Appendix A

RF Test Data for BT V5.0(BDR/EDR) (Conducted Measurement)

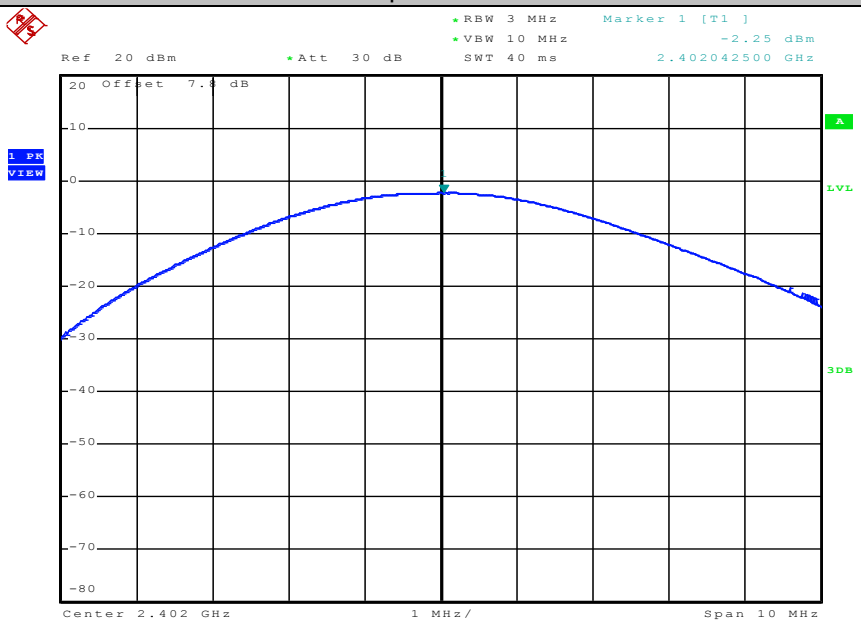
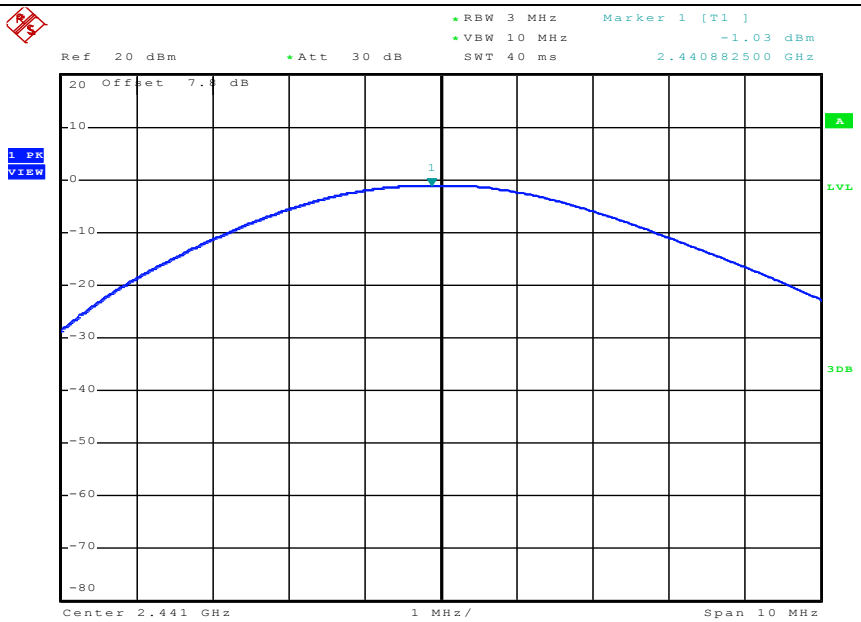
Product Name: Bluetooth speaker
Trade Mark: Brookstone
Test Model: BKS550

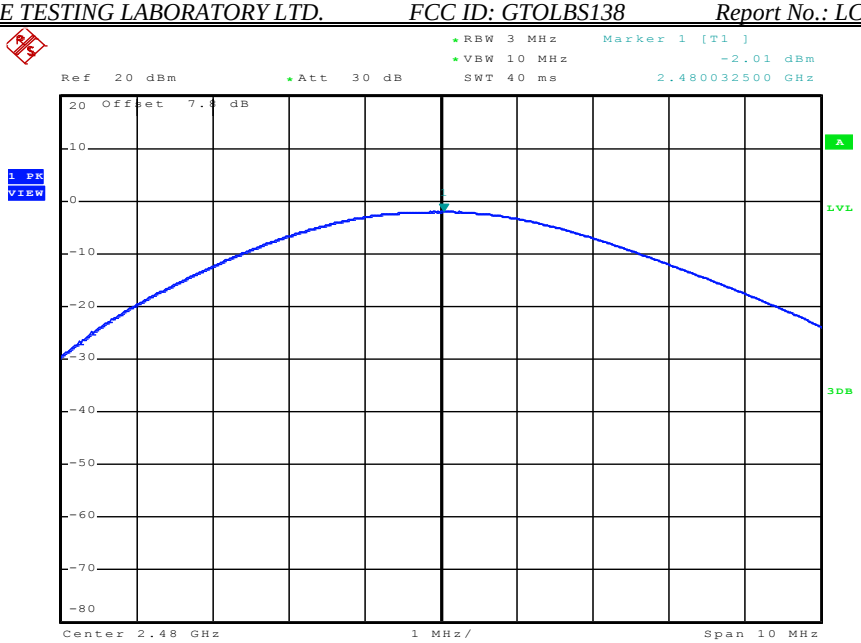
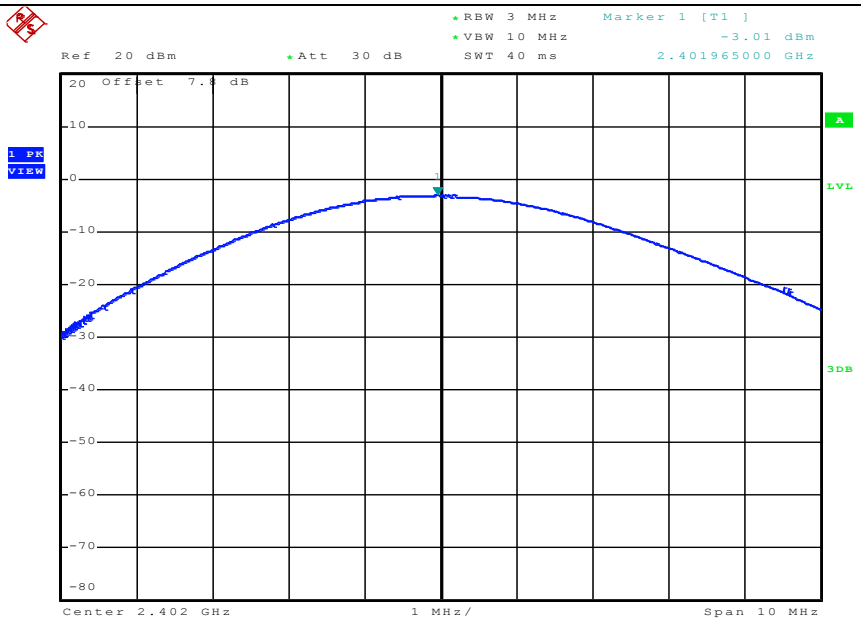
Environmental Conditions

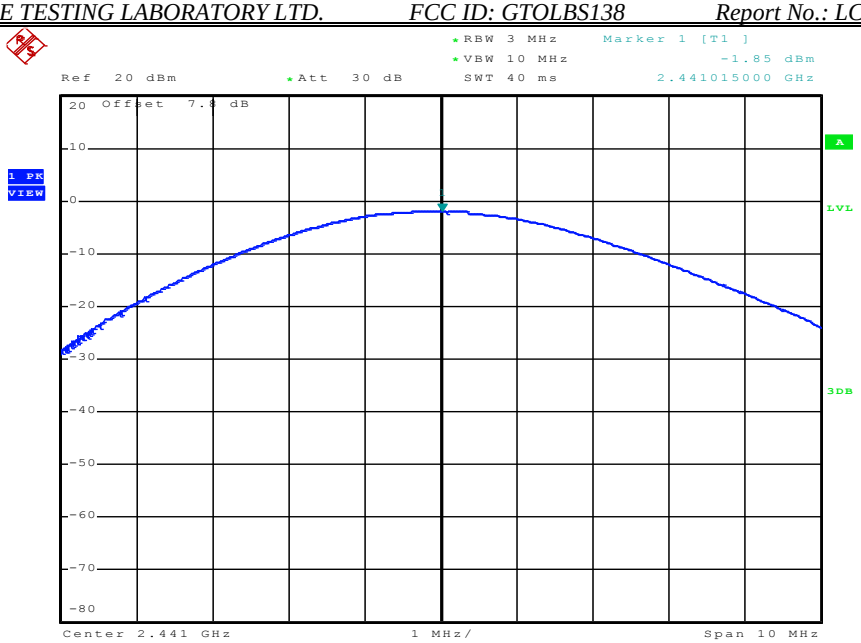
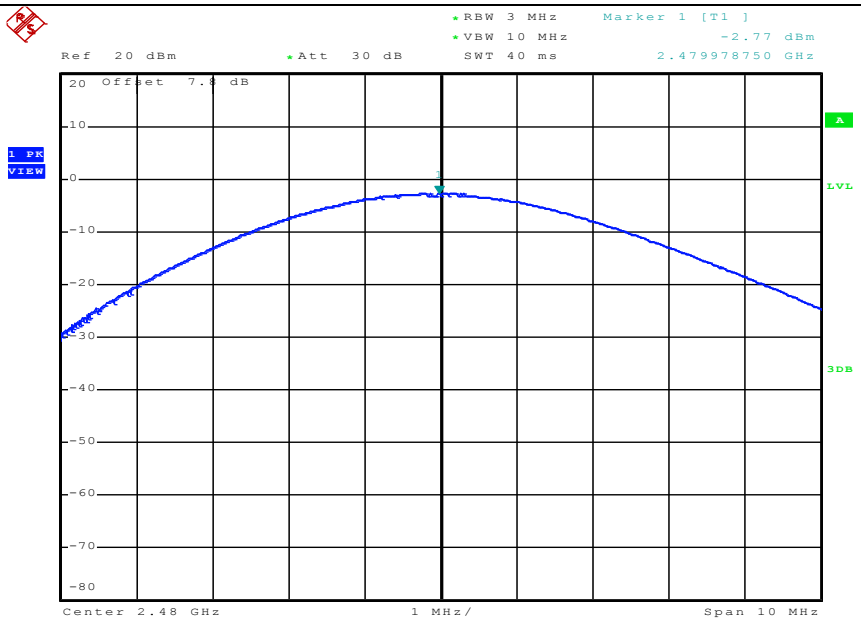
Temperature:	24.3°C
Relative Humidity:	53.3%
ATM Pressure:	100.0 kPa
Test Engineer:	Wang.Chuang
Supervised by:	TOM.LIU

A.1 Maxmum Conducted Peak Output Power

Mode	Channel.	Maximum Peak Output Power [dBm]	Limit [dBm]	Verdict
GFSK	LCH	-2.250	21	PASS
	MCH	-1.030	21	PASS
	HCH	-2.010	21	PASS
π/4DQPSK	LCH	-3.010	21	PASS
	MCH	-1.850	21	PASS
	HCH	-2.770	21	PASS

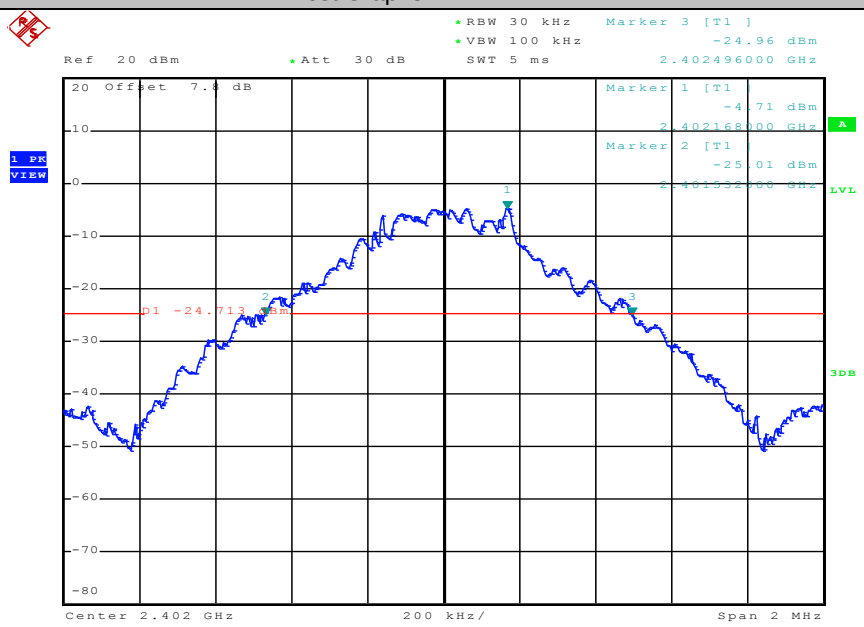
Test Graphs	
GFSK/LCH	 Date: 11.AUG.2019 11:24:07
GFSK/MCH	 Date: 11.AUG.2019 11:26:50

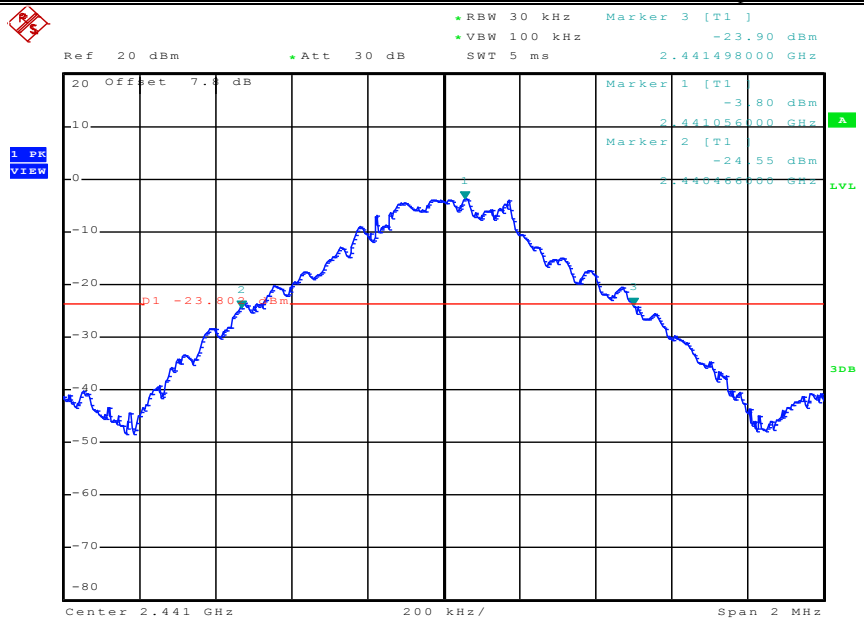
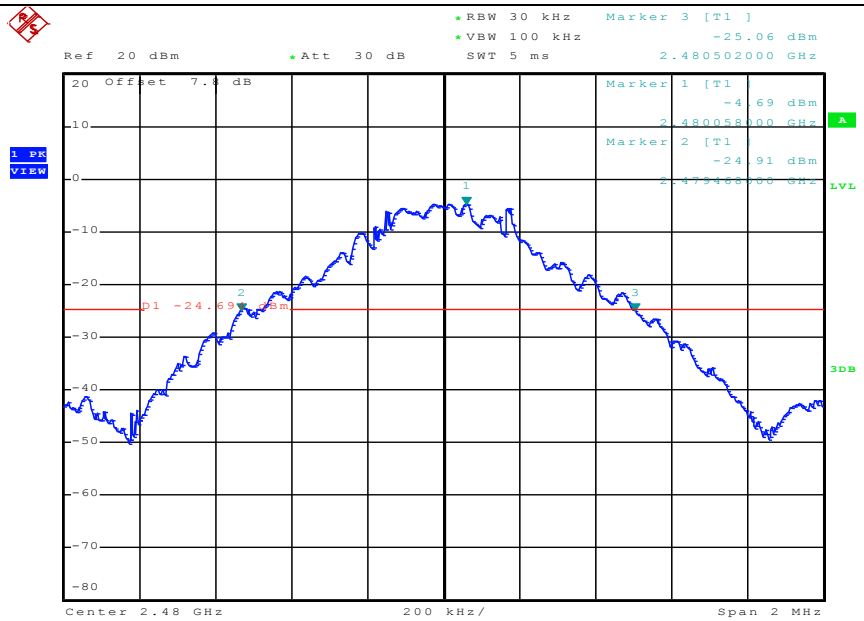
GFSK/HCH	 Date: 11.AUG.2019 11:28:32
π/4DQPSK/LCH	 Date: 11.AUG.2019 11:31:28

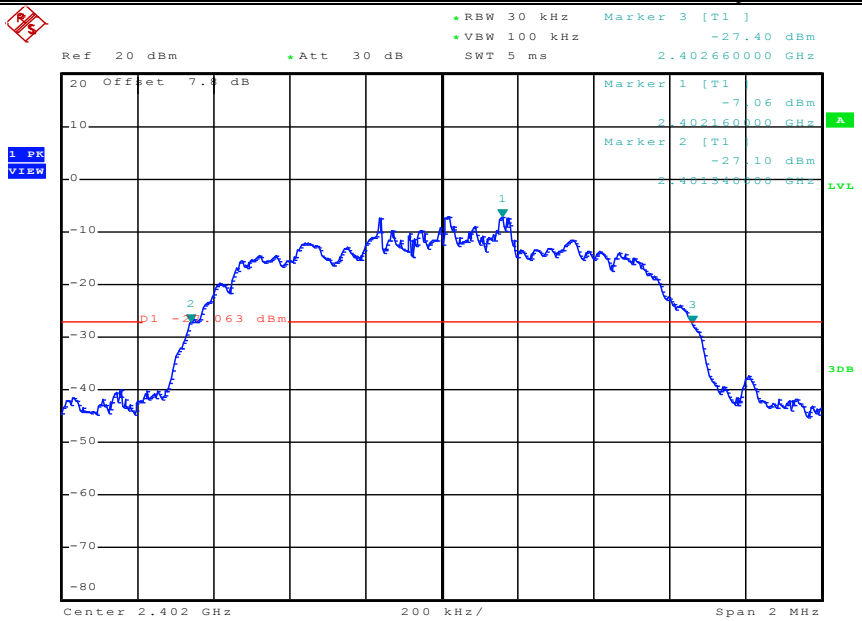
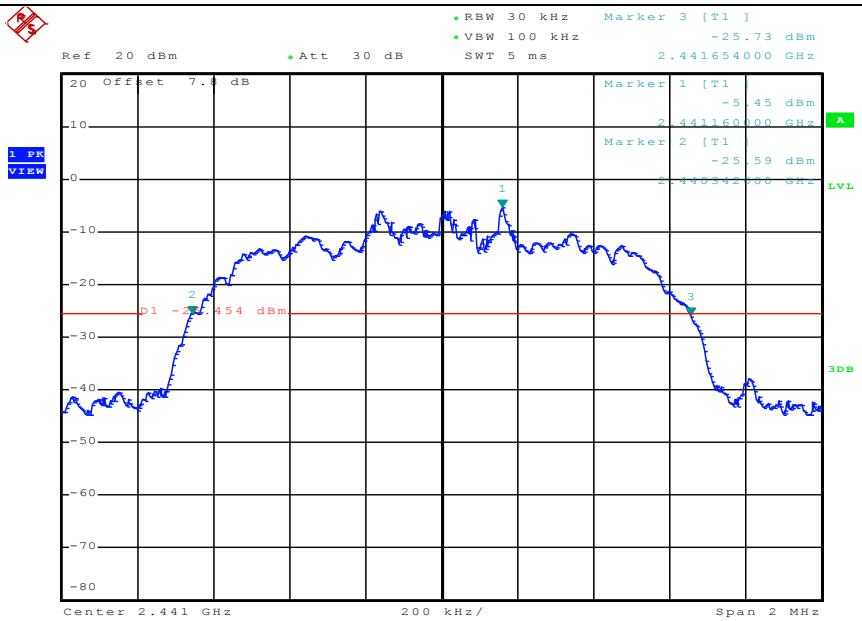
π/4DQPSK/MCH	 Date: 11.AUG.2019 11:34:11
π/4DQPSK/HCH	 Date: 11.AUG.2019 11:36:01

A.2 20dB Bandwidth

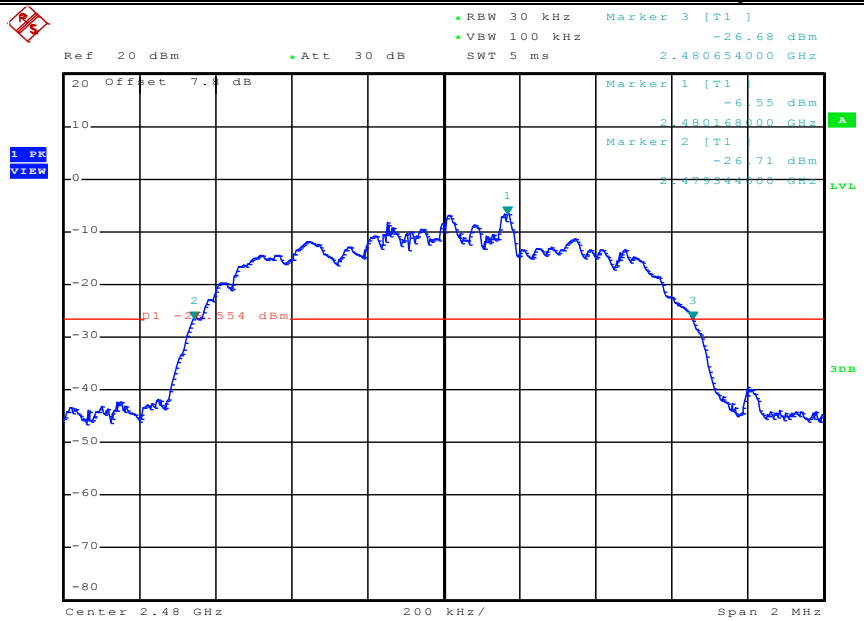
Mode	Channel.	20dB Bandwidth [MHz]	Limit [MHz]	Verdict
GFSK	LCH	0.964	Not Specified	PASS
	MCH	1.032	Not Specified	PASS
	HCH	1.034	Not Specified	PASS
π/4DQPSK	LCH	1.320	Not Specified	PASS
	MCH	1.312	Not Specified	PASS
	HCH	1.310	Not Specified	PASS

Test Graphs	
GFSK/LCH	

GFSK/MCH	 Date: 11.AUG.2019 11:26:13
GFSK/HCH	 Date: 11.AUG.2019 11:27:56

π/4DQPSK/LCH	 Date: 11.AUG.2019 11:30:51
π/4DQPSK/MCH	 Date: 11.AUG.2019 11:33:35

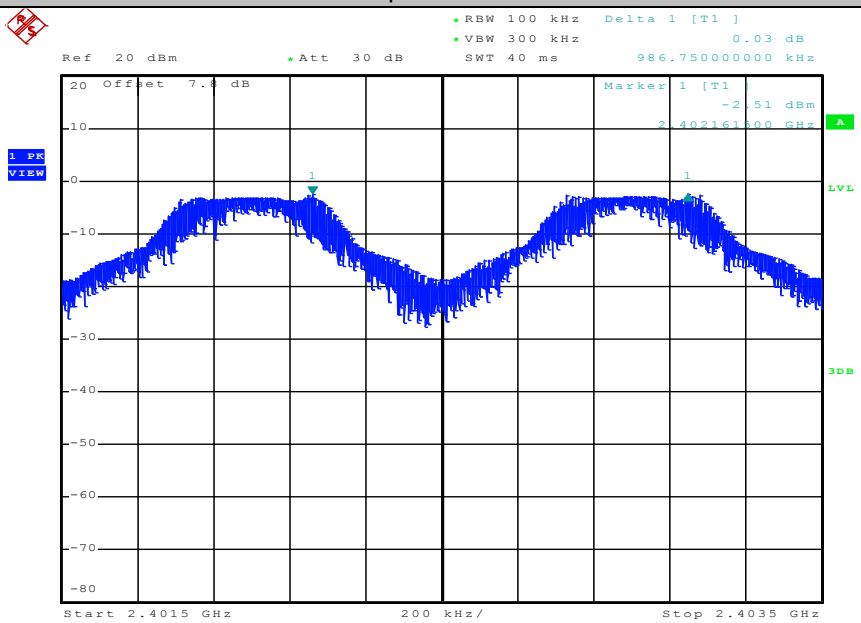
π/4DQPSK/HCH

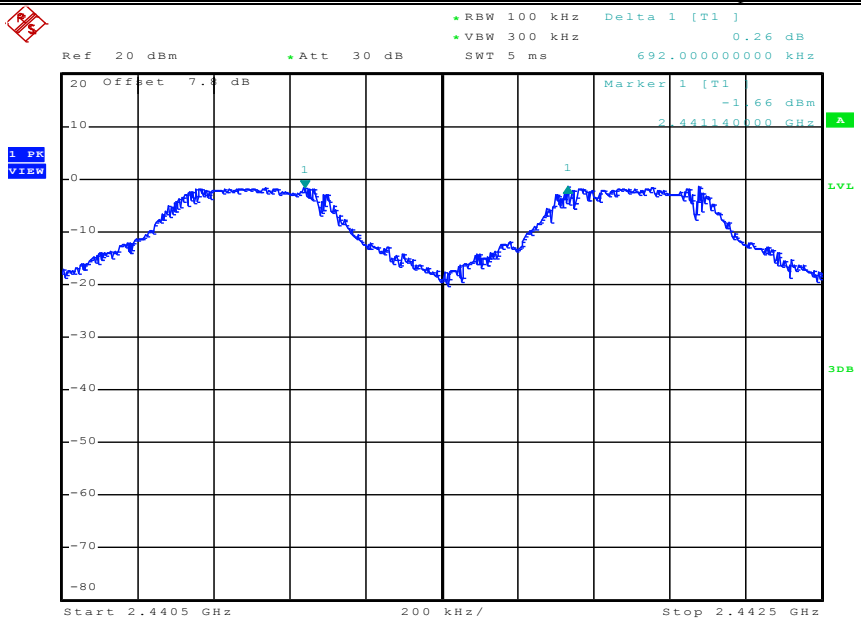
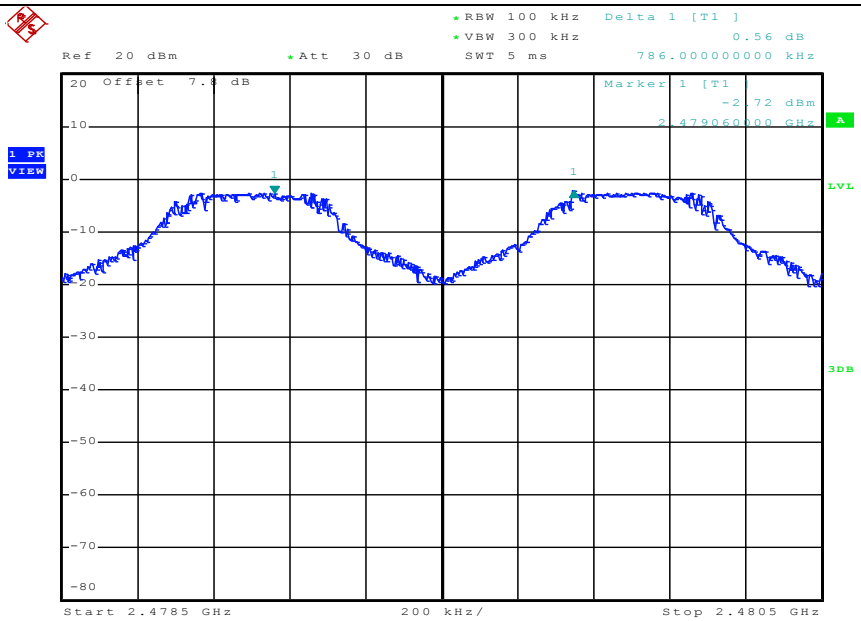


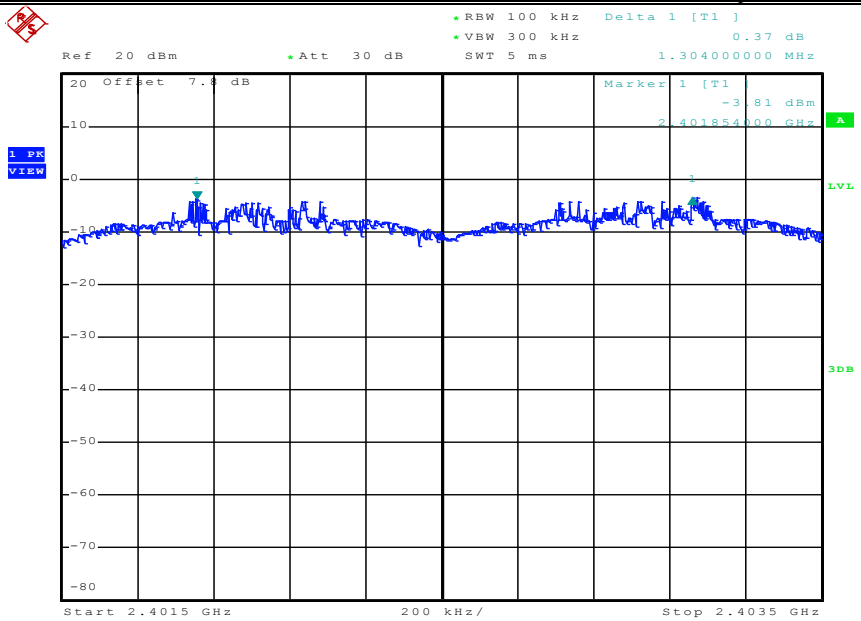
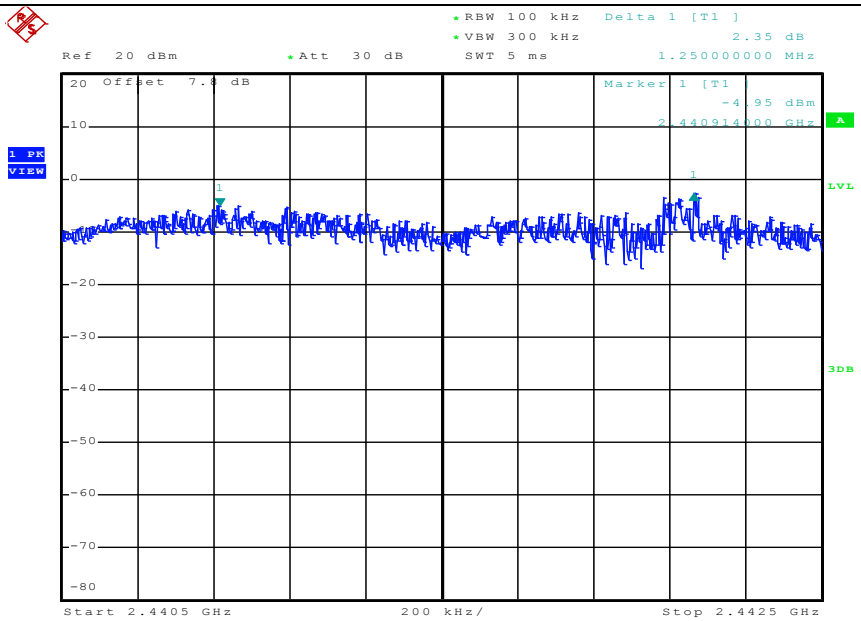
Date: 11.AUG.2019 11:35:24

A.3 Carrier Frequency Separation

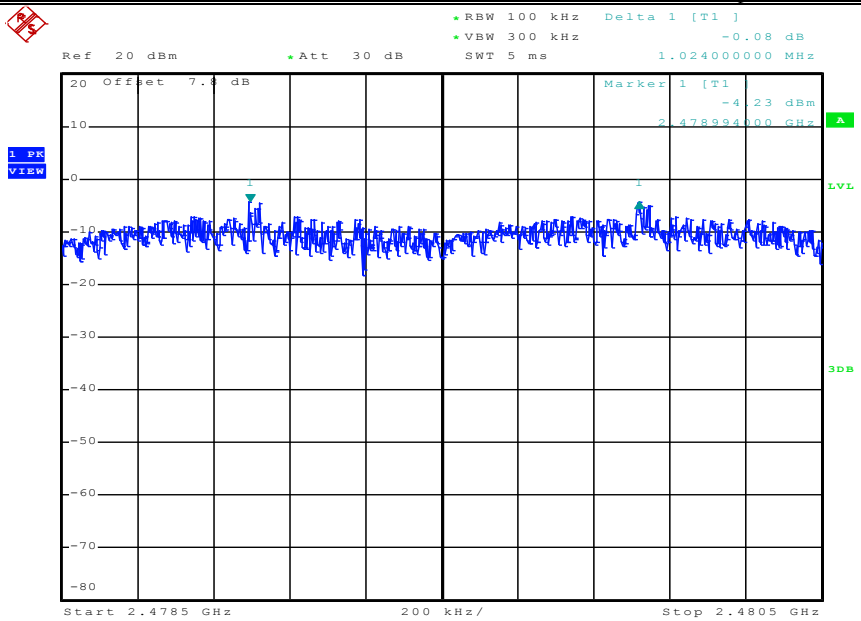
Mode	Channel.	Carrier Frequency Separation [MHz]	Limit [MHz]	Verdict
GFSK	LCH	0.987	0.689	PASS
	MCH	0.692	0.689	PASS
	HCH	0.786	0.689	PASS
π/4DQPSK	LCH	1.304	0.880	PASS
	MCH	1.250	0.880	PASS
	HCH	1.024	0.880	PASS

Test Graphs	
GFSK/LCH	

GFSK/MCH	
GFSK/HCH	

π/4DQPSK/LCH	 Date: 11.AUG.2019 11:57:48
π/4DQPSK/MCH	 Date: 11.AUG.2019 12:19:57

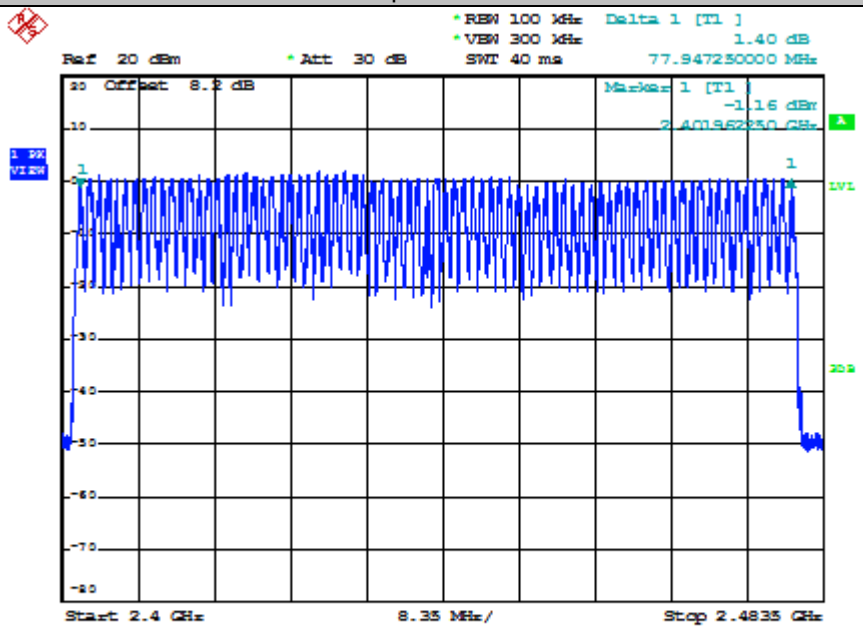
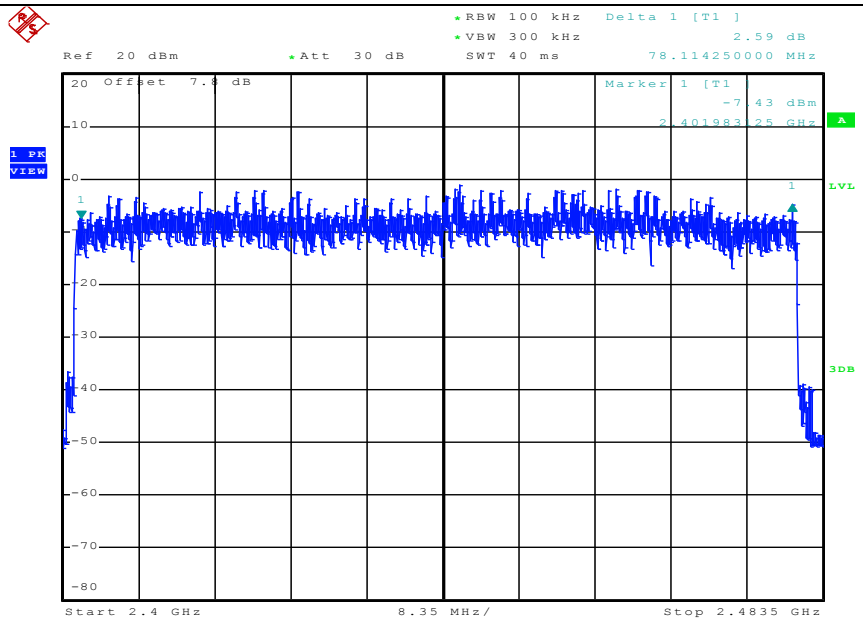
π/4DQPSK/HCH



Date: 11.AUG.2019 12:01:51

A.4 Hopping Channel Number

Mode	Channel.	Number of Hopping Channel [N]	Limit [N]	Verdict
GFSK	Hop	79	>=15	PASS
π/4DQPSK	Hop	79	>=15	PASS

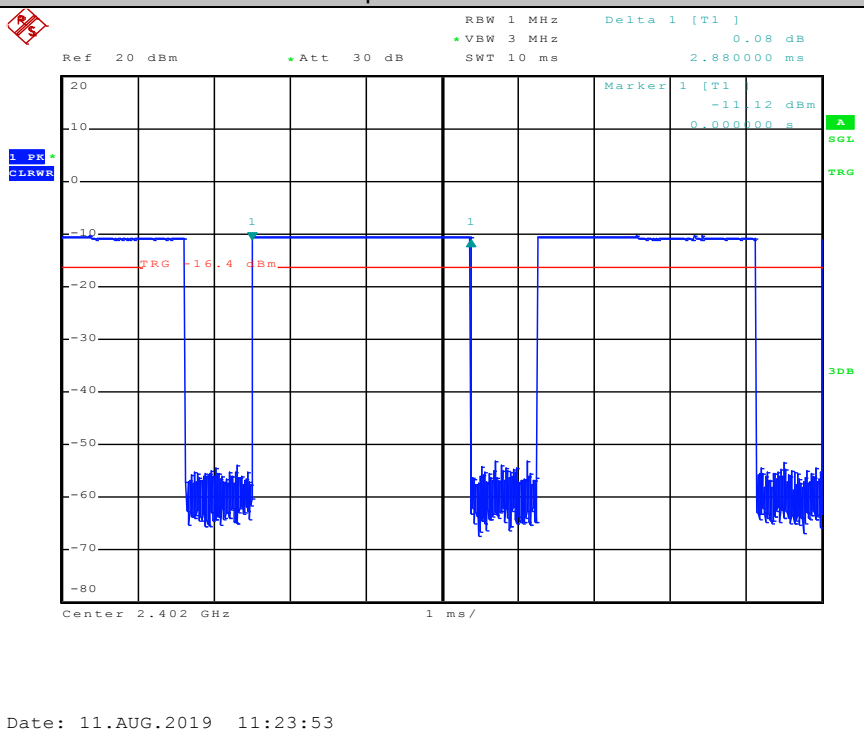
Test Graphs	
GFSK/Hop	
π/4DQPSK/Hop	

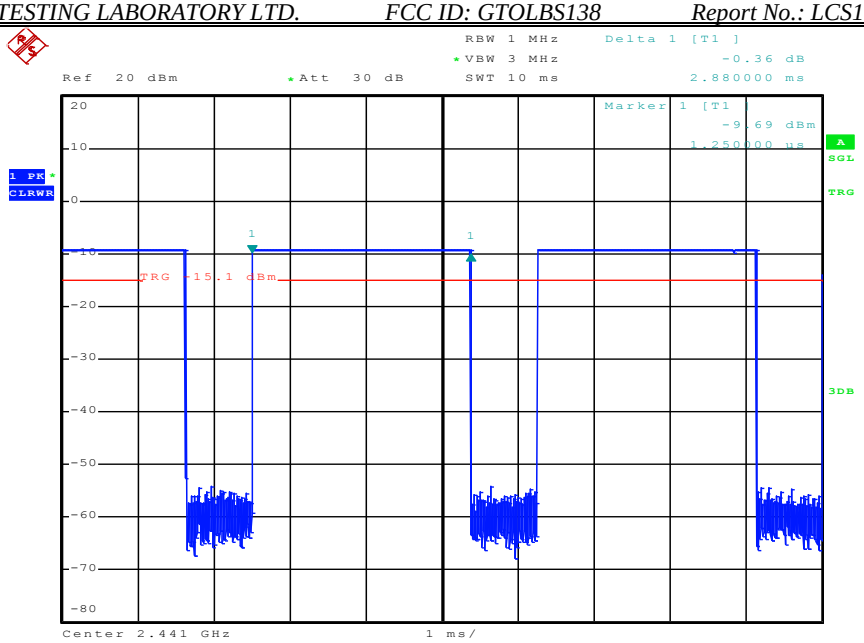
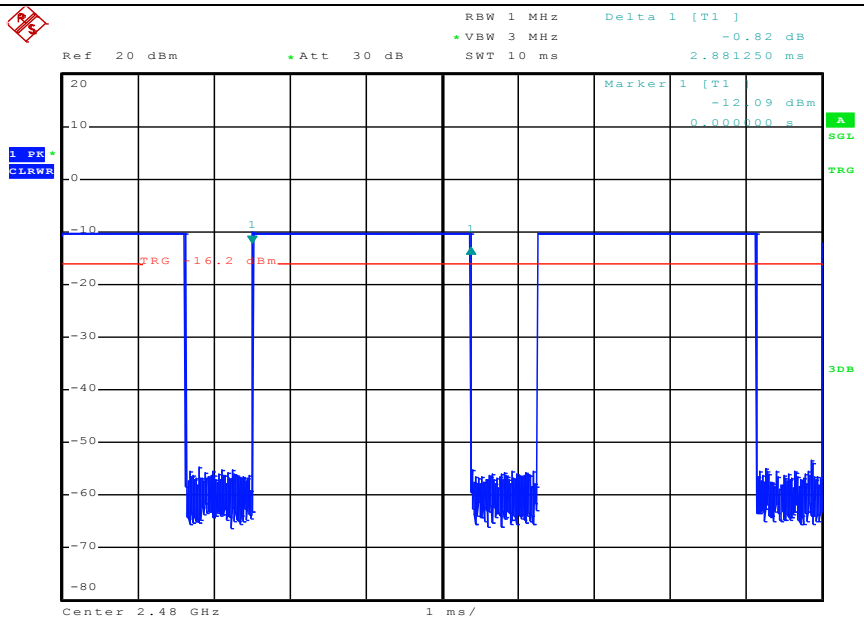
A.5 Dwell Time

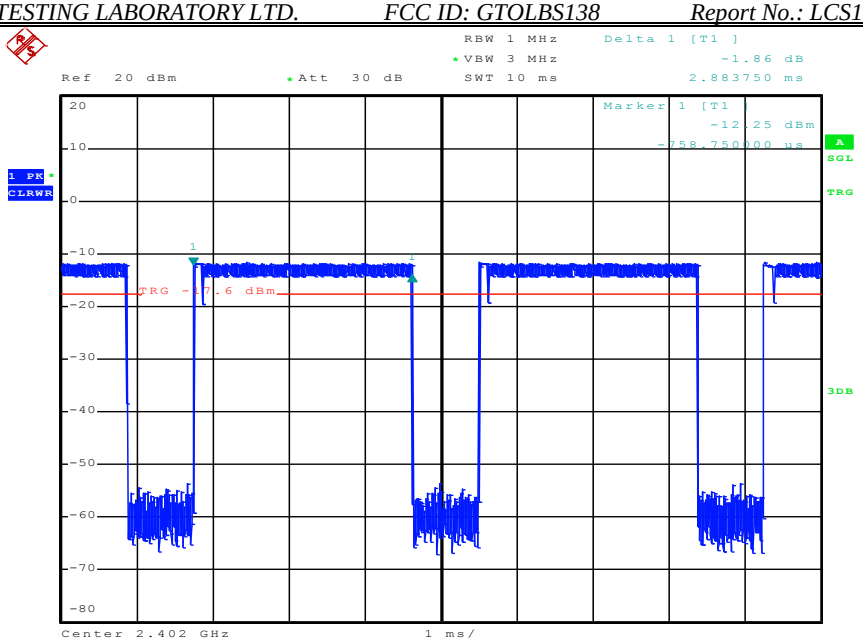
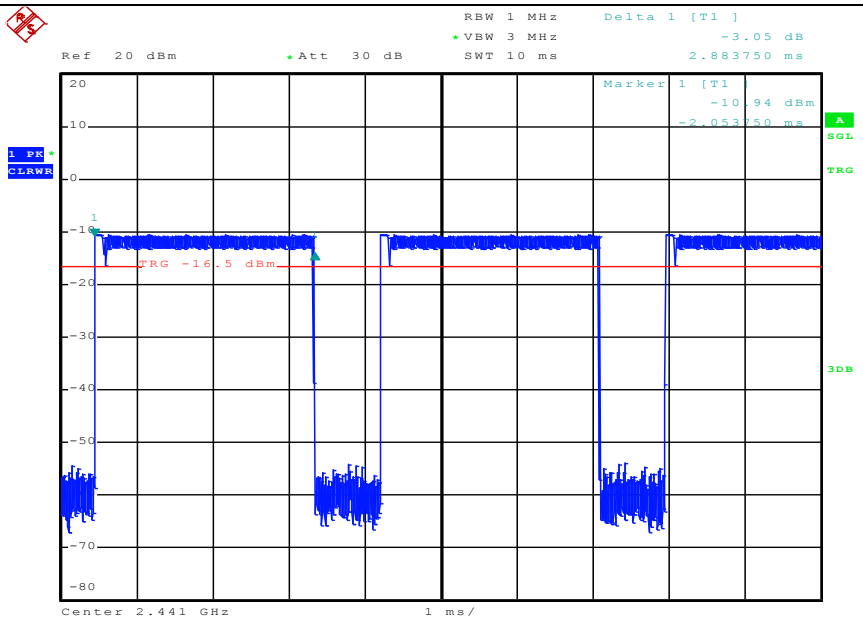
Mode	Packet	Channel	Burst Width [ms/hop/ch]	Total Hops[hop*ch]	Dwell Time[s]	Limit [s]	Verdict
GFSK	DH5	LCH	2.88	106.7	0.307	0.4	PASS
	DH5	MCH	2.88	106.7	0.307	0.4	PASS
	DH5	HCH	2.88	106.7	0.307	0.4	PASS
π/4DQPSK	2DH5	LCH	2.88	106.7	0.307	0.4	PASS
	2DH5	MCH	2.88	106.7	0.307	0.4	PASS
	2DH5	HCH	2.88	106.7	0.307	0.4	PASS

Test Graphs

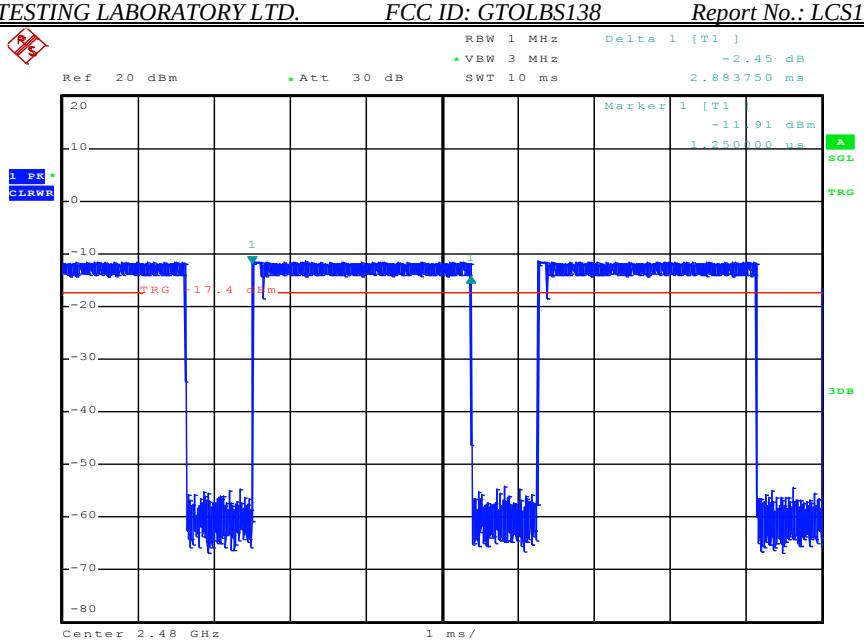
GFSK_DH5/LCH



GFSK_DH5/MCH	 Date: 11.AUG.2019 11:26:35
GFSK_DH5/HCH	 Date: 11.AUG.2019 11:28:17

π/4DQPSK _2DH5/LCH	 Date: 11.AUG.2019 11:31:13
π/4DQPSK _2DH5/MCH	 Date: 11.AUG.2019 11:33:56

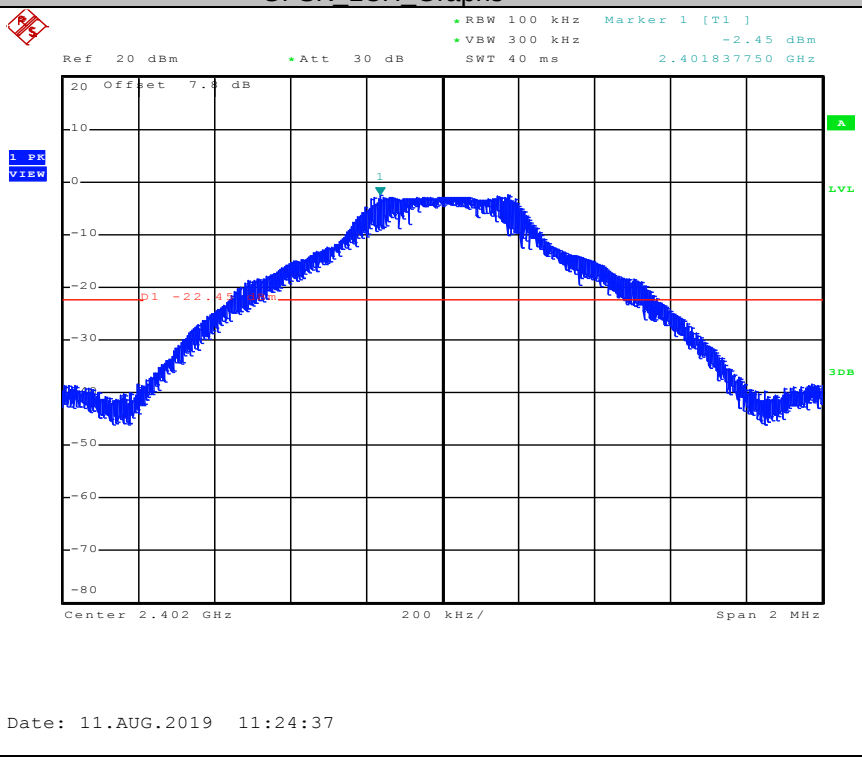
π/4DQPSK
_2DH5/HCH



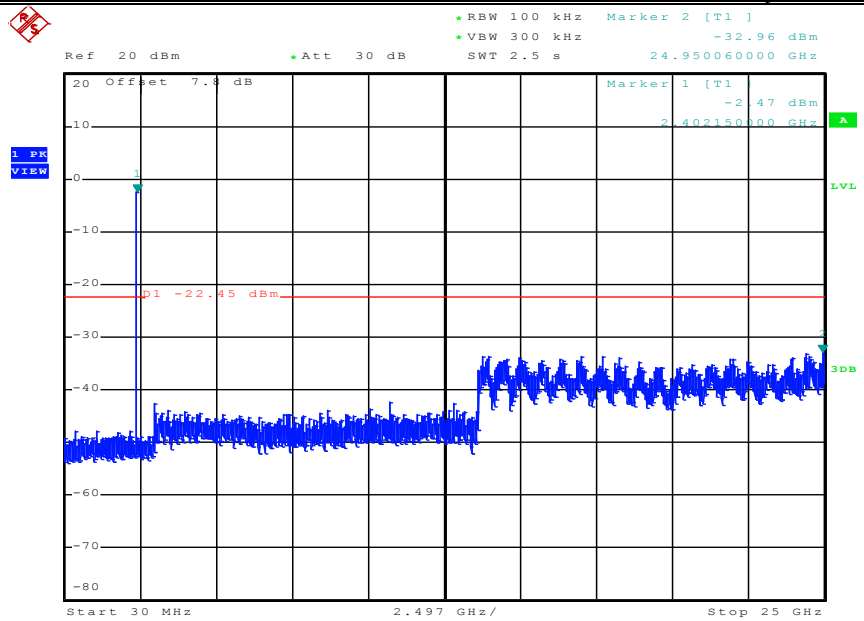
Date: 11.AUG.2019 11:35:46

A.6 RF Conducted Spurious Emissions

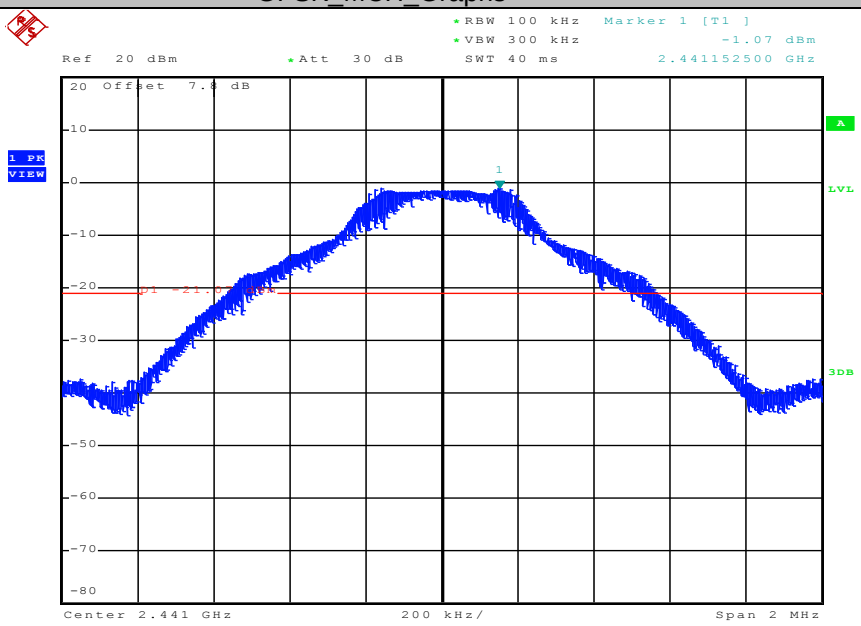
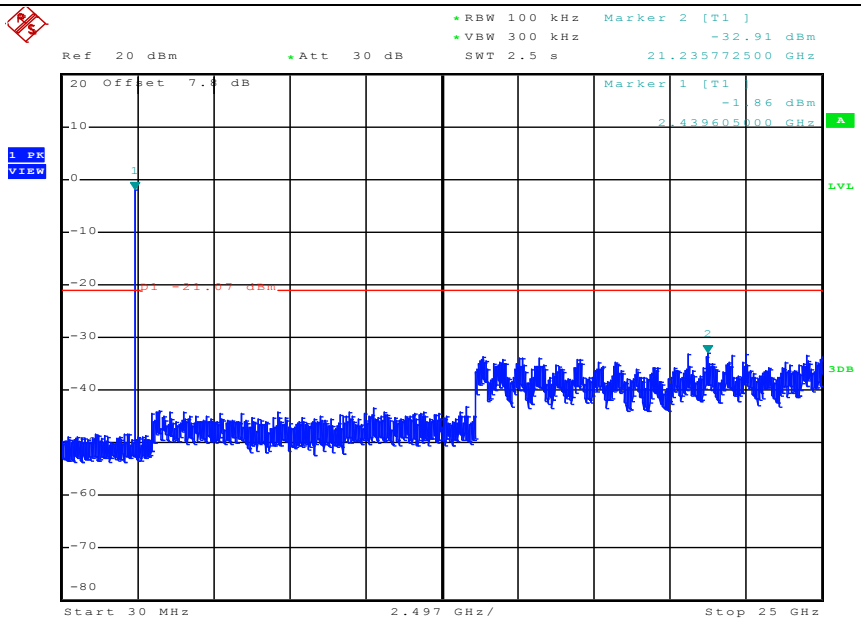
Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
GFSK	LCH	-2.45	-32.960	-22.450	PASS
	MCH	-1.07	-32.910	-21.070	PASS
	HCH	-2.01	-33.050	-22.010	PASS
π/4DQPSK	LCH	-3.61	-33.000	-23.610	PASS
	MCH	-2.34	-33.290	-22.340	PASS
	HCH	-3.33	-33.300	-23.330	PASS

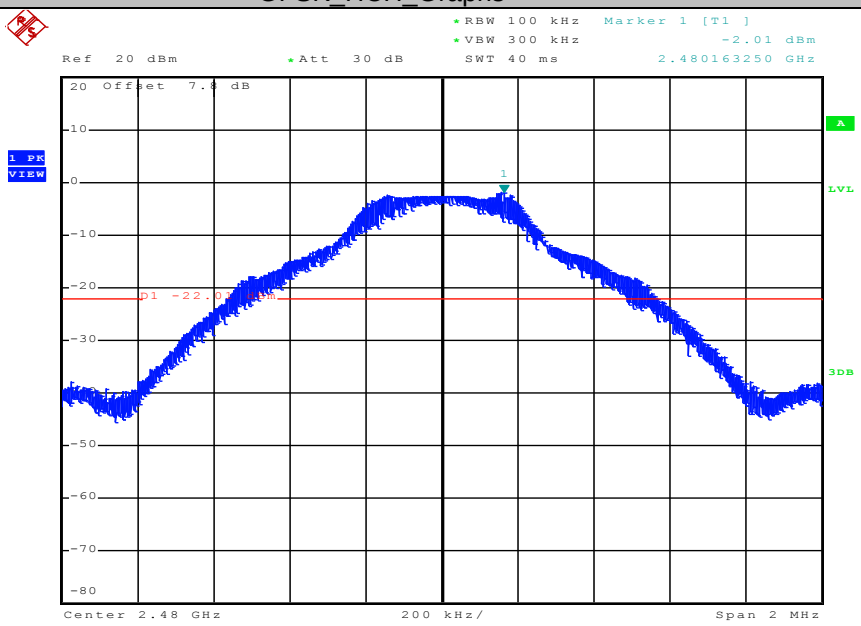
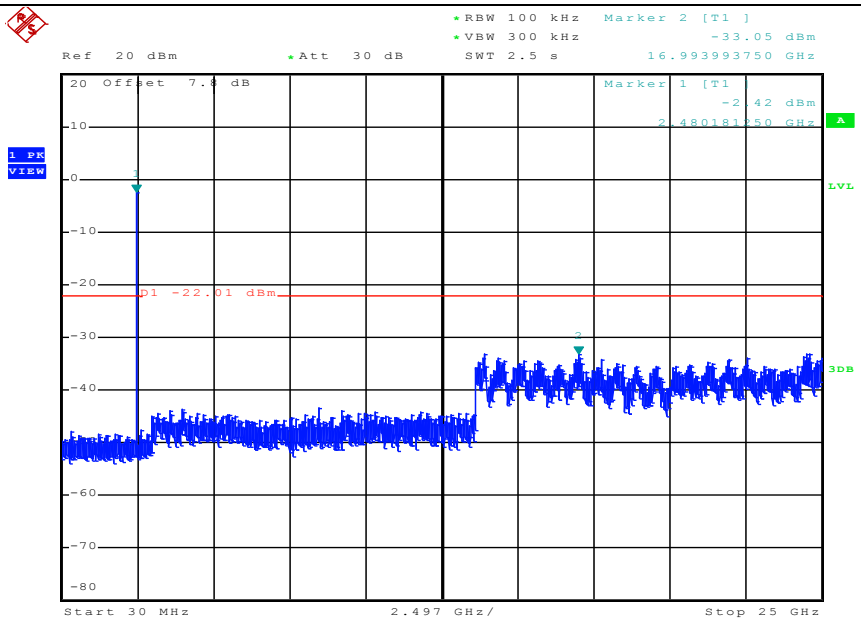
GFSK_LCH_Graphs	
Pref	

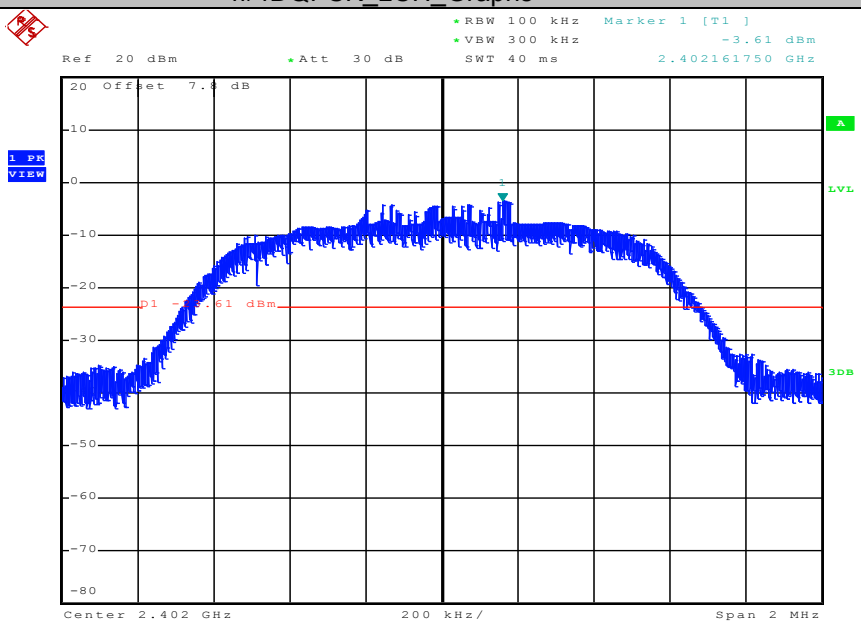
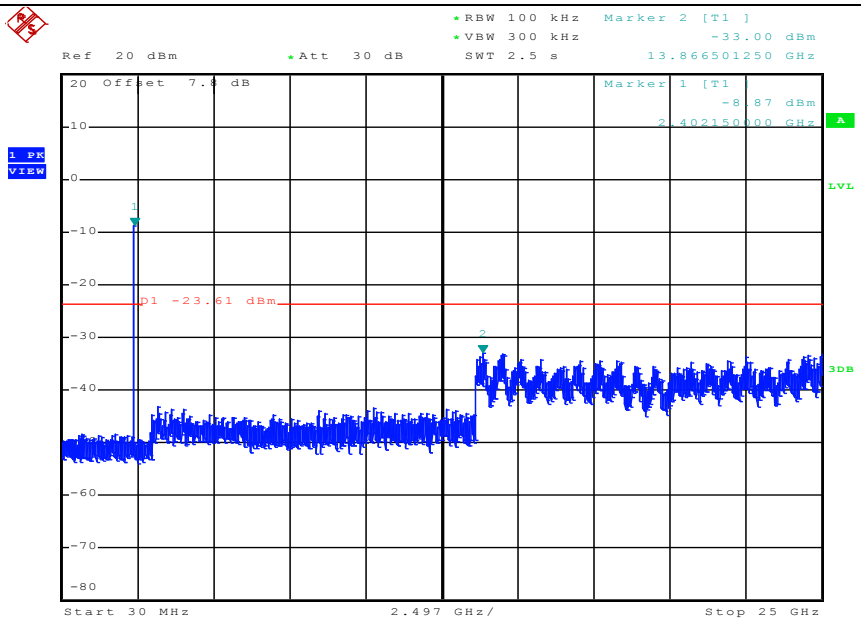
Puw

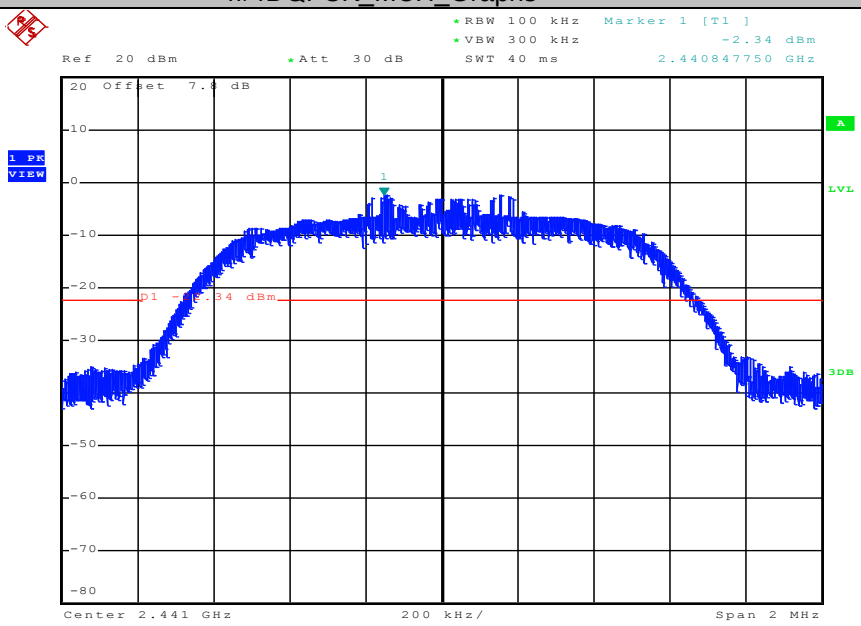
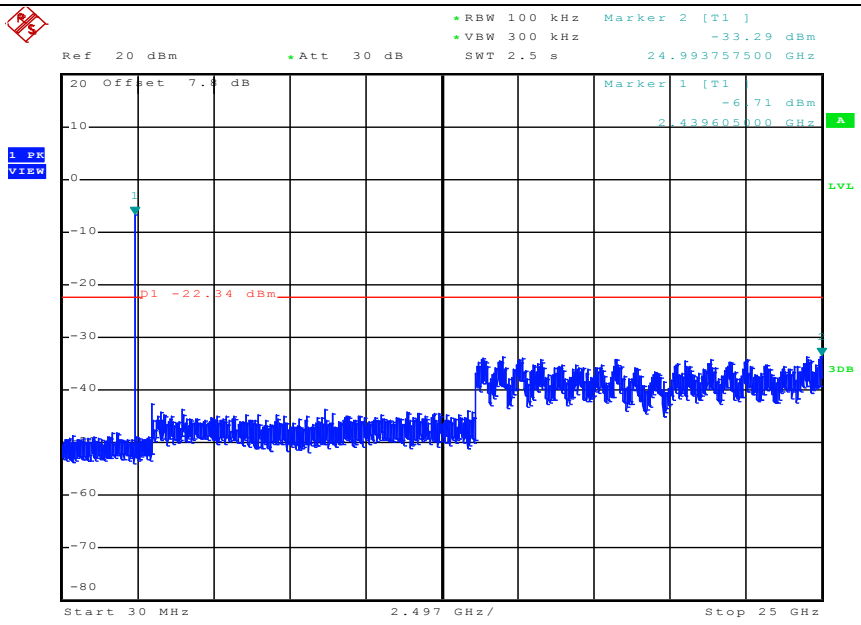


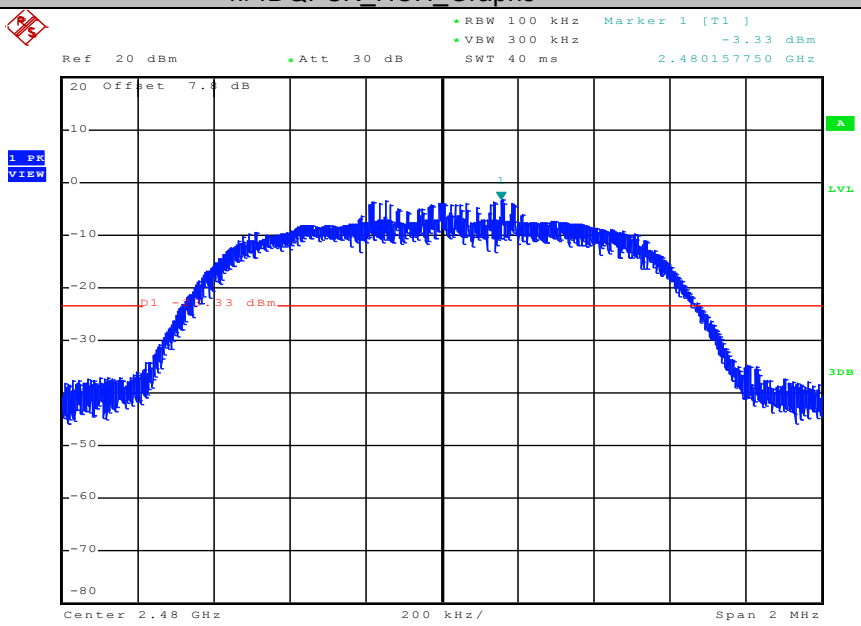
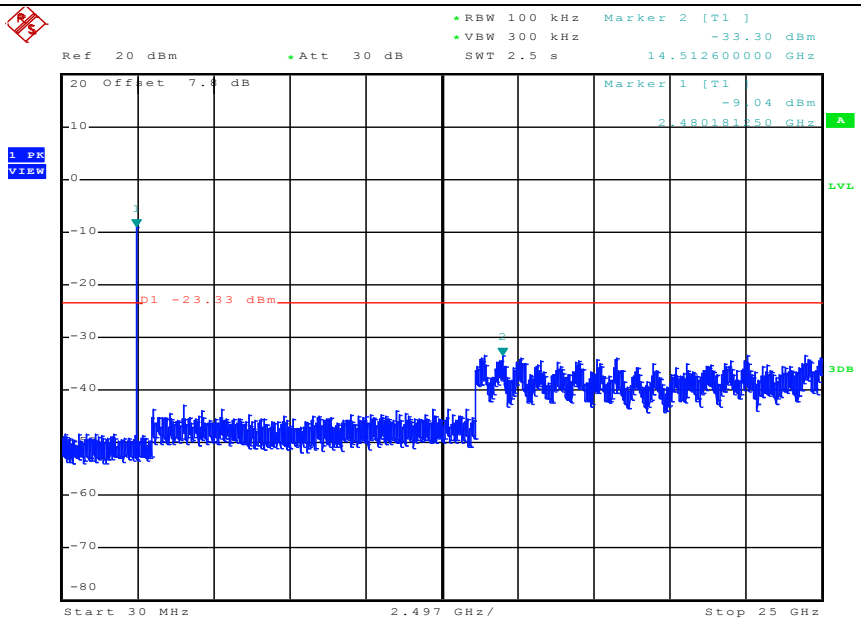
Date: 11.AUG.2019 11:24:51

GFSK_MCH_Graphs	
Pref	 Date: 11.AUG.2019 11:27:02
Puw	 Date: 11.AUG.2019 11:27:17

GFSK_HCH_Graphs	
Pref	 Date: 11.AUG.2019 11:29:02
Puw	 Date: 11.AUG.2019 11:29:17

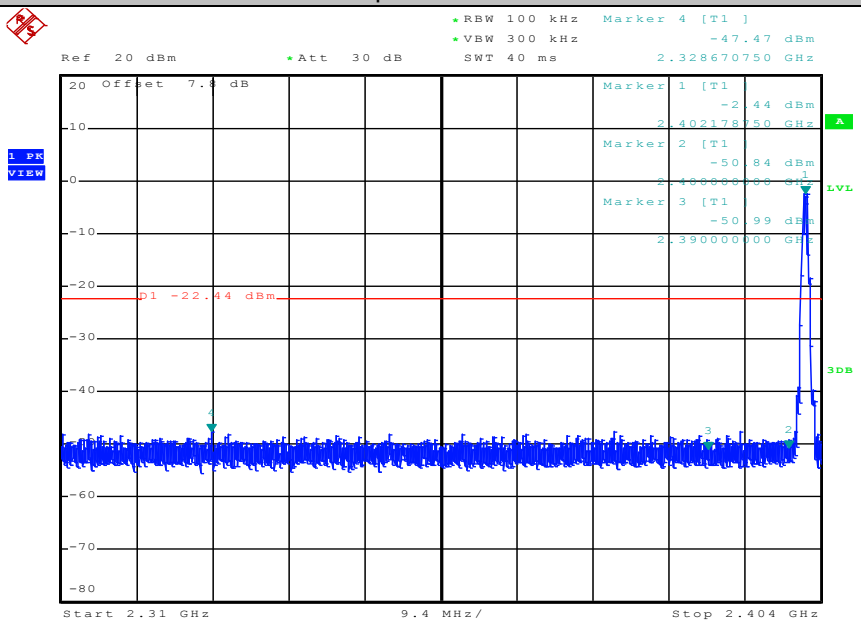
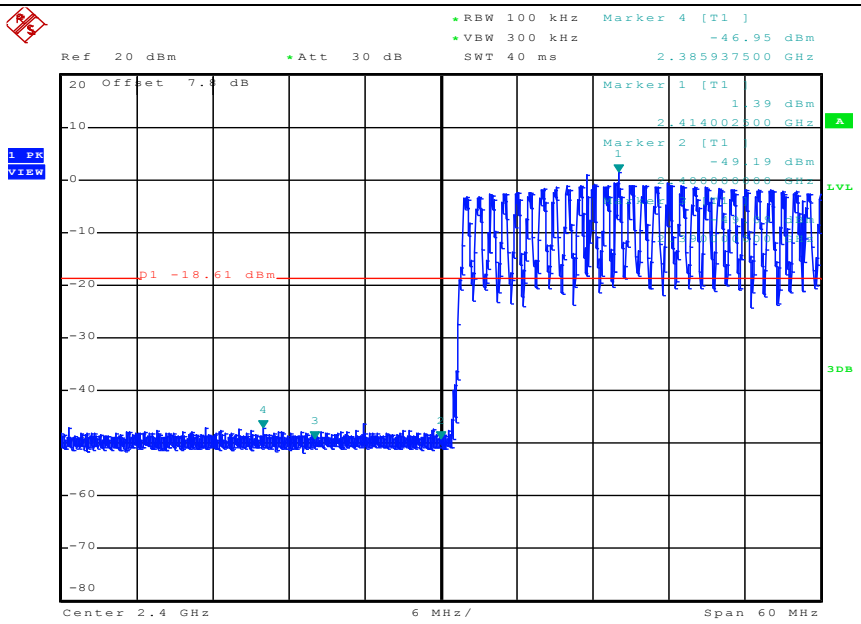
π/4DQPSK_LCH_Graphs	
Pref	 Date: 11.AUG.2019 11:31:57
Puw	 Date: 11.AUG.2019 11:32:12

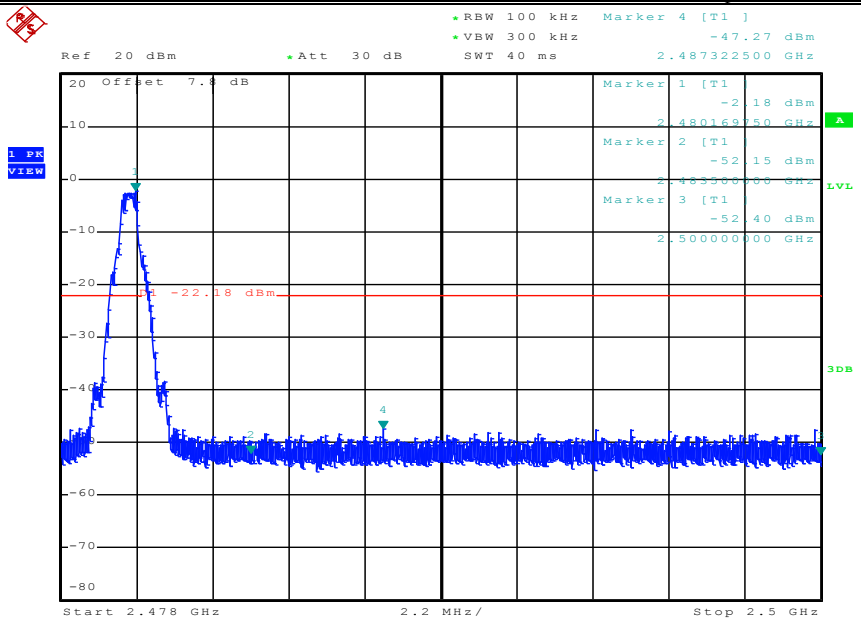
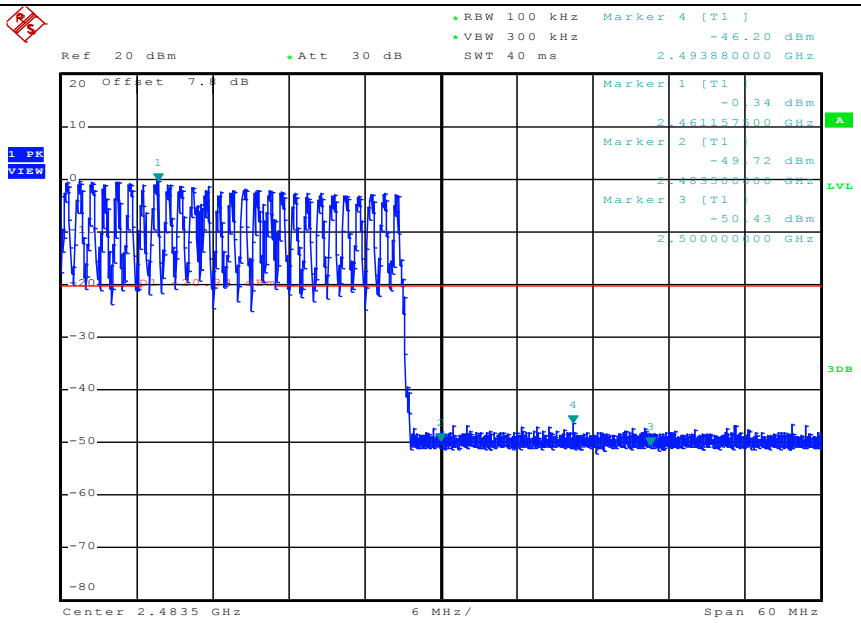
π/4DQPSK_MCH_Graphs	
Pref	 Date: 11.AUG.2019 11:34:24
Puw	 Date: 11.AUG.2019 11:34:39

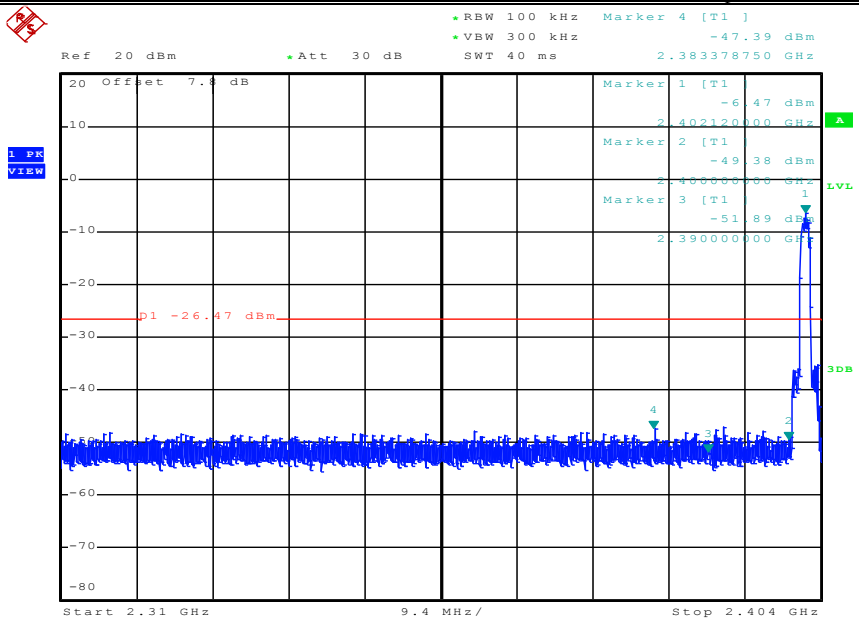
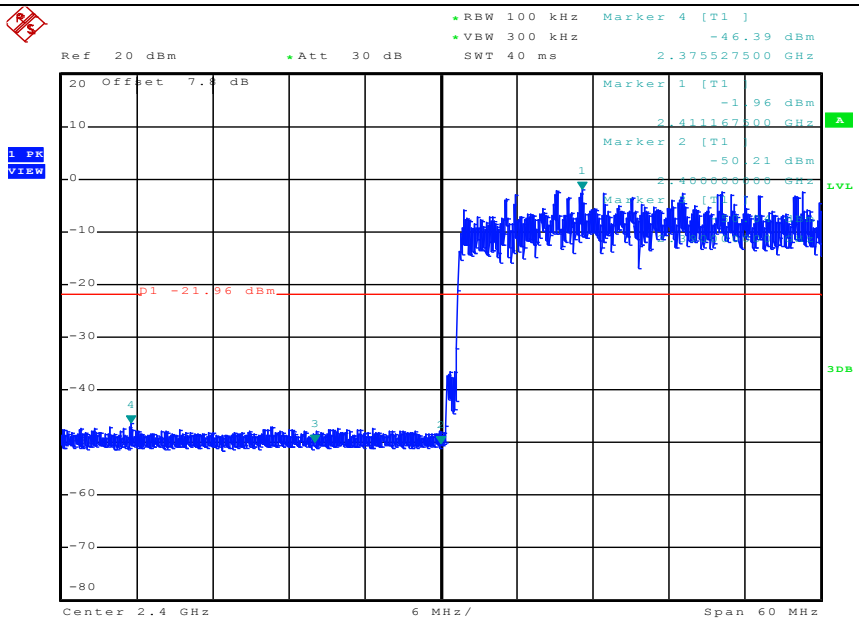
π/4DQPSK_HCH_Graphs	
Pref	 Date: 11.AUG.2019 11:36:30
Puw	 Date: 11.AUG.2019 11:36:45

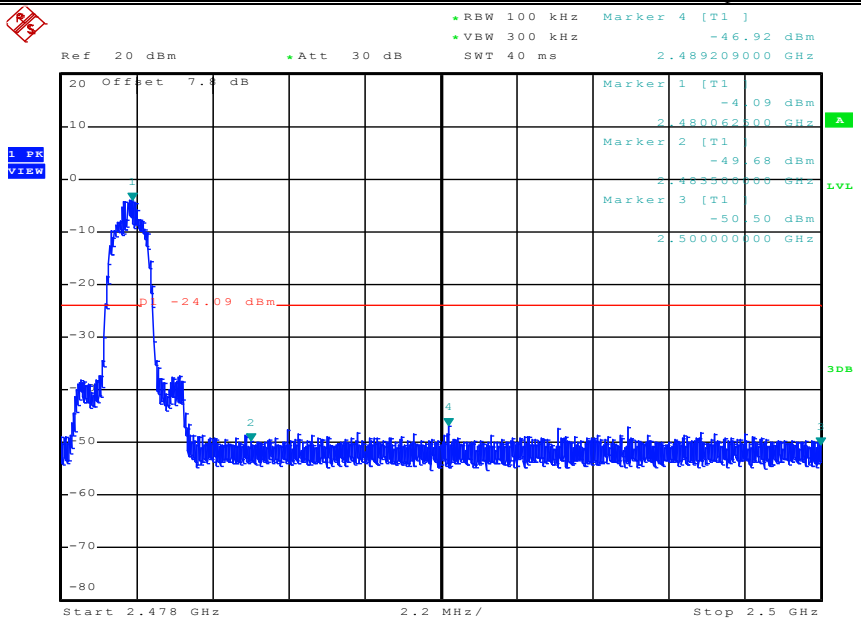
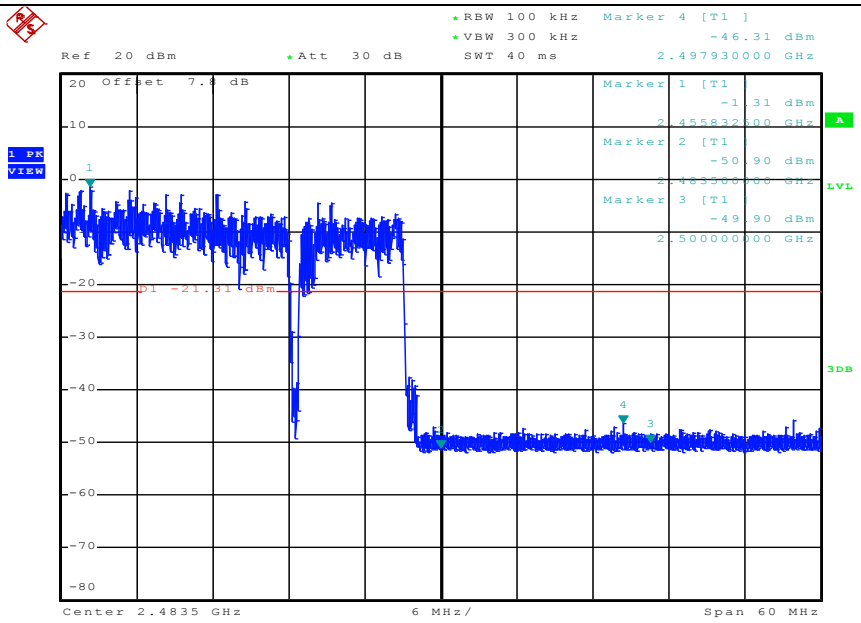
A.7 Band-edge for RF Conducted Emissions

Mode	Channel	Carrier Frequency [MHz]	Carrier Power [dBm]	Frequency Hopping	Max Spurious Level [dBm]	Limit [dBm]	Verdict
GFSK	LCH	2402	-2.440	Off	-47.468	-22.44	PASS
			1.390	On	-46.947	-18.61	PASS
	HCH	2480	-2.180	Off	-47.269	-22.18	PASS
			-0.340	On	-46.200	-20.34	PASS
π/4DQPSK	LCH	2402	-6.470	Off	-47.394	-26.47	PASS
			-1.960	On	-46.386	-21.96	PASS
	HCH	2480	-4.090	Off	-46.918	-24.09	PASS
			-1.310	On	-46.310	-21.31	PASS

Test Graphs	
GFSK/LCH/No Hop	 Date: 11.AUG.2019 11:24:24
GFSK/LCH/Hop	 Date: 11.AUG.2019 11:50:21

GFSK/HCH/No Hop	 Date: 11.AUG.2019 11:28:48
GFSK/HCH/Hop	 Date: 11.AUG.2019 11:54:59

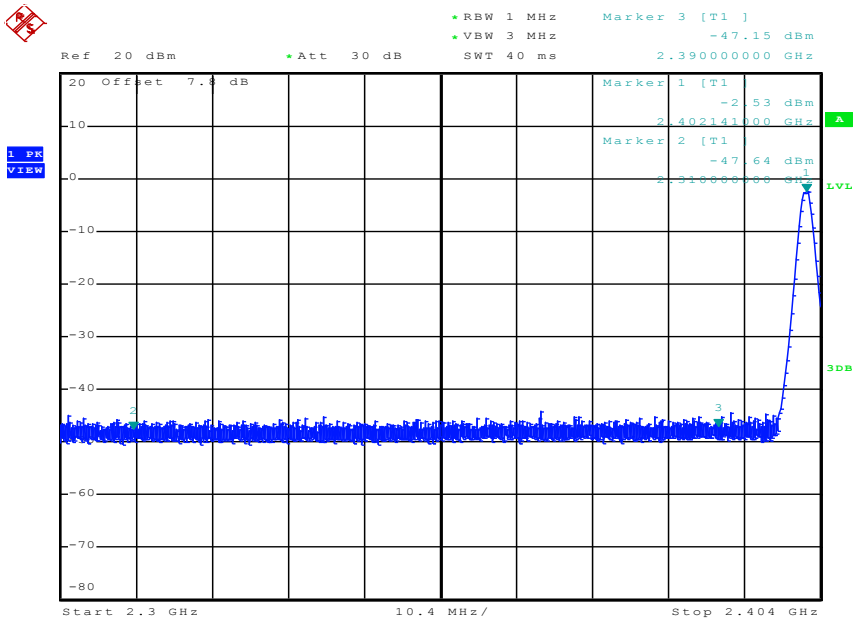
π/4DQPSK/LCH/No Hop	 Date: 11.AUG.2019 11:31:44
π/4DQPSK/LCH/Hop	 Date: 11.AUG.2019 11:59:58

π/4DQPSK/HCH/No Hop	 Date: 11.AUG.2019 11:36:17
π/4DQPSK/HCH/Hop	 Date: 11.AUG.2019 12:03:06

A.8 Restrict-band band-edge measurements

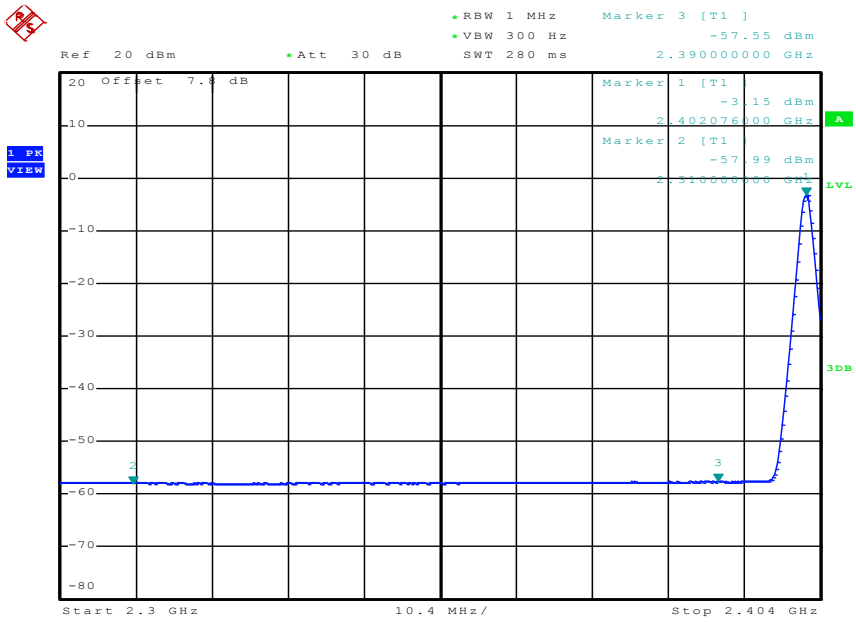
Test Mode	Hopping	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detector	Limit [dBuV/m]	Verdict
GFSK	Off	2310.0	-47.64	2.0	0	48.62	PEAK	74	PASS
	Off	2310.0	-57.99	2.0	0	38.27	AV	54	PASS
	Off	2390.0	-47.15	2.0	0	49.11	PEAK	74	PASS
	Off	2390.0	-57.55	2.0	0	38.71	AV	54	PASS
	Off	2483.5	-36.40	2.0	0	59.86	PEAK	74	PASS
	Off	2483.5	-45.05	2.0	0	51.21	AV	54	PASS
	Off	2500.0	-48.87	2.0	0	47.39	PEAK	74	PASS
	Off	2500.0	-58.37	2.0	0	37.89	AV	54	PASS
π/4DQPSK	Off	2310.0	-49.26	2.0	0	47.00	PEAK	74	PASS
	Off	2310.0	-58.01	2.0	0	38.25	AV	54	PASS
	Off	2390.0	-48.56	2.0	0	47.70	PEAK	74	PASS
	Off	2390.0	-57.83	2.0	0	38.43	AV	54	PASS
	Off	2483.5	-40.84	2.0	0	55.42	PEAK	74	PASS
	Off	2483.5	-47.26	2.0	0	49.00	AV	54	PASS
	Off	2500.0	-47.40	2.0	0	48.86	PEAK	74	PASS
	Off	2500.0	-58.40	2.0	0	37.86	AV	54	PASS

Restrict-band band-edge measurements_Hopping Off_ GFSK_PEAK (Low Channel)



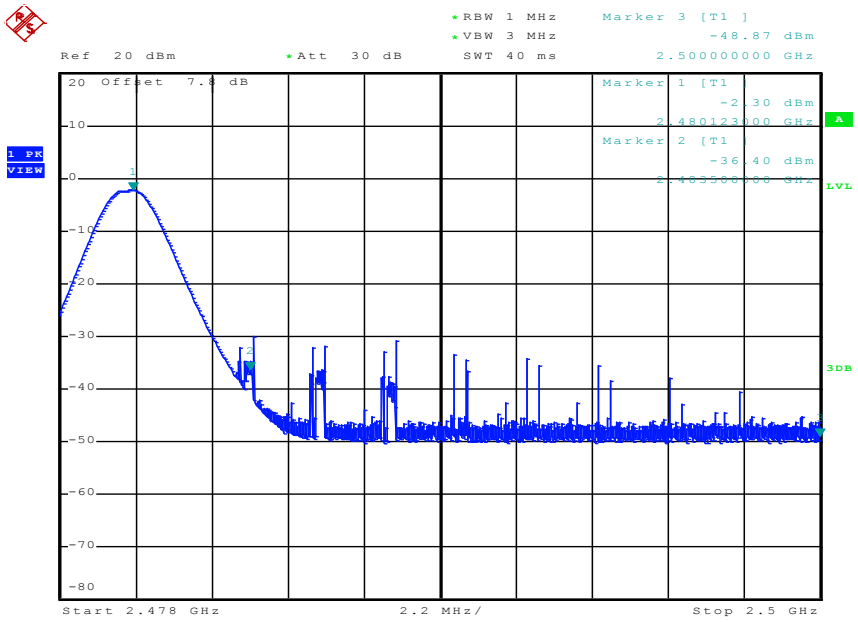
Date: 11.AUG.2019 11:25:10

Restrict-band band-edge measurements_Hopping Off_ GFSK_Average (Low Channel)



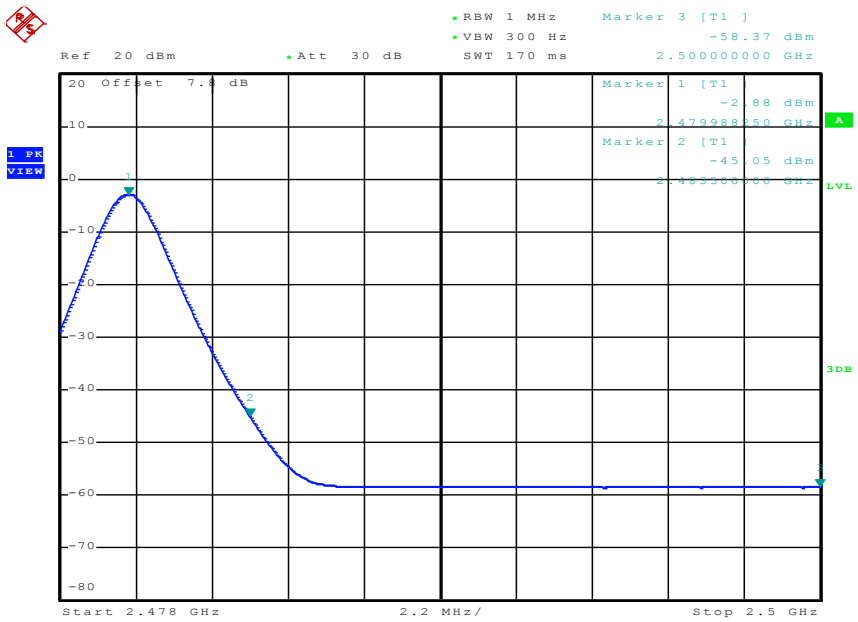
Date: 11.AUG.2019 11:25:23

Restrict-band band-edge measurements_Hopping Off_ GFSK_PEAK (High Channel)



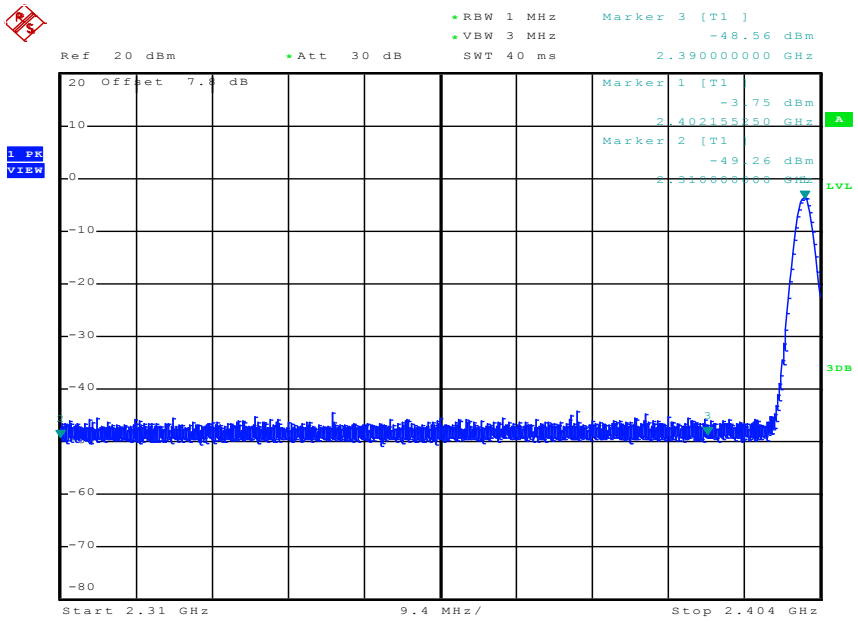
Date: 11.AUG.2019 11:29:36

Restrict-band band-edge measurements_Hopping Off_ GFSK_Average (High Channel)



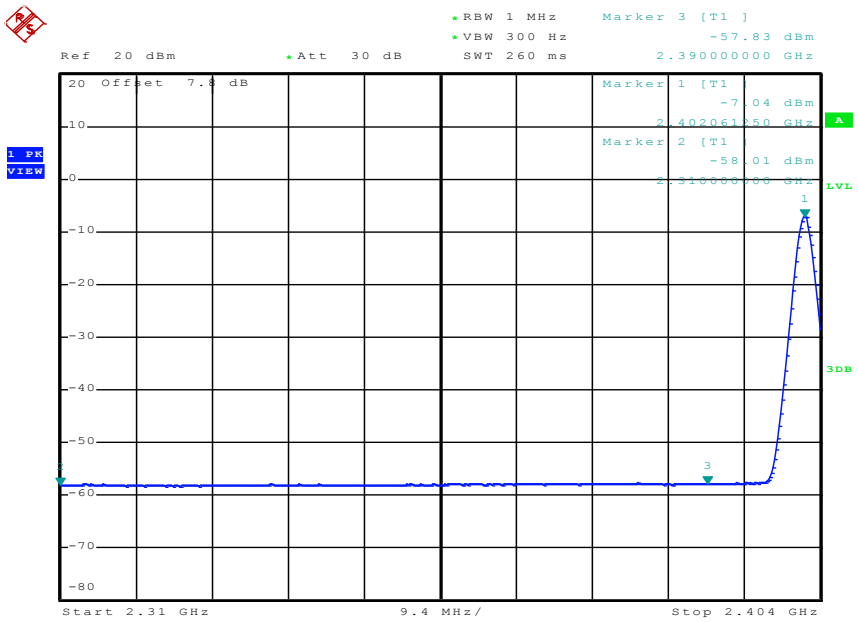
Date: 11.AUG.2019 11:29:49

Restrict-band band-edge measurements_Hopping Off_π/4-DQPSK_PEAK (Low Channel)



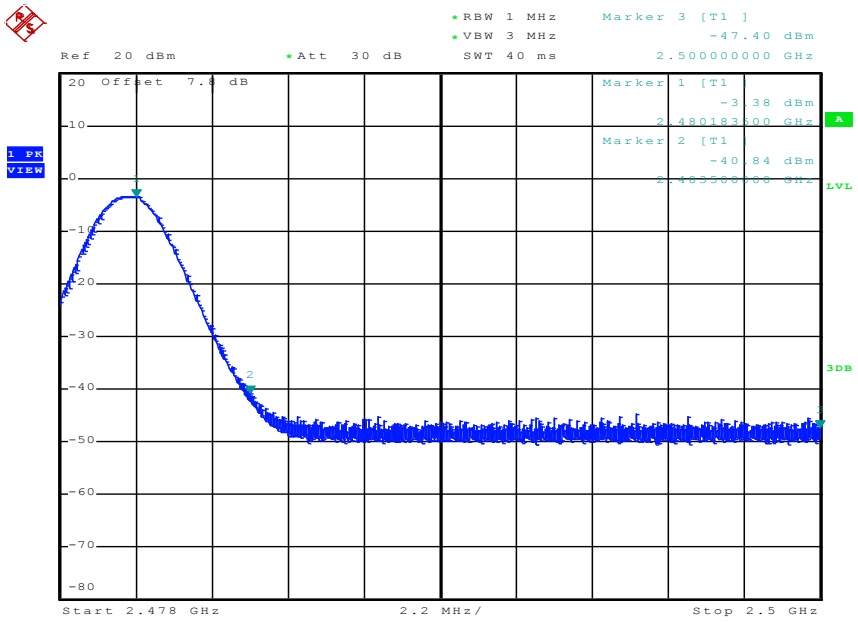
Date: 11.AUG.2019 11:32:30

Restrict-band band-edge measurements_Hopping Off_π/4-DQPSK_Average (Low Channel)



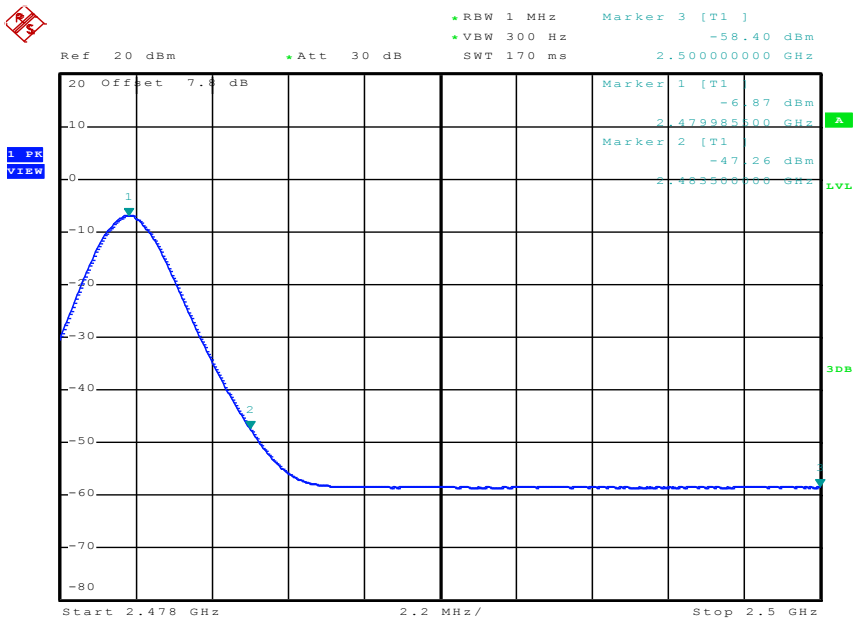
Date: 11.AUG.2019 11:32:44

Restrict-band band-edge measurements_Hopping Off_π/4-DQPSK_PEAK (High Channel)



Date: 11.AUG.2019 11:37:04

Restrict-band band-edge measurements_Hopping Off_π/4-DQPSK_Average (High Channel)



Date: 11.AUG.2019 11:37:17