

Dwell Time

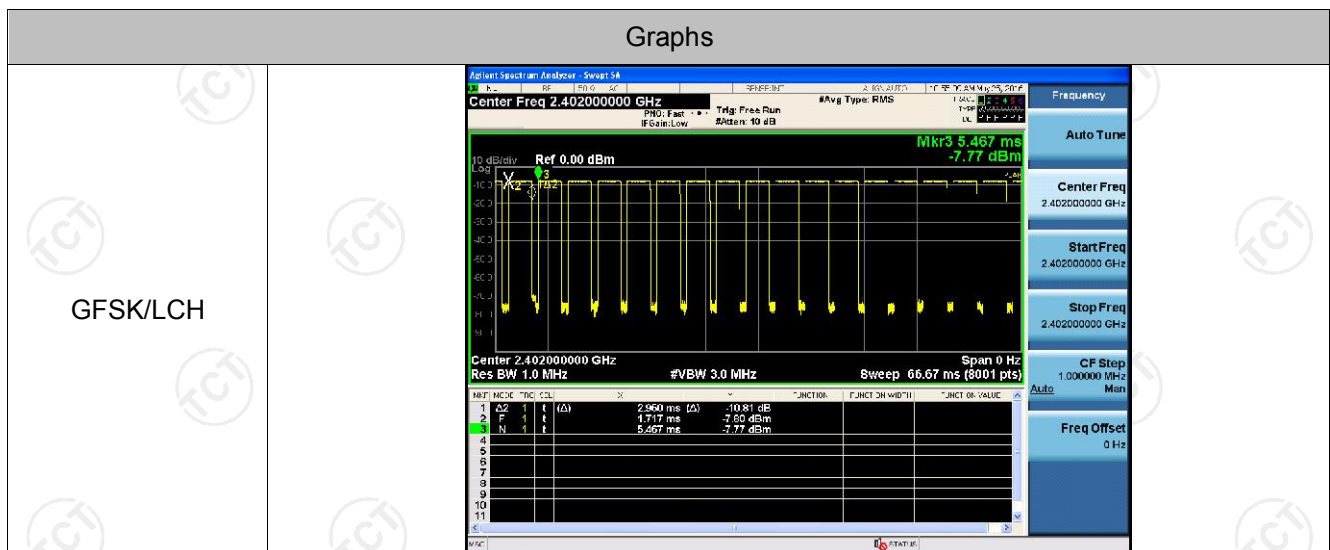
Result Table

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

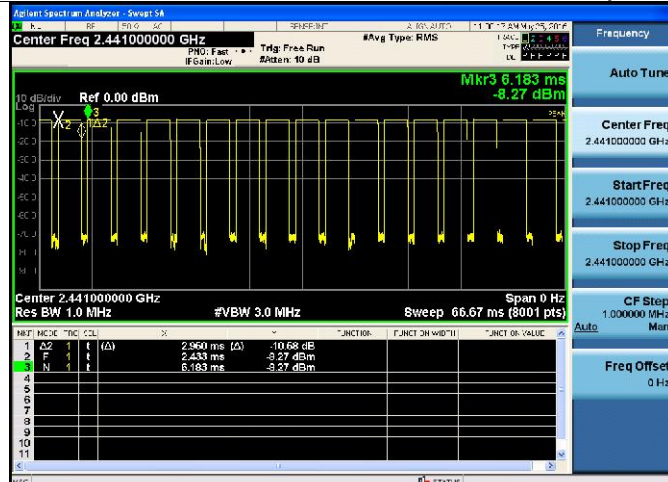
- The duration for dwell time calculation: $0.4[s] \times \text{hopping number} = 0.4[s] \times 79[\text{ch}] = 31.6[s \times \text{ch}]$;
- The burst width [ms/hop/ch], which is directly measured, refers to the duration on one channel hop.
- The hops per second for all channels: The selected EUT Conf 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 $1600/6 = 266.67 [\text{ch} \times \text{hop/s}]$
- 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: $3.38 [\text{hop/s}] \times 31.6[s \times \text{ch}] = 106.67 [\text{hop} \times \text{ch}]$;
- 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	2.95	106.7	0.315	78.67	PASS
GFSK	MCH	2.95	106.7	0.315	78.67	PASS
GFSK	HCH	2.95	106.7	0.315	78.67	PASS
$\pi/4$ DQPSK	LCH	2.933	106.7	0.313	78.22	PASS
$\pi/4$ DQPSK	MCH	2.942	106.7	0.314	78.44	PASS
$\pi/4$ DQPSK	HCH	2.933	106.7	0.313	78.22	PASS

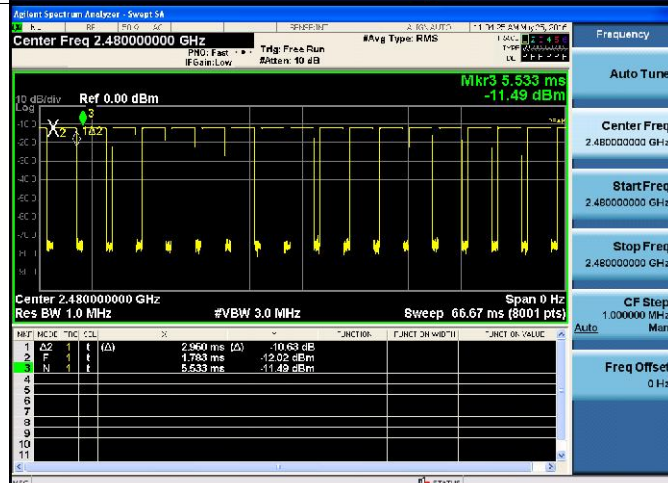
Test Graph



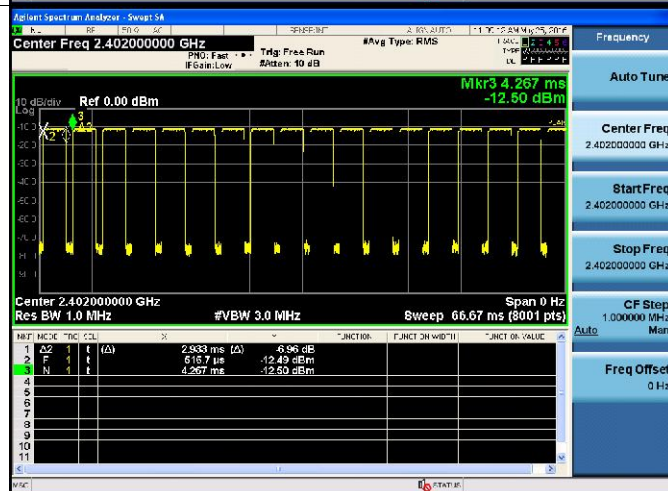
GFSK/MCH



GFSK/HCH



$\pi/4$ DQPSK/LCH



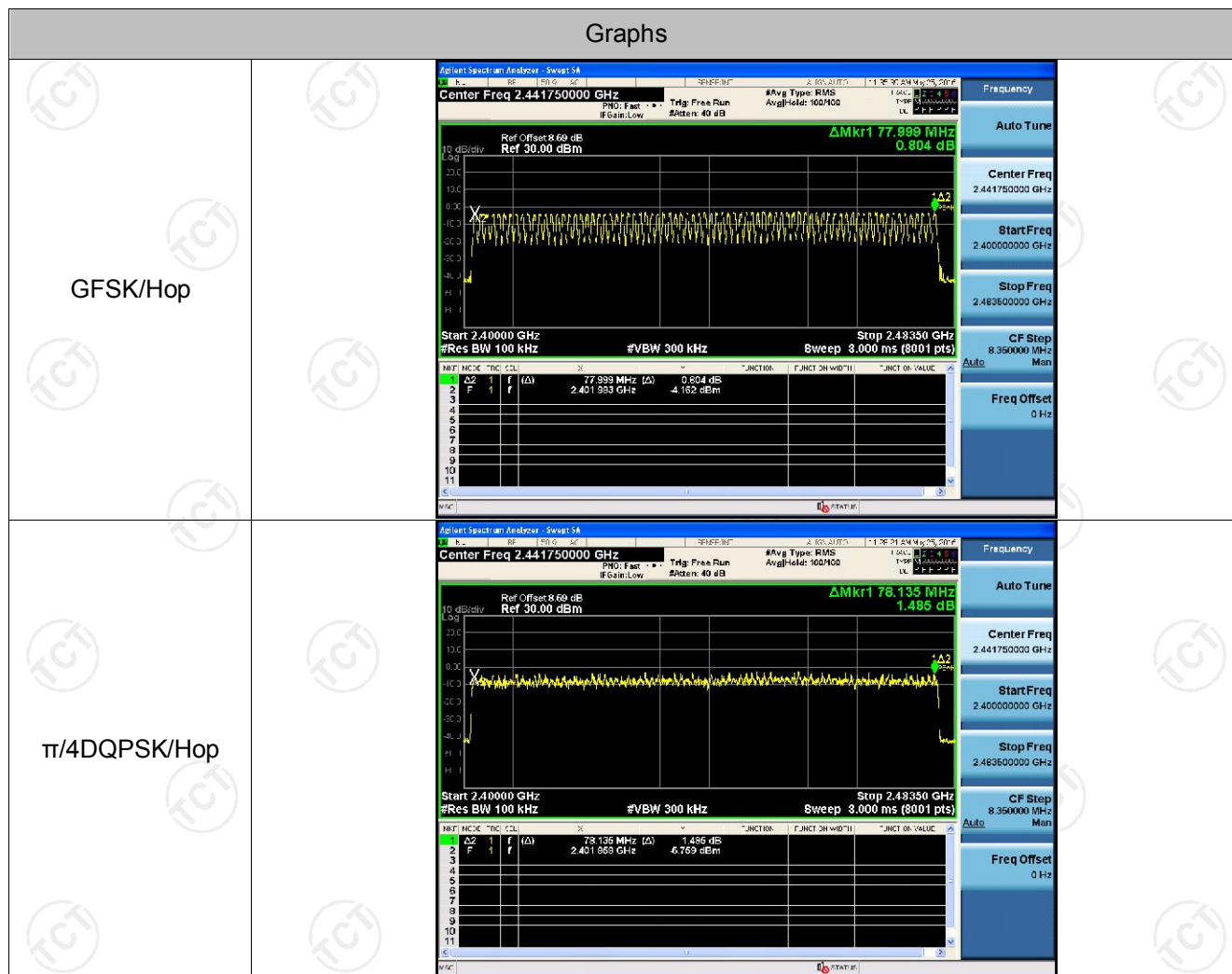
$\pi/4$ DQPSK/MCH	Agilent Spectrum Analyzer - Setup 54 Center Freq 2.441000000 GHz Ref 0.00 dBm Mkr3 6.600 ms -11.48 dBm Center 2.441000000 GHz Res BW 1.0 MHz #VBW 3.0 MHz Sweep 66.67 ms Span 0 Hz REF MODE TIME COL 1 A2 1 t (Δ) 2.942 ms (Δ) -11.60 dB 2 F 1 t 2.600 ms -11.04 dBm 3 N 1 t 6.600 ms -11.48 dBm Frequency Auto Tune Center Freq 2.441000000 GHz Start Freq 2.441000000 GHz Stop Freq 2.441000000 GHz CF Step 1.000000 MHz Freq Offset 0 Hz
$\pi/4$ DQPSK/HCH	Agilent Spectrum Analyzer - Setup 54 Center Freq 2.480000000 GHz Ref 0.00 dBm Mkr3 7.083 ms -11.97 dBm Center 2.480000000 GHz Res BW 1.0 MHz #VBW 3.0 MHz Sweep 66.67 ms Span 0 Hz REF MODE TIME COL 1 A2 1 t (Δ) 2.933 ms (Δ) -6.68 dB 2 F 1 t 3.333 ms -11.98 dBm 3 N 1 t 7.083 ms -11.97 dBm Frequency Auto Tune Center Freq 2.480000000 GHz Start Freq 2.480000000 GHz Stop Freq 2.480000000 GHz CF Step 1.000000 MHz Freq Offset 0 Hz

Hopping Channel Number

Result Table

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

Test Graph



Conducted Peak Output Power

Result Table

Mode	Channel.	Maximum Peak Output Power [dBm]	Verdict
GFSK	LCH	1.024	PASS
GFSK	MCH	0.764	PASS
GFSK	HCH	-2.713	PASS
$\pi/4$ DQPSK	LCH	-1.083	PASS
$\pi/4$ DQPSK	MCH	-0.548	PASS
$\pi/4$ DQPSK	HCH	-0.740	PASS

Test Graph



GFSK/HCH



$\pi/4$ DQPSK/LCH



$\pi/4$ DQPSK/MCH



π/4DQPSK/HCH

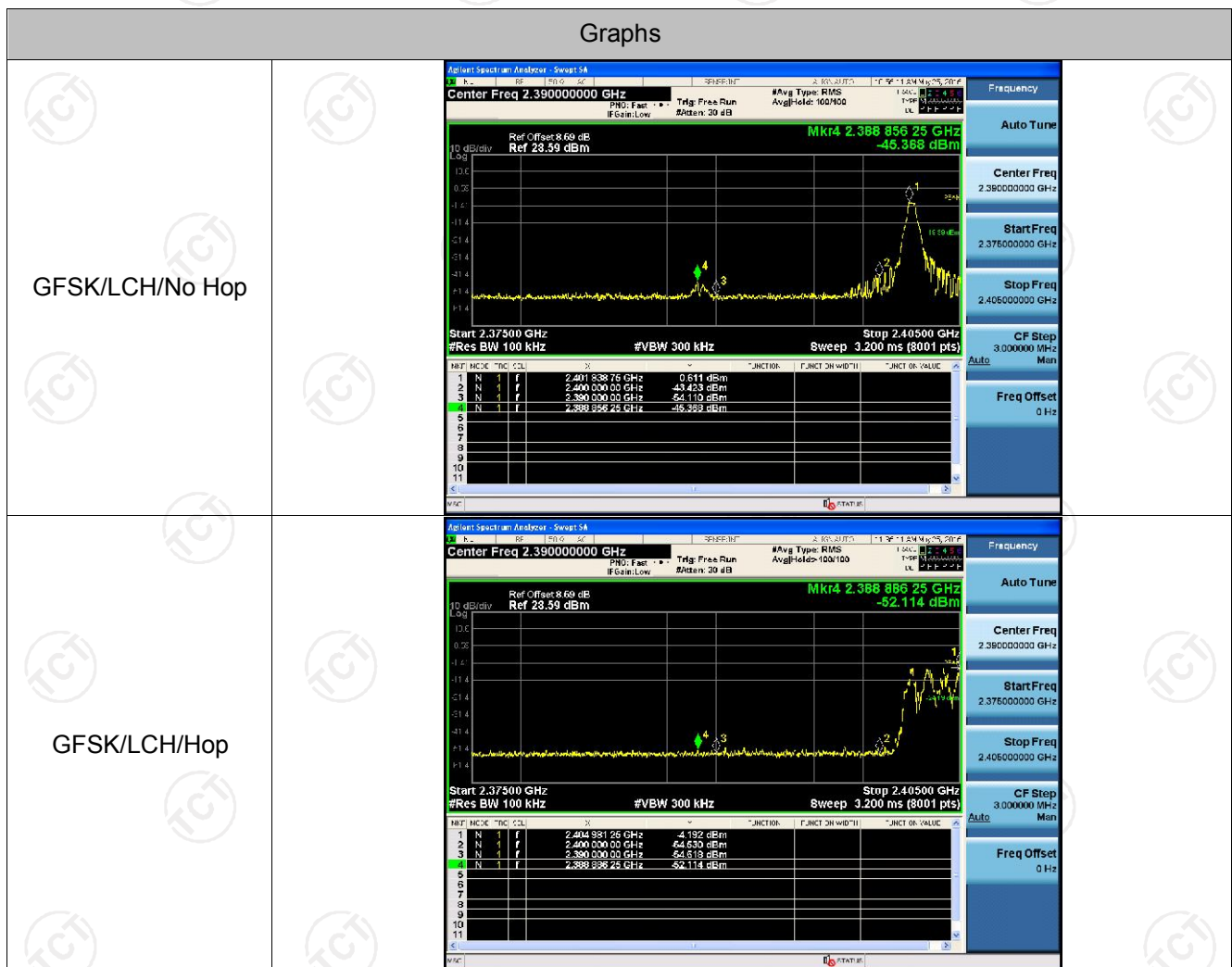


Band-edge for RF Conducted Emissions

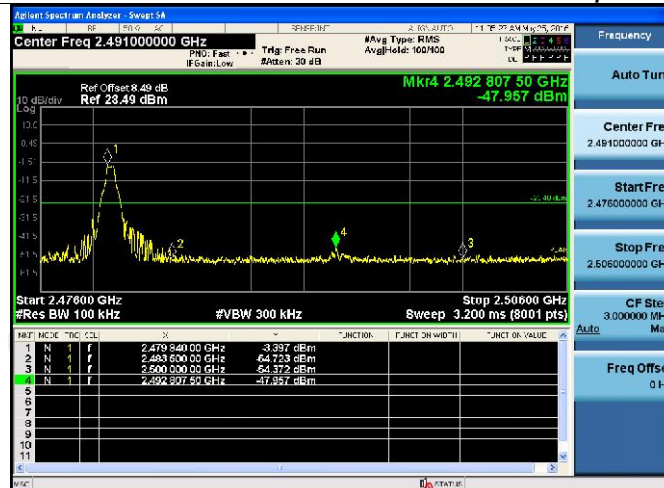
Result Table

Mode	Channel	Carrier Frequency [MHz]	Carrier Power [dBm]	Frequency Hopping	Max Spurious Level [dBm]	Limit [dBm]	Verdict
GFSK	LCH	2402	0.611	Off	-45.368	-19.39	PASS
			-4.192	On	-52.114	-24.19	PASS
GFSK	HCH	2480	-3.397	Off	-47.957	-23.4	PASS
			-3.405	On	-50.596	-23.41	PASS
π /4DQPSK	LCH	2402	-4.053	Off	-46.617	-24.05	PASS
			-3.822	On	-52.029	-23.82	PASS
π /4DQPSK	HCH	2480	-3.241	Off	-45.293	-23.24	PASS
			-4.946	On	-51.415	-24.95	PASS

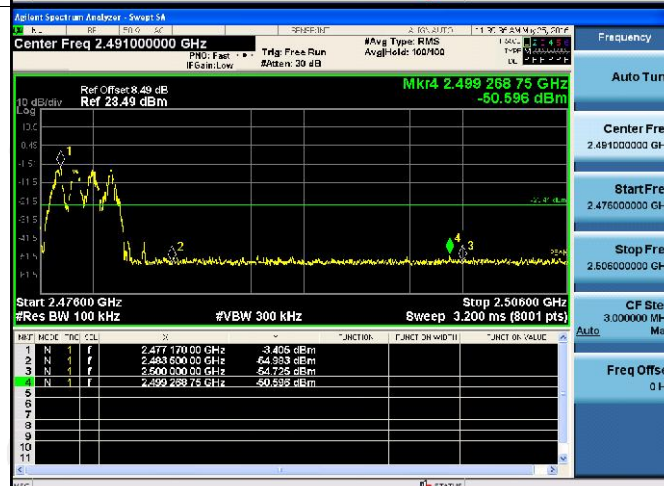
Test Graph



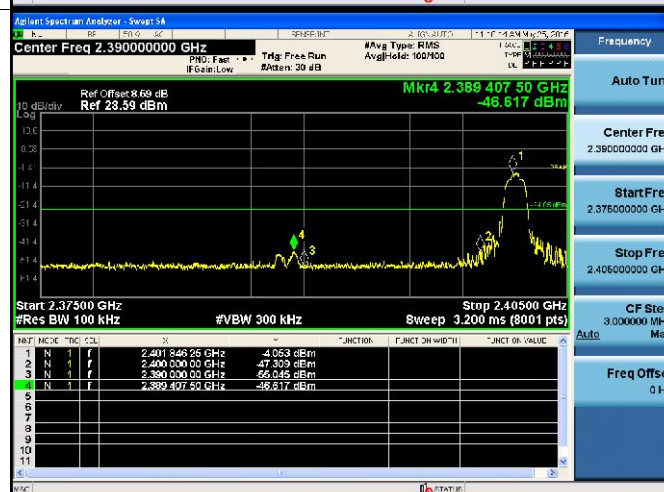
GFSK/HCH/No Hop



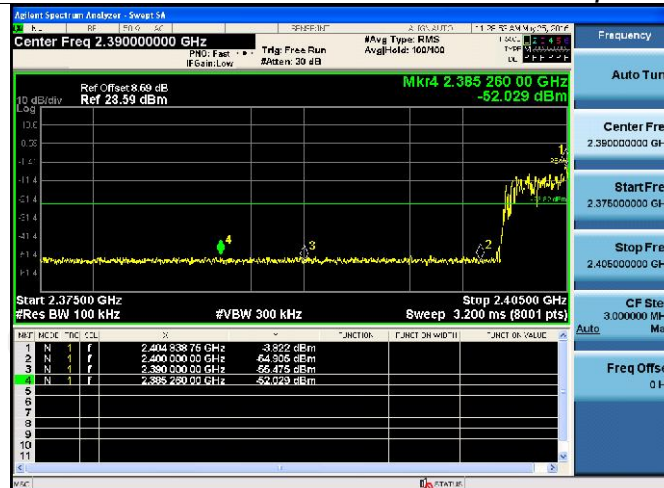
GFSK/HCH/Hop



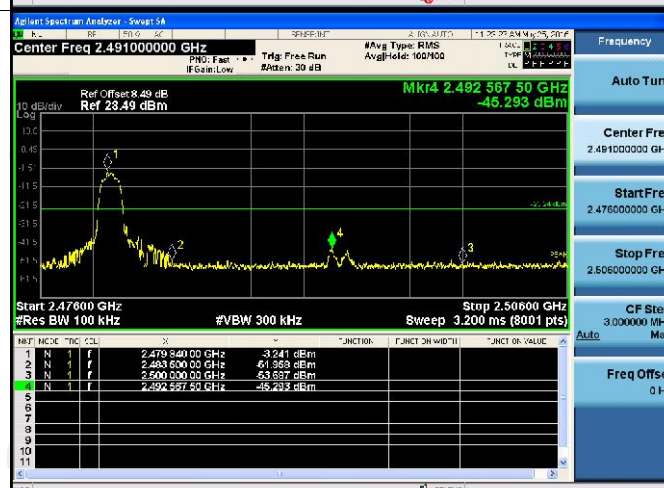
$\pi/4$ DQPSK/LCH/No Hop



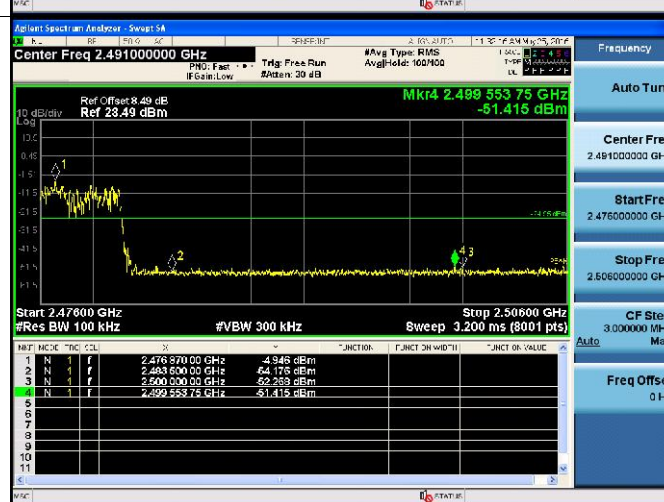
$\pi/4$ DQPSK/LCH/Hop



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



$\pi/4$ DQPSK/HCH/Hop

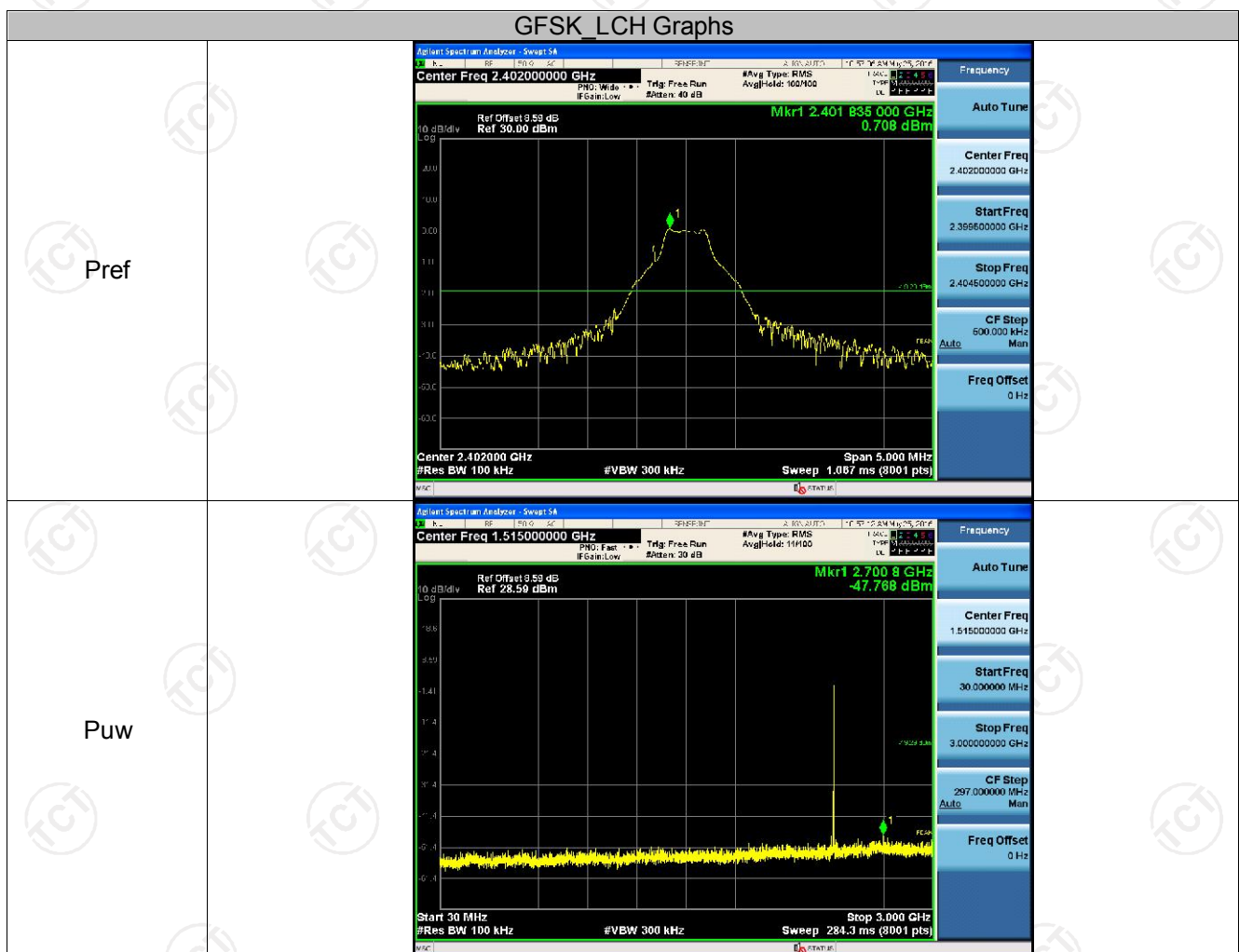


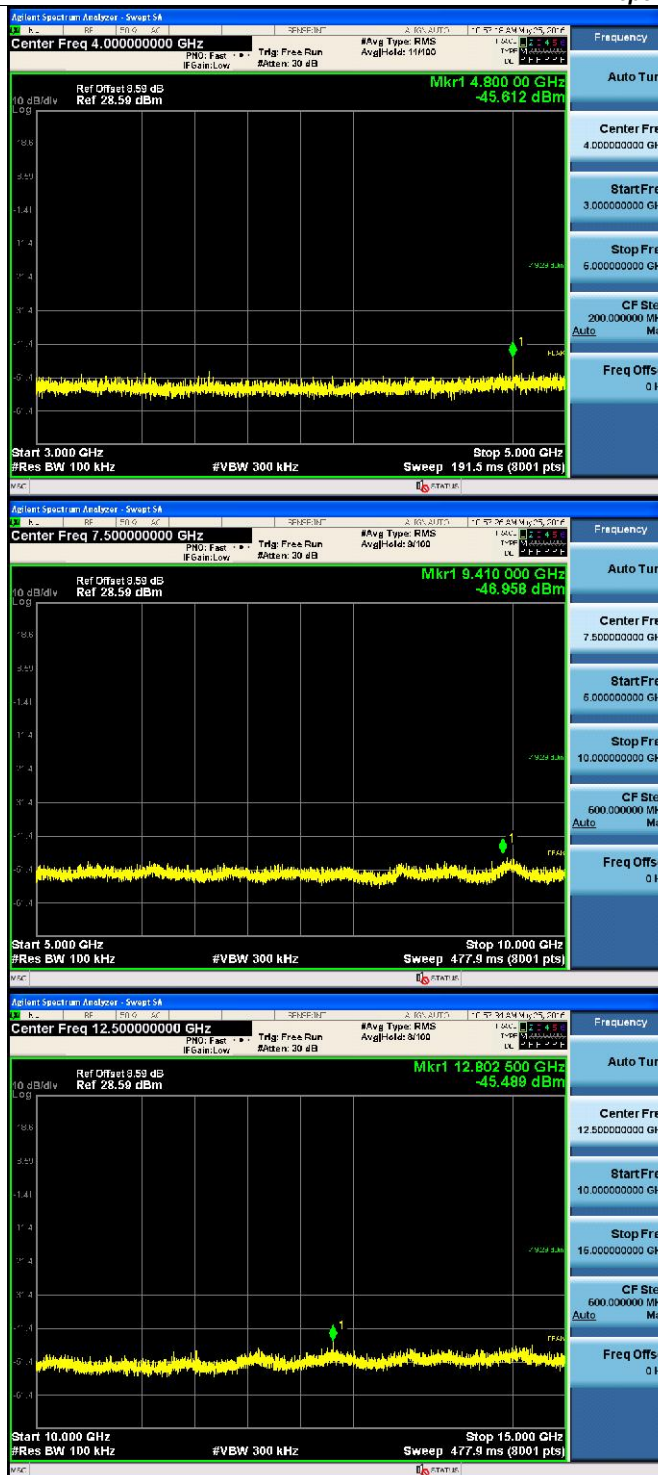
RF Conducted Spurious Emissions

Result Table

Mode	Channel	Pref [dBm]	Puw[dBm]	Verdict
GFSK	LCH	0.708	<Limit	PASS
GFSK	MCH	-2.944	<Limit	PASS
GFSK	HCH	-3.329	<Limit	PASS
$\pi/4$ DQPSK	LCH	-3.615	<Limit	PASS
$\pi/4$ DQPSK	MCH	-2.97	<Limit	PASS
$\pi/4$ DQPSK	HCH	-3.212	<Limit	PASS

Test Graph

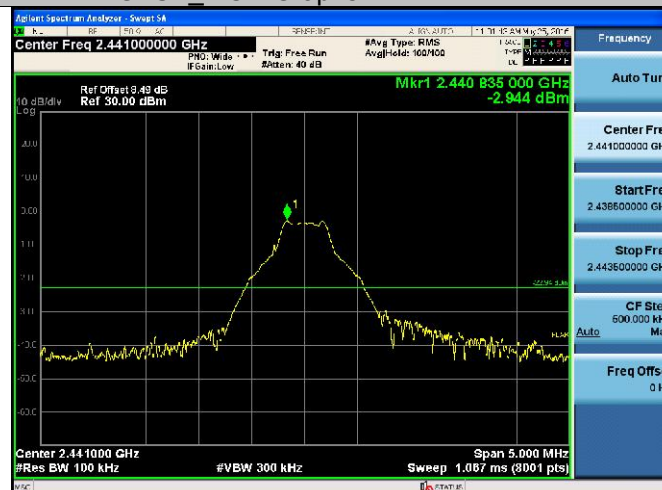




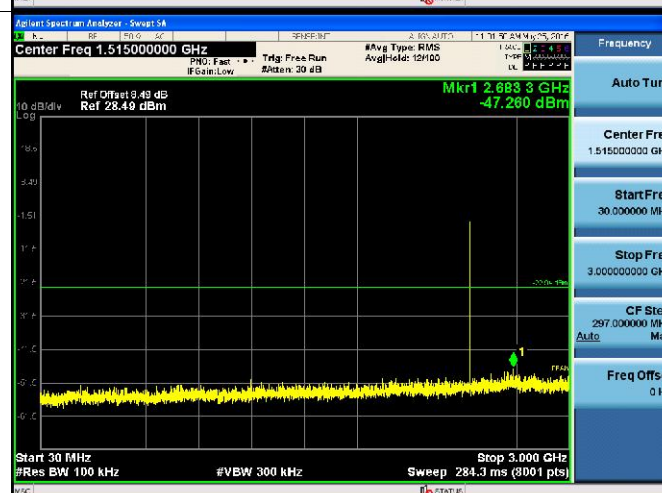


GFSK MCH Graphs

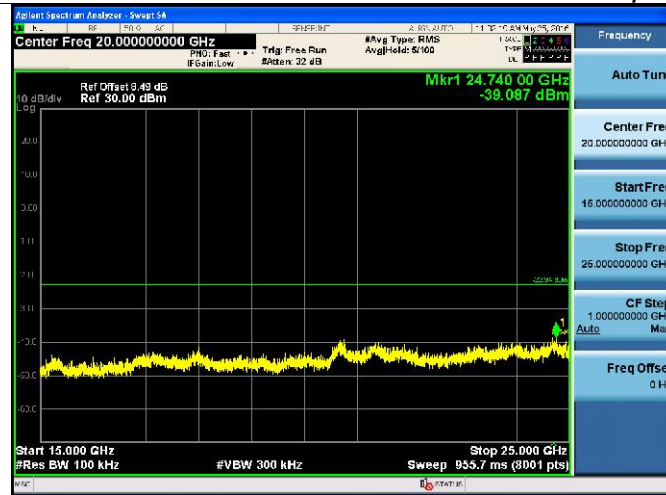
Pref



Puw

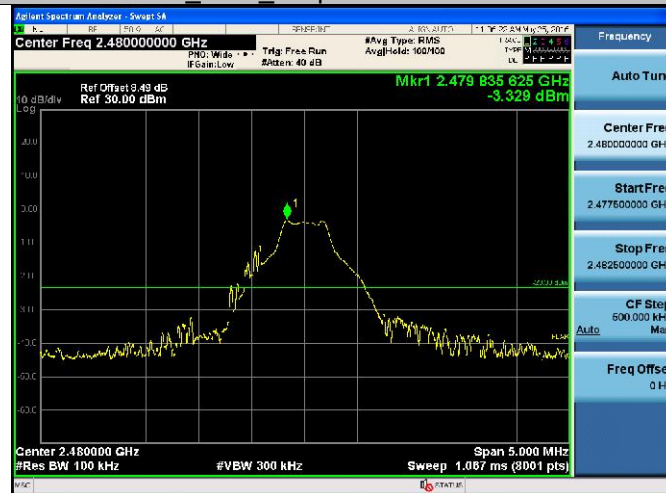




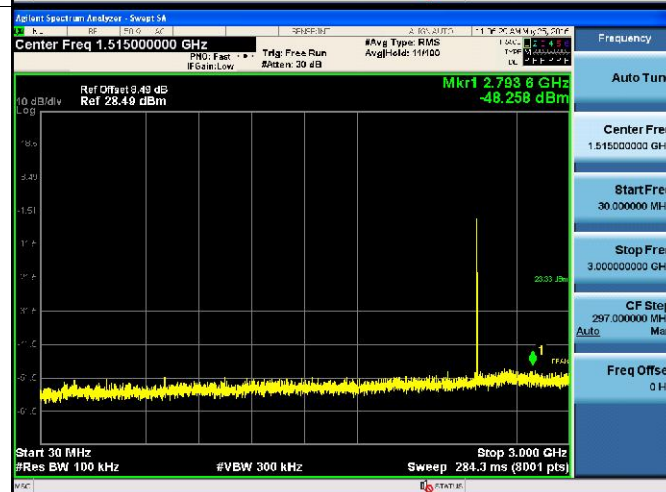


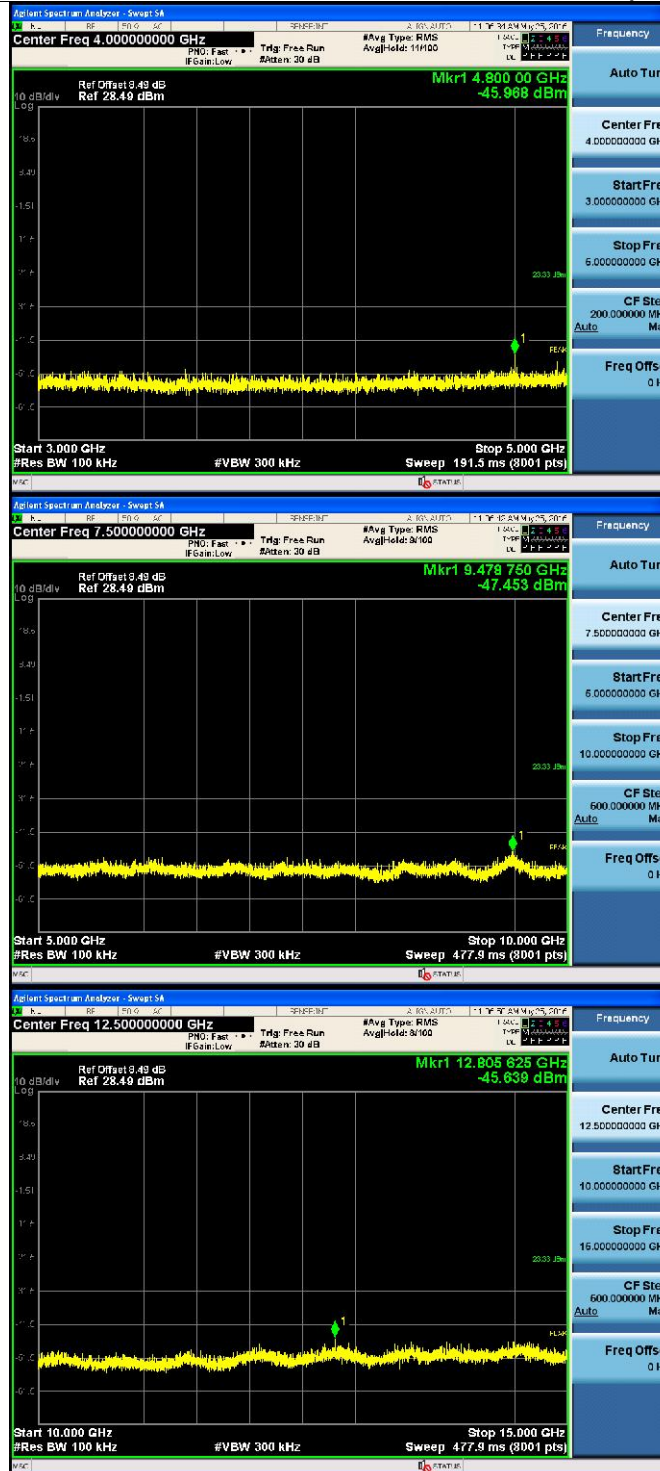
GFSK HCH Graphs

Pref



Puw





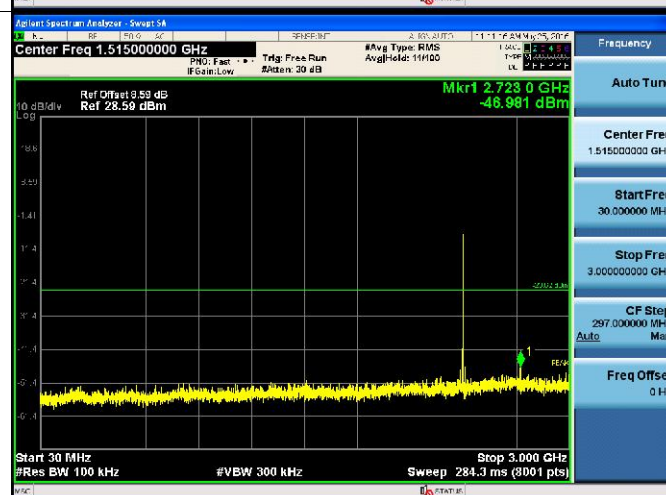


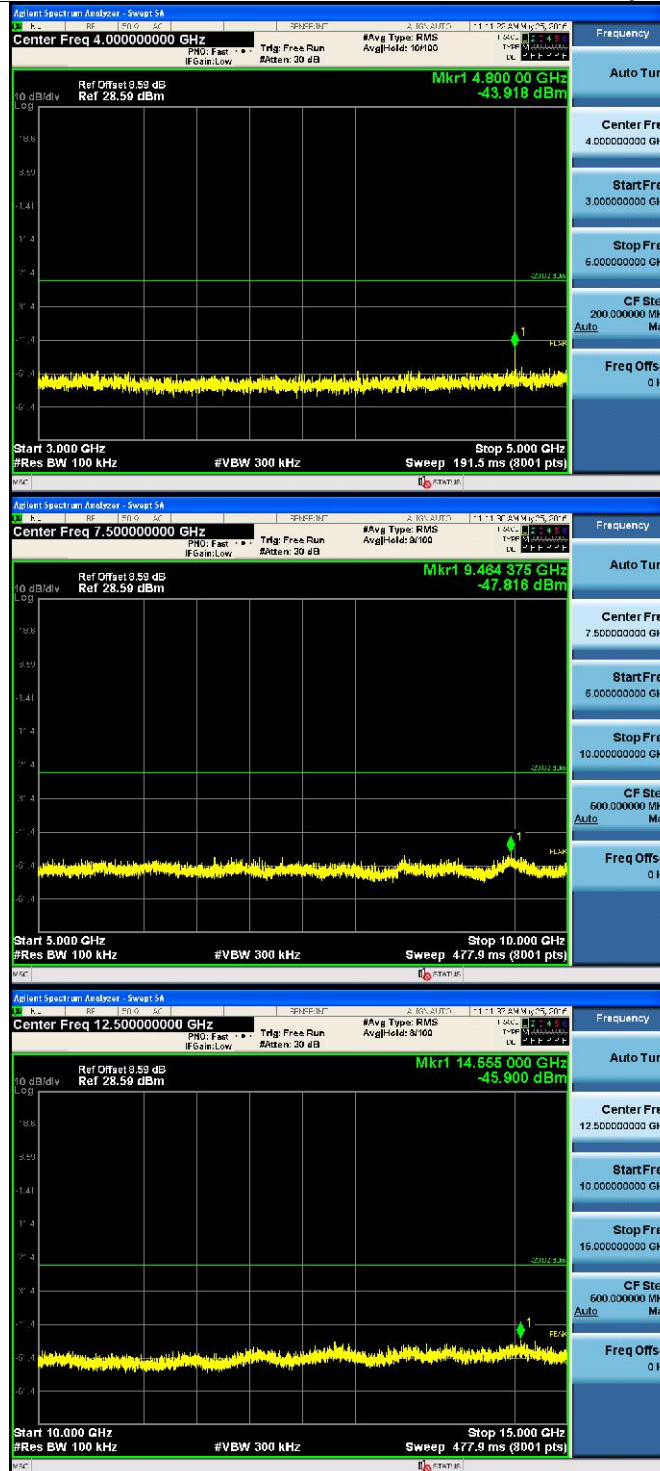
$\pi/4$ DQPSK LCH_Graphs

Pref



Puw

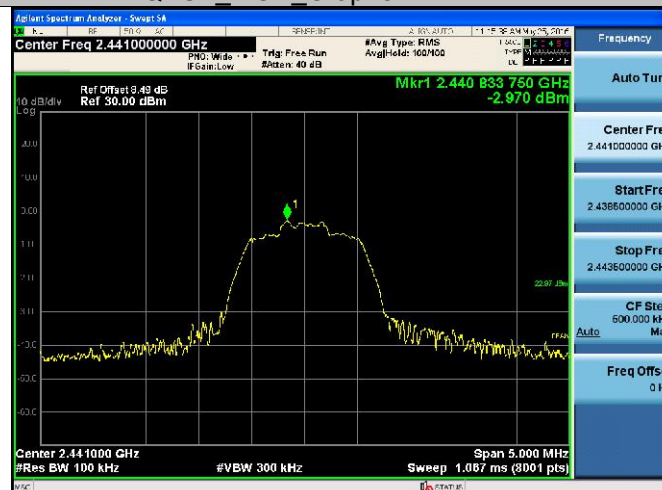




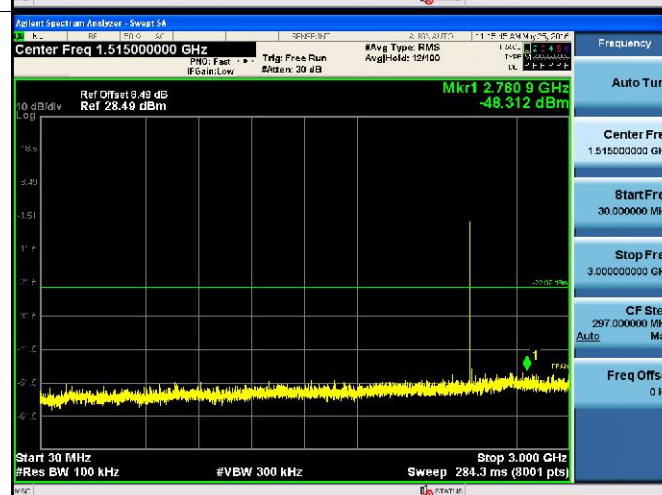


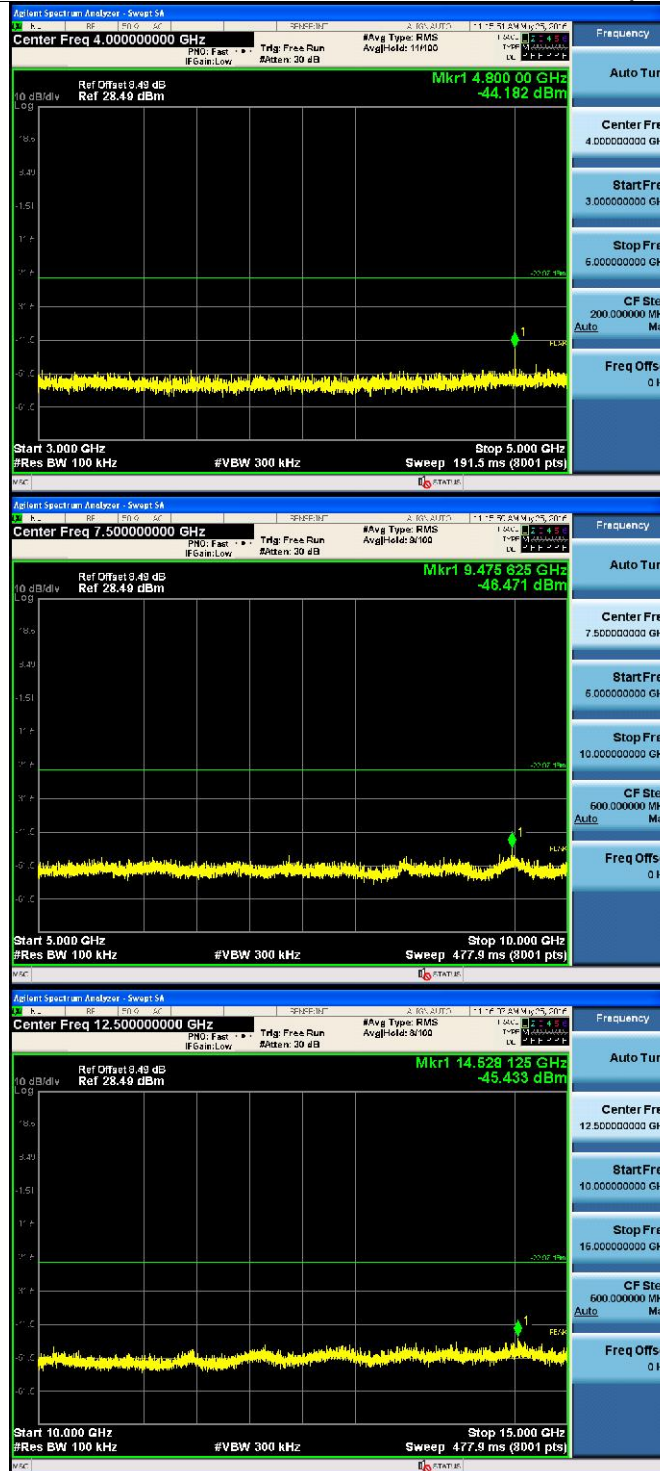
$\pi/4$ DQPSK_MCH_Graphs

Pref



Puw

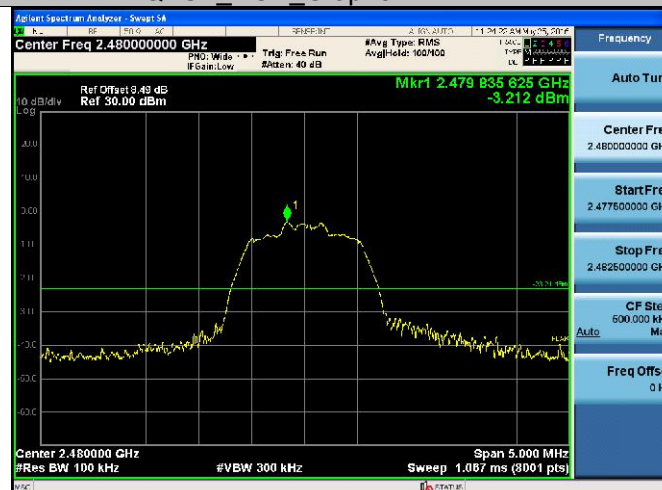






$\pi/4$ DQPSK HCH Graphs

Pref



Puw

