

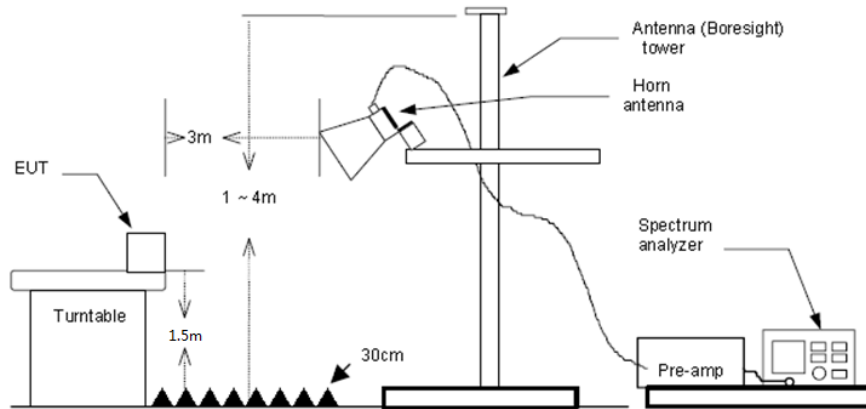
5.9. Restricted band (radiated)

LIMIT

FCC CFR Title 47 Part 15 Subpart C Section 15.247 (d):

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

TEST CONFIGURATION



TEST PROCEDURE

1. The EUT was setup and 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 1.5 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. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.10:2013 on radiated measurement.
5. The receiver set as follow:
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= Read level + Antenna Factor+ Cable Loss- Preamp Factor
- 2) 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.
- 3) The peak level is lower than average limit(54 dBuV/m), this data is the too weak instrument of signal is unable to test.

CH00									
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Margin Limit (dB)	Polarization	Test value
2310.00	35.18	28.05	6.62	37.65	32.20	74.00	-41.80	Vertical	Peak
2320.01	42.00	28.00	6.64	37.68	38.96	74.00	-35.04	Vertical	
2389.96	42.30	27.65	6.75	37.87	38.83	74.00	-35.17	Vertical	
2310.00	35.31	28.05	6.62	37.65	32.33	74.00	-41.67	Horizontal	
2320.11	44.03	28.00	6.64	37.68	40.99	74.00	-33.01	Horizontal	
2389.96	54.76	27.65	6.75	37.87	51.29	74.00	-22.71	Horizontal	
2310.00	23.73	28.05	6.62	37.65	20.75	54.00	-33.25	Vertical	Average
2319.71	37.27	28.00	6.64	37.68	34.23	54.00	-19.77	Vertical	
2390.03	26.51	27.65	6.75	37.87	23.04	54.00	-30.96	Vertical	
2310.00	23.02	28.05	6.62	37.65	20.04	74.00	-53.96	Horizontal	
2320.01	31.84	28.00	6.64	37.68	28.80	74.00	-45.20	Horizontal	
2389.96	24.43	27.65	6.75	37.87	20.96	74.00	-53.04	Horizontal	

CH78									
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Margin Limit (dB)	Polarization	Test value
2483.50	58.96	27.26	6.83	37.87	55.18	74.00	-18.82	Vertical	Peak
2500.00	45.14	27.20	6.84	37.87	41.31	74.00	-32.69	Vertical	
2483.50	59.35	27.26	6.83	37.87	55.57	74.00	-18.43	Horizontal	
2500.00	46.71	27.20	6.84	37.87	42.88	74.00	-31.12	Horizontal	
2483.50	26.30	27.26	6.83	37.87	22.52	54.00	-31.48	Vertical	Average
2500.00	25.46	27.20	6.84	37.87	21.63	54.00	-32.37	Vertical	
2483.50	27.34	27.26	6.83	37.87	23.56	54.00	-30.44	Horizontal	
2500.00	26.35	27.20	6.84	37.87	22.52	54.00	-31.48	Horizontal	

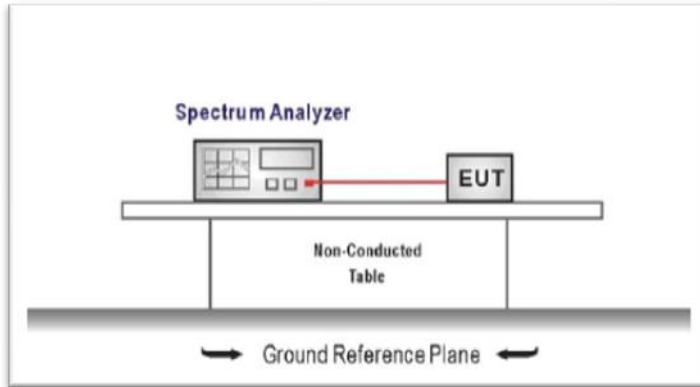
5.10. Bandedge and Spurious Emission (conducted)

LIMIT

FCC CFR Title 47 Part 15 Subpart C Section 15.247 (d):

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.

TEST CONFIGURATION



TEST PROCEDURE

1. The transmitter output was connected to the spectrum analyzer through an attenuator, the path loss was compensated to the results for each measurement.
2. Set to the maximum power setting and enable the EUT transmit continuously
3. Use the following spectrum analyzer settings:
RBW = 100 kHz, VBW $\geq$ RBW
Sweep = auto, Detector function = peak, Trace = max hold
4. Measure and record the results in the test report.

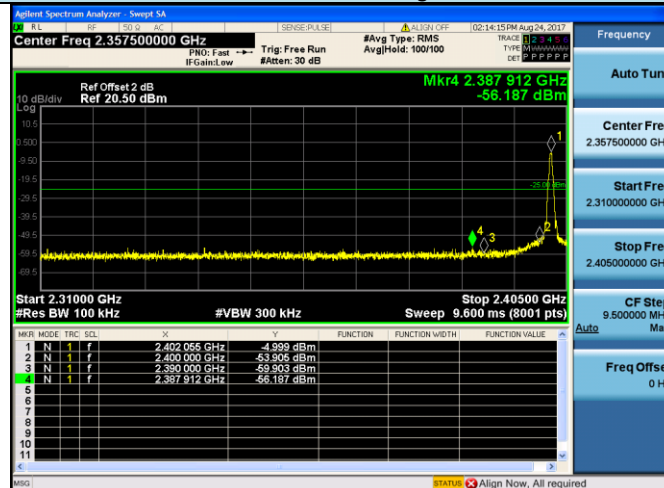
TEST MODE:

Please refer to the clause 3.3

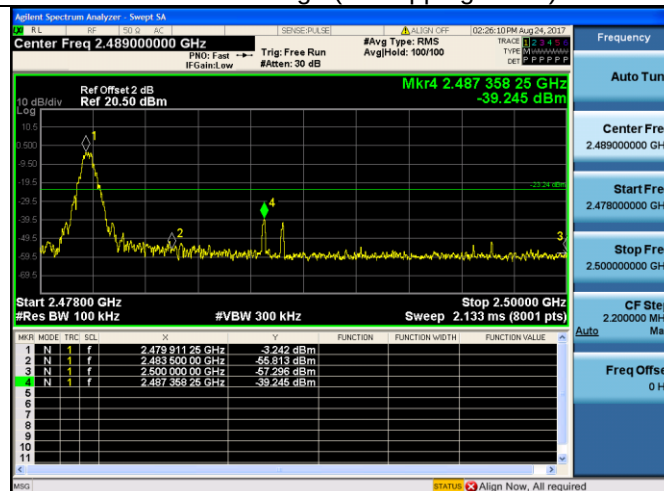
TEST RESULTS

☒ Passed ☐ Not Applicable

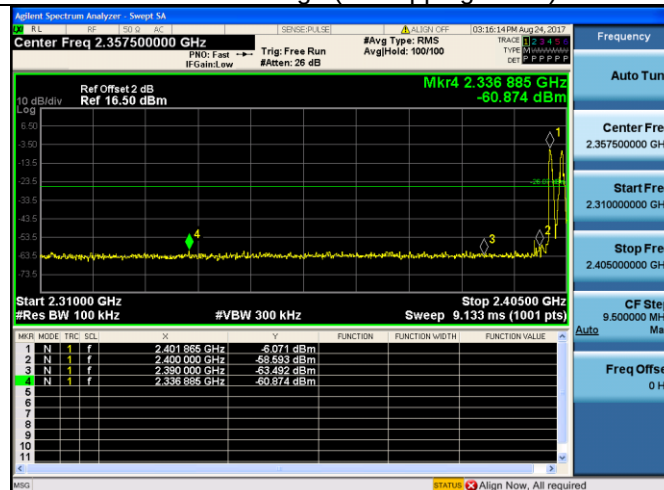
GFSK-Bandedge



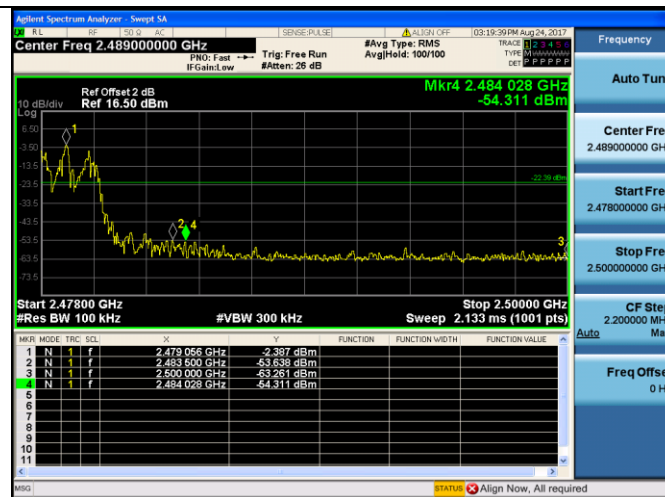
CH00 Bandedge (no hopping mode)



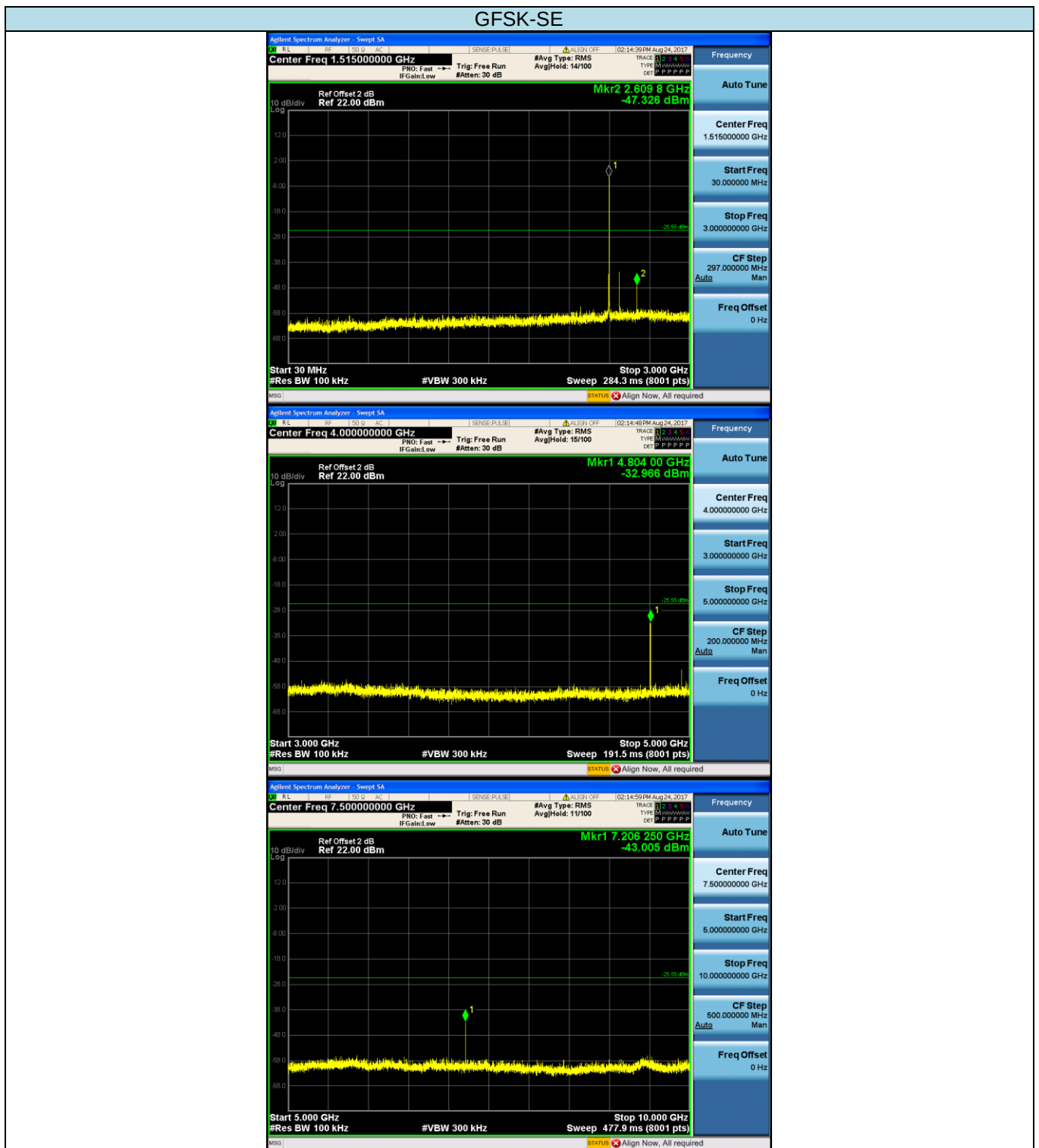
CH78 Bandedge (no hopping mode)

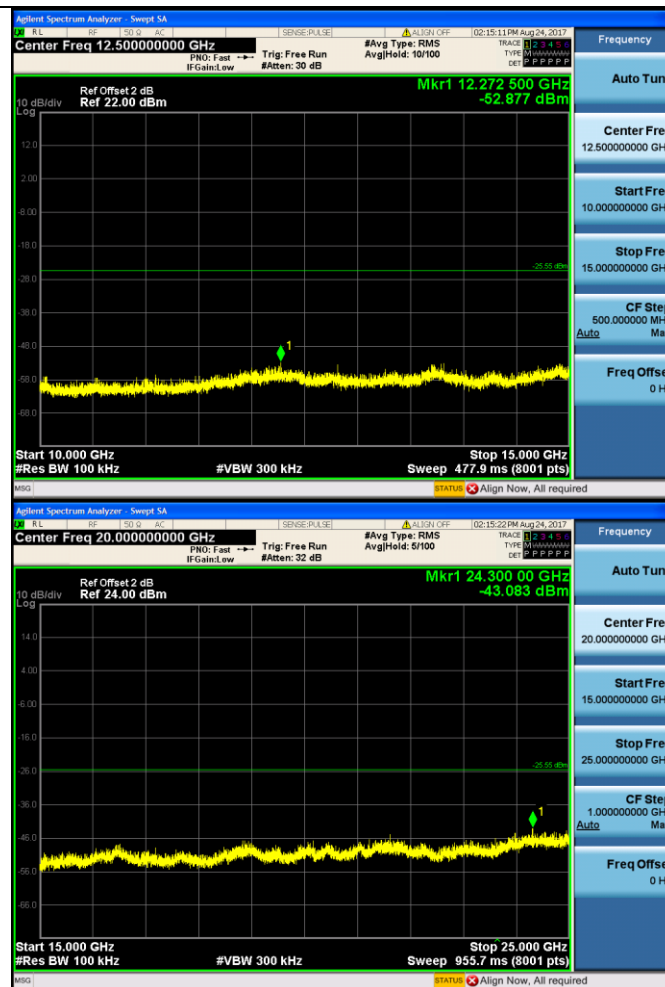


CH00 Bandedge (hopping mode)

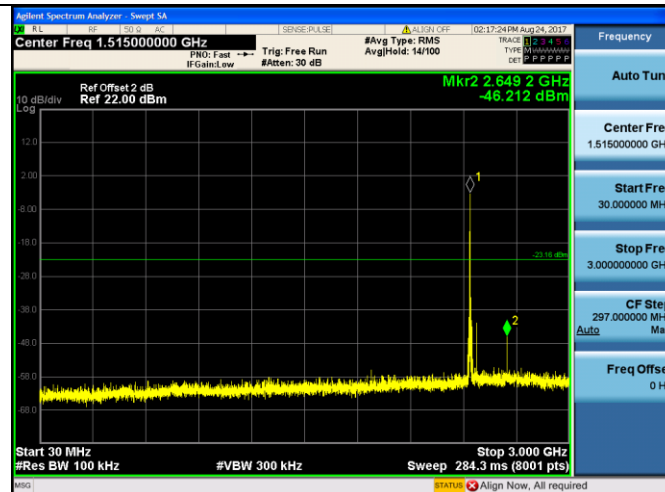


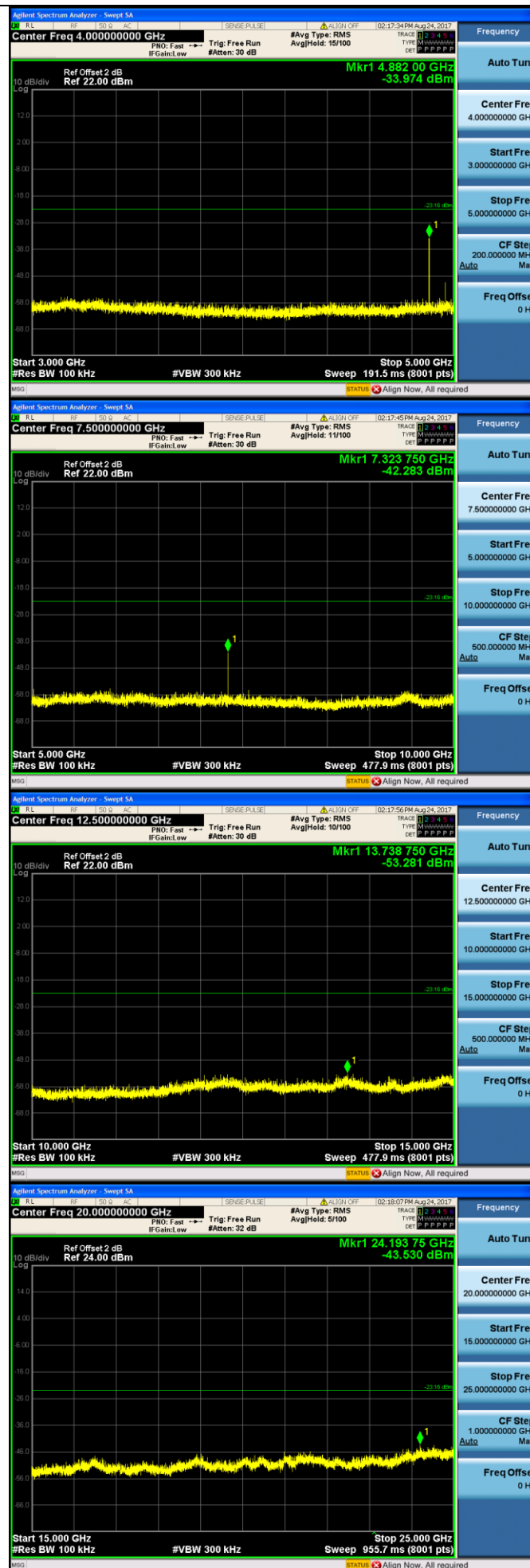
CH78 Bandedge (hopping mode)



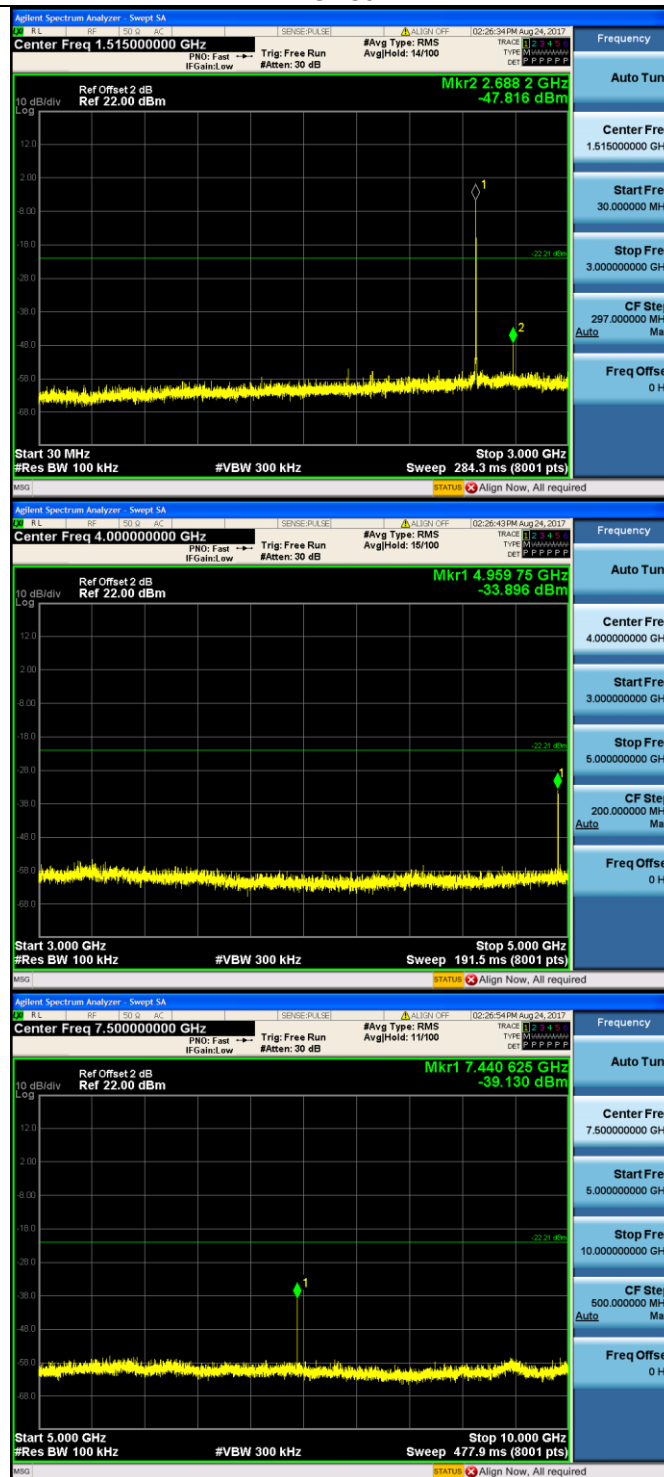


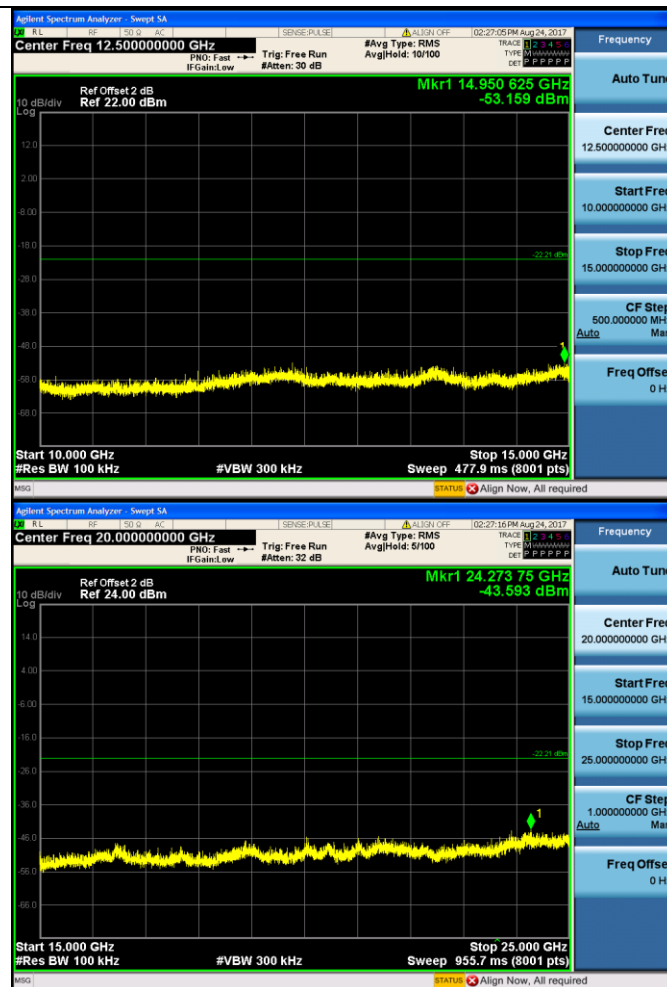
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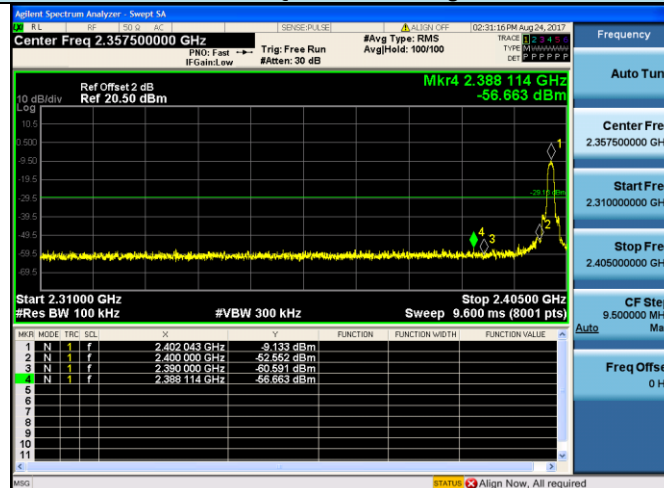


CH39

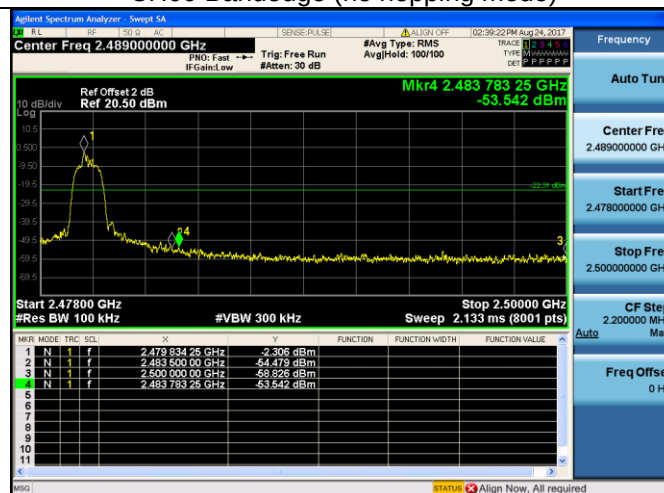




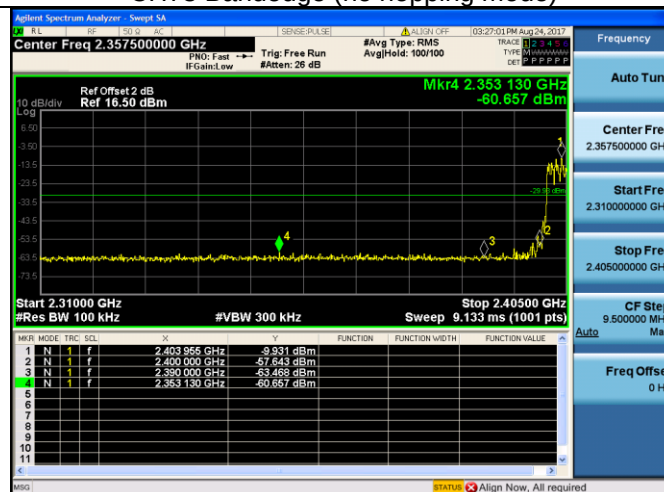
CH78

$\pi/4$ DQPSK-Bandedge

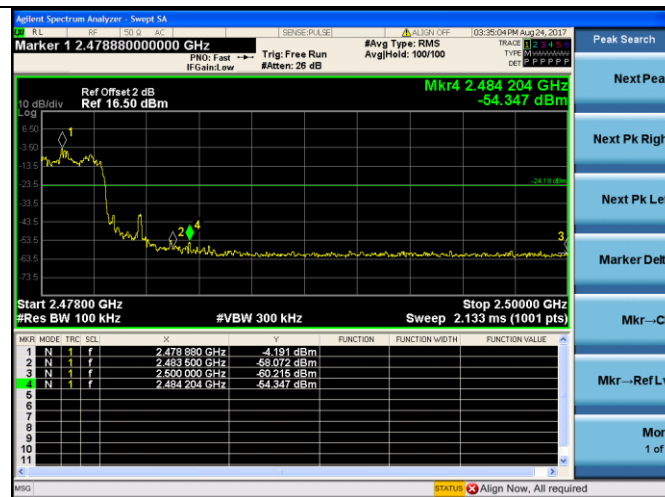
CH00 Bandedge (no hopping mode)



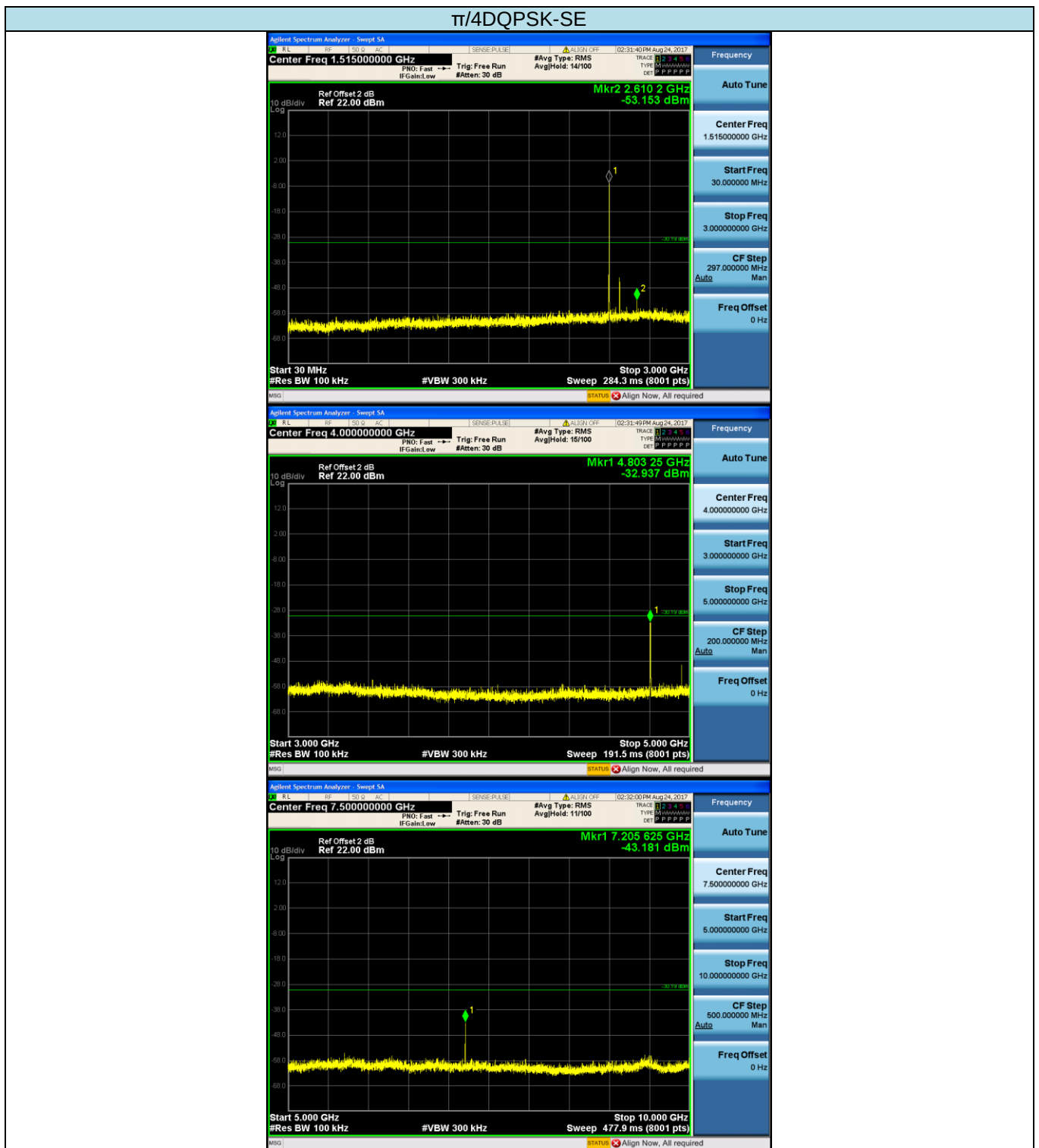
CH78 Bandedge (no hopping mode)

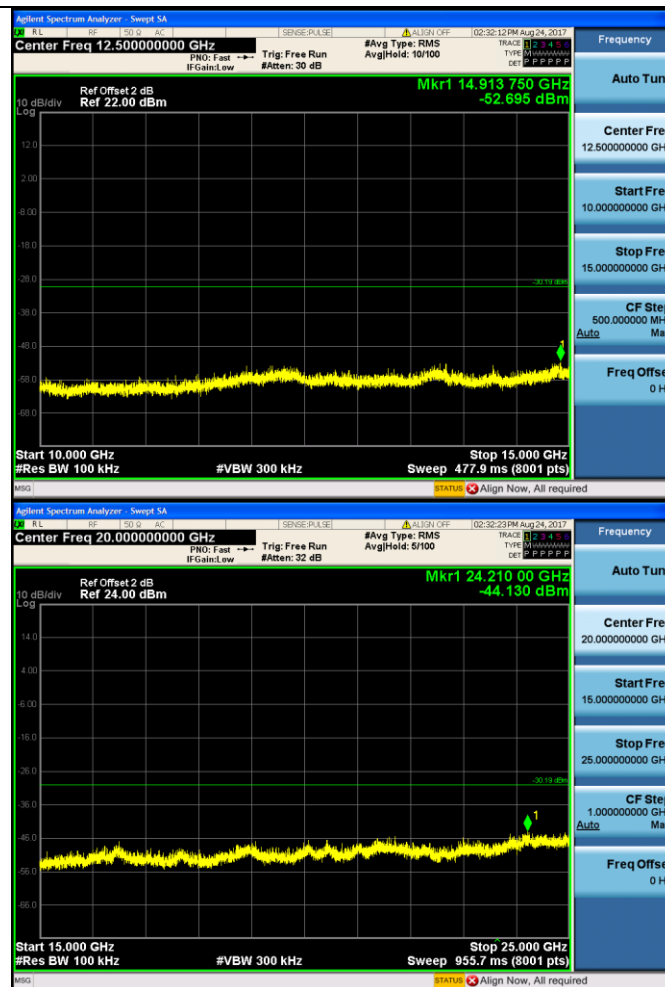


CH00 Bandedge (hopping mode)



CH78 Bandedge (hopping mode)





CH00

