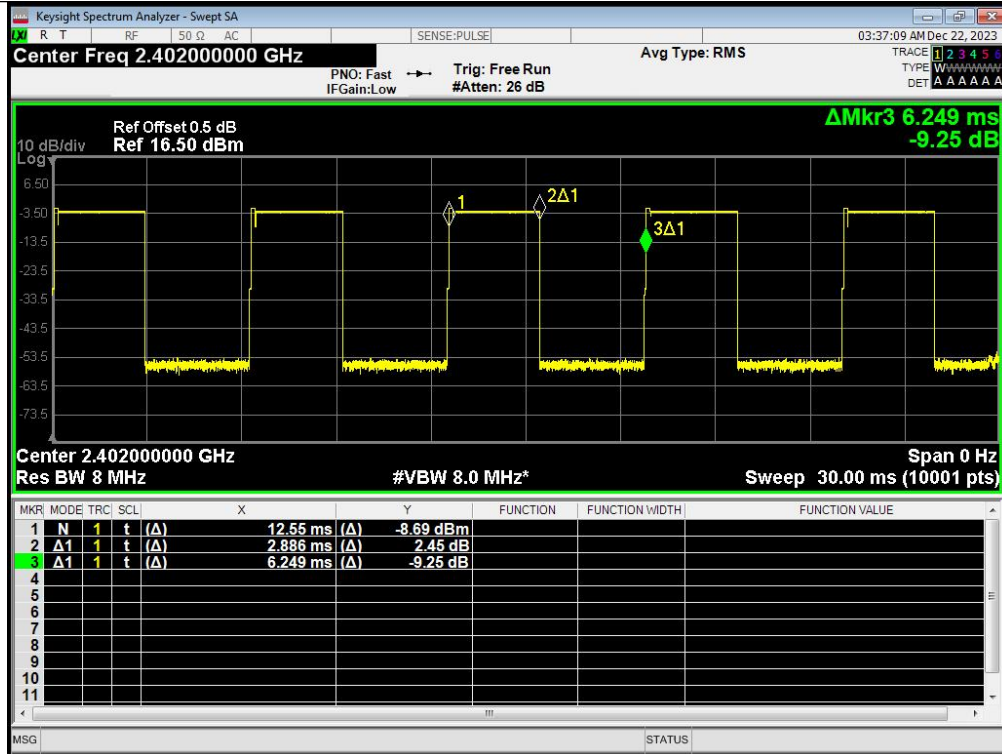
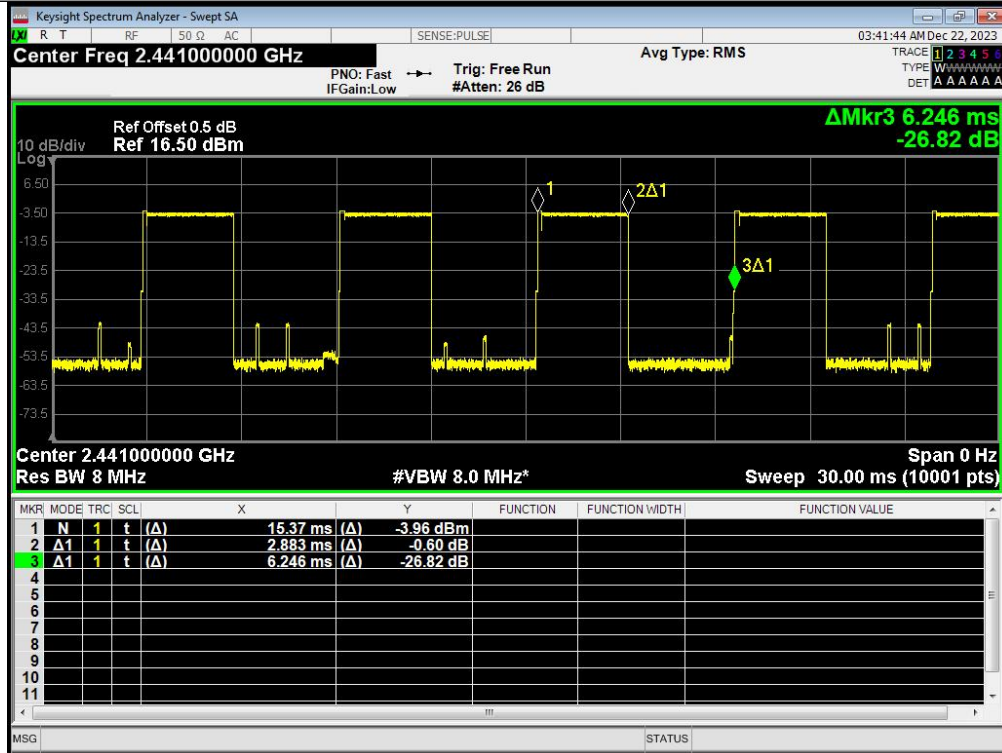
GFSK(DH5)_Channel 0

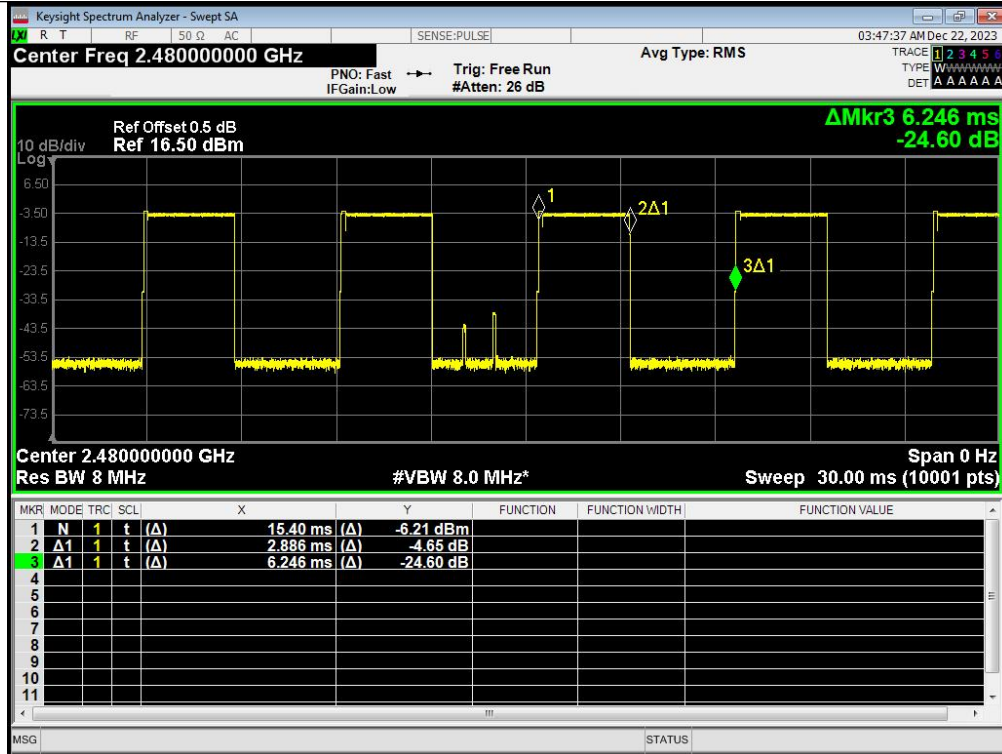


GFSK(DH5)_Channel 39



GFSK(DH5)_Channel 78

 $\pi/4$ QPSK(2-DH5)_Channel 0 $\pi/4$ QPSK(2-DH5)_Channel 39



$\pi/4$ DQPSK(2-DH5)_Channel 78



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	CH39 (2441MHz)	2.896	114	330.14	< 400	PASS
$\pi/4$ DQPSK	2-DH5		2.880	102	293.76		PASS

Test Graphs





Number Of Hopping Channel

Test Result

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

Test Graphs

