

Appendix A

RF Test Data for BT V4.2(DSS) (Conducted Measurement)

Product Name: LED bluetooth controller

Trade Mark: N/A

Test Model: CL306

Environmental Conditions

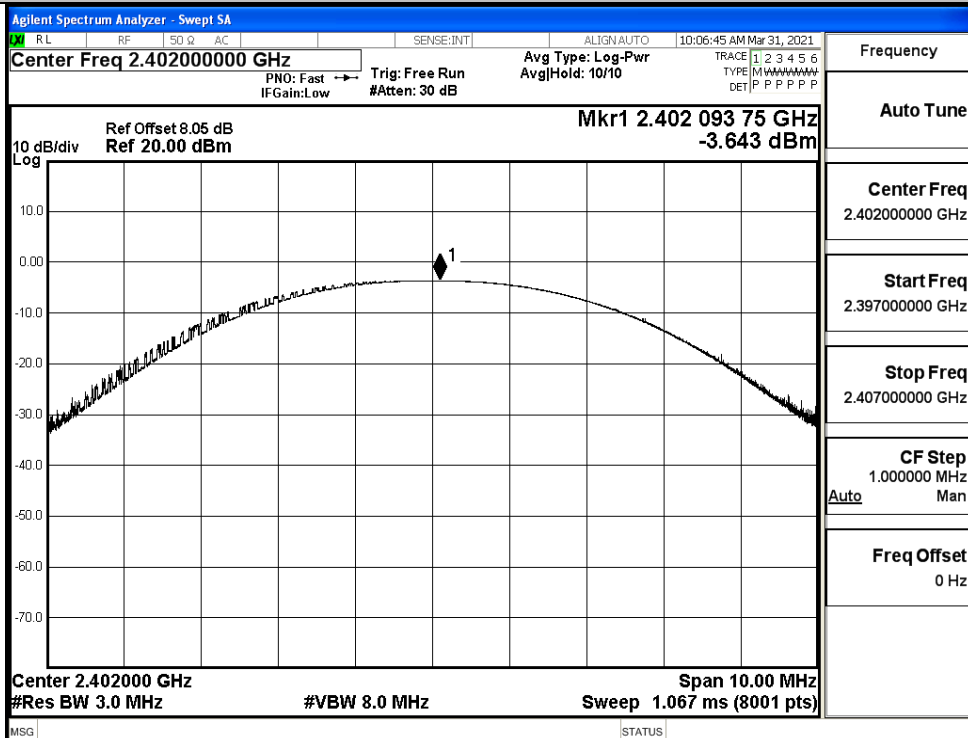
Temperature:	22.4 ° C
Relative Humidity:	53.5%
ATM Pressure:	100.0 kPa
Test Engineer:	Carl Fu
Supervised by:	Li Huan

A.1 Maximum Conducted Peak Output Power

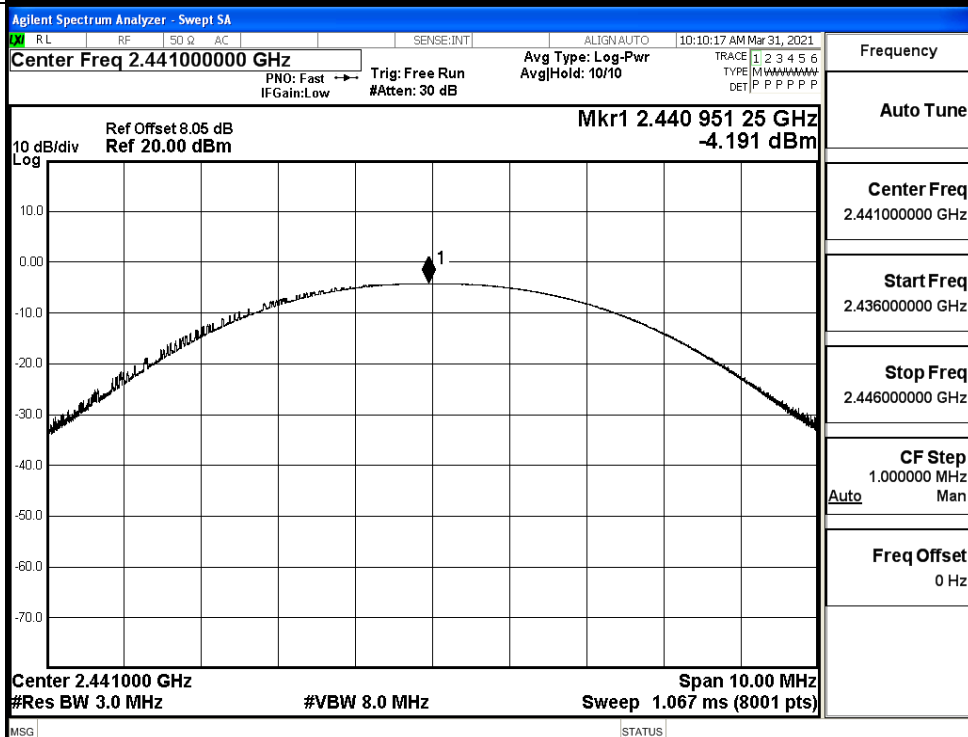
Mode	Channel.	Maximum Peak Output Power [dBm]	Limit [dBm]	Verdict
GFSK	LCH	-3.643	21	PASS
	MCH	-4.191	21	PASS
	HCH	-4.448	21	PASS

Test Graphs

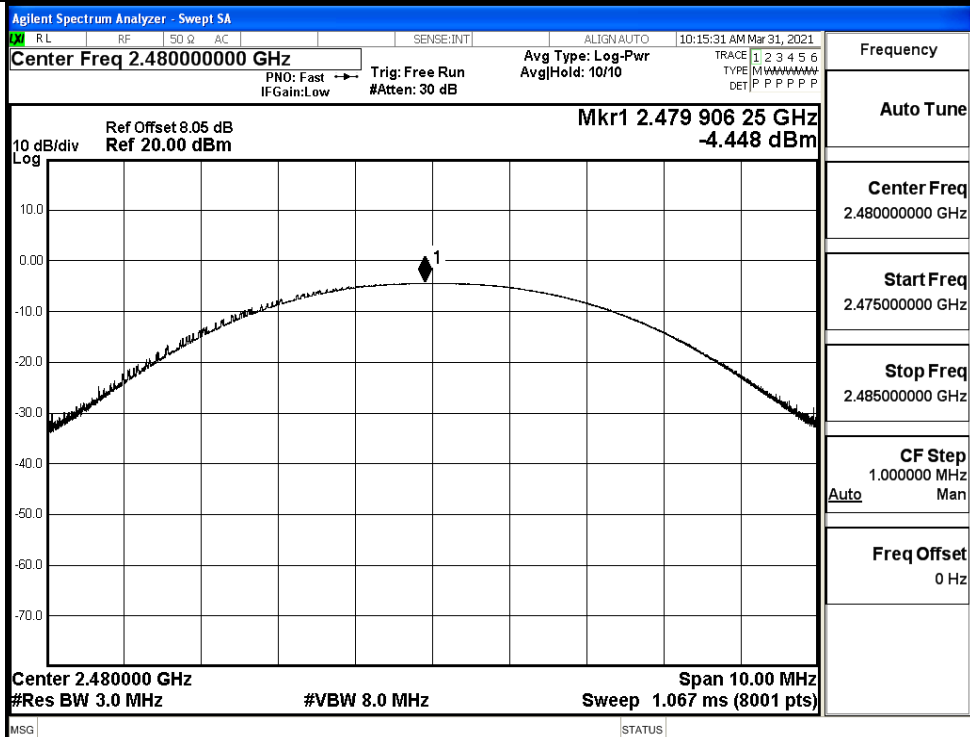
GFSK/LCH



GFSK/MCH



GFSK/HCH

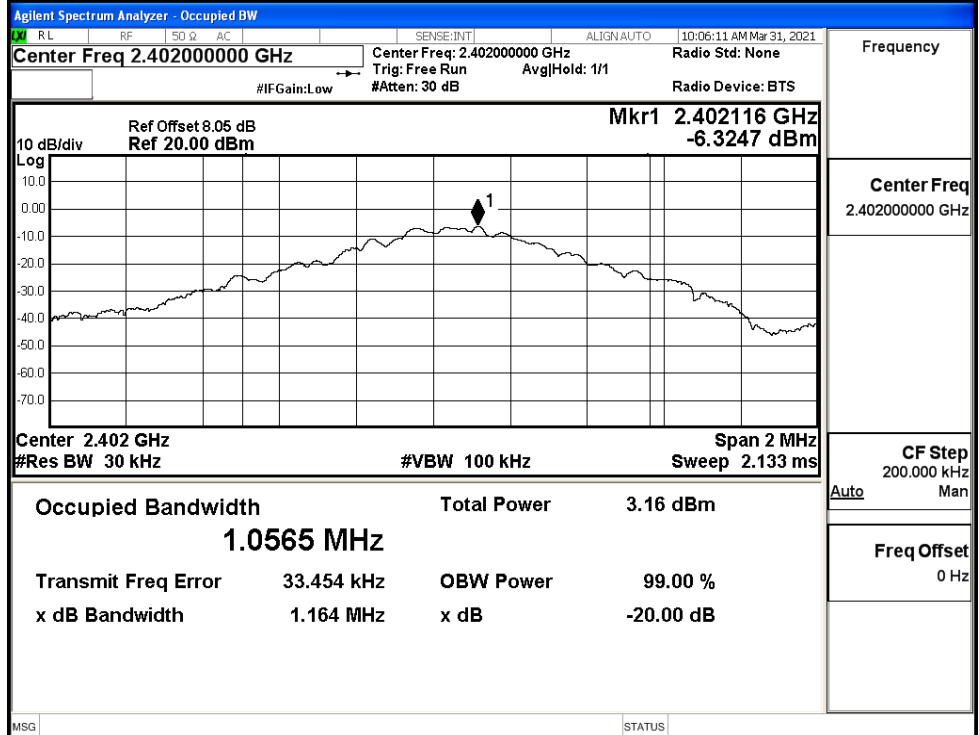


A.2 20dB Bandwidth

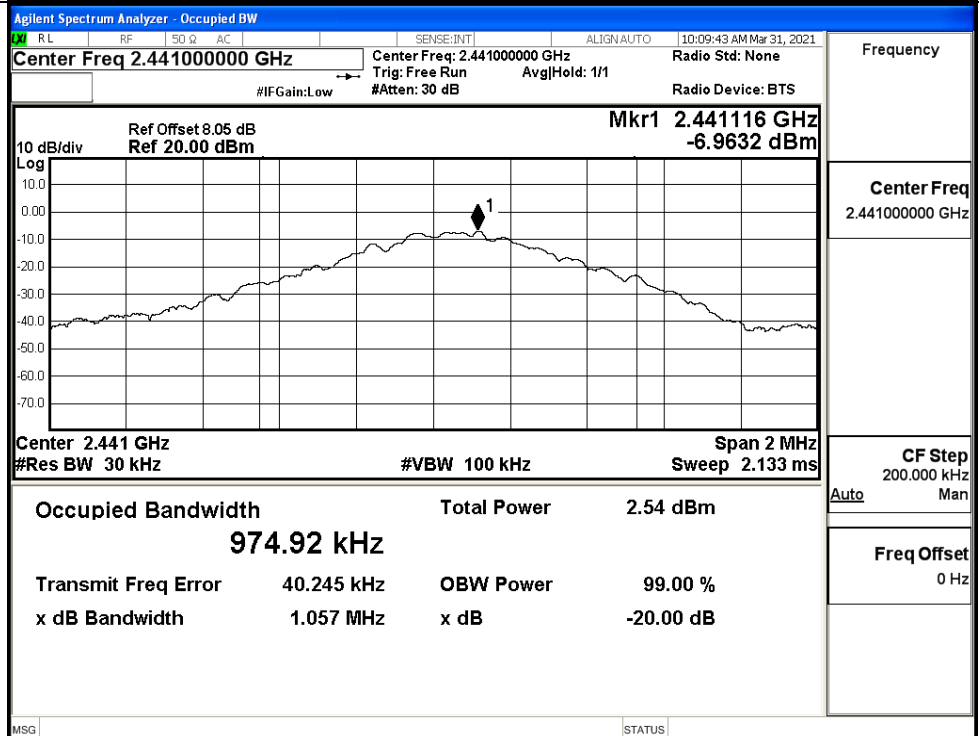
Mode	Channel.	20dB Bandwidth [MHz]	Limit [MHz]	Verdict
GFSK	LCH	1.164	Not Specified	PASS
	MCH	1.057	Not Specified	PASS
	HCH	1.054	Not Specified	PASS

Test Graphs

GFSK/LCH



GFSK/MCH



GFSK/HCH

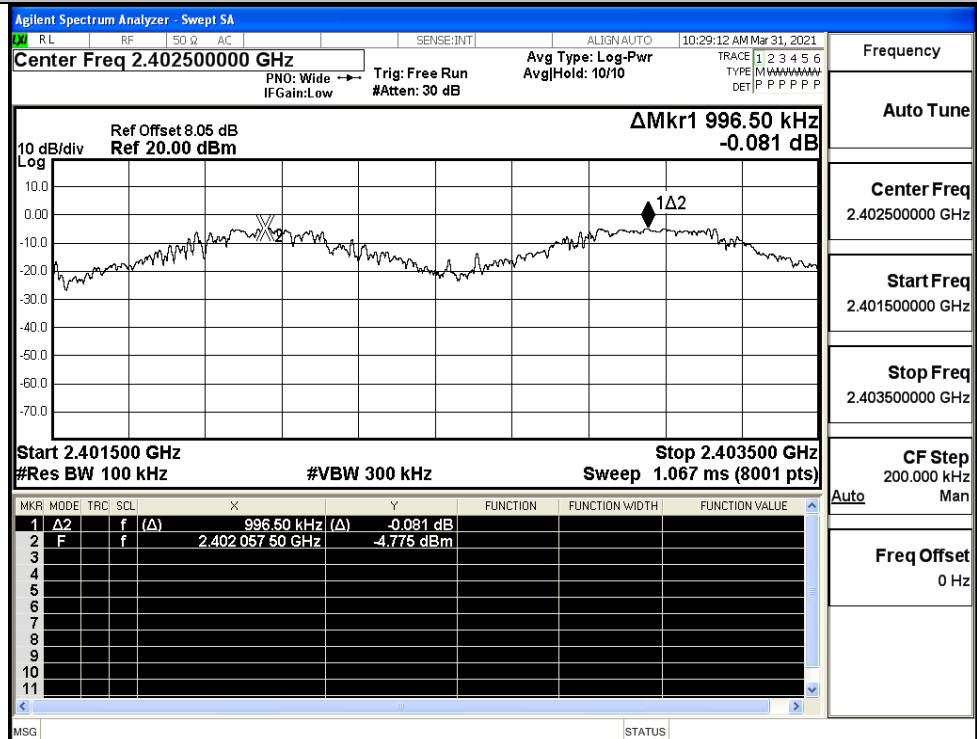


A.3 Carrier Frequency Separation

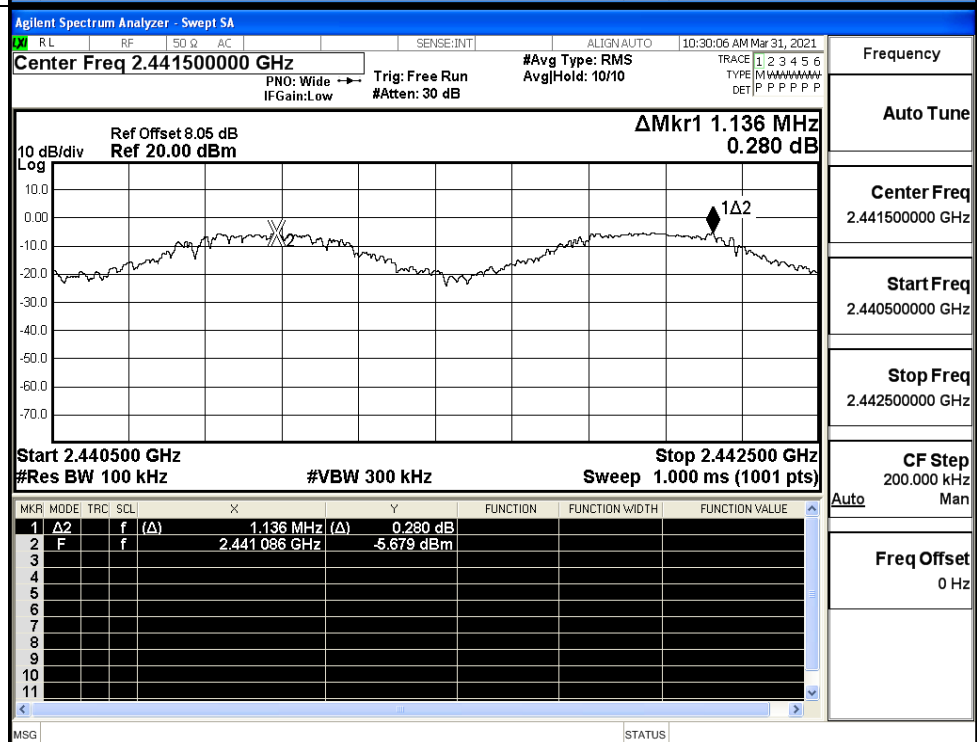
Mode	Channel.	Carrier Frequency Separation [MHz]	Limit [MHz]	Verdict
GFSK	LCH	0.997	0.776	PASS
	MCH	1.136	0.776	PASS
	HCH	1.006	0.776	PASS

Test Graphs

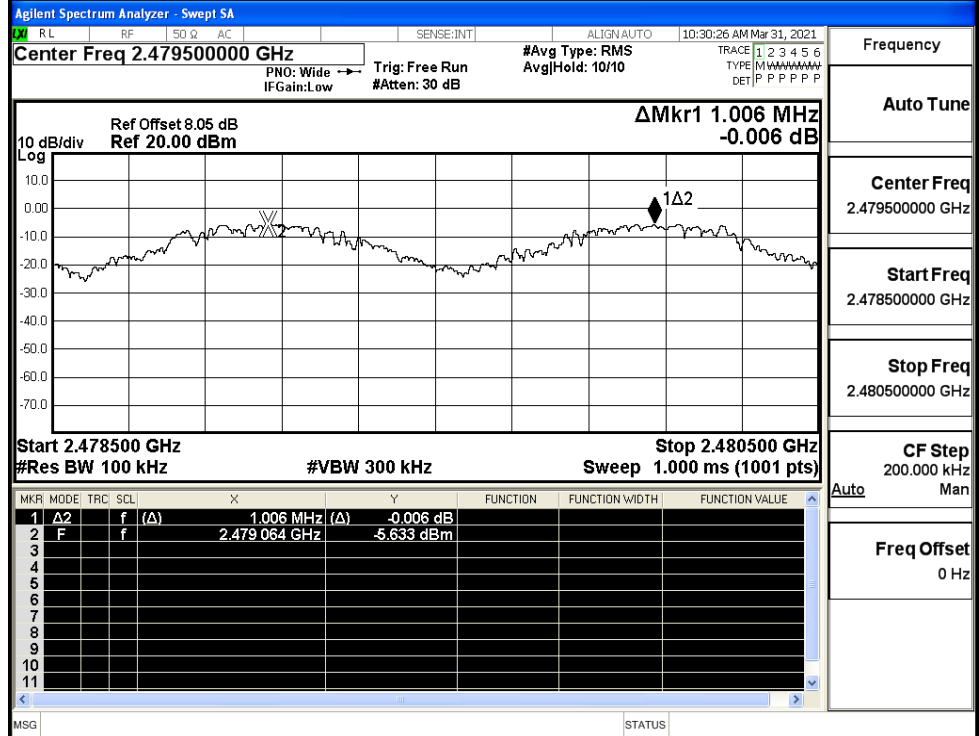
GFSK/LCH



GFSK/MCH



GFSK/HCH

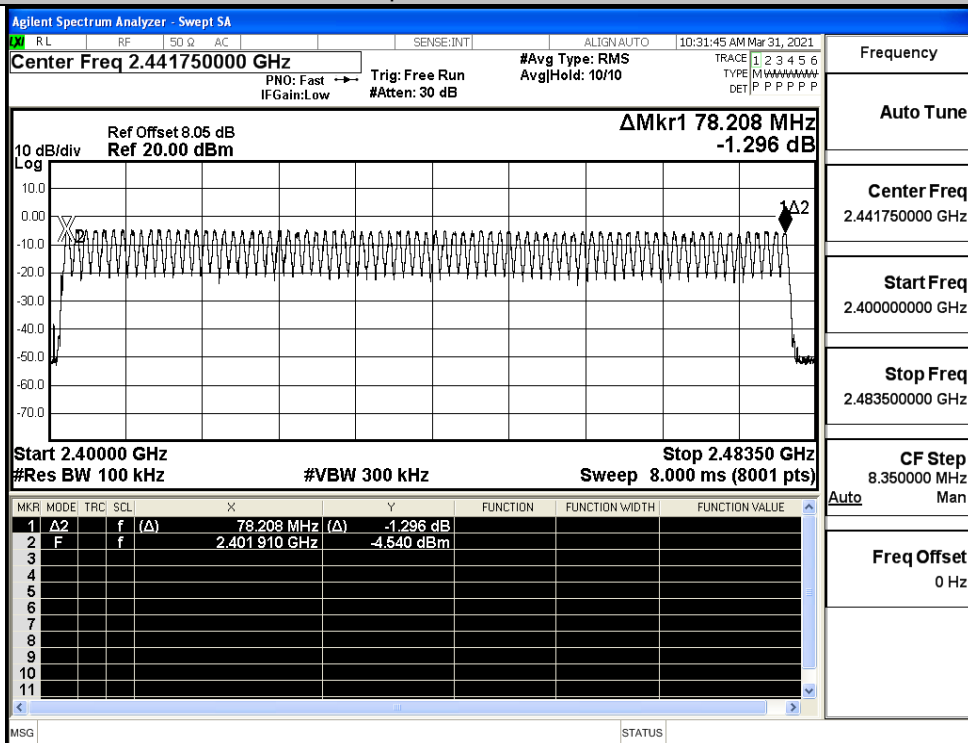


A.4 Hopping Channel Number

Mode	Channel.	Number of Hopping Channel [N]	Limit [N]	Verdict
GFSK	Hop	79	>=15	PASS
$\pi/4$ DQPSK	Hop	79	>=15	PASS
8DPSK	Hop	79	>=15	PASS

Test Graphs

GFSK/Hop

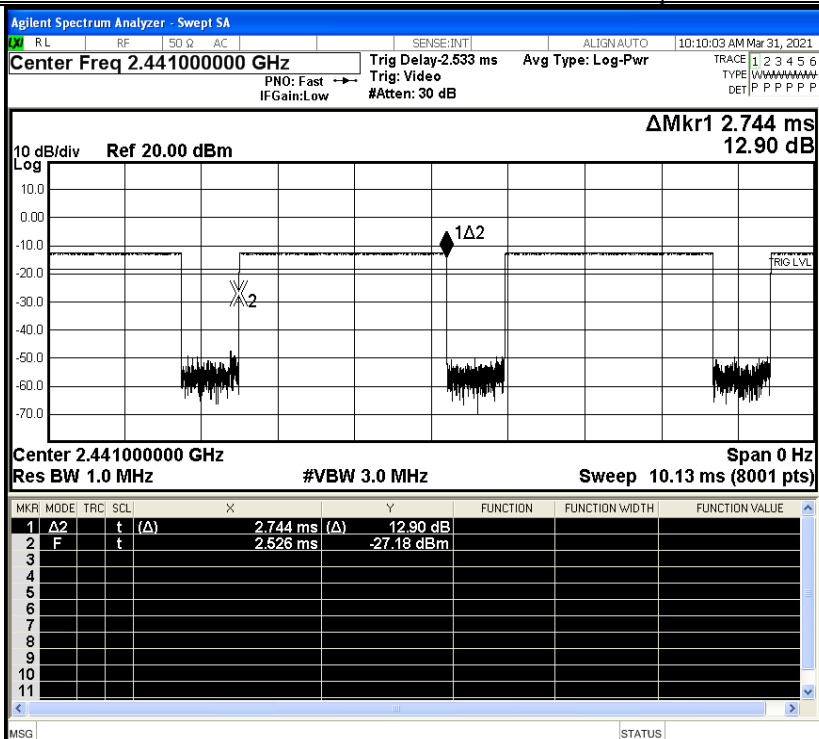


A.5 Dwell Time

Mode	Packet	Channel	Burst Width [ms/hop/ch]	Total Hops[hop*ch]	Dwell Time[s]	Limit [s]	Verdict
GFSK	DH5	LCH	2.74	106.7	0.292	0.4	PASS
	DH5	MCH	2.74	106.7	0.292	0.4	PASS
	DH5	HCH	2.74	106.7	0.292	0.4	PASS



GFSK_DH5/MCH



Frequency

Auto Tune

Center Freq

2.441000000 GHz

Start Freq

2.441000000 GHz

Stop Freq

2.441000000 GHz

CF Step

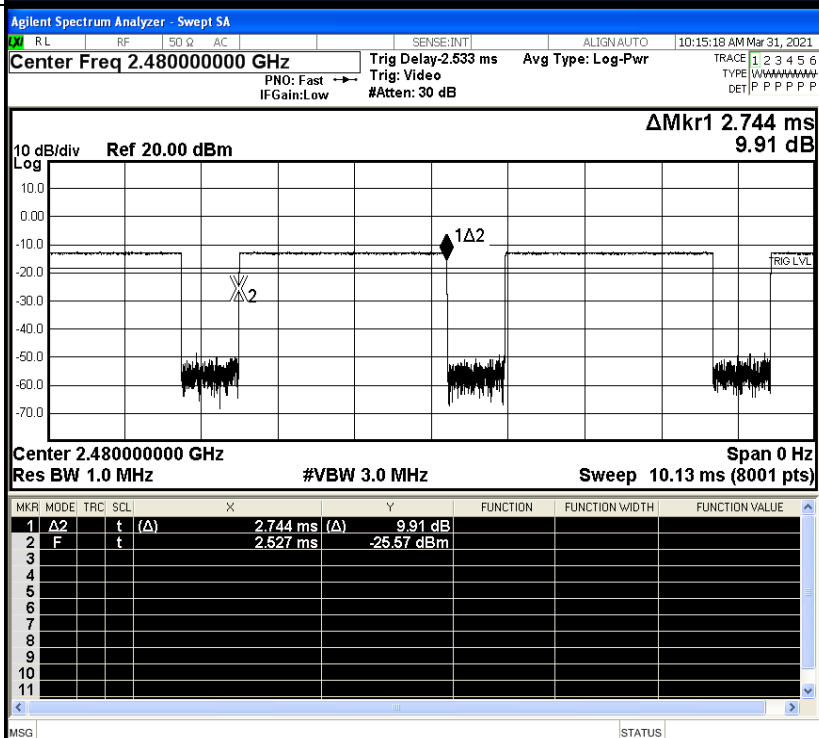
1.000000 MHz

Auto Man

Freq Offset

0 Hz

GFSK_DH5/HCH



Frequency

Auto Tune

Center Freq

2.480000000 GHz

Start Freq

2.480000000 GHz

Stop Freq

2.480000000 GHz

CF Step

1.000000 MHz

Auto Man

Freq Offset

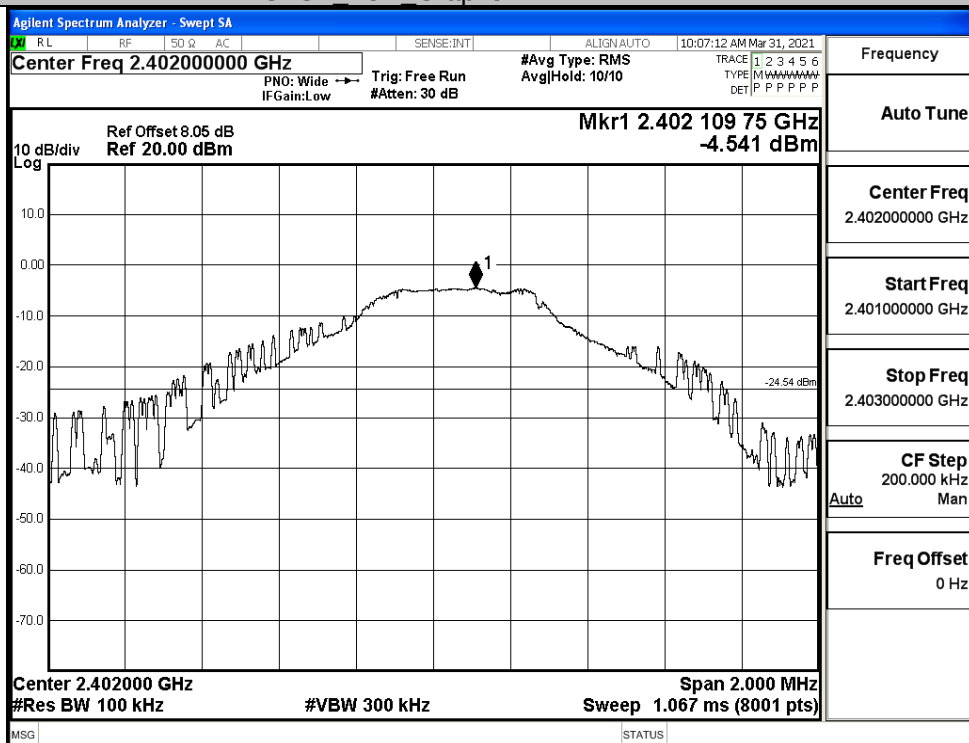
0 Hz

A.6 RF Conducted Spurious Emissions

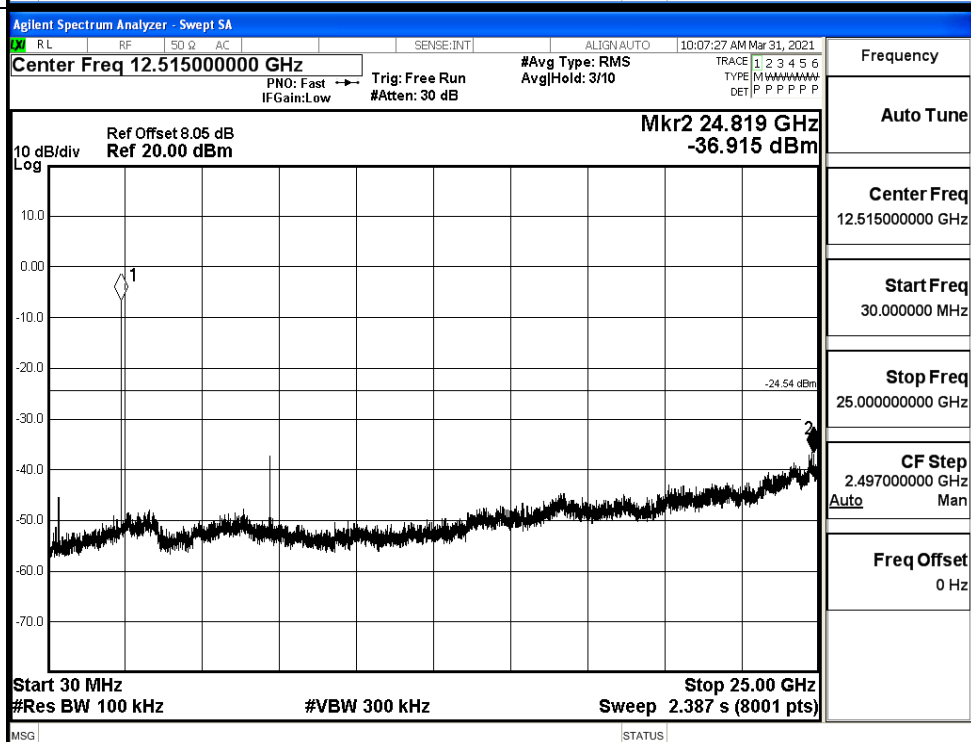
Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
GFSK	LCH	-4.541	-36.915	-24.541	PASS
	MCH	-5.167	-37.923	-25.167	PASS
	HCH	-5.342	-37.705	-25.342	PASS

GFSK LCH Graphs

Pref

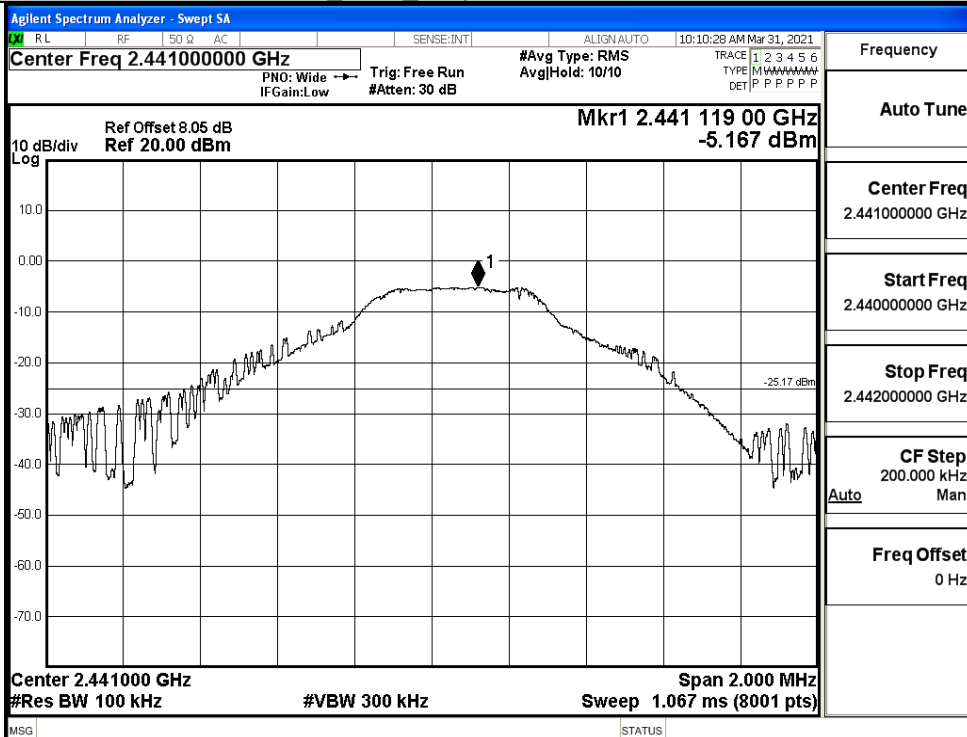


Puw

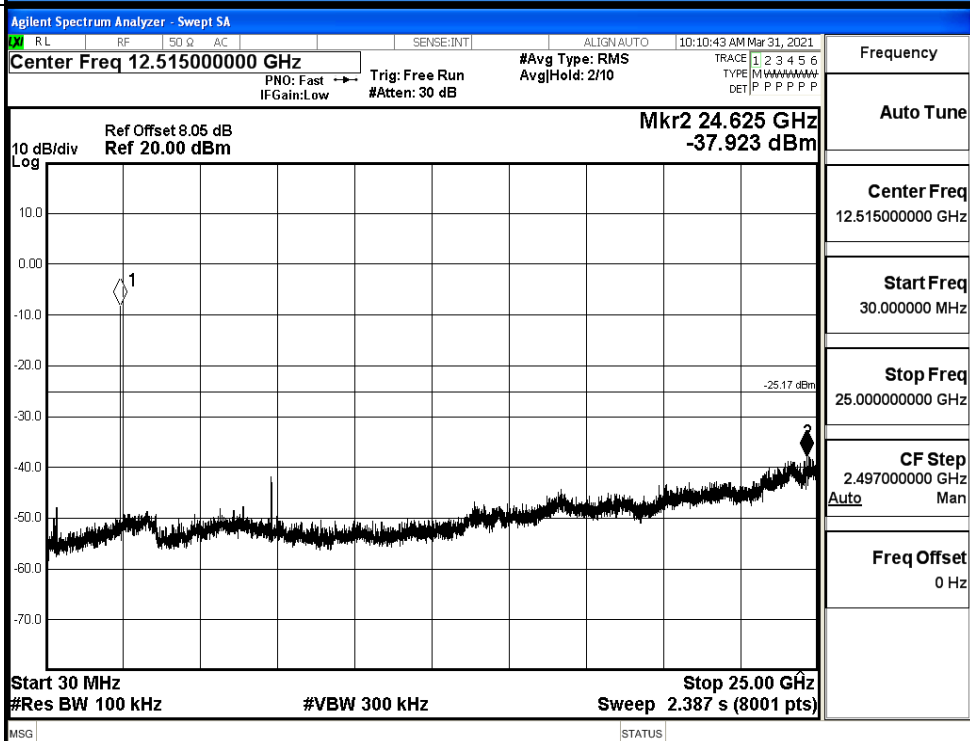


GFSK MCH_Graphs

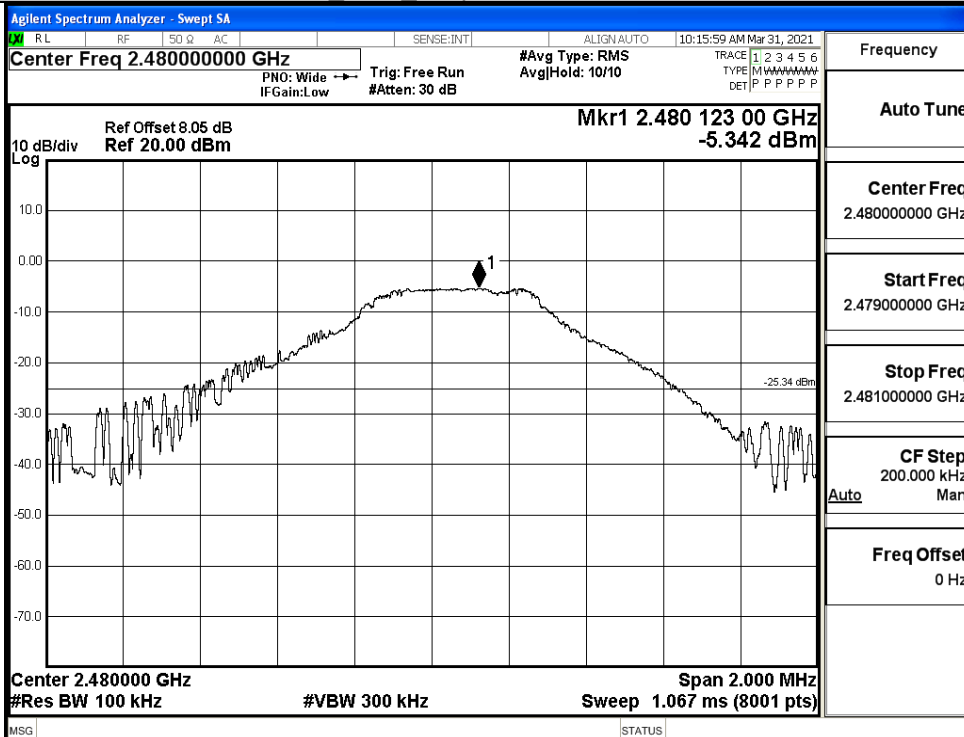
Pref



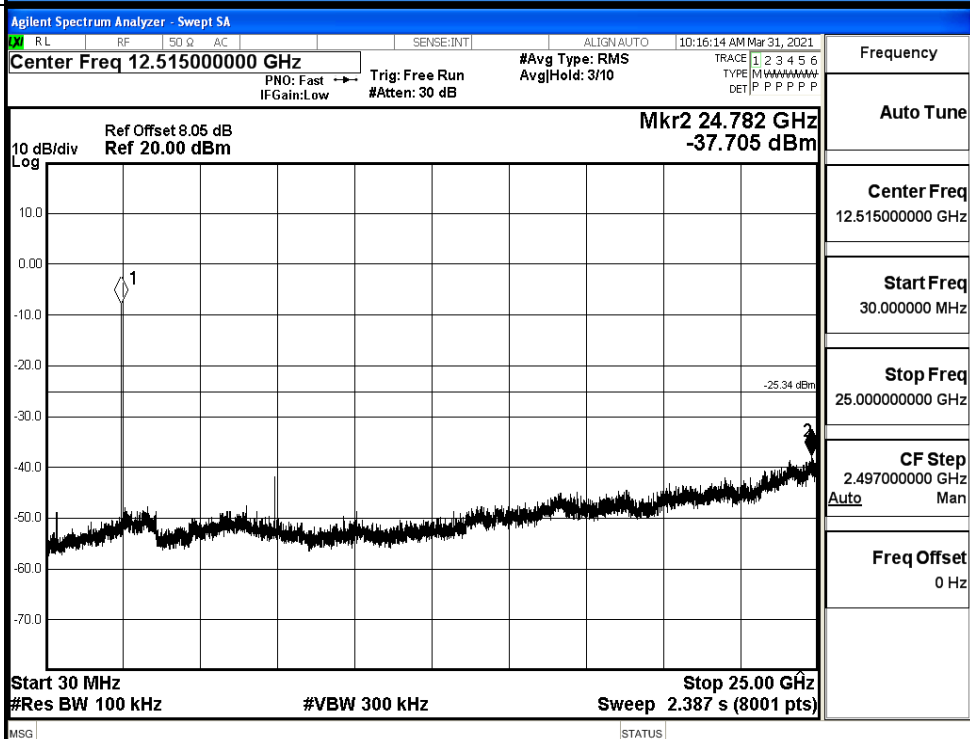
Puw



Pref



Puw

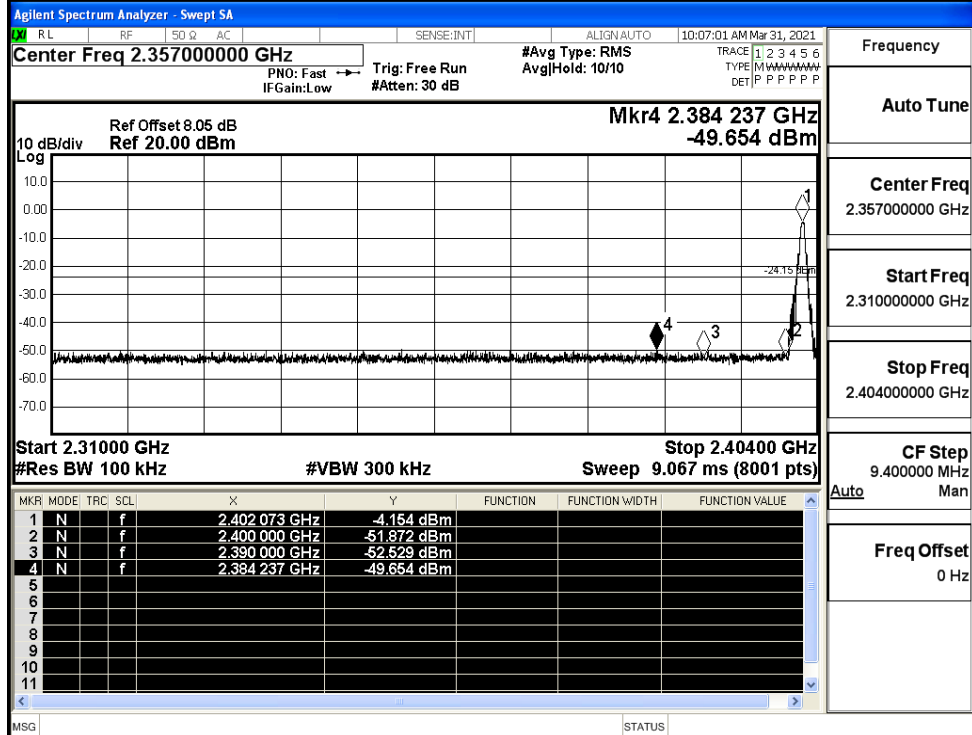


A.7 Band-edge for RF Conducted Emissions

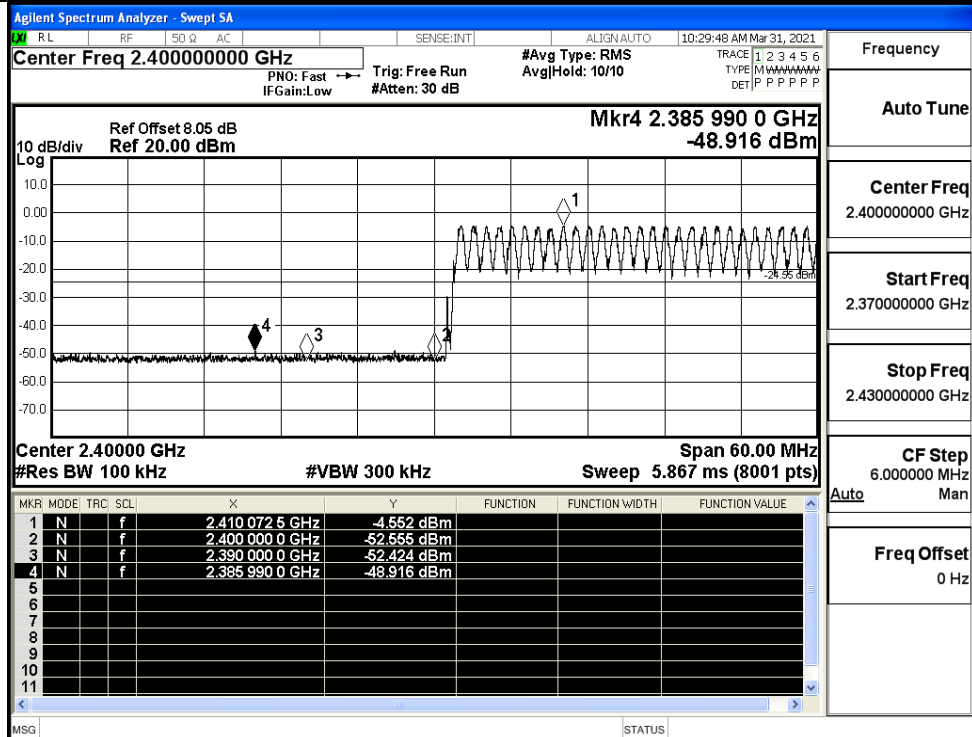
Mode	Channel	Carrier Frequency [MHz]	Carrier Power [dBm]	Frequency Hopping	Max Spurious Level [dBm]	Limit [dBm]	Verdict
GFSK	LCH	2402	-4.154	Off	-49.654	-24.15	PASS
			-4.552	On	-48.916	-24.55	PASS
	HCH	2480	-5.001	Off	-48.838	-25	PASS
			-5.124	On	-48.719	-25.12	PASS

Test Graphs

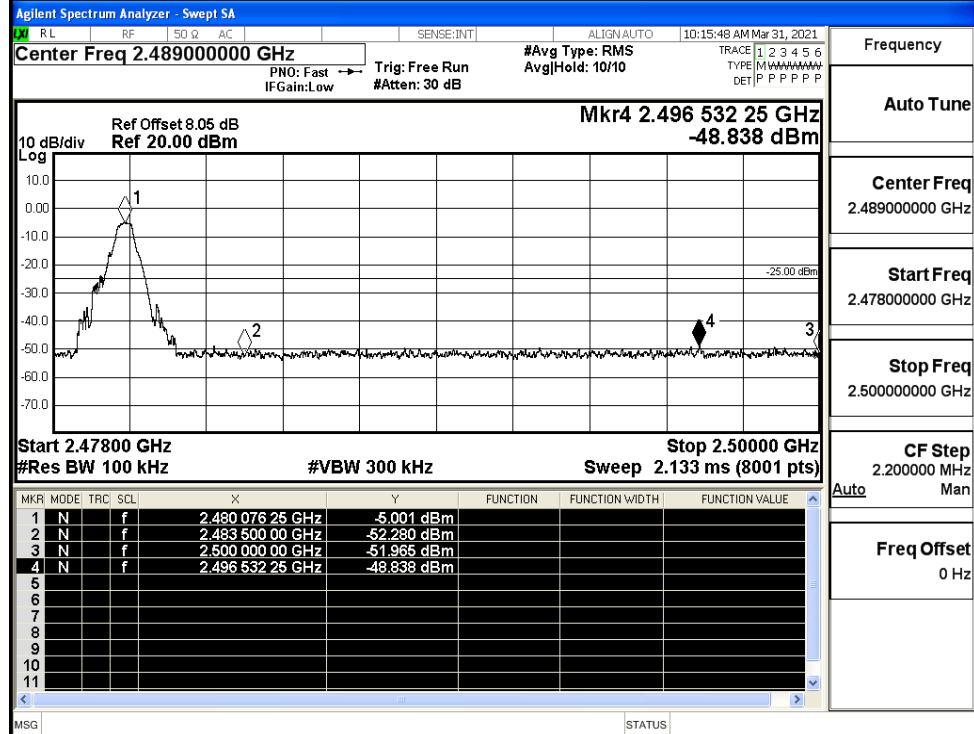
GFSK/LCH/No Hop



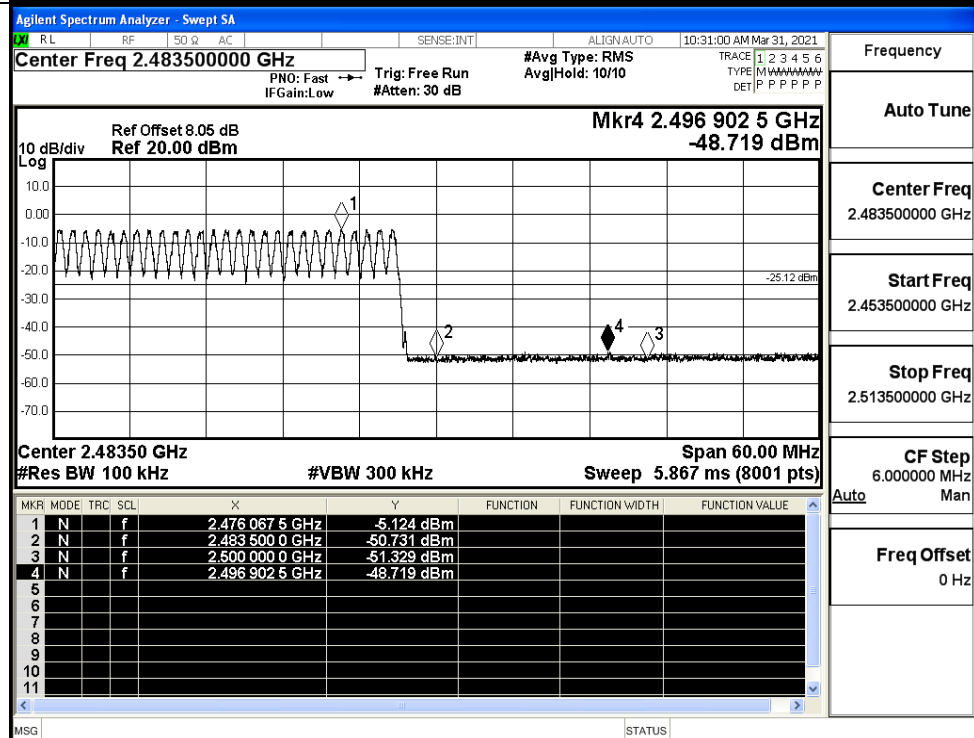
GFSK/LCH/Hop



GFSK/HCH/No Hop



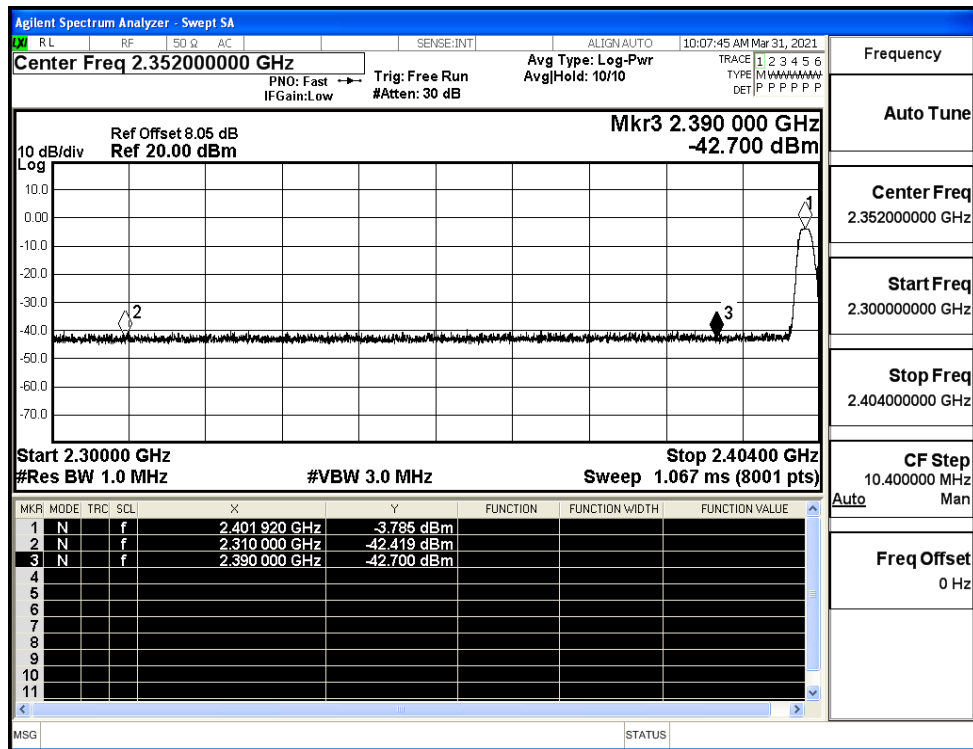
GFSK/HCH/Hop



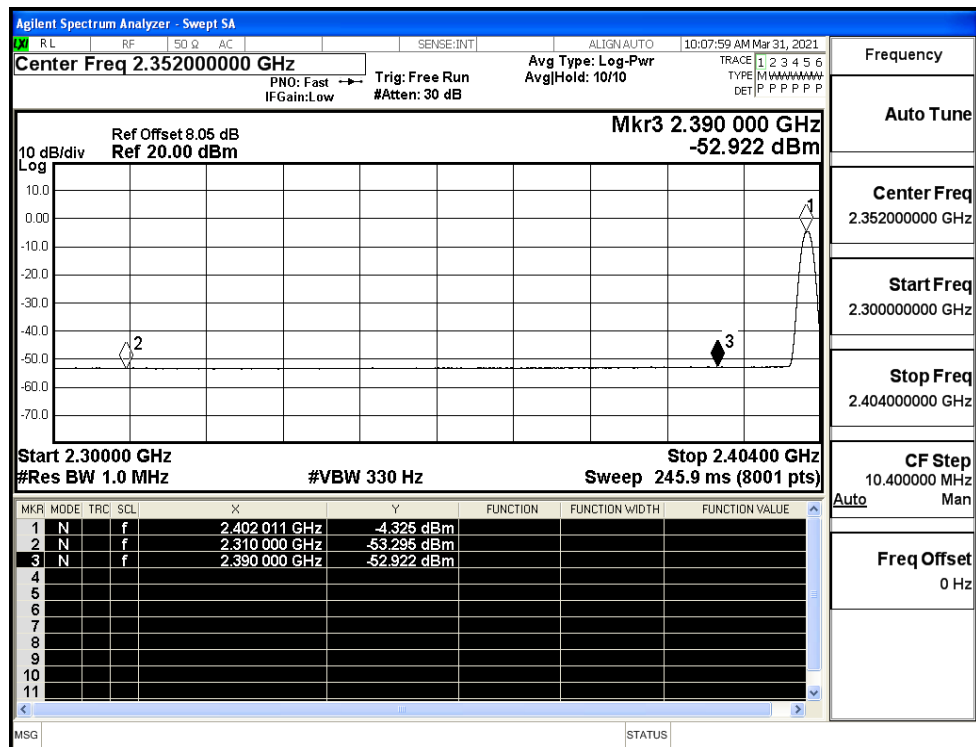
A.8 Restrict-band band-edge measurements

Test Mode	Hopping	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detector	Limit [dBuV/m]	Verdict
GFSK	Off	2310.0	-42.42	2.0	0	52.84	PEAK	74	PASS
	Off	2310.0	-53.30	2.0	0	41.96	AV	54	PASS
	Off	2390.0	-42.70	2.0	0	52.56	PEAK	74	PASS
	Off	2390.0	-52.92	2.0	0	42.34	AV	54	PASS
	Off	2483.5	-42.22	2.0	0	53.03	PEAK	74	PASS
	Off	2483.5	-52.31	2.0	0	42.95	AV	54	PASS
	Off	2500.0	-42.19	2.0	0	53.07	PEAK	74	PASS
	Off	2500.0	-52.35	2.0	0	42.91	AV	54	PASS

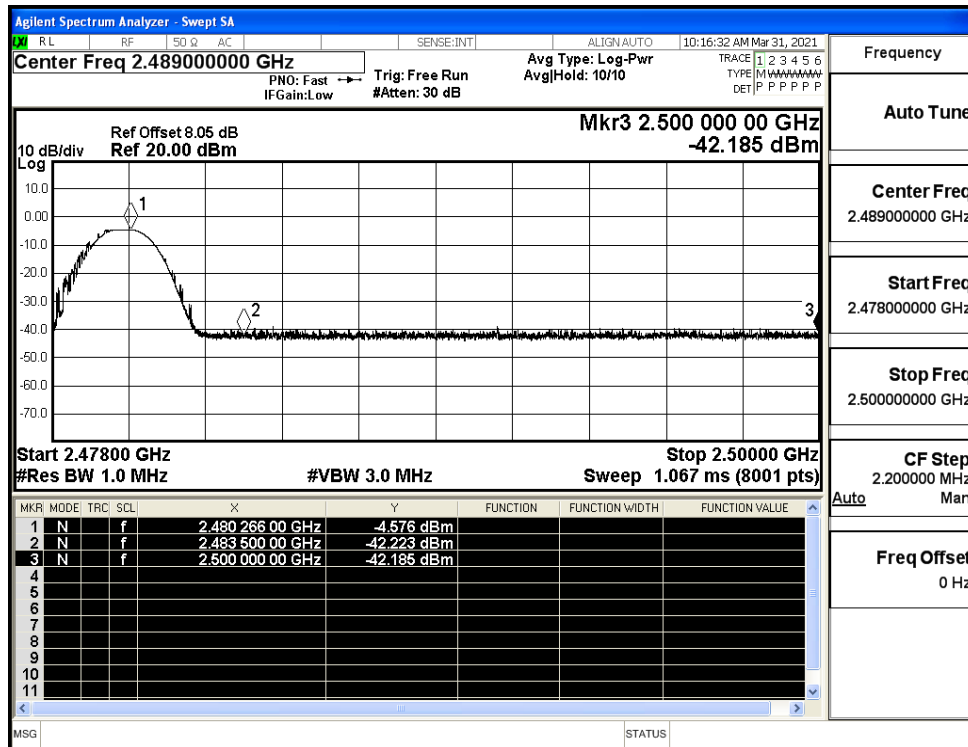
Restrict-band band-edge measurements_Hopping Off_GFSK_PEAK (Low Channel)



Restrict-band band-edge measurements_Hopping Off_GFSK_Average (Low Channel)



Restrict-band band-edge measurements_Hopping Off_GFSK_PEAK (High Channel)



Restrict-band band-edge measurements_Hopping Off_GFSK_Average (High Channel)

