

## Appendix A

### RF Test Data for BT V4.2(DSS) (Conducted Measurement)

Product Name: WIRELESS HEADPHONE



Trade Mark:

Test Model: HD10BT

#### Environmental Conditions

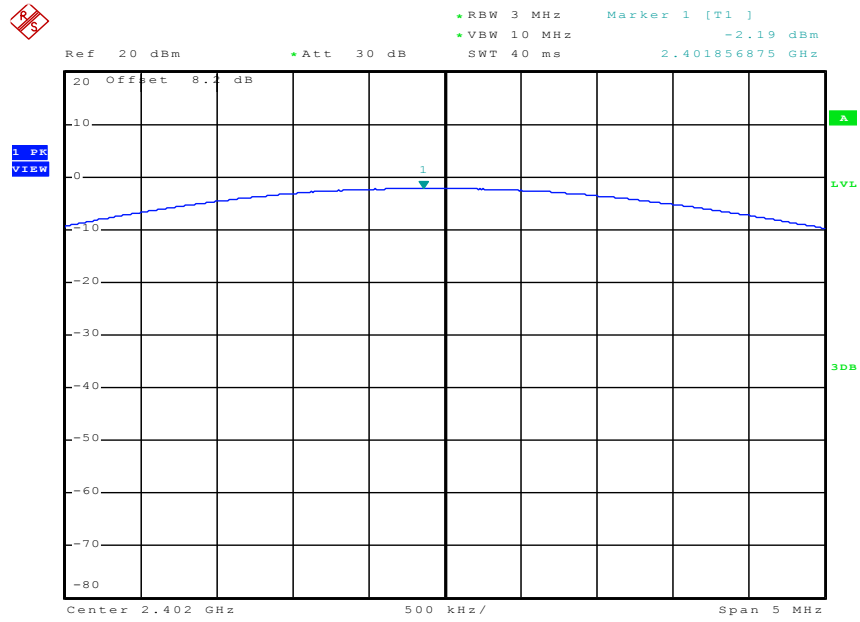
Temperature:	25.2 ° C
Relative Humidity:	53.8%
ATM Pressure:	100.0 kPa
Test Engineer:	Jerry Zeng
Supervised by:	Wang Chuang

#### A.1 Maxmum Conducted Peak Output Power

Mode	Channel.	Maximum Peak Output Power [dBm]	Limit [dBm]	Verdict
GFSK	LCH	-2.190	30	PASS
	MCH	-3.040	30	PASS
	HCH	-4.510	30	PASS
$\pi/4$ DQPSK	LCH	-0.080	21	PASS
	MCH	-1.030	21	PASS
	HCH	-2.490	21	PASS
8DPSK	LCH	0.470	21	PASS
	MCH	-0.540	21	PASS
	HCH	-2.010	21	PASS

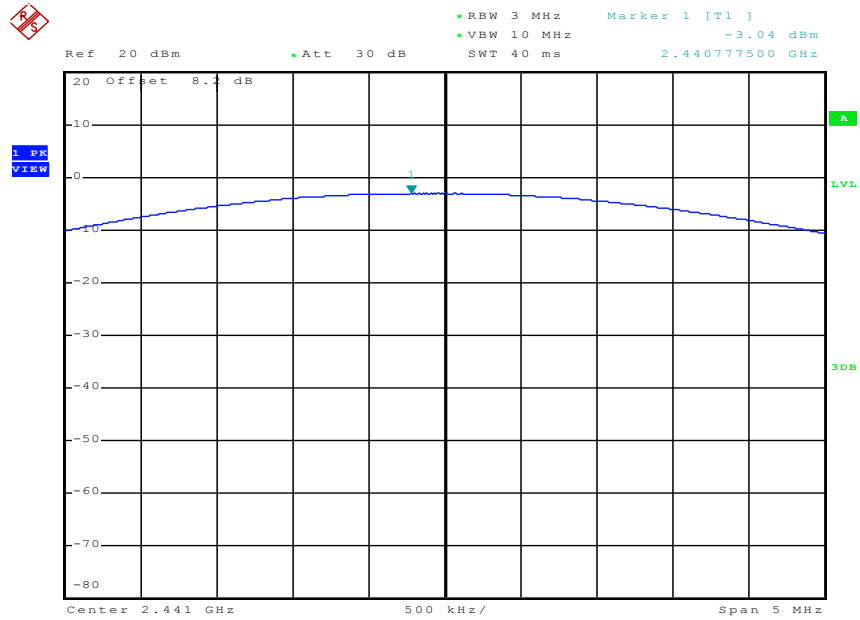
### Test Graphs

GFSK/LCH



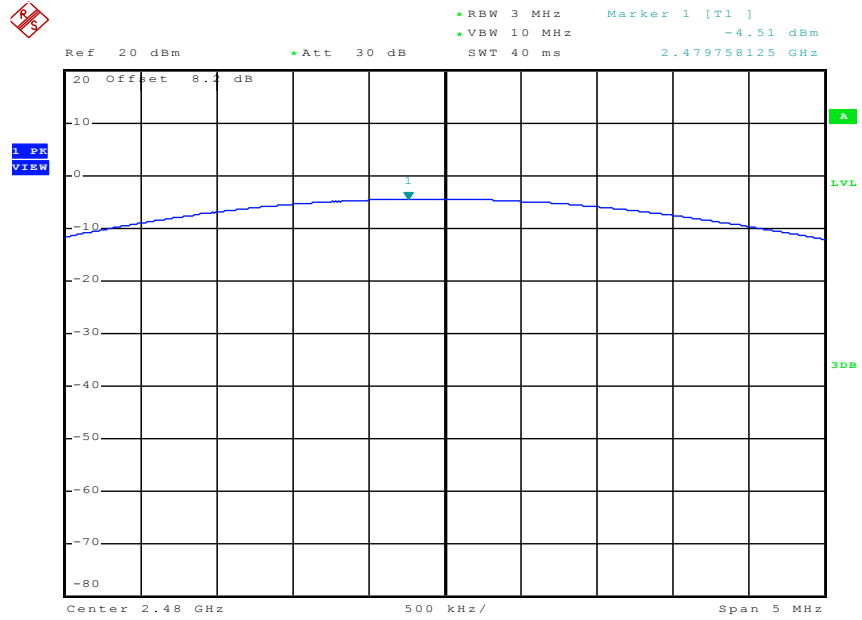
Date: 5 AUG 2019 18:15:13

GFSK/MCH



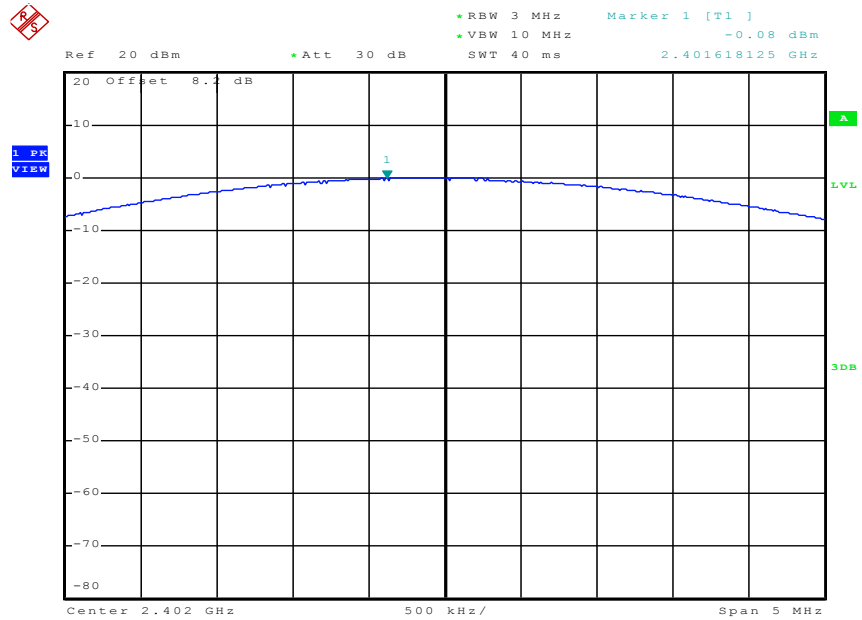
Date: 5 AUG 2019 18:17:51

GFSK/HCH



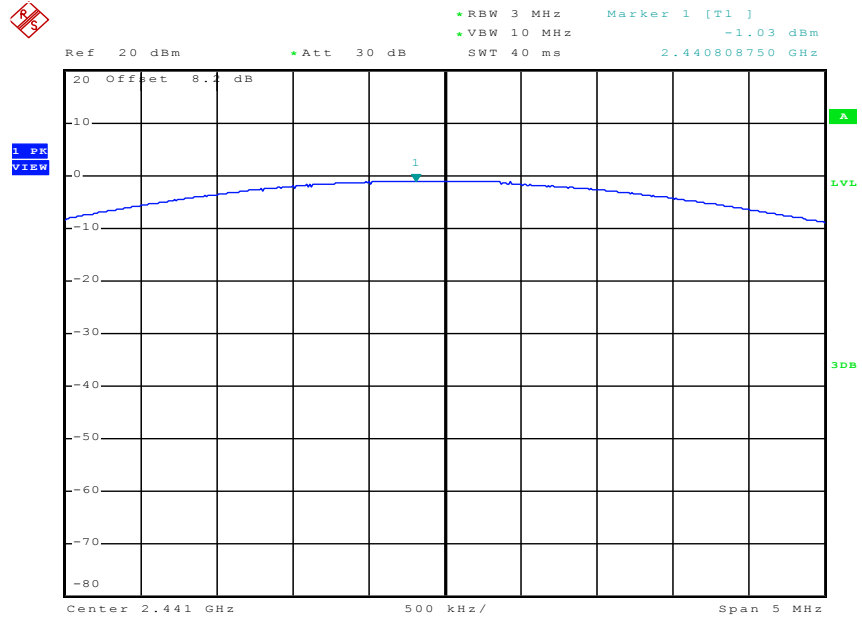
Date: 5 AUG 2019 18:20:25

$\pi/4$ DQPSK/LCH



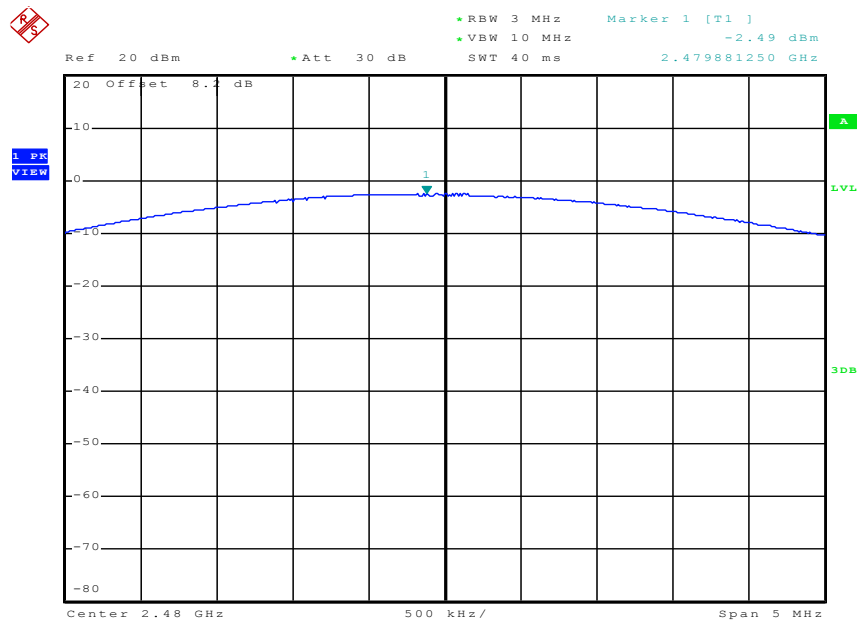
Date: 5 AUG 2019 18:24:43

$\pi/4$ DQPSK/MCH



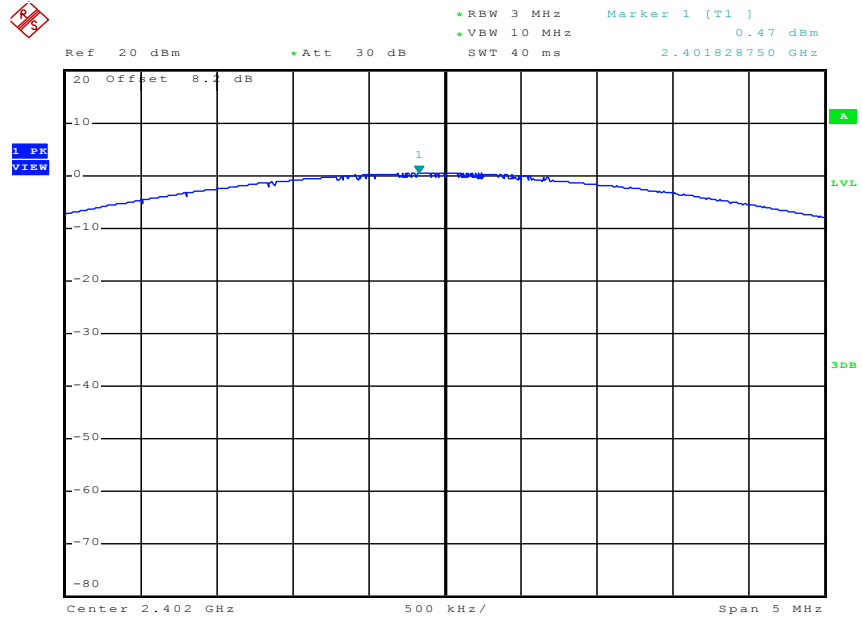
Date: 5 AUG 2019 18:27:20

$\pi/4$ DQPSK/HCH



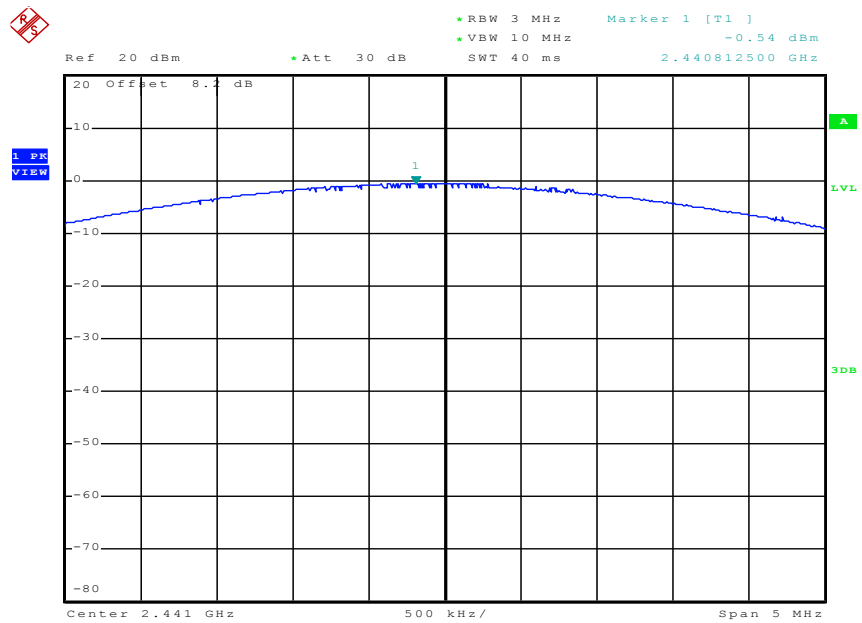
Date: 5 AUG 2019 18:29:15

8DPSK/LCH



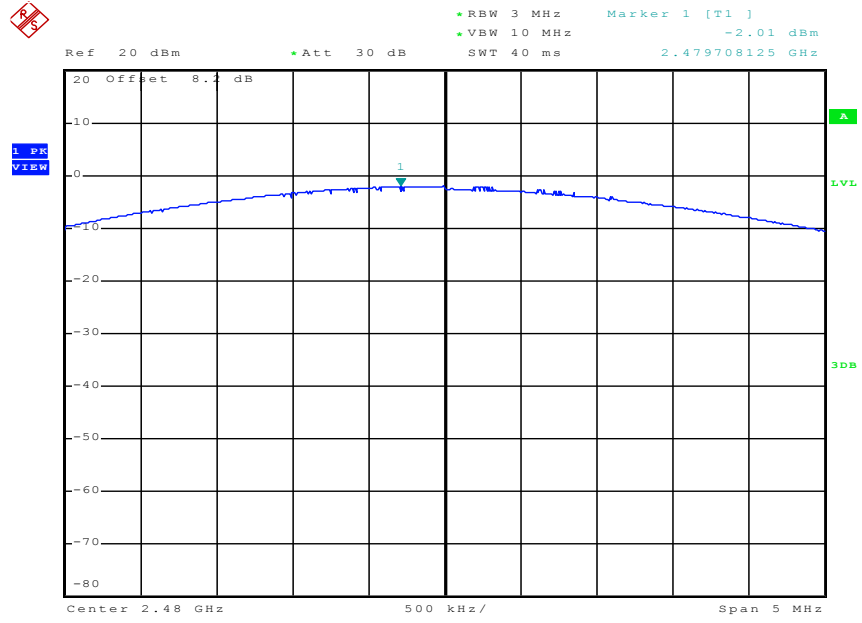
Date: 5 AUG 2019 18:33:44

8DPSK/MCH



Date: 5 AUG 2019 18:36:32

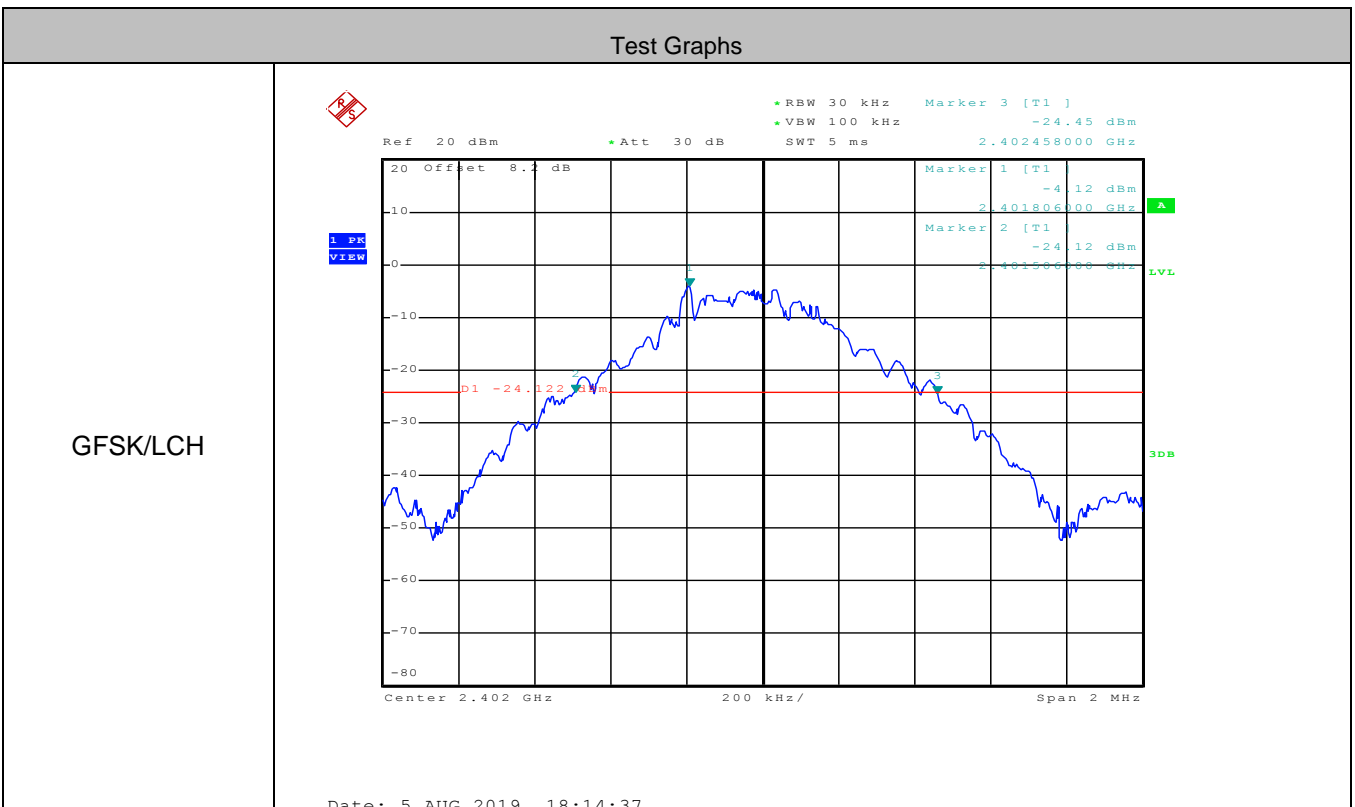
8DPSK/HCH



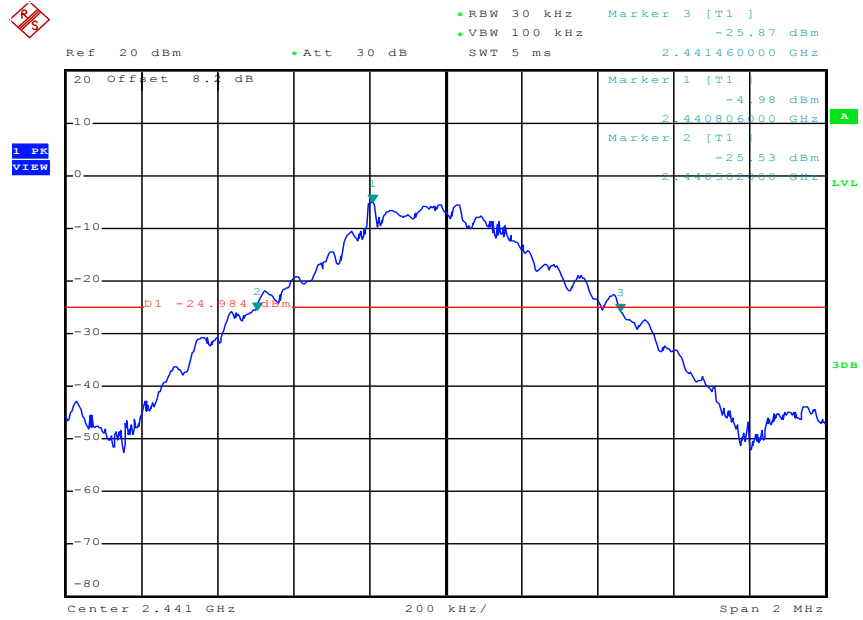
Date: 5 AUG 2019 18:52:25

**A.2 20dB Bandwidth**

Mode	Channel.	20dB Bandwidth [MHz]	Limit [MHz]	Verdict
GFSK	LCH	0.952	Not Specified	PASS
	MCH	0.958	Not Specified	PASS
	HCH	0.956	Not Specified	PASS
$\pi/4$ DQPSK	LCH	1.308	Not Specified	PASS
	MCH	1.282	Not Specified	PASS
	HCH	1.282	Not Specified	PASS
8DPSK	LCH	1.292	Not Specified	PASS
	MCH	1.296	Not Specified	PASS
	HCH	1.300	Not Specified	PASS

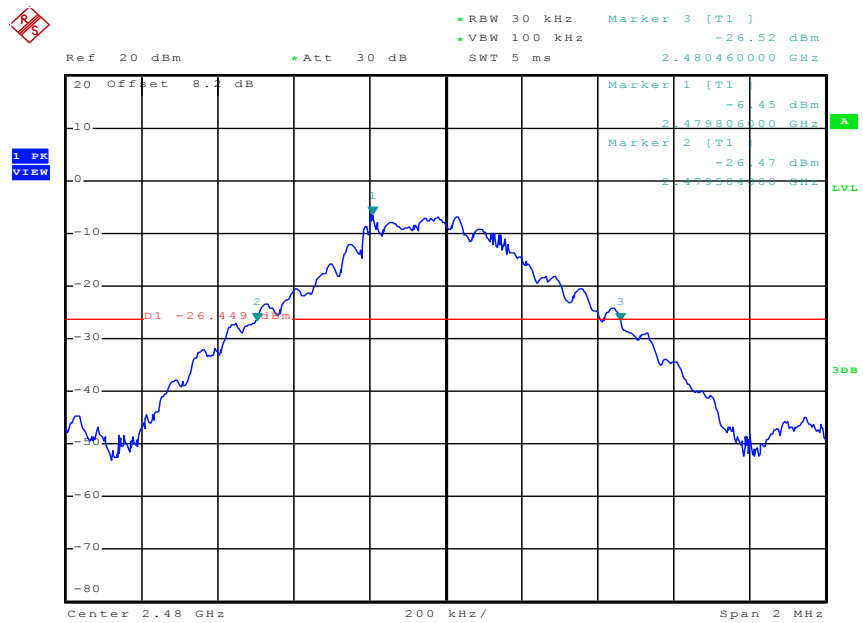


GFSK/MCH



Date: 5 AUG 2019 18:17:14

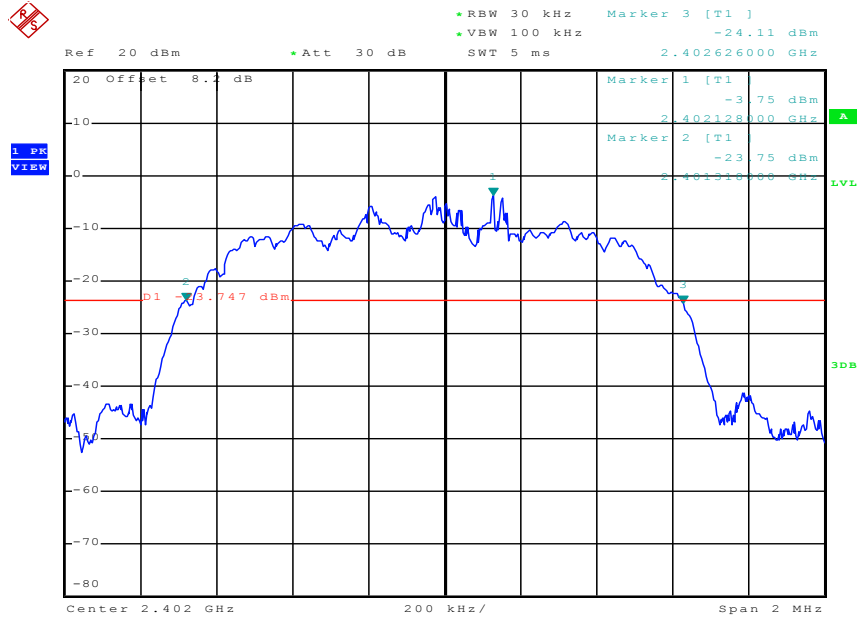
GFSK/HCH



Date: 5 AUG 2019 18:19:48

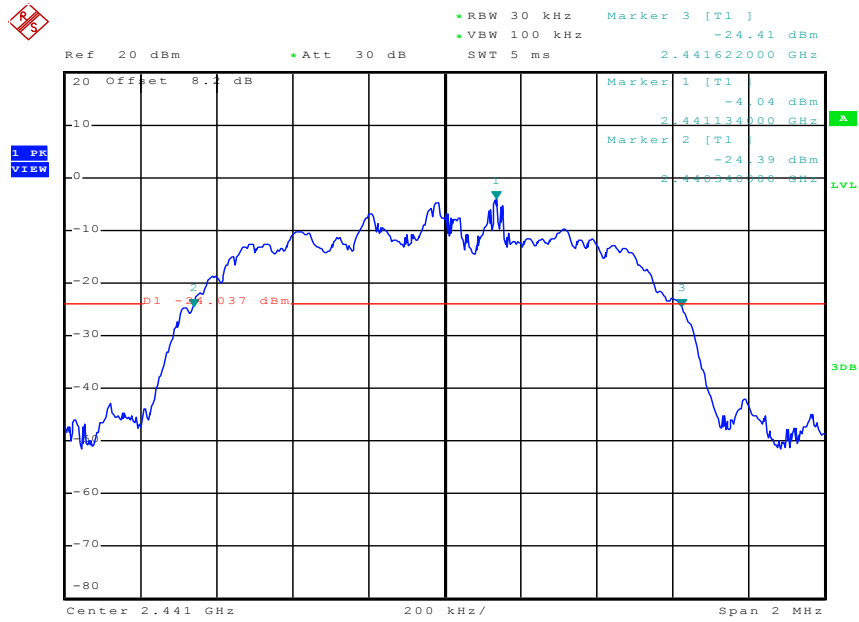


$\pi/4$ DQPSK/LCH



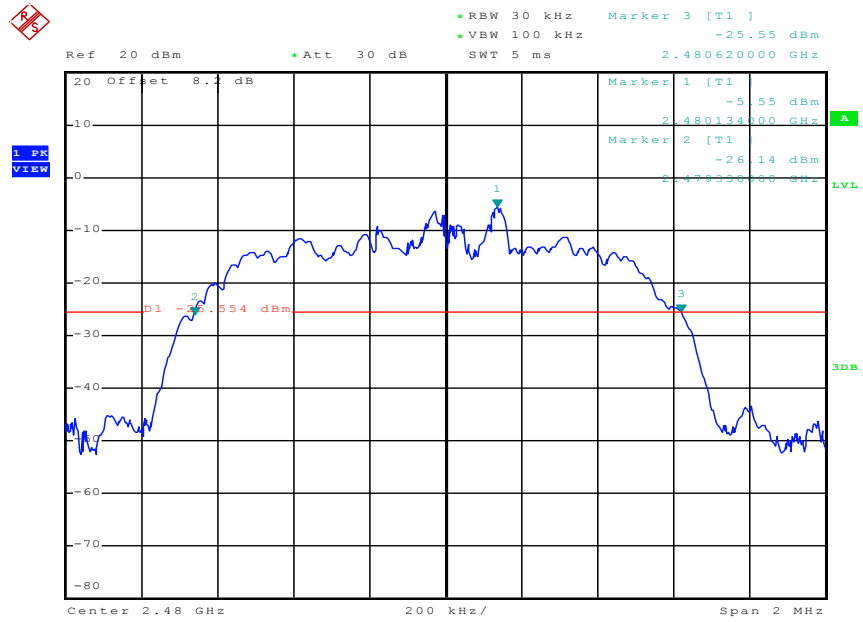
Date: 5 AUG 2019 18:24:06

$\pi/4$ DQPSK/MCH



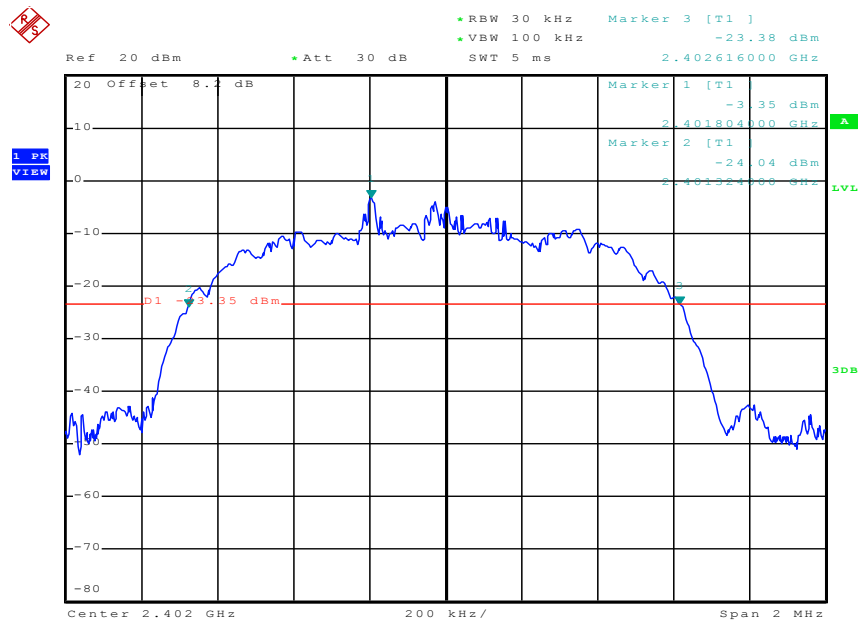
Date: 5 AUG 2019 18:26:43

$\pi/4$ DQPSK/HCH



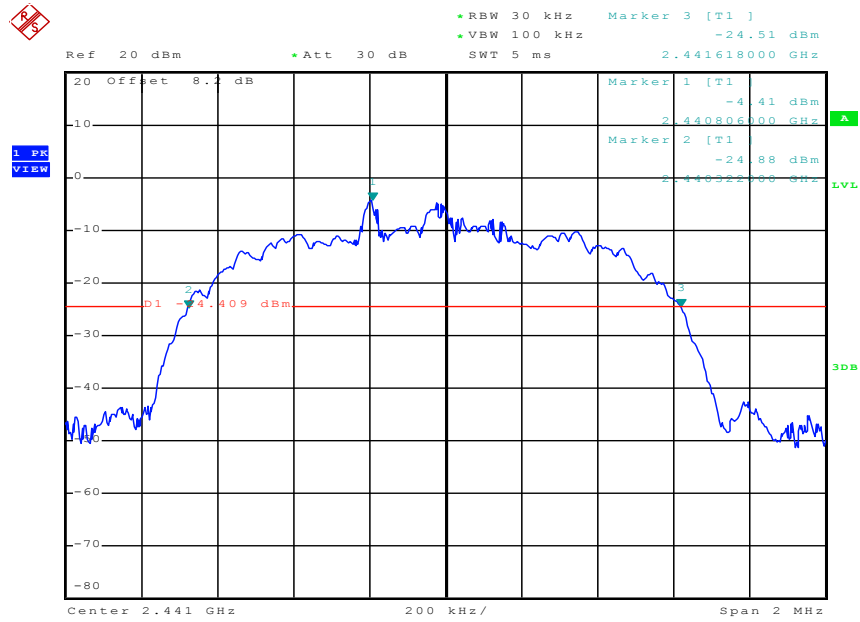
Date: 5 AUG 2019 18:28:38

8DPSK/LCH



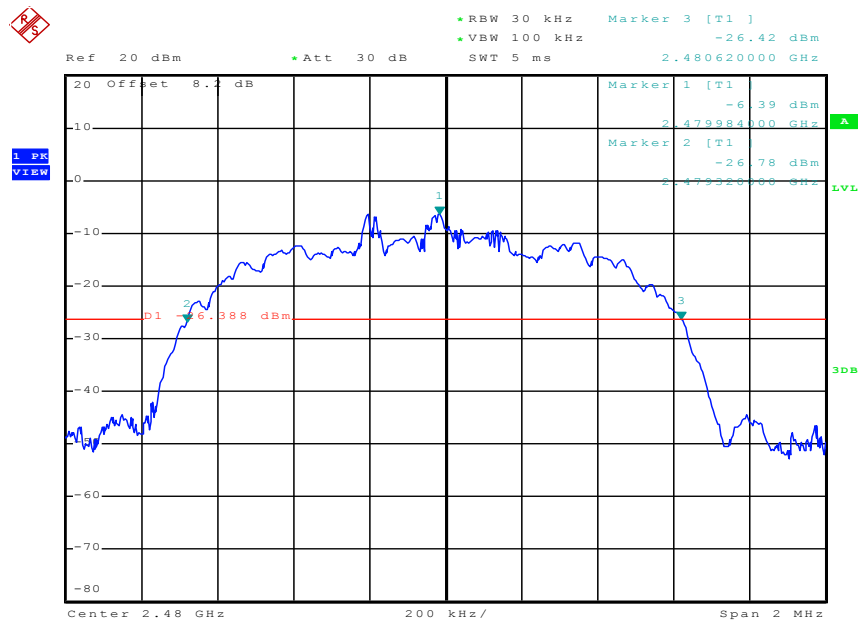
Date: 5 AUG 2019 18:33:07

8DPSK/MCH



Date: 5 AUG 2019 18:35:55

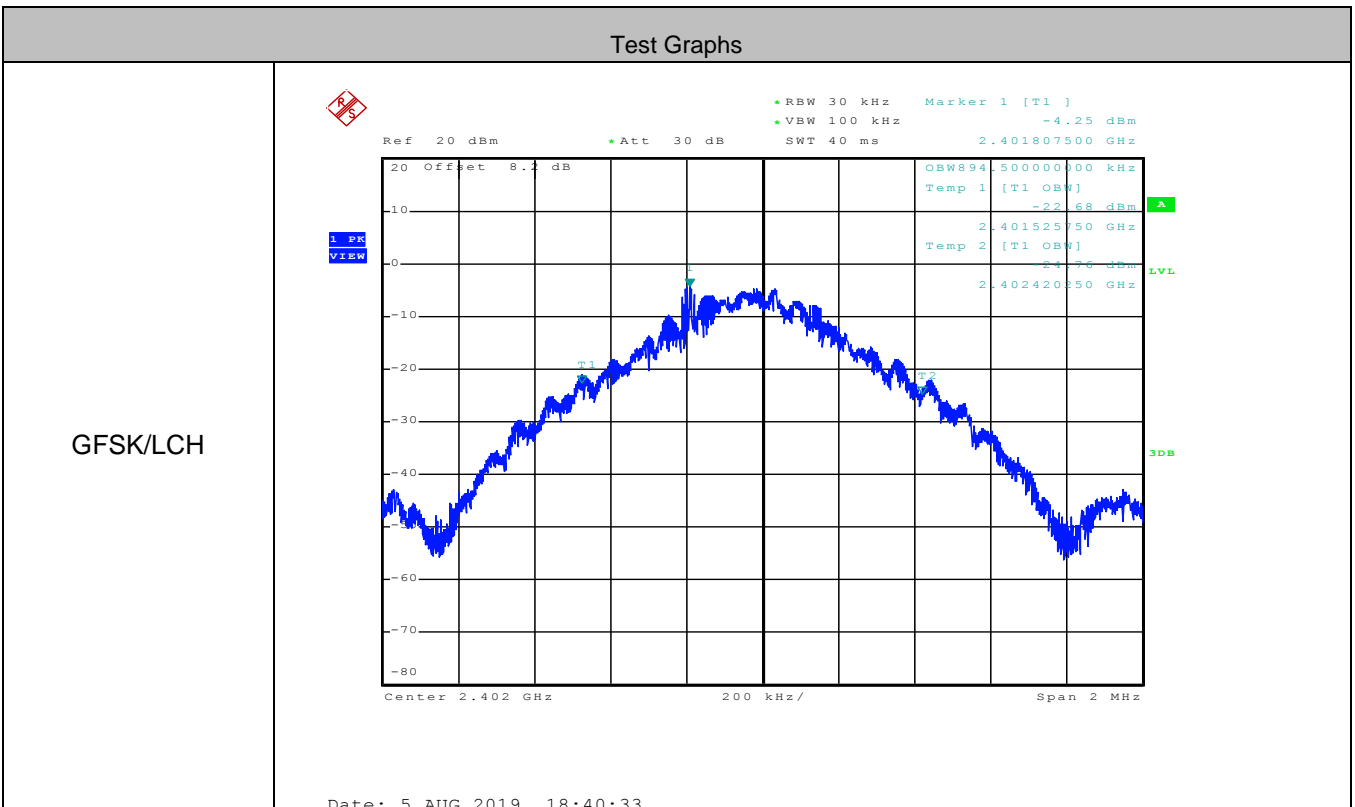
8DPSK/HCH



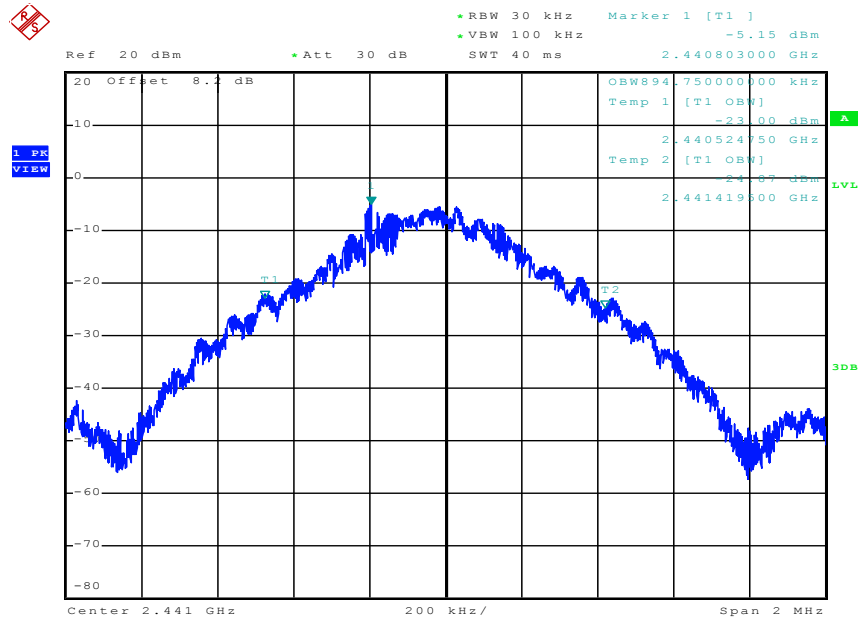
Date: 5 AUG 2019 18:57:20

### A.3 Occupied Bandwidth

Mode	Channel.	Occupied Bandwidth [MHz]	Limit [MHz]	Verdict
GFSK	LCH	0.895	Not Specified	PASS
	MCH	0.895	Not Specified	PASS
	HCH	0.891	Not Specified	PASS
$\pi/4$ DQPSK	LCH	1.186	Not Specified	PASS
	MCH	1.187	Not Specified	PASS
	HCH	1.186	Not Specified	PASS
8DPSK	LCH	1.188	Not Specified	PASS
	MCH	1.188	Not Specified	PASS
	HCH	1.188	Not Specified	PASS

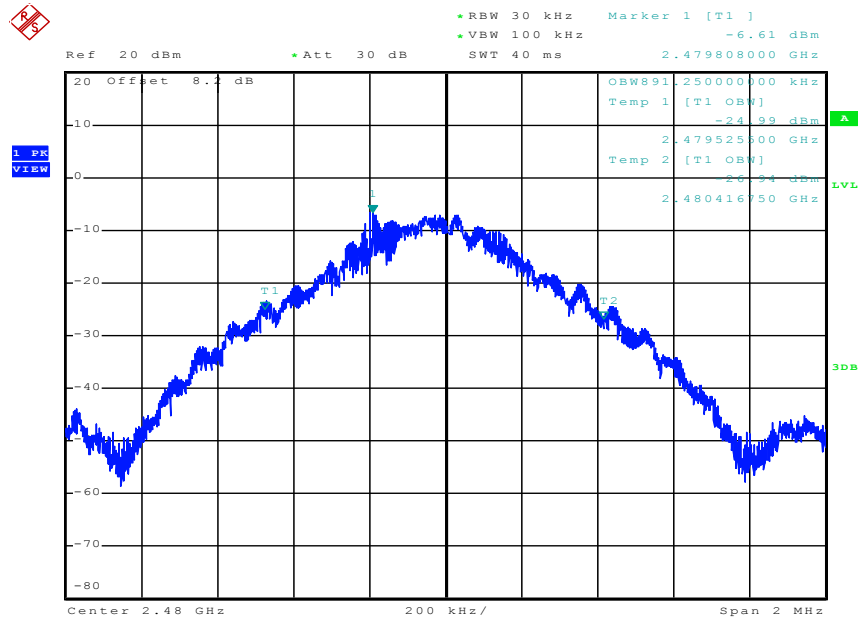


GFSK/MCH



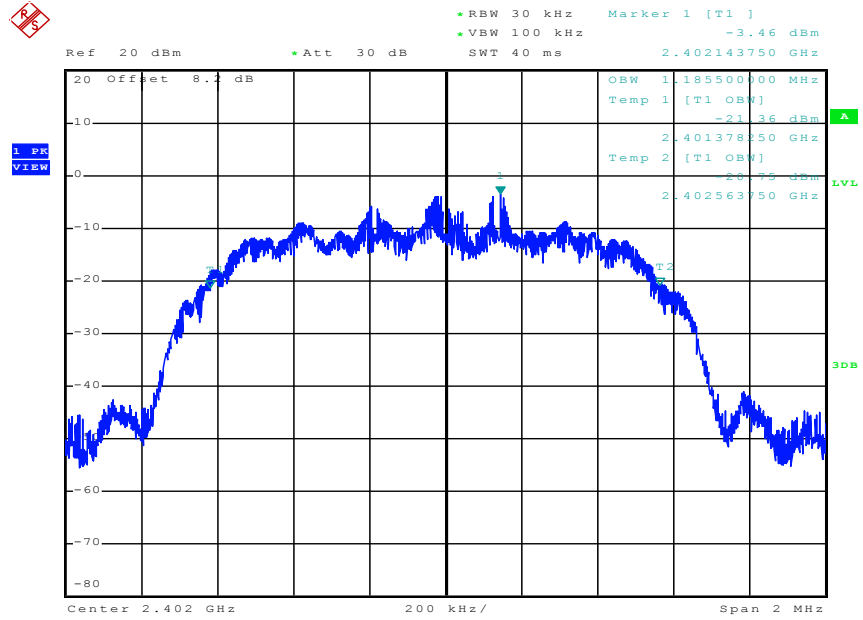
Date: 5 AUG 2019 18:41:42

GFSK/HCH



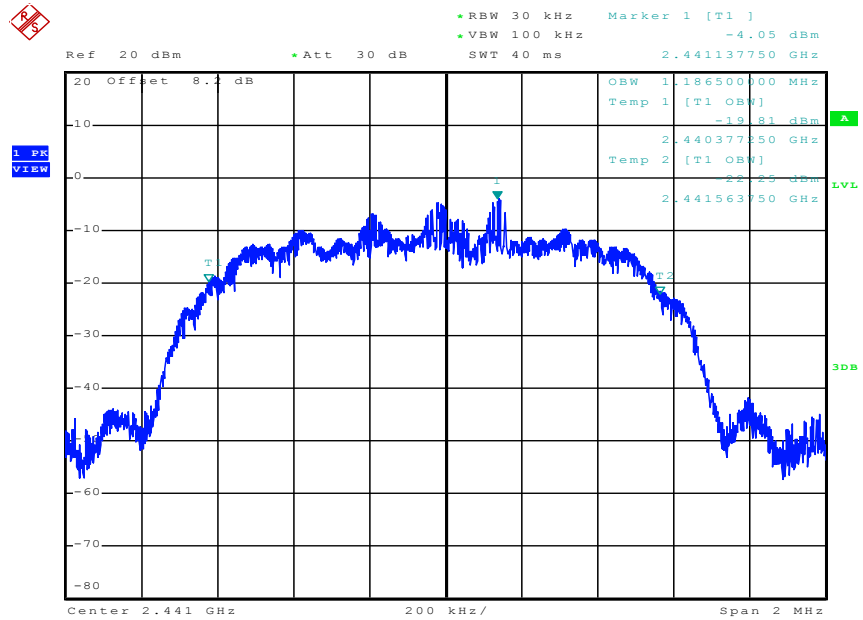
Date: 5 AUG 2019 18:42:13

$\pi/4$ DQPSK/LCH



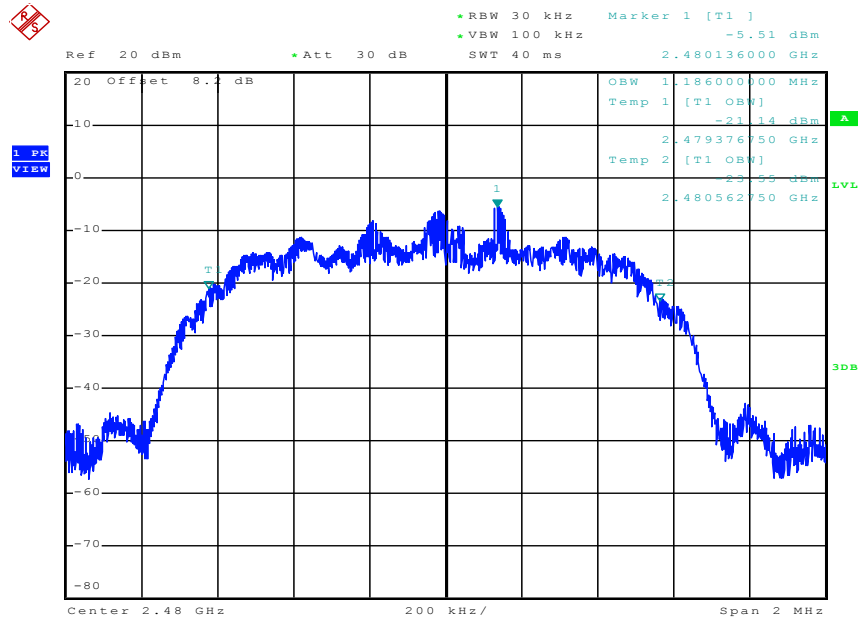
Date: 5 AUG 2019 18:43:15

$\pi/4$ DQPSK/MCH



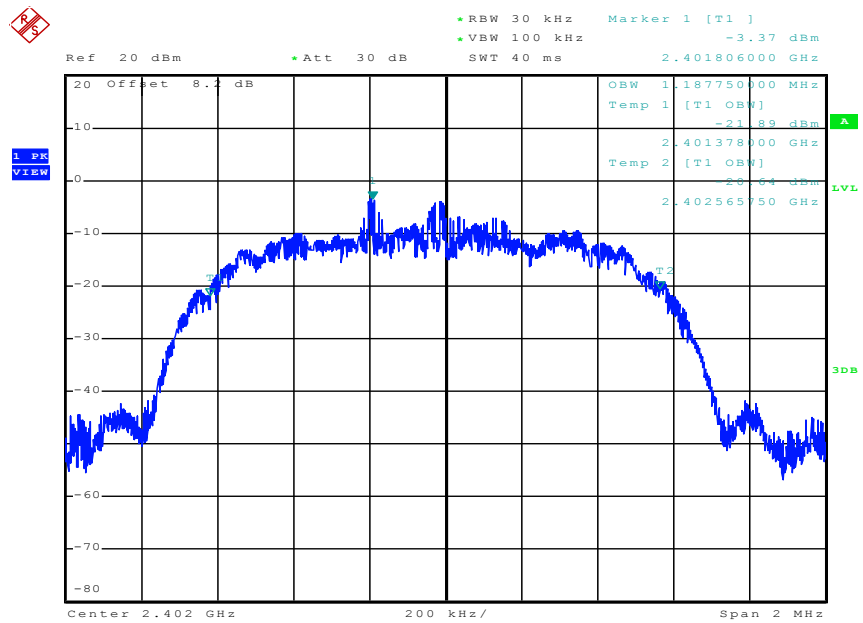
Date: 5 AUG 2019 18:43:56

$\pi/4$ DQPSK/HCH



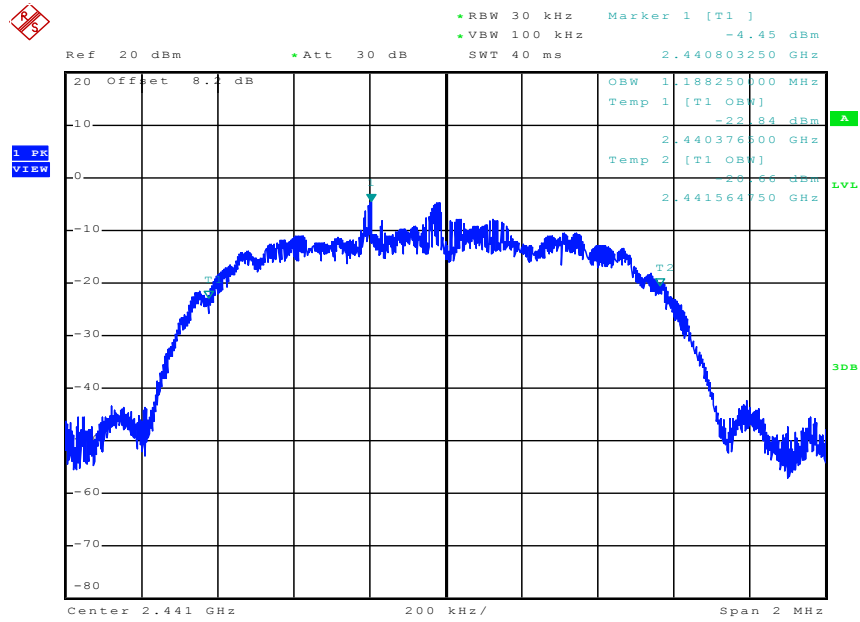
Date: 5 AUG 2019 18:44:28

8DPSK/LCH



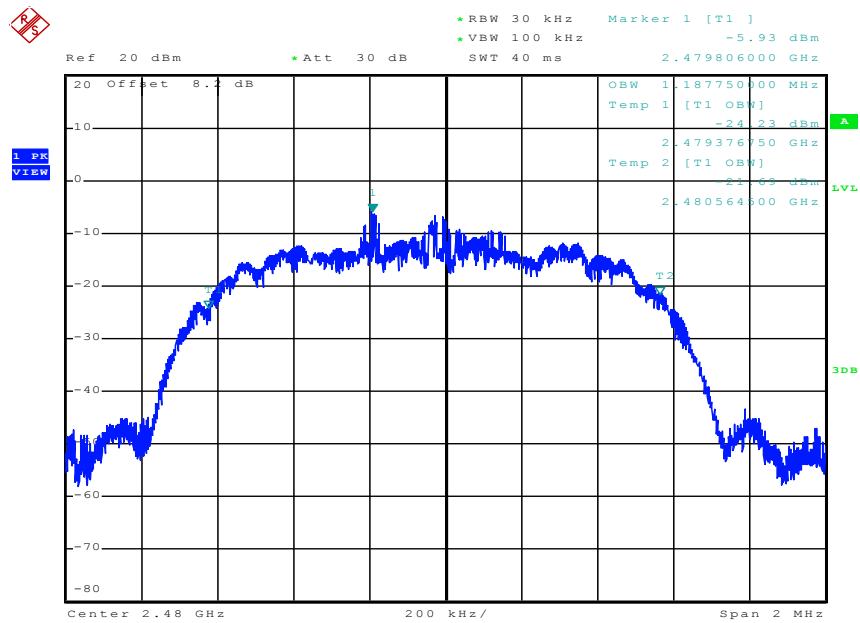
Date: 5 AUG 2019 18:53:18

8DPSK/MCH



Date: 5 AUG 2019 18:53:55

8DPSK/HCH

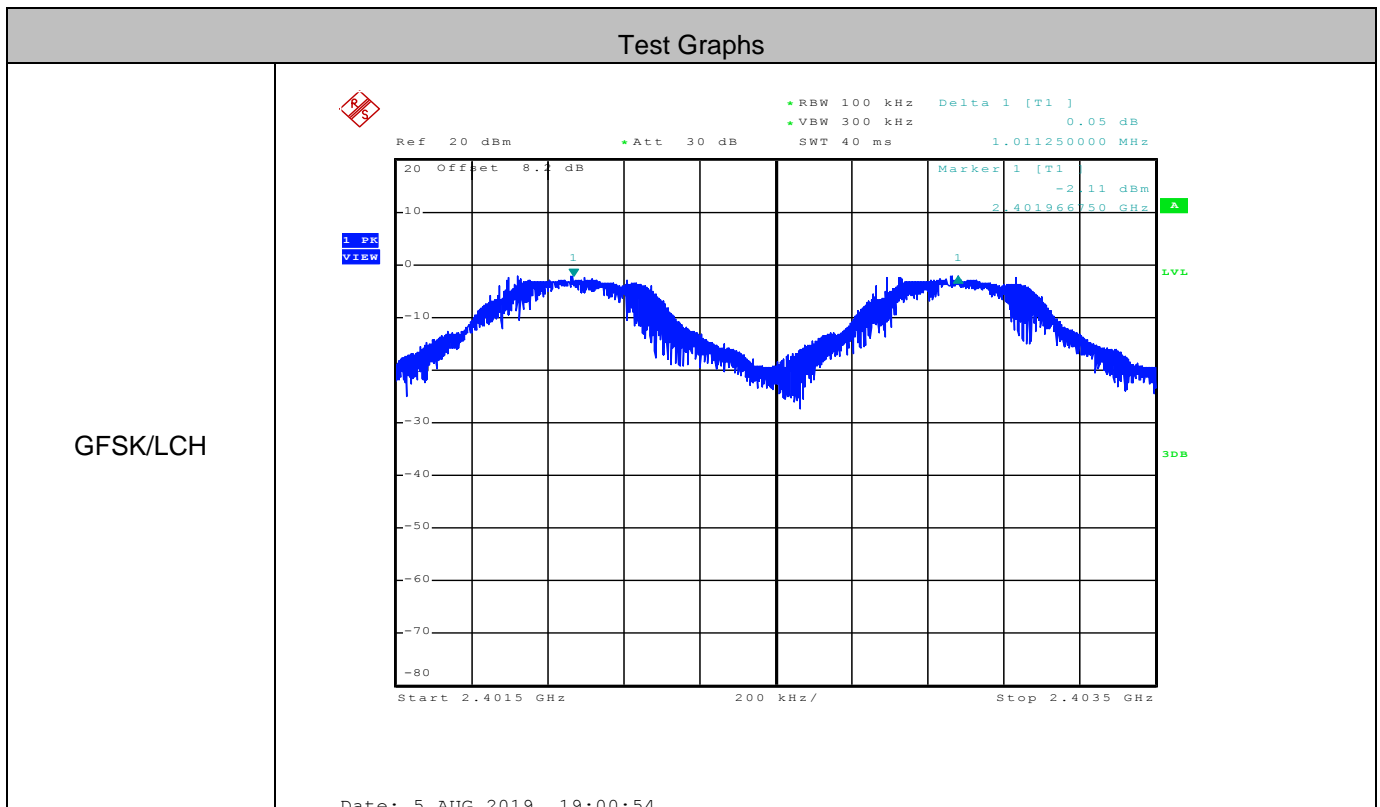


Date: 5 AUG 2019 18:54:32

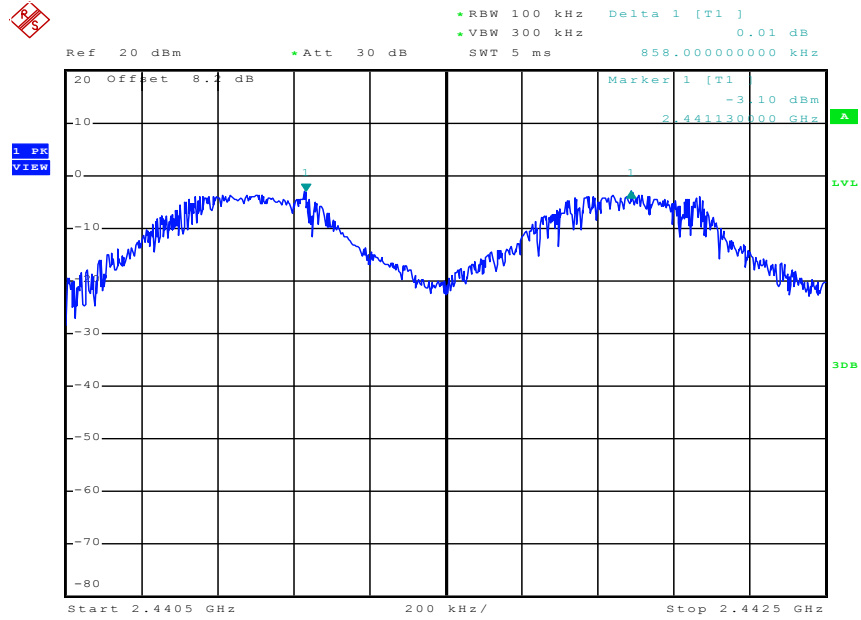


### A.4 Carrier Frequency Separation

Mode	Channel.	Carrier Frequency Separation [MHz]	Limit [MHz]	Verdict
GFSK	LCH	1.011	0.639	PASS
	MCH	0.858	0.639	PASS
	HCH	1.048	0.639	PASS
$\pi/4$ DQPSK	LCH	1.012	0.872	PASS
	MCH	1.006	0.872	PASS
	HCH	1.038	0.872	PASS
8DPSK	LCH	1.156	0.867	PASS
	MCH	1.168	0.867	PASS
	HCH	0.992	0.867	PASS

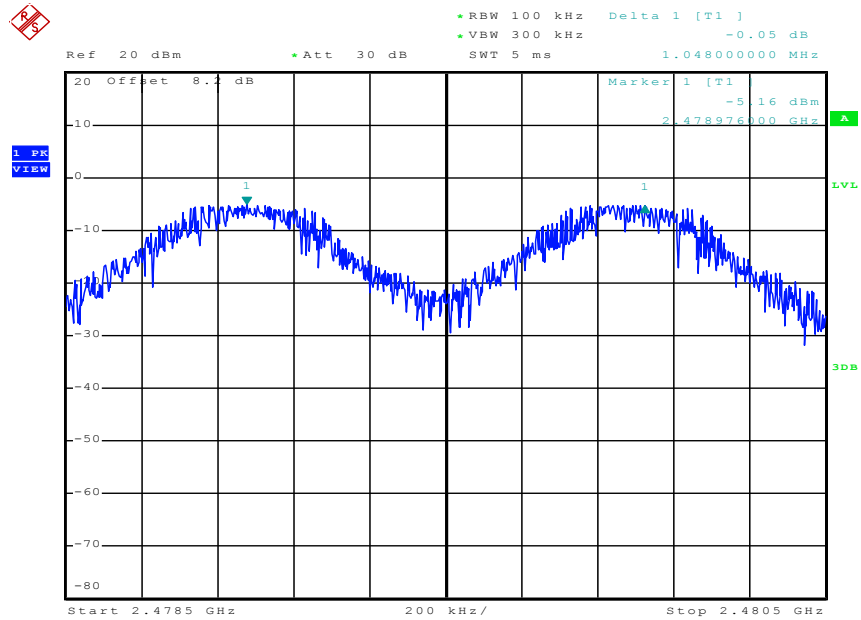


GFSK/MCH



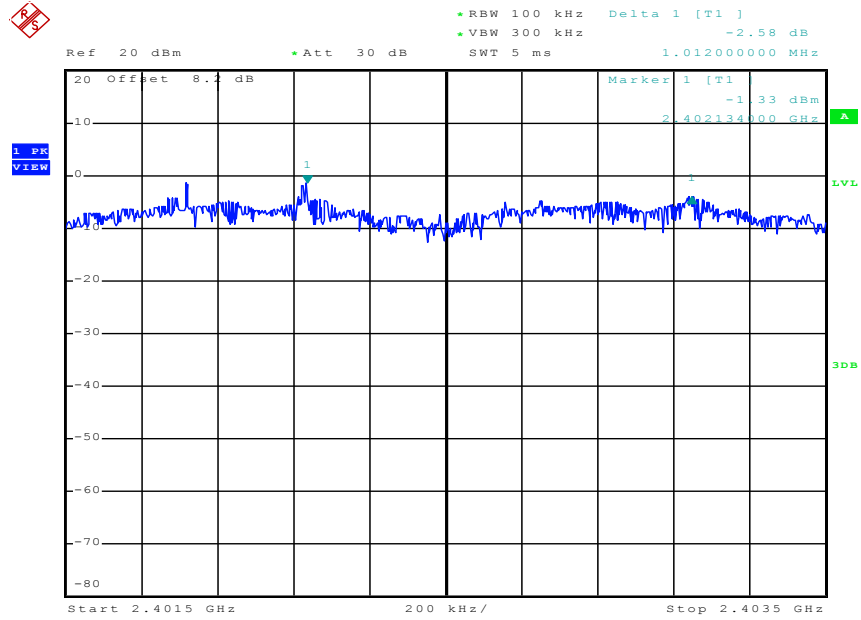
Date: 5 AUG 2019 19:03:57

GFSK/HCH



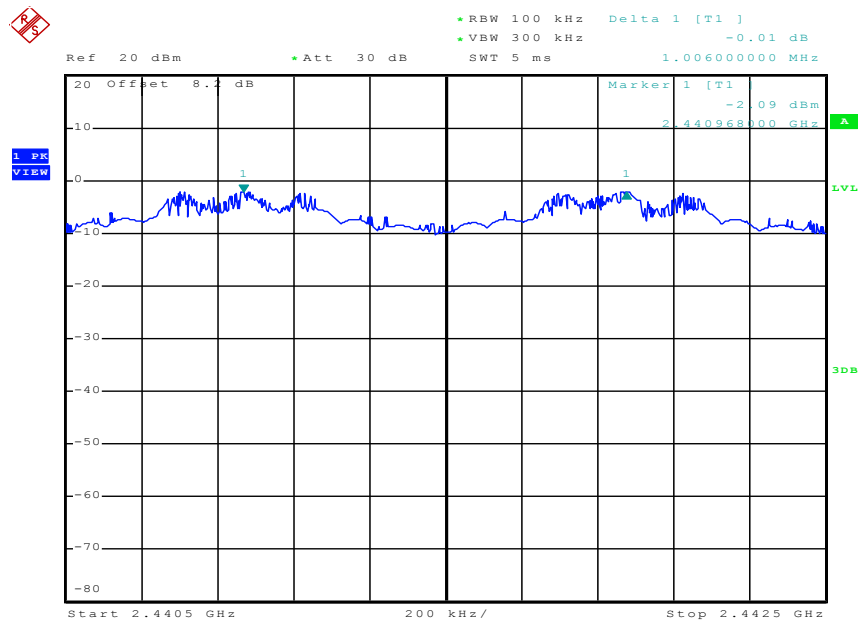
Date: 5 AUG 2019 19:04:17

$\pi/4$ DQPSK/LCH



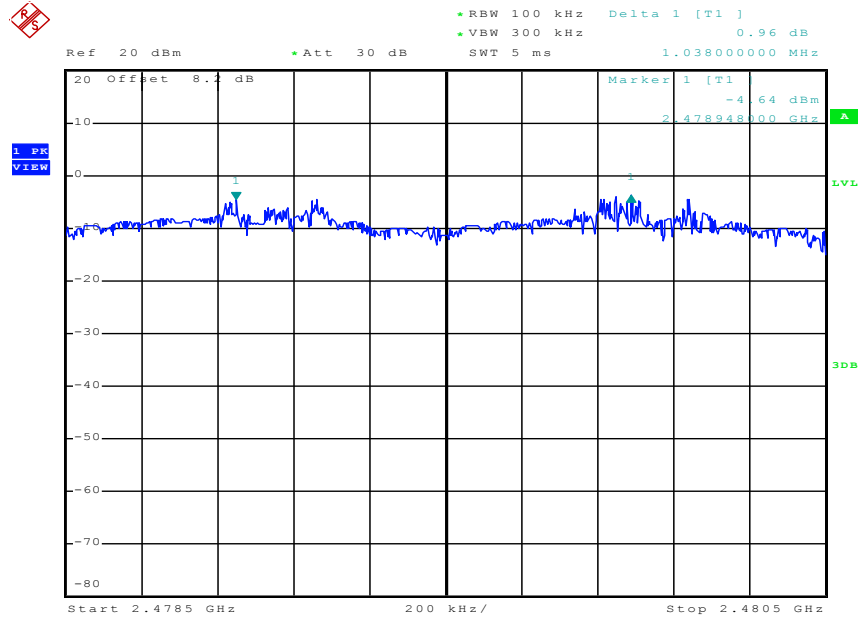
Date: 5 AUG 2019 19:09:48

$\pi/4$ DQPSK/MCH



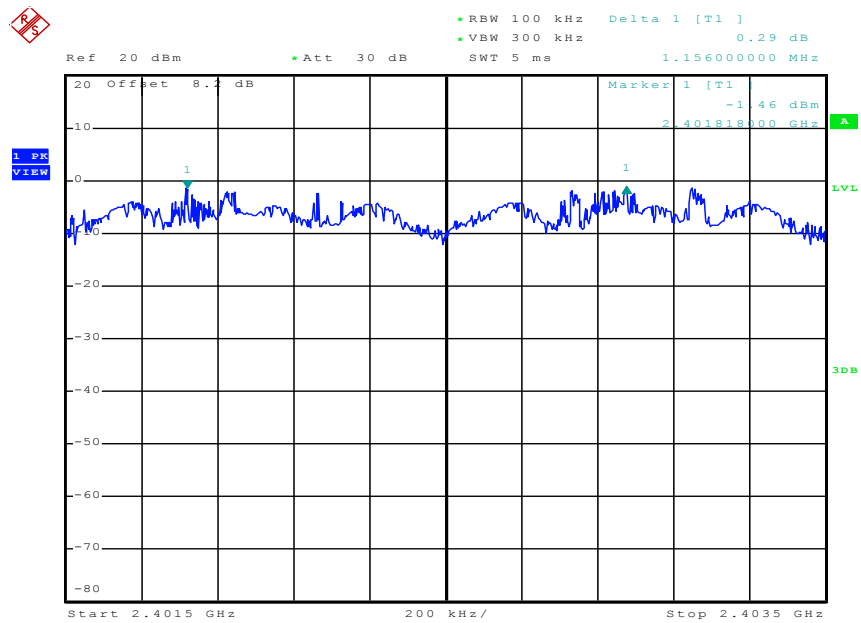
Date: 5 AUG 2019 19:18:36

$\pi/4$ DQPSK/HCH



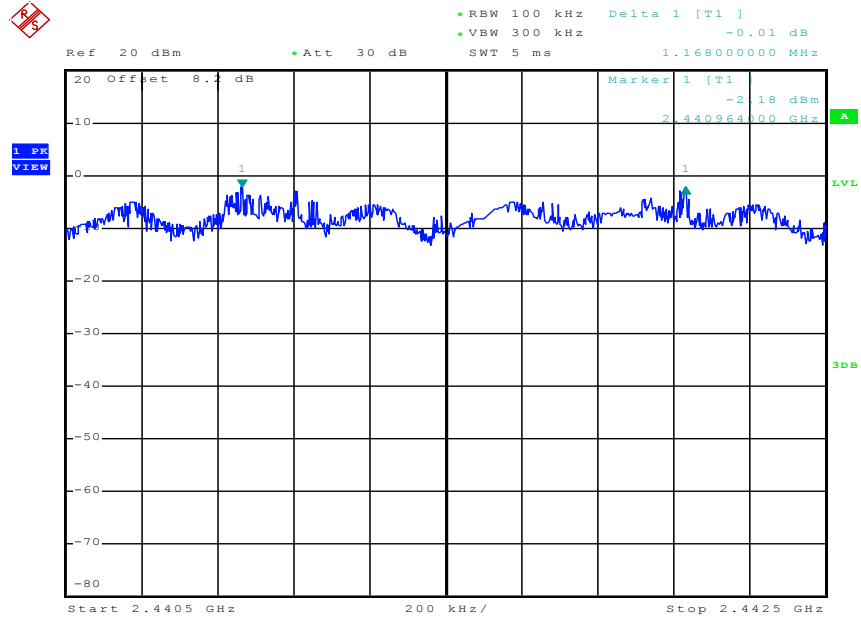
Date: 5 AUG 2019 19:19:29

8DPSK/LCH



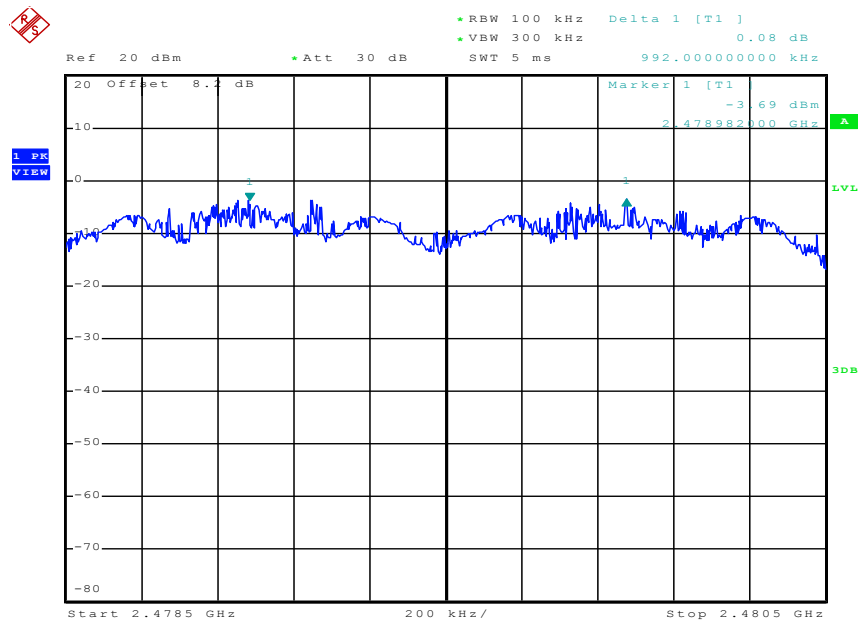
Date: 5 AUG 2019 19:26:48

8DPSK/MCH



Date: 5 AUG 2019 19:29:59

8DPSK/HCH



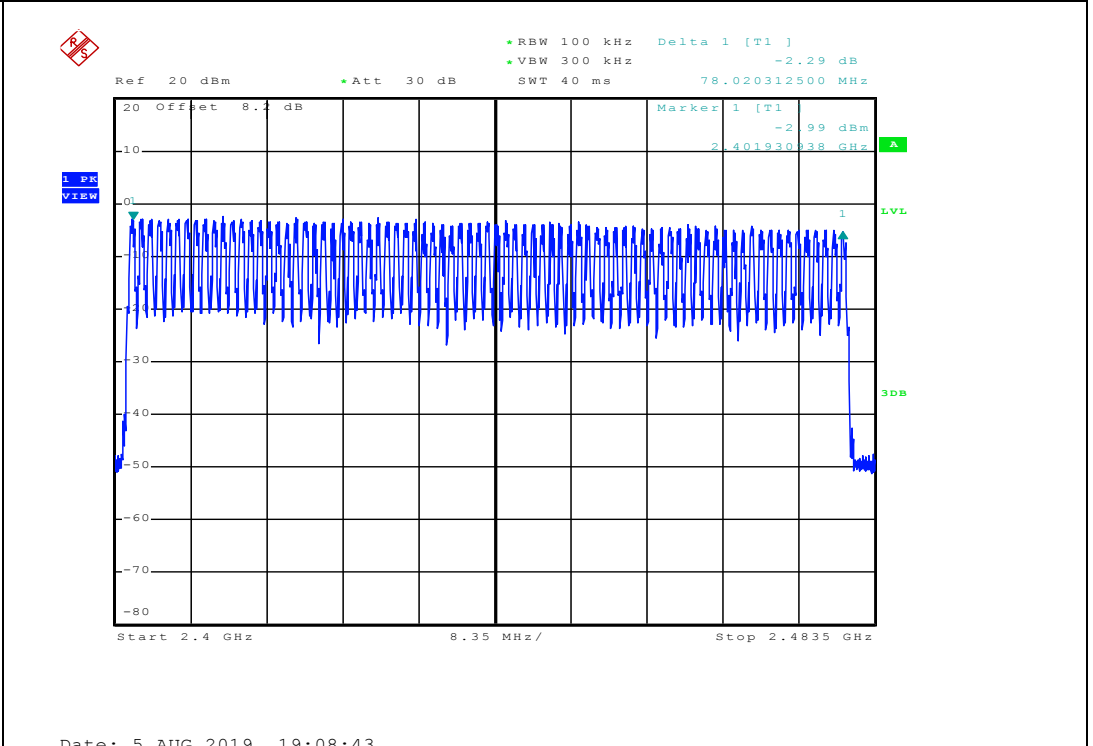
Date: 5 AUG 2019 19:31:19

### A.5 Hopping Channel Number

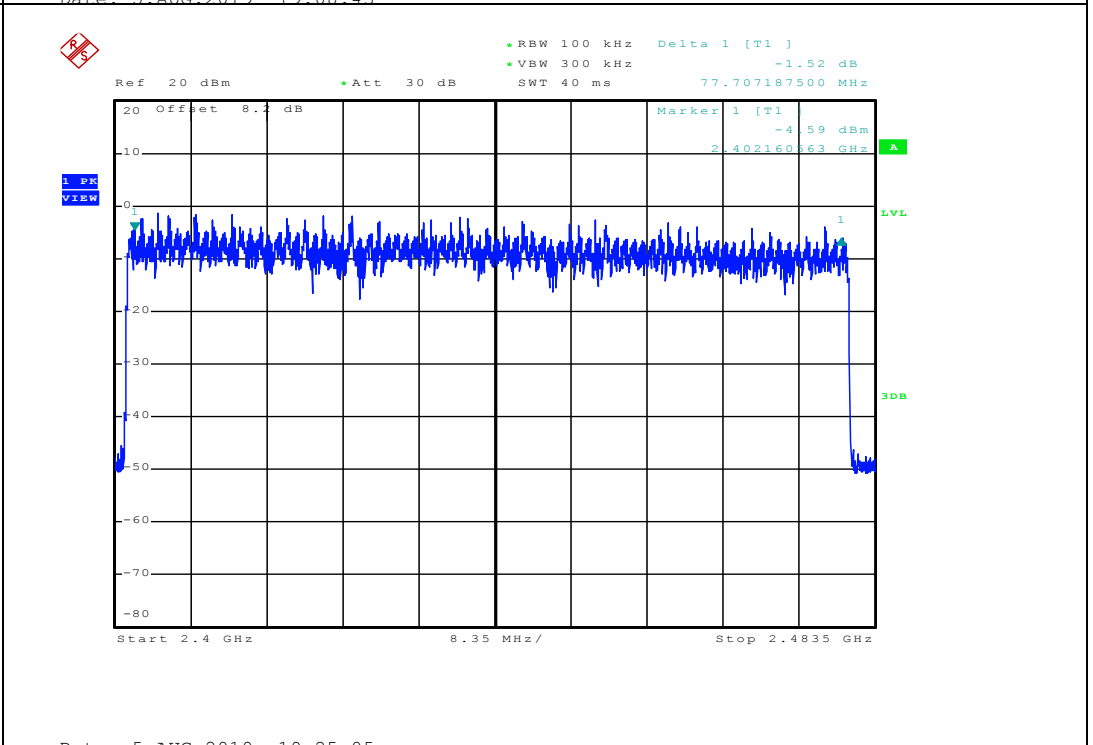
Mode	Channel.	Number of Hopping Channel [N]	Limit [N]	Verdict
GFSK	Hop	79	>=15	PASS
$\pi/4$ DQPSK	Hop	79	>=15	PASS
8DPSK	Hop	79	>=15	PASS

#### Test Graphs

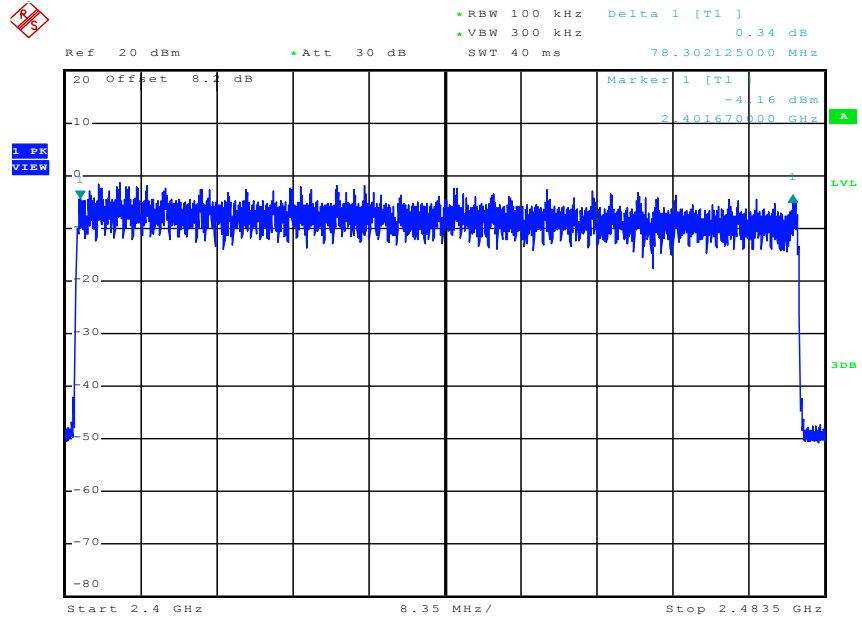
GFSK/Hop



$\pi/4$ DQPSK/Hop



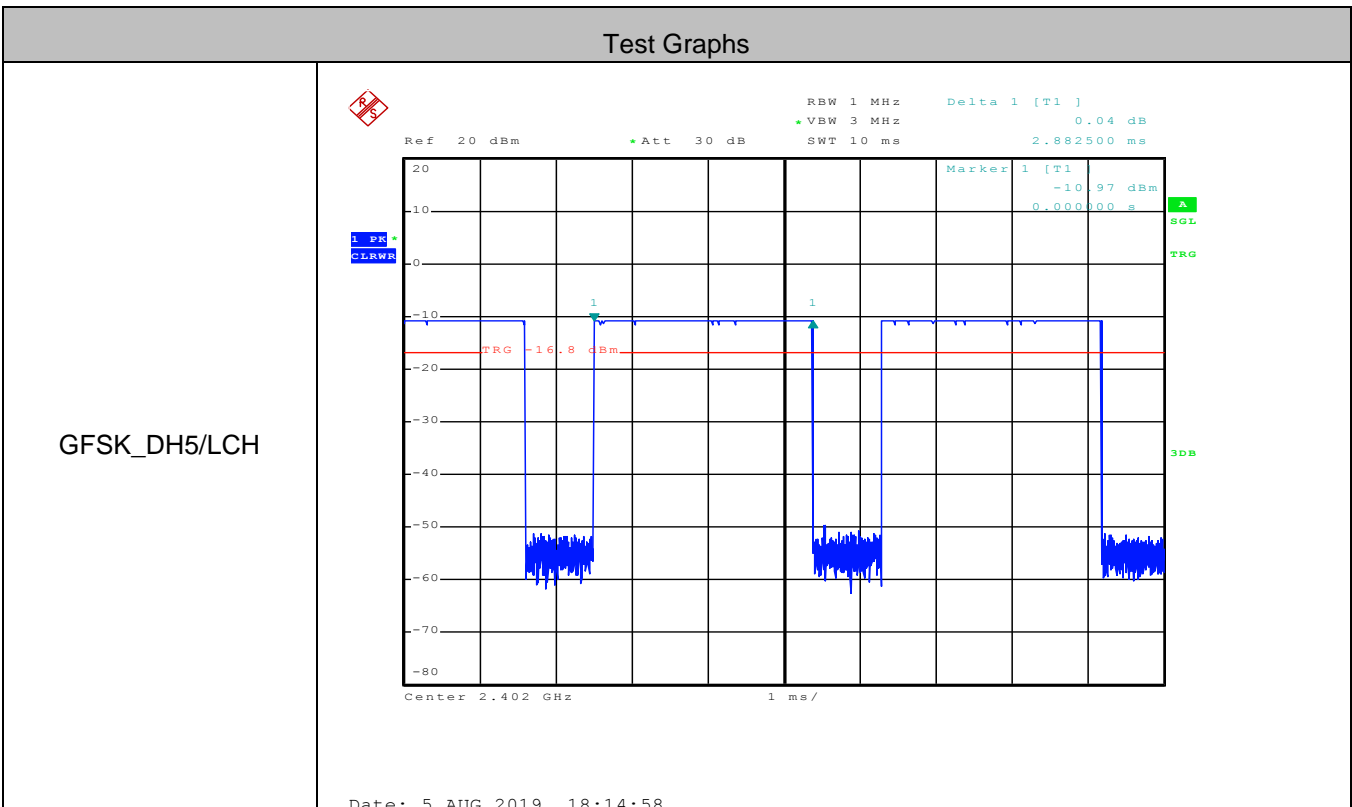
8DPSK/Hop



Date: 5 AUG 2019 19:36:50

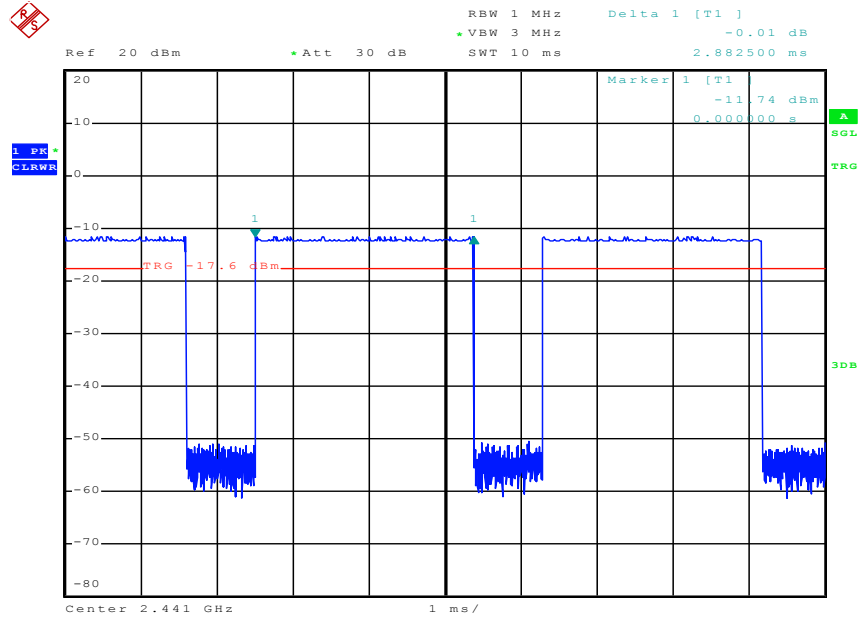
### A.6 Dwell Time

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	0.308	0.4	PASS
	2DH5	MCH	2.88	106.7	0.308	0.4	PASS
	2DH5	HCH	2.88	106.7	0.308	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



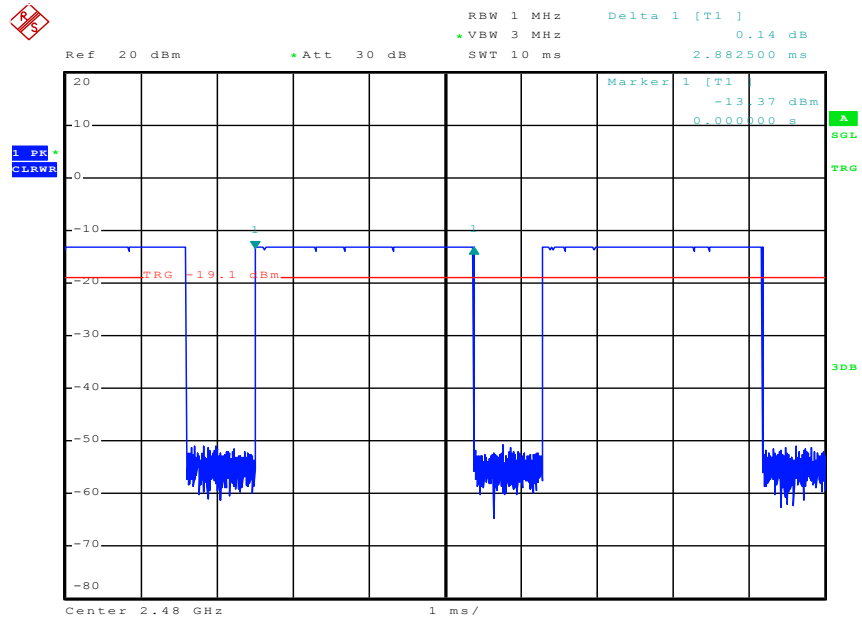


GFSK\_DH5/MCH



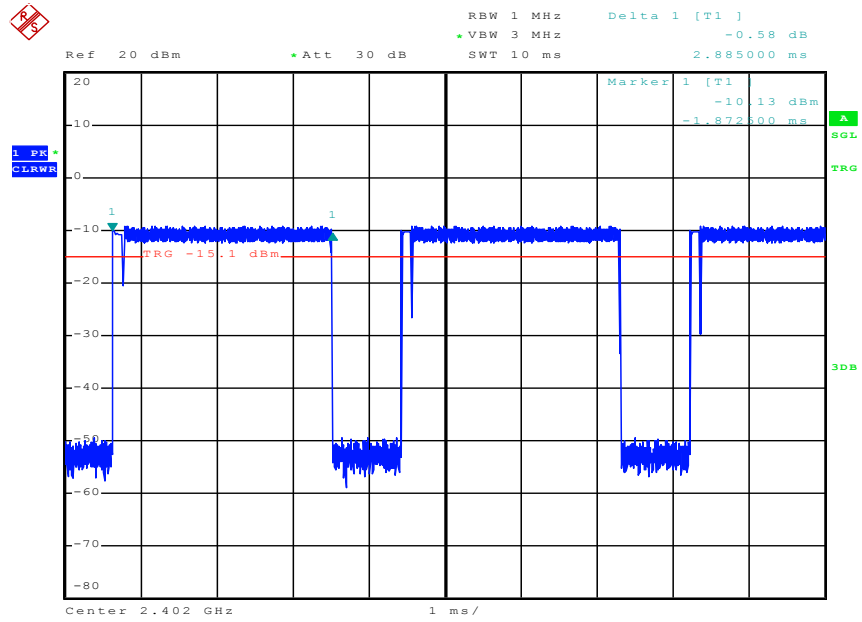
Date: 5 AUG 2019 18:17:36

GFSK\_DH5/HCH



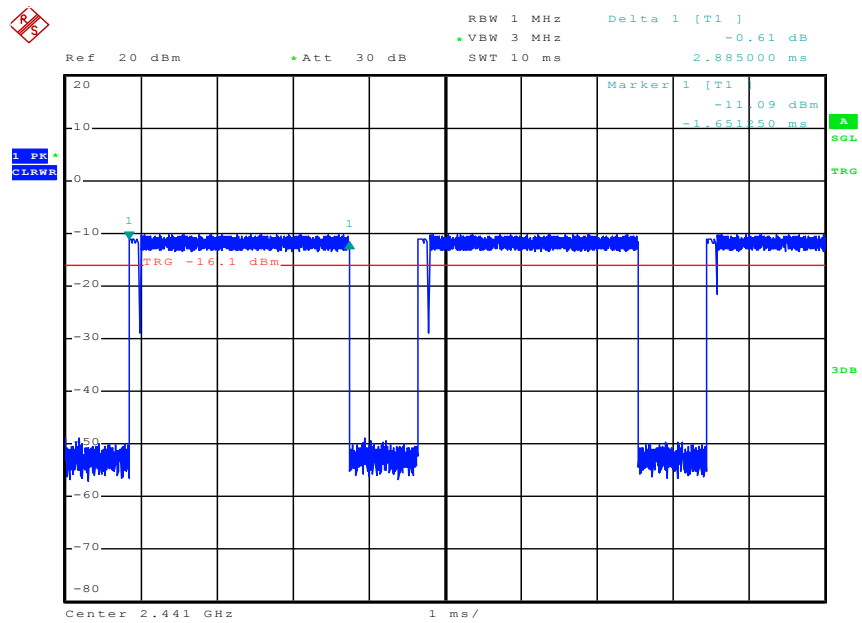
Date: 5 AUG 2019 18:20:10

$\pi/4$ DQPSK  
\_2DH5/LCH



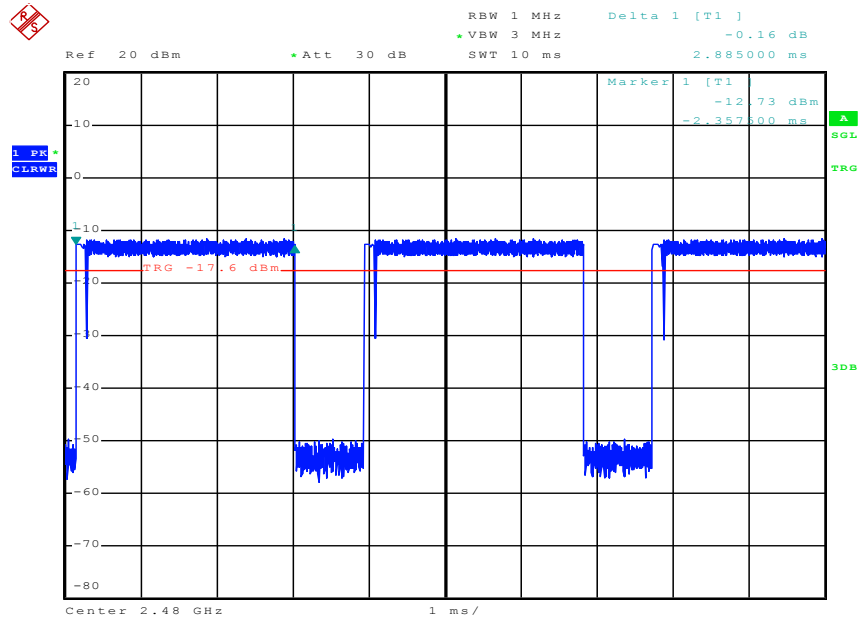
Date: 5 AUG 2019 18:24:27

$\pi/4$ DQPSK  
\_2DH5/MCH



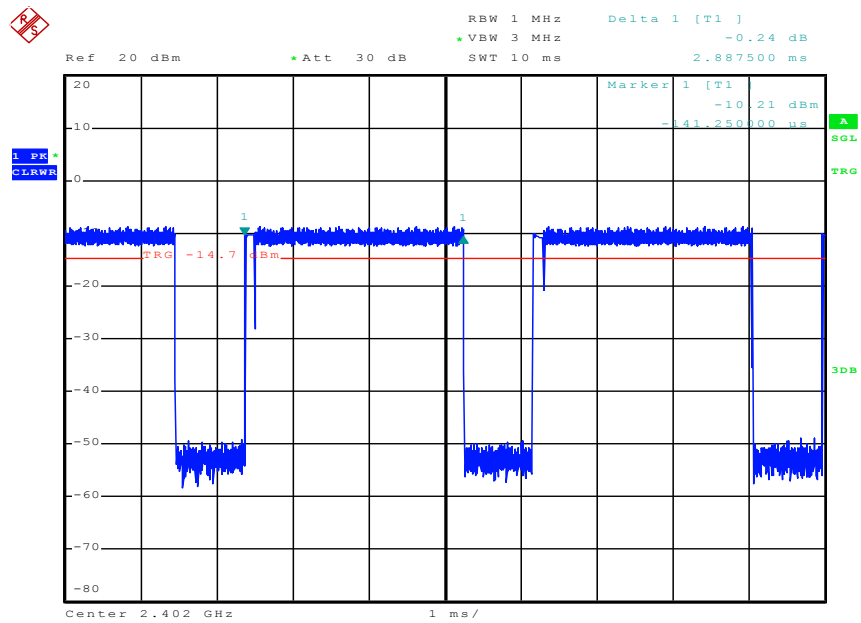
Date: 5 AUG 2019 18:27:05

$\pi/4$ DQPSK  
\_2DH5/HCH



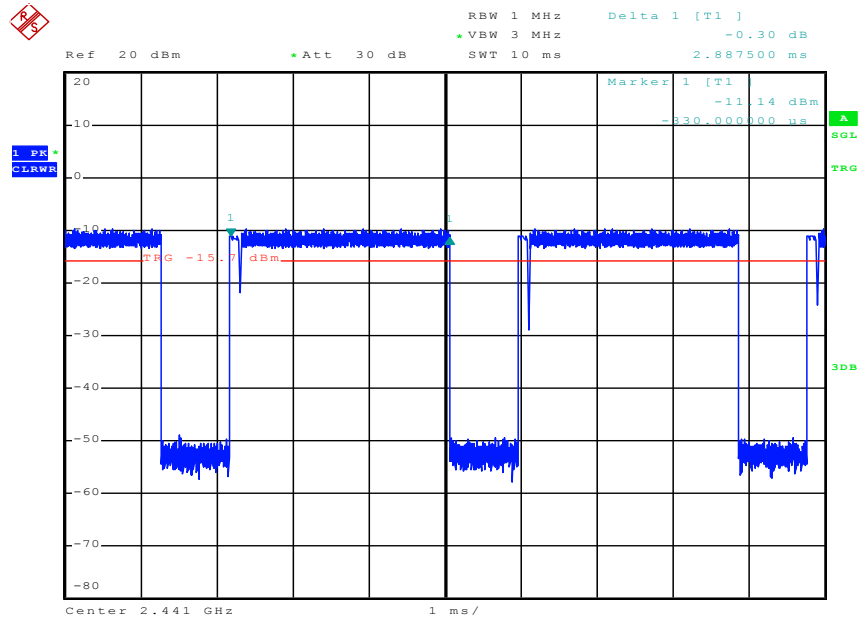
Date: 5 AUG 2019 18:29:00

8DPSK \_3DH5/LCH



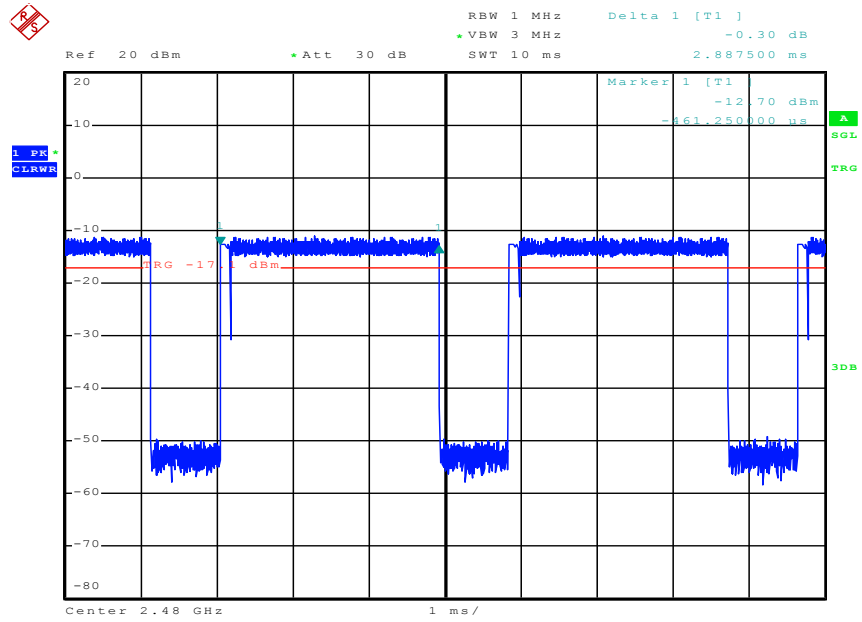
Date: 5 AUG 2019 18:33:28

8DPSK\_3DH5/MCH



Date: 5 AUG 2019 18:36:17

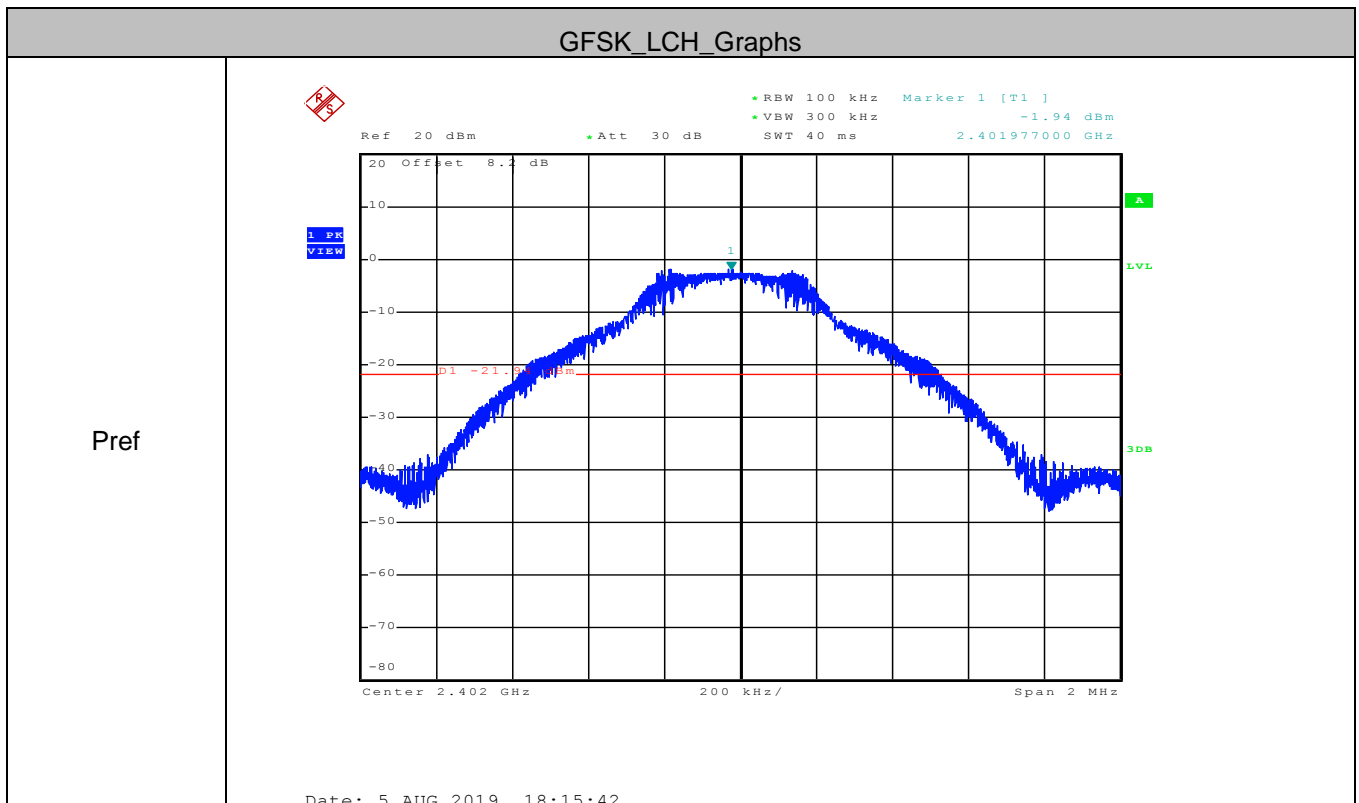
8DPSK\_3DH5/HCH



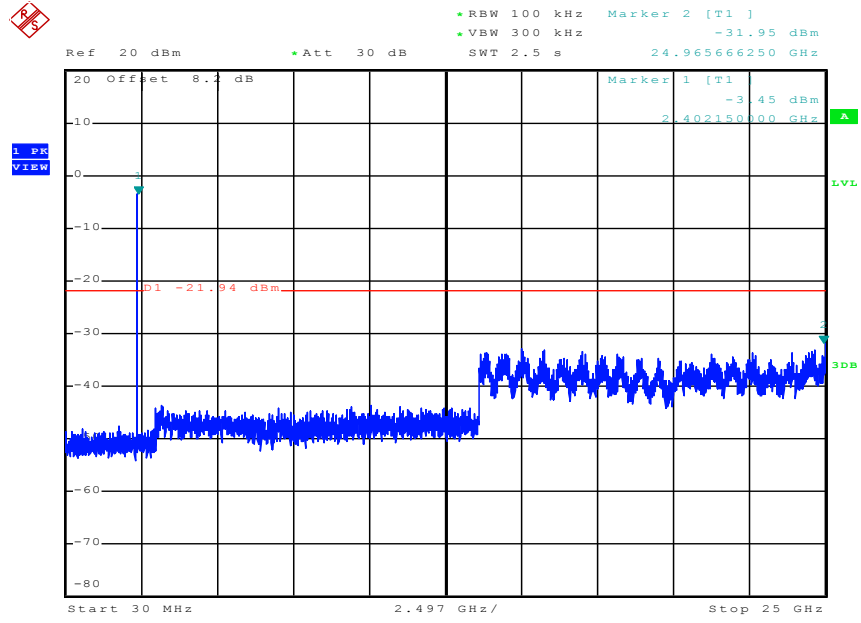
Date: 5 AUG 2019 18:52:09

### A.7 RF Conducted Spurious Emissions

Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
GFSK	LCH	-1.94	-31.950	-21.940	PASS
	MCH	-2.82	-31.190	-22.820	PASS
	HCH	-4.27	-31.650	-24.270	PASS
$\pi/4$ DQPSK	LCH	-1.2	-32.370	-21.200	PASS
	MCH	-2.12	-31.050	-22.120	PASS
	HCH	-3.66	-32.020	-23.660	PASS
8DPSK	LCH	-1.22	-31.840	-21.220	PASS
	MCH	-2.15	-31.820	-22.150	PASS
	HCH	-3.63	-32.680	-23.630	PASS



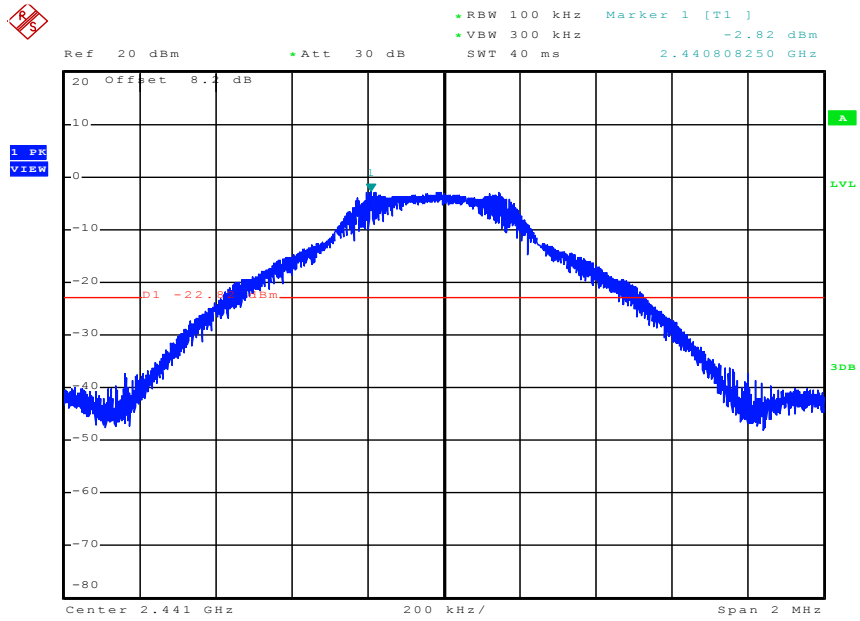
P<sub>uw</sub>



Date: 5 AUG 2019 18:15:56

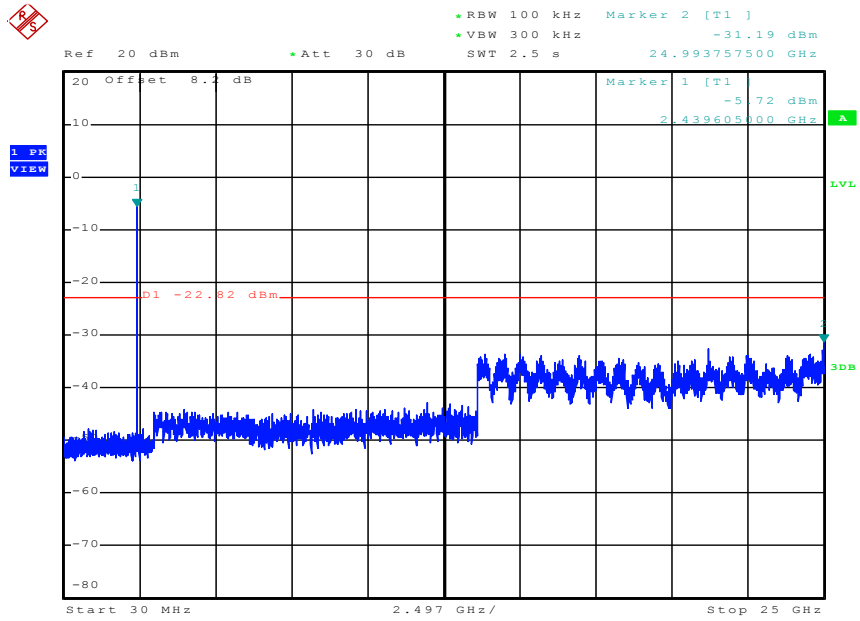
### GFSK\_MCH\_Graphs

Pref



Date: 5 AUG 2019 18:18:03

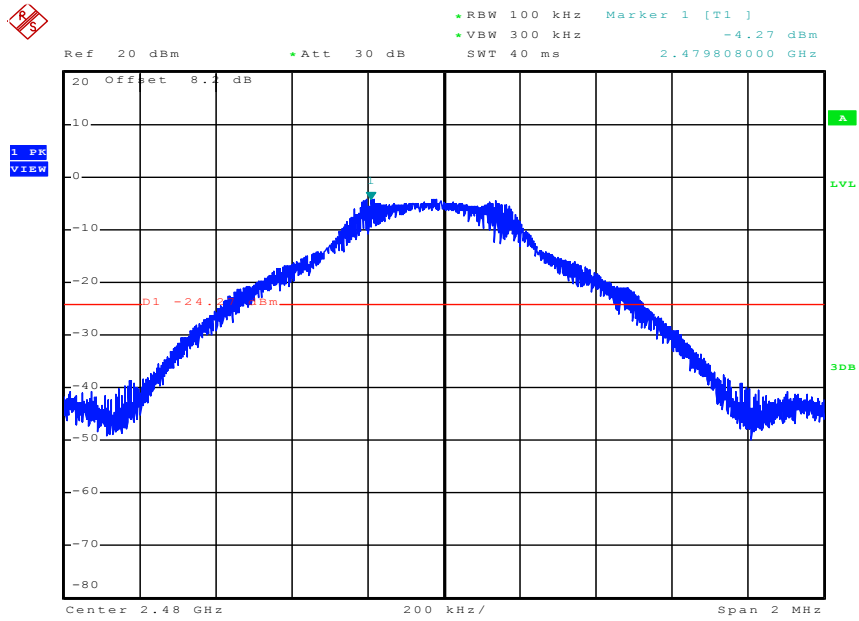
Puw



Date: 5 AUG 2019 18:18:18

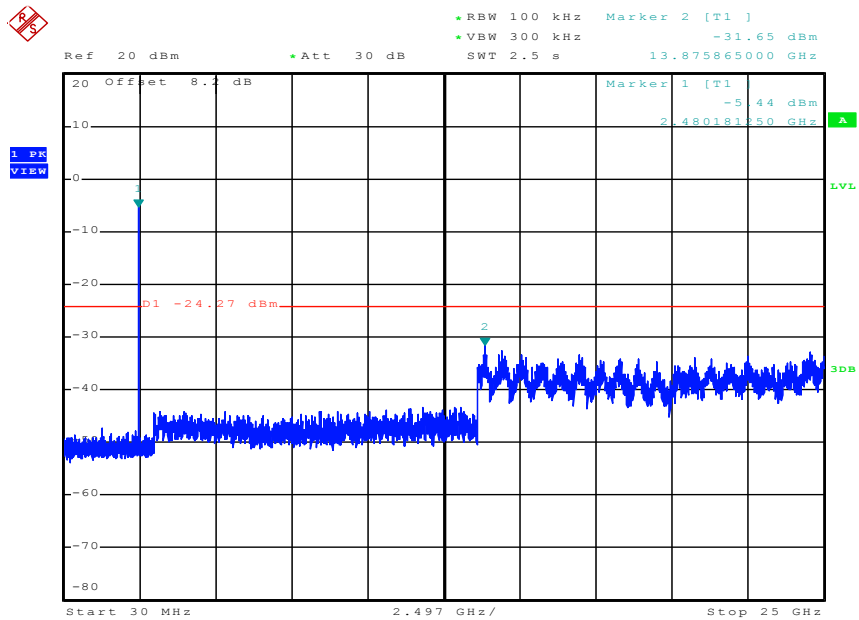
### GFSK\_HCH\_Graphs

Pref



Date: 5 AUG 2019 18:20:54

Puw

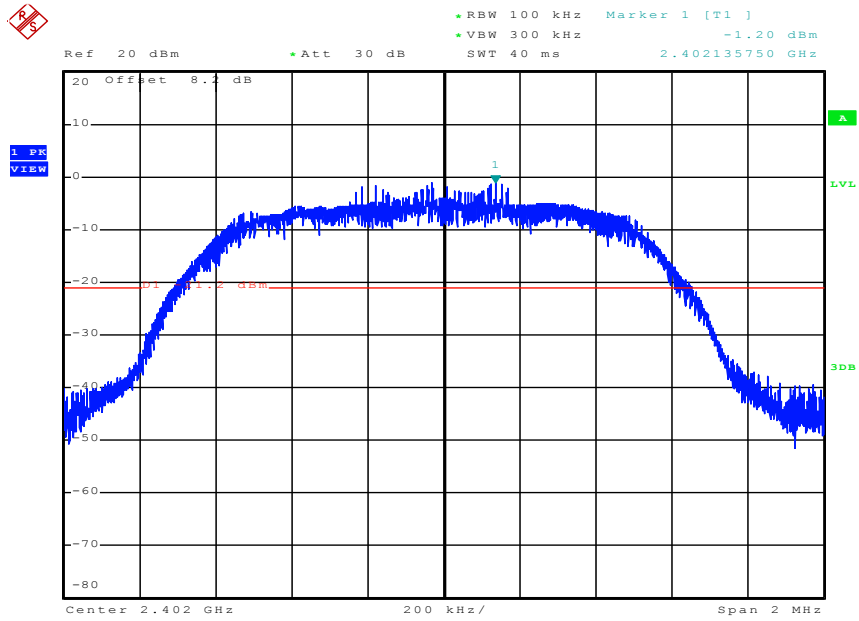


Date: 5 AUG 2019 18:21:09



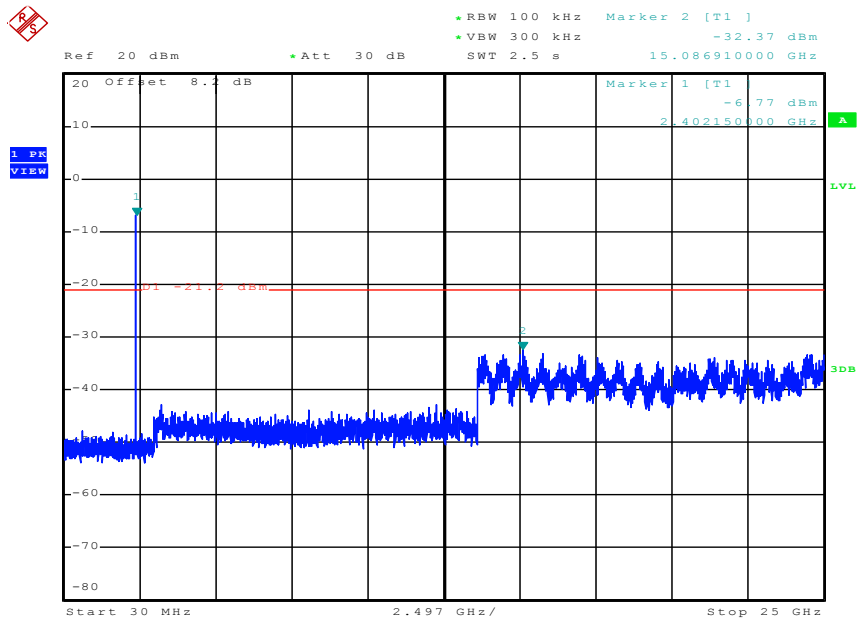
$\pi/4$ DQPSK\_LCH\_Graphs

Pref



Date: 5 AUG 2019 18:25:12

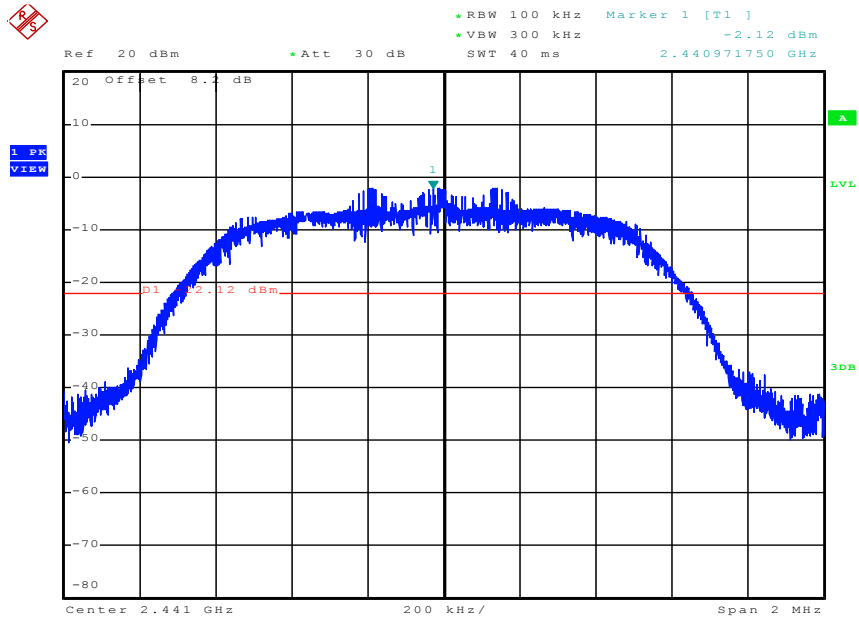
Puw



Date: 5 AUG 2019 18:25:27

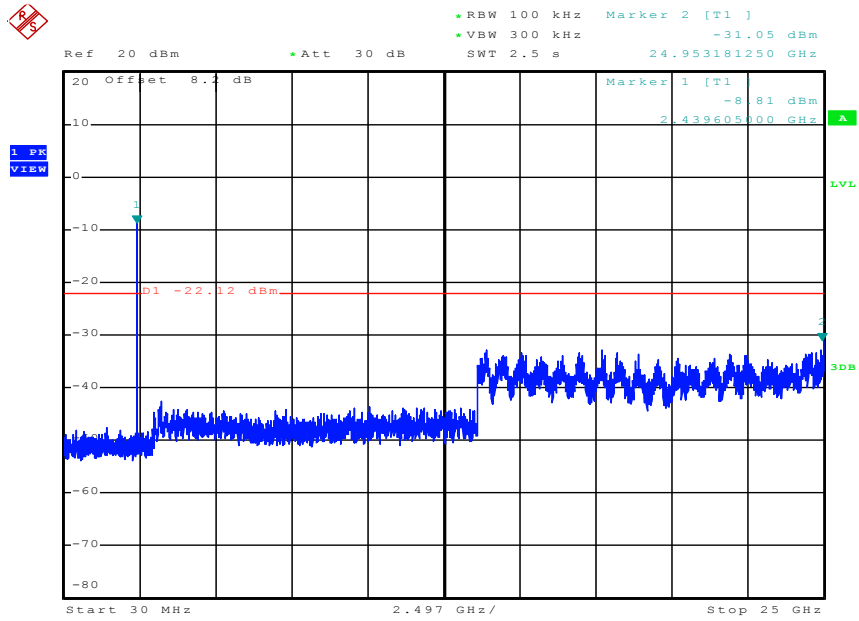
$\pi/4$ DQPSK\_MCH\_Graphs

Pref



Date: 5 AUG 2019 18:27:33

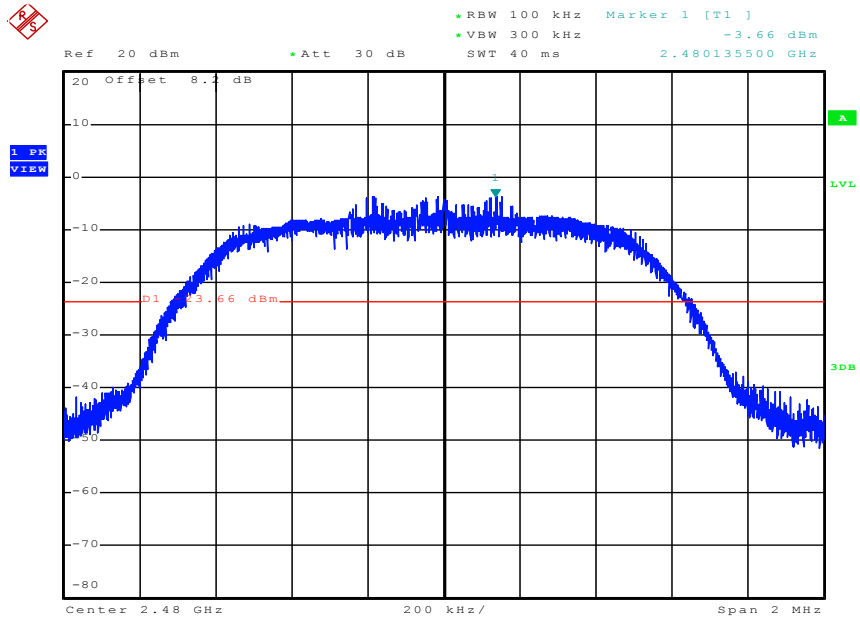
Puw



Date: 5 AUG 2019 18:27:47

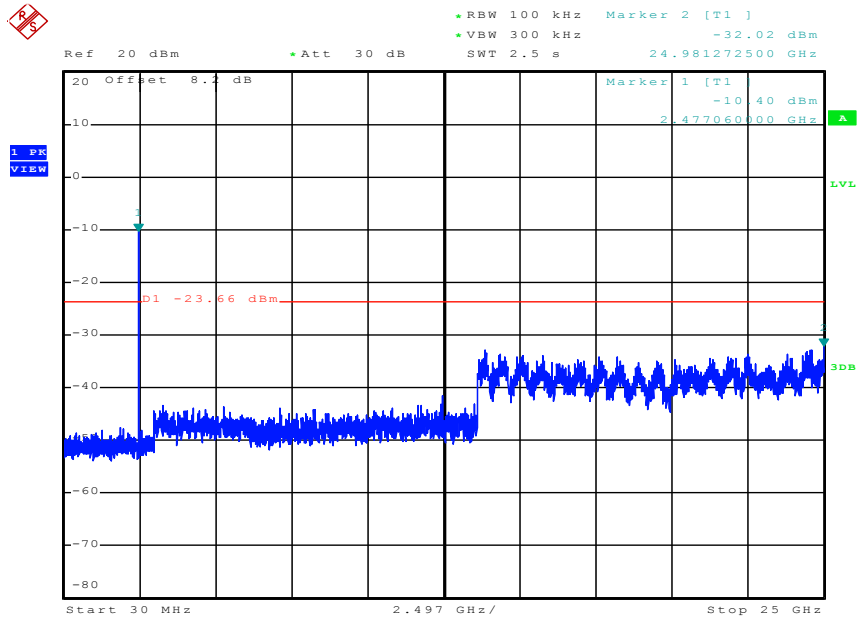
$\pi/4$ DQPSK\_HCH\_Graphs

Pref



Date: 5 AUG 2019 18:29:45

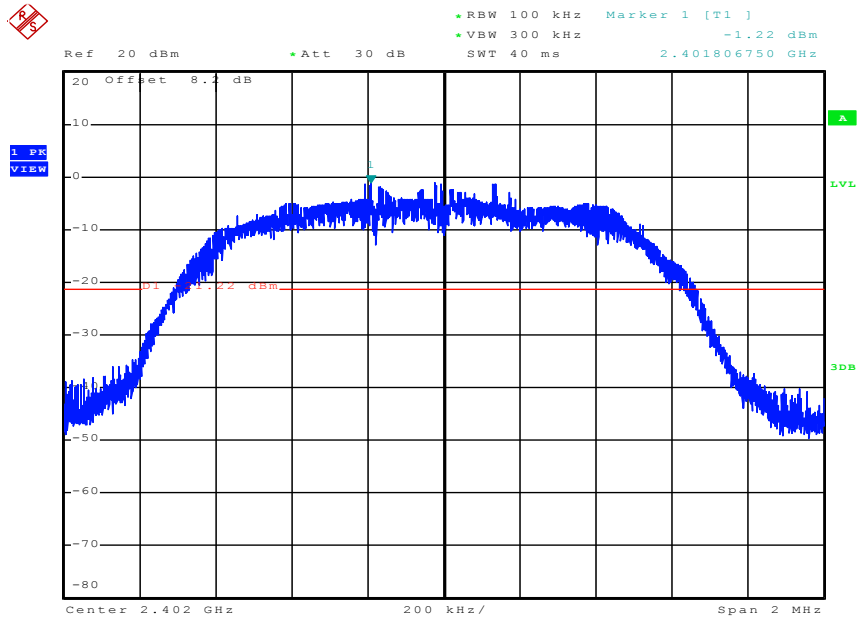
Puw



Date: 5 AUG 2019 18:29:59

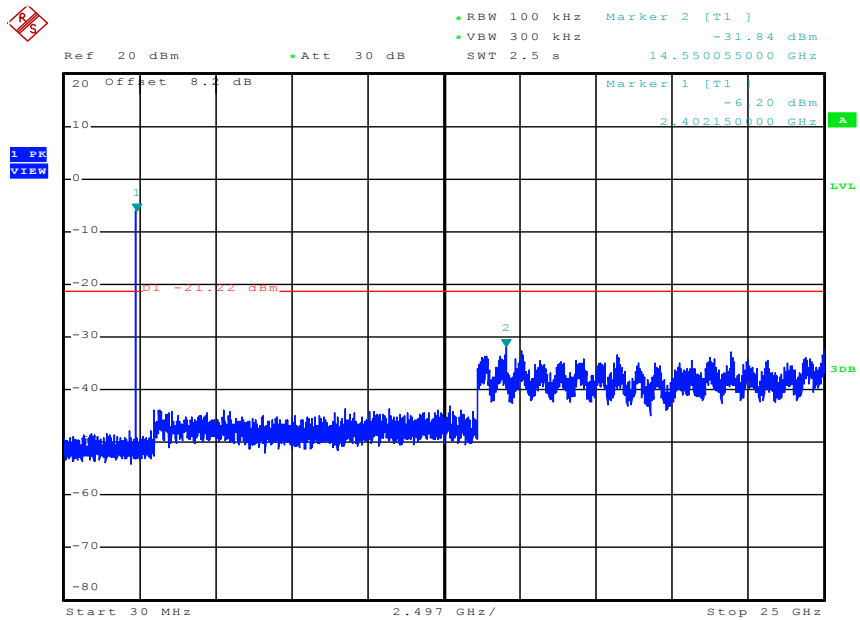
### 8DPSK\_LCH\_Graphs

Pref



Date: 5 AUG 2019 18:34:13

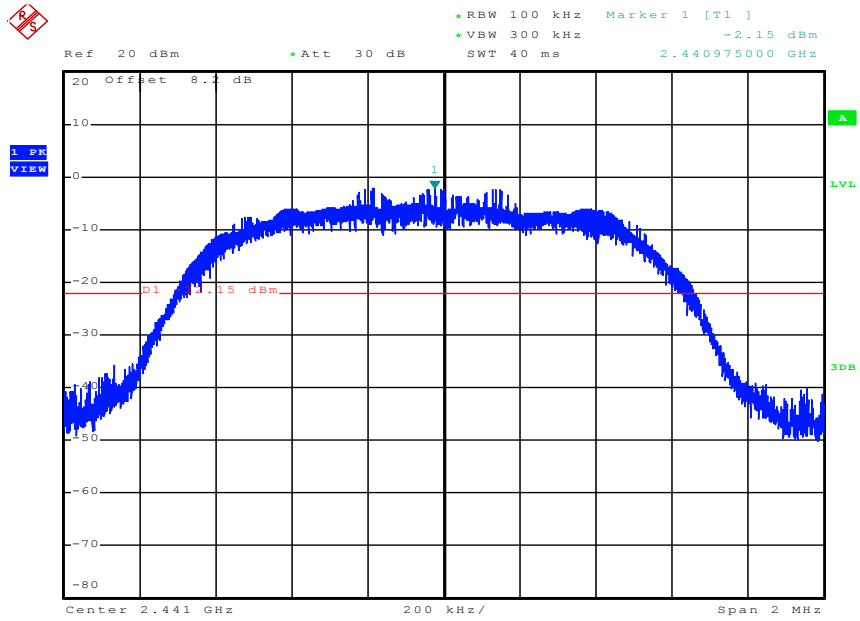
Puw



Date: 5 AUG 2019 18:34:28

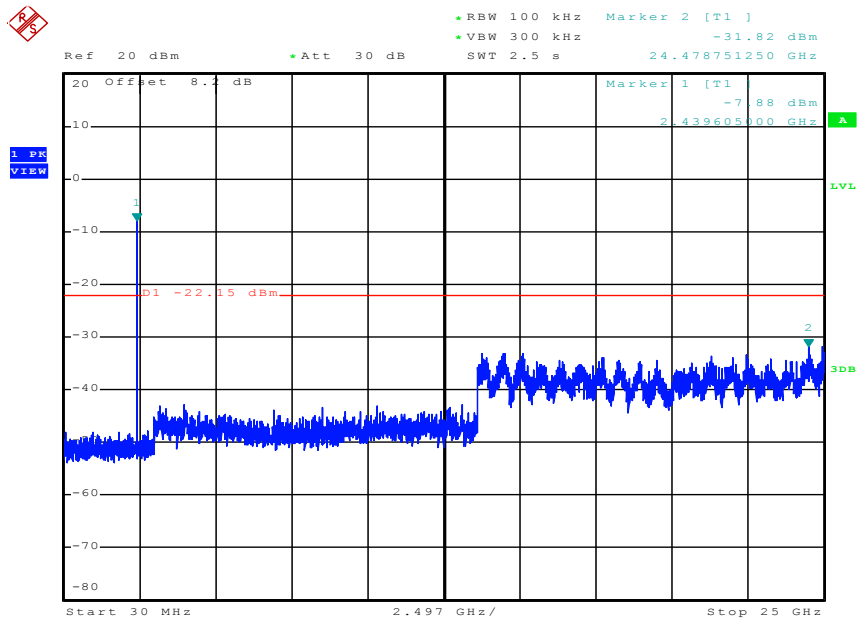
### 8DPSK\_MCH\_Graphs

Pref



Date: 5 AUG 2019 18:36:44

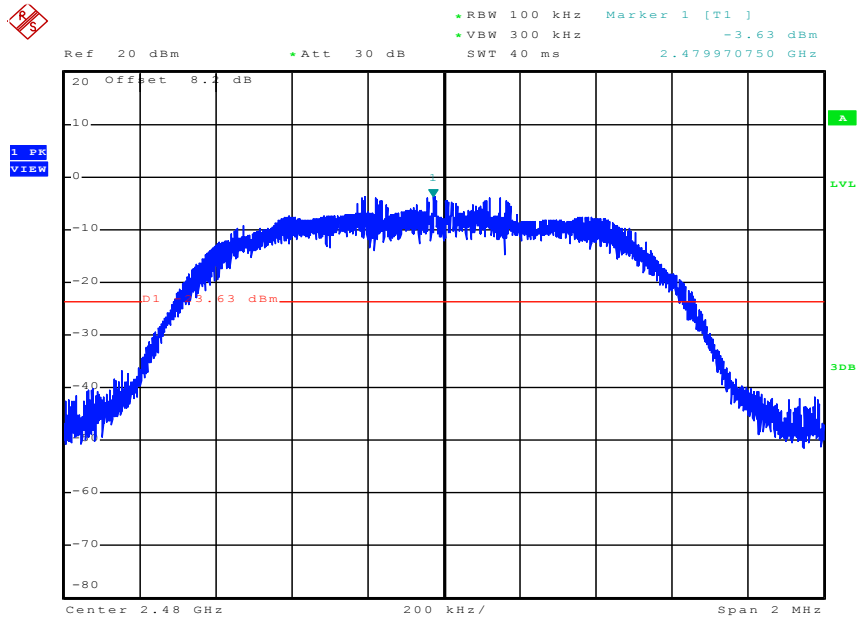
Puw



Date: 5 AUG 2019 18:36:59

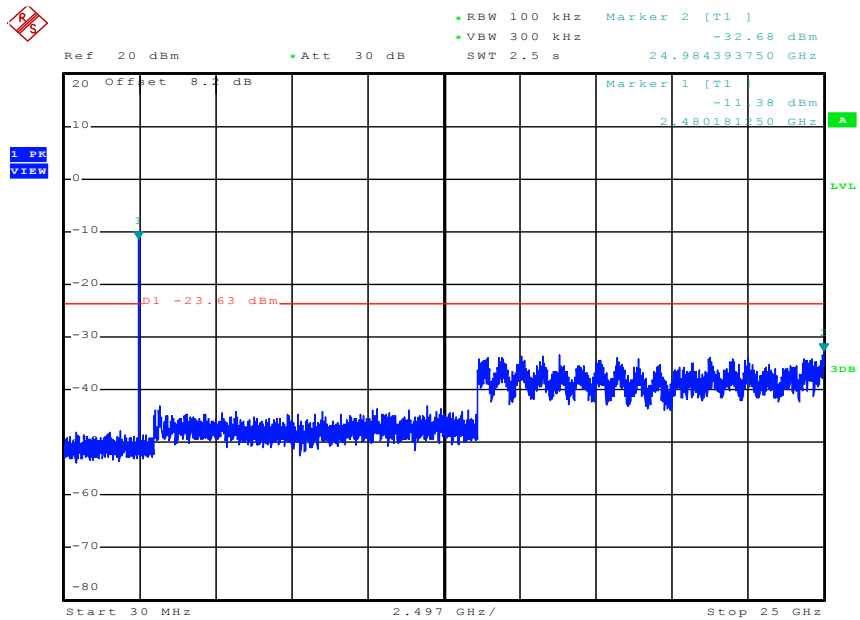
### 8DPSK\_HCH\_Graphs

Pref



Date: 5 AUG 2019 18:39:01

Puw



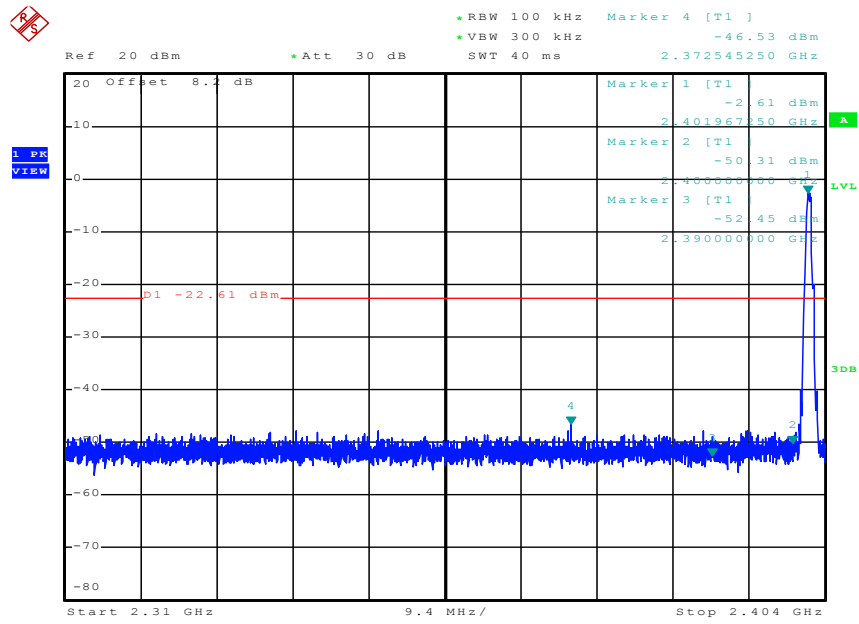
Date: 5 AUG 2019 18:39:16

## A.8 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	-2.610	Off	-46.530	-22.61	PASS
			-2.320	On	-46.321	-22.32	PASS
	HCH	2480	-4.300	Off	-47.329	-24.3	PASS
			-3.970	On	-46.495	-23.97	PASS
$\pi/4$ DQPSK	LCH	2402	-1.990	Off	-46.849	-21.99	PASS
			-1.390	On	-46.363	-21.39	PASS
	HCH	2480	-3.790	Off	-47.147	-23.79	PASS
			-3.180	On	-46.483	-23.18	PASS
8DPSK	LCH	2402	-4.070	Off	-46.448	-24.07	PASS
			-1.860	On	-46.409	-21.86	PASS
	HCH	2480	-3.740	Off	-47.034	-23.74	PASS
			-3.170	On	-47.155	-23.17	PASS

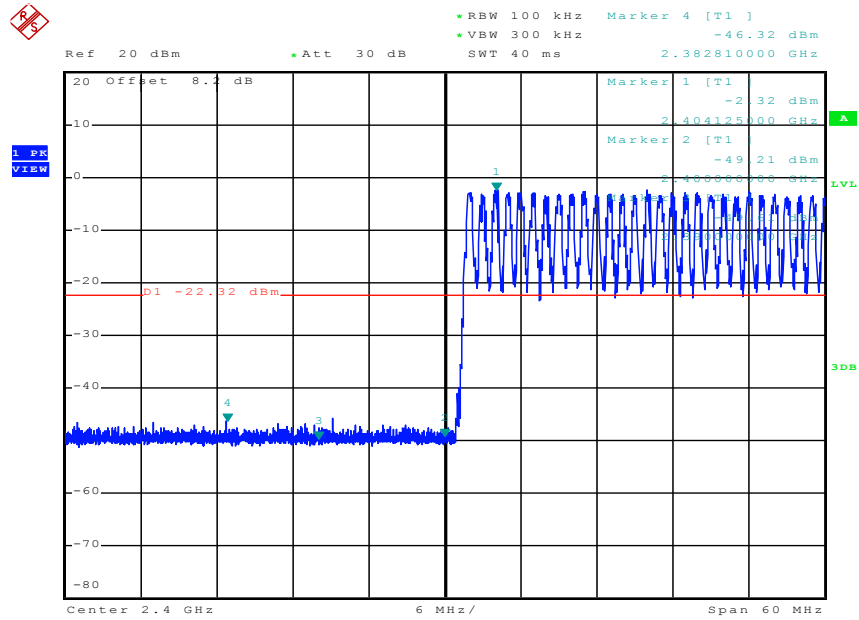
Test Graphs

GFSK/LCH/No Hop



Date: 5 AUG 2019 18:15:29

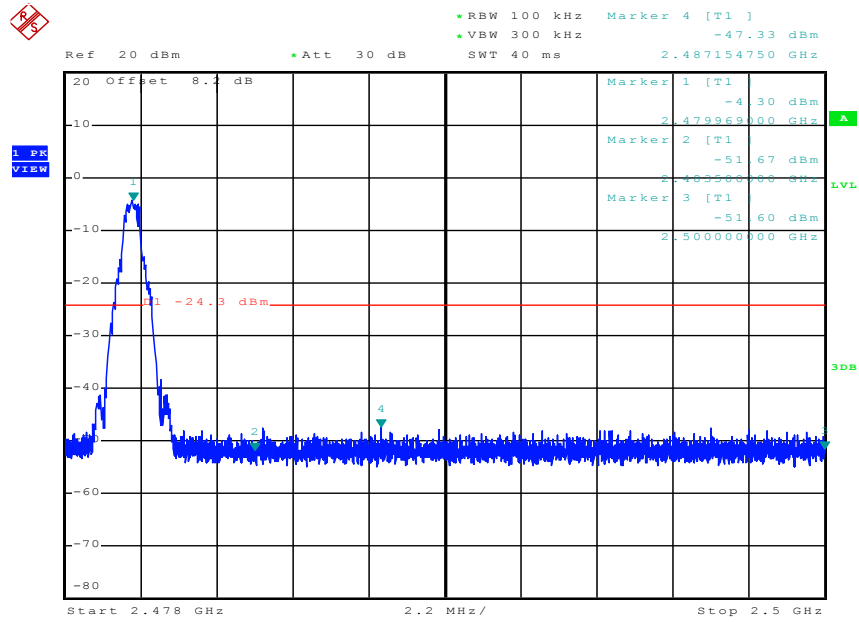
GFSK/LCH/Hop



Date: 5 AUG 2019 19:03:37

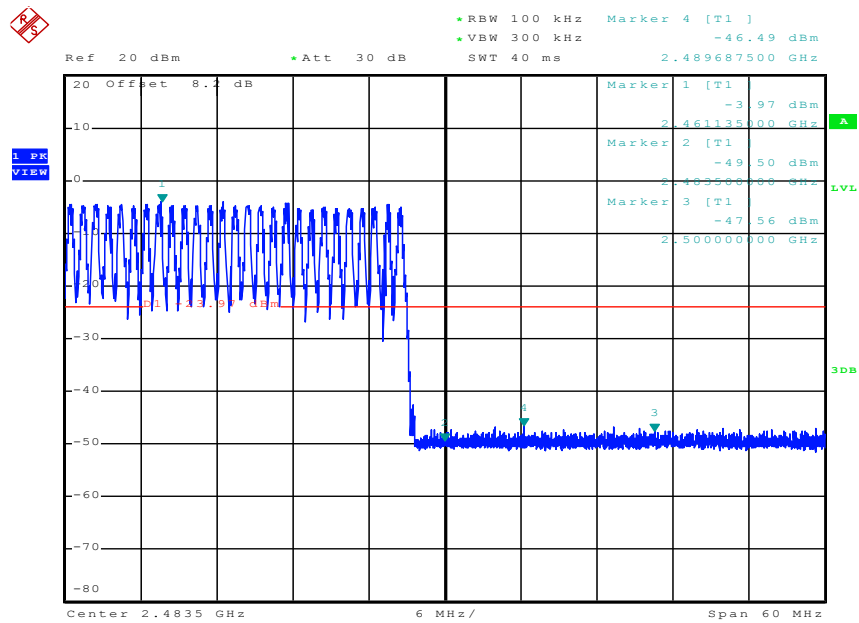


GFSK/HCH/No Hop



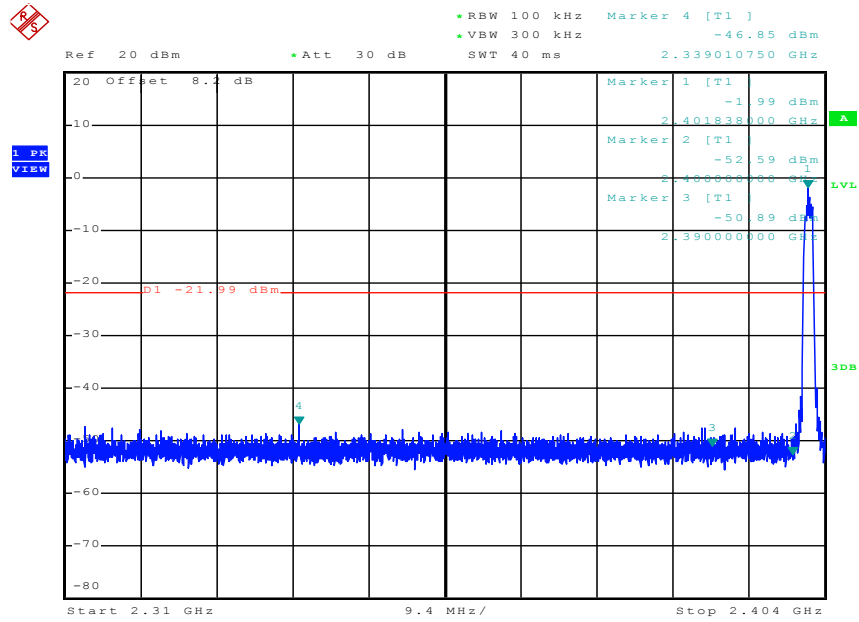
Date: 5 AUG 2019 18:20:41

GFSK/HCH/Hop



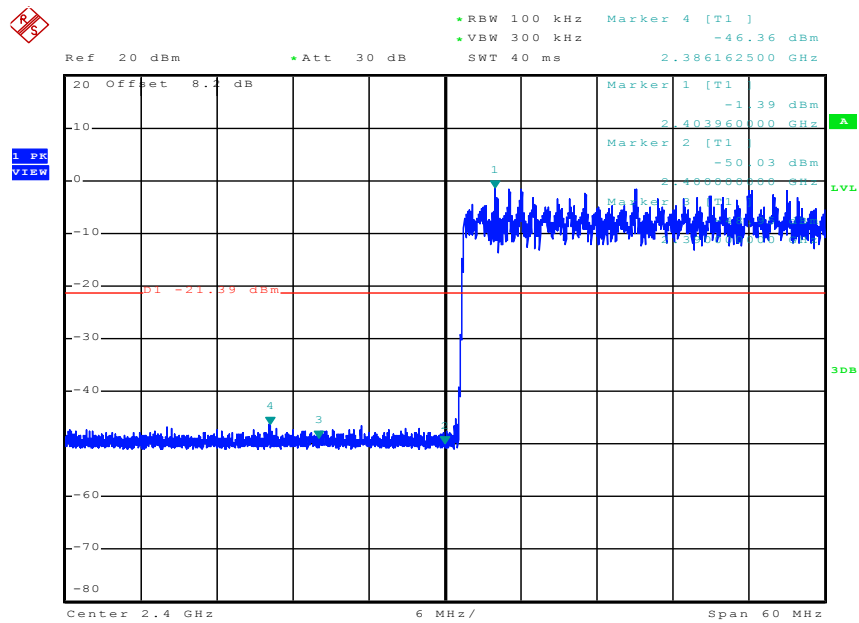
Date: 5 AUG 2019 19:06:24

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



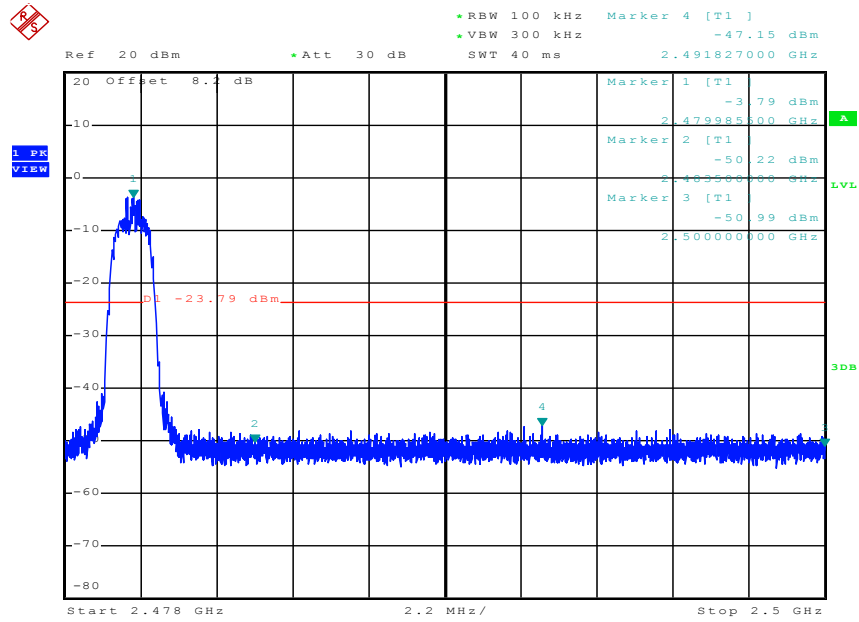
Date: 5 AUG 2019 18:24:59

$\pi$ /4DQPSK/LCH/Hop



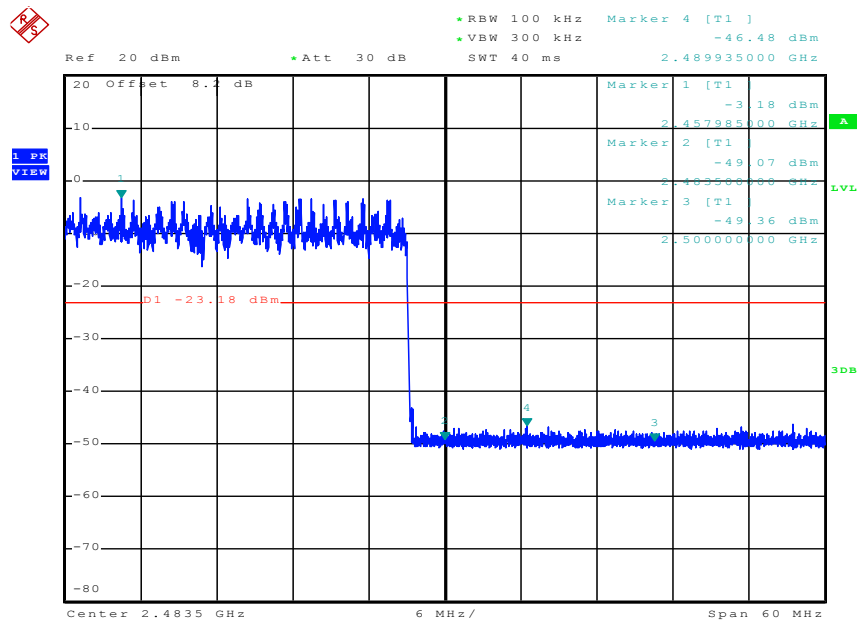
Date: 5 AUG 2019 19:12:07

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



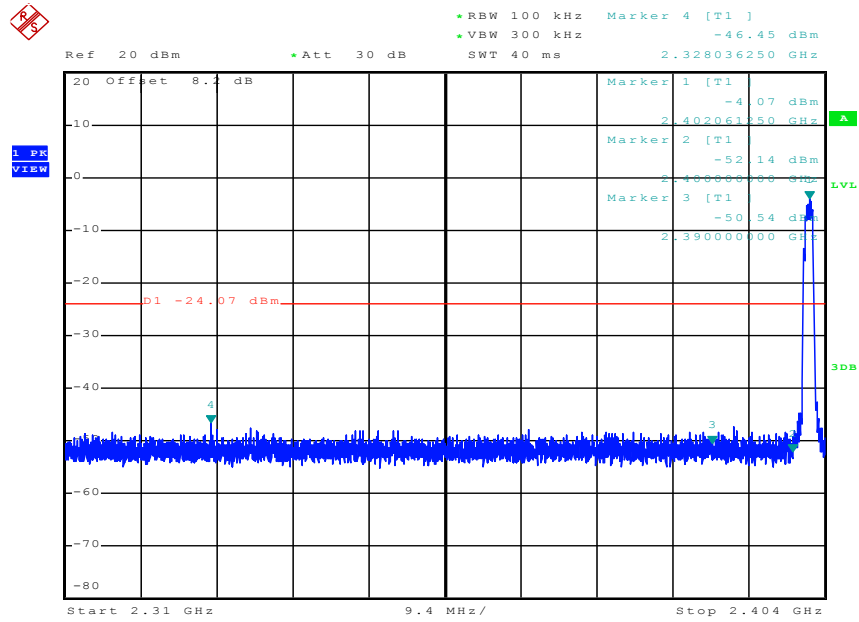
Date: 5 AUG 2019 18:29:32

$\pi$ /4DQPSK/HCH/Hop



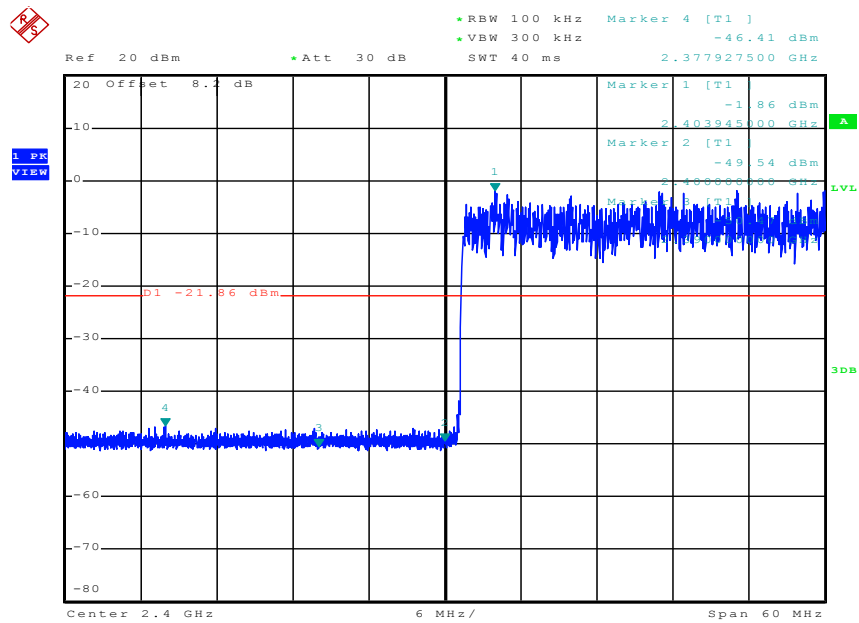
Date: 5 AUG 2019 19:22:32

8DPSK/LCH/No Hop



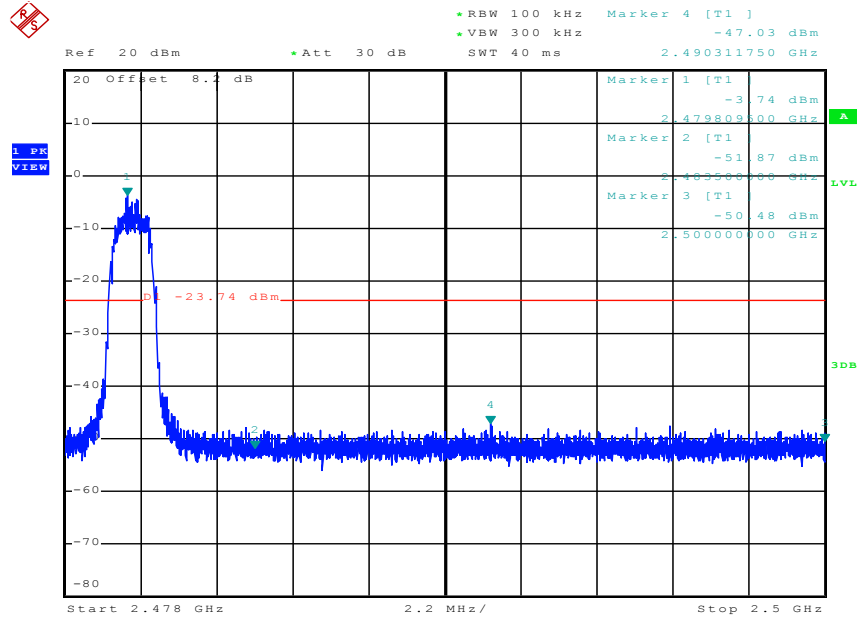
Date: 5 AUG 2019 18:34:00

8DPSK/LCH/Hop



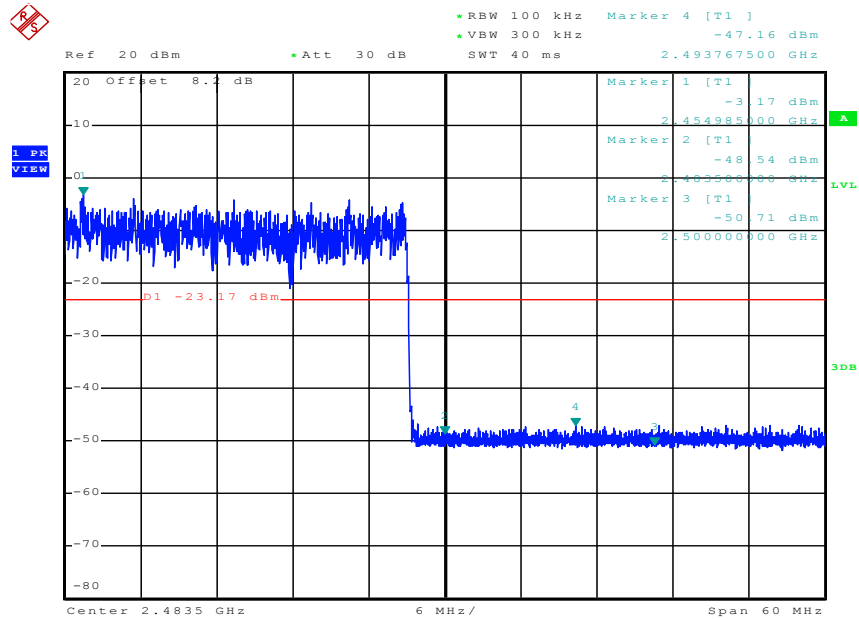
Date: 5 AUG 2019 19:29:01

8DPSK/HCH/No Hop



Date: 5 AUG 2019 18:52:41

8DPSK/HCH/Hop

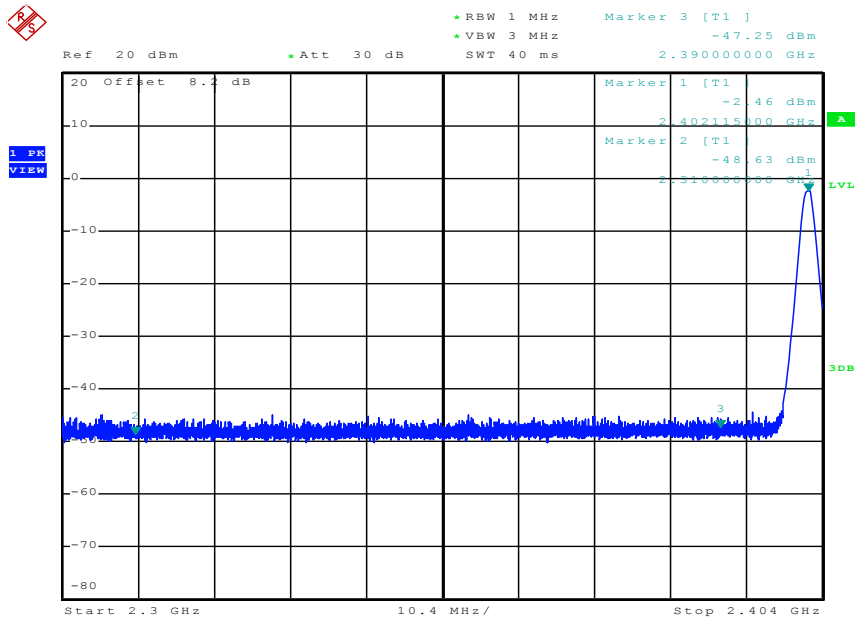


Date: 5 AUG 2019 19:33:03

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

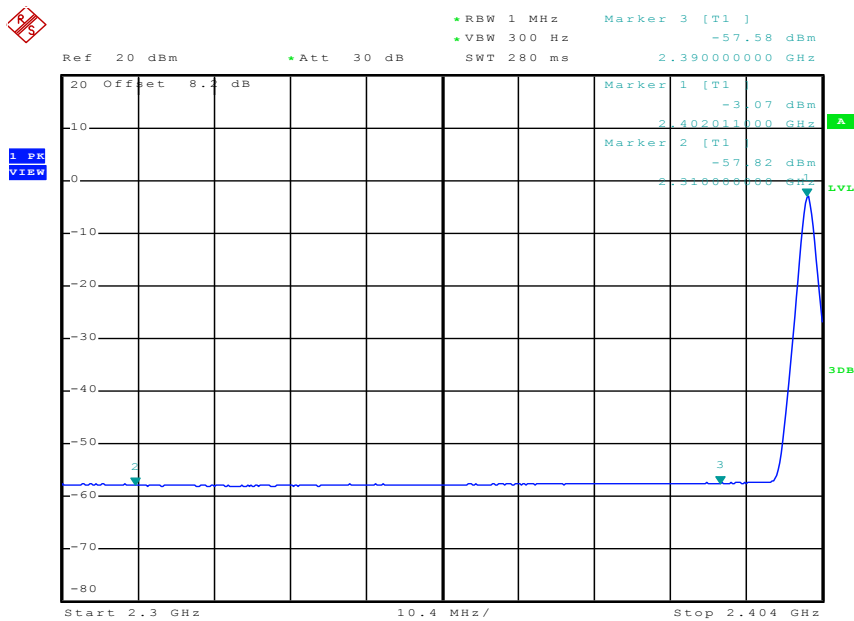
Test Mode	Hopping	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detector	Limit [dBuV/m]	Verdict
GFSK	Off	2310.0	-48.63	2.0	0	48.63	PEAK	74	PASS
	Off	2310.0	-57.82	2.0	0	39.44	AV	54	PASS
	Off	2390.0	-47.25	2.0	0	50.01	PEAK	74	PASS
	Off	2390.0	-57.58	2.0	0	39.68	AV	54	PASS
	Off	2483.5	-43.07	2.0	0	54.19	PEAK	74	PASS
	Off	2483.5	-47.97	2.0	0	49.29	AV	54	PASS
	Off	2500.0	-48.52	2.0	0	48.74	PEAK	74	PASS
	Off	2500.0	-58.14	2.0	0	39.12	AV	54	PASS
$\pi/4$ DQPSK	Off	2310.0	-48.62	2.0	0	48.64	PEAK	74	PASS
	Off	2310.0	-57.93	2.0	0	39.33	AV	54	PASS
	Off	2390.0	-48.43	2.0	0	48.83	PEAK	74	PASS
	Off	2390.0	-57.41	2.0	0	39.85	AV	54	PASS
	Off	2483.5	-42.58	2.0	0	54.68	PEAK	74	PASS
	Off	2483.5	-48.00	2.0	0	49.26	AV	54	PASS
	Off	2500.0	-48.16	2.0	0	49.10	PEAK	74	PASS
	Off	2500.0	-58.21	2.0	0	39.05	AV	54	PASS
8DPSK	Off	2310.0	-48.25	2.0	0	49.01	PEAK	74	PASS
	Off	2310.0	-57.86	2.0	0	39.40	AV	54	PASS
	Off	2390.0	-49.11	2.0	0	48.15	PEAK	74	PASS
	Off	2390.0	-57.51	2.0	0	39.75	AV	54	PASS
	Off	2483.5	-41.03	2.0	0	56.23	PEAK	74	PASS
	Off	2483.5	-48.02	2.0	0	49.24	AV	54	PASS
	Off	2500.0	-45.75	2.0	0	51.51	PEAK	74	PASS
	Off	2500.0	-58.17	2.0	0	39.09	AV	54	PASS

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



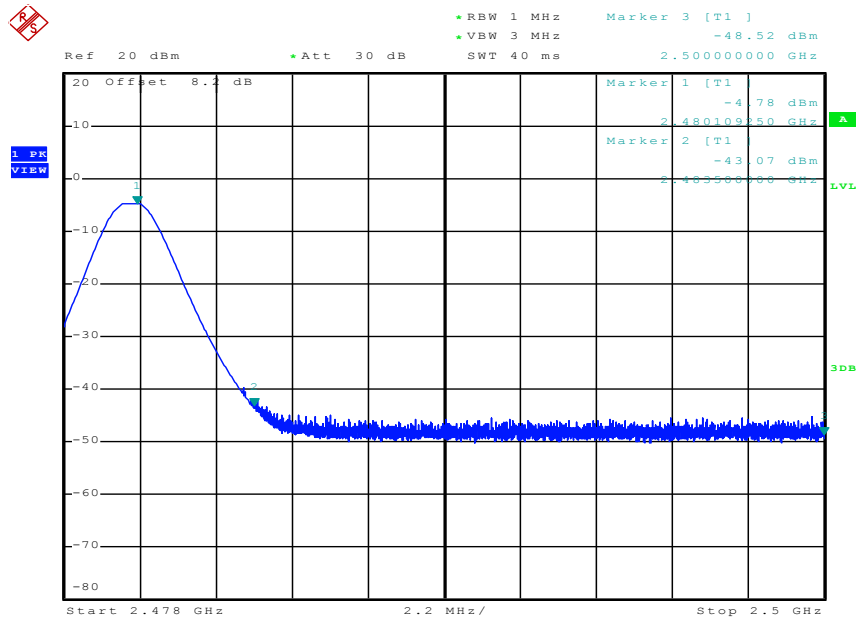
Date: 5.AUG.2019 18:16:15

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



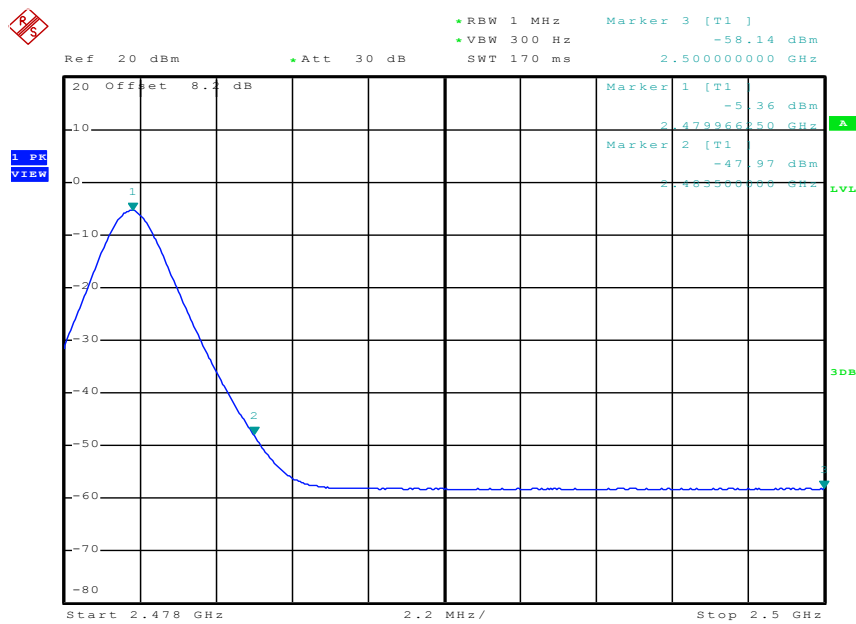
Date: 5.AUG.2019 18:16:29

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



Date: 5.AUG.2019 18:21:28

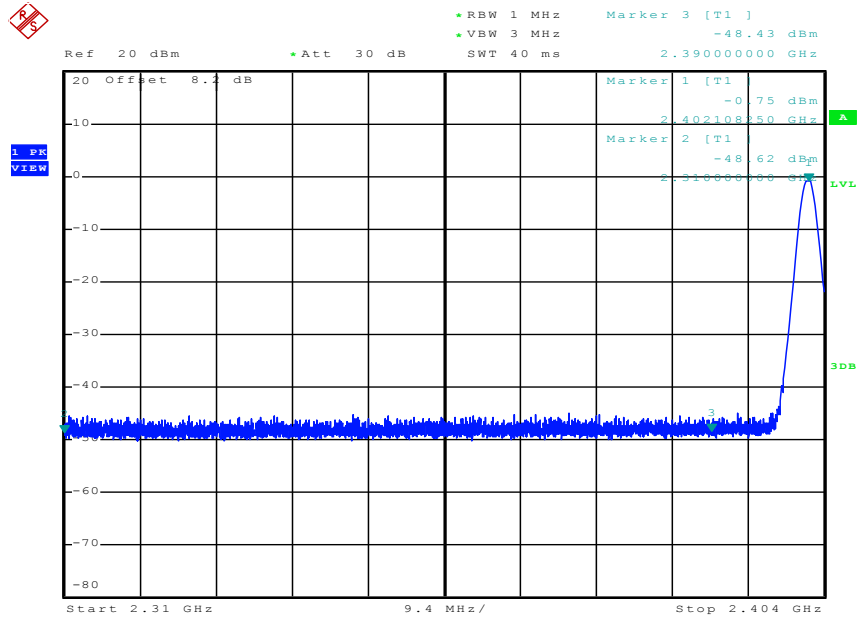
### Restrict-band band-edge measurements\_Hopping Off\_GFSK\_Average (High Channel)



Date: 5.AUG.2019 18:21:41

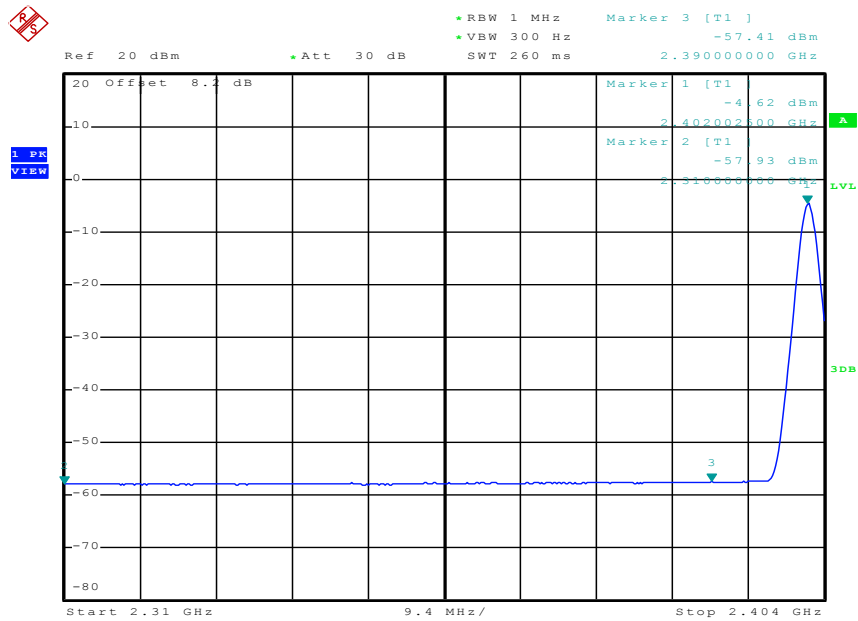


Restrict-band band-edge measurements\_Hopping Off  $\pi/4$ -DQPSK\_PEAK (Low Channel)



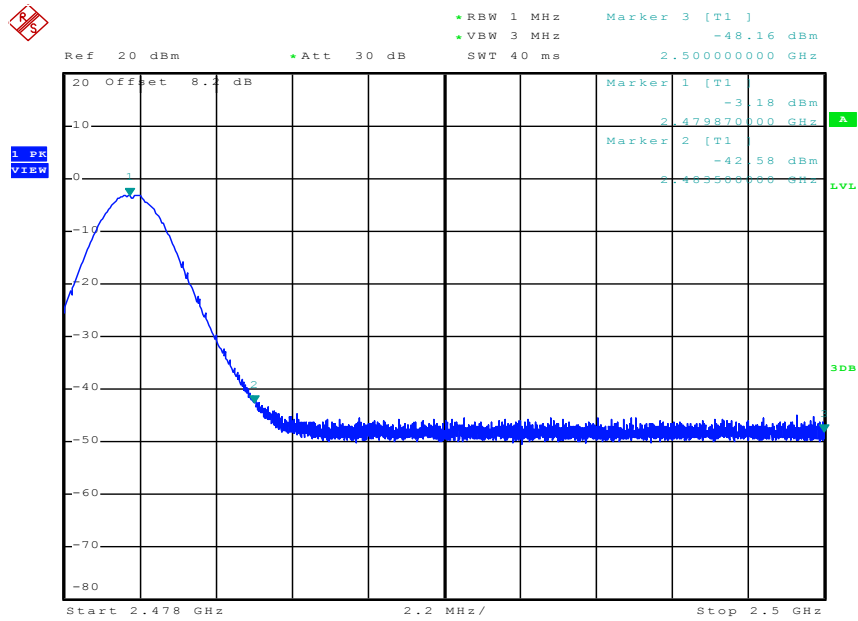
Date: 5.AUG.2019 18:25:46

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



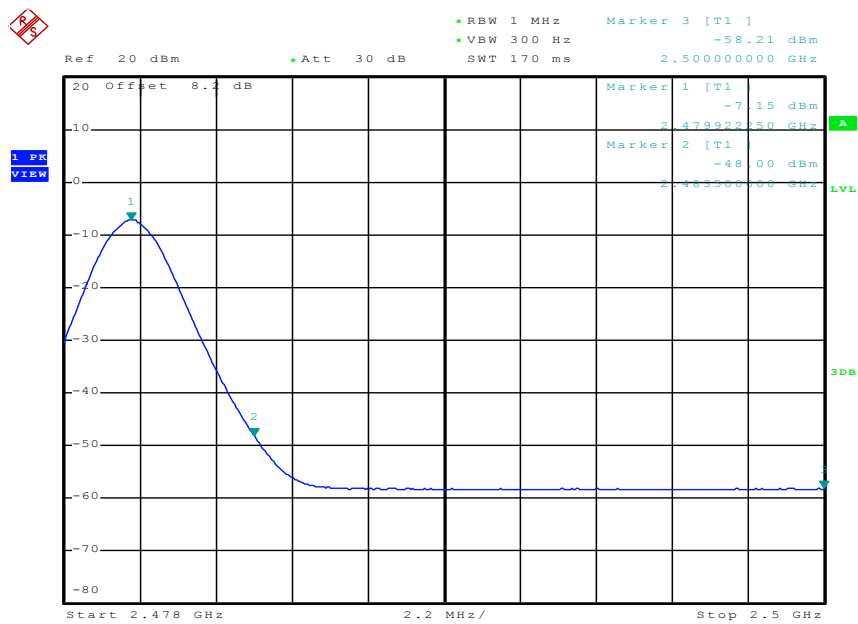
Date: 5.AUG.2019 18:25:59

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



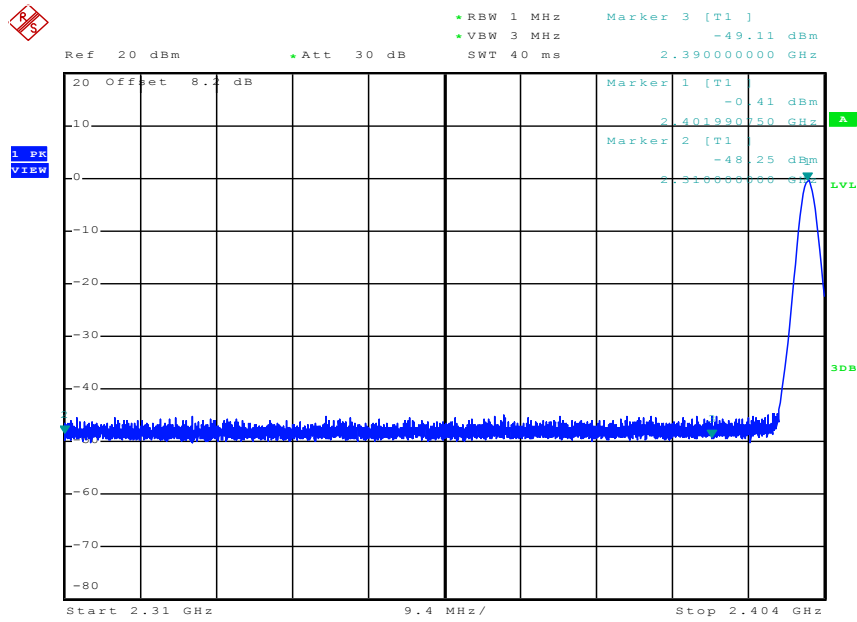
Date: 5.AUG.2019 18:30:18

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



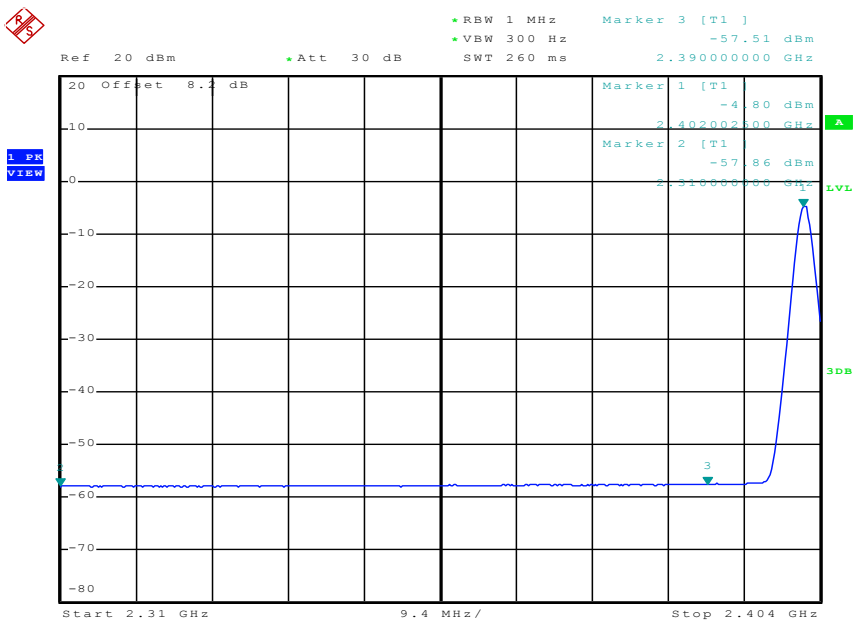
Date: 5.AUG.2019 18:30:31

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



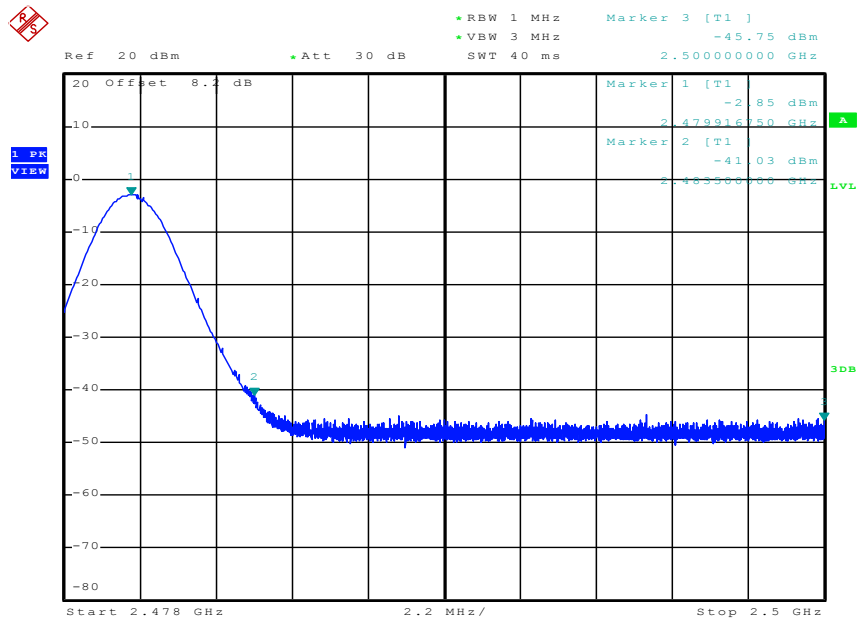
Date: 5.AUG.2019 18:34:47

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



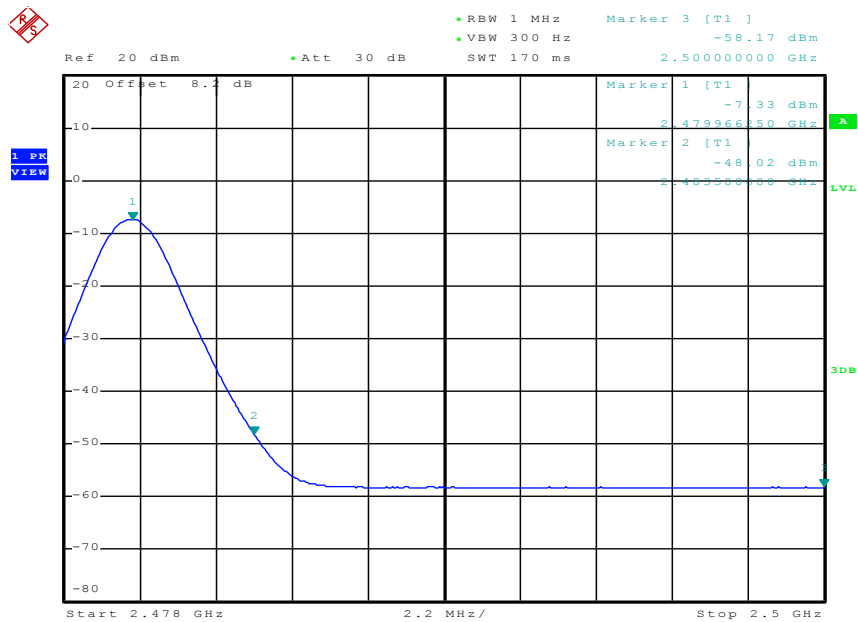
Date: 5.AUG.2019 18:35:00

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



Date: 5.AUG.2019 18:39:35

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



Date: 5.AUG.2019 18:39:48