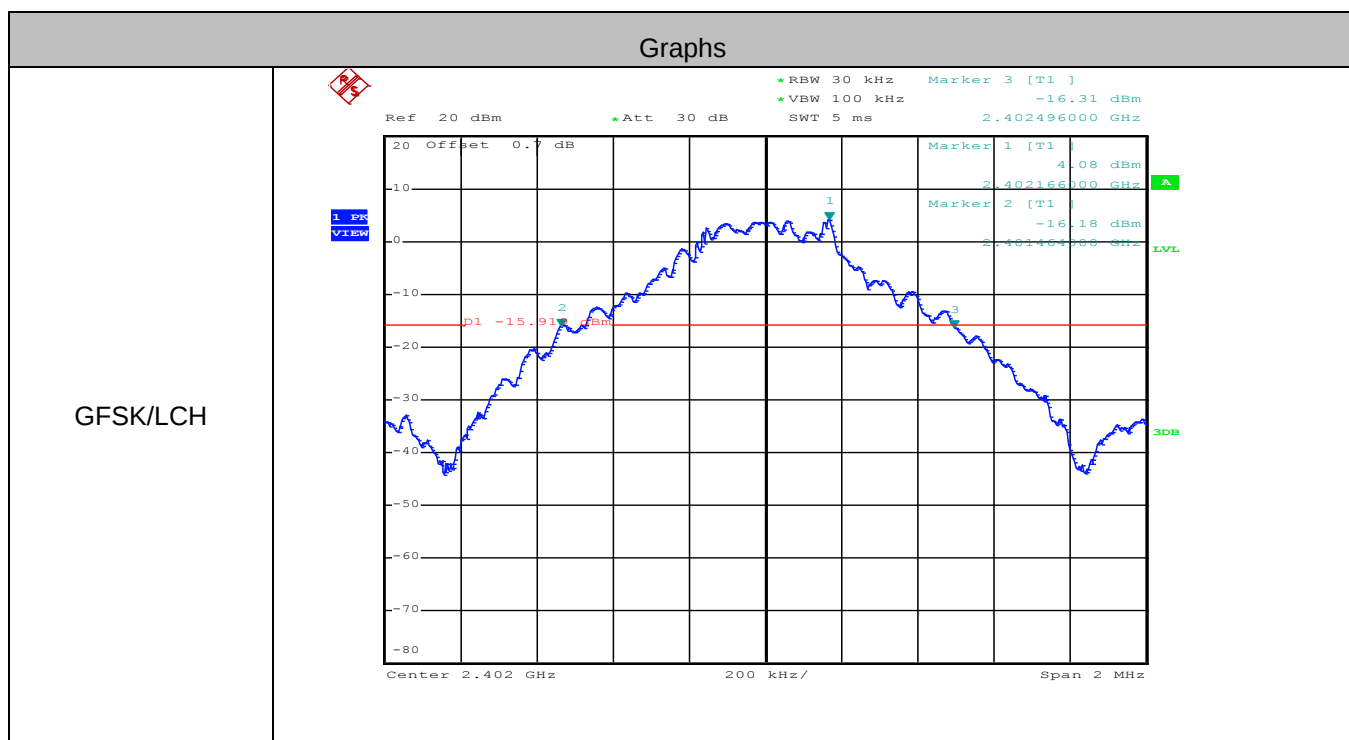


Appendix A): 20dB Bandwidth

Test Result

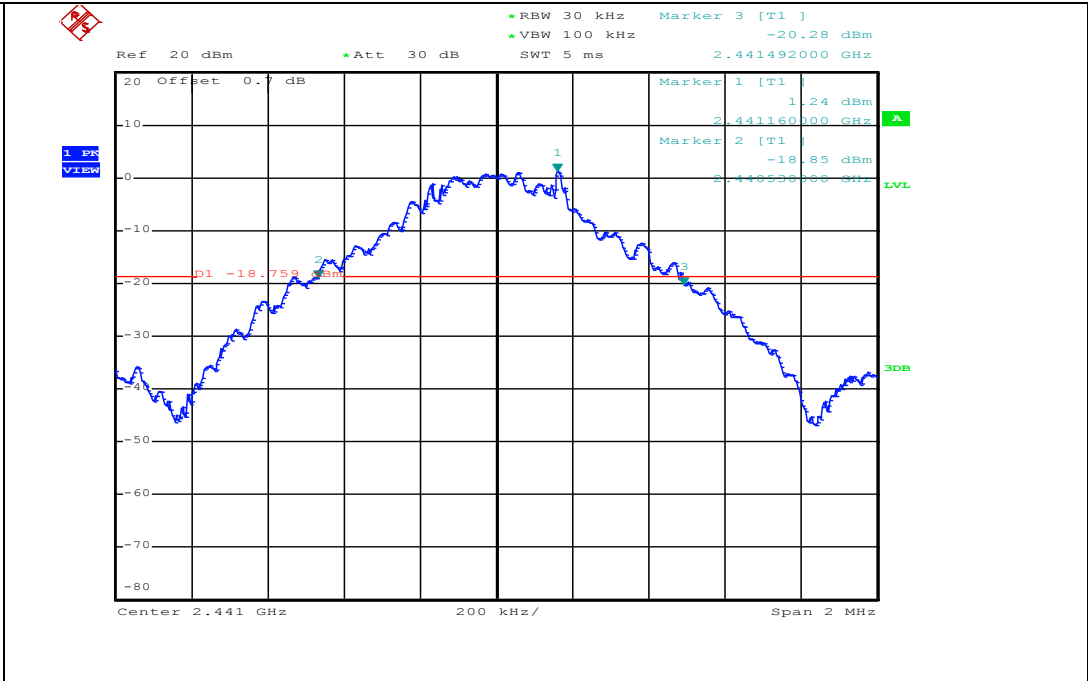
Mode	Channel.	20dB Bandwidth [MHz]	Verdict
GFSK	LCH	1.032	PASS
GFSK	MCH	0.962	PASS
GFSK	HCH	1.028	PASS
$\pi/4$ DQPSK	LCH	1.288	PASS
$\pi/4$ DQPSK	MCH	1.316	PASS
$\pi/4$ DQPSK	HCH	1.292	PASS

Test Graph

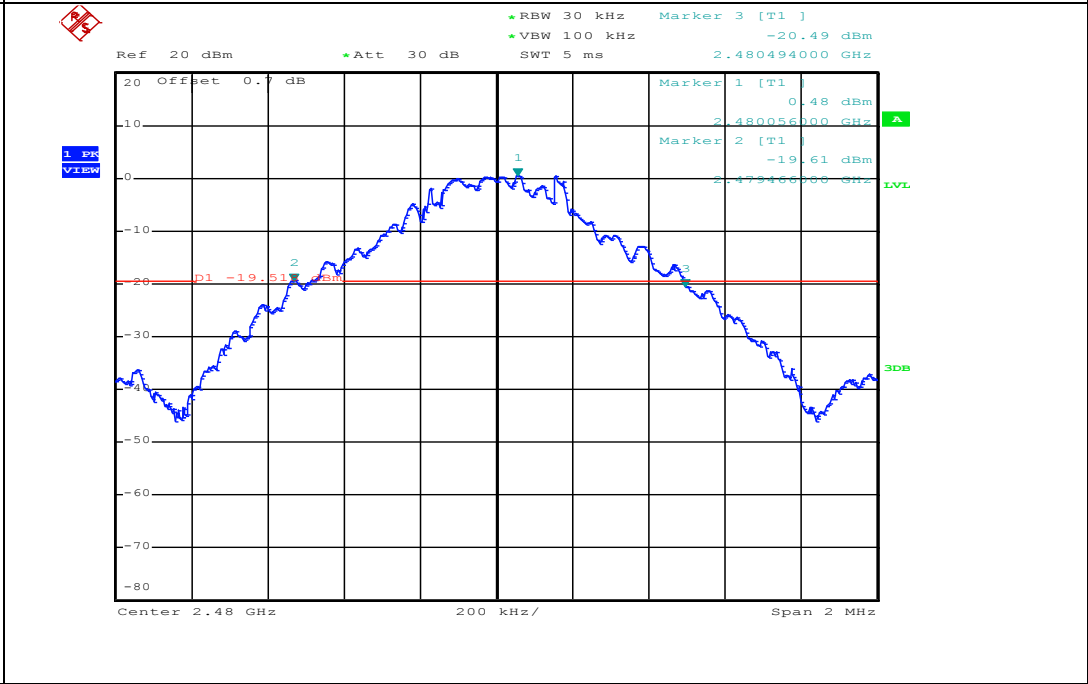


Date: 5.SEP.2017 07:45:24

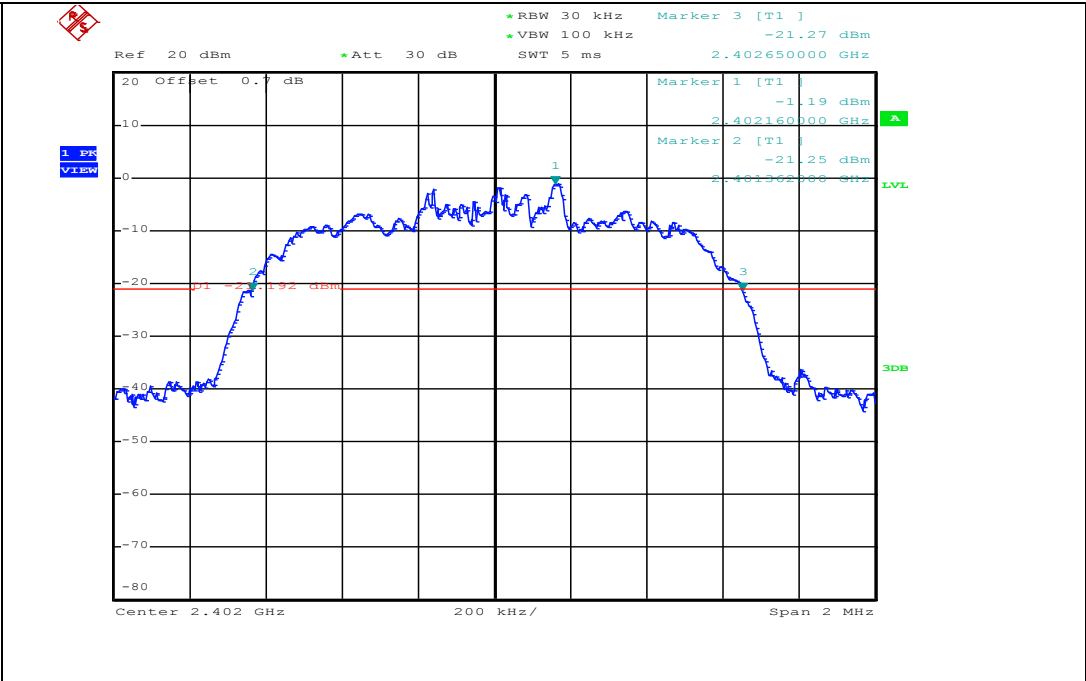
GFSK/MCH



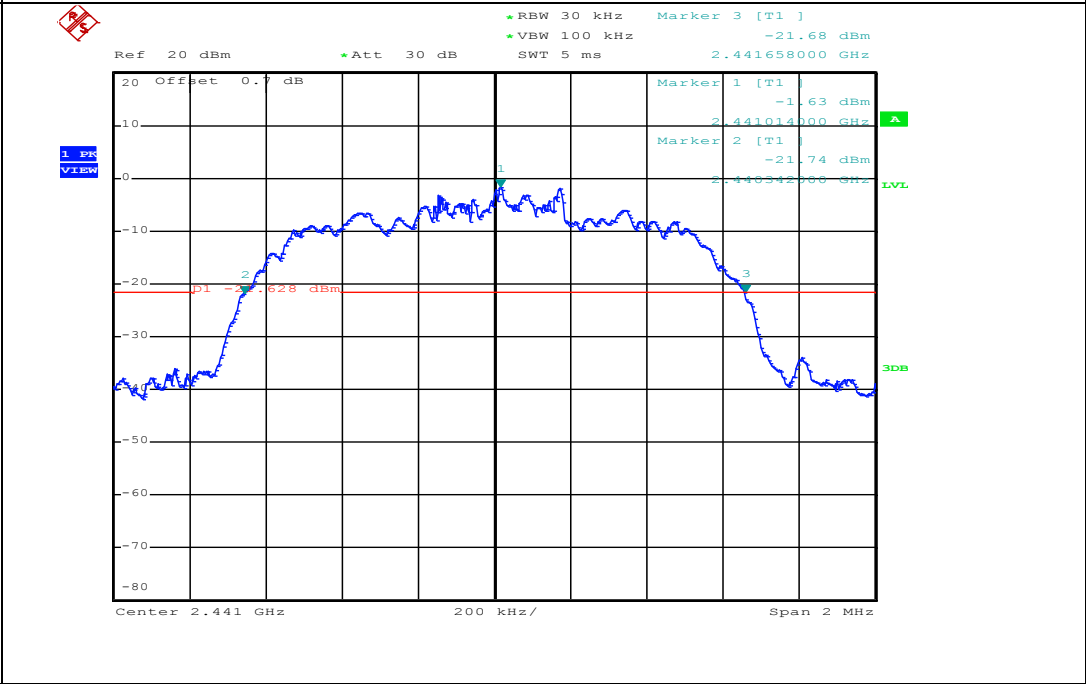
GFSK/HCH



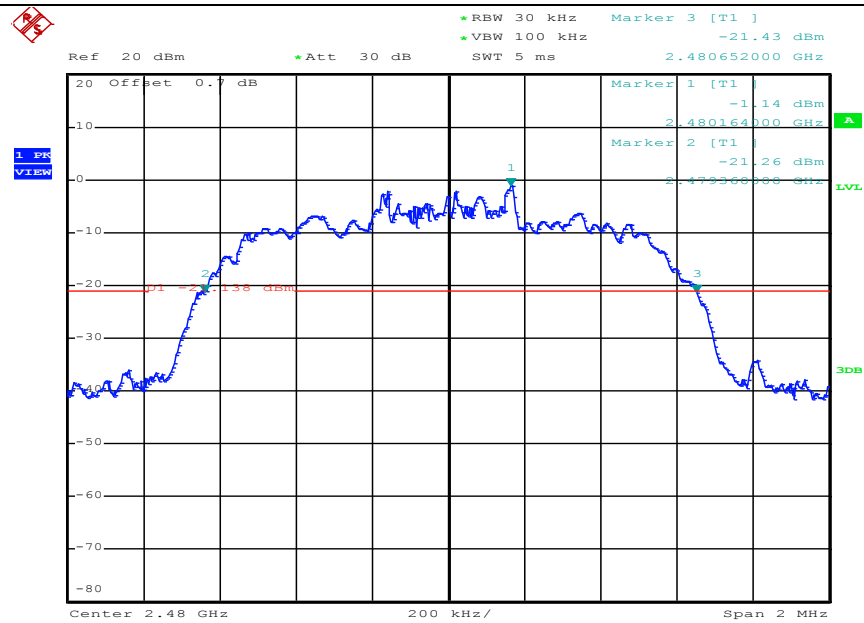
$\pi/4$ DQPSK/LCH



$\pi/4$ DQPSK/MCH



$\pi/4$ DQPSK/HCH



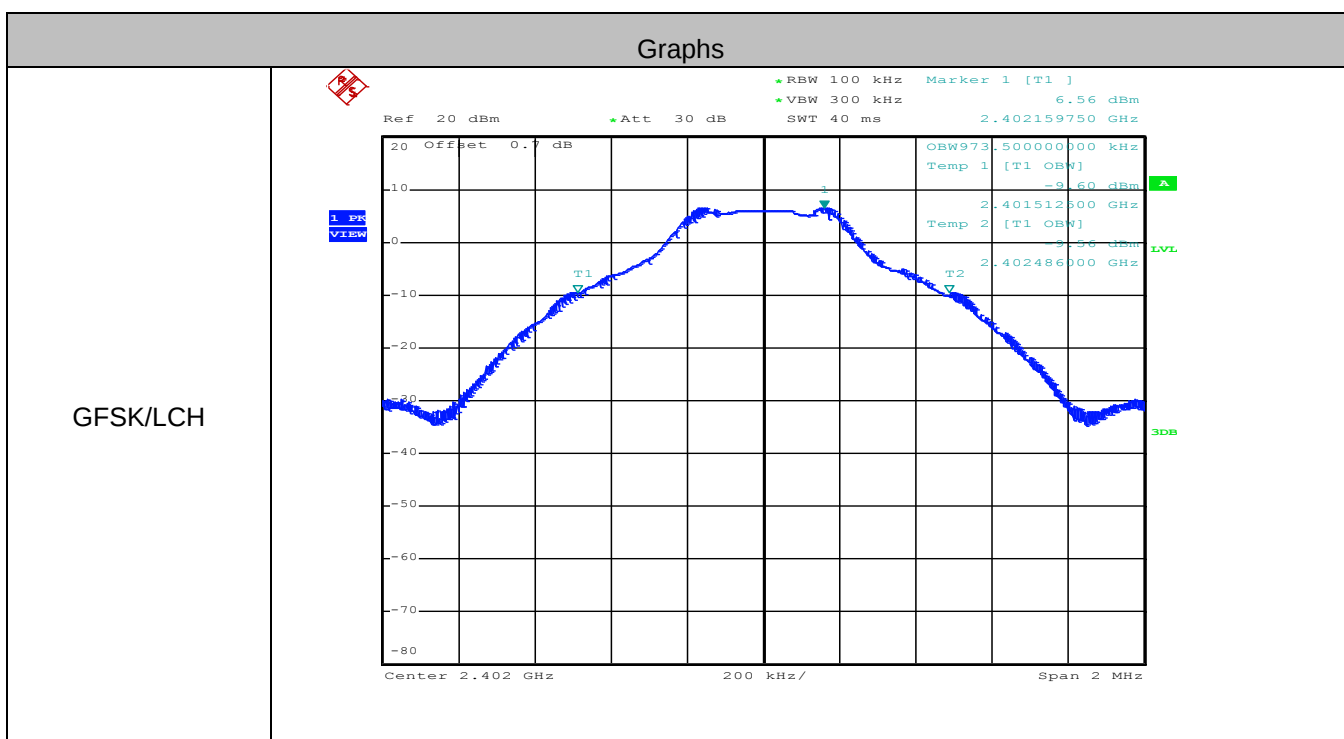
Date: 5.SEP.2017 08:24:30

Appendix B): Occupied Bandwidth

Test Result

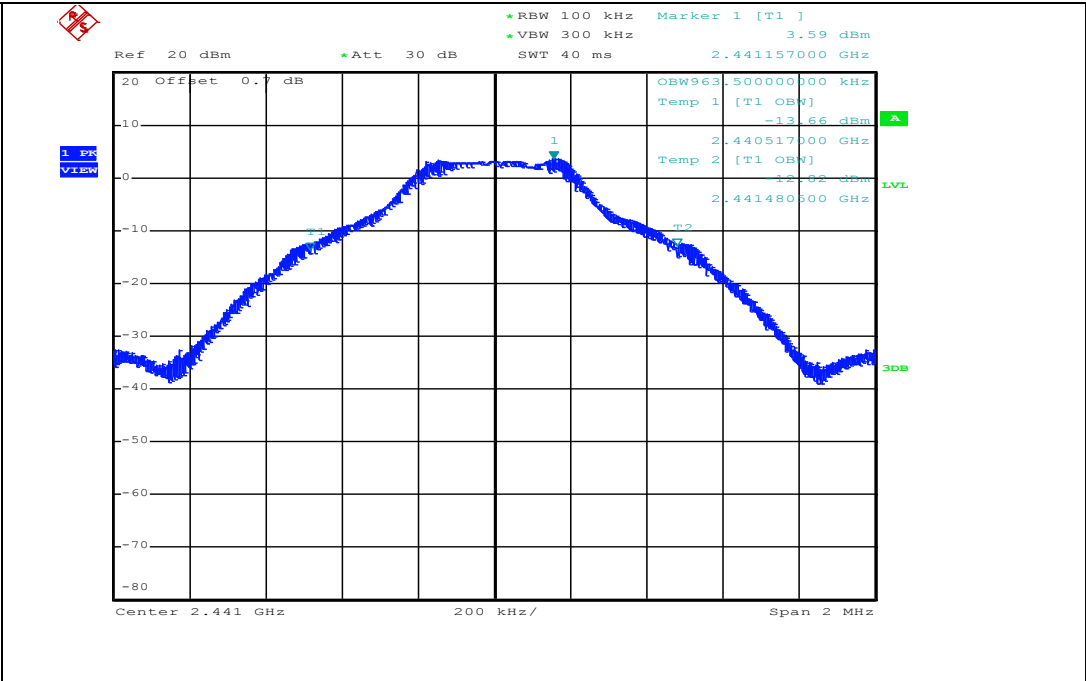
Mode	Channel.	99% OBW [MHz]	Verdict
GFSK	LCH	0.974	PASS
GFSK	MCH	0.964	PASS
GFSK	HCH	0.965	PASS
$\pi/4$ DQPSK	LCH	1.217	PASS
$\pi/4$ DQPSK	MCH	1.219	PASS
$\pi/4$ DQPSK	HCH	1.219	PASS

Test Graph

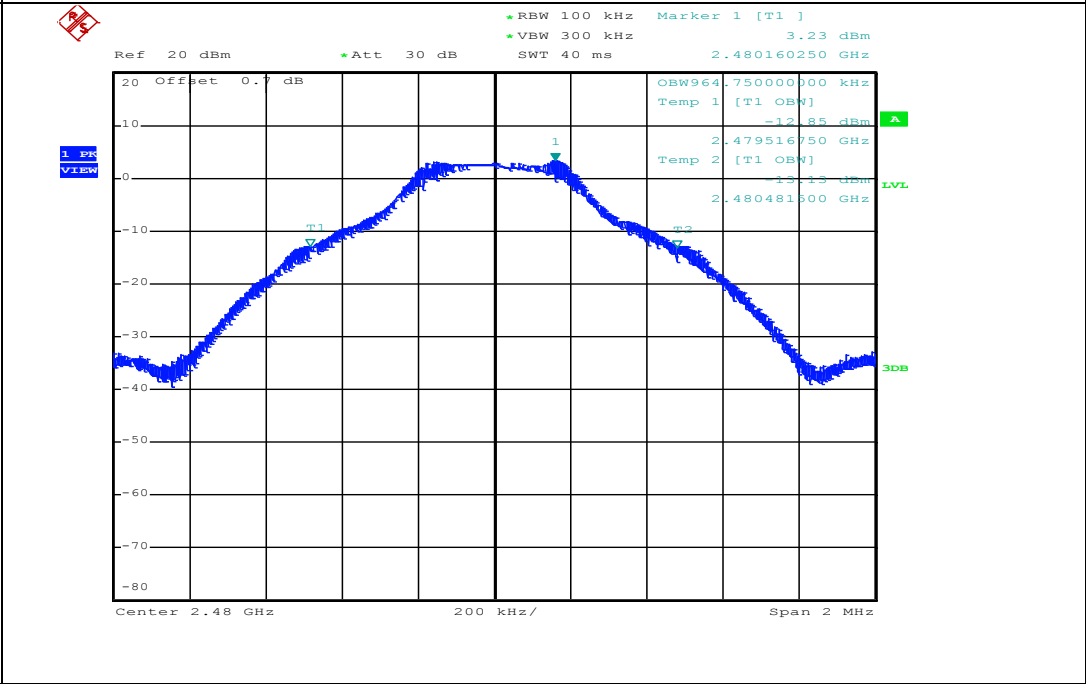


Date: 5.SEP.2017 07:46:22

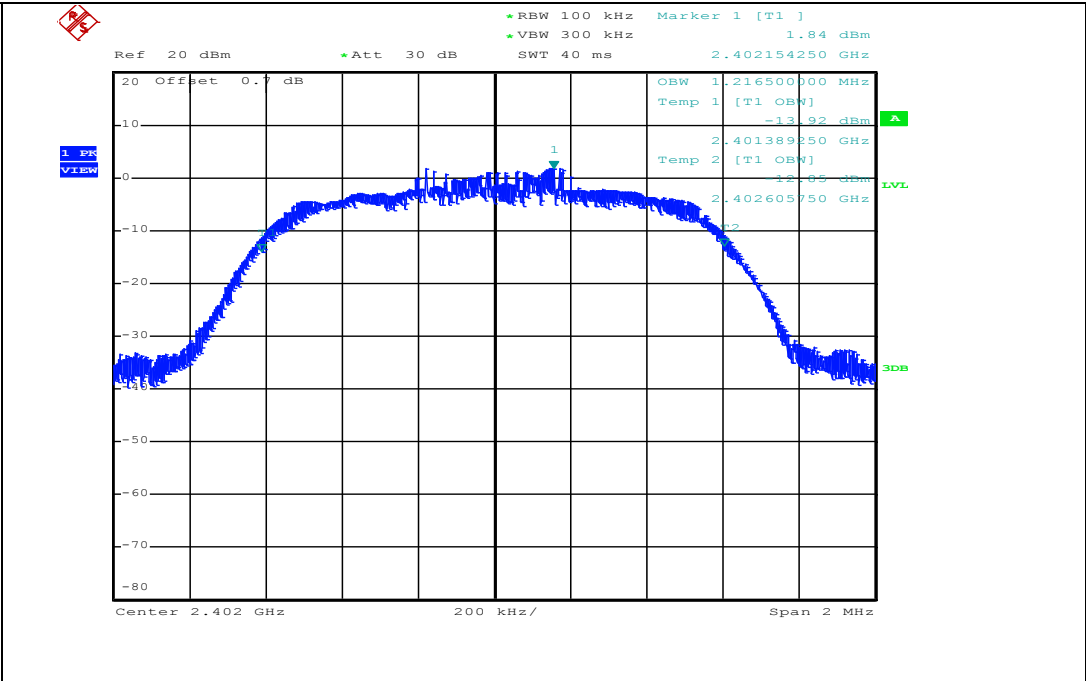
GFSK/MCH



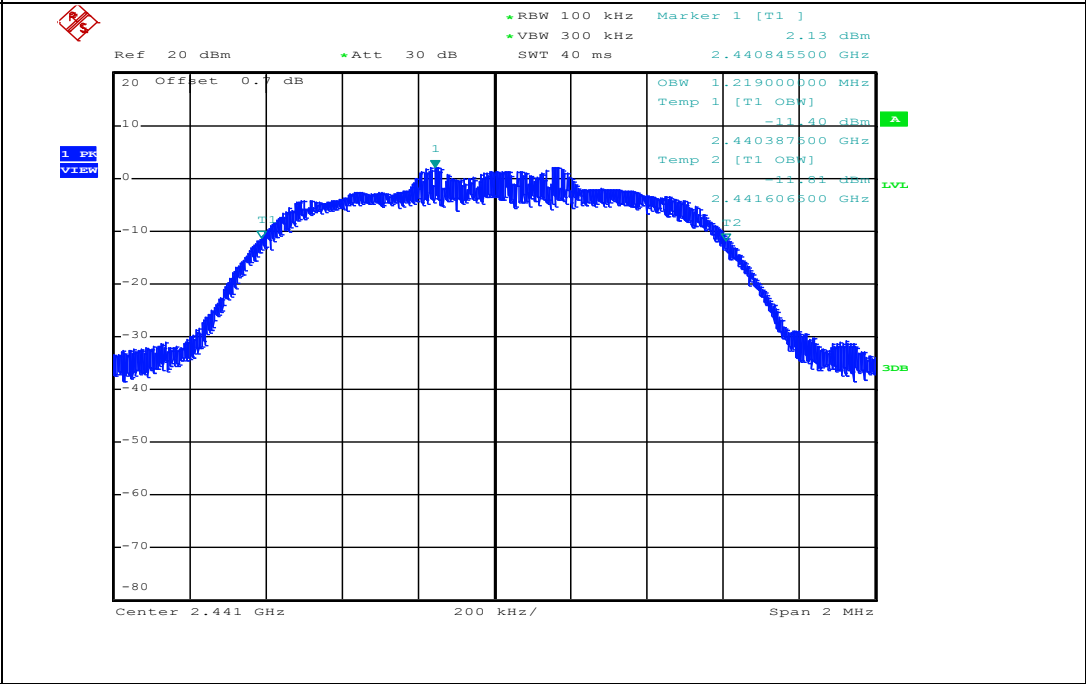
GFSK/HCH

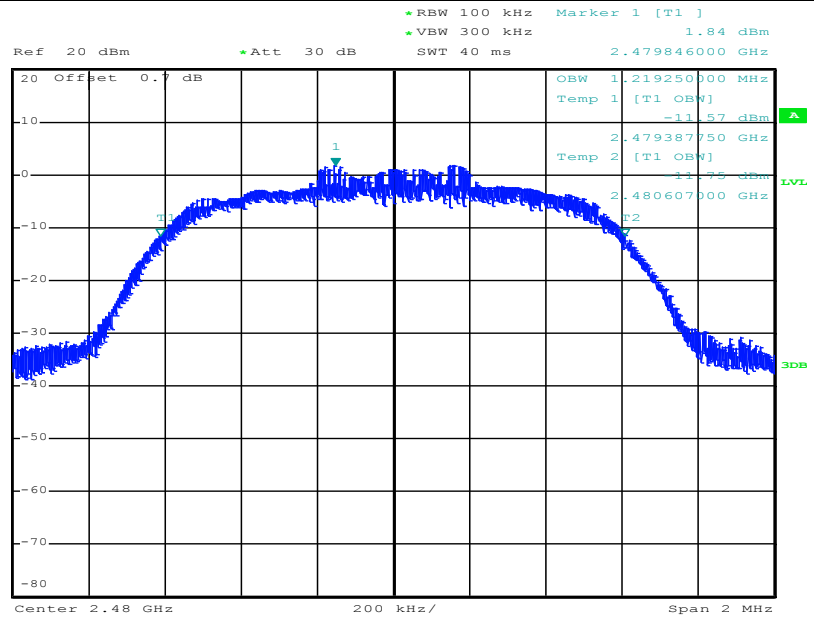


$\pi/4$ DQPSK/LCH



$\pi/4$ DQPSK/MCH



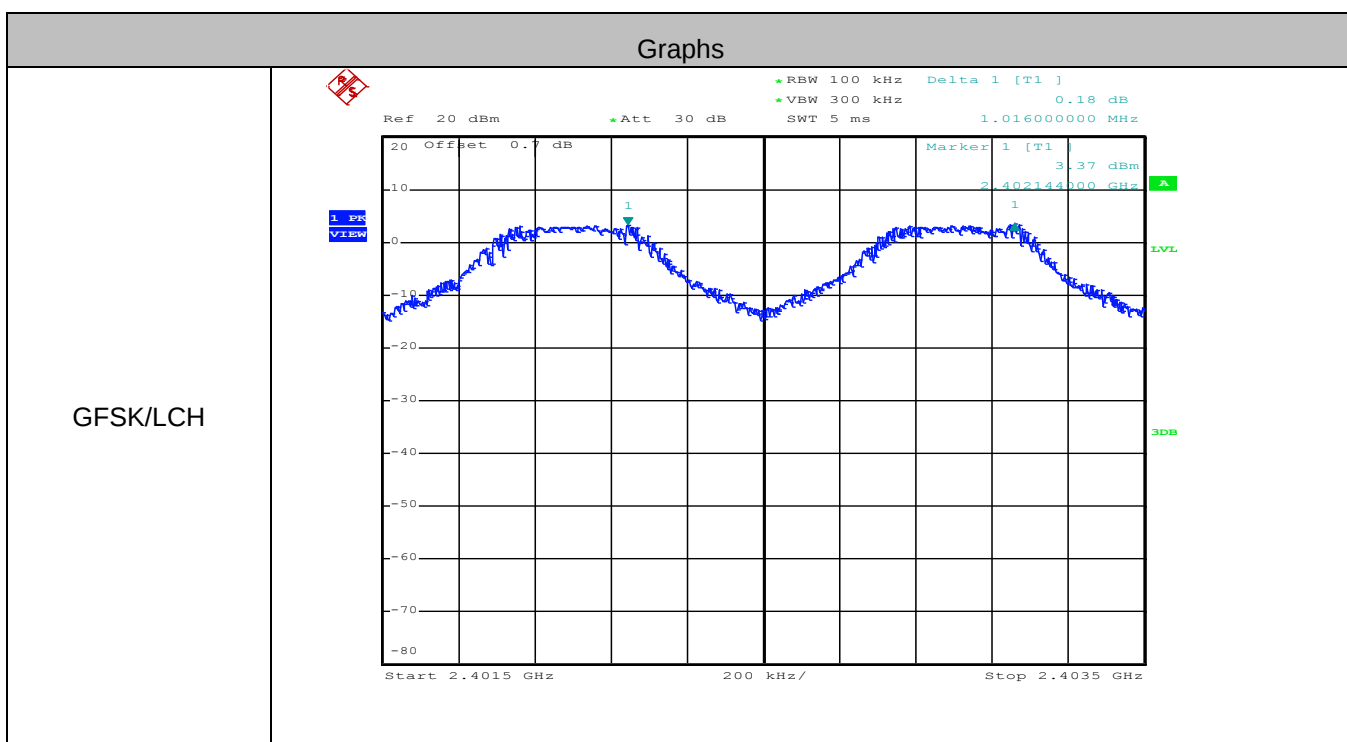


Appendix C): Carrier Frequency Separation

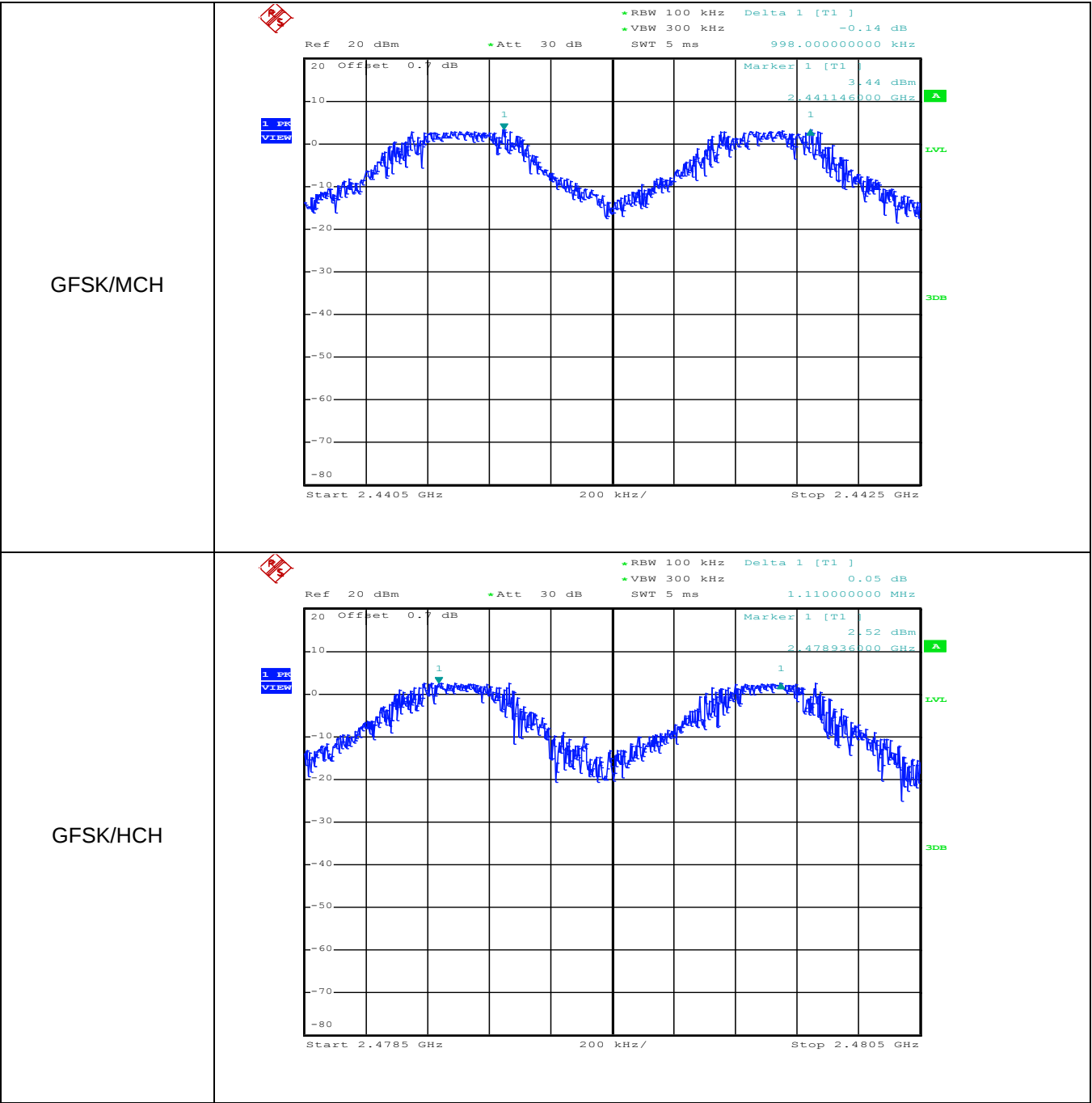
Result Table

Mode	Channel.	Carrier Frequency Separation [MHz]	Verdict
GFSK	LCH	1.016	PASS
GFSK	MCH	0.998	PASS
GFSK	HCH	1.110	PASS
$\pi/4$ DQPSK	LCH	1.038	PASS
$\pi/4$ DQPSK	MCH	1.158	PASS
$\pi/4$ DQPSK	HCH	0.980	PASS

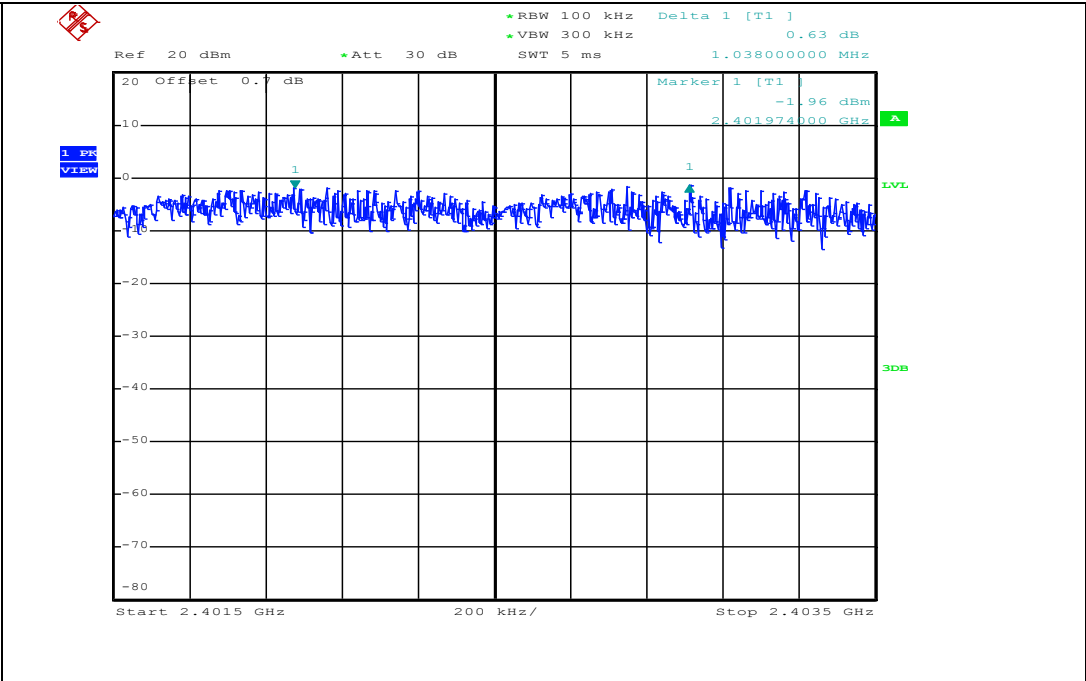
Test Graph



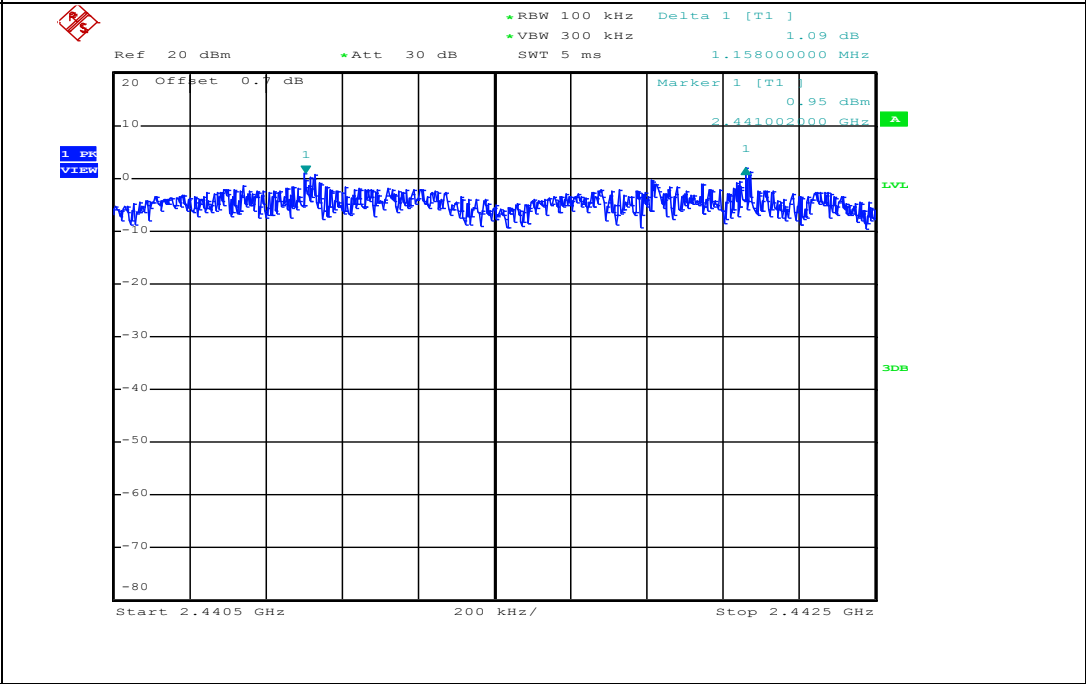
Date: 5.SEP.2017 08:30:35



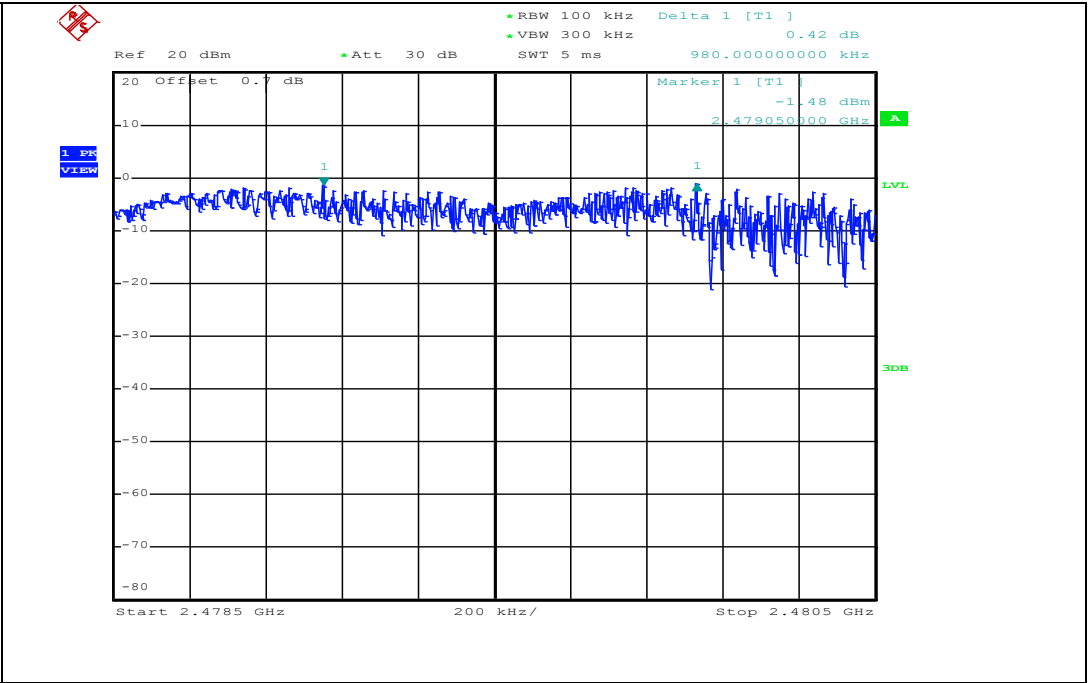
$\pi/4$ DQPSK/LCH



$\pi/4$ DQPSK/MCH



$\pi/4$ DQPSK/HCH



Date: 5.SEP.2017 08:42:07

Appendix D): Dwell Time

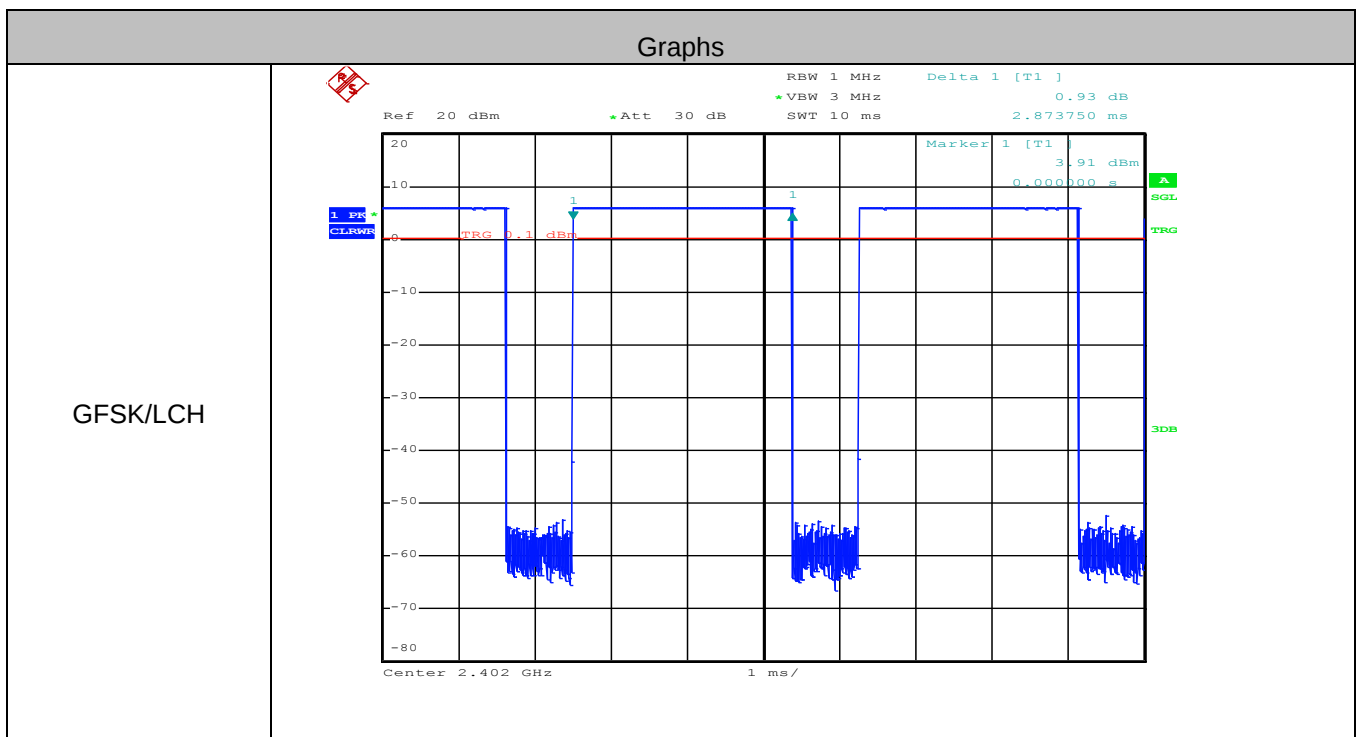
Result Table

The Dwell Time=Burst Width*Total Hops. The detailed calculations are showed as follows:

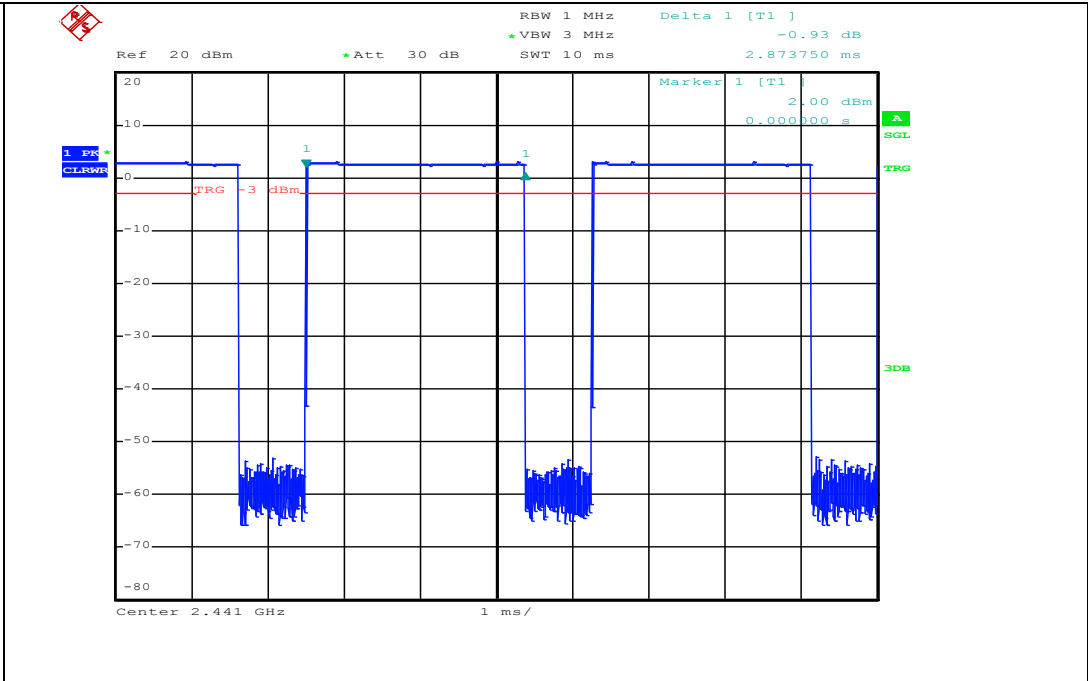
- The duration for dwell time calculation: $0.4[s] \times \text{hopping number} = 0.4[s] \times 79[\text{ch}] = 31.6[s \times \text{ch}]$;
- The burst width [ms/hop/ch], which is directly measured, refers to the duration on one channel hop.
- The hops per second for all channels: The selected EUT Conf uses a slot type of 5-Tx&1-Rx and a hopping rate of 1600 [ch*hop/s] for all channels. So the final hopping rate for all channels is $1600/6=266.67$ [ch*hop/s]
- The hops per second on one channel: $266.67 [\text{ch} \times \text{hops/s}] / 79 [\text{ch}] = 3.38 [\text{hop/s}]$;
- The total hops for all channels within the dwell time calculation duration: $3.38 [\text{hop/s}] \times 31.6[s \times \text{ch}] = 106.67$ [hop*ch];
- The dwell time for all channels hopping: $106.67 [\text{hop} \times \text{ch}] \times \text{Burst Width} [\text{ms/hop/ch}]$.

Mode	Channel	Burst Width [ms/hop/ch]	Total Hops[hop*ch]	Dwell Time[s]	Duty Cycle [%]	Verdict
GFSK	LCH	2.87	106.7	0.306	0.00	PASS
GFSK	MCH	2.87	106.7	0.306	0.00	PASS
GFSK	HCH	2.87	106.7	0.306	0.00	PASS
$\pi/4$ DQPSK	LCH	2.88	106.7	0.307	0.00	PASS
$\pi/4$ DQPSK	MCH	2.88	106.7	0.307	0.00	PASS
$\pi/4$ DQPSK	HCH	2.88	106.7	0.307	0.00	PASS

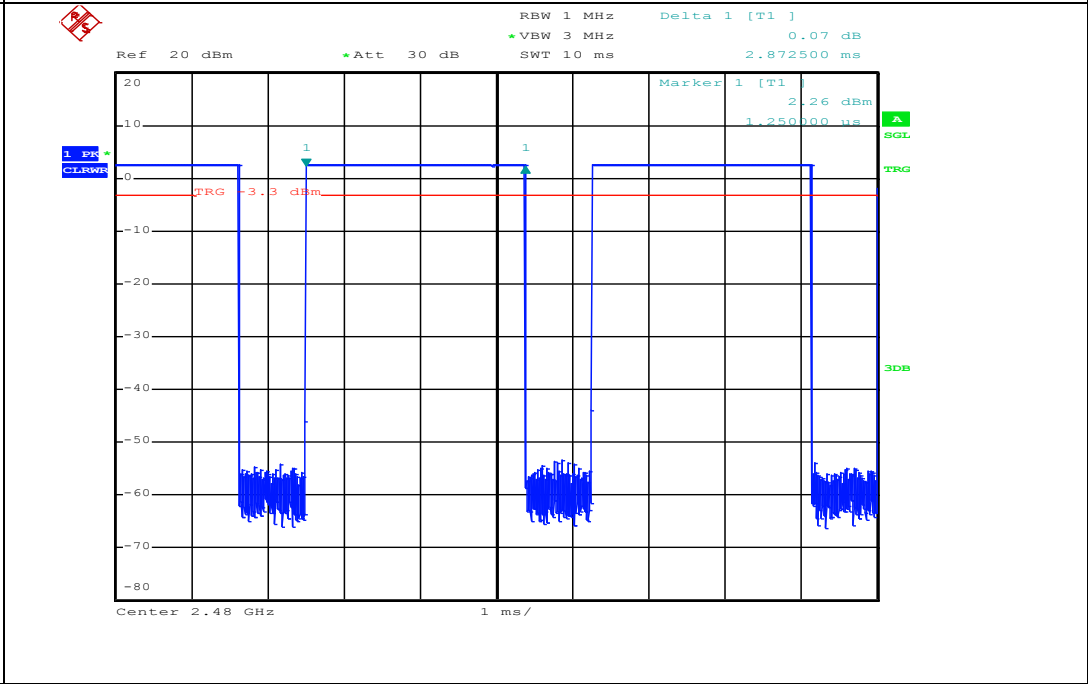
Test Graph



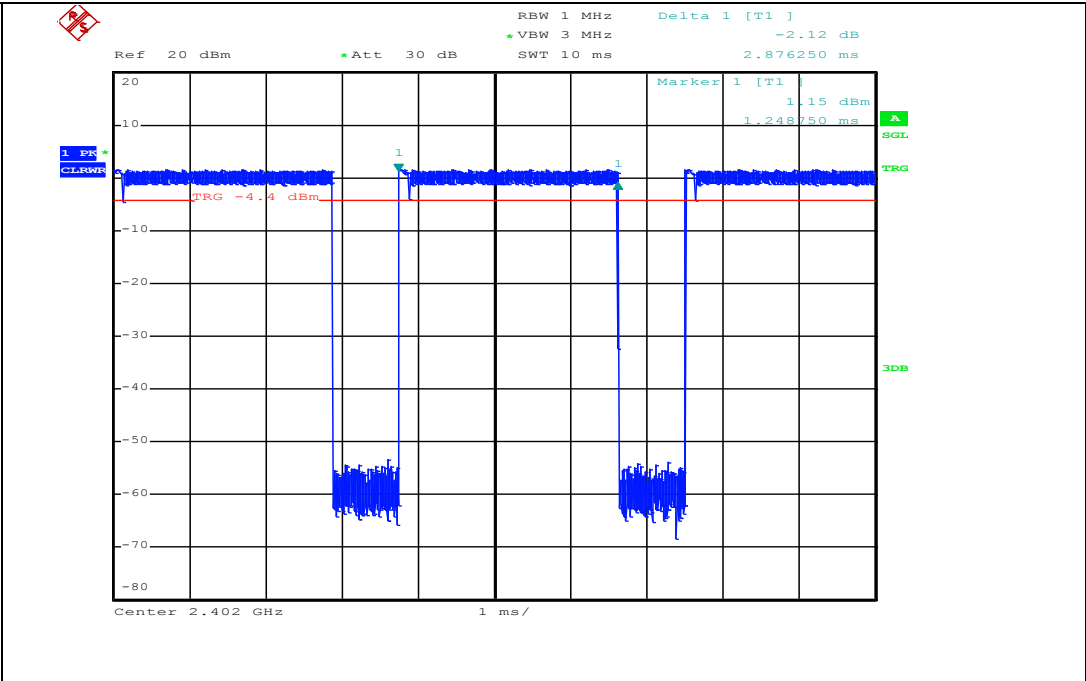
GFSK/MCH



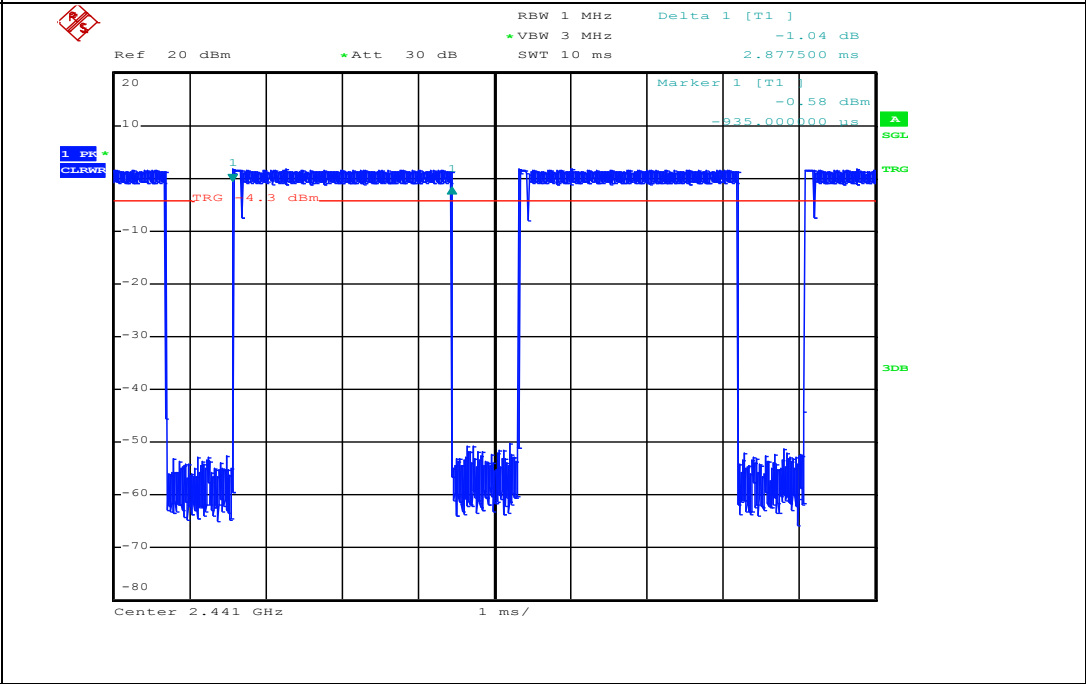
GFSK/HCH



$\pi/4$ DQPSK/LCH



$\pi/4$ DQPSK/MCH



RBW 1 MHz
 Delta 1 [T1]
 -2.46 dB
 VSW 3 MHz
 SWT 10 ms
 2.876250 ms

Ref 20 dBm
 Att 30 dB

Marker 1 [T1]
 1.08 dBm
 -1.027500 ms

1 PK
 CLRWR

TRG
 4.5 dBm

3dB

Center 2.48 GHz
 1 ms/

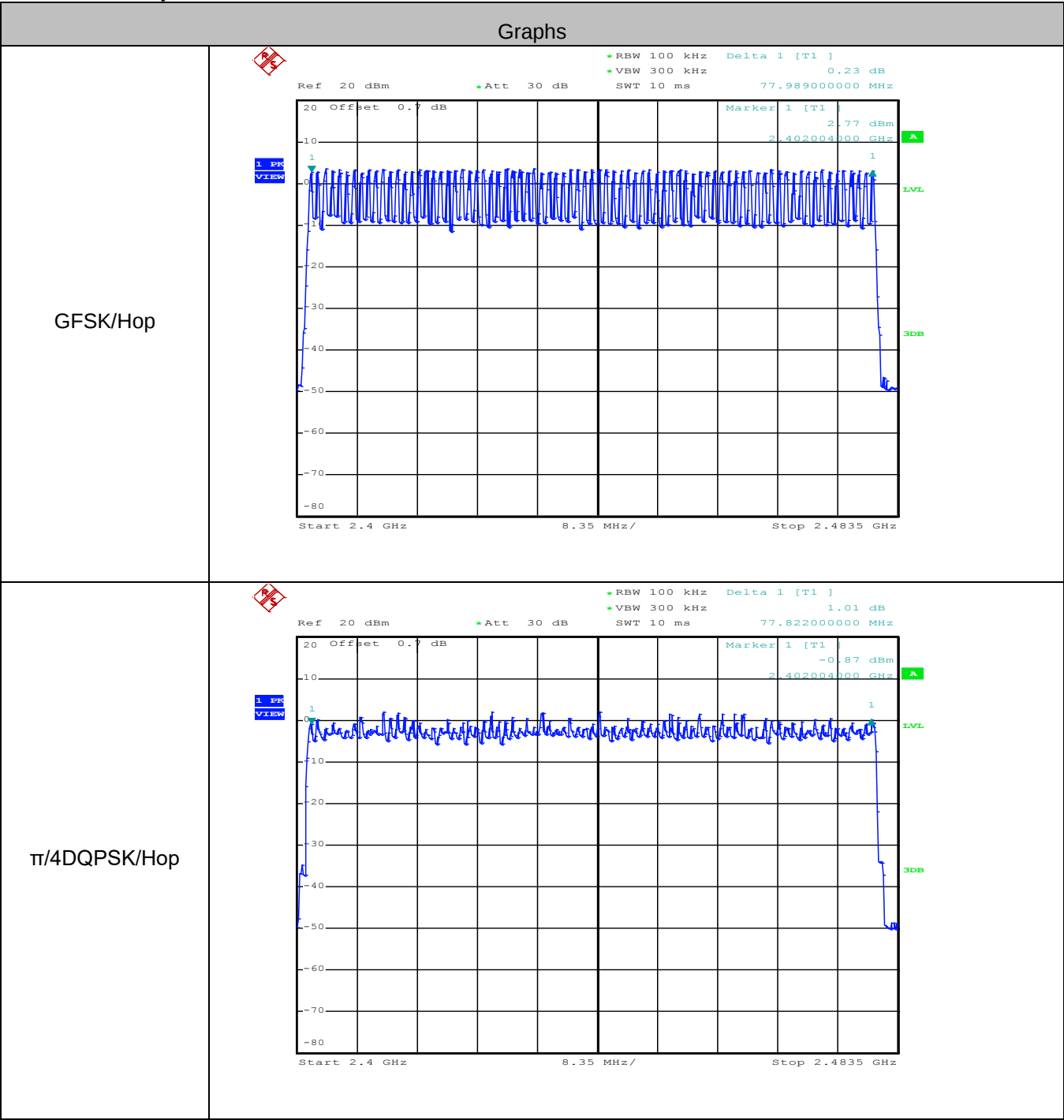
Date: 5.SEP.2017 08:25:09

Appendix E): Hopping Channel Number

Result Table

Mode	Channel.	Number of Hopping Channel	Verdict
GFSK	Hop	79	PASS
π /4DQPSK	Hop	79	PASS

Test Graph

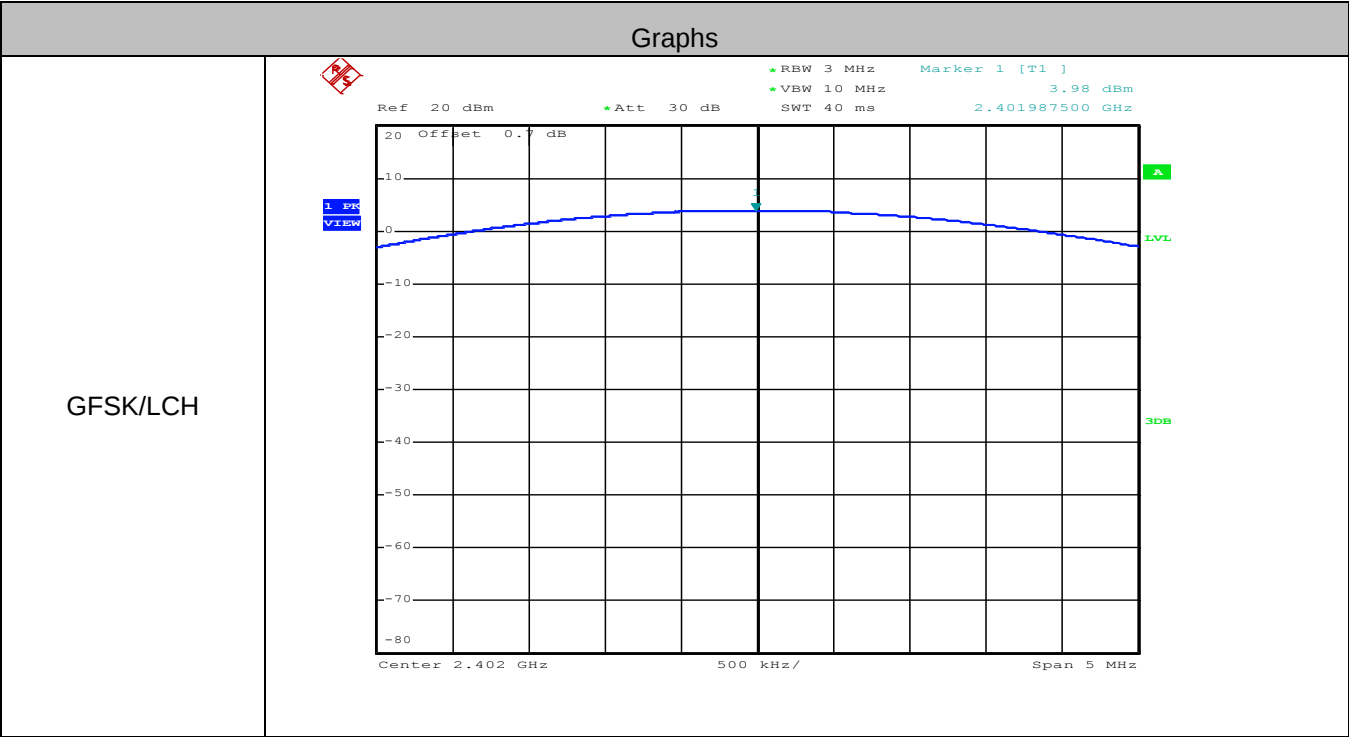


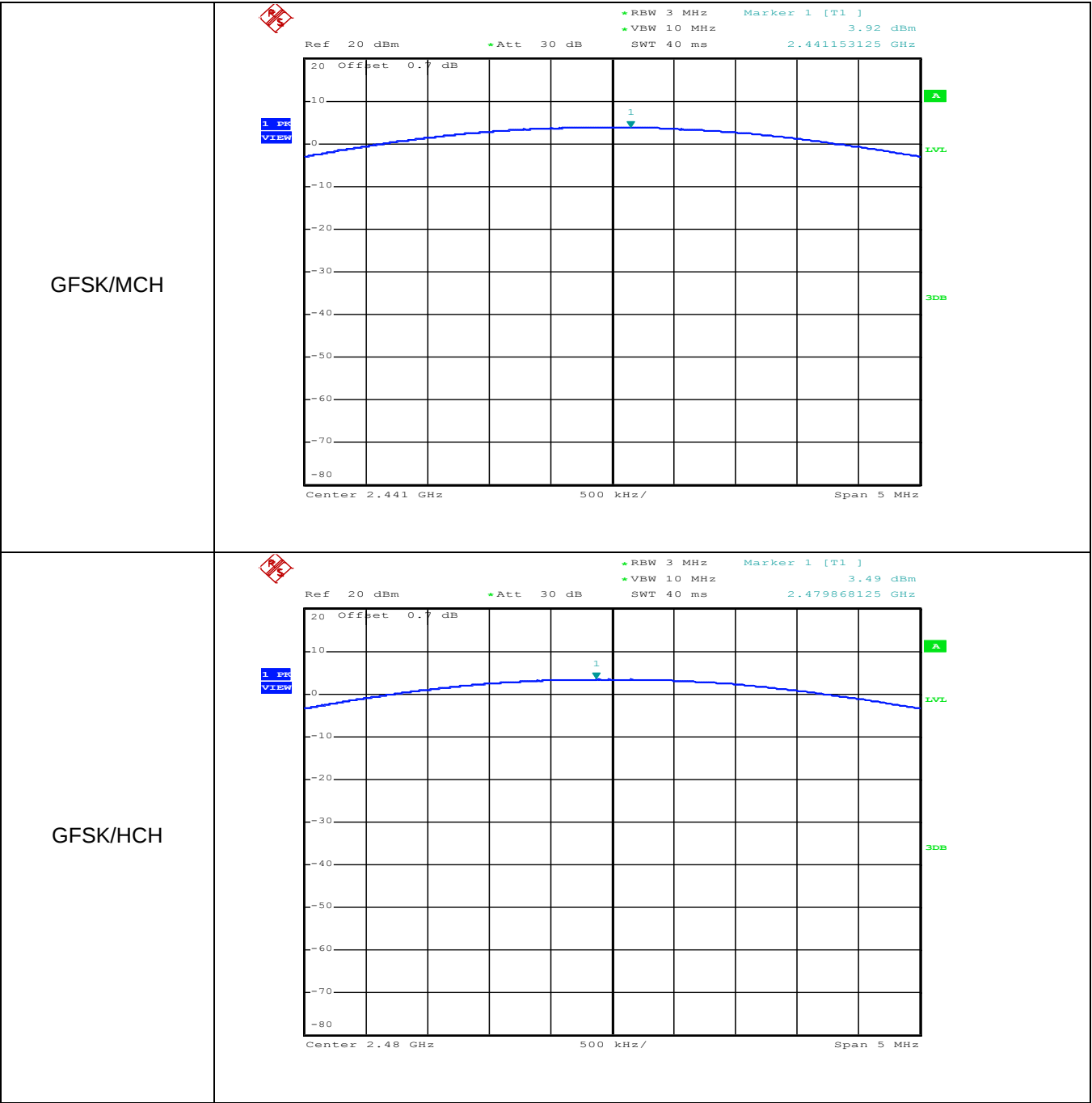
Appendix F): Conducted Peak Output Power

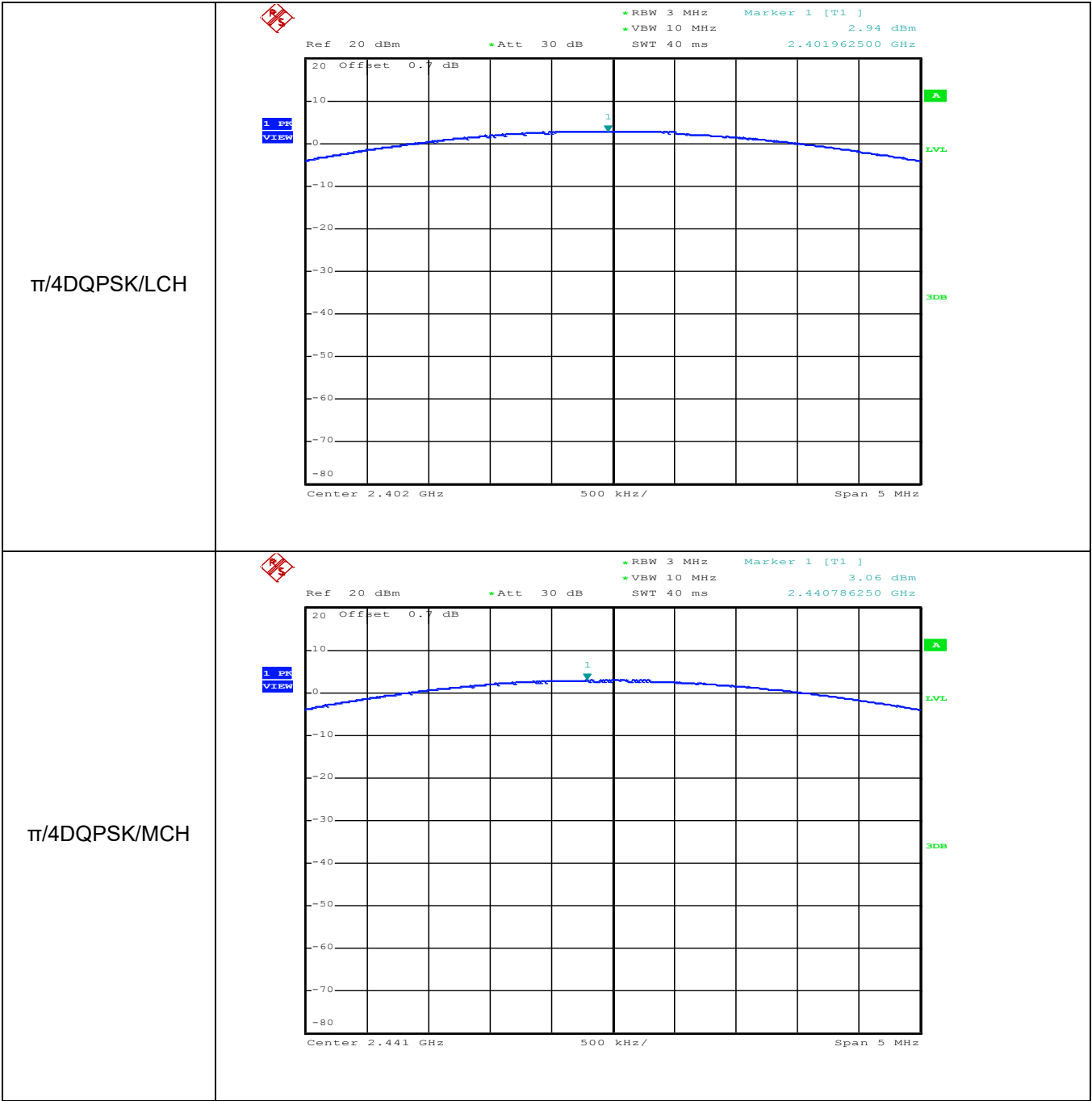
Result Table

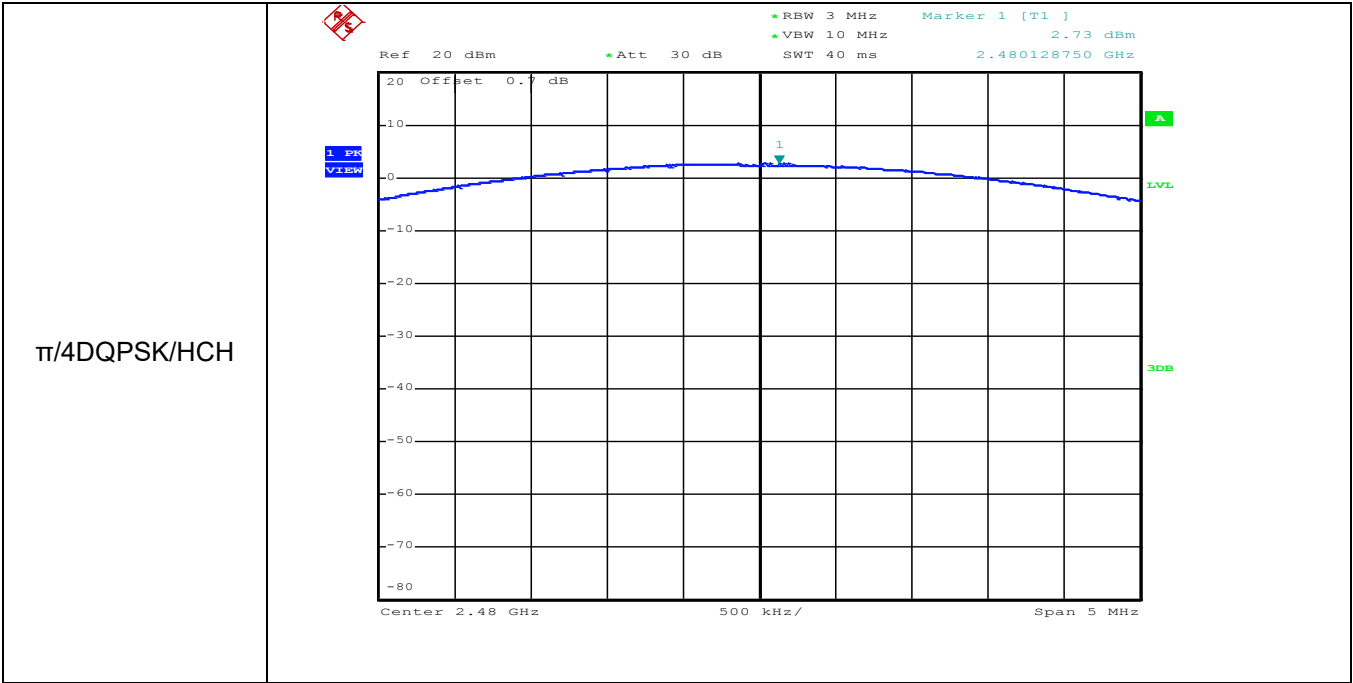
Mode	Channel.	Maximum Peak Output Power [dBm]	Verdict
GFSK	LCH	3.980	PASS
GFSK	MCH	3.920	PASS
GFSK	HCH	3.490	PASS
π /4DQPSK	LCH	2.940	PASS
π /4DQPSK	MCH	3.060	PASS
π /4DQPSK	HCH	2.730	PASS

Test Graph







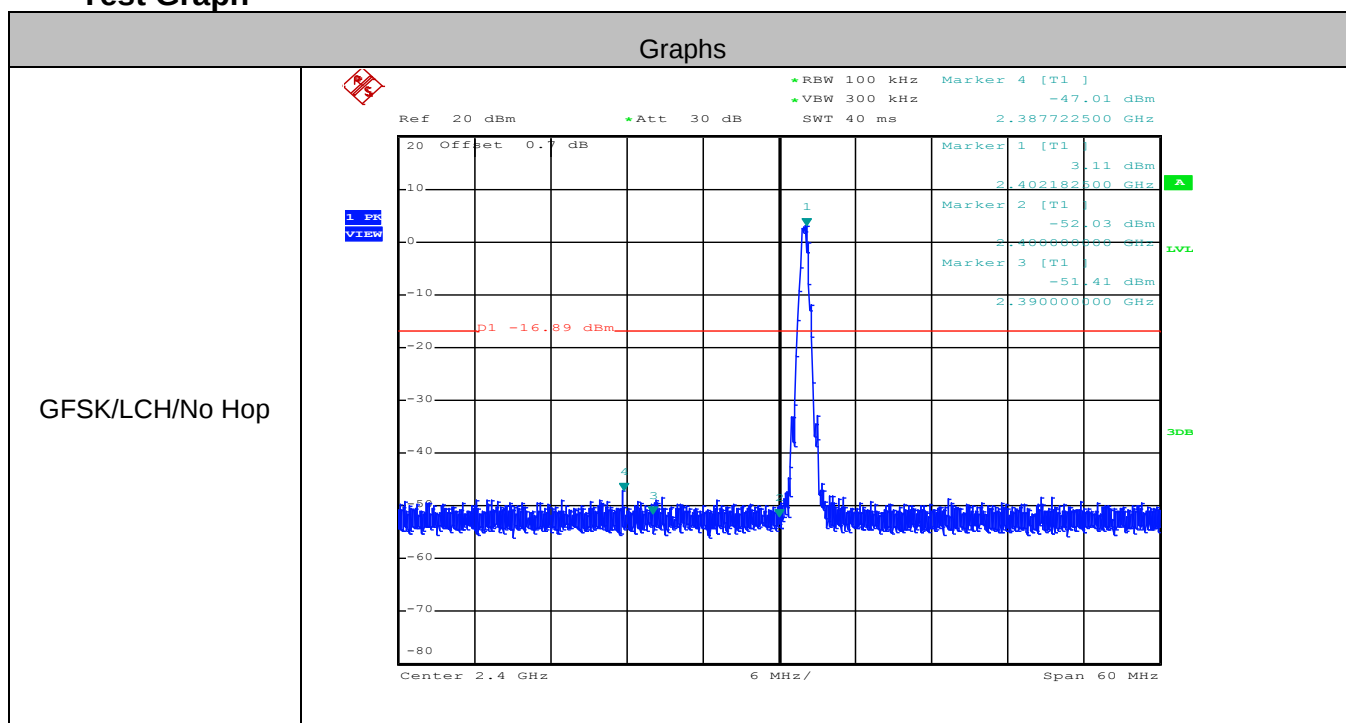


Appendix G): Band-edge for RF Conducted Emissions

Result Table

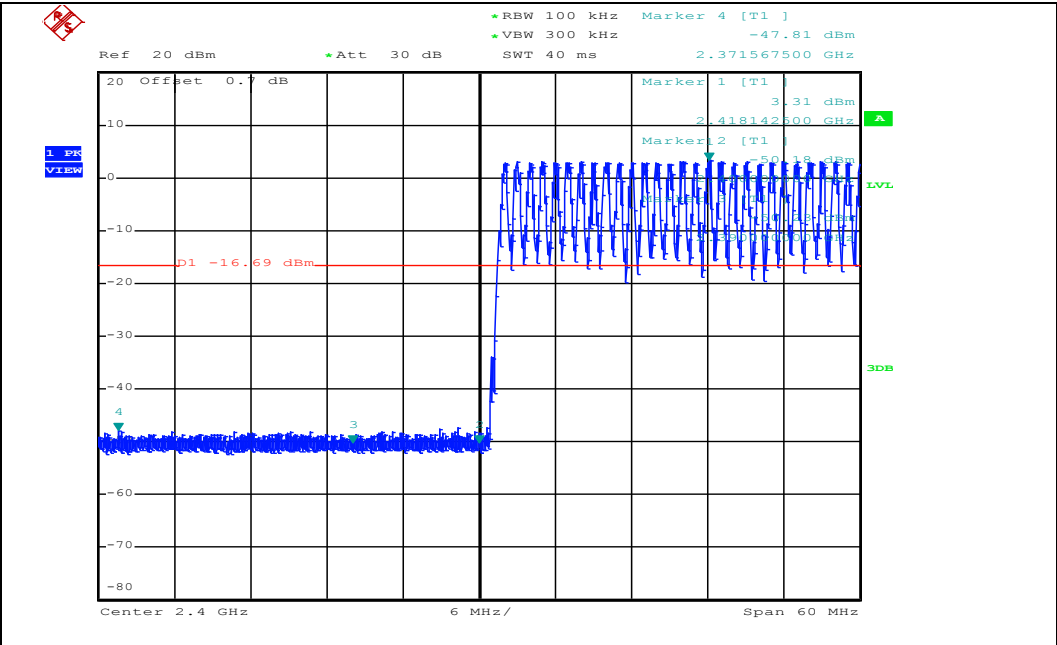
Mode	Channel	Carrier Frequency [MHz]	Carrier Power [dBm]	Frequency Hopping	Max Spurious Level [dBm]	Limit [dBm]	Verdict
GFSK	LCH	2402	3.110	Off	-47.014	-16.89	PASS
			3.310	On	-47.811	-16.69	PASS
GFSK	HCH	2480	3.210	Off	-48.811	-16.79	PASS
			2.890	On	-47.839	-17.11	PASS
$\pi/4$ DQPSK	LCH	2402	2.000	Off	-47.999	-18	PASS
			2.020	On	-46.623	-17.98	PASS
$\pi/4$ DQPSK	HCH	2480	1.430	Off	-48.943	-18.57	PASS
			1.930	On	-46.956	-18.07	PASS

Test Graph

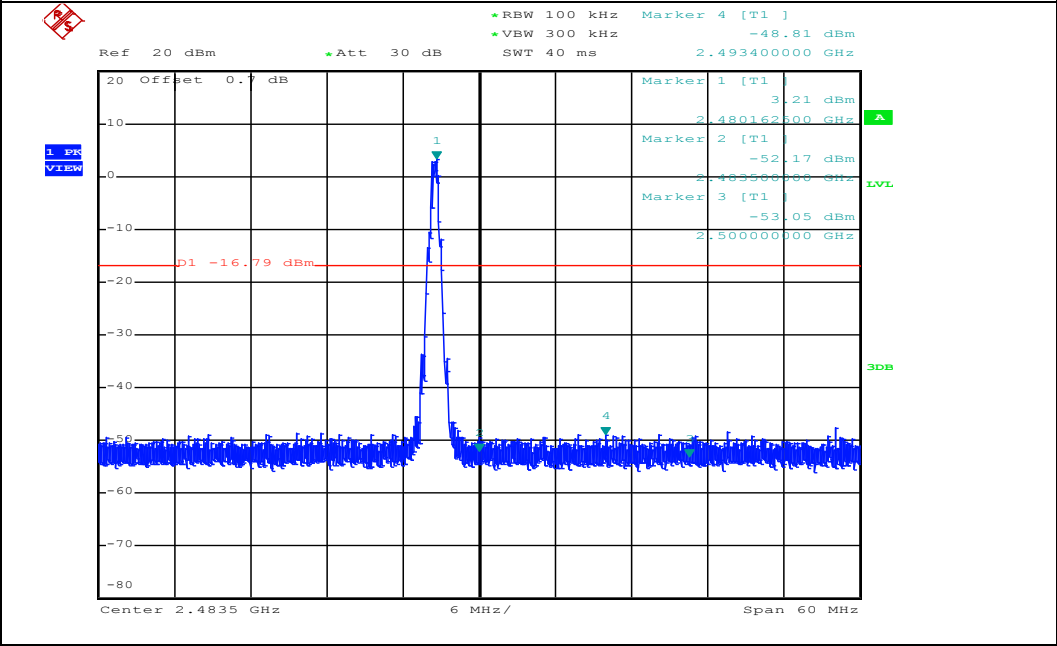


Date: 5.SEP.2017 07:55:51

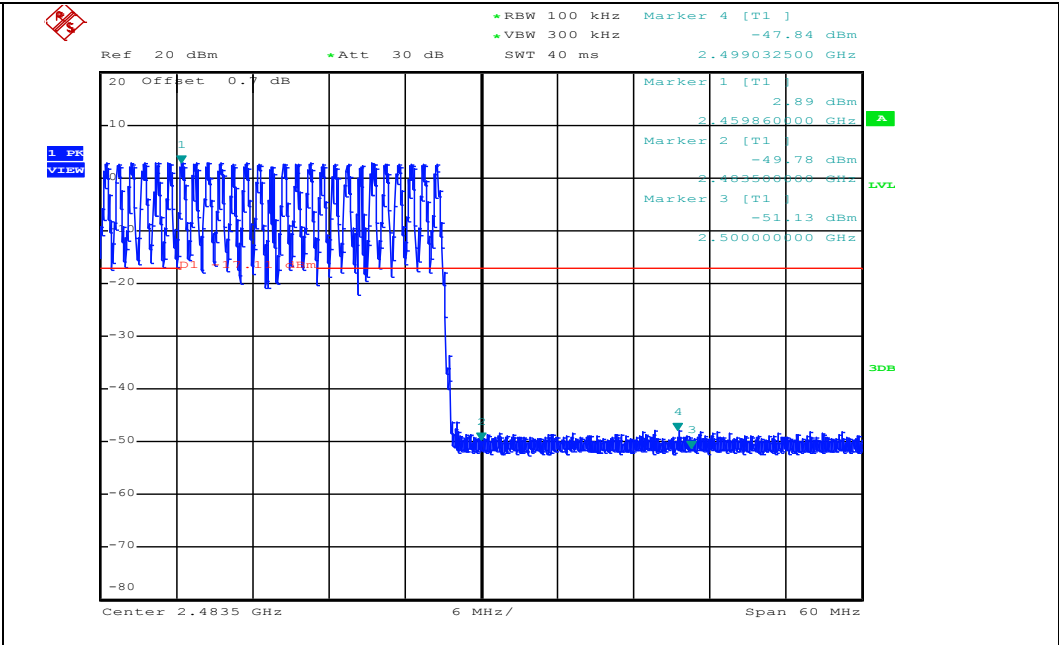
GFSK/LCH/Hop



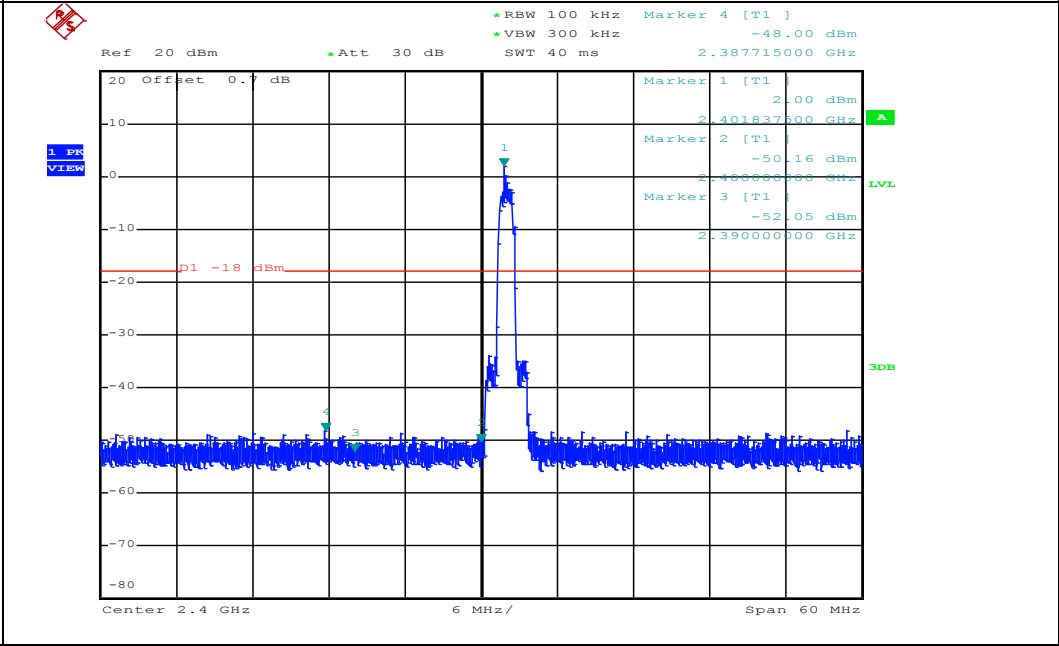
GFSK/HCH/No Hop

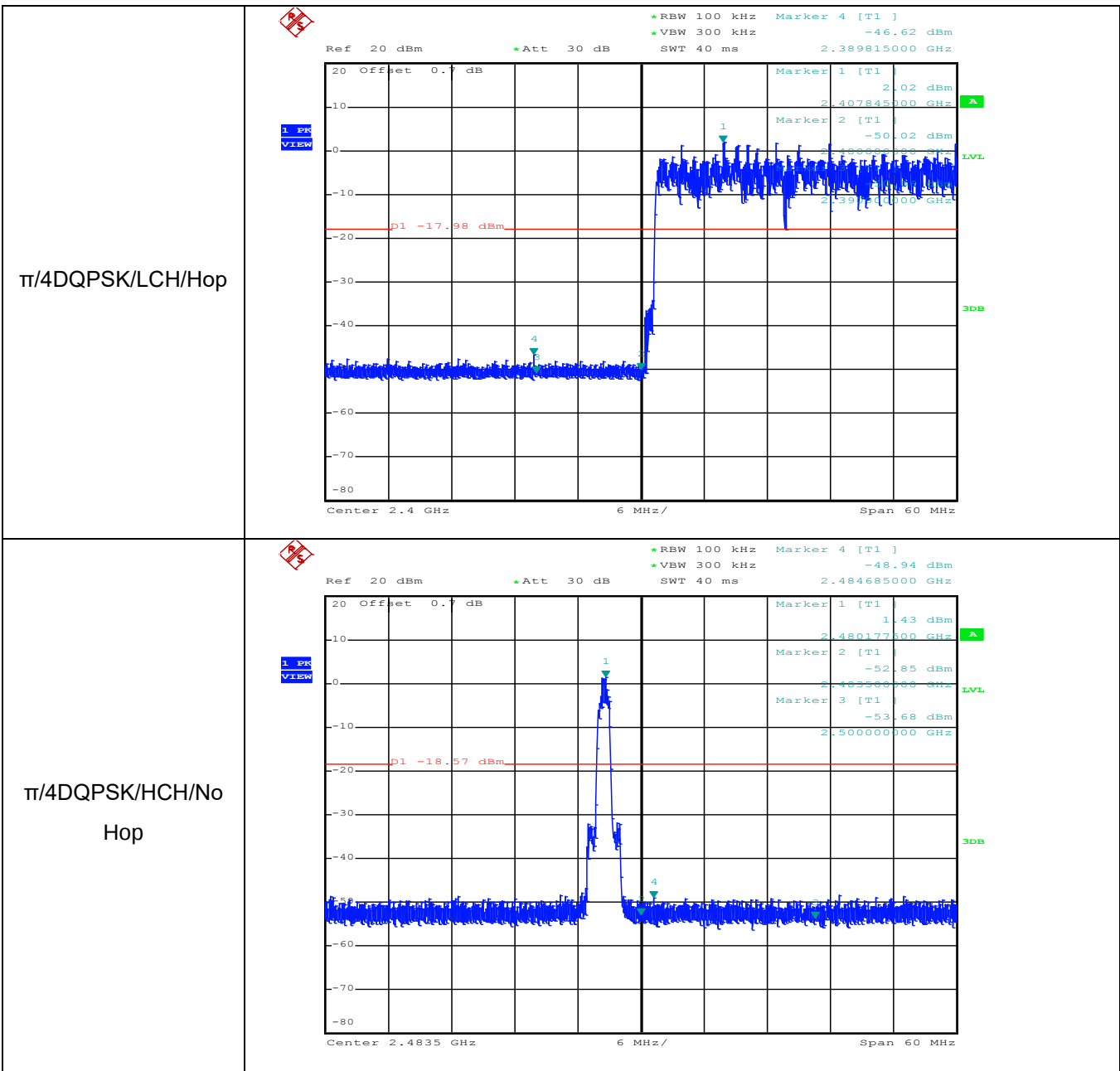


GFSK/HCH/Hop

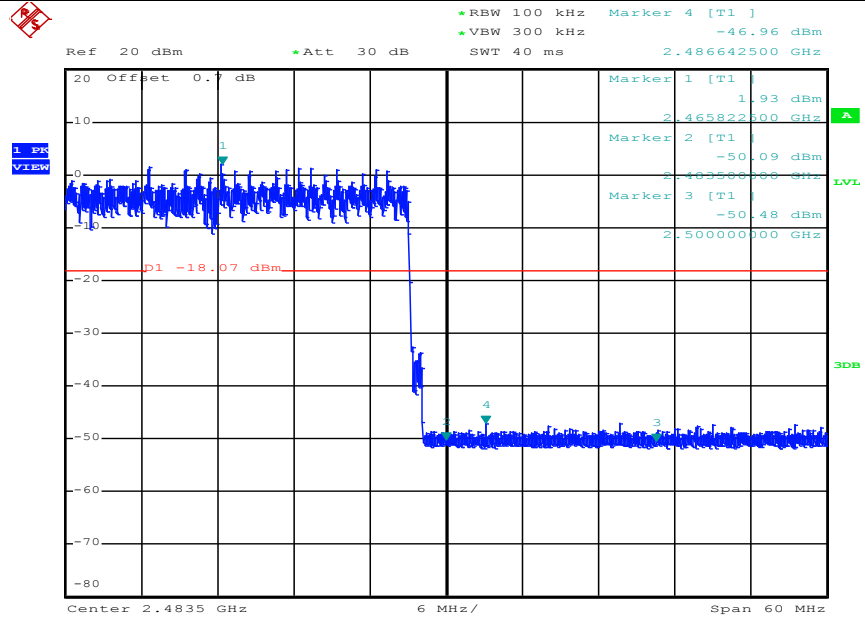


$\pi/4$ DQPSK/LCH/No
Hop





$\pi/4$ DQPSK/HCH/Hop



Date: 5.SEP.2017 08:46:28

Appendix H): RF Conducted Spurious Emissions

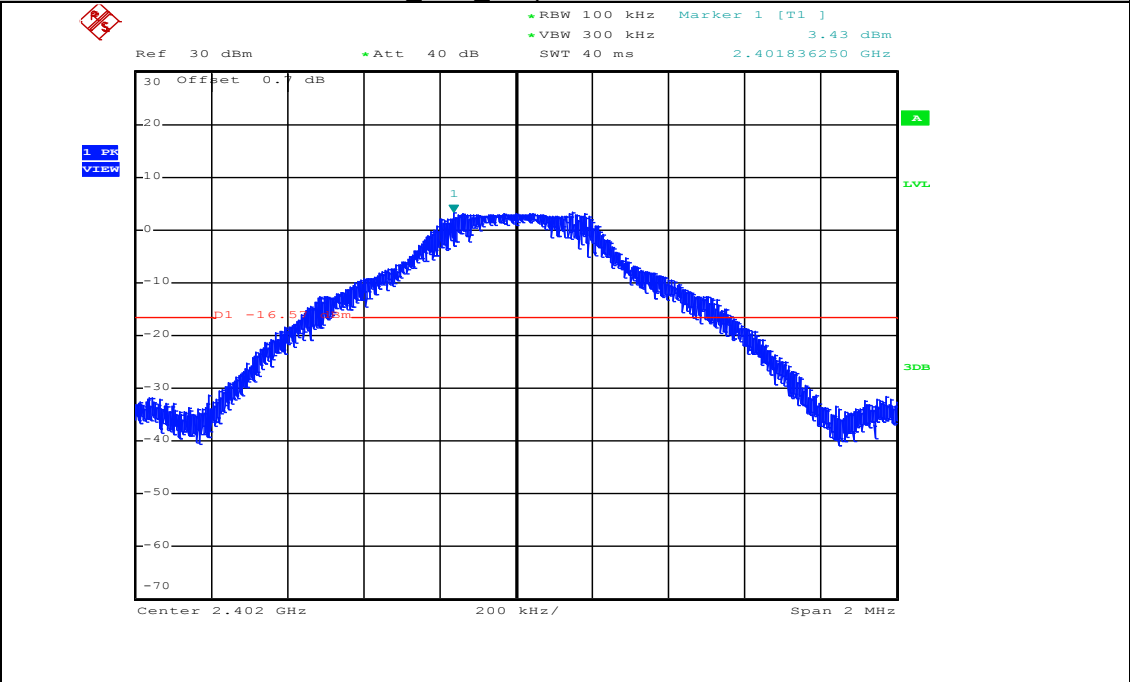
Result Table

Mode	Channel	Pref [dBm]	Puw[dBm]	Verdict
GFSK	LCH	3.43	<Limit	PASS
GFSK	MCH	3.56	<Limit	PASS
GFSK	HCH	3.23	<Limit	PASS
$\pi/4$ DQPSK	LCH	1.83	<Limit	PASS
$\pi/4$ DQPSK	MCH	2.18	<Limit	PASS
$\pi/4$ DQPSK	HCH	1.88	<Limit	PASS

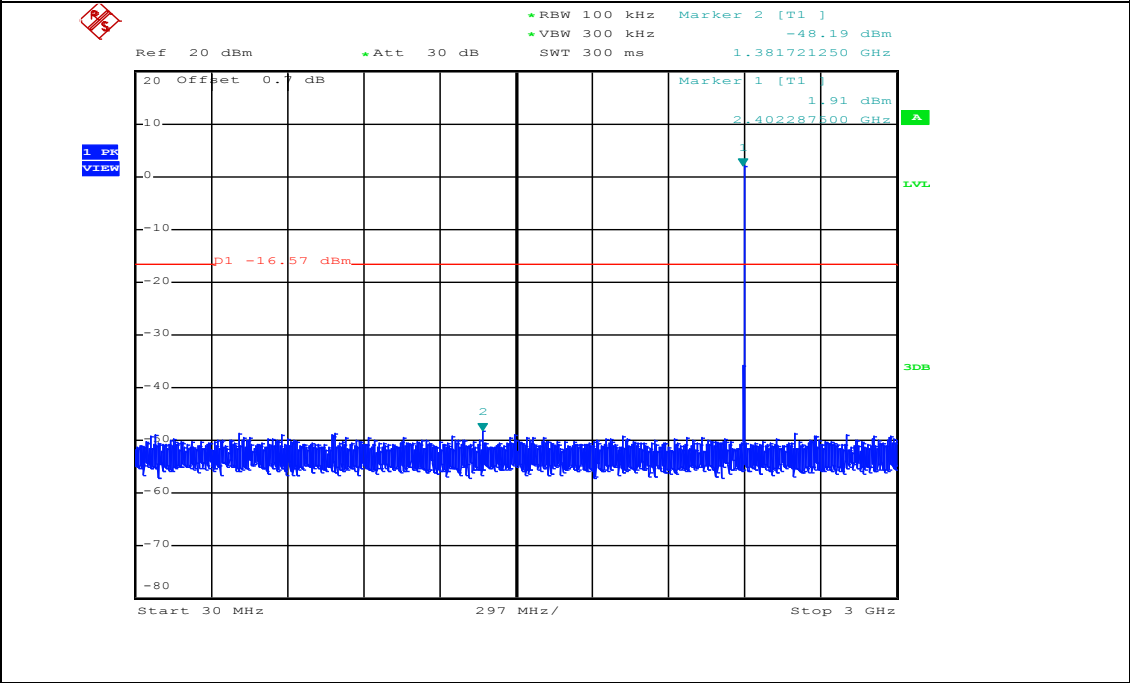
Test Graph

GFSK LCH Graphs

Pref

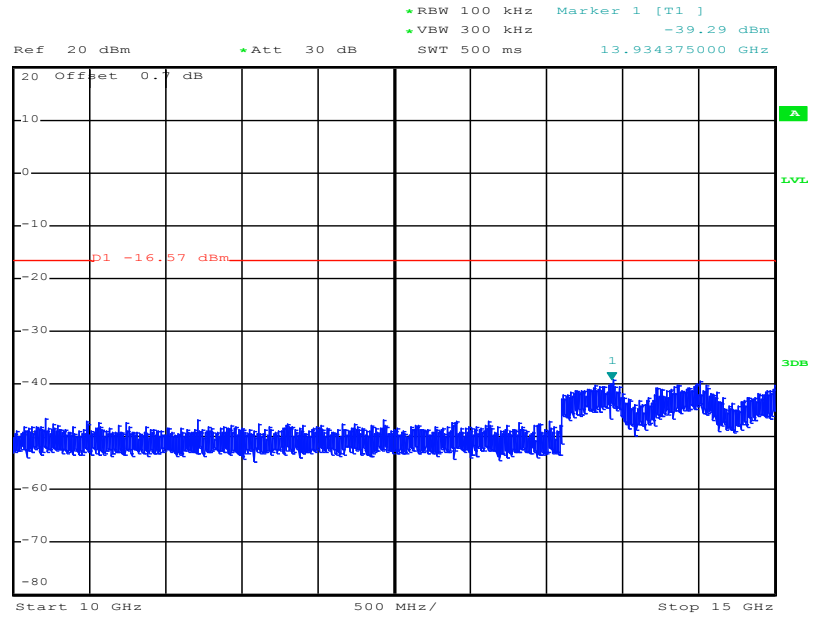


Puw

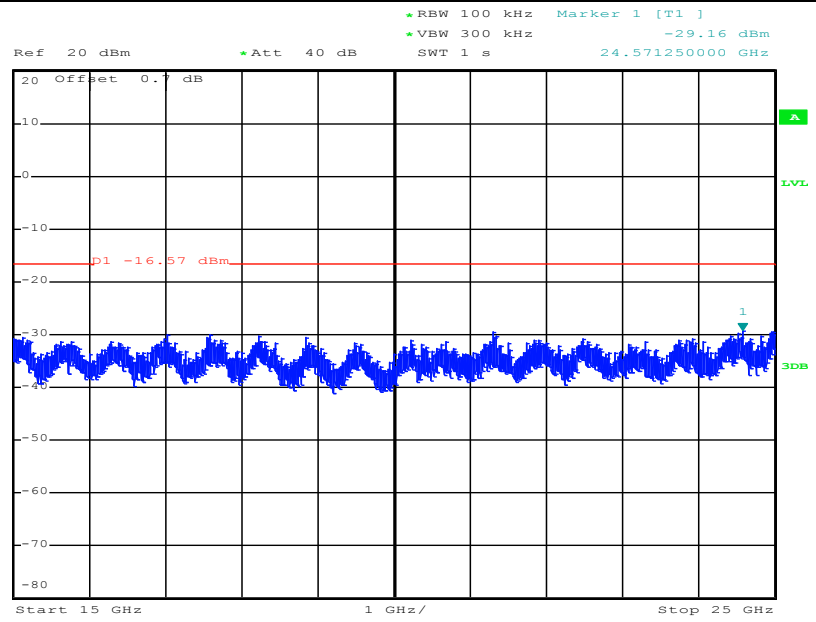




1 PR
VIEW



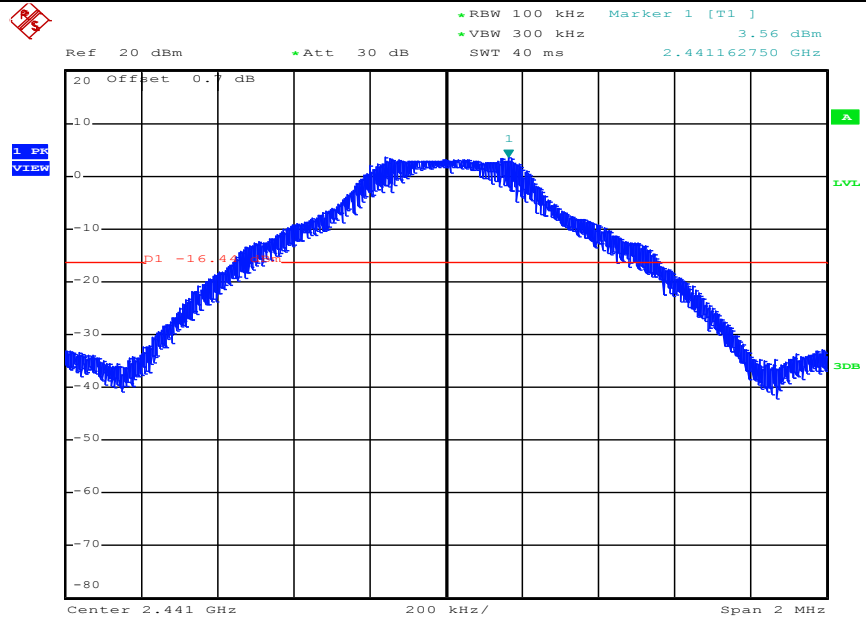
1 PR
VIEW



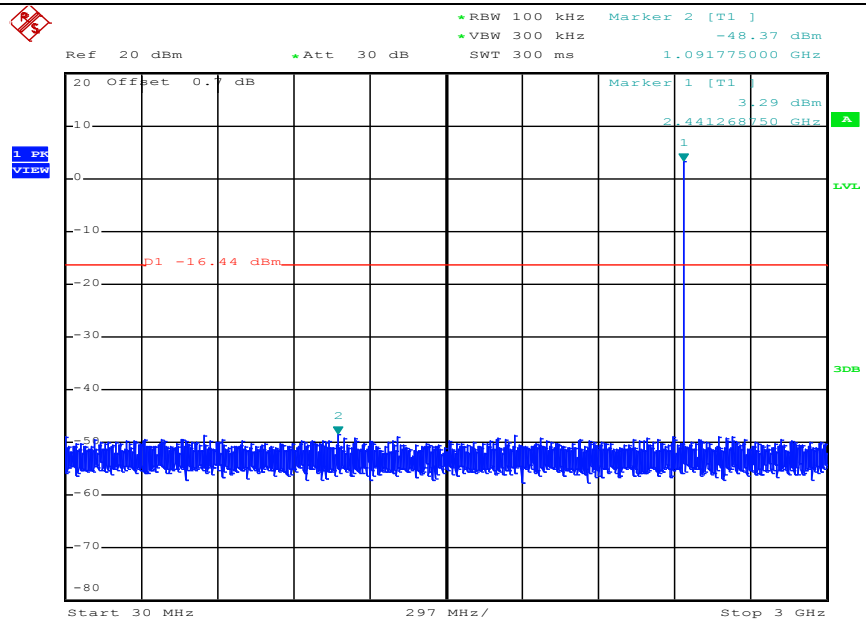
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GFSK MCH_Graphs

Pref

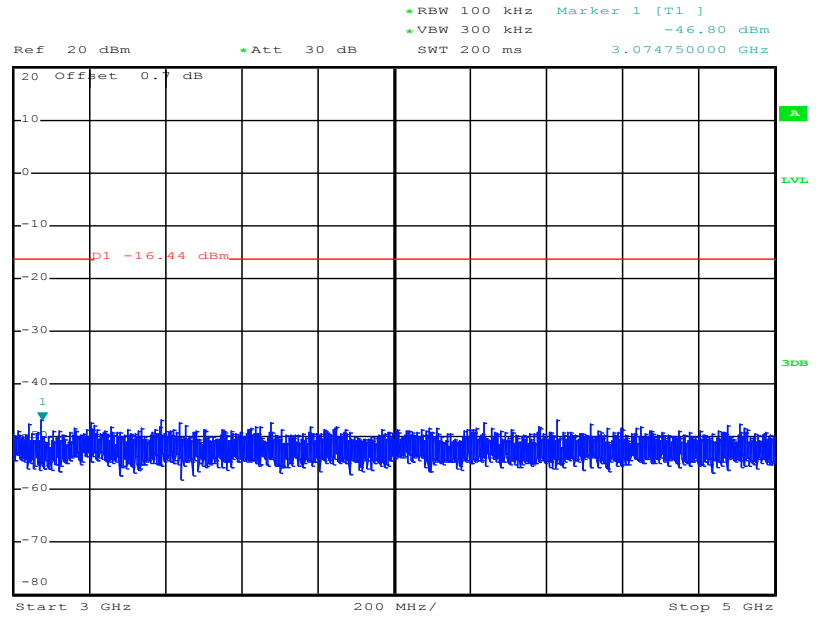


Puw

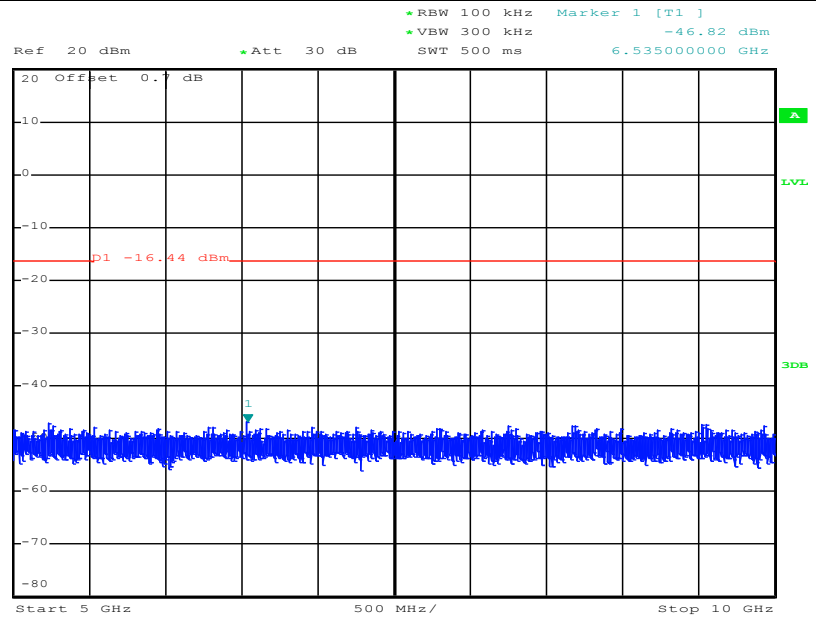




1 PR
VIEW



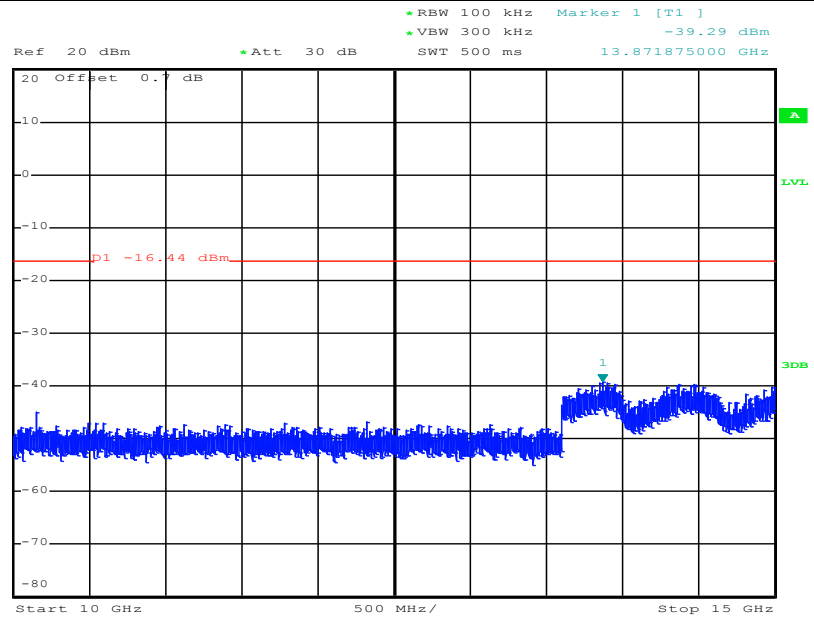
1 PR
VIEW



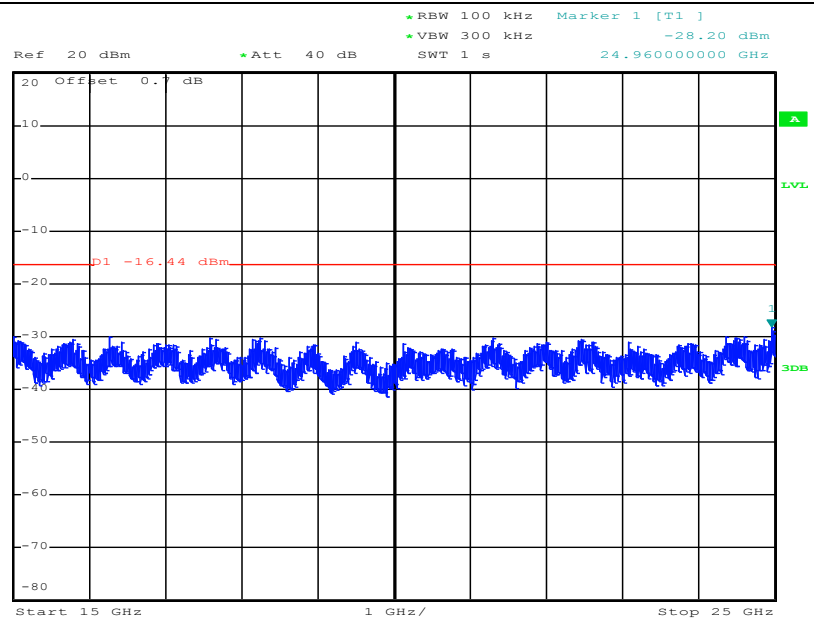
Date: 5.SEP.2017 08:13:12



1 PR
VIEW



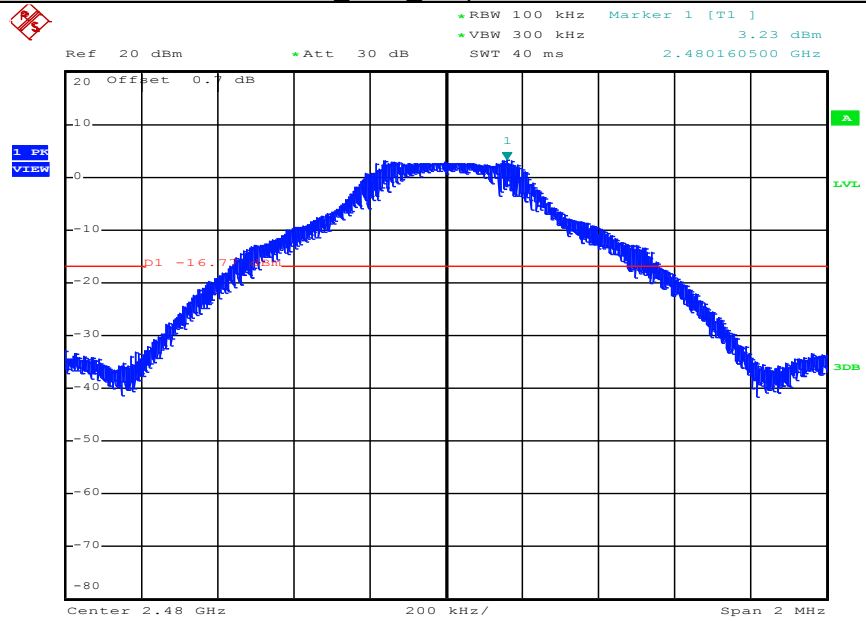
1 PR
VIEW



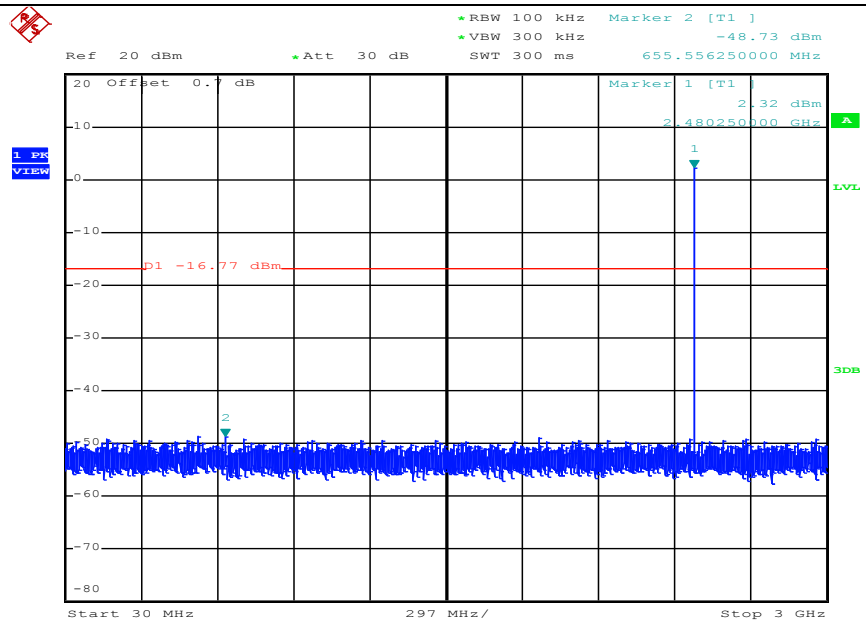
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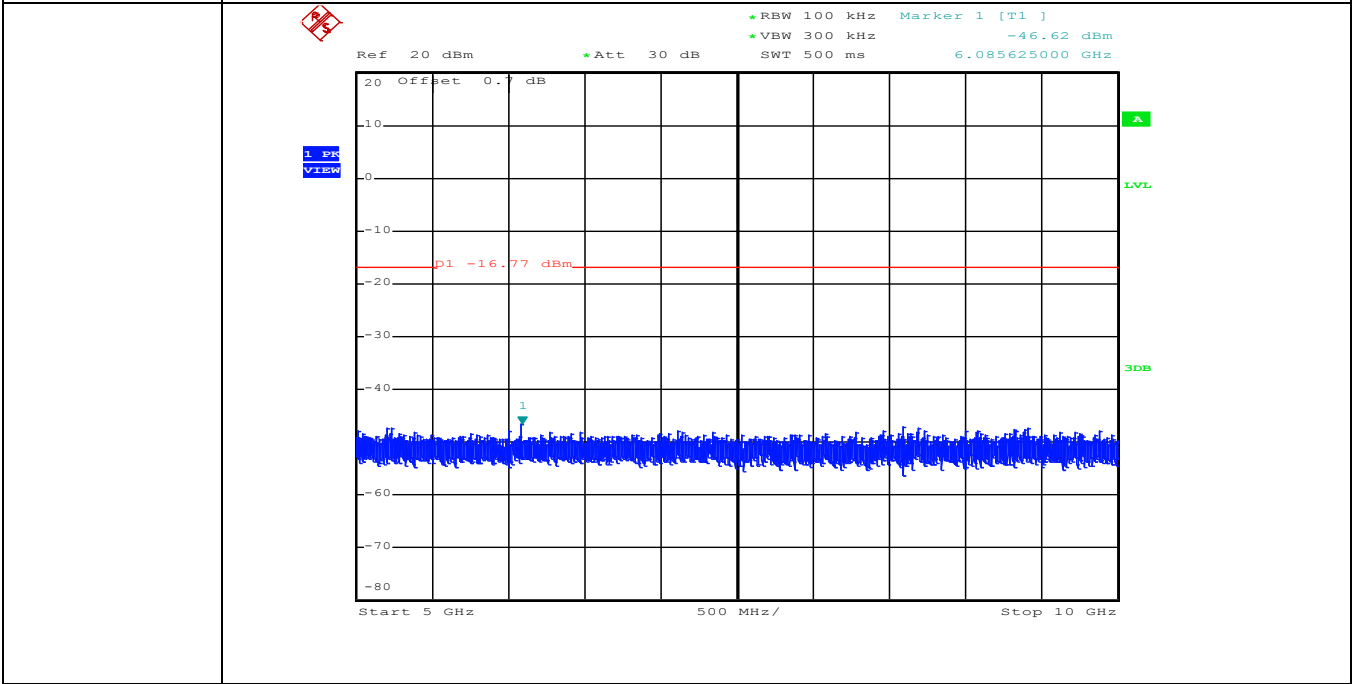
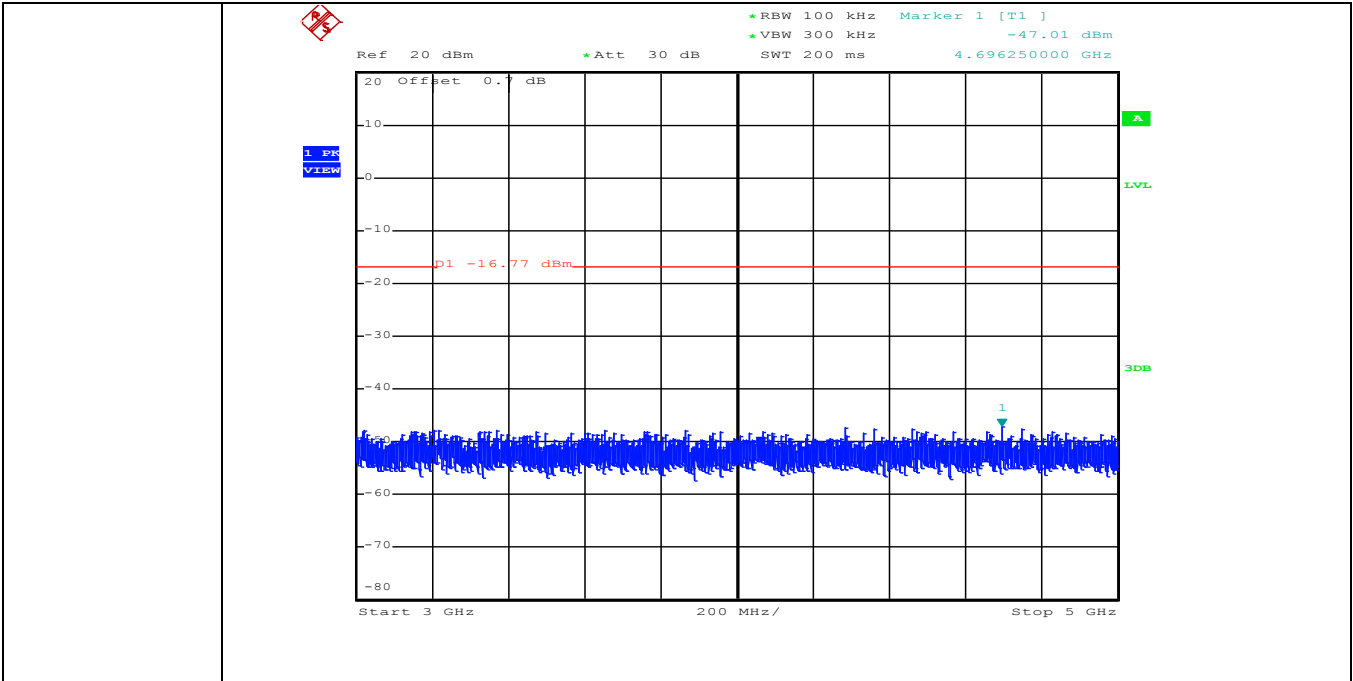
GFSK HCH Graphs

Pref

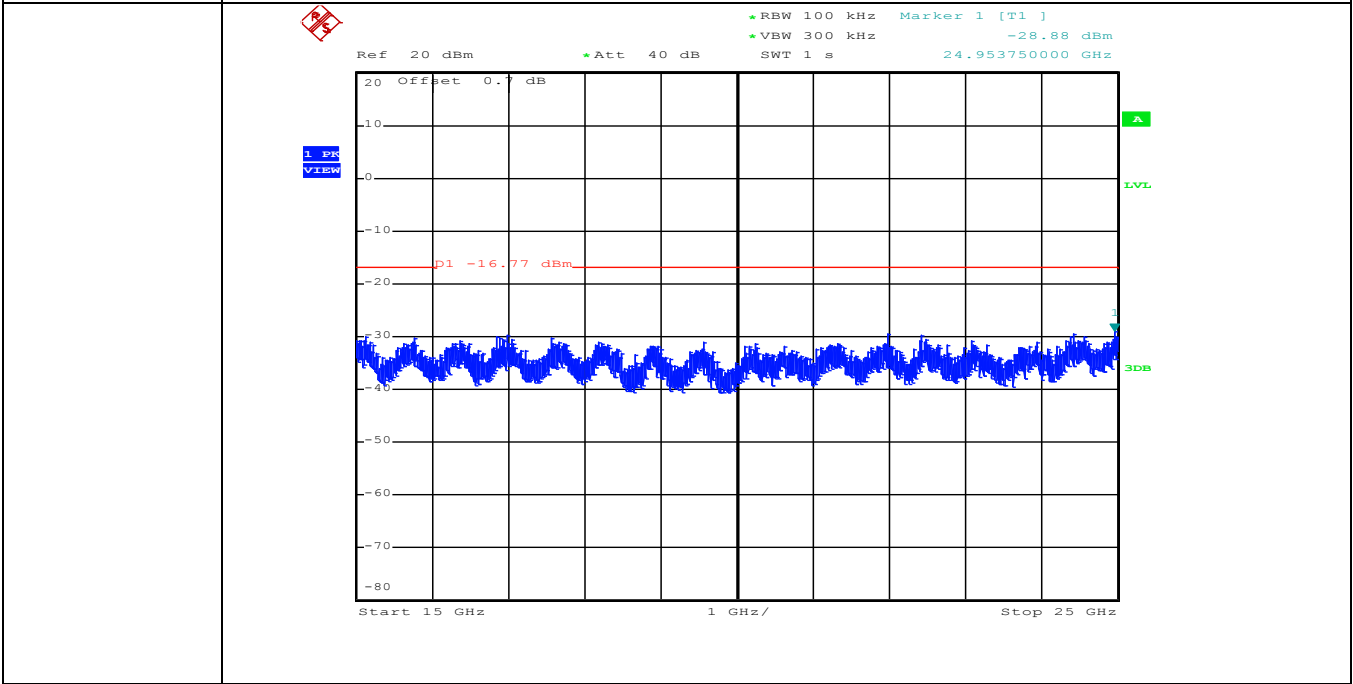
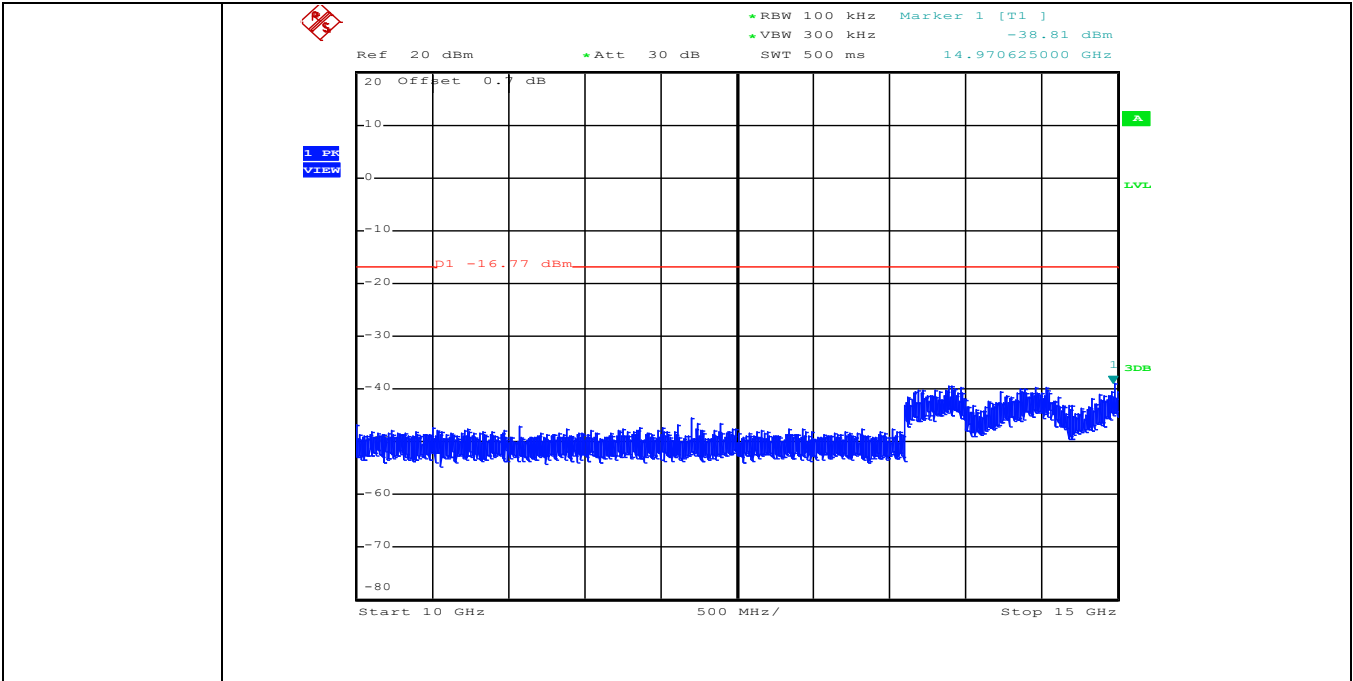


Puw



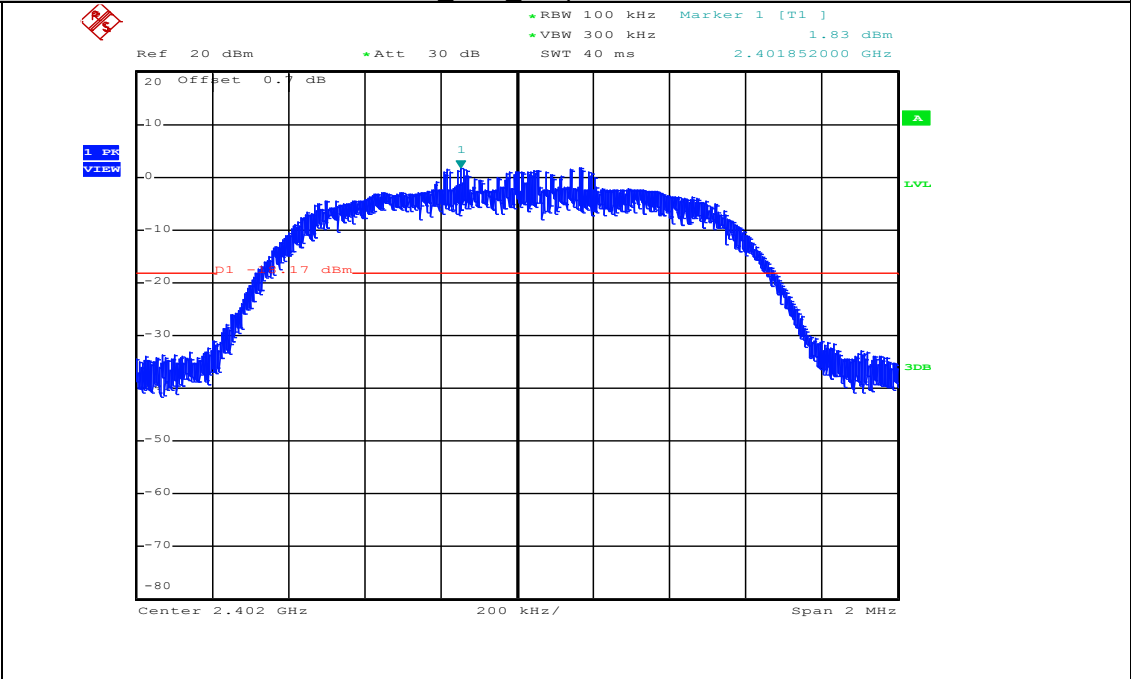


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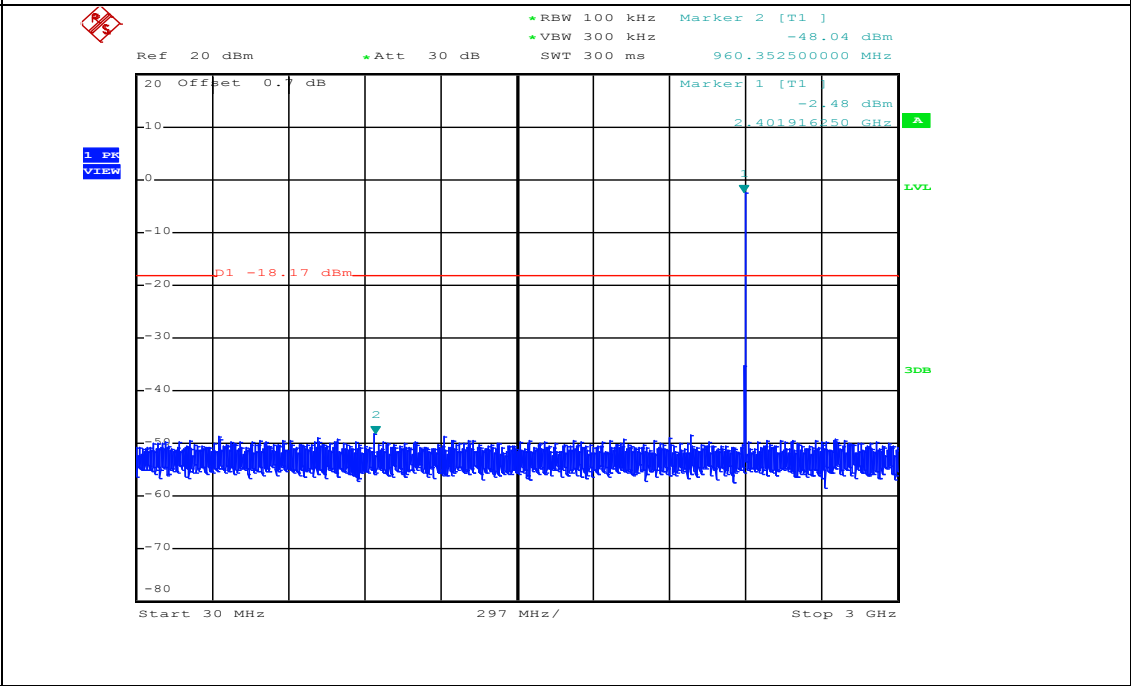


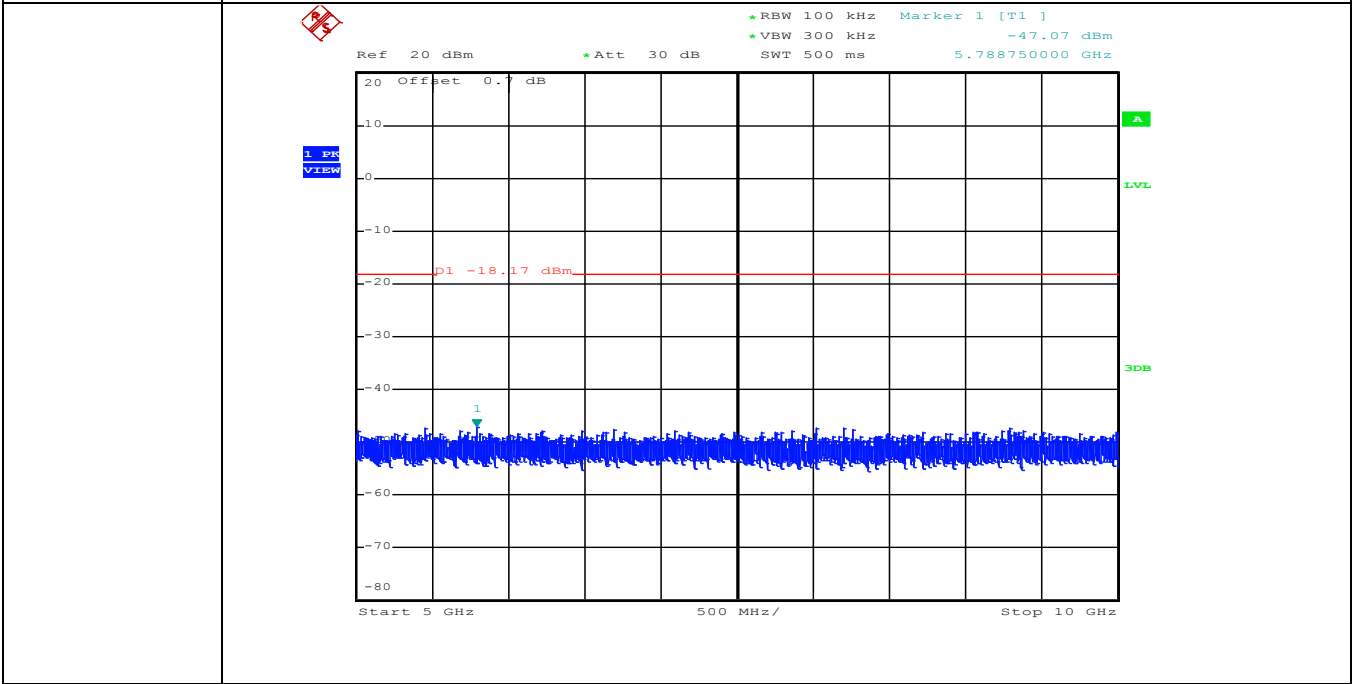
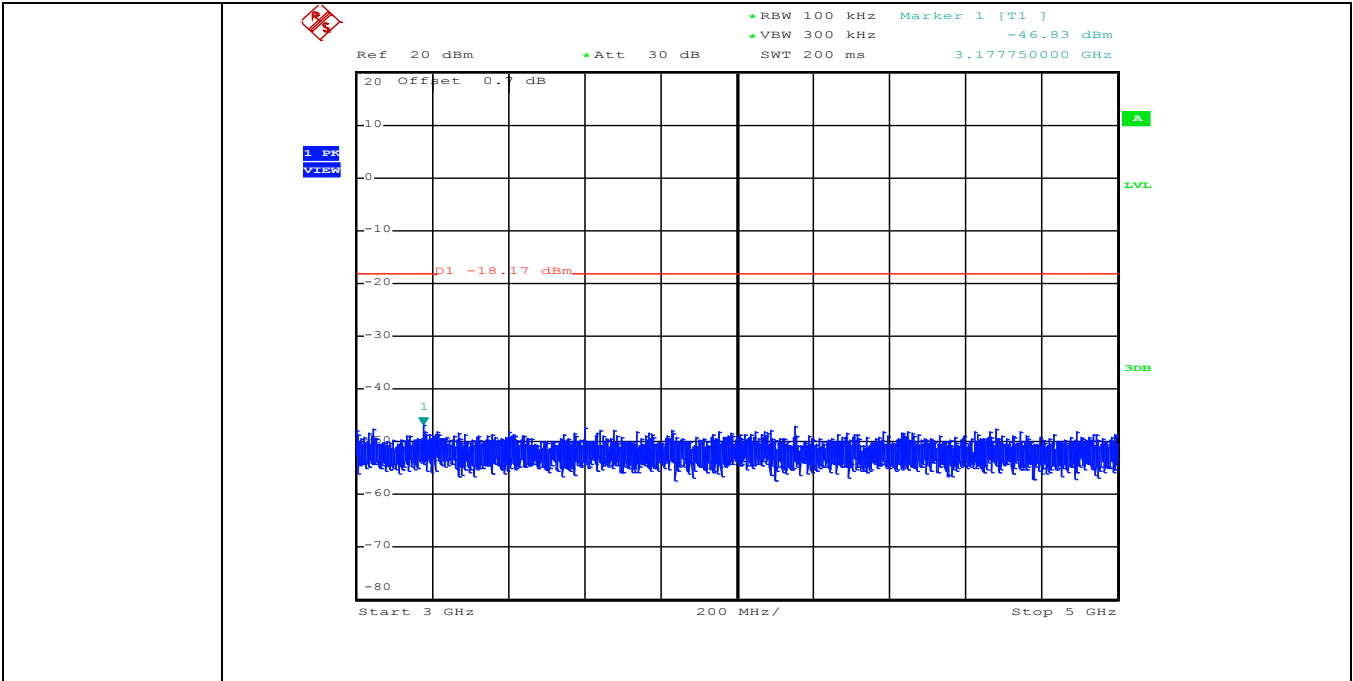
$\pi/4$ DQPSK_LCH_Graphs

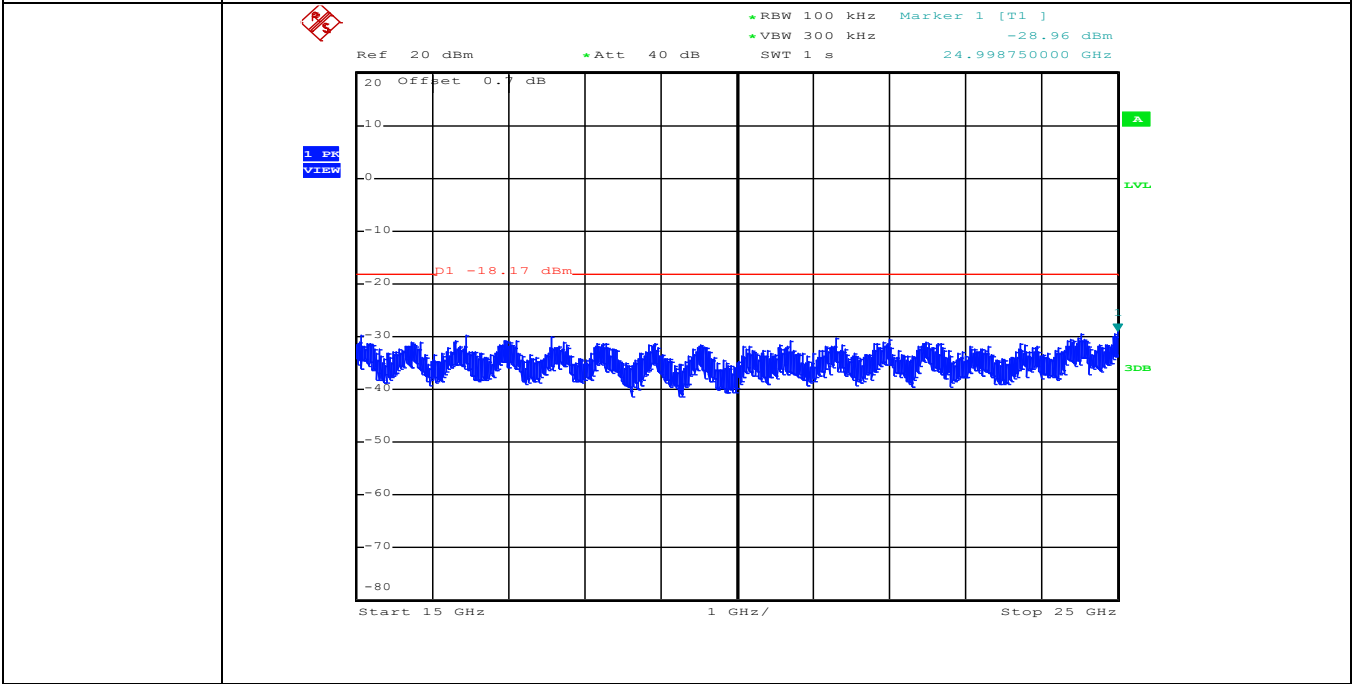
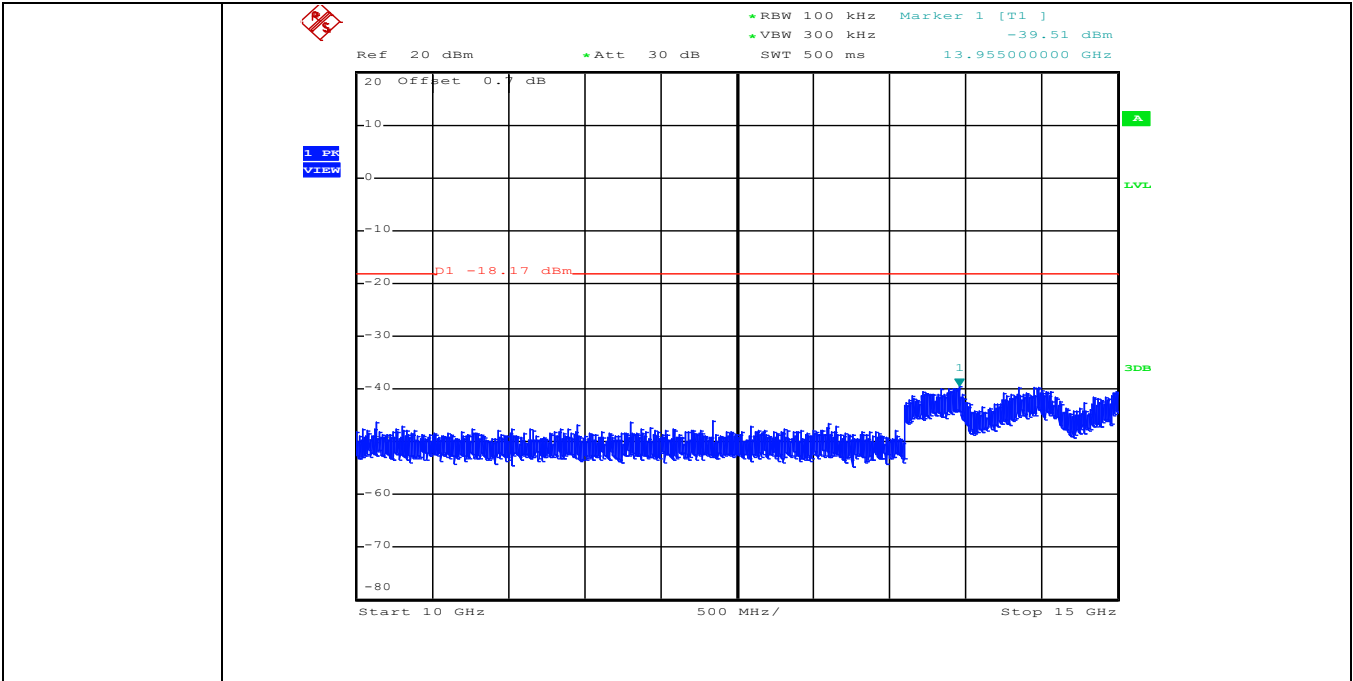
Pref



Puw

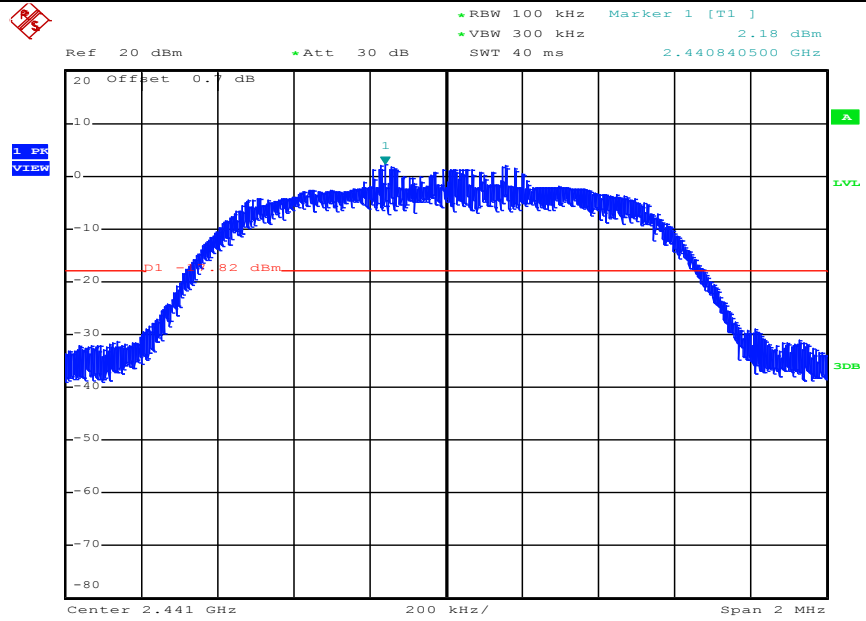




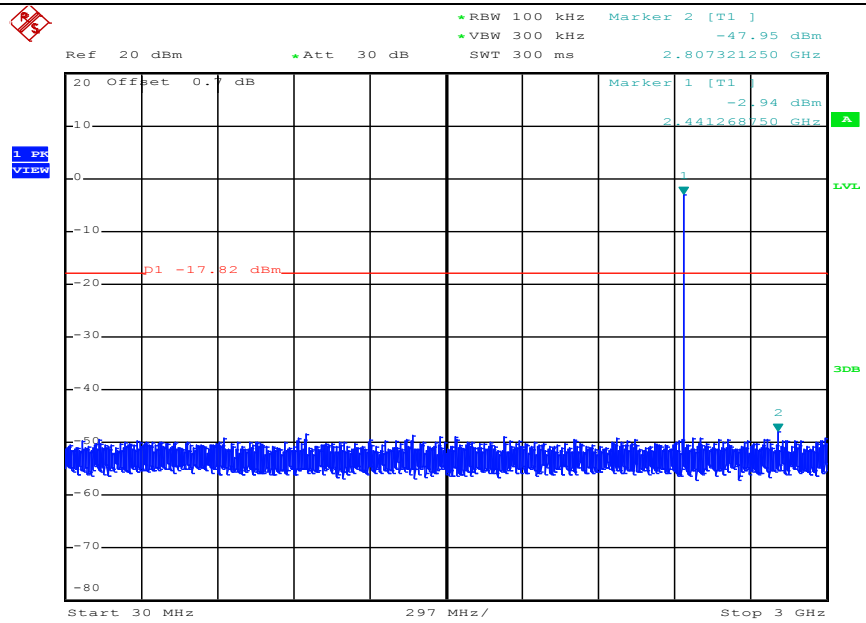


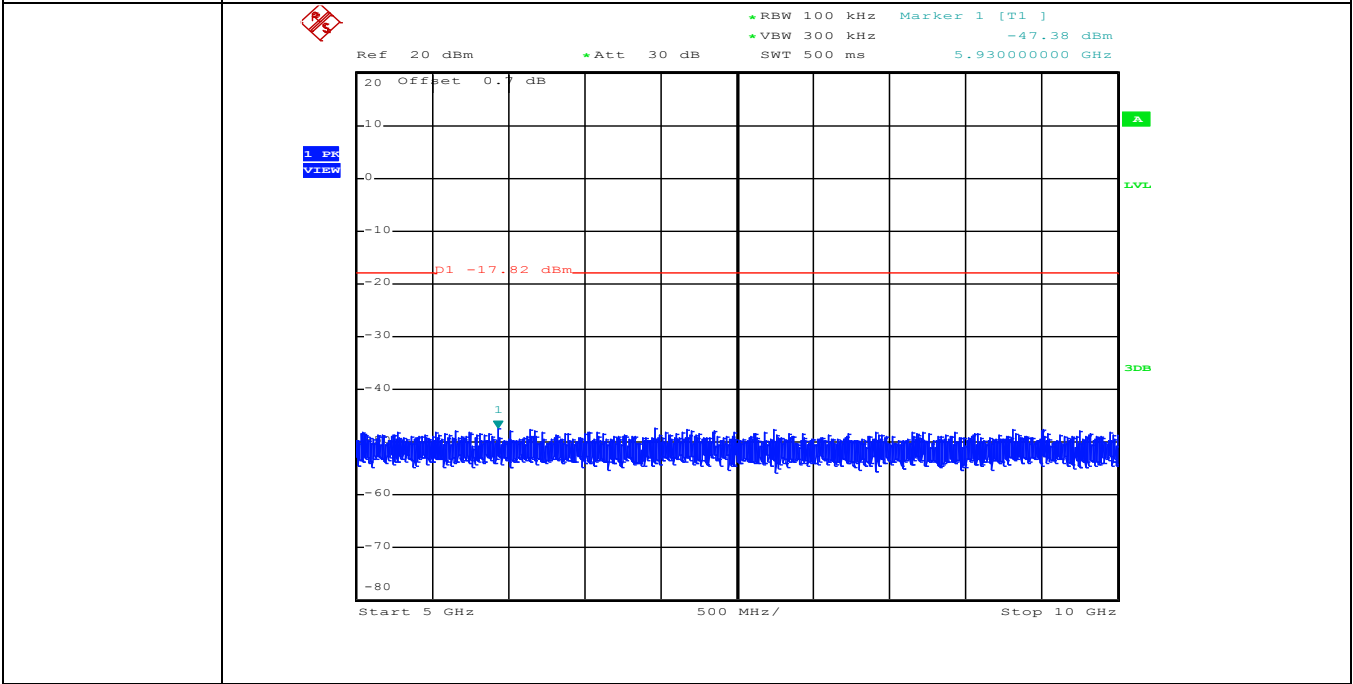
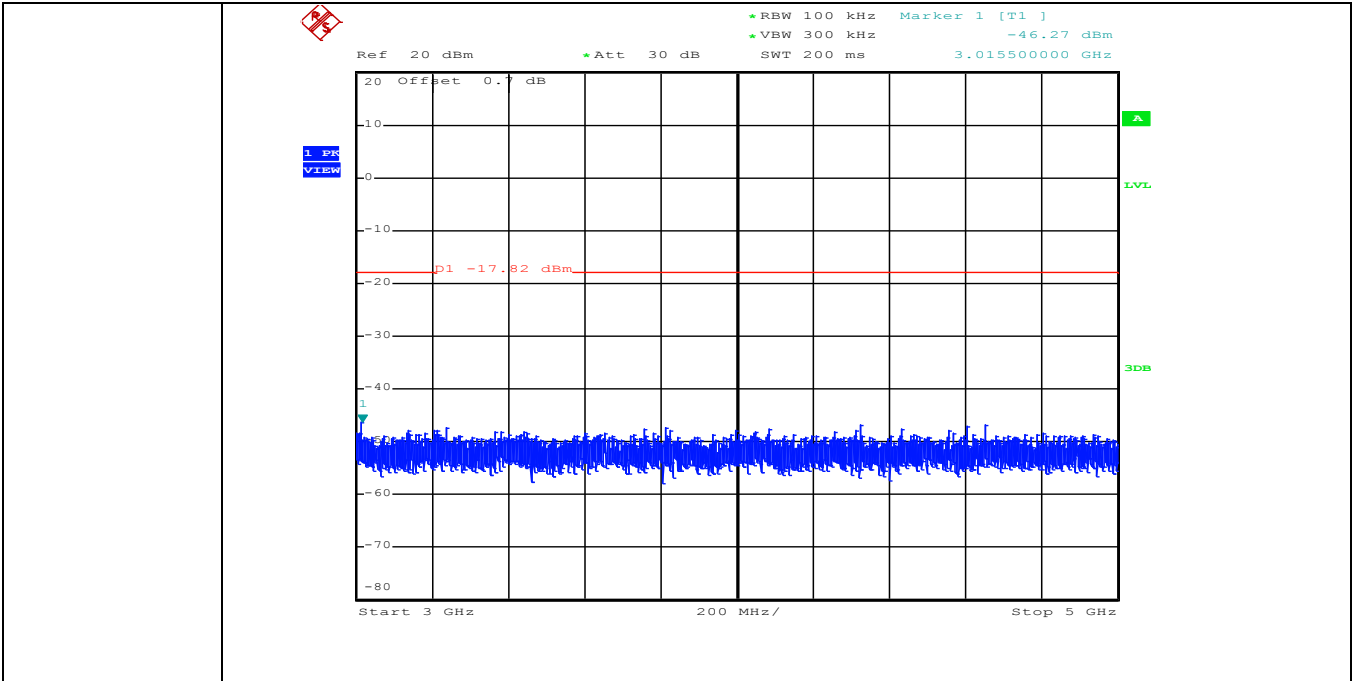
$\pi/4$ DQPSK MCH Graphs

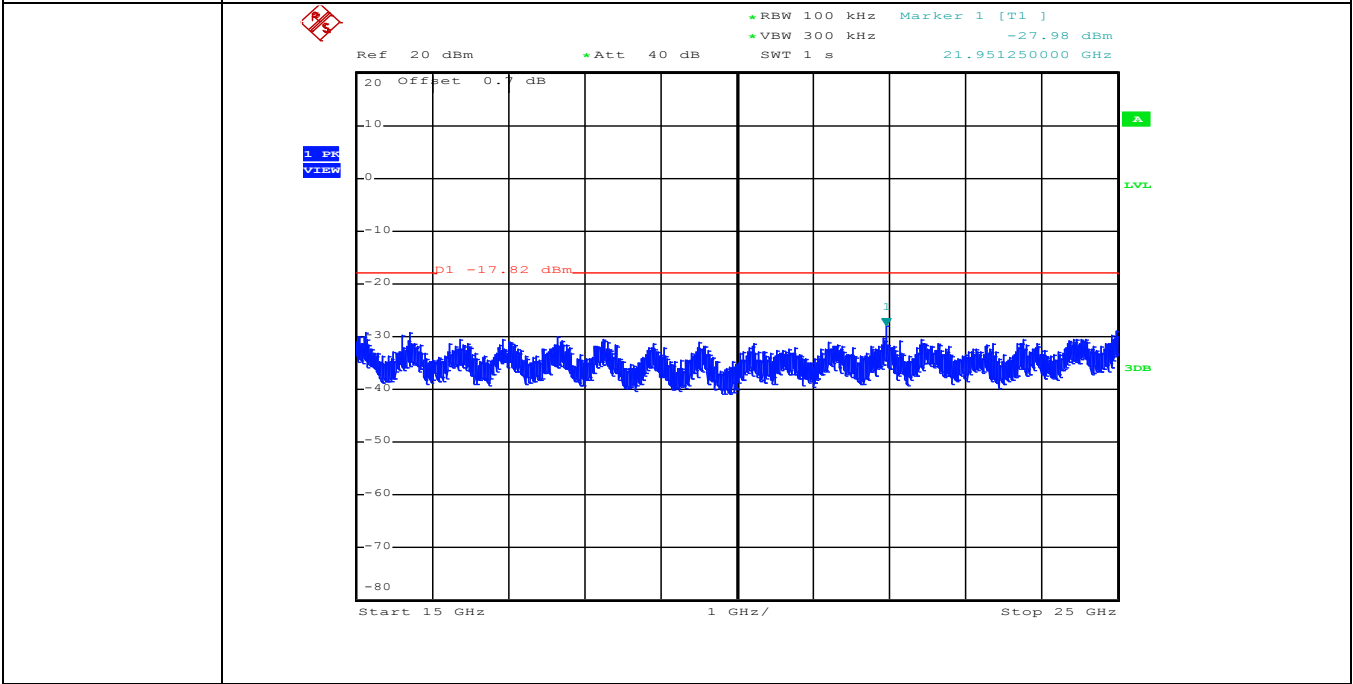
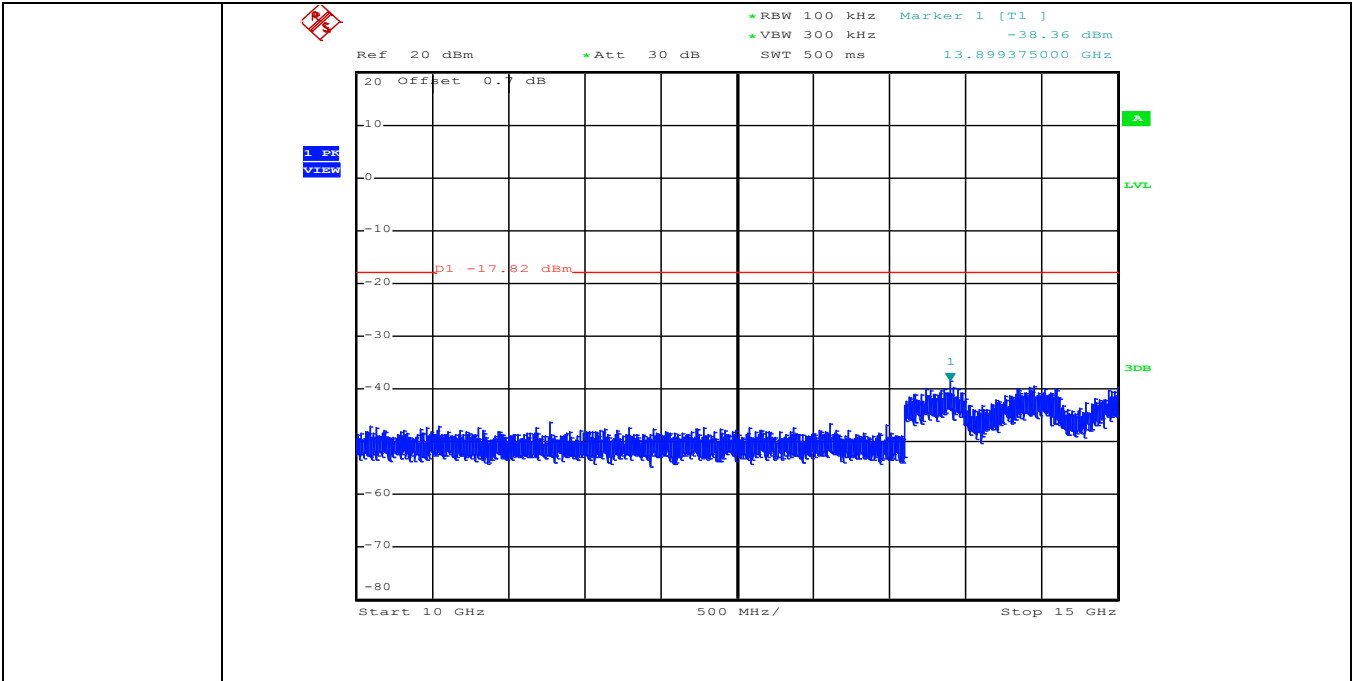
Pref



Puw

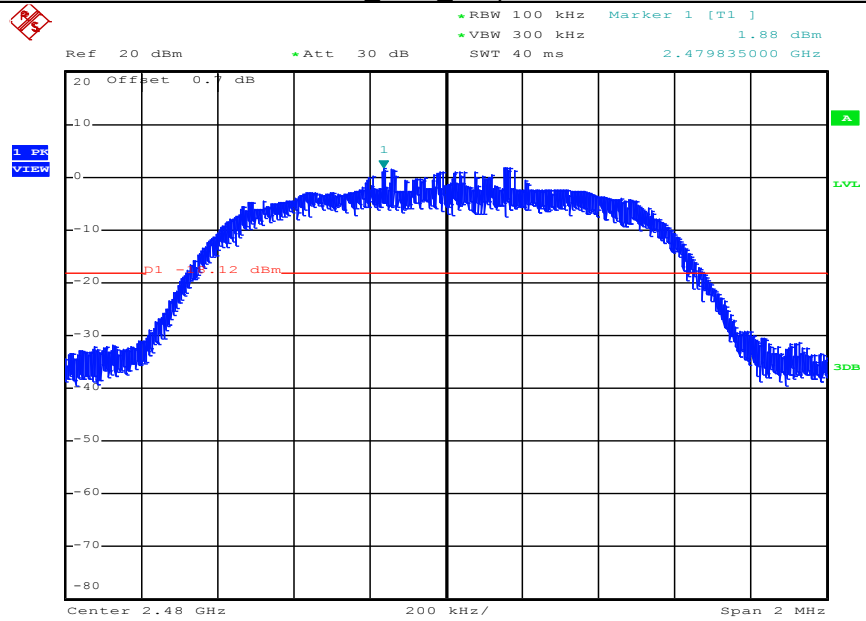






$\pi/4$ DQPSK HCH Graphs

Pref



Puw

