# TEST REPORT

FCC Sub6 n77(78) Test for TM18FNNABM0
Certification

**APPLICANT**
LG Electronics Inc.

**REPORT NO.**
HCT-RF-2506-FC071

**DATE OF ISSUE**
June 17, 2025

**Tested by**
Jae Ryang Do

**Technical Manager**
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Accredited by KOLAS, Republic of KOREA

HCT CO., LTD.
BongJai Huh / CEO


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| | |
|---|---|
| Applicant | **LG Electronics Inc.**<br>128, Yeoui-daero, Yeongdeungpo-gu, Seoul, Republic of Korea |
| Product Name<br>Model Name | Telematics<br>TM18FNNABM0 |
| Date of Test | February 08, 2025 ~ June 13, 2025 |
| Location of Test | ■ Permanent Testing Lab ☐ On Site Testing<br>(Address: 74, Seoicheon-ro 578beon-gil, Majang-myeon, Icheon-si, Gyeonggi-do, Republic of Korea) |
| FCC ID | 2BO3LTM18FNNABM0 |
| FCC Classification | PCS Licensed Transmitter (PCB) |
| Test Standard Used | FCC Rule Part(s) : § 27 |
| Test Results | PASS |



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## REVISION HISTORY

The revision history for this test report is shown in table.

| Revision No. | Date of Issue | Description |
|---|---|---|
| 0 | June 17, 2025 | Initial Release |

## Notice

| Content |
|---|
| The measurements shown in this report were made in accordance with the procedures specified in CFR47 section § 2.947. I assume full responsibility for the accuracy and completeness of these measurements, and for the qualifications of all persons taking them.<br>HCT CO., LTD. Certifies that no party to this application has subject to a denial of Federal benefits that includes FCC benefits pursuant to section 5301 of the Anti-Drug Abuse Act of 1998,21 U.S. C.853(a)<br><br>The results shown in this test report only apply to the sample(s), as received, provided by the applicant, unless otherwise stated.<br>The test results have only been applied with the test methods required by the standard(s).<br><br>The laboratory is not accredited for the test results marked *.<br>Information provided by the applicant is marked **.<br>Test results provided by external providers are marked ***.<br><br>When confirmation of authenticity of this test report is required, please contact www.hct.co.kr<br><br>This test report provides test result(s) under the scope accredited by the Korea Laboratory Accreditation Scheme (KOLAS), which signed the ILAC-MRA.<br>(KOLAS (KS Q ISO/IEC 17025) Accreditation No. KT197) |



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# MEASUREMENT REPORT

## 1.GENERAL INFORMATION

| | |
|---|---|
| **Applicant Name:** | LG Electronics Inc. |
| **Address:** | 128, Yeoui-daero, Yeongdeungpo-gu, Seoul, Republic of Korea |
| **FCC ID:** | 2BO3LTM18FNNABM0 |
| **Application Type:** | Certification |
| **FCC Classification:** | PCS Licensed Transmitter (PCB) |
| **FCC Rule Part(s):** | § 27 |
| **EUT Type:** | Telematics |
| **Model(s):** | TM18FNNABM0 |
| **Voltage:** | 4.2V |
| **SCS(kHz):** | 30 |
| **Bandwidth(MHz):** | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 |
| **Waveform:** | CP-OFDM, DFT-S-OFDM |
| **Modulation:** | DFT-S-OFDM: PI/2 BPSK, QPSK, 16QAM, 64QAM, 256QAM<br>CP-OFDM: QPSK, 16QAM, 64QAM, 256QAM |
| **Tx Frequency:<br>(3450 MHz - 3550 MHz)** | 3455.01 MHz – 3544.99 MHz (Sub6 n77)(10 MHz))<br>3457.50 MHz – 3542.50 MHz (Sub6 n77)(15 MHz))<br>3460.02 MHz – 3540.00 MHz (Sub6 n77)(20 MHz))<br>3462.50 MHz – 3537.50 MHz (Sub6 n77)(25 MHz))<br>3465.00 MHz – 3534.99 MHz (Sub6 n77)(30 MHz))<br>3470.01 MHz – 3529.98 MHz (Sub6 n77)(40 MHz))<br>3475.02 MHz – 3525.00 MHz (Sub6 n77)(50 MHz))<br>3480.00 MHz – 3519.99 MHz (Sub6 n77)(60 MHz))<br>3485.01 MHz – 3514.98 MHz (Sub6 n77)(70 MHz))<br>3490.02 MHz – 3510.00 MHz (Sub6 n77)(80 MHz))<br>3495.00 MHz – 3504.99 MHz (Sub6 n77)(90 MHz))<br>3500.01 MHz (Sub6 n77)(100 MHz)) |
| **Tx Frequency:<br>(3700 MHz - 3980 MHz)** | 3705.00 MHz – 3975.00 MHz (Sub6 n77(78)(10 MHz))<br>3707.51 MHz – 3972.48 MHz (Sub6 n77(78)(15 MHz))<br>3710.01 MHz – 3969.99 MHz (Sub6 n77(78)(20 MHz))<br>3712.50 MHz – 3967.50 MHz (Sub6 n77(78)(25 MHz))<br>3715.02 MHz – 3964.98 MHz (Sub6 n77(78)(30 MHz))<br>3720.00 MHz – 3960.00 MHz (Sub6 n77(78)(40 MHz))<br>3725.10 MHz – 3954.99 MHz (Sub6 n77(78)(50 MHz))<br>3730.02 MHz – 3949.98 MHz (Sub6 n77(78)(60 MHz))<br>3735.00 MHz – 3945.00 MHz (Sub6 n77(78)(70 MHz))<br>3740.01 MHz – 3939.99 MHz (Sub6 n77(78)(80 MHz))<br>3745.02 MHz – 3934.98 MHz (Sub6 n77(78)(90 MHz))<br>3750.00 MHz – 3930.00 MHz (Sub6 n77(78)(100 MHz)) |
| **Date(s) of Tests:** | February 08, 2025 ~ June 13, 2025 |
| **EUT Serial number:** | Radiated : BMW ICON-25SF Radiated #1<br>Conducted : BMW ICON-25SF Conducted #3 |
| **Antenna Information** | Please refer to the Antenna Specification document. |



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## 1.1. SUPPORTED BANDS PER ANTENNA PORT

| Antenna Port | Supported bands |
|---|---|
| MIMO 1 | - WCDMA: B2, 5<br>- LTE: B2, 4, 5, 7, 12, 13, 17, 25, 66, 26, 38, 42, 48, 71<br>- NR: n2, 5, 7, 12, 25, 41, 48, 66, 71, 77, 78 |
| MIMO 2 | - LTE: B42, 48<br>- NR: n48, 77, 78 |
| MIMO 3 | Only RX |
| MIMO 4 | Only RX |
| **Int. BUA (Back Up Antenna)** | - WCDMA: B2, 5<br>- LTE: B2, 4, 5, 7, 25, 26, 38, 66<br>- NR: n2, 5, 7, 25, 41, 66 |

Note:

1. Since the Int. BUA uses the same antenna port as MIMO1, only radiated testing was performed.



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## 1.2 MAXIMUM OUTPUT POWER

MIMO1(3450 MHz - 3550 MHz)

| Mode (MHz) | Tx Frequency (MHz) | Emission Designator | Modulation | Conducted Output Power | |
|---|---|---|---|---|---|
| | | | | Max. Power (W) | Max. Power (dBm) |
| Sub6 n77 (10) | 3455.01 – 3544.99 | 8M63G7D | PI/2 BPSK | 0.377 | 25.76 |
| | | 8M65G7D | QPSK | 0.381 | 25.81 |
| | | 8M61W7D | 16QAM | 0.292 | 24.66 |
| | | 8M59W7D | 64 QAM | 0.216 | 23.34 |
| | | 8M62W7D | 256 QAM | 0.136 | 21.34 |
| Sub6 n77 (15) | 3457.50 – 3542.50 | 12M9G7D | PI/2 BPSK | 0.390 | 25.91 |
| | | 12M9G7D | QPSK | 0.403 | 26.05 |
| | | 13M0W7D | 16QAM | 0.295 | 24.70 |
| | | 12M9W7D | 64 QAM | 0.219 | 23.40 |
| | | 12M9W7D | 256 QAM | 0.131 | 21.17 |
| Sub6 n77 (20) | 3460.02 – 3540.00 | 18M0G7D | PI/2 BPSK | 0.394 | 25.95 |
| | | 18M0G7D | QPSK | 0.407 | 26.10 |
| | | 17M9W7D | 16QAM | 0.300 | 24.77 |
| | | 17M9W7D | 64 QAM | 0.225 | 23.53 |
| | | 17M9W7D | 256 QAM | 0.139 | 21.42 |
| Sub6 n77 (25) | 3462.50 – 3537.50 | 23M0G7D | PI/2 BPSK | 0.376 | 25.75 |
| | | 22M9G7D | QPSK | 0.388 | 25.89 |
| | | 22M9W7D | 16QAM | 0.288 | 24.60 |
| | | 22M9W7D | 64 QAM | 0.217 | 23.36 |
| | | 22M9W7D | 256 QAM | 0.132 | 21.21 |
| Sub6 n77 (30) | 3465.00 – 3534.99 | 26M9G7D | PI/2 BPSK | 0.394 | 25.96 |
| | | 26M8G7D | QPSK | 0.399 | 26.01 |
| | | 26M9W7D | 16QAM | 0.305 | 24.84 |
| | | 26M8W7D | 64 QAM | 0.228 | 23.58 |
| | | 26M9W7D | 256 QAM | 0.139 | 21.43 |
| Sub6 n77 (40) | 3470.01 – 3529.98 | 35M9G7D | PI/2 BPSK | 0.380 | 25.80 |
| | | 35M9G7D | QPSK | 0.385 | 25.86 |
| | | 35M7W7D | 16QAM | 0.288 | 24.60 |
| | | 35M7W7D | 64 QAM | 0.210 | 23.22 |
| | | 35M8W7D | 256 QAM | 0.126 | 21.02 |
| Sub6 n77 (50) | 3475.02 – 3525.00 | 45M8G7D | PI/2 BPSK | 0.375 | 25.74 |
| | | 45M7G7D | QPSK | 0.372 | 25.71 |
| | | 45M7W7D | 16QAM | 0.272 | 24.35 |
| | | 45M8W7D | 64 QAM | 0.201 | 23.03 |
| | | 45M8W7D | 256 QAM | 0.122 | 20.87 |
| Sub6 n77 (60) | 3480.00 – 3519.99 | 57M9G7D | PI/2 BPSK | 0.372 | 25.71 |
| | | 57M7G7D | QPSK | 0.374 | 25.73 |
| | | 57M9W7D | 16QAM | 0.232 | 23.65 |
| | | 58M2W7D | 64 QAM | 0.172 | 22.36 |
| | | 57M8W7D | 256 QAM | 0.103 | 20.12 |
| Sub6 n77 (70) | 3485.01 – 3514.98 | 64M7G7D | PI/2 BPSK | 0.368 | 25.66 |
| | | 64M5G7D | QPSK | 0.374 | 25.73 |
| | | 64M7W7D | 16QAM | 0.239 | 23.79 |
| | | 64M9W7D | 64 QAM | 0.179 | 22.53 |
| | | 64M4W7D | 256 QAM | 0.110 | 20.40 |
| Sub6 n77 (80) | 3490.02 – 3510.00 | 77M6G7D | PI/2 BPSK | 0.363 | 25.60 |
| | | 77M3G7D | QPSK | 0.378 | 25.77 |
| | | 77M4W7D | 16QAM | 0.240 | 23.81 |
| | | 77M3W7D | 64 QAM | 0.179 | 22.53 |
| | | 77M3W7D | 256 QAM | 0.106 | 20.27 |
| Sub6 n77 (90) | 3495.00 – 3504.99 | 87M0G7D | PI/2 BPSK | 0.361 | 25.58 |
| | | 86M9G7D | QPSK | 0.367 | 25.65 |
| | | 87M0W7D | 16QAM | 0.246 | 23.91 |
| | | 86M9W7D | 64 QAM | 0.187 | 22.71 |
| | | 87M0W7D | 256 QAM | 0.108 | 20.35 |
| Sub6 n77 (100) | 3500.01 | 96M5G7D | PI/2 BPSK | 0.367 | 25.65 |
| | | 96M6G7D | QPSK | 0.378 | 25.78 |
| | | 96M4W7D | 16QAM | 0.251 | 24.00 |
| | | 96M4W7D | 64 QAM | 0.186 | 22.70 |
| | | 96M6W7D | 256 QAM | 0.114 | 20.56 |



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MIMO1(3700 MHz - 3980 MHz)

| Mode (MHz) | Tx Frequency (MHz) | Emission Designator | Modulation | Conducted Output Power | |
|---|---|---|---|---|---|
| | | | | Max. Power (W) | Max. Power (dBm) |
| Sub6 n77(78) (10) | 3705.00 – 3975.00 | 8M63G7D | PI/2 BPSK | 0.342 | 25.34 |
| | | 8M59G7D | QPSK | 0.346 | 25.39 |
| | | 8M61W7D | 16QAM | 0.260 | 24.15 |
| | | 8M57W7D | 64 QAM | 0.193 | 22.86 |
| | | 8M57W7D | 256 QAM | 0.120 | 20.79 |
| Sub6 n77(78) (15) | 3707.51 – 3972.48 | 13M0G7D | PI/2 BPSK | 0.364 | 25.61 |
| | | 12M8G7D | QPSK | 0.363 | 25.60 |
| | | 12M9W7D | 16QAM | 0.278 | 24.44 |
| | | 12M9W7D | 64 QAM | 0.212 | 23.26 |
| | | 12M9W7D | 256 QAM | 0.130 | 21.15 |
| Sub6 n77(78) (20) | 3710.01 – 3969.99 | 17M9G7D | PI/2 BPSK | 0.369 | 25.67 |
| | | 17M9G7D | QPSK | 0.373 | 25.72 |
| | | 17M9W7D | 16QAM | 0.279 | 24.45 |
| | | 17M9W7D | 64 QAM | 0.209 | 23.21 |
| | | 18M0W7D | 256 QAM | 0.129 | 21.10 |
| Sub6 n77(78) (25) | 3712.50 – 3967.50 | 23M0G7D | PI/2 BPSK | 0.351 | 25.45 |
| | | 22M9G7D | QPSK | 0.355 | 25.50 |
| | | 22M9W7D | 16QAM | 0.264 | 24.22 |
| | | 22M9W7D | 64 QAM | 0.200 | 23.00 |
| | | 23M0W7D | 256 QAM | 0.122 | 20.85 |
| Sub6 n77(78) (30) | 3715.02 – 3964.98 | 26M9G7D | PI/2 BPSK | 0.353 | 25.48 |
| | | 26M9G7D | QPSK | 0.354 | 25.49 |
| | | 26M9W7D | 16QAM | 0.266 | 24.25 |
| | | 26M8W7D | 64 QAM | 0.200 | 23.00 |
| | | 26M8W7D | 256 QAM | 0.125 | 20.98 |
| Sub6 n77(78) (40) | 3720.00 – 3960.00 | 35M9G7D | PI/2 BPSK | 0.354 | 25.49 |
| | | 35M8G7D | QPSK | 0.356 | 25.51 |
| | | 35M8W7D | 16QAM | 0.267 | 24.27 |
| | | 35M8W7D | 64 QAM | 0.201 | 23.03 |
| | | 35M8W7D | 256 QAM | 0.124 | 20.95 |
| Sub6 n77(78) (50) | 3725.10 – 3954.99 | 45M8G7D | PI/2 BPSK | 0.352 | 25.46 |
| | | 45M8G7D | QPSK | 0.350 | 25.44 |
| | | 45M7W7D | 16QAM | 0.267 | 24.27 |
| | | 45M8W7D | 64 QAM | 0.200 | 23.01 |
| | | 45M7W7D | 256 QAM | 0.121 | 20.81 |
| Sub6 n77(78) (60) | 3730.02 – 3949.98 | 58M1G7D | PI/2 BPSK | 0.356 | 25.51 |
| | | 57M8G7D | QPSK | 0.350 | 25.44 |
| | | 57M8W7D | 16QAM | 0.273 | 24.36 |
| | | 57M9W7D | 64 QAM | 0.207 | 23.15 |
| | | 57M8W7D | 256 QAM | 0.123 | 20.89 |
| Sub6 n77(78) (70) | 3735.00 – 3945.00 | 64M6G7D | PI/2 BPSK | 0.362 | 25.59 |
| | | 64M7G7D | QPSK | 0.368 | 25.66 |
| | | 64M5W7D | 16QAM | 0.281 | 24.49 |
| | | 64M5W7D | 64 QAM | 0.214 | 23.30 |
| | | 64M6W7D | 256 QAM | 0.130 | 21.15 |
| Sub6 n77(78) (80) | 3740.01 – 3939.99 | 77M5G7D | PI/2 BPSK | 0.355 | 25.50 |
| | | 77M3G7D | QPSK | 0.357 | 25.53 |
| | | 77M6W7D | 16QAM | 0.267 | 24.27 |
| | | 77M5W7D | 64 QAM | 0.204 | 23.10 |
| | | 77M3W7D | 256 QAM | 0.123 | 20.90 |
| Sub6 n77(78) (90) | 3745.02 – 3934.98 | 86M9G7D | PI/2 BPSK | 0.353 | 25.48 |
| | | 86M8G7D | QPSK | 0.362 | 25.59 |
| | | 87M0W7D | 16QAM | 0.267 | 24.27 |
| | | 86M9W7D | 64 QAM | 0.205 | 23.11 |
| | | 87M3W7D | 256 QAM | 0.125 | 20.97 |
| Sub6 n77(78) (100) | 3750.00 – 3930.00 | 96M8G7D | PI/2 BPSK | 0.354 | 25.49 |
| | | 96M7G7D | QPSK | 0.352 | 25.46 |
| | | 96M7W7D | 16QAM | 0.261 | 24.17 |
| | | 97M1W7D | 64 QAM | 0.198 | 22.96 |
| | | 96M8W7D | 256 QAM | 0.120 | 20.78 |



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MIMO2(3450 MHz - 3550 MHz)

| Mode (MHz) | Tx Frequency (MHz) | Emission Designator | Modulation | Conducted Output Power | |
|---|---|---|---|---|---|
| | | | | Max. Power (W) | Max. Power (dBm) |
| Sub6 n77 (10) | 3455.01 – 3544.99 | 8M60G7D | PI/2 BPSK | 0.495 | 26.95 |
| | | 8M68G7D | QPSK | 0.502 | 27.01 |
| | | 8M58W7D | 16QAM | 0.374 | 25.73 |
| | | 8M57W7D | 64 QAM | 0.269 | 24.29 |
| | | 8M58W7D | 256 QAM | 0.173 | 22.39 |
| Sub6 n77 (15) | 3457.50 – 3542.50 | 12M9G7D | PI/2 BPSK | 0.499 | 26.98 |
| | | 12M9G7D | QPSK | 0.493 | 26.93 |
| | | 13M0W7D | 16QAM | 0.385 | 25.85 |
| | | 12M9W7D | 64 QAM | 0.272 | 24.35 |
| | | 12M9W7D | 256 QAM | 0.173 | 22.37 |
| Sub6 n77 (20) | 3460.02 – 3540.00 | 17M9G7D | PI/2 BPSK | 0.494 | 26.94 |
| | | 17M9G7D | QPSK | 0.490 | 26.90 |
| | | 17M9W7D | 16QAM | 0.374 | 25.73 |
| | | 18M0W7D | 64 QAM | 0.267 | 24.27 |
| | | 18M0W7D | 256 QAM | 0.168 | 22.25 |
| Sub6 n77 (25) | 3462.50 – 3537.50 | 23M0G7D | PI/2 BPSK | 0.474 | 26.76 |
| | | 22M9G7D | QPSK | 0.480 | 26.81 |
| | | 23M0W7D | 16QAM | 0.357 | 25.53 |
| | | 22M9W7D | 64 QAM | 0.255 | 24.06 |
| | | 23M0W7D | 256 QAM | 0.161 | 22.06 |
| Sub6 n77 (30) | 3465.00 – 3534.99 | 26M9G7D | PI/2 BPSK | 0.486 | 26.87 |
| | | 26M9G7D | QPSK | 0.485 | 26.86 |
| | | 26M9W7D | 16QAM | 0.375 | 25.74 |
| | | 26M9W7D | 64 QAM | 0.267 | 24.27 |
| | | 27M0W7D | 256 QAM | 0.167 | 22.23 |
| Sub6 n77 (40) | 3470.01 – 3529.98 | 35M9G7D | PI/2 BPSK | 0.473 | 26.75 |
| | | 36M0G7D | QPSK | 0.489 | 26.89 |
| | | 35M9W7D | 16QAM | 0.362 | 25.59 |
| | | 35M8W7D | 64 QAM | 0.261 | 24.16 |
| | | 35M9W7D | 256 QAM | 0.165 | 22.18 |
| Sub6 n77 (50) | 3475.02 – 3525.00 | 45M8G7D | PI/2 BPSK | 0.465 | 26.67 |
| | | 45M6G7D | QPSK | 0.463 | 26.66 |
| | | 45M9W7D | 16QAM | 0.346 | 25.39 |
| | | 45M9W7D | 64 QAM | 0.245 | 23.90 |
| | | 45M7W7D | 256 QAM | 0.160 | 22.03 |
| Sub6 n77 (60) | 3480.00 – 3519.99 | 58M0G7D | PI/2 BPSK | 0.468 | 26.70 |
| | | 57M9G7D | QPSK | 0.465 | 26.67 |
| | | 57M9W7D | 16QAM | 0.327 | 25.15 |
| | | 57M9W7D | 64 QAM | 0.230 | 23.61 |
| | | 58M0W7D | 256 QAM | 0.144 | 21.58 |
| Sub6 n77 (70) | 3485.01 – 3514.98 | 64M5G7D | PI/2 BPSK | 0.471 | 26.73 |
| | | 64M6G7D | QPSK | 0.471 | 26.73 |
| | | 64M3W7D | 16QAM | 0.332 | 25.21 |
| | | 64M6W7D | 64 QAM | 0.233 | 23.68 |
| | | 64M7W7D | 256 QAM | 0.146 | 21.64 |
| Sub6 n77 (80) | 3490.02 – 3510.00 | 77M6G7D | PI/2 BPSK | 0.474 | 26.76 |
| | | 77M5G7D | QPSK | 0.473 | 26.75 |
| | | 77M6W7D | 16QAM | 0.333 | 25.23 |
| | | 77M5W7D | 64 QAM | 0.235 | 23.71 |
| | | 77M2W7D | 256 QAM | 0.148 | 21.70 |
| Sub6 n77 (90) | 3495.00 – 3504.99 | 87M1G7D | PI/2 BPSK | 0.475 | 26.77 |
| | | 87M1G7D | QPSK | 0.469 | 26.71 |
| | | 87M0W7D | 16QAM | 0.330 | 25.19 |
| | | 87M1W7D | 64 QAM | 0.243 | 23.85 |
| | | 86M9W7D | 256 QAM | 0.153 | 21.86 |
| Sub6 n77 (100) | 3500.01 | 96M8G7D | PI/2 BPSK | 0.474 | 26.76 |
| | | 96M8G7D | QPSK | 0.472 | 26.74 |
| | | 96M7W7D | 16QAM | 0.340 | 25.32 |
| | | 96M7W7D | 64 QAM | 0.241 | 23.82 |
| | | 96M8W7D | 256 QAM | 0.151 | 21.79 |



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MIMO2(3700 MHz - 3980 MHz)

| Mode (MHz) | Tx Frequency (MHz) | Emission Designator | Modulation | Conducted Output Power | |
|---|---|---|---|---|---|
| | | | | Max. Power (W) | Max. Power (dBm) |
| Sub6 n77(78) (10) | 3705.00 – 3975.00 | 8M60G7D | PI/2 BPSK | 0.342 | 25.34 |
| | | 8M58G7D | QPSK | 0.429 | 26.32 |
| | | 8M61W7D | 16QAM | 0.319 | 25.04 |
| | | 8M58W7D | 64 QAM | 0.229 | 23.60 |
| | | 8M65W7D | 256 QAM | 0.151 | 21.79 |
| Sub6 n77(78) (15) | 3707.51 – 3972.48 | 12M9G7D | PI/2 BPSK | 0.429 | 26.32 |
| | | 12M9G7D | QPSK | 0.427 | 26.30 |
| | | 12M9W7D | 16QAM | 0.324 | 25.10 |
| | | 12M9W7D | 64 QAM | 0.229 | 23.60 |
| | | 12M9W7D | 256 QAM | 0.152 | 21.82 |
| Sub6 n77(78) (20) | 3710.01 – 3969.99 | 17M9G7D | PI/2 BPSK | 0.432 | 26.35 |
| | | 17M9G7D | QPSK | 0.432 | 26.35 |
| | | 17M9W7D | 16QAM | 0.325 | 25.12 |
| | | 17M9W7D | 64 QAM | 0.231 | 23.64 |
| | | 17M9W7D | 256 QAM | 0.153 | 21.85 |
| Sub6 n77(78) (25) | 3712.50 – 3967.50 | 22M9G7D | PI/2 BPSK | 0.416 | 26.19 |
| | | 22M9G7D | QPSK | 0.407 | 26.10 |
| | | 22M9W7D | 16QAM | 0.314 | 24.97 |
| | | 22M9W7D | 64 QAM | 0.220 | 23.42 |
| | | 23M0W7D | 256 QAM | 0.145 | 21.61 |
| Sub6 n77(78) (30) | 3715.02 – 3964.98 | 26M9G7D | PI/2 BPSK | 0.420 | 26.23 |
| | | 26M9G7D | QPSK | 0.413 | 26.16 |
| | | 26M9W7D | 16QAM | 0.305 | 24.84 |
| | | 26M9W7D | 64 QAM | 0.214 | 23.30 |
| | | 26M9W7D | 256 QAM | 0.142 | 21.52 |
| Sub6 n77(78) (40) | 3720.00 – 3960.00 | 35M9G7D | PI/2 BPSK | 0.419 | 26.22 |
| | | 35M8G7D | QPSK | 0.415 | 26.18 |
| | | 35M8W7D | 16QAM | 0.306 | 24.86 |
| | | 35M7W7D | 64 QAM | 0.219 | 23.40 |
| | | 35M8W7D | 256 QAM | 0.142 | 21.51 |
| Sub6 n77(78) (50) | 3725.10 – 3954.99 | 45M8G7D | PI/2 BPSK | 0.414 | 26.17 |
| | | 45M7G7D | QPSK | 0.413 | 26.16 |
| | | 46M0W7D | 16QAM | 0.323 | 25.09 |
| | | 45M8W7D | 64 QAM | 0.232 | 23.65 |
| | | 45M7W7D | 256 QAM | 0.149 | 21.72 |
| Sub6 n77(78) (60) | 3730.02 – 3949.98 | 57M8G7D | PI/2 BPSK | 0.424 | 26.27 |
| | | 57M8G7D | QPSK | 0.417 | 26.20 |
| | | 57M7W7D | 16QAM | 0.330 | 25.19 |
| | | 57M8W7D | 64 QAM | 0.237 | 23.75 |
| | | 57M9W7D | 256 QAM | 0.158 | 21.99 |
| Sub6 n77(78) (70) | 3735.00 – 3945.00 | 64M5G7D | PI/2 BPSK | 0.436 | 26.39 |
| | | 64M6G7D | QPSK | 0.428 | 26.31 |
| | | 64M5W7D | 16QAM | 0.338 | 25.29 |
| | | 64M6W7D | 64 QAM | 0.240 | 23.81 |
| | | 64M5W7D | 256 QAM | 0.157 | 21.97 |
| Sub6 n77(78) (80) | 3740.01 – 3939.99 | 77M2G7D | PI/2 BPSK | 0.413 | 26.16 |
| | | 77M3G7D | QPSK | 0.413 | 26.16 |
| | | 77M3W7D | 16QAM | 0.299 | 24.75 |
| | | 77M3W7D | 64 QAM | 0.213 | 23.29 |
| | | 77M3W7D | 256 QAM | 0.140 | 21.46 |
| Sub6 n77(78) (90) | 3745.02 – 3934.98 | 87M1G7D | PI/2 BPSK | 0.410 | 26.13 |
| | | 87M0G7D | QPSK | 0.413 | 26.16 |
| | | 86M9W7D | 16QAM | 0.302 | 24.80 |
| | | 87M2W7D | 64 QAM | 0.215 | 23.32 |
| | | 86M9W7D | 256 QAM | 0.144 | 21.59 |
| Sub6 n77(78) (100) | 3750.00 – 3930.00 | 96M5G7D | PI/2 BPSK | 0.413 | 26.16 |
| | | 96M7G7D | QPSK | 0.410 | 26.13 |
| | | 96M8W7D | 16QAM | 0.308 | 24.89 |
| | | 96M8W7D | 64 QAM | 0.218 | 23.39 |
| | | 96M7W7D | 256 QAM | 0.142 | 21.53 |



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# 2. INTRODUCTION

## 2.1. DESCRIPTION OF EUT

Please refer to the [3G] Test Report.

## 2.2. MEASURING INSTRUMENT CALIBRATION

The measuring equipment, which was utilized in performing the tests documented herein, has been calibrated in accordance with the manufacturer's recommendations for utilizing calibration equipment, which is traceable to recognized national standards.

## 2.3. TEST FACILITY

The Fully-anechoic chamber and conducted measurement facility used to collect the radiated data are located at the **74, Seoicheon-ro 578beon-gil, Majang-myeon, Icheon-si, Gyeonggi-do, Republic of Korea**



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# 3. DESCRIPTION OF TESTS

## 3.1 TEST PROCEDURE

| Test Description | Test Procedure Used |
|---|---|
| Occupied Bandwidth | - KDB 971168 D01 v03r01 – Section 4.3<br>- ANSI C63.26-2015 – Section 5.4.4 |
| Band Edge | - KDB 971168 D01 v03r01 – Section 6.0<br>- ANSI C63.26-2015 – Section 5.7 |
| Spurious and Harmonic Emissions at Antenna Terminal | - KDB 971168 D01 v03r01 – Section 6.0<br>- ANSI C63.26-2015 – Section 5.7 |
| Conducted Output Power | - N/A (See SAR Report) |
| Peak- to- Average Ratio | - KDB 971168 D01 v03r01 – Section 5.7<br>- ANSI C63.26-2015 – Section 5.2.3.4 |
| Frequency stability | - ANSI C63.26-2015 – Section 5.6 |
| Radiated Power | - ANSI C63.26-2015 – Section 5.2.4.4<br>- KDB 971168 D01 v03r01 – Section 5.8 |
| Radiated Spurious and Harmonic Emissions | - ANSI C63.26-2015 – Section 5.5.3<br>- KDB 971168 D01 v03r01 – Section 5.8 |



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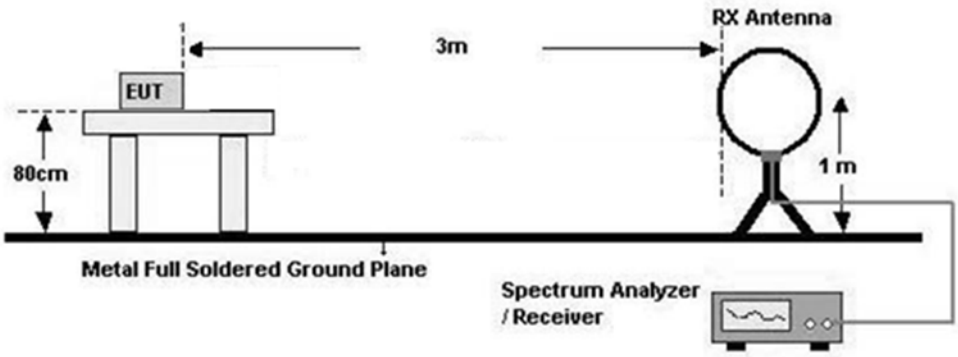
## 3.2 RADIATED POWER

### Test Overview

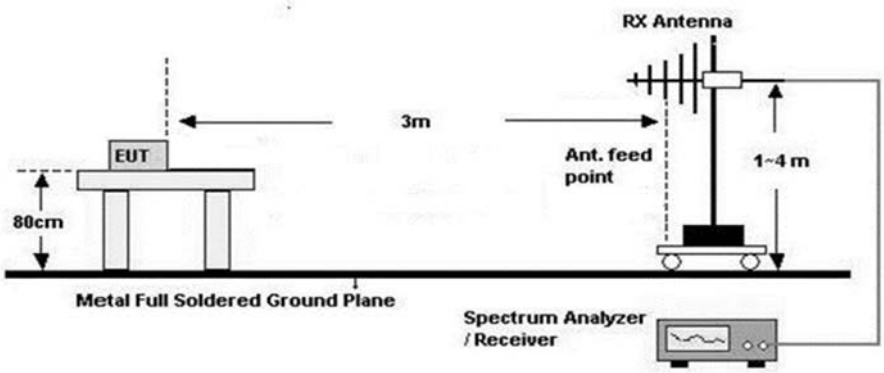
Radiated tests are performed in the semi-anechoic chamber. The equipment under test is placed on a non-conductive table on semi-anechoic chamber.

### Test Configuration

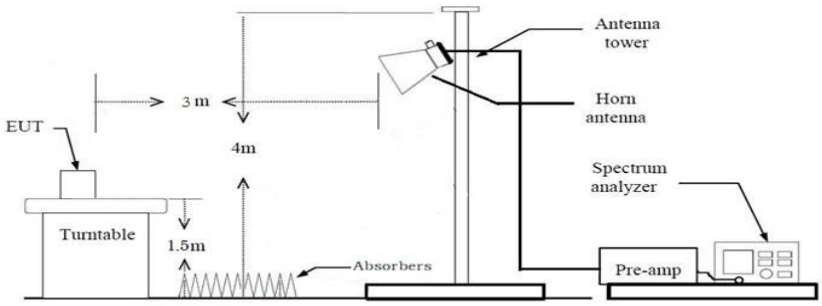
Below 30 MHz




30 MHz - 1 GHz




Above 1 GHz



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**Test Settings**

1. Radiated power measurements are performed using the signal analyzer's "channel power" measurement capability for signals with continuous operation.
2. RBW = 1 – 5 % of the expected OBW, not to exceed 1 MHz
3. VBW ≥ 3 x RBW
4. Span = 1.5 times the OBW
5. No. of sweep points > 2 x span / RBW
6. Detector = RMS
7. Trigger is set to "free run" for signals with continuous operation with the sweep times set to "auto".
8. The integration bandwidth was roughly set equal to the measured OBW of the signal for signals with
continuous operation.
9. Trace mode = trace averaging (RMS) over 100 sweeps
10. The trace was allowed to stabilize

**Test Note**

1. The EUT is placed on a turntable, which is 0.8 m above ground plane. (Below 1 GHz)
2. The EUT is placed on a turntable, which is 1.5 m above ground plane. (Above 1 GHz)
3. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
4. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level.
5. EUT is set 3 m away from the receiving antenna, which is varied from 1 m to 4 m to find out the highest emissions.
6. All measurements are performed as RMS average measurements while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies.
7. Total(dB V/m) = Measured Value(dB V) + Cable Loss(dB) + Antenna Factor(dB/m) + Distance Factor(D.F)
8. EIRP (dBm)
= Total (dB V/m) + 20 log D – 104.8 (where D is the measurement distance in meters. D=3)
= Total (dB V/m) - 95.2(dB)
9. ERP(dBm) = EIRP(dBm) - 2.15(dB)


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## 3.3 RADIATED SPURIOUS EMISSIONS

**Test Overview**

Radiated tests are performed in the Fully-anechoic chamber.

Radiated Spurious Emission Measurements at 3 meters by Substitution Method.

**Test Settings**

1. RBW = 100 kHz for emissions below 1 GHz and 1 MHz for emissions above 1 GHz
2. VBW ≥ 3 x RBW
3. Span = 1.5 times the OBW
4. No. of sweep points > 2 x span / RBW
5. Detector = Peak
6. Trace mode = Max Hold
7. The trace was allowed to stabilize
8. Test channel : Low/ Middle/ High
9. Frequency range : We are performed all frequency to $10^{th}$ harmonics from 9 kHz.

**Test Note**

1. Measurements value show only up to 3 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
2. The EUT was tested in three orthogonal planes(X, Y, Z) and in all possible test configurations and positioning.
   The worst case emissions are reported with the EUT positioning, modulations, RB sizes and offsets, and channel bandwidth configurations shown in the test data
3. For spurious emissions above 1 GHz, a horn antenna is substituted in place of the EUT. The substitute antenna is driven by a signal generator and the previously recorded signal was duplicated.
   The spurious emissions is calculated by the following formula;

$$\text{Result}_{(dBm)} = \text{Pg}_{(dBm)} - \text{cable loss}_{(dB)} + \text{antenna gain}_{(dBi)}$$

   Where: $P_g$ is the generator output power into the substitution antenna.

   If the fundamental frequency is below 1 GHz, RF output power has been converted to EIRP.

$$\text{EIRP}_{(dBm)} = \text{ERP}_{(dBm)} + 2.15$$



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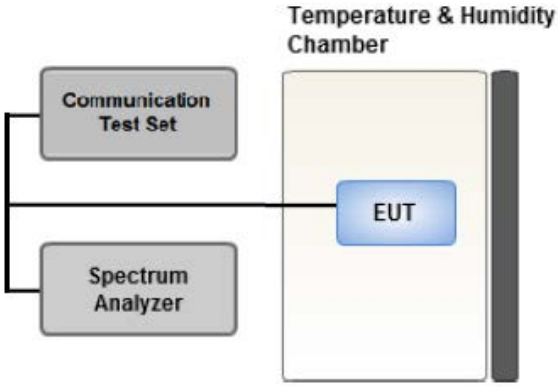
## 3.4 PEAK- TO- AVERAGE RATIO




Test setup

**CCDF Procedure for PAPR**

Test Settings

1. Set resolution/measurement bandwidth ≥ signal's occupied bandwidth;
2. Set the number of counts to a value that stabilizes the measured CCDF curve;
3. Set the measurement interval as follows:
   .- for continuous transmissions, set to 1 ms,
   .- or burst transmissions, employ an external trigger that is synchronized with the EUT burst timing sequence, or use the internal burst trigger with a trigger level that allows the burst to stabilize and set the measurement interval to a time that is less than or equal to the burst duration.
4. Record the maximum PAPR level associated with a probability of 0.1 %.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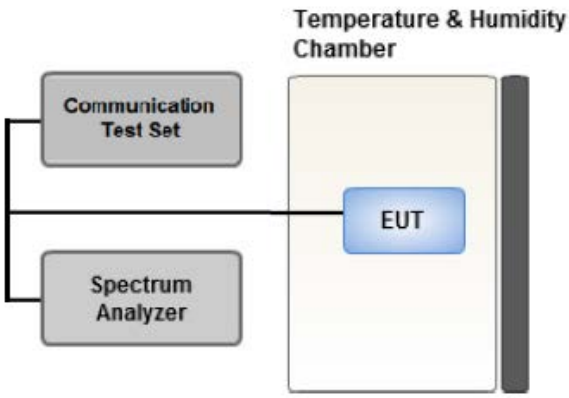
## 3.5 OCCUPIED BANDWIDTH.




Test setup

The width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5 % of the total mean power of a given emission.
The EUT makes a call to the communication simulator.
The conducted occupied bandwidth used the power splitter via EUT RF power connector between simulation base station and spectrum analyzer.
The communication simulator station system controlled a EUT to export maximum output power under transmission mode and specific channel frequency. Use OBW measurement function of Spectrum analyzer to measure 99 % occupied bandwidth

Test Settings

1. The signal analyzer's automatic bandwidth measurement capability was used to perform the 99 % occupied bandwidth and the 26 dB bandwidth. The bandwidth measurement was not influenced by any intermediate power nulls in the fundamental emission.
2. RBW = 1 – 5 % of the expected OBW
3. VBW ≥ 3 x RBW
4. Detector = Peak
5. Trace mode = max hold
6. Sweep = auto couple
7. The trace was allowed to stabilize
8. If necessary, steps 2 – 7 were repeated after changing the RBW such that it would be within 1 – 5 % of the 99 % occupied bandwidth observed in Step 7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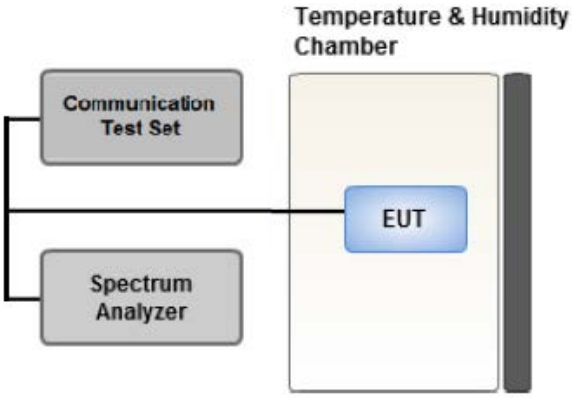
## 3.6 SPURIOUS AND HARMONIC EMISSIONS AT ANTENNA TERMINAL




Test setup

Test Overview

The level of the carrier and the various conducted spurious and harmonic frequencies is measured by means of a calibrated spectrum analyzer. The spectrum is scanned from the lowest frequency generated in the equipment up to a frequency including its 10th harmonic. All out of band emissions are measured with a spectrum analyzer connected to the antenna terminal of the EUT while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies. All data rates were investigated to determine the worst case configuration. All modes of operation were investigated and the worst case configuration results are reported in this section.

Test Settings

1. RBW = 1 MHz
2. VBW ≥ 3 MHz
3. Detector = Peak
4. Trace Mode = Max Hold
5. Sweep time = auto
6. Number of points in sweep ≥ 2 x Span / RBW



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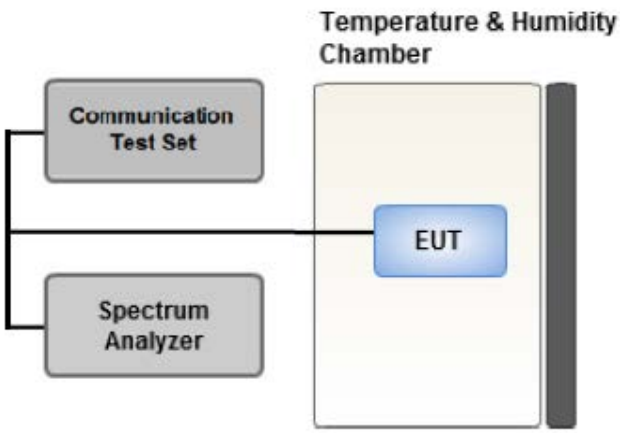
## 3.7 BAND EDGE




Test setup

Test Overview

All out of band emissions are measured with a spectrum analyzer connected to the antenna terminal of the EUT while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies. All data rates were investigated to determine the worst case configuration. All modes of
operation were investigated and the worst case configuration results are reported in this section.

Test Settings

1. Start and stop frequency were set such that the band edge would be placed in the center of the plot
2. Span was set large enough so as to capture all out of band emissions near the band edge
3. RBW > 1 % of the emission bandwidth
4. VBW > 3 x RBW
5. Detector = RMS
6. Number of sweep points ≥ 2 x Span/RBW
7. Trace mode = trace average
8. Sweep time > Number of points in sweep Symbol period (i.e., the transmit on-time + the off-time)
9. The trace was allowed to stabilize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**Test Notes**

For mobile operations in the 3450-3550 MHz band, the conducted power of any emission outside the licensee's authorized bandwidth shall not exceed －13 dBm/MHz.
Compliance with this paragraph is based on the use of measurement instrumentation employing a resolution bandwidth of 1 megahertz or greater.
However, in the 1 megahertz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed, but limited to a maximum of 200 kHz.
In the bands between 1 and 5 MHz removed from the licensee's frequency block, the minimum resolution bandwidth for the measurement shall be 500 kHz.
The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

For mobile operations in the 3700-3980 MHz band, the conducted power of any emission outside the licensee's authorized bandwidth shall not exceed －13 dBm/MHz.
Measurement instrumentation employing a resolution bandwidth of 1 megahertz or greater.
However, in the 1 megahertz bands immediately outside and adjacent to the licensee's frequency block, the minimum resolution bandwidth for the measurement shall be either one percent of the emission bandwidth of the fundamental emission of the transmitter or 350 kHz.
In the bands between 1 and 5 MHz removed from the licensee's frequency block, the minimum resolution bandwidth for the measurement shall be 500 kHz.
The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power. .

Where Margin < 1 dB the emission level is either corrected by 10 log(1 MHz/ RB) or the emission is integrated over a 1 MHz bandwidth to determine the final result. When using the integration method the integration window is either centered on the emission or, for emissions at the band edge, centered by an offset of 500 kHz from the block edge so that the integration window is the 1 MHz adjacent to the block edge.


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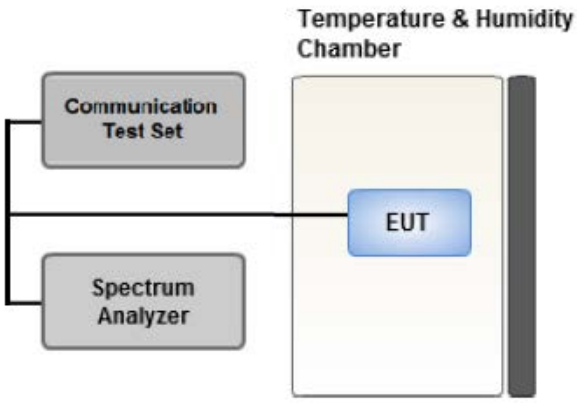
## 3.8 FREQUENCY STABILITY / VARIATION OF AMBIENT TEMPERATURE




Test setup

Test Overview

Frequency stability testing is performed in accordance with the guidelines of ANSI C63.26-2015.

The frequency stability of the transmitter is measured by:

1. Temperature: The temperature is varied from -30 °C to +50 °C in 10 °C increments using an environmental chamber.
2. Primary Supply Voltage:
   .- Unless otherwise specified, vary primary supply voltage from 85 % to 115 % of the nominal value for other than hand carried battery equipment.
   .- For hand carried, battery powered equipment, reduce the primary ac or dc supply voltage to the battery operating end point, which shall be specified by the manufacturer.

Test Settings

1. The carrier frequency of the transmitter is measured at room temperature (20 °C to provide a reference).
2. The equipment is turned on in a "standby" condition for fifteen minutes before applying power to the transmitter.
   Measurement of the carrier frequency of the transmitter is made within one minute after applying power to the transmitter.
3. Frequency measurements are made at 10 °C intervals ranging from -30 °C to +50 °C. A period of at least one half-hour is provided to allow stabilization of the equipment at each temperature level.



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## 3.9 WORST CASE(RADIATED TEST)

- The EUT was tested in three orthogonal planes(X, Y, Z) and in all possible test configurations and positioning.
- The worst case is reported with the EUT positioning, modulations, and paging service configurations shown in the test data.
- All modes of operation were investigated and the worst case configuration results are reported.
  Mode: SA, NSA (Worst case: SA)
- NR n77 (3450 – 3550 MHz / 3700 – 3980 MHz) overlaps the entire frequency range of NR n78 (3700 – 3800 MHz).
- All power classes were tested, and the results were reported for the worst case PC2(n77).
- Radiated Spurious emissions are measured while operating in EN-DC mode with Sub 6 NR carrier as well as an LTE carrier (anchor).
  All EN-DC mode of operation (=anchor) were investigated and the test results were measured No Peak Found.
  The test results which are attenuated more than 20 dB below the permissible value, so it was not reported.
- The worst case is reported with the EUT positioning, modulations, and paging service configurations shown in the test data.
- All RB sizes, offsets of operation were investigated and the worst case configuration results are reported. Please refer to the table below.
- In the case of radiated spurious emissions, all bandwidth of operation were investigated and the worst case bandwidth results are reported.
  Worst case:
  1. 20 MHz(MIMO1, 3450 MHz - 3550 MHz)
  2. 10 MHz(MIMO2, 3450 MHz - 3550 MHz)
  3. 90 MHz(MIMO1, 3700 MHz - 3980 MHz)
  4. 70 MHz(MIMO1, 3700 MHz - 3980 MHz)
- MIMO3 and MIMO4 have three types of Rx antennas. Operating modes were investigated for all Rx antennas, and the worst-case configuration results were reported.
  (Worst-case: HKL antenna(Maximum gain: 5dBi))


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[ Worst case (MIMO1, 3450 MHz - 3550 MHz) ]

| Test Description | Modulation | RB size | RB offset | Axis |
|---|---|---|---|---|
| Equivalent Isotropic Radiated Power | PI/2 BPSK, QPSK, 16QAM, 64 QAM, 256 QAM | See Section 8.1 | | Z |
| Radiated Spurious and Harmonic Emissions | PI/2 BPSK | See Section 8.2 | | Z |

[Worst case (MIMO1, 3700 MHz - 3980 MHz) ]

| Test Description | Modulation | RB size | RB offset | Axis |
|---|---|---|---|---|
| Equivalent Isotropic Radiated Power | PI/2 BPSK, QPSK, 16QAM, 64 QAM, 256 QAM | See Section 9.1 | | Z |
| Radiated Spurious and Harmonic Emissions | PI/2 BPSK | See Section 9.2 | | Z |

[Worst case (MIMO2, 3450 MHz - 3550 MHz) ]

| Test Description | Modulation | RB size | RB offset | Axis |
|---|---|---|---|---|
| Equivalent Isotropic Radiated Power | PI/2 BPSK, QPSK, 16QAM, 64 QAM, 256 QAM | See Section 10.1 | | Z |
| Radiated Spurious and Harmonic Emissions | PI/2 BPSK | See Section 10.2 | | Z |

[Worst case (MIMO2, 3700 MHz - 3980 MHz)]

| Test Description | Modulation | RB size | RB offset | Axis |
|---|---|---|---|---|
| Equivalent Isotropic Radiated Power | PI/2 BPSK, QPSK, 16QAM, 64 QAM, 256 QAM | See Section 11.1 | | Z |
| Radiated Spurious and Harmonic Emissions | PI/2 BPSK | See Section 11.2 | | Y |



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## 3.10 WORST CASE(CONDUCTED TEST)

- Waveform : All Waveform of operation were investigated and the worst case configuration results are reported. (Worst case: DFT-S-OFDM)
- Modulation : All Modulation of operation were investigated and the worst case configuration results are reported. (Worst case: PI/2 BPSK)
- NR n77 (3450 – 3550 MHz / 3700 – 3980 MHz) overlaps the entire frequency range of NR n78 (3700 – 3800 MHz).
- All power classes were tested, and the results were reported for the worst case PC2(n77).
- All modes of operation were investigated and the worst case configuration results are reported.
  Mode : SA, NSA. (Worst case : SA)
- All RB sizes, offsets of operation were investigated and the worst case configuration results are reported.
  Please refer to the table below.
- Both 85% and 115% conditions were measured for the Frequency Stability test, and results for the worst-case configuration (85%) were reported.
- In accordance with the customer's specification of 3.7V as the lowest operating voltage, testing was performed at 3.7V instead of 85% (3.57V).



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[ Worst case ]

| Test Description | Modulation | Bandwidth (MHz) | Frequency | RB size | RB offset |
|---|---|---|---|---|---|
| Occupied Bandwidth, | PI/2 BPSK, QPSK, 16QAM, 64QAM, 256QAM | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 | Mid | Full RB | 0 |
| Peak-To-Average Ratio | PI/2 BPSK, QPSK, 16QAM, 64QAM, 256QAM | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 | Mid | Full RB | 0 |
| Band Edge | PI/2 BPSK | 10 | Low | 1 | 0 |
| | | | High | 1 | 23 |
| | | 15 | Low | 1 | 0 |
| | | | High | 1 | 37 |
| | | 20 | Low | 1 | 0 |
| | | | High | 1 | 50 |
| | | 25 | Low | 1 | 0 |
| | | | High | 1 | 64 |
| | | 30 | Low | 1 | 0 |
| | | | High | 1 | 77 |
| | | 40 | Low | 1 | 0 |
| | | | High | 1 | 105 |
| | | 50 | Low | 1 | 0 |
| | | | High | 1 | 132 |
| | | 60 | Low | 1 | 0 |
| | | | High | 1 | 161 |
| | | 70 | Low | 1 | 0 |
| | | | High | 1 | 188 |
| | | 80 | Low | 1 | 0 |
| | | | High | 1 | 216 |
| | | 90 | Low | 1 | 0 |
| | | | High | 1 | 244 |
| | | 100 | Low | 1 | 0 |
| | | | High | 1 | 272 |
| | | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 | Low, High | Full RB | 0 |
| Spurious and Harmonic Emissions at Antenna Terminal | PI/2 BPSK | 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 | Low, Mid, High | 1 | 1 |



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## 4. LIST OF TEST EQUIPMENT

[Radiated]

| Equipment | Model | Manufacturer | Serial No. | Due to Calibration | Calibration Interval |
|---|---|---|---|---|---|
| RF Switch System | FBSR-04C(3G HPF+LNA) | TNM System | S4L1 | 03/12/2026 | Annual |
| RF Switch System | FBSR-04C(7G HPF+LNA) | TNM System | S4L5 | 03/12/2026 | Annual |
| RF Switch System | FBSR-04C(LNA) | TNM System | S4L4 | 03/12/2026 | Annual |
| RF Switch System | FBSR-04C(Thru) | TNM System | S4L6 | 03/12/2026 | Annual |
| Antenna Position Tower | MA4640 | Innco systems | S4AM | 08/07/2025 | Annual |
| Turn Table | DS2000-S | Innco systems | N/A | N/A | - |
| Controller (Antenna mast & Turn Table) | CO3000 | Innco systems | CO3000/1251/48920320/P | N/A | - |
| Amp & Filter Bank Switch Controller | FBSM-01B | TNM system | TM20090002 | N/A | - |
| RF Switching System | Switch box(1 G HPF+LNA) | HCT CO., LTD., | F2L2 | 12/12/2025 | Annual |
| RF Switching System | Switch box(3 G HPF+LNA) | HCT CO., LTD., | F2L3 | 12/12/2025 | Annual |
| RF Switching System | Switch box(LNA) | HCT CO., LTD., | F2L5 | 12/12/2025 | Annual |
| RF Switching System | Switch box(6 G HPF+LNA) | HCT CO., LTD., | F2L14 | 12/12/2025 | Annual |
| HIGHPASS FILTER | WHKX10-900-1000-15000-40SS | WAINWRIGHT INSTRUMENTS | 16 | 07/24/2025 | Annual |
| LOW NOISE AMPLIFIER | 310N | SONOMA Instrument | 186169 | 02/05/2026 | Annual |
| LOW NOISE AMPLIFIER | TK-PA1840H | TESTEK | 170011-L | 10/11/2025 | Annual |
| Power Amplifier | CBL18265035 | CERNEX | 22966 | 11/07/2025 | Annual |
| Power Amplifier | CBL26405040 | CERNEX | 25956 | 02/19/2026 | Annual |
| Power Splitter(DC ~ 26.5 GHz) | 11667B | Hewlett Packard | 5001 | 04/10/2026 | Annual |
| DC Power Supply | E3632A | Agilent | MY40010147 | 08/06/2025 | Annual |
| Dipole Antenna | UHAP | Schwarzbeck | 01274 | 03/10/2026 | Biennial |
| Dipole Antenna | UHAP | Schwarzbeck | 01288 | 08/07/2026 | Biennial |
| Horn Antenna(1 ~ 18 GHz) | BBHA 9120D | Schwarzbeck | 03197 | 11/28/2025 | Biennial |
| Horn Antenna(1 ~ 18 GHz) | BBHA 9120D | Schwarzbeck | 03201 | 11/28/2025 | Biennial |
| Horn Antenna(1 ~ 18 GHz) | BBHA 9120 | Schwarzbeck | 937 | 02/07/2027 | Biennial |
| Horn Antenna(15 ~ 40 GHz) | BBHA 9170 | Schwarzbeck | BBHA9170124 | 03/23/2027 | Biennial |
| Horn Antenna(15 ~ 40 GHz) | BBHA 9170 | Schwarzbeck | BBHA9170342 | 09/20/2026 | Biennial |



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| Equipment | Model | Manufacturer | Serial No. | Due to Calibration | Calibration Interval |
|---|---|---|---|---|---|
| Spectrum Analyzer(10 Hz ~ 40 GHz) | FSV40 | ROHDE & SCHWARZ | 101733 | 09/19/2025 | Annual |
| Spectrum Analyzer(10 Hz ~ 40 GHz) | FSV40 | REOHDE & SCHWARZ | 101436 | 02/04/2026 | Annual |
| Signal & Spectrum Analyzer (2 Hz~67 GHz) | FSW67 | REOHDE & SCHWARZ | 101736 | 05/27/2026 | Annual |
| Base Station | 8960 (E5515C) | Agilent | MY48360800 | 08/05/2025 | Annual |
| Loop Antenna(9 kHz ~ 30 MHz) | FMZB1513 | Schwarzbeck | 1513-333 | 03/07/2026 | Biennial |
| Trilog Broadband Antenna | VULB 9168 | Schwarzbeck | 9168-0895 | 08/28/2026 | Biennial |
| Trilog Broadband Antenna | VULB9168 | Schwarzbeck | 895 | 08/28/2026 | Biennial |
| Trilog Broadband Antenna | VULB9168 | Schwarzbeck | 1135 | 08/19/2026 | Biennial |
| Wideband Radio Communication Tester | MT8821C | Anritsu Corp. | 6262287701 | 05/14/2026 | Annual |
| Wideband Radio Communication Tester | MT8000A | Anritsu Corp. | 6272613402 | 08/28/2025 | Annual |
| SIGNAL GENERATOR (100 kHz ~ 40 GHz) | SMB100A | REOHDE & SCHWARZ | 177633 | 07/26/2025 | Annual |
| Automation Software | FCC LTE Radiated | HCT CO., LTD | – | – | – |
| Automation Software | FCC NR Radiated | HCT CO., LTD | – | – | – |



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[Conducted]

| Equipment | Model | Manufacturer | Serial No. | Due to Calibration | Calibration Interval |
|---|---|---|---|---|---|
| Power Splitter (DC ~ 26.5 GHz) | 11667B | Hewlett Packard | 5001 | 04/10/2026 | Annual |
| DC Power Supply | E3632A | Agilent | MY40010147 | 08/06/2025 | Annual |
| Chamber | SU-642 | ESPEC | 93008124 | 02/11/2026 | Annual |
| ATTENUATOR (20 dB) | 8493C | Hewlett Packard | 17280 | 04/10/2026 | Annual |
| Base Station | 8960 (E5515C) | Agilent | MY48360800 | 08/05/2025 | Annual |
| Wideband Radio Communication Tester | MT8821C | Anritsu Corp. | 6262094331 | 11/13/2025 | Annual |
| UXM 5G Wireless Test Platform | E7515B | KEYSIGHT | MY60101126 | 02/10/2026 | Annual |
| Signal Analyzer (2 Hz ~ 50.0 GHz) | N9030B | KEYSIGHT | MY56320554 | 02/03/2026 | Annual |
| FCC LTE Mobile Conducted RF Automation Test Software | - | HCT CO., LTD. | - | - | - |
| Automation Software | FCC 2G/3G/4G Conducted | HCT CO., LTD | – | – | – |
| Automation Software | FCC NR Conducted | HCT CO., LTD | – | – | – |

Note:

1. Equipment listed above that has a calibration due date during the testing period, the testing is completed before equipment expiration date.
2. Especially, all antenna for measurement is calibrated in accordance with the requirements of C63.5 (Version : 2017).



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## 5. MEASUREMENT UNCERTAINTY

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI C63.4:2014.

All measurement uncertainty values are shown with a coverage factor of $k = 2$ to indicate a 95 % level of confidence. The measurement data shown herein meets or exceeds the $U_{CISPR}$ measurement uncertainty values specified in CISPR 16-4-2 and, thus, can be compared directly to specified limits to determine compliance.

| Parameter | Expanded Uncertainty (±kHz) |
|---|---|
| Occupied Bandwidth | 95 (Confidence level about 95 %, *k*=2) |
| Frequency stability | 28 (Confidence level about 95 %, *k*=2) |

| Parameter | Expanded Uncertainty (±dB) |
|---|---|
| Block Edge | 0.70 (Confidence level about 95 %, *k*=2) |
| Conducted Spurious Emissions | 1.18 (Confidence level about 95 %, *k*=2) |
| Peak- to- Average Ratio | 0.68 (Confidence level about 95 %, *k*=2) |
| Radiated Power | 4.74 (Confidence level about 95 %, *k*=2) |
| Radiated Disturbance (9 kHz ~ 30 MHz) | 4.36 (Confidence level about 95 %, *k*=2) |
| Radiated Disturbance (30 MHz ~ 1 GHz) | 5.68 (Confidence level about 95 %, *k*=2) |
| Radiated Disturbance (1 GHz ~ 18 GHz) | 5.75 (Confidence level about 95 %, *k*=2) |
| Radiated Disturbance (18 GHz ~ 40 GHz) | 5.82 (Confidence level about 95 %, *k*=2) |
| Radiated Disturbance (Above 40 GHz) | 5.58 (Confidence level about 95 %, *k*=2) |



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## 6. SUMMARY OF TEST RESULTS

-. The decision rule applies 'simple acceptance'

6.1 Test Condition : Conducted Test

| Test Description | FCC Part Section(s) | Test Limit | Test Result |
|---|---|---|---|
| Occupied Bandwidth | § 2.1049 | N/A | PASS |
| Band Edge / Spurious and Harmonic Emissions at Antenna Terminal. | § 2.1051, § 27.53(n)(2), § 27.53(l)(2) | < -13 dBm | PASS |
| Conducted Output Power | § 2.1046 | N/A | Note[1] |
| Peak- to- Average Ratio | § 27.50(k)(4), § 27.50(j)(4) | < 13 dB | PASS |
| Frequency stability / variation of ambient temperature | § 2.1055, § 27.54 | Emission must remain in band | PASS |

**Note:**

1. Refer to the SAR report.

2. All conducted tests were tested using 5G Wireless Tester.

6.2 Test Condition : Radiated Test

| Test Description | FCC Part Section(s) | Test Limit | Test Result |
|---|---|---|---|
| Equivalent Isotropic Radiated Power | § 27.50(k)(3), § 27.50(j)(3) | < 1 Watts max. EIRP | PASS |
| Radiated Spurious and Harmonic Emissions | § 2.1051, § 27.53(n)(2), § 27.53(l)(2) | < -13 dBm | PASS |

**Note:**

1. Radiated tests were tested using 5G Wireless Tester.



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# 7. SAMPLE CALCULATION

7.1 ERP Sample Calculation

| Ch./ Freq. | | Measured Level (dBm) | Substitute Level (dBm) | Ant. Gain (dBd) | C.L | Pol. | ERP | |
|---|---|---|---|---|---|---|---|---|
| channel | Freq.(MHz) | | | | | | W | dBm |
| 128 | 824.20 | -21.37 | 38.40 | -10.61 | 0.95 | H | 0.483 | 26.84 |

ERP = Substitute LEVEL(dBm) + Ant. Gain – CL(Cable Loss)

1) The EUT mounted on a non-conductive turntable is 2.5 meter above test site ground level.
2) During the test, the turn table is rotated until the maximum signal is found.
3) Record the field strength meter's level.
4) Replace the EUT with dipole/Horn antenna that is connected to a calibrated signal generator.
5) Increase the signal generator output till the field strength meter's level is equal to the item (3).
6) The signal generator output level with Ant. Gain and cable loss are the rating of effective radiated power.

7.2 EIRP Sample Calculation

| Ch./ Freq. | | Measured Level (dBm) | Substitute Level (dBm) | Ant. Gain (dBi) | C.L | Pol. | EIRP | |
|---|---|---|---|---|---|---|---|---|
| channel | Freq.(MHz) | | | | | | W | dBm |
| 20175 | 1,732.50 | -15.75 | 18.45 | 9.90 | 1.76 | H | 0.456 | 26.59 |

EIRP = Substitute LEVEL(dBm) + Ant. Gain – CL(Cable Loss)

1) The EUT mounted on a non-conductive turntable is 2.5 meter above test site ground level.
2) During the test, the turn table is rotated until the maximum signal is found.
3) Record the field strength meter's level.
4) Replace the EUT with dipole/Horn antenna that is connected to a calibrated signal generator.
5) Increase the signal generator output till the field strength meter's level is equal to the item (3).
6) The signal generator output level with Ant. Gain and cable loss are the rating of equivalent isotropic radiated power.


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## 7.3. Emission Designator

GSM Emission Designator

Emission Designator = 249KGXW
GSM BW = 249 kHz
G = Phase Modulation
X = Cases not otherwise covered
W = Combination (Audio/Data)

EDGE Emission Designator

Emission Designator = 249KG7W
GSM BW = 249 kHz
G = Phase Modulation
7 = Quantized/Digital Info
W = Combination (Audio/Data)

WCDMA Emission Designator

Emission Designator = 4M17F9W
WCDMA BW = 4.17 MHz
F = Frequency Modulation
9 = Composite Digital Info
W = Combination (Audio/Data)

QPSK Modulation

Emission Designator = 4M48G7D
LTE BW = 4.48 MHz
G = Phase Modulation
7 = Quantized/Digital Info
D = Data transmission; telemetry; telecommand

QAM Modulation

Emission Designator = 4M48W7D
LTE BW = 4.48 MHz
W = Amplitude/Angle Modulated
7 = Quantized/Digital Info
D = Data transmission; telemetry; telecommand


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# 8. TEST DATA (MIMO1, 3450 MHz - 3550 MHz)

## 8.1 EQUIVALENT ISOTROPIC RADIATED POWER

| Freq (MHz) | Mod/ Bandwidth [SCS (kHz)] | Modulation | Measured (dBμV/m) | Ant. Factor + Dis. Factor(dB) | Cable loss(dB) | Total (dBμV/m) | Pol. | Limit | EIRP | | RB | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | W | W | dBm | Size | Offset |
| 3455.01 | Sub6 n77/ 10 MHz [30 kHz] | PI/2 BPSK | 79.96 | 30.80 | 5.43 | 116.19 | H | < 1.00 | 0.126 | 20.99 | 1 | 1 |
| | | QPSK | 79.55 | 30.80 | 5.43 | 115.78 | H | | 0.114 | 20.58 | | |
| | | 16-QAM | 79.04 | 30.80 | 5.43 | 115.27 | H | | 0.102 | 20.07 | | |
| | | 64-QAM | 79.04 | 30.80 | 5.43 | 115.27 | H | | 0.102 | 20.07 | | |
| | | 256-QAM | 78.14 | 30.80 | 5.43 | 114.37 | H | | 0.083 | 19.17 | | |
| 3500.01 | | PI/2 BPSK | 81.14 | 31.10 | 5.45 | 117.69 | H | | 0.177 | 22.49 | 1 | 12 |
| | | QPSK | 81.04 | 31.10 | 5.45 | 117.59 | H | | 0.173 | 22.39 | | |
| | | 16-QAM | 80.62 | 31.10 | 5.45 | 117.17 | H | | 0.157 | 21.97 | | |
| | | 64-QAM | 79.76 | 31.10 | 5.45 | 116.31 | H | | 0.129 | 21.11 | | |
| | | 256-QAM | 80.43 | 31.10 | 5.45 | 116.98 | H | | 0.151 | 21.78 | | |
| 3544.99 | | PI/2 BPSK | 80.69 | 31.50 | 5.51 | 117.70 | H | | 0.178 | 22.50 | 1 | 12 |
| | | QPSK | 80.54 | 31.50 | 5.51 | 117.55 | H | | 0.172 | 22.35 | | |
| | | 16-QAM | 80.40 | 31.50 | 5.51 | 117.41 | H | | 0.166 | 22.21 | | |
| | | 64-QAM | 79.96 | 31.50 | 5.51 | 116.97 | H | | 0.150 | 21.77 | | |
| | | 256-QAM | 79.13 | 31.50 | 5.51 | 116.14 | H | | 0.124 | 20.94 | | |



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| Freq (MHz) | Mod/ Bandwidth [SCS (kHz)] | Modulation | Measured (dBμV/m) | Ant. Factor + Dis. Factor(dB) | Cable loss(dB) | Total (dBμV/m) | Pol. | Limit | EIRP | | RB | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | W | W | dBm | Size | Offset |
| 3457.50 | Sub6 n77/ 15 MHz [30 kHz] | PI/2 BPSK | 79.07 | 30.80 | 5.43 | 115.30 | H | < 1.00 | 0.102 | 20.10 | 1 | 36 |
| | | QPSK | 78.47 | 30.80 | 5.43 | 114.70 | H | | 0.089 | 19.50 | | |
| | | 16-QAM | 77.55 | 30.80 | 5.43 | 113.78 | H | | 0.072 | 18.58 | | |
| | | 64-QAM | 78.24 | 30.80 | 5.43 | 114.47 | H | | 0.085 | 19.27 | | |
| | | 256-QAM | 77.38 | 30.80 | 5.43 | 113.61 | H | | 0.069 | 18.41 | | |
| 3500.01 | | PI/2 BPSK | 81.61 | 31.10 | 5.45 | 118.16 | H | | 0.198 | 22.96 | 1 | 19 |
| | | QPSK | 81.53 | 31.10 | 5.45 | 118.08 | H | | 0.194 | 22.88 | | |
| | | 16-QAM | 80.64 | 31.10 | 5.45 | 117.19 | H | | 0.158 | 21.99 | | |
| | | 64-QAM | 80.33 | 31.10 | 5.45 | 116.88 | H | | 0.147 | 21.68 | | |
| | | 256-QAM | 79.92 | 31.10 | 5.45 | 116.47 | H | | 0.134 | 21.27 | | |
| 3542.50 | | PI/2 BPSK | 80.72 | 31.50 | 5.51 | 117.73 | H | | 0.179 | 22.53 | 1 | 36 |
| | | QPSK | 80.05 | 31.50 | 5.51 | 117.06 | H | | 0.153 | 21.86 | | |
| | | 16-QAM | 79.99 | 31.50 | 5.51 | 117.00 | H | | 0.151 | 21.80 | | |
| | | 64-QAM | 80.49 | 31.50 | 5.51 | 117.50 | H | | 0.170 | 22.30 | | |
| | | 256-QAM | 80.02 | 31.50 | 5.51 | 117.03 | H | | 0.152 | 21.83 | | |



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| Freq (MHz) | Mod/ Bandwidth [SCS (kHz)] | Modulation | Measured (dBμV/m) | Ant. Factor + Dis. Factor(dB) | Cable loss(dB) | Total (dBμV/m) | Pol. | Limit | EIRP | | RB | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | W | W | dBm | Size | Offset |
| 3460.02 | Sub6 n77/ 20 MHz [30 kHz] | PI/2 BPSK | 79.49 | 30.80 | 5.43 | 115.72 | H | < 1.00 | 0.113 | 20.52 | 1 | 25 |
| | | QPSK | 78.07 | 30.80 | 5.43 | 114.30 | H | | 0.081 | 19.10 | | |
| | | 16-QAM | 78.60 | 30.80 | 5.43 | 114.83 | H | | 0.092 | 19.63 | | |
| | | 64-QAM | 78.59 | 30.80 | 5.43 | 114.82 | H | | 0.092 | 19.62 | | |
| | | 256-QAM | 78.57 | 30.80 | 5.43 | 114.80 | H | | 0.091 | 19.60 | | |
| 3500.01 | | PI/2 BPSK | 81.33 | 31.10 | 5.45 | 117.88 | H | | 0.185 | 22.68 | 1 | 25 |
| | | QPSK | 80.88 | 31.10 | 5.45 | 117.43 | H | | 0.167 | 22.23 | | |
| | | 16-QAM | 81.11 | 31.10 | 5.45 | 117.66 | H | | 0.176 | 22.46 | | |
| | | 64-QAM | 81.28 | 31.10 | 5.45 | 117.83 | H | | 0.183 | 22.63 | | |
| | | 256-QAM | 81.05 | 31.10 | 5.45 | 117.60 | H | | 0.174 | 22.40 | | |
| 3540.00 | | PI/2 BPSK | 81.26 | 31.50 | 5.51 | 118.27 | H | | 0.203 | 23.07 | 1 | 49 |
| | | QPSK | 80.05 | 31.50 | 5.51 | 117.06 | H | | 0.153 | 21.86 | | |
| | | 16-QAM | 80.88 | 31.50 | 5.51 | 117.89 | H | | 0.186 | 22.69 | | |
| | | 64-QAM | 80.32 | 31.50 | 5.51 | 117.33 | H | | 0.163 | 22.13 | | |
| | | 256-QAM | 79.74 | 31.50 | 5.51 | 116.75 | H | | 0.143 | 21.55 | | |



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| Freq (MHz) | Mod/ Bandwidth [SCS (kHz)] | Modulation | Measured (dBμV/m) | Ant. Factor + Dis. Factor(dB) | Cable loss(dB) | Total (dBμV/m) | Pol. | Limit | EIRP | | RB | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | W | W | dBm | Size | Offset |
| 3462.50 | Sub6 n77/ 25 MHz [30 kHz] | PI/2 BPSK | 79.03 | 30.80 | 5.43 | 115.26 | H | < 1.00 | 0.101 | 20.06 | 1 | 1 |
| | | QPSK | 78.95 | 30.80 | 5.43 | 115.18 | H | | 0.100 | 19.98 | | |
| | | 16-QAM | 79.01 | 30.80 | 5.43 | 115.24 | H | | 0.101 | 20.04 | | |
| | | 64-QAM | 78.80 | 30.80 | 5.43 | 115.03 | H | | 0.096 | 19.83 | | |
| | | 256-QAM | 78.30 | 30.80 | 5.43 | 114.53 | H | | 0.086 | 19.33 | | |
| 3500.01 | | PI/2 BPSK | 80.52 | 31.10 | 5.45 | 117.07 | H | | 0.154 | 21.87 | 1 | 63 |
| | | QPSK | 79.36 | 31.10 | 5.45 | 115.91 | H | | 0.118 | 20.71 | | |
| | | 16-QAM | 80.51 | 31.10 | 5.45 | 117.06 | H | | 0.153 | 21.86 | | |
| | | 64-QAM | 80.28 | 31.10 | 5.45 | 116.83 | H | | 0.146 | 21.63 | | |
| | | 256-QAM | 80.05 | 31.10 | 5.45 | 116.60 | H | | 0.138 | 21.40 | | |
| 3537.50 | | PI/2 BPSK | 80.20 | 31.50 | 5.51 | 117.21 | H | | 0.159 | 22.01 | 1 | 1 |
| | | QPSK | 80.07 | 31.50 | 5.51 | 117.08 | H | | 0.154 | 21.88 | | |
| | | 16-QAM | 79.81 | 31.50 | 5.51 | 116.82 | H | | 0.145 | 21.62 | | |
| | | 64-QAM | 79.21 | 31.50 | 5.51 | 116.22 | H | | 0.126 | 21.02 | | |
| | | 256-QAM | 79.88 | 31.50 | 5.51 | 116.89 | H | | 0.148 | 21.69 | | |



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| Freq (MHz) | Mod/ Bandwidth [SCS (kHz)] | Modulation | Measured (dBμV/m) | Ant. Factor + Dis. Factor(dB) | Cable loss(dB) | Total (dBμV/m) | Pol. | Limit | EIRP | | RB | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | W | W | dBm | Size | Offset |
| 3465.00 | Sub6 n77/ 30 MHz [30 kHz] | PI/2 BPSK | 79.57 | 30.80 | 5.43 | 115.80 | H | < 1.00 | 0.115 | 20.60 | 1 | 1 |
| | | QPSK | 78.80 | 30.80 | 5.43 | 115.03 | H | | 0.096 | 19.83 | | |
| | | 16-QAM | 79.01 | 30.80 | 5.43 | 115.24 | H | | 0.101 | 20.04 | | |
| | | 64-QAM | 78.40 | 30.80 | 5.43 | 114.63 | H | | 0.088 | 19.43 | | |
| | | 256-QAM | 78.06 | 30.80 | 5.43 | 114.29 | H | | 0.081 | 19.09 | | |
| 3500.01 | | PI/2 BPSK | 80.77 | 31.10 | 5.45 | 117.32 | H | | 0.163 | 22.12 | 1 | 39 |
| | | QPSK | 80.26 | 31.10 | 5.45 | 116.81 | H | | 0.145 | 21.61 | | |
| | | 16-QAM | 80.38 | 31.10 | 5.45 | 116.93 | H | | 0.149 | 21.73 | | |
| | | 64-QAM | 80.55 | 31.10 | 5.45 | 117.10 | H | | 0.155 | 21.90 | | |
| | | 256-QAM | 78.58 | 31.10 | 5.45 | 115.13 | H | | 0.098 | 19.93 | | |
| 3534.99 | | PI/2 BPSK | 80.56 | 31.50 | 5.51 | 117.57 | H | | 0.173 | 22.37 | 1 | 39 |
| | | QPSK | 79.61 | 31.50 | 5.51 | 116.62 | H | | 0.139 | 21.42 | | |
| | | 16-QAM | 80.07 | 31.50 | 5.51 | 117.08 | H | | 0.154 | 21.88 | | |
| | | 64-QAM | 79.86 | 31.50 | 5.51 | 116.87 | H | | 0.147 | 21.67 | | |
| | | 256-QAM | 79.74 | 31.50 | 5.51 | 116.75 | H | | 0.143 | 21.55 | | |



The report shall not be (partly) reproduced except in full without approval of the laboratory.

| Freq (MHz) | Mod/ Bandwidth [SCS (kHz)] | Modulation | Measured (dBμV/m) | Ant. Factor + Dis. Factor(dB) | Cable loss(dB) | Total (dBμV/m) | Pol. | Limit | EIRP | | RB | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | W | W | dBm | Size | Offset |
| 3470.01 | Sub6 n77/ 40 MHz [30 kHz] | PI/2 BPSK | 80.28 | 30.80 | 5.43 | 116.51 | H | < 1.00 | 0.135 | 21.31 | 1 | 104 |
| | | QPSK | 79.54 | 30.80 | 5.43 | 115.77 | H | | 0.114 | 20.57 | | |
| | | 16-QAM | 79.65 | 30.80 | 5.43 | 115.88 | H | | 0.117 | 20.68 | | |
| | | 64-QAM | 79.85 | 30.80 | 5.43 | 116.08 | H | | 0.122 | 20.88 | | |
| | | 256-QAM | 77.74 | 30.80 | 5.43 | 113.97 | H | | 0.075 | 18.77 | | |
| 3500.01 | | PI/2 BPSK | 81.33 | 31.10 | 5.45 | 117.88 | H | | 0.185 | 22.68 | 1 | 53 |
| | | QPSK | 80.58 | 31.10 | 5.45 | 117.13 | H | | 0.156 | 21.93 | | |
| | | 16-QAM | 80.39 | 31.10 | 5.45 | 116.94 | H | | 0.149 | 21.74 | | |
| | | 64-QAM | 79.23 | 31.10 | 5.45 | 115.78 | H | | 0.114 | 20.58 | | |
| | | 256-QAM | 79.77 | 31.10 | 5.45 | 116.32 | H | | 0.129 | 21.12 | | |
| 3529.98 | | PI/2 BPSK | 80.57 | 31.50 | 5.51 | 117.58 | H | | 0.173 | 22.38 | 1 | 1 |
| | | QPSK | 80.30 | 31.50 | 5.51 | 117.31 | H | | 0.163 | 22.11 | | |
| | | 16-QAM | 79.97 | 31.50 | 5.51 | 116.98 | H | | 0.151 | 21.78 | | |
| | | 64-QAM | 80.27 | 31.50 | 5.51 | 117.28 | H | | 0.161 | 22.08 | | |
| | | 256-QAM | 78.88 | 31.50 | 5.51 | 115.89 | H | | 0.117 | 20.69 | | |



The report shall not be (partly) reproduced except in full without approval of the laboratory.

| Freq (MHz) | Mod/ Bandwidth [SCS (kHz)] | Modulation | Measured (dBμV/m) | Ant. Factor + Dis. Factor(dB) | Cable loss(dB) | Total (dBμV/m) | Pol. | Limit | EIRP | | RB | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | W | W | dBm | Size | Offset |
| 3475.02 | Sub6 n77/ 50 MHz [30 kHz] | PI/2 BPSK | 81.09 | 30.80 | 5.43 | 117.32 | H | < 1.00 | 0.163 | 22.12 | 1 | 131 |
| | | QPSK | 80.08 | 30.80 | 5.43 | 116.31 | H | | 0.129 | 21.11 | | |
| | | 16-QAM | 80.43 | 30.80 | 5.43 | 116.66 | H | | 0.140 | 21.46 | | |
| | | 64-QAM | 80.07 | 30.80 | 5.43 | 116.30 | H | | 0.129 | 21.10 | | |
| | | 256-QAM | 79.90 | 30.80 | 5.43 | 116.13 | H | | 0.124 | 20.93 | | |
| 3500.01 | | PI/2 BPSK | 80.99 | 31.10 | 5.45 | 117.54 | H | | 0.171 | 22.34 | 1 | 66 |
| | | QPSK | 79.58 | 31.10 | 5.45 | 116.13 | H | | 0.124 | 20.93 | | |
| | | 16-QAM | 80.74 | 31.10 | 5.45 | 117.29 | H | | 0.162 | 22.09 | | |
| | | 64-QAM | 79.69 | 31.10 | 5.45 | 116.24 | H | | 0.127 | 21.04 | | |
| | | 256-QAM | 80.15 | 31.10 | 5.45 | 116.70 | H | | 0.141 | 21.50 | | |
| 3525.00 | | PI/2 BPSK | 80.62 | 31.50 | 5.51 | 117.63 | H | | 0.175 | 22.43 | 1 | 1 |
| | | QPSK | 80.11 | 31.50 | 5.51 | 117.12 | H | | 0.156 | 21.92 | | |
| | | 16-QAM | 80.10 | 31.50 | 5.51 | 117.11 | H | | 0.155 | 21.91 | | |
| | | 64-QAM | 79.39 | 31.50 | 5.51 | 116.40 | H | | 0.132 | 21.20 | | |
| | | 256-QAM | 79.69 | 31.50 | 5.51 | 116.70 | H | | 0.141 | 21.50 | | |



The report shall not be (partly) reproduced except in full without approval of the laboratory.

| Freq (MHz) | Mod/ Bandwidth [SCS (kHz)] | Modulation | Measured (dBμV/m) | Ant. Factor + Dis. Factor(dB) | Cable loss(dB) | Total (dBμV/m) | Pol. | Limit | EIRP | | RB | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | W | W | dBm | Size | Offset |
| 3480.00 | Sub6 n77/ 60 MHz [30 kHz] | PI/2 BPSK | 80.39 | 30.80 | 5.43 | 116.62 | H | < 1.00 | 0.139 | 21.42 | 1 | 82 |
| | | QPSK | 80.36 | 30.80 | 5.43 | 116.59 | H | | 0.138 | 21.39 | | |
| | | 16-QAM | 79.47 | 30.80 | 5.43 | 115.70 | H | | 0.112 | 20.50 | | |
| | | 64-QAM | 78.65 | 30.80 | 5.43 | 114.88 | H | | 0.093 | 19.68 | | |
| | | 256-QAM | 78.79 | 30.80 | 5.43 | 115.02 | H | | 0.096 | 19.82 | | |
| 3500.01 | | PI/2 BPSK | 80.92 | 31.10 | 5.45 | 117.47 | H | | 0.169 | 22.27 | 1 | 82 |
| | | QPSK | 79.65 | 31.10 | 5.45 | 116.20 | H | | 0.126 | 21.00 | | |
| | | 16-QAM | 80.83 | 31.10 | 5.45 | 117.38 | H | | 0.165 | 22.18 | | |
| | | 64-QAM | 80.29 | 31.10 | 5.45 | 116.84 | H | | 0.146 | 21.64 | | |
| | | 256-QAM | 79.69 | 31.10 | 5.45 | 116.24 | H | | 0.127 | 21.04 | | |
| 3519.99 | | PI/2 BPSK | 80.49 | 31.50 | 5.51 | 117.50 | H | | 0.170 | 22.30 | 1 | 82 |
| | | QPSK | 80.12 | 31.50 | 5.51 | 117.13 | H | | 0.156 | 21.93 | | |
| | | 16-QAM | 79.22 | 31.50 | 5.51 | 116.23 | H | | 0.127 | 21.03 | | |
| | | 64-QAM | 79.40 | 31.50 | 5.51 | 116.41 | H | | 0.132 | 21.21 | | |
| | | 256-QAM | 78.62 | 31.50 | 5.51 | 115.63 | H | | 0.110 | 20.43 | | |



The report shall not be (partly) reproduced except in full without approval of the laboratory.

| Freq (MHz) | Mod/ Bandwidth [SCS (kHz)] | Modulation | Measured (dBμV/m) | Ant. Factor + Dis. Factor(dB) | Cable loss(dB) | Total (dBμV/m) | Pol. | Limit | EIRP | | RB | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | W | W | dBm | Size | Offset |
| 3485.01 | Sub6 n77/ 70 MHz [30 kHz] | PI/2 BPSK | 80.52 | 30.80 | 5.43 | 116.75 | H | < 1.00 | 0.143 | 21.55 | 1 | 187 |
| | | QPSK | 79.64 | 30.80 | 5.43 | 115.87 | H | | 0.117 | 20.67 | | |
| | | 16-QAM | 78.77 | 30.80 | 5.43 | 115.00 | H | | 0.096 | 19.80 | | |
| | | 64-QAM | 79.44 | 30.80 | 5.43 | 115.67 | H | | 0.111 | 20.47 | | |
| | | 256-QAM | 79.07 | 30.80 | 5.43 | 115.30 | H | | 0.102 | 20.10 | | |
| 3500.01 | | PI/2 BPSK | 81.36 | 31.10 | 5.45 | 117.91 | H | | 0.187 | 22.71 | 1 | 94 |
| | | QPSK | 80.31 | 31.10 | 5.45 | 116.86 | H | | 0.147 | 21.66 | | |
| | | 16-QAM | 81.32 | 31.10 | 5.45 | 117.87 | H | | 0.185 | 22.67 | | |
| | | 64-QAM | 79.96 | 31.10 | 5.45 | 116.51 | H | | 0.135 | 21.31 | | |
| | | 256-QAM | 79.38 | 31.10 | 5.45 | 115.93 | H | | 0.118 | 20.73 | | |
| 3514.98 | | PI/2 BPSK | 80.83 | 31.50 | 5.51 | 117.84 | H | | 0.184 | 22.64 | 1 | 94 |
| | | QPSK | 80.73 | 31.50 | 5.51 | 117.74 | H | | 0.179 | 22.54 | | |
| | | 16-QAM | 79.92 | 31.50 | 5.51 | 116.93 | H | | 0.149 | 21.73 | | |
| | | 64-QAM | 79.79 | 31.50 | 5.51 | 116.80 | H | | 0.145 | 21.60 | | |
| | | 256-QAM | 78.48 | 31.50 | 5.51 | 115.49 | H | | 0.107 | 20.29 | | |



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| Freq (MHz) | Mod/ Bandwidth [SCS (kHz)] | Modulation | Measured (dBμV/m) | Ant. Factor + Dis. Factor(dB) | Cable loss(dB) | Total (dBμV/m) | Pol. | Limit | EIRP | | RB | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | W | W | dBm | Size | Offset |
| 3490.02 | Sub6 n77/ 80 MHz [30 kHz] | PI/2 BPSK | 80.46 | 30.80 | 5.43 | 116.69 | H | < 1.00 | 0.141 | 21.49 | 1 | 215 |
| | | QPSK | 79.42 | 30.80 | 5.43 | 115.65 | H | | 0.111 | 20.45 | | |
| | | 16-QAM | 79.64 | 30.80 | 5.43 | 115.87 | H | | 0.117 | 20.67 | | |
| | | 64-QAM | 78.67 | 30.80 | 5.43 | 114.90 | H | | 0.093 | 19.70 | | |
| | | 256-QAM | 79.80 | 30.80 | 5.43 | 116.03 | H | | 0.121 | 20.83 | | |
| 3500.01 | | PI/2 BPSK | 81.24 | 31.10 | 5.45 | 117.79 | H | | 0.182 | 22.59 | 1 | 108 |
| | | QPSK | 79.88 | 31.10 | 5.45 | 116.43 | H | | 0.133 | 21.23 | | |
| | | 16-QAM | 80.51 | 31.10 | 5.45 | 117.06 | H | | 0.153 | 21.86 | | |
| | | 64-QAM | 80.99 | 31.10 | 5.45 | 117.54 | H | | 0.171 | 22.34 | | |
| | | 256-QAM | 79.32 | 31.10 | 5.45 | 115.87 | H | | 0.117 | 20.67 | | |
| 3510.00 | | PI/2 BPSK | 80.26 | 31.50 | 5.51 | 117.27 | H | | 0.161 | 22.07 | 1 | 108 |
| | | QPSK | 79.97 | 31.50 | 5.51 | 116.98 | H | | 0.151 | 21.78 | | |
| | | 16-QAM | 80.07 | 31.50 | 5.51 | 117.08 | H | | 0.154 | 21.88 | | |
| | | 64-QAM | 79.95 | 31.50 | 5.51 | 116.96 | H | | 0.150 | 21.76 | | |
| | | 256-QAM | 79.96 | 31.50 | 5.51 | 116.97 | H | | 0.150 | 21.77 | | |



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| Freq (MHz) | Mod/ Bandwidth [SCS (kHz)] | Modulation | Measured (dBμV/m) | Ant. Factor + Dis. Factor(dB) | Cable loss(dB) | Total (dBμV/m) | Pol. | Limit | EIRP | | RB | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | W | W | dBm | Size | Offset |
| 3495.00 | Sub6 n77/ 90 MHz [30 kHz] | PI/2 BPSK | 80.66 | 30.80 | 5.43 | 116.89 | H | < 1.00 | 0.148 | 21.69 | 1 | 122 |
| | | QPSK | 80.17 | 30.80 | 5.43 | 116.40 | H | | 0.132 | 21.20 | | |
| | | 16-QAM | 80.58 | 30.80 | 5.43 | 116.81 | H | | 0.145 | 21.61 | | |
| | | 64-QAM | 80.23 | 30.80 | 5.43 | 116.46 | H | | 0.134 | 21.26 | | |
| | | 256-QAM | 79.91 | 30.80 | 5.43 | 116.14 | H | | 0.124 | 20.94 | | |
| 3500.01 | | PI/2 BPSK | 80.96 | 31.10 | 5.45 | 117.51 | H | | 0.170 | 22.31 | 1 | 122 |
| | | QPSK | 80.94 | 31.10 | 5.45 | 117.49 | H | | 0.169 | 22.29 | | |
| | | 16-QAM | 80.64 | 31.10 | 5.45 | 117.19 | H | | 0.158 | 21.99 | | |
| | | 64-QAM | 80.93 | 31.10 | 5.45 | 117.48 | H | | 0.169 | 22.28 | | |
| | | 256-QAM | 79.96 | 31.10 | 5.45 | 116.51 | H | | 0.135 | 21.31 | | |
| 3504.99 | | PI/2 BPSK | 81.03 | 31.50 | 5.51 | 118.04 | H | | 0.192 | 22.84 | 1 | 243 |
| | | QPSK | 78.85 | 31.50 | 5.51 | 115.86 | H | | 0.116 | 20.66 | | |
| | | 16-QAM | 79.59 | 31.50 | 5.51 | 116.60 | H | | 0.138 | 21.40 | | |
| | | 64-QAM | 79.89 | 31.50 | 5.51 | 116.90 | H | | 0.148 | 21.70 | | |
| | | 256-QAM | 79.85 | 31.50 | 5.51 | 116.86 | H | | 0.147 | 21.66 | | |



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| Freq (MHz) | Mod/ Bandwidth [SCS (kHz)] | Modulation | Measured (dBμV/m) | Ant. Factor + Dis. Factor(dB) | Cable loss(dB) | Total (dBμV/m) | Pol. | Limit | EIRP | | RB | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | W | W | dBm | Size | Offset |
| 3500.01 | Sub6 n77/ 100 MHz [30 kHz] | PI/2 BPSK | 80.52 | 31.10 | 5.45 | 117.07 | H | < 1.00 | 0.154 | 21.87 | 1 | 271 |
| | | QPSK | 79.90 | 31.10 | 5.45 | 116.45 | H | | 0.133 | 21.25 | | |
| | | 16-QAM | 79.99 | 31.10 | 5.45 | 116.54 | H | | 0.136 | 21.34 | | |
| | | 64-QAM | 79.47 | 31.10 | 5.45 | 116.02 | H | | 0.121 | 20.82 | | |
| | | 256-QAM | 79.14 | 31.10 | 5.45 | 115.69 | H | | 0.112 | 20.49 | | |



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## 8.2 RADIATED SPURIOUS EMISSIONS

- NR Band: N77
- Bandwidth: 20 MHz
- Modulation: PI/2 BPSK
- Distance: 1 meters
- SCS: 30 kHz

| Ch | Freq (MHz) | Measured Level (dBm) | Ant. Gain (dBi) | Substitute Level (dBm) | C.L | Pol | Result (dBm) | Limit (dBm) | RB | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | Size | Offset |
| 630668 (3460.02) | 6 920.04 | -55.43 | 11.19 | -57.94 | 4.39 | V | -51.14 | -13.00 | 1 | 25 |
| | 10 380.06 | -56.05 | 11.68 | -55.57 | 5.56 | V | -49.45 | -13.00 | | |
| | 13 840.08 | -61.96 | 13.35 | -50.60 | 6.53 | V | -43.78 | -13.00 | | |
| | 17 300.10 | -70.50 | 17.76 | -49.68 | 7.42 | H | -39.34 | -13.00 | | |
| 633334 (3500.01) | 7 000.02 | -54.90 | 11.14 | -57.50 | 4.45 | V | -50.81 | -13.00 | 1 | 25 |
| | 10 500.03 | -52.17 | 11.71 | -52.58 | 5.64 | H | -46.51 | -13.00 | | |
| | 14 000.04 | -62.58 | 13.09 | -50.66 | 6.55 | H | -44.12 | -13.00 | | |
| | 17 500.05 | -71.08 | 17.36 | -46.03 | 7.42 | H | -36.09 | -13.00 | | |
| 636000 (3540.00) | 7 080.00 | -55.01 | 10.90 | -57.18 | 4.49 | V | -50.77 | -13.00 | 1 | 49 |
| | 10 620.00 | -55.57 | 11.62 | -56.23 | 5.65 | H | -50.26 | -13.00 | | |
| | 14 160.00 | -64.22 | 13.01 | -50.61 | 6.51 | V | -44.11 | -13.00 | | |
| | 17 700.00 | -71.94 | 16.62 | -43.97 | 7.49 | H | -34.84 | -13.00 | | |



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## 8.3 PEAK-TO-AVERAGE RATIO

| Band | Band Width | Frequency (MHz) | Modulation | Resource Block Size | Resource Block Offset | Data (dB ) |
|---|---|---|---|---|---|---|
| Sub6 n77 | 10 MHz | 3500.01 | BPSK | Full RB | 0 | 4.62 |
| | | | QPSK | | | 5.64 |
| | | | 16-QAM | | | 6.26 |
| | | | 64-QAM | | | 6.50 |
| | | | 256-QAM | | | 6.64 |
| | 15 MHz | | BPSK | | | 5.14 |
| | | | QPSK | | | 5.89 |
| | | | 16-QAM | | | 6.64 |
| | | | 64-QAM | | | 6.61 |
| | | | 256-QAM | | | 6.54 |
| | 20 MHz | | BPSK | | | 5.43 |
| | | | QPSK | | | 5.84 |
| | | | 16-QAM | | | 6.45 |
| | | | 64-QAM | | | 6.44 |
| | | | 256-QAM | | | 6.69 |
| | 25 MHz | | BPSK | | | 4.33 |
| | | | QPSK | | | 5.64 |
| | | | 16-QAM | | | 6.59 |
| | | | 64-QAM | | | 6.40 |
| | | | 256-QAM | | | 6.73 |
| | 30 MHz | | BPSK | | | 4.45 |
| | | | QPSK | | | 5.65 |
| | | | 16-QAM | | | 6.30 |
| | | | 64-QAM | | | 6.59 |
| | | | 256-QAM | | | 6.55 |
| | 40 MHz | | BPSK | | | 5.73 |
| | | | QPSK | | | 6.03 |
| | | | 16-QAM | | | 6.26 |
| | | | 64-QAM | | | 6.45 |
| | | | 256-QAM | | | 6.74 |
| | 50 MHz | | BPSK | | | 4.48 |
| | | | QPSK | | | 5.51 |
| | | | 16-QAM | | | 6.29 |
| | | | 64-QAM | | | 6.45 |
| | | | 256-QAM | | | 6.57 |
| | 60 MHz | | BPSK | | | 4.65 |
| | | | QPSK | | | 5.59 |
| | | | 16-QAM | | | 6.25 |
| | | | 64-QAM | | | 6.38 |
| | | | 256-QAM | | | 6.52 |
| | 70 MHz | | BPSK | | | 4.48 |
| | | | QPSK | | | 5.65 |
| | | | 16-QAM | | | 6.40 |
| | | | 64-QAM | | | 6.42 |
| | | | 256-QAM | | | 6.52 |
| | 80 MHz | | BPSK | | | 4.66 |
| | | | QPSK | | | 5.53 |



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| | | | | | | |
|---|---|---|---|---|---|---|
| | | | 16-QAM | | | 6.34 |
| | | | 64-QAM | | | 6.60 |
| | | | 256-QAM | | | 6.62 |
| | 90 MHz | | BPSK | | | 4.71 |
| | | | QPSK | | | 5.57 |
| | | | 16-QAM | | | 6.30 |
| | | | 64-QAM | | | 6.48 |
| | | | 256-QAM | | | 6.67 |
| | 100 MHz | | BPSK | | | 4.99 |
| | | | QPSK | | | 5.62 |
| | | | 16-QAM | | | 6.31 |
| | | | 64-QAM | | | 6.48 |
| | | | 256-QAM | | | 6.59 |

**Note:**

1. Plots of the EUT's Peak- to- Average Ratio are shown Page 159 ~ 218.



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## 8.4 OCCUPIED BANDWIDTH

| Band | Band Width | Frequency (MHz) | Modulation | Resource Block Size | Resource Block Offset | Data ( MHz ) |
|---|---|---|---|---|---|---|
| Sub6 n77 | 10 MHz | 3500.01 | BPSK | Full RB | 0 | 8.6323 |
| | | | QPSK | | | 8.6461 |
| | | | 16-QAM | | | 8.6113 |
| | | | 64-QAM | | | 8.5927 |
| | | | 256-QAM | | | 8.6150 |
| | 15 MHz | | BPSK | | | 12.918 |
| | | | QPSK | | | 12.929 |
| | | | 16-QAM | | | 12.958 |
| | | | 64-QAM | | | 12.895 |
| | | | 256-QAM | | | 12.887 |
| | 20 MHz | | BPSK | | | 17.960 |
| | | | QPSK | | | 17.964 |
| | | | 16-QAM | | | 17.905 |
| | | | 64-QAM | | | 17.863 |
| | | | 256-QAM | | | 17.930 |
| | 25 MHz | | BPSK | | | 22.959 |
| | | | QPSK | | | 22.930 |
| | | | 16-QAM | | | 22.919 |
| | | | 64-QAM | | | 22.943 |
| | | | 256-QAM | | | 22.904 |
| | 30 MHz | | BPSK | | | 26.867 |
| | | | QPSK | | | 26.801 |
| | | | 16-QAM | | | 26.930 |
| | | | 64-QAM | | | 26.840 |
| | | | 256-QAM | | | 26.909 |
| | 40 MHz | | BPSK | | | 35.866 |
| | | | QPSK | | | 35.879 |
| | | | 16-QAM | | | 35.672 |
| | | | 64-QAM | | | 35.696 |
| | | | 256-QAM | | | 35.746 |
| | 50 MHz | | BPSK | | | 45.780 |
| | | | QPSK | | | 45.697 |
| | | | 16-QAM | | | 45.722 |
| | | | 64-QAM | | | 45.758 |
| | | | 256-QAM | | | 45.747 |
| | 60 MHz | | BPSK | | | 57.935 |
| | | | QPSK | | | 57.736 |
| | | | 16-QAM | | | 57.940 |
| | | | 64-QAM | | | 58.178 |
| | | | 256-QAM | | | 57.834 |
| | 70 MHz | | BPSK | | | 64.661 |
| | | | QPSK | | | 64.511 |
| | | | 16-QAM | | | 64.658 |
| | | | 64-QAM | | | 64.859 |
| | | | 256-QAM | | | 64.393 |
| | 80 MHz | | BPSK | | | 77.610 |
| | | | QPSK | | | 77.281 |



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| | | | | | | |
|---|---|---|---|---|---|---|
| | | | 16-QAM | | | 77.392 |
| | | | 64-QAM | | | 77.252 |
| | | | 256-QAM | | | 77.291 |
| | 90 MHz | | BPSK | | | 86.979 |
| | | | QPSK | | | 86.901 |
| | | | 16-QAM | | | 86.989 |
| | | | 64-QAM | | | 86.930 |
| | | | 256-QAM | | | 87.039 |
| | 100 MHz | | BPSK | | | 96.530 |
| | | | QPSK | | | 96.607 |
| | | | 16-QAM | | | 96.400 |
| | | | 64-QAM | | | 96.413 |
| | | | 256-QAM | | | 96.606 |

**Note:**

1. Plots of the EUT's Occupied Bandwidth are shown Page 219 ~ 278.



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## 8.5 CONDUCTED SPURIOUS EMISSIONS

| Band | Band Width (MHz) | Frequency (MHz) | Frequency of Maximum Harmonic (GHz) | Factor (dB) | Measurement Maximum Data (dBm) | Result (dBm) | Limit (dBm) |
|---|---|---|---|---|---|---|---|
| Sub6 n77 | 10 | 3455.010 | 8.0858 | 28.980 | -61.678 | -32.698 | -13.00 |
| | | 3500.010 | 10.0000 | 28.980 | -61.750 | -32.770 | |
| | | 3544.980 | 7.1885 | 28.980 | -61.560 | -32.580 | |
| | 15 | 3457.500 | 4.5664 | 28.370 | -62.225 | -33.855 | |
| | | 3500.010 | 4.9053 | 28.370 | -61.992 | -33.622 | |
| | | 3542.490 | 4.8854 | 28.370 | -61.766 | -33.396 | |
| | 20 | 3460.020 | 5.4936 | 28.980 | -62.421 | -33.441 | |
| | | 3500.010 | 4.9851 | 28.370 | -61.595 | -33.225 | |
| | | 3540.000 | 4.9352 | 28.370 | -62.590 | -34.220 | |
| | 25 | 3462.510 | 4.2673 | 28.370 | -62.001 | -33.631 | |
| | | 3500.010 | 4.9053 | 28.370 | -61.584 | -33.214 | |
| | | 3537.480 | 8.3350 | 28.980 | -62.696 | -33.716 | |
| | 30 | 3465.000 | 9.8405 | 28.980 | -62.446 | -33.466 | |
| | | 3500.010 | 4.8555 | 28.370 | -62.408 | -34.038 | |
| | | 3534.990 | 5.4836 | 28.980 | -62.313 | -33.333 | |
| | 40 | 3470.010 | 6.0419 | 28.980 | -62.524 | -33.544 | |
| | | 3500.010 | 4.9652 | 28.370 | -62.118 | -33.748 | |
| | | 3529.980 | 5.1945 | 28.980 | -63.005 | -34.025 | |
| | 50 | 3475.020 | 5.4836 | 28.980 | -62.354 | -33.374 | |
| | | 3500.010 | 9.9402 | 28.980 | -62.074 | -33.094 | |
| | | 3525.000 | 6.0519 | 28.980 | -61.719 | -32.739 | |
| | 60 | 3480.000 | 8.3250 | 28.980 | -62.875 | -33.895 | |
| | | 3500.010 | 6.0319 | 28.980 | -62.236 | -33.256 | |
| | | 3519.990 | 9.1526 | 28.980 | -62.808 | -33.828 | |
| | 70 | 3485.010 | 8.4148 | 28.980 | -62.273 | -33.293 | |
| | | 3500.010 | 9.2024 | 28.980 | -62.072 | -33.092 | |
| | | 3514.980 | 5.7129 | 28.980 | -60.480 | -31.500 | |
| | 80 | 3490.020 | 5.2443 | 28.980 | -61.919 | -32.939 | |
| | | 3500.010 | 8.0858 | 28.980 | -61.278 | -32.298 | |
| | | 3510.000 | 8.0758 | 28.980 | -61.699 | -32.719 | |
| | 90 | 3495.000 | 4.9452 | 28.370 | -61.215 | -32.845 | |
| | | 3500.010 | 5.1945 | 28.980 | -62.087 | -33.107 | |
| | | 3504.990 | 9.7208 | 28.980 | -61.086 | -32.106 | |
| | 100 | 3500.010 | 6.0120 | 28.980 | -61.582 | -32.602 | |



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**Note:**

1. Plots of the EUT's Conducted Spurious Emissions are shown Page 279 ~ 346.
2. Factor(dB) = Cable Loss + Ext. Attenuator + Power Splitter
3. Result(dBm) = Reading + Factor

Factor(dB)

| Frequency Range (GHz) | Factor [dB] |
|---|---|
| 0.03 – 1 | 25.670 |
| 1 – 5 | 28.370 |
| 5 – 10 | 28.980 |
| 10 – 15 | 29.520 |
| 15 – 20 | 29.890 |
| Above 20 | 30.530 |

## 8.6 BAND EDGE

1. Plots of the EUT's Band Edge are shown Page 347 ~ 490.
2. Duty Cycle factor already applied on the factor.
   - Factor(dB) = Duty Cycle factor + Cable Loss + Ext. Attenuator + Power Splitter
   - Result(dBm) = Reading + Factor
   - Duty Cycle Factor(dB) = 6.990



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## 8.7 FREQUENCY STABILITY / VARIATION OF AMBIENT TEMPERATURE

- ▣ BandWidth: 10 MHz
- ▣ Voltage(100 %): 4.200 VDC
- ▣ Lowest voltage: 3.700 VDC
- ▣ LIMIT: Emission must remain in band

| Test. Frequncy | Voltage | Temp. | Frequency | Frequency | Deviation | ppm |
|---|---|---|---|---|---|---|
| (MHz) | (%) | (°C) | (Hz) | Error (Hz) | (%) | |
| 3455.010 | 100 % | +20(Ref) | 3455 009 978 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3455 009 966 | -11.9 | 0.000 000 | -0.003 |
| | 100 % | -20 | 3455 009 966 | -12.4 | 0.000 000 | -0.004 |
| | 100 % | -10 | 3455 009 965 | -12.8 | 0.000 000 | -0.004 |
| | 100 % | 0 | 3455 009 965 | -13.4 | 0.000 000 | -0.004 |
| | 100 % | +10 | 3455 009 964 | -14.3 | 0.000 000 | -0.004 |
| | 100 % | +30 | 3455 009 962 | -16.3 | 0.000 000 | -0.005 |
| | 100 % | +40 | 3455 009 963 | -14.9 | 0.000 000 | -0.004 |
| | 100 % | +50 | 3455 009 962 | -16.5 | 0.000 000 | -0.005 |
| | Lowest voltage | +20 | 3455 009 964 | -14.6 | 0.000 000 | -0.004 |
| 3544.980 | 100 % | +20(Ref) | 3544 979 989 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3544 979 983 | -6.4 | 0.000 000 | -0.002 |
| | 100 % | -20 | 3544 979 976 | -13.8 | 0.000 000 | -0.004 |
| | 100 % | -10 | 3544 979 979 | -10.6 | 0.000 000 | -0.003 |
| | 100 % | 0 | 3544 979 974 | -15.3 | 0.000 000 | -0.004 |
| | 100 % | +10 | 3544 979 976 | -13.6 | 0.000 000 | -0.004 |
| | 100 % | +30 | 3544 979 976 | -13.9 | 0.000 000 | -0.004 |
| | 100 % | +40 | 3544 979 972 | -17.8 | -0.000 001 | -0.005 |
| | 100 % | +50 | 3544 979 977 | -12.3 | 0.000 000 | -0.003 |
| | Lowest voltage | +20 | 3544 979 976 | -13.3 | 0.000 000 | -0.004 |



The report shall not be (partly) reproduced except in full without approval of the laboratory.

▣ BandWidth: 15 MHz

▣ Voltage(100 %): 4.200 VDC

▣ Lowest voltage: 3.700 VDC

▣ LIMIT: Emission must remain in band

| Test. Frequncy | Voltage | Temp. | Frequency | Frequency | Deviation | ppm |
|---|---|---|---|---|---|---|
| (MHz) | (%) | (°C) | (Hz) | Error (Hz) | (%) | |
| 3457.500 | 100 % | +20(Ref) | 3457 499 989 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3457 499 977 | -11.7 | 0.000 000 | -0.003 |
| | 100 % | -20 | 3457 499 976 | -12.7 | 0.000 000 | -0.004 |
| | 100 % | -10 | 3457 499 979 | -9.4 | 0.000 000 | -0.003 |
| | 100 % | 0 | 3457 499 979 | -9.1 | 0.000 000 | -0.003 |
| | 100 % | +10 | 3457 499 983 | -5.7 | 0.000 000 | -0.002 |
| | 100 % | +30 | 3457 499 982 | -6.4 | 0.000 000 | -0.002 |
| | 100 % | +40 | 3457 499 979 | -9.3 | 0.000 000 | -0.003 |
| | 100 % | +50 | 3457 499 979 | -9.9 | 0.000 000 | -0.003 |
| | Lowest voltage | +20 | 3457 499 980 | -8.6 | 0.000 000 | -0.002 |
| 3542.490 | 100 % | +20(Ref) | 3542 489 990 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3542 489 974 | -15.5 | 0.000 000 | -0.004 |
| | 100 % | -20 | 3542 489 977 | -12.9 | 0.000 000 | -0.004 |
| | 100 % | -10 | 3542 489 971 | -18.5 | -0.000 001 | -0.005 |
| | 100 % | 0 | 3542 489 976 | -14.1 | 0.000 000 | -0.004 |
| | 100 % | +10 | 3542 489 977 | -13.1 | 0.000 000 | -0.004 |
| | 100 % | +30 | 3542 489 973 | -17.3 | 0.000 000 | -0.005 |
| | 100 % | +40 | 3542 489 968 | -21.9 | -0.000 001 | -0.006 |
| | 100 % | +50 | 3542 489 981 | -8.5 | 0.000 000 | -0.002 |
| | Lowest voltage | +20 | 3542 489 972 | -17.9 | -0.000 001 | -0.005 |



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▣ BandWidth: 20 MHz

▣ Voltage(100 %): 4.200 VDC

▣ Lowest voltage: 3.700 VDC

▣ LIMIT: Emission must remain in band

| Test. Frequncy | Voltage | Temp. | Frequency | Frequency | Deviation | ppm |
|---|---|---|---|---|---|---|
| (MHz) | (%) | (℃) | (Hz) | Error (Hz) | (%) | |
| 3460.020 | 100 % | +20(Ref) | 3460 019 990 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3460 019 980 | -10.0 | 0.000 000 | -0.003 |
| | 100 % | -20 | 3460 019 986 | -3.9 | 0.000 000 | -0.001 |
| | 100 % | -10 | 3460 019 986 | -4.2 | 0.000 000 | -0.001 |
| | 100 % | 0 | 3460 019 980 | -10.3 | 0.000 000 | -0.003 |
| | 100 % | +10 | 3460 019 984 | -6.0 | 0.000 000 | -0.002 |
| | 100 % | +30 | 3460 019 976 | -14.6 | 0.000 000 | -0.004 |
| | 100 % | +40 | 3460 019 978 | -11.8 | 0.000 000 | -0.003 |
| | 100 % | +50 | 3460 019 982 | -7.9 | 0.000 000 | -0.002 |
| | Lowest voltage | +20 | 3460 019 983 | -7.5 | 0.000 000 | -0.002 |
| 3540.000 | 100 % | +20(Ref) | 3539 999 994 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3539 999 989 | -5.6 | 0.000 000 | -0.002 |
| | 100 % | -20 | 3539 999 986 | -7.8 | 0.000 000 | -0.002 |
| | 100 % | -10 | 3539 999 985 | -8.8 | 0.000 000 | -0.002 |
| | 100 % | 0 | 3539 999 986 | -7.8 | 0.000 000 | -0.002 |
| | 100 % | +10 | 3539 999 984 | -10.3 | 0.000 000 | -0.003 |
| | 100 % | +30 | 3539 999 985 | -9.6 | 0.000 000 | -0.003 |
| | 100 % | +40 | 3539 999 986 | -8.4 | 0.000 000 | -0.002 |
| | 100 % | +50 | 3539 999 986 | -8.4 | 0.000 000 | -0.002 |
| | Lowest voltage | +20 | 3539 999 984 | -10.1 | 0.000 000 | -0.003 |



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▣ BandWidth: 25 MHz

▣ Voltage(100 %): 4.200 VDC

▣ Lowest voltage: 3.700 VDC

▣ LIMIT: Emission must remain in band

| Test. Frequncy | Voltage | Temp. | Frequency | Frequency | Deviation | ppm |
|---|---|---|---|---|---|---|
| (MHz) | (%) | (°C) | (Hz) | Error (Hz) | (%) | |
| 3462.510 | 100 % | +20(Ref) | 3462 509 985 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3462 509 976 | -9.0 | 0.000 000 | -0.003 |
| | 100 % | -20 | 3462 509 975 | -9.6 | 0.000 000 | -0.003 |
| | 100 % | -10 | 3462 509 974 | -10.7 | 0.000 000 | -0.003 |
| | 100 % | 0 | 3462 509 974 | -10.7 | 0.000 000 | -0.003 |
| | 100 % | +10 | 3462 509 969 | -15.8 | 0.000 000 | -0.005 |
| | 100 % | +30 | 3462 509 972 | -13.4 | 0.000 000 | -0.004 |
| | 100 % | +40 | 3462 509 980 | -5.1 | 0.000 000 | -0.001 |
| | 100 % | +50 | 3462 509 981 | -4.3 | 0.000 000 | -0.001 |
| | Lowest voltage | +20 | 3462 509 977 | -8.5 | 0.000 000 | -0.002 |
| 3537.480 | 100 % | +20(Ref) | 3537 479 987 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3537 479 974 | -13.5 | 0.000 000 | -0.004 |
| | 100 % | -20 | 3537 479 973 | -14.5 | 0.000 000 | -0.004 |
| | 100 % | -10 | 3537 479 979 | -8.6 | 0.000 000 | -0.002 |
| | 100 % | 0 | 3537 479 975 | -12.5 | 0.000 000 | -0.004 |
| | 100 % | +10 | 3537 479 978 | -9.9 | 0.000 000 | -0.003 |
| | 100 % | +30 | 3537 479 973 | -14.5 | 0.000 000 | -0.004 |
| | 100 % | +40 | 3537 479 974 | -13.2 | 0.000 000 | -0.004 |
| | 100 % | +50 | 3537 479 969 | -18.9 | -0.000 001 | -0.005 |
| | Lowest voltage | +20 | 3537 479 974 | -13.5 | 0.000 000 | -0.004 |



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▣ BandWidth: 30 MHz

▣ Voltage(100 %): 4.200 VDC

▣ Lowest voltage: 3.700 VDC

▣ LIMIT: Emission must remain in band

| Test. Frequncy | Voltage | Temp. | Frequency | Frequency | Deviation | ppm |
|---|---|---|---|---|---|---|
| (MHz) | (%) | (°C) | (Hz) | Error (Hz) | (%) | |
| 3465.000 | 100 % | +20(Ref) | 3464 999 988 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3464 999 976 | -12.4 | 0.000 000 | -0.004 |
| | 100 % | -20 | 3464 999 977 | -11.1 | 0.000 000 | -0.003 |
| | 100 % | -10 | 3464 999 975 | -13.3 | 0.000 000 | -0.004 |
| | 100 % | 0 | 3464 999 976 | -12.3 | 0.000 000 | -0.004 |
| | 100 % | +10 | 3464 999 973 | -15.1 | 0.000 000 | -0.004 |
| | 100 % | +30 | 3464 999 978 | -10.2 | 0.000 000 | -0.003 |
| | 100 % | +40 | 3464 999 979 | -9.5 | 0.000 000 | -0.003 |
| | 100 % | +50 | 3464 999 979 | -9.6 | 0.000 000 | -0.003 |
| | Lowest voltage | +20 | 3464 999 977 | -11.5 | 0.000 000 | -0.003 |
| 3534.990 | 100 % | +20(Ref) | 3534 989 989 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3534 989 982 | -7.7 | 0.000 000 | -0.002 |
| | 100 % | -20 | 3534 989 976 | -13.6 | 0.000 000 | -0.004 |
| | 100 % | -10 | 3534 989 978 | -11.6 | 0.000 000 | -0.003 |
| | 100 % | 0 | 3534 989 970 | -19.3 | -0.000 001 | -0.005 |
| | 100 % | +10 | 3534 989 976 | -13.3 | 0.000 000 | -0.004 |
| | 100 % | +30 | 3534 989 975 | -14.1 | 0.000 000 | -0.004 |
| | 100 % | +40 | 3534 989 975 | -14.2 | 0.000 000 | -0.004 |
| | 100 % | +50 | 3534 989 974 | -15.9 | 0.000 000 | -0.005 |
| | Lowest voltage | +20 | 3534 989 976 | -13.4 | 0.000 000 | -0.004 |



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▣ BandWidth: 40 MHz

▣ Voltage(100 %): 4.200 VDC

▣ Lowest voltage: 3.700 VDC

▣ LIMIT: Emission must remain in band

| Test. Frequncy | Voltage | Temp. | Frequency | Frequency | Deviation | ppm |
|---|---|---|---|---|---|---|
| (MHz) | (%) | (°C) | (Hz) | Error (Hz) | (%) | |
| 3470.010 | 100 % | +20(Ref) | 3470 009 991 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3470 009 985 | -5.9 | 0.000 000 | -0.002 |
| | 100 % | -20 | 3470 009 980 | -11.3 | 0.000 000 | -0.003 |
| | 100 % | -10 | 3470 009 979 | -11.9 | 0.000 000 | -0.003 |
| | 100 % | 0 | 3470 009 982 | -9.2 | 0.000 000 | -0.003 |
| | 100 % | +10 | 3470 009 978 | -13.2 | 0.000 000 | -0.004 |
| | 100 % | +30 | 3470 009 981 | -10.7 | 0.000 000 | -0.003 |
| | 100 % | +40 | 3470 009 980 | -11.0 | 0.000 000 | -0.003 |
| | 100 % | +50 | 3470 009 984 | -7.2 | 0.000 000 | -0.002 |
| | Lowest voltage | +20 | 3470 009 980 | -11.3 | 0.000 000 | -0.003 |
| 3529.980 | 100 % | +20(Ref) | 3529 979 986 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3529 979 974 | -12.3 | 0.000 000 | -0.003 |
| | 100 % | -20 | 3529 979 970 | -16.2 | 0.000 000 | -0.005 |
| | 100 % | -10 | 3529 979 976 | -10.7 | 0.000 000 | -0.003 |
| | 100 % | 0 | 3529 979 969 | -17.2 | 0.000 000 | -0.005 |
| | 100 % | +10 | 3529 979 973 | -13.0 | 0.000 000 | -0.004 |
| | 100 % | +30 | 3529 979 972 | -14.1 | 0.000 000 | -0.004 |
| | 100 % | +40 | 3529 979 972 | -14.5 | 0.000 000 | -0.004 |
| | 100 % | +50 | 3529 979 974 | -12.3 | 0.000 000 | -0.003 |
| | Lowest voltage | +20 | 3529 979 977 | -9.4 | 0.000 000 | -0.003 |



The report shall not be (partly) reproduced except in full without approval of the laboratory.

▣ BandWidth: 50 MHz

▣ Voltage(100 %): 4.200 VDC

▣ Lowest voltage: 3.700 VDC

▣ LIMIT: Emission must remain in band

| Test. Frequncy | Voltage | Temp. | Frequency | Frequency | Deviation | ppm |
|---|---|---|---|---|---|---|
| (MHz) | (%) | (°C) | (Hz) | Error (Hz) | (%) | |
| 3475.020 | 100 % | +20(Ref) | 3475 019 984 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3475 019 972 | -11.9 | 0.000 000 | -0.003 |
| | 100 % | -20 | 3475 019 971 | -13.0 | 0.000 000 | -0.004 |
| | 100 % | -10 | 3475 019 965 | -19.1 | -0.000 001 | -0.006 |
| | 100 % | 0 | 3475 019 973 | -11.5 | 0.000 000 | -0.003 |
| | 100 % | +10 | 3475 019 973 | -11.2 | 0.000 000 | -0.003 |
| | 100 % | +30 | 3475 019 965 | -18.8 | -0.000 001 | -0.005 |
| | 100 % | +40 | 3475 019 977 | -7.5 | 0.000 000 | -0.002 |
| | 100 % | +50 | 3475 019 971 | -13.0 | 0.000 000 | -0.004 |
| | Lowest voltage | +20 | 3475 019 971 | -13.6 | 0.000 000 | -0.004 |
| 3525.000 | 100 % | +20(Ref) | 3524 999 988 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3524 999 980 | -8.1 | 0.000 000 | -0.002 |
| | 100 % | -20 | 3524 999 974 | -14.2 | 0.000 000 | -0.004 |
| | 100 % | -10 | 3524 999 975 | -12.6 | 0.000 000 | -0.004 |
| | 100 % | 0 | 3524 999 976 | -11.6 | 0.000 000 | -0.003 |
| | 100 % | +10 | 3524 999 975 | -12.3 | 0.000 000 | -0.004 |
| | 100 % | +30 | 3524 999 978 | -10.3 | 0.000 000 | -0.003 |
| | 100 % | +40 | 3524 999 972 | -15.9 | 0.000 000 | -0.005 |
| | 100 % | +50 | 3524 999 974 | -13.8 | 0.000 000 | -0.004 |
| | Lowest voltage | +20 | 3524 999 976 | -12.1 | 0.000 000 | -0.003 |



The report shall not be (partly) reproduced except in full without approval of the laboratory.

▣ BandWidth: 60 MHz

▣ Voltage(100 %): 4.200 VDC

▣ Lowest voltage: 3.700 VDC

▣ LIMIT: Emission must remain in band

| Test. Frequncy | Voltage | Temp. | Frequency | Frequency | Deviation | ppm |
|---|---|---|---|---|---|---|
| (MHz) | (%) | (°C) | (Hz) | Error (Hz) | (%) | |
| 3480.000 | 100 % | +20(Ref) | 3479 999 986 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3479 999 974 | -11.7 | 0.000 000 | -0.003 |
| | 100 % | -20 | 3479 999 966 | -20.2 | -0.000 001 | -0.006 |
| | 100 % | -10 | 3479 999 979 | -7.5 | 0.000 000 | -0.002 |
| | 100 % | 0 | 3479 999 980 | -6.2 | 0.000 000 | -0.002 |
| | 100 % | +10 | 3479 999 978 | -7.8 | 0.000 000 | -0.002 |
| | 100 % | +30 | 3479 999 976 | -10.2 | 0.000 000 | -0.003 |
| | 100 % | +40 | 3479 999 980 | -6.1 | 0.000 000 | -0.002 |
| | 100 % | +50 | 3479 999 979 | -7.4 | 0.000 000 | -0.002 |
| | Lowest voltage | +20 | 3479 999 973 | -13.4 | 0.000 000 | -0.004 |
| 3519.990 | 100 % | +20(Ref) | 3519 989 986 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3519 989 969 | -17.3 | 0.000 000 | -0.005 |
| | 100 % | -20 | 3519 989 972 | -13.4 | 0.000 000 | -0.004 |
| | 100 % | -10 | 3519 989 966 | -20.0 | -0.000 001 | -0.006 |
| | 100 % | 0 | 3519 989 970 | -15.8 | 0.000 000 | -0.004 |
| | 100 % | +10 | 3519 989 972 | -13.6 | 0.000 000 | -0.004 |
| | 100 % | +30 | 3519 989 970 | -15.6 | 0.000 000 | -0.004 |
| | 100 % | +40 | 3519 989 968 | -18.3 | -0.000 001 | -0.005 |
| | 100 % | +50 | 3519 989 967 | -18.7 | -0.000 001 | -0.005 |
| | Lowest voltage | +20 | 3519 989 968 | -17.5 | 0.000 000 | -0.005 |



The report shall not be (partly) reproduced except in full without approval of the laboratory.

▣ BandWidth: 70 MHz

▣ Voltage(100 %): 4.200 VDC

▣ Lowest voltage: 3.700 VDC

▣ LIMIT: Emission must remain in band

| Test. Frequncy | Voltage | Temp. | Frequency | Frequency | Deviation | ppm |
|---|---|---|---|---|---|---|
| (MHz) | (%) | (°C) | (Hz) | Error (Hz) | (%) | |
| 3485.010 | 100 % | +20(Ref) | 3485 009 998 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3485 009 995 | -2.8 | 0.000 000 | -0.001 |
| | 100 % | -20 | 3485 009 995 | -3.1 | 0.000 000 | -0.001 |
| | 100 % | -10 | 3485 009 999 | 1.6 | 0.000 000 | 0.000 |
| | 100 % | 0 | 3485 009 997 | -1.3 | 0.000 000 | 0.000 |
| | 100 % | +10 | 3485 009 996 | -1.5 | 0.000 000 | 0.000 |
| | 100 % | +30 | 3485 009 999 | 1.6 | 0.000 000 | 0.000 |
| | 100 % | +40 | 3485 009 991 | -7.3 | 0.000 000 | -0.002 |
| | 100 % | +50 | 3485 009 989 | -9.0 | 0.000 000 | -0.003 |
| | Lowest voltage | +20 | 3485 009 998 | 0.2 | 0.000 000 | 0.000 |
| 3514.980 | 100 % | +20(Ref) | 3514 979 984 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3514 979 967 | -16.5 | 0.000 000 | -0.005 |
| | 100 % | -20 | 3514 979 969 | -15.4 | 0.000 000 | -0.004 |
| | 100 % | -10 | 3514 979 972 | -12.5 | 0.000 000 | -0.004 |
| | 100 % | 0 | 3514 979 972 | -12.0 | 0.000 000 | -0.003 |
| | 100 % | +10 | 3514 979 968 | -16.5 | 0.000 000 | -0.005 |
| | 100 % | +30 | 3514 979 970 | -14.0 | 0.000 000 | -0.004 |
| | 100 % | +40 | 3514 979 974 | -10.3 | 0.000 000 | -0.003 |
| | 100 % | +50 | 3514 979 969 | -14.9 | 0.000 000 | -0.004 |
| | Lowest voltage | +20 | 3514 979 972 | -11.9 | 0.000 000 | -0.003 |



The report shall not be (partly) reproduced except in full without approval of the laboratory.

▣ BandWidth: 80 MHz

▣ Voltage(100 %): 4.200 VDC

▣ Lowest voltage: 3.700 VDC

▣ LIMIT: Emission must remain in band

| Test. Frequncy | Voltage | Temp. | Frequency | Frequency | Deviation | ppm |
|---|---|---|---|---|---|---|
| (MHz) | (%) | (°C) | (Hz) | Error (Hz) | (%) | |
| 3490.020 | 100 % | +20(Ref) | 3490 019 988 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3490 019 976 | -12.3 | 0.000 000 | -0.004 |
| | 100 % | -20 | 3490 019 974 | -14.4 | 0.000 000 | -0.004 |
| | 100 % | -10 | 3490 019 973 | -14.8 | 0.000 000 | -0.004 |
| | 100 % | 0 | 3490 019 975 | -13.5 | 0.000 000 | -0.004 |
| | 100 % | +10 | 3490 019 980 | -8.4 | 0.000 000 | -0.002 |
| | 100 % | +30 | 3490 019 975 | -13.5 | 0.000 000 | -0.004 |
| | 100 % | +40 | 3490 019 977 | -10.7 | 0.000 000 | -0.003 |
| | 100 % | +50 | 3490 019 976 | -11.8 | 0.000 000 | -0.003 |
| | Lowest voltage | +20 | 3490 019 978 | -9.7 | 0.000 000 | -0.003 |
| 3510.000 | 100 % | +20(Ref) | 3509 999 982 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3509 999 972 | -10.1 | 0.000 000 | -0.003 |
| | 100 % | -20 | 3509 999 965 | -16.8 | 0.000 000 | -0.005 |
| | 100 % | -10 | 3509 999 971 | -10.5 | 0.000 000 | -0.003 |
| | 100 % | 0 | 3509 999 970 | -12.0 | 0.000 000 | -0.003 |
| | 100 % | +10 | 3509 999 967 | -15.1 | 0.000 000 | -0.004 |
| | 100 % | +30 | 3509 999 965 | -17.0 | 0.000 000 | -0.005 |
| | 100 % | +40 | 3509 999 970 | -11.7 | 0.000 000 | -0.003 |
| | 100 % | +50 | 3509 999 966 | -15.5 | 0.000 000 | -0.004 |
| | Lowest voltage | +20 | 3509 999 971 | -10.8 | 0.000 000 | -0.003 |



The report shall not be (partly) reproduced except in full without approval of the laboratory.

▣ BandWidth: 90 MHz

▣ Voltage(100 %): 4.200 VDC

▣ Lowest voltage: 3.700 VDC

▣ LIMIT: Emission must remain in band

| Test. Frequncy | Voltage | Temp. | Frequency | Frequency | Deviation | ppm |
|---|---|---|---|---|---|---|
| (MHz) | (%) | (℃) | (Hz) | Error (Hz) | (%) | |
| 3495.000 | 100 % | +20(Ref) | 3494 999 988 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3494 999 980 | -8.3 | 0.000 000 | -0.002 |
| | 100 % | -20 | 3494 999 977 | -11.6 | 0.000 000 | -0.003 |
| | 100 % | -10 | 3494 999 973 | -15.6 | 0.000 000 | -0.004 |
| | 100 % | 0 | 3494 999 976 | -11.9 | 0.000 000 | -0.003 |
| | 100 % | +10 | 3494 999 980 | -8.6 | 0.000 000 | -0.002 |
| | 100 % | +30 | 3494 999 978 | -10.1 | 0.000 000 | -0.003 |
| | 100 % | +40 | 3494 999 977 | -11.9 | 0.000 000 | -0.003 |
| | 100 % | +50 | 3494 999 981 | -7.6 | 0.000 000 | -0.002 |
| | Lowest voltage | +20 | 3494 999 978 | -10.4 | 0.000 000 | -0.003 |
| 3504.990 | 100 % | +20(Ref) | 3504 989 996 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3504 989 992 | -4.0 | 0.000 000 | -0.001 |
| | 100 % | -20 | 3504 989 989 | -7.3 | 0.000 000 | -0.002 |
| | 100 % | -10 | 3504 989 985 | -11.2 | 0.000 000 | -0.003 |
| | 100 % | 0 | 3504 989 985 | -10.8 | 0.000 000 | -0.003 |
| | 100 % | +10 | 3504 989 989 | -7.2 | 0.000 000 | -0.002 |
| | 100 % | +30 | 3504 989 979 | -16.7 | 0.000 000 | -0.005 |
| | 100 % | +40 | 3504 989 982 | -13.7 | 0.000 000 | -0.004 |
| | 100 % | +50 | 3504 989 985 | -10.4 | 0.000 000 | -0.003 |
| | Lowest voltage | +20 | 3504 989 987 | -9.3 | 0.000 000 | -0.003 |



The report shall not be (partly) reproduced except in full without approval of the laboratory.

▣ BandWidth: 100 MHz

▣ Voltage(100 %): 4.200 VDC

▣ Lowest voltage: 3.700 VDC

▣ LIMIT: Emission must remain in band

| Test. Frequncy | Voltage | Temp. | Frequency | Frequency | Deviation | ppm |
|---|---|---|---|---|---|---|
| (MHz) | (%) | (°C) | (Hz) | Error (Hz) | (%) | |
| 3500.010 | 100 % | +20(Ref) | 3500 009 988 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3500 009 982 | -5.7 | 0.000 000 | -0.002 |
| | 100 % | -20 | 3500 009 981 | -7.4 | 0.000 000 | -0.002 |
| | 100 % | -10 | 3500 009 986 | -2.3 | 0.000 000 | -0.001 |
| | 100 % | 0 | 3500 009 982 | -5.7 | 0.000 000 | -0.002 |
| | 100 % | +10 | 3500 009 976 | -11.6 | 0.000 000 | -0.003 |
| | 100 % | +30 | 3500 009 982 | -6.1 | 0.000 000 | -0.002 |
| | 100 % | +40 | 3500 009 983 | -4.6 | 0.000 000 | -0.001 |
| | 100 % | +50 | 3500 009 978 | -10.5 | 0.000 000 | -0.003 |
| | Lowest voltage | +20 | 3500 009 985 | -3.0 | 0.000 000 | -0.001 |



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# 9. TEST DATA (MIMO1, 3700 MHz - 3980 MHz)

## 9.1 EQUIVALENT ISOTROPIC RADIATED POWER

| Freq (MHz) | Mod/ Bandwidth [SCS (kHz)] | Modulation | Measured (dBμV/m) | Ant. Factor + Dis. Factor(dB) | Cable loss(dB) | Total (dBμV/m) | Pol. | Limit | EIRP | | RB | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | W | W | dBm | Size | Offset |
| 3705.00 | Sub6 n77(78)/ 10 MHz [30 kHz] | PI/2 BPSK | 79.91 | 31.40 | 5.73 | 117.04 | H | < 1.00 | 0.153 | 21.84 | 1 | 12 |
| | | QPSK | 79.35 | 31.40 | 5.73 | 116.48 | H | | 0.134 | 21.28 | | |
| | | 16-QAM | 79.79 | 31.40 | 5.73 | 116.92 | H | | 0.149 | 21.72 | | |
| | | 64-QAM | 78.05 | 31.40 | 5.73 | 115.18 | H | | 0.100 | 19.98 | | |
| | | 256-QAM | 77.76 | 31.40 | 5.73 | 114.89 | H | | 0.093 | 19.69 | | |
| 3840.00 | | PI/2 BPSK | 81.33 | 31.80 | 5.84 | 118.97 | H | | 0.238 | 23.77 | 1 | 22 |
| | | QPSK | 80.00 | 31.80 | 5.84 | 117.64 | H | | 0.175 | 22.44 | | |
| | | 16-QAM | 80.14 | 31.80 | 5.84 | 117.78 | H | | 0.181 | 22.58 | | |
| | | 64-QAM | 80.33 | 31.80 | 5.84 | 117.97 | H | | 0.189 | 22.77 | | |
| | | 256-QAM | 79.43 | 31.80 | 5.84 | 117.07 | H | | 0.154 | 21.87 | | |
| 3975.00 | | PI/2 BPSK | 79.39 | 31.90 | 5.90 | 117.19 | H | | 0.158 | 21.99 | 1 | 22 |
| | | QPSK | 78.39 | 31.90 | 5.90 | 116.19 | H | | 0.126 | 20.99 | | |
| | | 16-QAM | 79.29 | 31.90 | 5.90 | 117.09 | H | | 0.155 | 21.89 | | |
| | | 64-QAM | 78.84 | 31.90 | 5.90 | 116.64 | H | | 0.139 | 21.44 | | |
| | | 256-QAM | 77.42 | 31.90 | 5.90 | 115.22 | H | | 0.100 | 20.02 | | |



The report shall not be (partly) reproduced except in full without approval of the laboratory.

| Freq (MHz) | Mod/ Bandwidth [SCS (kHz)] | Modulation | Measured (dBμV/m) | Ant. Factor + Dis. Factor(dB) | Cable loss(dB) | Total (dBμV/m) | Pol. | Limit | EIRP | | RB | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | W | W | dBm | Size | Offset |
| 3707.51 | Sub6 n77(78)/ 15 MHz [30 kHz] | PI/2 BPSK | 79.18 | 31.40 | 5.73 | 116.31 | H | < 1.00 | 0.129 | 21.11 | 1 | 19 |
| | | QPSK | 78.60 | 31.40 | 5.73 | 115.73 | H | | 0.113 | 20.53 | | |
| | | 16-QAM | 78.33 | 31.40 | 5.73 | 115.46 | H | | 0.106 | 20.26 | | |
| | | 64-QAM | 78.04 | 31.40 | 5.73 | 115.17 | H | | 0.099 | 19.97 | | |
| | | 256-QAM | 77.59 | 31.40 | 5.73 | 114.72 | H | | 0.090 | 19.52 | | |
| 3840.00 | | PI/2 BPSK | 80.79 | 31.80 | 5.84 | 118.43 | H | | 0.210 | 23.23 | 1 | 1 |
| | | QPSK | 79.44 | 31.80 | 5.84 | 117.08 | H | | 0.154 | 21.88 | | |
| | | 16-QAM | 80.02 | 31.80 | 5.84 | 117.66 | H | | 0.176 | 22.46 | | |
| | | 64-QAM | 79.80 | 31.80 | 5.84 | 117.44 | H | | 0.167 | 22.24 | | |
| | | 256-QAM | 77.79 | 31.80 | 5.84 | 115.43 | H | | 0.105 | 20.23 | | |
| 3972.48 | | PI/2 BPSK | 79.47 | 31.90 | 5.90 | 117.27 | H | | 0.161 | 22.07 | 1 | 36 |
| | | QPSK | 79.37 | 31.90 | 5.90 | 117.17 | H | | 0.157 | 21.97 | | |
| | | 16-QAM | 79.14 | 31.90 | 5.90 | 116.94 | H | | 0.149 | 21.74 | | |
| | | 64-QAM | 78.70 | 31.90 | 5.90 | 116.50 | H | | 0.135 | 21.30 | | |
| | | 256-QAM | 78.04 | 31.90 | 5.90 | 115.84 | H | | 0.116 | 20.64 | | |



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| Freq (MHz) | Mod/ Bandwidth [SCS (kHz)] | Modulation | Measured (dBμV/m) | Ant. Factor + Dis. Factor(dB) | Cable loss(dB) | Total (dBμV/m) | Pol. | Limit | EIRP | | RB | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | W | W | dBm | Size | Offset |
| 3710.01 | Sub6 n77(78)/ 20 MHz [30 kHz] | PI/2 BPSK | 79.04 | 31.40 | 5.73 | 116.17 | H | < 1.00 | 0.125 | 20.97 | 1 | 25 |
| | | QPSK | 78.35 | 31.40 | 5.73 | 115.48 | H | | 0.107 | 20.28 | | |
| | | 16-QAM | 78.14 | 31.40 | 5.73 | 115.27 | H | | 0.102 | 20.07 | | |
| | | 64-QAM | 77.95 | 31.40 | 5.73 | 115.08 | H | | 0.097 | 19.88 | | |
| | | 256-QAM | 78.18 | 31.40 | 5.73 | 115.31 | H | | 0.103 | 20.11 | | |
| 3840.00 | | PI/2 BPSK | 81.37 | 31.80 | 5.84 | 119.01 | H | | 0.240 | 23.81 | 1 | 49 |
| | | QPSK | 80.38 | 31.80 | 5.84 | 118.02 | H | | 0.191 | 22.82 | | |
| | | 16-QAM | 80.27 | 31.80 | 5.84 | 117.91 | H | | 0.187 | 22.71 | | |
| | | 64-QAM | 80.58 | 31.80 | 5.84 | 118.22 | H | | 0.200 | 23.02 | | |
| | | 256-QAM | 78.83 | 31.80 | 5.84 | 116.47 | H | | 0.134 | 21.27 | | |
| 3969.99 | | PI/2 BPSK | 79.41 | 31.90 | 5.90 | 117.21 | H | | 0.159 | 22.01 | 1 | 49 |
| | | QPSK | 78.55 | 31.90 | 5.90 | 116.35 | H | | 0.130 | 21.15 | | |
| | | 16-QAM | 78.96 | 31.90 | 5.90 | 116.76 | H | | 0.143 | 21.56 | | |
| | | 64-QAM | 77.29 | 31.90 | 5.90 | 115.09 | H | | 0.098 | 19.89 | | |
| | | 256-QAM | 78.57 | 31.90 | 5.90 | 116.37 | H | | 0.131 | 21.17 | | |



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| Freq (MHz) | Mod/ Bandwidth [SCS (kHz)] | Modulation | Measured (dBμV/m) | Ant. Factor + Dis. Factor(dB) | Cable loss(dB) | Total (dBμV/m) | Pol. | Limit | EIRP | | RB | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | W | W | dBm | Size | Offset |
| 3712.50 | Sub6 n77(78)/ 25 MHz [30 kHz] | PI/2 BPSK | 79.06 | 31.40 | 5.73 | 116.19 | H | < 1.00 | 0.126 | 20.99 | 1 | 32 |
| | | QPSK | 78.36 | 31.40 | 5.73 | 115.49 | H | | 0.107 | 20.29 | | |
| | | 16-QAM | 78.27 | 31.40 | 5.73 | 115.40 | H | | 0.105 | 20.20 | | |
| | | 64-QAM | 78.70 | 31.40 | 5.73 | 115.83 | H | | 0.116 | 20.63 | | |
| | | 256-QAM | 76.62 | 31.40 | 5.73 | 113.75 | H | | 0.072 | 18.55 | | |
| 3840.00 | | PI/2 BPSK | 79.96 | 31.80 | 5.84 | 117.60 | H | | 0.174 | 22.40 | 1 | 63 |
| | | QPSK | 79.88 | 31.80 | 5.84 | 117.52 | H | | 0.171 | 22.32 | | |
| | | 16-QAM | 79.63 | 31.80 | 5.84 | 117.27 | H | | 0.161 | 22.07 | | |
| | | 64-QAM | 79.83 | 31.80 | 5.84 | 117.47 | H | | 0.169 | 22.27 | | |
| | | 256-QAM | 79.51 | 31.80 | 5.84 | 117.15 | H | | 0.157 | 21.95 | | |
| 3967.50 | | PI/2 BPSK | 78.86 | 31.90 | 5.90 | 116.66 | H | | 0.140 | 21.46 | 1 | 32 |
| | | QPSK | 78.81 | 31.90 | 5.90 | 116.61 | H | | 0.138 | 21.41 | | |
| | | 16-QAM | 78.85 | 31.90 | 5.90 | 116.65 | H | | 0.140 | 21.45 | | |
| | | 64-QAM | 77.86 | 31.90 | 5.90 | 115.66 | H | | 0.111 | 20.46 | | |
| | | 256-QAM | 77.59 | 31.90 | 5.90 | 115.39 | H | | 0.104 | 20.19 | | |



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| Freq (MHz) | Mod/ Bandwidth [SCS (kHz)] | Modulation | Measured (dBμV/m) | Ant. Factor + Dis. Factor(dB) | Cable loss(dB) | Total (dBμV/m) | Pol. | Limit | EIRP | | RB | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | W | W | dBm | Size | Offset |
| 3715.02 | Sub6 n77(78)/ 30 MHz [30 kHz] | PI/2 BPSK | 79.21 | 31.40 | 5.73 | 116.34 | H | < 1.00 | 0.130 | 21.14 | 1 | 39 |
| | | QPSK | 77.53 | 31.40 | 5.73 | 114.66 | H | | 0.088 | 19.46 | | |
| | | 16-QAM | 78.56 | 31.40 | 5.73 | 115.69 | H | | 0.112 | 20.49 | | |
| | | 64-QAM | 78.76 | 31.40 | 5.73 | 115.89 | H | | 0.117 | 20.69 | | |
| | | 256-QAM | 78.10 | 31.40 | 5.73 | 115.23 | H | | 0.101 | 20.03 | | |
| 3840.00 | | PI/2 BPSK | 80.66 | 31.80 | 5.84 | 118.30 | H | | 0.204 | 23.10 | 1 | 39 |
| | | QPSK | 78.83 | 31.80 | 5.84 | 116.47 | H | | 0.134 | 21.27 | | |
| | | 16-QAM | 79.90 | 31.80 | 5.84 | 117.54 | H | | 0.171 | 22.34 | | |
| | | 64-QAM | 79.66 | 31.80 | 5.84 | 117.30 | H | | 0.162 | 22.10 | | |
| | | 256-QAM | 78.96 | 31.80 | 5.84 | 116.60 | H | | 0.138 | 21.40 | | |
| 3964.98 | | PI/2 BPSK | 78.08 | 31.90 | 5.90 | 115.88 | H | | 0.117 | 20.68 | 1 | 1 |
| | | QPSK | 76.90 | 31.90 | 5.90 | 114.70 | H | | 0.089 | 19.50 | | |
| | | 16-QAM | 77.71 | 31.90 | 5.90 | 115.51 | H | | 0.107 | 20.31 | | |
| | | 64-QAM | 76.52 | 31.90 | 5.90 | 114.32 | H | | 0.082 | 19.12 | | |
| | | 256-QAM | 77.01 | 31.90 | 5.90 | 114.81 | H | | 0.091 | 19.61 | | |



The report shall not be (partly) reproduced except in full without approval of the laboratory.

| Freq (MHz) | Mod/ Bandwidth [SCS (kHz)] | Modulation | Measured (dBμV/m) | Ant. Factor + Dis. Factor(dB) | Cable loss(dB) | Total (dBμV/m) | Pol. | Limit | EIRP | | RB | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | W | W | dBm | Size | Offset |
| 3720.00 | Sub6 n77(78)/ 40 MHz [30 kHz] | PI/2 BPSK | 79.79 | 31.40 | 5.73 | 116.92 | H | < 1.00 | 0.149 | 21.72 | 1 | 104 |
| | | QPSK | 79.25 | 31.40 | 5.73 | 116.38 | H | | 0.131 | 21.18 | | |
| | | 16-QAM | 78.59 | 31.40 | 5.73 | 115.72 | H | | 0.113 | 20.52 | | |
| | | 64-QAM | 78.26 | 31.40 | 5.73 | 115.39 | H | | 0.104 | 20.19 | | |
| | | 256-QAM | 78.71 | 31.40 | 5.73 | 115.84 | H | | 0.116 | 20.64 | | |
| 3840.00 | | PI/2 BPSK | 80.87 | 31.80 | 5.84 | 118.51 | H | | 0.214 | 23.31 | 1 | 53 |
| | | QPSK | 80.01 | 31.80 | 5.84 | 117.65 | H | | 0.176 | 22.45 | | |
| | | 16-QAM | 79.70 | 31.80 | 5.84 | 117.34 | H | | 0.164 | 22.14 | | |
| | | 64-QAM | 79.54 | 31.80 | 5.84 | 117.18 | H | | 0.158 | 21.98 | | |
| | | 256-QAM | 79.91 | 31.80 | 5.84 | 117.55 | H | | 0.172 | 22.35 | | |
| 3960.00 | | PI/2 BPSK | 78.85 | 31.90 | 5.90 | 116.65 | H | | 0.140 | 21.45 | 1 | 53 |
| | | QPSK | 77.99 | 31.90 | 5.90 | 115.79 | H | | 0.115 | 20.59 | | |
| | | 16-QAM | 78.80 | 31.90 | 5.90 | 116.60 | H | | 0.138 | 21.40 | | |
| | | 64-QAM | 78.07 | 31.90 | 5.90 | 115.87 | H | | 0.117 | 20.67 | | |
| | | 256-QAM | 78.13 | 31.90 | 5.90 | 115.93 | H | | 0.118 | 20.73 | | |



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| Freq (MHz) | Mod/ Bandwidth [SCS (kHz)] | Modulation | Measured (dBμV/m) | Ant. Factor + Dis. Factor(dB) | Cable loss(dB) | Total (dBμV/m) | Pol. | Limit | EIRP | | RB | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | W | W | dBm | Size | Offset |
| 3725.10 | Sub6 n77(78)/ 50 MHz [30 kHz] | PI/2 BPSK | 80.08 | 31.40 | 5.73 | 117.21 | H | < 1.00 | 0.159 | 22.01 | 1 | 131 |
| | | QPSK | 78.81 | 31.40 | 5.73 | 115.94 | H | | 0.119 | 20.74 | | |
| | | 16-QAM | 79.33 | 31.40 | 5.73 | 116.46 | H | | 0.134 | 21.26 | | |
| | | 64-QAM | 79.16 | 31.40 | 5.73 | 116.29 | H | | 0.129 | 21.09 | | |
| | | 256-QAM | 77.57 | 31.40 | 5.73 | 114.70 | H | | 0.089 | 19.50 | | |
| 3840.00 | | PI/2 BPSK | 80.60 | 31.80 | 5.84 | 118.24 | H | | 0.201 | 23.04 | 1 | 66 |
| | | QPSK | 80.54 | 31.80 | 5.84 | 118.18 | H | | 0.199 | 22.98 | | |
| | | 16-QAM | 79.48 | 31.80 | 5.84 | 117.12 | H | | 0.156 | 21.92 | | |
| | | 64-QAM | 80.21 | 31.80 | 5.84 | 117.85 | H | | 0.184 | 22.65 | | |
| | | 256-QAM | 79.22 | 31.80 | 5.84 | 116.86 | H | | 0.147 | 21.66 | | |
| 3954.99 | | PI/2 BPSK | 79.39 | 31.90 | 5.90 | 117.19 | H | | 0.158 | 21.99 | 1 | 66 |
| | | QPSK | 79.03 | 31.90 | 5.90 | 116.83 | H | | 0.146 | 21.63 | | |
| | | 16-QAM | 77.83 | 31.90 | 5.90 | 115.63 | H | | 0.110 | 20.43 | | |
| | | 64-QAM | 78.36 | 31.90 | 5.90 | 116.16 | H | | 0.125 | 20.96 | | |
| | | 256-QAM | 76.57 | 31.90 | 5.90 | 114.37 | H | | 0.083 | 19.17 | | |



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| Freq (MHz) | Mod/ Bandwidth [SCS (kHz)] | Modulation | Measured (dBμV/m) | Ant. Factor + Dis. Factor(dB) | Cable loss(dB) | Total (dBμV/m) | Pol. | Limit | EIRP | | RB | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | W | W | dBm | Size | Offset |
| 3730.02 | Sub6 n77(78)/ 60 MHz [30 kHz] | PI/2 BPSK | 78.39 | 31.40 | 5.73 | 115.52 | H | < 1.00 | 0.108 | 20.32 | 1 | 160 |
| | | QPSK | 77.65 | 31.40 | 5.73 | 114.78 | H | | 0.091 | 19.58 | | |
| | | 16-QAM | 78.11 | 31.40 | 5.73 | 115.24 | H | | 0.101 | 20.04 | | |
| | | 64-QAM | 77.47 | 31.40 | 5.73 | 114.60 | H | | 0.087 | 19.40 | | |
| | | 256-QAM | 78.02 | 31.40 | 5.73 | 115.15 | H | | 0.099 | 19.95 | | |
| 3840.00 | | PI/2 BPSK | 80.56 | 31.80 | 5.84 | 118.20 | H | | 0.200 | 23.00 | 1 | 82 |
| | | QPSK | 79.95 | 31.80 | 5.84 | 117.59 | H | | 0.173 | 22.39 | | |
| | | 16-QAM | 79.45 | 31.80 | 5.84 | 117.09 | H | | 0.155 | 21.89 | | |
| | | 64-QAM | 80.42 | 31.80 | 5.84 | 118.06 | H | | 0.193 | 22.86 | | |
| | | 256-QAM | 80.18 | 31.80 | 5.84 | 117.82 | H | | 0.183 | 22.62 | | |
| 3949.98 | | PI/2 BPSK | 79.40 | 31.90 | 5.90 | 117.20 | H | | 0.158 | 22.00 | 1 | 1 |
| | | QPSK | 79.18 | 31.90 | 5.90 | 116.98 | H | | 0.151 | 21.78 | | |
| | | 16-QAM | 78.91 | 31.90 | 5.90 | 116.71 | H | | 0.142 | 21.51 | | |
| | | 64-QAM | 78.45 | 31.90 | 5.90 | 116.25 | H | | 0.127 | 21.05 | | |
| | | 256-QAM | 79.25 | 31.90 | 5.90 | 117.05 | H | | 0.153 | 21.85 | | |



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| Freq (MHz) | Mod/ Bandwidth [SCS (kHz)] | Modulation | Measured (dBμV/m) | Ant. Factor + Dis. Factor(dB) | Cable loss(dB) | Total (dBμV/m) | Pol. | Limit | EIRP | | RB | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | W | W | dBm | Size | Offset |
| 3735.00 | Sub6 n77(78)/ 70 MHz [30 kHz] | PI/2 BPSK | 80.27 | 31.40 | 5.73 | 117.40 | H | < 1.00 | 0.166 | 22.20 | 1 | 94 |
| | | QPSK | 79.14 | 31.40 | 5.73 | 116.27 | H | | 0.128 | 21.07 | | |
| | | 16-QAM | 79.16 | 31.40 | 5.73 | 116.29 | H | | 0.129 | 21.09 | | |
| | | 64-QAM | 78.73 | 31.40 | 5.73 | 115.86 | H | | 0.116 | 20.66 | | |
| | | 256-QAM | 78.13 | 31.40 | 5.73 | 115.26 | H | | 0.101 | 20.06 | | |
| 3840.00 | | PI/2 BPSK | 81.32 | 31.80 | 5.84 | 118.96 | H | | 0.238 | 23.76 | 1 | 187 |
| | | QPSK | 81.19 | 31.80 | 5.84 | 118.83 | H | | 0.231 | 23.63 | | |
| | | 16-QAM | 80.55 | 31.80 | 5.84 | 118.19 | H | | 0.199 | 22.99 | | |
| | | 64-QAM | 80.11 | 31.80 | 5.84 | 117.75 | H | | 0.180 | 22.55 | | |
| | | 256-QAM | 79.76 | 31.80 | 5.84 | 117.40 | H | | 0.166 | 22.20 | | |
| 3945.00 | | PI/2 BPSK | 80.60 | 31.90 | 5.90 | 118.40 | H | | 0.209 | 23.20 | 1 | 1 |
| | | QPSK | 80.32 | 31.90 | 5.90 | 118.12 | H | | 0.196 | 22.92 | | |
| | | 16-QAM | 79.15 | 31.90 | 5.90 | 116.95 | H | | 0.150 | 21.75 | | |
| | | 64-QAM | 80.00 | 31.90 | 5.90 | 117.80 | H | | 0.182 | 22.60 | | |
| | | 256-QAM | 78.88 | 31.90 | 5.90 | 116.68 | H | | 0.141 | 21.48 | | |



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| Freq (MHz) | Mod/ Bandwidth [SCS (kHz)] | Modulation | Measured (dBμV/m) | Ant. Factor + Dis. Factor(dB) | Cable loss(dB) | Total (dBμV/m) | Pol. | Limit | EIRP | | RB | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | W | W | dBm | Size | Offset |
| 3740.01 | Sub6 n77(78)/ 80 MHz [30 kHz] | PI/2 BPSK | 79.19 | 31.40 | 5.73 | 116.32 | H | < 1.00 | 0.129 | 21.12 | 1 | 108 |
| | | QPSK | 78.98 | 31.40 | 5.73 | 116.11 | H | | 0.123 | 20.91 | | |
| | | 16-QAM | 78.90 | 31.40 | 5.73 | 116.03 | H | | 0.121 | 20.83 | | |
| | | 64-QAM | 79.02 | 31.40 | 5.73 | 116.15 | H | | 0.124 | 20.95 | | |
| | | 256-QAM | 77.89 | 31.40 | 5.73 | 115.02 | H | | 0.096 | 19.82 | | |
| 3840.00 | | PI/2 BPSK | 80.99 | 31.80 | 5.84 | 118.63 | H | | 0.220 | 23.43 | 1 | 108 |
| | | QPSK | 80.14 | 31.80 | 5.84 | 117.78 | H | | 0.181 | 22.58 | | |
| | | 16-QAM | 79.44 | 31.80 | 5.84 | 117.08 | H | | 0.154 | 21.88 | | |
| | | 64-QAM | 79.70 | 31.80 | 5.84 | 117.34 | H | | 0.164 | 22.14 | | |
| | | 256-QAM | 79.46 | 31.80 | 5.84 | 117.10 | H | | 0.155 | 21.90 | | |
| 3939.99 | | PI/2 BPSK | 80.17 | 31.90 | 5.90 | 117.97 | H | | 0.189 | 22.77 | 1 | 1 |
| | | QPSK | 79.03 | 31.90 | 5.90 | 116.83 | H | | 0.146 | 21.63 | | |
| | | 16-QAM | 80.00 | 31.90 | 5.90 | 117.80 | H | | 0.182 | 22.60 | | |
| | | 64-QAM | 79.30 | 31.90 | 5.90 | 117.10 | H | | 0.155 | 21.90 | | |
| | | 256-QAM | 79.56 | 31.90 | 5.90 | 117.36 | H | | 0.164 | 22.16 | | |



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| Freq (MHz) | Mod/ Bandwidth [SCS (kHz)] | Modulation | Measured (dBμV/m) | Ant. Factor + Dis. Factor(dB) | Cable loss(dB) | Total (dBμV/m) | Pol. | Limit | EIRP | | RB | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | W | W | dBm | Size | Offset |
| 3745.02 | Sub6 n77(78)/ 90 MHz [30 kHz] | PI/2 BPSK | 79.13 | 31.40 | 5.73 | 116.26 | H | < 1.00 | 0.128 | 21.06 | 1 | 122 |
| | | QPSK | 77.75 | 31.40 | 5.73 | 114.88 | H | | 0.093 | 19.68 | | |
| | | 16-QAM | 77.89 | 31.40 | 5.73 | 115.02 | H | | 0.096 | 19.82 | | |
| | | 64-QAM | 78.24 | 31.40 | 5.73 | 115.37 | H | | 0.104 | 20.17 | | |
| | | 256-QAM | 77.76 | 31.40 | 5.73 | 114.89 | H | | 0.093 | 19.69 | | |
| 3840.00 | | PI/2 BPSK | 81.72 | 31.80 | 5.84 | 119.36 | H | | 0.261 | 24.16 | 1 | 243 |
| | | QPSK | 80.83 | 31.80 | 5.84 | 118.47 | H | | 0.212 | 23.27 | | |
| | | 16-QAM | 79.99 | 31.80 | 5.84 | 117.63 | H | | 0.175 | 22.43 | | |
| | | 64-QAM | 80.28 | 31.80 | 5.84 | 117.92 | H | | 0.187 | 22.72 | | |
| | | 256-QAM | 79.64 | 31.80 | 5.84 | 117.28 | H | | 0.161 | 22.08 | | |
| 3934.98 | | PI/2 BPSK | 80.68 | 31.90 | 5.90 | 118.48 | H | | 0.213 | 23.28 | 1 | 1 |
| | | QPSK | 80.20 | 31.90 | 5.90 | 118.00 | H | | 0.191 | 22.80 | | |
| | | 16-QAM | 80.20 | 31.90 | 5.90 | 118.00 | H | | 0.191 | 22.80 | | |
| | | 64-QAM | 80.51 | 31.90 | 5.90 | 118.31 | H | | 0.205 | 23.11 | | |
| | | 256-QAM | 79.27 | 31.90 | 5.90 | 117.07 | H | | 0.154 | 21.87 | | |



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| Freq (MHz) | Mod/ Bandwidth [SCS (kHz)] | Modulation | Measured (dBμV/m) | Ant. Factor + Dis. Factor(dB) | Cable loss(dB) | Total (dBμV/m) | Pol. | Limit | EIRP | | RB | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | W | W | dBm | Size | Offset |
| 3750.00 | Sub6 n77(78)/ 100 MHz [30 kHz] | PI/2 BPSK | 79.23 | 31.40 | 5.73 | 116.36 | H | < 1.00 | 0.131 | 21.16 | 1 | 136 |
| | | QPSK | 79.12 | 31.40 | 5.73 | 116.25 | H | | 0.127 | 21.05 | | |
| | | 16-QAM | 78.68 | 31.40 | 5.73 | 115.81 | H | | 0.115 | 20.61 | | |
| | | 64-QAM | 79.11 | 31.40 | 5.73 | 116.24 | H | | 0.127 | 21.04 | | |
| | | 256-QAM | 78.92 | 31.40 | 5.73 | 116.05 | H | | 0.122 | 20.85 | | |
| 3840.00 | | PI/2 BPSK | 80.46 | 31.80 | 5.84 | 118.10 | H | | 0.195 | 22.90 | 1 | 271 |
| | | QPSK | 79.96 | 31.80 | 5.84 | 117.60 | H | | 0.174 | 22.40 | | |
| | | 16-QAM | 79.61 | 31.80 | 5.84 | 117.25 | H | | 0.160 | 22.05 | | |
| | | 64-QAM | 79.20 | 31.80 | 5.84 | 116.84 | H | | 0.146 | 21.64 | | |
| | | 256-QAM | 80.13 | 31.80 | 5.84 | 117.77 | H | | 0.181 | 22.57 | | |
| 3930.00 | | PI/2 BPSK | 80.89 | 31.90 | 5.90 | 118.69 | H | | 0.223 | 23.49 | 1 | 1 |
| | | QPSK | 80.81 | 31.90 | 5.90 | 118.61 | H | | 0.219 | 23.41 | | |
| | | 16-QAM | 80.53 | 31.90 | 5.90 | 118.33 | H | | 0.206 | 23.13 | | |
| | | 64-QAM | 80.64 | 31.90 | 5.90 | 118.44 | H | | 0.211 | 23.24 | | |
| | | 256-QAM | 80.18 | 31.90 | 5.90 | 117.98 | H | | 0.190 | 22.78 | | |



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## 9.2 RADIATED SPURIOUS EMISSIONS

- ▣ NR Band: N77(78)
- ▣ Bandwidth: 90 MHz
- ▣ Modulation: PI/2 BPSK
- ▣ Distance: 1 meters
- ▣ SCS: 30 kHz

| Ch | Freq (MHz) | Measured Level (dBm) | Ant. Gain (dBi) | Substitute Level (dBm) | C.L | Pol | Result (dBm) | Limit (dBm) | RB | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | Size | Offset |
| 649668 (3745.02) | 7 490.04 | -51.69 | 11.53 | -54.47 | 4.61 | V | -47.55 | -13.00 | 1 | 122 |
| | 11 235.06 | -51.48 | 12.28 | -51.63 | 5.82 | H | -45.17 | -13.00 | | |
| | 14 980.08 | -66.68 | 14.18 | -49.34 | 6.79 | V | -41.95 | -13.00 | | |
| 656000 (3840.00) | 7 680.00 | -48.50 | 11.60 | -50.96 | 4.70 | H | -44.06 | -13.00 | 1 | 243 |
| | 11 520.00 | -55.06 | 12.51 | -54.68 | 5.87 | H | -48.04 | -13.00 | | |
| | 15 360.00 | -68.08 | 15.21 | -48.46 | 6.88 | H | -40.13 | -13.00 | | |
| 662332 (3934.98) | 7 869.96 | -47.48 | 11.20 | -48.59 | 4.75 | H | -42.14 | -13.00 | 1 | 1 |
| | 11 804.94 | -55.22 | 13.02 | -54.62 | 5.97 | H | -47.57 | -13.00 | | |
| | 15 739.92 | -67.19 | 16.05 | -49.55 | 6.93 | V | -40.43 | -13.00 | | |



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## 9.3 PEAK-TO-AVERAGE RATIO

| Band | Band Width | Frequency (MHz) | Modulation | Resource Block Size | Resource Block Offset | Data (dB ) |
|---|---|---|---|---|---|---|
| Sub6 n77(78) | 10 MHz | 3840.00 | BPSK | Full RB | 0 | 5.34 |
| | | | QPSK | | | 5.83 |
| | | | 16-QAM | | | 6.19 |
| | | | 64-QAM | | | 6.40 |
| | | | 256-QAM | | | 6.21 |
| | 15 MHz | | BPSK | | | 4.61 |
| | | | QPSK | | | 5.48 |
| | | | 16-QAM | | | 6.51 |
| | | | 64-QAM | | | 6.63 |
| | | | 256-QAM | | | 6.65 |
| | 20 MHz | | BPSK | | | 5.36 |
| | | | QPSK | | | 5.68 |
| | | | 16-QAM | | | 6.10 |
| | | | 64-QAM | | | 6.59 |
| | | | 256-QAM | | | 6.75 |
| | 25 MHz | | BPSK | | | 5.28 |
| | | | QPSK | | | 5.73 |
| | | | 16-QAM | | | 6.34 |
| | | | 64-QAM | | | 6.53 |
| | | | 256-QAM | | | 6.49 |
| | 30 MHz | | BPSK | | | 4.43 |
| | | | QPSK | | | 5.62 |
| | | | 16-QAM | | | 6.12 |
| | | | 64-QAM | | | 6.55 |
| | | | 256-QAM | | | 6.74 |
| | 40 MHz | | BPSK | | | 4.33 |
| | | | QPSK | | | 5.61 |
| | | | 16-QAM | | | 6.30 |
| | | | 64-QAM | | | 6.50 |
| | | | 256-QAM | | | 6.64 |
| | 50 MHz | | BPSK | | | 4.44 |
| | | | QPSK | | | 5.65 |
| | | | 16-QAM | | | 6.39 |
| | | | 64-QAM | | | 6.62 |
| | | | 256-QAM | | | 6.77 |
| | 60 MHz | | BPSK | | | 4.44 |
| | | | QPSK | | | 5.54 |
| | | | 16-QAM | | | 6.28 |
| | | | 64-QAM | | | 6.48 |
| | | | 256-QAM | | | 6.53 |
| | 70 MHz | | BPSK | | | 4.59 |
| | | | QPSK | | | 5.60 |
| | | | 16-QAM | | | 6.36 |
| | | | 64-QAM | | | 6.40 |
| | | | 256-QAM | | | 6.65 |
| | 80 MHz | | BPSK | | | 4.45 |
| | | | QPSK | | | 5.60 |



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| | | | | | | |
|---|---|---|---|---|---|---|
| | | | 16-QAM | | | 6.21 |
| | | | 64-QAM | | | 6.48 |
| | | | 256-QAM | | | 6.72 |
| | 90 MHz | | BPSK | | | 5.54 |
| | | | QPSK | | | 5.82 |
| | | | 16-QAM | | | 6.37 |
| | | | 64-QAM | | | 6.40 |
| | | | 256-QAM | | | 6.56 |
| | 100 MHz | | BPSK | | | 4.47 |
| | | | QPSK | | | 5.61 |
| | | | 16-QAM | | | 6.29 |
| | | | 64-QAM | | | 6.37 |
| | | | 256-QAM | | | 6.65 |

**Note:**

1. Plots of the EUT's Peak- to- Average Ratio are shown Page 491 ~ 550.



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## 9.4 OCCUPIED BANDWIDTH

| Band | Band Width | Frequency (MHz) | Modulation | Resource Block Size | Resource Block Offset | Data ( MHz ) |
|---|---|---|---|---|---|---|
| Sub6 n77(78) | 10 MHz | 3840.00 | BPSK | Full RB | 0 | 8.6248 |
| | | | QPSK | | | 8.5886 |
| | | | 16-QAM | | | 8.6097 |
| | | | 64-QAM | | | 8.5722 |
| | | | 256-QAM | | | 8.5717 |
| | 15 MHz | | BPSK | | | 12.946 |
| | | | QPSK | | | 12.831 |
| | | | 16-QAM | | | 12.883 |
| | | | 64-QAM | | | 12.941 |
| | | | 256-QAM | | | 12.920 |
| | 20 MHz | | BPSK | | | 17.895 |
| | | | QPSK | | | 17.880 |
| | | | 16-QAM | | | 17.859 |
| | | | 64-QAM | | | 17.872 |
| | | | 256-QAM | | | 17.947 |
| | 25 MHz | | BPSK | | | 22.957 |
| | | | QPSK | | | 22.913 |
| | | | 16-QAM | | | 22.938 |
| | | | 64-QAM | | | 22.922 |
| | | | 256-QAM | | | 22.945 |
| | 30 MHz | | BPSK | | | 26.864 |
| | | | QPSK | | | 26.929 |
| | | | 16-QAM | | | 26.878 |
| | | | 64-QAM | | | 26.837 |
| | | | 256-QAM | | | 26.826 |
| | 40 MHz | | BPSK | | | 35.862 |
| | | | QPSK | | | 35.837 |
| | | | 16-QAM | | | 35.786 |
| | | | 64-QAM | | | 35.790 |
| | | | 256-QAM | | | 35.787 |
| | 50 MHz | | BPSK | | | 45.752 |
| | | | QPSK | | | 45.806 |
| | | | 16-QAM | | | 45.696 |
| | | | 64-QAM | | | 45.791 |
| | | | 256-QAM | | | 45.711 |
| | 60 MHz | | BPSK | | | 58.092 |
| | | | QPSK | | | 57.819 |
| | | | 16-QAM | | | 57.763 |
| | | | 64-QAM | | | 57.912 |
| | | | 256-QAM | | | 57.843 |
| | 70 MHz | | BPSK | | | 64.552 |
| | | | QPSK | | | 64.682 |
| | | | 16-QAM | | | 64.523 |
| | | | 64-QAM | | | 64.480 |
| | | | 256-QAM | | | 64.625 |
| | 80 MHz | | BPSK | | | 77.468 |
| | | | QPSK | | | 77.260 |



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| | | | | | | |
|---|---|---|---|---|---|---|
| | | | 16-QAM | | | 77.614 |
| | | | 64-QAM | | | 77.522 |
| | | | 256-QAM | | | 77.278 |
| | 90 MHz | | BPSK | | | 86.919 |
| | | | QPSK | | | 86.828 |
| | | | 16-QAM | | | 86.984 |
| | | | 64-QAM | | | 86.885 |
| | | | 256-QAM | | | 87.332 |
| | 100 MHz | | BPSK | | | 96.783 |
| | | | QPSK | | | 96.734 |
| | | | 16-QAM | | | 96.656 |
| | | | 64-QAM | | | 97.081 |
| | | | 256-QAM | | | 96.771 |

**Note:**

1. Plots of the EUT's Occupied Bandwidth are shown Page 551 ~ 610.



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## 9.5 CONDUCTED SPURIOUS EMISSIONS

| Band | Band Width (MHz) | Frequency (MHz) | Frequency of Maximum Harmonic (GHz) | Factor (dB) | Measurement Maximum Data (dBm) | Result (dBm) | Limit (dBm) |
|---|---|---|---|---|---|---|---|
| Sub6 n77(78) | 10 | 3705.000 | 5.1845 | 28.980 | -62.362 | -33.382 | -13.00 |
| | | 3840.000 | 8.3151 | 28.980 | -62.657 | -33.677 | |
| | | 3975.000 | 6.0220 | 28.980 | -60.683 | -31.703 | |
| | 15 | 3707.520 | 7.9960 | 28.980 | -62.666 | -33.686 | |
| | | 3840.000 | 4.8954 | 28.370 | -62.063 | -33.693 | |
| | | 3972.480 | 4.9851 | 28.370 | -62.250 | -33.880 | |
| | 20 | 3710.010 | 4.9053 | 28.370 | -60.574 | -32.204 | |
| | | 3840.000 | 7.4377 | 28.980 | -62.233 | -33.253 | |
| | | 3969.990 | 7.7867 | 28.980 | -62.825 | -33.845 | |
| | 25 | 3712.500 | 4.9452 | 28.370 | -61.962 | -33.592 | |
| | | 3840.000 | 7.4975 | 28.980 | -61.942 | -32.962 | |
| | | 3967.500 | 7.2483 | 28.980 | -62.443 | -33.463 | |
| | 30 | 3715.020 | 5.1745 | 28.980 | -62.026 | -33.046 | |
| | | 3840.000 | 8.6042 | 28.980 | -62.426 | -33.446 | |
| | | 3964.980 | 5.1745 | 28.980 | -62.655 | -33.675 | |
| | 40 | 3720.000 | 6.6202 | 28.980 | -61.686 | -32.706 | |
| | | 3840.000 | 8.6341 | 28.980 | -62.617 | -33.637 | |
| | | 3960.000 | 8.6142 | 28.980 | -61.749 | -32.769 | |
| | 50 | 3725.010 | 9.7707 | 28.980 | -62.072 | -33.092 | |
| | | 3840.000 | 4.9253 | 28.370 | -61.893 | -33.523 | |
| | | 3954.990 | 9.1625 | 28.980 | -62.308 | -33.328 | |
| | 60 | 3730.020 | 4.9552 | 28.370 | -61.633 | -33.263 | |
| | | 3840.000 | 4.9253 | 28.370 | -61.935 | -33.565 | |
| | | 3949.980 | 5.2343 | 28.980 | -61.900 | -32.920 | |
| | 70 | 3735.000 | 8.3849 | 28.980 | -62.272 | -33.292 | |
| | | 3840.000 | 5.2144 | 28.980 | -61.554 | -32.574 | |
| | | 3945.000 | 5.4936 | 28.980 | -62.125 | -33.145 | |
| | 80 | 3740.010 | 5.9921 | 28.980 | -62.670 | -33.690 | |
| | | 3840.000 | 6.2712 | 28.980 | -61.617 | -32.637 | |
| | | 3939.990 | 7.2283 | 28.980 | -61.573 | -32.593 | |
| | 90 | 3745.020 | 9.4417 | 28.980 | -62.449 | -33.469 | |
| | | 3840.000 | 5.1945 | 28.980 | -61.639 | -32.659 | |
| | | 3934.980 | 8.0758 | 28.980 | -62.013 | -33.033 | |
| | 100 | 3750.000 | 4.9352 | 28.370 | -61.860 | -33.490 | |
| | | 3840.000 | 5.7229 | 28.980 | -62.456 | -33.476 | |
| | | 3930.000 | 4.9253 | 28.370 | -61.955 | -33.585 | |



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**Note:**

1. Plots of the EUT's Conducted Spurious Emissions are shown Page 611 ~ 682.
2. Factor(dB) = Cable Loss + Ext. Attenuator + Power Splitter
3. Result(dBm) = Reading + Factor

Factor(dB)

| Frequency Range (GHz) | Factor [dB] |
|---|---|
| 0.03 – 1 | 25.670 |
| 1 – 5 | 28.370 |
| 5 – 10 | 28.980 |
| 10 – 15 | 29.520 |
| 15 – 20 | 29.890 |
| Above 20 | 30.530 |

## 9.6 BAND EDGE

1. Plots of the EUT's Band Edge are shown Page 683 ~ 826.
2. Duty Cycle factor already applied on the factor.
   - Factor(dB) = Duty Cycle factor + Cable Loss + Ext. Attenuator + Power Splitter
   - Result(dBm) = Reading + Factor
   - Duty Cycle Factor(dB) = 6.990



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## 9.7 FREQUENCY STABILITY / VARIATION OF AMBIENT TEMPERATURE

- ▣ BandWidth: 10 MHz
- ▣ Voltage(100 %): 4.200 VDC
- ▣ Lowest voltage: 3.700 VDC
- ▣ LIMIT: Emission must remain in band

| Test. Frequncy | Voltage | Temp. | Frequency | Frequency | Deviation | ppm |
|---|---|---|---|---|---|---|
| (MHz) | (%) | (°C) | (Hz) | Error (Hz) | (%) | |
| 3705.000 | 100 % | +20(Ref) | 3704 999 989 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3704 999 974 | -15.4 | 0.000 000 | -0.004 |
| | 100 % | -20 | 3704 999 980 | -8.6 | 0.000 000 | -0.002 |
| | 100 % | -10 | 3704 999 979 | -10.0 | 0.000 000 | -0.003 |
| | 100 % | 0 | 3704 999 973 | -16.2 | 0.000 000 | -0.004 |
| | 100 % | +10 | 3704 999 976 | -12.8 | 0.000 000 | -0.003 |
| | 100 % | +30 | 3704 999 971 | -17.7 | 0.000 000 | -0.005 |
| | 100 % | +40 | 3704 999 976 | -13.2 | 0.000 000 | -0.004 |
| | 100 % | +50 | 3704 999 979 | -9.7 | 0.000 000 | -0.003 |
| | Lowest voltage | +20 | 3704 999 983 | -5.8 | 0.000 000 | -0.002 |
| 3975.000 | 100 % | +20(Ref) | 3974 999 990 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3974 999 982 | -8.5 | 0.000 000 | -0.002 |
| | 100 % | -20 | 3974 999 979 | -11.9 | 0.000 000 | -0.003 |
| | 100 % | -10 | 3974 999 977 | -13.6 | 0.000 000 | -0.003 |
| | 100 % | 0 | 3974 999 981 | -9.5 | 0.000 000 | -0.002 |
| | 100 % | +10 | 3974 999 981 | -9.6 | 0.000 000 | -0.002 |
| | 100 % | +30 | 3974 999 977 | -13.2 | 0.000 000 | -0.003 |
| | 100 % | +40 | 3974 999 985 | -5.0 | 0.000 000 | -0.001 |
| | 100 % | +50 | 3974 999 983 | -7.7 | 0.000 000 | -0.002 |
| | Lowest voltage | +20 | 3974 999 979 | -11.9 | 0.000 000 | -0.003 |


The report shall not be (partly) reproduced except in full without approval of the laboratory.

▣ BandWidth: 15 MHz

▣ Voltage(100 %): 4.200 VDC

▣ Lowest voltage: 3.700 VDC

▣ LIMIT: Emission must remain in band

| Test. Frequncy (MHz) | Voltage (%) | Temp. (°C) | Frequency (Hz) | Frequency Error (Hz) | Deviation (%) | ppm |
|---|---|---|---|---|---|---|
| 3707.520 | 100 % | +20(Ref) | 3707 519 986 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3707 519 976 | -9.1 | 0.000 000 | -0.002 |
| | 100 % | -20 | 3707 519 974 | -11.2 | 0.000 000 | -0.003 |
| | 100 % | -10 | 3707 519 971 | -14.2 | 0.000 000 | -0.004 |
| | 100 % | 0 | 3707 519 974 | -11.5 | 0.000 000 | -0.003 |
| | 100 % | +10 | 3707 519 978 | -7.1 | 0.000 000 | -0.002 |
| | 100 % | +30 | 3707 519 972 | -13.4 | 0.000 000 | -0.004 |
| | 100 % | +40 | 3707 519 971 | -14.2 | 0.000 000 | -0.004 |
| | 100 % | +50 | 3707 519 975 | -10.6 | 0.000 000 | -0.003 |
| | Lowest voltage | +20 | 3707 519 973 | -12.8 | 0.000 000 | -0.003 |
| 3972.480 | 100 % | +20(Ref) | 3972 479 984 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3972 479 970 | -13.5 | 0.000 000 | -0.003 |
| | 100 % | -20 | 3972 479 967 | -16.2 | 0.000 000 | -0.004 |
| | 100 % | -10 | 3972 479 970 | -13.7 | 0.000 000 | -0.003 |
| | 100 % | 0 | 3972 479 969 | -14.6 | 0.000 000 | -0.004 |
| | 100 % | +10 | 3972 479 966 | -17.1 | 0.000 000 | -0.004 |
| | 100 % | +30 | 3972 479 974 | -9.0 | 0.000 000 | -0.002 |
| | 100 % | +40 | 3972 479 965 | -18.5 | 0.000 000 | -0.005 |
| | 100 % | +50 | 3972 479 967 | -16.9 | 0.000 000 | -0.004 |
| | Lowest voltage | +20 | 3972 479 974 | -9.1 | 0.000 000 | -0.002 |



The report shall not be (partly) reproduced except in full without approval of the laboratory.

▣ BandWidth: 20 MHz

▣ Voltage(100 %): 4.200 VDC

▣ Lowest voltage: 3.700 VDC

▣ LIMIT: Emission must remain in band

| Test. Frequncy | Voltage | Temp. | Frequency | Frequency | Deviation | ppm |
|---|---|---|---|---|---|---|
| (MHz) | (%) | (℃) | (Hz) | Error (Hz) | (%) | |
| 3710.010 | 100 % | +20(Ref) | 3710 009 984 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3710 009 974 | -10.5 | 0.000 000 | -0.003 |
| | 100 % | -20 | 3710 009 968 | -16.0 | 0.000 000 | -0.004 |
| | 100 % | -10 | 3710 009 971 | -12.7 | 0.000 000 | -0.003 |
| | 100 % | 0 | 3710 009 974 | -10.1 | 0.000 000 | -0.003 |
| | 100 % | +10 | 3710 009 977 | -6.8 | 0.000 000 | -0.002 |
| | 100 % | +30 | 3710 009 967 | -16.6 | 0.000 000 | -0.004 |
| | 100 % | +40 | 3710 009 970 | -13.5 | 0.000 000 | -0.004 |
| | 100 % | +50 | 3710 009 969 | -15.4 | 0.000 000 | -0.004 |
| | Lowest voltage | +20 | 3710 009 971 | -13.1 | 0.000 000 | -0.004 |
| 3969.990 | 100 % | +20(Ref) | 3969 989 994 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3969 989 984 | -9.7 | 0.000 000 | -0.002 |
| | 100 % | -20 | 3969 989 981 | -12.8 | 0.000 000 | -0.003 |
| | 100 % | -10 | 3969 989 983 | -11.4 | 0.000 000 | -0.003 |
| | 100 % | 0 | 3969 989 989 | -5.3 | 0.000 000 | -0.001 |
| | 100 % | +10 | 3969 989 985 | -8.6 | 0.000 000 | -0.002 |
| | 100 % | +30 | 3969 989 990 | -3.6 | 0.000 000 | -0.001 |
| | 100 % | +40 | 3969 989 983 | -11.2 | 0.000 000 | -0.003 |
| | 100 % | +50 | 3969 989 981 | -12.7 | 0.000 000 | -0.003 |
| | Lowest voltage | +20 | 3969 989 983 | -10.8 | 0.000 000 | -0.003 |



The report shall not be (partly) reproduced except in full without approval of the laboratory.

▣ BandWidth: 25 MHz

▣ Voltage(100 %): 4.200 VDC

▣ Lowest voltage: 3.700 VDC

▣ LIMIT: Emission must remain in band

| Test. Frequncy | Voltage | Temp. | Frequency | Frequency | Deviation | ppm |
|---|---|---|---|---|---|---|
| (MHz) | (%) | (°C) | (Hz) | Error (Hz) | (%) | |
| 3712.500 | 100 % | +20(Ref) | 3712 499 993 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3712 499 983 | -10.8 | 0.000 000 | -0.003 |
| | 100 % | -20 | 3712 499 984 | -9.1 | 0.000 000 | -0.002 |
| | 100 % | -10 | 3712 499 984 | -9.0 | 0.000 000 | -0.002 |
| | 100 % | 0 | 3712 499 985 | -8.0 | 0.000 000 | -0.002 |
| | 100 % | +10 | 3712 499 985 | -8.4 | 0.000 000 | -0.002 |
| | 100 % | +30 | 3712 499 986 | -7.3 | 0.000 000 | -0.002 |
| | 100 % | +40 | 3712 499 985 | -8.2 | 0.000 000 | -0.002 |
| | 100 % | +50 | 3712 499 984 | -9.1 | 0.000 000 | -0.002 |
| | Lowest voltage | +20 | 3712 499 986 | -7.2 | 0.000 000 | -0.002 |
| 3967.500 | 100 % | +20(Ref) | 3967 499 982 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3967 499 976 | -6.2 | 0.000 000 | -0.002 |
| | 100 % | -20 | 3967 499 978 | -4.2 | 0.000 000 | -0.001 |
| | 100 % | -10 | 3967 499 967 | -15.4 | 0.000 000 | -0.004 |
| | 100 % | 0 | 3967 499 971 | -11.1 | 0.000 000 | -0.003 |
| | 100 % | +10 | 3967 499 969 | -13.4 | 0.000 000 | -0.003 |
| | 100 % | +30 | 3967 499 971 | -10.8 | 0.000 000 | -0.003 |
| | 100 % | +40 | 3967 499 978 | -4.2 | 0.000 000 | -0.001 |
| | 100 % | +50 | 3967 499 980 | -1.8 | 0.000 000 | 0.000 |
| | Lowest voltage | +20 | 3967 499 973 | -9.1 | 0.000 000 | -0.002 |



The report shall not be (partly) reproduced except in full without approval of the laboratory.

▣ BandWidth: 30 MHz

▣ Voltage(100 %): 4.200 VDC

▣ Lowest voltage: 3.700 VDC

▣ LIMIT: Emission must remain in band

| Test. Frequncy | Voltage | Temp. | Frequency | Frequency | Deviation | ppm |
|---|---|---|---|---|---|---|
| (MHz) | (%) | (°C) | (Hz) | Error (Hz) | (%) | |
| 3715.020 | 100 % | +20(Ref) | 3715 019 982 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3715 019 966 | -16.3 | 0.000 000 | -0.004 |
| | 100 % | -20 | 3715 019 969 | -12.8 | 0.000 000 | -0.003 |
| | 100 % | -10 | 3715 019 971 | -11.3 | 0.000 000 | -0.003 |
| | 100 % | 0 | 3715 019 966 | -16.4 | 0.000 000 | -0.004 |
| | 100 % | +10 | 3715 019 964 | -18.4 | 0.000 000 | -0.005 |
| | 100 % | +30 | 3715 019 963 | -19.6 | -0.000 001 | -0.005 |
| | 100 % | +40 | 3715 019 962 | -20.0 | -0.000 001 | -0.005 |
| | 100 % | +50 | 3715 019 969 | -13.2 | 0.000 000 | -0.004 |
| | Lowest voltage | +20 | 3715 019 979 | -3.4 | 0.000 000 | -0.001 |
| 3964.980 | 100 % | +20(Ref) | 3964 979 986 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3964 979 962 | -23.2 | -0.000 001 | -0.006 |
| | 100 % | -20 | 3964 979 968 | -17.4 | 0.000 000 | -0.004 |
| | 100 % | -10 | 3964 979 972 | -13.7 | 0.000 000 | -0.003 |
| | 100 % | 0 | 3964 979 969 | -16.4 | 0.000 000 | -0.004 |
| | 100 % | +10 | 3964 979 984 | -1.2 | 0.000 000 | 0.000 |
| | 100 % | +30 | 3964 979 978 | -7.9 | 0.000 000 | -0.002 |
| | 100 % | +40 | 3964 979 976 | -9.7 | 0.000 000 | -0.002 |
| | 100 % | +50 | 3964 979 974 | -11.4 | 0.000 000 | -0.003 |
| | Lowest voltage | +20 | 3964 979 977 | -8.9 | 0.000 000 | -0.002 |



The report shall not be (partly) reproduced except in full without approval of the laboratory.

▣ BandWidth: 40 MHz

▣ Voltage(100 %): 4.200 VDC

▣ Lowest voltage: 3.700 VDC

▣ LIMIT: Emission must remain in band

| Test. Frequncy | Voltage | Temp. | Frequency | Frequency | Deviation | ppm |
|---|---|---|---|---|---|---|
| (MHz) | (%) | (°C) | (Hz) | Error (Hz) | (%) | |
| 3720.000 | 100 % | +20(Ref) | 3719 999 987 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3719 999 978 | -9.0 | 0.000 000 | -0.002 |
| | 100 % | -20 | 3719 999 975 | -11.7 | 0.000 000 | -0.003 |
| | 100 % | -10 | 3719 999 978 | -8.4 | 0.000 000 | -0.002 |
| | 100 % | 0 | 3719 999 975 | -11.8 | 0.000 000 | -0.003 |
| | 100 % | +10 | 3719 999 968 | -18.7 | -0.000 001 | -0.005 |
| | 100 % | +30 | 3719 999 971 | -16.0 | 0.000 000 | -0.004 |
| | 100 % | +40 | 3719 999 976 | -11.0 | 0.000 000 | -0.003 |
| | 100 % | +50 | 3719 999 971 | -15.9 | 0.000 000 | -0.004 |
| | Lowest voltage | +20 | 3719 999 971 | -15.9 | 0.000 000 | -0.004 |
| 3960.000 | 100 % | +20(Ref) | 3959 999 982 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3959 999 966 | -16.0 | 0.000 000 | -0.004 |
| | 100 % | -20 | 3959 999 966 | -16.7 | 0.000 000 | -0.004 |
| | 100 % | -10 | 3959 999 976 | -6.3 | 0.000 000 | -0.002 |
| | 100 % | 0 | 3959 999 971 | -11.7 | 0.000 000 | -0.003 |
| | 100 % | +10 | 3959 999 973 | -8.9 | 0.000 000 | -0.002 |
| | 100 % | +30 | 3959 999 974 | -8.6 | 0.000 000 | -0.002 |
| | 100 % | +40 | 3959 999 972 | -10.5 | 0.000 000 | -0.003 |
| | 100 % | +50 | 3959 999 972 | -10.3 | 0.000 000 | -0.003 |
| | Lowest voltage | +20 | 3959 999 970 | -12.5 | 0.000 000 | -0.003 |



The report shall not be (partly) reproduced except in full without approval of the laboratory.

▣ BandWidth: 50 MHz

▣ Voltage(100 %): 4.200 VDC

▣ Lowest voltage: 3.700 VDC

▣ LIMIT: Emission must remain in band

| Test. Frequncy | Voltage | Temp. | Frequency | Frequency | Deviation | ppm |
|---|---|---|---|---|---|---|
| (MHz) | (%) | (°C) | (Hz) | Error (Hz) | (%) | |
| 3725.010 | 100 % | +20(Ref) | 3725 009 991 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3725 009 981 | -9.3 | 0.000 000 | -0.003 |
| | 100 % | -20 | 3725 009 985 | -5.1 | 0.000 000 | -0.001 |
| | 100 % | -10 | 3725 009 984 | -7.0 | 0.000 000 | -0.002 |
| | 100 % | 0 | 3725 009 978 | -12.7 | 0.000 000 | -0.003 |
| | 100 % | +10 | 3725 009 978 | -12.6 | 0.000 000 | -0.003 |
| | 100 % | +30 | 3725 009 978 | -12.3 | 0.000 000 | -0.003 |
| | 100 % | +40 | 3725 009 983 | -7.2 | 0.000 000 | -0.002 |
| | 100 % | +50 | 3725 009 979 | -12.0 | 0.000 000 | -0.003 |
| | Lowest voltage | +20 | 3725 009 981 | -9.8 | 0.000 000 | -0.003 |
| 3954.990 | 100 % | +20(Ref) | 3954 989 988 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3954 989 977 | -11.1 | 0.000 000 | -0.003 |
| | 100 % | -20 | 3954 989 978 | -9.9 | 0.000 000 | -0.003 |
| | 100 % | -10 | 3954 989 972 | -16.2 | 0.000 000 | -0.004 |
| | 100 % | 0 | 3954 989 976 | -11.7 | 0.000 000 | -0.003 |
| | 100 % | +10 | 3954 989 975 | -13.3 | 0.000 000 | -0.003 |
| | 100 % | +30 | 3954 989 978 | -9.5 | 0.000 000 | -0.002 |
| | 100 % | +40 | 3954 989 974 | -13.4 | 0.000 000 | -0.003 |
| | 100 % | +50 | 3954 989 975 | -13.2 | 0.000 000 | -0.003 |
| | Lowest voltage | +20 | 3954 989 973 | -14.5 | 0.000 000 | -0.004 |



The report shall not be (partly) reproduced except in full without approval of the laboratory.

▣ BandWidth: 60 MHz

▣ Voltage(100 %): 4.200 VDC

▣ Lowest voltage: 3.700 VDC

▣ LIMIT: Emission must remain in band

| Test. Frequncy | Voltage | Temp. | Frequency | Frequency | Deviation | ppm |
|---|---|---|---|---|---|---|
| (MHz) | (%) | (°C) | (Hz) | Error (Hz) | (%) | |
| 3730.020 | 100 % | +20(Ref) | 3730 019 991 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3730 019 980 | -11.1 | 0.000 000 | -0.003 |
| | 100 % | -20 | 3730 019 974 | -16.4 | 0.000 000 | -0.004 |
| | 100 % | -10 | 3730 019 975 | -15.5 | 0.000 000 | -0.004 |
| | 100 % | 0 | 3730 019 976 | -15.1 | 0.000 000 | -0.004 |
| | 100 % | +10 | 3730 019 975 | -15.9 | 0.000 000 | -0.004 |
| | 100 % | +30 | 3730 019 981 | -10.0 | 0.000 000 | -0.003 |
| | 100 % | +40 | 3730 019 980 | -11.1 | 0.000 000 | -0.003 |
| | 100 % | +50 | 3730 019 977 | -14.2 | 0.000 000 | -0.004 |
| | Lowest voltage | +20 | 3730 019 973 | -17.4 | 0.000 000 | -0.005 |
| 3949.980 | 100 % | +20(Ref) | 3949 979 988 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3949 979 974 | -14.6 | 0.000 000 | -0.004 |
| | 100 % | -20 | 3949 979 978 | -9.9 | 0.000 000 | -0.003 |
| | 100 % | -10 | 3949 979 976 | -11.9 | 0.000 000 | -0.003 |
| | 100 % | 0 | 3949 979 978 | -10.1 | 0.000 000 | -0.003 |
| | 100 % | +10 | 3949 979 975 | -13.3 | 0.000 000 | -0.003 |
| | 100 % | +30 | 3949 979 976 | -12.8 | 0.000 000 | -0.003 |
| | 100 % | +40 | 3949 979 973 | -15.5 | 0.000 000 | -0.004 |
| | 100 % | +50 | 3949 979 975 | -13.0 | 0.000 000 | -0.003 |
| | Lowest voltage | +20 | 3949 979 975 | -13.6 | 0.000 000 | -0.003 |



The report shall not be (partly) reproduced except in full without approval of the laboratory.

▣ BandWidth: 70 MHz

▣ Voltage(100 %): 4.200 VDC

▣ Lowest voltage: 3.700 VDC

▣ LIMIT: Emission must remain in band

| Test. Frequncy | Voltage | Temp. | Frequency | Frequency | Deviation | ppm |
|---|---|---|---|---|---|---|
| (MHz) | (%) | (°C) | (Hz) | Error (Hz) | (%) | |
| 3735.000 | 100 % | +20(Ref) | 3734 999 985 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3734 999 965 | -19.3 | -0.000 001 | -0.005 |
| | 100 % | -20 | 3734 999 972 | -12.9 | 0.000 000 | -0.003 |
| | 100 % | -10 | 3734 999 974 | -10.7 | 0.000 000 | -0.003 |
| | 100 % | 0 | 3734 999 978 | -6.5 | 0.000 000 | -0.002 |
| | 100 % | +10 | 3734 999 976 | -8.3 | 0.000 000 | -0.002 |
| | 100 % | +30 | 3734 999 971 | -13.3 | 0.000 000 | -0.004 |
| | 100 % | +40 | 3734 999 975 | -10.1 | 0.000 000 | -0.003 |
| | 100 % | +50 | 3734 999 979 | -6.1 | 0.000 000 | -0.002 |
| | Lowest voltage | +20 | 3734 999 970 | -14.4 | 0.000 000 | -0.004 |
| 3945.000 | 100 % | +20(Ref) | 3944 999 989 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3944 999 981 | -7.4 | 0.000 000 | -0.002 |
| | 100 % | -20 | 3944 999 976 | -13.0 | 0.000 000 | -0.003 |
| | 100 % | -10 | 3944 999 977 | -11.3 | 0.000 000 | -0.003 |
| | 100 % | 0 | 3944 999 976 | -12.1 | 0.000 000 | -0.003 |
| | 100 % | +10 | 3944 999 977 | -11.8 | 0.000 000 | -0.003 |
| | 100 % | +30 | 3944 999 984 | -4.3 | 0.000 000 | -0.001 |
| | 100 % | +40 | 3944 999 977 | -12.0 | 0.000 000 | -0.003 |
| | 100 % | +50 | 3944 999 983 | -5.4 | 0.000 000 | -0.001 |
| | Lowest voltage | +20 | 3944 999 988 | -0.6 | 0.000 000 | 0.000 |



The report shall not be (partly) reproduced except in full without approval of the laboratory.

▣ BandWidth: 80 MHz

▣ Voltage(100 %): 4.200 VDC

▣ Lowest voltage: 3.700 VDC

▣ LIMIT: Emission must remain in band

| Test. Frequncy | Voltage | Temp. | Frequency | Frequency | Deviation | ppm |
|---|---|---|---|---|---|---|
| (MHz) | (%) | (°C) | (Hz) | Error (Hz) | (%) | |
| 3740.010 | 100 % | +20(Ref) | 3740 009 989 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3740 009 977 | -12.5 | 0.000 000 | -0.003 |
| | 100 % | -20 | 3740 009 984 | -5.5 | 0.000 000 | -0.001 |
| | 100 % | -10 | 3740 009 978 | -11.0 | 0.000 000 | -0.003 |
| | 100 % | 0 | 3740 009 982 | -7.9 | 0.000 000 | -0.002 |
| | 100 % | +10 | 3740 009 980 | -9.7 | 0.000 000 | -0.003 |
| | 100 % | +30 | 3740 009 984 | -5.5 | 0.000 000 | -0.001 |
| | 100 % | +40 | 3740 009 978 | -11.2 | 0.000 000 | -0.003 |
| | 100 % | +50 | 3740 009 983 | -6.2 | 0.000 000 | -0.002 |
| | Lowest voltage | +20 | 3740 009 979 | -10.1 | 0.000 000 | -0.003 |
| 3939.990 | 100 % | +20(Ref) | 3939 989 986 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3939 989 969 | -16.8 | 0.000 000 | -0.004 |
| | 100 % | -20 | 3939 989 972 | -14.0 | 0.000 000 | -0.004 |
| | 100 % | -10 | 3939 989 971 | -15.4 | 0.000 000 | -0.004 |
| | 100 % | 0 | 3939 989 968 | -18.2 | 0.000 000 | -0.005 |
| | 100 % | +10 | 3939 989 977 | -9.4 | 0.000 000 | -0.002 |
| | 100 % | +30 | 3939 989 971 | -14.9 | 0.000 000 | -0.004 |
| | 100 % | +40 | 3939 989 971 | -14.6 | 0.000 000 | -0.004 |
| | 100 % | +50 | 3939 989 972 | -13.9 | 0.000 000 | -0.004 |
| | Lowest voltage | +20 | 3939 989 968 | -17.6 | 0.000 000 | -0.004 |



The report shall not be (partly) reproduced except in full without approval of the laboratory.

▣ BandWidth: 90 MHz

▣ Voltage(100 %): 4.200 VDC

▣ Lowest voltage: 3.700 VDC

▣ LIMIT: Emission must remain in band

| Test. Frequncy | Voltage | Temp. | Frequency | Frequency | Deviation | ppm |
|---|---|---|---|---|---|---|
| (MHz) | (%) | (℃) | (Hz) | Error (Hz) | (%) | |
| 3745.020 | 100 % | +20(Ref) | 3745 019 991 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3745 019 979 | -12.1 | 0.000 000 | -0.003 |
| | 100 % | -20 | 3745 019 981 | -9.9 | 0.000 000 | -0.003 |
| | 100 % | -10 | 3745 019 974 | -17.5 | 0.000 000 | -0.005 |
| | 100 % | 0 | 3745 019 983 | -8.0 | 0.000 000 | -0.002 |
| | 100 % | +10 | 3745 019 978 | -13.0 | 0.000 000 | -0.003 |
| | 100 % | +30 | 3745 019 977 | -14.2 | 0.000 000 | -0.004 |
| | 100 % | +40 | 3745 019 982 | -9.5 | 0.000 000 | -0.003 |
| | 100 % | +50 | 3745 019 978 | -13.2 | 0.000 000 | -0.004 |
| | Lowest voltage | +20 | 3745 019 983 | -8.0 | 0.000 000 | -0.002 |
| 3934.980 | 100 % | +20(Ref) | 3934 979 989 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3934 979 981 | -8.2 | 0.000 000 | -0.002 |
| | 100 % | -20 | 3934 979 985 | -3.9 | 0.000 000 | -0.001 |
| | 100 % | -10 | 3934 979 982 | -7.6 | 0.000 000 | -0.002 |
| | 100 % | 0 | 3934 979 985 | -4.6 | 0.000 000 | -0.001 |
| | 100 % | +10 | 3934 979 980 | -9.2 | 0.000 000 | -0.002 |
| | 100 % | +30 | 3934 979 979 | -10.9 | 0.000 000 | -0.003 |
| | 100 % | +40 | 3934 979 975 | -14.0 | 0.000 000 | -0.004 |
| | 100 % | +50 | 3934 979 985 | -4.6 | 0.000 000 | -0.001 |
| | Lowest voltage | +20 | 3934 979 980 | -9.5 | 0.000 000 | -0.002 |



The report shall not be (partly) reproduced except in full without approval of the laboratory.

▣ BandWidth: 100 MHz

▣ Voltage(100 %): 4.200 VDC

▣ Lowest voltage: 3.700 VDC

▣ LIMIT: Emission must remain in band

| Test. Frequncy | Voltage | Temp. | Frequency | Frequency | Deviation | ppm |
|---|---|---|---|---|---|---|
| (MHz) | (%) | (°C) | (Hz) | Error (Hz) | (%) | |
| 3750.000 | 100 % | +20(Ref) | 3749 999 991 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3749 999 979 | -12.2 | 0.000 000 | -0.003 |
| | 100 % | -20 | 3749 999 980 | -11.0 | 0.000 000 | -0.003 |
| | 100 % | -10 | 3749 999 984 | -7.4 | 0.000 000 | -0.002 |
| | 100 % | 0 | 3749 999 982 | -9.4 | 0.000 000 | -0.003 |
| | 100 % | +10 | 3749 999 985 | -5.6 | 0.000 000 | -0.001 |
| | 100 % | +30 | 3749 999 980 | -10.8 | 0.000 000 | -0.003 |
| | 100 % | +40 | 3749 999 981 | -10.2 | 0.000 000 | -0.003 |
| | 100 % | +50 | 3749 999 979 | -11.8 | 0.000 000 | -0.003 |
| | Lowest voltage | +20 | 3749 999 976 | -15.1 | 0.000 000 | -0.004 |
| 3930.000 | 100 % | +20(Ref) | 3929 999 996 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3929 999 992 | -4.8 | 0.000 000 | -0.001 |
| | 100 % | -20 | 3929 999 989 | -7.1 | 0.000 000 | -0.002 |
| | 100 % | -10 | 3929 999 991 | -5.0 | 0.000 000 | -0.001 |
| | 100 % | 0 | 3929 999 986 | -10.2 | 0.000 000 | -0.003 |
| | 100 % | +10 | 3929 999 990 | -6.3 | 0.000 000 | -0.002 |
| | 100 % | +30 | 3929 999 991 | -5.7 | 0.000 000 | -0.001 |
| | 100 % | +40 | 3929 999 990 | -6.6 | 0.000 000 | -0.002 |
| | 100 % | +50 | 3929 999 987 | -9.3 | 0.000 000 | -0.002 |
| | Lowest voltage | +20 | 3929 999 989 | -7.1 | 0.000 000 | -0.002 |



The report shall not be (partly) reproduced except in full without approval of the laboratory.

# 10. TEST DATA (MIMO2, 3450 MHz - 3550 MHz)

## 10.1 EQUIVALENT ISOTROPIC RADIATED POWER

| Freq (MHz) | Mod/ Bandwidth [SCS (kHz)] | Modulation | Measured (dBμV/m) | Ant. Factor + Dis. Factor(dB) | Cable loss(dB) | Total (dBμV/m) | Pol. | Limit | EIRP | | RB | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | W | W | dBm | Size | Offset |
| 3455.01 | Sub6 n77/ 10 MHz [30 kHz] | PI/2 BPSK | 81.22 | 30.80 | 5.43 | 117.45 | H | < 1.00 | 0.168 | 22.25 | 1 | 22 |
| | | QPSK | 80.23 | 30.80 | 5.43 | 116.46 | H | | 0.134 | 21.26 | | |
| | | 16-QAM | 80.76 | 30.80 | 5.43 | 116.99 | H | | 0.151 | 21.79 | | |
| | | 64-QAM | 80.73 | 30.80 | 5.43 | 116.96 | H | | 0.150 | 21.76 | | |
| | | 256-QAM | 79.19 | 30.80 | 5.43 | 115.42 | H | | 0.105 | 20.22 | | |
| 3500.01 | | PI/2 BPSK | 80.66 | 31.10 | 5.45 | 117.21 | H | | 0.159 | 22.01 | 1 | 12 |
| | | QPSK | 80.33 | 31.10 | 5.45 | 116.88 | H | | 0.147 | 21.68 | | |
| | | 16-QAM | 80.10 | 31.10 | 5.45 | 116.65 | H | | 0.140 | 21.45 | | |
| | | 64-QAM | 80.21 | 31.10 | 5.45 | 116.76 | H | | 0.143 | 21.56 | | |
| | | 256-QAM | 80.65 | 31.10 | 5.45 | 117.20 | H | | 0.158 | 22.00 | | |
| 3544.99 | | PI/2 BPSK | 82.08 | 31.50 | 5.51 | 119.09 | H | | 0.245 | 23.89 | 1 | 22 |
| | | QPSK | 81.73 | 31.50 | 5.51 | 118.74 | H | | 0.226 | 23.54 | | |
| | | 16-QAM | 81.51 | 31.50 | 5.51 | 118.52 | H | | 0.215 | 23.32 | | |
| | | 64-QAM | 81.58 | 31.50 | 5.51 | 118.59 | H | | 0.218 | 23.39 | | |
| | | 256-QAM | 80.93 | 31.50 | 5.51 | 117.94 | H | | 0.188 | 22.74 | | |



The report shall not be (partly) reproduced except in full without approval of the laboratory.

| Freq (MHz) | Mod/ Bandwidth [SCS (kHz)] | Modulation | Measured (dBμV/m) | Ant. Factor + Dis. Factor(dB) | Cable loss(dB) | Total (dBμV/m) | Pol. | Limit | EIRP | | RB | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | W | W | dBm | Size | Offset |
| 3457.50 | Sub6 n77/ 15 MHz [30 kHz] | PI/2 BPSK | 80.79 | 30.80 | 5.43 | 117.02 | H | < 1.00 | 0.152 | 21.82 | 1 | 1 |
| | | QPSK | 80.24 | 30.80 | 5.43 | 116.47 | H | | 0.134 | 21.27 | | |
| | | 16-QAM | 80.09 | 30.80 | 5.43 | 116.32 | H | | 0.129 | 21.12 | | |
| | | 64-QAM | 79.70 | 30.80 | 5.43 | 115.93 | H | | 0.118 | 20.73 | | |
| | | 256-QAM | 79.63 | 30.80 | 5.43 | 115.86 | H | | 0.116 | 20.66 | | |
| 3500.01 | | PI/2 BPSK | 81.98 | 31.10 | 5.45 | 118.53 | H | | 0.215 | 23.33 | 1 | 36 |
| | | QPSK | 81.46 | 31.10 | 5.45 | 118.01 | H | | 0.191 | 22.81 | | |
| | | 16-QAM | 81.74 | 31.10 | 5.45 | 118.29 | H | | 0.204 | 23.09 | | |
| | | 64-QAM | 79.32 | 31.10 | 5.45 | 115.87 | H | | 0.117 | 20.67 | | |
| | | 256-QAM | 80.64 | 31.10 | 5.45 | 117.19 | H | | 0.158 | 21.99 | | |
| 3542.50 | | PI/2 BPSK | 81.84 | 31.50 | 5.51 | 118.85 | H | | 0.232 | 23.65 | 1 | 36 |
| | | QPSK | 80.63 | 31.50 | 5.51 | 117.64 | H | | 0.175 | 22.44 | | |
| | | 16-QAM | 81.38 | 31.50 | 5.51 | 118.39 | H | | 0.208 | 23.19 | | |
| | | 64-QAM | 81.79 | 31.50 | 5.51 | 118.80 | H | | 0.229 | 23.60 | | |
| | | 256-QAM | 81.22 | 31.50 | 5.51 | 118.23 | H | | 0.201 | 23.03 | | |



The report shall not be (partly) reproduced except in full without approval of the laboratory.

| Freq (MHz) | Mod/ Bandwidth [SCS (kHz)] | Modulation | Measured (dBμV/m) | Ant. Factor + Dis. Factor(dB) | Cable loss(dB) | Total (dBμV/m) | Pol. | Limit | EIRP | | RB | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | W | W | dBm | Size | Offset |
| 3460.02 | Sub6 n77/ 20 MHz [30 kHz] | PI/2 BPSK | 80.73 | 30.80 | 5.43 | 116.96 | H | < 1.00 | 0.150 | 21.76 | 1 | 25 |
| | | QPSK | 80.34 | 30.80 | 5.43 | 116.57 | H | | 0.137 | 21.37 | | |
| | | 16-QAM | 80.12 | 30.80 | 5.43 | 116.35 | H | | 0.130 | 21.15 | | |
| | | 64-QAM | 79.46 | 30.80 | 5.43 | 115.69 | H | | 0.112 | 20.49 | | |
| | | 256-QAM | 80.66 | 30.80 | 5.43 | 116.89 | H | | 0.148 | 21.69 | | |
| 3500.01 | | PI/2 BPSK | 80.47 | 31.10 | 5.45 | 117.02 | H | | 0.152 | 21.82 | 1 | 1 |
| | | QPSK | 80.23 | 31.10 | 5.45 | 116.78 | H | | 0.144 | 21.58 | | |
| | | 16-QAM | 79.96 | 31.10 | 5.45 | 116.51 | H | | 0.135 | 21.31 | | |
| | | 64-QAM | 80.34 | 31.10 | 5.45 | 116.89 | H | | 0.148 | 21.69 | | |
| | | 256-QAM | 79.95 | 31.10 | 5.45 | 116.50 | H | | 0.135 | 21.30 | | |
| 3540.00 | | PI/2 BPSK | 81.90 | 31.50 | 5.51 | 118.91 | H | | 0.235 | 23.71 | 1 | 49 |
| | | QPSK | 81.10 | 31.50 | 5.51 | 118.11 | H | | 0.195 | 22.91 | | |
| | | 16-QAM | 80.19 | 31.50 | 5.51 | 117.20 | H | | 0.158 | 22.00 | | |
| | | 64-QAM | 80.75 | 31.50 | 5.51 | 117.76 | H | | 0.180 | 22.56 | | |
| | | 256-QAM | 81.48 | 31.50 | 5.51 | 118.49 | H | | 0.213 | 23.29 | | |



The report shall not be (partly) reproduced except in full without approval of the laboratory.

| Freq (MHz) | Mod/ Bandwidth [SCS (kHz)] | Modulation | Measured (dBμV/m) | Ant. Factor + Dis. Factor(dB) | Cable loss(dB) | Total (dBμV/m) | Pol. | Limit | EIRP | | RB | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | W | W | dBm | Size | Offset |
| 3462.50 | Sub6 n77/ 25 MHz [30 kHz] | PI/2 BPSK | 80.63 | 30.80 | 5.43 | 116.86 | H | < 1.00 | 0.147 | 21.66 | 1 | 32 |
| | | QPSK | 79.39 | 30.80 | 5.43 | 115.62 | H | | 0.110 | 20.42 | | |
| | | 16-QAM | 79.59 | 30.80 | 5.43 | 115.82 | H | | 0.115 | 20.62 | | |
| | | 64-QAM | 79.35 | 30.80 | 5.43 | 115.58 | H | | 0.109 | 20.38 | | |
| | | 256-QAM | 79.73 | 30.80 | 5.43 | 115.96 | H | | 0.119 | 20.76 | | |
| 3500.01 | | PI/2 BPSK | 79.85 | 31.10 | 5.45 | 116.40 | H | | 0.132 | 21.20 | 1 | 1 |
| | | QPSK | 79.51 | 31.10 | 5.45 | 116.06 | H | | 0.122 | 20.86 | | |
| | | 16-QAM | 79.84 | 31.10 | 5.45 | 116.39 | H | | 0.132 | 21.19 | | |
| | | 64-QAM | 79.76 | 31.10 | 5.45 | 116.31 | H | | 0.129 | 21.11 | | |
| | | 256-QAM | 79.06 | 31.10 | 5.45 | 115.61 | H | | 0.110 | 20.41 | | |
| 3537.50 | | PI/2 BPSK | 80.74 | 31.50 | 5.51 | 117.75 | H | | 0.180 | 22.55 | 1 | 1 |
| | | QPSK | 79.59 | 31.50 | 5.51 | 116.60 | H | | 0.138 | 21.40 | | |
| | | 16-QAM | 79.94 | 31.50 | 5.51 | 116.95 | H | | 0.150 | 21.75 | | |
| | | 64-QAM | 80.41 | 31.50 | 5.51 | 117.42 | H | | 0.167 | 22.22 | | |
| | | 256-QAM | 79.61 | 31.50 | 5.51 | 116.62 | H | | 0.139 | 21.42 | | |



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| Freq (MHz) | Mod/ Bandwidth [SCS (kHz)] | Modulation | Measured (dBμV/m) | Ant. Factor + Dis. Factor(dB) | Cable loss(dB) | Total (dBμV/m) | Pol. | Limit | EIRP | | RB | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | W | W | dBm | Size | Offset |
| 3465.00 | Sub6 n77/ 30 MHz [30 kHz] | PI/2 BPSK | 80.24 | 30.80 | 5.43 | 116.47 | H | < 1.00 | 0.134 | 21.27 | 1 | 76 |
| | | QPSK | 79.62 | 30.80 | 5.43 | 115.85 | H | | 0.116 | 20.65 | | |
| | | 16-QAM | 79.58 | 30.80 | 5.43 | 115.81 | H | | 0.115 | 20.61 | | |
| | | 64-QAM | 79.31 | 30.80 | 5.43 | 115.54 | H | | 0.108 | 20.34 | | |
| | | 256-QAM | 80.19 | 30.80 | 5.43 | 116.42 | H | | 0.132 | 21.22 | | |
| 3500.01 | | PI/2 BPSK | 80.66 | 31.10 | 5.45 | 117.21 | H | | 0.159 | 22.01 | 1 | 1 |
| | | QPSK | 80.07 | 31.10 | 5.45 | 116.62 | H | | 0.139 | 21.42 | | |
| | | 16-QAM | 79.78 | 31.10 | 5.45 | 116.33 | H | | 0.130 | 21.13 | | |
| | | 64-QAM | 80.17 | 31.10 | 5.45 | 116.72 | H | | 0.142 | 21.52 | | |
| | | 256-QAM | 79.92 | 31.10 | 5.45 | 116.47 | H | | 0.134 | 21.27 | | |
| 3534.99 | | PI/2 BPSK | 80.97 | 31.50 | 5.51 | 117.98 | H | | 0.190 | 22.78 | 1 | 1 |
| | | QPSK | 80.44 | 31.50 | 5.51 | 117.45 | H | | 0.168 | 22.25 | | |
| | | 16-QAM | 80.29 | 31.50 | 5.51 | 117.30 | H | | 0.162 | 22.10 | | |
| | | 64-QAM | 79.27 | 31.50 | 5.51 | 116.28 | H | | 0.128 | 21.08 | | |
| | | 256-QAM | 79.68 | 31.50 | 5.51 | 116.69 | H | | 0.141 | 21.49 | | |



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| Freq (MHz) | Mod/ Bandwidth [SCS (kHz)] | Modulation | Measured (dBμV/m) | Ant. Factor + Dis. Factor(dB) | Cable loss(dB) | Total (dBμV/m) | Pol. | Limit | EIRP | | RB | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | W | W | dBm | Size | Offset |
| 3470.01 | Sub6 n77/ 40 MHz [30 kHz] | PI/2 BPSK | 80.44 | 30.80 | 5.43 | 116.67 | H | < 1.00 | 0.140 | 21.47 | 1 | 104 |
| | | QPSK | 80.14 | 30.80 | 5.43 | 116.37 | H | | 0.131 | 21.17 | | |
| | | 16-QAM | 78.75 | 30.80 | 5.43 | 114.98 | H | | 0.095 | 19.78 | | |
| | | 64-QAM | 79.30 | 30.80 | 5.43 | 115.53 | H | | 0.108 | 20.33 | | |
| | | 256-QAM | 79.27 | 30.80 | 5.43 | 115.50 | H | | 0.107 | 20.30 | | |
| 3500.01 | | PI/2 BPSK | 81.20 | 31.10 | 5.45 | 117.75 | H | | 0.180 | 22.55 | 1 | 104 |
| | | QPSK | 80.18 | 31.10 | 5.45 | 116.73 | H | | 0.142 | 21.53 | | |
| | | 16-QAM | 79.82 | 31.10 | 5.45 | 116.37 | H | | 0.131 | 21.17 | | |
| | | 64-QAM | 80.75 | 31.10 | 5.45 | 117.30 | H | | 0.162 | 22.10 | | |
| | | 256-QAM | 79.91 | 31.10 | 5.45 | 116.46 | H | | 0.134 | 21.26 | | |
| 3529.98 | | PI/2 BPSK | 81.28 | 31.50 | 5.51 | 118.29 | H | | 0.204 | 23.09 | 1 | 104 |
| | | QPSK | 80.59 | 31.50 | 5.51 | 117.60 | H | | 0.174 | 22.40 | | |
| | | 16-QAM | 80.38 | 31.50 | 5.51 | 117.39 | H | | 0.166 | 22.19 | | |
| | | 64-QAM | 80.93 | 31.50 | 5.51 | 117.94 | H | | 0.188 | 22.74 | | |
| | | 256-QAM | 81.05 | 31.50 | 5.51 | 118.06 | H | | 0.193 | 22.86 | | |



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| Freq (MHz) | Mod/ Bandwidth [SCS (kHz)] | Modulation | Measured (dBμV/m) | Ant. Factor + Dis. Factor(dB) | Cable loss(dB) | Total (dBμV/m) | Pol. | Limit | EIRP | | RB | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | W | W | dBm | Size | Offset |
| 3475.02 | Sub6 n77/ 50 MHz [30 kHz] | PI/2 BPSK | 81.07 | 30.80 | 5.43 | 117.30 | H | < 1.00 | 0.162 | 22.10 | 1 | 66 |
| | | QPSK | 79.50 | 30.80 | 5.43 | 115.73 | H | | 0.113 | 20.53 | | |
| | | 16-QAM | 80.19 | 30.80 | 5.43 | 116.42 | H | | 0.132 | 21.22 | | |
| | | 64-QAM | 80.53 | 30.80 | 5.43 | 116.76 | H | | 0.143 | 21.56 | | |
| | | 256-QAM | 80.65 | 30.80 | 5.43 | 116.88 | H | | 0.147 | 21.68 | | |
| 3500.01 | | PI/2 BPSK | 80.48 | 31.10 | 5.45 | 117.03 | H | | 0.152 | 21.83 | 1 | 131 |
| | | QPSK | 80.48 | 31.10 | 5.45 | 117.03 | H | | 0.152 | 21.83 | | |
| | | 16-QAM | 80.42 | 31.10 | 5.45 | 116.97 | H | | 0.150 | 21.77 | | |
| | | 64-QAM | 80.22 | 31.10 | 5.45 | 116.77 | H | | 0.144 | 21.57 | | |
| | | 256-QAM | 79.32 | 31.10 | 5.45 | 115.87 | H | | 0.117 | 20.67 | | |
| 3525.00 | | PI/2 BPSK | 80.80 | 31.50 | 5.51 | 117.81 | H | | 0.182 | 22.61 | 1 | 131 |
| | | QPSK | 80.56 | 31.50 | 5.51 | 117.57 | H | | 0.173 | 22.37 | | |
| | | 16-QAM | 80.44 | 31.50 | 5.51 | 117.45 | H | | 0.168 | 22.25 | | |
| | | 64-QAM | 79.21 | 31.50 | 5.51 | 116.22 | H | | 0.126 | 21.02 | | |
| | | 256-QAM | 80.27 | 31.50 | 5.51 | 117.28 | H | | 0.161 | 22.08 | | |



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| Freq (MHz) | Mod/ Bandwidth [SCS (kHz)] | Modulation | Measured (dBμV/m) | Ant. Factor + Dis. Factor(dB) | Cable loss(dB) | Total (dBμV/m) | Pol. | Limit | EIRP | | RB | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | W | W | dBm | Size | Offset |
| 3480.00 | Sub6 n77/ 60 MHz [30 kHz] | PI/2 BPSK | 81.32 | 30.80 | 5.43 | 117.55 | H | < 1.00 | 0.172 | 22.35 | 1 | 160 |
| | | QPSK | 80.00 | 30.80 | 5.43 | 116.23 | H | | 0.127 | 21.03 | | |
| | | 16-QAM | 79.07 | 30.80 | 5.43 | 115.30 | H | | 0.102 | 20.10 | | |
| | | 64-QAM | 79.75 | 30.80 | 5.43 | 115.98 | H | | 0.120 | 20.78 | | |
| | | 256-QAM | 80.05 | 30.80 | 5.43 | 116.28 | H | | 0.128 | 21.08 | | |
| 3500.01 | | PI/2 BPSK | 80.74 | 31.10 | 5.45 | 117.29 | H | | 0.162 | 22.09 | 1 | 82 |
| | | QPSK | 79.95 | 31.10 | 5.45 | 116.50 | H | | 0.135 | 21.30 | | |
| | | 16-QAM | 80.08 | 31.10 | 5.45 | 116.63 | H | | 0.139 | 21.43 | | |
| | | 64-QAM | 79.86 | 31.10 | 5.45 | 116.41 | H | | 0.132 | 21.21 | | |
| | | 256-QAM | 79.18 | 31.10 | 5.45 | 115.73 | H | | 0.113 | 20.53 | | |
| 3519.99 | | PI/2 BPSK | 80.05 | 31.50 | 5.51 | 117.06 | H | | 0.153 | 21.86 | 1 | 1 |
| | | QPSK | 80.05 | 31.50 | 5.51 | 117.06 | H | | 0.153 | 21.86 | | |
| | | 16-QAM | 79.82 | 31.50 | 5.51 | 116.83 | H | | 0.146 | 21.63 | | |
| | | 64-QAM | 79.90 | 31.50 | 5.51 | 116.91 | H | | 0.148 | 21.71 | | |
| | | 256-QAM | 79.99 | 31.50 | 5.51 | 117.00 | H | | 0.151 | 21.80 | | |



The report shall not be (partly) reproduced except in full without approval of the laboratory.

| Freq (MHz) | Mod/ Bandwidth [SCS (kHz)] | Modulation | Measured (dBμV/m) | Ant. Factor + Dis. Factor(dB) | Cable loss(dB) | Total (dBμV/m) | Pol. | Limit | EIRP | | RB | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | W | W | dBm | Size | Offset |
| 3485.01 | Sub6 n77/ 70 MHz [30 kHz] | PI/2 BPSK | 80.31 | 30.80 | 5.43 | 116.54 | H | < 1.00 | 0.136 | 21.34 | 1 | 94 |
| | | QPSK | 79.63 | 30.80 | 5.43 | 115.86 | H | | 0.116 | 20.66 | | |
| | | 16-QAM | 79.19 | 30.80 | 5.43 | 115.42 | H | | 0.105 | 20.22 | | |
| | | 64-QAM | 79.53 | 30.80 | 5.43 | 115.76 | H | | 0.114 | 20.56 | | |
| | | 256-QAM | 79.35 | 30.80 | 5.43 | 115.58 | H | | 0.109 | 20.38 | | |
| 3500.01 | | PI/2 BPSK | 80.94 | 31.10 | 5.45 | 117.49 | H | | 0.169 | 22.29 | 1 | 187 |
| | | QPSK | 80.07 | 31.10 | 5.45 | 116.62 | H | | 0.139 | 21.42 | | |
| | | 16-QAM | 79.04 | 31.10 | 5.45 | 115.59 | H | | 0.109 | 20.39 | | |
| | | 64-QAM | 80.69 | 31.10 | 5.45 | 117.24 | H | | 0.160 | 22.04 | | |
| | | 256-QAM | 79.64 | 31.10 | 5.45 | 116.19 | H | | 0.126 | 20.99 | | |
| 3514.98 | | PI/2 BPSK | 81.32 | 31.50 | 5.51 | 118.33 | H | | 0.206 | 23.13 | 1 | 187 |
| | | QPSK | 80.80 | 31.50 | 5.51 | 117.81 | H | | 0.182 | 22.61 | | |
| | | 16-QAM | 80.10 | 31.50 | 5.51 | 117.11 | H | | 0.155 | 21.91 | | |
| | | 64-QAM | 79.96 | 31.50 | 5.51 | 116.97 | H | | 0.150 | 21.77 | | |
| | | 256-QAM | 80.83 | 31.50 | 5.51 | 117.84 | H | | 0.184 | 22.64 | | |



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| Freq (MHz) | Mod/ Bandwidth [SCS (kHz)] | Modulation | Measured (dBμV/m) | Ant. Factor + Dis. Factor(dB) | Cable loss(dB) | Total (dBμV/m) | Pol. | Limit | EIRP | | RB | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | W | W | dBm | Size | Offset |
| 3490.02 | Sub6 n77/ 80 MHz [30 kHz] | PI/2 BPSK | 80.61 | 30.80 | 5.43 | 116.84 | H | < 1.00 | 0.146 | 21.64 | 1 | 1 |
| | | QPSK | 80.01 | 30.80 | 5.43 | 116.24 | H | | 0.127 | 21.04 | | |
| | | 16-QAM | 78.95 | 30.80 | 5.43 | 115.18 | H | | 0.100 | 19.98 | | |
| | | 64-QAM | 80.27 | 30.80 | 5.43 | 116.50 | H | | 0.135 | 21.30 | | |
| | | 256-QAM | 79.37 | 30.80 | 5.43 | 115.60 | H | | 0.110 | 20.40 | | |
| 3500.01 | | PI/2 BPSK | 80.71 | 31.10 | 5.45 | 117.26 | H | | 0.161 | 22.06 | 1 | 215 |
| | | QPSK | 80.51 | 31.10 | 5.45 | 117.06 | H | | 0.153 | 21.86 | | |
| | | 16-QAM | 79.48 | 31.10 | 5.45 | 116.03 | H | | 0.121 | 20.83 | | |
| | | 64-QAM | 80.31 | 31.10 | 5.45 | 116.86 | H | | 0.147 | 21.66 | | |
| | | 256-QAM | 79.16 | 31.10 | 5.45 | 115.71 | H | | 0.112 | 20.51 | | |
| 3510.00 | | PI/2 BPSK | 80.17 | 31.50 | 5.51 | 117.18 | H | | 0.158 | 21.98 | 1 | 108 |
| | | QPSK | 79.51 | 31.50 | 5.51 | 116.52 | H | | 0.136 | 21.32 | | |
| | | 16-QAM | 80.15 | 31.50 | 5.51 | 117.16 | H | | 0.157 | 21.96 | | |
| | | 64-QAM | 77.81 | 31.50 | 5.51 | 114.82 | H | | 0.092 | 19.62 | | |
| | | 256-QAM | 79.30 | 31.50 | 5.51 | 116.31 | H | | 0.129 | 21.11 | | |



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| Freq (MHz) | Mod/ Bandwidth [SCS (kHz)] | Modulation | Measured (dBμV/m) | Ant. Factor + Dis. Factor(dB) | Cable loss(dB) | Total (dBμV/m) | Pol. | Limit | EIRP | | RB | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | W | W | dBm | Size | Offset |
| 3495.00 | Sub6 n77/ 90 MHz [30 kHz] | PI/2 BPSK | 79.97 | 30.80 | 5.43 | 116.20 | H | < 1.00 | 0.126 | 21.00 | 1 | 1 |
| | | QPSK | 78.94 | 30.80 | 5.43 | 115.17 | H | | 0.099 | 19.97 | | |
| | | 16-QAM | 79.93 | 30.80 | 5.43 | 116.16 | H | | 0.125 | 20.96 | | |
| | | 64-QAM | 79.74 | 30.80 | 5.43 | 115.97 | H | | 0.119 | 20.77 | | |
| | | 256-QAM | 79.63 | 30.80 | 5.43 | 115.86 | H | | 0.116 | 20.66 | | |
| 3500.01 | | PI/2 BPSK | 80.86 | 31.10 | 5.45 | 117.41 | H | | 0.166 | 22.21 | 1 | 1 |
| | | QPSK | 79.09 | 31.10 | 5.45 | 115.64 | H | | 0.111 | 20.44 | | |
| | | 16-QAM | 79.83 | 31.10 | 5.45 | 116.38 | H | | 0.131 | 21.18 | | |
| | | 64-QAM | 79.27 | 31.10 | 5.45 | 115.82 | H | | 0.115 | 20.62 | | |
| | | 256-QAM | 80.71 | 31.10 | 5.45 | 117.26 | H | | 0.161 | 22.06 | | |
| 3504.99 | | PI/2 BPSK | 81.00 | 31.50 | 5.51 | 118.01 | H | | 0.191 | 22.81 | 1 | 122 |
| | | QPSK | 80.85 | 31.50 | 5.51 | 117.86 | H | | 0.184 | 22.66 | | |
| | | 16-QAM | 80.58 | 31.50 | 5.51 | 117.59 | H | | 0.173 | 22.39 | | |
| | | 64-QAM | 79.97 | 31.50 | 5.51 | 116.98 | H | | 0.151 | 21.78 | | |
| | | 256-QAM | 79.99 | 31.50 | 5.51 | 117.00 | H | | 0.151 | 21.80 | | |



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| Freq (MHz) | Mod/ Bandwidth [SCS (kHz)] | Modulation | Measured (dBμV/m) | Ant. Factor + Dis. Factor(dB) | Cable loss(dB) | Total (dBμV/m) | Pol. | Limit | EIRP | | RB | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | W | W | dBm | Size | Offset |
| 3500.01 | Sub6 n77/ 100 MHz [30 kHz] | PI/2 BPSK | 81.54 | 31.10 | 5.45 | 118.09 | H | < 1.00 | 0.195 | 22.89 | 1 | 271 |
| | | QPSK | 81.30 | 31.10 | 5.45 | 117.85 | H | | 0.184 | 22.65 | | |
| | | 16-QAM | 80.92 | 31.10 | 5.45 | 117.47 | H | | 0.169 | 22.27 | | |
| | | 64-QAM | 81.20 | 31.10 | 5.45 | 117.75 | H | | 0.180 | 22.55 | | |
| | | 256-QAM | 80.01 | 31.10 | 5.45 | 116.56 | H | | 0.137 | 21.36 | | |



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## 10.2 RADIATED SPURIOUS EMISSIONS

- ▣ NR Band: N77
- ▣ Bandwidth: 10 MHz
- ▣ Modulation: PI/2 BPSK
- ▣ Distance: 1 meters
- ▣ SCS: 30 kHz

| Ch | Freq (MHz) | Measured Level (dBm) | Ant. Gain (dBi) | Substitute Level (dBm) | C.L | Pol | Result (dBm) | Limit (dBm) | RB | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | Size | Offset |
| 630334 (3455.01) | 6,910.02 | -54.72 | 11.19 | -57.16 | 4.39 | H | -50.36 | -13.00 | 1 | 22 |
| | 10,365.03 | -55.59 | 11.66 | -54.90 | 5.55 | V | -48.79 | -13.00 | | |
| | 13,820.04 | -62.38 | 13.35 | -50.92 | 6.55 | H | -44.12 | -13.00 | | |
| | 17,275.05 | -68.59 | 17.79 | -48.13 | 7.44 | V | -37.78 | -13.00 | | |
| 633334 (3500.01) | 7,000.02 | -55.06 | 11.14 | -57.66 | 4.45 | V | -50.97 | -13.00 | 1 | 12 |
| | 10,500.03 | -55.07 | 11.71 | -55.48 | 5.64 | H | -49.41 | -13.00 | | |
| | 14,000.04 | -62.34 | 13.09 | -50.42 | 6.55 | H | -43.88 | -13.00 | | |
| | 17,500.05 | -72.16 | 17.36 | -47.11 | 7.42 | V | -37.17 | -13.00 | | |
| 636322 (3544.99) | 7,089.98 | -54.85 | 10.88 | -57.03 | 4.48 | H | -50.63 | -13.00 | 1 | 22 |
| | 10,634.97 | -53.88 | 11.62 | -54.45 | 5.62 | V | -48.45 | -13.00 | | |
| | 14,179.96 | -63.86 | 13.04 | -50.29 | 6.56 | H | -43.81 | -13.00 | | |
| | 17,724.95 | -70.54 | 16.48 | -41.64 | 7.48 | V | -32.64 | -13.00 | | |



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## 10.3 PEAK-TO-AVERAGE RATIO

| Band | Band Width | Frequency (MHz) | Modulation | Resource Block Size | Resource Block Offset | Data (dB ) |
|---|---|---|---|---|---|---|
| Sub6 n77 | 10 MHz | 3500.01 | BPSK | Full RB | 0 | 4.39 |
| | | | QPSK | | | 5.48 |
| | | | 16-QAM | | | 6.10 |
| | | | 64-QAM | | | 6.33 |
| | | | 256-QAM | | | 6.62 |
| | 15 MHz | | BPSK | | | 4.23 |
| | | | QPSK | | | 5.39 |
| | | | 16-QAM | | | 6.47 |
| | | | 64-QAM | | | 6.57 |
| | | | 256-QAM | | | 6.53 |
| | 20 MHz | | BPSK | | | 4.29 |
| | | | QPSK | | | 5.68 |
| | | | 16-QAM | | | 6.43 |
| | | | 64-QAM | | | 6.53 |
| | | | 256-QAM | | | 6.58 |
| | 25 MHz | | BPSK | | | 4.35 |
| | | | QPSK | | | 5.59 |
| | | | 16-QAM | | | 6.40 |
| | | | 64-QAM | | | 6.41 |
| | | | 256-QAM | | | 6.53 |
| | 30 MHz | | BPSK | | | 4.43 |
| | | | QPSK | | | 5.56 |
| | | | 16-QAM | | | 6.27 |
| | | | 64-QAM | | | 6.56 |
| | | | 256-QAM | | | 6.58 |
| | 40 MHz | | BPSK | | | 4.92 |
| | | | QPSK | | | 5.65 |
| | | | 16-QAM | | | 6.20 |
| | | | 64-QAM | | | 6.50 |
| | | | 256-QAM | | | 6.60 |
| | 50 MHz | | BPSK | | | 4.44 |
| | | | QPSK | | | 5.53 |
| | | | 16-QAM | | | 6.39 |
| | | | 64-QAM | | | 6.41 |
| | | | 256-QAM | | | 6.59 |
| | 60 MHz | | BPSK | | | 4.82 |
| | | | QPSK | | | 5.62 |
| | | | 16-QAM | | | 6.16 |
| | | | 64-QAM | | | 6.57 |
| | | | 256-QAM | | | 6.71 |
| | 70 MHz | | BPSK | | | 4.80 |
| | | | QPSK | | | 5.56 |
| | | | 16-QAM | | | 6.23 |
| | | | 64-QAM | | | 6.43 |
| | | | 256-QAM | | | 6.62 |
| | 80 MHz | | BPSK | | | 4.41 |
| | | | QPSK | | | 5.60 |



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| | | | | | | |
|---|---|---|---|---|---|---|
| | | | 16-QAM | | | 6.29 |
| | | | 64-QAM | | | 6.55 |
| | | | 256-QAM | | | 6.67 |
| | 90 MHz | | BPSK | | | 4.39 |
| | | | QPSK | | | 5.52 |
| | | | 16-QAM | | | 6.41 |
| | | | 64-QAM | | | 6.52 |
| | | | 256-QAM | | | 6.55 |
| | 100 MHz | | BPSK | | | 4.51 |
| | | | QPSK | | | 5.64 |
| | | | 16-QAM | | | 6.37 |
| | | | 64-QAM | | | 6.52 |
| | | | 256-QAM | | | 6.68 |

**Note:**

1. Plots of the EUT's Peak- to- Average Ratio are shown Page 828 ~ 887.



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## 10.4 OCCUPIED BANDWIDTH

| Band | Band Width | Frequency (MHz) | Modulation | Resource Block Size | Resource Block Offset | Data ( MHz ) |
|---|---|---|---|---|---|---|
| Sub6 n77 | 10 MHz | 3500.01 | BPSK | Full RB | 0 | 8.6027 |
| | | | QPSK | | | 8.6830 |
| | | | 16-QAM | | | 8.5814 |
| | | | 64-QAM | | | 8.5692 |
| | | | 256-QAM | | | 8.5815 |
| | 15 MHz | | BPSK | | | 12.940 |
| | | | QPSK | | | 12.926 |
| | | | 16-QAM | | | 12.984 |
| | | | 64-QAM | | | 12.911 |
| | | | 256-QAM | | | 12.886 |
| | 20 MHz | | BPSK | | | 17.924 |
| | | | QPSK | | | 17.893 |
| | | | 16-QAM | | | 17.915 |
| | | | 64-QAM | | | 18.028 |
| | | | 256-QAM | | | 17.952 |
| | 25 MHz | | BPSK | | | 23.037 |
| | | | QPSK | | | 22.937 |
| | | | 16-QAM | | | 22.965 |
| | | | 64-QAM | | | 22.927 |
| | | | 256-QAM | | | 22.953 |
| | 30 MHz | | BPSK | | | 26.907 |
| | | | QPSK | | | 26.879 |
| | | | 16-QAM | | | 26.905 |
| | | | 64-QAM | | | 26.877 |
| | | | 256-QAM | | | 26.960 |
| | 40 MHz | | BPSK | | | 35.873 |
| | | | QPSK | | | 35.968 |
| | | | 16-QAM | | | 35.888 |
| | | | 64-QAM | | | 35.761 |
| | | | 256-QAM | | | 35.847 |
| | 50 MHz | | BPSK | | | 45.793 |
| | | | QPSK | | | 45.631 |
| | | | 16-QAM | | | 45.868 |
| | | | 64-QAM | | | 45.934 |
| | | | 256-QAM | | | 45.671 |
| | 60 MHz | | BPSK | | | 58.011 |
| | | | QPSK | | | 57.907 |
| | | | 16-QAM | | | 57.905 |
| | | | 64-QAM | | | 57.890 |
| | | | 256-QAM | | | 58.001 |
| | 70 MHz | | BPSK | | | 64.478 |
| | | | QPSK | | | 64.563 |
| | | | 16-QAM | | | 64.343 |
| | | | 64-QAM | | | 64.551 |
| | | | 256-QAM | | | 64.659 |
| | 80 MHz | | BPSK | | | 77.640 |
| | | | QPSK | | | 77.461 |



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| | | | | | | |
|---|---|---|---|---|---|---|
| | | | 16-QAM | | | 77.553 |
| | | | 64-QAM | | | 77.538 |
| | | | 256-QAM | | | 77.152 |
| | 90 MHz | | BPSK | | | 87.124 |
| | | | QPSK | | | 87.100 |
| | | | 16-QAM | | | 86.946 |
| | | | 64-QAM | | | 87.088 |
| | | | 256-QAM | | | 86.866 |
| | 100 MHz | | BPSK | | | 96.801 |
| | | | QPSK | | | 96.754 |
| | | | 16-QAM | | | 96.667 |
| | | | 64-QAM | | | 96.676 |
| | | | 256-QAM | | | 96.804 |

**Note:**

1. Plots of the EUT's Occupied Bandwidth are shown Page 888 ~ 947.



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## 10.5 CONDUCTED SPURIOUS EMISSIONS

| Band | Band Width (MHz) | Frequency (MHz) | Frequency of Maximum Harmonic (GHz) | Factor (dB) | Measurement Maximum Data (dBm) | Result (dBm) | Limit (dBm) |
|---|---|---|---|---|---|---|---|
| Sub6 n77 | 10 | 3455.010 | 4.8954 | 28.370 | -61.768 | -33.398 | -13.00 |
| | | 3500.010 | 6.0220 | 28.980 | -61.932 | -32.952 | |
| | | 3544.980 | 4.5165 | 28.370 | -62.005 | -33.635 | |
| | 15 | 3457.500 | 4.9552 | 28.370 | -62.380 | -34.010 | |
| | | 3500.010 | 5.4637 | 28.980 | -62.342 | -33.362 | |
| | | 3542.490 | 4.9652 | 28.370 | -61.901 | -33.531 | |
| | 20 | 3460.020 | 4.9851 | 28.370 | -61.228 | -32.858 | |
| | | 3500.010 | 8.9930 | 28.980 | -62.304 | -33.324 | |
| | | 3540.000 | 8.8734 | 28.980 | -61.857 | -32.877 | |
| | 25 | 3462.510 | 5.2044 | 28.980 | -62.721 | -33.741 | |
| | | 3500.010 | 9.4716 | 28.980 | -62.020 | -33.040 | |
| | | 3537.480 | 4.9053 | 28.370 | -60.713 | -32.343 | |
| | 30 | 3465.000 | 4.8954 | 28.370 | -62.801 | -34.431 | |
| | | 3500.010 | 4.9153 | 28.370 | -61.507 | -33.137 | |
| | | 3534.990 | 9.1326 | 28.980 | -62.361 | -33.381 | |
| | 40 | 3470.010 | 7.1286 | 28.980 | -62.329 | -33.349 | |
| | | 3500.010 | 4.9452 | 28.370 | -62.696 | -34.326 | |
| | | 3529.980 | 4.9851 | 28.370 | -61.766 | -33.396 | |
| | 50 | 3475.020 | 5.4736 | 28.980 | -62.290 | -33.310 | |
| | | 3500.010 | 8.0060 | 28.980 | -62.821 | -33.841 | |
| | | 3525.000 | 6.8993 | 28.980 | -62.222 | -33.242 | |
| | 60 | 3480.000 | 5.9821 | 28.980 | -62.416 | -33.436 | |
| | | 3500.010 | 6.0718 | 28.980 | -62.311 | -33.331 | |
| | | 3519.990 | 4.8954 | 28.370 | -62.080 | -33.710 | |
| | 70 | 3485.010 | 9.1725 | 28.980 | -62.133 | -33.153 | |
| | | 3500.010 | 5.2144 | 28.980 | -62.044 | -33.064 | |
| | | 3514.980 | 9.3320 | 28.980 | -61.374 | -32.394 | |
| | 80 | 3490.020 | 9.7208 | 28.980 | -62.139 | -33.159 | |
| | | 3500.010 | 8.2752 | 28.980 | -62.375 | -33.395 | |
| | | 3510.000 | 8.3250 | 28.980 | -62.549 | -33.569 | |
| | 90 | 3495.000 | 4.9253 | 28.370 | -62.406 | -34.036 | |
| | | 3500.010 | 5.1745 | 28.980 | -62.165 | -33.185 | |
| | | 3504.990 | 5.9622 | 28.980 | -62.156 | -33.176 | |
| | 100 | 3500.010 | 4.9851 | 28.370 | -62.773 | -34.403 | |



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**Note:**

1. Plots of the EUT's Conducted Spurious Emissions are shown Page 948 ~ 1015.
2. Factor(dB) = Cable Loss + Ext. Attenuator + Power Splitter
3. Result(dBm) = Reading + Factor

Factor(dB)

| Frequency Range (GHz) | Factor [dB] |
|---|---|
| 0.03 – 1 | 25.670 |
| 1 – 5 | 28.370 |
| 5 – 10 | 28.980 |
| 10 – 15 | 29.520 |
| 15 – 20 | 29.890 |
| Above 20 | 30.530 |

## 10.6 BAND EDGE

1. Plots of the EUT's Band Edge are shown Page 1016 ~ 1159.
2. Duty Cycle factor already applied on the factor.
   - Factor(dB) = Duty Cycle factor + Cable Loss + Ext. Attenuator + Power Splitter
   - Result(dBm) = Reading + Factor
   - Duty Cycle Factor(dB) = 6.990



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## 10.7 FREQUENCY STABILITY / VARIATION OF AMBIENT TEMPERATURE

- ▣ BandWidth: 10 MHz
- ▣ Voltage(100 %): 4.200 VDC
- ▣ Lowest voltage: 3.700 VDC
- ▣ LIMIT: Emission must remain in band

| Test. Frequncy | Voltage | Temp. | Frequency | Frequency | Deviation | ppm |
|---|---|---|---|---|---|---|
| (MHz) | (%) | (°C) | (Hz) | Error (Hz) | (%) | |
| 3455.010 | 100 % | +20(Ref) | 3455 009 989 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3455 009 977 | -12.4 | 0.000 000 | -0.004 |
| | 100 % | -20 | 3455 009 979 | -10.4 | 0.000 000 | -0.003 |
| | 100 % | -10 | 3455 009 975 | -13.8 | 0.000 000 | -0.004 |
| | 100 % | 0 | 3455 009 977 | -12.3 | 0.000 000 | -0.004 |
| | 100 % | +10 | 3455 009 982 | -6.8 | 0.000 000 | -0.002 |
| | 100 % | +30 | 3455 009 983 | -6.3 | 0.000 000 | -0.002 |
| | 100 % | +40 | 3455 009 984 | -4.9 | 0.000 000 | -0.001 |
| | 100 % | +50 | 3455 009 976 | -12.8 | 0.000 000 | -0.004 |
| | Lowest voltage | +20 | 3455 009 981 | -7.8 | 0.000 000 | -0.002 |
| 3544.980 | 100 % | +20(Ref) | 3544 979 987 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3544 979 973 | -14.2 | 0.000 000 | -0.004 |
| | 100 % | -20 | 3544 979 973 | -13.9 | 0.000 000 | -0.004 |
| | 100 % | -10 | 3544 979 972 | -14.7 | 0.000 000 | -0.004 |
| | 100 % | 0 | 3544 979 969 | -18.0 | -0.000 001 | -0.005 |
| | 100 % | +10 | 3544 979 972 | -15.2 | 0.000 000 | -0.004 |
| | 100 % | +30 | 3544 979 976 | -10.6 | 0.000 000 | -0.003 |
| | 100 % | +40 | 3544 979 977 | -10.0 | 0.000 000 | -0.003 |
| | 100 % | +50 | 3544 979 974 | -13.1 | 0.000 000 | -0.004 |
| | Lowest voltage | +20 | 3544 979 974 | -12.6 | 0.000 000 | -0.004 |



The report shall not be (partly) reproduced except in full without approval of the laboratory.

▣ BandWidth: 15 MHz

▣ Voltage(100 %): 4.200 VDC

▣ Lowest voltage: 3.700 VDC

▣ LIMIT: Emission must remain in band

| Test. Frequncy | Voltage | Temp. | Frequency | Frequency | Deviation | ppm |
|---|---|---|---|---|---|---|
| (MHz) | (%) | (°C) | (Hz) | Error (Hz) | (%) | |
| 3457.500 | 100 % | +20(Ref) | 3457 499 994 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3457 499 981 | -12.9 | 0.000 000 | -0.004 |
| | 100 % | -20 | 3457 499 989 | -5.3 | 0.000 000 | -0.002 |
| | 100 % | -10 | 3457 499 986 | -8.3 | 0.000 000 | -0.002 |
| | 100 % | 0 | 3457 499 981 | -12.6 | 0.000 000 | -0.004 |
| | 100 % | +10 | 3457 499 983 | -10.6 | 0.000 000 | -0.003 |
| | 100 % | +30 | 3457 499 990 | -4.1 | 0.000 000 | -0.001 |
| | 100 % | +40 | 3457 499 993 | -0.8 | 0.000 000 | 0.000 |
| | 100 % | +50 | 3457 499 987 | -7.5 | 0.000 000 | -0.002 |
| | Lowest voltage | +20 | 3457 499 989 | -5.3 | 0.000 000 | -0.002 |
| 3542.490 | 100 % | +20(Ref) | 3542 489 988 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3542 489 973 | -14.6 | 0.000 000 | -0.004 |
| | 100 % | -20 | 3542 489 972 | -15.8 | 0.000 000 | -0.004 |
| | 100 % | -10 | 3542 489 971 | -16.8 | 0.000 000 | -0.005 |
| | 100 % | 0 | 3542 489 975 | -12.5 | 0.000 000 | -0.004 |
| | 100 % | +10 | 3542 489 970 | -17.5 | 0.000 000 | -0.005 |
| | 100 % | +30 | 3542 489 978 | -9.6 | 0.000 000 | -0.003 |
| | 100 % | +40 | 3542 489 972 | -15.9 | 0.000 000 | -0.004 |
| | 100 % | +50 | 3542 489 972 | -15.8 | 0.000 000 | -0.004 |
| | Lowest voltage | +20 | 3542 489 978 | -10.3 | 0.000 000 | -0.003 |



The report shall not be (partly) reproduced except in full without approval of the laboratory.

▣ BandWidth: 20 MHz

▣ Voltage(100 %): 4.200 VDC

▣ Lowest voltage: 3.700 VDC

▣ LIMIT: Emission must remain in band

| Test. Frequncy | Voltage | Temp. | Frequency | Frequency | Deviation | ppm |
|---|---|---|---|---|---|---|
| (MHz) | (%) | (℃) | (Hz) | Error (Hz) | (%) | |
| 3460.020 | 100 % | +20(Ref) | 3460 019 988 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3460 019 979 | -9.7 | 0.000 000 | -0.003 |
| | 100 % | -20 | 3460 019 979 | -9.7 | 0.000 000 | -0.003 |
| | 100 % | -10 | 3460 019 979 | -9.3 | 0.000 000 | -0.003 |
| | 100 % | 0 | 3460 019 977 | -11.7 | 0.000 000 | -0.003 |
| | 100 % | +10 | 3460 019 973 | -15.1 | 0.000 000 | -0.004 |
| | 100 % | +30 | 3460 019 982 | -6.4 | 0.000 000 | -0.002 |
| | 100 % | +40 | 3460 019 981 | -7.6 | 0.000 000 | -0.002 |
| | 100 % | +50 | 3460 019 975 | -13.1 | 0.000 000 | -0.004 |
| | Lowest voltage | +20 | 3460 019 982 | -6.2 | 0.000 000 | -0.002 |
| 3540.000 | 100 % | +20(Ref) | 3539 999 995 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3539 999 987 | -8.0 | 0.000 000 | -0.002 |
| | 100 % | -20 | 3539 999 985 | -10.7 | 0.000 000 | -0.003 |
| | 100 % | -10 | 3539 999 984 | -11.3 | 0.000 000 | -0.003 |
| | 100 % | 0 | 3539 999 987 | -8.7 | 0.000 000 | -0.002 |
| | 100 % | +10 | 3539 999 988 | -7.5 | 0.000 000 | -0.002 |
| | 100 % | +30 | 3539 999 981 | -14.5 | 0.000 000 | -0.004 |
| | 100 % | +40 | 3539 999 990 | -4.9 | 0.000 000 | -0.001 |
| | 100 % | +50 | 3539 999 982 | -13.2 | 0.000 000 | -0.004 |
| | Lowest voltage | +20 | 3539 999 987 | -8.7 | 0.000 000 | -0.002 |



The report shall not be (partly) reproduced except in full without approval of the laboratory.

▣ BandWidth: 25 MHz

▣ Voltage(100 %): 4.200 VDC

▣ Lowest voltage: 3.700 VDC

▣ LIMIT: Emission must remain in band

| Test. Frequncy | Voltage | Temp. | Frequency | Frequency | Deviation | ppm |
|---|---|---|---|---|---|---|
| (MHz) | (%) | (°C) | (Hz) | Error (Hz) | (%) | |
| 3462.510 | 100 % | +20(Ref) | 3462 509 991 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3462 509 981 | -10.2 | 0.000 000 | -0.003 |
| | 100 % | -20 | 3462 509 979 | -12.0 | 0.000 000 | -0.003 |
| | 100 % | -10 | 3462 509 983 | -7.8 | 0.000 000 | -0.002 |
| | 100 % | 0 | 3462 509 981 | -10.6 | 0.000 000 | -0.003 |
| | 100 % | +10 | 3462 509 983 | -8.6 | 0.000 000 | -0.002 |
| | 100 % | +30 | 3462 509 980 | -11.0 | 0.000 000 | -0.003 |
| | 100 % | +40 | 3462 509 983 | -8.5 | 0.000 000 | -0.002 |
| | 100 % | +50 | 3462 509 987 | -3.9 | 0.000 000 | -0.001 |
| | Lowest voltage | +20 | 3462 509 986 | -5.7 | 0.000 000 | -0.002 |
| 3537.480 | 100 % | +20(Ref) | 3537 479 993 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3537 479 990 | -2.8 | 0.000 000 | -0.001 |
| | 100 % | -20 | 3537 479 981 | -12.1 | 0.000 000 | -0.003 |
| | 100 % | -10 | 3537 479 980 | -12.7 | 0.000 000 | -0.004 |
| | 100 % | 0 | 3537 479 984 | -9.1 | 0.000 000 | -0.003 |
| | 100 % | +10 | 3537 479 980 | -12.8 | 0.000 000 | -0.004 |
| | 100 % | +30 | 3537 479 983 | -9.7 | 0.000 000 | -0.003 |
| | 100 % | +40 | 3537 479 984 | -8.7 | 0.000 000 | -0.002 |
| | 100 % | +50 | 3537 479 982 | -10.8 | 0.000 000 | -0.003 |
| | Lowest voltage | +20 | 3537 479 981 | -11.5 | 0.000 000 | -0.003 |



The report shall not be (partly) reproduced except in full without approval of the laboratory.

▣ BandWidth: 30 MHz

▣ Voltage(100 %): 4.200 VDC

▣ Lowest voltage: 3.700 VDC

▣ LIMIT: Emission must remain in band

| Test. Frequncy | Voltage | Temp. | Frequency | Frequency | Deviation | ppm |
|---|---|---|---|---|---|---|
| (MHz) | (%) | (°C) | (Hz) | Error (Hz) | (%) | |
| 3465.000 | 100 % | +20(Ref) | 3464 999 995 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3464 999 985 | -9.9 | 0.000 000 | -0.003 |
| | 100 % | -20 | 3464 999 983 | -11.5 | 0.000 000 | -0.003 |
| | 100 % | -10 | 3464 999 982 | -12.4 | 0.000 000 | -0.004 |
| | 100 % | 0 | 3464 999 986 | -9.0 | 0.000 000 | -0.003 |
| | 100 % | +10 | 3464 999 988 | -6.8 | 0.000 000 | -0.002 |
| | 100 % | +30 | 3464 999 985 | -10.2 | 0.000 000 | -0.003 |
| | 100 % | +40 | 3464 999 987 | -8.1 | 0.000 000 | -0.002 |
| | 100 % | +50 | 3464 999 988 | -6.4 | 0.000 000 | -0.002 |
| | Lowest voltage | +20 | 3464 999 982 | -12.4 | 0.000 000 | -0.004 |
| 3534.990 | 100 % | +20(Ref) | 3534 989 999 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3534 989 998 | -0.8 | 0.000 000 | 0.000 |
| | 100 % | -20 | 3534 989 995 | -4.2 | 0.000 000 | -0.001 |
| | 100 % | -10 | 3534 989 994 | -4.8 | 0.000 000 | -0.001 |
| | 100 % | 0 | 3534 989 997 | -1.3 | 0.000 000 | 0.000 |
| | 100 % | +10 | 3534 989 995 | -4.1 | 0.000 000 | -0.001 |
| | 100 % | +30 | 3534 989 998 | -0.4 | 0.000 000 | 0.000 |
| | 100 % | +40 | 3534 989 995 | -3.3 | 0.000 000 | -0.001 |
| | 100 % | +50 | 3534 989 996 | -2.6 | 0.000 000 | -0.001 |
| | Lowest voltage | +20 | 3534 990 000 | 0.9 | 0.000 000 | 0.000 |



The report shall not be (partly) reproduced except in full without approval of the laboratory.

▣ BandWidth: 40 MHz

▣ Voltage(100 %): 4.200 VDC

▣ Lowest voltage: 3.700 VDC

▣ LIMIT: Emission must remain in band

| Test. Frequncy | Voltage | Temp. | Frequency | Frequency | Deviation | ppm |
|---|---|---|---|---|---|---|
| (MHz) | (%) | (°C) | (Hz) | Error (Hz) | (%) | |
| 3470.010 | 100 % | +20(Ref) | 3470 009 994 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3470 009 987 | -6.8 | 0.000 000 | -0.002 |
| | 100 % | -20 | 3470 009 986 | -7.7 | 0.000 000 | -0.002 |
| | 100 % | -10 | 3470 009 990 | -3.8 | 0.000 000 | -0.001 |
| | 100 % | 0 | 3470 009 985 | -9.0 | 0.000 000 | -0.003 |
| | 100 % | +10 | 3470 009 990 | -3.7 | 0.000 000 | -0.001 |
| | 100 % | +30 | 3470 009 983 | -10.6 | 0.000 000 | -0.003 |
| | 100 % | +40 | 3470 009 981 | -13.0 | 0.000 000 | -0.004 |
| | 100 % | +50 | 3470 009 982 | -12.4 | 0.000 000 | -0.004 |
| | Lowest voltage | +20 | 3470 009 985 | -9.5 | 0.000 000 | -0.003 |
| 3529.980 | 100 % | +20(Ref) | 3529 979 989 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3529 979 980 | -9.4 | 0.000 000 | -0.003 |
| | 100 % | -20 | 3529 979 980 | -9.5 | 0.000 000 | -0.003 |
| | 100 % | -10 | 3529 979 973 | -16.3 | 0.000 000 | -0.005 |
| | 100 % | 0 | 3529 979 979 | -10.3 | 0.000 000 | -0.003 |
| | 100 % | +10 | 3529 979 978 | -11.4 | 0.000 000 | -0.003 |
| | 100 % | +30 | 3529 979 981 | -8.2 | 0.000 000 | -0.002 |
| | 100 % | +40 | 3529 979 981 | -8.4 | 0.000 000 | -0.002 |
| | 100 % | +50 | 3529 979 977 | -12.4 | 0.000 000 | -0.004 |
| | Lowest voltage | +20 | 3529 979 977 | -11.9 | 0.000 000 | -0.003 |



The report shall not be (partly) reproduced except in full without approval of the laboratory.

▣ BandWidth: 50 MHz

▣ Voltage(100 %): 4.200 VDC

▣ Lowest voltage: 3.700 VDC

▣ LIMIT: Emission must remain in band

| Test. Frequncy | Voltage | Temp. | Frequency | Frequency | Deviation | ppm |
|---|---|---|---|---|---|---|
| (MHz) | (%) | (°C) | (Hz) | Error (Hz) | (%) | |
| 3475.020 | 100 % | +20(Ref) | 3475 019 991 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3475 019 979 | -12.3 | 0.000 000 | -0.004 |
| | 100 % | -20 | 3475 019 977 | -14.9 | 0.000 000 | -0.004 |
| | 100 % | -10 | 3475 019 978 | -13.2 | 0.000 000 | -0.004 |
| | 100 % | 0 | 3475 019 977 | -14.6 | 0.000 000 | -0.004 |
| | 100 % | +10 | 3475 019 982 | -9.8 | 0.000 000 | -0.003 |
| | 100 % | +30 | 3475 019 978 | -13.8 | 0.000 000 | -0.004 |
| | 100 % | +40 | 3475 019 976 | -15.3 | 0.000 000 | -0.004 |
| | 100 % | +50 | 3475 019 980 | -11.6 | 0.000 000 | -0.003 |
| | Lowest voltage | +20 | 3475 019 980 | -11.3 | 0.000 000 | -0.003 |
| 3525.000 | 100 % | +20(Ref) | 3524 999 984 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3524 999 969 | -14.6 | 0.000 000 | -0.004 |
| | 100 % | -20 | 3524 999 969 | -15.3 | 0.000 000 | -0.004 |
| | 100 % | -10 | 3524 999 973 | -10.6 | 0.000 000 | -0.003 |
| | 100 % | 0 | 3524 999 974 | -10.0 | 0.000 000 | -0.003 |
| | 100 % | +10 | 3524 999 973 | -10.5 | 0.000 000 | -0.003 |
| | 100 % | +30 | 3524 999 972 | -12.5 | 0.000 000 | -0.004 |
| | 100 % | +40 | 3524 999 973 | -10.9 | 0.000 000 | -0.003 |
| | 100 % | +50 | 3524 999 972 | -11.5 | 0.000 000 | -0.003 |
| | Lowest voltage | +20 | 3524 999 973 | -11.0 | 0.000 000 | -0.003 |



The report shall not be (partly) reproduced except in full without approval of the laboratory.

▣ BandWidth: 60 MHz

▣ Voltage(100 %): 4.200 VDC

▣ Lowest voltage: 3.700 VDC

▣ LIMIT: Emission must remain in band

| Test. Frequncy | Voltage | Temp. | Frequency | Frequency | Deviation | ppm |
|---|---|---|---|---|---|---|
| (MHz) | (%) | (°C) | (Hz) | Error (Hz) | (%) | |
| 3480.000 | 100 % | +20(Ref) | 3479 999 992 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3479 999 984 | -7.7 | 0.000 000 | -0.002 |
| | 100 % | -20 | 3479 999 983 | -9.4 | 0.000 000 | -0.003 |
| | 100 % | -10 | 3479 999 985 | -7.3 | 0.000 000 | -0.002 |
| | 100 % | 0 | 3479 999 987 | -5.4 | 0.000 000 | -0.002 |
| | 100 % | +10 | 3479 999 986 | -5.6 | 0.000 000 | -0.002 |
| | 100 % | +30 | 3479 999 982 | -9.6 | 0.000 000 | -0.003 |
| | 100 % | +40 | 3479 999 986 | -6.2 | 0.000 000 | -0.002 |
| | 100 % | +50 | 3479 999 985 | -7.4 | 0.000 000 | -0.002 |
| | Lowest voltage | +20 | 3479 999 978 | -13.5 | 0.000 000 | -0.004 |
| 3519.990 | 100 % | +20(Ref) | 3519 989 987 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3519 989 971 | -15.3 | 0.000 000 | -0.004 |
| | 100 % | -20 | 3519 989 976 | -10.9 | 0.000 000 | -0.003 |
| | 100 % | -10 | 3519 989 978 | -8.9 | 0.000 000 | -0.003 |
| | 100 % | 0 | 3519 989 978 | -8.4 | 0.000 000 | -0.002 |
| | 100 % | +10 | 3519 989 971 | -15.5 | 0.000 000 | -0.004 |
| | 100 % | +30 | 3519 989 975 | -11.8 | 0.000 000 | -0.003 |
| | 100 % | +40 | 3519 989 972 | -14.5 | 0.000 000 | -0.004 |
| | 100 % | +50 | 3519 989 974 | -13.0 | 0.000 000 | -0.004 |
| | Lowest voltage | +20 | 3519 989 978 | -9.0 | 0.000 000 | -0.003 |



The report shall not be (partly) reproduced except in full without approval of the laboratory.

▣ BandWidth: 70 MHz

▣ Voltage(100 %): 4.200 VDC

▣ Lowest voltage: 3.700 VDC

▣ LIMIT: Emission must remain in band

| Test. Frequncy | Voltage | Temp. | Frequency | Frequency | Deviation | ppm |
|---|---|---|---|---|---|---|
| (MHz) | (%) | (°C) | (Hz) | Error (Hz) | (%) | |
| 3485.010 | 100 % | +20(Ref) | 3485 009 989 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3485 009 981 | -7.8 | 0.000 000 | -0.002 |
| | 100 % | -20 | 3485 009 979 | -9.8 | 0.000 000 | -0.003 |
| | 100 % | -10 | 3485 009 983 | -5.5 | 0.000 000 | -0.002 |
| | 100 % | 0 | 3485 009 975 | -13.5 | 0.000 000 | -0.004 |
| | 100 % | +10 | 3485 009 978 | -11.0 | 0.000 000 | -0.003 |
| | 100 % | +30 | 3485 009 980 | -8.9 | 0.000 000 | -0.003 |
| | 100 % | +40 | 3485 009 979 | -9.7 | 0.000 000 | -0.003 |
| | 100 % | +50 | 3485 009 979 | -10.3 | 0.000 000 | -0.003 |
| | Lowest voltage | +20 | 3485 009 986 | -3.4 | 0.000 000 | -0.001 |
| 3514.980 | 100 % | +20(Ref) | 3514 979 984 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3514 979 972 | -12.3 | 0.000 000 | -0.003 |
| | 100 % | -20 | 3514 979 975 | -9.0 | 0.000 000 | -0.003 |
| | 100 % | -10 | 3514 979 972 | -12.3 | 0.000 000 | -0.004 |
| | 100 % | 0 | 3514 979 973 | -10.8 | 0.000 000 | -0.003 |
| | 100 % | +10 | 3514 979 978 | -6.0 | 0.000 000 | -0.002 |
| | 100 % | +30 | 3514 979 976 | -7.8 | 0.000 000 | -0.002 |
| | 100 % | +40 | 3514 979 970 | -14.3 | 0.000 000 | -0.004 |
| | 100 % | +50 | 3514 979 970 | -13.4 | 0.000 000 | -0.004 |
| | Lowest voltage | +20 | 3514 979 973 | -10.4 | 0.000 000 | -0.003 |



The report shall not be (partly) reproduced except in full without approval of the laboratory.

▣ BandWidth: 80 MHz

▣ Voltage(100 %): 4.200 VDC

▣ Lowest voltage: 3.700 VDC

▣ LIMIT: Emission must remain in band

| Test. Frequncy | Voltage | Temp. | Frequency | Frequency | Deviation | ppm |
|---|---|---|---|---|---|---|
| (MHz) | (%) | (°C) | (Hz) | Error (Hz) | (%) | |
| 3490.020 | 100 % | +20(Ref) | 3490 019 988 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3490 019 982 | -6.4 | 0.000 000 | -0.002 |
| | 100 % | -20 | 3490 019 976 | -11.9 | 0.000 000 | -0.003 |
| | 100 % | -10 | 3490 019 980 | -8.1 | 0.000 000 | -0.002 |
| | 100 % | 0 | 3490 019 979 | -9.3 | 0.000 000 | -0.003 |
| | 100 % | +10 | 3490 019 985 | -3.7 | 0.000 000 | -0.001 |
| | 100 % | +30 | 3490 019 975 | -12.9 | 0.000 000 | -0.004 |
| | 100 % | +40 | 3490 019 978 | -9.9 | 0.000 000 | -0.003 |
| | 100 % | +50 | 3490 019 983 | -5.2 | 0.000 000 | -0.001 |
| | Lowest voltage | +20 | 3490 019 976 | -11.9 | 0.000 000 | -0.003 |
| 3510.000 | 100 % | +20(Ref) | 3509 999 992 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3509 999 982 | -10.1 | 0.000 000 | -0.003 |
| | 100 % | -20 | 3509 999 984 | -8.9 | 0.000 000 | -0.003 |
| | 100 % | -10 | 3509 999 986 | -6.1 | 0.000 000 | -0.002 |
| | 100 % | 0 | 3509 999 984 | -8.6 | 0.000 000 | -0.002 |
| | 100 % | +10 | 3509 999 983 | -9.8 | 0.000 000 | -0.003 |
| | 100 % | +30 | 3509 999 982 | -10.0 | 0.000 000 | -0.003 |
| | 100 % | +40 | 3509 999 981 | -11.3 | 0.000 000 | -0.003 |
| | 100 % | +50 | 3509 999 987 | -5.1 | 0.000 000 | -0.001 |
| | Lowest voltage | +20 | 3509 999 986 | -6.3 | 0.000 000 | -0.002 |



The report shall not be (partly) reproduced except in full without approval of the laboratory.

▣ BandWidth: 90 MHz

▣ Voltage(100 %): 4.200 VDC

▣ Lowest voltage: 3.700 VDC

▣ LIMIT: Emission must remain in band

| Test. Frequncy | Voltage | Temp. | Frequency | Frequency | Deviation | ppm |
|---|---|---|---|---|---|---|
| (MHz) | (%) | (℃) | (Hz) | Error (Hz) | (%) | |
| 3495.000 | 100 % | +20(Ref) | 3494 999 986 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3494 999 978 | -7.6 | 0.000 000 | -0.002 |
| | 100 % | -20 | 3494 999 978 | -7.4 | 0.000 000 | -0.002 |
| | 100 % | -10 | 3494 999 974 | -11.6 | 0.000 000 | -0.003 |
| | 100 % | 0 | 3494 999 975 | -10.8 | 0.000 000 | -0.003 |
| | 100 % | +10 | 3494 999 975 | -10.8 | 0.000 000 | -0.003 |
| | 100 % | +30 | 3494 999 969 | -16.4 | 0.000 000 | -0.005 |
| | 100 % | +40 | 3494 999 975 | -10.3 | 0.000 000 | -0.003 |
| | 100 % | +50 | 3494 999 970 | -15.9 | 0.000 000 | -0.005 |
| | Lowest voltage | +20 | 3494 999 973 | -12.2 | 0.000 000 | -0.003 |
| 3504.990 | 100 % | +20(Ref) | 3504 989 991 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3504 989 981 | -9.6 | 0.000 000 | -0.003 |
| | 100 % | -20 | 3504 989 985 | -6.3 | 0.000 000 | -0.002 |
| | 100 % | -10 | 3504 989 983 | -8.4 | 0.000 000 | -0.002 |
| | 100 % | 0 | 3504 989 979 | -12.4 | 0.000 000 | -0.004 |
| | 100 % | +10 | 3504 989 984 | -6.8 | 0.000 000 | -0.002 |
| | 100 % | +30 | 3504 989 981 | -10.0 | 0.000 000 | -0.003 |
| | 100 % | +40 | 3504 989 982 | -9.5 | 0.000 000 | -0.003 |
| | 100 % | +50 | 3504 989 982 | -9.4 | 0.000 000 | -0.003 |
| | Lowest voltage | +20 | 3504 989 978 | -13.0 | 0.000 000 | -0.004 |



The report shall not be (partly) reproduced except in full without approval of the laboratory.

▣ BandWidth: 100 MHz

▣ Voltage(100 %): 4.200 VDC

▣ Lowest voltage: 3.700 VDC

▣ LIMIT: Emission must remain in band

| Test. Frequncy | Voltage | Temp. | Frequency | Frequency | Deviation | ppm |
|---|---|---|---|---|---|---|
| (MHz) | (%) | (°C) | (Hz) | Error (Hz) | (%) | |
| 3500.010 | 100 % | +20(Ref) | 3500 009 994 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3500 009 984 | -10.0 | 0.000 000 | -0.003 |
| | 100 % | -20 | 3500 009 984 | -10.4 | 0.000 000 | -0.003 |
| | 100 % | -10 | 3500 009 988 | -5.8 | 0.000 000 | -0.002 |
| | 100 % | 0 | 3500 009 987 | -7.1 | 0.000 000 | -0.002 |
| | 100 % | +10 | 3500 009 984 | -10.3 | 0.000 000 | -0.003 |
| | 100 % | +30 | 3500 009 984 | -10.4 | 0.000 000 | -0.003 |
| | 100 % | +40 | 3500 009 981 | -12.9 | 0.000 000 | -0.004 |
| | 100 % | +50 | 3500 009 982 | -12.0 | 0.000 000 | -0.003 |
| | Lowest voltage | +20 | 3500 009 983 | -11.2 | 0.000 000 | -0.003 |



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## 11. TEST DATA (MIMO2, 3700 MHz - 3980 MHz)

### 11.1 EQUIVALENT ISOTROPIC RADIATED POWER

| Freq (MHz) | Mod/ Bandwidth [SCS (kHz)] | Modulation | Measured (dBμV/m) | Ant. Factor + Dis. Factor(dB) | Cable loss(dB) | Total (dBμV/m) | Pol. | Limit | EIRP | | RB | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | W | W | dBm | Size | Offset |
| 3705.00 | Sub6 n77(78)/ 10 MHz [30 kHz] | PI/2 BPSK | 80.10 | 31.40 | 5.73 | 117.23 | H | < 1.00 | 0.160 | 22.03 | 1 | 22 |
| | | QPSK | 79.57 | 31.40 | 5.73 | 116.70 | H | | 0.141 | 21.50 | | |
| | | 16-QAM | 78.27 | 31.40 | 5.73 | 115.40 | H | | 0.105 | 20.20 | | |
| | | 64-QAM | 78.70 | 31.40 | 5.73 | 115.83 | H | | 0.116 | 20.63 | | |
| | | 256-QAM | 79.44 | 31.40 | 5.73 | 116.57 | H | | 0.137 | 21.37 | | |
| 3840.00 | | PI/2 BPSK | 80.47 | 31.80 | 5.84 | 118.11 | H | | 0.195 | 22.91 | 1 | 22 |
| | | QPSK | 79.31 | 31.80 | 5.84 | 116.95 | H | | 0.150 | 21.75 | | |
| | | 16-QAM | 79.73 | 31.80 | 5.84 | 117.37 | H | | 0.165 | 22.17 | | |
| | | 64-QAM | 79.64 | 31.80 | 5.84 | 117.28 | H | | 0.161 | 22.08 | | |
| | | 256-QAM | 79.01 | 31.80 | 5.84 | 116.65 | H | | 0.140 | 21.45 | | |
| 3975.00 | | PI/2 BPSK | 77.42 | 31.90 | 5.90 | 115.22 | H | | 0.100 | 20.02 | 1 | 1 |
| | | QPSK | 76.90 | 31.90 | 5.90 | 114.70 | H | | 0.089 | 19.50 | | |
| | | 16-QAM | 76.78 | 31.90 | 5.90 | 114.58 | H | | 0.087 | 19.38 | | |
| | | 64-QAM | 77.08 | 31.90 | 5.90 | 114.88 | H | | 0.093 | 19.68 | | |
| | | 256-QAM | 77.04 | 31.90 | 5.90 | 114.84 | H | | 0.092 | 19.64 | | |



The report shall not be (partly) reproduced except in full without approval of the laboratory.

| Freq (MHz) | Mod/ Bandwidth [SCS (kHz)] | Modulation | Measured (dBμV/m) | Ant. Factor + Dis. Factor(dB) | Cable loss(dB) | Total (dBμV/m) | Pol. | Limit | EIRP | | RB | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | W | W | dBm | Size | Offset |
| 3707.51 | Sub6 n77(78)/ 15 MHz [30 kHz] | PI/2 BPSK | 79.97 | 31.40 | 5.73 | 117.10 | H | < 1.00 | 0.155 | 21.90 | 1 | 19 |
| | | QPSK | 78.49 | 31.40 | 5.73 | 115.62 | H | | 0.110 | 20.42 | | |
| | | 16-QAM | 79.56 | 31.40 | 5.73 | 116.69 | H | | 0.141 | 21.49 | | |
| | | 64-QAM | 79.05 | 31.40 | 5.73 | 116.18 | H | | 0.125 | 20.98 | | |
| | | 256-QAM | 78.79 | 31.40 | 5.73 | 115.92 | H | | 0.118 | 20.72 | | |
| 3840.00 | | PI/2 BPSK | 79.81 | 31.80 | 5.84 | 117.45 | H | | 0.168 | 22.25 | 1 | 36 |
| | | QPSK | 78.74 | 31.80 | 5.84 | 116.38 | H | | 0.131 | 21.18 | | |
| | | 16-QAM | 78.04 | 31.80 | 5.84 | 115.68 | H | | 0.112 | 20.48 | | |
| | | 64-QAM | 78.55 | 31.80 | 5.84 | 116.19 | H | | 0.126 | 20.99 | | |
| | | 256-QAM | 78.84 | 31.80 | 5.84 | 116.48 | H | | 0.134 | 21.28 | | |
| 3972.48 | | PI/2 BPSK | 77.31 | 31.90 | 5.90 | 115.11 | H | | 0.098 | 19.91 | 1 | 1 |
| | | QPSK | 76.57 | 31.90 | 5.90 | 114.37 | H | | 0.083 | 19.17 | | |
| | | 16-QAM | 77.08 | 31.90 | 5.90 | 114.88 | H | | 0.093 | 19.68 | | |
| | | 64-QAM | 76.91 | 31.90 | 5.90 | 114.71 | H | | 0.089 | 19.51 | | |
| | | 256-QAM | 76.64 | 31.90 | 5.90 | 114.44 | H | | 0.084 | 19.24 | | |



The report shall not be (partly) reproduced except in full without approval of the laboratory.

| Freq (MHz) | Mod/ Bandwidth [SCS (kHz)] | Modulation | Measured (dBμV/m) | Ant. Factor + Dis. Factor(dB) | Cable loss(dB) | Total (dBμV/m) | Pol. | Limit | EIRP | | RB | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | W | W | dBm | Size | Offset |
| 3710.01 | Sub6 n77(78)/ 20 MHz [30 kHz] | PI/2 BPSK | 80.98 | 31.40 | 5.73 | 118.11 | H | < 1.00 | 0.195 | 22.91 | 1 | 49 |
| | | QPSK | 79.89 | 31.40 | 5.73 | 117.02 | H | | 0.152 | 21.82 | | |
| | | 16-QAM | 80.46 | 31.40 | 5.73 | 117.59 | H | | 0.173 | 22.39 | | |
| | | 64-QAM | 79.74 | 31.40 | 5.73 | 116.87 | H | | 0.147 | 21.67 | | |
| | | 256-QAM | 79.28 | 31.40 | 5.73 | 116.41 | H | | 0.132 | 21.21 | | |
| 3840.00 | | PI/2 BPSK | 80.74 | 31.80 | 5.84 | 118.38 | H | | 0.208 | 23.18 | 1 | 49 |
| | | QPSK | 80.30 | 31.80 | 5.84 | 117.94 | H | | 0.188 | 22.74 | | |
| | | 16-QAM | 79.40 | 31.80 | 5.84 | 117.04 | H | | 0.153 | 21.84 | | |
| | | 64-QAM | 79.31 | 31.80 | 5.84 | 116.95 | H | | 0.150 | 21.75 | | |
| | | 256-QAM | 78.64 | 31.80 | 5.84 | 116.28 | H | | 0.128 | 21.08 | | |
| 3969.99 | | PI/2 BPSK | 77.62 | 31.90 | 5.90 | 115.42 | H | | 0.105 | 20.22 | 1 | 1 |
| | | QPSK | 76.94 | 31.90 | 5.90 | 114.74 | H | | 0.090 | 19.54 | | |
| | | 16-QAM | 75.82 | 31.90 | 5.90 | 113.62 | H | | 0.070 | 18.42 | | |
| | | 64-QAM | 76.34 | 31.90 | 5.90 | 114.14 | H | | 0.078 | 18.94 | | |
| | | 256-QAM | 77.11 | 31.90 | 5.90 | 114.91 | H | | 0.094 | 19.71 | | |



The report shall not be (partly) reproduced except in full without approval of the laboratory.

| Freq (MHz) | Mod/ Bandwidth [SCS (kHz)] | Modulation | Measured (dBμV/m) | Ant. Factor + Dis. Factor(dB) | Cable loss(dB) | Total (dBμV/m) | Pol. | Limit | EIRP | | RB | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | W | W | dBm | Size | Offset |
| 3712.50 | Sub6 n77(78)/ 25 MHz [30 kHz] | PI/2 BPSK | 80.39 | 31.40 | 5.73 | 117.52 | H | < 1.00 | 0.171 | 22.32 | 1 | 63 |
| | | QPSK | 80.16 | 31.40 | 5.73 | 117.29 | H | | 0.162 | 22.09 | | |
| | | 16-QAM | 79.53 | 31.40 | 5.73 | 116.66 | H | | 0.140 | 21.46 | | |
| | | 64-QAM | 79.25 | 31.40 | 5.73 | 116.38 | H | | 0.131 | 21.18 | | |
| | | 256-QAM | 79.75 | 31.40 | 5.73 | 116.88 | H | | 0.147 | 21.68 | | |
| 3840.00 | | PI/2 BPSK | 79.12 | 31.80 | 5.84 | 116.76 | H | | 0.143 | 21.56 | 1 | 1 |
| | | QPSK | 78.86 | 31.80 | 5.84 | 116.50 | H | | 0.135 | 21.30 | | |
| | | 16-QAM | 78.81 | 31.80 | 5.84 | 116.45 | H | | 0.133 | 21.25 | | |
| | | 64-QAM | 78.68 | 31.80 | 5.84 | 116.32 | H | | 0.129 | 21.12 | | |
| | | 256-QAM | 77.89 | 31.80 | 5.84 | 115.53 | H | | 0.108 | 20.33 | | |
| 3967.50 | | PI/2 BPSK | 76.78 | 31.90 | 5.90 | 114.58 | H | | 0.087 | 19.38 | 1 | 32 |
| | | QPSK | 76.24 | 31.90 | 5.90 | 114.04 | H | | 0.077 | 18.84 | | |
| | | 16-QAM | 75.65 | 31.90 | 5.90 | 113.45 | H | | 0.067 | 18.25 | | |
| | | 64-QAM | 75.87 | 31.90 | 5.90 | 113.67 | H | | 0.070 | 18.47 | | |
| | | 256-QAM | 75.98 | 31.90 | 5.90 | 113.78 | H | | 0.072 | 18.58 | | |



The report shall not be (partly) reproduced except in full without approval of the laboratory.

| Freq (MHz) | Mod/ Bandwidth [SCS (kHz)] | Modulation | Measured (dBμV/m) | Ant. Factor + Dis. Factor(dB) | Cable loss(dB) | Total (dBμV/m) | Pol. | Limit | EIRP | | RB | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | W | W | dBm | Size | Offset |
| 3715.02 | Sub6 n77(78)/ 30 MHz [30 kHz] | PI/2 BPSK | 79.84 | 31.40 | 5.73 | 116.97 | H | < 1.00 | 0.150 | 21.77 | 1 | 39 |
| | | QPSK | 78.79 | 31.40 | 5.73 | 115.92 | H | | 0.118 | 20.72 | | |
| | | 16-QAM | 77.77 | 31.40 | 5.73 | 114.90 | H | | 0.093 | 19.70 | | |
| | | 64-QAM | 78.14 | 31.40 | 5.73 | 115.27 | H | | 0.102 | 20.07 | | |
| | | 256-QAM | 76.15 | 31.40 | 5.73 | 113.28 | H | | 0.064 | 18.08 | | |
| 3840.00 | | PI/2 BPSK | 79.42 | 31.80 | 5.84 | 117.06 | H | | 0.153 | 21.86 | 1 | 1 |
| | | QPSK | 78.71 | 31.80 | 5.84 | 116.35 | H | | 0.130 | 21.15 | | |
| | | 16-QAM | 79.04 | 31.80 | 5.84 | 116.68 | H | | 0.141 | 21.48 | | |
| | | 64-QAM | 78.73 | 31.80 | 5.84 | 116.37 | H | | 0.131 | 21.17 | | |
| | | 256-QAM | 77.44 | 31.80 | 5.84 | 115.08 | H | | 0.097 | 19.88 | | |
| 3964.98 | | PI/2 BPSK | 76.78 | 31.90 | 5.90 | 114.58 | H | | 0.087 | 19.38 | 1 | 39 |
| | | QPSK | 75.41 | 31.90 | 5.90 | 113.21 | H | | 0.063 | 18.01 | | |
| | | 16-QAM | 76.25 | 31.90 | 5.90 | 114.05 | H | | 0.077 | 18.85 | | |
| | | 64-QAM | 76.40 | 31.90 | 5.90 | 114.20 | H | | 0.079 | 19.00 | | |
| | | 256-QAM | 75.55 | 31.90 | 5.90 | 113.35 | H | | 0.065 | 18.15 | | |



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| Freq (MHz) | Mod/ Bandwidth [SCS (kHz)] | Modulation | Measured (dBμV/m) | Ant. Factor + Dis. Factor(dB) | Cable loss(dB) | Total (dBμV/m) | Pol. | Limit | EIRP | | RB | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | W | W | dBm | Size | Offset |
| 3720.00 | Sub6 n77(78)/ 40 MHz [30 kHz] | PI/2 BPSK | 80.29 | 31.40 | 5.73 | 117.42 | H | < 1.00 | 0.167 | 22.22 | 1 | 53 |
| | | QPSK | 79.47 | 31.40 | 5.73 | 116.60 | H | | 0.138 | 21.40 | | |
| | | 16-QAM | 79.04 | 31.40 | 5.73 | 116.17 | H | | 0.125 | 20.97 | | |
| | | 64-QAM | 78.56 | 31.40 | 5.73 | 115.69 | H | | 0.112 | 20.49 | | |
| | | 256-QAM | 79.06 | 31.40 | 5.73 | 116.19 | H | | 0.126 | 20.99 | | |
| 3840.00 | | PI/2 BPSK | 79.89 | 31.80 | 5.84 | 117.53 | H | | 0.171 | 22.33 | 1 | 53 |
| | | QPSK | 79.49 | 31.80 | 5.84 | 117.13 | H | | 0.156 | 21.93 | | |
| | | 16-QAM | 78.34 | 31.80 | 5.84 | 115.98 | H | | 0.120 | 20.78 | | |
| | | 64-QAM | 78.84 | 31.80 | 5.84 | 116.48 | H | | 0.134 | 21.28 | | |
| | | 256-QAM | 79.43 | 31.80 | 5.84 | 117.07 | H | | 0.154 | 21.87 | | |
| 3960.00 | | PI/2 BPSK | 76.72 | 31.90 | 5.90 | 114.52 | H | | 0.086 | 19.32 | 1 | 53 |
| | | QPSK | 75.90 | 31.90 | 5.90 | 113.70 | H | | 0.071 | 18.50 | | |
| | | 16-QAM | 76.23 | 31.90 | 5.90 | 114.03 | H | | 0.076 | 18.83 | | |
| | | 64-QAM | 75.45 | 31.90 | 5.90 | 113.25 | H | | 0.064 | 18.05 | | |
| | | 256-QAM | 75.73 | 31.90 | 5.90 | 113.53 | H | | 0.068 | 18.33 | | |



The report shall not be (partly) reproduced except in full without approval of the laboratory.

| Freq (MHz) | Mod/ Bandwidth [SCS (kHz)] | Modulation | Measured (dBμV/m) | Ant. Factor + Dis. Factor(dB) | Cable loss(dB) | Total (dBμV/m) | Pol. | Limit | EIRP | | RB | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | W | W | dBm | Size | Offset |
| 3725.10 | Sub6 n77(78)/ 50 MHz [30 kHz] | PI/2 BPSK | 80.26 | 31.40 | 5.73 | 117.39 | H | < 1.00 | 0.166 | 22.19 | 1 | 66 |
| | | QPSK | 79.57 | 31.40 | 5.73 | 116.70 | H | | 0.141 | 21.50 | | |
| | | 16-QAM | 79.60 | 31.40 | 5.73 | 116.73 | H | | 0.142 | 21.53 | | |
| | | 64-QAM | 78.66 | 31.40 | 5.73 | 115.79 | H | | 0.115 | 20.59 | | |
| | | 256-QAM | 79.42 | 31.40 | 5.73 | 116.55 | H | | 0.136 | 21.35 | | |
| 3840.00 | | PI/2 BPSK | 79.54 | 31.80 | 5.84 | 117.18 | H | | 0.158 | 21.98 | 1 | 66 |
| | | QPSK | 78.79 | 31.80 | 5.84 | 116.43 | H | | 0.133 | 21.23 | | |
| | | 16-QAM | 79.16 | 31.80 | 5.84 | 116.80 | H | | 0.145 | 21.60 | | |
| | | 64-QAM | 79.37 | 31.80 | 5.84 | 117.01 | H | | 0.152 | 21.81 | | |
| | | 256-QAM | 79.09 | 31.80 | 5.84 | 116.73 | H | | 0.142 | 21.53 | | |
| 3954.99 | | PI/2 BPSK | 76.37 | 31.90 | 5.90 | 114.17 | H | | 0.079 | 18.97 | 1 | 66 |
| | | QPSK | 76.27 | 31.90 | 5.90 | 114.07 | H | | 0.077 | 18.87 | | |
| | | 16-QAM | 76.36 | 31.90 | 5.90 | 114.16 | H | | 0.079 | 18.96 | | |
| | | 64-QAM | 76.32 | 31.90 | 5.90 | 114.12 | H | | 0.078 | 18.92 | | |
| | | 256-QAM | 75.42 | 31.90 | 5.90 | 113.22 | H | | 0.063 | 18.02 | | |



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| Freq (MHz) | Mod/ Bandwidth [SCS (kHz)] | Modulation | Measured (dBμV/m) | Ant. Factor + Dis. Factor(dB) | Cable loss(dB) | Total (dBμV/m) | Pol. | Limit | EIRP | | RB | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | W | W | dBm | Size | Offset |
| 3730.02 | Sub6 n77(78)/ 60 MHz [30 kHz] | PI/2 BPSK | 80.57 | 31.40 | 5.73 | 117.70 | H | < 1.00 | 0.178 | 22.50 | 1 | 82 |
| | | QPSK | 80.24 | 31.40 | 5.73 | 117.37 | H | | 0.165 | 22.17 | | |
| | | 16-QAM | 79.91 | 31.40 | 5.73 | 117.04 | H | | 0.153 | 21.84 | | |
| | | 64-QAM | 80.18 | 31.40 | 5.73 | 117.31 | H | | 0.163 | 22.11 | | |
| | | 256-QAM | 79.04 | 31.40 | 5.73 | 116.17 | H | | 0.125 | 20.97 | | |
| 3840.00 | | PI/2 BPSK | 80.33 | 31.80 | 5.84 | 117.97 | H | | 0.189 | 22.77 | 1 | 82 |
| | | QPSK | 79.58 | 31.80 | 5.84 | 117.22 | H | | 0.159 | 22.02 | | |
| | | 16-QAM | 79.17 | 31.80 | 5.84 | 116.81 | H | | 0.145 | 21.61 | | |
| | | 64-QAM | 77.73 | 31.80 | 5.84 | 115.37 | H | | 0.104 | 20.17 | | |
| | | 256-QAM | 78.69 | 31.80 | 5.84 | 116.33 | H | | 0.130 | 21.13 | | |
| 3949.98 | | PI/2 BPSK | 76.27 | 31.90 | 5.90 | 114.07 | H | | 0.077 | 18.87 | 1 | 82 |
| | | QPSK | 75.73 | 31.90 | 5.90 | 113.53 | H | | 0.068 | 18.33 | | |
| | | 16-QAM | 75.32 | 31.90 | 5.90 | 113.12 | H | | 0.062 | 17.92 | | |
| | | 64-QAM | 75.85 | 31.90 | 5.90 | 113.65 | H | | 0.070 | 18.45 | | |
| | | 256-QAM | 75.58 | 31.90 | 5.90 | 113.38 | H | | 0.066 | 18.18 | | |



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| Freq (MHz) | Mod/ Bandwidth [SCS (kHz)] | Modulation | Measured (dBμV/m) | Ant. Factor + Dis. Factor(dB) | Cable loss(dB) | Total (dBμV/m) | Pol. | Limit | EIRP | | RB | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | W | W | dBm | Size | Offset |
| 3735.00 | Sub6 n77(78)/ 70 MHz [30 kHz] | PI/2 BPSK | 81.25 | 31.40 | 5.73 | 118.38 | H | < 1.00 | 0.208 | 23.18 | 1 | 94 |
| | | QPSK | 80.63 | 31.40 | 5.73 | 117.76 | H | | 0.180 | 22.56 | | |
| | | 16-QAM | 80.90 | 31.40 | 5.73 | 118.03 | H | | 0.192 | 22.83 | | |
| | | 64-QAM | 80.34 | 31.40 | 5.73 | 117.47 | H | | 0.169 | 22.27 | | |
| | | 256-QAM | 80.49 | 31.40 | 5.73 | 117.62 | H | | 0.175 | 22.42 | | |
| 3840.00 | | PI/2 BPSK | 79.02 | 31.80 | 5.84 | 116.66 | H | | 0.140 | 21.46 | 1 | 94 |
| | | QPSK | 78.50 | 31.80 | 5.84 | 116.14 | H | | 0.124 | 20.94 | | |
| | | 16-QAM | 78.51 | 31.80 | 5.84 | 116.15 | H | | 0.124 | 20.95 | | |
| | | 64-QAM | 78.23 | 31.80 | 5.84 | 115.87 | H | | 0.117 | 20.67 | | |
| | | 256-QAM | 78.83 | 31.80 | 5.84 | 116.47 | H | | 0.134 | 21.27 | | |
| 3945.00 | | PI/2 BPSK | 76.23 | 31.90 | 5.90 | 114.03 | H | | 0.076 | 18.83 | 1 | 94 |
| | | QPSK | 75.26 | 31.90 | 5.90 | 113.06 | H | | 0.061 | 17.86 | | |
| | | 16-QAM | 75.98 | 31.90 | 5.90 | 113.78 | H | | 0.072 | 18.58 | | |
| | | 64-QAM | 74.90 | 31.90 | 5.90 | 112.70 | H | | 0.056 | 17.50 | | |
| | | 256-QAM | 74.45 | 31.90 | 5.90 | 112.25 | H | | 0.051 | 17.05 | | |



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| Freq (MHz) | Mod/ Bandwidth [SCS (kHz)] | Modulation | Measured (dBμV/m) | Ant. Factor + Dis. Factor(dB) | Cable loss(dB) | Total (dBμV/m) | Pol. | Limit | EIRP | | RB | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | W | W | dBm | Size | Offset |
| 3740.01 | Sub6 n77(78)/ 80 MHz [30 kHz] | PI/2 BPSK | 80.36 | 31.40 | 5.73 | 117.49 | H | < 1.00 | 0.169 | 22.29 | 1 | 108 |
| | | QPSK | 78.55 | 31.40 | 5.73 | 115.68 | H | | 0.112 | 20.48 | | |
| | | 16-QAM | 78.55 | 31.40 | 5.73 | 115.68 | H | | 0.112 | 20.48 | | |
| | | 64-QAM | 79.70 | 31.40 | 5.73 | 116.83 | H | | 0.146 | 21.63 | | |
| | | 256-QAM | 78.70 | 31.40 | 5.73 | 115.83 | H | | 0.116 | 20.63 | | |
| 3840.00 | | PI/2 BPSK | 76.77 | 31.80 | 5.84 | 114.41 | H | | 0.083 | 19.21 | 1 | 215 |
| | | QPSK | 76.58 | 31.80 | 5.84 | 114.22 | H | | 0.080 | 19.02 | | |
| | | 16-QAM | 76.46 | 31.80 | 5.84 | 114.10 | H | | 0.078 | 18.90 | | |
| | | 64-QAM | 75.75 | 31.80 | 5.84 | 113.39 | H | | 0.066 | 18.19 | | |
| | | 256-QAM | 74.90 | 31.80 | 5.84 | 112.54 | H | | 0.054 | 17.34 | | |
| 3939.99 | | PI/2 BPSK | 77.01 | 31.90 | 5.90 | 114.81 | H | | 0.091 | 19.61 | 1 | 108 |
| | | QPSK | 76.42 | 31.90 | 5.90 | 114.22 | H | | 0.080 | 19.02 | | |
| | | 16-QAM | 75.92 | 31.90 | 5.90 | 113.72 | H | | 0.071 | 18.52 | | |
| | | 64-QAM | 75.79 | 31.90 | 5.90 | 113.59 | H | | 0.069 | 18.39 | | |
| | | 256-QAM | 75.50 | 31.90 | 5.90 | 113.30 | H | | 0.065 | 18.10 | | |



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| Freq (MHz) | Mod/ Bandwidth [SCS (kHz)] | Modulation | Measured (dBμV/m) | Ant. Factor + Dis. Factor(dB) | Cable loss(dB) | Total (dBμV/m) | Pol. | Limit | EIRP | | RB | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | W | W | dBm | Size | Offset |
| 3745.02 | Sub6 n77(78)/ 90 MHz [30 kHz] | PI/2 BPSK | 79.14 | 31.40 | 5.73 | 116.27 | H | < 1.00 | 0.128 | 21.07 | 1 | 122 |
| | | QPSK | 78.31 | 31.40 | 5.73 | 115.44 | H | | 0.106 | 20.24 | | |
| | | 16-QAM | 78.85 | 31.40 | 5.73 | 115.98 | H | | 0.120 | 20.78 | | |
| | | 64-QAM | 79.02 | 31.40 | 5.73 | 116.15 | H | | 0.124 | 20.95 | | |
| | | 256-QAM | 77.17 | 31.40 | 5.73 | 114.30 | H | | 0.081 | 19.10 | | |
| 3840.00 | | PI/2 BPSK | 77.62 | 31.80 | 5.84 | 115.26 | H | | 0.101 | 20.06 | 1 | 122 |
| | | QPSK | 77.47 | 31.80 | 5.84 | 115.11 | H | | 0.098 | 19.91 | | |
| | | 16-QAM | 76.73 | 31.80 | 5.84 | 114.37 | H | | 0.083 | 19.17 | | |
| | | 64-QAM | 77.56 | 31.80 | 5.84 | 115.20 | H | | 0.100 | 20.00 | | |
| | | 256-QAM | 76.11 | 31.80 | 5.84 | 113.75 | H | | 0.072 | 18.55 | | |
| 3934.98 | | PI/2 BPSK | 76.42 | 31.90 | 5.90 | 114.22 | H | | 0.080 | 19.02 | 1 | 1 |
| | | QPSK | 76.15 | 31.90 | 5.90 | 113.95 | H | | 0.075 | 18.75 | | |
| | | 16-QAM | 75.87 | 31.90 | 5.90 | 113.67 | H | | 0.070 | 18.47 | | |
| | | 64-QAM | 74.87 | 31.90 | 5.90 | 112.67 | H | | 0.056 | 17.47 | | |
| | | 256-QAM | 75.99 | 31.90 | 5.90 | 113.79 | H | | 0.072 | 18.59 | | |



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| Freq (MHz) | Mod/ Bandwidth [SCS (kHz)] | Modulation | Measured (dBμV/m) | Ant. Factor + Dis. Factor(dB) | Cable loss(dB) | Total (dBμV/m) | Pol. | Limit | EIRP | | RB | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | W | W | dBm | Size | Offset |
| 3750.00 | Sub6 n77(78)/ 100 MHz [30 kHz] | PI/2 BPSK | 79.48 | 31.40 | 5.73 | 116.61 | H | < 1.00 | 0.138 | 21.41 | 1 | 136 |
| | | QPSK | 78.80 | 31.40 | 5.73 | 115.93 | H | | 0.118 | 20.73 | | |
| | | 16-QAM | 77.76 | 31.40 | 5.73 | 114.89 | H | | 0.093 | 19.69 | | |
| | | 64-QAM | 77.43 | 31.40 | 5.73 | 114.56 | H | | 0.086 | 19.36 | | |
| | | 256-QAM | 78.00 | 31.40 | 5.73 | 115.13 | H | | 0.098 | 19.93 | | |
| 3840.00 | | PI/2 BPSK | 78.63 | 31.80 | 5.84 | 116.27 | H | | 0.128 | 21.07 | 1 | 136 |
| | | QPSK | 77.55 | 31.80 | 5.84 | 115.19 | H | | 0.100 | 19.99 | | |
| | | 16-QAM | 77.58 | 31.80 | 5.84 | 115.22 | H | | 0.100 | 20.02 | | |
| | | 64-QAM | 77.36 | 31.80 | 5.84 | 115.00 | H | | 0.096 | 19.80 | | |
| | | 256-QAM | 77.24 | 31.80 | 5.84 | 114.88 | H | | 0.093 | 19.68 | | |
| 3930.00 | | PI/2 BPSK | 77.00 | 31.90 | 5.90 | 114.80 | H | | 0.091 | 19.60 | 1 | 1 |
| | | QPSK | 76.50 | 31.90 | 5.90 | 114.30 | H | | 0.081 | 19.10 | | |
| | | 16-QAM | 76.46 | 31.90 | 5.90 | 114.26 | H | | 0.081 | 19.06 | | |
| | | 64-QAM | 76.13 | 31.90 | 5.90 | 113.93 | H | | 0.075 | 18.73 | | |
| | | 256-QAM | 75.82 | 31.90 | 5.90 | 113.62 | H | | 0.070 | 18.42 | | |



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## 11.2 RADIATED SPURIOUS EMISSIONS

- NR Band: N77(78)
- Bandwidth: 70 MHz
- Modulation: PI/2 BPSK
- Distance: 1 meters
- SCS: 30 kHz

| Ch | Freq (MHz) | Measured Level (dBm) | Ant. Gain (dBi) | Substitute Level (dBm) | C.L | Pol | Result (dBm) | Limit (dBm) | RB | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | Size | Offset |
| 649000 (3735.00) | 7 470.00 | -51.33 | 11.45 | -54.05 | 4.61 | V | -47.21 | -13.00 | 1 | 94 |
| | 11 205.00 | -54.68 | 12.31 | -54.84 | 5.84 | H | -48.37 | -13.00 | | |
| | 14 940.00 | -65.44 | 14.04 | -48.44 | 6.73 | H | -41.13 | -13.00 | | |
| 656000 (3840.00) | 7 680.00 | -50.17 | 11.60 | -52.63 | 4.70 | H | -45.73 | -13.00 | 1 | 94 |
| | 11 520.00 | -55.28 | 12.51 | -54.90 | 5.87 | V | -48.26 | -13.00 | | |
| | 15 360.00 | -67.73 | 15.21 | -48.11 | 6.88 | H | -39.78 | -13.00 | | |
| 663000 (3945.00) | 7 890.00 | -52.40 | 11.18 | -53.73 | 4.74 | H | -47.29 | -13.00 | 1 | 94 |
| | 11 835.00 | -53.12 | 13.01 | -51.62 | 5.95 | V | -44.56 | -13.00 | | |
| | 15 780.00 | -67.68 | 16.06 | -49.27 | 6.92 | V | -40.13 | -13.00 | | |



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## 11.3 PEAK-TO-AVERAGE RATIO

| Band | Band Width | Frequency (MHz) | Modulation | Resource Block Size | Resource Block Offset | Data (dB ) |
|---|---|---|---|---|---|---|
| Sub6 n77(78) | 10 MHz | 3840.00 | BPSK | Full RB | 0 | 4.64 |
| | | | QPSK | | | 5.67 |
| | | | 16-QAM | | | 6.54 |
| | | | 64-QAM | | | 6.42 |
| | | | 256-QAM | | | 6.60 |
| | 15 MHz | | BPSK | | | 4.46 |
| | | | QPSK | | | 5.52 |
| | | | 16-QAM | | | 6.24 |
| | | | 64-QAM | | | 6.35 |
| | | | 256-QAM | | | 6.49 |
| | 20 MHz | | BPSK | | | 4.47 |
| | | | QPSK | | | 5.70 |
| | | | 16-QAM | | | 6.54 |
| | | | 64-QAM | | | 6.67 |
| | | | 256-QAM | | | 6.37 |
| | 25 MHz | | BPSK | | | 4.54 |
| | | | QPSK | | | 5.87 |
| | | | 16-QAM | | | 6.36 |
| | | | 64-QAM | | | 6.70 |
| | | | 256-QAM | | | 6.67 |
| | 30 MHz | | BPSK | | | 4.61 |
| | | | QPSK | | | 5.87 |
| | | | 16-QAM | | | 6.29 |
| | | | 64-QAM | | | 6.45 |
| | | | 256-QAM | | | 6.59 |
| | 40 MHz | | BPSK | | | 5.81 |
| | | | QPSK | | | 6.06 |
| | | | 16-QAM | | | 6.41 |
| | | | 64-QAM | | | 6.67 |
| | | | 256-QAM | | | 6.74 |
| | 50 MHz | | BPSK | | | 4.44 |
| | | | QPSK | | | 5.52 |
| | | | 16-QAM | | | 6.39 |
| | | | 64-QAM | | | 6.53 |
| | | | 256-QAM | | | 6.66 |
| | 60 MHz | | BPSK | | | 4.49 |
| | | | QPSK | | | 5.67 |
| | | | 16-QAM | | | 6.42 |
| | | | 64-QAM | | | 6.47 |
| | | | 256-QAM | | | 6.61 |
| | 70 MHz | | BPSK | | | 4.65 |
| | | | QPSK | | | 5.75 |
| | | | 16-QAM | | | 6.42 |
| | | | 64-QAM | | | 6.39 |
| | | | 256-QAM | | | 6.47 |
| | 80 MHz | | BPSK | | | 5.05 |
| | | | QPSK | | | 5.59 |



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| | | | | | | |
|---|---|---|---|---|---|---|
| | | | 16-QAM | | | 6.45 |
| | | | 64-QAM | | | 6.52 |
| | | | 256-QAM | | | 6.66 |
| | 90 MHz | | BPSK | | | 4.80 |
| | | | QPSK | | | 5.65 |
| | | | 16-QAM | | | 6.43 |
| | | | 64-QAM | | | 6.49 |
| | | | 256-QAM | | | 6.70 |
| | 100 MHz | | BPSK | | | 4.54 |
| | | | QPSK | | | 5.64 |
| | | | 16-QAM | | | 6.49 |
| | | | 64-QAM | | | 6.48 |
| | | | 256-QAM | | | 6.73 |

**Note:**

1. Plots of the EUT's Peak- to- Average Ratio are shown Page 1160 ~ 1219.



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## 11.4 OCCUPIED BANDWIDTH

| Band | Band Width | Frequency (MHz) | Modulation | Resource Block Size | Resource Block Offset | Data ( MHz ) |
|---|---|---|---|---|---|---|
| Sub6 n77(78) | 10 MHz | 3840.00 | BPSK | Full RB | 0 | 8.5995 |
| | | | QPSK | | | 8.5805 |
| | | | 16-QAM | | | 8.6131 |
| | | | 64-QAM | | | 8.5830 |
| | | | 256-QAM | | | 8.6522 |
| | 15 MHz | | BPSK | | | 12.903 |
| | | | QPSK | | | 12.893 |
| | | | 16-QAM | | | 12.890 |
| | | | 64-QAM | | | 12.908 |
| | | | 256-QAM | | | 12.899 |
| | 20 MHz | | BPSK | | | 17.914 |
| | | | QPSK | | | 17.856 |
| | | | 16-QAM | | | 17.904 |
| | | | 64-QAM | | | 17.914 |
| | | | 256-QAM | | | 17.911 |
| | 25 MHz | | BPSK | | | 22.858 |
| | | | QPSK | | | 22.932 |
| | | | 16-QAM | | | 22.938 |
| | | | 64-QAM | | | 22.943 |
| | | | 256-QAM | | | 22.984 |
| | 30 MHz | | BPSK | | | 26.912 |
| | | | QPSK | | | 26.907 |
| | | | 16-QAM | | | 26.896 |
| | | | 64-QAM | | | 26.856 |
| | | | 256-QAM | | | 26.925 |
| | 40 MHz | | BPSK | | | 35.874 |
| | | | QPSK | | | 35.822 |
| | | | 16-QAM | | | 35.787 |
| | | | 64-QAM | | | 35.711 |
| | | | 256-QAM | | | 35.789 |
| | 50 MHz | | BPSK | | | 45.842 |
| | | | QPSK | | | 45.723 |
| | | | 16-QAM | | | 45.985 |
| | | | 64-QAM | | | 45.752 |
| | | | 256-QAM | | | 45.695 |
| | 60 MHz | | BPSK | | | 57.842 |
| | | | QPSK | | | 57.809 |
| | | | 16-QAM | | | 57.698 |
| | | | 64-QAM | | | 57.806 |
| | | | 256-QAM | | | 57.845 |
| | 70 MHz | | BPSK | | | 64.499 |
| | | | QPSK | | | 64.573 |
| | | | 16-QAM | | | 64.495 |
| | | | 64-QAM | | | 64.609 |
| | | | 256-QAM | | | 64.520 |
| | 80 MHz | | BPSK | | | 77.159 |
| | | | QPSK | | | 77.292 |



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| | | | | | | |
|---|---|---|---|---|---|---|
| | | | 16-QAM | | | 77.260 |
| | | | 64-QAM | | | 77.256 |
| | | | 256-QAM | | | 77.272 |
| | 90 MHz | | BPSK | | | 87.085 |
| | | | QPSK | | | 86.966 |
| | | | 16-QAM | | | 86.893 |
| | | | 64-QAM | | | 87.157 |
| | | | 256-QAM | | | 86.913 |
| | 100 MHz | | BPSK | | | 96.457 |
| | | | QPSK | | | 96.671 |
| | | | 16-QAM | | | 96.765 |
| | | | 64-QAM | | | 96.811 |
| | | | 256-QAM | | | 96.693 |

**Note:**

1. Plots of the EUT's Occupied Bandwidth are shown Page 1220 ~ 1279.



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## 11.5 CONDUCTED SPURIOUS EMISSIONS

| Band | Band Width (MHz) | Frequency (MHz) | Frequency of Maximum Harmonic (GHz) | Factor (dB) | Measurement Maximum Data (dBm) | Result (dBm) | Limit (dBm) |
|---|---|---|---|---|---|---|---|
| Sub6 n77(78) | 10 | 3705.000 | 9.1725 | 28.980 | -62.365 | -33.385 | -13.00 |
| | | 3840.000 | 4.9253 | 28.370 | -61.422 | -33.052 | |
| | | 3975.000 | 4.9652 | 28.370 | -61.942 | -33.572 | |
| | 15 | 3707.520 | 7.1984 | 28.980 | -61.776 | -32.796 | |
| | | 3840.000 | 4.9352 | 28.370 | -62.077 | -33.707 | |
| | | 3972.480 | 8.8335 | 28.980 | -61.994 | -33.014 | |
| | 20 | 3710.010 | 4.9153 | 28.370 | -61.272 | -32.902 | |
| | | 3840.000 | 7.5075 | 28.980 | -62.405 | -33.425 | |
| | | 3969.990 | 9.1625 | 28.980 | -62.314 | -33.334 | |
| | 25 | 3712.500 | 9.6112 | 28.980 | -62.296 | -33.316 | |
| | | 3840.000 | 4.9153 | 28.370 | -62.632 | -34.262 | |
| | | 3967.500 | 9.8205 | 28.980 | -61.866 | -32.886 | |
| | 30 | 3715.020 | 4.8954 | 28.370 | -60.264 | -31.894 | |
| | | 3840.000 | 4.9253 | 28.370 | -62.645 | -34.275 | |
| | | 3964.980 | 7.1685 | 28.980 | -62.361 | -33.381 | |
| | 40 | 3720.000 | 7.1386 | 28.980 | -61.978 | -32.998 | |
| | | 3840.000 | 7.4477 | 28.980 | -62.403 | -33.423 | |
| | | 3960.000 | 8.0459 | 28.980 | -62.344 | -33.364 | |
| | 50 | 3725.010 | 4.9652 | 28.370 | -61.437 | -33.067 | |
| | | 3840.000 | 5.6830 | 28.980 | -62.193 | -33.213 | |
| | | 3954.990 | 7.0888 | 28.980 | -62.546 | -33.566 | |
| | 60 | 3730.020 | 5.6631 | 28.980 | -62.946 | -33.966 | |
| | | 3840.000 | 4.9452 | 28.370 | -61.056 | -32.686 | |
| | | 3949.980 | 4.5364 | 28.370 | -62.800 | -34.430 | |
| | 70 | 3735.000 | 8.6441 | 28.980 | -61.806 | -32.826 | |
| | | 3840.000 | 7.7867 | 28.980 | -62.561 | -33.581 | |
| | | 3945.000 | 5.9721 | 28.980 | -62.776 | -33.796 | |
| | 80 | 3740.010 | 6.0419 | 28.980 | -62.317 | -33.337 | |
| | | 3840.000 | 6.0220 | 28.980 | -61.946 | -32.966 | |
| | | 3939.990 | 6.0619 | 28.980 | -62.468 | -33.488 | |
| | 90 | 3745.020 | 7.4577 | 28.980 | -62.243 | -33.263 | |
| | | 3840.000 | 4.9253 | 28.370 | -62.165 | -33.795 | |
| | | 3934.980 | 6.4108 | 28.980 | -62.490 | -33.510 | |
| | 100 | 3750.000 | 4.9851 | 28.370 | -61.292 | -32.922 | |
| | | 3840.000 | 7.2283 | 28.980 | -61.919 | -32.939 | |
| | | 3930.000 | 4.9652 | 28.370 | -61.892 | -33.522 | |



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**Note:**

1. Plots of the EUT's Conducted Spurious Emissions are shown Page 1280 ~ 1351.
2. Factor(dB) = Cable Loss + Ext. Attenuator + Power Splitter
3. Result(dBm) = Reading + Factor

Factor(dB)

| Frequency Range (GHz) | Factor [dB] |
|---|---|
| 0.03 – 1 | 25.670 |
| 1 – 5 | 28.370 |
| 5 – 10 | 28.980 |
| 10 – 15 | 29.520 |
| 15 – 20 | 29.890 |
| Above 20 | 30.530 |

## 11.6 BAND EDGE

1. Plots of the EUT's Band Edge are shown Page 1352 ~ 1495.
2. Duty Cycle factor already applied on the factor.
   - Factor(dB) = Duty Cycle factor + Cable Loss + Ext. Attenuator + Power Splitter
   - Result(dBm) = Reading + Factor
   - Duty Cycle Factor(dB) = 6.990



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## 11.7 FREQUENCY STABILITY / VARIATION OF AMBIENT TEMPERATURE

- ▣ BandWidth: 10 MHz
- ▣ Voltage(100 %): 4.200 VDC
- ▣ Lowest voltage: 3.700 VDC
- ▣ LIMIT: Emission must remain in band

| Test. Frequncy | Voltage | Temp. | Frequency | Frequency | Deviation | ppm |
|---|---|---|---|---|---|---|
| (MHz) | (%) | (°C) | (Hz) | Error (Hz) | (%) | |
| 3705.000 | 100 % | +20(Ref) | 3704 999 988 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3704 999 968 | -19.7 | -0.000 001 | -0.005 |
| | 100 % | -20 | 3704 999 969 | -19.2 | -0.000 001 | -0.005 |
| | 100 % | -10 | 3704 999 976 | -12.0 | 0.000 000 | -0.003 |
| | 100 % | 0 | 3704 999 971 | -17.2 | 0.000 000 | -0.005 |
| | 100 % | +10 | 3704 999 972 | -15.8 | 0.000 000 | -0.004 |
| | 100 % | +30 | 3704 999 969 | -19.0 | -0.000 001 | -0.005 |
| | 100 % | +40 | 3704 999 977 | -11.5 | 0.000 000 | -0.003 |
| | 100 % | +50 | 3704 999 970 | -18.1 | 0.000 000 | -0.005 |
| | Lowest voltage | +20 | 3704 999 973 | -15.1 | 0.000 000 | -0.004 |
| 3975.000 | 100 % | +20(Ref) | 3974 999 993 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3974 999 987 | -5.7 | 0.000 000 | -0.001 |
| | 100 % | -20 | 3974 999 986 | -6.6 | 0.000 000 | -0.002 |
| | 100 % | -10 | 3974 999 980 | -12.9 | 0.000 000 | -0.003 |
| | 100 % | 0 | 3974 999 980 | -12.2 | 0.000 000 | -0.003 |
| | 100 % | +10 | 3974 999 979 | -13.3 | 0.000 000 | -0.003 |
| | 100 % | +30 | 3974 999 978 | -14.3 | 0.000 000 | -0.004 |
| | 100 % | +40 | 3974 999 979 | -13.6 | 0.000 000 | -0.003 |
| | 100 % | +50 | 3974 999 975 | -17.4 | 0.000 000 | -0.004 |
| | Lowest voltage | +20 | 3974 999 979 | -13.8 | 0.000 000 | -0.003 |



The report shall not be (partly) reproduced except in full without approval of the laboratory.

▣ BandWidth: 15 MHz

▣ Voltage(100 %): 4.200 VDC

▣ Lowest voltage: 3.700 VDC

▣ LIMIT: Emission must remain in band

| Test. Frequncy | Voltage | Temp. | Frequency | Frequency | Deviation | ppm |
|---|---|---|---|---|---|---|
| (MHz) | (%) | (°C) | (Hz) | Error (Hz) | (%) | |
| 3707.520 | 100 % | +20(Ref) | 3707 519 986 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3707 519 966 | -20.2 | -0.000 001 | -0.005 |
| | 100 % | -20 | 3707 519 970 | -15.9 | 0.000 000 | -0.004 |
| | 100 % | -10 | 3707 519 968 | -18.0 | 0.000 000 | -0.005 |
| | 100 % | 0 | 3707 519 978 | -8.5 | 0.000 000 | -0.002 |
| | 100 % | +10 | 3707 519 974 | -12.3 | 0.000 000 | -0.003 |
| | 100 % | +30 | 3707 519 974 | -11.9 | 0.000 000 | -0.003 |
| | 100 % | +40 | 3707 519 970 | -15.8 | 0.000 000 | -0.004 |
| | 100 % | +50 | 3707 519 973 | -13.4 | 0.000 000 | -0.004 |
| | Lowest voltage | +20 | 3707 519 968 | -17.6 | 0.000 000 | -0.005 |
| 3972.480 | 100 % | +20(Ref) | 3972 479 991 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3972 479 980 | -11.5 | 0.000 000 | -0.003 |
| | 100 % | -20 | 3972 479 982 | -9.8 | 0.000 000 | -0.002 |
| | 100 % | -10 | 3972 479 979 | -12.6 | 0.000 000 | -0.003 |
| | 100 % | 0 | 3972 479 979 | -12.1 | 0.000 000 | -0.003 |
| | 100 % | +10 | 3972 479 983 | -8.9 | 0.000 000 | -0.002 |
| | 100 % | +30 | 3972 479 981 | -10.1 | 0.000 000 | -0.003 |
| | 100 % | +40 | 3972 479 983 | -8.1 | 0.000 000 | -0.002 |
| | 100 % | +50 | 3972 479 982 | -9.2 | 0.000 000 | -0.002 |
| | Lowest voltage | +20 | 3972 479 984 | -7.9 | 0.000 000 | -0.002 |



The report shall not be (partly) reproduced except in full without approval of the laboratory.

▣ BandWidth: 20 MHz

▣ Voltage(100 %): 4.200 VDC

▣ Lowest voltage: 3.700 VDC

▣ LIMIT: Emission must remain in band

| Test. Frequncy | Voltage | Temp. | Frequency | Frequency | Deviation | ppm |
|---|---|---|---|---|---|---|
| (MHz) | (%) | (℃) | (Hz) | Error (Hz) | (%) | |
| 3710.010 | 100 % | +20(Ref) | 3710 009 980 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3710 009 963 | -17.2 | 0.000 000 | -0.005 |
| | 100 % | -20 | 3710 009 966 | -13.4 | 0.000 000 | -0.004 |
| | 100 % | -10 | 3710 009 963 | -16.8 | 0.000 000 | -0.005 |
| | 100 % | 0 | 3710 009 957 | -22.8 | -0.000 001 | -0.006 |
| | 100 % | +10 | 3710 009 960 | -19.9 | -0.000 001 | -0.005 |
| | 100 % | +30 | 3710 009 961 | -18.9 | -0.000 001 | -0.005 |
| | 100 % | +40 | 3710 009 955 | -24.4 | -0.000 001 | -0.007 |
| | 100 % | +50 | 3710 009 960 | -20.2 | -0.000 001 | -0.005 |
| | Lowest voltage | +20 | 3710 009 958 | -21.8 | -0.000 001 | -0.006 |
| 3969.990 | 100 % | +20(Ref) | 3969 989 986 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3969 989 976 | -9.9 | 0.000 000 | -0.002 |
| | 100 % | -20 | 3969 989 977 | -8.8 | 0.000 000 | -0.002 |
| | 100 % | -10 | 3969 989 978 | -8.0 | 0.000 000 | -0.002 |
| | 100 % | 0 | 3969 989 974 | -12.1 | 0.000 000 | -0.003 |
| | 100 % | +10 | 3969 989 972 | -13.8 | 0.000 000 | -0.003 |
| | 100 % | +30 | 3969 989 971 | -15.1 | 0.000 000 | -0.004 |
| | 100 % | +40 | 3969 989 979 | -6.6 | 0.000 000 | -0.002 |
| | 100 % | +50 | 3969 989 980 | -5.7 | 0.000 000 | -0.001 |
| | Lowest voltage | +20 | 3969 989 978 | -7.4 | 0.000 000 | -0.002 |



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▣ BandWidth: 25 MHz

▣ Voltage(100 %): 4.200 VDC

▣ Lowest voltage: 3.700 VDC

▣ LIMIT: Emission must remain in band

| Test. Frequncy | Voltage | Temp. | Frequency | Frequency | Deviation | ppm |
|---|---|---|---|---|---|---|
| (MHz) | (%) | (°C) | (Hz) | Error (Hz) | (%) | |
| 3712.500 | 100 % | +20(Ref) | 3712 499 985 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3712 499 968 | -17.3 | 0.000 000 | -0.005 |
| | 100 % | -20 | 3712 499 966 | -18.9 | -0.000 001 | -0.005 |
| | 100 % | -10 | 3712 499 966 | -19.7 | -0.000 001 | -0.005 |
| | 100 % | 0 | 3712 499 964 | -21.6 | -0.000 001 | -0.006 |
| | 100 % | +10 | 3712 499 974 | -11.3 | 0.000 000 | -0.003 |
| | 100 % | +30 | 3712 499 972 | -12.9 | 0.000 000 | -0.003 |
| | 100 % | +40 | 3712 499 975 | -10.6 | 0.000 000 | -0.003 |
| | 100 % | +50 | 3712 499 974 | -11.2 | 0.000 000 | -0.003 |
| | Lowest voltage | +20 | 3712 499 969 | -16.6 | 0.000 000 | -0.004 |
| 3967.500 | 100 % | +20(Ref) | 3967 499 999 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3967 499 996 | -3.1 | 0.000 000 | -0.001 |
| | 100 % | -20 | 3967 499 999 | -0.4 | 0.000 000 | 0.000 |
| | 100 % | -10 | 3967 499 995 | -4.2 | 0.000 000 | -0.001 |
| | 100 % | 0 | 3967 499 994 | -5.5 | 0.000 000 | -0.001 |
| | 100 % | +10 | 3967 499 997 | -1.6 | 0.000 000 | 0.000 |
| | 100 % | +30 | 3967 499 990 | -8.7 | 0.000 000 | -0.002 |
| | 100 % | +40 | 3967 499 988 | -10.7 | 0.000 000 | -0.003 |
| | 100 % | +50 | 3967 500 001 | 2.4 | 0.000 000 | 0.001 |
| | Lowest voltage | +20 | 3967 499 998 | -0.7 | 0.000 000 | 0.000 |



The report shall not be (partly) reproduced except in full without approval of the laboratory.

▣ BandWidth: 30 MHz

▣ Voltage(100 %): 4.200 VDC

▣ Lowest voltage: 3.700 VDC

▣ LIMIT: Emission must remain in band

| Test. Frequncy | Voltage | Temp. | Frequency | Frequency | Deviation | ppm |
|---|---|---|---|---|---|---|
| (MHz) | (%) | (°C) | (Hz) | Error (Hz) | (%) | |
| 3715.020 | 100 % | +20(Ref) | 3715 019 986 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3715 019 969 | -16.9 | 0.000 000 | -0.005 |
| | 100 % | -20 | 3715 019 969 | -16.8 | 0.000 000 | -0.005 |
| | 100 % | -10 | 3715 019 970 | -15.9 | 0.000 000 | -0.004 |
| | 100 % | 0 | 3715 019 966 | -20.3 | -0.000 001 | -0.005 |
| | 100 % | +10 | 3715 019 973 | -13.1 | 0.000 000 | -0.004 |
| | 100 % | +30 | 3715 019 964 | -22.5 | -0.000 001 | -0.006 |
| | 100 % | +40 | 3715 019 972 | -14.2 | 0.000 000 | -0.004 |
| | 100 % | +50 | 3715 019 969 | -17.3 | 0.000 000 | -0.005 |
| | Lowest voltage | +20 | 3715 019 968 | -18.2 | 0.000 000 | -0.005 |
| 3964.980 | 100 % | +20(Ref) | 3964 979 991 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3964 979 987 | -4.2 | 0.000 000 | -0.001 |
| | 100 % | -20 | 3964 979 979 | -12.1 | 0.000 000 | -0.003 |
| | 100 % | -10 | 3964 979 983 | -8.1 | 0.000 000 | -0.002 |
| | 100 % | 0 | 3964 979 984 | -6.7 | 0.000 000 | -0.002 |
| | 100 % | +10 | 3964 979 980 | -11.1 | 0.000 000 | -0.003 |
| | 100 % | +30 | 3964 979 976 | -14.5 | 0.000 000 | -0.004 |
| | 100 % | +40 | 3964 979 984 | -7.4 | 0.000 000 | -0.002 |
| | 100 % | +50 | 3964 979 982 | -9.0 | 0.000 000 | -0.002 |
| | Lowest voltage | +20 | 3964 979 987 | -3.5 | 0.000 000 | -0.001 |



The report shall not be (partly) reproduced except in full without approval of the laboratory.

▣ BandWidth: 40 MHz

▣ Voltage(100 %): 4.200 VDC

▣ Lowest voltage: 3.700 VDC

▣ LIMIT: Emission must remain in band

| Test. Frequncy | Voltage | Temp. | Frequency | Frequency | Deviation | ppm |
|---|---|---|---|---|---|---|
| (MHz) | (%) | (°C) | (Hz) | Error (Hz) | (%) | |
| 3720.000 | 100 % | +20(Ref) | 3719 999 982 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3719 999 962 | -20.1 | -0.000 001 | -0.005 |
| | 100 % | -20 | 3719 999 963 | -19.3 | -0.000 001 | -0.005 |
| | 100 % | -10 | 3719 999 961 | -21.3 | -0.000 001 | -0.006 |
| | 100 % | 0 | 3719 999 964 | -18.4 | 0.000 000 | -0.005 |
| | 100 % | +10 | 3719 999 969 | -12.8 | 0.000 000 | -0.003 |
| | 100 % | +30 | 3719 999 964 | -18.4 | 0.000 000 | -0.005 |
| | 100 % | +40 | 3719 999 965 | -17.0 | 0.000 000 | -0.005 |
| | 100 % | +50 | 3719 999 965 | -17.0 | 0.000 000 | -0.005 |
| | Lowest voltage | +20 | 3719 999 961 | -20.9 | -0.000 001 | -0.006 |
| 3960.000 | 100 % | +20(Ref) | 3959 999 994 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3959 999 982 | -11.9 | 0.000 000 | -0.003 |
| | 100 % | -20 | 3959 999 985 | -9.6 | 0.000 000 | -0.002 |
| | 100 % | -10 | 3959 999 981 | -13.6 | 0.000 000 | -0.003 |
| | 100 % | 0 | 3959 999 984 | -9.9 | 0.000 000 | -0.003 |
| | 100 % | +10 | 3959 999 979 | -14.9 | 0.000 000 | -0.004 |
| | 100 % | +30 | 3959 999 988 | -6.4 | 0.000 000 | -0.002 |
| | 100 % | +40 | 3959 999 987 | -7.7 | 0.000 000 | -0.002 |
| | 100 % | +50 | 3959 999 986 | -8.7 | 0.000 000 | -0.002 |
| | Lowest voltage | +20 | 3959 999 986 | -8.8 | 0.000 000 | -0.002 |



The report shall not be (partly) reproduced except in full without approval of the laboratory.

▣ BandWidth: 50 MHz

▣ Voltage(100 %): 4.200 VDC

▣ Lowest voltage: 3.700 VDC

▣ LIMIT: Emission must remain in band

| Test. Frequncy | Voltage | Temp. | Frequency | Frequency | Deviation | ppm |
|---|---|---|---|---|---|---|
| (MHz) | (%) | (°C) | (Hz) | Error (Hz) | (%) | |
| 3725.010 | 100 % | +20(Ref) | 3725 009 982 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3725 009 964 | -17.8 | 0.000 000 | -0.005 |
| | 100 % | -20 | 3725 009 964 | -17.6 | 0.000 000 | -0.005 |
| | 100 % | -10 | 3725 009 961 | -20.6 | -0.000 001 | -0.006 |
| | 100 % | 0 | 3725 009 962 | -19.4 | -0.000 001 | -0.005 |
| | 100 % | +10 | 3725 009 961 | -20.8 | -0.000 001 | -0.006 |
| | 100 % | +30 | 3725 009 962 | -19.9 | -0.000 001 | -0.005 |
| | 100 % | +40 | 3725 009 964 | -17.9 | 0.000 000 | -0.005 |
| | 100 % | +50 | 3725 009 963 | -19.2 | -0.000 001 | -0.005 |
| | Lowest voltage | +20 | 3725 009 962 | -19.3 | -0.000 001 | -0.005 |
| 3954.990 | 100 % | +20(Ref) | 3954 989 989 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3954 989 979 | -9.9 | 0.000 000 | -0.003 |
| | 100 % | -20 | 3954 989 979 | -9.9 | 0.000 000 | -0.002 |
| | 100 % | -10 | 3954 989 972 | -17.1 | 0.000 000 | -0.004 |
| | 100 % | 0 | 3954 989 975 | -13.9 | 0.000 000 | -0.004 |
| | 100 % | +10 | 3954 989 982 | -7.1 | 0.000 000 | -0.002 |
| | 100 % | +30 | 3954 989 975 | -13.6 | 0.000 000 | -0.003 |
| | 100 % | +40 | 3954 989 981 | -7.6 | 0.000 000 | -0.002 |
| | 100 % | +50 | 3954 989 977 | -11.6 | 0.000 000 | -0.003 |
| | Lowest voltage | +20 | 3954 989 978 | -10.6 | 0.000 000 | -0.003 |



The report shall not be (partly) reproduced except in full without approval of the laboratory.

▣ BandWidth: 60 MHz

▣ Voltage(100 %): 4.200 VDC

▣ Lowest voltage: 3.700 VDC

▣ LIMIT: Emission must remain in band

| Test. Frequncy | Voltage | Temp. | Frequency | Frequency | Deviation | ppm |
|---|---|---|---|---|---|---|
| (MHz) | (%) | (°C) | (Hz) | Error (Hz) | (%) | |
| 3730.020 | 100 % | +20(Ref) | 3730 019 977 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3730 019 961 | -15.5 | 0.000 000 | -0.004 |
| | 100 % | -20 | 3730 019 963 | -13.8 | 0.000 000 | -0.004 |
| | 100 % | -10 | 3730 019 960 | -17.2 | 0.000 000 | -0.005 |
| | 100 % | 0 | 3730 019 961 | -16.0 | 0.000 000 | -0.004 |
| | 100 % | +10 | 3730 019 959 | -17.6 | 0.000 000 | -0.005 |
| | 100 % | +30 | 3730 019 957 | -19.8 | -0.000 001 | -0.005 |
| | 100 % | +40 | 3730 019 958 | -18.8 | -0.000 001 | -0.005 |
| | 100 % | +50 | 3730 019 957 | -20.3 | -0.000 001 | -0.005 |
| | Lowest voltage | +20 | 3730 019 960 | -17.1 | 0.000 000 | -0.005 |
| 3949.980 | 100 % | +20(Ref) | 3949 979 986 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3949 979 971 | -15.0 | 0.000 000 | -0.004 |
| | 100 % | -20 | 3949 979 972 | -13.8 | 0.000 000 | -0.004 |
| | 100 % | -10 | 3949 979 975 | -10.7 | 0.000 000 | -0.003 |
| | 100 % | 0 | 3949 979 974 | -11.3 | 0.000 000 | -0.003 |
| | 100 % | +10 | 3949 979 974 | -12.0 | 0.000 000 | -0.003 |
| | 100 % | +30 | 3949 979 976 | -10.2 | 0.000 000 | -0.003 |
| | 100 % | +40 | 3949 979 976 | -9.4 | 0.000 000 | -0.002 |
| | 100 % | +50 | 3949 979 975 | -11.2 | 0.000 000 | -0.003 |
| | Lowest voltage | +20 | 3949 979 973 | -13.2 | 0.000 000 | -0.003 |



The report shall not be (partly) reproduced except in full without approval of the laboratory.

▣ BandWidth: 70 MHz

▣ Voltage(100 %): 4.200 VDC

▣ Lowest voltage: 3.700 VDC

▣ LIMIT: Emission must remain in band

| Test. Frequncy | Voltage | Temp. | Frequency | Frequency | Deviation | ppm |
|---|---|---|---|---|---|---|
| (MHz) | (%) | (°C) | (Hz) | Error (Hz) | (%) | |
| 3735.000 | 100 % | +20(Ref) | 3734 999 988 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3734 999 973 | -14.6 | 0.000 000 | -0.004 |
| | 100 % | -20 | 3734 999 972 | -16.0 | 0.000 000 | -0.004 |
| | 100 % | -10 | 3734 999 970 | -18.0 | 0.000 000 | -0.005 |
| | 100 % | 0 | 3734 999 968 | -19.2 | -0.000 001 | -0.005 |
| | 100 % | +10 | 3734 999 967 | -20.6 | -0.000 001 | -0.006 |
| | 100 % | +30 | 3734 999 970 | -17.5 | 0.000 000 | -0.005 |
| | 100 % | +40 | 3734 999 970 | -18.1 | 0.000 000 | -0.005 |
| | 100 % | +50 | 3734 999 971 | -16.4 | 0.000 000 | -0.004 |
| | Lowest voltage | +20 | 3734 999 972 | -15.8 | 0.000 000 | -0.004 |
| 3945.000 | 100 % | +20(Ref) | 3944 999 991 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3944 999 981 | -9.5 | 0.000 000 | -0.002 |
| | 100 % | -20 | 3944 999 978 | -12.4 | 0.000 000 | -0.003 |
| | 100 % | -10 | 3944 999 982 | -8.8 | 0.000 000 | -0.002 |
| | 100 % | 0 | 3944 999 975 | -15.5 | 0.000 000 | -0.004 |
| | 100 % | +10 | 3944 999 980 | -10.8 | 0.000 000 | -0.003 |
| | 100 % | +30 | 3944 999 980 | -10.5 | 0.000 000 | -0.003 |
| | 100 % | +40 | 3944 999 980 | -10.2 | 0.000 000 | -0.003 |
| | 100 % | +50 | 3944 999 977 | -13.5 | 0.000 000 | -0.003 |
| | Lowest voltage | +20 | 3944 999 981 | -9.6 | 0.000 000 | -0.002 |



The report shall not be (partly) reproduced except in full without approval of the laboratory.

▣ BandWidth: 80 MHz

▣ Voltage(100 %): 4.200 VDC

▣ Lowest voltage: 3.700 VDC

▣ LIMIT: Emission must remain in band

| Test. Frequncy | Voltage | Temp. | Frequency | Frequency | Deviation | ppm |
|---|---|---|---|---|---|---|
| (MHz) | (%) | (°C) | (Hz) | Error (Hz) | (%) | |
| 3740.010 | 100 % | +20(Ref) | 3740 009 998 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3740 009 991 | -7.2 | 0.000 000 | -0.002 |
| | 100 % | -20 | 3740 009 993 | -5.7 | 0.000 000 | -0.002 |
| | 100 % | -10 | 3740 009 986 | -12.3 | 0.000 000 | -0.003 |
| | 100 % | 0 | 3740 009 994 | -4.3 | 0.000 000 | -0.001 |
| | 100 % | +10 | 3740 009 995 | -3.7 | 0.000 000 | -0.001 |
| | 100 % | +30 | 3740 009 999 | 1.0 | 0.000 000 | 0.000 |
| | 100 % | +40 | 3740 009 993 | -4.7 | 0.000 000 | -0.001 |
| | 100 % | +50 | 3740 009 995 | -2.9 | 0.000 000 | -0.001 |
| | Lowest voltage | +20 | 3740 009 994 | -4.3 | 0.000 000 | -0.001 |
| 3939.990 | 100 % | +20(Ref) | 3939 989 992 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3939 989 979 | -12.1 | 0.000 000 | -0.003 |
| | 100 % | -20 | 3939 989 984 | -8.0 | 0.000 000 | -0.002 |
| | 100 % | -10 | 3939 989 986 | -5.8 | 0.000 000 | -0.001 |
| | 100 % | 0 | 3939 989 986 | -5.8 | 0.000 000 | -0.001 |
| | 100 % | +10 | 3939 989 980 | -11.3 | 0.000 000 | -0.003 |
| | 100 % | +30 | 3939 989 980 | -11.3 | 0.000 000 | -0.003 |
| | 100 % | +40 | 3939 989 972 | -19.1 | 0.000 000 | -0.005 |
| | 100 % | +50 | 3939 989 980 | -11.1 | 0.000 000 | -0.003 |
| | Lowest voltage | +20 | 3939 989 979 | -12.7 | 0.000 000 | -0.003 |



The report shall not be (partly) reproduced except in full without approval of the laboratory.

▣ BandWidth: 90 MHz

▣ Voltage(100 %): 4.200 VDC

▣ Lowest voltage: 3.700 VDC

▣ LIMIT: Emission must remain in band

| Test. Frequncy | Voltage | Temp. | Frequency | Frequency | Deviation | ppm |
|---|---|---|---|---|---|---|
| (MHz) | (%) | (℃) | (Hz) | Error (Hz) | (%) | |
| 3745.020 | 100 % | +20(Ref) | 3745 019 993 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3745 019 980 | -12.5 | 0.000 000 | -0.003 |
| | 100 % | -20 | 3745 019 979 | -13.8 | 0.000 000 | -0.004 |
| | 100 % | -10 | 3745 019 978 | -14.5 | 0.000 000 | -0.004 |
| | 100 % | 0 | 3745 019 973 | -20.2 | -0.000 001 | -0.005 |
| | 100 % | +10 | 3745 019 977 | -15.6 | 0.000 000 | -0.004 |
| | 100 % | +30 | 3745 019 981 | -12.3 | 0.000 000 | -0.003 |
| | 100 % | +40 | 3745 019 978 | -15.0 | 0.000 000 | -0.004 |
| | 100 % | +50 | 3745 019 978 | -14.3 | 0.000 000 | -0.004 |
| | Lowest voltage | +20 | 3745 019 982 | -11.1 | 0.000 000 | -0.003 |
| 3934.980 | 100 % | +20(Ref) | 3934 979 983 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3934 979 968 | -14.9 | 0.000 000 | -0.004 |
| | 100 % | -20 | 3934 979 975 | -7.5 | 0.000 000 | -0.002 |
| | 100 % | -10 | 3934 979 973 | -10.2 | 0.000 000 | -0.003 |
| | 100 % | 0 | 3934 979 968 | -14.4 | 0.000 000 | -0.004 |
| | 100 % | +10 | 3934 979 972 | -10.8 | 0.000 000 | -0.003 |
| | 100 % | +30 | 3934 979 972 | -10.8 | 0.000 000 | -0.003 |
| | 100 % | +40 | 3934 979 970 | -12.5 | 0.000 000 | -0.003 |
| | 100 % | +50 | 3934 979 966 | -16.6 | 0.000 000 | -0.004 |
| | Lowest voltage | +20 | 3934 979 972 | -10.6 | 0.000 000 | -0.003 |



The report shall not be (partly) reproduced except in full without approval of the laboratory.

▣ BandWidth: 100 MHz

▣ Voltage(100 %): 4.200 VDC

▣ Lowest voltage: 3.700 VDC

▣ LIMIT: Emission must remain in band

| Test. Frequncy | Voltage | Temp. | Frequency | Frequency | Deviation | ppm |
|---|---|---|---|---|---|---|
| (MHz) | (%) | (°C) | (Hz) | Error (Hz) | (%) | |
| 3750.000 | 100 % | +20(Ref) | 3749 999 983 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3749 999 975 | -8.3 | 0.000 000 | -0.002 |
| | 100 % | -20 | 3749 999 966 | -16.8 | 0.000 000 | -0.004 |
| | 100 % | -10 | 3749 999 970 | -13.3 | 0.000 000 | -0.004 |
| | 100 % | 0 | 3749 999 970 | -13.4 | 0.000 000 | -0.004 |
| | 100 % | +10 | 3749 999 970 | -13.4 | 0.000 000 | -0.004 |
| | 100 % | +30 | 3749 999 972 | -11.3 | 0.000 000 | -0.003 |
| | 100 % | +40 | 3749 999 970 | -12.9 | 0.000 000 | -0.003 |
| | 100 % | +50 | 3749 999 972 | -11.1 | 0.000 000 | -0.003 |
| | Lowest voltage | +20 | 3749 999 972 | -11.2 | 0.000 000 | -0.003 |
| 3930.000 | 100 % | +20(Ref) | 3929 999 978 | 0.0 | 0.000 000 | 0.000 |
| | 100 % | -30 | 3929 999 960 | -17.2 | 0.000 000 | -0.004 |
| | 100 % | -20 | 3929 999 963 | -15.0 | 0.000 000 | -0.004 |
| | 100 % | -10 | 3929 999 961 | -16.7 | 0.000 000 | -0.004 |
| | 100 % | 0 | 3929 999 962 | -16.0 | 0.000 000 | -0.004 |
| | 100 % | +10 | 3929 999 957 | -21.1 | -0.000 001 | -0.005 |
| | 100 % | +30 | 3929 999 958 | -19.5 | 0.000 000 | -0.005 |
| | 100 % | +40 | 3929 999 960 | -17.9 | 0.000 000 | -0.005 |
| | 100 % | +50 | 3929 999 960 | -18.1 | 0.000 000 | -0.005 |
| | Lowest voltage | +20 | 3929 999 965 | -12.3 | 0.000 000 | -0.003 |



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## 12. TEST PLOTS (MIMO1)



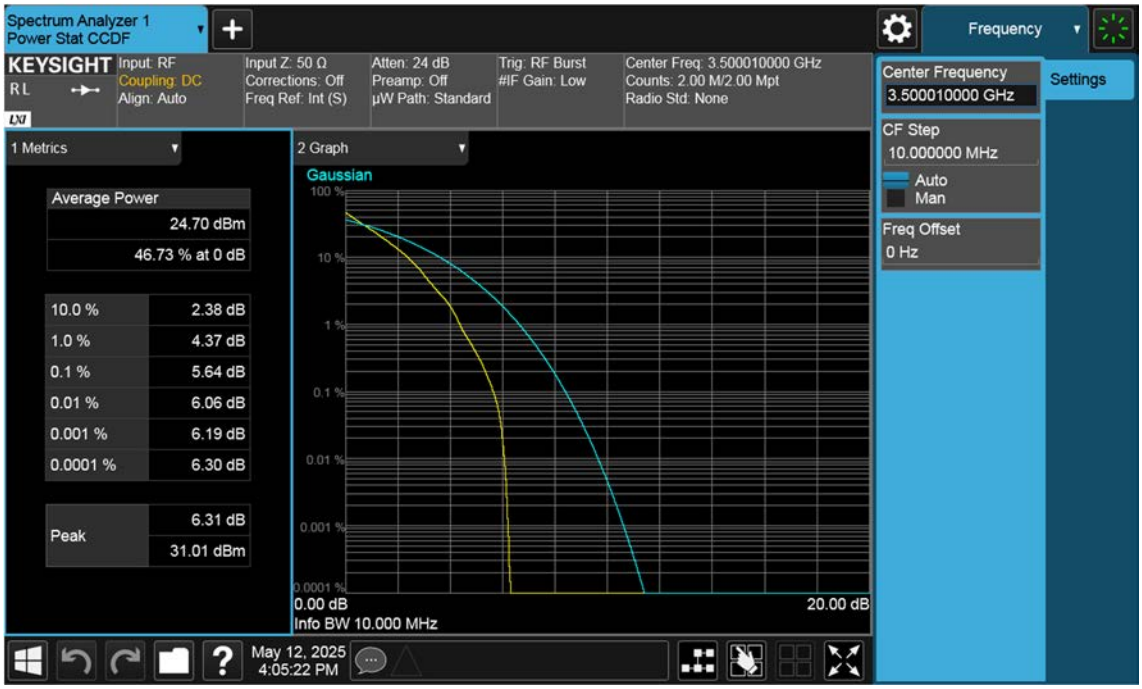
The report shall not be (partly) reproduced except in full without approval of the laboratory.

## 12.1 3450 MHz - 3550 MHz

n77(3450~3550 MHz)_10 M_PAR_Mid_BPSK_FullRB

The report shall not be (partly) reproduced except in full without approval of the laboratory.

n77(3450~3550 MHz)_10 M_PAR_Mid_QPSK_FullRB






The report shall not be (partly) reproduced except in full without approval of the laboratory.

n77(3450~3550 MHz)_10 M_PAR_Mid_16QAM_FullRB

The report shall not be (partly) reproduced except in full without approval of the laboratory.

n77(3450~3550 MHz)_10 M_PAR_Mid_64QAM_FullRB

The report shall not be (partly) reproduced except in full without approval of the laboratory.

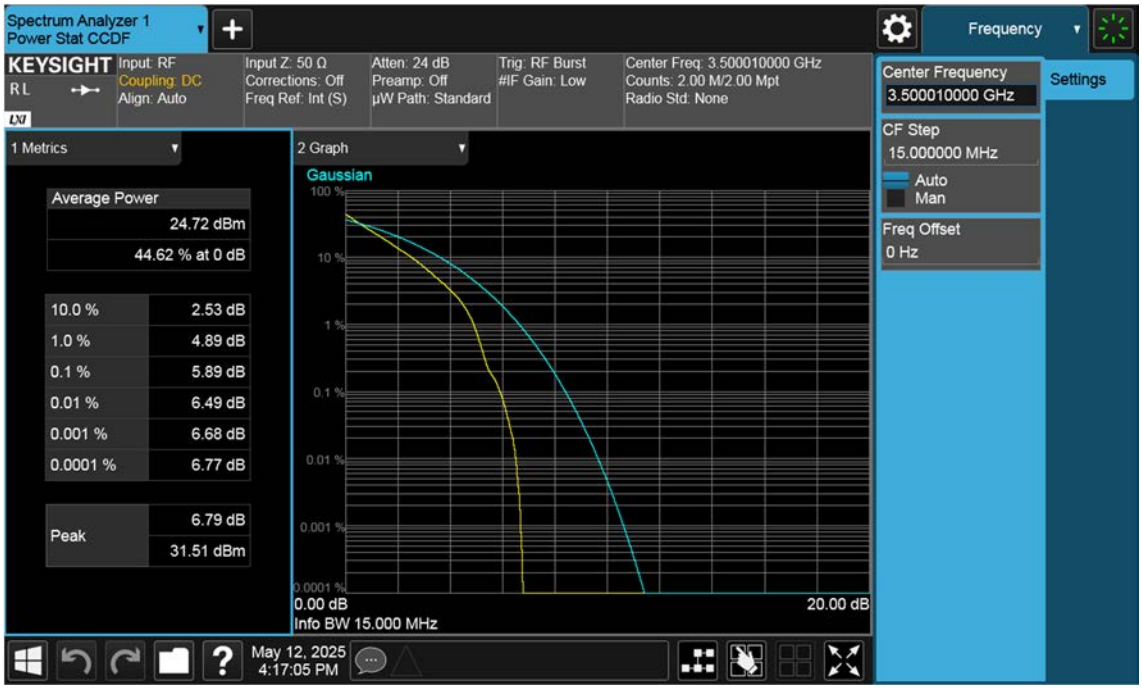
n77(3450~3550 MHz)_10 M_PAR_Mid_256QAM_FullRB

The report shall not be (partly) reproduced except in full without approval of the laboratory.

n77(3450~3550 MHz)_15 M_PAR_Mid_BPSK_FullRB

The report shall not be (partly) reproduced except in full without approval of the laboratory.

n77(3450~3550 MHz)_15 M_PAR_Mid_QPSK_FullRB






The report shall not be (partly) reproduced except in full without approval of the laboratory.

n77(3450~3550 MHz)_15 M_PAR_Mid_16QAM_FullRB

The report shall not be (partly) reproduced except in full without approval of the laboratory.

n77(3450~3550 MHz)_15 M_PAR_Mid_64QAM_FullRB

The report shall not be (partly) reproduced except in full without approval of the laboratory.

n77(3450~3550 MHz)_15 M_PAR_Mid_256QAM_FullRB

The report shall not be (partly) reproduced except in full without approval of the laboratory.

n77(3450~3550 MHz)_20 M_PAR_Mid_BPSK_FullRB

The report shall not be (partly) reproduced except in full without approval of the laboratory.

n77(3450~3550 MHz)_20 M_PAR_Mid_QPSK_FullRB

The report shall not be (partly) reproduced except in full without approval of the laboratory.

n77(3450~3550 MHz)_20 M_PAR_Mid_16QAM_FullRB

The report shall not be (partly) reproduced except in full without approval of the laboratory.

n77(3450~3550 MHz)_20 M_PAR_Mid_64QAM_FullRB

The report shall not be (partly) reproduced except in full without approval of the laboratory.

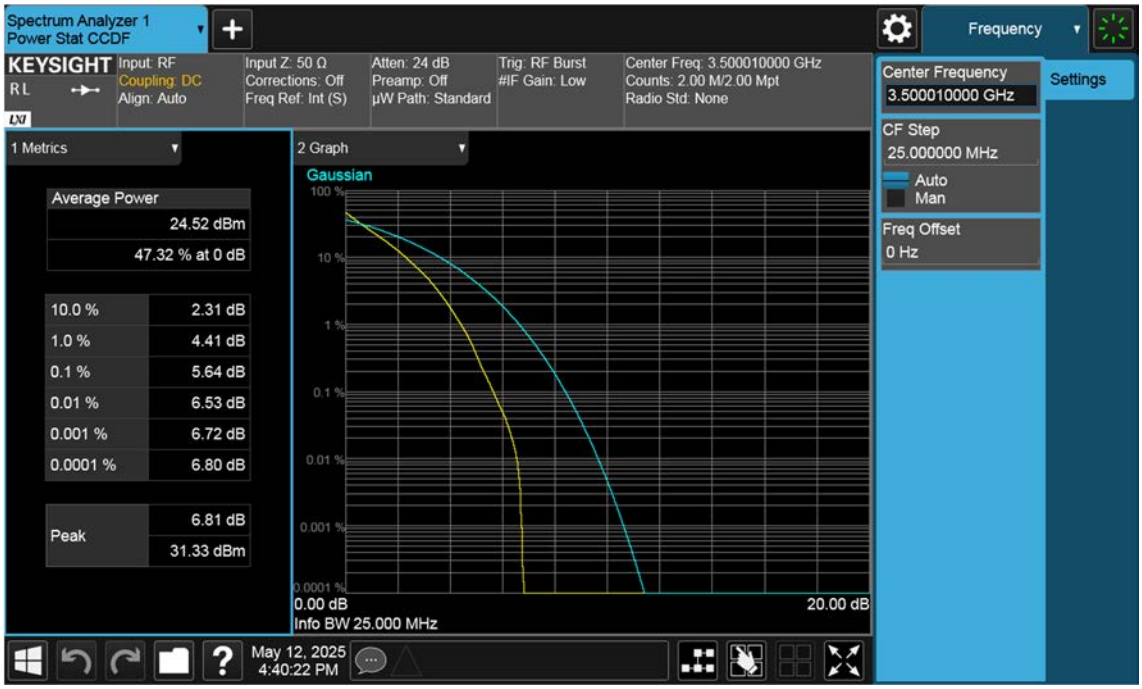
n77(3450~3550 MHz)_20 M_PAR_Mid_256QAM_FullRB

The report shall not be (partly) reproduced except in full without approval of the laboratory.

n77(3450~3550 MHz)_25 M_PAR_Mid_BPSK_FullRB

The report shall not be (partly) reproduced except in full without approval of the laboratory.

n77(3450~3550 MHz)_25 M_PAR_Mid_QPSK_FullRB






The report shall not be (partly) reproduced except in full without approval of the laboratory.

n77(3450~3550 MHz)_25 M_PAR_Mid_16QAM_FullRB

The report shall not be (partly) reproduced except in full without approval of the laboratory.

n77(3450~3550 MHz)_25 M_PAR_Mid_64QAM_FullRB

The report shall not be (partly) reproduced except in full without approval of the laboratory.

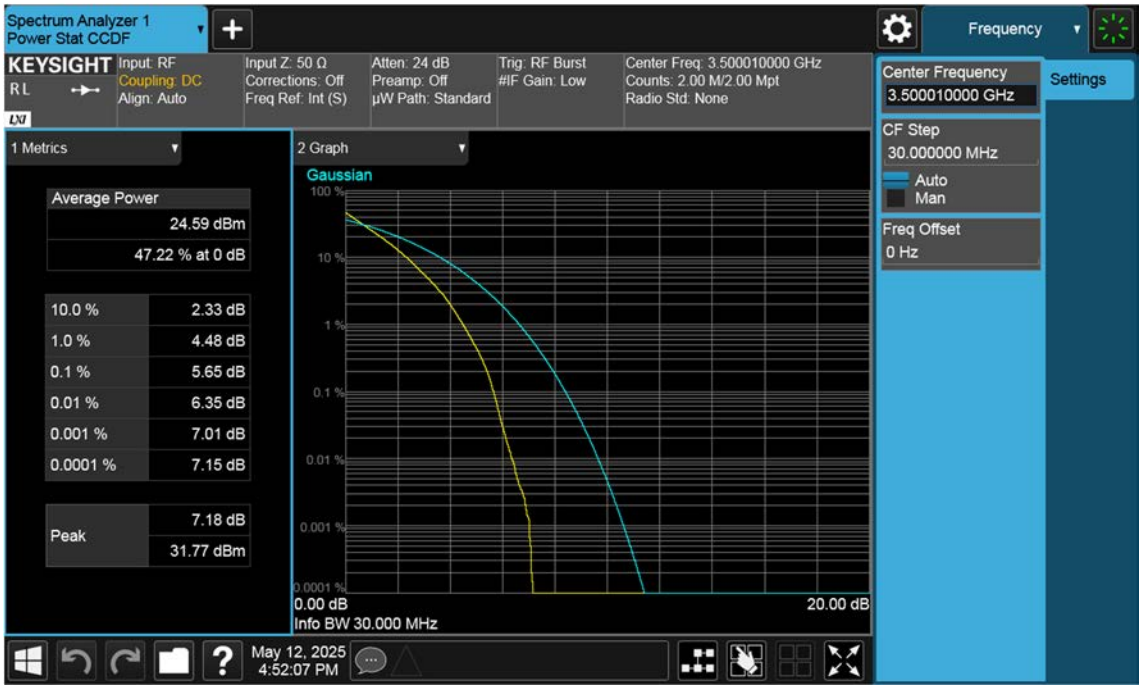
n77(3450~3550 MHz)_25 M_PAR_Mid_256QAM_FullRB

The report shall not be (partly) reproduced except in full without approval of the laboratory.

n77(3450~3550 MHz)_30 M_PAR_Mid_BPSK_FullRB

The report shall not be (partly) reproduced except in full without approval of the laboratory.

n77(3450~3550 MHz)_30 M_PAR_Mid_QPSK_FullRB






The report shall not be (partly) reproduced except in full without approval of the laboratory.

n77(3450~3550 MHz)_30 M_PAR_Mid_16QAM_FullRB

The report shall not be (partly) reproduced except in full without approval of the laboratory.

n77(3450~3550 MHz)_30 M_PAR_Mid_64QAM_FullRB

The report shall not be (partly) reproduced except in full without approval of the laboratory.

n77(3450~3550 MHz)_30 M_PAR_Mid_256QAM_FullRB

The report shall not be (partly) reproduced except in full without approval of the laboratory.

n77(3450~3550 MHz)_40 M_PAR_Mid_BPSK_FullRB

The report shall not be (partly) reproduced except in full without approval of the laboratory.

n77(3450~3550 MHz)_40 M_PAR_Mid_QPSK_FullRB

The report shall not be (partly) reproduced except in full without approval of the laboratory.

n77(3450~3550 MHz)_40 M_PAR_Mid_16QAM_FullRB

The report shall not be (partly) reproduced except in full without approval of the laboratory.

n77(3450~3550 MHz)_40 M_PAR_Mid_64QAM_FullRB

The report shall not be (partly) reproduced except in full without approval of the laboratory.

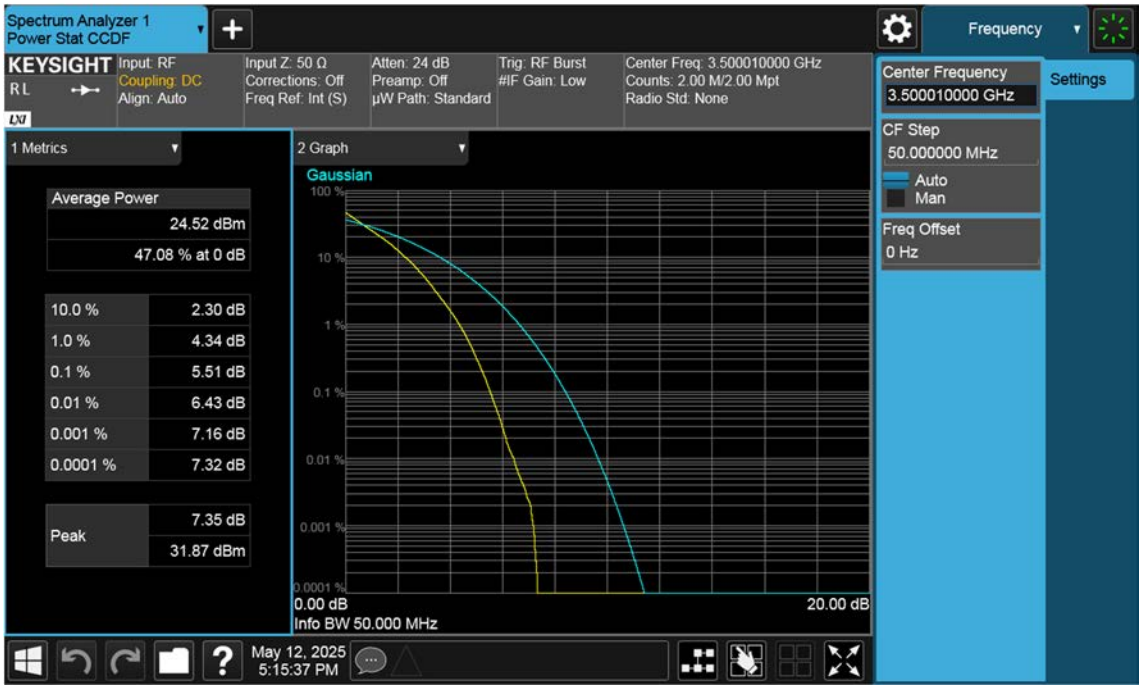
n77(3450~3550 MHz)_40 M_PAR_Mid_256QAM_FullRB

The report shall not be (partly) reproduced except in full without approval of the laboratory.

n77(3450~3550 MHz)_50 M_PAR_Mid_BPSK_FullRB

The report shall not be (partly) reproduced except in full without approval of the laboratory.

n77(3450~3550 MHz)_50 M_PAR_Mid_QPSK_FullRB






The report shall not be (partly) reproduced except in full without approval of the laboratory.

n77(3450~3550 MHz)_50 M_PAR_Mid_16QAM_FullRB

The report shall not be (partly) reproduced except in full without approval of the laboratory.

n77(3450~3550 MHz)_50 M_PAR_Mid_64QAM_FullRB

The report shall not be (partly) reproduced except in full without approval of the laboratory.

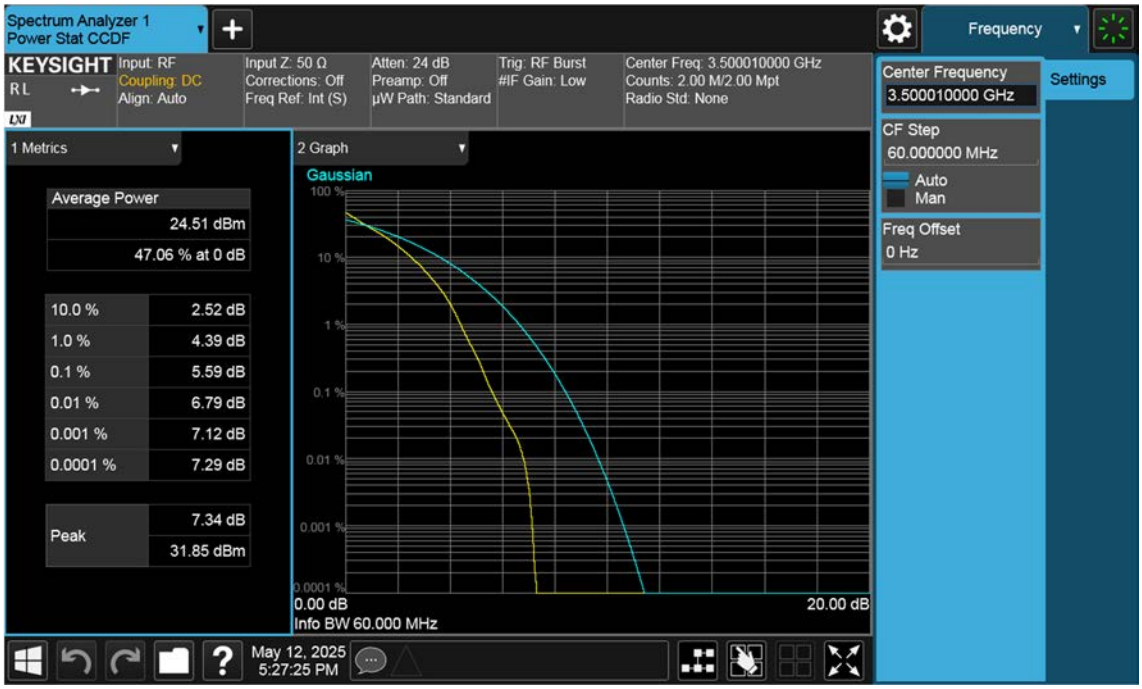
n77(3450~3550 MHz)_50 M_PAR_Mid_256QAM_FullRB

The report shall not be (partly) reproduced except in full without approval of the laboratory.

n77(3450~3550 MHz)_60 M_PAR_Mid_BPSK_FullRB

The report shall not be (partly) reproduced except in full without approval of the laboratory.

n77(3450~3550 MHz)_60 M_PAR_Mid_QPSK_FullRB






The report shall not be (partly) reproduced except in full without approval of the laboratory.

n77(3450~3550 MHz)_60 M_PAR_Mid_16QAM_FullRB

The report shall not be (partly) reproduced except in full without approval of the laboratory.

n77(3450~3550 MHz)_60 M_PAR_Mid_64QAM_FullRB

The report shall not be (partly) reproduced except in full without approval of the laboratory.

n77(3450~3550 MHz)_60 M_PAR_Mid_256QAM_FullRB

The report shall not be (partly) reproduced except in full without approval of the laboratory.

n77(3450~3550 MHz)_70 M_PAR_Mid_BPSK_FullRB

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n77(3450~3550 MHz)_70 M_PAR_Mid_QPSK_FullRB

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n77(3450~3550 MHz)_70 M_PAR_Mid_16QAM_FullRB

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n77(3450~3550 MHz)_70 M_PAR_Mid_64QAM_FullRB

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n77(3450~3550 MHz)_70 M_PAR_Mid_256QAM_FullRB

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n77(3450~3550 MHz)_80 M_PAR_Mid_BPSK_FullRB

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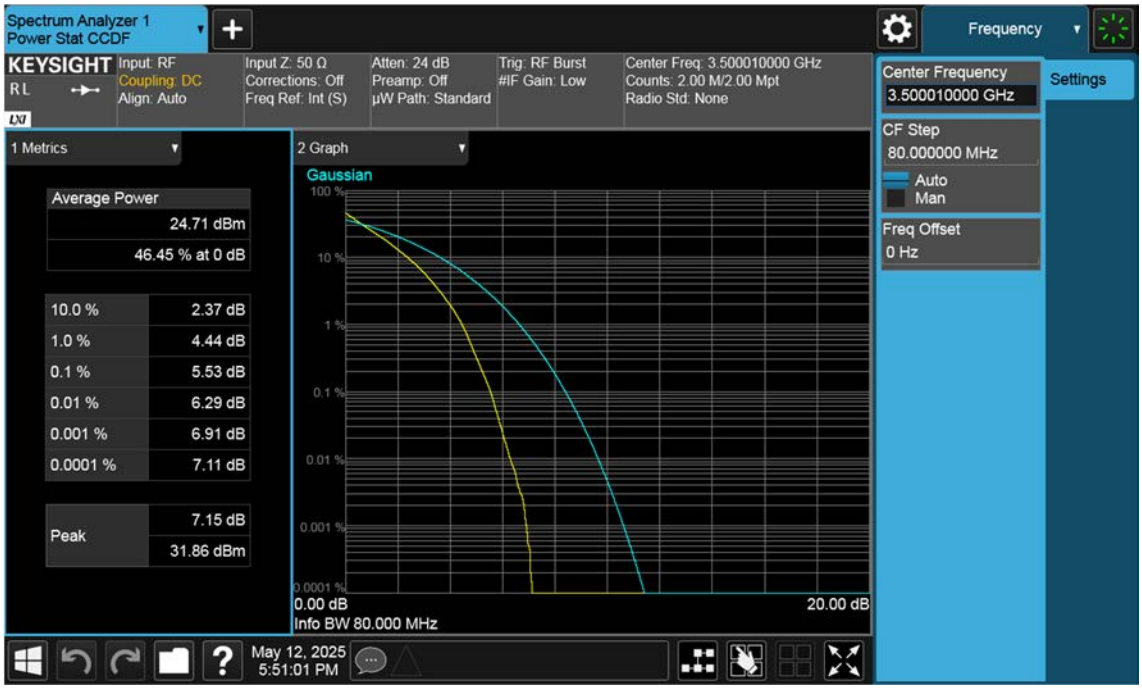
n77(3450~3550 MHz)_80 M_PAR_Mid_QPSK_FullRB



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n77(3450~3550 MHz)_80 M_PAR_Mid_16QAM_FullRB

The report shall not be (partly) reproduced except in full without approval of the laboratory.

n77(3450~3550 MHz)_80 M_PAR_Mid_64QAM_FullRB

The report shall not be (partly) reproduced except in full without approval of the laboratory.

n77(3450~3550 MHz)_80 M_PAR_Mid_256QAM_FullRB

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n77(3450~3550 MHz)_90 M_PAR_Mid_BPSK_FullRB

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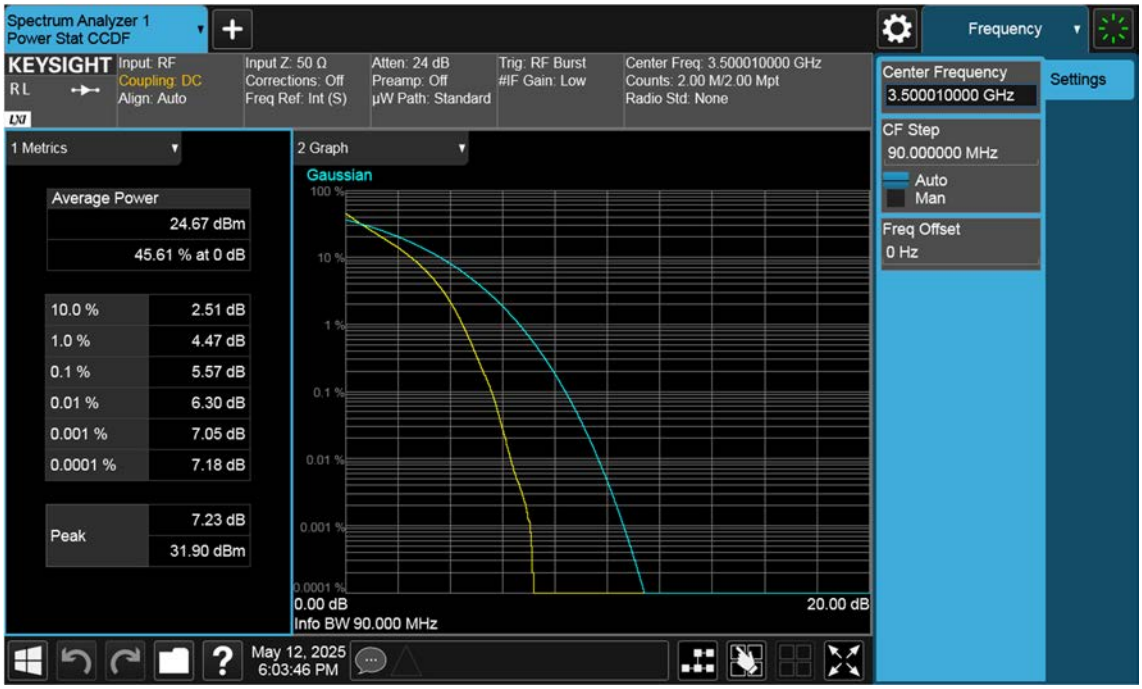
n77(3450~3550 MHz)_90 M_PAR_Mid_QPSK_FullRB



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n77(3450~3550 MHz)_90 M_PAR_Mid_16QAM_FullRB

The report shall not be (partly) reproduced except in full without approval of the laboratory.

n77(3450~3550 MHz)_90 M_PAR_Mid_64QAM_FullRB

The report shall not be (partly) reproduced except in full without approval of the laboratory.

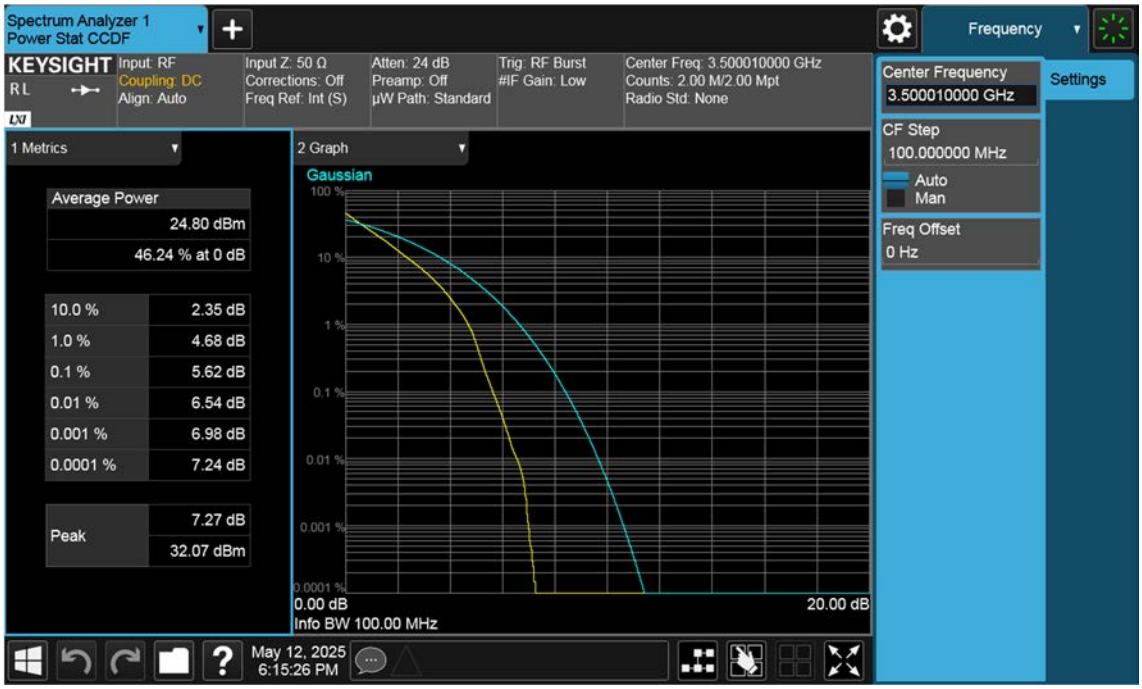
n77(3450~3550 MHz)_90 M_PAR_Mid_256QAM_FullRB

The report shall not be (partly) reproduced except in full without approval of the laboratory.

n77(3450~3550 MHz)_100 M_PAR_Mid_BPSK_FullRB

The report shall not be (partly) reproduced except in full without approval of the laboratory.

n77(3450~3550 MHz)_100 M_PAR_Mid_QPSK_FullRB



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