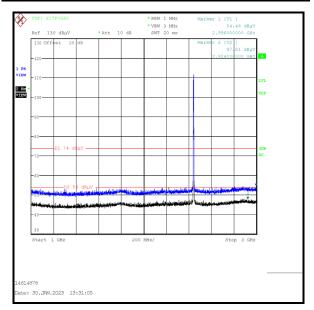
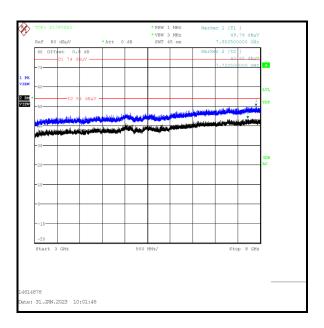
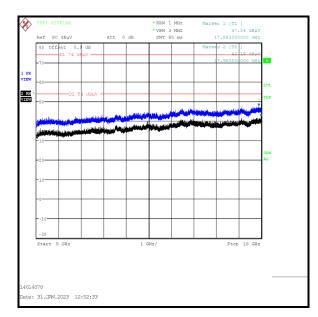
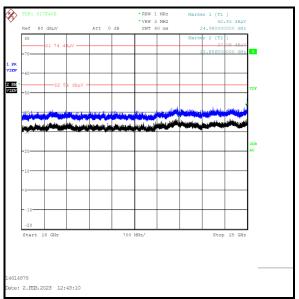
Transmitter Radiated Emissions (continued)









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 an 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	Peak Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Result
2399.450	Horizontal	46.5	85.6*	39.1	Complied
2400.0	Horizontal	45.9	85.6*	39.7	Complied
2483.5	Horizontal	54.5	74.0	19.5	Complied
2483.750	Horizontal	55.1	74.0	18.9	Complied

Frequency	Antenna	Average Level	Limit	Margin	Result
(MHz)	Polarity	(dBμV/m)	(dBμV/m)	(dB)	
2483.5	Horizontal	43.7	54.0	10.3	Complied

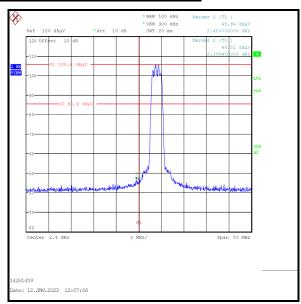
Results: 2310 MHz to 2390 MHz Restricted Band / Peak

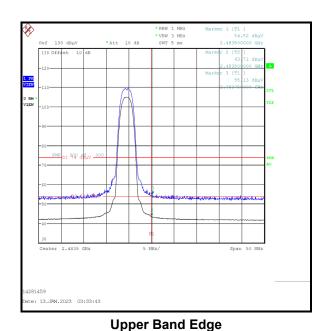
Frequency (MHz)	Antenna Polarity	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Result
2325.385	Horizontal	53.9	74.0	20.1	Complied

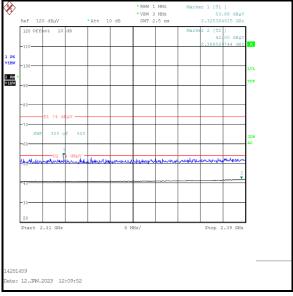
Frequency	Antenna	Level	Limit	Margin	Result
(MHz)	Polarity	(dBµV/m)	(dBµV/m)	(dB)	
2388.590	Horizontal	42.0	54.0	12.0	Complied

Transmitter Band Edge Radiated Emissions (continued)

Results: 4DH5 / SISO / Core 0







2310 MHz to 2390 MHz Restricted Band

Transmitter Band Edge Radiated Emissions (continued)

Results: 8DH5 / SISO / Core 0

Frequency (MHz)	Antenna Polarity	Peak Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Result
2400.0	Horizontal	54.0	82.4*	28.4	Complied
2483.5	Horizontal	61.5	74.0	12.5	Complied
2483.550	Horizontal	62.4	74.0	11.6	Complied

Frequency	Antenna	Average Level	Limit	Margin	Result
(MHz)	Polarity	(dBμV/m)	(dBμV/m)	(dB)	
2483.5	Horizontal	51.3	54.0	2.7	Complied

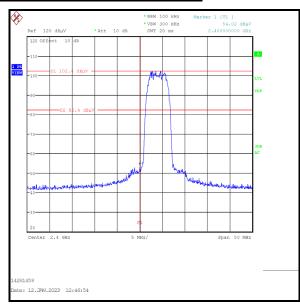
Results: 2310 MHz to 2390 MHz Restricted Band / Peak

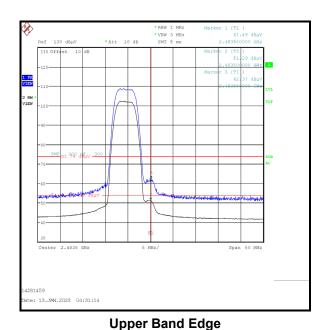
Frequency (MHz)	Antenna Polarity	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Result
2389.744	Horizontal	54.7	74.0	19.3	Complied

Frequency (MHz)	Antenna Polarity	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Result
2390.000	Horizontal	43.3	54.0	10.7	Complied

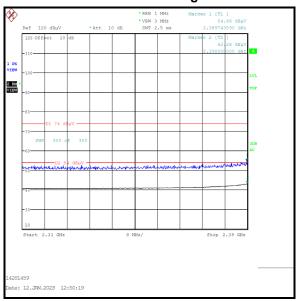
Transmitter Band Edge Radiated Emissions (continued)

Results: 8DH5 / SISO / Core 0









2310 MHz to 2390 MHz Restricted Band

Transmitter Band Edge Radiated Emissions (continued)

Results: 4DH5 / SISO / Core 1

Frequency (MHz)	Antenna Polarity	Peak Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Result
2399.900	Horizontal	46.6	85.4*	38.8	Complied
2400.0	Horizontal	46.1	85.4*	39.3	Complied
2483.5	Horizontal	54.6	74.0	19.4	Complied
2484.350	Horizontal	55.7	74.0	18.3	Complied

Frequency	Antenna	Average Level	Limit	Margin	Result
(MHz)	Polarity	(dBμV/m)	(dBμV/m)	(dB)	
2483.5	Horizontal	44.1	54.0	9.9	Complied

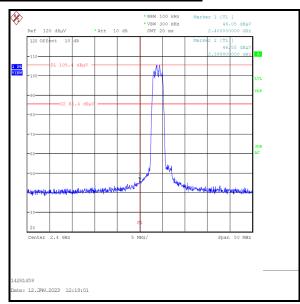
Results: 2310 MHz to 2390 MHz Restricted Band / Peak

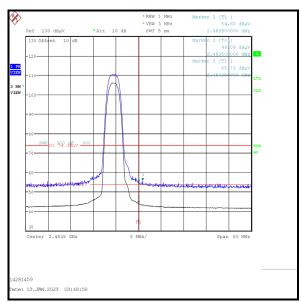
Frequency (MHz)	Antenna Polarity	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Result
2389.872	Horizontal	53.7	74.0	20.3	Complied

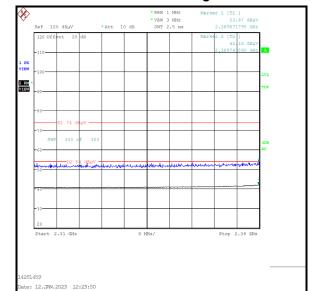
Frequency	Antenna	Level	Limit	Margin	Result
(MHz)	Polarity	(dBµV/m)	(dBµV/m)	(dB)	
2389.744	Horizontal	42.2	54.0	11.8	Complied

Transmitter Band Edge Radiated Emissions (continued)

Results: 4DH5 / SISO / Core 1







2310 MHz to 2390 MHz Restricted Band

Upper Band Edge

Transmitter Band Edge Radiated Emissions (continued)

Results: 8DH5 / SISO / Core 1

Frequency (MHz)	Antenna Polarity	Peak Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Result
2399.200	Horizontal	51.7	82.1*	30.4	Complied
2400.0	Horizontal	51.3	82.1*	30.8	Complied
2483.5	Horizontal	61.5	74.0	12.5	Complied
2483.550	Horizontal	62.4	74.0	11.6	Complied

Frequency	Antenna	Average Level	Limit	Margin	Result
(MHz)	Polarity	(dBμV/m)	(dBμV/m)	(dB)	
2483.5	Horizontal	51.3	54.0	2.7	Complied

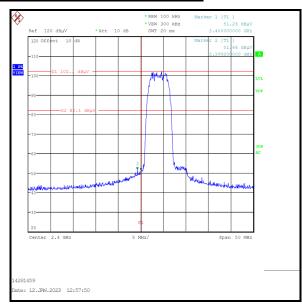
Results: 2310 MHz to 2390 MHz Restricted Band / Peak

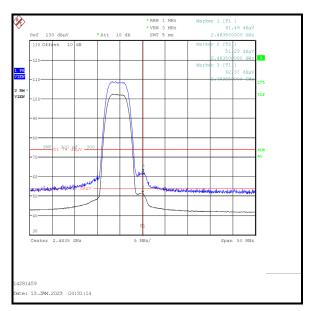
Frequency	Antenna	Level	Limit	Margin	Result
(MHz)	Polarity	(dBµV/m)	(dBµV/m)	(dB)	
2389.103	Horizontal	54.4	74.0	19.6	Complied

Frequency	Antenna	Level	Limit	Margin	Result
(MHz)	Polarity	(dBµV/m)	(dBµV/m)	(dB)	
2390.000	Horizontal	43.6	54.0	10.4	Complied

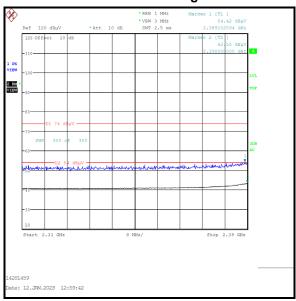
Transmitter Band Edge Radiated Emissions (continued)

Results: 8DH5 / SISO / Core 1





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	Peak Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Result
2400.0	Horizontal	47.2	87.6*	40.4	Complied
2483.5	Horizontal	55.8	74.0	18.2	Complied

Frequency	Antenna	Average Level	Limit	Margin	Result
(MHz)	Polarity	(dBμV/m)	(dBμV/m)	(dB)	
2483.5	Horizontal	43.9	54.0	10.1	Complied

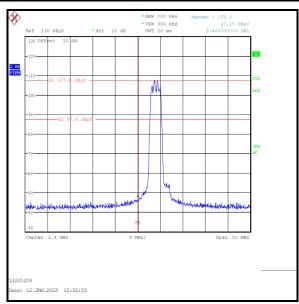
Results: 2310 MHz to 2390 MHz Restricted Band / Peak

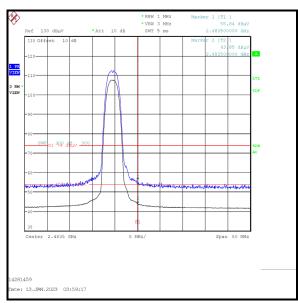
Frequency	Antenna	Level	Limit	Margin	Result
(MHz)	Polarity	(dBµV/m)	(dBµV/m)	(dB)	
2386.923	Horizontal	54.2	74.0	19.8	Complied

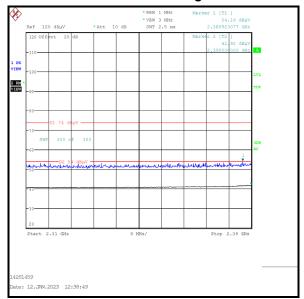
Frequency (MHz)	Antenna Polarity	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Result
2390.000	Horizontal	41.9	54.0	12.1	Complied

Transmitter Band Edge Radiated Emissions (continued)

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







2310 MHz to 2390 MHz Restricted Band

Upper Band Edge

Transmitter Band Edge Radiated Emissions (continued)

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

Frequency (MHz)	Antenna Polarity	Peak Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Result
2399.950	Horizontal	52.0	84.3*	32.3	Complied
2400.0	Horizontal	51.5	84.3*	32.8	Complied
2483.5	Horizontal	61.8	74.0	12.2	Complied
2483.800	Horizontal	62.7	74.0	11.3	Complied

Frequency (MHz)	Antenna Polarity	Average Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Result
2483.5	Horizontal	51.2	54.0	2.8	Complied
2483.550	Horizontal	51.3	54.0	2.7	Complied

Results: 2310 MHz to 2390 MHz Restricted Band / Peak

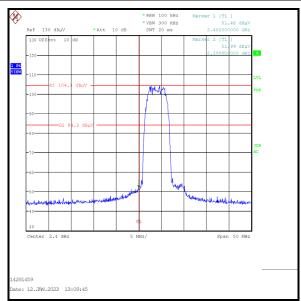
Frequency (MHz)	Antenna Polarity	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Result
2388.974	Horizontal	55.5	74.0	18.5	Complied

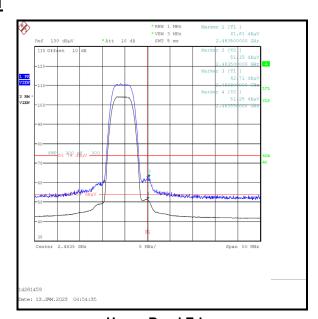
Frequency	Antenna	Level	Limit	Margin	Result
(MHz)	Polarity	(dBµV/m)	(dBµV/m)	(dB)	
2389.744	Horizontal	42.9	54.0	11.1	Complied

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Transmitter Band Edge Radiated Emissions (continued)

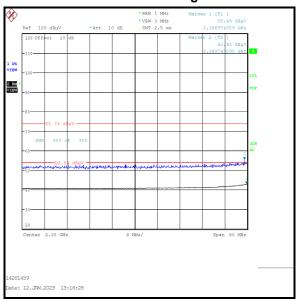
Results: 8DH5 / Beamforming / Core 0 + Core 1





Lower Band Edge

Upper Band Edge



2310 MHz to 2390 MHz Restricted Band

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