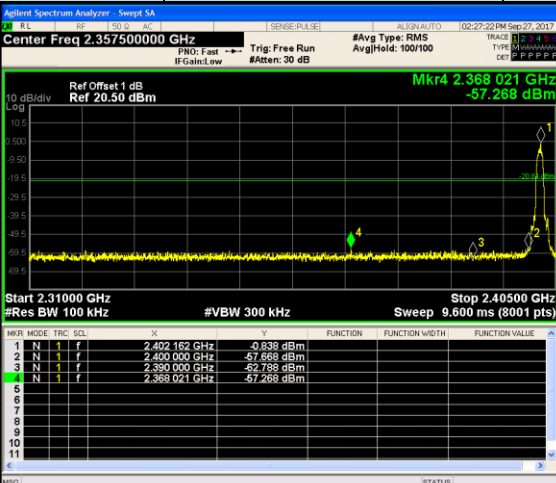
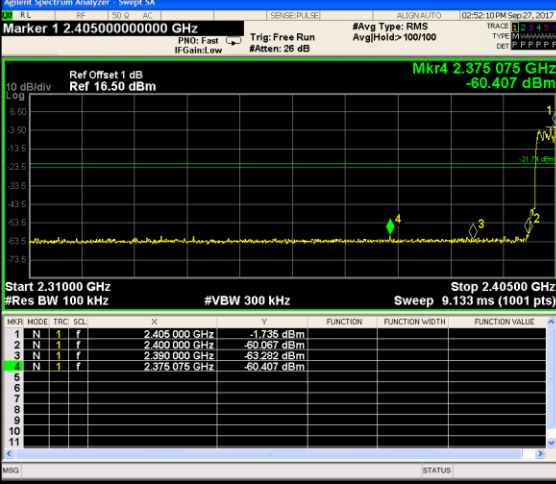
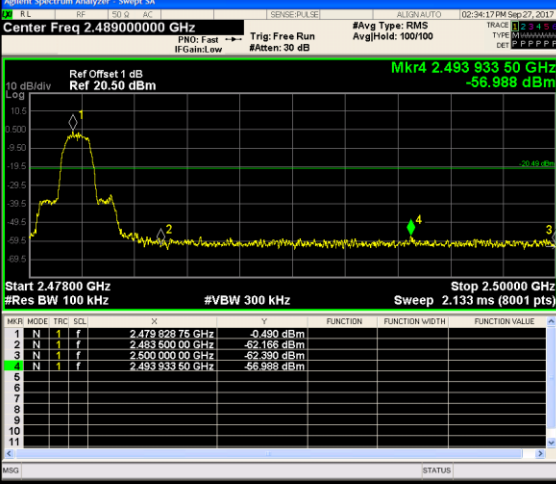
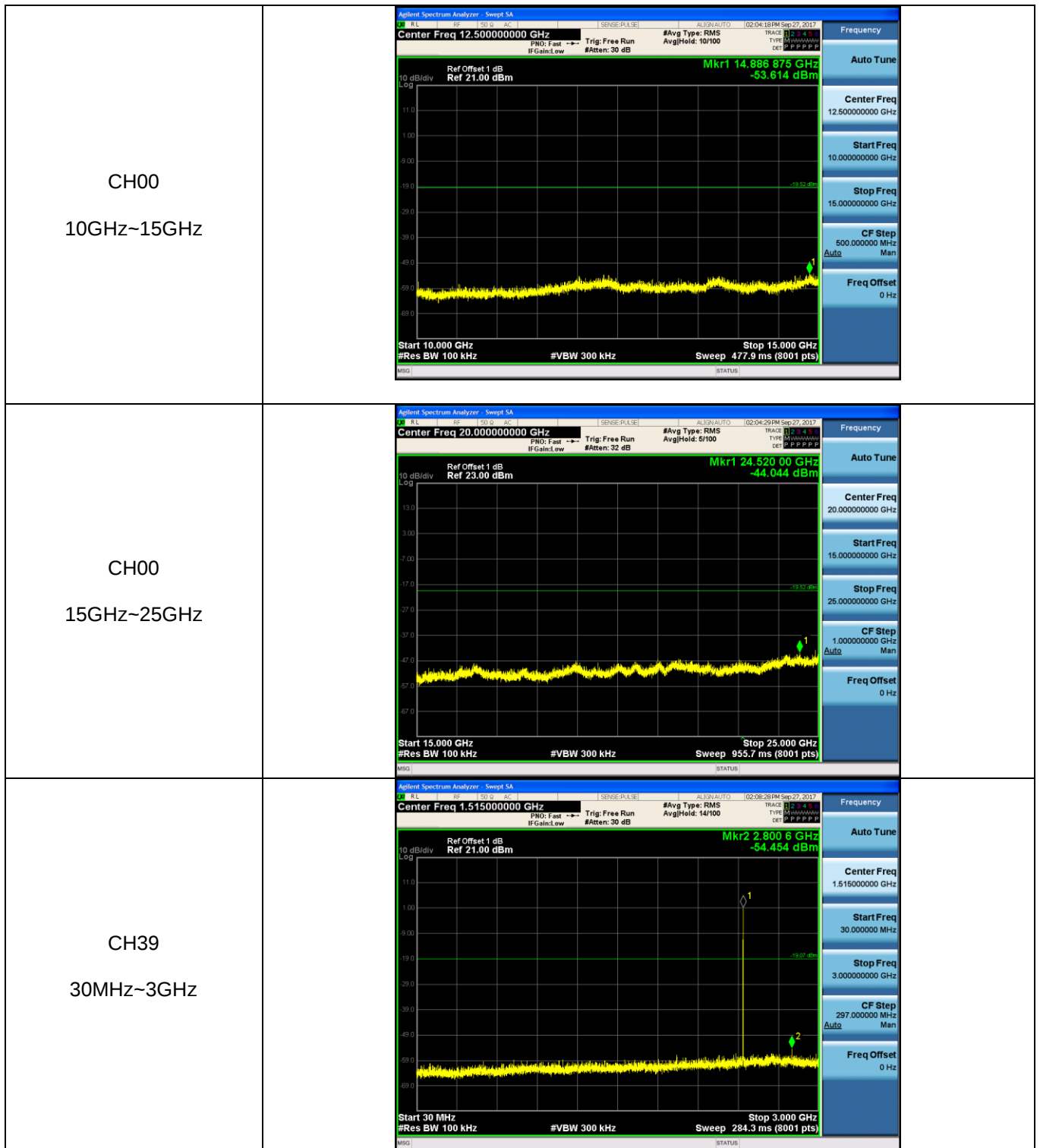


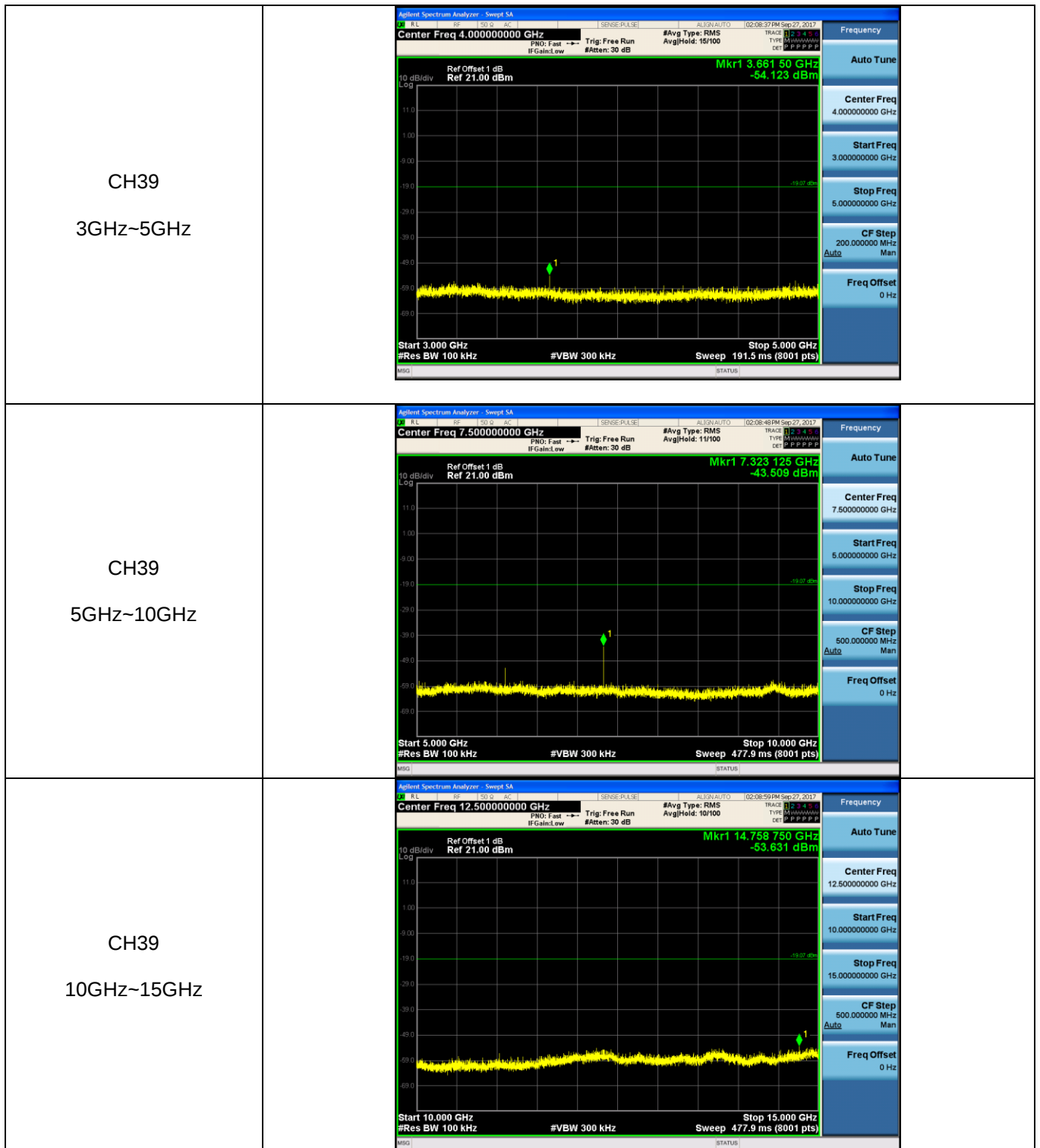
Test Item:	Band edge	Modulation type:	8DPSK
CH00 No hopping mode			
CH00 Hopping mode			
CH78 No hopping mode			

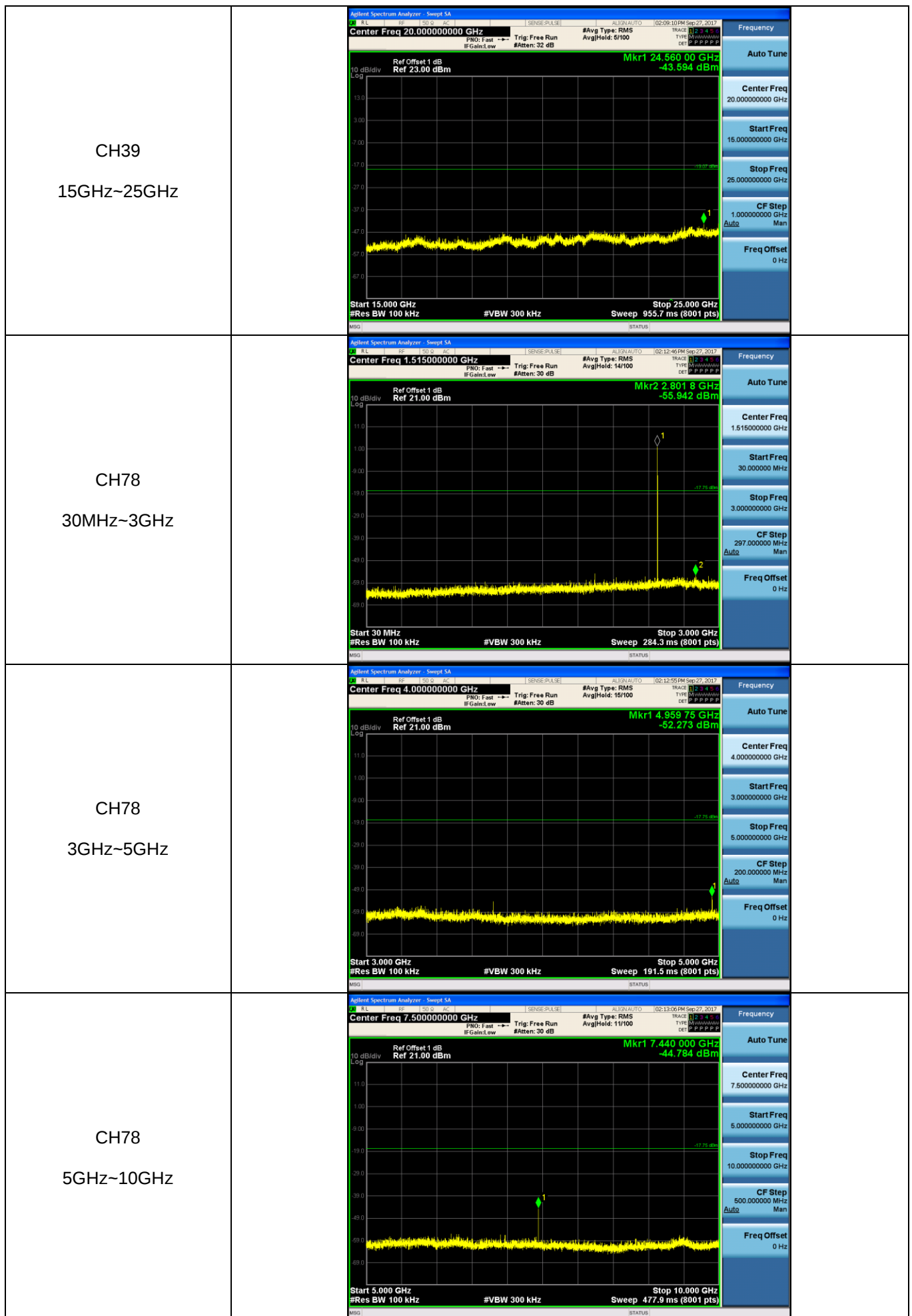
CH78
Hoppig mode

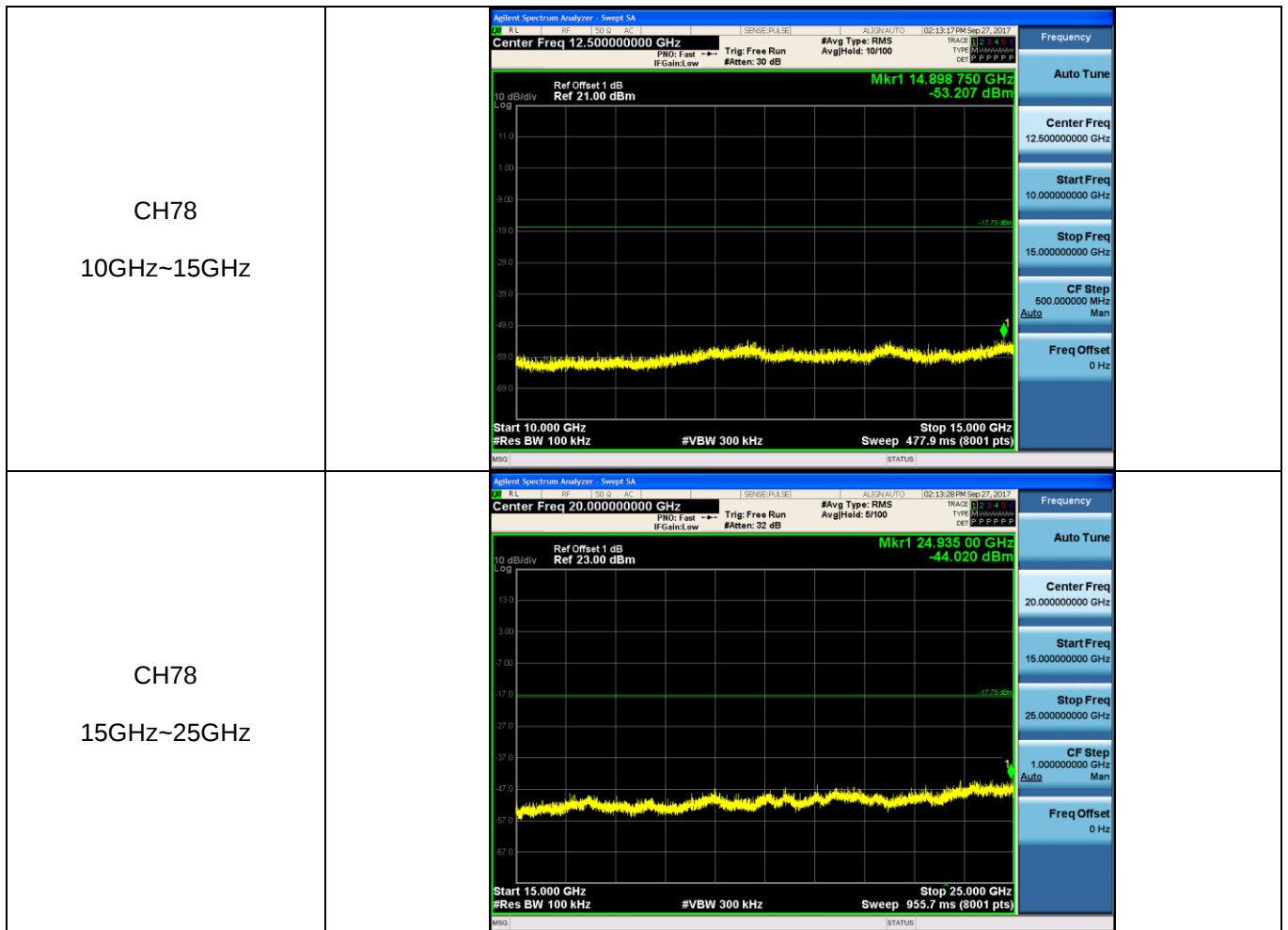


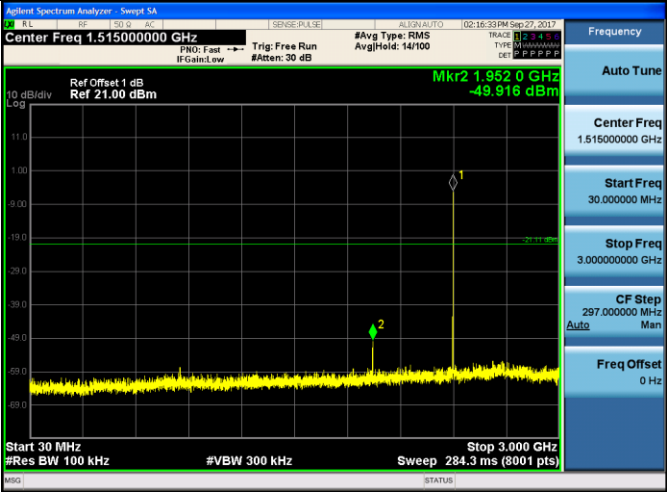
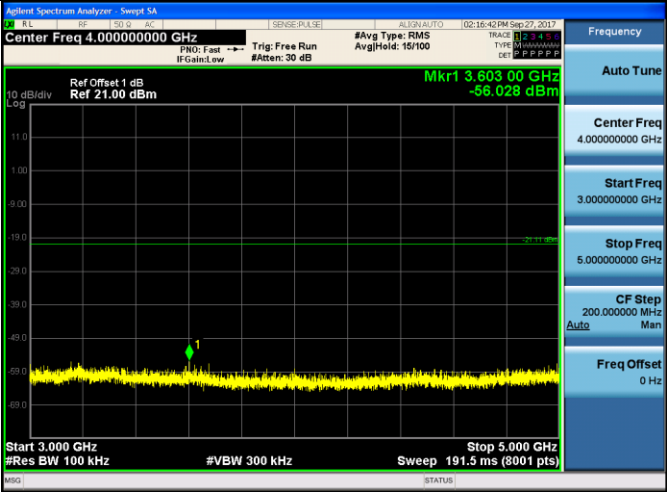
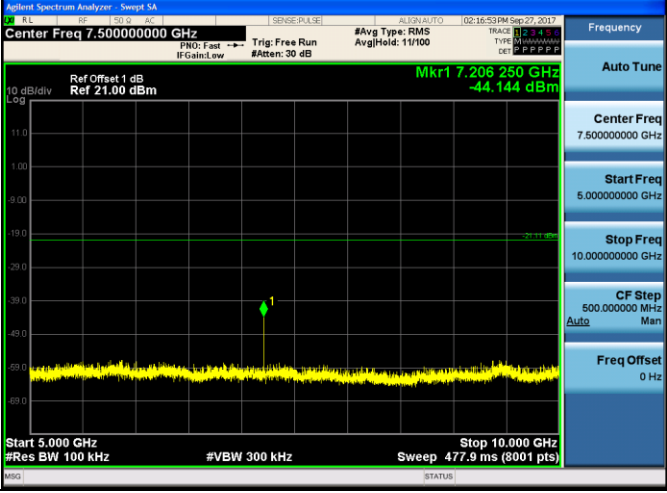
Test Item:	SE	Modulation type:	GFSK
CH00 30MHz~3GHz		Agilent Spectrum Analyzer - Sweep SA Center Freq 1.515000000 GHz Ref Offset 1 dB Ref 21.00 dBm Mkr2 2.819 6 GHz -55.096 dBm Start 30 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 284.3 ms (8001 pts)	
CH00 3GHz~5GHz		Agilent Spectrum Analyzer - Sweep SA Center Freq 4.000000000 GHz Ref Offset 1 dB Ref 21.00 dBm Mkr1 3.603 00 GHz -53.248 dBm Start 3.000 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 191.5 ms (8001 pts)	
CH00 5GHz~10GHz		Agilent Spectrum Analyzer - Sweep SA Center Freq 7.500000000 GHz Ref Offset 1 dB Ref 21.00 dBm Mkr1 7.206 250 GHz -40.901 dBm Start 5.000 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 477.9 ms (8001 pts)	

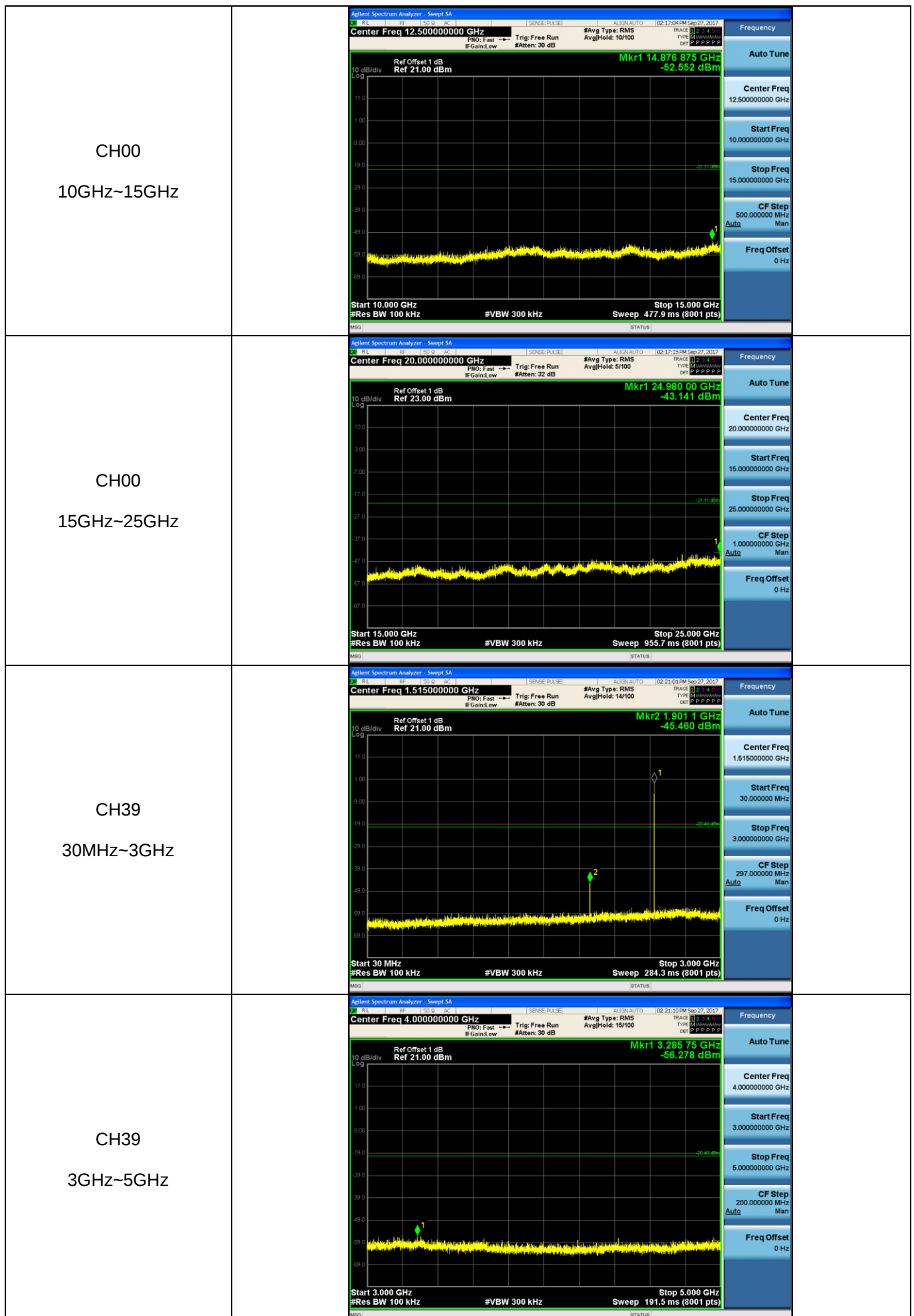


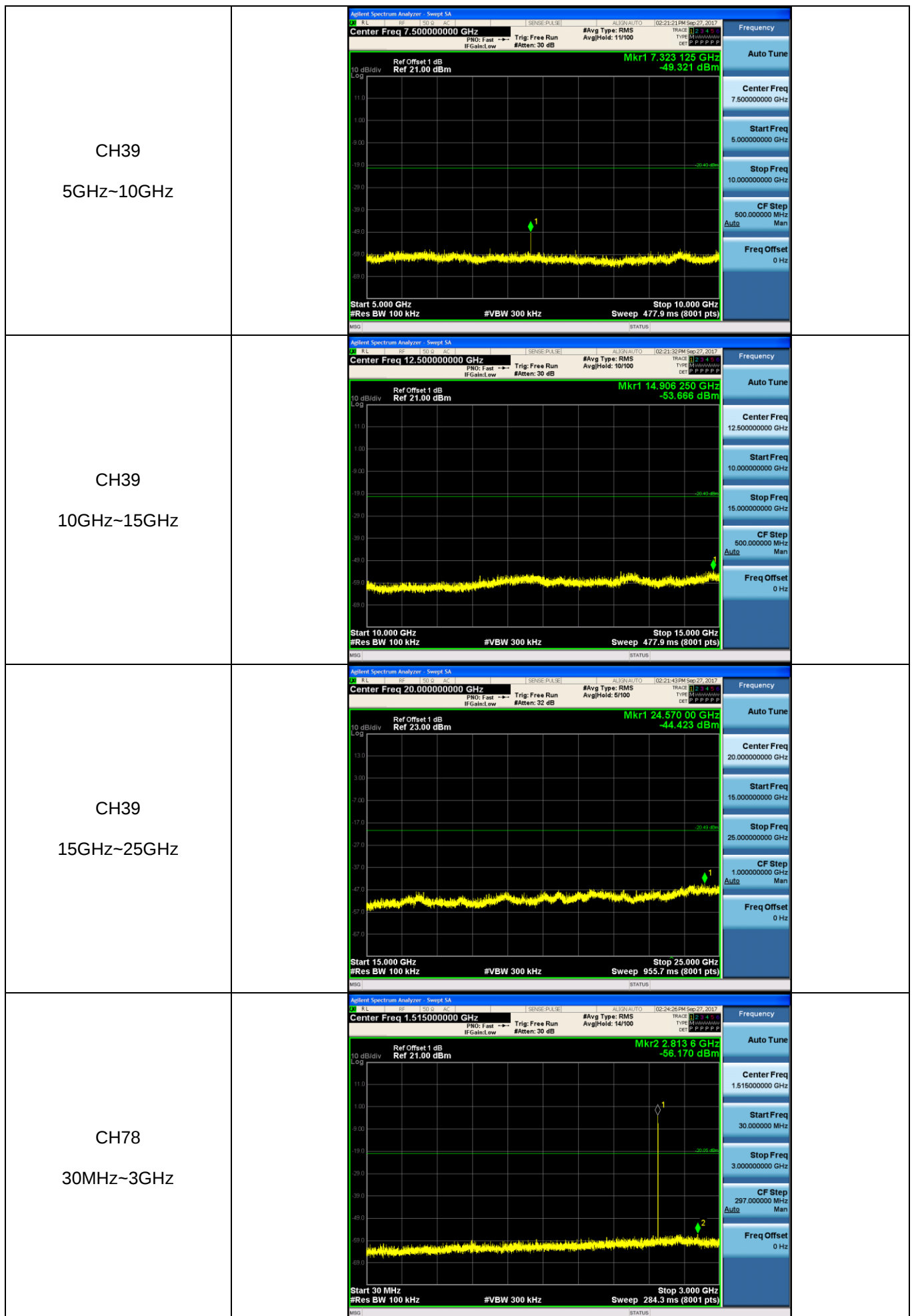


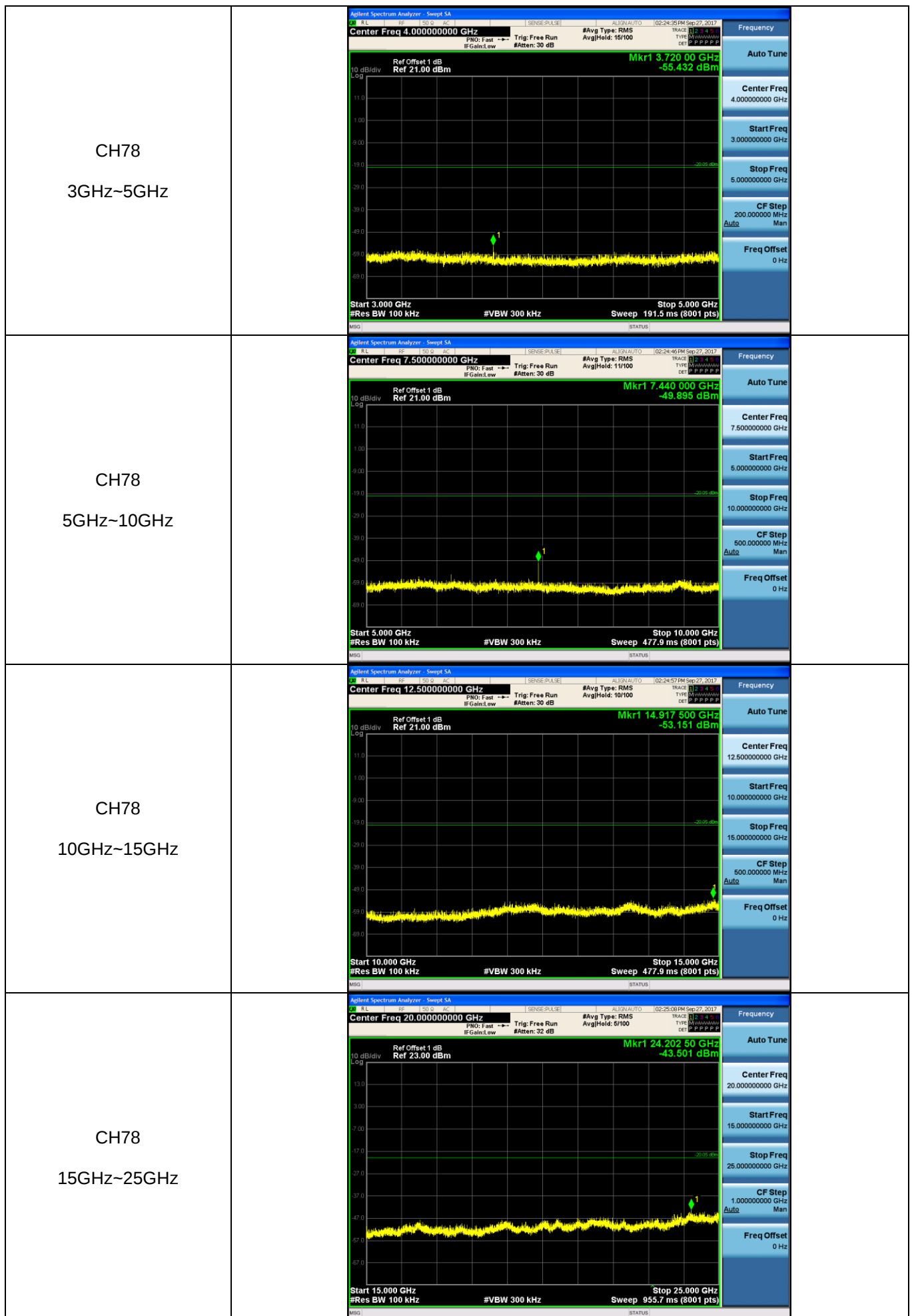


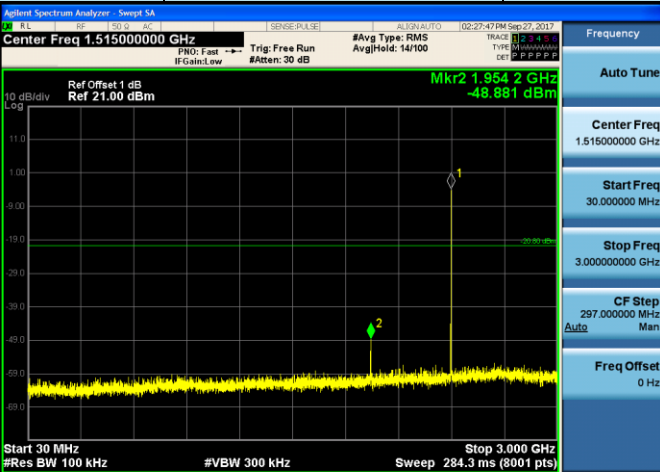
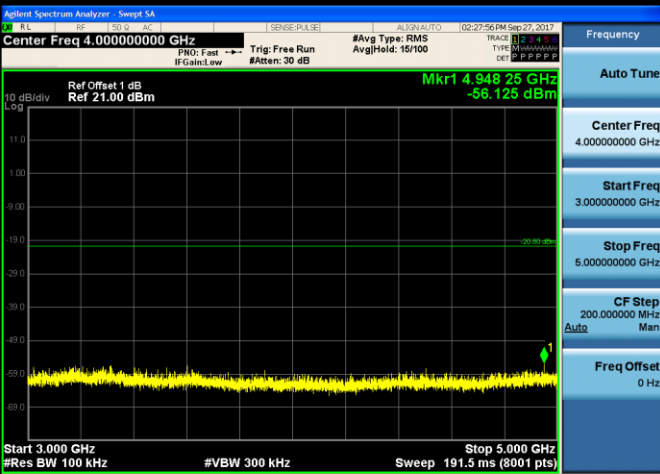
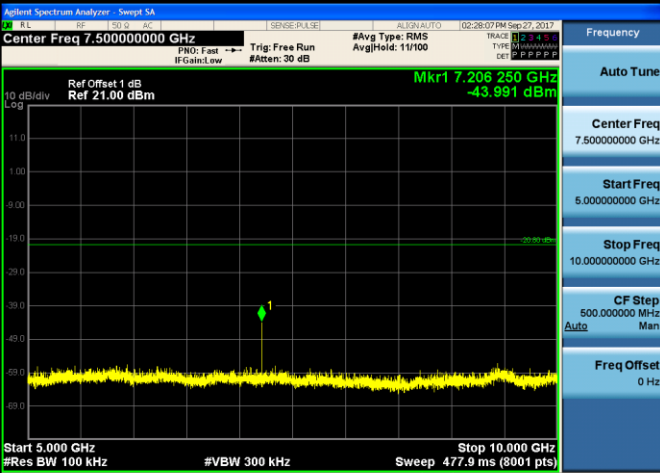


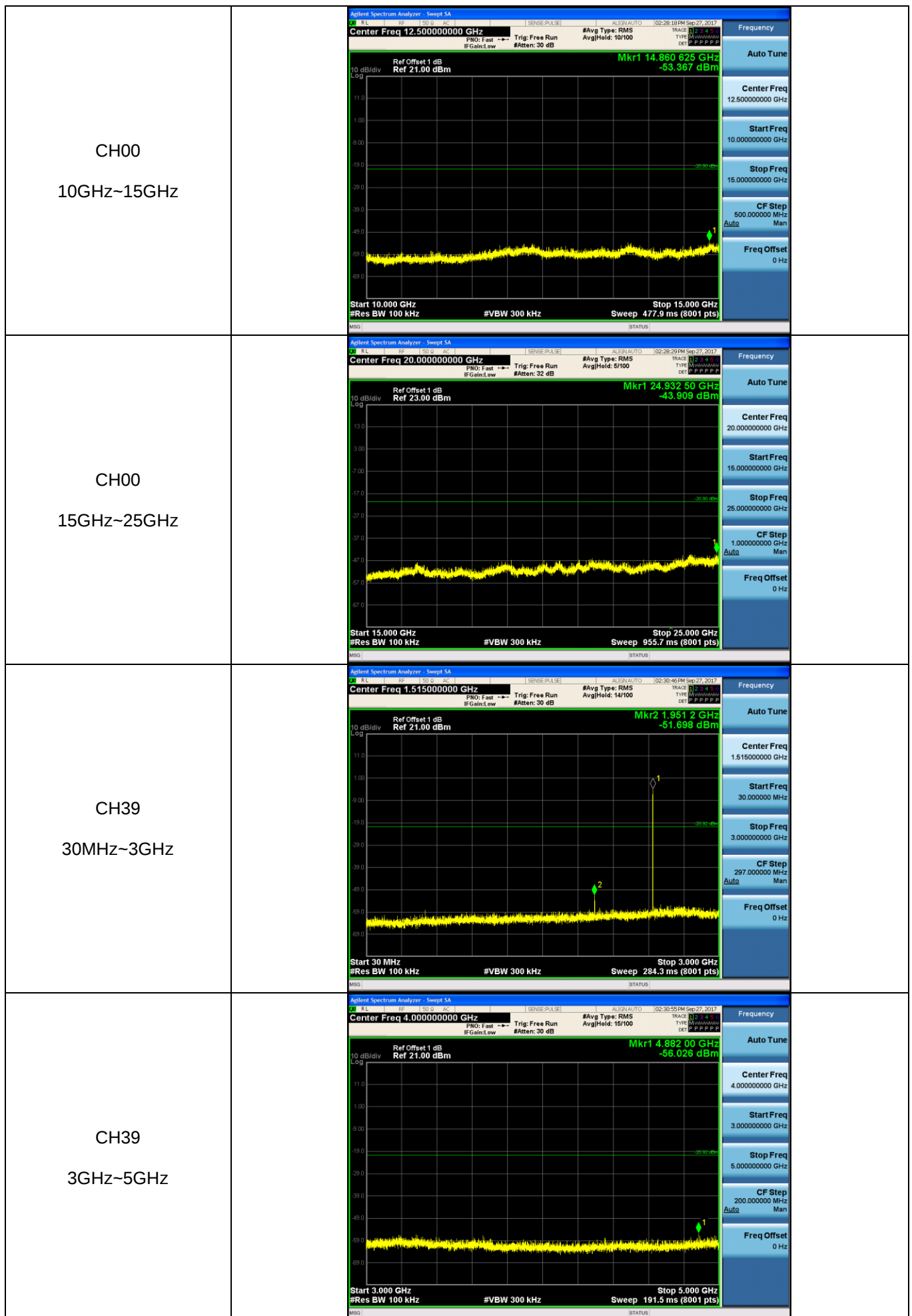
Test Item:	SE	Modulation type:	$\pi/4$ DQPSK
CH00 30MHz~3GHz			
CH00 3GHz~5GHz			
CH00 5GHz~10GHz			

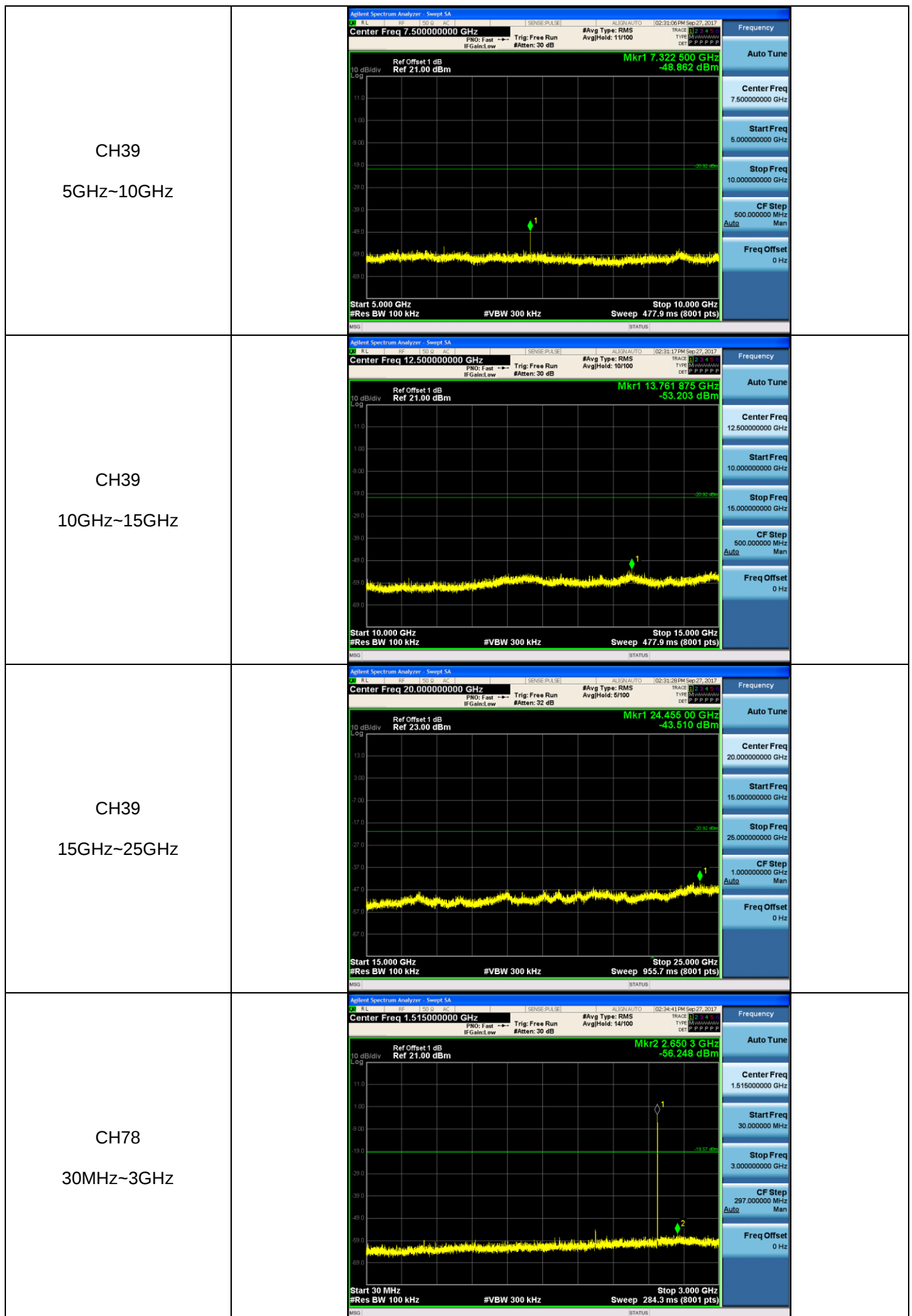


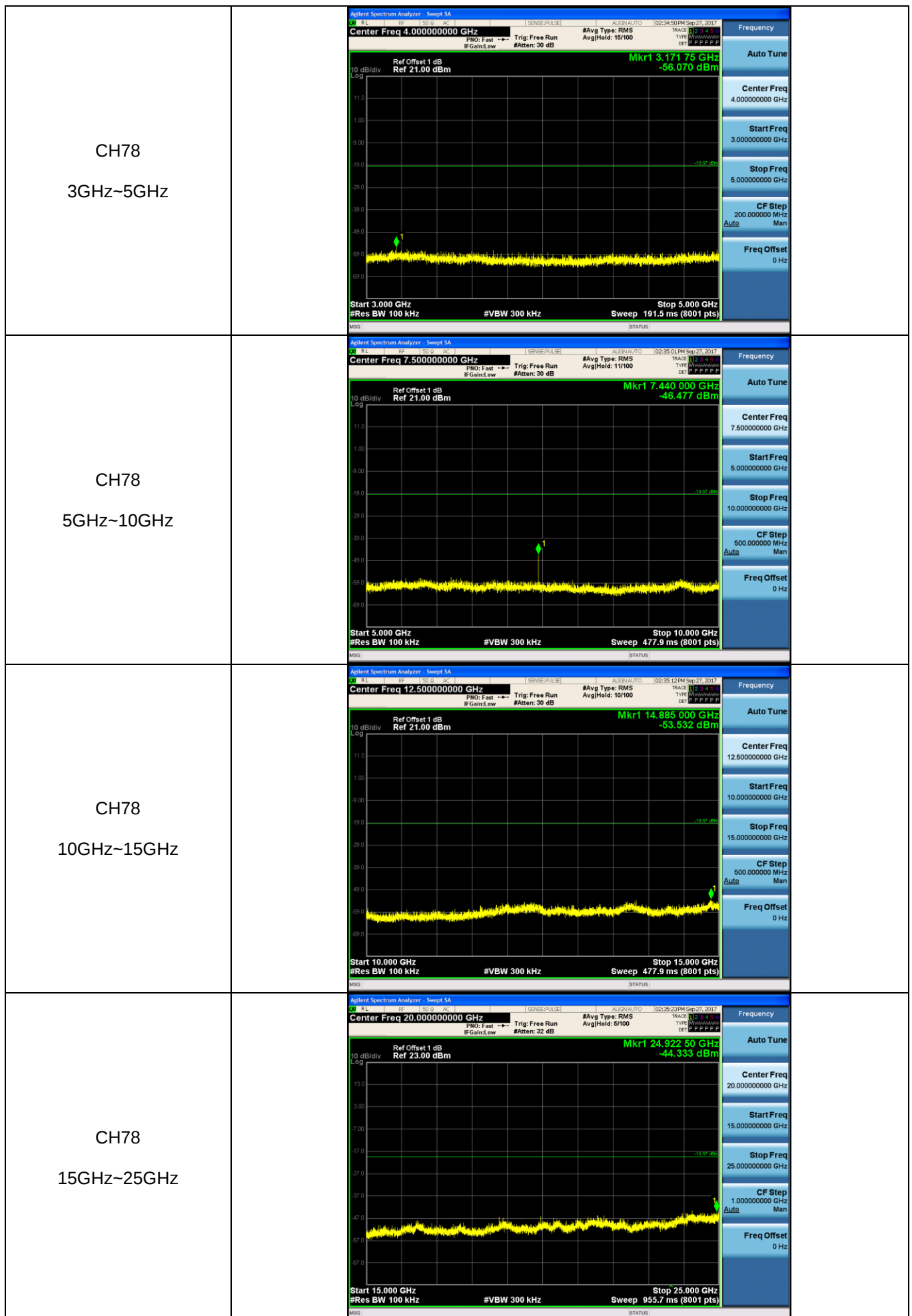




Test Item:	SE	Modulation type:	8DPSK
CH00 30MHz~3GHz			
CH00 3GHz~5GHz			
CH00 5GHz~10GHz			







5.11. Spurious Emissions (radiated)

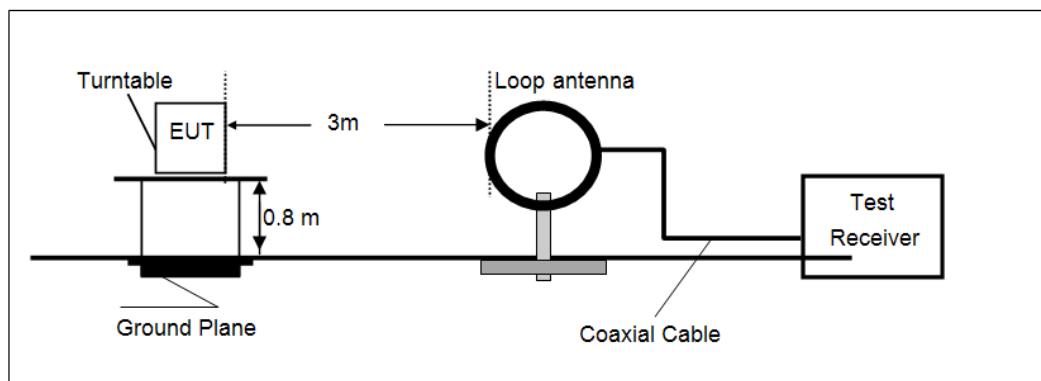
LIMIT

FCC CFR Title 47 Part 15 Subpart C Section 15.209

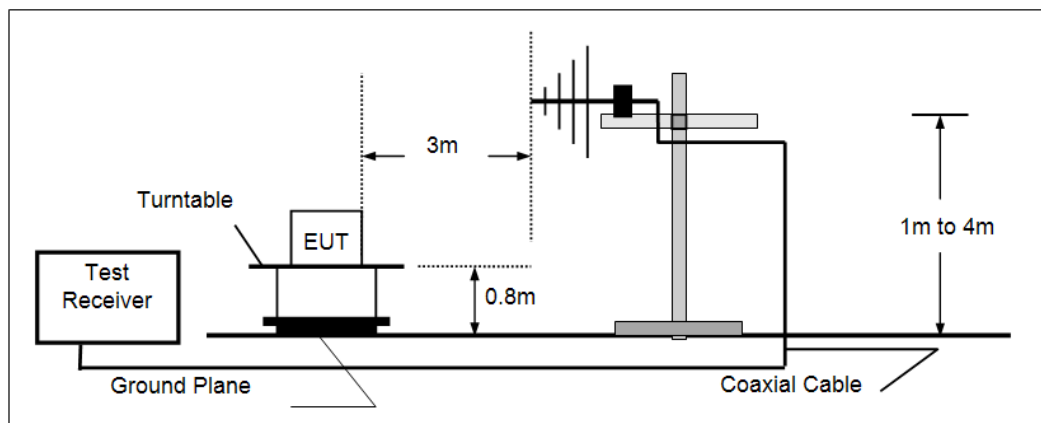
Frequency	Limit (dBuV/m @3m)	Value
30 MHz ~ 88 MHz	40.00	Quasi-peak
88 MHz ~ 216 MHz	43.50	Quasi-peak
216 MHz ~ 960 MHz	46.00	Quasi-peak
960 MHz ~ 1 GHz	54.00	Quasi-peak
Above 1 GHz	54.00	Average
	74.00	Peak

TEST CONFIGURATION

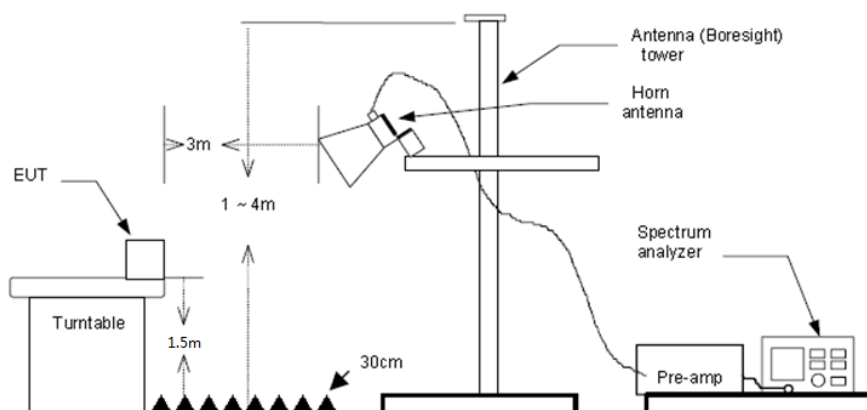
- Below 30 MHz



- 30 MHz ~1000 MHz



- Above 1 GHz



TEST PROCEDURE

1. The EUT was tested according to ANSI C63.10:2013.
2. The EUT is placed on a turn table which is 0.8 meter above ground. The turn table is rotated 360 degrees to determine the position of the maximum emission level.
3. The EUT was positioned such that the distance from antenna to the EUT was 3 meters.
4. The antenna is scanned from 1 meter to 4 meters to find out the maximum emission level. This is repeated for both horizontal and vertical polarization of the antenna.
5. Use the following spectrum analyzer settings
 - (1) Span shall wide enough to fully capture the emission being measured;
 - (2) Below 1 GHz, RBW=120 kHz, VBW=300 kHz, Sweep=auto, Detector function=peak, Trace=max hold;
If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.
 - (3) Above 1 GHz, RBW=1 MHz, VBW=3 MHz Peak detector for Peak value
RBW=1 MHz, VBW=10 Hz Peak detector for Average value.

TEST MODE:

Please refer to the clause 3.3

TEST RESULTS

☒ **Passed** ☐ **Not Applicable**

Note:

- 1) Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor
- 2) The emission levels of other frequencies are very lower than the limit and not show in test report.
- 3) Below 1 GHz, Have pre-scan all modulation mode, found the GFSK modulation High channel which it was worst case, so only the worst case's data on the test report.
- 4) Above 1 GHz, Have pre-scan all modulation mode, found the GFSK modulation which it was worst case, so only the worst case's data on the test report
- 5) The peak level is lower than average limit(54 dBuV/m), this data is the too weak instrument of signal is unable to test.

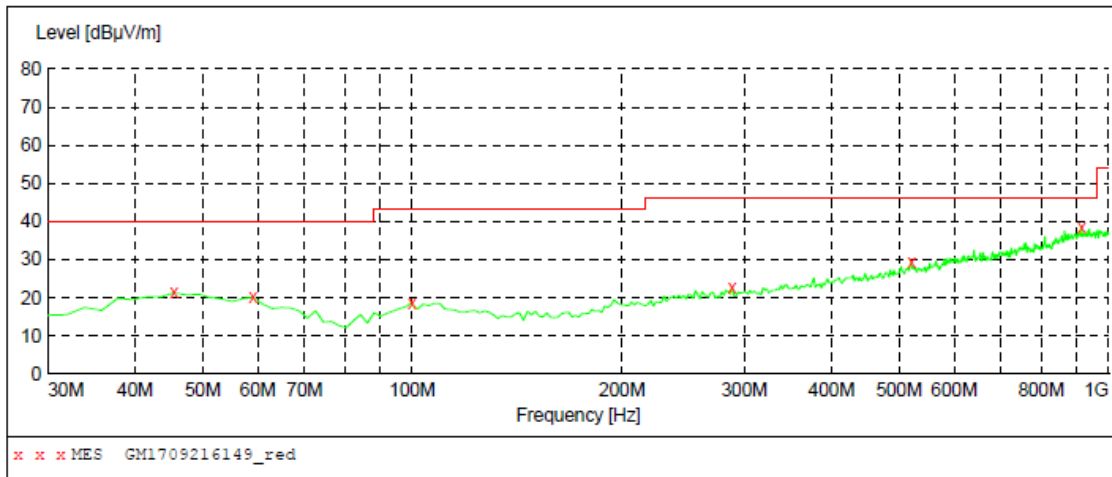
➤ **9 kHz ~ 30 MHz**

The low frequency, which started from 9 kHz to 30 MHz, was pre-scanned and the result which was 20 dB lower than the limit line per 15.31(o) was not reported.

➤ 30 MHz ~ 1 GHz

Polarization:

Vertical

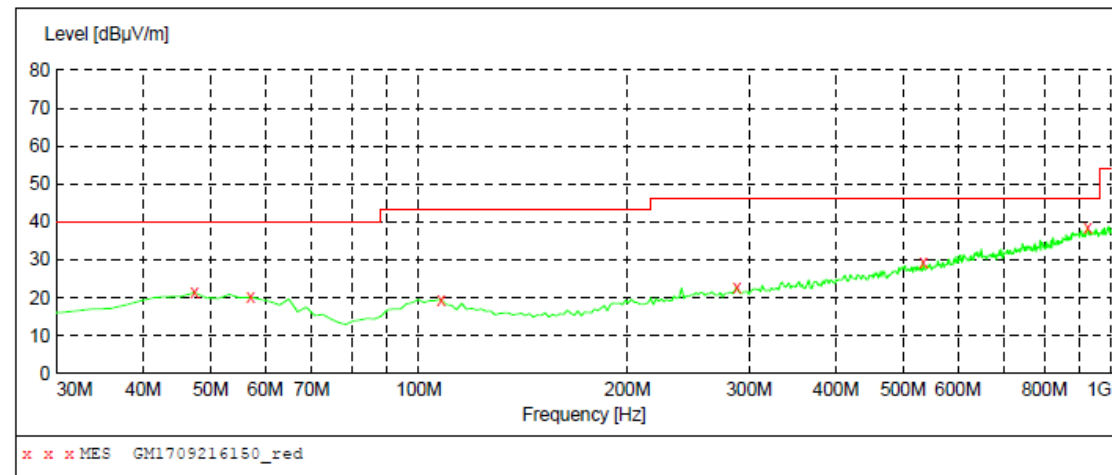
**MEASUREMENT RESULT: "GM1709216149_red"**

9/21/2017 8:34PM

Frequency MHz	Level dBμV/m	Transd dB	Limit dBμV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
45.520000	21.40	-8.8	40.0	18.6	QP	100.0	282.00	VERTICAL
59.100000	20.10	-9.8	40.0	19.9	QP	100.0	257.00	VERTICAL
99.840000	18.70	-10.6	43.5	24.8	QP	100.0	232.00	VERTICAL
288.020000	22.70	-7.5	46.0	23.3	QP	100.0	309.00	VERTICAL
520.820000	29.20	-1.3	46.0	16.8	QP	100.0	222.00	VERTICAL
914.640000	38.60	6.9	46.0	7.4	QP	100.0	84.00	VERTICAL

Polarization:

Horizontal

**MEASUREMENT RESULT: "GM1709216150_red"**

9/21/2017 8:38PM

Frequency MHz	Level dBμV/m	Transd dB	Limit dBμV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
47.460000	21.40	-8.8	40.0	18.6	QP	300.0	17.00	HORIZONTAL
57.160000	20.20	-9.4	40.0	19.8	QP	300.0	56.00	HORIZONTAL
107.600000	19.60	-10.6	43.5	23.9	QP	300.0	298.00	HORIZONTAL
288.020000	22.80	-7.5	46.0	23.2	QP	100.0	179.00	HORIZONTAL
534.400000	29.20	-1.1	46.0	16.8	QP	100.0	50.00	HORIZONTAL
924.340000	38.30	7.0	46.0	7.7	QP	100.0	0.00	HORIZONTAL

➤ Above 1 GHz

CH00									
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization	Test value
1823.48	37.52	25.38	6.00	37.16	31.74	74.00	-42.26	Vertical	Peak
4343.90	35.44	30.33	9.08	37.59	37.26	74.00	-36.74	Vertical	Peak
5703.86	34.54	31.62	10.44	35.58	41.02	74.00	-32.98	Vertical	Peak
8571.38	32.66	37.19	12.88	34.48	48.25	74.00	-25.75	Vertical	Peak
1943.29	47.32	25.74	6.18	37.25	41.99	74.00	-32.01	Horizontal	Peak
3128.01	37.22	28.80	7.63	38.21	35.44	74.00	-38.56	Horizontal	Peak
4809.50	43.14	31.58	9.55	36.93	47.34	74.00	-26.66	Horizontal	Peak
7209.02	35.93	36.21	11.87	35.07	48.94	74.00	-25.06	Horizontal	Peak

CH39									
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization	Test value
1529.75	38.22	25.53	5.37	36.63	32.49	74.00	-41.51	Vertical	Peak
3552.58	36.51	29.16	8.20	38.34	35.53	74.00	-38.47	Vertical	Peak
4883.52	51.03	31.43	9.59	36.73	55.32	74.00	-18.68	Vertical	Peak
7432.62	33.01	36.23	12.18	34.85	46.57	74.00	-27.43	Vertical	Peak
4883.52	42.04	31.43	9.59	36.73	46.33	54.00	-7.67	Vertical	Average
1943.29	41.58	25.74	6.18	37.25	36.25	74.00	-37.75	Horizontal	Peak
4288.96	35.23	30.18	9.02	37.61	36.82	74.00	-37.18	Horizontal	Peak
5099.49	34.26	31.90	9.75	36.30	39.61	74.00	-34.39	Horizontal	Peak
7470.56	32.77	36.16	12.30	34.88	46.35	74.00	-27.65	Horizontal	Peak

CH78									
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization	Test value
3080.60	37.34	28.76	7.58	38.22	35.46	74.00	-38.54	Vertical	Peak
4712.55	34.26	31.25	9.51	37.08	37.94	74.00	-36.06	Vertical	Peak
7432.62	33.88	36.23	12.18	34.85	47.44	74.00	-26.56	Vertical	Peak
9784.47	34.12	39.10	13.65	35.65	51.22	74.00	-22.78	Vertical	Peak
1958.19	42.59	25.89	6.21	37.27	37.42	74.00	-36.58	Horizontal	Peak
3923.37	35.41	29.70	8.67	38.16	35.62	74.00	-38.38	Horizontal	Peak
4958.68	46.97	31.46	9.64	36.52	51.55	74.00	-22.45	Horizontal	Peak
7063.69	32.80	35.49	11.85	34.88	45.26	74.00	-28.74	Horizontal	Peak

6. TEST SETUP PHOTOS

Conducted Emissions



Radiated Emissions





7. EXTERANAL AND INTERNAL PHOTOS

Reference to the test report No.: TRE1709016401.

.....End of Report.....