

## 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

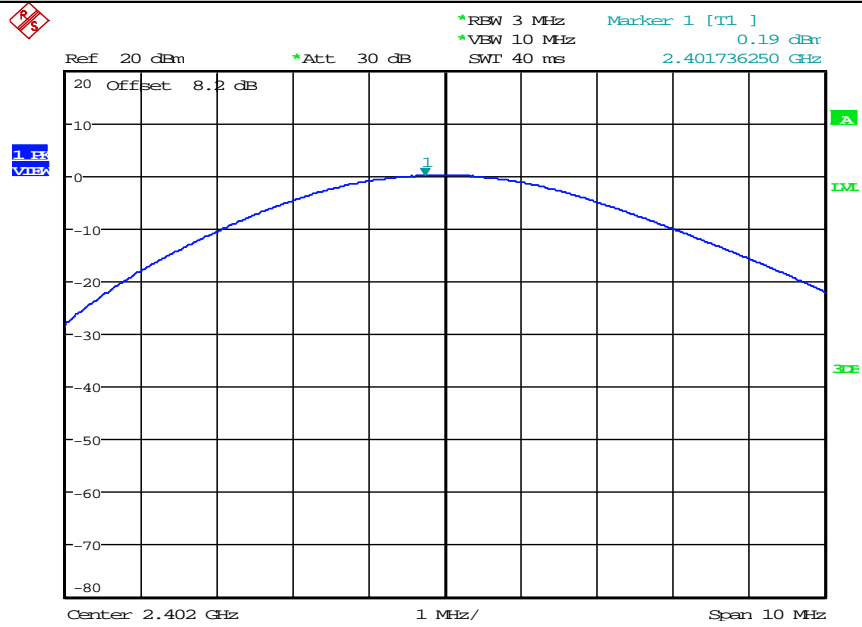
Temperature:	24.5° C
Relative Humidity:	53.6%
ATM Pressure:	100.0 kPa
Test Engineer:	SCENT HU
Supervised by:	Wang.Chuang

#### 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

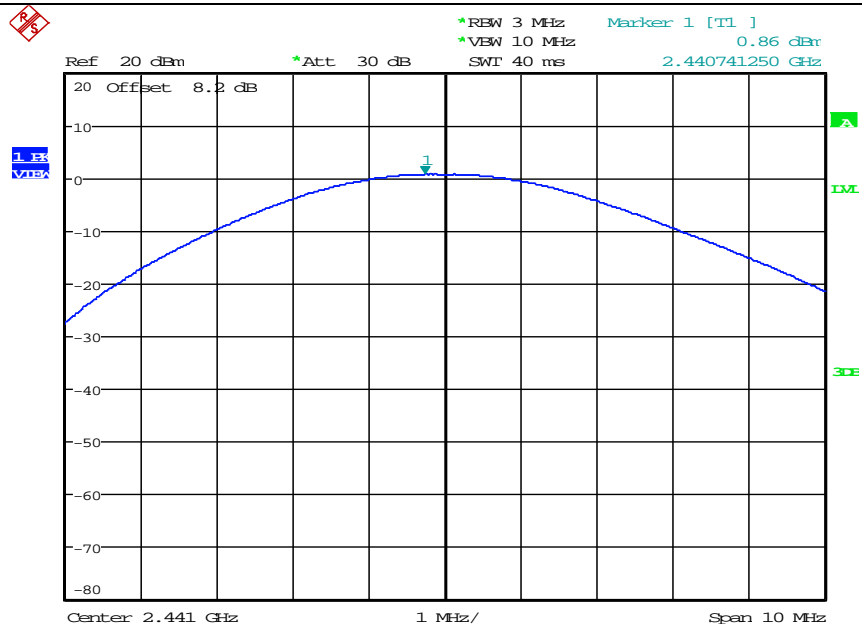
Test Graphs

GFSK/LCH



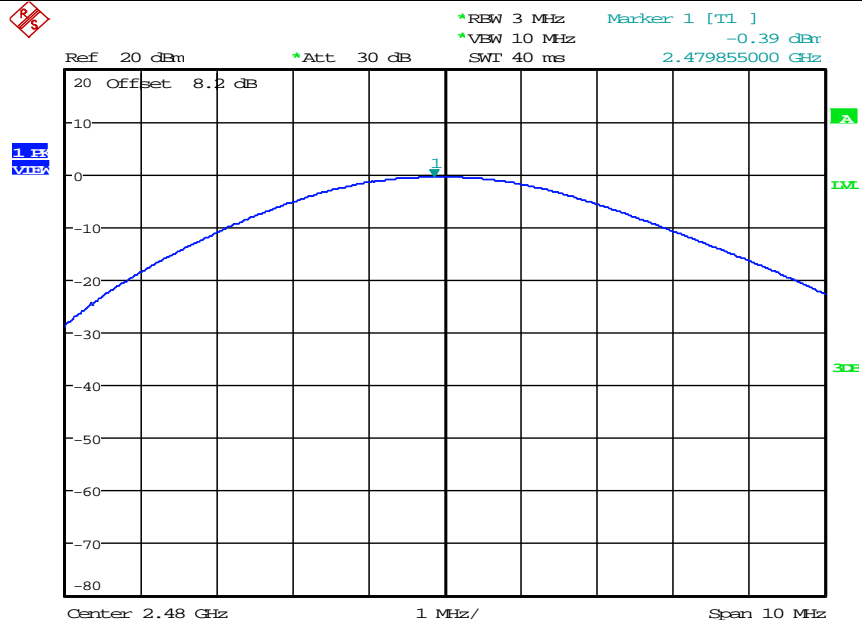
Date: 31.JUL.2019 21:45:54

GFSK/MCH



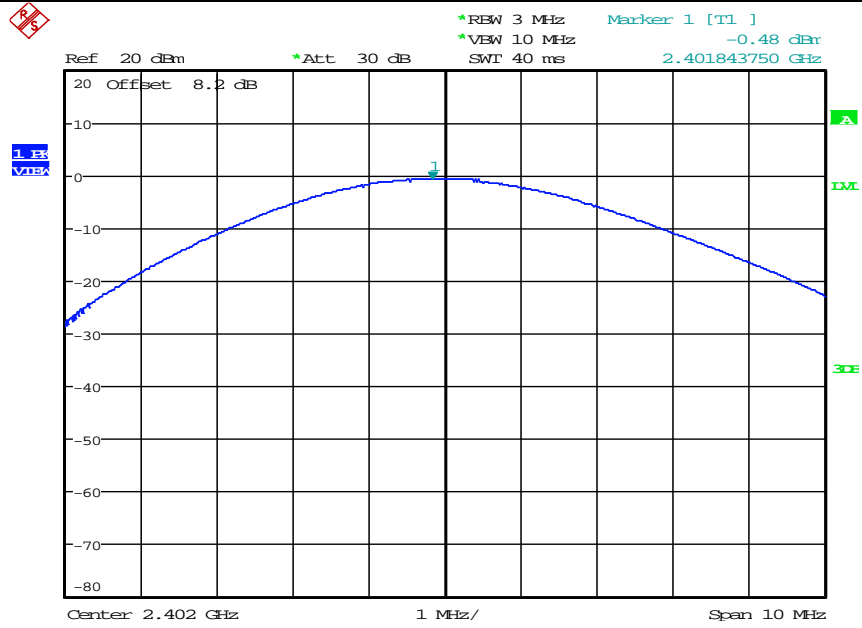
Date: 31.JUL.2019 21:49:29

GFSK/HCH



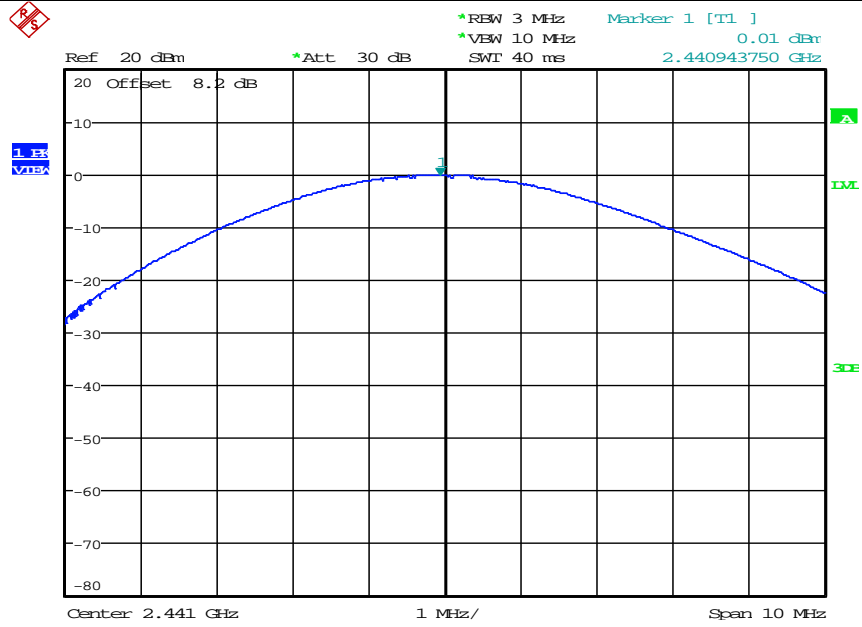
Date: 31.JUL.2019 21:51:11

$\pi/4$ DQPSK/LCH



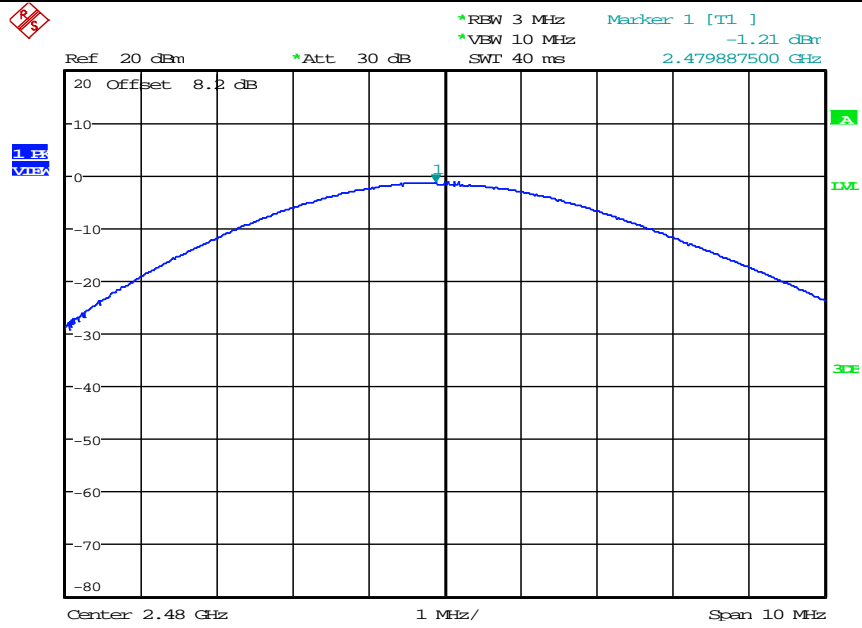
Date: 1.AUG.2019 12:42:43

$\pi$ /4DQPSK/MCH



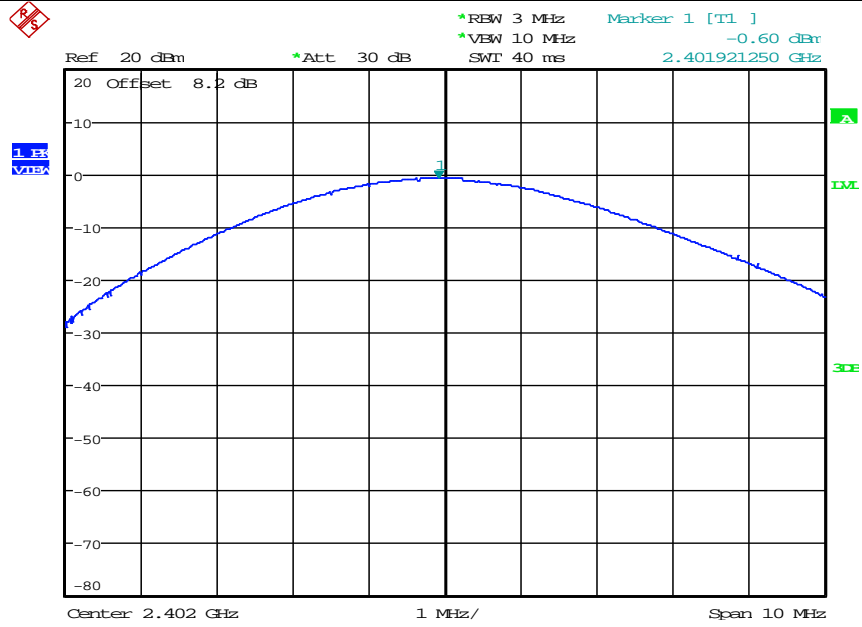
Date: 31.JUL.2019 21:56:21

$\pi$ /4DQPSK/HCH



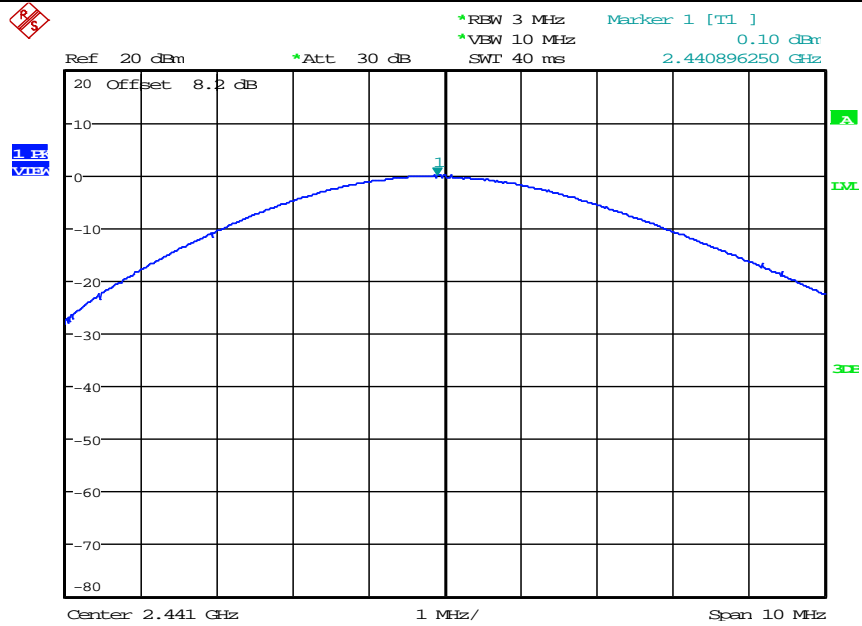
Date: 31.JUL.2019 21:58:19

8DPSK/LCH



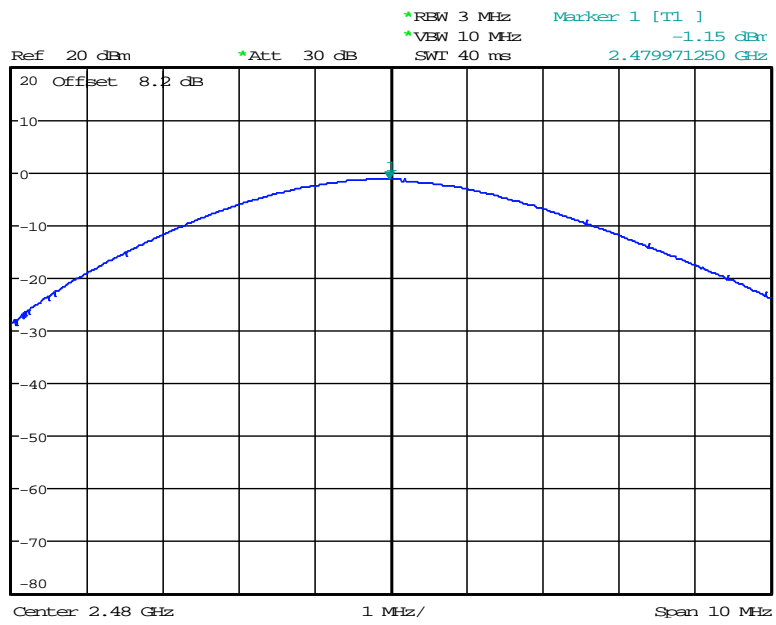
Date: 31.JUL.2019 22:00:53

8DPSK/MCH



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

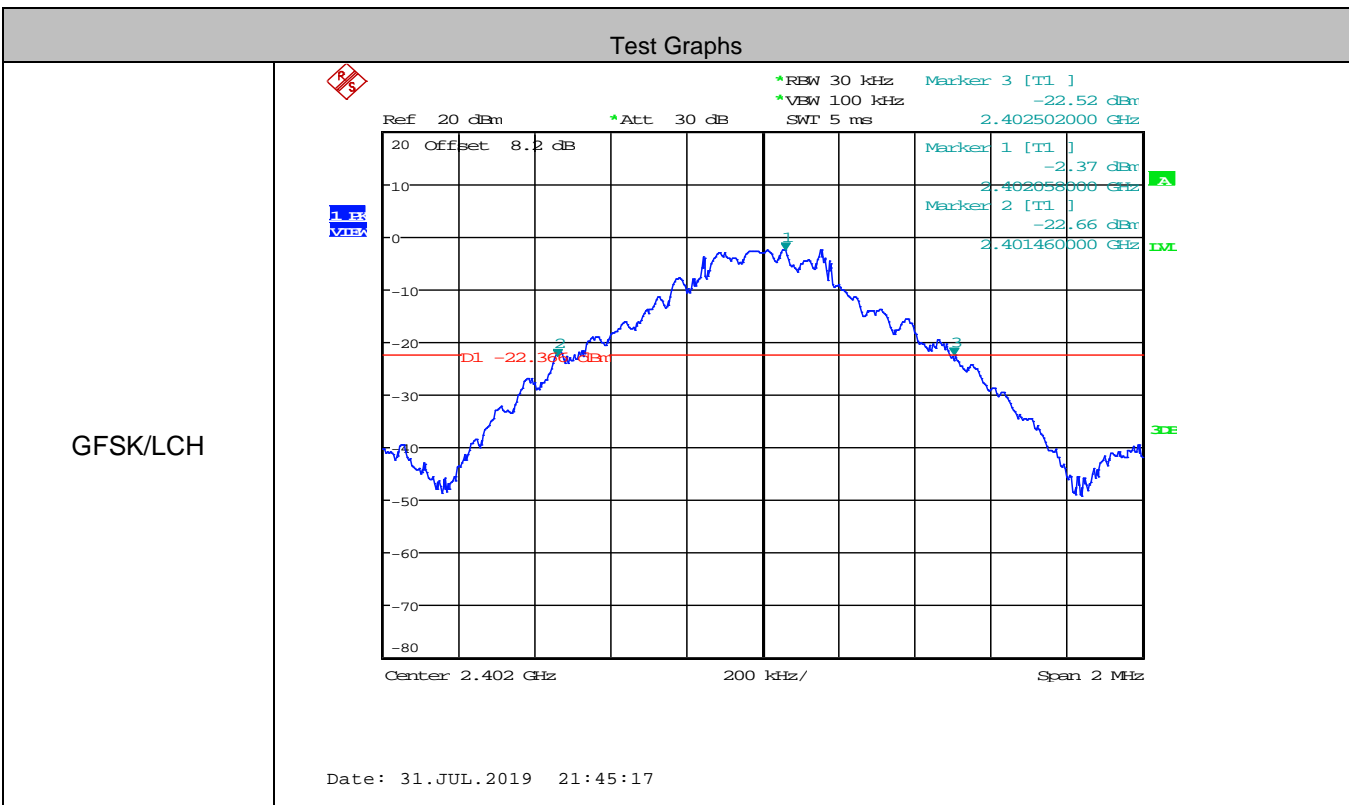
8DPSK/HCH



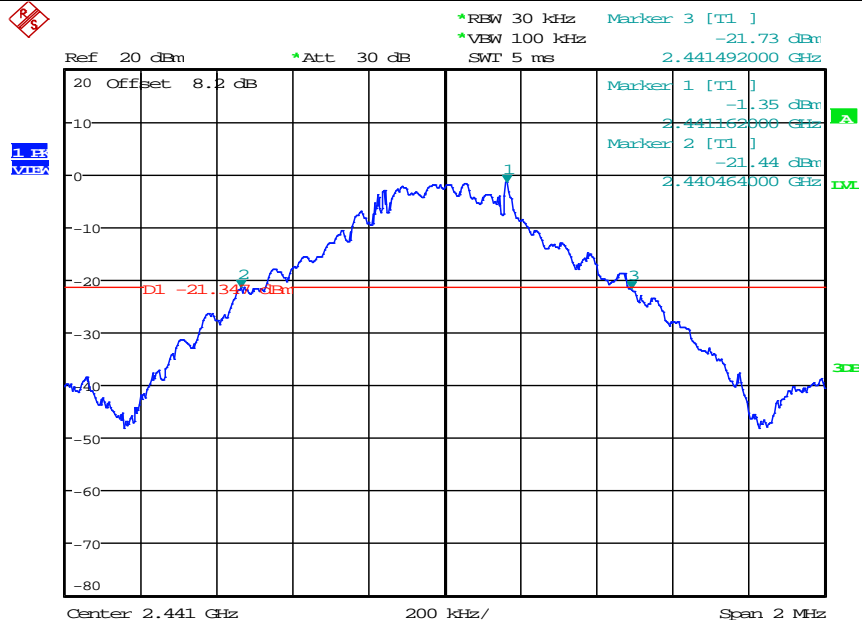
Date: 31.JUL.2019 22:05:05

**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

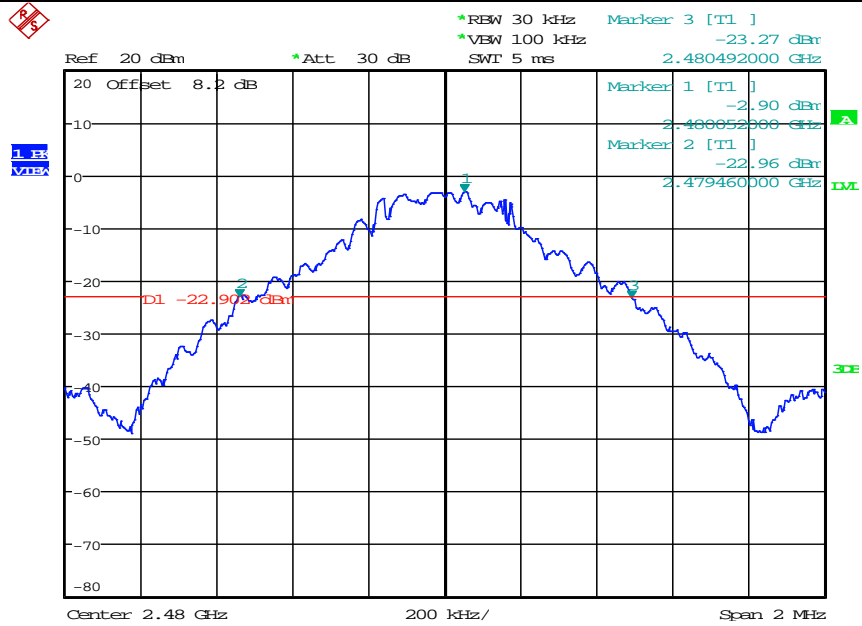


GFSK/MCH



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

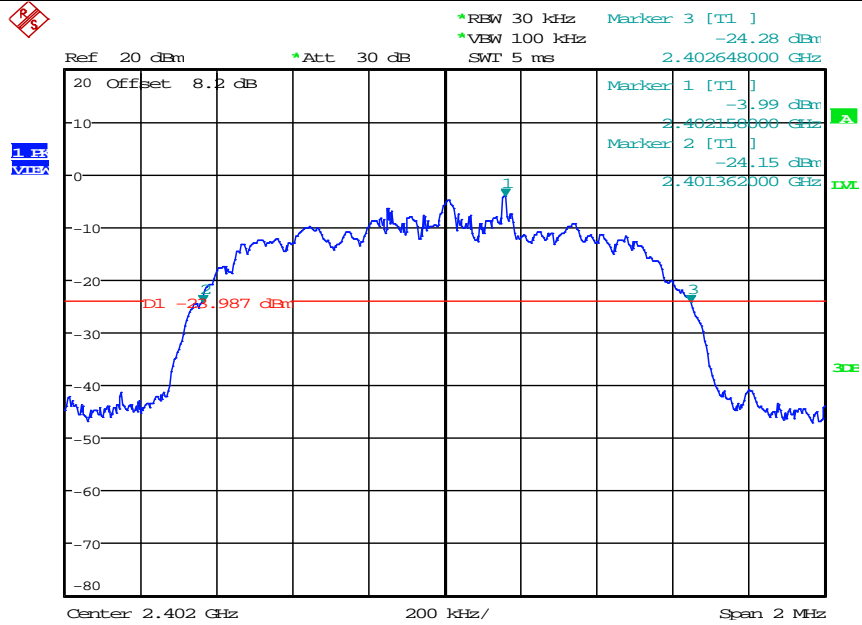
GFSK/HCH



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

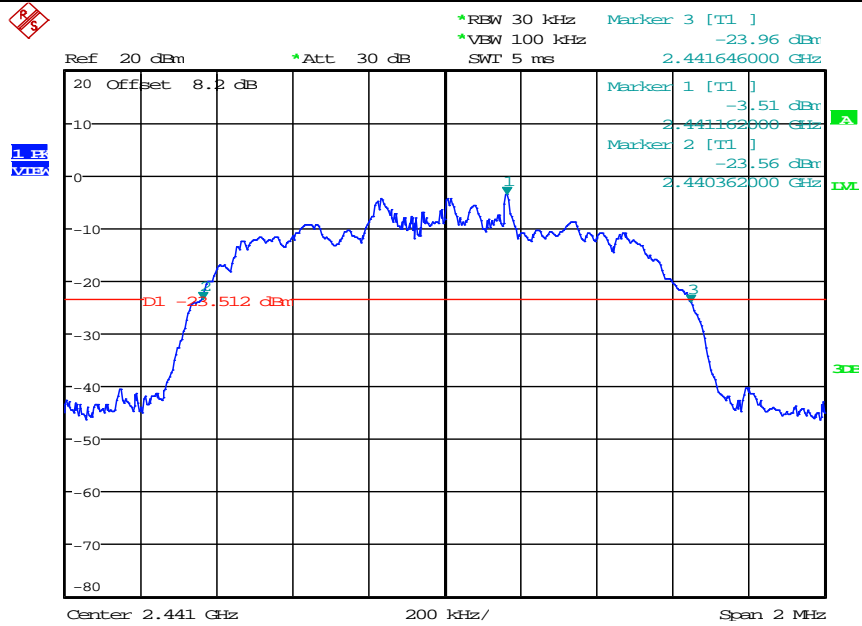


$\pi/4$ DQPSK/LCH



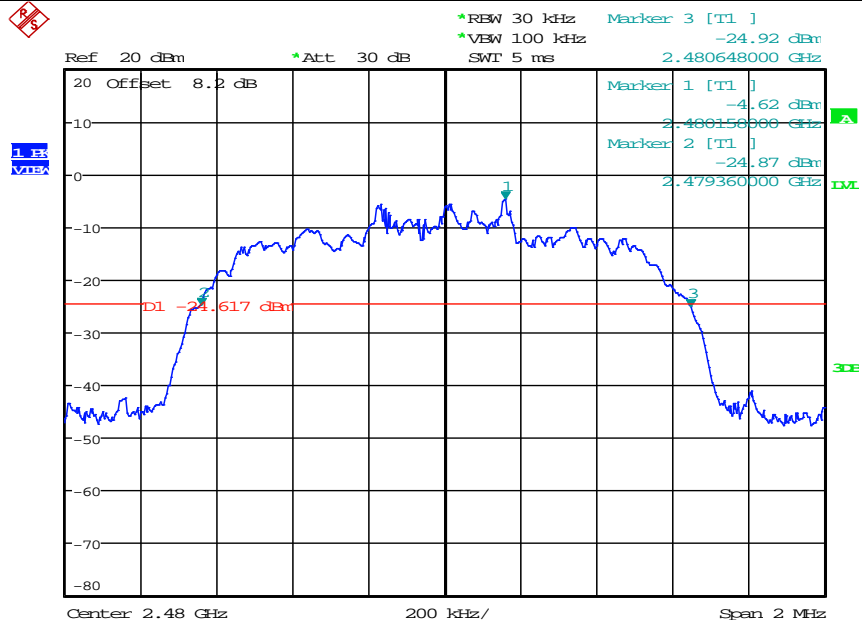
Date: 1.AUG.2019 12:42:06

$\pi/4$ DQPSK/MCH



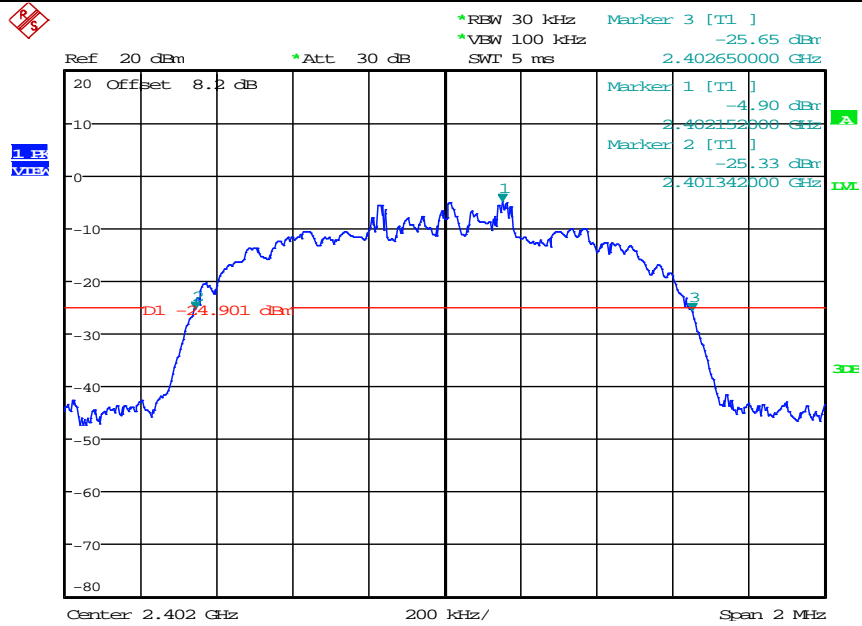
Date: 31.JUL.2019 21:55:45

$\pi/4$ DQPSK/HCH



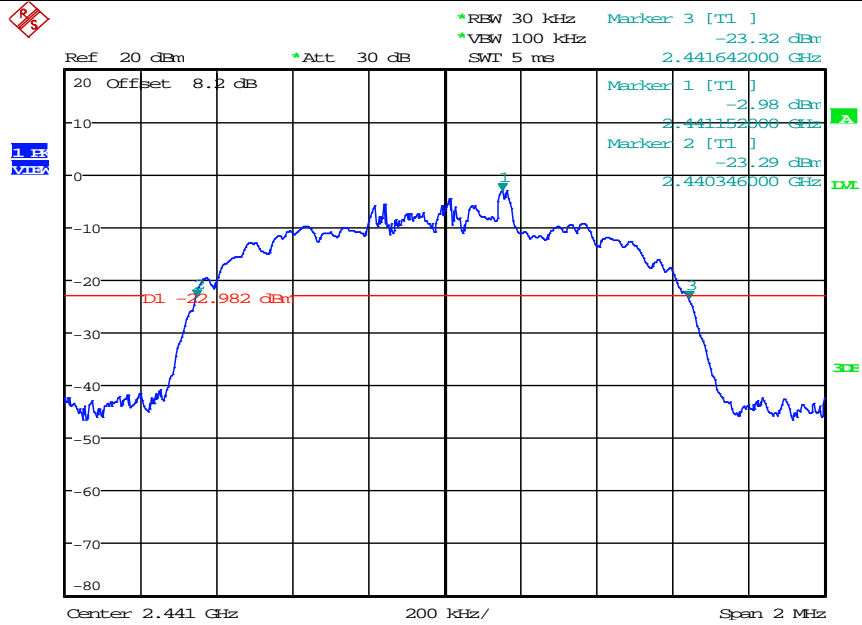
Date: 31.JUL.2019 21:57:42

8DPSK/LCH



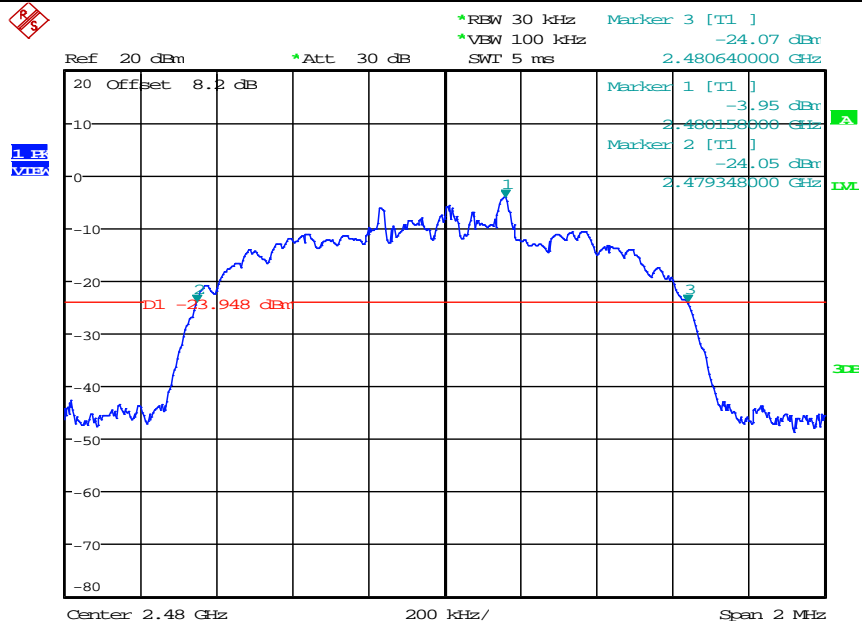
Date: 31.JUL.2019 22:00:16

8DPSK/MCH



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

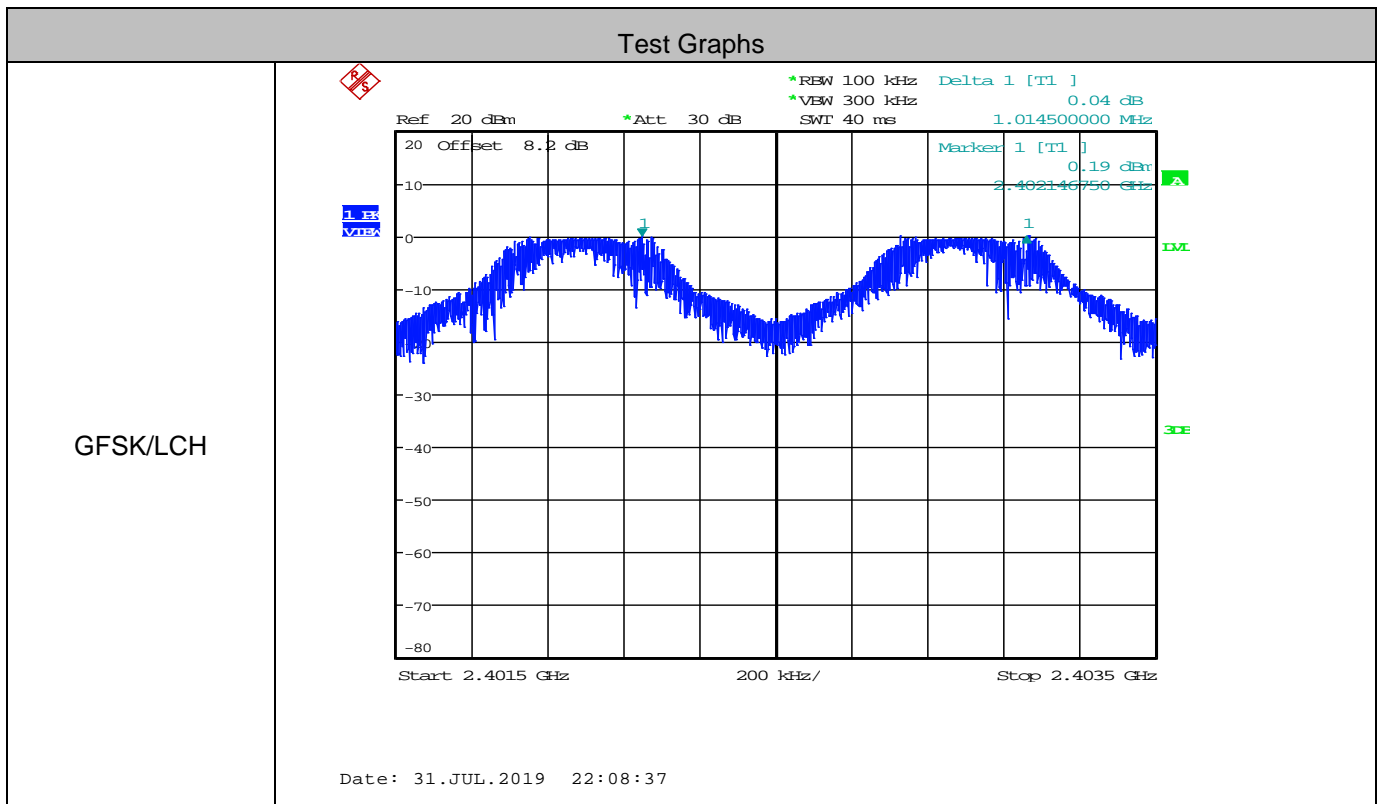
8DPSK/HCH



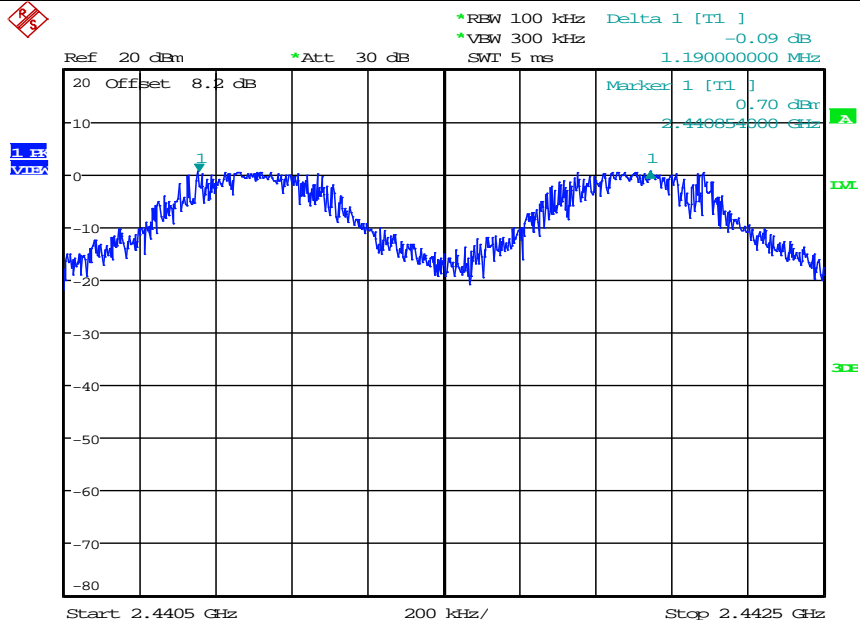
Date: 31.JUL.2019 22:04:28

### 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

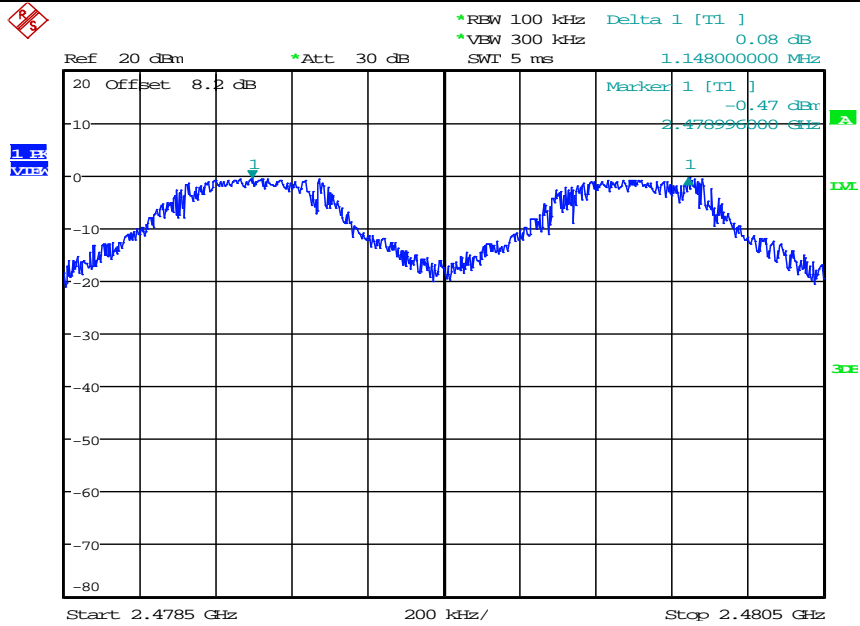


GFSK/MCH



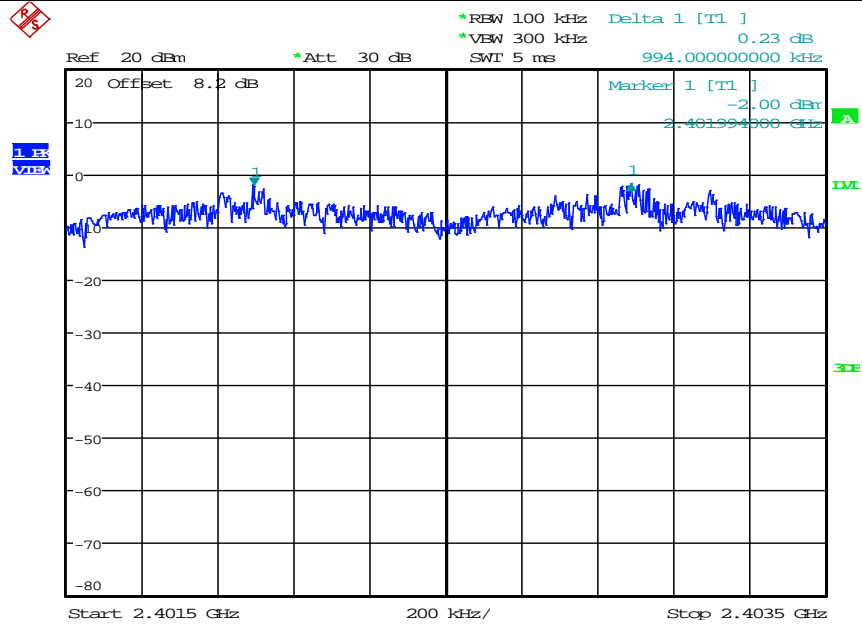
Date: 31.JUL.2019 22:10:44

GFSK/HCH



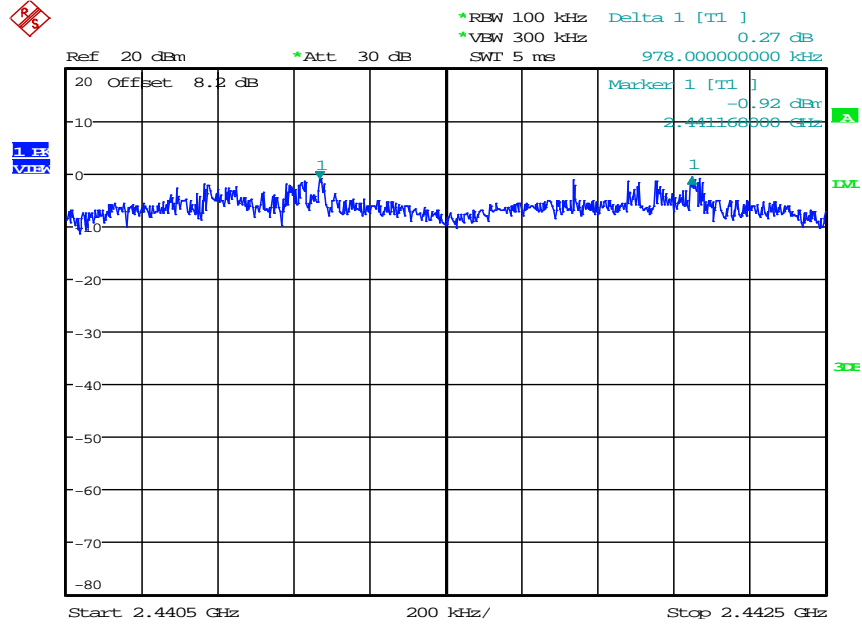
Date: 31.JUL.2019 22:11:19

$\pi/4$ DQPSK/LCH



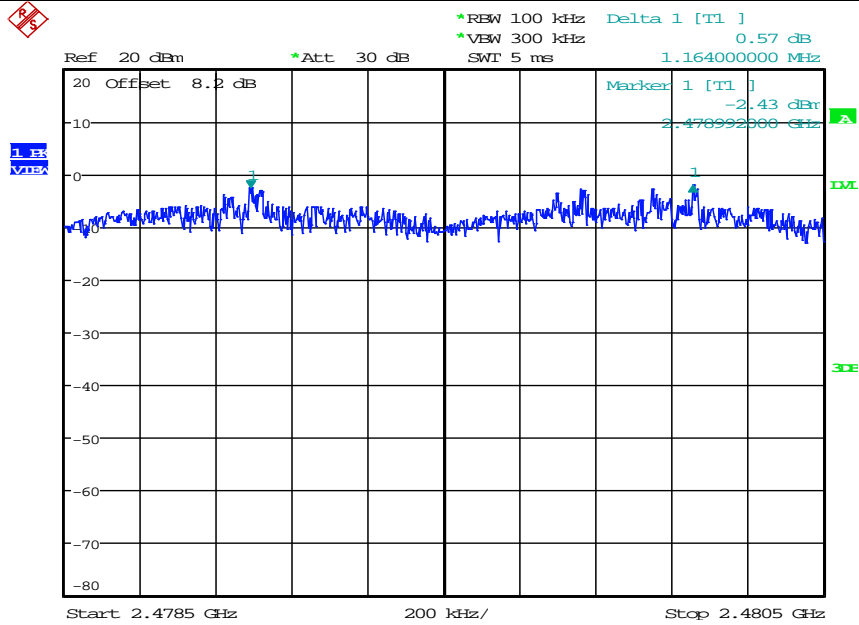
Date: 31.JUL.2019 22:16:32

$\pi/4$ DQPSK/MCH



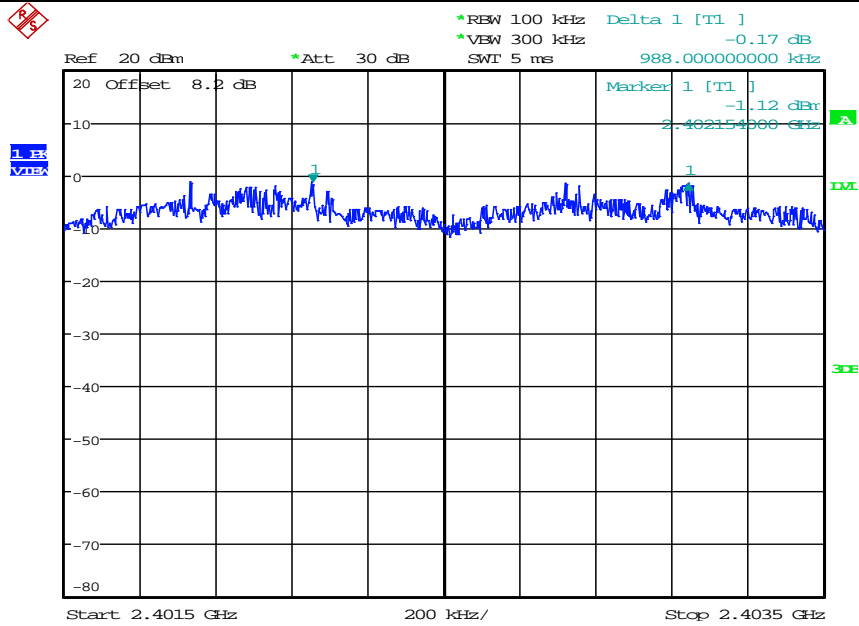
Date: 31.JUL.2019 22:18:52

$\pi$ /4DQPSK/HCH



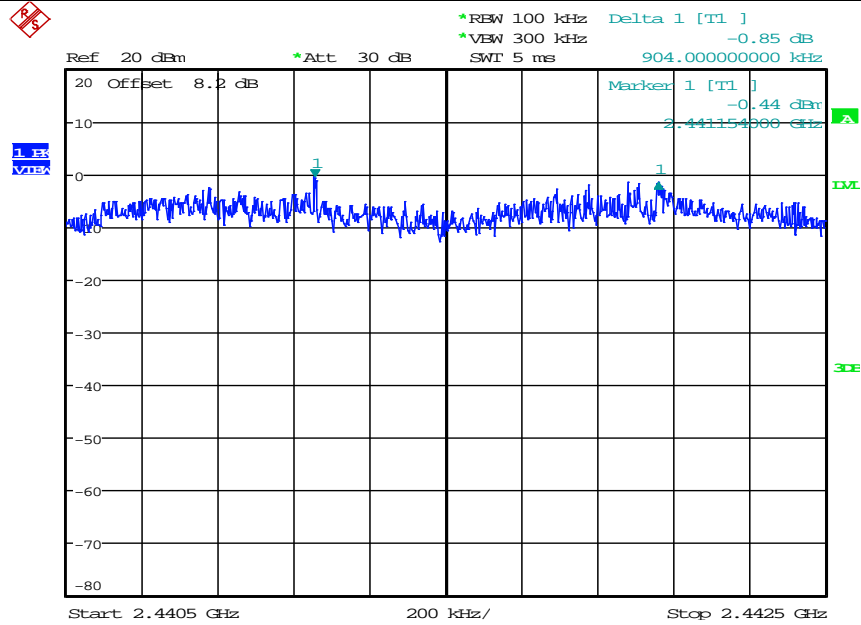
Date: 31.JUL.2019 22:35:20

8DPSK/LCH



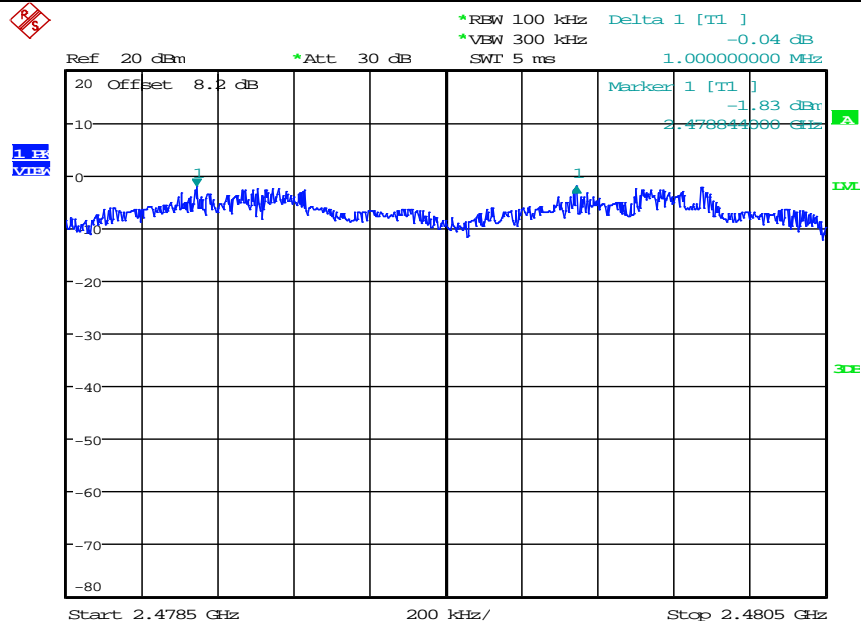
Date: 31.JUL.2019 22:25:41

8DPSK/MCH



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

8DPSK/HCH



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

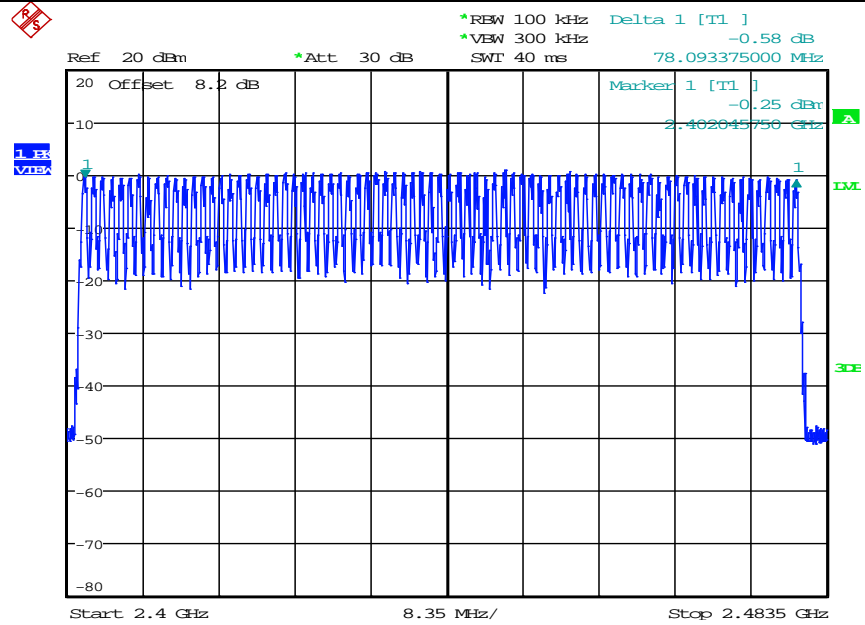
### A.4 Hopping Channel Number

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



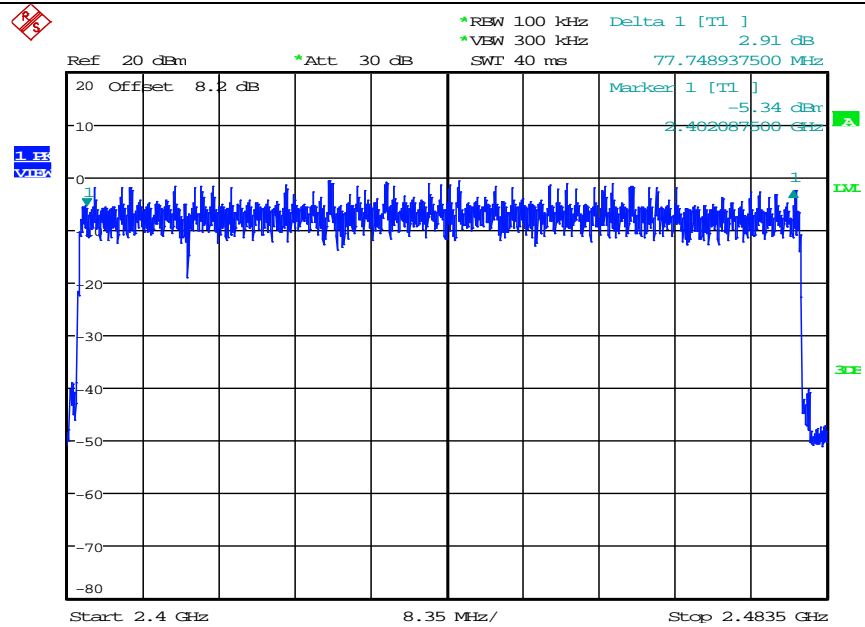
Test Graphs

GFSK/Hop



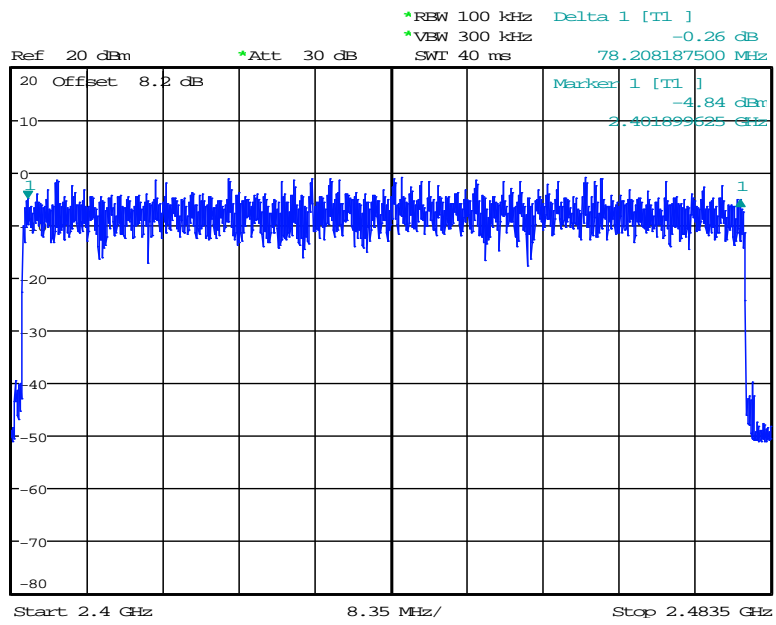
Date: 31.JUL.2019 22:15:25

$\pi/4$ DQPSK/Hop



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

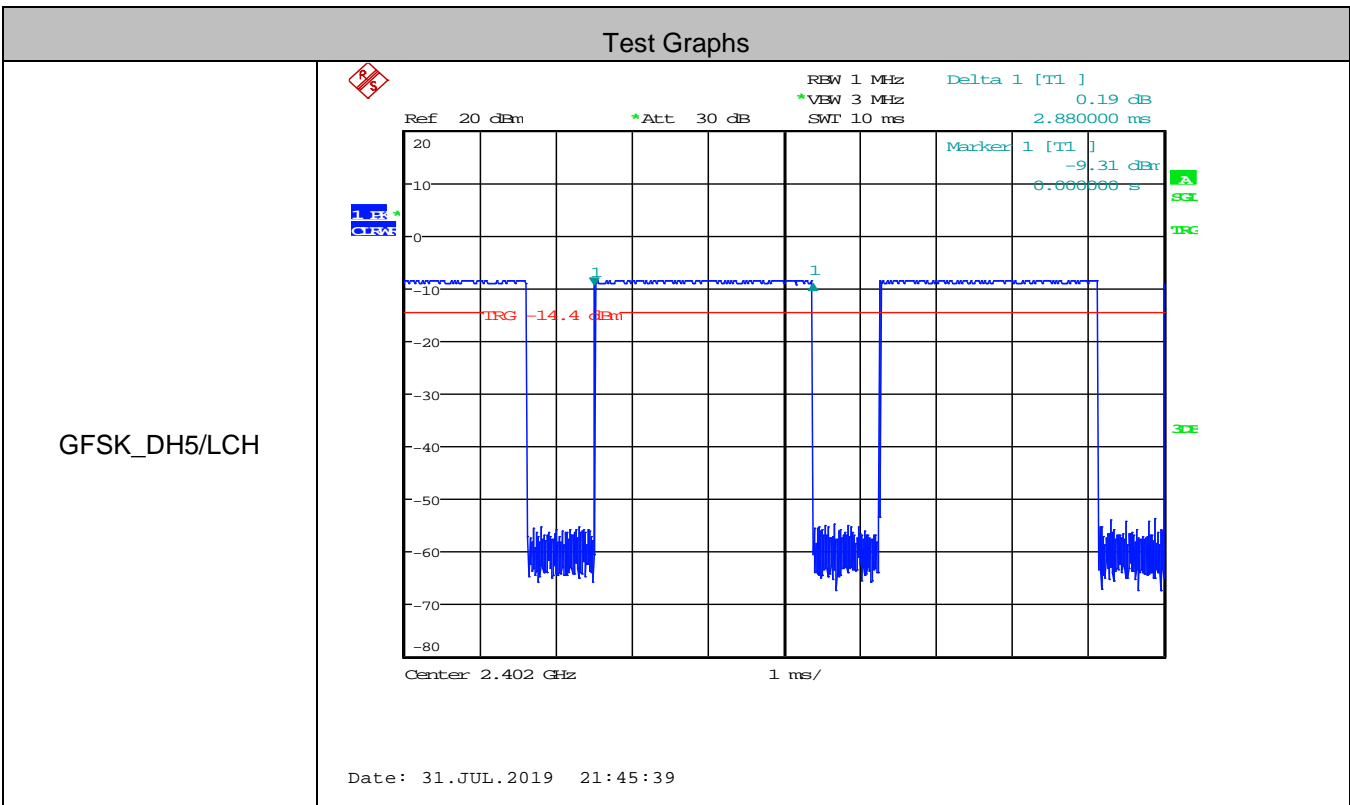
8DPSK/Hop



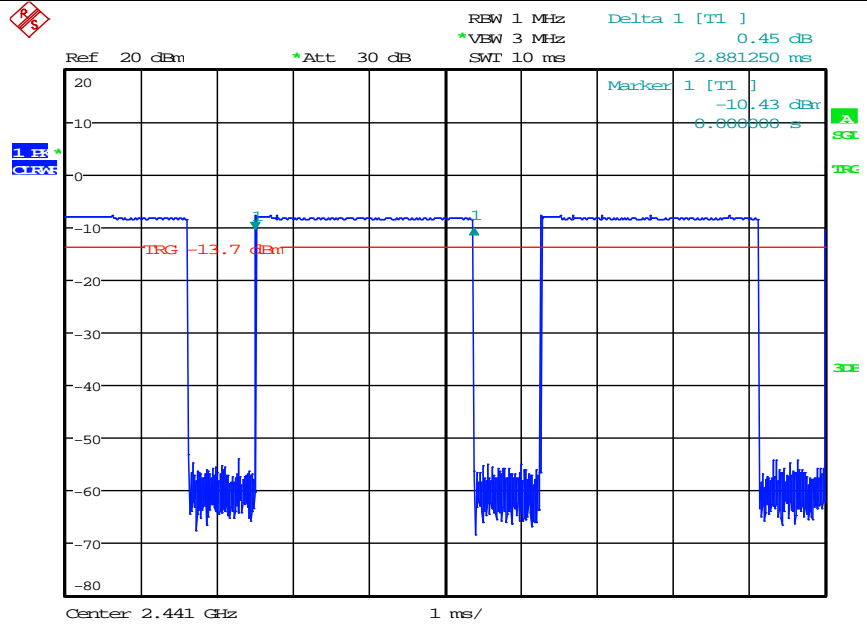
Date: 31.JUL.2019 22:34:13

**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
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	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

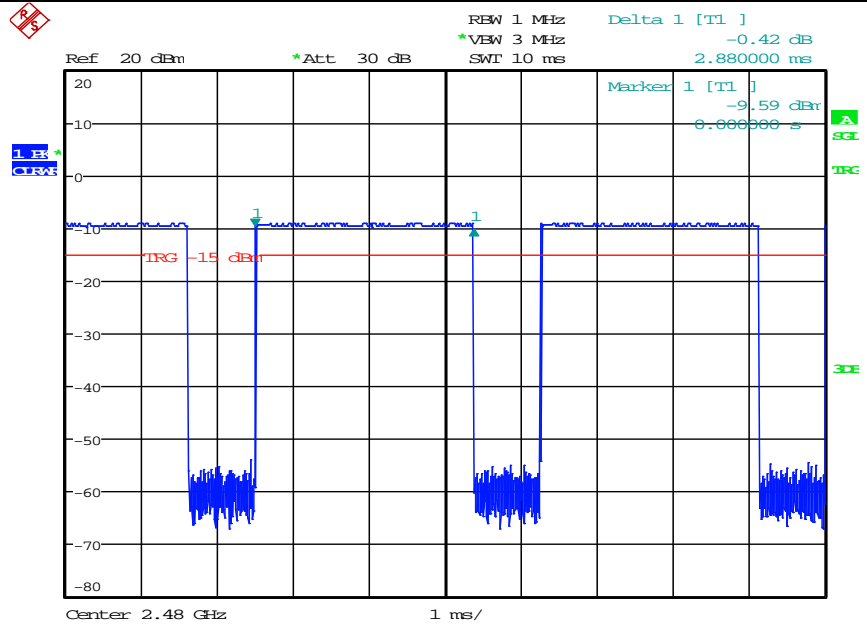


GFSK\_DH5/MCH



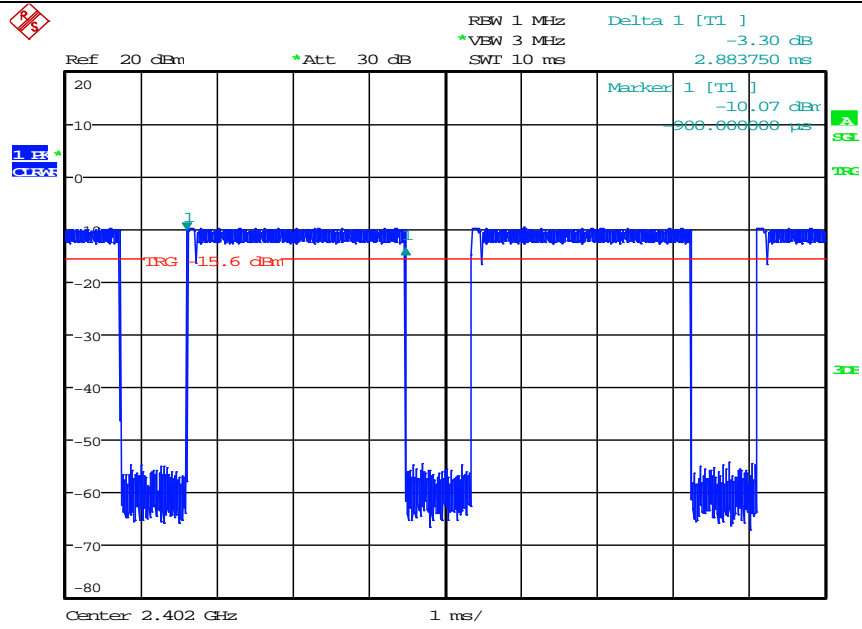
Date: 31.JUL.2019 21:49:14

GFSK\_DH5/HCH



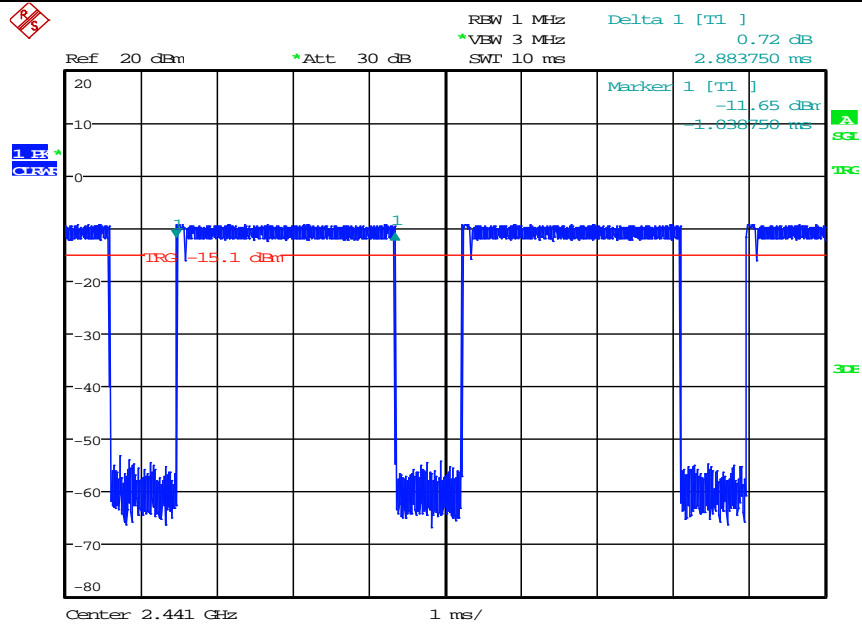
Date: 31.JUL.2019 21:50:56

$\pi/4$ DQPSK  
\_2DH5/LCH



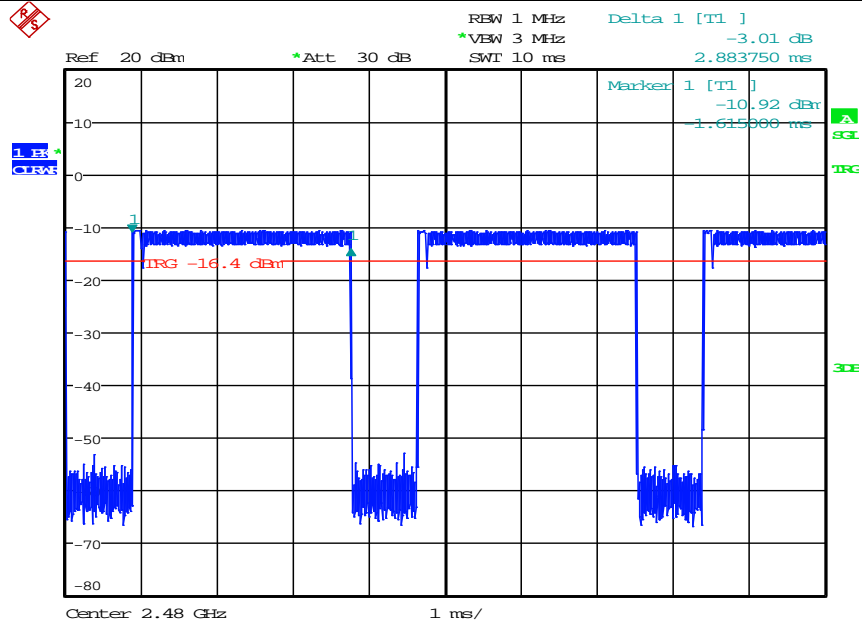
Date: 1.AUG.2019 12:42:28

$\pi/4$ DQPSK  
\_2DH5/MCH



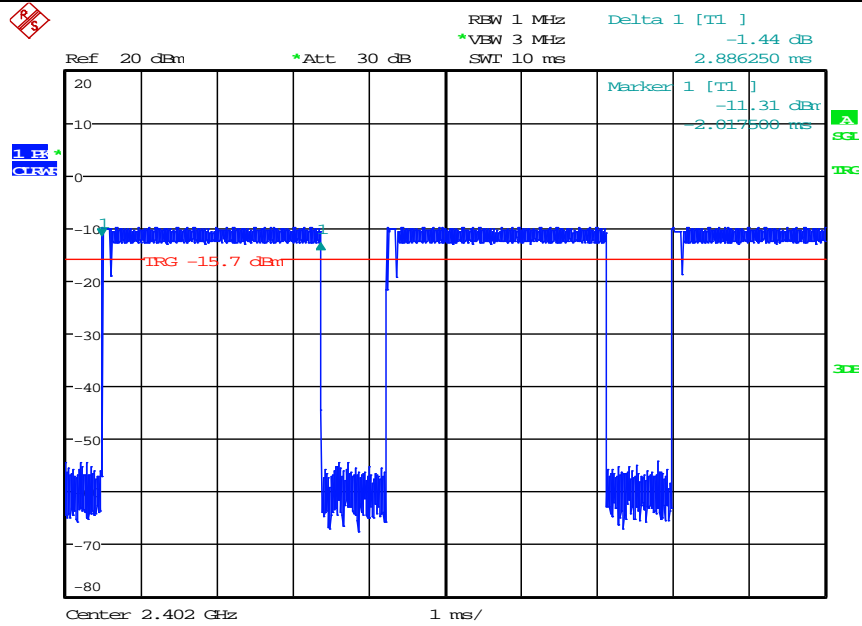
Date: 31.JUL.2019 21:56:06

$\pi/4$ DQPSK  
\_2DH5/HCH



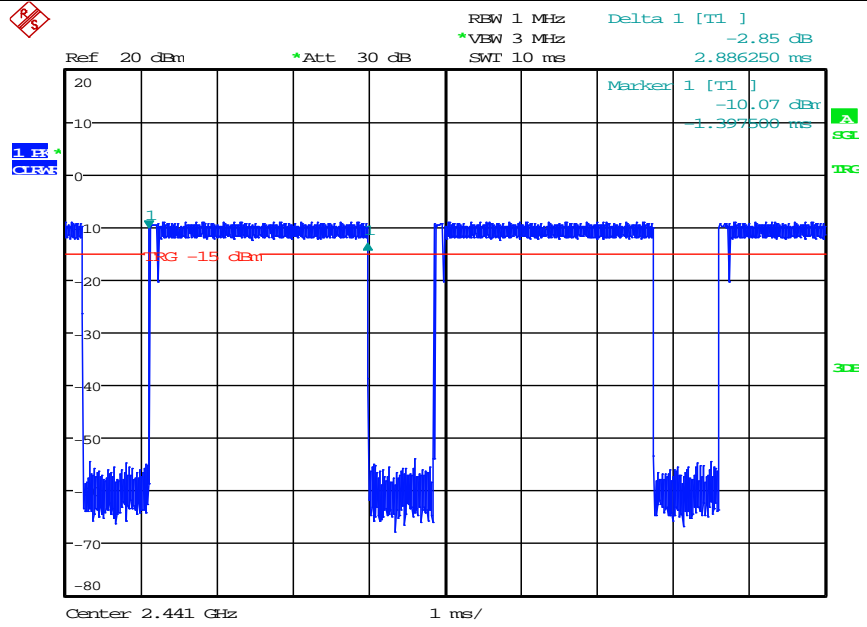
Date: 31.JUL.2019 21:58:04

8DPSK \_3DH5/LCH



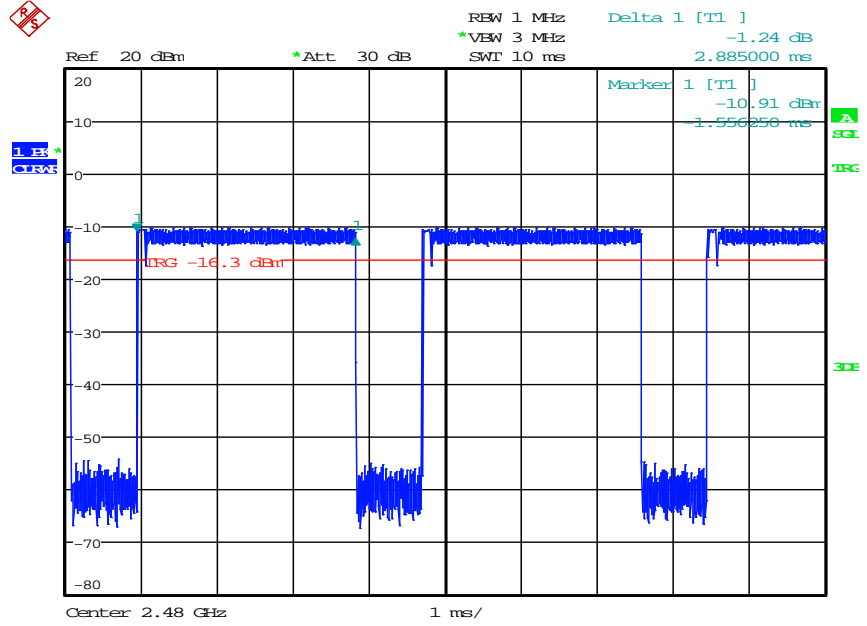
Date: 31.JUL.2019 22:00:38

8DPSK\_3DH5/MCH



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

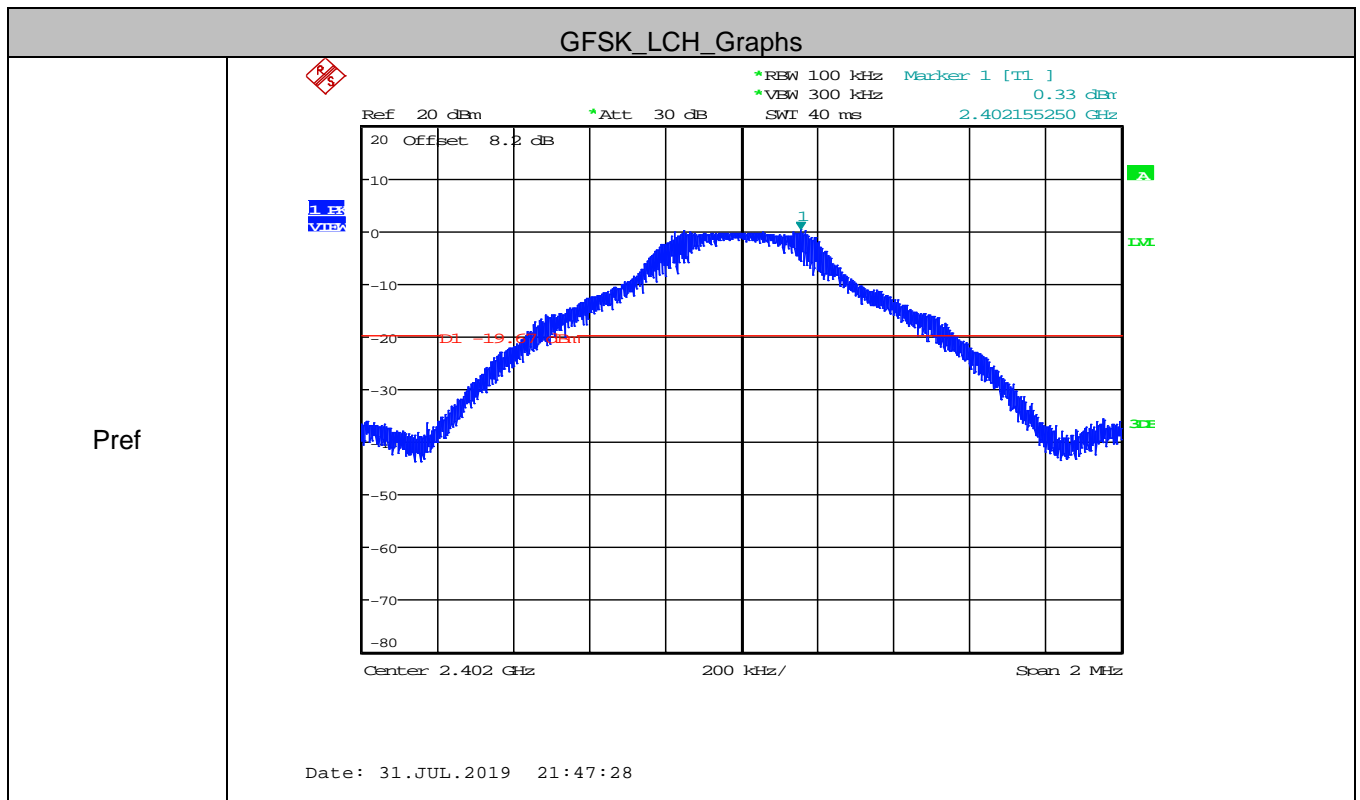
8DPSK\_3DH5/HCH



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

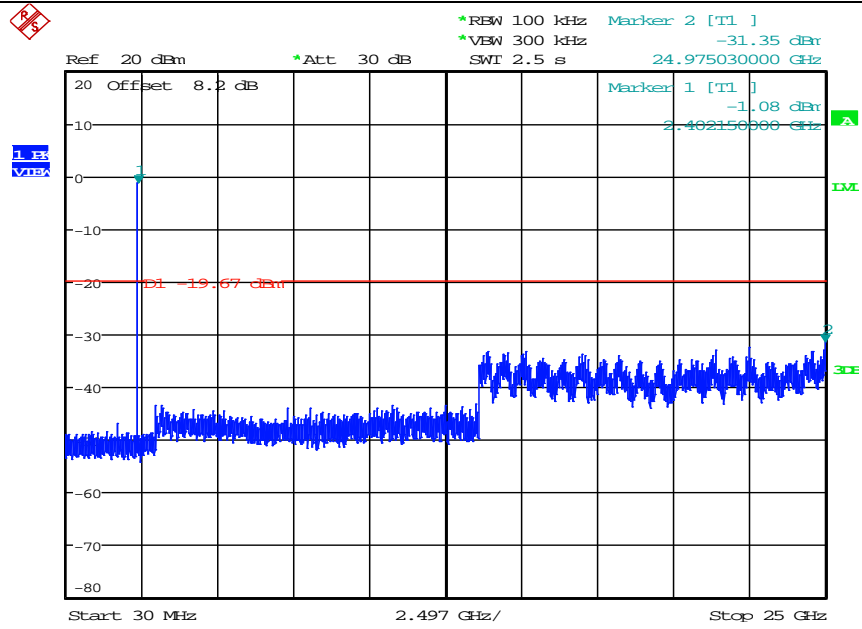
### A.6 RF Conducted Spurious Emissions

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





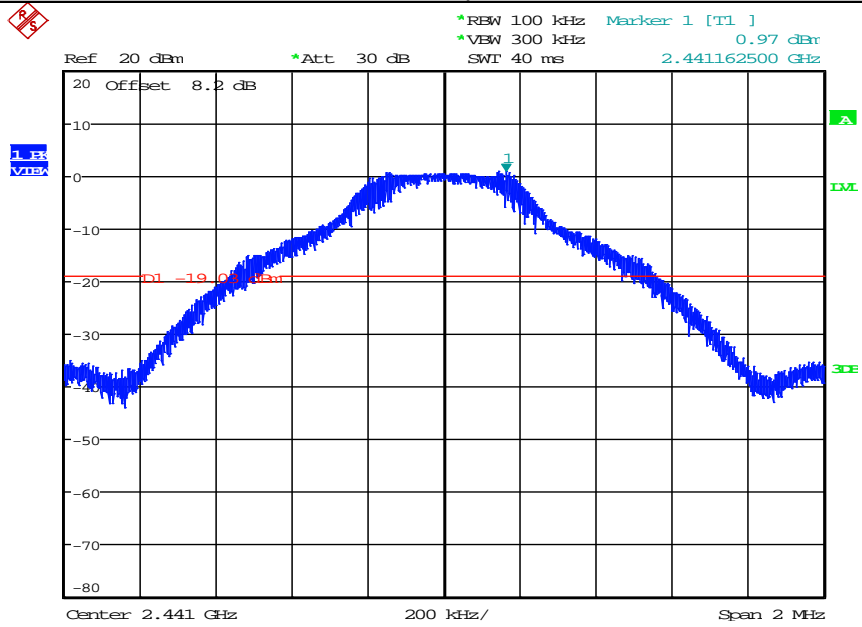
P<sub>u</sub>w



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

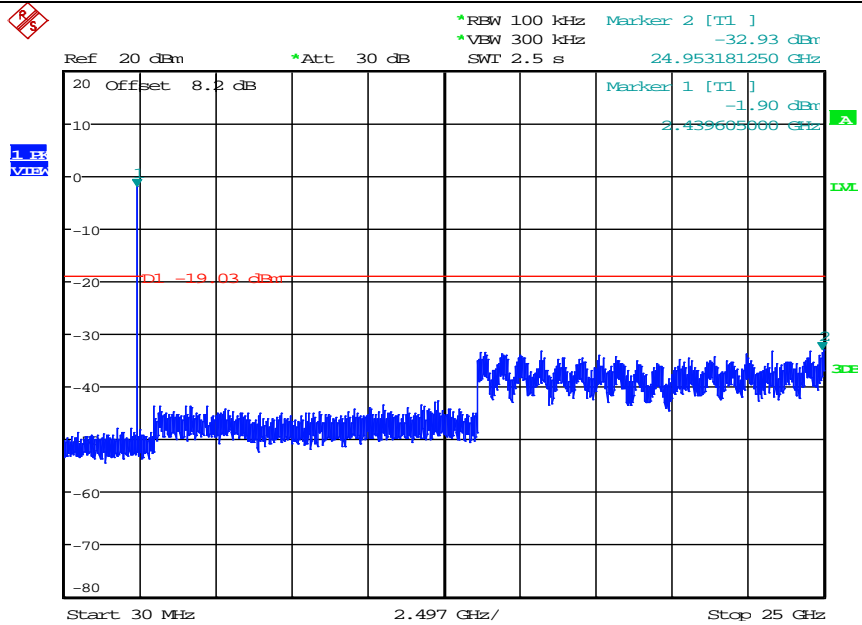
### GFSK\_MCH\_Graphs

Pref



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

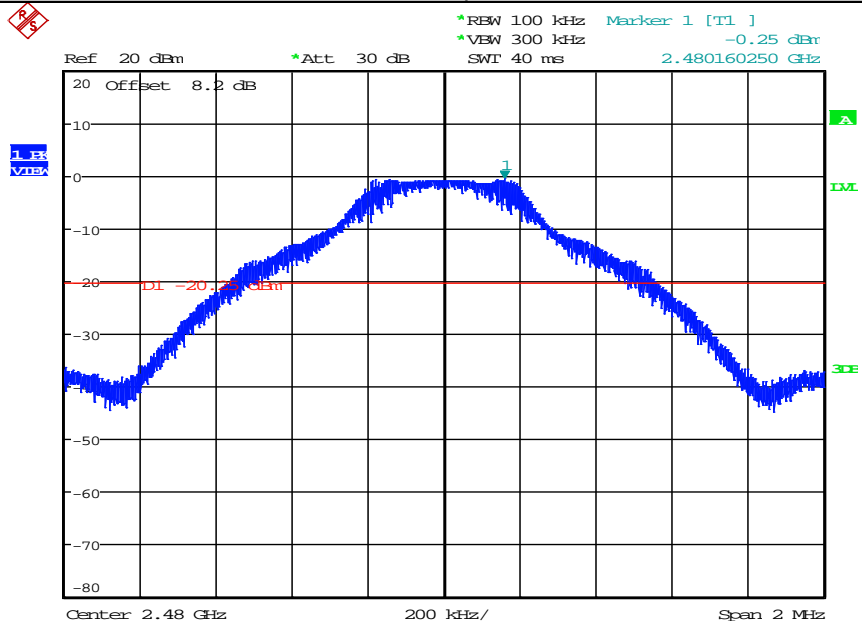
Puw



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

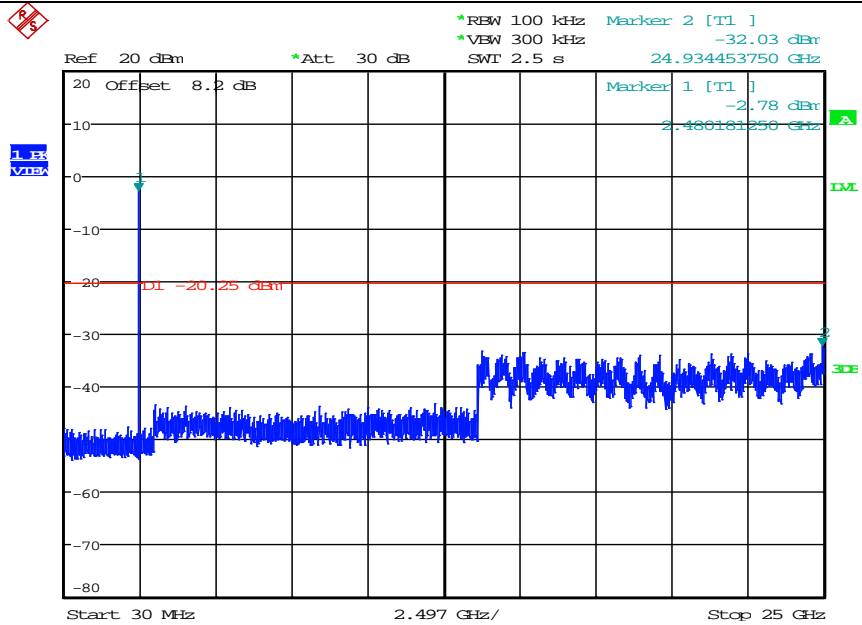
### GFSK\_HCH\_Graphs

Pref



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

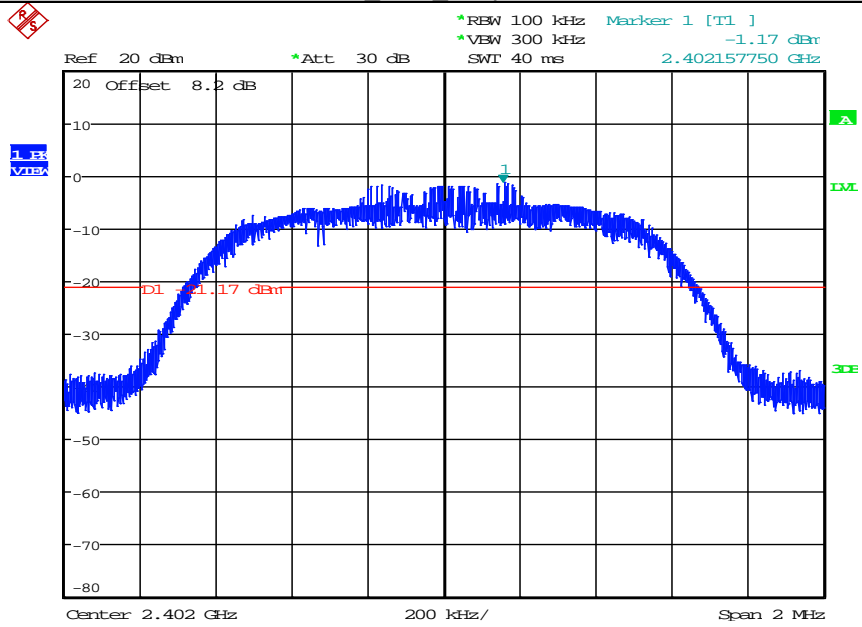
Puw



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

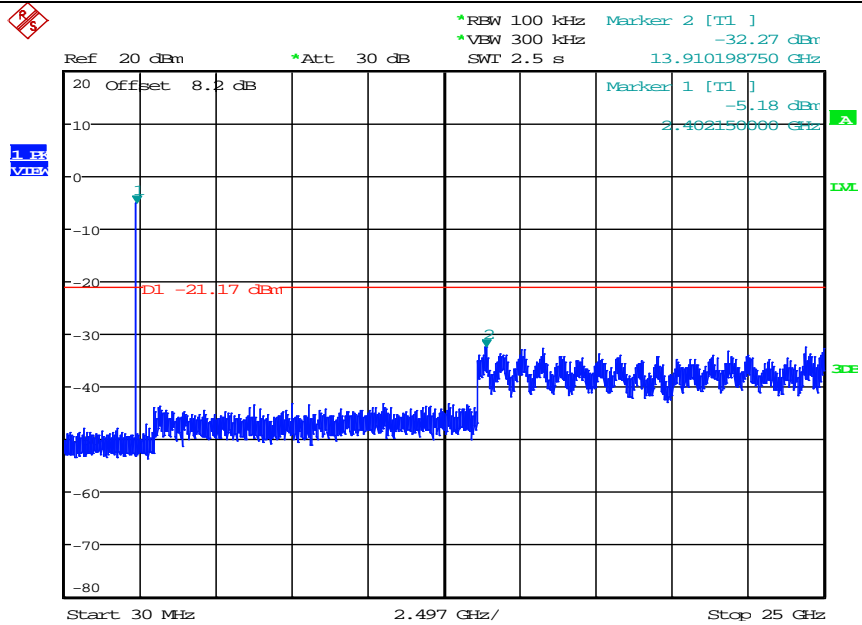
$\pi/4$ DQPSK\_LCH\_Graphs

Pref



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

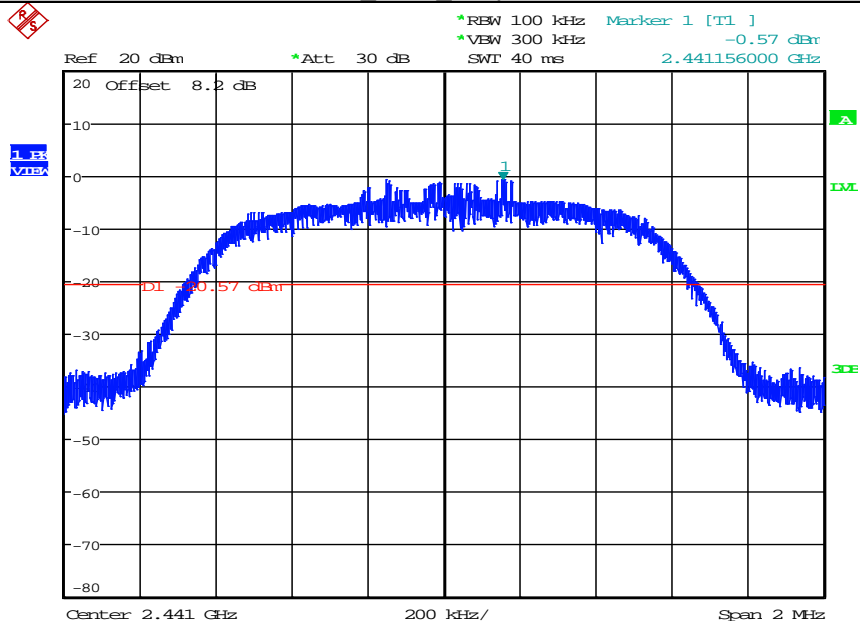
Puw



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

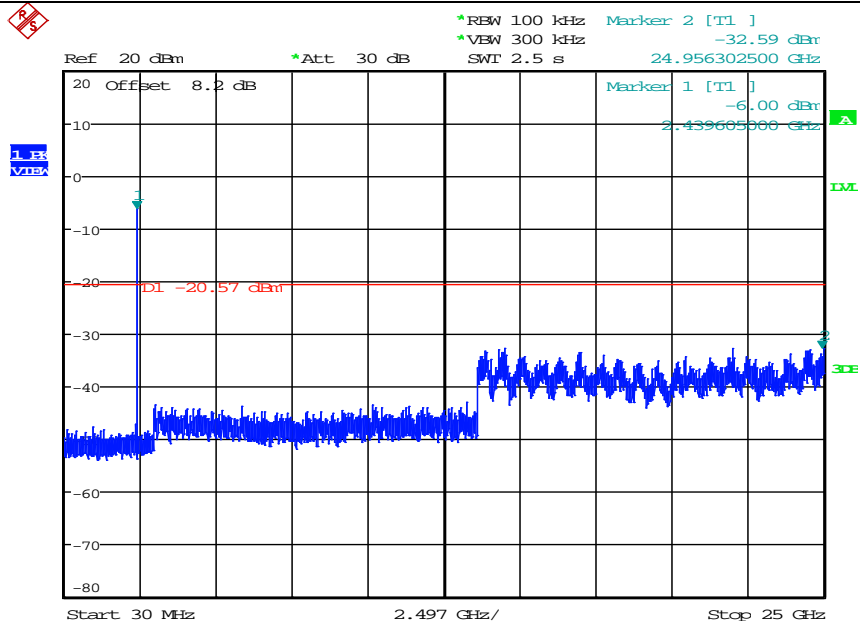
$\pi/4$ DQPSK\_MCH\_Graphs

Pref



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

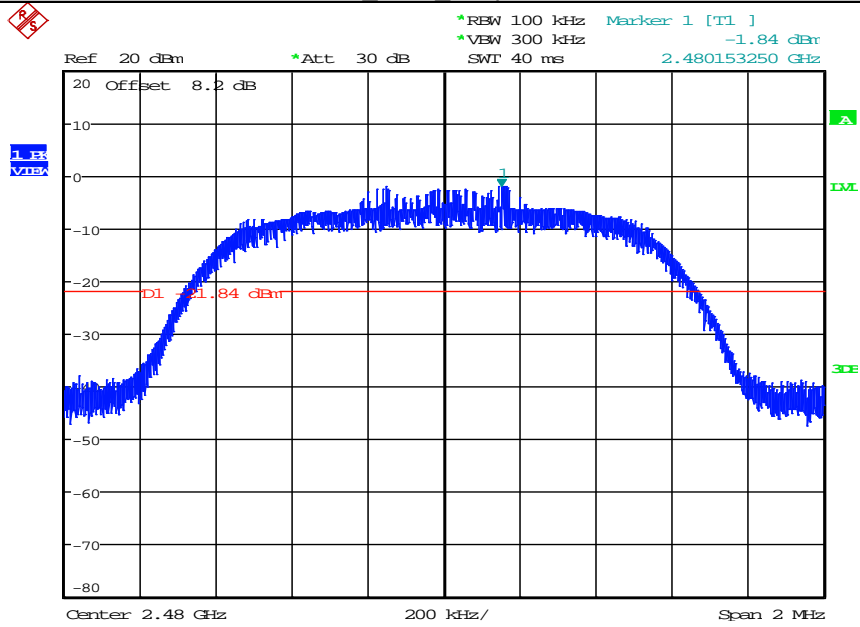
Puw



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

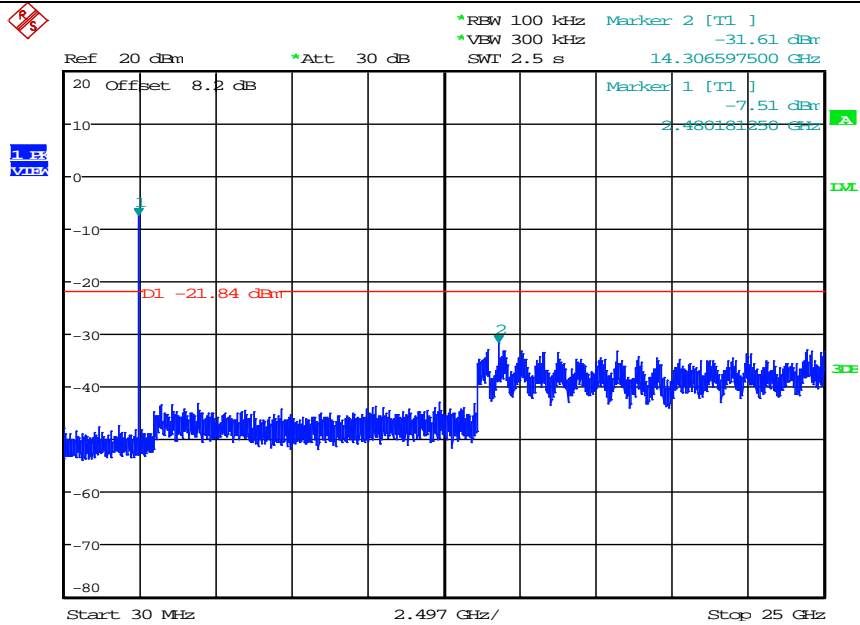
$\pi/4$ DQPSK\_HCH\_Graphs

Pref



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

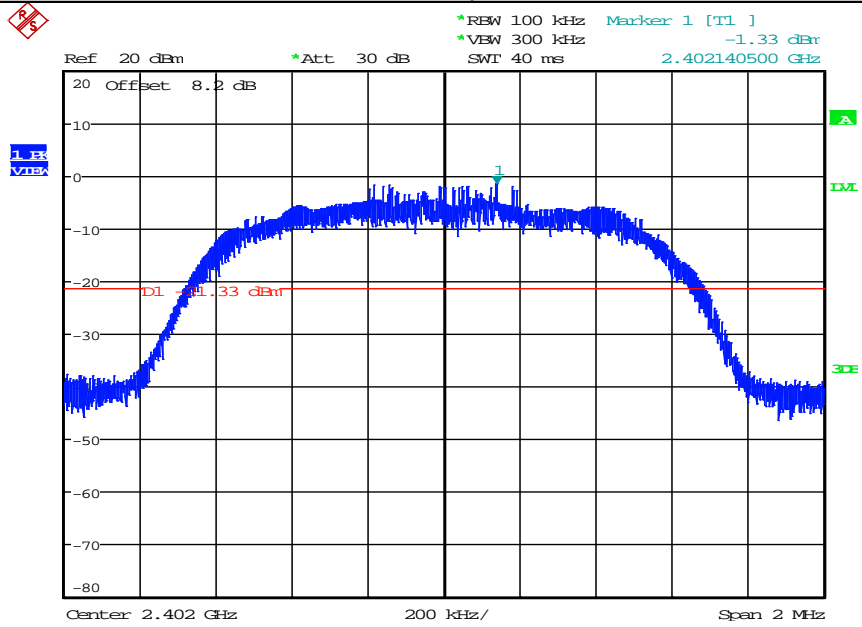
Puw



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

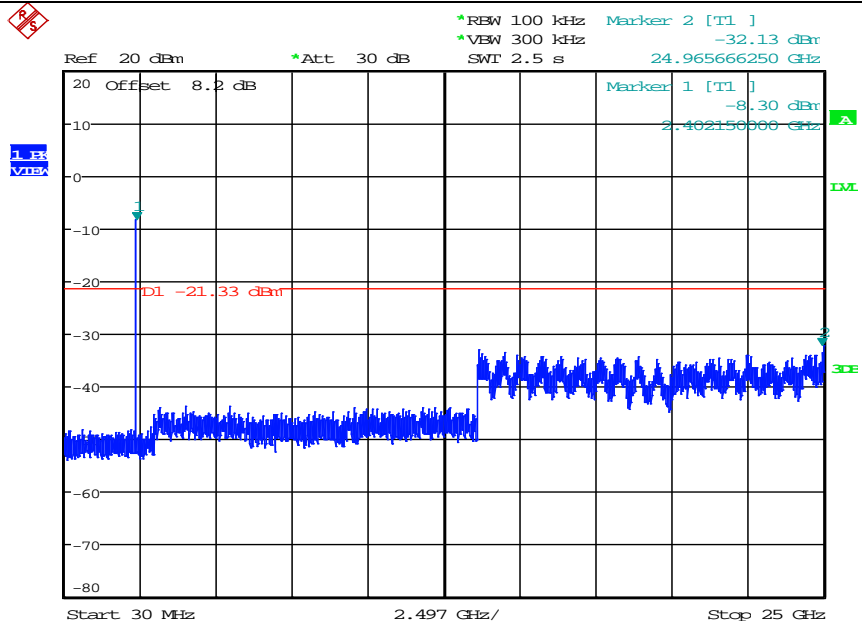
8DPSK\_LCH\_Graphs

Pref



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

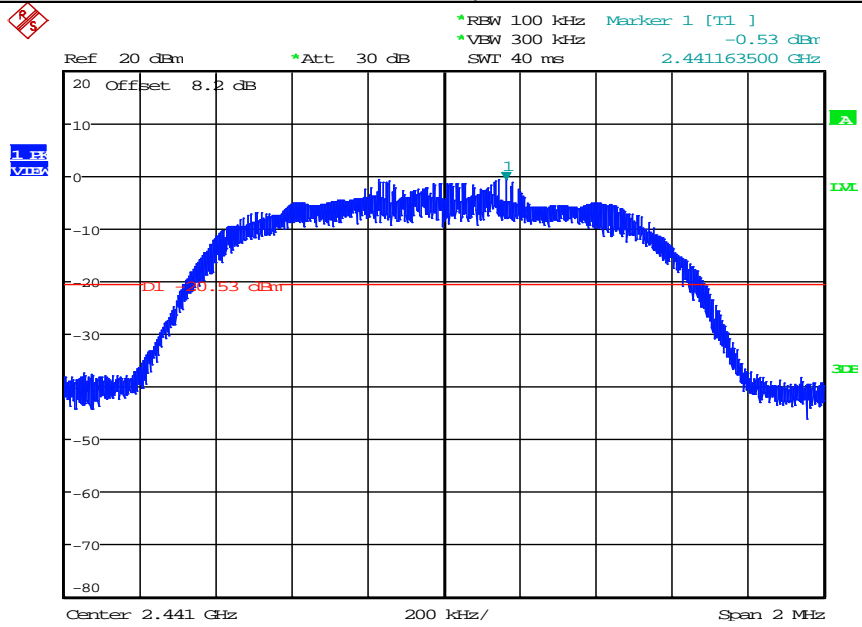
Puw



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

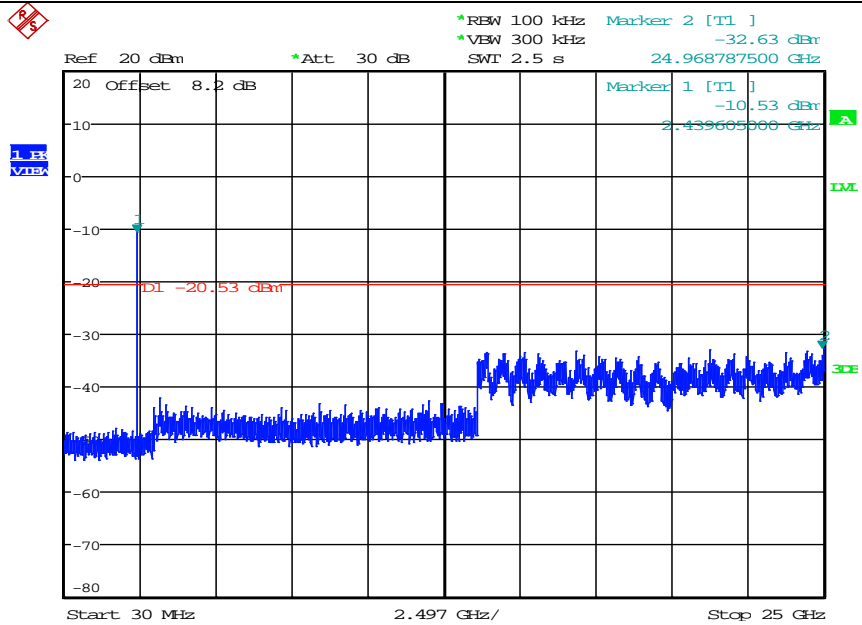
### 8DPSK\_MCH\_Graphs

Pref



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

Puw

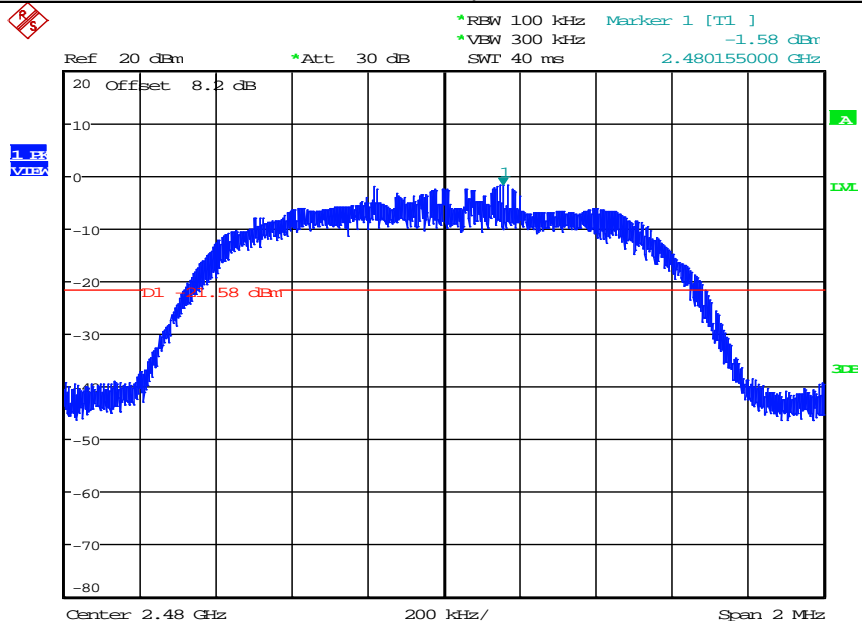


Date: 31.JUL.2019 22:03:49



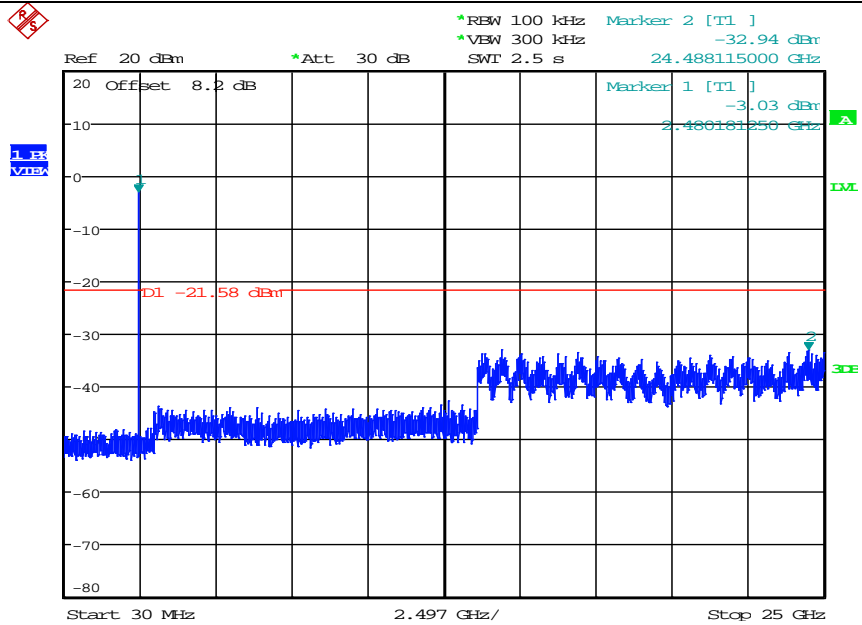
### 8DPSK\_HCH\_Graphs

Pref



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

Puw



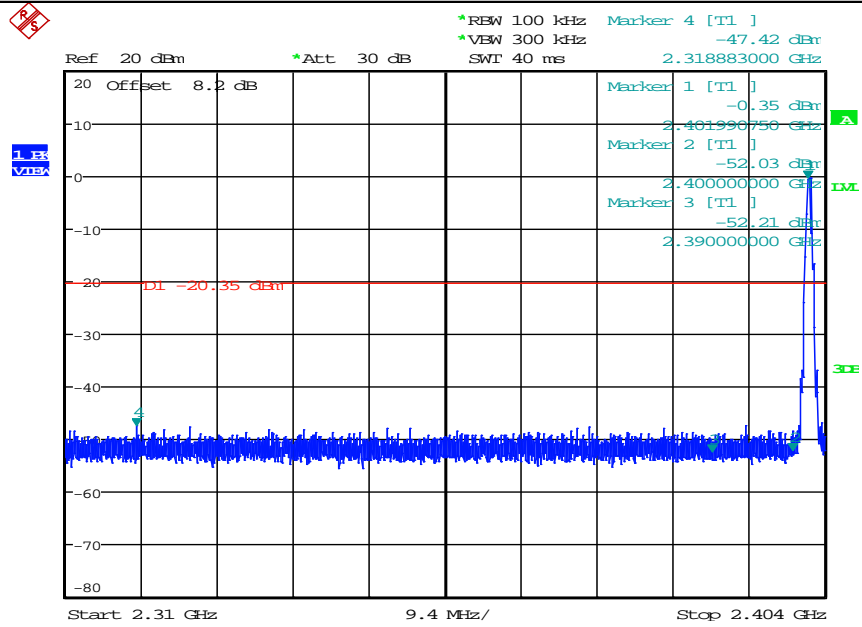
Date: 1.AUG.2019 12:46:15

## 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

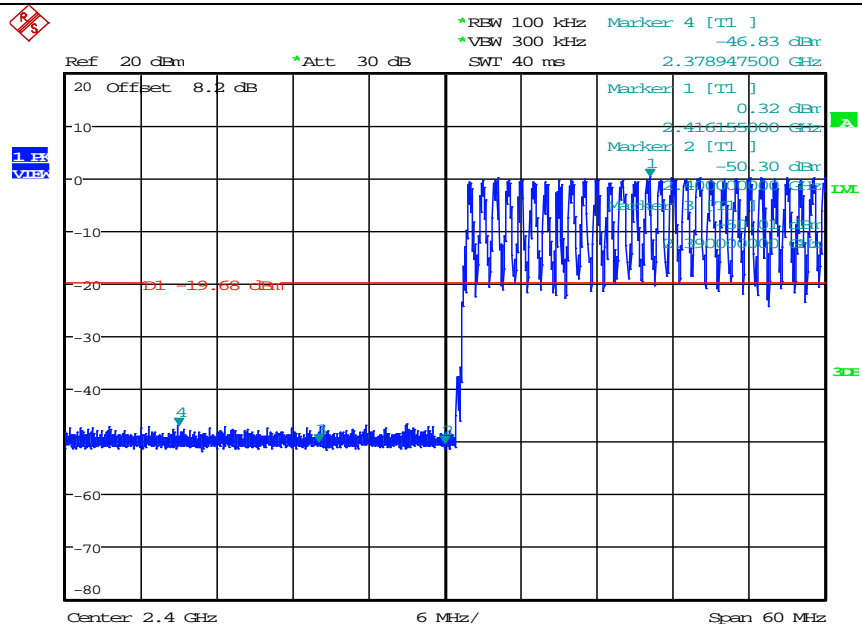
### Test Graphs

GFSK/LCH/No Hop



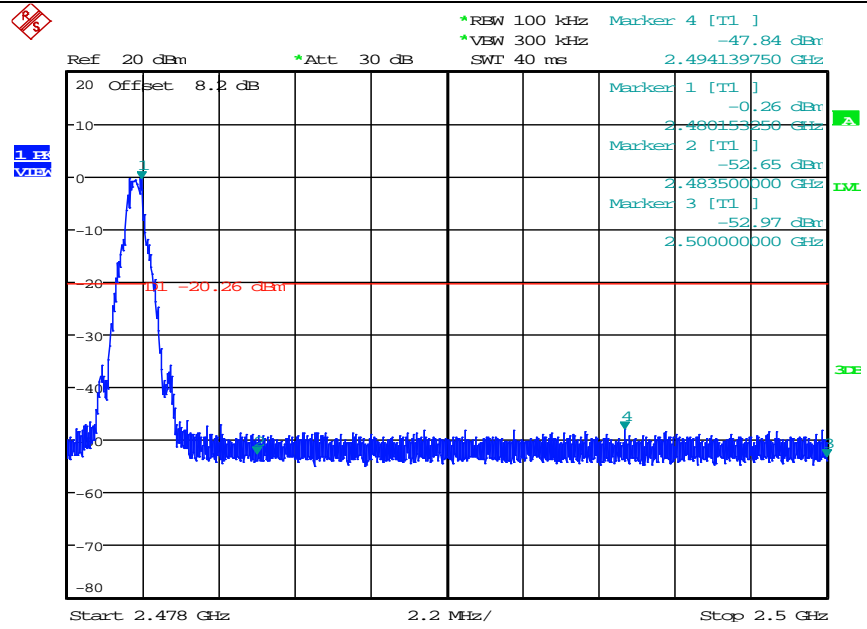
Date: 31.JUL.2019 21:47:15

GFSK/LCH/Hop



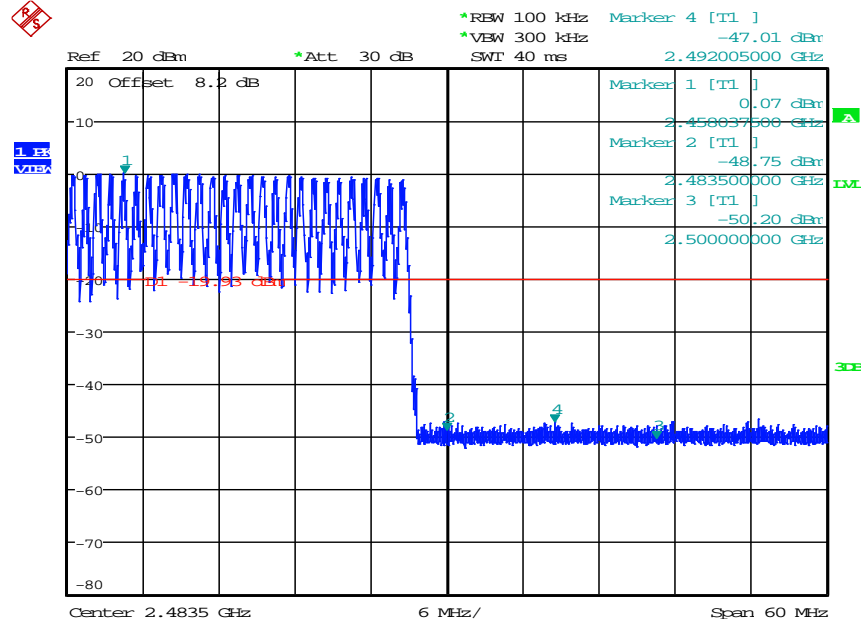
Date: 31.JUL.2019 22:10:19

GFSK/HCH/No Hop



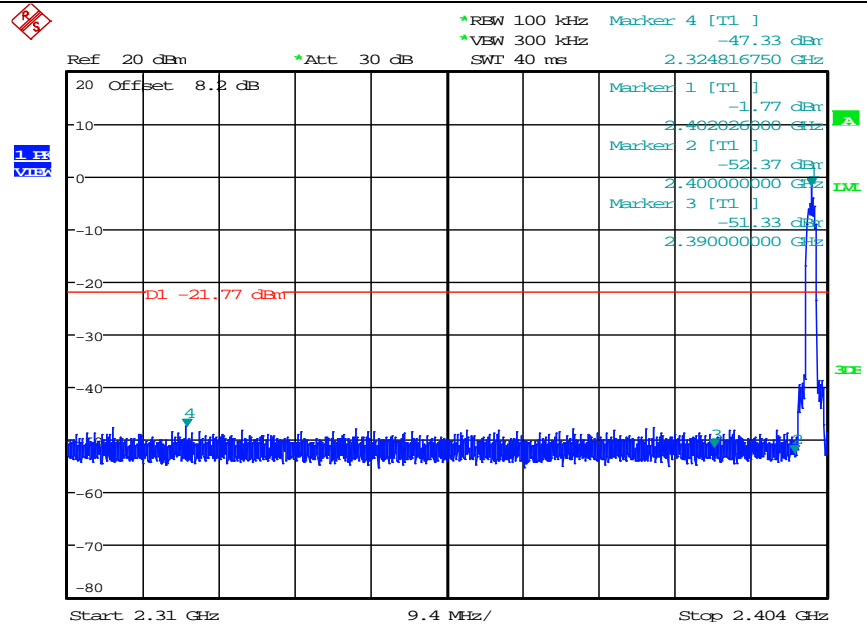
Date: 31.JUL.2019 21:51:27

GFSK/HCH/Hop



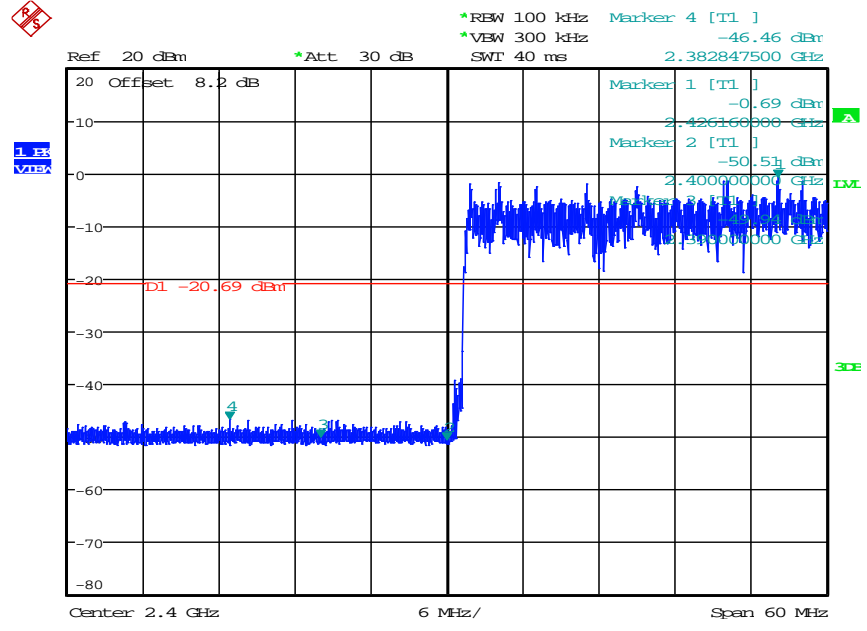
Date: 31.JUL.2019 22:12:42

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



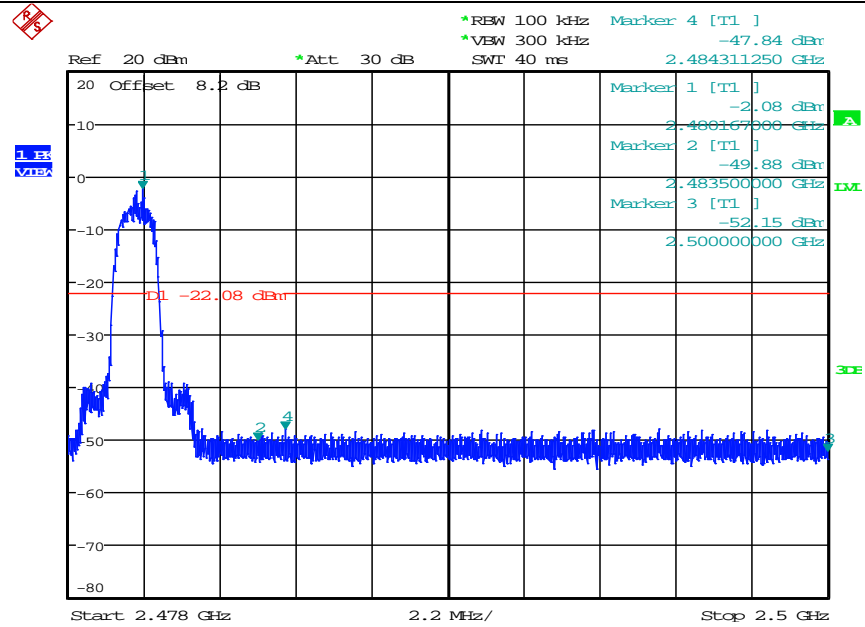
Date: 1.AUG.2019 12:43:00

$\pi$ /4DQPSK/LCH/Hop



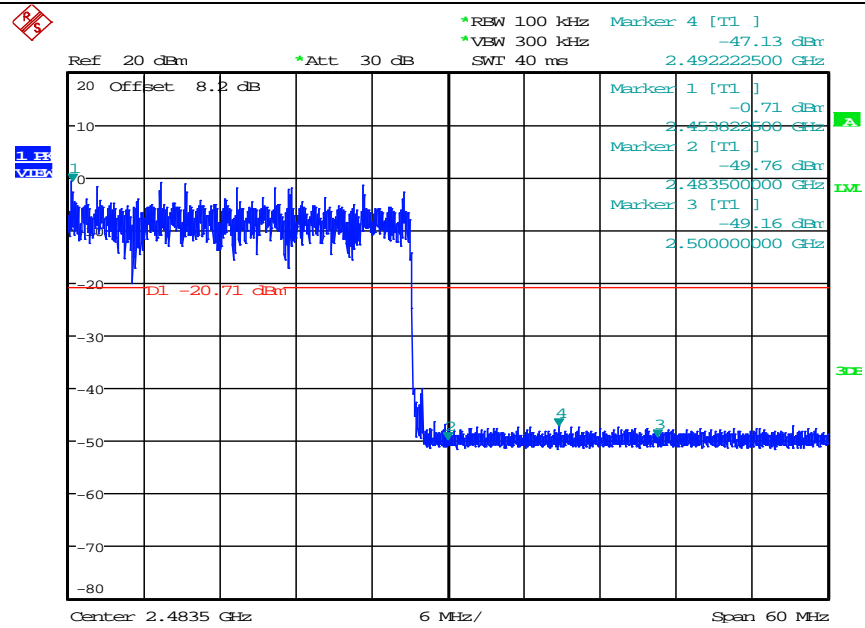
Date: 1.AUG.2019 12:39:26

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



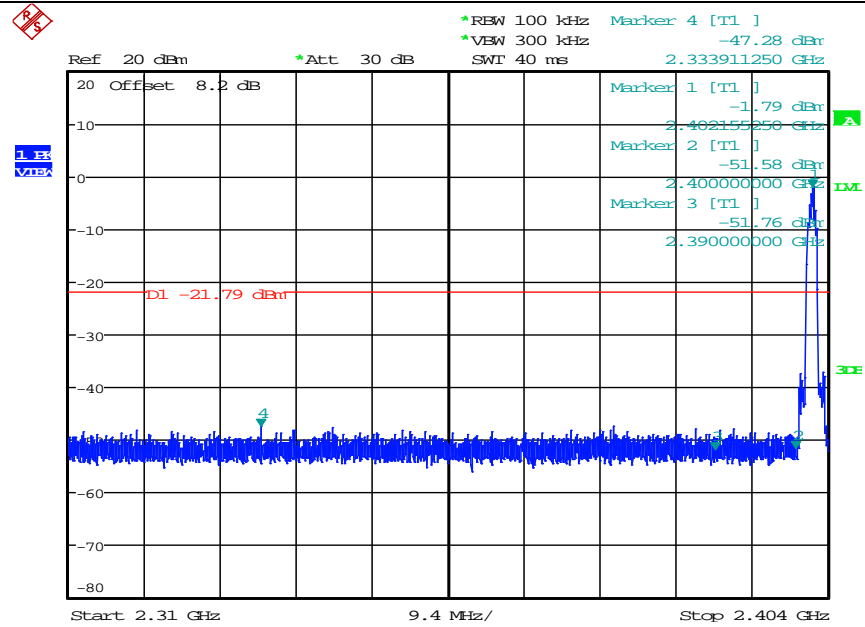
Date: 31.JUL.2019 21:58:35

$\pi$ /4DQPSK/HCH/Hop

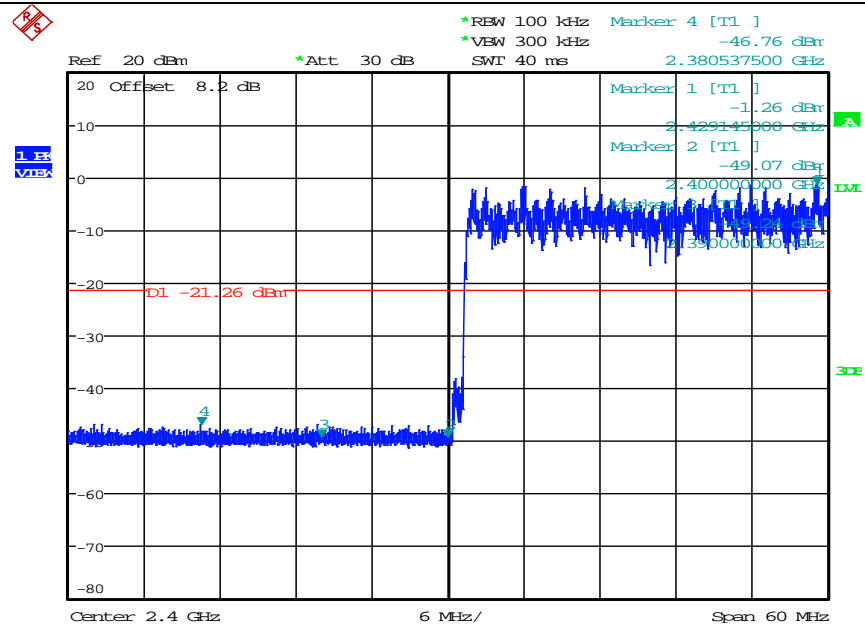


Date: 31.JUL.2019 22:21:19

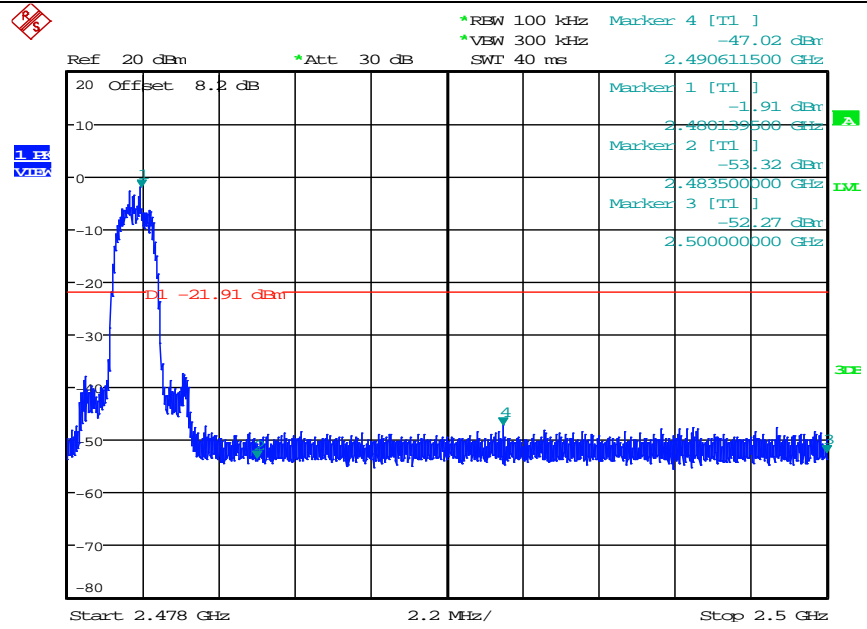
8DPSK/LCH/No Hop



8DPSK/LCH/Hop

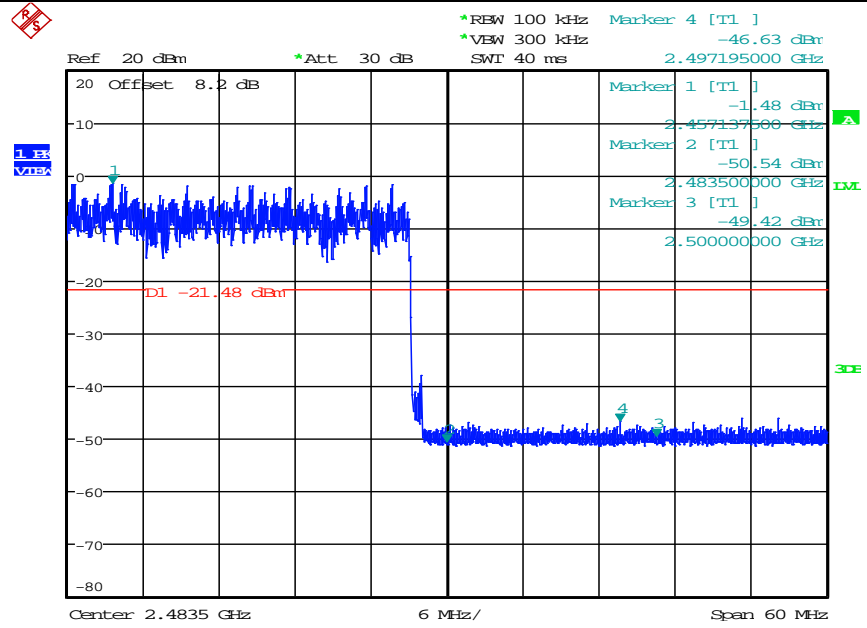


8DPSK/HCH/No Hop



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

8DPSK/HCH/Hop



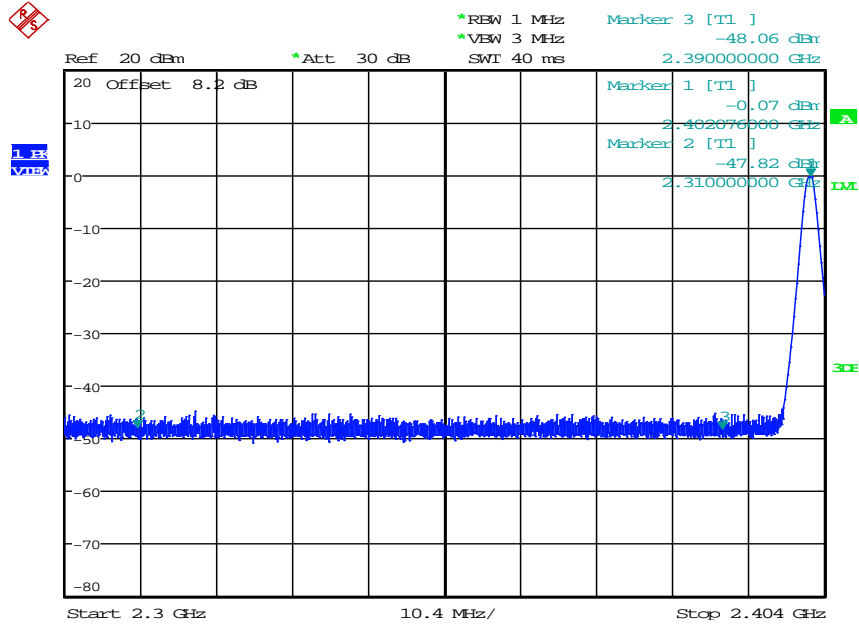
Date: 31.JUL.2019 22:32:07



## A.8 Restrict-band band-edge measurements

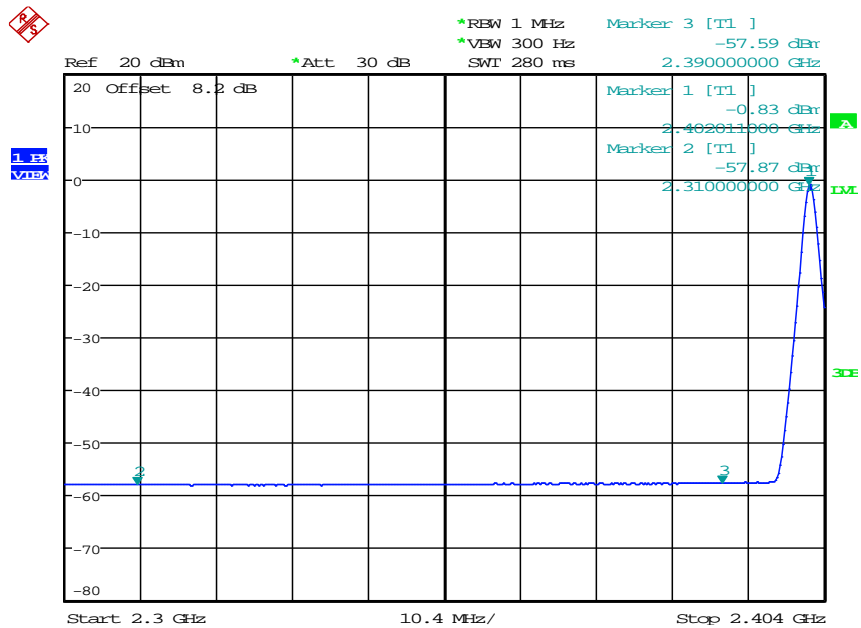
Test Mode	Hopping	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detector	Limit [dBuV/m]	Verdict
GFSK	Off	2310.0	-47.82	2.0	0	47.44	PEAK	74	PASS
	Off	2310.0	-57.87	2.0	0	37.39	AV	54	PASS
	Off	2390.0	-48.06	2.0	0	47.20	PEAK	74	PASS
	Off	2390.0	-57.59	2.0	0	37.67	AV	54	PASS
	Off	2483.5	-39.84	2.0	0	55.42	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)



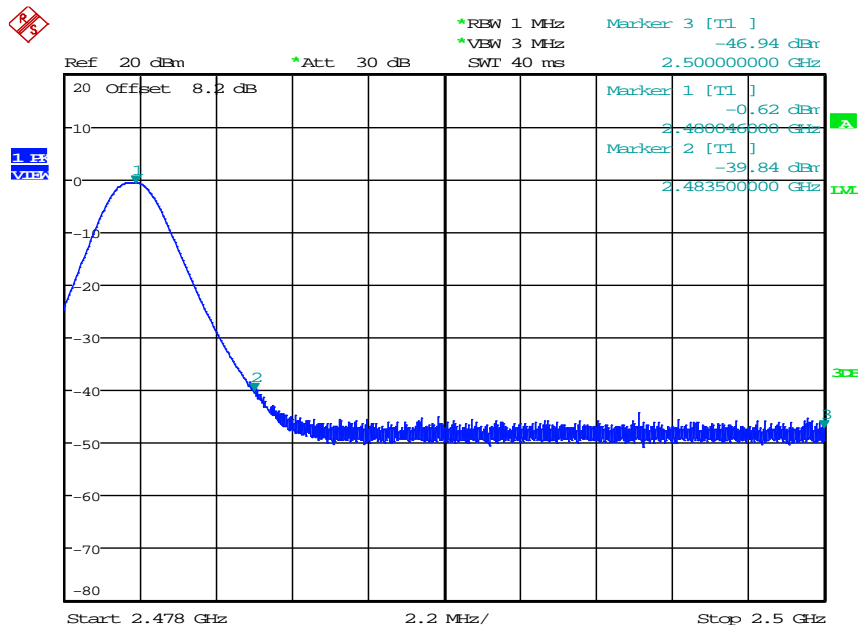
Date: 31.JUL.2019 21:48:01

### Restrict-band band-edge measurements\_Hopping Off\_GFSK\_Average (Low Channel)



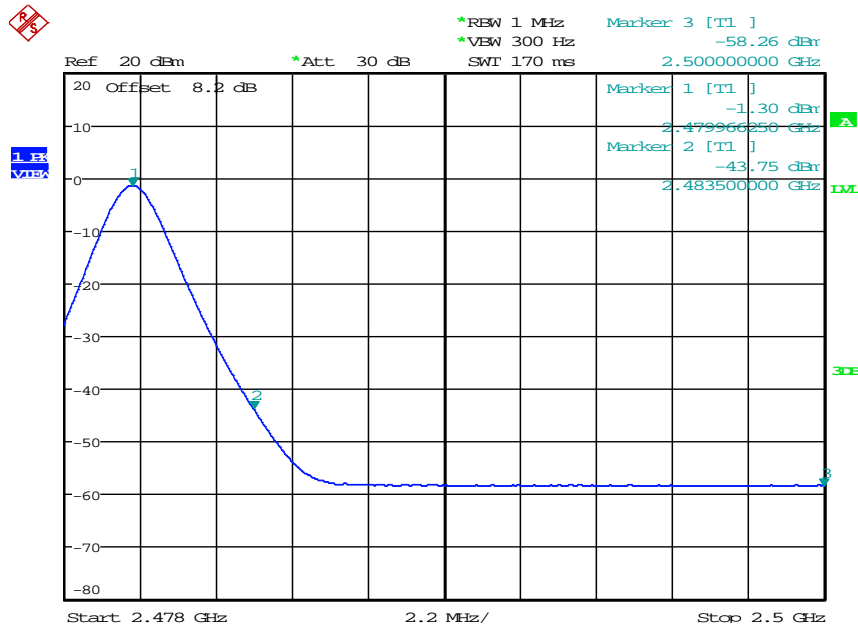
Date: 31.JUL.2019 21:48:15

Restrict-band band-edge measurements\_Hopping Off\_GFSK\_PEAK (High Channel)



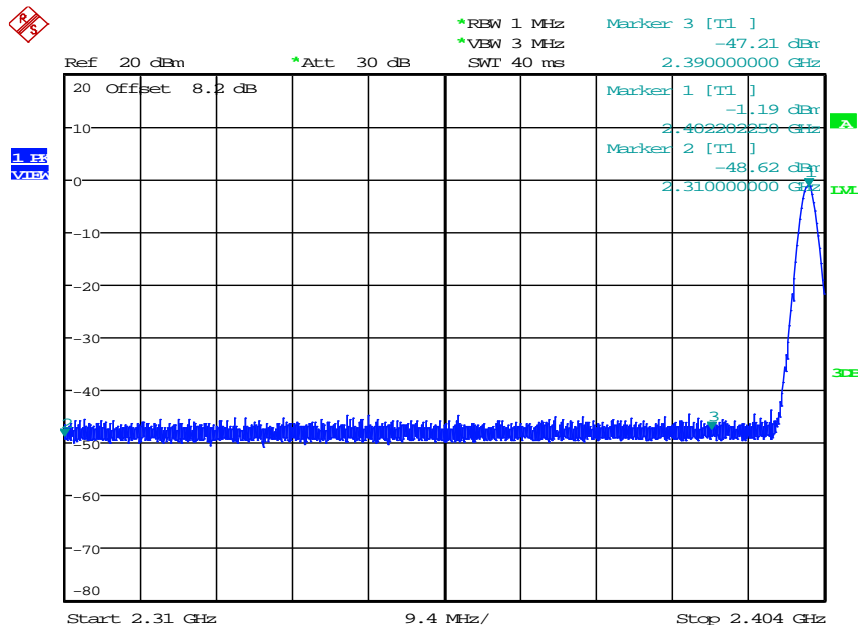
Date: 31.JUL.2019 21:52:13

Restrict-band band-edge measurements\_Hopping Off\_GFSK\_Average (High Channel)



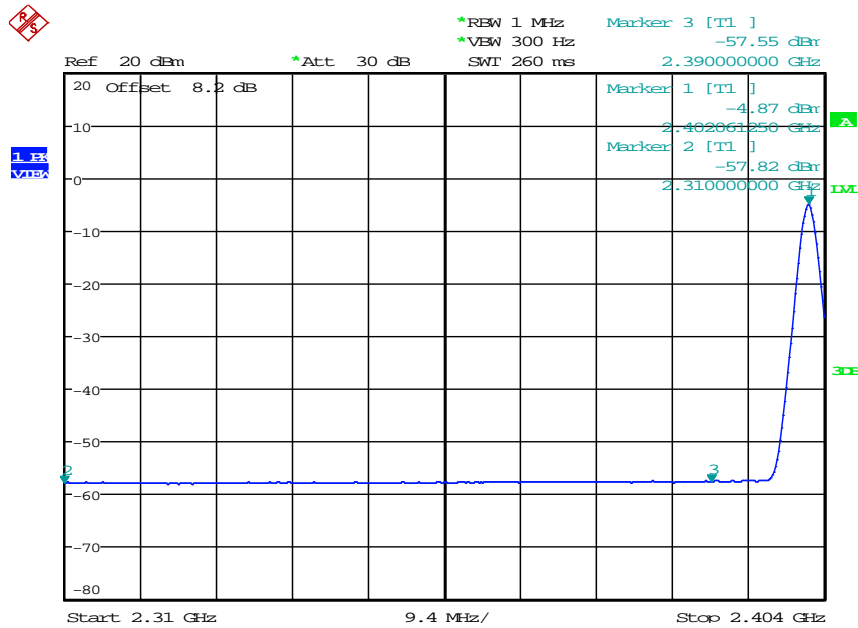
Date: 31.JUL.2019 21:52:26

Restrict-band band-edge measurements\_Hopping Off  $\pi/4$ -DQPSK\_PEAK (Low Channel)



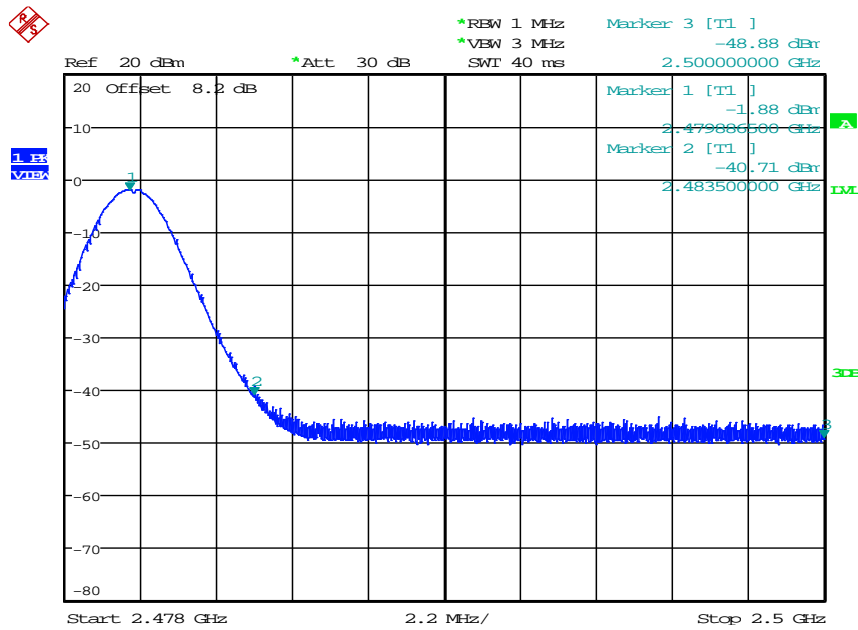
Date: 1.AUG.2019 12:43:46

Restrict-band band-edge measurements\_Hopping Off  $\pi/4$ -DQPSK\_Average (Low Channel)



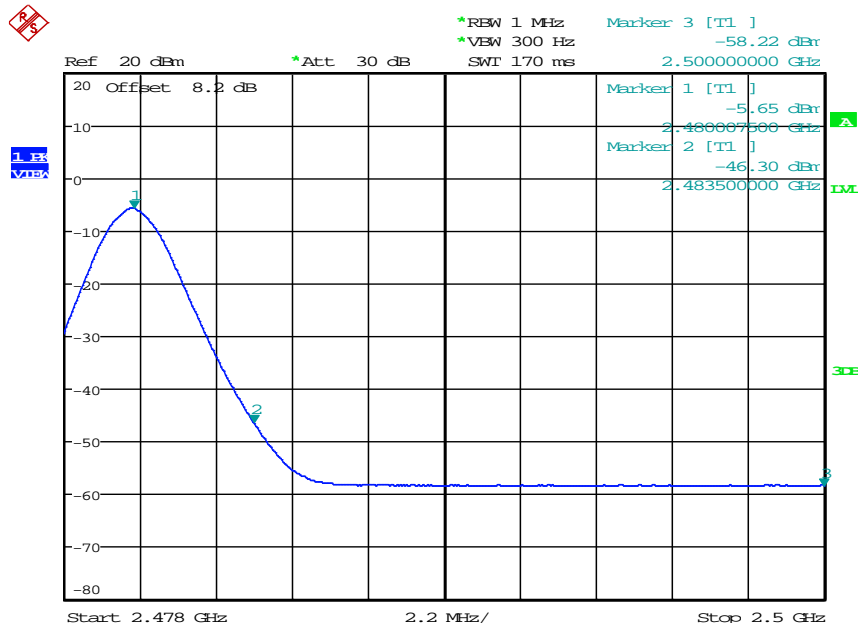
Date: 1.AUG.2019 12:44:00

Restrict-band band-edge measurements\_Hopping Off\_π/4-DQPSK\_PEAK (High Channel)



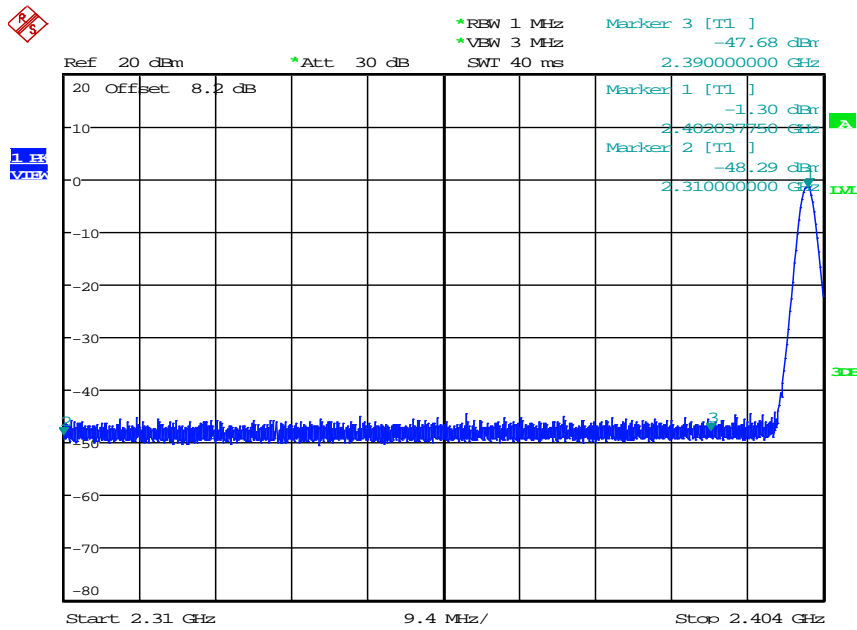
Date: 31.JUL.2019 21:59:22

Restrict-band band-edge measurements\_Hopping Off\_π/4-DQPSK\_Average (High Channel)



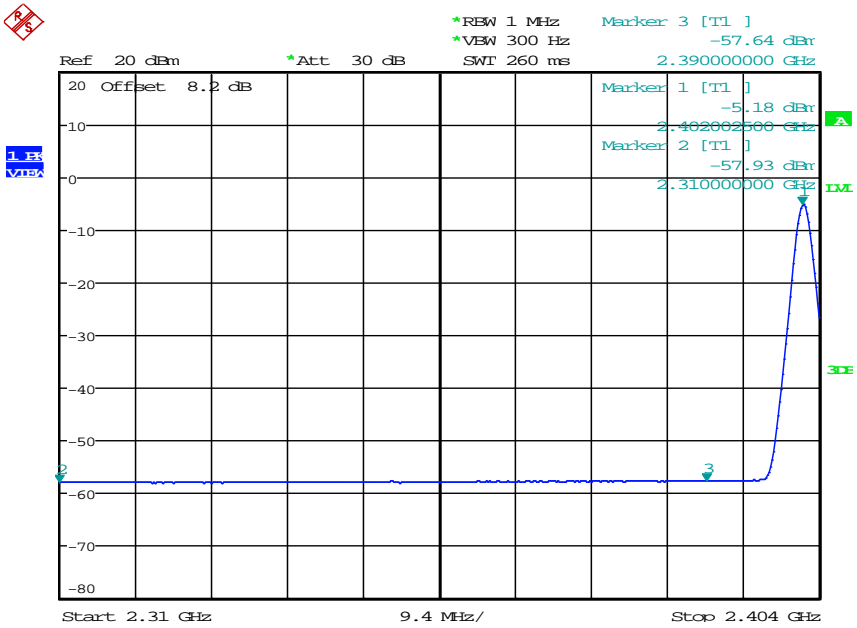
Date: 31.JUL.2019 21:59:35

Restrict-band band-edge measurements\_Hopping Off\_8DPSK\_PEAK (Low Channel)



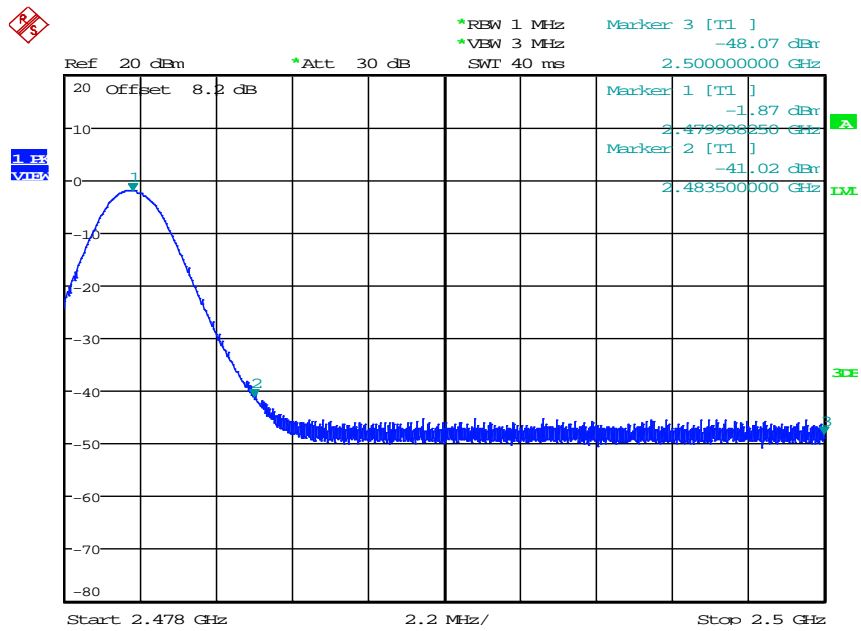
Date: 31.JUL.2019 22:01:55

Restrict-band band-edge measurements\_Hopping Off\_8DPSK\_Average (Low Channel)



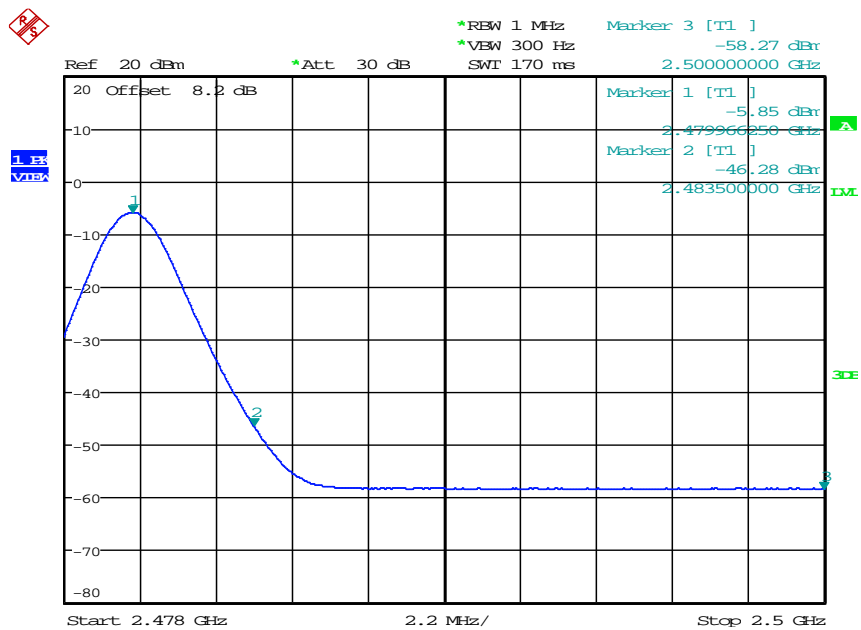
Date: 31.JUL.2019 22:02:09

### 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