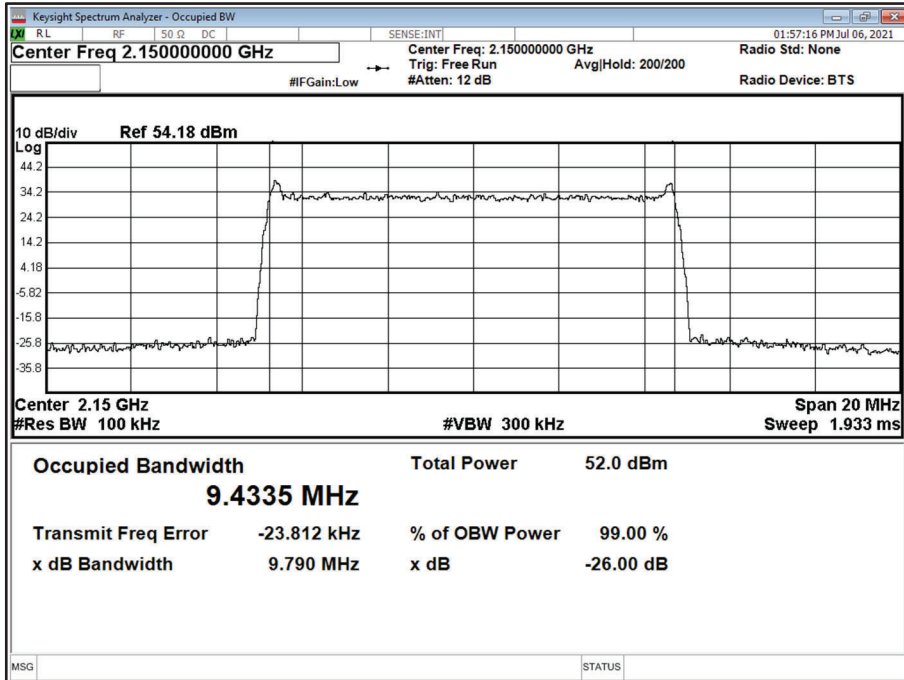
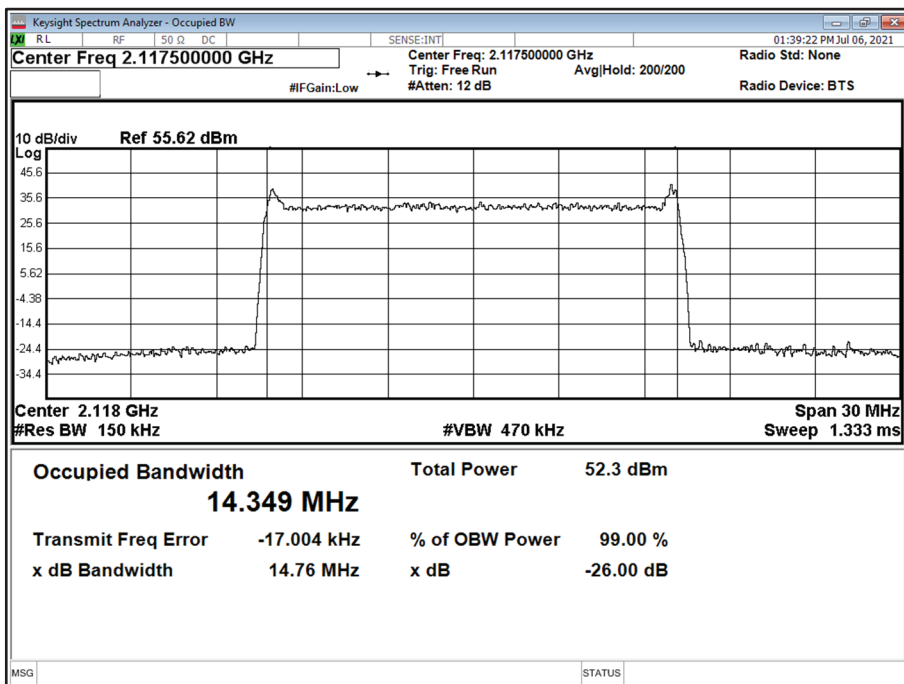




Antenna A - NR in NR/ESS Setup (NB-IoT) Modulation QPSK - NR in NR/ESS Setup (NB-IoT)
Carrier Bandwidth 10.0 MHz - Channel Position T

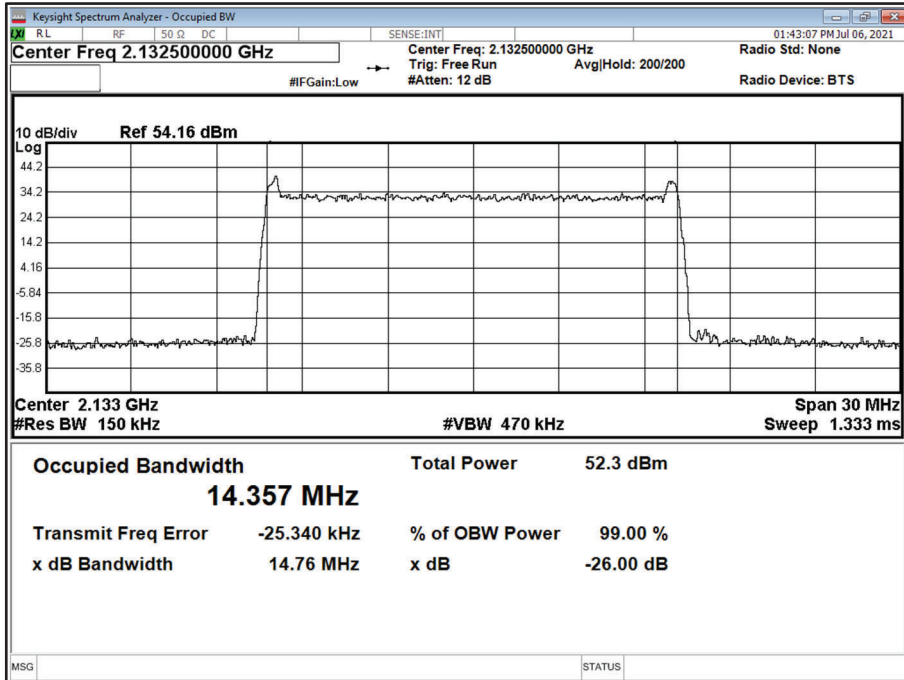


Antenna A - NR in NR/ESS Setup (NB-IoT) Modulation QPSK - NR in NR/ESS Setup (NB-IoT)
Carrier Bandwidth 15.0 MHz - Channel Position B

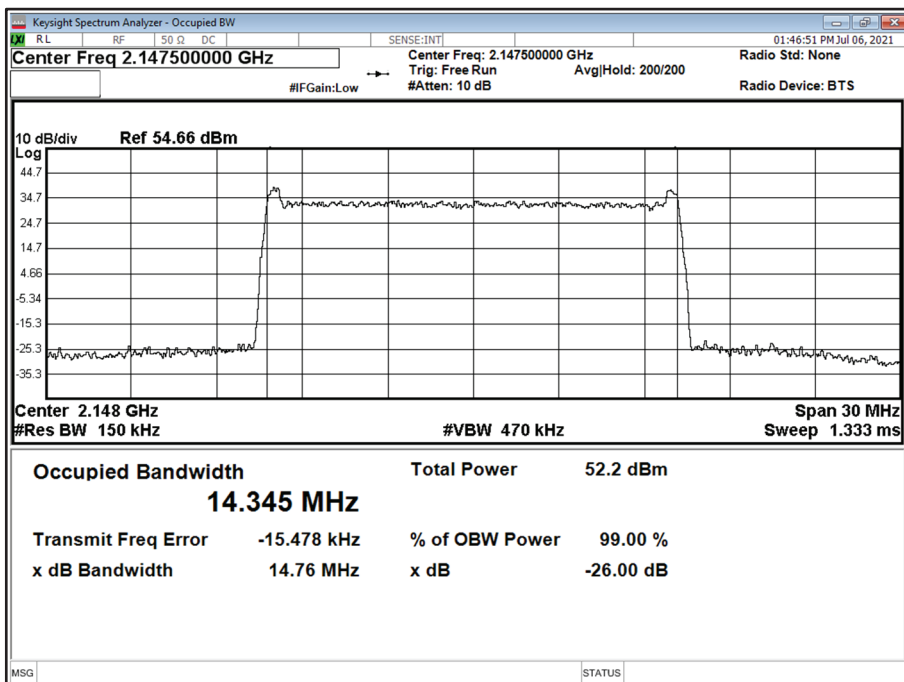




Antenna A - NR in NR/ESS Setup (NB-IoT) Modulation QPSK - NR in NR/ESS Setup (NB-IoT)
Carrier Bandwidth 15.0 MHz - Channel Position M

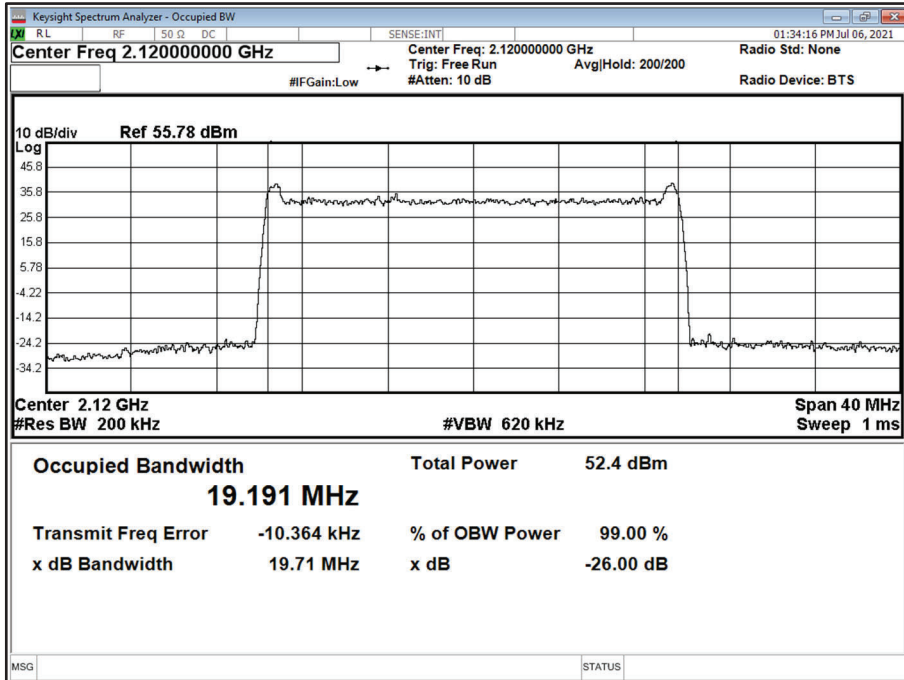


Antenna A - NR in NR/ESS Setup (NB-IoT) Modulation QPSK - NR in NR/ESS Setup (NB-IoT)
Carrier Bandwidth 15.0 MHz - Channel Position T

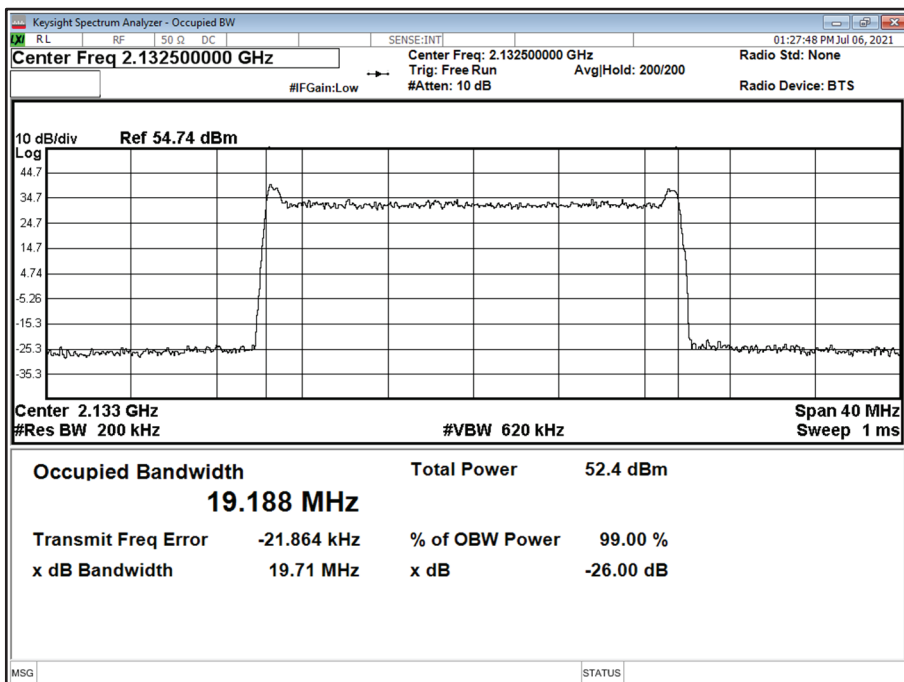




Antenna A - NR in NR/ESS Setup (NB-IoT) Modulation QPSK - NR in NR/ESS Setup (NB-IoT)
Carrier Bandwidth 20.0 MHz - Channel Position B

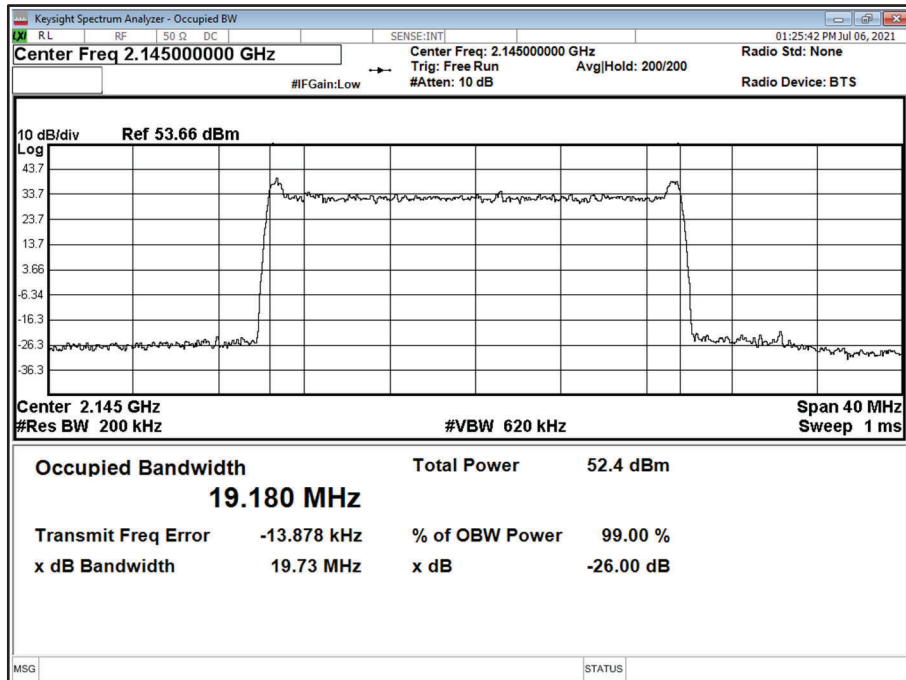


Antenna A - NR in NR/ESS Setup (NB-IoT) Modulation QPSK - NR in NR/ESS Setup (NB-IoT)
Carrier Bandwidth 20.0 MHz - Channel Position M





Antenna A - NR in NR/ESS Setup (NB-IoT) Modulation QPSK - NR in NR/ESS Setup (NB-IoT)
Carrier Bandwidth 20.0 MHz - Channel Position T





2.3 BAND EDGE

2.3.1 Specification Reference

FCC CFR 47 Part 27, Clause 27.53
Industry Canada RSS-139, Clause 6.5
FCC CFR 47 Part 2, Clause 2.1051

2.3.2 Date of Test and Modification State

06 July 2021 - Modification State 0

2.3.3 Test Equipment Used

The major items of test equipment used for the above tests are identified in Section 3.1.

2.3.4 Environmental Conditions

Ambient Temperature 23.4°C
Relative Humidity 42.0%

2.3.5 Test Method

All measurements were made in accordance with FCC KDB 971168 D01, Clause 6.0.

Band Edge measurements were used an Integration Bandwidth of at least 1% of the measured 26dB Bandwidth.

Each antenna port has been declared as being equivalent, therefore measurements were made on one antenna port only. To account for this, the limit was tightened by $10 * \text{Log}(N)$, where N is equal to the number of MIMO antenna ports.

For 4 ports, the limit was calculated as being $-13 \text{ dBm} - 10 * \text{Log}(4) = -19 \text{ dBm}$.

2.3.6 Test Results

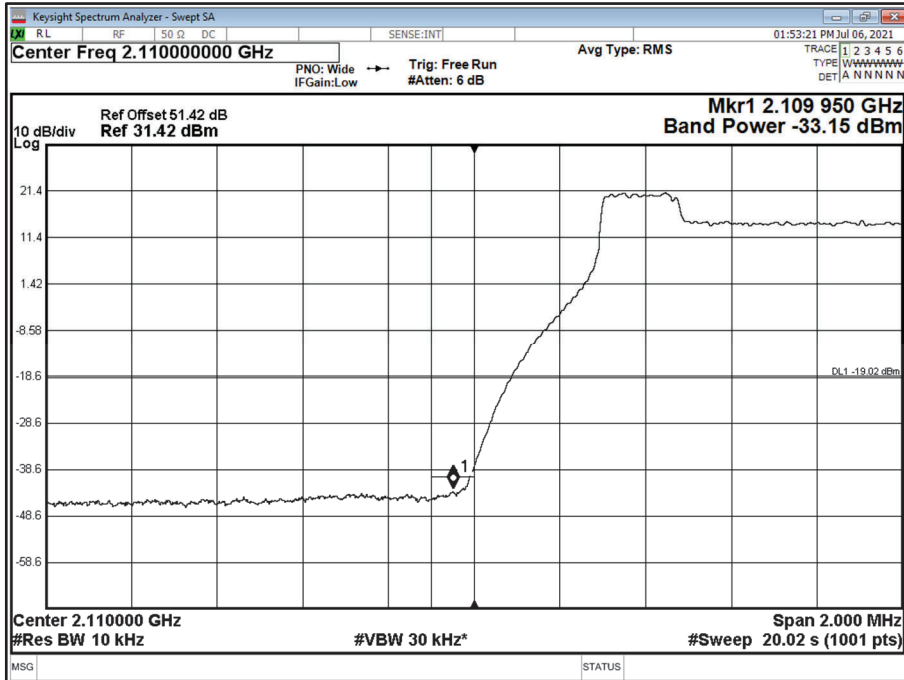
Configuration 1

Maximum Output Power 44.80 dBm

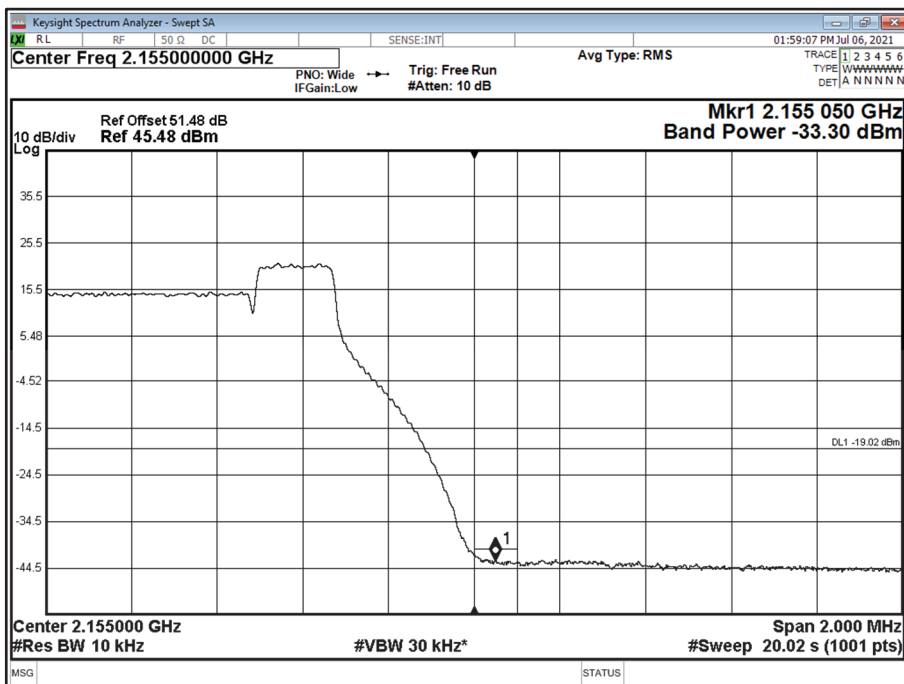
Antenna	NR in NR/ESS Setup (NB-IoT) Modulation	NR in NR/ESS Setup (NB-IoT) Carrier Bandwidth	Band Edge (MHz)	
			Channel Position B	Channel Position T
A	QPSK	10.0 MHz	2,115.0	2,150.0
A	QPSK	15.0 MHz	2,117.5	2,147.5
A	QPSK	20.0 MHz	2,120.0	2,145.0



Antenna A - NR in NR/ESS Setup (NB-IoT) Modulation QPSK - NR in NR/ESS Setup (NB-IoT)
Carrier Bandwidth 10.0 MHz - Channel Position B

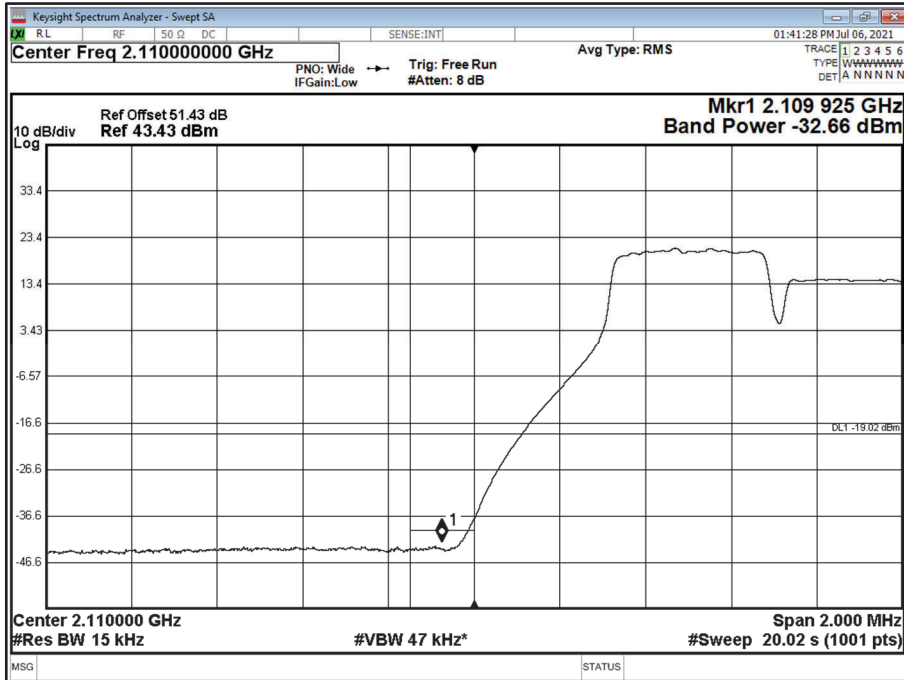


Antenna A - NR in NR/ESS Setup (NB-IoT) Modulation QPSK - NR in NR/ESS Setup (NB-IoT)
Carrier Bandwidth 10.0 MHz - Channel Position T

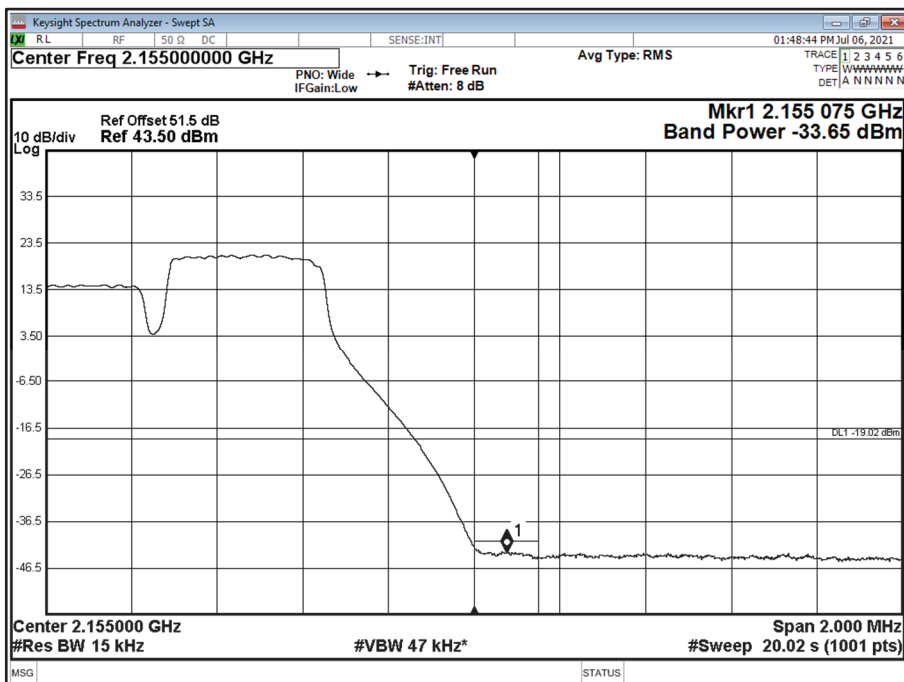




Antenna A - NR in NR/ESS Setup (NB-IoT) Modulation QPSK - NR in NR/ESS Setup (NB-IoT)
Carrier Bandwidth 15.0 MHz - Channel Position B

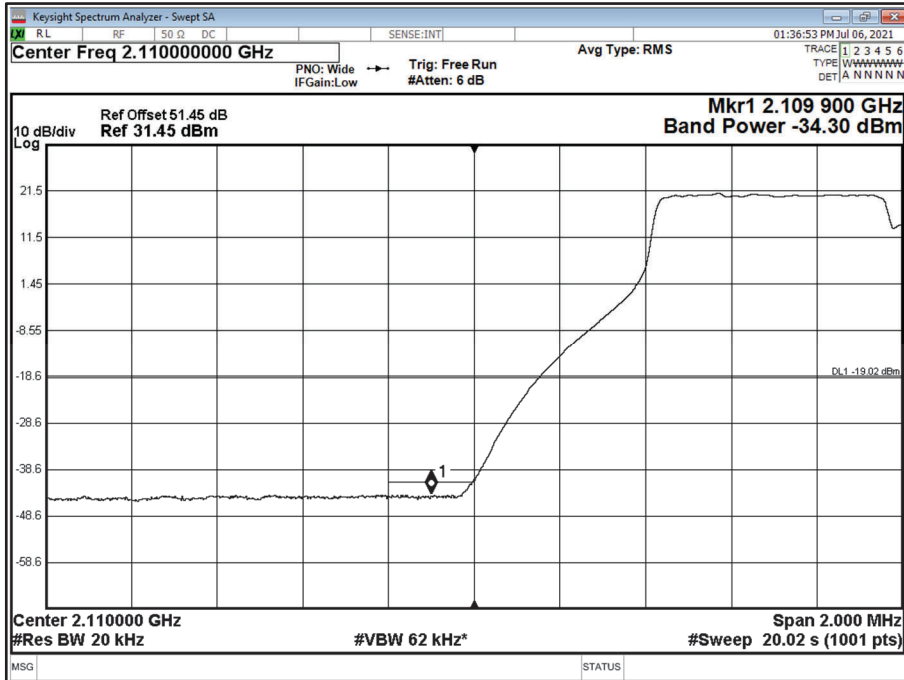


Antenna A - NR in NR/ESS Setup (NB-IoT) Modulation QPSK - NR in NR/ESS Setup (NB-IoT)
Carrier Bandwidth 15.0 MHz - Channel Position T

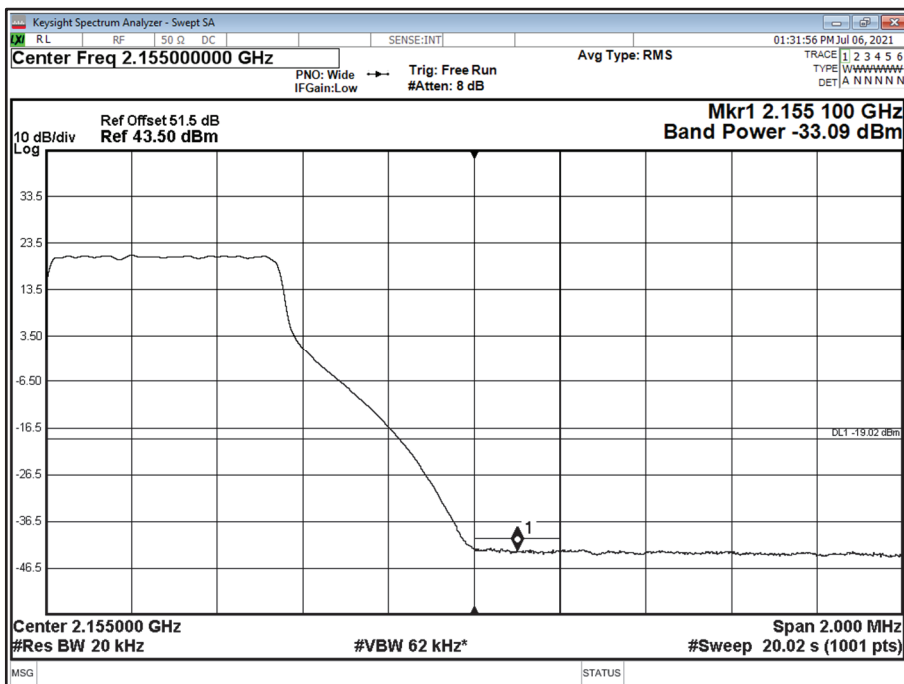




Antenna A - NR in NR/ESS Setup (NB-IoT) Modulation QPSK - NR in NR/ESS Setup (NB-IoT)
Carrier Bandwidth 20.0 MHz - Channel Position B



Antenna A - NR in NR/ESS Setup (NB-IoT) Modulation QPSK - NR in NR/ESS Setup (NB-IoT)
Carrier Bandwidth 20.0 MHz - Channel Position T



Limit	-19 dBm
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2.4 TRANSMITTER SPURIOUS EMISSIONS

2.4.1 Specification Reference

FCC CFR 47 Part 27, Clause 27.53
Industry Canada RSS-139, Clause 6.6
FCC CFR 47 Part 2, Clause 2.1051

2.4.2 Date of Test and Modification State

06 July 2021 - Modification State 0

2.4.3 Test Equipment Used

The major items of test equipment used for the above tests are identified in Section 3.1.

2.4.4 Environmental Conditions

Ambient Temperature	23.4°C
Relative Humidity	42.0%

2.4.5 Test Method

All measurements were made in accordance with FCC KDB 971168 D01, Clause 6.1.

Each antenna port has been declared as being equivalent, therefore measurements were made on one antenna port only. To account for this, the limit was tightened by $10 * \text{Log}(N)$, where N is equal to the number of MIMO antenna ports.

For 4 ports, the limit was calculated as being $-13 \text{ dBm} - 10 * \text{Log}(4) = -19 \text{ dBm}$.

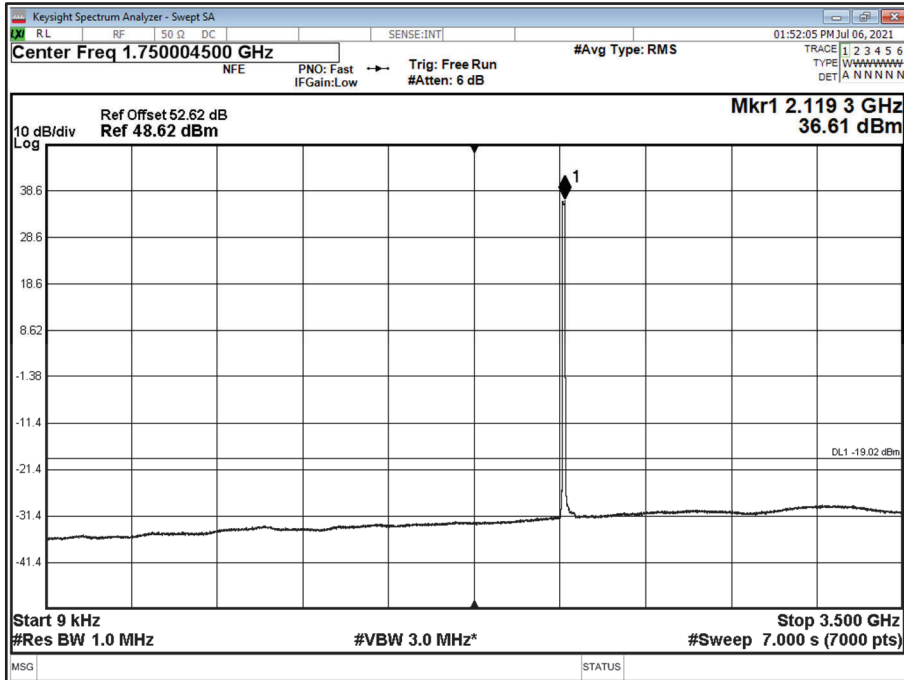
2.4.6 Test Results

Configuration 1

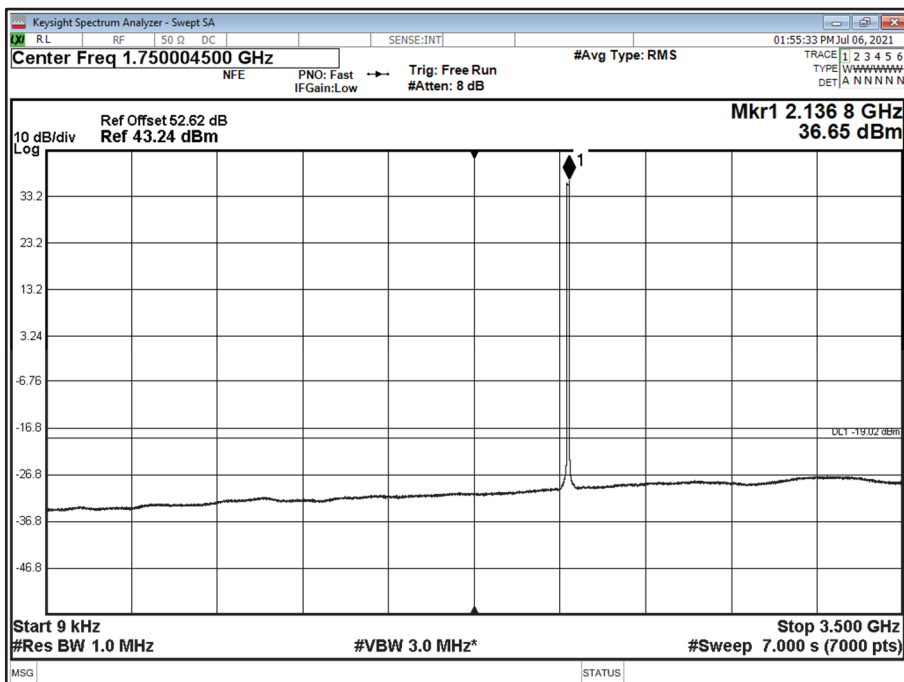
Maximum Output Power 44.80 dBm



Antenna A - NR in NR/ESS Setup (NB-IoT) Modulation QPSK - NR in NR/ESS Setup (NB-IoT)
Carrier Bandwidth 10.0 MHz - Channel Position B - Band 1 - Range 0.009 to 3500 MHz

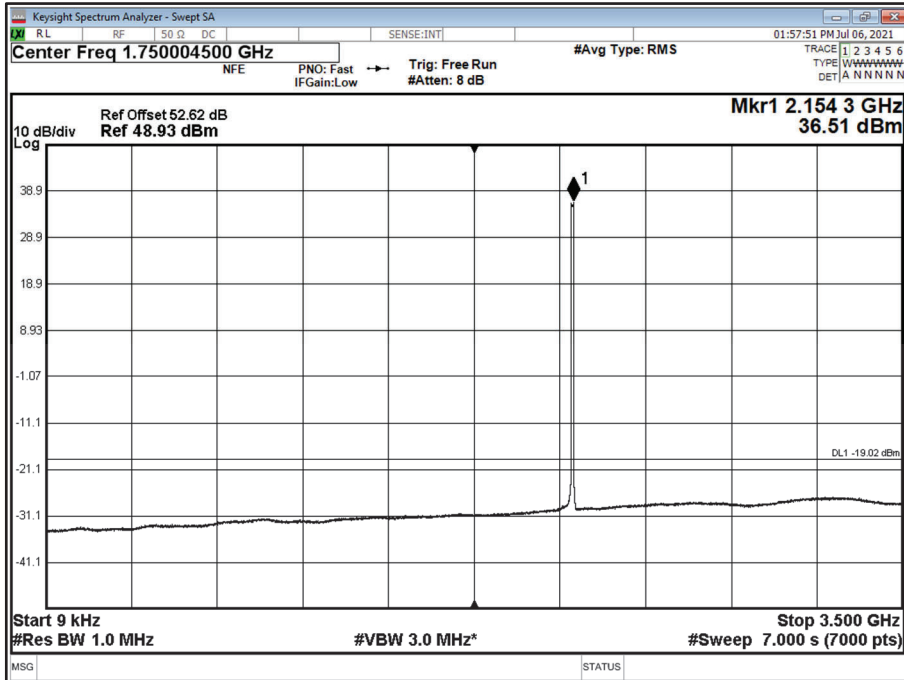


Antenna A - NR in NR/ESS Setup (NB-IoT) Modulation QPSK - NR in NR/ESS Setup (NB-IoT)
Carrier Bandwidth 10.0 MHz - Channel Position M - Band 1 - Range 0.009 to 3500 MHz

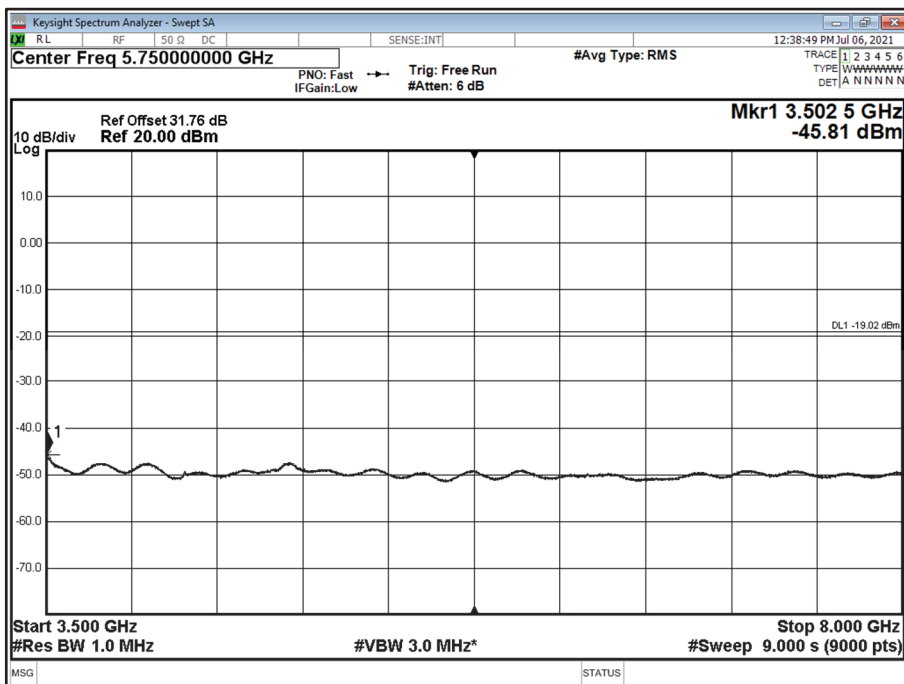




Antenna A - NR in NR/ESS Setup (NB-IoT) Modulation QPSK - NR in NR/ESS Setup (NB-IoT)
Carrier Bandwidth 10.0 MHz - Channel Position T - Band 1 - Range 0.009 to 3500 MHz

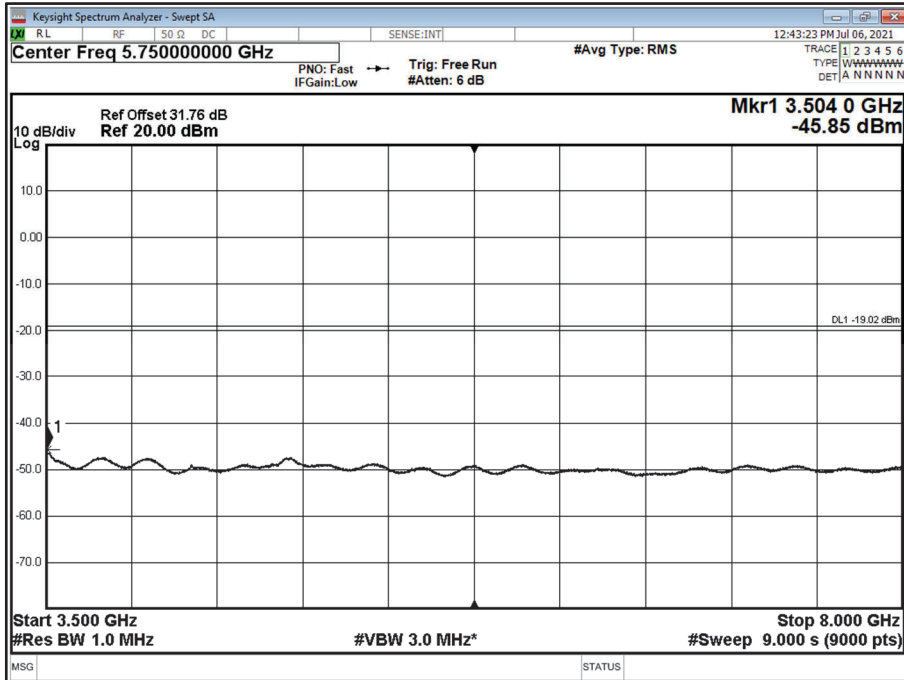


Antenna A - NR in NR/ESS Setup (NB-IoT) Modulation QPSK - NR in NR/ESS Setup (NB-IoT)
Carrier Bandwidth 10.0 MHz - Channel Position B - Band 2 - Range 3500 to 8000 MHz

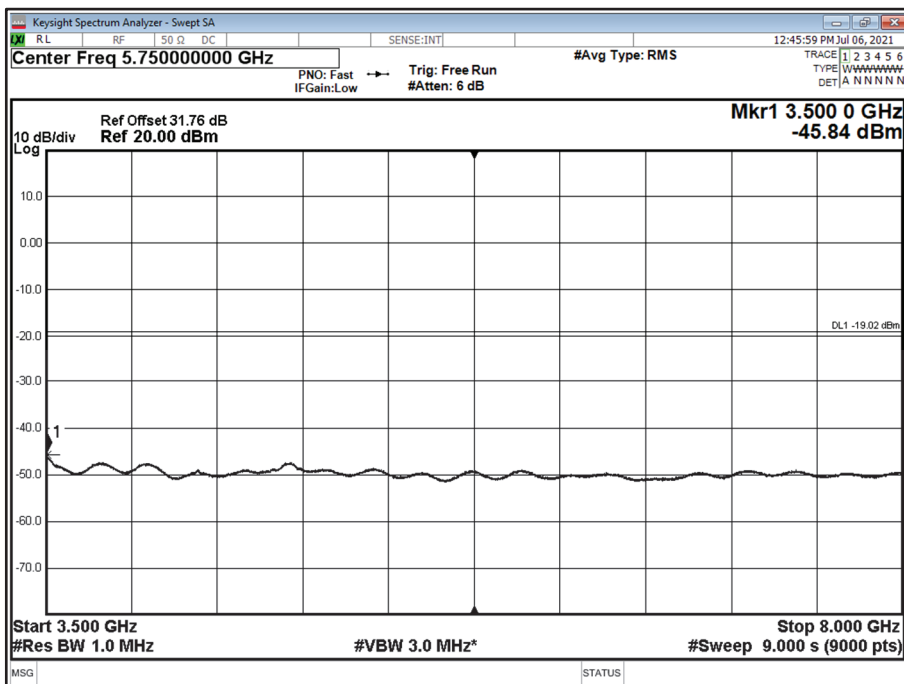




Antenna A - NR in NR/ESS Setup (NB-IoT) Modulation QPSK - NR in NR/ESS Setup (NB-IoT)
Carrier Bandwidth 10.0 MHz - Channel Position M - Band 2 - Range 3500 to 8000 MHz

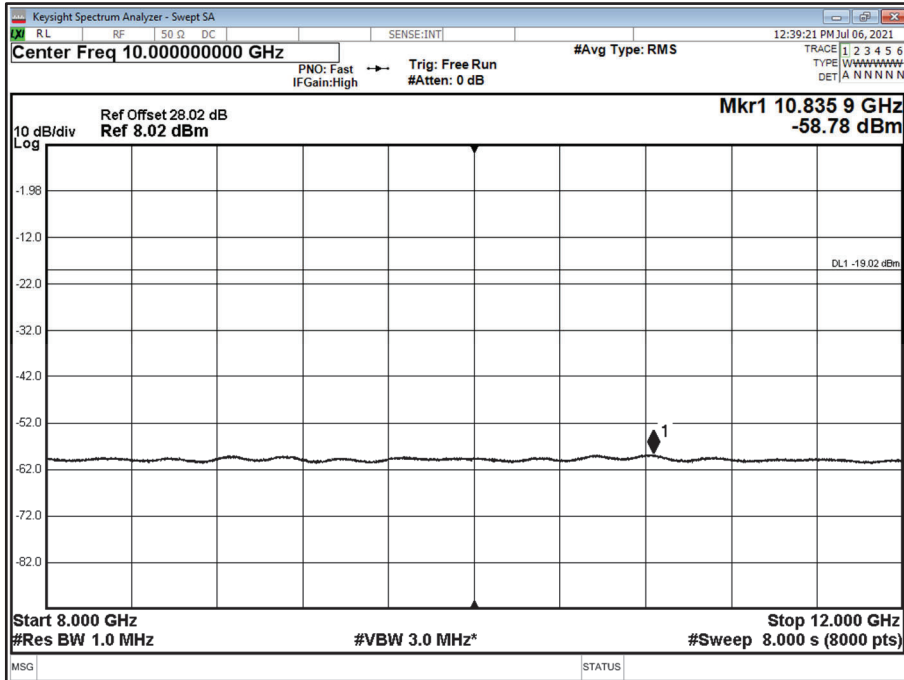


Antenna A - NR in NR/ESS Setup (NB-IoT) Modulation QPSK - NR in NR/ESS Setup (NB-IoT)
Carrier Bandwidth 10.0 MHz - Channel Position T - Band 2 - Range 3500 to 8000 MHz





Antenna A - NR in NR/ESS Setup (NB-IoT) Modulation QPSK - NR in NR/ESS Setup (NB-IoT)
Carrier Bandwidth 10.0 MHz - Channel Position B - Band 3 - Range 8000 to 12000 MHz



Antenna A - NR in NR/ESS Setup (NB-IoT) Modulation QPSK - NR in NR/ESS Setup (NB-IoT)
Carrier Bandwidth 10.0 MHz - Channel Position M - Band 3 - Range 8000 to 12000 MHz

