

Conducted spurious emission measurements according to CFR 47 §24.238 and §27.53(h) / RSS-133 6.5, RSS-139 6.6

Date	Temperature	Humidity
2020-02-28	24 °C ± 3 °C	11 % ± 5 %
2020-03-02	23 °C ± 3 °C	18 % ± 5 %
2020-03-03	24 °C ± 3 °C	16 % ± 5 %
2020-03-05	24 °C ± 3 °C	17 % ± 5 %
2020-03-10	23 °C ± 3 °C	18 % ± 5 %
2020-03-12	23 °C ± 3 °C	19 % ± 5 %
2020-03-27	23 °C ± 3 °C	14 % ± 5 %
2020-03-31	23 °C ± 3 °C	12 % ± 5 %
2020-04-01	24 °C ± 3 °C	16 % ± 5 %
2020-04-02	23 °C ± 3 °C	17 % ± 5 %
2020-04-15	22 °C ± 3 °C	25 % ± 5 %
2020-05-04	23 °C ± 3 °C	16 % ± 5 %
2020-05-05	22 °C ± 3 °C	14 % ± 5 %

Test set-up and procedure

The measurements were made per definition in ANSI C63.26, 5.7.4. The output was connected to a spectrum analyzer with the RMS detector activated.

Before comparing the results to the limit, 6 dB [10 log (4)] to cover 4x4 MIMO, should be added according to ANSI C63.26 6.4.4.1 c “measure and add 10 log(N_{ANT})”.

Measurement equipment	RISE number
R&S FSW 43	902 073
Directional coupler	901 496
RF attenuator	902 282
High pass filter 3-27 GHz	901 502
Coaxial cable Megaphase	BX50191
Coaxial cable Sucoflex 102EA	BX50236
Coaxial cable Sucoflex 102EA	BX50237
Testo 635, temperature and humidity meter	504 203

Measurement uncertainty: 3.7 dB

Results LTE**B25 max power configuration:**

Single carrier E-TM1.1

Diagram	Symbolic name	Tested Port
3.1 a-b	B ₃	RF A
3.2 a-b	B ₂₀	RF A
3.3 a-b	M _{1.4}	RF A
3.4 a-b	M ₃	RF A
3.5 a-b	M ₅	RF A
3.6 a-b	M ₁₀	RF A
3.7 a-b	M ₁₀	RF B
3.8 a-b	M ₁₀	RF C
3.9 a-b	M ₁₀	RF D
3.10 a-b	M ₁₅	RF A
3.11 a-b	M ₂₀	RF A
3.12 a-b	T ₃	RF A
3.13 a-b	T ₂₀	RF A

Multi carrier E-TM1.1

Diagram	Symbolic name	Tested Port
3.14 a-c	Bim ₃	RF A
3.15 a-c	Tim ₃	RF A
3.16 a-c	M6 ₁₀	RF A

Note: Measurements were mainly limited to port RF A due to the measurement result in single carrier mode that shows that the ports are electrical identical as declared by the client.

B66 max power configuration:

Single carrier E-TM1.1

Diagram	Symbolic name	Tested Port
3.17 a-b	B ₁₀	RF B
3.18 a-b	M ₅	RF B
3.19 a-b	M ₁₀	RF A
3.20 a-b	M ₁₀	RF B
3.21 a-b	M ₁₀	RF C
3.22 a-b	M ₁₀	RF D
3.23 a-b	M ₁₅	RF B
3.24 a-b	M ₂₀	RF B
3.25 a-b	T ₁₀	RF B

Multi carrier E-TM1.1

Diagram	Symbolic name	Tested Port
3.26 a-c	Bim ₅	RF B
3.27 a-c	Tim ₅	RF B
3.28 a-c	M6 ₁₀	RF B

Results GSM

B2 max power configuration:

Multi RAT: GSM: GMSK, LTE: E-TM1.1

Diagram	Symbolic name	Tested Port
3.29 a-b	B _{G+L}	RF A
3.30 a-b	M _{G+L}	RF A
3.31 a-b	M _{G+L}	RF B
3.32 a-b	M _{G+L}	RF C
3.33 a-b	M _{G+L}	RF D
3.34 a-b	T _{G+L}	RF A

Multi RAT: GSM: GMSK, LTE: E-TM1.1

Diagram	Symbolic name	Tested Port
3.35 a-c	M4 _{G+L}	RF A

Multi RAT: GSM: 8PSK, LTE: E-TM1.1

Diagram	Symbolic name	Tested Port
3.36 a-c	Bim _{G+L}	RF A
3.37 a-c	Tim _{G+L}	RF A

Results NB IoT SA/ GB/ IB

B25 max power configuration:

Multi RAT: NB IoT SA/GB/IB: N-TM, LTE: E-TM1.1

Diagram	Symbolic name	Tested Port
3.38 a-c	B _{IoT+L}	RF A
3.39 a-c	B _{IBIoT+L}	RF A
3.40 a-c	M _{IoT+L}	RF A
3.41 a-c	M _{IoT+L}	RF B
3.42 a-c	M _{IoT+L}	RF C
3.43 a-c	M _{IoT+L}	RF D
3.44 a-c	M _{IBIoT+L}	RF A
3.45 a-c	T _{IoT+L}	RF A
3.46 a-c	T _{IBIoT+L}	RF A
3.47 a-c	T10 _{Guard}	RF A
3.48 a-c	T15 _{Guard}	RF A
3.49 a-c	T20 _{Guard}	RF A

B66 max power configuration:

Multi RAT: NB IoT SA/GB/IB: N-TM, LTE: E-TM1.1

Diagram	Symbolic name	Tested Port
3.50 a-c	B_{IoT+L}	RF B
3.51 a-c	$B_{IBIoT+L}$	RF B
3.52 a-c	$B_{10Guard}$	RF B
3.53 a-c	$B_{15Guard}$	RF B
3.54 a-c	$B_{20Guard}$	RF B
3.55 a-c	M_{IoT+L}	RF A
3.56 a-c	M_{IoT+L}	RF B
3.57 a-c	M_{IoT+L}	RF C
3.58 a-c	M_{IoT+L}	RF D
3.59 a-c	$M_{IBIoT+L}$	RF B
3.60 a-c	T_{IoT+L}	RF B
3.61 a-c	$T_{IBIoT+L}$	RF B

Results GSM+NB IoT SA+LTE**B2 max power configuration:**

Multi RAT GSM: GMSK, NB IoT SA: N-TM, LTE: E-TM1.1

Diagram	Symbolic name	Tested Port
3.62 a-c	$B_{imG+IoT+L}$	RF A
3.63 a-c	$T_{imG+IoT+L}$	RF A
3.64 a-c	$Max_{G+IoT+L}$	RF A

Note: Measurements were mainly limited to port RF A due to the measurement result in single carrier mode that shows that the ports are electrical identical as declared by the client.

Remark

The emission at 9 kHz on the plots was not generated by the test object. A complementary measurement with a smaller RBW showed that it was related to the LO feed-through.

The highest fundamental frequency is 2180 MHz. The measurements were made up to 22 GHz (10x2180 MHz = 21.80 GHz).

Limits

CFR 47 §24.238, §27.53(h) and RSS-133 6.5, RSS-139 6.6

- i. In the 1.0 MHz bands immediately outside and adjacent to the equipment's operating frequency block, the emission power per any 1% of the emission bandwidth shall be attenuated (in dB) below the transmitter output power P (dBW) by at least $43 + 10 \log_{10}(\text{watts})$.
- ii. After the first 1.0 MHz, the emission power in any 1 MHz bandwidth shall be attenuated (in dB) below the transmitter output power P (dBW) by at least $43 + 10 \log_{10}(\text{watts})$. If the measurement is performed using 1% of the emission bandwidth, power integration over 1.0 MHz is required.

Complies?	Yes
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Diagram 3.1a, E-TM1.1, B₃, 9 kHz – 3 GHz, Port A:

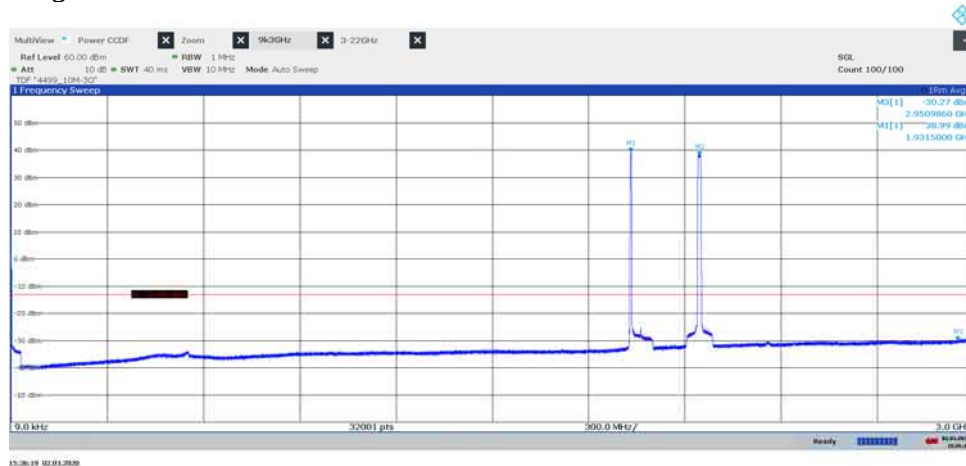


Diagram 3.1b, E-TM1.1, B₃, 3 GHz – 22 GHz, Port A:

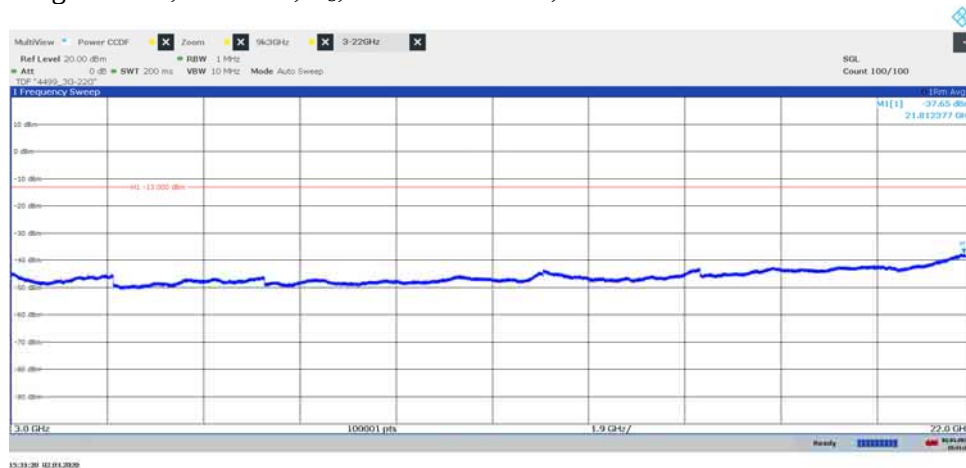


Diagram 3.2a, E-TM1.1, B₂₀, 9 kHz – 3 GHz, Port A:

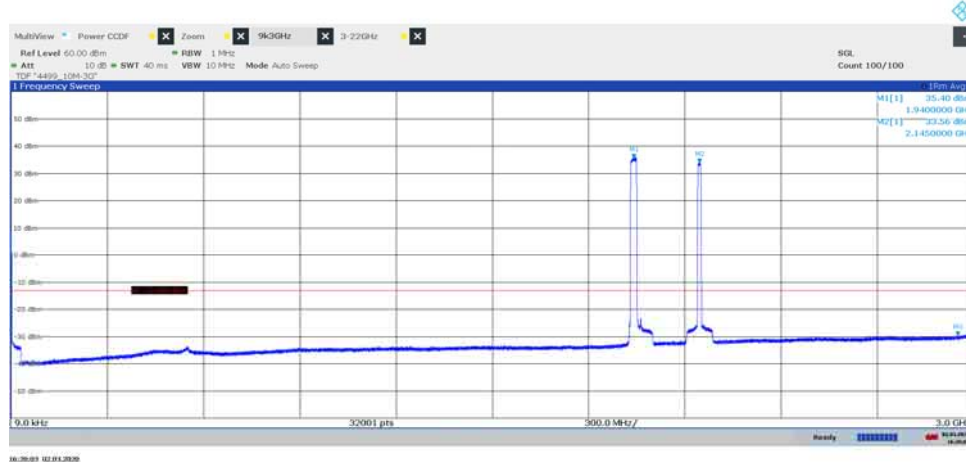


Diagram 3.2b, E-TM1.1, B₂₀, 3 GHz – 22 GHz, Port A:

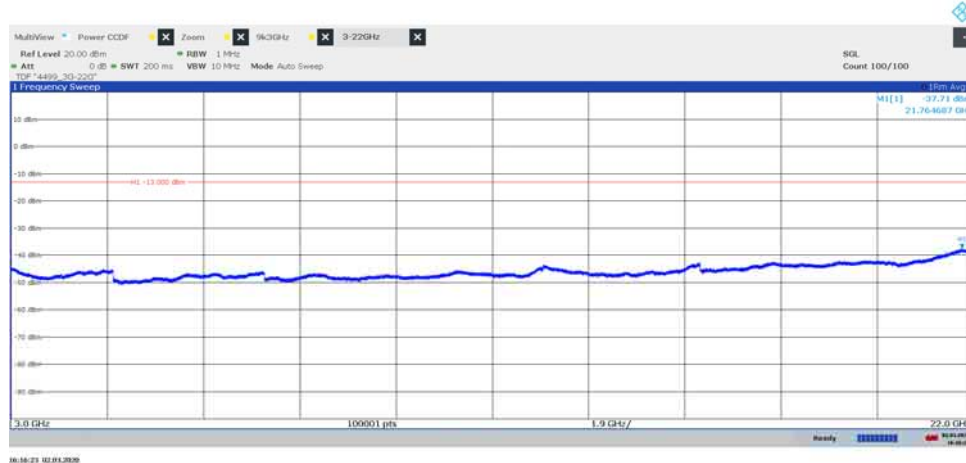


Diagram 3.3a, E-TM1.1, M_{1,4}, 9 kHz – 3 GHz, Port A:



Diagram 3.3b, E-TM1.1, M_{1,4}, 3 GHz – 22 GHz, Port A:



Diagram 3.4a, E-TM1.1, M₃, 9 kHz – 3 GHz, Port A:

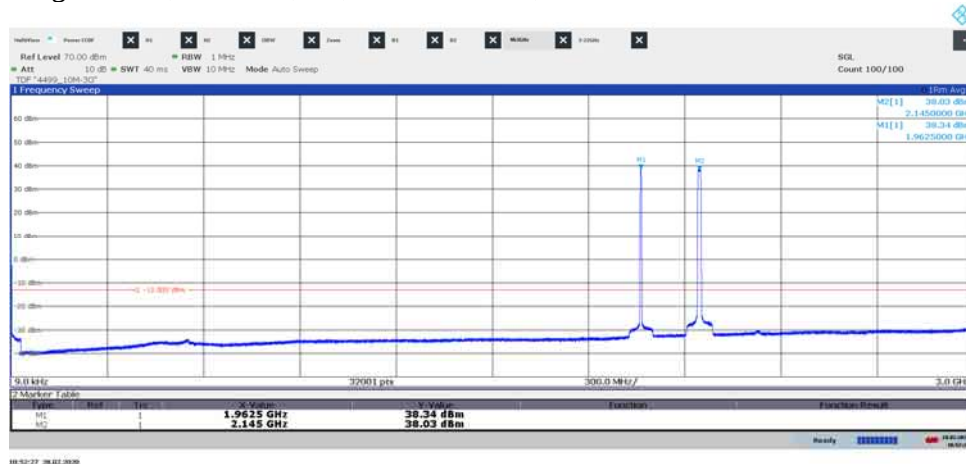


Diagram 3.4b, E-TM1.1, M₃, 3 GHz – 22 GHz, Port A:



Diagram 3.5a, E-TM1.1, M₅, 9 kHz – 3 GHz, Port A:

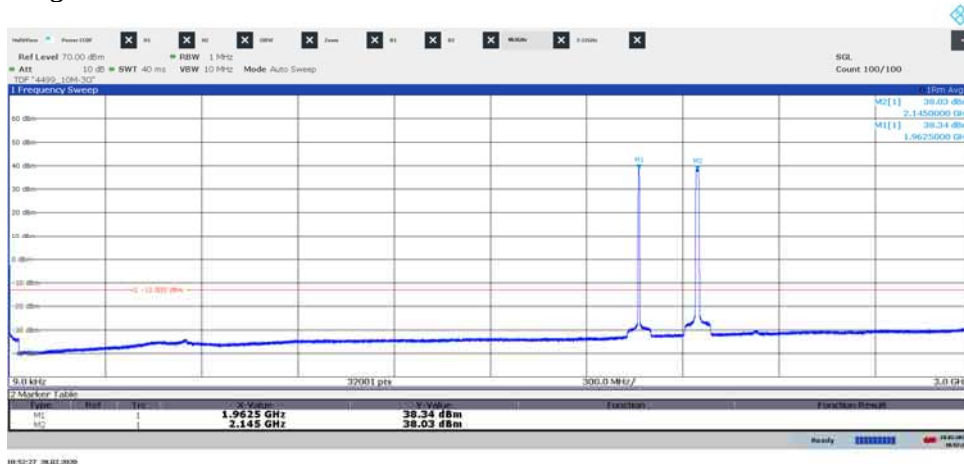


Diagram 3.5b, E-TM1.1, M₅, 3 GHz – 22 GHz, Port A:



Diagram 3.6a, E-TM1.1, M_{10} , 9 kHz – 3 GHz, Port A:

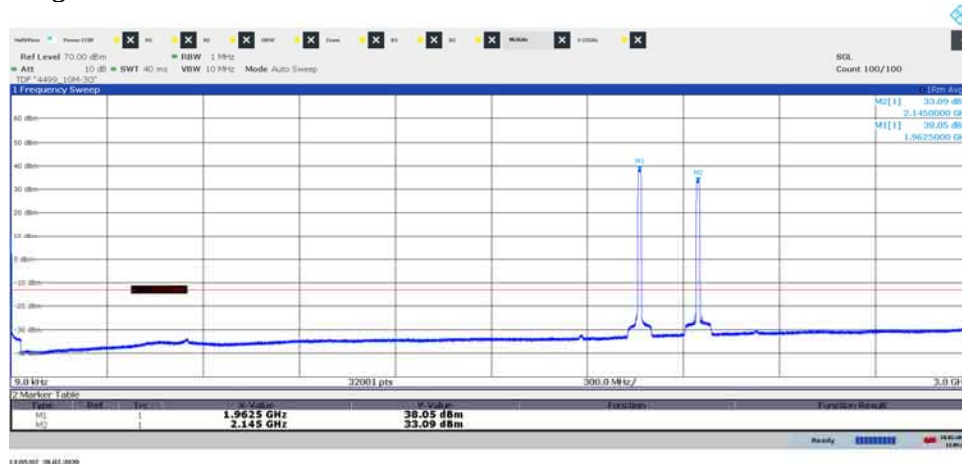


Diagram 3.6b, E-TM1.1, M_{10} , 3 GHz – 22 GHz, Port A:



Diagram 3.7a, E-TM1.1, M₁₀, 9 kHz – 3 GHz, Port B:



Diagram 3.7b, E-TM1.1, M₁₀, 3 GHz – 22 GHz, Port B:

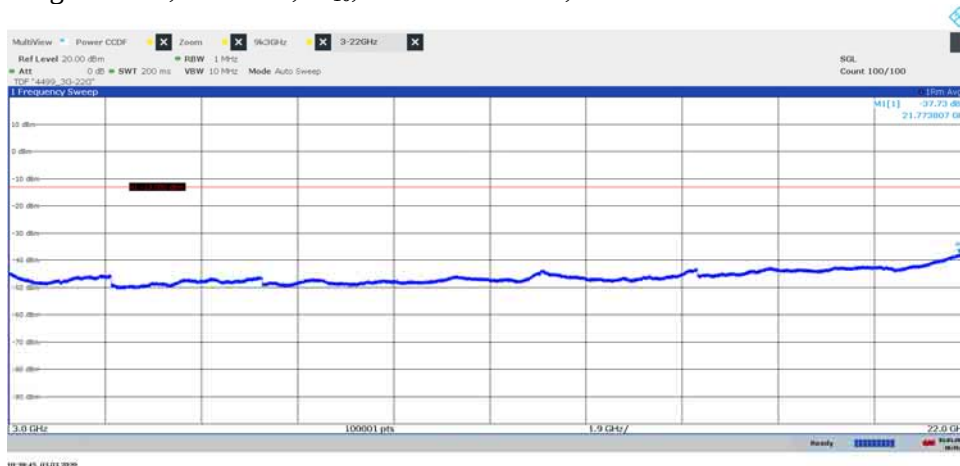


Diagram 3.8a, E-TM1.1, M₁₀, 9 kHz – 3 GHz, Port C:



Diagram 3.8b, E-TM1.1, M₁₀, 3 GHz – 22 GHz, Port C:

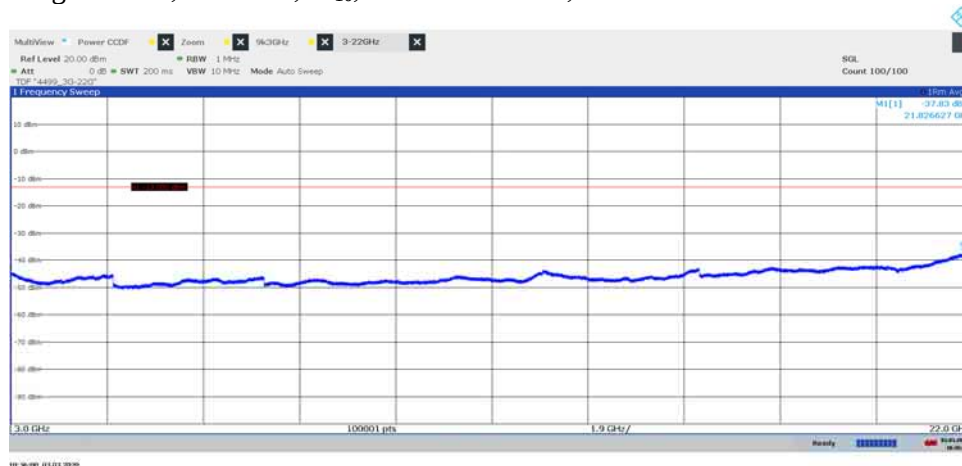


Diagram 3.9a, E-TM1.1, M₁₀, 9 kHz – 3 GHz, Port D:



Diagram 3.9b, E-TM1.1, M₁₀, 3 GHz – 22 GHz, Port D:

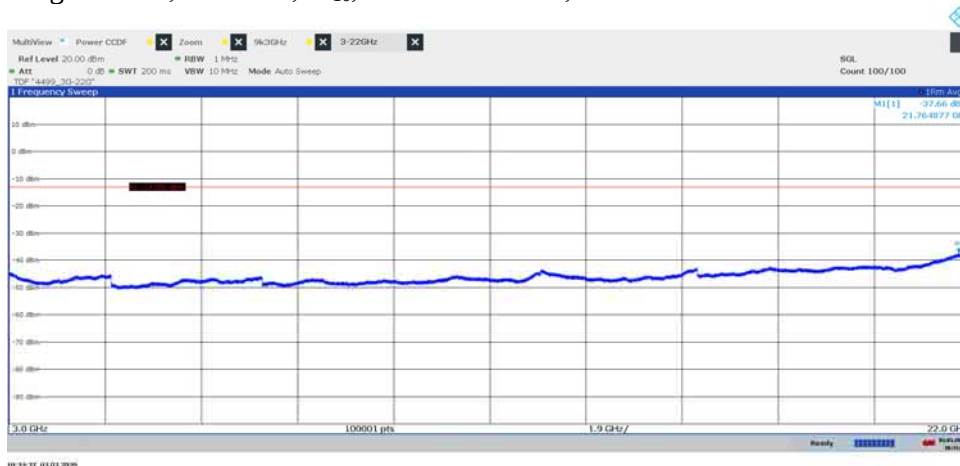


Diagram 3.10a, E-TM1.1, M₁₅, 9 kHz – 3 GHz, Port A:



Diagram 3.10b, E-TM1.1, M₁₅, 3 GHz – 22 GHz, Port A:



Diagram 3.11a, E-TM1.1, M₂₀, 9 kHz – 3 GHz, Port A:

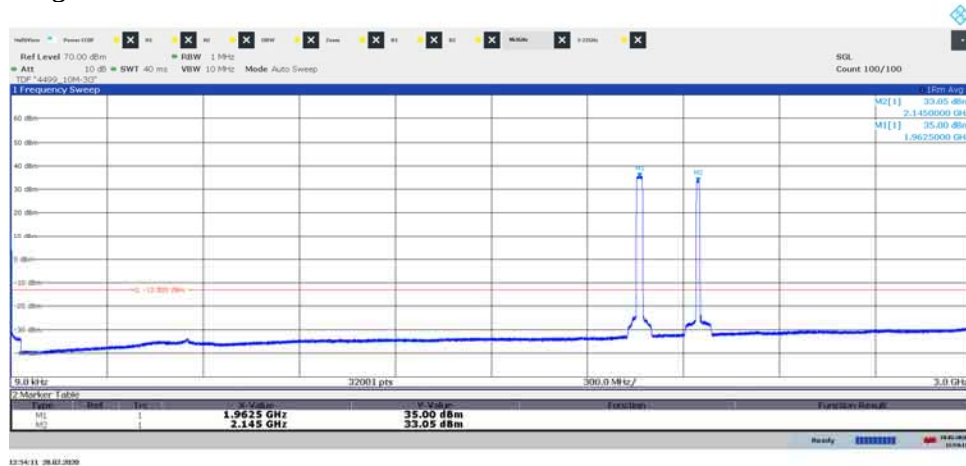


Diagram 3.11b, E-TM1.1, M₂₀, 3 GHz – 22 GHz, Port A:



Diagram 3.12a, E-TM1.1, T₃, 9 kHz – 3 GHz, Port A:

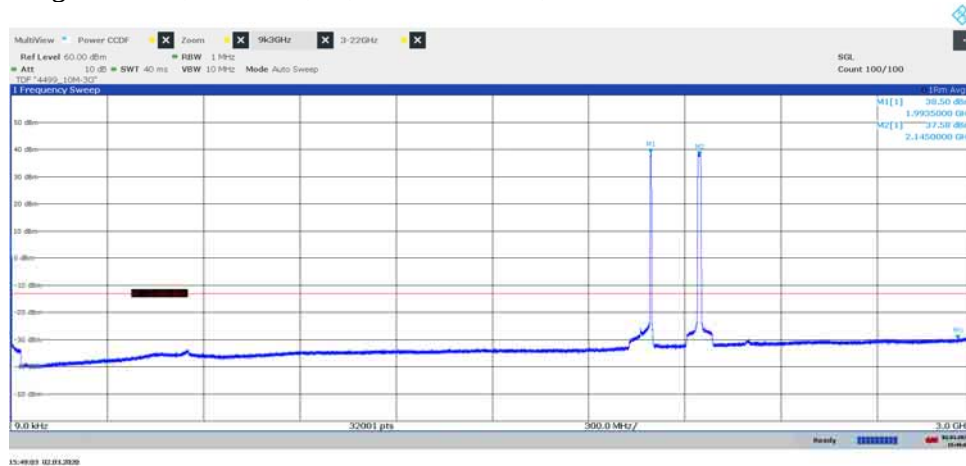


Diagram 3.12b, E-TM1.1, T₃, 3 GHz – 22 GHz, Port A:

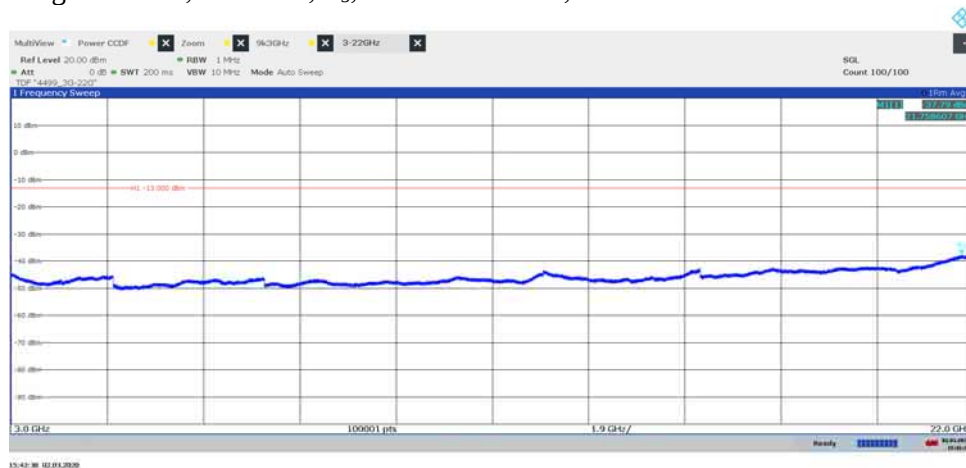


Diagram 3.13a, E-TM1.1, T_{20} , 9 kHz – 3 GHz, Port A:

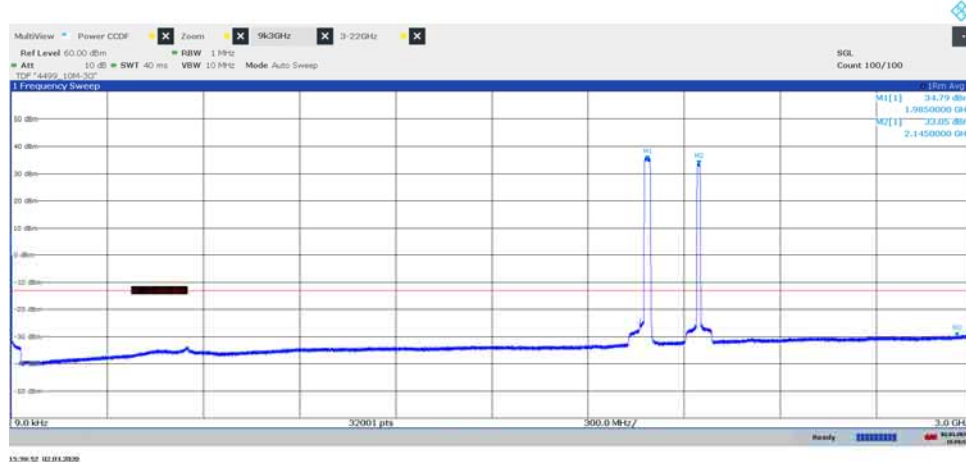


Diagram 3.13b, E-TM1.1, T_{20} , 3 GHz – 22 GHz, Port A:

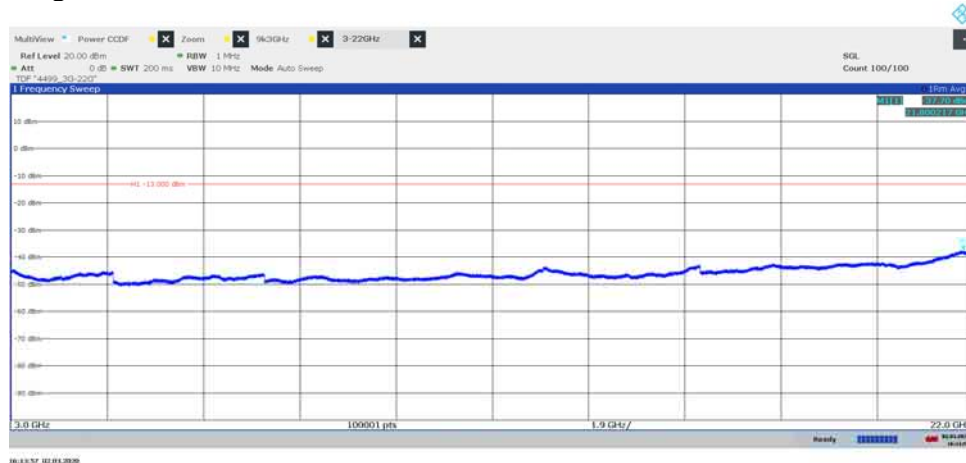


Diagram 3.14a, E-TM1.1, Bim₃, 9 kHz – 3 GHz, Port A:

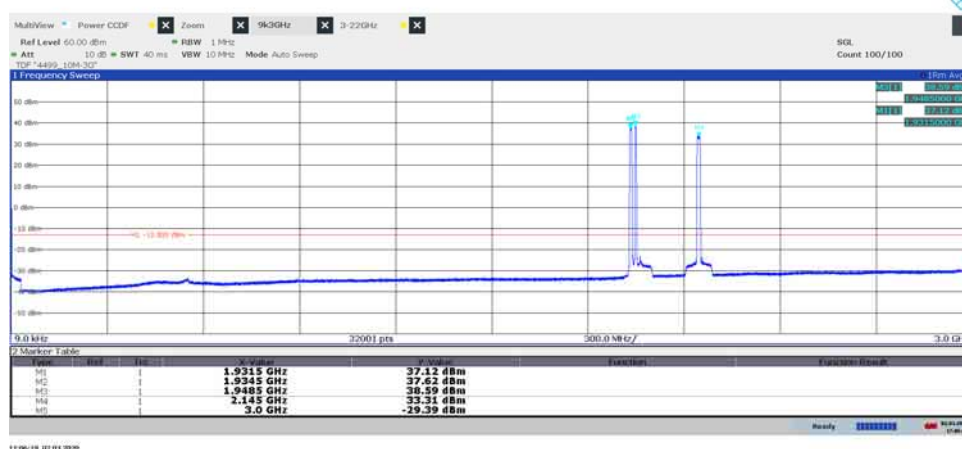
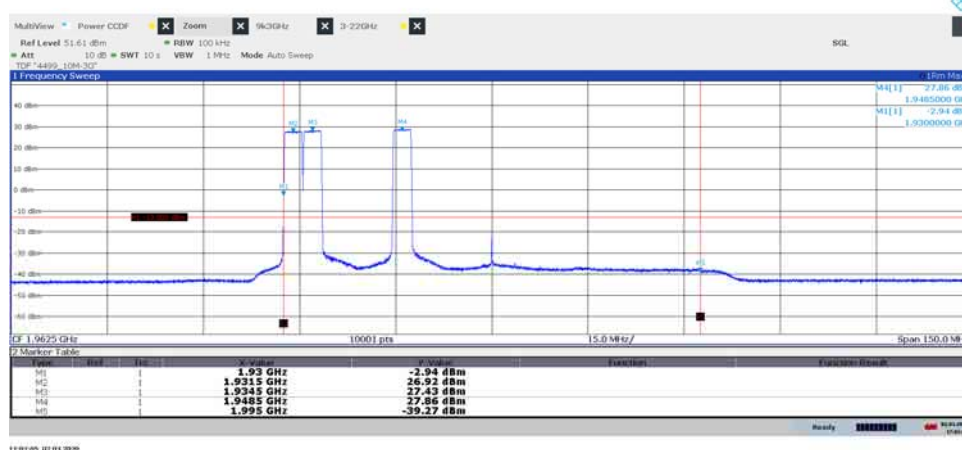


Diagram 3.14b, E-TM1.1, Bim₃, 1.8875 GHz – 2.0375 GHz, Port A:



Note: The purpose of this measurement is to find IM products, not to verify compliance at the edges.

Diagram 3.14c, E-TM1.1, Bim₃, 3 GHz – 22 GHz, Port A:

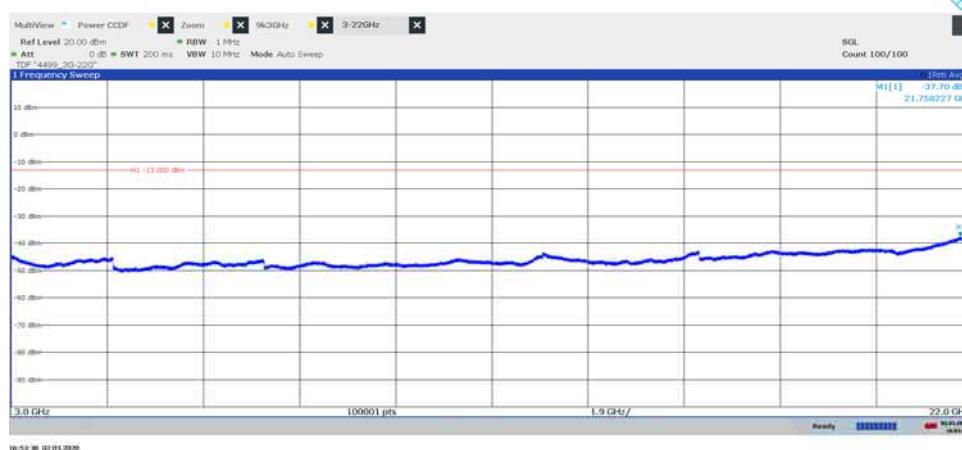


Diagram 3.15a, E-TM1.1, Tim₃, 9 kHz – 3 GHz, Port A:

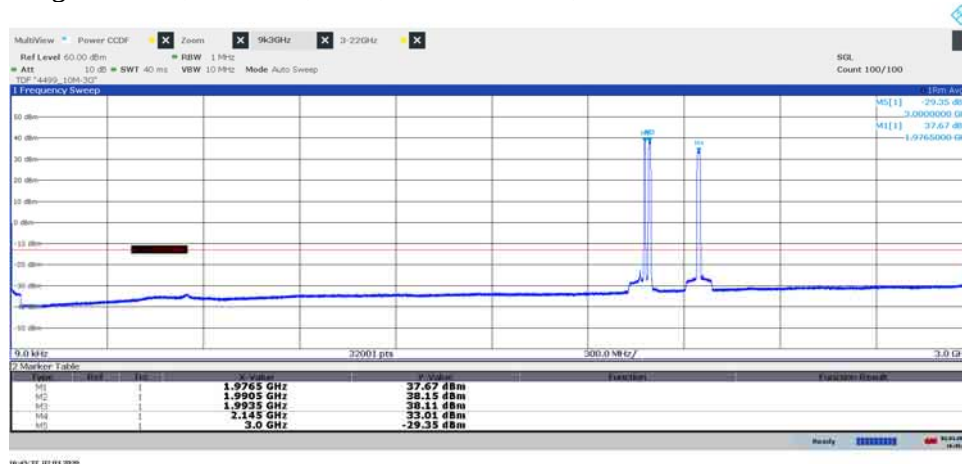
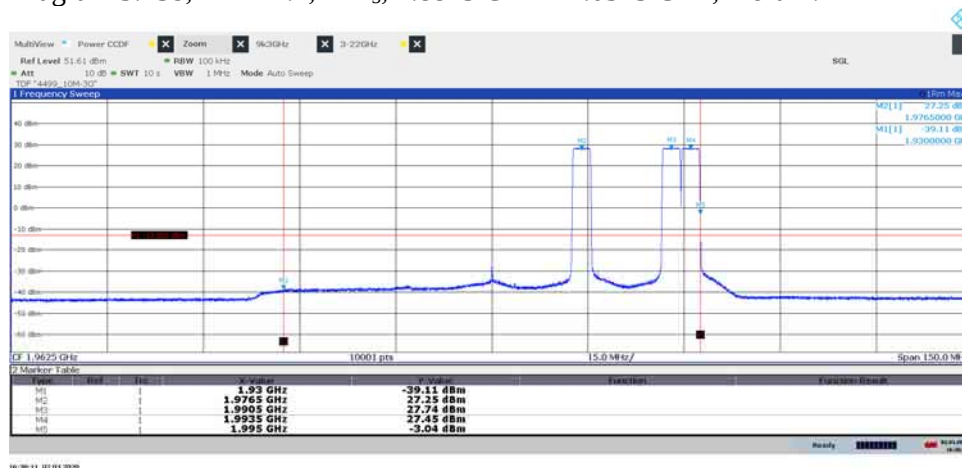


Diagram 3.15b, E-TM1.1, Tim₃, 1.8875 GHz – 2.0375 GHz, Port A:



Note: The purpose of this measurement is to find IM products, not to verify compliance at the Band edges.

Diagram 3.15c, E-TM1.1, Tim₃, 3 GHz – 22 GHz, Port A:

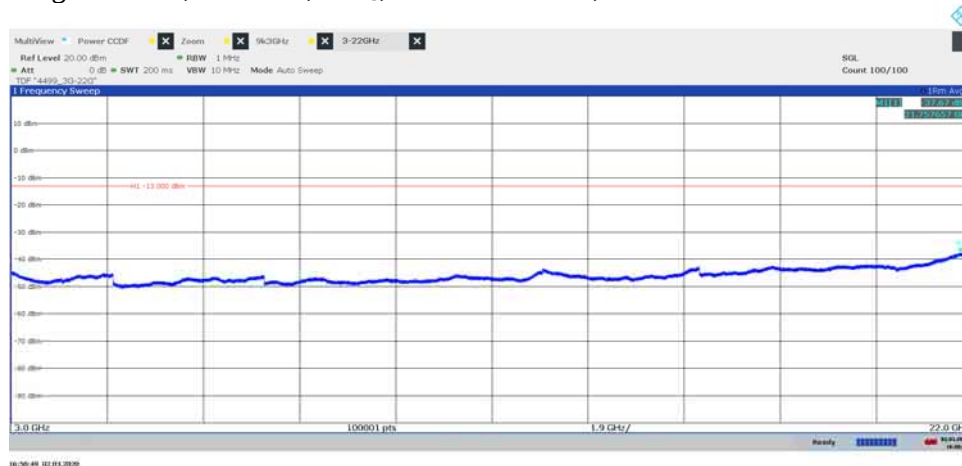


Diagram 3.16a, E-TM1.1, M6₁₀, 9 kHz – 3 GHz, Port A:



Diagram 3.16b, E-TM1.1, M6₁₀, 1.8875 GHz – 2.0375 GHz, Port A:

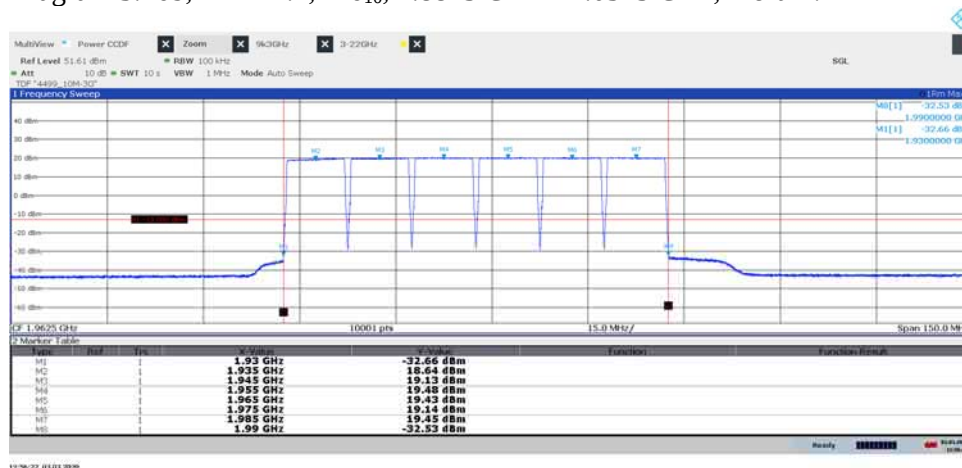


Diagram 3.16c, E-TM1.1, M6₁₀, 3 GHz – 22 GHz, Port A:

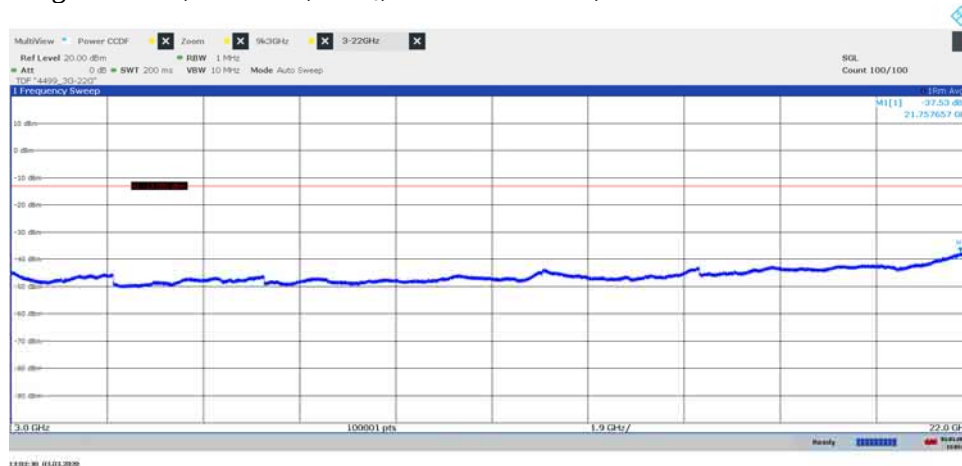


Diagram 3.17a, E-TM1.1, B₁₀, 9 kHz – 3 GHz, Port B:

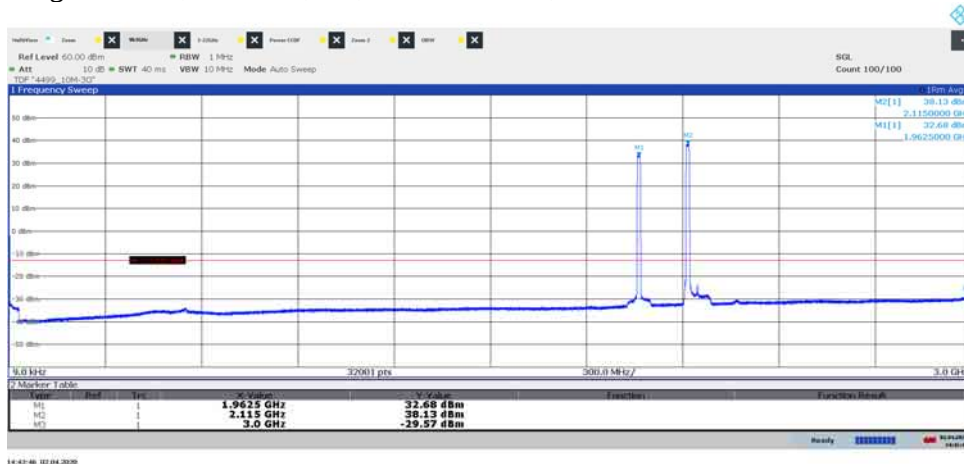


Diagram 3.17b, E-TM1.1, B₁₀, 3 GHz – 22 GHz, Port B:



Diagram 3.18a, E-TM1.1, M₅, 9 kHz – 3 GHz, Port B:

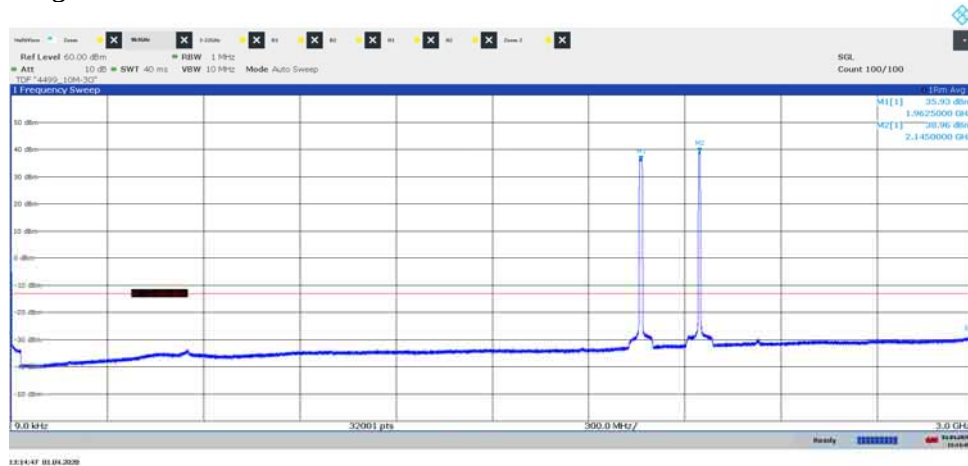


Diagram 3.18b, E-TM1.1, M₅, 3 GHz – 22 GHz, Port B:



Diagram 3.19a, E-TM1.1, M_{10} , 9 kHz – 3 GHz, Port A:

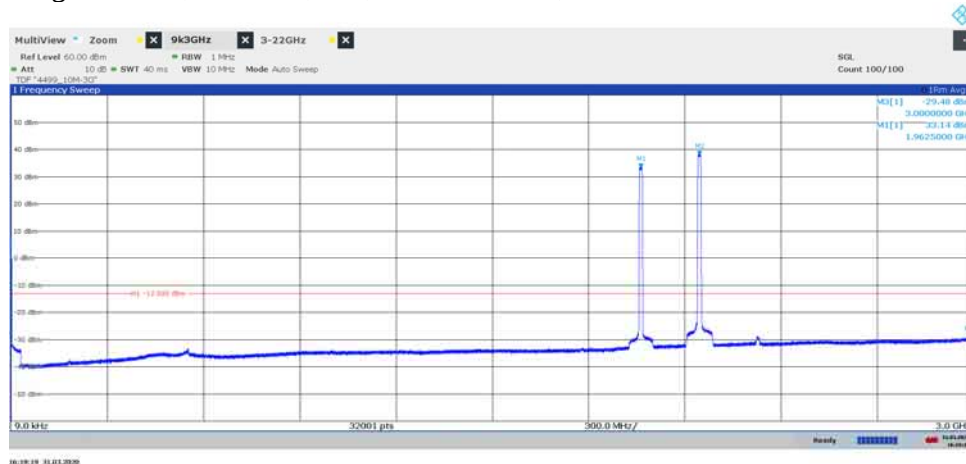


Diagram 3.19b, E-TM1.1, M_{10} , 3 GHz – 22 GHz, Port A:

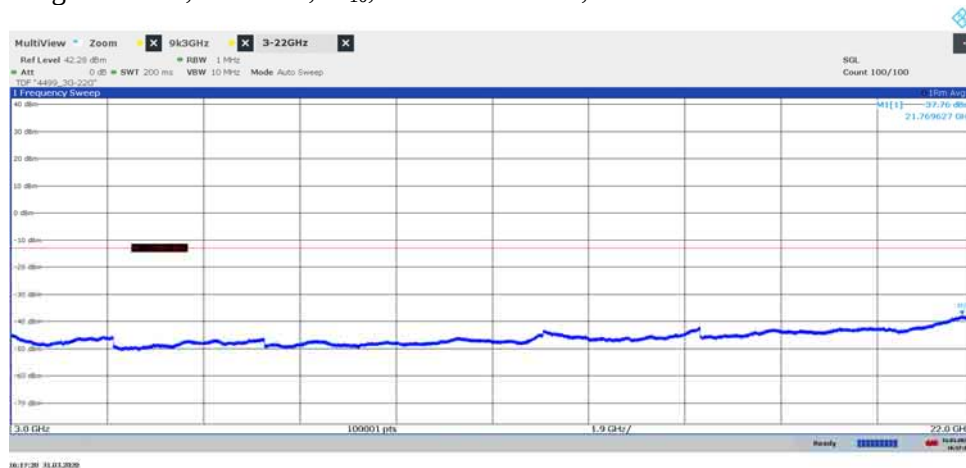


Diagram 3.20a, E-TM1.1, M_{10} , 9 kHz – 3 GHz, Port B:

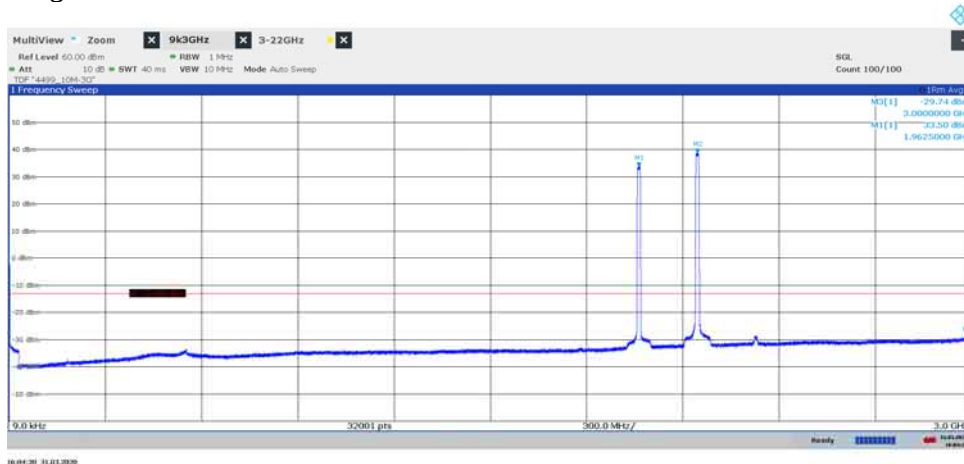


Diagram 3.20b, E-TM1.1, M_{10} , 3 GHz – 22 GHz, Port B:

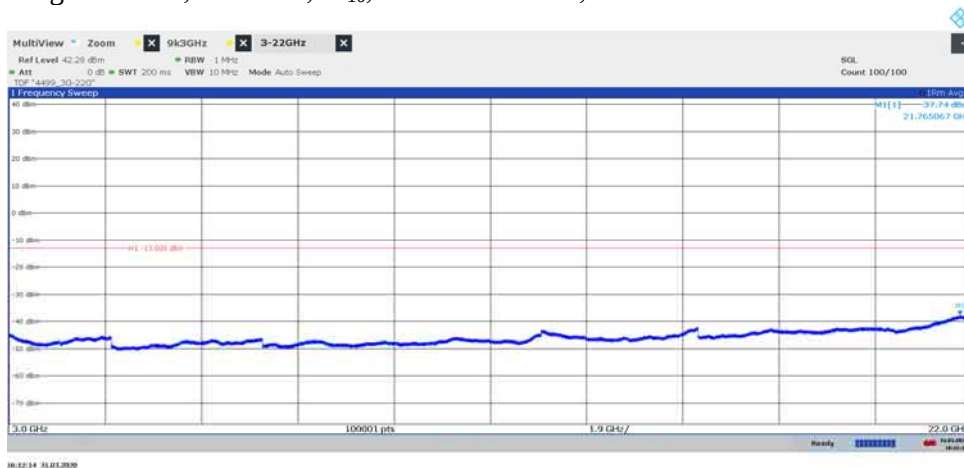


Diagram 3.21a, E-TM1.1, M_{10} , 9 kHz – 3 GHz, Port C:

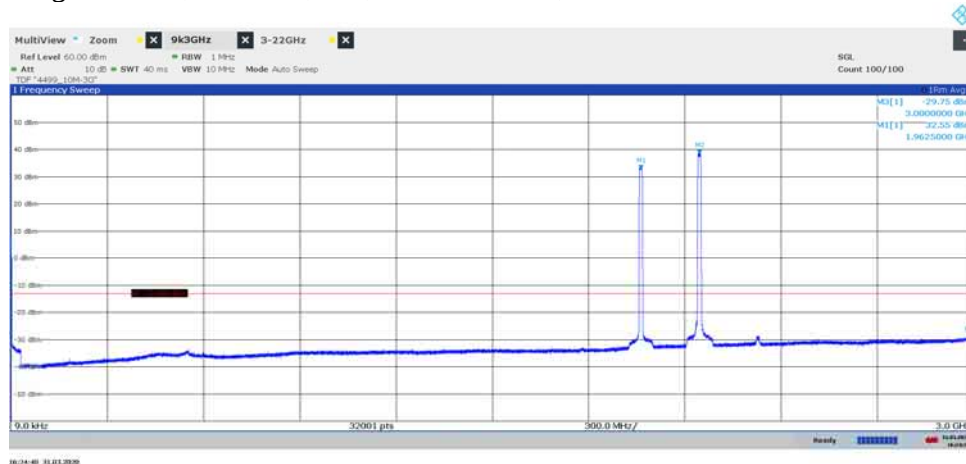


Diagram 3.21b, E-TM1.1, M_{10} , 3 GHz – 22 GHz, Port C:

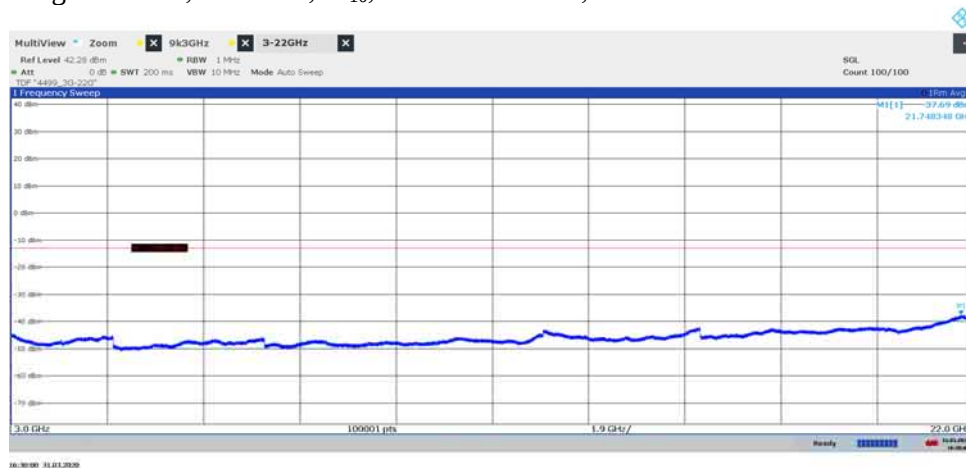


Diagram 3.22a, E-TM1.1, M_{10} , 9 kHz – 3 GHz, Port D:

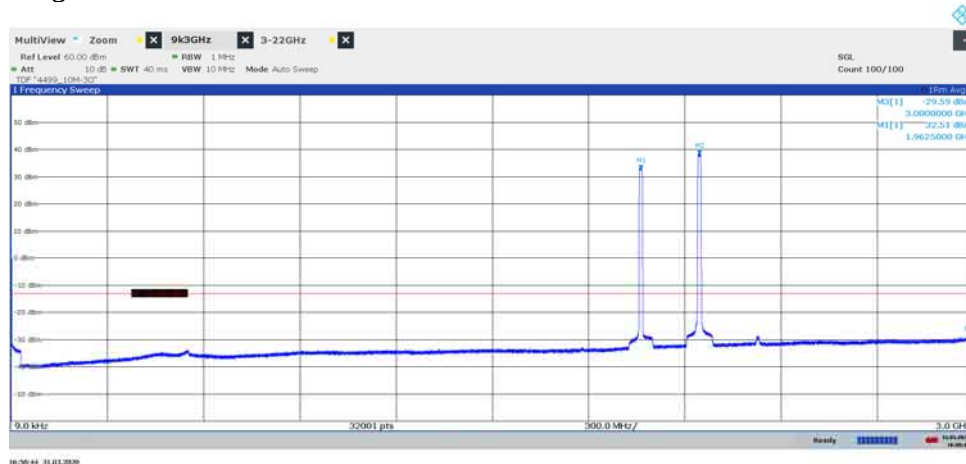


Diagram 3.22b, E-TM1.1, M_{10} , 3 GHz – 22 GHz, Port D:

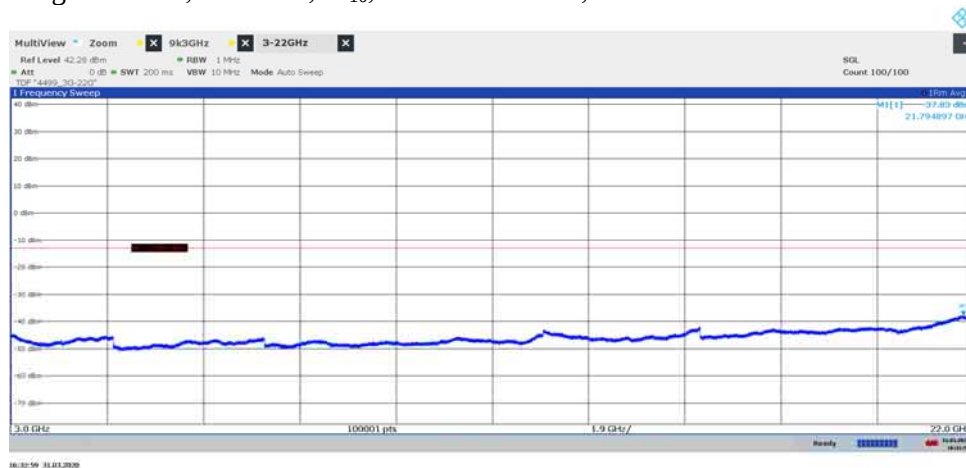


Diagram 3.23a, E-TM1.1, M₁₅, 9 kHz – 3 GHz, Port B:

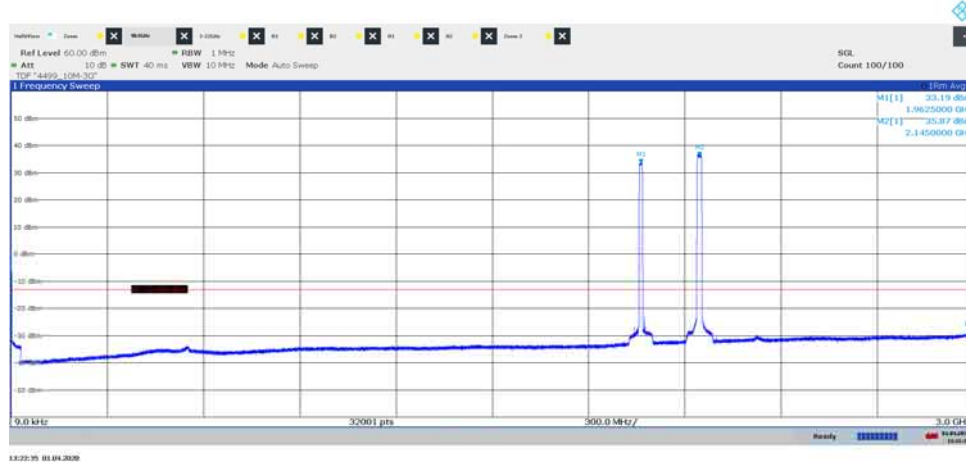


Diagram 3.23b, E-TM1.1, M₁₅, 3 GHz – 22 GHz, Port B:



Diagram 3.24a, E-TM1.1, M₂₀, 9 kHz – 3 GHz, Port B:

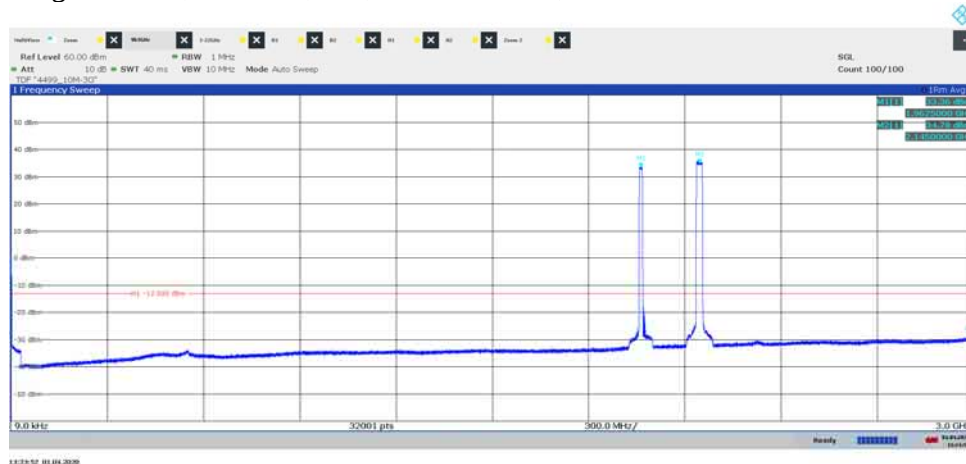


Diagram 3.24b, E-TM1.1, M₂₀, 3 GHz – 22 GHz, Port B:



Diagram 3.25a, E-TM1.1, T_{10} , 9 kHz – 3 GHz, Port B:



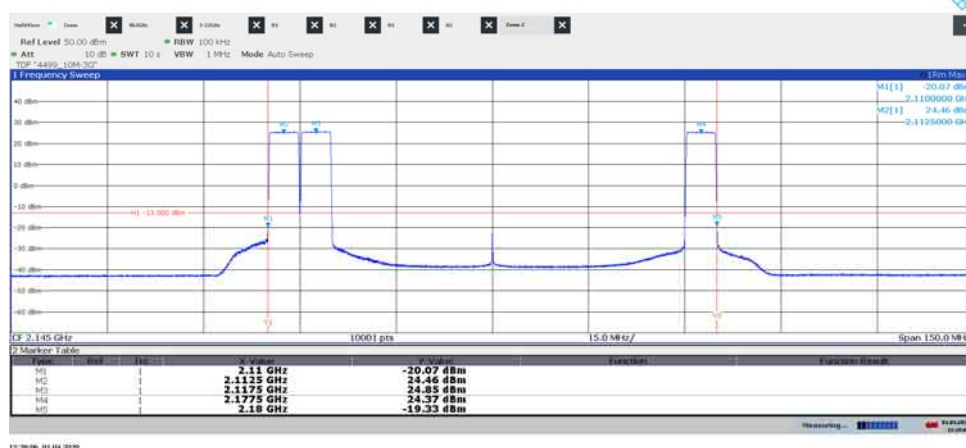
Diagram 3.25b, E-TM1.1, T_{10} , 3 GHz – 22 GHz, Port B:



Diagram 3.26a, E-TM1.1, Bim₅, 9 kHz – 3 GHz, Port B:



Diagram 3.26b, E-TM1.1, Bim₅, 2.07 GHz – 2.22 GHz, Port B:



Note: The purpose of this measurement is to find IM products, not to verify compliance at the Band edges.

Diagram 3.26c, E-TM1.1, Bim₅, 3 GHz – 22 GHz, Port B:

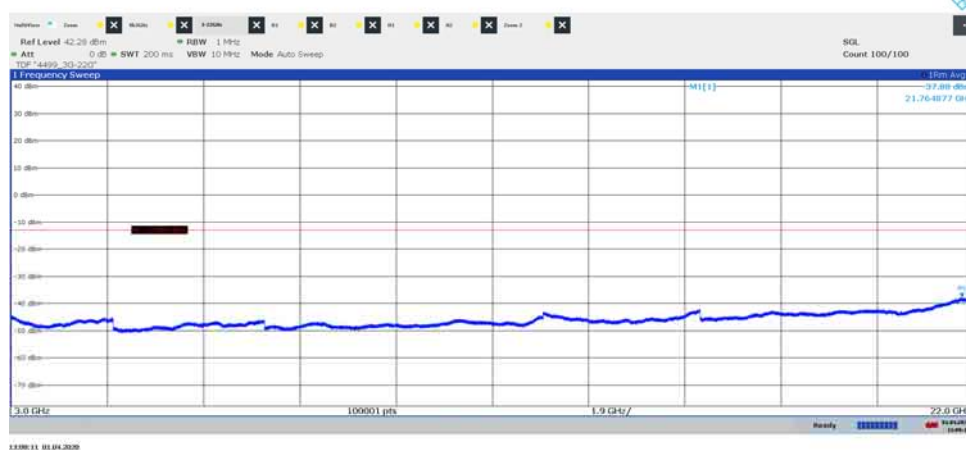
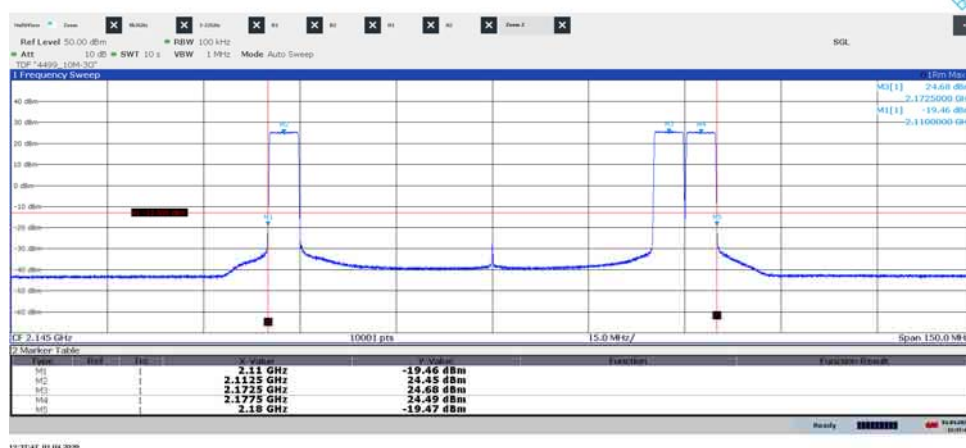


Diagram 3.27a, E-TM1.1, Tim₅, 9 kHz – 3 GHz, Port B:



Diagram 3.27b, E-TM1.1, Tim₅, 2.07 GHz – 2.22 GHz, Port B:



Note: The purpose of this measurement is to find IM products, not to verify compliance at the Band edges.

Diagram 3.27c, E-TM1.1, Tim₅, 3 GHz – 22 GHz, Port B:

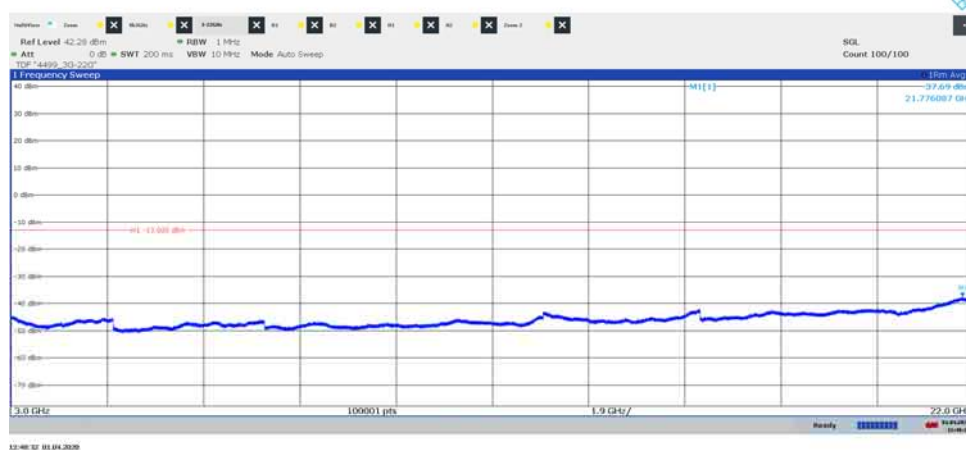


Diagram 3.28a, E-TM1.1, M6₁₀, 9 kHz – 3 GHz, Port B:



Diagram 3.28b, E-TM1.1, M6₁₀, 2.07 GHz – 2.22 GHz, Port B:

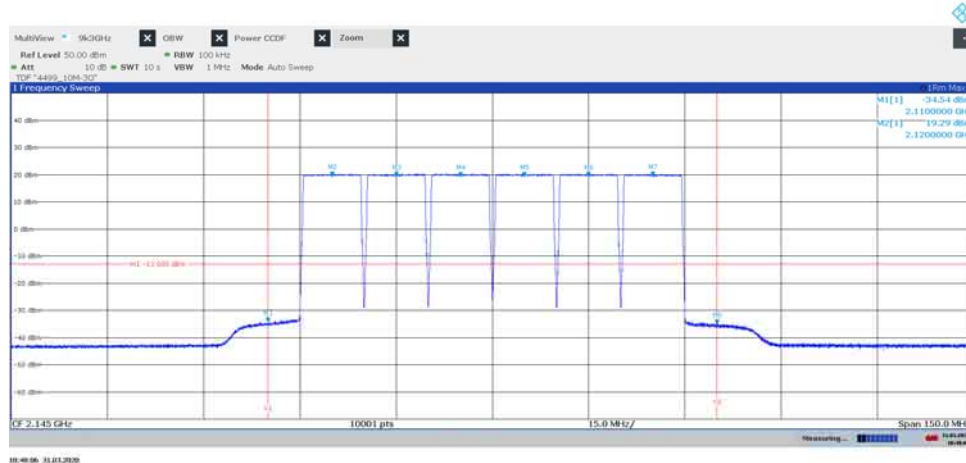


Diagram 3.28c, E-TM1.1, M6₁₀, 3 GHz – 22 GHz, Port B:

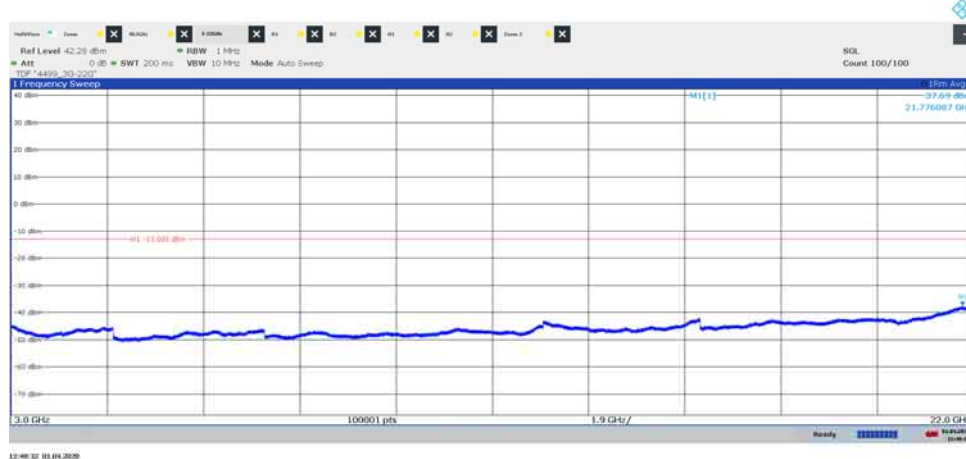


Diagram 3.29a, GSM: GMSK, LTE: E-TM1.1, B_{G+L} , 9 kHz – 3 GHz, Port B:

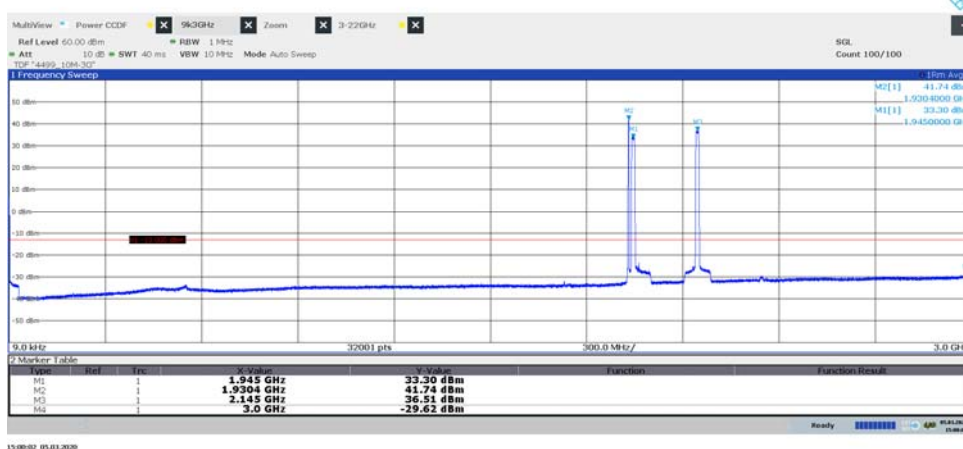


Diagram 3.29b, GSM: GMSK, LTE: E-TM1.1, B_{G+L} , 3 GHz – 22 GHz, Port B:

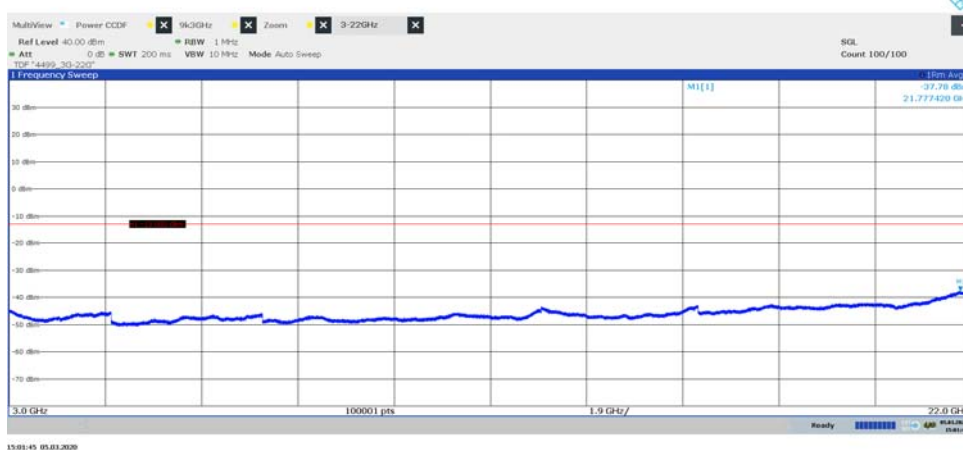


Diagram 3.30a, GSM: GMSK, LTE: E-TM1.1, M_{G+L} , 9 kHz – 3 GHz, Port A:



Diagram 3.30b, GSM: GMSK, LTE: E-TM1.1, M_{G+L} , 3 GHz – 22 GHz, Port A:

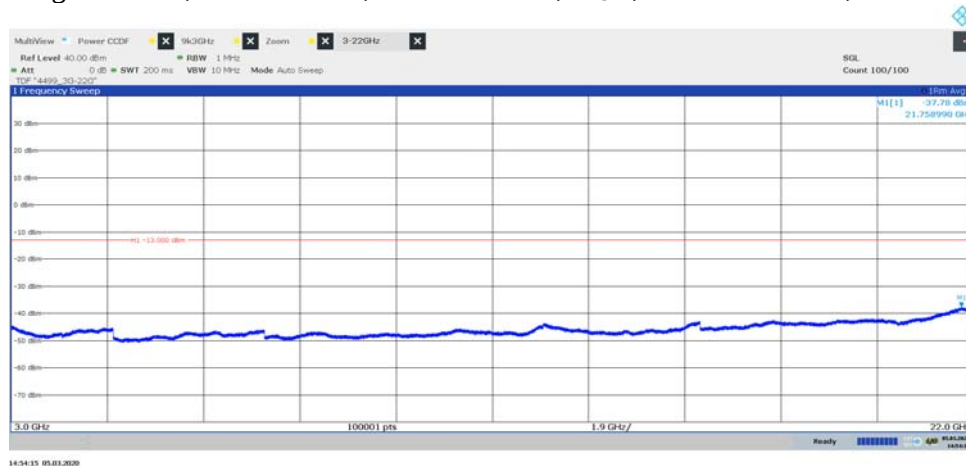


Diagram 3.31a, GSM: GMSK, LTE: E-TM1.1, M_{G+L} , 9 kHz – 3 GHz, Port B:

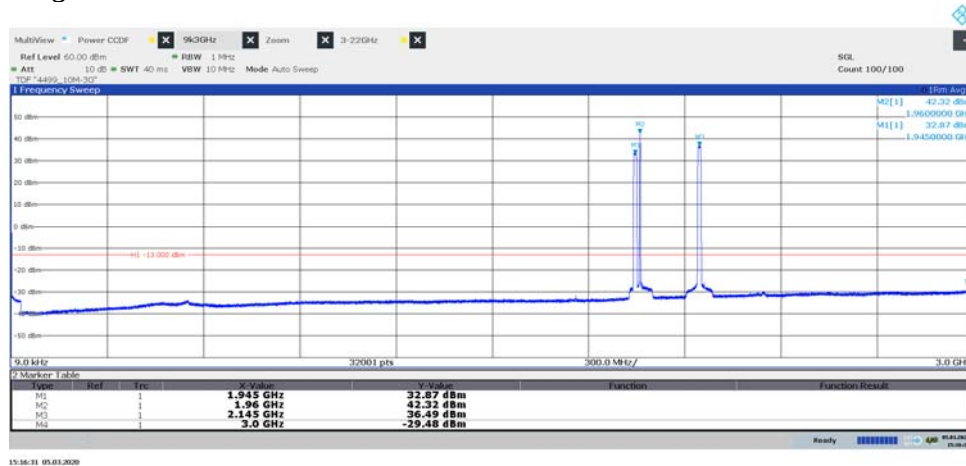


Diagram 3.31b, GSM: GMSK, LTE: E-TM1.1, M_{G+L} , 3 GHz – 22 GHz, Port B:

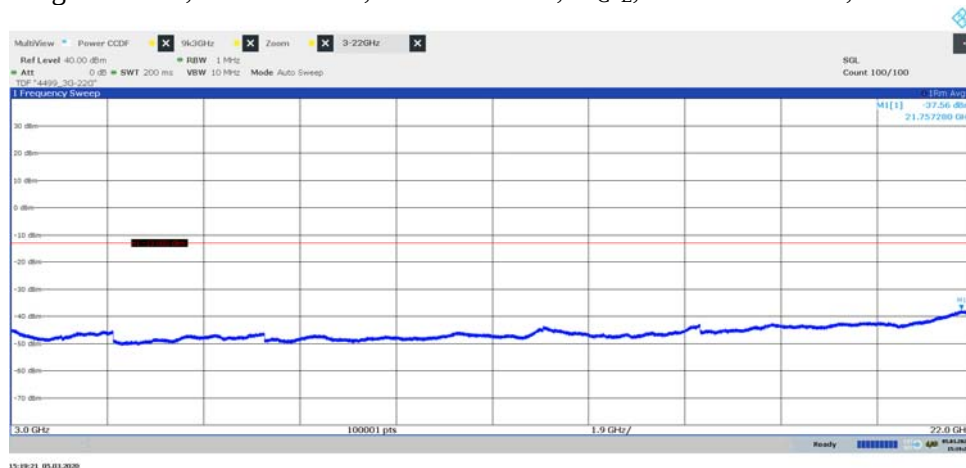


Diagram 3.32a, GSM: GMSK, LTE: E-TM1.1, M_{G+L} , 9 kHz – 3 GHz, Port C:

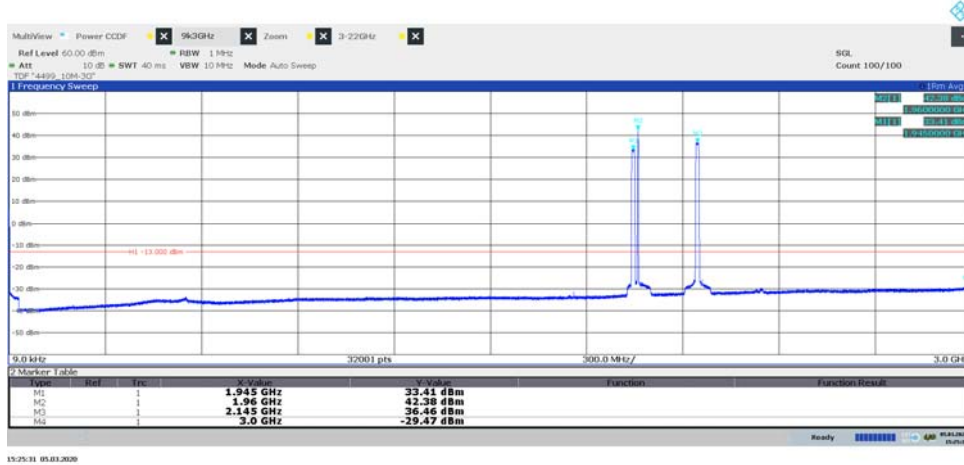


Diagram 3.32b, GSM: GMSK, LTE: E-TM1.1, M_{G+L} , 3 GHz – 22 GHz, Port C:

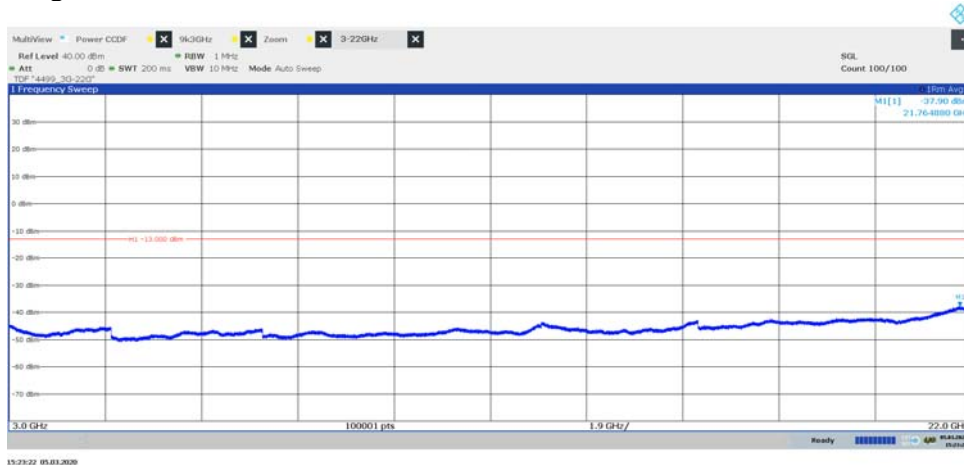


Diagram 3.33a, GSM: GMSK, LTE: E-TM1.1, M_{G+L} , 9 kHz – 3 GHz, Port D:



Diagram 3.33b, GSM: GMSK, LTE: E-TM1.1, M_{G+L} , 3 GHz – 22 GHz, Port D:

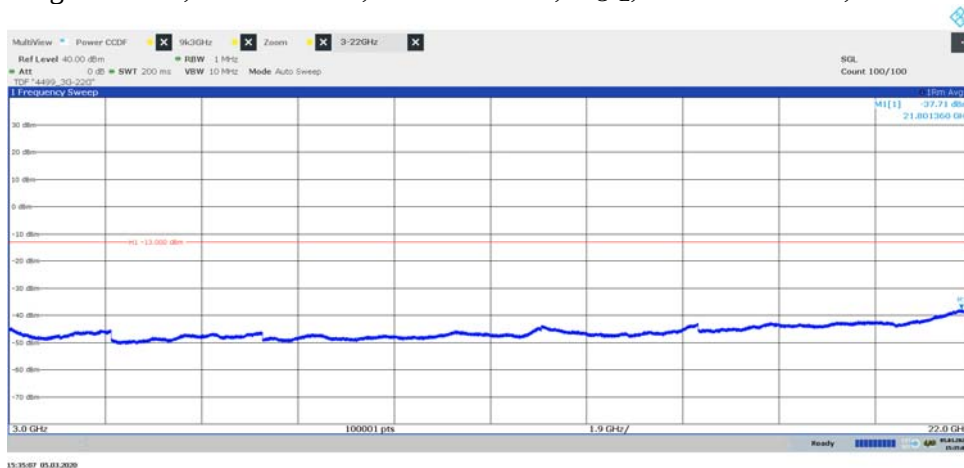


Diagram 3.34a, GSM: GMSK, LTE: E-TM1.1, T_{G+L} , 9 kHz – 3 GHz, Port A:

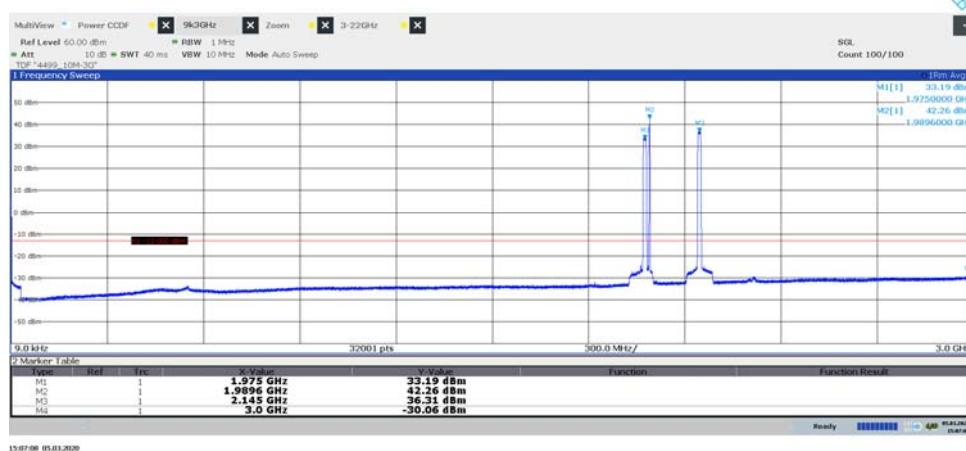


Diagram 3.34b, GSM: GMSK, LTE: E-TM1.1, T_{G+L} , 3 GHz – 22 GHz, Port A:

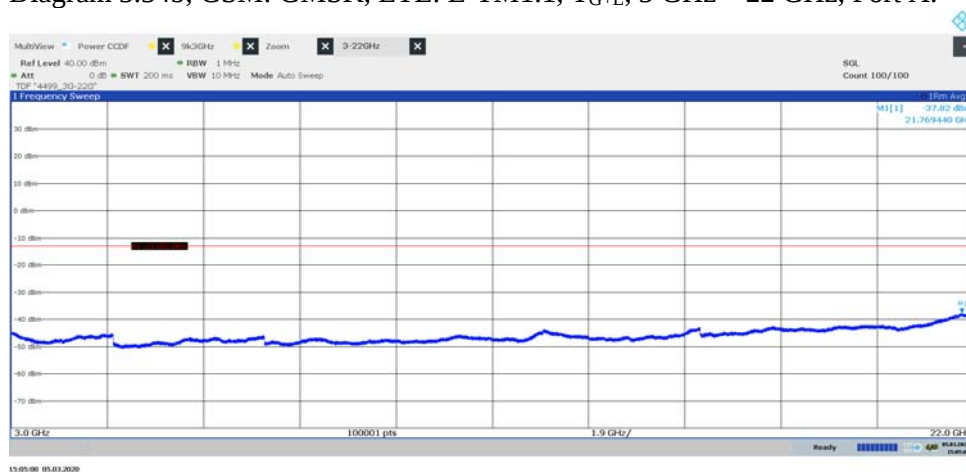


Diagram 3.35a, GSM: GMSK, LTE: E-TM1.1, M4_{G+L}, 9 kHz – 3 GHz, Port A:

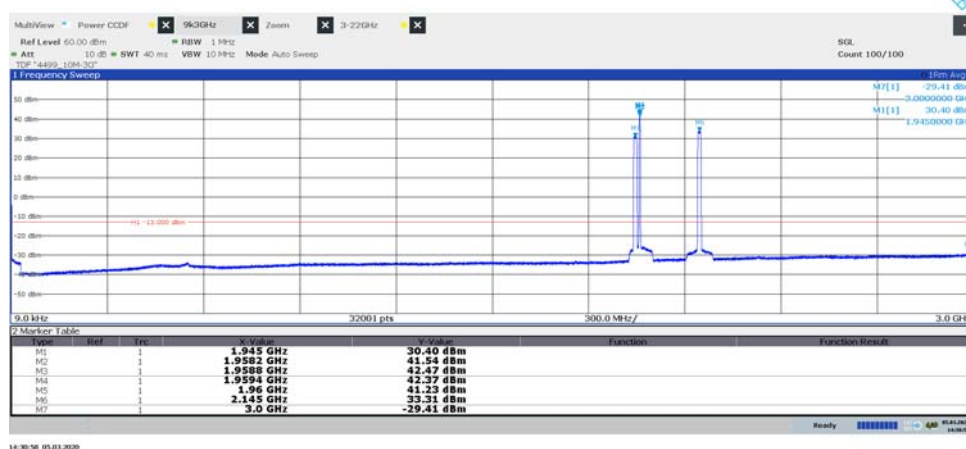


Diagram 3.35b, GSM: GMSK, LTE: E-TM1.1, M4_{G+L}, 1.885 GHz – 2.035 GHz, Port A:

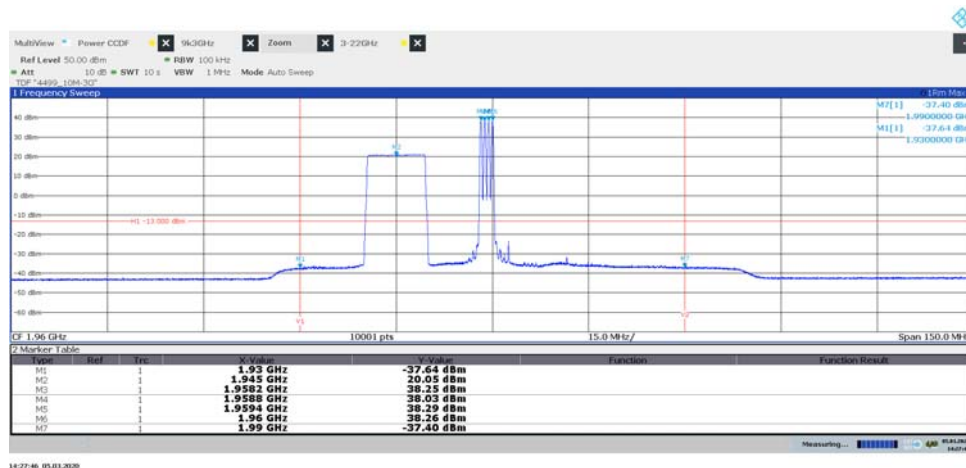


Diagram 3.35c, GSM: GMSK, LTE: E-TM1.1, M4_{G+L}, 3 GHz – 22 GHz, Port A:

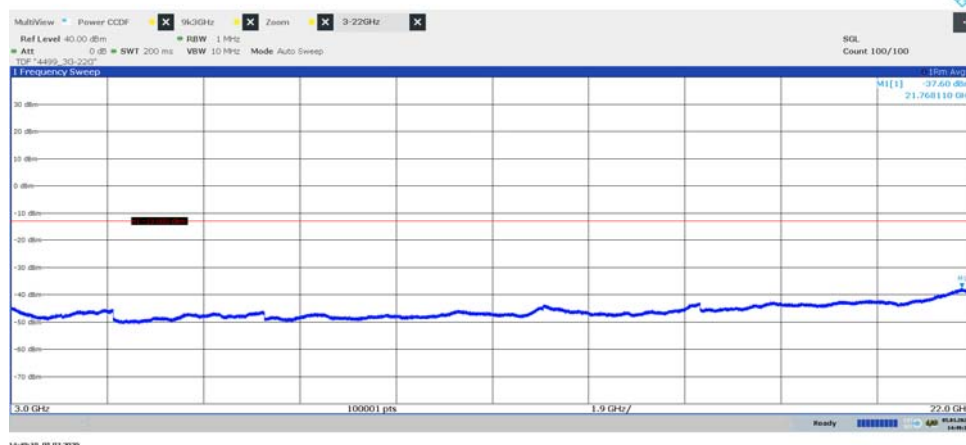


Diagram 3.36a, GSM: 8PSK, LTE: E-TM1.1, Bim_{G+L}, 9 kHz – 3 GHz, Port B:

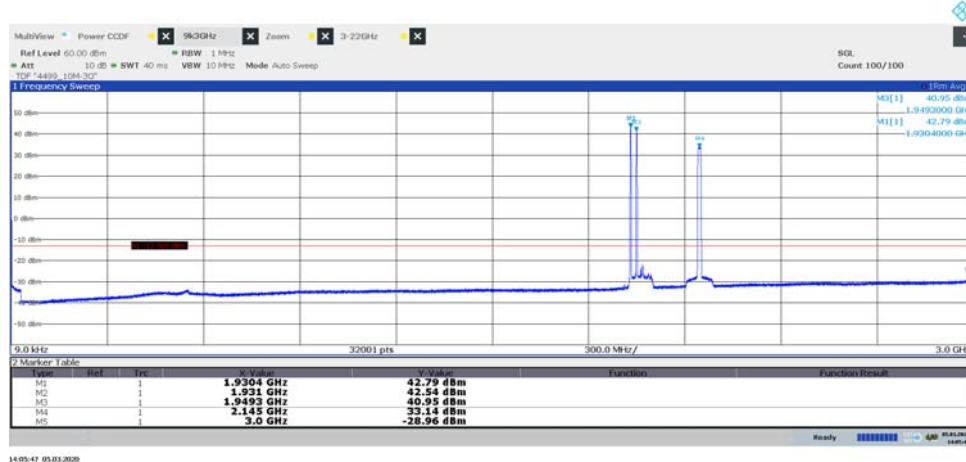
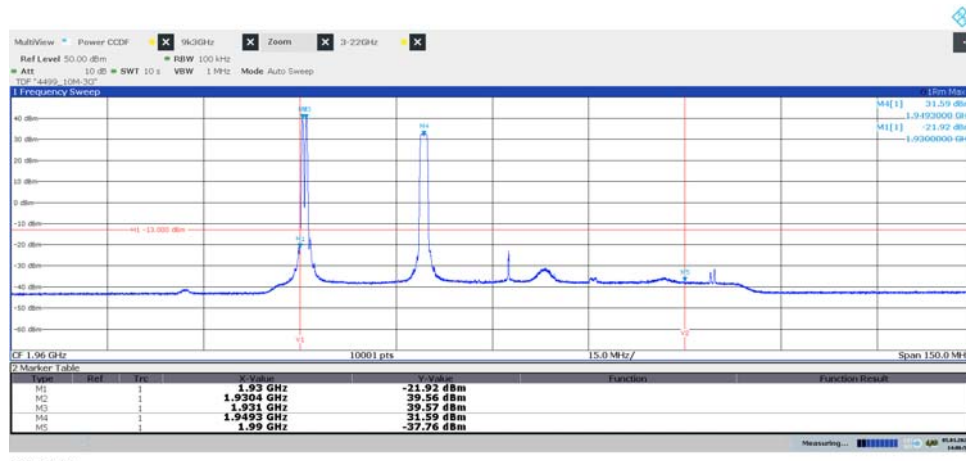


Diagram 3.36b, GSM: 8PSK, LTE: E-TM1.1, Bim_{G+L}, 1.885 GHz – 2.035 GHz, Port B:



Note: The purpose of this measurement is to find IM products, not to verify compliance at the Band edges.

Diagram 3.36c, GSM: 8PSK, LTE: E-TM1.1, Bim_{G+L}, 3 GHz – 22 GHz, Port B:

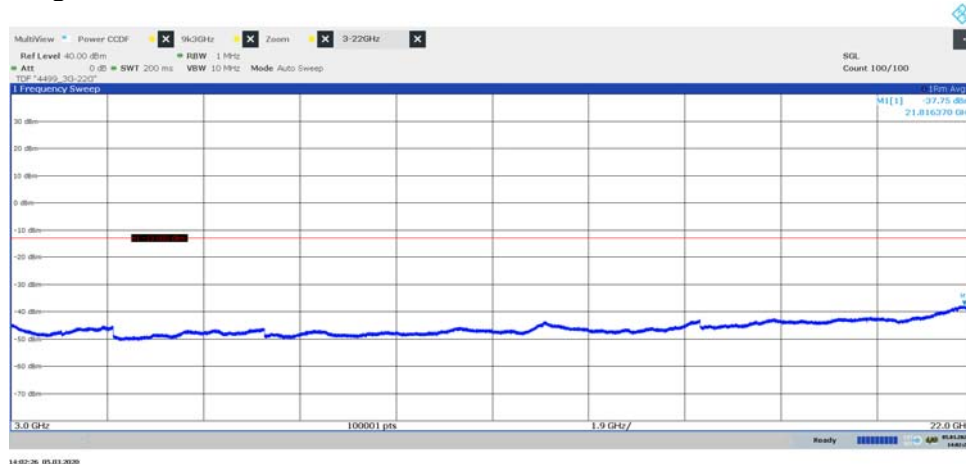


Diagram 3.37a, GSM: 8PSK, LTE: E-TM1.1, Tim_{G+L}, 9 kHz – 3 GHz, Port B:

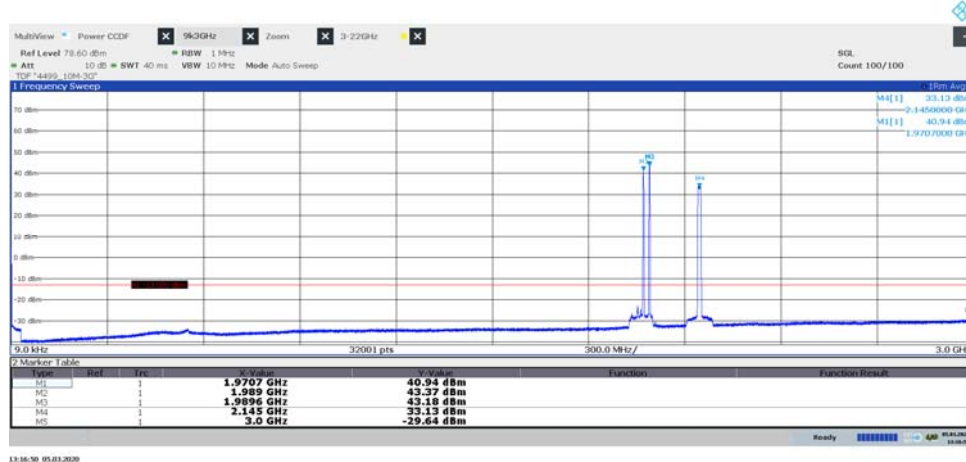
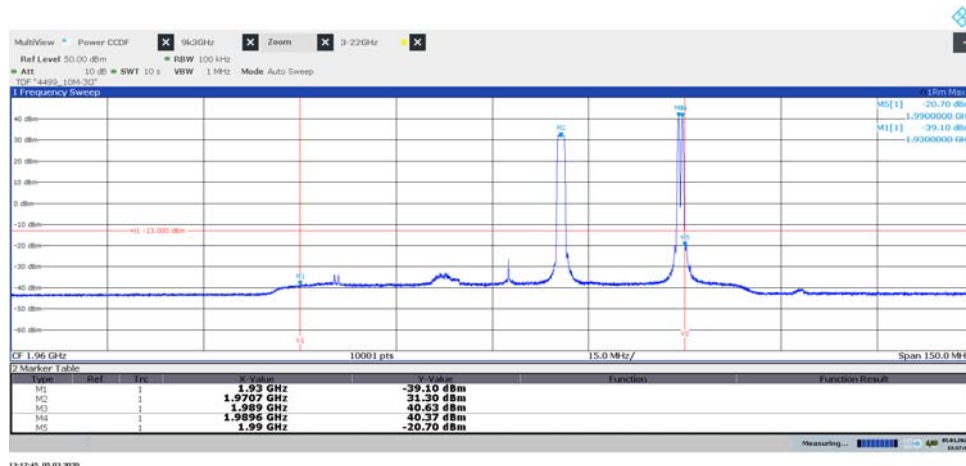


Diagram 3.37b, GSM: 8PSK, LTE: E-TM1.1, Tim_{G+L}, 1.885 GHz – 2.035 GHz, Port B:



Note: The purpose of this measurement is to find IM products, not to verify compliance at the Band edges.

Diagram 3.37c, GSM: 8PSK, LTE: E-TM1.1, Tim_{G+L}, 3 GHz – 22 GHz, Port A:

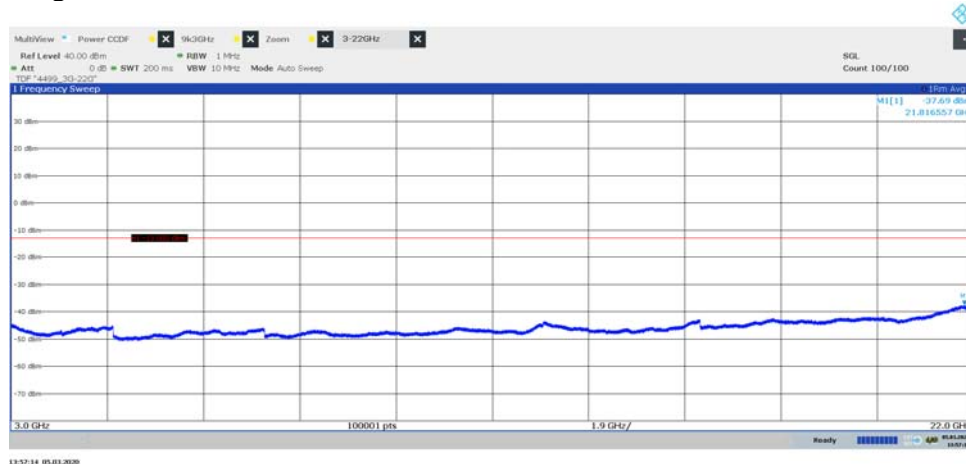
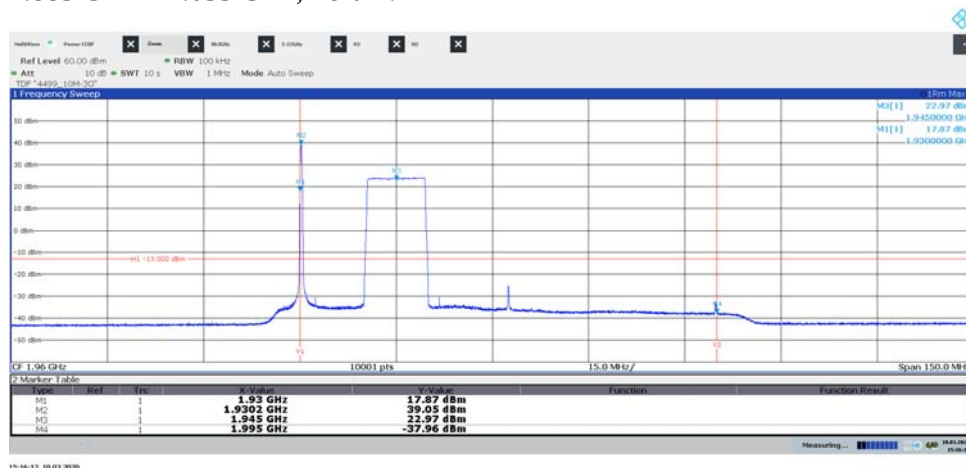


Diagram 3.38a, NB IoT SA: N-TM, LTE: E-TM1.1, B_{IoT+L} , 9 kHz – 3 GHz, Port A:



Diagram 3.38b, NB IoT SA: N-TM, LTE: E-TM1.1, B_{IoT+L} , 1.885 GHz – 2.035 GHz, Port A:



Note: The purpose of this measurement is to find IM products, not to verify compliance at the Band edges.

Diagram 3.38c, NB IoT SA: N-TM, LTE: E-TM1.1, B_{IoT+L} , 3 GHz – 22 GHz, Port A:

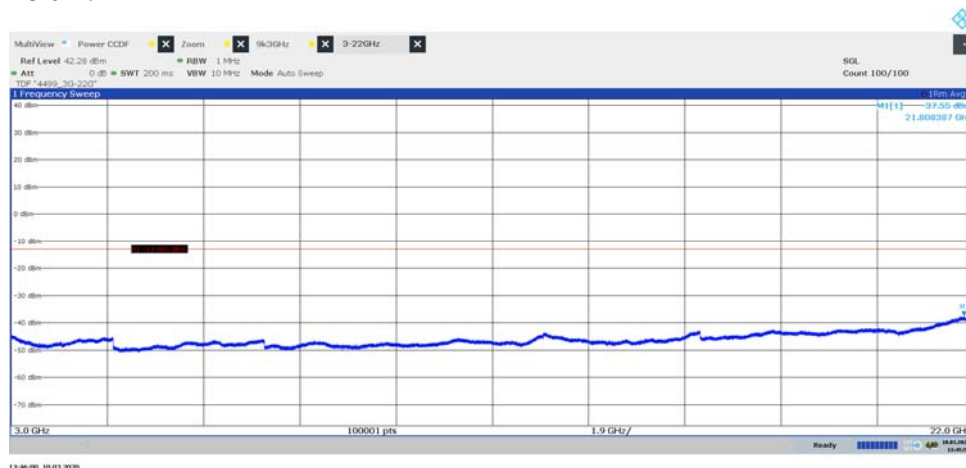


Diagram 3.39a, NB IoT IB: N-TM, LTE: E-TM3.1, $B_{\text{IBIoT+L}}$, 9 kHz – 3 GHz,
Port A:

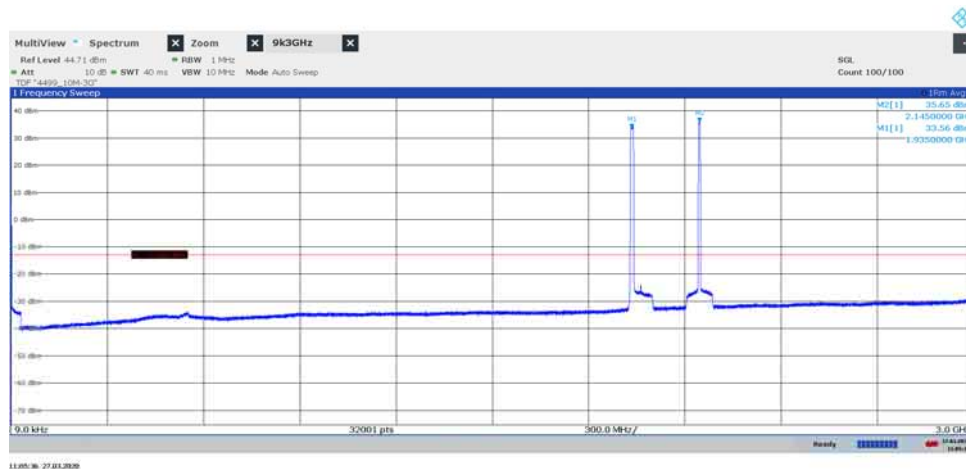


Diagram 3.39b, NB IoT IB: N-TM, LTE: E-TM3.1, $B_{\text{IBIoT+L}}$,
1.885 GHz – 2.035 GHz, Port A:

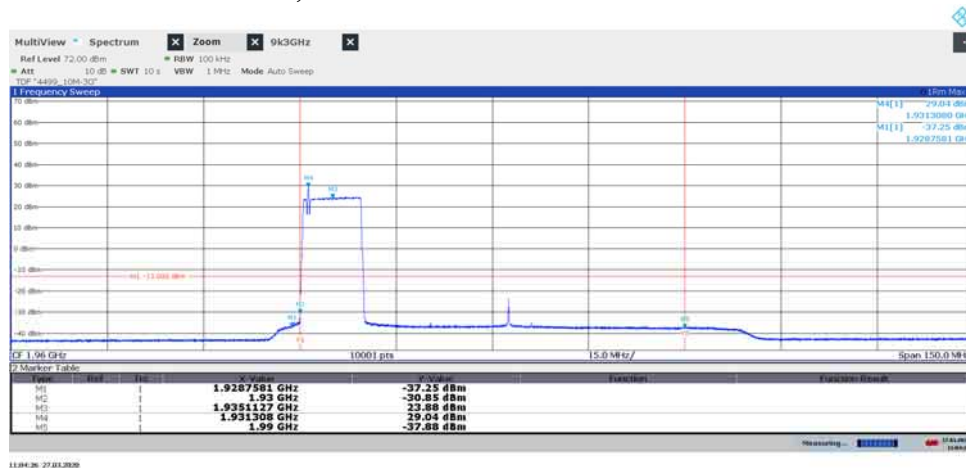


Diagram 3.39c, NB IoT IB: N-TM, LTE: E-TM3.1, $B_{\text{IBIoT+L}}$, 3 GHz – 22 GHz,
Port A:

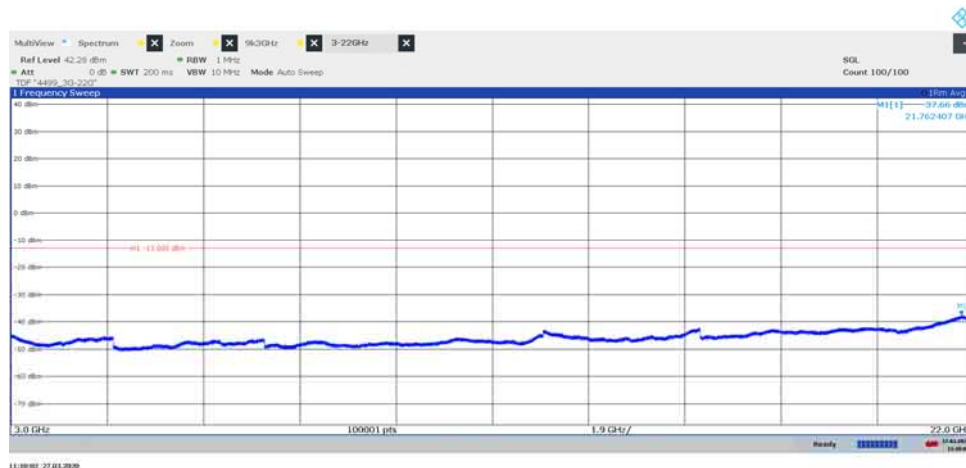


Diagram 3.40a, NB IoT SA: N-TM, LTE: E-TM1.1, M_{IoT+L} , 9 kHz – 3 GHz, Port A:



Diagram 3.40b, NB IoT SA: N-TM, LTE: E-TM1.1, M_{IoT+L} , 1.885 GHz – 2.035 GHz, Port A:

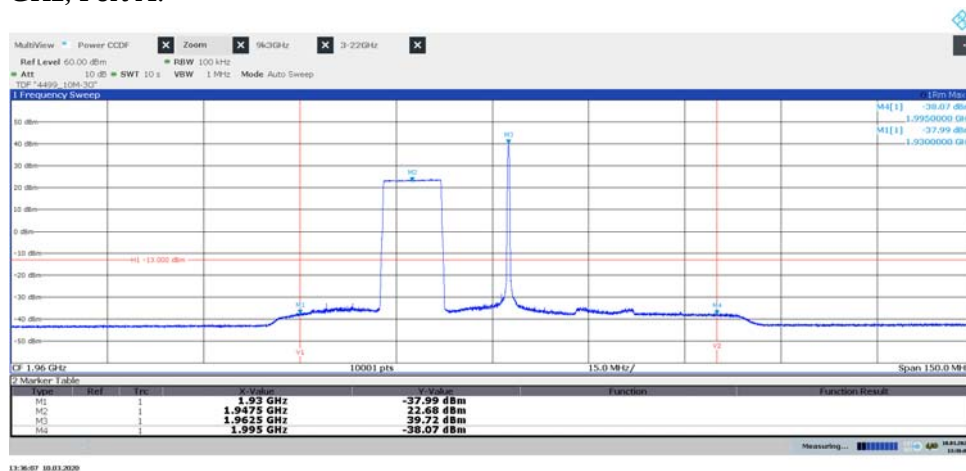


Diagram 3.40c, NB IoT SA: N-TM, LTE: E-TM1.1, M_{IoT+L} , 3 GHz – 22 GHz, Port A:

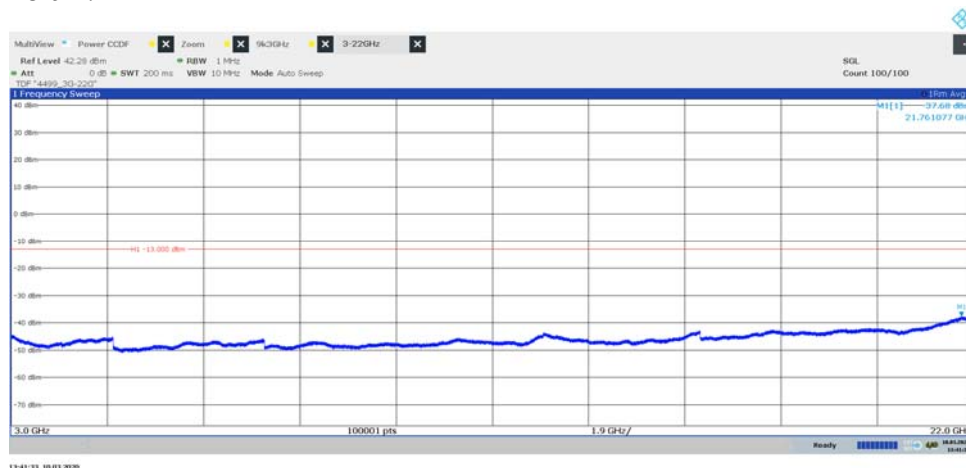


Diagram 3.41a, NB IoT SA: N-TM, LTE: E-TM1.1, M_{IoT+L} , 9 kHz – 3 GHz,
Port B:

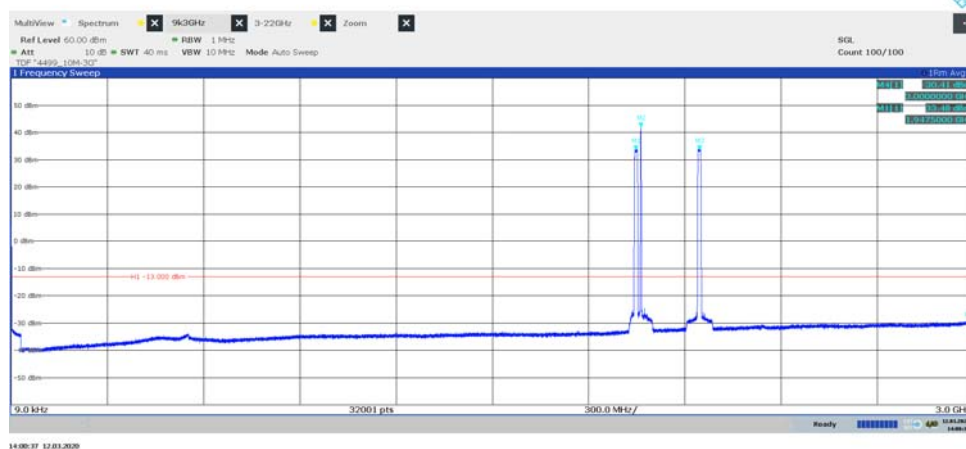


Diagram 3.41b, NB IoT SA: N-TM, LTE: E-TM1.1, M_{IoT+L} ,
1.885 GHz – 2.035 GHz, Port B:

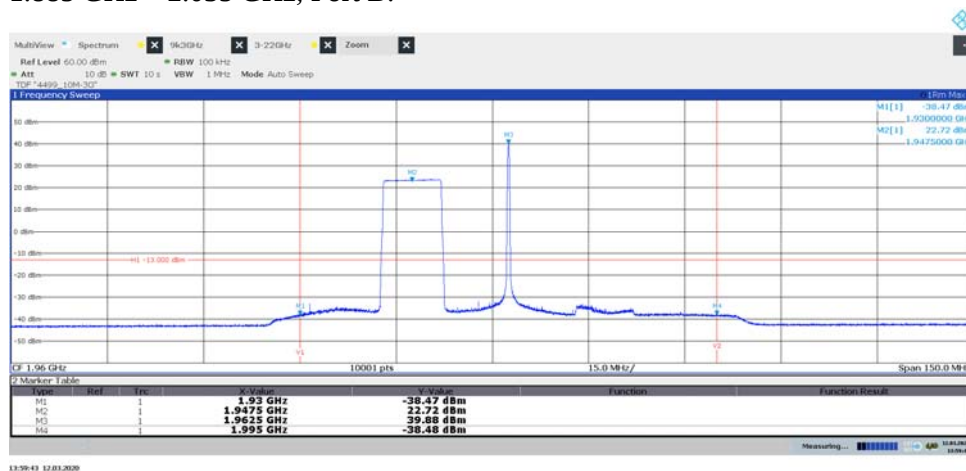


Diagram 3.41c, NB IoT SA: N-TM, LTE: E-TM1.1, M_{IoT+L} , 3 GHz – 22 GHz,
Port B:

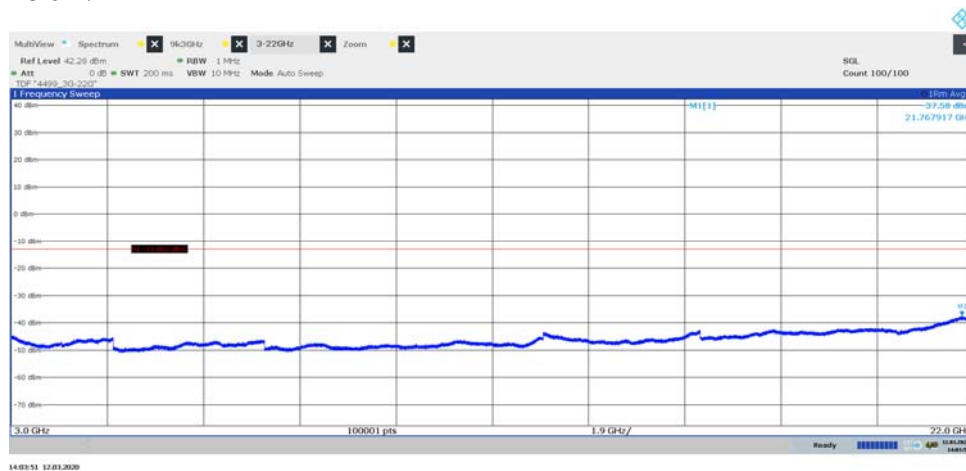


Diagram 3.42a, NB IoT SA: N-TM, LTE: E-TM1.1, M_{IoT+L} , 9 kHz – 3 GHz,
Port C:

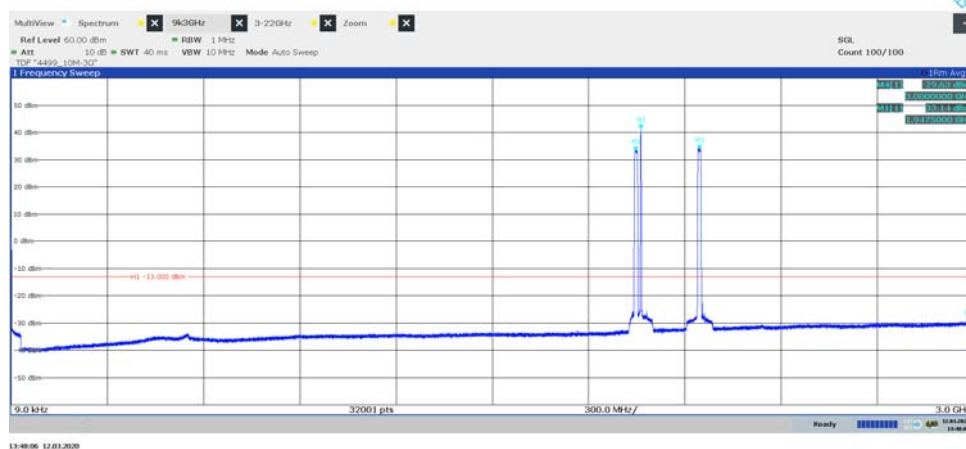


Diagram 3.42b, NB IoT SA: N-TM, LTE: E-TM1.1, M_{IoT+L} , 1.885 GHz – 2.035
GHz, Port C:

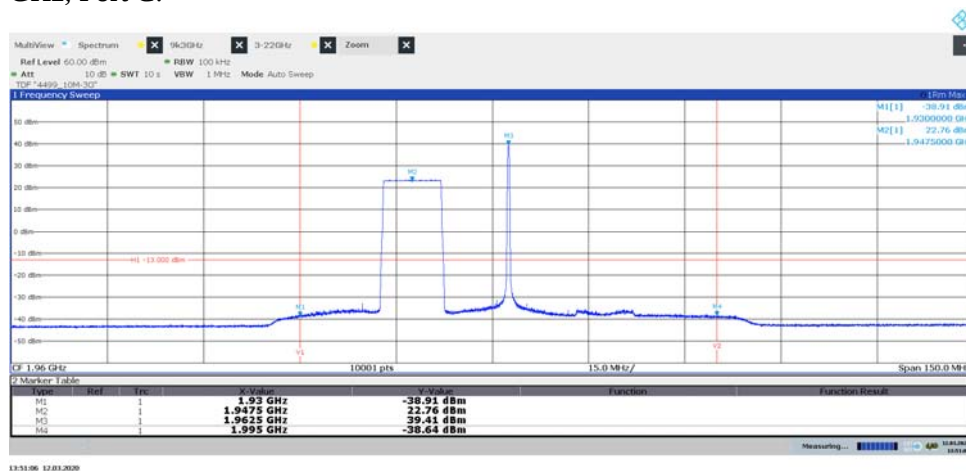


Diagram 3.42c, NB IoT SA: N-TM, LTE: E-TM1.1, M_{IoT+L} , 3 GHz – 22 GHz,
Port C:

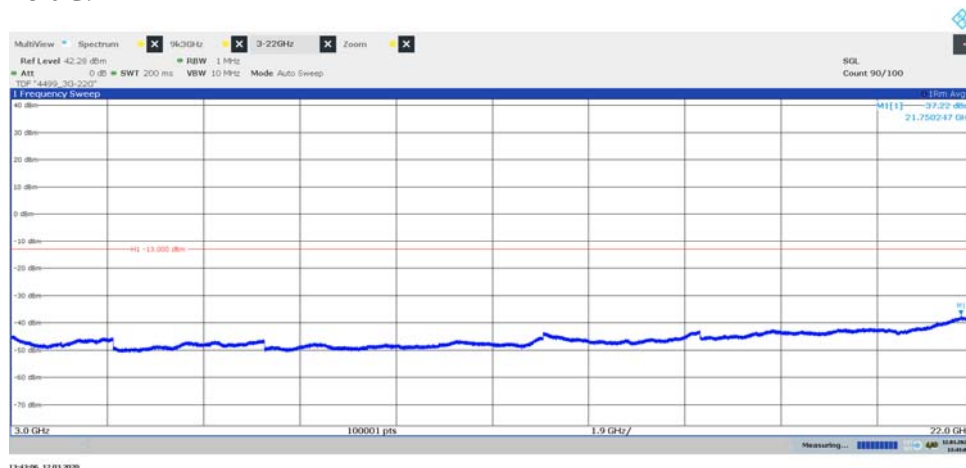


Diagram 3.43a, NB IoT SA: N-TM, LTE: E-TM1.1, M_{IoT+L} , 9 kHz – 3 GHz, Port D:

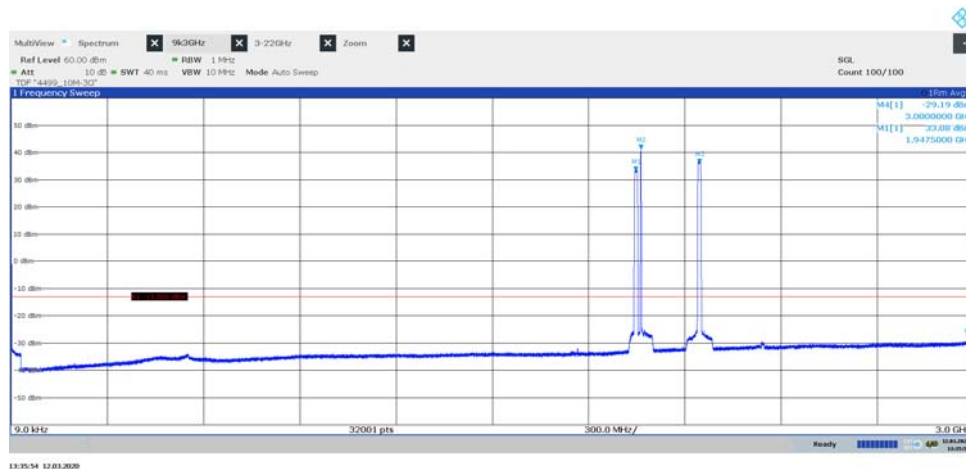


Diagram 3.43b, NB IoT SA: N-TM, LTE: E-TM1.1, M_{IoT+L} , 1.885 GHz – 2.035 GHz, Port D:

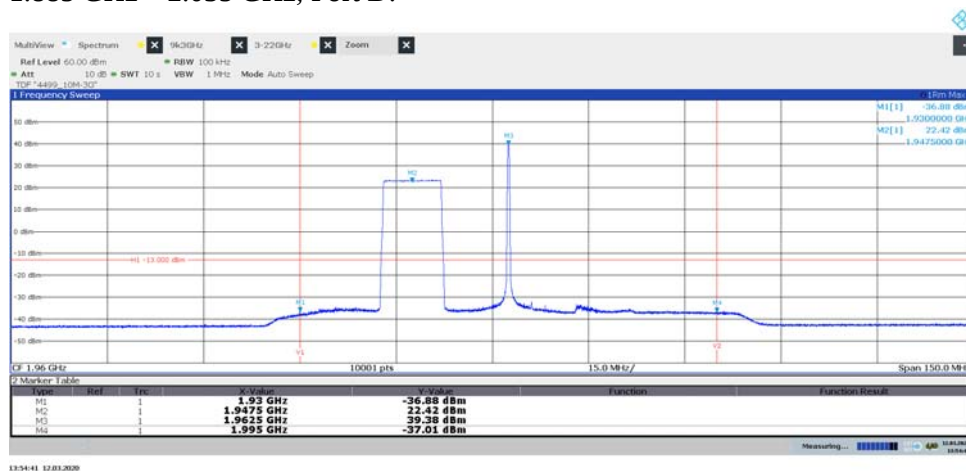


Diagram 3.43c, NB IoT SA: N-TM, LTE: E-TM1.1, M_{IoT+L} , 3 GHz – 22 GHz, Port D:

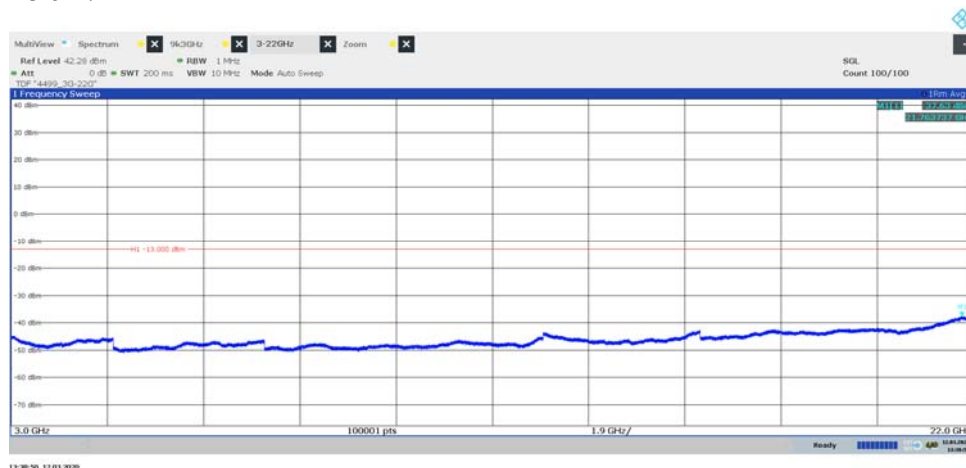


Diagram 3.44a, NB IoT IB: N-TM, LTE: E-TM3.1, $M_{IBIoT+L}$, 9 kHz – 3 GHz, Port A:

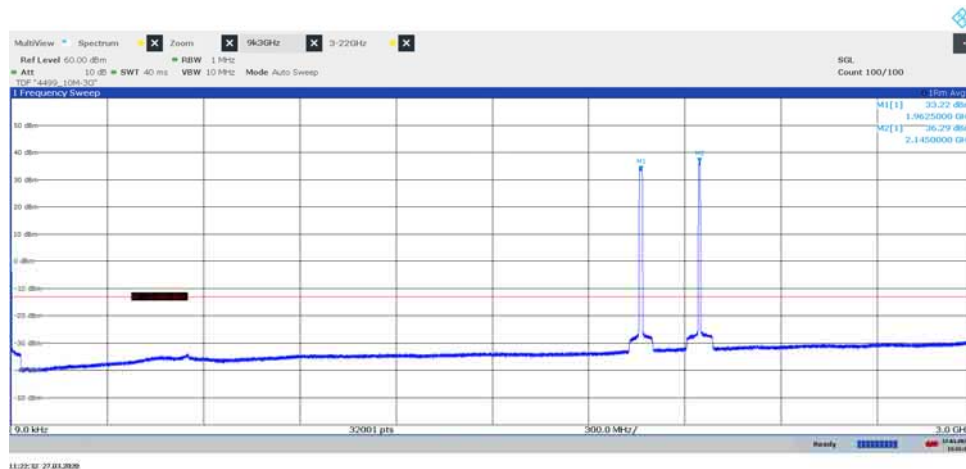


Diagram 3.44b, NB IoT IB: N-TM, LTE: E-TM3.1, $M_{IBIoT+L}$, 1.885 GHz – 2.035 GHz, Port A:

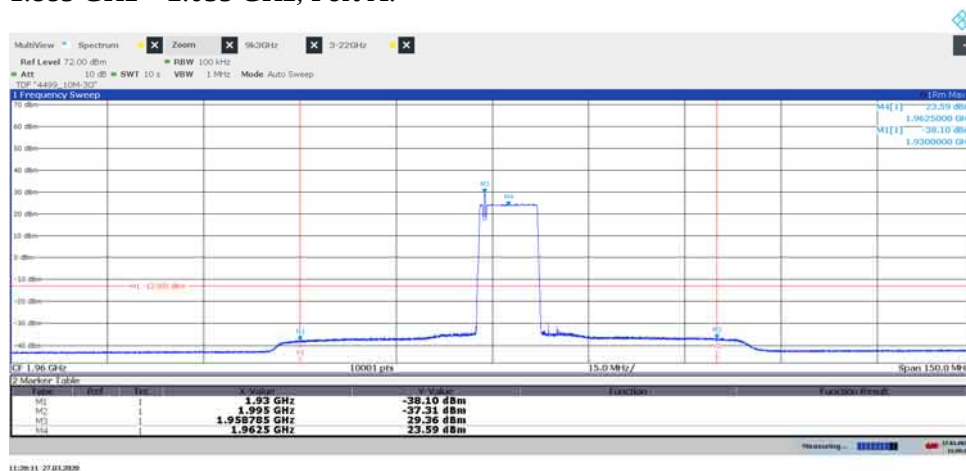


Diagram 3.44c, NB IoT IB: N-TM, LTE: E-TM3.1, $M_{IBIoT+L}$, 3 GHz – 22 GHz, Port A:

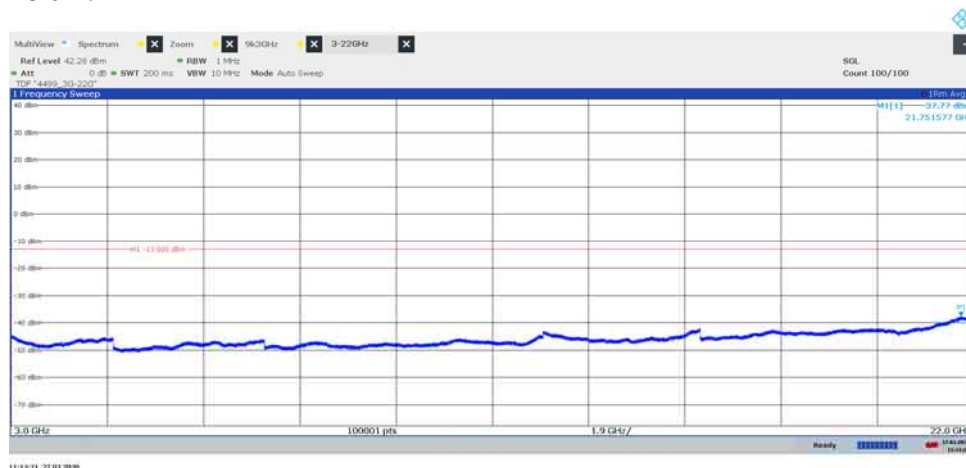


Diagram 3.45a, NB IoT SA: N-TM, LTE: E-TM1.1, T_{IoT+L} , 9 kHz – 3 GHz, Port A:

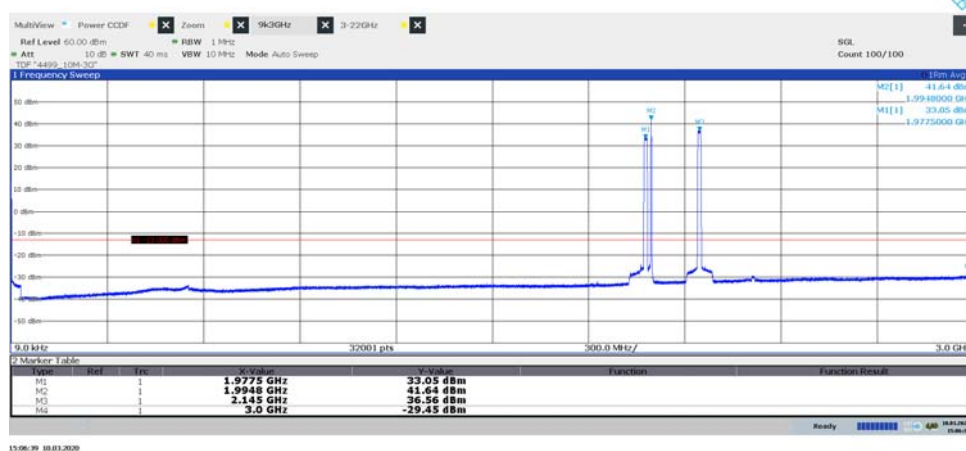
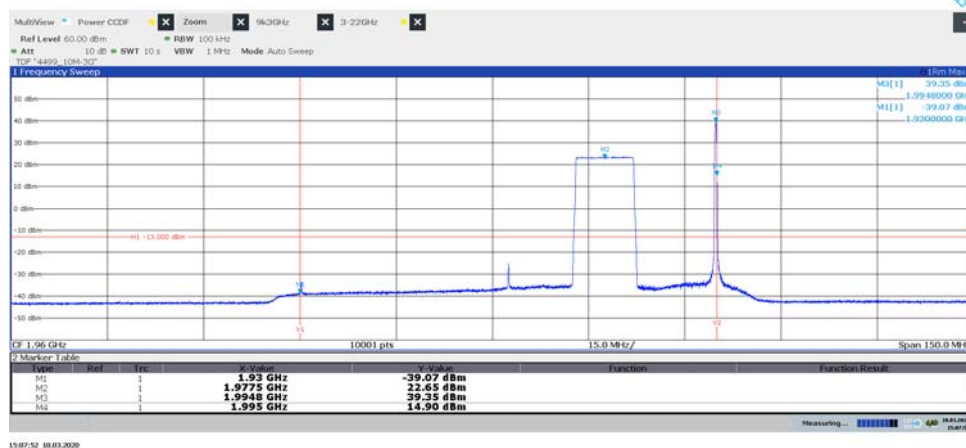


Diagram 3.45b, NB IoT SA: N-TM, LTE: E-TM1.1, T_{IoT+L} , 1.885 GHz – 2.035 GHz, Port A:



Note: The purpose of this measurement is to find IM products, not to verify compliance at the Band edges.

Diagram 3.45c, NB IoT SA: N-TM, LTE: E-TM1.1, T_{IoT+L} , 3 GHz – 22 GHz, Port A:

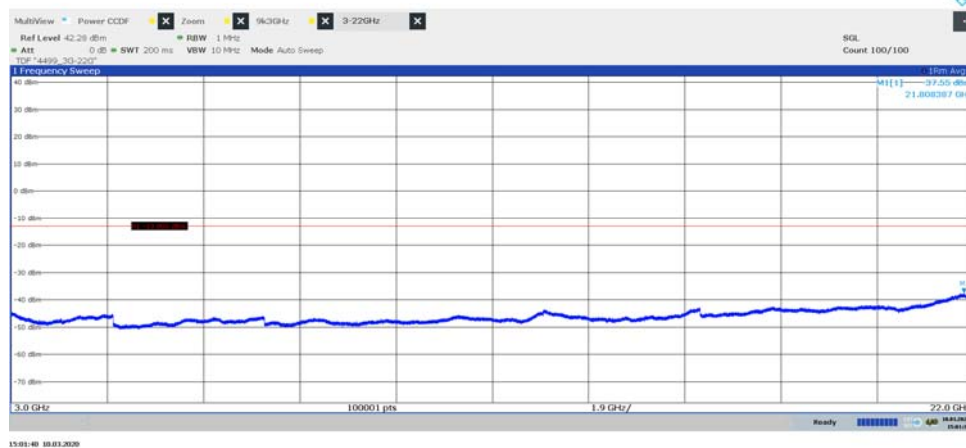


Diagram 3.46a, NB IoT IB: N-TM, LTE: E-TM3.1, $T_{IBIoT+L}$, 9 kHz – 3 GHz, Port A:

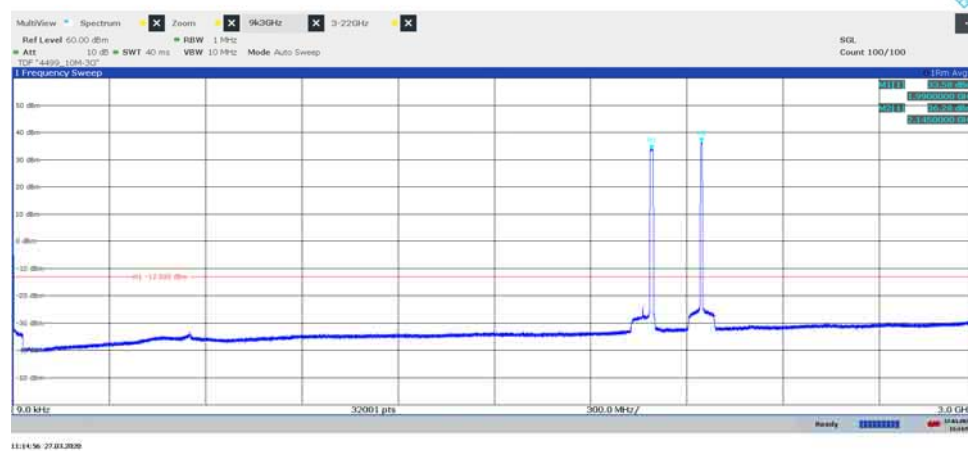


Diagram 3.46b, NB IoT IB: N-TM, LTE: E-TM3.1, $T_{IBIoT+L}$, 1.885 GHz – 2.035 GHz, Port A:



Diagram 3.46c, NB IoT IB: N-TM, LTE: E-TM3.1, $T_{IBIoT+L}$, 3 GHz – 22 GHz, Port A:

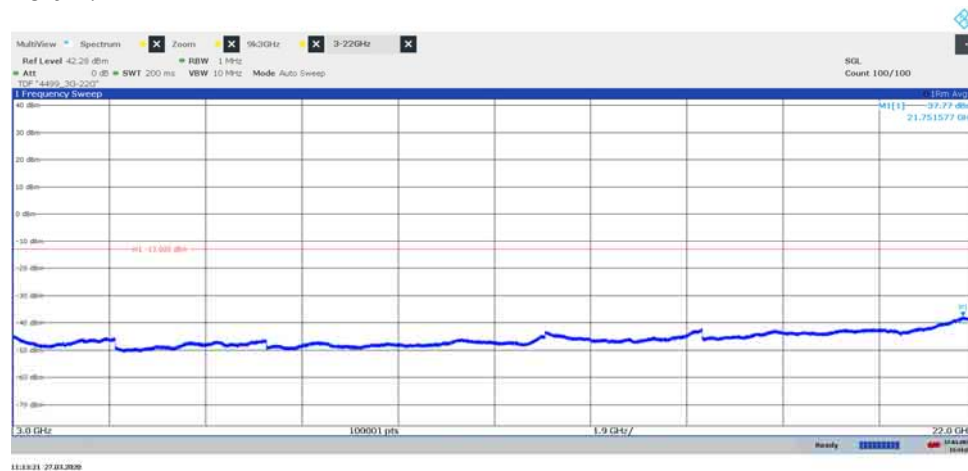


Diagram 3.47a, NB IoT GB: N-TM, LTE: E-TM3.1, T10_{Guard}, 9 kHz – 3 GHz,
Port A:

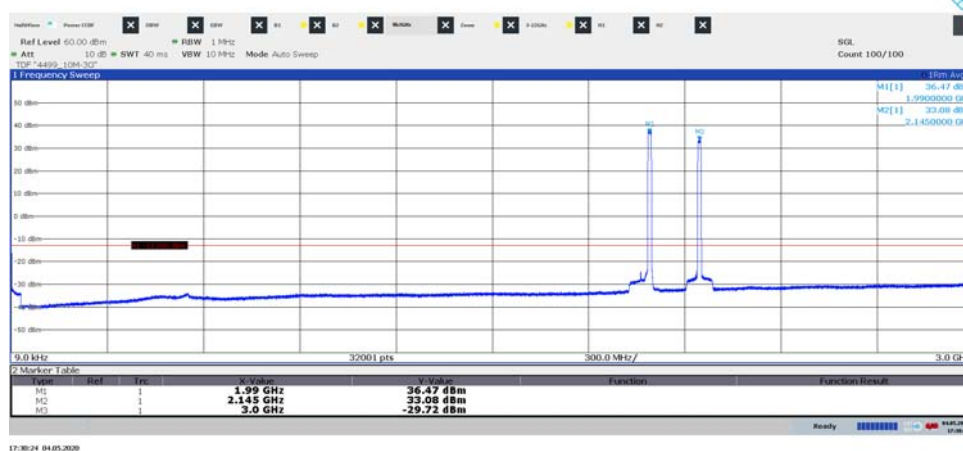


Diagram 3.47b, NB IoT GB: N-TM, LTE: E-TM3.1, T10_{Guard},
1.885 GHz – 2.035 GHz, Port A:

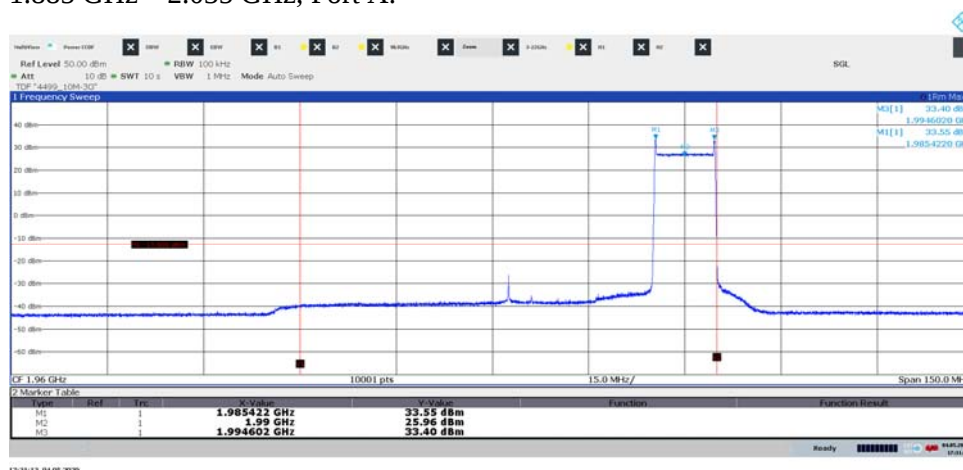


Diagram 3.47c, NB IoT GB: N-TM, LTE: E-TM3.1, T10_{Guard}, 3 GHz – 22 GHz,
Port A:

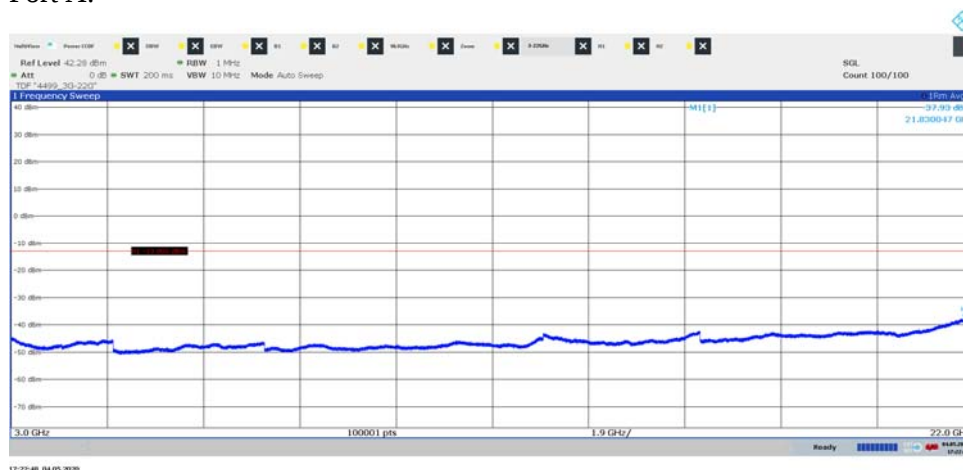


Diagram 3.48a, NB IoT GB: N-TM, LTE: E-TM3.1, T15_{Guard}, 9 kHz – 3 GHz,
Port A:

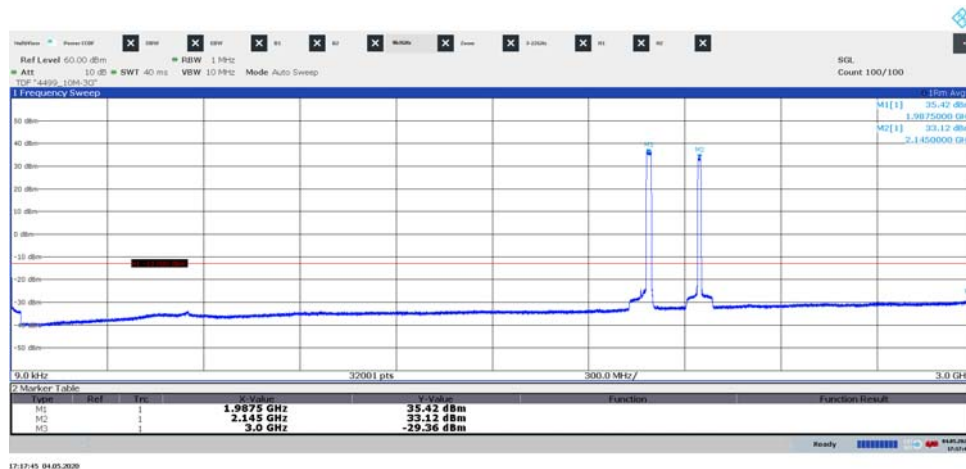


Diagram 3.48b, NB IoT GB: N-TM, LTE: E-TM3.1, T15_{Guard}, 1.885 GHz – 2.035 GHz, Port A:



Diagram 3.48c, NB IoT GB: N-TM, LTE: E-TM3.1, T15_{Guard}, 3 GHz – 22 GHz,
Port A:

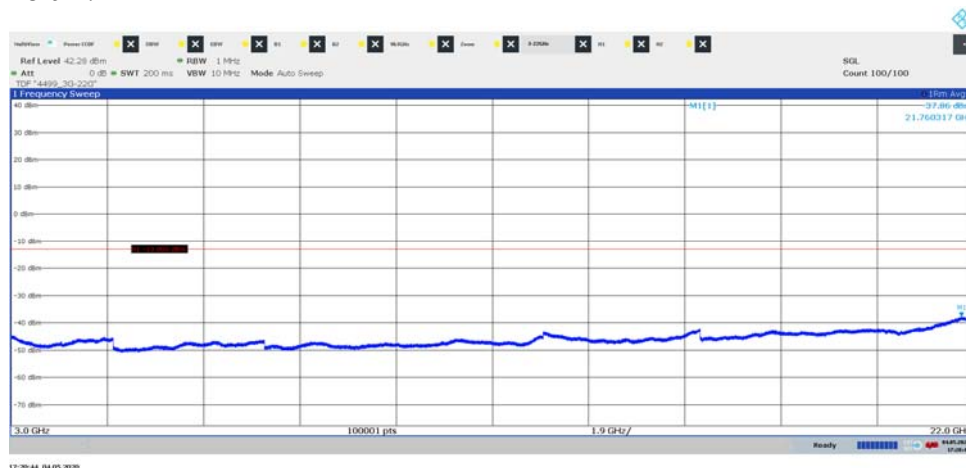


Diagram 3.49a, NB IoT GB: N-TM, LTE: E-TM3.1, T10_{Guard}, 9 kHz – 3 GHz,
Port A:

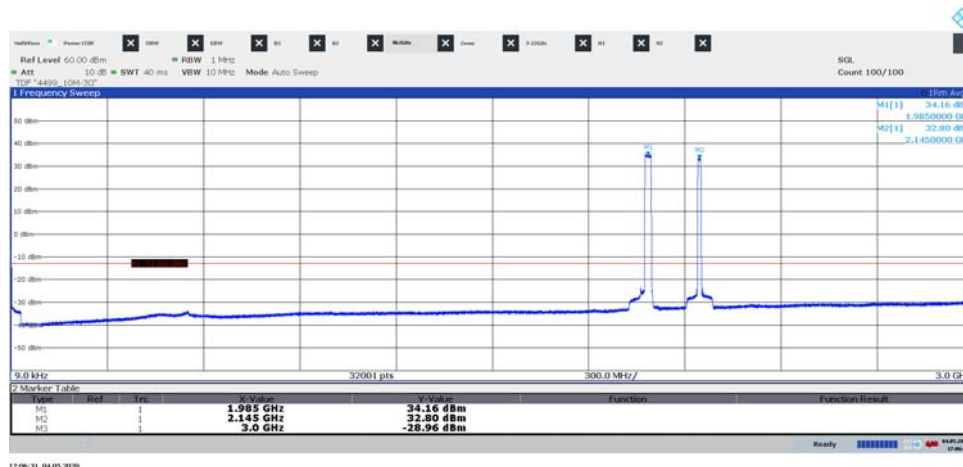


Diagram 3.49b, NB IoT GB: N-TM, LTE: E-TM3.1, T10_{Guard},
1.885 GHz – 2.035 GHz, Port A:

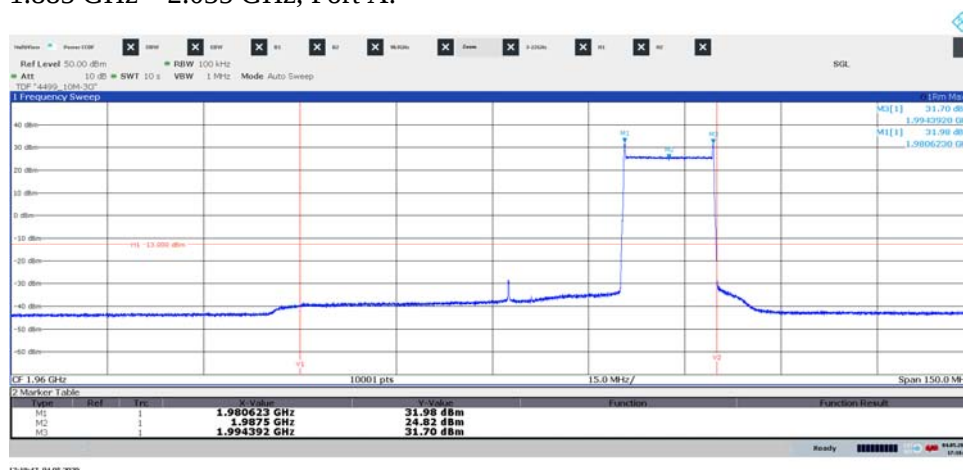


Diagram 3.49c, NB IoT GB: N-TM, LTE: E-TM3.1, T10_{Guard}, 3 GHz – 22 GHz,
Port A:

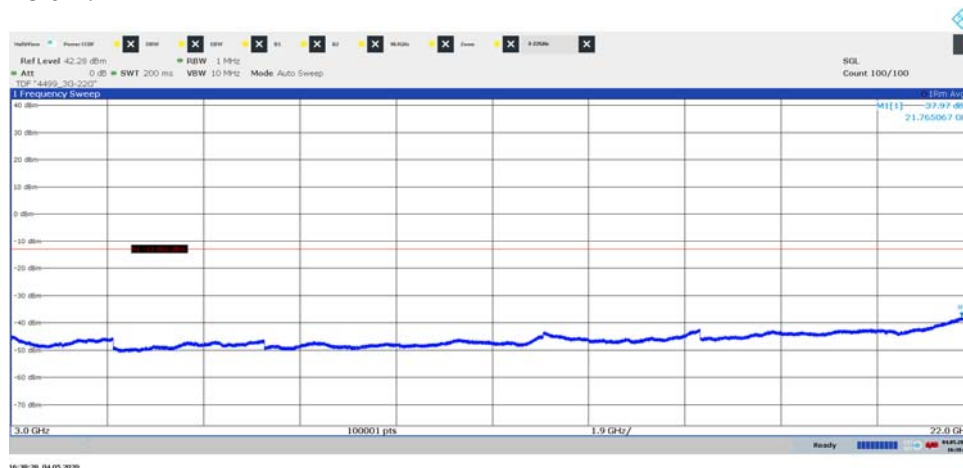


Diagram 3.50a, NB IoT SA: N-TM, LTE: E-TM1.1, B_{IoT+L} , 9 kHz – 3 GHz,
Port B:

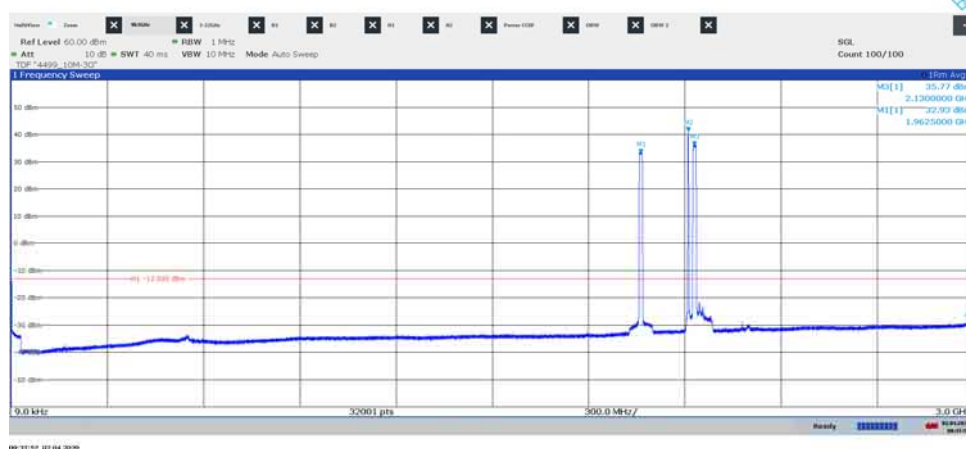
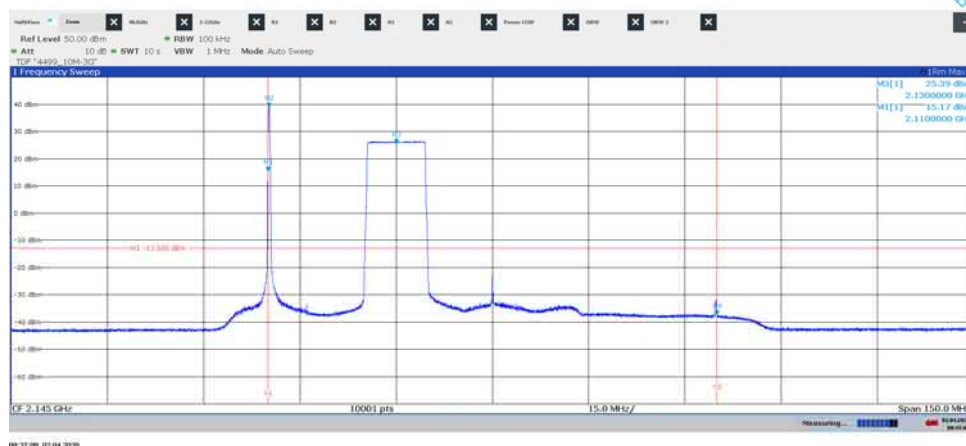


Diagram 3.50b, NB IoT SA: N-TM, LTE: E-TM1.1, B_{IoT+L} ,
2.07 GHz – 2.22 GHz, Port B:



Note: The purpose of this measurement is to find IM products, not to verify compliance at the Band edges.

Diagram 3.50c, NB IoT SA: N-TM, LTE: E-TM1.1, B_{IoT+L} , 3 GHz – 22 GHz,
Port B:



Diagram 3.51a, NB IoT IB: N-TM, LTE: E-TM3.1, $B_{\text{IBIoT+L}}$, 9 kHz – 3 GHz, Port B:

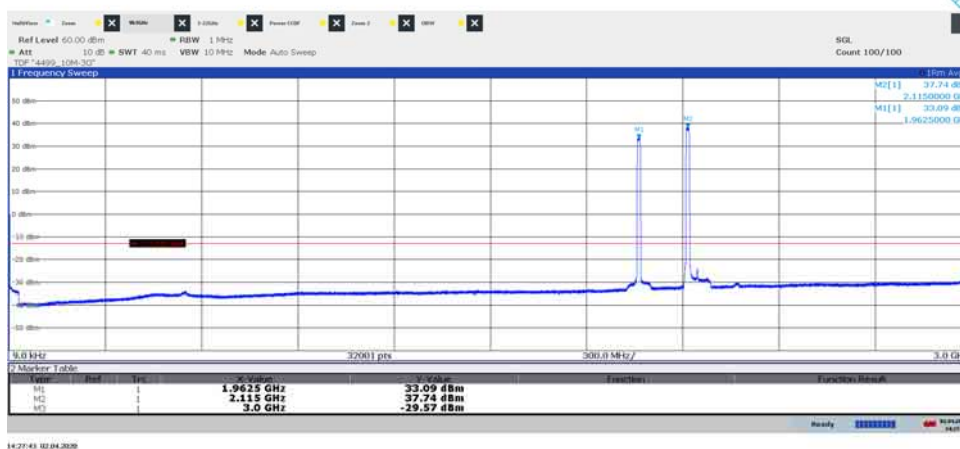
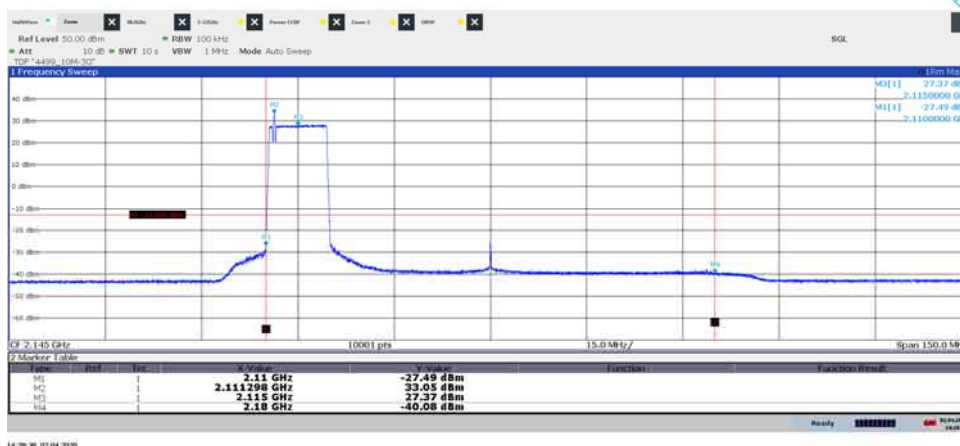


Diagram 3.51b, NB IoT IB: N-TM, LTE: E-TM3.1, $B_{\text{IBIoT+L}}$, 2.07 GHz – 2.22 GHz, GHz, Port B:



Note: The purpose of this measurement is to find IM products, not to verify compliance at the Band edges.

Diagram 3.51c, NB IoT IB: N-TM, LTE: E-TM3.1, $B_{\text{IBIoT+L}}$, 3 GHz – 22 GHz, Port B:

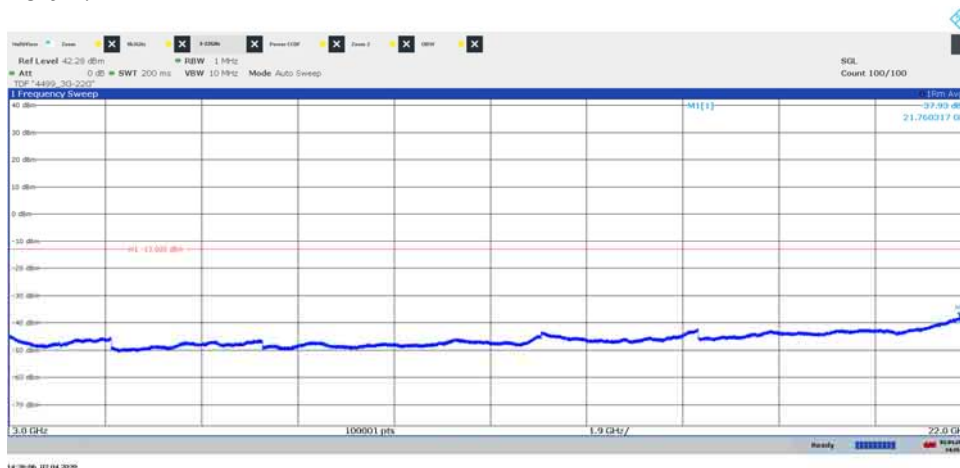


Diagram 3.52a, NB IoT GB: N-TM, LTE: E-TM3.1, B10_{Guard}, 9 kHz – 3 GHz,
Port B:

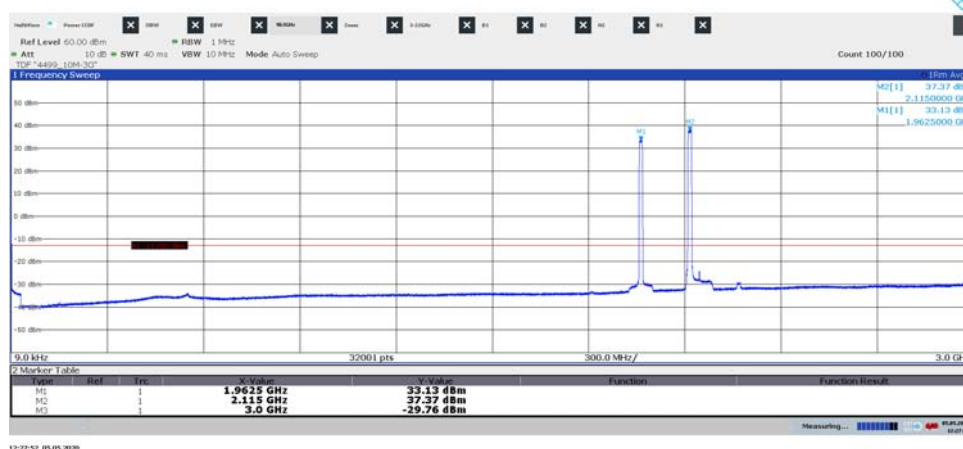


Diagram 3.52b, NB IoT GB: N-TM, LTE: E-TM3.1, B10_{Guard},
2.07 GHz – 2.22 GHz, Port B:

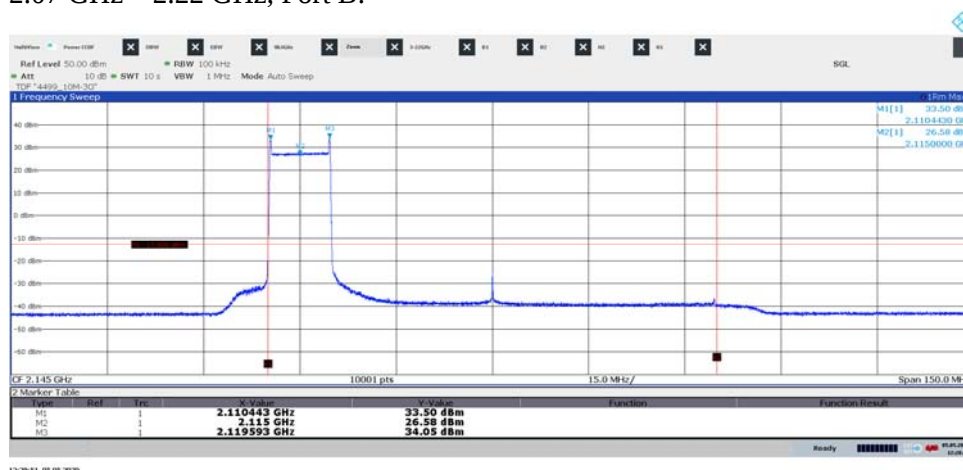


Diagram 3.52c, NB IoT GB: N-TM, LTE: E-TM3.1, B10_{Guard}, 3 GHz – 22 GHz,
Port B:

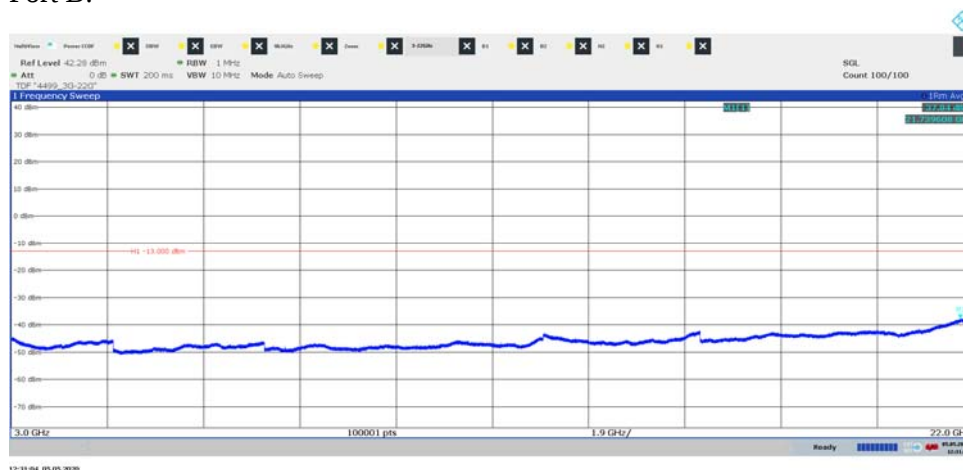


Diagram 3.53a, NB IoT GB: N-TM, LTE: E-TM3.1, B15_{Guard}, 9 kHz – 3 GHz, Port B:

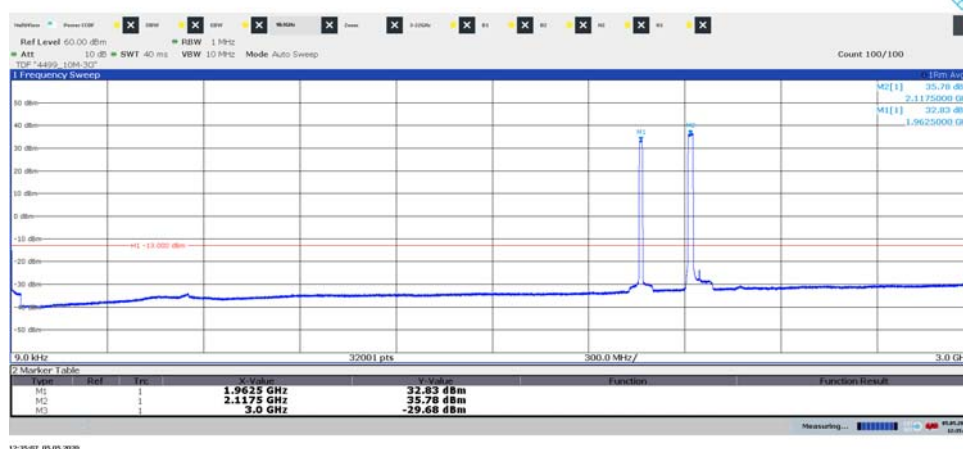


Diagram 3.53b, NB IoT GB: N-TM, LTE: E-TM3.1, B15_{Guard}, 2.07 GHz – 2.22 GHz, Port B:

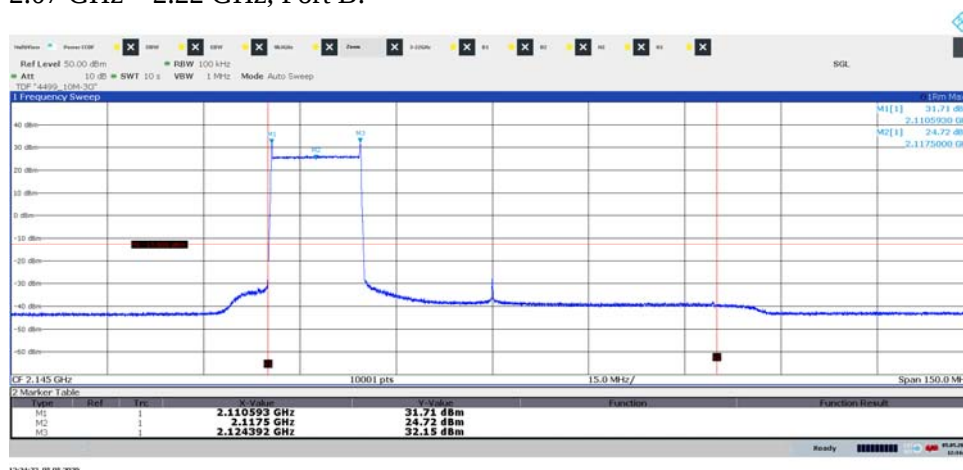


Diagram 3.53c, NB IoT GB: N-TM, LTE: E-TM3.1, B15_{Guard}, 3 GHz – 22 GHz, Port B:

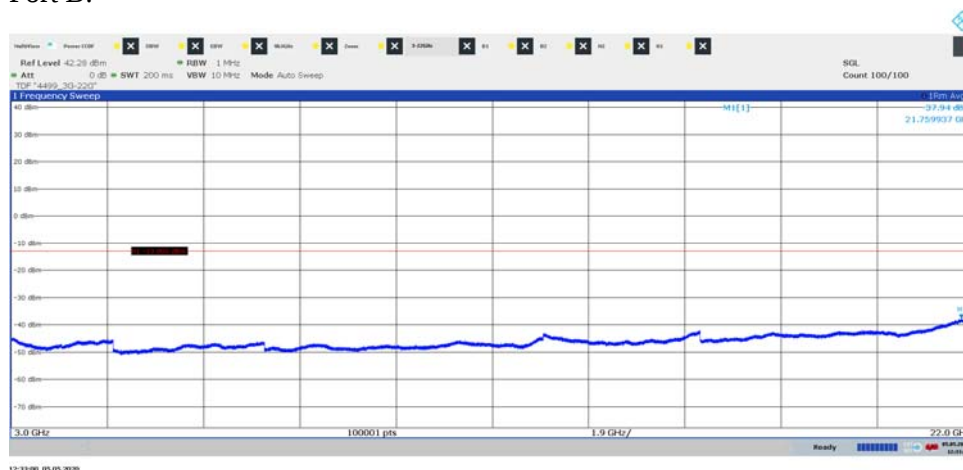


Diagram 3.54a, NB IoT GB: N-TM, LTE: E-TM3.1, B20_{Guard}, 9 kHz – 3 GHz, Port B:

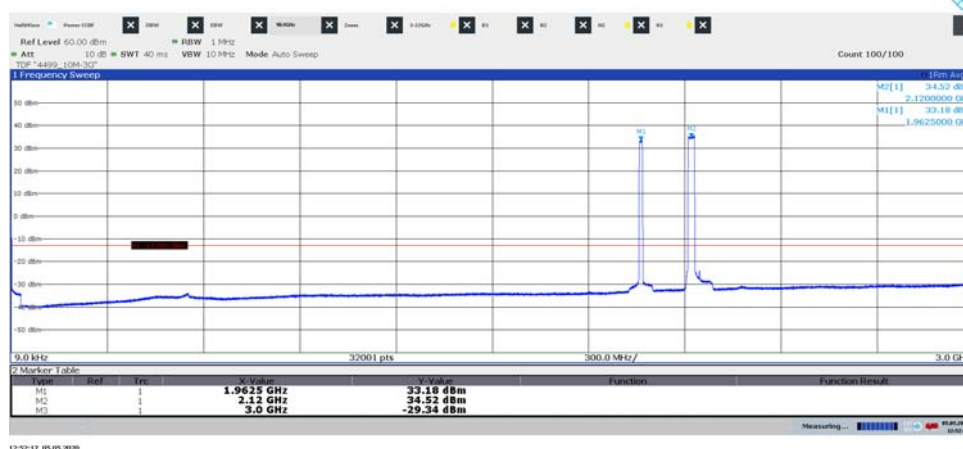


Diagram 3.54b, NB IoT GB: N-TM, LTE: E-TM3.1, B20_{Guard}, 2.07 GHz – 2.22 GHz, Port B:

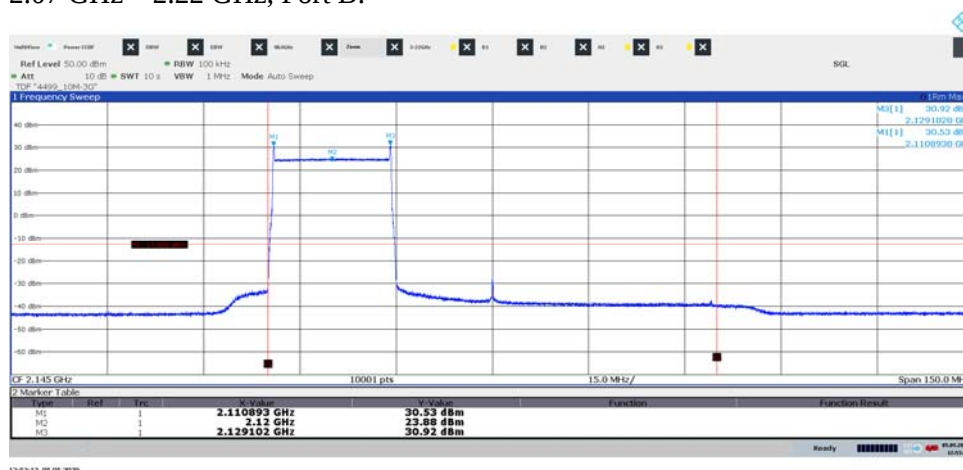


Diagram 3.54c, NB IoT GB: N-TM, LTE: E-TM3.1, B20_{Guard}, 3 GHz – 22 GHz, Port B:

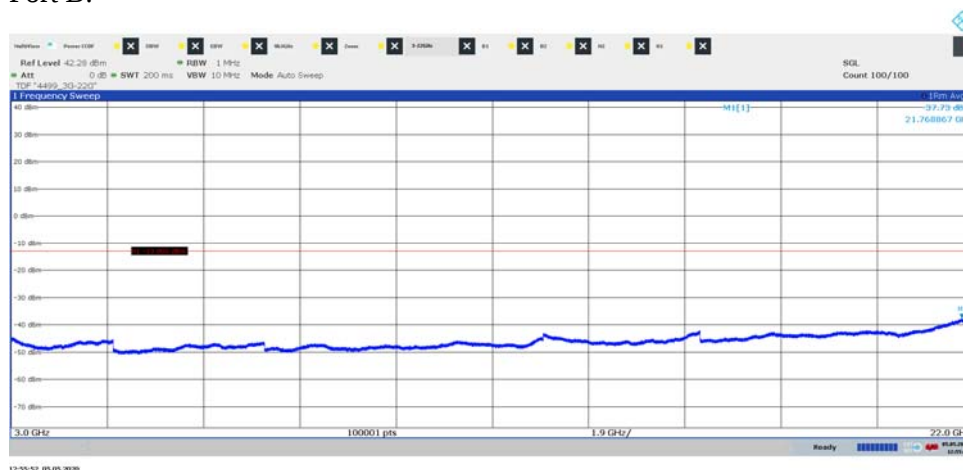


Diagram 3.55a, NB IoT SA: N-TM, LTE: E-TM1.1, M_{IoT+L} , 9 kHz – 3 GHz, Port A:

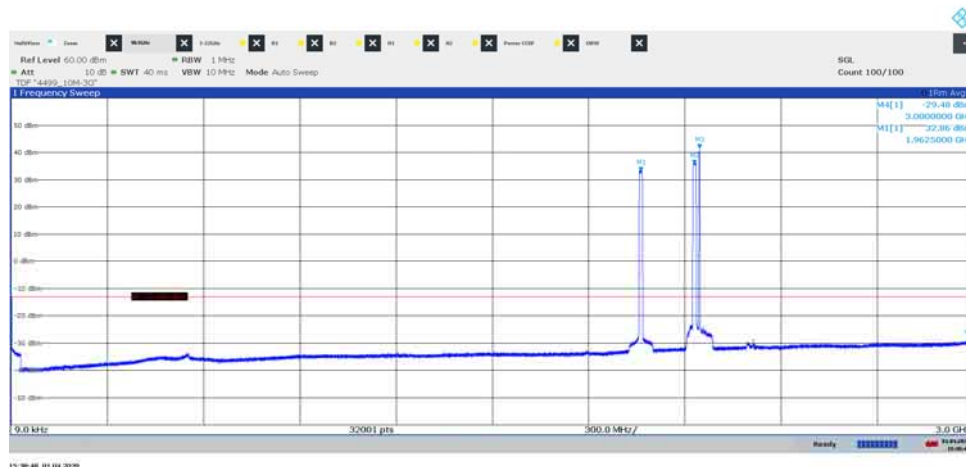


Diagram 3.55b, NB IoT SA: N-TM, LTE: E-TM1.1, M_{IoT+L} , 2.07 GHz – 2.22 GHz, Port A:

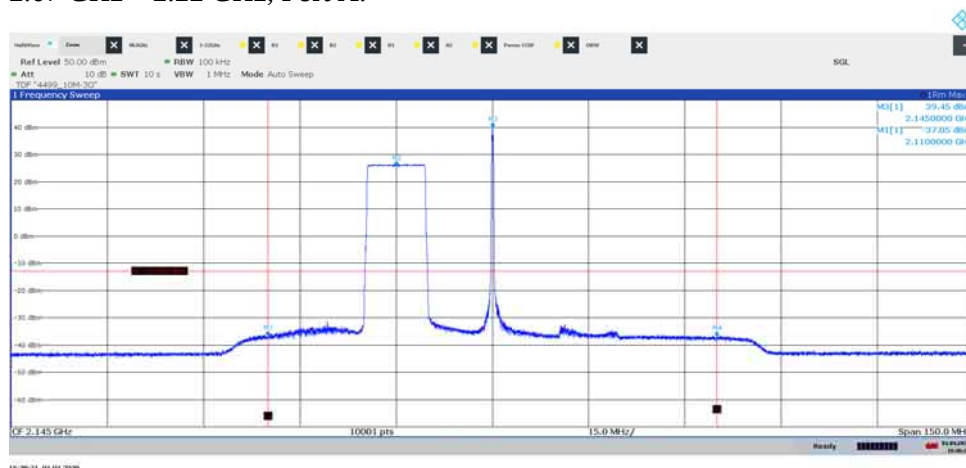


Diagram 3.55c, NB IoT SA: N-TM, LTE: E-TM1.1, M_{IoT+L} , 3 GHz – 22 GHz, Port A:

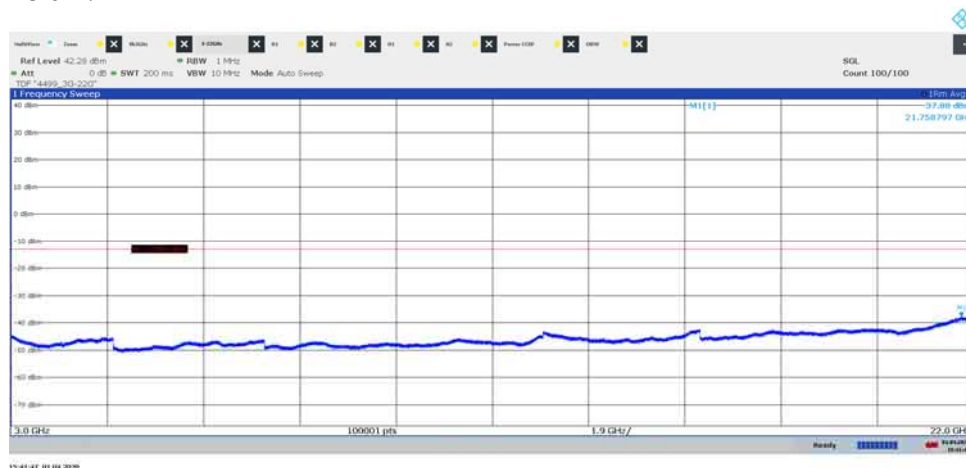


Diagram 3.56a, NB IoT SA: N-TM, LTE: E-TM1.1, M_{IoT+L} , 9 kHz – 3 GHz,
Port B:

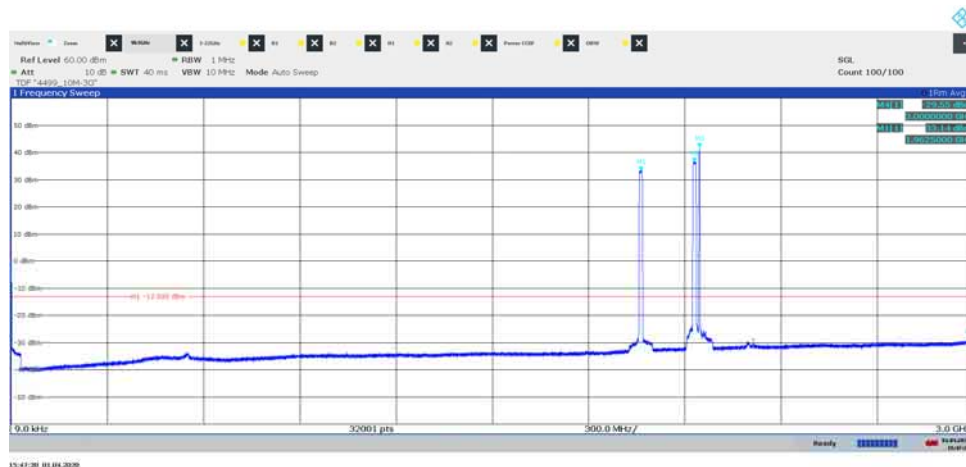


Diagram 3.56b, NB IoT SA: N-TM, LTE: E-TM1.1, M_{IoT+L} ,
2.07 GHz – 2.22 GHz, Port B:

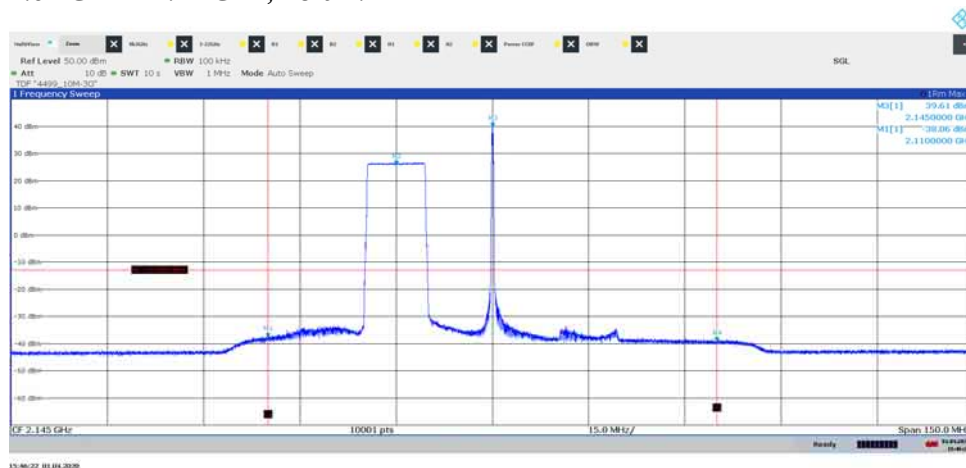


Diagram 3.56c, NB IoT SA: N-TM, LTE: E-TM1.1, M_{IoT+L} , 3 GHz – 22 GHz,
Port B:

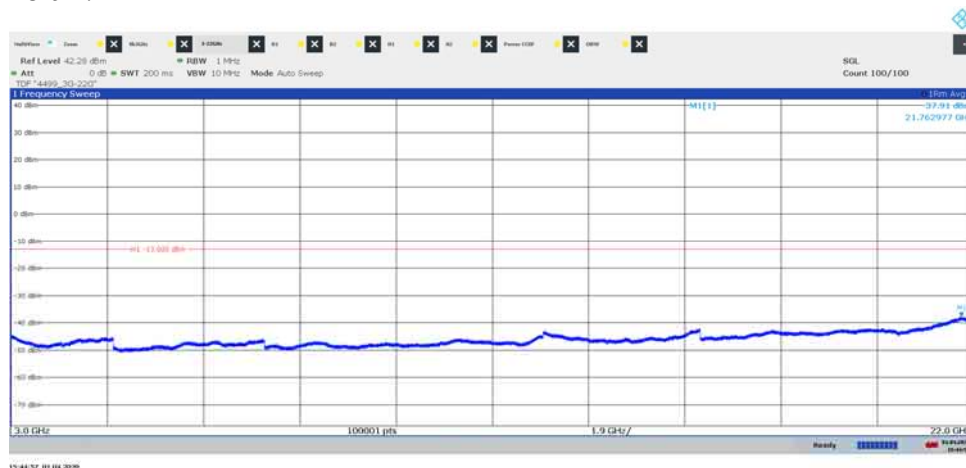


Diagram 3.57a, NB IoT SA: N-TM, LTE: E-TM1.1, M_{IoT+L} , 9 kHz – 3 GHz, Port C:

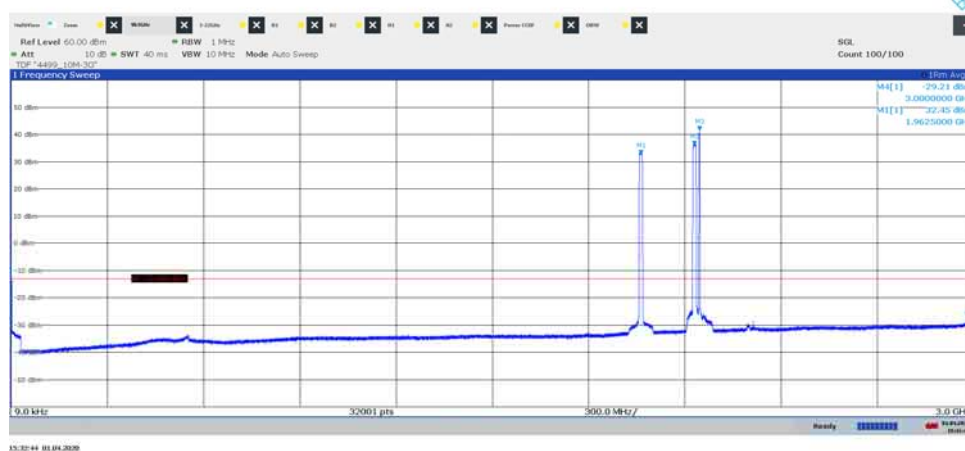


Diagram 3.57b, NB IoT SA: N-TM, LTE: E-TM1.1, M_{IoT+L} , 2.07 GHz – 2.22 GHz, Port C:

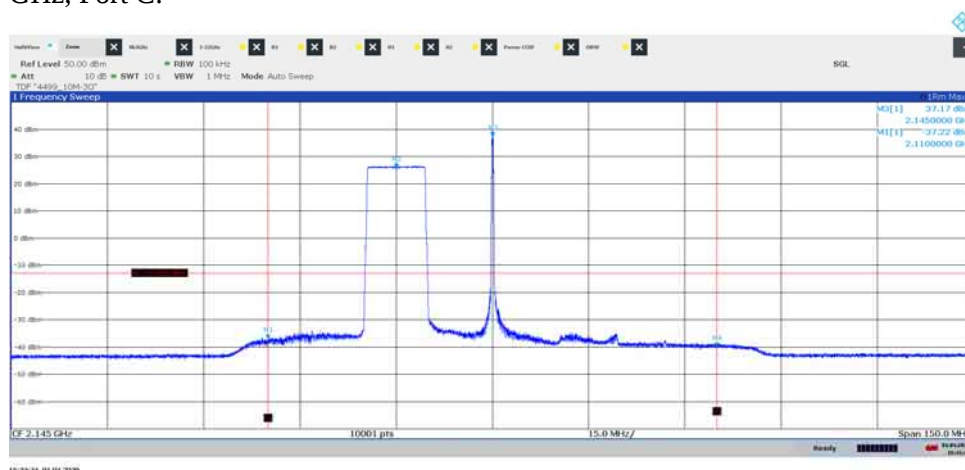


Diagram 3.57c, NB IoT SA: N-TM, LTE: E-TM1.1, M_{IoT+L} , 3 GHz – 22 GHz, Port C:

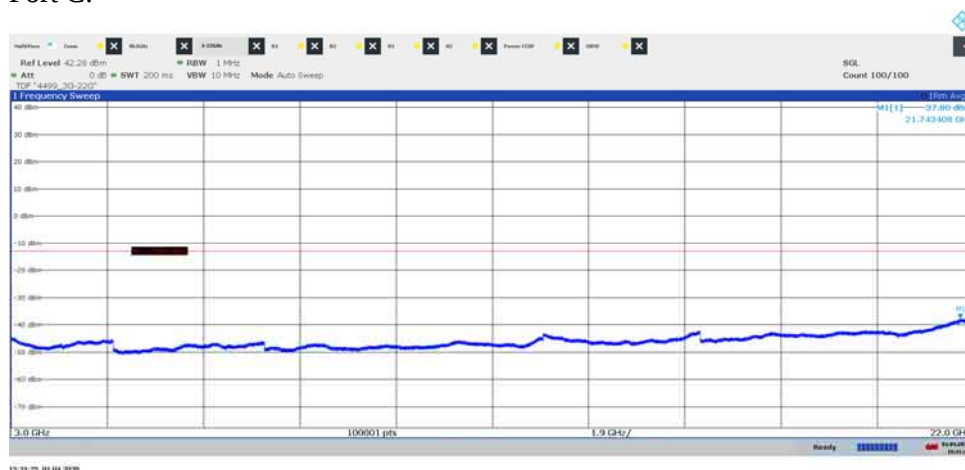


Diagram 3.58a, NB IoT SA: N-TM, LTE: E-TM1.1, M_{IoT+L} , 9 kHz – 3 GHz, Port D:

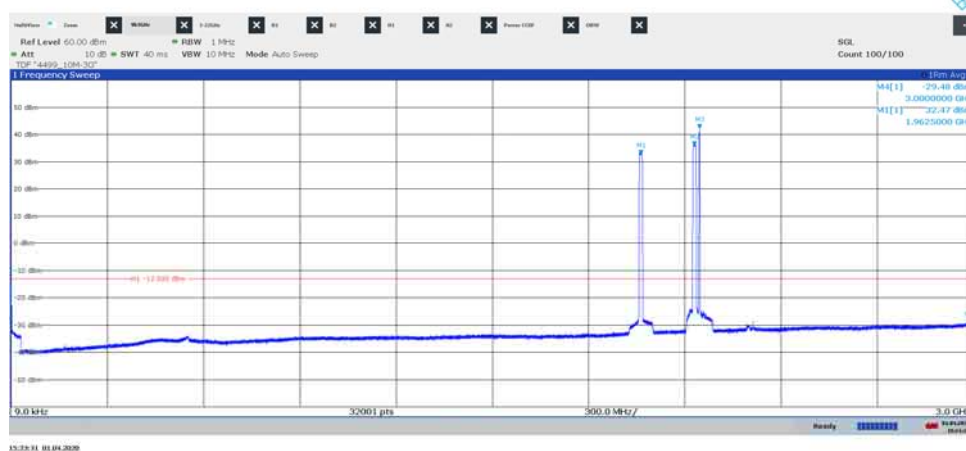


Diagram 3.58b, NB IoT SA: N-TM, LTE: E-TM1.1, M_{IoT+L} , 2.07 GHz – 2.22 GHz, Port D:

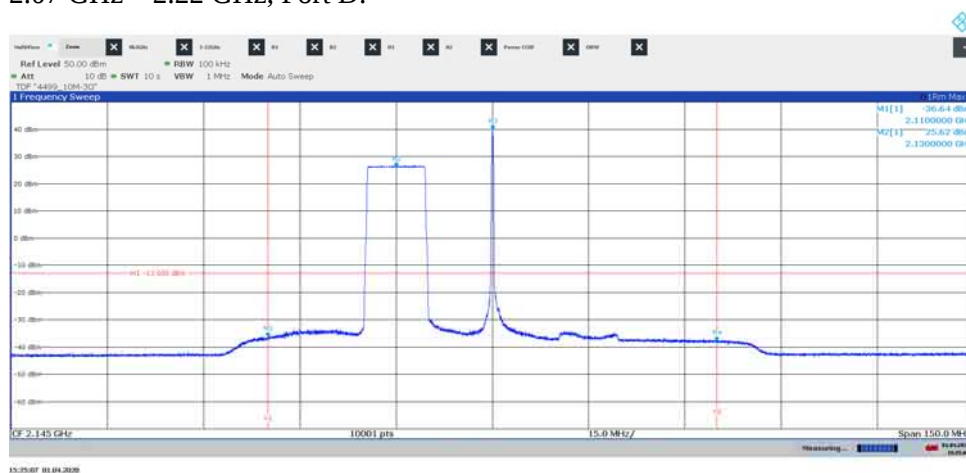


Diagram 3.58c, NB IoT SA: N-TM, LTE: E-TM1.1, M_{IoT+L} , 3 GHz – 22 GHz, Port D:

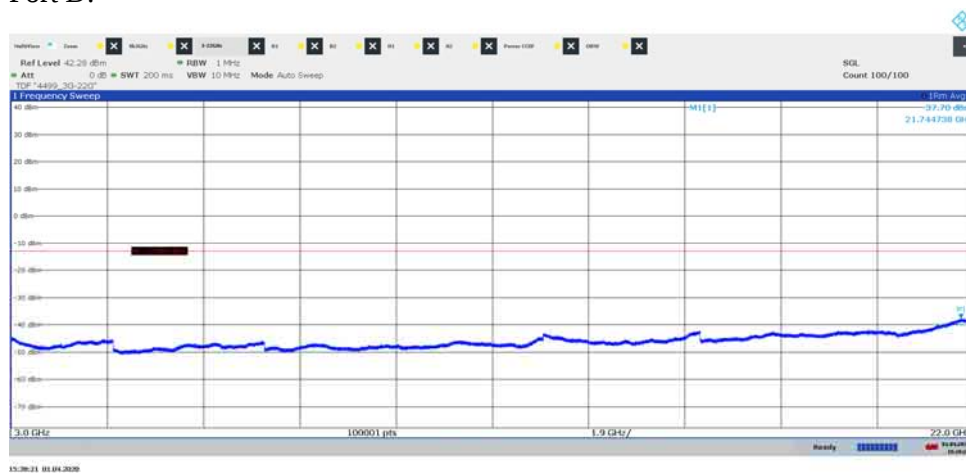


Diagram 3.59a, NB IoT IB: N-TM, LTE: E-TM3.1, $M_{IBIoT+L}$, 9 kHz – 3 GHz, Port B:

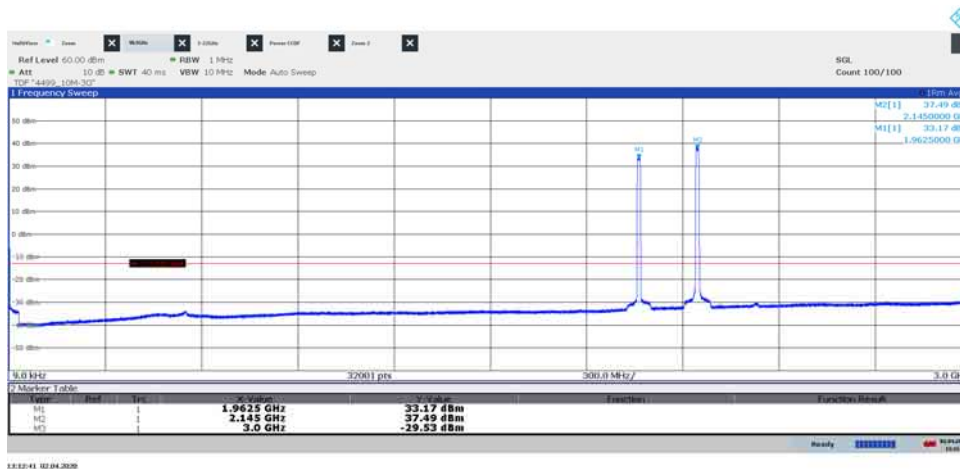


Diagram 3.59b, NB IoT IB: N-TM, LTE: E-TM3.1, $M_{IBIoT+L}$, 2.07 GHz – 2.22 GHz, Port B:

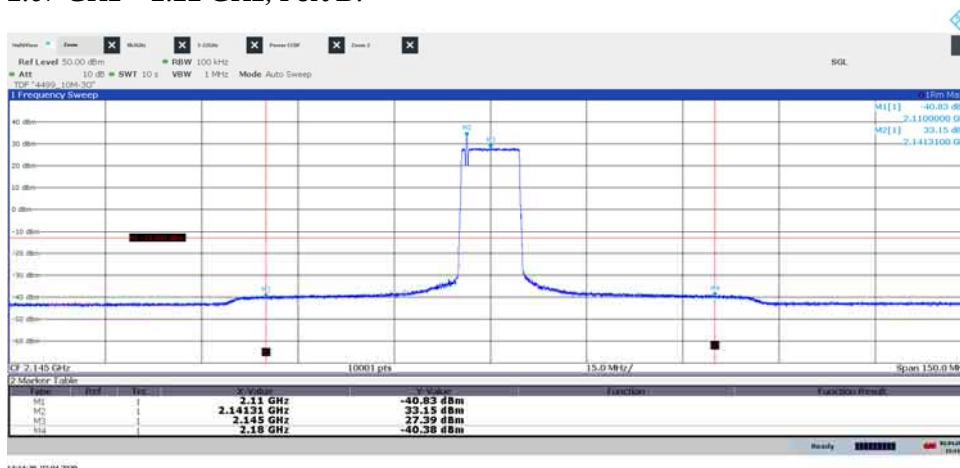


Diagram 3.59c, NB IoT IB: N-TM, LTE: E-TM3.1, $M_{IBIoT+L}$, 3 GHz – 22 GHz, Port B:

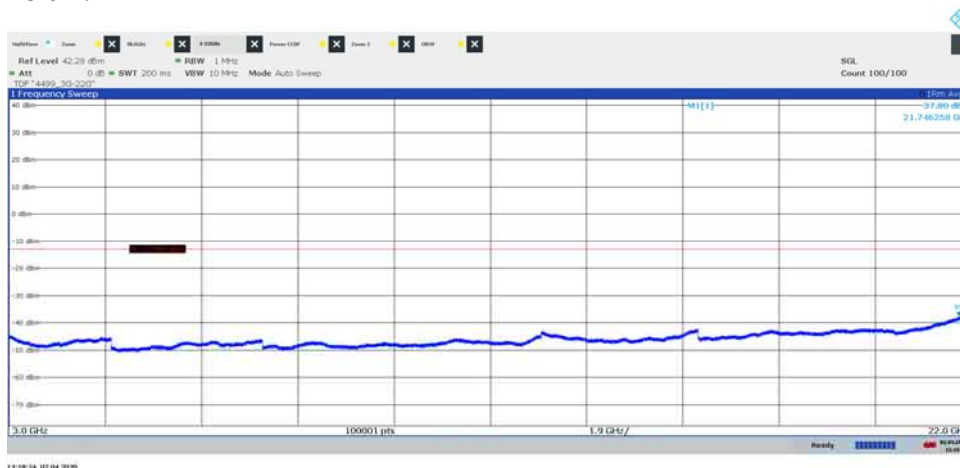


Diagram 3.60a, NB IoT SA: N-TM, LTE: E-TM1.1, T_{IoT+L} , 9 kHz – 3 GHz, Port B:

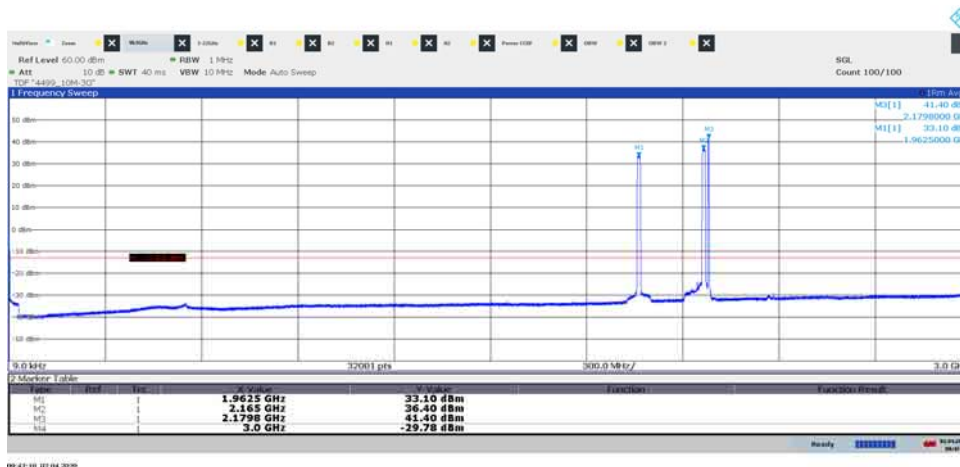
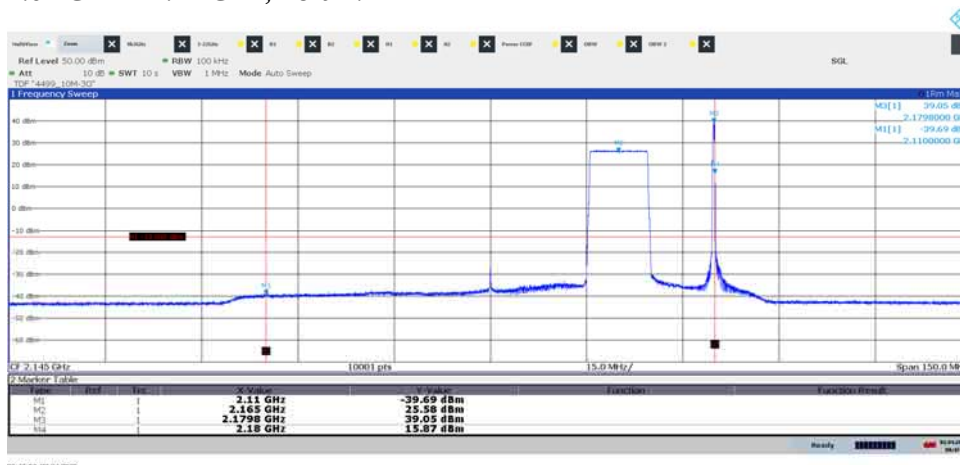


Diagram 3.60b, NB IoT SA: N-TM, LTE: E-TM1.1, T_{IoT+L} , 2.07 GHz – 2.22 GHz, Port B:



Note: The purpose of this measurement is to find IM products, not to verify compliance at the Band edges.

Diagram 3.60c, NB IoT SA: N-TM, LTE: E-TM1.1, T_{IoT+L} , 3 GHz – 22 GHz, Port B:



Diagram 3.61a, NB IoT IB: N-TM, LTE: E-TM3.1, $T_{IBIoT+L}$, 9 kHz – 3 GHz,
Port B:

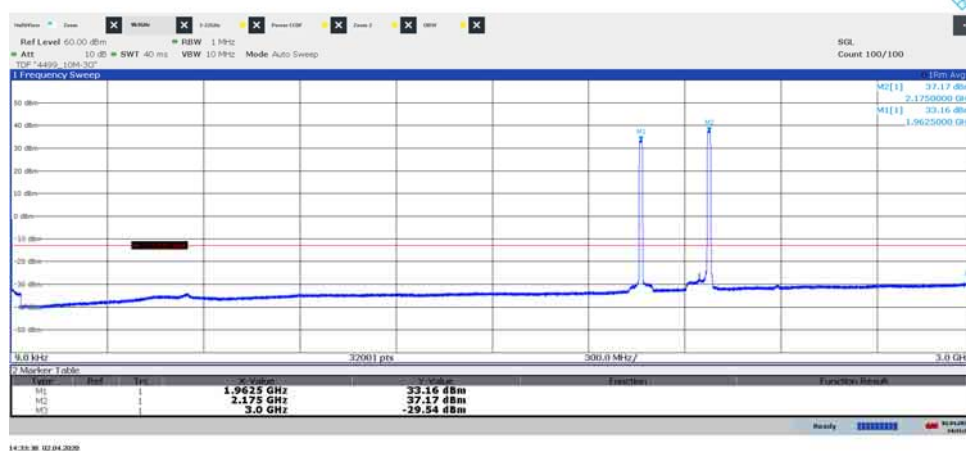


Diagram 3.61b, NB IoT IB: N-TM, LTE: E-TM3.1, $T_{IBIoT+L}$,
2.07 GHz – 2.22 GHz, Port B:

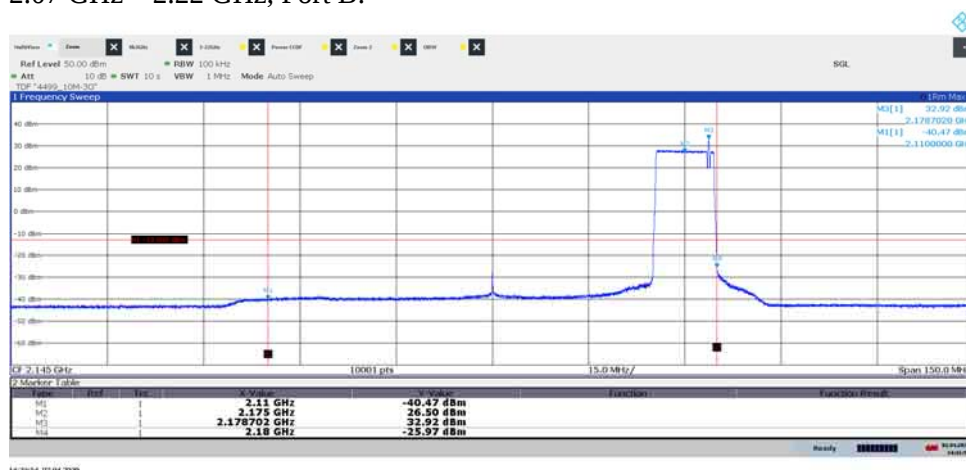


Diagram 3.61c, NB IoT IB: N-TM, LTE: E-TM3.1, $T_{IBIoT+L}$, 3 GHz – 22 GHz,
Port B:

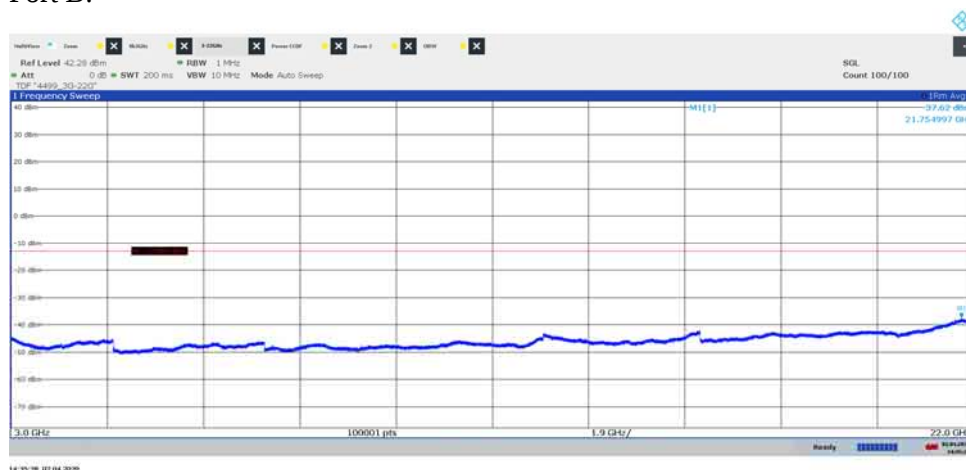


Diagram 3.62a, GSM: GMSK, NB IoT SA: N-TM, LTE: E-TM1.1, Bim_{G+IoT+L}, 9kHz – 3GHz Port A:

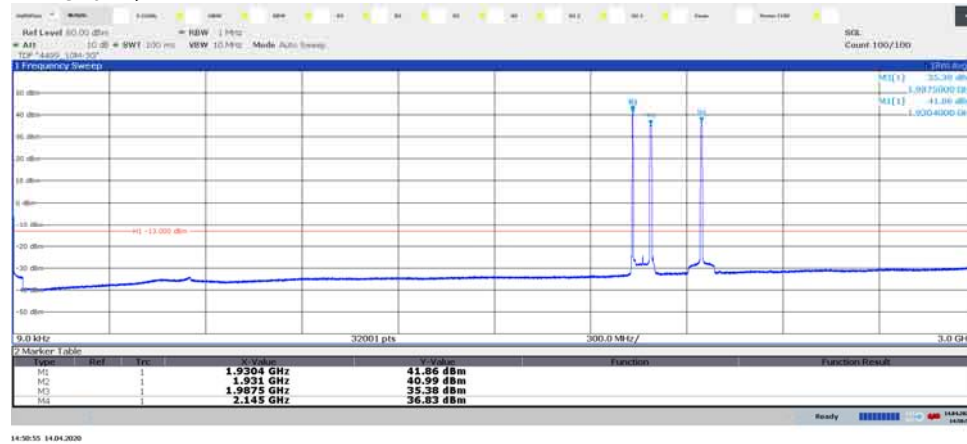
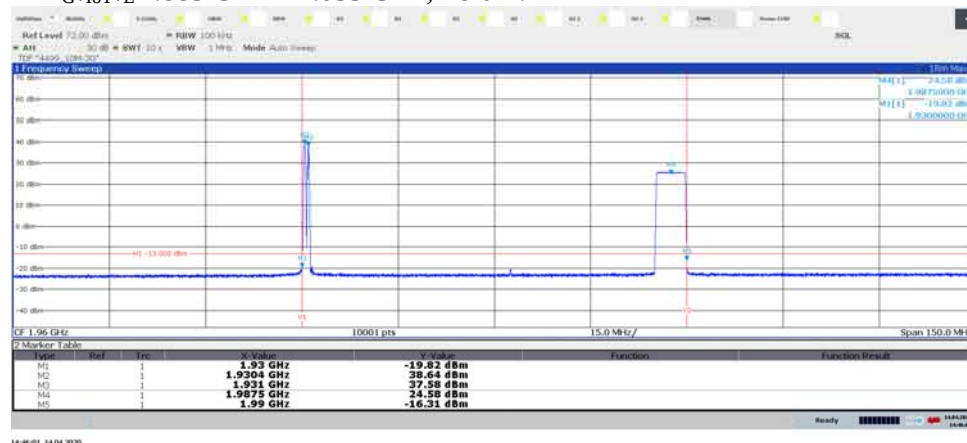


Diagram 3.62b, GSM: GMSK, NB IoT SA: N-TM, LTE: E-TM1.1, Bim_{G+IoT+L} 1.885 GHz – 2.035 GHz, Port A:



Note: The purpose of this measurement is to find IM products, not to verify compliance at the Band edges.

Diagram 3.62c GSM: GMSK, NB IoT SA: N-TM, LTE: E-TM1.1, Bim_{G+IoT+L}, 3 GHz – 22 GHz, Port A:

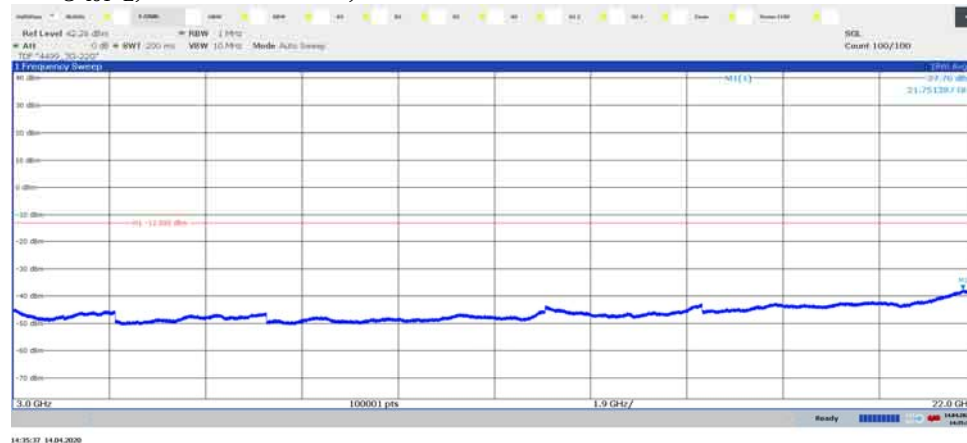


Diagram 3.63a, GSM: GMSK, NB IoT SA: N-TM, LTE: E-TM1.1,
Tim_{G+IoT+L}, 9kHz – 3GHz Port A:

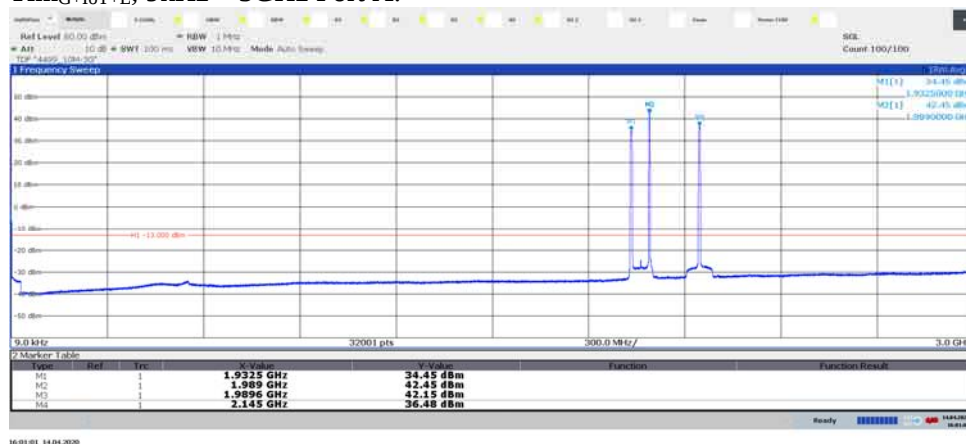
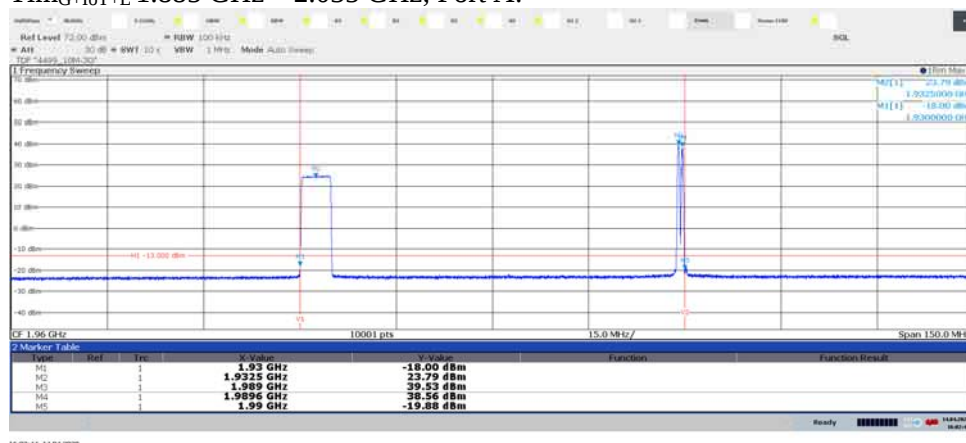


Diagram 3.63b, GSM: GMSK, NB IoT SA: N-TM, LTE: E-TM1.1,
Tim_{G+IoT+L} 1.885 GHz – 2.035 GHz, Port A:



Note: The purpose of this measurement is to find IM products, not to verify compliance at the Band edges.

Diagram 3.63c GSM: GMSK, NB IoT SA: N-TM, LTE: E-TM1.1,
Tim_{G+IoT+L}, 3 GHz – 22 GHz, Port B:

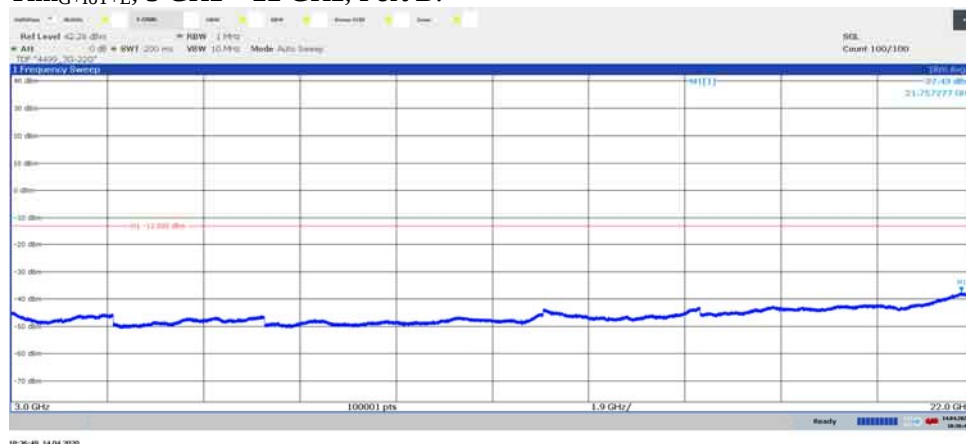


Diagram 3.64a, GSM: GMSK, NB IoT SA: N-TM, LTE: E-TM1.1,
Max_{G+IoT+L}, 9 kHz – 3 GHz, Port A:

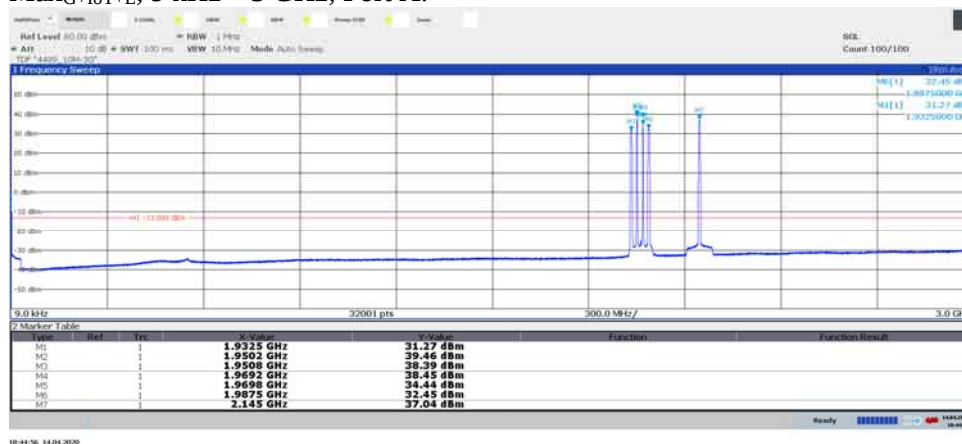
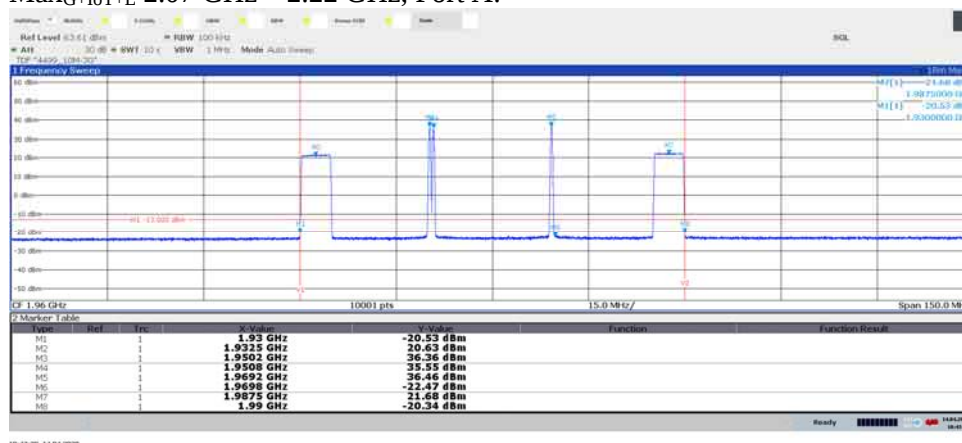


Diagram 3.64b, GSM: GMSK, NB IoT SA: N-TM, LTE: E-TM1.1,
Max_{G+IoT+L} 2.07 GHz – 2.22 GHz, Port A:



Note: The purpose of this measurement is to find IM products, not to verify compliance at the Band edges.

Diagram 3.64c, GSM: GMSK, NB IoT SA: N-TM, LTE: E-TM1.1,
Max_{G+IoT+L}, 3 GHz – 22 GHz, Port A:

