

# **Radio Test Report**

Report No.:STS2503027W01

Issued for

Shenzhen Yikexin Electronics Co., Ltd.

4th Floor, Building 8, Huike Industrial Park, No. 1 Gongye 2nd Road, Shilong Community, Shiyan Street, Bao'an District, Shenzhen, China

| Product Name:    | True wireless headphones |
|------------------|--------------------------|
| Brand Name:      | N/A                      |
| Model Name:      | K02                      |
| Series Model(s): | K03                      |
| FCC ID:          | 2BLP4-K02                |
| Test Standards:  | FCC Part15.247           |

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Report No.: STS2503027W01

# **TEST REPORT**

| Applicant's Name:    | Shenzhen Yikexin Electronics Co., Ltd.                               |
|----------------------|--|
|                      | 4th Floor, Building 8, Huike Industrial Park, No. 1 Gongye 2nd Road, |
| Address:             | Shilong Community, Shiyan Street, Bao'an District, Shenzhen,         |
|                      | China  |
| Manufacturer's Name: | Shenzhen Yikexin Electronics Co., Ltd.                               |
|                      | 4th Floor, Building 8, Huike Industrial Park, No. 1 Gongye 2nd Road, |
| Address:             | Shilong Community, Shiyan Street, Bao'an District, Shenzhen,         |
|                      | China  |
| Product Description  |  |
| Product Name:        | True wireless headphones   |
|                      |  |

| Brand Name:      | N/A              |
|------------------|------------------|
| Model Name:      | K02              |
| Series Model(s): | K03              |
| Standards        | FCC Part15.247   |
| Test Procedure:  | ANSI C63.10-2020 |

This device described above has been tested by STS, the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.

The test results presented in this report relate only to the object tested. This report shall not be reproduced, except in full, without the written approval of the Shenzhen STS Test Services Co., Ltd. **Date of Test** 

| Date of receipt of test item     | 20 Feb. 2025                |
|----------------------------------|-----------------------------|
| Date (s) of performance of tests | 26 Feb. 2025 ~ 10 Mar. 2025 |
| Date of Issue                    | 10 Mar. 2025                |
| Test Result                      | Pass                        |

| Testing Engineer :     | Aann 13u                  |
|------------------------|---------------------------|
|                        | (Aaron Bu)                |
| Technical Manager :    | Juny Liv TESTING APPROVAL |
|                        | (Tony Liu)                |
| Authorized Signatory : | Honey Yuney               |
|                        | (Bovey Yang)              |



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# **Revision History**

| Rev. | Issue Date   | Report No.    | Effect Page | Contents      |
|------|--------------|---------------|-------------|---------------|
| 00   | 10 Mar. 2025 | STS2503027W01 | ALL         | Initial Issue |
|      | Ń            |               |             | 1             |





# 1. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards: KDB 558074 D01 15.247 Meas Guidance v05r02.

| FCC Part 15.247,Subpart C        |  |        |   |  |
|----------------------------------|--|--------|---|--|
| Standard<br>Section              | Judgment                                   | Remark |   |  |
| 15.207                           | Conducted Emission                         | N/A    |   |  |
| 15.247(a)(1)                     | Hopping Channel Separation                 | PASS   |   |  |
| 15.247(a)(1)&(b)(1)              | Output Power                               | PASS   |   |  |
| 15.209                           | Radiated Spurious Emission                 | PASS   | - |  |
| 15.247(d)                        | Conducted Spurious & Band Edge<br>Emission | PASS   | - |  |
| 15.247(a)(1)(iii)                | Number of Hopping Frequency                | PASS   |   |  |
| 15.247(a)(1)(iii)                | Dwell Time                                 | PASS   |   |  |
| 15.247(a)(1)                     | Bandwidth                                  | PASS   |   |  |
| 15.205                           | Restricted bands of operation              | PASS   |   |  |
| Part 15.247(d)/part<br>15.209(a) | Band Edge Emission                         | PASS   |   |  |
| 15.203                           | Antenna Requirement                        | PASS   | - |  |

Note:

(1) 'N/A' denotes test is not applicable in this Test Report.

(2) All tests are ccording tto ANSI C63.10-2020.



#### 1.1 TEST FACTORY

SHENZHEN STS TEST SERVICES CO., LTD Add. : 101, Building B, Zhuoke Science Park, No.190 Chongqing Road, ZhanChengShequ, Fuhai Sub-District, Bao'an District, Shenzhen, Guang Dong, China FCC test Firm Registration Number: 625569 IC test Firm Registration Number: 12108A A2LA Certificate No.: 4338.01

#### **1.2 MEASUREMENT UNCERTAINTY**

The reported uncertainty of measurement  $y \pm U$ , where expended uncertainty U is based on a standard uncertainty multiplied by a coverage factor of k=2, providing a level of confidence of approximately 95 %.

| No. | Item                              | Uncertainty |
|-----|-----------------------------------|-------------|
| 1   | RF output power, conducted        | ±0.755dB    |
| 2   | Unwanted Emissions, conducted     | ±2.874dB    |
| 3   | All emissions, radiated 9K-30MHz  | ±3.80dB     |
| 4   | All emissions, radiated 30M-1GHz  | ±4.18dB     |
| 5   | All emissions, radiated 1G-6GHz   | ±4.90dB     |
| 6   | All emissions, radiated>6G        | ±5.24dB     |
| 7   | Conducted Emission (9KHz-150KHz)  | ±2.19dB     |
| 8   | Conducted Emission (150KHz-30MHz) | ±2.53dB     |
| 9   | Occupied Channel Bandwidth        | ±3.5%       |
| 10  | Dwell time                        | ±3.2%       |



# 2. GENERAL INFORMATION

# 2.1 GENERAL DESCRIPTION OF THE EUT

| Product Name            | True wireless headphones  |  |
|-------------------------|---|--|
| Brand Name              | N/A   |  |
| Model Name              | К02   |  |
| Series Model(s)         | К03   |  |
| Model Difference        | All the same except for the model name and a ppearance shape                            |  |
| Channel List            | Please refer to the Note 3.   |  |
| Bluetooth               | Frequency:2402 – 2480 MHz<br>Modulation: GFSK(1Mbps), π/4-DQPSK(2Mbps),<br>8DPSK(3Mbps) |  |
| Bluetooth Configuration | BR+EDR  |  |
| Antenna Type            | РСВ   |  |
| Antenna Gain            | -0.68dBi  |  |
| Power Rating            | DC 3.7V by battery  |  |
| Adapter                 | N/A   |  |
| Battery                 | DC 3.7V 30mAh 0.111Wh   |  |
| Hardware version number | HLT-K02-56T   |  |
| Software version number | V1.0  |  |
| Connecting I/O Port(s)  | Please refer to the Note 1.   |  |

Note:

- 1. For a more detailed features description, please refer to the manufacturer's specifications or the User Manual.
- 2. The antenna information refer the manufacturer provide report, applicable only to the tested sample identified in the report. Due to the incorrect antenna information, a series of problems such as the accuracy of the test results will be borne by the customer.



3.

|         | Channel List       |         |                    |         |                    |
|---------|--------------------|---------|--------------------|---------|--------------------|
| Channel | Frequency<br>(MHz) | Channel | Frequency<br>(MHz) | Channel | Frequency<br>(MHz) |
| 00      | 2402               | 27      | 2429               | 54      | 2456               |
| 01      | 2403               | 28      | 2430               | 55      | 2457               |
| 02      | 2404               | 29      | 2431               | 56      | 2458               |
| 03      | 2405               | 30      | 2432               | 57      | 2459               |
| 04      | 2406               | 31      | 2433               | 58      | 2460               |
| 05      | 2407               | 32      | 2434               | 59      | 2461               |
| 06      | 2408               | 33      | 2435               | 60      | 2462               |
| 07      | 2409               | 34      | 2436               | 61      | 2463               |
| 08      | 2410               | 35      | 2437               | 62      | 2464               |
| 09      | 2411               | 36      | 2438               | 63      | 2465               |
| 10      | 2412               | 37      | 2439               | 64      | 2466               |
| 11      | 2413               | 38      | 2440               | 65      | 2467               |
| 12      | 2414               | 39      | 2441               | 66      | 2468               |
| 13      | 2415               | 40      | 2442               | 67      | 2469               |
| 14      | 2416               | 41      | 2443               | 68      | 2470               |
| 15      | 2417               | 42      | 2444               | 69      | 2471               |
| 16      | 2418               | 43      | 2445               | 70      | 2472               |
| 17      | 2419               | 44      | 2446               | 71      | 2473               |
| 18      | 2420               | 45      | 2447               | 72      | 2474               |
| 19      | 2421               | 46      | 2448               | 73      | 2475               |
| 20      | 2422               | 47      | 2449               | 74      | 2476               |
| 21      | 2423               | 48      | 2450               | 75      | 2477               |
| 22      | 2424               | 49      | 2451               | 76      | 2478               |
| 23      | 2425               | 50      | 2452               | 77      | 2479               |
| 24      | 2426               | 51      | 2453               | 78      | 2480               |
| 25      | 2427               | 52      | 2454               |         |                    |
| 26      | 2428               | 53      | 2455               |         |                    |



# 2.2 DESCRIPTION OF THE TEST MODES

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

| Worst Mode | Description | Data Rate/Modulation |
|------------|-------------|----------------------|
| Mode 1     | TX CH00     | 1Mbps/GFSK           |
| Mode 2     | TX CH39     | 1Mbps/GFSK           |
| Mode 3     | TX CH78     | 1Mbps/GFSK           |
| Mode 4     | TX CH00     | 2 Mbps/π/4-DQPSK     |
| Mode 5     | TX CH39     | 2 Mbps/π/4-DQPSK     |
| Mode 6     | TX CH78     | 2 Mbps/π/4-DQPSK     |
| Mode7      | TX CH00     | 3 Mbps/8DPSK         |
| Mode 8     | TX CH39     | 3 Mbps/8DPSK         |
| Mode 9     | TX CH78     | 3 Mbps/8DPSK         |
| Mode 10    | Hopping     | GFSK                 |
| Mode 11    | Hopping     | π/4-DQPSK            |
| Mode 12    | Hopping     | 8DPSK                |

Note:

(1) The measurements are performed at all Bit Rate of Transmitter, the worst data was reported.

(2) We tested for all available U.S. voltage and frequencies (For 120V, 50/60Hz and 240V, 50/60Hz) for which the device is capable of operation, and the worst case of 120V/ 60Hz is shown in the report.

(3) The battery is fully-charged during the radiated and RF conducted test.

#### For AC Conducted Emission

| Test Case             |     |  |
|-----------------------|-----|--|
| AC Conducted Emission | N/A |  |

#### 2.3 FREQUENCY HOPPING SYSTEM REQUIREMENTS

#### (1)Standard and Limit

According to FCC Part 15.247(a)(1), The system shall hop to channel frequencies that are selected at the system hopping rate from a pseudo randomly ordered list of hopping frequencies. Each frequency must be used equally on the average by each transmitter. The system receivers shall have input bandwidths that match the hopping channel bandwidths of their corresponding transmitters and shall shift frequencies in synchronization with the transmitted signals.

Frequency hopping spread spectrum systems are not required to employ all available hopping channels during each transmission. However, the system, consisting of both the transmitter and the receiver, must be designed to comply with all of the regulations in this section should the transmitter be presented with a continuous data (or information) stream. In addition, a system employing short transmission bursts must comply with the definition of a frequency hopping system and must distribute its transmissions over the minimum number of hopping channels specified in this section.

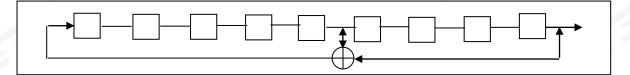


The incorporation of intelligence within a frequency hopping spread spectrum system that permits the system to recognize other users within the spectrum band so that it individually and independently chooses and adapts its hop sets to avoid hopping on occupied channels is permitted. The coordination of frequency hopping systems in any other manner for the express purpose of avoiding the simultaneous occupancy of individual hopping frequencies by multiple transmitters is not permitted.

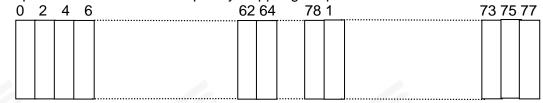
(2)The Pseudorandom sequence may be generated in a nin-stage shift register whose 5<sup>th</sup> and 9<sup>th</sup> stage outputs are added in a modulo-two addition stage. And the result is fed back to the input of the first stage. The sequence begins with the first one of 9 consecutive ones: i.e. the shift register is initialized with nine ones.

Numver of shift register stages:9

Length of pseudo-random sequence:2<sup>9</sup>-1=511bits Longest sequence of zeros: 8(non-inverted signal)



Liner Feedback Shift Register for Generator of the PRBS sequence An example of Pseudorandom Frequency Hoppong Sequence as follow:



Each frequency used equally on th average by each transmitter. The system receivers have input bandwidths that match the hopping channel bandwidths of their corresponding transmitters and shift frequencies ini synchronization with the transmitted signals.

#### (3) Frequency Hopping System

This transmitter device is frequency hopping device, and complies with FCC part 15.247 rule.

This device uses Bluetooth radio which operates in 2400-2483.5 MHz band. Bluetooth uses a radio technology called frequency-hopping spread spectrum, which chops up the data being sent and transmits chunks of it on up to 79 bands (1 MHz each; centred from 2402 to 2480 MHz) in the range 2,400-2,483.5MHz. The transmitter switches hop frequencies 1,600 times per second to assure a high degree of data security. All Bluetooth devices participating in a given piconet are synchronized to the frequency-hopping channel for the piconet. The frequency hopping sequence is determined by the master's device address and the phase of the hopping sequence (the frequency to hop at a specific time) is determined by the master's internal clock. Therefore, all slaves in a piconet must know the master's device address and must synchronize their clocks with the master's clock.

Adaptive Frequency Hopping (AFH) was introduced in the Bluetooth specification to provide an effective way for a Bluetooth radio to counteract normal interference. AFH identifies "bad" channels, where either other wireless devices are interfering with the Bluetooth signal or the Bluetooth signal is interfering with another device. The AFH-enabled Bluetooth device will then communicate with other devices within its piconet to share details of any identified bad channels. The devices will then switch to alternative available "good" channels, away from the areas of interference, thus having no impact on the bandwidth used.

This device was tested with a bluetooth system receiver to check that the device maintained hopping synchronization, and the device complied with these requirements FCC Part 15.247 rule.



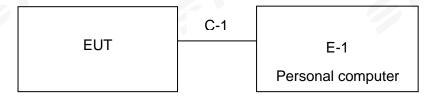
# 2.4 TABLE OF PARAMETERS OF TEST SOFTWARE SETTING

During testing channel & power controlling software provided by the customer was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product power parameters of FHSS.

|   | Test program: Bluetooth                              |  |   |
|---|--|--|---|
| (Control software)<br>Parameters(1/2/3Mbps) | Packet type:<br>DH1:4:27<br>2DH1:20:54<br>3DH1:24:83 | Packet type:<br>DH3:11:183<br>2DH3:26:367<br>3DH3:27:552 | Packet type:<br>DH5:15:339<br>2DH5:30:679<br>3DH5:31:1021 |

#### 2.5 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

# Radiated Spurious Emission Test





# 2.6 DESCRIPTION OF NECESSARY ACCESSORIES AND SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

| Item | Equipment         | Mfr/Brand | Model/Type No. | Note |
|------|-------------------|-----------|----------------|------|
| E-1  | Personal computer | DELL      | Inspiron 3501  | N/A  |
|      |                   |           |                |      |
|      |                   |           |                |      |
|      |                   |           |                |      |

| Item | Shielded Type | Ferrite Core | Length | Note |
|------|---------------|--------------|--------|------|
|      |               |              |        |      |
|      |               |              |        |      |
|      |               |              |        |      |
|      |               |              |        |      |
|      |               |              |        |      |

Note:

- (1) For detachable type I/O cable should be specified the length in cm in <sup>C</sup>Length<sub>2</sub> column.
- (2) "YES" is means "with core"; "NO" is means "without core".



# 2.7 EQUIPMENTS LIST

# RF Radiation Test Equipment

| A Rauation rest              | Equipment           |                    |              |                     |                     |
|------------------------------|---------------------|--------------------|--------------|---------------------|---------------------|
| Kind of<br>Equipment         | Manufacturer        | Type No.           | Serial No.   | Last<br>Calibration | Calibrated<br>Until |
| Temperature &<br>Humidity    | SW-108              | SuWei              | N/A          | 2025.02.24          | 2026.02.23          |
| Pre-Amplifier(0.1<br>M-3GHz) | EM                  | EM330              | 060665       | 2025.02.22          | 2026.02.21          |
| Pre-Amplifier(1G-<br>18GHz)  | SKET                | LNPA-01018G<br>-45 | SK2018080901 | 2024.09.23          | 2025.09.22          |
| Pre-Amplifier(18<br>G-40GHz) | SKET                | LNPA_1840-5<br>0   | SK2018101801 | 2025.02.22          | 2026.02.21          |
| Active loop<br>Antenna       | ZHINAN              | ZN30900C           | 16035        | 2025.02.25          | 2026.02.24          |
| Bilog Antenna                | TESEQ               | CBL6111D           | 34678        | 2024.09.30          | 2025.09.29          |
| Horn Antenna                 | SCHWARZBECK         | BBHA 9120D         | 02014        | 2023.09.24          | 2025.09.23          |
| Horn Antenna                 | A-INFOMW            | LB-180400-KF       | J211020657   | 2023.10.10          | 2025.10.09          |
| Positioning<br>Controller    | MF                  | MF-7802            | MF-780208587 | N/A                 | N/A                 |
| Signal Analyzer              | R&S                 | FSV 40-N           | 101823       | 2024.09.23          | 2025.09.22          |
| Switch Control<br>Box        | N/A                 | N/A                | N/A          | N/A                 | N/A                 |
| Filter Box                   | BALUN<br>Technology | SU319E             | BL-SZ1530051 | N/A                 | N/A                 |
| Antenna Mast                 | MF                  | MFA-440H           | N/A          | N/A                 | N/A                 |
| Turn Table                   | MF                  | SC100_1            | 60531        | N/A                 | N/A                 |
| AC Power<br>Source           | APC                 | KDF-11010G         | F214050035   | N/A                 | N/A                 |
| DC power supply              | HONGSHENGFE<br>NG   | DPS-305AF          | 17064939     | 2024.09.23          | 2025.09.22          |
| Test SW                      | EZ-EMC              |                    | Ver.STSLAB-0 | 3A1 RE              |                     |

#### Conduction Test equipment

| Kind of<br>Equipment      | Manufacturer      | Type No.           | Serial No. | Last calibration | Calibrated<br>until |
|---------------------------|-------------------|--------------------|------------|------------------|---------------------|
| Test Receiver             | R&S               | ESCI               | 101427     | 2024.09.24       | 2025.09.23          |
| Limtter                   | CYBERTEK          | EM5010             | N/A        | 2024.09.24       | 2025.09.23          |
| LISN                      | R&S               | ENV216             | 101242     | 2024.09.24       | 2025.09.23          |
| LISN                      | EMCO              | 3810/2NM           | 23625      | 2024.09.24       | 2025.09.23          |
| Temperature &<br>Humidity | SW-108            | SuWei              | N/A        | 2025.02.24       | 2026.02.23          |
| Test SW                   | EZ-EMC            | Ver.STSLAB-03A1 CE |            |                  |                     |
| RF Connected Test         | RF Connected Test |                    |            |                  |                     |
| Kind of<br>Equipment      | Manufacturer      | Type No.           | Serial No. | Last calibration | Calibrated<br>until |
| Signal Analyzer           | Agilent           | N9020A             | MY51510623 | 2025.02.22       | 2026.02.21          |
| Power detector<br>group   | Keysight          | NW2021031          | N/A        | 2024.09.23       | 2025.09.22          |
| Switch control<br>box     | MW                | MW100-RFCB         | N/A        | N/A              | N/A                 |
| Temperature &<br>Humidity | SW-108            | SuWei              | N/A        | 2025.02.24       | 2026.02.23          |
| Test SW                   | MW                | MTS 8310_2.0.0.0   |            |                  |                     |



# **3. EMC EMISSION TEST**

# 3.1 CONDUCTED EMISSION MEASUREMENT

3.1.1 POWER LINE CONDUCTED EMISSION LIMITS

The radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 kHz to 30 MHz, shall not exceed the limits in the following table.

|                 | Conducted Emiss | ionlimit (dBuV) |  |  |
|-----------------|-----------------|-----------------|--|--|
| FREQUENCY (MHz) | Quasi-peak      | Average         |  |  |
| 0.15 -0.5       | 66 - 56 *       | 56 - 46 *       |  |  |
| 0.50 -5.0       | 56.00           | 46.00           |  |  |
| 5.0 -30.0       | 60.00           | 50.00           |  |  |

Note:

- (1) The tighter limit applies at the band edges.
- (2) The limit of " \* " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

#### The following table is the setting of the receiver

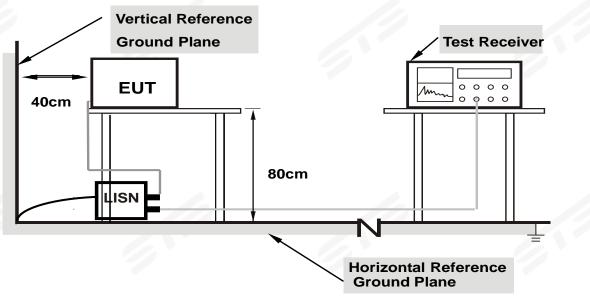
| Receiver Parameters | Setting  |
|---------------------|----------|
| Attenuation         | 10 dB    |
| Start Frequency     | 0.15 MHz |
| Stop Frequency      | 30 MHz   |
| IF Bandwidth        | 9 kHz    |



#### 3.1.2 TEST PROCEDURE

- a. The EUT is 0.8 m from the horizontal ground plane and 0.4 m from the vertical ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments are powered from additional LISN(s). The LISN provides 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- b. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
- c. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
- d. LISN is at least 80 cm from the nearest part of EUT chassis.
- e. For the actual test configuration, please refer to the related Item -EUT Test Photos.

#### 3.1.3 TEST SETUP



Note: 1. Support units were connected to second LISN.

2. Both of LISNs (AMN) are 80 cm from EUT and at least 80 cm from other units and other metal planes support units.

#### 3.1.4 EUT OPERATING CONDITIONS

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.



# 3.1.5 TEST RESULTS: N/A

Remark: The BT function cannot transmit when charging.



### 3.2 RADIATED EMISSION MEASUREMENT

#### 3.2.1 RADIATED EMISSION LIMITS

In any 100 kHz bandwidth outside the operating frequency band. In case the emission fall within the Restricted band specified on Part15.205 (a)&209(a) limit in the table and according to ANSI C63.10-2020 below has to be followed.

#### LIMITS OF RADIATED EMISSION MEASUREMENT (0.009MHz - 1000MHz)

| Frequencies | Field Strength     | Measurement Distance |
|-------------|--------------------|----------------------|
| (MHz)       | (micorvolts/meter) | (meters)             |
| 0.009~0.490 | 2400/F(KHz)        | 300                  |
| 0.490~1.705 | 24000/F(KHz)       | 30                   |
| 1.705~30.0  | 30                 | 30                   |
| 30~88       | 100                | 3                    |
| 88~216      | 150                | 3                    |
| 216~960     | 200                | 3                    |
| Above 960   | 500                | 3                    |

#### LIMITS OF RADIATED EMISSION MEASUREMENT (1GHz-25 GHz)

| (dBuV/r | m) (at 3M) |  |
|---------|------------|--|
| PEAK    | AVERAGE    |  |
| 74      | 54         |  |
|         | PEAK       |  |

Notes:

(1) The limit for radiated test was performed according to FCC PART 15C.

- (2) The tighter limit applies at the band edges.
- (3) Emission level (dBuV/m)=20log Emission level (uV/m).

#### LIMITS OF RESTRICTED FREQUENCY BANDS

| FREQUENCY (MHz)   | FREQUENCY (MHz)     | FREQUENCY (MHz) | FREQUENCY (GHz) |
|-------------------|---------------------|-----------------|-----------------|
| 0.090-0.110       | 16.42-16.423        | 399.9-410       | 4.5-5.15        |
| 0.495-0.505       | 16.69475-16.69525   | 608-614         | 5.35-5.46       |
| 2.1735-2.1905     | 16.80425-16.80475   | 960-1240        | 7.25-7.75       |
| 4.125-4.128       | 25.5-25.67          | 1300-1427       | 8.025-8.5       |
| 4.17725-4.17775   | 37.5-38.25          | 1435-1626.5     | 9.0-9.2         |
| 4.20725-4.20775   | 73-74.6             | 1645.5-1646.5   | 9.3-9.5         |
| 6.215-6.218       | 74.8-75.2           | 1660-1710       | 10.6-12.7       |
| 6.26775-6.26825   | 108-121.94          | 1718.8-1722.2   | 13.25-13.4      |
| 6.31175-6.31225   | 123-138             | 2200-2300       | 14.47-14.5      |
| 8.291-8.294       | 149.9-150.05        | 2310-2390       | 15.35-16.2      |
| 8.362-8.366       | 156.52475-156.52525 | 2483.5-2500     | 17.7-21.4       |
| 8.37625-8.38675   | 156.7-156.9         | 2690-2900       | 22.01-23.12     |
| 8.41425-8.41475   | 162.0125-167.17     | 3260-3267       | 23.6-24.0       |
| 12.29-12.293      | 167.72-173.2        | 3332-3339       | 31.2-31.8       |
| 12.51975-12.52025 | 240-285             | 3345.8-3358     | 36.43-36.5      |
| 12.57675-12.57725 | 322-335.4           | 3600-4400       | Above 38.6      |
| 13.36-13.41       |                     |                 |                 |



For Radiated Emission

| Spectrum Parameter              | Setting                       |  |  |  |  |  |
|---------------------------------|-------------------------------|--|--|--|--|--|
| Attenuation                     | Auto                          |  |  |  |  |  |
| Detector                        | Peak/QP/AV                    |  |  |  |  |  |
| Start Frequency                 | 9 KHz/150KHz(Peak/QP/AV)      |  |  |  |  |  |
| Stop Frequency                  | 150KHz/30MHz(Peak/QP/AV)      |  |  |  |  |  |
|                                 | 200Hz (From 9kHz to 0.15MHz)/ |  |  |  |  |  |
| RB / VB (emission in restricted | 9KHz (From 0.15MHz to 30MHz); |  |  |  |  |  |
| band)                           | 200Hz (From 9kHz to 0.15MHz)/ |  |  |  |  |  |
|                                 | 9KHz (From 0.15MHz to 30MHz)  |  |  |  |  |  |

| Spectrum Parameter              | Setting            |  |  |  |  |
|---------------------------------|--------------------|--|--|--|--|
| Attenuation                     | Auto               |  |  |  |  |
| Detector                        | Peak/QP            |  |  |  |  |
| Start Frequency                 | 30 MHz(Peak/QP)    |  |  |  |  |
| Stop Frequency                  | 1000 MHz (Peak/QP) |  |  |  |  |
| RB / VB (emission in restricted | 120 KHz / 300 KHz  |  |  |  |  |
| band)                           | 120 KH2 / 300 KH2  |  |  |  |  |
|                                 |                    |  |  |  |  |

| Spectrum Parameter              | Setting                       |  |  |  |
|---------------------------------|-------------------------------|--|--|--|
| Attenuation                     | Auto                          |  |  |  |
| Detector                        | Peak/AV                       |  |  |  |
| Start Frequency                 | 1000 MHz(Peak/AV)             |  |  |  |
| Stop Frequency                  | 10th carrier hamonic(Peak/AV) |  |  |  |
| RB / VB (emission in restricted | 1 MHz / 3 MHz(Peak)           |  |  |  |
| band)                           | 1 MHz/1/T MHz(AVG)            |  |  |  |
|                                 |                               |  |  |  |

For Restricted band

| Spectrum Parameter   | Setting                           |  |  |  |  |
|----------------------|-----------------------------------|--|--|--|--|
| Detector             | Peak/AV                           |  |  |  |  |
| Stort/Stop Frequency | Lower Band Edge: 2310 to 2410 MHz |  |  |  |  |
| Start/Stop Frequency | Upper Band Edge: 2476 to 2500 MHz |  |  |  |  |
|                      | 1 MHz / 3 MHz(Peak)               |  |  |  |  |
| RB / VB              | 1 MHz/1/T MHz(AVG)                |  |  |  |  |



| Attenuation            | Auto                                 |  |  |  |  |
|------------------------|--------------------------------------|--|--|--|--|
| Start ~ Stop Frequency | 9kHz~90kHz / RB 200Hz for PK & AV    |  |  |  |  |
| Start ~ Stop Frequency | 90kHz~110kHz / RB 200Hz for QP       |  |  |  |  |
| Start ~ Stop Frequency | 110kHz~490kHz / RB 200Hz for PK & AV |  |  |  |  |
| Start ~ Stop Frequency | 490kHz~30MHz / RB 9kHz for QP        |  |  |  |  |
| Start ~ Stop Frequency | 30MHz~1000MHz / RB 120kHz for QP     |  |  |  |  |

# 3.2.2 TEST PROCEDURE

- a. The measuring distance at 3 m shall be used for measurements at frequency 0.009MHz up to 1GHz, and above 1GHz.
- b. The EUT was placed on the top of a rotating table 0.8 m (above 1GHz is 1.5 m) above the ground at a 3 m anechoic chamber test site. The table was rotated 360 degree to determine the position of the highest radiation.
- c. The height of the equipment shall be 0.8 m (above 1GHz is 1.5 m); the height of the test antenna shall vary between 1 m to 4 m. Horizontal and vertical polarization of the antenna are set to make the measurement.
- d. The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and QuasiPeak detector mode will be re-measured.
- e. If the Peak Mode measured value is compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and no additional QP Mode measurement was performed.
- f. For the actual test configuration, please refer to the related Item –EUT Test Photos. Note:

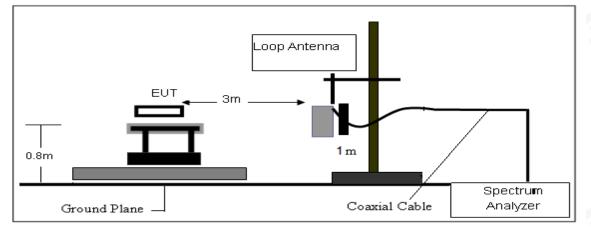
Both horizontal and vertical antenna polarities were tested and performed pretest to three orthogonal axis. The worst case emissions were reported.

# 3.2.3 DEVIATION FROM TEST STANDARD No deviation.

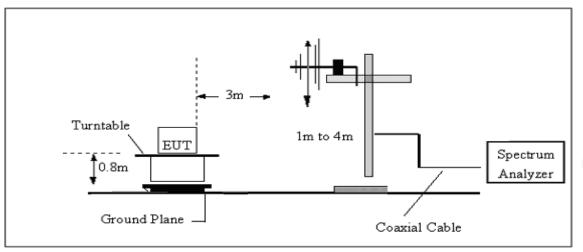


# 3.2.4 TESTSETUP

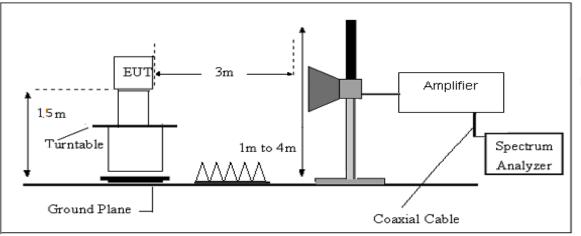
(A) Radiated Emission Test-Up Frequency Below 30MHz



(B) Radiated Emission Test-Up Frequency 30MHz~1GHz



(C) Radiated Emission Test-Up Frequency Above 1GHz



3.2.5 EUT OPERATING CONDITIONS Please refer to section 3.1.4 of this report.



# 3.2.6 FIELD STRENGTH CALCULATION

The field strength is calculated by adding the Antenna Factor and Cable Factor and subtracting the Amplifier Gain and Duty Cycle Correction Factor (if any) from the measured reading. The basic equation with a sample calculation is as follows:

 $F\dot{S} = RA + AF + CL - AG$ Where FS = Field Strength CL = Cable Attenuation Factor (Cable Loss) RA = Reading Amplitude AG = Amplifier Gain AF = Antenna Factor

For example

| Frequency | FS       | RA       | AF   | CL   | AG   | Factor |
|-----------|----------|----------|------|------|------|--------|
| (MHz)     | (dBµV/m) | (dBµV/m) | (dB) | (dB) | (dB) | (dB)   |
| 300       | 40       | 58.1     | 12.2 | 1.6  | 31.9 | -18.1  |

Factor=AF+CL-AG



# 3.2.7 TEST RESULTS

(9KHz-30MHz)

|   | Temperature:  | 20.9°C  | Relative Humidity: | 50 %    |  |  |
|---|---------------|---------|--------------------|---------|--|--|
| - | Test Voltage: | DC 3.7V | Test Mode:         | TX Mode |  |  |

| Freq. | Reading  | Limit    | Margin | State | Toot Dooult |  |
|-------|----------|----------|--------|-------|-------------|--|
| (MHz) | (dBuV/m) | (dBuV/m) | (dB)   | P/F   | Test Result |  |
|       |          |          |        |       | PASS        |  |
|       |          |          |        |       | PASS        |  |

Note:

The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

Distance extrapolation factor =40 log (specific distance/test distance)(dB); Limit line = specific limits (dBuv) + distance extrapolation factor.



# (30MHz-1000MHz)

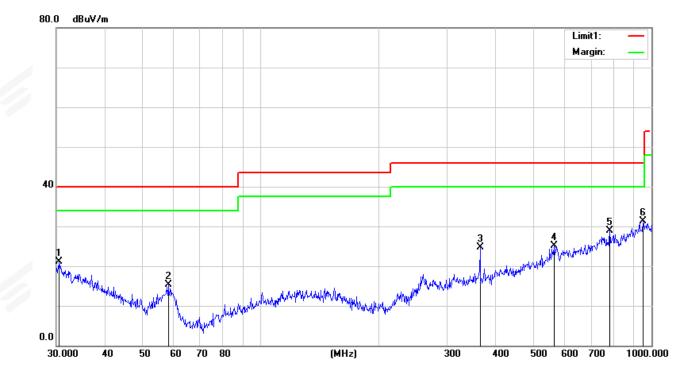
| Tempe        | rature:   | 20.9°C       |                  | Relative Hum  | Relative Humidity: |      |         | 50 %   |  |  |
|--------------|-----------|--------------|------------------|---------------|--------------------|------|---------|--------|--|--|
| Test Vo      | oltage:   | DC 3.7V      |                  | Test Mode:    |                    | TX M | TX Mode |        |  |  |
| Test M       | ode:      | Mode 1/2/3/4 | /5/6/7/8/9 (Mode | e 9 worst mod | e)                 |      |         |        |  |  |
| No.          | Frequency | Reading      | Correct          | Result        | Limi               | t    | Margin  | Remark |  |  |
|              | (MHz)     | (dBuV)       | Factor(dB/m)     | (dBuV/m)      | (dBuV/             | /m)  | (dB)    |        |  |  |
| 1            | 30.5306   | 32.50        | -11.32           | 21.18         | 40.0               | 0    | -18.82  | QP     |  |  |
| 2            | 57.9993   | 40.28        | -25.05           | 15.23         | 40.0               | 0    | -24.77  | QP     |  |  |
| 3            | 364.2595  | 39.05        | -14.29           | 24.76         | 46.0               | 0    | -21.24  | QP     |  |  |
| 4            | 562.6624  | 33.08        | -7.92            | 25.16         | 46.0               | 0    | -20.84  | QP     |  |  |
| 5            | 782.3453  | 34.21        | -5.36            | 28.85         | 46.0               | 0    | -17.15  | QP     |  |  |
| 6<br>Domorku | 952.0937  | 33.44        | -2.10            | 31.34         | 31.34 46.00        |      | -14.66  | QP     |  |  |

Remark:

1. Margin = Result (Result = Reading + Factor )-Limit

2. Factor= Antenna factor+Cable attenuation factor(cable loss)-Amplifier gain

3. All modes have been tested,only show the worst case.





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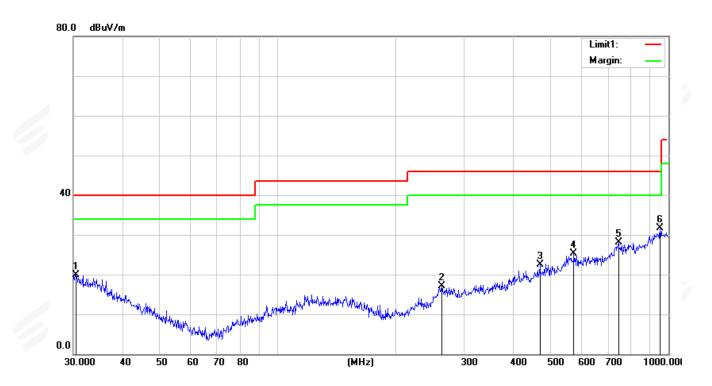
| Temper  | ature:         | 20.9°C Relative Humidity: 50 % |                  |               |             |         |        |  |  |
|---------|----------------|--------------------------------|------------------|---------------|-------------|---------|--------|--|--|
| Test Vo | ltage:         | DC 3.7V                        |                  | Test Mode:    |             | TX Mode |        |  |  |
| Test Mo | de:            | Mode 1/2/3/4/                  | /5/6/7/8/9 (Mode | e 9 worst mod | le)         |         |        |  |  |
| No.     | Frequency      | Reading                        | Correct          | Result        | Limit       | Margin  | Remark |  |  |
|         | (MHz)          | (dBuV)                         | Factor(dB/m)     | (dBuV/m)      | (dBuV/i     | n) (dB) |        |  |  |
| 1       | 30.5306        | 31.28                          | -11.32           | 19.96         | 40.00       | -20.04  | QP     |  |  |
| 2       | 262.8955       | 32.29                          | -15.12           | 17.17         | 46.00       | -28.83  | QP     |  |  |
| 3       | 468.8762       | 33.88                          | -11.38           | 22.50         | 46.00       | -23.50  | QP     |  |  |
| 4       | 572.6144 33.89 |                                | -8.52            | 25.37         | 25.37 46.00 |         | QP     |  |  |
| 5       | 744.8661       | 32.77                          | -4.63            | 28.14         | 46.00       | -17.86  | QP     |  |  |
| 6       | 952.0937       | 33.90                          | -2.10            | 31.80         | 46.00       | -14.20  | QP     |  |  |

Remark:

4. Margin = Result (Result = Reading + Factor )-Limit

5. Factor= Antenna factor+Cable attenuation factor(cable loss)-Amplifier gain

6. All modes have been tested, only show the worst case.





# (1GHz~25GHz) Spurious emission Requirements

| Frequency | Meter<br>Reading | Amplifier | Loss  | Antenna<br>Factor | Corrected<br>Factor | Emission<br>Level | Limits   | Margin   | Detector |           |         |
|-----------|------------------|-----------|-------|-------------------|---------------------|-------------------|----------|----------|----------|-----------|---------|
| (MHz)     | (dBµV)           | (dBµV)    | (dB)  | (dB)              | (dB/m)              | (dB)              | (dBµV/m) | (dBµV/m) | (dB)     | Туре      | Comment |
|           | •                |           |       | Low Char          | nel (π/4-DQP        | SK2402 MHz)       |          |          |          |           |         |
| 3264.85   | 61.64            | 44.70     | 6.70  | 28.20             | -9.80               | 51.84             | 74.00    | -22.16   | PK       | Vertical  |         |
| 3264.85   | 50.61            | 44.70     | 6.70  | 28.20             | -9.80               | 40.81             | 54.00    | -13.19   | AV       | Vertical  |         |
| 3264.80   | 61.41            | 44.70     | 6.70  | 28.20             | -9.80               | 51.61             | 74.00    | -22.39   | PK       | Horizonta |         |
| 3264.80   | 51.15            | 44.70     | 6.70  | 28.20             | -9.80               | 41.35             | 54.00    | -12.65   | AV       | Horizonta |         |
| 4824.31   | 58.86            | 44.20     | 9.04  | 31.60             | -3.56               | 55.30             | 74.00    | -18.70   | PK       | Vertical  |         |
| 4824.31   | 49.53            | 44.20     | 9.04  | 31.60             | -3.56               | 45.97             | 54.00    | -8.03    | AV       | Vertical  |         |
| 4824.36   | 58.15            | 44.20     | 9.04  | 31.60             | -3.56               | 54.59             | 74.00    | -19.41   | PK       | Horizonta |         |
| 4824.36   | 50.04            | 44.20     | 9.04  | 31.60             | -3.56               | 46.48             | 54.00    | -7.52    | AV       | Horizonta |         |
| 5359.63   | 49.44            | 44.20     | 9.86  | 32.00             | -2.34               | 47.09             | 74.00    | -26.91   | PK       | Vertical  |         |
| 5359.63   | 39.21            | 44.20     | 9.86  | 32.00             | -2.34               | 36.86             | 54.00    | -17.14   | AV       | Vertical  |         |
| 5359.67   | 48.18            | 44.20     | 9.86  | 32.00             | -2.34               | 45.84             | 74.00    | -28.16   | PK       | Horizonta |         |
| 5359.67   | 39.17            | 44.20     | 9.86  | 32.00             | -2.34               | 36.83             | 54.00    | -17.17   | AV       | Horizonta |         |
| 7235.85   | 55.01            | 43.50     | 11.40 | 35.50             | 3.40                | 58.41             | 74.00    | -15.59   | PK       | Vertical  |         |
| 7235.85   | 44.42            | 43.50     | 11.40 | 35.50             | 3.40                | 47.82             | 54.00    | -6.18    | AV       | Vertica   |         |
| 7235.82   | 54.27            | 43.50     | 11.40 | 35.50             | 3.40                | 57.67             | 74.00    | -16.33   | PK       | Horizonta |         |
| 7235.82   | 44.56            | 43.50     | 11.40 | 35.50             | 3.40                | 47.96             | 54.00    | -6.04    | AV       | Horizonta |         |
|           | •                |           |       | Middle Cha        | innel (π/4-DQP      | SK/2441 MHz       | )        |          |          |           |         |
| 3264.71   | 62.10            | 44.70     | 6.70  | 28.20             | -9.80               | 52.30             | 74.00    | -21.70   | PK       | Vertical  |         |
| 3264.71   | 51.02            | 44.70     | 6.70  | 28.20             | -9.80               | 41.22             | 54.00    | -12.78   | AV       | Vertica   |         |
| 3264.81   | 61.51            | 44.70     | 6.70  | 28.20             | -9.80               | 51.71             | 74.00    | -22.29   | PK       | Horizont  |         |
| 3264.81   | 50.42            | 44.70     | 6.70  | 28.20             | -9.80               | 40.62             | 54.00    | -13.38   | AV       | Horizonta |         |
| 4874.57   | 58.75            | 44.20     | 9.04  | 31.60             | -3.56               | 55.19             | 74.00    | -18.81   | PK       | Vertical  |         |
| 4874.57   | 50.27            | 44.20     | 9.04  | 31.60             | -3.56               | 46.71             | 54.00    | -7.29    | AV       | Vertical  |         |
| 4874.38   | 58.95            | 44.20     | 9.04  | 31.60             | -3.56               | 55.39             | 74.00    | -18.61   | PK       | Horizont  |         |
| 4874.38   | 49.56            | 44.20     | 9.04  | 31.60             | -3.56               | 46.00             | 54.00    | -8.00    | AV       | Horizonta |         |
| 5359.71   | 48.36            | 44.20     | 9.86  | 32.00             | -2.34               | 46.02             | 74.00    | -27.98   | PK       | Vertical  |         |
| 5359.71   | 39.24            | 44.20     | 9.86  | 32.00             | -2.34               | 36.90             | 54.00    | -17.10   | AV       | Vertical  |         |
| 5359.63   | 47.27            | 44.20     | 9.86  | 32.00             | -2.34               | 44.93             | 74.00    | -29.07   | PK       | Horizont  |         |
| 5359.63   | 38.54            | 44.20     | 9.86  | 32.00             | -2.34               | 36.20             | 54.00    | -17.80   | AV       | Horizonta |         |
| 7310.72   | 54.72            | 43.50     | 11.40 | 35.50             | 3.40                | 58.12             | 74.00    | -15.88   | PK       | Vertical  |         |
| 7310.72   | 43.67            | 43.50     | 11.40 | 35.50             | 3.40                | 47.07             | 54.00    | -6.93    | AV       | Vertica   |         |
| 7310.73   | 53.92            | 43.50     | 11.40 | 35.50             | 3.40                | 57.32             | 74.00    | -16.68   | PK       | Horizont  |         |
| 7310.73   | 44.19            | 43.50     | 11.40 | 35.50             | 3.40                | 47.59             | 54.00    | -6.41    | AV       | Horizont  |         |



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|         | High Channel (π/4-DQPSK/2480 MHz) |       |       |       |       |       |       |        |    |            |  |
|---------|-----------------------------------|-------|-------|-------|-------|-------|-------|--------|----|------------|--|
| 3264.89 | 61.04                             | 44.70 | 6.70  | 28.20 | -9.80 | 51.24 | 74.00 | -22.76 | PK | Vertical   |  |
| 3264.89 | 51.67                             | 44.70 | 6.70  | 28.20 | -9.80 | 41.87 | 54.00 | -12.13 | AV | Vertical   |  |
| 3264.86 | 62.02                             | 44.70 | 6.70  | 28.20 | -9.80 | 52.22 | 74.00 | -21.78 | PK | Horizontal |  |
| 3264.86 | 49.99                             | 44.70 | 6.70  | 28.20 | -9.80 | 40.19 | 54.00 | -13.81 | AV | Horizontal |  |
| 4924.31 | 58.53                             | 44.20 | 9.04  | 31.60 | -3.56 | 54.97 | 74.00 | -19.03 | PK | Vertical   |  |
| 4924.31 | 49.53                             | 44.20 | 9.04  | 31.60 | -3.56 | 45.97 | 54.00 | -8.03  | AV | Vertical   |  |
| 4924.61 | 58.35                             | 44.20 | 9.04  | 31.60 | -3.56 | 54.79 | 74.00 | -19.21 | PK | Horizontal |  |
| 4924.61 | 49.45                             | 44.20 | 9.04  | 31.60 | -3.56 | 45.89 | 54.00 | -8.11  | AV | Horizontal |  |
| 5359.63 | 48.00                             | 44.20 | 9.86  | 32.00 | -2.34 | 45.65 | 74.00 | -28.35 | PK | Vertical   |  |
| 5359.63 | 40.39                             | 44.20 | 9.86  | 32.00 | -2.34 | 38.05 | 54.00 | -15.95 | AV | Vertical   |  |
| 5359.87 | 48.08                             | 44.20 | 9.86  | 32.00 | -2.34 | 45.74 | 74.00 | -28.26 | PK | Horizontal |  |
| 5359.87 | 38.05                             | 44.20 | 9.86  | 32.00 | -2.34 | 35.71 | 54.00 | -18.29 | AV | Horizontal |  |
| 7385.90 | 54.55                             | 43.50 | 11.40 | 35.50 | 3.40  | 57.95 | 74.00 | -16.05 | PK | Vertical   |  |
| 7385.90 | 43.62                             | 43.50 | 11.40 | 35.50 | 3.40  | 47.02 | 54.00 | -6.98  | AV | Vertical   |  |
| 7385.84 | 53.88                             | 43.50 | 11.40 | 35.50 | 3.40  | 57.28 | 74.00 | -16.72 | PK | Horizontal |  |
| 7385.84 | 44.45                             | 43.50 | 11.40 | 35.50 | 3.40  | 47.85 | 54.00 | -6.15  | AV | Horizontal |  |

Note:

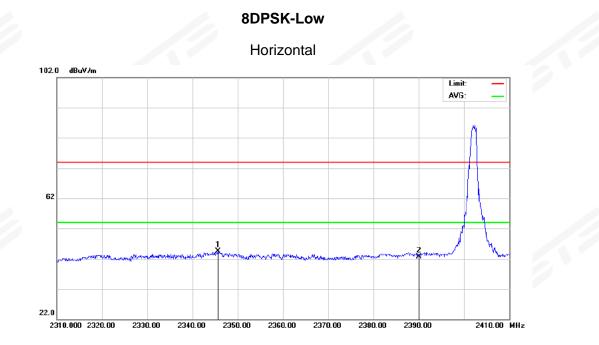
- 1) All modes have been measurement, only worst mode was reported.
- 2) Factor = Antenna Factor + Cable Loss Pre-amplifier.

Emission Level = Reading + Factor

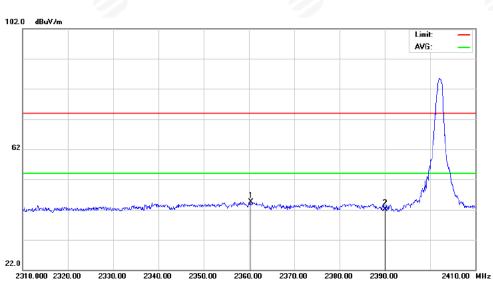
3) The frequency emission of peak points that did not show above the forms are at least 20dB below the limit, the frequency emission is mainly from the environment noise.



# Restricted band Requirements



| No. | Frequency | Reading | Correct      | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|--------------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | Factor(dB/m) | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 2345.600  | 44.41   | 4.12         | 48.53    | 74.00    | -25.47 | peak   |
| 2   | 2390.000  | 42.61   | 4.34         | 46.95    | 74.00    | -27.05 | peak   |



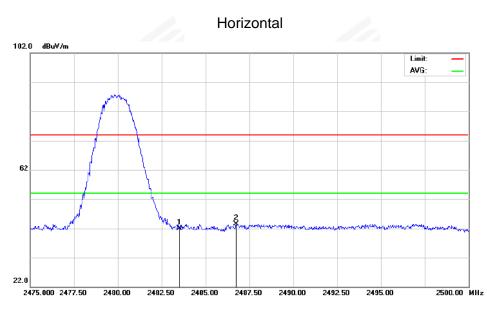
Limit No. Frequency Reading Correct Result Margin Remark Factor(dB/m) (MHz) (dBuV) (dBuV/m) (dBuV/m) (dB) 2360.400 44.49 4.15 48.64 74.00 -25.36 1 peak 4.34 74.00 2 2390.000 42.11 42.11 -27.55 peak

Vertical



Report No.: STS2503027W01

# 8DPSK-High



| No. | Frequency | Reading | eading Correct |          | Limit    | Margin | Remark |
|-----|-----------|---------|----------------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | Factor(dB/m)   | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 2483.500  | 41.82   | 4.60           | 46.42    | 74.00    | -27.58 | peak   |
| 2   | 2486.750  | 43.43   | 4.62           | 48.05    | 74.00    | -25.95 | peak   |

Vertical



| 2475.000 2477.50 2480.00 |           | 2492.50 2495.00 | 2487.50  | 2490.00 | 2492.50 | 2495.00 | 2500.00 MHz |        |        |
|--------------------------|-----------|-----------------|----------|---------|---------|---------|-------------|--------|--------|
| No.                      | Frequency | Reading         | Corre    | ct      | Resu    | lt      | Limit       | Margin | Remark |
|                          | (MHz)     | (dBuV)          | Factor(d | B/m)    | (dBuV/  | /m)     | (dBuV/m)    | (dB)   |        |
| 1                        | 2483.500  | 40.82           | 4.60     |         | 45.42   | 2       | 74.00       | -28.58 | peak   |
| 2                        | 2486.525  | 43.03           | 4.62     |         | 47.65   | 5       | 74.00       | -26.35 | peak   |

Note: All modes have been measurement, only worst mode was reported.



# 4. CONDUCTED SPURIOUS & BAND EDGE EMISSION

## 4.1 LIMIT

According to FCC section 15.247(d), in any 100kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.

# 4.2 TEST PROCEDURE

| Spectrum Parameter                    | Setting                         |
|---------------------------------------|---------------------------------|
| Detector                              | Peak                            |
| Start/Stop Frequency                  | 30 MHz to 10th carrier harmonic |
| RB / VB (emission in restricted band) | 100 KHz/300 KHz                 |
| Trace-Mode:                           | Max hold                        |

For Band edge

| For Band edge                         |                                  |  |  |
|---------------------------------------|----------------------------------|--|--|
| Spectrum Parameter                    | Setting                          |  |  |
| Detector                              | Peak                             |  |  |
| Stort/Ston Fraguancy                  | Lower Band Edge: 2300 – 2407 MHz |  |  |
| Start/Stop Frequency                  | Upper Band Edge: 2475 – 2500 MHz |  |  |
| RB / VB (emission in restricted band) | 100 KHz/300 KHz                  |  |  |
| Trace-Mode:                           | Max hold                         |  |  |
| For Hopping Band edge                 |                                  |  |  |
| For Hopping Band edge                 | For Hopping Band edge            |  |  |
| Detector                              | Peak                             |  |  |
| Ctort/Cton Exerciserov                | Lower Band Edge: 2300– 2403 MHz  |  |  |
| Start/Stop Frequency                  | Upper Band Edge: 2479 – 2500 MHz |  |  |
| RB / VB (emission in restricted band) | 100 KHz/300 KHz                  |  |  |
| Trace-Mode:                           | Max hold                         |  |  |
|                                       |                                  |  |  |



4.3 TEST SETUP



The EUT is connected to the Spectrum Analyzer; the RF load attached to the EUT antenna terminal is 500hm; the path loss as the factor is calibrated to correct the reading. Tune the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 100 kHz. In order to make an accurate measurement, the span is set to be greater than RBW.

4.4 EUT OPERATION CONDITIONS

Please refer to section 3.1.4 of this report.

#### 4.5 TEST RESULTS



# 5. NUMBER OF HOPPING CHANNEL

5.1 LIMIT

| FCC Part 15.247,Subpart C |                       |                              |     |                         |        |
|---------------------------|-----------------------|------------------------------|-----|-------------------------|--------|
|                           | Section               | Section Test Item            |     | FrequencyRange<br>(MHz) | Result |
|                           | 15.247<br>(a)(1)(iii) | Number of Hopping<br>Channel | ≥15 | 2400-2483.5             | PASS   |

| Spectrum Parameters | Setting                    |
|---------------------|----------------------------|
| Attenuation         | Auto                       |
| Span Frequency      | > Operating FrequencyRange |
| RB                  | 100KHz                     |
| VB                  | 300KHz                     |
| Detector            | Peak                       |
| Trace               | Max Hold                   |
| Sweep Time          | Auto                       |

#### 5.2 TEST PROCEDURE

- a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below.
- b. Spectrum Setting: RBW= 200KHz, VBW=620KHz, Sweep time = Auto.

5.3 TEST SETUP



# 5.4 EUT OPERATION CONDITIONS

Please refer to section 3.1.4 of this report.

#### 5.5 TEST RESULTS



# 6. AVERAGE TIME OF OCCUPANCY

6.1 LIMIT

| FCC Part 15.247,Subpart C |                              |                            |             |        |  |
|---------------------------|------------------------------|----------------------------|-------------|--------|--|
| Section Test Item         |                              | Limit FrequencyRange (MHz) |             | Result |  |
| 15.247<br>(a)(1)(iii)     | Average Time<br>of Occupancy | 0.4sec                     | 2400-2483.5 | PASS   |  |

#### 6.2 TEST PROCEDURE

- a. The transmitter output (antenna port) was connected to the spectrum analyzer.
- b. Set RBW =1MHz/VBW =3MHz.
- c. Use a video trigger with the trigger level set to enable triggering only on full pulses.
- d. Sweep Time is more than once pulse time.
- Set the center frequency on any frequency would be measure and set the frequency span to e. zero span.
- f. Measure the maximum time duration of one single pulse.

The Dwell Time=Burst Width\*Total Hops.The detailed calculations are showed as follows: The duration for dwell time calculation: 0.4[s]\*hopping number=0.4[s]\*79[ch)=31.6[s\*ch]; Dwell Time Calculate formula:

Dwell time = pulse time (ms) x pulse number in 31.6s

#### 6.3 TEST SETUP



# 6.4 EUT OPERATION CONDITIONS

Please refer to section 3.1.4 of this report.

#### 6.5 TEST RESULTS



# 7. HOPPING CHANNEL SEPARATION MEASUREMEN

#### 7.1 LIMIT

Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater. Alternatively, frequency hopping systems operating in the 2400-2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater, provided the systems operate with an output power no greater than 125 mW.

| Spectrum Parameter | Setting   |
|--------------------|---|
| Attenuation        | Auto  |
| Span Frequency     | > 20 dB Bandwidth or Channel Separation                 |
| RB                 | 30 kHz (20dB Bandwidth) / 30 kHz (Channel Separation)   |
| VB                 | 100 kHz (20dB Bandwidth) / 100 kHz (Channel Separation) |
| Detector           | Peak  |
| Trace              | Max Hold  |
| Sweep Time         | Auto  |

#### 7.2 TEST PROCEDURE

- a. The transmitter output (antenna port) was connected to the spectrum analyser in peak hold mode.
- b. The resolution bandwidth of 30 kHz and the video bandwidth of 100 kHz were utilised for 20 dB bandwidth measurement.
- c. The resolution bandwidth of 30 kHz and the video bandwidth of 100 kHz were utilised for channel separation measurement.

7.3 TEST SETUP



# 7.4 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

# 7.5 TEST RESULTS



# 8. BANDWIDTH TEST

# 8.1 LIMIT

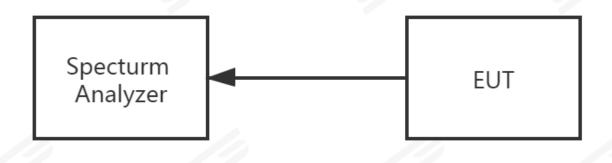
| FCC Part15 15.247,Subpart C |               |           |       |                         |        |
|-----------------------------|---------------|-----------|-------|-------------------------|--------|
|                             | Section       | Test Item | Limit | FrequencyRange<br>(MHz) | Result |
|                             | 15.247 (a)(1) | Bandwidth | N/A   | 2400-2483.5             | PASS   |

| Spectrum Parameter | Setting   |
|--------------------|---|
| Attenuation        | Auto  |
| Span Frequency     | > Measurement Bandwidth or Channel Separation           |
| RB                 | 30 kHz (20dB Bandwidth) / 30 kHz (Channel Separation)   |
| VB                 | 100 kHz (20dB Bandwidth) / 100 kHz (Channel Separation) |
| Detector           | Peak  |
| Trace              | Max Hold  |
| Sweep Time         | Auto  |

#### **8.2 TEST PROCEDURE**

- a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below.
- b. Spectrum Setting: RBW= 30KHz, VBW=100KHz, Sweep time = Auto.

#### 8.3 TEST SETUP



8.4 EUT OPERATION CONDITIONS Please refer to section 3.1.4 of this report.

#### 8.5 TEST RESULTS



# 9. OUTPUT POWER TEST

### 9.1 LIMIT

| FCC Part 15.247,Subpart C |                         |  |                       |        |  |  |
|---------------------------|-------------------------|--|-----------------------|--------|--|--|
| Section                   | Section Test Item Limit |  | Frequency Range (MHz) | Result |  |  |
|                           |                         | 1 W or 0.125W  |                       |        |  |  |
| 15.247<br>(a)(1)&(b)(1)   | Output<br>Power         | if channel separation ><br>2/3 bandwidthprovided<br>thesystems operatewith an<br>output power no greater<br>than125 mW(20.97dBm) | 2400-2483.5           | PASS   |  |  |

### 9.2 TEST PROCEDURE

This is an RF-conducted test to evaluate maximum peak output power. Use a direct connection between the antenna port of the unlicensed wireless device and the spectrum analyzer, through suitable attenuation. The hopping shall be disabled for this test:

a) Use the following spectrum analyzer settings:

1) Span: Approximately five times the 20 dB bandwidth, centered on a hopping channel.

2) RBW > 20 dB bandwidth of the emission being measured.

3) VBW  $\geq$  RBW.

4) Sweep: Auto.

5) Detector function: Peak.

6) Trace: Max hold.

b) Allow trace to stabilize.

c) Use the marker-to-peak function to set the marker to the peak of the emission.

d) The indicated level is the peak output power, after any corrections for external attenuators and cables.

e) A plot of the test results and setup description shall be included in the test report.

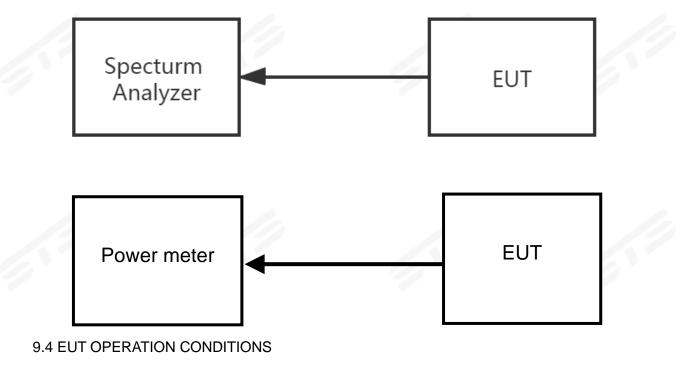
Note—A peak responding power meter may be used, where the power meter and sensor system video bandwidth is greater than the occupied bandwidth of the unlicensed wireless device, rather than a spectrum analyzer.

PKPM1 Peak power meter method:

The maximum peak conducted output power may be measured using a broadband peak RF power meter. The power meter shall have a video bandwidth that is greater than or equal to the DSS bandwidth and shall use a fast-responding diode detector.



9.3 TEST SETUP



Please refer to section 3.1.4 of this report.

9.5 TEST RESULTS

Note: The test data please refer to APPENDIX 1.



# **10. ANTENNA REQUIREMENT**

# 10.1 STANDARD REQUIREMENT

15.203 requirement: For intentional device, according to 15.203: an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

# 10.2 EUT ANTENNA

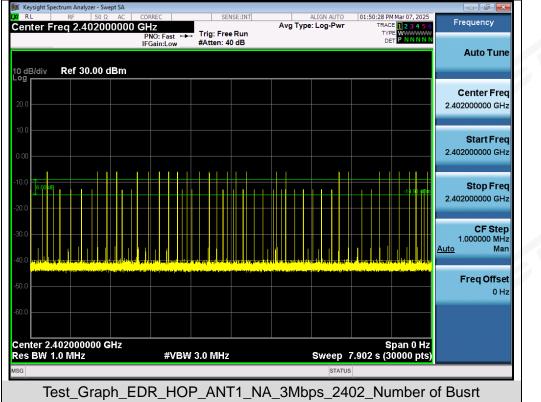
The EUT antenna is PCB Antenna. It comply with the standard requirement.



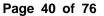
# **APPENDIX 1-TEST DATA**

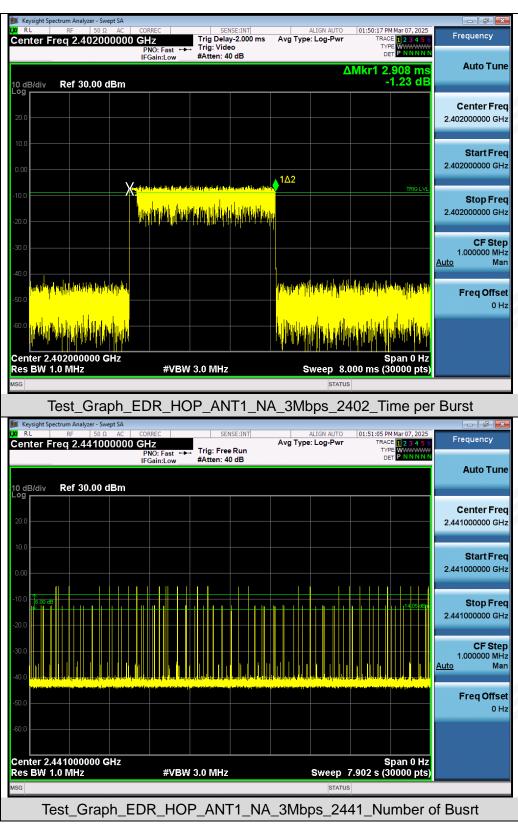
|         |                                | Test Data of D   | well Time          |               |              |
|---------|--------------------------------|--|--------------------|---------------|--------------|
| Channel | Time of Pulse<br>for 3DH5 (ms) | Number of hops in the period specified in the requirements | Dwell Time<br>(ms) | Limit<br>(ms) | Pass or Fail |
| 2402    | 2.908                          | 26.0*4   | 302.432            | 400           | Pass         |
| 2441    | 2.908                          | 30.0*4   | 348.960            | 400           | Pass         |
| 2480    | 2.908                          | 30.0*4   | 348.960            | 400           | Pass         |

# Test Graphs of Dwell Time



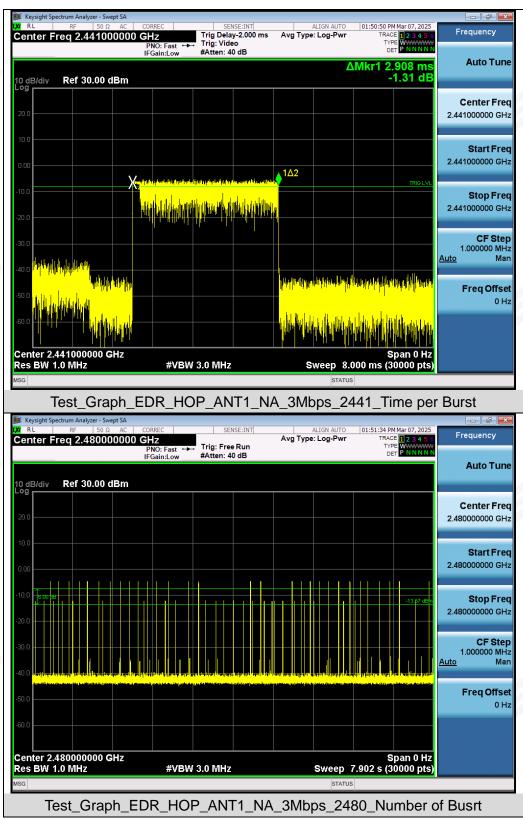








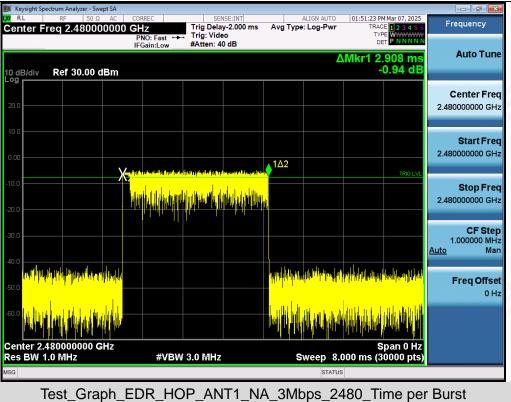
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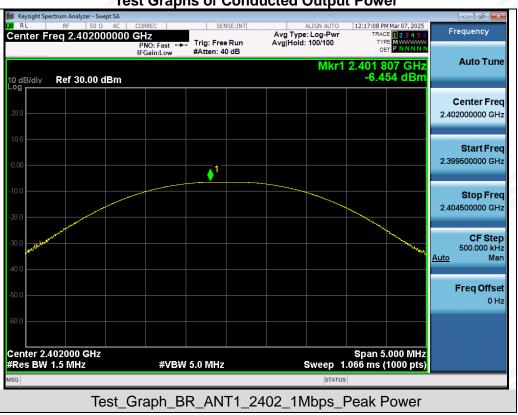
### Report No.: STS2503027W01



Note: All mode rates are tested and evaluated, 8DPSK modulated 3DH5 mode is the worst case and documented in the report.



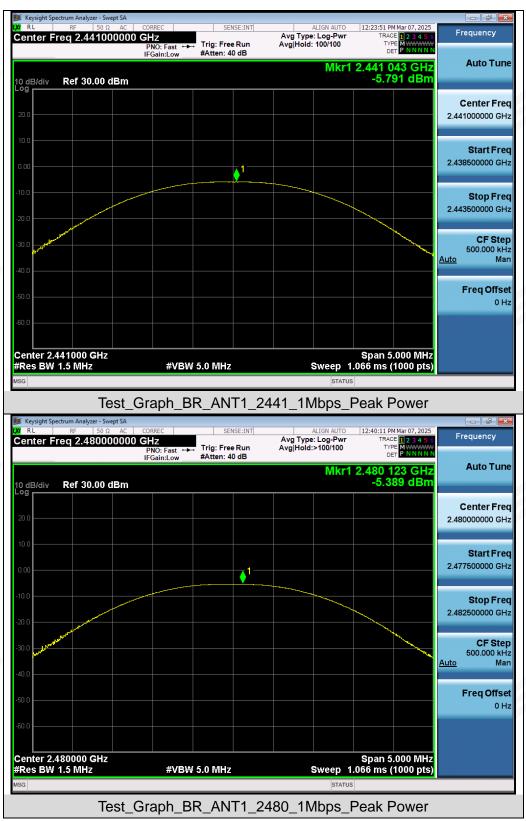
|            | Test Data               | a of Conducted Output | Power           |              |
|------------|-------------------------|-----------------------|-----------------|--------------|
| Test Mode  | Test Frequency<br>(MHz) | Peak Power<br>(dBm)   | Limits<br>(dBm) | Pass or Fail |
|            | 2402                    | -6.454                | ≤21             | Pass         |
| GFSK       | 2441                    | -5.791                | ≤21             | Pass         |
|            | 2480                    | -5.389                | ≤21             | Pass         |
|            | 2402                    | -5.775                | ≤21             | Pass         |
| π /4-DQPSK | 2441                    | -4.963                | ≤21             | Pass         |
|            | 2480                    | -4.536                | ≤21             | Pass         |
|            | 2402                    | -5.459                | ≤21             | Pass         |
| 8DPSK      | 2441                    | -4.581                | ≤21             | Pass         |
|            | 2480                    | -4.190                | ≤21             | Pass         |



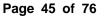
# **Test Graphs of Conducted Output Power**

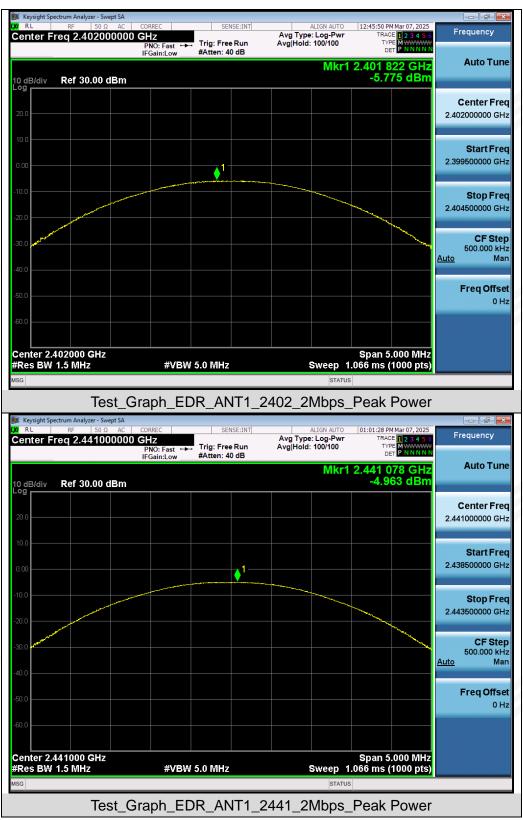


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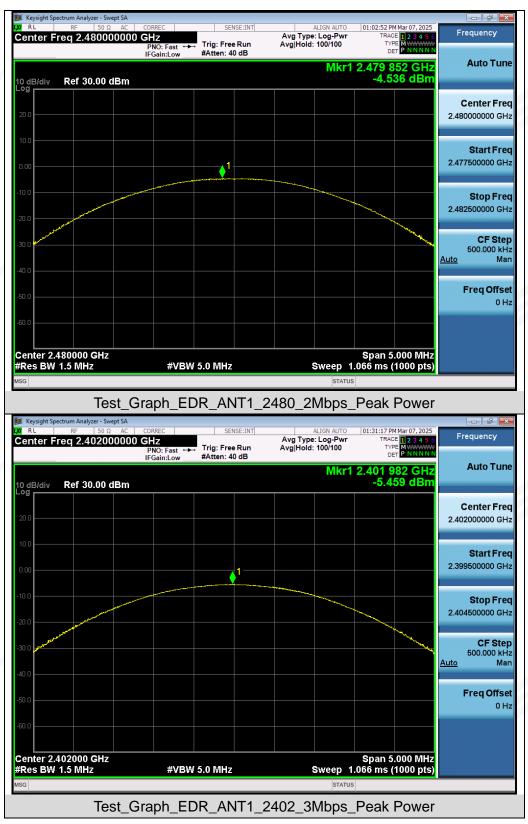




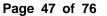


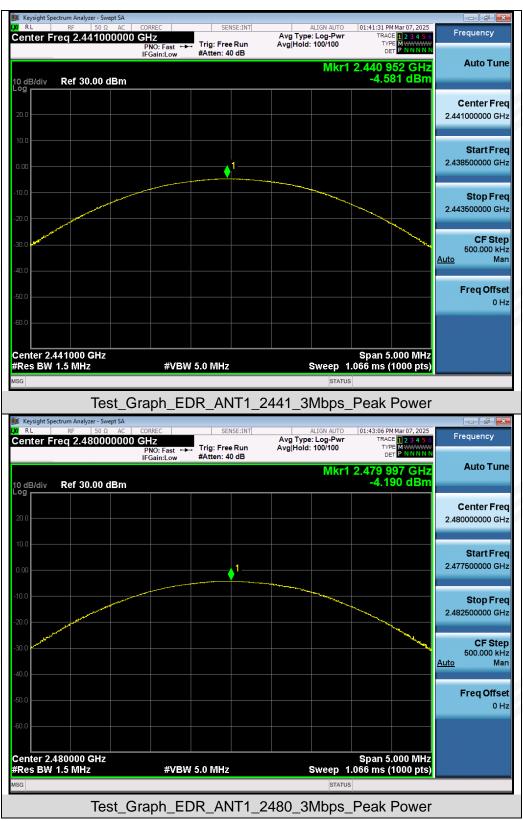


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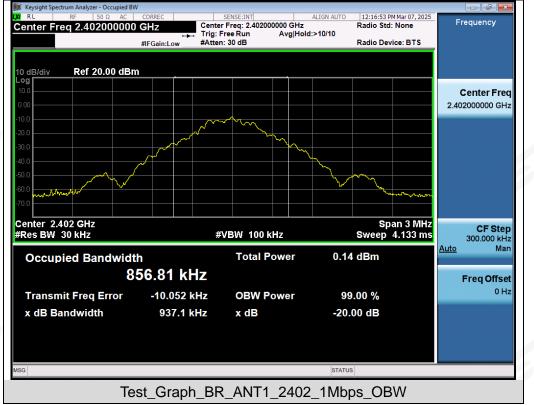






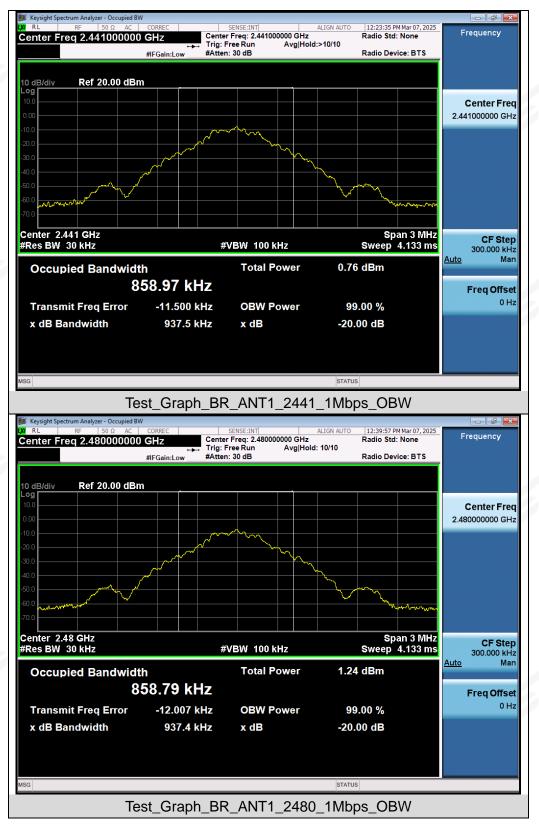
|            | Test Data of C          | Occupied Bandwidth              | n and -20dB Band            | dwidth |              |
|------------|-------------------------|---------------------------------|-----------------------------|--------|--------------|
| Test Mode  | Test Frequency<br>(MHz) | 99% Occupied<br>Bandwidth (MHz) | -20dB<br>Bandwidth<br>(MHz) | Limits | Pass or Fail |
|            | 2402                    | 0.857                           | 0.937                       | N/A    | Pass         |
| GFSK       | 2441                    | 0.859                           | 0.937                       | N/A    | Pass         |
|            | 2480                    | 0.859                           | 0.937                       | N/A    | Pass         |
|            | 2402                    | 1.154                           | 1.248                       | N/A    | Pass         |
| π /4-DQPSK | 2441                    | 1.154                           | 1.247                       | N/A    | Pass         |
|            | 2480                    | 1.154                           | 1.246                       | N/A    | Pass         |
|            | 2402                    | 1.160                           | 1.257                       | N/A    | Pass         |
| 8DPSK      | 2441                    | 1.159                           | 1.255                       | N/A    | Pass         |
|            | 2480                    | 1.159                           | 1.255                       | N/A    | Pass         |

# Test Graphs of Occupied Bandwidth and -20dB Bandwidth



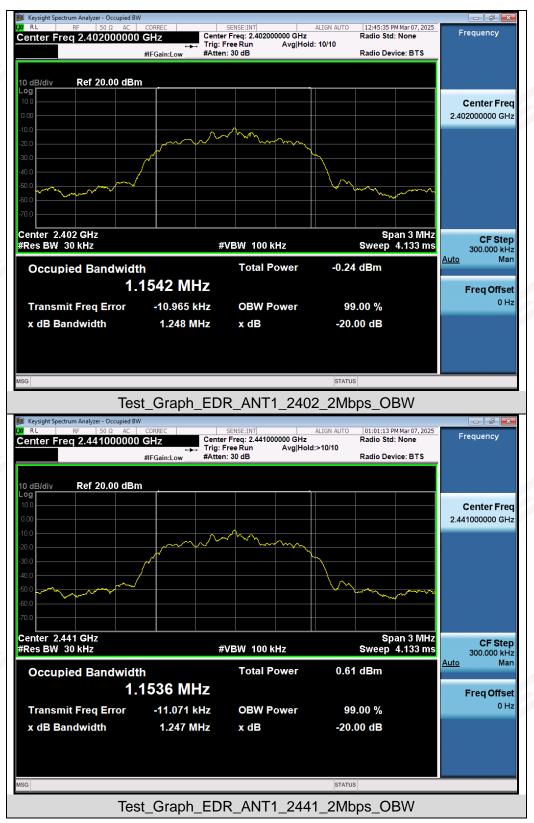


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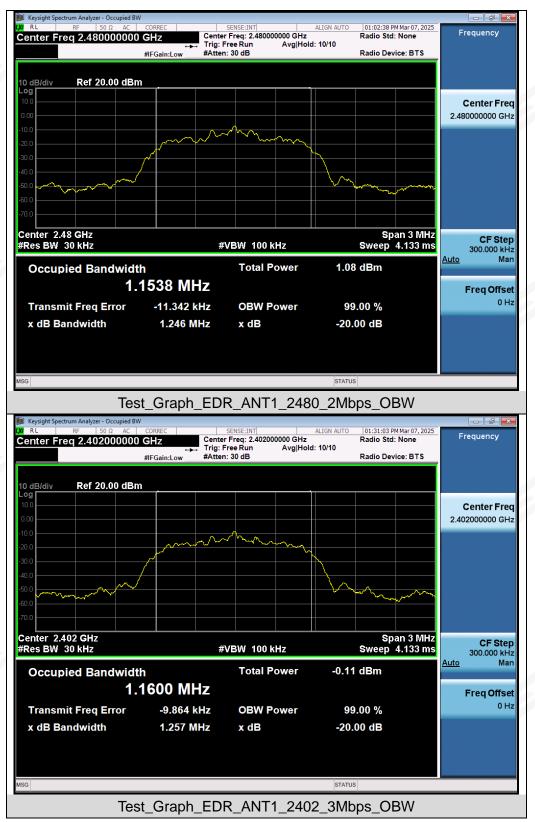


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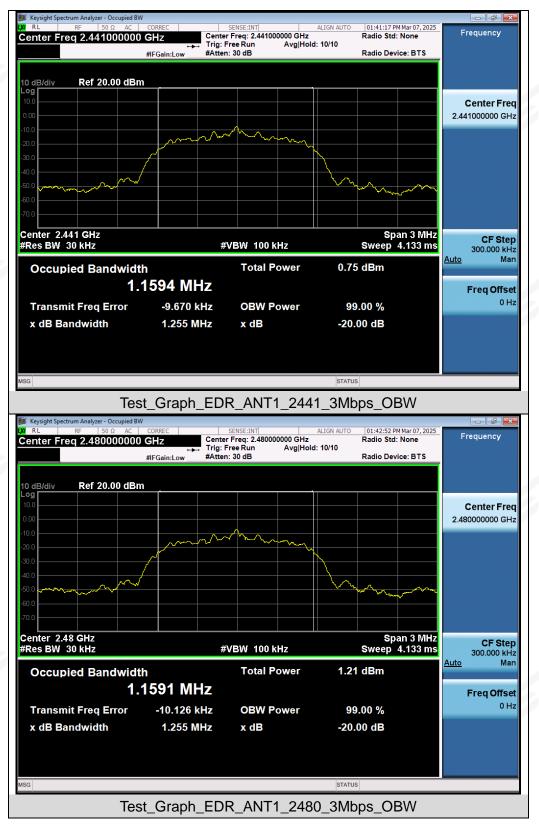


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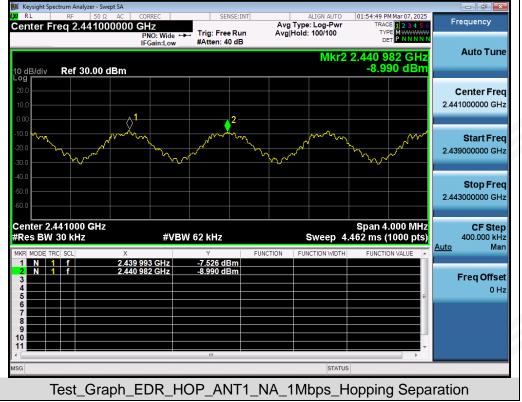
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|                   | Test Data of Frequency Separa | ation        |              |
|-------------------|-------------------------------|--------------|--------------|
| Test Mode         | Channel Separation (MHz)      | Limits (MHz) | Pass or Fail |
| GFSK Hopping      | 0.989                         | ≥0.625       | Pass         |
| π/4-DQPSK Hopping | 0.993                         | ≥0.831       | Pass         |
| 8DPSK Hopping     | 0.993                         | ≥0.837       | Pass         |

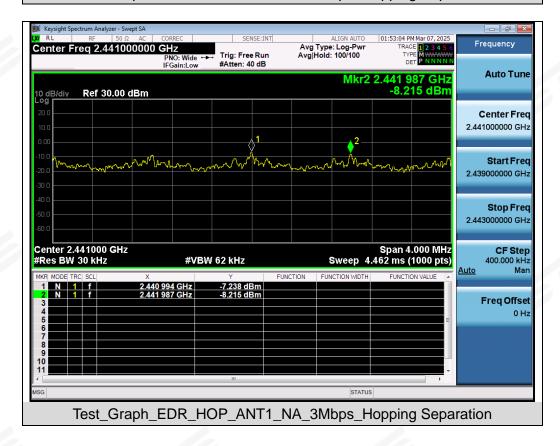
# Test Graphs of Frequency Separation





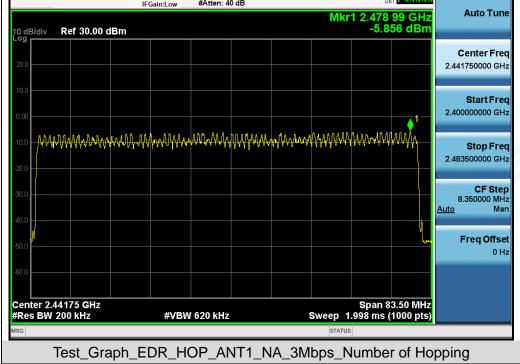
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| 📕 Keysight Spectrum Analyzer - Swept SA |                |  |  |   |                        |
|---|----------------|--|--|---|------------------------|
| X RL RF 50 Ω AC                         | CORREC         | SENSE:INT                              | ALIGN AUTO<br>Avg Type: Log-Pwr        | 01:59:21 PM Mar 07, 2025<br>TRACE 1 2 3 4 5 6 | Frequency              |
| Center Freq 2.441000000                 | PNO: Wide ++++ | Trig: Free Run                         | Avg Type: Log-Pwr<br>Avg Hold: 100/100 |   |                        |
|   | IFGain:Low     | #Atten: 40 dB                          |  |   | Auto Tune              |
|   |                |  | Mkr2                                   | 2.440 990 GHz                                 | Autorune               |
| 10 dB/div Ref 30.00 dBm                 |                |  |  | -7.510 dBm                                    |                        |
| 20.0                                    |                |  |  |   | Center Freq            |
| 10.0                                    |                |  |  |   | 2.441000000 GHz        |
|   |                | 2                                      |  |   | 2.441000000 GHZ        |
| 0.00                                    |                | <b>\</b>                               |  |   |                        |
| -10.0 mmmmmmmmm                         | mon            | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ | moundary                               | mmmm  | Start Freq             |
| 20.0                                    | 101 01 V 000   |  |  |   | 2.439000000 GHz        |
| -30.0                                   |                |  |  |   |                        |
| -40.0                                   |                |  |  |   | Stop Freq              |
| -50.0                                   |                |  |  |   | 2.443000000 GHz        |
| -60.0                                   |                |  |  |   |                        |
| Center 2.441000 GHz                     |                |  |  | Span 4.000 MHz                                | OF Otom                |
| #Res BW 30 kHz                          | #VBW           | 62 kHz                                 | Sweep 4                                | .462 ms (1000 pts)                            | CF Step<br>400.000 kHz |
| MKRI MODEI TRCI SCLI X                  |                |  | CTION FUNCTION WIDTH                   | FUNCTION VALUE                                | <u>Auto</u> Man        |
| 1 N 1 f 2.439                           | 997 GHz        | -8.359 dBm                             | ICTION TONCTION WIDTH                  |   |                        |
| 2 N 1 f 2.440                           | ) 990 GHz      | -7.510 dBm                             |  |   | Freq Offset            |
| 4                                       |                |  |  |   | 0 Hz                   |
| 5                                       |                |  |  | E   |                        |
| 7                                       |                |  |  |   |                        |
| 8                                       |                |  |  |   |                        |
| 10                                      |                |  |  |   |                        |
| •                                       |                |  |  |   |                        |
| MSG                                     |                |  | STATUS                                 | 3   |                        |
| Toot Graph                              |                |  |  | lopping Sepa                                  | ration                 |





| Te   | est Data of Number of Hopping   | g Frequency  |                   |
|--|---|--|-------------------|
| Test Mode  | Number of Hopping Frequency   | Limits   | Pass or Fail      |
| 8DPSK Hopping  | 79  | >=15   | Pass              |
| Keysight Spectrum Analyzer - Swept S           Center Freq 2.44175000           10 dB/div         Ref 30.00 dBr           10 dB/div         Ref 30.00 dBr | IC CORREC SENSE:INT AUGN<br>100 CHZ Avg Type: Log<br>PNO: Fast ↔ Trig: Free Run<br>IFGain:Low #Atten: 40 dB | AUTO 01:50:04 PM Mar 07, 2025<br>Pwr TRACE 12 3 4 5 6<br>100 Type<br>Det P.NNNNN | uency<br>uto Tune |



Note: All mode rates are tested and evaluated, 8DPSK modulated 3DH5 mode is the worst case and documented in the report.



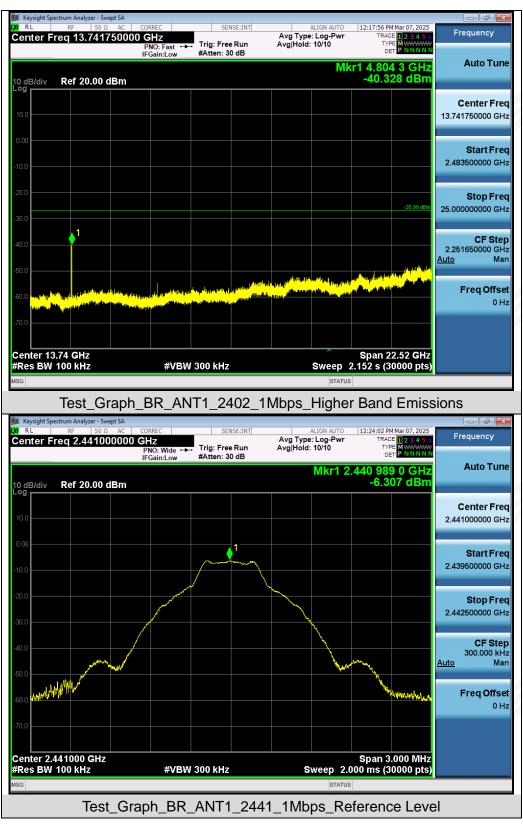


#### 12:17:19 PM Mar 07, 2025 Center Freq 2.402000000 GHz IFGain:Low Frequency TRACE 1 2 3 4 5 6 TYPE MWWWW DET P NNNN Avg Type: Log-Pwr Avg|Hold: 10/10 Trig: Free Run #Atten: 30 dB Auto Tune Mkr1 2.401 995 3 GHz -6.992 dBm 10 dB/div Ref 20.00 dBm **Center Freq** 2.402000000 GHz Start Freq 2.400500000 GHz Stop Freq 2.403500000 GHz **CF** Step 300.000 kHz Man <u>Auto</u> Freq Offset 0 Hz Center 2.402000 GHz #Res BW 100 kHz Span 3.000 MHz #VBW 300 kHz Sweep 2.000 ms (30000 pts) Test\_Graph\_BR\_ANT1\_2402\_1Mbps\_Reference Level 📕 Keysight S ALIGN AUTO 12:17:30 PM Mar 07, 2025 Avg Type: Log-Pwr Avg|Hold: 10/10 TYPE SENSE:INT Frequency TRACE 1 2 3 4 5 6 TYPE MWWWW DET PNNNN Center Freq 1.210000000 GHz Trig: Free Run #Atten: 30 dB PNO: Fast ++-IFGain:Low Auto Tune Mkr1 2.335 72 GHz -57.276 dBm Ref 20.00 dBm 10 dB/div **Center Frea** 1.210000000 GHz Start Freq 30.000000 MHz Stop Frea 2.39000000 GHz **CF** Step 236.000000 MHz Man <u>Auto</u> **Freq Offset** 0 Hz Center 1.210 GHz #Res BW 100 kHz Span 2.360 GHz #VBW 300 kHz Sweep 226.0 ms (30000 pts) Test\_Graph\_BR\_ANT1\_2402\_1Mbps\_Lower Band Emissions

# Test Graphs of Spurious Emissions in Non-Restricted Frequency Bands

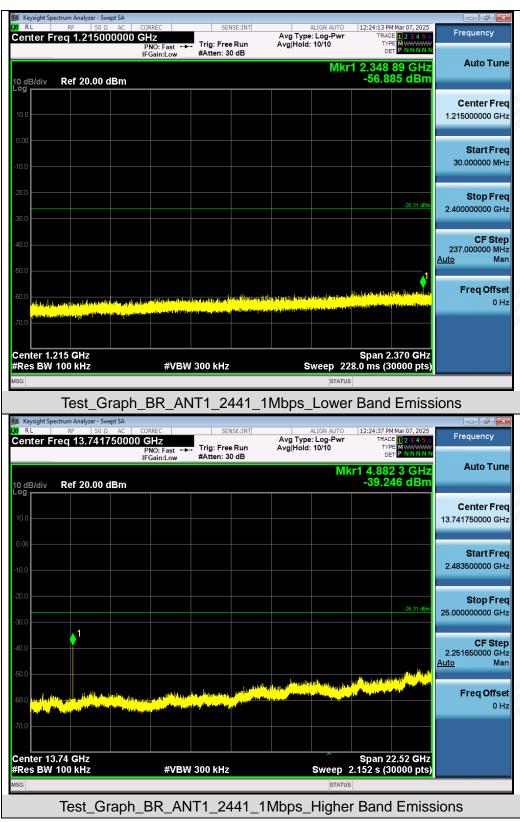


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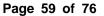




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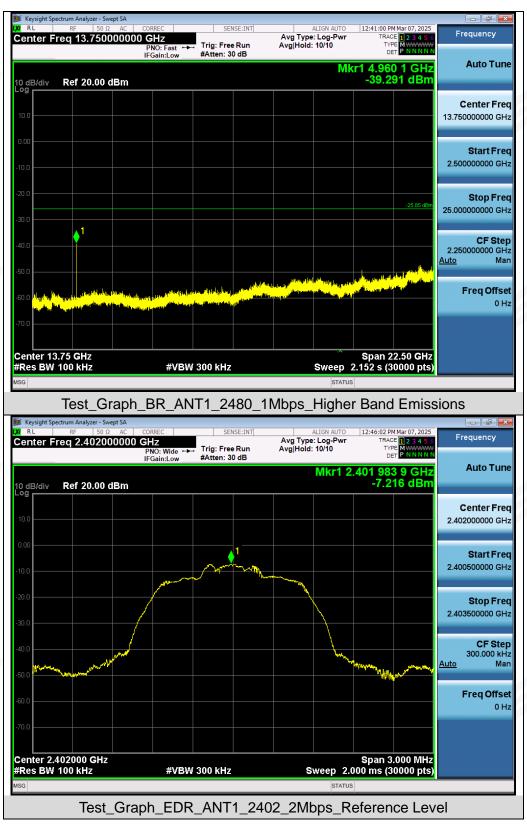






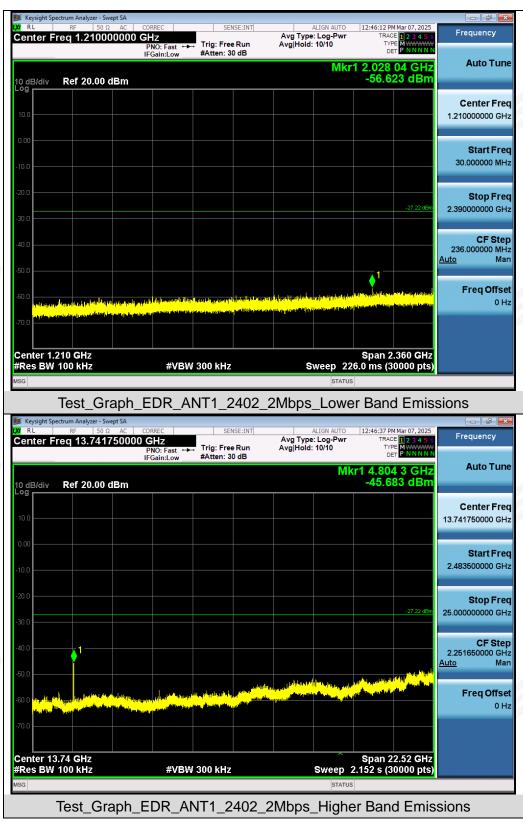


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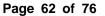


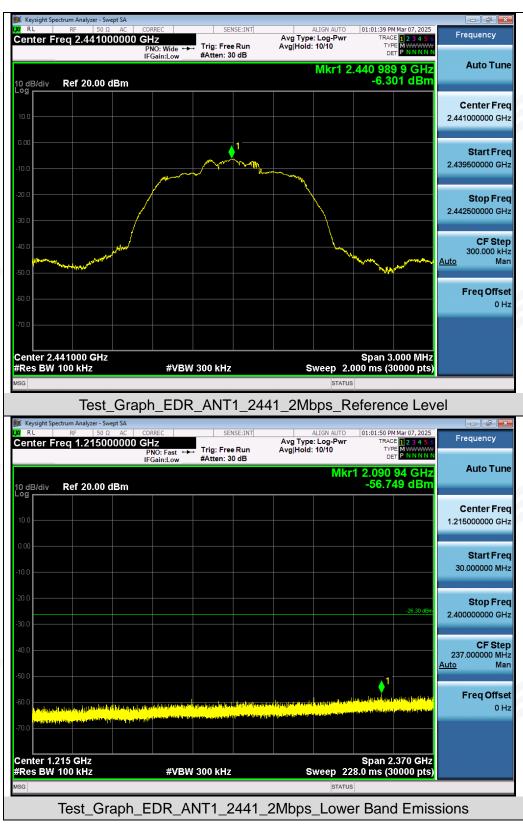


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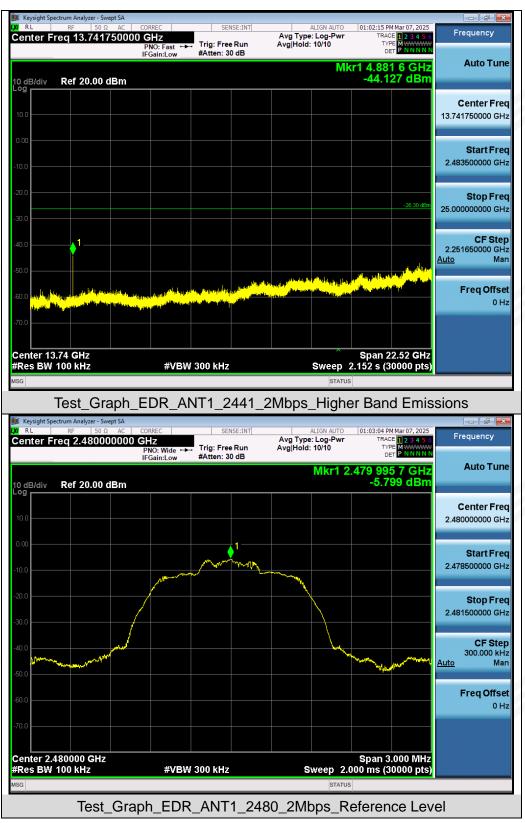








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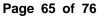




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| Keysight Sp<br>R L   | RF 50 Ω A   | AC CORREC   | SEI   | NSE:INT  |                                    | ALIGN AUTO                              |  | 4 Mar 07, 2025   | Frequency  |
|--|---|---|---|--|------------------------------------|---|--|--|--|
| nter F   | req 1.2150000   | DOO GHz<br>PNO: Fast  | +++ Trig: Free  |  | Avg Type<br>Avg Hold:              | :: Log-Pwr<br>: 10/10                   | TRAC<br>TYP  | E 1 2 3 4 5 6<br>E M WWWW<br>F P N N N N N   | Frequency  |
| dB/div   | Ref 20.00 dBr   | IFGain:Low  | , #Atten: 3   | 0 dB   |                                    | Mkr                                     | 1 2.202  | 41 GHz<br>76 dBm   | Auto Tur   |
|  |   |   |   |  |                                    |   |  |  | Center Fre   |
| .0   |   |   |   |  |                                    |   |  |  | 1.215000000 Gł   |
|  |   |   |   |  |                                    |   |  |  |  |
|  |   |   |   |  |                                    |   |  |  | Start Fre  |
| .0   |   |   |   |  |                                    |   |  |  | 30.000000 MH   |
| .0   |   |   |   |  |                                    |   |  |  |  |
|  |   |   |   |  |                                    |   |  | -25.80 dBm   | Stop Fre   |
| 0  |   |   |   |  |                                    |   |  |  | 2.4000000000   |
|  |   |   |   |  |                                    |   |  |  | CF Ste   |
|  |   |   |   |  |                                    |   |  |  | 237.000000 Mi<br>Auto Ma   |
| .0   |   |   |   |  |                                    |   |  | <b>1</b>   |  |
| .0   | ly hyperboard in standing and the standing of the |   |   | a a chair a sha ta chair a shi a chair a |                                    | ويسراوليم وترويد ومعر                   | dana pana bana sa                | dingalishinanar  | Freq Offs  |
|  |   | and the state of the | أقرادات والتستحد أترادك   |  | an a sea a state of the sea of the |   | an a                             | i Madaaan ku <mark>A</mark> dabika   | 01   |
|  |   |   |   |  |                                    |   |  |  |  |
| nter 1   | 215 GHz   |   |   |  |                                    |   | Snan 2   | .370 GHz   |  |
|  | 100 kHz   | #V  | BW 300 kHz  |  | s                                  | weep 22                                 |  |  |  |
|  |   |   |   |  |                                    | STATUS                                  |  |  |  |
|  |   |   |   |  |                                    |   |  |  |  |
|  | Test_Grap   | h_EDR_  | _ANT1_2   | 2480_2   | 2Mbps                              | _Lowe                                   | r Band   | d Emis   | sions  |
|  | ectrum Analyzer - Swept S   | SA  |   |  |                                    |   |  |  |  |
| RL   | ectrum Analyzer - Swept S   | A<br>AC CORREC<br>D000 GHz  | SEI   | NSE:INT  | Avg Type                           | ALIGN AUTO<br>:: Log-Pwr                | 01:03:41 Pf  | Mar 07, 2025   |  |
| RL   | ectrum Analyzer - Swept S<br>RF 50 Ω A  | AC CORREC   | SET   | NSE:INT  |                                    | ALIGN AUTO<br>:: Log-Pwr<br>: 10/10     | 01:03:41 P<br>TRAC<br>TYF<br>DE                                      | MMar 07, 2025<br>E 1 2 3 4 5 6<br>E MWWWW<br>T P NNNNN   | Frequency  |
| nter F   | rectrum Analyzer - Swept S<br>RF 50 Ω A<br>req 13.750000  | AC CORREC DODO GHZ<br>PNO: Fast<br>IFGain:Low   | SET   | NSE:INT  | Avg Type                           | ALIGN AUTO<br>:: Log-Pwr<br>: 10/10     | 01:03:41 Pr<br>TRAC<br>TYF<br>DE<br><b>r1 4.96</b>                   | Mar 07, 2025   | Frequency  |
| nter F   | ectrum Analyzer - Swept S<br>RF 50 Ω A  | AC CORREC DODO GHZ<br>PNO: Fast<br>IFGain:Low   | SET   | NSE:INT  | Avg Type                           | ALIGN AUTO<br>:: Log-Pwr<br>: 10/10     | 01:03:41 Pr<br>TRAC<br>TYF<br>DE<br><b>r1 4.96</b>                   | Mar 07, 2025<br>E 1 2 3 4 5 6<br>E MWWWW<br>F P N N N N N<br>D 1 GHz   | Frequency  |
| RL  <br>enter F<br>dB/div  | rectrum Analyzer - Swept S<br>RF 50 Ω A<br>req 13.750000  | AC CORREC DODO GHZ<br>PNO: Fast<br>IFGain:Low   | SET   | NSE:INT  | Avg Type                           | ALIGN AUTO<br>:: Log-Pwr<br>: 10/10     | 01:03:41 Pr<br>TRAC<br>TYF<br>DE<br><b>r1 4.96</b>                   | Mar 07, 2025<br>E 1 2 3 4 5 6<br>E MWWWW<br>F P N N N N N<br>D 1 GHz   | Frequency<br>Auto Tur<br>Center Fre  |
| dB/div   | rectrum Analyzer - Swept S<br>RF 50 Ω A<br>req 13.750000  | AC CORREC DODO GHZ<br>PNO: Fast<br>IFGain:Low   | SET   | NSE:INT  | Avg Type                           | ALIGN AUTO<br>:: Log-Pwr<br>: 10/10     | 01:03:41 Pr<br>TRAC<br>TYF<br>DE<br><b>r1 4.96</b>                   | Mar 07, 2025<br>E 1 2 3 4 5 6<br>E MWWWW<br>F P N N N N N<br>D 1 GHz   | Frequency<br>Auto Tur<br>Center Fre  |
| dB/div   | rectrum Analyzer - Swept S<br>RF 50 Ω A<br>req 13.750000  | AC CORREC DODO GHZ<br>PNO: Fast<br>IFGain:Low   | SET   | NSE:INT  | Avg Type                           | ALIGN AUTO<br>:: Log-Pwr<br>: 10/10     | 01:03:41 Pr<br>TRAC<br>TYF<br>DE<br><b>r1 4.96</b>                   | Mar 07, 2025<br>E 1 2 3 4 5 6<br>E MWWWW<br>F P N N N N N<br>D 1 GHz   | Frequency<br>Auto Tur<br>Center Fre<br>13.75000000 G   |
| dB/div   | rectrum Analyzer - Swept S<br>RF 50 Ω A<br>req 13.750000  | AC CORREC DODO GHZ<br>PNO: Fast<br>IFGain:Low   | SET   | NSE:INT  | Avg Type                           | ALIGN AUTO<br>:: Log-Pwr<br>: 10/10     | 01:03:41 Pr<br>TRAC<br>TYF<br>DE<br><b>r1 4.96</b>                   | Mar 07, 2025<br>E 1 2 3 4 5 6<br>E MWWWW<br>F P N N N N N<br>D 1 GHz   | Frequency<br>Auto Tur<br>Center Fre<br>13.75000000 Gl<br>Start Fre   |
| dB/div   | rectrum Analyzer - Swept S<br>RF 50 Ω A<br>req 13.750000  | AC CORREC DODO GHZ<br>PNO: Fast<br>IFGain:Low   | SET   | NSE:INT  | Avg Type                           | ALIGN AUTO<br>:: Log-Pwr<br>: 10/10     | 01:03:41 Pr<br>TRAC<br>TYF<br>DE<br><b>r1 4.96</b>                   | Mar 07, 2025<br>E 1 2 3 4 5 6<br>M WWWWW<br>T P N N N N N<br>D 1 GHz   | Center Fre<br>13.75000000 GH   |
| dB/div   | rectrum Analyzer - Swept S<br>RF 50 Ω A<br>req 13.750000  | AC CORREC DODO GHZ<br>PNO: Fast<br>IFGain:Low   | SET   | NSE:INT  | Avg Type                           | ALIGN AUTO<br>:: Log-Pwr<br>: 10/10     | 01:03:41 Pr<br>TRAC<br>TYF<br>DE<br><b>r1 4.96</b>                   | Mar 07, 2025<br>E 1 2 3 4 5 6<br>M WWWWW<br>T P N N N N N<br>D 1 GHz   | Frequency<br>Auto Tur<br>Center Fre<br>13.75000000 Gl<br>Start Fre<br>2.50000000 Gl<br>Stop Fre  |
| dB/div   | rectrum Analyzer - Swept S<br>RF 50 Ω A<br>req 13.750000  | AC CORREC DODO GHZ<br>PNO: Fast<br>IFGain:Low   | SET   | NSE:INT  | Avg Type                           | ALIGN AUTO<br>:: Log-Pwr<br>: 10/10     | 01:03:41 Pr<br>TRAC<br>TYF<br>DE<br><b>r1 4.96</b>                   | Mar 07, 2025<br>E 1 2 3 4 5 6<br>M WWWWW<br>T P NNNNN<br>D 1 GHz<br>45 dBm   |  |
| aB/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div<br>ab/div | rectrum Analyzer - Swept S<br>RF 50 Ω A<br>req 13.750000  | AC CORREC DODO GHZ<br>PNO: Fast<br>IFGain:Low   | SET   | NSE:INT  | Avg Type                           | ALIGN AUTO<br>:: Log-Pwr<br>: 10/10     | 01:03:41 Pr<br>TRAC<br>TYF<br>DE<br><b>r1 4.96</b>                   | Mar 07, 2025<br>E 1 2 3 4 5 6<br>M WWWWW<br>T P NNNNN<br>D 1 GHz<br>45 dBm   | Frequency<br>Auto Tur<br>Center Fre<br>13.75000000 Gl<br>Start Fre<br>2.50000000 Gl<br>Stop Fre<br>25.00000000 Gl  |
|  | rectrum Analyzer - Swept S<br>RF 50 Ω A<br>req 13.750000  | AC CORREC DODO GHZ<br>PNO: Fast<br>IFGain:Low   | SET   | NSE:INT  | Avg Type                           | ALIGN AUTO<br>:: Log-Pwr<br>: 10/10     | 01:03:41 Pr<br>TRAC<br>TYF<br>DE<br><b>r1 4.96</b>                   | Mar 07, 2025<br>E 1 2 3 4 5 6<br>M WWWWW<br>T P NNNNN<br>D 1 GHz<br>45 dBm   | Center Frequency           Auto Tur           Center Frequency           13.750000000 Gl           Start Frequency           Start Frequency           2.500000000 Gl           Stop Frequency           25.00000000 Gl           CF Step           2.250000000 Gl |
| RL   | rectrum Analyzer - Swept S<br>RF 50 Ω A<br>req 13.750000  | AC CORREC DODO GHZ<br>PNO: Fast<br>IFGain:Low   | SET   | NSE:INT  | Avg Type<br>Avg Hold:              | ALIGN AUTO<br>10/10<br>Mik              | 01:03:41 PT<br>TRAC<br>TYP<br>DF<br><b>r1 4.960</b><br>-45.6         | Mar 07, 2025<br>E 1 2 3 4 5 6<br>MWWWWW<br>T P NNNNN<br>D 1 GHz<br>45 dBm<br>-25 80 dBm  | Center Fre           13.750000000 Gl           Start Fre           2.500000000 Gl           Stop Fre           25.00000000 Gl           CF Ste           2.250000000 Gl  |
| dB/div<br>g<br>00<br>00<br>00<br>00<br>00<br>00<br>00<br>00<br>00<br>00<br>00<br>00<br>0   | rectrum Analyzer - Swept S<br>RF 50 Ω A<br>req 13.750000  | AC CORREC DODO GHZ<br>PNO: Fast<br>IFGain:Low   | SET   | e Run<br>0 dB  | Avg Type<br>Avg Hold:              | ALIGN AUTO<br>: Log-Pwr<br>10/10<br>Mik | 01:03:41 PH<br>TRAC<br>TRAC<br>PD<br>PT<br>4.96(<br>-45.6            | Mar 07, 2025<br>E 1 2 3 4 5 6<br>MWWWWW<br>T P NNNNN<br>D 1 GHz<br>45 dBm<br>-25 80 dBm  | Frequency<br>Auto Tur<br>Center Fre<br>13.750000000 Gi<br>Start Fre<br>2.500000000 Gi<br>Stop Fre<br>25.00000000 Gi<br>Auto Mi   |
|  | rectrum Analyzer - Swept S<br>RF 50 Ω A<br>req 13.750000  | AC CORREC DODO GHZ<br>PNO: Fast<br>IFGain:Low   | SET   | e Run<br>0 dB  |                                    | ALIGN AUTO<br>: Log-Pwr<br>10/10<br>Mik | 01:03:41 PH<br>TRAC<br>TRAC<br>PD<br>PT<br>4.96(<br>-45.6            | Mar 07, 2025<br>E 1 2 3 4 5 6<br>MWWWWW<br>T P NNNNN<br>D 1 GHz<br>45 dBm<br>-25 80 dBm  | Frequency<br>Auto Tur<br>Center Fre<br>13.750000000 Gi<br>Start Fre<br>2.500000000 Gi<br>Stop Fre<br>25.00000000 Gi<br>Auto Mi   |
|  | rectrum Analyzer - Swept S<br>RF 50 Ω A<br>req 13.750000  | AC CORREC DODO GHZ<br>PNO: Fast<br>IFGain:Low   | SET   | e Run<br>0 dB  |                                    | ALIGN AUTO<br>: Log-Pwr<br>10/10<br>Mik | 01:03:41 PH<br>TRAC<br>TRAC<br>PD<br>PT<br>4.96(<br>-45.6            | Mar 07, 2025<br>E 1 2 3 4 5 6<br>MWWWWW<br>T P NNNNN<br>D 1 GHz<br>45 dBm<br>-25 80 dBm  | Frequency<br>Auto Tur<br>Center Fre<br>13.750000000 Gi<br>Start Fre<br>2.500000000 Gi<br>Stop Fre<br>25.00000000 Gi<br>Auto Mi   |
|  | ectrum Analyzer - Swept S<br>RF 50 Ω A<br>req 13.750000<br>Ref 20.00 dBr  | AC CORREC DODO GHZ<br>PNO: Fast<br>IFGain:Low   | SET   | e Run<br>0 dB  |                                    | ALIGN AUTO<br>: Log-Pwr<br>10/10<br>Mik | 01:03:41 PT<br>TRAC<br>TYP<br>pr<br><b>r1 4.960</b><br>-4 <b>5.6</b> | Mar 07, 2025<br>E 1 2 3 4 5 6<br>MWWWWWW<br>T P NNNNN<br>D 1 GHz<br>45 dBm<br>-25 80 dBm   | Center Fre           13.750000000 GH           Start Fre           2.500000000 GH           Stop Fre           25.00000000 GH           CF Ste           2.250000000 GH  |
| dB/div   | rectrum Analyzer - Swept S<br>RF 50 Ω A<br>req 13.750000  | AC CORREC DOUD GHZ<br>PNO: Fast<br>IFGain:Low<br>M  | A SET<br>Trig: Free<br>#Atten: 3<br>4<br>4<br>4<br>4<br>4<br>4<br>4<br>4<br>4<br>4<br>4<br>4<br>4 | NSE:INT  |                                    | ALIGN AUTO<br>: Log-Pwr<br>10/10<br>Mk  | 01:03:41 PT<br>TRAC<br>TRAC<br><b>11 4.960</b><br>-45.6              | Mar 07, 2025<br>E 1 2 3 4 5 6<br>MWWWWW<br>T P NNNNN<br>D 1 GHz<br>45 dBm<br>-25 80 dBm  | Frequency<br>Auto Tur<br>Center Fre<br>13.750000000 GH<br>Start Fre<br>2.500000000 GH<br>Stop Fre<br>25.00000000 GH<br>2.250000000 GH<br>Auto Ma   |
| dB/div   | ectrum Analyzer - Swept S<br>RF 50 Ω A<br>req 13.750000<br>Ref 20.00 dBr  | AC CORREC DOUD GHZ<br>PNO: Fast<br>IFGain:Low<br>M  | SET   | NSE:INT  |                                    | ALIGN AUTO<br>: Log-Pwr<br>10/10<br>Mk  | 01:03:41 PT<br>TRAC<br>TRAC<br><b>11 4.960</b><br>-45.6              | Mar 07, 2025<br>E 1 2 3 4 5 6<br>M 20 4 5<br>M 20 4<br>M 20 4 5<br>M 20 4 5<br>M 20 4<br>M 20 4 5<br>M 20 4<br>M 20 4<br>M 20 4<br>M 20 4<br>M 20 4<br>M 20 4<br>M 2 | Frequency<br>Auto Tur<br>Center Fre<br>13.750000000 Gi<br>Start Fre<br>2.500000000 Gi<br>Stop Fre<br>25.00000000 Gi<br>Auto Mi   |

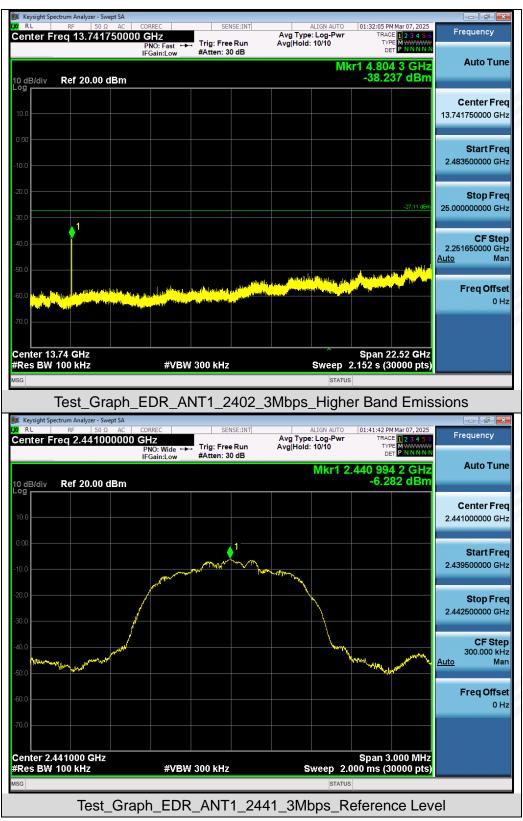






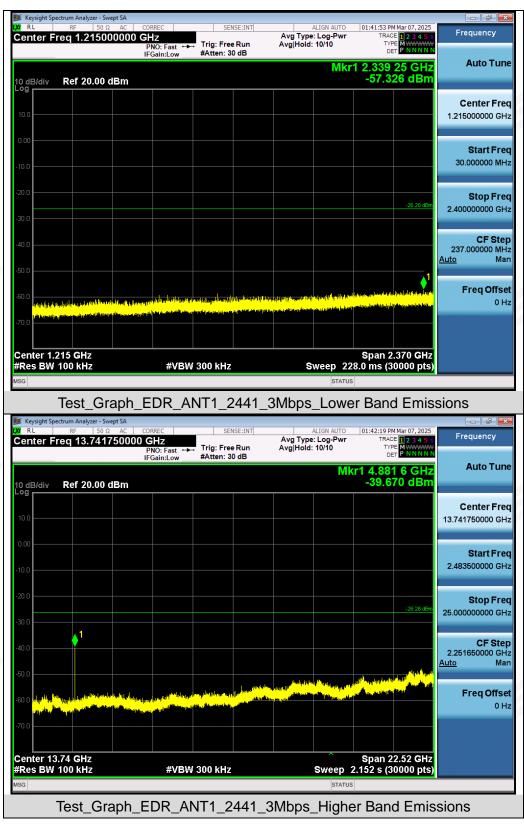


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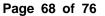




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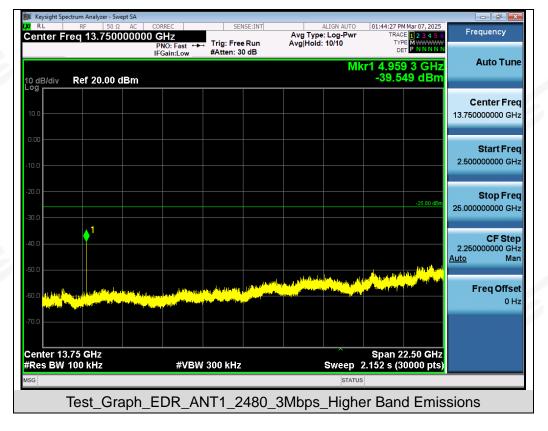




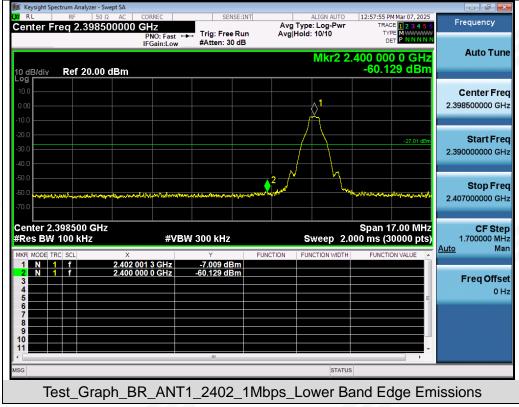




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## Test Graphs of Band Edge Emissions in Non-Restricted Frequency Bands





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| Keysight Spectrum Analyzer -<br>RL RF 50<br>Center Freq 2.487   |   | Fast +++ Trig: Free Ru          | Avg Type   | e: Log-Pwr<br>: 10/10                           | 01:56:38 PM Mar 07, 2025<br>TRACE 1 2 3 4 5<br>TYPE MWWW<br>DET P NNNN   | Frequency  |
|---|---|---------------------------------|--|---|--|--|
|   | IFGair  | rast rast                       |  |   | 83 500 0 GHz<br>-62.256 dBm  | Auto Tur   |
| 0 dB/div Ref 20.0<br>0 dB/div Ref 20.0<br>10.0<br>10.0<br>10.0<br>10.0<br>10.0  |   |                                 |  |   |  | Center Fre<br>2.487500000 GH   |
| 20.0  |   |                                 |  |   | -26.00 dBn   | <b>Start Fre</b><br>2.475000000 GF   |
| 50.0<br>60.0<br>70.0  |   |                                 | reyndrau y Maadaad y Handdood Add awrau Anis a   | iterar talinikan atalah magin                   | Maran and an and an  | <b>Stop Fre</b><br>2.500000000 GH  |
| Center 2.48750 GHz<br>Res BW 100 kHz  | 2   | #VBW 300 kHz                    |  |   | Span 25.00 MHz<br>) ms (30000 pts  |  |
| N         1         f           2         N         1         f           3         -         -         -           5         -         -         -           6         -         -         -           7         -         -         -           8         -         -         -           9         -         -         -           11         -         -         -  | 2.476 993 4 G<br>2.483 500 0 G  | Hz -5.996 dBm<br>Hz -62.256 dBm |  |   |  | Freq Offs<br>0 F   |
|   |   |                                 |  |   |  |  |
| G   |   | m                               |  | STATUS  | 4  |  |
| Test_Graph  | BR_HO   | P_ANT1_NA                       | A_1Mbps_ł  |   | and Edge   | Emissions  |
| Test_Graph Keysight Spectrum Analyzer - RL RF 5(  | Swept SA<br>Ω Ω AC CORREC<br>500000 GHz                                 | P_ANT1_NA                       | INT Avg Type   | Higher E  | Band Edge<br>12:46:51 PM Mar 07, 2025<br>TRACE 12:34 5<br>TYPE<br>DET MININ  | 6<br>Frequency   |
| Test_Graph  | Swept SA<br>D Q AC CORREC<br>5000000 GHz<br>PNO:<br>IFGair              | P_ANT1_NA                       | INT Avg Type   | Higher E<br>ALIGN AUTO<br>E: Log-Pwr<br>: 10/10 | 12:46:51 PM Mar 07, 2025<br>TRACE 1 2 3 4 5  | Frequency<br>Auto Tur  |
| Test_Graph<br>Keysight Spectrum Analyzer -  | Swept SA<br>D Q AC CORREC<br>5000000 GHz<br>PNO:<br>IFGair              | P_ANT1_NA                       | INT Avg Type   | Higher E<br>ALIGN AUTO<br>E: Log-Pwr<br>: 10/10 | 12:46:51 PM Mar 07, 2029<br>TRACE 1 2 3 4 5<br>TYPE MMMMM<br>DET P N N N N   | Auto Tur<br>Center Fre   |
| Test_Graph  | Swept SA<br>D Q AC CORREC<br>5000000 GHz<br>PNO:<br>IFGair              | P_ANT1_NA                       | INT Avg Type<br>an Avg Hold<br>B   | Higher E<br>ALIGN AUTO<br>E: Log-Pwr<br>: 10/10 | 12:46:51 PM Mar 07, 2029<br>TRACE 1 2 3 4 5<br>TYPE MMMMM<br>DET P N N N N   | Frequency<br>Auto Tur  |
| Test_Graph           Keysight Spectrum Analyzer -           RL         RF           Scenter Freq 2.398           0 dB/div         Ref 20.01           10 0         0           20 0         0           20 0         0           20 0         0           20 0         0           20 0         0           20 0         0           20 0         0           20 0         0  | Swept SA<br>D Q AC CORREC<br>5000000 GHz<br>PNO:<br>IFGair              | P_ANT1_NA                       | INT Avg Type   | Higher E<br>ALIGN AUTO<br>E: Log-Pwr<br>: 10/10 | 12:46:51 PM Mar 07, 2029<br>TRACE 12:34 5:<br>TYPE VIEW OF V   | Auto Tur<br>Center Fre<br>2.39850000 GH<br>Start Fre<br>2.39000000 GH  |
| Test_Graph           Keysight Spectrum Analyzer           RL         RF           Rt         RF           Senter Freq 2.398           0 dB/div         Ref 20.01           0 dB/div  | Swept SA<br>D Q AC CORREC<br>5000000 GHZ<br>PNO:<br>IFGair<br>0 dBm     | P_ANT1_NA                       | INT Avg Type<br>an Avg Hold<br>B   | Higher E  | 12:46:51 PM Mar 07, 2025<br>TRACE 12:34 5:<br>TYPE NNNN<br>DET NNNN<br>00 0000 0 GH2<br>-54.202 dBm<br>-26:95 dBm<br>-20:95 dBm<br>-26:95 dBm<br>-20:95 dBm<br>-20 | Frequency           Auto Tur           Center Fre           2.398500000 GF           Start Fre           2.390000000 GF           Stop Fre           2.407000000 GF           CF Ste           1.700000 MF |
| Test_Graph           Keysight Spectrum Analyzer-<br>RL         RF           RL         RF           Scenter Freq 2.398           0 dB/div         Ref 20.01           0 dB/div         Ref 20.01 </td <td>Swept SA<br/>D Q AC CORREC<br/>5000000 GHZ<br/>PNO:<br/>IFGair<br/>0 dBm</td> <td>P_ANT1_NA</td> <td>INT Avg Type<br/>In Avg Hold<br/>B<br/>2<br/>2<br/>2<br/>2<br/>2<br/>2<br/>2<br/>2<br/>2<br/>2<br/>2<br/>2<br/>2<br/>2<br/>2<br/>2<br/>2<br/>2</td> <td>Higher E</td> <td>12:46:51 PM Mar 07, 2025<br/>TRACE 12:34 5:<br/>TYPE VIEW VIEW VIEW VIEW VIEW VIEW VIEW VIE</td> <td>Frequency<br/>Auto Tur<br/>Center Fre<br/>2.398500000 GF<br/>Start Fre<br/>2.390000000 GF<br/>Stop Fre<br/>2.40700000 GF<br/>CF Ste<br/>1.700000 MF<br/>Auto Ma</td> | Swept SA<br>D Q AC CORREC<br>5000000 GHZ<br>PNO:<br>IFGair<br>0 dBm     | P_ANT1_NA                       | INT Avg Type<br>In Avg Hold<br>B<br>2<br>2<br>2<br>2<br>2<br>2<br>2<br>2<br>2<br>2<br>2<br>2<br>2<br>2<br>2<br>2<br>2<br>2 | Higher E  | 12:46:51 PM Mar 07, 2025<br>TRACE 12:34 5:<br>TYPE VIEW VIEW VIEW VIEW VIEW VIEW VIEW VIE  | Frequency<br>Auto Tur<br>Center Fre<br>2.398500000 GF<br>Start Fre<br>2.390000000 GF<br>Stop Fre<br>2.40700000 GF<br>CF Ste<br>1.700000 MF<br>Auto Ma  |
| Test_Graph           [ Keysight Spectrum Analyzer-<br>RL         RF         SC           RL         RF         SC           Center Freq 2.398         SC         SC           0 dB/div         Ref 20.00         SC           0 dD         SC         SC           1 n         1         SC           1 n         1         SC           1 n         1         SC   | Swept SA<br>0 2 AC CORREC<br>500000 GHz<br>PNO:<br>IFGair<br>0 dBm<br>4 | P_ANT1_NA                       | INT Avg Type<br>In Avg Hold<br>B<br>2<br>2<br>2<br>2<br>2<br>2<br>2<br>2<br>2<br>2<br>2<br>2<br>2<br>2<br>2<br>2<br>2<br>2 | Higher E  | 12:46:51 PM Mar 07, 2025<br>TRACE 12:34 5:<br>TYPE NNNN<br>DET NNNN<br>00 0000 0 GH2<br>-54.202 dBm<br>-26:95 dBm<br>-20:95 dBm<br>-26:95 dBm<br>-20:95 dBm<br>-20 | Frequency           Auto Tur           Center Fre           2.398500000 GF           Start Fre           2.390000000 GF           Stop Fre           2.407000000 GF           CF Ste           1.700000 MF |





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| Keysight Spectrum Analyzer -<br>RL RF 50   |  | SENSE:INT   | ALIGN AUTO                           | 01:03:54 PM Mar 07, 2025                           |   |
|--|--|---|--------------------------------------|--|---|
| enter Freq 2.487   | 500000 GHz<br>PNO: Fast +  | ▶ Trig: Free Run  | Avg Type: Log-Pwr<br>Avg Hold: 10/10 | TRACE 1 2 3 4 5 6<br>TYPE MWWWW<br>DET P N N N N N | Frequency   |
| dB/div Ref 20.0  | IFGain:Low _   | #Atten: 30 dB   | Mkr2 2.4                             | 483 500 0 GHz<br>-62.981 dBm                       | Auto Tui  |
|  | 1  |   |                                      |  | <b>Center Fr</b><br>2.487500000 GI                      |
|  |  |   |                                      | -25.71 dBm   | <b>Start Fr</b><br>2.475000000 G                        |
|  | 2<br>1   | اليوريوري، استاد المطلقة ويسترون المراجعة المواجعة المراجعة المواجعة المواجعة المواجعة المواجعة المواجعة المواج |                                      | undry data angen frendret stande at before the     | <b>Stop Fr</b><br>2.50000000 G                          |
| enter 2.48750 GHz<br>Res BW 100 kHz  |  | W 300 kHz   |                                      | Span 25.00 MHz<br>00 ms (30000 pts)                | CF Sto<br>2.500000 M<br><u>Auto</u> M                   |
| KR         MODE         TRC         SCL           1         N         1         f           2         N         1         f           3  | ×<br>2.479 998 5 GHz<br>2.483 500 0 GHz  | Y FU<br>-5.711 dBm<br>-62.981 dBm   | INCTION FUNCTION WIDTH               | FUNCTION VALUE                                     | Freq Offs   |
| 5<br>6<br>7<br>8<br>9  |  |   |                                      | E  |   |
| 0 1  |  | III   | STATUS                               | •  |   |
| Test Gran  | h EDR ANT  | [1 2480 2M  | lbps_Higher B                        | and Edge Er  | nissions  |
| Keysight Spectrum Analyzer -   |  | SENSE:INT   | ALIGN AUTO                           | 01:54:28 PM Mar 07, 2025                           |   |
| enter Freq 2.398   |  | Tain: Ence Dura   | Avg Type: Log-Pwr<br>Avg Hold: 10/10 | TRACE 123456<br>TYPE MWWWW<br>DET PNNNN            | Frequency   |
| ) dB/div Ref 20.0  | 0 dBm  |   | Mkr2 2.4                             | 400 000 0 GHz<br>-60.917 dBm                       | Auto Tu   |
| <b>99</b><br>0.0<br>1.00   |  |   |                                      |  | <b>Center Fr</b><br>2.398500000 G                       |
|  |  |   | prof Way of Amage                    | -26.95 dBm   | <b>Start Fr</b><br>2.390000000 G                        |
|  | anne af ann ha ha an a sa a fra dae an dae | andrenana dan dan daga daga daga daga daga da   | 2 m n <sup>l</sup>                   |  | <b>Stop Fr</b><br>2.407000000 G                         |
|  |  |   |                                      |  |   |
| enter 2.398500 GF<br>Res BW 100 kHz  |  | W 300 kHz   |                                      | Span 17.00 MHz<br>00 ms (30000 pts)                | 1.700000 M  |
| enter 2.398500 GF<br>Res BW 100 kHz<br>KR MODE TRC SCL<br>1 N 1 f<br>2 N 1 f   |  |   | Sweep 2.0                            |  | 1.700000 M<br><u>Auto</u> M<br>Freq Offs                |
| No.0         Image: Constraint of the second se | #VB<br>×<br>2.406 000 9 GHz  | Y FU<br>-6.945 dBm  |                                      | 00 ms (30000 pts)                                  | 1.700000 M<br><u>Auto</u> M<br><b>Freq Off</b> s        |
| 0.0  | #VB<br>×<br>2.406 000 9 GHz  | Y FU<br>-6.945 dBm  |                                      | FUNCTION VALUE                                     | CF Sto<br>1.700000 M<br><u>Auto</u> M<br>Freq Offs<br>0 |



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| Keysight Spectrum Analyzer -<br>RL RF 50   | Swept SA<br>Ω AC CORREC  | SENSE:INT  | ALIGN AUTO   | 01:55:03 PM Mar 07, 2025  | -  |
|--|--|--|--|---|--|
| enter Freq 2.487   | 500000 GHz<br>PNO: Fast  | Trig: Free Run   | Avg Type: Log-Pwr<br>Avg Hold: 10/10   | TRACE 1 2 3 4 5 6<br>TYPE MWWWW<br>DET P N N N N N  | Frequency  |
|  | IFGain:Lov   | <u> #Atten: 30 dB</u>  | Mkr2 2.4   | 83 500 0 GHz  | Auto Tun   |
| 0 dB/div Ref 20.0  | 0 dBm  |  |  | -61.595 dBm   |  |
| 10.0   |  |  |  |   | Center Fre   |
| 0.00   |  |  |  |   | 2.487500000 GH   |
| 10.0 mart mant hand by mark  | weller .   |  |  |   |  |
| 30.0   |  |  |  | -26.56 dBm  | Start Fre<br>2.475000000 GH  |
| 40.0   |  |  |  |   | 2.475000000 GF   |
| 50.0   |  |  |  |   | Stop Fre   |
| 60.0<br>70.0   | an any laster and  | ushewever and a later statement of the statement   | antes have a substance for the operation such with                             | angerelentergeneers of the same hat the two   | 2.500000000 GH   |
|  |  |  |  |   |  |
| Center 2.48750 GHz<br>#Res BW 100 kHz  |  | 'BW 300 kHz  | Sweep 4.00   | Span 25.00 MHz<br>10 ms (30000 pts)   | CF Ste<br>2.500000 M⊦  |
| MKR MODE TRC SCL   | X  |  | UNCTION FUNCTION WIDTH   | FUNCTION VALUE  | <u>Auto</u> Ma   |
| 1 N 1 f<br>2 N 1 f   | 2.475 008 3 GHz<br>2.483 500 0 GHz   | -6.563 dBm<br>-61.595 dBm  |  |   | Ener Offe  |
| 3 4  |  |  |  |   | Freq Offs<br>0 H   |
| 5<br>6<br>7  |  |  |  |   |  |
| 7<br>8<br>9  |  |  |  |   |  |
| 10   |  |  |  |   |  |
|  |  |  |  | •   |  |
| SG   |  |  |  |   |  |
|  |  |  | STATUS   |   |  |
| Test_Graph_  | _EDR_HOP   | _ANT1_NA_2   | 2Mbps_Higher   | Band Edge   | Emissions  |
| Test_Graph_  | Swept SA   | ANT1_NA_:  |  | 01:32:17 PM Mar 07, 2025  |  |
| Keysight Spectrum Analyzer -<br>RL RF 50   | Swept SA   | SENSE:INT  | 2Mbps_Higher   | 01:32:17 PM Mar 07, 2025  |  |
| Keysight Spectrum Analyzer -<br>RL RF 50   | Swept SA<br>Ω AC CORREC  | SENSE:INT  | 2Mbps_Higher<br>Aug Type: Log-Pwr<br>Avg Hold: 10/10                           | 01:32:17 PM Mar 07, 2025<br>TRACE 1 2 3 4 5 6<br>TYPE M WWWWW<br>DET P N N N N N  | Frequency  |
| Keysight Spectrum Analyzer<br>RL RF 50<br>Center Freq 2.398  | Swept SA<br>∫Ω AC CORREC  <br>5000000 GHz<br>PNO: Fast<br>IFGain:Lov   | SENSE:INT  | 2Mbps_Higher<br>Aug Type: Log-Pwr<br>Avg Hold: 10/10                           | 01:32:17 PM Mar 07, 2025  | Frequency  |
| Keysight Spectrum Analyzer -     RL RF 50     Center Freq 2.398     O dB/div Ref 20.00     *9  | Swept SA<br>∫Ω AC CORREC  <br>5000000 GHz<br>PNO: Fast<br>IFGain:Lov   | SENSE:INT  | 2Mbps_Higher<br>Aug Type: Log-Pwr<br>Avg Hold: 10/10                           | 01:32:17 PM Mar 07, 2025<br>TRACE 1 2 3 4 5 6<br>TYPE MWWWWW<br>DET P NNNNN   | Frequency  |
| Keysight Spectrum Analyzer -     RL RF 50     Center Freq 2.398     O dB/div Ref 20.00     '9  | Swept SA<br>∫Ω AC CORREC  <br>5000000 GHz<br>PNO: Fast<br>IFGain:Lov   | SENSE:INT  | 2Mbps_Higher<br>Aug Type: Log-Pwr<br>Avg Hold: 10/10<br>Mkr2 2.4               | 01:32:17 PM Mar 07, 2025<br>TRACE 1 2 3 4 5 6<br>TYPE MWWWWW<br>DET P NNNNN   | Genter Fre   |
| Keysight Spectrum Analyzer           RL         RF         50           Center Freq 2.398           0 dB/div         Ref 20.01           9         0           0.00         0  | Swept SA<br>∫Ω AC CORREC  <br>5000000 GHz<br>PNO: Fast<br>IFGain:Lov   | SENSE:INT  | 2Mbps_Higher<br>Aug Type: Log-Pwr<br>Avg Hold: 10/10                           | 01:32:17 PM Mar 07, 2025<br>TRACE 1 2 3 4 5 6<br>TYPE MWWWWW<br>DET P NNNNN   | Genter Fre   |
| Keysight Spectrum Analyzer           RL         RF         50           center Freq 2.398:           0 dB/div         Ref 20.00           0 0         0           0 0         0           0 0         0           0 0         0           0 0         0           0 0         0           0 0         0           0 0         0  | Swept SA<br>∫Ω AC CORREC  <br>5000000 GHz<br>PNO: Fast<br>IFGain:Lov   | SENSE:INT  | 2Mbps_Higher<br>Aug Type: Log-Pwr<br>Avg Hold: 10/10<br>Mkr2 2.4               | 01:32:17 PM Mar 07, 2025<br>TRACE 1 2 3 4 5 6<br>TYPE MWWWWW<br>DET P NNNNN   | Auto Tur<br>Center Fre<br>2.398500000 GH   |
| Keysight Spectrum Analyzer -     RL RF 50     Center Freq 2.398  | Swept SA<br>∫Ω AC CORREC  <br>5000000 GHz<br>PNO: Fast<br>IFGain:Lov   | SENSE:INT  | 2Mbps_Higher<br>Aug Type: Log-Pwr<br>Avg Hold: 10/10<br>Mkr2 2.4               | 01:32:17 PM Mar 07, 2025<br>TRACE 12.3.4.5.6<br>TYPE MANNAN<br>DET P.N.N.N.N.N.<br>1000 0000 0 GHz<br>-60.129 dBm   | Auto Tur<br>Center Fre<br>2.398500000 GH   |
| Keysight Spectrum Analyzer -     RL RF 50     Center Freq 2.398  | Swept SA<br>∫Ω AC CORREC  <br>5000000 GHz<br>PNO: Fast<br>IFGain:Lov   | SENSE:INT  | 2Mbps_Higher<br>Aug Type: Log-Pwr<br>AvgHold: 10/10<br>Mkr2 2.4                | 01:32:17 PM Mar 07, 2025<br>TRACE 12.3.4.5.6<br>TYPE MANNAN<br>DET P.N.N.N.N.N.<br>1000 0000 0 GHz<br>-60.129 dBm   | Center Fre<br>2.398500000 GH<br>Start Fre<br>2.390000000 GH  |
| Keysight Spectrum Analyzer           RL         RF         SC           Center Freq 2.398         SC         SC           0 dB/div         Ref 20.01         SC         SC           0 0 00         00         00         SC         SC         SC           0 0 00         00         00         SC  | Swept SA<br>∫Ω AC CORREC  <br>5000000 GHz<br>PNO: Fast<br>IFGain:Lov   | SENSE:INT  | 2Mbps_Higher   | 01:32:17 PM Mar 07, 2025<br>TRACE 12.3.4.5.6<br>TYPE MANNAN<br>DET P.N.N.N.N.N.<br>1000 0000 0 GHz<br>-60.129 dBm   | Center Fre<br>2.39850000 GH<br>Start Fre<br>2.39000000 GH  |
| Keysight Spectrum Analyzer-           RL         RF         SC           Center Freq 2.398           0 dB/div         Ref 20.01           0 g  | Swept SA<br>∫Ω AC CORREC  <br>5000000 GHz<br>PNO: Fast<br>IFGain:Lov   | SENSE:INT  | 2Mbps_Higher<br>Aug Type: Log-Pwr<br>AvgHold: 10/10<br>Mkr2 2.4                | 01:32:17 PM Mar 07, 2025<br>TRACE 1 2 3 4 5 6<br>TYPE WWWWWW<br>DET P NNNNN<br>1000 0000 0 GHz<br>-60.129 dBm<br>-27.16 dbm   | Center Fre<br>2.39850000 GH<br>Start Fre<br>2.39000000 GH  |
| Keysight Spectrum Analyzer-<br>RL         RF         50           Center Freq 2.398         50         50           0         B/div         Ref 20.01         60           0         0         0         0         0           0 <td>Swept SA<br/>20 AC   CORREC  <br/>500000 GHZ<br/>PNO: Fast<br/>IFGain:Lov<br/>0 dBm</td> <td>Trig: Free Run<br/>#Atten: 30 dB</td> <td>2Mbps_Higher<br/>Align Auto<br/>Avg Type: Log-Pwr<br/>AvglHold: 10/10<br/>Mkr2 2.4</td> <td>01:32:17 PM Mar 07, 2025<br/>TRACE 12.3.4.5.6<br/>TYPE 2.4.5.6<br/>TYPE 0.12.9 dBm<br/></td> <td>Frequency<br/>Auto Tur<br/>Center Fre<br/>2.398500000 GH<br/>Start Fre<br/>2.39000000 GH<br/>Stop Fre<br/>2.407000000 GH</td>   | Swept SA<br>20 AC   CORREC  <br>500000 GHZ<br>PNO: Fast<br>IFGain:Lov<br>0 dBm   | Trig: Free Run<br>#Atten: 30 dB  | 2Mbps_Higher<br>Align Auto<br>Avg Type: Log-Pwr<br>AvglHold: 10/10<br>Mkr2 2.4 | 01:32:17 PM Mar 07, 2025<br>TRACE 12.3.4.5.6<br>TYPE 2.4.5.6<br>TYPE 0.12.9 dBm<br>   | Frequency<br>Auto Tur<br>Center Fre<br>2.398500000 GH<br>Start Fre<br>2.39000000 GH<br>Stop Fre<br>2.407000000 GH  |
| Keysight Spectrum Analyzer           RL         RF         50           Center Freq 2.398         Second         Second           0 dB/div         Ref 20.00         Second         Second           0 0         Second  | Swept SA<br>Q AC CORREC<br>500000 GHZ<br>PNO: Fast<br>IFGain:Lov<br>0 dBm  | BW 300 kHz   | 2Mbps_Higher<br>Aug Type: Log-Pwr<br>Avg Hold: 10/10<br>Mkr2 2.4               | 01:32:17 PM Mar 07, 2025<br>TRACE 12 3 4 5 6<br>TYPE 2000 0 GHz<br>-60.129 dBm<br>-27.16 dBm<br>-27.16 dBm<br>Span 17.00 MHz<br>0 ms (30000 pts)                      | Center Fre           2.398500000 GF           2.390000000 GF           2.39000000 GF           2.39000000 GF           2.407000000 GF           2.407000000 GF           1.700000 MF                             |
| Keysight Spectrum Analyzer -           RL         RF         50           Center Freq 2.398:         50           0 dB/div         Ref 20.01           0 d         0           0 dB/div         Ref 20.01  | Swept SA<br>Ω AC CORREC<br>500000 GHZ<br>PNO: Fast<br>IFGain:Lov<br>0 dBm<br>12<br>2.402 154 3 GHz                             | BW 300 kHz   | 2Mbps_Higher<br>Align Auto<br>Avg Type: Log-Pwr<br>AvglHold: 10/10<br>Mkr2 2.4 | 01:32:17 PM Mar 07, 2025<br>TRACE 12.3 4 5 6<br>TYPE 2.4 5 6<br>TYPE 7 NNNNN<br>000 0000 0 GHz<br>-60.129 dBm<br>-27.16 dBm<br>-27.16 dBm<br>-27.16 dBm<br>-27.16 dBm | Center Fre           2.398500000 GF           2.390000000 GF           2.39000000 GF           2.39000000 GF           2.407000000 GF           2.407000000 GF           1.700000 MF                             |
| Keysight Spectrum Analyzer -           RL         RF         S0           Center Freq 2.398         S0         S0           0         B/div         Ref 20.00           0         0         0         0           0         0         0         0         0           0         0         0         0         0         0           0  | Swept SA<br>Q AC CORREC<br>500000 GHZ<br>PNO: Fasi<br>IFGain:Lov<br>0 dBm<br>0 dBm<br>1 data data data data data data data dat | SENSE:INT<br>Trig: Free Run<br>#Atten: 30 dB   | 2Mbps_Higher<br>Aug Type: Log-Pwr<br>Avg Hold: 10/10<br>Mkr2 2.4               | 01:32:17 PM Mar 07, 2025<br>TRACE 12 3 4 5 6<br>TYPE 2000 0 GHz<br>-60.129 dBm<br>-27.16 dBm<br>-27.16 dBm<br>Span 17.00 MHz<br>0 ms (30000 pts)                      | Center Fre           2.398500000 GF           2.390000000 GF           2.390000000 GF           2.407000000 GF           2.407000000 GF           1.700000 MF           Auto           Mate           Freq Offse |
| Keysight Spectrum Analyzer -         Sc           RL         RF         SC           Center Freq 2.398         Sc           0 dB/div         Ref 20.00           0 dD         0 dD         0 dD           0 dD         0 dD         1 f         1 dD           0 dD         1 dD         1 dD         1 dD           0 dD         0 dD         0 dD         1 dD           0 dD         0 dD         1 dD         1 dD           <   | Swept SA<br>Ω AC CORREC<br>500000 GHZ<br>PNO: Fast<br>IFGain:Lov<br>0 dBm<br>12<br>2.402 154 3 GHz                             | BW 300 kHz   | 2Mbps_Higher<br>Aug Type: Log-Pwr<br>Avg Hold: 10/10<br>Mkr2 2.4               | 01:32:17 PM Mar 07, 2025<br>TRACE 12 3 4 5 6<br>TYPE 2000 0 GHz<br>-60.129 dBm<br>-27.16 dBm<br>-27.16 dBm<br>Span 17.00 MHz<br>0 ms (30000 pts)                      | Frequency<br>Auto Tur<br>Center Fre<br>2.398500000 GF<br>2.390000000 GF<br>2.407000000 GF<br>2.407000000 GF<br>1.700000 MF<br>Auto Ma  |
| Keysight Spectrum Analyzer           RL         RF         50           Center Freq 2.398         Secondary         Secondary           0 dB/div         Ref 20.00         Secondary           0 d0         Secondary         Secondary         Secondary           0 d0         Secondary         Secondary         Secondary           Center 2.398500 GH         H         F           2 N         1 f         3         4   | Swept SA<br>Ω AC CORREC<br>500000 GHZ<br>PNO: Fast<br>IFGain:Lov<br>0 dBm<br>12<br>2.402 154 3 GHz                             | BW 300 kHz   | 2Mbps_Higher<br>Aug Type: Log-Pwr<br>Avg Hold: 10/10<br>Mkr2 2.4               | 01:32:17 PM Mar 07, 2025<br>TRACE 12 3 4 5 6<br>TYPE 2000 0 GHz<br>-60.129 dBm<br>-27.16 dBm<br>-27.16 dBm<br>Span 17.00 MHz<br>0 ms (30000 pts)                      | Center Fre           2.398500000 GF           2.390000000 GF           2.390000000 GF           2.407000000 GF           2.407000000 GF           1.700000 MF           Auto           Mate           Freq Offse |
| Keysight Spectrum Analyzer           RL         RF         50           Center Freq 2.3983         Secondary         Secondary           0 dB/div         Ref 20.01         Secondary           0 g         Secondary         Secondary         Secondary           1 N         1 f         Secondary         Secondary           1 N         1 f         Secondary         Secondary           2 N         1 f         Secondary         Secondary           3 G         Secondary         Secondary         Secondary           3 G         Secondary         Secondary         Secondary  | Swept SA<br>Ω AC CORREC<br>500000 GHZ<br>PNO: Fast<br>IFGain:Lov<br>0 dBm<br>12<br>2.402 154 3 GHz                             | BW 300 kHz   | 2Mbps_Higher<br>Aug Type: Log-Pwr<br>Avg Hold: 10/10<br>Mkr2 2.4               | 01:32:17 PM Mar 07, 2025<br>TRACE 12 3 4 5 6<br>TYPE 2000 0 GHz<br>-60.129 dBm<br>-27.16 dBm<br>-27.16 dBm<br>Span 17.00 MHz<br>0 ms (30000 pts)                      | Frequency<br>Auto Tur<br>Center Fre<br>2.398500000 GH<br>2.390000000 GH<br>2.407000000 GH<br>2.407000000 GH<br>1.700000 MH<br>Auto Ma  |
| Keysight Spectrum Analyzer           RL         RF         50           Center Freq 2.398:         Secondary         Secondary           0 dB/div         Ref 20.00         Secondary           0 0         Secondary         Secondary         Secondary           1 N 1 f         1         1         1           2 N 1 f         Secondary         Secondary         Secondary           1 N 1 f         3         3         3         3         3           2 N 1 f         3 <th< td=""><td>Swept SA<br/>Ω AC CORREC<br/>500000 GHZ<br/>PNO: Fast<br/>IFGain:Lov<br/>0 dBm<br/>12<br/>2.402 154 3 GHz</td><td>BW 300 kHz</td><td>2Mbps_Higher<br/>Aug Type: Log-Pwr<br/>Avg Hold: 10/10<br/>Mkr2 2.4</td><td>01:32:17 PM Mar 07, 2025<br/>TRACE 12 3 4 5 6<br/>TYPE 2000 0 GHz<br/>-60.129 dBm<br/>-27.16 dBm<br/>-27.16 dBm<br/>Span 17.00 MHz<br/>0 ms (30000 pts)</td><td>Frequency<br/>Auto Tur<br/>Center Fre<br/>2.398500000 GH<br/>2.390000000 GH<br/>2.407000000 GH<br/>2.407000000 GH<br/>1.700000 MH<br/>Auto Ma</td></th<>   | Swept SA<br>Ω AC CORREC<br>500000 GHZ<br>PNO: Fast<br>IFGain:Lov<br>0 dBm<br>12<br>2.402 154 3 GHz                             | BW 300 kHz   | 2Mbps_Higher<br>Aug Type: Log-Pwr<br>Avg Hold: 10/10<br>Mkr2 2.4               | 01:32:17 PM Mar 07, 2025<br>TRACE 12 3 4 5 6<br>TYPE 2000 0 GHz<br>-60.129 dBm<br>-27.16 dBm<br>-27.16 dBm<br>Span 17.00 MHz<br>0 ms (30000 pts)                      | Frequency<br>Auto Tur<br>Center Fre<br>2.398500000 GH<br>2.390000000 GH<br>2.407000000 GH<br>2.407000000 GH<br>1.700000 MH<br>Auto Ma  |
| Keysight Spectrum Analyzer-<br>RL         RF         SC           RL         RF         SC           Senter Freq 2.398         SC         SC           0 dB/div         Ref 20.00         SC           0 dD         SC         SC           1 dC         N         1           1 N         1         1           3 dC         SC         SC           6         SC         SC           7         SC         SC           1 dS         SC         SC           1 dS         SC         SC           1 dS         SC         SC <t< td=""><td>Swept SA<br/>Ω AC CORREC<br/>500000 GHZ<br/>PNO: Fast<br/>IFGain:Lov<br/>0 dBm<br/>12<br/>2.402 154 3 GHz</td><td>SENSE:INT         Trig: Free Run         #Atten: 30 dB         #Atten: 40 dB         #</td><td>2Mbps_Higher<br/>Aug Type: Log-Pwr<br/>Avg Hold: 10/10<br/>Mkr2 2.4</td><td>01:32:17 PM Mar 07, 2025<br/>TRACE 12 3 4 5 6<br/>TYPE 2000 0 GHz<br/>-60.129 dBm<br/>-27.16 dBm<br/>-27.16 dBm<br/>Span 17.00 MHz<br/>0 ms (30000 pts)</td><td>Frequency<br/>Auto Tur<br/>Center Fre<br/>2.398500000 GH<br/>2.390000000 GH<br/>2.407000000 GH<br/>2.407000000 GH<br/>1.700000 MH<br/>Auto Ma</td></t<> | Swept SA<br>Ω AC CORREC<br>500000 GHZ<br>PNO: Fast<br>IFGain:Lov<br>0 dBm<br>12<br>2.402 154 3 GHz                             | SENSE:INT         Trig: Free Run         #Atten: 30 dB         #Atten: 40 dB         # | 2Mbps_Higher<br>Aug Type: Log-Pwr<br>Avg Hold: 10/10<br>Mkr2 2.4               | 01:32:17 PM Mar 07, 2025<br>TRACE 12 3 4 5 6<br>TYPE 2000 0 GHz<br>-60.129 dBm<br>-27.16 dBm<br>-27.16 dBm<br>Span 17.00 MHz<br>0 ms (30000 pts)                      | Frequency<br>Auto Tur<br>Center Fre<br>2.398500000 GH<br>2.390000000 GH<br>2.407000000 GH<br>2.407000000 GH<br>1.700000 MH<br>Auto Ma  |



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| Keysight Spectrum Analyzer - S<br>RL RF 50  | Ω AC CORREC  | SENSE:INT   | ALIGN AUTO   | 01:44:39 PM Mar 07, 2025   |  |
|---|--|---|--|--|--|
| enter Freq 2.4875   | PNO: Fast 🔸  | Trig: Free Run<br>#Atten: 30 dB                           | Avg Type: Log-Pwr<br>Avg Hold: 10/10                                 | TRACE 1 2 3 4 5 6<br>TYPE MWWWW<br>DET P NNNNN   | Frequency  |
|   | IFGain:Low   | #Atten: 00 dB   | Mkr2 2.4   | 183 500 0 GHz  | Auto Tur   |
| 0 dB/div Ref 20.00  | dBm  |   |  | -61.977 dBm  |  |
| 10.0  |  |   |  |  | Center Fre   |
| 0.00  | _ <b>↓</b> 1   |   |  |  | 2.487500000 Gł   |
| 10.0  | ×**  |   |  |  |  |
| 30.0  |  |   |  | -25.90 dBm   | Start Fre  |
| 40.0  |  |   |  |  | 2.475000000 GI   |
| 50.0  |  |   |  |  | 04 <b>-</b> -  |
| 60.0 Augusta Martin Martin  | White And a second second  |   | وفالر والجدور الدار الوفالي والمردور والمادوني الدواري والمردو       | and the stand of the stand of the stand of the stand   | Stop Fre<br>2.50000000 GI  |
| 70.0  |  |   |  |  |  |
| Center 2.48750 GHz  |  | N 200 KU-   | Silian 4.00  | Span 25.00 MHz   | CF Ste   |
| KR MODE TRC SCL   | #VBV   | V 300 kHz   | Sweep 4.00   | 10 ms (30000 pts)  | 2.500000 Mi<br>Auto Ma   |
| 1 N 1 f<br>2 N 1 f  | 2.479 999 3 GHz<br>2.483 500 0 GHz   | -5.902 dBm<br>-61.977 dBm                                 | INCTION FONCTION WIDTH   | PONCTION VALUE   |  |
| 3   | 2.463 300 0 GHZ  |   |  |  | Freq Offs  |
| 5 6   |  |   |  | E  | 01   |
| 7 8   |  |   |  |  |  |
| 9   |  |   |  |  |  |
| 11  |  |   |  |  |  |
|   |  |   |  |  |  |
| Test_Grap   | wept SA<br>Ω AC CORREC   |   | STATUS<br>1bps_Higher Ba   | 01:48:58 PM Mar 07, 2025   |  |
| Test_Grap   | wept SA<br>Ω AC CORREC   | 1_2480_3N   | lbps_Higher Ba   |  |  |
| Test_Grap   | weet SA<br>Ω AC CORREC<br>5000000 GHz<br>PNO: Fast →<br>IFGain:Low   | 1_2480_3N   | 1bps_Higher Ba<br>Align Auto<br>Avg Type: Log-Pwr<br>AvgIHold: 10/10 | 01:48:58 PM Mar 07, 2025<br>TRACE 1 2 3 4 5 6<br>TYPE M WWWW<br>DET P NNNNN  | Frequency  |
| Test_Grap   | weet SA<br>Ω AC CORREC<br>5000000 GHz<br>PNO: Fast →<br>IFGain:Low   | 1_2480_3N   | 1bps_Higher Ba<br>Align Auto<br>Avg Type: Log-Pwr<br>AvgIHold: 10/10 | 01:48:58 PM Mar 07, 2025<br>TRACE <b>1 2 3 4 5 6</b><br>TYPE <b>M</b> WWWWW<br>DET <b>P</b> N N N N N  | Frequency  |
| Test_Grap   | weet SA<br>Ω AC CORREC<br>5000000 GHz<br>PNO: Fast →<br>IFGain:Low   | 1_2480_3N   | 1bps_Higher Ba<br>Align Auto<br>Avg Type: Log-Pwr<br>AvgIHold: 10/10 | 01:48:58 PM Mar 07, 2025<br>TRACE 12 3 4 5 6<br>TYPE M WWWWW<br>DET P NNNNN<br>1000 000 0 GHz<br>-59.700 dBm   | Frequency<br>Auto Tur<br>Center Fre  |
| Test_Grap   | weet SA<br>Ω AC CORREC<br>5000000 GHz<br>PNO: Fast →<br>IFGain:Low   | 1_2480_3N   | 1bps_Higher Ba<br>Aug Type: Log-Pwr<br>AvgIHold: 10/10<br>Mkr2 2.4   | 01:48:58 PM Mar 07, 2025<br>TRACE 1 2 3 4 5 6<br>TYPE M WWWW<br>DET P NNNNN  | Frequency<br>Auto Tur<br>Center Fre  |
| Test_Grap   | weet SA<br>Ω AC CORREC<br>5000000 GHz<br>PNO: Fast →<br>IFGain:Low   | 1_2480_3N   | 1bps_Higher Ba<br>Align Auto<br>Avg Type: Log-Pwr<br>AvgIHold: 10/10 | 01:48:58 PM Mar 07, 2025<br>TRACE 12.3.4.5.6<br>TVPE 12.3.4.5.6<br>TVPE P NNNNN<br>1000 0000 0 GHz<br>-59.700 dBm  | Frequency<br>Auto Tur<br>Center Fre<br>2.398500000 GH  |
| Image: Section of the sectio | weept SA<br>Ω AC   CORREC  <br>5000000 GHz<br>PNO: Fast →<br>IFGain:Low  | 1_2480_3N   | 1bps_Higher Ba<br>Aug Type: Log-Pwr<br>AvgIHold: 10/10<br>Mkr2 2.4   | 01:48:58 PM Mar 07, 2025<br>TRACE 12 3 4 5 6<br>TYPE M WWWWW<br>DET P NNNNN<br>1000 000 0 GHz<br>-59.700 dBm   | Frequency<br>Auto Tur<br>Center Fre<br>2.398500000 GH<br>Start Fre   |
| Test_Grap           Keysight Spectrum Analyzer - S           RL         RF           Some reference           RL         RF           Some reference           CodB/div         Ref 20.000  | weept SA<br>Ω AC   CORREC  <br>5000000 GHz<br>PNO: Fast →<br>IFGain:Low  | 1_2480_3N   | 1bps_Higher Ba   | 01:48:58 PM Mar 07, 2025<br>TRACE 12.3.4.5.6<br>TVPE 12.3.4.5.6<br>TVPE P NNNNN<br>1000 0000 0 GHz<br>-59.700 dBm  | Frequency<br>Auto Tur<br>Center Fre<br>2.398500000 GH<br>Start Fre   |
| Image: Section of the sectio | weept SA<br>Ω AC   CORREC  <br>5000000 GHz<br>PNO: Fast →<br>IFGain:Low  | 1_2480_3N   | 1bps_Higher Ba<br>Aug Type: Log-Pwr<br>AvgIHold: 10/10<br>Mkr2 2.4   | 01:48:58 PM Mar 07, 2025<br>TRACE 12.3.4.5.6<br>TVPE 12.3.4.5.6<br>TVPE P NNNNN<br>1000 0000 0 GHz<br>-59.700 dBm  | Auto Tur<br>Center Fre<br>2.398500000 GH<br>Start Fre<br>2.390000000 GH<br>Stop Fre  |
| Test_Grap           Keysight Spectrum Analyzer - S           RL         RF           Sonter Freq 2.3985           OdB/div         Ref 20.00   | weept SA<br>Ω AC   CORREC  <br>5000000 GHz<br>PNO: Fast →<br>IFGain:Low  | 1_2480_3N   | 1bps_Higher Ba   | 01:48:58 PM Mar 07, 2025<br>TRACE 12.3.4.5.6<br>TVPE 12.3.4.5.6<br>TVPE P NNNNN<br>1000 0000 0 GHz<br>-59.700 dBm  | Auto Tur<br>Center Fre<br>2.398500000 GH<br>Start Fre<br>2.390000000 GH<br>Stop Fre  |
| Image: Constraint of the sector of  | xwept SA<br>Ω AC   CORREC  <br>PRO: Fast →<br>IFGain:Low<br>0 dBm  | 1_2480_3N   | 1bps_Higher Ba   | 01:48:58 PM Mar 07, 2025<br>TRACE 1 2 3 4 3 6<br>TYPE 1 2 3 4 5 6<br>TYPE 1 2 3 4 5 6<br>TYPE 1 2 3 4 5 6<br>TYP             | Frequency<br>Auto Tur<br>Center Fre<br>2.398500000 Gl<br>Start Fre<br>2.39000000 Gl<br>Stop Fre<br>2.407000000 Gl  |
| Image: Constraint of the sector of  | xwept SA<br>Ω AC   CORREC  <br>PRO: Fast →<br>IFGain:Low<br>0 dBm<br>0 dB | 1_2480_3N   | 1bps_Higher Ba   | 01:48:58 PM Mar 07, 2025<br>TRACE 12 3 4 5 6<br>TYPE 12 3 4 5 | Frequency           Auto Tur           Center Fre           2.398500000 GH           Start Fre           2.390000000 GH           Stop Fre           2.407000000 GH           CF Ste           1.700000 MH |
| Test_Grap           Image: Sector and S                           | xwept SA<br>Ω AC   CORREC  <br>S00000 GHz<br>PRO: Fast →<br>IFGain:Low<br>0 dBm<br>2 dBm<br>2 #VBW<br>X<br>2.404 161 5 GHz   | 1_2480_3N   | 1bps_Higher Ba   | 01:48:58 PM Mar 07, 2025<br>TRACE 1 2 3 4 3 6<br>TYPE 1 2 3 4 5 6<br>TYPE 1 2 3 4 5 6<br>TYPE 1 2 3 4 5 6<br>TYP             | Frequency           Auto Tur           Center Fre           2.398500000 GH           Start Fre           2.390000000 GH           Stop Fre           2.407000000 GH           CF Ste           1.700000 MH |
| Image: Constraint of the sector of  | xwept SA<br>Ω AC   CORREC  <br>SOUDOU CHZ<br>PRO: Fast →<br>IFGain:Low<br>0 dBm<br>0 dBm<br>1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1  | 1_2480_3N<br>SENSE:INT<br>Trig: Free Run<br>#Atten: 30 dB | 1bps_Higher Ba   | 01:48:58 PM Mar 07, 2025<br>TRACE 12 3 4 5 6<br>TYPE 12 3 4 5 | Frequency<br>Auto Tur<br>Center Fre<br>2.398500000 GH<br>Start Fre<br>2.39000000 GH<br>2.407000000 GH<br>2.407000000 GH<br>2.40700000 GH   |
| Test_Grap         It is in the section of the   | xwept SA<br>Ω AC   CORREC  <br>S00000 GHz<br>PRO: Fast →<br>IFGain:Low<br>0 dBm<br>2 dBm<br>2 #VBW<br>X<br>2.404 161 5 GHz   | 1_2480_3N   | 1bps_Higher Ba   | 01:48:58 PM Mar 07, 2025<br>TRACE 12 3 4 5 6<br>TYPE 12 3 4 5 | Frequency<br>Auto Tur<br>Center Fre<br>2.398500000 GH<br>Start Fre<br>2.39000000 GH<br>2.407000000 GH<br>2.407000000 GH<br>2.40700000 GH   |
| Image: Constraint of the sector of  | xwept SA<br>Ω AC   CORREC  <br>S00000 GHz<br>PRO: Fast →<br>IFGain:Low<br>0 dBm<br>2 dBm<br>2 #VBW<br>X<br>2.404 161 5 GHz   | 1_2480_3N   | 1bps_Higher Ba   | 01:48:58 PM Mar 07, 2025<br>TRACE 12 3 4 5 6<br>TYPE 12 3 4 5 | Frequency<br>Auto Tur<br>Center Fre<br>2.398500000 GH<br>Start Fre<br>2.39000000 GH<br>2.407000000 GH<br>2.407000000 GH<br>2.40700000 GH   |
| Image: Constraint of the sector of  | xwept SA<br>Ω AC   CORREC  <br>S00000 GHz<br>PRO: Fast →<br>IFGain:Low<br>0 dBm<br>2 dBm<br>2 #VBW<br>X<br>2.404 161 5 GHz   | 1_2480_3N   | 1bps_Higher Ba   | 01:48:58 PM Mar 07, 2025<br>TRACE 12 3 4 5 6<br>TYPE 12 3 4 5 | Frequency<br>Auto Tur<br>Center Fro<br>2.398500000 Gl<br>Start Fro<br>2.390000000 Gl<br>Stop Fro<br>2.407000000 Gl<br>CF Sto<br>1.700000 Mi<br>Auto  |
| Test_Grap         G Test_Grap         It is a start of the start of  | xwept SA<br>Ω AC   CORREC  <br>S00000 GHz<br>PRO: Fast →<br>IFGain:Low<br>0 dBm<br>2 dBm<br>2 #VBW<br>X<br>2.404 161 5 GHz   | 1_2480_3N   | 1bps_Higher Ba   | 01:48:58 PM Mar 07, 2025<br>TRACE 12 3 4 5 6<br>TYPE 12 3 4 5 | Frequency<br>Auto Tur<br>Center Fre<br>2.398500000 GH<br>Start Fre<br>2.39000000 GH<br>2.407000000 GH<br>2.407000000 GH<br>2.40700000 GH   |
| Image: Constraint of the sector of  | xwept SA<br>Ω AC   CORREC  <br>S00000 GHz<br>PRO: Fast →<br>IFGain:Low<br>0 dBm<br>2 dBm<br>2 #VBW<br>X<br>2.404 161 5 GHz   | 1_2480_3N   | 1bps_Higher Ba   | 01:48:58 PM Mar 07, 2025<br>TRACE 12 3 4 5 6<br>TYPE 12 3 4 5 | Frequency<br>Auto Tur<br>Center Fre<br>2.398500000 GH<br>Start Fre<br>2.39000000 GH<br>Stop Fre<br>2.407000000 GH<br>CF Ste<br>1.700000 MH<br>Auto Mi  |



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| enter Freq 2.487500000 GHz<br>PNO: Fast<br>IFGain:Low<br>PNO: Fast<br>IFGain:Low<br>PNO: Fast<br>IFGain:Low<br>PNO: Fast<br>IFGain:Low<br>PNO: Fast<br>IFGain:Low<br>PNO: Fast<br>IFGain:Low<br>IFGain:Low<br>IFGain:Low<br>IFGain:Low<br>IFGain:Low<br>IFGain:Low<br>IFGain:Low<br>IFGain:Low<br>IFGain:Low<br>IFGain:Low<br>IFGain:Low<br>IFGain:Low<br>IFGain:Low<br>IFGain:Low<br>IFGain:Low<br>IFGain:Low<br>IFGain:Low<br>IFGain:Low<br>IFGain:Low<br>IFGain:Low<br>IFGain:Low<br>IFGain:Low<br>IFGain:Low<br>IFGain:Low<br>IFGain:Low<br>IFGain:Low<br>IFGain:Low<br>IFGain:Low<br>IFGain:Low<br>IFGGain:Low<br>IFGain:Low<br>IFGain:Low<br>IFGain:Low<br>IFGGain:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN:Low<br>IFGGAIN   | 🎉 Keysight Spectrum Analyzer - Swept SA |                               |   |  |  |                 |
|--|---|-------------------------------|---|--|--|-----------------|
| PNO: Fast  |   |                               | SENSE:INT                                 |  |  | Frequency       |
| Inclusion       Watter: 30 dB       Mikr2 2.483 500 0 GHz<br>-61.371 dBm       Auto Tune         00       <  | Center Freq 2.487500000                 | PNO: Fast +++                 |   |  | TYPE M WWWWW                           |                 |
| MKr2 24.483 500 0 GH2<br>-61.371 dBm         Center Freq<br>2.48750000 GHz         Center Freq<br>2.487500000 GHz         Start Freq<br>2.47500000 GHz         Start Freq<br>2.5000000 GHz         Start Freq<br>2.500000 GHz         Start Freq<br>2.5725 dBm         Start Freq<br>2.5725 dBm         Start Freq<br>2.5725 dBm         Star  |   | IFGain:Low                    | #Atten: 30 dB                             |  |  |                 |
| 00       1   |   |                               |   | Mkr2 2   |  | Autorune        |
| Center Freq<br>2.487500000 GHz<br>2.47500000 GHz<br>2.47500000 GHz<br>2.47500000 GHz<br>2.47500000 GHz<br>2.47500000 GHz<br>2.47500000 GHz<br>2.47500000 GHz<br>2.50000000 GHz<br>2.5000000 GHz<br>2.5000000 GHz<br>2.5000000 GHz<br>2.5000000 GHz<br>2.5000000 GHz<br>2.500000 GHz<br>2.50000 GHz<br>2.500000 GHz<br>2.50000 GHz<br>2.5000 GHz<br>3.500 GHz<br>3. | 10 dB/div Ref 20.00 dBm                 |                               |   |  | -61.371 dBm                            |                 |
| C        | 10.0                                    |                               |   |  |  | Contor From     |
| 000       0000       0000       000       000 <td< td=""><td>1</td><td></td><td></td><td></td><td></td><td></td></td<>   | 1                                       |                               |   |  |  |                 |
| 000  |   |                               |   |  |  | 2.487500000 GH2 |
| 2:3730m       2:3730m       StartFreq         0:0  |   |                               |   |  |  |                 |
| 2     2     2     2     2     3     3     4     5 <td>-20.0</td> <td></td> <td></td> <td></td> <td>-25.73 dBm</td> <td>Start Freq</td>   | -20.0                                   |                               |   |  | -25.73 dBm                             | Start Freq      |
| 000       0  | -30.0                                   |                               |   |  |  | 2.475000000 GHz |
| Stop Freq<br>2.5000000 GHz         Stop Freq<br>2.50000000 GHz         Stop Freq<br>2.5000000 GHz         Stop Freq<br>2.5000000 GHz         Stop Freq<br>2.5000000 GHz         Stop Freq<br>2.5000000 GHz         Stop Freq<br>2.500000 GHz         Stop Freq<br>2.50000 GHz         Stop Freq<br>2.500000 GHz         Stop Freq<br>2.50000 GHz         Stop Freq<br>2.5000 GHz         Stop Freq<br>2.5000 GHz         Stop Freq<br>2.5000 GHz         Stop Freq<br>2.5000 GHz <td>-40.0</td> <td></td> <td></td> <td></td> <td></td> <td></td>   | -40.0                                   |                               |   |  |  |                 |
| 0.0  | -50.0                                   | 2                             |   |  |  |                 |
| CF Step       Span 25.00 MHz       CF Step         Res BW 100 kHz       #VBW 300 kHz       Sweep 4.000 ms (30000 pts)       Auto         R MODE TRC SCL       X       Y       FUNCTION       FUNCTION WIDTH       FUNCTION VALUE       Auto         1       N       1       f       2.483 500 0 GHz       -5.725 dBm       FUNCTION       FUNCTION WIDTH       FUNCTION VALUE       Freq Offset         2       N       1       f       2.483 500 0 GHz       -5.725 dBm       Freq Offset       O Hz         3       1       f       2.483 500 0 GHz       -5.725 dBm       Freq Offset       O Hz         3       1       f       2.483 500 0 GHz       -5.725 dBm       Freq Offset       O Hz         3       1       f       2.483 500 0 GHz       -5.725 dBm       Freq Offset       O Hz         3       1       f       2.483 500 0 GHz       -5.725 dBm       Freq Offset       O Hz         3       1       f       2.483 500 0 GHz       -5.725 dBm       Freq Offset       O Hz         3       1       f       1       1       1       1       1       1       1         4       1       1       1       1       1 <td>-60.0</td> <td>Water of the selection of the</td> <td>ومارور والمحرفة والمتحال الأرادا المحالية</td> <td>and and state of the second state of a second state of the</td> <td>e suite esté a la carte la la face des</td> <td></td>   | -60.0                                   | Water of the selection of the | ومارور والمحرفة والمتحال الأرادا المحالية | and and state of the second state of a second state of the | e suite esté a la carte la la face des |                 |
| Res BW 100 kHz         #VBW 300 kHz         Sweep         4.000 ms (30000 pts)         2.500000 MHz           R MODE TRC SCL         X         Y         FUNCTION         FUNCTION WIDTH         FUNCTION VALUE         Auto         Man           1         N         1         f         2.479 996 8 GHz         -5.725 dBm         Man         Man         Function Value         Man   | -70.0                                   |                               |   |  |  | 2.500000000 GHz |
| Res BW 100 kHz         #VBW 300 kHz         Sweep         4.000 ms (30000 pts)         2.500000 MHz           R MODE TRC SCL         X         Y         FUNCTION         FUNCTION WIDTH         FUNCTION VALUE         Auto         Man           1         N         1         f         2.479 996 8 GHz         -5.725 dBm         Man         Man         Function Value         Man   |   |                               |   |  |  |                 |
| R         MODE         TRC         SCL         X         Y         FUNCTION         FUNCTION WIDTH         FUNCTION VALUE         Auto         Man           1         N         1         f         2.479         996         8 GHz         -5.725 dBm         FUNCTION         FUNCTION WIDTH         FUNCTION VALUE         Freq Offset         0 Hz         Freq Offset         0 Hz         0 Hz         6         0 Hz         6         0 Hz         0 Hz <td>Center 2.48750 GHz</td> <td></td> <td></td> <td></td> <td></td> <td></td>   | Center 2.48750 GHz                      |                               |   |  |  |                 |
| R         MODE         TRC         Scl.         X         Y         FUNCTION         FUNCTION WIDTH         FUNCTION VALUE  | #Res BW 100 kHz                         | #VB₩                          | 300 KHZ                                   | Sweep 4.0  | 000 ms (30000 pts)                     |                 |
| 2         N         1         f         2.483 500 0 GHz         -61.371 dBm         Freq Offset         0 Hz         0 Hz <td></td> <td></td> <td></td> <td>NCTION FUNCTION WIDTH</td> <td>FUNCTION VALUE</td> <td>Adto</td>  |   |                               |   | NCTION FUNCTION WIDTH                                      | FUNCTION VALUE                         | Adto            |
| 3     -     -     -     Freq Offset       4     -     -     -     -       5     -     -     -     -       6     -     -     -     -       7     -     -     -     -       8     -     -     -     -  | 1 N 1 f 2.479 9<br>2 N 1 f 2.483 5      | 996 8 GHz                     | <u>-5.725 dBm</u><br>-61 371 dBm          |  |  |                 |
|  | 3                                       |                               |   |  |  |                 |
|  | 4 5                                     |                               |   |  | =                                      | 0 Hz            |
|  | 6                                       |                               |   |  |  |                 |
|  | 8                                       |                               |   |  |  |                 |
|  | 9                                       |                               |   |  |  |                 |
|  | 11                                      |                               |   |  |  |                 |
| m P  | •                                       |                               | III                                       |  | F                                      |                 |
| 3 STATUS   | MSG                                     |                               |   | STATUS   | 8                                      |                 |
| Test_Graph_EDR_HOP_ANT1_NA_3Mbps_Higher Band Edge Emissions  | Test Graph EDP                          | Emissions                     |   |  |  |                 |



# APPENDIX 2-PHOTOS OF TEST SETUP

Note: See test photos in setup photo document for the actual connections between Product and support equipment.

\* \* \* \* \* END OF THE REPORT \* \* \* \* \*