

Appendix A

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

Product Name: HOME AUDIO SOUND BAR

Trade Mark: HDTC

Test Model: HD-016L

Environmental Conditions

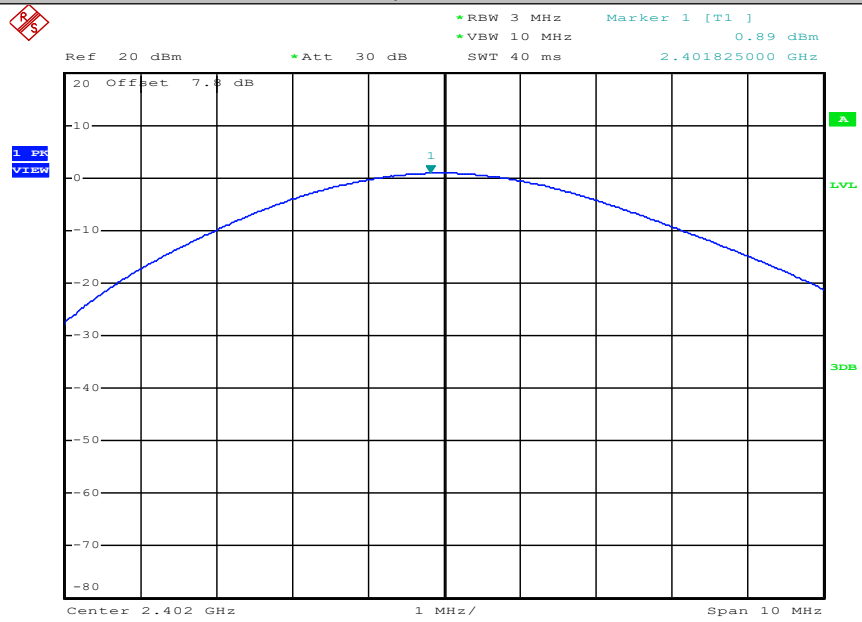
Temperature:	23.3 ° C
Relative Humidity:	51.9 %
ATM Pressure:	100.0 kPa
Test Engineer:	Wang.Chuang
Supervised by:	Tom.liu

A.1 Maxmum Conducted Peak Output Power

Mode	Channel.	Maximum Peak Output Power [dBm]	Limit [dBm]	Verdict
GFSK	LCH	0.890	30	PASS
	MCH	0.530	30	PASS
	HCH	0.680	30	PASS
$\pi/4$ DQPSK	LCH	0.010	21	PASS
	MCH	-0.420	21	PASS
	HCH	0.470	21	PASS
8DPSK	N/A	N/A	N/A	N/A
	N/A	N/A	N/A	N/A
	N/A	N/A	N/A	N/A

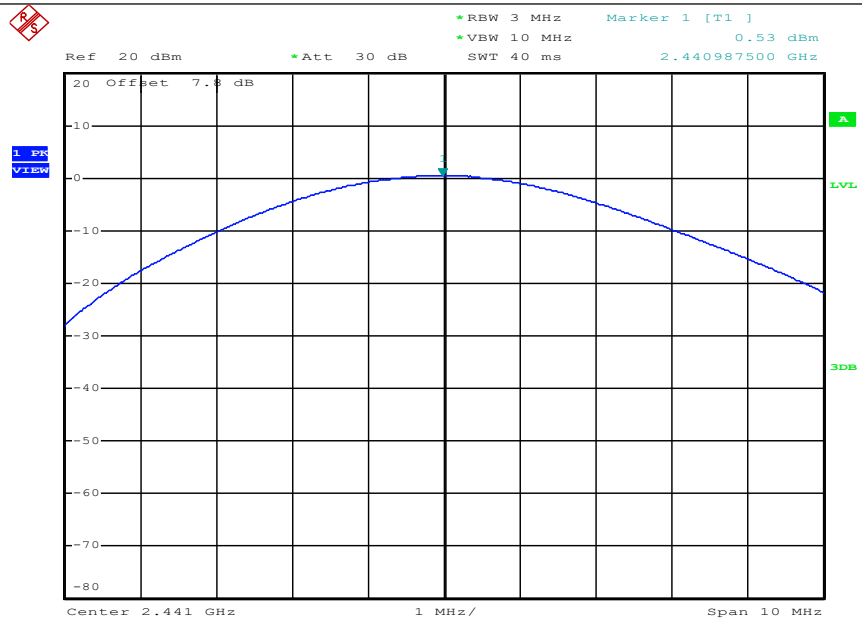
Test Graphs

GFSK/LCH



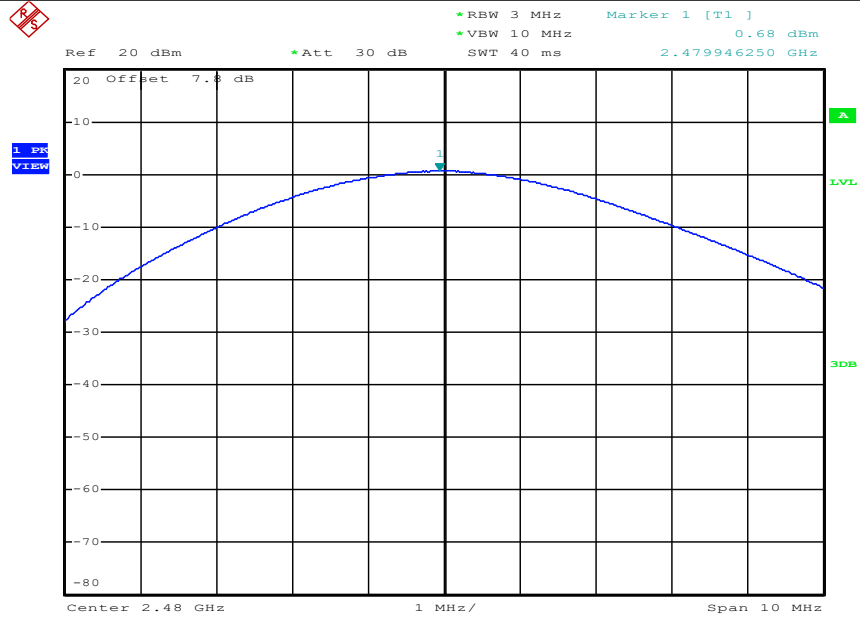
Date: 19.SEP.2019 09:14:50

GFSK/MCH



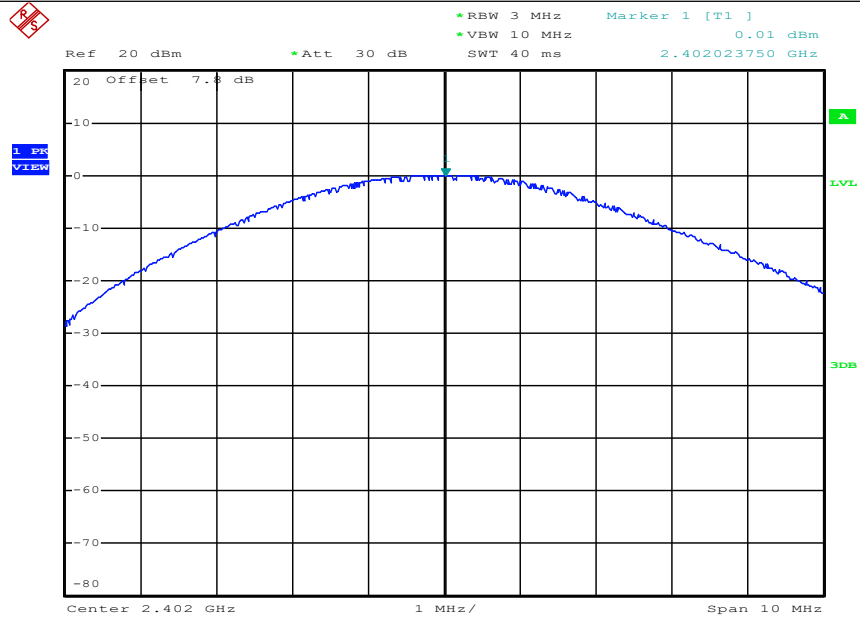
Date: 19.SEP.2019 09:18:11

GFSK/HCH



Date: 19.SEP.2019 09:19:52

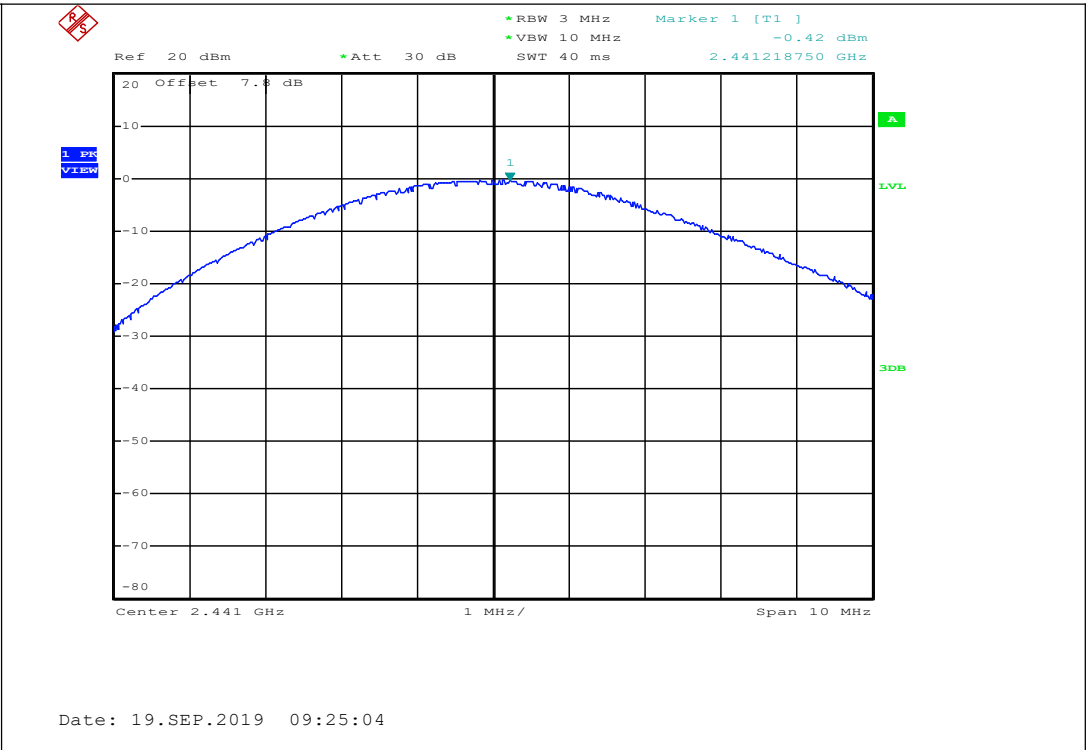
$\pi/4$ DQPSK/LCH



Date: 19.SEP.2019 09:22:34

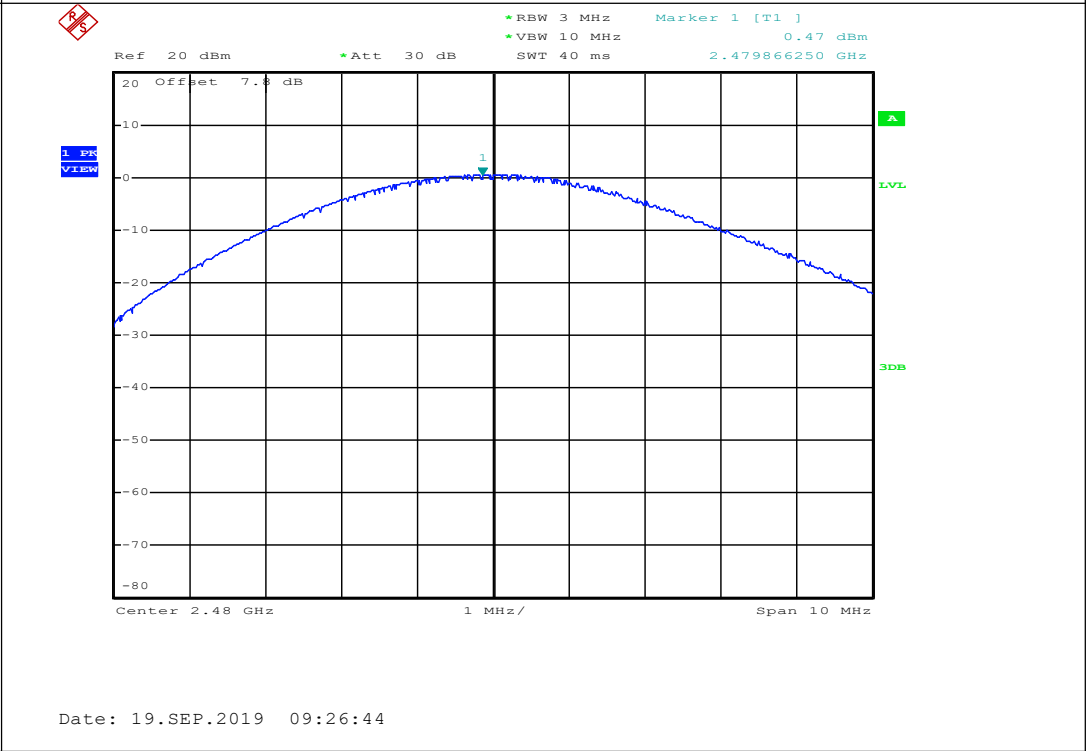
$\pi/4$ DQPSK/MCH

Date: 19.SEP.2019 09:25:04



$\pi/4$ DQPSK/HCH

Date: 19.SEP.2019 09:26:44



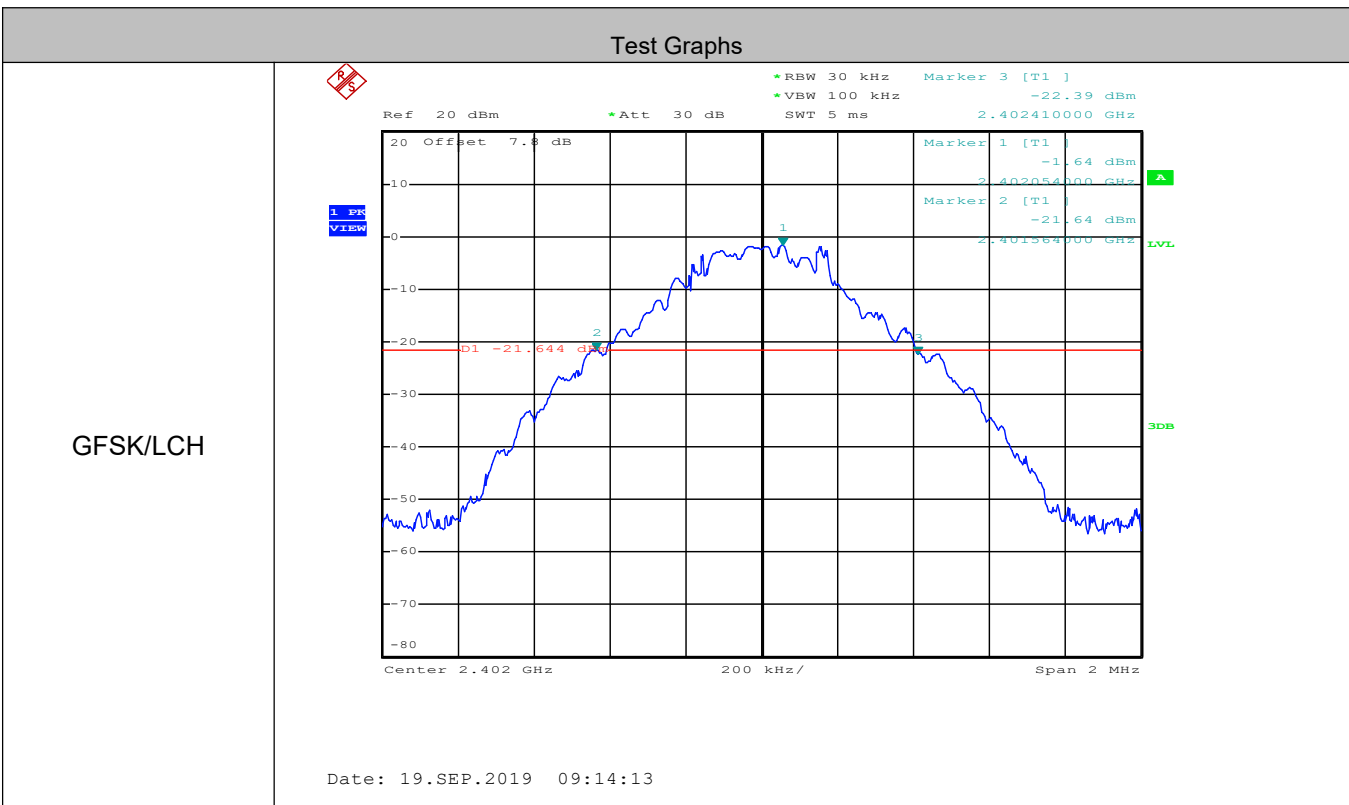
8DPSK/LCH

#ImgPeakp3dh51lchnn

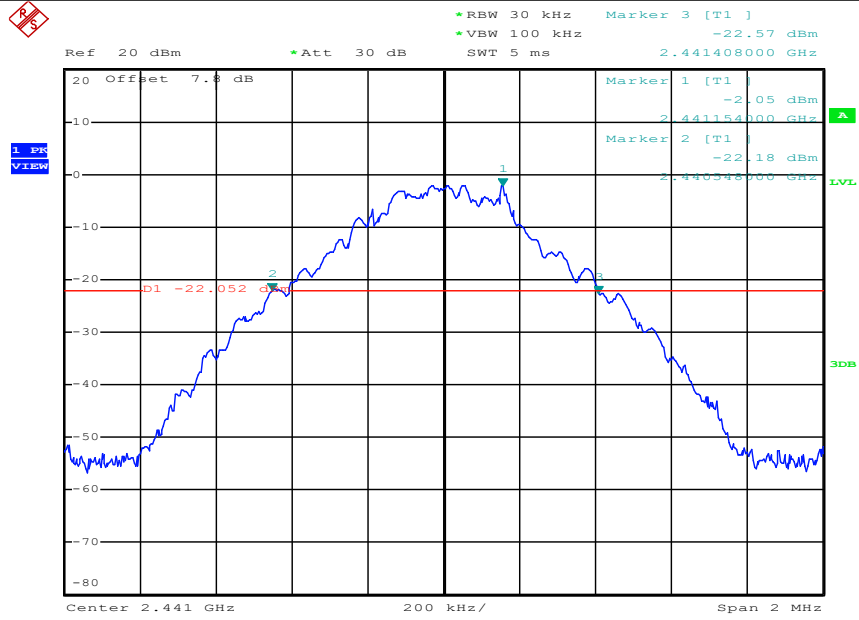
8DPSK/MCH	#ImgPeakp3dh51mchnn
8DPSK/HCH	#ImgPeakp3dh51hchnn

A.2 20dB Bandwidth

Mode	Channel.	20dB Bandwidth [MHz]	Limit [MHz]	Verdict
GFSK	LCH	0.846	Not Specified	PASS
	MCH	0.860	Not Specified	PASS
	HCH	0.860	Not Specified	PASS
$\pi/4$ DQPSK	LCH	1.274	Not Specified	PASS
	MCH	1.260	Not Specified	PASS
	HCH	1.270	Not Specified	PASS
8DPSK	N/A	N/A	N/A	N/A
	N/A	N/A	N/A	N/A
	N/A	N/A	N/A	N/A

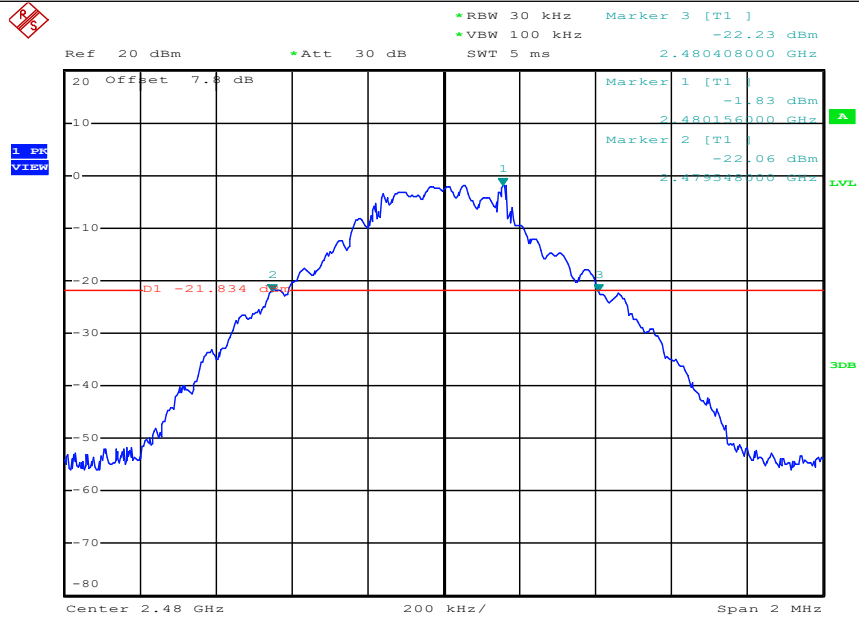


GFSK/MCH



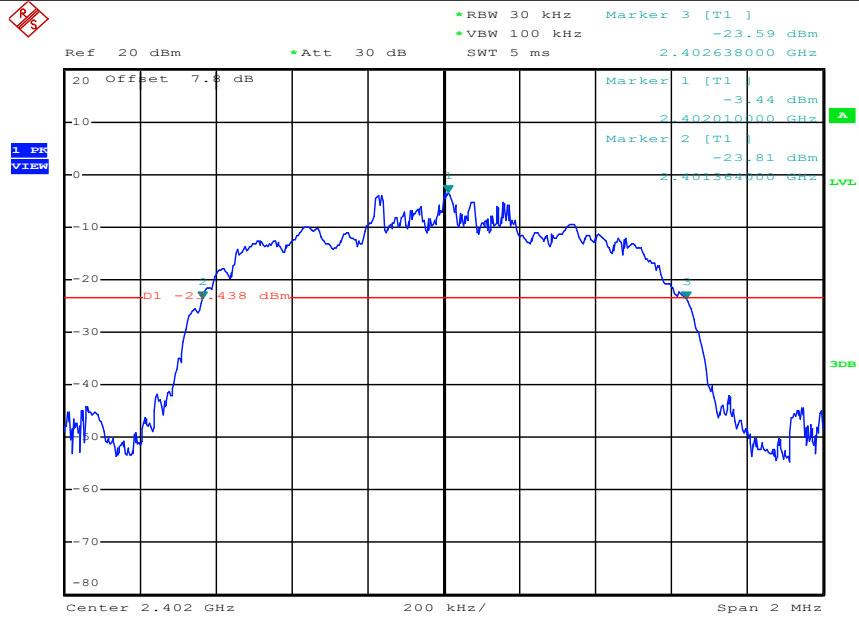
Date: 19.SEP.2019 09:17:34

GFSK/HCH



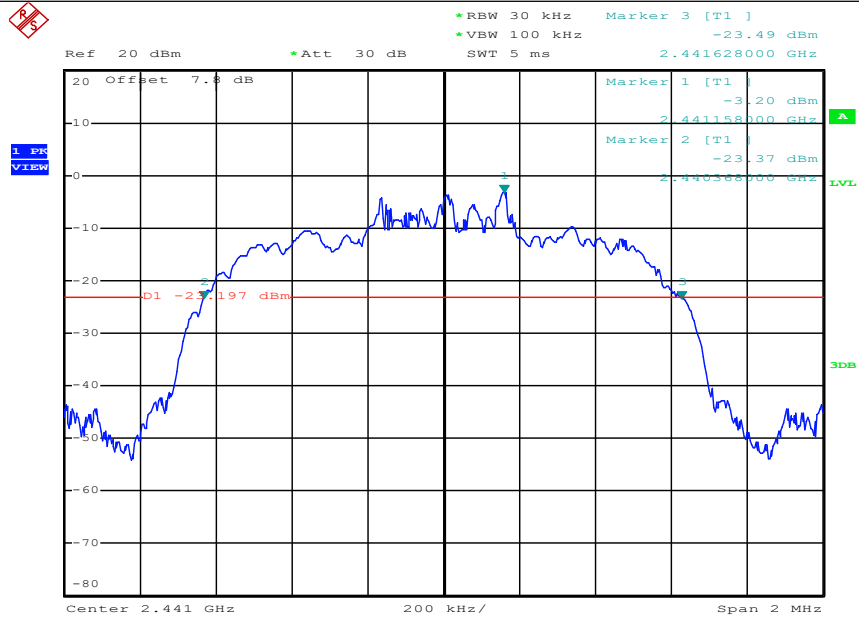
Date: 19.SEP.2019 09:19:16

$\pi/4$ DQPSK/LCH

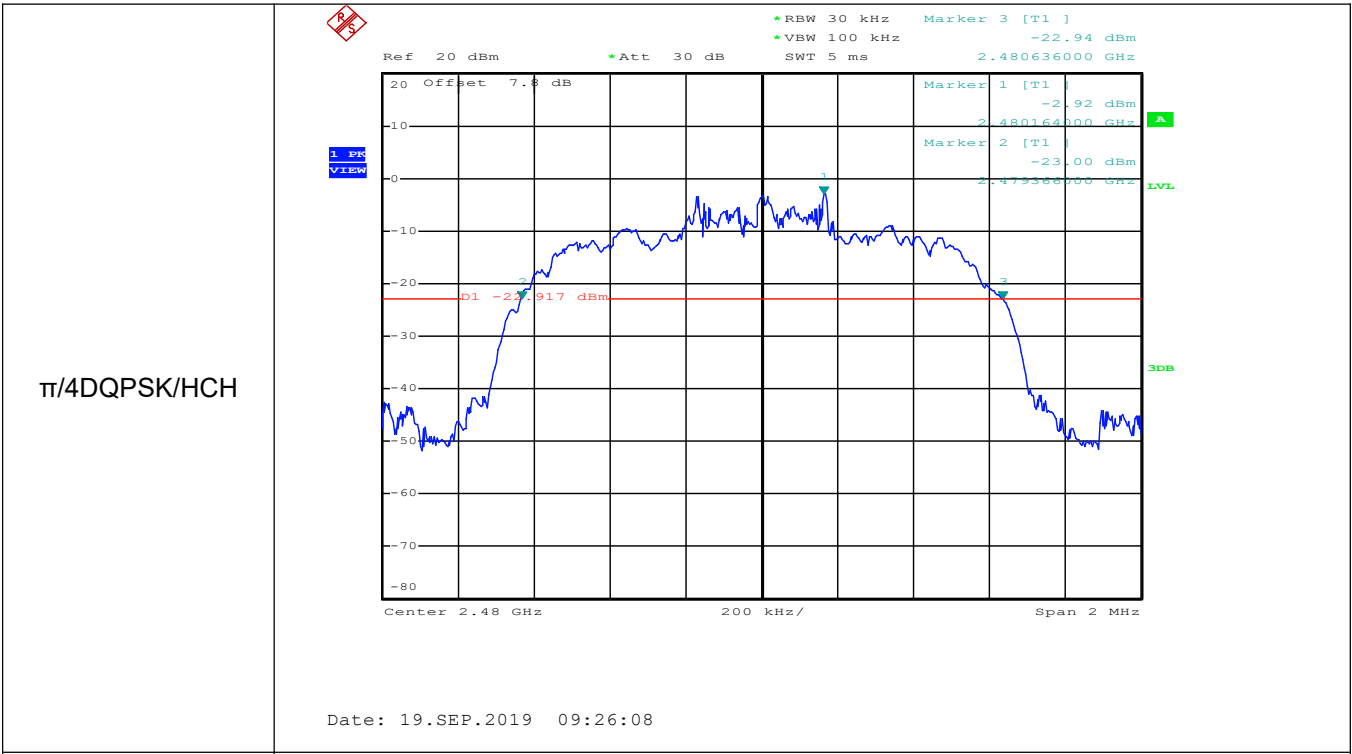


Date: 19.SEP.2019 09:21:58

$\pi/4$ DQPSK/MCH



Date: 19.SEP.2019 09:24:27



π/4DQPSK/HCH

#imgxbw3dh51lchnn

8DPSK/LCH

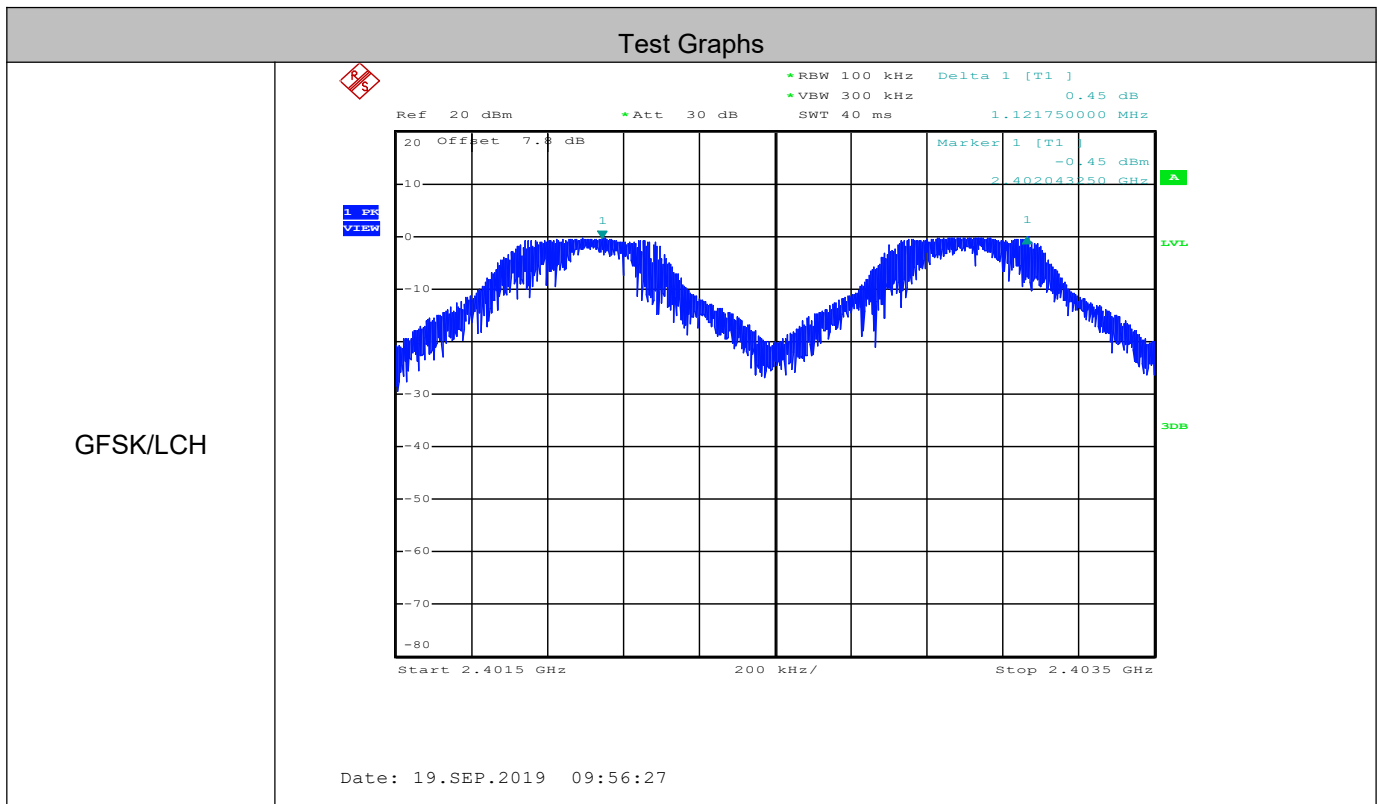
#imgxbw3dh51mchnn

8DPSK/HCH

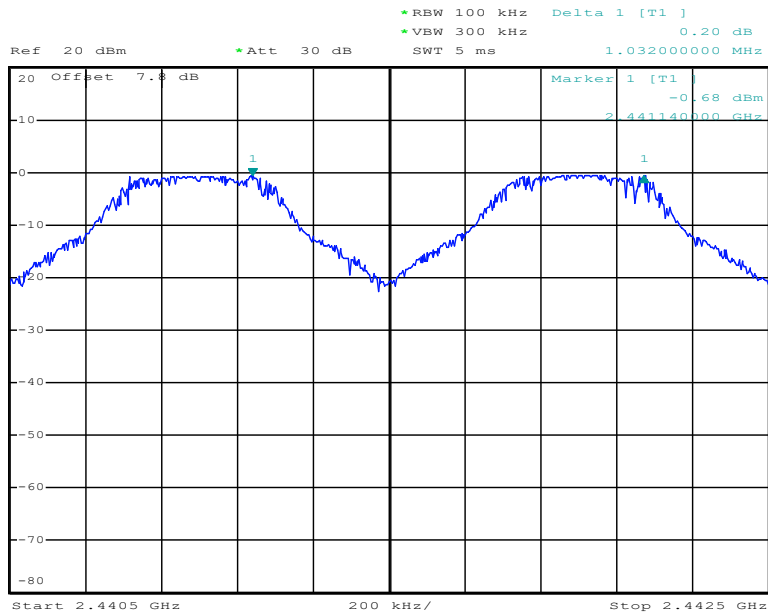
#imgxbw3dh51hchnn

A.3 Carrier Frequency Separation

Mode	Channel.	Carrier Frequency Separation [MHz]	Limit [MHz]	Verdict
GFSK	LCH	1.122	0.573	PASS
	MCH	1.032	0.573	PASS
	HCH	0.954	0.573	PASS
π/4DQPSK	LCH	1.032	0.849	PASS
	MCH	1.024	0.849	PASS
	HCH	1.356	0.849	PASS
8DPSK	N/A	N/A	N/A	N/A
	N/A	N/A	N/A	N/A
	N/A	N/A	N/A	N/A

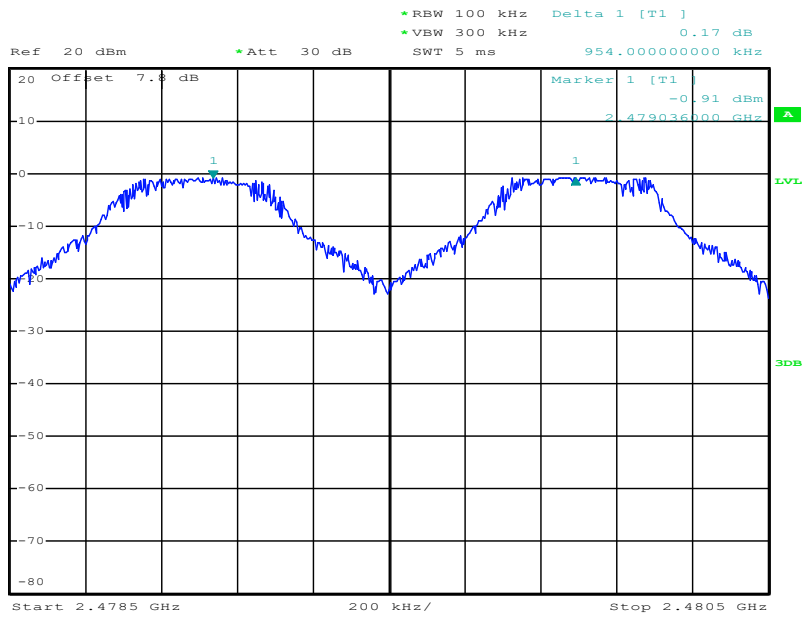


GFSK/MCH



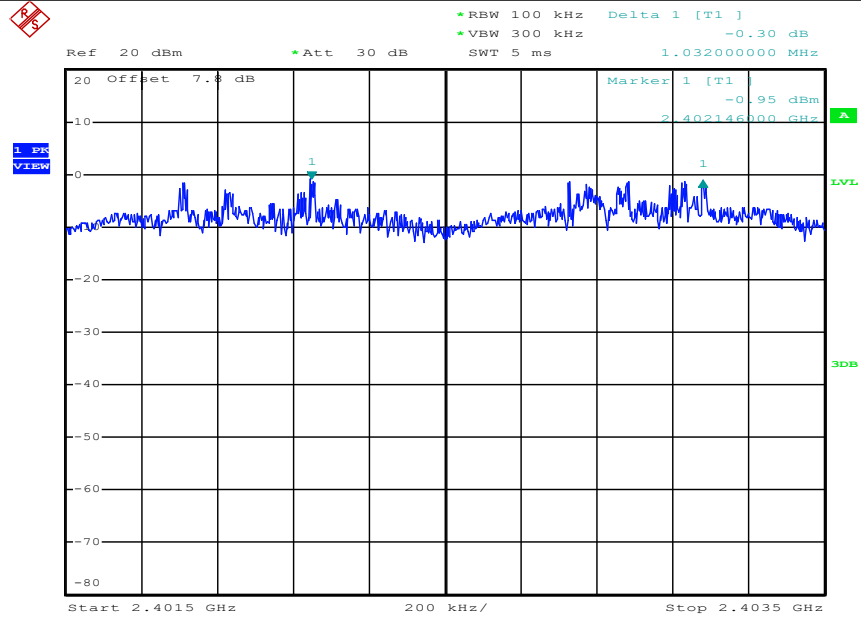
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GFSK/HCH



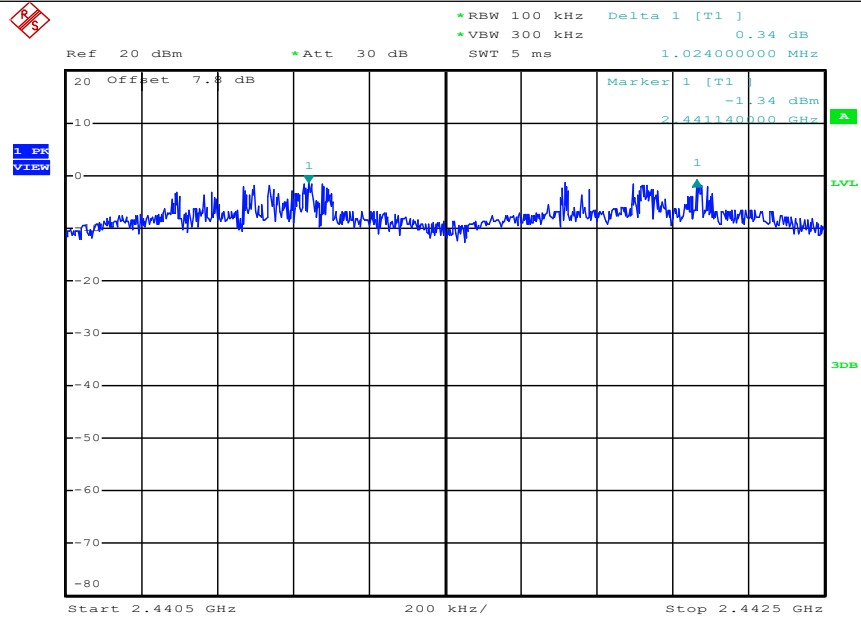
Date: 19.SEP.2019 10:00:41

$\pi/4$ DQPSK/LCH



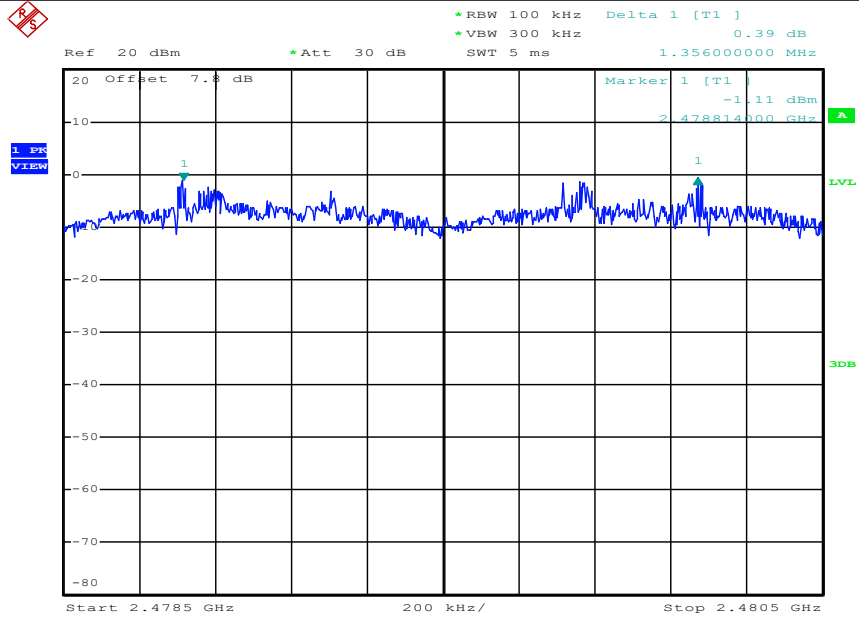
Date: 19.SEP.2019 10:12:41

$\pi/4$ DQPSK/MCH



Date: 19.SEP.2019 10:07:49

π /4DQPSK/HCH



Date: 19.SEP.2019 10:14:38

8DPSK/LCH

#imgcfs3dh51lchnn

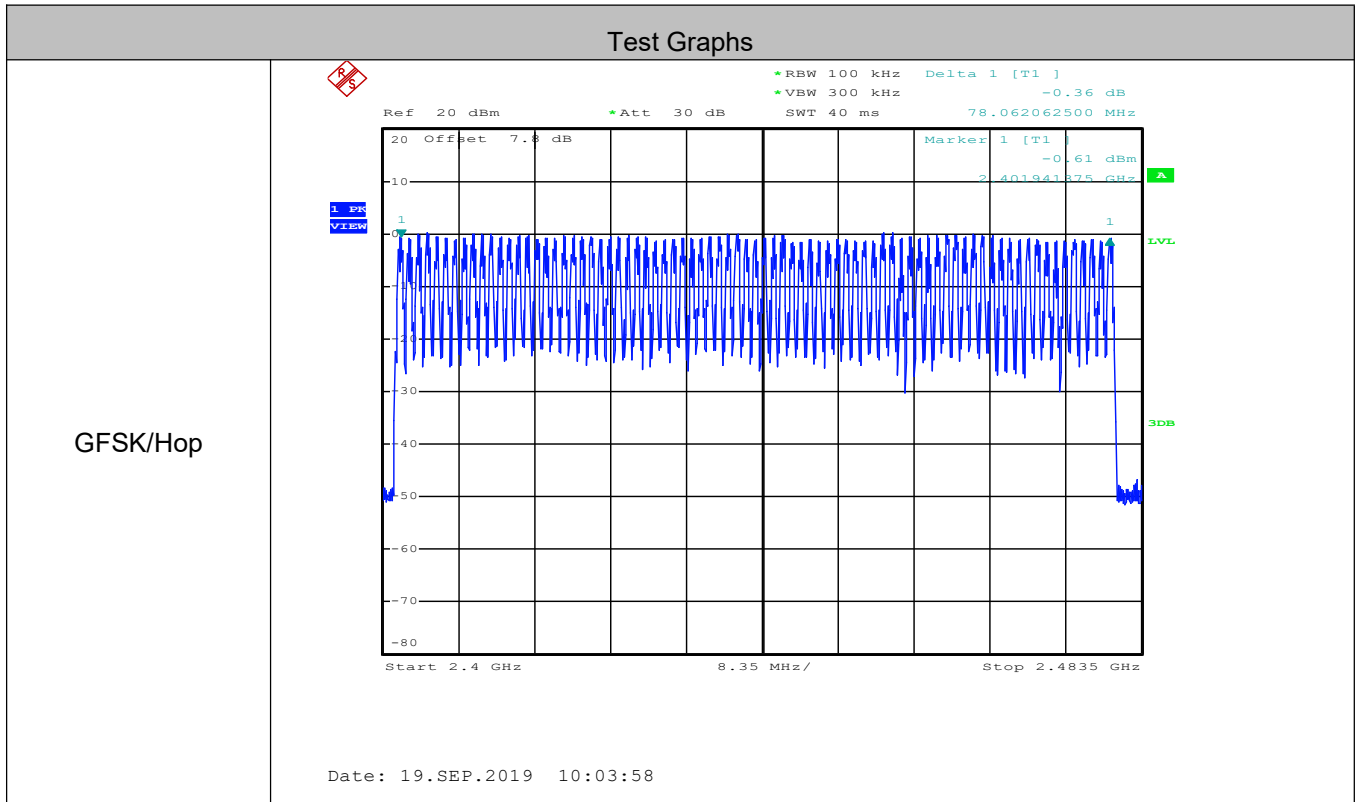
8DPSK/MCH

#imgcfs3dh51mchnn

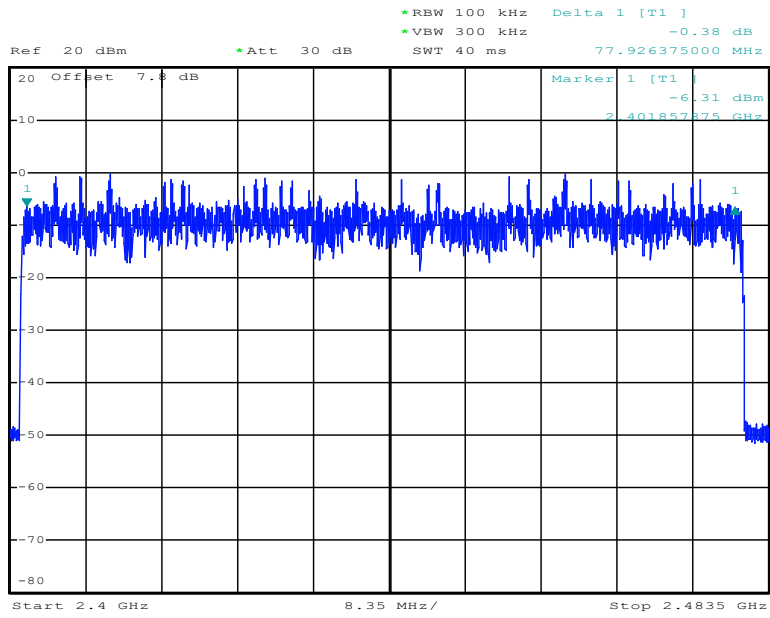
8DPSK/HCH	#imgcfs3dh51hchnn
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A.4 Hopping Channel Number

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



$\pi/4$ DQPSK/Hop



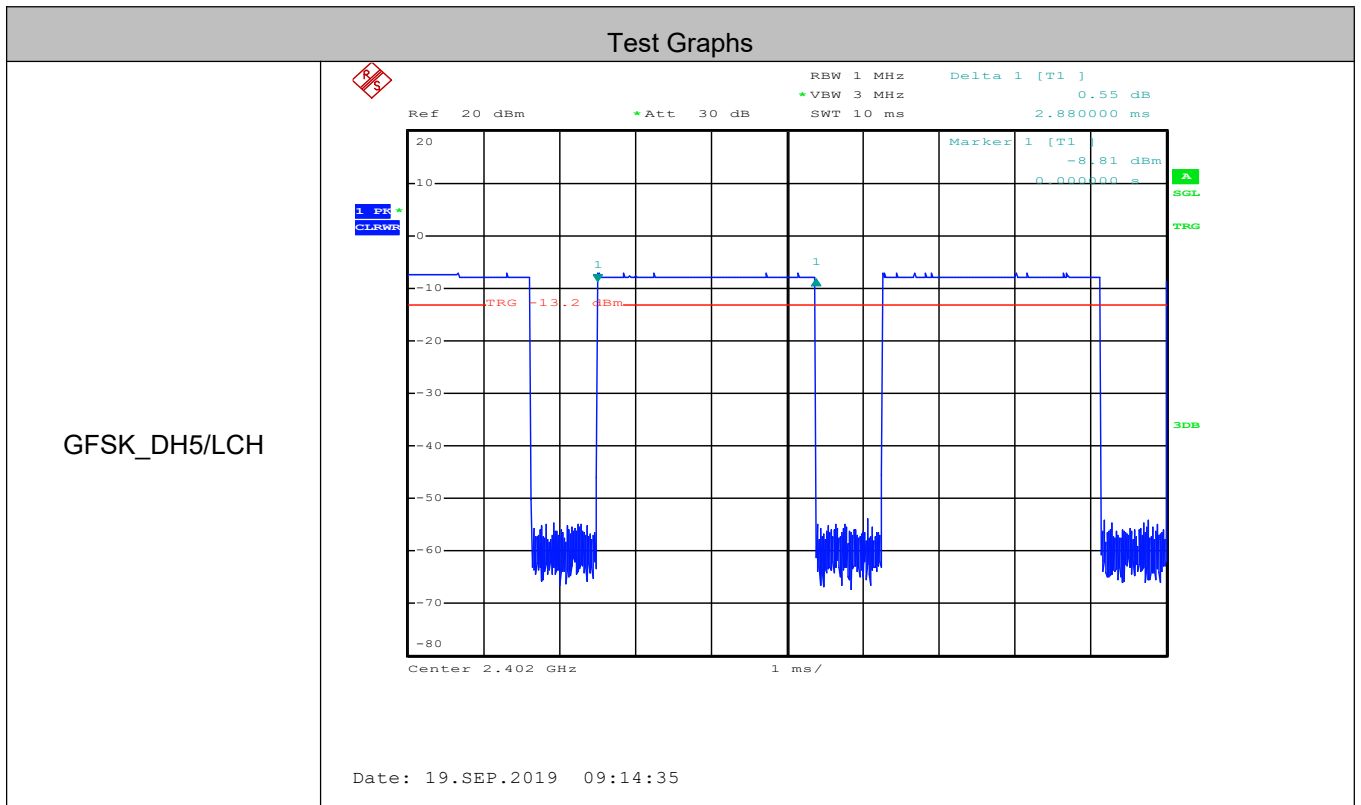
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8DPSK/Hop

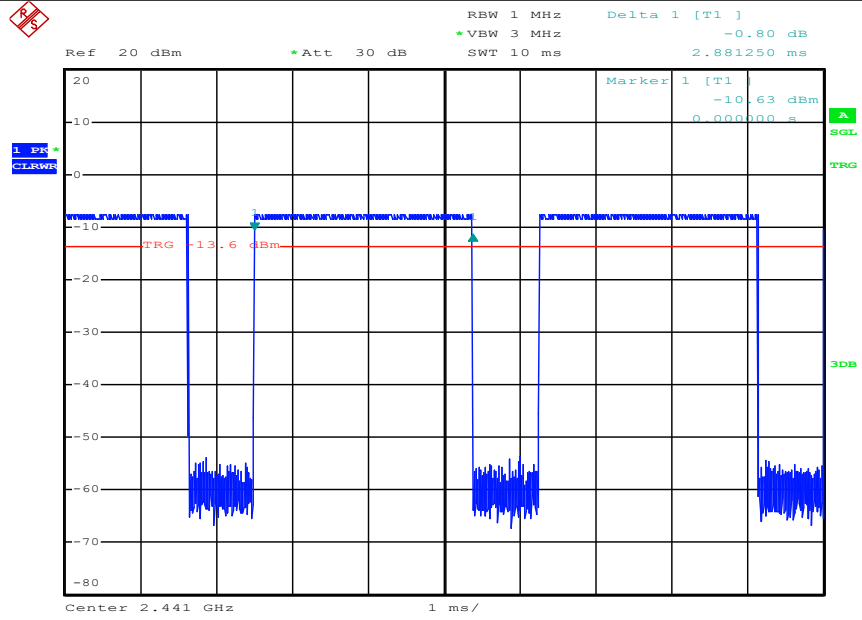
#imghopnum3dh51lchnn

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
8DPSK	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	N/A	N/A	N/A	N/A	N/A	N/A	N/A

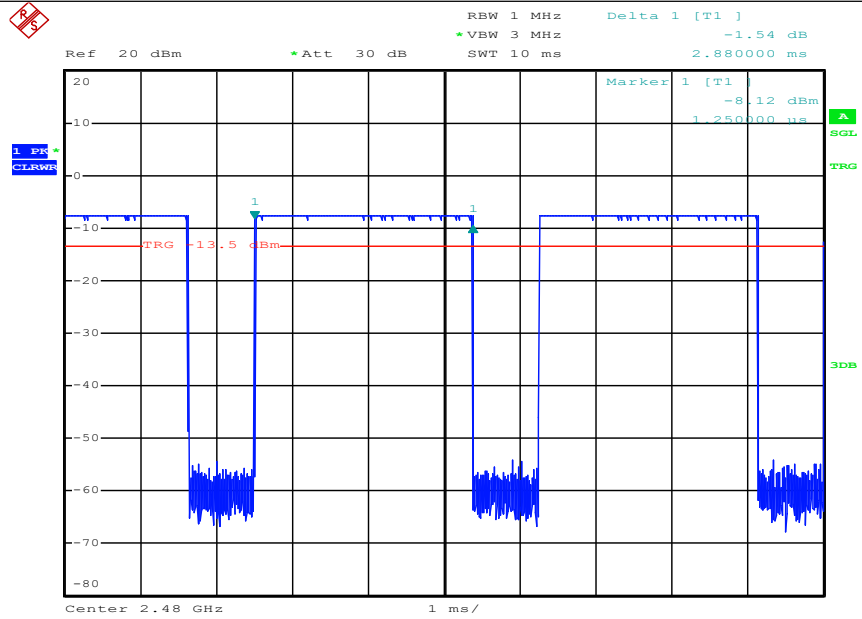


GFSK_DH5/MCH



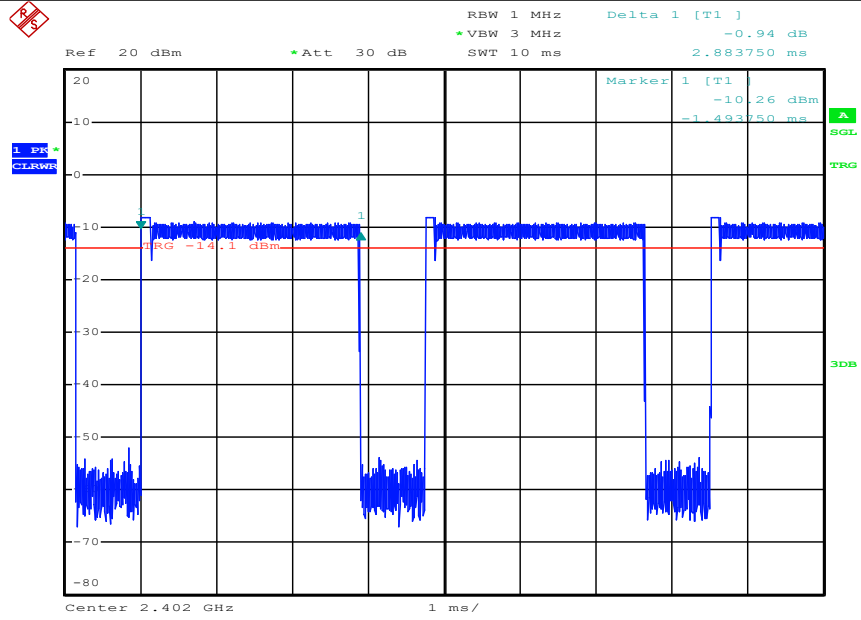
Date: 19.SEP.2019 09:17:56

GFSK_DH5/HCH



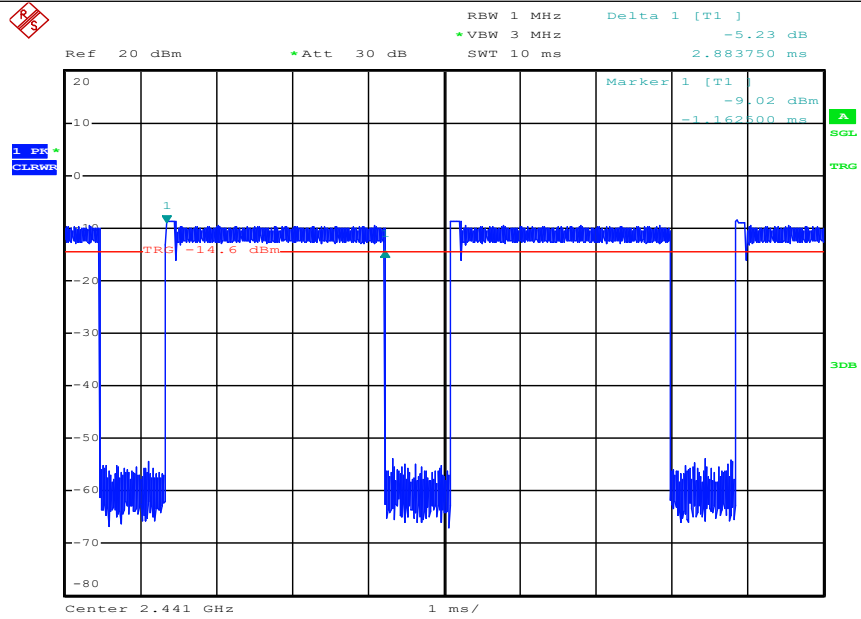
Date: 19.SEP.2019 09:19:38

$\pi/4$ DQPSK
_2DH5/LCH



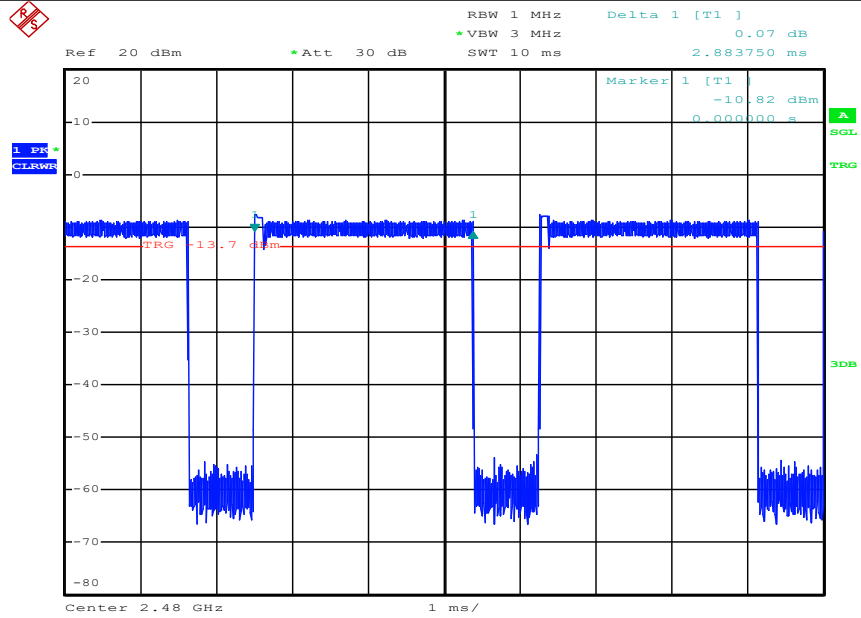
Date: 19.SEP.2019 09:22:19

$\pi/4$ DQPSK
_2DH5/MCH



Date: 19.SEP.2019 09:24:49

$\pi/4$ DQPSK
_2DH5/HCH



Date: 19.SEP.2019 09:26:29

8DPSK_3DH5/LCH

#imgburst3dh51lchnn

8DPSK_3DH5/MCH

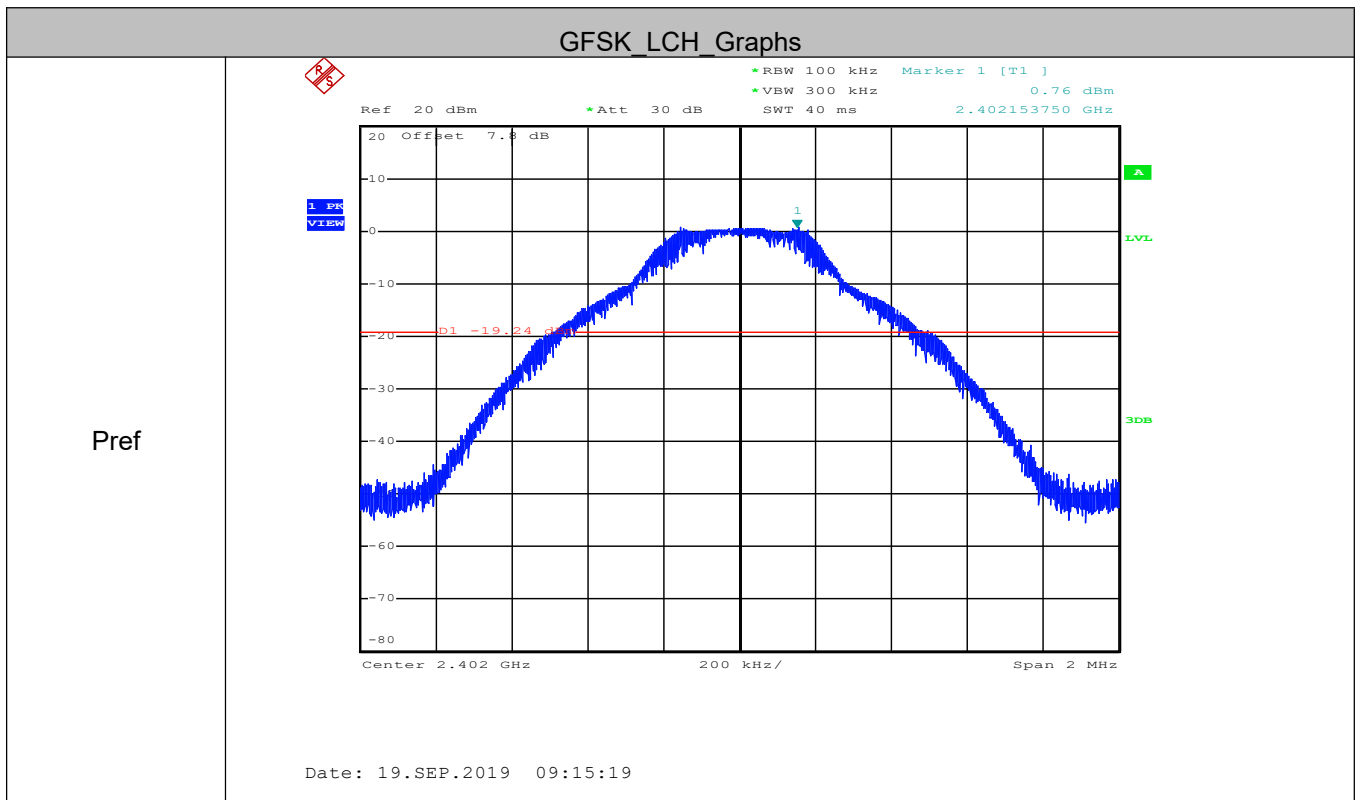
#imgburst3dh51mchnn

8DPSK_3DH5/HCH

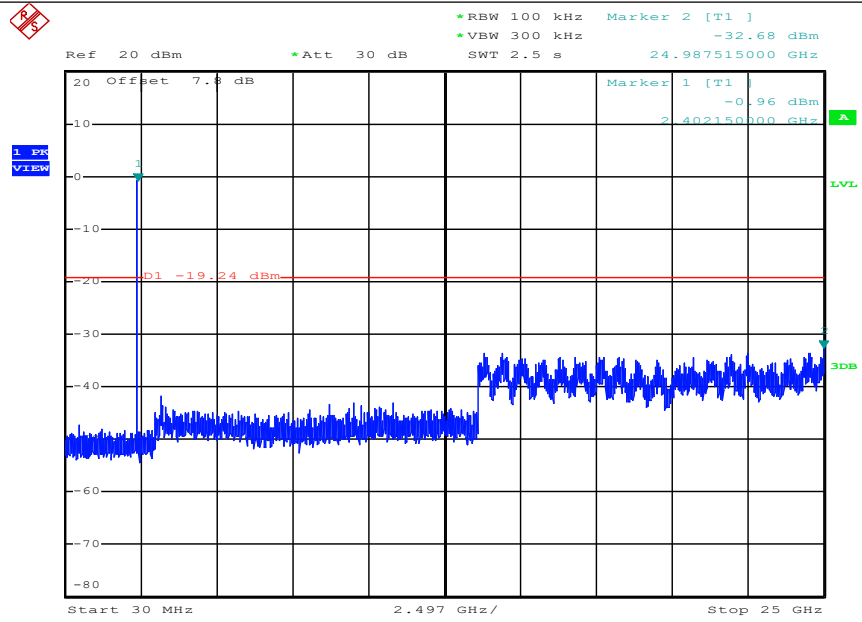
#imgburst3dh51hchnn

A.6 RF Conducted Spurious Emissions

Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
GFSK	LCH	0.76	-32.680	-19.240	PASS
	MCH	0.36	-32.730	-19.640	PASS
	HCH	0.47	-32.360	-19.530	PASS
π/4DQPSK	LCH	0.1	-32.900	-19.900	PASS
	MCH	-0.34	-33.120	-20.340	PASS
	HCH	0.46	-32.060	-19.540	PASS
8DPSK	N/A	N/A	N/A	N/A	N/A
	N/A	N/A	N/A	N/A	N/A
	N/A	N/A	N/A	N/A	N/A



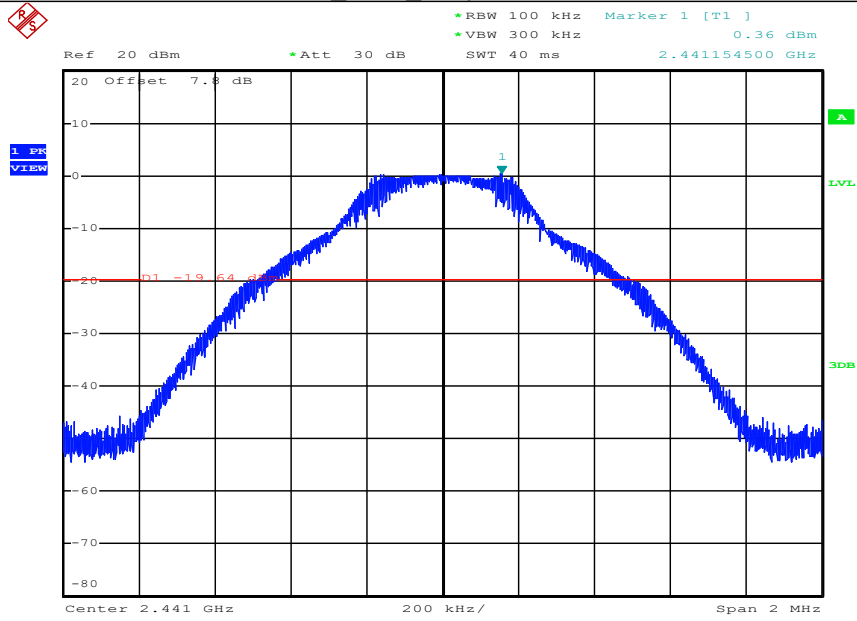
P_{uw}



Date: 19.SEP.2019 09:15:34

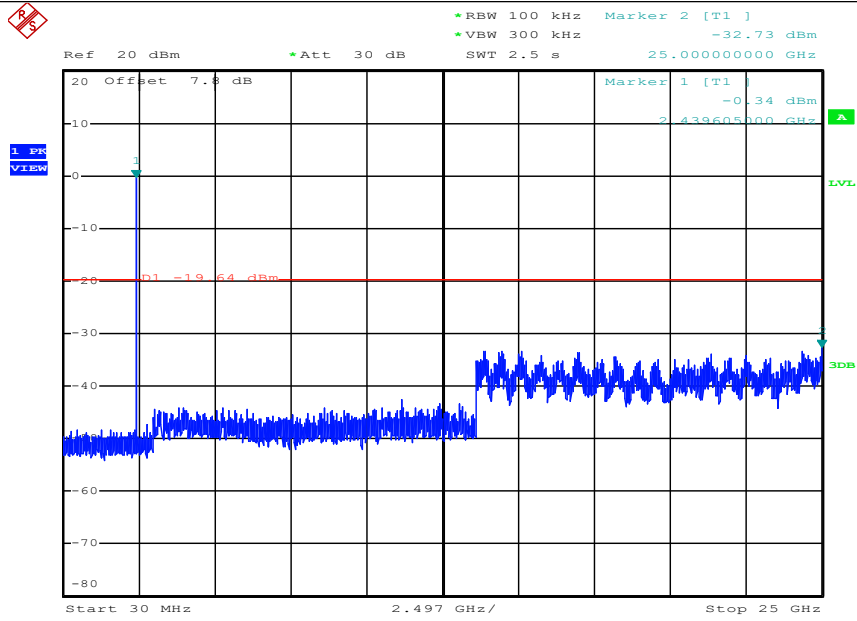
GFSK_MCH_Graphs

Pref



Date: 19.SEP.2019 09:18:23

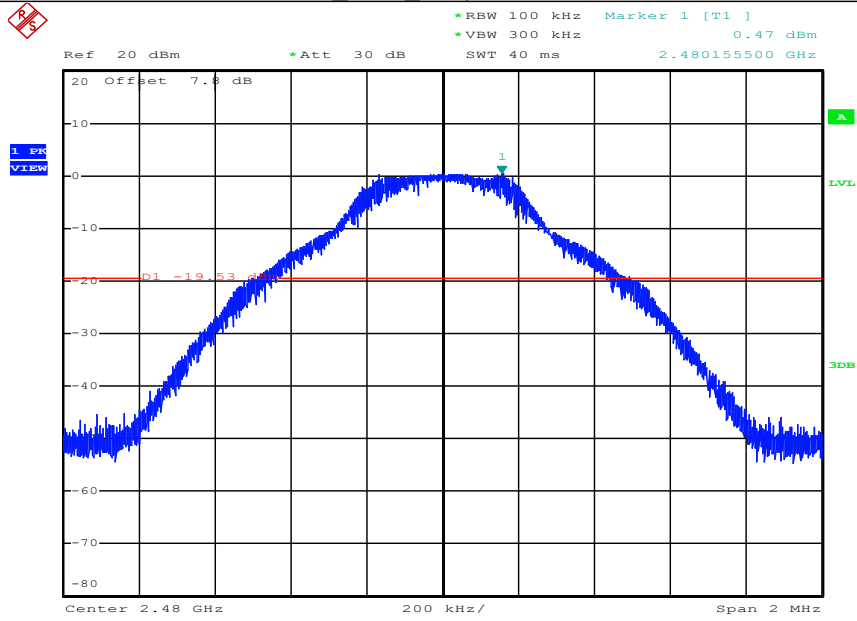
Puw



Date: 19.SEP.2019 09:18:38

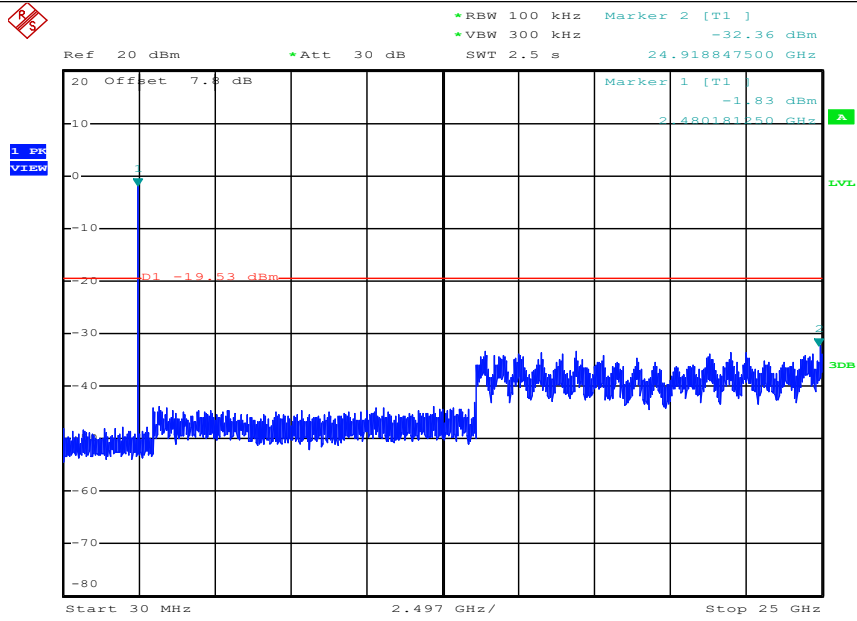
GFSK_HCH_Graphs

Pref



Date: 19.SEP.2019 09:20:22

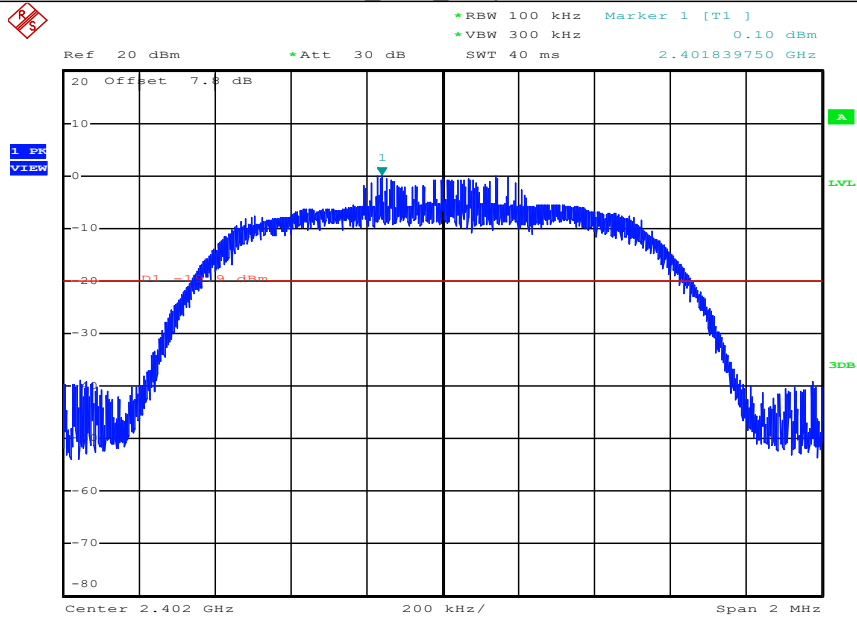
Puw



Date: 19.SEP.2019 09:20:36

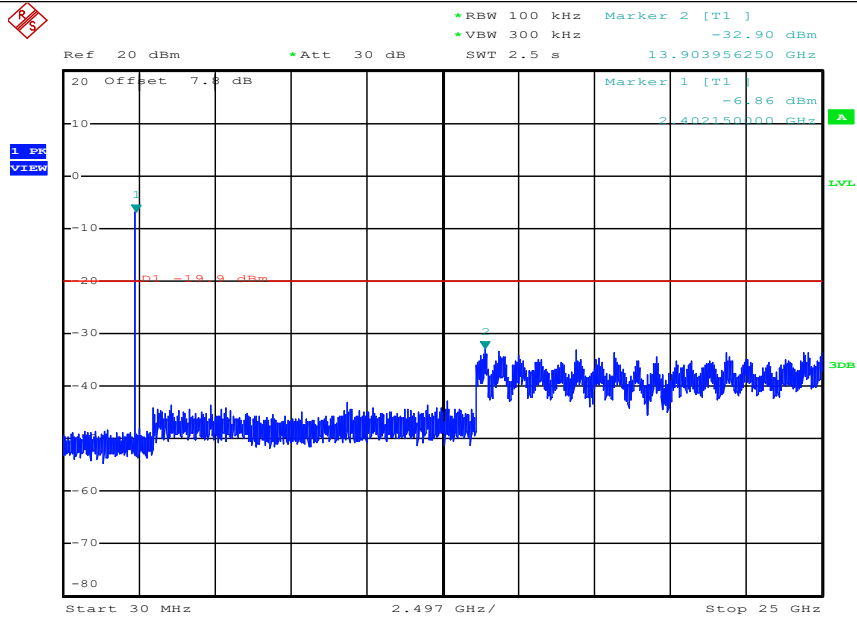
$\pi/4$ DQPSK_LCH_Graphs

Pref



Date: 19.SEP.2019 09:23:04

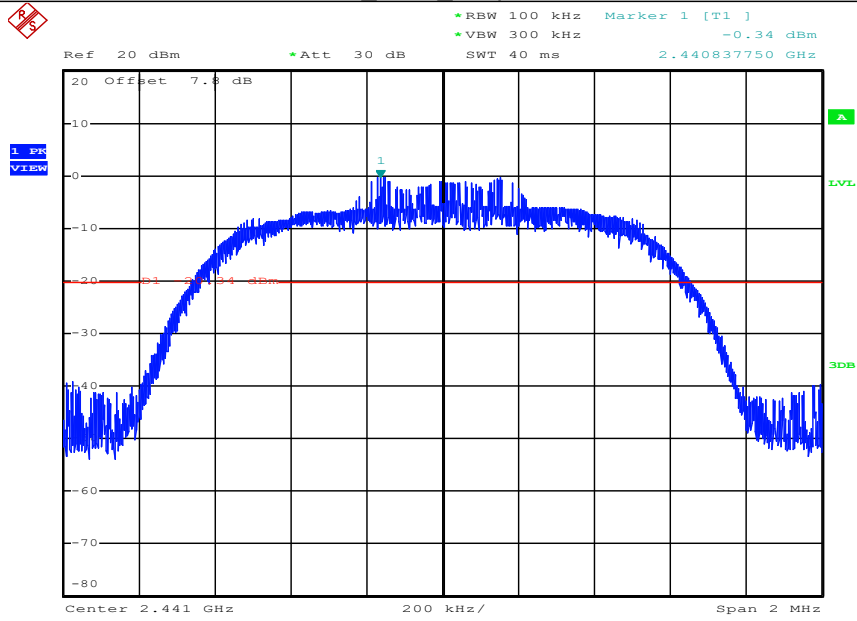
Puw



Date: 19.SEP.2019 09:23:18

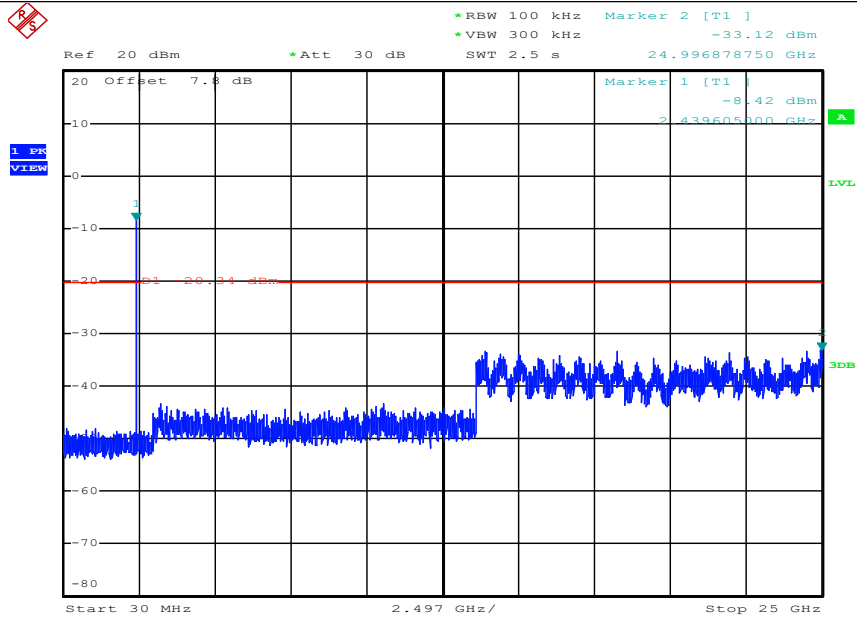
$\pi/4$ DQPSK_MCH_Graphs

Pref



Date: 19.SEP.2019 09:25:16

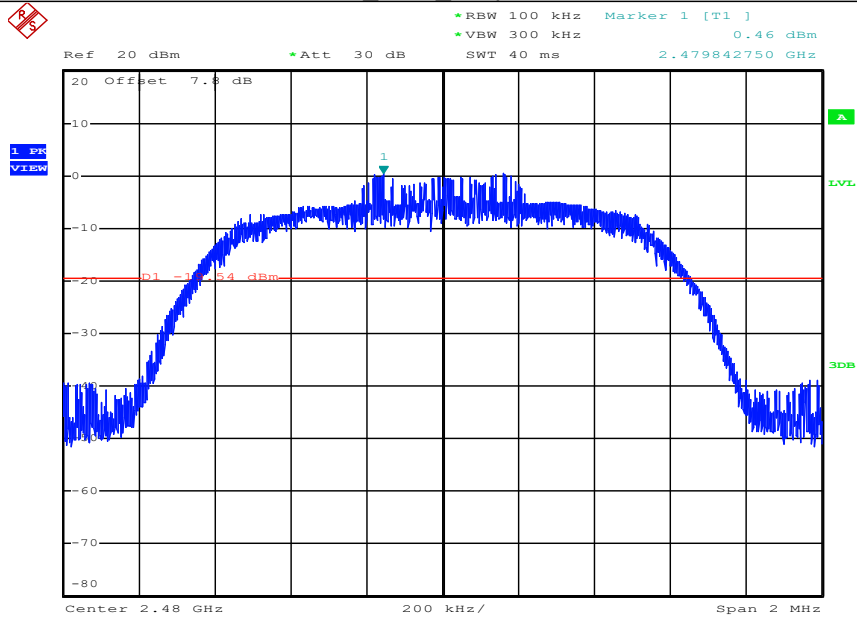
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Date: 19.SEP.2019 09:25:31

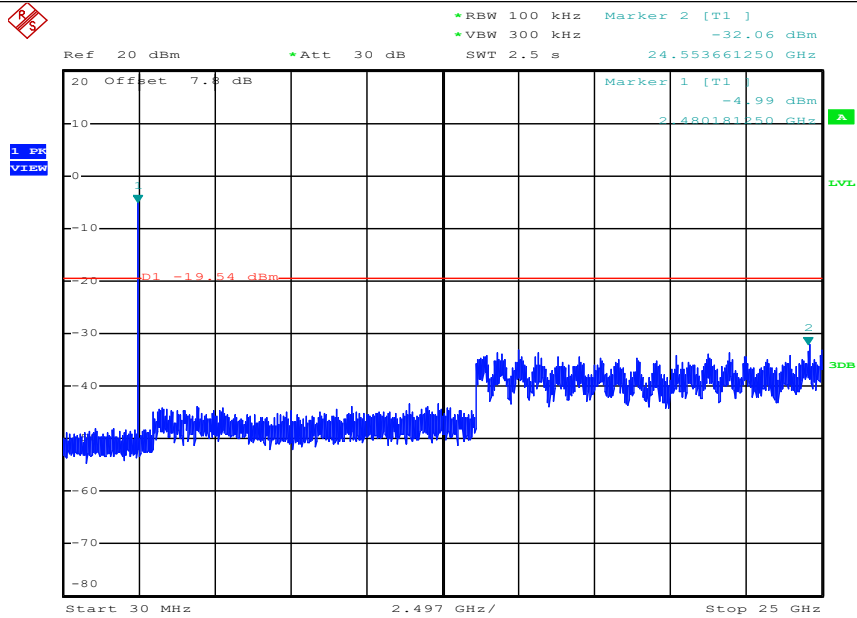
$\pi/4$ DQPSK_HCH_Graphs

Pref



Date: 19.SEP.2019 09:27:14

Puw



Date: 19.SEP.2019 09:27:28

8DPSK_LCH_Graphs

Pref

#imgtx3dh51lchnnpref

Puw

#imgtx3dh51lchnnpuw1

8DPSK_MCH_Graphs

Pref

#imgtx3dh51mchnnpref

Puw

#imgtx3dh51mchnnpuw1

8DPSK_HCH_Graphs

Pref

#imgtx3dh51hchnnpref

Puw

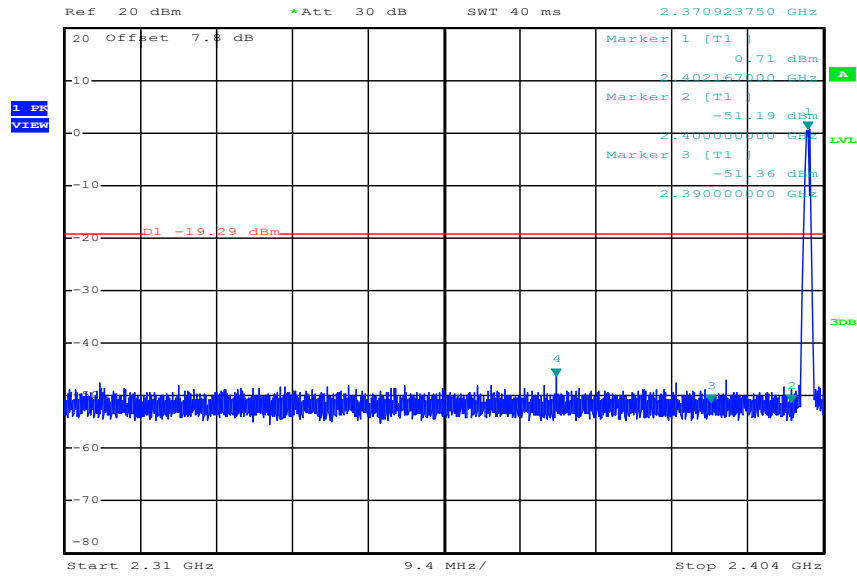
#imgtx3dh51hchnnpuw1

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	0.710	Off	-46.367	-19.29	PASS
			0.300	On	-46.648	-19.7	PASS
	HCH	2480	0.240	Off	-47.407	-19.76	PASS
			0.130	On	-47.248	-19.87	PASS
$\pi/4$ DQPSK	LCH	2402	-0.630	Off	-47.525	-20.63	PASS
			-0.670	On	-46.605	-20.67	PASS
	HCH	2480	0.150	Off	-47.163	-19.85	PASS
			-0.460	On	-46.768	-20.46	PASS
8DPSK	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			N/A	N/A	N/A	N/A	N/A
	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			N/A	N/A	N/A	N/A	N/A

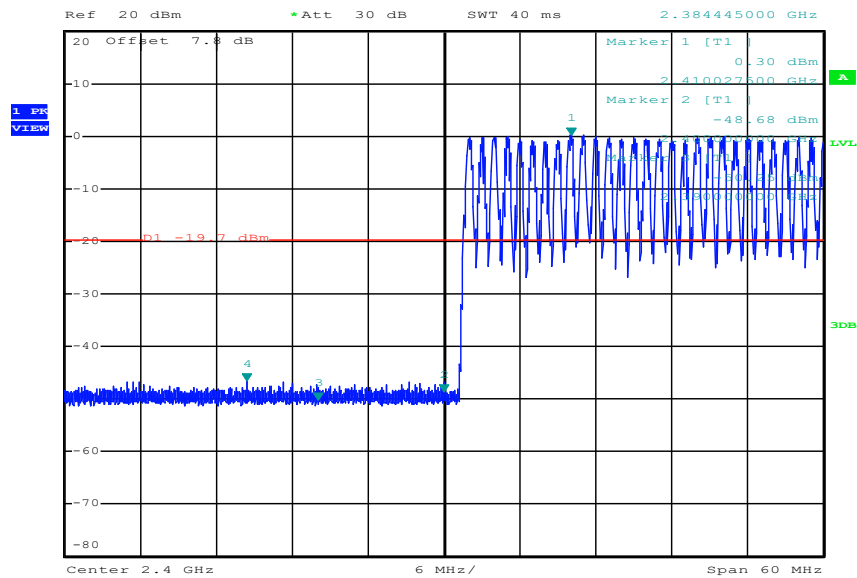
Test Graphs

GFSK/LCH/No Hop



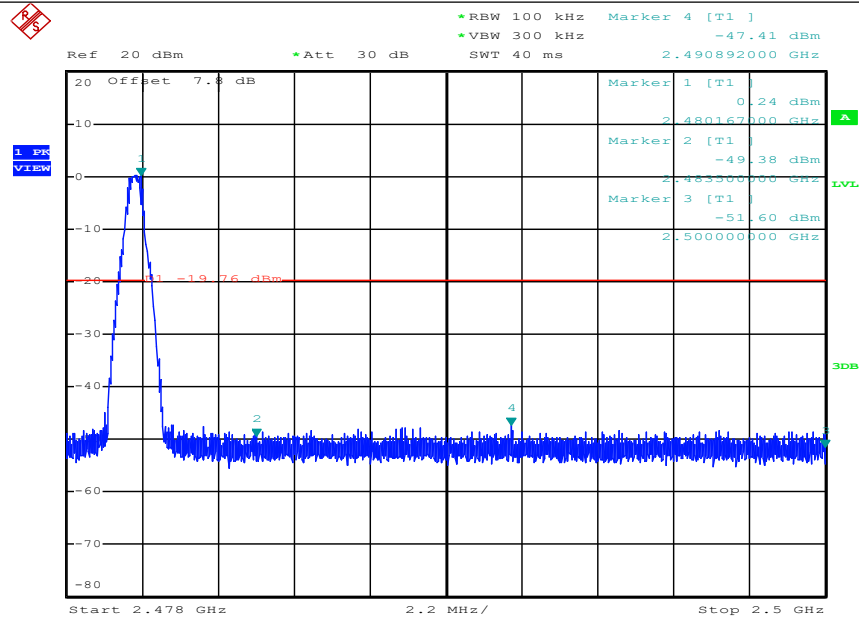
Date: 19.SEP.2019 09:15:06

GFSK/LCH/Hop



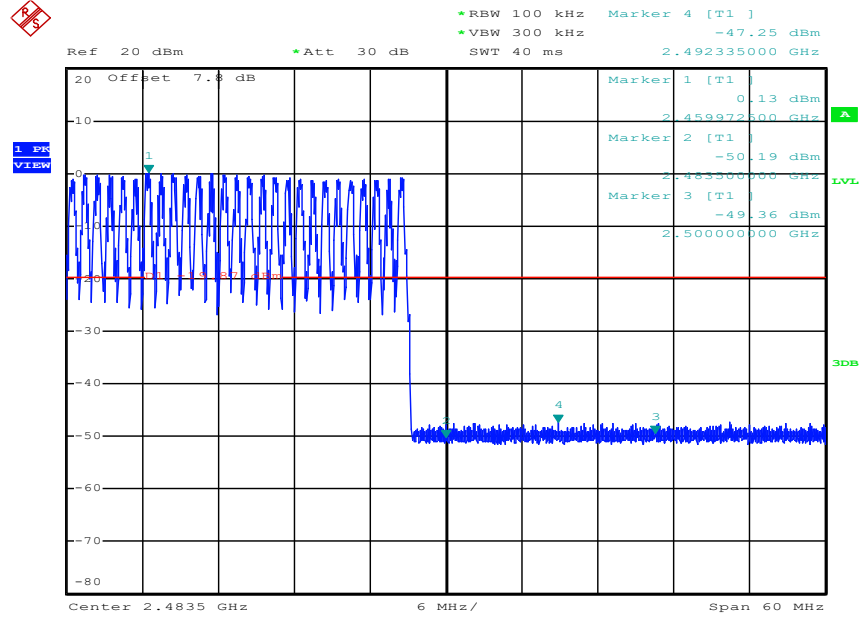
Date: 19.SEP.2019 09:58:34

GFSK/HCH/No Hop



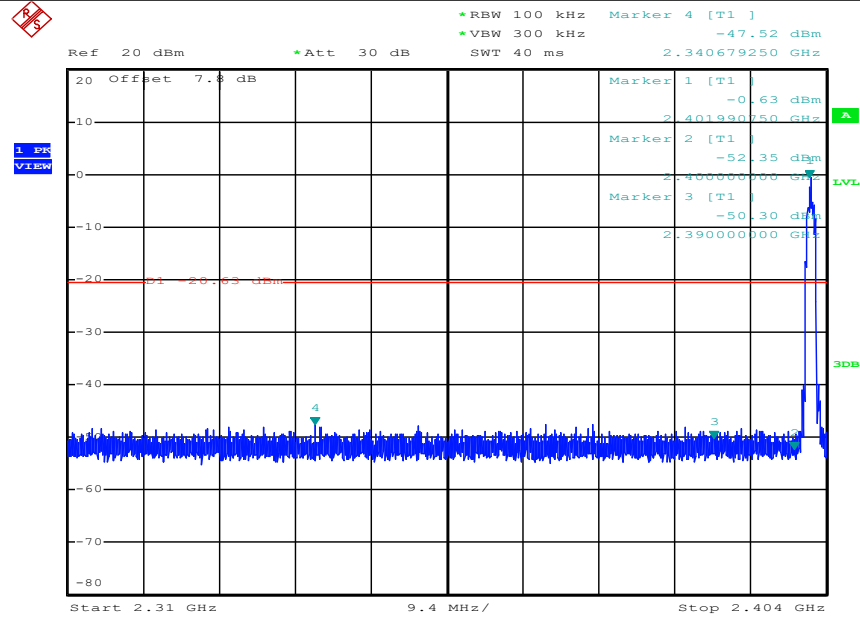
Date: 19.SEP.2019 09:20:09

GFSK/HCH/Hop



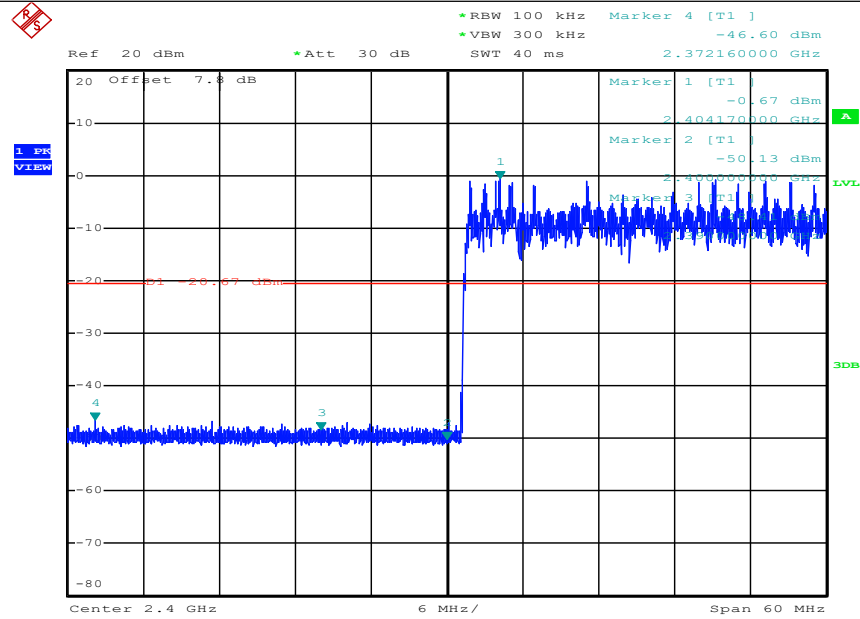
Date: 19.SEP.2019 10:02:20

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



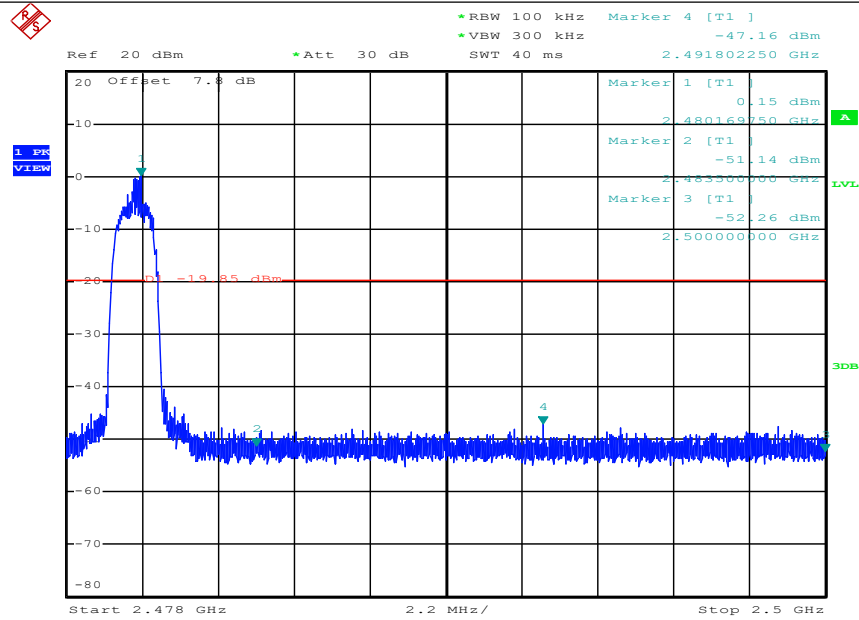
Date: 19.SEP.2019 09:22:51

$\pi/4$ DQPSK/LCH/Hop



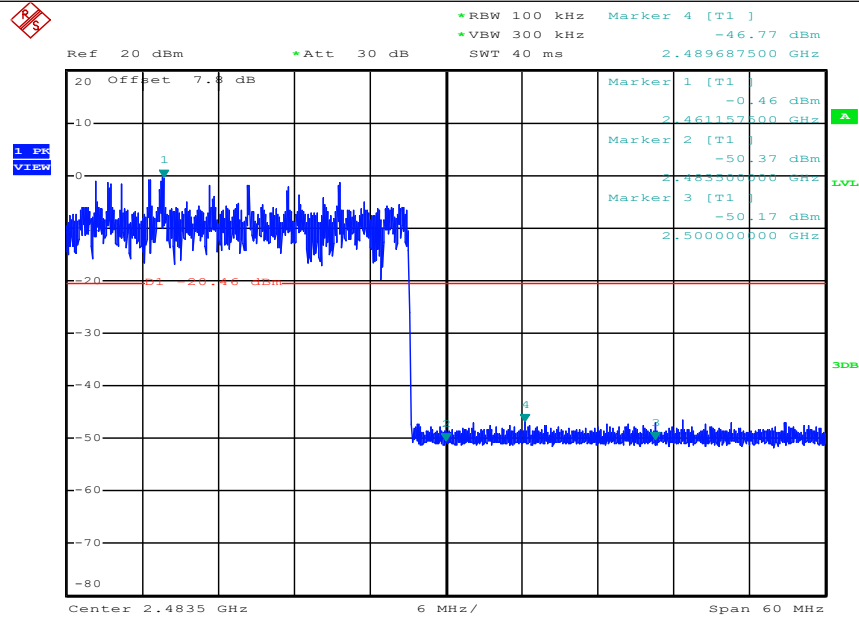
Date: 19.SEP.2019 10:06:57

π /4DQPSK/HCH/No Hop



Date: 19.SEP.2019 09:27:01

π /4DQPSK/HCH/Hop



Date: 19.SEP.2019 10:10:08

8DPSK/LCH/No Hop

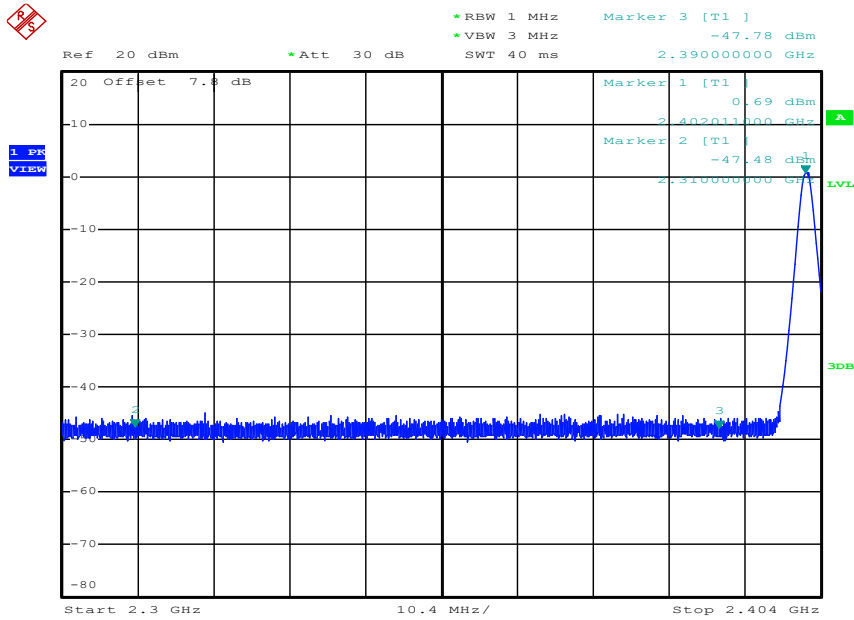
#imgbe3dh51lchnn

8DPSK/LCH/Hop	#imgbe3dh51lchonnn
8DPSK/HCH/No Hop	#imgbe3dh51hchnn
8DPSK/HCH/Hop	#imgbe3dh51hchonnn

A.8 Restrict-band band-edge measurements

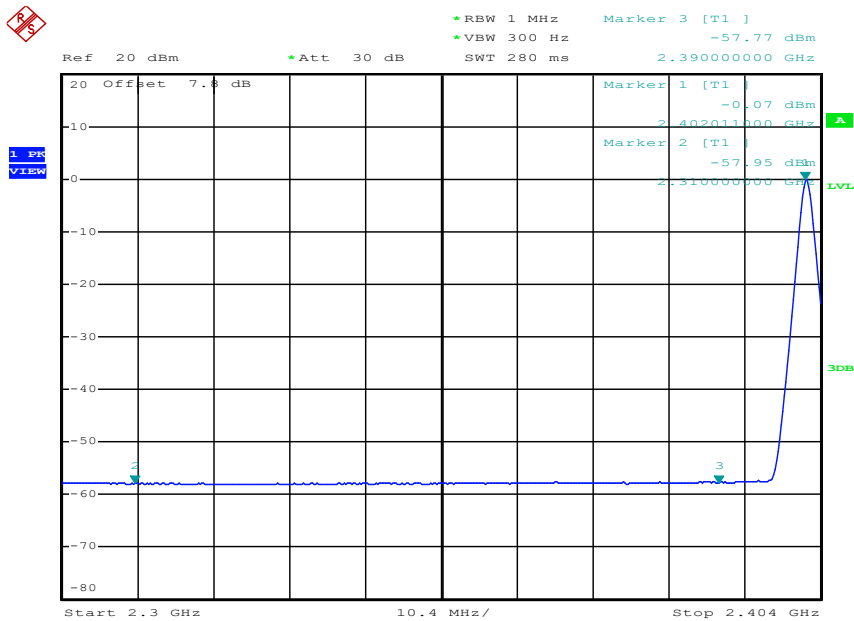
Test Mode	Hopping	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detector	Limit [dBuV/m]	Verdict
GFSK	Off	2310.0	-47.48	2.0	0	49.78	PEAK	74	PASS
	Off	2310.0	-57.95	2.0	0	39.31	AV	54	PASS
	Off	2390.0	-47.78	2.0	0	49.48	PEAK	74	PASS
	Off	2390.0	-57.77	2.0	0	39.49	AV	54	PASS
	Off	2483.5	-40.02	2.0	0	57.24	PEAK	74	PASS
	Off	2483.5	-43.58	2.0	0	53.68	AV	54	PASS
	Off	2500.0	-48.19	2.0	0	49.07	PEAK	74	PASS
	Off	2500.0	-58.34	2.0	0	38.92	AV	54	PASS
$\pi/4$ DQPSK	Off	2310.0	-49.17	2.0	0	48.09	PEAK	74	PASS
	Off	2310.0	-58.02	2.0	0	39.24	AV	54	PASS
	Off	2390.0	-47.60	2.0	0	49.66	PEAK	74	PASS
	Off	2390.0	-57.82	2.0	0	39.44	AV	54	PASS
	Off	2483.5	-39.19	2.0	0	58.07	PEAK	74	PASS
	Off	2483.5	-45.05	2.0	0	52.21	AV	54	PASS
	Off	2500.0	-48.88	2.0	0	48.38	PEAK	74	PASS
	Off	2500.0	-58.37	2.0	0	38.89	AV	54	PASS
8DPSK	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

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



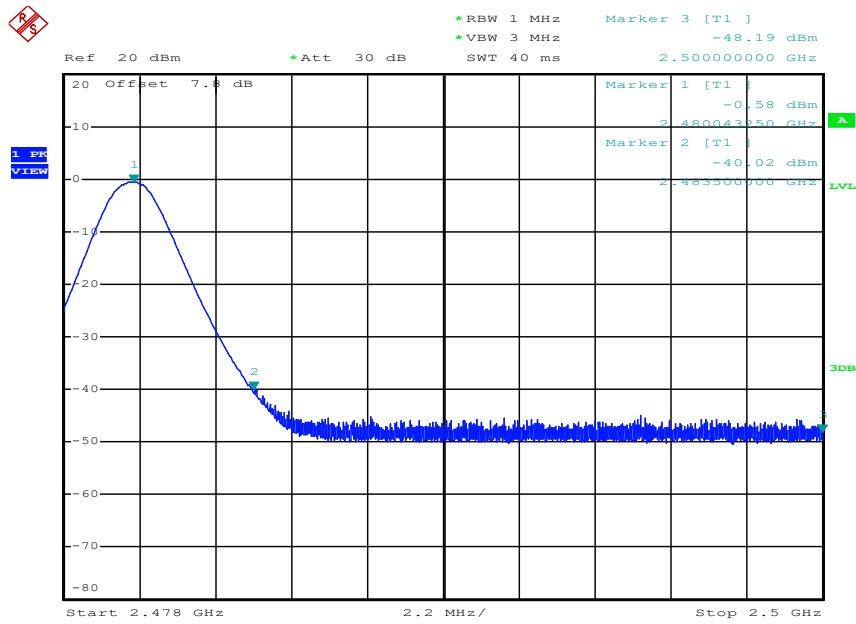
Date: 19.SEP.2019 09:15:53

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



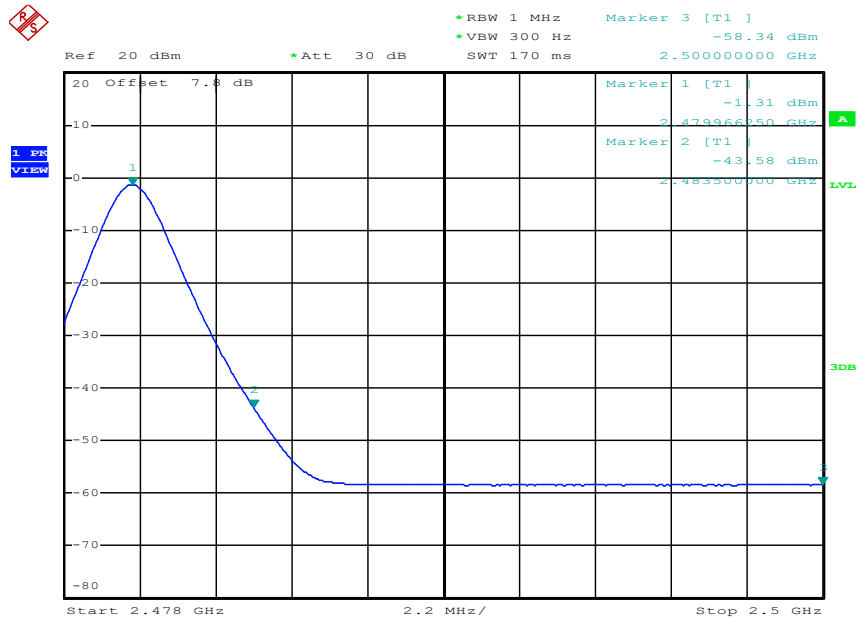
Date: 19.SEP.2019 09:16:06

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



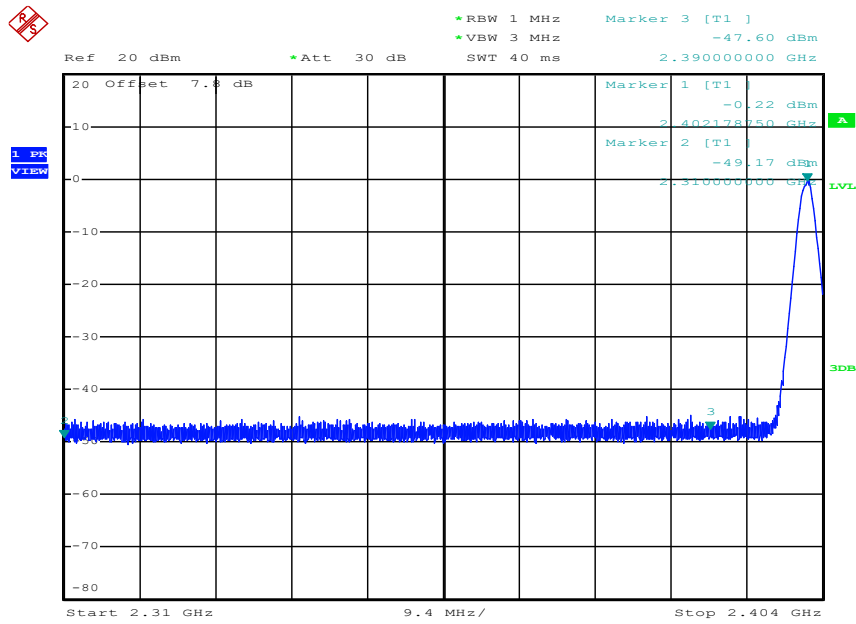
Date: 19.SEP.2019 09:50:20

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



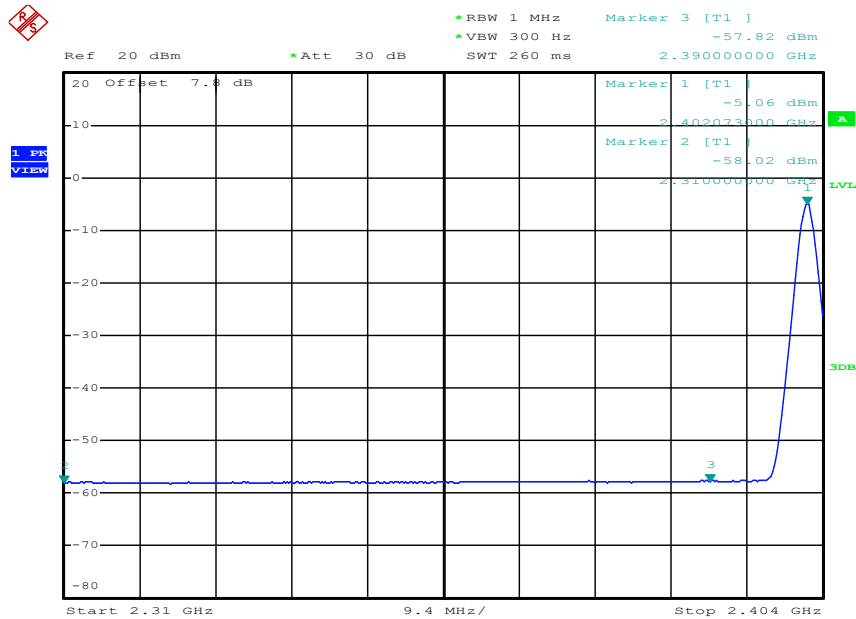
Date: 19.SEP.2019 09:50:34

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



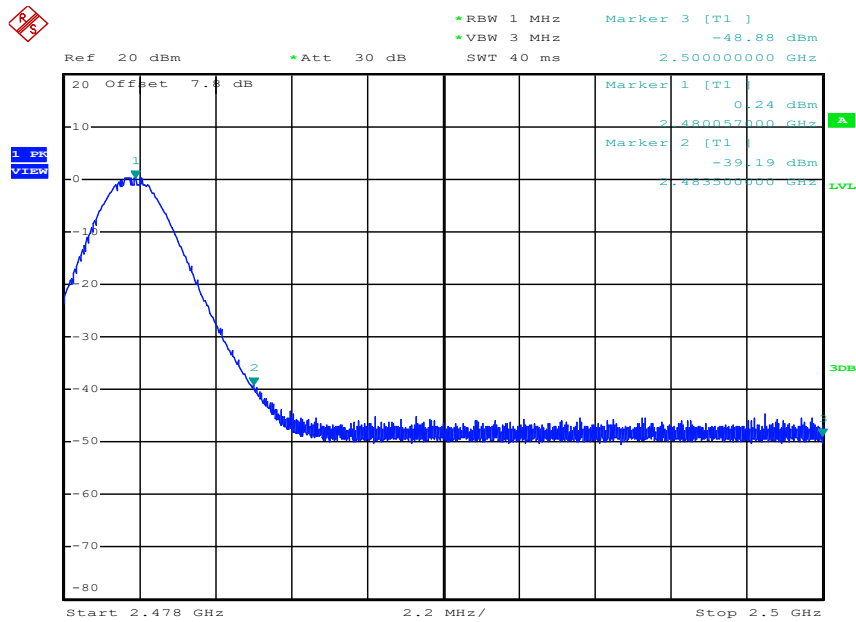
Date: 19.SEP.2019 09:23:37

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



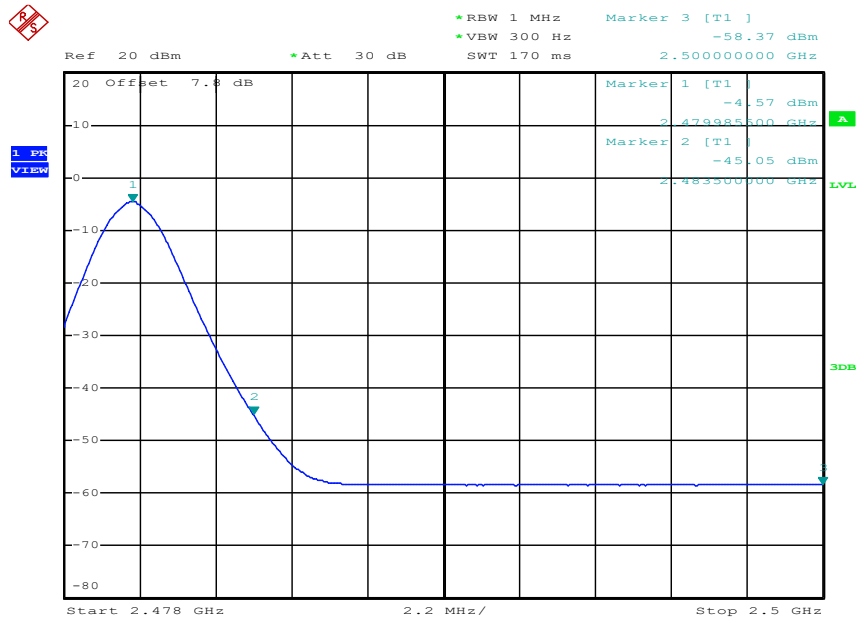
Date: 19.SEP.2019 09:23:51

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



Date: 19.SEP.2019 09:27:47

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



Date: 19.SEP.2019 09:28:01

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

#imgrb3dh51lchnnpeak

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

#imgrb3dh51lchnnav

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

#imgrb3dh51hchnpeak

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

#imgrb3dh51hchnnav