

CommScope Technologies, LLC TEST REPORT

SCOPE OF WORK

Emissions testing of model RPM-A5A11-B14 (Band 14 with 5G nR and 5100 Host (Lo-PIM) and Band 14 with 5G nR and 5100 Host (Hi-PIM)) for Class II Permissive Change

REPORT NUMBER

105250625BOX-001.2

ISSUE DATE November 30, 2022

[REVISED DATE] January 11, 2023



DOCUMENT CONTROL NUMBER

Generic EMC Report Shell Rev. October 2022 © 2022 INTERTEK



EMISSIONS TEST REPORT

(FULL COMPLIANCE) – CLASS II PERMISSIVE CHANGE

Report Number: 105250625BOX-001.2 Project Number: G105250625

Report Issue Date: November 30, 2022 Report Revision Date: January 11, 2023

Model(s) Tested: RPM-A5A11-B14 (Band 14 with 5G nR and 5100 Host (Lo-PIM) and Band 14 with 5G nR and 5100 Host (Hi-PIM))

Model(s) Partially Tested: None Model(s) Not Tested but declared equivalent by the client: None

Standards: CFR47 FCC Part 90: 11/2022)

Tested by: Intertek 70 Codman Hill Road Boxborough, MA 01719 USA Client: CommScope Technologies LLC 900 Chelmsford St. Lowell, MA 01851 USA

Report prepared by:

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Intertek

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1 Introduction and Conclusion

The tests indicated in section 2.0 were performed on the product constructed as described in section 4.0. The remaining test sections are the verbatim text from the actual data sheets used during the investigation. These test sections include the test name, the specified test Method, a list of the actual Test Equipment Used, documentation Photos, Results and raw Data. No additions, deviations, or exclusions have been made from the standard(s) unless specifically noted.

Based on the results of our investigation, we have concluded the product tested **complies** with the requirements of the standard(s) indicated. The results obtained in this test report pertain only to the item(s) tested. Intertek does not make any claims of compliance for samples or variants which were not tested.

2 Test Summary

| Section | Test full name | Result |
|---------|---|--------|
| 3 | Client Information | |
| 4 | Description of Equipment Under Test and Variant Models | |
| 5 | System Setup and Method | |
| 6 | Output Power (ERP) CFR47 FCC Part 90.542 (a)(3): 11/2022 | Pass |
| 7 | Occupied and 26 dB Bandwidths CFR47 FCC Part 90.543 (d): 11/2022, CFR47 FCC Part 2.1049: 11/2022 | Pass |
| 8 | Band Edges and Emission Mask CFR47 FCC Part 90.543 (e)(1) and (e)(3): 11/2022 CFR47 FCC Part 2.1051: 11/2022, CFR47 FCC Part 2.1057: 2022 | Pass |
| 9 | Antenna Port Conducted and Radiated Emissions CFR47 FCC Part 90.543 (e)(1) and (e)(3): 11/2022 | Pass |
| 10 | Revision History | |

Notes: This is a class II permissive. Only selected tests as listed above were performed.

Radio modules for RP5100 host platform which cover band 14. Both old and new versions of the hardware were tested; referenced as Hi-PIM and Lo-PIM. Testing was conducted to add 5G nR waveforms to the filing, there were no changes to the hardware in this permissive change.

3 Client Information

This EUT was tested at the request of:

| Client: | CommScope Technologies, LLC 900 Chelmsford St. Lowell, MA 01851 USA |
|------------|--|
| Contact: | Zac Johnson |
| Telephone: | (978) 250-2678 |
| Fax: | None |
| Email: | zac.johnson@commscope.com |

4 Description of Equipment Under Test and Variant Models

| Manufacturer: | CommScope Telecommunications (China) Ltd. |
|---------------|---|
| | 68 Su Hong Xi Lu, Suzhou Industrial Park. |
| | Suzhou, Jiangsu, 215021, China |

| Equipment Under Test | | | |
|------------------------|-------------------|---------------|---------------|
| Description | Manufacturer | Model Number | Serial Number |
| Band 14 with 5G nR | CommScope | RPM-A5A11-B14 | 2131810253 |
| and 5100 Host (Lo-PIM) | Technologies, LLC | | |
| Band 14 with 5G nR | CommScope | RPM-A5A11-B14 | 21128470062 |
| and 5100 Host (Hi-PIM) | Technologies, LLC | | |
| | | | |

| Receive Date: | 11/03/2022 |
|---------------------|------------|
| Received Condition: | Good |
| Type: | Production |

Description of Equipment Under Test (provided by client) Radio modules for RP5100 host platform which cover band 14. Both old and new versions of the hardware were tested; referenced as Hi-PIM and Lo-PIM. Testing was conducted to add 5G nR waveforms to the filing, there were no changes to the hardware in this permissive change.

| Equipment Under Test Power Configuration | | | |
|--|-----------------------|----|-----|
| Rated Voltage Rated Current Rated Frequency Number of Phases | | | |
| 48 VDC | 0.960 mA per pair max | DC | N/A |

Operating modes of the EUT:

| No. | Descriptions of EUT Exercising |
|-----|---|
| 1 | Pre-programmed to transmit at Low, Mid, and High channels at four different modulations, TM1.1- QPSK, TM3.2-16QAM, TM3.1-64QAM, and TM3.1a-256QAM at 5 MHz and 10 MHz Bandwidths |
| | |

Software used by the EUT:

| No. | Descriptions of EUT Exercising |
|-----|--------------------------------|
| 1 | RP5100_B14 |

| Radio/Receiver Characteristics | | | | |
|-------------------------------------|---|--|--|--|
| Frequency Band(s) | 758 – 768 MHz | | | |
| Modulation Type(s) | TM1.1-QPSK, TM3.2-16QAM, TM3.1-64 QAM, TM3.1a- 256QAM | | | |
| Maximum Output Power (ERP) | 23.16 dBm (Lo-PIM), 22.62 dBm (Hi-PIM) | | | |
| Test Channels | Low, Middle, High Channels of 5 MHz and 10 MHz Bandwidths, Single Channel operation only | | | |
| Occupied Bandwidth | 9.299 MHz (Lo-PIM), 9.297 MHz (Hi-PIM) | | | |
| MIMO Information (# of Transmit and | t and 2x2 MIMO using cross polarized antennas and uncorrelated | | | |
| Receive antenna ports) data streams | | | | |
| Equipment Type | Module in a host | | | |
| Antenna Type and Gain | Detachable Antenna: +4 dBi (as provided by the client. Intertek takes no responsibility for the accuracy of this information. Actual antenna gain will be determined at the time of licensing) | | | |

Variant Models:

The following variant models were not tested as part of this evaluation and are not eligible for certification; but have been identified by the manufacturer as being electrically identical models, depopulated models, or with reasonable similarity to the model(s) tested. Intertek does not make any claims of compliance for samples or variants which were not tested.

None

5 System Setup and Method

| | Cables | | | | | |
|----|-----------------------|------|-----------|----------|-------------|--|
| ID | ID Description | | Shielding | Ferrites | Termination | |
| | | (m) | | | | |
| | LAN (POE Power Cable) | 2.17 | None | None | POE P/S | |
| | LAN (Communication) | 9.00 | None | None | Laptop | |

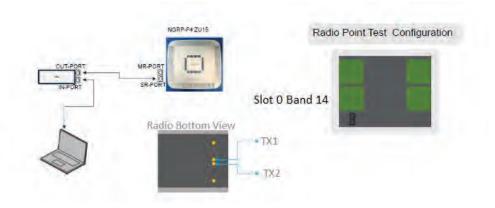
Notes: Longer cables were used to accommodate emission testing in the 10m Chamber.

| Support Equipment | | | |
|--------------------------|--------------------|---------------|------------------|
| Description Manufacturer | | Model Number | Serial Number |
| POE Power Supply | Sifos Technologies | PDA-604A | 604A0107 |
| Laptop | Dell | Latitude 3520 | None |

5.1 Method:

Configuration as required by ANSI C63.26-2015, KDB 662911, and CFR47 FCC Part 90: 11/2022.

5.2 EUT Block Diagram:



6 Output Power

6.1 Method

Tests are performed in accordance with CFR47 FCC Parts 2.1046 and 90, KDB662911, and ANSI C63.26 Section 5.2.4.4.

TEST SITE: EMC Lab

The EMC Lab has one Semi-anechoic Chamber and one Shielded Chamber. AC Mains Power is available at 120, 230, and 277 Single Phase; 208, 400, and 480 3-Phase. Large reference ground-planes are installed in the general lab area to facilitate EMC work not requiring a shielded environment.

6.2 Test Equipment Used:

| Asset | Description | Manufacturer | Model | Serial | Cal Date | Cal Due |
|-----------------|------------------------------------|-----------------------|---------|-------------|------------|------------|
| DAV005' | Weather Station | Davis | 6250 | MS191218083 | 02/11/2022 | 02/11/2023 |
| ROS005-1' | Signal and Spectrum Analyzer | Rohde and Shwartz | FSW43 | 100646 | 11/02/2021 | 11/02/2022 |
| CEN001' | DC-40GHz attenuator 20dB | Centric RF | C411-20 | CEN001 | 01/26/2022 | 01/26/2023 |
| CBLHF2012-2M-2' | 2m 9kHz-40GHz Coaxial Cable - SET2 | Huber & Suhner | SF102 | 252675002 | 02/10/2022 | 02/10/2023 |
| CEN001' | DC-40GHz attenuator 20dB | Centric RF | C411-20 | CEN001 | 01/26/2022 | 01/26/2023 |
| None | Mini SMA cable | Provided by CommScope | None | None | VBU | Verified |

Software Utilized:

| Name | Manufacturer | Version |
|------|--------------|---------|
| None | N/A | N/A |

6.3 Results:

The sample tested was found to Comply.

Limits:

CFR47 FCC Part 90.542 (a)(3) – Fixed and base stations transmitting a signal in the 758-768 MHz band with an emission bandwidth greater than 1 MHz must not exceed an ERP of 1000 watts/MHz and an antenna height of 305 m HAAT, except that antenna heights greater than 305 m HAAT are permitted if power levels are reduced below 1000 watts/MHz ERP accordance with Table 3 of this section.

Notes: ERP = EIRP - 2.15 dB. ERP = {Conducted Power (dBm) + Antenna Gain (dBi)} - 2.15 dB

| Channel | Frequency (MHz) | Antenna Port | Conducted Output Power (dBm) | Combined Conducted Output Power (dBm) | ERP (dBm) | Combined ERP (dBm | ERP Limit (dBm) | ERP Margin (dB) |
|---------|--------------------|-----------------|---------------------------------------|---|--------------|-------------------------|-----------------------|-----------------------|
| Low | 760.50 | ANT0 | 21.27 | 24.11 | 23.12 | 25.96 | 60 | -36.88 |
| | | ANT1 | 20.93 | 24.11 | 22.78 | 25.90 | 60 | -37.22 |
| Mid | 763.00 | ANT0 | 21.01 | 23.90 | 22.86 | 25.75 | 60 | -37.14 |
| | | ANT1 | 20.77 | 23.90 | 22.62 | 25.75 | 60 | -37.38 |
| High | 765.50 | ANT0 | 20.79 | 23.64 | 22.64 | 25.49 | 60 | -37.36 |
| | | ANT1 | 20.46 | 23.04 | 22.31 | 20.49 | 60 | -37.69 |

Lo-PIM, Slot 0 (Band 14), Bandwidth: 5 MHz, Modulation: TM3.2-16QAM (5G nR)

| Channel | Frequency (MHz) | Antenna Port | Conducted Output Power (dBm) | Combined Conducted Output Power (dBm) | ERP (dBm) | Combined ERP (dBm | ERP Limit (dBm) | ERP Margin (dB) |
|---------|--------------------|-----------------|---------------------------------------|---|--------------|-------------------------|-----------------------|-----------------------|
| Low | 760.50 | ANT0 | 21.29 | 24.12 | 23.14 | 25.97 | 60 | -36.86 |
| | | ANT1 | 20.92 | 24.12 | 22.77 | 25.97 | 60 | -37.23 |
| Mid | 763.00 | ANT0 | 21.05 | 23.94 | 22.90 | 25.79 | 60 | -37.10 |
| | | ANT1 | 20.80 | 23.94 | 22.65 | 25.79 | 60 | -37.35 |
| High | 765.50 | ANT0 | 20.84 | 23.68 | 22.69 | 25.53 | 60 | -37.31 |
| | | ANT1 | 20.50 | 23.00 | 22.35 | 25.55 | 60 | -37.65 |

Lo-PIM, Slot 0 (Band 14), Bandwidth: 5 MHz, Modulation: TM3.1-64QAM (5G nR)

| Channel | Frequency (MHz) | Antenna Port | Conducted Output Power (dBm) | Combined Conducted Output Power (dBm) | ERP (dBm) | Combined ERP (dBm | ERP Limit (dBm) | ERP Margin (dB) |
|---------|--------------------|-----------------|---------------------------------------|---|--------------|-------------------------|-----------------------|-----------------------|
| Low | 760.50 | ANT0 | 20.52 | 23.48 | 22.37 | - 25.33 | 60 | -37.63 |
| | | ANT1 | 20.42 | 23.40 | 22.27 | | 60 | -37.73 |
| Mid | 763.00 | ANT0 | 20.79 | 23.8 | 22.64 | 25.65 | 60 | -37.36 |
| | | ANT1 | 20.78 | 23.0 | 22.63 | 25.65 | 60 | -37.37 |
| High | 765.50 | ANT0 | 20.57 | 23.54 | 22.42 | 42 25.39 | 60 | -37.58 |
| | | ANT1 | 20.49 | 23.34 | 22.34 | 20.09 | 60 | -37.66 |

Lo-PIM, Slot 0 (Band 14), Bandwidth: 5 MHz, Modulation: TM3.1a-256QAM (5G nR)

| Channel | Frequency (MHz) | Antenna Port | Conducted Output Power (dBm) | Combined Conducted Output Power (dBm) | ERP (dBm) | Combined ERP (dBm | ERP Limit (dBm) | ERP Margin (dB) |
|---------|--------------------|-----------------|---------------------------------------|---|--------------|-------------------------|-----------------------|-----------------------|
| Low | 760.50 | ANT0 | 21.31 | 24.14 | 23.16 | 25.99 | 60 | -36.84 |
| | | ANT1 | 20.94 | 24.14 | 22.79 | 25.99 | 60 | -37.21 |
| Mid | 763.00 | ANT0 | 21.05 | 23.94 | 22.90 | 25.80 | 60 | -37.10 |
| | | ANT1 | 20.81 | 23.94 | 22.66 | 25.60 | 60 | -37.34 |
| High | 765.50 | ANT0 | 20.83 | 23.68 | 22.68 | 25.53 | 60 | -37.32 |
| | | ANT1 | 20.50 | 23.00 | 22.35 | 20.00 | 60 | -37.65 |

Lo-PIM, Slot 0 (Band 14), Bandwidth: 10 MHz, Modulation: TM1.1-QPSK (5G nR)

| Channel | Frequency (MHz) | Antenna Port | Conducted Output Power (dBm) | Combined Conducted Output Power (dBm) | ERP (dBm) | Combined ERP (dBm | ERP Limit (dBm) | ERP Margin (dB) |
|---------|--------------------|-----------------|---------------------------------------|---|--------------|-------------------------|-----------------------|-----------------------|
| High | 763.00 | ANT0 | 21.02 | 22.06 | 22.87 | 05.74 | 60 | -37.13 |
| - | | ANT1 | 20.68 | 23.86 | 22.53 | 25.71 | 60 | -37.47 |

Lo-PIM, Slot 0 (Band 14), Bandwidth: 10 MHz, Modulation: TM3.2-16QAM (5G nR)

| Channel | Frequency | Antenna | Conducted | Combined | ERP | Combined | ERP | ERP | | |
|---------|-----------|---------|-----------|-----------|-------|----------|-------|--------|--|--|
| | (MHz) | Port | Output | Conducted | (dBm) | ERP | Limit | Margin | | |
| | | | Power | Output | | (dBm | (dBm) | (dB) | | |
| | | | (dBm) | Power | | | | | | |
| | | | , í | (dBm) | | | | | | |
| High | 763.00 | ANT0 | 21.07 | 22.0 | 22.92 | 25.75 | 60 | -37.08 | | |
| _ | | ANT1 | 20.70 | 23.9 | 22.55 | 25.75 | 60 | -37.45 | | |

Lo-PIM, Slot 0 (Band 14), Bandwidth: 10 MHz, Modulation: TM3.1-64QAM (5G nR)

| Channel | Frequency (MHz) | Antenna Port | Conducted Output Power (dBm) | Combined Conducted Output Power | ERP (dBm) | Combined ERP (dBm | ERP Limit (dBm) | ERP Margin (dB) |
|---------|--------------------|-----------------|---------------------------------------|--|--------------|-------------------------|-----------------------|-----------------------|
| High | 763.00 | ANT0 | 21.03 | (dBm) | 22.88 | 05 70 | 60 | -37.12 |
| | | ANT1 | 20.71 | 23.88 | 22.56 | 25.73 | 60 | -37.44 |

Lo-PIM, Slot 0 (Band 14), Bandwidth: 5 MHz, Modulation: TM3.1a-256QAM (5G nR)

| Channel | Frequency (MHz) | Antenna Port | Conducted Output Power (dBm) | Combined Conducted Output Power (dBm) | ERP (dBm) | Combined ERP (dBm | ERP Limit (dBm) | ERP Margin (dB) |
|---------|--------------------|-----------------|---------------------------------------|---|--------------|-------------------------|-----------------------|-----------------------|
| High | 763.00 | ANT0 | 20.71 | 23.88 | 22.56 | 25.73 | 60 | -37.44 |
| | | ANT1 | 21.03 | 23.00 | 22.88 | 20.75 | 60 | -37.12 |

Hi-PIM, Slot 0 (Band 14), Bandwidth: 5 MHz, Modulation: TM1.1-QPSK (5G nR)

| Channel | Frequency (MHz) | Antenna Port | Conducted Output Power (dBm) | Combined Conducted Output Power (dBm) | ERP (dBm) | Combined ERP (dBm | ERP Limit (dBm) | ERP Margin (dB) |
|---------|--------------------|-----------------|---------------------------------------|---|--------------|-------------------------|-----------------------|-----------------------|
| Low | 760.50 | ANT0 | 20.48 | 22 51 | 22.33 | 25.26 | 60 | -37.67 |
| | | ANT1 | 20.51 | 23.51 | 22.36 | 25.36 | 60 | -37.64 |
| Mid | 763.00 | ANT0 | 20.52 | 23.58 | 22.37 | 25.43 | 60 | -37.63 |
| | | ANT1 | 20.62 | 23.30 | 22.47 | 20.43 | 60 | -37.53 |
| High | 765.50 | ANT0 | 20.59 | 23.68 | 22.44 | 25.53 | 60 | -37.56 |
| | | ANT1 | 20.75 | 23.00 | 22.60 | 20.03 | 60 | -37.4 |

Hi-PIM, Slot 0 (Band 14), Bandwidth: 5 MHz, Modulation: TM3.2-16QAM (5G nR)

| Channel | Frequency (MHz) | Antenna Port | Conducted Output Power (dBm) | Combined Conducted Output Power (dBm) | ERP (dBm) | Combined ERP (dBm | ERP Limit (dBm) | ERP Margin (dB) |
|---------|--------------------|-----------------|---------------------------------------|---|--------------|-------------------------|-----------------------|-----------------------|
| Low | 760.50 | ANT0 | 20.51 | 23.53 | 22.36 | 25.91 | 60 | -37.64 |
| | | ANT1 | 20.53 | 23.03 | 22.38 | 25.91 | 60 | -37.62 |
| Mid | 763.00 | ANT0 | 20.54 | 23.59 | 22.39 | 25.44 | 60 | -37.61 |
| | | ANT1 | 20.62 | 23.39 | 22.47 | 20.44 | 60 | -37.53 |
| High | 765.50 | ANT0 | 20.61 | 23.70 | 22.46 | 25.55 | 60 | -37.54 |
| | | ANT1 | 20.77 | 23.70 | 22.62 | 25.55 | 60 | -37.38 |

Hi-PIM, Slot 0 (Band 14), Bandwidth: 5 MHz, Modulation: TM3.1-64QAM (5G nR)

| Channel | Frequency (MHz) | Antenna Port | Conducted Output Power (dBm) | ERP (dBm) | ERP Limit (dBm) | ERP Margin (dB) |
|---------|--------------------|-----------------|------------------------------------|--------------|--------------------|--------------------|
| Low | 760.50 | ANT0 | 20.49 | 22.34 | 60 | -37.66 |
| | | ANT1 | 20.53 | 22.38 | 60 | -37.62 |
| Mid | 763.00 | ANT0 | 20.53 | 22.38 | 60 | -37.62 |
| | | ANT1 | 20.63 | 22.48 | 60 | -37.52 |
| High | 765.5 | ANT0 | 20.59 | 22.44 | 60 | -37.56 |
| | | ANT1 | 20.73 | 22.58 | 60 | -37.42 |

| Channel | Frequency (MHz) | Antenna Port | Conducted Output Power (dBm) | Combined Conducted Output Power (dBm) | ERP (dBm) | Combined ERP (dBm | ERP Limit (dBm) | ERP Margin (dB) |
|---------|--------------------|-----------------|---------------------------------------|---|--------------|-------------------------|-----------------------|-----------------------|
| Low | 760.50 | ANT0 | 20.49 | 00 E0 | 22.34 | 05.07 | 60 | -37.66 |
| | | ANT1 | 20.53 | 23.52 | 22.38 | 25.37 | 60 | -37.62 |
| Mid | 763.00 | ANT0 | 20.53 | 22 50 | 22.38 | 0E 44 | 60 | -37.62 |
| | | ANT1 | 20.63 | 23.59 | 22.48 | 25.44 | 60 | -37.52 |
| High | 765.50 | ANT0 | 20.59 | 23.67 | 22.44 | 25.52 | 60 | -37.56 |
| | | ANT1 | 20.73 | 23.07 | 22.58 | 20.02 | 60 | -37.42 |

| Channel | Frequency (MHz) | Antenna Port | Conducted Output Power (dBm) | ERP (dBm) | ERP Limit (dBm) | ERP Margin (dB) |
|---------|--------------------|-----------------|------------------------------------|--------------|--------------------|--------------------|
| Low | 760.50 | ANT0 | 20.47 | 22.32 | 60 | -37.68 |
| | | ANT1 | 20.50 | 22.35 | 60 | -37.65 |
| Mid | 763.00 | ANT0 | 20.53 | 22.38 | 60 | -37.62 |
| | | ANT1 | 20.62 | 22.47 | 60 | -37.53 |
| High | 765.5 | ANT0 | 20.58 | 22.43 | 60 | -37.57 |
| | | ANT1 | 20.73 | 22.58 | 60 | -37.42 |

Hi-PIM, Slot 0 (Band 14), Bandwidth: 5 MHz, Modulation: TM3.1a-256QAM (5G nR)

| Channel | Frequency (MHz) | Antenna Port | Conducted Output Power (dBm) | Combined Conducted Output Power (dBm) | ERP (dBm) | Combined ERP (dBm | ERP Limit (dBm) | ERP Margin (dB) |
|---------|--------------------|-----------------|---------------------------------------|---|--------------|-------------------------|-----------------------|-----------------------|
| Low | 760.50 | ANT0 | 20.47 | 23.5 | 22.32 | 25.35 | 60 | -37.68 |
| | | ANT1 | 20.50 | 23.5 | 22.35 | 20.00 | 60 | -37.65 |
| Mid | 763.00 | ANT0 | 20.53 | 23.56 | 22.38 | 25.44 | 60 | -37.62 |
| | | ANT1 | 20.62 | 23.30 | 22.47 | 23.44 | 60 | -37.53 |
| High | 765.50 | ANT0 | 20.58 | 23.67 | 22.43 | 25.52 | 60 | -37.57 |
| | | ANT1 | 20.73 | 23.07 | 22.58 | 20.02 | 60 | -37.42 |

Hi-PIM, Slot 0 (Band 14), Bandwidth: 10 MHz, Modulation: TM1.1-QPSK (5G nR)

| Channel | Frequency (MHz) | Antenna Port | Conducted Output Power (dBm) | Combined Conducted Output Power (dBm) | ERP (dBm) | Combined ERP (dBm | ERP Limit (dBm) | ERP Margin (dB) |
|---------|--------------------|-----------------|---------------------------------------|---|--------------|-------------------------|-----------------------|-----------------------|
| High | 763.00 | ANT0 | 20.35 | 23.2 | 22.20 | 25.42 | 60 | -37.80 |
| _ | | ANT1 | 20.16 | 23.2 | 22.01 | 25.12 | 60 | -37.99 |

Hi-PIM, Slot 0 (Band 14), Bandwidth: 10 MHz, Modulation: TM3.2-16QAM (5G nR)

| Channel | Frequency (MHz) | Antenna Port | Conducted Output Power (dBm) | Combined Conducted Output Power (dBm) | ERP (dBm) | Combined ERP (dBm | ERP Limit (dBm) | ERP Margin (dB) |
|---------|--------------------|-----------------|---------------------------------------|---|--------------|-------------------------|-----------------------|-----------------------|
| High | 763.00 | ANT0 | 20.54 | 22.50 | 22.39 | 0E 14 | 60 | -37.61 |
| _ | | ANT1 | 20.62 | 23.59 | 22.47 | 25.44 | 60 | -37.53 |

Hi-PIM, Slot 0 (Band 14), Bandwidth: 10 MHz, Modulation: TM3.1-64QAM (5G nR)

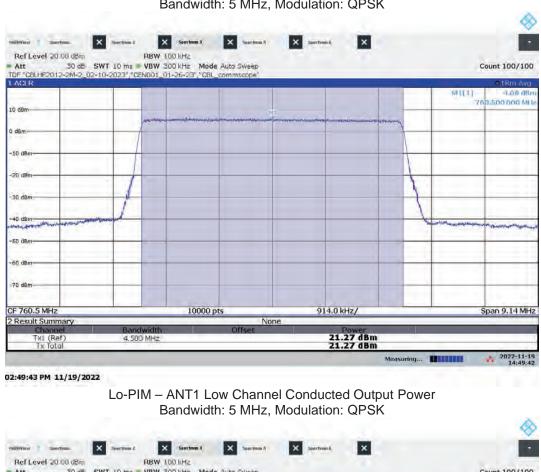
| Channel | Frequency | Antenna | Conducted | Combined | ERP | Combined | ERP | ERP |
|---------|-----------|---------|-----------|-----------|-------|----------|-------|--------|
| | (MHz) | Port | Output | Conducted | (dBm) | ERP | Limit | Margin |
| | | | Power | Output | | (dBm | (dBm) | (dB) |
| | | | (dBm) | Power | | | | |
| | | | | (dBm) | | | | |
| High | 763.00 | ANT0 | 20.49 | 22 54 | 22.34 | 25.20 | 60 | -37.66 |
| _ | | ANT1 | 20.56 | 23.54 | 22.41 | 25.39 | 60 | -37.59 |

| Channel | Frequency (MHz) | Antenna Port | Conducted Output Power (dBm) | Combined Conducted Output Power (dBm) | ERP (dBm) | Combined ERP (dBm | ERP Limit (dBm) | ERP Margin (dB) |
|---------|--------------------|-----------------|---------------------------------------|---|--------------|-------------------------|-----------------------|-----------------------|
| High | 763.00 | ANT0 | 20.49 | 23.54 | 22.34 | 25.39 | 60 | -37.66 |
| | | ANT1 | 20.57 | 23.34 | 22.42 | 20.39 | 60 | -37.58 |

6.4 **Setup Photographs**:

Confidential - Photos not included in this report

6.5 Plots/Data:



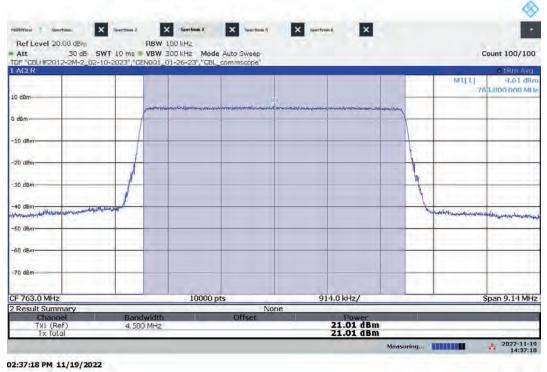
Lo-PIM – ANTO Low Channel Conducted Output Power Bandwidth: 5 MHz, Modulation: QPSK

 Att 30 dB SWT 10 ms ■ VBW 300 kHz Mode Auto Sweep
 TDF "CBLHE2012-2M-2_02-10-2023","CEN001_01-26-23","CBL_commscope" Count 100/100 1 ACLR MILII 4.77 dBn 760.500 000 MI I 10 d8 0 dBr -10 dBr -20 dBr 30 dBr 40 dBm A distanting the second 50 dBn -60 dBm 70 d8m-CF 760.5 MHz 10000 pts 914.0 kHz/ Span 9.14 MHz 2 Result Summary None Bandwidth 20.93 dBm 20.93 dBm 4,500 MHz Tx1 (Ref Tx Total 2022-11-19 14:57:49 Measuring...

02:57:49 PM 11/19/2022

Lo-PIM – ANTO Mid Channel Conducted Output Power Bandwidth: 5 MHz, Modulation: QPSK

Intertek



Lo-PIM – ANT1 Mid Channel Conducted Output Power Bandwidth: 5 MHz, Modulation: QPSK



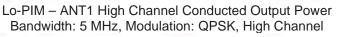
02:43:15 PM 11/19/2022

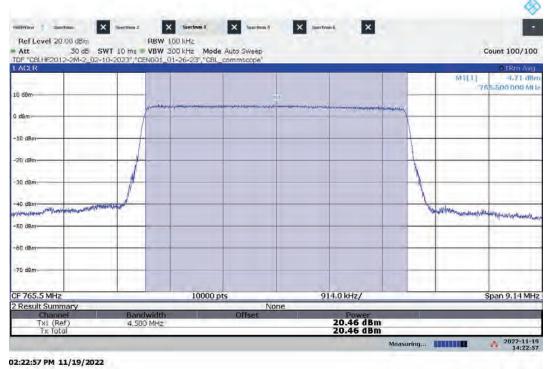
Lo-PIM – ANT0 High Channel Conducted Output Power Bandwidth: 5 MHz, Modulation: QPSK

Intertek



02:20:43 PM 11/19/2022



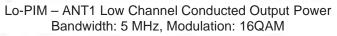


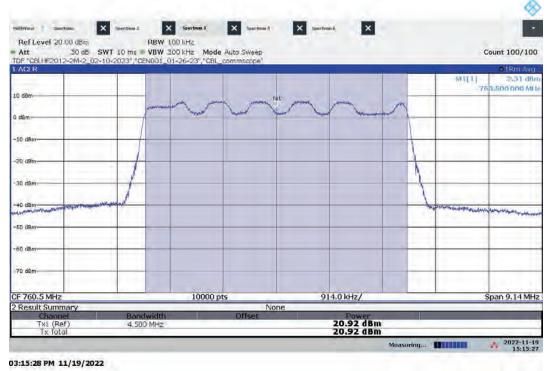
Lo-PIM – ANT0 Low Channel Conducted Output Power Bandwidth: 5 MHz, Modulation: 16QAM

Intertek



03:11:01 PM 11/19/2022



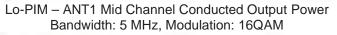


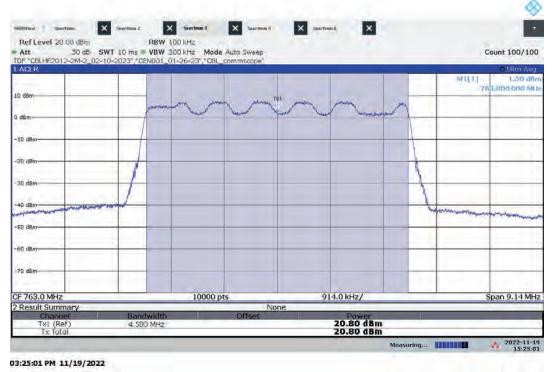
Lo-PIM – ANTO Mid Channel Conducted Output Power Bandwidth: 5 MHz, Modulation: 16QAM

Intertek

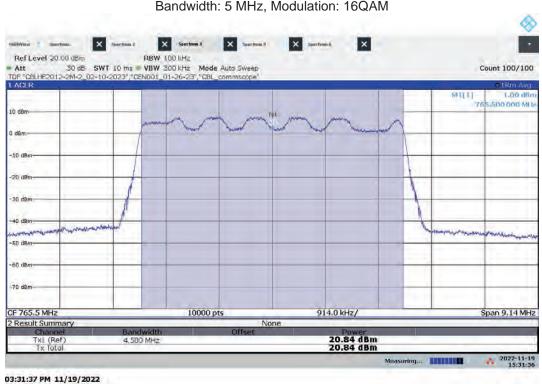


03:22:24 PM 11/19/2022





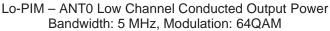
Intertek

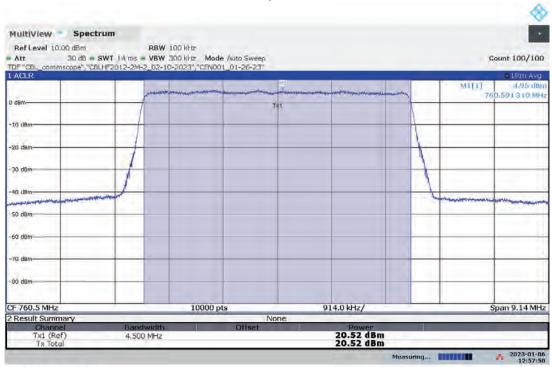


Lo-PIM – ANT0 High Channel Conducted Output Power Bandwidth: 5 MHz, Modulation: 16QAM

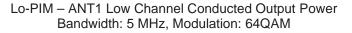
Lo-PIM – ANT1 High Channel Conducted Output Power Bandwidth: 5 MHz, Modulation: 16QAM

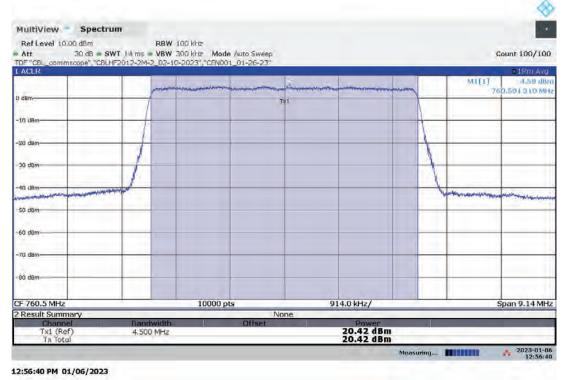


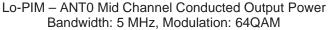


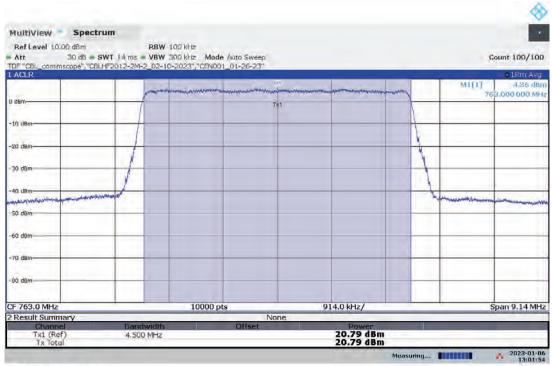


12:57:51 PM 01/06/2023



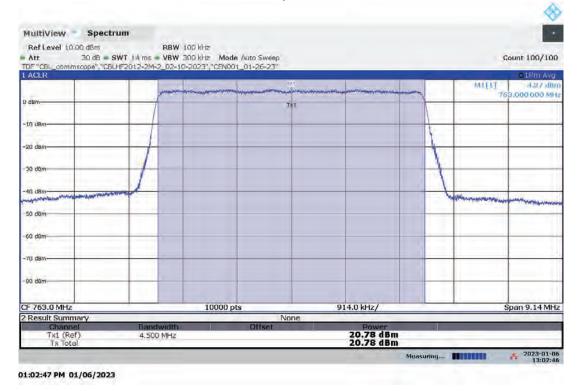


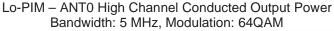


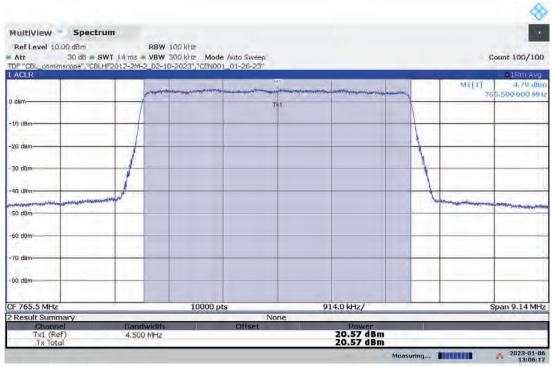


01:01:55 PM 01/06/2023



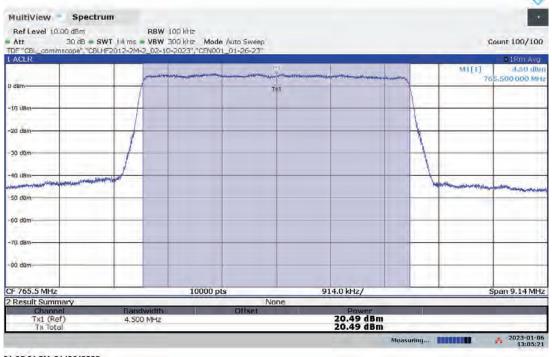






01:06:17 PM 01/06/2023





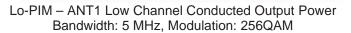
01:05:21 PM 01/06/2023

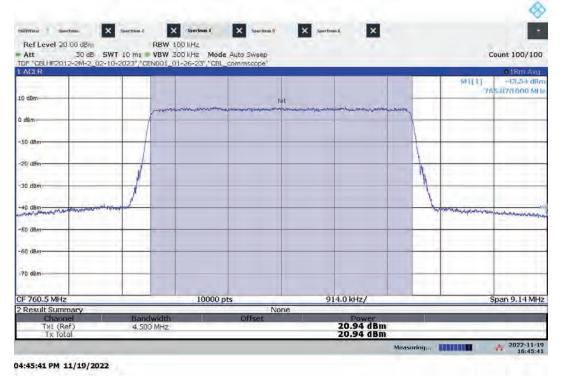
Lo-PIM – ANT0 Low Channel Conducted Output Power Bandwidth: 5 MHz, Modulation: 256QAM

Intertek



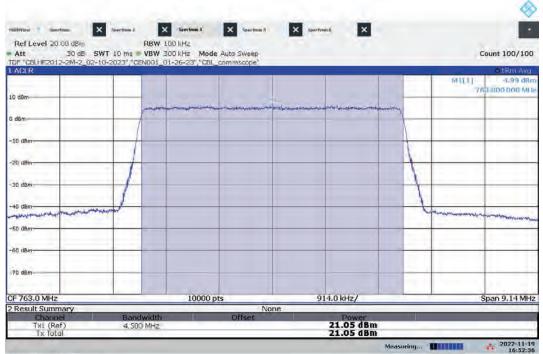
04:41:36 PM 11/19/2022



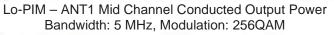


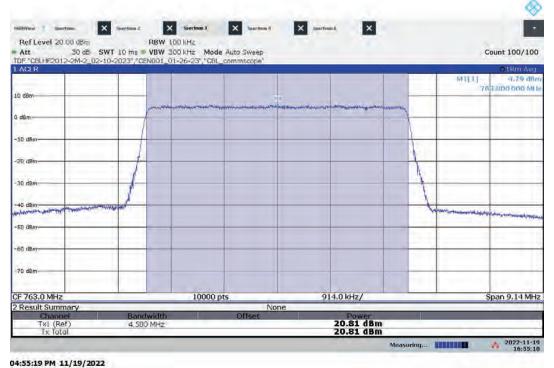
Lo-PIM – ANTO Mid Channel Conducted Output Power Bandwidth: 5 MHz, Modulation: 256QAM

Intertek



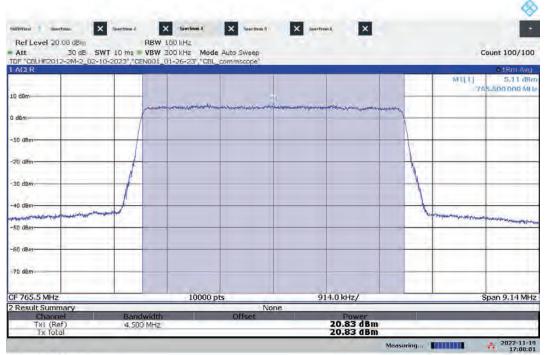
04:52:37 PM 11/19/2022



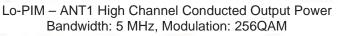


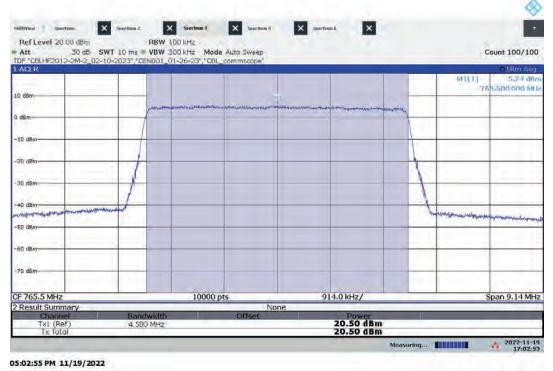
Lo-PIM – ANT0 High Channel Conducted Output Power Bandwidth: 5 MHz, Modulation: 256QAM

Intertek



05:00:02 PM 11/19/2022

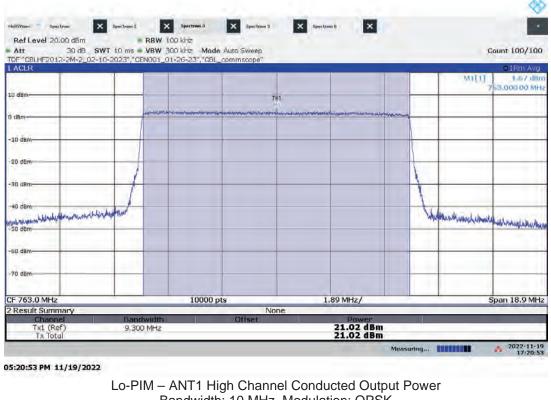




0

Lo-PIM – ANT0 High Channel Conducted Output Power Bandwidth: 10 MHz, Modulation: QPSK

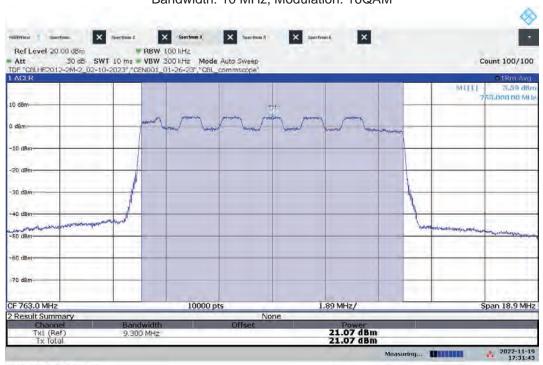
Intertek

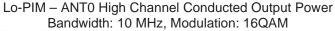


Bandwidth: 10 MHz, Modulation: QPSK

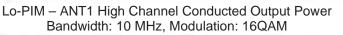
| 40 dBm where an and the state of the state | malaintent | | | have | elaltren with an and a second |
|---|------------|---|---|---------|-------------------------------|
| 40 dBm | mental | | | 1 | (a) |
| 30 dBm | | | | 1 | |
| 20 dBm | ++++ | | | | |
| 10 dBm- | | | | | |
| | | | | | |
| dBm | - | man and the product of the second of the second | animpto Printer agree attractioned ben from | Marine. | |
| dêm | | Tet | | | 753,000,004 |

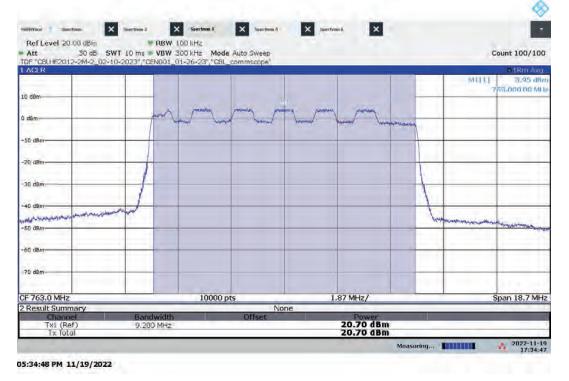
Notes: Low and mid channels are the same frequency as high channel.





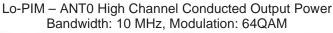
05:31:43 PM 11/19/2022



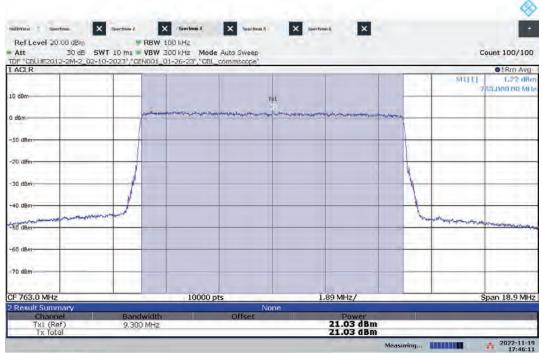


Notes: Low and mid channels are the same frequency as high channel.

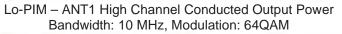
Intertek

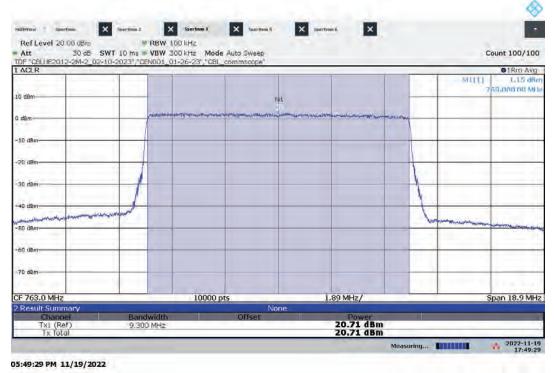


Intertek



05:46:11 PM 11/19/2022





Notes: Low and mid channels are the same frequency as high channel.

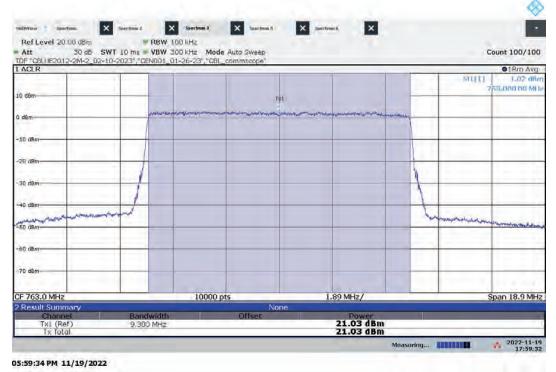
Lo-PIM – ANT0 High Channel Conducted Output Power Bandwidth: 10 MHz, Modulation: 256QAM

Intertek



05:55:49 PM 11/19/2022





Notes: Low and mid channels are the same frequency as high channel.

Hi-PIM – ANT0 Low Channel Conducted Output Power Bandwidth: 5 MHz, Modulation: QPSK



07:05:18 PM 11/19/2022

Hi-PIM – ANT1 Low Channel Conducted Output Power Bandwidth: 5 MHz, Modulation: QPSK

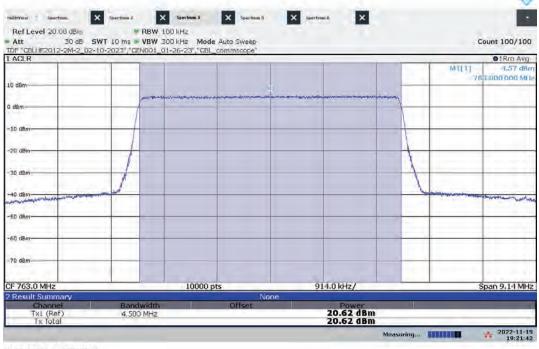


Hi-PIM – ANT0 Mid Channel Conducted Output Power Bandwidth: 5 MHz, Modulation: QPSK



^{07:19:12} PM 11/19/2022

Hi-PIM – ANT1 Mid Channel Conducted Output Power Bandwidth: 5 MHz, Modulation: QPSK



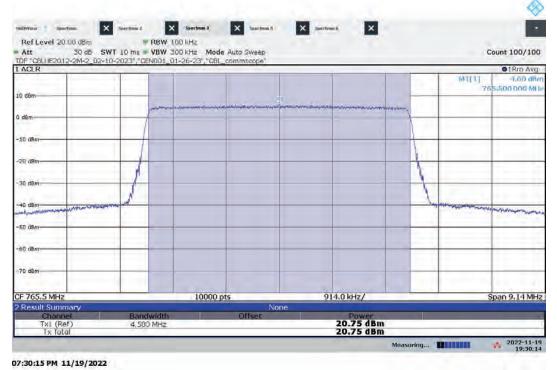
07:21:42 PM 11/19/2022

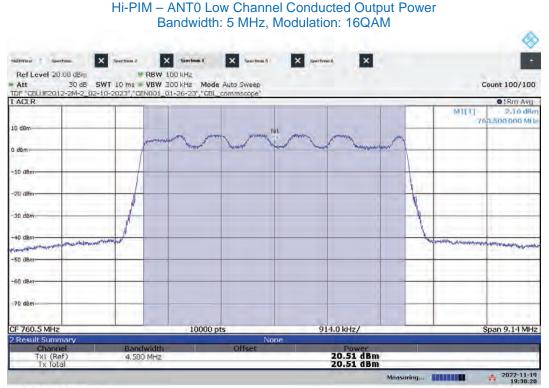
Hi-PIM – ANTO High Channel Conducted Output Power Bandwidth: 5 MHz, Modulation: QPSK



07:27:36 PM 11/19/2022

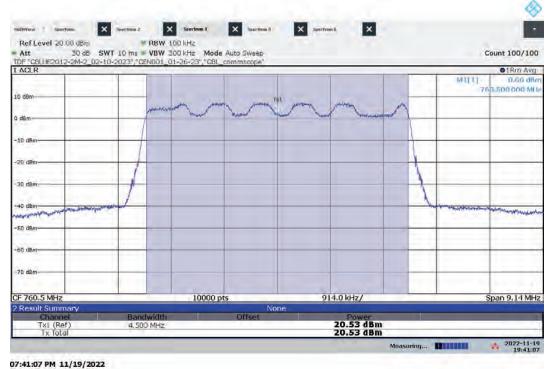






07:38:28 PM 11/19/2022

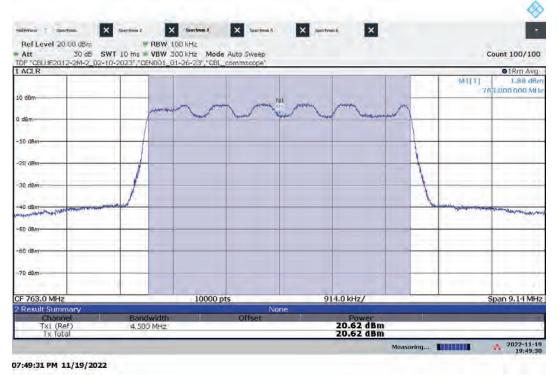




Hi-PIM – ANTO Mid Channel Conducted Output Power Bandwidth: 5 MHz, Modulation: 16QAM ∞ × Spectrum 8 × Spartnum 5 × Spectrum & × × Spectrum 2 Ref Level 20.00 dBm * RBW 100 kHz Att 30 dB SWT 10 ms VBW 300 kHz TDF "CBLHE2012-2M-2_02-10-2023","CEN001_01-26-23" 30 dB SWT 10 ms . VBW 300 kHz Mode Auto Sweep Count 100/100 "CBL commiscope 1 ACLR O1Rm Avg MILLI 1.39 dBn 763.000 000 MI L 10 dân (inter 0 dBm -10 dBm -20 dE 30 dBm -40 dBm المراد بالبالين 50 dBm -60 dBr 70 dBm-914.0 kHz/ CF 763.0 MHz 10000 pts Span 9.14 MHz Result Summ Bandwidth 4,500 MHz 20.54 dBm 20.54 dBm Tx1 (Ref Tx Total + 2022-11-19 19:47:00 Measuring...

07:47:09 PM 11/19/2022

Hi-PIM – ANT1 Mid Channel Conducted Output Power Bandwidth: 5 MHz, Modulation: 16QAM

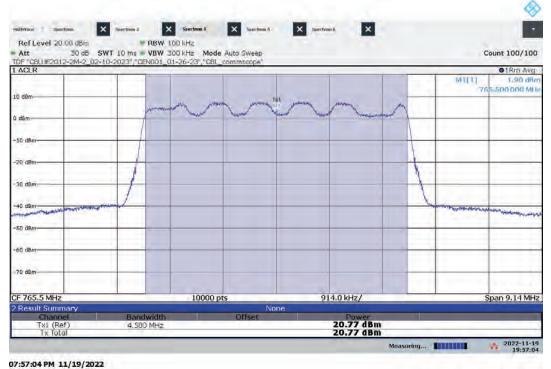






07:54:38 PM 11/19/2022



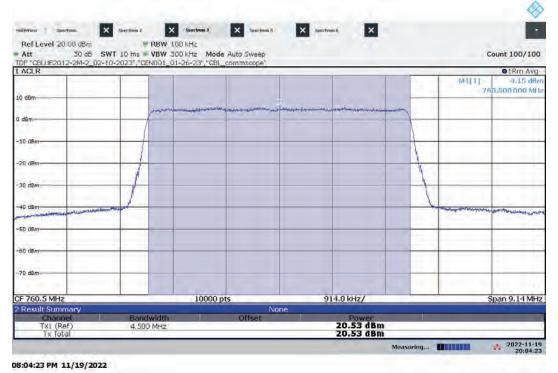


Hi-PIM – ANT0 Low Channel Conducted Output Power Bandwidth: 5 MHz, Modulation: 64QAM

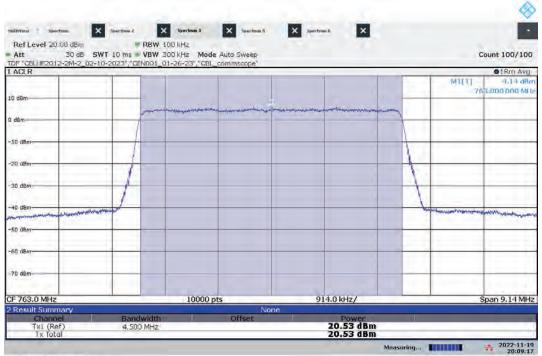


08:02:09 PM 11/19/2022

Hi-PIM – ANT1 Low Channel Conducted Output Power Bandwidth: 5 MHz, Modulation: 64QAM

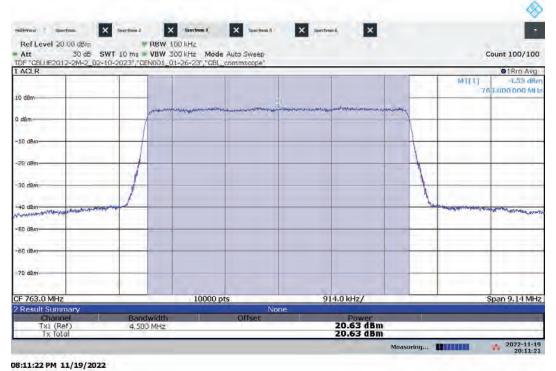


Hi-PIM – ANT0 Mid Channel Conducted Output Power Bandwidth: 5 MHz, Modulation: 64QAM



08:09:17 PM 11/19/2022

Hi-PIM – ANT1 Mid Channel Conducted Output Power Bandwidth: 5 MHz, Modulation: 64QAM



Hi-PIM – ANTO High Channel Conducted Output Power Bandwidth: 5 MHz, Modulation: 64QAM



08:15:21 PM 11/19/2022

Hi-PIM – ANT1 High Channel Conducted Output Power Bandwidth: 5 MHz, Modulation: 64QAM



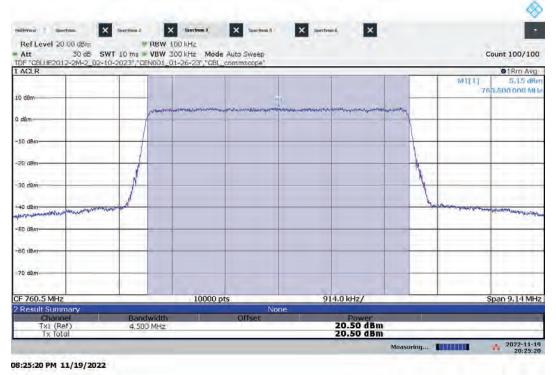
08:17:29 PM 11/19/2022

Hi-PIM – ANT0 Low Channel Conducted Output Power Bandwidth: 5 MHz, Modulation: 256QAM



08:23:00 PM 11/19/2022

Hi-PIM – ANT1 Low Channel Conducted Output Power Bandwidth: 5 MHz, Modulation: 256QAM

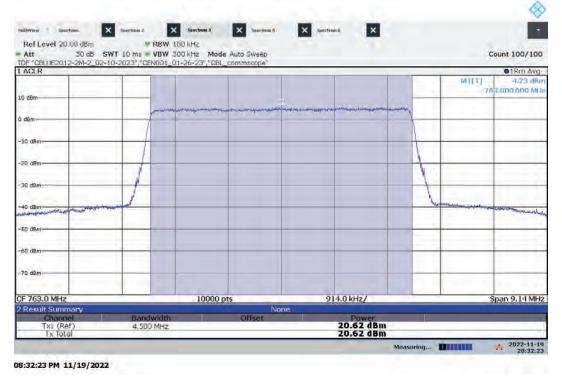


Hi-PIM – ANT0 Mid Channel Conducted Output Power Bandwidth: 5 MHz, Modulation: 256QAM



08:29:52 PM 11/19/2022

Hi-PIM – ANT1 Mid Channel Conducted Output Power Bandwidth: 5 MHz, Modulation: 256QAM



Hi-PIM – ANT0 High Channel Conducted Output Power Bandwidth: 5 MHz, Modulation: 256QAM

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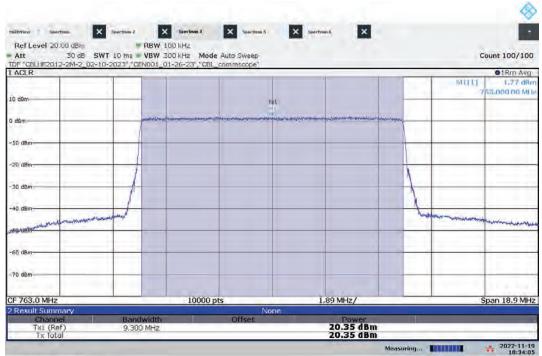


^{08:37:02} PM 11/19/2022

Hi-PIM – ANT1 High Channel Conducted Output Power Bandwidth: 5 MHz, Modulation: 256QAM

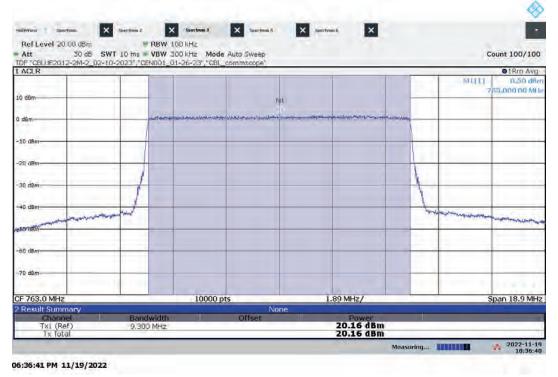


Hi-PIM – ANTO High Channel Conducted Output Power Bandwidth: 10 MHz, Modulation: QPSK



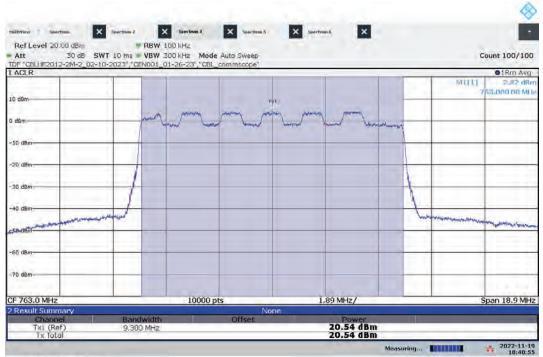
06:34:06 PM 11/19/2022

Hi-PIM – ANT1 High Channel Conducted Output Power Bandwidth: 10 MHz, Modulation: QPSK





Hi-PIM – ANTO High Channel Conducted Output Power Bandwidth: 10 MHz, Modulation: 16QAM

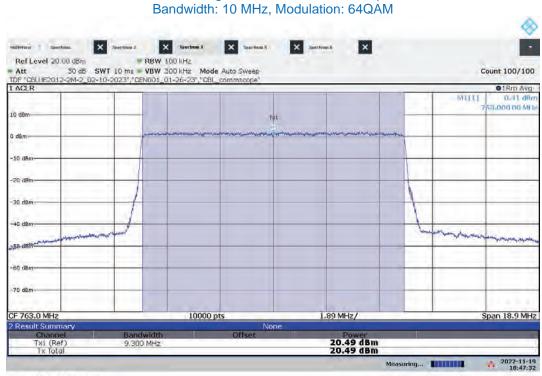


06:40:55 PM 11/19/2022

Hi-PIM – ANT1 High Channel Conducted Output Power Bandwidth: 10 MHz, Modulation: 16QAM



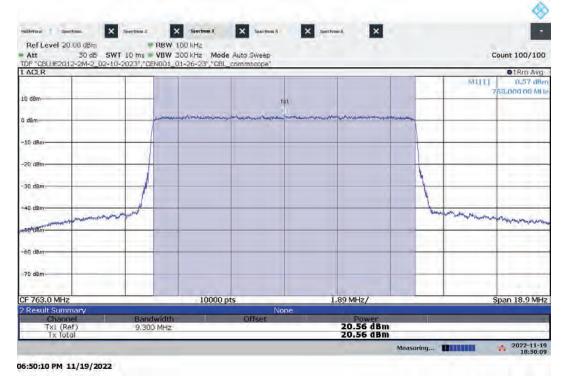
06:43:01 PM 11/19/2022

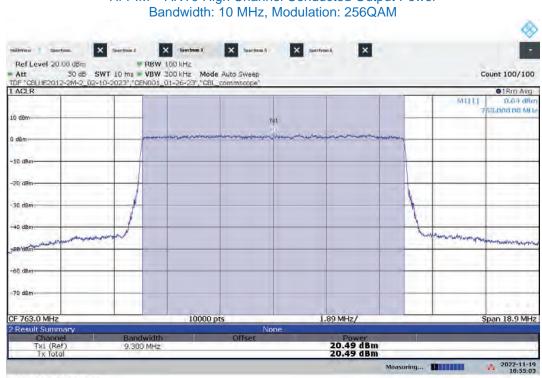


Hi-PIM – ANTO High Channel Conducted Output Power Bandwidth: 10 MHz, Modulation: 64QAM

06:47:32 PM 11/19/2022

Hi-PIM – ANT1 High Channel Conducted Output Power Bandwidth: 10 MHz, Modulation: 64QAM

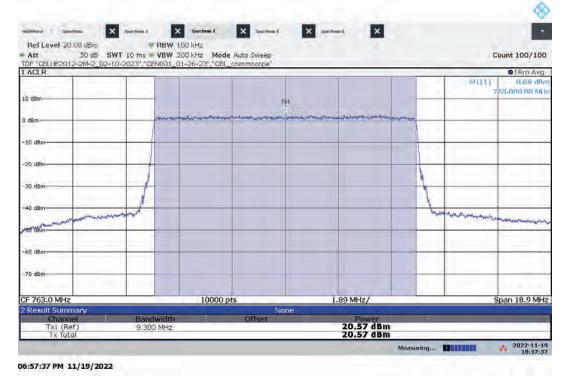




Hi-PIM – ANTO High Channel Conducted Output Power

06:55:04 PM 11/19/2022

Hi-PIM – ANT1 High Channel Conducted Output Power Bandwidth: 10 MHz, Modulation: 256QAM



| | Product Standard: CFR47 FCC Part 90 | | | Limit applied: See Report Section 6.3 Pretest Verification w/BB source: N/A | | | |
|------------|-------------------------------------|----------------|-----|--|----|---|------|
| Test Date | Test Personnel/ Initials | | | Mode Ten C ^e | | Atmospheric Data Relative Atmospheri Humidity % Pressure mb | |
| 11/19/2022 | Kouma Sinn 43 | Vathana F. Ven | POE | Transmit | 24 | 14 | 1009 |
| | | | | | | | |
| | | | | | | | |

Deviations, Additions, or Exclusions: None

7 Occupied and 26 dB Bandwidths

7.1 Method

Tests are performed in accordance with ANSI C63.26 and CFR47 FCC Parts 2.1049 and 90.

TEST SITE: EMC Lab

The EMC Lab has one Semi-anechoic Chamber and one Shielded Chamber. AC Mains Power is available at 120, 230, and 277 Single Phase; 208, 400, and 480 3-Phase. Large reference ground-planes are installed in the general lab area to facilitate EMC work not requiring a shielded environment.

7.2 Test Equipment Used:

| Asset | Description | Manufacturer | Model | Serial | Cal Date | Cal Due |
|-----------------|---------------------------------------|-----------------------|---------|-------------|------------|------------|
| DAV005' | Weather Station | Davis | 6250 | MS191218083 | 02/11/2022 | 02/11/2023 |
| ROS005-1' | Signal and Spectrum Analyzer | Rohde and Shwartz | FSW43 | 100646 | 11/02/2021 | 11/02/2022 |
| CEN001' | DC-40GHz attenuator 20dB | Centric RF | C411-20 | CEN001 | 01/26/2022 | 01/26/2023 |
| CBLHF2012-2M-2' | 2m 9kHz-40GHz Coaxial Cable - SET2 | Huber & Suhner | SF102 | 252675002 | 02/10/2022 | 02/10/2023 |
| CEN001' | DC-40GHz attenuator 20dB | Centric RF | C411-20 | CEN001 | 01/26/2022 | 01/26/2023 |
| None | Mini SMA cable | Provided by CommScope | None | None | VBU | Verified |

Software Utilized:

| Name | Manufacturer | Version |
|------|--------------|---------|
| None | N/A | N/A |

7.3 Results:

The sample tested was found to Comply.

§90.543 (d): *Authorized bandwidth*. Provided that the ACP requirements of this section are met, applicants may request any authorized bandwidth that does not exceed the channel size.

§2.1049: The occupied bandwidth, that is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 percent of the total mean power radiated by a given emission.

| Channel | Frequency (MHz) | Antenna Port | Occupied BW (MHz) | 26 dB BW (MHz) |
|---------|--------------------|--------------|----------------------|-------------------|
| Low | 760.50 | ANT0 | 4.472 | 4.98 |
| | | ANT1 | 4.468 | 4.98 |
| Mid | 763.00 | ANT0 | 4.474 | 4.98 |
| | | ANT1 | 4.475 | 4.99 |
| High | 765.50 | ANT0 | 4.465 | 4.98 |
| | | ANT1 | 4.469 | 4.98 |

Lo-PIM, Slot 0 (Band 14), Bandwidth: 5 MHz, Modulation: TM1.1-QPSK (5G nR)

Lo-PIM, Slot 0 (Band 14), Bandwidth: 5 MHz, Modulation: TM3.2-16QAM (5G nR)

| Channel | Frequency (MHz) | Antenna Port | Occupied BW (MHz) | 26 dB BW (MHz) |
|---------|--------------------|--------------|----------------------|-------------------|
| Low | 760.50 | ANT0 | 4.516 | 5.02 |
| | | ANT1 | 4.519 | 5.02 |
| Mid | 763.00 | ANT0 | 4.515 | 5.04 |
| | | ANT1 | 4.513 | 5.03 |
| High | 765.50 | ANT0 | 4.512 | 5.01 |
| | | ANT1 | 5.514 | 5.02 |

Lo-PIM, Slot 0 (Band 14), Bandwidth: 5 MHz, Modulation: TM3.1-64QAM (5G nR)

| Channel | Frequency (MHz) | Antenna Port | Occupied BW (MHz) | 26 dB BW (MHz) |
|---------|--------------------|--------------|----------------------|-------------------|
| Low | 760.50 | ANT0 | 4.481 | 4.99 |
| | | ANT1 | 4.480 | 4.99 |
| Mid | 763.00 | ANT0 | 4.477 | 4.85 |
| | | ANT1 | 4.473 | 4.87 |
| High | 765.50 | ANT0 | 4.472 | 4.97 |
| | | ANT1 | 4.474 | 4.99 |

Lo-PIM, Slot 0 (Band 14), Bandwidth: 5 MHz, Modulation: TM3.1a-256QAM (5G nR)

| Channel | Frequency (MHz) | Antenna Port | Occupied BW (MHz) | 26 dB BW (MHz) |
|---------|--------------------|--------------|----------------------|-------------------|
| Low | 760.50 | ANT0 | 4.480 | 4.99 |
| | | ANT1 | 4.473 | 5.01 |
| Mid | 763.00 | ANT0 | 4.480 | 4.98 |
| | | ANT1 | 4.479 | 4.97 |
| High | 765.50 | ANT0 | 4.470 | 4.99 |
| | | ANT1 | 4.472 | 4.99 |

Lo-PIM, Slot 0 (Band 14), Bandwidth: 10 MHz, Modulation: TM1.1-QPSK (5G nR)

| Channel | Frequency (MHz) | Antenna Port | Occupied BW (MHz) | 26 dB BW (MHz) |
|---------|--------------------|--------------|----------------------|-------------------|
| High | 763.00 | ANT0 | 9.299 | 10.09 |
| | | ANT1 | 9.293 | 10.11 |

Lo-PIM, Slot 0 (Band 14), Bandwidth: 10 MHz, Modulation: TM3.2-16QAM (5G nR)

| Channel | Frequency (MHz) | Antenna Port | Occupied BW (MHz) | 26 dB BW (MHz) |
|---------|--------------------|--------------|----------------------|-------------------|
| High | 763.00 | ANT0 | 9.222 | 9.97 |
| | | ANT1 | 9.215 | 9.97 |

| | Lo-PIM, Slot 0 (Band 14), Bandwidth: 10 MHz, Modulation: TM3.1-64QAM (5G nR) | | | | | | |
|---|--|--------------------|--------------|----------------------|-------------------|--|--|
| | Channel | Frequency (MHz) | Antenna Port | Occupied BW (MHz) | 26 dB BW (MHz) | | |
| ſ | High | 763.00 | ANT0 | 9.297 | 10.09 | | |
| | | | ANT1 | 9.295 | 10.07 | | |

Lo-PIM, Slot 0 (Band 14), Bandwidth: 10 MHz, Modulation: TM3.1a-256QAM (5G nR)

| Channel | Frequency | Antenna Port | Occupied BW | 26 dB BW |
|---------|-----------|--------------|-------------|----------|
| | (MHz) | | (MHz) | (MHz) |
| High | 763.00 | ANT0 | 9.291 | 10.07 |
| | | ANT1 | 9.278 | 10.11 |

Hi-PIM, Slot 0 (Band 14), Bandwidth: 5 MHz, Modulation: TM1.1-QPSK (5G nR)

| Channel | Frequency (MHz) | Antenna Port | Occupied BW (MHz) | 26 dB BW (MHz) |
|---------|--------------------|--------------|----------------------|-------------------|
| Low | 760.50 | ANT0 | 4.467 | 4.99 |
| | | ANT1 | 4.470 | 4.97 |
| Mid | 763.00 | ANT0 | 4.475 | 4.99 |
| | | ANT1 | 4.478 | 4.99 |
| High | 765.50 | ANT0 | 4.467 | 4.99 |
| | | ANT1 | 4.472 | 4.96 |

Hi-PIM, Slot 0 (Band 14), Bandwidth: 5 MHz, Modulation: TM3.2-16QAM (5G nR)

| Channel | Frequency (MHz) | Antenna Port | Occupied BW (MHz) | 26 dB BW (MHz) |
|---------|--------------------|--------------|----------------------|-------------------|
| Low | 760.50 | ANT0 | 4.514 | 5.03 |
| | | ANT1 | 4.519 | 5.03 |
| Mid | 763.00 | ANT0 | 4.522 | 5.04 |
| | | ANT1 | 4.515 | 5.03 |
| High | 765.50 | ANT0 | 4.485 | 5.03 |
| | | ANT1 | 4.511 | 5.01 |

Hi-PIM, Slot 0 (Band 14), Bandwidth: 5 MHz, Modulation: TM3.1-64QAM (5G nR)

| Channel | Frequency (MHz) | Antenna Port | Occupied BW (MHz) | 26 dB BW (MHz) |
|---------|--------------------|--------------|----------------------|-------------------|
| Low | 760.50 | ANT0 | 4.487 | 4.93 |
| | | ANT1 | 4.480 | 4.92 |
| Mid | 763.00 | ANT0 | 4.487 | 4.93 |
| | | ANT1 | 4.487 | 4.92 |
| High | 765.50 | ANT0 | 4.479 | 4.93 |
| _ | | ANT1 | 4.479 | 4.93 |

Hi-PIM, Slot 0 (Band 14), Bandwidth: 5 MHz, Modulation: TM3.1a-256QAM (5G nR)

| Channel | Frequency (MHz) | Antenna Port | Occupied BW (MHz) | 26 dB BW (MHz) |
|---------|--------------------|--------------|----------------------|-------------------|
| Low | 760.50 | ANT0 | 4.480 | 4.96 |
| | | ANT1 | 4.477 | 4.95 |
| Mid | 763.00 | ANT0 | 4.486 | 4.96 |
| | | ANT1 | 4.473 | 4.96 |
| High | 765.50 | ANT0 | 4.478 | 4.95 |
| | | ANT1 | 4.477 | 4.95 |

| Hi-PIM Slot 0 | (Band 14), Bandwidth | · 10 MHz N | Adulation · TM | 11 1-QPSK (5G nR) |
|---------------|----------------------|------------|----------------|-------------------|
| | (Dana 14), Danawiath | | | |

| Channel | Frequency (MHz) | Antenna Port | Occupied BW (MHz) | 26 dB BW (MHz) |
|---------|--------------------|--------------|----------------------|-------------------|
| High | 763.00 | ANT0 | 9.295 | 10.11 |
| | | ANT1 | 9.291 | 10.11 |

Hi-PIM, Slot 0 (Band 14), Bandwidth: 10 MHz, Modulation: TM3.2-16QAM (5G nR)

| Channel | Frequency (MHz) | Antenna Port | Occupied BW (MHz) | 26 dB BW (MHz) |
|---------|--------------------|--------------|----------------------|-------------------|
| High | 763.00 | ANT0 | 9.235 | 9.97 |
| _ | | ANT1 | 9.231 | 9.95 |

Hi-PIM, Slot 0 (Band 14), Bandwidth: 10 MHz, Modulation: TM3.1-64QAM (5G nR)

| Channel | Frequency (MHz) | Antenna Port | Occupied BW (MHz) | 26 dB BW (MHz) |
|---------|--------------------|--------------|----------------------|-------------------|
| High | 763.00 | ANT0 | 9.297 | 10.07 |
| | | ANT1 | 9.300 | 10.09 |

Hi-PIM, Slot 0 (Band 14), Bandwidth: 10 MHz, Modulation: TM3.1a-256QAM (5G nR)

| Channel | Frequency (MHz) | Antenna Port | Occupied BW (MHz) | 26 dB BW (MHz) |
|---------|--------------------|--------------|----------------------|-------------------|
| High | 763.00 | ANT0 | 9.290 | 10.11 |
| | | ANT1 | 9.294 | 10.09 |

7.4 **Setup Photographs:**

Confidential – Photos not included in this report

7.5 Plots/Data:

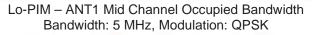
Lo-PIM – ANTO Low Channel Occupied Bandwidth Bandwidth: 5 MHz, Modulation: QPSK

| W See | 00 d8m 30 d8 SWT 2-2N-2 02-10- mdwidth | Spermus 2 X 1.41.82 µs (>6.9 m 2023","CENDO1_0 | | 20 KHz Mode Au commscope" | Suschum A | | | 1 12.50 756.500.00 |
|--|---|--|---------------|--|---------------------------|-------------|-----------|------------------------------|
| Level 20 C6LH=201 supied ba | 30 dB SWT | r 41.82 µs (~6.9 m | RBW 16 | 30 kHz 30 kHz Mode Au commscope" | | | MIII) | 1 12:50 |
| Level 20 C6LHF201 supied Ba m sm sm sm | 30 dB SWT | r 41.82 µs (~6.9 m | RBW 10 | 00 kHz. 00 kHz. Mode Aut | | | M((1)) | 1 12.50 |
| Level 20 CBLHF201 upied Ba | 30 dB SWT | r 41.82 µs (~6.9 m | RBW 10 | 00 kHz. 00 kHz. Mode Aut | | | M()() | 1 12.50 |
| Level 20 CBUHE201 upied Bz m m m m m m | 30 dB SWT | r 41.82 µs (~6.9 m | RBW 10 | 00 kHz. 00 kHz. Mode Aut | | | M(1) | 1 12.50 |
| Level 20 CBLHF201 appied Ba | 30 dB SWT | r 41.82 µs (~6.9 m | RBW 10 | 00 kHz. 00 kHz. Mode Aut | | | MIII. | 01P61 12:50 756:500.00 |
| Level 20 C6LHF201 supied Ba | 30 dB SWT | r 41.82 µs (~6.9 m | RBW 10 | 00 kHz. 00 kHz. Mode Aut | | | | 1 12.50 |
| Level 20 CBLHE201 Sopied Bz | 30 dB SWT | r 41.82 µs (~6.9 m | RBW 10 | 00 kHz. 00 kHz. Mode Aut | | × | | 1 12.50 |
| Level 20 CBLHE201 Sopied Bz | 30 dB SWT | r 41.82 µs (~6.9 m | RBW 10 | 00 kHz. 00 kHz. Mode Aut | | | M(1) | 1 12.50 |
| Level 20 CBLHF201 supied Ba | 30 dB SWT | r 41.82 µs (~6.9 m | RBW 10 | 00 kHz. 00 kHz. Mode Aut | | | | 1 12.50 |
| Level 20 CBLHF201 Cupied Ba | 30 dB SWT | r 41.82 µs (~6.9 m | RBW 10 | 00 kHz. 00 kHz. Mode Aut | | | MUL | 1 12.50 |
| Level 20 CBLHF2O1 Supied Ba | 30 dB SWT | r 41.82 µs (~6.9 m | RBW 10 | 00 kHz. 00 kHz. Mode Aut | | | witt) | 1 12.50 |
| Level 20 CBLHF2O1 Supied Ba | 30 dB SWT | r 41.82 µs (~6.9 m | RBW 10 | 00 kHz. 00 kHz. Mode Aut | | | MUU | 1 12.50 |
| Level 20 CBLHF201 upied Ba | 30 dB SWT | r 41.82 µs (~6.9 m | RBW 10 | 00 kHz. 00 kHz. Mode Aut | | × | witt | 1 12.50 |
| Level 20 | 30 dB SWT | r 41.82 µs (~6.9 m | RBW 10 | 00 kHz. 00 kHz. Mode Aut | | × | MUL | 1 12.50 |
| Level 20 | 30 dB SWT | r 41.82 µs (~6.9 m | RBW 10 | 00 kHz. 00 kHz. Mode Aut | | × | | 019/1 |
| Level 20 | 100 dBm 30 dB SWT | r 41.82 µs (~6.9 m | RBW 10 | 00 kHz. 00 kHz. Mode Aut | | × | | |
| w spe | ectrum 🗙 | Spertrum 2 | Sportune il | × Sparmin 8 | × spectrum & | × | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | Modulation: (| | | |
| 23 P.P. 1 | 1 19 2022 | Lo-PIM | – ANT1 | Low Char | nnel Occupie | d Bandwidth | | |
| 13 84 4 | 1/19/2022 | | | | | -masuring. | | 14:4 |
| 12 | .1. | 762.726.49 M | | 9.62 dBm | Ooc Bw Freq Offse | | | 083 905 kHz |
| ie i kei | 1 | 760.5 M | | 12.94 dBm 9.93 dBm | Occ Bw Occ Bw Centroid | | 4.471 870 | |
| ker Tabl | | X-Value | - | Y-Value | Funct | ion | Function | Result |
| 0.5 MHz | | | 1001 p | ots | 914.0 kH | z/ | | Span 9.14 |
| Sm- | | | | | | | | |
| | | | | 11 | | | | |
| 5m | - | - | | | | | | - |
| m | | | - | | | | 1 | |
| ini- | | | | 11.27.25 | | | 111 | |
| | 1.00 | | | 110 100 10 | | | | |
| Sm | N | 7/ | | - | | | han | and a |
| sm | | | | | | | | |
| | | | | | | | | |
| im- | | | _ | 14 21 44 | | | L | 1 |
| _ | | / | | | | | - | - |
| h | | | | | | 1 | - | |
| | | 18m | min | mini | 1 miles | in the mast | MIL | 758.500.00 |
| | | | | | | | | O1Pk I |
| | 2-2M-2_02-10- andwidth | 2023","CEN001_0 | 1-26-23","CBL | _commscope" | _ | | | |
| CBLHF201 | 30 dB SWT | F 41.82 µs (~6.9 m •2023","CENDO1_0 | ns) = VBW 30 | 0 kHz Mode Aut | 30 FFT | | | |
| Level 20 CBLHF201 | 30 dB SWT | | | 0 kHz Mode Aut | to FFT | - | | |

Lo-PIM – ANTO Mid Channel Occupied Bandwidth Bandwidth: 5 MHz, Modulation: QPSK

| | | | | | O1Pk Max |
|---|------------|---------|------------|-------|--|
| Contraction of the second s | II may may | minin | | mante | MU[1] 12.08 dBr 753.000.00 MH |
| D dBm- | T | | | 1 | (hadroron m |
| dBm | | | | | |
| 10 dBm- | +/ | | | | |
| 20 dBm | | _ | | | |
| 30 (Bm | | _ | | - hr | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ |
| fü dem- | - | | | | |
| 50 dBm | | | | - | |
| ou dem- | - | | | | |
| 70 dBm- | | | | | |
| F 763.0 MHz Marker Table | 1 | 001 pts | 914.0 kHz/ | | Span 9,14 MH |

02:34:35 PM 11/19/2022

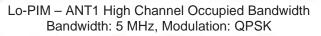


| | 30 dB SWT | 41.82 µs (~6.9 ms | | kHz Mode Aut | o FFT | | | | |
|-------------------|-----------------------|-------------------|----------------|--|------------|-----------------------|------|------------------------|----------------------|
| Occupied Ban | 2M-2_02-10- dwidth | 2023","CEN001_01 | -26-23","GBL_0 | commscope" | | | | _ | O 1 Pk Max |
| | | 71.0.0 | | | 1 | | 0.12 | MILLI | 12.30 dB 12.30 dB |
| U dBm- | | - The | | a month | | ~~~~ | a Ne | | Baanorronwo |
| | | | | | | | | | |
| dBm- | | | | | | - | 1 | | |
| | | | | | | | | - | |
| 10 dBm | | | | | | - | | | - |
| | | | | | | | | | |
| 20 dBm | | | | | | - | 1 | | - |
| 10.00 | 1ºm | | | in south | | | 1 | X | |
| 30 dBm | ~ | | | | | | | 1 Jan | 9 mm |
| | | | | | | | | | |
| 40 dBm- | | | | | - | - | | | |
| | | | | 1 | | | | | |
| 50 dBm | | | | 1. | | | 11 | | |
| | | | | 12 | | | 1 | | |
| ou dBm- | | | | | | | 1 | 1 | |
| 70 dBm | | | | | | | | | - |
| /u dbm- | | | | | | | | | |
| The second second | | | | | | and the second second | 1 | | |
| F 763.0 MHz | | A | 1001 pts | 1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1- | 91 | 4.0 kHz/ | | 4 | Span 9.14 MF |
| Marker Table | Tre | X-Value | _ | Y-Value | - | Function | _ | Trans Prove Da | |
| Type Ref M1 | 1 | 763.0 MH | 7 1 | 2.30 dBm | Occ Bw | Punction | | Function R 4.475100 | |
| TI | i | 760.751 92 MH | IZ | 9.64 dBm | Occ Bw Ce | ntroid. | | 762.989 4 | 68 676 MHz |
| T2 | -1 | 765.227 02 MH | Z | 9.17 dBm | Oor Bw Fre | g Offset | | -10,5313 | 23 502 kHz |

Lo-PIM – ANT0 High Channel Occupied Bandwidth Bandwidth: 5 MHz, Modulation: QPSK

| Att 30 dE | SWT 41.82 µs (~6.9 ms) | | X suerhum A X | | |
|-----------------------------|---|-----------------------------------|---|--------|--|
| Occupied Bandwidt | _02-10-2023","CEND01_01-26 | -23","SBL_commscope" | | 1 | ●1Pk Max |
| _ | 12mm | man | Linhimi | WAR !! | MILLI 12.55 dB/ 755.500.00 MI |
| D dBm- | 1 | | | | |
| dBm- | | | | | |
| 10 dBm | | | | | |
| | | | | | |
| 20 dBm | | | | | |
| | And - | | | - bo | mm |
| 40 dBm | | | | | |
| 5 | | 11 11 11 11 11 | 1.2.1 | | |
| 50 dBm | | | | | |
| ou dem- | | | | | |
| 70 dBm- | | | | | |
| | | | | 1 | de brene |
| F 765.5 MHz Marker Table | 1 1 | 1001 pts | 914.0 kHz/ | X - X | Span 9,14 MH |
| Type Ref Irc | X-Value | Y-Value | Function | | Function Result |
| M1 1 T1 1 T2 1 | 765.5 MHz 763,25415 MHz 767,71943 MHz | 12.55 dBm 9.37 dBm 9.50 dBm | Occ Bw Occ Bw Centroid Occ Bw Freg Offset | 4.4 | 765.486787942 MHz -13.212058103 kHz |

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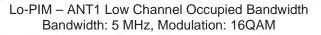


| Ref Level 20.0 Att | | 41.82 µs (~6.9 ms | RBW 100 | 11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | o FFT | | | | |
|-------------------------------|--------------|---------------------------|----------------|--|----------------------|-------------|-----------|----------|--------------------|
| DF "CBLHF2012 Occupied Ban | -2M-2_02-10- | 2023","CEND01_01 | -26-23","CBL_(| commscope" | | - | | | O1Pk Max |
| | | | | | | | | Will | |
| U dam- | - | in the second | | man | m | man | where the | - | 765-500 00 MI |
| | | | | | | | 1 | - | |
| dBm- | | | | | | | 1 | - | |
| | | | | | | | | | |
| 10 dBm | | | | | | | | - | - |
| | | | | | | | | | |
| 20 dBm | | 11 | | | | - | 1 | | |
| 200 0 | S. | | | | | | 1 | 10 | |
| 30 dBm | Ver | | | | | - | | 100 | The |
| | | | | | | | | | |
| 40 dBm- | | | | 1 | | | 1 | | |
| 50 dBm | | | | | | | | | |
| and that the | | | | 1 | | | | | |
| ou dam | | | | | | | | | |
| | | | | | | | | | |
| 70 dBm | | | | | | | | - | |
| | | - | | | | | | | |
| F 765.5 MHz | | 1 | 1001 pts | | 01 | 4.0 kHz/ | | | Span 9.14 MH |
| Marker Table | | | | | | - no to tey | | _ | open stations |
| Type Ref | Tre | X-Value | | Y-Value | | Function | | Function | |
| M1 T1 | 1 | 765.5 MH 763.252 28 MH | | 2.17 dBm 9.18 dBm | Occ Bw Occ Bw Cer | biosto | | | 917 396 MHz |
| T2 | 1 | 767.721 55 MH | | 9.02 dBm | Occ Bw Ere | g Offset | | | 2603751 kHz |
| | | -Partitus and the | 16 | Sinc Goilt | COLOW LIC | al arriting | Measuring | | + 2022-11 14:22 |

Lo-PIM – ANTO Low Channel Occupied Bandwidth Bandwidth: 5 MHz, Modulation: 16QAM

| D dBm- | | | | |
|---------|------|--|---|-------|
| -10 dBm | | | | |
| 20 dBm | **** | | h | ~~~~~ |
| 40 dBm | | | | |
| 60 dBm- | | | | |
| 70 dBm- | | | | |

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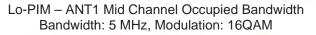
| Occupied Bandwidth | | s in . | min m | - | 71.72 | MILL | 1 Pk Max 10.64 dBr 50.500 00 Mt |
|-----------------------------|---|----------|-------|------------|-------|------|---|
| J dBm- | m | ~~~~ | K. L. | / has | - | X | 59200.00 MI |
| dBm- | | | | - | | | |
| 10 dBm | | | | | | 1 | 1 |
| | | | | | | | |
| 20 dBm | | | | | 1 | | |
| s0 dBm | ~ | | | - | f f | mon | m |
| f0 dBm- | | | | | | | |
| 50 dBm- | | | | | | | 2 E |
| ad mont | | | | | | | |
| 50 dBm- | | | | | | | |
| 70 dBm | | | | | | - | - |
| F 760.5 MHz | | 1001 pts | | 14.0 kHz/ | | S | nan 9.14 MH |
| | | | | | | | |
| F 760.5 MHz Marker Table | 1 | 1001 pts | g | 014.0 kHz/ | | S | pan 9,14 Mi |

A

Lo-PIM – ANTO Mid Channel Occupied Bandwidth Bandwidth: 5 MHz, Modulation: 16QAM

| TDF "GBLHF2012-2 L Occupied Band | | 023"/"GENU01_ | 01-26-23 , 0 | BL_commscope" | | | 4 | O1Pk Mai |
|-------------------------------------|-------|--------------------|--------------|----------------------|------------------------|-----------|-----------|--|
| | | 12- | In 1 | m m | m | m | nu | Milij 10.81 dB 755.000 00 M |
|) dBm- | | 1 | | there is | and the | 1000 | + | |
| dBm- | | _ | - | | | - | | |
| | | / | | | | | | |
| 0 dBm | | 1 | | | | | 1 | |
| 0 dBm | | | - | | | - | 1 | |
| 200 | | / | | | | | | |
| 0 dBm | m | 1 | - | | | | 1 | monin |
| 0 dBm- | _ | | | _ | | | - | |
| - | | | | 11.10 | | | | |
| 0 dBm | | | | | | | | |
| 0 d8m | | - | - | _ | | | - | |
| 0 dBm | | | | | | | | |
| u asm- | | | - | | | | | |
| F 763.0 MHz | | - | 100 | 1 pts | g | 14.0 kHz/ | <u></u> | Span 9.14 MF |
| Marker Table | | 1000 | | | | | | |
| Type Ref M1 | Trc 1 | X-Value 763.0 P | | V-Value 10.81 dBm | Occ Bw | Function | | Function Result 4.515183 MHz |
| T1 T2 | 1 | 760.75224 | | 9.87 dBm 9.97 dBm | Occ Bw Co Occ Bw Fr | | | 763.009 829 965 MHz 9.829 965 199 kHz |
| | | | | | | | Measuring | 2022-11-1 |

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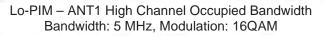


| TDF "CBLHF2012 L Occupied Bar | | 023","CEND01_0 | 1-26-23","CBL | commscope" | | - | | O1Pk Max |
|----------------------------------|----------------|---------------------|---------------|--|-----------|---------------------|--------|--|
| | | 12 | n m | a more | m | m | Ster | 755.000 00 MH |
| U dBm- | - | T | 1 mil | | 2 Yo | f have | to I - | |
| dBm- | | | | - | - | | | |
| | | | | | | | | |
| 10 dBm | | / | | | | | | |
| 20 dBm | | | | | | | | |
| 20 0.5m | | 1 | | | | | | |
| 80 dBm- | and the second | 1 | | | | | 1 | |
| ma | | 1 | | 10.000 | | | Y Y | mon |
| 40 dBm- | | | | | - | - | | |
| 50 dBm | | | | 1. | | | | |
| and more the | | | | 11 | | | | · · · · · · · · · · · · · · · · · · · |
| ou dBm | - | | | | | | | |
| 70 dBm | | | | 1 | | | | |
| /u dbm | | | | | | | | |
| F 763.0 MHz | | | 1001 p | s | 0 | 14.0 kHz/ | ļ | Span 9.14 MF |
| Marker Table | 1 | 1.0.4-1 | roor p | | | THO REP | | |
| Type Ref M1 | Trc | X-Value 763.0 MI | 17 | V-Value 10.48 dBm | Occ Bw | Function | 4 | Function Result 512756394 MHz |
| TI | 1 | 760.751 51 M | | 9.33 dBm 9.46 dBm | Occ Bw Ce | ntroid eq Offset | - | 763.007.890 9 MHz 7.890.899 595 kHz |

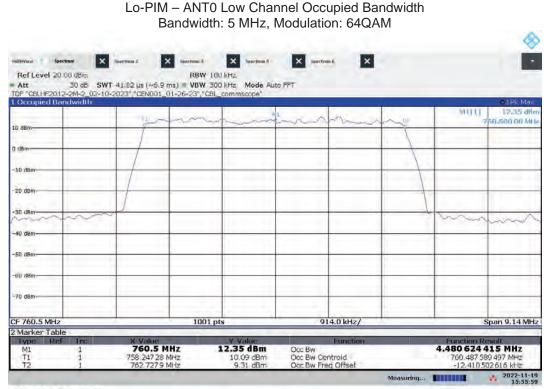
Lo-PIM – ANT0 High Channel Occupied Bandwidth Bandwidth: 5 MHz, Modulation: 16QAM

| | SWT 41.82 µs (~6.9 ms) = 1 2-10-2023","CEN001_01-26-2 | | 0 FFT | | |
|--------------------|--|----------|------------|------------|-----------------------------|
| Occupied Bandwidth | | | 200 | 1 | •1Pk Max Mt[1] 10.65 dBr |
| J dBm- | - mm | A | | The second | 755-500 00 MI |
| dBm | | | | | |
| 0 dBm | | | | | |
| 20 dBm | | | | | |
| 80 (Bm- | | | | | |
| FU dBm | ~ ~ | | | Y | |
| 50 dBm- | | | | | |
| 00 d8m- | | | | | |
| 70 dBm | | | | | |
| F 765.5 MHz | | 1001 pts | 914.0 kHz/ | | Span 9.14 MH |
| 7 4242102 1911 12. | | roor pia | STHURIES | | Sport sit title |

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| Occupied Band | | 2023","CENDO1, | 01-26-23","C | BL_commscope" | ID FFT | | | | • 1Pk Max |
|--------------------------|-----|------------------------------------|--------------|-----------------------------------|------------------------------------|------------|-----------|----------------------|--|
| | | Illin | n 1 | n n | m | m | ~ | 991111 | 10.58 dB 755.500 00 MI |
| D dBm- | | 1 | | 100 | N N | the second | ~ { | - | |
| dBm- | | | - | - | | | | | - |
| 10 dBm | | | | | | | | 1 | 1 |
| | | | | | | | | - | - |
| 20 dBm | | 1/ | - | | | | 1 | | |
| 30 dBm | | 1 | | | _ | | | - | |
| m | | 1 | | 1 1 1 1 1 1 1 1 | | 7 | | man | m |
| FO dam- | | | | 11 11 11 11 | 11111 | | 1 | 1 | 1 |
| i0 dBm | | | 1 | | | | | | - |
| u dBm- | | | | | 1 1 | | 1 | | |
| | | | | | | | | | |
| 70 dBm | | | | | | | | - | |
| F 765.5 MHz | | | 1001 | pts | 91 | 4.0 kHz/ | <u> </u> | - | Span 9.14 M |
| Marker Table Type Ref | Irc | X-Value | | V-Value | - | Function | | Function R | and the second s |
| M1 T1 T2 | 1 | 765.5 1 763.251 2 .767.76536 | MHz | 10.58 dBm 9.40 dBm 9.20 dBm | Occ Bw Occ Bw Cer Occ Bw Fre | htroid | | 4.514178 765.5082 | |
| - 16- | | .197.703-30 | r 1711 12- | -9.20 GDIT | - WALDWITE | d wheet | Measuring | | 2022-11-1 15:33:5 |



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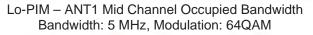
| dBm | | | | | | | | | O1Pk Max |
|----------------------------|--------|--|----------|--|------------------------------------|--------------------|----------|-------|----------------------------|
| dBm | | The | in | | -n-n | mon | 115 | MILLI | 11.96 dBn 750.500 00 MH |
| | | 1 | | | | - v was | 1 | - | |
| dBm- | | | | | | _ | | - | |
| 0 dBm | | | | | | | | 1 | |
| u nam. | | | | 11 | | | 1 1 | | |
| 0 dBm | | | | | | - | 1 | | |
| 0 dBm | - | J | | | | | <u> </u> | h | |
| | _ | | | | | - | | | |
| 0 dBm- | _ | | | | 1.1.1.1 | | 1 | | |
| 0 dBm | | | | | | | | | - |
| 0 dBm | | | | 1. | | | | | _ |
| | | | | | | | | | |
| 0 dBm | | | | | | | | | |
| 760.5 MHz | _ | | 1001 pts | \$ | 91 | 14.0 kHz/ | <u> </u> | - | Span 9.14 MHz |
| Marker Table | | | | | | | | | |
| Type Ref M1 T1 T2 | 1 1 | X-Value 760.5 M 758.24914 N .762.729.04 N | MHz | V-Value 1.98 dBm 9.60 dBm 9.07 dBm | Occ Bw Occ Bw Cer Occ Bw Fre | Function ntroid | | | |

A

Lo-PIM – ANTO Mid Channel Occupied Bandwidth Bandwidth: 5 MHz, Modulation: 64QAM

|)F "CBLHF2012-2M-2_(Occupied Bandwidth | 2-10-2023","CEN001_01-26 | VBW 300 kHz Mode A -23","CBL_commscope" | Auto FFT | _ | o t Pk Max |
|--|--------------------------|--|----------|------|--|
| | 11.000 | man a | Kanna | T | MILLI 18.01 dB |
| dem- | | | | Time | (Industrial Fill Pro |
| dBm- | | | | | |
| 0 dBm | | | | | |
| O dBm | | | | | |
| | | | | | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ |
| 0 dBm- | _ | | | | |
| 0 dBm | | | | | |
| 0 dBm | | | | | |
| 0 dBm- | - | | | | |
| | | | | | |

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| Occupied B | andwidth | | | | | | | |
|-------------|----------|----------------------------------|-------------------------------------|------------|--------------------|--|----------|----------------------------|
| | | | N. | | - | 1 | MEET | 01Pk Max 18,53 dBr |
| | | Inno | nih il | Lain | n. | TE | and the | 753,000,00 M |
| U dBm- | - | T | and the second second | | · · ···· | 4 | | |
| | | | | | | 1 | | - |
| dBm | | | | | | | | _ |
| | | | | | | | | |
| 10 dBm | | | | | | | | |
| AU UBIN | 1 | | | | | | | |
| 1. Der | | | | | | | | |
| 20 dBm | | - F | | | - | 1 | | |
| - | mont | | (1) 11 5 (0.11) | | | | m | - |
| 30 aBm | | - | | | - | | | |
| | | | 1.1 | | | 1. | | 1.1.1.1.1.1.1 |
| 40 dBm- | - | | | | | | | |
| | | 1 1 | C 11 11 CT 11 | | | 11 | | |
| 50 dBm- | | | | | | | | |
| | | 1 | | | | | | |
| ou d8m- | | | | | | | | |
| DO GUNT | | | | | | 1 | 1 | |
| | | | | | | | | |
| 70 dBm | | | | | | | | |
| | | | | | | | | |
| F 763.0 MHz | 2 | 1 | 001 pts | 91 | 4.0 kHz/ | 1 | - | Span 9.14 MH |
| Marker Tab | le | | | | | | | |
| Type Re | f Trc | X-Value | Y-Value | | Function | | Function | Result |
| M1 | 1 | 763.0 MHz | 18.53 dBm | Occ Bw | | | | 38 81 MHz |
| T1 | 1 | 760.750.6 MHz .765.223.24 MHz | 10.31 dBm 9.49 dBm | Occ Bw Cer | ntroid a Offset | | | 922 795 MHz 205 095 kHz |

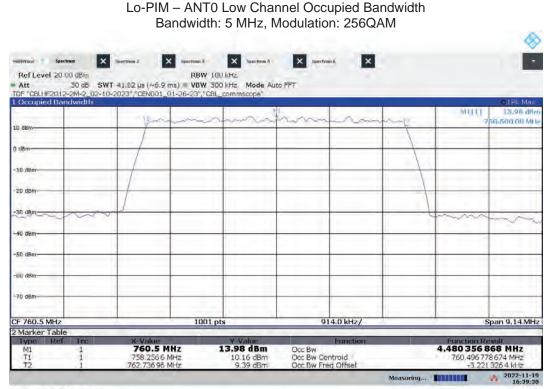
Lo-PIM – ANT0 High Channel Occupied Bandwidth Bandwidth: 5 MHz, Modulation: 64QAM

| | SWT 41.82 µs (~6.9 ms) | | 20 FFT | | |
|---|--------------------------------|----------------------|---------------------------------------|--------|--|
| OF "CBLHF2012-2M-2_ Occupied Bandwidth | 02-10-2023","CEND01_01-26-3 | 23","CBL_commscope" | | | O 1 Pk Max |
| | The man | min in | inner . | - E | M1[1] 11.95 dB 755-500 00 Mi |
| J dBm- | T | | | - M | |
| dBm | | | | | |
| | | | | | |
| 10 dBm | | | | | |
| 0 dBm | | | | | |
| | | | | | |
| in dBm | m | | | 1 Main | ~ ~ ~ 1 |
| 0 dBm- | | | | | |
| | | 11.11.11.11.11 | | 1 | |
| 0 dBm | | | | | |
| u dBm- | | | | | |
| | | | | | |
| 0 dBm | | | | | |
| 765.5 MHz | | 1001 pts | 914.0 kHz/ | 1 | Span 9.14 M |
| Marker Table | 0.00 | | | | |
| Type Ref Irc M1 1 | X-Value 765.5 MHz | Y-Value 11.95 dBm | Function Occ Bw | | Function Result 472 495 228 MHz |
| T1 1 T2 1 | 763.24644 MHz 767.71894 MHz | 9.69 dBm 9.03 dBm | Occ Bw Centroid Occ Bw Freg Offset | | 765.482689903 MHz -17.310096678 kHz |

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| | | hann | 12 | MULT 755 | 01Pk Max 11.62 dB 5.500.00 Mi |
|----------------------------|-----------------------|--|---|---|---|
| | ~~~~~~ | hand | 12 | 761 | 5.500.00 MI |
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| | | | | | |
| | 1001 pts | 914.0 kHz/ | 1 | Sp | an 9.14 Mi |
| V Value | M. Madam | Equation | _ | Constitute Data | |
| 765.5 MHz 763.24432 MHz | 11.62 dBm 9.46 dBm | Occ Bw Occ Bw Centroid | | 4.474 245 04 765.481 4395 | 6 MHz 985 MHz |
| | X-Value 765.5 MHz | 765.5 MHz 11.62 dBm 763.244 32 MHz 9.46 dBm | X Value Y Value Function 765.5 MHz 11.62 dBm Occ Bw 763.24432 MHz 9.46 dBm Occ Bw | X Value Y. Value Function 765.5 MHz 11.62 dBm Occ Bw 763.244.32 MHz 9.46 dBm Occ Bw | X Value Y Value Function Function 765.5 MHz 11.62 dBm Occ Bw 4.474 245 04 763.244 32 MHz 9.46 dBm Occ Bw Centroid 765.481 430 |



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Lo-PIM – ANT1 Low Channel Occupied Bandwidth Bandwidth: 5 MHz, Modulation: 256QAM

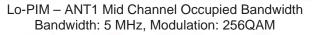
| | | | | -18 -18 | MIIII | 13,49 dBn 759,500 00 MH |
|----------|--------------------|---|---|--|--|--|
| | | | | | J. S. | Y 5H 300 00 MI |
| | | | | | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ | |
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| - | | | | - | | |
| 1001 pts | | 014.0 | | | - | Span 9.14 MH |
| 1001 pis | | 5140 | Ki ley | | - | Spart 9.1-4140 |
| | 9.75 dBm | Occ Bw Occ Bw Centro | id. | | 760,4968 | |
| 5 | 5 MHz 13 52 MHz | Y Value 5 MHz 13.49 dBm 52 MHz 9.75 dBm | Y Value Fi MHz 13.49 dBm Occ Bw 52 MHz 9.75 dBm Occ Bw Centro | Y Value Function 6 MHz 13.49 dBm Occ Bw 52 MHz 9.75 dBm Occ Bw Centroid 36 MHz 9.02 dBm Occ Bw Freq Offset | Y Value Function 6 MHz 13.49 dBm Occ Bw 52 MHz 9.75 dBm Occ Bw Centroid 36 MHz 9.02 dBm Occ Bw Freq Offset | Y Value Function Function MHz 13.49 dBm Occ Bw 4.472 560 S2 MHz 9.75 dBm Occ Bw 760.4961 |

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Lo-PIM – ANTO Mid Channel Occupied Bandwidth Bandwidth: 5 MHz, Modulation: 256QAM

| | | - | _ | | | ~ |
|--------------------|-------|----------------------------|-----------------------|---------------------------|-----------|--|
| uiltiview Spectrus | # × 3 | ipertium 2 X Sumetru | nil X Sparfrom A | X Spectrum A | × | |
| Ref Level 20.00 | | | BW 100 kHz | | | |
| | | | 3W 300 kHz Mode Aut | D FFT | | |
| Occupied Band | | 023","CEN001_01-26-23 | ","Gal_commscope" | | 100 | O 1Pk Max |
| | | | | | | MUTT 13.02 dB |
| U dBm- | | 15 month | mon | non | | 753.000 00 MI |
| - dann | | | | | | |
| dBm | | | | | 1 | |
| | | | | | | |
| 10 dBm | | | | | | |
| | | | | | | |
| 20 dBm | | | | | | |
| 30 dBm- | | | | | | |
| | SUN. | 2 | | | har | man |
| 40 dBm- | | | | | | ~~~ |
| | 1 | | 1.11 11 12 12 12 | 1 | | |
| 50 dBm | | | | | | |
| | | | | | | |
| ou dam- | | 1 | | | | |
| 70 dBm | | | | | | |
| Vu ubin | | | | | | |
| F 763.0 MHz | | | 001 pts | 914.0 kHz/ | | Span 9,14 MH |
| Marker Table | | | dor pis | 914.0 KHZ/ | | apart 9, 14 Min |
| Type Ref | Inc | X-Value | Y-Value | Function | | Function Result |
| M1 T1 | 1 | 763.0 MHz 760.75549 MHz | 13.62 dBm 9.93 dBm | Occ Bw Occ Bw Centroid | 4, | 479 619 731 MHz 762,995 303 127 MHz |
| T2 | 1 | 765.23511 MHz | 9.17 dBm | Occ.Bw Freq Offset | | -4.696873279 kHz |
| | | | | | Measuring | 2022-11-1 |

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| 30.08m 40.08m 40.08m 50.08m 50.08m 50.08m 70.08m 50.08m | |
|---|---|
| 30 (Bm 40 dBm 50 dBm 60 dBm 70 dBm | |
| 20. dBm 40. dBm 50. dBm 60. dBm | |
| 30.08m 40 dem 50.08m | ~~~ |
| 30, (Bm) 40 dBm | |
| | |
| | ~ |
| | |
| 20 dBm | _ |
| 10 /Bm | - |
|) dbm | |
| iD dam- | |
| Occupied Bandwidth | 1 1.80 dB 3.000 00 M |

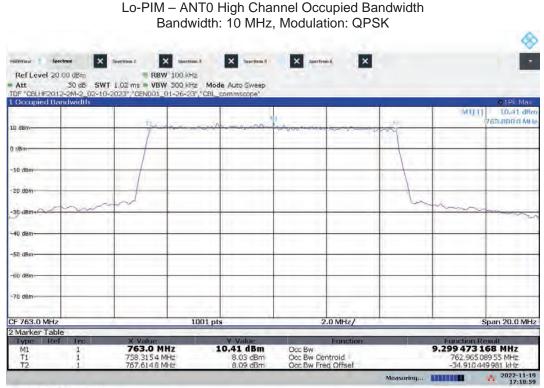
Lo-PIM – ANT0 High Channel Occupied Bandwidth Bandwidth: 5 MHz, Modulation: 256QAM

| Occupied Bandwidt | h | | 1 | TT | • 1Pk Max MULT 13.01 dBr |
|--|-------|----------|------------|---------|-----------------------------|
| U dBm- | 4 man | m | mon | and the | 755.500.00 MI |
| | | | | | |
| dBm | | | | | |
| 0 dBm | | | | | |
| | | | | | |
| 20 dBm | | | | 1 | |
| 80 dBm- | | | | 1 | |
| ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ | W | | | Y | Land |
| f0 dBm- | | | | 1 | |
| i0 dBm- | | | | - | |
| an an | | | | | |
| 50 dem | | | | | |
| 70 dBm | | | | | |
| | | | | | |
| F 765.5 MHz | | 1001 pts | 914.0 kHz/ | | Span 9.14 MH |

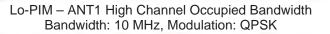
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| Ref Level 20. Att | 00 dBm | | | / 100.hHz 300.kHz Mode Aut | Spectrum | × | | | |
|----------------------|---|------------------|-----|-------------------------------|-------------|----------|---|-------------------------|---------------|
| | -2M-2_02-10-2 | | | CBL_commscope" | 5001 | | | | O1Pk Max |
| - occupied ba | in within | | 1 | | | | 1 | MUU | |
| U dam- | - | 17- | - | min | mm | mm | m | | 755-500.00 MI |
| a dann | | | | | | | | | |
| dBm- | | - / | - | | | _ | 1 | | - |
| | | | | | | | 1 | | |
| 10 dBm | | 1/ | 1 | | | | 1 | | - |
| 10.00 | | | | | | | | | |
| 20 dBm | | | | | | | | | |
| -30 (Bm | | | _ | | | | 1 | | _ |
| ann | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ | | | 11 10 10 10 10 | | | L | -n- | |
| 40 dBm- | | | - | | | _ | | | |
| | | | | 11 11 11 11 | 1.1.1 | | | | |
| -50 dBm | | | 1 | | | | | | - |
| ou dem | | | | | | | 1 | | 1 |
| -ou asm- | | | | | | | 1 | | |
| 70 dBm- | | | - | | | | - | | - |
| 14 | | | - | - | | | | | - |
| F 765.5 MHz | | | 100 | 01 pts | 91 | 4.0 kHz/ | | - | Span 9.14 MH |
| 2 Marker Table | | and a | | | | | | | |
| Type Ref M1 | Tre | X-Value 765.5 | MHZ | Y Value 13.19 dBm | Doc Bw | Function | | Function 4.472 038 | |
| TI | 1 | 763.25872 | MHz | 8,80 dBm | Occ Bw Cen | troid. | | 765.494 | 736 312 MHz |
| T2 | .1. | 767.73076 | MHz | 8.73 dBm | Oor Bw Free | Offset | | -5.263 | 688 092 kHz |



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| DF "CBLHF2012-2M-2 Occupied Bandwidt | | 001_01-26-23" | "CBL_commscope" | | | | _ | O 1 Pk Max |
|---|--------|---------------|--|----------------------|----------|------|------------|-------------------------------------|
| | | | 1 | | | 1 | MITT | 10.20 dBr |
| U dam- | T | 1- pro- | - marine | WWW WWW | | 13 | | 763-000 0 MI |
| | | | | | | a g | | |
| dBm- | - 1 | | | | | | | |
| 0 dBm | | | | | | | | - |
| | | | | | | | - | - |
| 20 dBm | | | | | - | 1 1- | | |
| | mond | | 41 (1) (2) (2) (2) | | | lima | | |
| a all when the second | N. | | | | | | and the | an when any |
| 10 dam- | | - | | | | | - | |
| 5 | | | | | | | 1 | |
| 50 dBm | | | | | | | | |
| 0 dBm | | - | | | | | | |
| | | | | | | | - | |
| 0 dBm | | | | | | | | |
| 763.0 MHz | | | 001 pts | | .0 MHz/ | | - | Span 20.0 MH |
| Marker Table | | | JUT DIS | | .0 MHZ/ | - | | span zu.u wie. |
| Type Ref Irc | | | Y-Value | | Function | | Function R | |
| M1 1 T1 1 | 758.31 | 91 MHz | 10.20 dBm 7.45 dBm | Occ Bw Occ Bw Cer | | | | 50 543 MHz |
| T2 .1 | 767.61 | 26 MHz | 7.60 dBm | Oor Bw Fre | q Offset | | -34,1494 | 56 547 kHz 2022-11-1 17:22:4: |

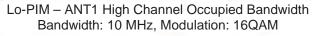
Notes: Low and mid channels are the same frequency as high channel.

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Lo-PIM – ANTO High Channel Occupied Bandwidth Bandwidth: 10 MHz, Modulation: 16QAM

| -50 dBm | | | | | |
|--|-------|----------|-----------|--------|---------------------------------|
| | | | | | |
| 50 dBm | 1 | | | | |
| And a second sec | | | | | |
| 40 dBm- | | | | | - man and - man |
| 30 dBm | m | | | hum | manna |
| 20 dBm | | | | | |
| 10 dBm | | | | | |
| dBm | | | | | |
| U dBm- | 1 Cro | that had | had had t | mining | |
| | The | my inty | non ma ma | | M1[1] 12.26 dB (763.000.0 M) |

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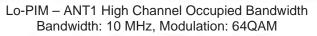
| | | | 100 M | | MT[1] 12.03 dB 763.000 d M |
|---|-----|----------|--------------|---------|-------------------------------|
| dBm- | | The hat | month and my | MAR. | |
| dBm- | | | | | |
| 0 dBm | | | | + \ - + | |
| 0 dBm | | | | + | |
| 0 dBm | - m | | | | |
| 0 dBm- Nacher Waltham Market 0 dBm- | | | 1 1 | Ling | montheman |
| 0 dBm- | | | | | |
| 0 dBm | | | | | |
| 0 dBm- | | - | | | |
| 763.0 MHz | | 1001 pts | 2.0 MHz/ | | Span 20.0 M |

A

Lo-PIM – ANT0 High Channel Occupied Bandwidth Bandwidth: 10 MHz, Modulation: 64QAM

| Ref Level 20.00 dBm Att 30 dB | BBW 100 kHz SWT 1.02 ms - VBW 300 kHz | | | × | |
|---|---|---------------------------------------|---|------|--|
| DF "CBLHF2012-2M-2_02 Occupied Bandwidth | 2-10-2023","CEND01_01-26-23 | "CBL_commscope" | | | O 1Pk Max |
| | | | | | M1[1] 9.58 dBr |
| U dBm | The Autom | a a a a a a a a a a a a a a a a a a a | م لاير کا سيمان سريان ساي جرم : | www. | 763-R00 A MI |
| dBm | | | | | |
| | | | | | |
| 10 dBm | | | | | |
| 20 dBm | | | | | |
| 200 | | | the second second | | |
| -30 dBm- | Anna | | | | |
| 30 dBm | | | | www | when and when the |
| 50 dBm- | | | | | |
| ou dem- | | | | | |
| | | | | | |
| 70 dBm- | | | | | |
| F 763.0 MHz | i | 001 pts | 2.0 MHz/ | | Span 20.0 MH |
| Marker Table | X-Value | Y-Value | Function | | Function Result |
| M1 1 T1 1 T2 1 | 763.0 MHz 758.3236 MHz 757.6206 MHz | 9.58 dBm 8.45 dBm 8.15 dBm | Occ Bw Occ Bw Centroid Occ Bw Freq Offsef | | 297 049 252 MHz 762.972101 809 MHz -27.898191197 kHz |

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| TDF "CBLHF2012-2 I Occupied Band | | 23","CEND | 01_01-26-23" | "CBL_commscope" | | | | | |
|-------------------------------------|---------|-----------|--------------|---------------------------------|---------------------|-----------------|-----|------------|----------------------|
| Occupied Band | width | | 1 | 1 | | - | 1 | MILI | 01Pk Max 9,24 dBr |
| | | TĚ | 1 | | 1 | | 115 | | 765-000-0 MI |
| U dBm- | | - The | - And the | and a state of the state of the | to and the second | the contraction | CAN | 1 | |
| | | 1 | | | | | | | - |
| dBm- | | | | | | - | | | - |
| | | | | | | | | | |
| 10 dBm | | | - | | | - | | - | - |
| | | 1 | | and the second second second | | | | | - |
| 20 dBm | | | | | | | | - | |
| | | | | | | | | | |
| 30 dBm | | 1 | | | | | | | - |
| | and the | in | | | | | | A | |
| Manual A | Jon . | | | | | | Jun | www.www. | Man |
| 40 dbm- | | | | | · · · · · · · · · · | | | | |
| 10 M | | | | | | | | | 1 |
| 50 dBm | | | | | | | | | |
| | | | | | | | 1 | | |
| ou dBm | | | | | | | 1 | | |
| | | | | | | | | | |
| 70 dBm | | | - | | | | | - | |
| | | | | | | | | | |
| F 763.0 MHz | | - | 10 | 01 pts | | .0 MHz/ | | 1 | Span 20.0 MH |
| Marker Table | | | | ior pra | | 131 141 127 | | | 50.0 1411 |
| Type Ref | Trc | X-Value | e | Y-Value: | | Function | | Function I | Result |
| M1 | 1 | 763.0 | MHz | 9.24 dBm | Occ Bw | | | 9.294 770 | 311 MHz |
| T1 | 1 | 758.324 | | 7.96 dBm | Occ Bw Ce | | | | 063914 MHz |
| T2 | -1- | 767.619 | 4 MHz | 7.69 dBm | Occ. Bw Fre | eq Offset | | -27.936 | 086163 kHz |