

Appendix A

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

Product Name: True Wireless Stereo Headset

Trade Mark: N/A

Test Model: T2

Environmental Conditions

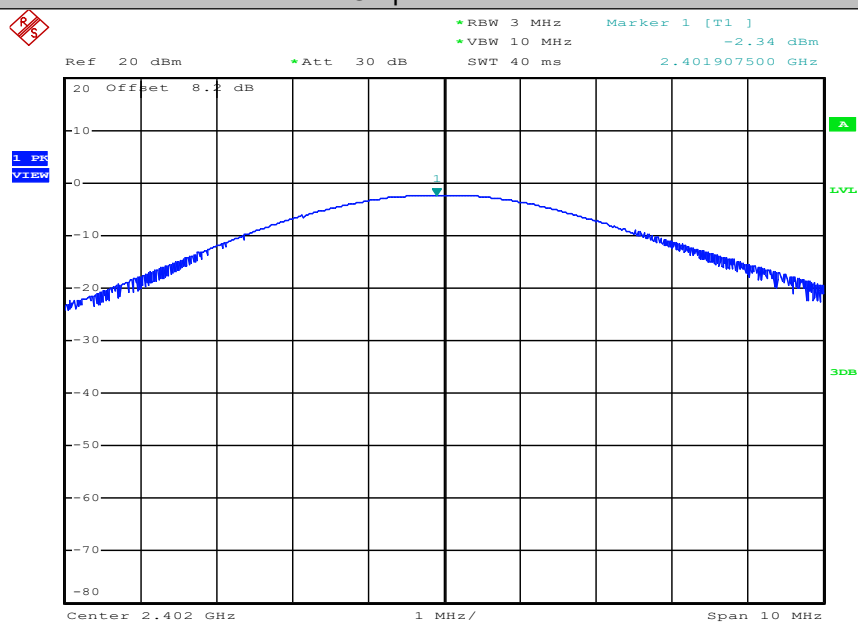
Temperature:	23.8 ° C
Relative Humidity:	53.1 %
ATM Pressure:	100.0 kPa
Test Engineer:	Alisa Huang
Supervised by:	Wang.Chuang

A.1 Maximum Conducted Peak Output Power

Mode	Channel.	Maximum Peak Output Power [dBm]	Limit [dBm]	Verdict
GFSK	LCH	-2.340	30	PASS
	MCH	-1.460	30	PASS
	HCH	-1.270	30	PASS
$\pi/4$ DQPSK	LCH	-3.010	21	PASS
	MCH	-2.490	21	PASS
	HCH	-2.220	21	PASS
8DPSK	LCH	-2.830	21	PASS
	MCH	-2.040	21	PASS
	HCH	-2.100	21	PASS

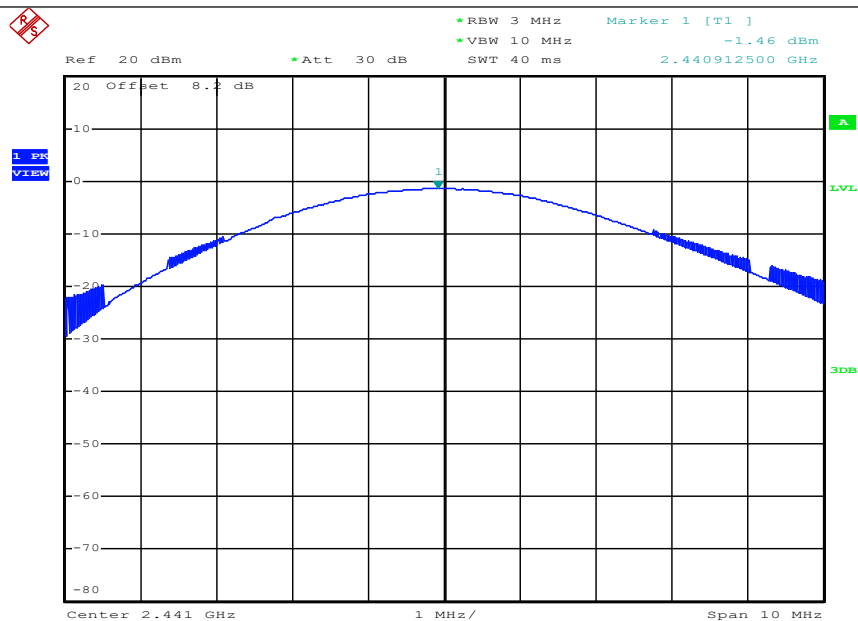
Test Graphs

GFSK/LCH



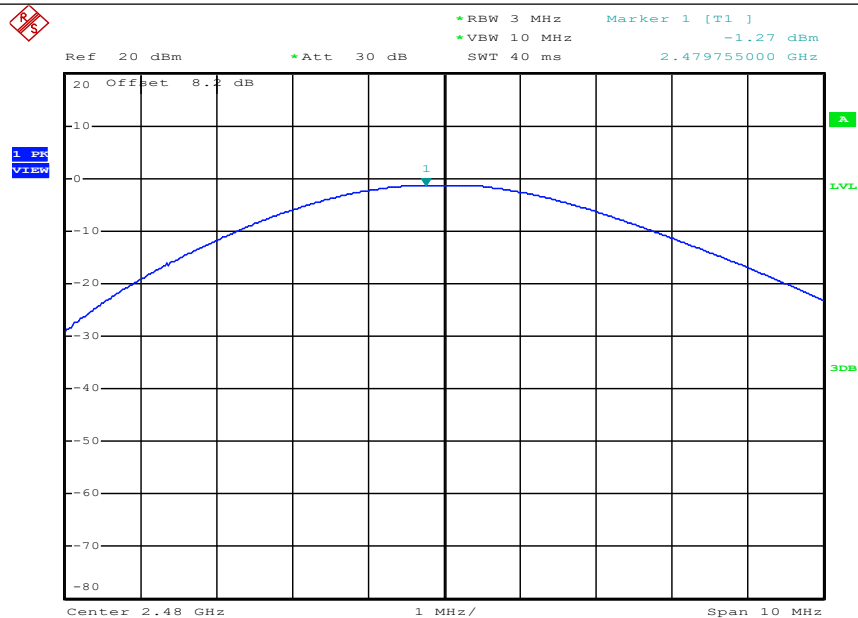
Date: 26.AUG.2019 18:24:02

GFSK/MCH

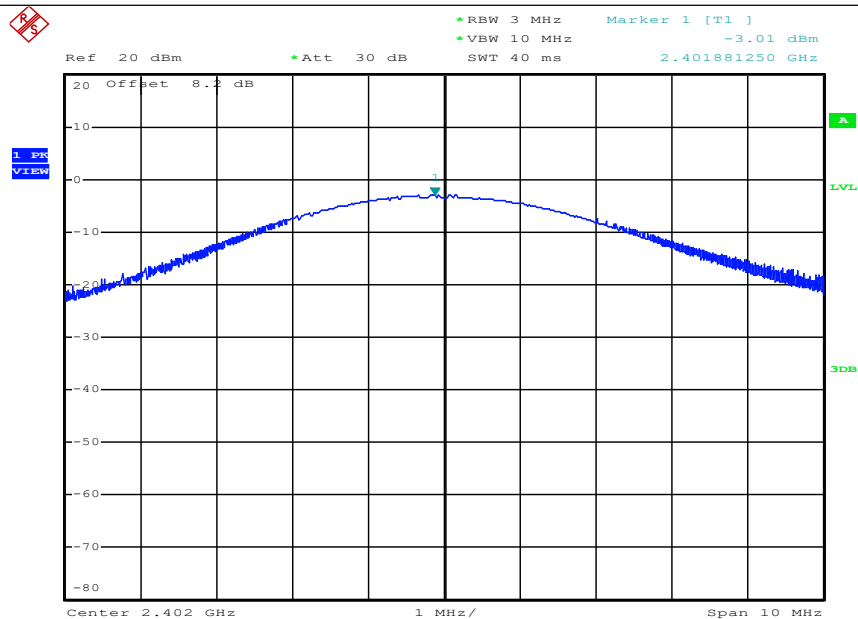


Date: 26.AUG.2019 18:26:29

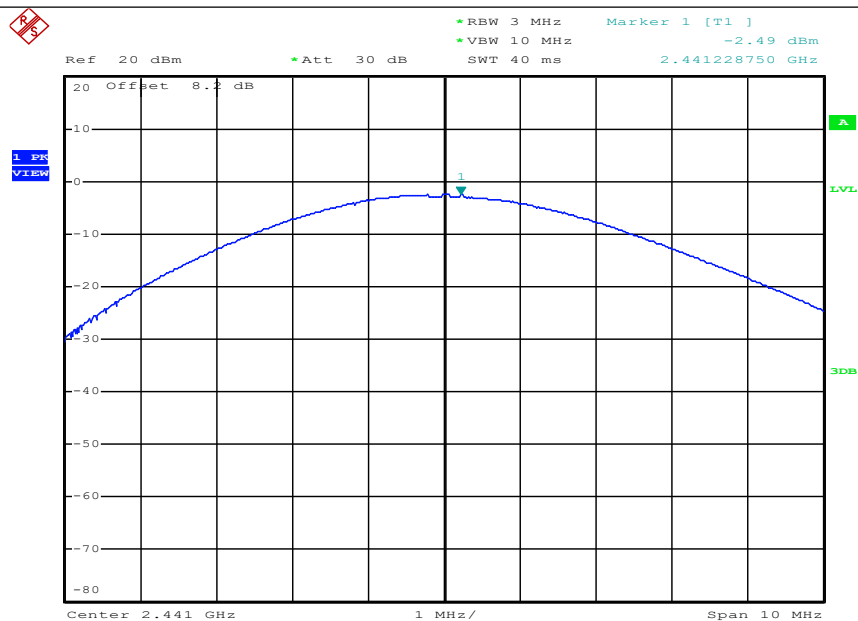
GFSK/HCH



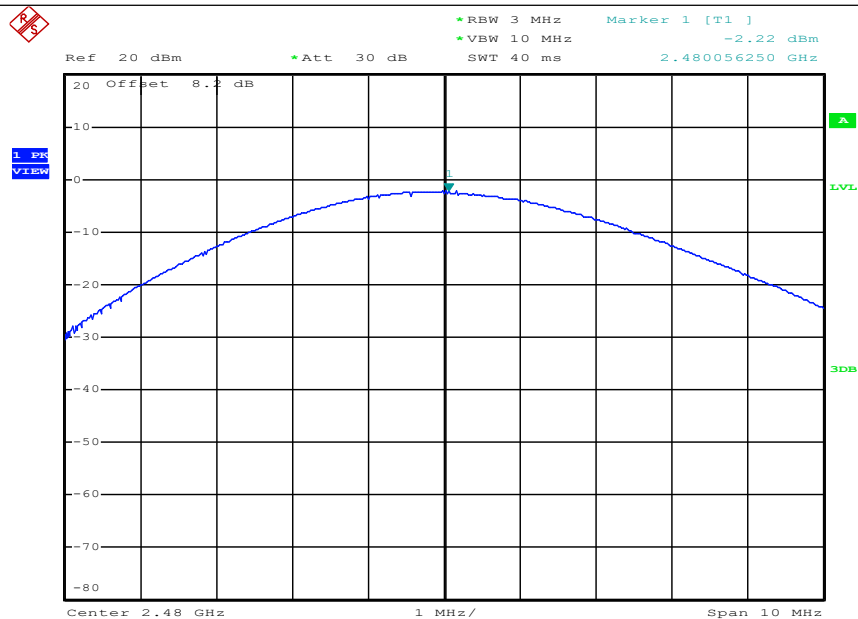
Date: 26.AUG.2019 18:28:12

 π /4DQPSK/LCH

Date: 26.AUG.2019 18:31:52

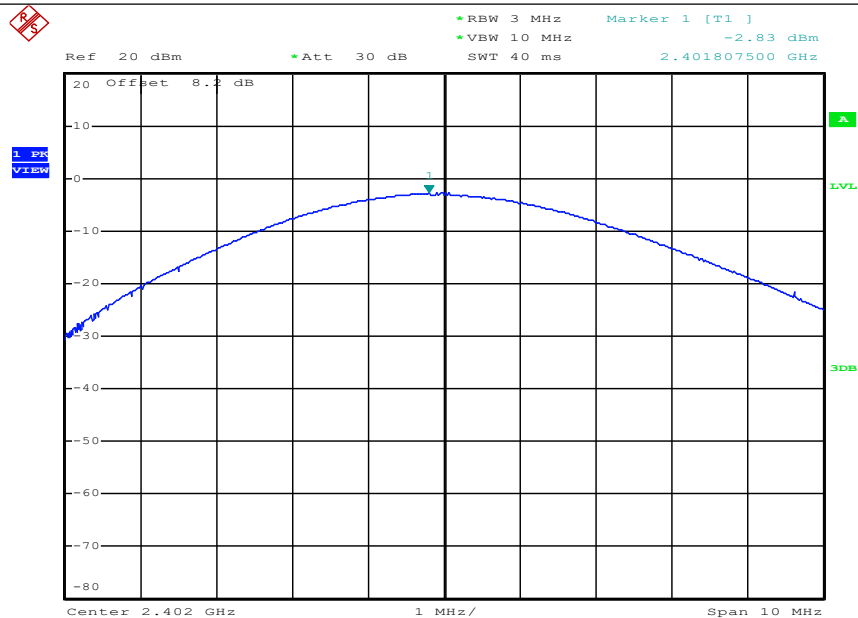
$\pi/4$ DQPSK/MCH

Date: 26.AUG.2019 18:34:17

 $\pi/4$ DQPSK/HCH

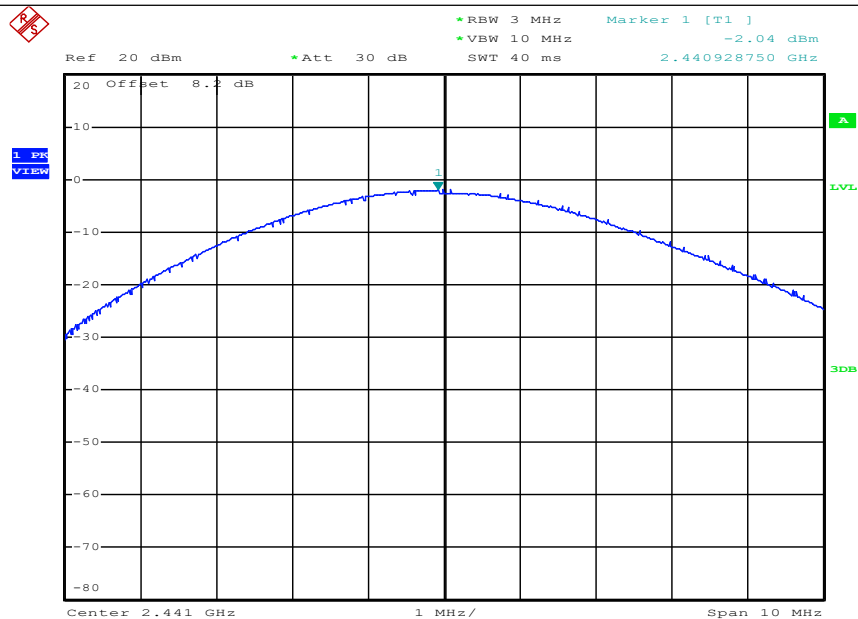
Date: 26.AUG.2019 18:36:00

8DPSK/LCH



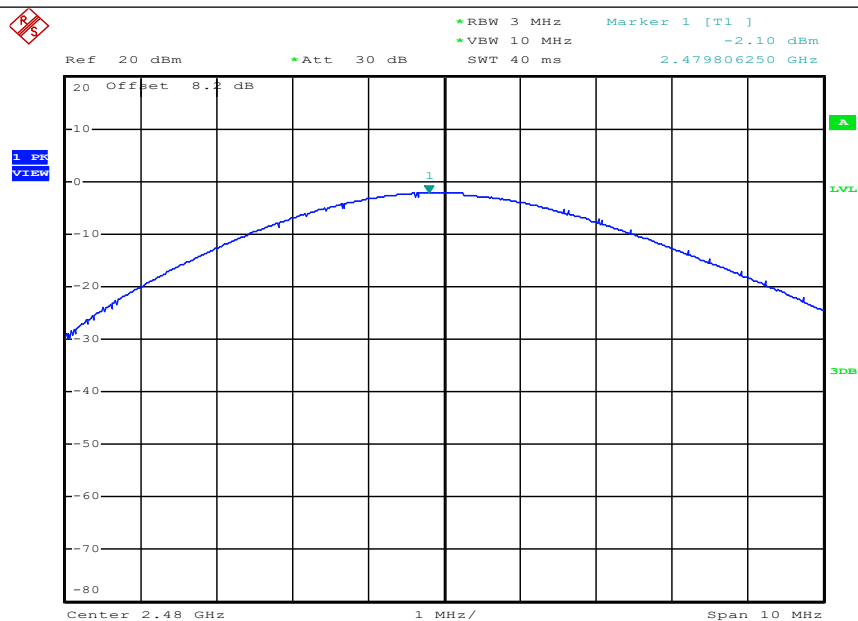
Date: 26.AUG.2019 18:38:26

8DPSK/MCH



Date: 26.AUG.2019 18:40:46

8DPSK/HCH



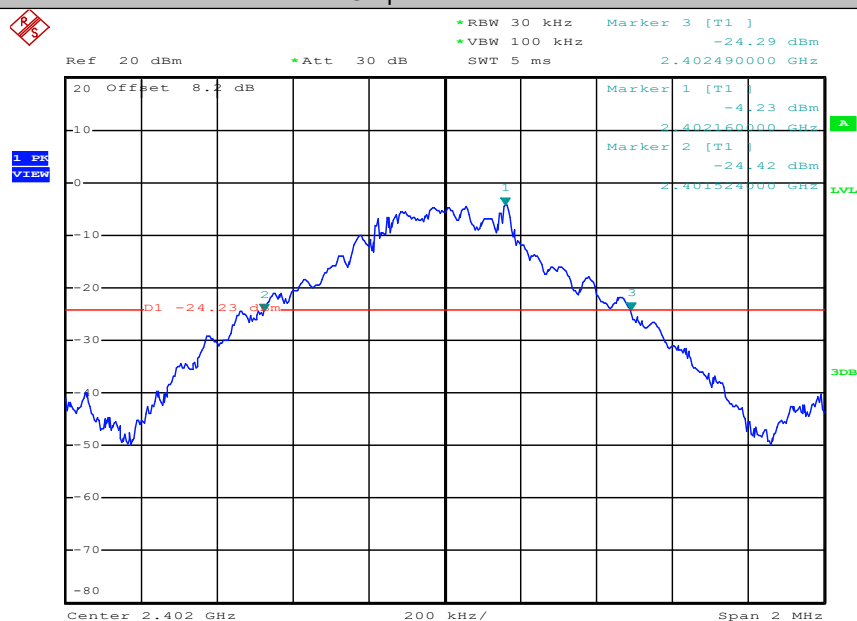
Date: 26.AUG.2019 18:42:24

A.2 20dB Bandwidth

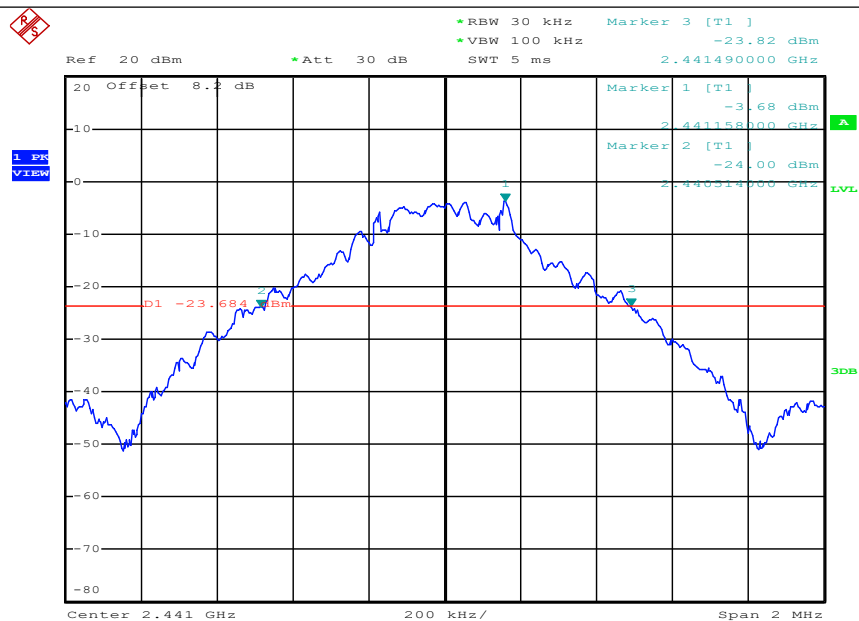
Mode	Channel.	20dB Bandwidth [MHz]	Limit [MHz]	Verdict
GFSK	LCH	0.966	Not Specified	PASS
	MCH	0.976	Not Specified	PASS
	HCH	1.028	Not Specified	PASS
$\pi/4$ DQPSK	LCH	1.316	Not Specified	PASS
	MCH	1.286	Not Specified	PASS
	HCH	1.286	Not Specified	PASS
8DPSK	LCH	1.292	Not Specified	PASS
	MCH	1.294	Not Specified	PASS
	HCH	1.292	Not Specified	PASS

Test Graphs

GFSK/LCH

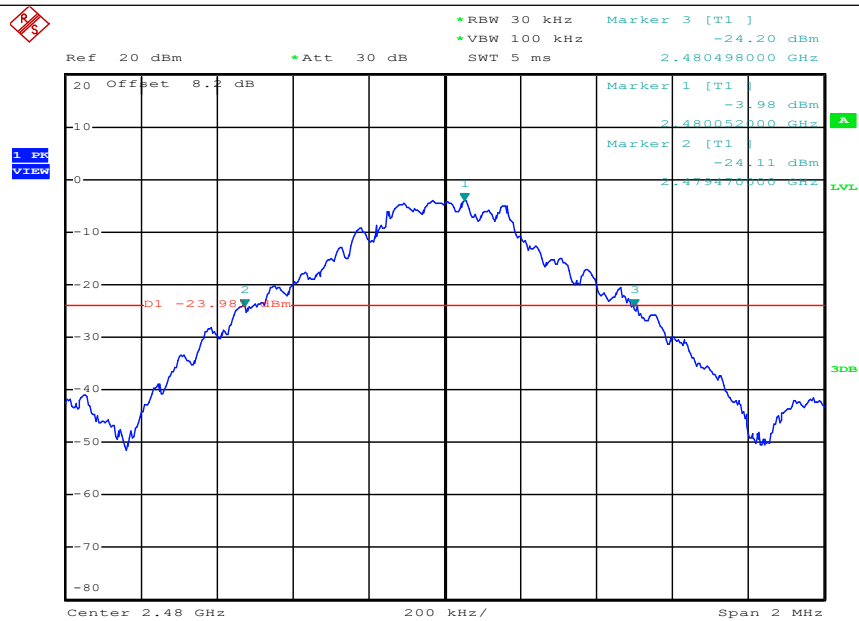


GFSK/MCH

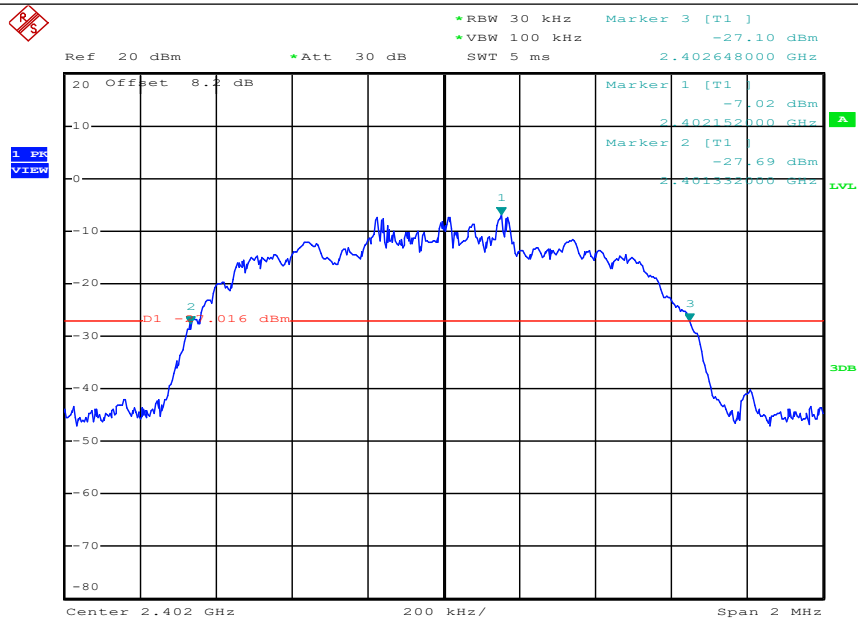


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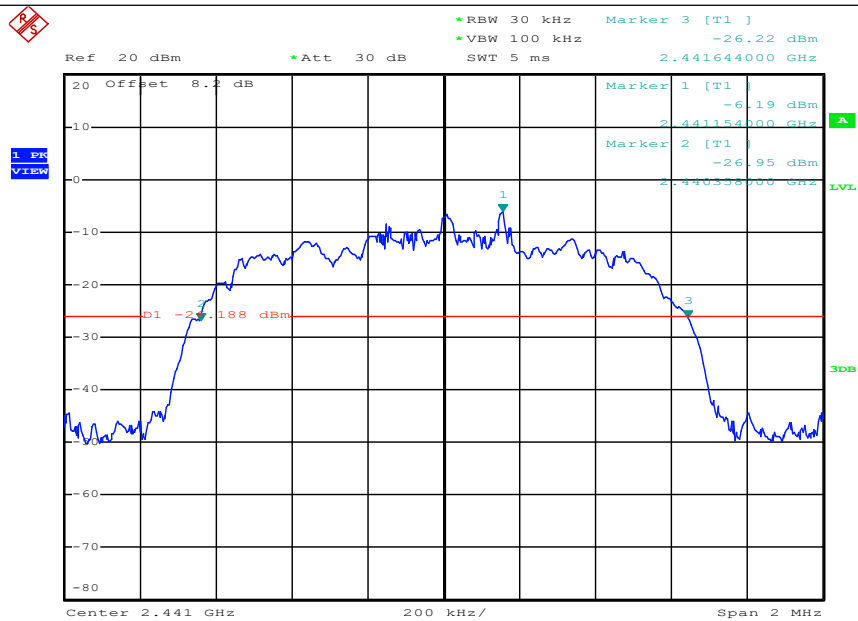
GFSK/HCH



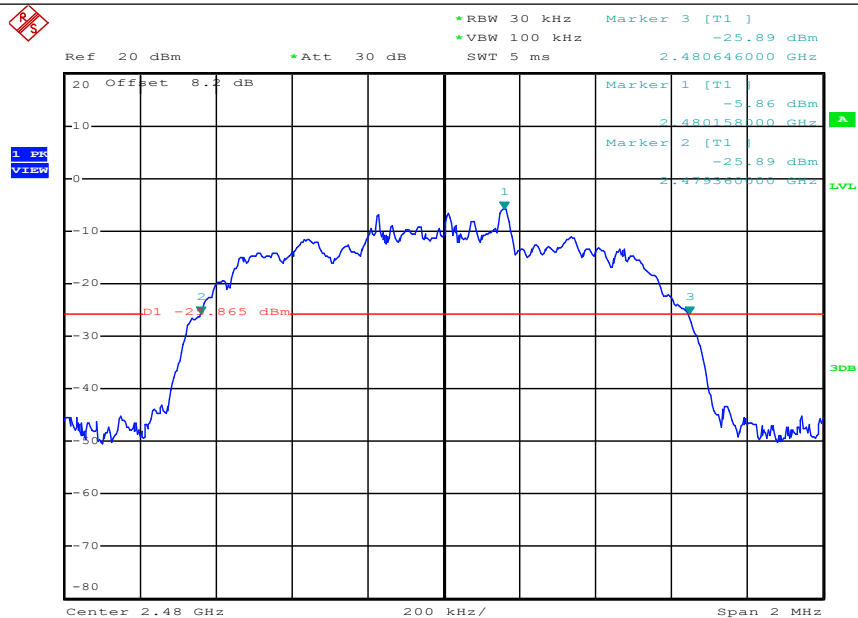
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$\pi/4$ DQPSK/LCH

Date: 26.AUG.2019 18:31:15

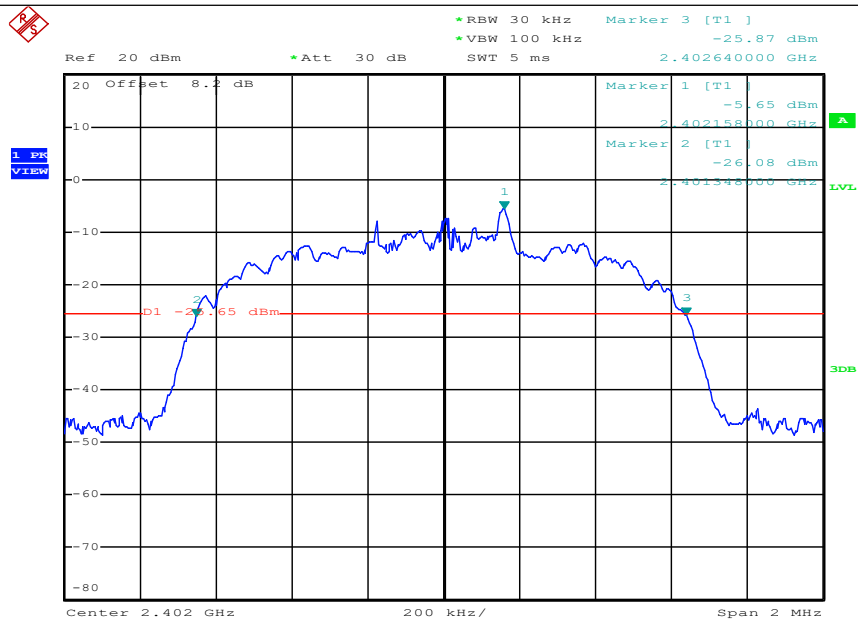
 $\pi/4$ DQPSK/MCH

Date: 26.AUG.2019 18:33:43

$\pi/4$ DQPSK/HCH

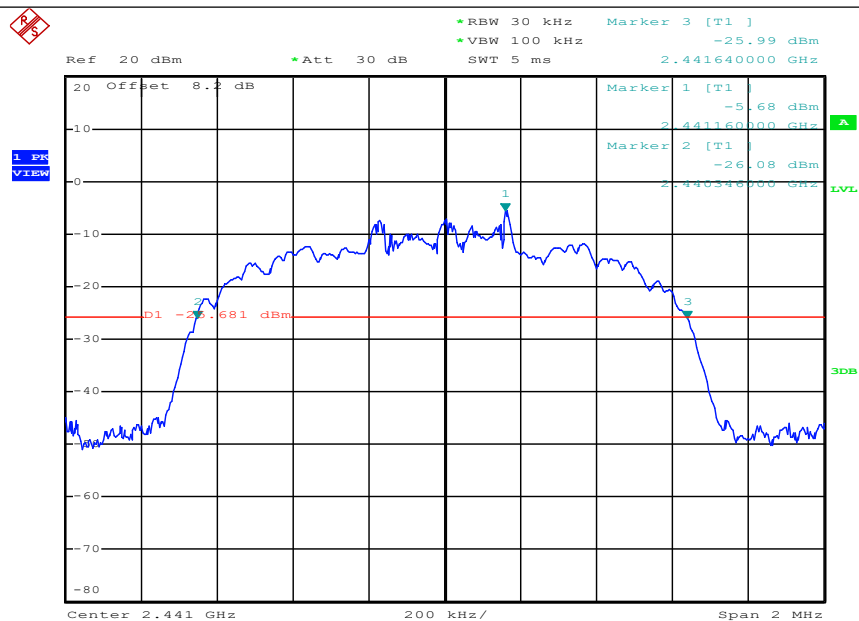
Date: 26.AUG.2019 18:35:26

8DPSK/LCH



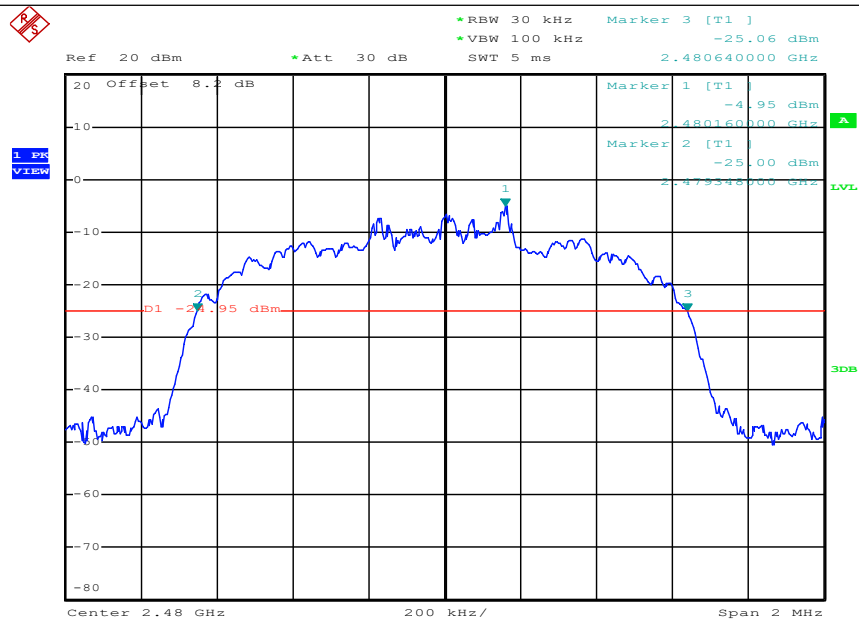
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8DPSK/MCH



Date: 26.AUG.2019 18:40:12

8DPSK/HCH



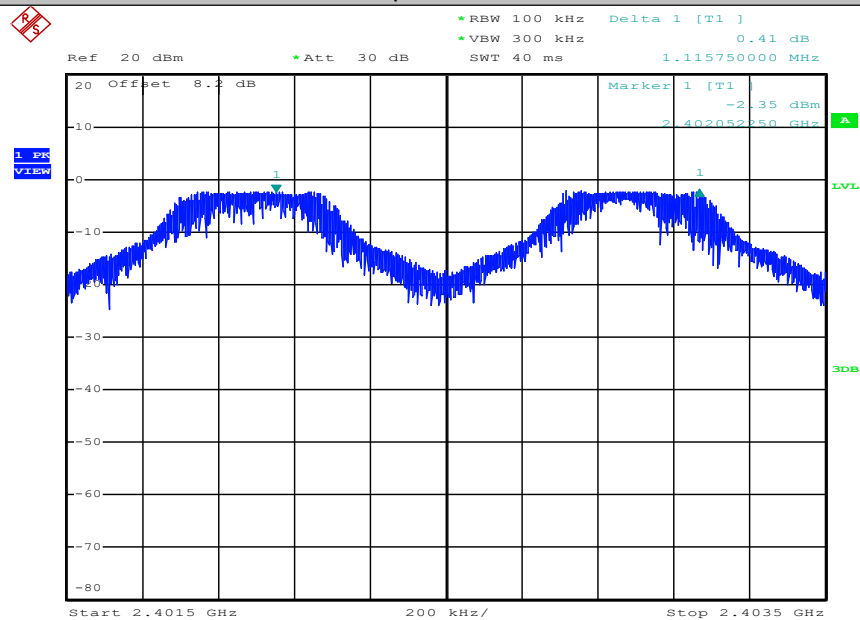
Date: 26.AUG.2019 18:41:50

A.3 Carrier Frequency Separation

Mode	Channel.	Carrier Frequency Separation [MHz]	Limit [MHz]	Verdict
GFSK	LCH	1.116	0.685	PASS
	MCH	1.136	0.685	PASS
	HCH	0.852	0.685	PASS
$\pi/4$ DQPSK	LCH	1.194	0.877	PASS
	MCH	1.134	0.877	PASS
	HCH	1.154	0.877	PASS
8DPSK	LCH	0.962	0.863	PASS
	MCH	1.152	0.863	PASS
	HCH	0.886	0.863	PASS

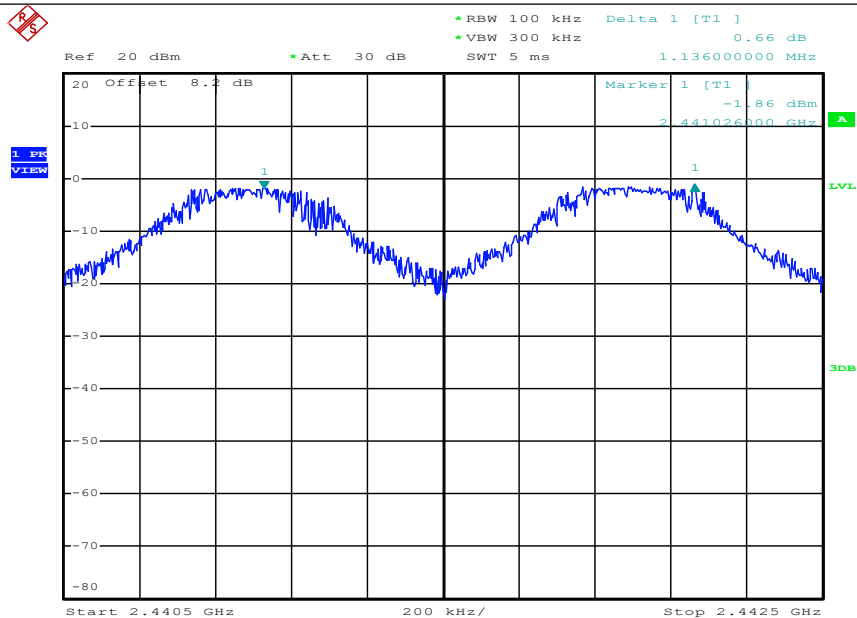
Test Graphs

GFSK/LCH



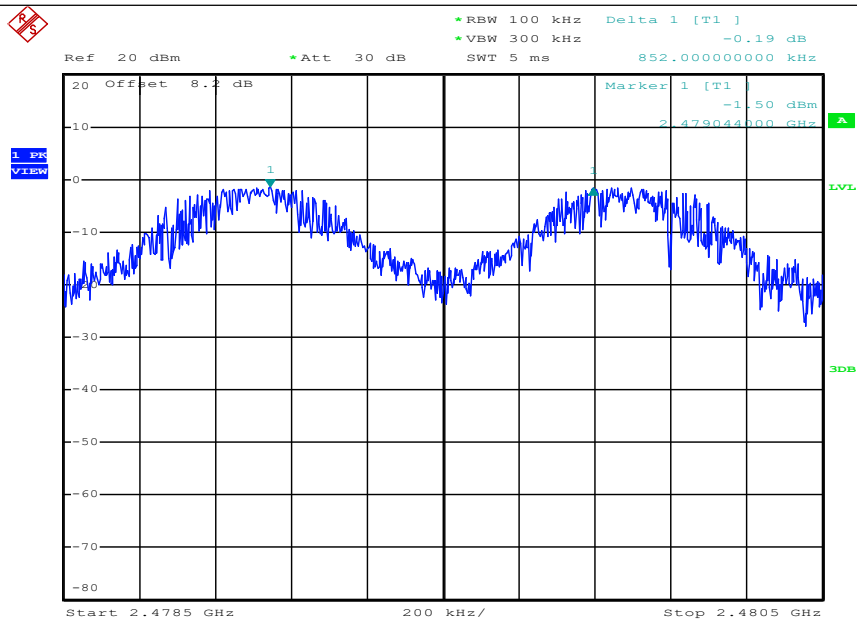
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GFSK/MCH

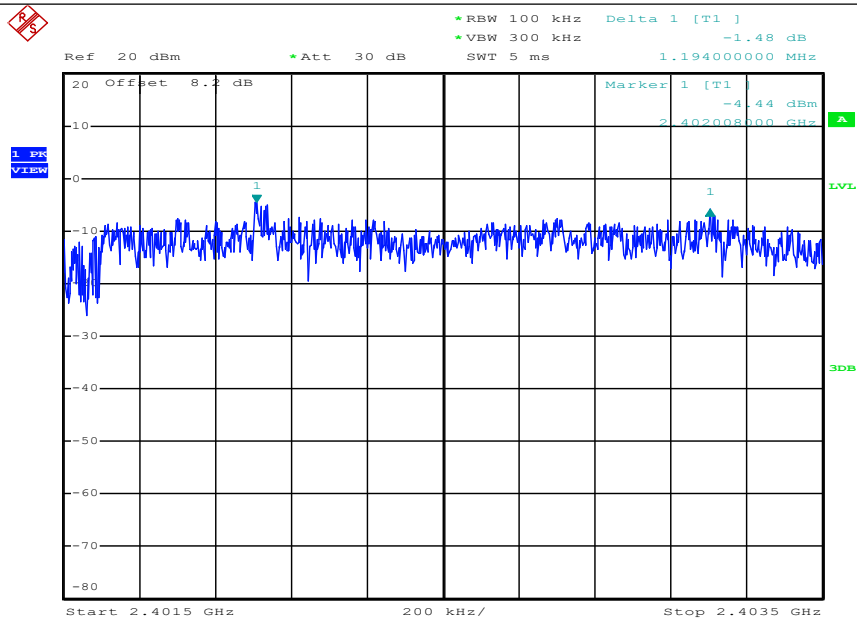


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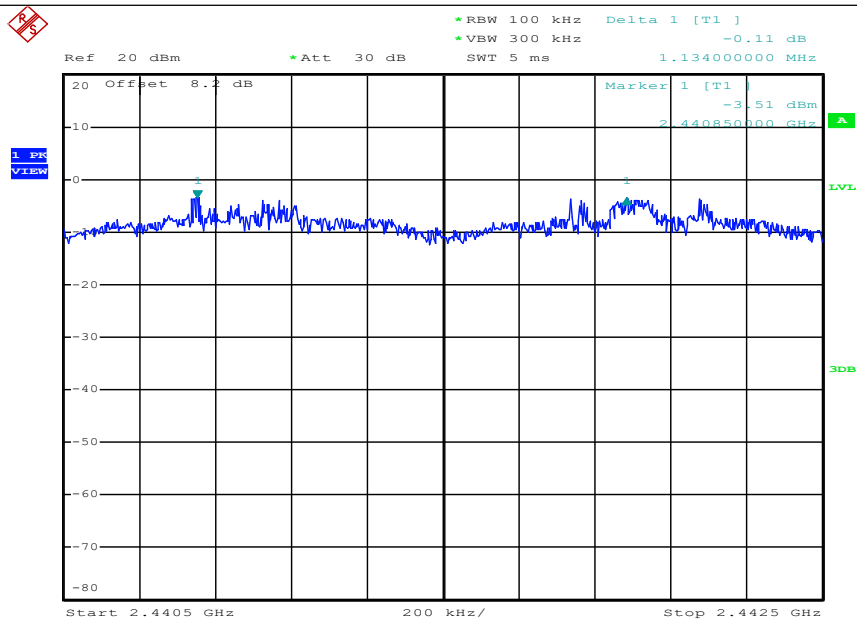
GFSK/HCH



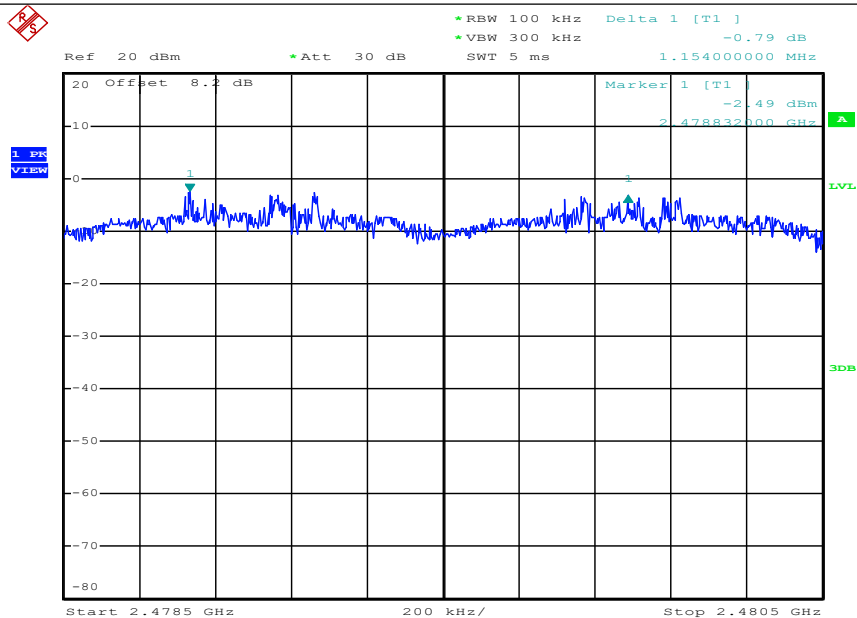
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π /4DQPSK/LCH

Date: 26.AUG.2019 18:59:22

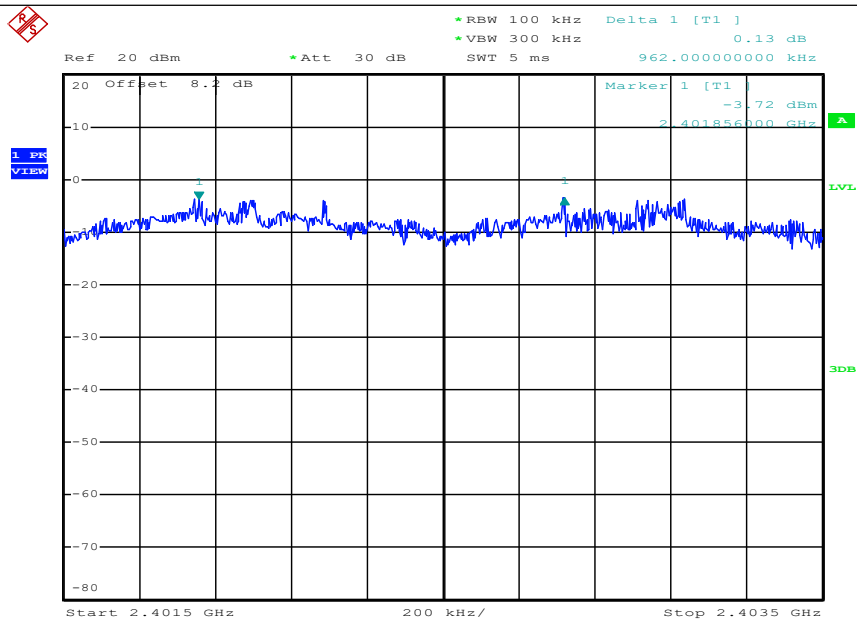
 π /4DQPSK/MCH

Date: 26.AUG.2019 19:02:49

π /4DQPSK/HCH

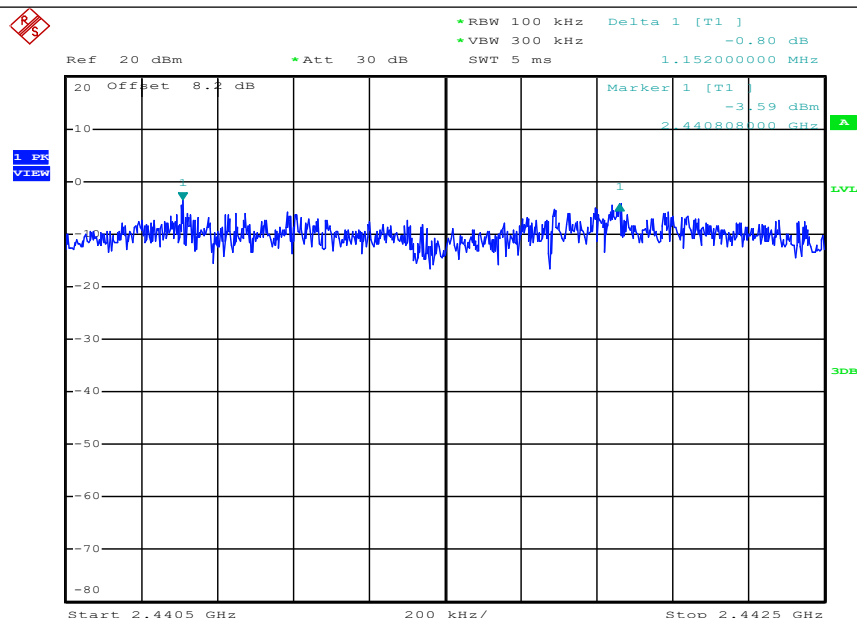
Date: 26.AUG.2019 19:19:40

8DPSK/LCH



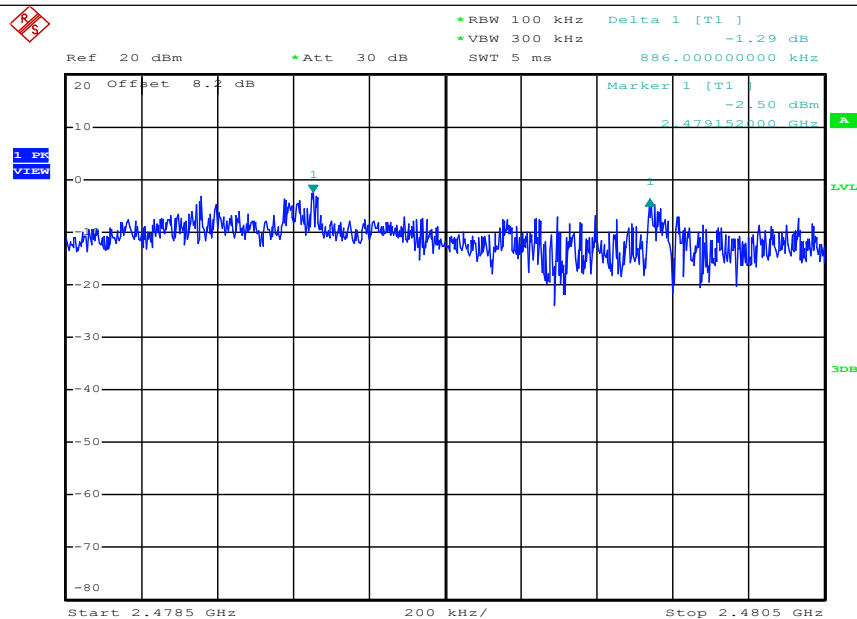
Date: 26.AUG.2019 19:09:39

8DPSK/MCH



Date: 26.AUG.2019 19:20:18

8DPSK/HCH



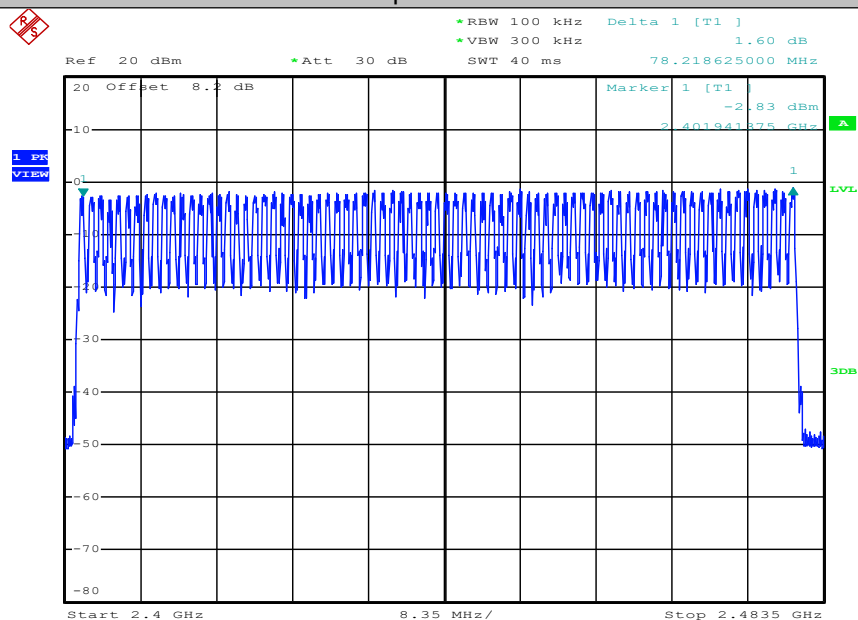
Date: 26.AUG.2019 19:13:47

A.4 Hopping Channel Number

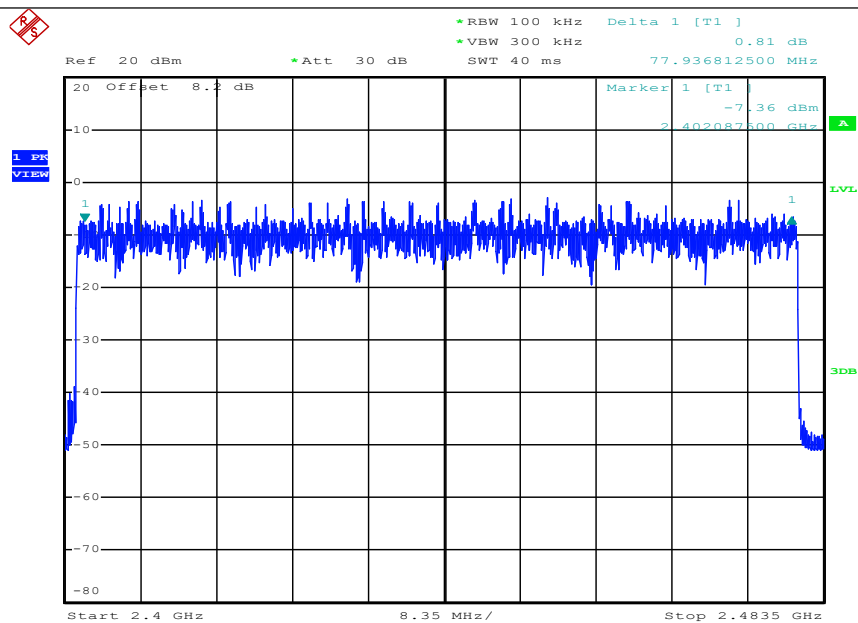
Mode	Channel.	Number of Hopping Channel [N]	Limit [N]	Verdict
GFSK	Hop	79	>=15	PASS
$\pi/4$ DQPSK	Hop	79	>=15	PASS
8DPSK	Hop	79	>=15	PASS

Test Graphs

GFSK/Hop



Date: 26.AUG.2019 18:58:36

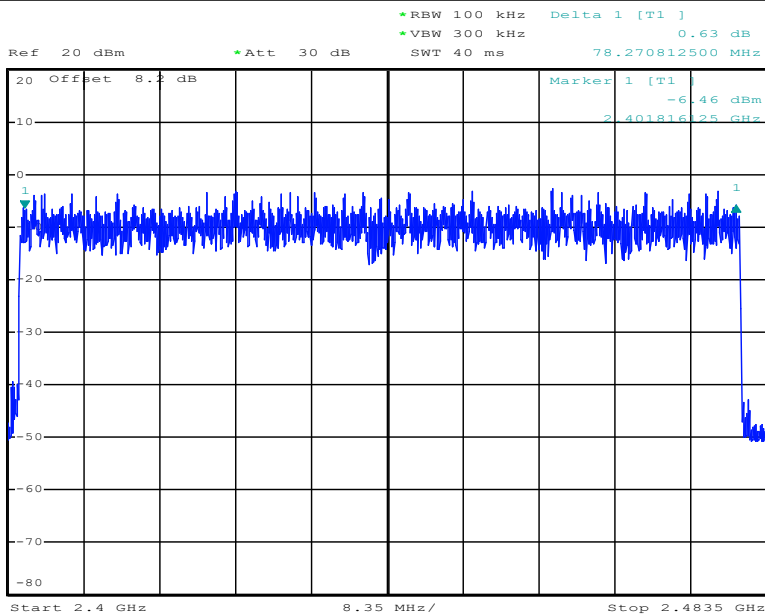
 $\pi/4$ DQPSK/Hop

Date: 26.AUG.2019 19:07:44

8DPSK/Hop



1. 27
VIEW



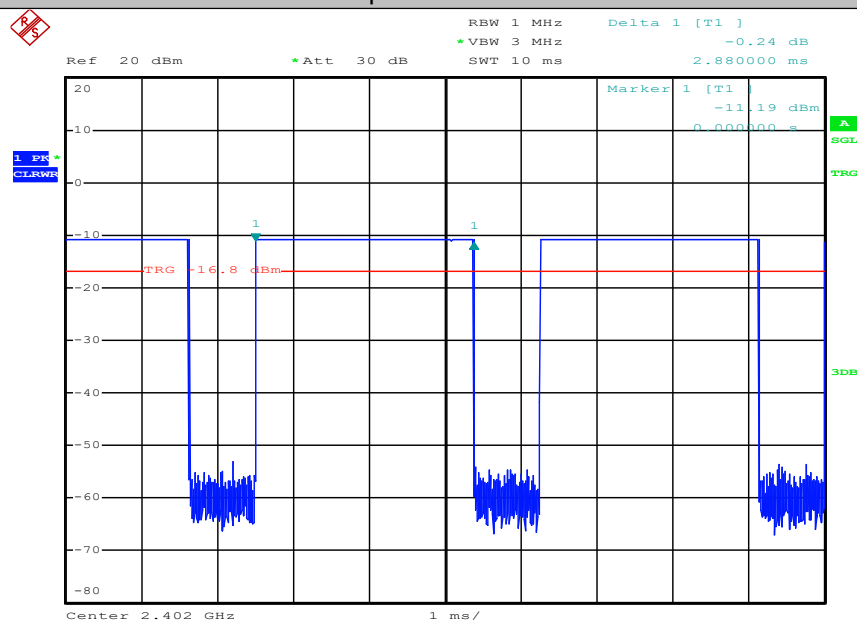
Date: 26.AUG.2019 19:18:01

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
$\pi/4$ DQPSK	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
8DPSK	3DH5	LCH	2.88	106.7	0.308	0.4	PASS
	3DH5	MCH	2.88	106.7	0.308	0.4	PASS
	3DH5	HCH	2.88	106.7	0.308	0.4	PASS

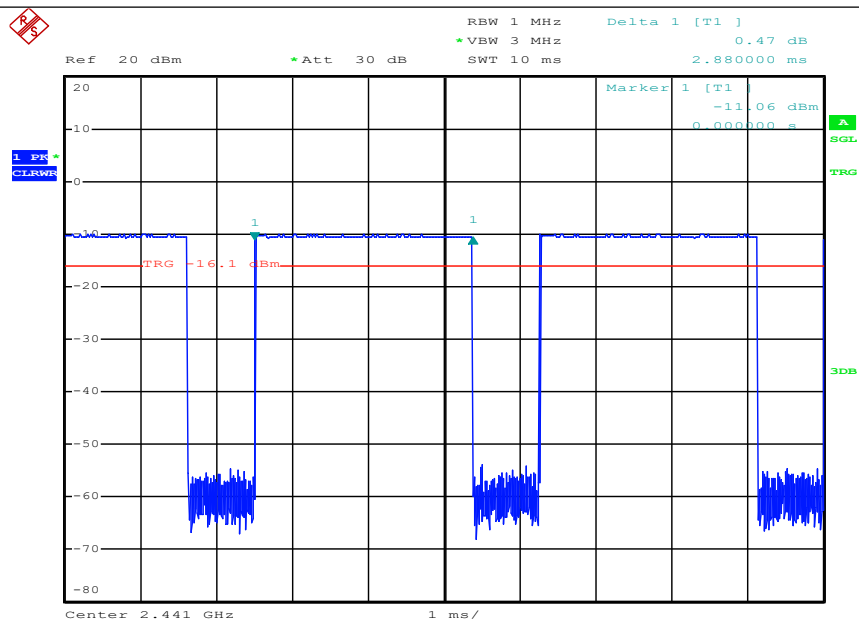
Test Graphs

GFSK_DH5/LCH



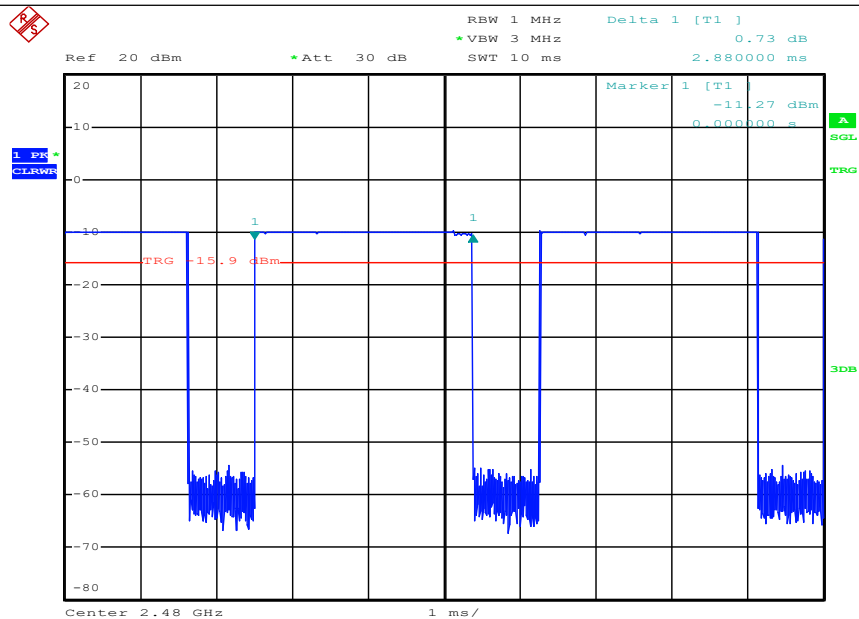
Date: 26.AUG.2019 18:23:47

GFSK_DH5/MCH



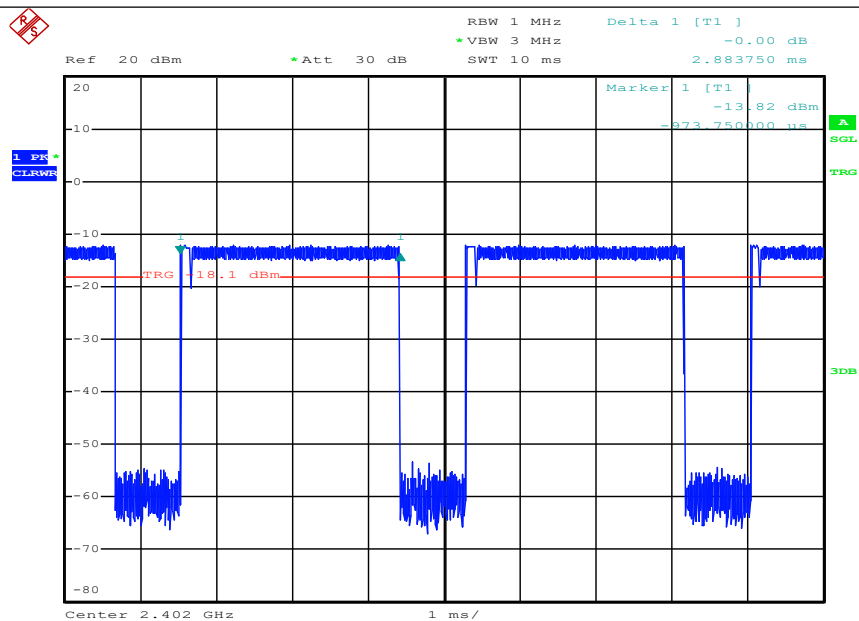
Date: 26.AUG.2019 18:26:14

GFSK_DH5/HCH



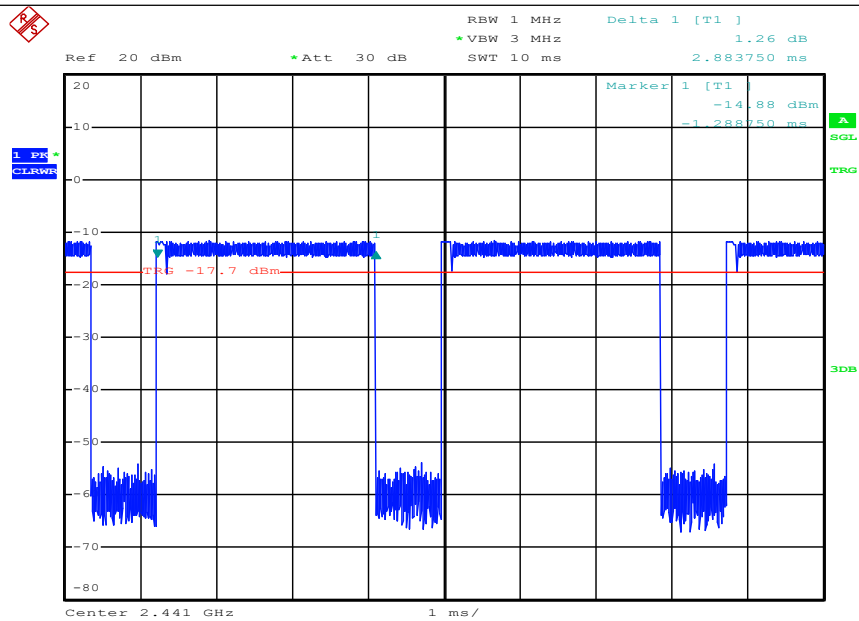
Date: 26.AUG.2019 18:27:58

$\pi/4$ DQPSK
_2DH5/LCH



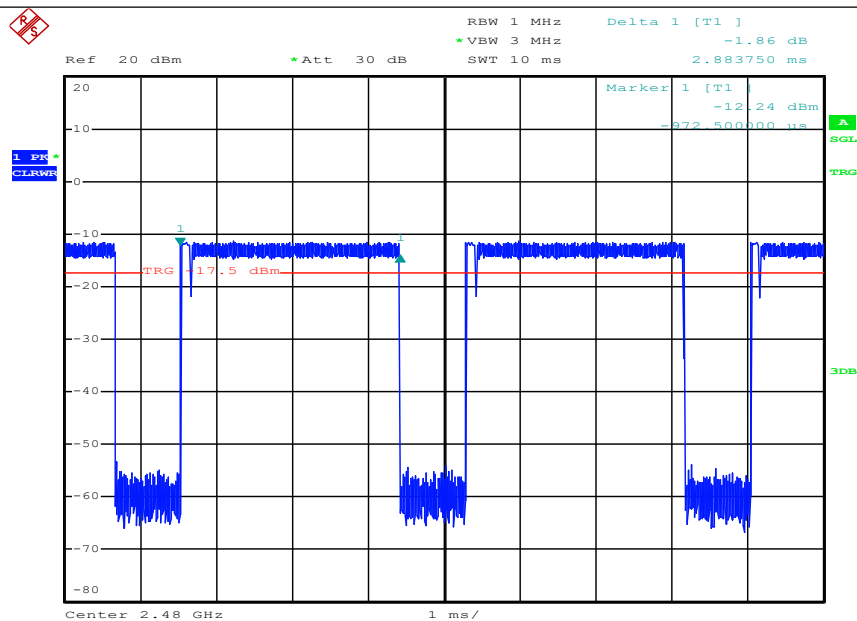
Date: 26.AUG.2019 18:31:37

$\pi/4$ DQPSK
_2DH5/MCH



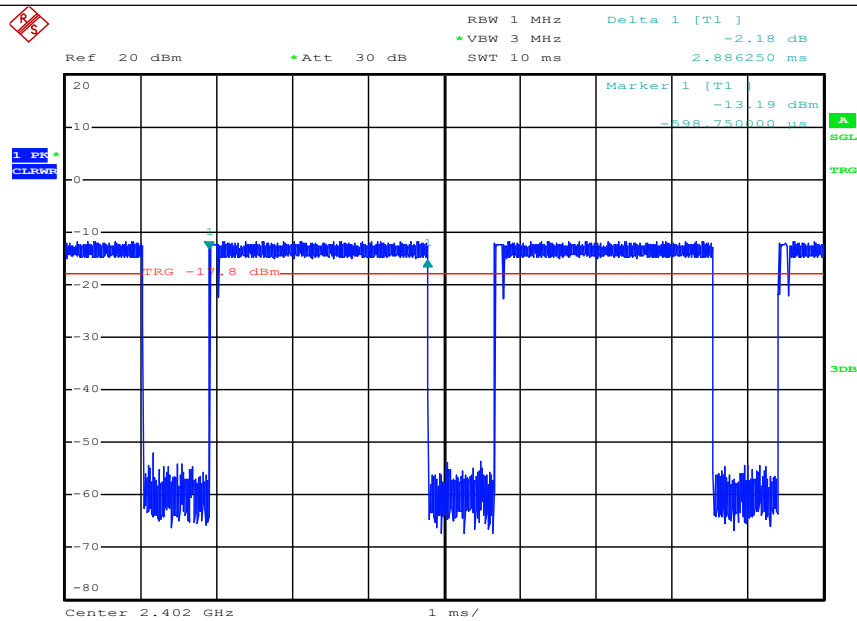
Date: 26.AUG.2019 18:34:03

$\pi/4$ DQPSK
_2DH5/HCH



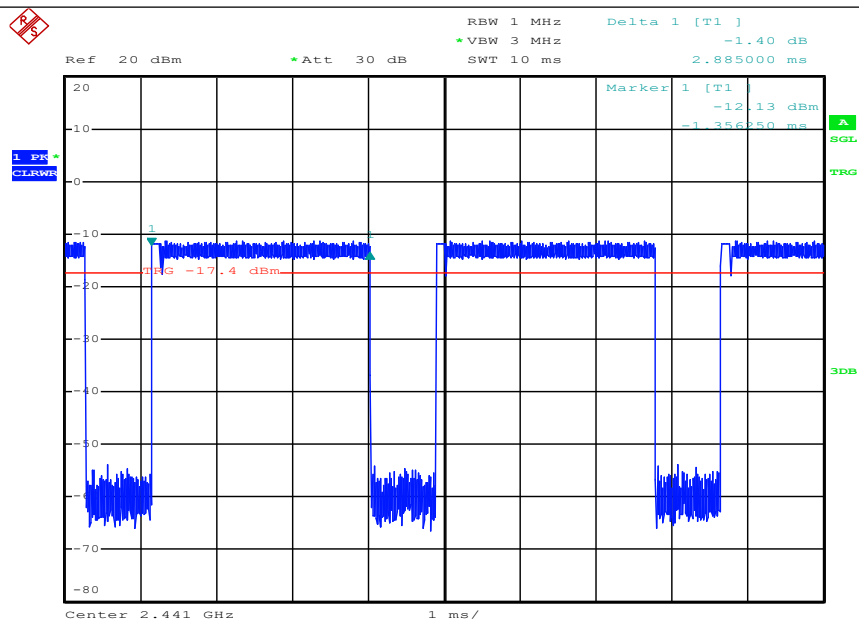
Date: 26.AUG.2019 18:35:46

8DPSK_3DH5/LCH



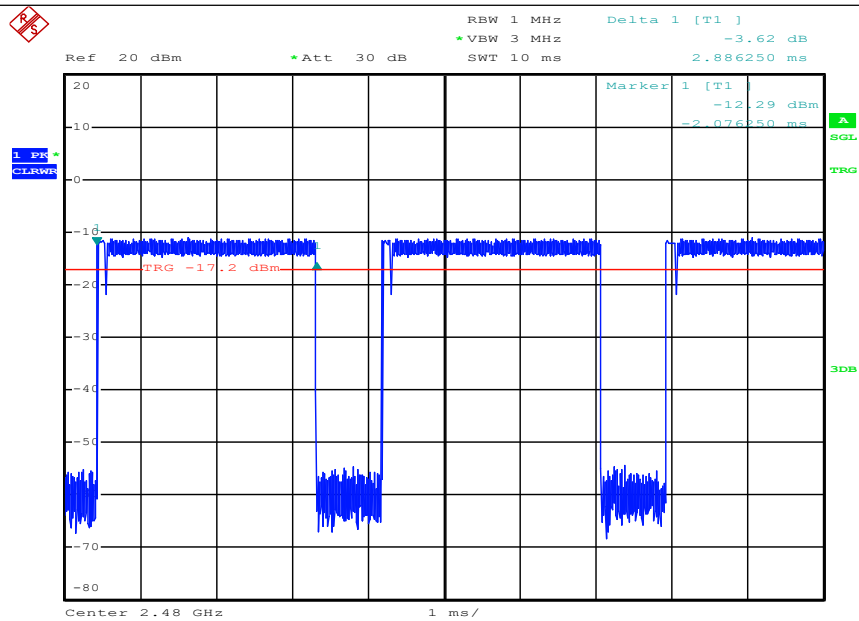
Date: 26.AUG.2019 18:38:12

8DPSK_3DH5/MCH



Date: 26.AUG.2019 18:40:32

8DPSK_3DH5/HCH



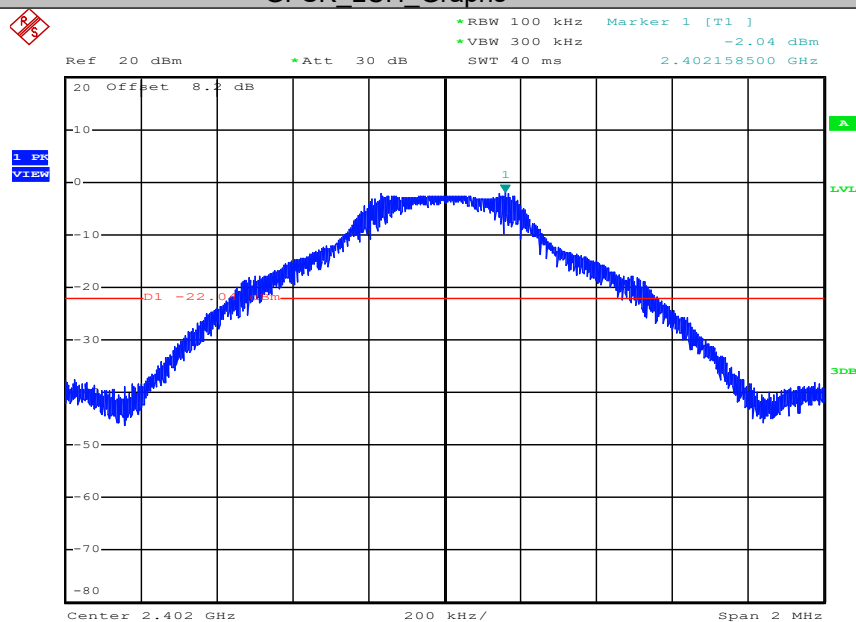
Date: 26.AUG.2019 18:42:10

A.6 RF Conducted Spurious Emissions

Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
GFSK	LCH	-2.04	-31.870	-22.040	PASS
	MCH	-1.43	-32.520	-21.430	PASS
	HCH	-1.24	-32.920	-21.240	PASS
$\pi/4$ DQPSK	LCH	-3.44	-32.330	-23.440	PASS
	MCH	-3.26	-31.990	-23.260	PASS
	HCH	-2.92	-32.220	-22.920	PASS
8DPSK	LCH	-3.43	-32.420	-23.430	PASS
	MCH	-3.1	-32.300	-23.100	PASS
	HCH	-2.87	-32.280	-22.870	PASS

GFSK LCH_Graphs

Pref

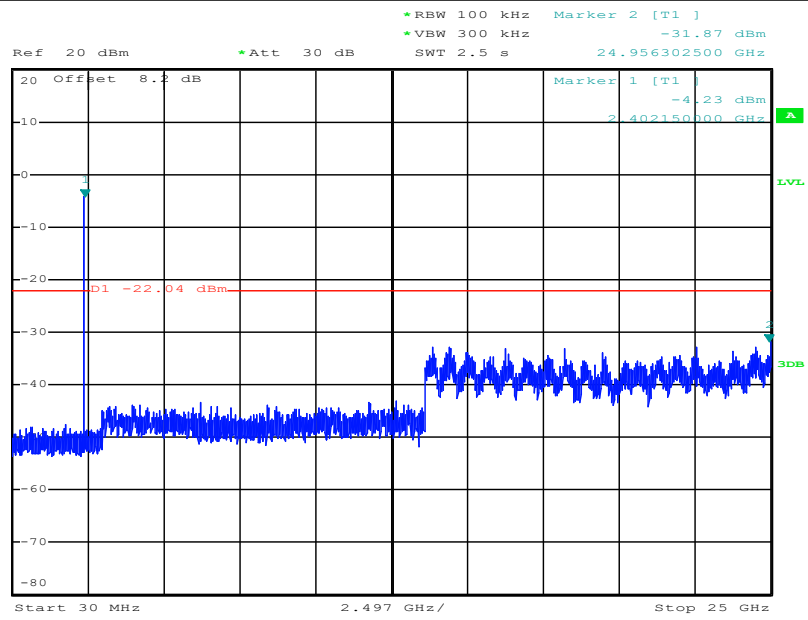


Date: 26.AUG.2019 18:24:31

P_{uw}



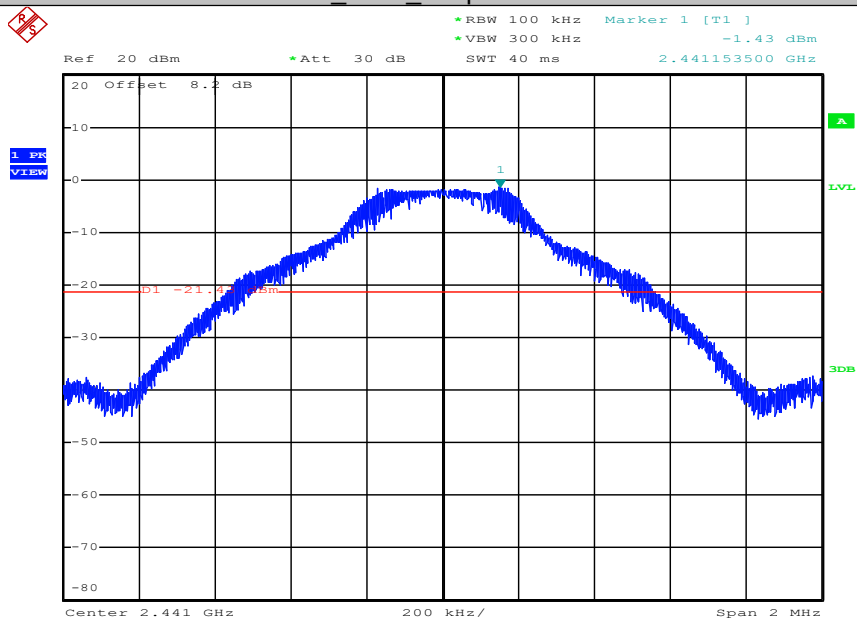
1. PR
VIEW



Date: 26.AUG.2019 18:24:45

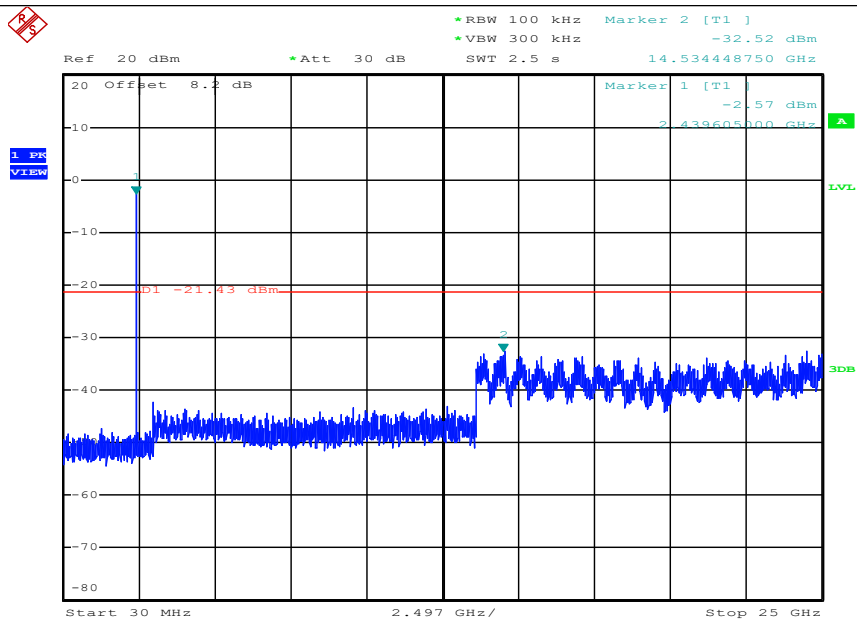
GFSK_MCH_Graphs

Pref



Date: 26.AUG.2019 18:26:41

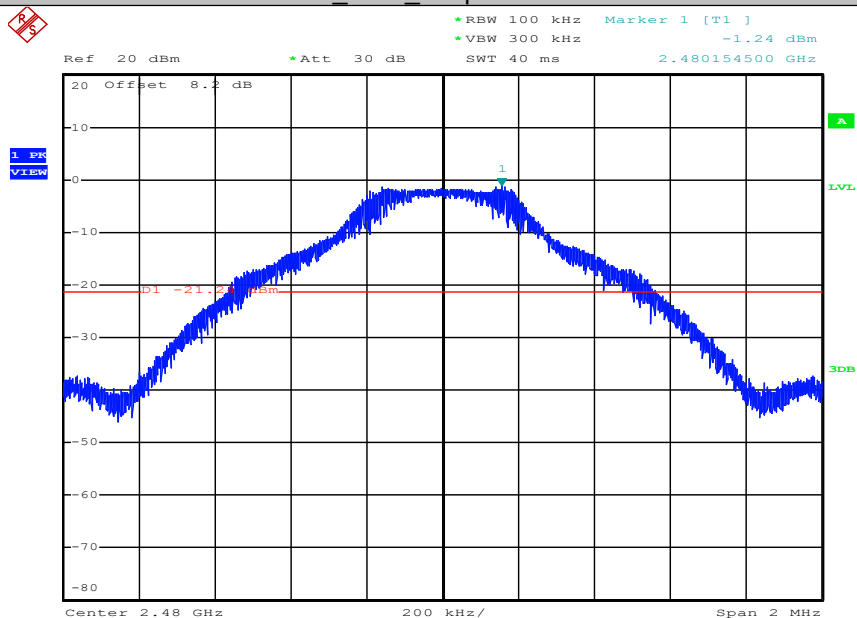
Puw



Date: 26.AUG.2019 18:26:56

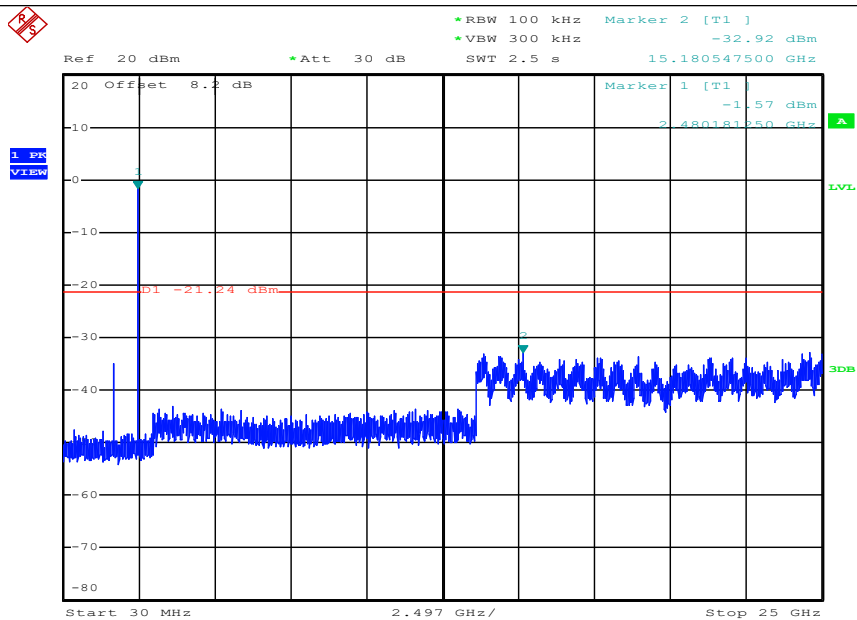
GFSK_HCH_Graphs

Pref



Date: 26.AUG.2019 18:28:41

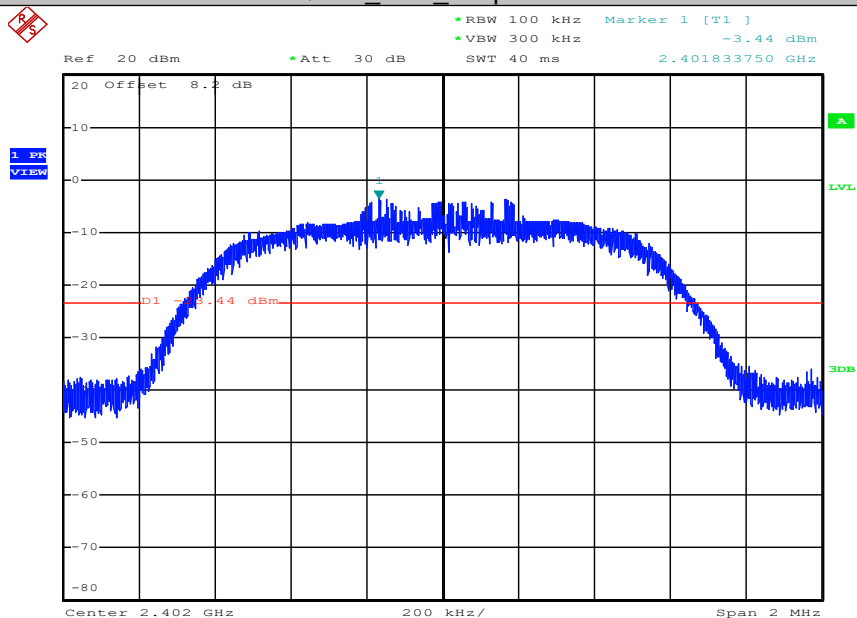
Puw



Date: 26.AUG.2019 18:28:56

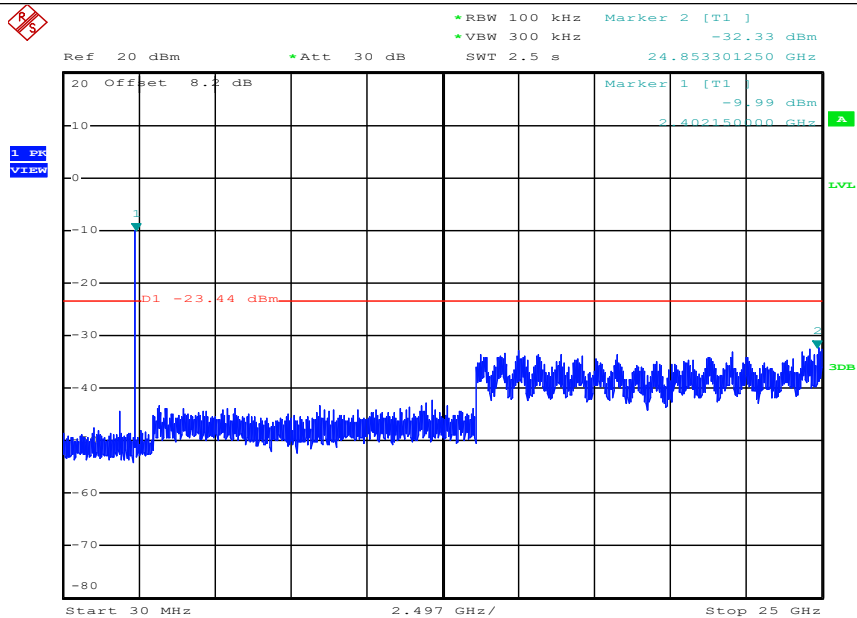
$\pi/4$ DQPSK_LCH_Graphs

Pref



Date: 26.AUG.2019 18:32:21

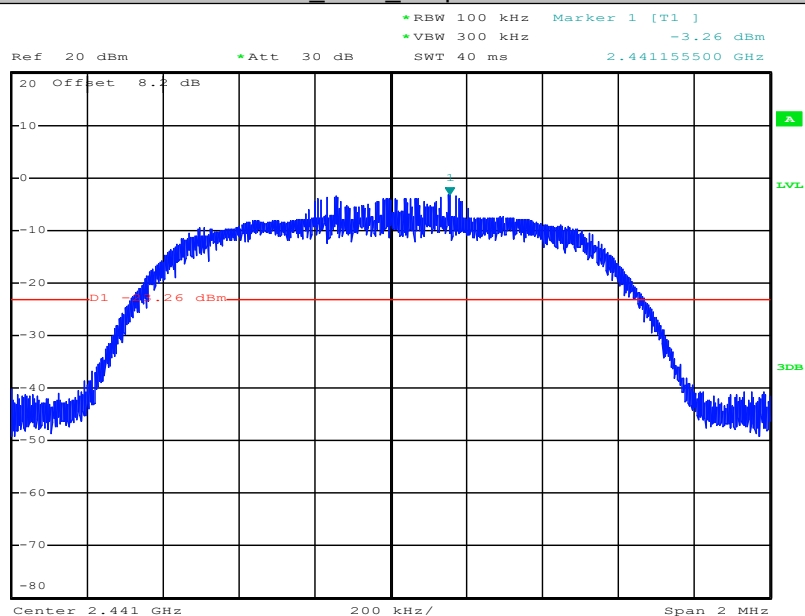
Puw



Date: 26.AUG.2019 18:32:36

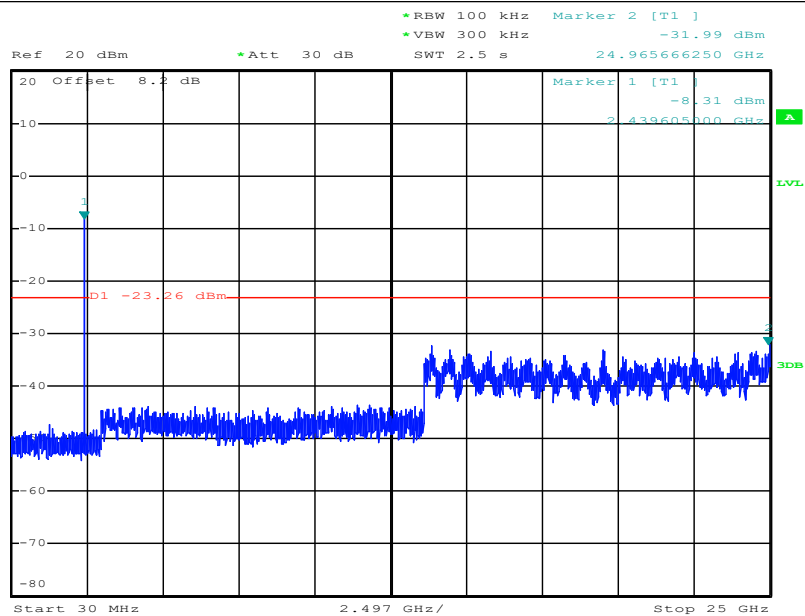
$\pi/4$ DQPSK_MCH_Graphs

Pref

1 PR
VIEW

Date: 26.AUG.2019 18:34:28

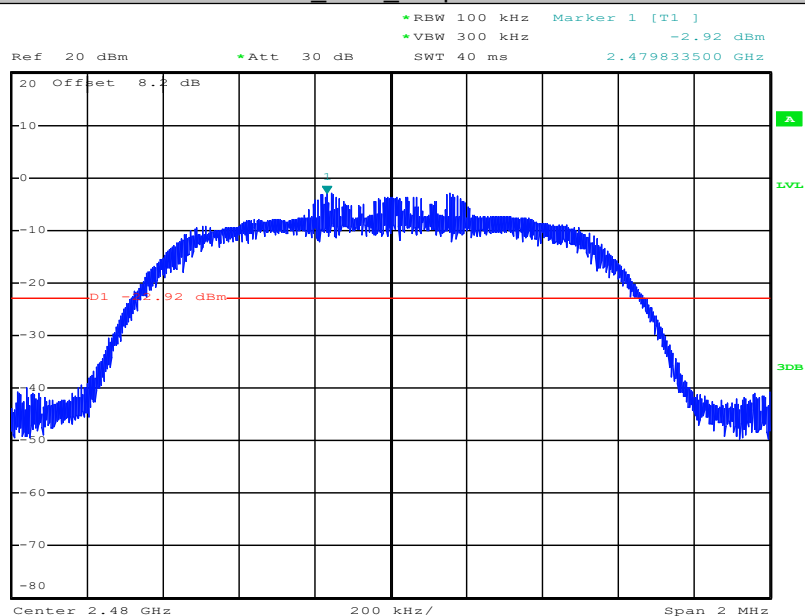
Puw

1 PR
VIEW

Date: 26.AUG.2019 18:34:43

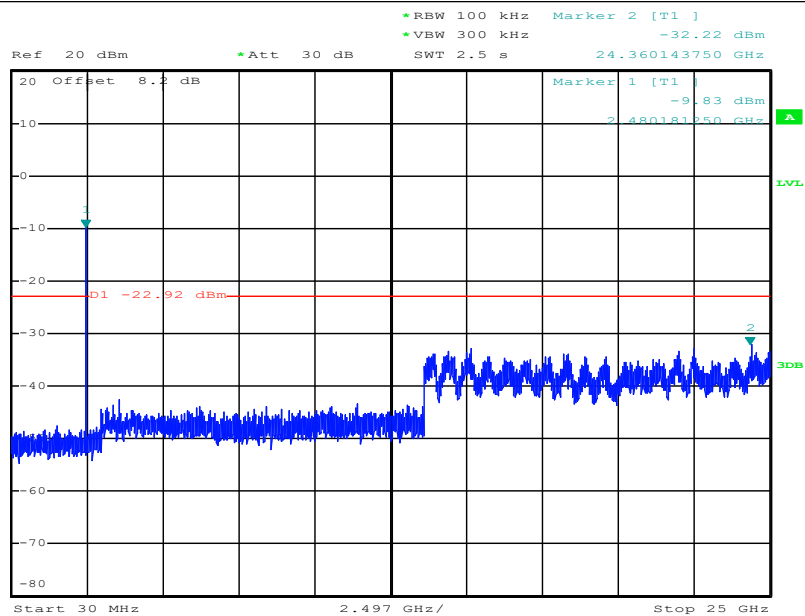
$\pi/4$ DQPSK_HCH_Graphs

Pref

1 PR
VIEW

Date: 26.AUG.2019 18:36:28

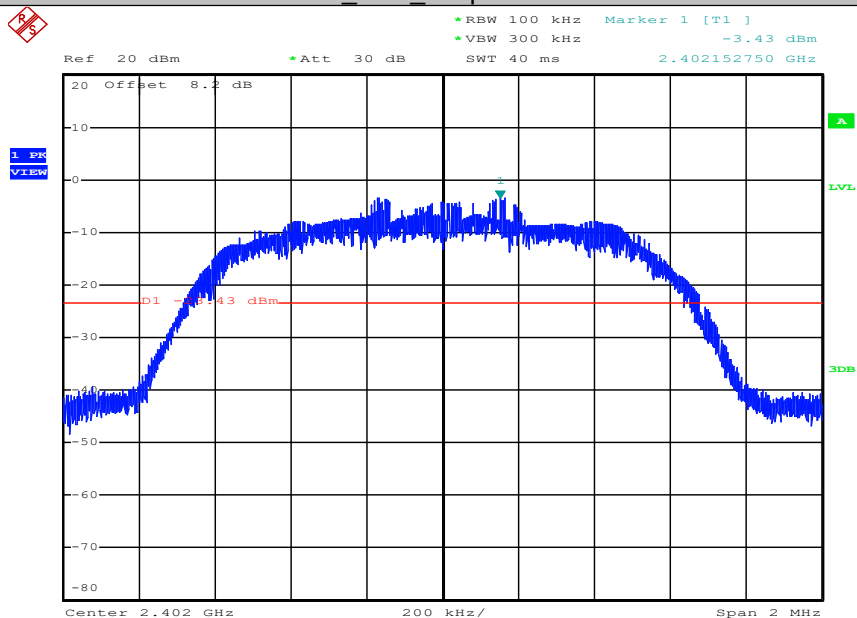
Puw

1 PR
VIEW

Date: 26.AUG.2019 18:36:41

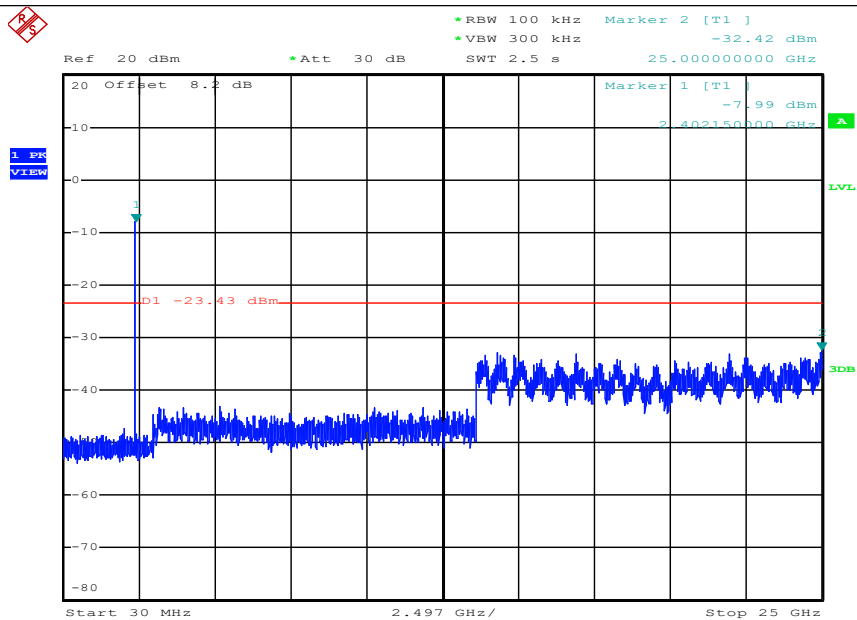
8DPSK_LCH_Graphs

Pref



Date: 26.AUG.2019 18:38:53

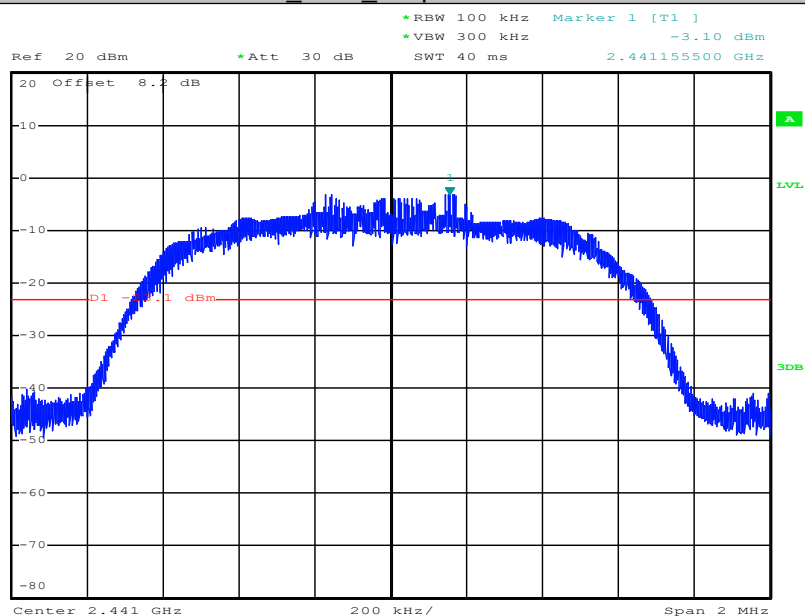
Puw



Date: 26.AUG.2019 18:39:07

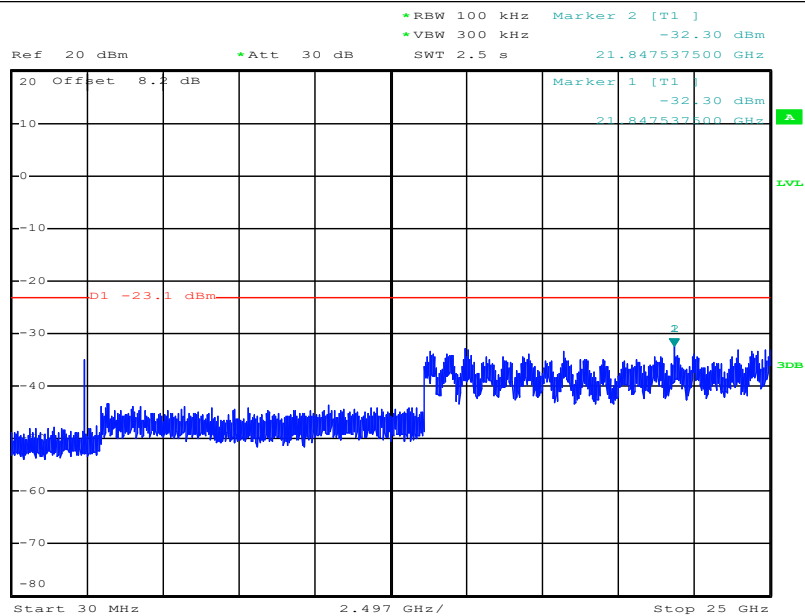
8DPSK_MCH_Graphs

Pref

1 PR
VIEW

Date: 26.AUG.2019 18:40:58

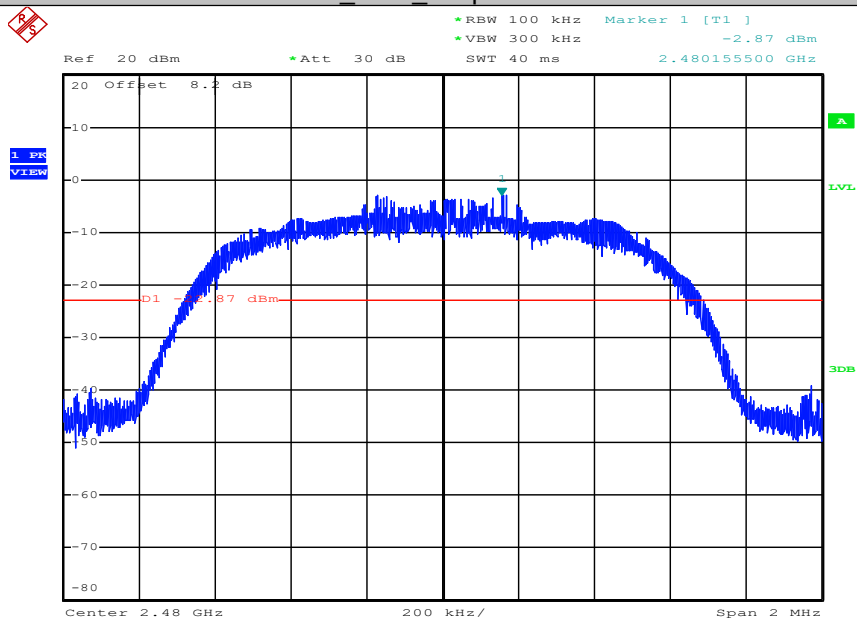
Puw

1 PR
VIEW

Date: 26.AUG.2019 18:41:11

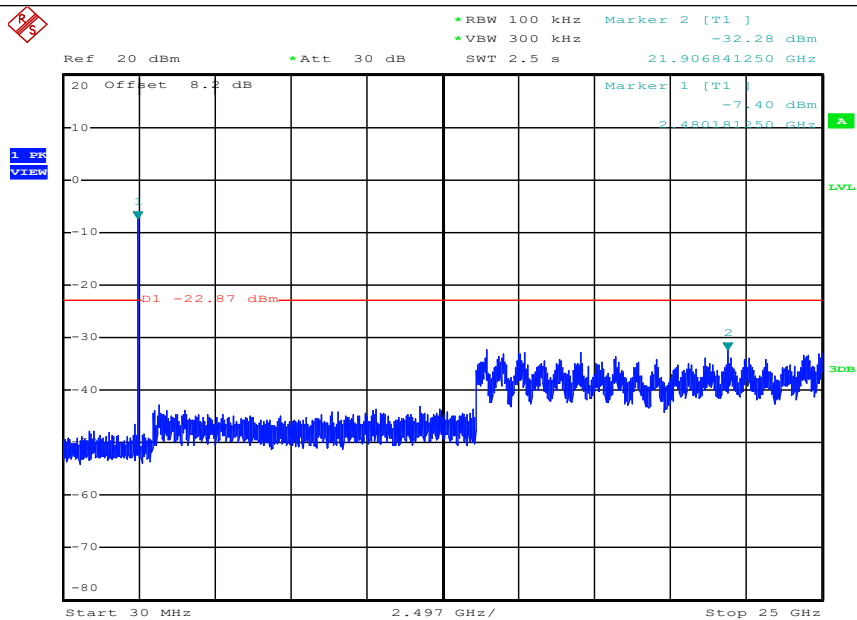
8DPSK_HCH_Graphs

Pref



Date: 26.AUG.2019 18:42:52

Puw



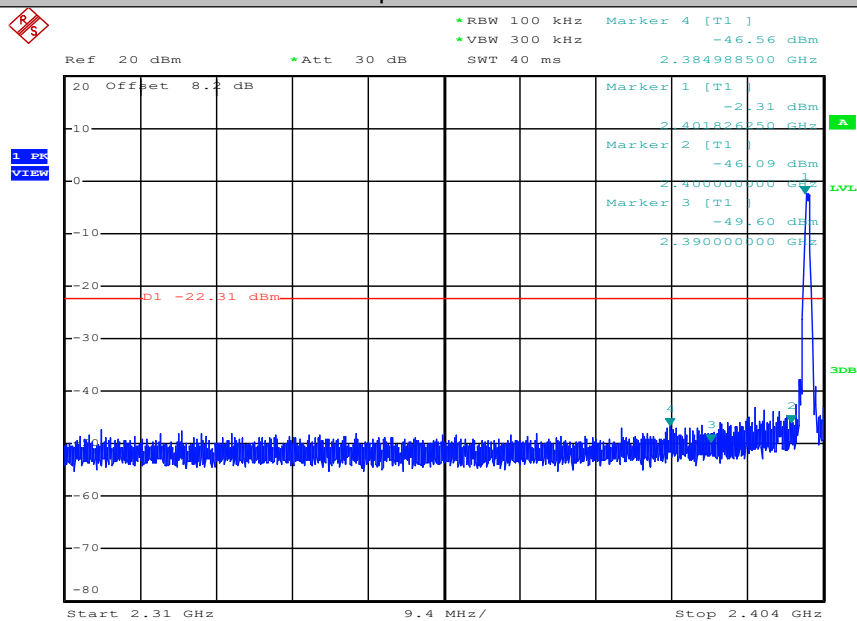
Date: 26.AUG.2019 18:43:05

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	-2.310	Off	-46.557	-22.31	PASS
			-1.470	On	-46.542	-21.47	PASS
	HCH	2480	-1.210	Off	-47.716	-21.21	PASS
			-1.030	On	-47.059	-21.03	PASS
$\pi/4$ DQPSK	LCH	2402	-7.320	Off	-43.204	-27.32	PASS
			-3.460	On	-46.644	-23.46	PASS
	HCH	2480	-3.790	Off	-47.385	-23.79	PASS
			-2.650	On	-45.609	-22.65	PASS
8DPSK	LCH	2402	-3.890	Off	-47.312	-23.89	PASS
			-3.290	On	-46.495	-23.29	PASS
	HCH	2480	-3.030	Off	-48.040	-23.03	PASS
			-2.680	On	-47.117	-22.68	PASS

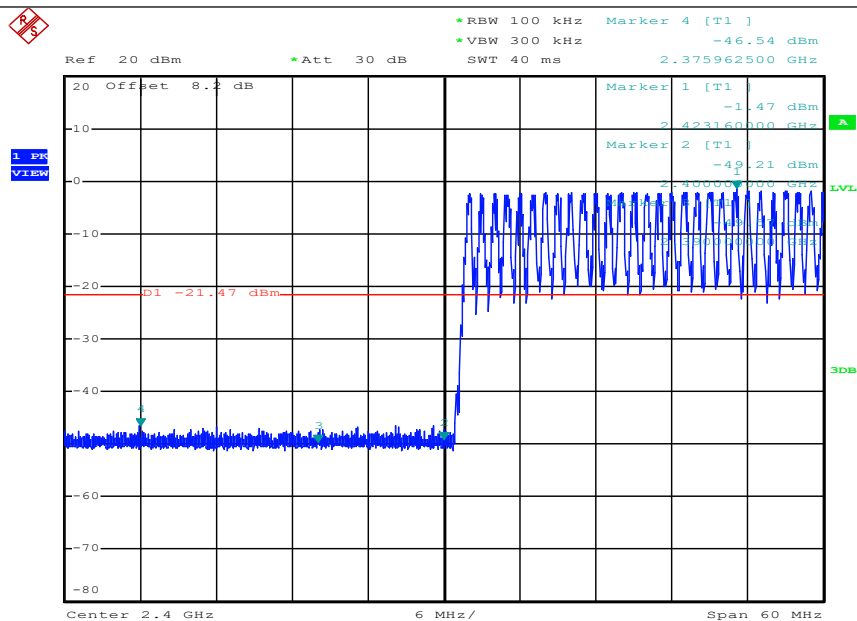
Test Graphs

GFSK/LCH/No Hop



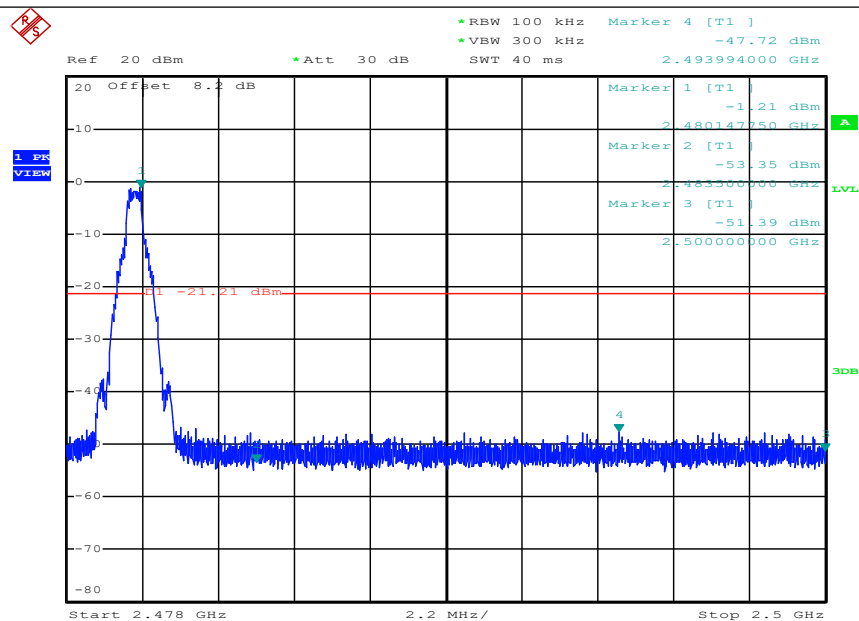
Date: 26.AUG.2019 18:24:18

GFSK/LCH/Hop



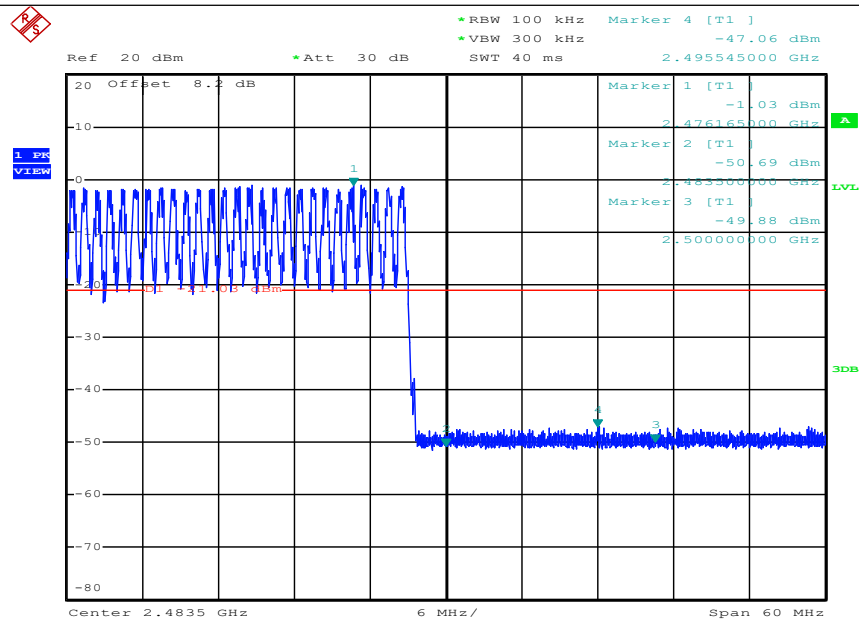
Date: 26.AUG.2019 18:52:42

GFSK/HCH/No Hop



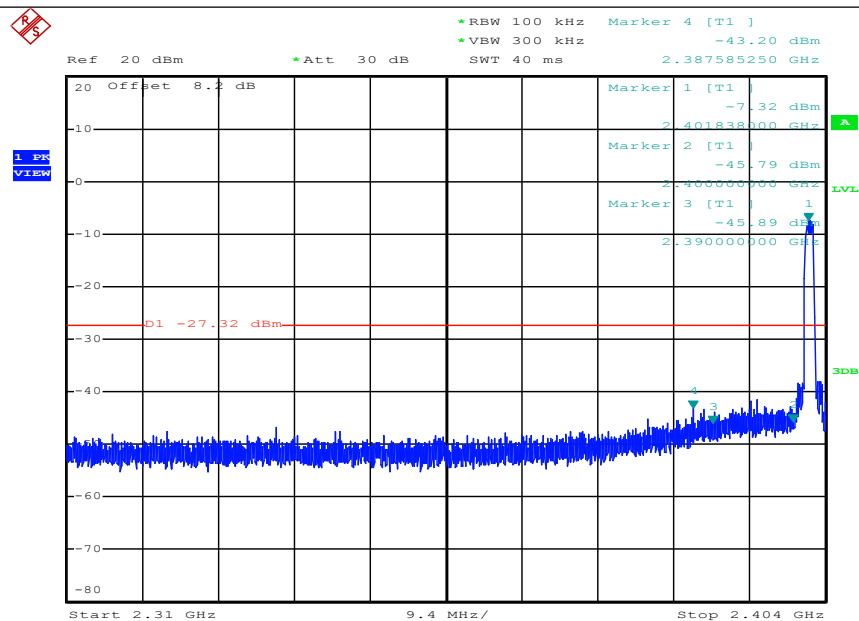
Date: 26.AUG.2019 18:28:29

GFSK/HCH/Hop



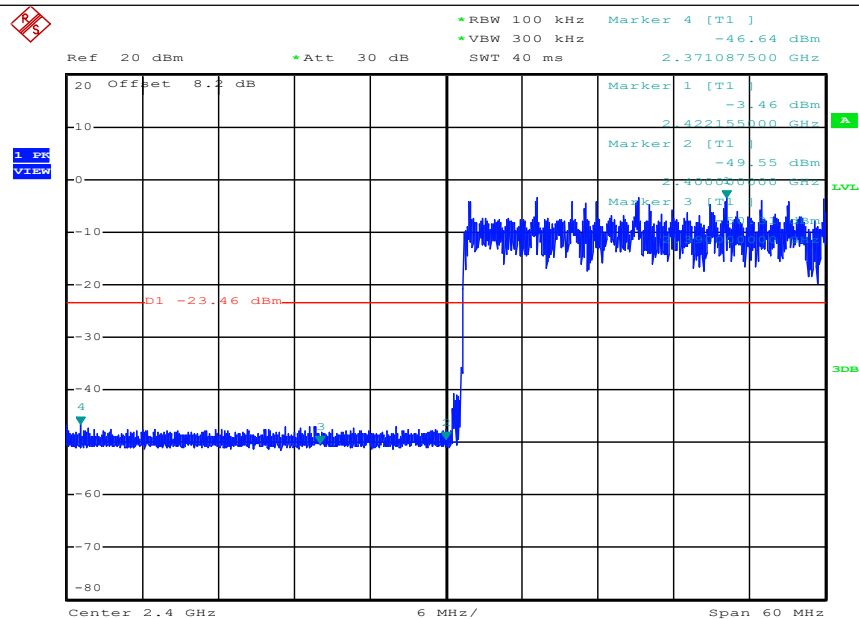
Date: 26.AUG.2019 18:55:36

$\pi/4$ DQPSK/LCH/No
Hop



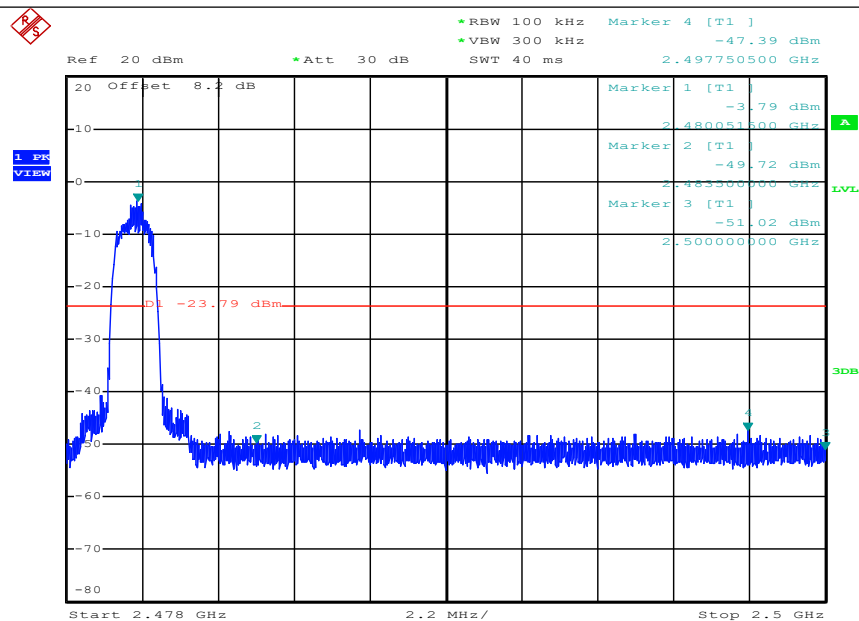
Date: 26.AUG.2019 18:32:08

$\pi/4$ DQPSK/LCH/Hop



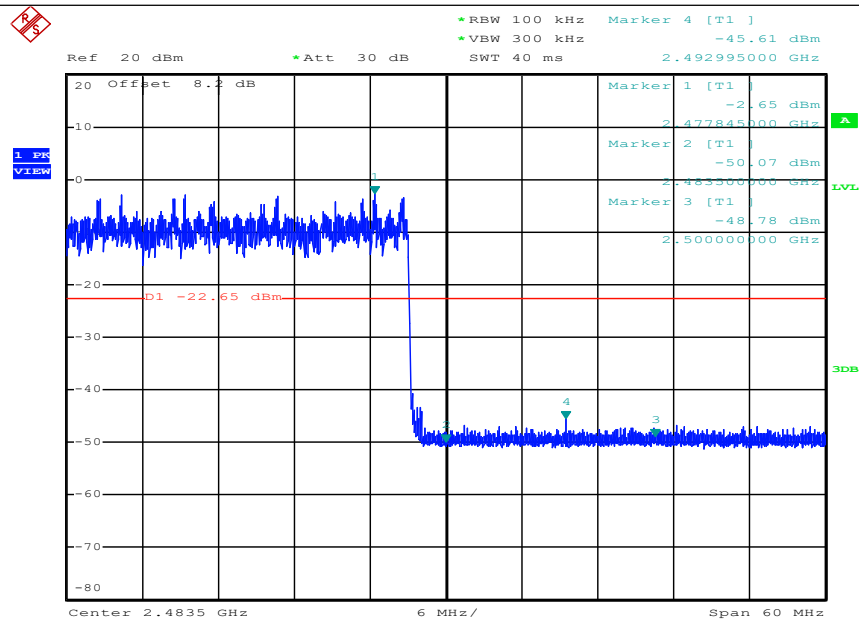
Date: 26.AUG.2019 19:01:20

$\pi/4$ DQPSK/HCH/No
Hop



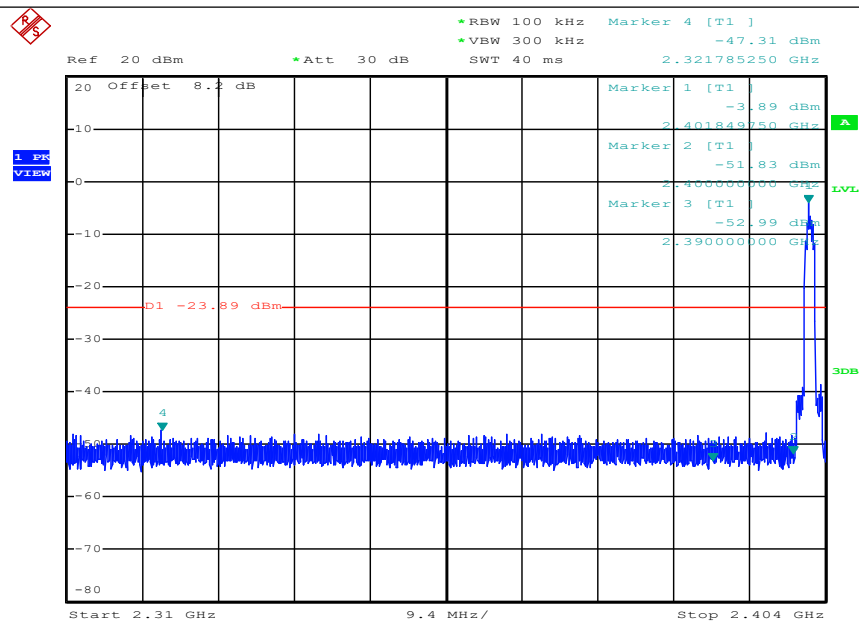
Date: 26.AUG.2019 18:36:15

$\pi/4$ DQPSK/HCH/Hop



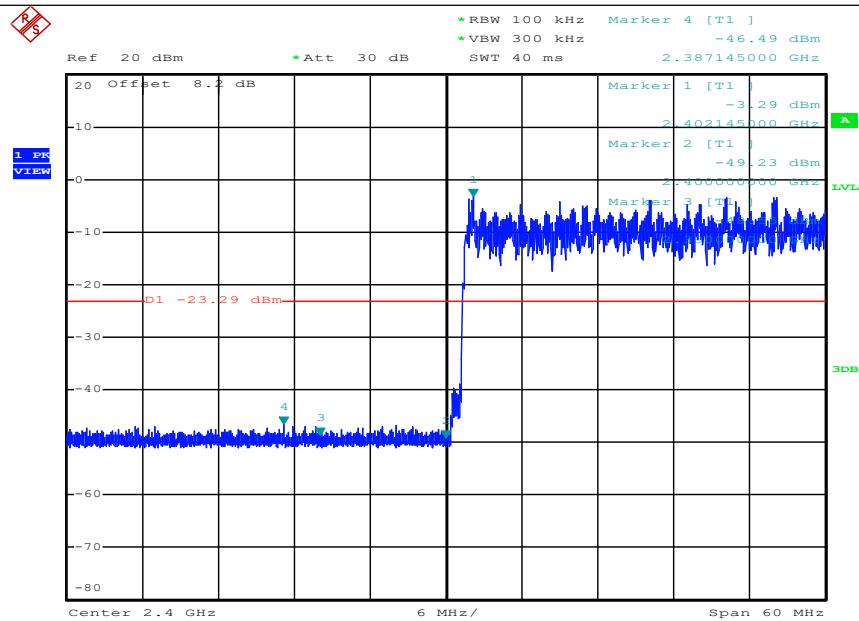
Date: 26.AUG.2019 19:05:52

8DPSK/LCH/No Hop



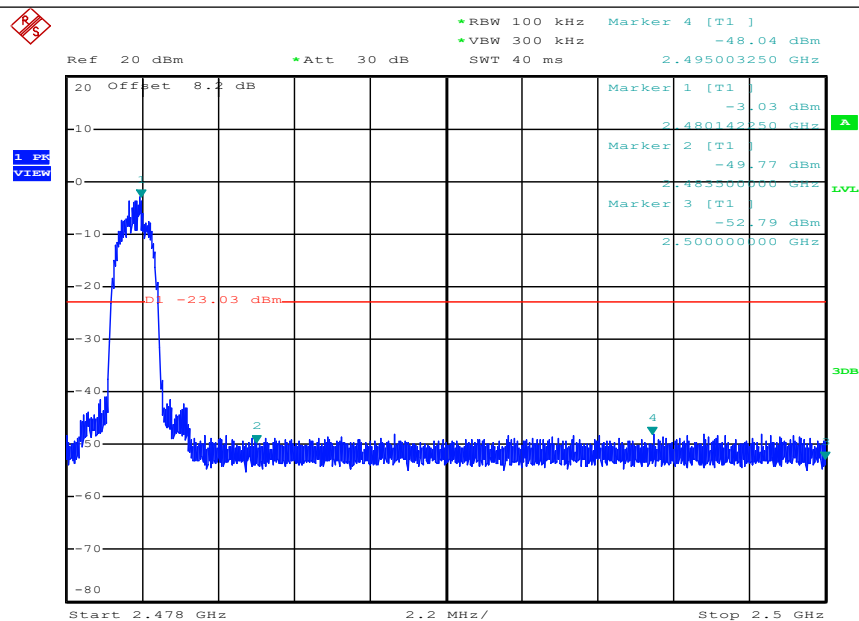
Date: 26.AUG.2019 18:38:41

8DPSK/LCH/Hop



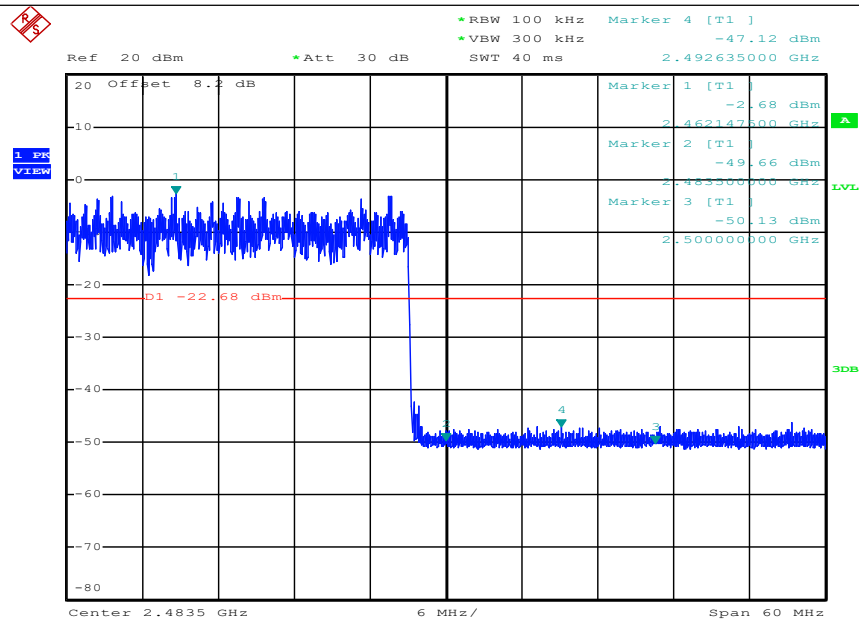
Date: 26.AUG.2019 19:11:54

8DPSK/HCH/No Hop



Date: 26.AUG.2019 18:42:39

8DPSK/HCH/Hop

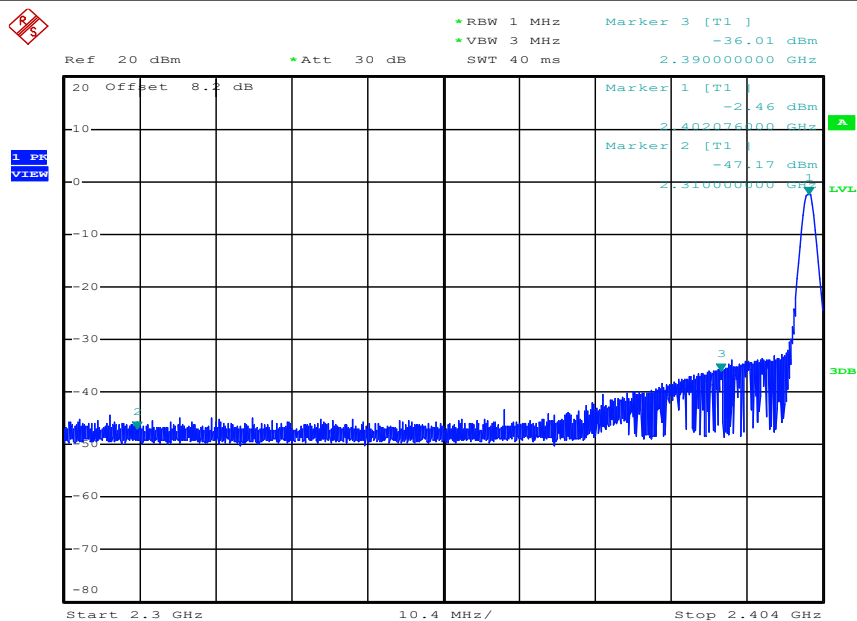


Date: 26.AUG.2019 19:15:44

A.8 Restrict-band band-edge measurements

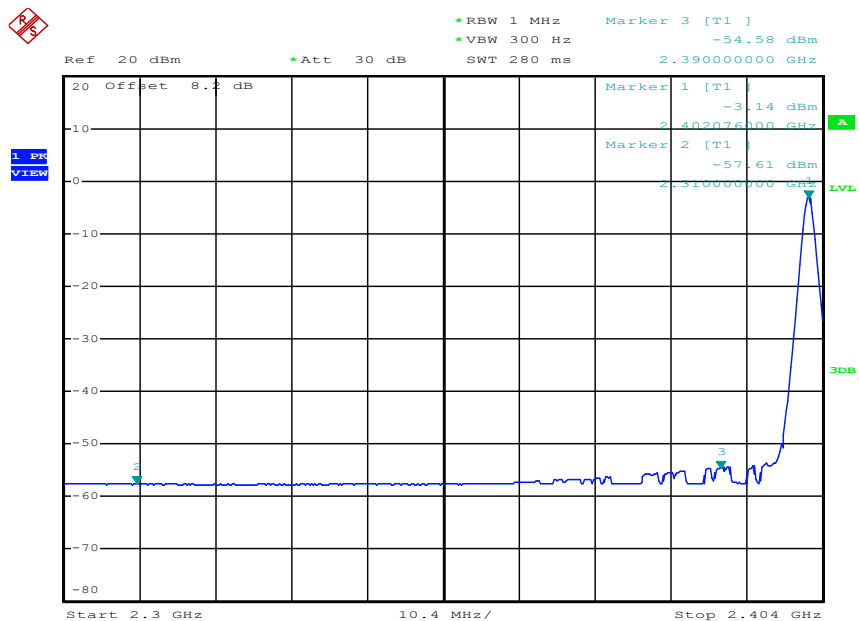
Test Mode	Hopping	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detector	Limit [dBuV/m]	Verdict
GFSK	Off	2310.0	-47.17	2.0	0	48.59	PEAK	74	PASS
	Off	2310.0	-57.61	2.0	0	38.15	AV	54	PASS
	Off	2390.0	-36.01	2.0	0	59.75	PEAK	74	PASS
	Off	2390.0	-54.58	2.0	0	41.18	AV	54	PASS
	Off	2483.5	-40.45	2.0	0	55.31	PEAK	74	PASS
	Off	2483.5	-44.38	2.0	0	51.38	AV	54	PASS
	Off	2500.0	-49.58	2.0	0	46.18	PEAK	74	PASS
	Off	2500.0	-58.10	2.0	0	37.66	AV	54	PASS
$\pi/4$ DQPSK	Off	2310.0	-47.14	2.0	0	48.62	PEAK	74	PASS
	Off	2310.0	-57.67	2.0	0	38.09	AV	54	PASS
	Off	2390.0	-35.27	2.0	0	60.49	PEAK	74	PASS
	Off	2390.0	-52.11	2.0	0	43.65	AV	54	PASS
	Off	2483.5	-41.53	2.0	0	54.23	PEAK	74	PASS
	Off	2483.5	-47.20	2.0	0	48.56	AV	54	PASS
	Off	2500.0	-47.89	2.0	0	47.87	PEAK	74	PASS
	Off	2500.0	-58.01	2.0	0	37.75	AV	54	PASS
8DPSK	Off	2310.0	-46.70	2.0	0	49.06	PEAK	74	PASS
	Off	2310.0	-57.71	2.0	0	38.05	AV	54	PASS
	Off	2390.0	-47.93	2.0	0	47.83	PEAK	74	PASS
	Off	2390.0	-57.41	2.0	0	38.35	AV	54	PASS
	Off	2483.5	-41.65	2.0	0	54.11	PEAK	74	PASS
	Off	2483.5	-47.15	2.0	0	48.61	AV	54	PASS
	Off	2500.0	-48.29	2.0	0	47.47	PEAK	74	PASS
	Off	2500.0	-58.00	2.0	0	37.76	AV	54	PASS

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



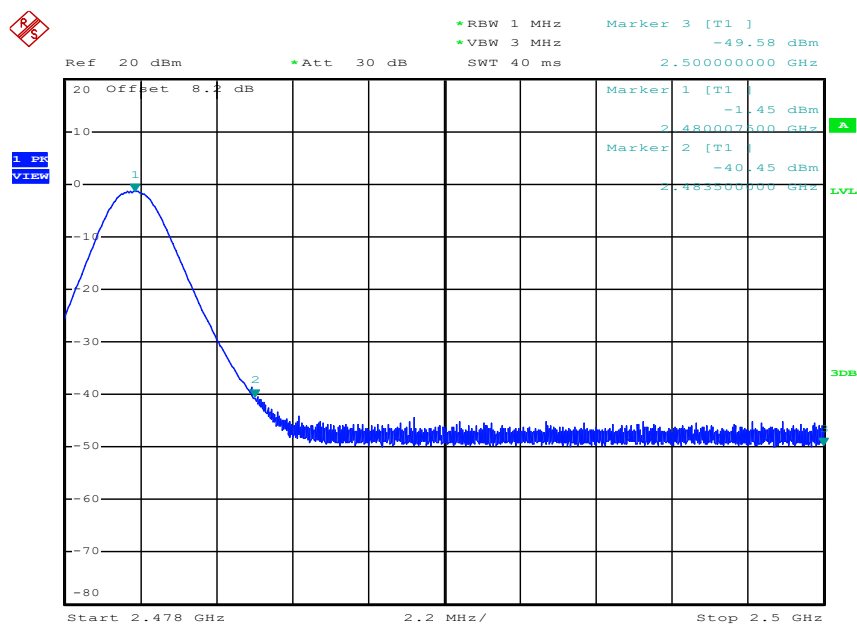
Date: 26.AUG.2019 18:25:04

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



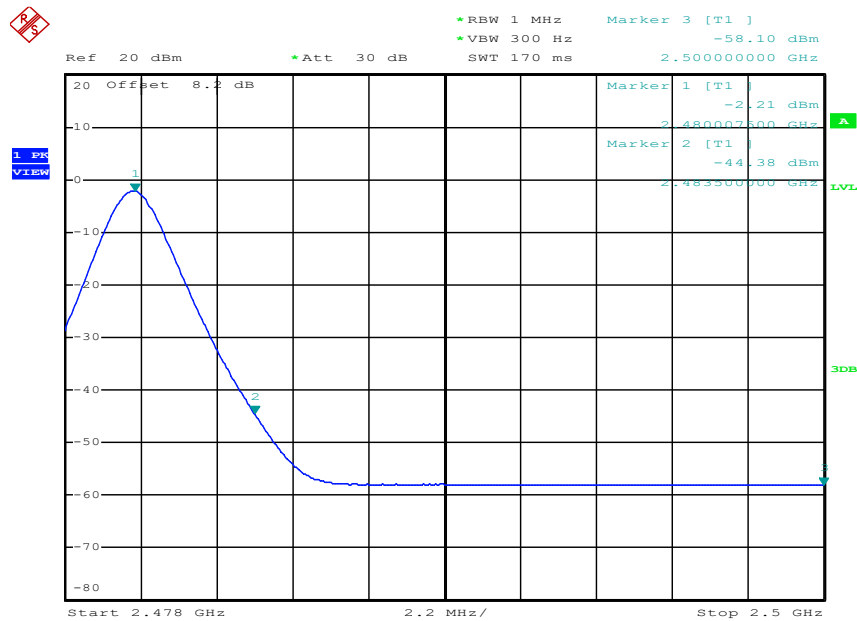
Date: 26.AUG.2019 18:25:17

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

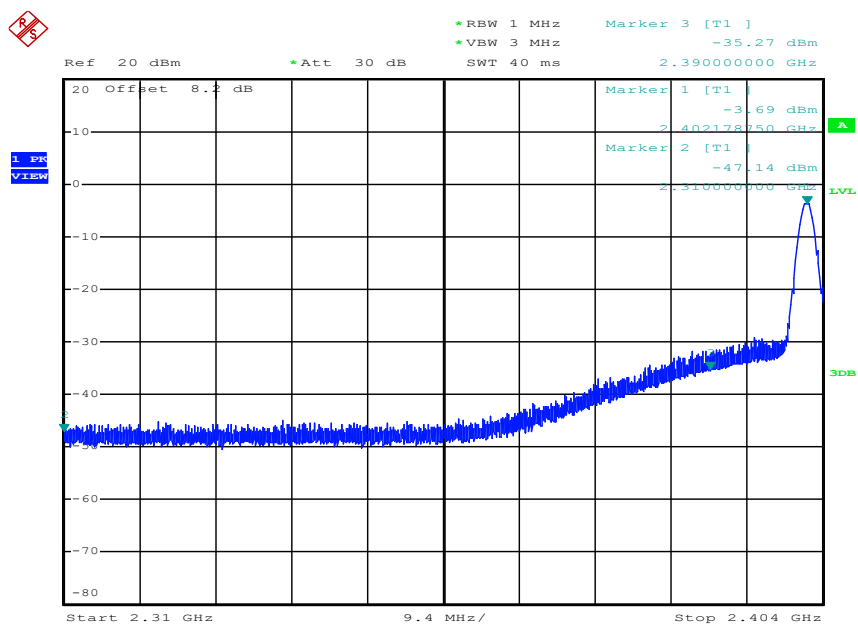


Date: 26.AUG.2019 18:29:15

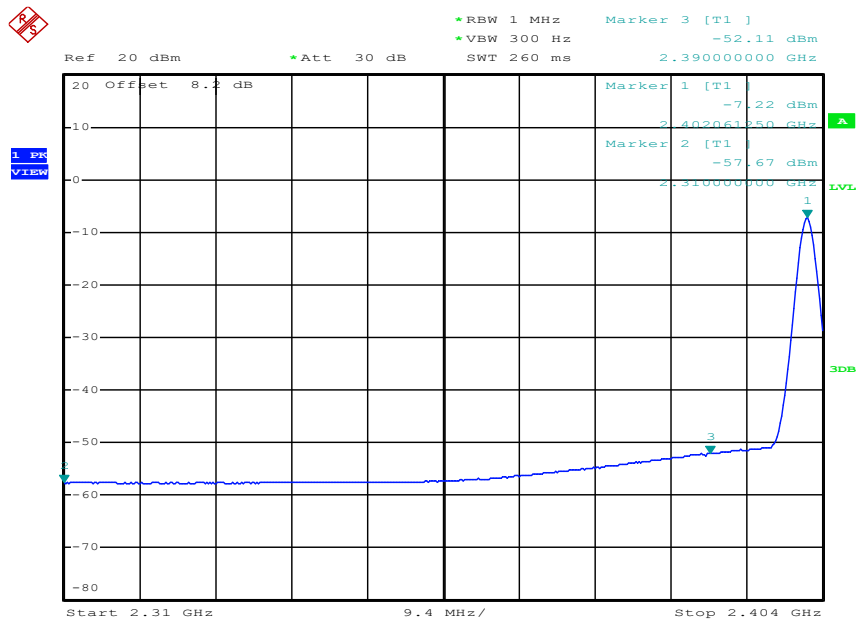
Restrict-band band-edge measurements_Hopping Off_ GFSK_Average (High Channel)



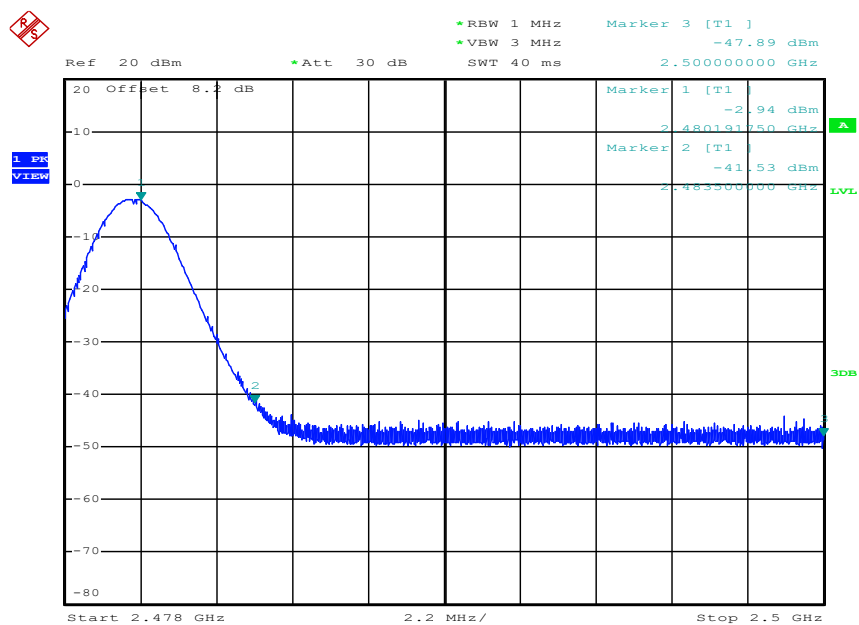
Date: 26.AUG.2019 18:29:28

Restrict-band band-edge measurements_Hopping Off $\pi/4$ -DQPSK_PEAK (Low Channel)

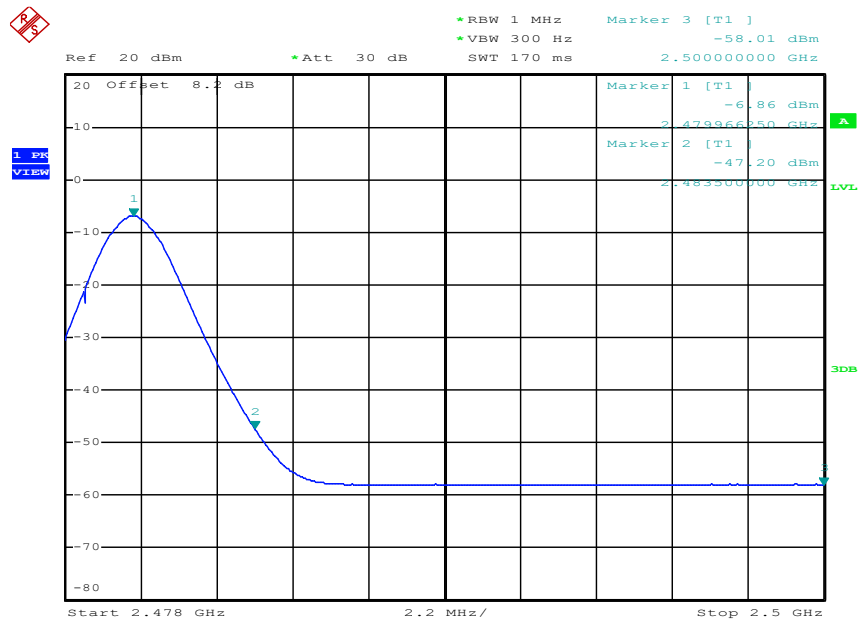
Date: 26.AUG.2019 18:32:55

Restrict-band band-edge measurements_Hopping Off $\pi/4$ -DQPSK_Average (Low Channel)

Date: 26.AUG.2019 18:33:08

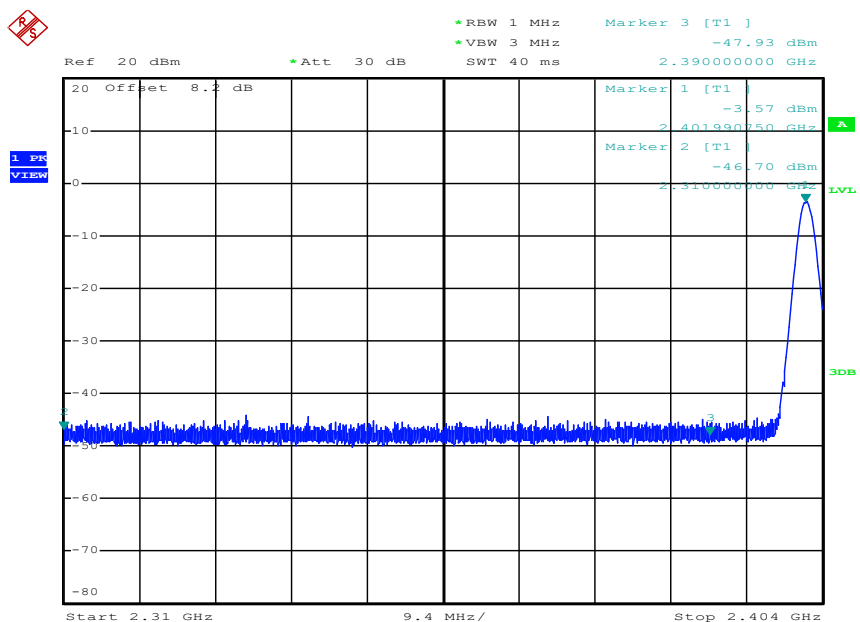
Restrict-band band-edge measurements_Hopping Off $\pi/4$ -DQPSK_PEAK (High Channel)

Date: 26.AUG.2019 18:36:59

Restrict-band band-edge measurements_Hopping Off $\pi/4$ -DQPSK_Average (High Channel)

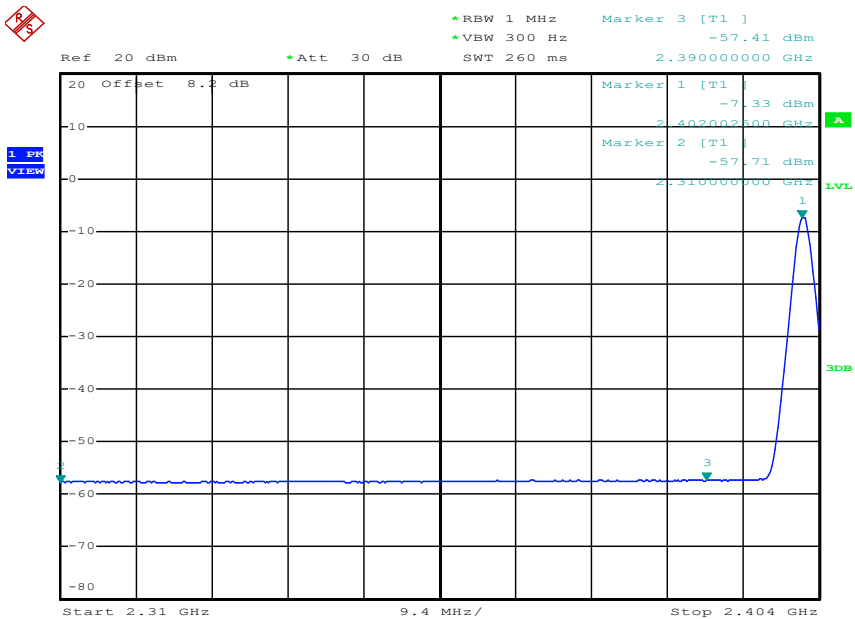
Date: 26.AUG.2019 18:37:12

Restrict-band band-edge measurements_Hopping Off_8DPSK_PEAK (Low Channel)



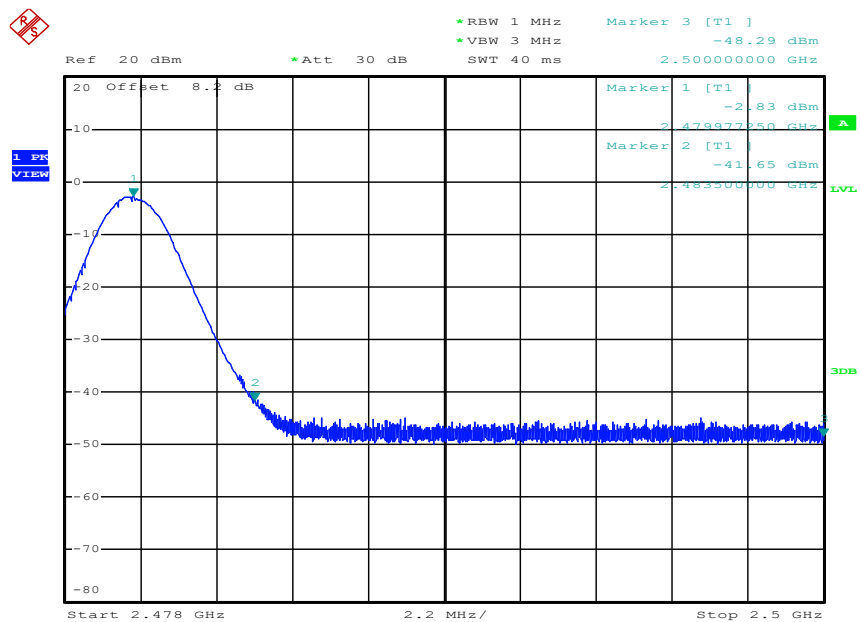
Date: 26.AUG.2019 18:39:25

Restrict-band band-edge measurements_Hopping Off_8DPSK_Average (Low Channel)



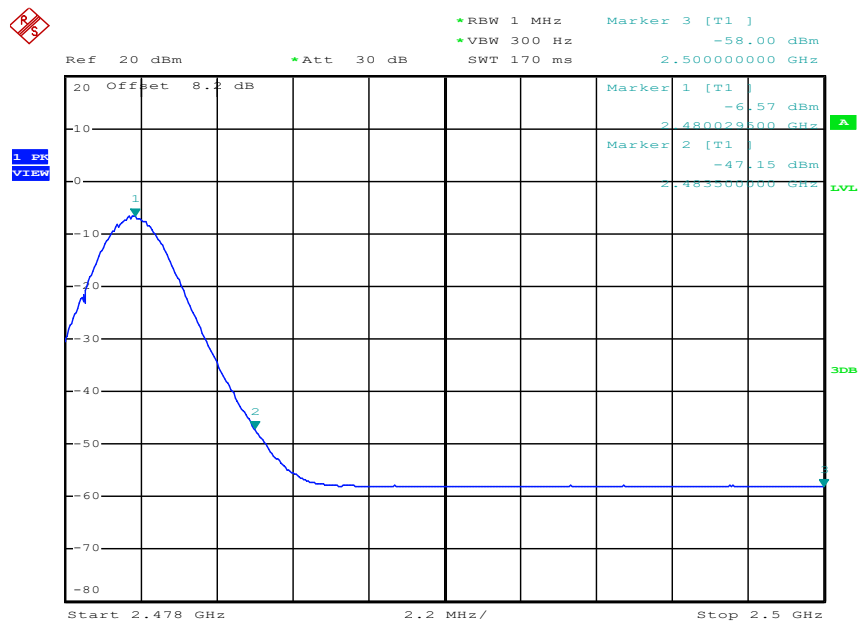
Date: 26.AUG.2019 18:39:38

Restrict-band band-edge measurements_Hopping Off_8DPSK_PEAK (High Channel)



Date: 26.AUG.2019 18:43:23

Restrict-band band-edge measurements_Hopping Off_8DPSK_Average (High Channel)



Date: 26.AUG.2019 18:43:36