

Environmental Conditions

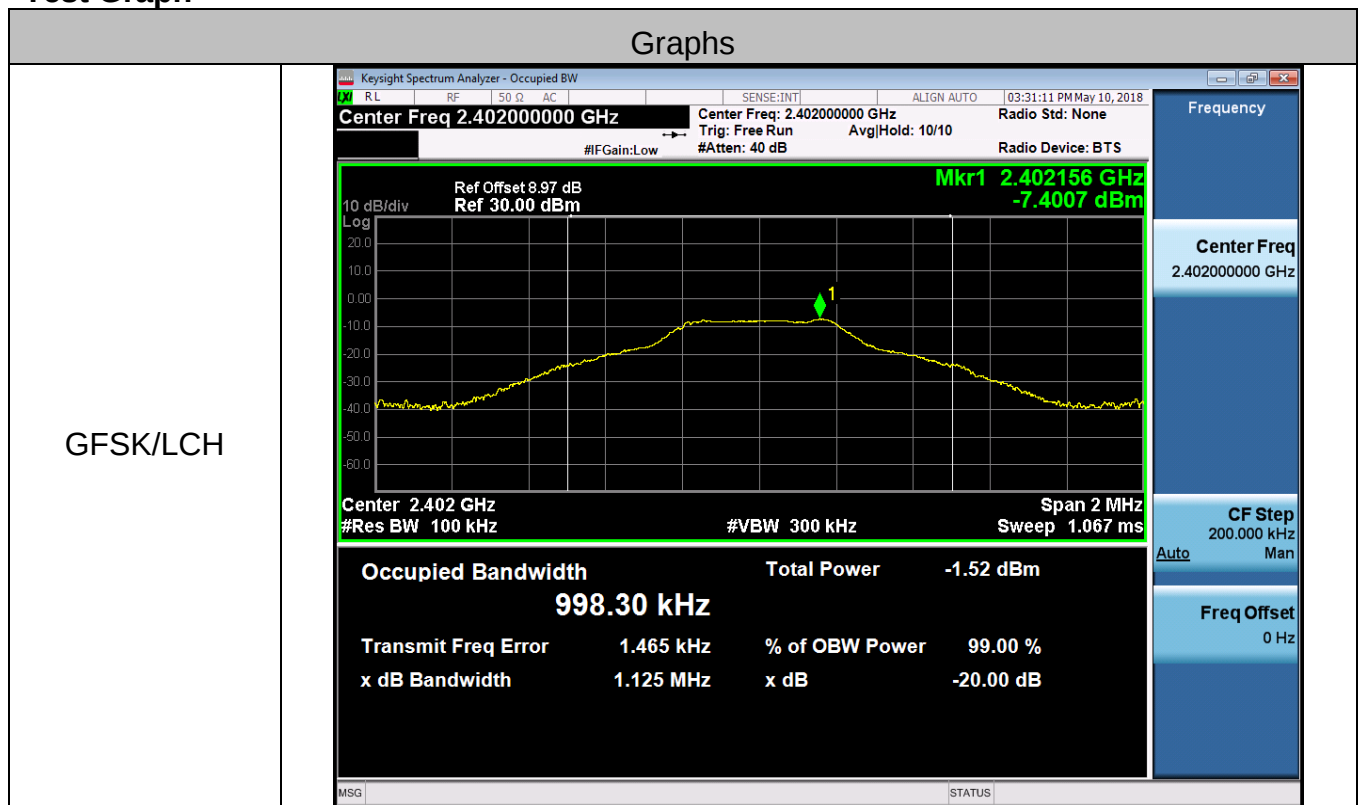
Temperature:	22.9 ° C
Relative Humidity:	52.3%
ATM Pressure:	100.0 kPa
Test Engineer:	Mina.xu
Supervised by:	Tom.Liu

Appendix A): 20dB Bandwidth

Test Result

Mode	Channel.	20dB Bandwidth [MHz]	Limit [MHz]	Verdict
GFSK	LCH	1.125	Not Specified	PASS
	MCH	1.120	Not Specified	PASS
	HCH	1.128	Not Specified	PASS

Test Graph



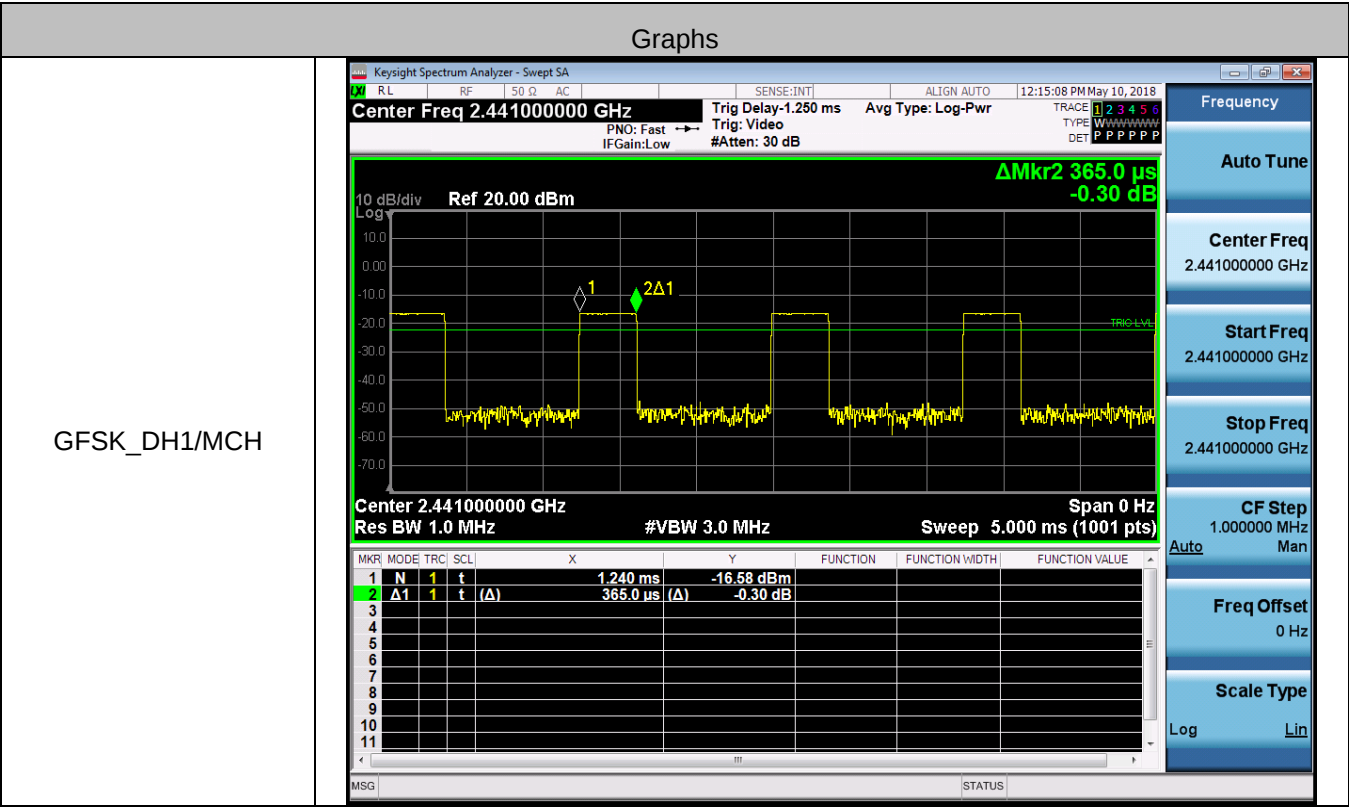
GFSK/MCH	Keysight Spectrum Analyzer - Occupied BW RL RF 50 Ω AC SENSE:INT ALIGN AUTO 05:07:25 PM May 02, 2018 Center Freq 2.441000000 GHz Center Freq: 2.441000000 GHz Trig: Free Run Avg/Hold: 10/10 Radio Std: None #IFGain:Low #Atten: 40 dB Radio Device: BTS 10 dB/div Ref Offset 9.24 dB Ref 30.00 dBm Mkr1 2.441156 GHz 2.0895 dBm  Center 2.441 GHz #Res BW 100 kHz #VBW 300 kHz Span 2 MHz Sweep 1.067 ms Occupied Bandwidth 980.21 kHz Total Power 7.97 dBm Transmit Freq Error 174 Hz % of OBW Power 99.00 % x dB Bandwidth 1.120 MHz x dB -20.00 dB MSG STATUS
GFSK/HCH	Keysight Spectrum Analyzer - Occupied BW RL RF 50 Ω AC SENSE:INT ALIGN AUTO 05:10:08 PM May 02, 2018 Center Freq 2.480000000 GHz Center Freq: 2.480000000 GHz Trig: Free Run Avg/Hold: 10/10 Radio Std: None #IFGain:Low #Atten: 40 dB Radio Device: BTS 10 dB/div Ref Offset 9.24 dB Ref 30.00 dBm Mkr1 2.4801568 GHz 2.1179 dBm  Center 2.48 GHz #Res BW 100 kHz #VBW 300 kHz Span 2 MHz Sweep 1.067 ms Occupied Bandwidth 983.59 kHz Total Power 7.97 dBm Transmit Freq Error 238 Hz % of OBW Power 99.00 % x dB Bandwidth 1.128 MHz x dB -20.00 dB MSG STATUS

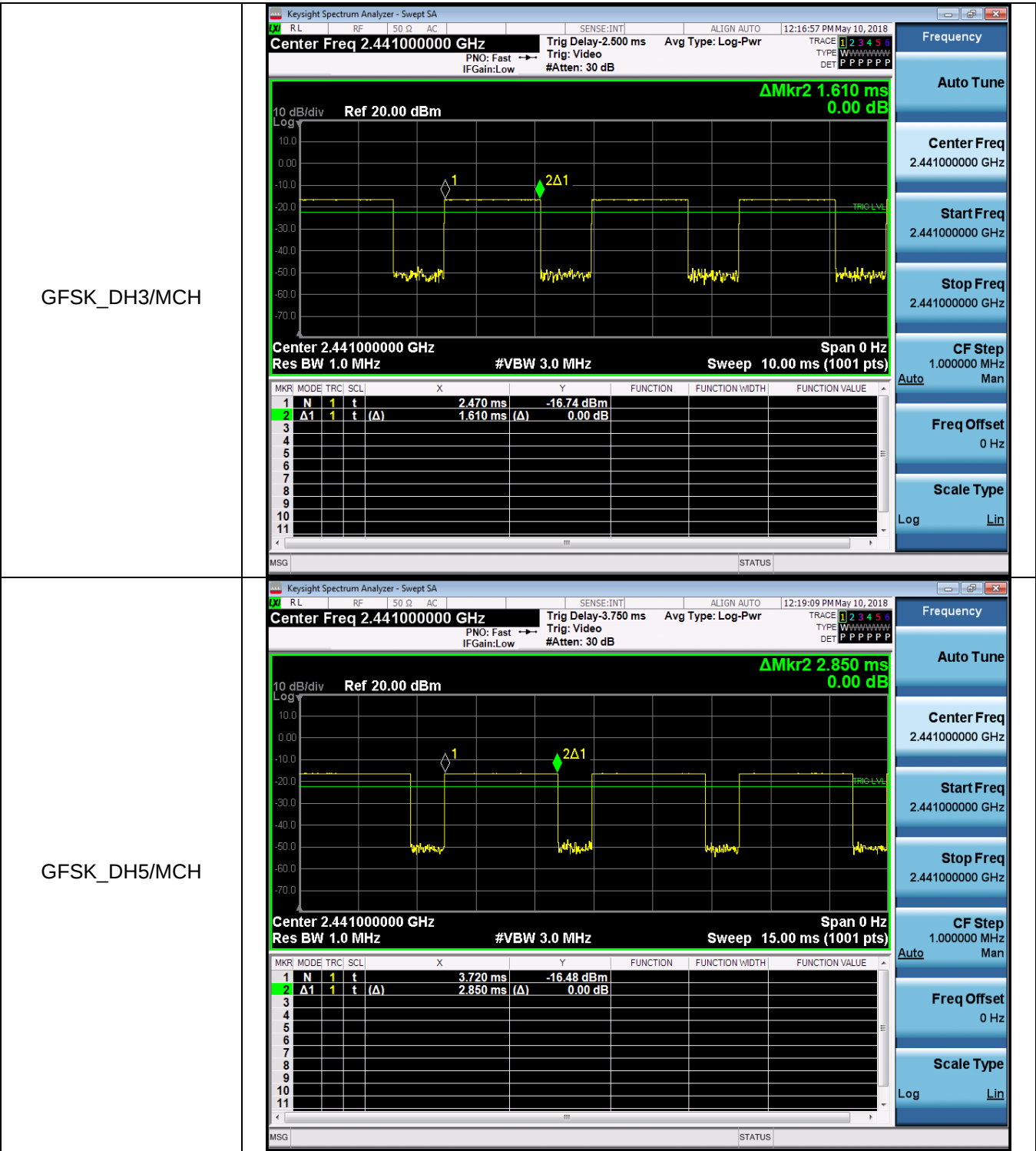
Appendix B): Dwell Time

Result Table

Mode	Packet	Chann el	Burst Width [ms/hop/ch]	Total Hops[hop*ch]	Dwell Time[s]	Limit [s]	Verdic t
GFSK	DH1	MCH	0.37	320	0.118	0.4	PASS
GFSK	DH3	MCH	1.61	160	0.258	0.4	PASS
GFSK	DH5	MCH	2.85	106.7	0.304	0.4	PASS

Test Graph



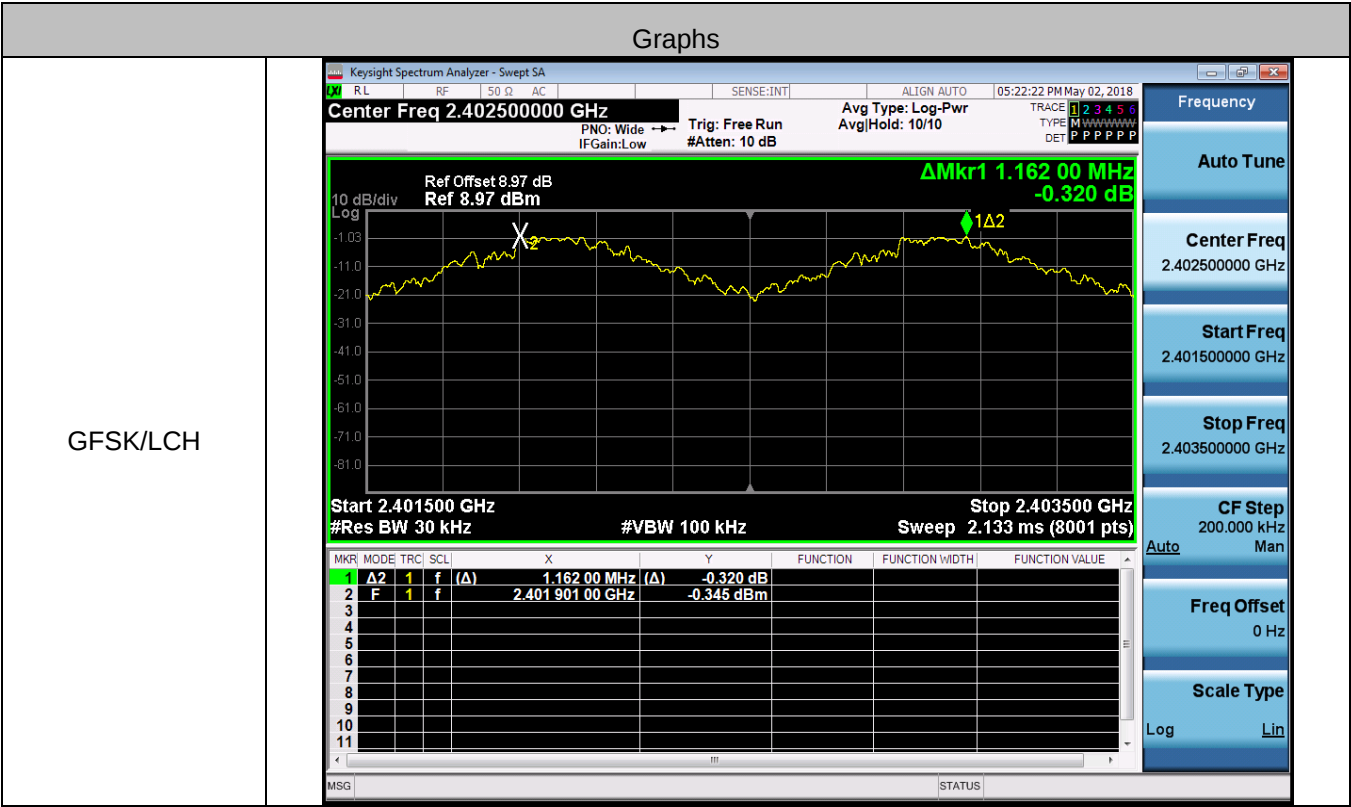


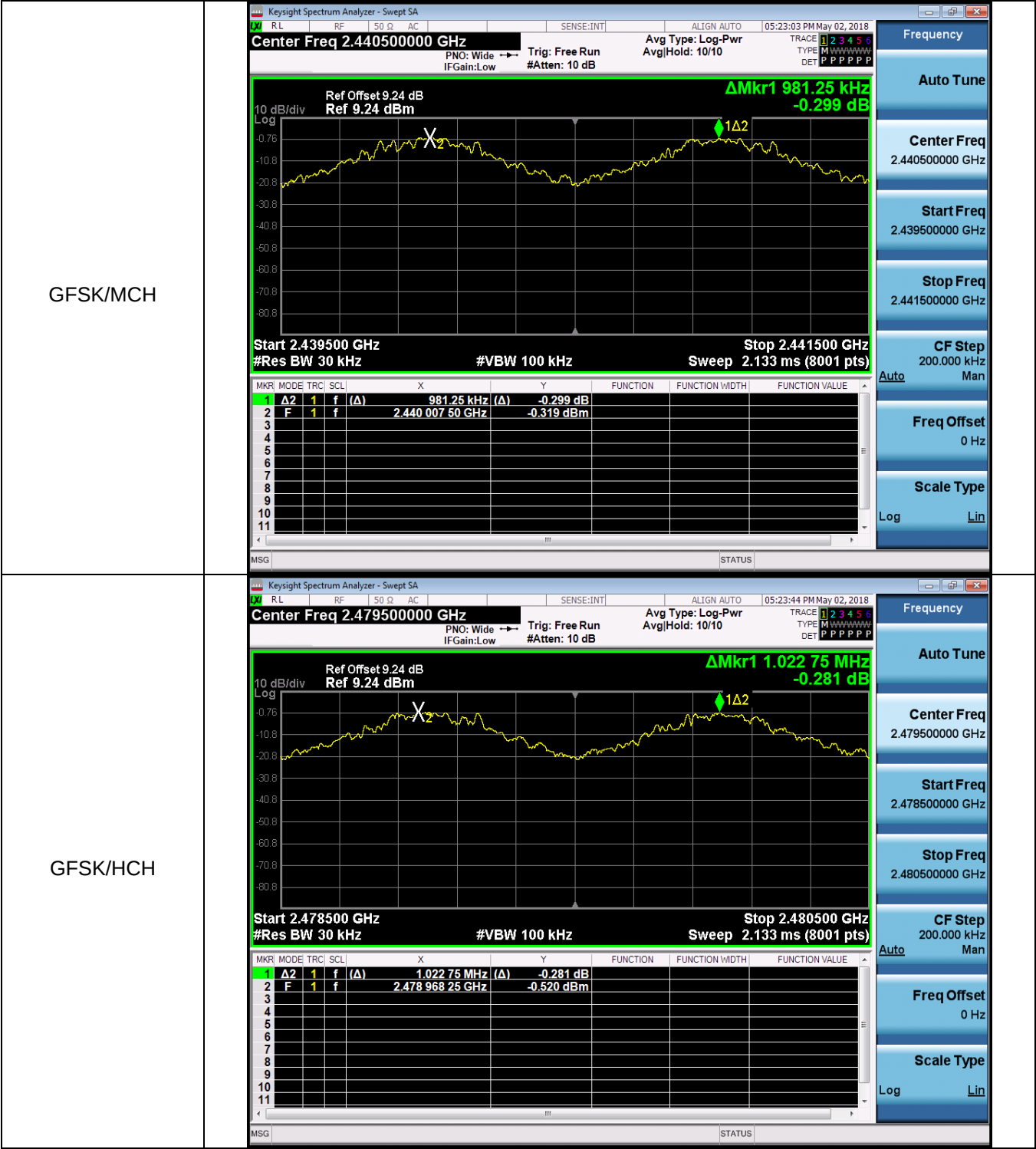
Appendix C): Carrier Frequency Separation

Result Table

Mode	Channel.	Carrier Frequency Separation [MHz]	Limit [MHz] 2/3*20dB Bandwidth	Verdict
GFSK	LCH	1.162	0.648	PASS
	MCH	0.981	0.678	PASS
	HCH	1.023	0.687	PASS

Test Graph



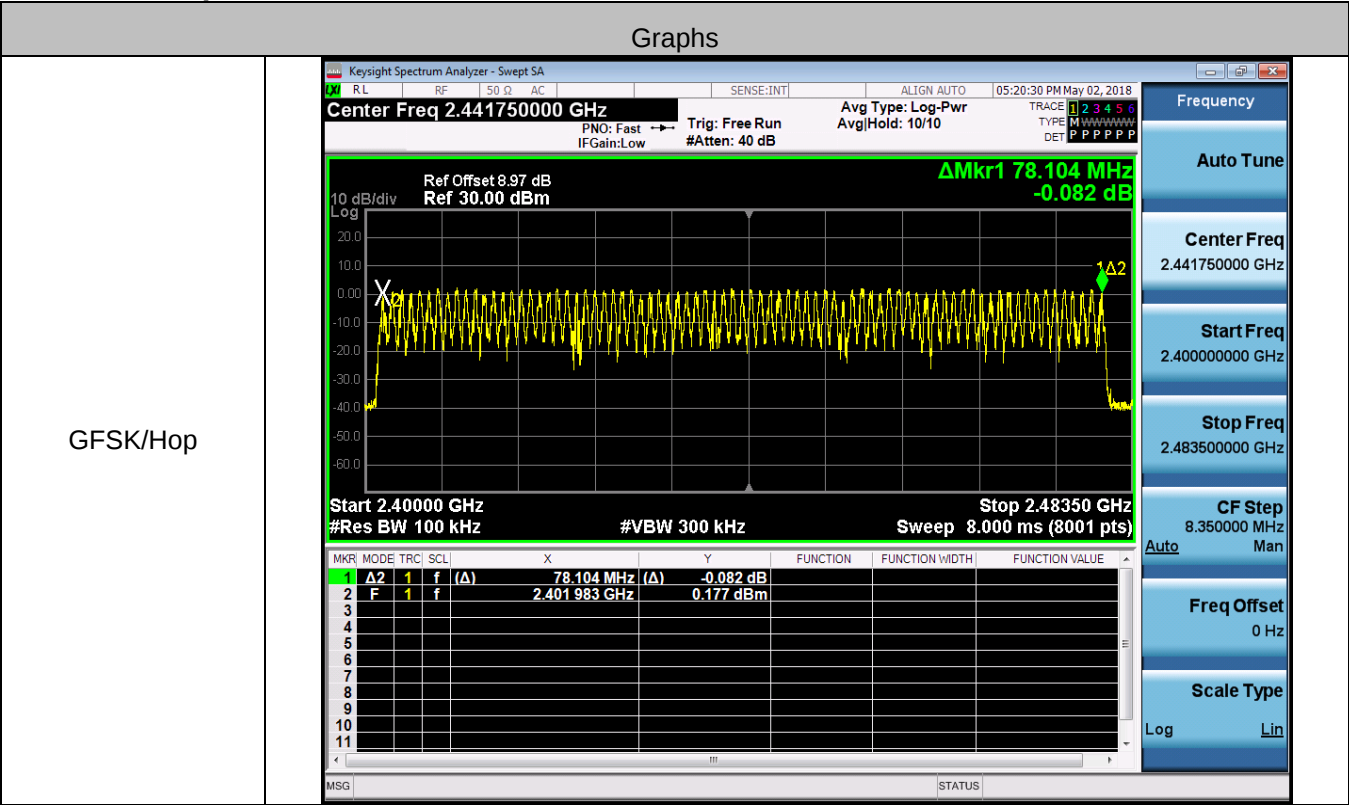


Appendix D): Hopping Channel Number

Result Table

Mode	Channel.	Number of Hopping Channel	Verdict
GFSK	Hop	79	PASS

Test Graph

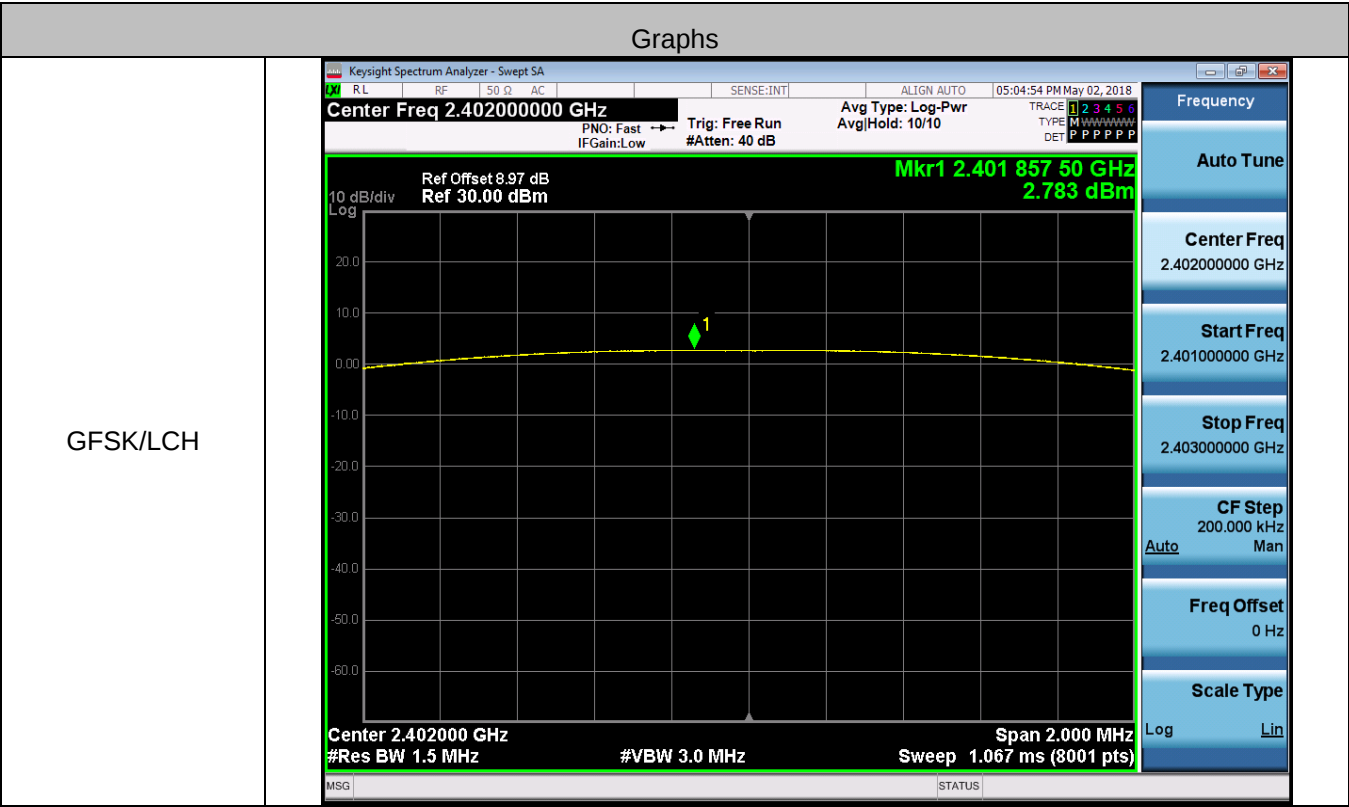


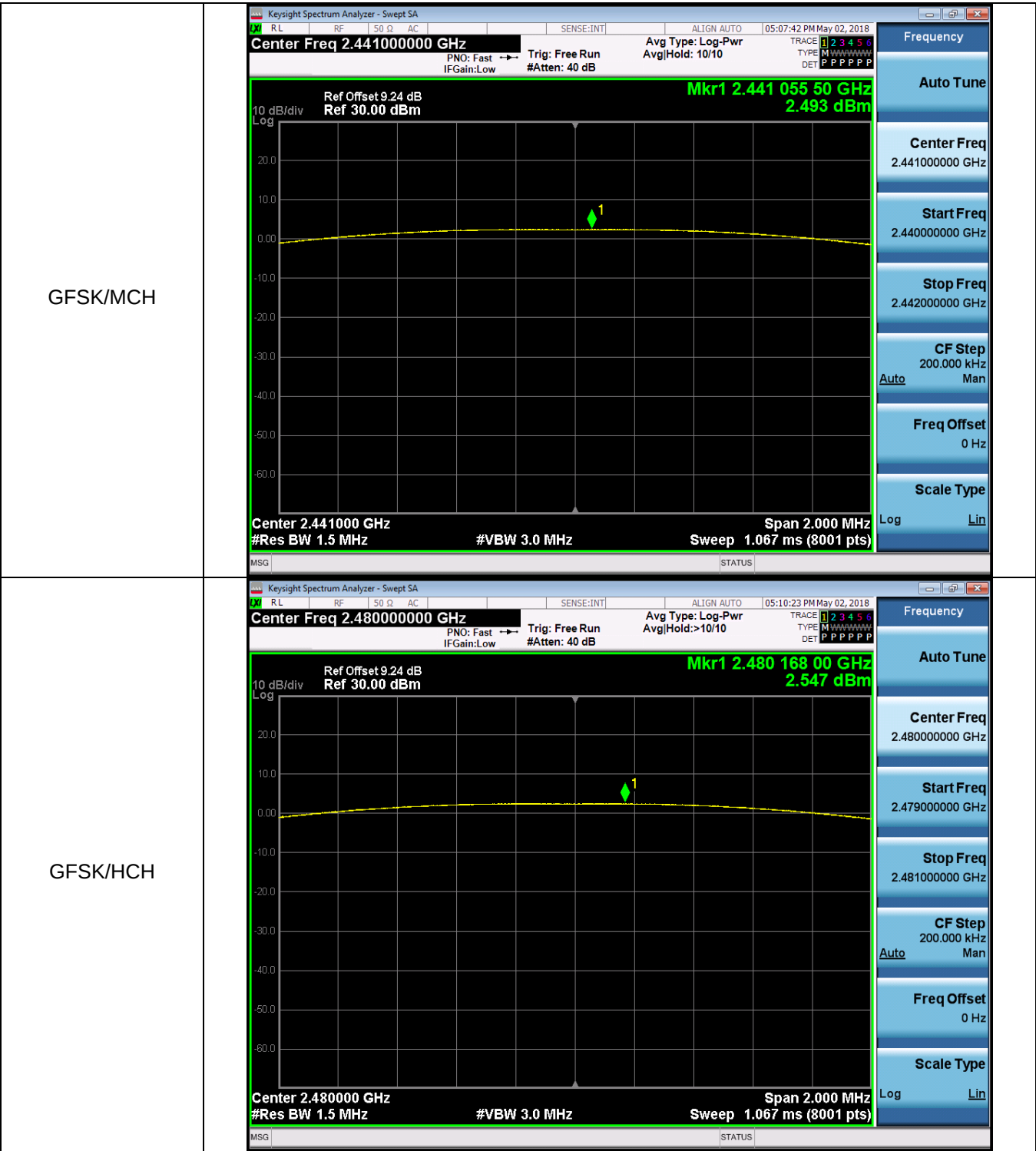
Appendix E): Conducted Peak Output Power

Result Table

Mode	Channel.	Maximum Peak Output Power [dBm]	Limit [dBm]	Verdict
GFSK	LCH	2.783	21	PASS
	MCH	2.493	21	PASS
	HCH	2.547	21	PASS

Test Graph



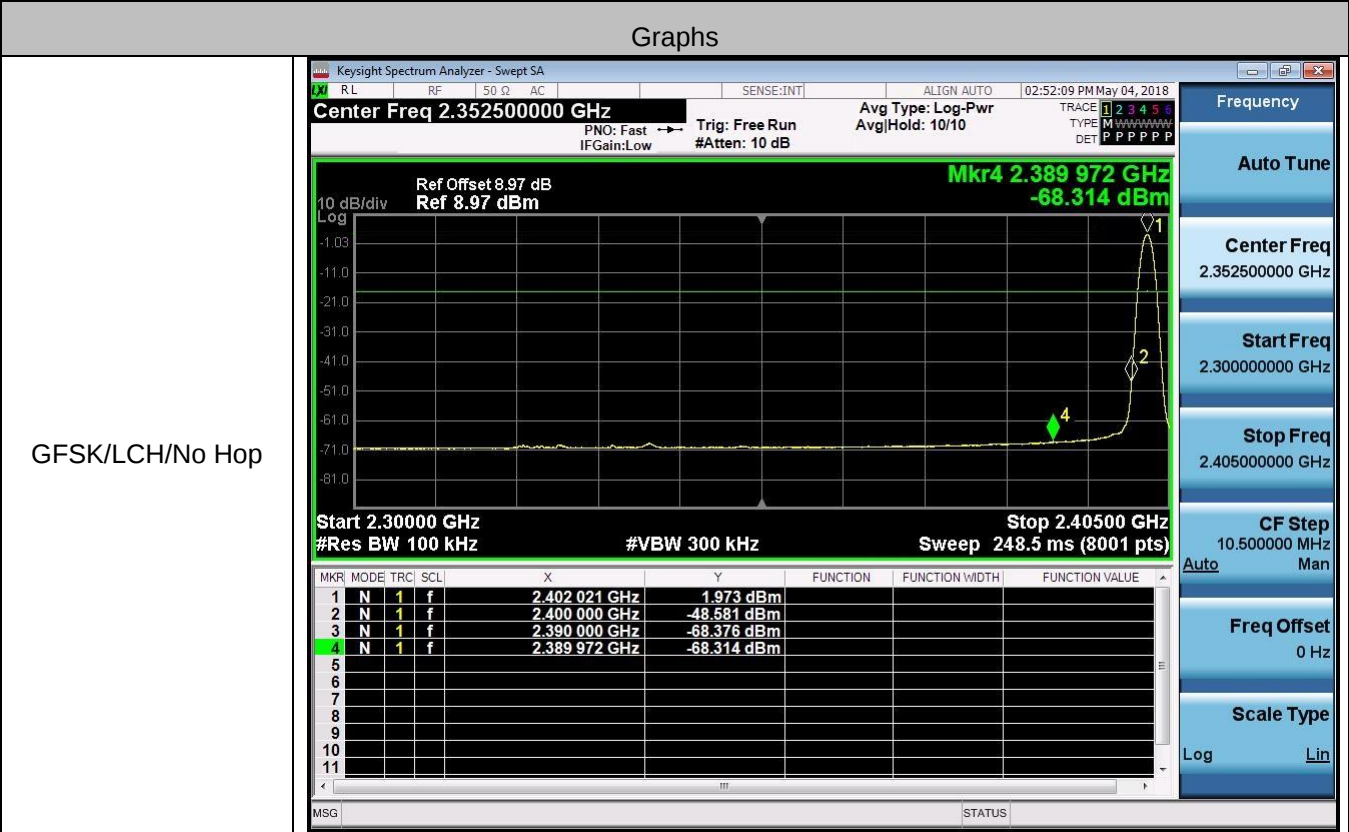


Appendix F): Band-edge for RF Conducted Emissions

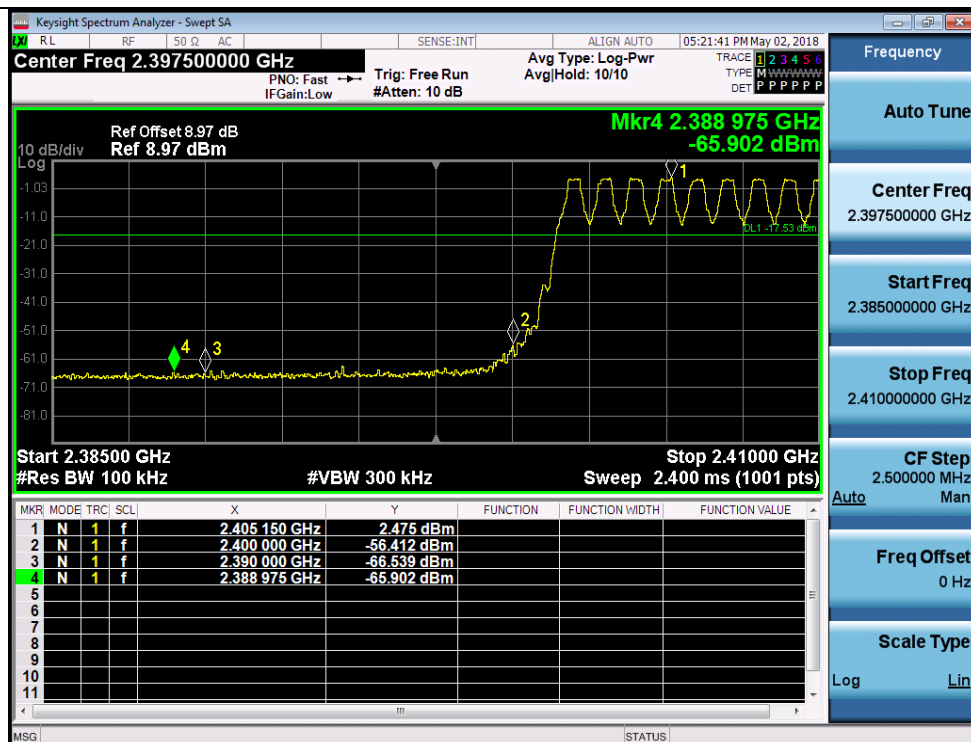
Result Table

Mode	Channel	Carrier Frequency [MHz]	Carrier Power [dBm]	Frequenc y Hopping	Max Spurious Level [dBm]	Limit [dBm]	Verdict
GFSK	LCH	2402	1.973	Off	-48.581	-18.03	PASS
			2.475	On	-56.412	-17.53	PASS
GFSK	HCH	2480	2.244	Off	-36.289	-17.76	PASS
			2.283	On	-64.147	-17.72	PASS

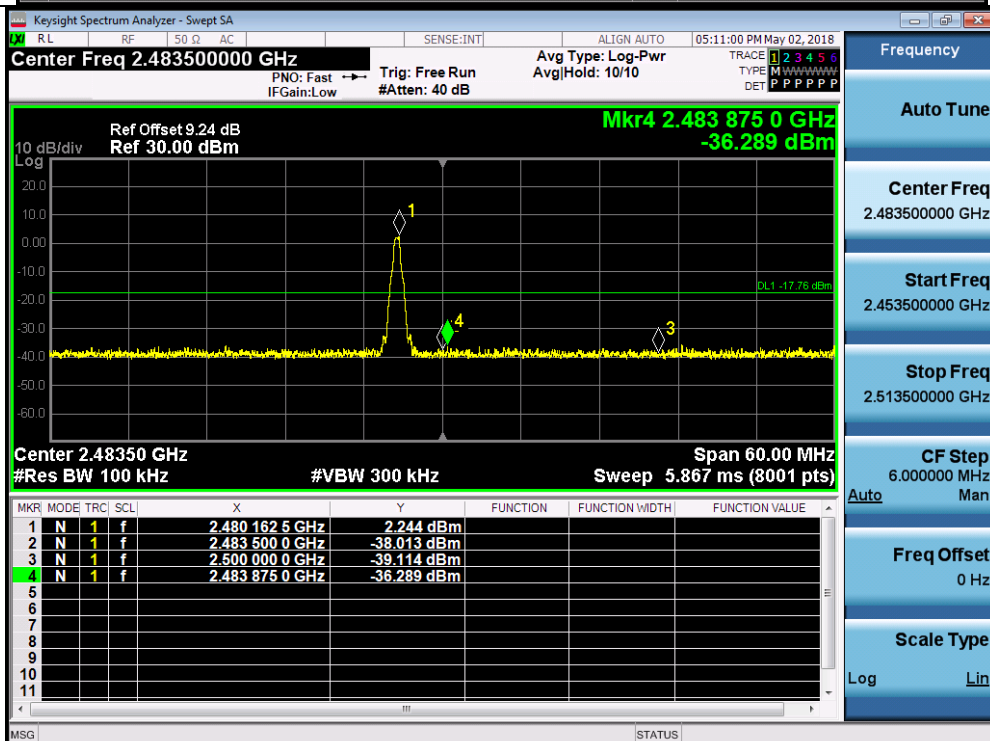
Test Graph



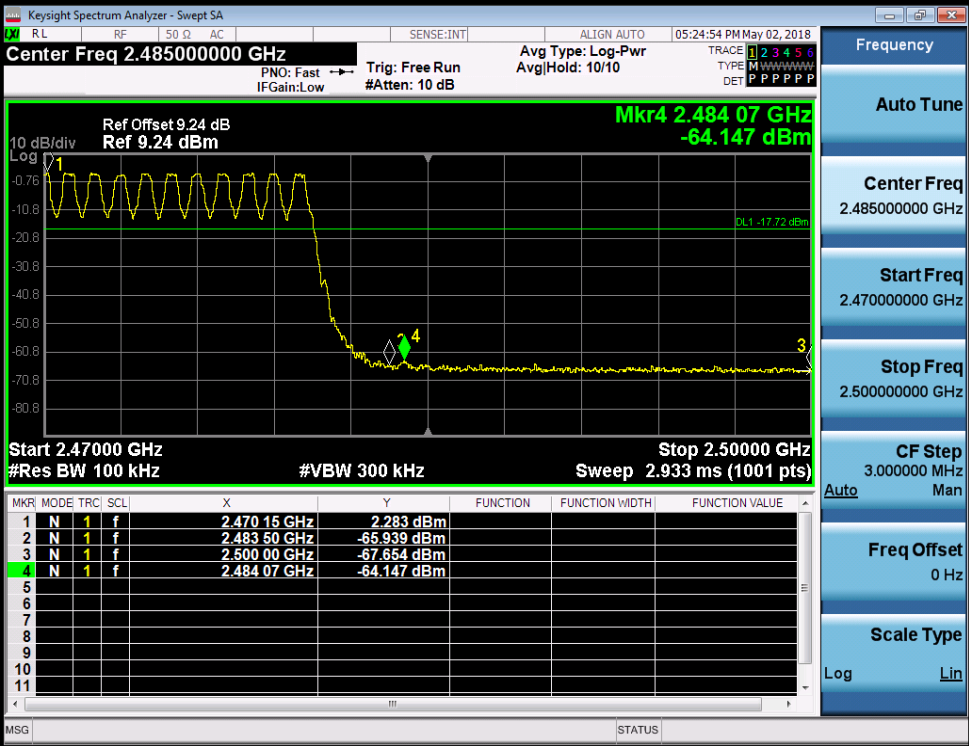
GFSK/LCH/Hop



GFSK/HCH/No Hop



GFSK/HCH/Hop

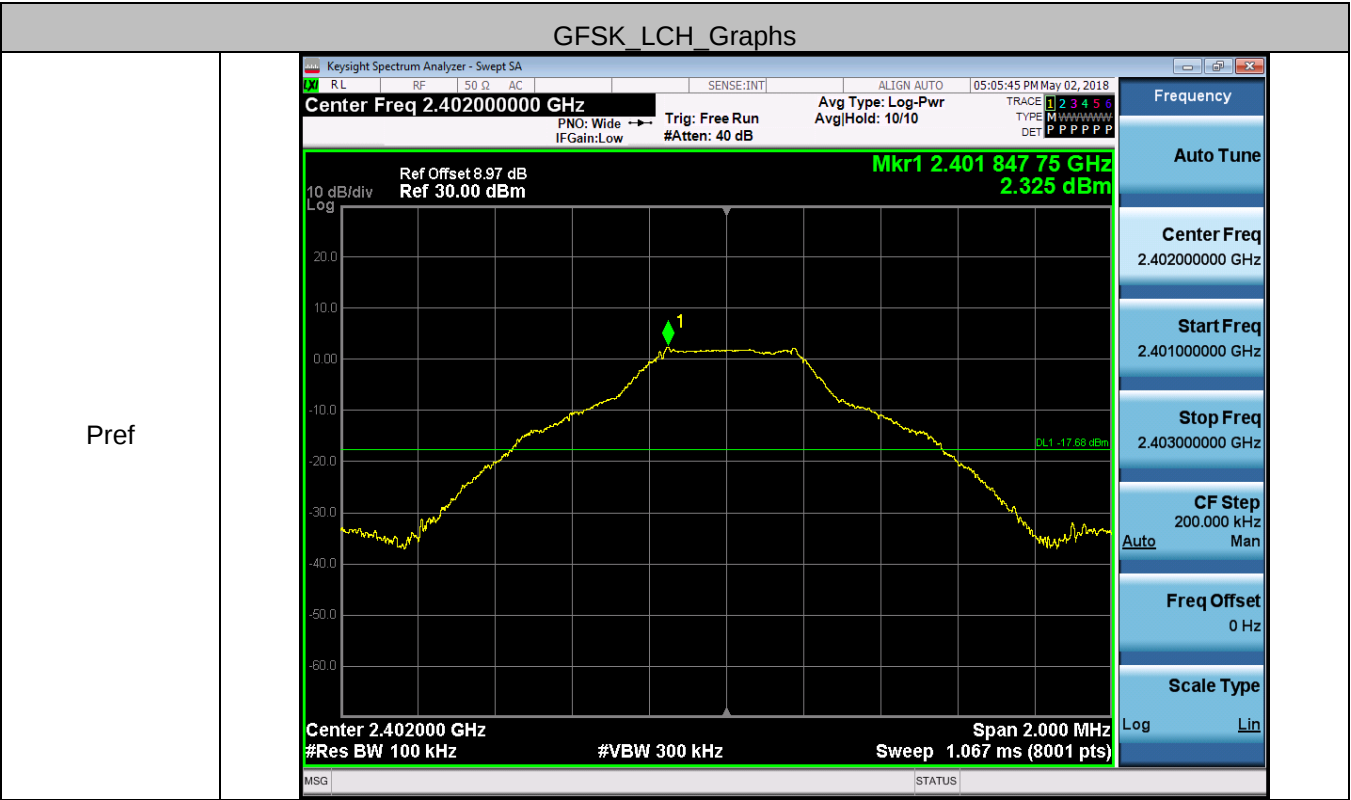


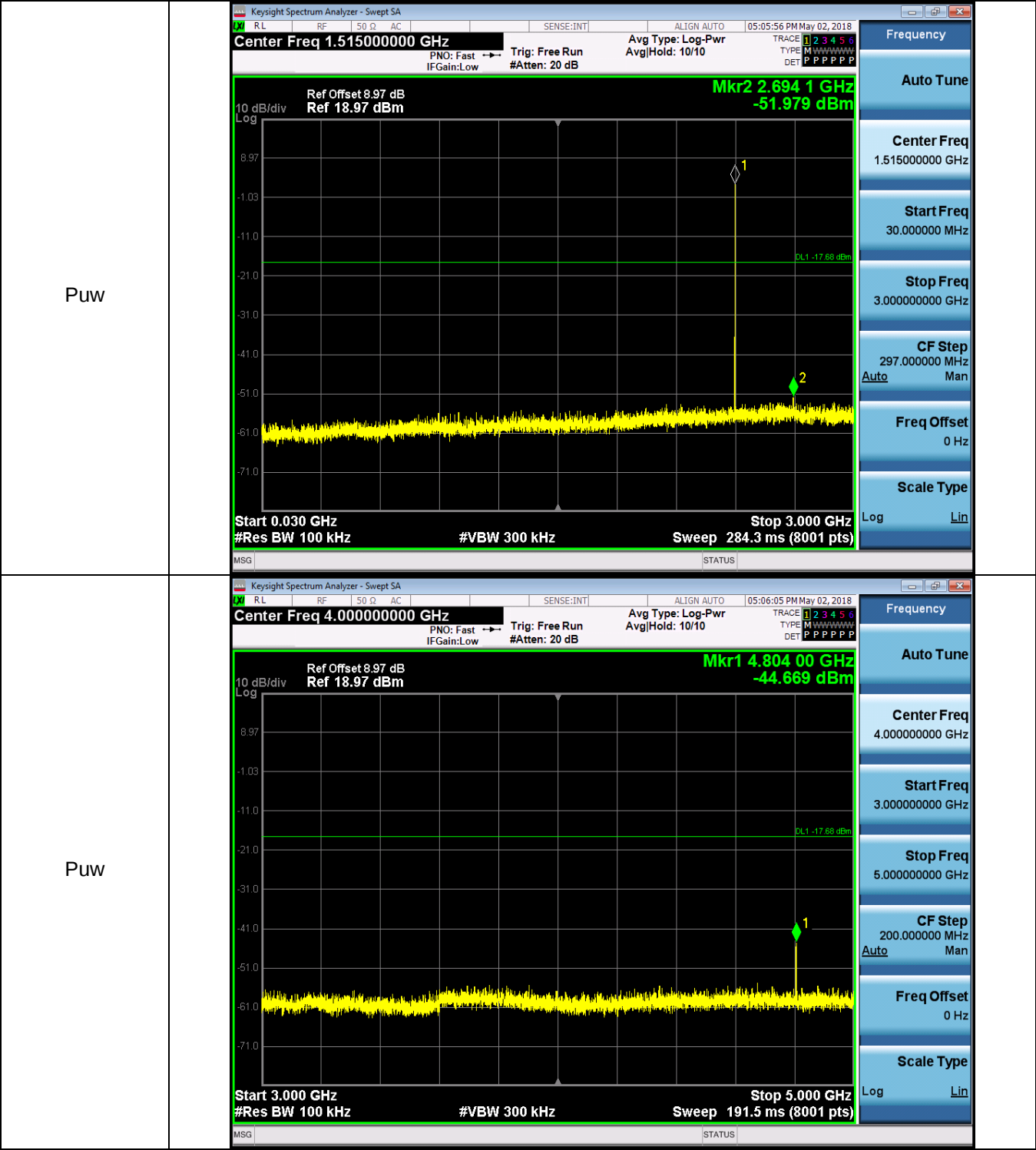
Appendix G): RF Conducted Spurious Emissions

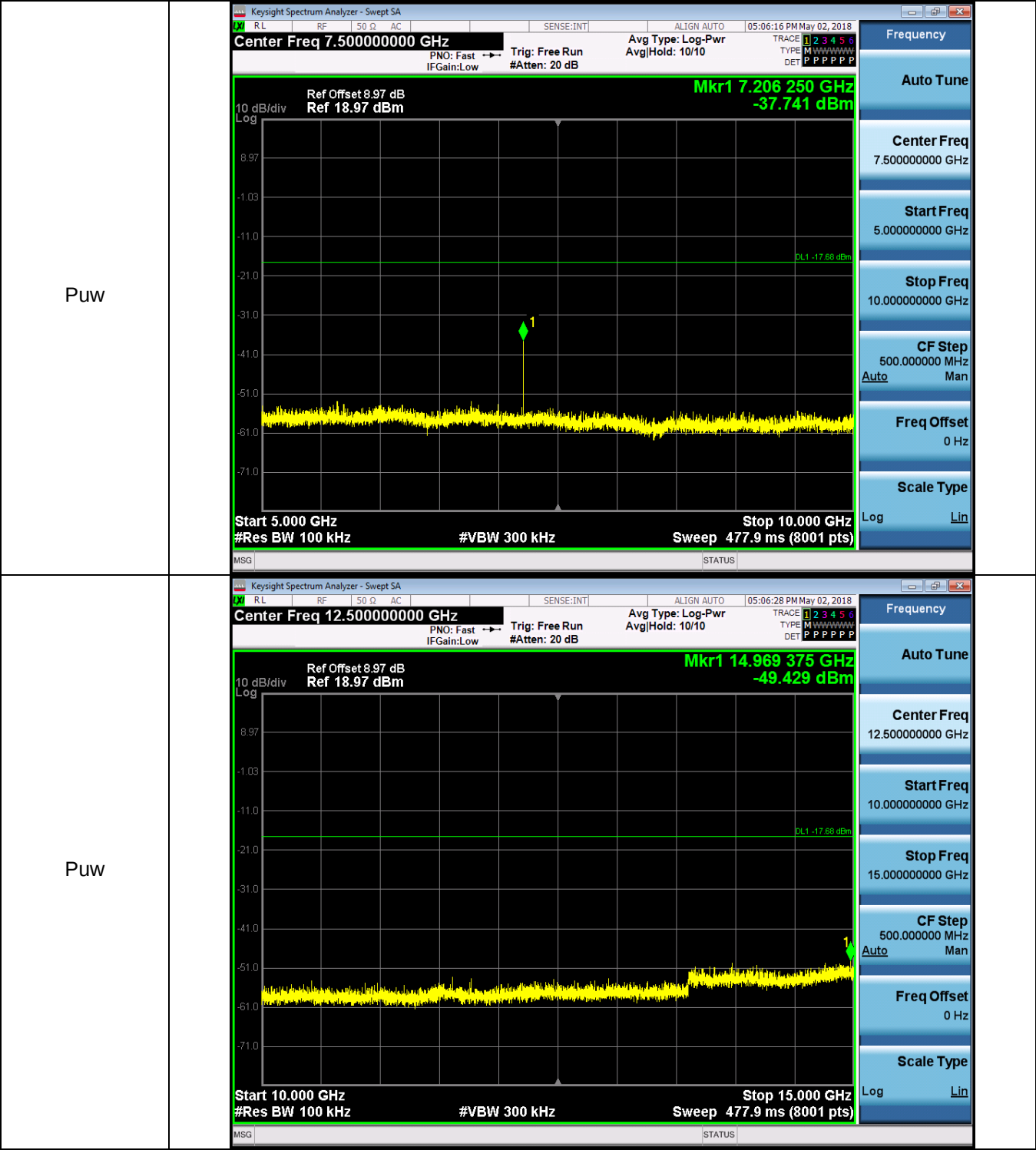
Result Table

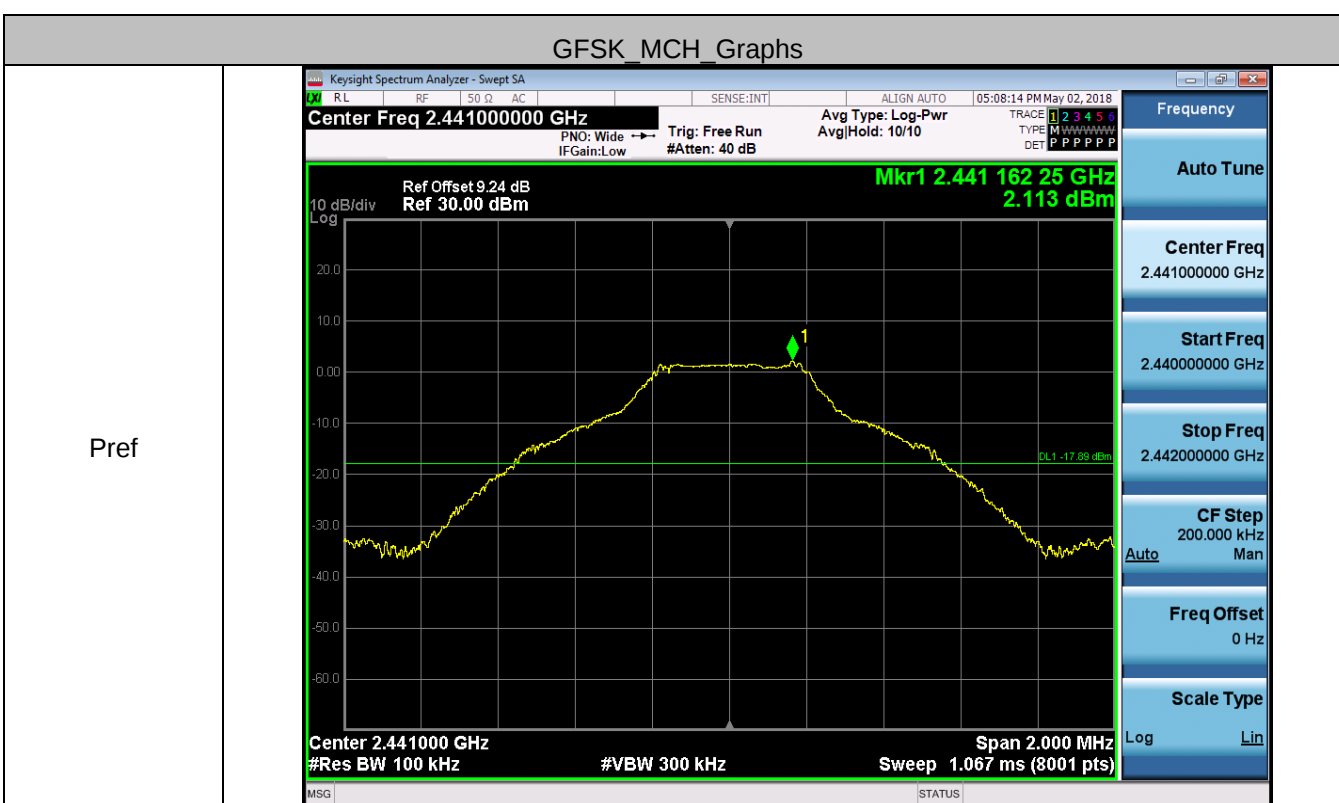
Mode	Channel	Pref [dBm]	Puw[dBm]	Verdict
GFSK	LCH	2.325	<Limit	PASS
GFSK	MCH	2.113	<Limit	PASS
GFSK	HCH	2.111	<Limit	PASS

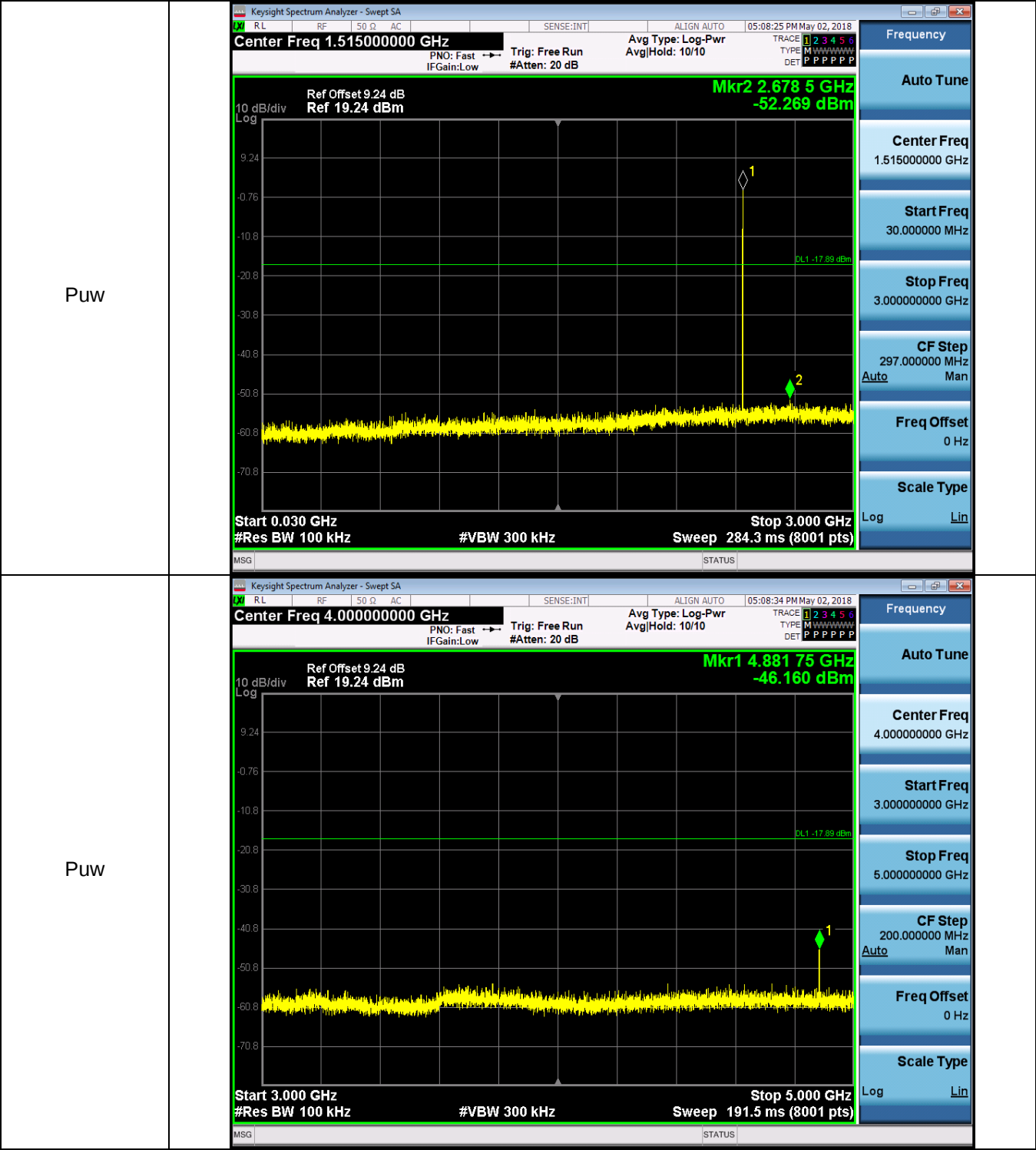
Test Graph

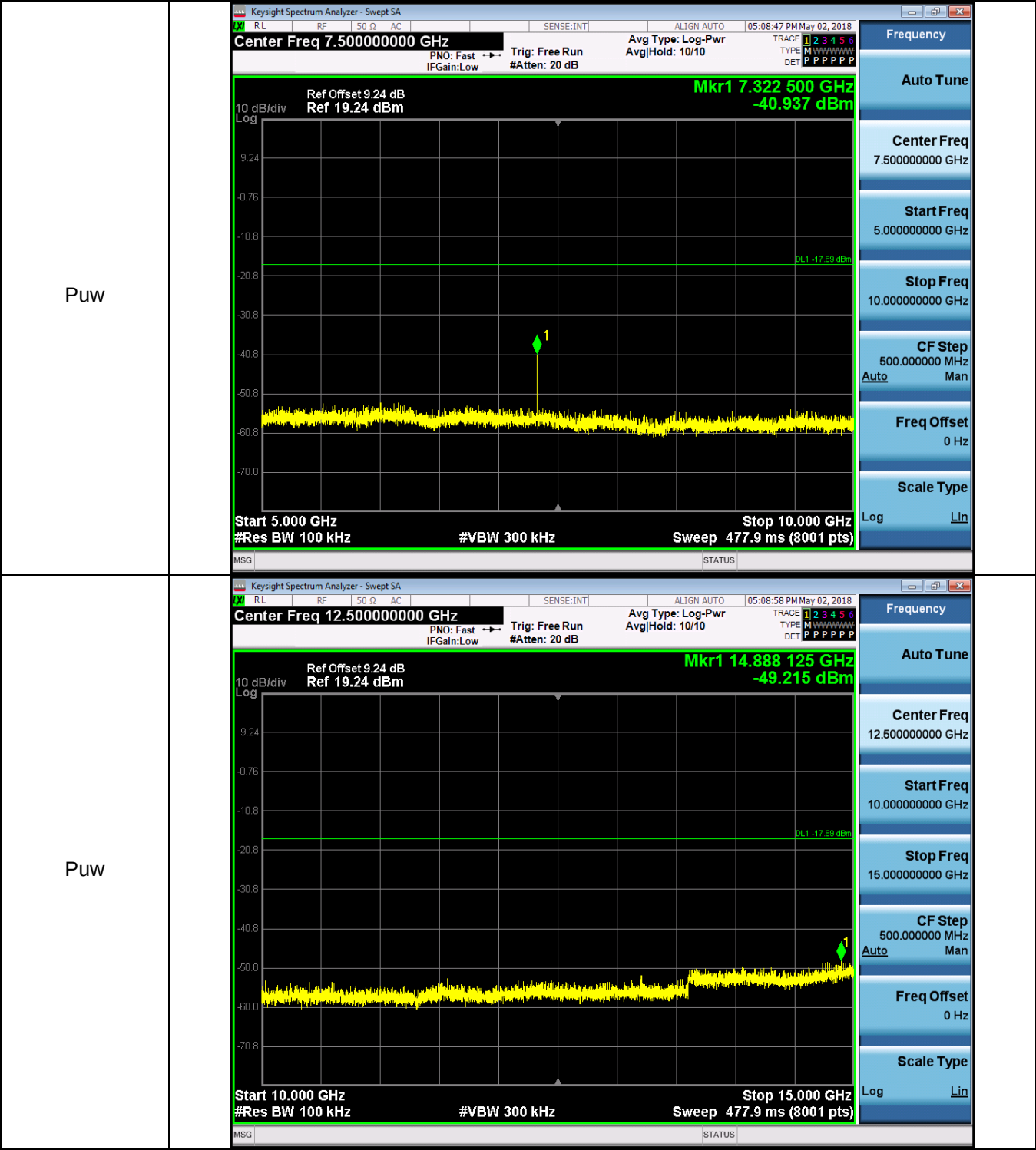


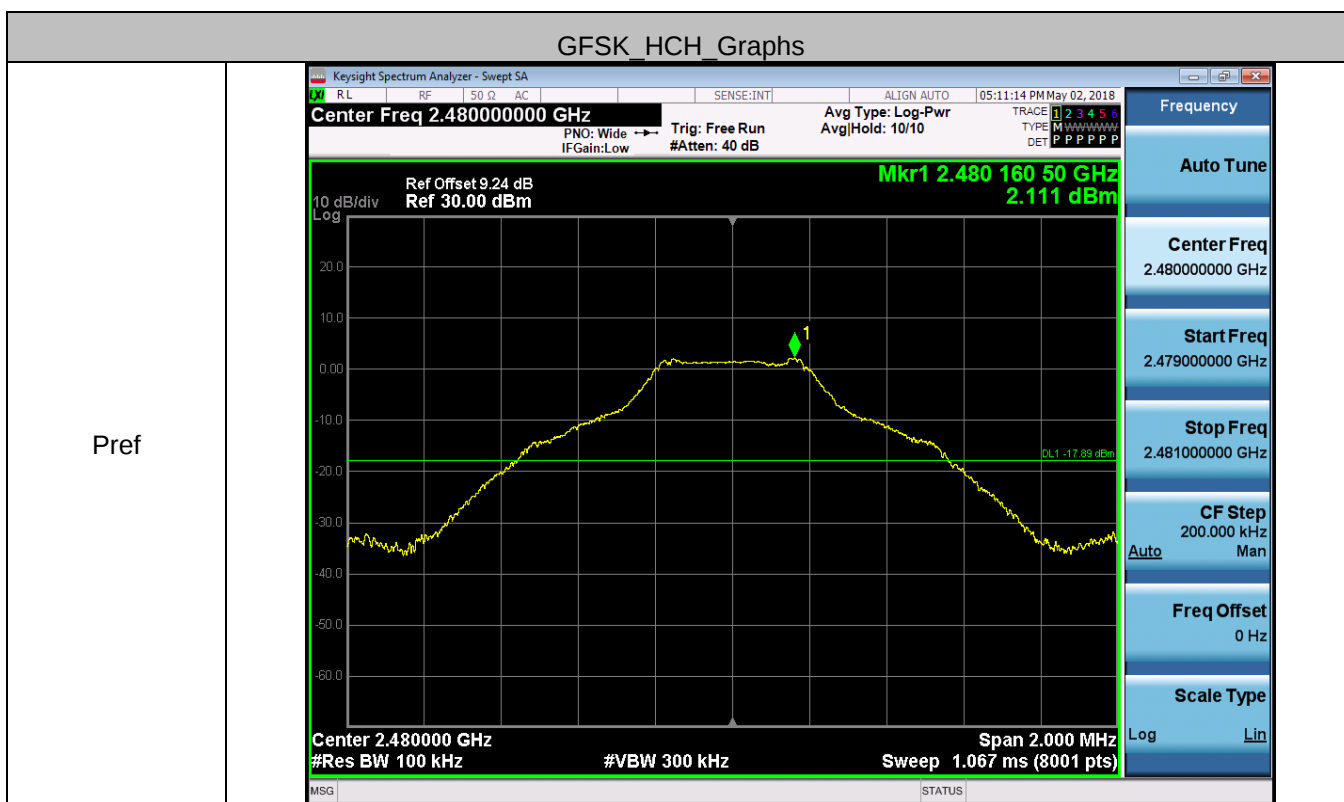
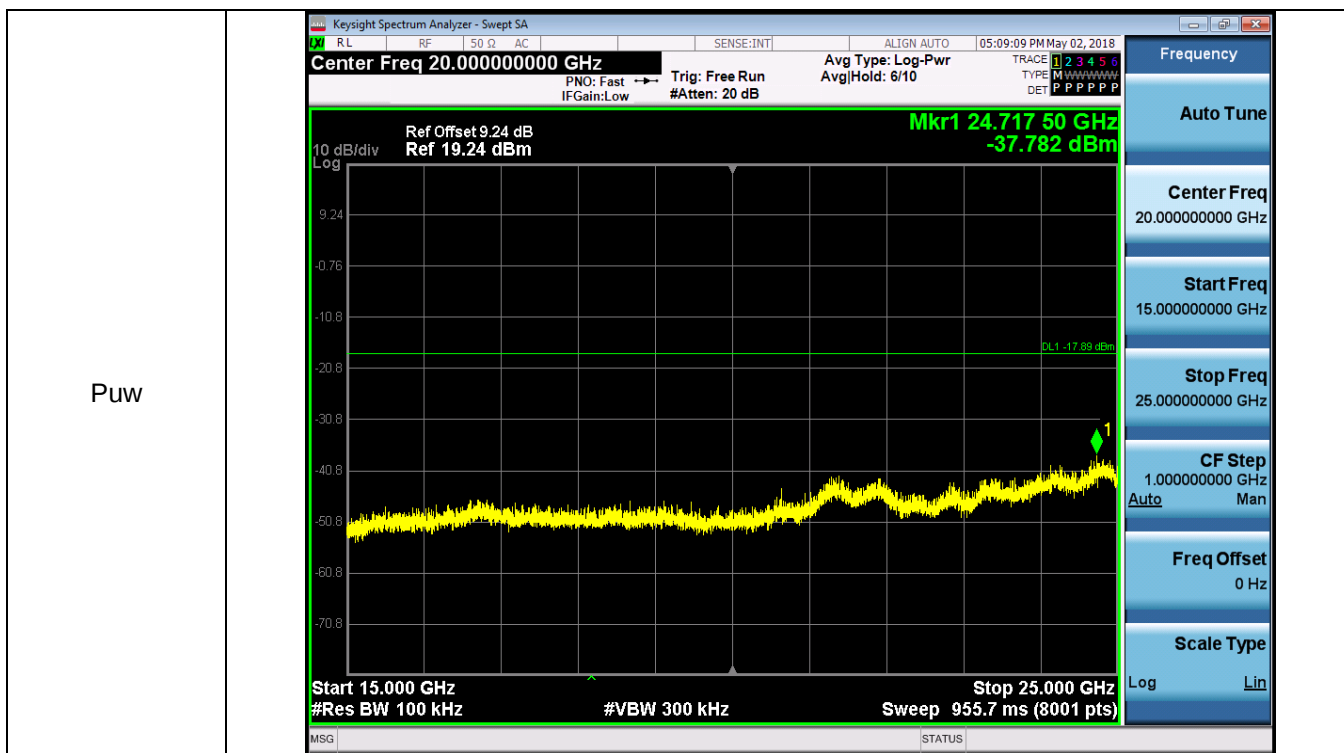


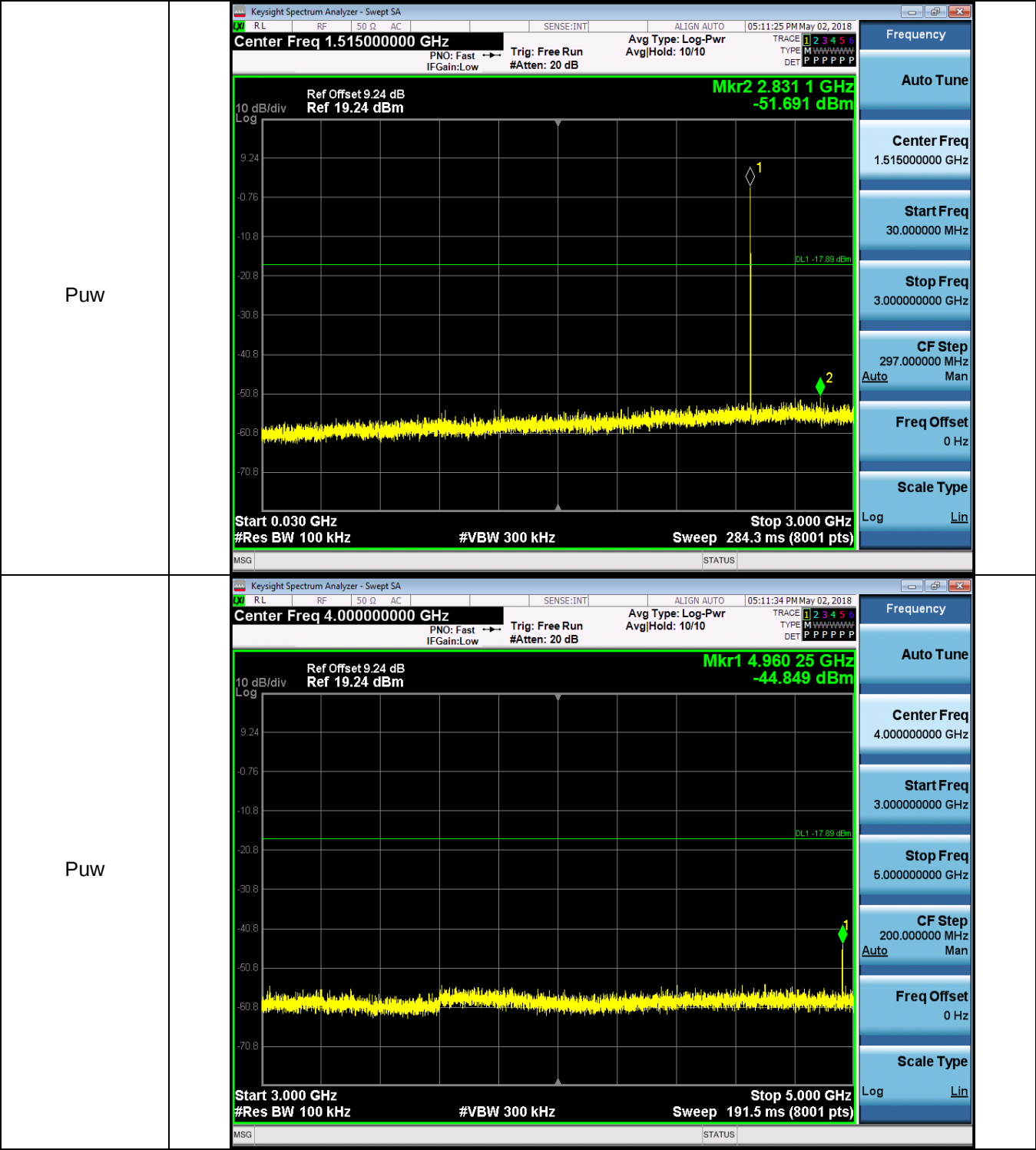


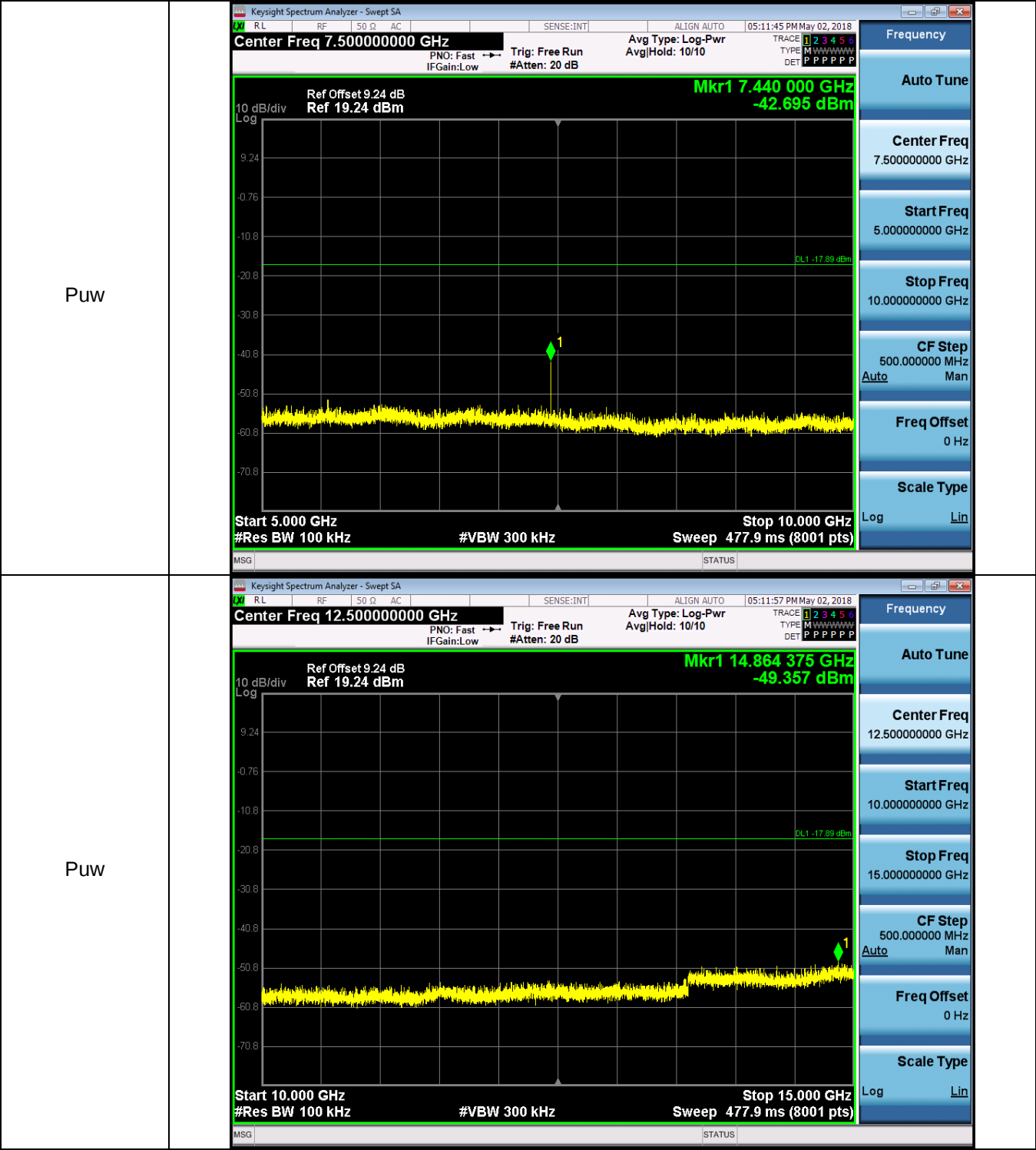


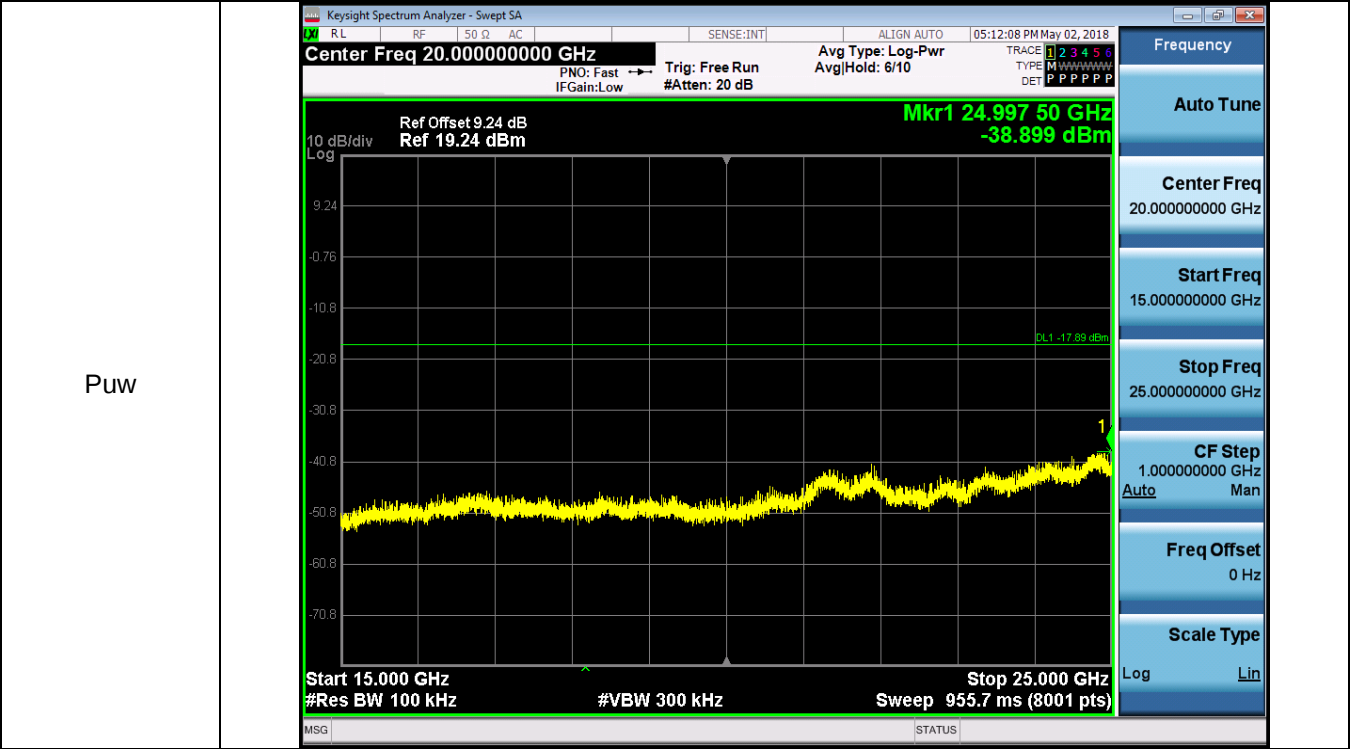










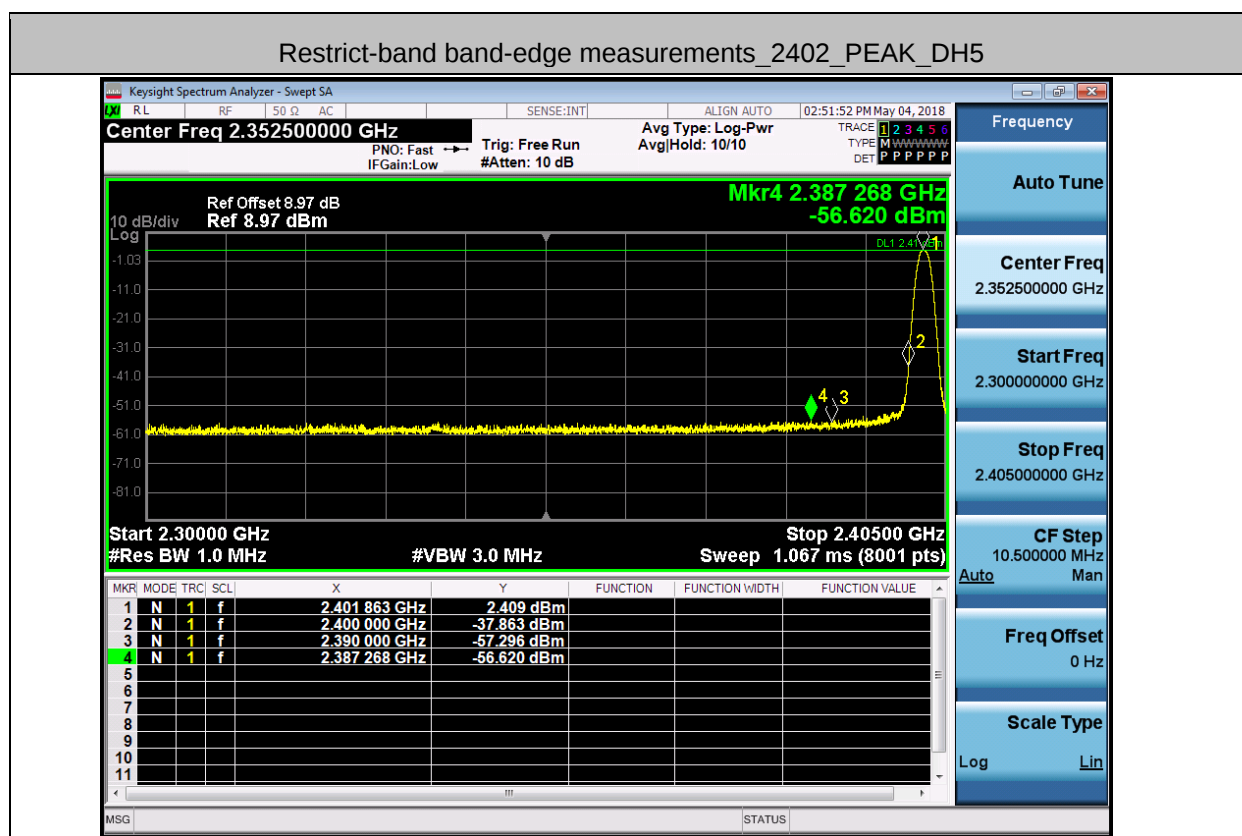


. Appendix H):Restrict-band band-edge measurements

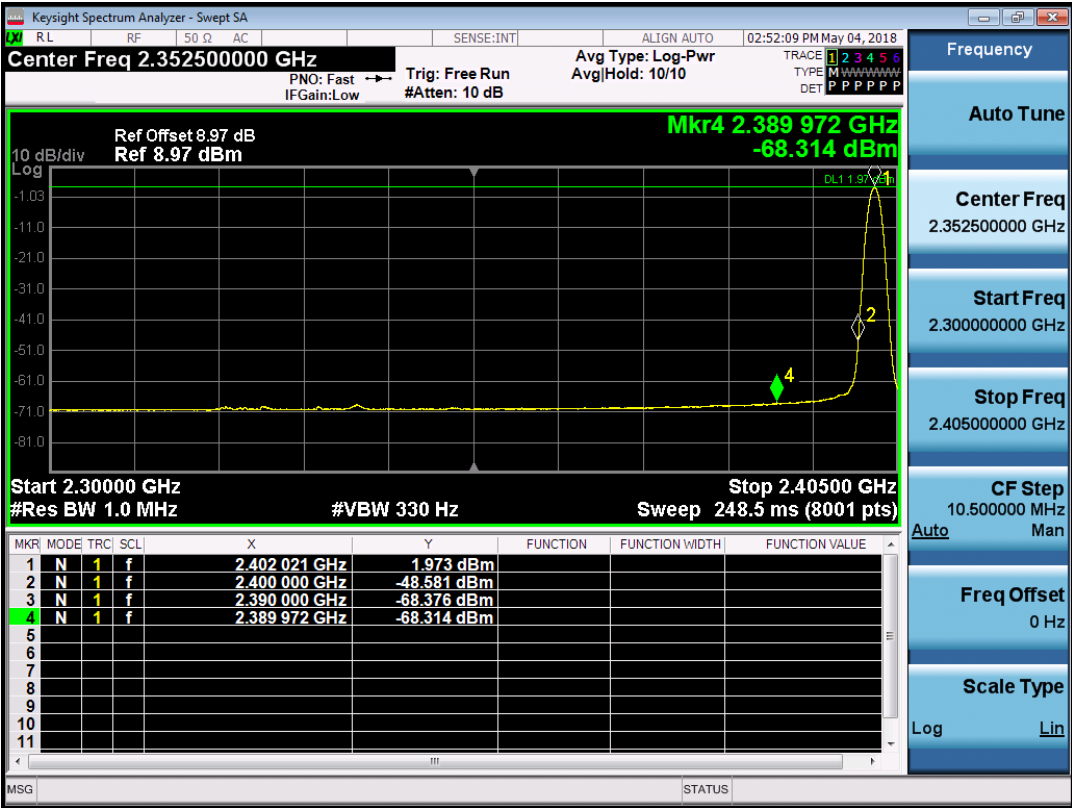
Result Table

Test Mode	Hopping	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detect or	Limit [dBuV/m]	Verdi
GFSK_DH5	On	2387.3	-56.62	2.00	0	40.45	PEAK	74	PASS
GFSK_DH5	On	2389.9	-68.31	2.00	0	28.76	AV	54	PASS
GFSK_DH5	On	2390.0	-57.62	2.00	0	39.45	PEAK	74	PASS
GFSK_DH5	On	2390.0	-68.38	2.00	0	28.69	AV	54	PASS
GFSK_DH5	On	2483.5	-55.08	2.00	0	41.99	PEAK	74	PASS
GFSK_DH5	On	2483.5	-65.52	2.00	0	31.55	AV	54	PASS
GFSK_DH5	On	2500.0	-58.69	2.00	0	38.38	PEAK	74	PASS
GFSK_DH5	On	2500.0	-69.22	2.00	0	27.85	AV	54	PASS

Test Graph



Restrict-band band-edge measurements_2402_AV_DH5



Restrict-band band-edge measurements_2480_PEAK_DH5



Restrict-band band-edge measurements_2480_AV_DH5

