

Appendix A

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

Product Name: 29 INCH STEREO SOUND BAR

SYSTEM with Digital Optical Input and Bluetooth Wireless Technology

Trade Mark: CRAIG

Test Model: CHT985

Environmental Conditions

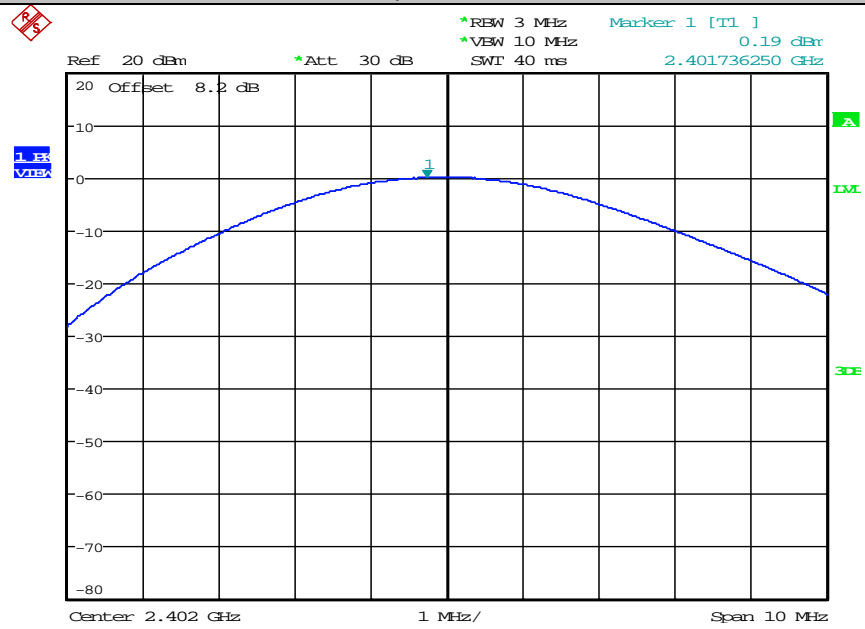
Temperature:	24.5° C
Relative Humidity:	53.6%
ATM Pressure:	100.0 kPa
Test Engineer:	SCENT HU
Supervised by:	Wang.Chuang

A.1 Maxmum Conducted Peak Output Power

Mode	Channel.	Maximum Peak Output Power [dBm]	Limit [dBm]	Verdict
GFSK	LCH	0.190	21	PASS
	MCH	0.860	21	PASS
	HCH	-0.390	21	PASS
$\pi/4$ DQPSK	LCH	-0.480	21	PASS
	MCH	0.010	21	PASS
	HCH	-1.210	21	PASS
8DPSK	LCH	-0.600	21	PASS
	MCH	0.100	21	PASS
	HCH	-1.150	21	PASS

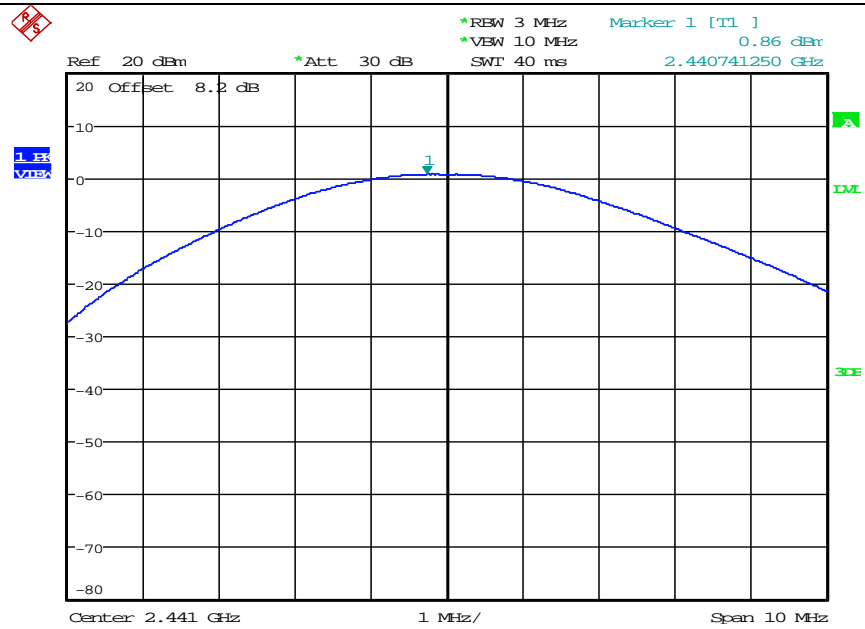
Test Graphs

GFSK/LCH



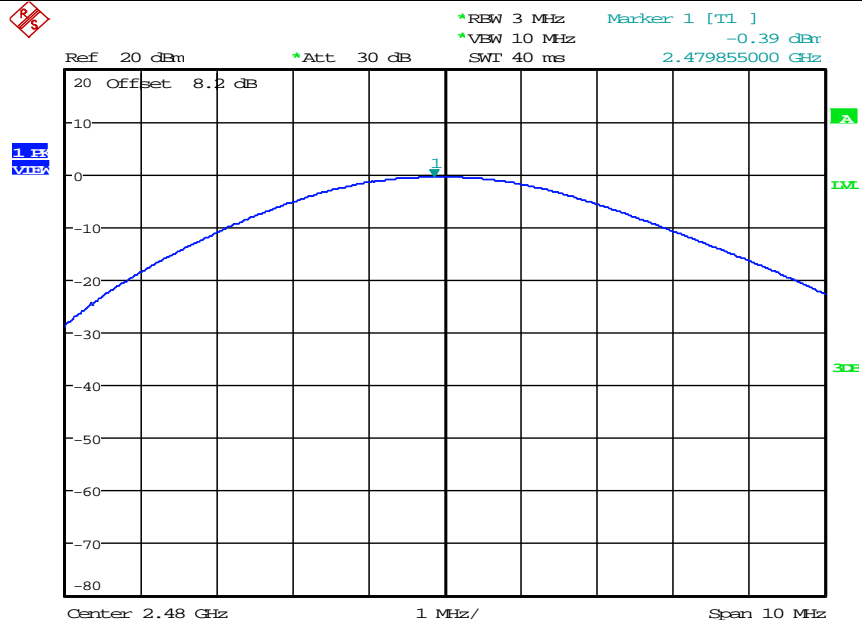
Date: 31.JUL.2019 21:45:54

GFSK/MCH



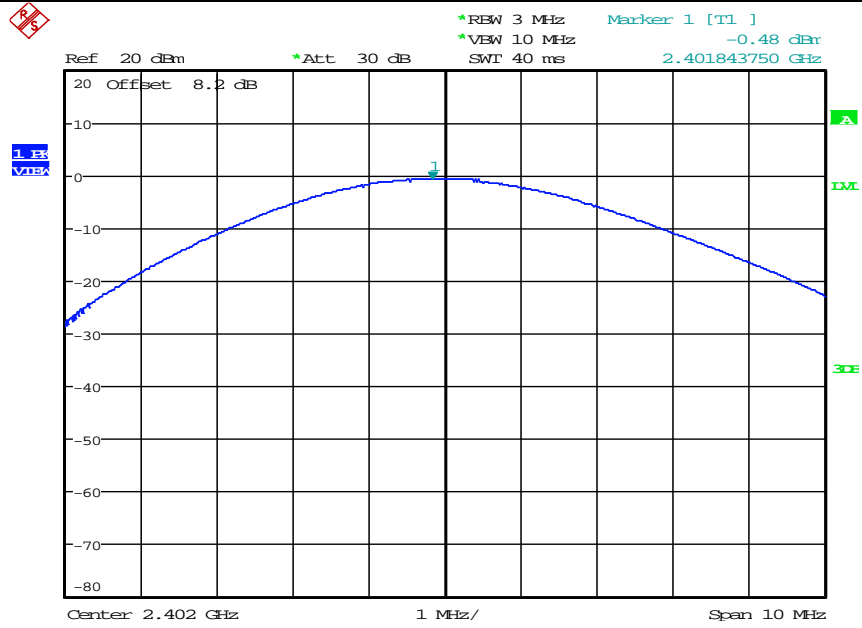
Date: 31.JUL.2019 21:49:29

GFSK/HCH



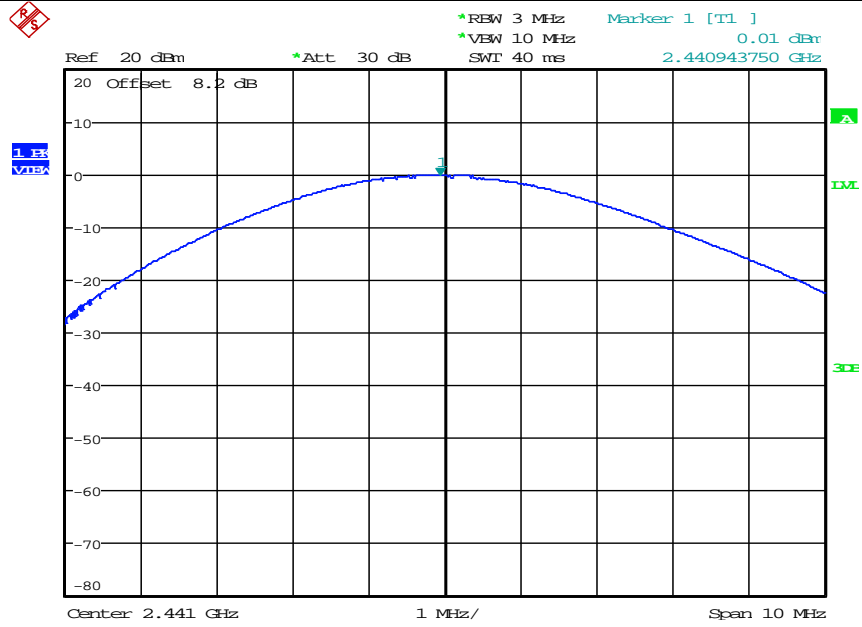
Date: 31.JUL.2019 21:51:11

$\pi/4$ DQPSK/LCH



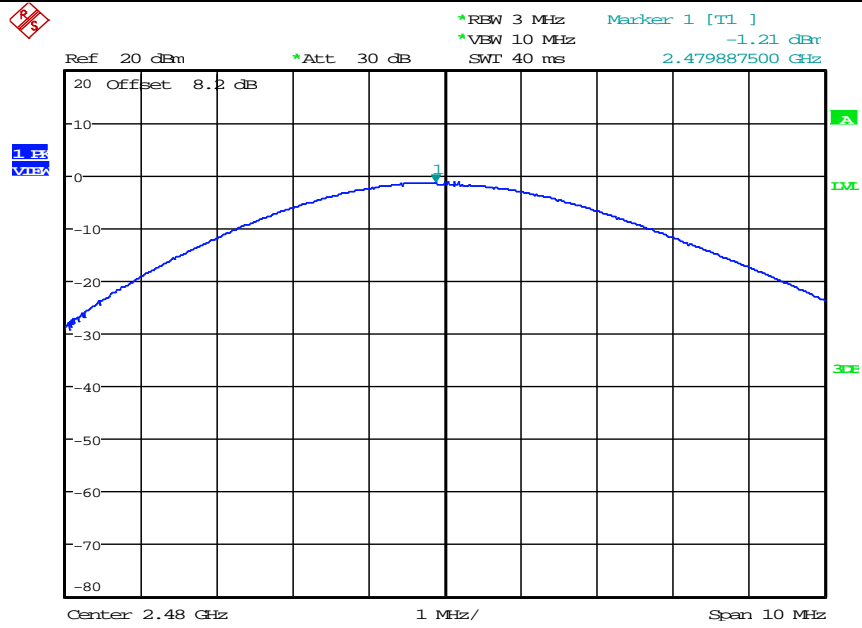
Date: 1.AUG.2019 12:42:43

π /4DQPSK/MCH



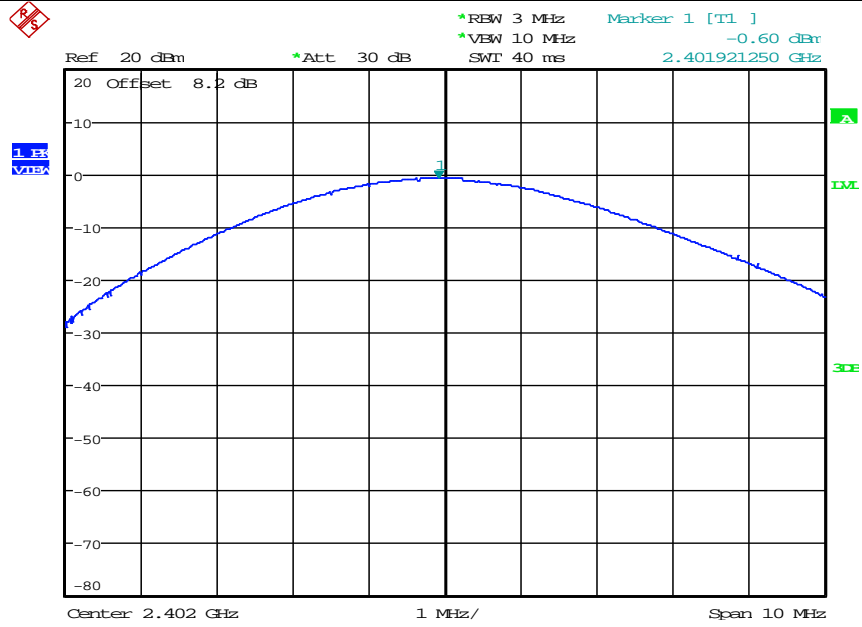
Date: 31.JUL.2019 21:56:21

π /4DQPSK/HCH



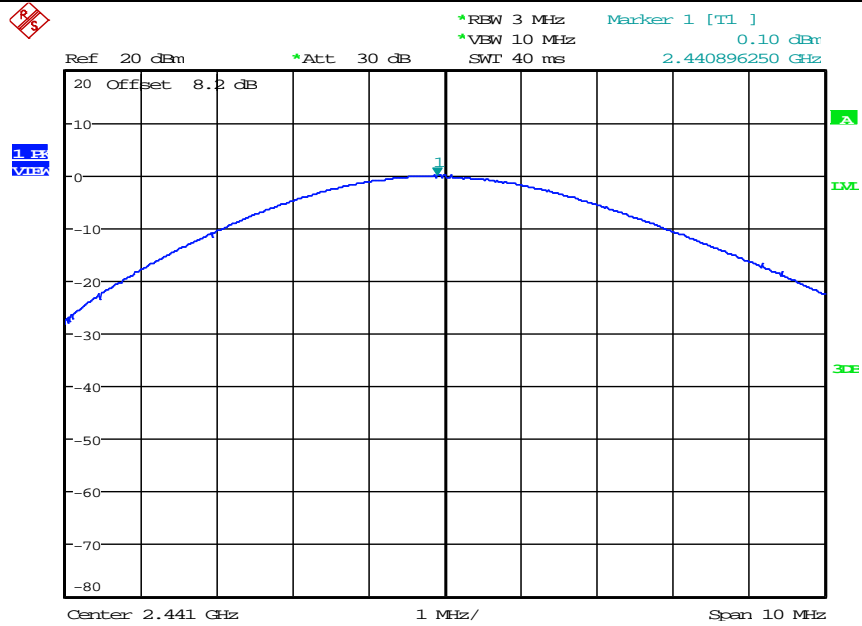
Date: 31.JUL.2019 21:58:19

8DPSK/LCH



Date: 31.JUL.2019 22:00:53

8DPSK/MCH

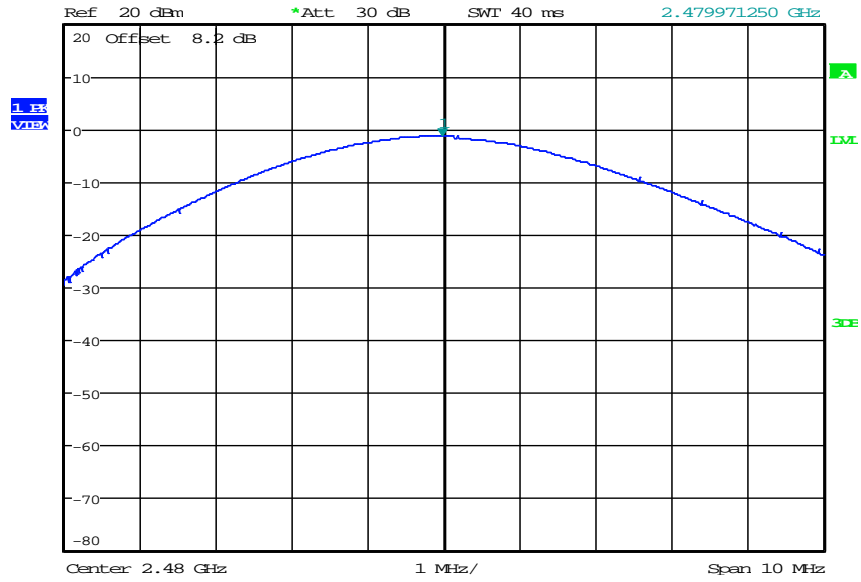


Date: 31.JUL.2019 22:03:22

8DPSK/HCH



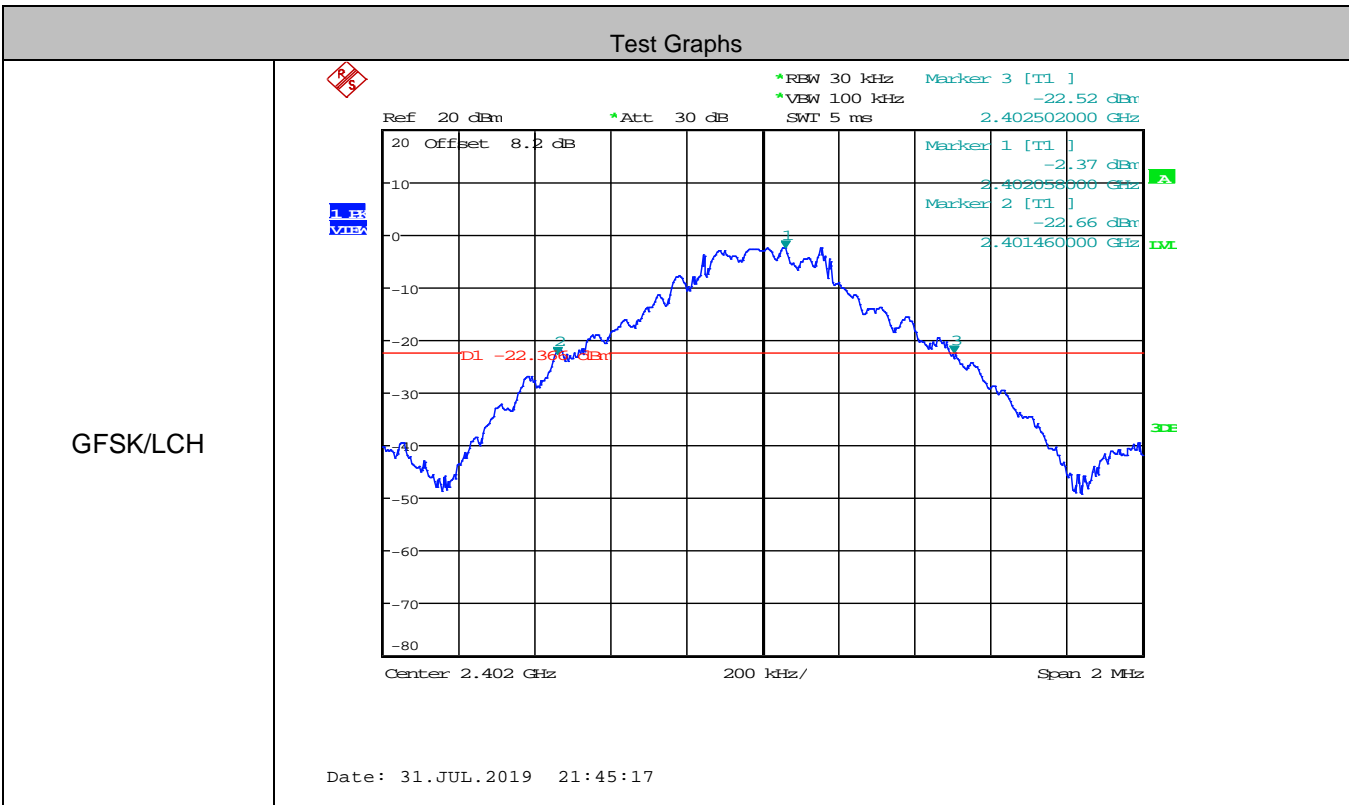
*RES 3 MHz Marker 1 [T1]
*VIEW 10 MHz -1.15 dBm
SWI 40 ms 2.479971250 GHz



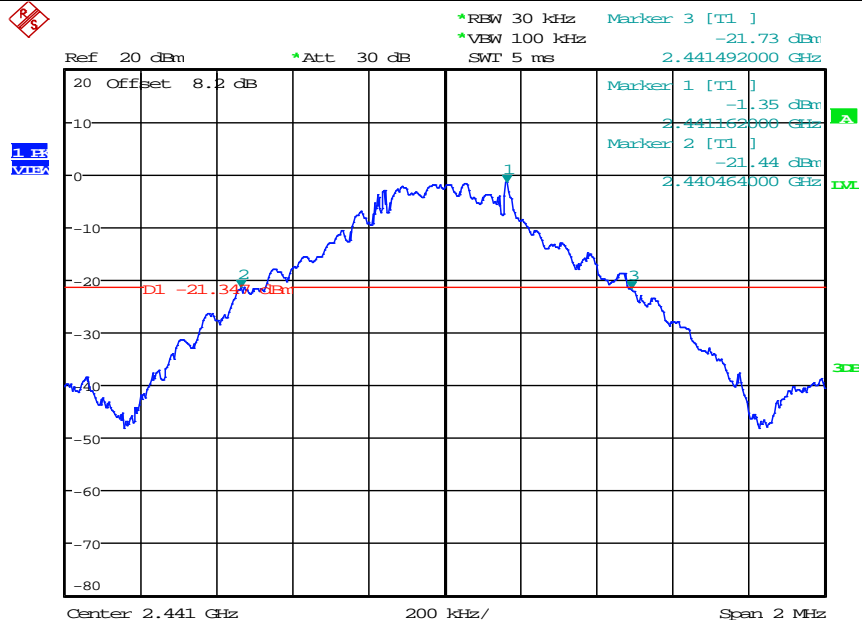
Date: 31.JUL.2019 22:05:05

A.2 20dB Bandwidth

Mode	Channel.	20dB Bandwidth [MHz]	Limit [MHz]	Verdict
GFSK	LCH	1.042	Not Specified	PASS
	MCH	1.028	Not Specified	PASS
	HCH	1.032	Not Specified	PASS
$\pi/4$ DQPSK	LCH	1.286	Not Specified	PASS
	MCH	1.284	Not Specified	PASS
	HCH	1.288	Not Specified	PASS
8DPSK	LCH	1.308	Not Specified	PASS
	MCH	1.296	Not Specified	PASS
	HCH	1.292	Not Specified	PASS

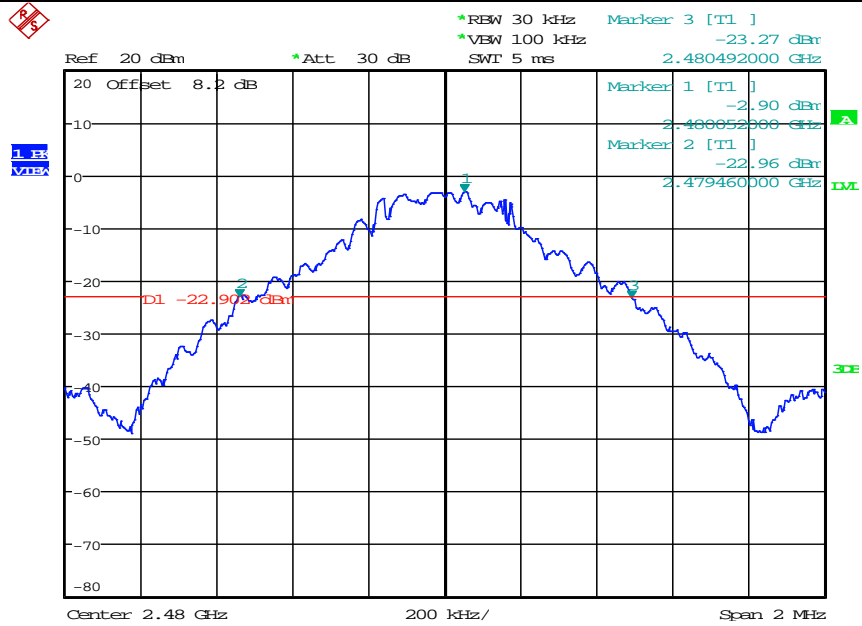


GFSK/MCH



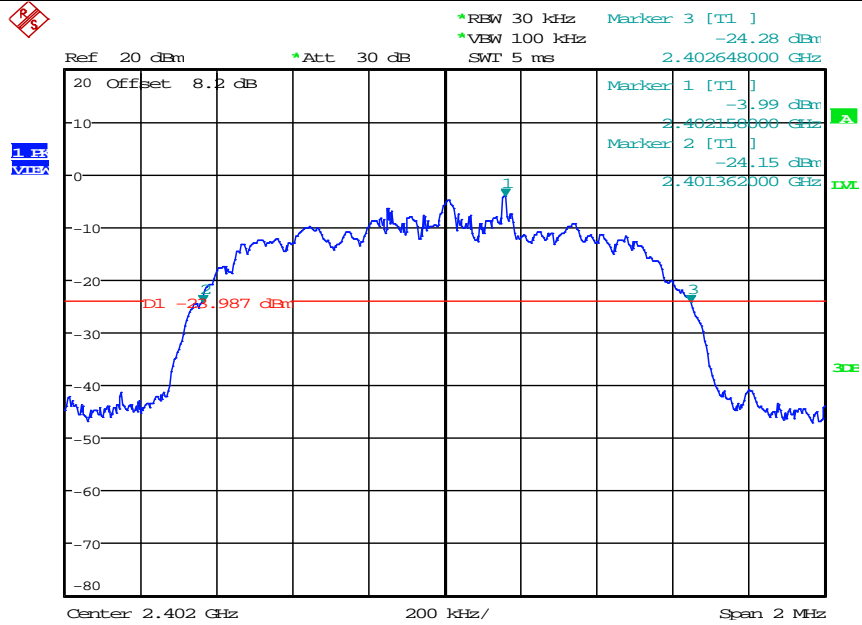
Date: 31.JUL.2019 21:48:52

GFSK/HCH



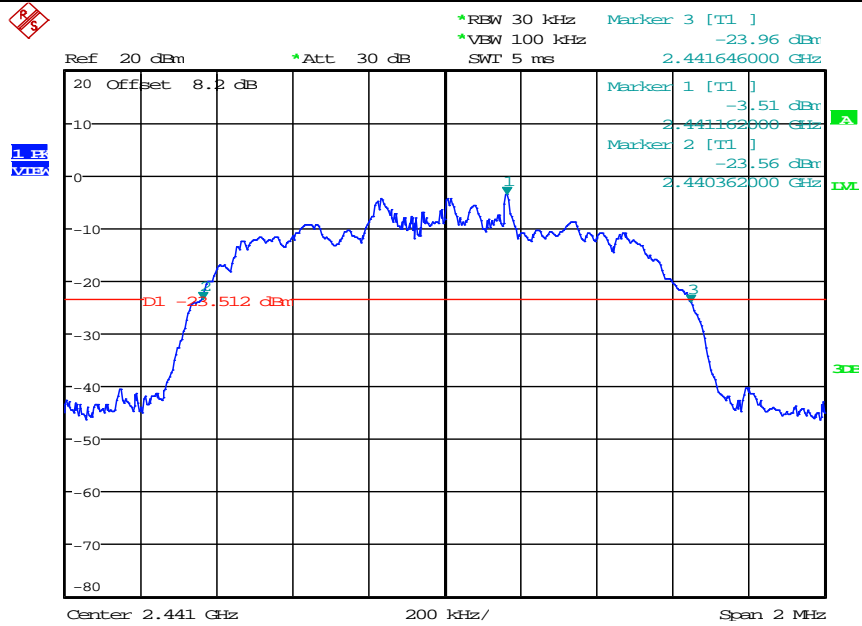
Date: 31.JUL.2019 21:50:34

$\pi/4$ DQPSK/LCH



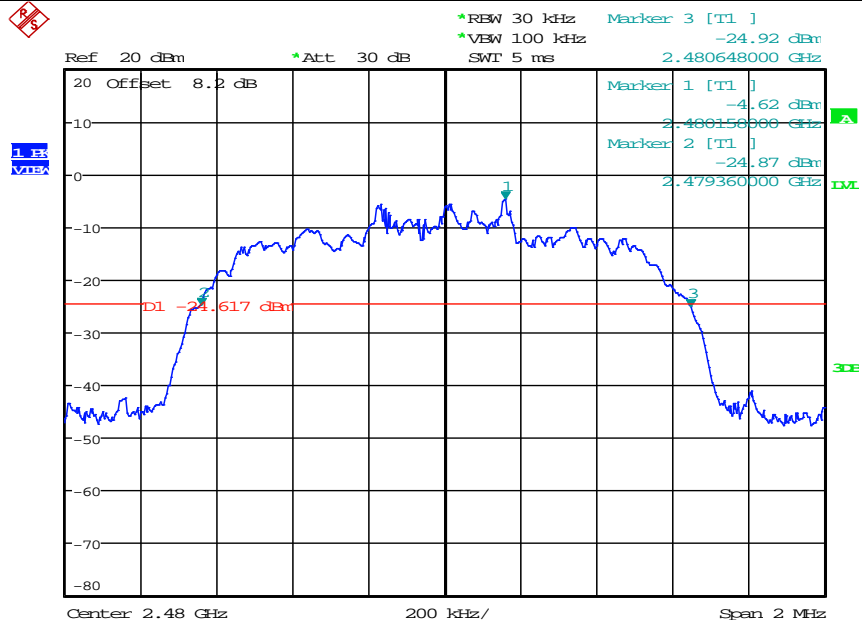
Date: 1.AUG.2019 12:42:06

$\pi/4$ DQPSK/MCH



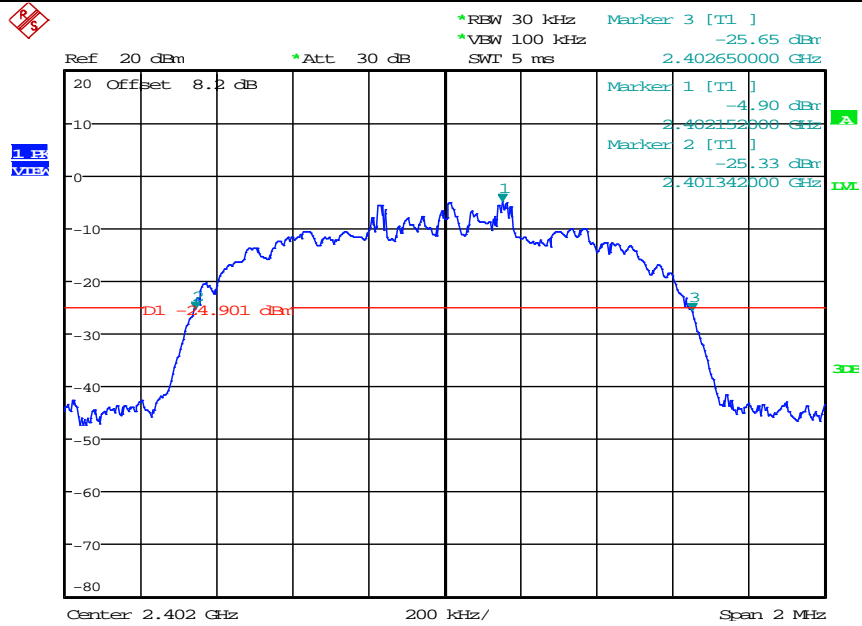
Date: 31.JUL.2019 21:55:45

$\pi/4$ DQPSK/HCH



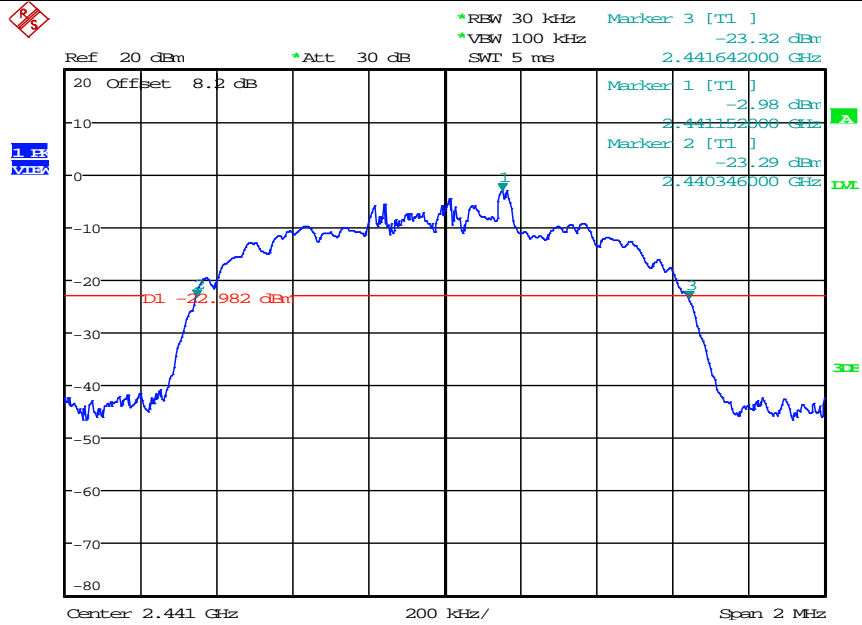
Date: 31.JUL.2019 21:57:42

8DPSK/LCH



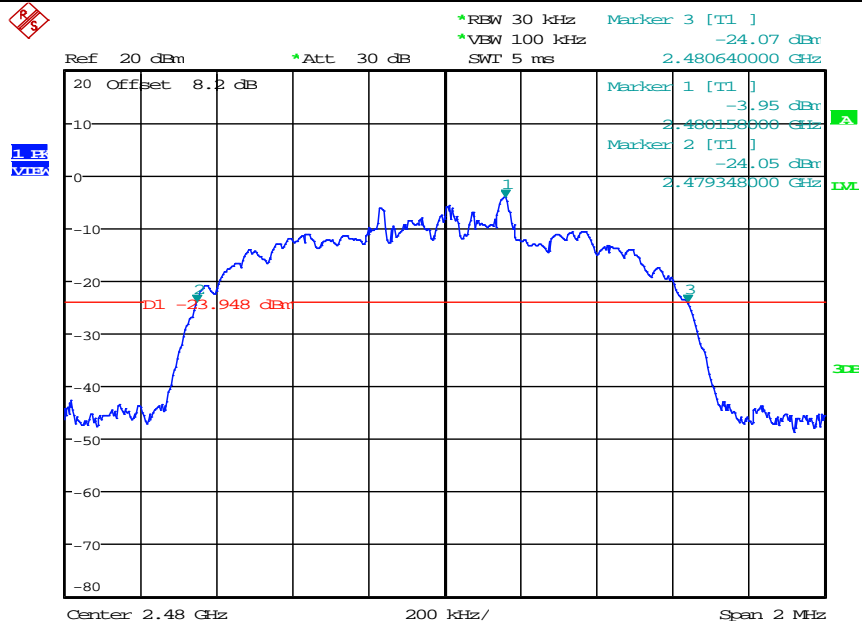
Date: 31.JUL.2019 22:00:16

8DPSK/MCH



Date: 31.JUL.2019 22:02:45

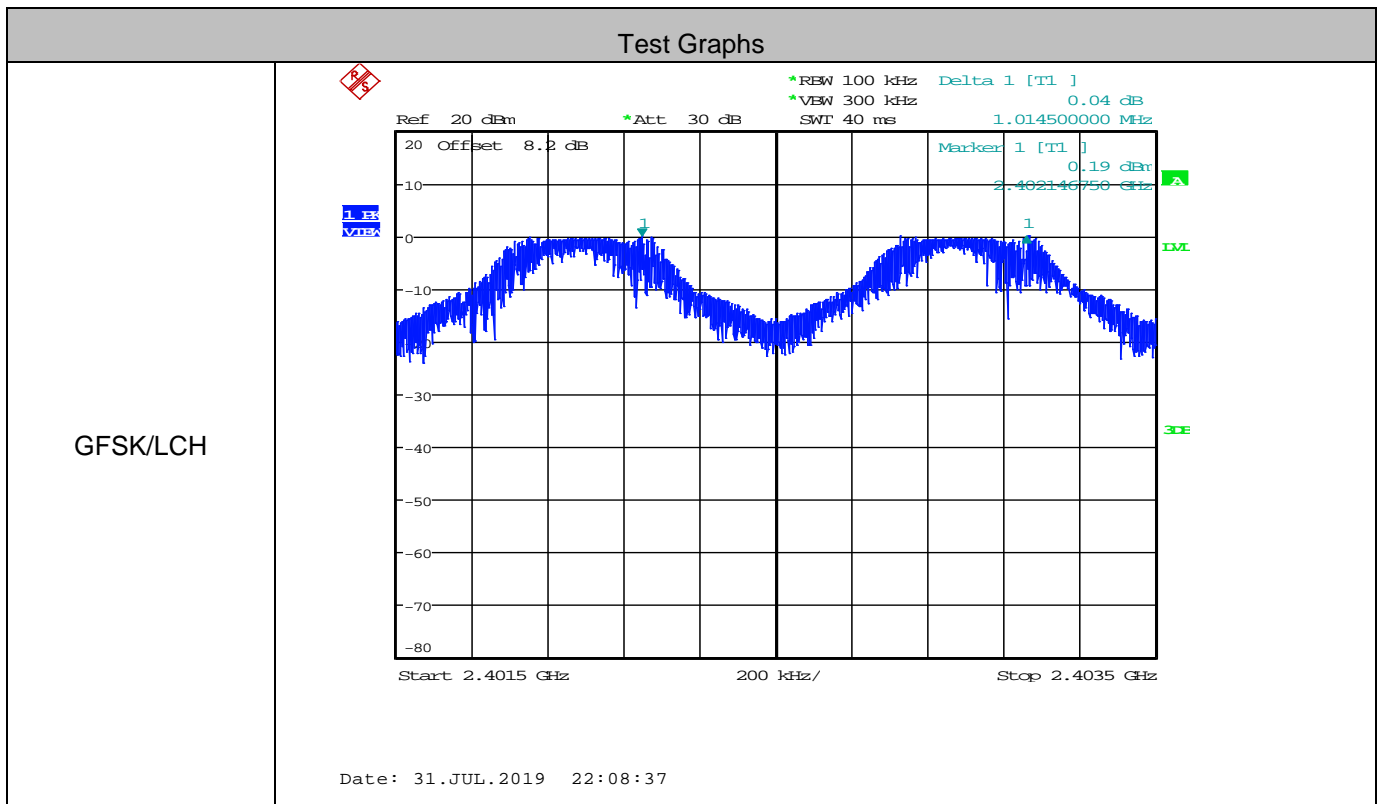
8DPSK/HCH



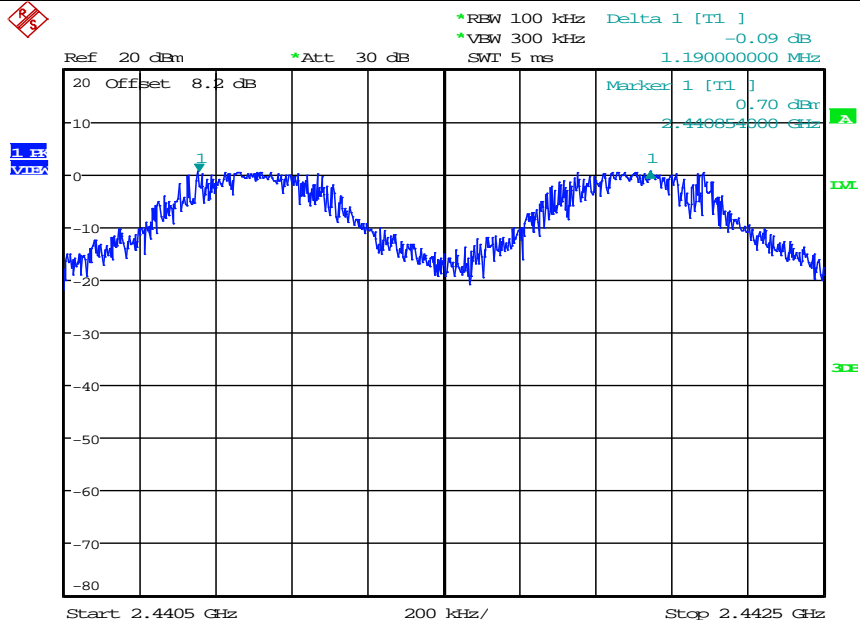
Date: 31.JUL.2019 22:04:28

A.3 Carrier Frequency Separation

Mode	Channel.	Carrier Frequency Separation [MHz]	Limit [MHz]	Verdict
GFSK	LCH	1.015	0.695	PASS
	MCH	1.190	0.695	PASS
	HCH	1.148	0.695	PASS
π/4DQPSK	LCH	0.994	0.876	PASS
	MCH	0.978	0.876	PASS
	HCH	1.164	0.876	PASS
8DPSK	LCH	0.988	0.872	PASS
	MCH	0.904	0.872	PASS
	HCH	1.000	0.872	PASS

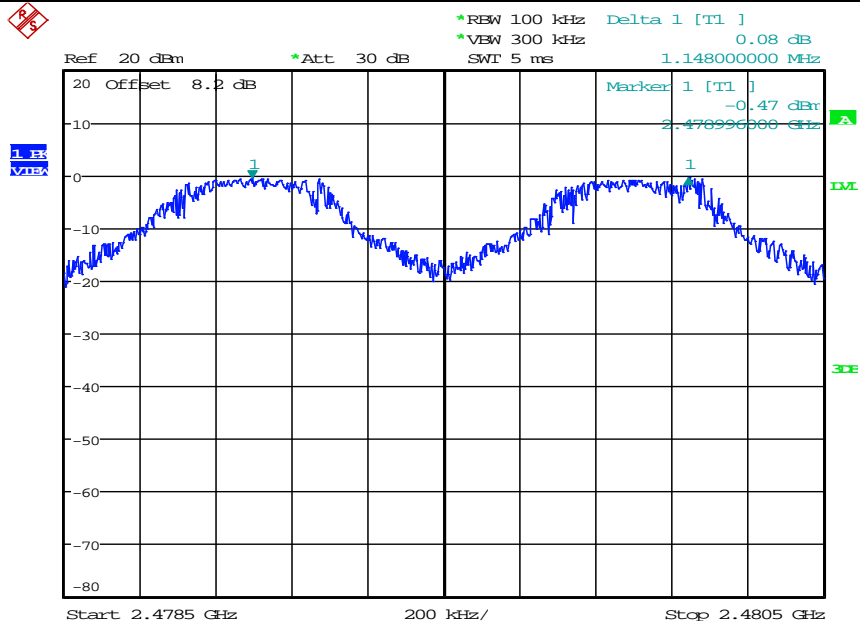


GFSK/MCH



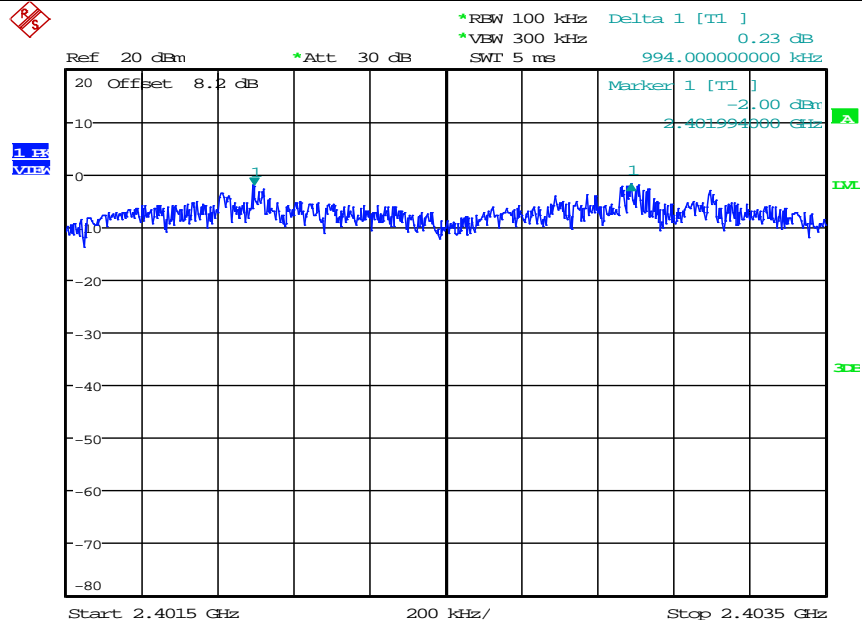
Date: 31.JUL.2019 22:10:44

GFSK/HCH



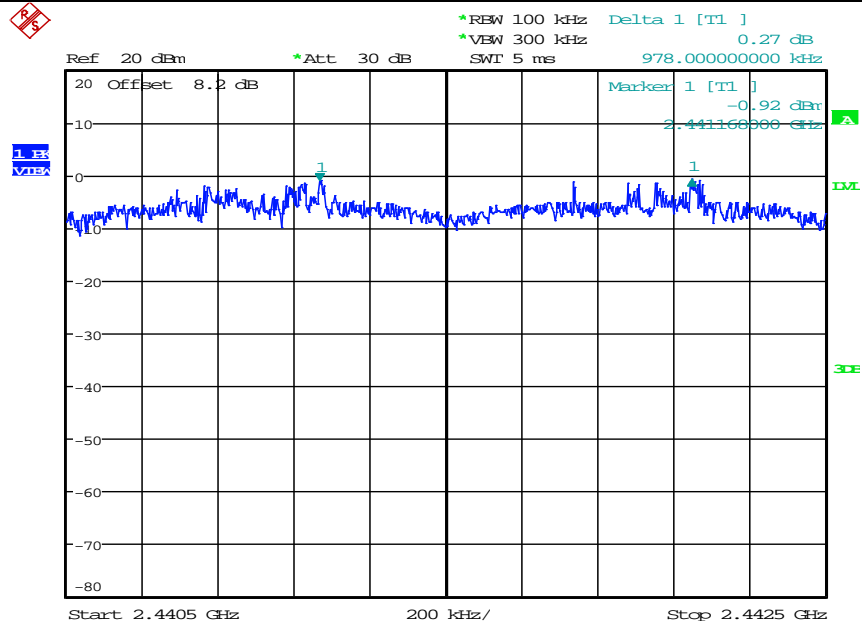
Date: 31.JUL.2019 22:11:19

π /4DQPSK/LCH



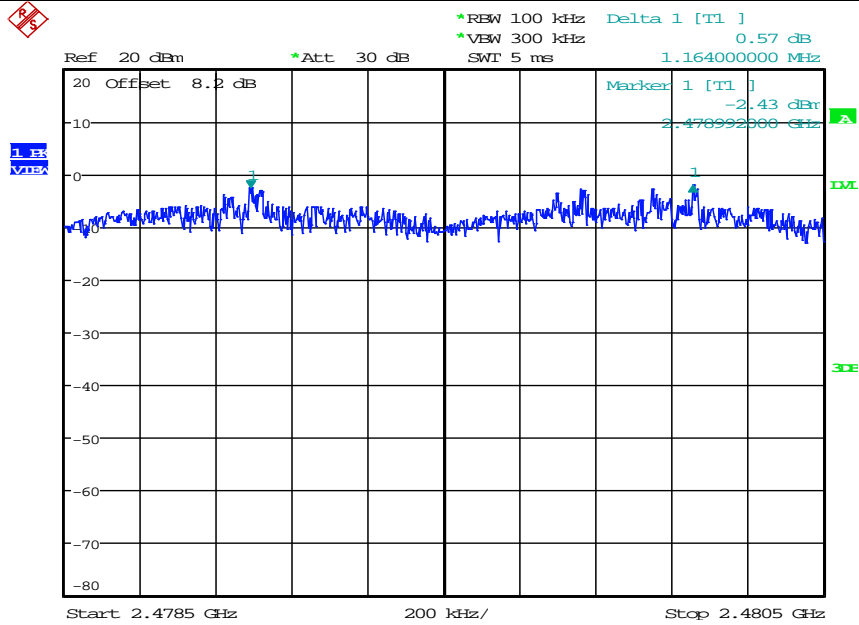
Date: 31.JUL.2019 22:16:32

π /4DQPSK/MCH



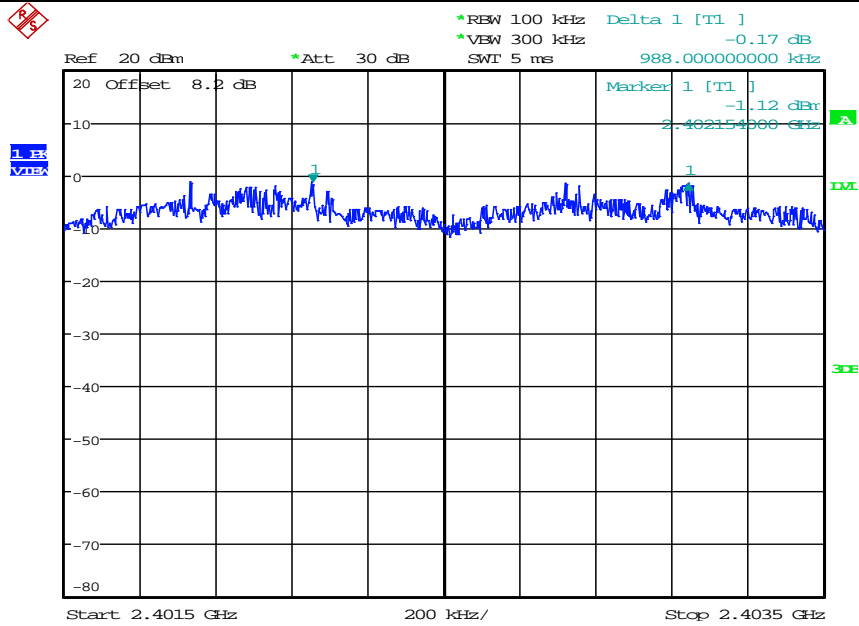
Date: 31.JUL.2019 22:18:52

π /4DQPSK/HCH



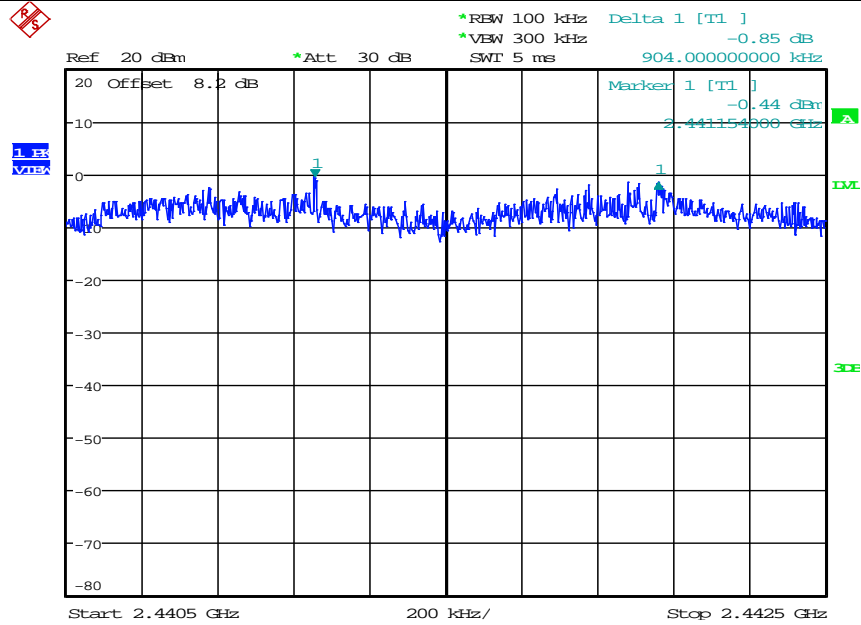
Date: 31.JUL.2019 22:35:20

8DPSK/LCH



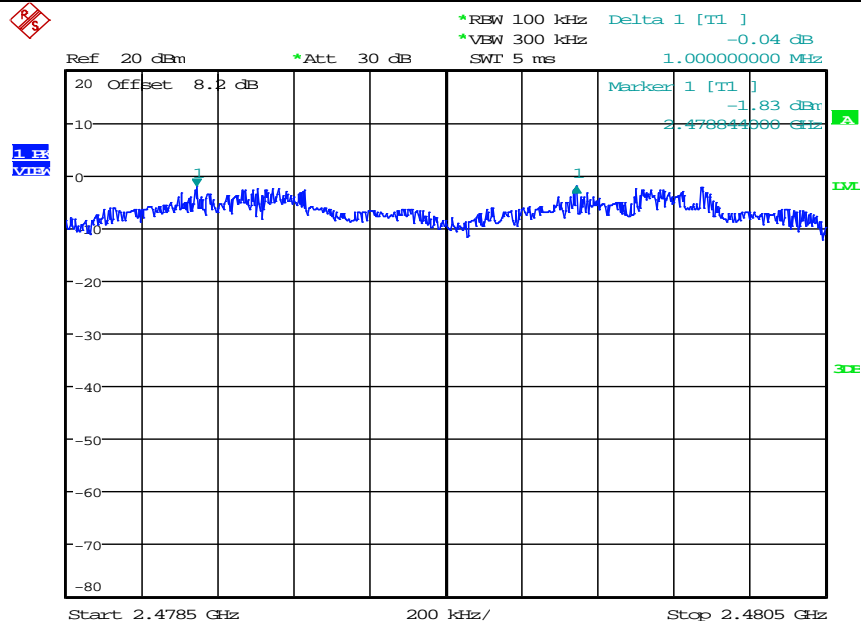
Date: 31.JUL.2019 22:25:41

8DPSK/MCH



Date: 31.JUL.2019 22:28:44

8DPSK/HCH



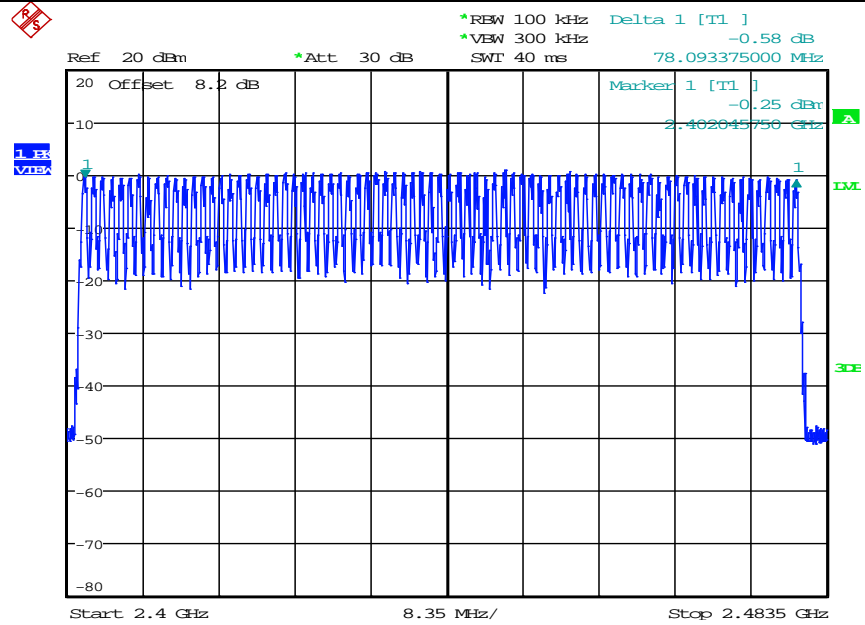
Date: 31.JUL.2019 22:30:13

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

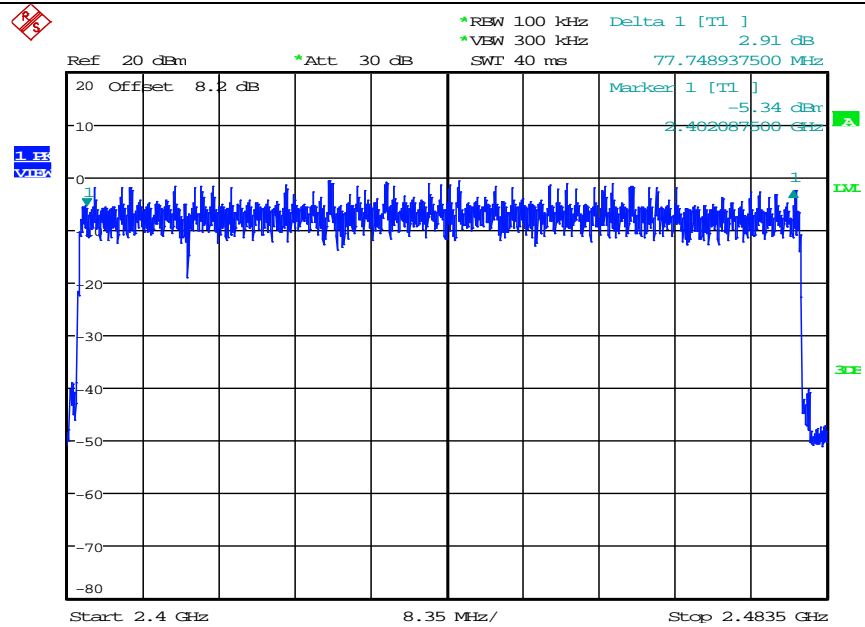
Test Graphs

GFSK/Hop



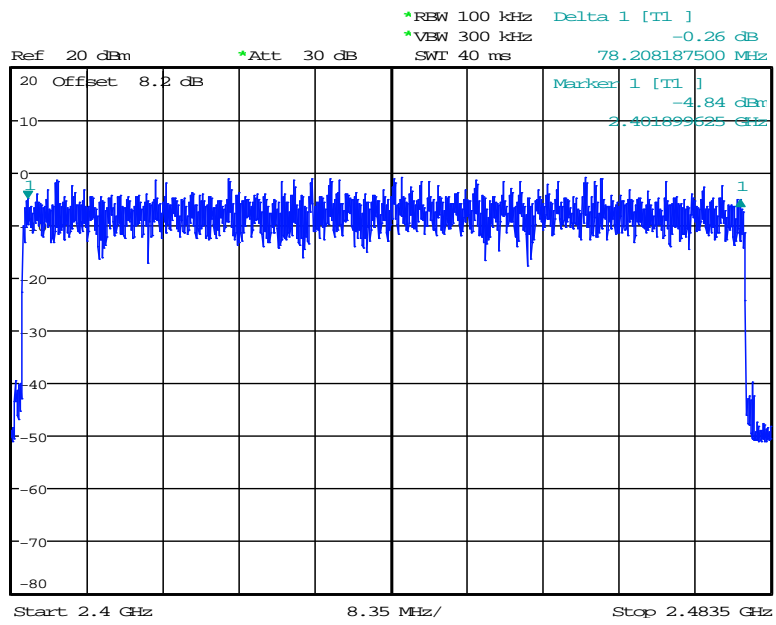
Date: 31.JUL.2019 22:15:25

$\pi/4$ DQPSK/Hop



Date: 31.JUL.2019 22:24:20

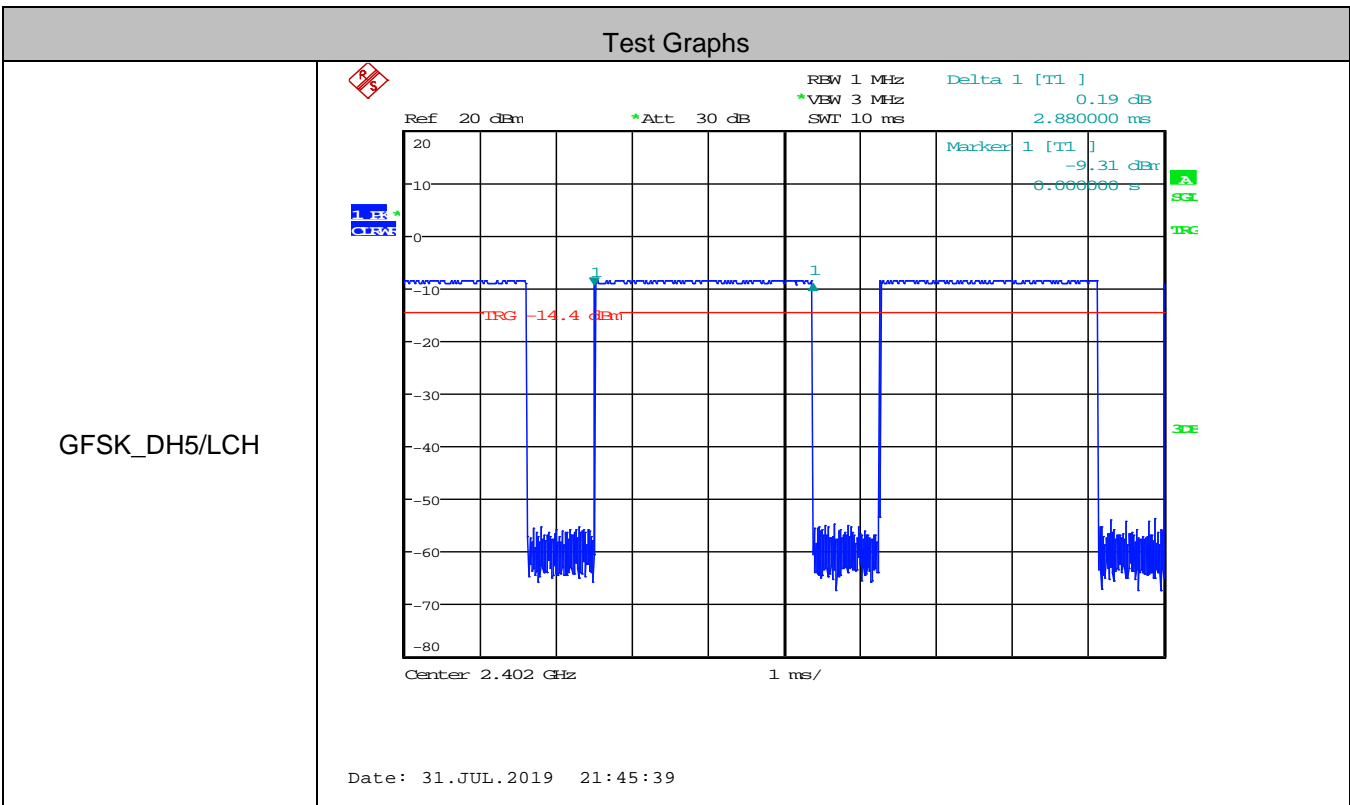
8DPSK/Hop



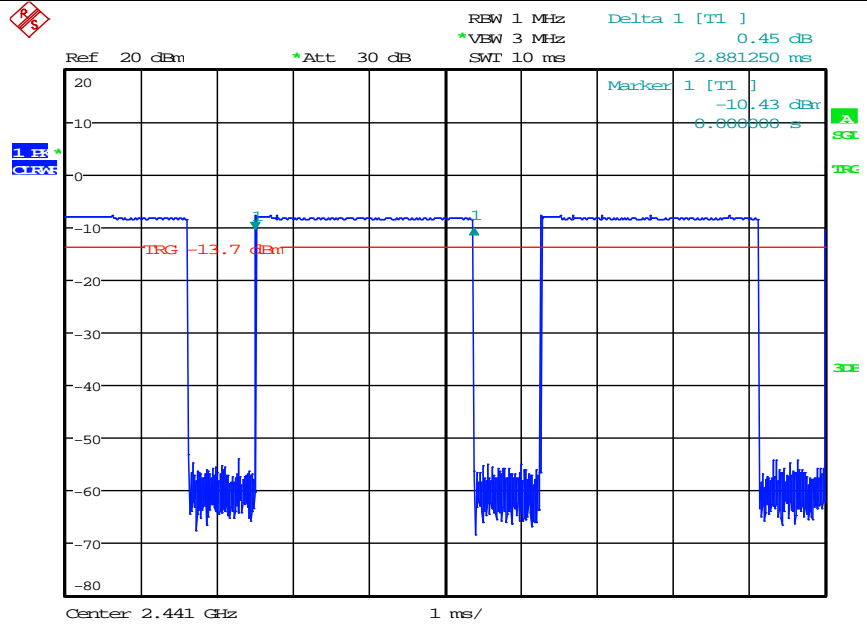
Date: 31.JUL.2019 22:34:13

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

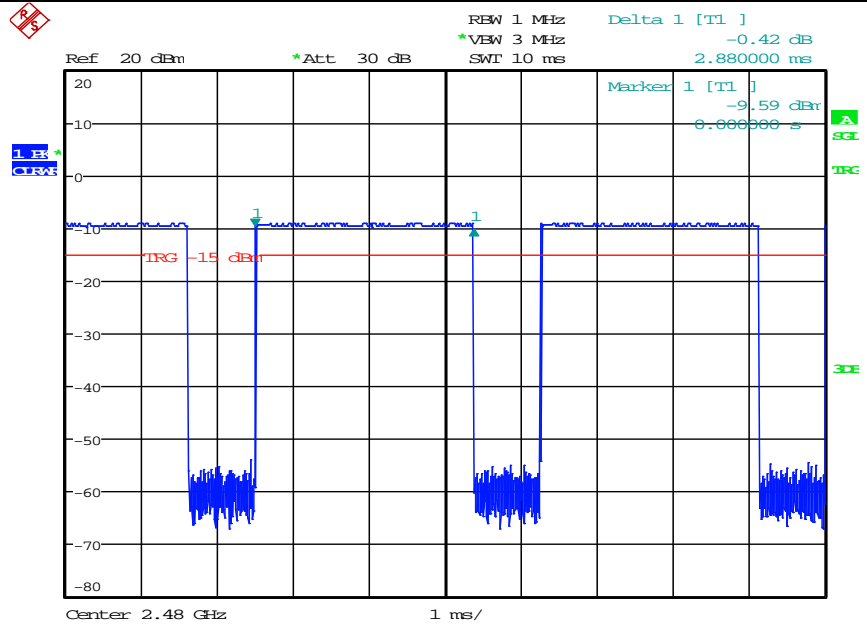


GFSK_DH5/MCH



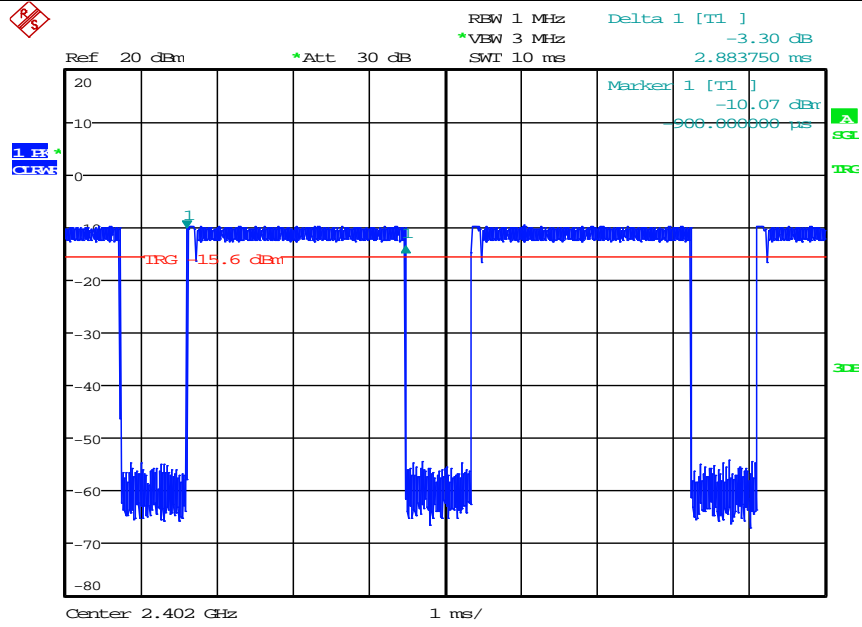
Date: 31.JUL.2019 21:49:14

GFSK_DH5/HCH



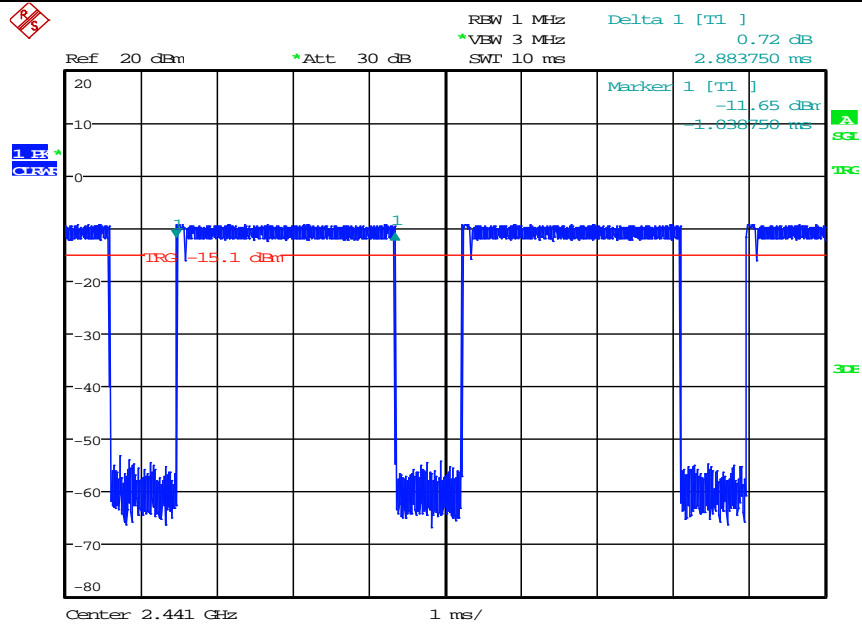
Date: 31.JUL.2019 21:50:56

$\pi/4$ DQPSK
_2DH5/LCH



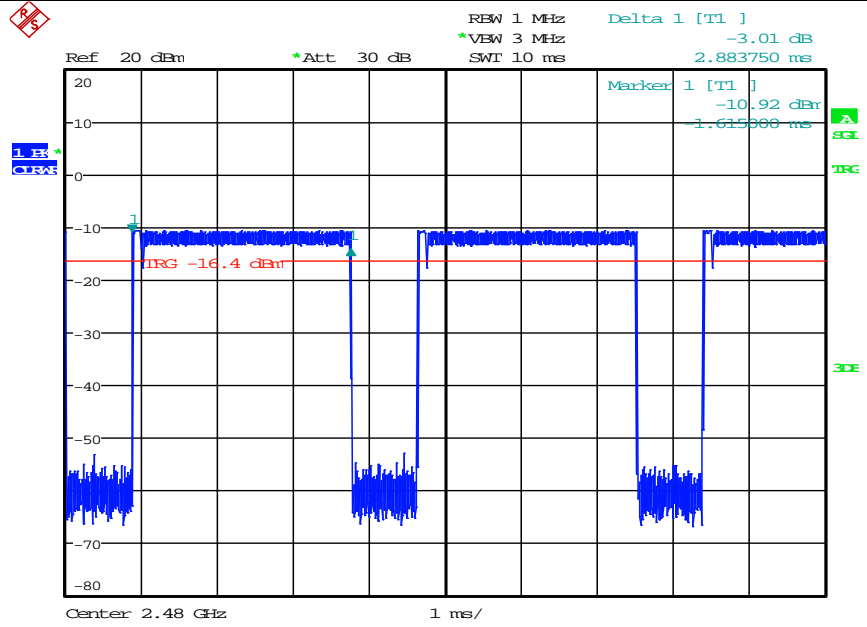
Date: 1.AUG.2019 12:42:28

$\pi/4$ DQPSK
_2DH5/MCH



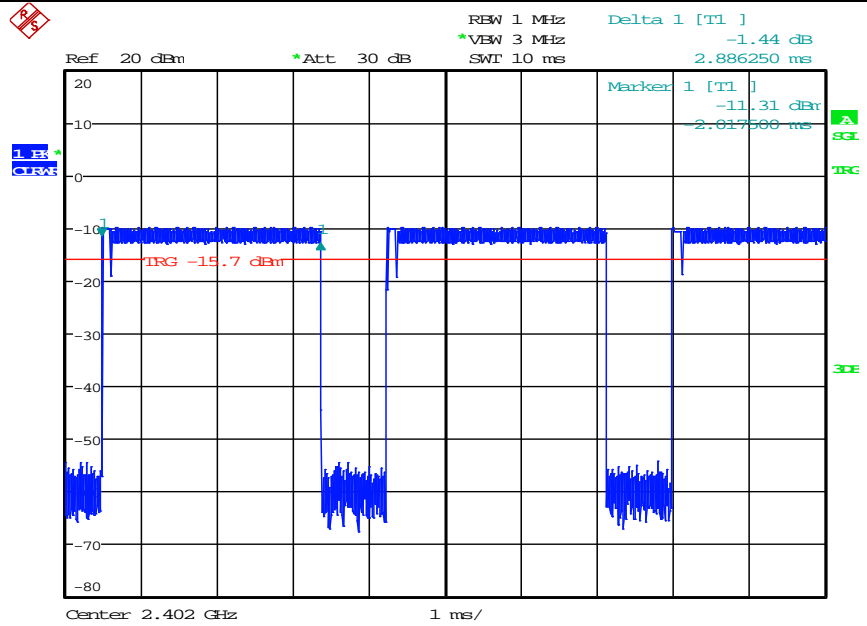
Date: 31.JUL.2019 21:56:06

$\pi/4$ DQPSK
_2DH5/HCH



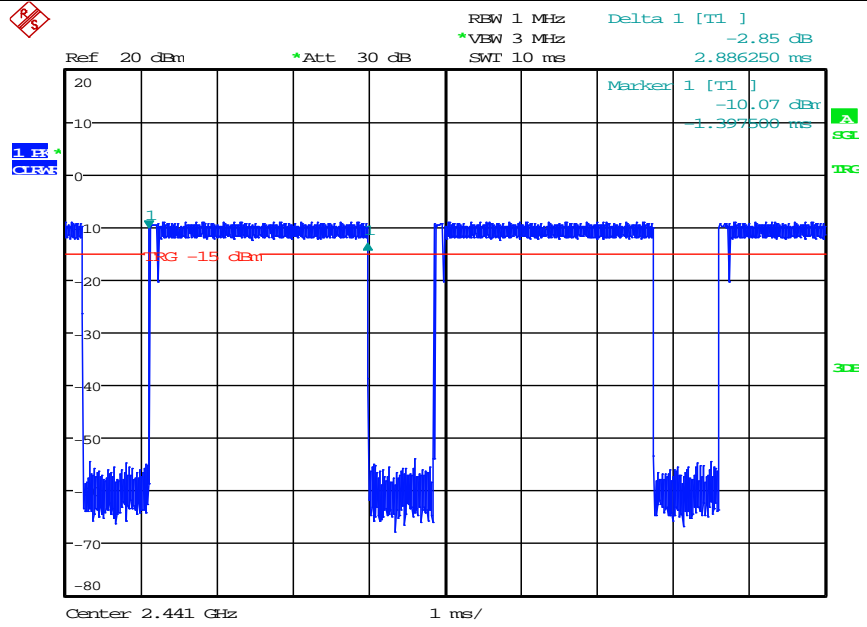
Date: 31.JUL.2019 21:58:04

8DPSK _3DH5/LCH



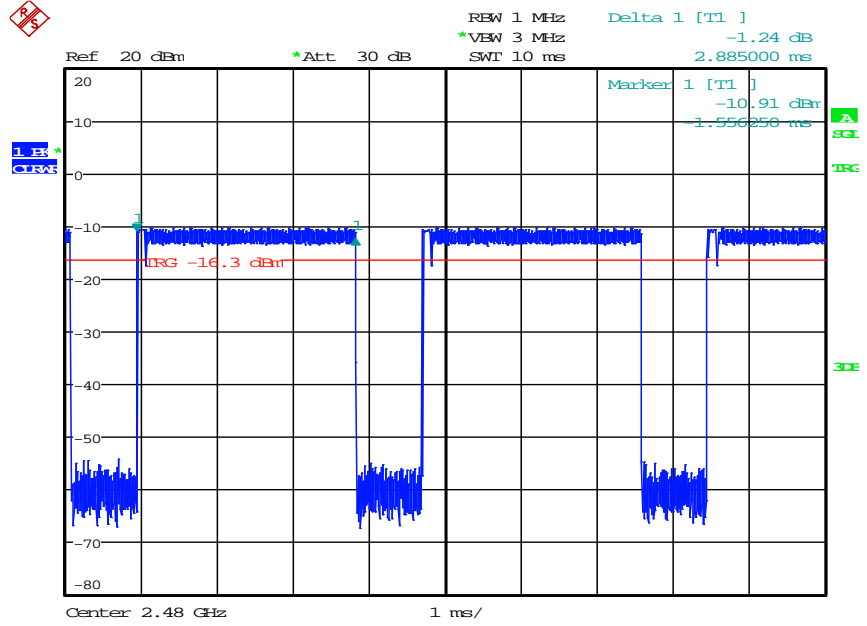
Date: 31.JUL.2019 22:00:38

8DPSK_3DH5/MCH



Date: 31.JUL.2019 22:03:07

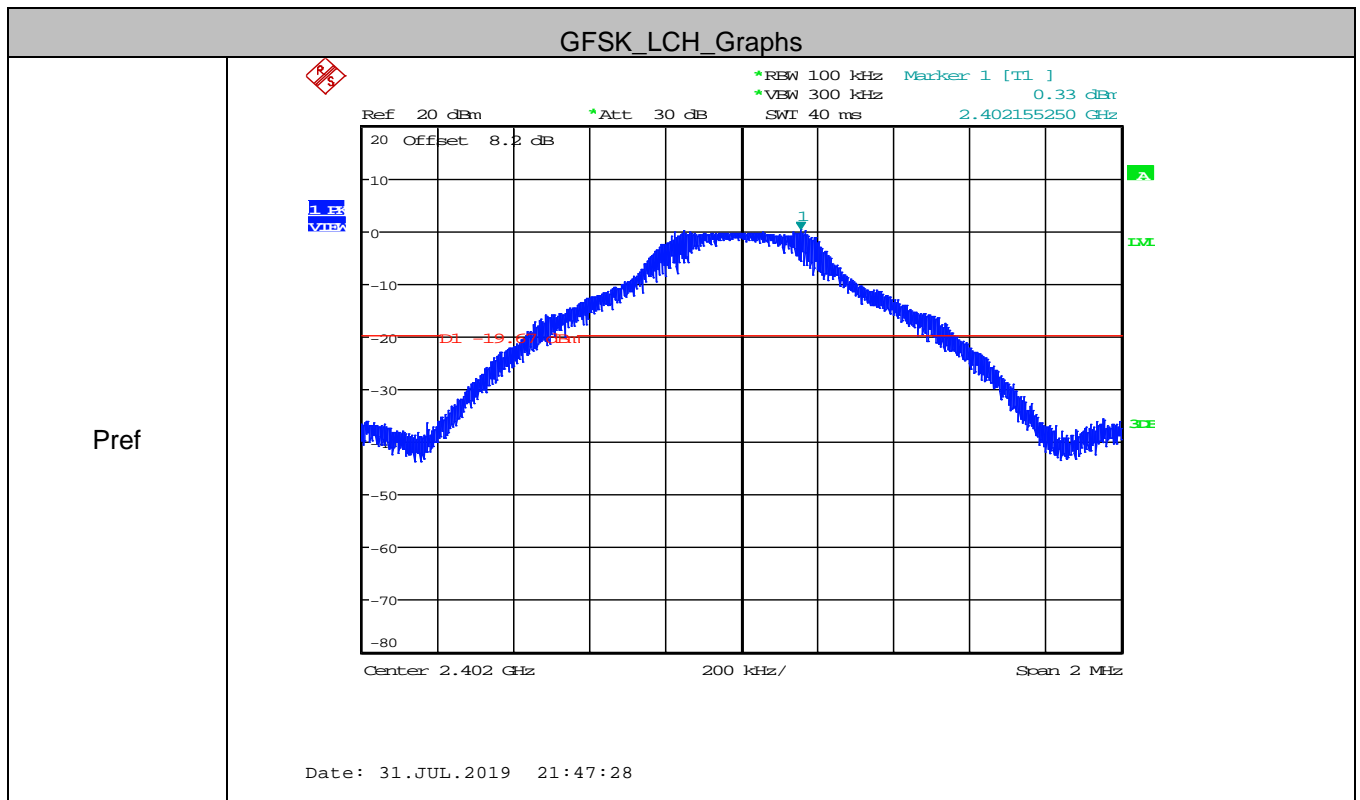
8DPSK_3DH5/HCH



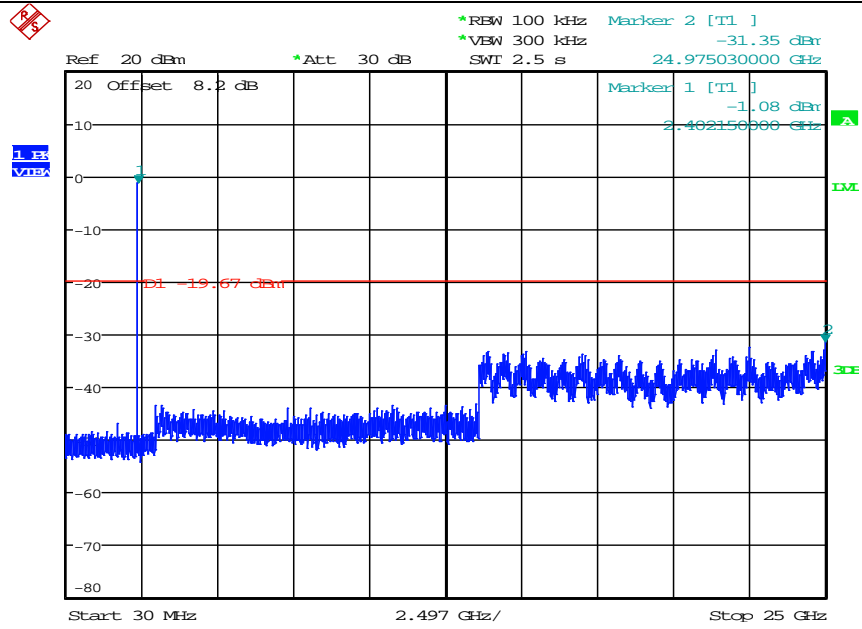
Date: 31.JUL.2019 22:04:50

A.6 RF Conducted Spurious Emissions

Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
GFSK	LCH	0.33	-31.350	-19.670	PASS
	MCH	0.97	-32.930	-19.030	PASS
	HCH	-0.25	-32.030	-20.250	PASS
$\pi/4$ DQPSK	LCH	-1.17	-32.270	-21.170	PASS
	MCH	-0.57	-32.590	-20.570	PASS
	HCH	-1.84	-31.610	-21.840	PASS
8DPSK	LCH	-1.33	-32.130	-21.330	PASS
	MCH	-0.53	-32.630	-20.530	PASS
	HCH	-1.58	-32.940	-21.580	PASS



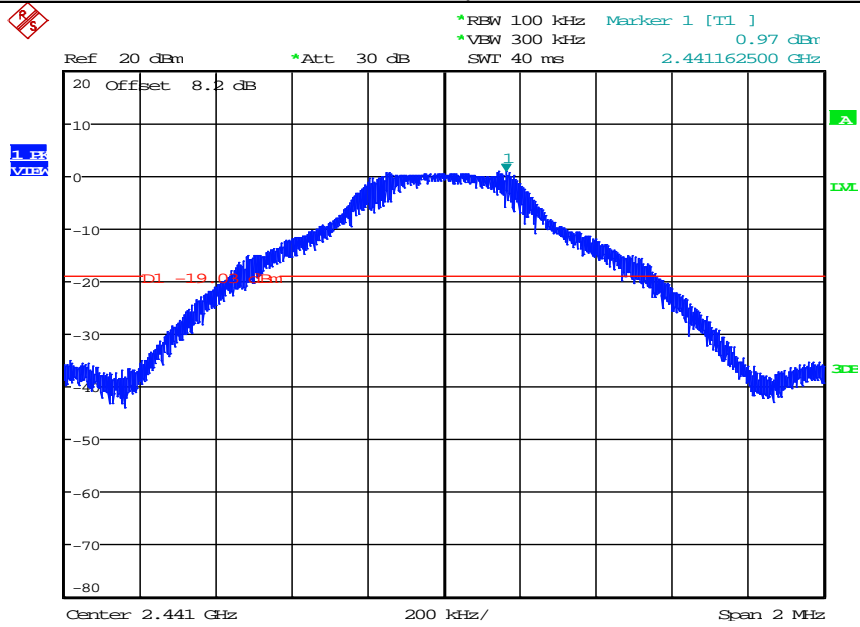
P_{uw}



Date: 31.JUL.2019 21:47:42

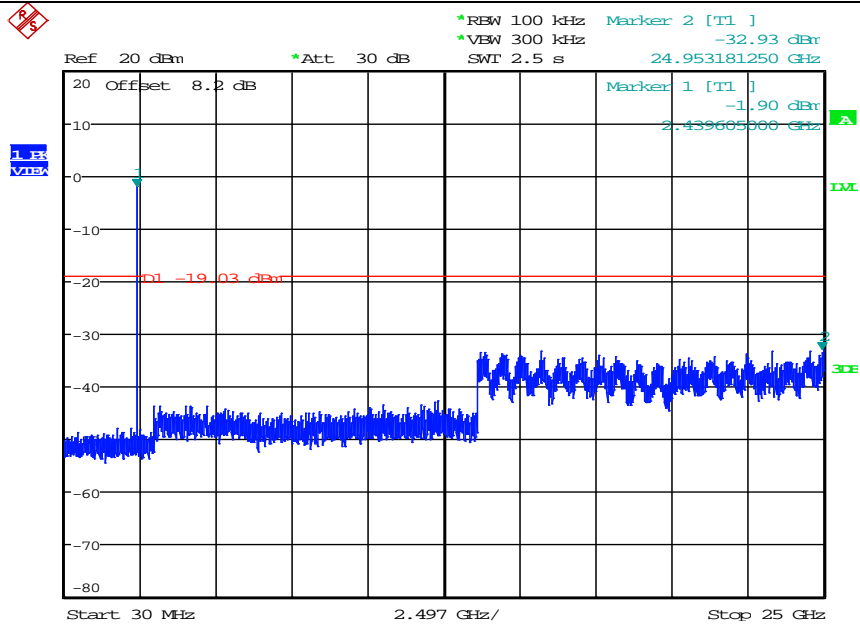
GFSK_MCH_Graphs

Pref



Date: 31.JUL.2019 21:49:41

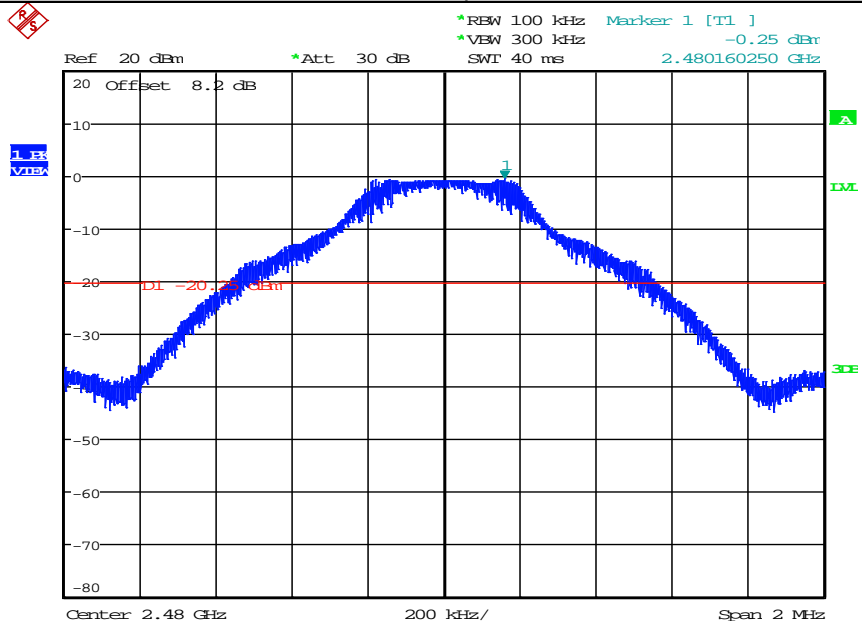
Puw



Date: 31.JUL.2019 21:49:56

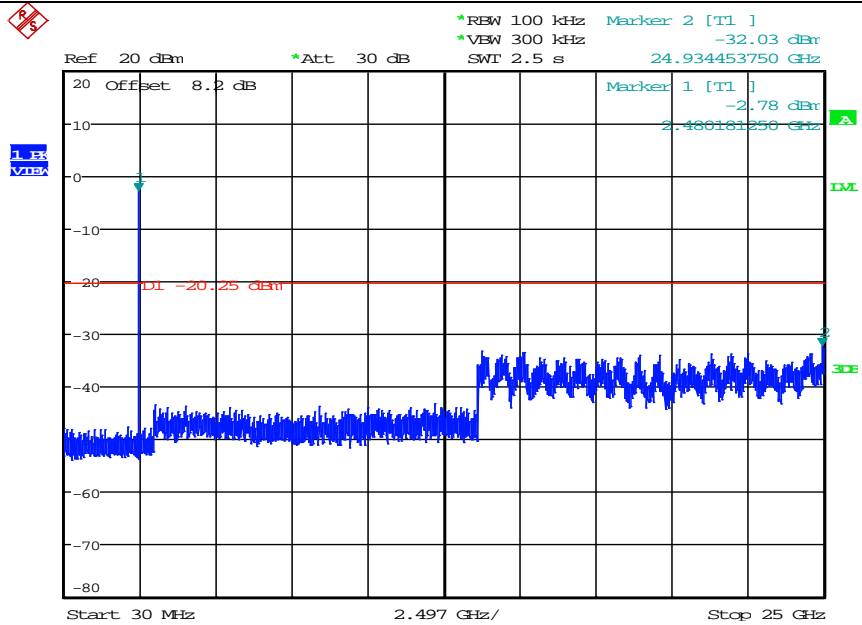
GFSK_HCH_Graphs

Pref



Date: 31.JUL.2019 21:51:40

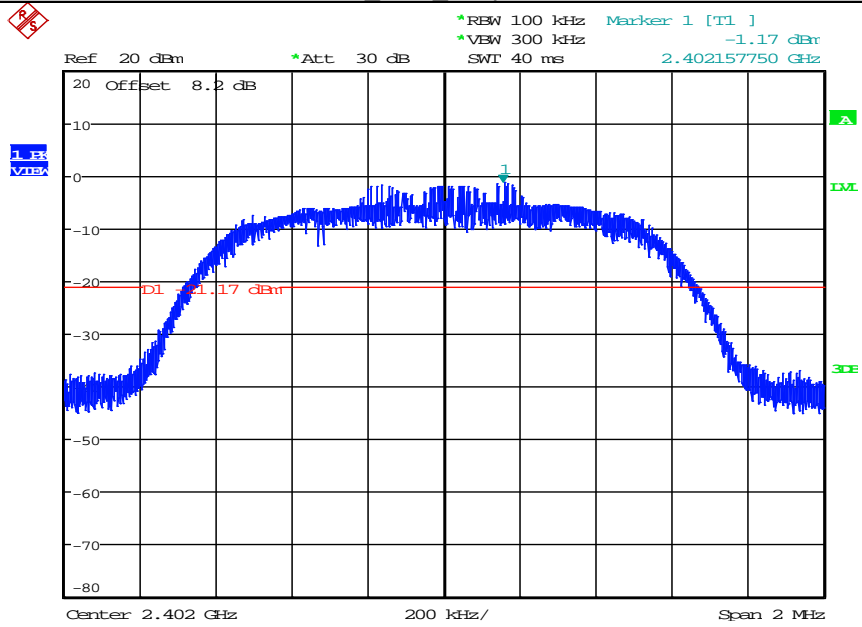
Puw



Date: 31.JUL.2019 21:51:54

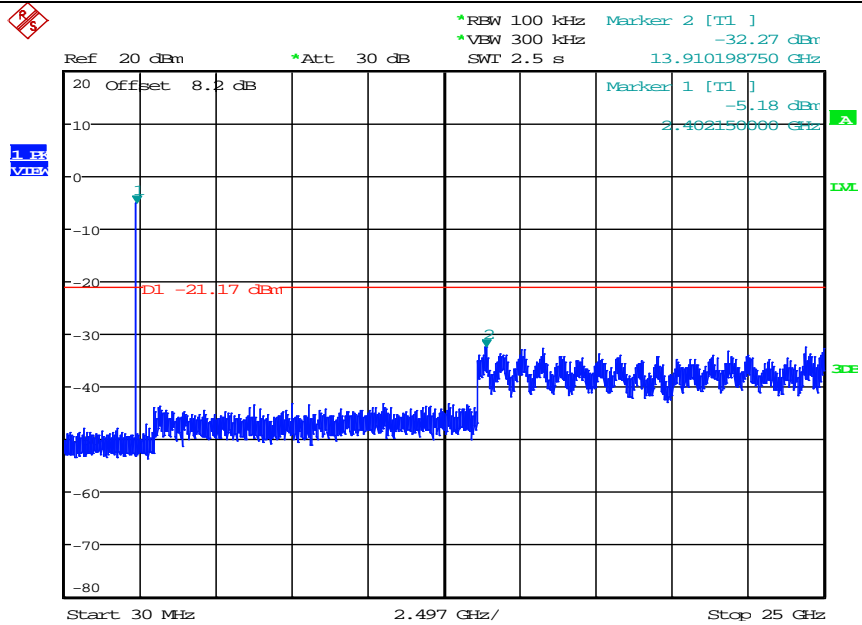
$\pi/4$ DQPSK_LCH_Graphs

Pref



Date: 1.AUG.2019 12:44:46

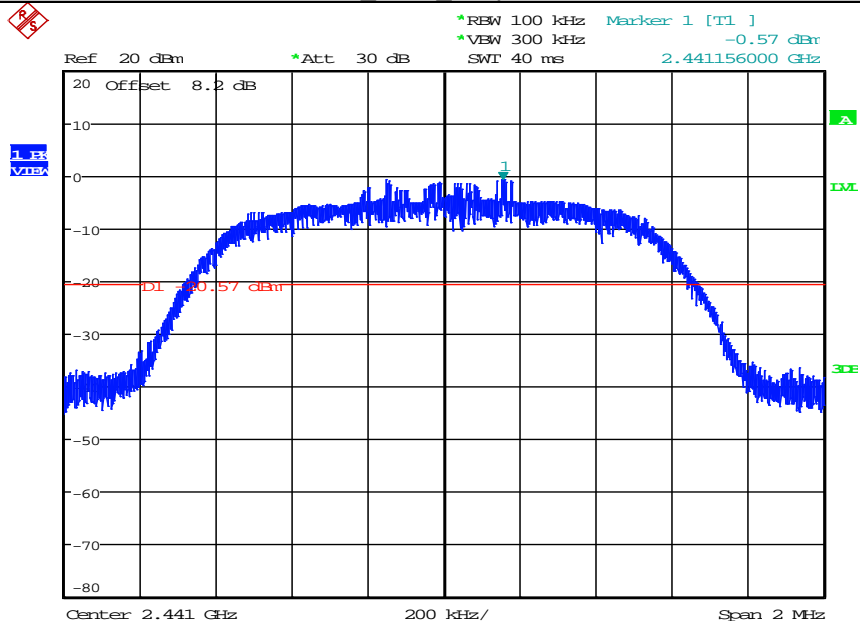
Puw



Date: 1.AUG.2019 12:45:03

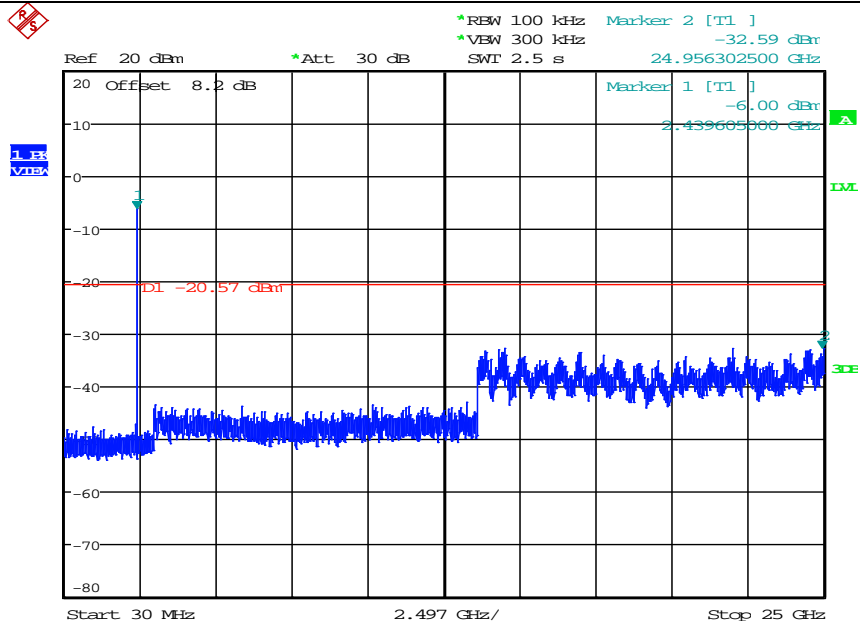
$\pi/4$ DQPSK_MCH_Graphs

Pref



Date: 31.JUL.2019 21:56:33

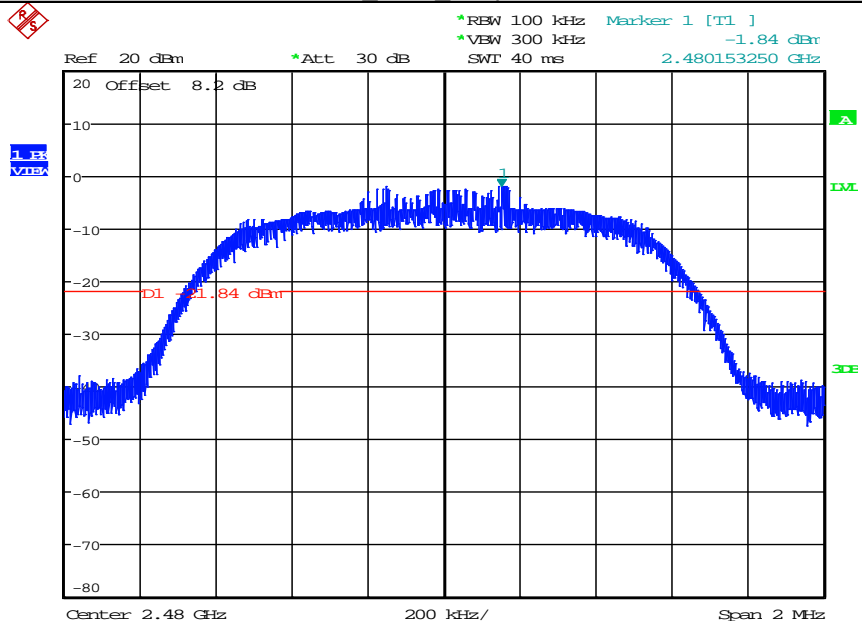
Puw



Date: 31.JUL.2019 21:56:48

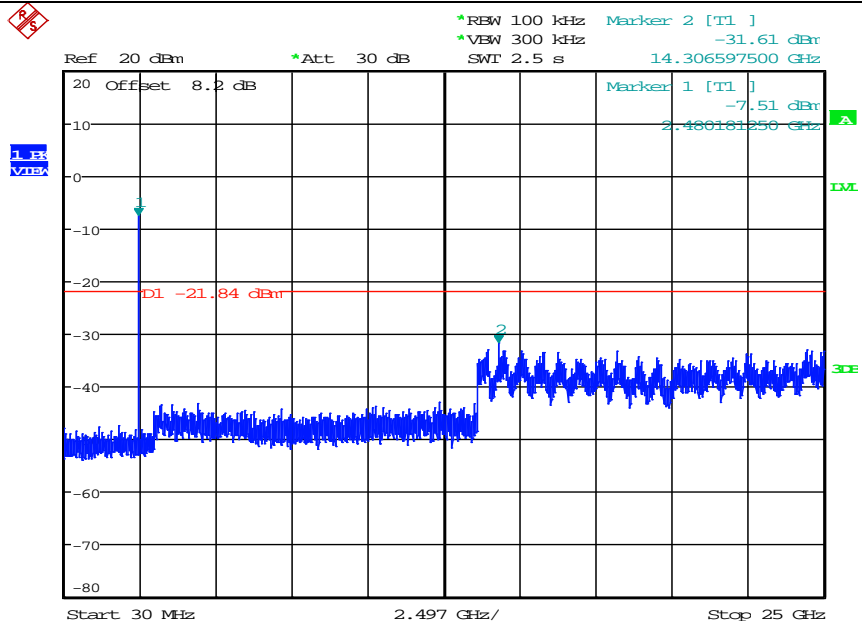
$\pi/4$ DQPSK_HCH_Graphs

Pref



Date: 31.JUL.2019 21:58:48

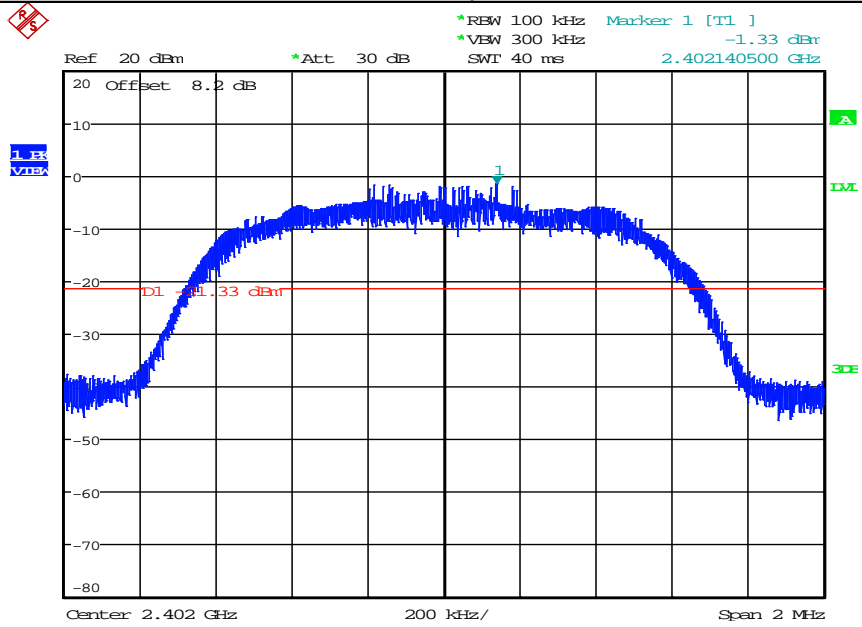
Puw



Date: 31.JUL.2019 21:59:03

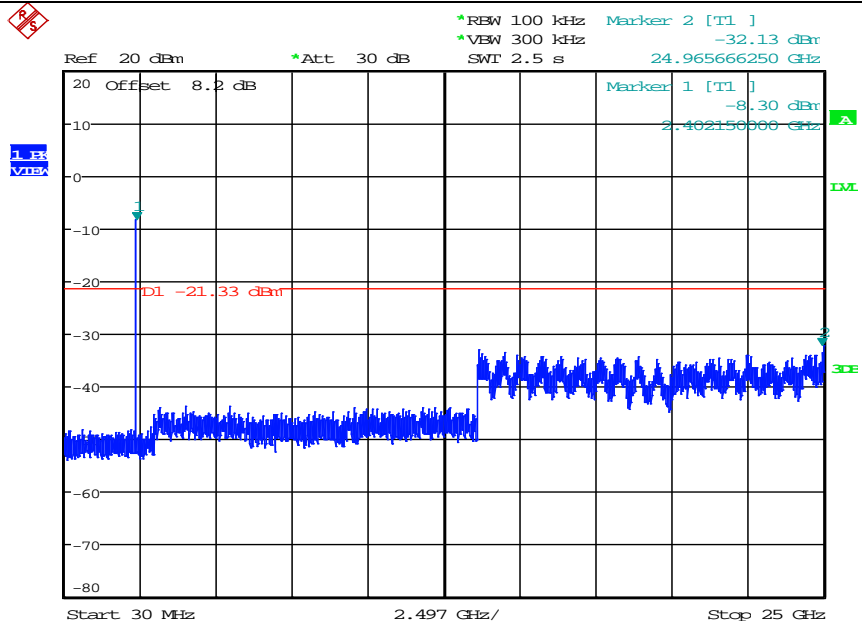
8DPSK_LCH_Graphs

Pref



Date: 31.JUL.2019 22:01:22

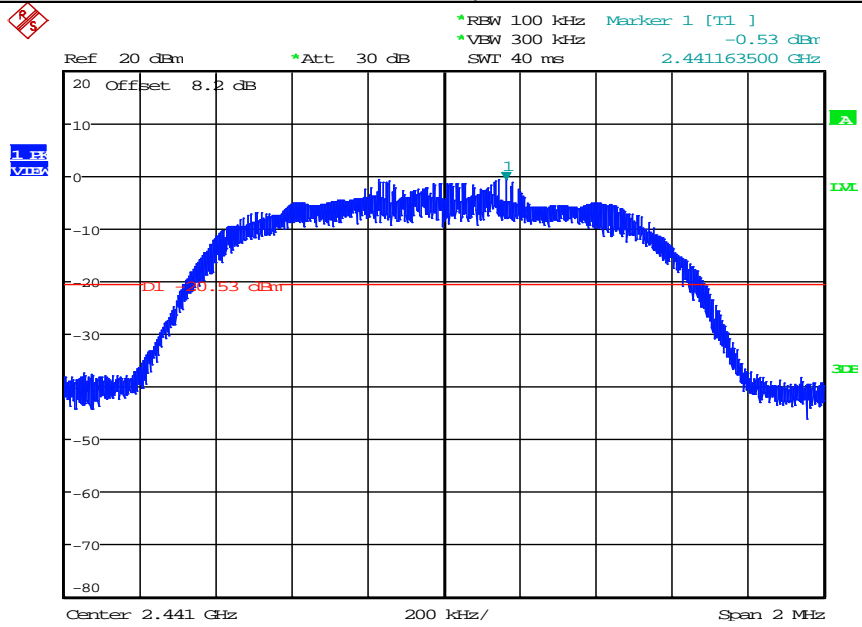
Puw



Date: 31.JUL.2019 22:01:37

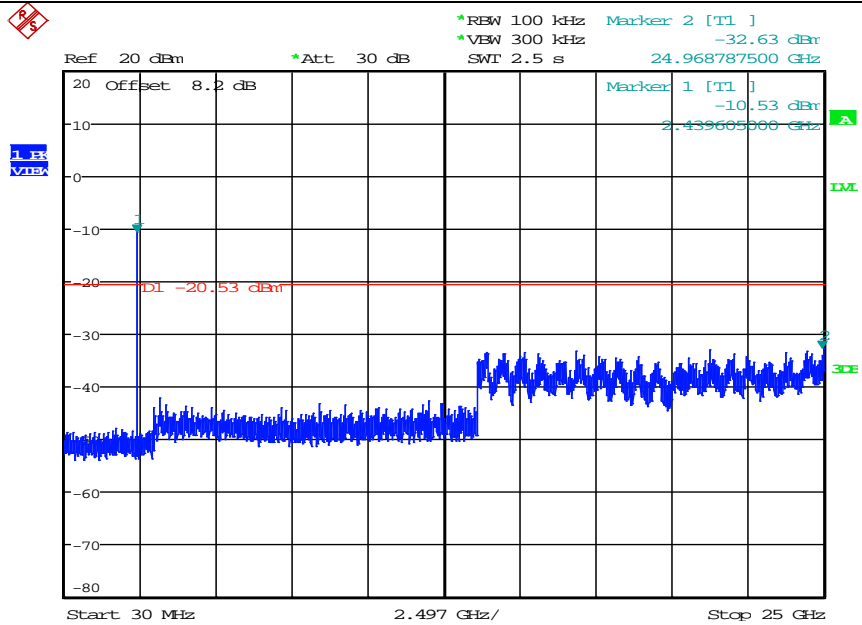
8DPSK_MCH_Graphs

Pref



Date: 31.JUL.2019 22:03:34

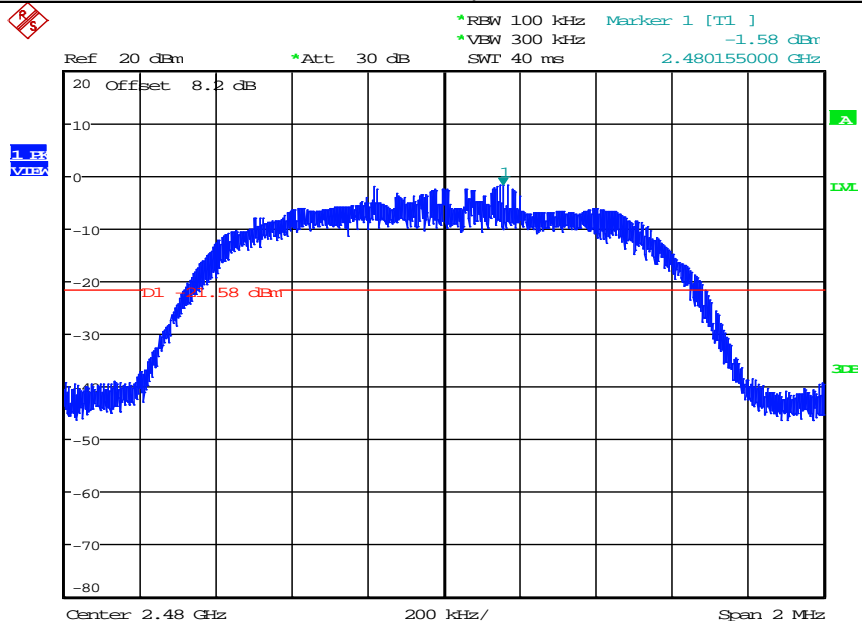
Puw



Date: 31.JUL.2019 22:03:49

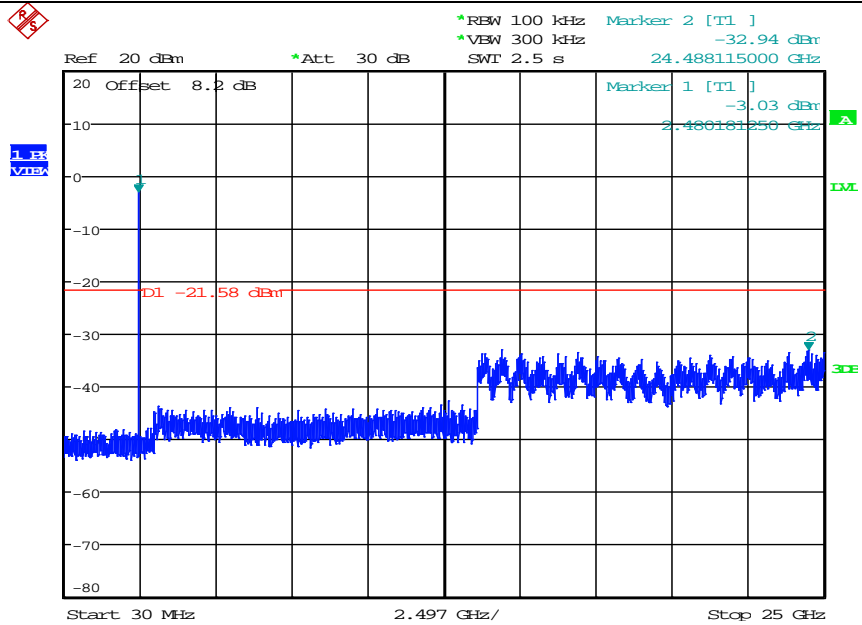
8DPSK_HCH_Graphs

Pref



Date: 1.AUG.2019 12:46:00

Puw



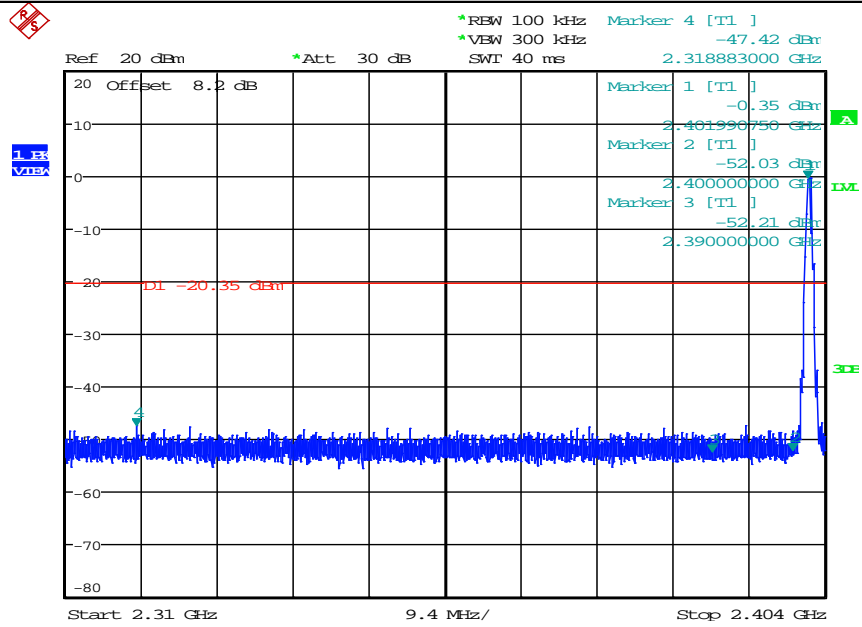
Date: 1.AUG.2019 12:46:15

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	-0.350	Off	-47.420	-20.35	PASS
			0.320	On	-46.833	-19.68	PASS
	HCH	2480	-0.260	Off	-47.842	-20.26	PASS
			0.070	On	-47.009	-19.93	PASS
$\pi/4$ DQPSK	LCH	2402	-1.770	Off	-47.325	-21.77	PASS
			-0.690	On	-46.464	-20.69	PASS
	HCH	2480	-2.080	Off	-47.838	-22.08	PASS
			-0.710	On	-47.130	-20.71	PASS
8DPSK	LCH	2402	-1.790	Off	-47.278	-21.79	PASS
			-1.260	On	-46.756	-21.26	PASS
	HCH	2480	-1.910	Off	-47.017	-21.91	PASS
			-1.480	On	-46.632	-21.48	PASS

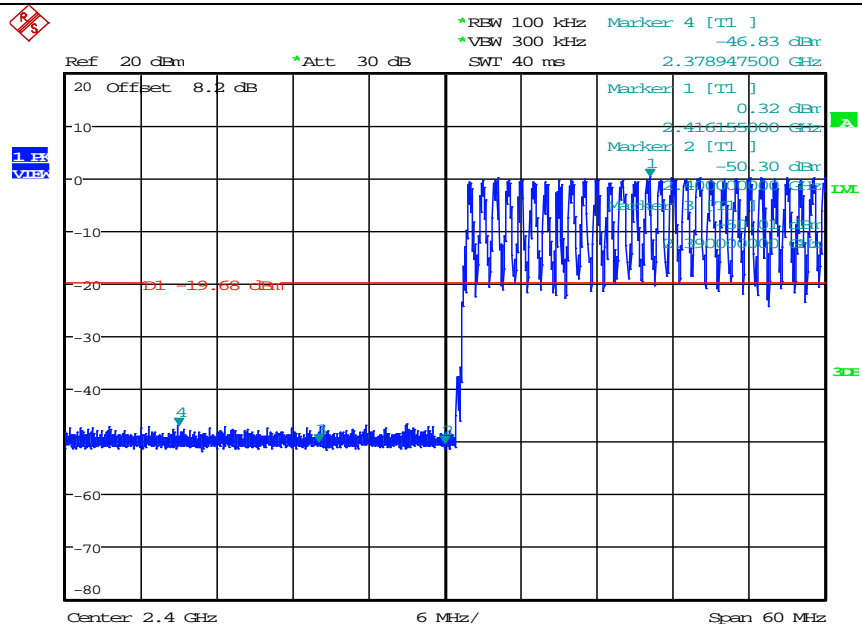
Test Graphs

GFSK/LCH/No Hop



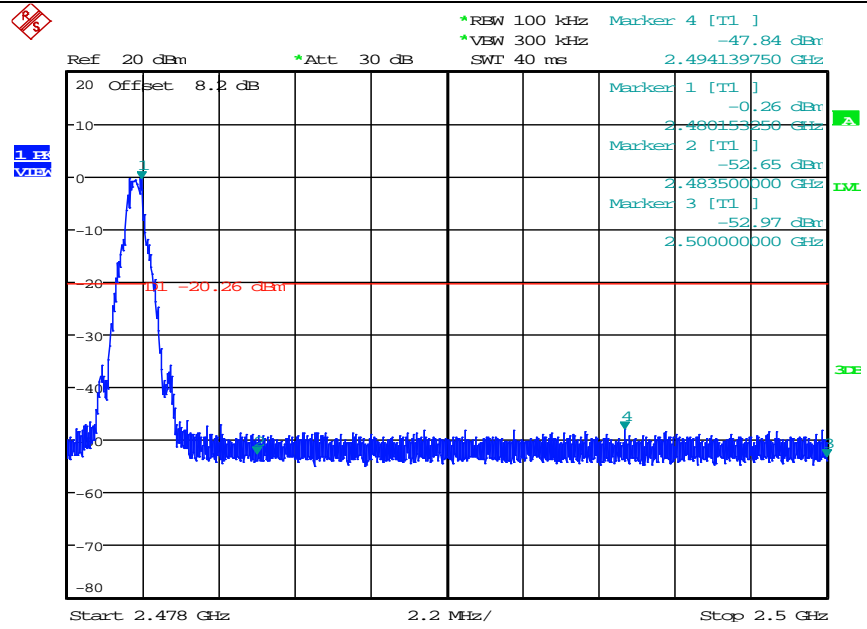
Date: 31.JUL.2019 21:47:15

GFSK/LCH/Hop



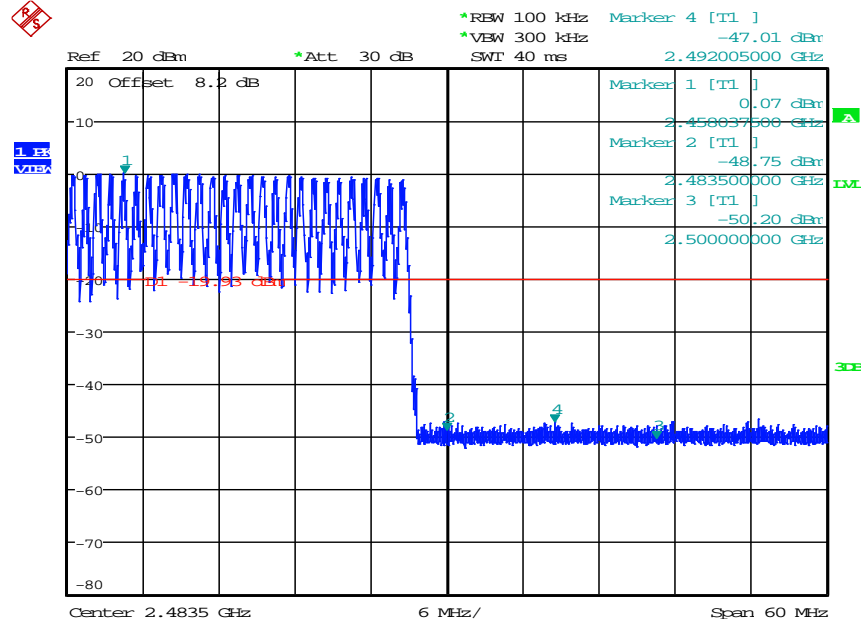
Date: 31.JUL.2019 22:10:19

GFSK/HCH/No Hop



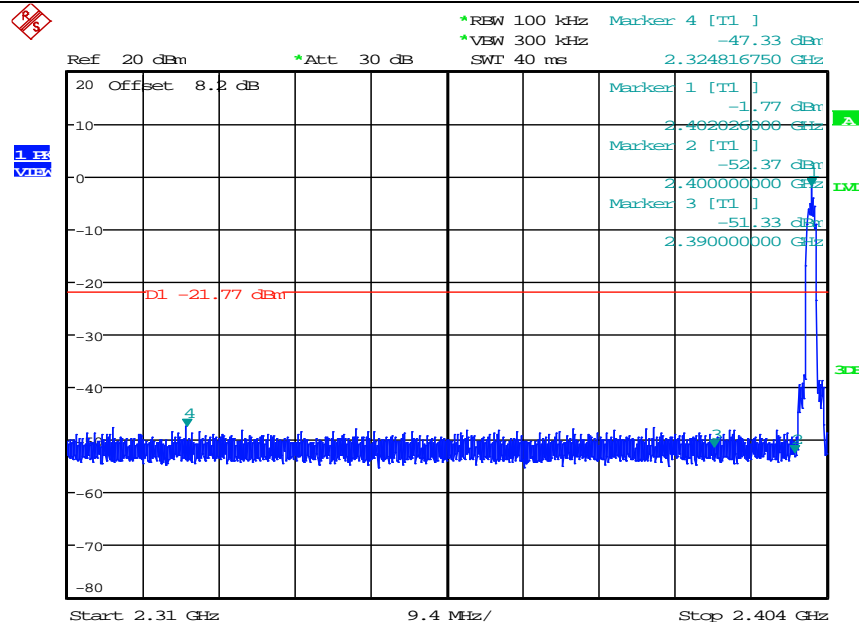
Date: 31.JUL.2019 21:51:27

GFSK/HCH/Hop



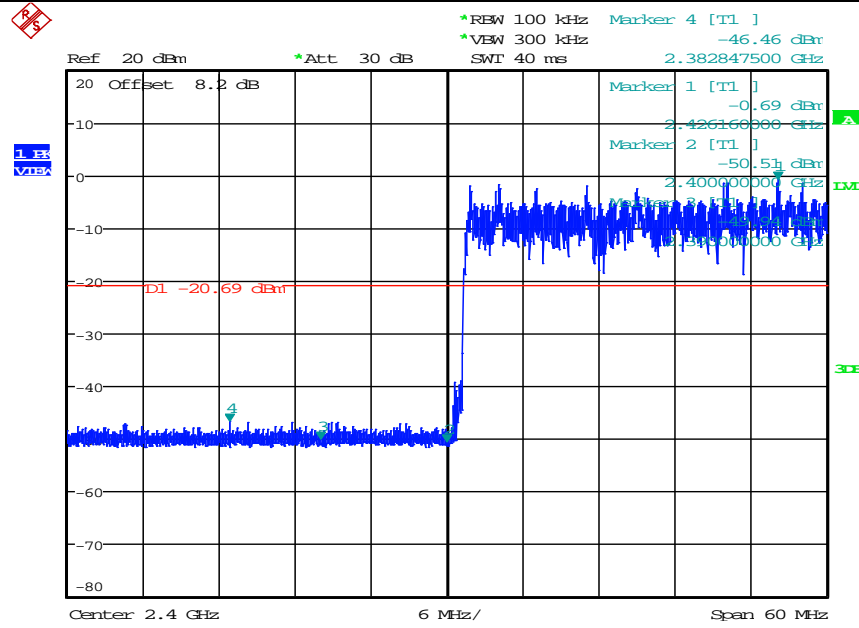
Date: 31.JUL.2019 22:12:42

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



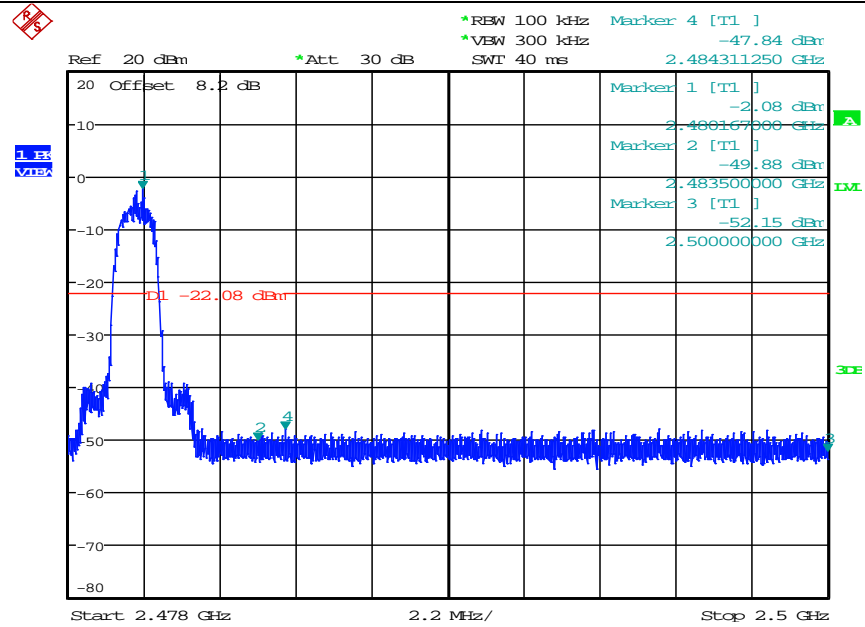
Date: 1.AUG.2019 12:43:00

$\pi/4$ DQPSK/LCH/Hop



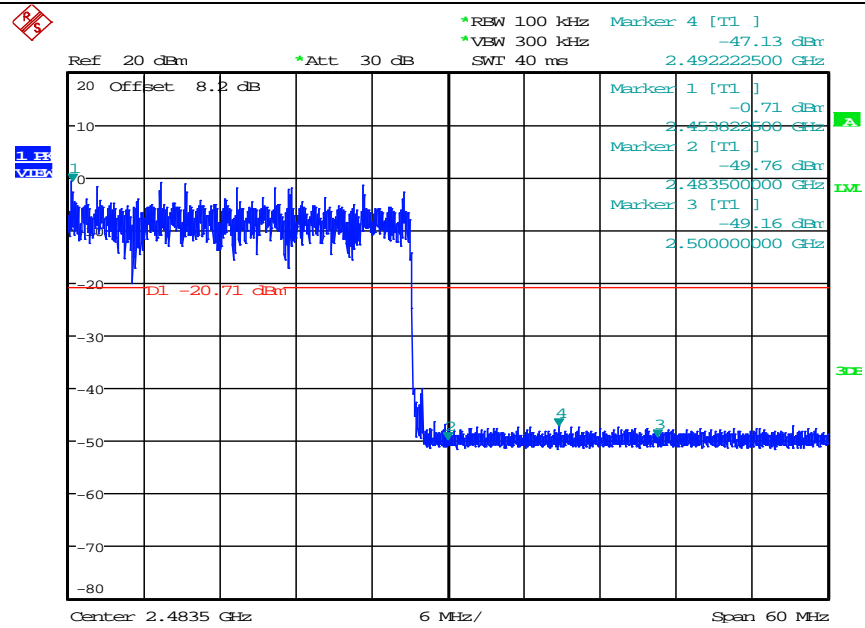
Date: 1.AUG.2019 12:39:26

π /4DQPSK/HCH/No
Hop



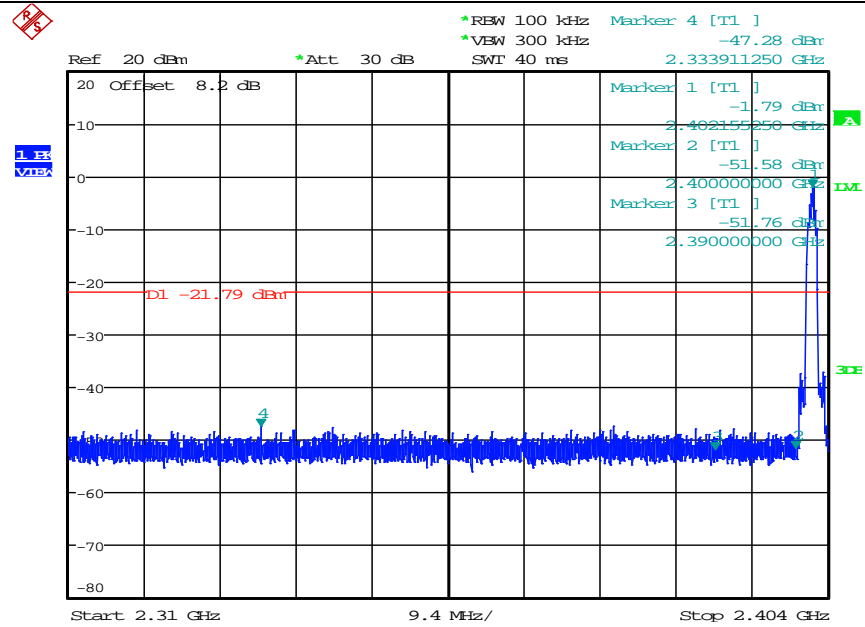
Date: 31.JUL.2019 21:58:35

π /4DQPSK/HCH/Hop

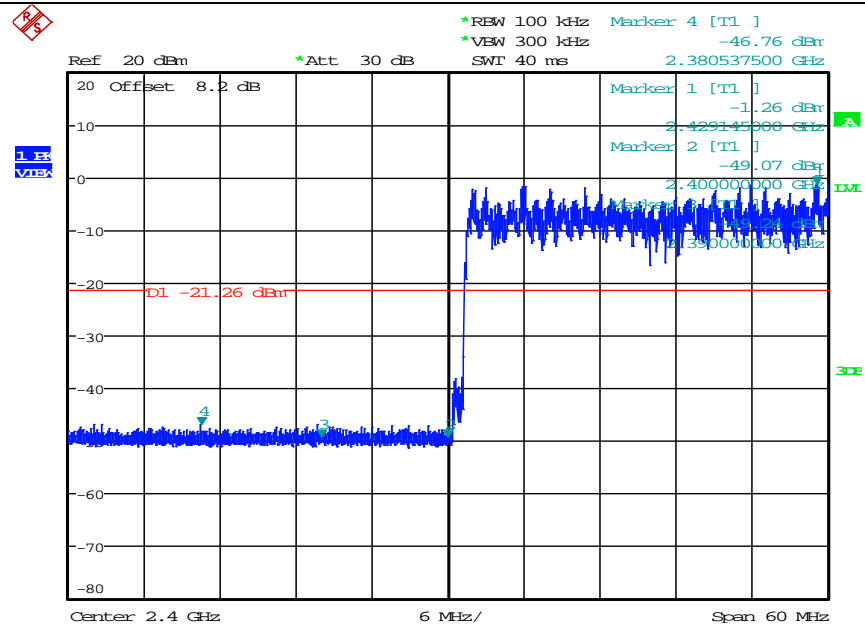


Date: 31.JUL.2019 22:21:19

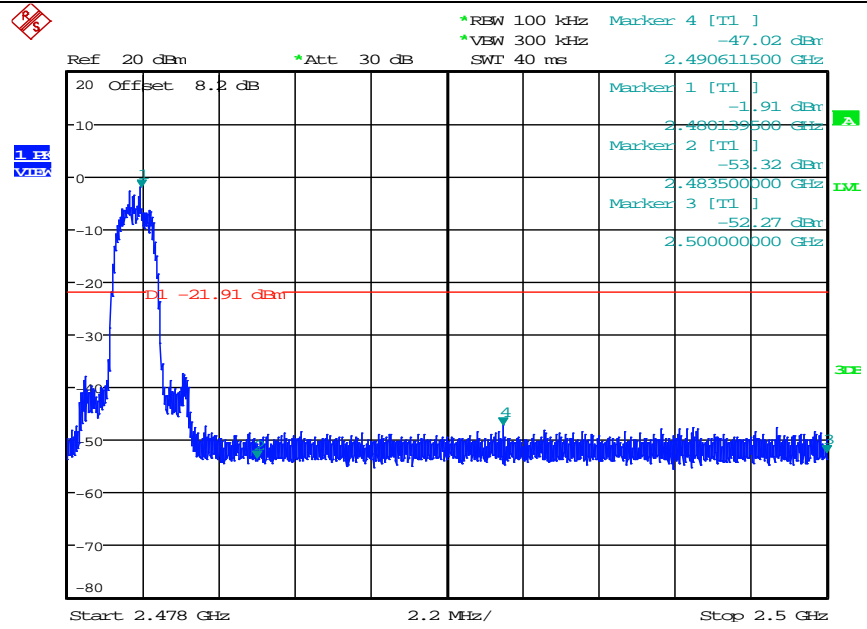
8DPSK/LCH/No Hop



8DPSK/LCH/Hop

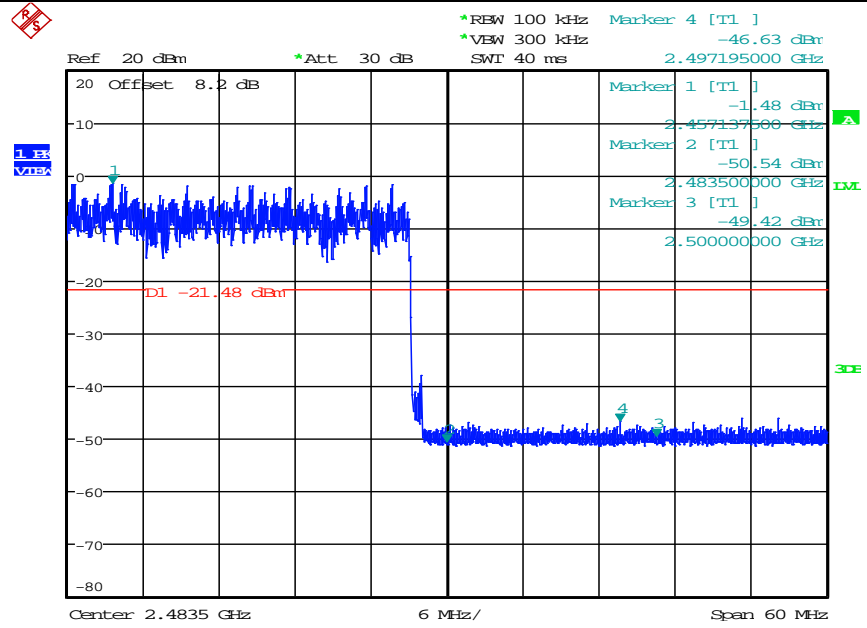


8DPSK/HCH/No Hop



Date: 31.JUL.2019 22:05:21

8DPSK/HCH/Hop

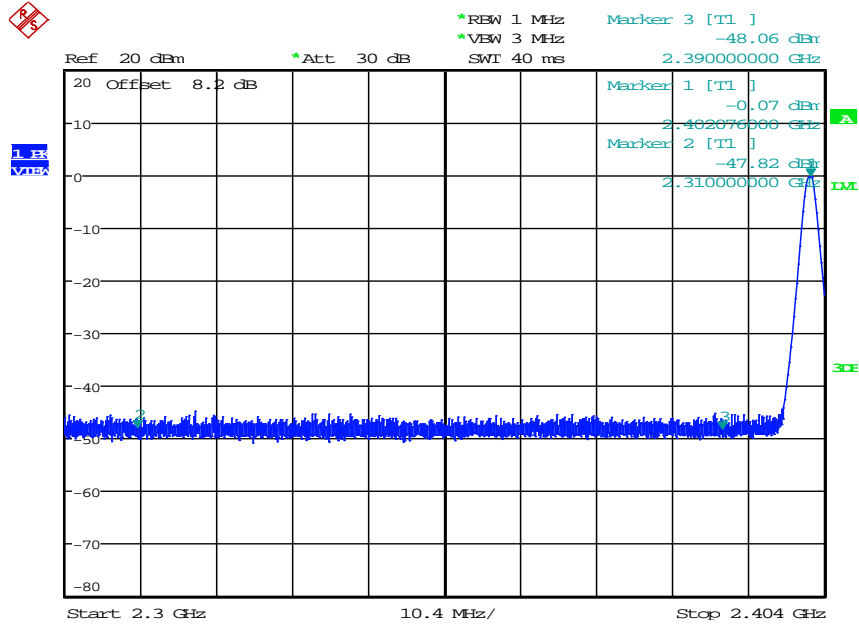


Date: 31.JUL.2019 22:32:07

A.8 Restrict-band band-edge measurements

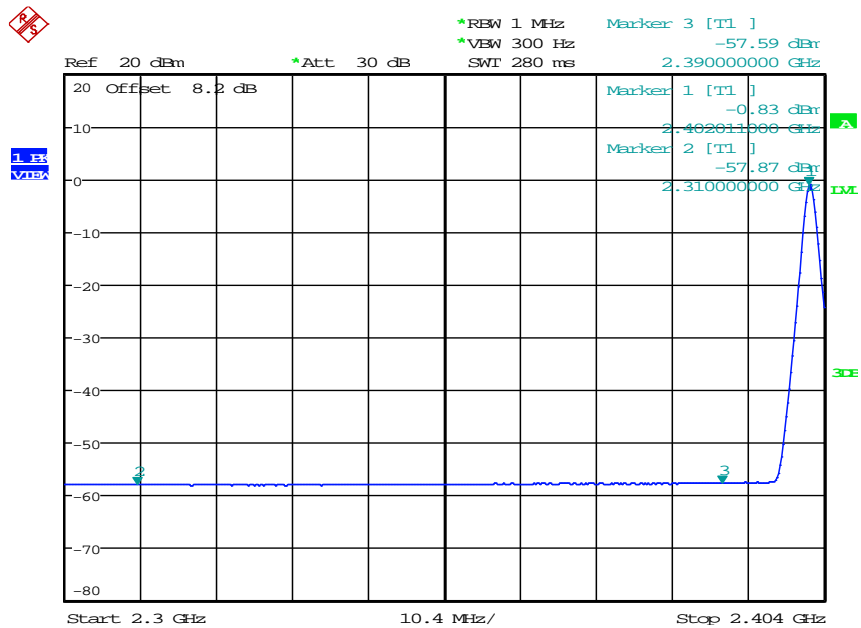
Test Mode	Hopping	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detector	Limit [dBuV/m]	Verdict
GFSK	Off	2310.0	-47.82	2.0	0	47.44	PEAK	74	PASS
	Off	2310.0	-57.87	2.0	0	37.39	AV	54	PASS
	Off	2390.0	-48.06	2.0	0	47.20	PEAK	74	PASS
	Off	2390.0	-57.59	2.0	0	37.67	AV	54	PASS
	Off	2483.5	-39.84	2.0	0	55.42	PEAK	74	PASS
	Off	2483.5	-43.75	2.0	0	51.51	AV	54	PASS
	Off	2500.0	-46.94	2.0	0	48.32	PEAK	74	PASS
	Off	2500.0	-58.26	2.0	0	37.00	AV	54	PASS
$\pi/4$ DQPSK	Off	2310.0	-48.62	2.0	0	46.64	PEAK	74	PASS
	Off	2310.0	-57.82	2.0	0	37.44	AV	54	PASS
	Off	2390.0	-47.21	2.0	0	48.05	PEAK	74	PASS
	Off	2390.0	-57.55	2.0	0	37.71	AV	54	PASS
	Off	2483.5	-40.71	2.0	0	54.55	PEAK	74	PASS
	Off	2483.5	-46.30	2.0	0	48.96	AV	54	PASS
	Off	2500.0	-48.88	2.0	0	46.38	PEAK	74	PASS
	Off	2500.0	-58.22	2.0	0	37.04	AV	54	PASS
8DPSK	Off	2310.0	-48.29	2.0	0	46.97	PEAK	74	PASS
	Off	2310.0	-57.93	2.0	0	37.33	AV	54	PASS
	Off	2390.0	-47.68	2.0	0	47.58	PEAK	74	PASS
	Off	2390.0	-57.64	2.0	0	37.62	AV	54	PASS
	Off	2483.5	-41.02	2.0	0	54.24	PEAK	74	PASS
	Off	2483.5	-46.28	2.0	0	48.98	AV	54	PASS
	Off	2500.0	-48.07	2.0	0	47.19	PEAK	74	PASS
	Off	2500.0	-58.27	2.0	0	36.99	AV	54	PASS

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



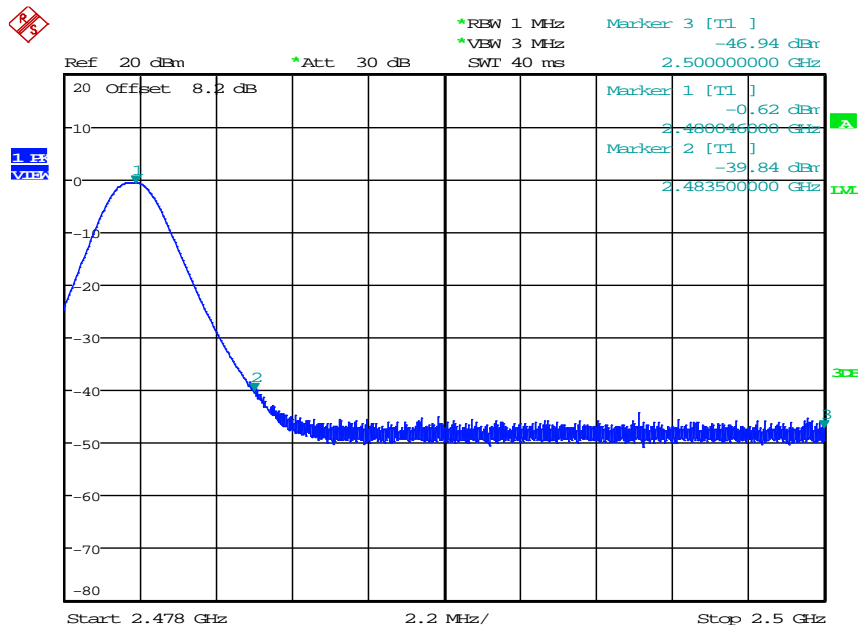
Date: 31.JUL.2019 21:48:01

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



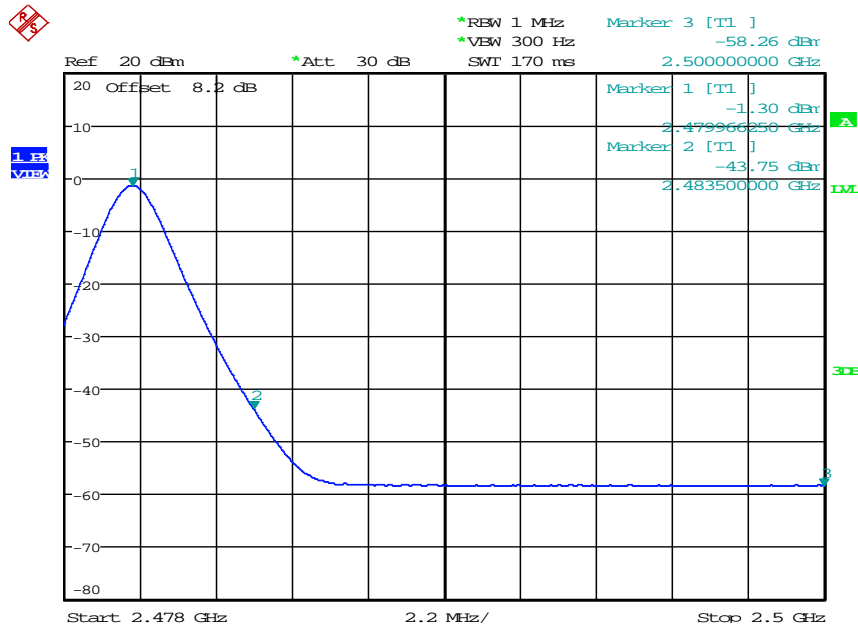
Date: 31.JUL.2019 21:48:15

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



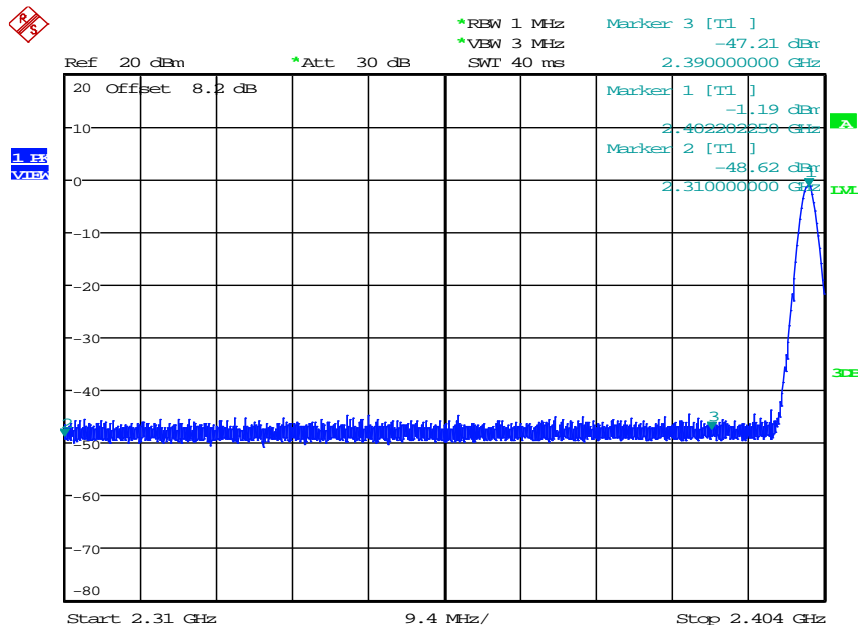
Date: 31.JUL.2019 21:52:13

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



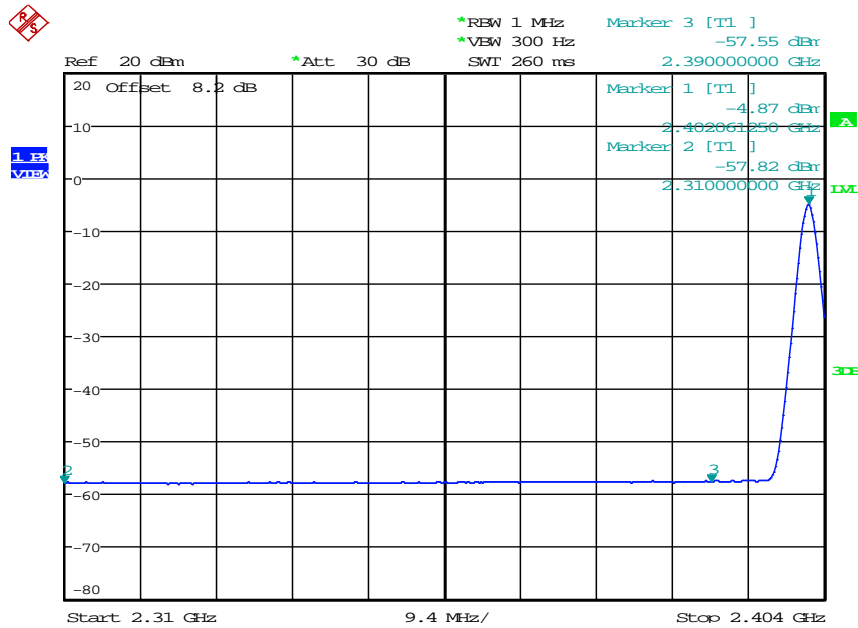
Date: 31.JUL.2019 21:52:26

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



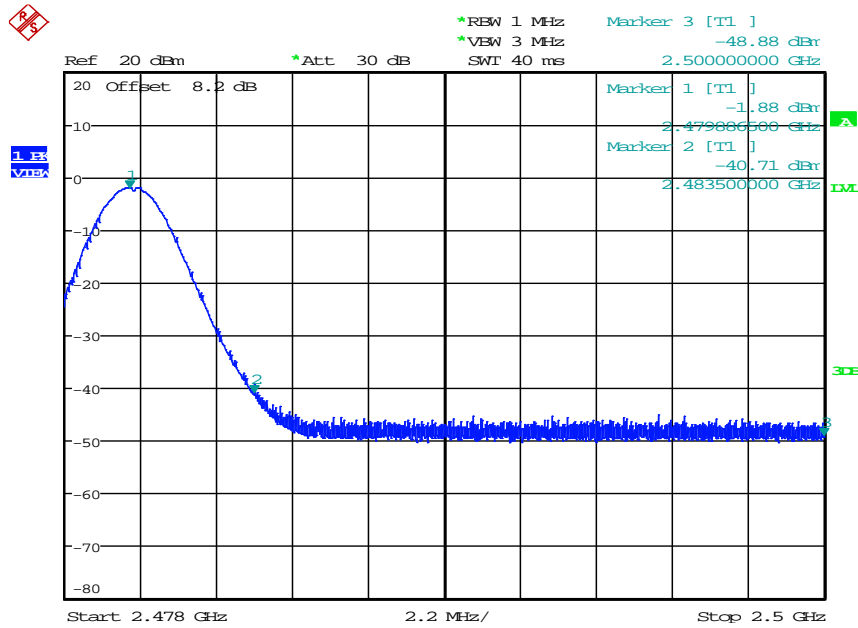
Date: 1.AUG.2019 12:43:46

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



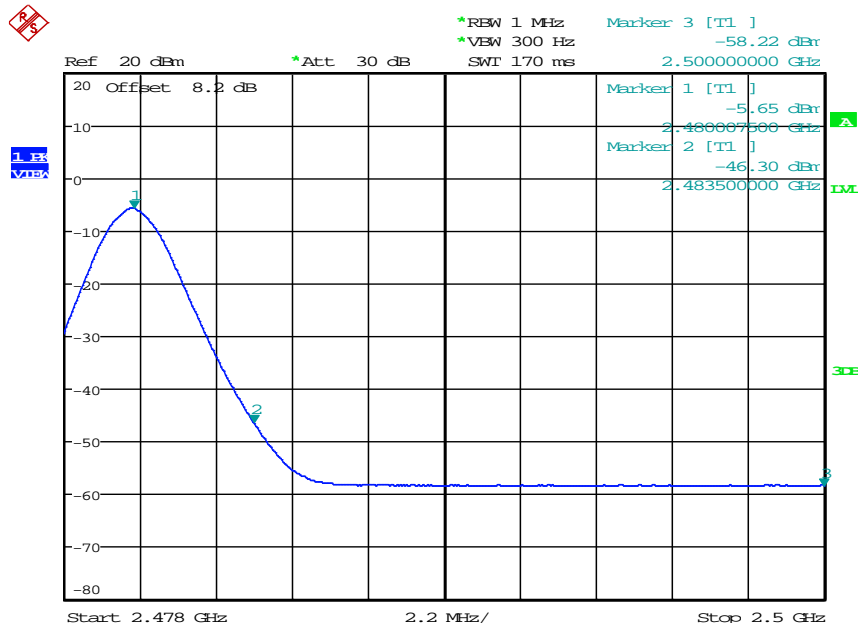
Date: 1.AUG.2019 12:44:00

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



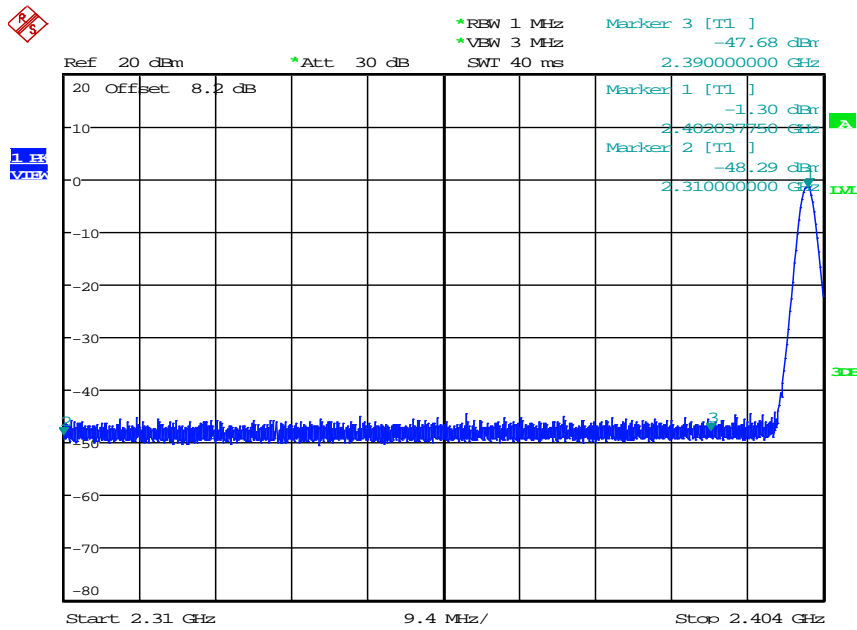
Date: 31.JUL.2019 21:59:22

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



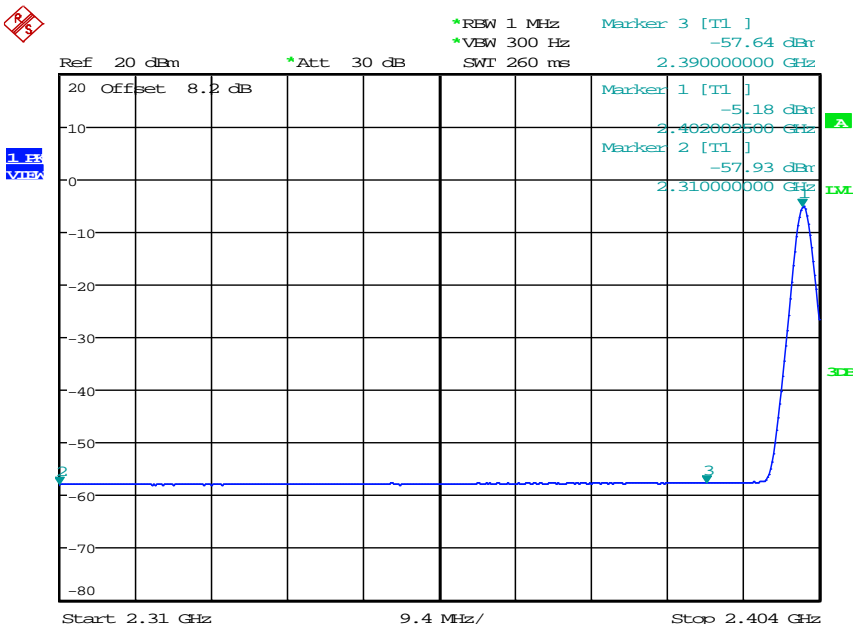
Date: 31.JUL.2019 21:59:35

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



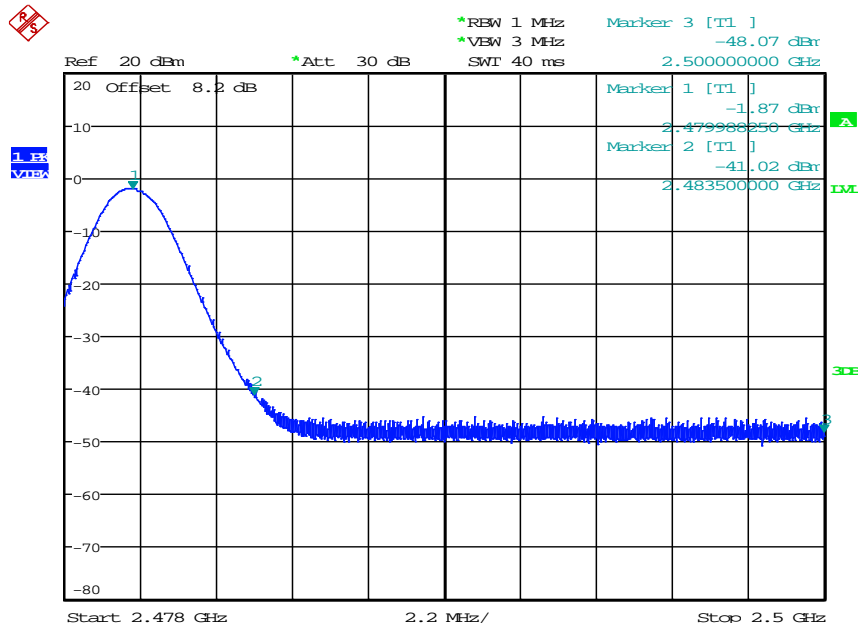
Date: 31.JUL.2019 22:01:55

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



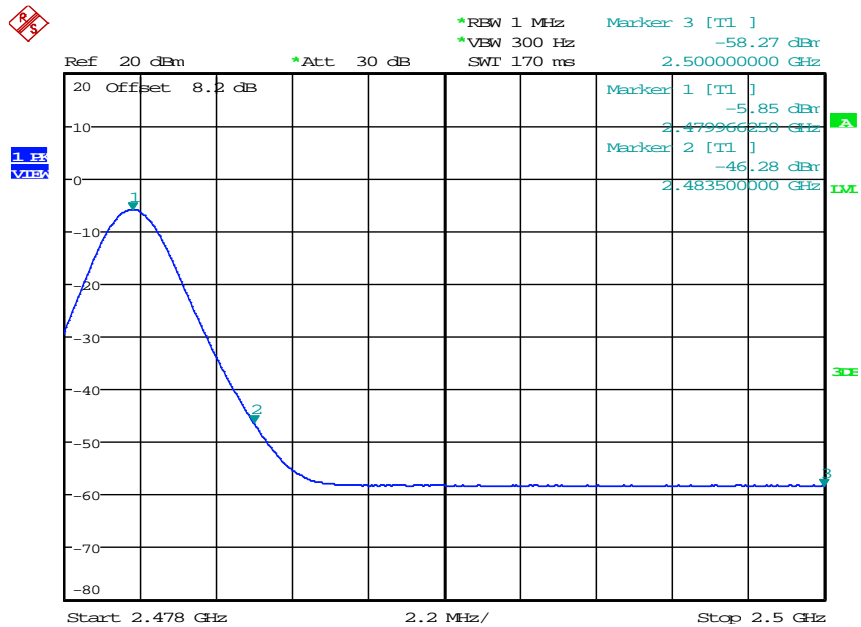
Date: 31.JUL.2019 22:02:09

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



Date: 31.JUL.2019 22:06:08

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



Date: 31.JUL.2019 22:06:21