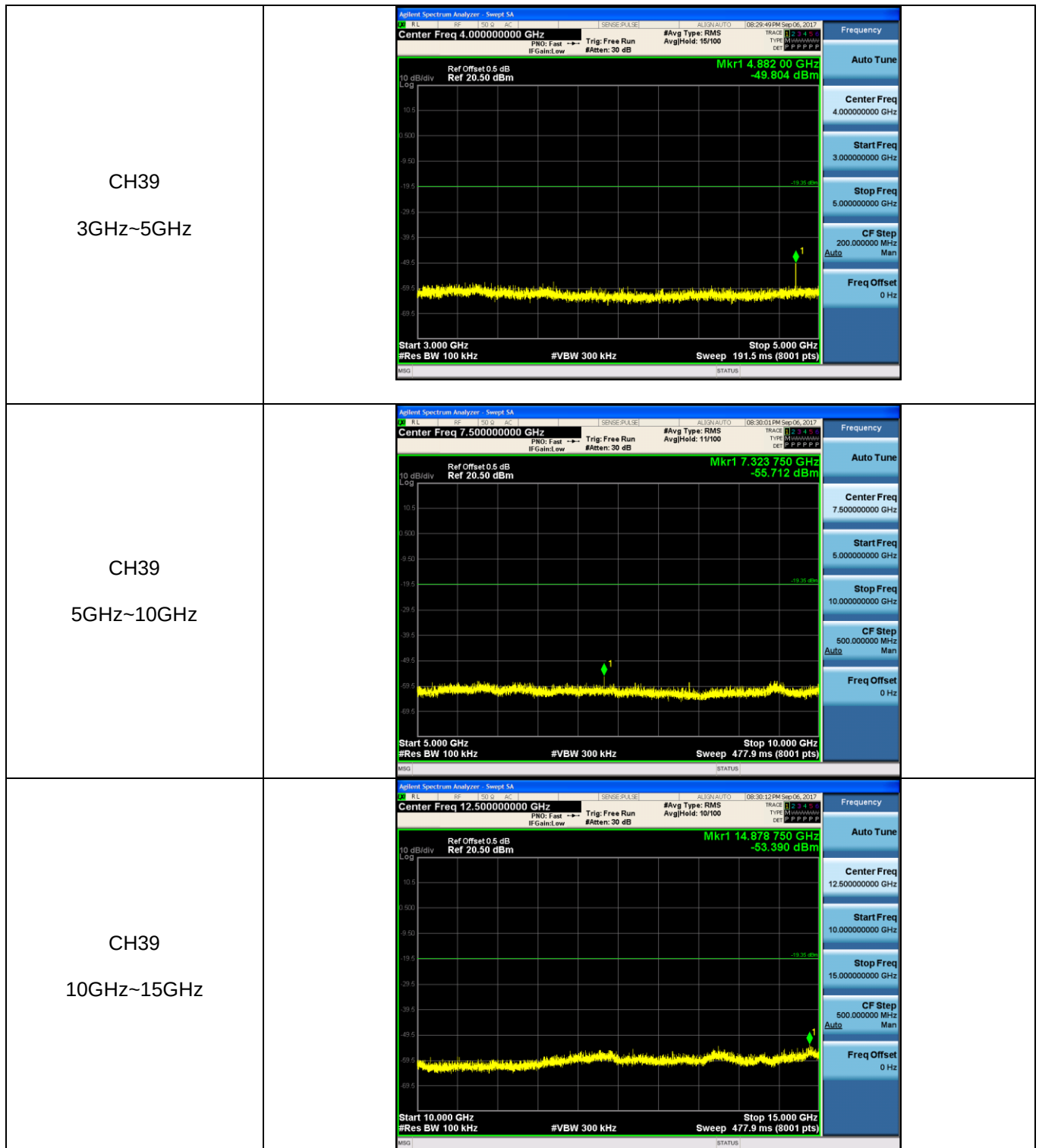
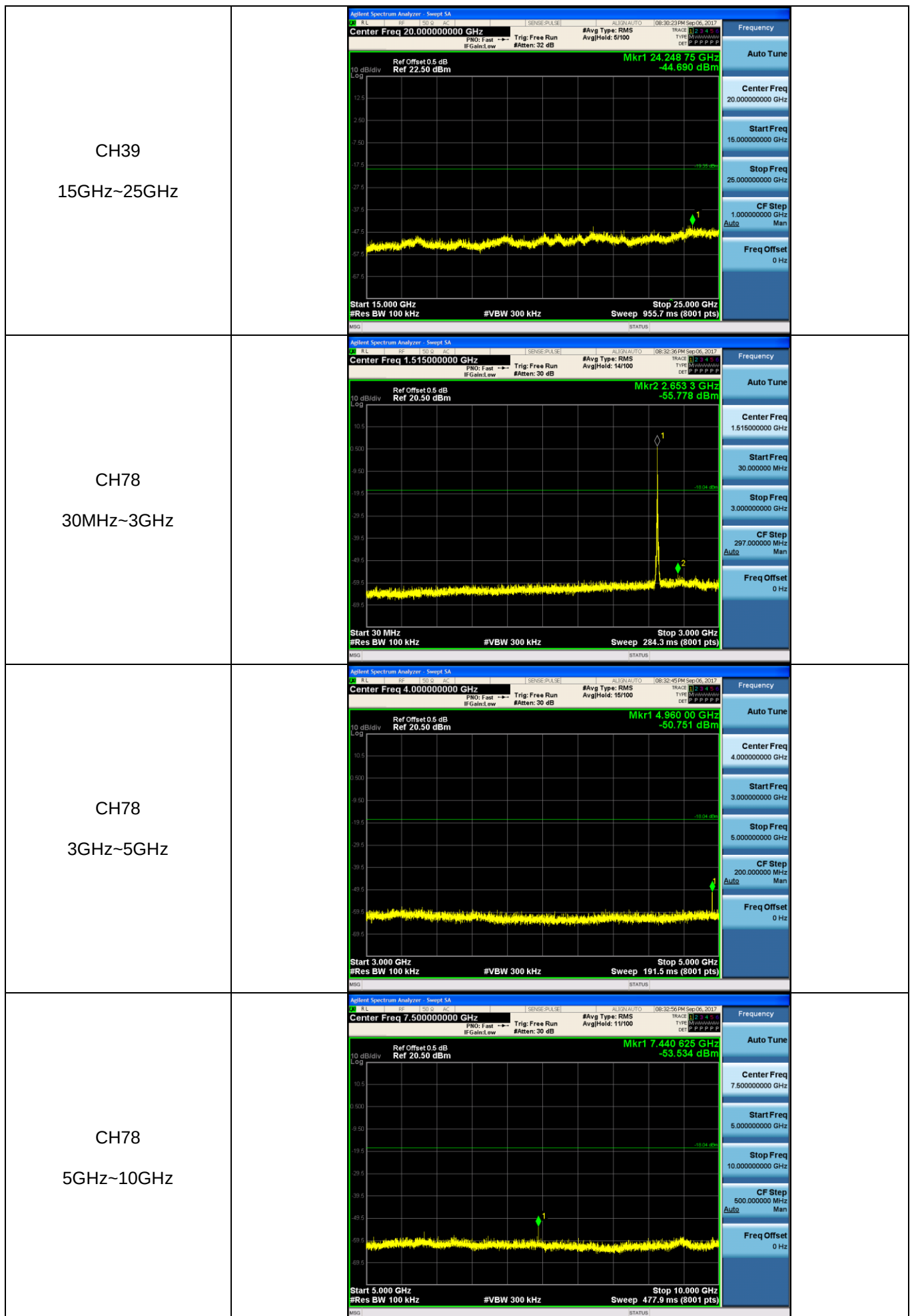
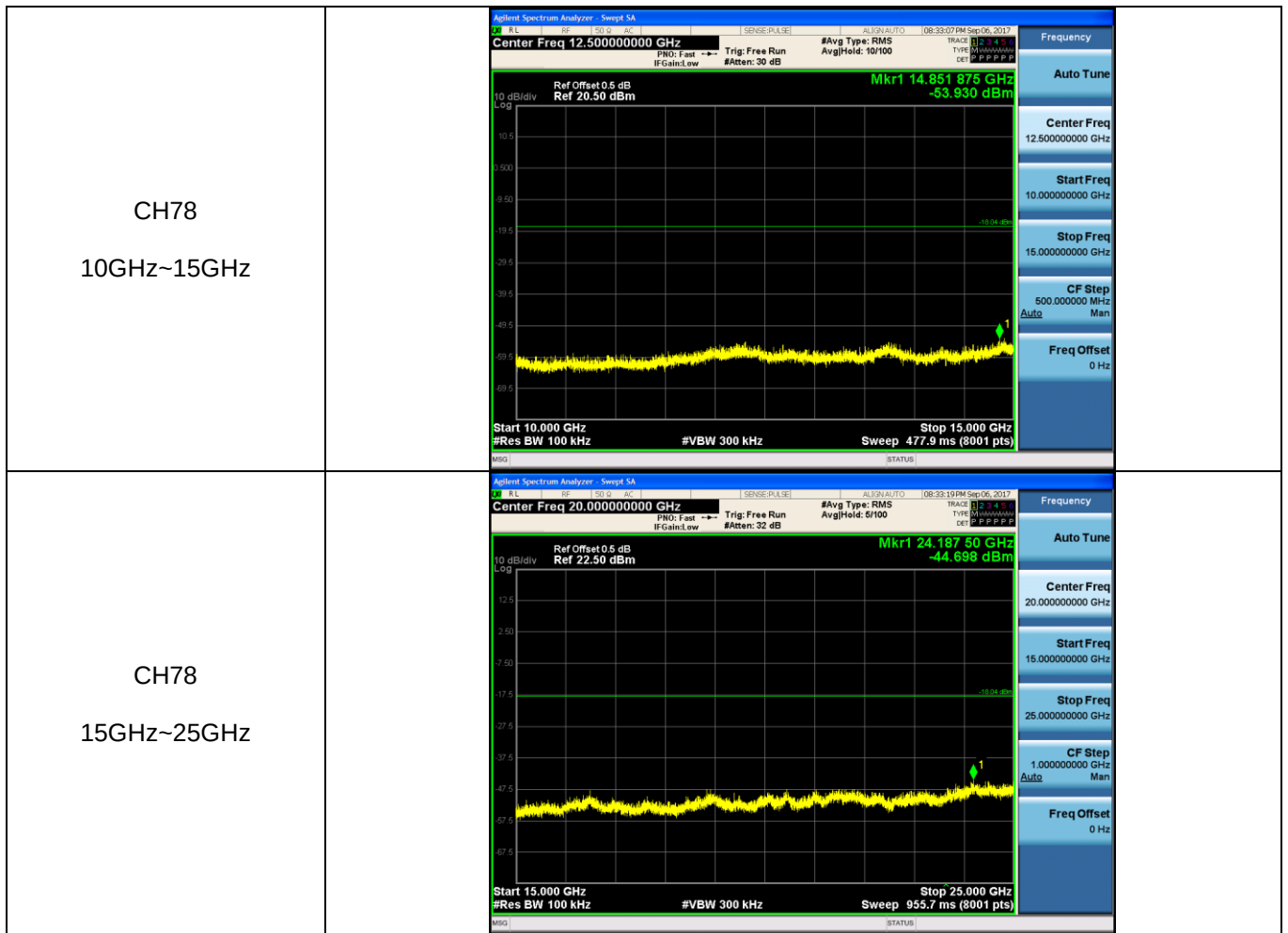
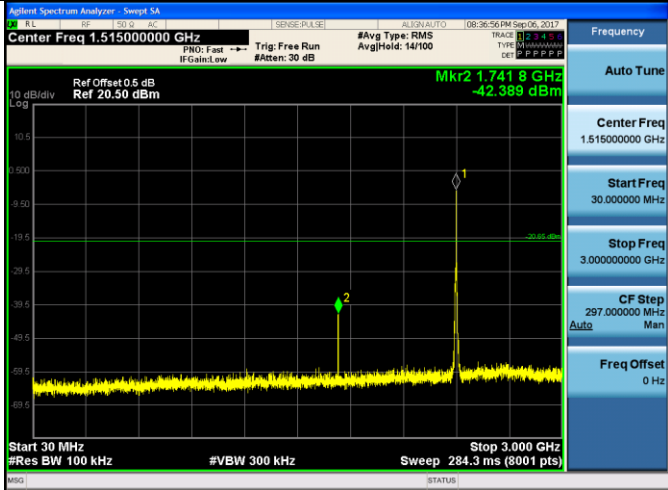
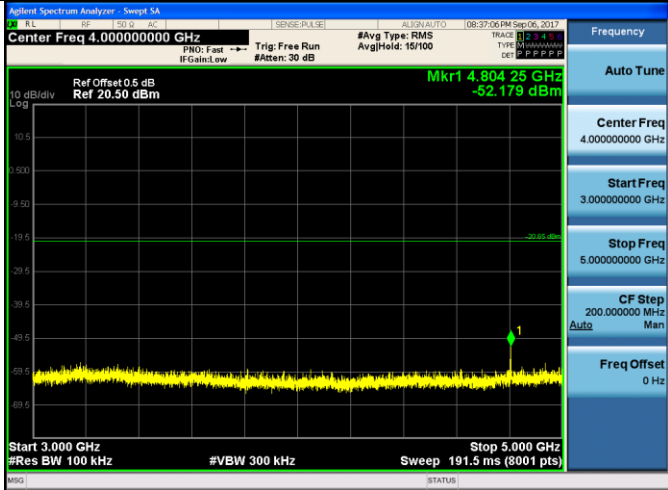
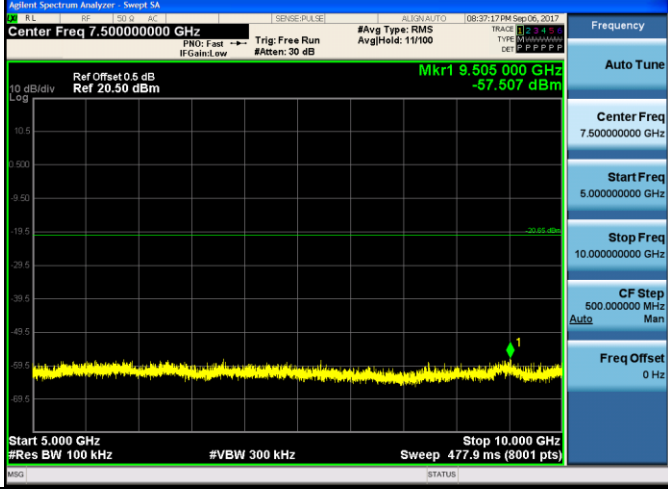
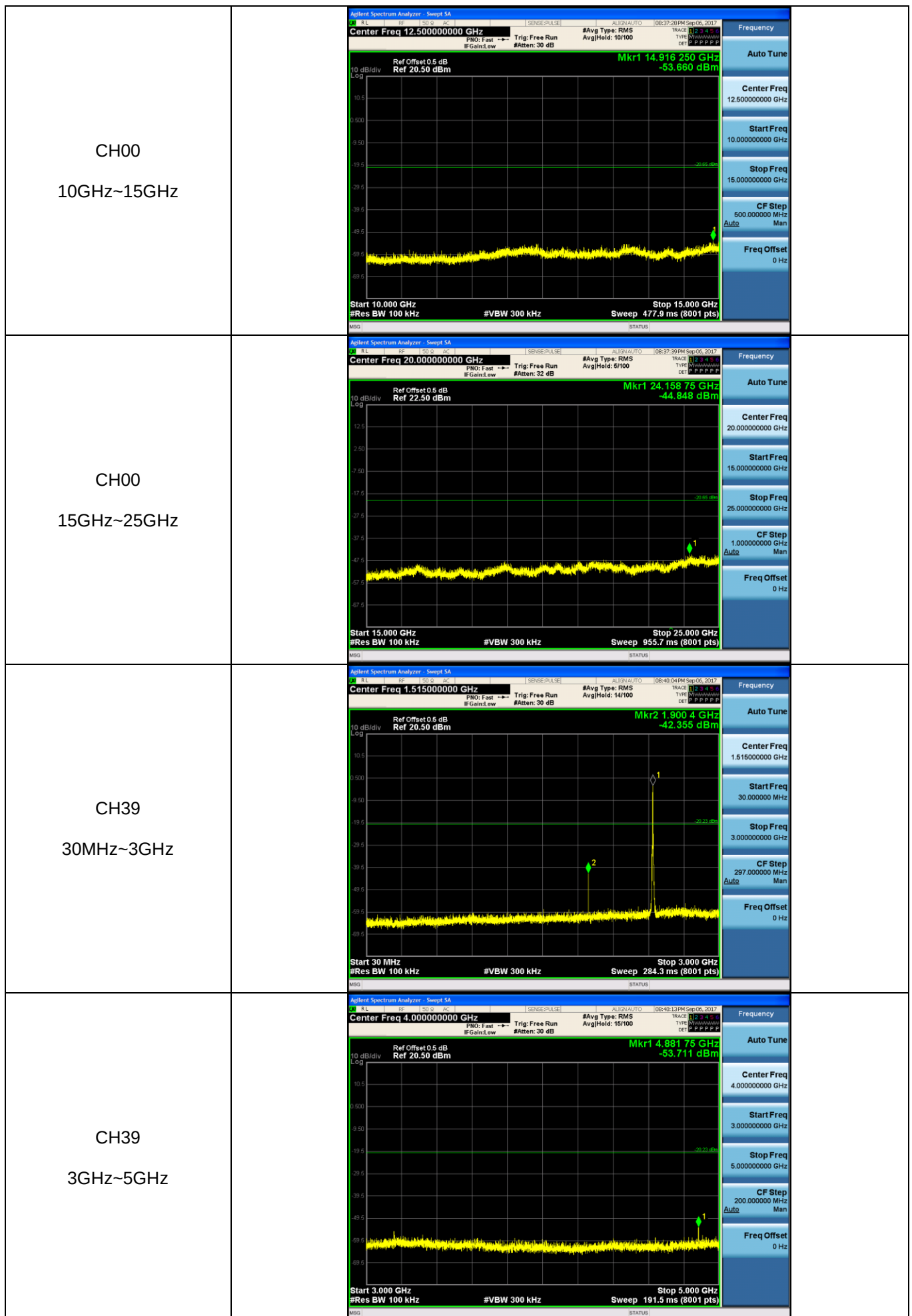


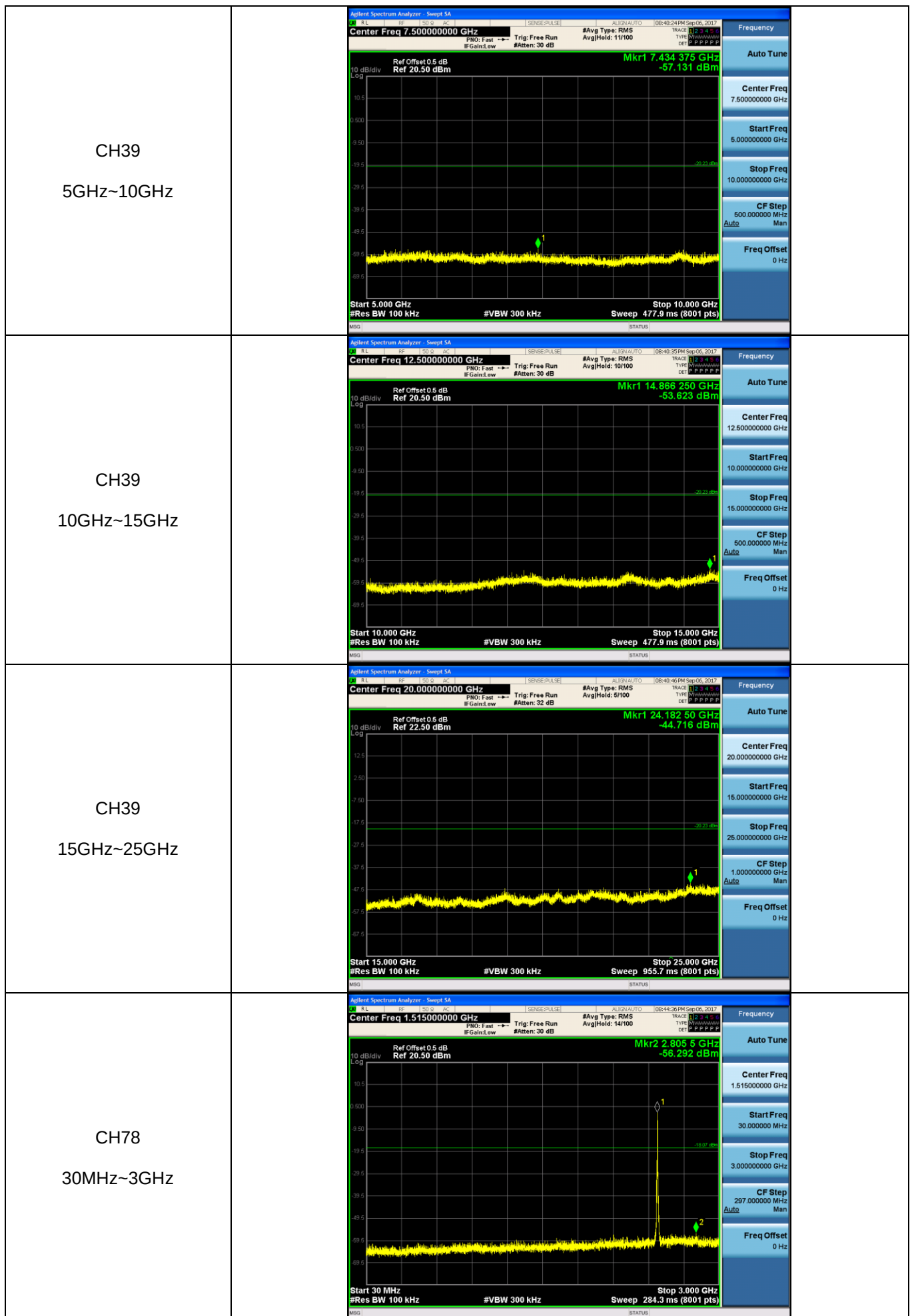


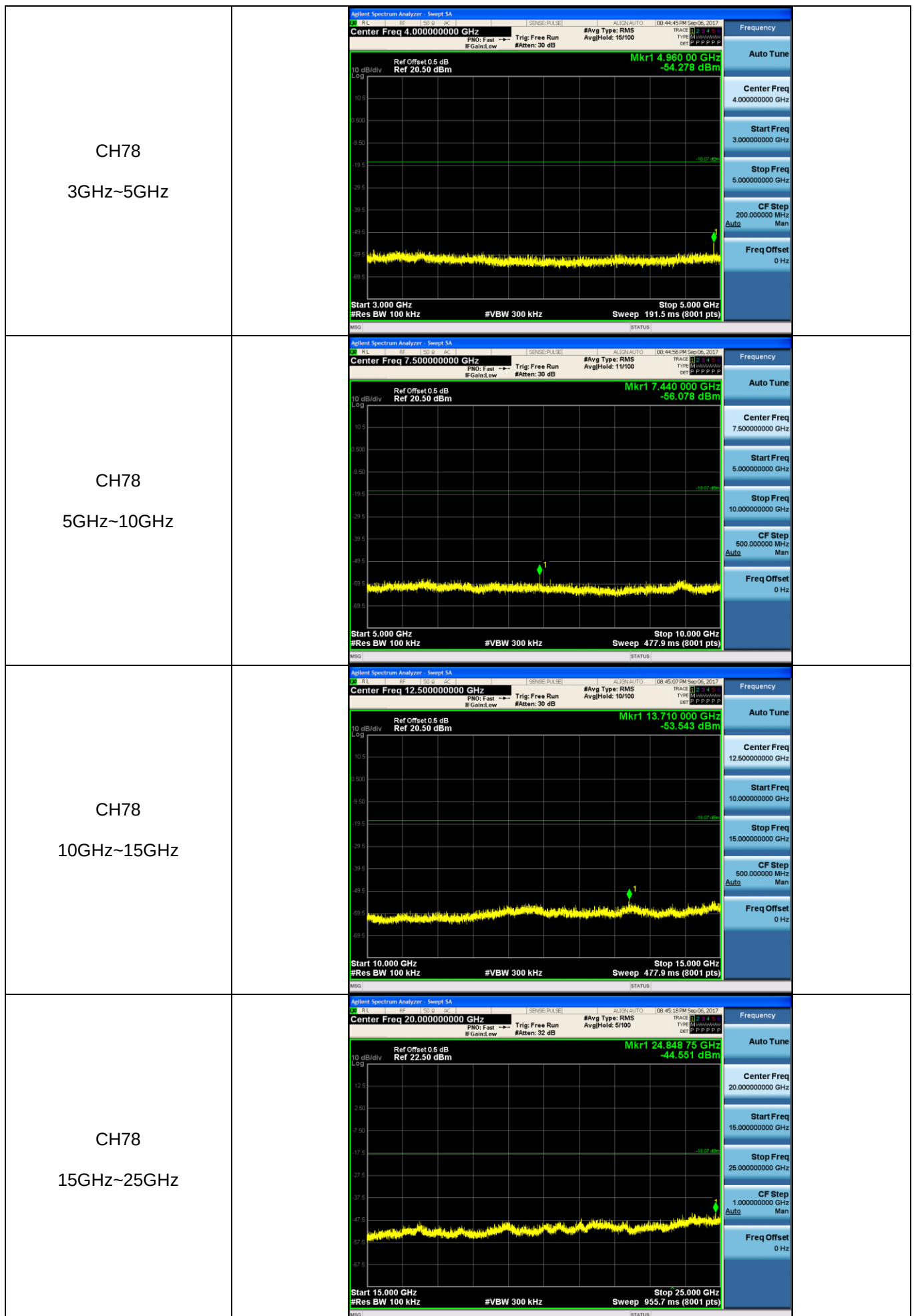


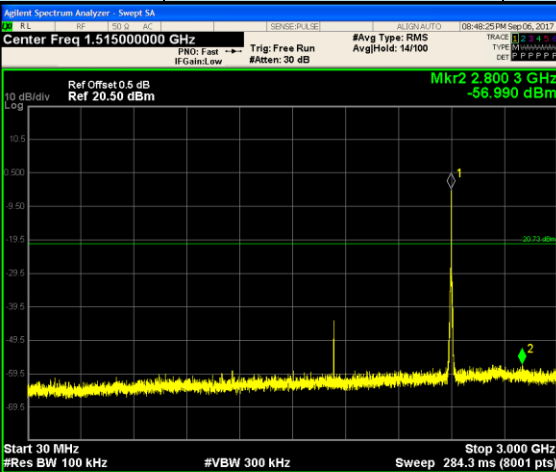
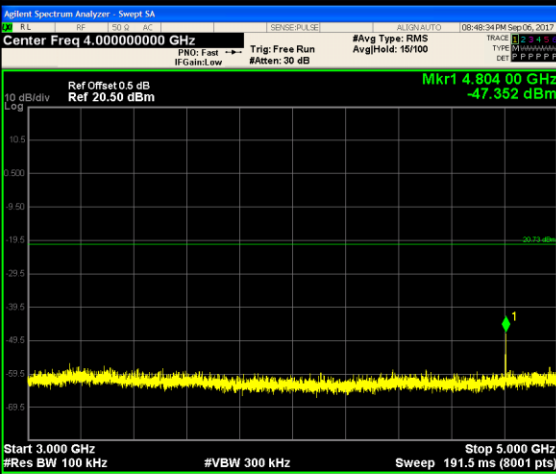
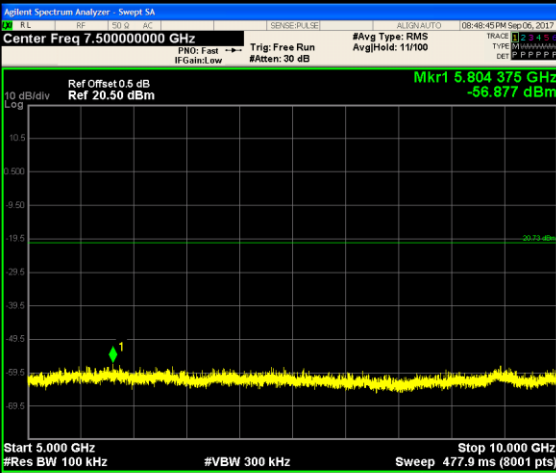


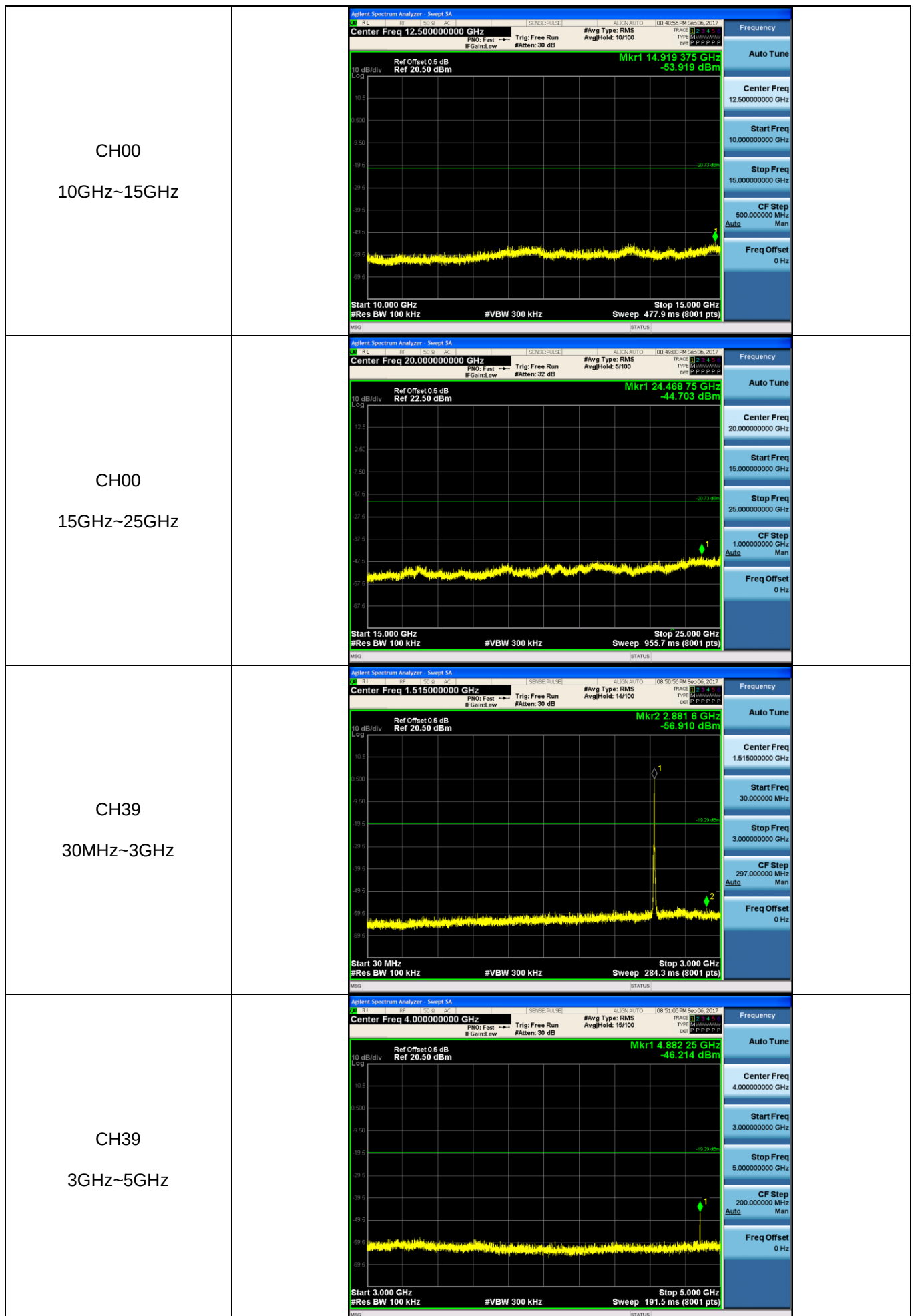
Test Item:	SE	Modulation type:	$\pi/4$ DQPSK
CH00 30MHz~3GHz			
CH00 3GHz~5GHz			
CH00 5GHz~10GHz			

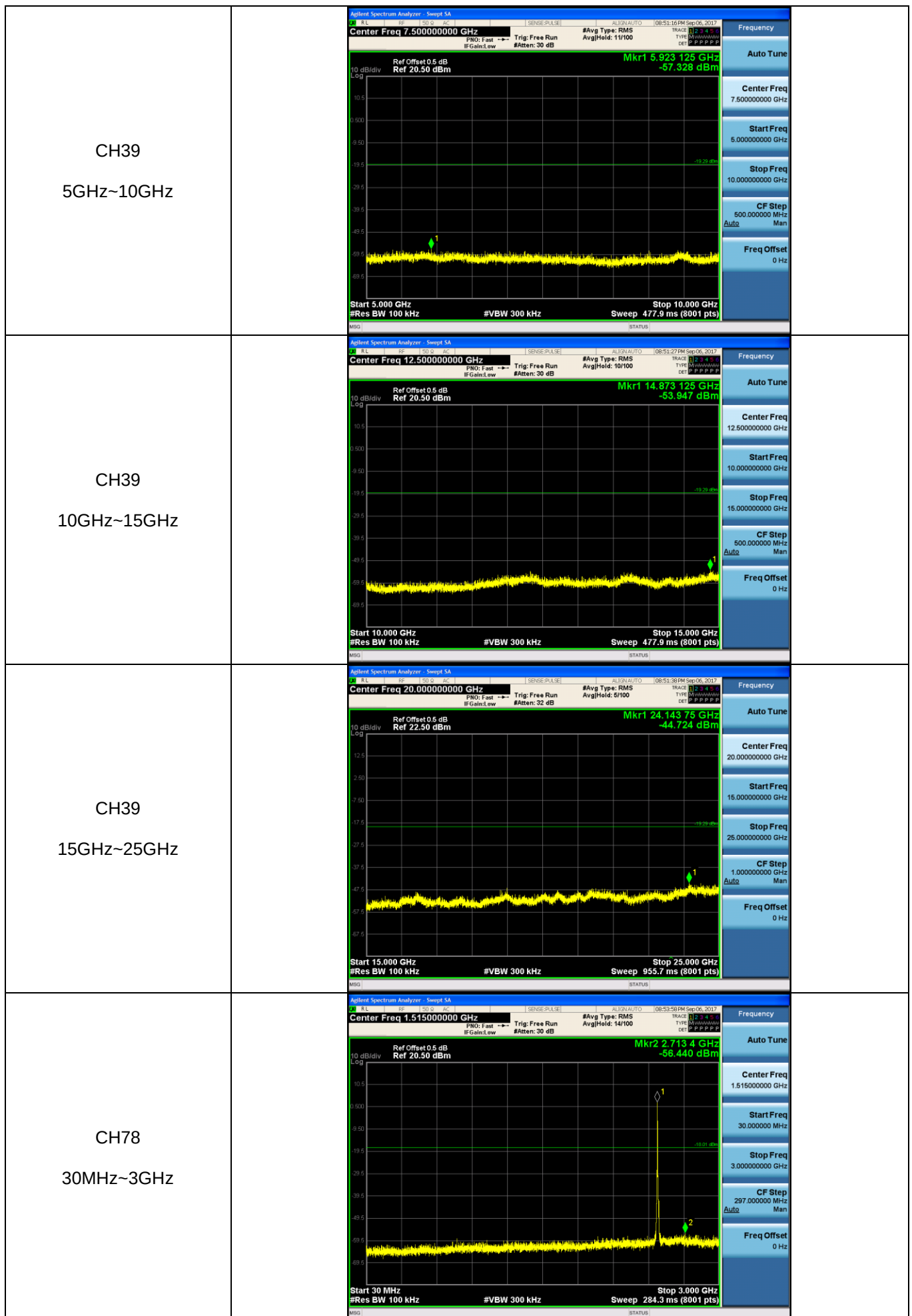


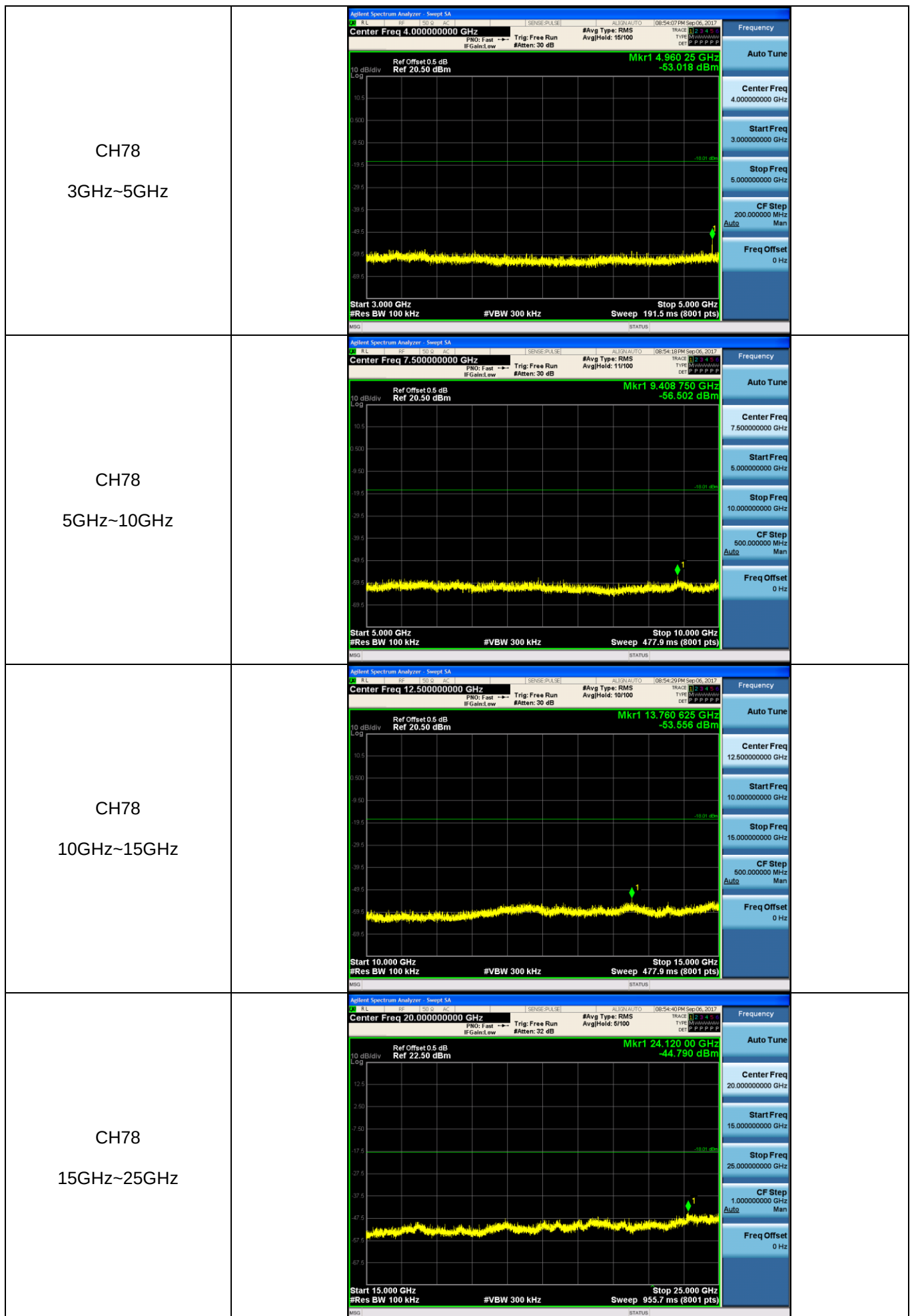




Test Item:	SE	Modulation type:	8DPSK
CH00 30MHz~3GHz			
CH00 3GHz~5GHz			
CH00 5GHz~10GHz			







5.11. Spurious Emissions (radiated)

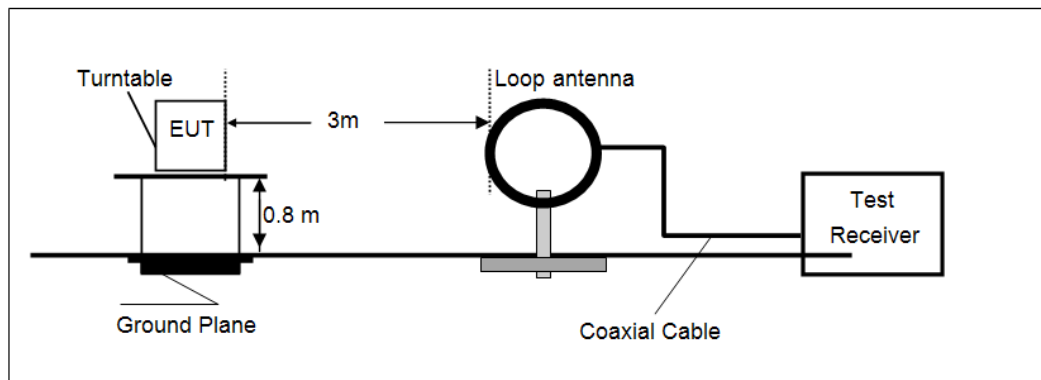
LIMIT

FCC CFR Title 47 Part 15 Subpart C Section 15.209

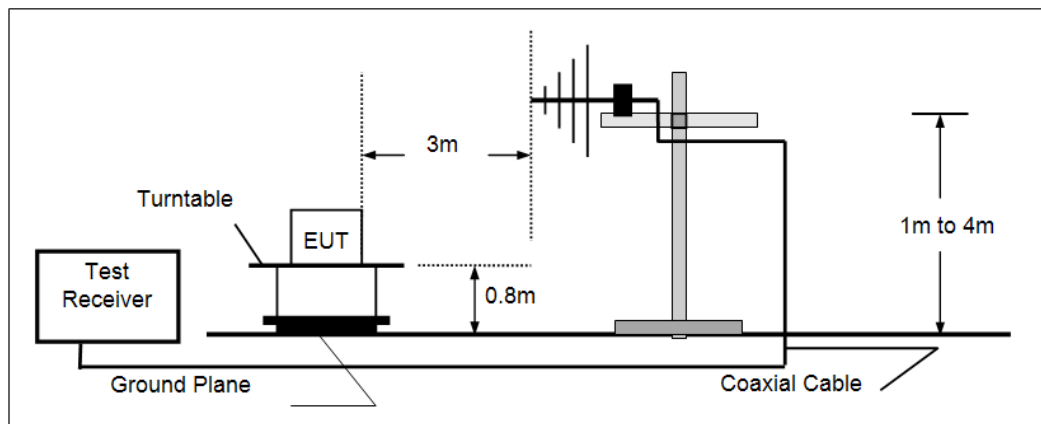
Frequency	Limit (dBuV/m @3m)	Value
30 MHz ~ 88 MHz	40.00	Quasi-peak
88 MHz ~ 216 MHz	43.50	Quasi-peak
216 MHz ~ 960 MHz	46.00	Quasi-peak
960 MHz ~ 1 GHz	54.00	Quasi-peak
Above 1 GHz	54.00	Average
	74.00	Peak

TEST CONFIGURATION

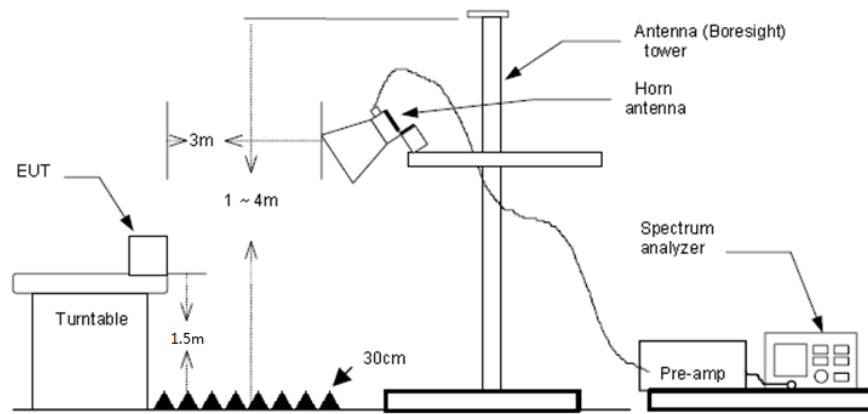
- Below 30 MHz



- 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 turntable 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=QP, 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.

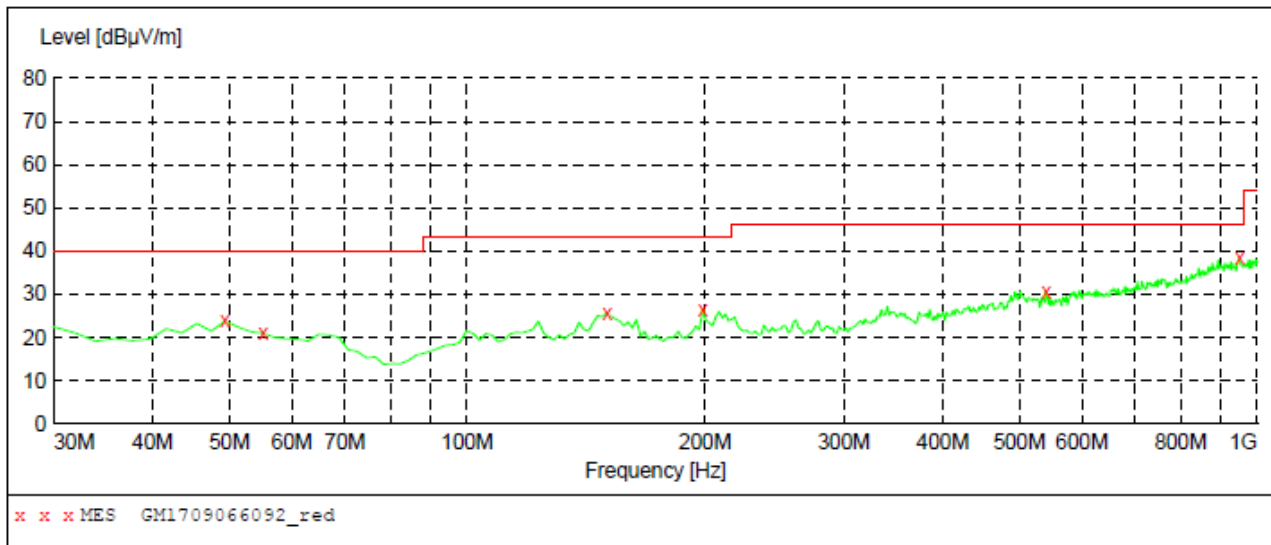
➤ 9 kHz ~ 30 MHz

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:

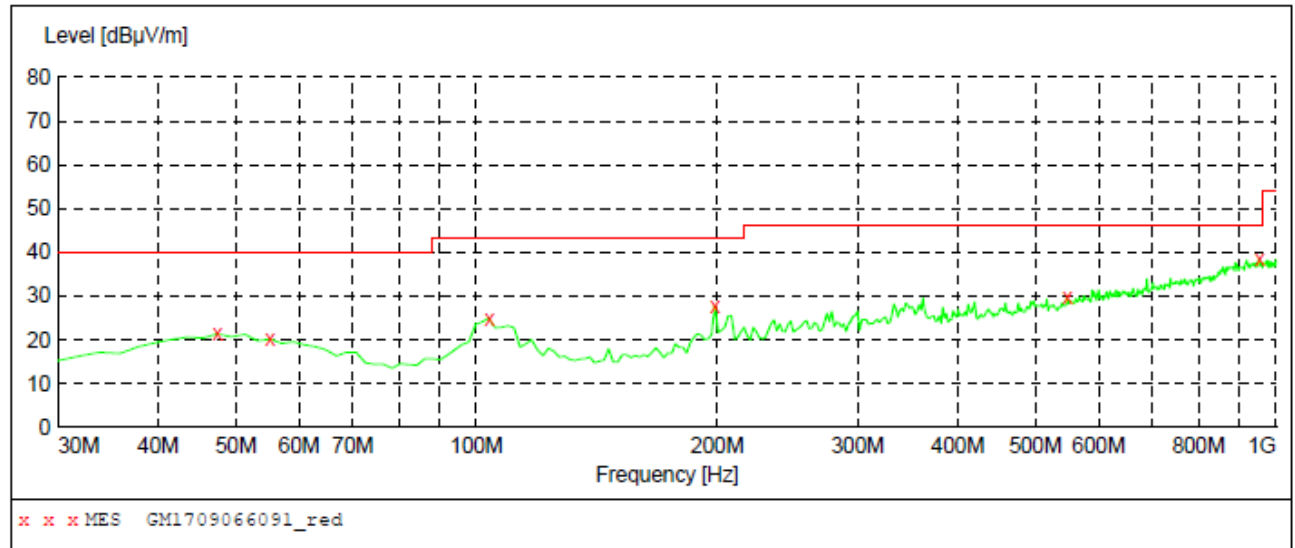
Vertical



Frequency MHz	Level dBuV/m	Transd dB	Limit dBuV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
49.400000	23.80	-8.7	40.0	16.2	QP	100.0	314.00	VERTICAL
55.220000	21.00	-9.2	40.0	19.0	QP	100.0	314.00	VERTICAL
150.280000	25.70	-13.8	43.5	17.8	QP	100.0	166.00	VERTICAL
198.780000	26.40	-9.8	43.5	17.1	QP	100.0	114.00	VERTICAL
540.220000	30.80	-1.0	46.0	15.2	QP	100.0	166.00	VERTICAL
949.560000	38.30	7.2	46.0	7.7	QP	100.0	102.00	VERTICAL

Polarization:

Horizontal



Frequency MHz	Level dBuV/m	Transd dB	Limit dBuV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
47.460000	21.40	-8.8	40.0	18.6	QP	300.0	10.00	HORIZONTAL
55.220000	20.20	-9.2	40.0	19.8	QP	300.0	359.00	HORIZONTAL
103.720000	25.00	-10.5	43.5	18.5	QP	300.0	26.00	HORIZONTAL
198.780000	27.90	-9.8	43.5	15.6	QP	100.0	298.00	HORIZONTAL
547.980000	29.70	-0.8	46.0	16.3	QP	100.0	0.00	HORIZONTAL
953.440000	38.50	7.3	46.0	7.5	QP	100.0	3.00	HORIZONTAL

➤ Above 1 GHz

CH00									
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization	Test value
1413.67	36.99	25.89	5.04	36.48	31.44	74.00	-42.56	Vertical	Peak
3644.18	34.84	29.30	8.32	38.26	34.20	74.00	-39.80	Vertical	Peak
4809.50	44.29	31.58	9.55	36.93	48.49	74.00	-25.51	Vertical	Peak
6713.08	31.92	34.17	11.50	35.15	42.44	74.00	-31.56	Vertical	Peak
1506.56	37.25	25.74	5.30	36.60	31.69	74.00	-42.31	Horizontal	Peak
3249.76	37.18	28.50	7.78	38.29	35.17	74.00	-38.83	Horizontal	Peak
4809.50	41.04	31.58	9.55	36.93	45.24	74.00	-28.76	Horizontal	Peak
7209.02	35.33	36.21	11.87	35.07	48.34	74.00	-25.66	Horizontal	Peak

CH39									
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization	Test value
1732.97	36.04	25.27	5.83	37.00	30.14	74.00	-43.86	Vertical	Peak
3480.97	36.43	28.85	8.09	38.44	34.93	74.00	-39.07	Vertical	Peak
5518.20	32.82	31.88	10.21	36.25	38.66	74.00	-35.34	Vertical	Peak
7376.08	32.89	36.30	12.04	34.85	46.38	74.00	-27.62	Vertical	Peak
1442.76	36.81	25.86	5.12	36.52	31.27	74.00	-42.73	Horizontal	Peak
3607.26	35.09	29.30	8.28	38.27	34.40	74.00	-39.60	Horizontal	Peak
5297.97	34.38	31.30	9.98	36.49	39.17	74.00	-34.83	Horizontal	Peak
7009.96	31.83	35.33	11.85	34.80	44.21	74.00	-29.79	Horizontal	Peak

CH78									
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization	Test value
1805.01	36.77	25.39	5.97	37.14	30.99	74.00	-43.01	Vertical	Peak
3135.99	35.77	28.80	7.64	38.21	34.00	74.00	-40.00	Vertical	Peak
4772.91	33.76	31.49	9.53	37.00	37.78	74.00	-36.22	Vertical	Peak
7081.70	31.51	35.55	11.85	34.91	44.00	74.00	-30.00	Vertical	Peak
1413.67	36.80	25.89	5.04	36.48	31.25	74.00	-42.75	Horizontal	Peak
3128.01	35.96	28.80	7.63	38.21	34.18	74.00	-39.82	Horizontal	Peak
4883.52	41.71	31.43	9.59	36.73	46.00	74.00	-28.00	Horizontal	Peak
7338.62	33.96	36.30	12.01	34.90	47.37	74.00	-26.63	Horizontal	Peak