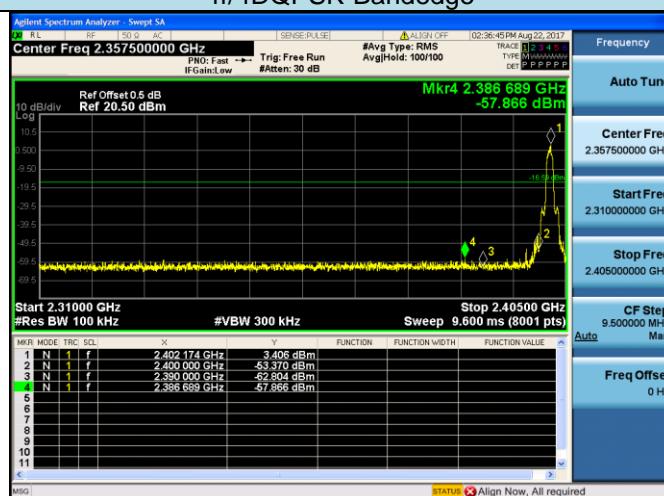
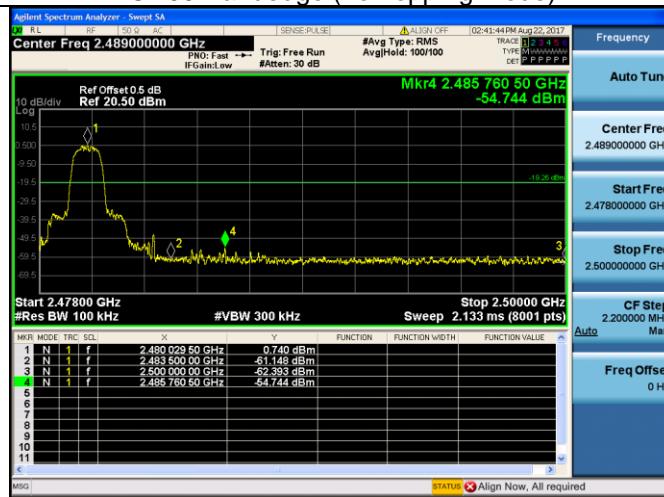
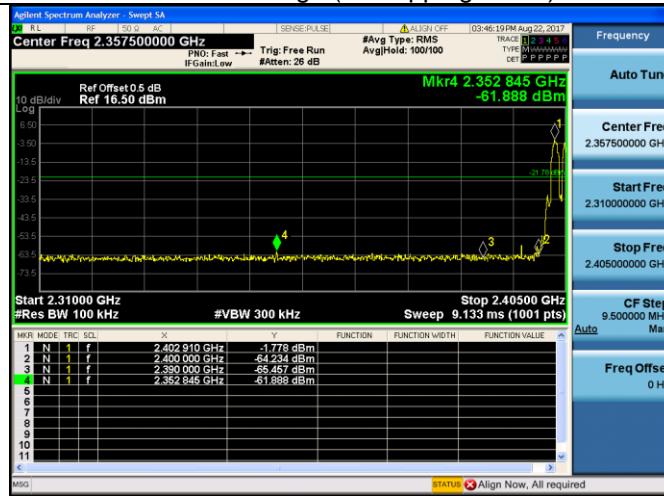
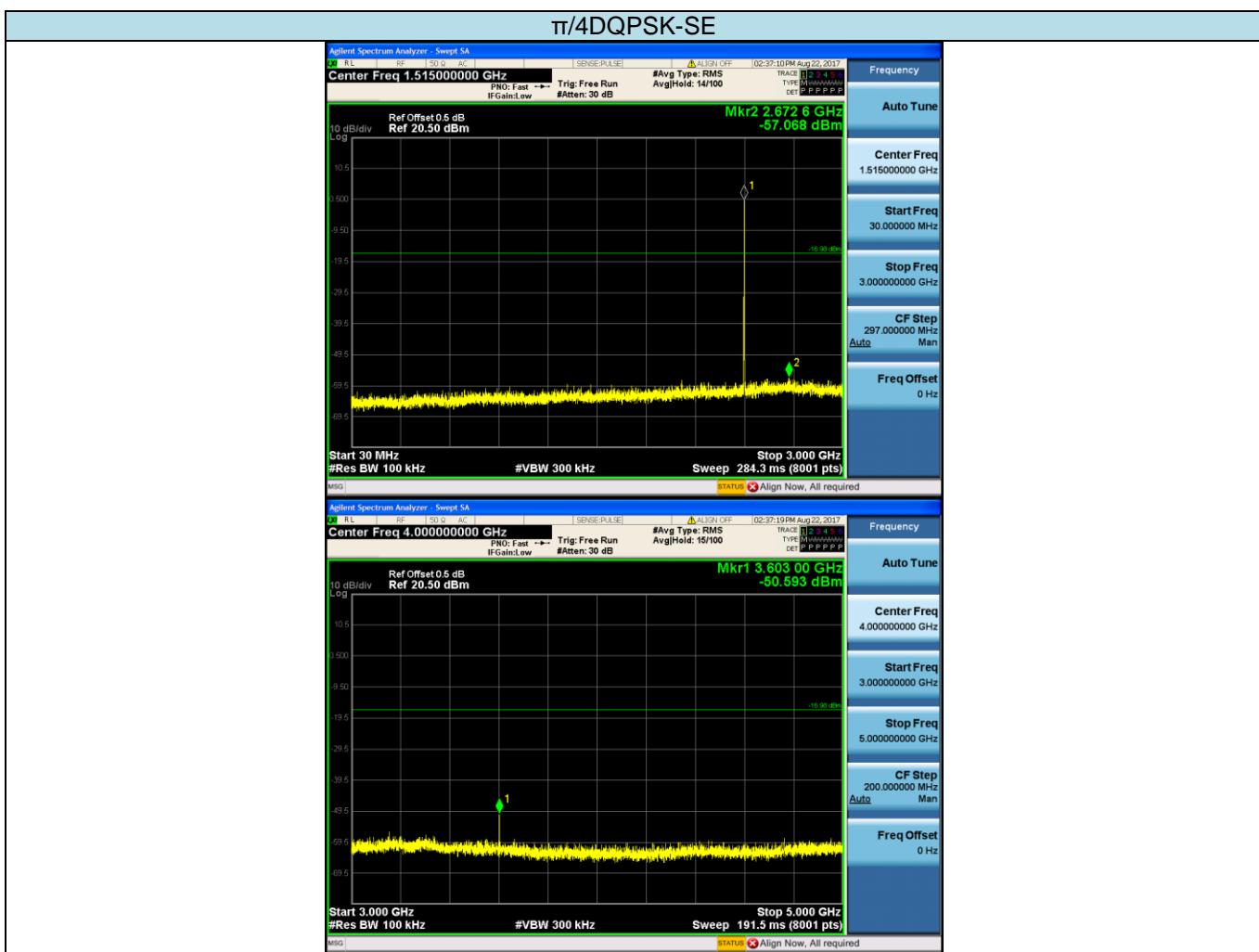
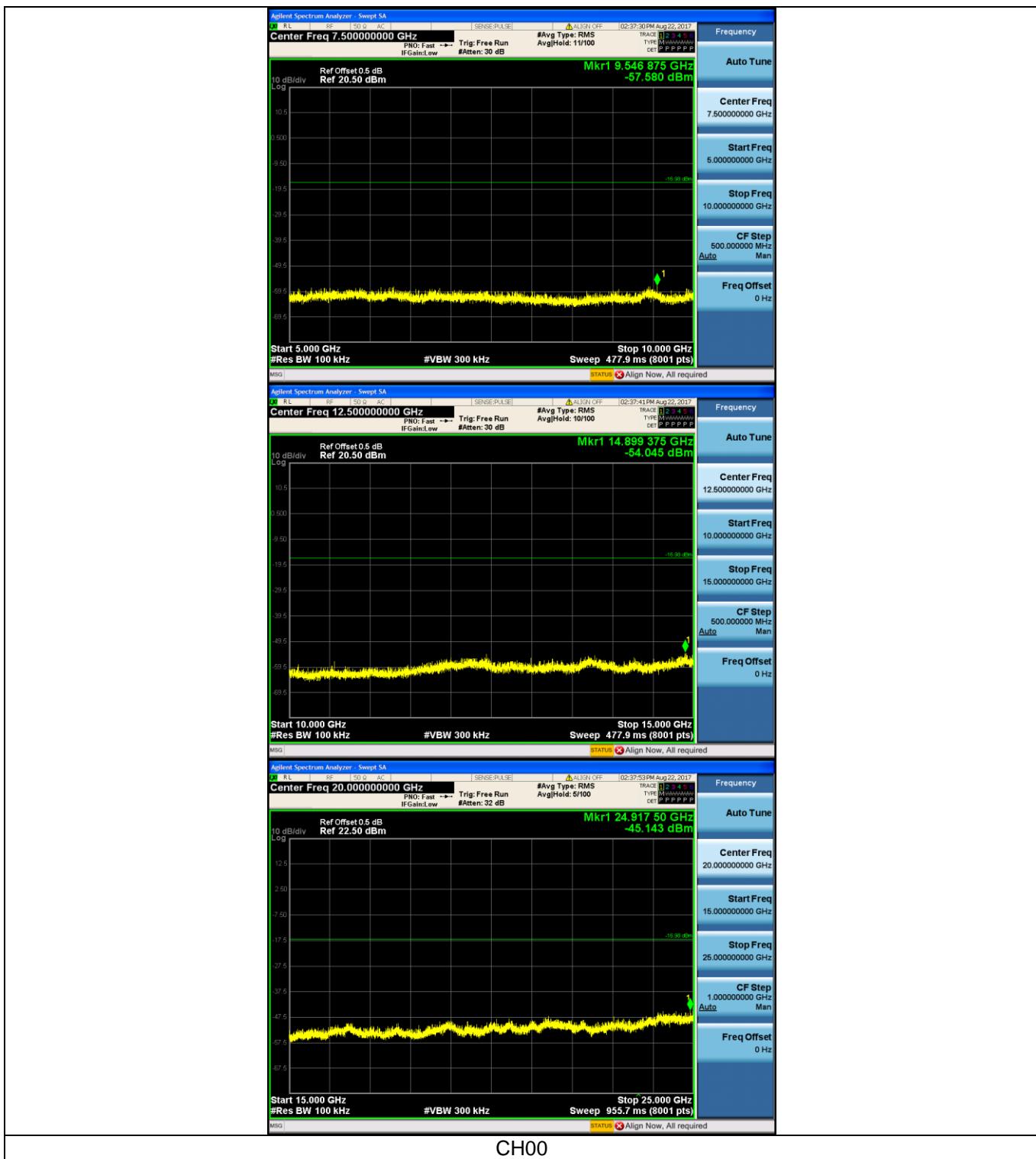


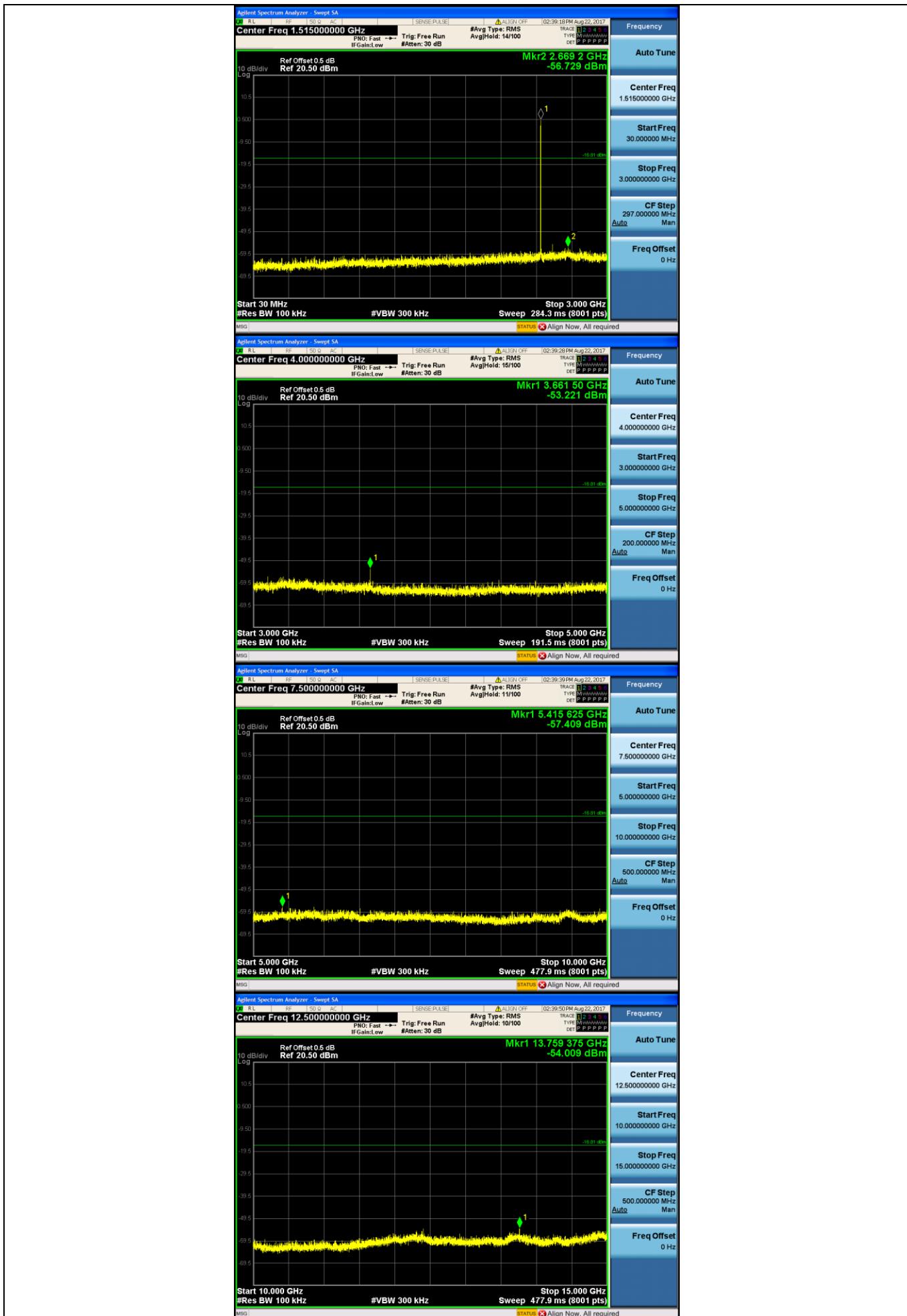
CH78

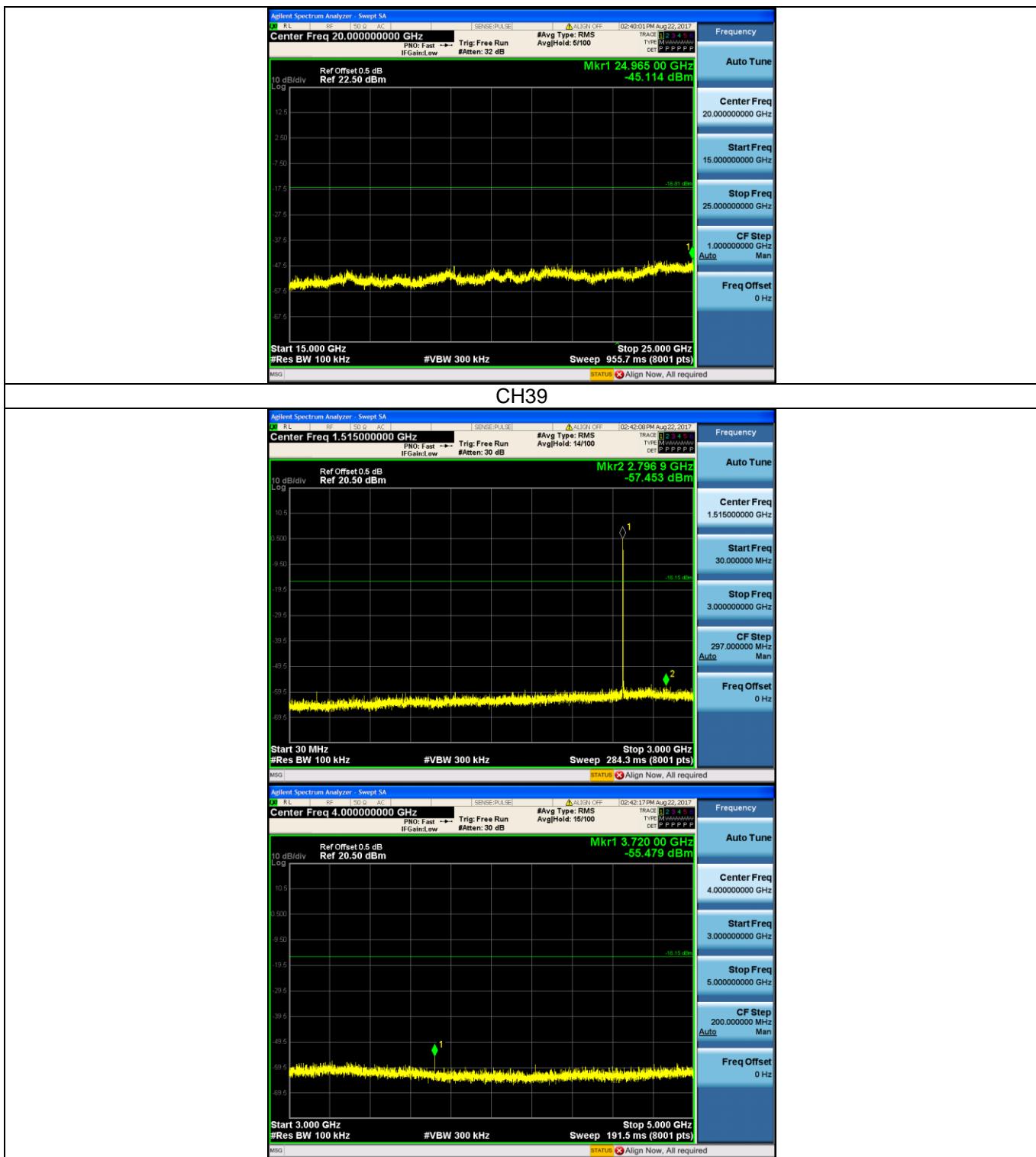
$\pi/4$ DQPSK-Bandedge**CH00 Bandedge (no hopping mode)****CH78 Bandedge (no hopping mode)****CH00 Bandedge (hopping mode)**





CH00

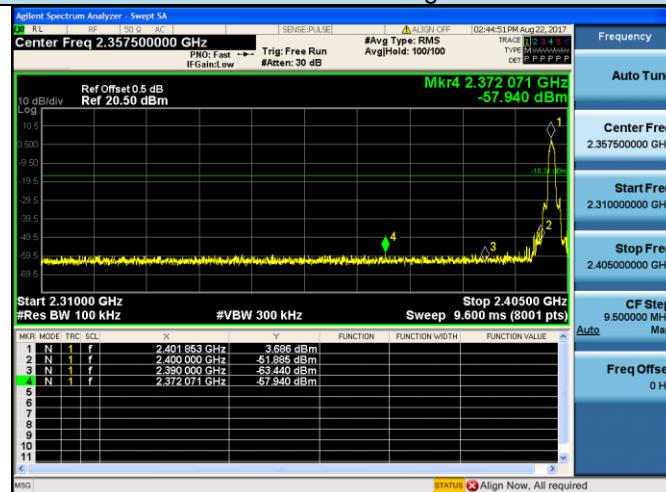




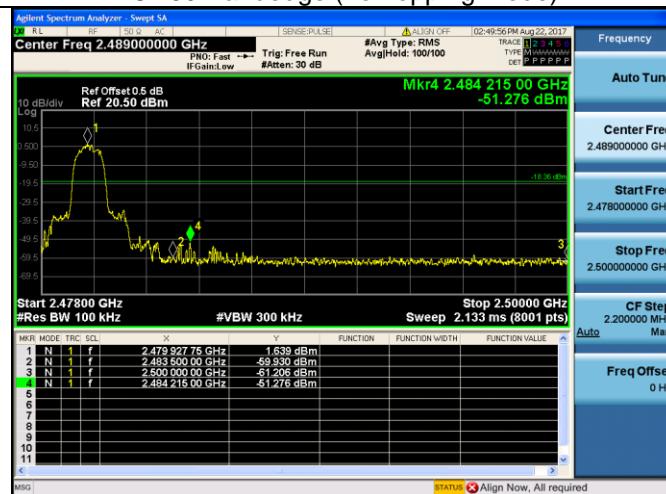


CH78

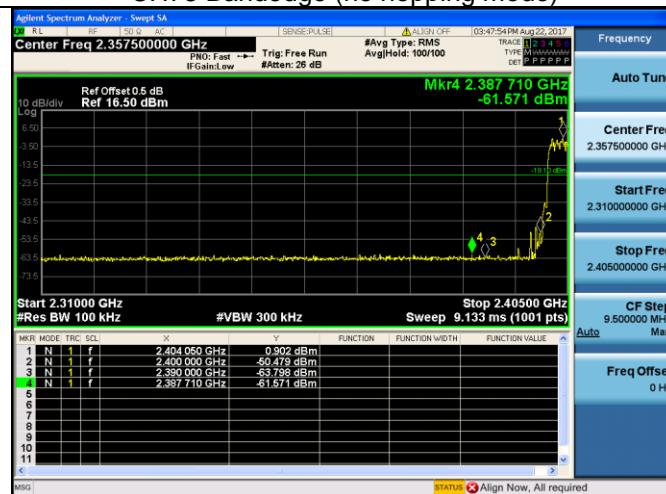
8DPSK-Bandedge



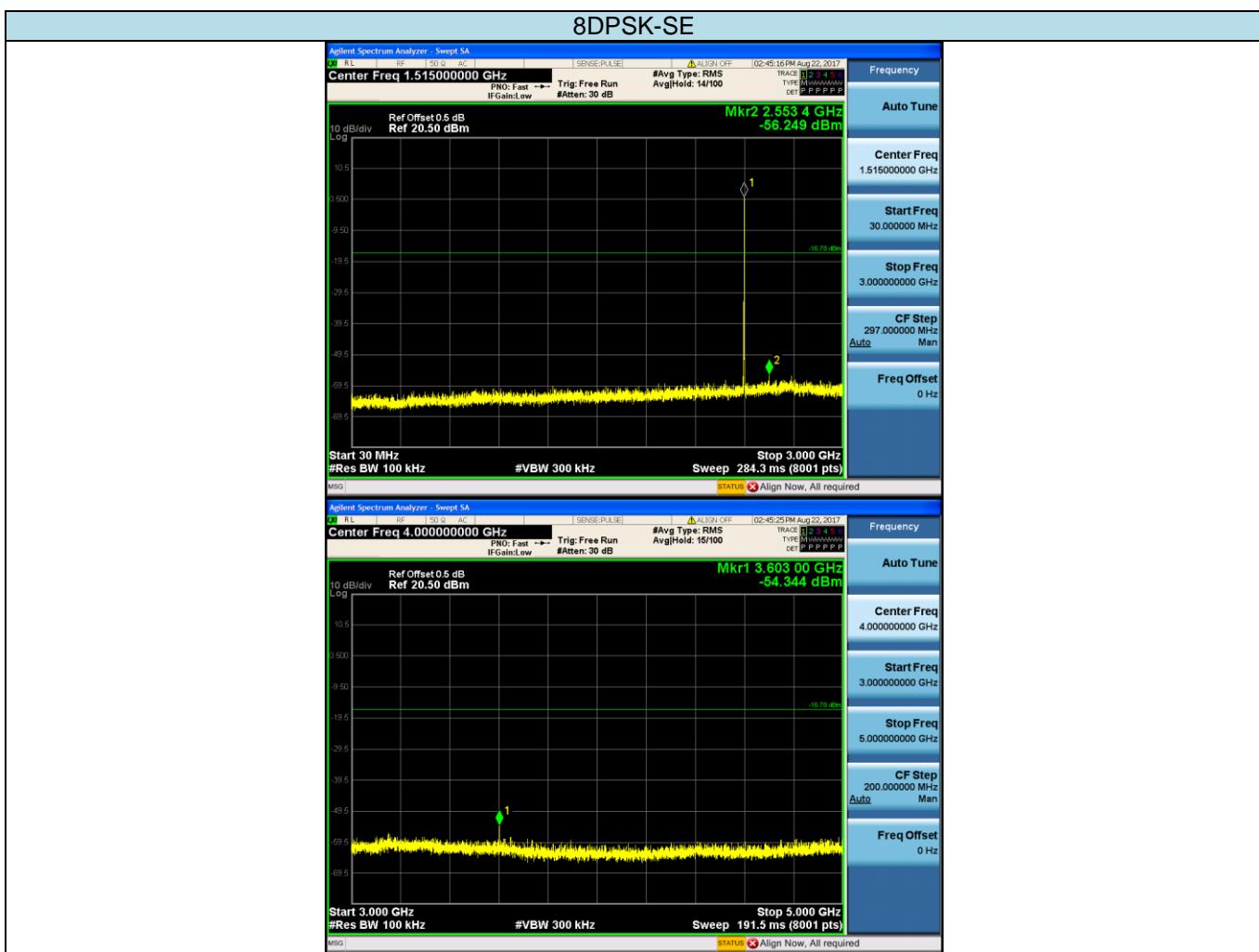
CH00 Bandedge (no hopping mode)

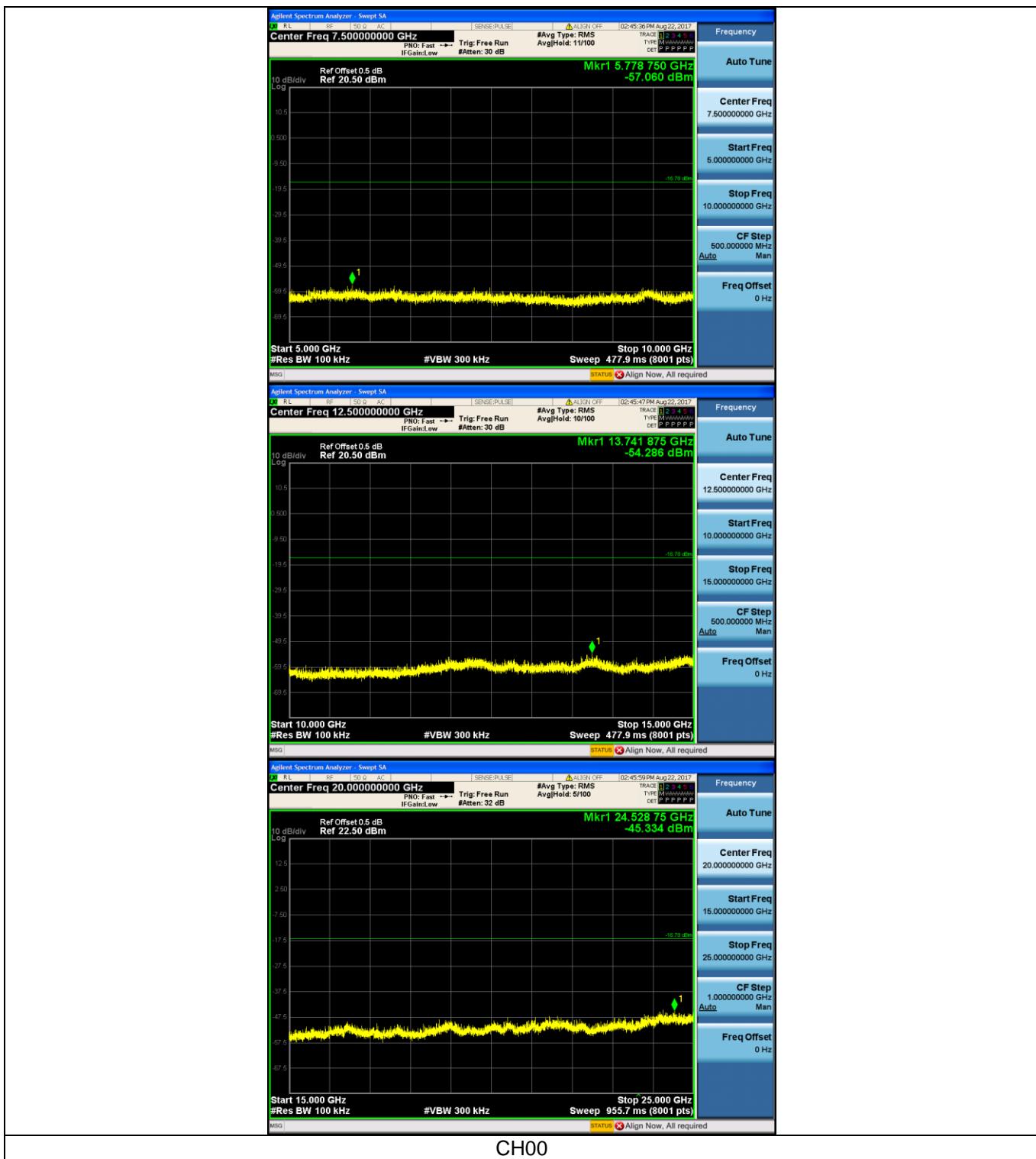


CH00 Bandedge (no hopping mode)



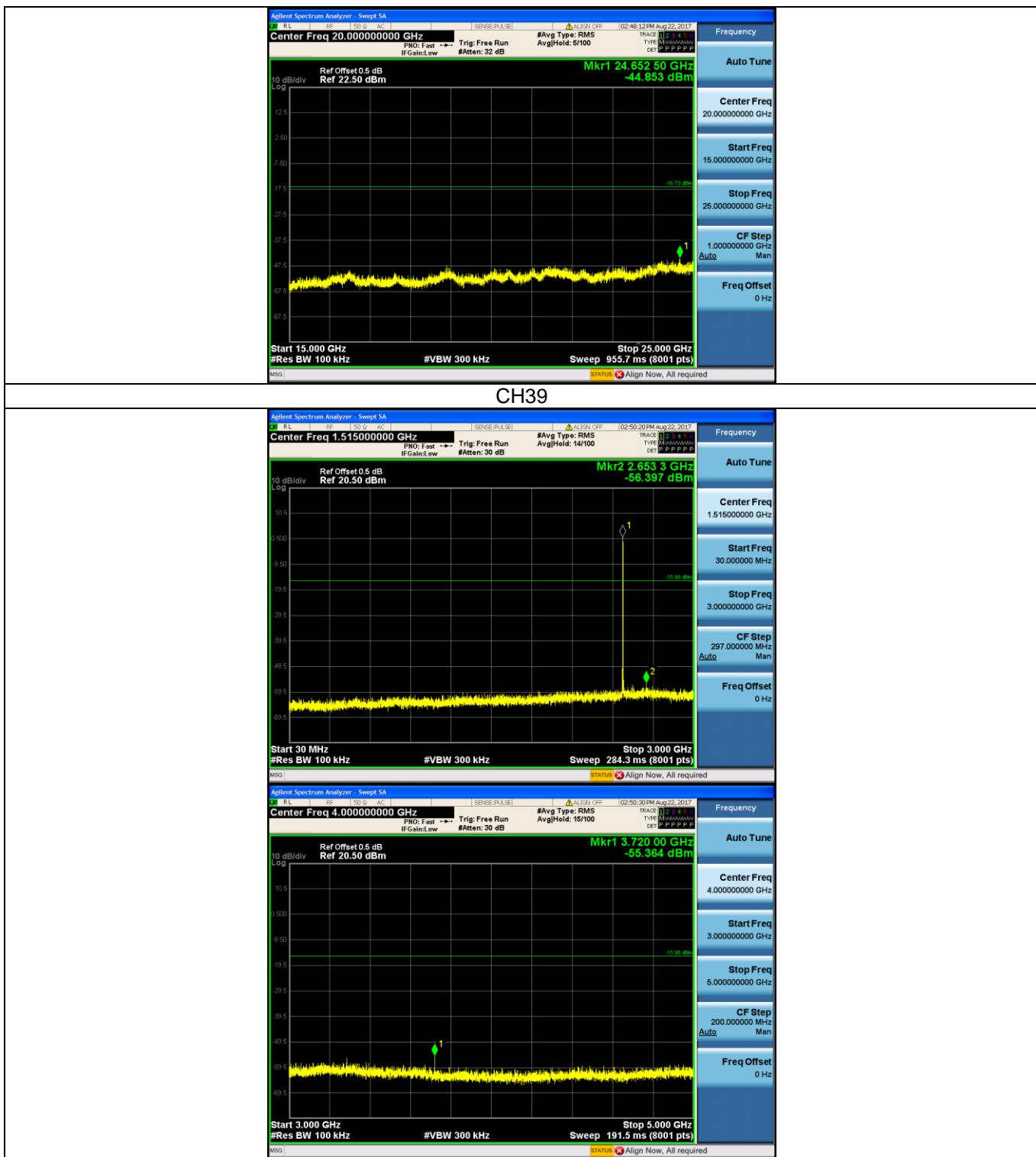
CH00 Bandedge (hopping mode)

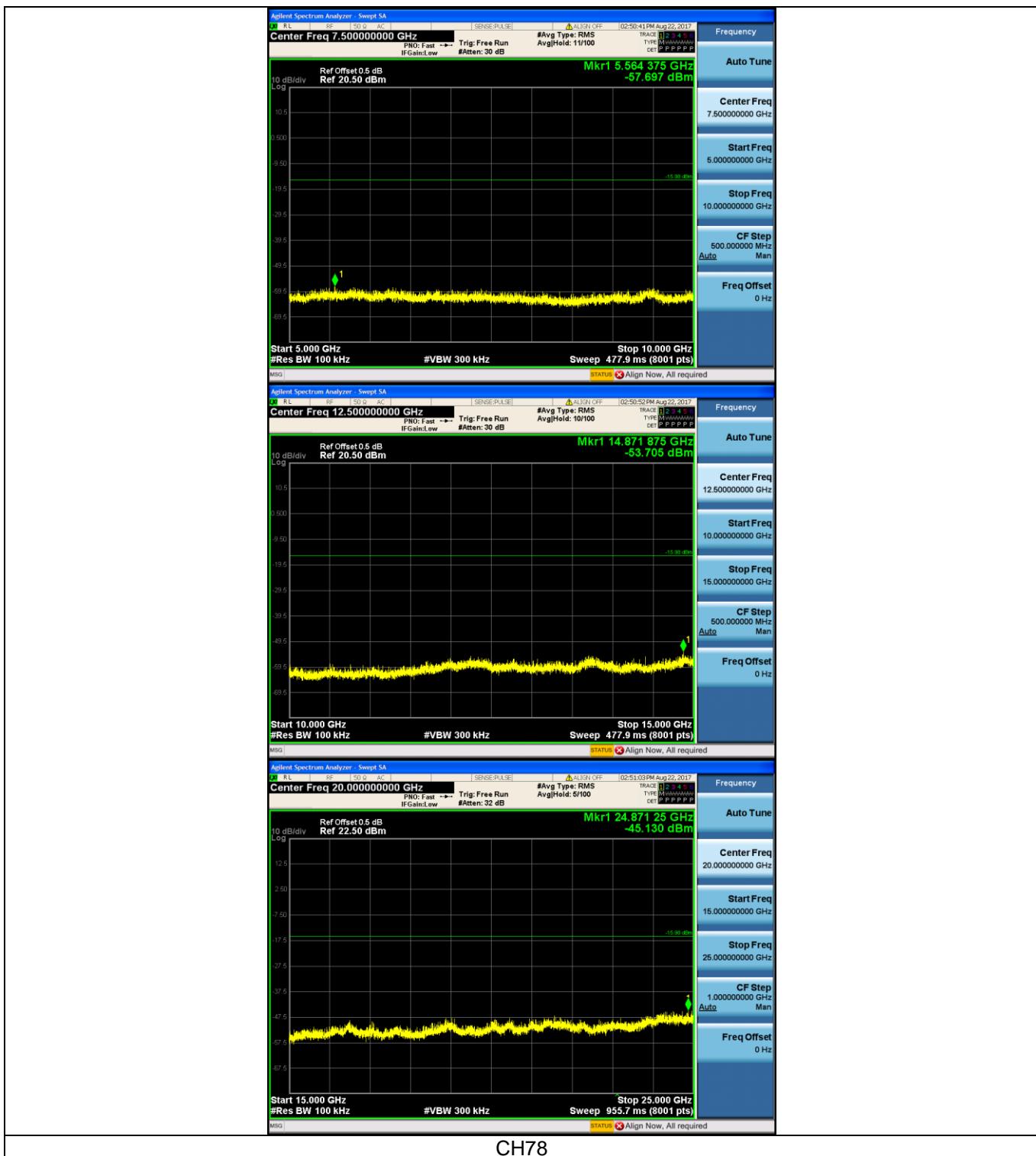




CH00







CH78

5.11. Spurious Emission (radiated)

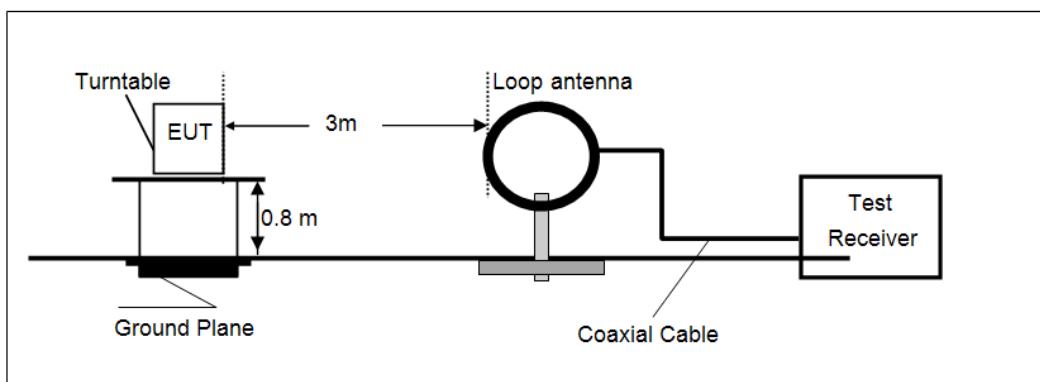
LIMIT

FCC CFR Title 47 Part 15 Subpart C Section 15.209

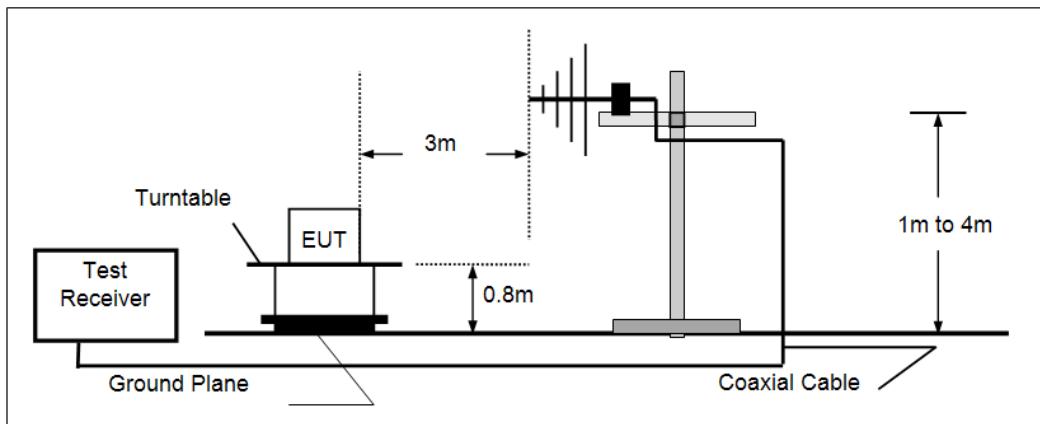
| Frequency | Limit (dB _{UV} /m @ 3m) | Value |
|-------------------|----------------------------------|------------|
| 30 MHz ~ 88 MHz | 40.00 | Quasi-peak |
| 88 MHz ~ 216 MHz | 43.50 | Quasi-peak |
| 216 MHz ~ 960 MHz | 46.00 | Quasi-peak |
| 960 MHz ~ 1 GHz | 54.00 | Quasi-peak |
| Above 1 GHz |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

TEST CONFIGURATION

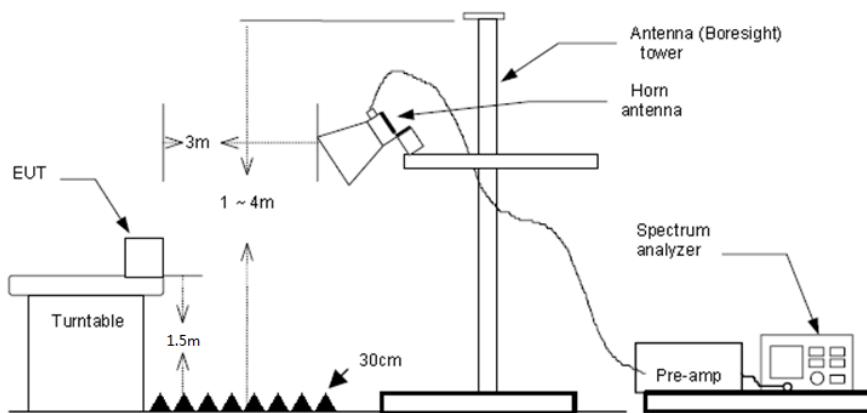
- Below 30 MHz



- 30 MHz ~1000 MHz



- Above 1 GHz



TEST PROCEDURE

1. The EUT was tested according to ANSI C63.10:2013 for compliance to FCC 47CFR 15.247 requirements.
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 for Peak value
RBW=1 MHz, VBW=10 Hz for Average value.

TEST MODE:

Please refer to the clause 3.3

TEST RESULTS

Passed Not Applicable

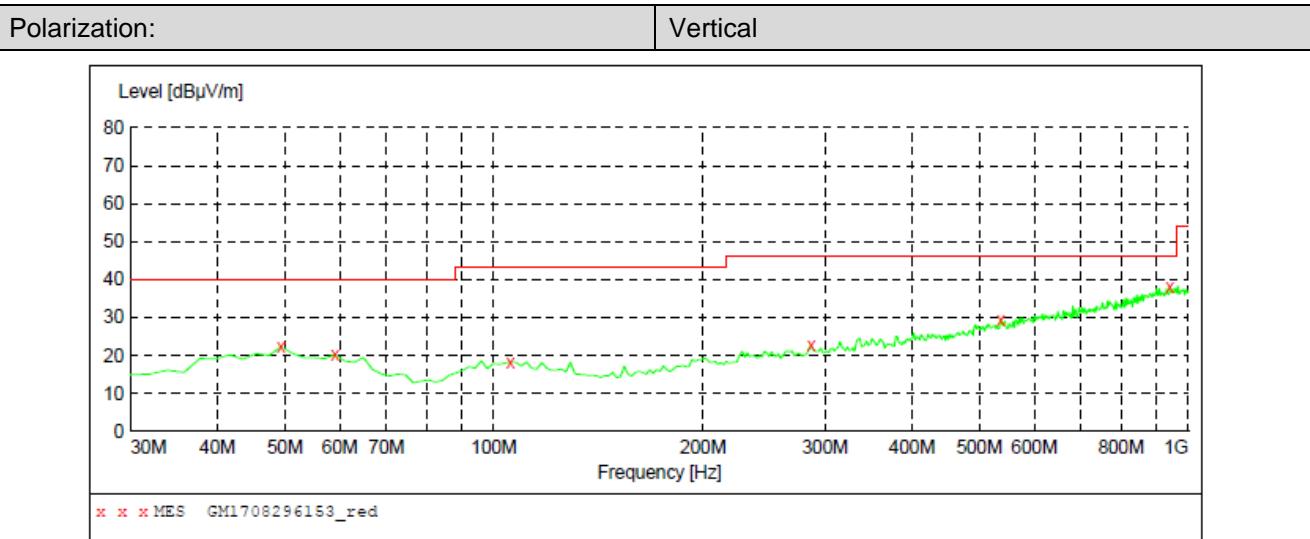
Note:

- 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

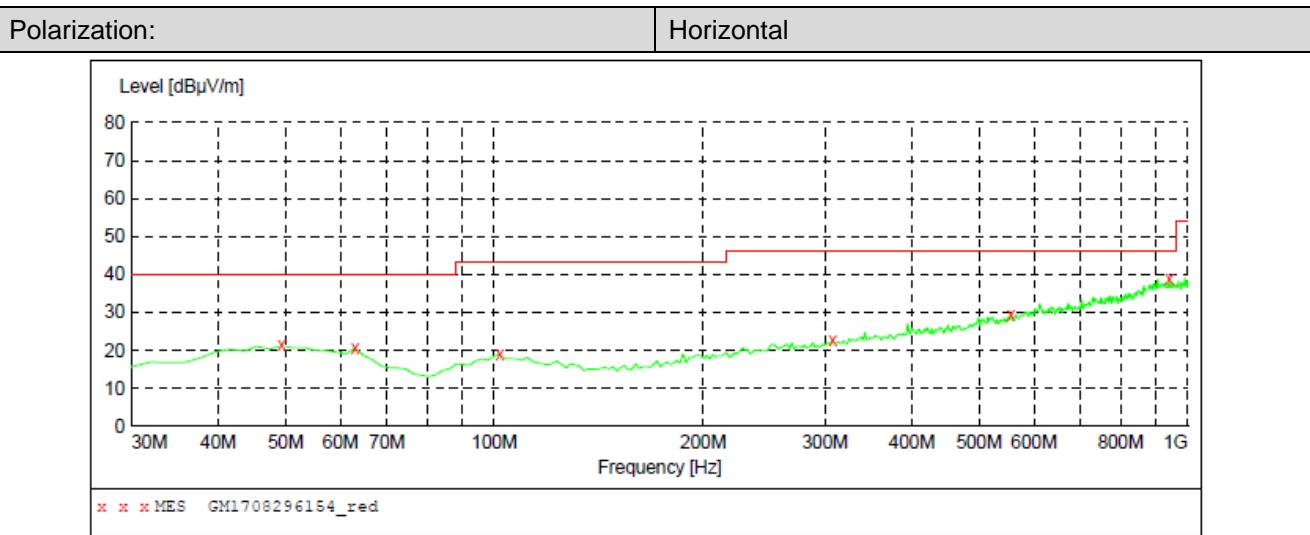
The low frequency, which started from 9 kHz to 30 MHz, was pre-scanned and the result which was 20 dB lower than the limit line per 15.31(o) was not reported.

> 30 MHz ~ 1 GHz

**MEASUREMENT RESULT: "GM1708296153_red"**

8/29/2017 9:58PM

| Frequency MHz | Level dB μ V/m | Transd dB | Limit dB μ V/m | Margin dB | Det. | Height cm | Azimuth deg | Polarization |
|------------------|-----------------------|--------------|-----------------------|--------------|------|--------------|----------------|--------------|
| 49.400000 | 22.30 | -8.7 | 40.0 | 17.7 | QP | 100.0 | 289.00 | VERTICAL |
| 59.100000 | 20.20 | -9.8 | 40.0 | 19.8 | QP | 100.0 | 211.00 | VERTICAL |
| 105.660000 | 18.30 | -10.5 | 43.5 | 25.2 | QP | 100.0 | 0.00 | VERTICAL |
| 286.080000 | 22.60 | -7.5 | 46.0 | 23.4 | QP | 100.0 | 0.00 | VERTICAL |
| 536.340000 | 29.50 | -1.0 | 46.0 | 16.5 | QP | 100.0 | 238.00 | VERTICAL |
| 939.860000 | 38.20 | 7.2 | 46.0 | 7.8 | QP | 100.0 | 174.00 | VERTICAL |

**MEASUREMENT RESULT: "GM1708296154_red"**

8/29/2017 10:01PM

| Frequency MHz | Level dB μ V/m | Transd dB | Limit dB μ V/m | Margin dB | Det. | Height cm | Azimuth deg | Polarization |
|------------------|-----------------------|--------------|-----------------------|--------------|------|--------------|----------------|--------------|
| 49.400000 | 21.30 | -8.7 | 40.0 | 18.7 | QP | 100.0 | 76.00 | HORIZONTAL |
| 62.980000 | 20.60 | -10.8 | 40.0 | 19.4 | QP | 300.0 | 0.00 | HORIZONTAL |
| 101.780000 | 19.10 | -10.5 | 43.5 | 24.4 | QP | 300.0 | 195.00 | HORIZONTAL |
| 307.420000 | 22.60 | -7.1 | 46.0 | 23.4 | QP | 100.0 | 192.00 | HORIZONTAL |
| 555.740000 | 29.30 | -0.6 | 46.0 | 16.7 | QP | 100.0 | 3.00 | HORIZONTAL |
| 939.860000 | 39.10 | 7.2 | 46.0 | 6.9 | QP | 100.0 | 192.00 | HORIZONTAL |

> Above 1 GHz

| CH00 for GFSK | | | | | | | | | |
|-----------------|-------------------|-----------------------|-----------------|--------------------|----------------|---------------------|-------------------|--------------|------------|
| Frequency (MHz) | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Margin Limit (dB) | Polarization | Test value |
| 1424.51 | 37.83 | 25.87 | 5.07 | 36.49 | 32.28 | 74.00 | -41.72 | Vertical | Peak |
| 3873.75 | 36.67 | 29.67 | 8.60 | 38.19 | 38.19 | 74.00 | -37.25 | Vertical | |
| 4809.50 | 38.85 | 31.58 | 9.55 | 36.93 | 36.93 | 74.00 | -30.95 | Vertical | |
| 8002.06 | 33.26 | 37.10 | 12.30 | 34.53 | 34.53 | 74.00 | -25.87 | Vertical | |
| 1585.25 | 37.91 | 25.03 | 5.53 | 36.70 | 31.77 | 74.00 | -42.23 | Horizontal | Peak |
| 3096.33 | 36.52 | 28.79 | 7.60 | 38.22 | 34.69 | 74.00 | -39.31 | Horizontal | |
| 4809.50 | 39.91 | 31.58 | 9.55 | 36.93 | 44.11 | 74.00 | -29.89 | Horizontal | |
| 7172.41 | 32.79 | 36.04 | 11.86 | 35.04 | 45.65 | 74.00 | -28.35 | Horizontal | |

| CH39 for GFSK | | | | | | | | | |
|-----------------|-------------------|-----------------------|-----------------|--------------------|----------------|---------------------|-------------------|--------------|------------|
| Frequency (MHz) | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Margin Limit (dB) | Polarization | Test value |
| 1431.78 | 36.93 | 25.87 | 5.09 | 36.50 | 31.39 | 74.00 | -42.61 | Vertical | Peak |
| 3516.59 | 37.56 | 29.05 | 8.14 | 38.39 | 36.36 | 74.00 | -37.64 | Vertical | |
| 4117.79 | 35.41 | 29.92 | 8.87 | 37.84 | 36.36 | 74.00 | -37.64 | Vertical | |
| 5971.29 | 32.53 | 32.44 | 10.66 | 35.43 | 40.20 | 74.00 | -33.80 | Vertical | |
| 1521.98 | 36.25 | 25.60 | 5.35 | 36.62 | 30.58 | 74.00 | -43.42 | Horizontal | Peak |
| 3873.75 | 36.12 | 29.67 | 8.60 | 38.19 | 36.20 | 74.00 | -37.80 | Horizontal | |
| 4883.52 | 36.77 | 31.43 | 9.59 | 36.73 | 41.06 | 74.00 | -32.94 | Horizontal | |
| 7900.86 | 32.42 | 36.70 | 12.78 | 34.80 | 47.10 | 74.00 | -26.90 | Horizontal | |

| CH78 for GFSK | | | | | | | | | |
|-----------------|-------------------|-----------------------|-----------------|--------------------|----------------|---------------------|-------------------|--------------|------------|
| Frequency (MHz) | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Margin Limit (dB) | Polarization | Test value |
| 1381.66 | 38.31 | 25.95 | 4.97 | 36.47 | 32.76 | 74.00 | -41.24 | Vertical | Peak |
| 3662.78 | 35.90 | 29.30 | 8.34 | 38.26 | 35.28 | 74.00 | -38.72 | Vertical | |
| 4821.76 | 34.41 | 31.56 | 9.55 | 36.90 | 38.62 | 74.00 | -35.38 | Vertical | |
| 8083.96 | 32.91 | 37.02 | 12.50 | 34.54 | 47.89 | 74.00 | -26.11 | Vertical | |
| 1420.89 | 36.89 | 25.88 | 5.06 | 36.49 | 31.34 | 74.00 | -42.66 | Horizontal | Peak |
| 3561.64 | 36.43 | 29.19 | 8.21 | 38.32 | 35.51 | 74.00 | -38.49 | Horizontal | |
| 5138.58 | 34.01 | 31.74 | 9.78 | 36.26 | 39.27 | 74.00 | -34.73 | Horizontal | |
| 7489.60 | 32.02 | 36.12 | 12.36 | 34.89 | 45.61 | 74.00 | -28.39 | Horizontal | |

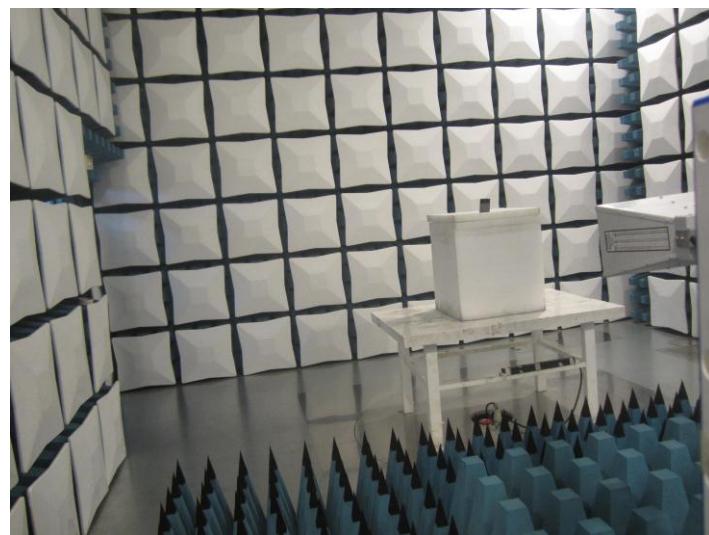
6. Test Setup Photos of the EUT

Conducted Emission (AC Mains)



Radiated Emission





7. External and Internal Photos of the EUT

Reference to Test Report No.: TRE1708011801

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