

Figure 7.4-51: Radiated spurious emissions 6 to 18 GHz, 5500 MHz with antenna in horizontal polarization

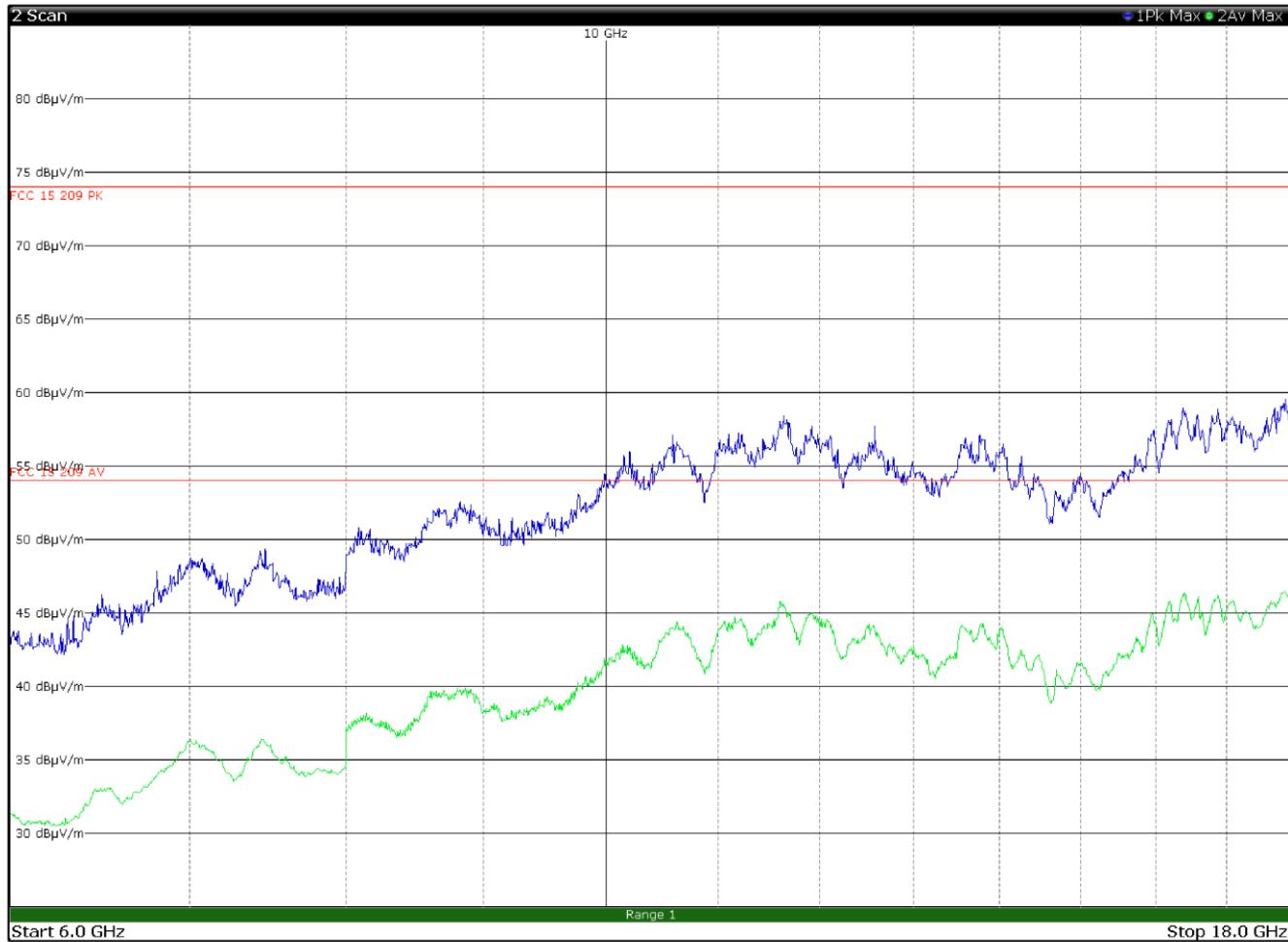


Figure 7.4-52: Radiated spurious emissions 6 to 18 GHz, 5500 MHz with antenna in vertical polarization

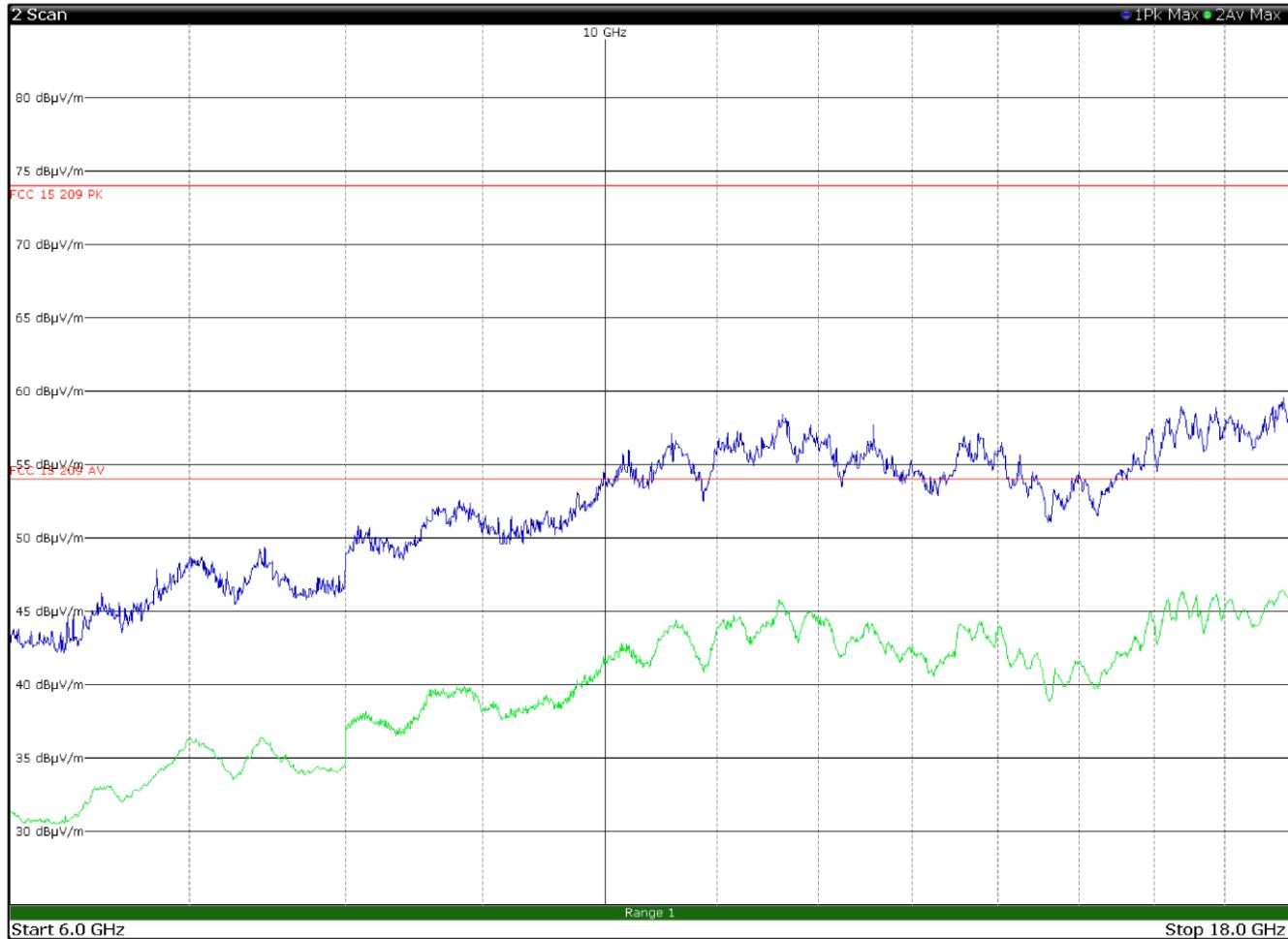


Figure 7.4-53: Radiated spurious emissions 6 to 18 GHz, 5580 MHz with antenna in horizontal polarization

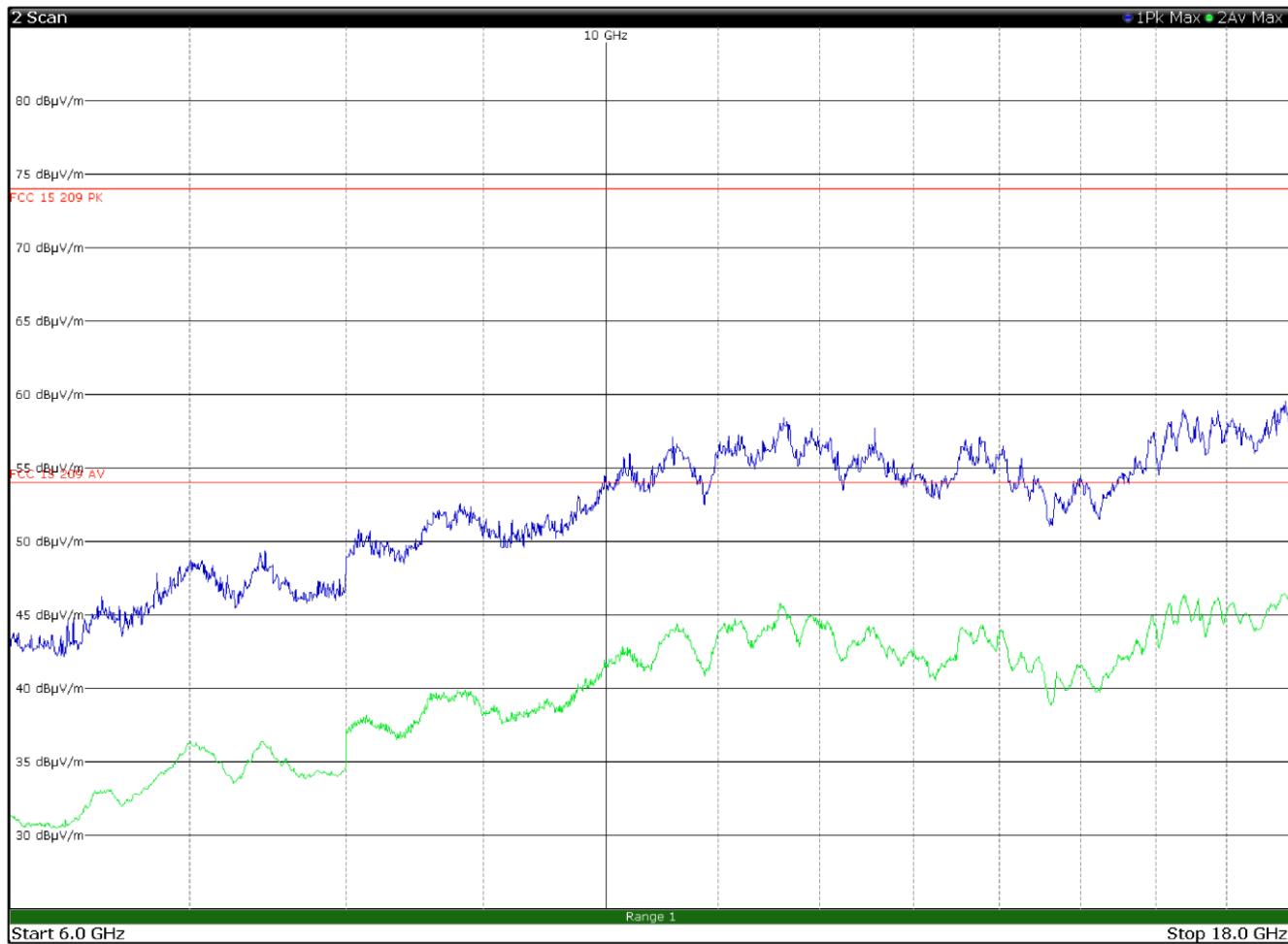


Figure 7.4-54: Radiated spurious emissions 6 to 18 GHz, 5580 MHz with antenna in vertical polarization

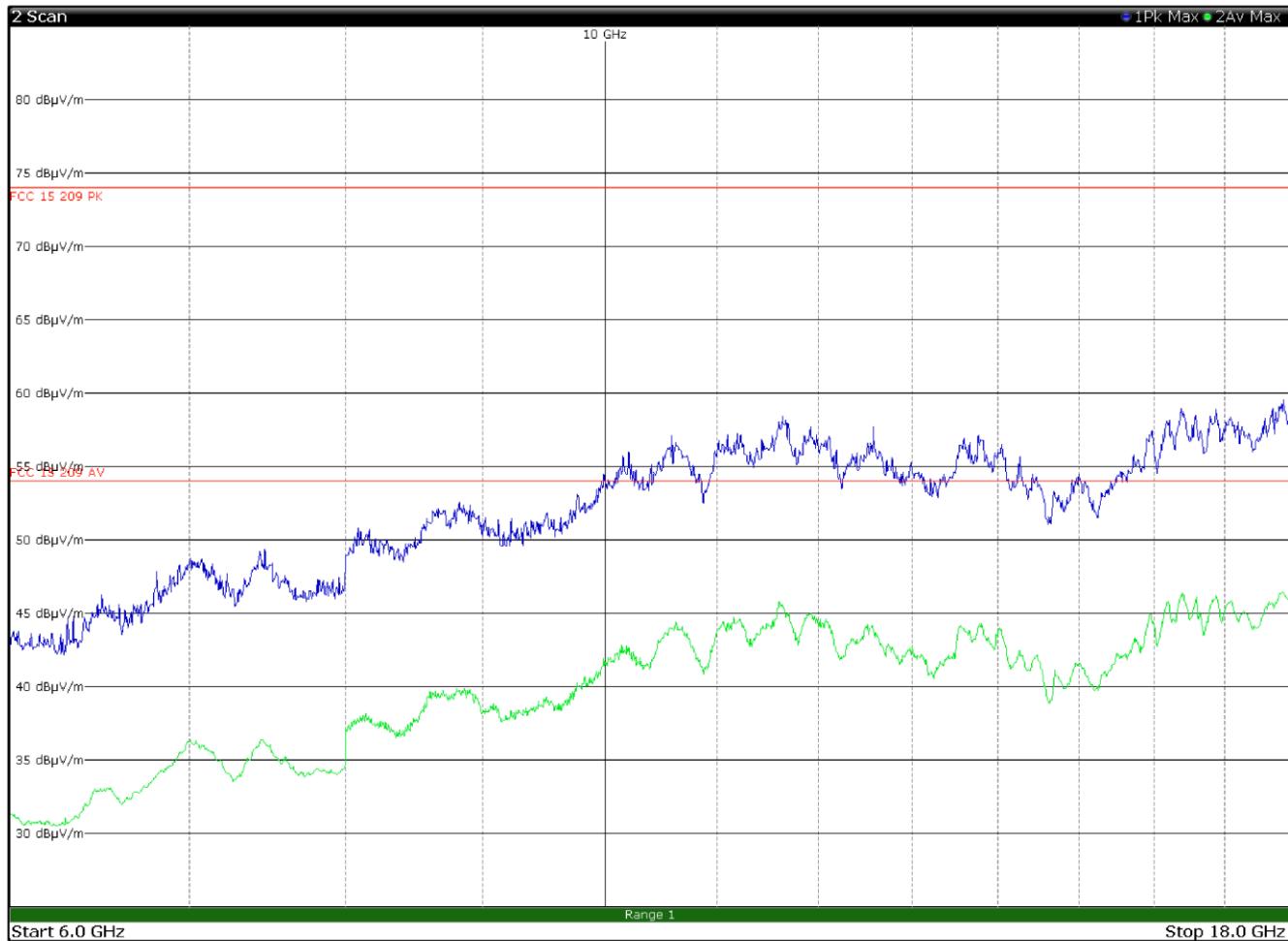


Figure 7.4-55: Radiated spurious emissions 6 to 18 GHz, 5700 MHz with antenna in horizontal polarization

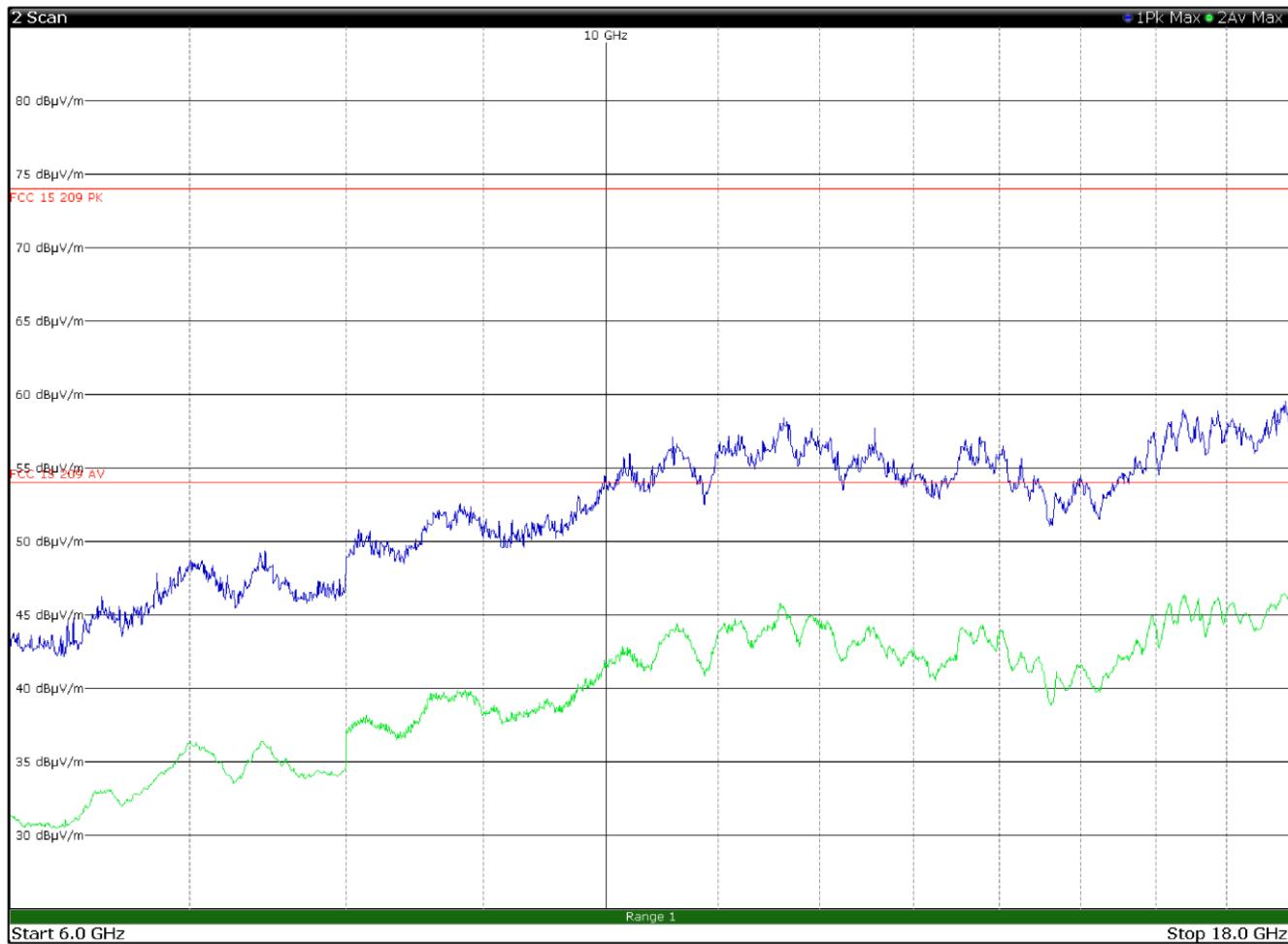


Figure 7.4-56: Radiated spurious emissions 6 to 18 GHz, 5700 MHz with antenna in vertical polarization

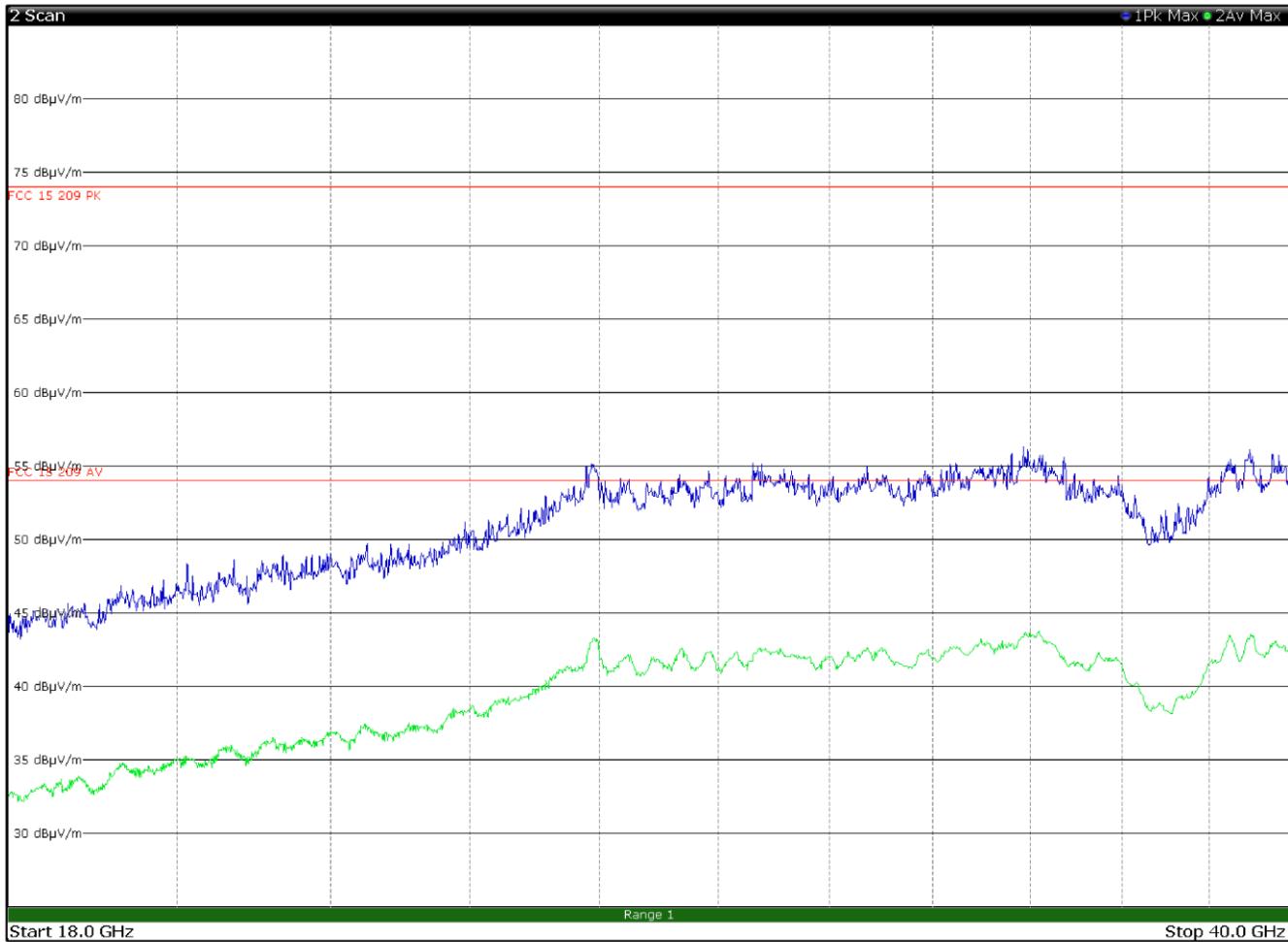


Figure 7.4-57: Radiated spurious emissions 18 to 40 GHz, 5180 MHz with antenna in horizontal polarization

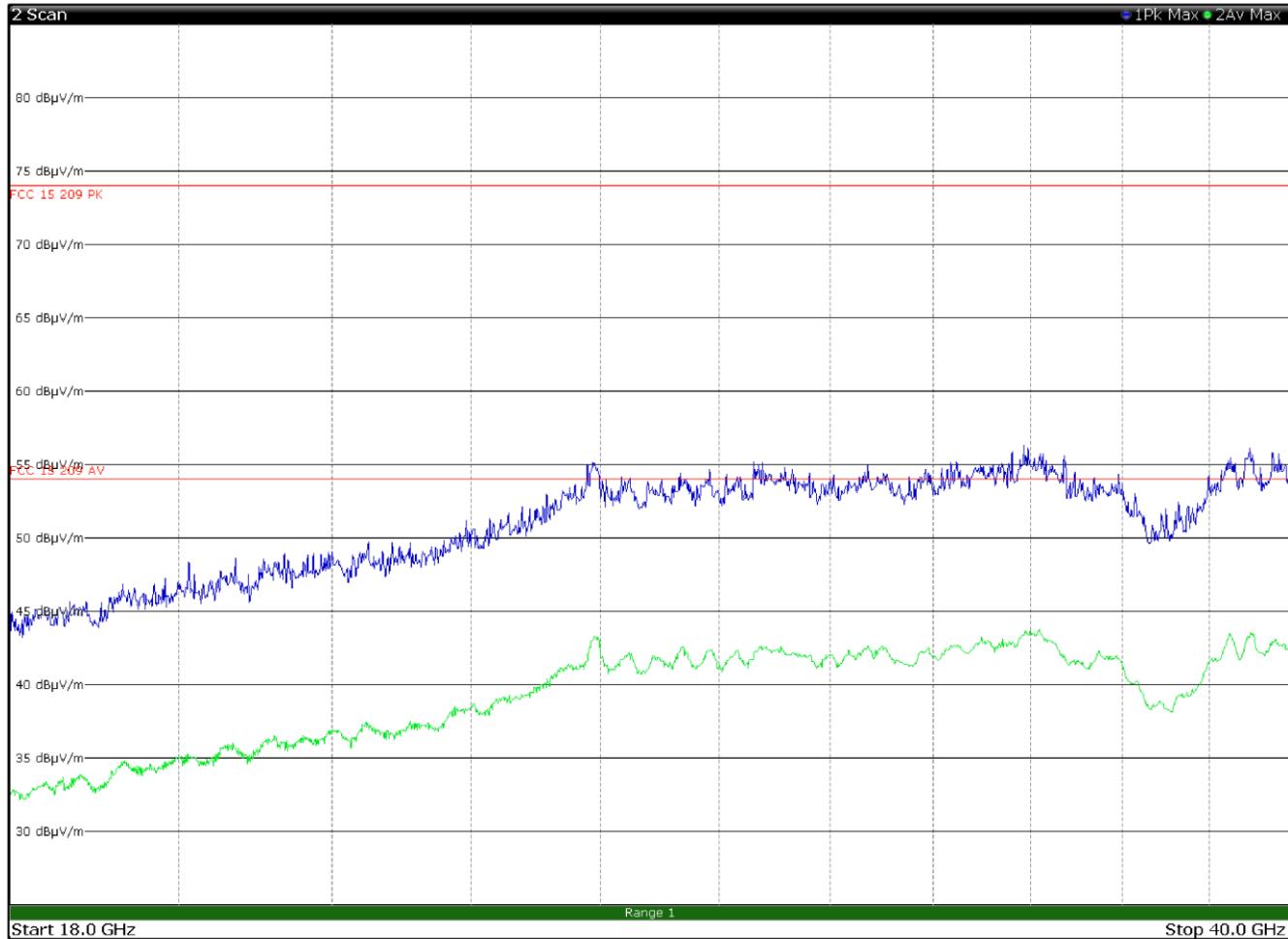


Figure 7.4-58: Radiated spurious emissions 18 to 40 GHz, 5180 with antenna in vertical polarization

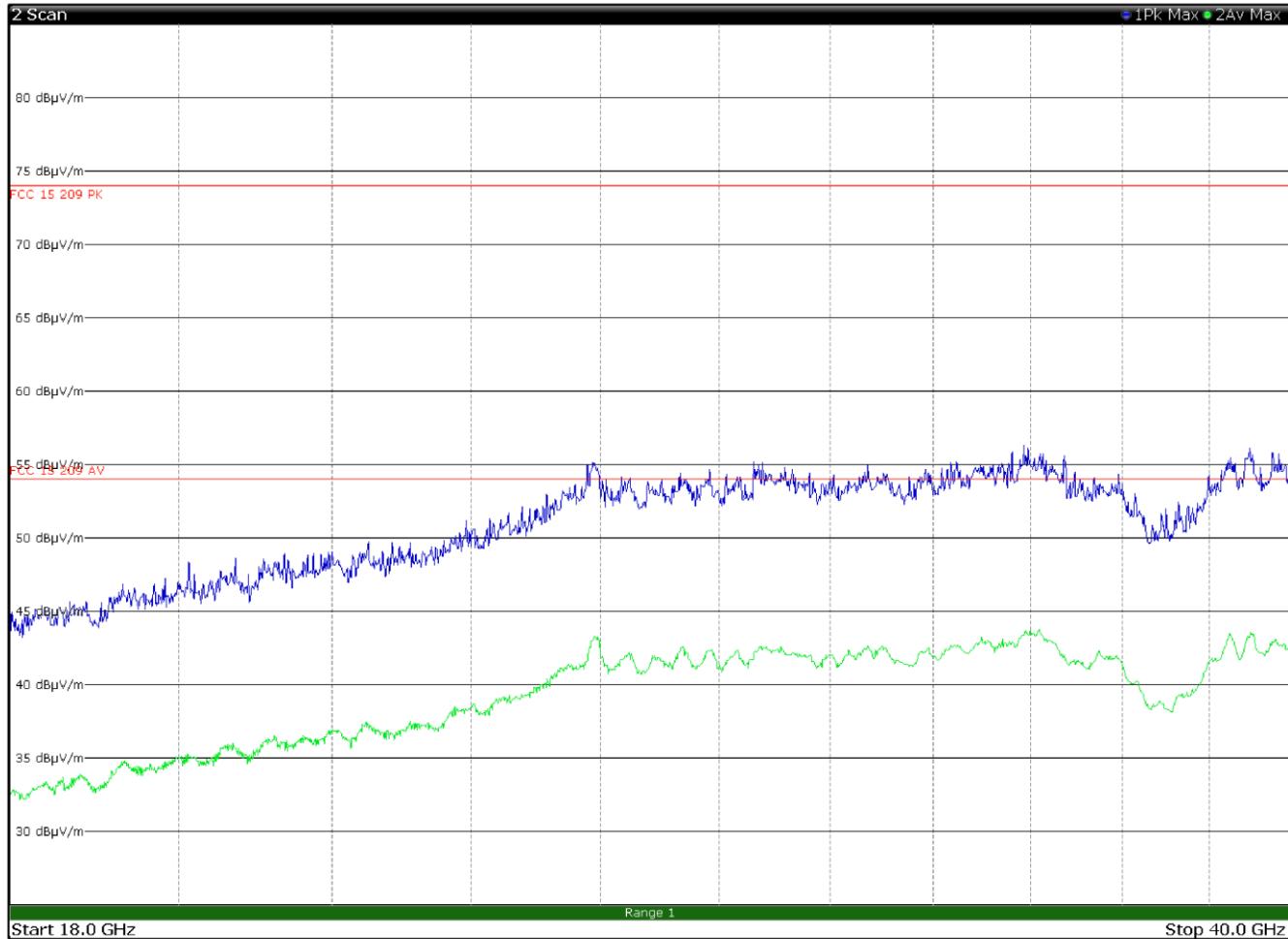


Figure 7.4-59 Radiated spurious emissions 18 to 40 GHz, 5220 MHz with antenna in horizontal polarization

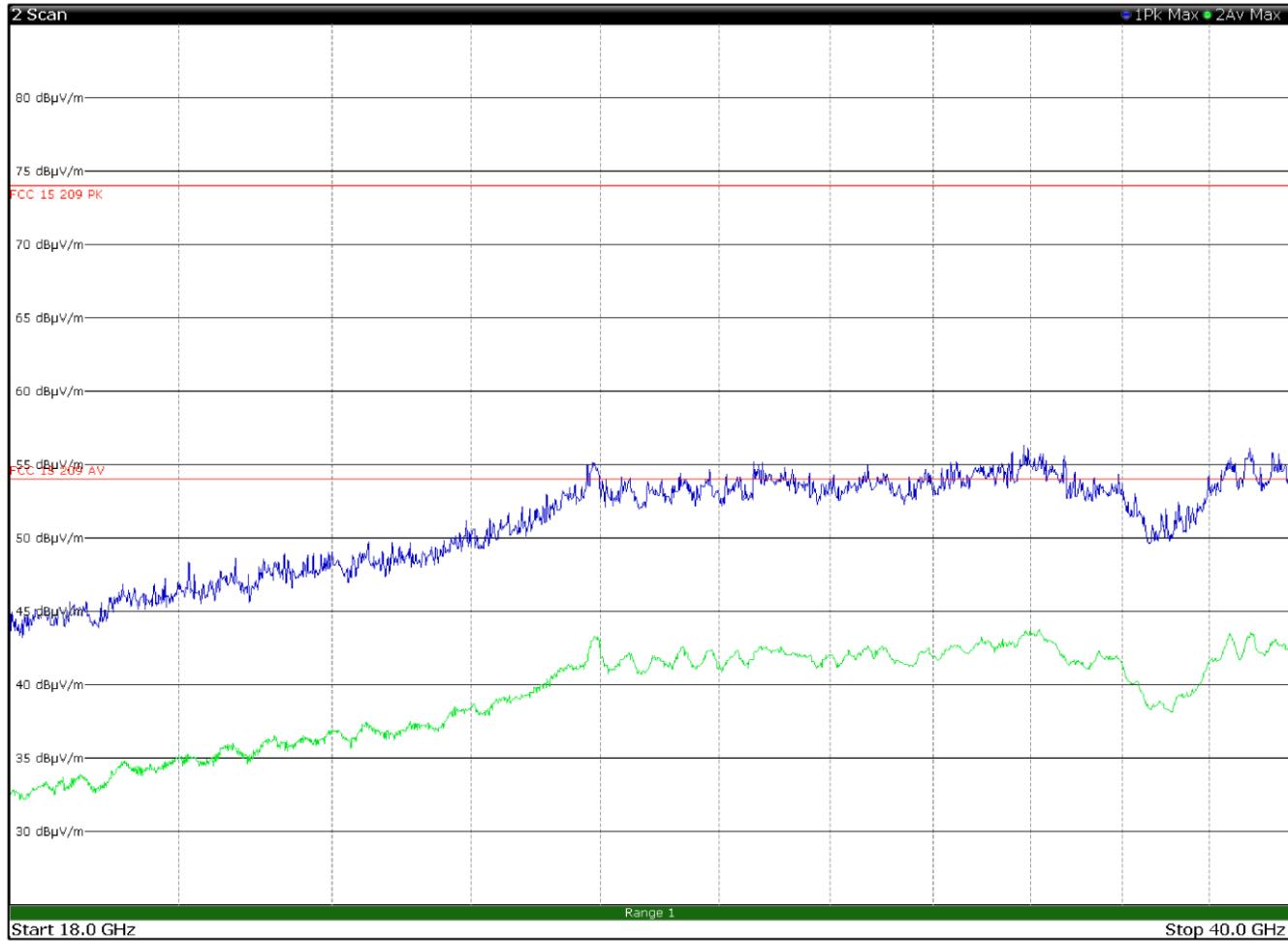


Figure 7.4-60: Radiated spurious emissions 18 to 40 GHz, 5220 with antenna in vertical polarization

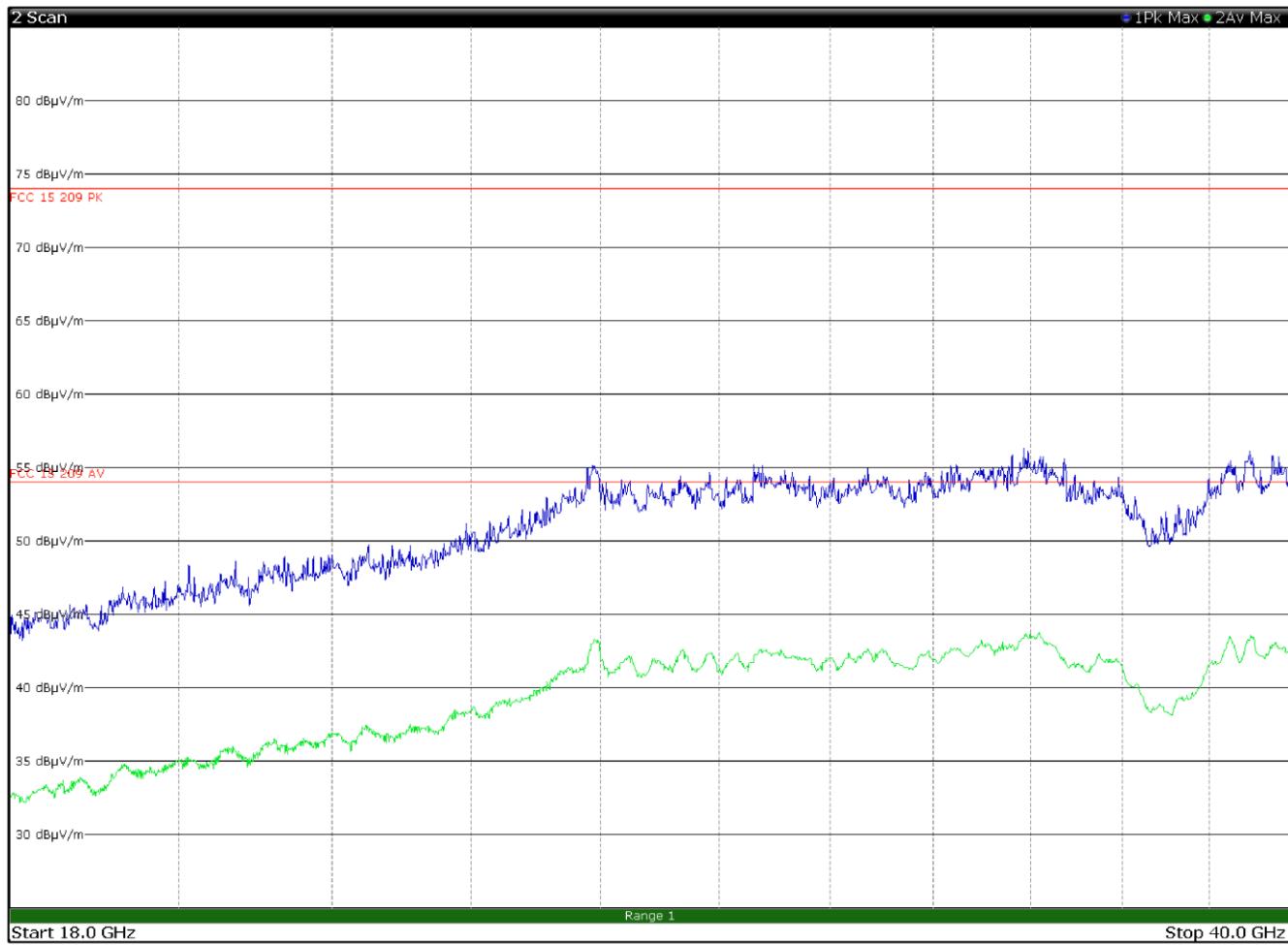


Figure 7.4-61: Radiated spurious emissions 18 to 40 GHz, 5240 MHz with antenna in horizontal polarization

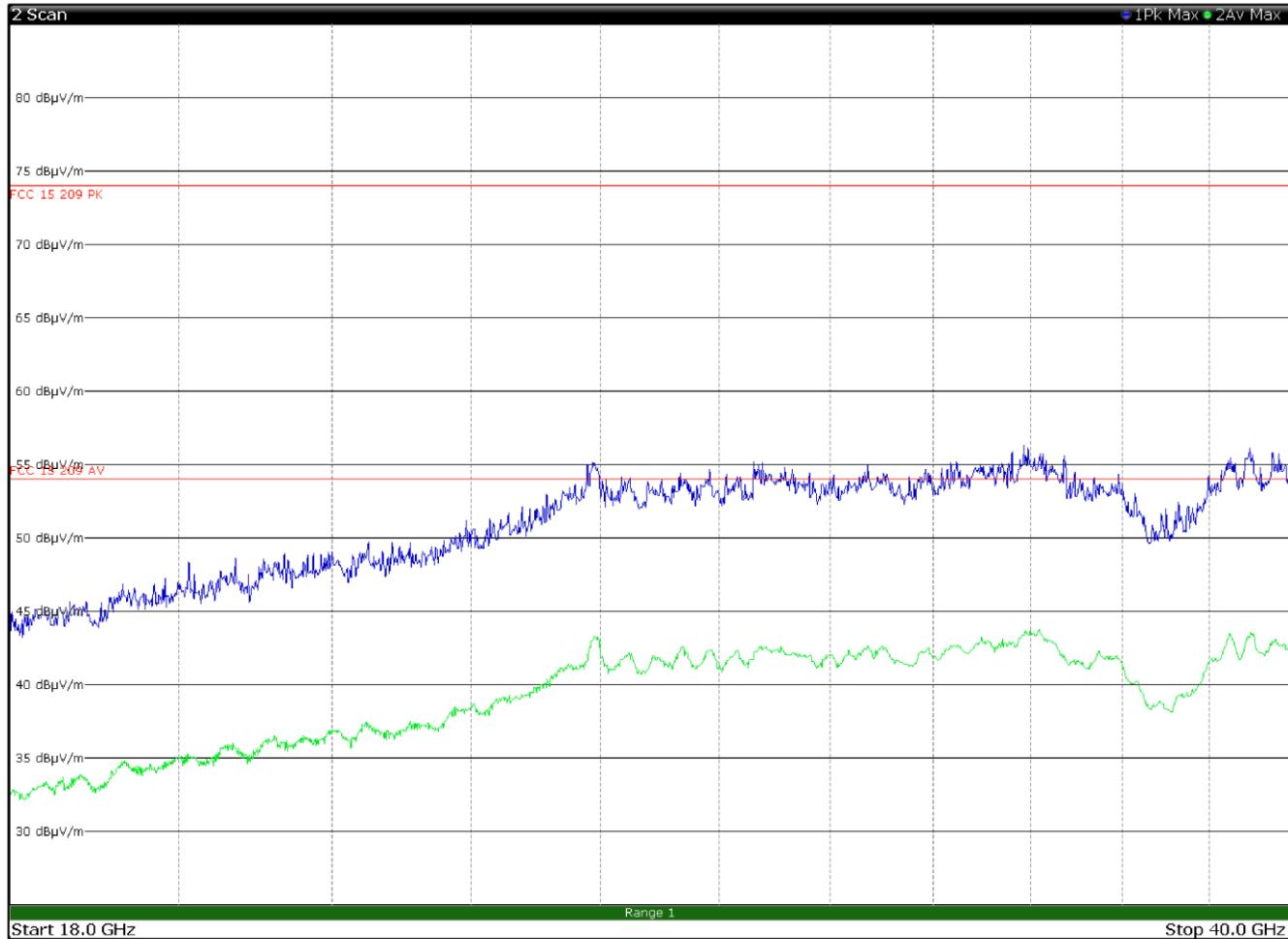


Figure 7.4-62: Radiated spurious emissions 18 to 40 GHz, 5240 with antenna in vertical polarization

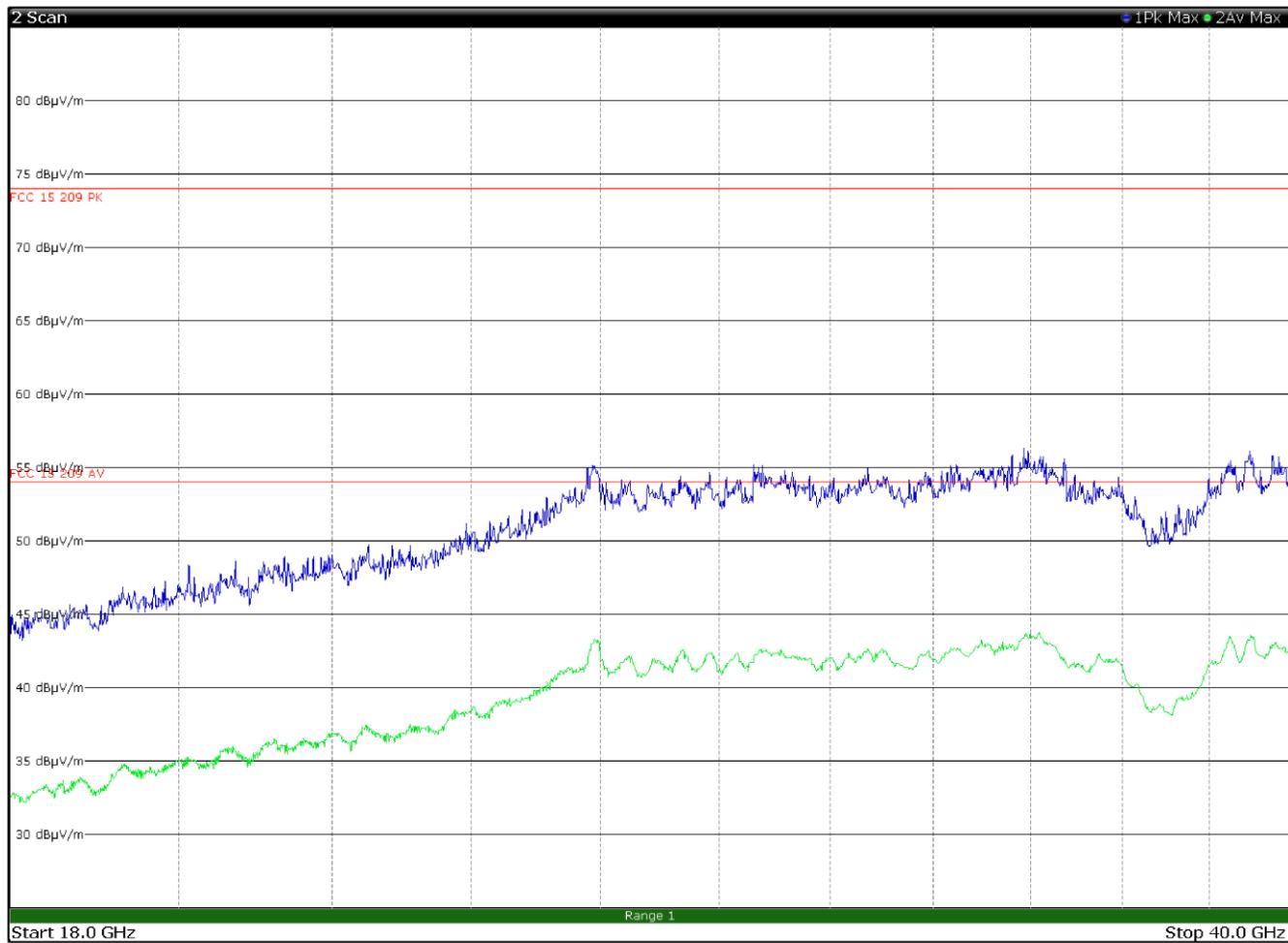


Figure 7.4-63: Radiated spurious emissions 18 to 40 GHz, 5745 MHz with antenna in horizontal polarization

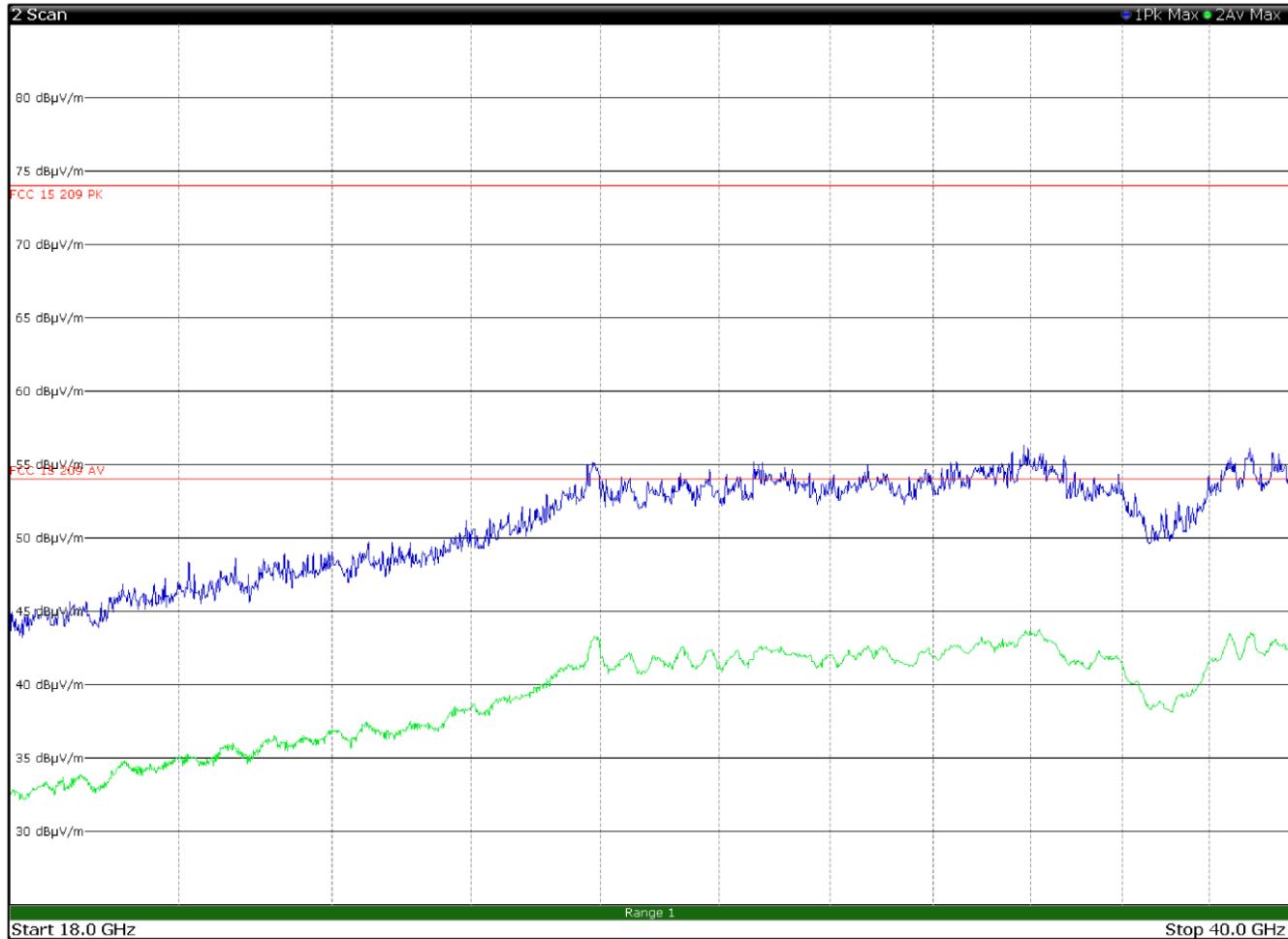


Figure 7.4-64: Radiated spurious emissions 18 to 40 GHz, 5745 with antenna in vertical polarization

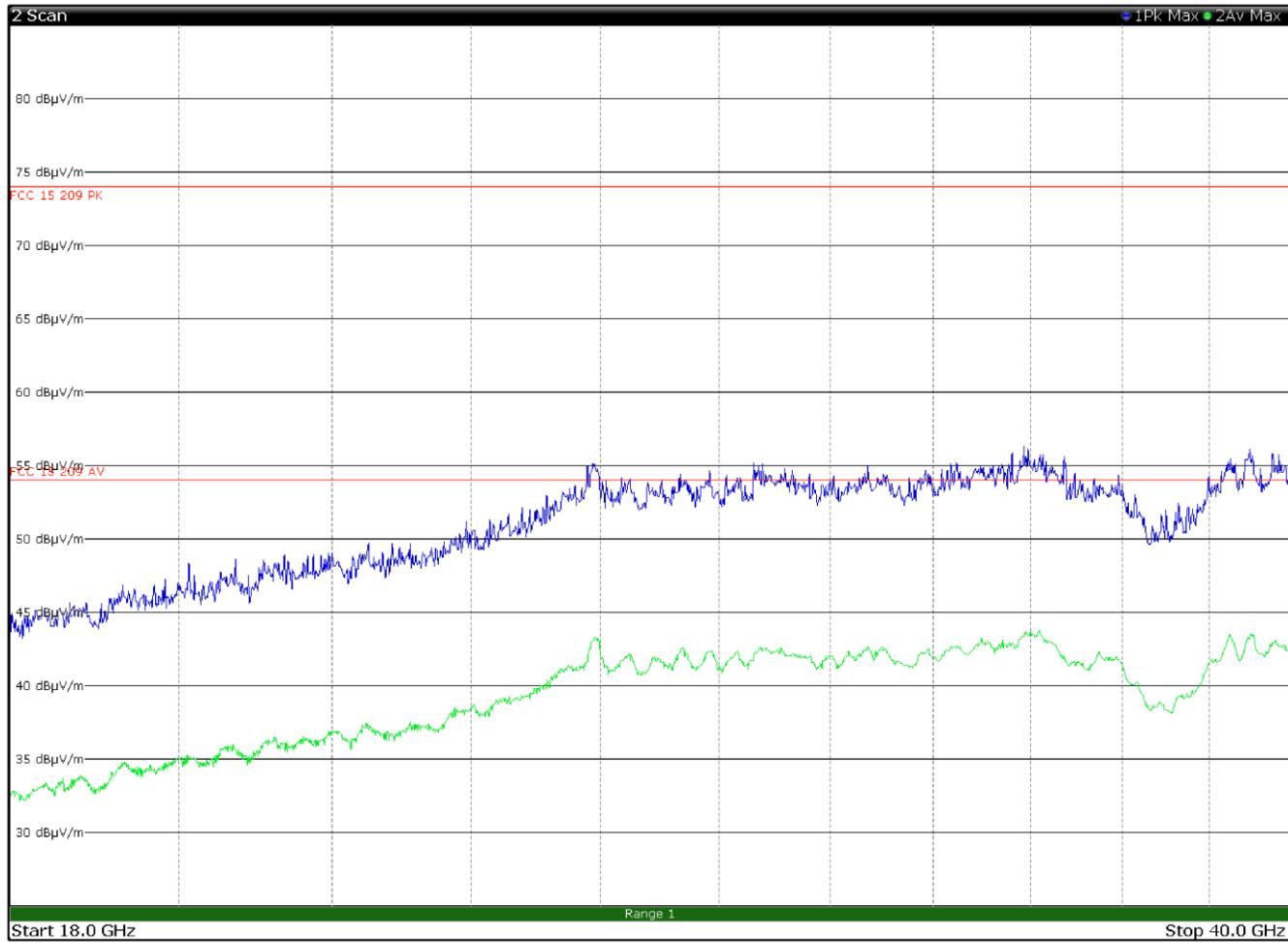


Figure 7.4-65: Radiated spurious emissions 18 to 40 GHz, 5785 MHz with antenna in horizontal polarization

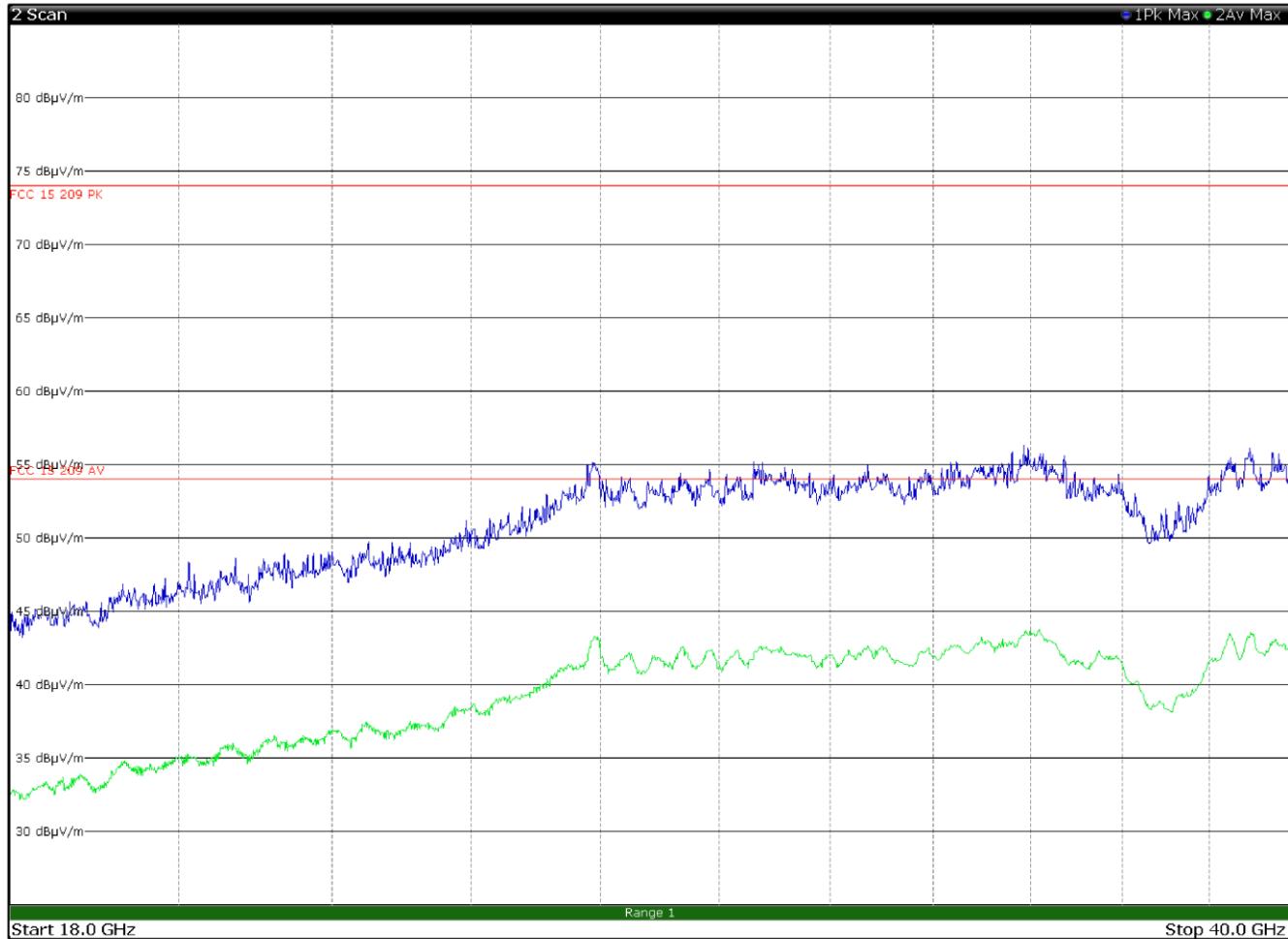


Figure 7.4-66: Radiated spurious emissions 18 to 40 GHz, 5785 with antenna in vertical polarization

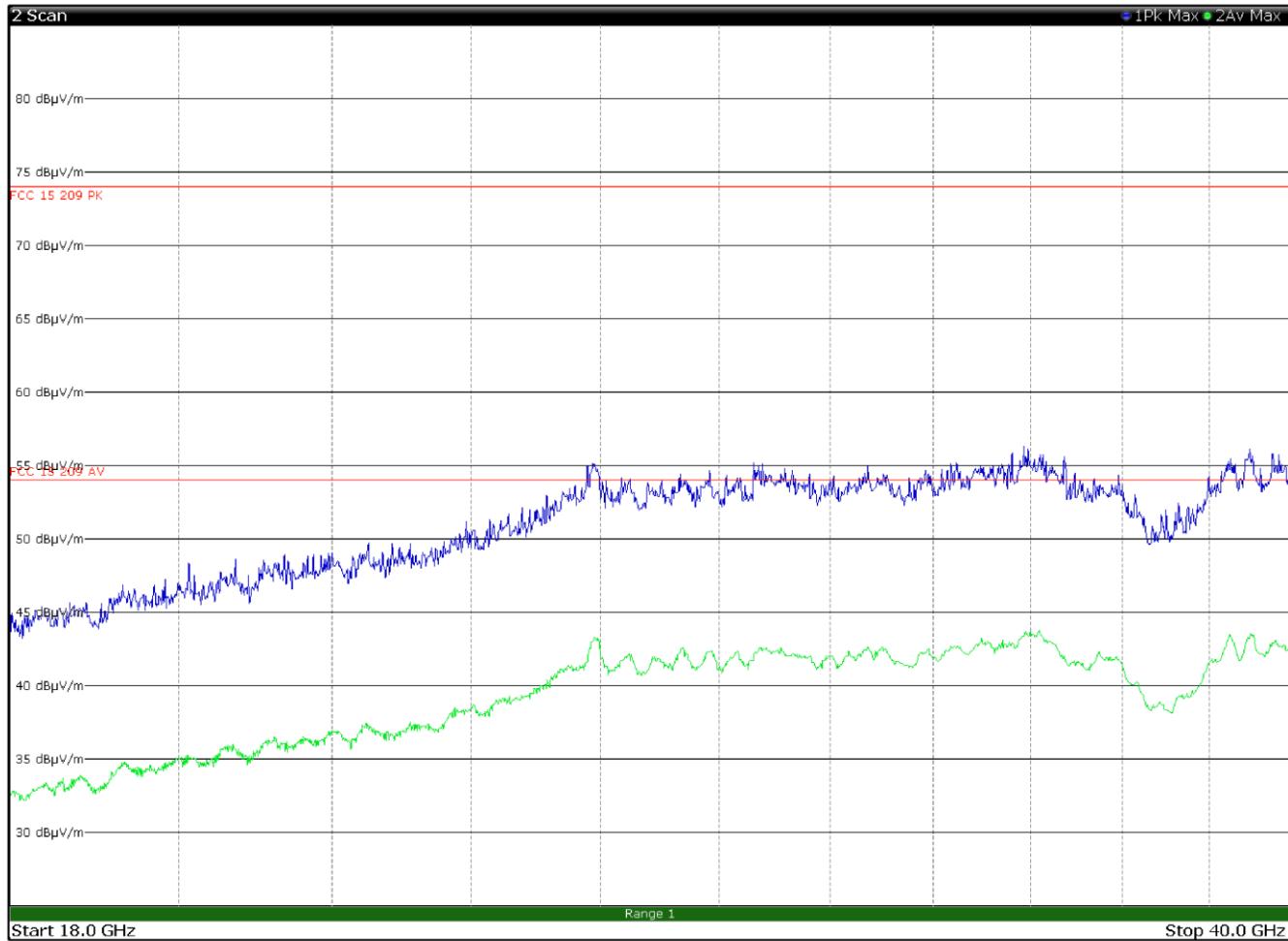


Figure 7.4-67: Radiated spurious emissions 18 to 40 GHz, 5825 MHz with antenna in horizontal polarization

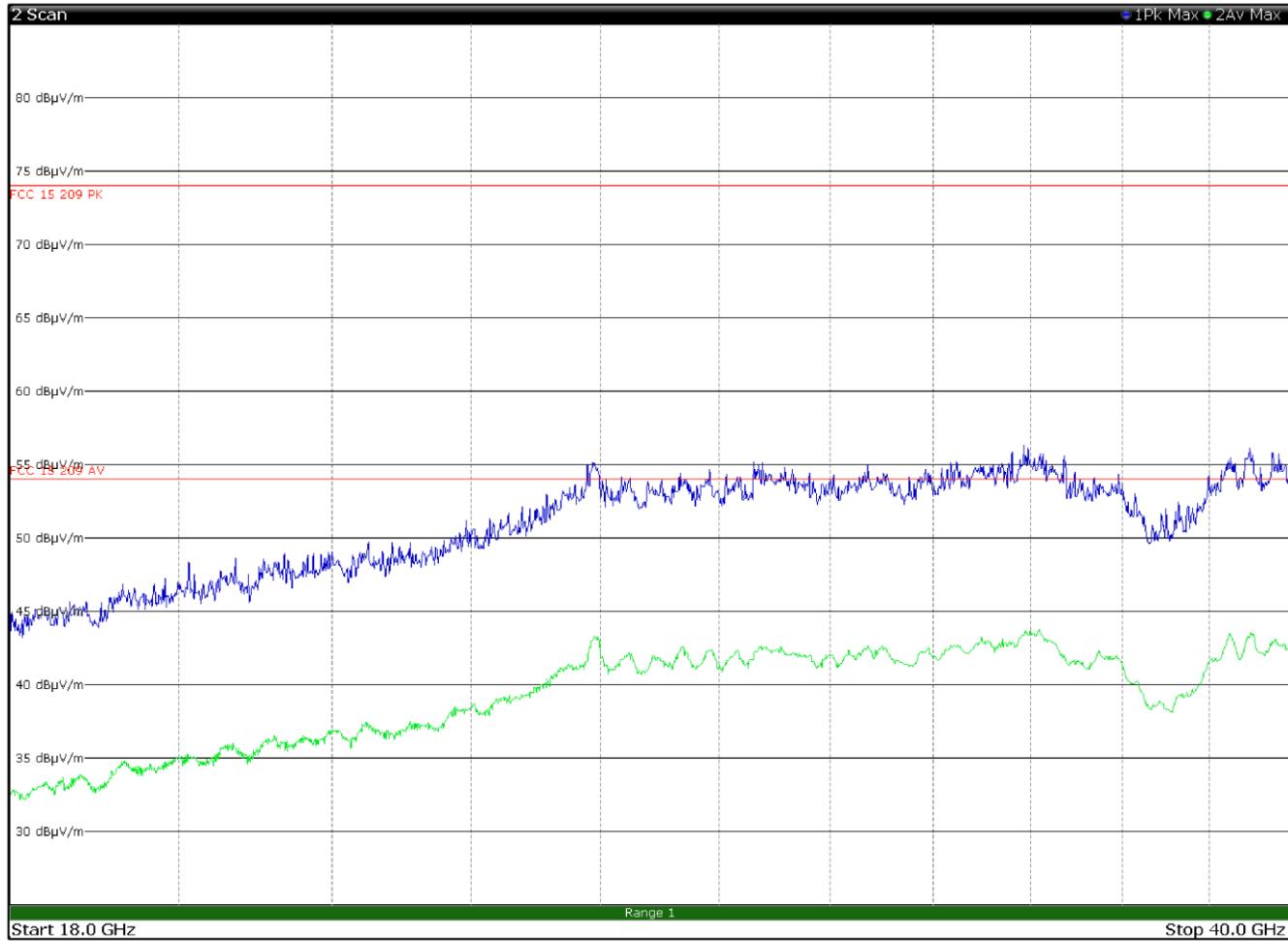


Figure 7.4-68: Radiated spurious emissions 18 to 40 GHz, 5825 with antenna in vertical polarization

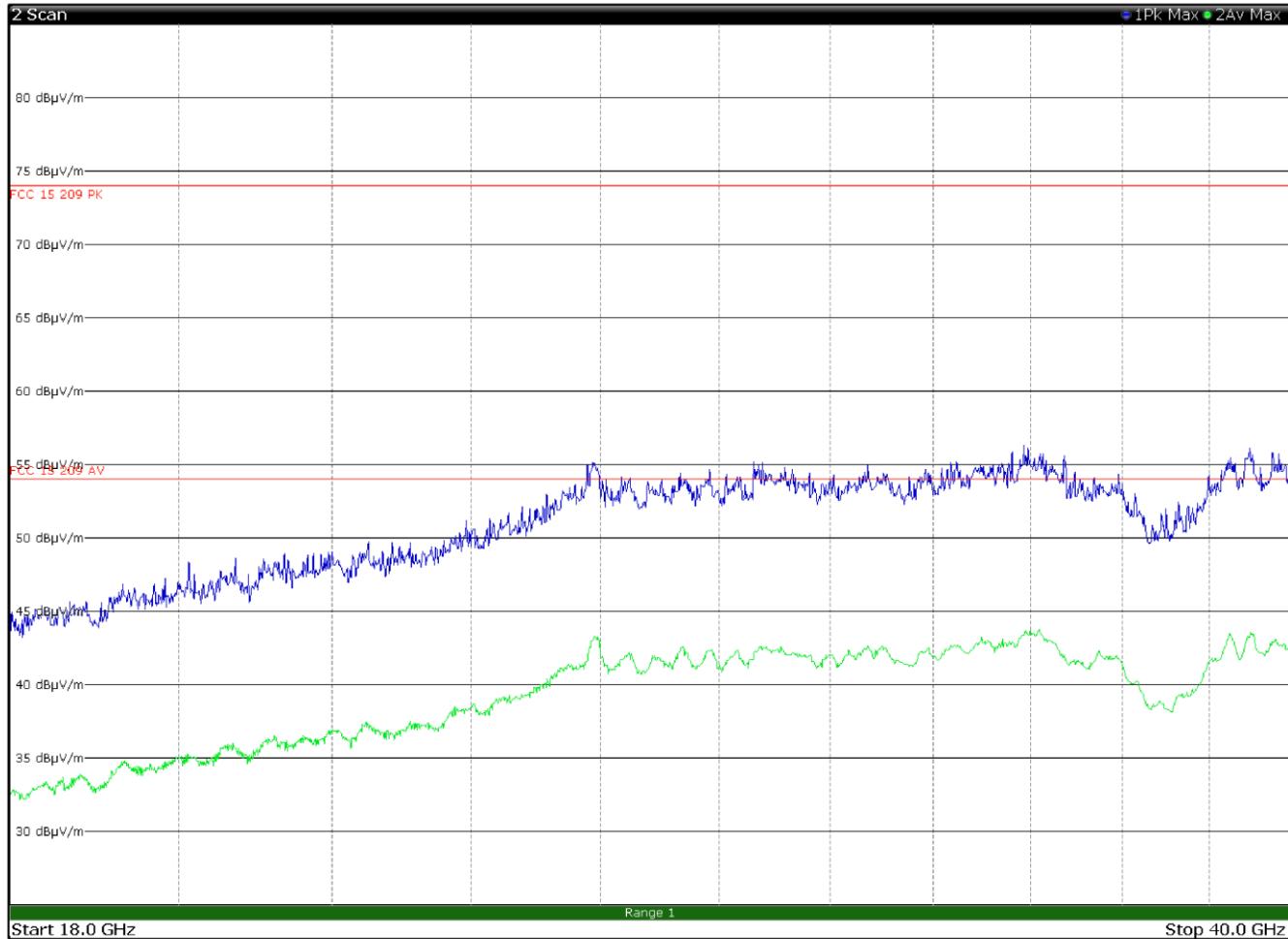


Figure 7.4-69: Radiated spurious emissions 18 to 40 GHz, 5260 MHz with antenna in horizontal polarization

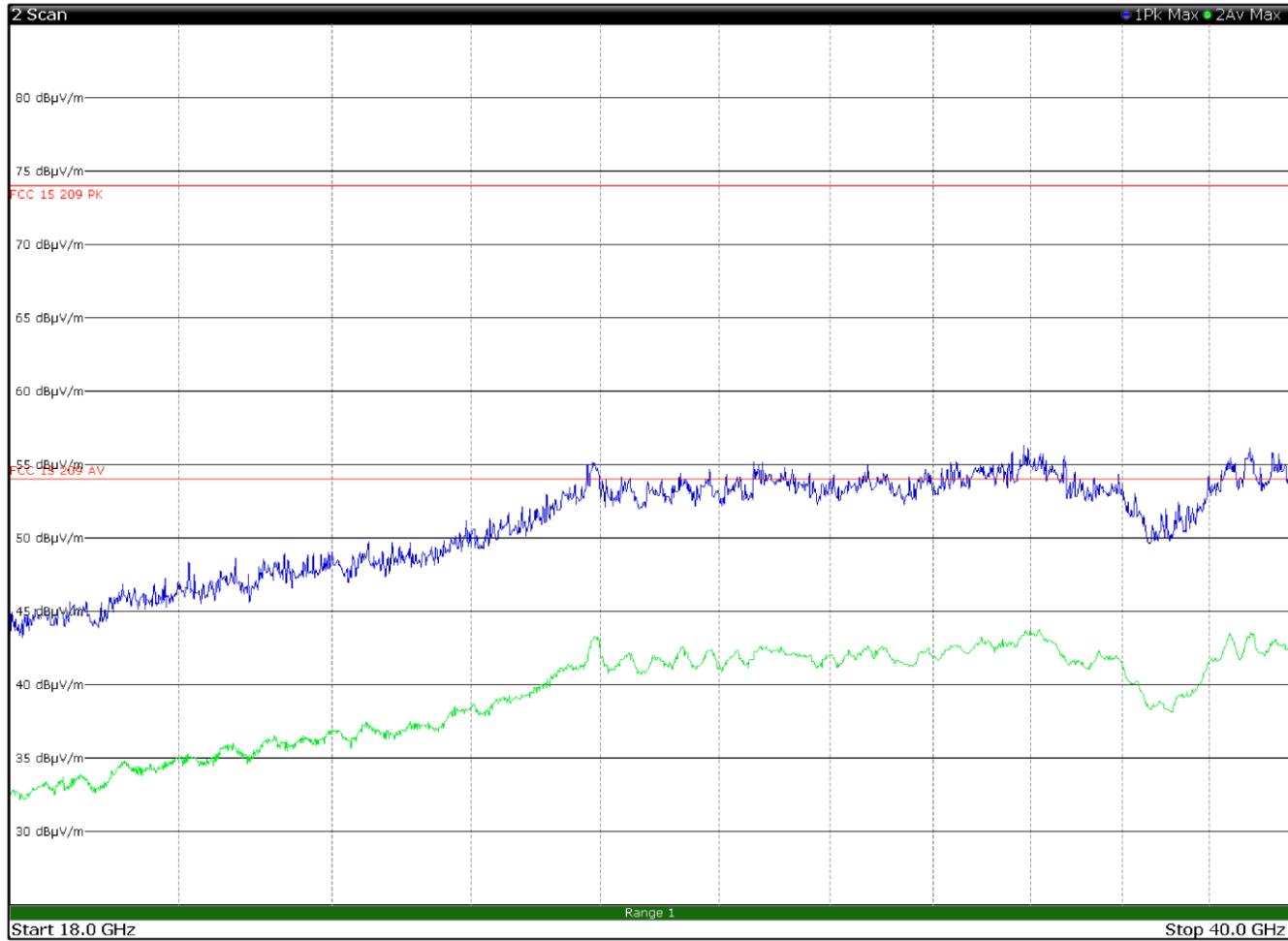


Figure 7.4-70: Radiated spurious emissions 18 to 40 GHz, 5260 with antenna in vertical polarization

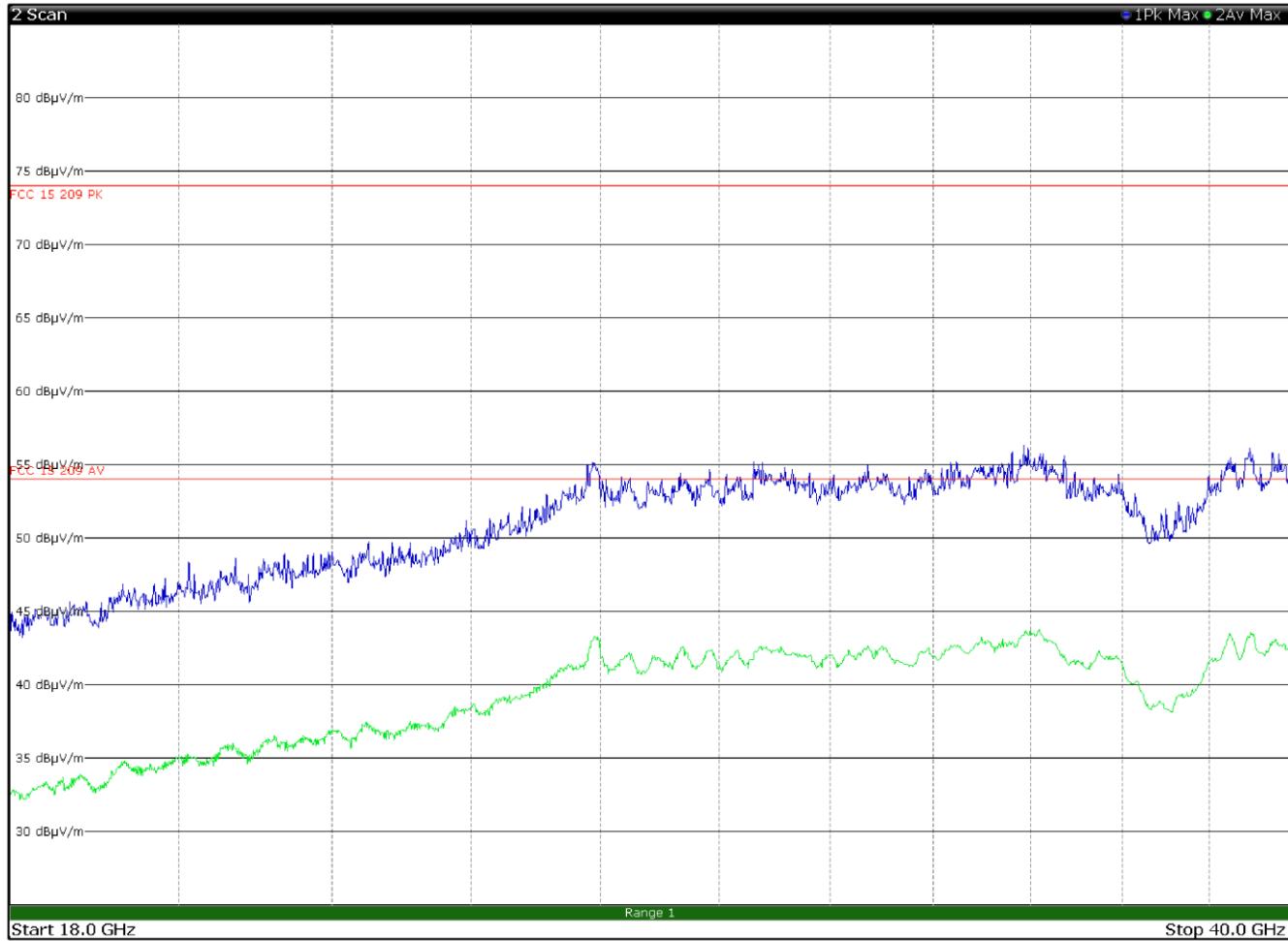


Figure 7.4-71: Radiated spurious emissions 18 to 40 GHz, 5300 MHz with antenna in horizontal polarization

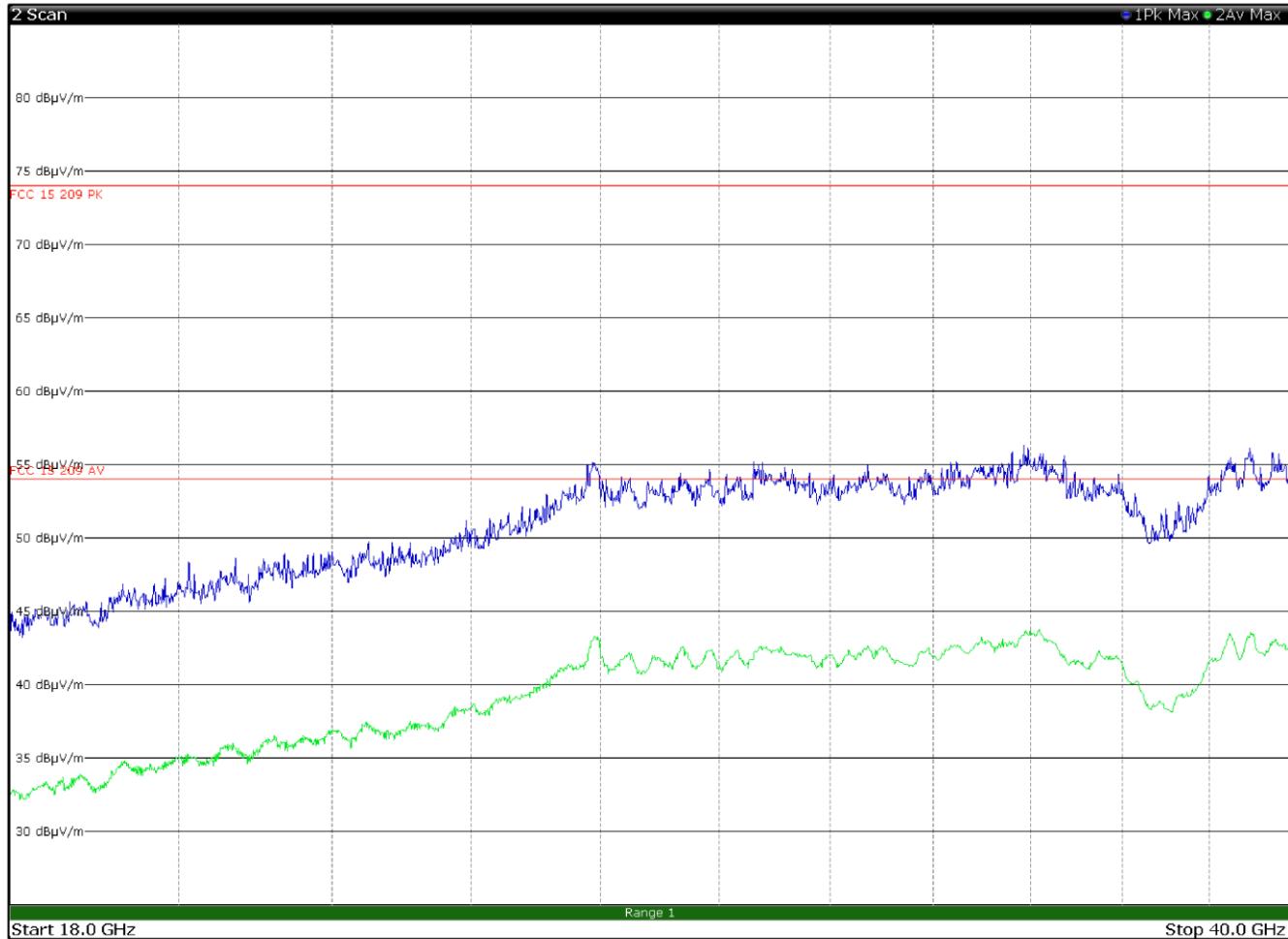


Figure 7.4-72: Radiated spurious emissions 18 to 40 GHz, 5300 with antenna in vertical polarization

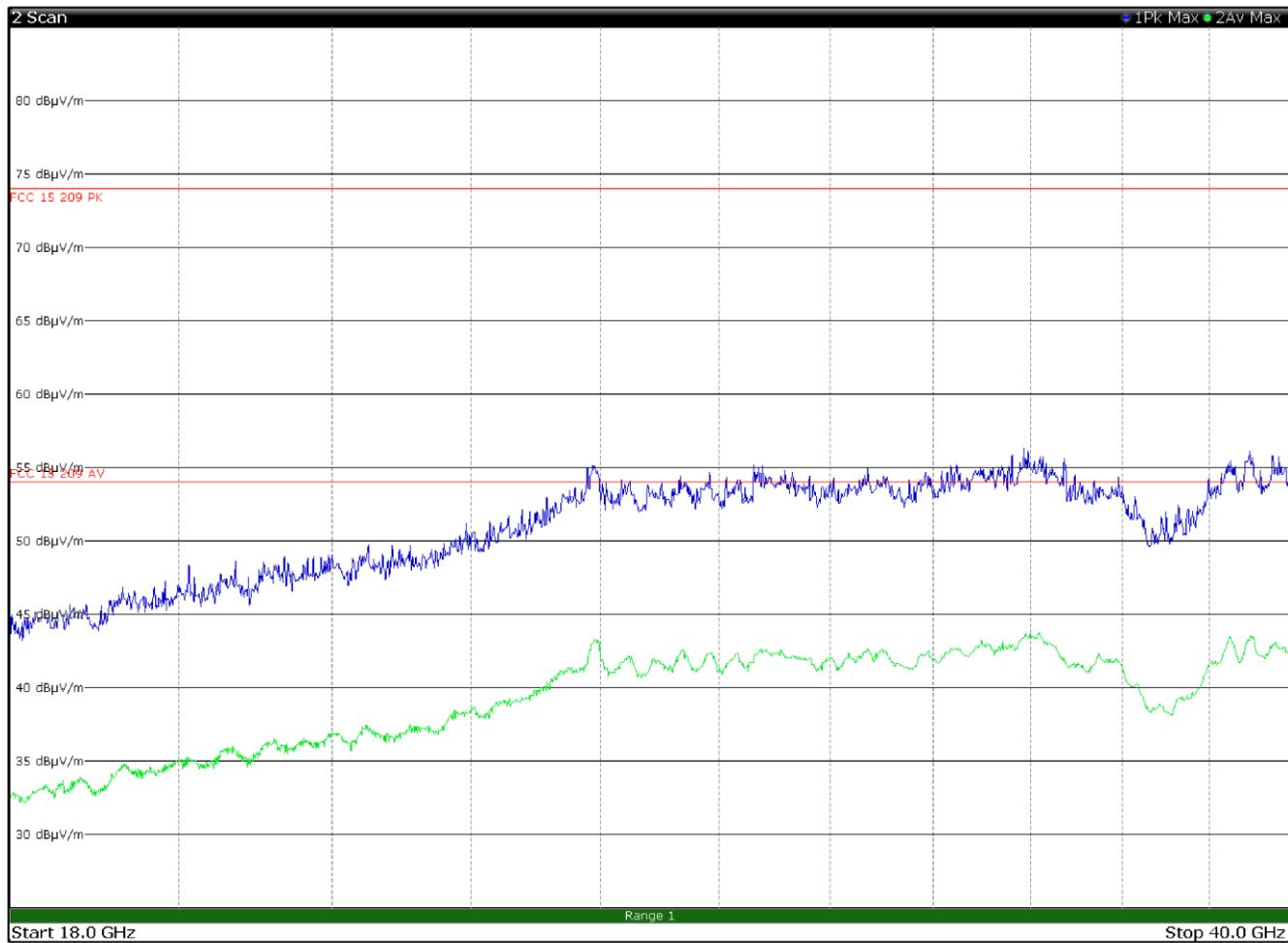


Figure 7.4-73: Radiated spurious emissions 18 to 40 GHz, 5320 MHz with antenna in horizontal polarization

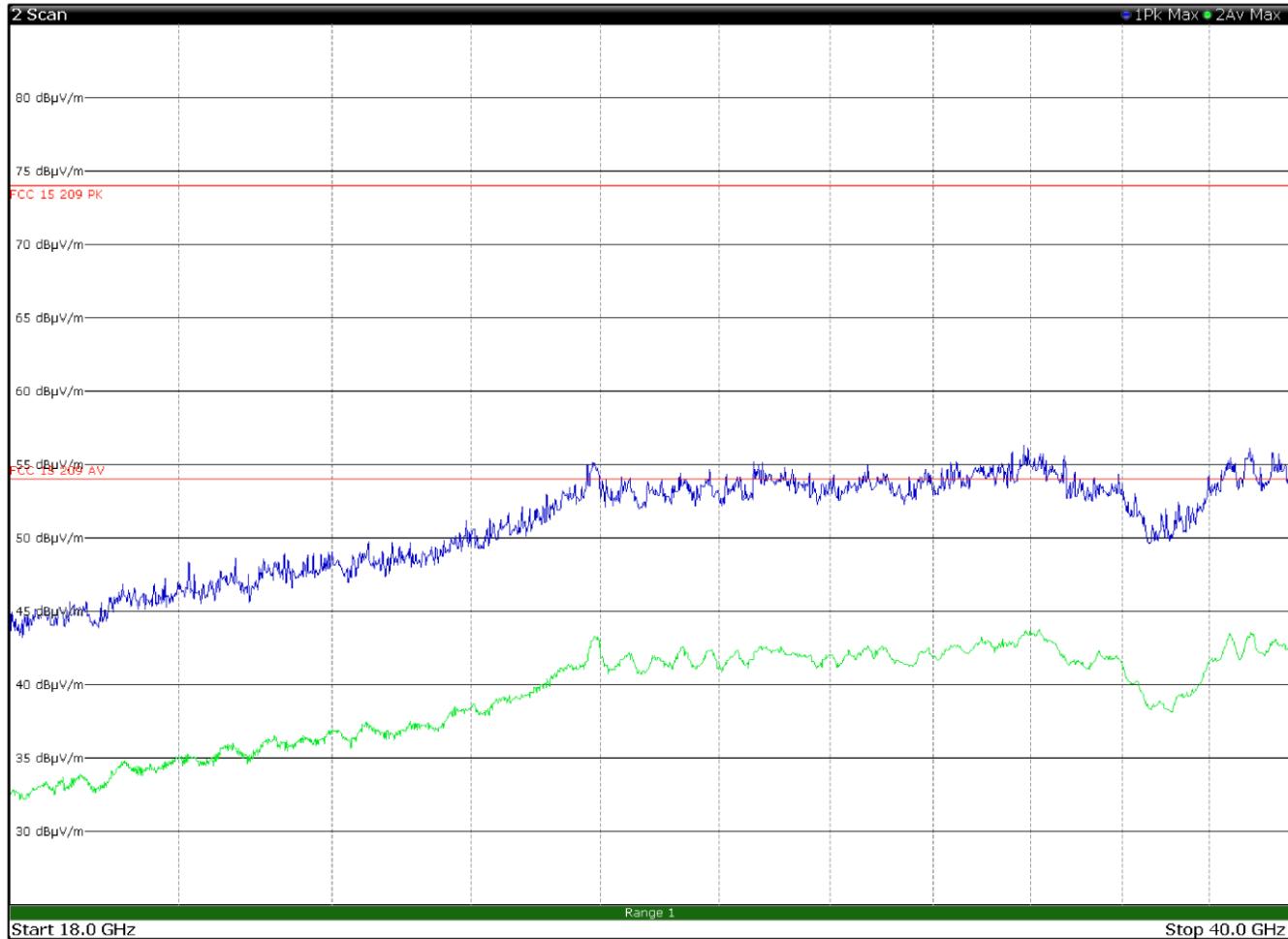


Figure 7.4-74: Radiated spurious emissions 18 to 40 GHz, 5320 with antenna in vertical polarization

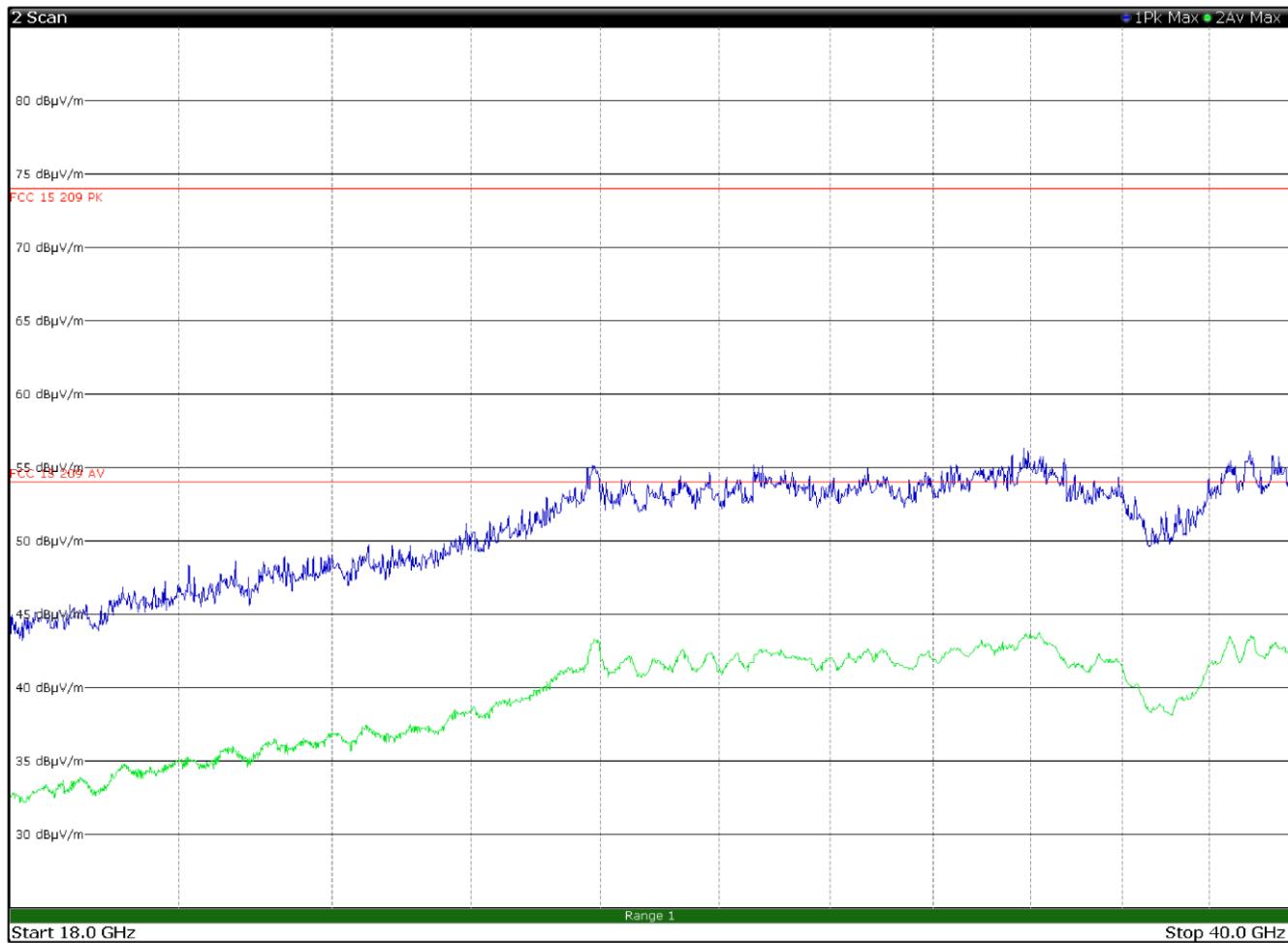


Figure 7.4-75: Radiated spurious emissions 18 to 40 GHz, 5500 MHz with antenna in horizontal polarization

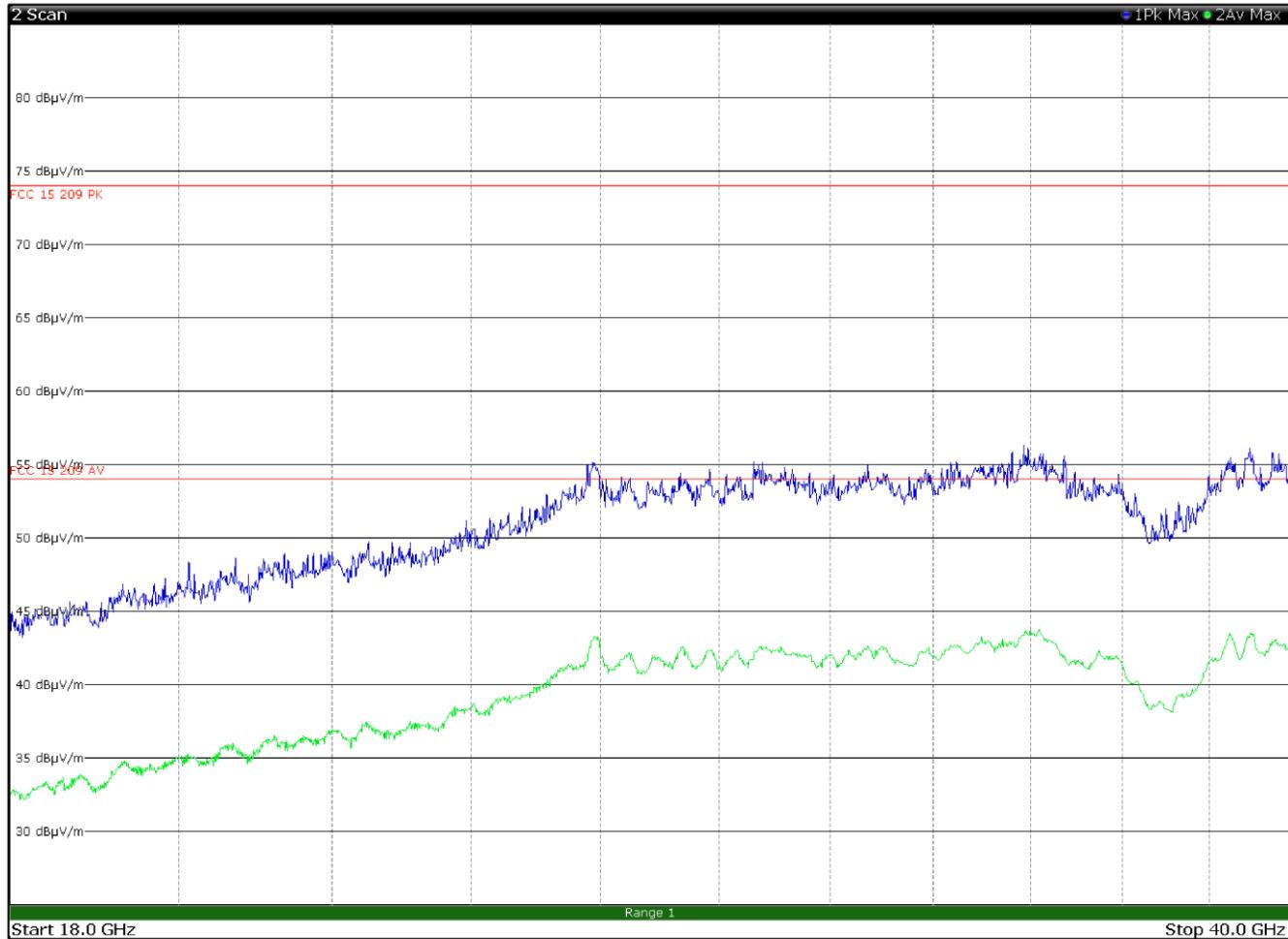


Figure 7.4-78: Radiated spurious emissions 18 to 40 GHz, 5500 with antenna in vertical polarization

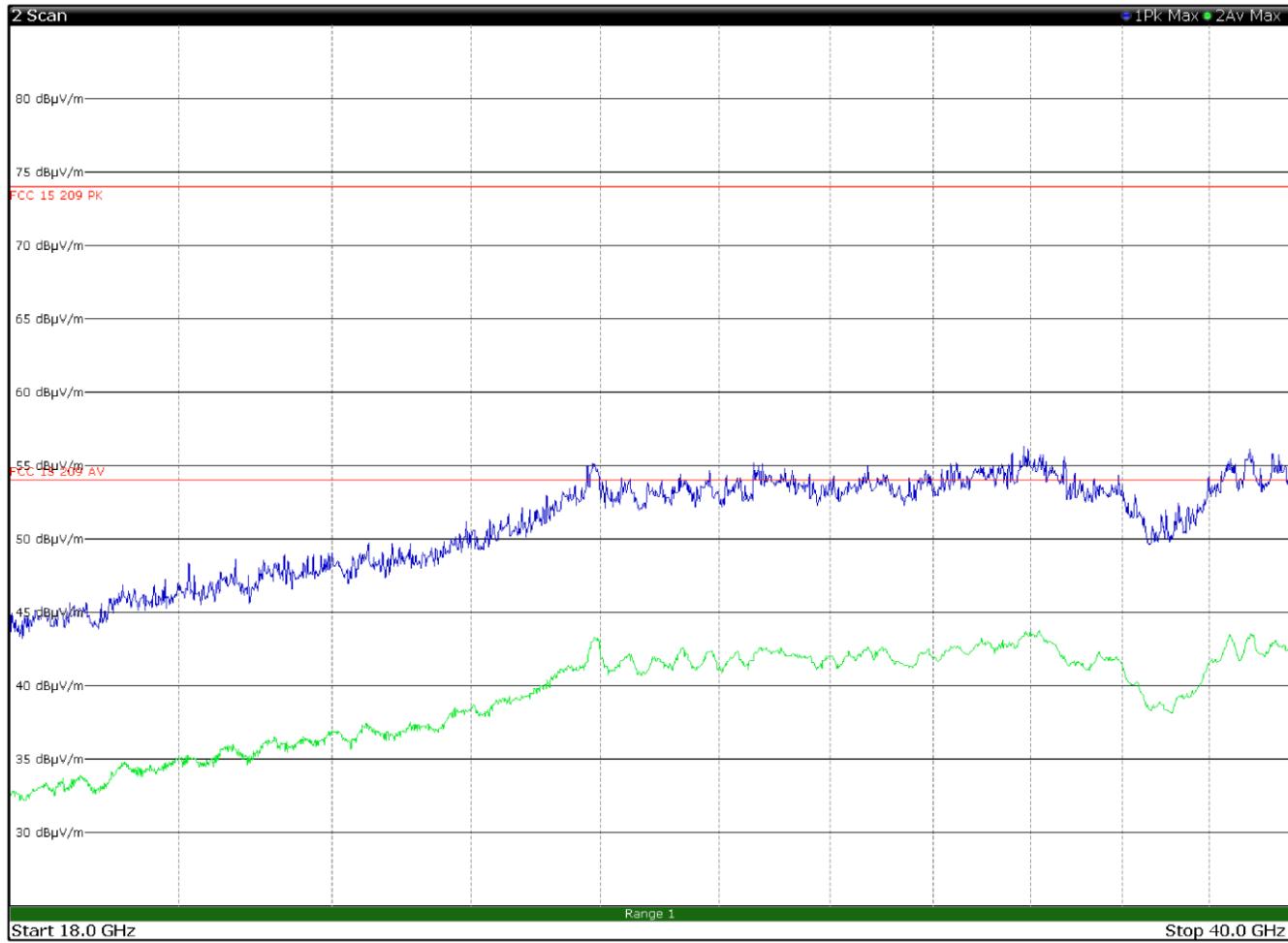


Figure 7.4-77: Radiated spurious emissions 18 to 40 GHz, 5580 MHz with antenna in horizontal polarization

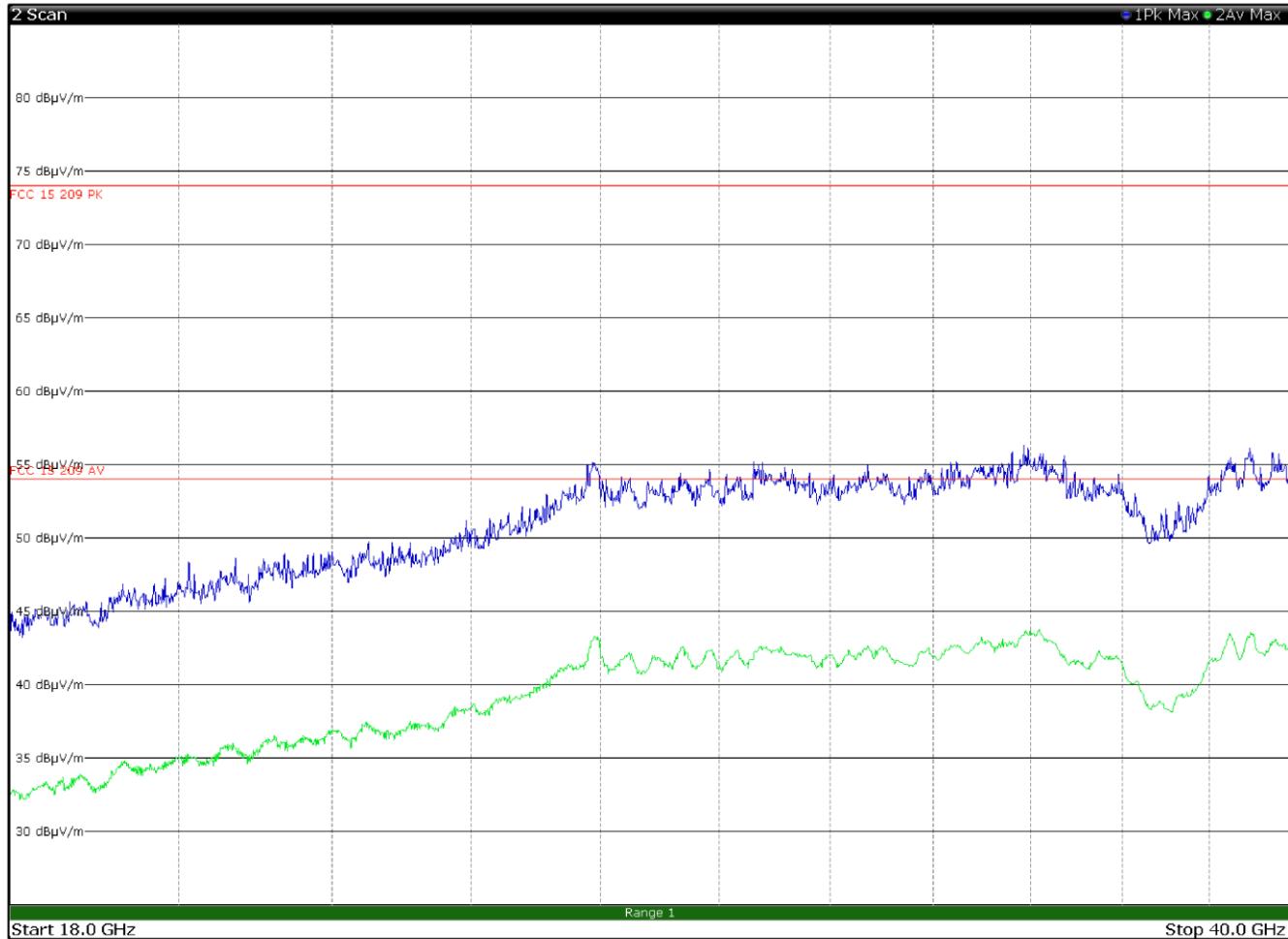


Figure 7.4-78: Radiated spurious emissions 18 to 40 GHz, 5580 with antenna in vertical polarization

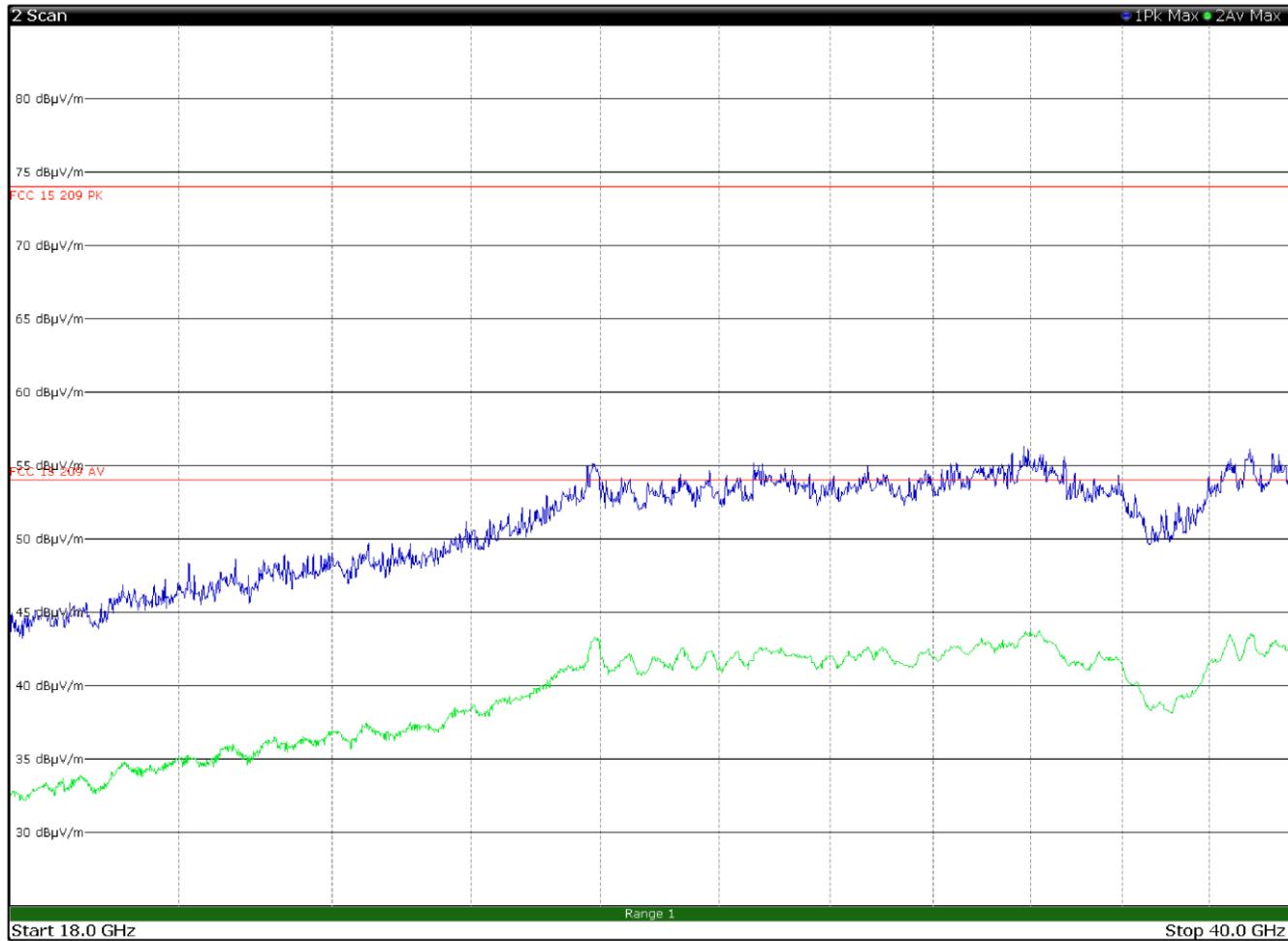


Figure 7.4-79: Radiated spurious emissions 18 to 40 GHz, 5700 MHz with antenna in horizontal polarization

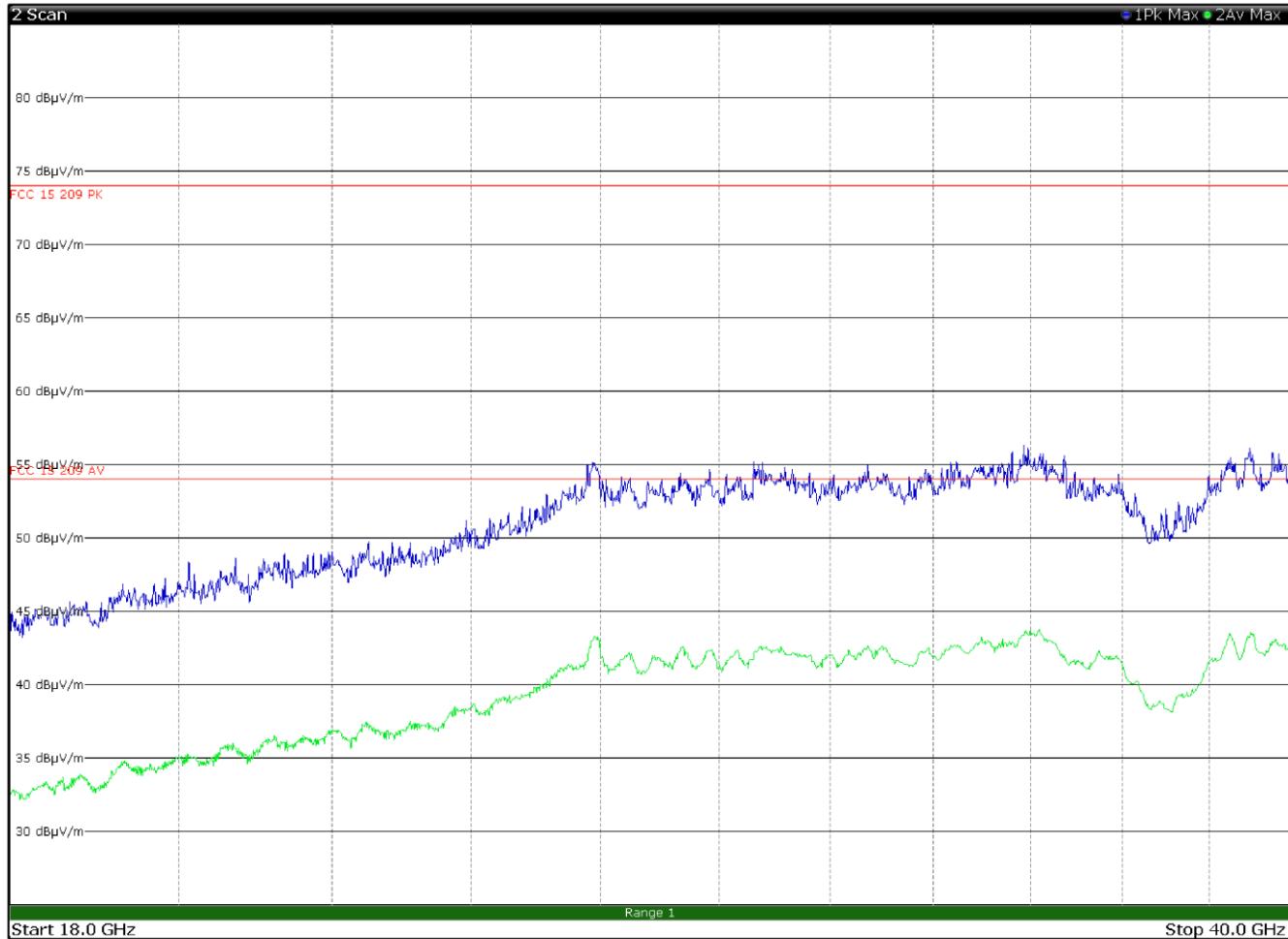


Figure 7.4-80: Radiated spurious emissions 18 to 40 GHz, 5700 with antenna in vertical polarization

7.5 FCC 15.207(a) and RSS-Gen 8.8 AC power line conducted emissions limits

7.5.1 Definitions and limits

FCC §15.407(6)(b):

Any U-NII devices using an AC power line are required to comply also with the conducted limits set forth in §15.207

FCC §15.207(a):

Except as shown in paragraphs (b) and (c) of this section, for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 kHz to 30 MHz, shall not exceed the limits in the following table, as measured using a 50 μ H/50 Ω line impedance stabilization network (LISN). Compliance with the provisions of this paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower limit applies at the boundary between the frequency ranges.

ISED:

A radio apparatus that is designed to be connected to the public utility (AC) power line shall ensure that the radio frequency voltage, which is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz, shall not exceed the limits in table below.

Unless the requirements applicable to a given device state otherwise, for any radio apparatus equipped to operate from the public utility AC power supply either directly or indirectly (such as with a battery charger), the radio frequency voltage of emissions conducted back onto the AC power lines in the frequency range of 0.15 MHz to 30 MHz shall not exceed the limits shown in table below. The more stringent limit applies at the frequency range boundaries.

Table 7.5-1: Conducted emissions limit

Frequency of emission (MHz)	Quasi-peak	Conducted limit (dB μ V)	Average**
0.15–0.5	66 to 56*	56 to 46*	
0.5–5	56	46	
5–30	60	50	

Note: * - The level decreases linearly with the logarithm of the frequency.

** - A linear average detector is required.

7.5.2 Test summary

Test start date: June 04, 2020

7.5.3 Observations, settings and special notes

The EUT was set up as tabletop configuration.

The spectral scan has been corrected with transducer factors (i.e. cable loss, LISN factors, and attenuators) for determination of compliance.

A preview measurement was generated with the receiver in continuous scan mode. Emissions detected within 6 dB or above limit were re-measured with the appropriate detector against the correlating limit and recorded as the final measurement.

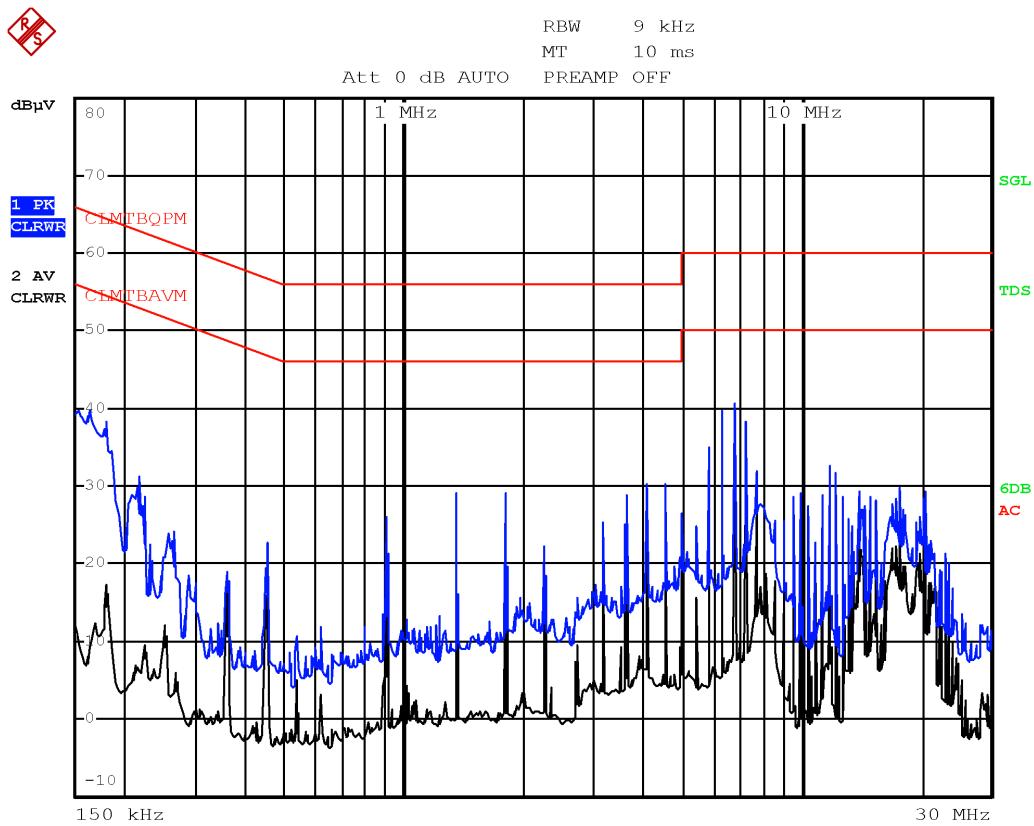
Receiver settings for preview measurements:

Resolution bandwidth	9 kHz
Video bandwidth	30 kHz
Detector mode	Peak and Average
Trace mode	Max Hold
Measurement time	100 ms

Receiver settings for final measurements:

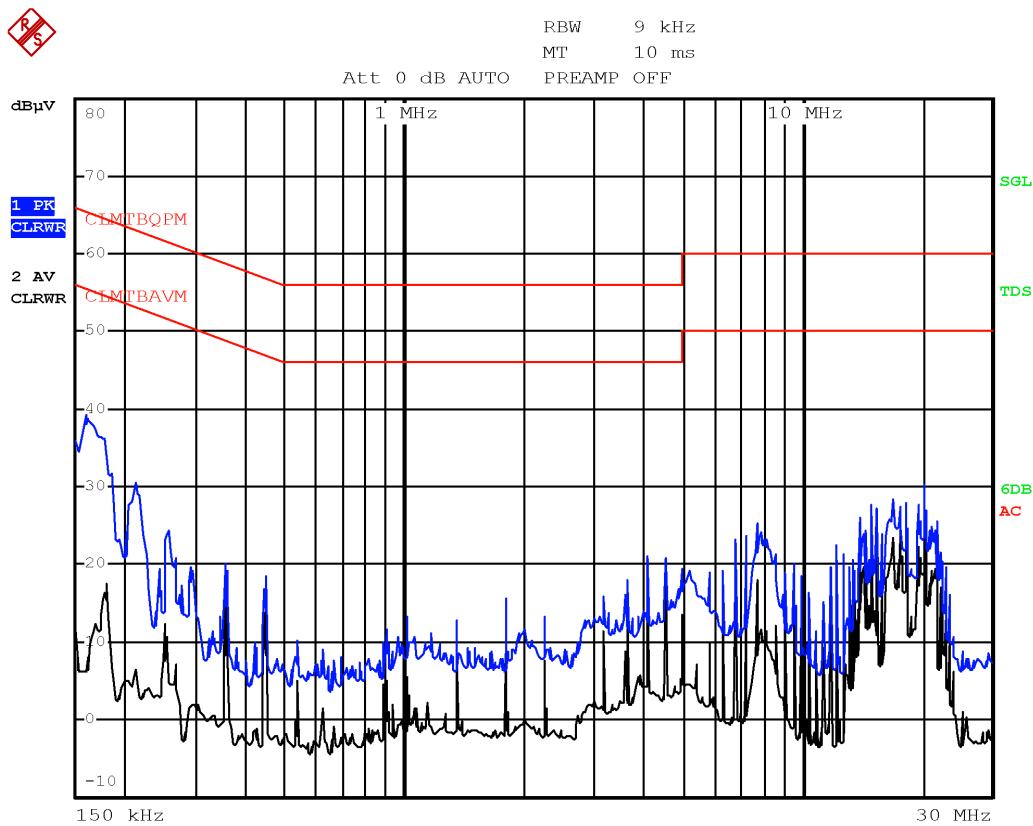
Resolution bandwidth	9 kHz
Video bandwidth	30 kHz
Detector mode	Quasi-Peak and Average
Trace mode	Max Hold
Measurement time	100 ms

7.5.4 Test data



Plot 7.5-1: Conducted emissions on phase line

Frequency (MHz)	Level (dB μ V)	Limit (dB μ V)	Margin (dB)	Detector
--	--	--	--	--

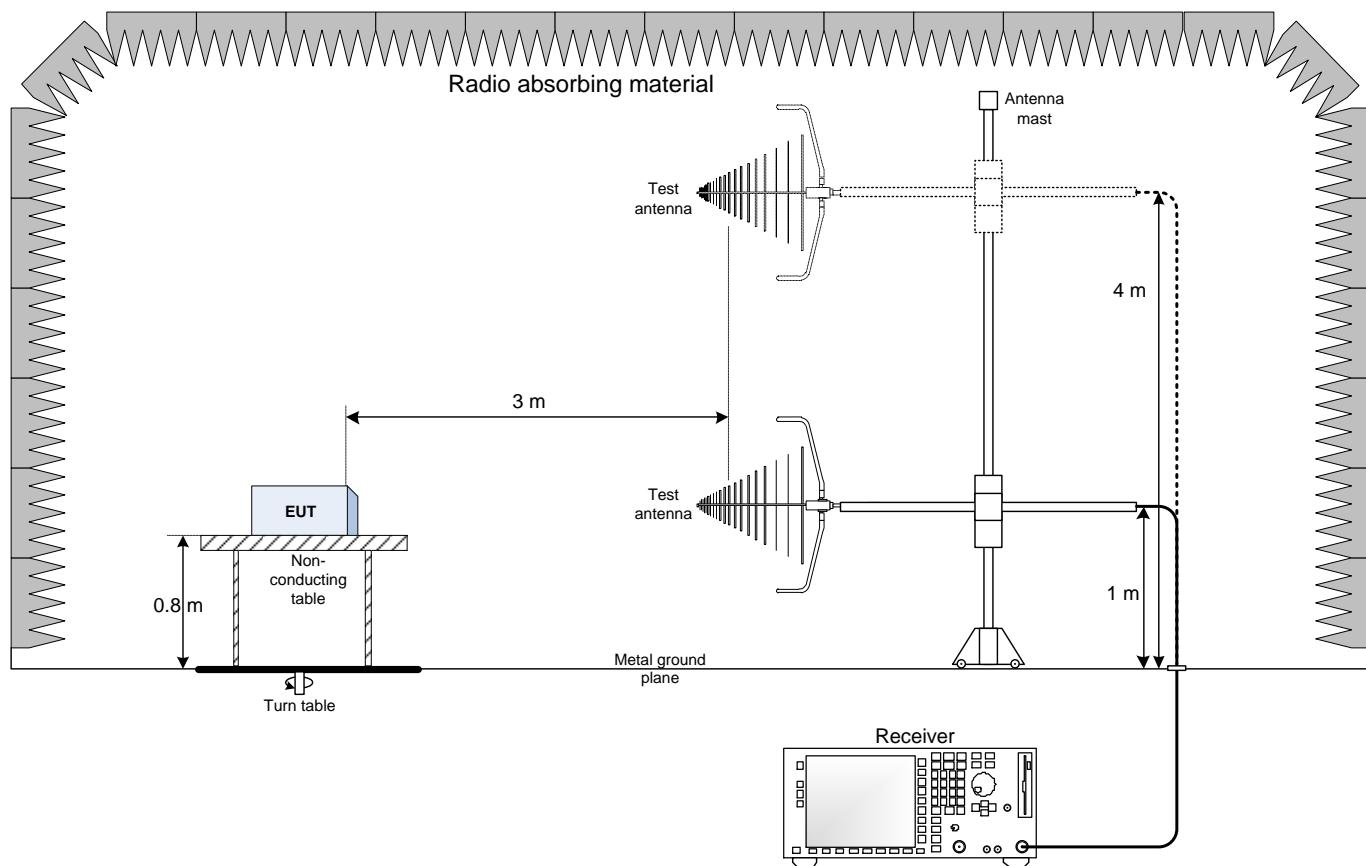


Plot 7.5-2: Conducted emissions on neutral line

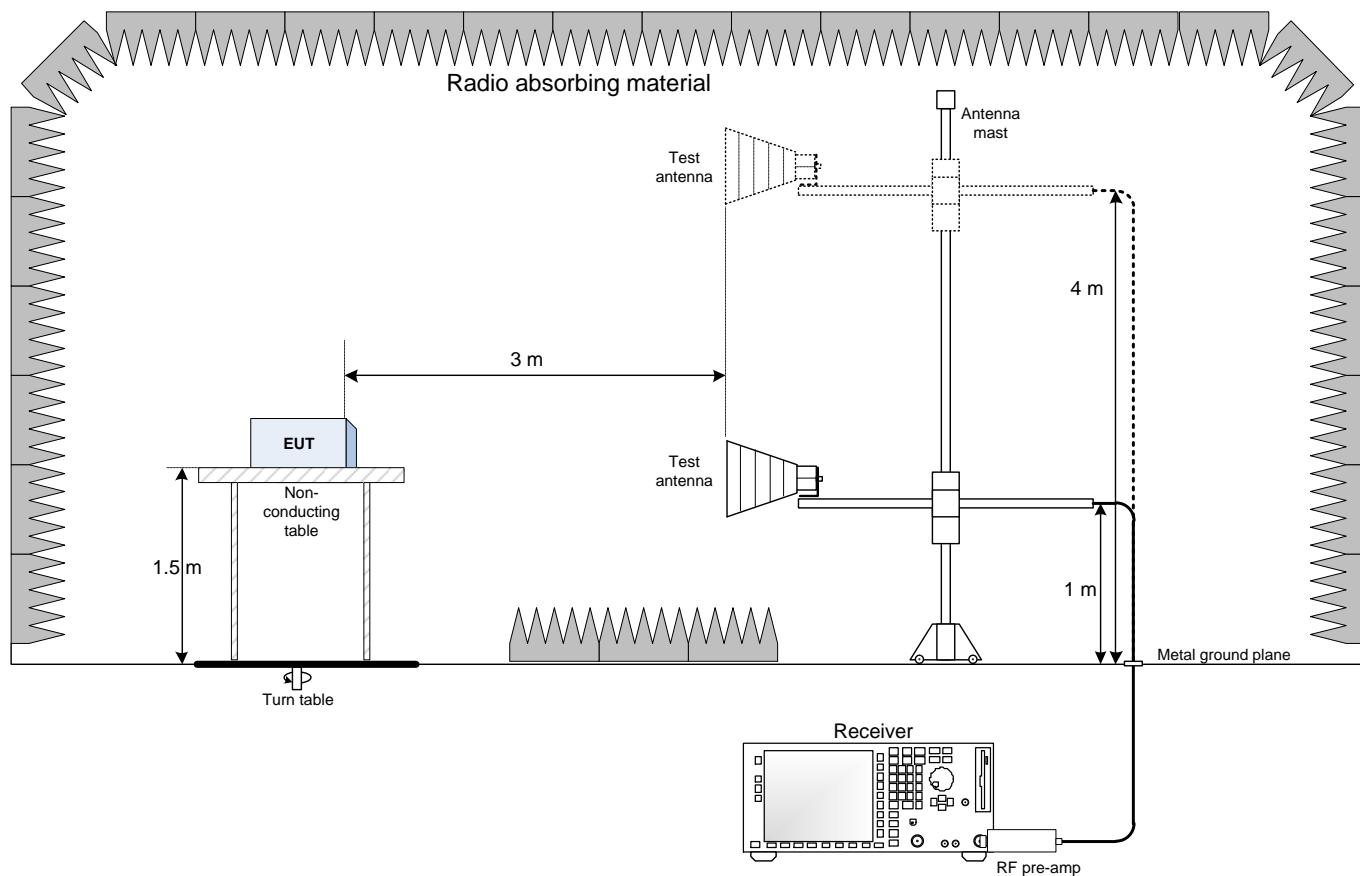
Frequency (MHz)	Level (dB μ V)	Limit (dB μ V)	Margin (dB)	Detector
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Section 8. Block diagrams of test set-ups

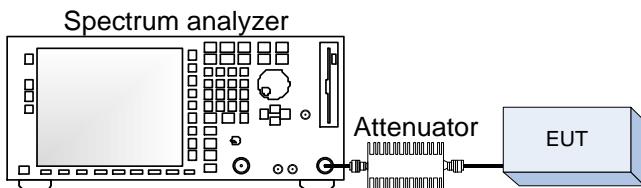
8.1 Radiated emissions set-up for frequencies below 1 GHz



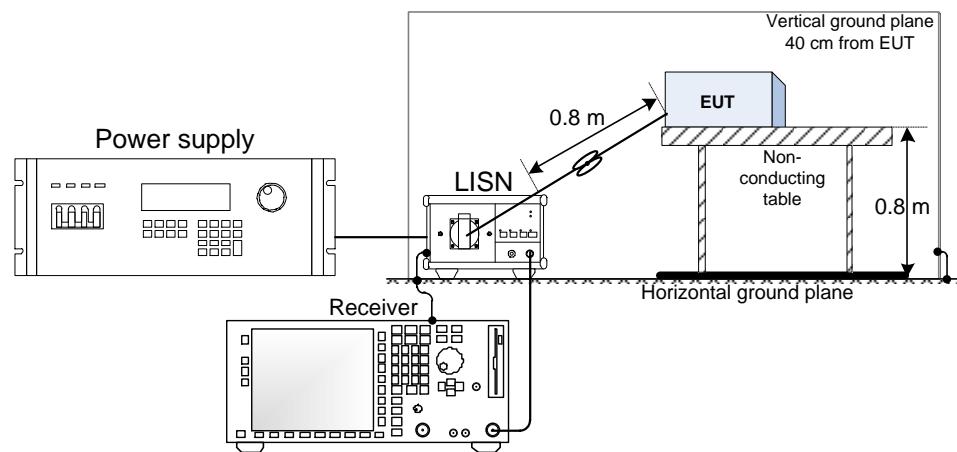
8.2 Radiated emissions set-up for frequencies above 1 GHz



8.3 Antenna port conducted measurements set-up

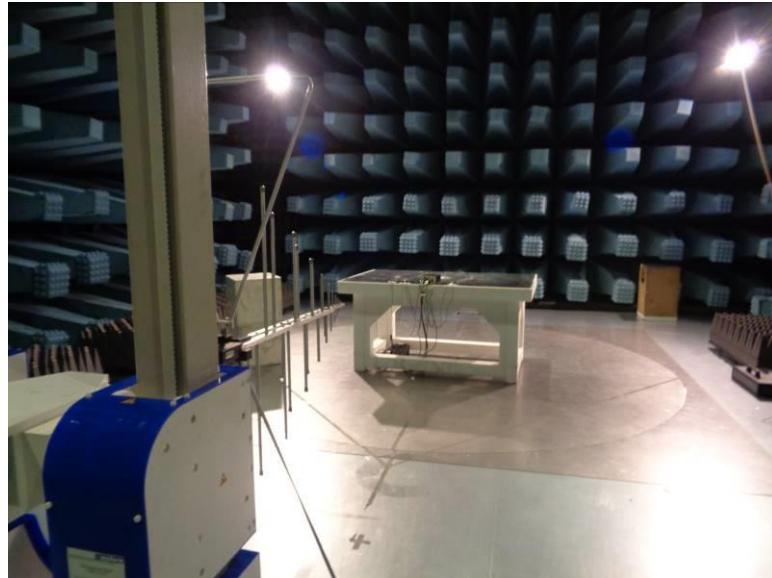


8.4 Power line Conducted emissions set-up

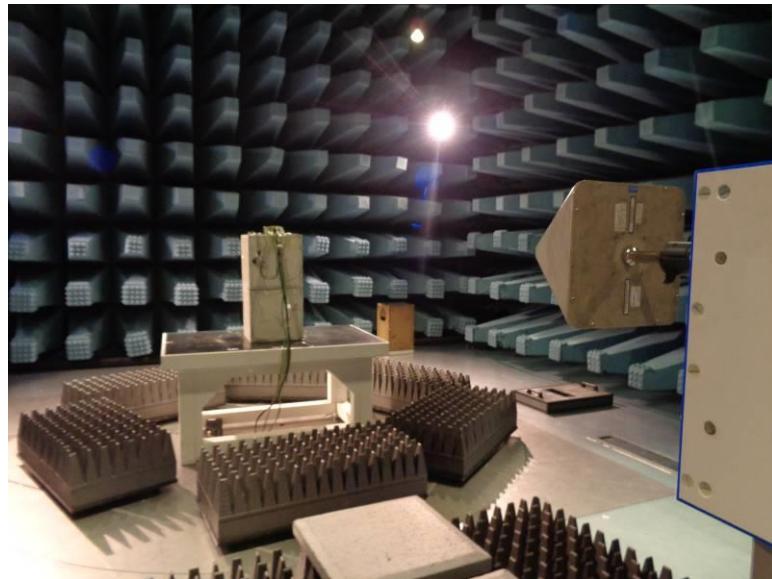


Section 9. Photos

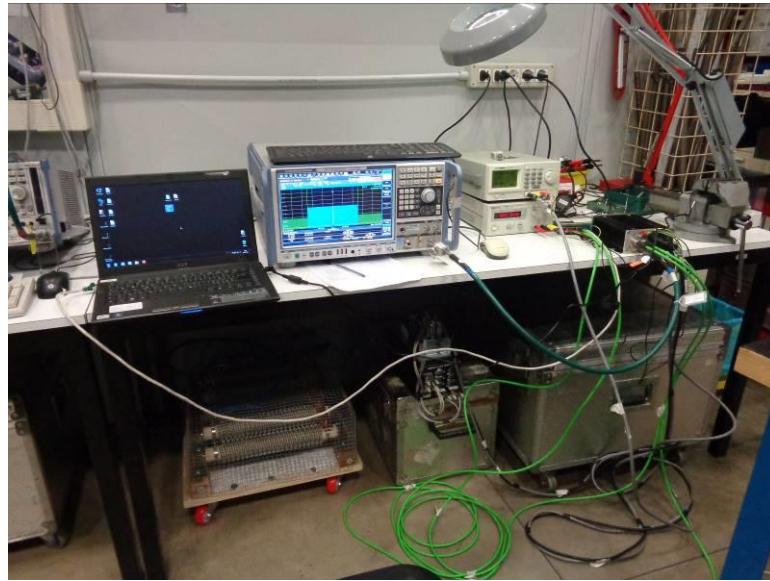
9.1 Photos of the test set-up



Radiated emission below 1 GHz



Radiated emission above 1 GHz



Conducted emission on the antenna port



Conducted emission on the AC Mains

9.2 Photos of the EUT







(End of report)