Appendix A

RF Test Data for BT V5.0(BDR/EDR) (Conducted Measurement)
Product Name: Microphone Speaker
Trade Mark: SUPERSONIC
Test Model: SC-904BTK

Environmental Conditions

Temperature:	24.1°C
Relative Humidity:	52.8%
ATM Pressure:	100.0kPa
Test Engineer:	JERRY.ZENG
Supervised by:	Wang.Chuang

A.1 Maxmum Conducted Peak Output Power

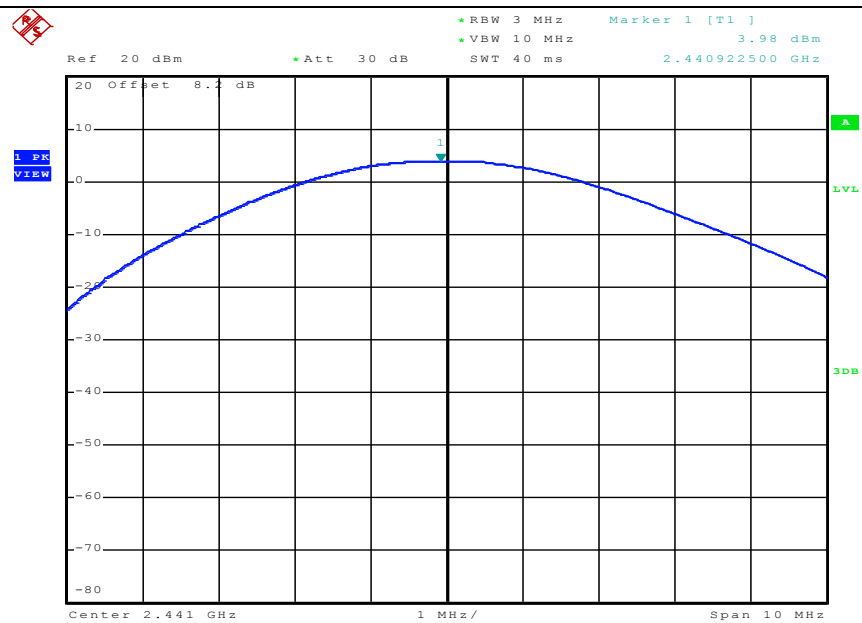| Mode	Channel.	Maximum Peak Output Power [dBm]	Limit [dBm]	Verdict
GFSK	LCH	2.820	30	PASS
GFSK	MCH	3.980	30	PASS
GFSK	HCH	2.630	30	PASS
π/4DQPSK	LCH	2.420	21	PASS
π/4DQPSK	MCH	3.310	21	PASS
π/4DQPSK	HCH	2.270	21	PASS

Test Graphs
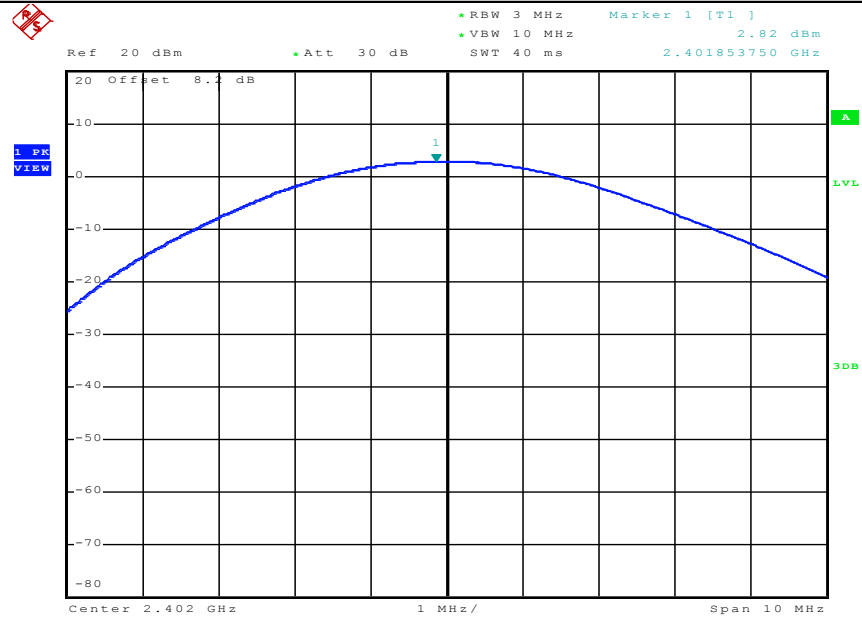
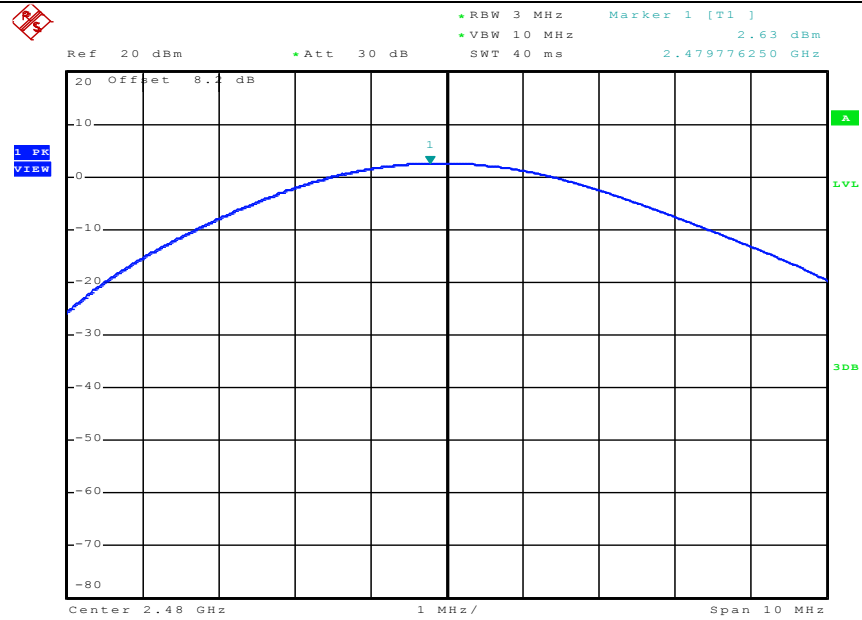|	
GFSK/LCH	 Date: 19.AUG.2019 18:36:49
GFSK/MCH	 Date: 19.AUG.2019 18:40:09

GFSK/HCH

Date: 19.AUG.2019 18:41:52
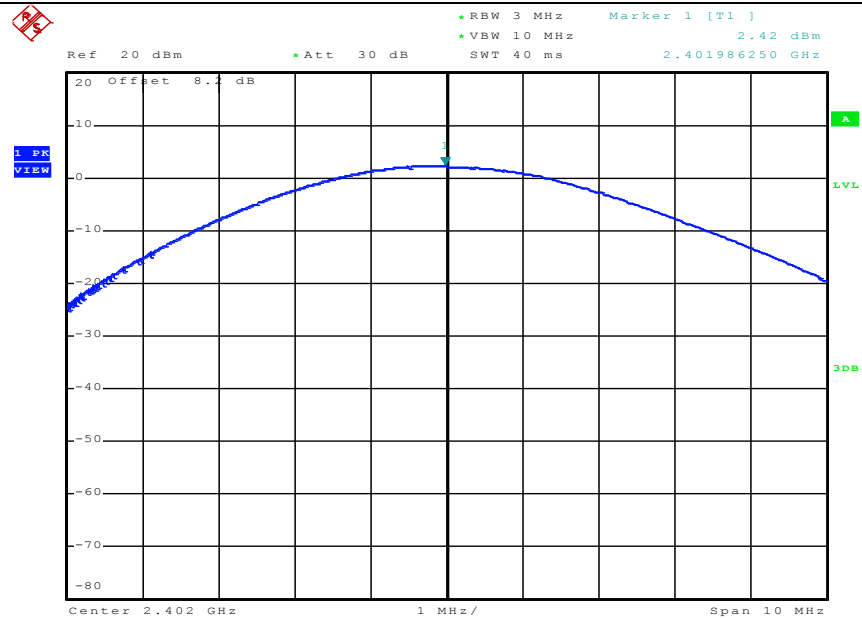
π/4DQPSK/LCH

Date: 19.AUG.2019 18:46:32
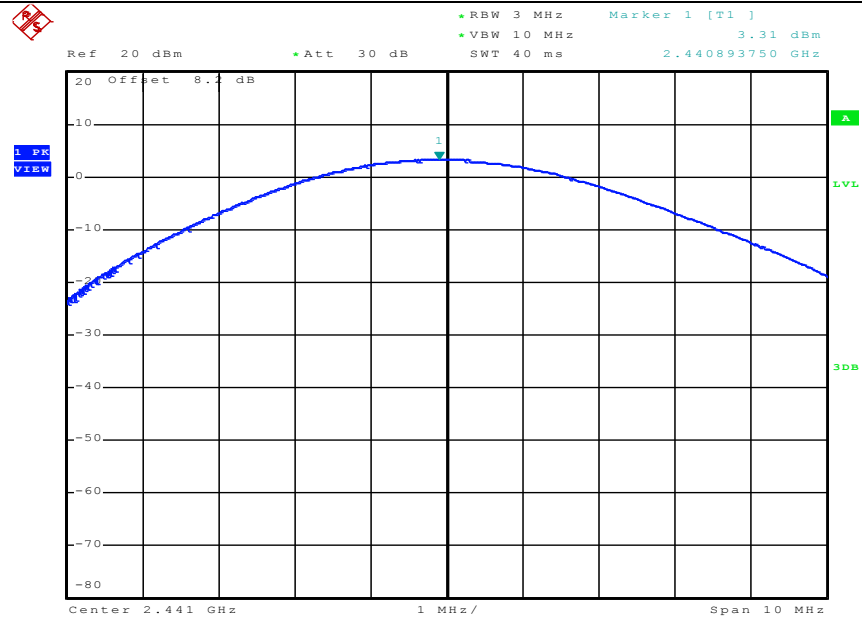
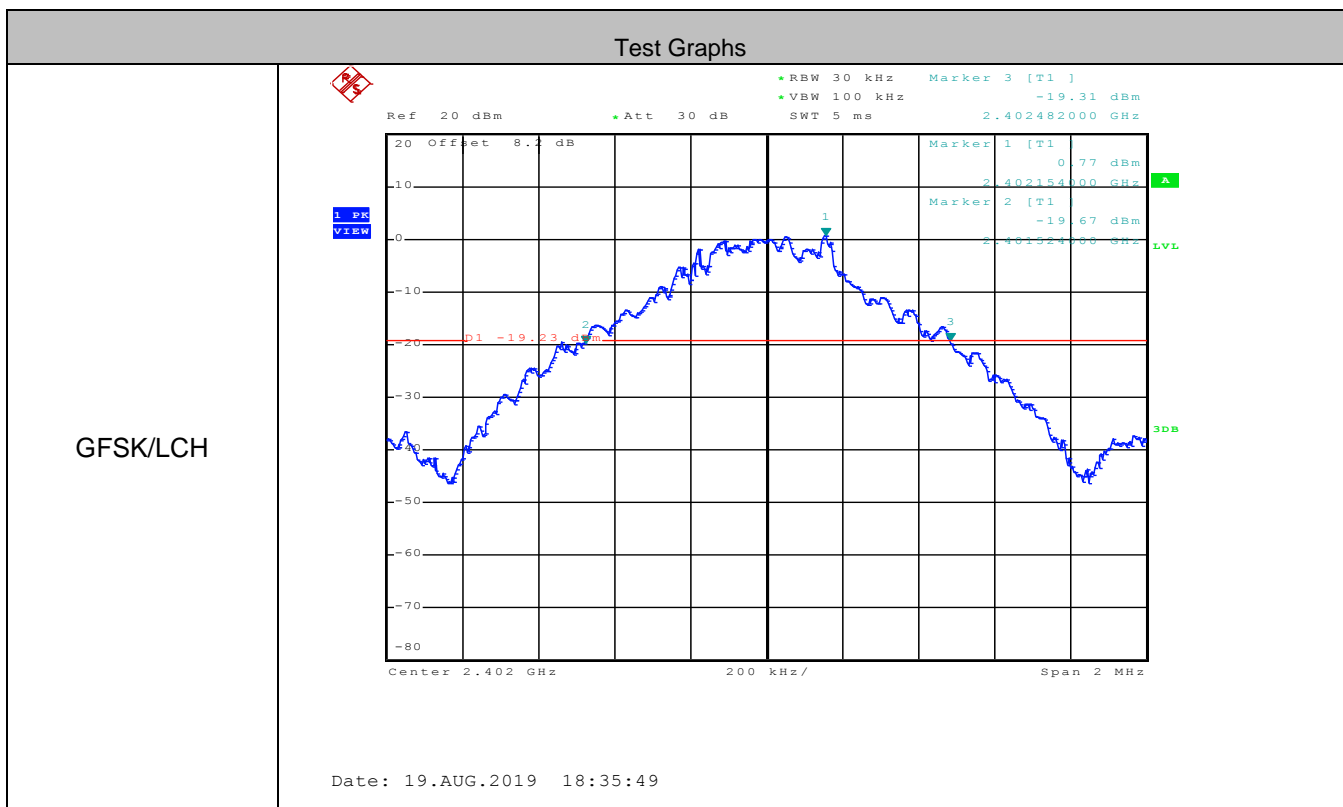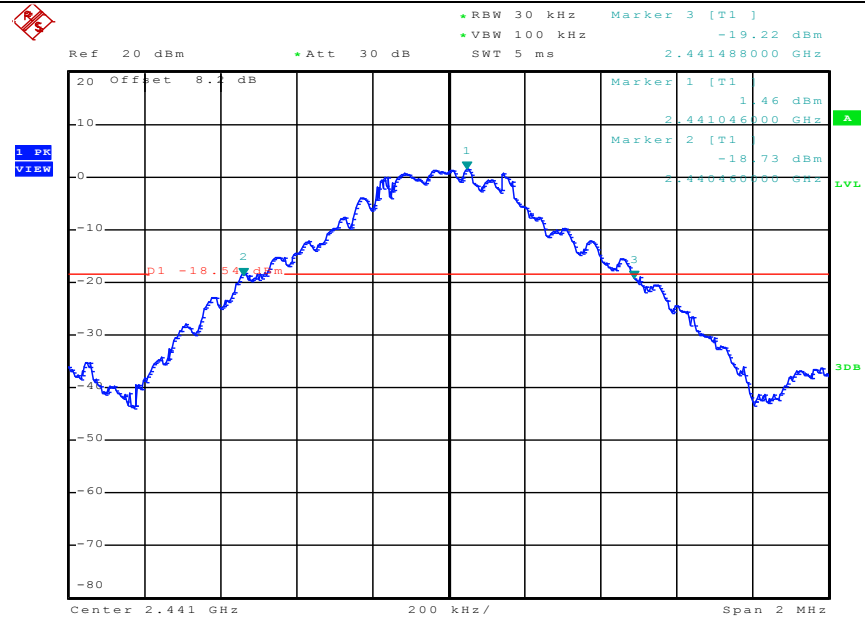|	
π/4DQPSK/MCH	 Date: 19.AUG.2019 18:49:02
π/4DQPSK/HCH	 Date: 19.AUG.2019 19:44:49
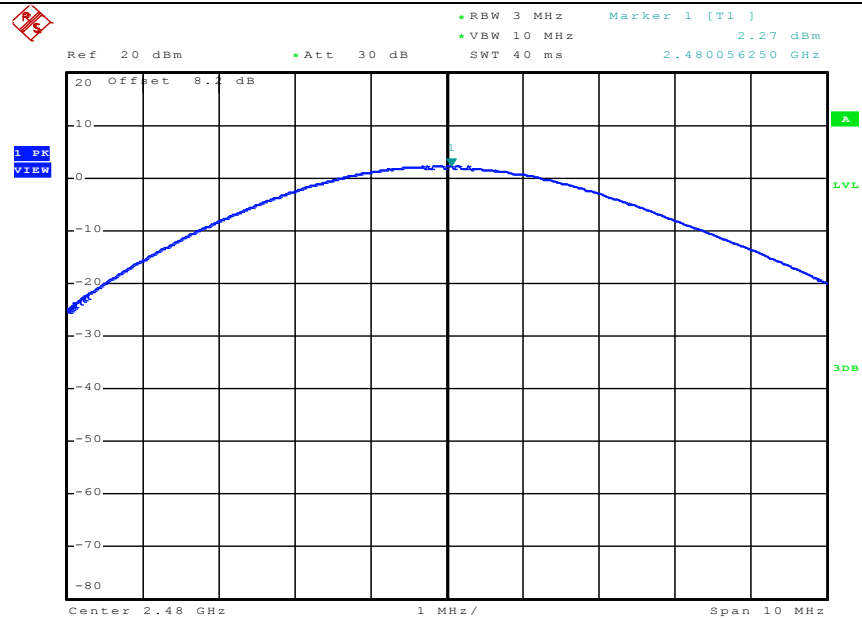
A.2 20dB Bandwidth

Mode	Channel.	20dB Bandwidth [MHz]	Limit [MHz]	Verdict
GFSK	LCH	0.958	Not Specified	PASS
	MCH	1.028	Not Specified	PASS
	HCH	0.978	Not Specified	PASS
π/4DQPSK	LCH	1.290	Not Specified	PASS
	MCH	1.294	Not Specified	PASS
	HCH	1.290	Not Specified	PASS

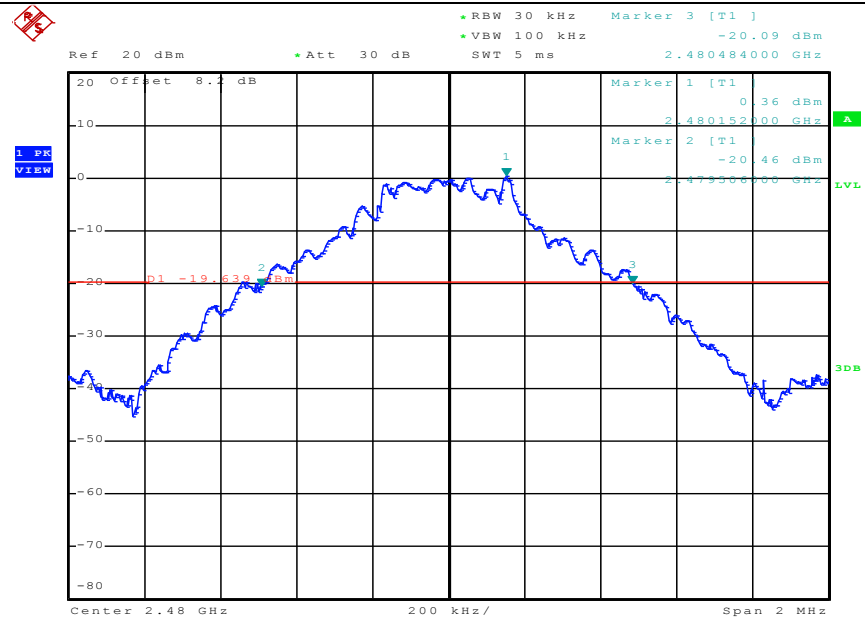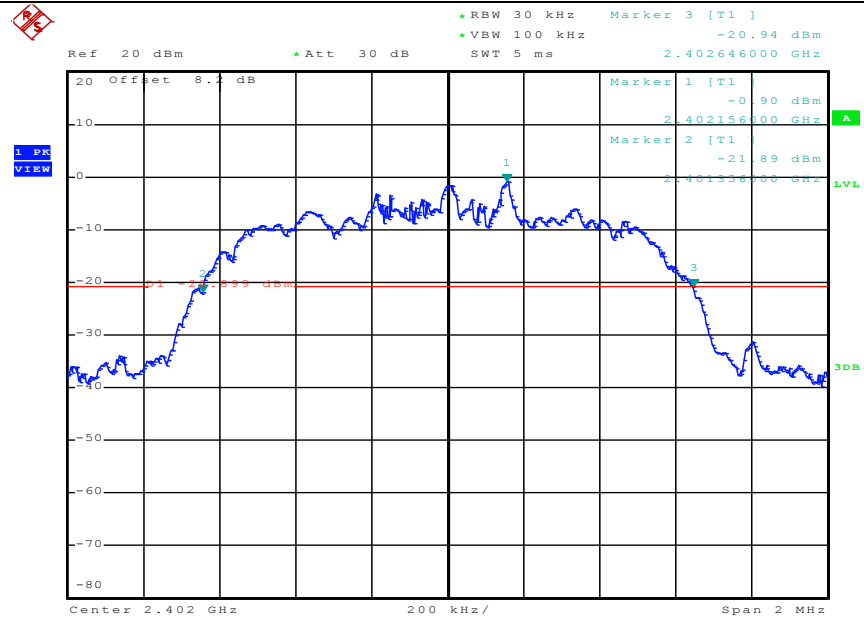| Test Graphs	
GFSK/LCH	

GFSK/MCH	 Date: 19.AUG.2019 18:39:34
GFSK/HCH	 Date: 19.AUG.2019 18:41:16

π/4DQPSK/LCH	

Date: 19.AUG.2019 18:45:55

π/4DQPSK/MCH	

Date: 19.AUG.2019 18:48:25

π/4DQPSK/HCH

RBW 30 kHz   Marker 3 [T1]
VBW 100 kHz   -24.23 dBm
Ref 20 dBm   Att 30 dB   SWT 5 ms   2.480648000 GHz

20 Offset 8.2 dB

Marker 1 [T1]
                -4.17 dBm
        2.480160000 GHz

Marker 2 [T1]
                -24.51 dBm
        2.479358000 GHz

D1 -24.172 dBm

Center 2.48 GHz   200 kHz/   Span 2 MHz
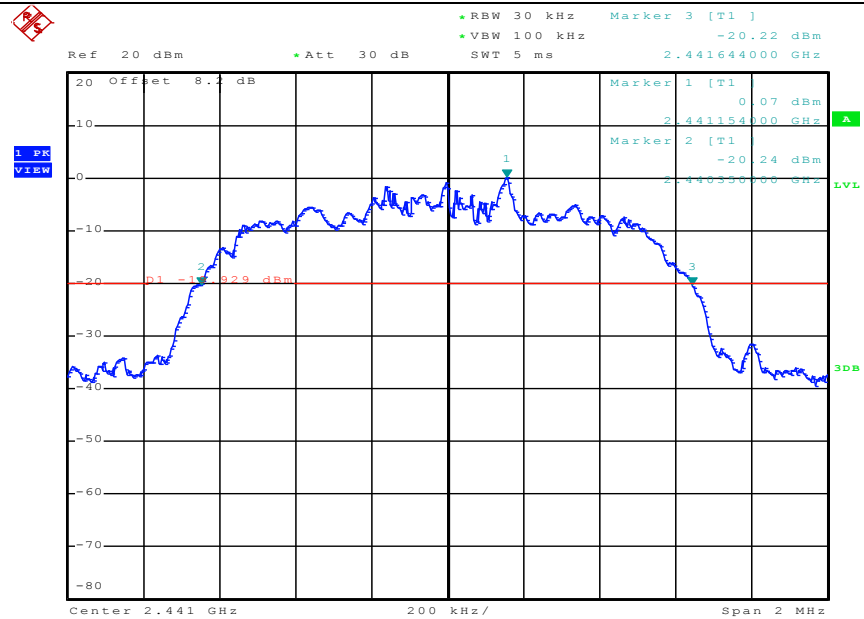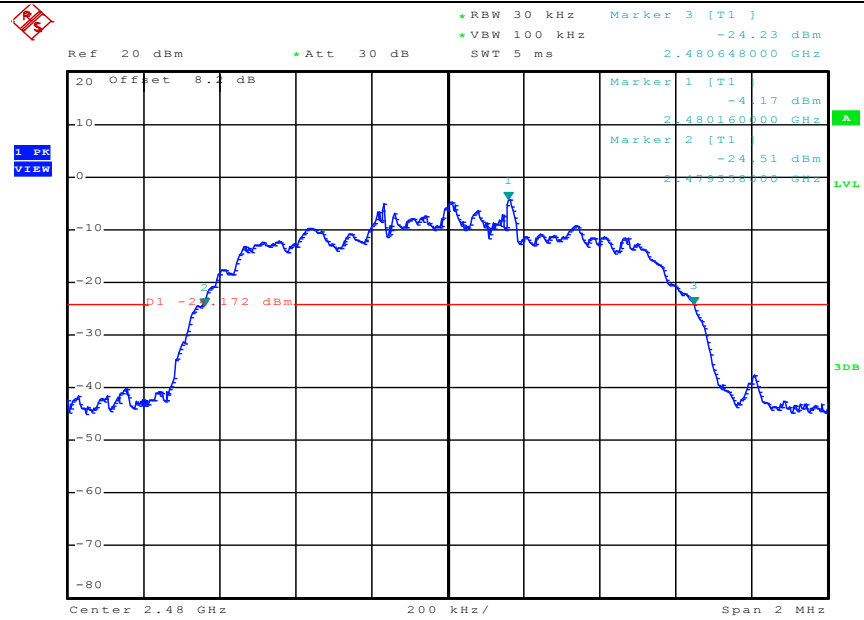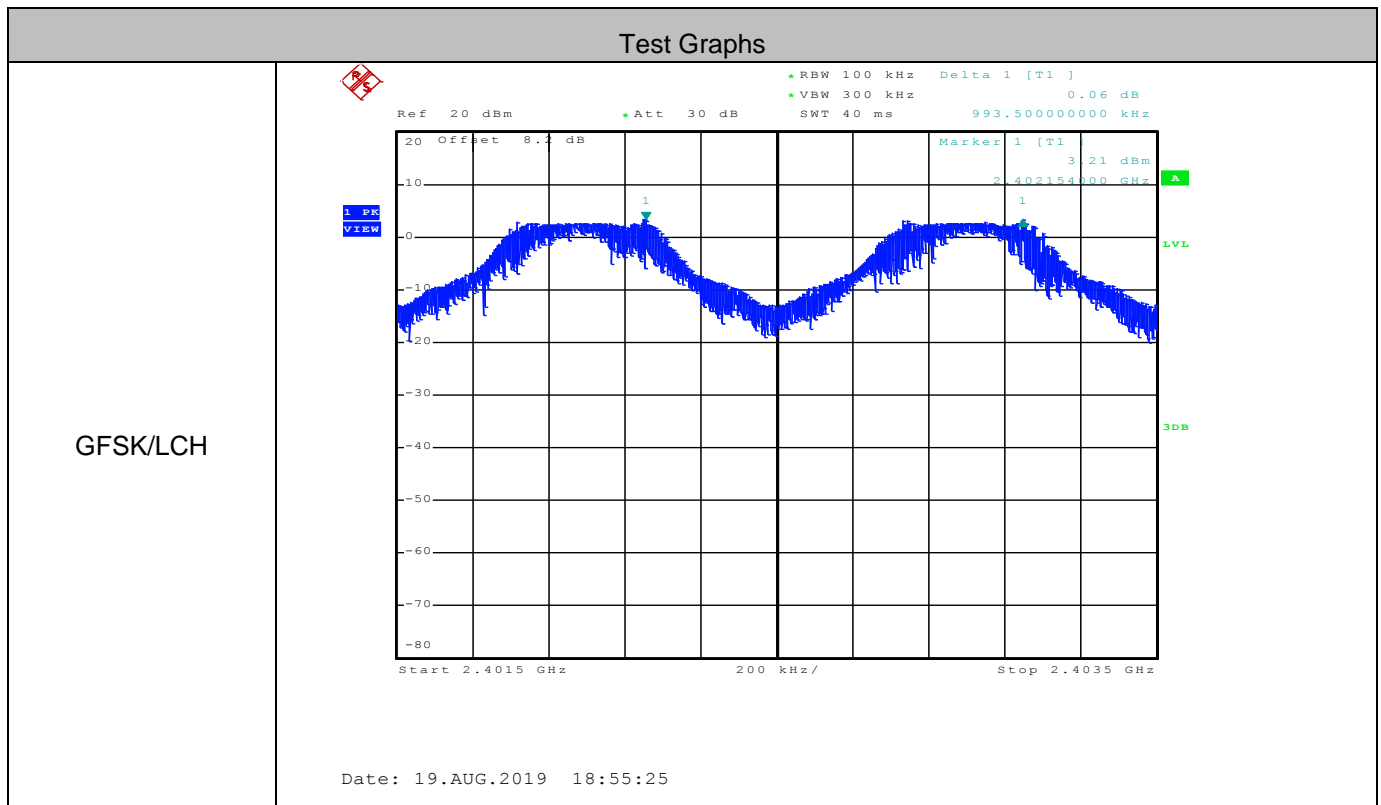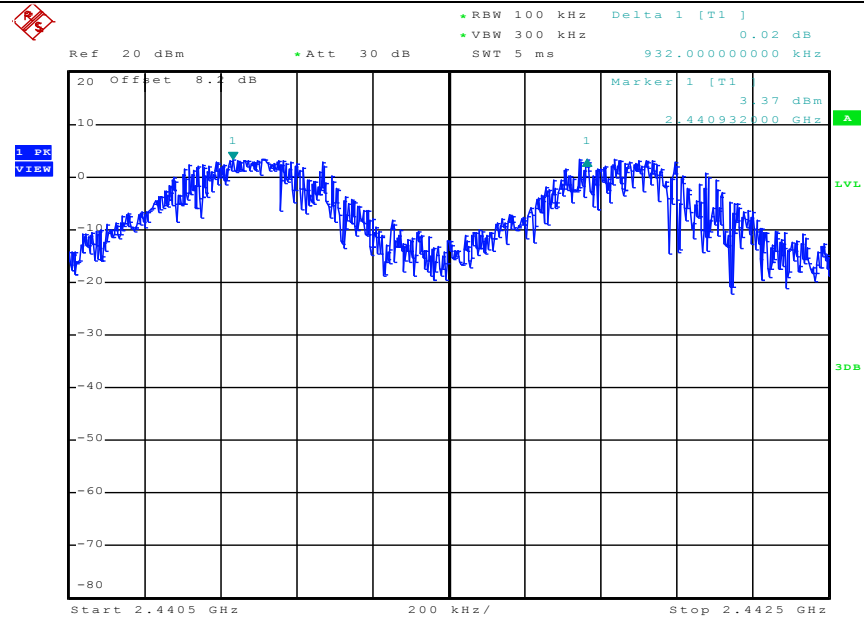
Date: 19.AUG.2019 19:43:28

A.3 Carrier Frequency Separation

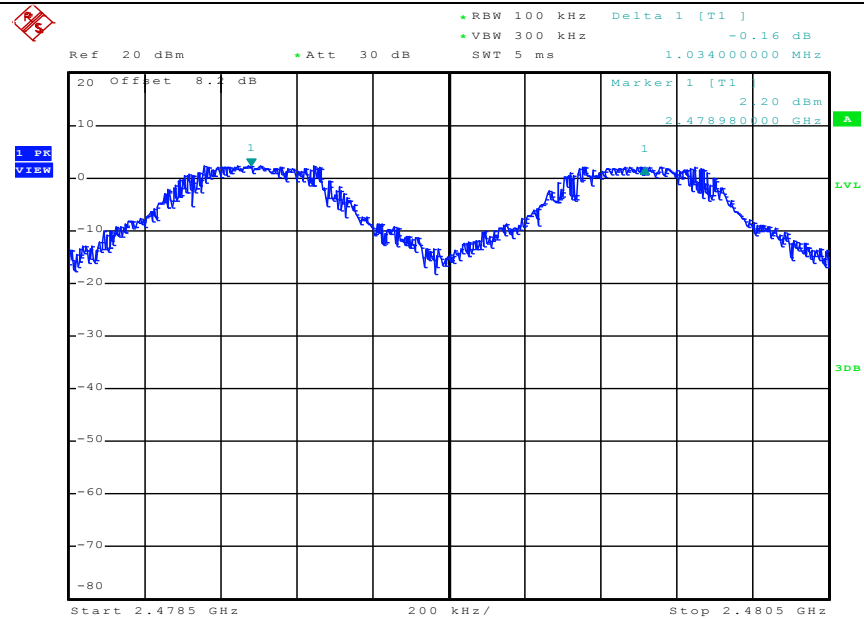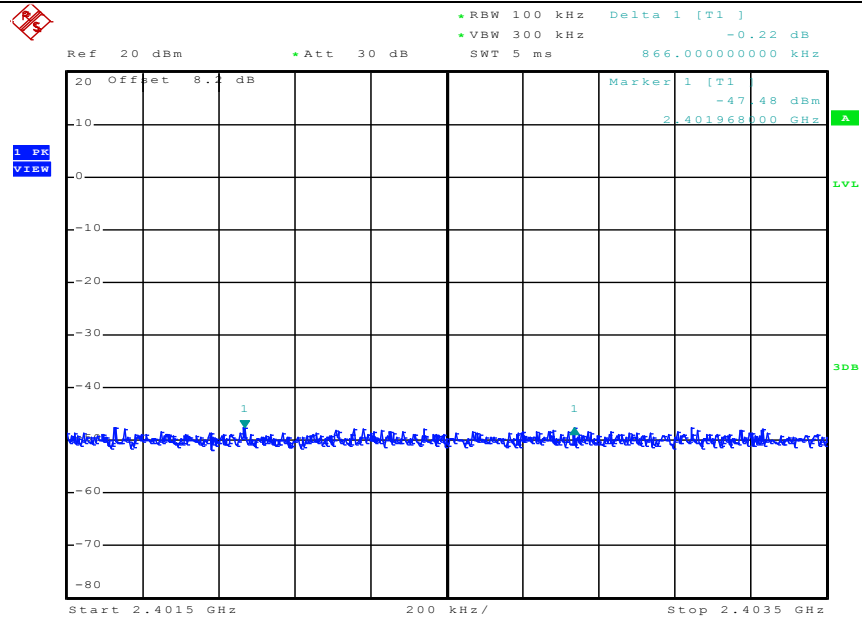| Mode	Channel.	Carrier Frequency Separation [MHz]	Limit [MHz]	Verdict
GFSK	LCH	0.994	0.685	PASS
	MCH	0.932	0.685	PASS
	HCH	1.034	0.685	PASS
π/4DQPSK	LCH	0.866	0.879	PASS
	MCH	1.144	0.879	PASS
	HCH	1.014	0.879	PASS

Test Graphs	
GFSK/LCH	

GFSK/MCH	\n\nDate: 19.AUG.2019 19:13:29
GFSK/HCH	\n\nDate: 19.AUG.2019 18:59:43

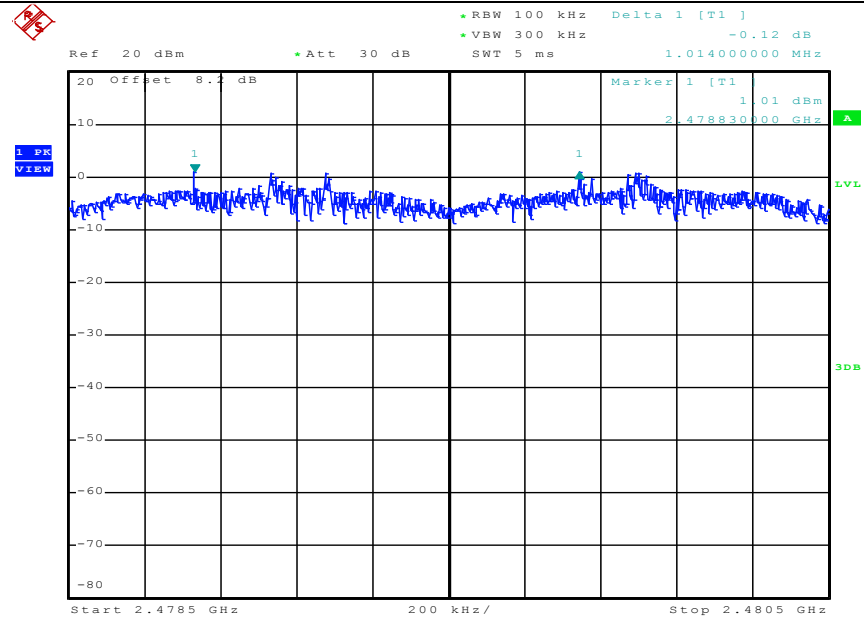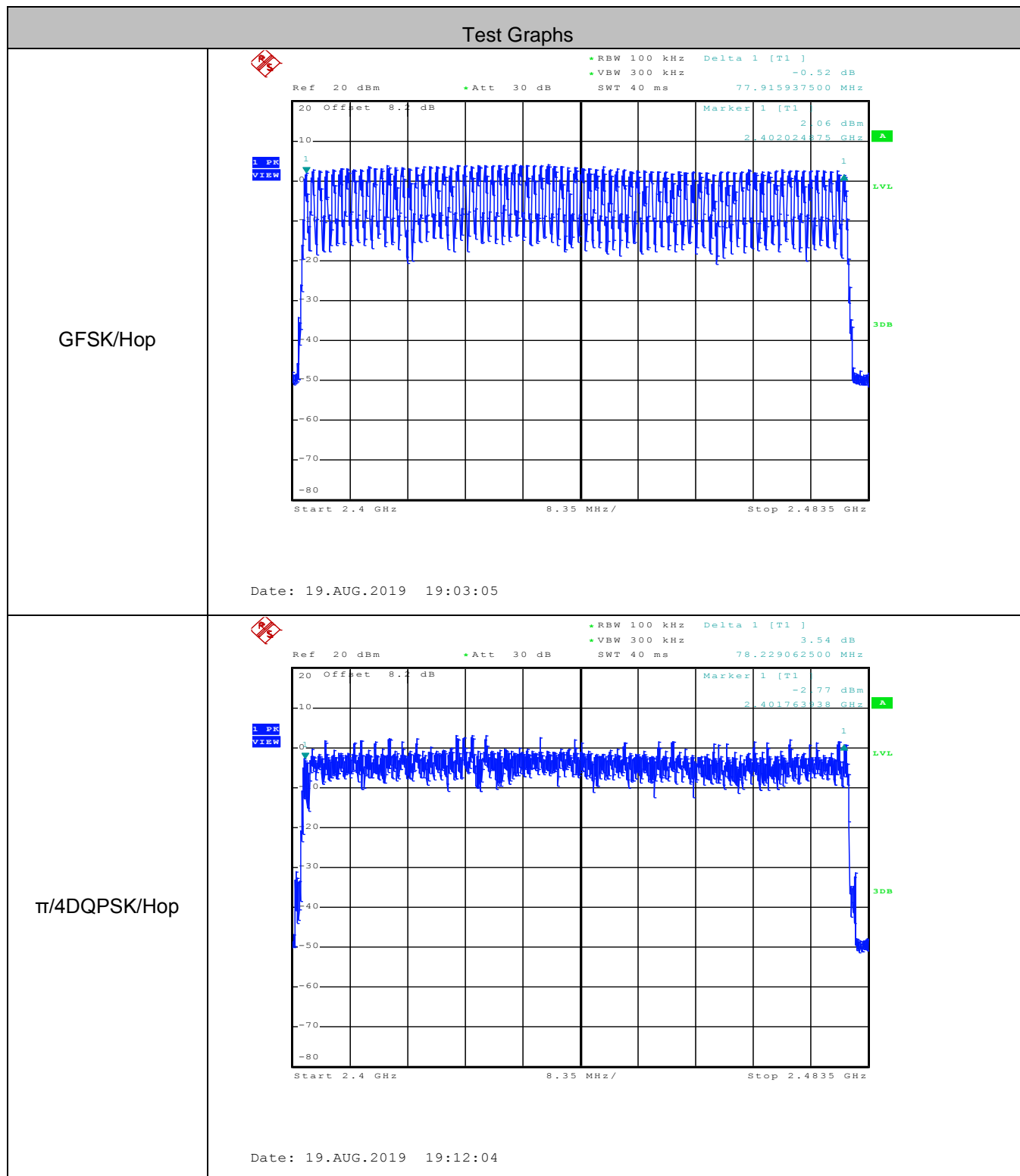|	
π/4DQPSK/LCH	 Date: 19.AUG.2019 19:21:04
π/4DQPSK/MCH	 Date: 19.AUG.2019 19:07:13
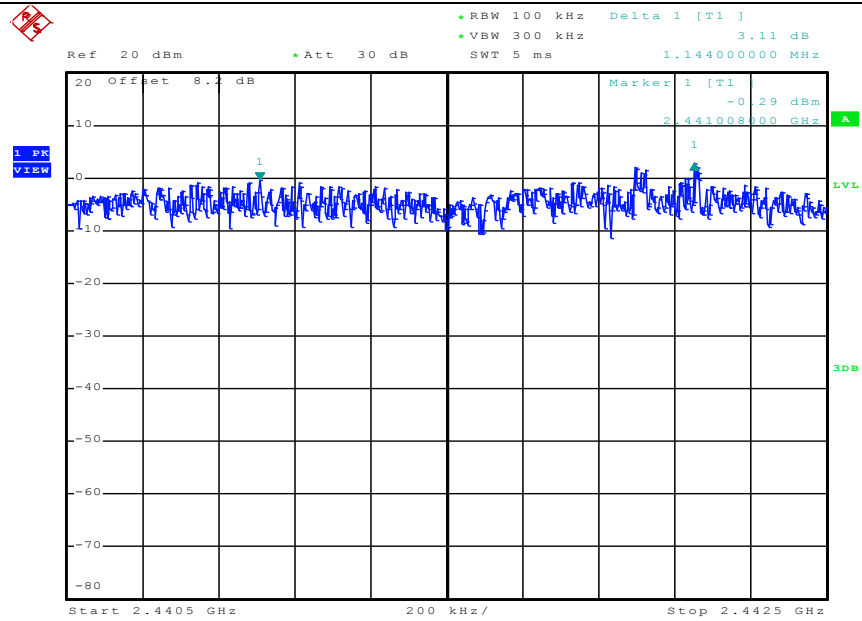
π/4DQPSK/HCH

Date: 19.AUG.2019 19:07:56

A.4 Hopping Channel Number

Mode	Channel.	Number of Hopping Channel [N]	Limit [N]	Verdict
GFSK	Hop	79	>=15	PASS
π/4DQPSK	Hop	79	>=15	PASS

| Test Graphs	
GFSK/Hop	 Date: 19.AUG.2019 19:03:05
π/4DQPSK/Hop	 Date: 19.AUG.2019 19:12:04

A.5 Dwell Time

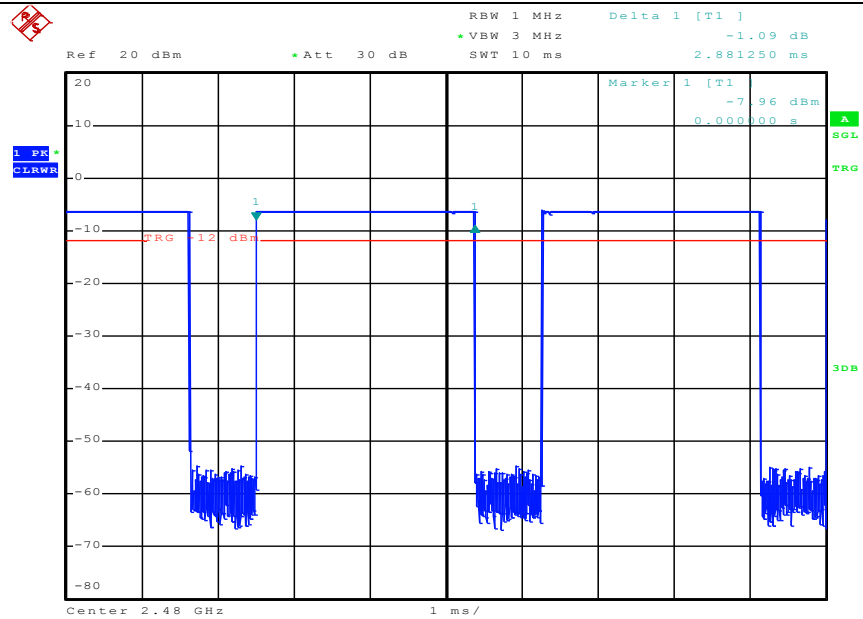| Mode	Packet	Channel	Burst Width [ms/hop/ch]	Total Hops[hop*ch]	Dwell Time[s]	Limit [s]	Verdict
GFSK	DH5	LCH	2.88	106.7	0.307	0.4	PASS
	DH5	MCH	2.88	106.7	0.307	0.4	PASS
	DH5	HCH	2.88	106.7	0.307	0.4	PASS
π/4DQPSK	2DH5	LCH	2.88	106.7	0.307	0.4	PASS
	2DH5	MCH	2.88	106.7	0.307	0.4	PASS
	2DH5	HCH	2.88	106.7	0.307	0.4	PASS

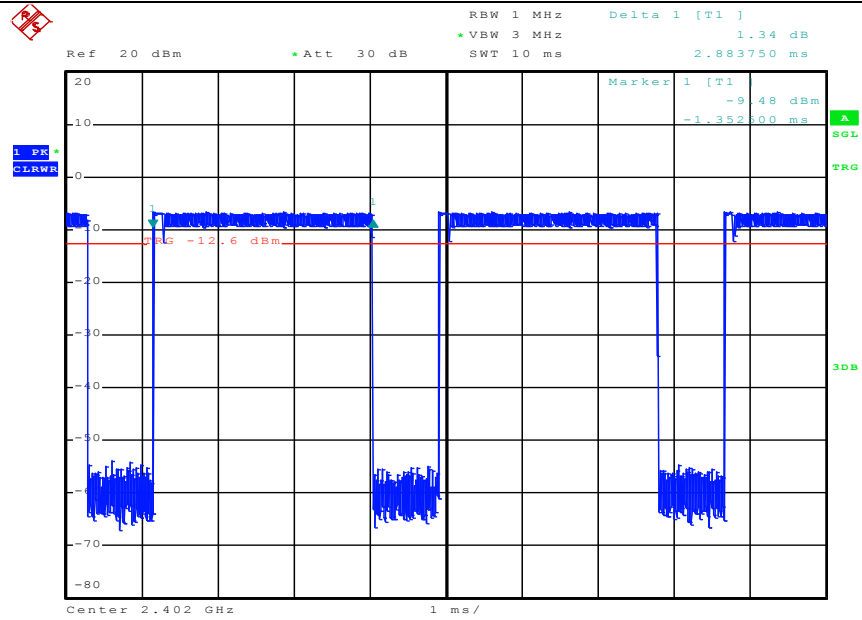| Test Graphs	
GFSK_DH5/LCH	
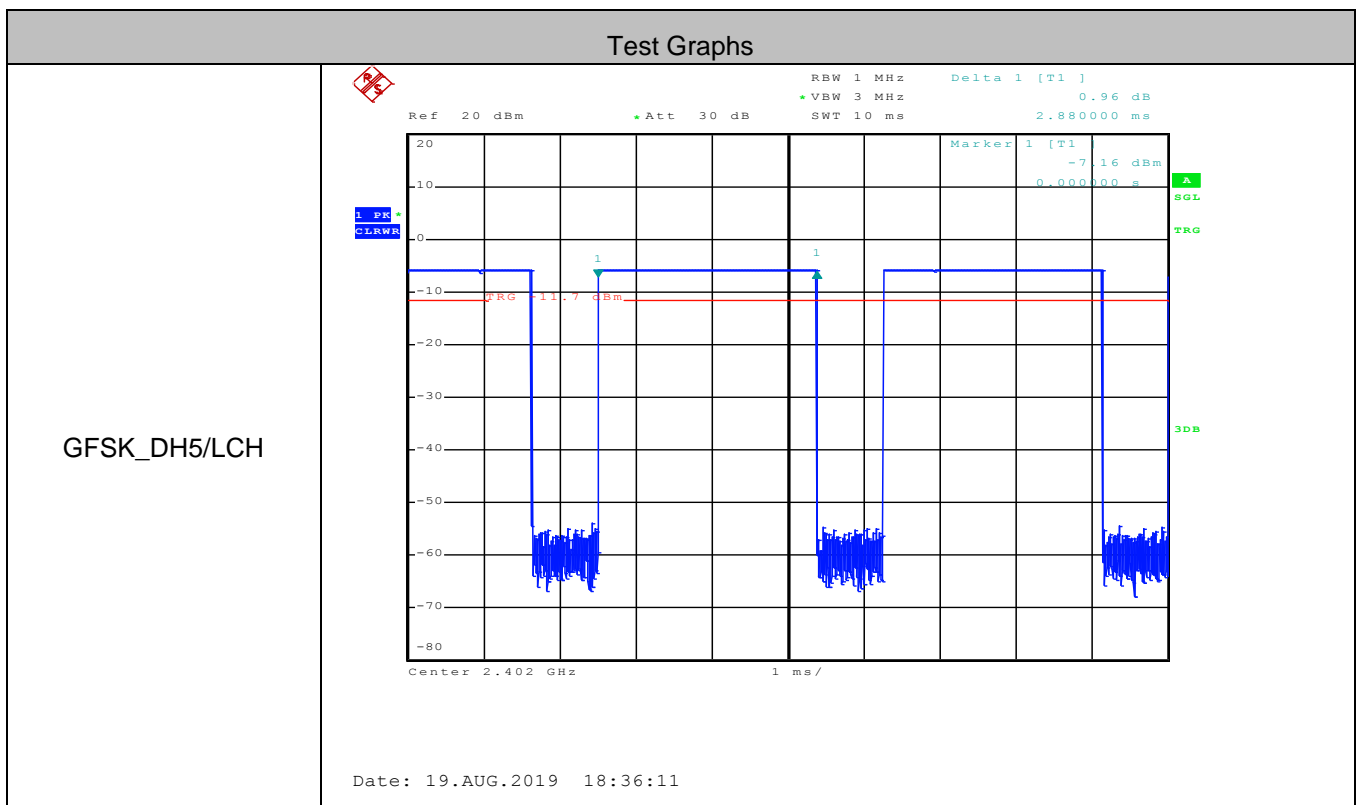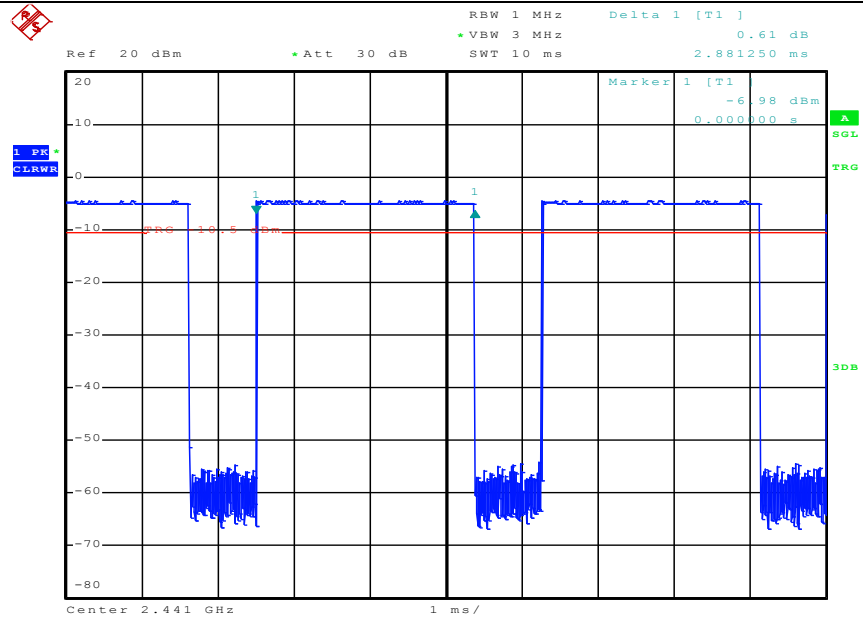
GFSK_DH5/MCH	 Date: 19.AUG.2019 18:39:55
GFSK_DH5/HCH	 Date: 19.AUG.2019 18:41:37

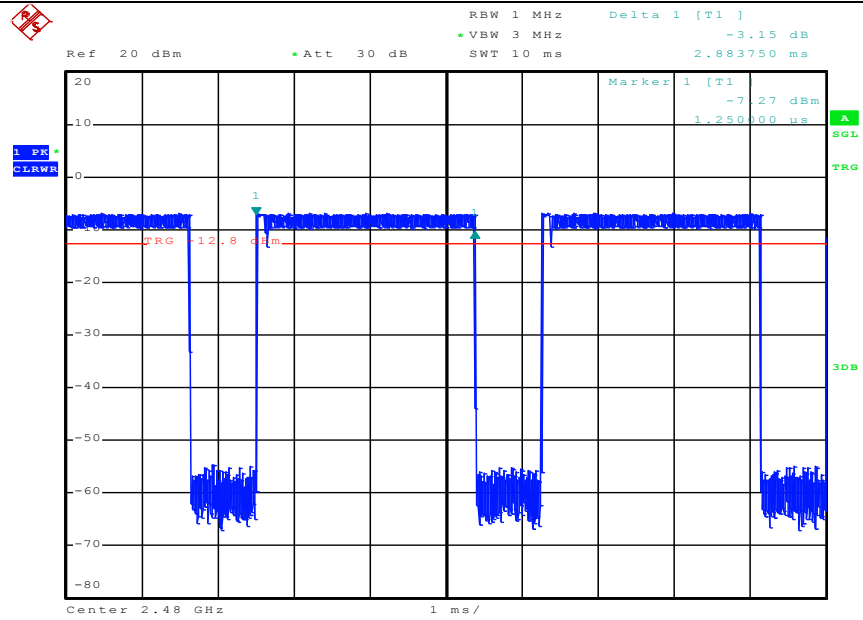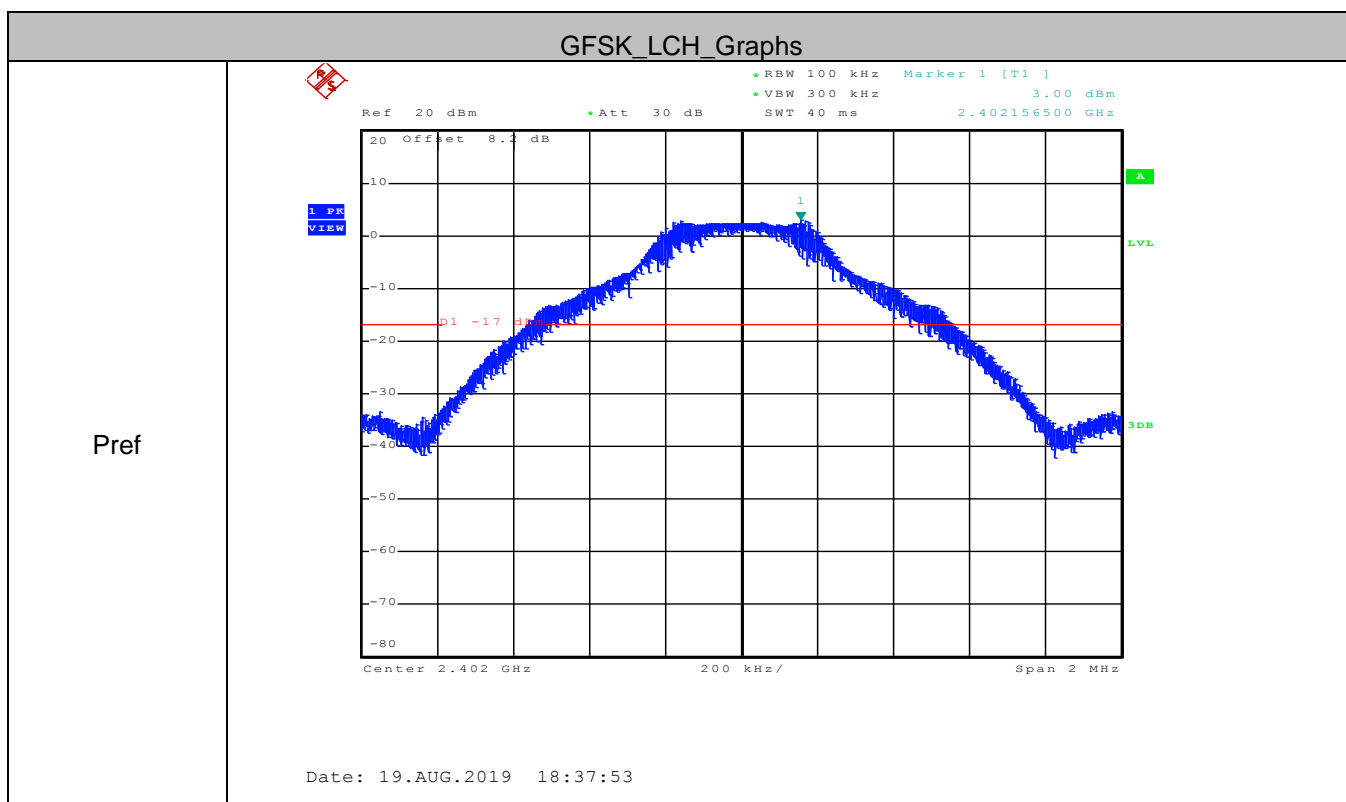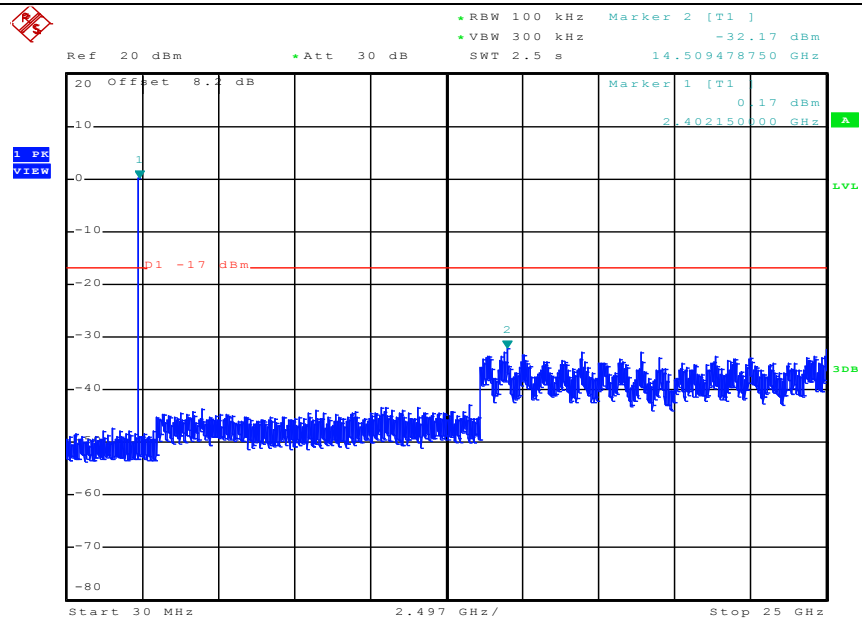|	
π/4DQPSK _2DH5/LCH	 Date: 19.AUG.2019 18:46:17
π/4DQPSK _2DH5/MCH	 Date: 19.AUG.2019 18:48:47
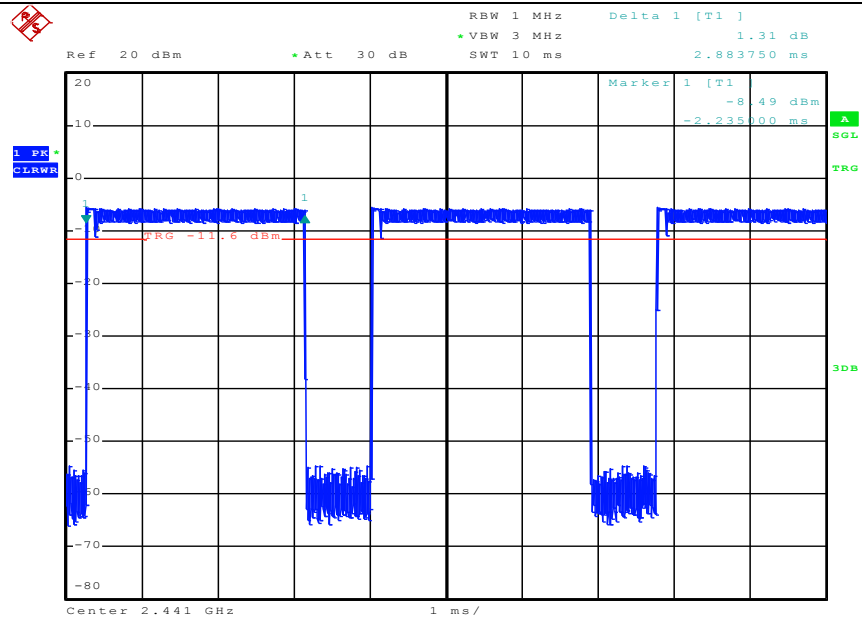
π/4DQPSK

_2DH5/HCH

Date: 19.AUG.2019 19:44:34

A.6 RF Conducted Spurious Emissions

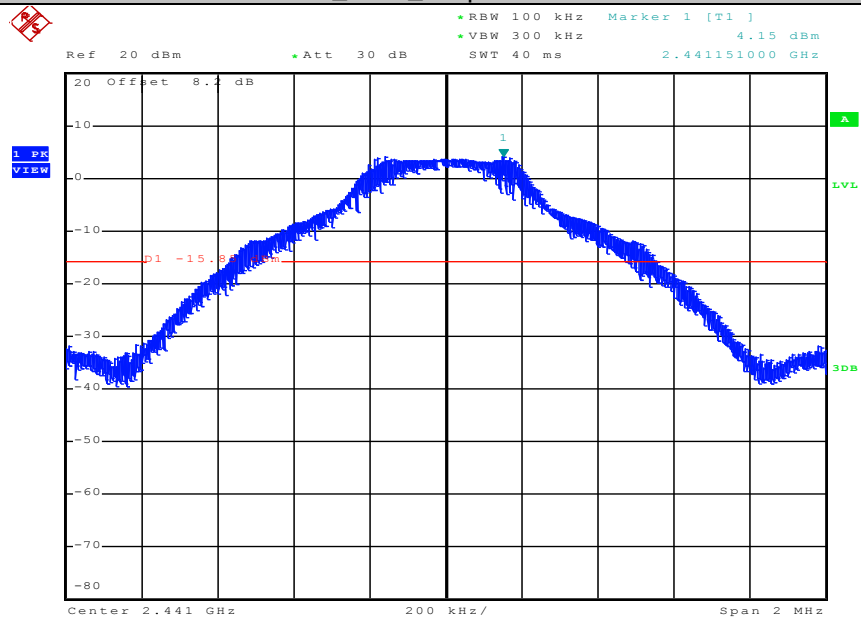| Mode	Channel	Pref [dBm]	Max. Level [dBm]	Limit [dBm]	Verdict
GFSK	LCH	3	-32.170	-17.000	PASS
	MCH	4.15	-31.400	-15.850	PASS
	HCH	0.09	-32.090	-19.910	PASS
π/4DQPSK	LCH	2.05	-32.570	-17.950	PASS
	MCH	2.97	-32.780	-17.030	PASS
	HCH	-1.15	-32.300	-21.150	PASS

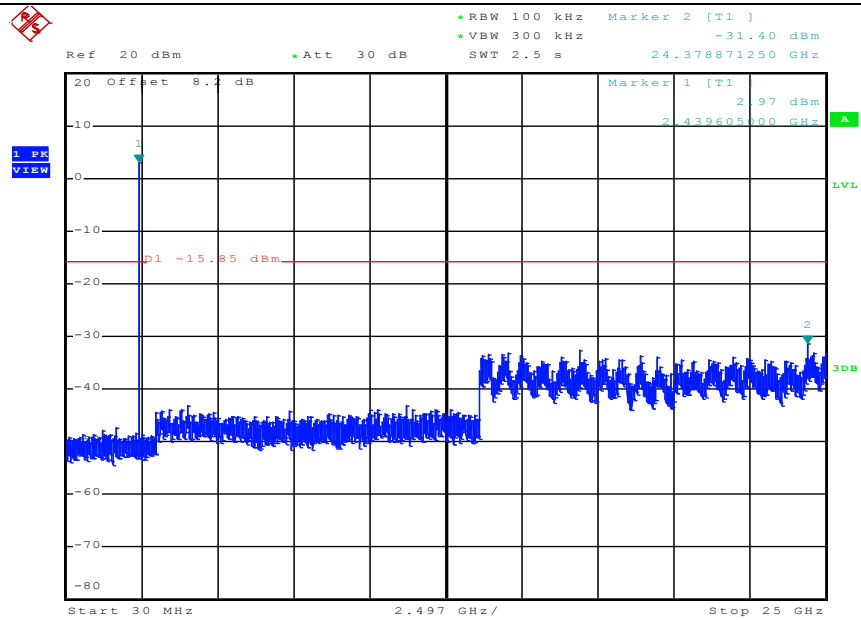| GFSK_LCH_Graphs |
|---|
| Pref |

Puw


```
                                                      *RBW 100 kHz   Marker 2 [T1 ]
                                                      *VBW 300 kHz          -32.17 dBm
            Ref  20 dBm          *Att  30 dB   SWT 2.5 s       14.509478750 GHz
        20  Offset  8.2 dB                                Marker 1 [T1 ]
                                                                   0.17 dBm
       -10                                                  2.402150000 GHz
        -0
       -10
     D1 -17 dBm
       -20
       -30
       -40
       -60
       -70
       -80
        Start 30 MHz                  2.497 GHz/              Stop 25 GHz
```

Date: 19.AUG.2019 18:38:08

GFSK_MCH_Graphs

Pref

Date: 19.AUG.2019 18:40:22

Puw

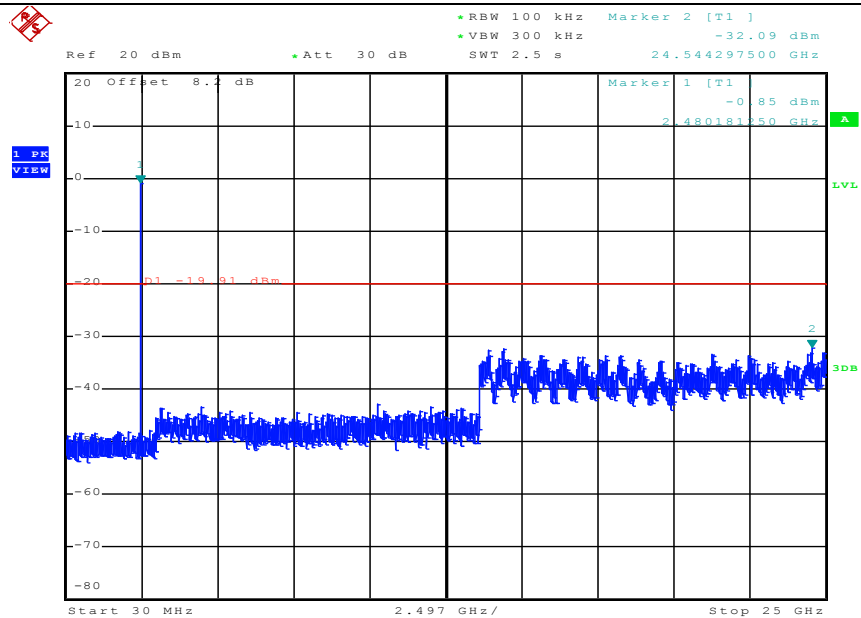Date: 19.AUG.2019 18:40:37

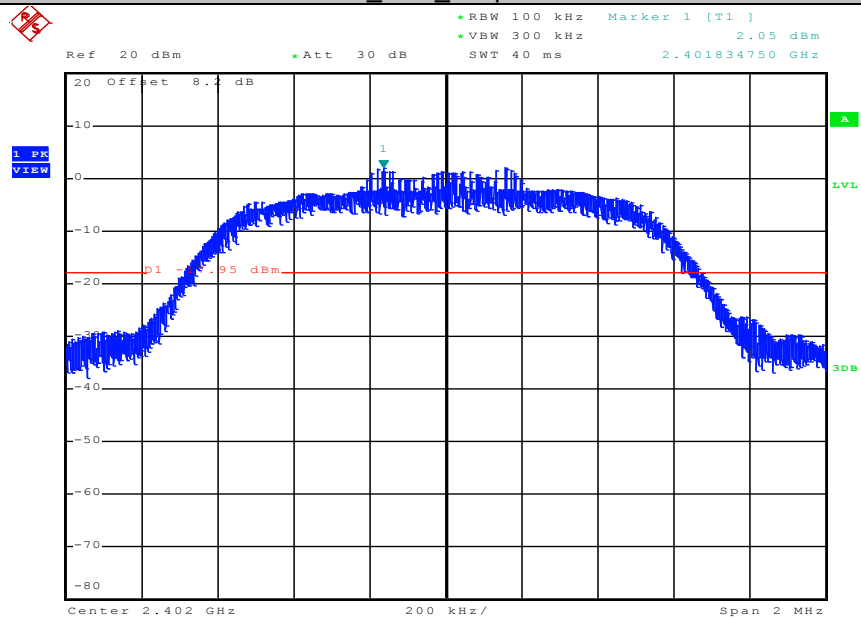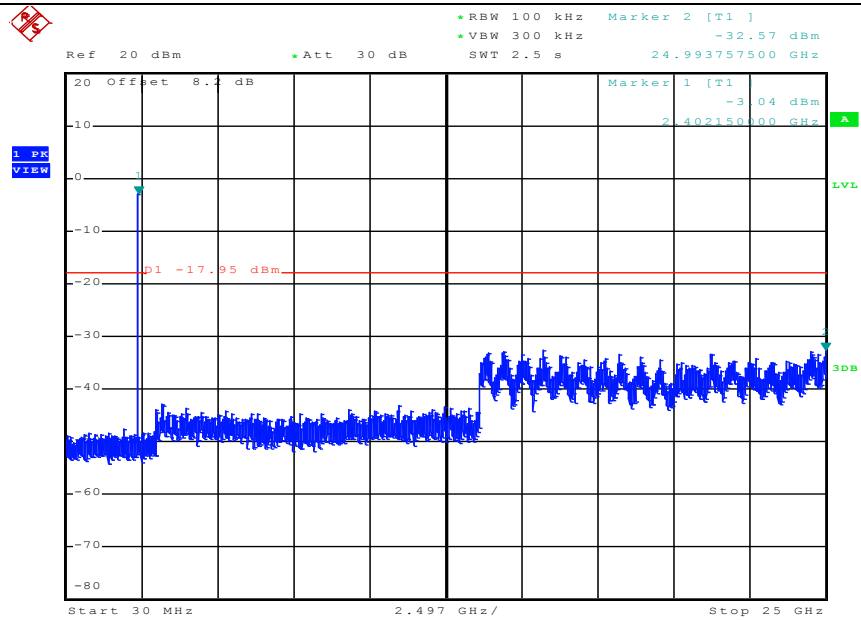| GFSK_HCH_Graphs	
Pref	Date: 19.AUG.2019 20:04:43
Puw	Date: 19.AUG.2019 20:04:58
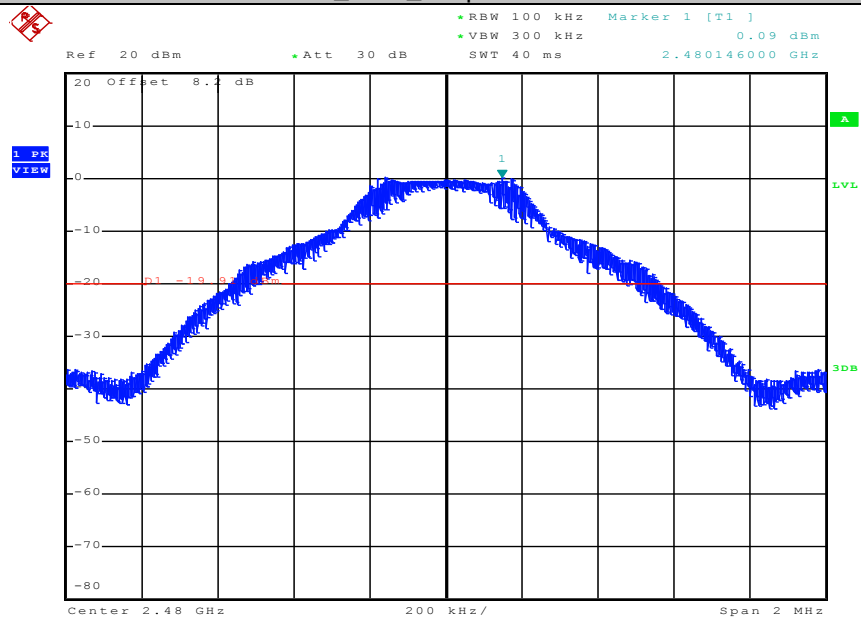
π/4DQPSK_LCH_Graphs

Pref

Date: 19.AUG.2019 18:47:01

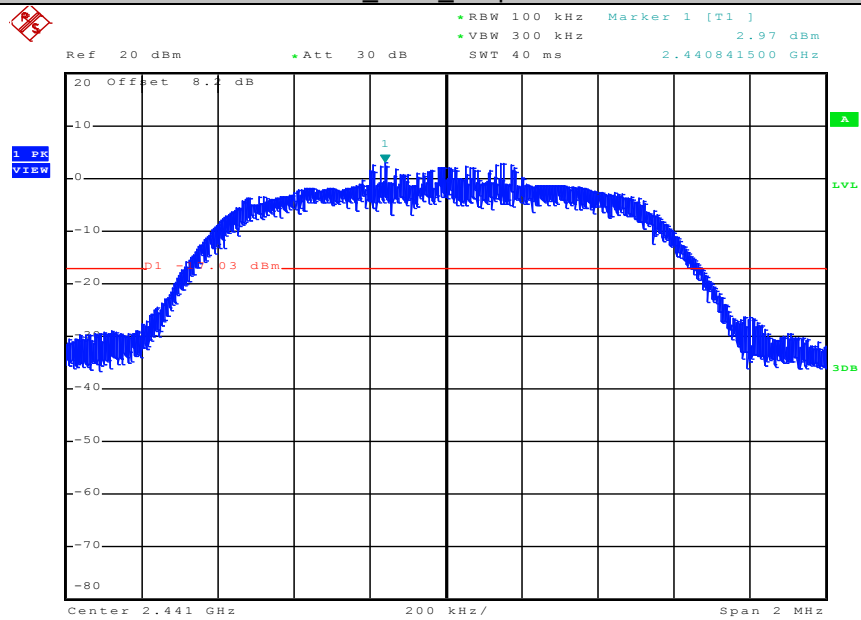**Puw**

Date: 19.AUG.2019 18:47:16

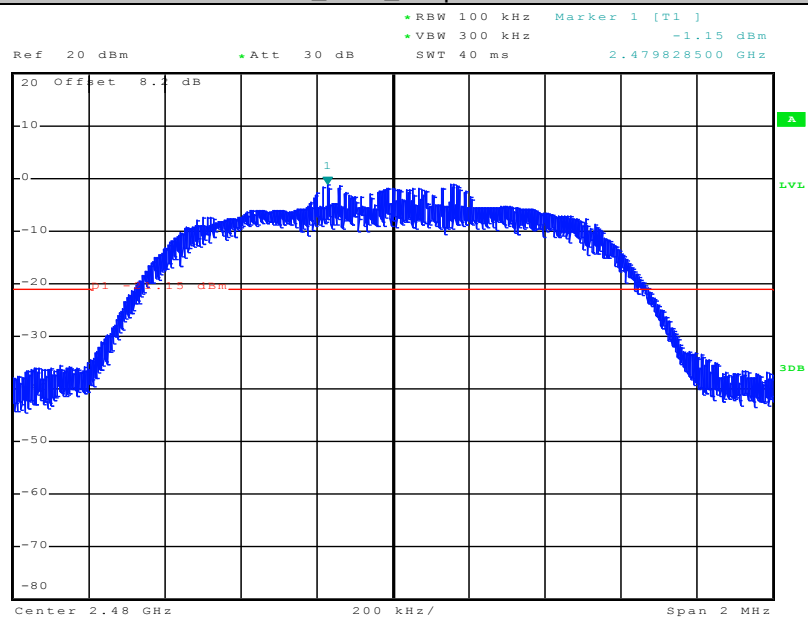## π/4DQPSK_MCH_Graphs

Pref

Date: 19.AUG.2019 18:49:14

Puw
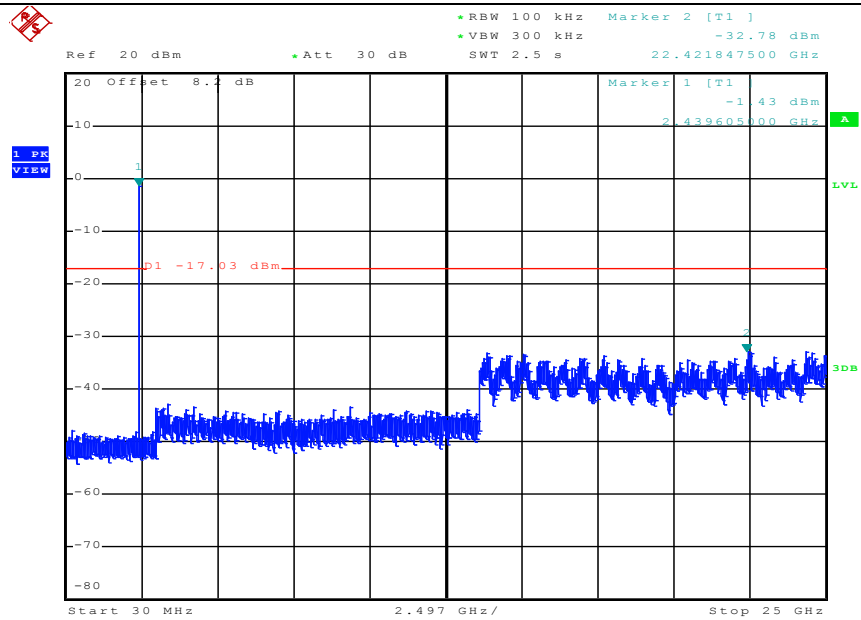
Date: 19.AUG.2019 18:49:29

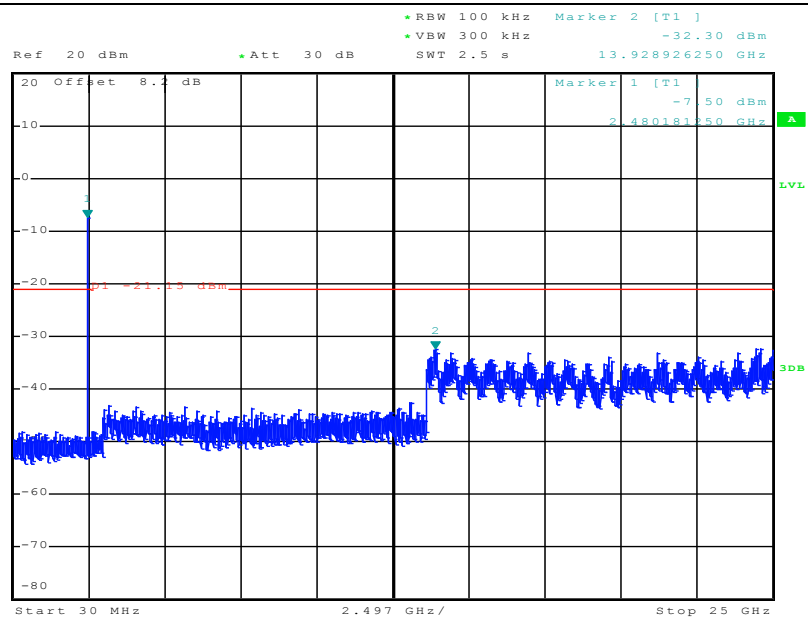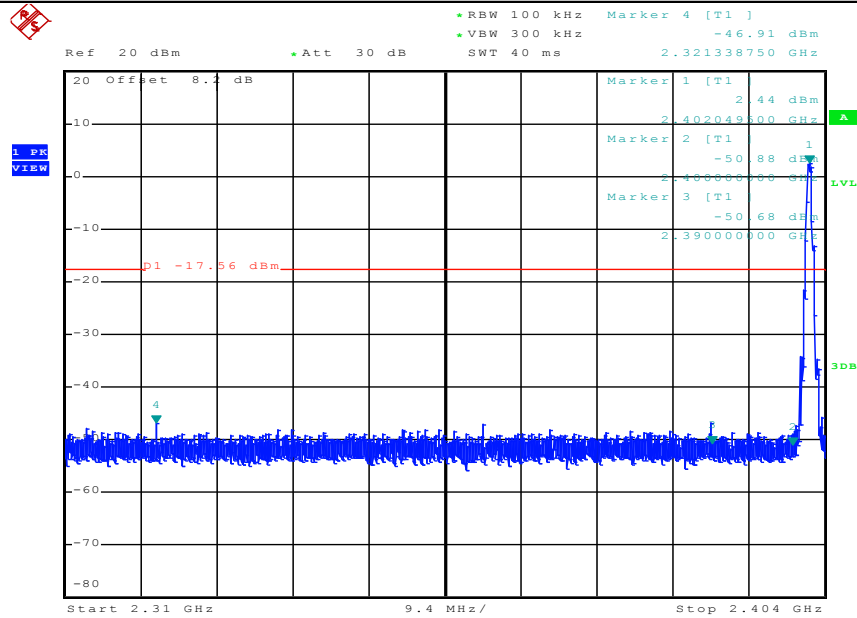| π/4DQPSK_HCH_Graphs	
Pref	 Date: 19.AUG.2019 19:46:52
Puw	 Date: 19.AUG.2019 19:47:06

A.7 Band-edge for RF Conducted Emissions

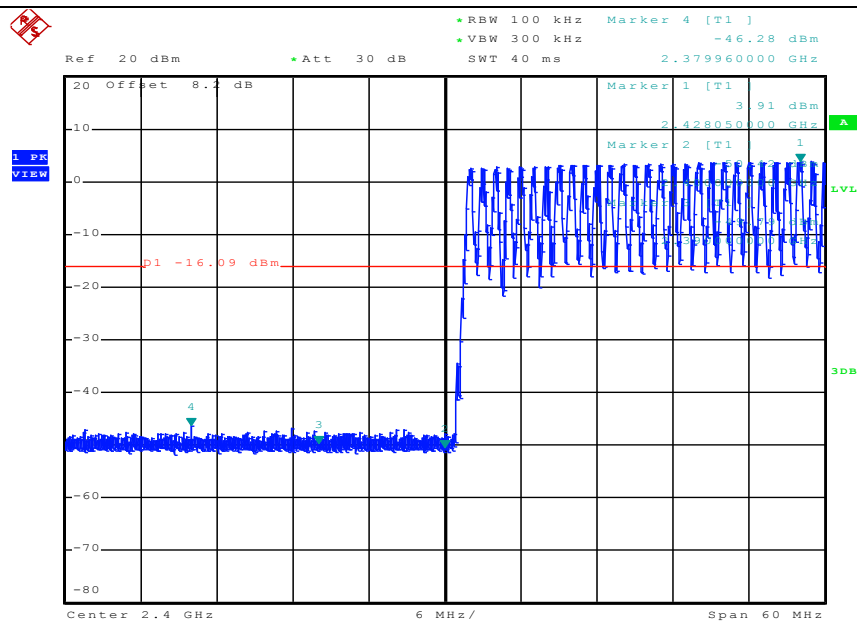| Mode	Channel	Carrier Frequency [MHz]	Carrier Power [dBm]	Frequency Hopping	Max Spurious Level [dBm]	Limit [dBm]	Verdict
GFSK	LCH	2402	2.440	Off	-46.906	-17.56	PASS
			3.910	On	-46.275	-16.09	PASS
	HCH	2480	-0.410	Off	-47.180	-20.41	PASS
			3.230	On	-46.736	-16.77	PASS
π/4DQPSK	LCH	2402	1.110	Off	-47.155	-18.89	PASS
			2.810	On	-46.660	-17.19	PASS
	HCH	2480	1.720	Off	-45.438	-18.28	PASS
			1.640	On	-46.440	-18.36	PASS

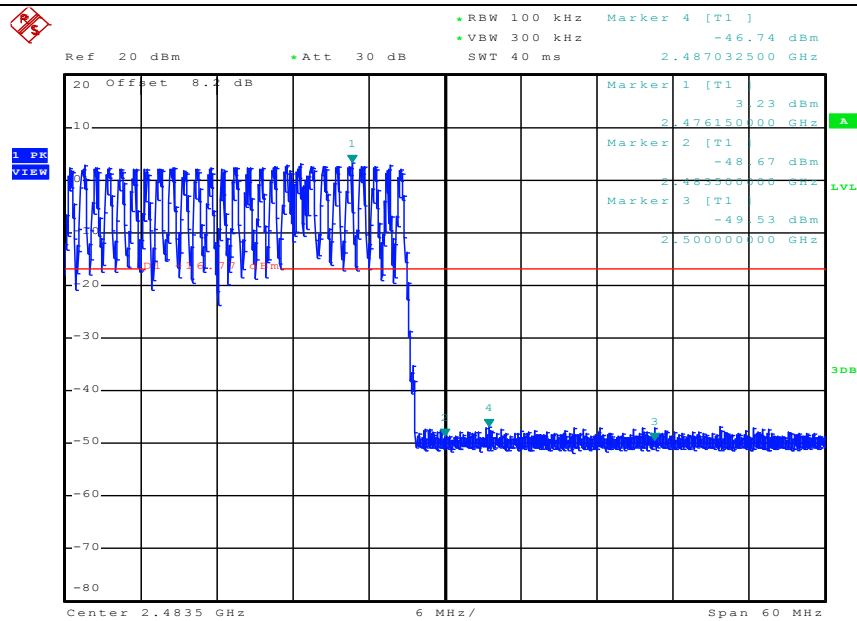| Test Graphs	
GFSK/LCH/No Hop	 Date: 19.AUG.2019 18:37:40
GFSK/LCH/Hop	 Date: 19.AUG.2019 18:57:01

GFSK/HCH/No Hop
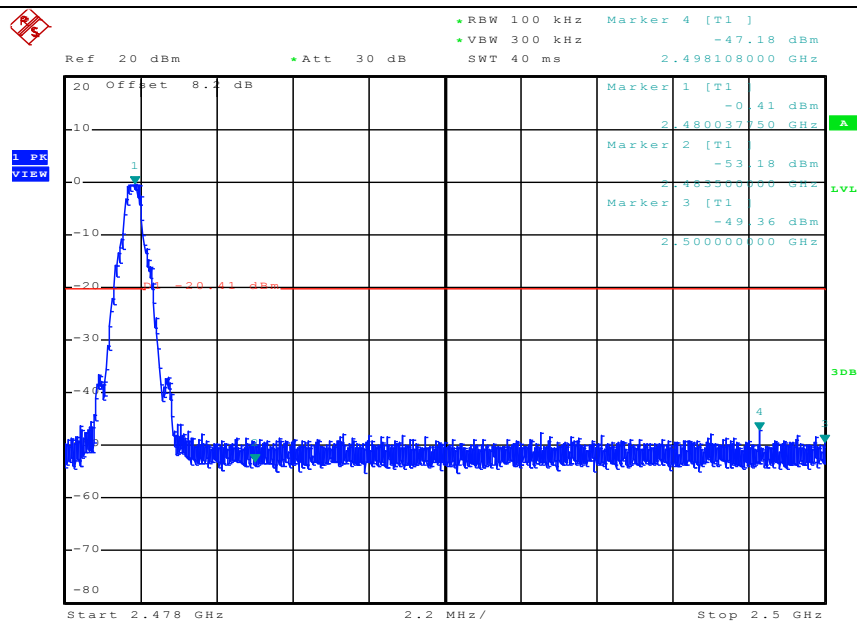
Date: 19.AUG.2019 20:04:31

GFSK/HCH/Hop
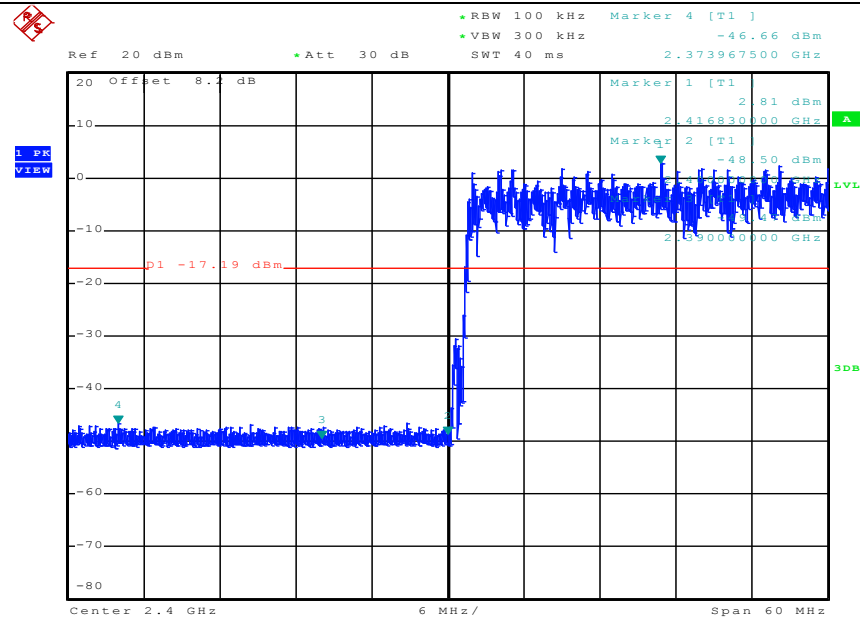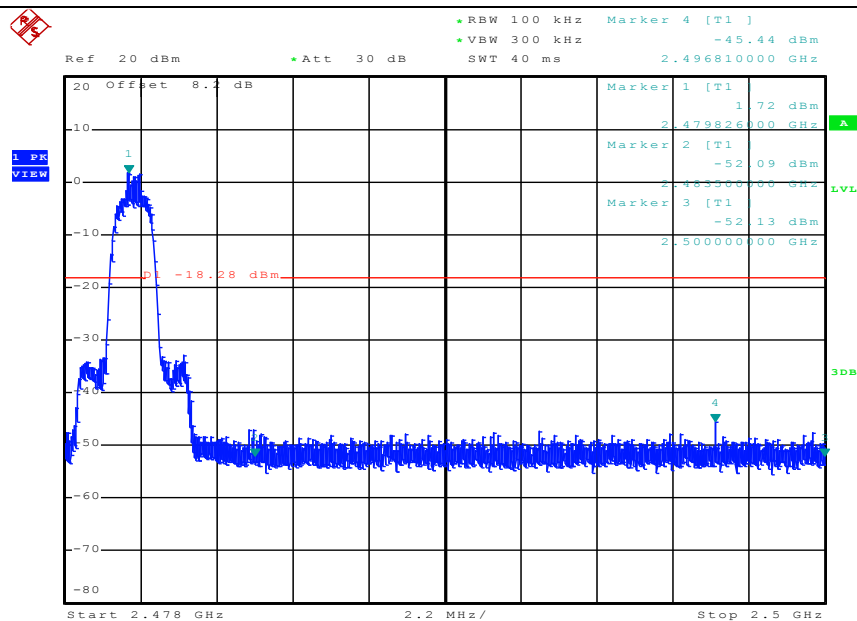

Date: 19.AUG.2019 19:01:22
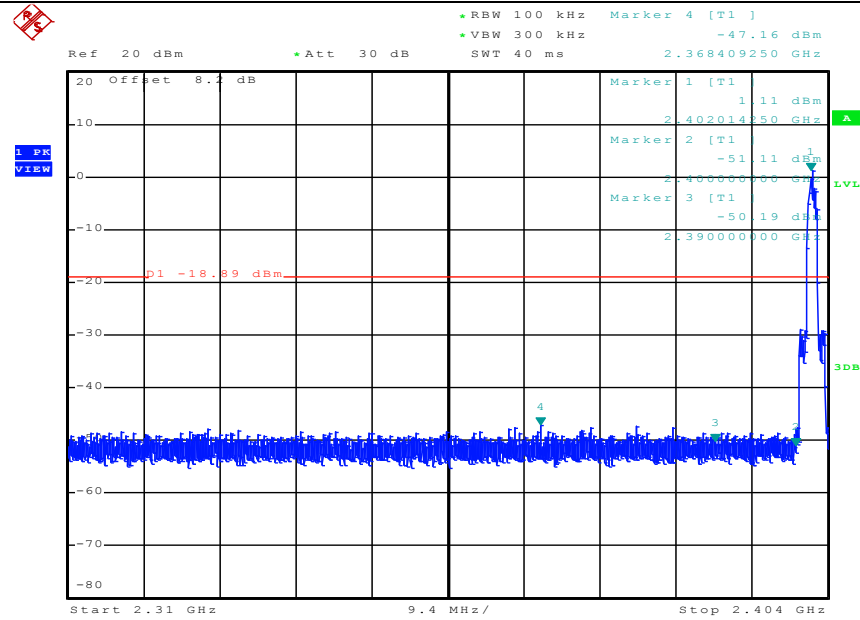
π/4DQPSK/LCH/No Hop	
	Date: 19.AUG.2019 18:46:48
π/4DQPSK/LCH/Hop	
	Date: 19.AUG.2019 19:06:47

π/4DQPSK/HCH/No Hop	

Date: 19.AUG.2019   19:45:05

π/4DQPSK/HCH/Hop	
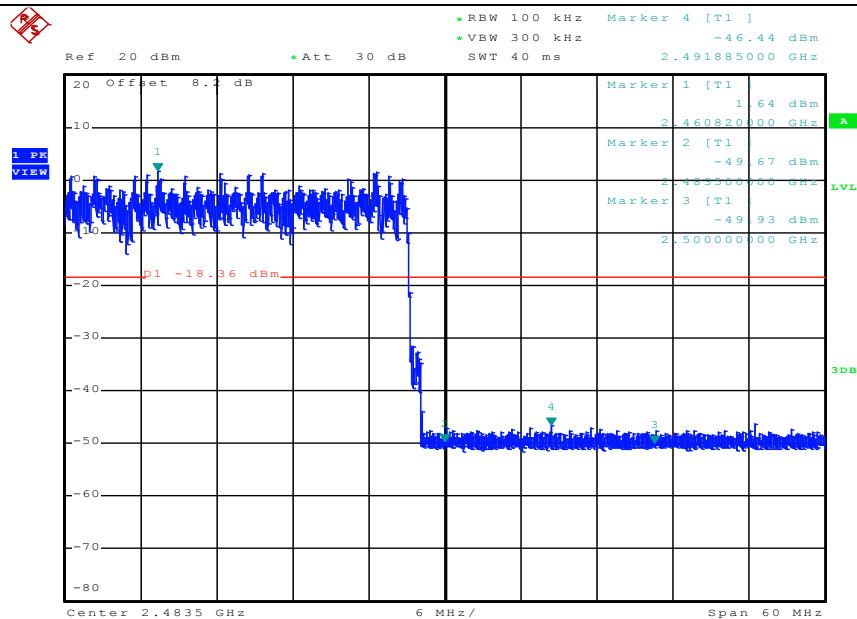
Date: 19.AUG.2019   19:09:50
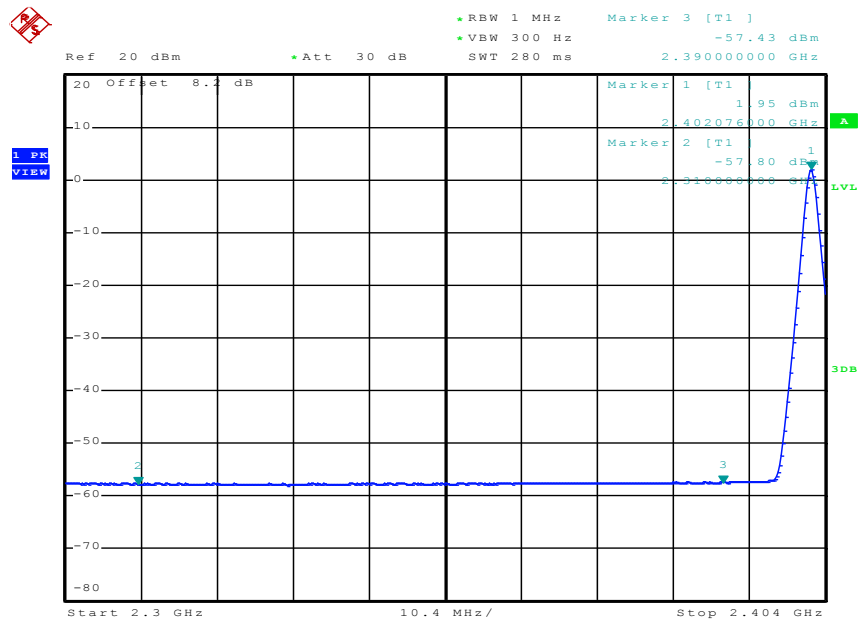
A.8 Restrict-band band-edge measurements

Test Mode	Hopping	Freq.	Power [dBm]	Gain	Ground Factor	E [dBuV/m]	Detector	Limit [dBuV/m]	Verdict
GFSK	Off	2310.0	-48.48	2.0	0	48.78	PEAK	74	PASS
	Off	2310.0	-57.80	2.0	0	39.46	AV	54	PASS
	Off	2390.0	-47.33	2.0	0	49.93	PEAK	74	PASS
	Off	2390.0	-57.43	2.0	0	39.83	AV	54	PASS
	Off	2483.5	-46.22	2.0	0	51.04	PEAK	74	PASS
	Off	2483.5	-53.02	2.0	0	44.24	AV	54	PASS
	Off	2500.0	-48.74	2.0	0	48.52	PEAK	74	PASS
	Off	2500.0	-58.09	2.0	0	39.17	AV	54	PASS
π/4DQPSK	Off	2310.0	-46.76	2.0	0	50.50	PEAK	74	PASS
	Off	2310.0	-57.78	2.0	0	39.48	AV	54	PASS
	Off	2390.0	-47.07	2.0	0	50.19	PEAK	74	PASS
	Off	2390.0	-57.31	2.0	0	39.95	AV	54	PASS
	Off	2483.5	-40.17	2.0	0	57.09	PEAK	74	PASS
	Off	2483.5	-45.27	2.0	0	51.99	AV	54	PASS
	Off	2500.0	-46.60	2.0	0	50.66	PEAK	74	PASS
	Off	2500.0	-58.09	2.0	0	39.17	AV	54	PASS

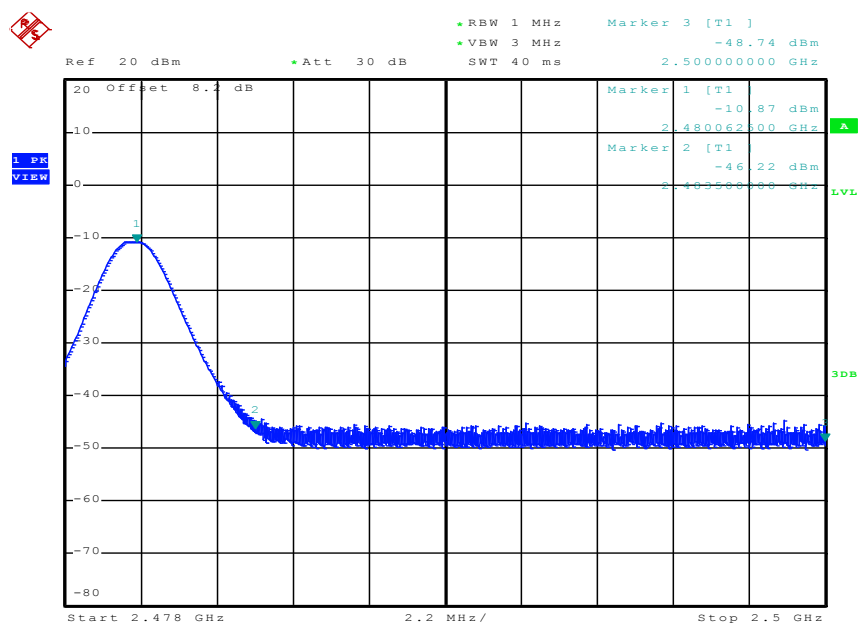## Restrict-band band-edge measurements_Hopping Off_ GFSK_PEAK (Low Channel)
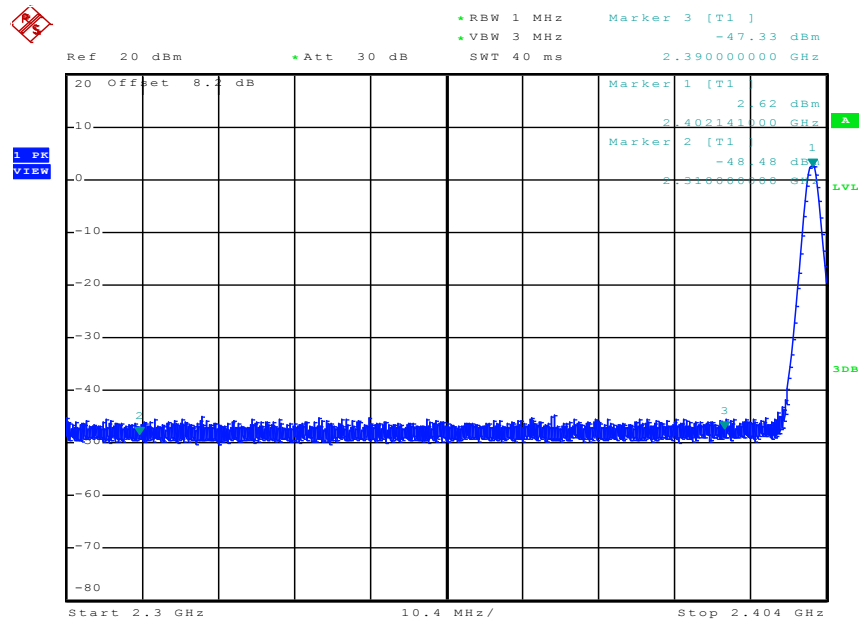
Date: 19.AUG.2019 18:38:26

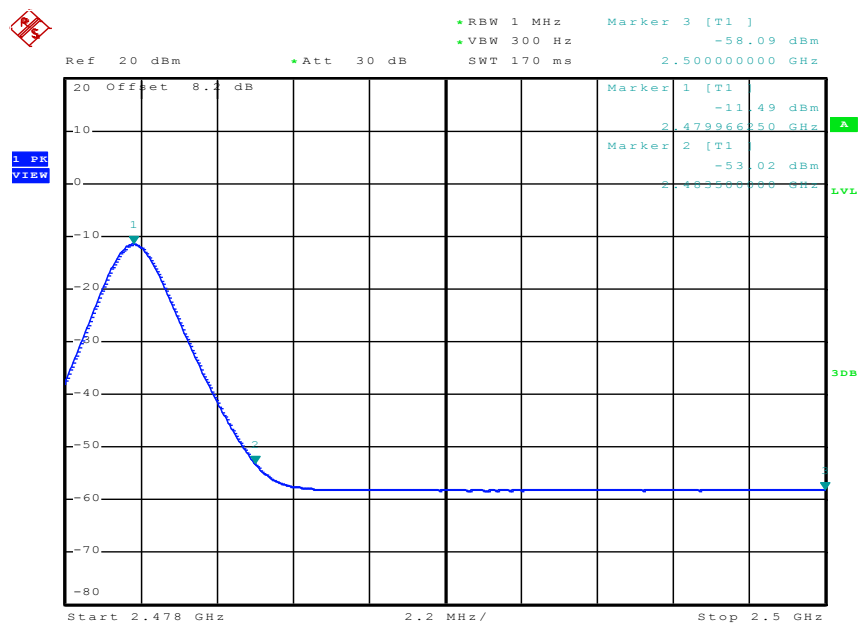## Restrict-band band-edge measurements_Hopping Off_ GFSK_Average (Low Channel)

Date: 19.AUG.2019 18:38:39

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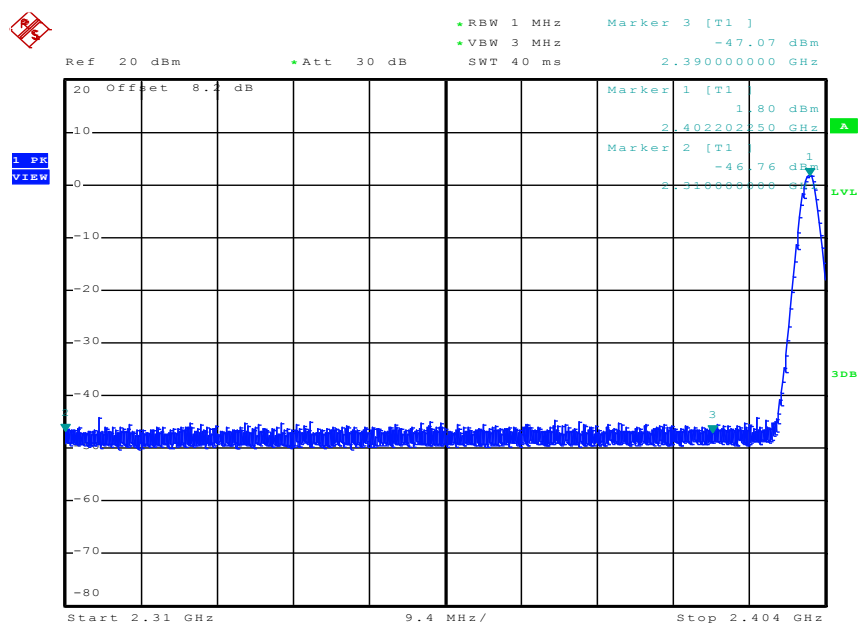

Date: 19.AUG.2019 20:09:50

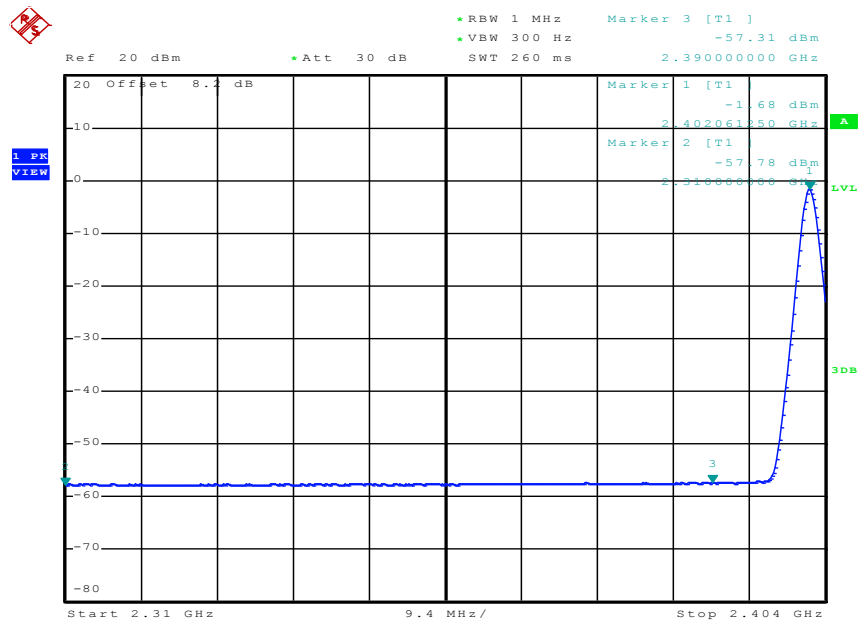## Restrict-band band-edge measurements_Hopping Off_ GFSK_Average (High Channel)

Date: 19.AUG.2019 20:10:03

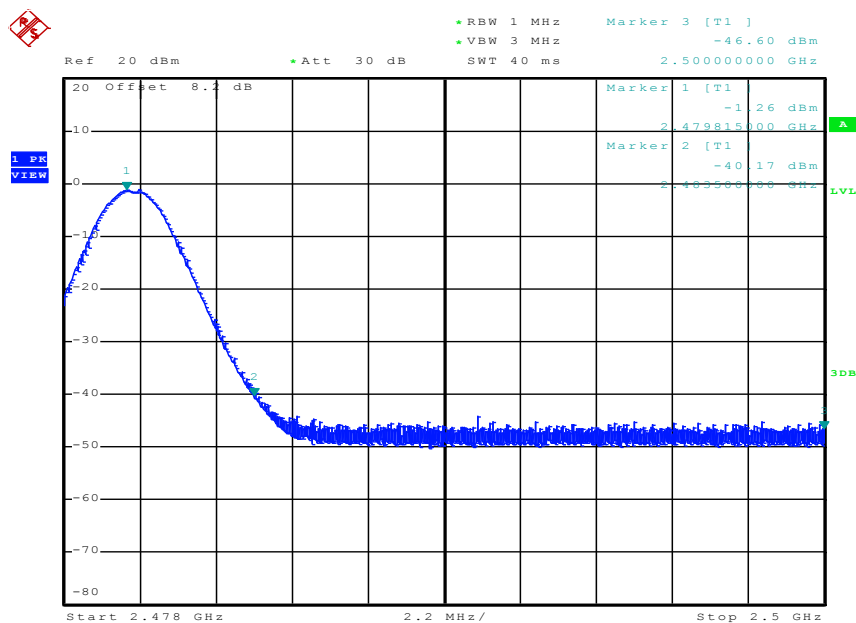## Restrict-band band-edge measurements_Hopping Off_π/4-DQPSK_PEAK (Low Channel)

Date: 19.AUG.2019 18:47:35

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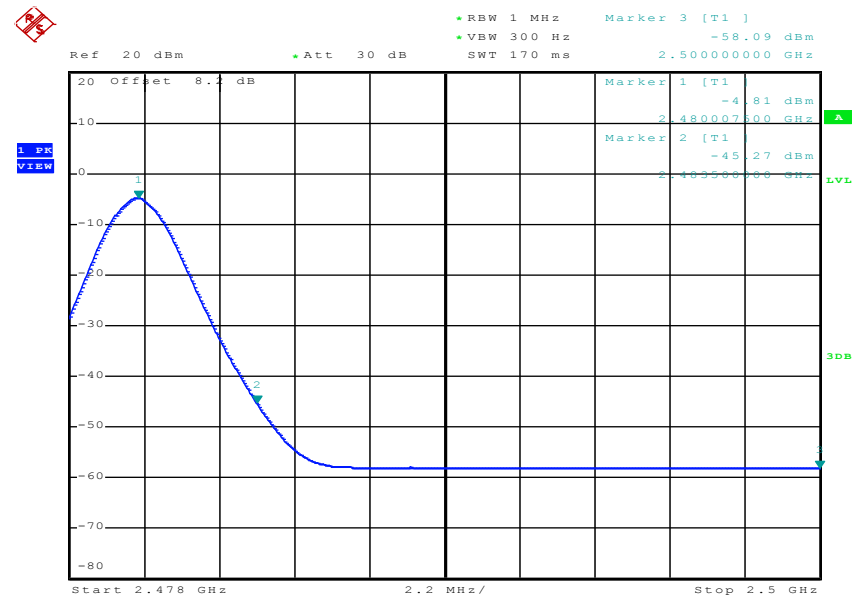

Date: 19.AUG.2019 18:47:48

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

Date: 19.AUG.2019 19:47:25

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

Date: 19.AUG.2019 19:47:38