# 1. Effective (Isotropic) Radiated Power Output Data

## 1.1 Band4_EIRP

### 1.1.1 Test Result

| Band: 4 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| ENV | Mode | | Frequency (MHz) | Conducted Power (dBm) | Gain (dBi) | EIRP (dBm) | | Verdict |
| | Network | Subset | | | | Result | Limit | |
| NTNV | RMC | 12.2kbps RMC | 1712.4 | 21.09 | 1.18 | 22.27 | <=30 | Pass |
| | | | 1732.6 | 20.89 | 1.18 | 22.07 | <=30 | Pass |
| | | | 1752.6 | 20.83 | 1.18 | 22.01 | <=30 | Pass |
| | HSDPA | Subtest 1 | 1712.4 | 19.12 | 1.18 | 20.30 | <=30 | Pass |
| | | Subtest 2 | 1712.4 | 19.04 | 1.18 | 20.22 | <=30 | Pass |
| | | Subtest 3 | 1712.4 | 18.99 | 1.18 | 20.17 | <=30 | Pass |
| | | Subtest 4 | 1712.4 | 18.99 | 1.18 | 20.17 | <=30 | Pass |
| | | Subtest 1 | 1732.6 | 18.90 | 1.18 | 20.08 | <=30 | Pass |
| | | Subtest 2 | 1732.6 | 18.95 | 1.18 | 20.13 | <=30 | Pass |
| | | Subtest 3 | 1732.6 | 18.95 | 1.18 | 20.13 | <=30 | Pass |
| | | Subtest 4 | 1732.6 | 19.03 | 1.18 | 20.21 | <=30 | Pass |
| | | Subtest 1 | 1752.6 | 18.83 | 1.18 | 20.01 | <=30 | Pass |
| | | Subtest 2 | 1752.6 | 18.81 | 1.18 | 19.99 | <=30 | Pass |
| | | Subtest 3 | 1752.6 | 18.84 | 1.18 | 20.02 | <=30 | Pass |
| | | Subtest 4 | 1752.6 | 18.87 | 1.18 | 20.05 | <=30 | Pass |
| | HSUPA | Subtest 1 | 1712.4 | 17.49 | 1.18 | 18.67 | <=30 | Pass |
| | | Subtest 2 | 1712.4 | 17.39 | 1.18 | 18.57 | <=30 | Pass |
| | | Subtest 3 | 1712.4 | 17.42 | 1.18 | 18.60 | <=30 | Pass |
| | | Subtest 4 | 1712.4 | 17.48 | 1.18 | 18.66 | <=30 | Pass |
| | | Subtest 5 | 1712.4 | 17.02 | 1.18 | 18.20 | <=30 | Pass |
| | | Subtest 1 | 1732.6 | 17.34 | 1.18 | 18.52 | <=30 | Pass |
| | | Subtest 2 | 1732.6 | 17.19 | 1.18 | 18.37 | <=30 | Pass |
| | | Subtest 3 | 1732.6 | 17.25 | 1.18 | 18.43 | <=30 | Pass |
| | | Subtest 4 | 1732.6 | 17.39 | 1.18 | 18.57 | <=30 | Pass |
| | | Subtest 5 | 1732.6 | 17.29 | 1.18 | 18.47 | <=30 | Pass |
| | | Subtest 1 | 1752.6 | 17.10 | 1.18 | 18.28 | <=30 | Pass |
| | | Subtest 2 | 1752.6 | 17.08 | 1.18 | 18.26 | <=30 | Pass |
| | | Subtest 3 | 1752.6 | 17.24 | 1.18 | 18.42 | <=30 | Pass |
| | | Subtest 4 | 1752.6 | 16.72 | 1.18 | 17.90 | <=30 | Pass |
| | | Subtest 5 | 1752.6 | 16.68 | 1.18 | 17.86 | <=30 | Pass |
| Note1: EIRP=Conducted Power+Antenna Gain | | | | | | | | |

# 2. Frequency Stability

## 2.1 Band4

### 2.1.1 Test Result

| Band: 4 | | | | | | |
|---|---|---|---|---|---|---|
| Network | Frequency | Temp. | Voltage | Freq. Error | Freq. vs. Rated (ppm) | Verdict |

| | (MHz) | (°C) | (VDC) | (Hz) | Result | Limit | |
|---|---|---|---|---|---|---|---|
| RMC | 1712.4 | 20 | 3.27 | 26.121 | 0.0153 | -2.5 to 2.5 | Pass |
| | | | 3.85 | 26.658 | 0.0156 | -2.5 to 2.5 | Pass |
| | | | 4.43 | 27.537 | 0.0161 | -2.5 to 2.5 | Pass |
| | | -30 | 3.85 | 27.437 | 0.0160 | -2.5 to 2.5 | Pass |
| | | -20 | 3.85 | 27.401 | 0.0160 | -2.5 to 2.5 | Pass |
| | | -10 | 3.85 | 28.067 | 0.0164 | -2.5 to 2.5 | Pass |
| | | 0 | 3.85 | 28.324 | 0.0165 | -2.5 to 2.5 | Pass |
| | | 10 | 3.85 | 28.095 | 0.0164 | -2.5 to 2.5 | Pass |
| | | 30 | 3.85 | 27.931 | 0.0163 | -2.5 to 2.5 | Pass |
| | | 40 | 3.85 | 27.537 | 0.0161 | -2.5 to 2.5 | Pass |
| | | 50 | 3.85 | 27.237 | 0.0159 | -2.5 to 2.5 | Pass |
| | 1732.6 | 20 | 3.27 | 0.365 | 0.0002 | -2.5 to 2.5 | Pass |
| | | | 3.85 | 0.637 | 0.0004 | -2.5 to 2.5 | Pass |
| | | | 4.43 | 0.486 | 0.0003 | -2.5 to 2.5 | Pass |
| | | -30 | 3.85 | -0.179 | -0.0001 | -2.5 to 2.5 | Pass |
| | | -20 | 3.85 | 0.994 | 0.0006 | -2.5 to 2.5 | Pass |
| | | -10 | 3.85 | 0.000 | 0.0000 | -2.5 to 2.5 | Pass |
| | | 0 | 3.85 | 0.730 | 0.0004 | -2.5 to 2.5 | Pass |
| | | 10 | 3.85 | 0.165 | 0.0001 | -2.5 to 2.5 | Pass |
| | | 30 | 3.85 | 0.551 | 0.0003 | -2.5 to 2.5 | Pass |
| | | 40 | 3.85 | 1.087 | 0.0006 | -2.5 to 2.5 | Pass |
| | | 50 | 3.85 | 0.887 | 0.0005 | -2.5 to 2.5 | Pass |
| | 1752.6 | 20 | 3.27 | -24.362 | -0.0139 | -2.5 to 2.5 | Pass |
| | | | 3.85 | -25.027 | -0.0143 | -2.5 to 2.5 | Pass |
| | | | 4.43 | -24.712 | -0.0141 | -2.5 to 2.5 | Pass |
| | | -30 | 3.85 | -24.061 | -0.0137 | -2.5 to 2.5 | Pass |
| | | -20 | 3.85 | -24.848 | -0.0142 | -2.5 to 2.5 | Pass |
| | | -10 | 3.85 | -23.997 | -0.0137 | -2.5 to 2.5 | Pass |
| | | 0 | 3.85 | -23.911 | -0.0136 | -2.5 to 2.5 | Pass |
| | | 10 | 3.85 | -24.705 | -0.0141 | -2.5 to 2.5 | Pass |
| | | 30 | 3.85 | -24.354 | -0.0139 | -2.5 to 2.5 | Pass |
| | | 40 | 3.85 | -24.261 | -0.0138 | -2.5 to 2.5 | Pass |
| | | 50 | 3.85 | -23.997 | -0.0137 | -2.5 to 2.5 | Pass |
| HSDPA | 1712.4 | 20 | 3.27 | 22.860 | 0.0133 | -2.5 to 2.5 | Pass |
| | | | 3.85 | 24.576 | 0.0144 | -2.5 to 2.5 | Pass |
| | | | 4.43 | 24.648 | 0.0144 | -2.5 to 2.5 | Pass |
| | | -30 | 3.85 | 24.712 | 0.0144 | -2.5 to 2.5 | Pass |
| | | -20 | 3.85 | 25.742 | 0.0150 | -2.5 to 2.5 | Pass |
| | | -10 | 3.85 | 25.170 | 0.0147 | -2.5 to 2.5 | Pass |
| | | 0 | 3.85 | 25.399 | 0.0148 | -2.5 to 2.5 | Pass |
| | | 10 | 3.85 | 24.941 | 0.0146 | -2.5 to 2.5 | Pass |
| | | 30 | 3.85 | 25.177 | 0.0147 | -2.5 to 2.5 | Pass |
| | | 40 | 3.85 | 24.047 | 0.0140 | -2.5 to 2.5 | Pass |
| | | 50 | 3.85 | 24.827 | 0.0145 | -2.5 to 2.5 | Pass |
| | 1732.6 | 20 | 3.27 | -2.575 | -0.0015 | -2.5 to 2.5 | Pass |
| | | | 3.85 | -2.396 | -0.0014 | -2.5 to 2.5 | Pass |
| | | | 4.43 | -2.296 | -0.0013 | -2.5 to 2.5 | Pass |
| | | -30 | 3.85 | -1.431 | -0.0008 | -2.5 to 2.5 | Pass |
| | | -20 | 3.85 | -2.711 | -0.0016 | -2.5 to 2.5 | Pass |
| | | -10 | 3.85 | -2.210 | -0.0013 | -2.5 to 2.5 | Pass |
| | | 0 | 3.85 | -1.202 | -0.0007 | -2.5 to 2.5 | Pass |
| | | 10 | 3.85 | -2.017 | -0.0012 | -2.5 to 2.5 | Pass |
| | | 30 | 3.85 | -2.060 | -0.0012 | -2.5 to 2.5 | Pass |
| | | 40 | 3.85 | -1.810 | -0.0010 | -2.5 to 2.5 | Pass |
| | | 50 | 3.85 | -1.338 | -0.0008 | -2.5 to 2.5 | Pass |
| | 1752.6 | 20 | 3.27 | -25.291 | -0.0144 | -2.5 to 2.5 | Pass |
| | | | 3.85 | -25.721 | -0.0147 | -2.5 to 2.5 | Pass |
| | | | 4.43 | -26.572 | -0.0152 | -2.5 to 2.5 | Pass |
| | | -30 | 3.85 | -25.649 | -0.0146 | -2.5 to 2.5 | Pass |
| | | -20 | 3.85 | -25.520 | -0.0146 | -2.5 to 2.5 | Pass |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | -10 | 3.85 | -26.178 | -0.0149 | -2.5 to 2.5 | Pass |
| | | 0 | 3.85 | -26.414 | -0.0151 | -2.5 to 2.5 | Pass |
| | | 10 | 3.85 | -26.529 | -0.0151 | -2.5 to 2.5 | Pass |
| | | 30 | 3.85 | -26.400 | -0.0151 | -2.5 to 2.5 | Pass |
| | | 40 | 3.85 | -26.286 | -0.0150 | -2.5 to 2.5 | Pass |
| | | 50 | 3.85 | -25.477 | -0.0145 | -2.5 to 2.5 | Pass |
| HSUPA | 1712.4 | 20 | 3.27 | 23.868 | 0.0139 | -2.5 to 2.5 | Pass |
| | | | 3.85 | 25.249 | 0.0147 | -2.5 to 2.5 | Pass |
| | | | 4.43 | 24.140 | 0.0141 | -2.5 to 2.5 | Pass |
| | | -30 | 3.85 | 25.313 | 0.0148 | -2.5 to 2.5 | Pass |
| | | -20 | 3.85 | 25.377 | 0.0148 | -2.5 to 2.5 | Pass |
| | | -10 | 3.85 | 24.962 | 0.0146 | -2.5 to 2.5 | Pass |
| | | 0 | 3.85 | 25.556 | 0.0149 | -2.5 to 2.5 | Pass |
| | | 10 | 3.85 | 25.055 | 0.0146 | -2.5 to 2.5 | Pass |
| | | 30 | 3.85 | 24.426 | 0.0143 | -2.5 to 2.5 | Pass |
| | | 40 | 3.85 | 25.184 | 0.0147 | -2.5 to 2.5 | Pass |
| | | 50 | 3.85 | 25.256 | 0.0147 | -2.5 to 2.5 | Pass |
| | 1732.6 | 20 | 3.27 | -0.401 | -0.0002 | -2.5 to 2.5 | Pass |
| | | | 3.85 | -0.286 | -0.0002 | -2.5 to 2.5 | Pass |
| | | | 4.43 | -0.250 | -0.0001 | -2.5 to 2.5 | Pass |
| | | -30 | 3.85 | 0.300 | 0.0002 | -2.5 to 2.5 | Pass |
| | | -20 | 3.85 | -0.443 | -0.0003 | -2.5 to 2.5 | Pass |
| | | -10 | 3.85 | 0.300 | 0.0002 | -2.5 to 2.5 | Pass |
| | | 0 | 3.85 | 0.122 | 0.0001 | -2.5 to 2.5 | Pass |
| | | 10 | 3.85 | -0.093 | -0.0001 | -2.5 to 2.5 | Pass |
| | | 30 | 3.85 | -0.601 | -0.0003 | -2.5 to 2.5 | Pass |
| | | 40 | 3.85 | -0.794 | -0.0005 | -2.5 to 2.5 | Pass |
| | | 50 | 3.85 | -0.422 | -0.0002 | -2.5 to 2.5 | Pass |
| | 1752.6 | 20 | 3.27 | -28.138 | -0.0161 | -2.5 to 2.5 | Pass |
| | | | 3.85 | -27.258 | -0.0156 | -2.5 to 2.5 | Pass |
| | | | 4.43 | -27.051 | -0.0154 | -2.5 to 2.5 | Pass |
| | | -30 | 3.85 | -26.894 | -0.0153 | -2.5 to 2.5 | Pass |
| | | -20 | 3.85 | -26.472 | -0.0151 | -2.5 to 2.5 | Pass |
| | | -10 | 3.85 | -26.522 | -0.0151 | -2.5 to 2.5 | Pass |
| | | 0 | 3.85 | -27.208 | -0.0155 | -2.5 to 2.5 | Pass |
| | | 10 | 3.85 | -26.879 | -0.0153 | -2.5 to 2.5 | Pass |
| | | 30 | 3.85 | -26.522 | -0.0151 | -2.5 to 2.5 | Pass |
| | | 40 | 3.85 | -26.822 | -0.0153 | -2.5 to 2.5 | Pass |
| | | 50 | 3.85 | -26.121 | -0.0149 | -2.5 to 2.5 | Pass |

# 3. Modulation Characteristics

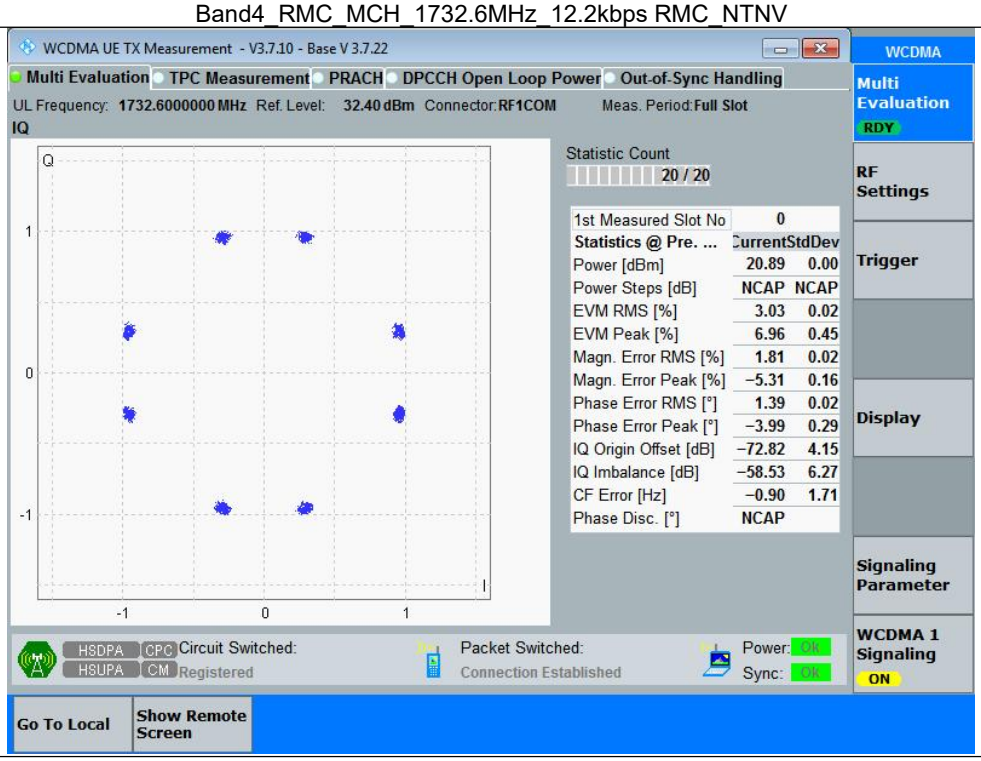
## 3.1 Band4

### 3.1.1 Test Result

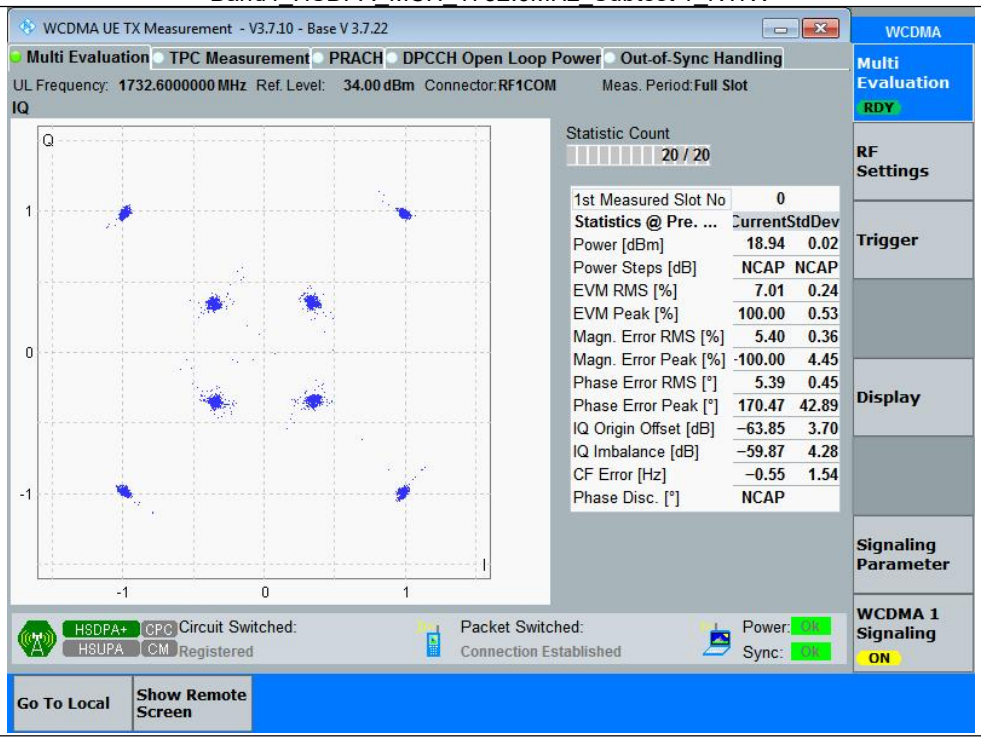
| Band: 4 | | | | | | |
|---|---|---|---|---|---|---|
| ENV | Mode | | Frequency (MHz) | Modulation Characteristics | | Verdict |
| | Network | Subset | | Result | Limit | |
| NTNV | RMC | 12.2kbps RMC | 1732.6 | Refer To Test Graph | | Pass |
| | HSDPA | Subtest 1 | 1732.6 | Refer To Test Graph | | Pass |
| | HSUPA | Subtest 1 | 1732.6 | Refer To Test Graph | | Pass |

## 3.1.2 Test Graph

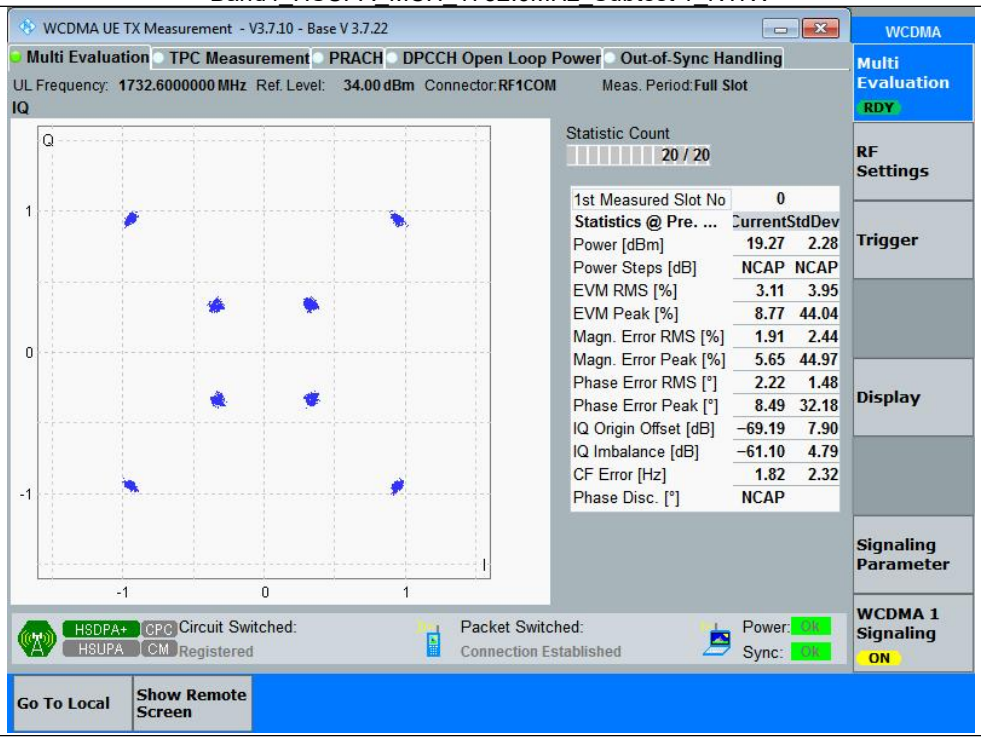
Band4_RMC_MCH_1732.6MHz_12.2kbps RMC_NTNV




Band4_HSDPA_MCH_1732.6MHz_Subtest 1_NTNV



Band4_HSUPA_MCH_1732.6MHz_Subtest 1_NTNV



# 4. 99% & 26dB Bandwidth

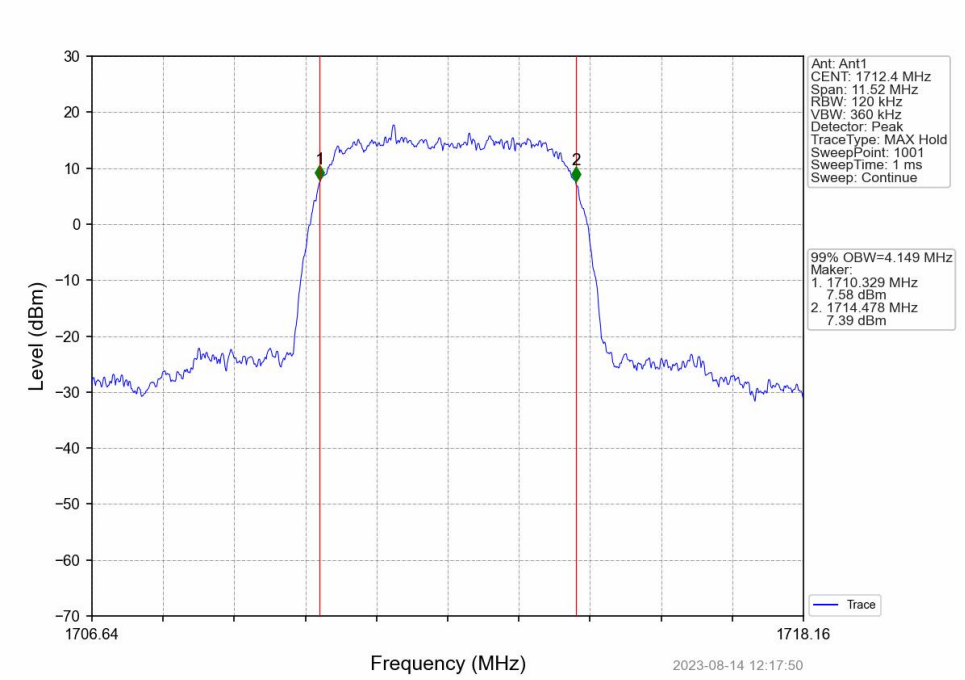
## 4.1 Band4_OBW

### 4.1.1 Test Result

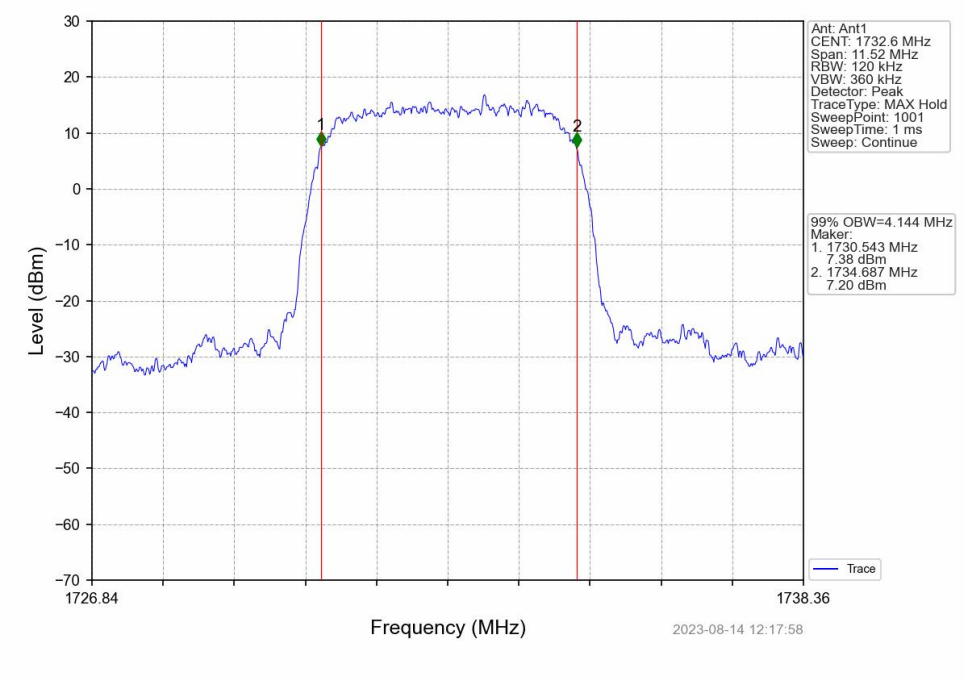
| Band: 4 | | | | | |
|---|---|---|---|---|---|
| ENV | Mode | | Frequency (MHz) | 99% Occupied Bandwidth (MHz) | Verdict |
| | Network | Subset | | Result | |
| NTNV | RMC | 12.2kbps RMC | 1712.4 | 4.149 | Pass |
| | | | 1732.6 | 4.144 | Pass |
| | | | 1752.6 | 4.154 | Pass |
| | HSDPA | Subtest 1 | 1712.4 | 4.175 | Pass |
| | | | 1732.6 | 4.193 | Pass |
| | | | 1752.6 | 4.163 | Pass |
| | HSUPA | Subtest 1 | 1712.4 | 4.191 | Pass |
| | | | 1732.6 | 4.198 | Pass |
| | | | 1752.6 | 4.177 | Pass |

## 4.1.2 Test Graph

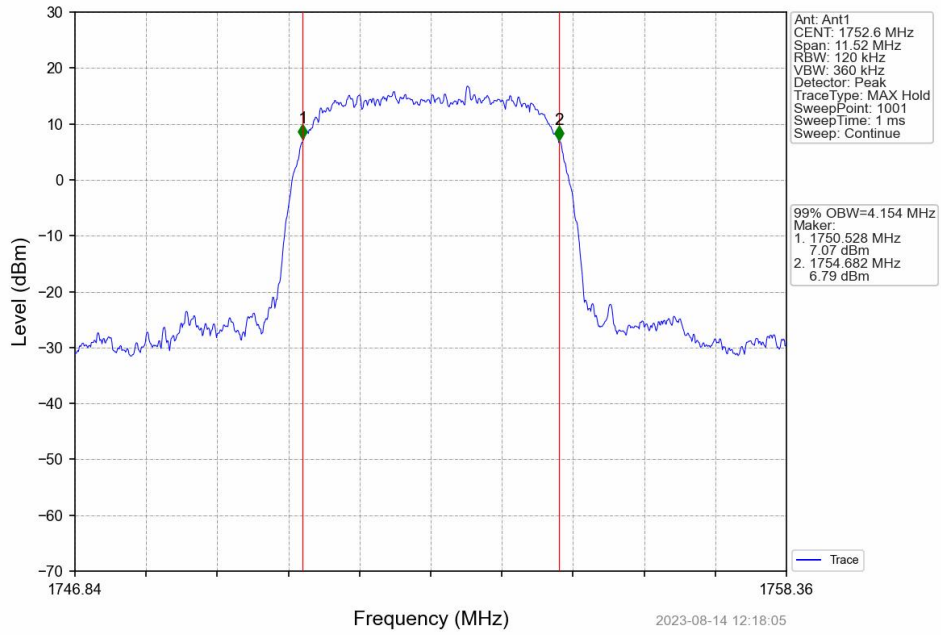
Band4_RMC_LCH_1712.4MHz_12.2kbps RMC_NTNV



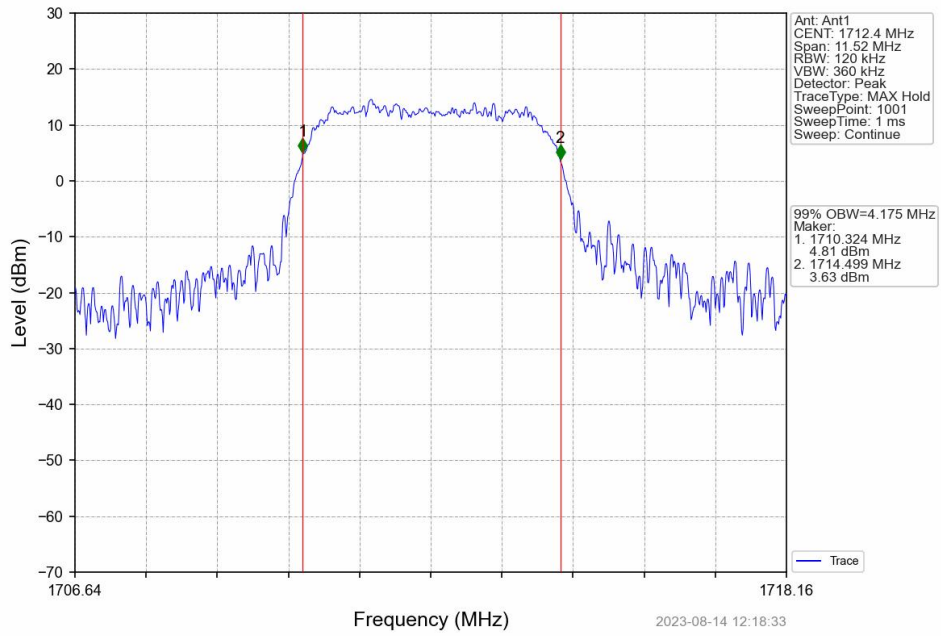

Band4_RMC_MCH_1732.6MHz_12.2kbps RMC_NTNV



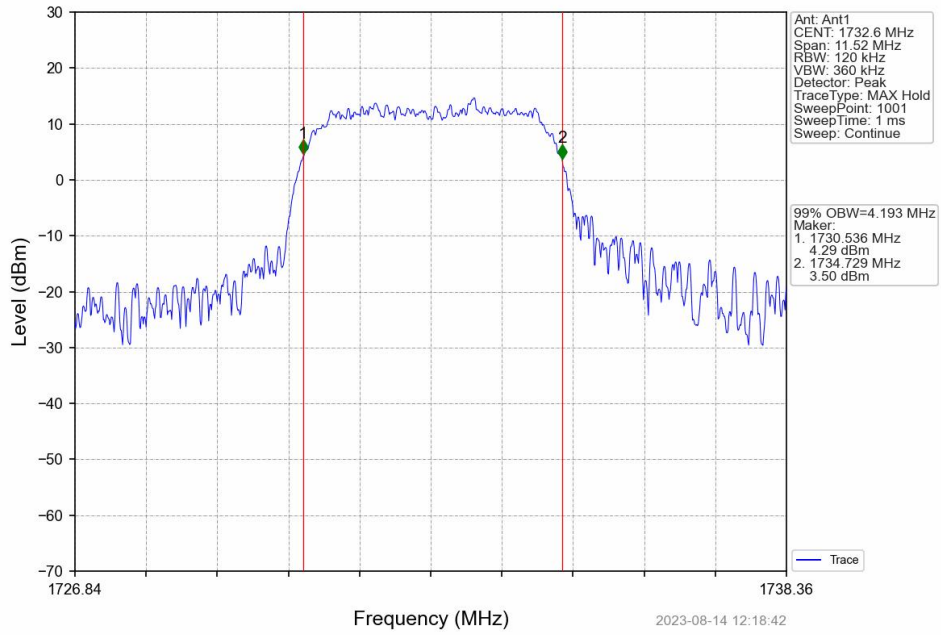
Band4_RMC_HCH_1752.6MHz_12.2kbps RMC_NTNV



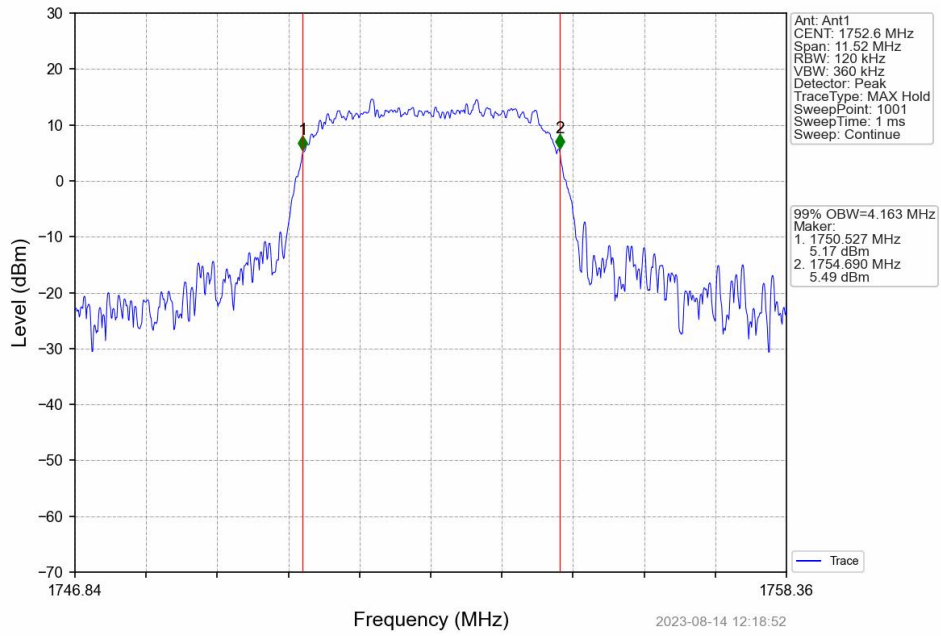

Band4_HSDPA_LCH_1712.4MHz_Subtest 1_NTNV



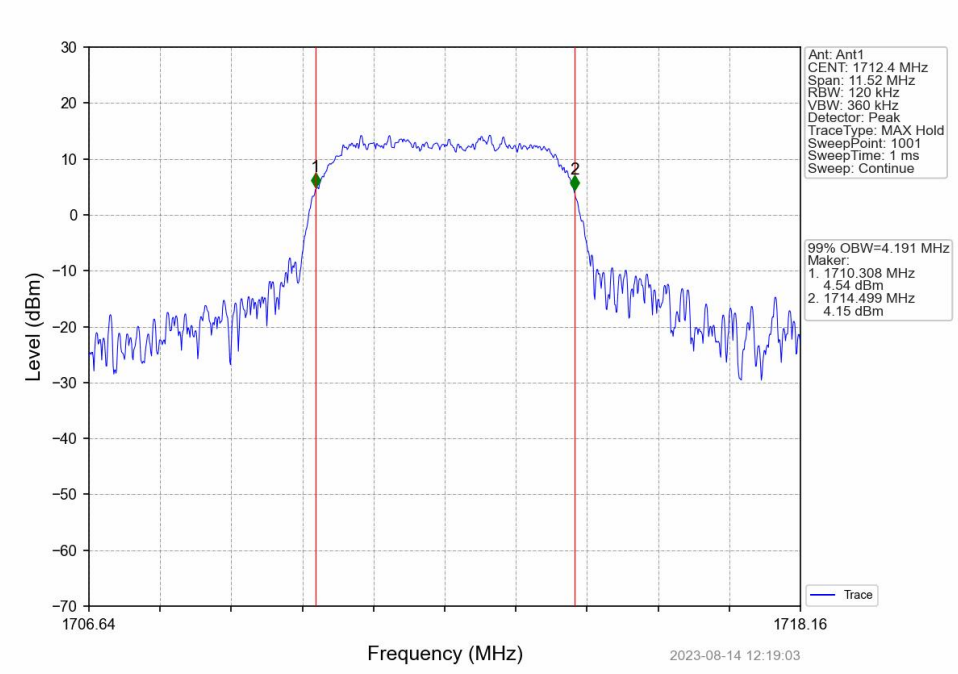
Band4_HSDPA_MCH_1732.6MHz_Subtest 1_NTNV



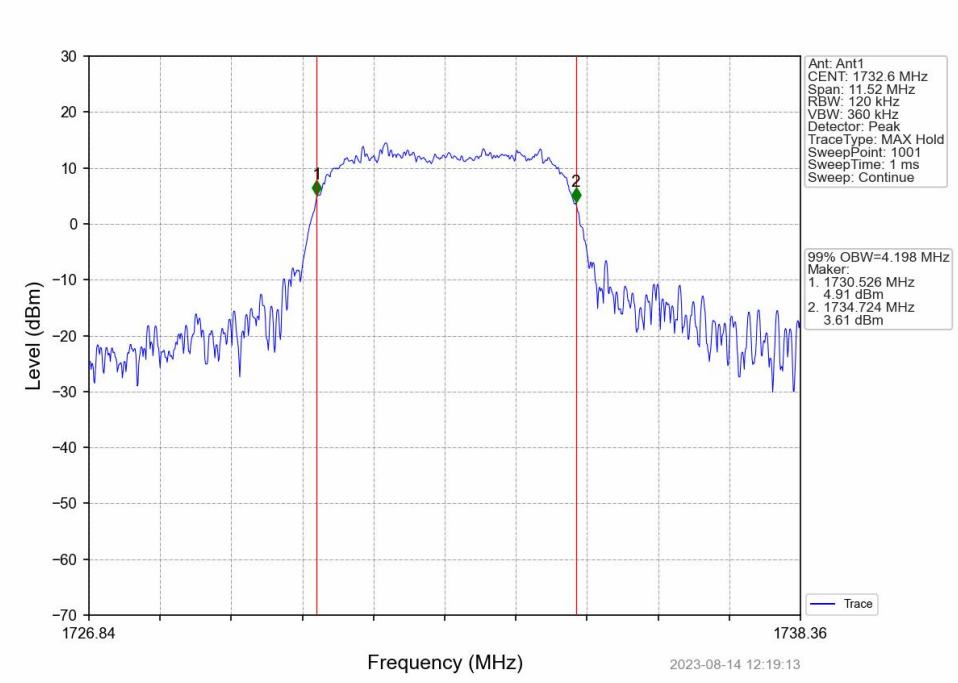

Band4_HSDPA_HCH_1752.6MHz_Subtest 1_NTNV



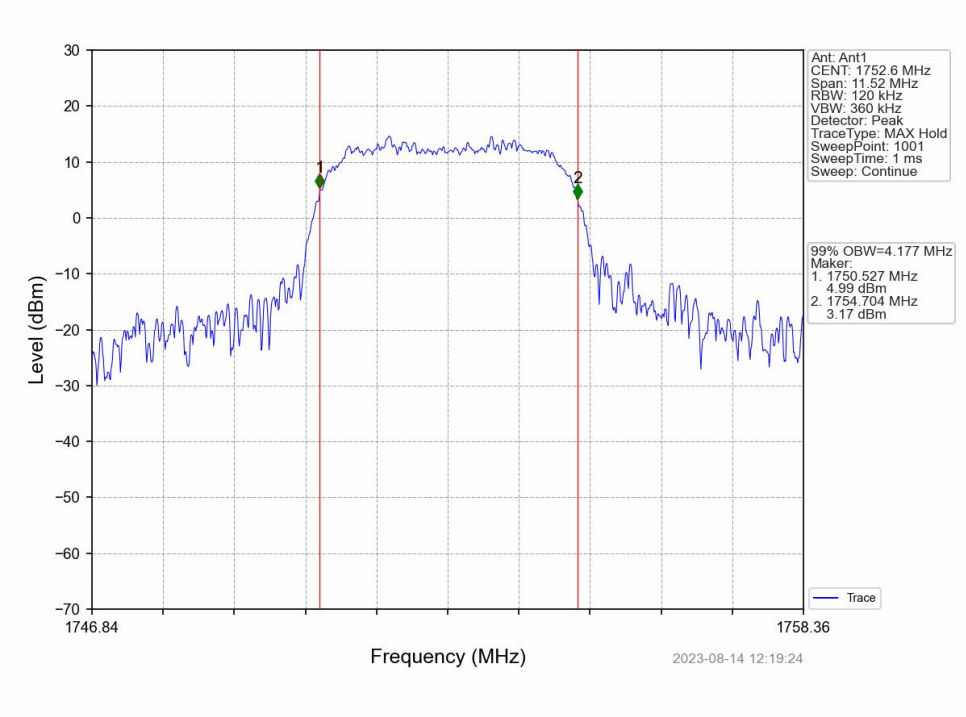
Band4_HSUPA_LCH_1712.4MHz_Subtest 1_NTNV




Band4_HSUPA_MCH_1732.6MHz_Subtest 1_NTNV



Band4_HSUPA_HCH_1752.6MHz_Subtest 1_NTNV



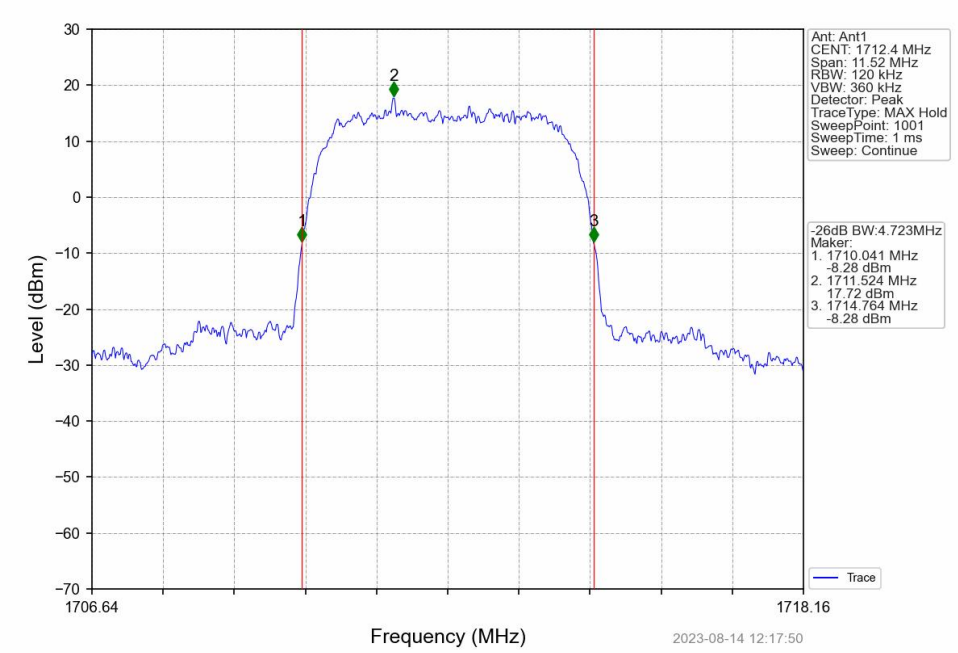
## 4.2 Band4_XDB

### 4.2.1 Test Result

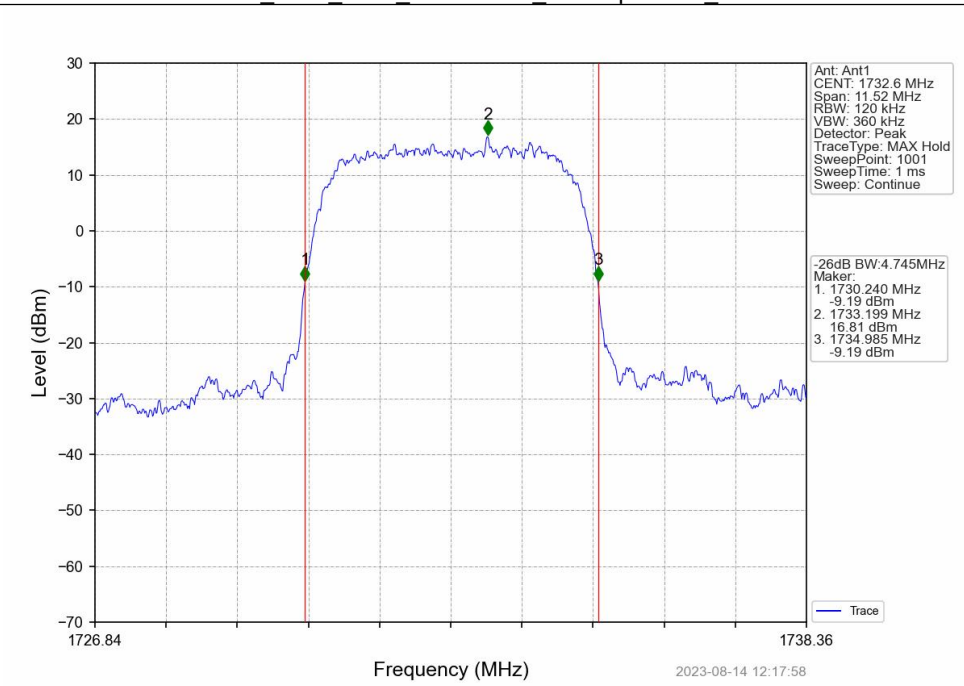
| Band: 4 | | | | | |
|---|---|---|---|---|---|
| ENV | Mode | | Frequency (MHz) | 26dB Bandwidth (MHz) | Verdict |
| | Network | Subset | | Result | |
| NTNV | RMC | 12.2kbps RMC | 1712.4 | 4.723 | Pass |
| | | | 1732.6 | 4.745 | Pass |
| | | | 1752.6 | 4.749 | Pass |
| | HSDPA | Subtest 1 | 1712.4 | 5.696 | Pass |
| | | | 1732.6 | 5.744 | Pass |
| | | | 1752.6 | 5.221 | Pass |
| | HSUPA | Subtest 1 | 1712.4 | 5.884 | Pass |
| | | | 1732.6 | 6.442 | Pass |
| | | | 1752.6 | 5.668 | Pass |

## 4.2.2 Test Graph

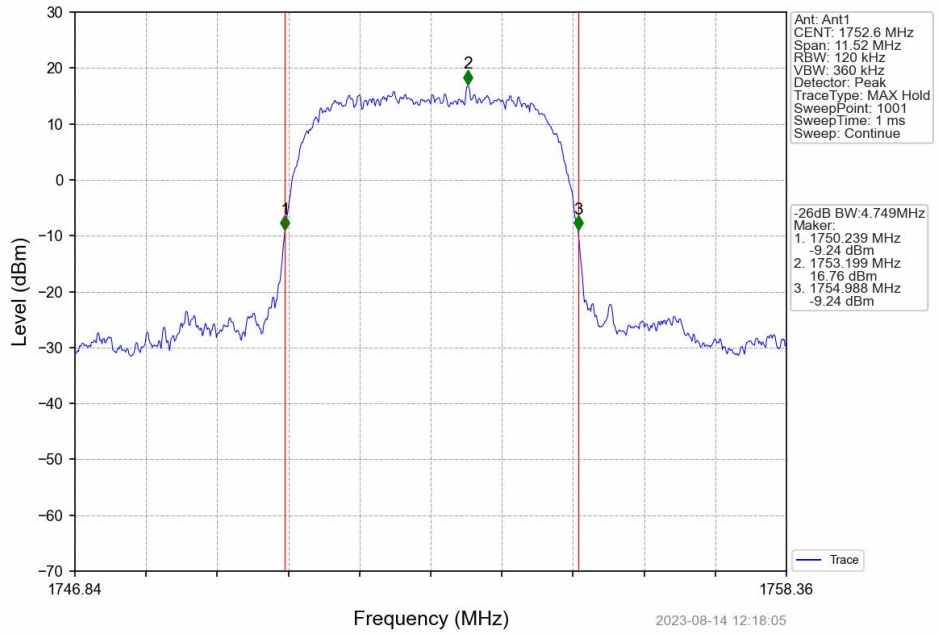
Band4_RMC_LCH_1712.4MHz_12.2kbps RMC_NTNV



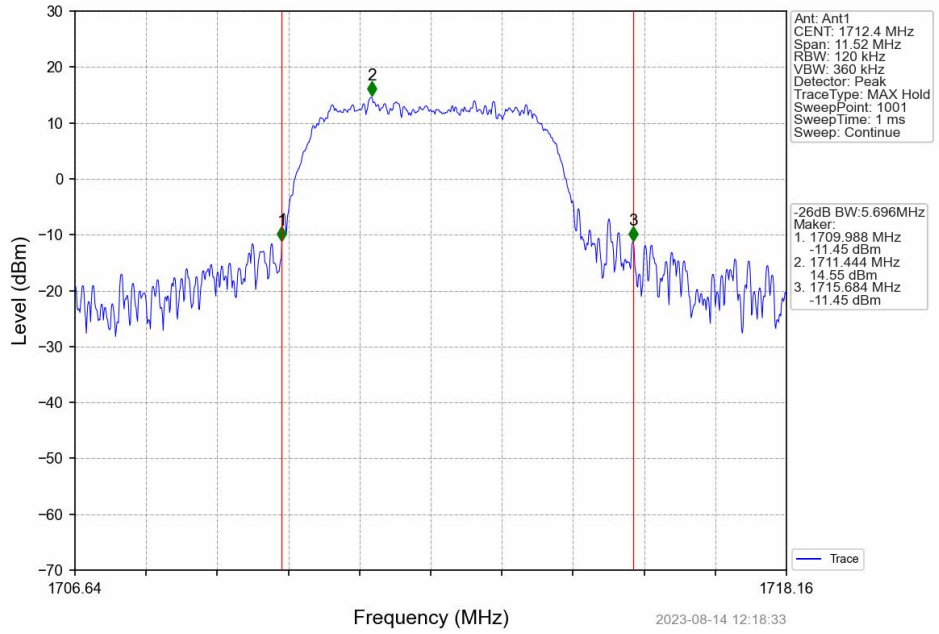

Band4_RMC_MCH_1732.6MHz_12.2kbps RMC_NTNV



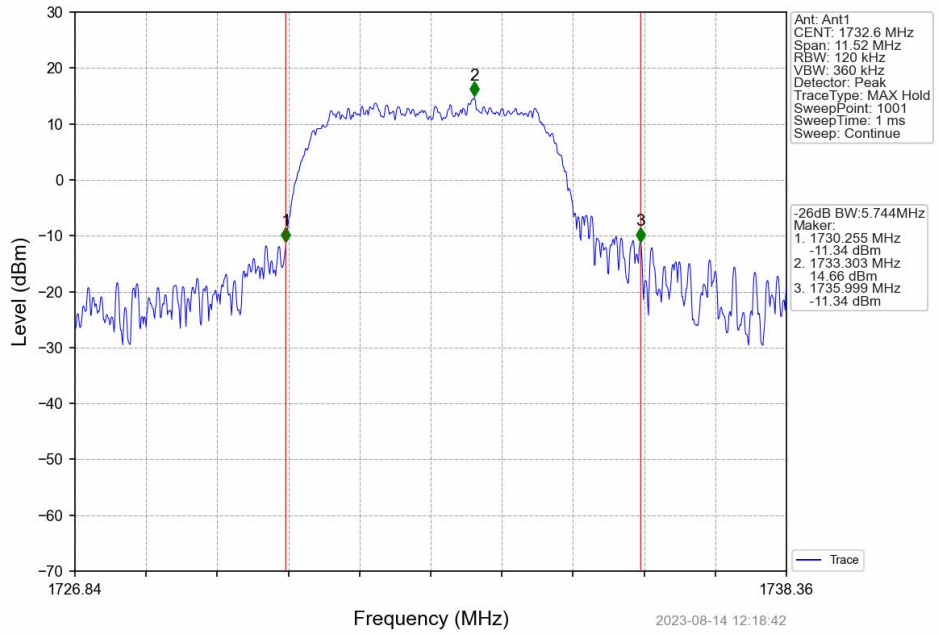
Band4_RMC_HCH_1752.6MHz_12.2kbps RMC_NTNV



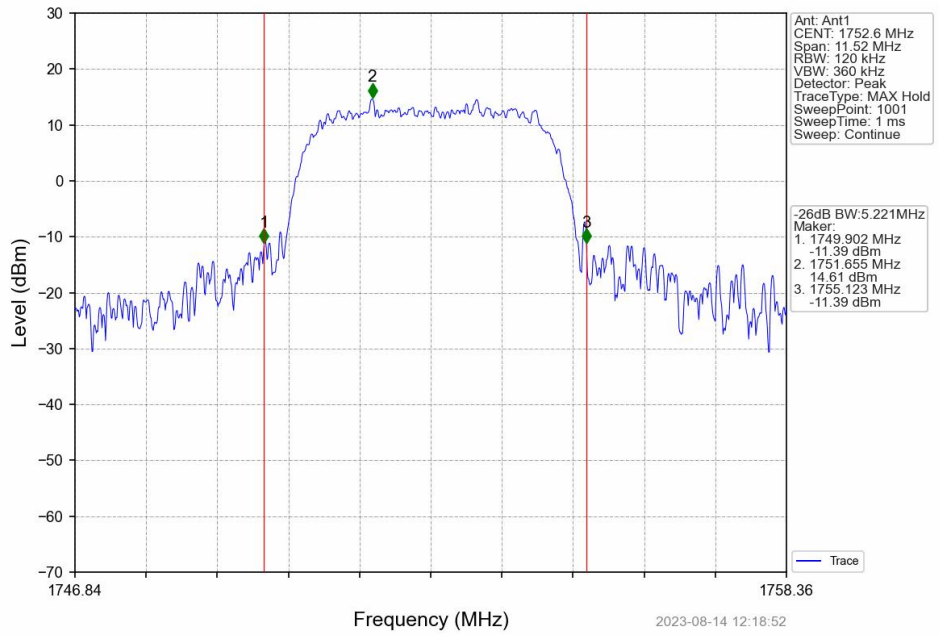

Band4_HSDPA_LCH_1712.4MHz_Subtest 1_NTNV



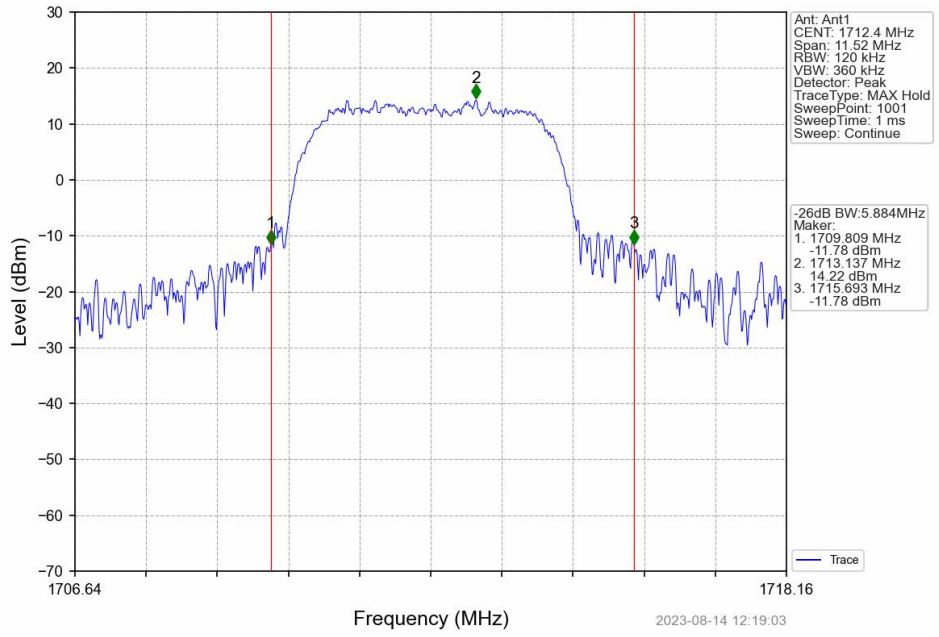
Band4_HSDPA_MCH_1732.6MHz_Subtest 1_NTNV



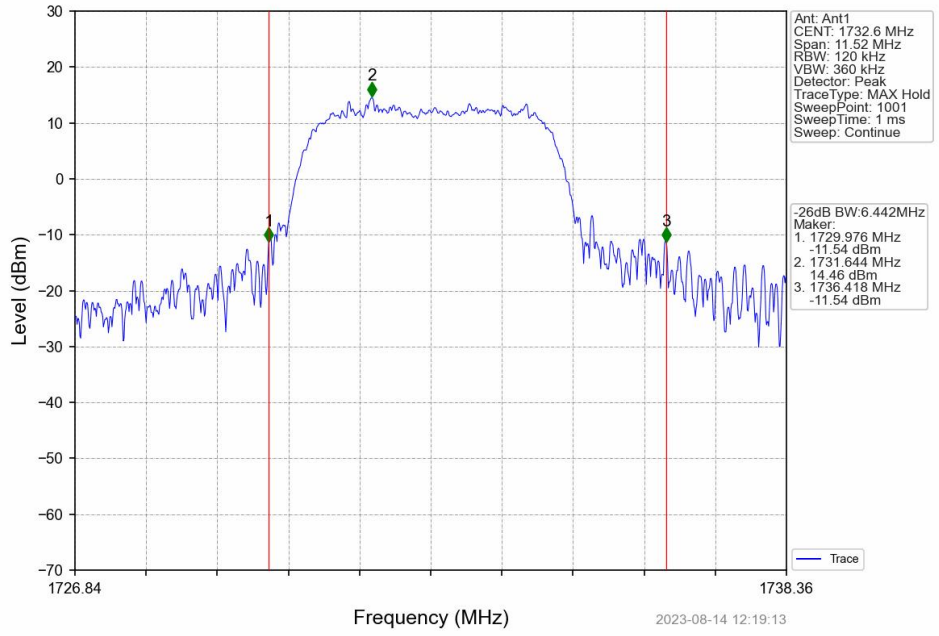

Band4_HSDPA_HCH_1752.6MHz_Subtest 1_NTNV



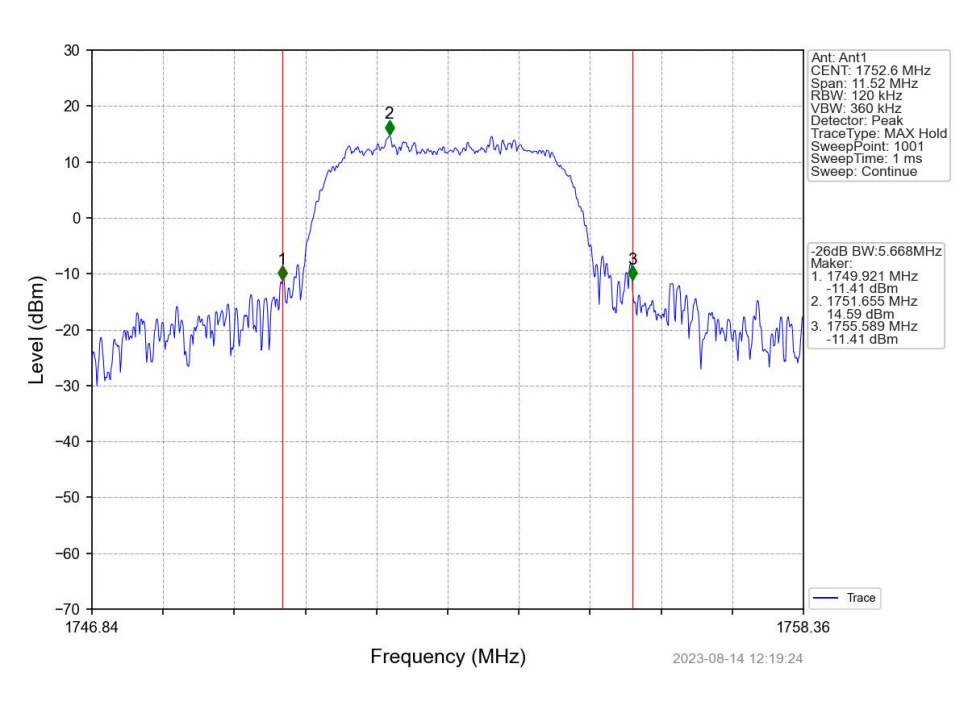
Band4_HSUPA_LCH_1712.4MHz_Subtest 1_NTNV




Band4_HSUPA_MCH_1732.6MHz_Subtest 1_NTNV



Band4_HSUPA_HCH_1752.6MHz_Subtest 1_NTNV



# 5. Peak-Average Ratio

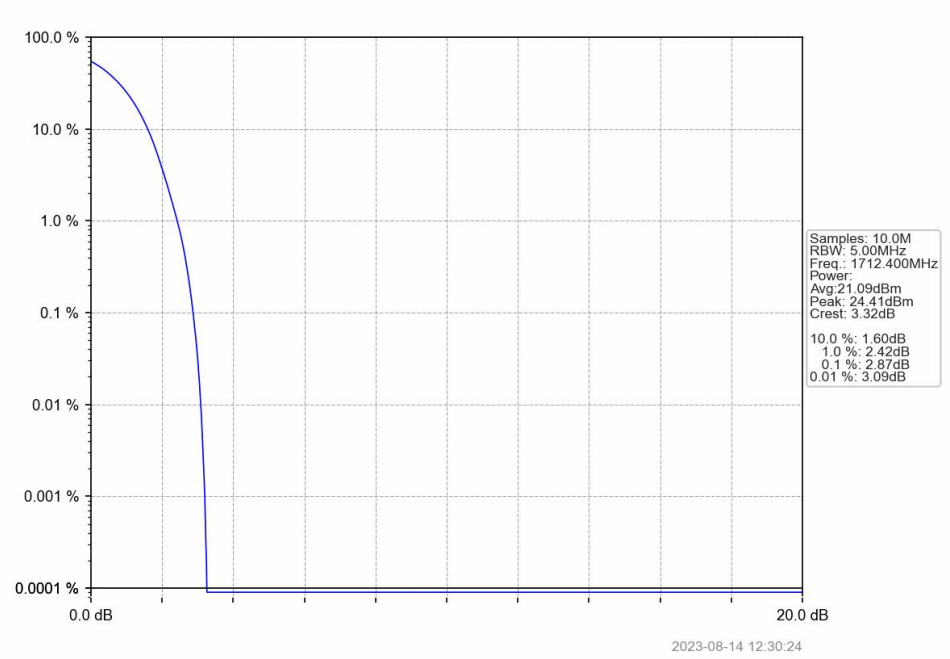
## 5.1 Band4

### 5.1.1 Test Result

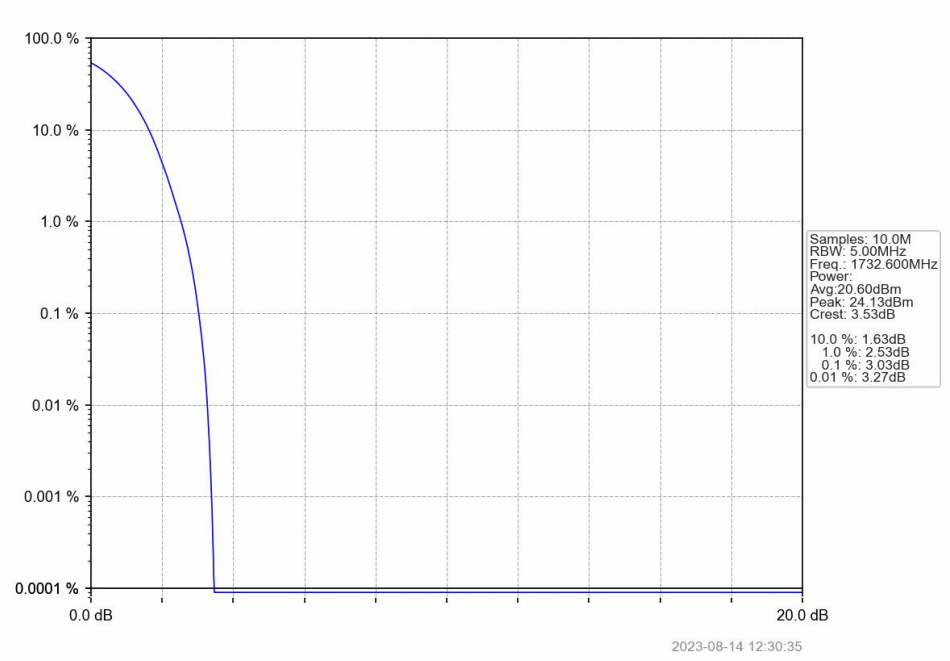
| Band: 4 | | | | | | |
|---|---|---|---|---|---|---|
| ENV | Mode | | Frequency (MHz) | Peak-Average Ratio (dB) | | Verdict |
| | Network | Subset | | Result | Limit | |
| NTNV | RMC | 12.2kbps RMC | 1712.4 | 2.87 | <=13 | Pass |
| | | | 1732.6 | 3.03 | <=13 | Pass |
| | | | 1752.6 | 2.99 | <=13 | Pass |
| | HSDPA | Subtest 1 | 1712.4 | 5.50 | <=13 | Pass |
| | | | 1732.6 | 5.58 | <=13 | Pass |
| | | | 1752.6 | 5.61 | <=13 | Pass |
| | HSUPA | Subtest 1 | 1712.4 | 5.51 | <=13 | Pass |
| | | | 1732.6 | 5.58 | <=13 | Pass |
| | | | 1752.6 | 5.58 | <=13 | Pass |

## 5.1.2 Test Graph

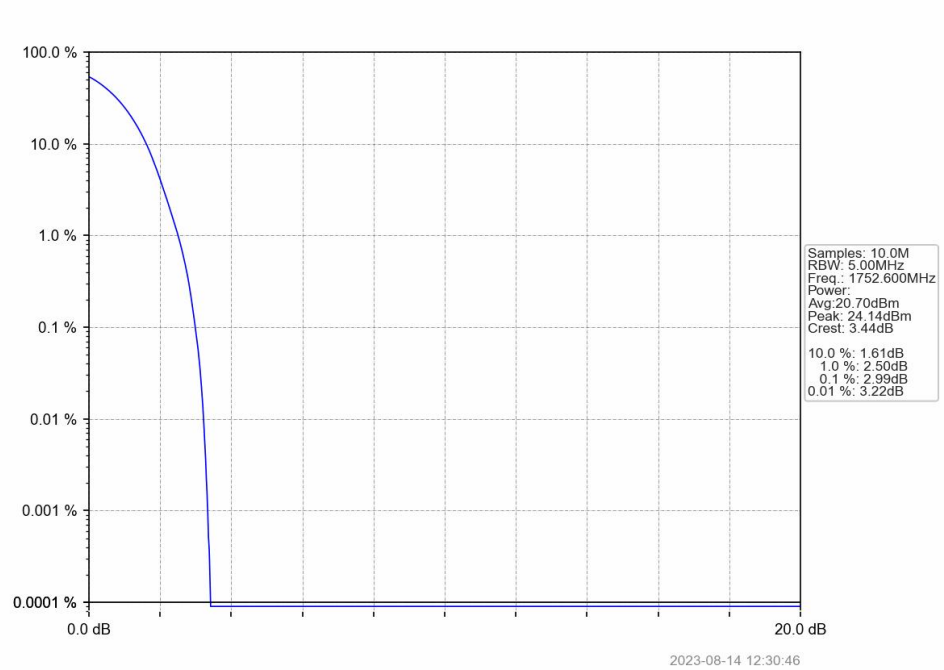
Band4_RMC_LCH_1712.4MHz_12.2kbps RMC_NTNV



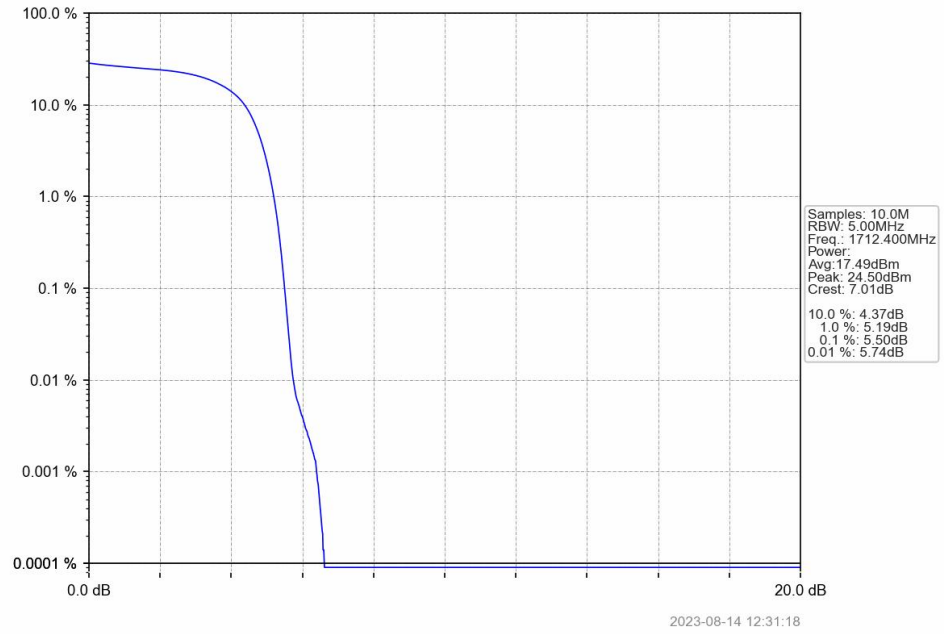

Band4_RMC_MCH_1732.6MHz_12.2kbps RMC_NTNV



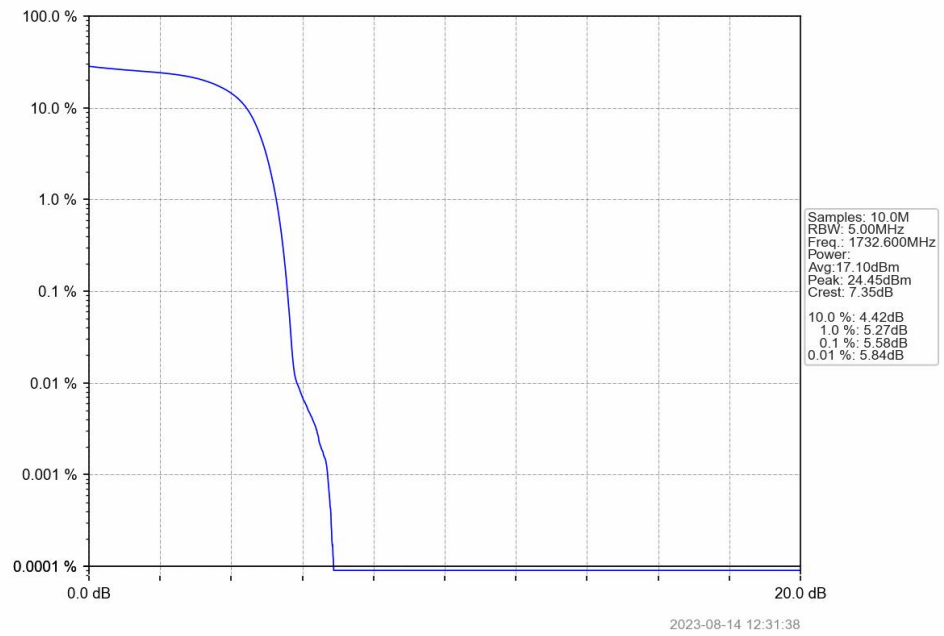
Band4_RMC_HCH_1752.6MHz_12.2kbps RMC_NTNV



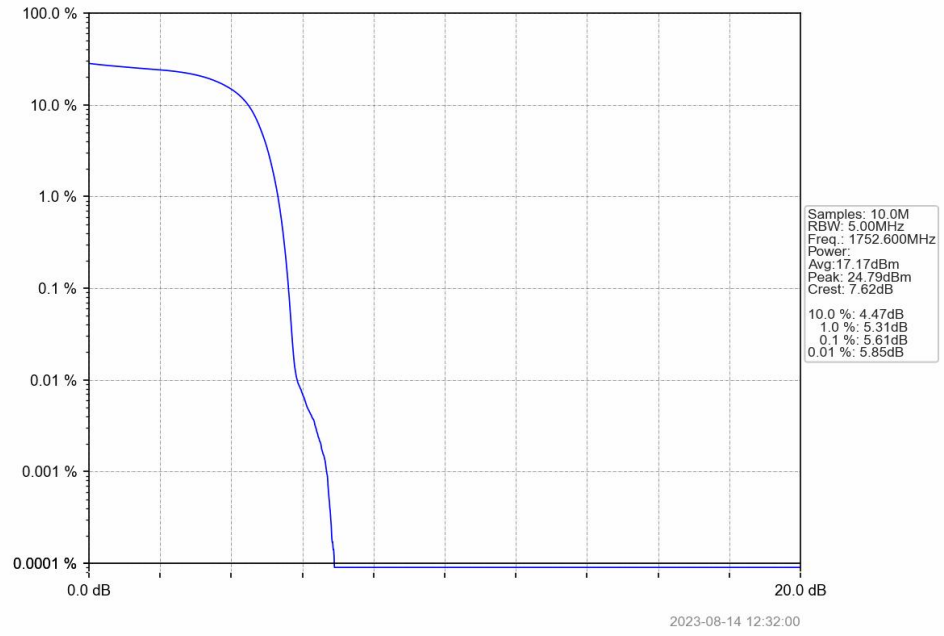

Band4_HSDPA_LCH_1712.4MHz_Subtest 1_NTNV



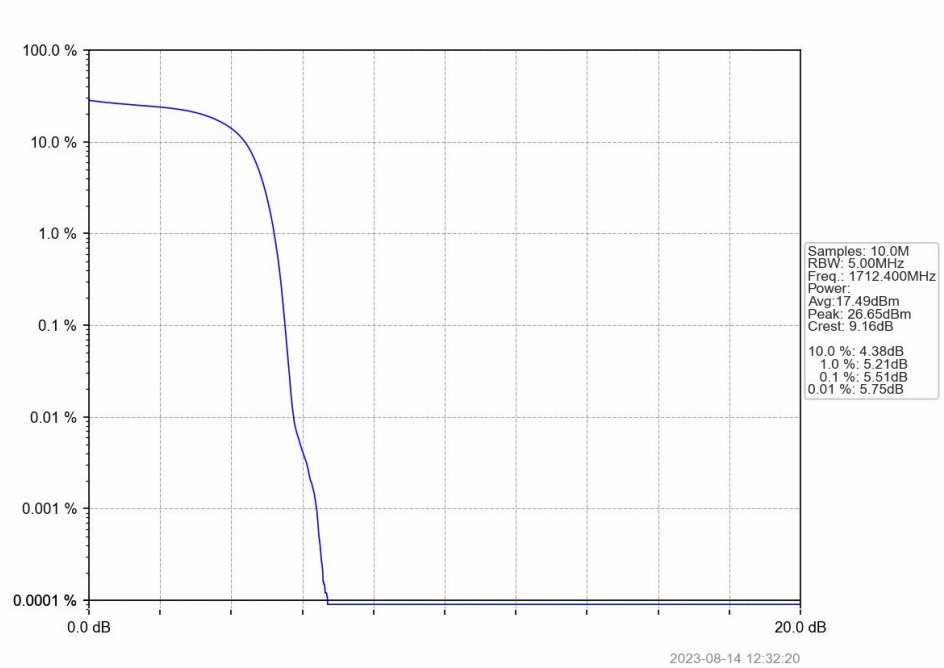
Band4_HSDPA_MCH_1732.6MHz_Subtest 1_NTNV



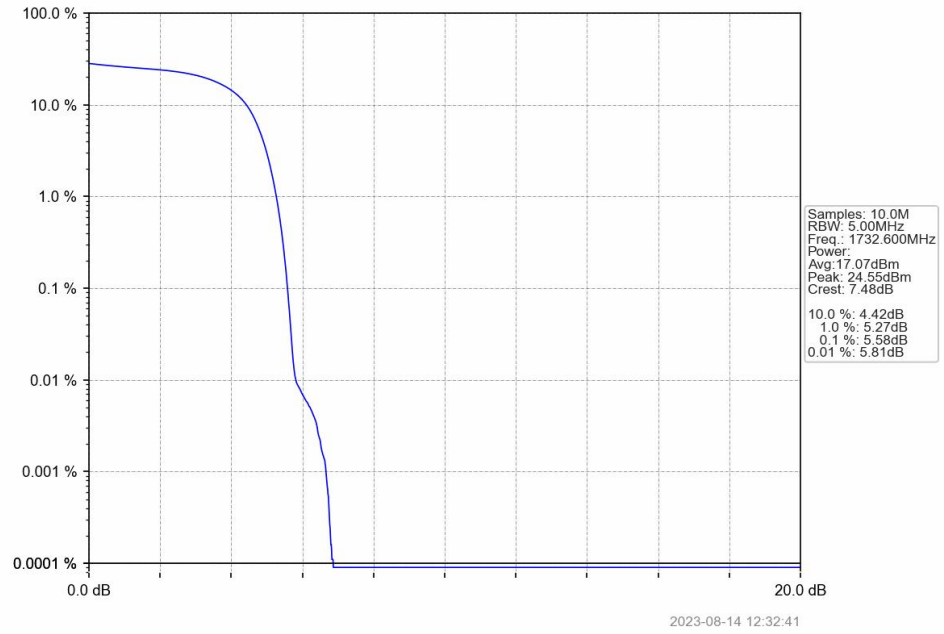

Band4_HSDPA_HCH_1752.6MHz_Subtest 1_NTNV



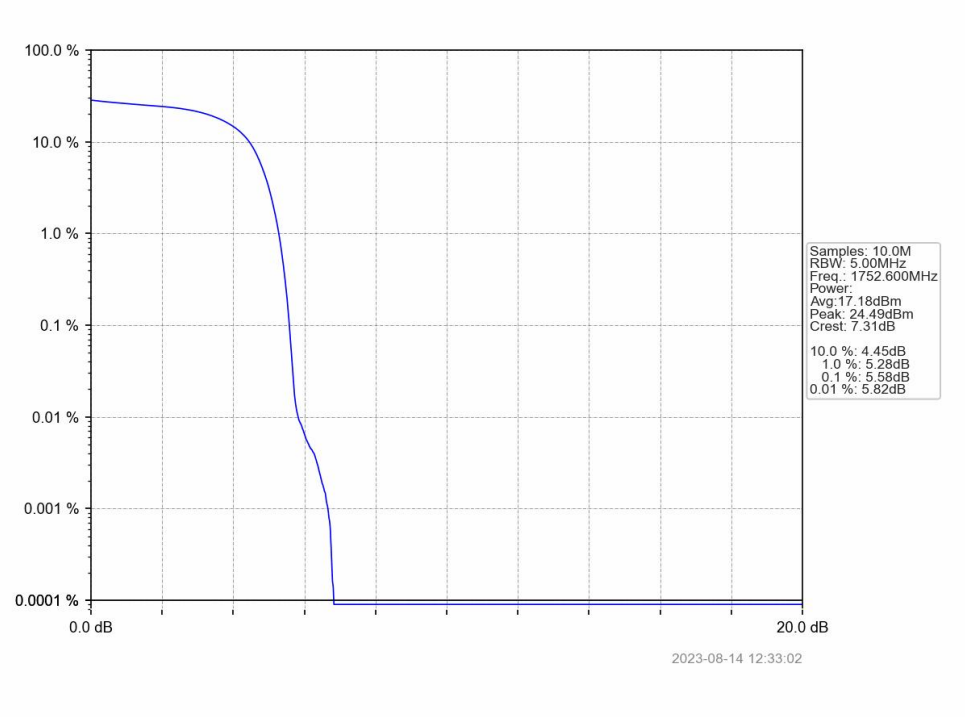
Band4_HSUPA_LCH_1712.4MHz_Subtest 1_NTNV




Band4_HSUPA_MCH_1732.6MHz_Subtest 1_NTNV



Band4_HSUPA_HCH_1752.6MHz_Subtest 1_NTNV



# 6. Spurious Emission

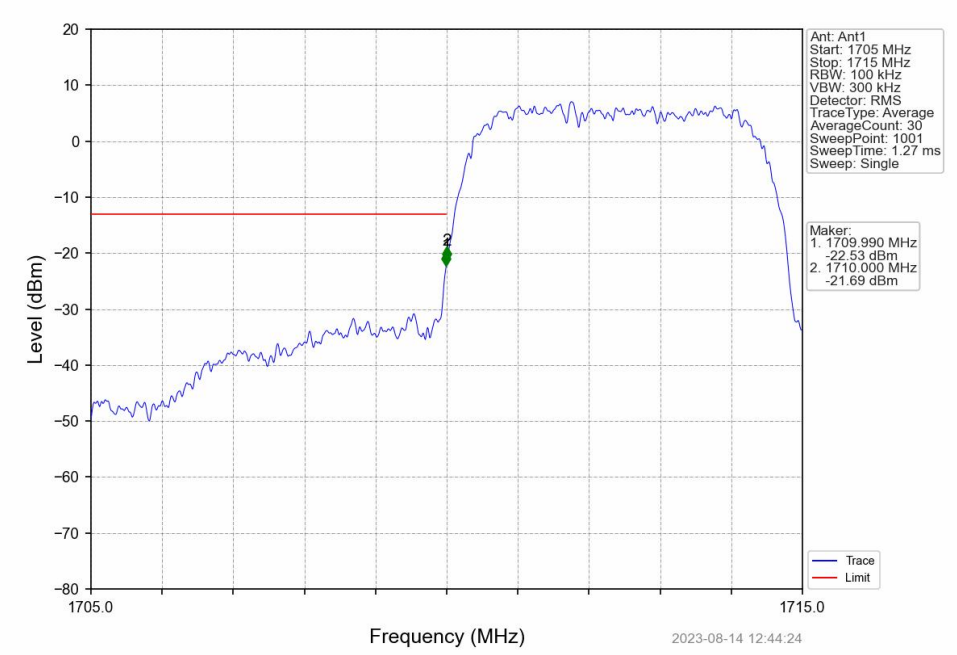
## 6.1 Band4

### 6.1.1 Test Result

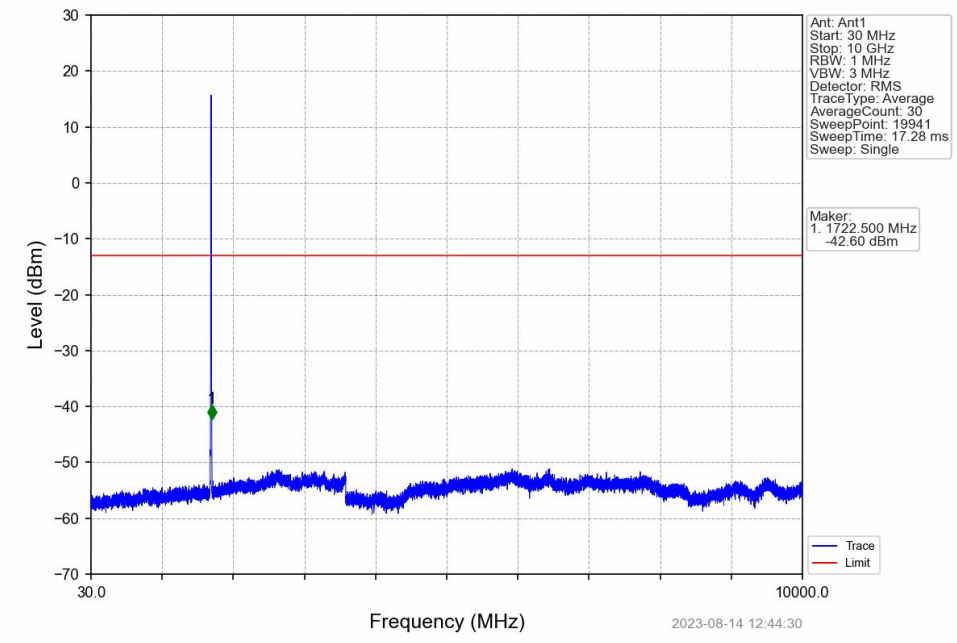
| Band: 4 | | | | | | |
|---|---|---|---|---|---|---|
| ENV | Mode | | Frequency (MHz) | Spurious Emission | | Verdict |
| | Network | Subset | | Result | Limit | |
| NTNV | RMC | 12.2kbps RMC | 1712.4 | Refer To Test Graph | | Pass |
| | | | 1732.6 | Refer To Test Graph | | Pass |
| | | | 1752.6 | Refer To Test Graph | | Pass |
| | HSDPA | Subtest 1 | 1712.4 | Refer To Test Graph | | Pass |
| | | | 1732.6 | Refer To Test Graph | | Pass |
| | | | 1752.6 | Refer To Test Graph | | Pass |
| | HSUPA | Subtest 1 | 1712.4 | Refer To Test Graph | | Pass |
| | | | 1732.6 | Refer To Test Graph | | Pass |
| | | | 1752.6 | Refer To Test Graph | | Pass |

## 6.1.2 Test Graph

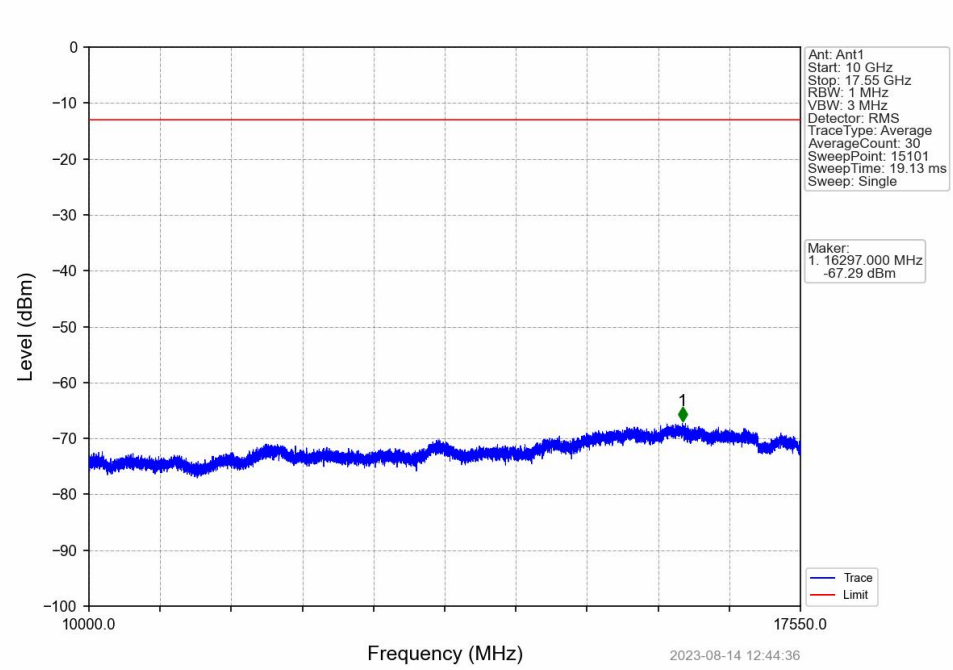
Band4_RMC_LCH_1712.4MHz_12.2kbps RMC_NTNV



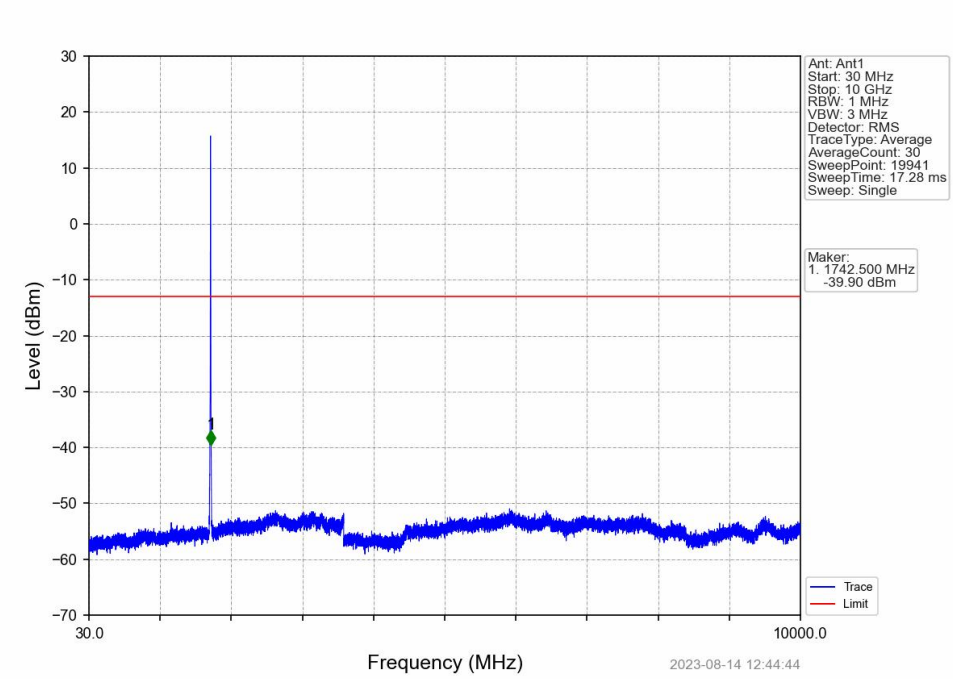

Band4_RMC_LCH_1712.4MHz_12.2kbps RMC_NTNV



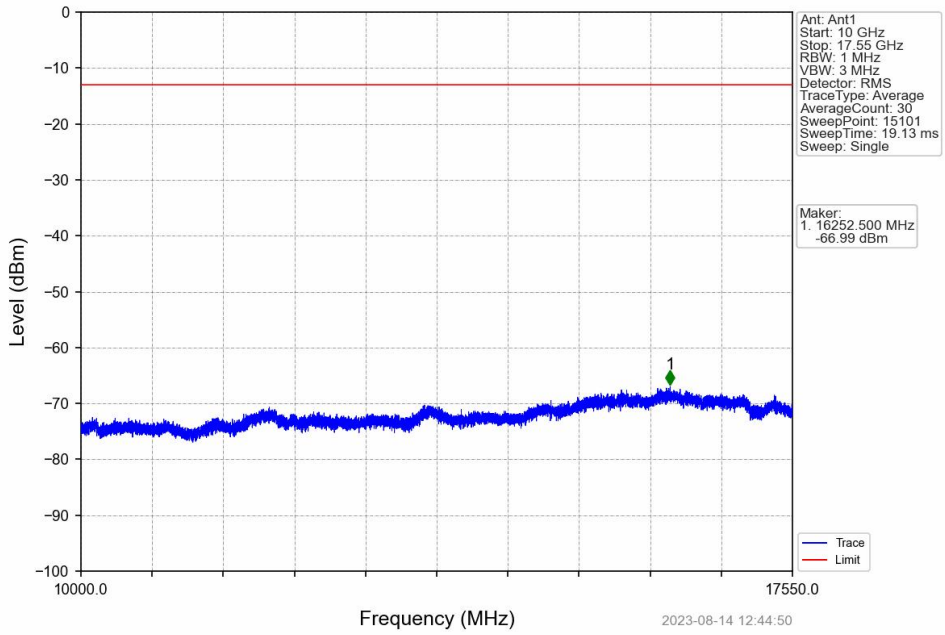
Band4_RMC_LCH_1712.4MHz_12.2kbps RMC_NTNV



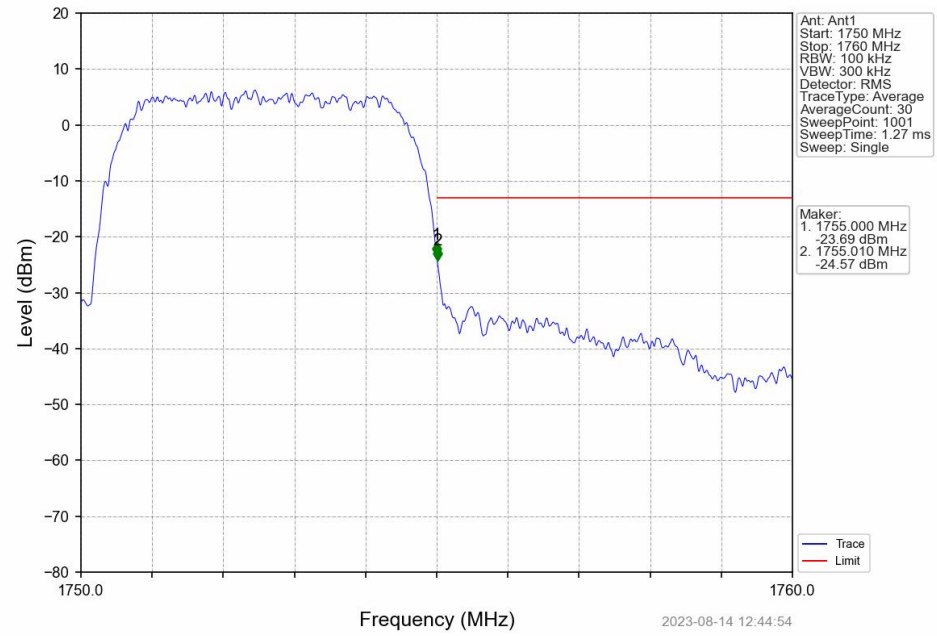

Band4_RMC_MCH_1732.6MHz_12.2kbps RMC_NTNV



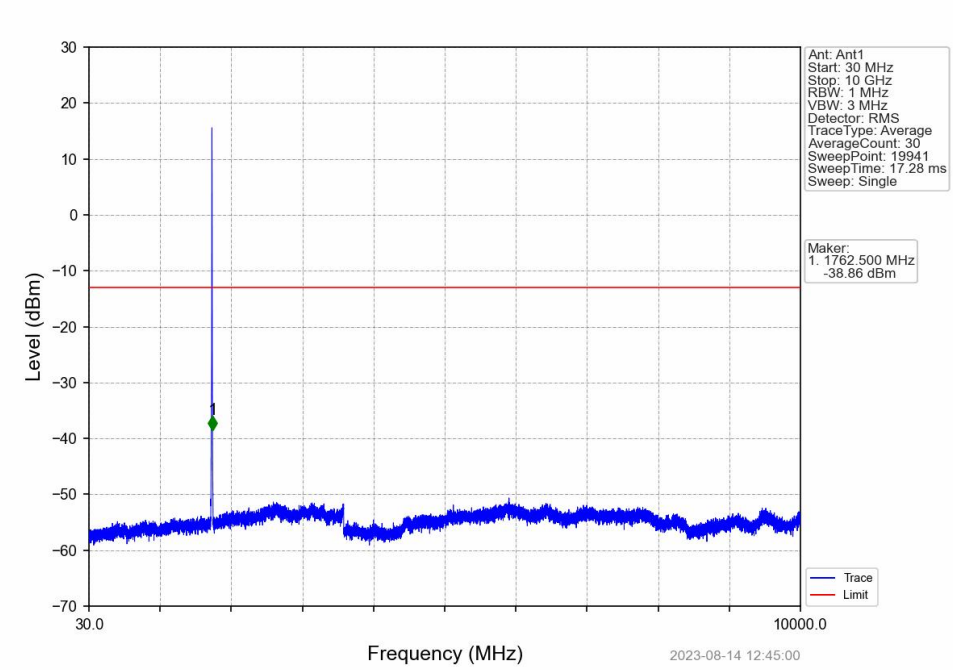
Band4_RMC_MCH_1732.6MHz_12.2kbps RMC_NTNV



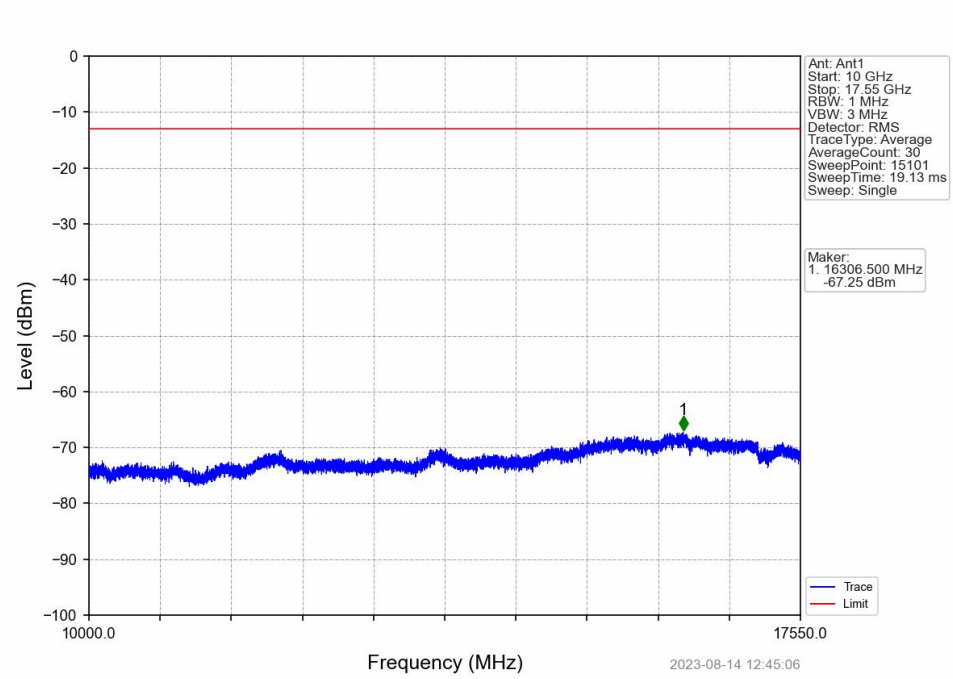

Band4_RMC_HCH_1752.6MHz_12.2kbps RMC_NTNV



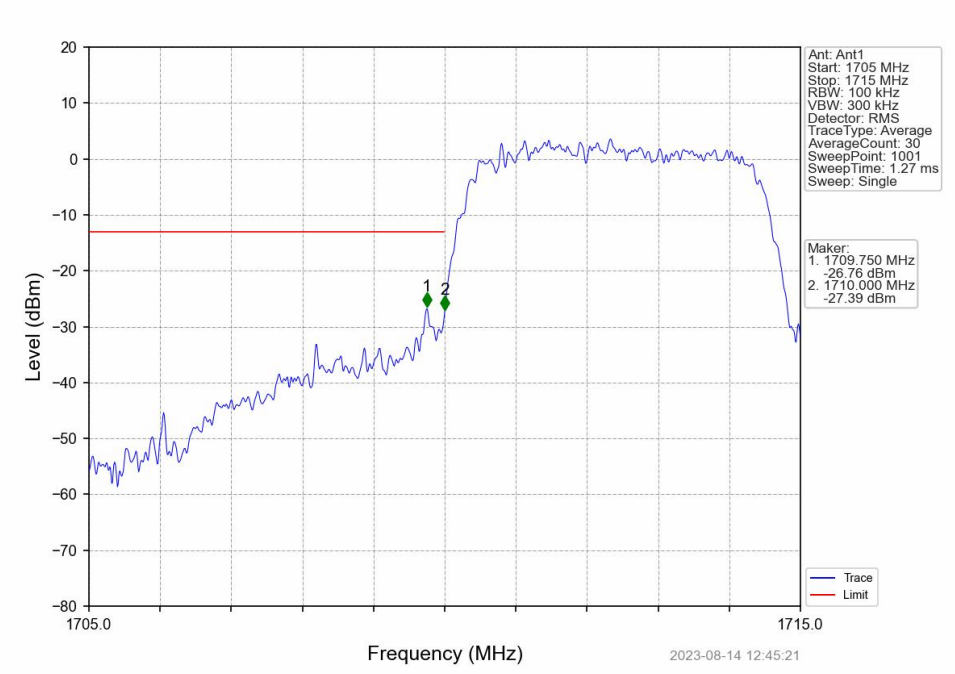
Band4_RMC_HCH_1752.6MHz_12.2kbps RMC_NTNV



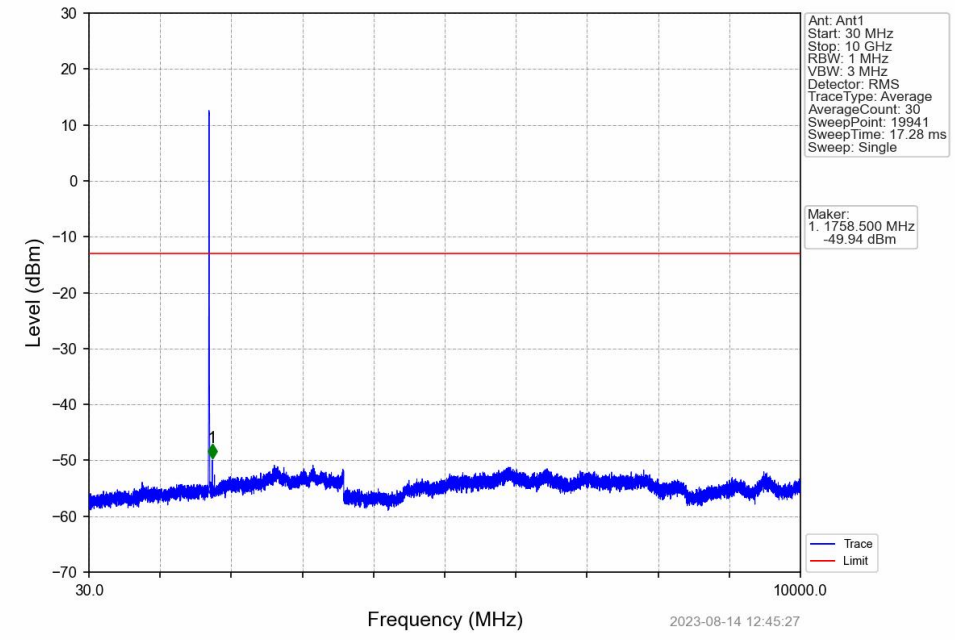

Band4_RMC_HCH_1752.6MHz_12.2kbps RMC_NTNV



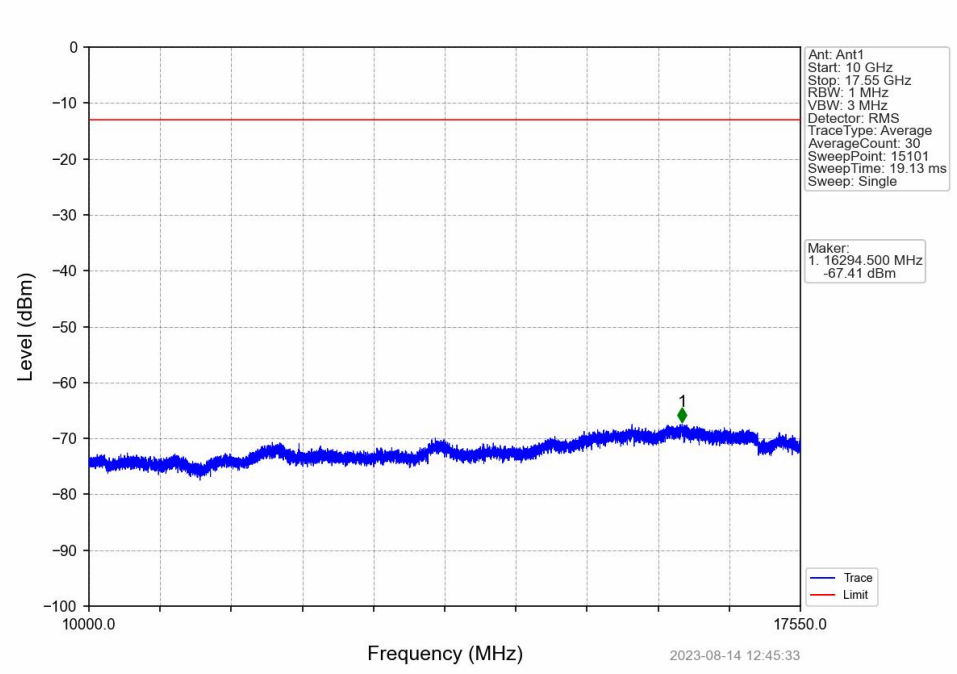
Band4_HSDPA_LCH_1712.4MHz_Subtest 1_NTNV



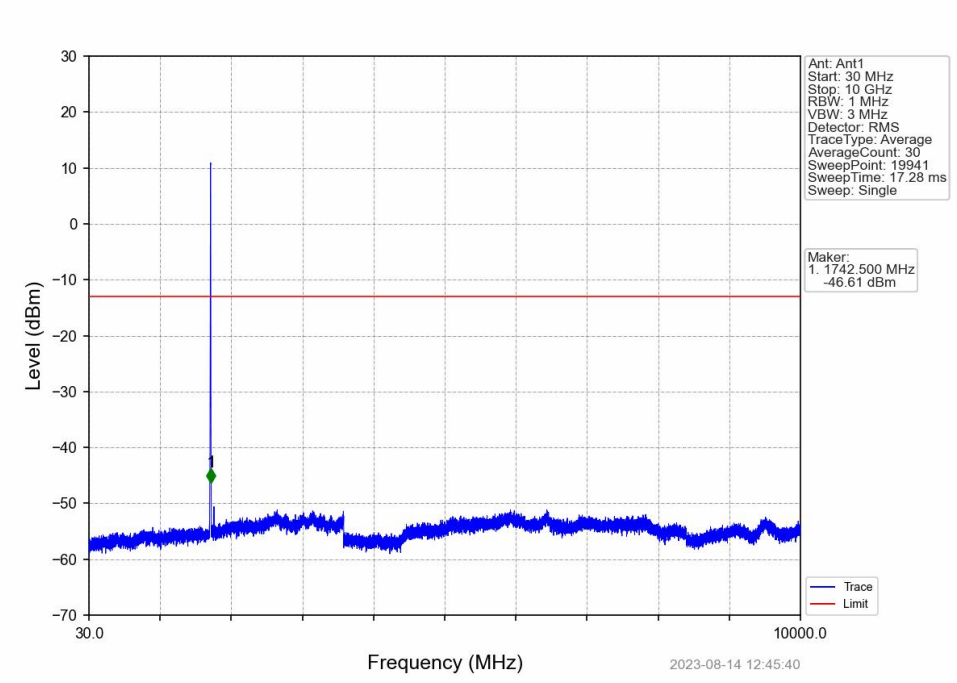

Band4_HSDPA_LCH_1712.4MHz_Subtest 1_NTNV



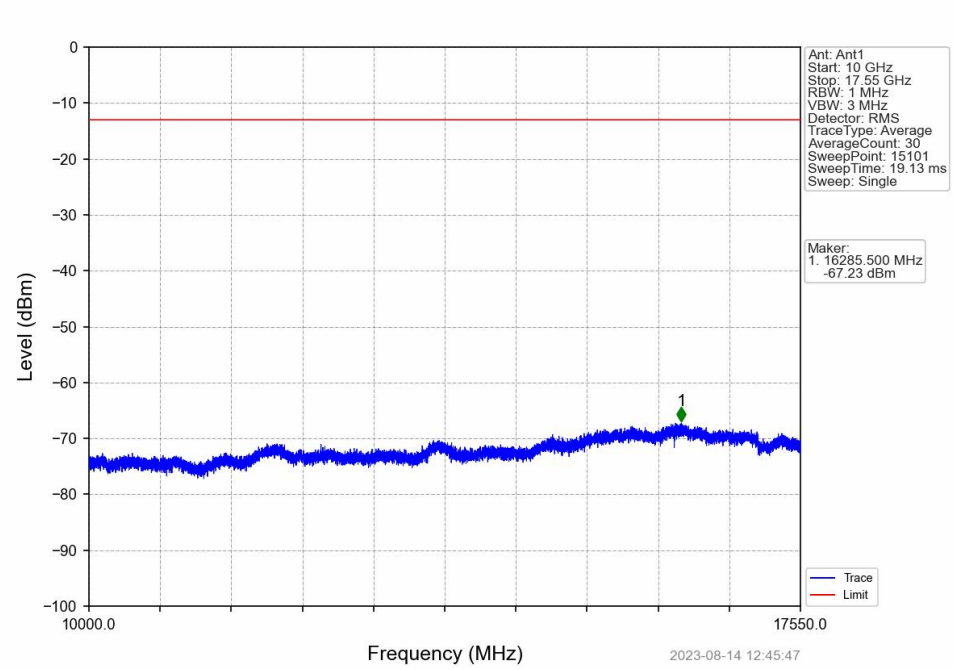
Band4_HSDPA_LCH_1712.4MHz_Subtest 1_NTNV



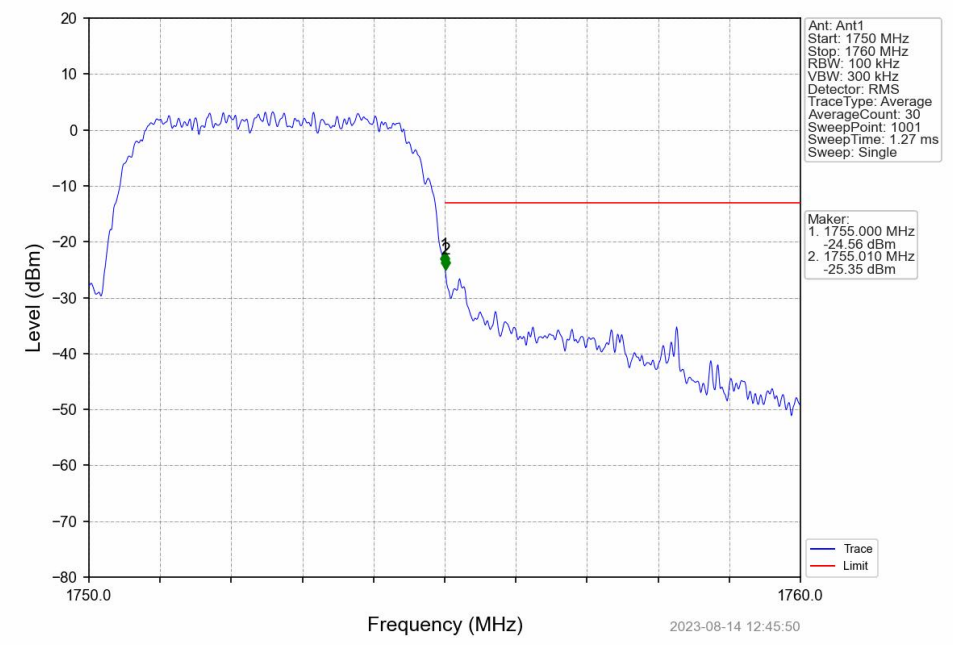

Band4_HSDPA_MCH_1732.6MHz_Subtest 1_NTNV



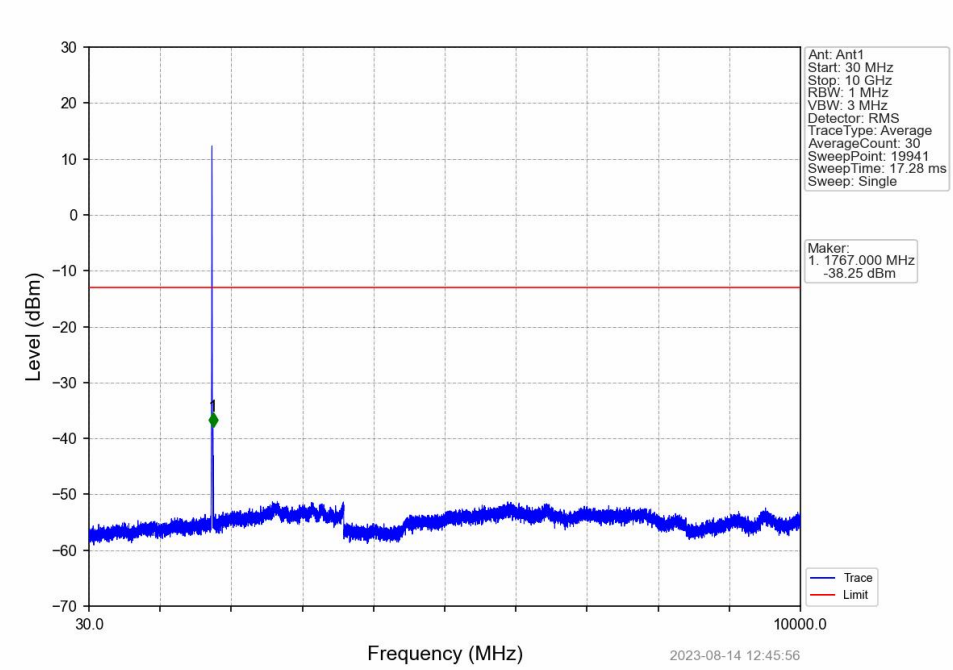
Band4_HSDPA_MCH_1732.6MHz_Subtest 1_NTNV



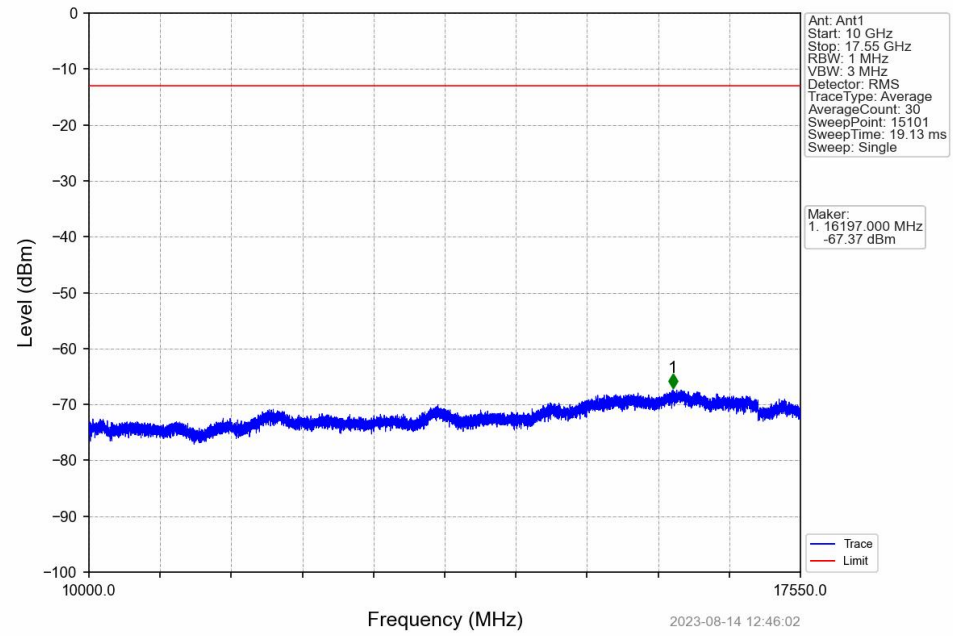

Band4_HSDPA_HCH_1752.6MHz_Subtest 1_NTNV



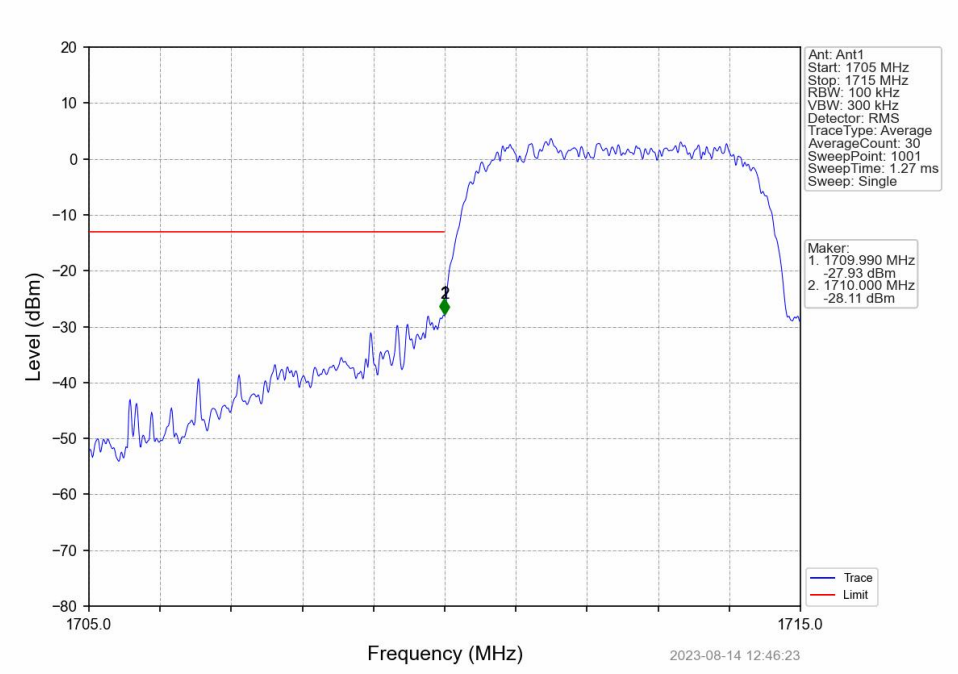
Band4_HSDPA_HCH_1752.6MHz_Subtest 1_NTNV



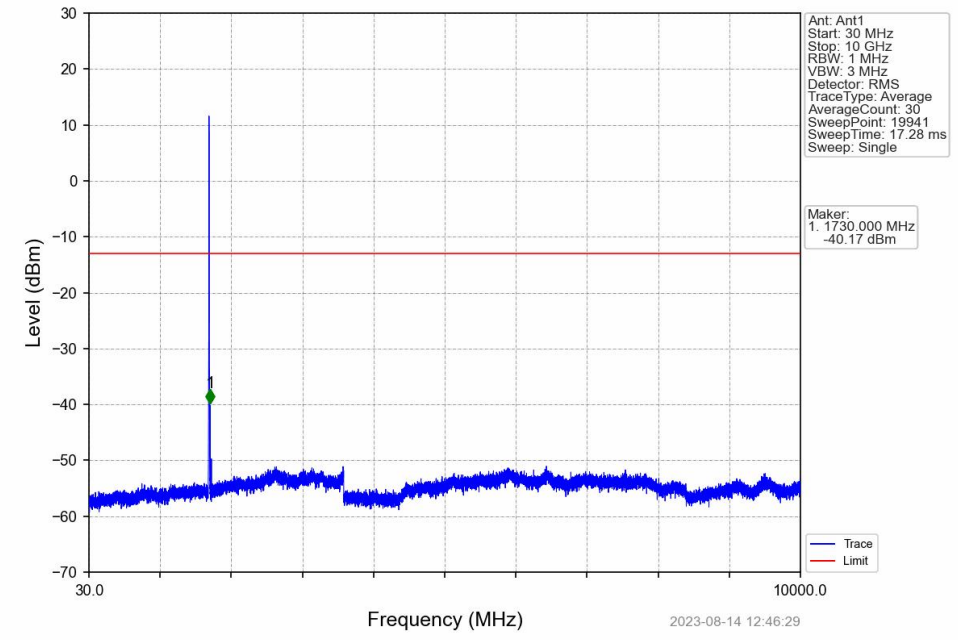

Band4_HSDPA_HCH_1752.6MHz_Subtest 1_NTNV



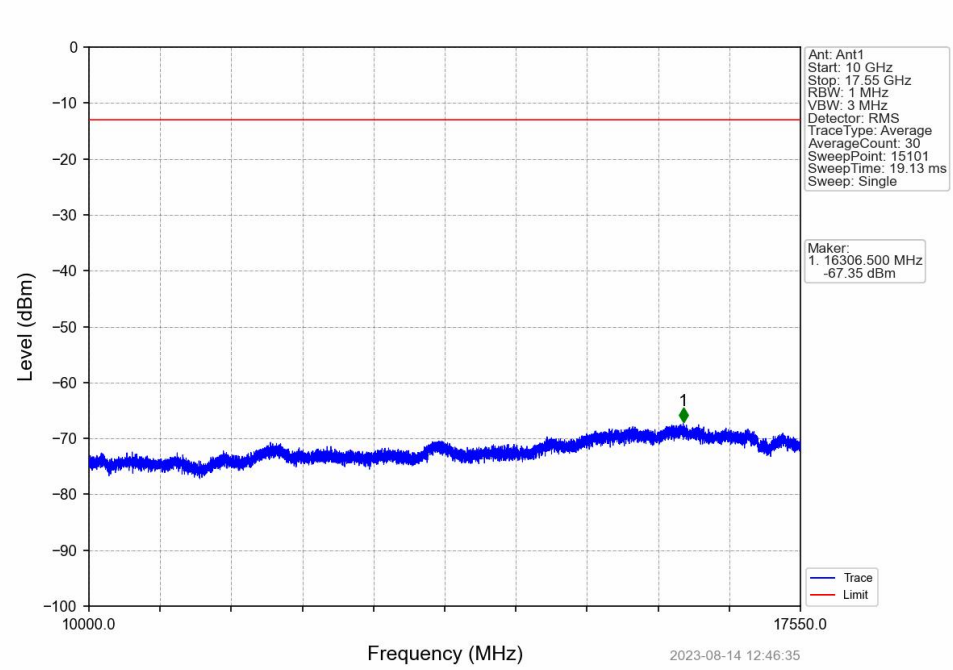
Band4_HSUPA_LCH_1712.4MHz_Subtest 1_NTNV



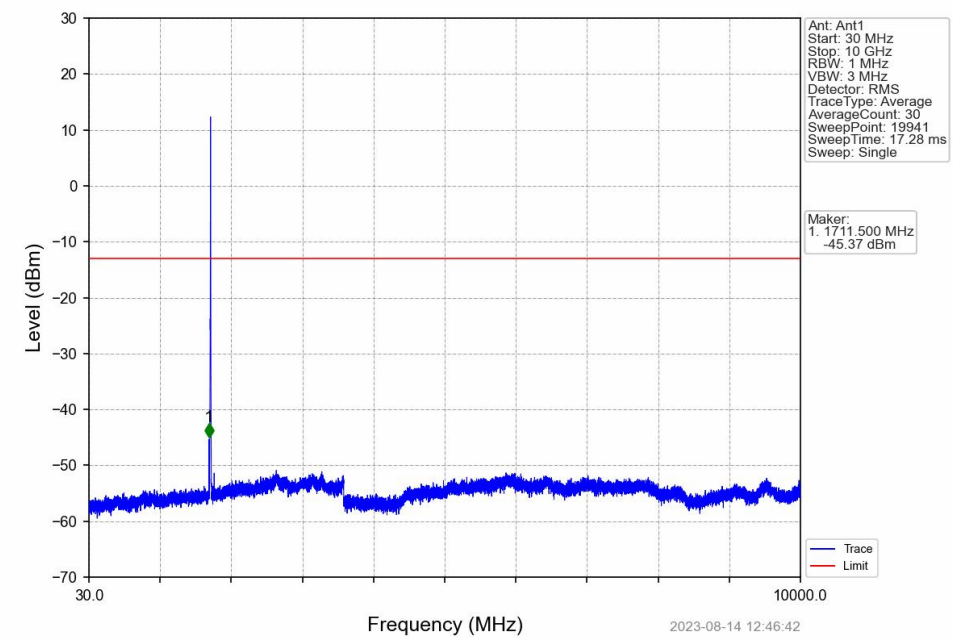

Band4_HSUPA_LCH_1712.4MHz_Subtest 1_NTNV



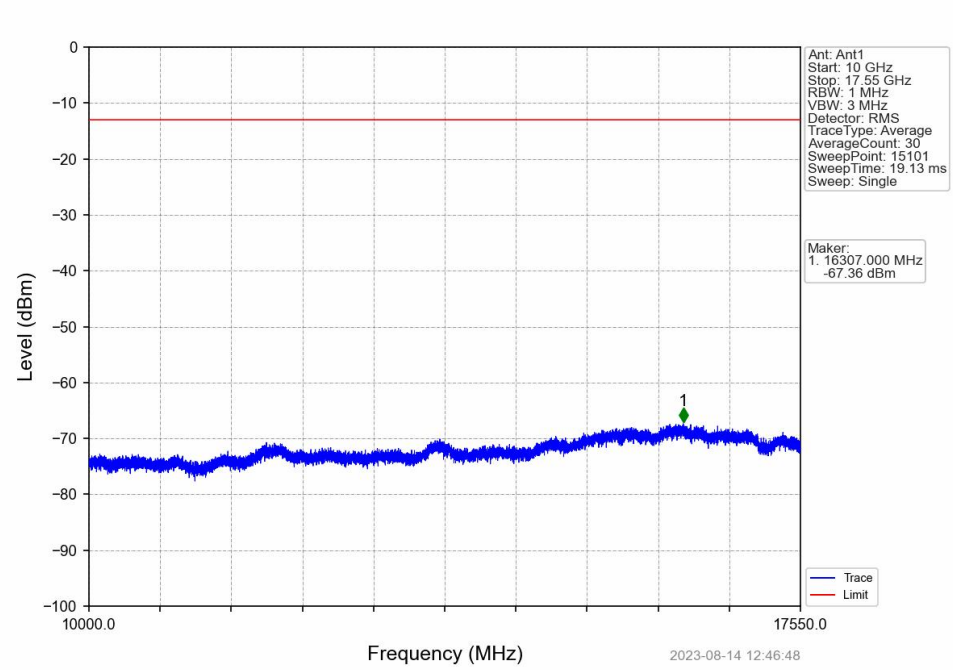
Band4_HSUPA_LCH_1712.4MHz_Subtest 1_NTNV



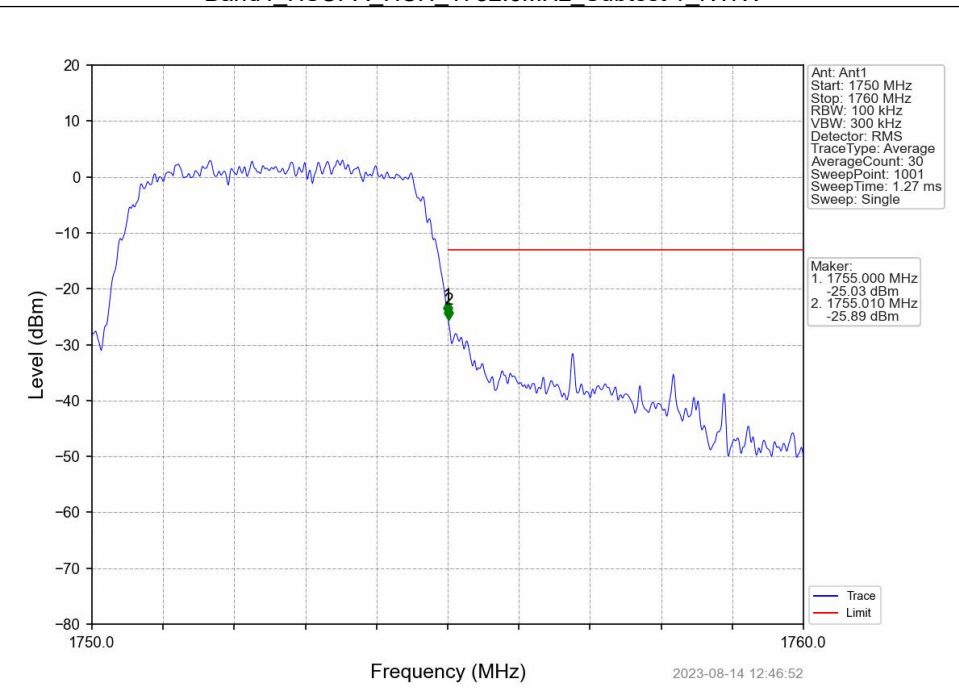

Band4_HSUPA_MCH_1732.6MHz_Subtest 1_NTNV



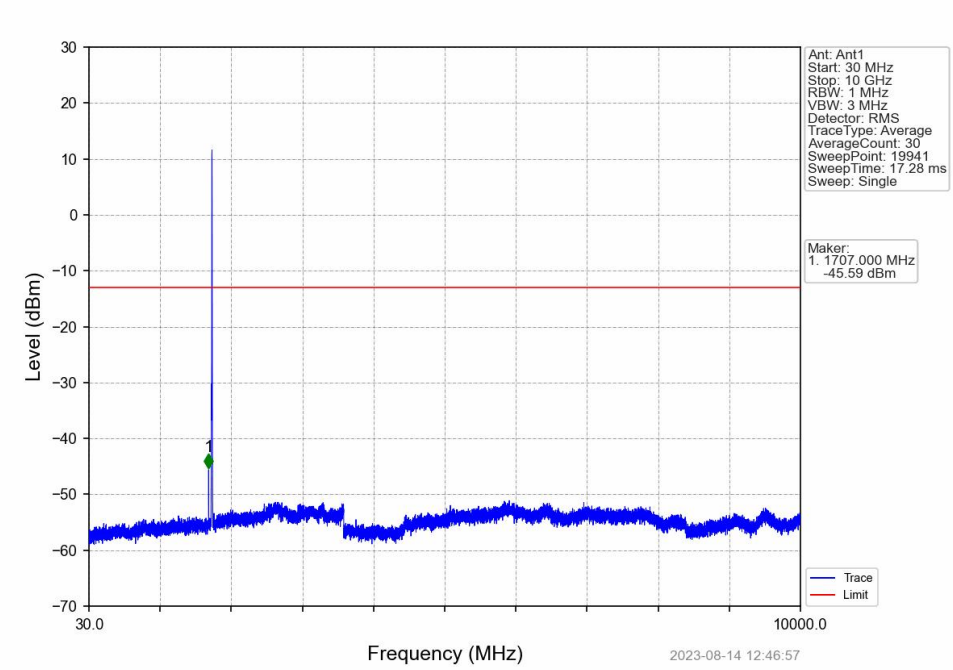
Band4_HSUPA_MCH_1732.6MHz_Subtest 1_NTNV



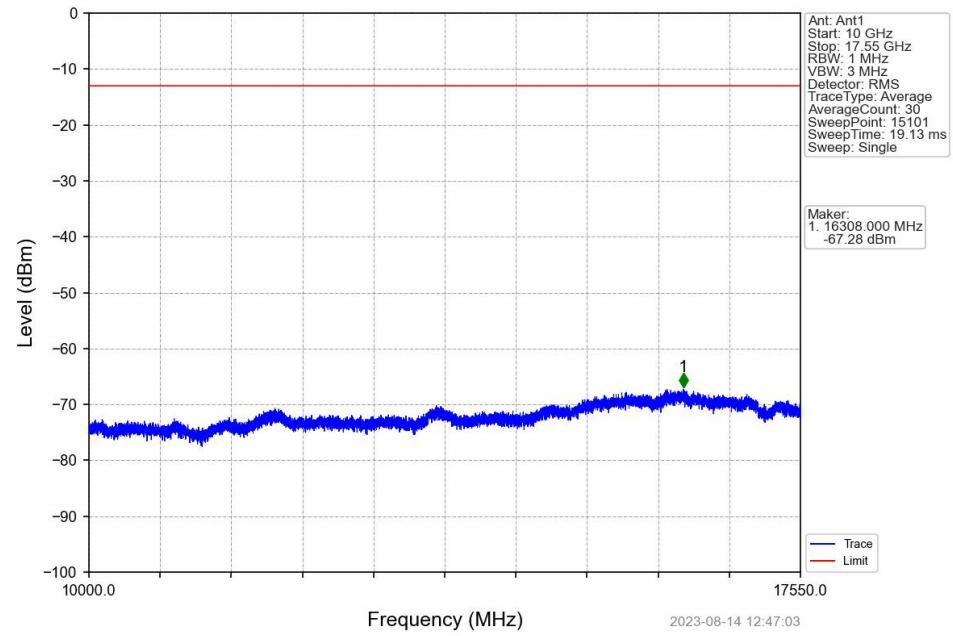

Band4_HSUPA_HCH_1752.6MHz_Subtest 1_NTNV



Band4_HSUPA_HCH_1752.6MHz_Subtest 1_NTNV




Band4_HSUPA_HCH_1752.6MHz_Subtest 1_NTNV



# 7. Form731

## 7.1 Form731_Power

### 7.1.1 Test Result

| Band | BW | Lower Freq | High Freq | MAX Power (W) | Value | Hz/ppm | Emission Designator | Rule Parts | MAX Power (dBm) |
|---|---|---|---|---|---|---|---|---|---|
| 4 | 3.84 | 1712.4 | 1752.6 | 0.1285 | 0.0165 | ppm | 4M20F9W | 24E | 21.09 |

## 7.2 Form731_EIRP

### 7.2.1 Test Result

| Band | BW | Lower Freq | High Freq | MAX Power (W) | Value | Hz/ppm | Emission Designator | Rule Parts | MAX Power (dBm) |
|---|---|---|---|---|---|---|---|---|---|
| 4 | 3.84 | 1712.4 | 1752.6 | 0.1687 | 0.0165 | ppm | 4M20F9W | 24E | 22.27 |