

## 6.5. CONDUCTED BANDEDGE AND SPURIOUS EMISSIONS

### LIMITS

FCC Part15 (15.247) , Subpart C		
Section	Test Item	Limit
FCC §15.247 (d)	Conducted Bandedge and Spurious Emissions	at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power

### TEST PROCEDURE

Refer to FCC KDB 558074, connect the UUT to the spectrum analyser and use the following

Center Frequency	The centre frequency of the channel under test
Detector	Peak
RBW	100K
VBW	$\geq 3 \times$ RBW
Span	1.5 x DTS bandwidth
Trace	Max hold
Sweep time	Auto couple.

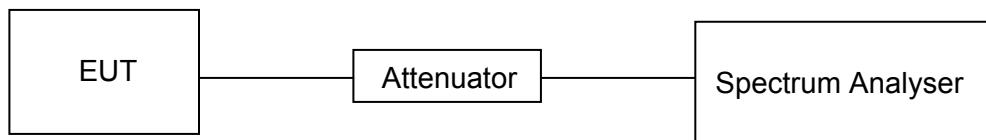
settings:

Use the peak marker function to determine the maximum PSD level.

Span	Set the center frequency and span to encompass frequency range to be measured
Detector	Peak
RBW	100K
VBW	$\geq 3 \times$ RBW
measurement points	$\geq$ span/RBW
Trace	Max hold
Sweep time	Auto couple.

Use the peak marker function to determine the maximum amplitude level.

### TEST SETUP

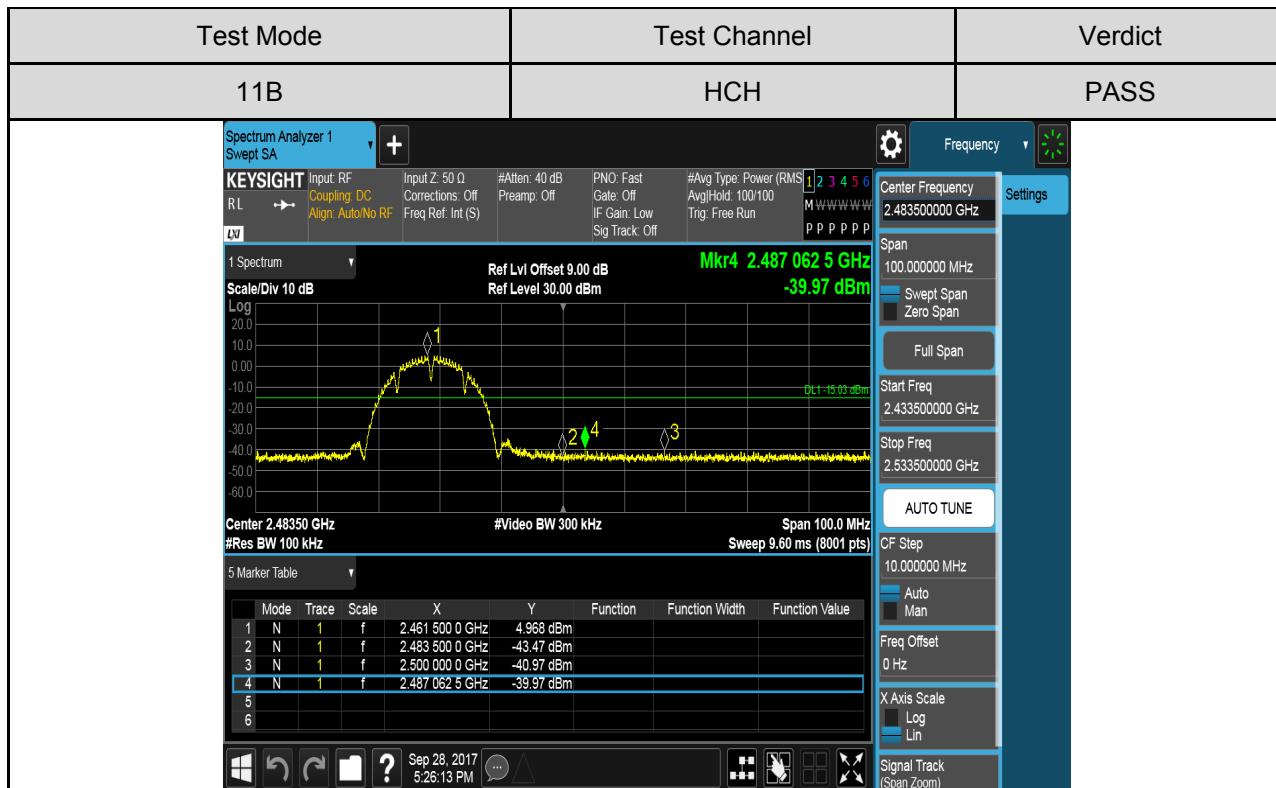
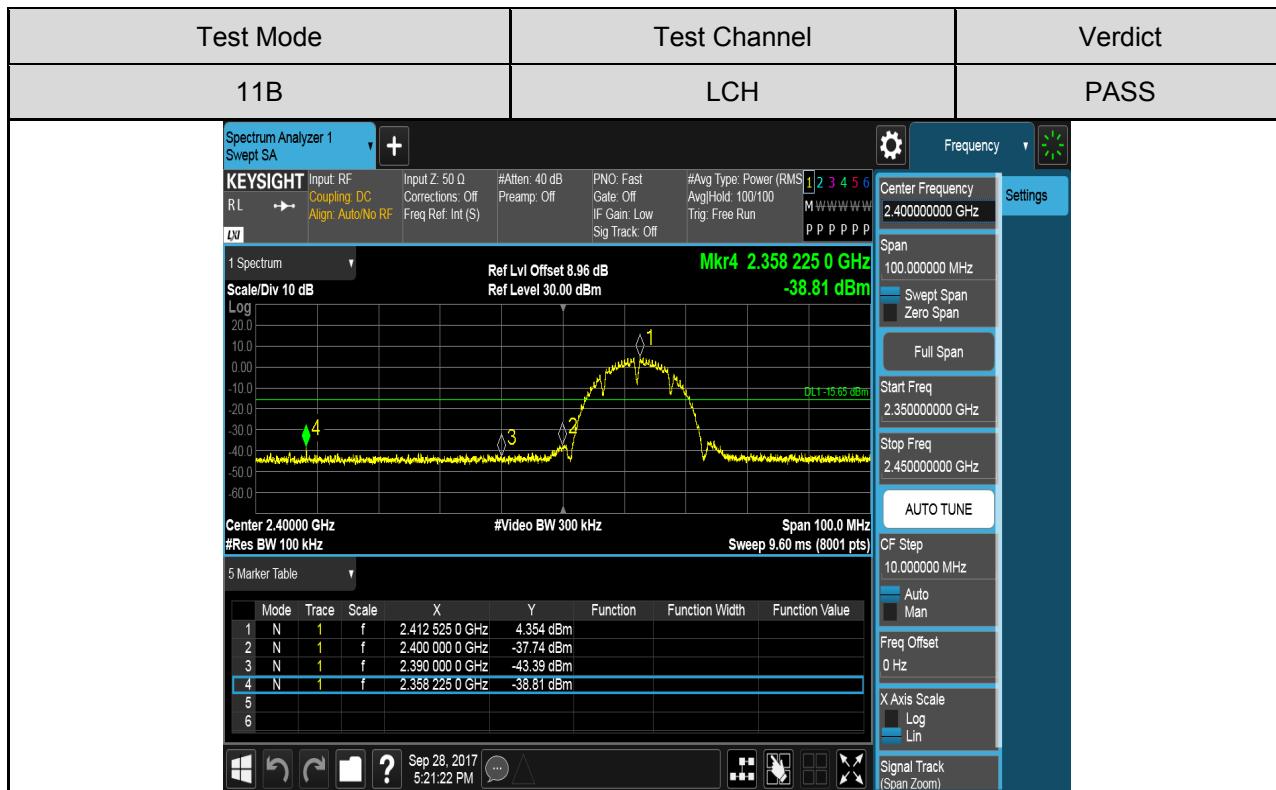


**Part I :Conducted Bandedge**

**RESULTS TABLE**

Test Mode	Test Channel	Carrier Power[dBm]	Max. Spurious Level [dBm]	Limit [dBm]	Verdict
11B	LCH	4.354	-38.807	-15.65	PASS
11B	HCH	4.968	-39.969	-15.03	PASS
11G	LCH	-5.646	-40.775	-25.65	PASS
11G	HCH	-5.160	-41.105	-25.16	PASS
11N20SISO	LCH	-5.485	-40.851	-25.49	PASS
11N20SISO	HCH	-5.067	-40.048	-25.07	PASS
11N40SISO	LCH	-7.155	-41.061	-27.16	PASS
11N40SISO	HCH	-7.385	-41.407	-27.39	PASS

**TEST GRAPHS**



Test Mode	Test Channel	Verdict
11G	LCH	PASS
		

Test Mode	Test Channel	Verdict
11G	HCH	PASS

**Spectrum Analyzer 1**

**KEYSIGHT** Input: RF Coupling: DC Input Z: 50 Ω Corrections: Off #Atten: 40 dB PNO: Fast #Avg Type: Power (RMS) 1 2 3 4 5 6 RL Align: Auto/No RF Freq Ref: Int (S) Preamp: Off Gate: Off Avg Hold: 100/100 IF Gain: Low Trg: Free Run Sig Track: Off P P P P P P P P P P P P

1 Spectrum Ref Lvl Offset 9.00 dB Ref Level 30.00 dBm Mkr4 2.498 925 0 GHz -41.11 dBm

Scale/Div 10 dB Log 2.00 1.00 0.00 -1.00 -2.00 -3.00 -4.00 -5.00 -6.00

Center 2.48350 GHz #Video BW 300 kHz Span 100.0 MHz Sweep 9.60 ms (8001 pts)

#Res BW 100 kHz

5 Marker Table

Mode	Trace	Scale	X	Y	Function	Function Width	Function Value
1	N	1	f	2.466 162 5 GHz	-5.160 dBm		
2	N	1	f	2.483 500 0 GHz	-44.60 dBm		
3	N	1	f	2.500 000 0 GHz	-43.86 dBm		
4	N	1	f	2.498 925 0 GHz	-41.11 dBm		
5							
6							

Sept 28, 2017 5:33:06 PM

Frequency 2.483500000 GHz Settings

Span 100.000000 MHz

Swept Span

Zero Span

Full Span

Start Freq 2.433500000 GHz

Stop Freq 2.533500000 GHz

AUTO TUNE

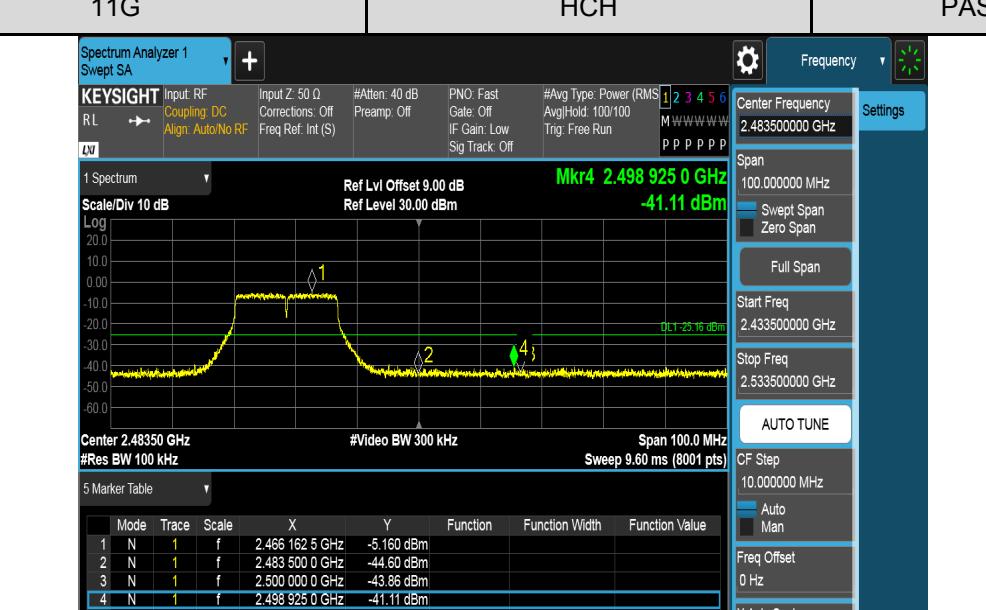
CF Step 10.000000 MHz

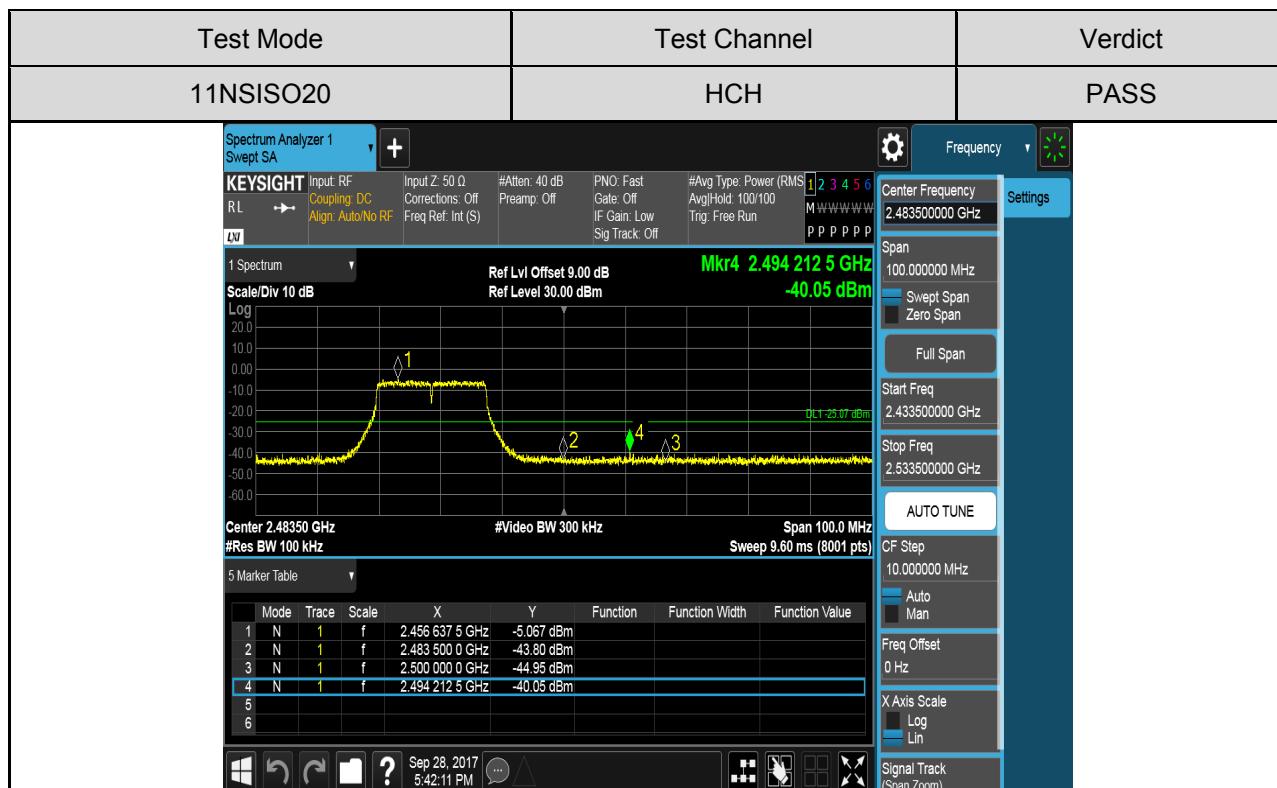
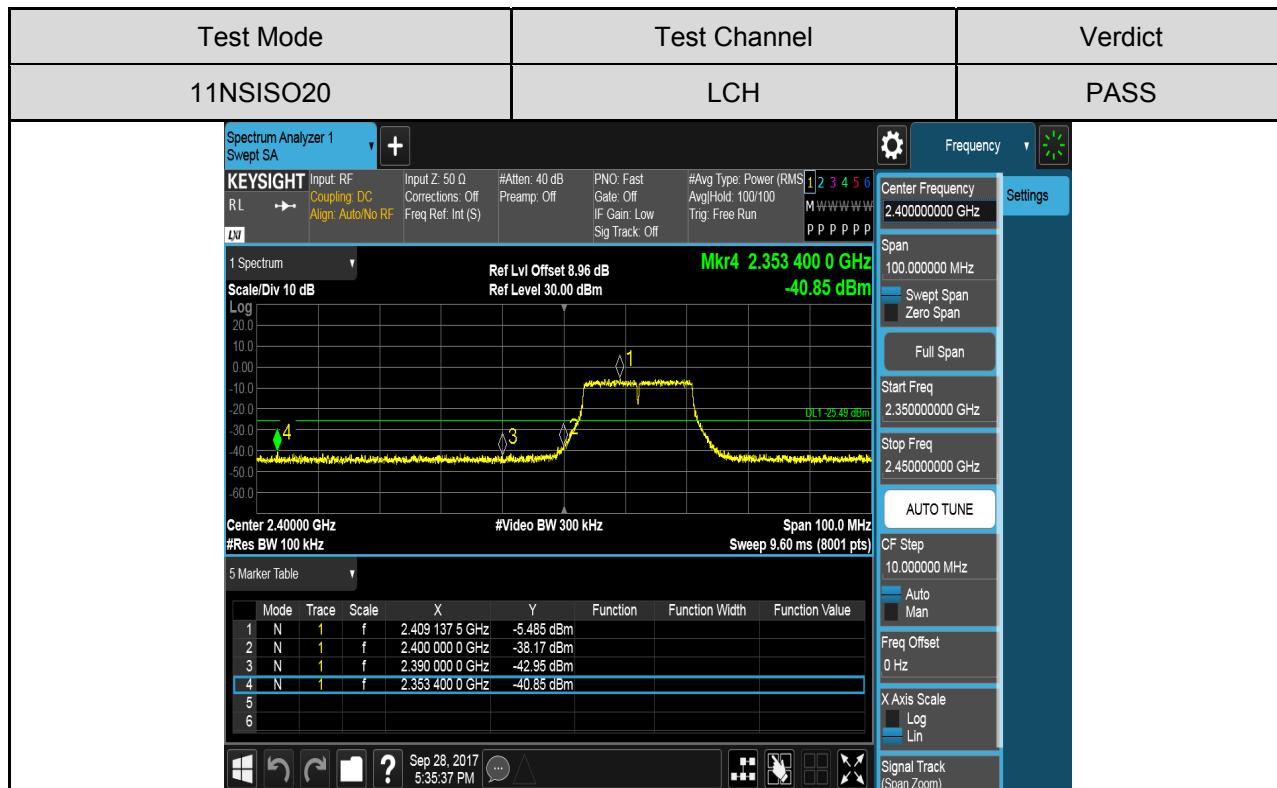
Auto Man

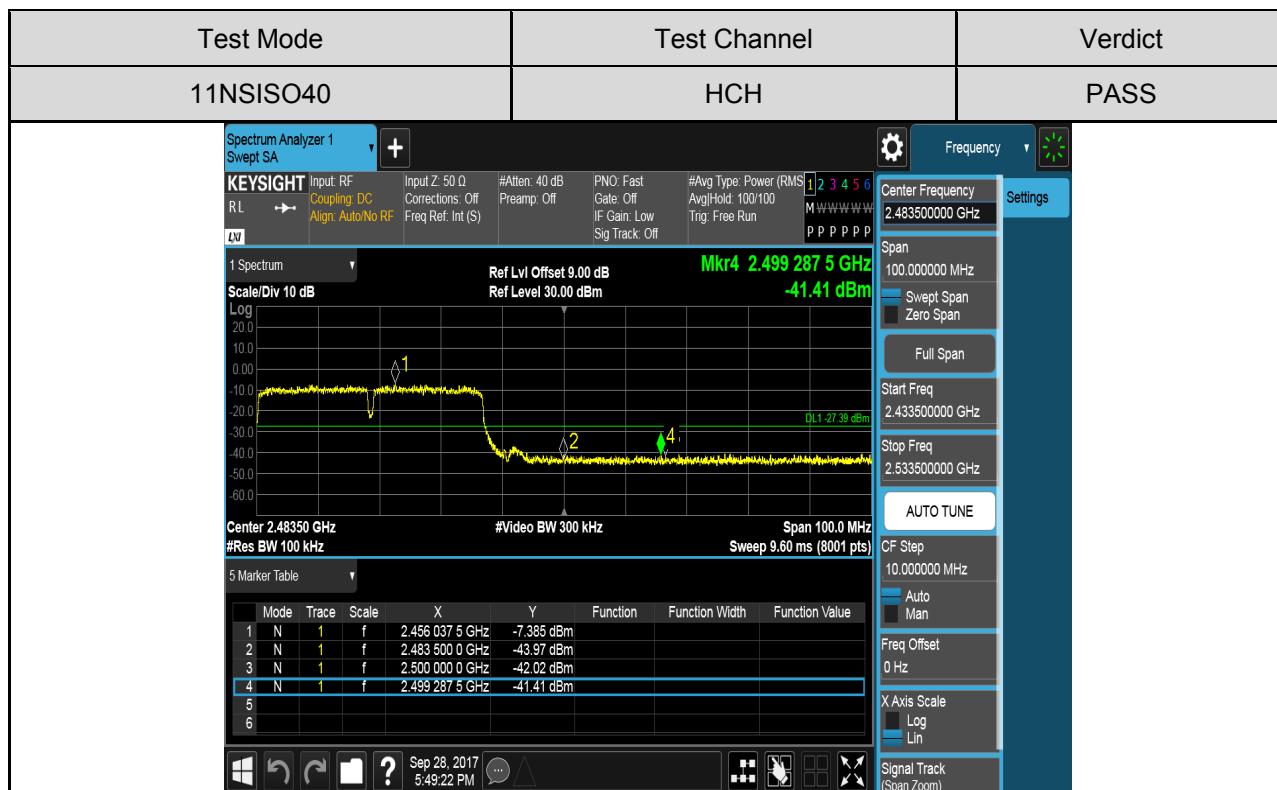
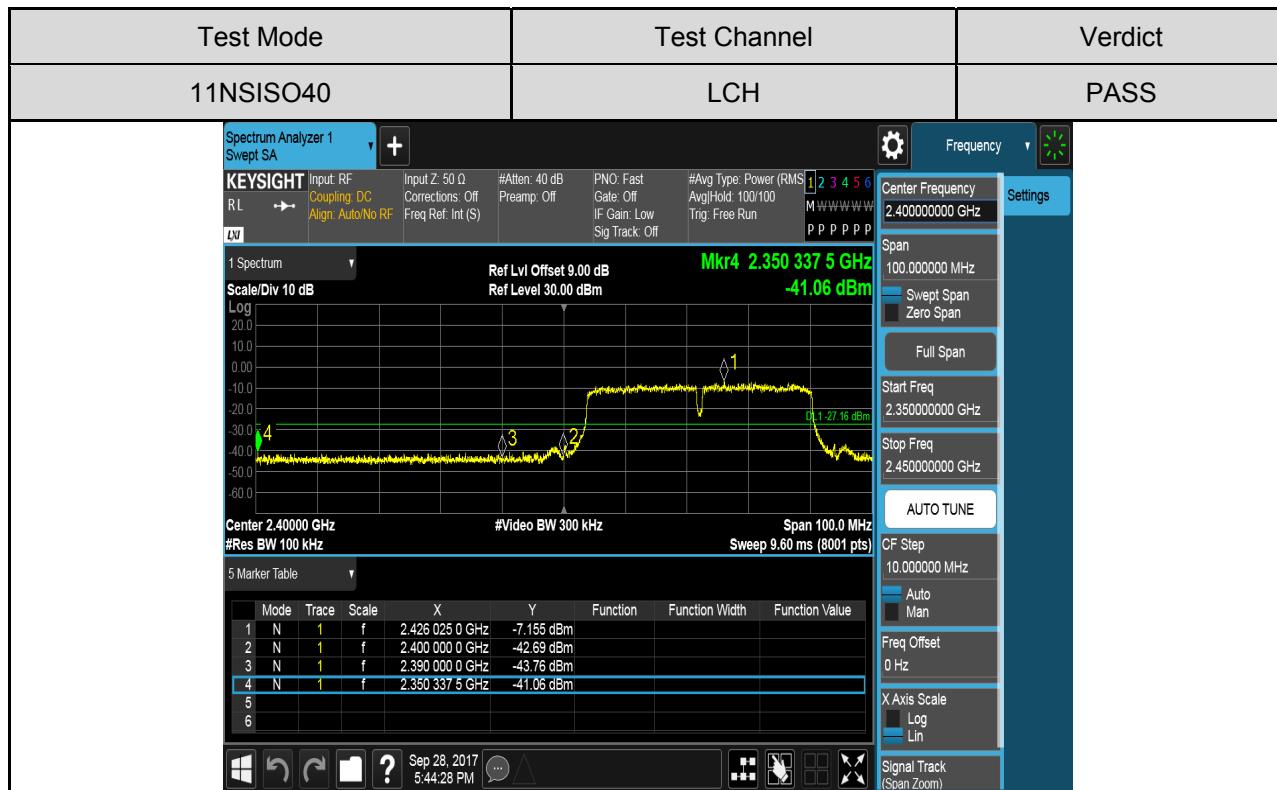
Freq Offset 0 Hz

X Axis Scale Log Lin

Signal Track (Span Zoom)







**Part II :Conducted Emission**

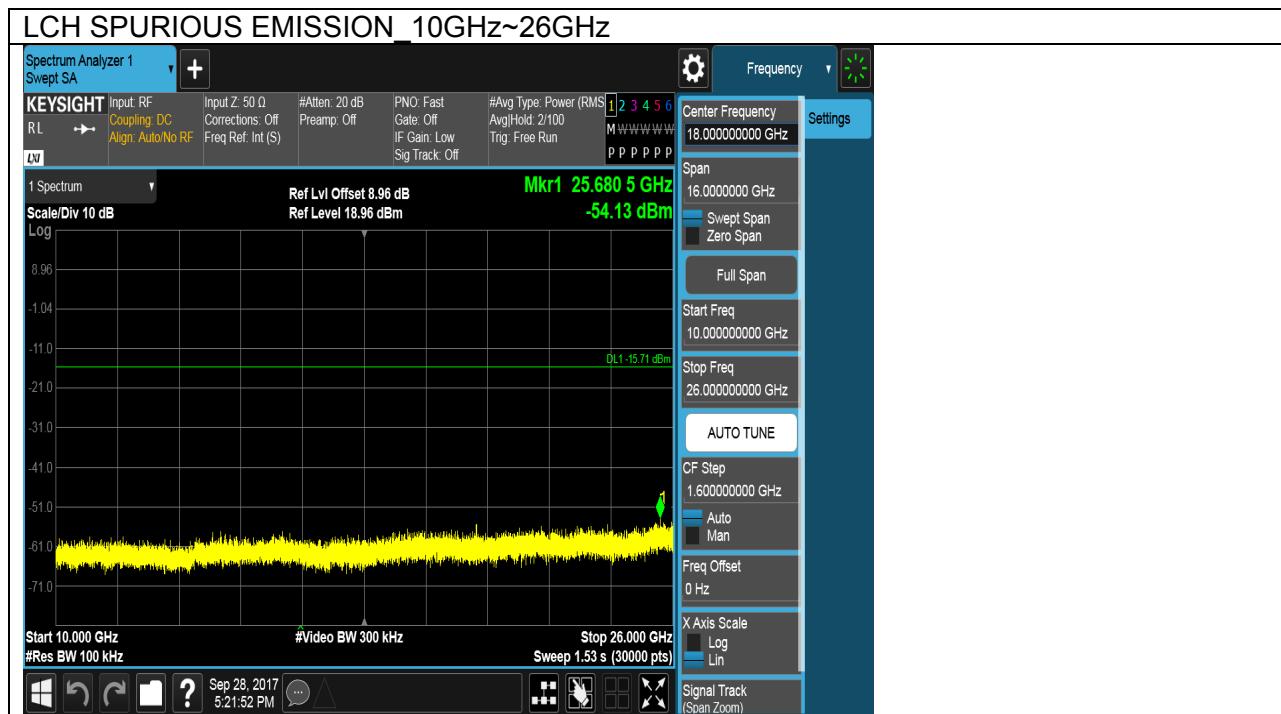
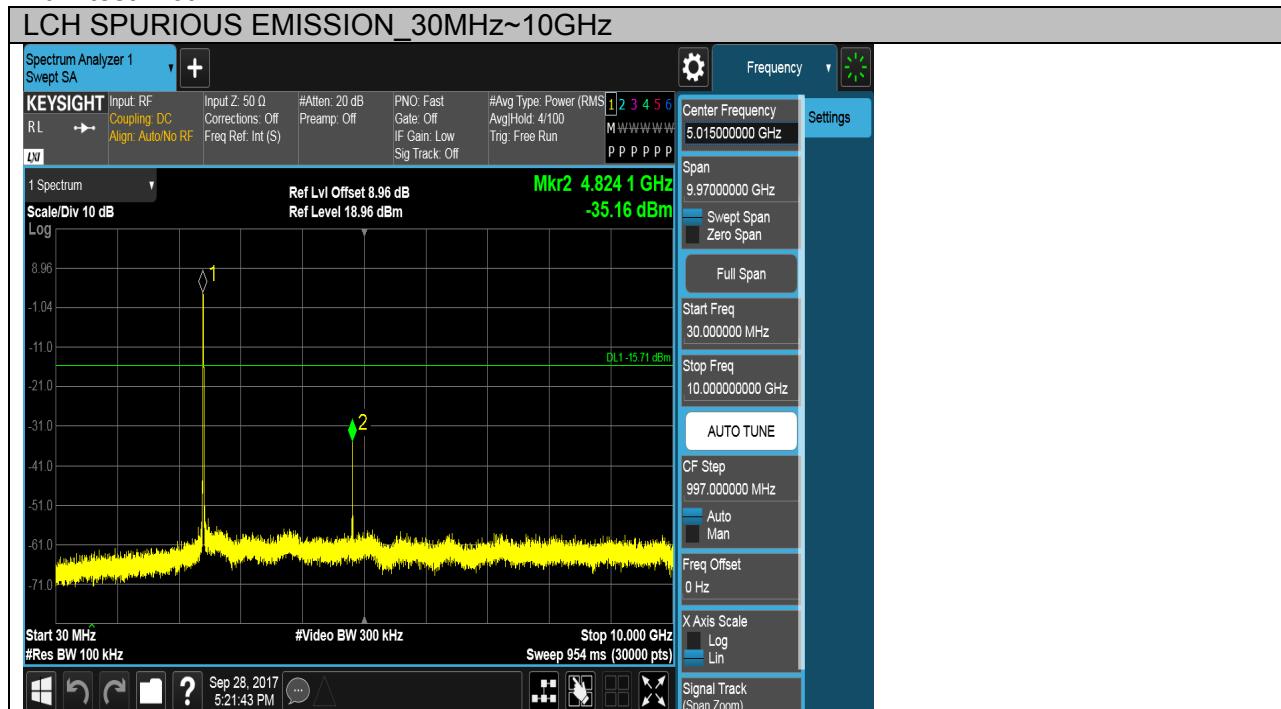
Test Result Table

Test Mode	Channel	Pref(dBm)	Puw(dBm)	Verdict
11B	LCH	4.29	<Limit	PASS
	MCH	4.88	<Limit	PASS
	HCH	4.891	<Limit	PASS
11G	LCH	-5.684	<Limit	PASS
	MCH	-5.162	<Limit	PASS
	HCH	-5.156	<Limit	PASS
11NSISO20	LCH	-5.375	<Limit	PASS
	MCH	-4.831	<Limit	PASS
	HCH	-4.564	<Limit	PASS
11NSISO40	LCH	-7.036	<Limit	PASS
	MCH	-7.257	<Limit	PASS
	HCH	-7.262	<Limit	PASS

Test Mode	Channel	Verdict
11B	LCH	PASS

Pref test Plot

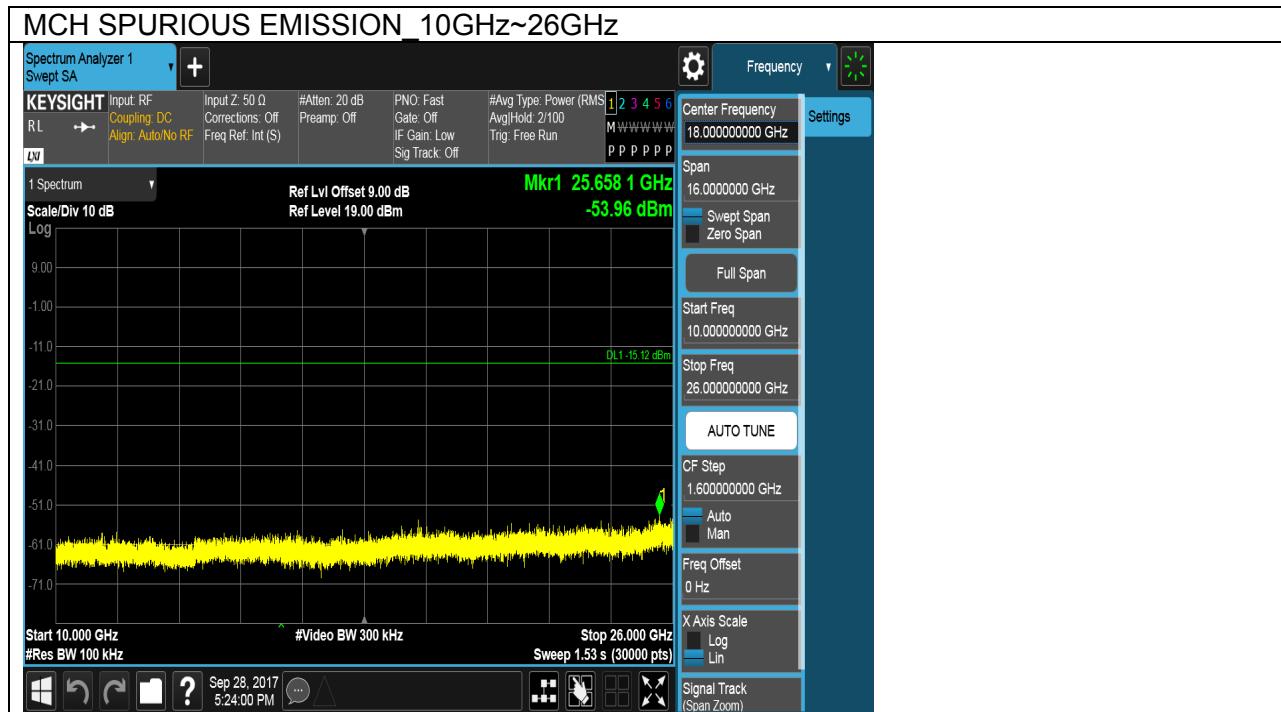
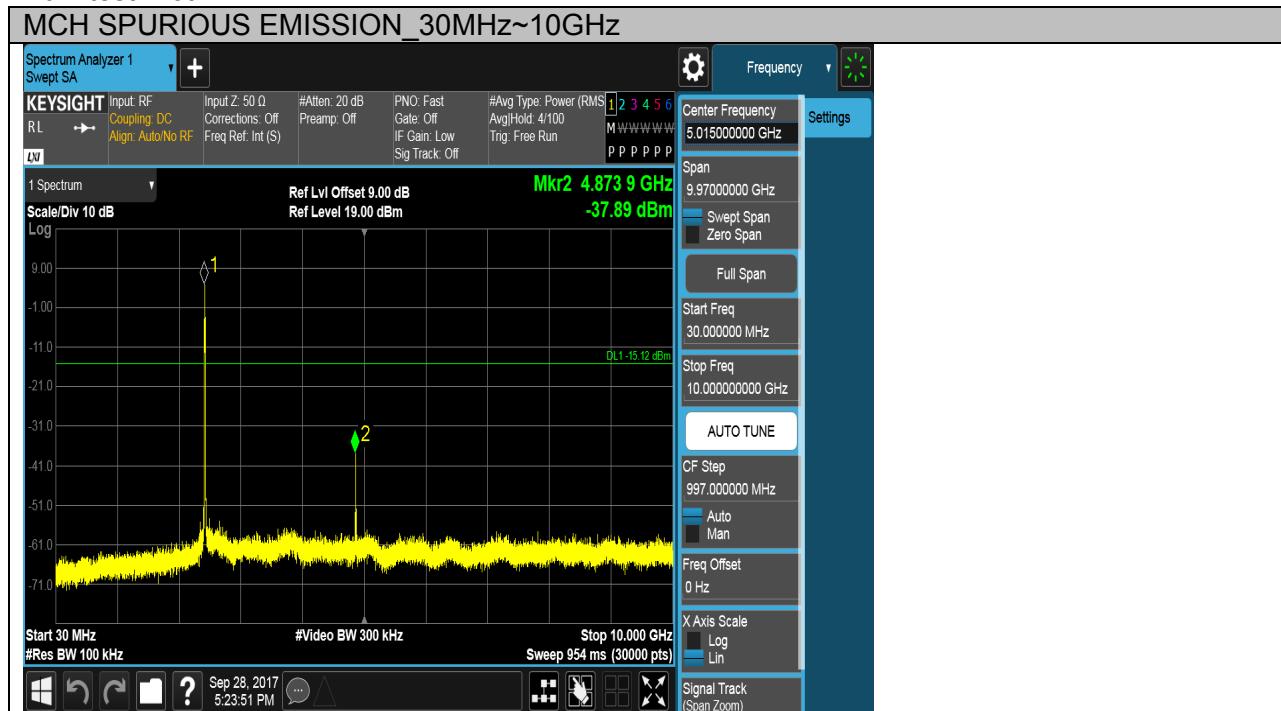




Test Mode	Channel	Verdict
11B	MCH	PASS

Pref test Plot

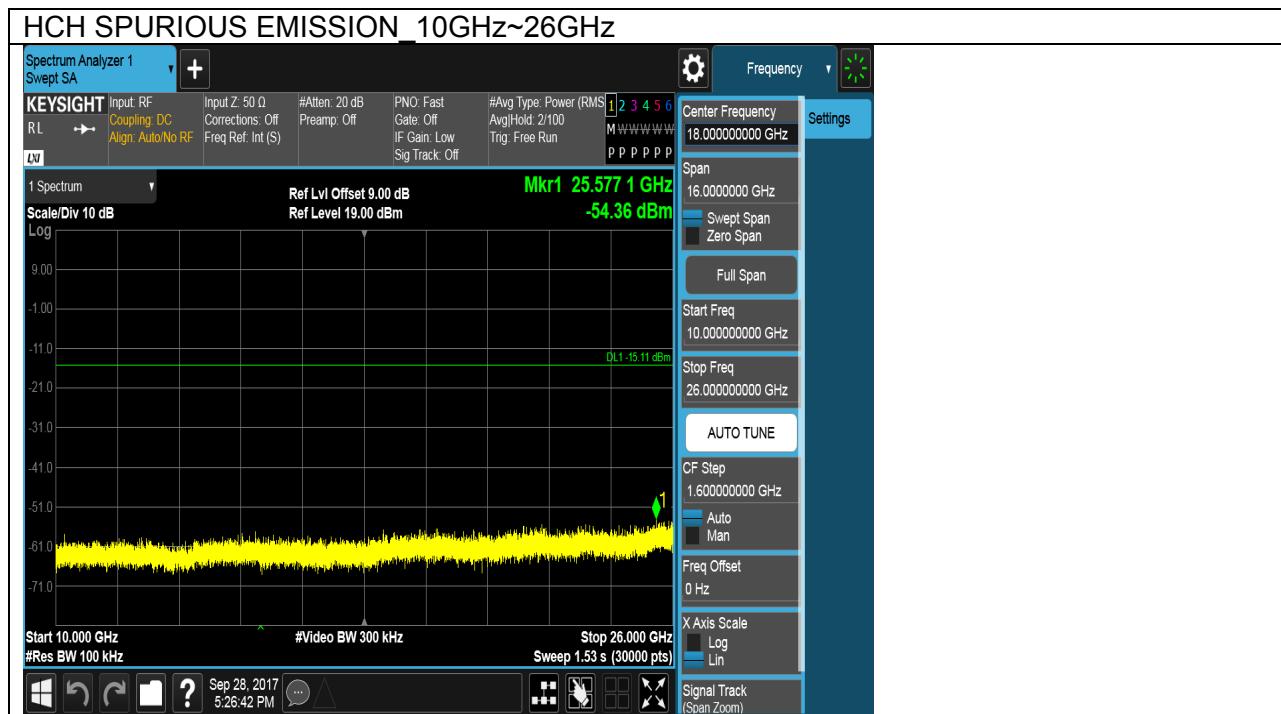
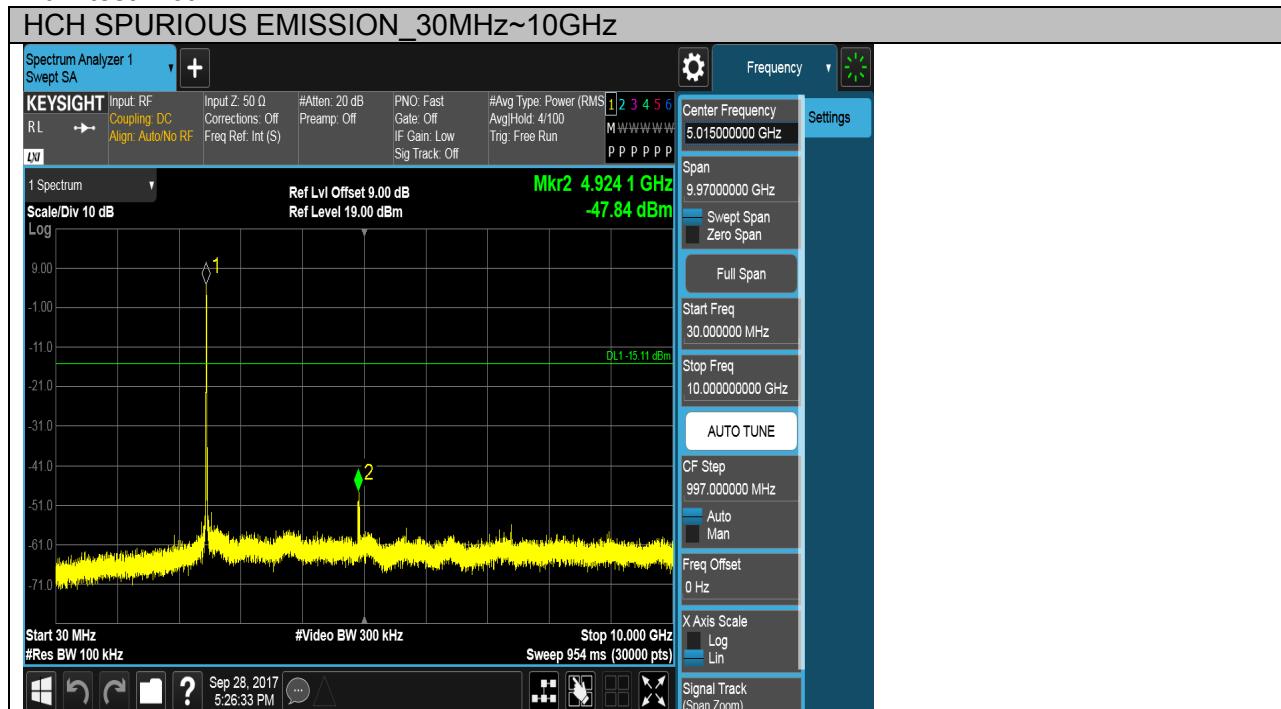




Test Mode	Channel	Verdict
11B	HCH	PASS

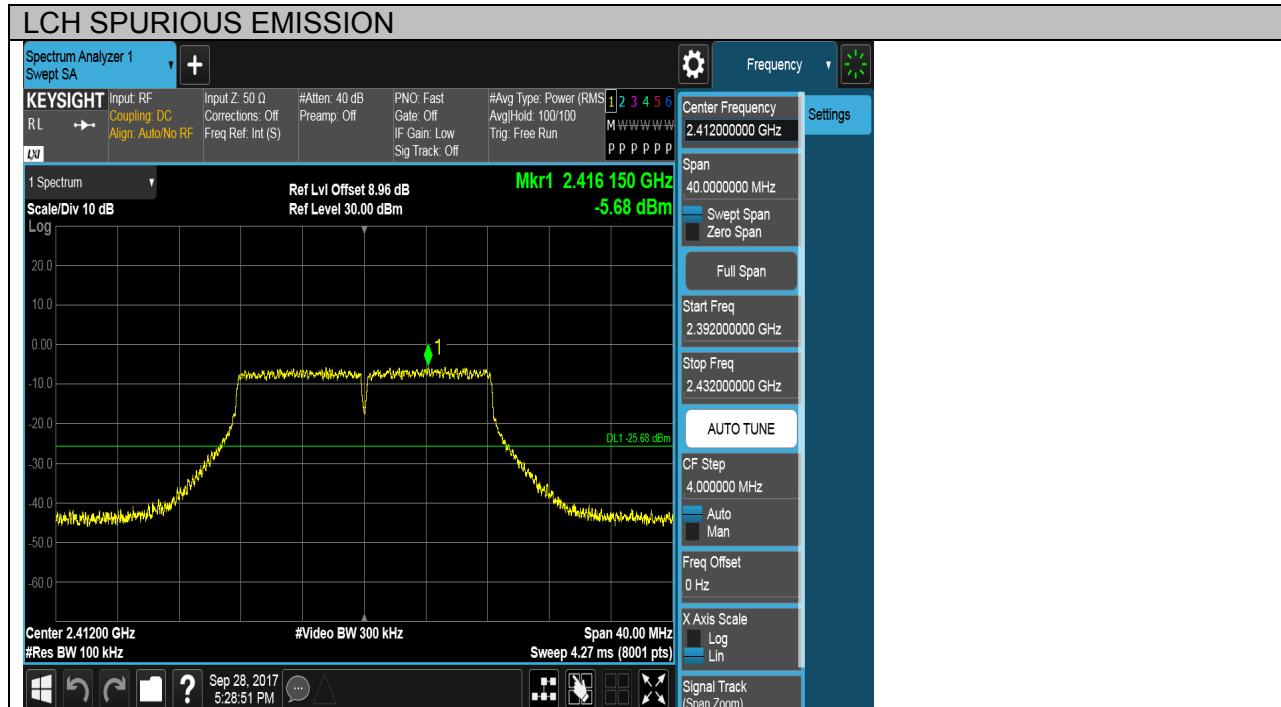
Pref test Plot



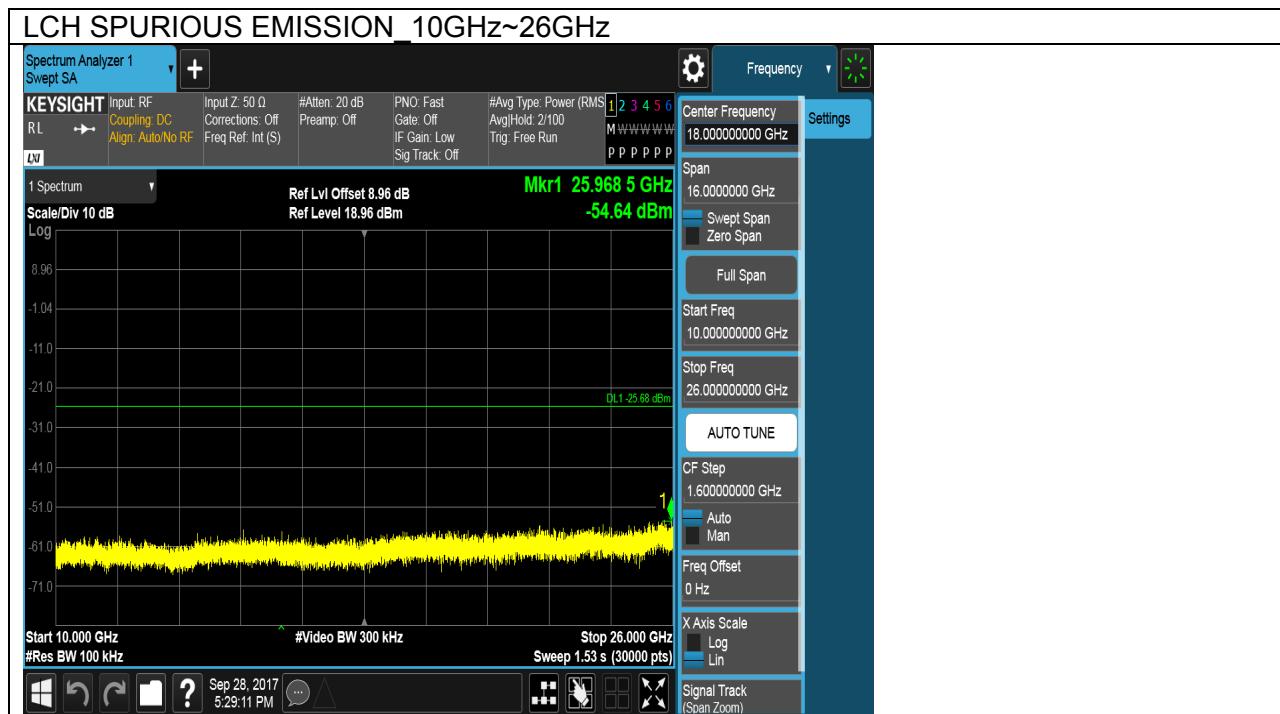
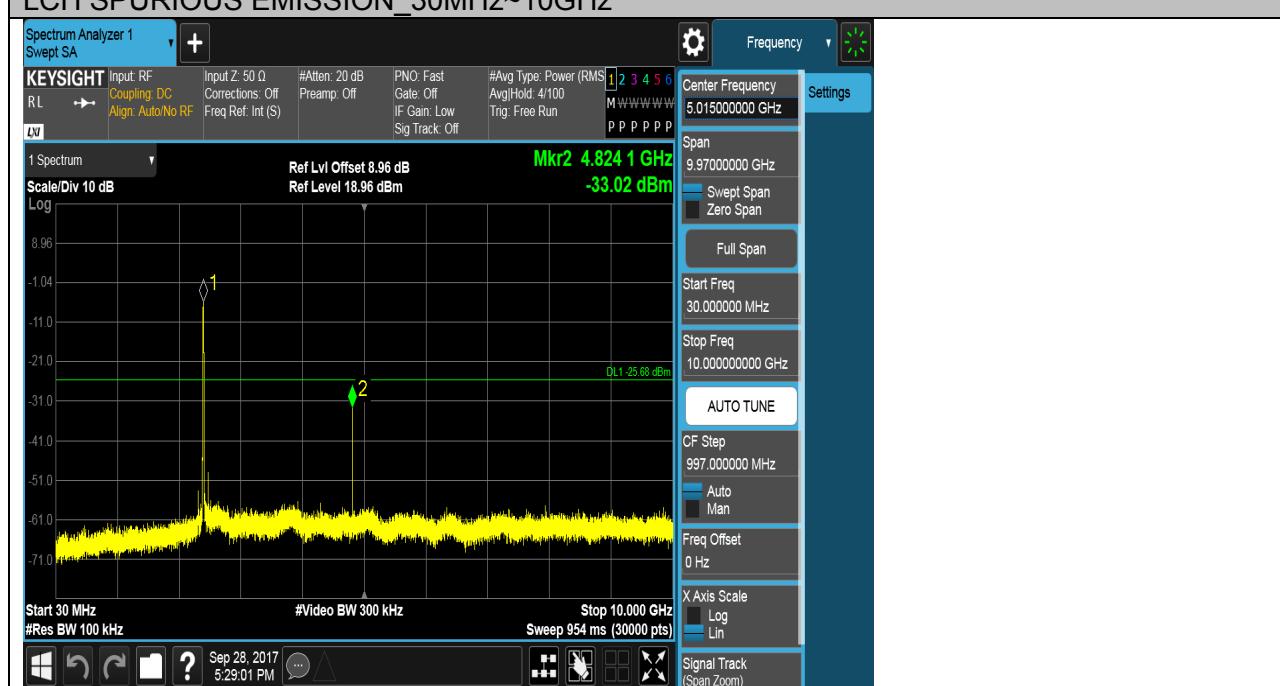


Test Mode	Channel	Verdict
11G	LCH	PASS

Pref test Plot



ICH SPURIC

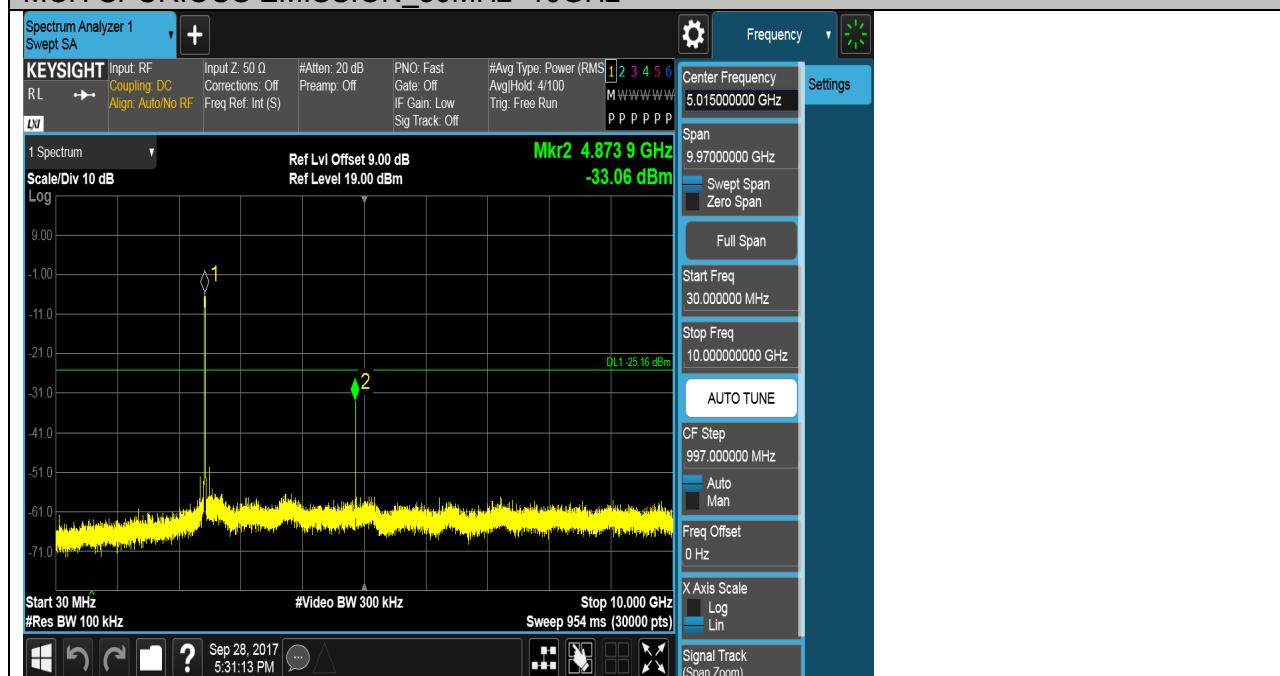


Test Mode	Channel	Verdict
11G	MCH	PASS

Pref test Plot



MCH SPURIOUS EMISSION 30MHz~10GHz



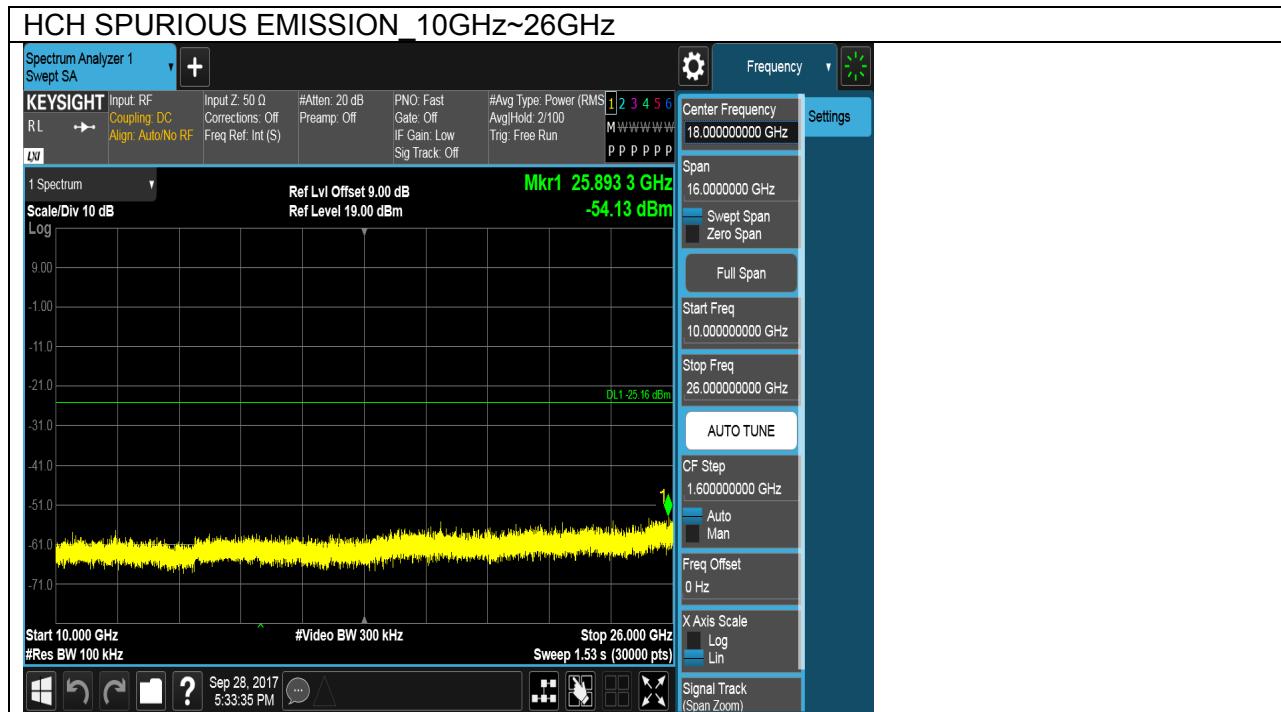
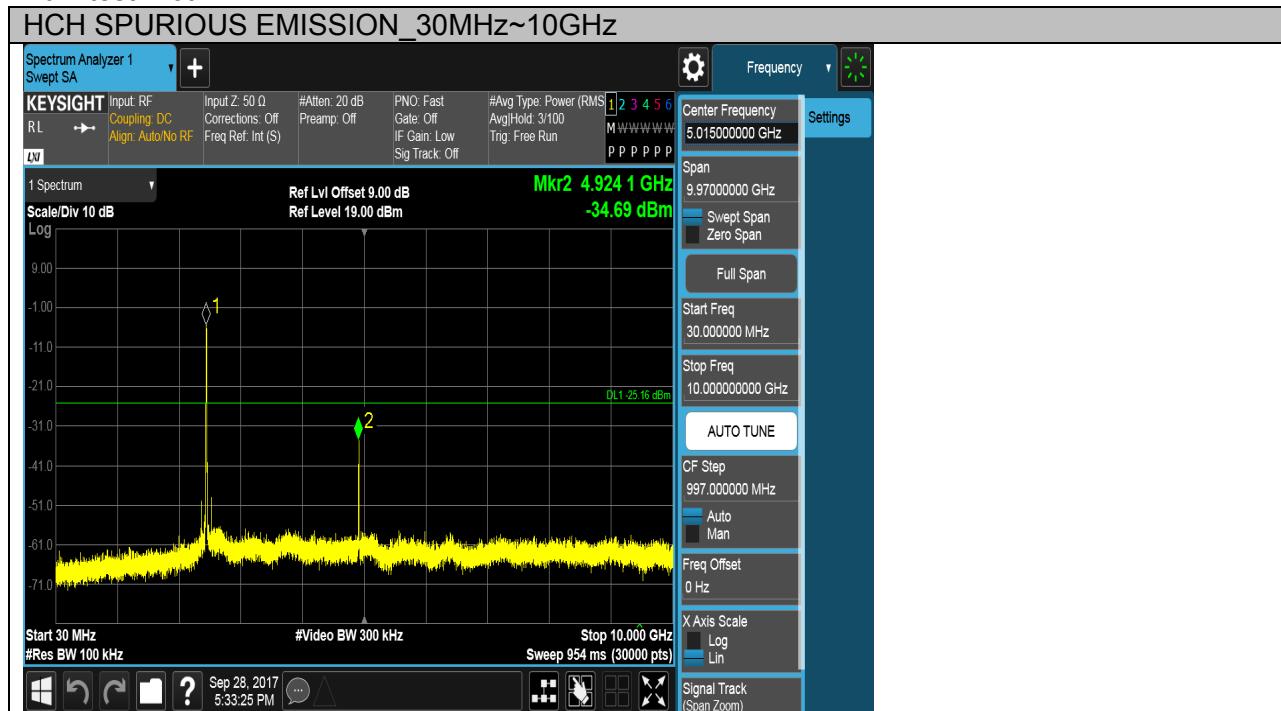
MCH SPURIOUS EMISSION 10GHz~26GHz



Test Mode	Channel	Verdict
11G	HCH	PASS

Pref test Plot



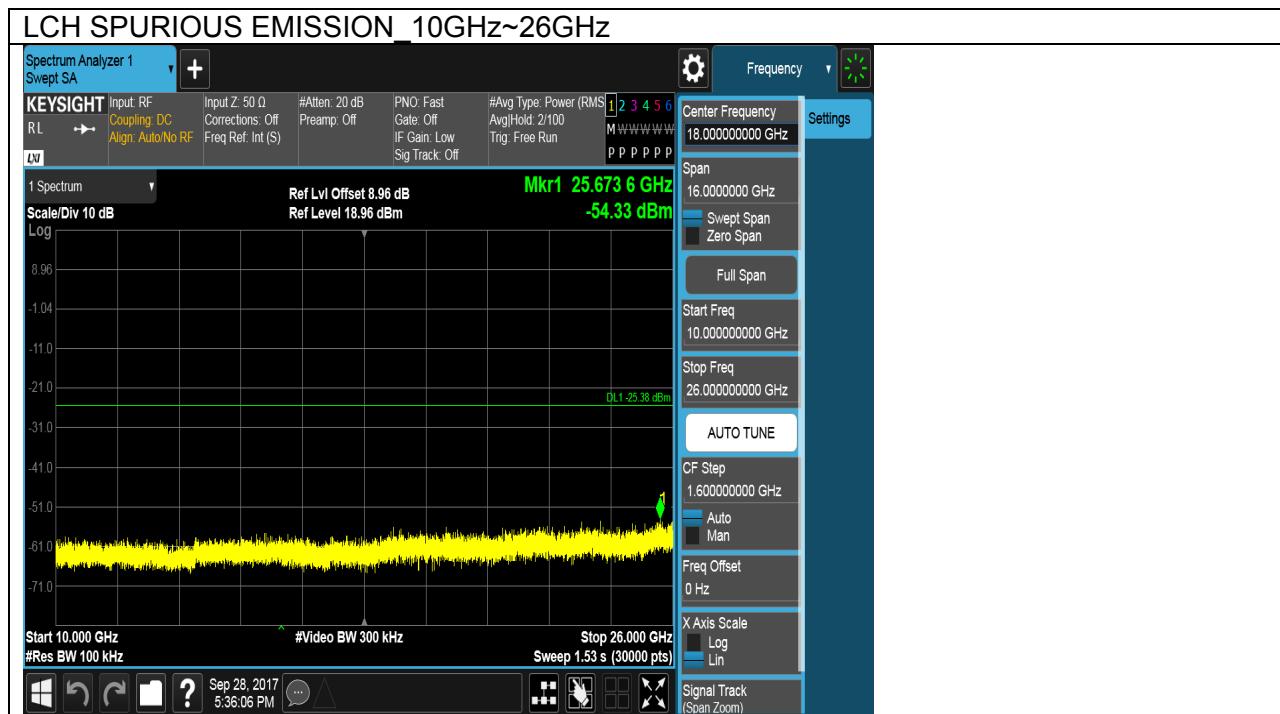
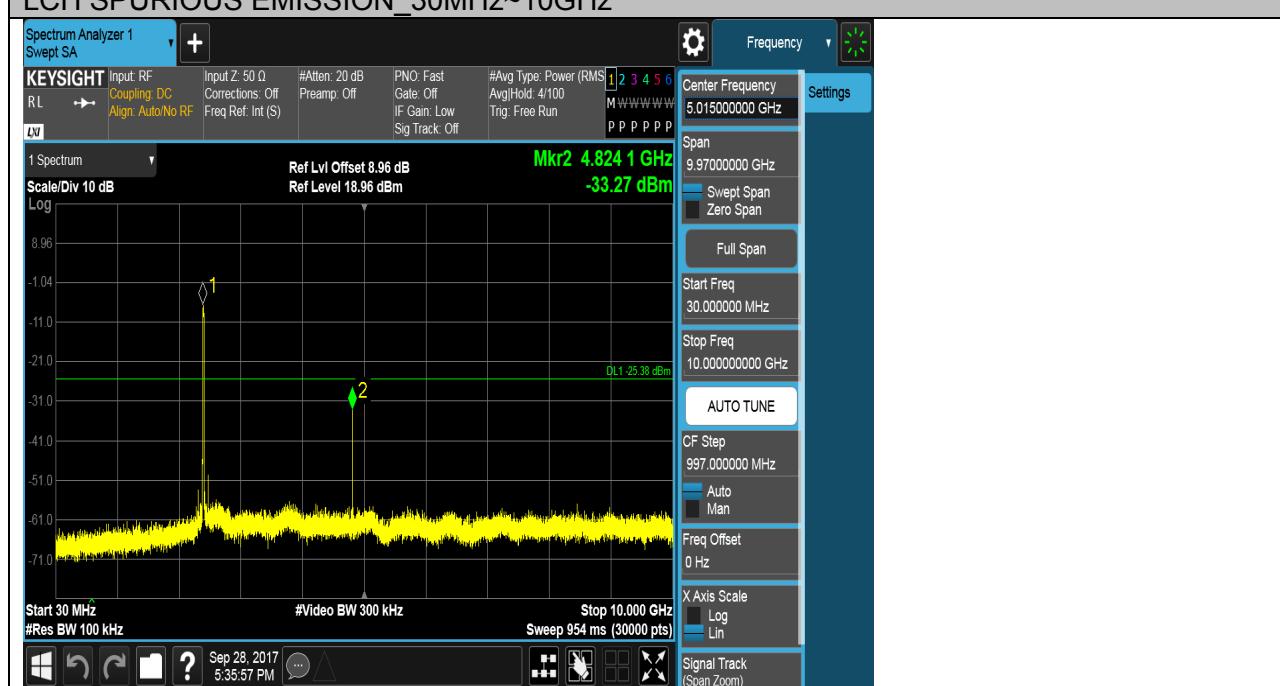


Test Mode	Channel	Verdict
11NSISO20	LCH	PASS

Pref test Plot



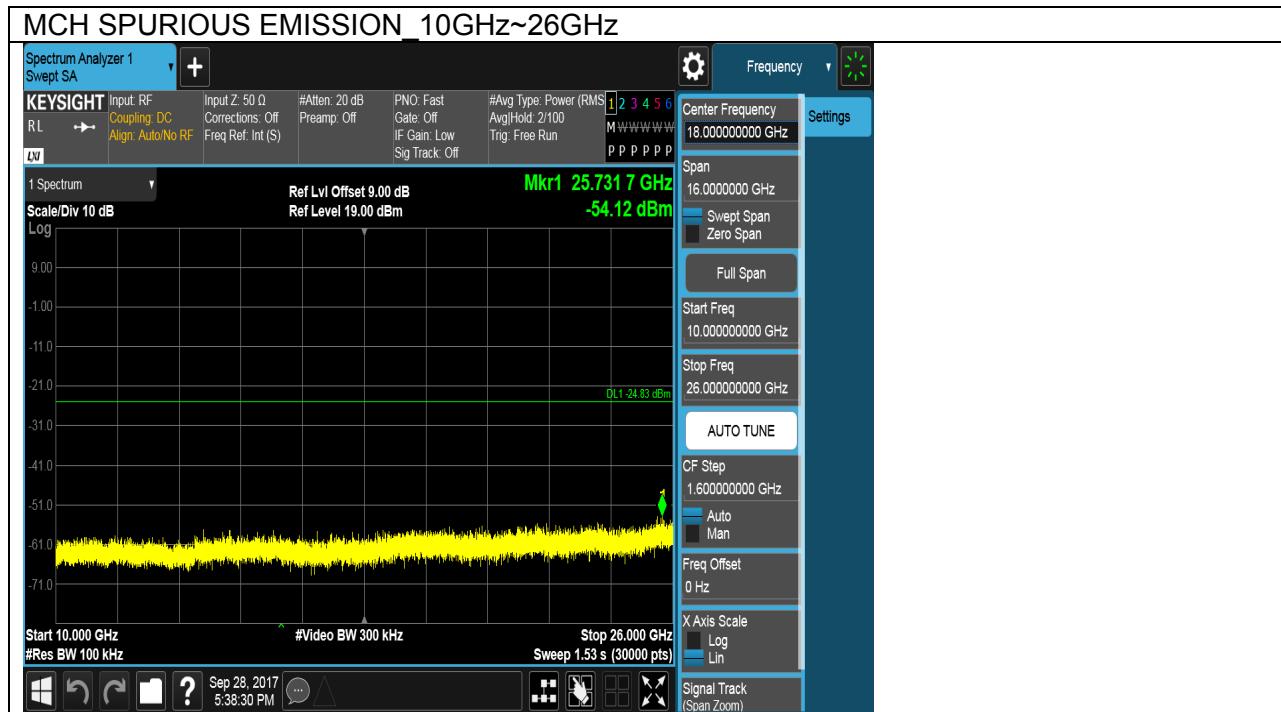
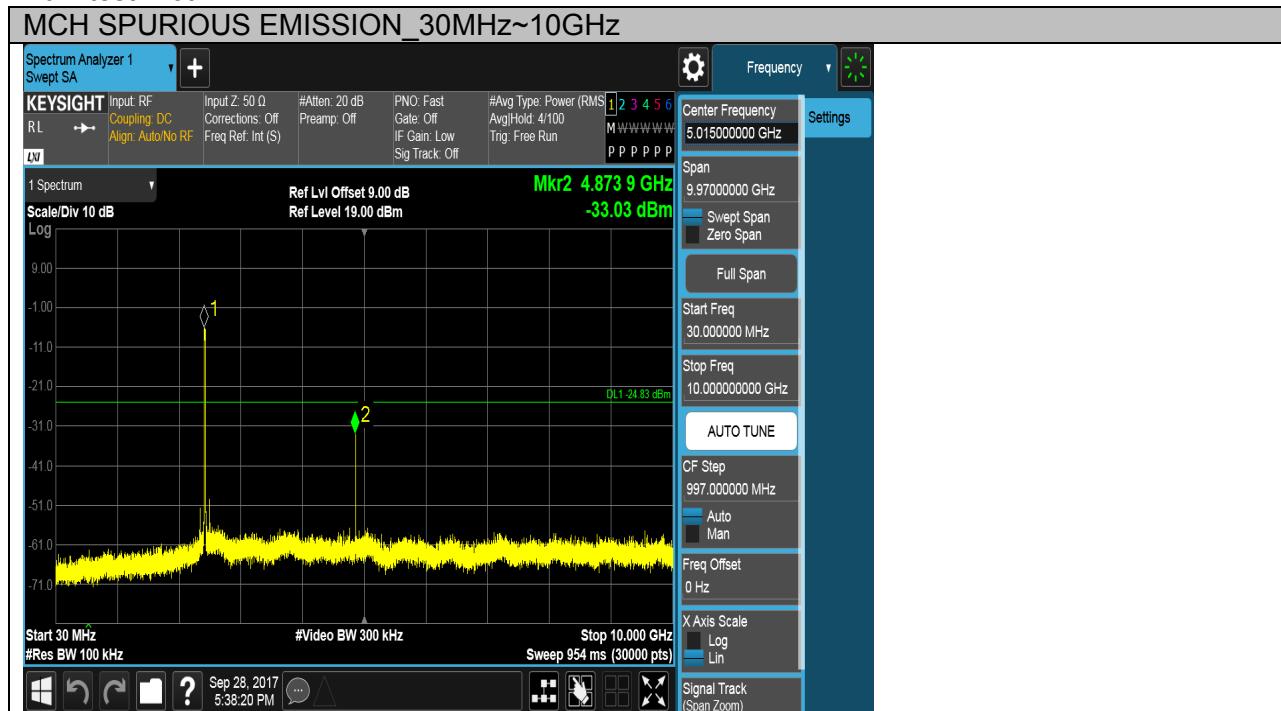
ICH SPURIC



Test Mode	Channel	Verdict
11NSISO20	MCH	PASS

Pref test Plot

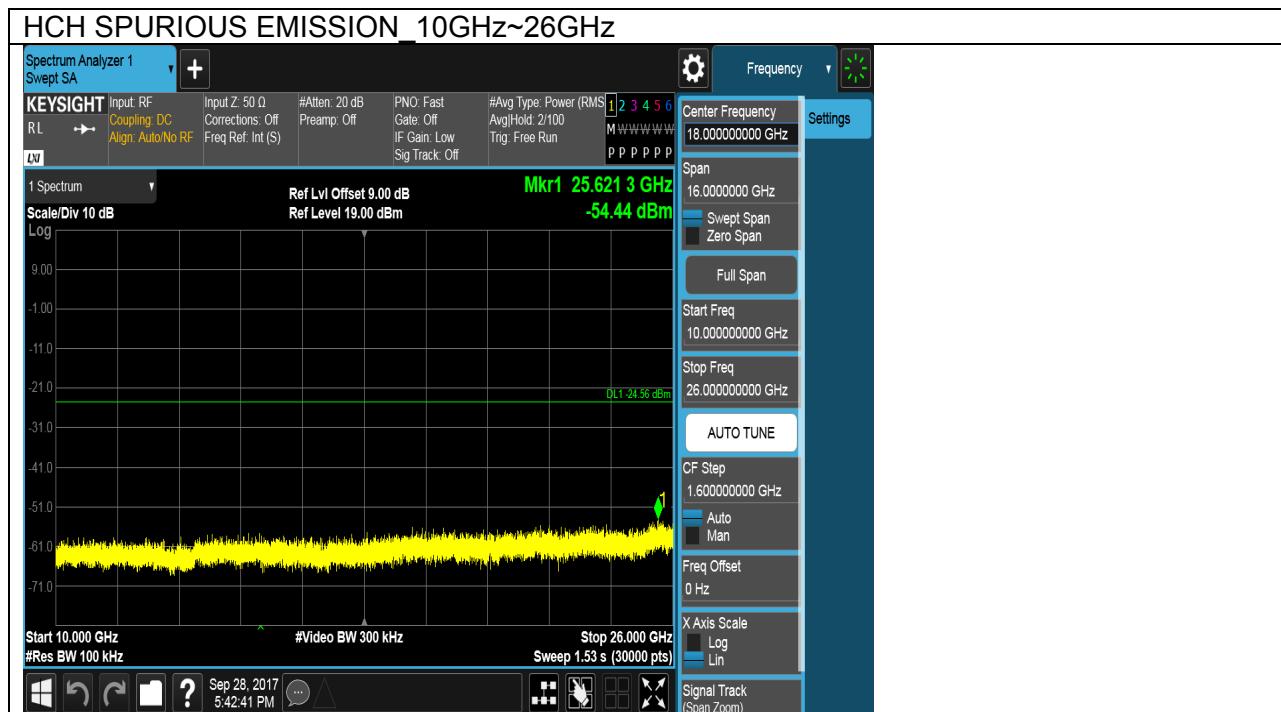
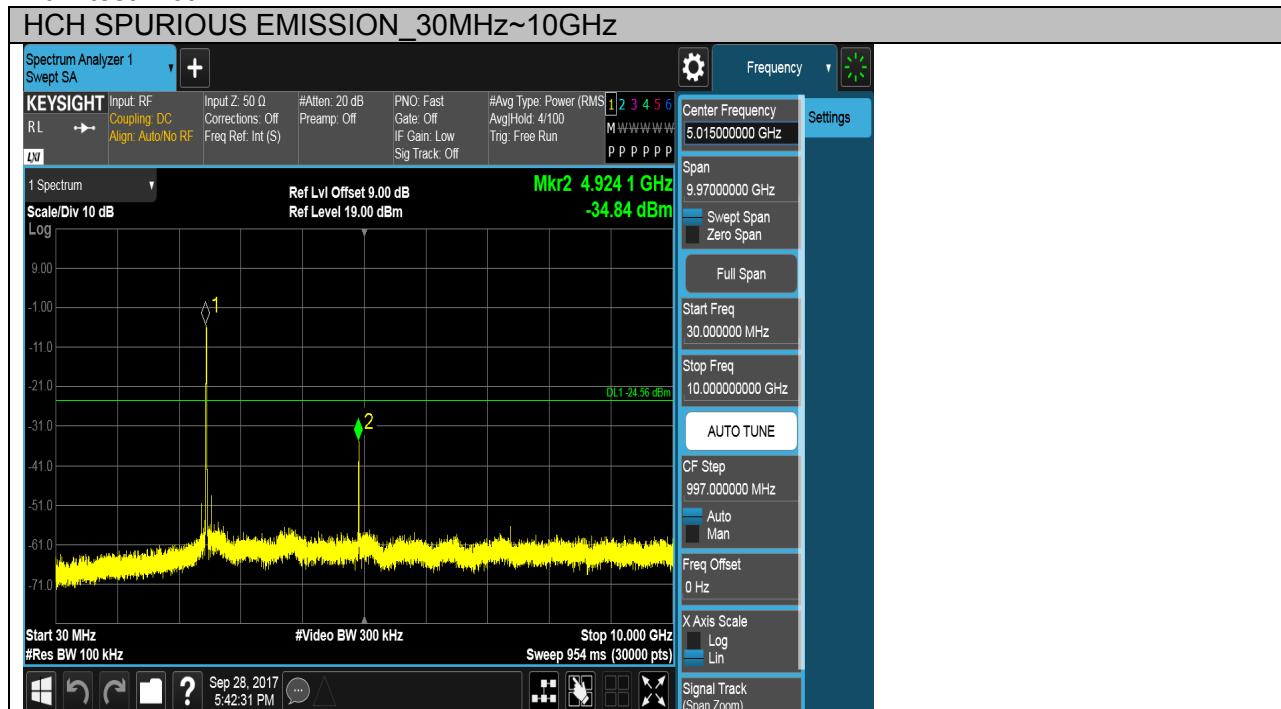




Test Mode	Channel	Verdict
11NSISO20	HCH	PASS

Pref test Plot

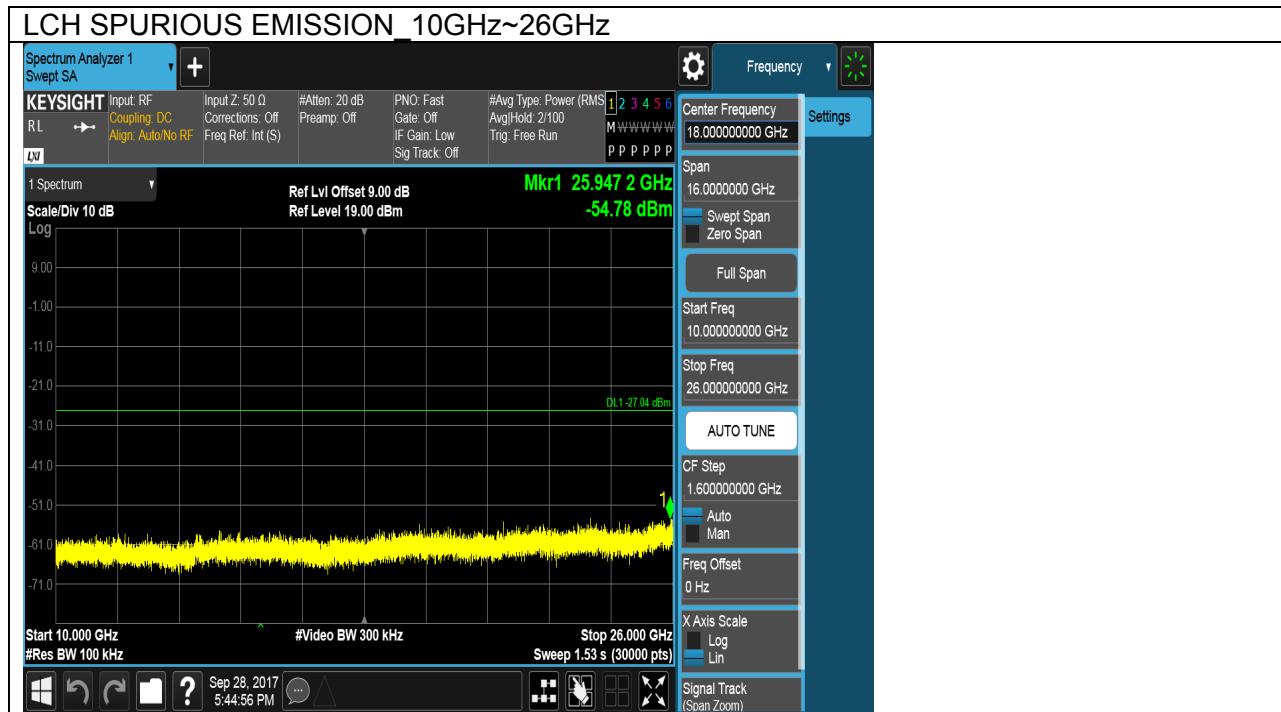
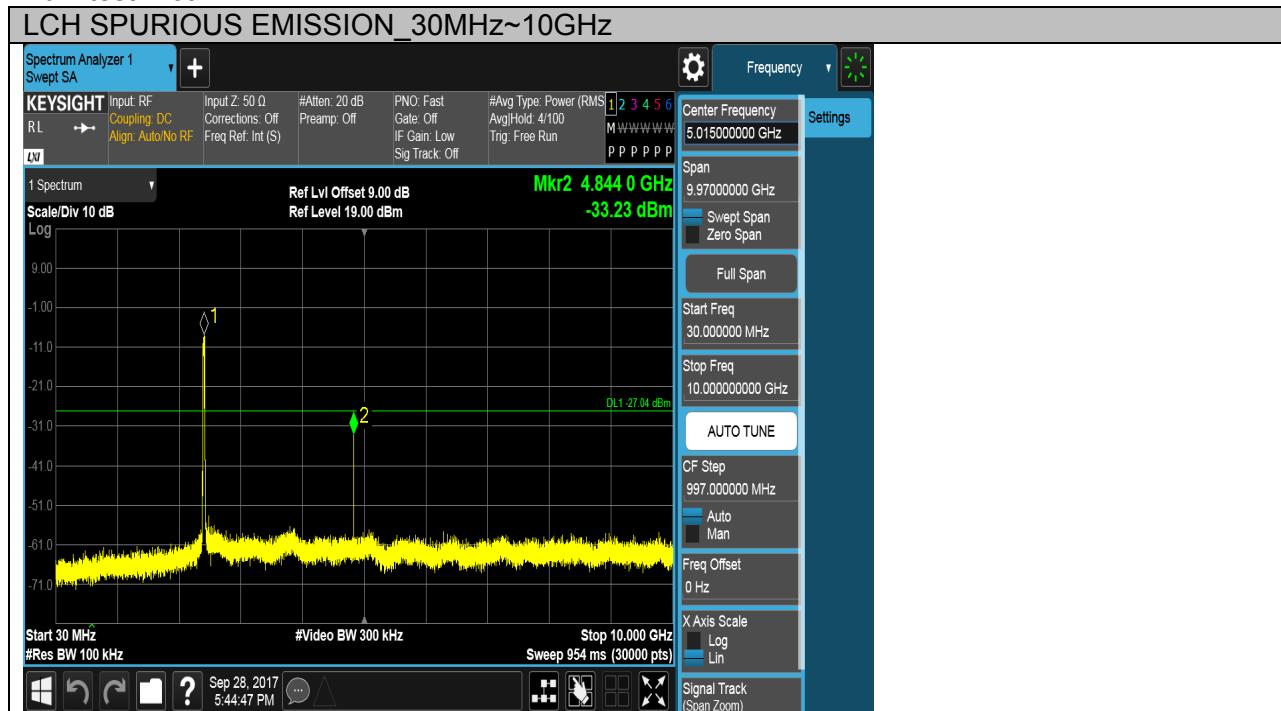




Test Mode	Channel	Verdict
11NSISO40	LCH	PASS

Pref test Plot

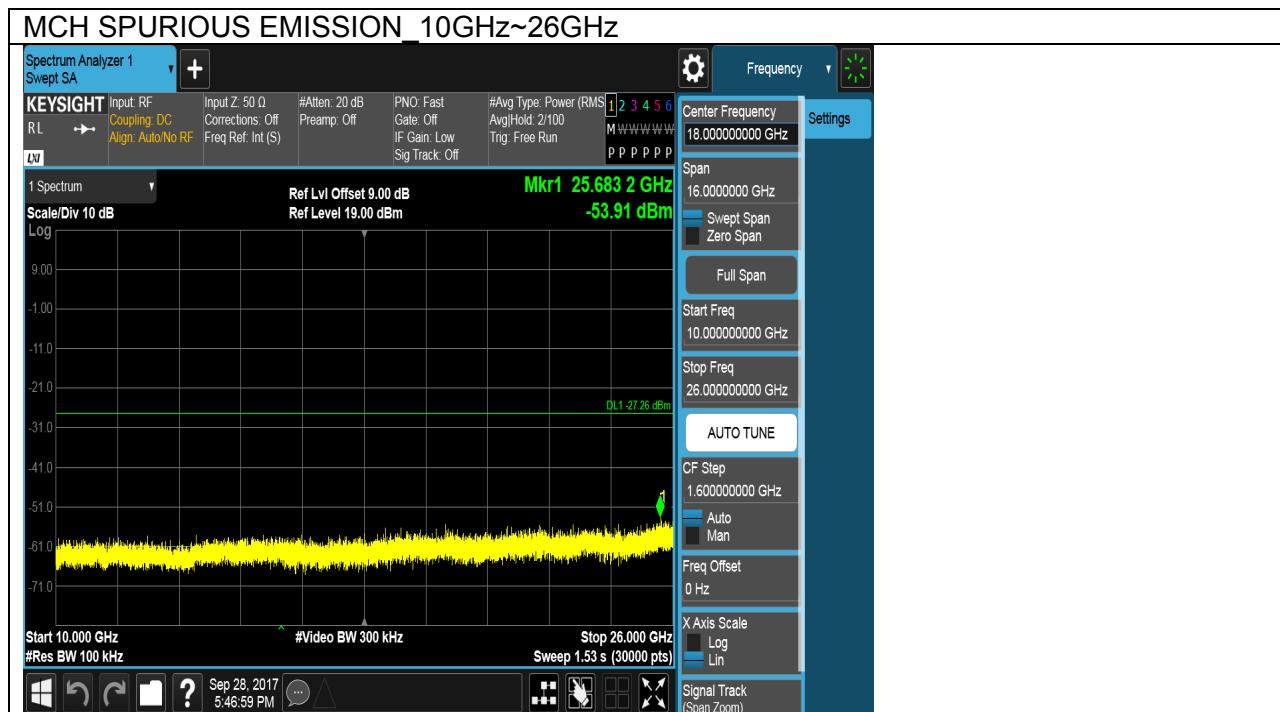
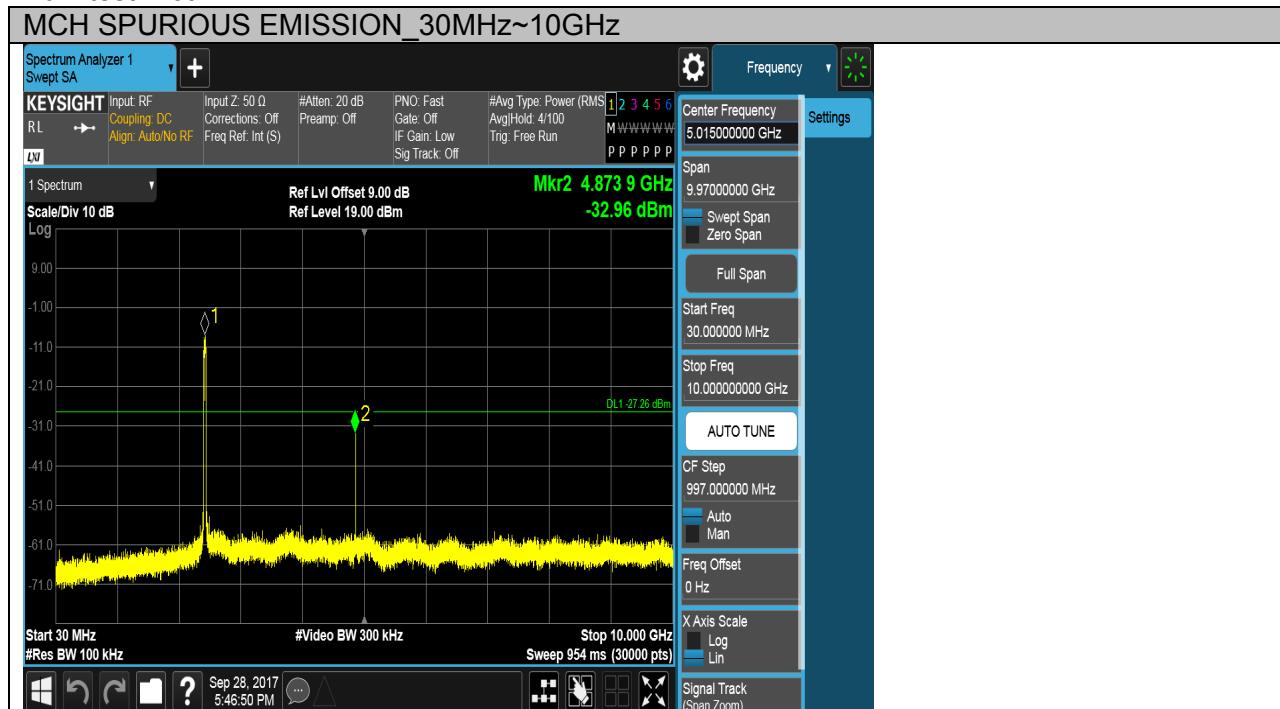




Test Mode	Channel	Verdict
11NSISO40	MCH	PASS

Pref test Plot





Test Mode	Channel	Verdict
11NSISO40	HCH	PASS

Pref test Plot



HCH SPURIC

