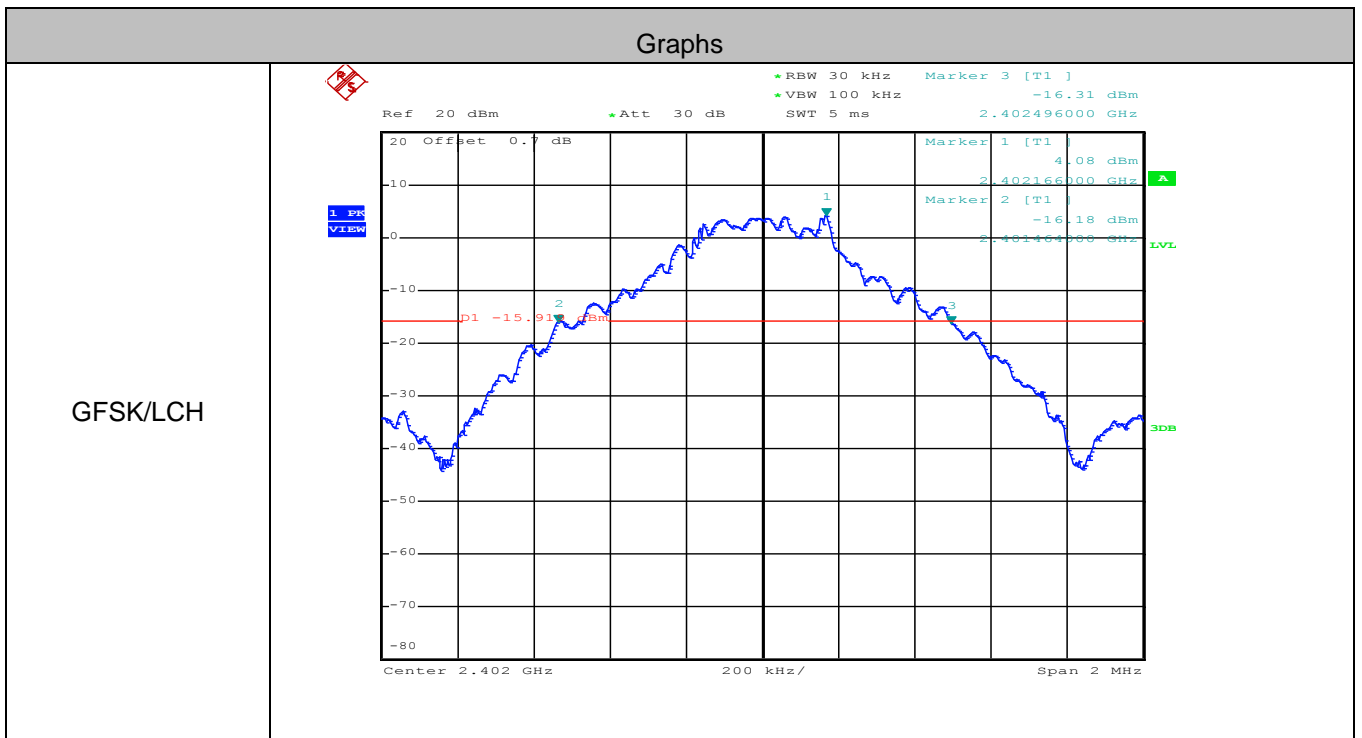


Appendix A): 20dB Bandwidth

Test Result

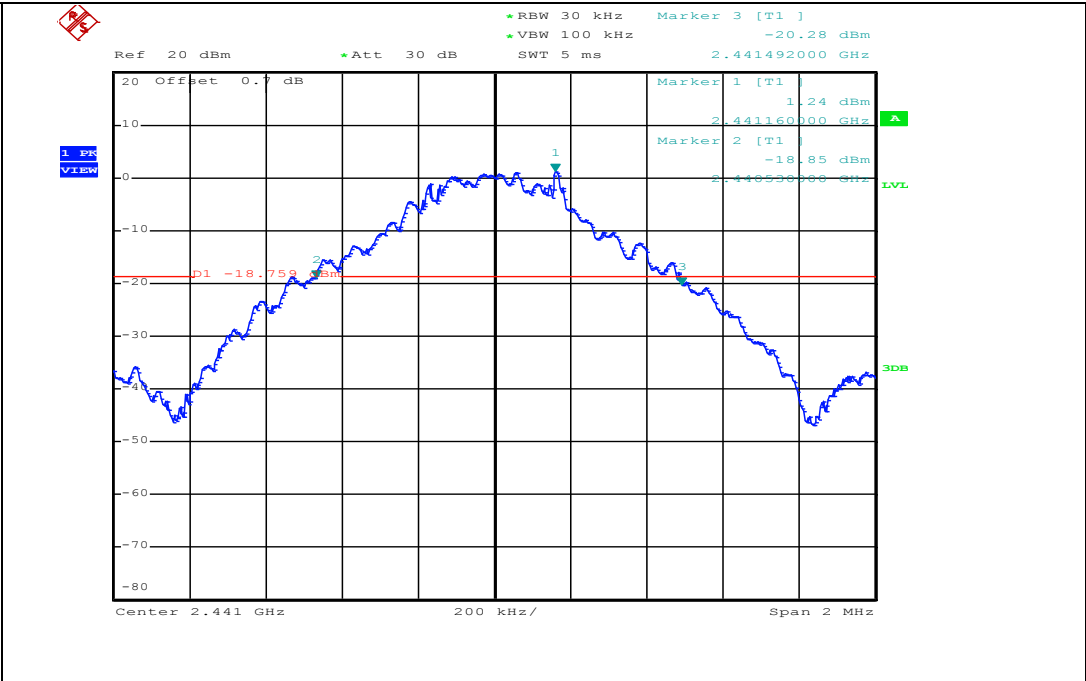
Mode	Channel.	20dB Bandwidth [MHz]	Verdict
GFSK	LCH	1.032	PASS
GFSK	MCH	0.962	PASS
GFSK	HCH	1.028	PASS
$\pi/4$ DQPSK	LCH	1.288	PASS
$\pi/4$ DQPSK	MCH	1.316	PASS
$\pi/4$ DQPSK	HCH	1.292	PASS

Test Graph

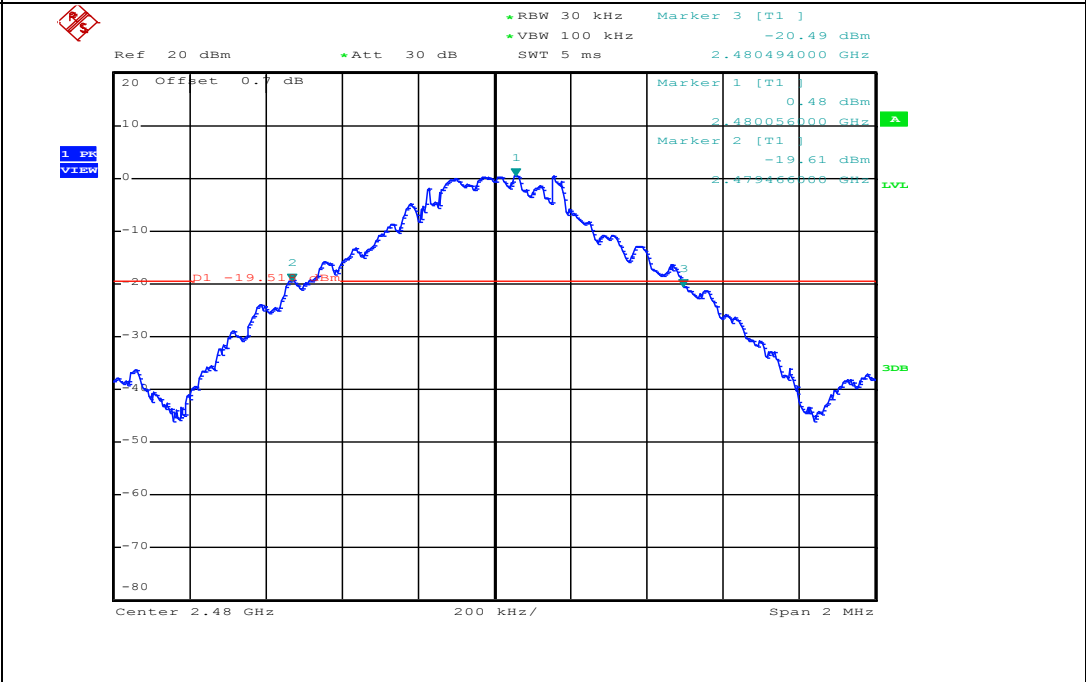


Date: 5.SEP.2017 07:45:24

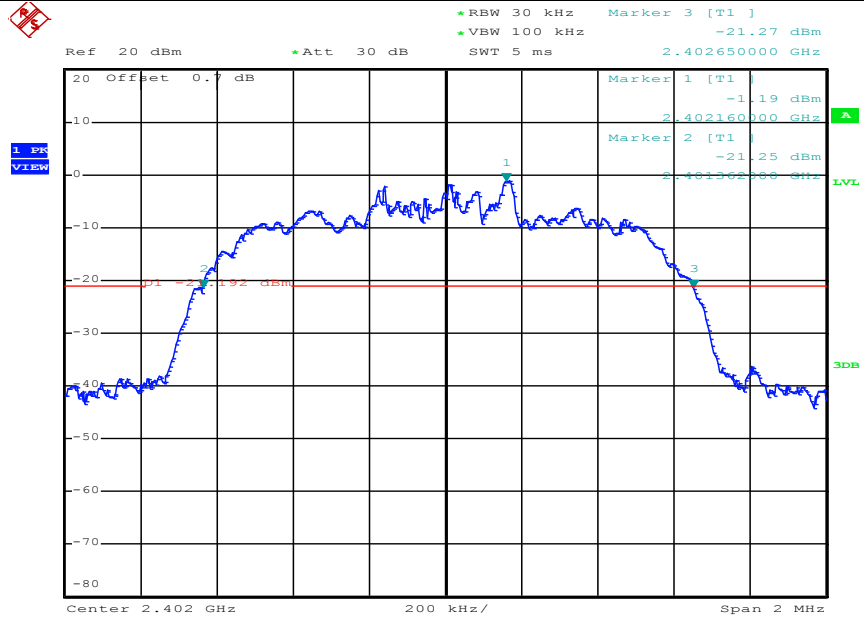
GFSK/MCH



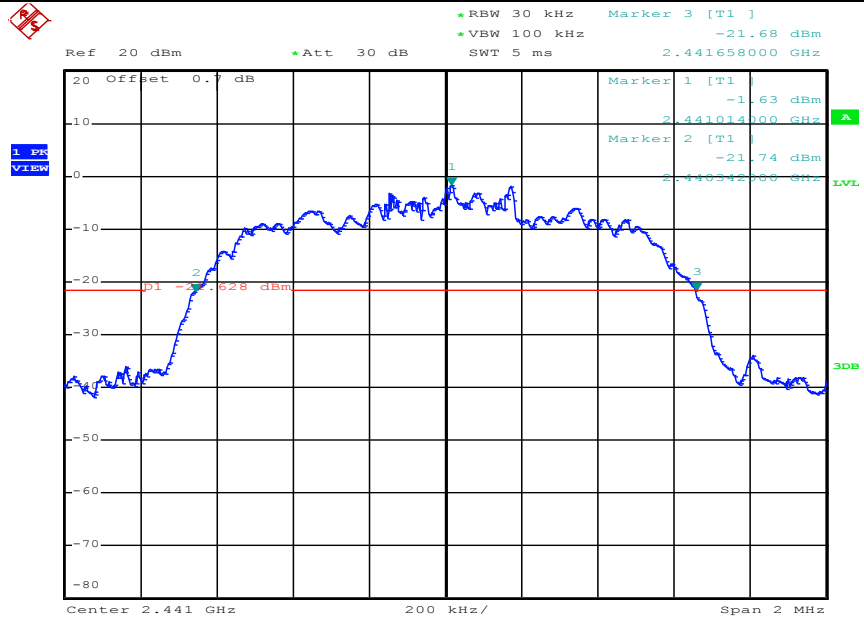
GFSK/HCH



$\pi/4$ DQPSK/LCH

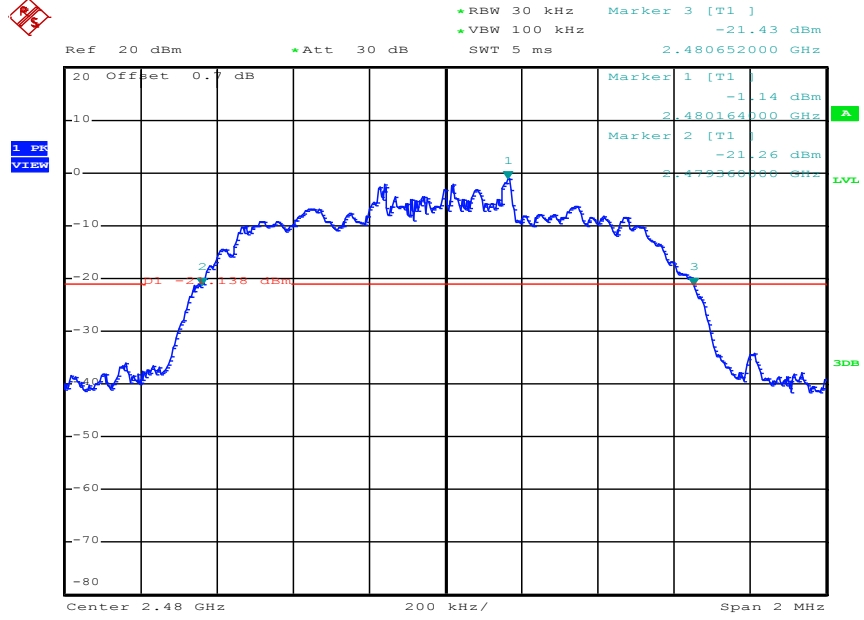


$\pi/4$ DQPSK/MCH



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$\pi/4$ DQPSK/HCH



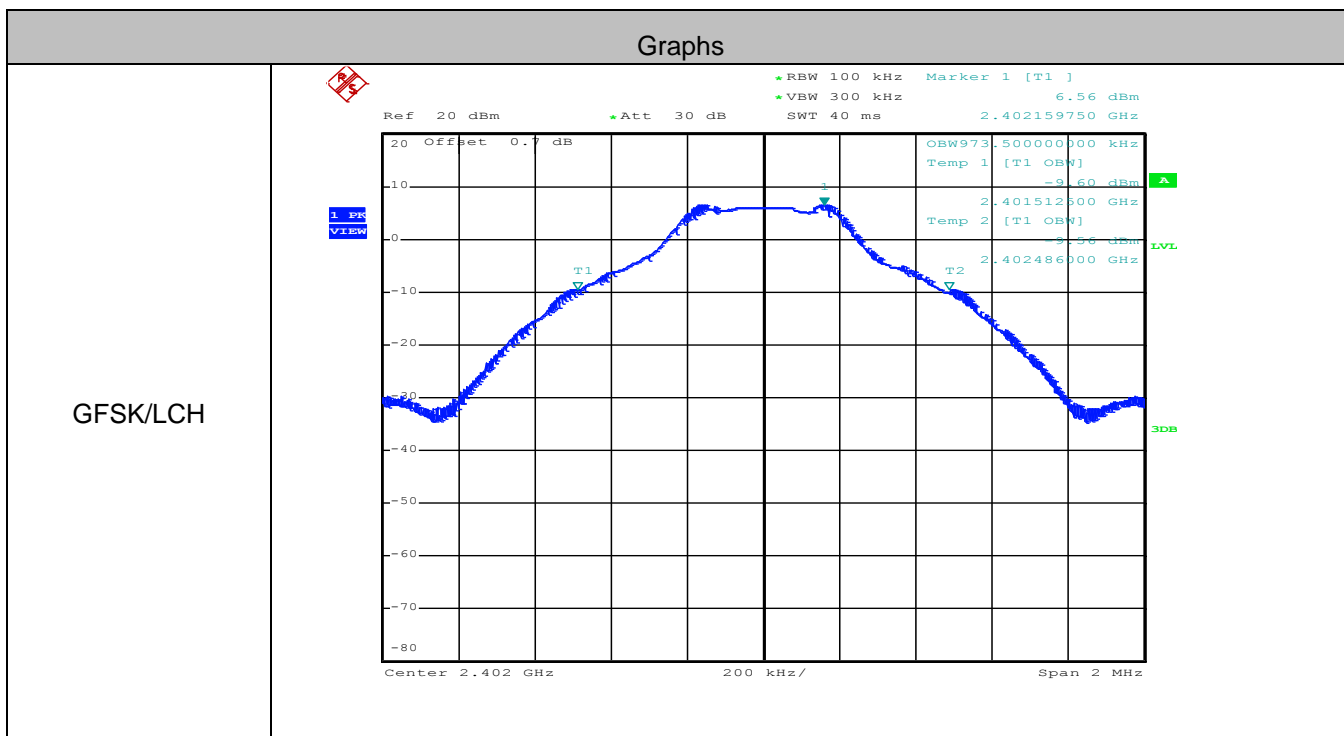
Date: 5.SEP.2017 08:24:30

Appendix B): Occupied Bandwidth

Test Result

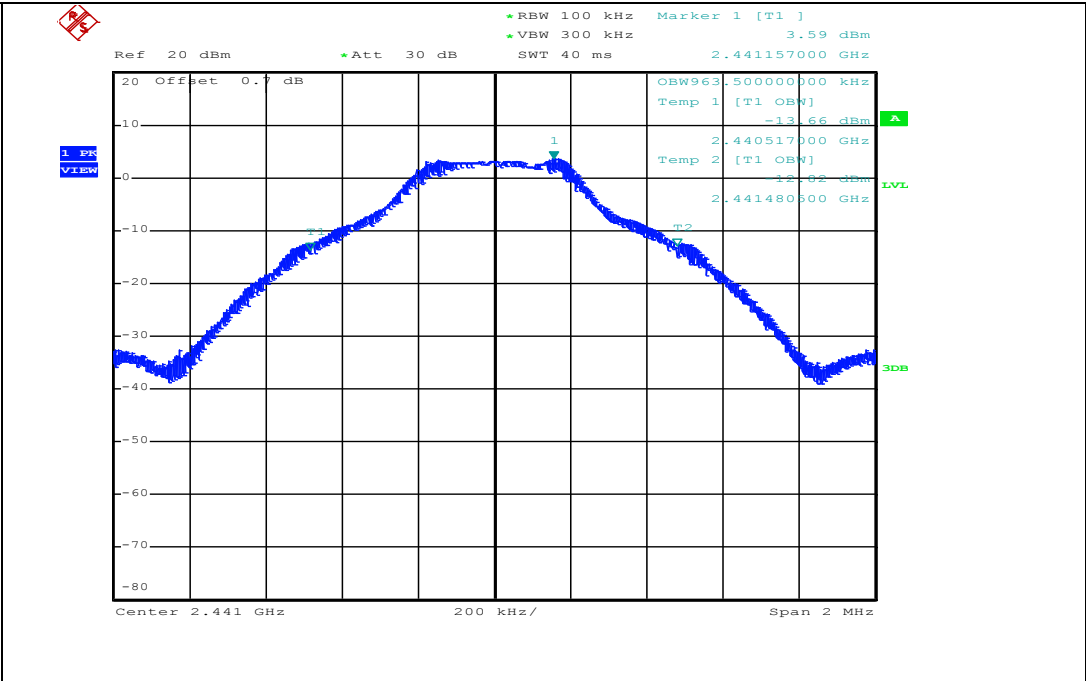
Mode	Channel.	99% OBW [MHz]	Verdict
GFSK	LCH	0.974	PASS
GFSK	MCH	0.964	PASS
GFSK	HCH	0.965	PASS
$\pi/4$ DQPSK	LCH	1.217	PASS
$\pi/4$ DQPSK	MCH	1.219	PASS
$\pi/4$ DQPSK	HCH	1.219	PASS

Test Graph

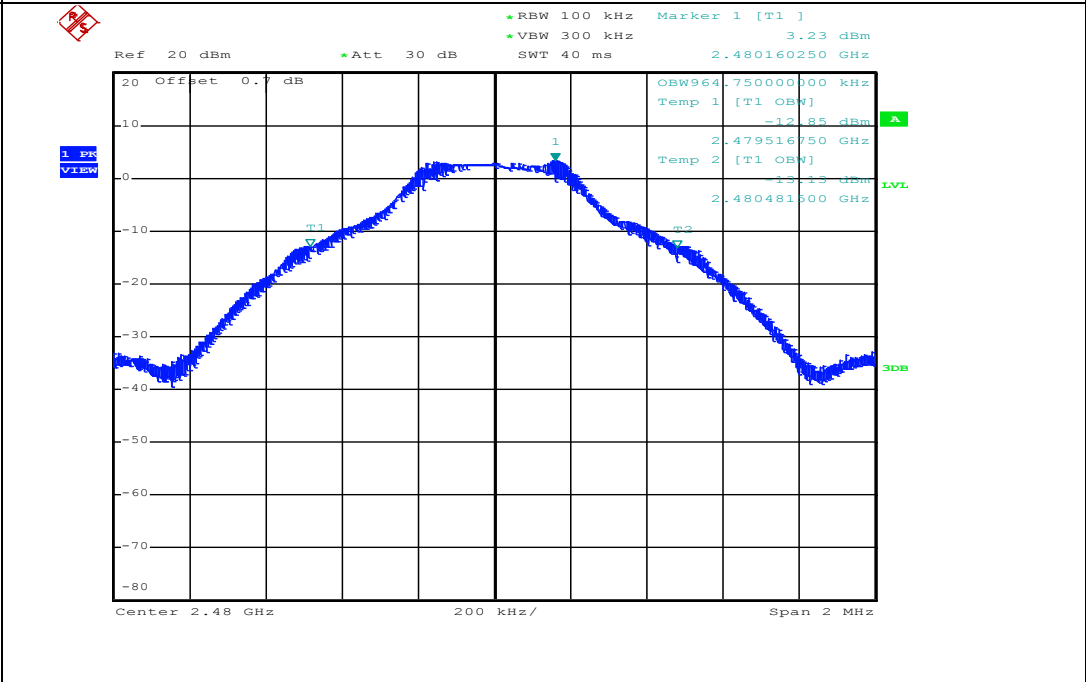


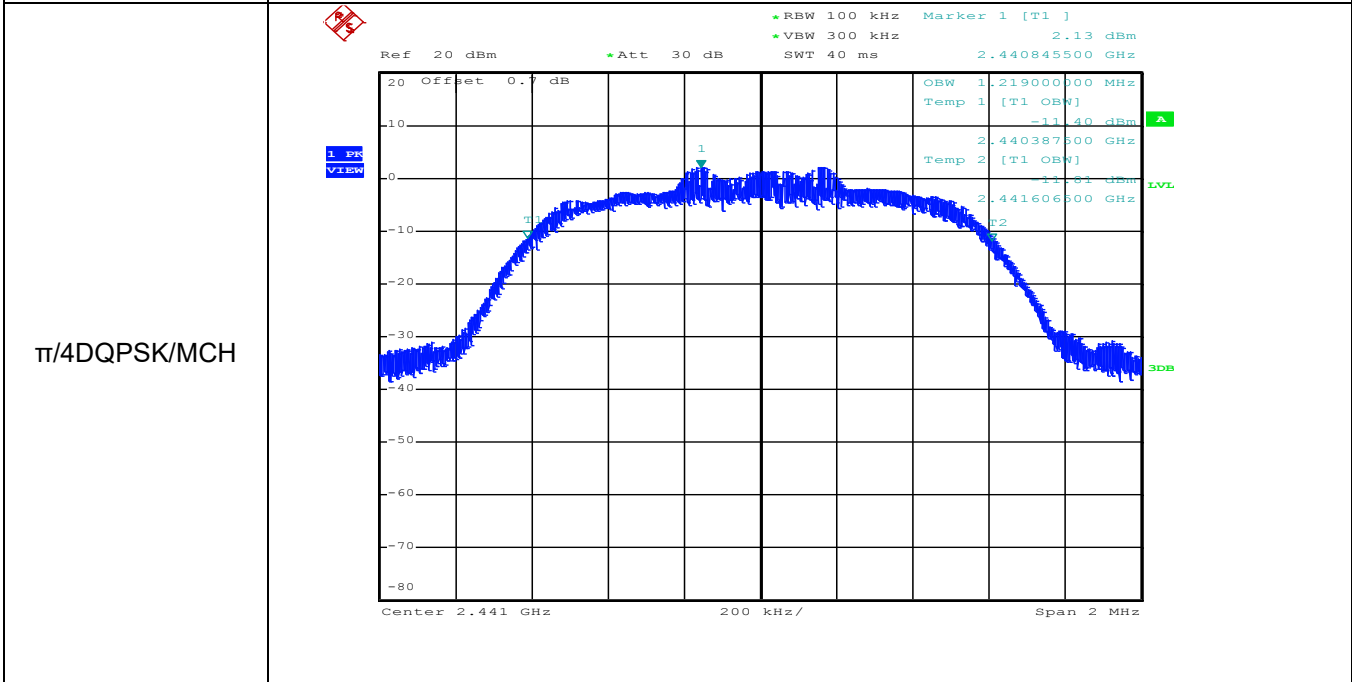
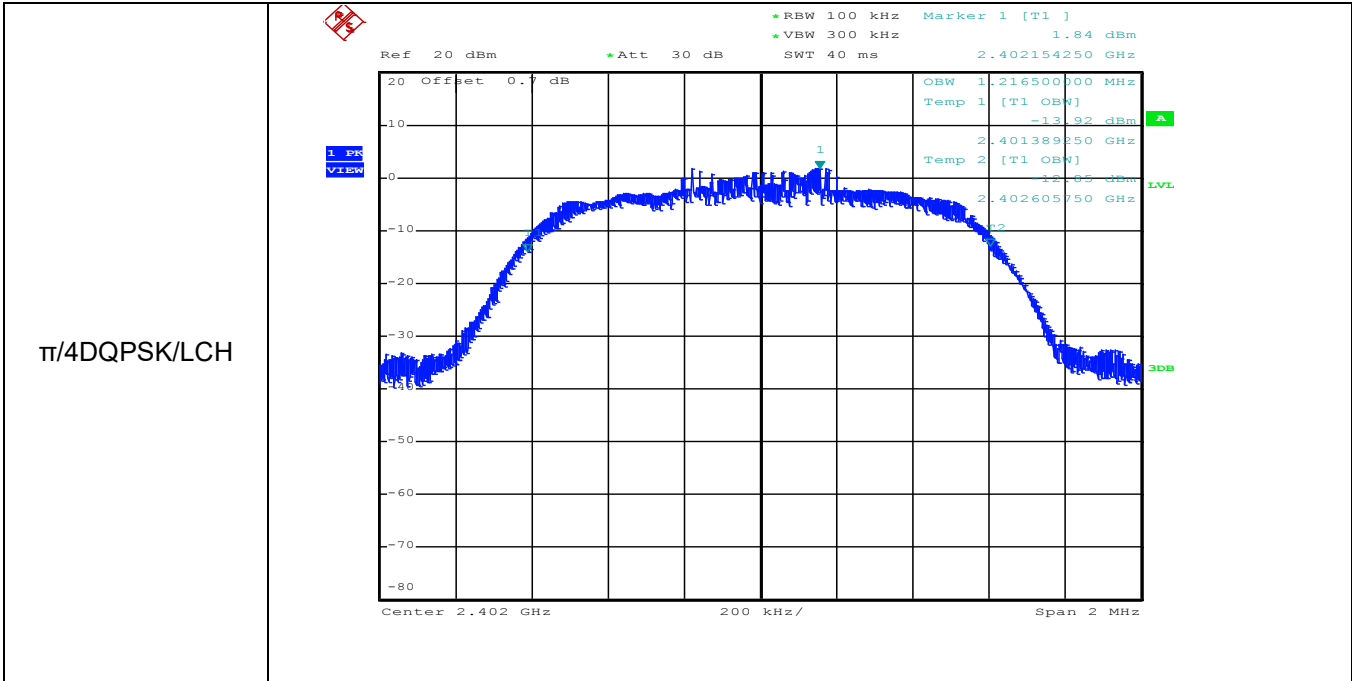
Date: 5.SEP.2017 07:46:22

GFSK/MCH

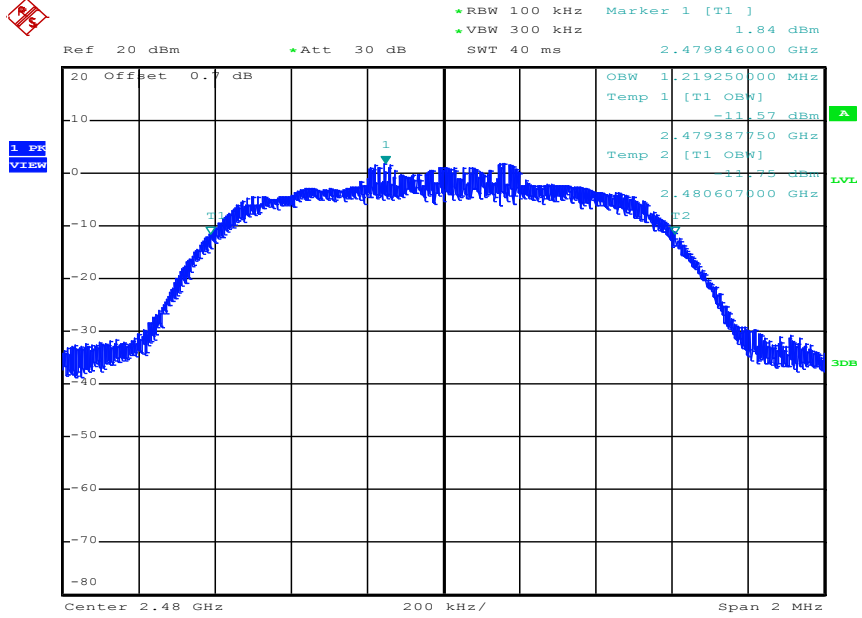


GFSK/HCH





$\pi/4$ DQPSK/HCH



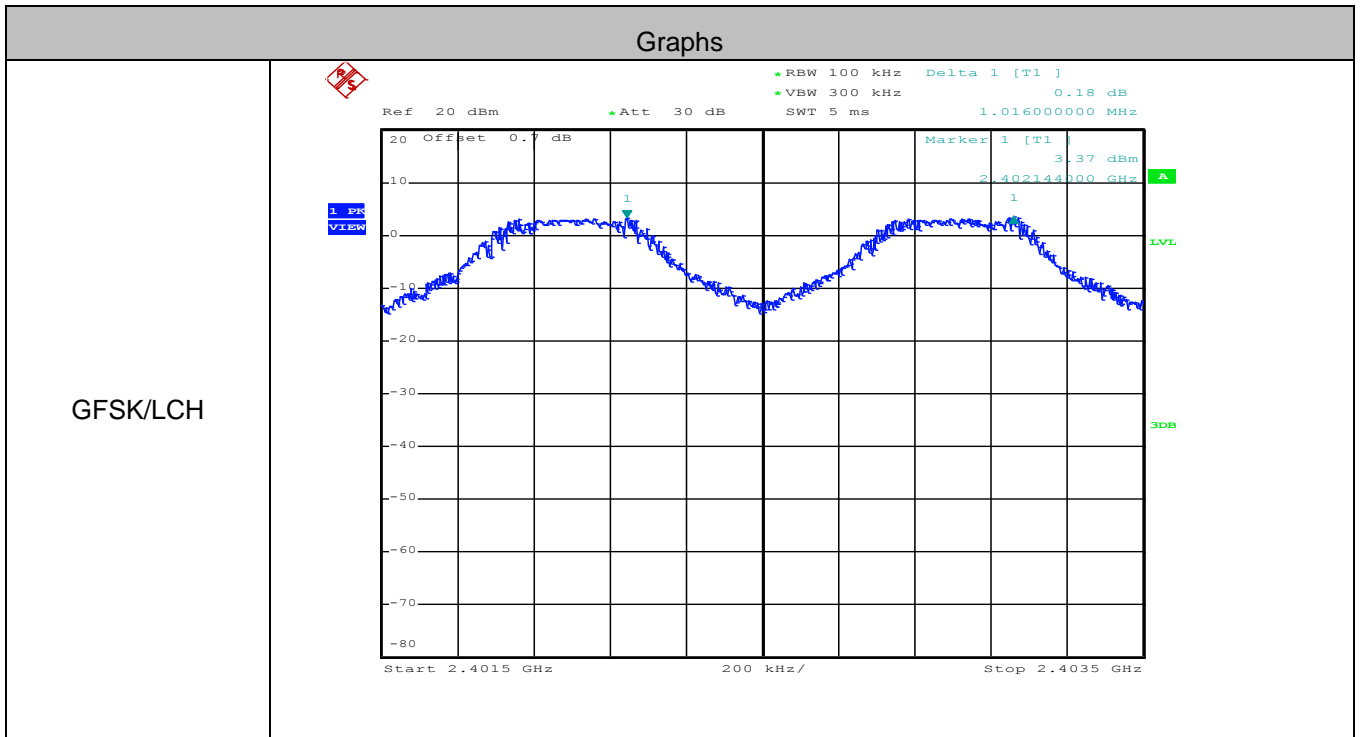
Date: 5.SEP.2017 08:24:49

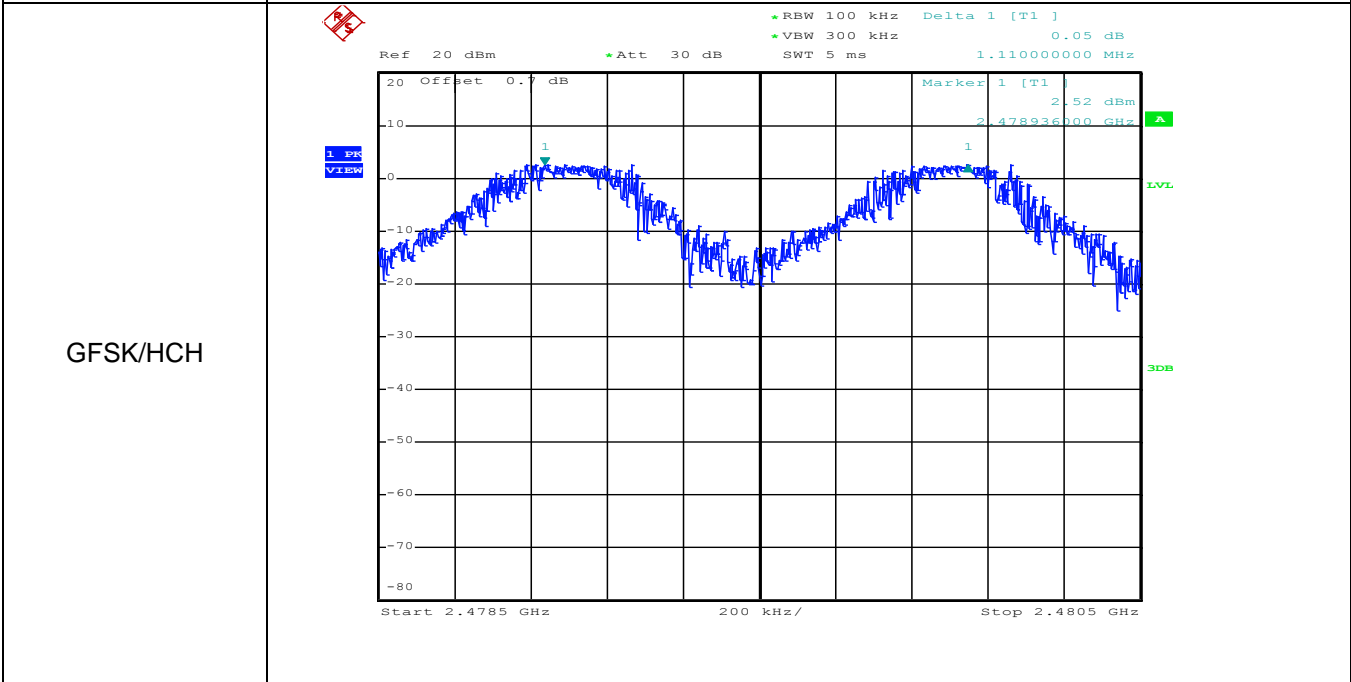
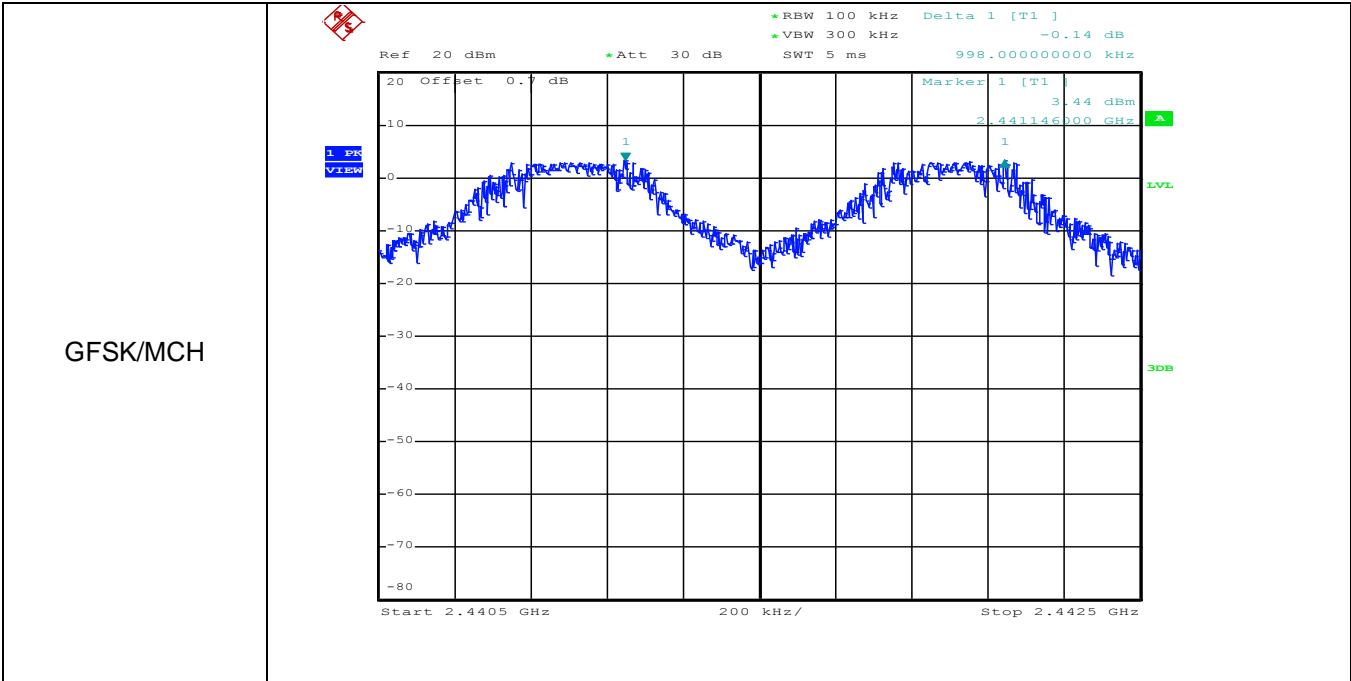
Appendix C): Carrier Frequency Separation

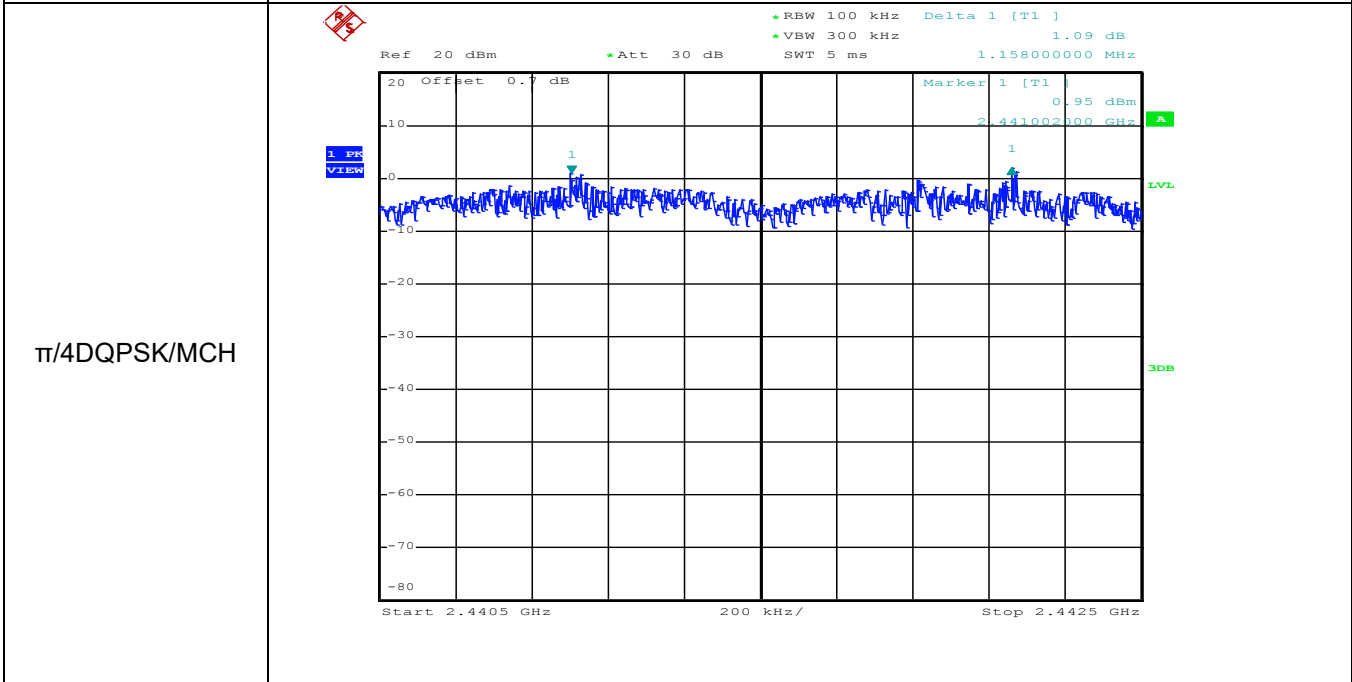
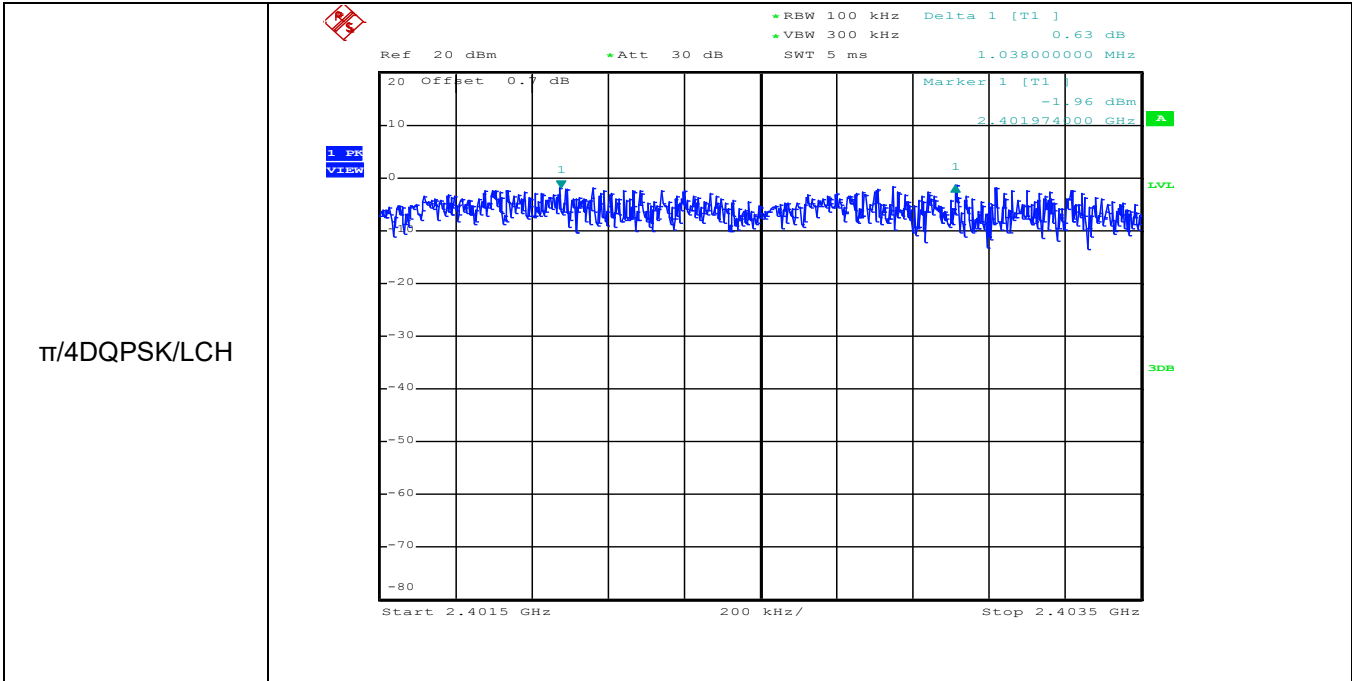
Result Table

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

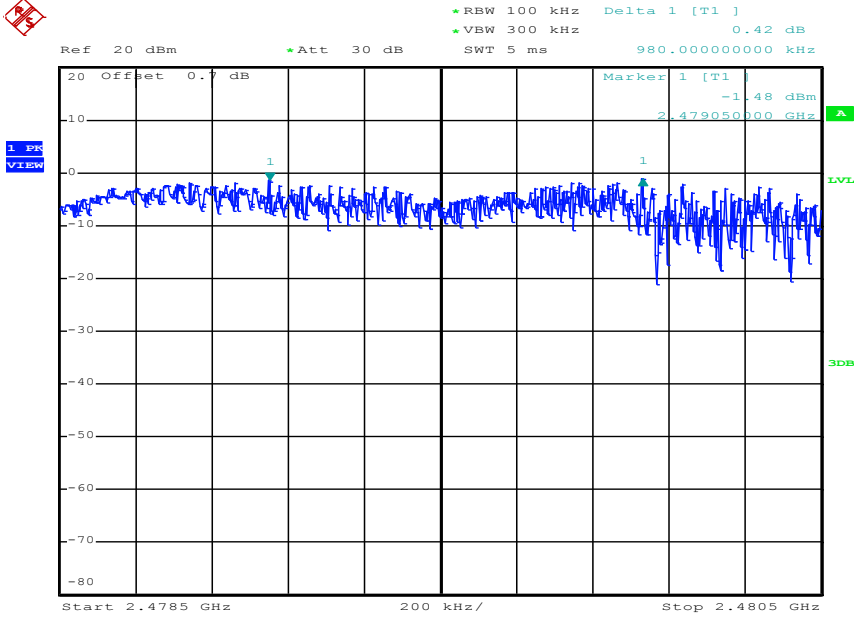
Test Graph







$\pi/4$ DQPSK/HCH



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Appendix D): Dwell Time

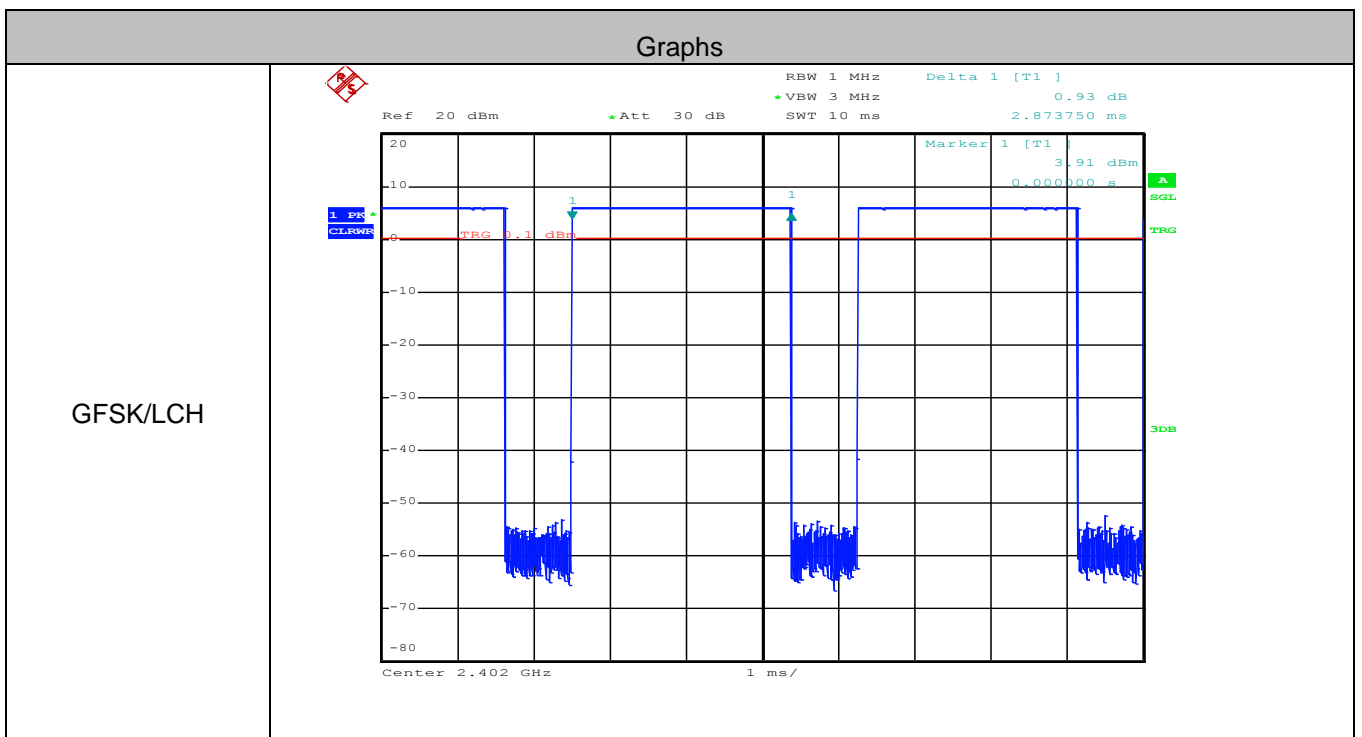
Result Table

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

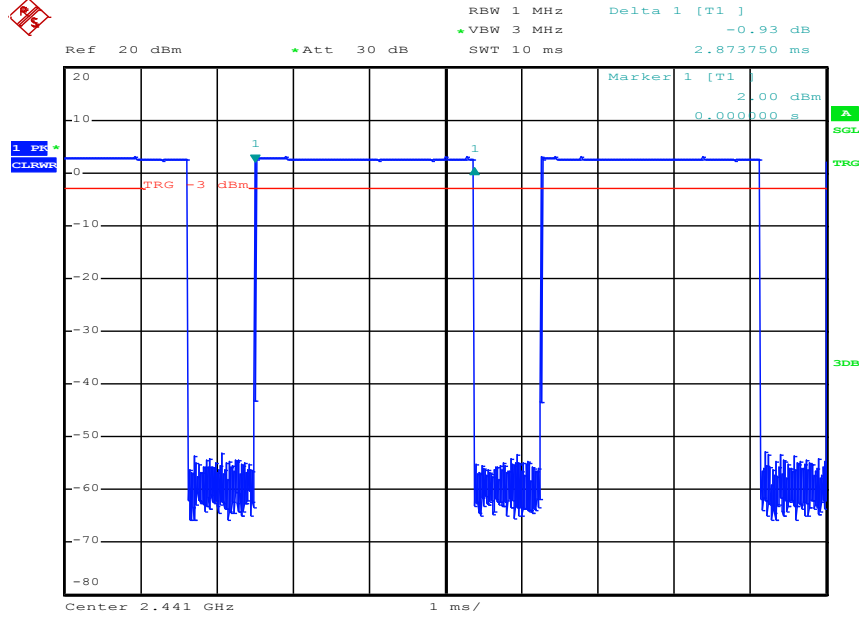
- The duration for dwell time calculation: $0.4[s]*\text{hopping number}=0.4[s]*79[\text{ch}]=31.6[s*\text{ch}]$;
- The burst width [ms/hop/ch], which is directly measured, refers to the duration on one channel hop.
- The hops per second for all channels: The selected EUT Conf uses a slot type of 5-Tx&1-Rx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

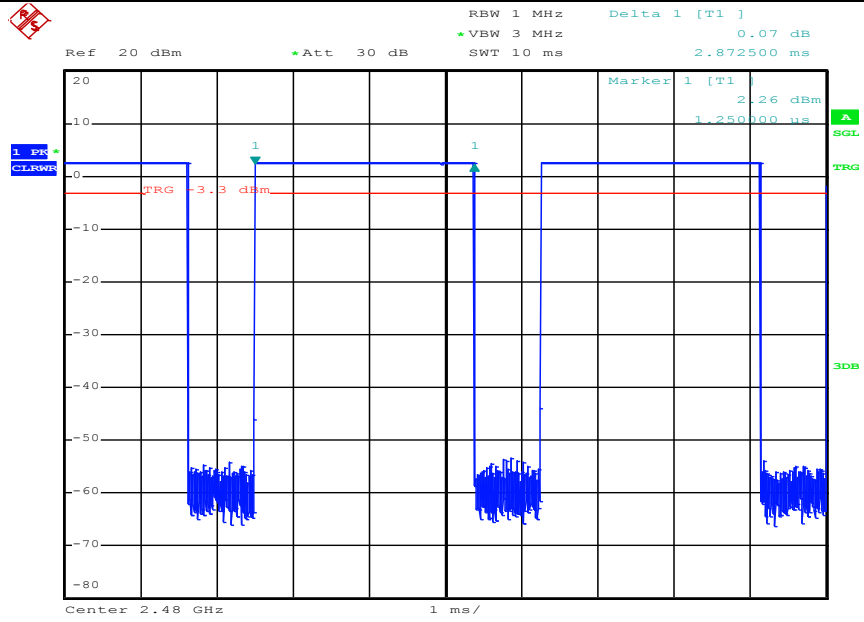
Test Graph



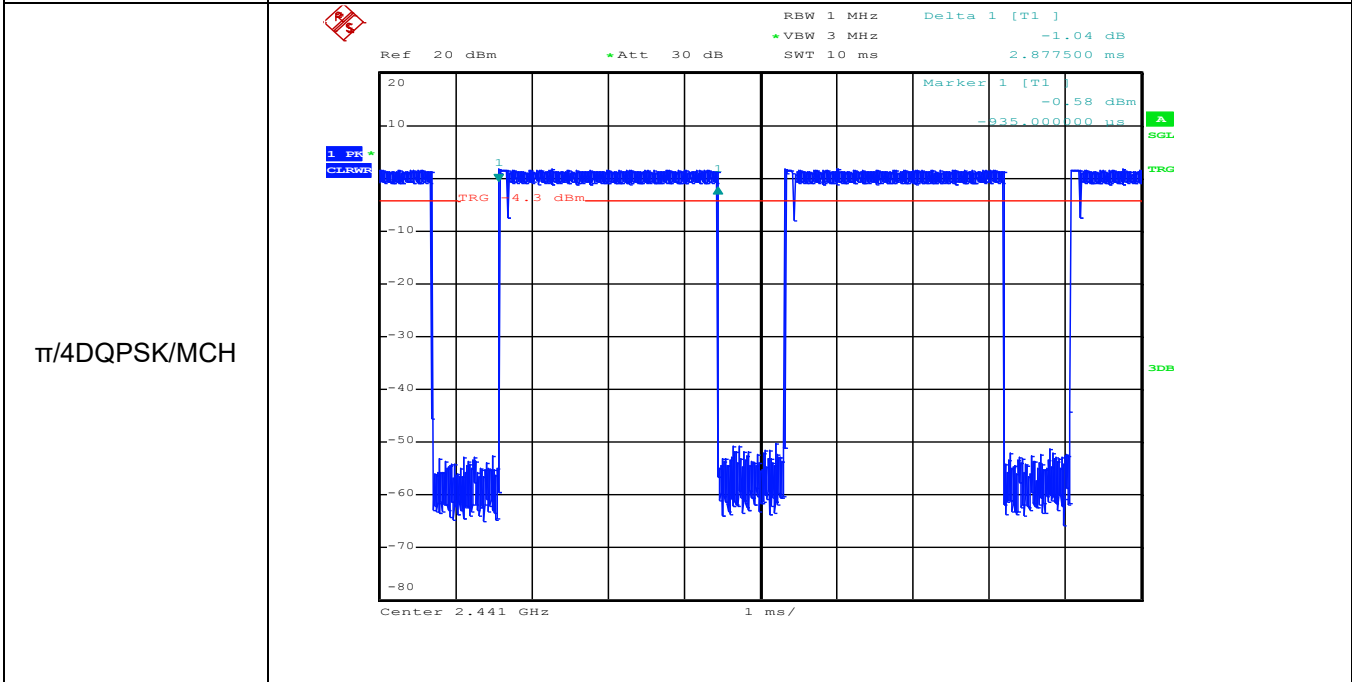
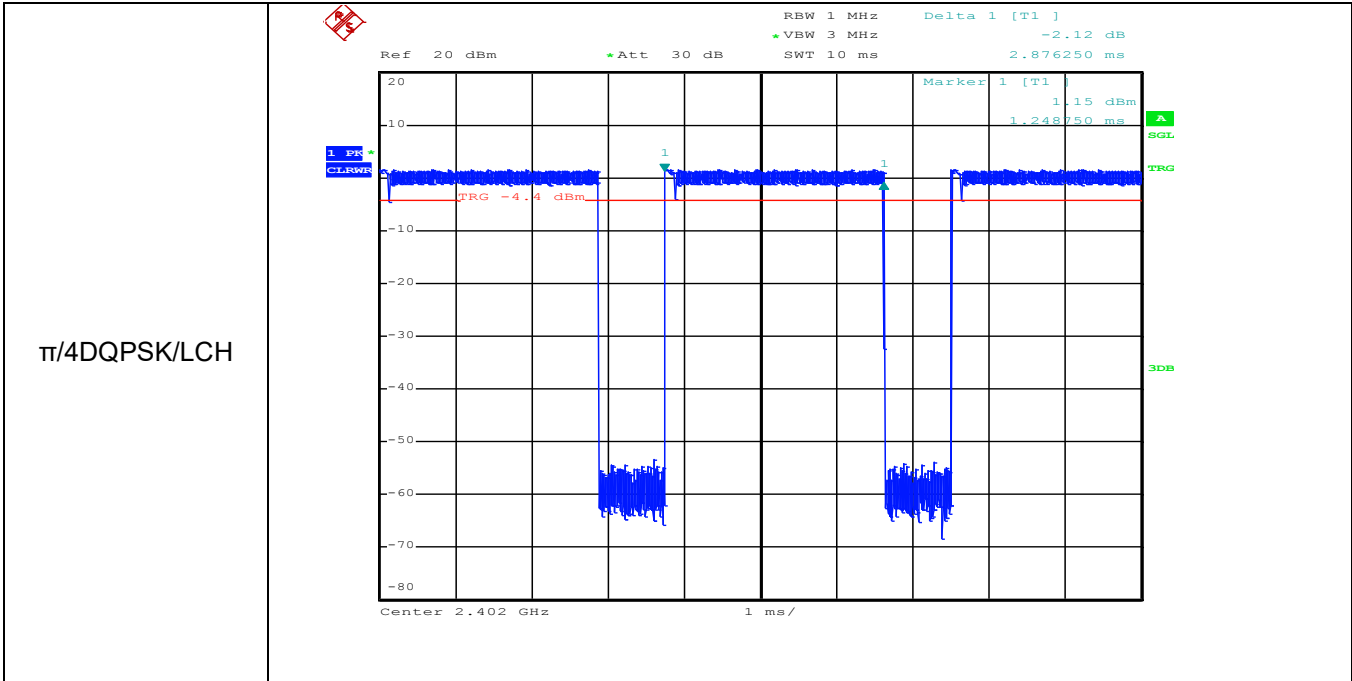
GFSK/MCH

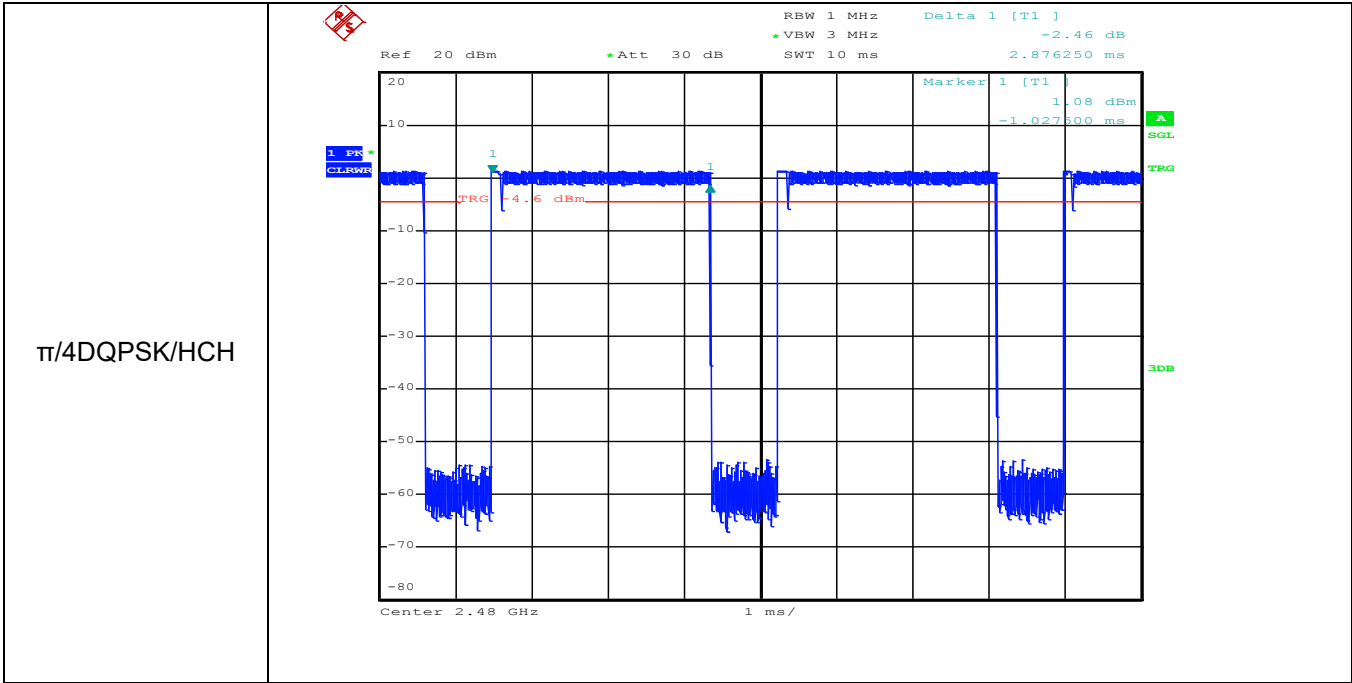


GFSK/HCH



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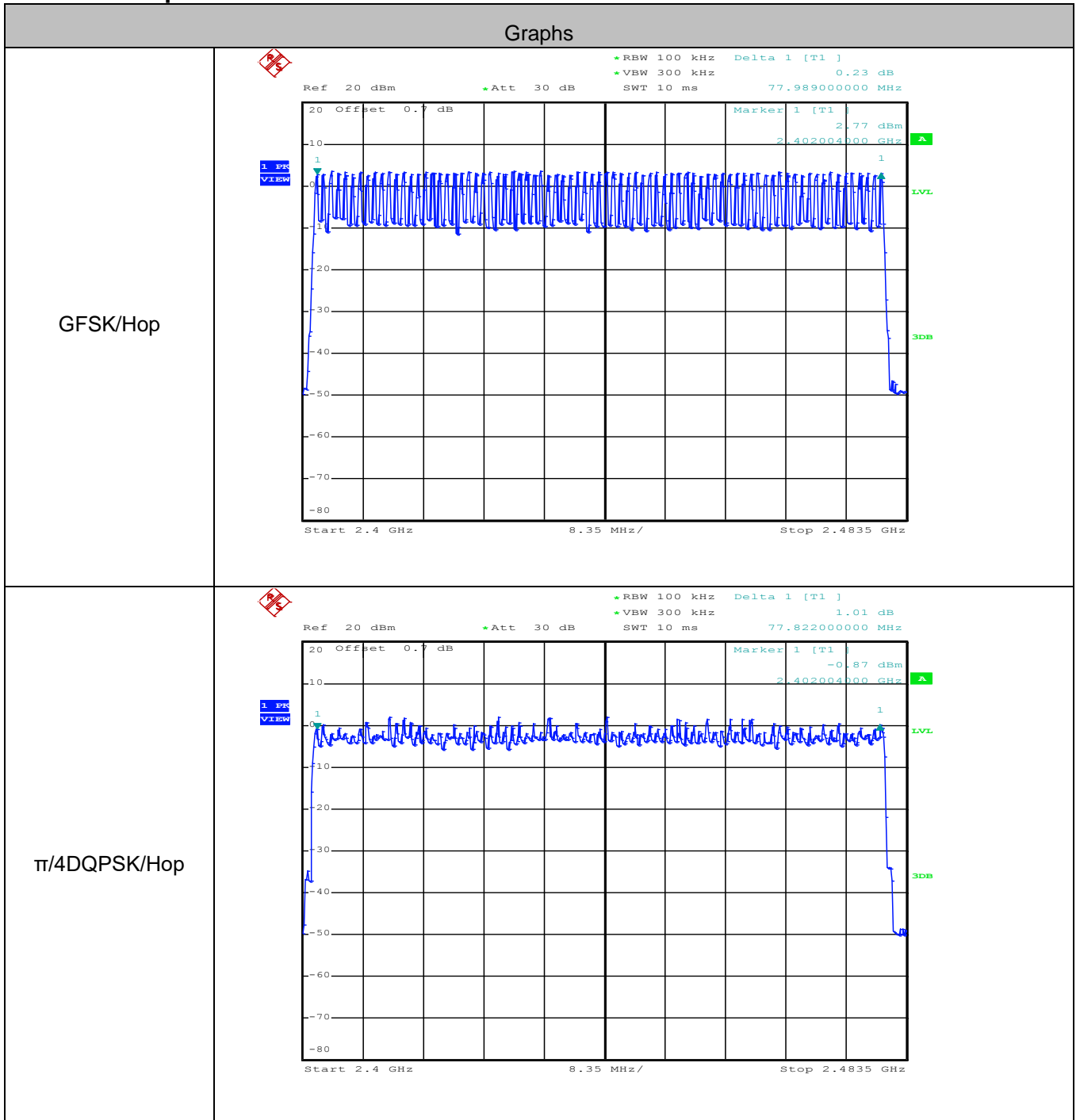
Date: 5.SEP.2017 08:25:09

Appendix E): Hopping Channel Number

Result Table

Mode	Channel.	Number of Hopping Channel	Verdict
GFSK	Hop	79	PASS
$\pi/4$ DQPSK	Hop	79	PASS

Test Graph

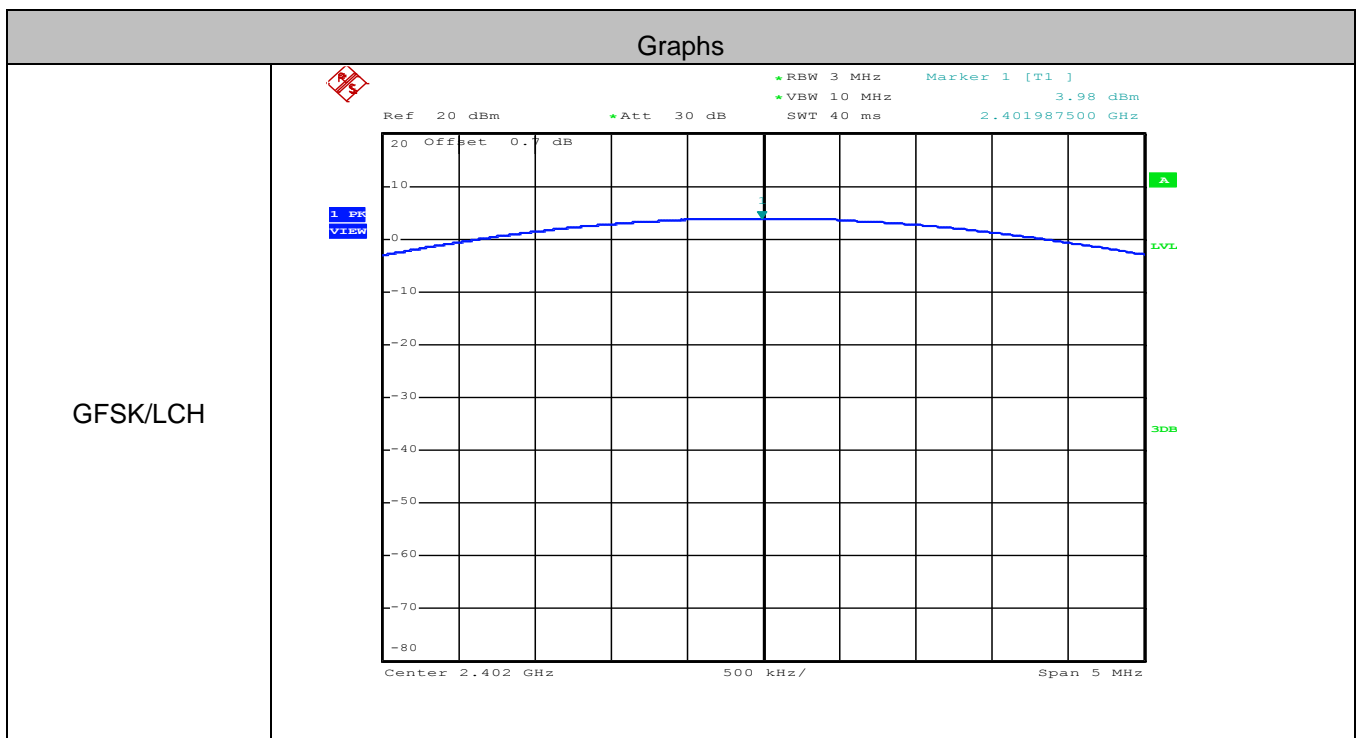


Appendix F): Conducted Peak Output Power

Result Table

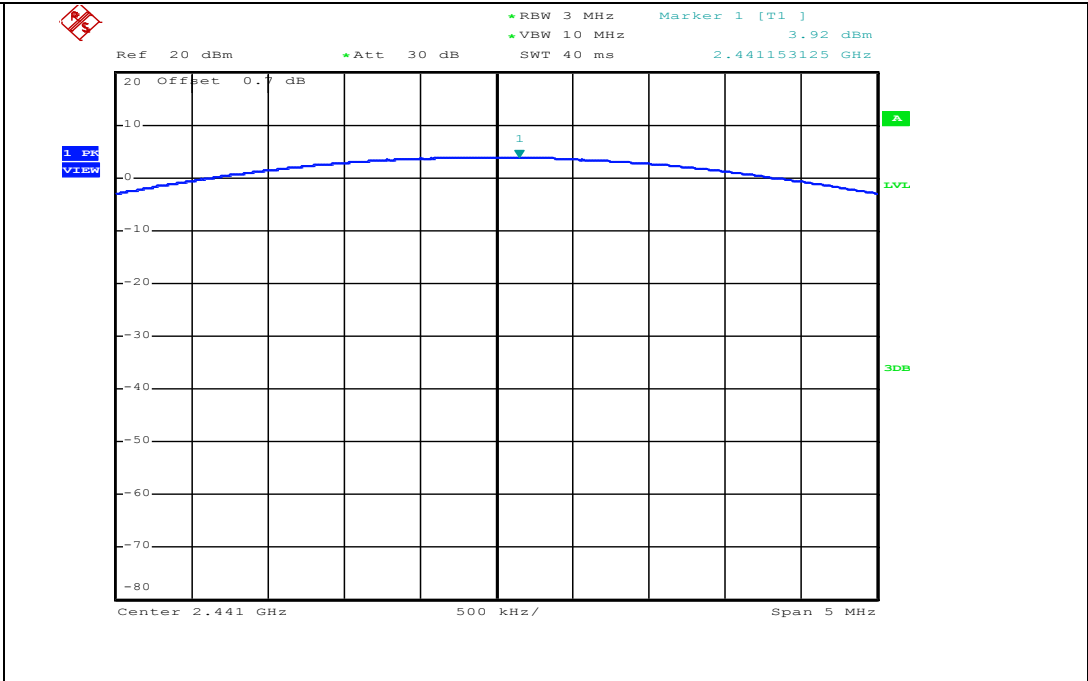
Mode	Channel.	Maximum Peak Output Power [dBm]	Verdict
GFSK	LCH	3.980	PASS
GFSK	MCH	3.920	PASS
GFSK	HCH	3.490	PASS
$\pi/4$ DQPSK	LCH	2.940	PASS
$\pi/4$ DQPSK	MCH	3.060	PASS
$\pi/4$ DQPSK	HCH	2.730	PASS

Test Graph

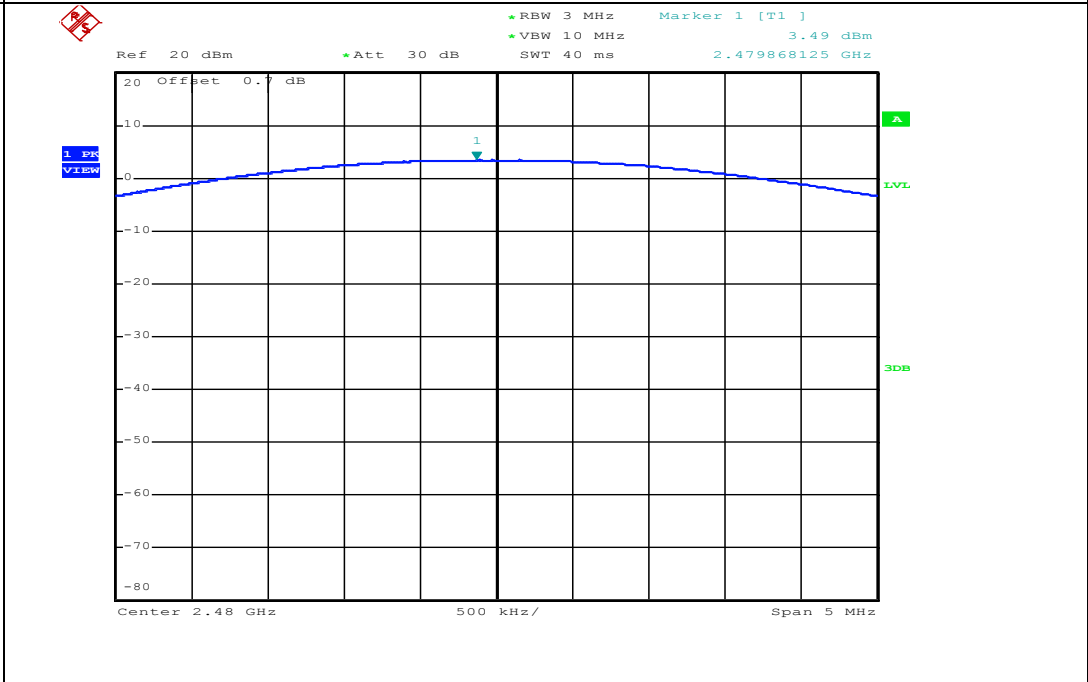


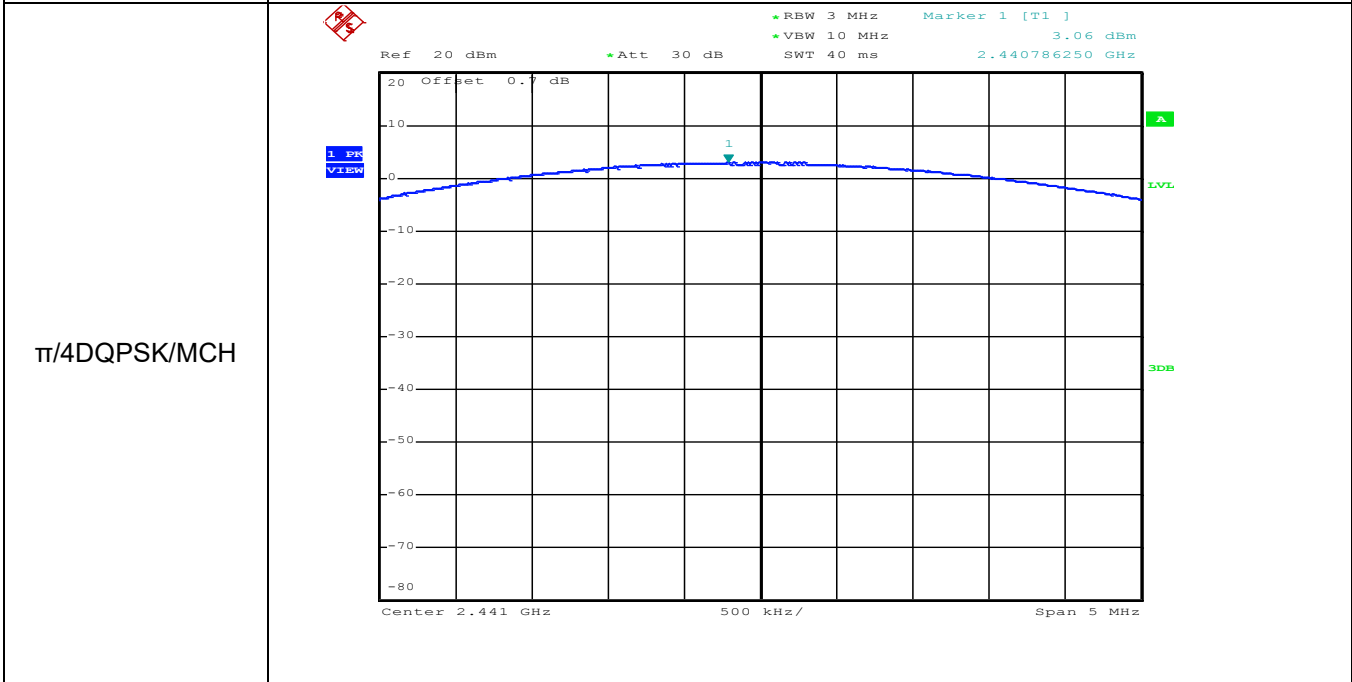
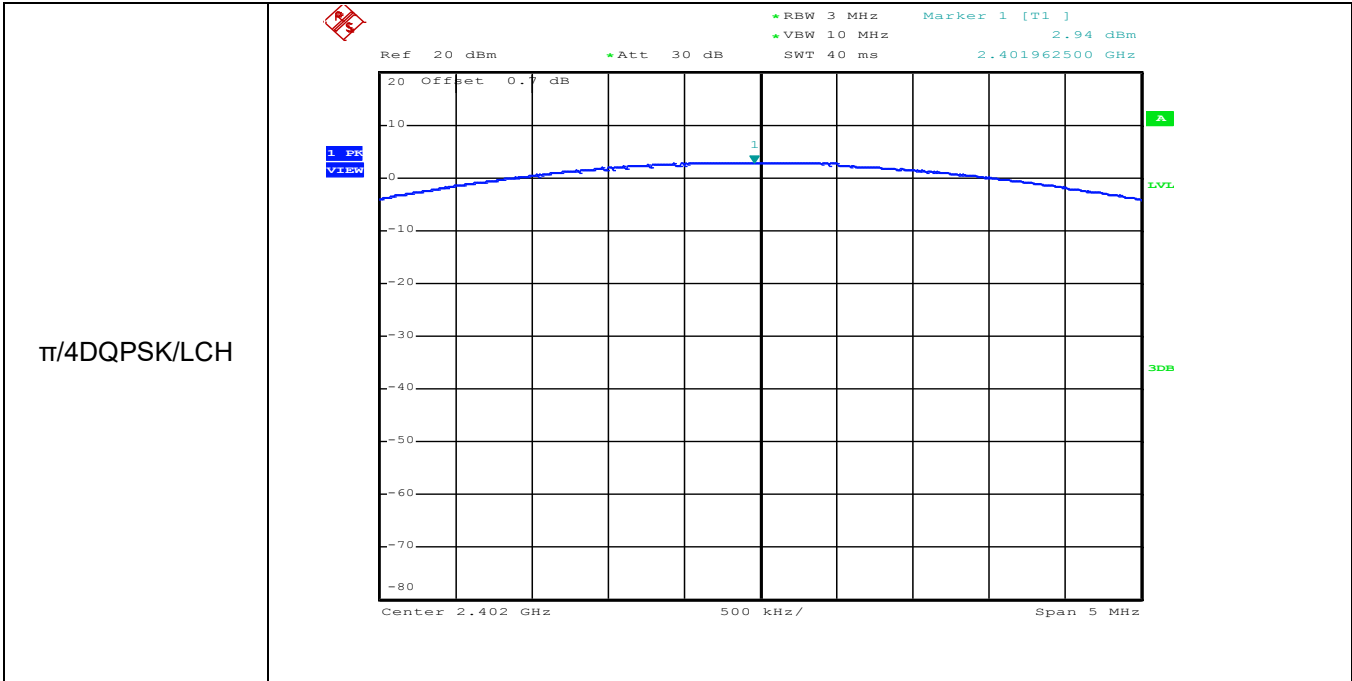
Date: 5.SEP.2017 07:55:35

GFSK/MCH



GFSK/HCH

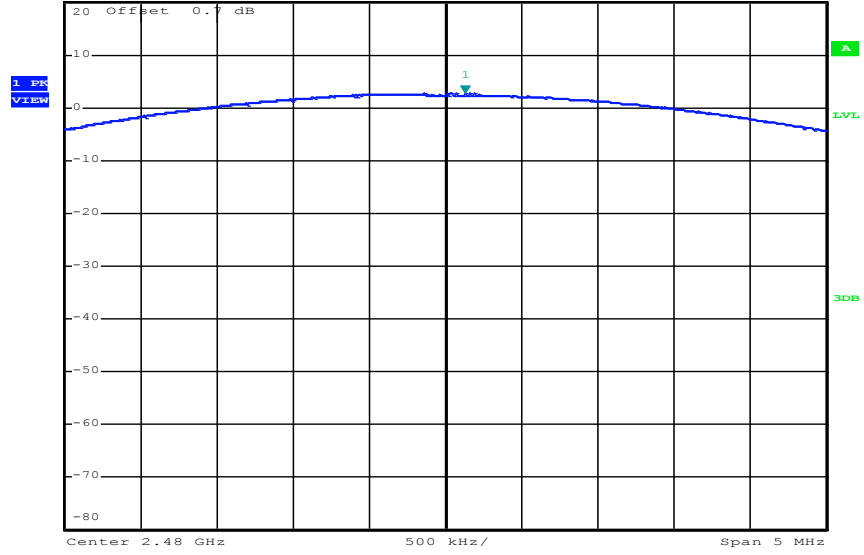




$\pi/4$ DQPSK/HCH



Ref 20 dBm *Att 30 dB *RBW 3 MHz Marker 1 [T1] 2.73 dBm
*VBW 10 MHz SWT 40 ms 2.480128750 GHz



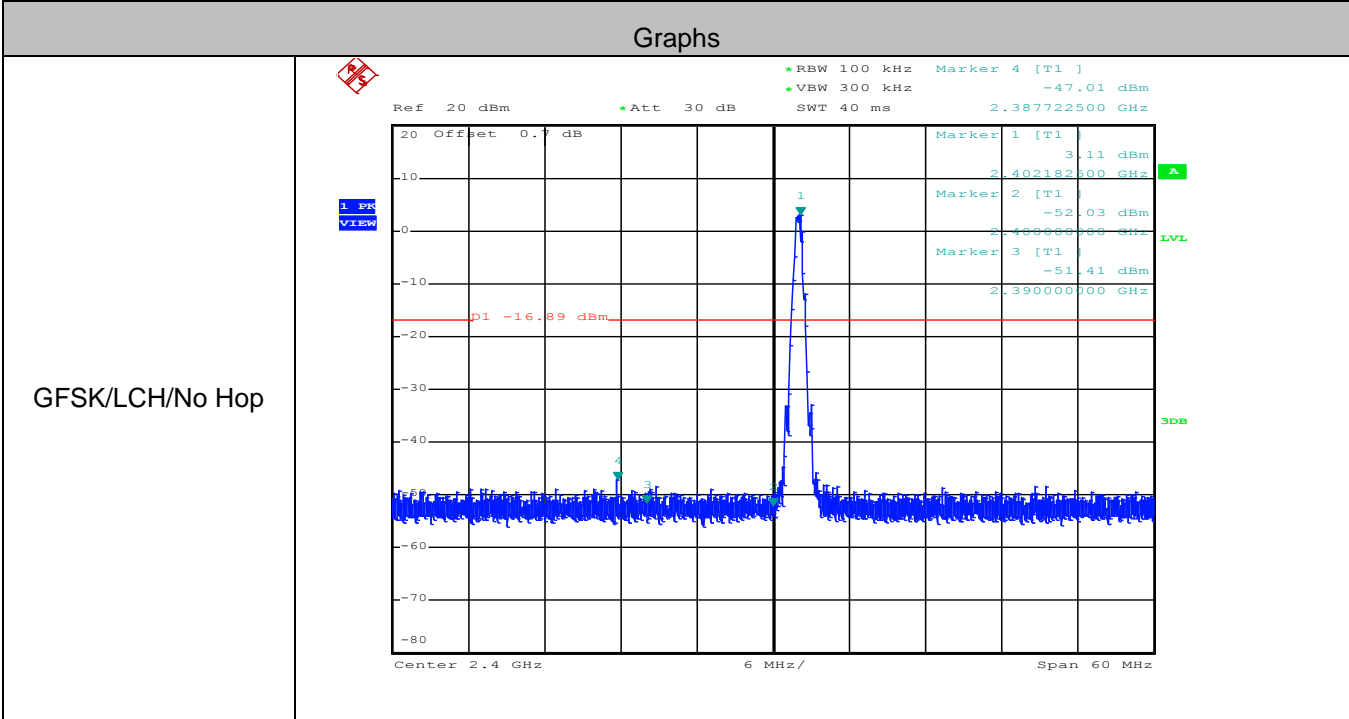
Date: 5.SEP.2017 08:25:24

Appendix G): Band-edge for RF Conducted Emissions

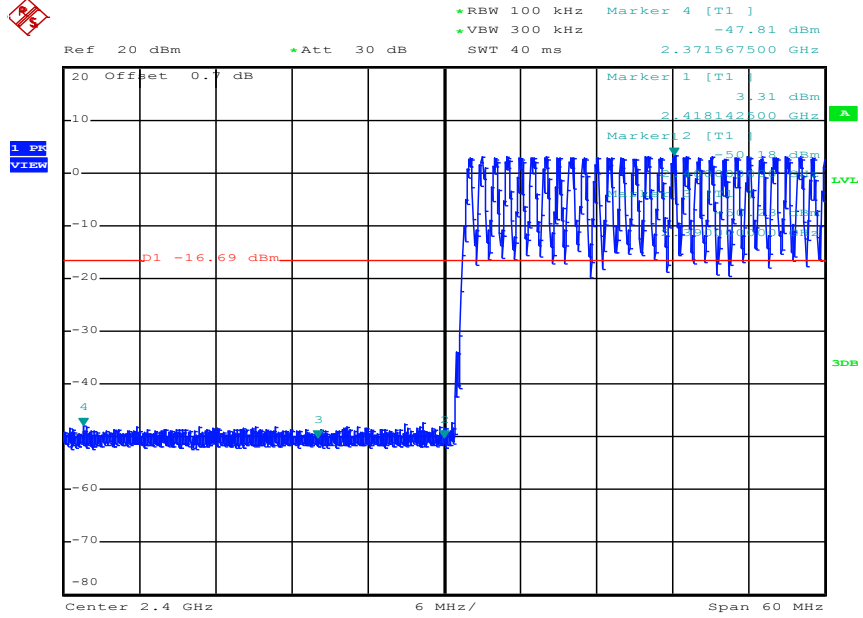
Result Table

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
π /4DQPSK	LCH	2402	2.000	Off	-47.999	-18	PASS
			2.020	On	-46.623	-17.98	PASS
π /4DQPSK	HCH	2480	1.430	Off	-48.943	-18.57	PASS
			1.930	On	-46.956	-18.07	PASS

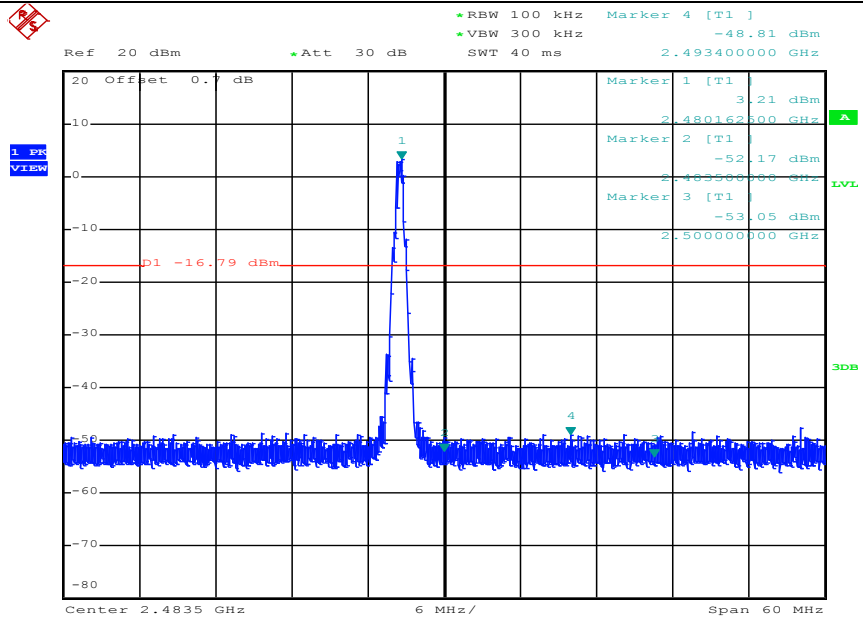
Test Graph



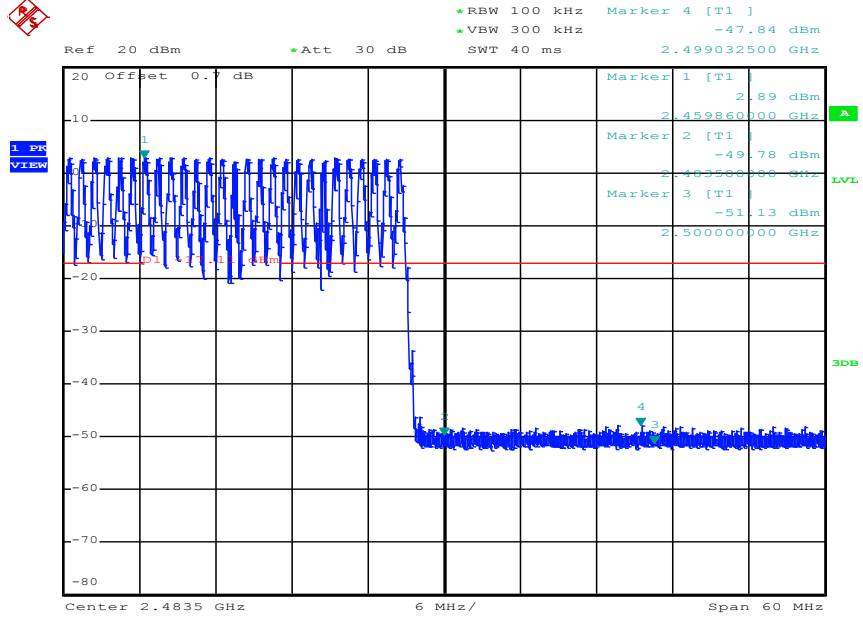
GFSK/LCH/Hop



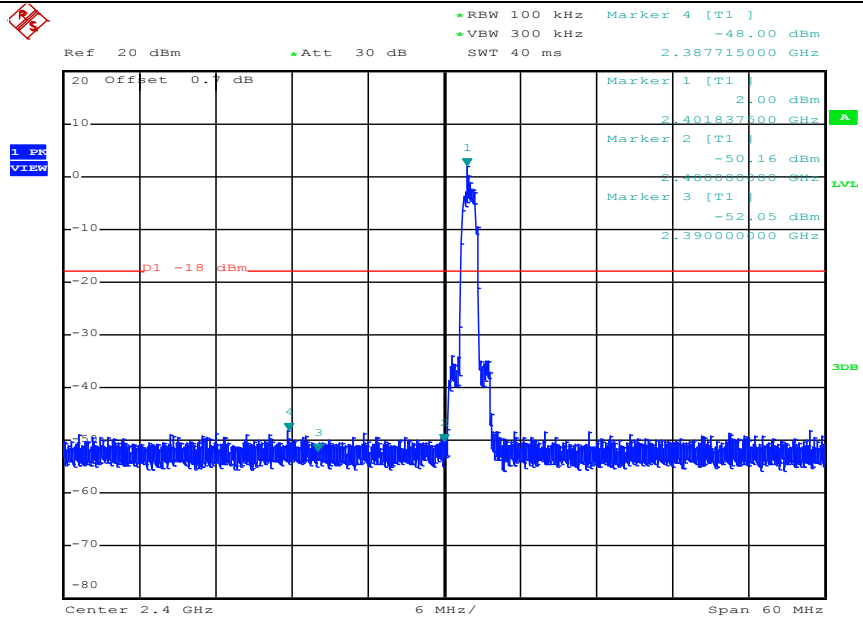
GFSK/HCH/No Hop



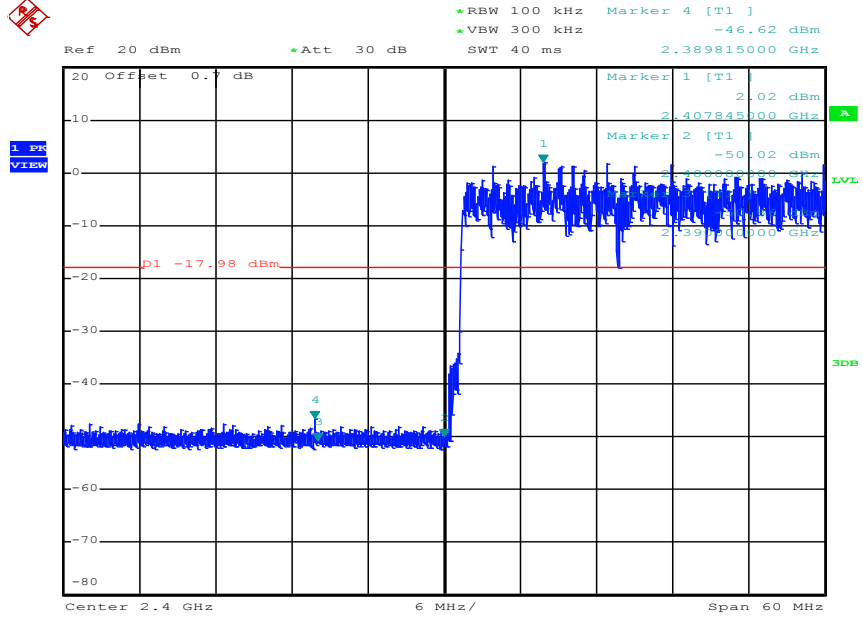
GFSK/HCH/Hop



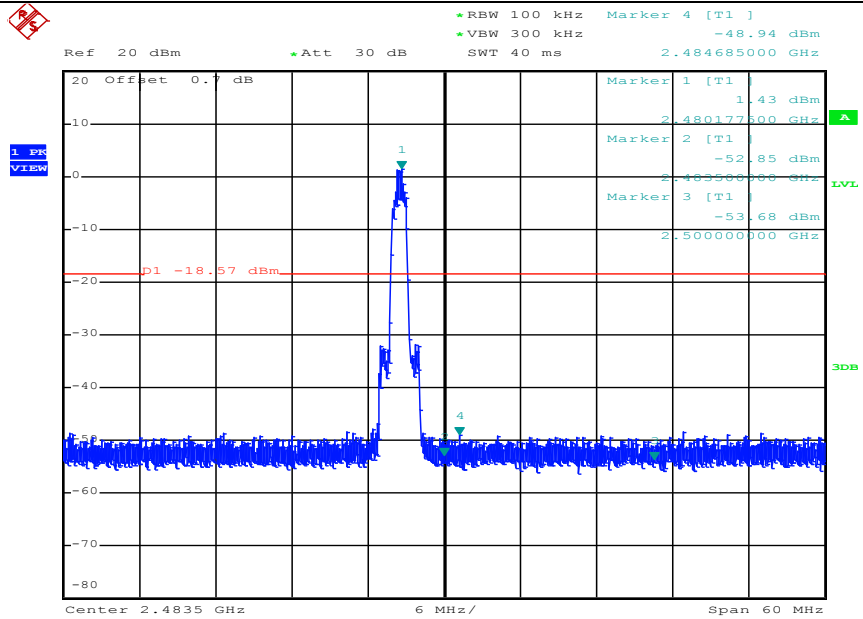
$\pi/4$ DQPSK/LCH/No Hop



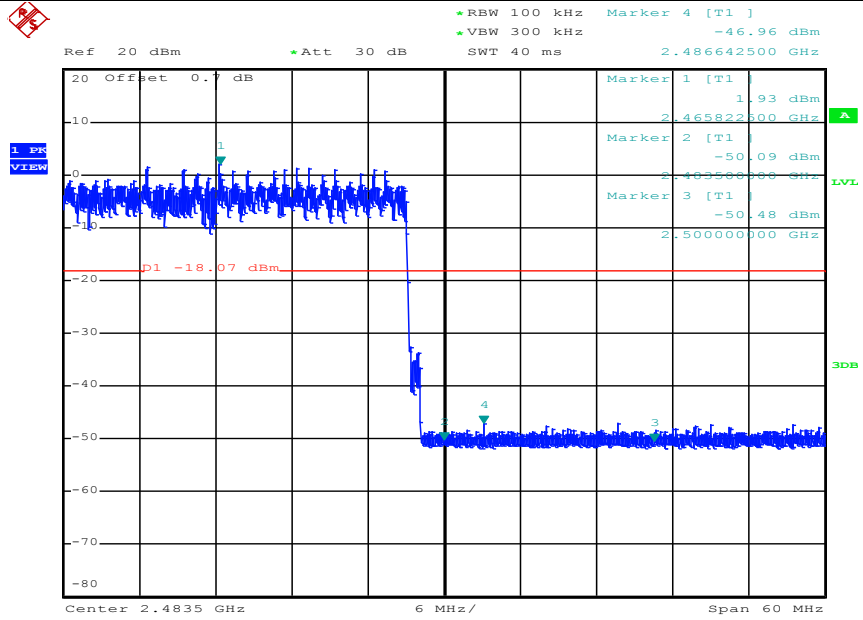
$\pi/4$ DQPSK/LCH/Hop



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



$\pi/4$ DQPSK/HCH/Hop



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

Appendix H): RF Conducted Spurious Emissions

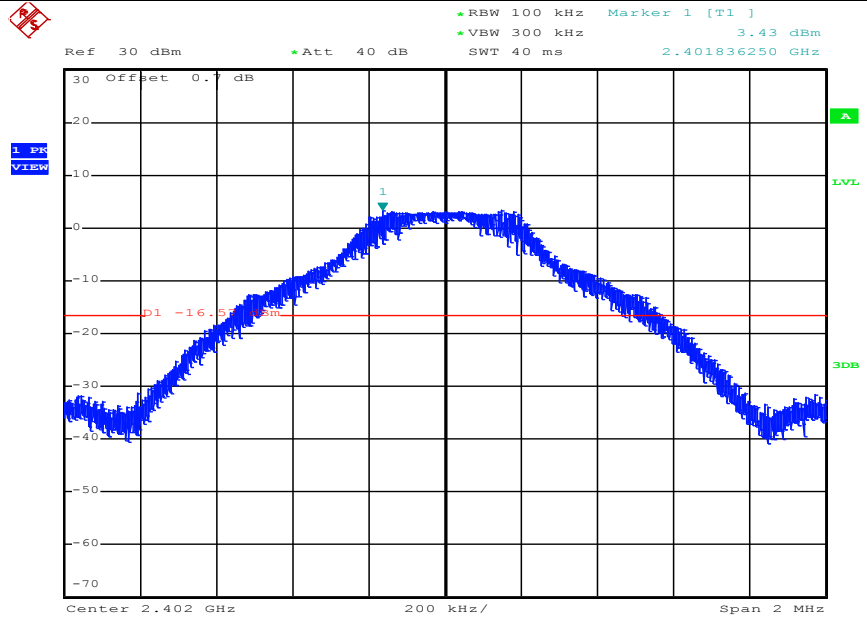
Result Table

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

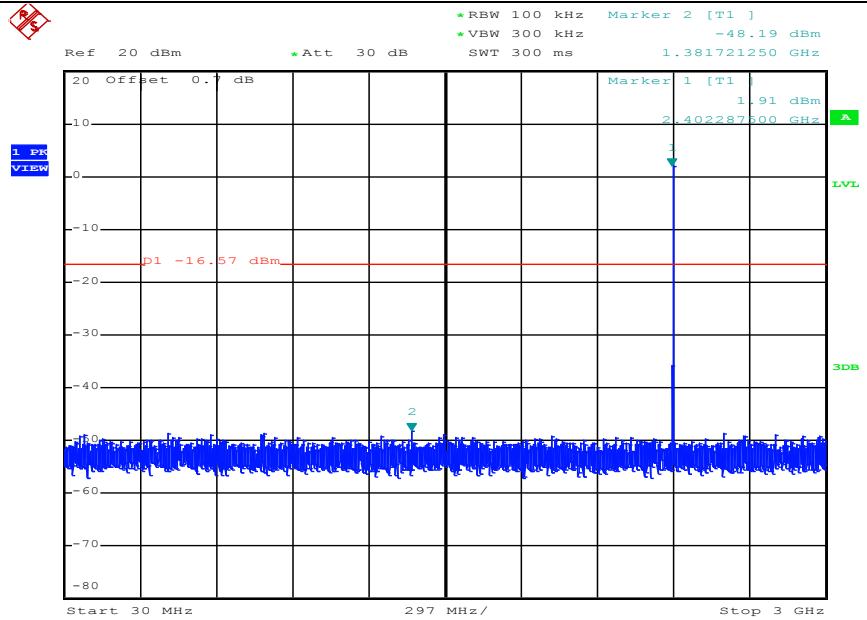
Test Graph

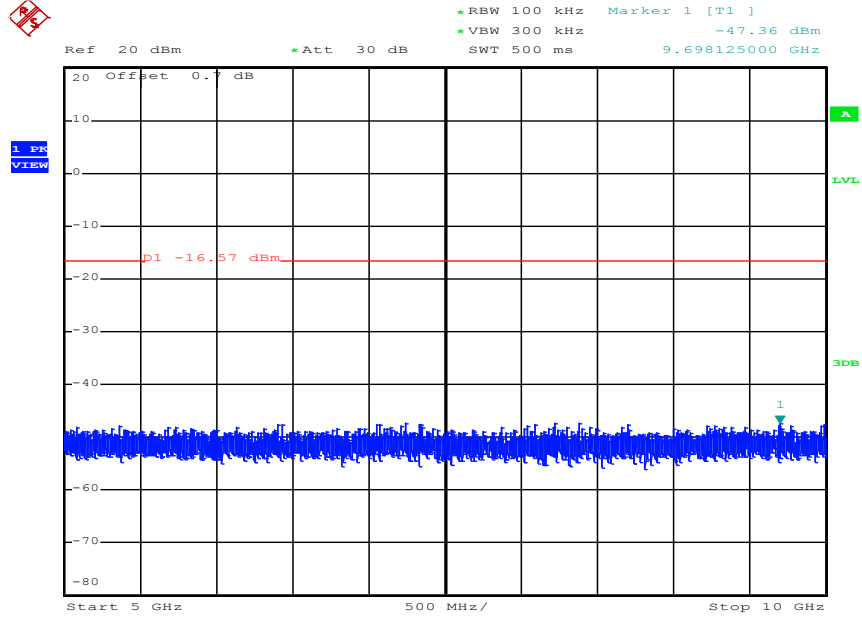
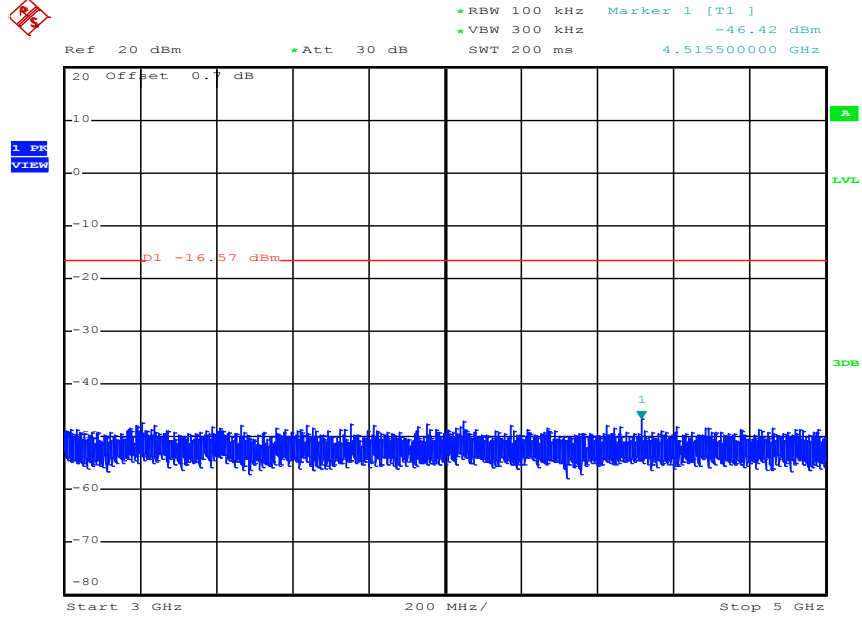
GFSK_LCH_Graphs

Pref

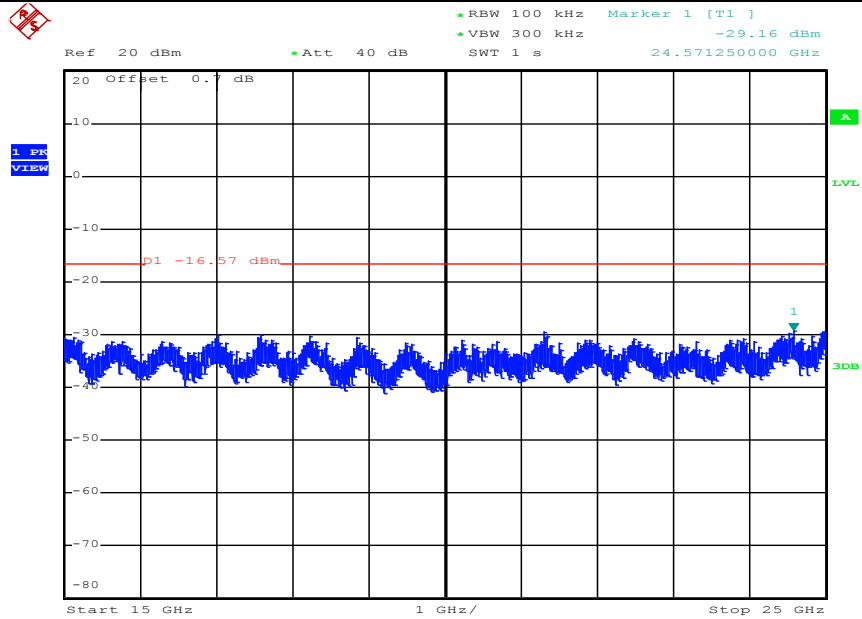
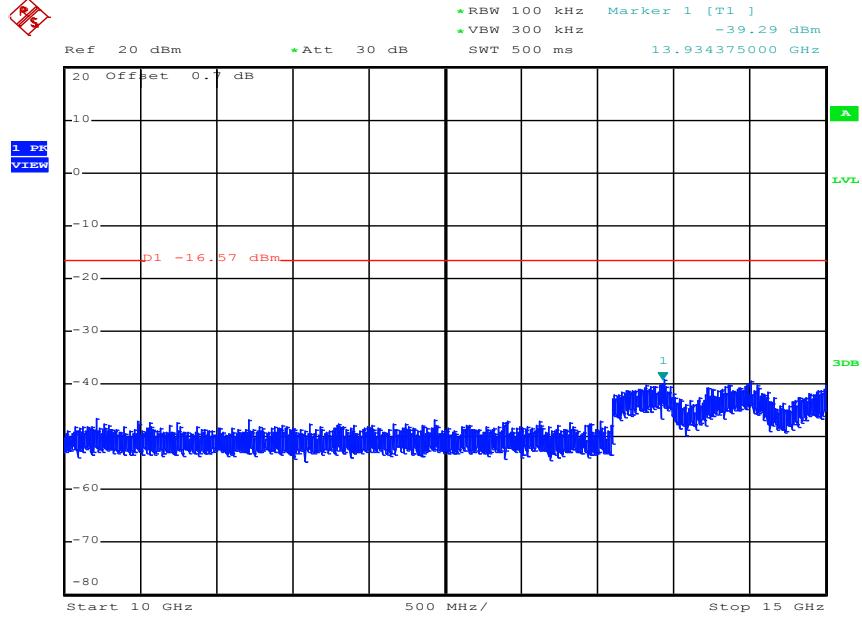


Puw





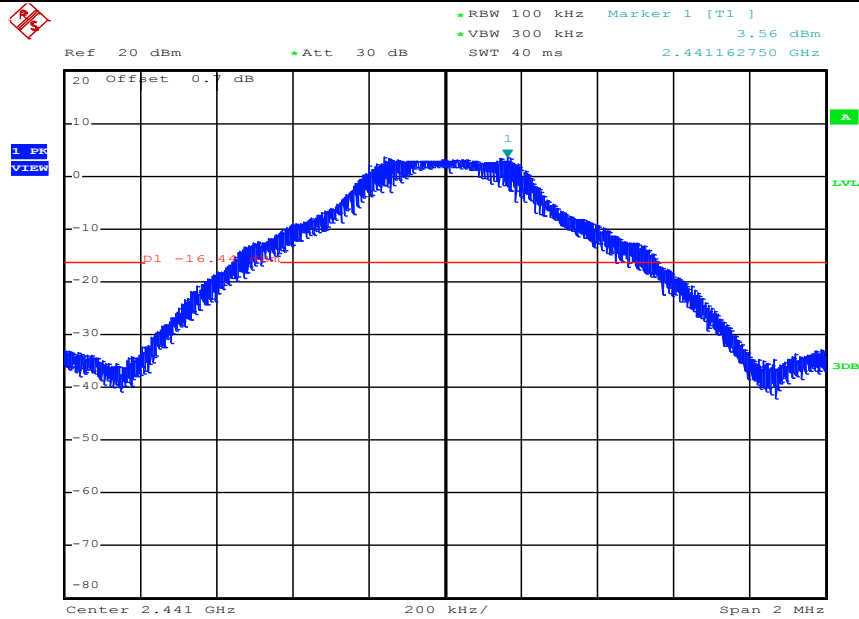
Date: 5.SEP.2017 08:09:51



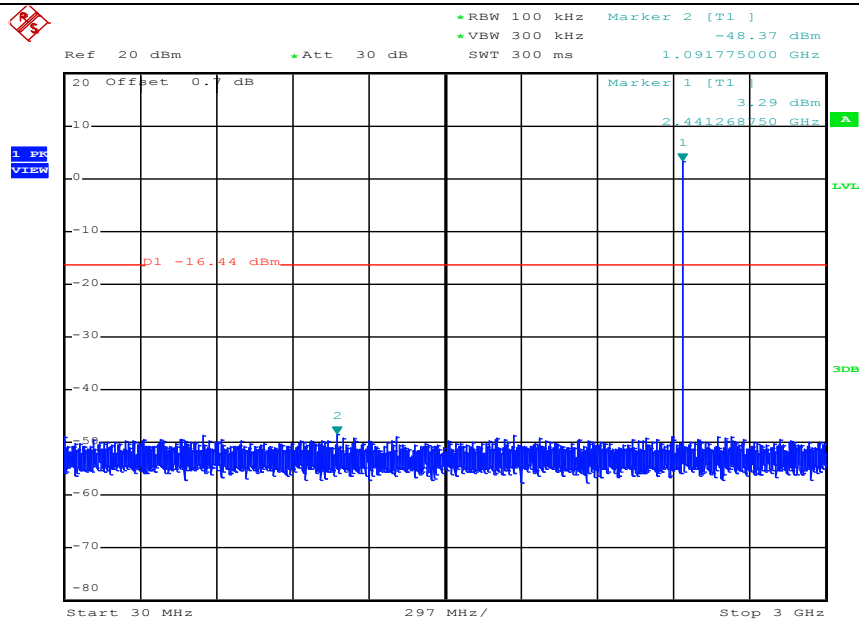
Date: 5.SEP.2017 08:10:15

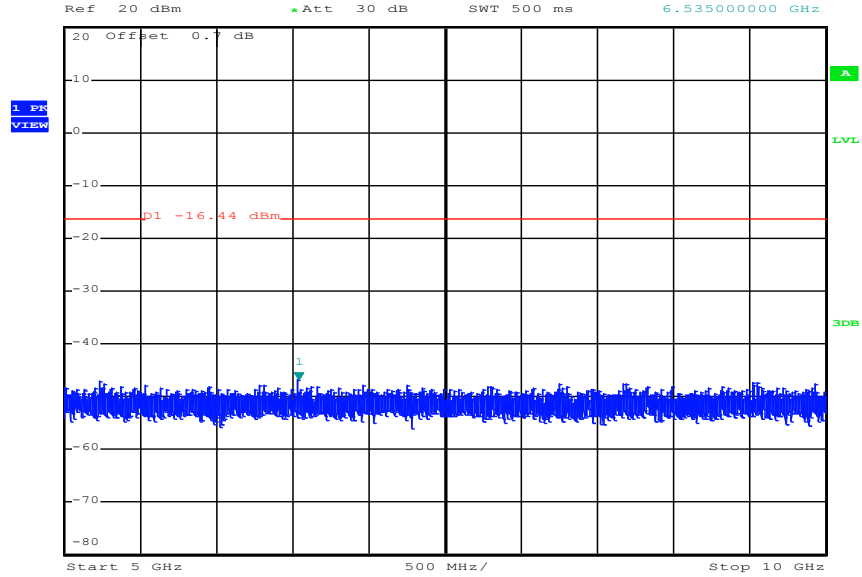
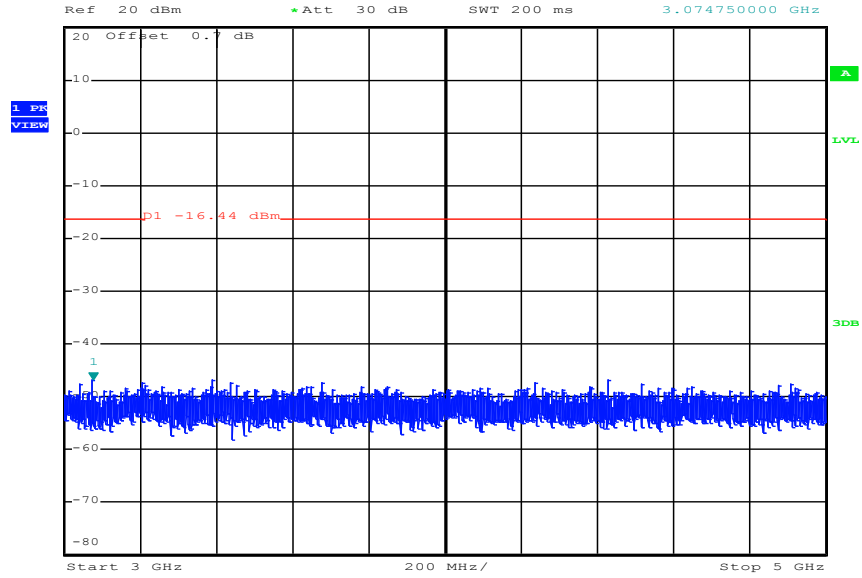
GFSK_MCH_Graphs

Pref

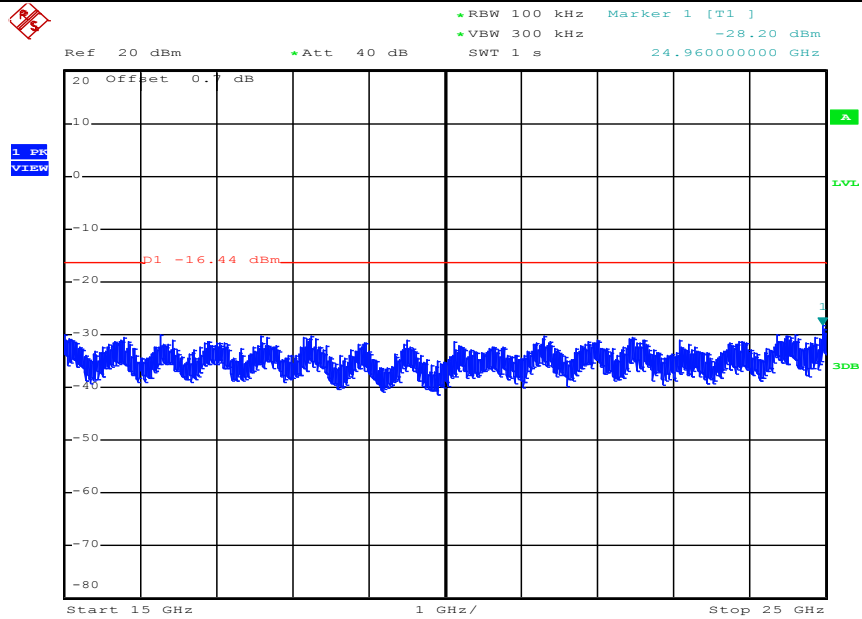
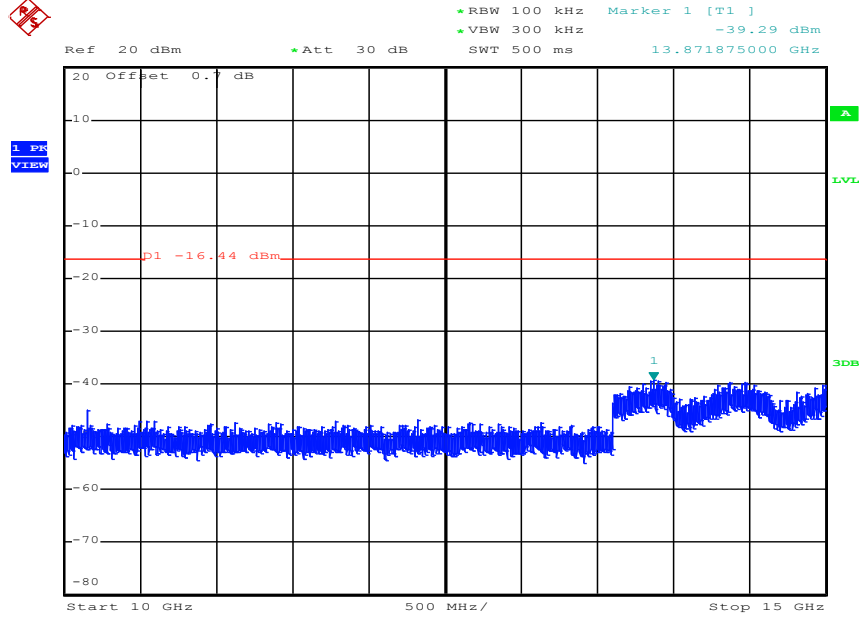


Puw





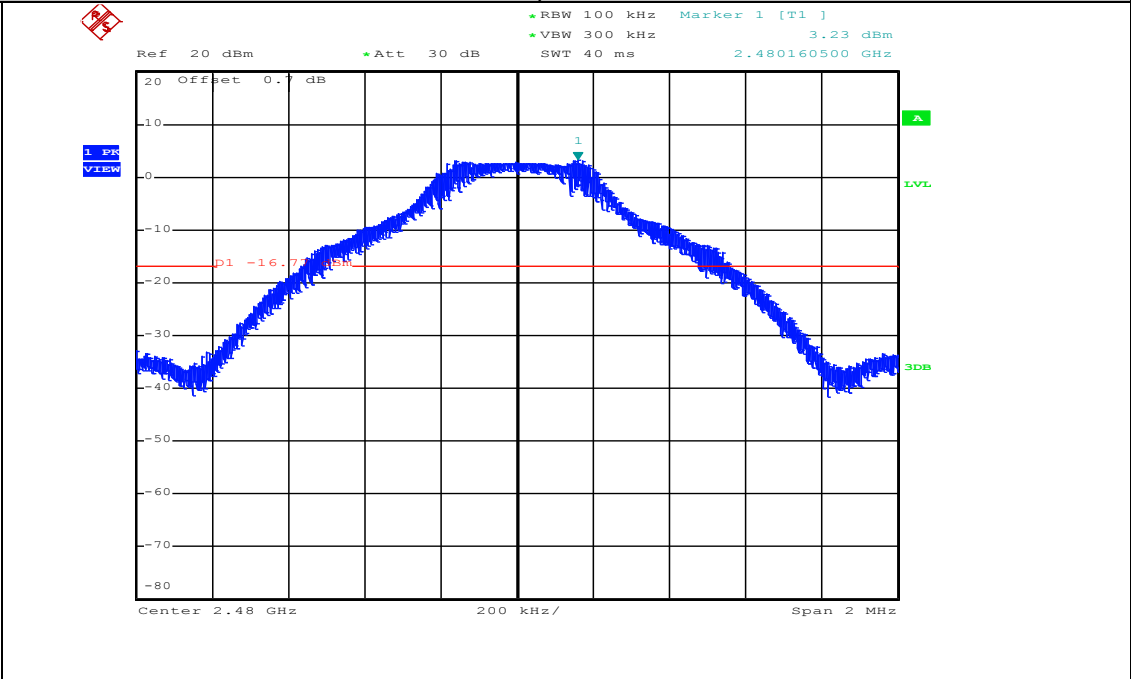
Date: 5.SEP.2017 08:13:12



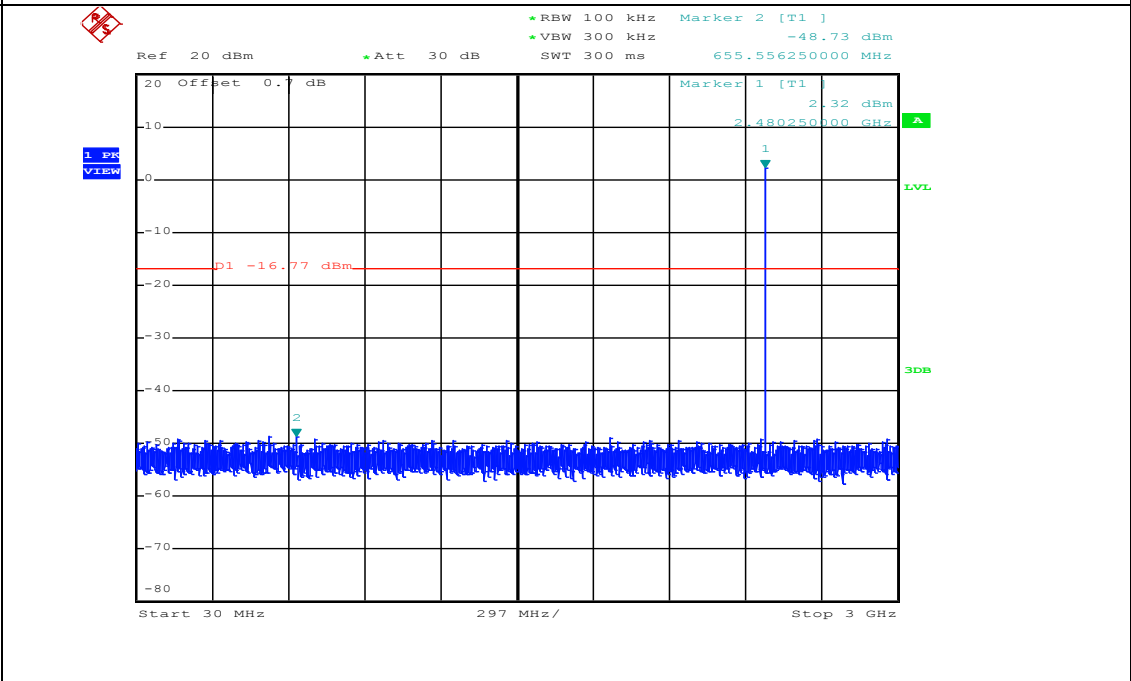
Date: 5.SEP.2017 08:13:36

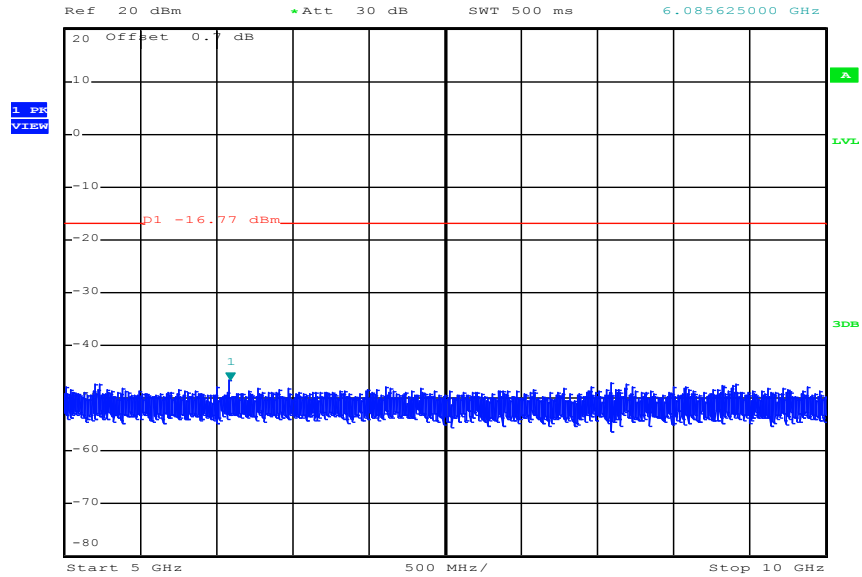
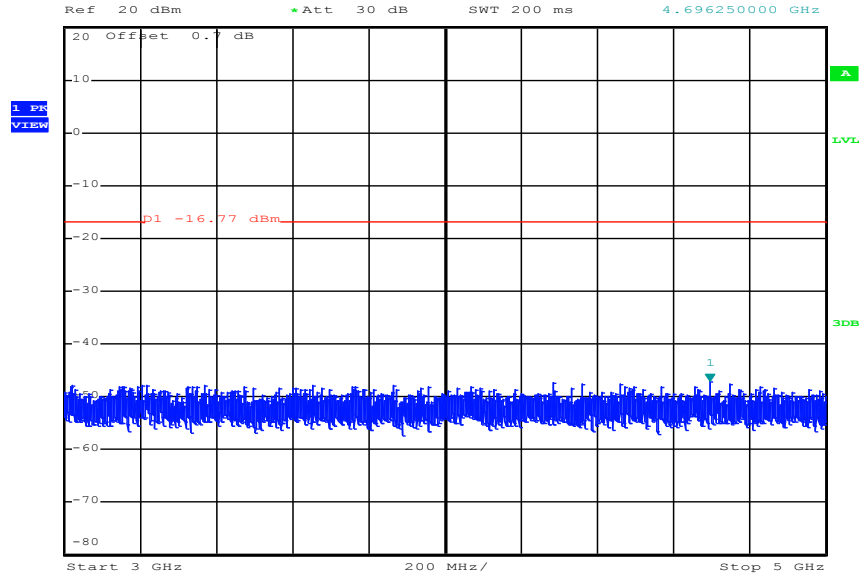
GFSK_HCH_Graphs

Pref

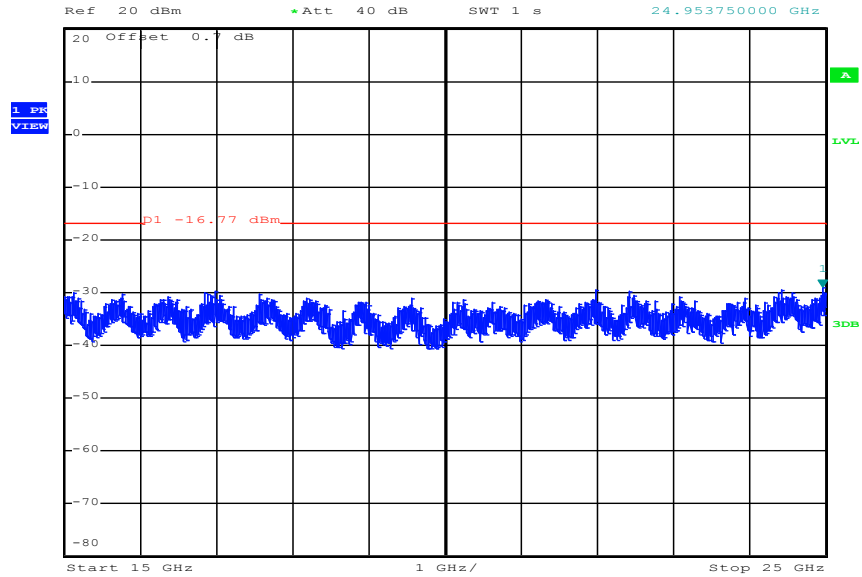
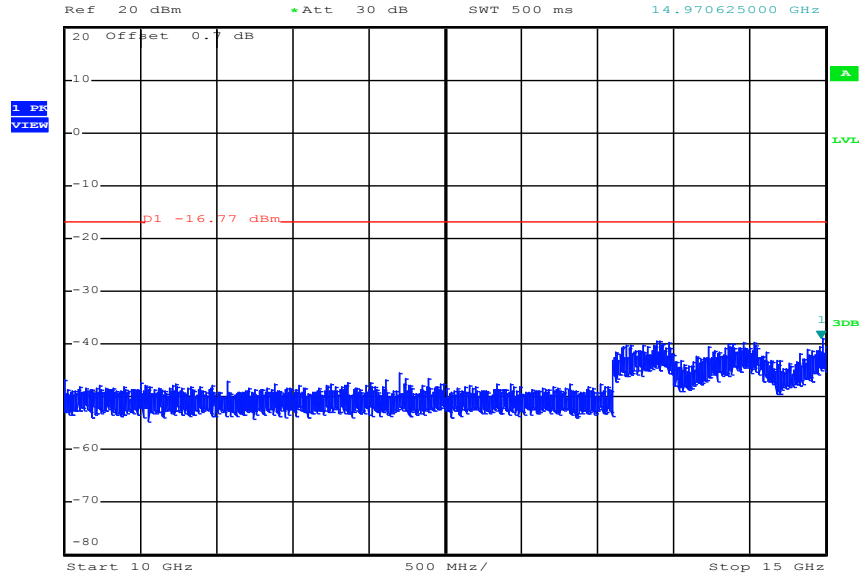


Puw

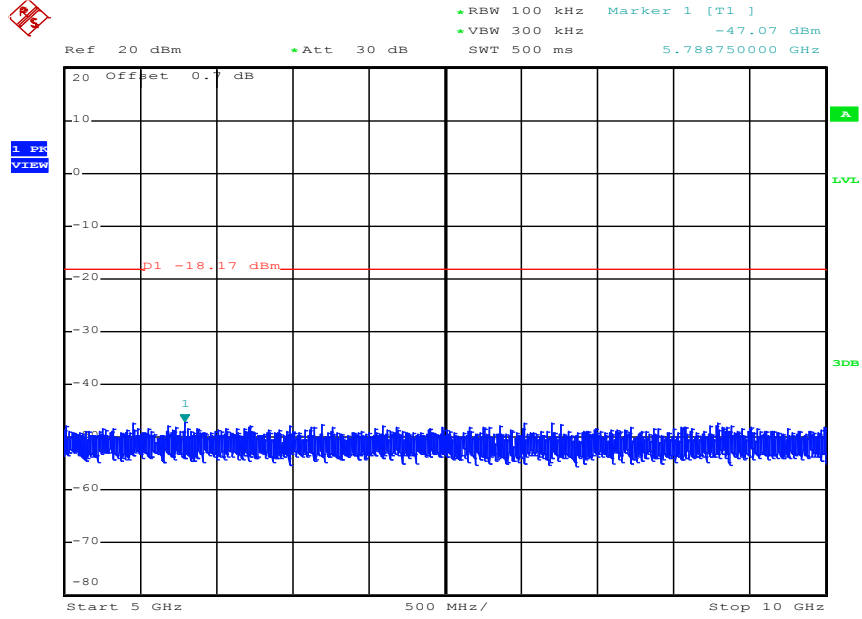
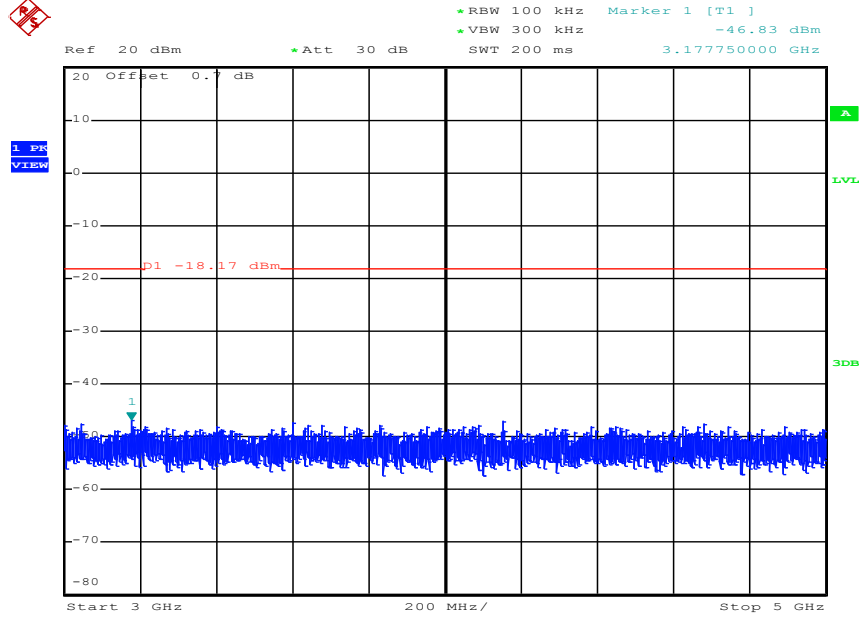




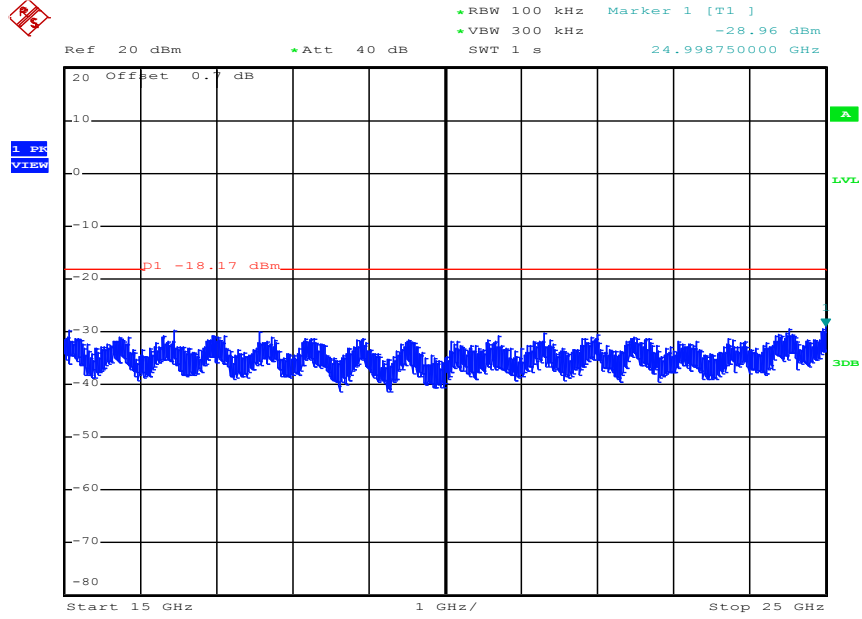
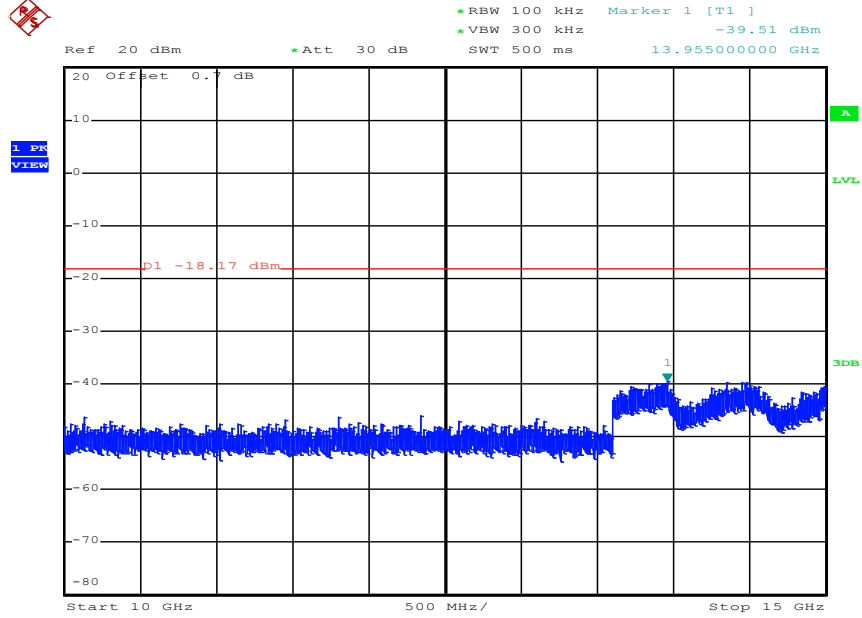
Date: 5.SEP.2017 08:16:44



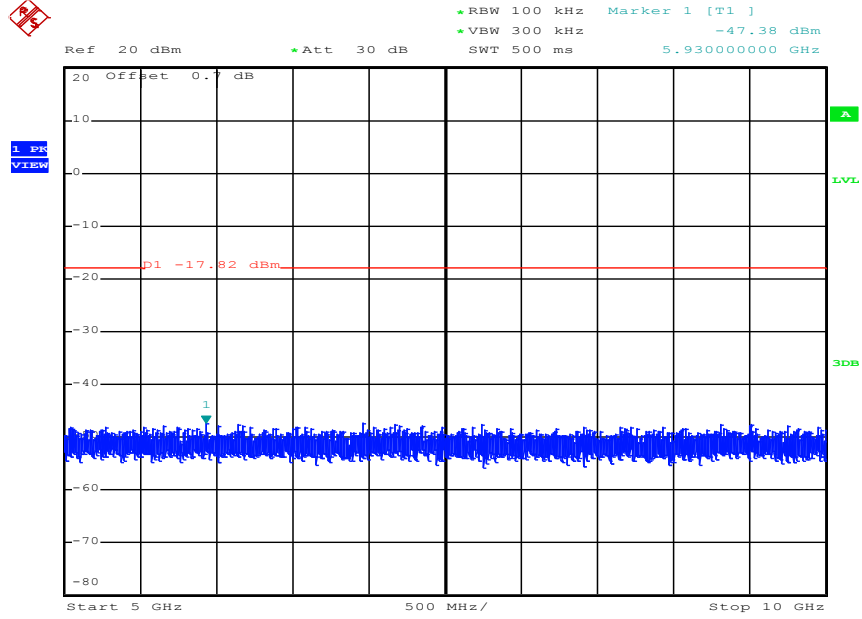
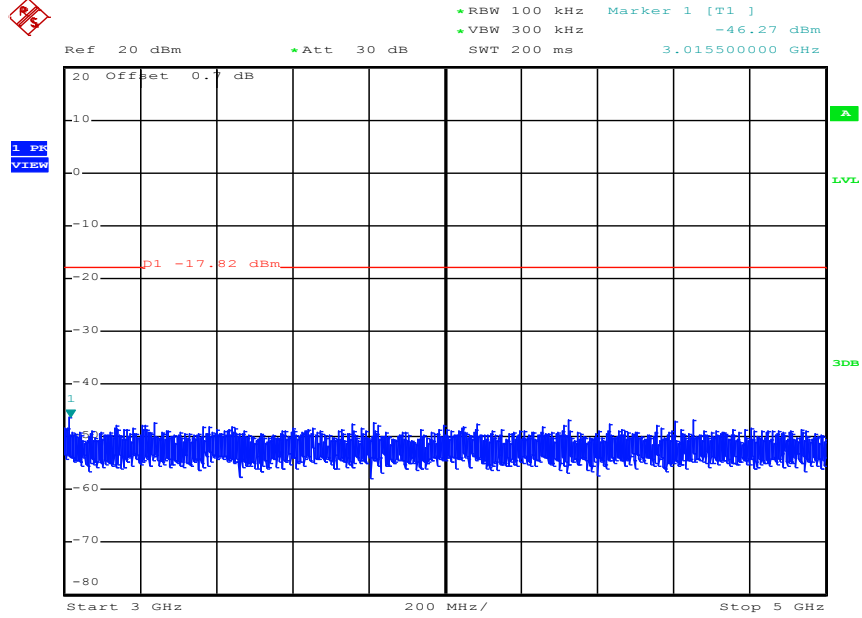
Date: 5.SEP.2017 08:17:09



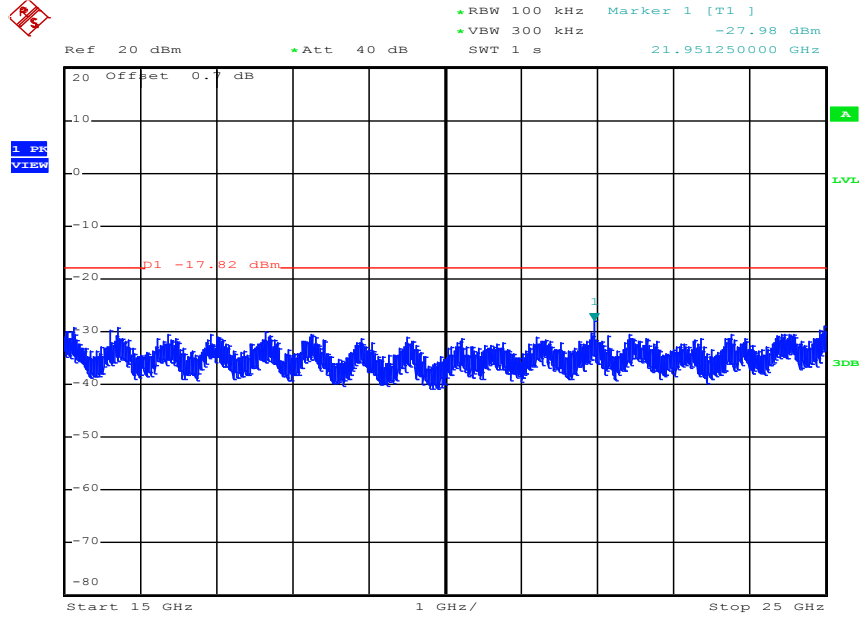
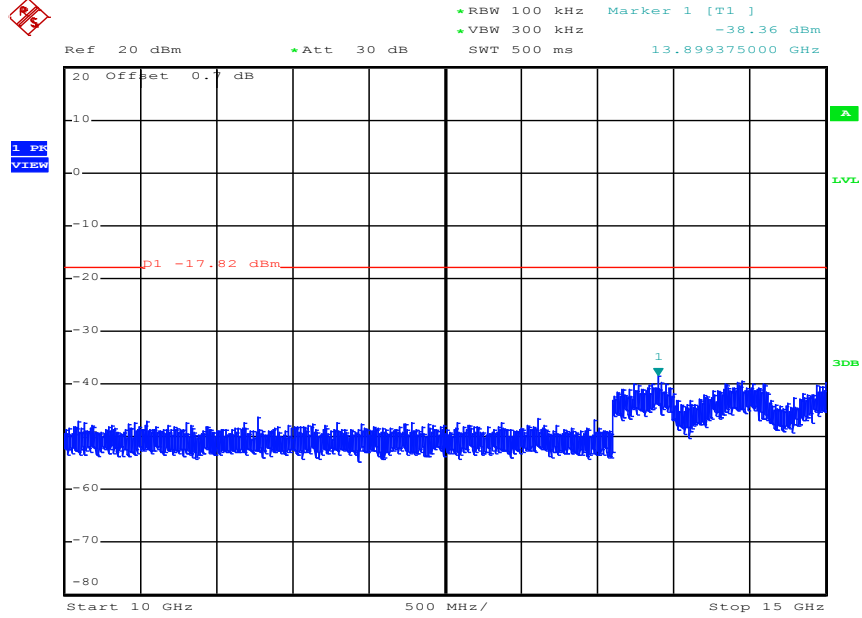
Date: 5.SEP.2017 08:20:27



Date: 5.SEP.2017 08:20:51



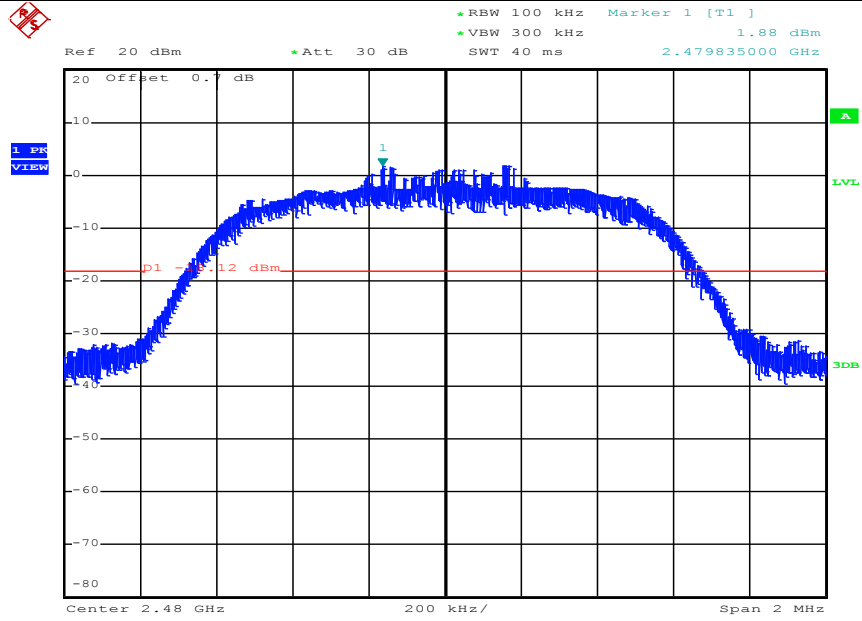
Date: 5.SEP.2017 08:23:24



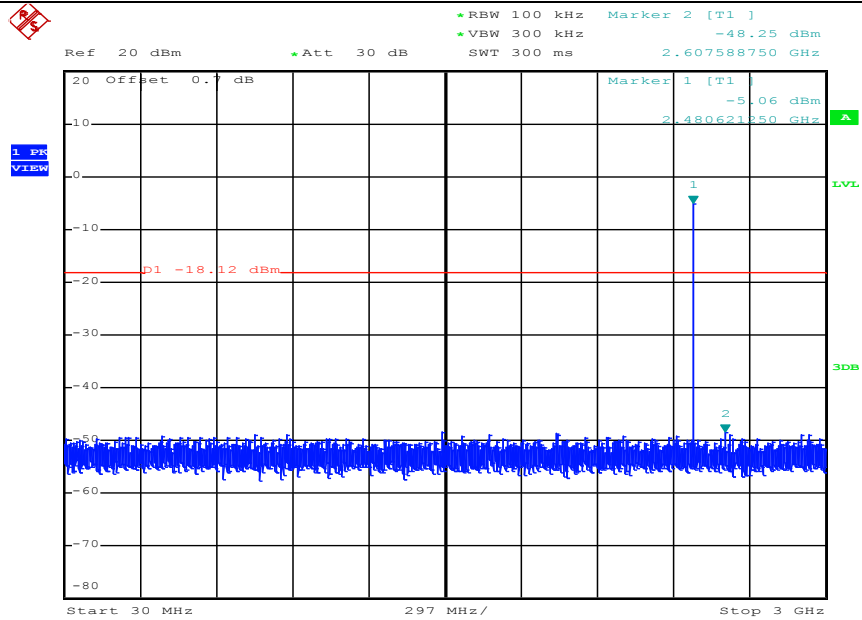
Date: 5.SEP.2017 08:23:49

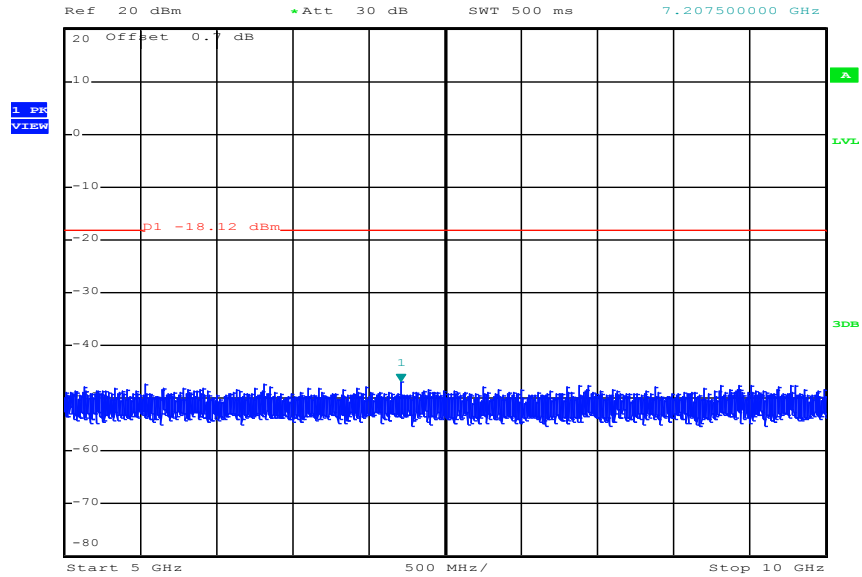
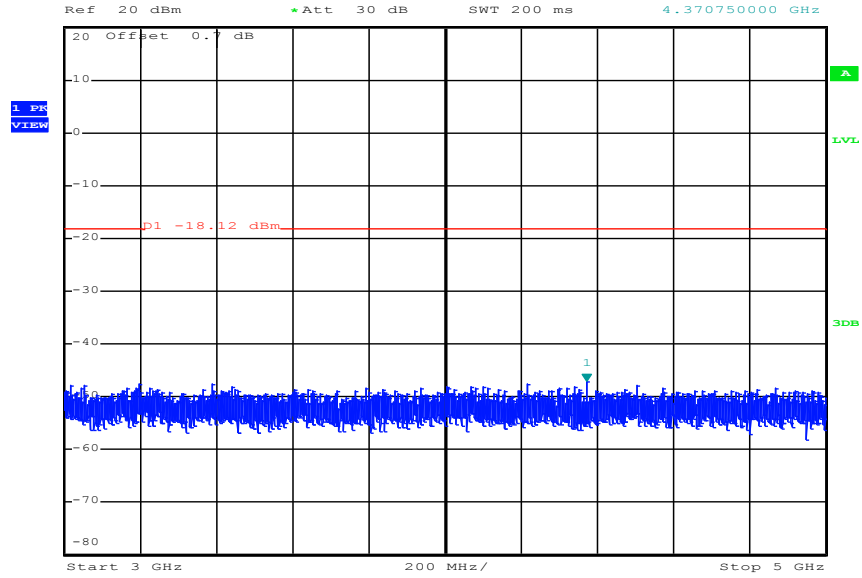
π/4DQPSK HCH Graphs

Pref

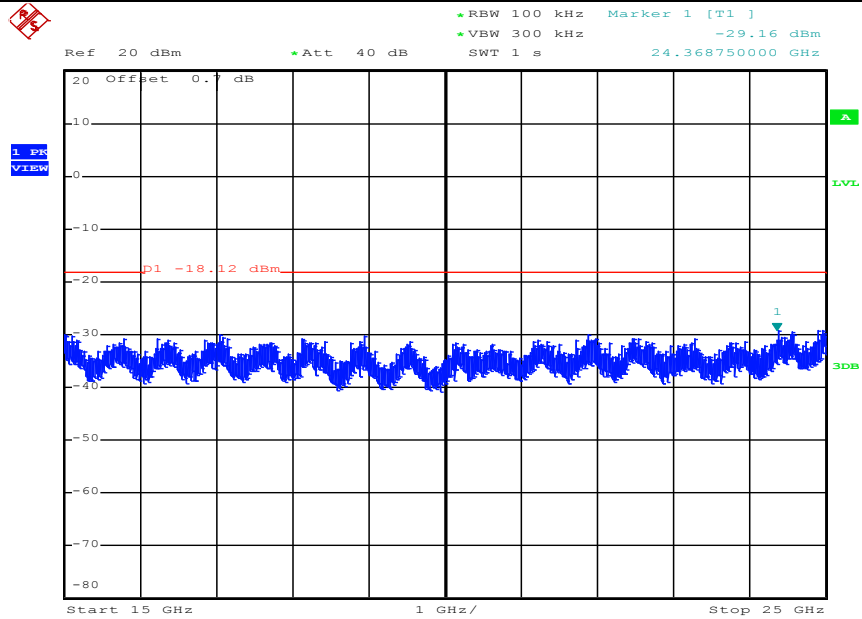
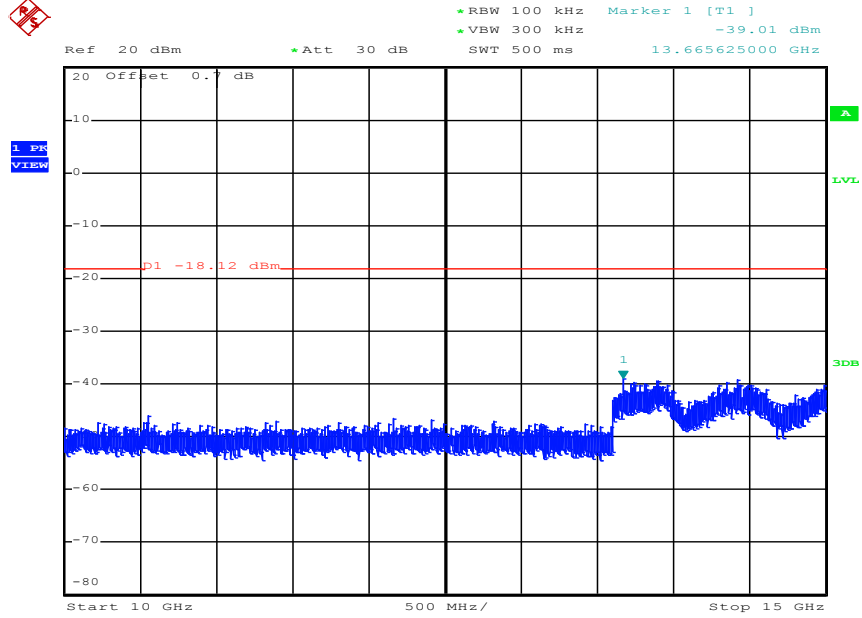


Puw





Date: 5.SEP.2017 08:26:30



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