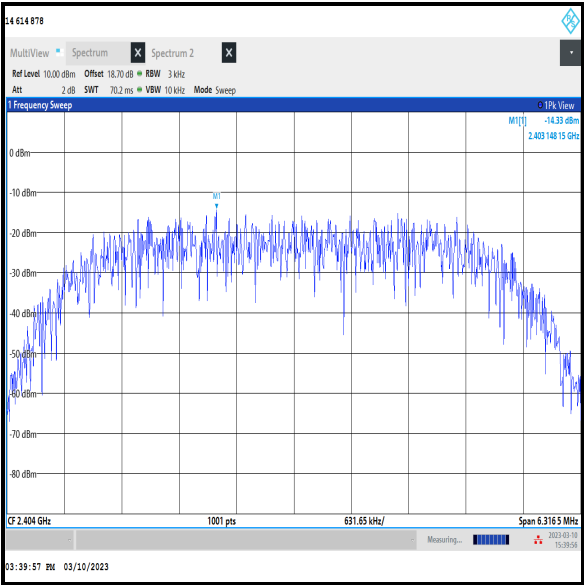


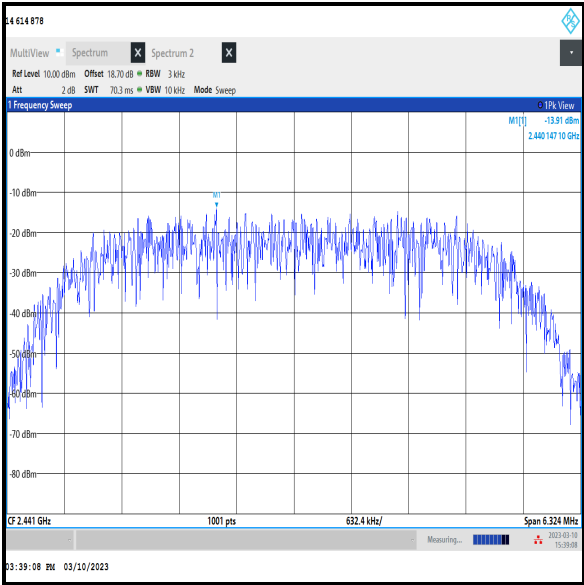
Transmitter Power Spectral Density (continued)

Results: 8DH5 / SISO / Core 2

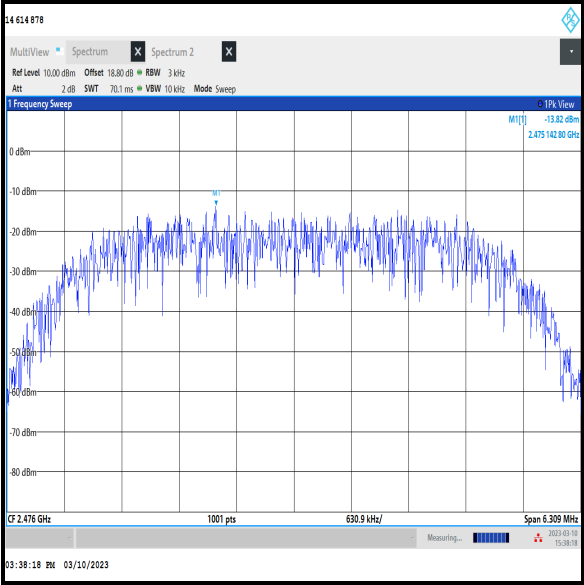
Channel	PSD (dBm / 3 kHz)	Limit (dBm / 3 kHz)	Margin (dB)	Result
Bottom	-14.3	8.0	22.3	Complied
Middle	-13.9	8.0	21.9	Complied
Top	-13.8	8.0	21.8	Complied



Bottom Channel



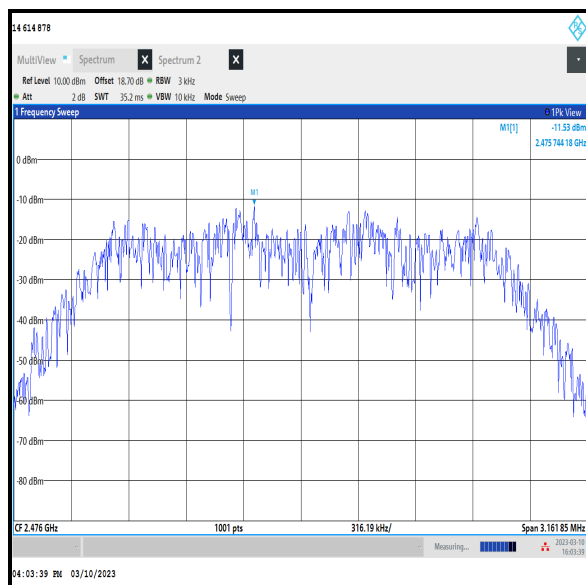
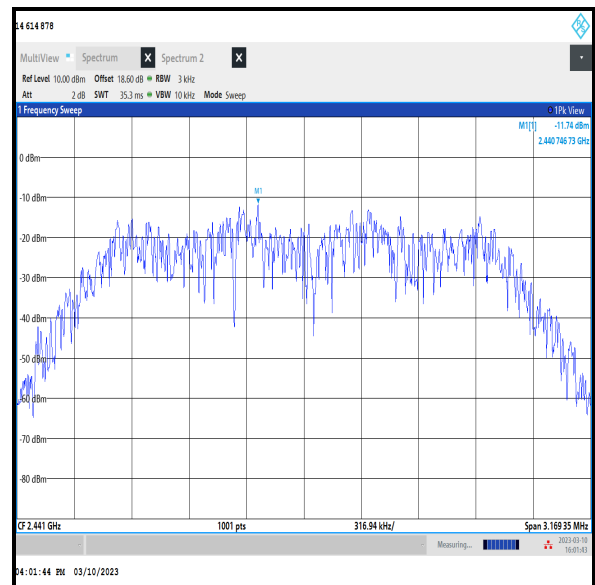
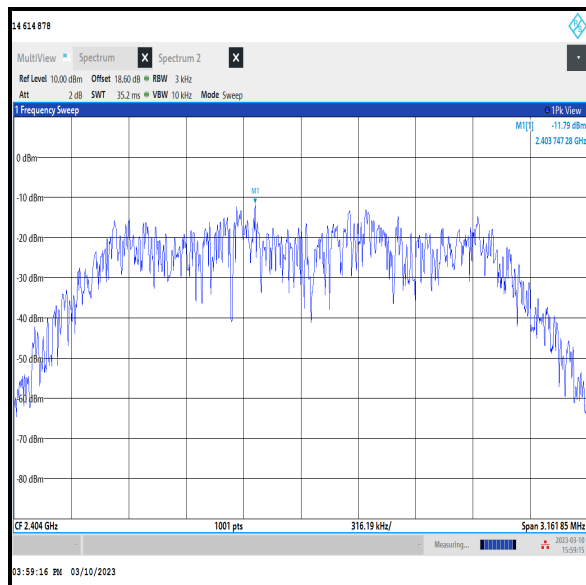
Middle Channel



Top Channel

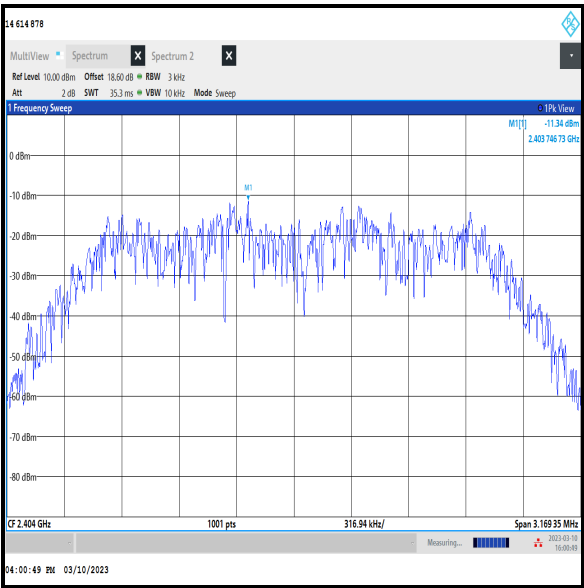
Transmitter Power Spectral Density (continued)**Results: 4DH5 / Beamforming**

Channel	PSD Core 0 (dBm / 3 kHz)	PSD Core 1 (dBm / 3 kHz)	Combined PSD (dBm / 3 kHz)	Limit (dBm / 3 kHz)	Margin (dB)	Result
Bottom	-11.8	-11.3	-8.5	8.0	16.5	Complied
Middle	-11.7	-11.3	-8.5	8.0	16.5	Complied
Top	-11.5	-11.3	-8.4	8.0	16.4	Complied

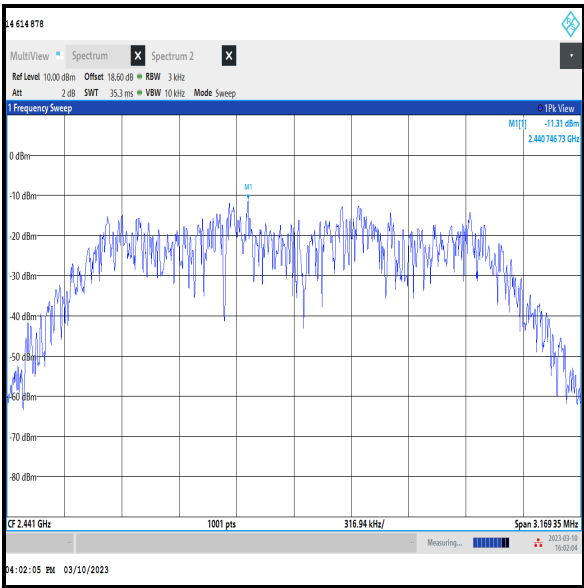
Results: Core 0

Transmitter Power Spectral Density (continued)

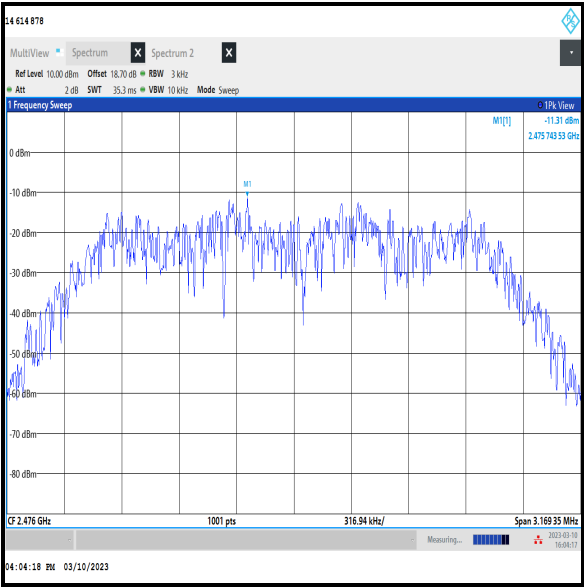
Results: 4DH5 / Beamforming / Core 1



Bottom Channel



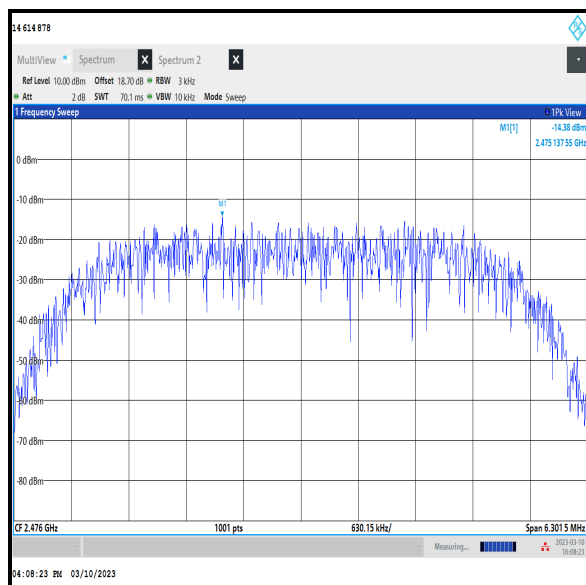
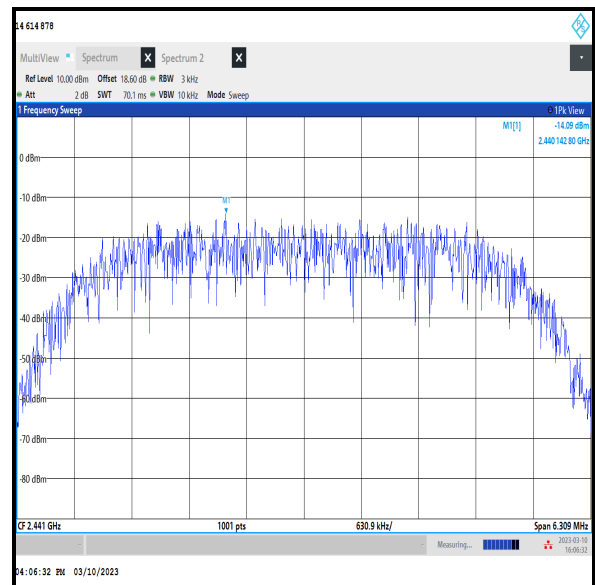
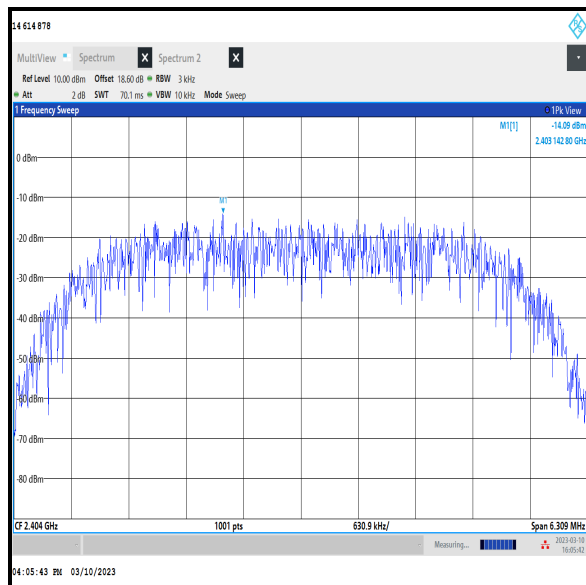
Middle Channel



Top Channel

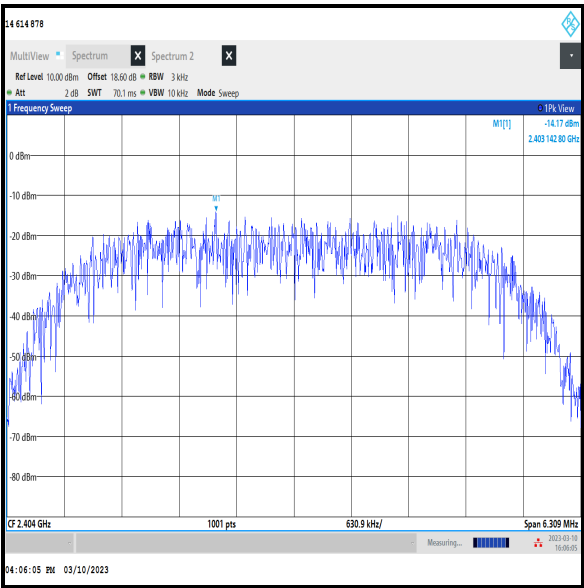
Transmitter Power Spectral Density (continued)**Results: 8DH5 / Beamforming**

Channel	PSD Core 0 (dBm / 3 kHz)	PSD Core 1 (dBm / 3 kHz)	Combined PSD (dBm / 3 kHz)	Limit (dBm / 3 kHz)	Margin (dB)	Result
Bottom	-14.1	-14.2	-11.1	8.0	19.1	Complied
Middle	-14.1	-14.5	-11.3	8.0	19.3	Complied
Top	-14.4	-14.2	-11.3	8.0	19.3	Complied

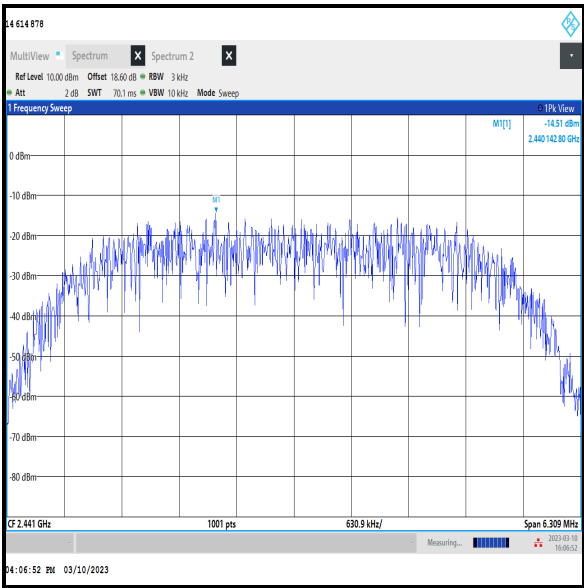
Results: Core 0

Transmitter Power Spectral Density (continued)

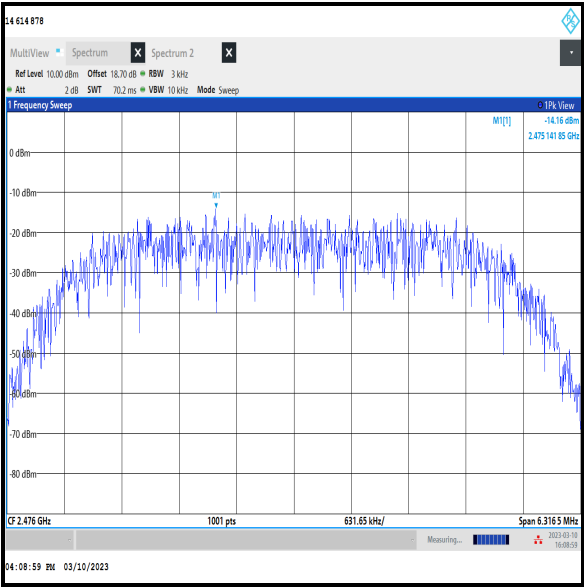
Results: 8DH5 / Beamforming / Core 1



Bottom Channel



Middle Channel



Top Channel

5 Radiated Test Results

5.1 Transmitter Radiated Emissions <1 GHz

Test Summary:

Test Engineers:	John Ferdinand & Andrew Harding	Test Dates:	01 February 2023 & 14 February 2023
Test Sample Serial Number:	NQHHW969D9		

FCC Reference:	Parts 15.247(d) & 15.209(a)
ISED Canada Reference:	RSS-Gen 6.13 & 8.9 / RSS-247 5.5
Test Method Used:	ANSI C63.10 Sections 6.3, 6.4 and 6.5
Frequency Range	9 kHz to 1000 MHz

Environmental Conditions:

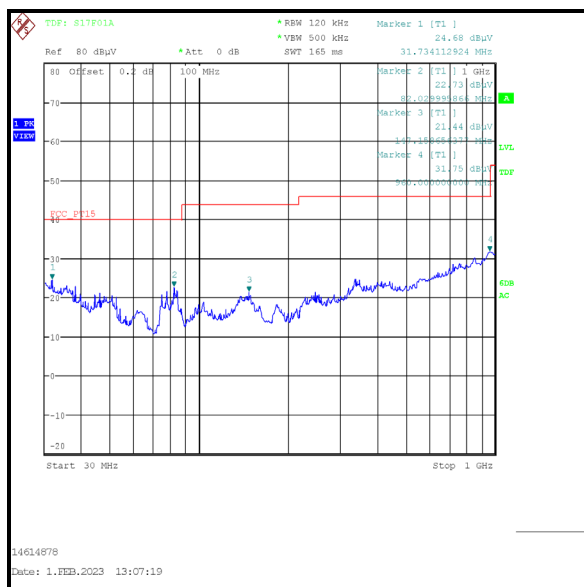
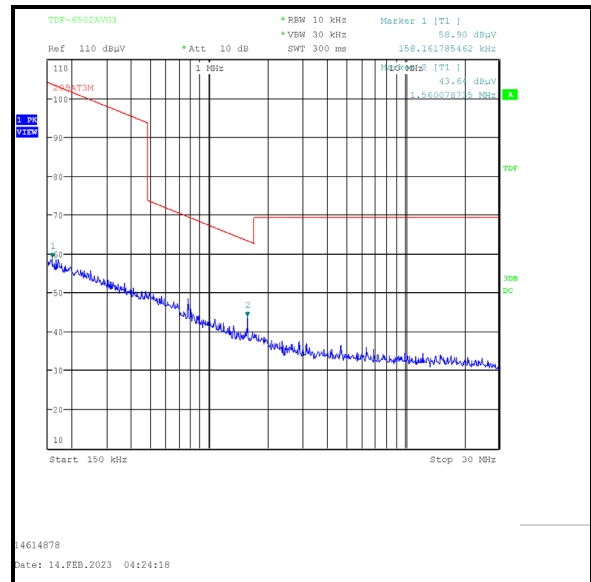
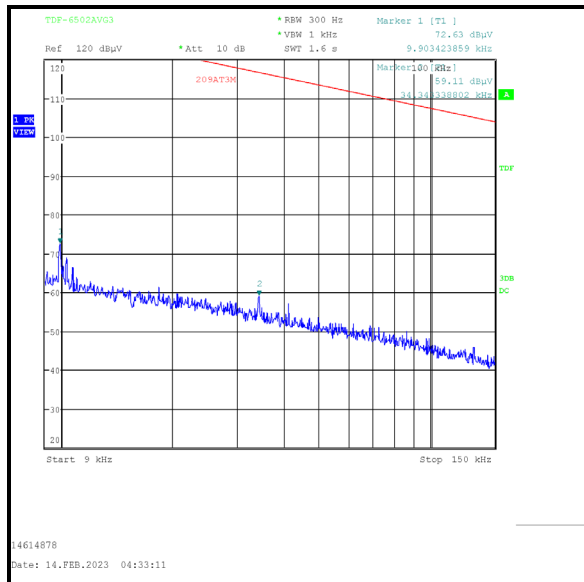
Temperature (°C):	19 to 21
Relative Humidity (%):	34 to 38

Note(s):

1. The final measured value, for the given emission, in the table below incorporates the calibrated antenna factor and cable loss.
2. The preliminary scans showed similar emission levels below 1 GHz, for each channel of operation. Therefore final radiated emissions measurements were performed with the EUT set to the middle channel only.
3. All emissions shown on the pre-scans were investigated and found to be ambient, or > 20 dB below the appropriate limit or below the noise floor of the measurement system. Therefore the highest peak noise floor reading of the measuring receiver was recorded in the table below.
4. Measurements below 30 MHz were performed in a semi-anechoic chamber (Asset Number K0001) at 3 metres. The EUT was placed at a height of 80 cm above the reference ground plane in the centre of the chamber turntable. The limit was extrapolated to 3 metres in accordance with ANSI C63.10 clause 6.4.3 using the method described in clause 6.4.4.2. ANSI C63.10 clause 5.2 states an alternative test site that can demonstrate equivalence to an open area test site may be used for measurements below 30 MHz. Therefore, measurements were performed in a semi-anechoic chamber. The correlation data between semi-anechoic chamber and an open field test site is available upon request.
5. Measurements from 30 MHz to 1 GHz were performed in a semi-anechoic chamber (Asset Number K0001) at a distance of 3 metres. The EUT was placed at a height of 80 cm above the reference ground plane in the centre of the chamber turntable. Maximum emission levels were determined by height searching the measurement antenna over the range 1 metre to 4 metres.
6. Pre-scans were performed and markers placed on the highest measured levels. The test receiver was configured as follows: For 9 kHz to 150 kHz, the resolution bandwidth was set to 300 Hz and video bandwidth 1 kHz. A peak detector was used and trace mode was Max Hold. For 150 kHz to 30 MHz, the resolution bandwidth was set to 10 kHz and video bandwidth 30 kHz, trace mode was Max Hold. For 30 MHz to 1 GHz, the resolution bandwidth was set to 120 kHz and video bandwidth 500 kHz. A peak detector was used, sweep time was set to auto and trace mode was Max Hold.

Transmitter Radiated Emissions (continued)**Results: Peak / Middle Channel / 4DH5 / Beamforming / Core 0 + Core 1**

Frequency (MHz)	Antenna Polarity	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Result
960.000	Horizontal	31.8	46.0	14.2	Complied



5.2 Transmitter Radiated Emissions >1 GHz

Test Summary:

Test Engineer:	John Ferdinand	Test Dates:	30 January 2023 to 02 February 2023
Test Sample Serial Number:	NQHHW969D9		

FCC Reference:	Parts 15.247(d) & 15.209(a)
ISED Canada Reference:	RSS-Gen 6.13 & 8.9 / RSS-247 5.5
Test Method Used:	FCC KDB 558074 Sections 8.1 c)3), 8.5 & 8.6 referencing ANSI C63.10 Sections 6.3, 6.6, 11.11 & 11.12
Frequency Range	1 GHz to 25 GHz

Environmental Conditions:

Temperature (°C):	20 to 22
Relative Humidity (%):	33 to 37

Note(s):

1. The final measured value, for the given emission, in the table below incorporates the calibrated antenna factor and cable loss.
2. No spurious emissions were detected above the noise floor of the measuring receiver therefore the highest peak and average noise floor readings of the measuring receiver were recorded as shown in the tables below.
3. The emission shown on the 1 GHz to 3 GHz plot at approximately 2441 MHz is the EUT fundamental.
4. Pre-scans above 1 GHz were performed in a fully anechoic chamber (Asset Number K0001) at a distance of 3 metres. The EUT was placed at a height of 1.5 metres above the test chamber floor in the centre of the chamber turntable. All measurement antennas were placed at a fixed height of 1.5 metres above the test chamber floor, in line with the EUT.
5. Pre-scans were performed and a marker placed on the highest measured level of the appropriate plot. The test receiver resolution bandwidth was set to 1 MHz and video bandwidth 3 MHz. The sweep time was set to auto. Peak and average measurements were performed with their own appropriate detectors during the pre-scan measurements.

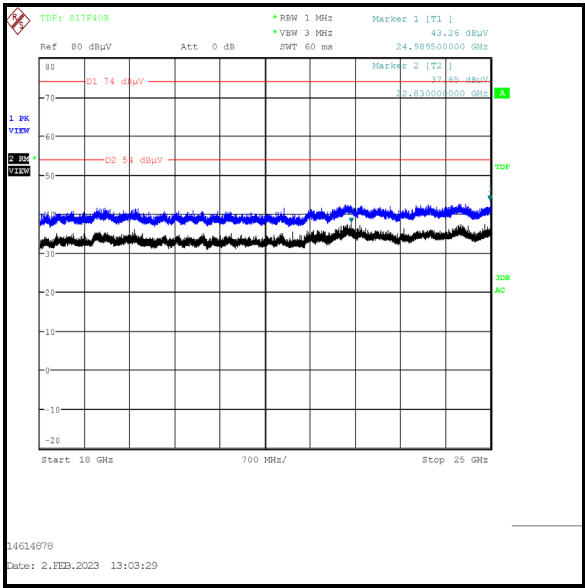
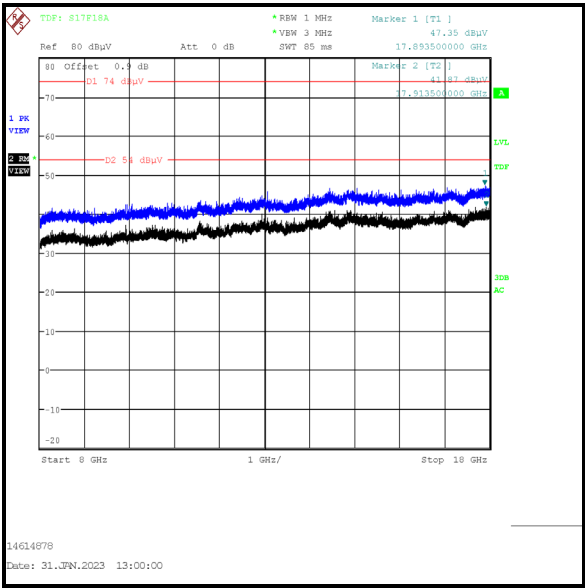
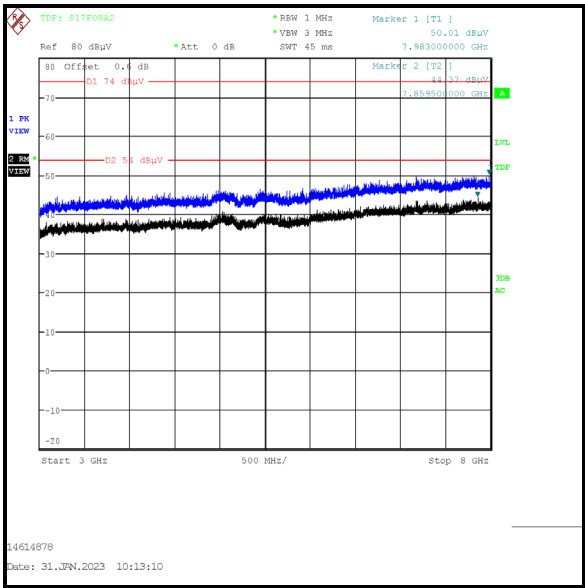
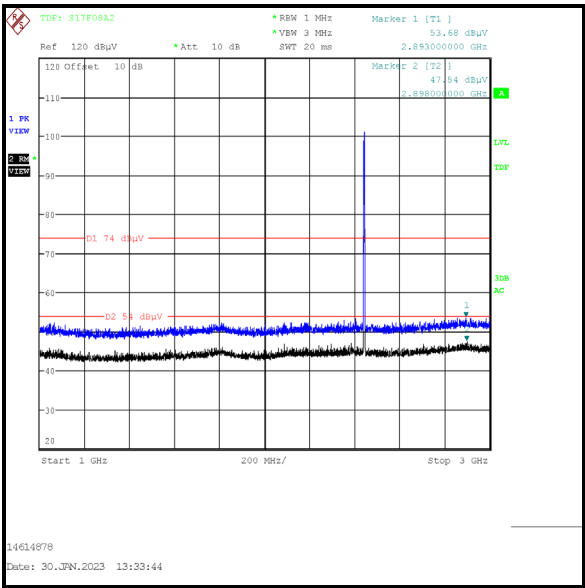
Results: Peak / Middle Channel / 4DH5 / Beamforming / Core 0 + Core 1

Frequency (MHz)	Antenna Polarity	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Result
2893.000	Horizontal	53.7	74.0	20.3	Complied

Results: Average / Middle Channel / 4DH5 / Beamforming / Core 0 + Core 1

Frequency (MHz)	Antenna Polarity	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Result
2898.000	Horizontal	47.5	54.0	6.5	Complied

Transmitter Radiated Emissions (continued)



5.3 Transmitter Band Edge Radiated Emissions

Test Summary:

Test Engineers:	John Ferdinand & Andrew Harding	Test Dates:	12 January 2023 & 13 January 2023
Test Sample Serial Number:	NQHHW969D9		

FCC Reference:	Parts 15.247(d) & 15.209(a)
ISED Canada Reference:	RSS-Gen 6.13 / RSS-247 5.5
Test Method Used:	KDB 558074 Section 8.7 referencing ANSI C63.10 Sections 11.11, 11.12 & 11.13

Environmental Conditions:

Temperature (°C):	22
Relative Humidity (%):	39 to 42

Note(s):

1. The final measured value, for the given emission, in the table below incorporates the calibrated antenna factor and cable loss.
2. As the lower band edge is adjacent to a non-restricted band, only peak measurements are required. In accordance with ANSI C63.10 Section 11.11.1, the test method in Section 11.11.3 was followed: the test receiver resolution bandwidth was set to 100 kHz and video bandwidth 300 kHz. A peak detector was used, sweep time was set to auto and trace mode was Max Hold. The test receiver was left to sweep for a sufficient length of time in order to maximise the carrier level and out-of-band emissions. A marker and corresponding reference level line were placed on the peak of the carrier. As the maximum peak conducted output power was measured using a peak detector in accordance with ANSI C63.10 Section 11.9.1.1 an out-of-band limit line was placed 20 dB (ANSI C63.10 Section 11.11.1(a)) below the peak level. A marker was placed on the band edge spot frequencies. Marker frequency and levels were recorded.
3. As the upper band edge is adjacent to a restricted band, both peak and average measurements were recorded by placing a marker at the edge of the band. For peak measurements the test receiver resolution bandwidth was set to 1 MHz and the video bandwidth 3 MHz. A peak detector was used, sweep time was set to auto and trace mode was Max Hold. For average measurements the test receiver resolution bandwidth was set to 1 MHz and the video bandwidth 3 MHz. An RMS detector was used, sweep time was set to auto and trace mode was trace averaging over 300 sweeps. A marker was placed on the band edge spot frequencies and a second marker placed on the highest emission level in the adjacent restricted band of operation (where a higher level emission was present). Marker frequencies and levels were recorded.
4. There is a restricted band 10 MHz below the lower band edge. The test receiver was set up as follows: the RBW set to 1 MHz, the VBW set to 3 MHz, with the sweep time set to auto couple. Peak and average measurements were performed with peak and RMS detectors respectively. Markers were placed on the highest point on each trace.
5. * -20 dBc limit.

Transmitter Band Edge Radiated Emissions (continued)**Results: 4DH5 / SISO / Core 0**

Frequency (MHz)	Antenna Polarity	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Result
2396.550	Horizontal	43.2	76.2*	33.0	Complied
2400.0	Horizontal	41.2	76.2*	35.0	Complied
2483.5	Horizontal	49.9	74.0	24.1	Complied
2483.700	Horizontal	51.9	74.0	22.1	Complied

Frequency (MHz)	Antenna Polarity	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Result
2483.5	Horizontal	39.8	54.0	14.2	Complied
2483.650	Horizontal	39.9	54.0	14.1	Complied

Results: 2310 MHz to 2390 MHz Restricted Band / Peak

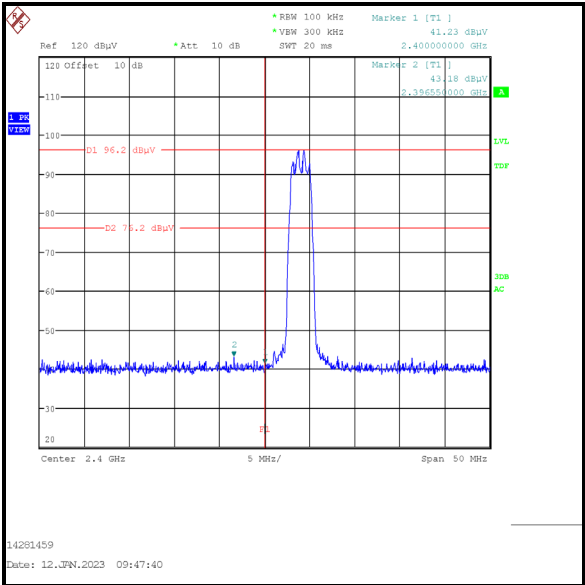
Frequency (MHz)	Antenna Polarity	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Result
2378.974	Horizontal	53.9	74.0	20.1	Complied

Results: 2310 MHz to 2390 MHz Restricted Band / Average

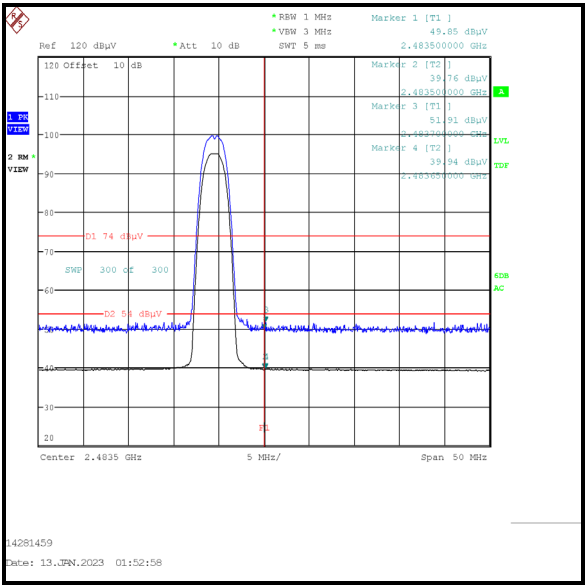
Frequency (MHz)	Antenna Polarity	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Result
2379.359	Horizontal	41.0	54.0	13.0	Complied

Transmitter Band Edge Radiated Emissions (continued)

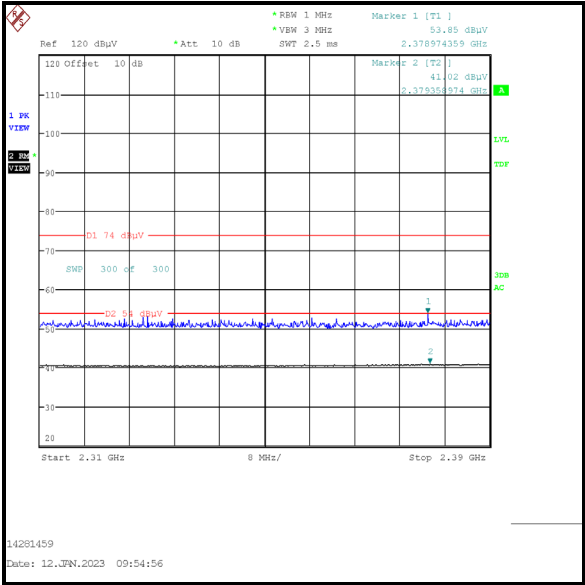
Results: 4DH5 / SISO / Core 0



Lower Band Edge



Upper Band Edge



2310 MHz to 2390 MHz Restricted Band

Transmitter Band Edge Radiated Emissions (continued)**Results: 8DH5 / SISO / Core 0**

Frequency (MHz)	Antenna Polarity	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Result
2398.300	Horizontal	46.5	72.8*	26.3	Complied
2400.0	Horizontal	44.8	72.8*	28.0	Complied
2483.5	Horizontal	52.7	74.0	21.3	Complied
2483.950	Horizontal	53.6	74.0	20.4	Complied

Frequency (MHz)	Antenna Polarity	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Result
2483.5	Horizontal	42.0	54.0	12.0	Complied

Results: 2310 MHz to 2390 MHz Restricted Band / Peak

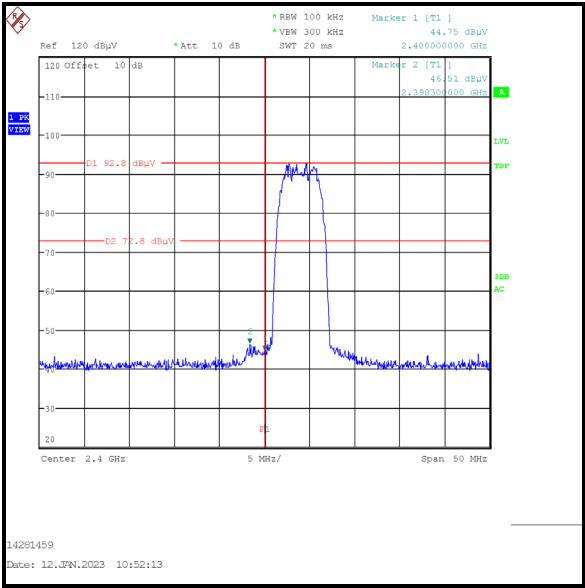
Frequency (MHz)	Antenna Polarity	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Result
2385.385	Horizontal	52.9	74.0	21.1	Complied

Results: 2310 MHz to 2390 MHz Restricted Band / Average

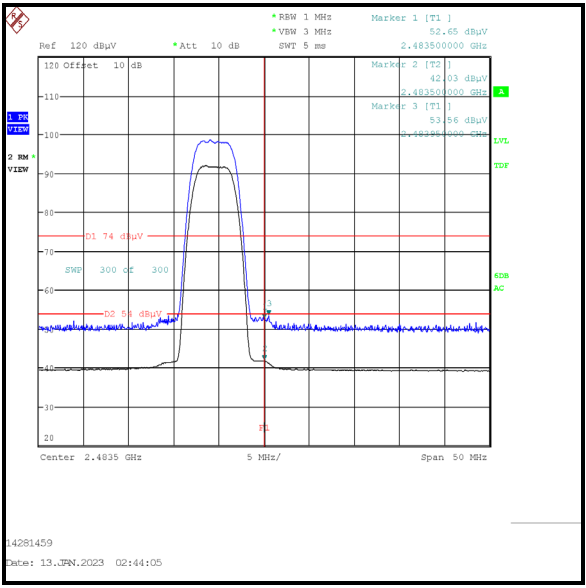
Frequency (MHz)	Antenna Polarity	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Result
2388.846	Horizontal	41.2	54.0	12.8	Complied

Transmitter Band Edge Radiated Emissions (continued)

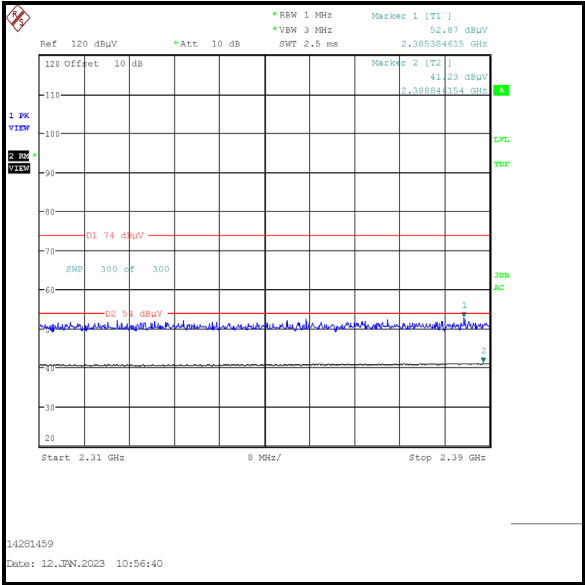
Results: 8DH5 / SISO / Core 0



Lower Band Edge



Upper Band Edge



2310 MHz to 2390 MHz Restricted Band

Transmitter Band Edge Radiated Emissions (continued)**Results: 4DH5 / SISO / Core 1**

Frequency (MHz)	Antenna Polarity	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Result
2398.297	Horizontal	42.0	76.9*	34.9	Complied
2400.0	Horizontal	41.0	76.9*	35.9	Complied
2483.5	Horizontal	50.2	74.0	23.8	Complied
2491.450	Horizontal	52.4	74.0	21.6	Complied

Frequency (MHz)	Antenna Polarity	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Result
2483.5	Horizontal	39.9	54.0	14.1	Complied
2483.700	Horizontal	40.1	54.0	13.9	Complied

Results: 2310 MHz to 2390 MHz Restricted Band / Peak

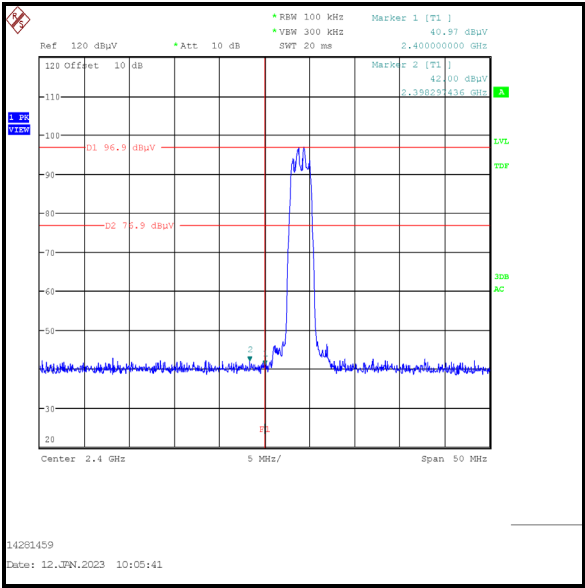
Frequency (MHz)	Antenna Polarity	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Result
2327.949	Horizontal	52.8	74.0	21.2	Complied

Results: 2310 MHz to 2390 MHz Restricted Band / Average

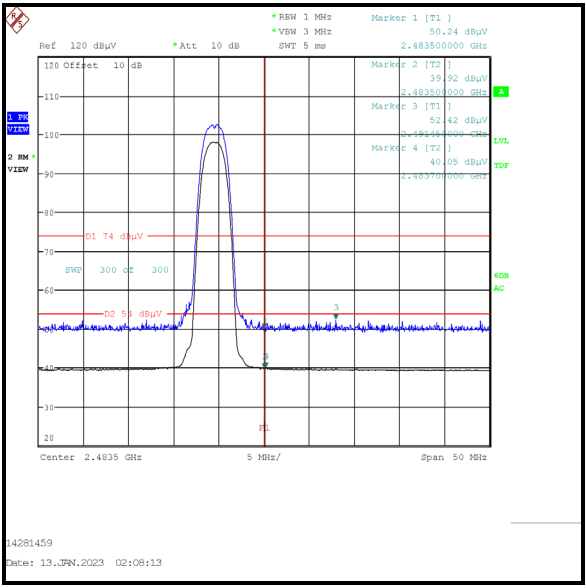
Frequency (MHz)	Antenna Polarity	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Result
2387.949	Horizontal	41.1	54.0	12.9	Complied

Transmitter Band Edge Radiated Emissions (continued)

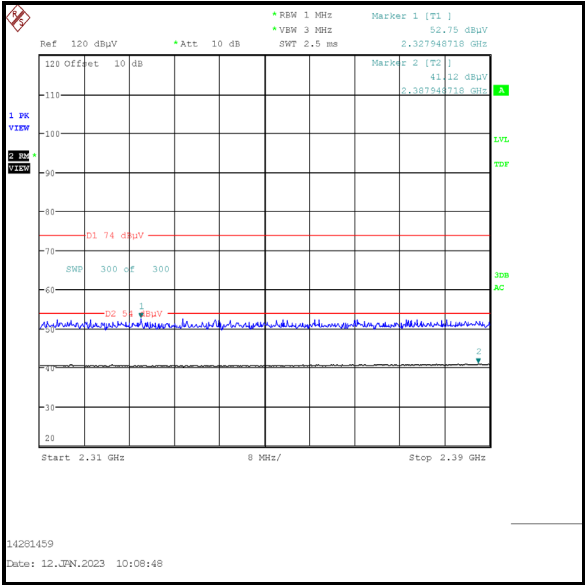
Results: 4DH5 / SISO / Core 1



Lower Band Edge



Upper Band Edge



2310 MHz to 2390 MHz Restricted Band

Transmitter Band Edge Radiated Emissions (continued)**Results: 8DH5 / SISO / Core 1**

Frequency (MHz)	Antenna Polarity	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Result
2398.800	Horizontal	47.5	73.5*	26.0	Complied
2400.0	Horizontal	43.8	73.5*	29.7	Complied
2483.5	Horizontal	55.1	74.0	18.9	Complied
2483.850	Horizontal	55.8	74.0	18.2	Complied

Frequency (MHz)	Antenna Polarity	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Result
2483.5	Horizontal	44.0	54.0	10.0	Complied
2483.550	Horizontal	44.1	54.0	9.9	Complied

Results: 2310 MHz to 2390 MHz Restricted Band / Peak

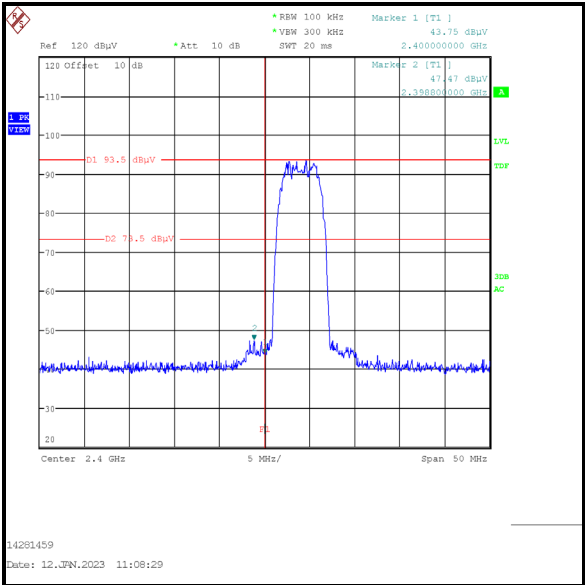
Frequency (MHz)	Antenna Polarity	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Result
2360.385	Horizontal	53.6	74.0	20.4	Complied

Results: 2310 MHz to 2390 MHz Restricted Band / Average

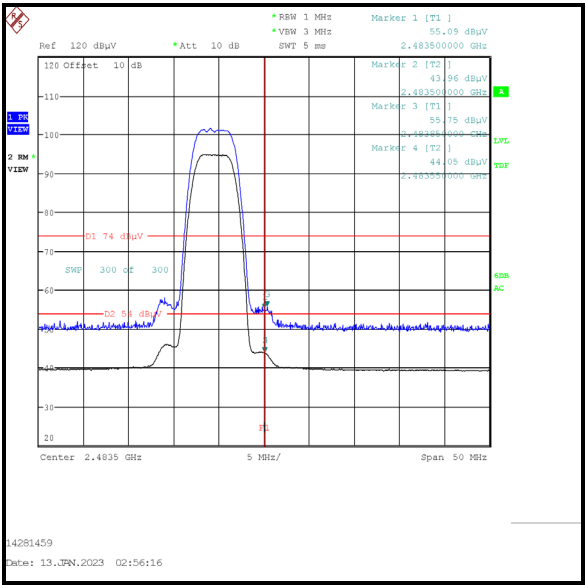
Frequency (MHz)	Antenna Polarity	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Result
2389.359	Horizontal	41.3	54.0	12.7	Complied

Transmitter Band Edge Radiated Emissions (continued)

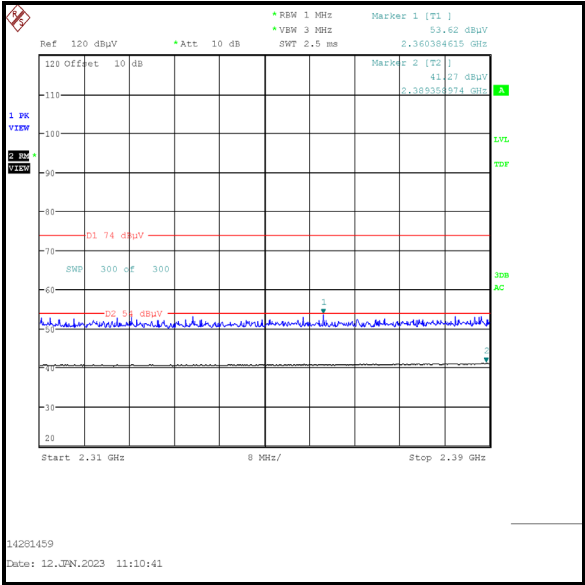
Results: 8DH5 / SISO / Core 1



Lower Band Edge



Upper Band Edge



2310 MHz to 2390 MHz Restricted Band

Transmitter Band Edge Radiated Emissions (continued)**Results: 4DH5 / SISO / Core 2**

Frequency (MHz)	Antenna Polarity	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Result
2394.750	Horizontal	42.9	73.5*	30.6	Complied
2400.0	Horizontal	40.4	73.5*	33.1	Complied
2483.5	Horizontal	50.4	74.0	23.6	Complied
2489.250	Horizontal	52.3	74.0	21.7	Complied

Frequency (MHz)	Antenna Polarity	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Result
2483.5	Horizontal	39.7	54.0	14.3	Complied
2483.800	Horizontal	39.8	54.0	14.2	Complied

Results: 2310 MHz to 2390 MHz Restricted Band / Peak

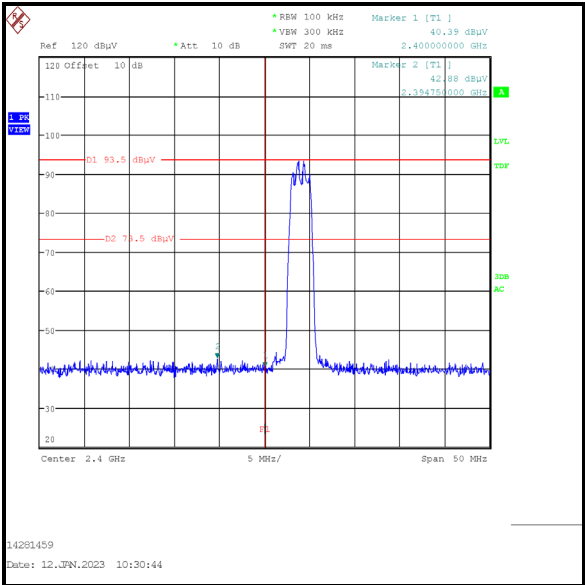
Frequency (MHz)	Antenna Polarity	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Result
2314.872	Horizontal	52.9	74.0	21.1	Complied

Results: 2310 MHz to 2390 MHz Restricted Band / Average

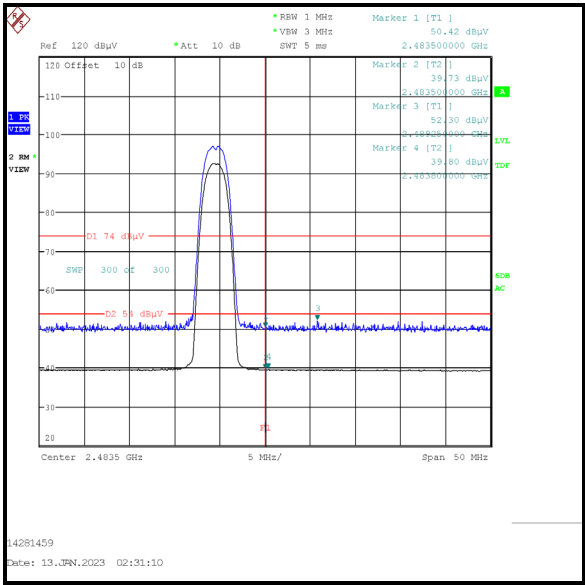
Frequency (MHz)	Antenna Polarity	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Result
2388.974	Horizontal	41.0	54.0	13.0	Complied

Transmitter Band Edge Radiated Emissions (continued)

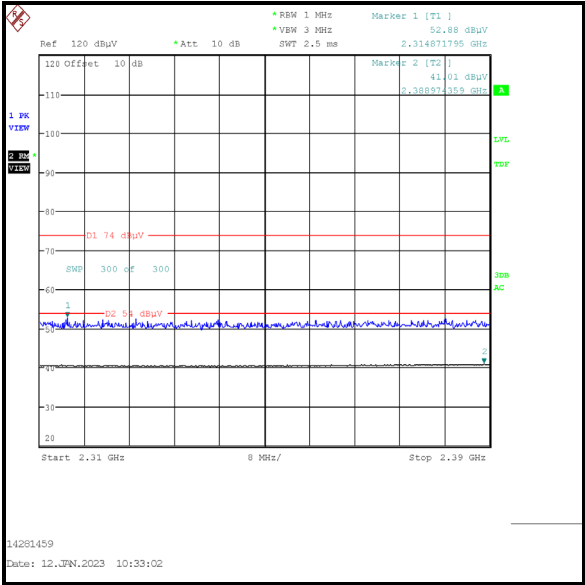
Results: 4DH5 / SISO / Core 2



Lower Band Edge



Upper Band Edge



2310 MHz to 2390 MHz Restricted Band

Transmitter Band Edge Radiated Emissions (continued)**Results: 8DH5 / SISO / Core 2**

Frequency (MHz)	Antenna Polarity	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Result
2398.750	Horizontal	45.1	70.2*	25.1	Complied
2400.0	Horizontal	43.1	70.2*	27.1	Complied
2483.5	Horizontal	52.1	74.0	21.9	Complied
2483.650	Horizontal	52.4	74.0	21.6	Complied

Frequency (MHz)	Antenna Polarity	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Result
2483.5	Horizontal	40.8	54.0	13.2	Complied
2483.650	Horizontal	40.9	54.0	13.1	Complied

Results: 2310 MHz to 2390 MHz Restricted Band / Peak

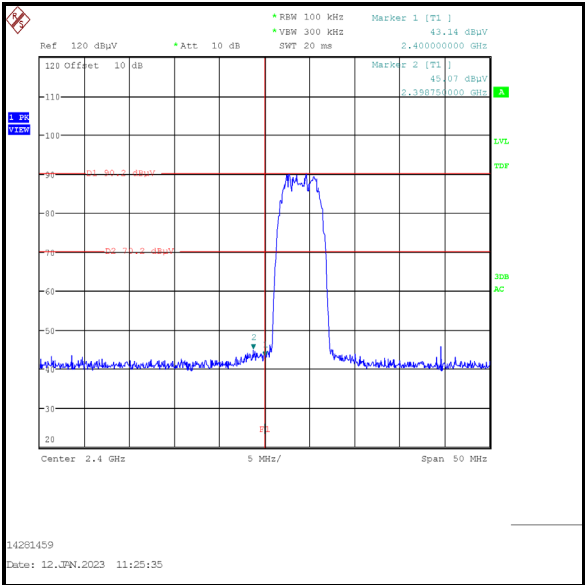
Frequency (MHz)	Antenna Polarity	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Result
2371.410	Horizontal	53.0	74.0	21.0	Complied

Results: 2310 MHz to 2390 MHz Restricted Band / Average

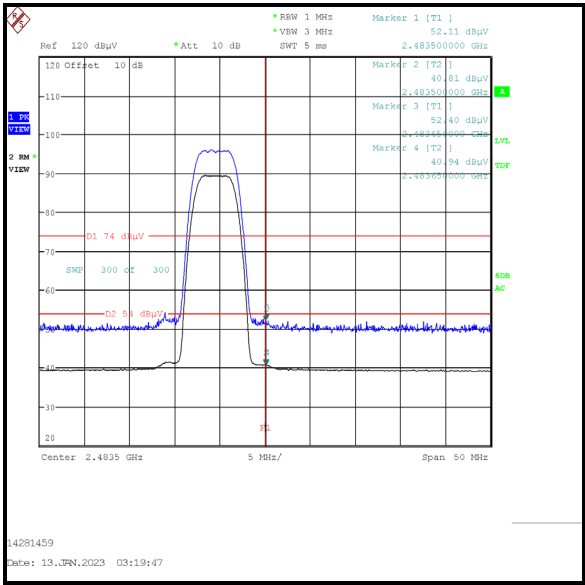
Frequency (MHz)	Antenna Polarity	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Result
2376.410	Horizontal	41.4	54.0	12.6	Complied

Transmitter Band Edge Radiated Emissions (continued)

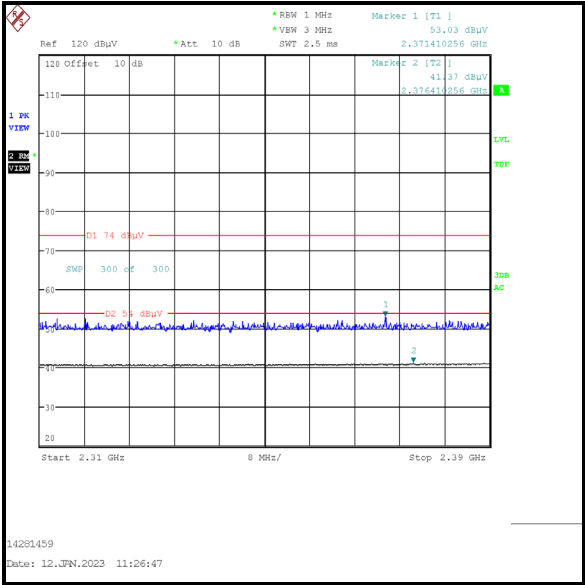
Results: 8DH5 / SISO / Core 2



Lower Band Edge



Upper Band Edge



2310 MHz to 2390 MHz Restricted Band

Transmitter Band Edge Radiated Emissions (continued)**Results: 4DH5 / Beamforming / Core 0 + Core 1**

Frequency (MHz)	Antenna Polarity	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Result
2398.397	Horizontal	42.4	79.3*	36.9	Complied
2400.0	Horizontal	39.1	79.3*	40.2	Complied
2483.5	Horizontal	49.7	74.0	24.3	Complied
2497.050	Horizontal	52.2	74.0	21.8	Complied

Frequency (MHz)	Antenna Polarity	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Result
2483.5	Horizontal	40.0	54.0	14.0	Complied

Results: 2310 MHz to 2390 MHz Restricted Band / Peak

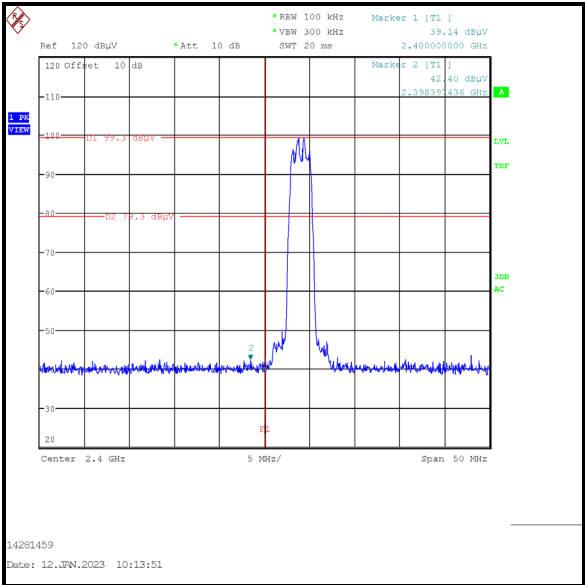
Frequency (MHz)	Antenna Polarity	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Result
2338.462	Horizontal	53.4	74.0	20.6	Complied

Results: 2310 MHz to 2390 MHz Restricted Band / Average

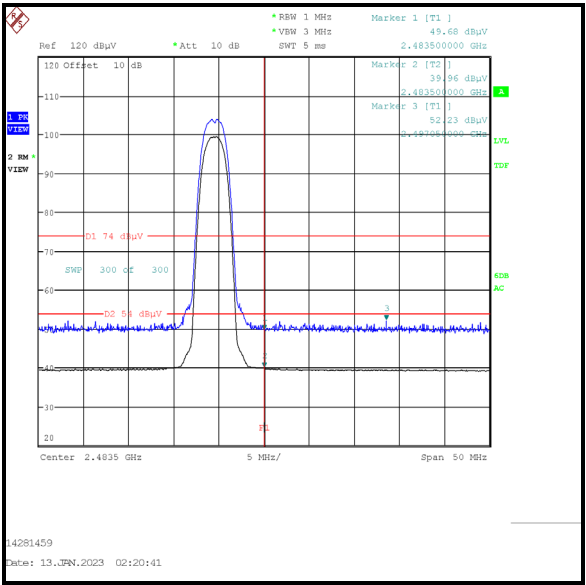
Frequency (MHz)	Antenna Polarity	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Result
2388.974	Horizontal	41.0	54.0	13.0	Complied

Transmitter Band Edge Radiated Emissions (continued)

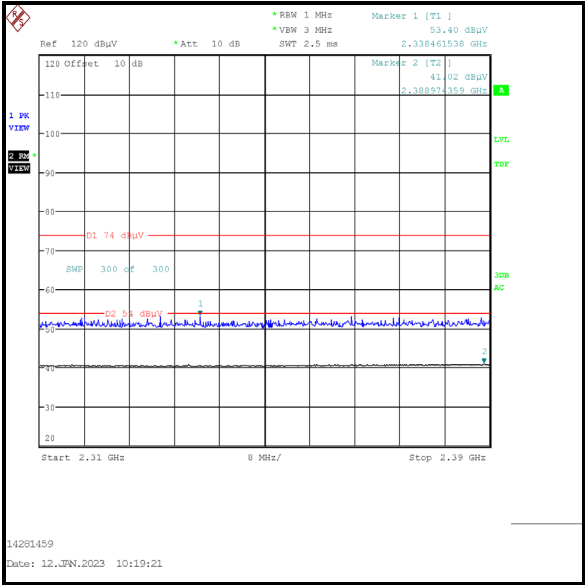
Results: 4DH5 / Beamforming / Core 0 + Core 1



Lower Band Edge



Upper Band Edge



2310 MHz to 2390 MHz Restricted Band

Transmitter Band Edge Radiated Emissions (continued)**Results: 8DH5 / Beamforming / Core 0 + Core 1**

Frequency (MHz)	Antenna Polarity	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Result
2398.300	Horizontal	49.0	76.7*	27.7	Complied
2400.0	Horizontal	46.0	76.7*	30.7	Complied
2483.5	Horizontal	55.8	74.0	18.2	Complied
2483.750	Horizontal	56.4	74.0	17.6	Complied

Frequency (MHz)	Antenna Polarity	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Result
2483.5	Horizontal	44.8	54.0	9.2	Complied

Results: 2310 MHz to 2390 MHz Restricted Band / Peak

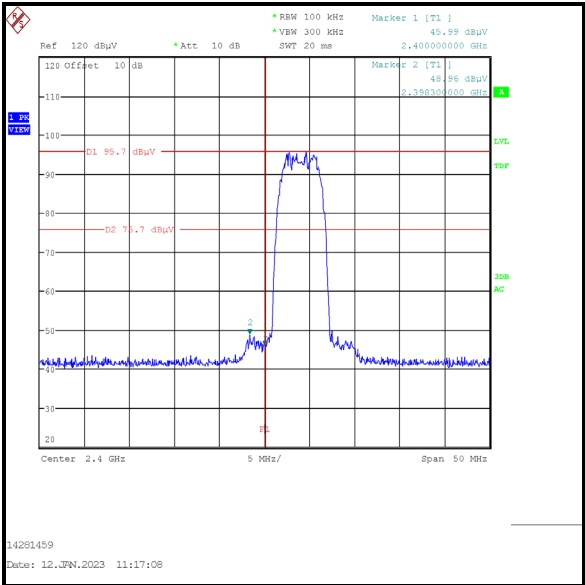
Frequency (MHz)	Antenna Polarity	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Result
2354.487	Horizontal	52.6	74.0	21.4	Complied

Results: 2310 MHz to 2390 MHz Restricted Band / Average

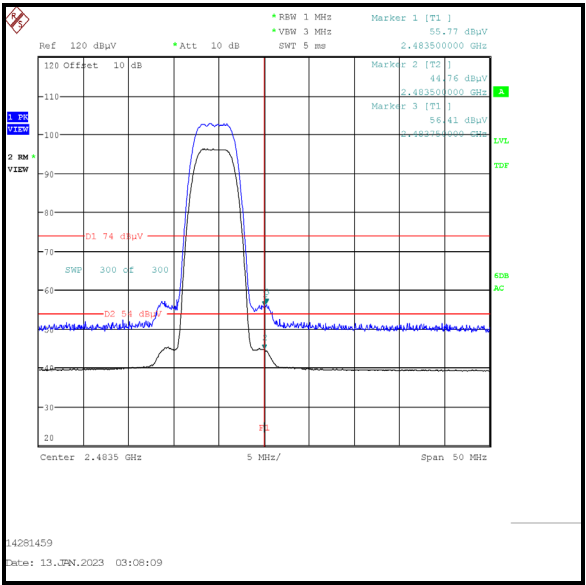
Frequency (MHz)	Antenna Polarity	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Result
2388.590	Horizontal	41.3	54.0	12.7	Complied

Transmitter Band Edge Radiated Emissions (continued)

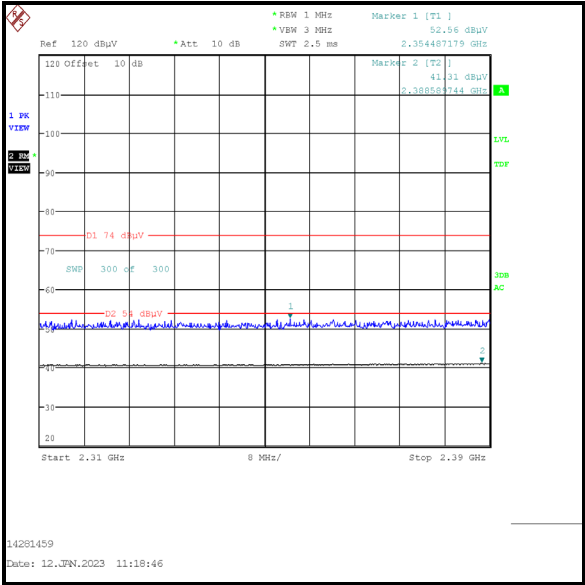
Results: 8DH5 / Beamforming / Core 0 + Core 1



Lower Band Edge



Upper Band Edge



2310 MHz to 2390 MHz Restricted Band

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