



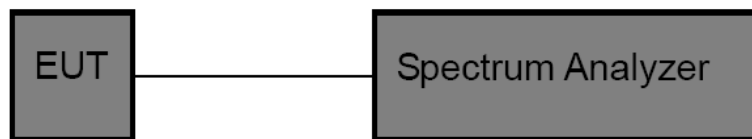
3.5. Bandwidth

Limit

FCC CFR Title 47 Part 15 Subpart C Section 15.247 (a)(2)/ RSS-247 5.2 a:

| Test Item | Limit | Frequency Range(MHz) |
|---------------|-----------------------------------|----------------------|
| DTS Bandwidth | ≥ 500 KHz (6dB bandwidth) | 2400~2483.5 |

Test Configuration



Test Procedure

1. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram above.

2. DTS Spectrum Setting:

- (1) Set RBW = 100 kHz.
- (2) Set the video bandwidth (VBW) ≥ 3 RBW.
- (3) Detector = Peak.
- (4) Trace mode = Max hold.
- (5) Sweep = Auto couple.

OCB Spectrum Setting:

- (1) Set RBW = 1% ~ 5% occupied bandwidth.
- (2) Set the video bandwidth (VBW) ≥ 3 RBW.
- (3) Detector = Peak.
- (4) Trace mode = Max hold.
- (5) Sweep = Auto couple.

NOTE: The EUT was set to continuously transmitting in each mode and low, Middle and high channel for the test.

Test Mode

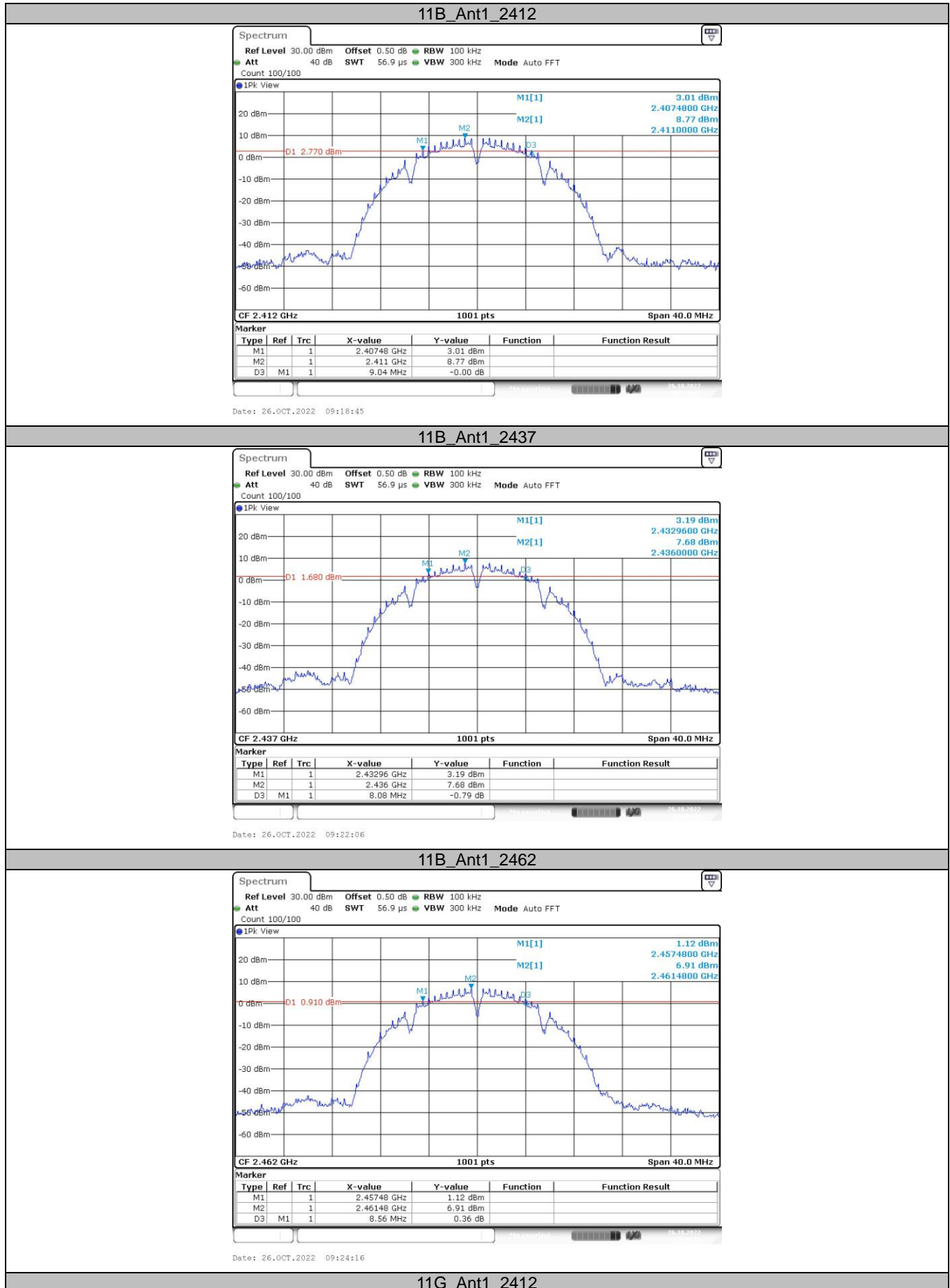
Please refer to the clause 2.4.

**Test Results**

| Test Mode | Antenna | Frequency (MHz) | OCB [MHz] | DTS BW [MHz] | Limit[MHz] | Verdict |
|-----------|---------|-----------------|-----------|--------------|------------|---------|
| 11B | Ant1 | 2412 | 13.267 | 9.04 | ≥ 0.5 | PASS |
| | | 2437 | 13.506 | 8.08 | ≥ 0.5 | PASS |
| | | 2462 | 13.267 | 8.56 | ≥ 0.5 | PASS |
| 11G | Ant1 | 2412 | 17.742 | 16.36 | ≥ 0.5 | PASS |
| | | 2437 | 17.383 | 16.36 | ≥ 0.5 | PASS |
| | | 2462 | 17.303 | 16.36 | ≥ 0.5 | PASS |
| 11N20SISO | Ant1 | 2412 | 16.903 | 16.44 | ≥ 0.5 | PASS |
| | | 2437 | 16.903 | 16.44 | ≥ 0.5 | PASS |
| | | 2462 | 16.943 | 16.44 | ≥ 0.5 | PASS |
| 11N40SISO | Ant1 | 2422 | 36.683 | 35.92 | ≥ 0.5 | PASS |
| | | 2437 | 36.284 | 35.68 | ≥ 0.5 | PASS |
| | | 2452 | 36.683 | 36.16 | ≥ 0.5 | PASS |



DTS Bandwidth:



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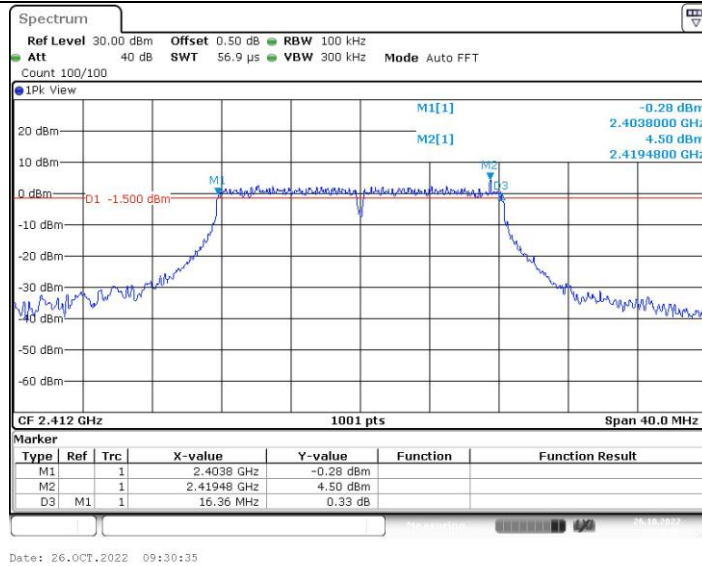
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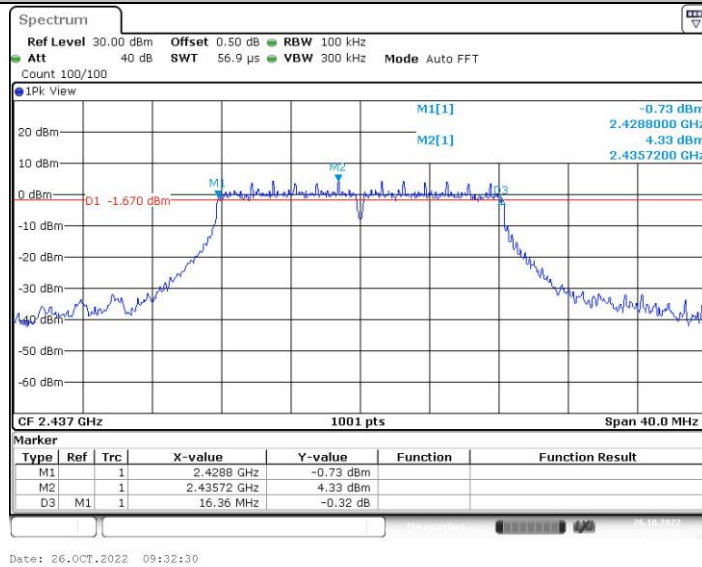
Http://www.sz-ctc.org.cn



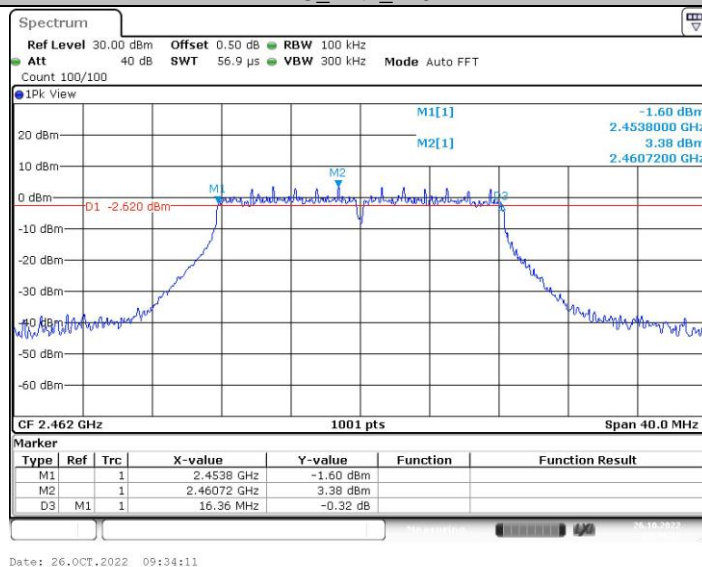
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11G_Ant1_2437



11G_Ant1_2462



11N20SISO_Ant1_2412

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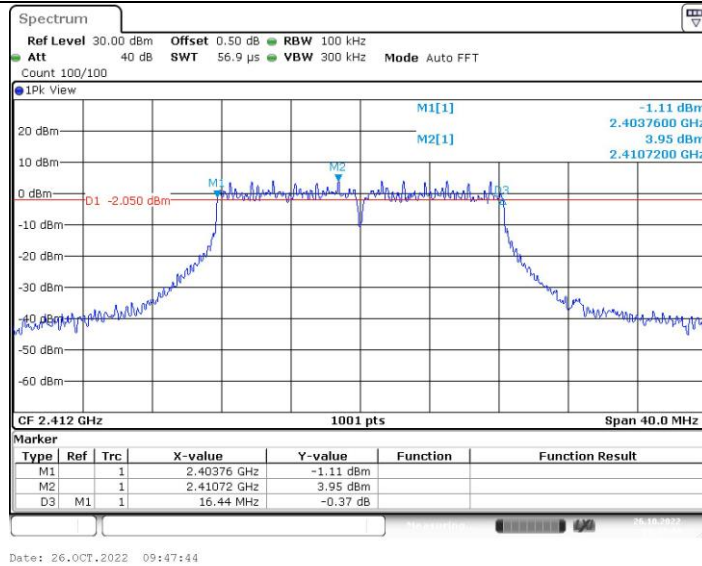
Tel.: (86)755-27521059

Fax: (86)755-27521011

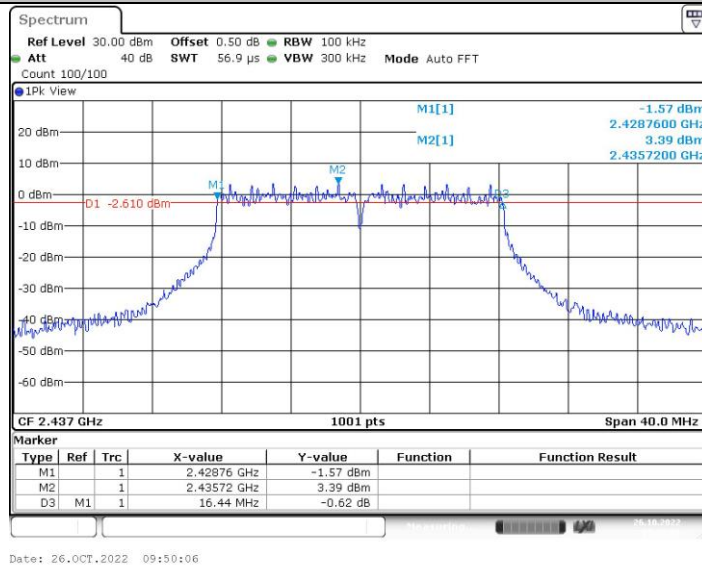
Http://www.sz-ctc.org.cn



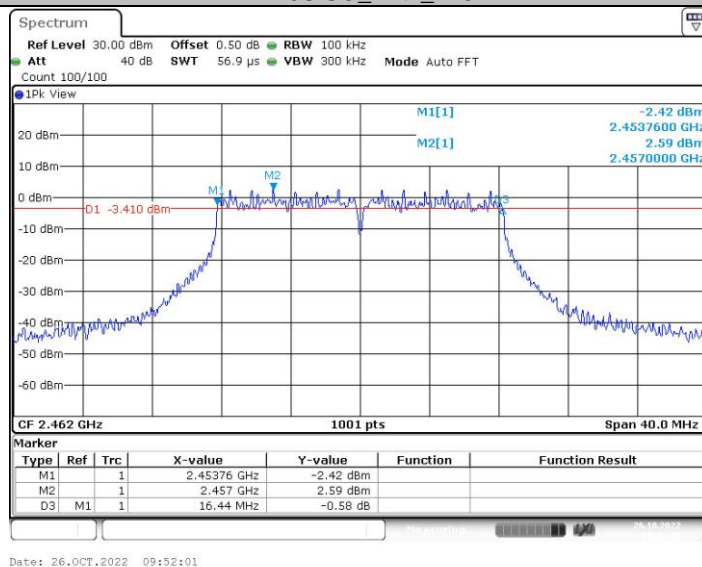
For anti-fake verification, please visit the official website of Certification and Accreditation Administration of the People's Republic of China : yz.cnca.cn



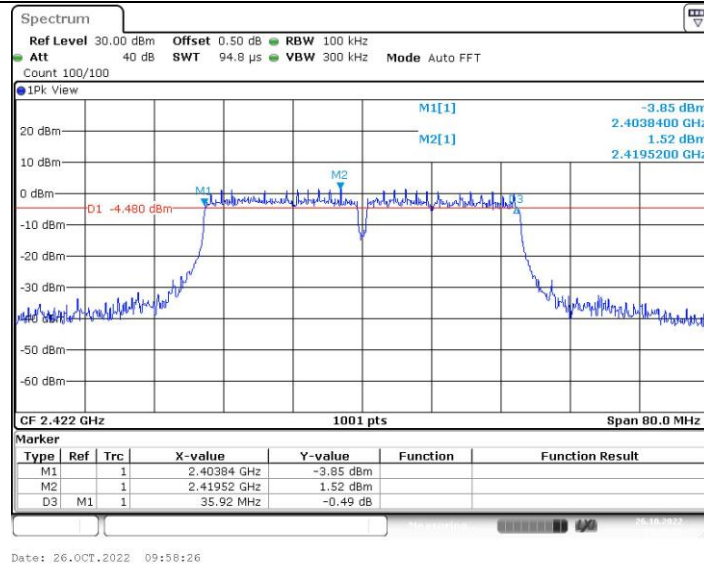
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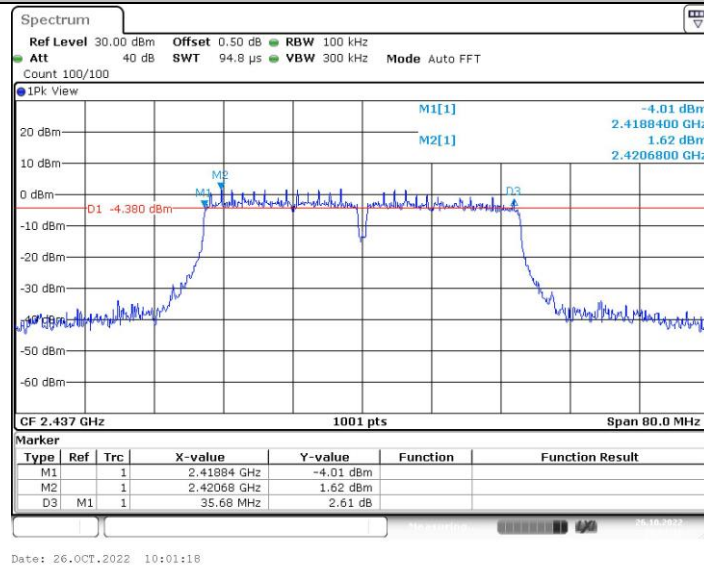
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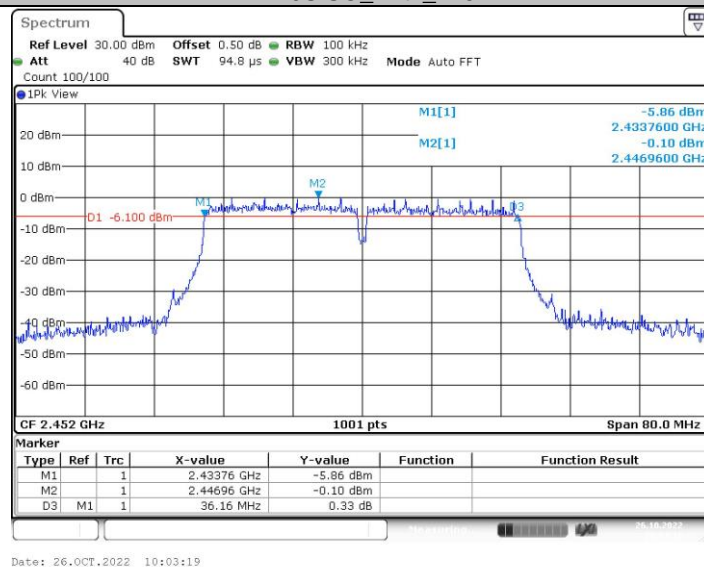
11N40SISO_Ant1_2422



11N40SISO_Ant1_2437



11N40SISO_Ant1_2452

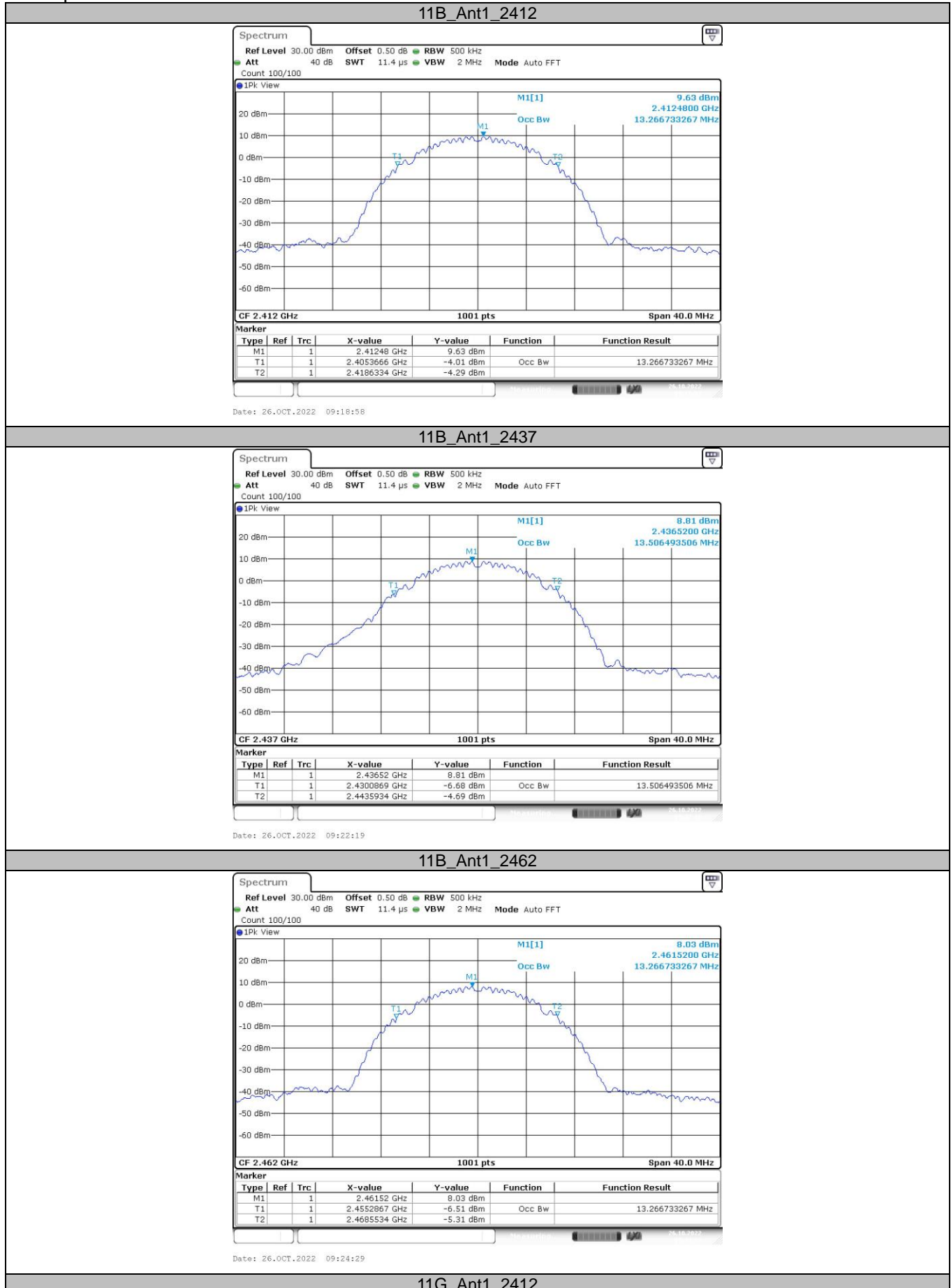


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Occupied Channel Bandwidth:



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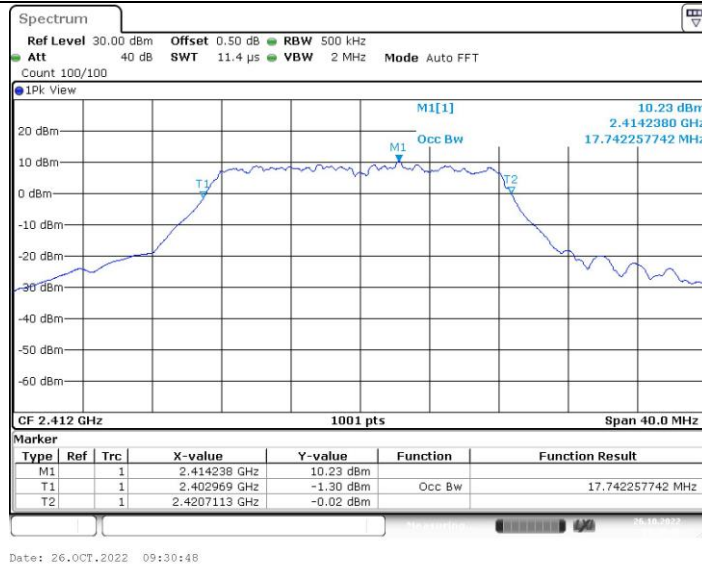
1-2/F., Building 2, Jiaquan Building, Guanlan High-Tech Park, Shenzhen, Guangdong, China

Tel.: (86)755-27521059

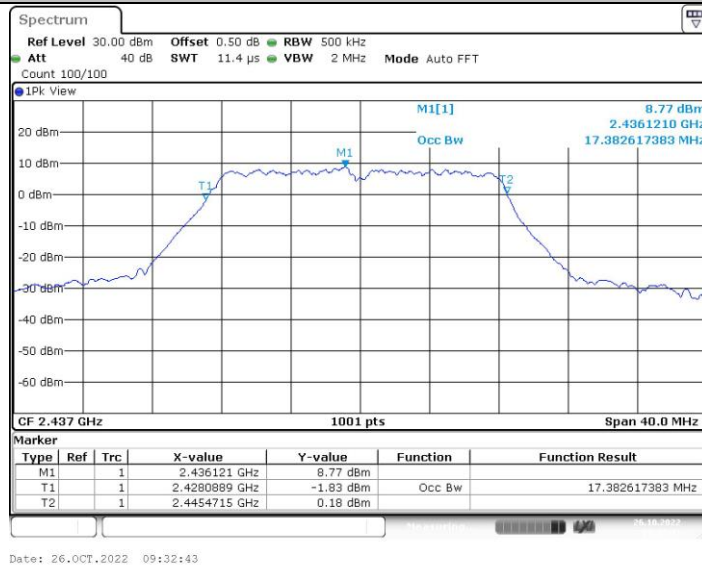
Fax: (86)755-27521011

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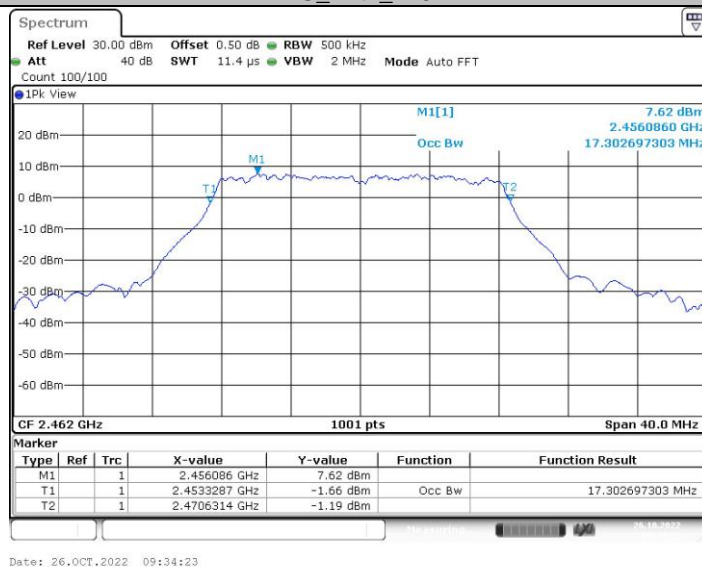
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11G_Ant1_2437



11G_Ant1_2462



11N20SISO_Ant1_2412

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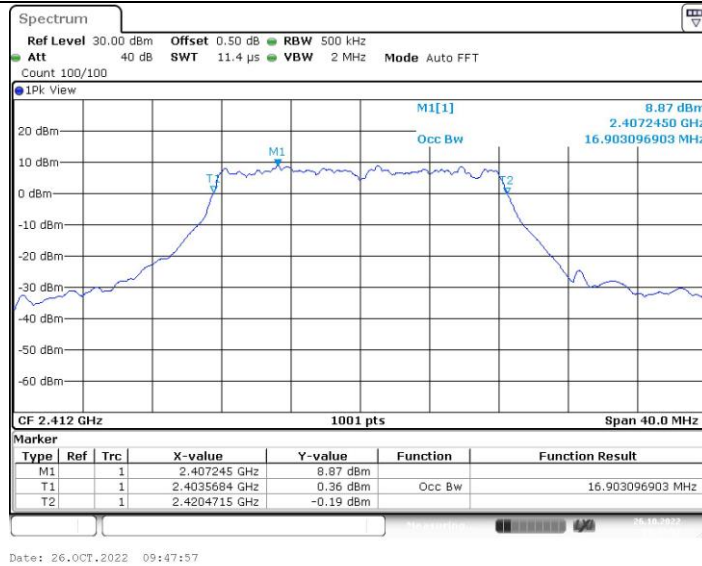
Tel.: (86)755-27521059

Fax: (86)755-27521011

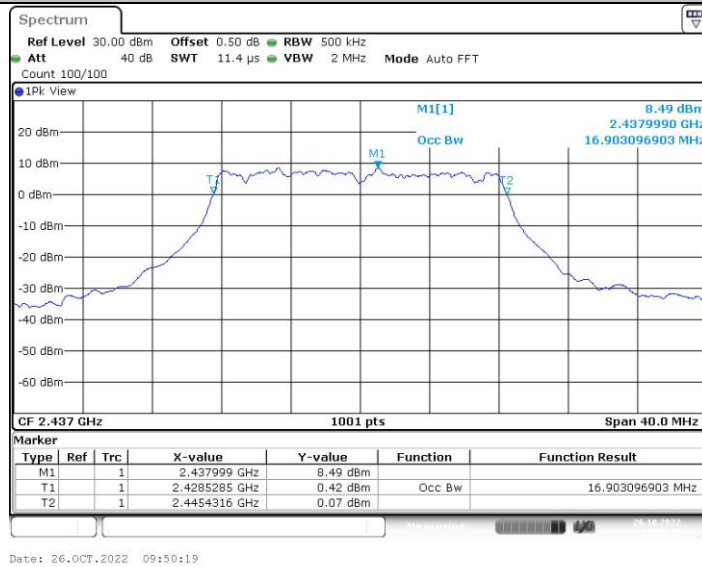
Http://www.sz-ctc.org.cn



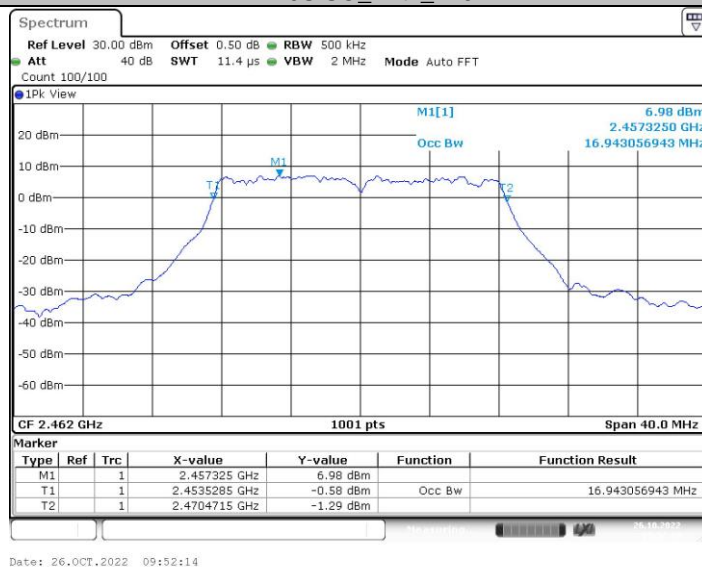
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11N20SISO_Ant1_2437



11N20SISO_Ant1_2462



11N40SISO_Ant1_2422

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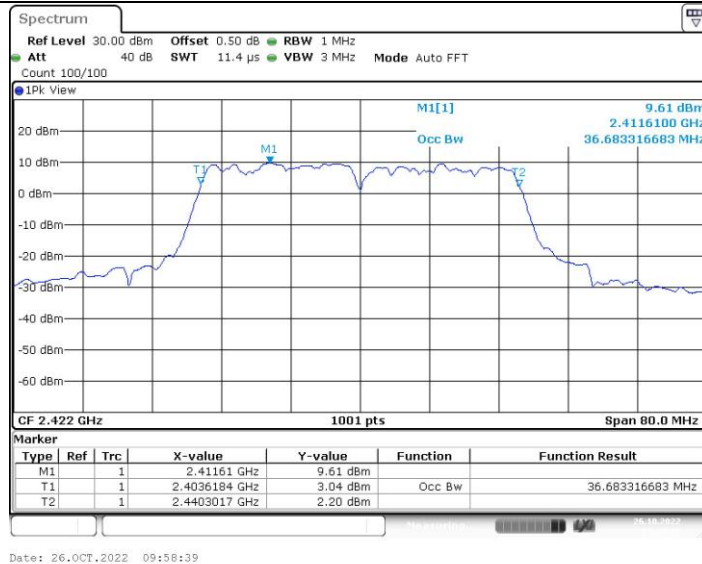
Tel.: (86)755-27521059

Fax: (86)755-27521011

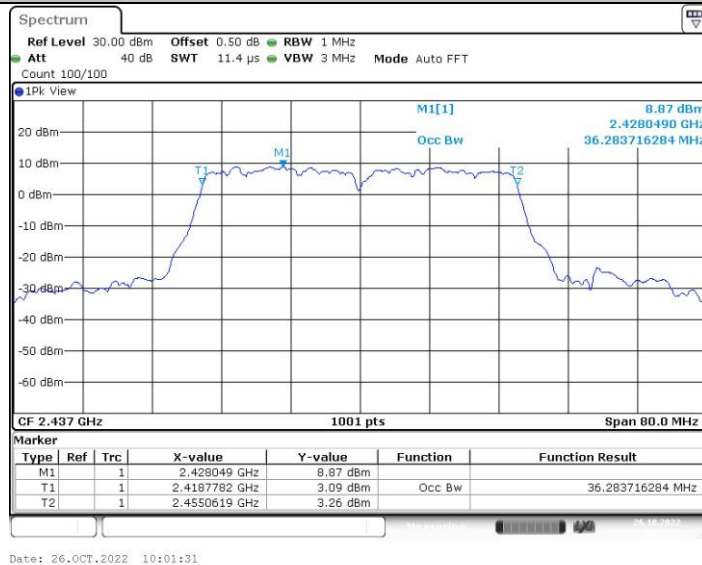
Http://www.sz-ctc.org.cn



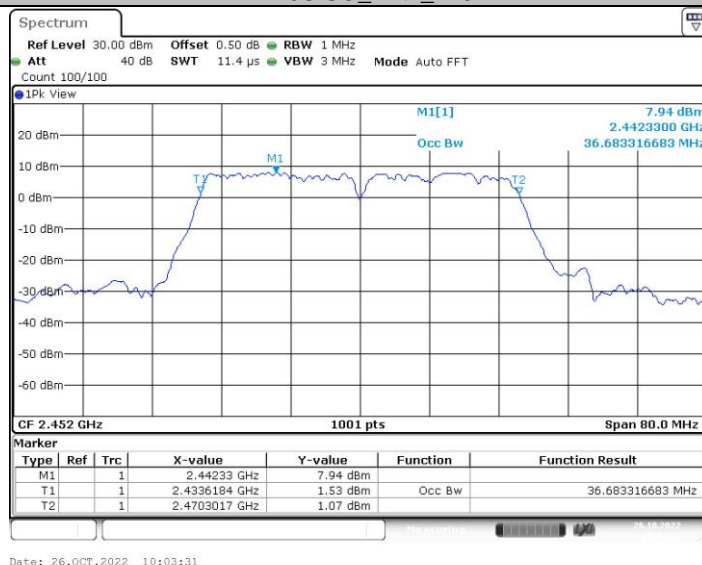
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11N40SISO_Ant1_2437



11N40SISO_Ant1_2452





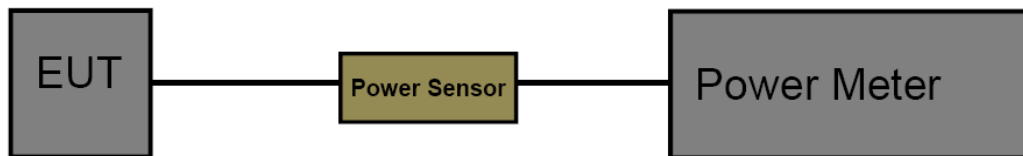
3.6. Peak Output Power

Limit

FCC CFR Title 47 Part 15 Subpart C Section 15.247 (b)(3)/ RSS-247 5.4:

| Section | Test Item | Limit | Frequency Range(MHz) |
|-------------------------|--------------------------------|-----------------|----------------------|
| CFR 47 FCC 15.247(b)(3) | Maximum conducted output power | 1 Watt or 30dBm | 2400~2483.5 |
| ISED RSS-247 5.4 d | EIRP | 4 Watt or 36dBm | 2400~2483.5 |

Test Configuration



Test Procedure

1. The maximum conducted output power may be measured using a broadband Peak RF power meter.
2. Power measurements were performed only when the EUT was transmitting at its AVG power control level using a broadband power meter with a pulse sensor.
3. The power meter implemented triggering and gating capabilities which were set up such that power measurements were recorded only during the ON time of the transmitter.
4. Record the measurement data.

Test Mode

Please refer to the clause 2.4.

Test Result

| Test Mode | Antenna | Frequency (MHz) | Result[dBm] | Limit[dBm] | Verdict |
|-----------|---------|-----------------|-------------|------------|---------|
| 11B | Ant1 | 2412 | 17.29 | <=30 | PASS |
| | | 2437 | 16.78 | <=30 | PASS |
| | | 2462 | 15.85 | <=30 | PASS |
| 11G | Ant1 | 2412 | 16.51 | <=30 | PASS |
| | | 2437 | 16.00 | <=30 | PASS |
| | | 2462 | 14.84 | <=30 | PASS |
| 11N20SISO | Ant1 | 2412 | 16.02 | <=30 | PASS |
| | | 2437 | 16.85 | <=30 | PASS |
| | | 2462 | 14.14 | <=30 | PASS |
| 11N40SISO | Ant1 | 2422 | 16.10 | <=30 | PASS |
| | | 2437 | 15.47 | <=30 | PASS |
| | | 2452 | 14.92 | <=30 | PASS |

Note: Test results increased RF cable loss by 0.5dB.

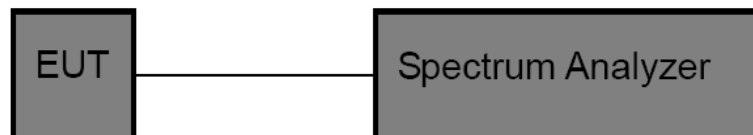
3.7. Power Spectral Density

Limit

FCC CFR Title 47 Part 15 Subpart C Section 15.247 (e)/ RSS-247 5.2 b:

| Test Item | Limit | Frequency Range(MHz) |
|------------------------|--------------------|----------------------|
| Power Spectral Density | 8dBm(in any 3 kHz) | 2400~2483.5 |

Test Configuration



Test Procedure

1. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram above.
2. The EUT was directly connected to the Spectrum Analyzer and antenna output port as show in the block diagram above. The measurement according to section 10.2 of KDB 558074 D01 DTS Meas Guidance v05r02.
3. Spectrum Setting:
Set analyzer center frequency to DTS channel center frequency.
Set the span to 1.5 times the DTS bandwidth.
Set the RBW to: 3 kHz
Set the VBW to: 10 kHz
Detector: Avg
Sweep time: Auto
Allow trace to fully stabilize. Then use the peak marker function to determine the maximum amplitude level.

Test Mode

Please refer to the clause 2.4.

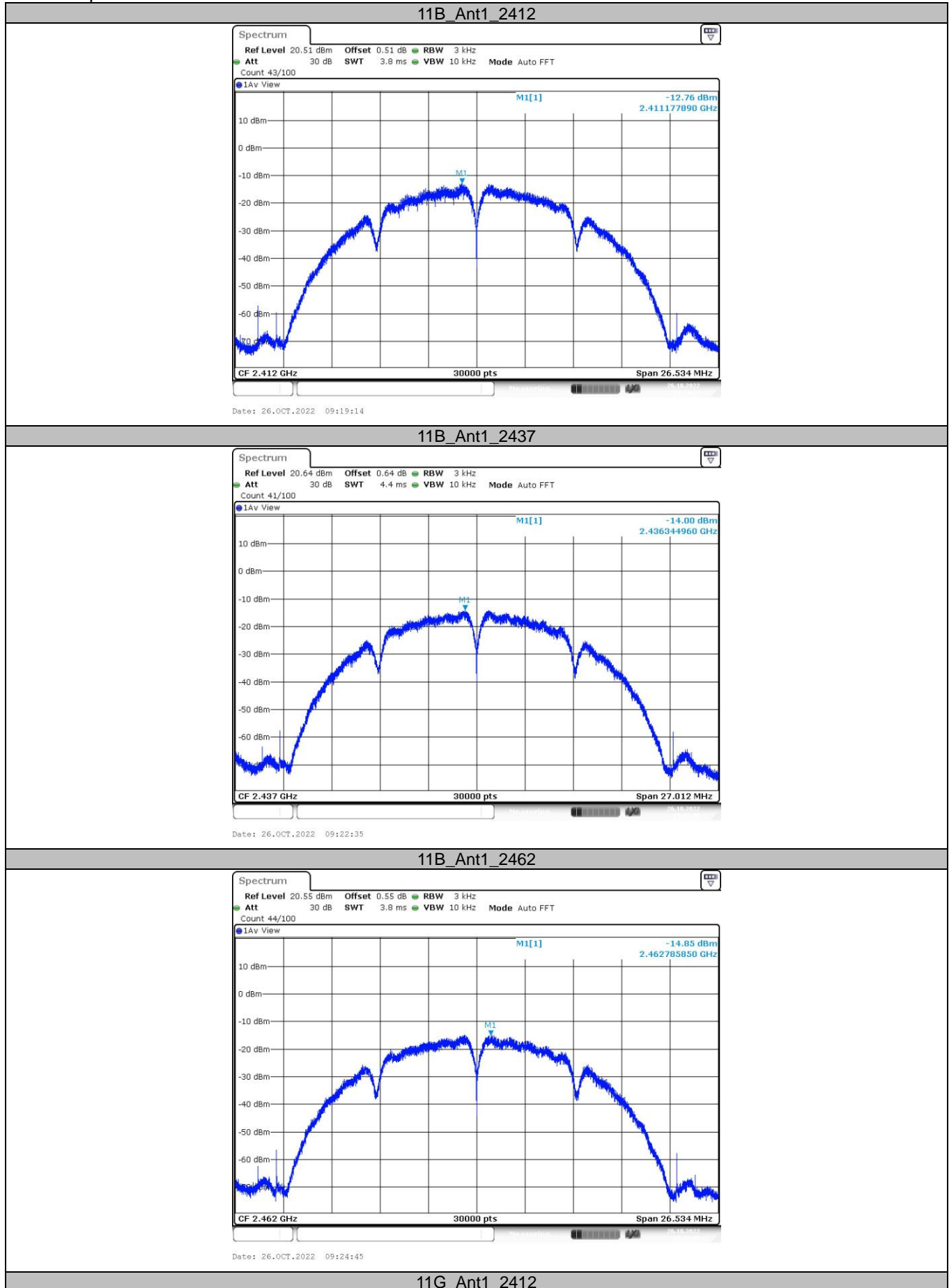
**Test Result**

| Test Mode | Antenna | Frequency (MHz) | Result[dBm/3-100kHz] | Limit[dBm/3kHz] | Verdict |
|-----------|---------|-----------------|----------------------|-----------------|---------|
| 11B | Ant1 | 2412 | -12.76 | <=8 | PASS |
| | | 2437 | -14.00 | <=8 | PASS |
| | | 2462 | -14.85 | <=8 | PASS |
| 11G | Ant1 | 2412 | -14.47 | <=8 | PASS |
| | | 2437 | -14.20 | <=8 | PASS |
| | | 2462 | -15.83 | <=8 | PASS |
| 11N20SISO | Ant1 | 2412 | -11.29 | <=8 | PASS |
| | | 2437 | -9.73 | <=8 | PASS |
| | | 2462 | -12.92 | <=8 | PASS |
| 11N40SISO | Ant1 | 2422 | -16.84 | <=8 | PASS |
| | | 2437 | -17.84 | <=8 | PASS |
| | | 2452 | -17.44 | <=8 | PASS |

Note: 1. Duty Cycle Correction Factor = $10 \cdot \log(1/\text{duty cycle})$
2. The Duty Cycle Correction Factor is compensated in the graph.



Test Graphs:



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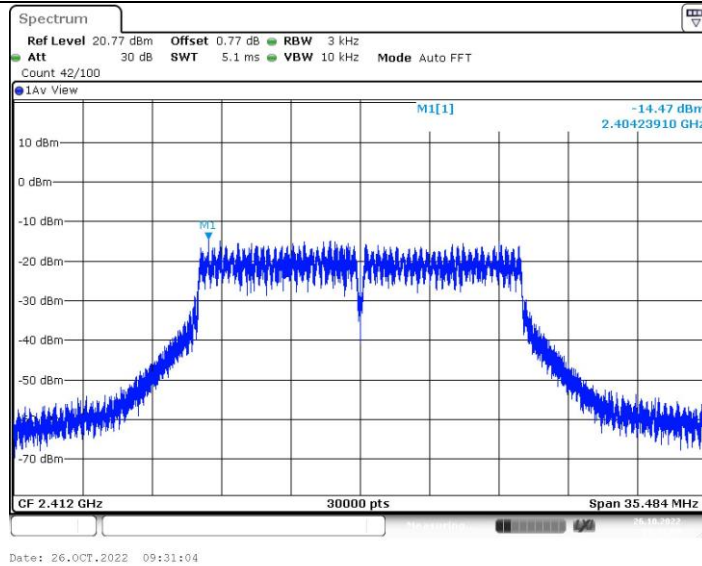
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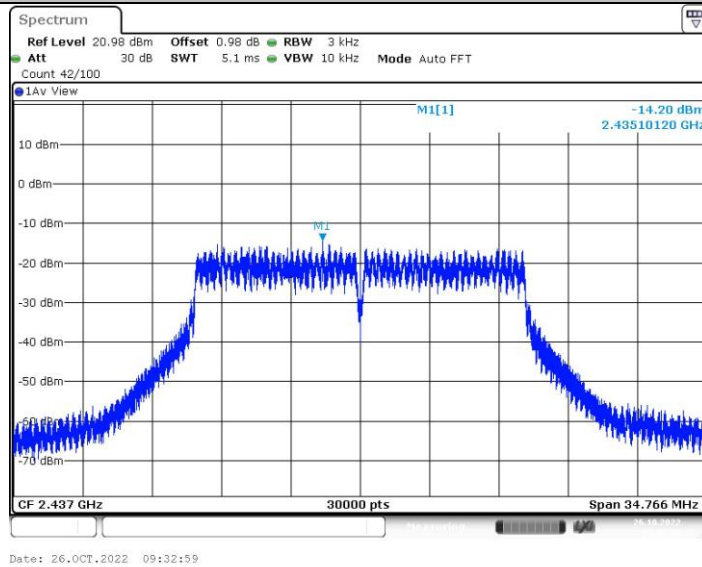
Http://www.sz-ctc.org.cn



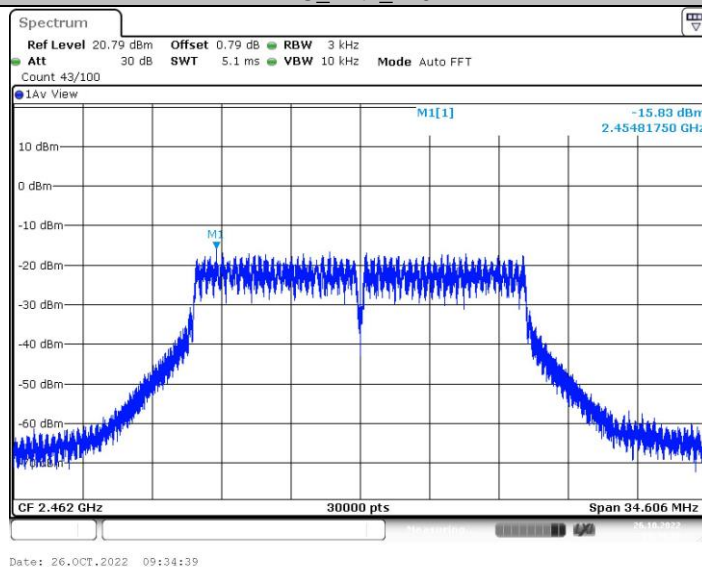
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11G_Ant1_2437



11G_Ant1_2462



11N20SISO_Ant1_2412

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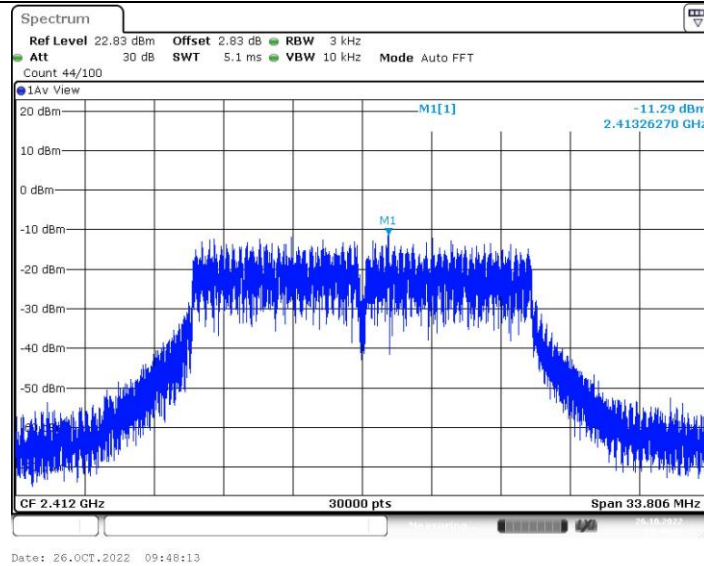
Tel.: (86)755-27521059

Fax: (86)755-27521011

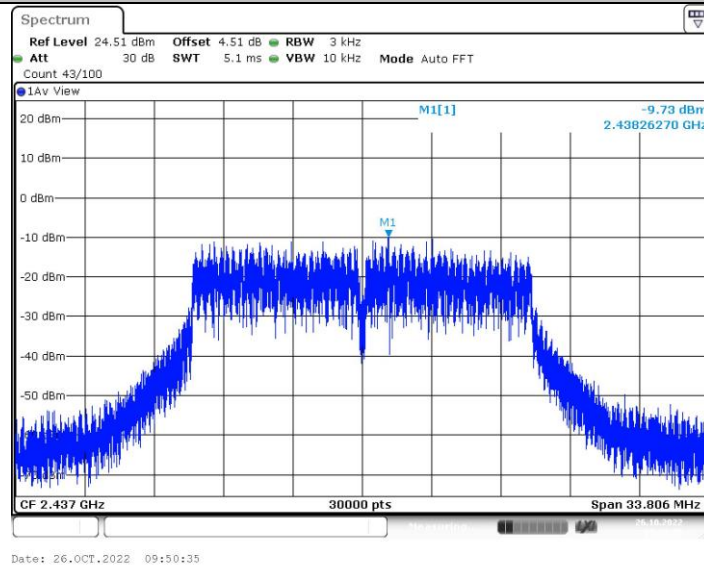
Http://www.sz-ctc.org.cn



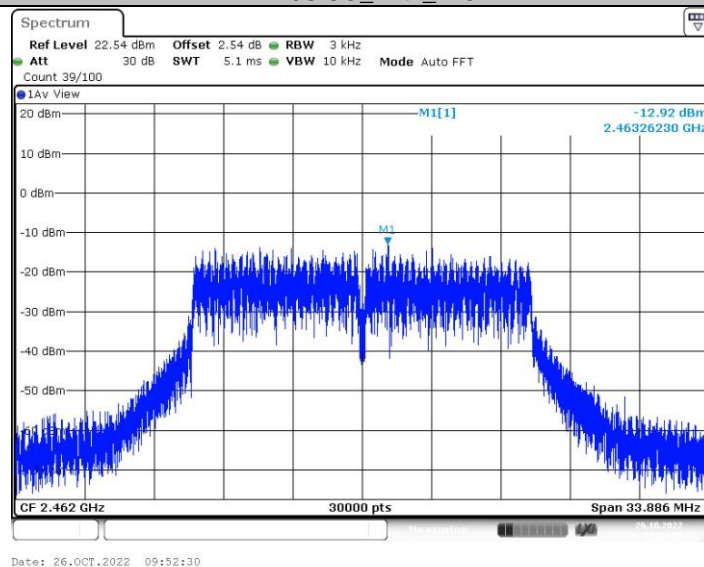
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11N20SISO_Ant1_2437



11N20SISO_Ant1_2462



11N40SISO_Ant1_2422

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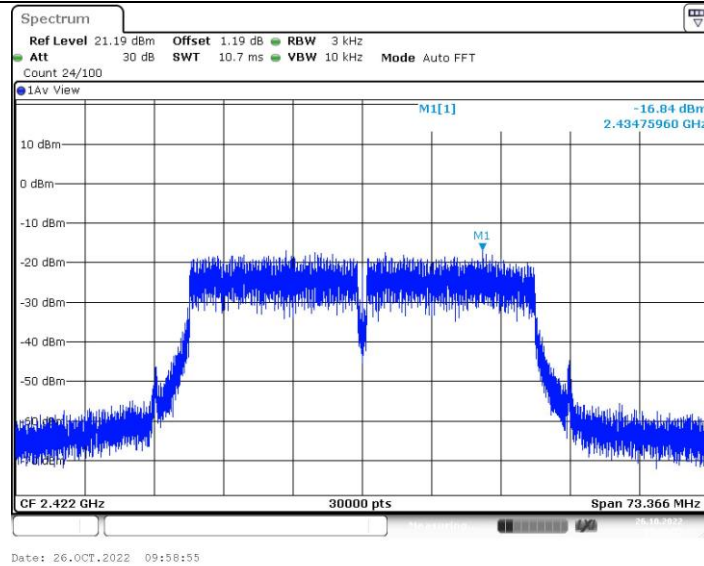
Tel.: (86)755-27521059

Fax: (86)755-27521011

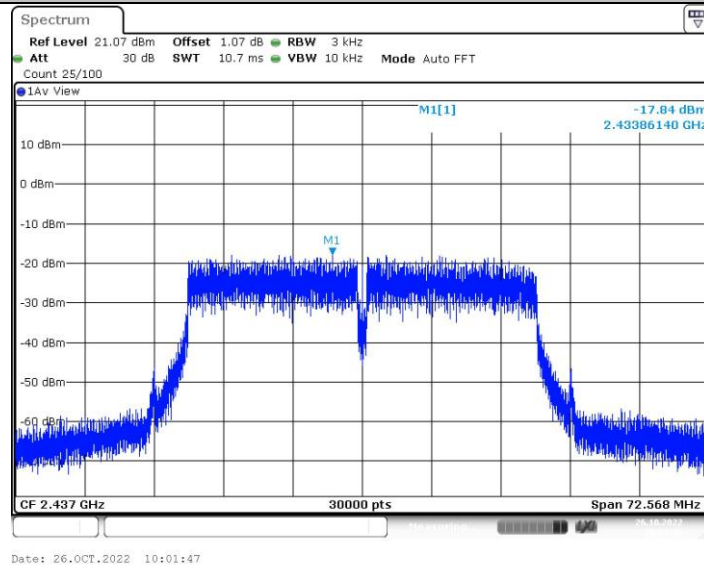
Http://www.sz-ctc.org.cn



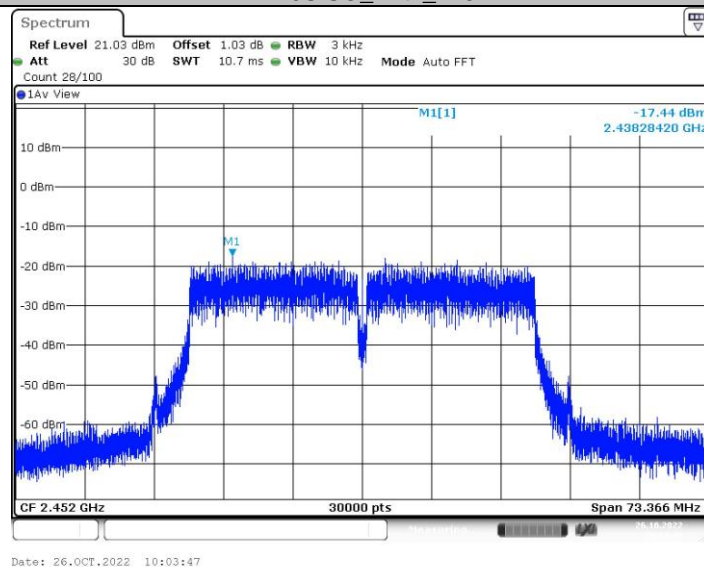
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11N40SISO_Ant1_2437



11N40SISO_Ant1_2452



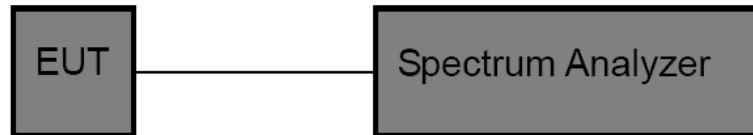


3.8. Duty Cycle

Limit

None, for report purposes only.

Test Configuration



Test Procedure

1. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram above.
2. The EUT was directly connected to the Spectrum Analyzer and antenna output port as show in the block diagram above. The measurement according to section 10.2 of KDB 558074 D01 DTS Meas Guidance v05r02.
3. Spectrum Setting:
Set analyzer center frequency to DTS channel center frequency.
Set the span to 0Hz
Set the RBW to 10MHz
Set the VBW to 10MHz
Detector: peak
Sweep time: auto
Allow trace to fully stabilize. Then use the peak marker function to determine the maximum amplitude level.

Test Mode

Please refer to the clause 2.3

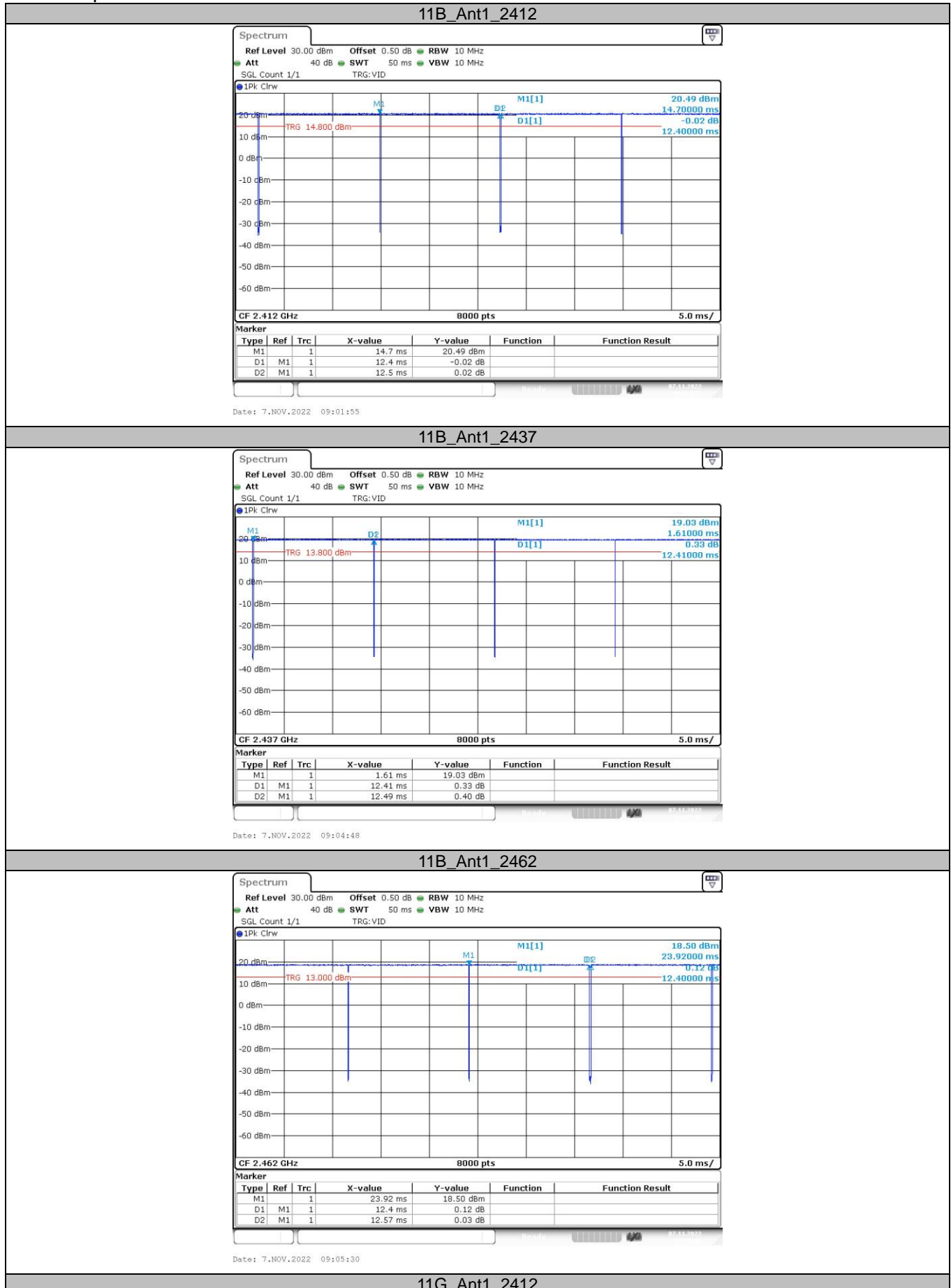
Test Result

| Test Mode | Antenna | Channel | Transmission Duration [ms] | Transmission Period [ms] | Duty Cycle [%] | 1/T Minimum VBW (kHz) | Final setting For VBW (kHz) |
|-----------|---------|---------|----------------------------|--------------------------|----------------|-----------------------|-----------------------------|
| 11B | Ant1 | 2412 | 12.40 | 12.50 | 99.20 | / | 0.01 |
| | Ant1 | 2437 | 12.41 | 12.49 | 99.36 | / | 0.01 |
| | Ant1 | 2462 | 12.40 | 12.57 | 98.65 | / | 0.01 |
| 11G | Ant1 | 2412 | 2.06 | 2.17 | 94.93 | 0.49 | 1 |
| | Ant1 | 2437 | 2.05 | 2.22 | 92.34 | 0.49 | 1 |
| | Ant1 | 2462 | 2.05 | 2.19 | 93.61 | 0.49 | 1 |
| 11N20SISO | Ant1 | 2412 | 0.24 | 0.41 | 58.54 | 4.17 | 5 |
| | Ant1 | 2437 | 0.24 | 0.55 | 43.64 | 4.17 | 5 |
| | Ant1 | 2462 | 0.25 | 0.40 | 62.50 | 4.00 | 5 |
| 11N40SISO | Ant1 | 2422 | 0.93 | 1.09 | 85.32 | 1.08 | 3 |
| | Ant1 | 2437 | 0.93 | 1.06 | 87.74 | 1.08 | 3 |
| | Ant1 | 2452 | 0.93 | 1.05 | 88.57 | 1.08 | 3 |

Note: Duty Cycle>98%, VBW=10Hz



Test Graphs:



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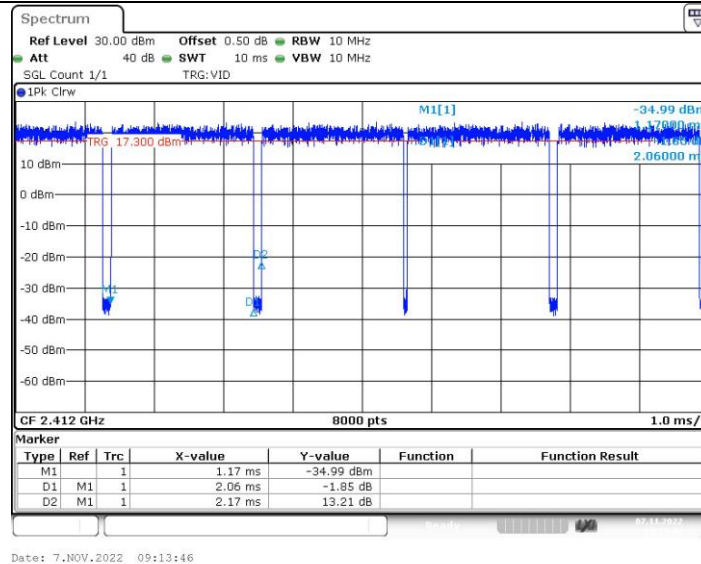
1-2/F., Building 2, Jiaquan Building, Guanlan High-Tech Park, Shenzhen, Guangdong, China

Tel.: (86)755-27521059

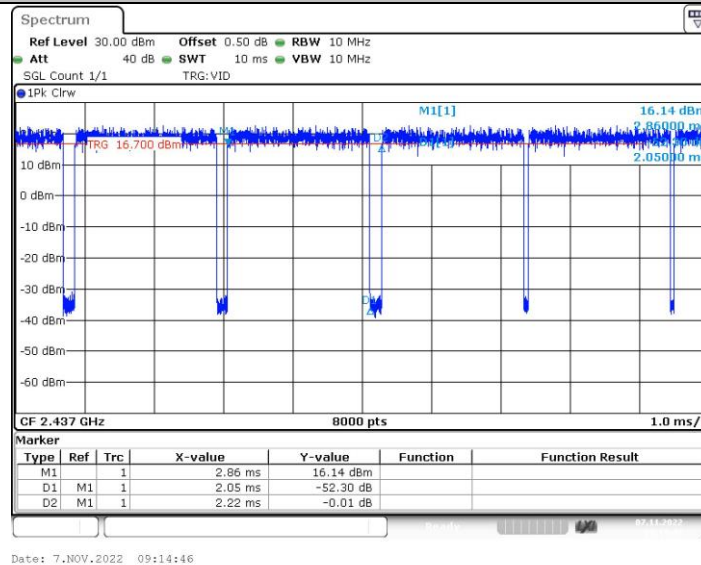
Fax: (86)755-27521011

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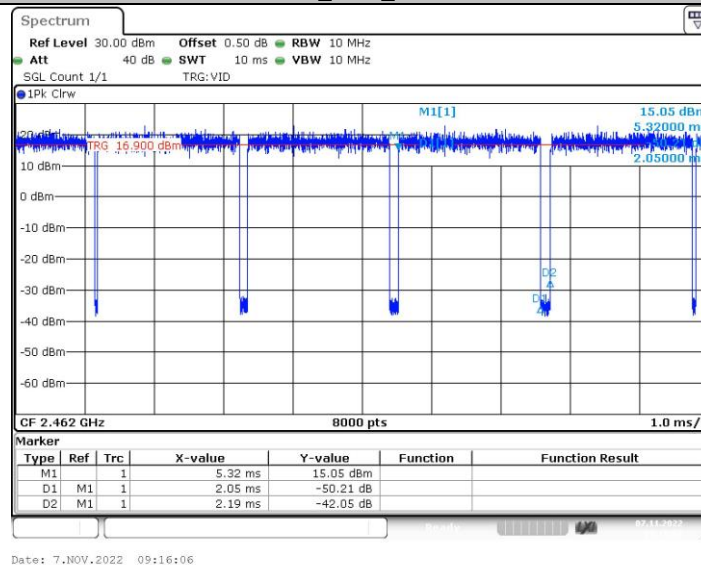
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11G_Ant1_2437



11G_Ant1_2462



11N20MIMO_Ant1_2412

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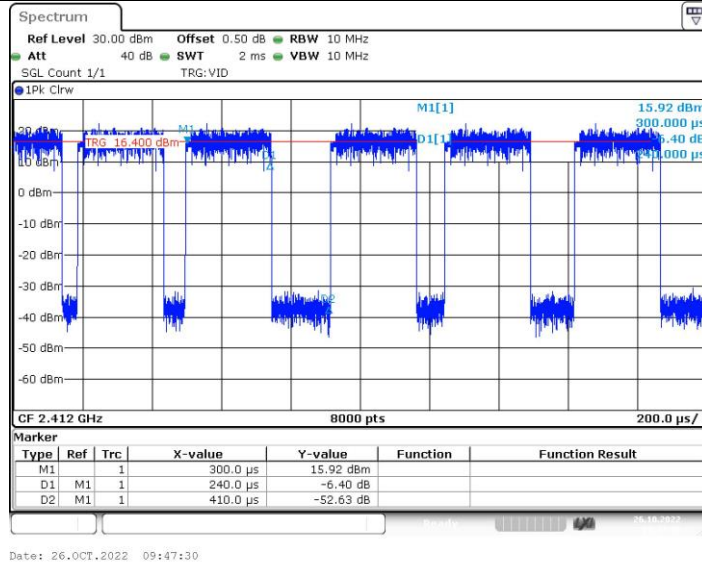
1-2/F., Building 2, Jiaquan Building, Guanlan High-Tech Park, Shenzhen, Guangdong, China

Tel.: (86)755-27521059

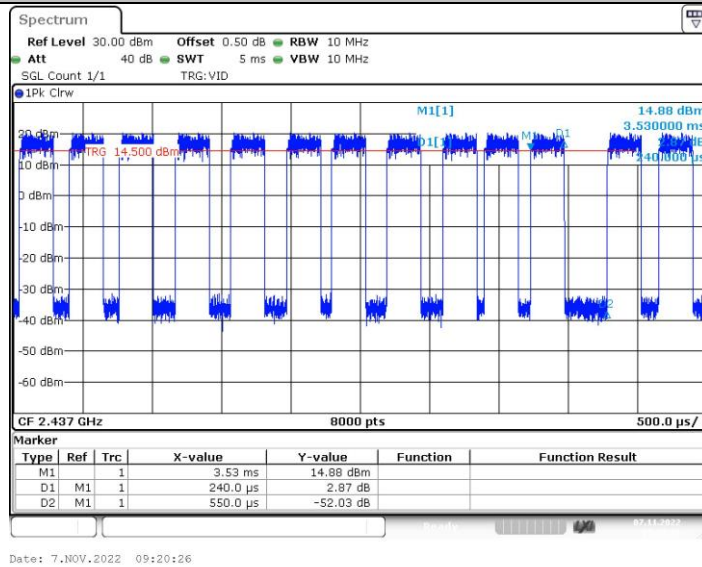
Fax: (86)755-27521011

Http://www.sz-ctc.org.cn

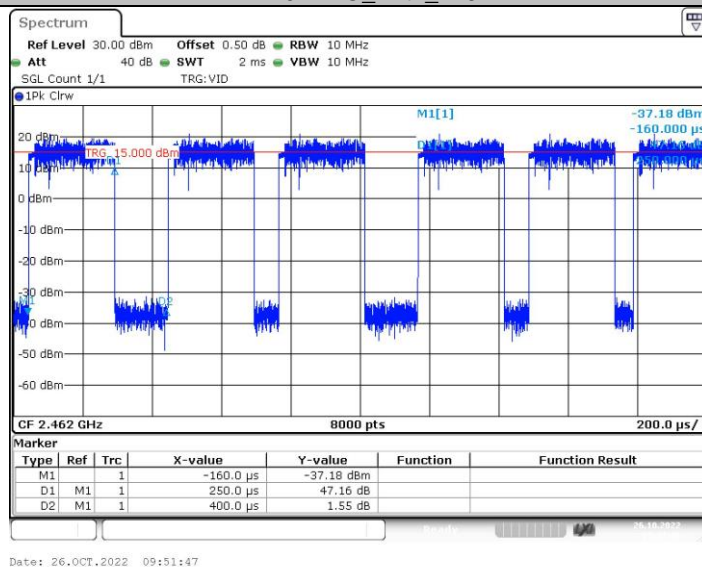
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11N20MIMO_Ant1_2437



11N20MIMO_Ant1_2462



11N40MIMO_Ant1_2422

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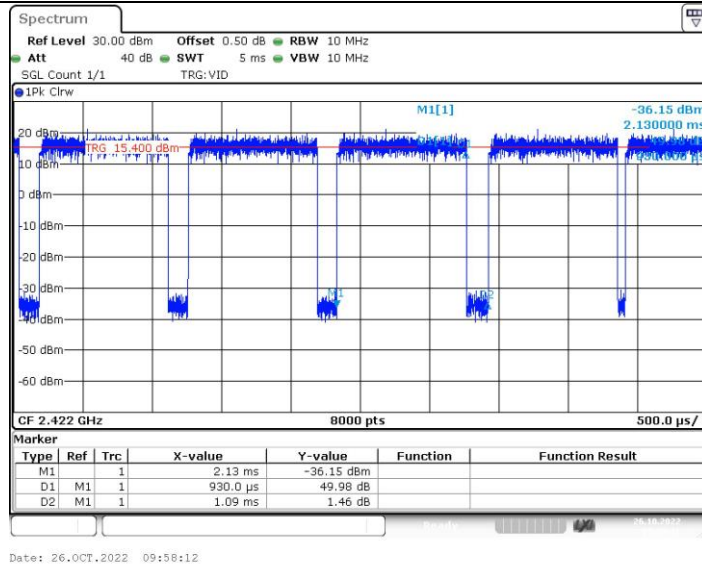
Tel.: (86)755-27521059

Fax: (86)755-27521011

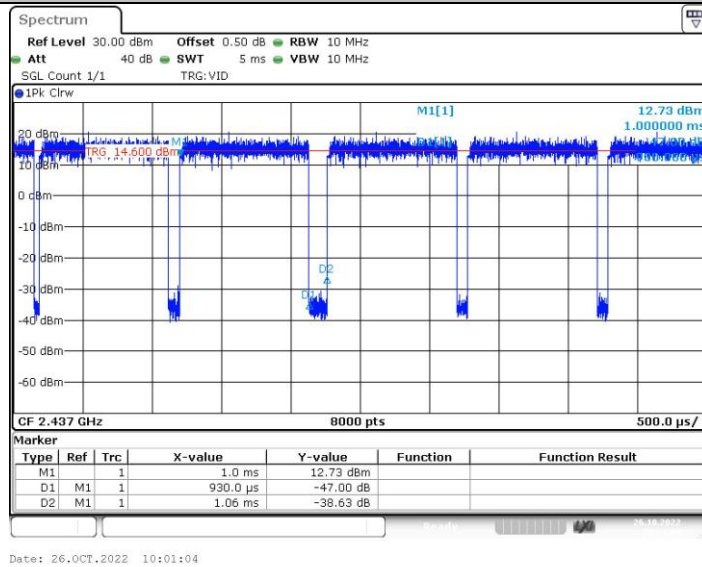
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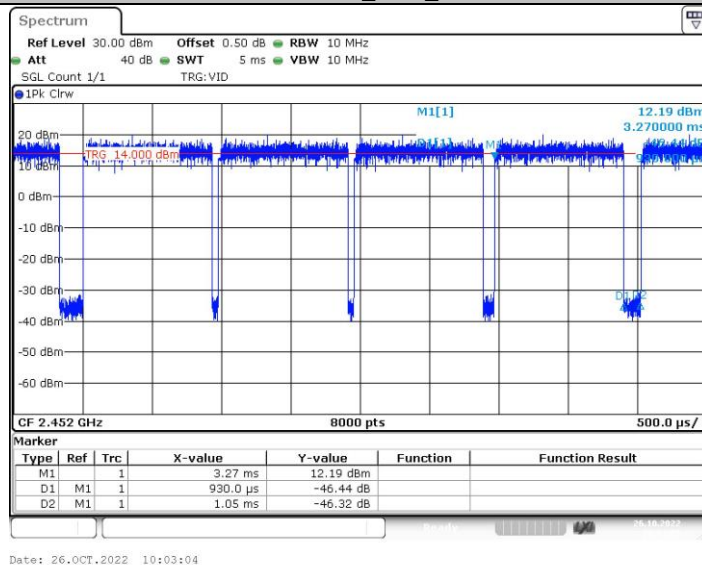
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11N40MIMO_Ant1_2437



11N40MIMO_Ant1_2452



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3.9. Antenna Requirement

Requirement

FCC CFR Title 47 Part 15 Subpart C Section 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. The use of a permanently attached antenna or of antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

FCC CFR Title 47 Part 15 Subpart C Section 15.247(c) (1)(i):

(i) Systems operating in the 2400~2483.5 MHz band that is used exclusively for fixed. Point-to-point operations may employ transmitting antennas with directional gain greater than 6dBi provided the maximum conducted output power of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6dBi.

Test Result

The directional gain of the antenna less than 6dBi, please refer to the EUT internal photographs antenna photo.

*****THE END*****