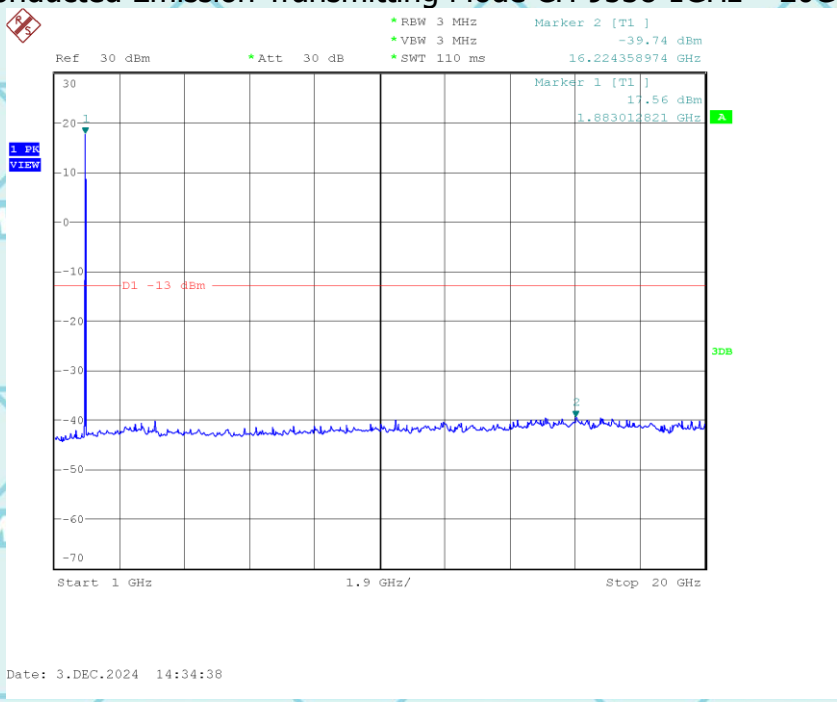
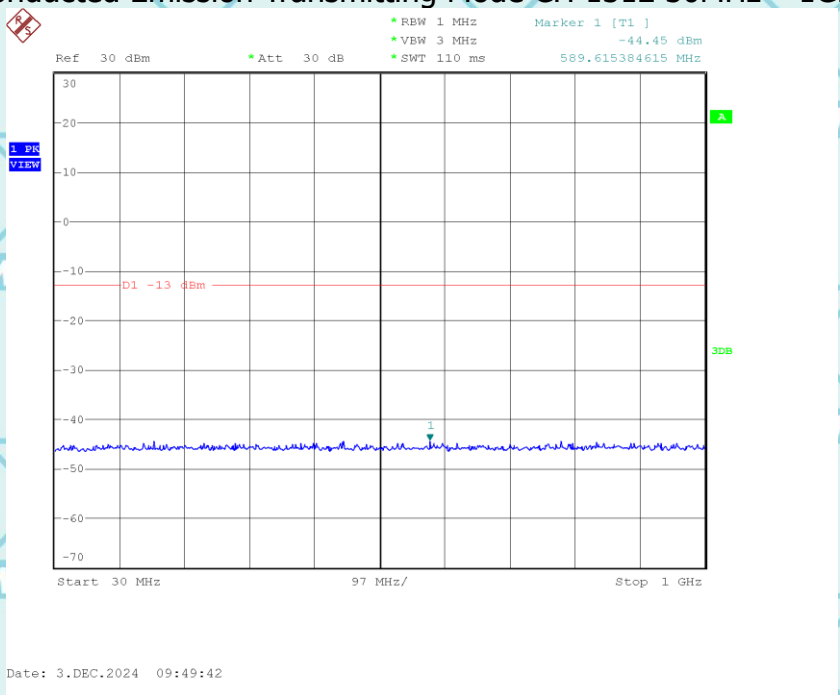
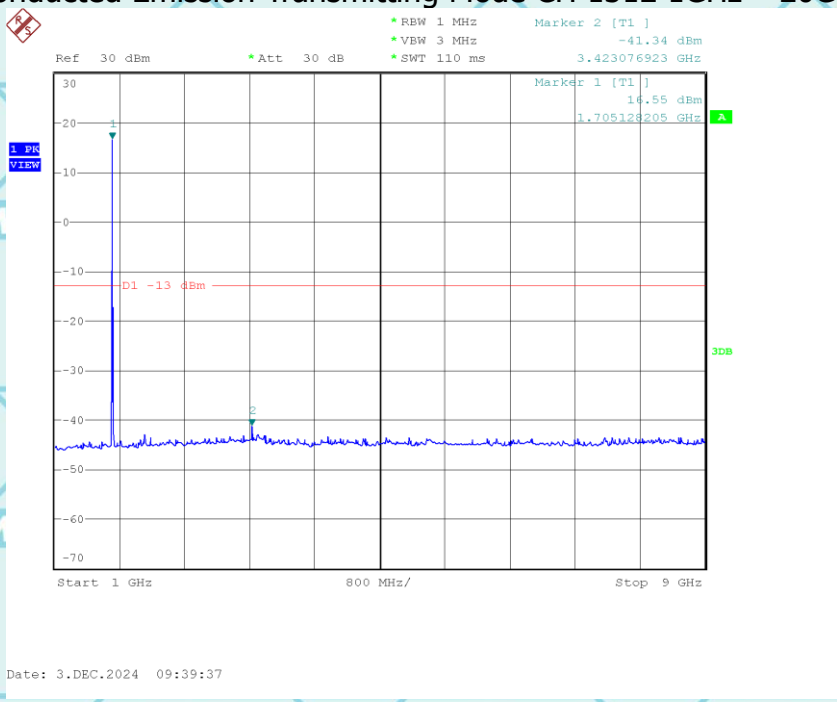
Conducted Emission Transmitting Mode CH 9538 1GHz – 20GHz



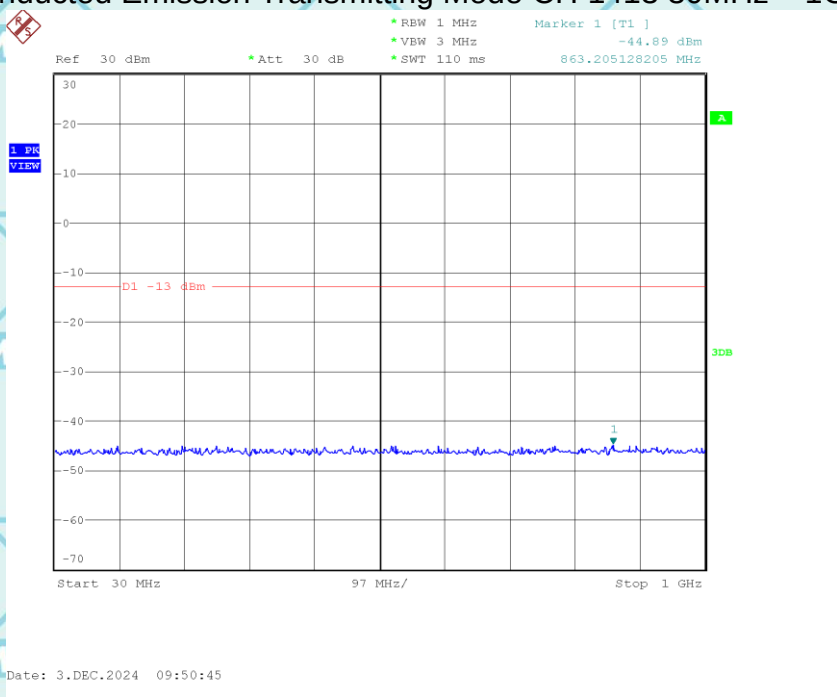

CONDUCTED EMISSION IN WCDMA Band 4
Conducted Emission Transmitting Mode CH 1312 30MHz – 1GHz



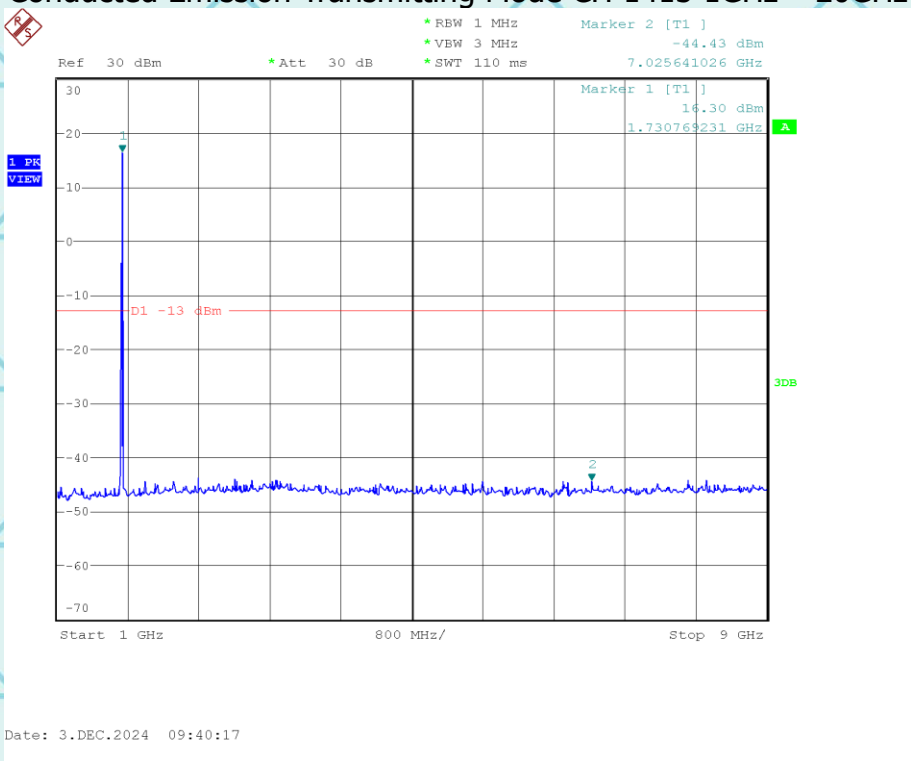
Conducted Emission Transmitting Mode CH 1312 1GHz – 20GHz



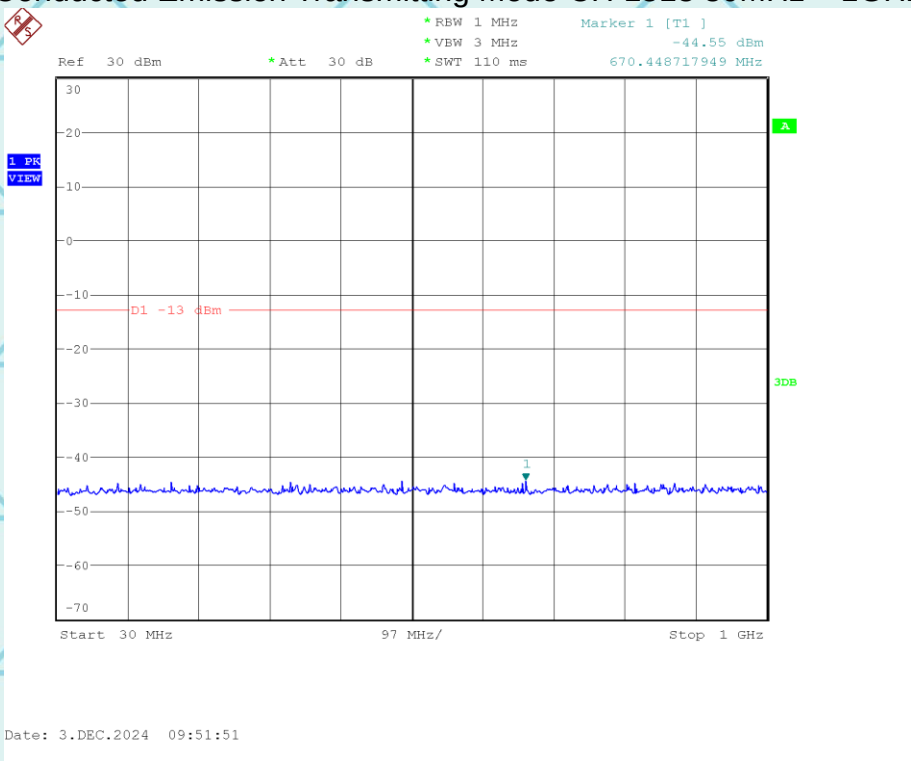

Conducted Emission Transmitting Mode CH 1413 30MHz – 1GHz



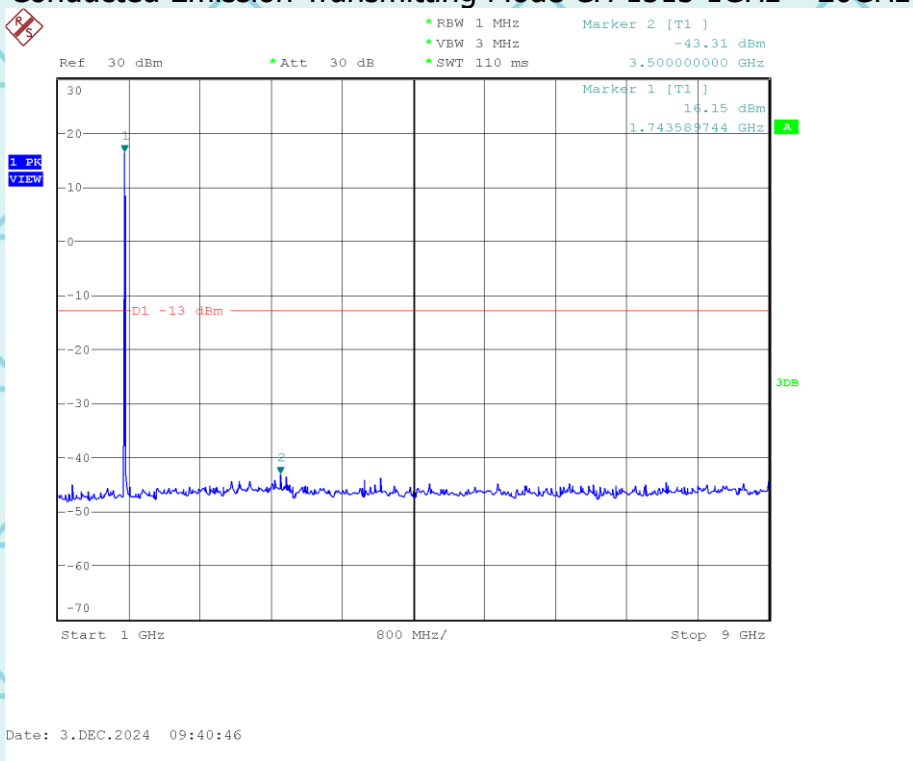
## Conducted Emission Transmitting Mode CH 1413 1GHz – 20GHz



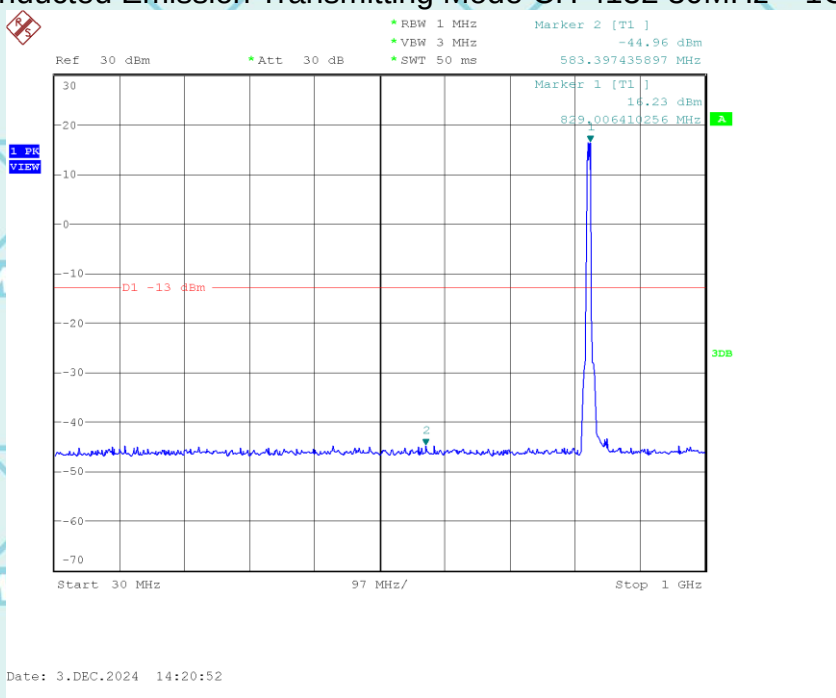

## Conducted Emission Transmitting Mode CH 1513 30MHz – 1GHz



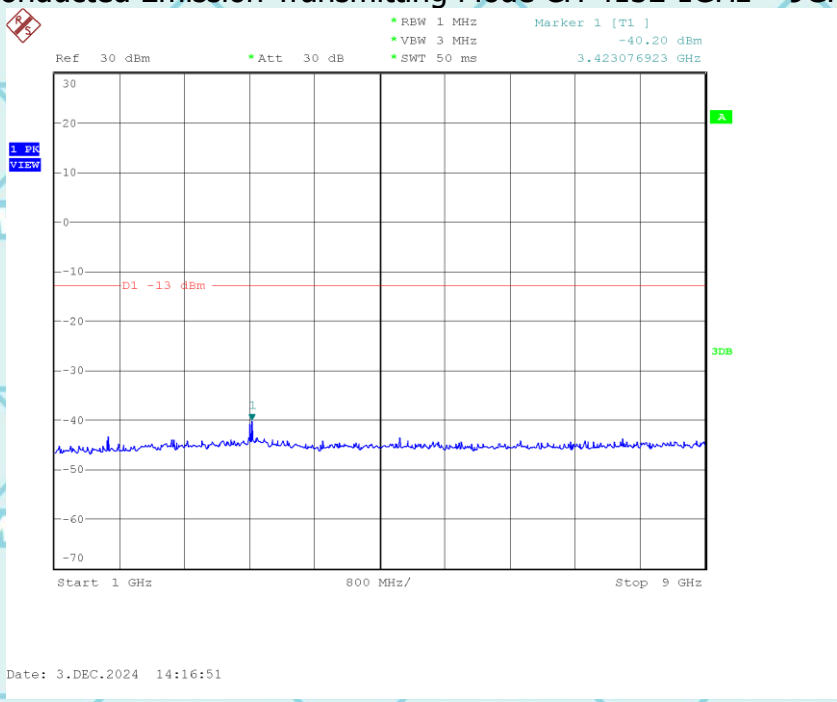
Conducted Emission Transmitting Mode CH 1513 1GHz – 20GHz



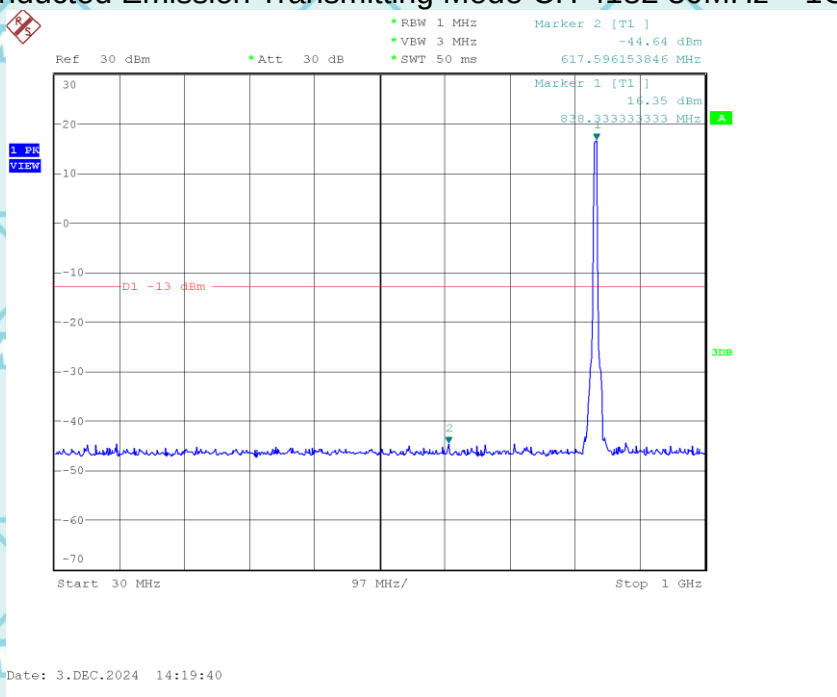

CONDUCTED EMISSION IN WCDMA Band 5
Conducted Emission Transmitting Mode CH 4132 30MHz – 1GHz



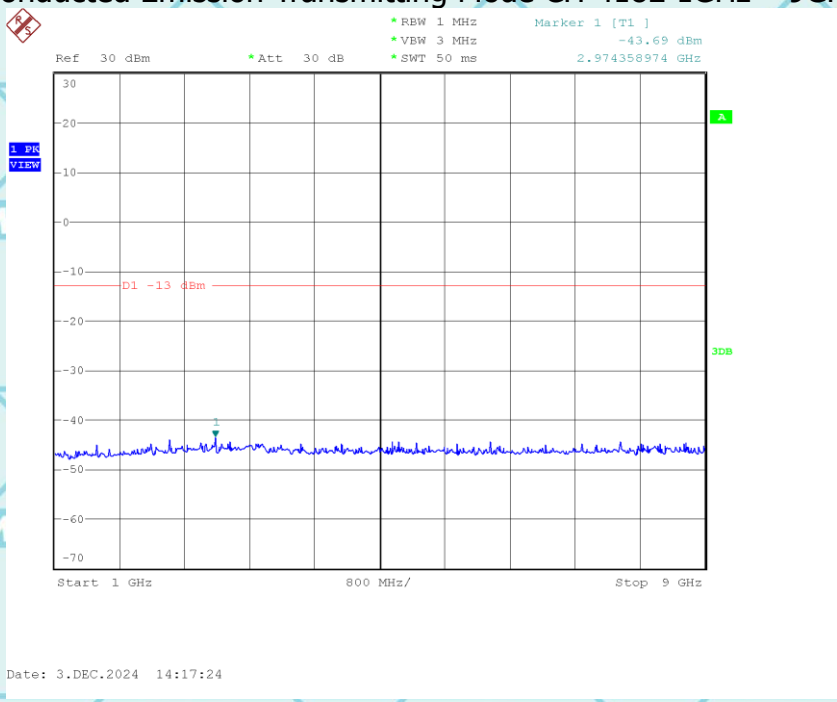
Conducted Emission Transmitting Mode CH 4132 1GHz – 9GHz



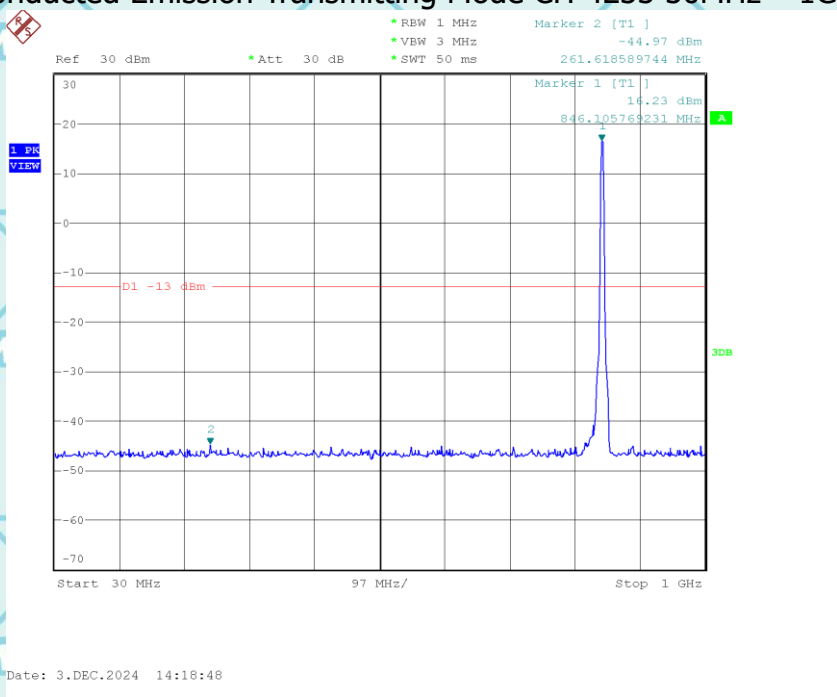

Conducted Emission Transmitting Mode CH 4182 30MHz – 1GHz



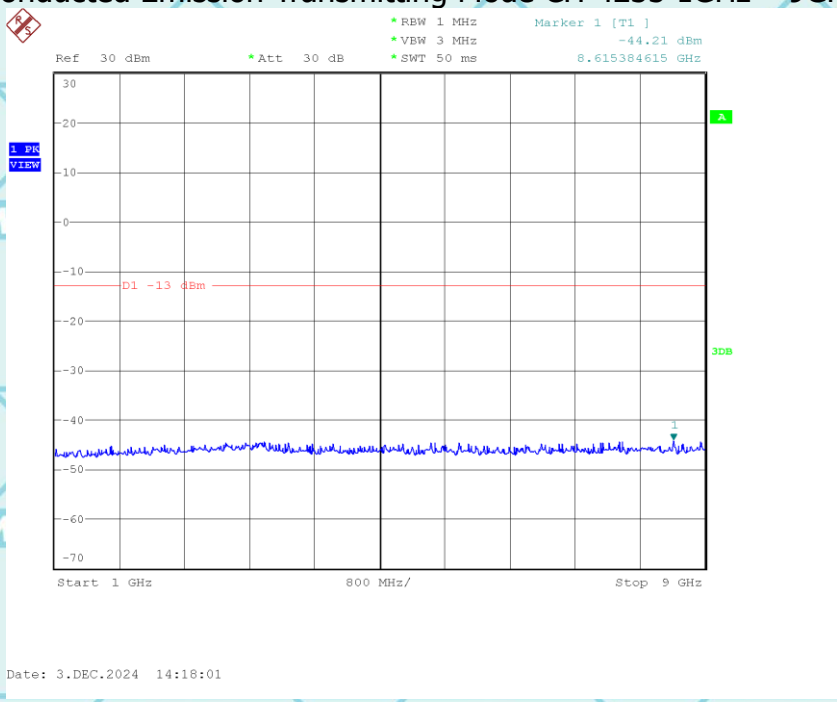
Conducted Emission Transmitting Mode CH 4182 1GHz – 9GHz




Conducted Emission Transmitting Mode CH 4233 30MHz – 1GHz



Conducted Emission Transmitting Mode CH 4233 1GHz – 9GHz




*Note: Please refer to Annex（LTE&NR Out-of-band emissions） for more test data*

# 12. FREQUENCY STABILITY

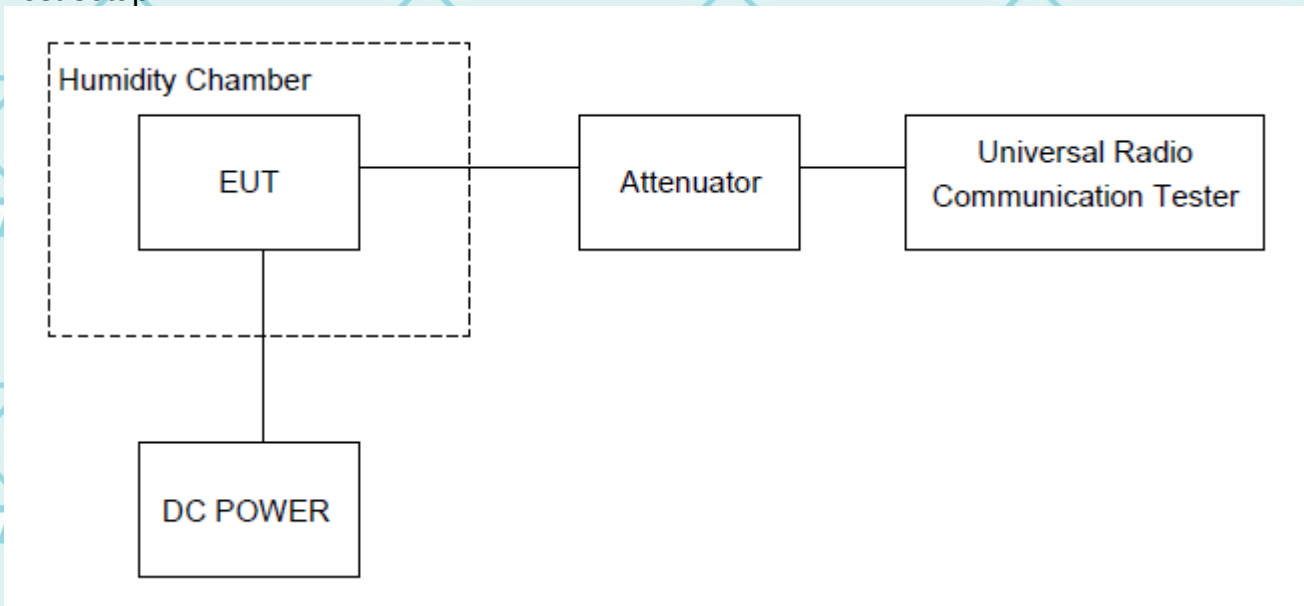
## Test limit:

The frequency stability of the transmitter shall be measured while varying the ambient temperatures and supply voltages over the ranges specified in §2.1055. The specific frequency stability limits are provided in the relevant rules section(s). see section 4.

## Test procedure:

Frequency Stability vs. Temperature: The equipment under test was connected to an external DC power supply and the RF output was connected to communication test set via feed-through attenuators. The EUT was placed inside the temperature chamber. The DC leads and RF output cable exited the chamber through an opening made for the purpose.

## Test setup:



## 12.1. Measurement Result (Worst)

**Frequency Error against Voltage for GSM 850 band (836.6MHz)**

| Voltage(V) | Frequency error(Hz) | Frequency error (ppm) |
|---|---|---|
| 3.45 | 42 | 0.051 |
| 3.86 | 34 | 0.040 |
| 4.50 | 44 | 0.053 |

**Frequency Error against Temperature for GSM 850 band (836.6MHz)**

| Temperature(°C) | Frequency error(Hz) | Frequency error(ppm) |
|---|---|---|
| -10 | 42 | 0.051 |
| 0 | 42 | 0.051 |
| 10 | 38 | 0.046 |
| 20 | 36 | 0.043 |
| 30 | 37 | 0.045 |
| 40 | 41 | 0.049 |
| 55 | 38 | 0.046 |

**Frequency Error against Voltage for PCS 1900 band (1880MHz)**

| Voltage(V) | Frequency error(Hz) | Frequency error(ppm) |
|---|---|---|
| 3.45 | 36 | 0.019 |
| 3.86 | 38 | 0.020 |
| 4.50 | 40 | 0.021 |

**Frequency Error against Temperature for PCS 1900 band (1880MHz)**

| Temperature(°C) | Frequency error(Hz) | Frequency error(ppm) |
|---|---|---|
| -10 | 42 | 0.022 |
| 0 | 40 | 0.021 |
| 10 | 37 | 0.020 |
| 20 | 44 | 0.023 |
| 30 | 38 | 0.020 |
| 40 | 38 | 0.020 |
| 55 | 40 | 0.021 |

**Frequency Error against Voltage for GPRS 850 band (836.6MHz)**

| Voltage(V) | Frequency error(Hz) | Frequency error (ppm) |
|---|---|---|
| 3.45 | 42 | 0.050 |
| 3.86 | 44 | 0.052 |
| 4.50 | 37 | 0.045 |

**Frequency Error against Temperature for GPRS 850 band (836.6MHz)**

| Temperature(°C) | Frequency error(Hz) | Frequency error(ppm) |
|---|---|---|
| -10 | 44 | 0.052 |
| 0 | 40 | 0.048 |
| 10 | 44 | 0.052 |
| 20 | 42 | 0.050 |
| 30 | 38 | 0.046 |
| 40 | 40 | 0.048 |
| 55 | 42 | 0.050 |

**Frequency Error against Voltage for GPRS 1900 band (1880MHz)**

| Voltage(V) | Frequency error(Hz) | Frequency error(ppm) |
|---|---|---|
| 3.45 | 45 | 0.024 |
| 3.86 | 35 | 0.018 |
| 4.50 | 41 | 0.022 |

**Frequency Error against Temperature for GPRS 1900 band (1880MHz)**

| Temperature(°C) | Frequency error(Hz) | Frequency error(ppm) |
|---|---|---|
| -10 | 44 | 0.023 |
| 0 | 35 | 0.018 |
| 10 | 41 | 0.022 |
| 20 | 44 | 0.023 |
| 30 | 38 | 0.020 |
| 40 | 38 | 0.020 |
| 55 | 41 | 0.022 |

**Frequency Error against Voltage for EGPRS 850 band (836.6MHz)**

| Voltage(V) | Frequency error(Hz) | Frequency error (ppm) |
|---|---|---|
| 3.45 | 34 | 0.041 |
| 3.86 | 36 | 0.043 |
| 4.50 | 43 | 0.051 |

**Frequency Error against Temperature for EGPRS 850 band (836.6MHz)**

| Temperature(°C) | Frequency error(Hz) | Frequency error(ppm) |
|---|---|---|
| -10 | 40 | 0.048 |
| 0 | 41 | 0.049 |
| 10 | 44 | 0.053 |
| 20 | 34 | 0.041 |
| 30 | 37 | 0.044 |
| 40 | 41 | 0.049 |
| 55 | 40 | 0.047 |

**Frequency Error against Voltage for EGPRS 1900 band (1880MHz)**

| Voltage(V) | Frequency error(Hz) | Frequency error(ppm) |
|---|---|---|
| 3.45 | 42 | 0.022 |
| 3.86 | 39 | 0.021 |
| 4.50 | 38 | 0.020 |

**Frequency Error against Temperature for EGPRS 1900 band (1880MHz)**

| Temperature(°C) | Frequency error(Hz) | Frequency error(ppm) |
|---|---|---|
| -10 | 40 | 0.021 |
| 0 | 38 | 0.020 |
| 10 | 39 | 0.021 |
| 20 | 45 | 0.024 |
| 30 | 38 | 0.020 |
| 40 | 42 | 0.022 |
| 55 | 35 | 0.019 |

**UTRA BANDS**

**Frequency Error against Voltage for WCDMA Band 2 (1880MHz)**

| Voltage(V) | Frequency error(Hz) | Frequency error (ppm) |
|---|---|---|
| 3.45 | 44 | 0.023 |
| 3.86 | 37 | 0.019 |
| 4.50 | 39 | 0.020 |

**Frequency Error against Temperature for WCDMA Band 2 (1880MHz)**

| Temperature(°C) | Frequency error(Hz) | Frequency error(ppm) |
|---|---|---|
| -10 | 37 | 0.019 |
| 0 | 42 | 0.022 |
| 10 | 37 | 0.019 |
| 20 | 40 | 0.021 |
| 30 | 44 | 0.023 |
| 40 | 37 | 0.019 |
| 55 | 42 | 0.022 |

**Frequency Error against Voltage for WCDMA Band 4 (1732.6MHz)**

| Voltage(V) | Frequency error(Hz) | Frequency error (ppm) |
|---|---|---|
| 3.45 | 36 | 0.021 |
| 3.86 | 42 | 0.024 |
| 4.50 | 39 | 0.022 |

**Frequency Error against Temperature for WCDMA Band 4 (1732.6MHz)**

| Temperature(°C) | Frequency error(Hz) | Frequency error(ppm) |
|---|---|---|
| -10 | 41 | 0.023 |
| 0 | 41 | 0.023 |
| 10 | 37 | 0.022 |
| 20 | 36 | 0.021 |
| 30 | 36 | 0.021 |
| 40 | 42 | 0.024 |
| 55 | 39 | 0.022 |

**Frequency Error against Voltage for WCDMA Band 5 (836.4MHz)**

| Voltage(V) | Frequency error(Hz) | Frequency error(ppm) |
|---|---|---|
| 3.45 | 44 | 0.053 |
| 3.86 | 34 | 0.041 |
| 4.50 | 37 | 0.044 |

**Frequency Error against Temperature for WCDMA Band 5 (836.4MHz)**

| Temperature(°C) | Frequency error(Hz) | Frequency error(ppm) |
|---|---|---|
| -10 | 38 | 0.046 |
| 0 | 40 | 0.048 |
| 10 | 43 | 0.052 |
| 20 | 38 | 0.045 |
| 30 | 34 | 0.041 |
| 40 | 37 | 0.044 |
| 55 | 42 | 0.050 |

*Note: Please refer to Annex（LTE&NR Frequency Error against） for more test data*

# 13. Test Setup Photographs

Please refer to Annex "Set Up Photos-RF" for test setup photos

**---END OF REPORT---**