



Report No.: FR842412AD



FCC Test Report

FCC ID : 2AEUPBHALP021

Equipment : Wi-Fi enabled Video Doorbell

Brand Name : RING

Model Name : Video Doorbell Pro

Applicant : Ring, Inc

1523 26th St, Santa Monica, CA 90404, USA

Manufacturer : Chicony Electronics (Dong Guan) Co.,Ltd.

San Zhong Guan Li Qu, Qingxi Town, Dongguan City

Guangdong 523651 China

: 47 CFR FCC Part 15.247 Standard

The product was received on Apr. 24, 2018, and testing was started from Apr. 27, 2018 and completed on May 03, 2018. We, SPORTON INTERTIONAL INC. EMC & Wireless Communications Laboratory, would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.10-2013 and shown compliance with the applicable technical standards.

The report must not be used by the client to claim product certification, approval, or endorsement by TAF or any agency of government.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERTIONAL INC. EMC & Wireless Communications Laboratory, the test report shall not be reproduced except in full.

Approved by: Allen Lin

SPORTON INTERTIONAL INC. EMC & Wireless Communications Laboratory

No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.)

TEL: 886-3-3273456 FAX: 886-3-3270973

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History of this test report

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|------------|---------|-------------------------|--------------|
| FR842412AD | 01 | Initial issue of report | May 25, 2018 |
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Summary of Test Result

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| Report Clause | Ref. Std. Clause | Test Items | Result (PASS/FAIL) | Remark |
|------------------|---------------------|--|-----------------------|--------|
| 1.1.2 | 15.203 | Antenna Requirement | PASS | - |
| 3.1 | 15.207 | AC Power-line Conducted Emissions | PASS | - |
| 3.2 | 15.247(a) | 20dB Bandwidth | PASS | - |
| 3.2 | 15.247(a) | Carrier Frequency Separation | PASS | - |
| 3.3 | 15.247(b) | Maximum Conducted Output Power | PASS | - |
| 3.4 | 15.247(a) | Number of Hopping Frequencies and Hopping Bandedge | PASS | - |
| 3.5 | 15.247(a) | Time of Occupancy (Dwell Time) | PASS | - |
| 3.6 | 15.247(d) | Emissions in Non-restricted Frequency Bands | PASS | - |
| 3.7 | 15.247(d) | Emissions in Restricted Frequency Bands | PASS | - |

Reviewed by: Sam Tsai

Report Producer: Jackson Tsai

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1 General Description

1.1 Information

1.1.1 RF General Information

| Frequency Range (MHz) | Bluetooth Version | Ch. Frequency (MHz) | Channel Number |
|-----------------------|-------------------|---------------------|----------------|
| 2400-2483.5 | BR / EDR | 2402-2480 | 0-78 [79] |

| Band | Mode | BWch (MHz) | Nant |
|---------------|---------------|------------|------|
| 2.4-2.4835GHz | BT-BR(1Mbps) | 1 | 1TX |
| 2.4-2.4835GHz | BT-EDR(2Mbps) | 1 | 1TX |
| 2.4-2.4835GHz | BT-EDR(3Mbps) | 1 | 1TX |

Note:

- Bluetooth BR uses a GFSK (1Mbps).
- Bluetooth EDR uses a combination of $\pi/4$ -DQPSK (2Mbps) and 8DPSK (3Mbps).
- Bluetooth BR/EDR uses as a system using FHSS modulation.
- BWch is the nominal channel bandwidth.

1.1.2 Antenna Information

| Ant. | Port | Brand | Model Name | Antenna Type | Connector |
|------|------|-------|-------------------|--------------|----------------|
| 1 | 1 | = | Ring Wifi Antenna | PIFA Antenna | Fixed on board |

| 2.4 | 4G | 5 | G | ВТ | | |
|--------------------|---------------|--------------------|---------------|--------------------|---------------|--|
| Frequency (MHz) | Gain (dBi) | Frequency (MHz) | Gain (dBi) | Frequency (MHz) | Gain (dBi) | |
| 2412 | 1.37 | 5180 | 1.4 | 2402 | 1.37 | |
| 2417 | 1.37 | 5200 | 1.4 | 2440 / 2441 | 1.08 | |
| 2422 | 1.37 | 5240 | 2.5 | 2480 | 1.09 | |
| 2427 | 1.08 | 5190 | 1.4 | - | - | |
| 2432 | 1.08 | 5230 | 2.5 | - | - | |
| 2437 | 1.08 | 5745 | 3.12 | - | - | |
| 2442 | 1.08 | 5785 | 2.65 | - | - | |
| 2447 | 1.08 | 5825 | 1.67 | - | - | |
| 2452 | 1.08 | 5755 | 3.12 | - | - | |
| 2457 | 1.08 | 5795 | 2.65 | - | - | |
| 2462 | 1.08 | - | - | - | - | |

For 2.4 GHz function:

For IEEE 802.11b/g/n mode (1TX/1RX)

Only Ant. 1 (port 1) can be used as transmitting/receiving antenna.

For 5 GHz function:

For IEEE 802.11a/n mode (1TX/1RX)

Only Ant. 1 (port 1) can be used as transmitting/receiving antenna.

For Bluetooth function:

For Bluetooth mode (1TX/1RX)

Only Ant. 1 (port 1) can be used as transmitting/receiving antenna.

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FCC Test Report

1.1.3 EUT Information

| | Operational Condition | | | | | | | | |
|-------------|--|--------------|----------------------------|--------------------|-----------|---------------|---|----------------|--|
| EU1 | Power T | уре | From Battery / Transformer | | | | | | |
| EU1 | Function | า | \boxtimes | Point-to-multipo | oint | | | Point-to-point | |
| | | | | | Type of | EUT | | | |
| \boxtimes | Stand-alo | ne | | | | | | | |
| | Combine | d (EUT where | the | radio part is full | y integra | ated within a | a | nother device) | |
| | Combine | d Equipment | - Bra | and Name / Mod | el No.: | | | | |
| | Plug-in radio (EUT intended for a variety of host systems) | | | | | | | | |
| | Host System - Brand Name / Model No.: | | | | | | | | |
| | Other: | | | | | | | | |

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1.1.4 Mode Test Duty Cycle

| Mode | DC | DCF(dB) | T(s) | VBW(Hz) ≥ 1/T |
|---------------|-------|---------|--------|---------------|
| BT-BR(1Mbps) | 0.742 | 1.296 | 2.888m | 1k |
| BT-EDR(2Mbps) | 0.785 | 1.051 | 2.89m | 1k |
| BT-EDR(3Mbps) | 0.761 | 1.186 | 2.893m | 1k |

1.1.5 Table for Multiple Listing

| Difference | Description | | | | |
|--|--|--|--|--|--|
| SKU #1 | | | | | |
| SKU #2 | The complete the come one only the color is different | | | | |
| SKU #3 | The sample is the same one, only the color is different. | | | | |
| SKU #4 | | | | | |
| Note. For more detailed features description, please refer to the specifications or user's manual. | | | | | |

1.2 Testing Applied Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- 47 CFR FCC Part 15
- Public Notice DA 00-705
- ANSI C63.10-2013

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1.3 Testing Location Information

| | Testing Location | | | | | | | |
|-------------|--|---|---|--------------------------|---------|-----|---------------------------------------|--|
| \boxtimes | HWA YA | WA YA ADD : No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.) | | | | | | |
| | | TEL | : | 886-3-327-3456 | FAX : | | 886-3-327-0973 | |
| | Test site Designation No. TW1190 with FCC. | | | | | | | |
| | JHUBEI | ADD | : | No.8, Ln. 724, Bo'ai St. | , Zhube | i C | City, Hsinchu County, Taiwan (R.O.C.) | |
| | TEL: 886-3-656-9065 FAX: 886-3-656-9085 | | | | | | | |
| | Test site Designation No. TW0006 with FCC. | | | | | | | |

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| Test Condition | Test Site No. | Test Engineer | Test Environment | Test Date |
|----------------|---------------|---------------|------------------|-------------|
| AC Conduction | CO04-HY | Daniel | 22.8°C / 53% | 02/May/2018 |
| RF Conducted | TH07-HY | Andy | 23.5°C / 65% | 02/May/2018 |
| Radiated | 03CH09-HY | Jerry | 23.5°C / 55% | 03/May/2018 |

1.4 Measurement Uncertainty

ISO/IEC 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report. The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor (k=2)

| Test Items | Uncertainty | Remark |
|--------------------------------------|-------------|--------------------------|
| Conducted Emission (150kHz ~ 30MHz) | 3.6 dB | Confidence levels of 95% |
| Radiated Emission (9kHz ~ 30MHz) | 3.0 dB | Confidence levels of 95% |
| Radiated Emission (30MHz ~ 1,000MHz) | 4.3 dB | Confidence levels of 95% |
| Radiated Emission (1GHz ~ 18GHz) | 3.9 dB | Confidence levels of 95% |
| Radiated Emission (18GHz ~ 40GHz) | 3.5 dB | Confidence levels of 95% |
| Conducted Emission | 1.3 dB | Confidence levels of 95% |
| Temperature | 0.7 °C | Confidence levels of 95% |
| Humidity | 4 % | Confidence levels of 95% |

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2 Test Configuration of EUT

2.1 Test Condition

| RF Conducted | Abbreviation | Remark |
|--------------|--------------|--------|
| TnomVnom | Tnom | 20°C |
| - | Vnom | 120V |

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2.2 Test Channel Mode

| Test Software | DoS |
|---------------|-----|
| rest contware | 200 |

| Mode | Power Setting |
|---------------|---------------|
| BT-BR(1Mbps) | - |
| 2402MHz | Default |
| 2441MHz | Default |
| 2480MHz | Default |
| BT-EDR(2Mbps) | - |
| 2402MHz | Default |
| 2441MHz | Default |
| 2480MHz | Default |
| BT-EDR(3Mbps) | - |
| 2402MHz | Default |
| 2441MHz | Default |
| 2480MHz | Default |

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2.3 The Worst Case Measurement Configuration

| Т | he Worst Case Mode for Following Conformance Tests |
|----------------|--|
| Tests Item | AC power-line conducted emissions |
| Condition | AC power-line conducted measurement for line and neutral |
| Operating Mode | CTX |
| 1 | AC mode |

| Th | The Worst Case Mode for Following Conformance Tests | |
|----------------|--|--|
| Tests Item | 20dB Bandwidth Carrier Frequency Separation Maximum Conducted Output Power Number of Hopping Frequencies Hopping Bandedge Time of Occupancy (Dwell Time) Emissions in Non-restricted Frequency Bands | |
| Test Condition | Conducted measurement at transmit chains | |

| Th | e Worst Case Mode for Fo | ollowing Conformance Te | sts |
|-----------------------------|-----------------------------|--|-----------------------------|
| Tests Item | Emissions in Restricted Fr | equency Bands | |
| Test Condition | regardless of spatial multi | antenna assembly (multiple plexing MIMO configuratior antenna gain of each anten |), the radiated test should |
| Operating Mode < 1GHz | CTX | | |
| 1 | AC mode | | |
| Operating Mode > 1GHz | CTX | | |
| | X Plane | Y Plane | Z Plane |
| Orthogonal Planes of EUT | | | |
| Worst Planes of EUT | | | V |

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2.4 Accessories and Support Equipment

| | | Accesso | ries | |
|---------|--------------|------------------|------------|--------|
| 5 | Brand Name | Fuji | Model Name | 334060 |
| Battery | Power Rating | 3.8 Vdc, 300 mAh | Туре | Li-ion |

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Reminder: Regarding to more detail and other information, please refer to user manual.

2.5 Support Equipment

| | Support Equipment – RF Conducted | | | |
|-----|----------------------------------|------------|------------|--------|
| No. | Equipment | Brand Name | Model Name | FCC ID |
| 1 | Notebook | DELL | E5410 | DoC |
| 2 | Adapter for NB | DELL | HA65NM130 | DoC |
| 3 | Transformer | TRIAD | VPL24-1100 | DoC |

Note: Support equipment No.3 was provided by customer.

| | | Support Equipment – R | adiated Emission | |
|-----|-------------|-----------------------|------------------|--------|
| No. | Equipment | Brand Name | Model Name | FCC ID |
| 1 | Transformer | TRIAD | VPL24-1100 | - |

Note: Support equipment No.1 was provided by customer.

| | | Support Equipment – | AC Conduction | |
|-----|-------------|---------------------|---------------|--------|
| No. | Equipment | Brand Name | Model Name | FCC ID |
| 1 | Transformer | TRIAD | VPL24-1100 | - |

Note: Support equipment No.1 was provided by customer.

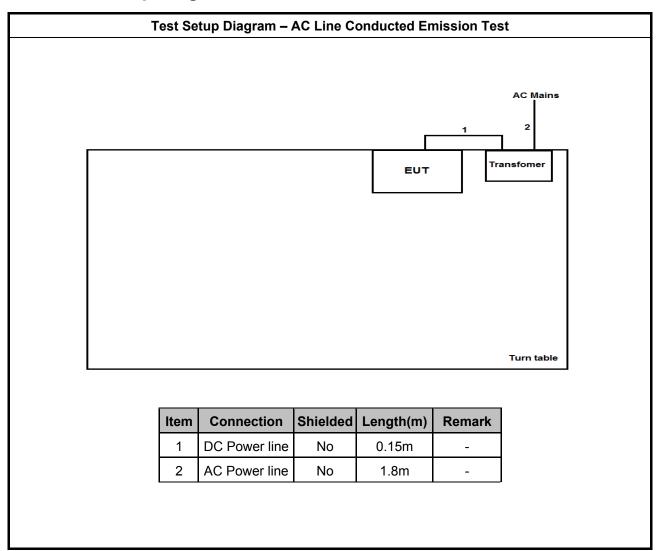
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Test Setup Diagram 2.6



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Test Setup Diagram – Radiated Test AC Mains Transformer **EUT** Turn Table Item Connection Shielded Length(m) Remark 1 AC Power line No 1.8m 2 DC Power line No 0.15m

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Transmitter Test Result 3

AC Power-line Conducted Emissions 3.1

3.1.1 AC Power-line Conducted Emissions Limit

| AC Power-line Conducted Emissions Limit | | |
|---|------------|-----------|
| Frequency Emission (MHz) | Quasi-Peak | Average |
| 0.15-0.5 | 66 - 56 * | 56 - 46 * |
| 0.5-5 | 56 | 46 |
| 5-30 | 60 | 50 |

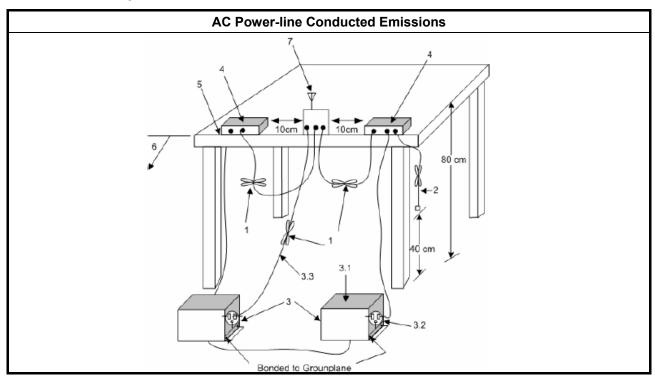
3.1.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

Test Procedures 3.1.3

| Ī | Test Method |
|---|---|
| Ī | ■ Refer as ANSI C63.10-2013, clause 6.2 foray power-line conducted emissions. |

3.1.4 **Test Setup**



Test Result of AC Power-line Conducted Emissions

Refer as Appendix A

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3.2 20dB Bandwidth and Carrier Frequency Separation

3.2.1 20dB Bandwidth and Carrier Frequency Separation Limit

| | 20dB Bandwidth and Carrier Frequency Separation Limit for Frequency Hopping Systems | | | | | | |
|--|---|---|--|--|--|--|--|
| • | ■ 2400-2483.5 MHz Band: | | | | | | |
| | • | N ≥75 and ChS ≥ MAX (20 dB bandwidth, 25 kHz). | | | | | |
| | • | 75>N ≥ 15 and ChS ≥ MAX (20 dB bandwidth 2/3,25 kHz). | | | | | |
| N:Number of Hopping Frequencies; ChS: Hopping Channel Separation | | | | | | | |

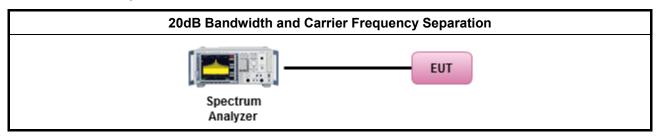
3.2.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

3.2.3 Test Procedures

Test Method Refer as ANSI C63.10-2013, clause 6.9.2 for 20 dB bandwidth measurement. Refer as ANSI C63.10-2013, clause 7.8.2 for carrier frequency separation measurement.

3.2.4 Test Setup



3.2.5 Test Result of 20dB Bandwidth

Refer as Appendix B

3.2.6 Test Result of Carrier Frequency Separation

Refer as Appendix B

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3.3 Maximum Conducted Output Power

3.3.1 Maximum Conducted Output Power Limit

| | Maximum Conducted Output Power Limit | | | | | |
|-----|---------------------------------------|--|--|--|--|--|
| • | ■ 2400-2483.5 MHz Band: | | | | | |
| | ■ N ≥ 75; Power 30dBm; EIRP 36dBm | | | | | |
| | ■ 75 >N ≥ 15; Power 21dBm; EIRP 27dBm | | | | | |
| N:N | N:Number of Hopping Frequencies | | | | | |

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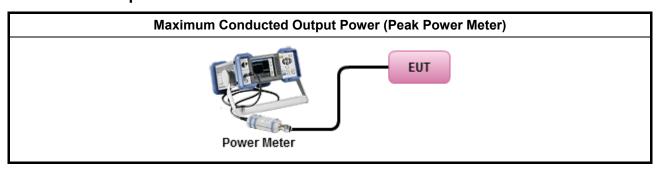
3.3.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

3.3.3 Test Procedures

| Ī | Test Method |
|---|---|
| I | ■ Refer as ANSI C63.10-2013, clause 7.8.5 for output power measurement. |

3.3.4 Test Setup



3.3.5 Test Result of Maximum Conducted Output Power

Refer as Appendix C

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3.4 Number of Hopping Frequencies and Hopping Bandedge

3.4.1 Number of Hopping Frequencies Limit

| Number of Hopping Frequencies Limit | | | | | |
|--|--|--|--|--|--|
| • 2400-2483.5 MHz Band: | | | | | |
| | N ≥ 75 and ChS ≥ MAX (20 dB bandwidth, 25 kHz). | | | | |
| | ■ 75 >N ≥ 15 and ChS ≥ MAX (20 dB bandwidth 2/3,25 kHz). | | | | |
| N:Number of Hopping Frequencies; ChS: Hopping Channel Separation | | | | | |

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3.4.2 Hopping Bandedge Limit

Refer clause 3.6.1 and clause 3.7.1

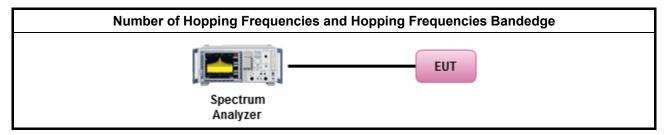
3.4.3 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

3.4.4 Test Procedures

| Test Method | | | | | |
|---|--|--|--|--|--|
| | ■ Refer as ANSI C63.10-2013, clause 7.8.3 for number of hopping frequencies measurement. | | | | |
| Refer as ANSI C63.10-2013, clause 7.8.6 for hopping frequencies Bandedge measurement. | | | | | |

3.4.5 Test Setup



3.4.6 Test Result of Number of Hopping Frequencies

Refer as Appendix D

3.4.7 Test Result of Number of Hopping Frequencies Bandedge

Refer as Appendix D

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3.5 Time of Occupancy (Dwell Time)

3.5.1 Time of Occupancy (Dwell Time) Limit

| Time of Occupancy (Dwell Time) Limit for Frequency Hopping Systems | | | | | |
|--|--------------------------------------|--|--|--|--|
| - | ■ 2400-2483.5 MHz Band: | | | | |
| | ■ N ≥ 75; 0.4s in N x 0.4 period | | | | |
| | ■ 75 >N ≥ 15; 0.4s in N x 0.4 period | | | | |
| N:N | N:Number of Hopping Frequencies | | | | |

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3.5.2 Measuring Instruments

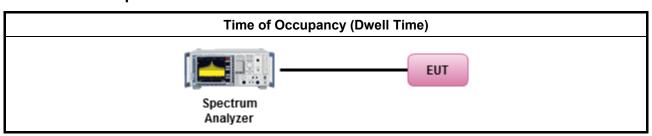
Refer a test equipment and calibration data table in this test report.

3.5.3 Test Procedures

Test Method

- Refer as ANSI C63.10-2013, clause 7.8.4 for dwell time measurement.
- Bluetooth ACL packets can be 1, 3, or 5 time slots. Following as dwell time. Operate DH5 at maximum dwell time and maximum duty cycle.
 - The DH5 packet can cover up to 5 time slots. Operate DH5 at maximum dwell time and maximum duty cycle. A maximum length packet has duration of 5 time slots. The hopping rate is 1600 hops/second so the maximum dwell time is 5/1600 seconds, or 3.125ms.DH5 Packet permit maximum 1600/79 / 6 = 3.37 hops per second in each channel.

3.5.4 Test Setup



3.5.5 Test Result of Time of Occupancy (Dwell Time)

Refer as Appendix E

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3.6 Emissions in Non-restricted Frequency Bands

3.6.1 Emissions in Non-restricted Frequency Bands Limit

| Un-restricted Ban | d Emissions Limit |
|-----------------------------|-------------------|
| RF output power procedure | Limit (dB) |
| Peak output power procedure | 20 |

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Note 1: If the peak output power procedure is used to measure the fundamental emission power to demonstrate compliance to requirements, then the peak conducted output power measured within any 100 kHz outside the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum measured in-band peak PSD level.

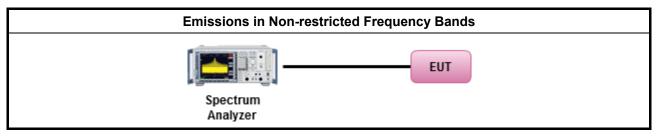
3.6.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

3.6.3 Test Procedures

| Test Method |
|---|
| Refer as ANSI C63.10-2013, clause 7.8.8 for unwanted emissions into non-restricted bands. |

3.6.4 Test Setup



3.6.5 Test Result of Emissions in Non-restricted Frequency Bands

Refer as Appendix F

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Report Version

: 01

Report Template No.: HE1-C9 Ver2.0

FCC Test Report No.: FR842412AD

3.7 Emissions in Restricted Frequency Bands

3.7.1 Emissions in Restricted Frequency Bands Limit

| Restricted Band Emissions Limit | | | | | | |
|---------------------------------|-----------------------|-------------------------|----------------------|--|--|--|
| Frequency Range (MHz) | Field Strength (uV/m) | Field Strength (dBuV/m) | Measure Distance (m) | | | |
| 0.009~0.490 | 2400/F(kHz) | 48.5 - 13.8 | 300 | | | |
| 0.490~1.705 | 24000/F(kHz) | 33.8 - 23 | 30 | | | |
| 1.705~30.0 | 30 | 29 | 30 | | | |
| 30~88 | 100 | 40 | 3 | | | |
| 88~216 | 150 | 43.5 | 3 | | | |
| 216~960 | 200 | 46 | 3 | | | |
| Above 960 | 500 | 54 | 3 | | | |

- Note 1: Test distance for frequencies at or above 30 MHz, measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse of linear distance for field-strength measurements, inverse of linear distance-squared for power-density measurements).
- Note 2: Test distance for frequencies at below 30 MHz, measurements may be performed at a distance closer than the EUT limit distance; however, an attempt should be made to avoid making measurements in the near field. When performing measurements below30 MHz at a closer distance than the limit distance, the results shall be extrapolated to the specified distance by either making measurements at a minimum of two or more distances on at least one radial to determine the proper extrapolation factor or by using the square of an inverse linear distance extrapolation factor (40 dB / decade). The test report shall specify the extrapolation method used to determine compliance of the EUT.
- Note 3: Using the distance of 1m during the test for above 18 GHz, and the test value to correct for the distance factor at 3m.

3.7.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

3.7.3 Test Procedures

Test Method

- The average emission levels shall be measured in [hopping duty factor].
- Refer as ANSI C63.10; clause 6.9.2.2 band-edge testing shall be performed at the lowest frequency channel and highest frequency channel within the allowed operating band.
- For the transmitter unwanted emissions shall be measured using following options below:
 - Refer as ANSI C63.10, clause 4.1.4.2.1 QP value.
 - Refer as ANSI C63.10, clause 4.1.4.2.2 measurement procedure peak.
 - Refer as ANSI C63.10, clause 4.1.4.2.4 average value of hopping pulsed emissions.

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Report Version

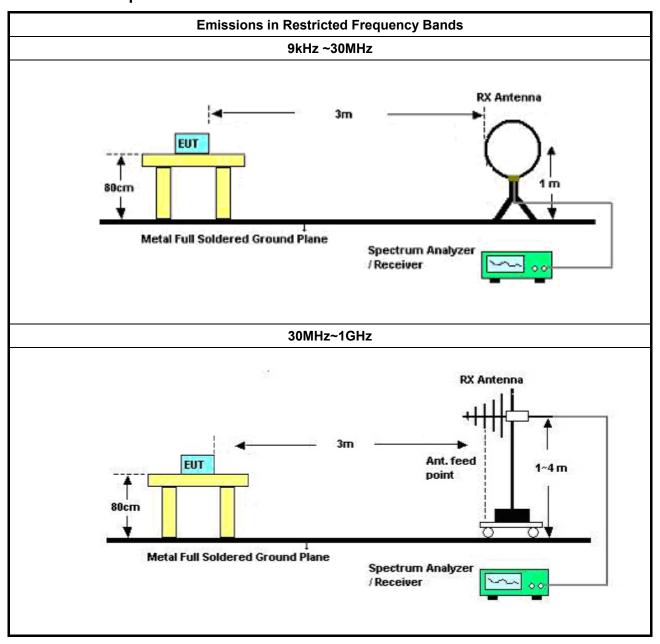
: 01

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Report No.: FR842412AD

3.7.4 Test Setup

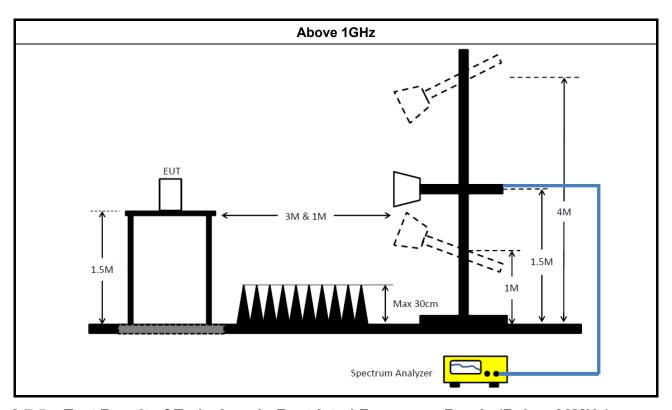


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: 01

3.7.5 Test Result of Emissions in Restricted Frequency Bands (Below 30MHz)

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

3.7.6 Test Result of Emissions in Restricted Frequency Bands

Refer as Appendix G

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4 Test Equipment and Calibration Data

Instrument for AC Conduction

| Strainent for Ac Conduction | | | | | | |
|--------------------------------------|-----------------|-------------|----------------|-------------------------|---------------------|-------------------------|
| Instrument | Manufacturer | Model No. | Serial No. | Spec. | Calibration Date | Calibration Due Date |
| EMI Test Receiver | Rohde & Schwarz | ESCS 30 | 838251/003 | 9 kHz ~ 2.75 GHz | 13/Jun/2017 | 12/Jun/2018 |
| LISN | R&S | ENV216 | 101295 | 9 kHz ~ 30 MHz | 17/Nov/2017 | 16/Nov/2018 |
| RF Cable-CON | HUBER+SUHNER | RG213/U | 07611832020001 | 9 kHz ~ 30 MHz | 06/Oct/2017 | 05/Oct/2018 |
| AC POWER | APC | AFC-11005G | F310050055 | 47 Hz ~ 63 Hz 5~300V | NCR | NCR |
| Impuls Begrenzer Pulse Limiter | SCHWARZBECK | VTSD 9561-F | 9561-F041 | 9 kHz ~ 30 MHz | 12/Oct/2017 | 11/Oct/2018 |

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NCR : Non-Calibration Require

Instrument for Radiated Test

| Instrument | Manufacturer | Model No. | Serial No. | Spec. | Calibration Date | Calibration Due Date |
|--|--------------|--------------------------|-----------------|------------------|---------------------|-------------------------|
| 3m Semi Anechoic Chamber | TDK | SAC-3M | 03CH09-HY | 30 MHz ~ 1 GHz | 23/Apr/2018 | 22/Apr/2019 |
| 3m Semi Anechoic Chamber | TDK | SAC-3M | 03CH09-HY | 1 GHz ~ 18 GHz | 20/Jun/2017 | 19/Jun/2018 |
| Microwave Preamplifier | Agilent | 8449B | 3008A02326 | 1 GHz ~ 26.5 GHz | 17/Jul/2017 | 16/Jul/2018 |
| Amplifier | EMC | EMC9135 | 980232 | 9 kHz ~ 1 GHz | 27/Apr/2018 | 26/Apr/2019 |
| EXA Signal Analyzer | KEYSIGHT | N9010A | MY54200885 | 10 Hz ~ 44 GHz | 20/Jul/2017 | 19/Jul/2018 |
| Bilog Antenna & 5dB Attenuator | TESEQ & MTJ | CBL6111D & MTJ6102-05 | 35418 / 3 | 30 MHz ~ 1 GHz | 09/Sep/2017 | 08/Sep/2018 |
| Double Ridged Guide Horn Antenna | SCHWARZBECK | BBHA 9120 D | BBHA9120 D 1534 | 1 GHz ~ 18 GHz | 30/Apr/2018 | 29/Apr/2019 |
| Broadband Horn Antenna | SCHWARZBECK | BBHA 9170 | BBHA9170614 | 18 GHz ~ 40 GHz | 09/Feb/2018 | 08/Feb/2019 |
| Preamplifier | MITEQ | TTA1840-35-H G | 1864481 | 18 GHz ~ 40 GHz | 24/Aug/2017 | 23/Aug/2018 |
| Loop Antenna | TESEQ | HLA 6120 | 31244 | 9k – 30 MHz | 29/Mar/2018 | 28/Mar/2019 |
| RF Cable-R03m | Jye Bao | RG142 | CB031 | 9 kHz ~ 1 GHz | 02/Feb/2018 | 01/Feb/2019 |
| RF Cable-high | SUHNER | SUCOFLEX104 | MY34918/4 | 1 GHz ~ 40 GHz | 02/Feb/2018 | 01/Feb/2019 |

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FCC Test Report

Instrument for Conducted Test

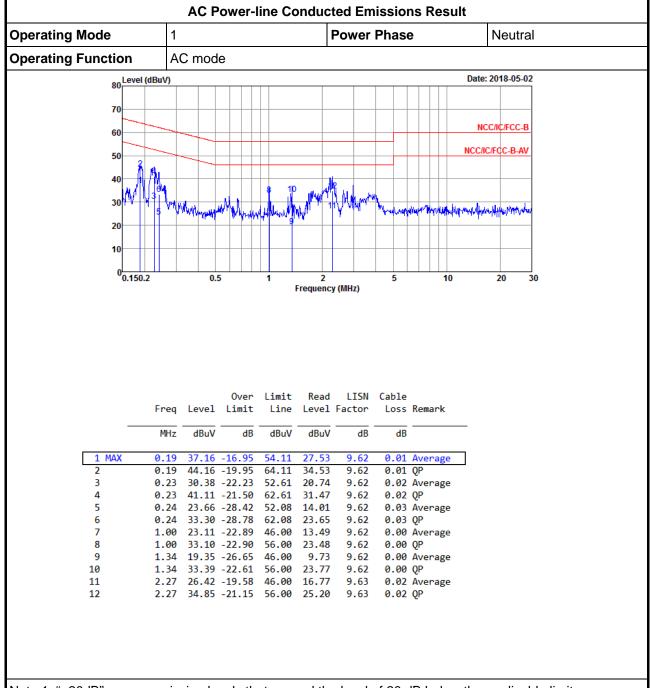
| Instrument | Manufacturer | Model No. | Serial No. | Spec. | Calibration Date | Calibration Due Date |
|----------------------|--------------|--------------|------------|-------------------|---------------------|-------------------------|
| Spectrum Analyzer | R&S | FSV 40 | 101515 | 9 kHz ~ 40 GHz | 08/Dec/2017 | 07/Dec/2018 |
| Power Sensor | Anritsu | MA2411B | 1339407 | 300 MHz ~ 40 GHz | 10/May/2017 | 09/May/2018 |
| Power Meter | Anritsu | ML2495A | 1517010 | 300 MHz ~ 40 GHz | 06/Nov/2017 | 05/Nov/2018 |
| RF Cable-0.2m | HUBER+SUHNER | SUCOFLEX_104 | MY10710/4 | 30 MHz ~ 26.5 GHz | 25/Aug/2017 | 24/Aug/2018 |
| RF Cable-0.2m | HUBER+SUHNER | SUCOFLEX_104 | MY10709/4 | 30 MHz ~ 26.5 GHz | 25/Aug/2017 | 24/Aug/2018 |
| RF Cable-0.5m | HUBER+SUHNER | SUCOFLEX_104 | MY10713/4 | 30 MHz ~ 26.5 GHz | 25/Aug/2017 | 24/Aug/2018 |
| Signal Generator | R&S | SMR40 | 100116 | 10 MHz ~ 40 GHz | 27/Jul/2017 | 26/Jul/2018 |

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AC Power-line Conducted Emissions

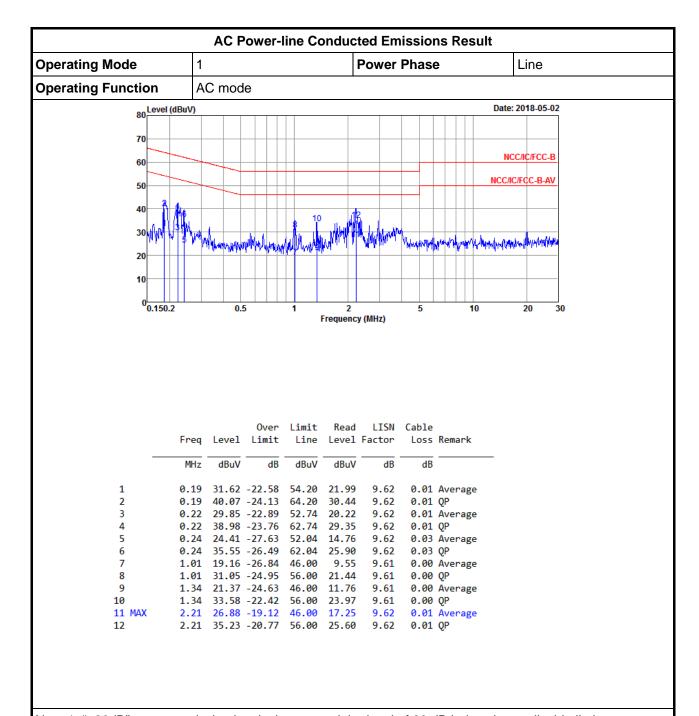


Note 1: ">20dB" means emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found emissions (No emissions were detected.)

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Note 1: ">20dB" means emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found emissions (No emissions were detected.)

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EBW-FS Result Appendix B

Summary

| Mode | Max-N dB | Max-OBW | ITU-Code | Min-N dB | Min-OBW |
|---------------|----------|----------|----------|----------|----------|
| | (Hz) | (Hz) | | (Hz) | (Hz) |
| 2.4-2.4835GHz | - | - | - | - | - |
| BT-BR(1Mbps) | 925k | 887.056k | 887KF1D | 923.75k | 883.308k |
| BT-EDR(2Mbps) | 1.338M | 1.226M | 1M23G1D | 1.335M | 1.219M |
| BT-EDR(3Mbps) | 1.285M | 1.222M | 1M22G1D | 1.279M | 1.217M |

Max-N dB = Maximum 20dB down bandwidth; Max-OBW = Maximum 99% occupied bandwidth; Min-N dB = Minimum 20dB down bandwidth; Min-OBW = Minimum 99% occupied bandwidth;

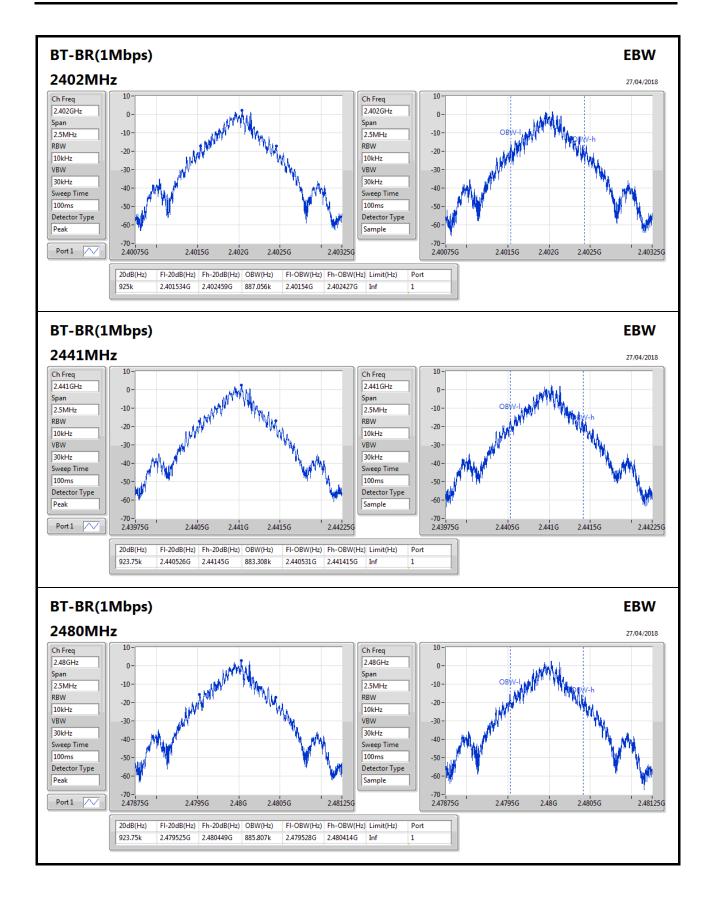
Result

| Mode | Result | Limit | Port 1-N dB | Port 1-OBW |
|---------------|--------|-------|-------------|------------|
| | | (Hz) | (Hz) | (Hz) |
| BT-BR(1Mbps) | - | - | - | - |
| 2402MHz | Pass | Inf | 925k | 887.056k |
| 2441MHz | Pass | Inf | 923.75k | 883.308k |
| 2480MHz | Pass | Inf | 923.75k | 885.807k |
| BT-EDR(2Mbps) | - | - | - | - |
| 2402MHz | Pass | Inf | 1.335M | 1.226M |
| 2441MHz | Pass | Inf | 1.336M | 1.223M |
| 2480MHz | Pass | Inf | 1.338M | 1.219M |
| BT-EDR(3Mbps) | - | - | - | - |
| 2402MHz | Pass | Inf | 1.285M | 1.217M |
| 2441MHz | Pass | Inf | 1.284M | 1.218M |
| 2480MHz | Pass | Inf | 1.279M | 1.222M |

Port X-N dB = Port X 20dB down bandwidth; Port X-OBW = Port X 99% occupied bandwidth;

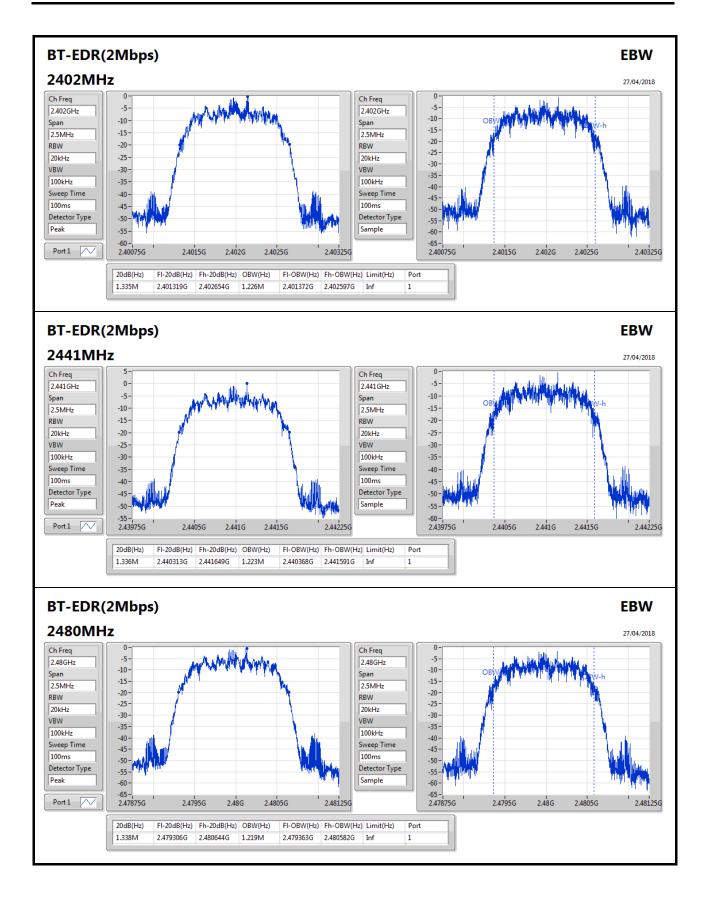
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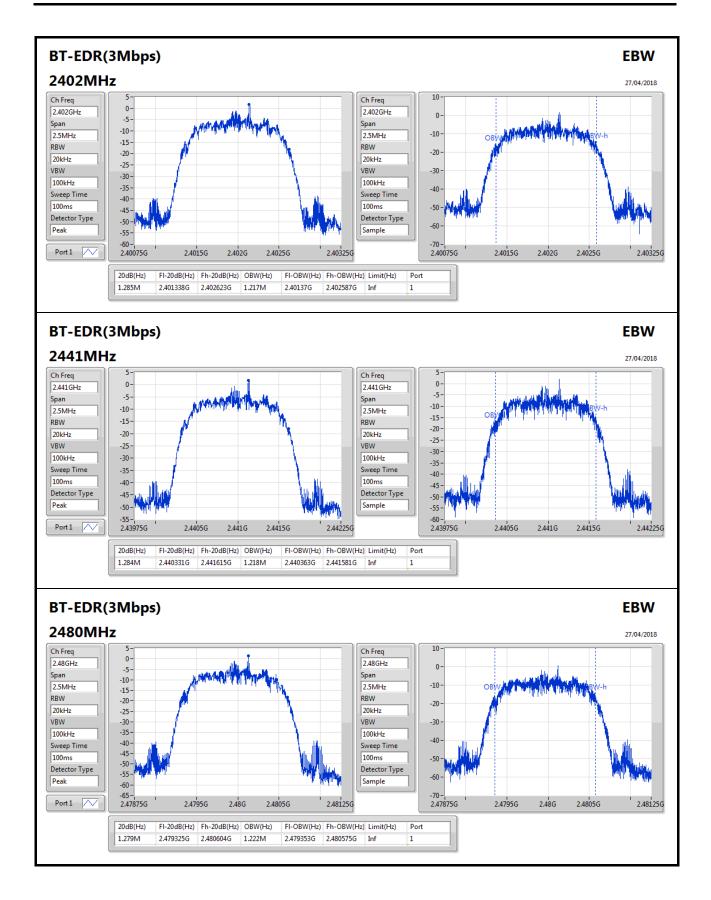
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Appendix B

Summary

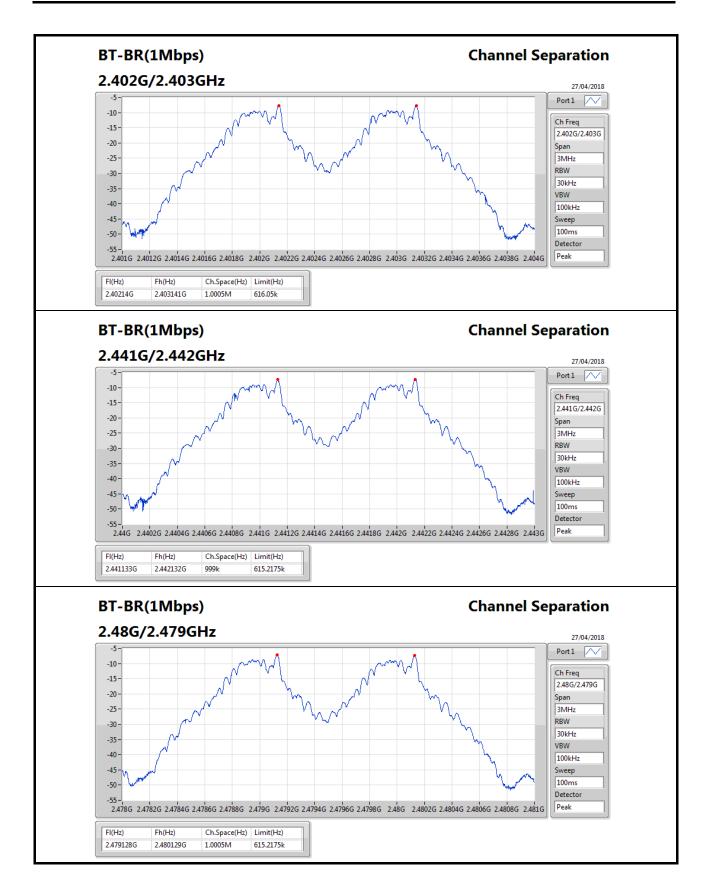
| Mode | Max-Space | Min-Space | |
|---------------|-----------|-----------|--|
| | (Hz) | (Hz) | |
| 2.4-2.4835GHz | - | - | |
| BT-BR(1Mbps) | 1.0005M | 999k | |
| BT-EDR(2Mbps) | 1.0005M | 999k | |
| BT-EDR(3Mbps) | 1.002M | 1.0005M | |

Result

| Mode | Result | FI | Fh | Ch.Space | Limit |
|---------------|--------|-----------|-----------|----------|-----------|
| | | (Hz) | (Hz) | (Hz) | (Hz) |
| BT-BR(1Mbps) | - | - | - | - | - |
| 2402MHz | Pass | 2.40214G | 2.403141G | 1.0005M | 616.05k |
| 2441MHz | Pass | 2.441133G | 2.442132G | 999k | 615.2175k |
| 2480MHz | Pass | 2.479128G | 2.480129G | 1.0005M | 615.2175k |
| BT-EDR(2Mbps) | - | - | - | - | - |
| 2402MHz | Pass | 2.402143G | 2.403144G | 1.0005M | 889.11k |
| 2441MHz | Pass | 2.441136G | 2.442135G | 999k | 889.776k |
| 2480MHz | Pass | 2.479128G | 2.480129G | 1.0005M | 891.108k |
| BT-EDR(3Mbps) | - | - | - | - | - |
| 2402MHz | Pass | 2.402139G | 2.403139G | 1.0005M | 855.81k |
| 2441MHz | Pass | 2.441133G | 2.442135G | 1.002M | 855.144k |
| 2480MHz | Pass | 2.479124G | 2.480126G | 1.002M | 851.814k |

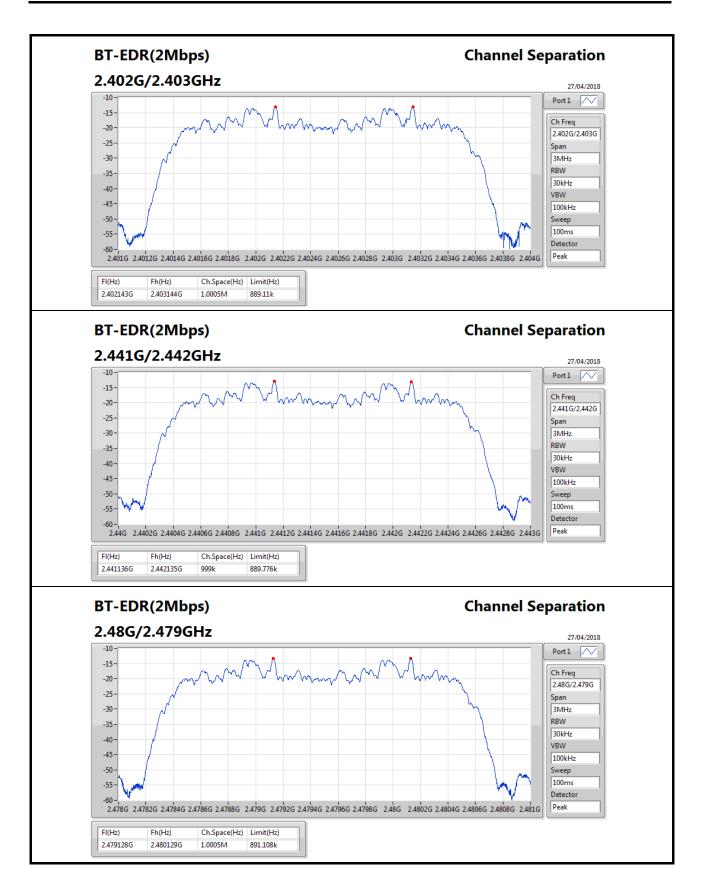
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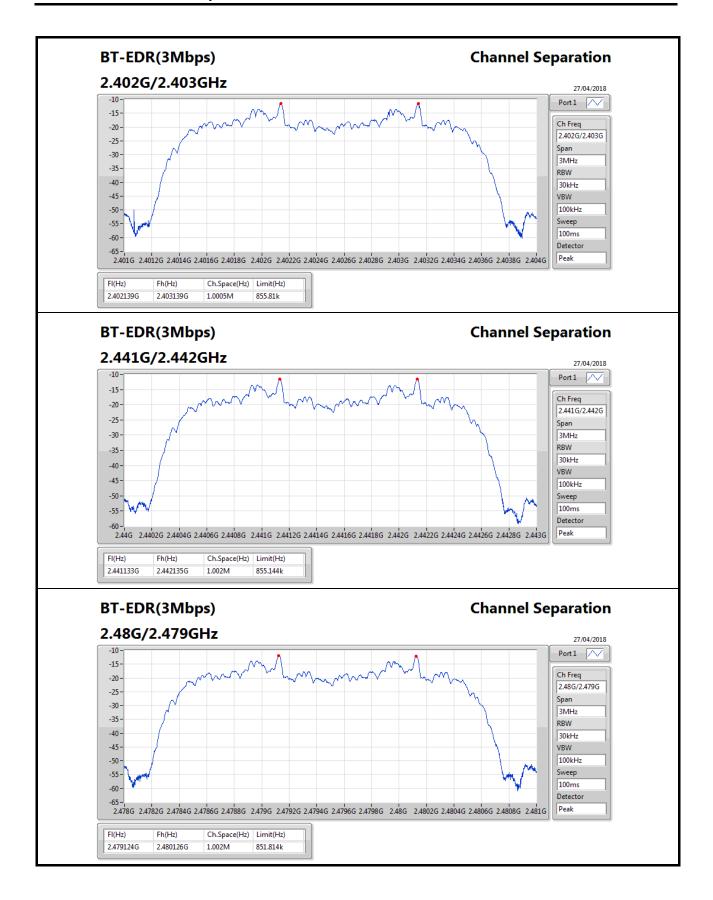
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PKPower Result Appendix C

Summary

| Mode | Power | Power |
|---------------|-------|---------|
| | (dBm) | (W) |
| 2.4-2.4835GHz | - | - |
| BT-BR(1Mbps) | 8.65 | 0.00733 |
| BT-EDR(2Mbps) | 7.35 | 0.00543 |
| BT-EDR(3Mbps) | 7.43 | 0.00553 |

Result

| Mode | Result | Gain | Power | Power Limit |
|---------------|--------|-------|-------|-------------|
| | | (dBi) | (dBm) | (dBm) |
| BT-BR(1Mbps) | - | - | - | - |
| 2402MHz | Pass | 1.37 | 8.21 | 21.00 |
| 2441MHz | Pass | 1.08 | 8.64 | 21.00 |
| 2480MHz | Pass | 1.09 | 8.65 | 21.00 |
| BT-EDR(2Mbps) | - | - | - | - |
| 2402MHz | Pass | 1.37 | 6.97 | 21.00 |
| 2441MHz | Pass | 1.08 | 7.22 | 21.00 |
| 2480MHz | Pass | 1.09 | 7.35 | 21.00 |
| BT-EDR(3Mbps) | - | - | - | - |
| 2402MHz | Pass | 1.37 | 7.21 | 21.00 |
| 2441MHz | Pass | 1.08 | 7.43 | 21.00 |
| 2480MHz | Pass | 1.09 | 7.22 | 21.00 |

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AV Power-FS Result

Summary

| Mode | Power | Power |
|---------------|-------|---------|
| | (dBm) | (W) |
| 2.4-2.4835GHz | - | - |
| BT-BR(1Mbps) | 8.49 | 0.00706 |
| BT-EDR(2Mbps) | 4.60 | 0.00288 |
| BT-EDR(3Mbps) | 4.52 | 0.00283 |

Result

| Mode | Result | Gain | Power | Power Limit |
|---------------|--------|-------|-------|-------------|
| | | (dBi) | (dBm) | (dBm) |
| BT-BR(1Mbps) | - | - | - | - |
| 2402MHz | Pass | 1.37 | 7.91 | 21.00 |
| 2441MHz | Pass | 1.08 | 8.39 | 21.00 |
| 2480MHz | Pass | 1.09 | 8.49 | 21.00 |
| BT-EDR(2Mbps) | - | - | - | - |
| 2402MHz | Pass | 1.37 | 4.30 | 21.00 |
| 2441MHz | Pass | 1.08 | 4.47 | 21.00 |
| 2480MHz | Pass | 1.09 | 4.60 | 21.00 |
| BT-EDR(3Mbps) | - | - | - | - |
| 2402MHz | Pass | 1.37 | 4.36 | 21.00 |
| 2441MHz | Pass | 1.08 | 4.52 | 21.00 |
| 2480MHz | Pass | 1.09 | 4.12 | 21.00 |

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Appendix D

SPORTON LAB.

Summary

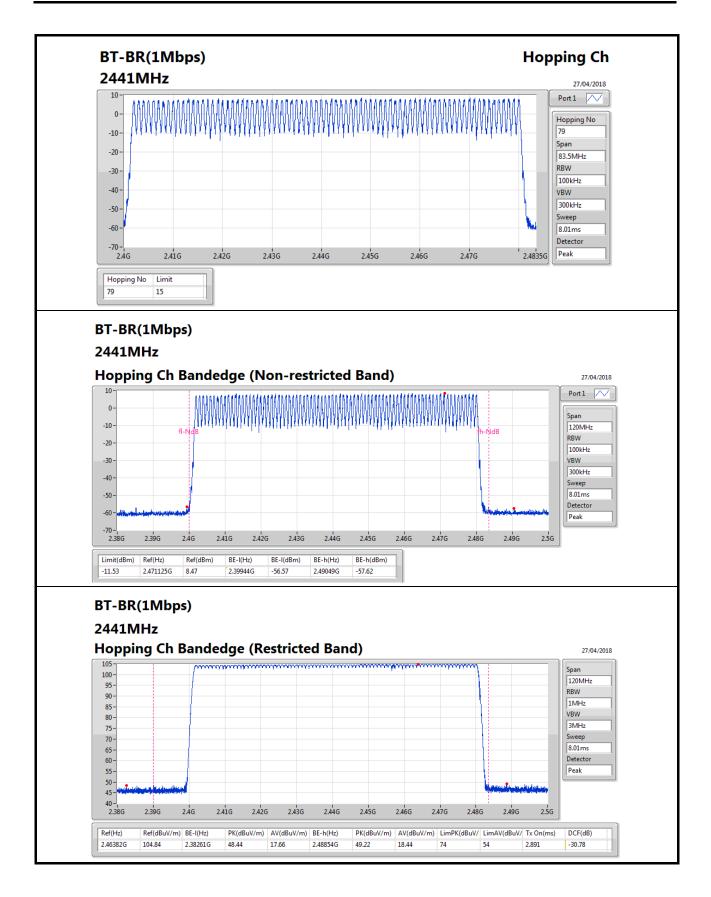
| Mode | Max-Hop No | | |
|---------------|------------|--|--|
| | | | |
| 2.4-2.4835GHz | - | | |
| BT-BR(1Mbps) | 79 | | |
| BT-EDR(2Mbps) | 79 | | |
| BT-EDR(3Mbps) | 79 | | |

Result

| Mode | Result | Hopping No | Limit |
|---------------|--------|------------|-------|
| BT-BR(1Mbps) | - | - | - |
| 2441MHz | Pass | 79 | 15 |
| BT-EDR(2Mbps) | - | - | - |
| 2441MHz | Pass | 79 | 15 |
| BT-EDR(3Mbps) | - | - | - |
| 2441MHz | Pass | 79 | 15 |

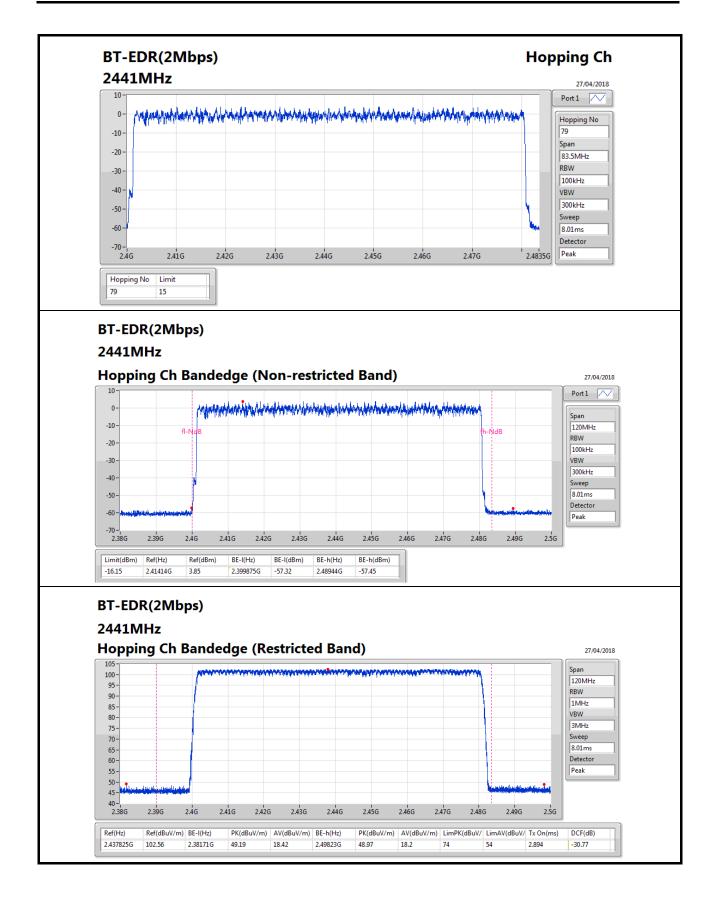
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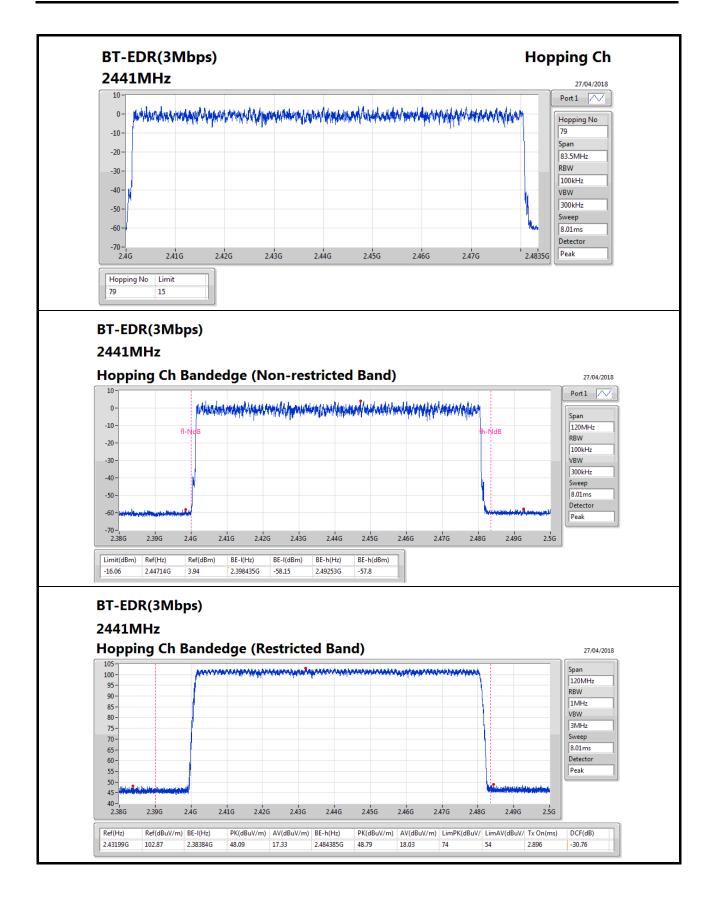
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Dwell Time-FS Result

Summary

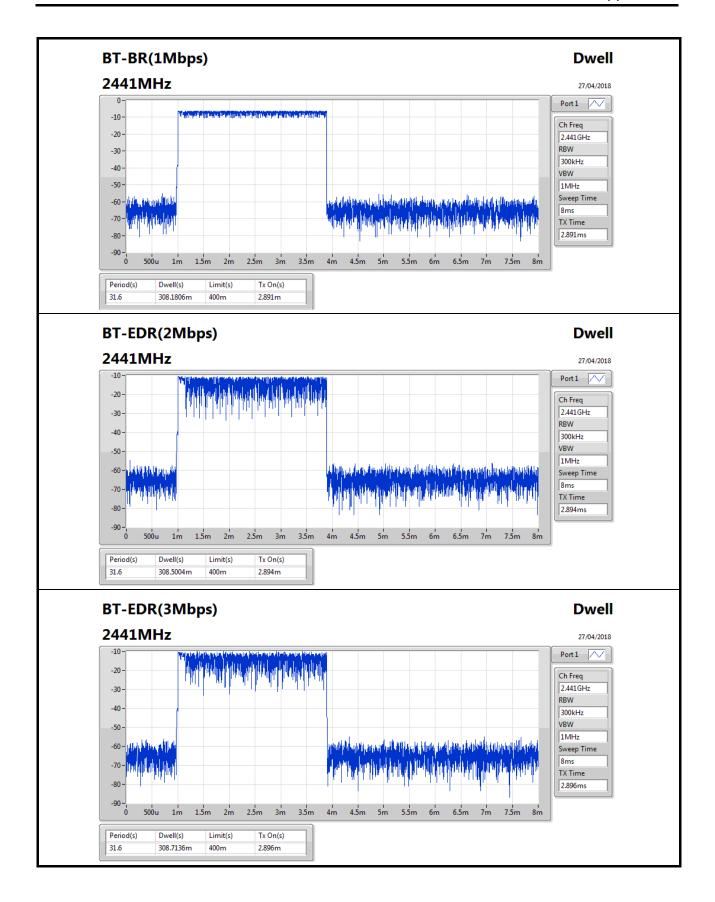
| Mode | Max-Dwell |
|---------------|-----------|
| | (s) |
| 2.4-2.4835GHz | - |
| BT-BR(1Mbps) | 308.1806m |
| BT-EDR(2Mbps) | 308.5004m |
| BT-EDR(3Mbps) | 308.7136m |

Result

| Mode | Result | Period | Dwell | Limit | Tx On |
|---------------|--------|--------|-----------|-------|--------|
| | | (s) | (s) | (s) | (s) |
| BT-BR(1Mbps) | - | - | - | - | - |
| 2441MHz | Pass | 31.6 | 308.1806m | 400m | 2.891m |
| BT-EDR(2Mbps) | - | - | - | - | - |
| 2441MHz | Pass | 31.6 | 308.5004m | 400m | 2.894m |
| BT-EDR(3Mbps) | - | - | - | - | - |
| 2441MHz | Pass | 31.6 | 308.7136m | 400m | 2.896m |

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CSE Non-restricted Band-FS Result

Appendix F

Summary

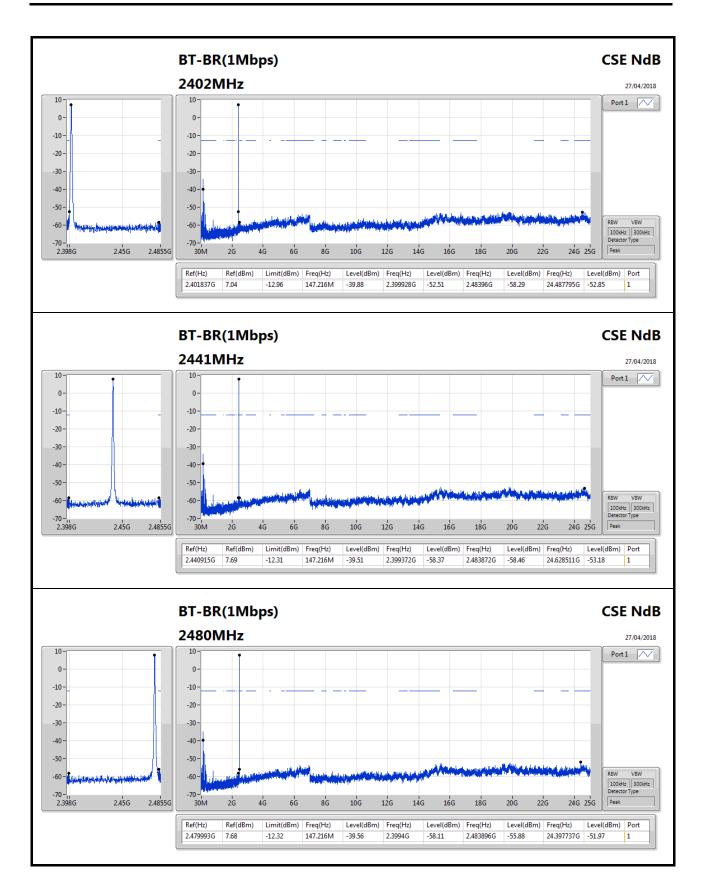
| Mode | Result | Ref | Ref | Limit | Freq | Level | Freq | Level | Freq | Level | Freq | Level | Port |
|---------------|--------|-----------|-------|--------|----------|--------|-----------|--------|-----------|--------|------------|--------|------|
| | | (Hz) | (dBm) | (dBm) | (Hz) | (dBm) | (Hz) | (dBm) | (Hz) | (dBm) | (Hz) | (dBm) | |
| 2.4-2.4835GHz | - | - | - | - | - | - | - | - | - | - | - | - | - |
| BT-BR(1Mbps) | Pass | 2.401837G | 7.04 | -12.96 | 147.216M | -39.88 | 2.399928G | -52.51 | 2.48396G | -58.29 | 24.487795G | -52.85 | 1 |
| BT-EDR(2Mbps) | Pass | 2.401837G | 1.83 | -18.17 | 147.216M | -39.52 | 2.3999G | -55.21 | 2.484152G | -57.33 | 15.335651G | -52.80 | 1 |
| BT-EDR(3Mbps) | Pass | 2.441082G | 1.52 | -18.48 | 147.216M | -39.78 | 2.399432G | -58.63 | 2.484984G | -58.93 | 24.628511G | -53.15 | 1 |

Result

| Result | | | | | | | | | | | | | |
|---------------|--------|-----------|-------|--------|----------|--------|-----------|--------|-----------|--------|------------|--------|------|
| Mode | Result | Ref | Ref | Limit | Freq | Level | Freq | Level | Freq | Level | Freq | Level | Port |
| | | (Hz) | (dBm) | (dBm) | (Hz) | (dBm) | (Hz) | (dBm) | (Hz) | (dBm) | (Hz) | (dBm) | |
| BT-BR(1Mbps) | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 2402MHz | Pass | 2.401837G | 7.04 | -12.96 | 147.216M | -39.88 | 2.399928G | -52.51 | 2.48396G | -58.29 | 24.487795G | -52.85 | 1 |
| 2441MHz | Pass | 2.440915G | 7.69 | -12.31 | 147.216M | -39.51 | 2.399372G | -58.37 | 2.483872G | -58.46 | 24.628511G | -53.18 | 1 |
| 2480MHz | Pass | 2.479993G | 7.68 | -12.32 | 147.216M | -39.56 | 2.3994G | -58.11 | 2.483896G | -55.88 | 24.397737G | -51.97 | 1 |
| BT-EDR(2Mbps) | - | - | - | - | - | - | - | - | - | - | - | - | |
| 2402MHz | Pass | 2.401837G | 1.83 | -18.17 | 147.216M | -39.52 | 2.3999G | -55.21 | 2.484152G | -57.33 | 15.335651G | -52.80 | 1 |
| 2441MHz | Pass | 2.441082G | 2.42 | -17.58 | 147.216M | -39.53 | 2.399292G | -58.68 | 2.484424G | -58.09 | 6.965886G | -52.37 | 1 |
| 2480MHz | Pass | 2.479993G | 2.31 | -17.69 | 147.216M | -39.68 | 2.399452G | -59.07 | 2.484256G | -56.89 | 24.501867G | -52.33 | 1 |
| BT-EDR(3Mbps) | - | - | - | - | - | - | - | - | - | - | - | - | |
| 2402MHz | Pass | 2.402004G | 2.43 | -17.57 | 147.216M | -39.53 | 2.399956G | -55.17 | 2.484144G | -58.74 | 15.012005G | -53.03 | 1 |
| 2441MHz | Pass | 2.441082G | 1.52 | -18.48 | 147.216M | -39.78 | 2.399432G | -58.63 | 2.484984G | -58.93 | 24.628511G | -53.15 | 1 |
| 2480MHz | Pass | 2.479993G | 1.74 | -18.26 | 147.216M | -39.59 | 2.399788G | -58.60 | 2.484544G | -57.45 | 24.496238G | -51.91 | 1 |

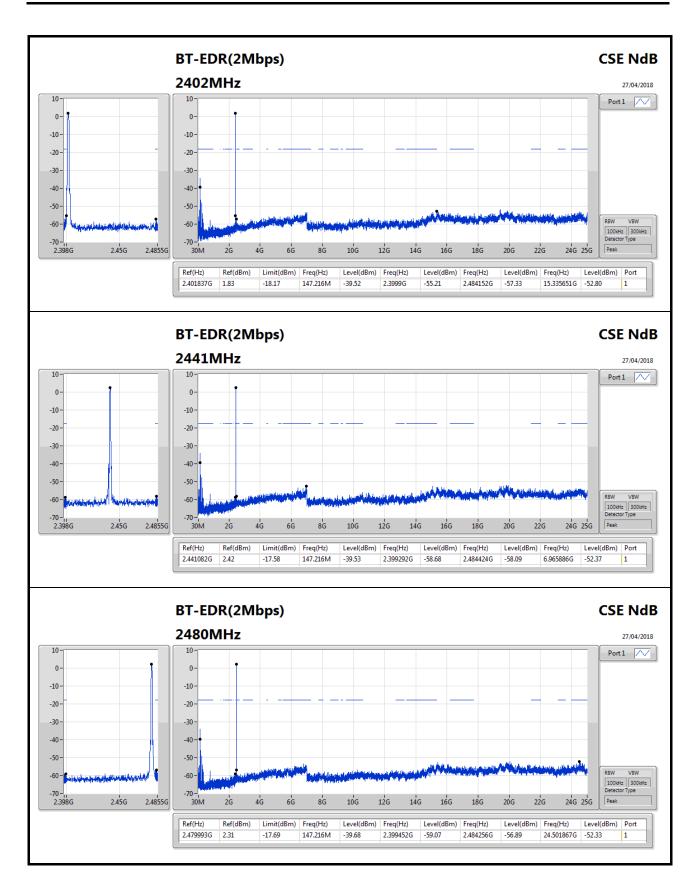
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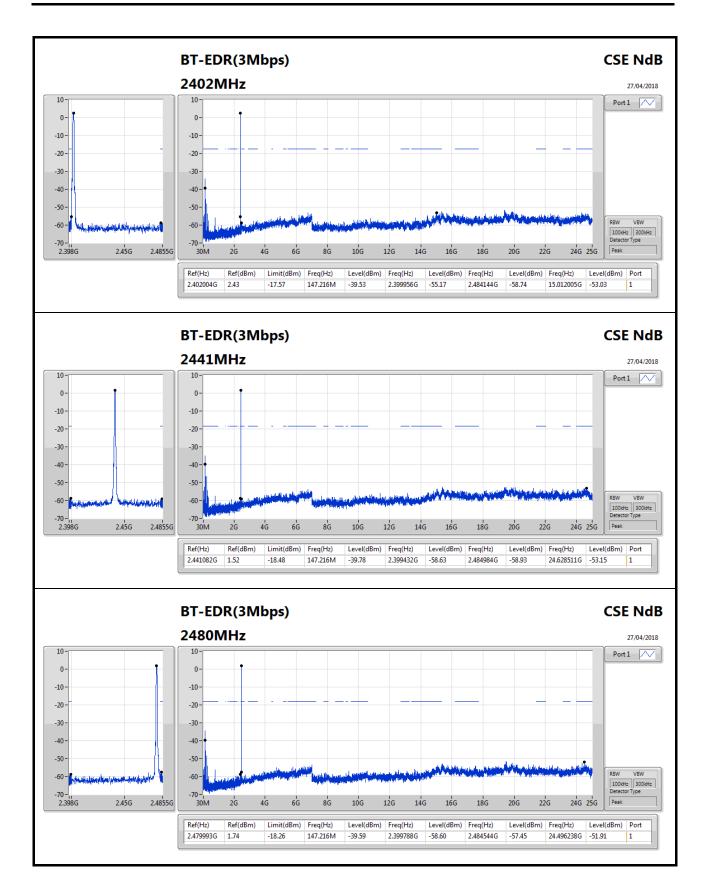
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RSE TX below 1GHz Result

Appendix G

Summary

| Mode | Result | Туре | Freq (Hz) | Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Factor (dB) | Dist (m) | Condition | Azimuth | Height (m) | Comments |
|---------------|--------|------|--------------|-------------------|-------------------|----------------|----------------|-------------|------------|---------|------------|----------|
| 2.4-2.4835GHz | - | - | - | - | - | - | - | - | - | - | - | - |
| BT-BR(1Mbps) | Pass | PK | 256.98M | 33.35 | 46.00 | -12.65 | -15.85 | 3 | Horizontal | 360 | 1.00 | - |

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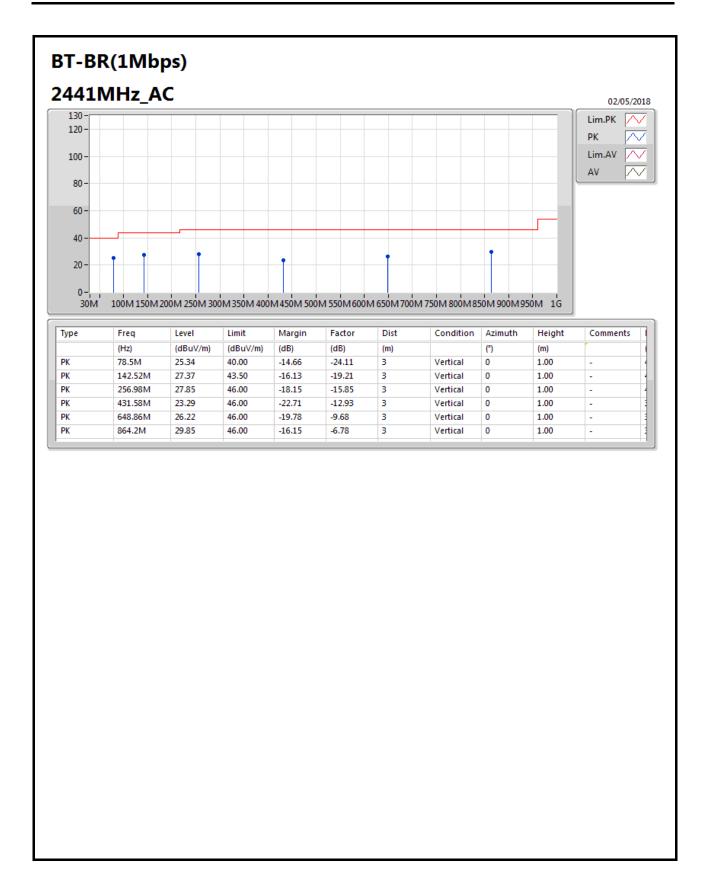
RSE TX below 1GHz Result

Result

| Mode | Result | Туре | Freq | Level | Limit | Margin | Factor | Dist | Condition | Azimuth | Height | Comments |
|--------------|--------|------|---------|----------|----------|--------|--------|------|------------|---------|--------|----------|
| | | | (Hz) | (dBuV/m) | (dBuV/m) | (dB) | (dB) | (m) | | (°) | (m) | |
| BT-BR(1Mbps) | - | - | - | - | - | - | - | - | - | - | - | - |
| 2441MHz | Pass | PK | 78.5M | 25.34 | 40.00 | -14.66 | -24.11 | 3 | Vertical | 0 | 1.00 | - |
| 2441MHz | Pass | PK | 142.52M | 27.37 | 43.50 | -16.13 | -19.21 | 3 | Vertical | 0 | 1.00 | - |
| 2441MHz | Pass | PK | 256.98M | 27.85 | 46.00 | -18.15 | -15.85 | 3 | Vertical | 0 | 1.00 | - |
| 2441MHz | Pass | PK | 431.58M | 23.29 | 46.00 | -22.71 | -12.93 | 3 | Vertical | 0 | 1.00 | - |
| 2441MHz | Pass | PK | 648.86M | 26.22 | 46.00 | -19.78 | -9.68 | 3 | Vertical | 0 | 1.00 | - |
| 2441MHz | Pass | PK | 864.2M | 29.85 | 46.00 | -16.15 | -6.78 | 3 | Vertical | 0 | 1.00 | - |
| 2441MHz | Pass | PK | 103.72M | 24.40 | 43.50 | -19.10 | -20.61 | 3 | Horizontal | 360 | 1.00 | - |
| 2441MHz | Pass | PK | 218.18M | 26.27 | 46.00 | -19.73 | -20.71 | 3 | Horizontal | 360 | 1.00 | - |
| 2441MHz | Pass | PK | 256.98M | 33.35 | 46.00 | -12.65 | -15.85 | 3 | Horizontal | 360 | 1.00 | - |
| 2441MHz | Pass | PK | 458.74M | 23.30 | 46.00 | -22.70 | -12.53 | 3 | Horizontal | 360 | 1.00 | - |
| 2441MHz | Pass | PK | 557.68M | 28.82 | 46.00 | -17.18 | -10.24 | 3 | Horizontal | 360 | 1.00 | - |
| 2441MHz | Pass | PK | 819.58M | 31.47 | 46.00 | -14.53 | -7.75 | 3 | Horizontal | 360 | 1.00 | - |

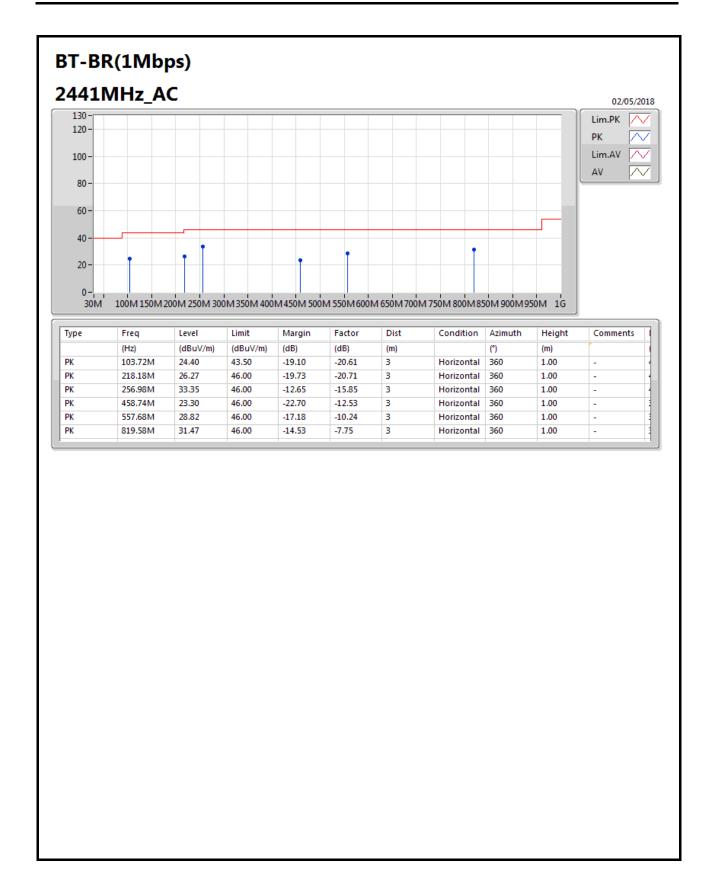
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Appendix G

Summary

| Mode | Result | Туре | Freq | Level | Limit | Margin | Factor | Dist | Condition | Azimuth | Height | Comments |
|---------------|--------|------|----------|----------|----------|--------|--------|------|-----------|---------|--------|----------|
| | | | (Hz) | (dBuV/m) | (dBuV/m) | (dB) | (dB) | (m) | | (°) | (m) | |
| 2.4-2.4835GHz | - | - | - | - | - | - | - | - | - | - | - | - |
| BT-BR(1Mbps) | Pass | AV | 4.96018G | 46.34 | 54.00 | -7.66 | 4.82 | 3 | Vertical | 318 | 1.21 | - |
| BT-EDR(2Mbps) | Pass | AV | 2.495G | 45.94 | 54.00 | -8.06 | 34.07 | 3 | Vertical | 322 | 2.48 | - |
| BT-EDR(3Mbps) | Pass | AV | 2.4998G | 45.95 | 54.00 | -8.05 | 34.07 | 3 | Vertical | 344 | 2.48 | - |

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Result

| Mode | Result | Туре | Freq | Level | Limit | Margin | Factor | Dist | Condition | Azimuth | Height | Comments |
|---------------|--------|------|-----------|----------|----------|--------|--------|------|------------|---------|--------|----------|
| | | ,, | (Hz) | (dBuV/m) | (dBuV/m) | (dB) | (dB) | (m) | | (°) | (m) | |
| BT-BR(1Mbps) | - | - | | - | - | - | - | - | - | - | - | - |
| 2402MHz | Pass | AV | 2.355G | 45.55 | 54.00 | -8.45 | 34.05 | 3 | Vertical | 344 | 2.60 | - |
| 2402MHz | Pass | AV | 2.402G | 92.03 | Inf | -Inf | 34.05 | 3 | Vertical | 344 | 2.60 | - |
| 2402MHz | Pass | PK | 2.3638G | 60.04 | 74.00 | -13.96 | 34.04 | 3 | Vertical | 344 | 2.60 | - |
| 2402MHz | Pass | PK | 2.4018G | 104.55 | Inf | -Inf | 34.05 | 3 | Vertical | 344 | 2.60 | _ |
| 2402MHz | Pass | AV | 2.386G | 45.55 | 54.00 | -8.45 | 34.05 | 3 | Horizontal | 40 | 1.20 | _ |
| 2402MHz | Pass | AV | 2.402G | 93.24 | Inf | -Inf | 34.05 | 3 | Horizontal | 40 | 1.20 | - |
| 2402MHz | Pass | PK | 2.3808G | 59.84 | 74.00 | -14.16 | 34.05 | 3 | Horizontal | 40 | 1.20 | - |
| 2402MHz | Pass | PK | 2.4018G | 106.02 | Inf | -Inf | 34.05 | 3 | Horizontal | 40 | 1.20 | - |
| 2402MHz | Pass | AV | 4.08441G | 40.45 | 54.00 | -13.55 | 1.76 | 3 | Vertical | 311 | 1.02 | - |
| 2402MHz | Pass | PK | 4.08441G | 49.24 | 74.00 | -24.76 | 1.76 | 3 | Vertical | 311 | 1.02 | - |
| 2402MHz | Pass | AV | 4.08441G | 37.54 | 54.00 | -16.46 | 1.76 | 3 | Horizontal | 212 | 1.04 | - |
| 2402MHz | Pass | PK | 4.08441G | 46.50 | 74.00 | -27.50 | 1.76 | 3 | Horizontal | 212 | 1.04 | - |
| 2441MHz | Pass | AV | 2.353G | 45.55 | 54.00 | -8.45 | 34.05 | 3 | Vertical | 329 | 2.50 | - |
| 2441MHz | Pass | AV | 2.441G | 92.73 | Inf | -Inf | 34.06 | 3 | Vertical | 329 | 2.50 | _ |
| 2441MHz | Pass | AV | 2.489G | 45.94 | 54.00 | -8.06 | 34.07 | 3 | Vertical | 329 | 2.50 | _ |
| 2441MHz | Pass | PK | 2.381G | 59.45 | 74.00 | -14.55 | 34.05 | 3 | Vertical | 329 | 2.50 | _ |
| 2441MHz | Pass | PK | 2.441G | 105.42 | Inf | -Inf | 34.06 | 3 | Vertical | 329 | 2.50 | - |
| 2441MHz | Pass | PK | 2.4898G | 58.52 | 74.00 | -15.48 | 34.07 | 3 | Vertical | 329 | 2.50 | _ |
| 2441MHz | Pass | AV | 2.3574G | 45.54 | 54.00 | -8.46 | 34.05 | 3 | Horizontal | 42 | 1.02 | _ |
| 2441MHz | Pass | AV | 2.441G | 93.09 | Inf | -Inf | 34.06 | 3 | Horizontal | 42 | 1.02 | - |
| 2441MHz | Pass | AV | 2.4942G | 45.95 | 54.00 | -8.05 | 34.07 | 3 | Horizontal | 42 | 1.02 | - |
| 2441MHz | Pass | PK | 2.3518G | 59.46 | 74.00 | -14.54 | 34.05 | 3 | Horizontal | 42 | 1.02 | - |
| 2441MHz | Pass | PK | 2.441G | 105.90 | Inf | -Inf | 34.06 | 3 | Horizontal | 42 | 1.02 | - |
| 2441MHz | Pass | PK | 2.487G | 59.79 | 74.00 | -14.21 | 34.07 | 3 | Horizontal | 42 | 1.02 | _ |
| 2441MHz | Pass | AV | 4.88194G | 38.30 | 54.00 | -15.70 | 4.52 | 3 | Vertical | 173 | 1.26 | - |
| 2441MHz | Pass | PK | 4.88194G | 47.50 | 74.00 | -26.50 | 4.52 | 3 | Vertical | 173 | 1.26 | - |
| 2441MHz | Pass | AV | 4.88194G | 39.36 | 54.00 | -14.64 | 4.52 | 3 | Horizontal | 175 | 1.35 | - |
| 2441MHz | Pass | PK | 4.88194G | 48.64 | 74.00 | -25.36 | 4.52 | 3 | Horizontal | 175 | 1.35 | - |
| 2480MHz | Pass | AV | 2.48G | 92.19 | Inf | -Inf | 34.07 | 3 | Vertical | 359 | 2.46 | _ |
| 2480MHz | Pass | AV | 2.4836G | 45.94 | 54.00 | -8.06 | 34.07 | 3 | Vertical | 359 | 2.46 | _ |
| 2480MHz | Pass | PK | 2.4798G | 104.70 | Inf | -Inf | 34.07 | 3 | Vertical | 359 | 2.46 | - |
| 2480MHz | Pass | PK | 2.4862G | 58.72 | 74.00 | -15.28 | 34.07 | 3 | Vertical | 359 | 2.46 | - |
| 2480MHz | Pass | AV | 2.48G | 92.71 | Inf | -Inf | 34.07 | 3 | Horizontal | 46 | 1.17 | - |
| 2480MHz | Pass | AV | 2.483502G | 46.01 | 54.00 | -7.99 | 34.07 | 3 | Horizontal | 46 | 1.17 | - |
| 2480MHz | Pass | PK | 2.4798G | 105.39 | Inf | -Inf | 34.07 | 3 | Horizontal | 46 | 1.17 | - |
| 2480MHz | Pass | PK | 2.4936G | 59.71 | 74.00 | -14.29 | 34.06 | 3 | Horizontal | 46 | 1.17 | - |
| 2480MHz | Pass | AV | 4.96018G | 46.34 | 54.00 | -7.66 | 4.82 | 3 | Vertical | 318 | 1.21 | - |
| 2480MHz | Pass | PK | 4.96018G | 53.33 | 74.00 | -20.67 | 4.82 | 3 | Vertical | 318 | 1.21 | - |
| 2480MHz | Pass | AV | 4.95994G | 43.59 | 54.00 | -10.41 | 4.82 | 3 | Horizontal | 174 | 2.57 | - |
| 2480MHz | Pass | PK | 4.95994G | 47.87 | 74.00 | -26.13 | 4.82 | 3 | Horizontal | 174 | 2.57 | - |
| BT-EDR(2Mbps) | | - | - | - | - | | - | - | - | - | - | - |
| 2402MHz | Pass | AV | 2.3544G | 45.54 | 54.00 | -8.46 | 34.05 | 3 | Vertical | 325 | 2.59 | - |
| 2402MHz | Pass | AV | 2.402G | 88.15 | Inf | -Inf | 34.05 | 3 | Vertical | 325 | 2.59 | - |
| 2402MHz | Pass | PK | 2.3836G | 59.40 | 74.00 | -14.60 | 34.05 | 3 | Vertical | 325 | 2.59 | - |
| 2402MHz | Pass | PK | 2.4022G | 102.85 | Inf | -Inf | 34.05 | 3 | Vertical | 325 | 2.59 | |
| 2402MHz | Pass | AV | 2.3644G | 45.54 | 54.00 | -8.46 | 34.05 | 3 | Horizontal | 40 | 1.18 | - |
| 2402MHz | Pass | AV | 2.402G | 88.58 | Inf | -Inf | 34.05 | 3 | Horizontal | 40 | 1.18 | - |

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| | ı | | | ı | | | ı | 1 | ı | | 1 | 1 |
|---------------|--------|------|--------------------|----------|----------|----------------|--------|------|------------|---------|--------|----------|
| Mode | Result | Туре | Freq | Level | Limit | Margin | Factor | Dist | Condition | Azimuth | Height | Comments |
| | | | (Hz) | (dBuV/m) | (dBuV/m) | (dB) | (dB) | (m) | | (°) | (m) | |
| 2402MHz | Pass | PK | 2.3726G | 58.67 | 74.00 | -15.33 | 34.05 | 3 | Horizontal | 40 | 1.18 | - |
| 2402MHz | Pass | PK | 2.4022G | 103.39 | Inf | -Inf | 34.05 | 3 | Horizontal | 40 | 1.18 | - |
| 2441MHz | Pass | AV | 2.3562G | 45.55 | 54.00 | -8.45 | 34.05 | 3 | Vertical | 322 | 2.48 | - |
| 2441MHz | Pass | AV | 2.441G | 87.72 | Inf | -Inf | 34.06 | 3 | Vertical | 322 | 2.48 | - |
| 2441MHz | Pass | AV | 2.495G | 45.94 | 54.00 | -8.06 | 34.07 | 3 | Vertical | 322 | 2.48 | - |
| 2441MHz | Pass | PK | 2.3426G | 58.89 | 74.00 | -15.11 | 34.04 | 3 | Vertical | 322 | 2.48 | - |
| 2441MHz | Pass | PK | 2.441G | 102.38 | Inf | -Inf | 34.06 | 3 | Vertical | 322 | 2.48 | - |
| 2441MHz | Pass | PK | 2.4894G | 58.53 | 74.00 | -15.47 | 34.07 | 3 | Vertical | 322 | 2.48 | - |
| 2441MHz | Pass | AV | 2.3458G | 45.53 | 54.00 | -8.47 | 34.04 | 3 | Horizontal | 43 | 1.56 | - |
| 2441MHz | Pass | AV | 2.441G | 88.58 | Inf | -Inf | 34.06 | 3 | Horizontal | 43 | 1.56 | - |
| 2441MHz | Pass | AV | 2.4886G | 45.93 | 54.00 | -8.07 | 34.07 | 3 | Horizontal | 43 | 1.56 | - |
| 2441MHz | Pass | PK | 2.3502G | 59.25 | 74.00 | -14.75 | 34.05 | 3 | Horizontal | 43 | 1.56 | - |
| 2441MHz | Pass | PK | 2.441G | 103.36 | Inf | -Inf | 34.06 | 3 | Horizontal | 43 | 1.56 | - |
| 2441MHz | Pass | PK | 2.4878G | 58.93 | 74.00 | -15.07 | 34.07 | 3 | Horizontal | 43 | 1.56 | - |
| 2480MHz | Pass | AV | 2.48G | 87.26 | Inf | -Inf | 34.07 | 3 | Vertical | 0 | 2.47 | - |
| 2480MHz | Pass | AV | 2.484G | 45.90 | 54.00 | -8.10 | 34.07 | 3 | Vertical | 0 | 2.47 | - |
| 2480MHz | Pass | PK | 2.4798G | 101.72 | Inf | -Inf | 34.07 | 3 | Vertical | 0 | 2.47 | - |
| 2480MHz | Pass | PK | 2.4936G | 60.06 | 74.00 | -13.94 | 34.06 | 3 | Vertical | 0 | 2.47 | - |
| 2480MHz | Pass | AV | 2.48G | 88.21 | Inf | -Inf | 34.07 | 3 | Horizontal | 39 | 1.06 | - |
| 2480MHz | Pass | AV | 2.483502G | 45.91 | 54.00 | -8.09 | 34.07 | 3 | Horizontal | 39 | 1.06 | - |
| 2480MHz | Pass | PK | 2.4798G | 102.93 | Inf | -Inf | 34.07 | 3 | Horizontal | 39 | 1.06 | - |
| 2480MHz | Pass | PK | 2.4988G | 59.38 | 74.00 | -14.62 | 34.07 | 3 | Horizontal | 39 | 1.06 | - |
| BT-EDR(3Mbps) | - | - | - | - | - | - | - | - | - | - | - | - |
| 2402MHz | Pass | AV | 2.3582G | 45.51 | 54.00 | -8.49 | 34.05 | 3 | Vertical | 359 | 2.61 | - |
| 2402MHz | Pass | AV | 2.402G | 87.49 | Inf | -Inf | 34.05 | 3 | Vertical | 359 | 2.61 | - |
| 2402MHz | Pass | PK | 2.375G | 59.00 | 74.00 | -15.00 | 34.05 | 3 | Vertical | 359 | 2.61 | - |
| 2402MHz | Pass | PK | 2.4022G | 102.19 | Inf | -Inf | 34.05 | 3 | Vertical | 359 | 2.61 | - |
| 2402MHz | Pass | AV | 2.3554G | 45.53 | 54.00 | -8.47 | 34.05 | 3 | Horizontal | 33 | 1.87 | - |
| 2402MHz | Pass | AV | 2.402G | 88.36 | Inf | -Inf | 34.05 | 3 | Horizontal | 33 | 1.87 | - |
| 2402MHz | Pass | PK | 2.3552G | 58.74 | 74.00 | -15.26 | 34.05 | 3 | Horizontal | 33 | 1.87 | - |
| 2402MHz | Pass | PK | 2.402G | 103.30 | Inf | -Inf | 34.05 | 3 | Horizontal | 33 | 1.87 | - |
| 2441MHz | Pass | AV | 2.3566G | 45.56 | 54.00 | -8.44 | 34.05 | 3 | Vertical | 344 | 2.48 | - |
| 2441MHz | Pass | AV | 2.441G | 87.44 | Inf | -Inf | 34.06 | 3 | Vertical | 344 | 2.48 | - |
| 2441MHz | Pass | AV | 2.4998G | 45.95 | 54.00 | -8.05 | 34.07 | 3 | Vertical | 344 | 2.48 | - |
| 2441MHz | Pass | PK | 2.3846G | 58.69 | 74.00 | -15.31 | 34.05 | 3 | Vertical | 344 | 2.48 | - |
| 2441MHz | Pass | PK | 2.441G | 102.13 | Inf | -Inf | 34.06 | 3 | Vertical | 344 | 2.48 | |
| 2441MHz | Pass | PK | 2.4962G | 59.22 | 74.00 | -14.78 | 34.07 | 3 | Vertical | 344 | 2.48 | |
| 2441MHz | Pass | AV | 2.3566G | 45.53 | 54.00 | -8.47 | 34.05 | 3 | Horizontal | 41 | 1.17 | |
| 2441MHz | Pass | AV | 2.441G | 88.49 | Inf | -Inf | 34.06 | 3 | Horizontal | 41 | 1.17 | |
| 2441MHz | Pass | AV | 2.4902G | 45.91 | 54.00 | -8.09 | 34.07 | 3 | Horizontal | 41 | 1.17 | |
| 2441MHz | Pass | PK | 2.3466G | 59.44 | 74.00 | -14.56 | 34.04 | 3 | Horizontal | 41 | 1.17 | |
| 2441MHz | Pass | PK | 2.441G | 103.46 | Inf | -Inf | 34.06 | 3 | Horizontal | 41 | 1.17 | _ |
| 2441MHz | Pass | PK | 2.4846G | 58.79 | 74.00 | -15.21 | 34.07 | 3 | Horizontal | 41 | 1.17 | |
| 2480MHz | Pass | AV | 2.48G | 87.87 | Inf | -13.21 -Inf | 34.07 | 3 | Vertical | 348 | 2.46 | |
| 2480MHz | Pass | AV | 2.483502G | 45.91 | 54.00 | -8.09 | 34.07 | 3 | Vertical | 348 | 2.46 | - |
| | | PK | 2.483502G 2.48G | | | -8.09 -Inf | 34.07 | 3 | | 348 | 2.46 | - |
| 2480MHz | Pass | | | 102.74 | Inf | | | | Vertical | | | |
| 2480MHz | Pass | PK | 2.4894G | 59.87 | 74.00 | -14.13 | 34.07 | 3 | Vertical | 348 | 2.46 | - |
| 2480MHz | Pass | AV | 2.48G | 88.50 | Inf | -Inf | 34.07 | 3 | Horizontal | 33 | 1.02 | - |
| 2480MHz | Pass | AV | 2.4836G | 45.94 | 54.00 | -8.06 | 34.07 | 3 | Horizontal | 33 | 1.02 | - |

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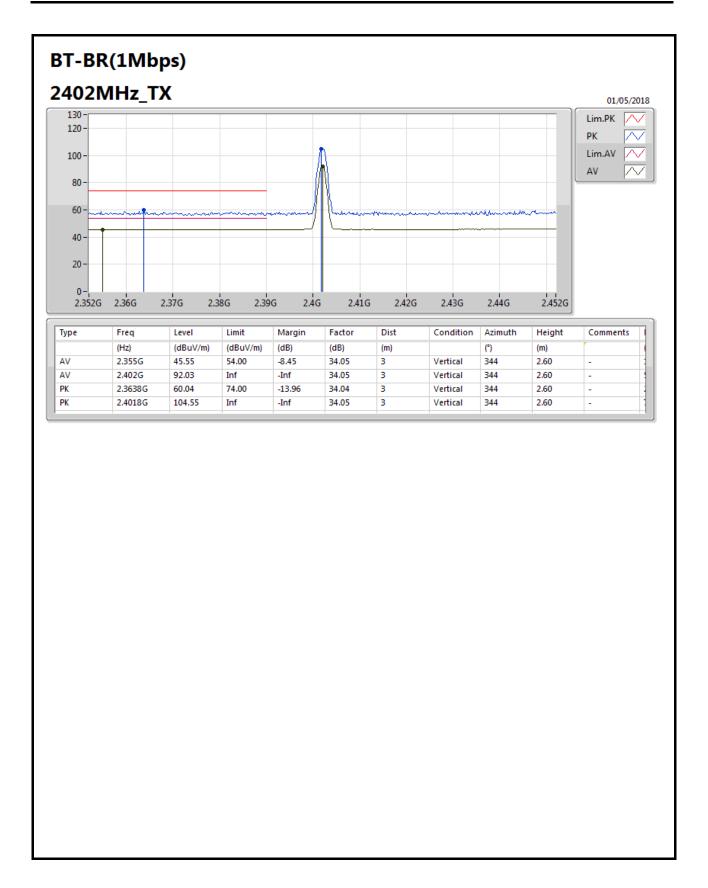


Appendix G

| Mode | Result | Туре | Freq | Level | Limit | Margin | Factor | Dist | Condition | Azimuth | Height | Comments |
|---------|--------|------|---------|----------|----------|--------|--------|------|------------|---------|--------|----------|
| | | | (Hz) | (dBuV/m) | (dBuV/m) | (dB) | (dB) | (m) | | (°) | (m) | |
| 2480MHz | Pass | PK | 2.48G | 103.49 | Inf | -Inf | 34.07 | 3 | Horizontal | 33 | 1.02 | - |
| 2480MHz | Pass | PK | 2.4862G | 58.94 | 74.00 | -15.06 | 34.07 | 3 | Horizontal | 33 | 1.02 | - |

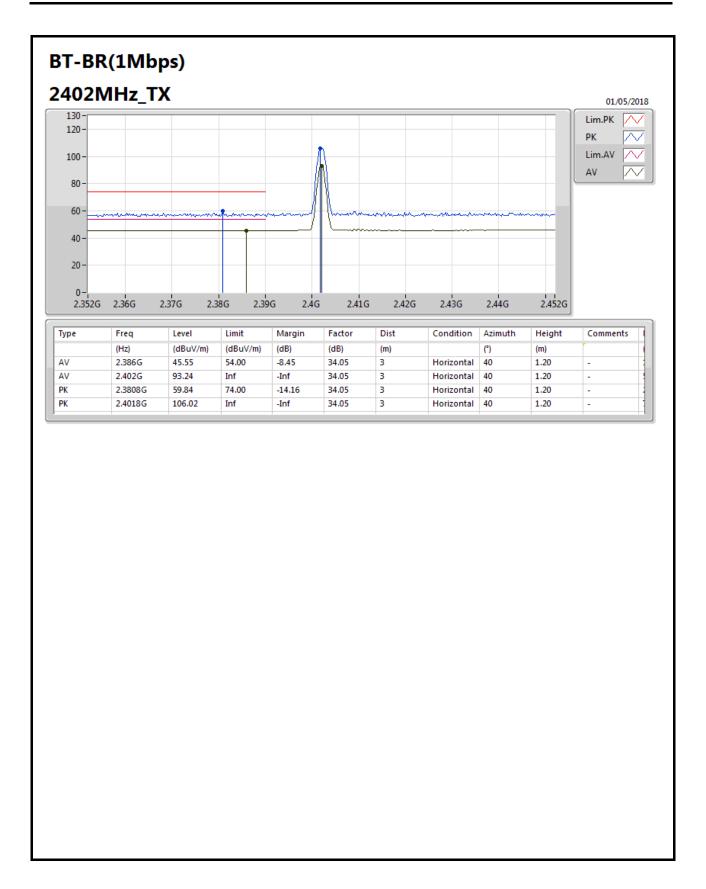
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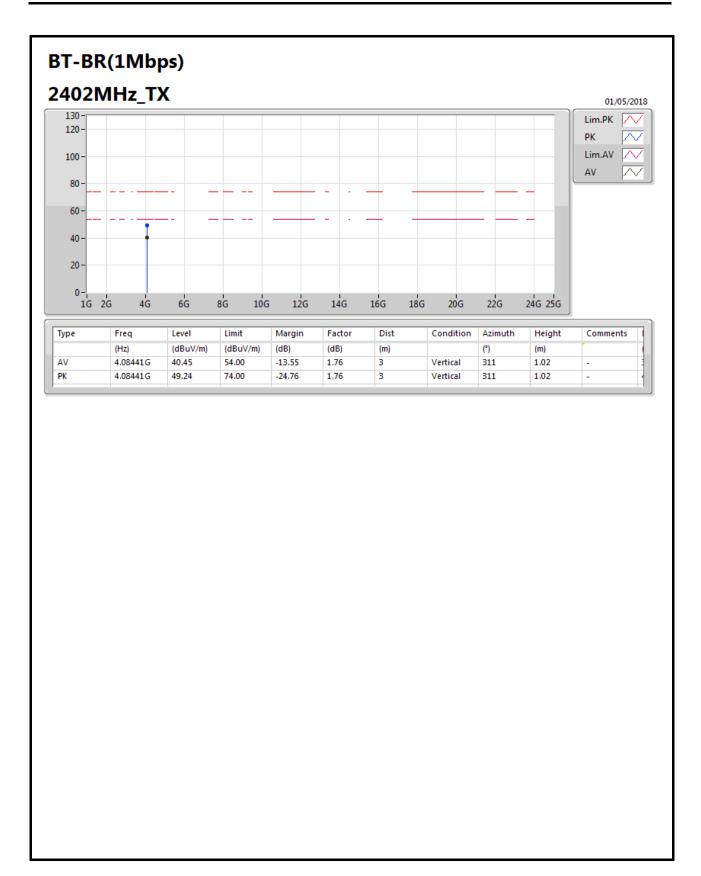
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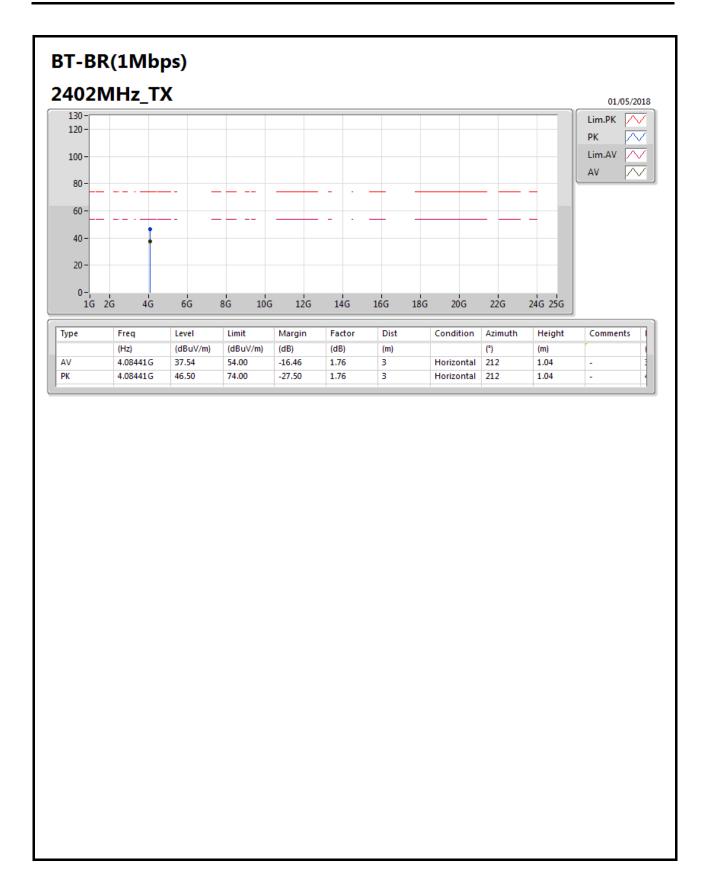
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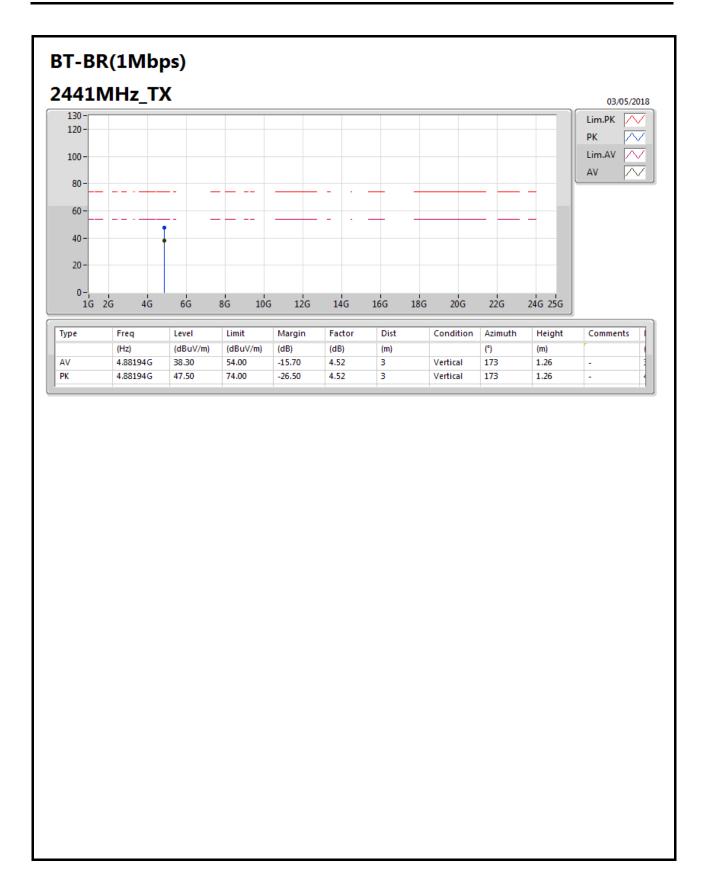
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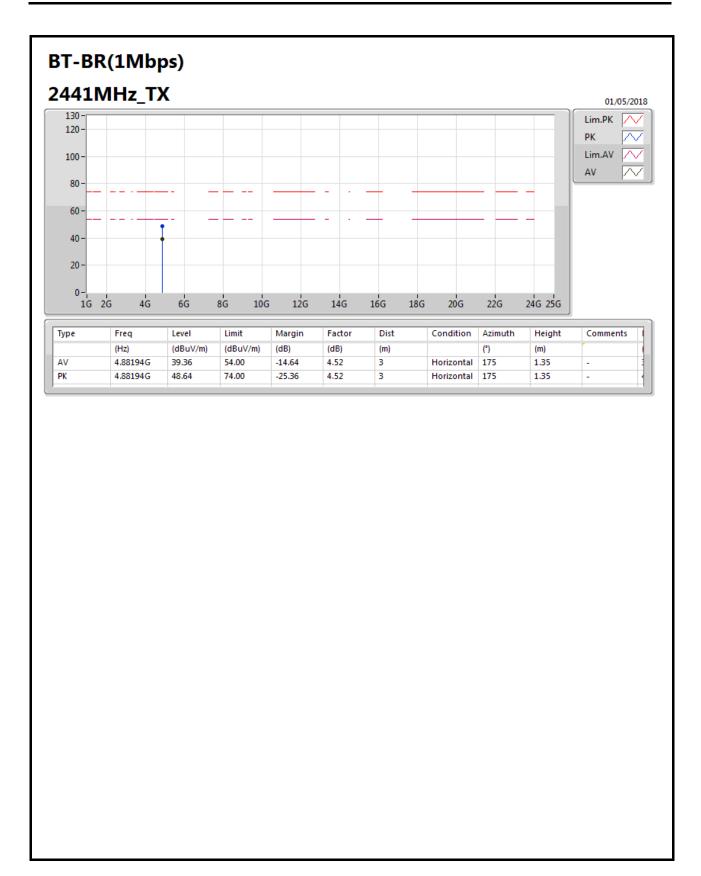
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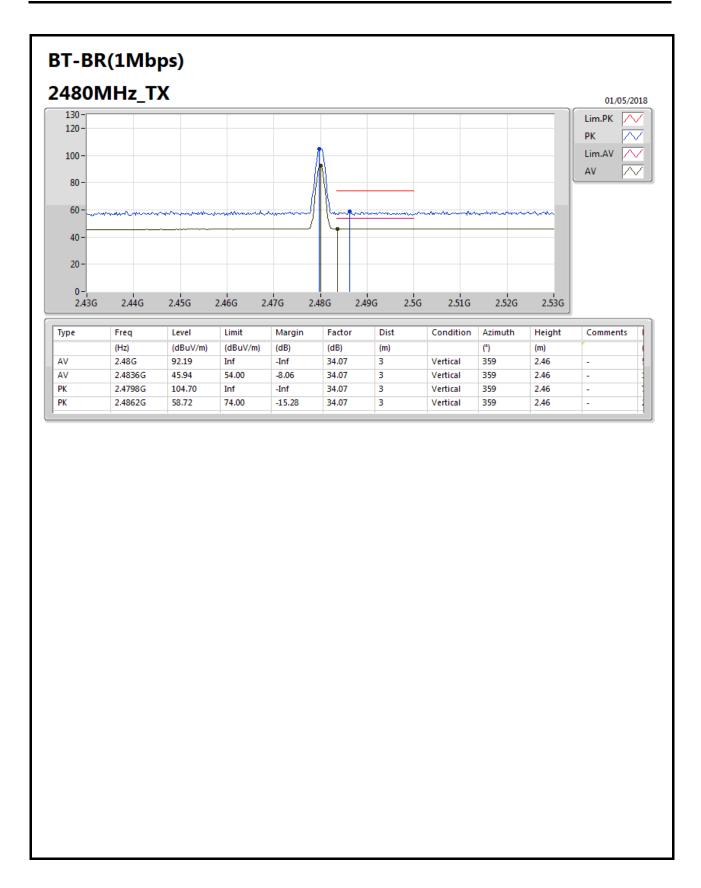
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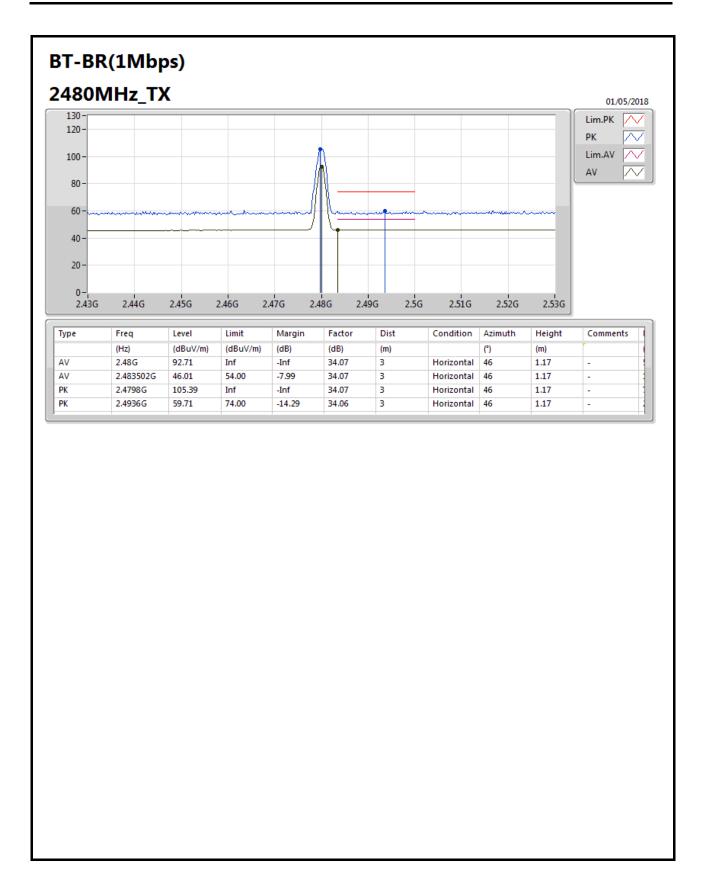
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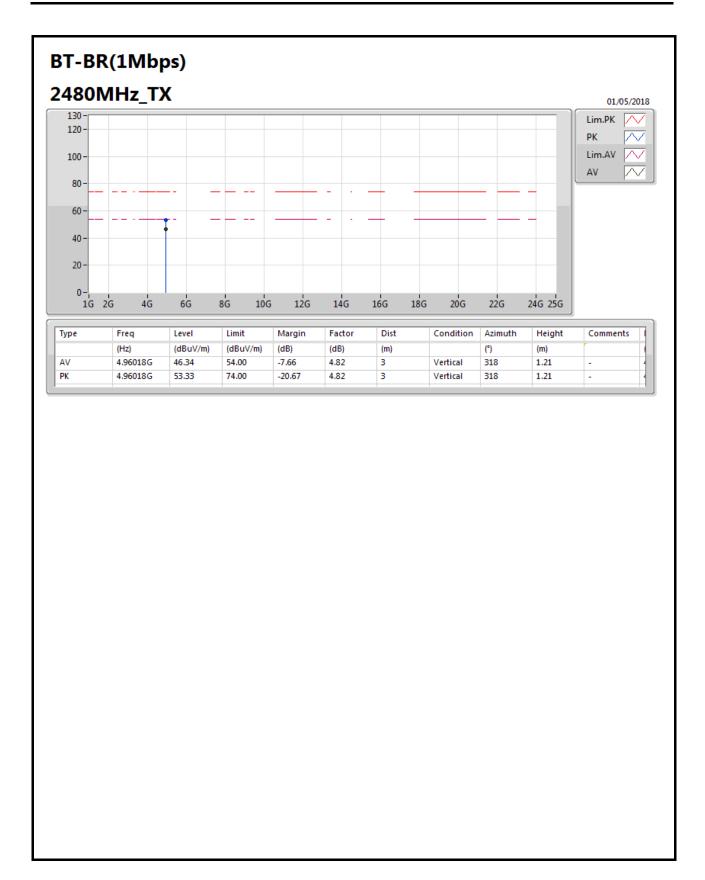
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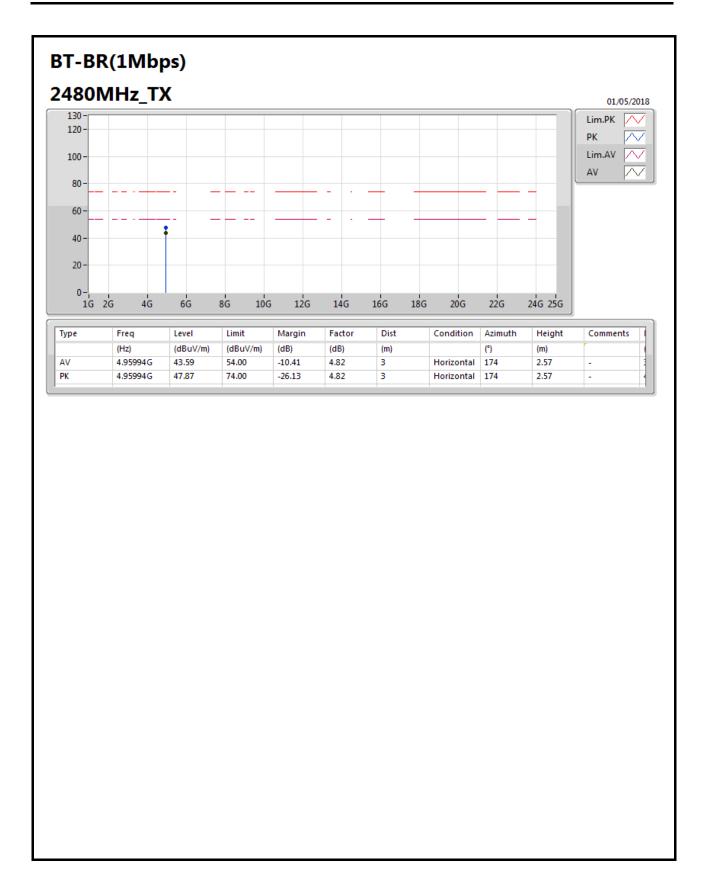
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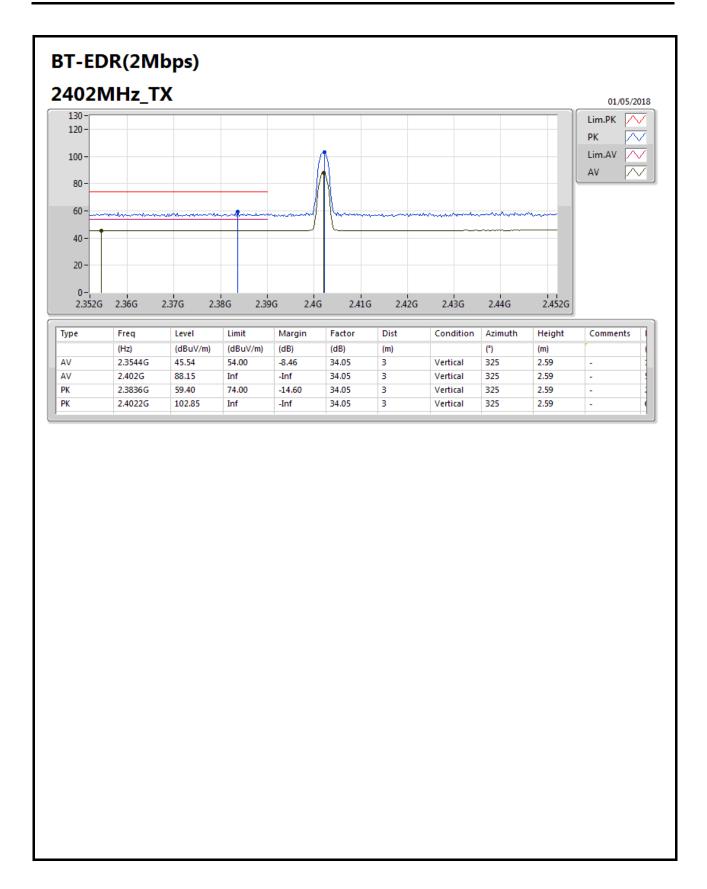
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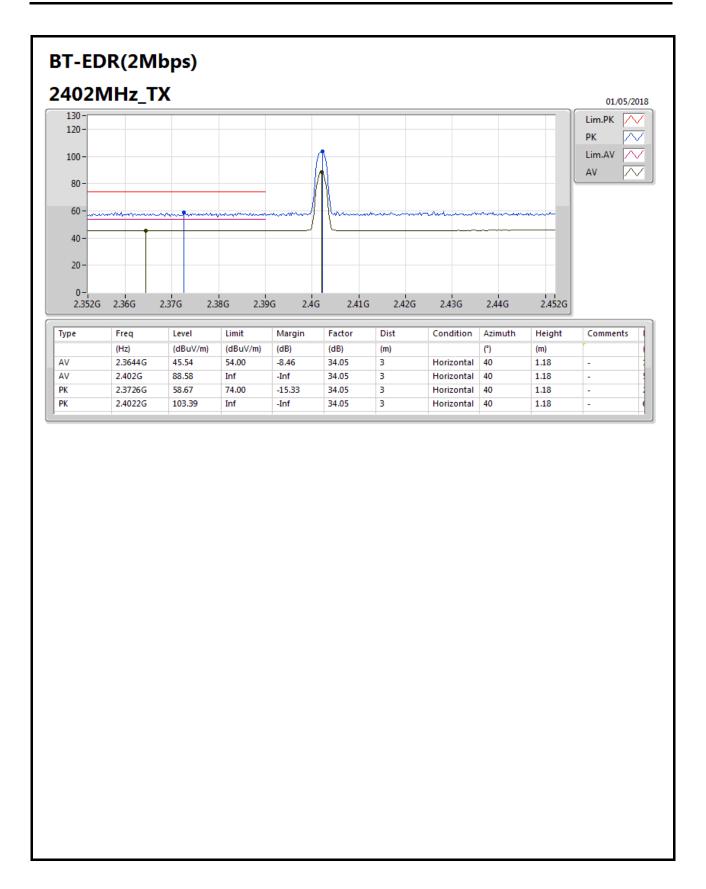
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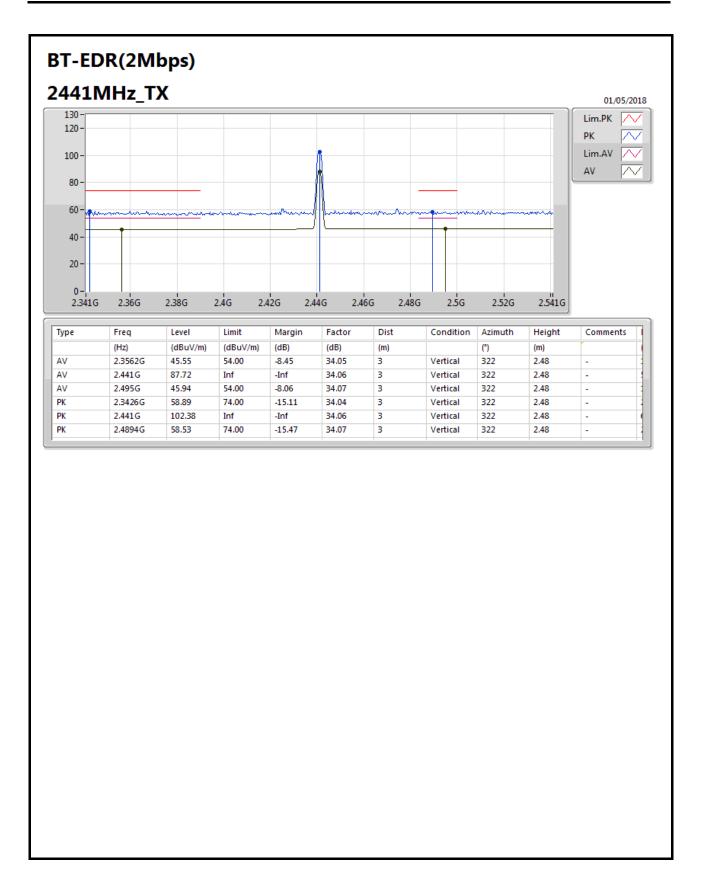
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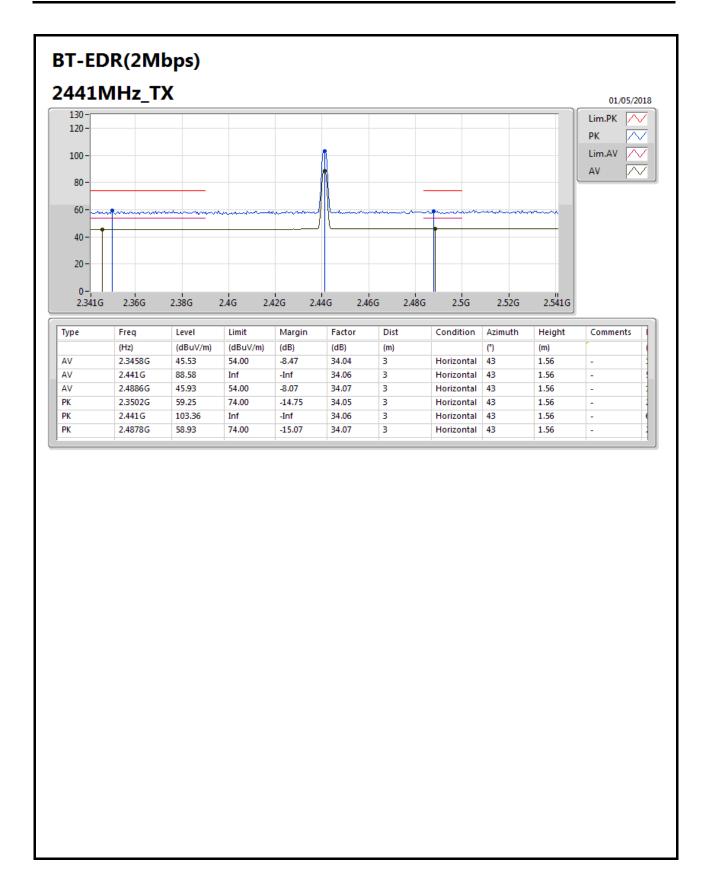
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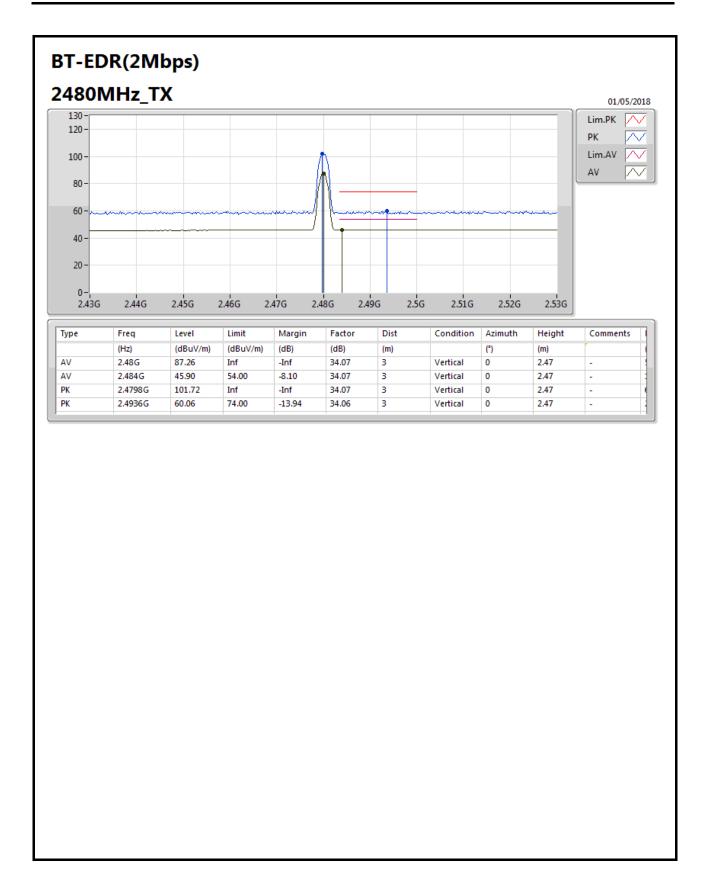
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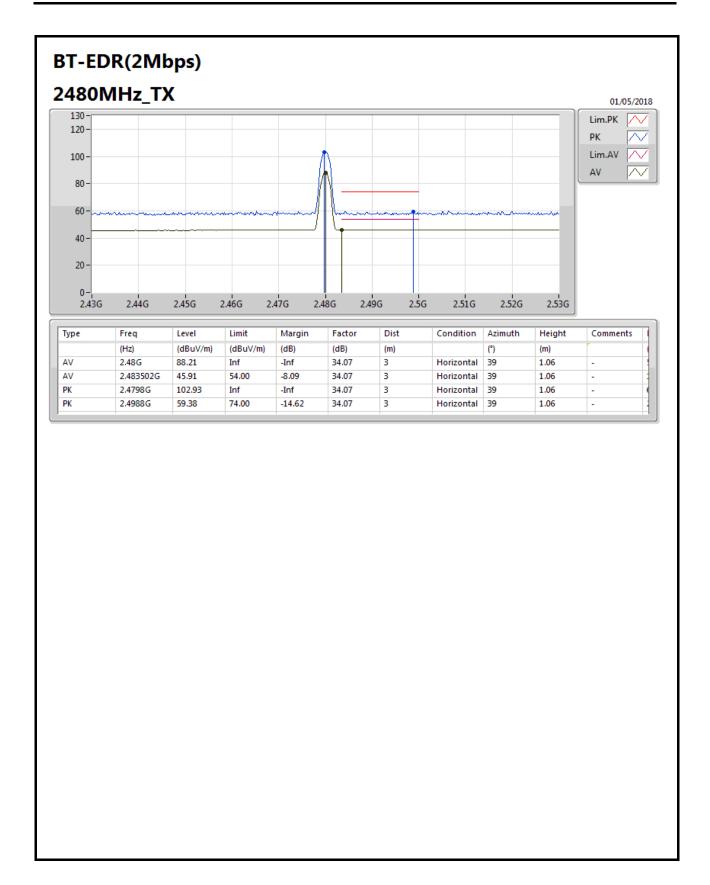
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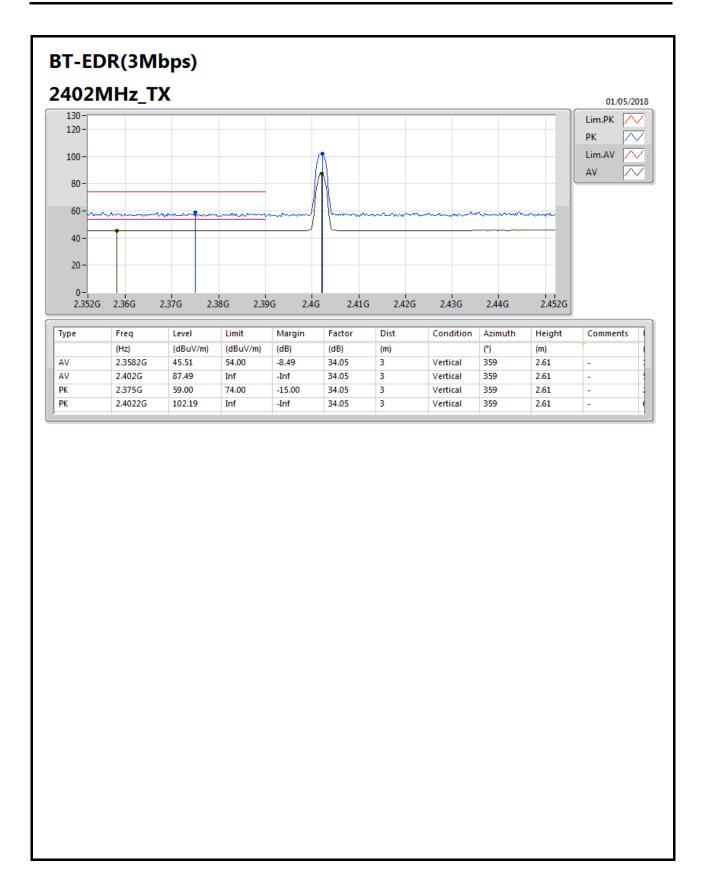
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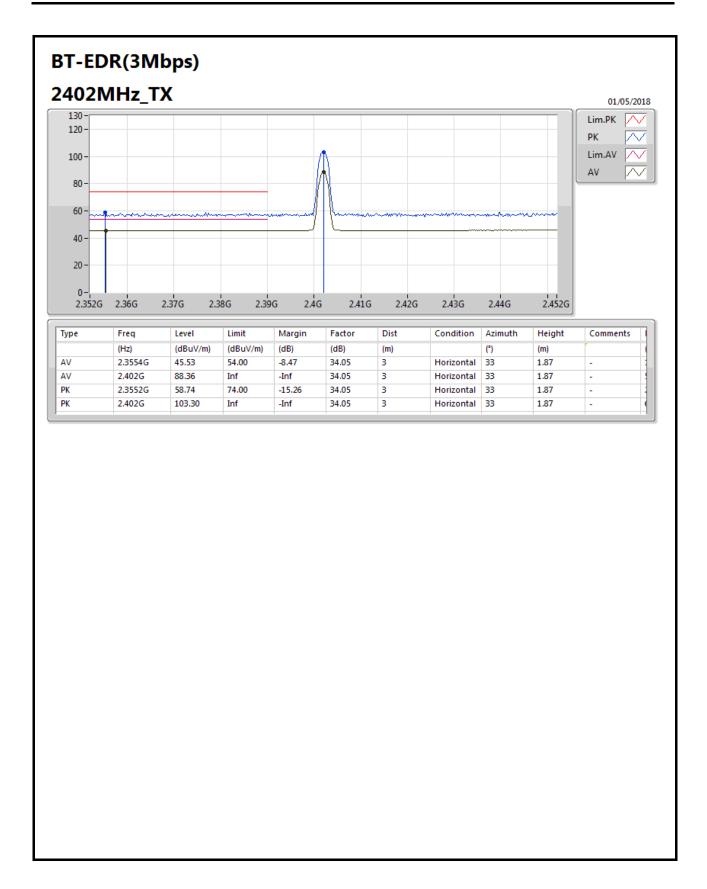
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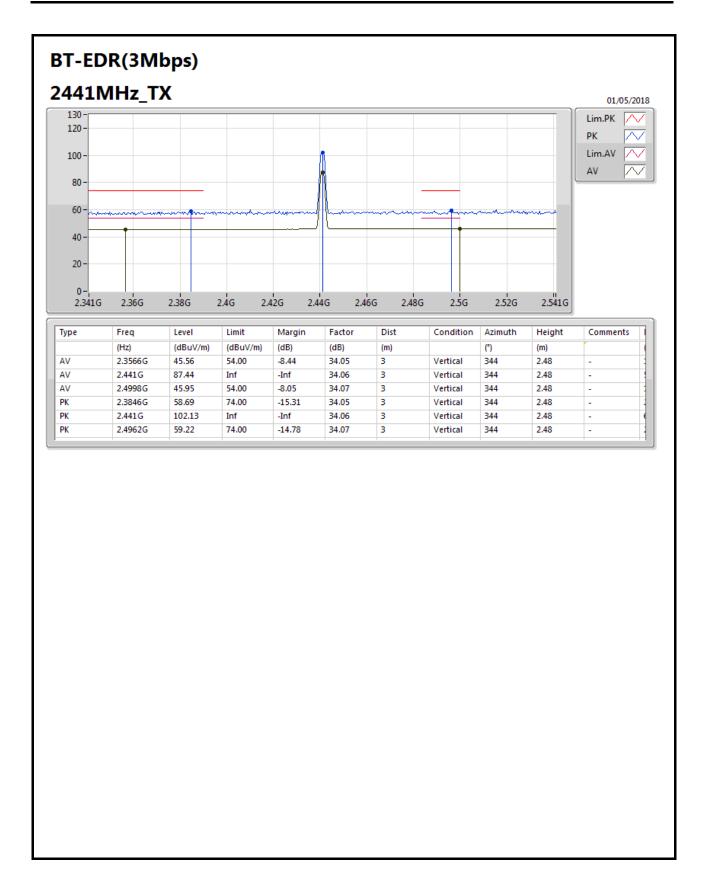
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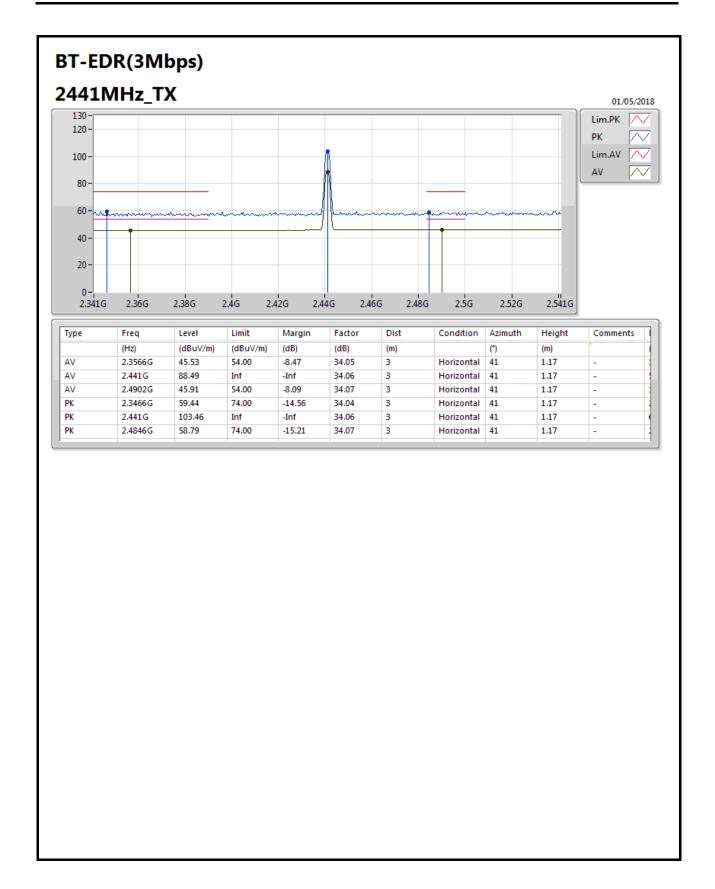
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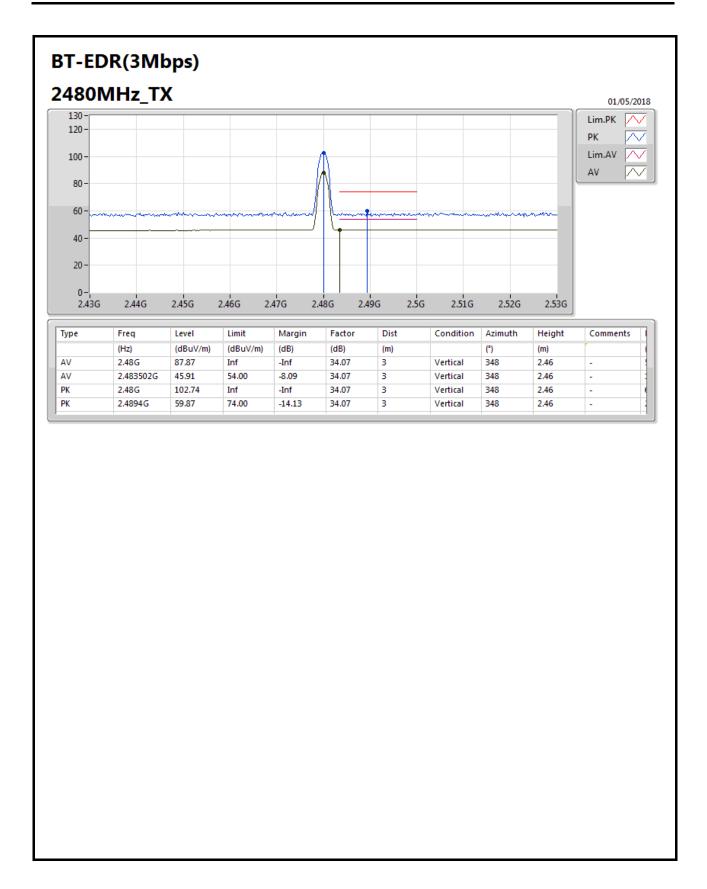
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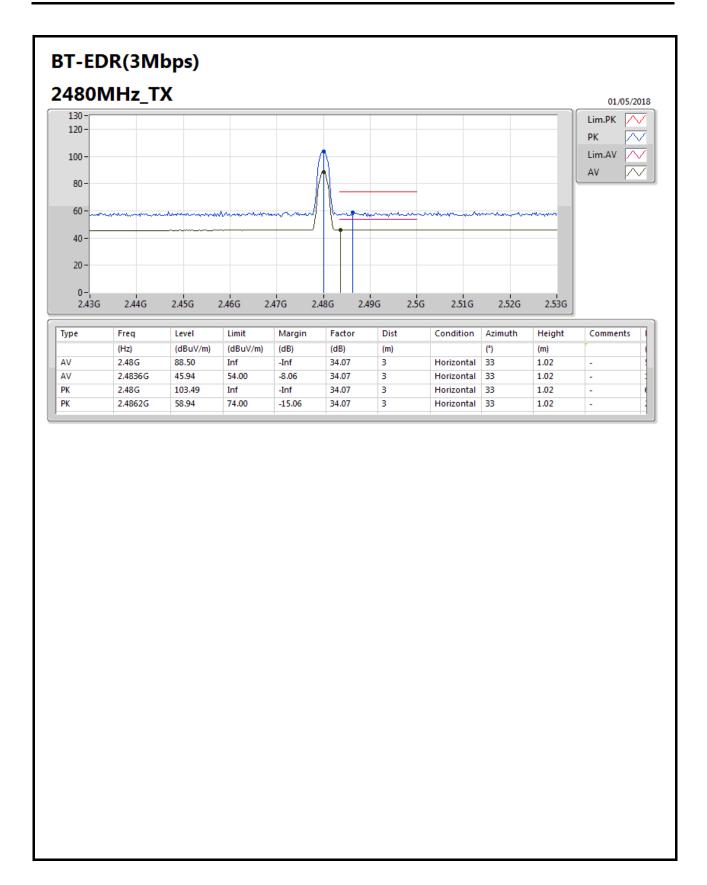
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