





FCC Test Report

FCC ID : VUIUPWL6580

Equipment : Wireless module

Brand Name : PEGATRON

Model Name : UPWL6580

Applicant : PEGATRON CORPORATION

5F., NO. 76, LIGONG ST., BEITOU DISTRICT,

TAIPEI CITY 112 Taiwan

Manufacturer : PEGATRON CORPORATION

5F., NO. 76, LIGONG ST., BEITOU DISTRICT,

TAIPEI CITY 112 Taiwan

Standard : 47 CFR FCC Part 15.407

The product was received on Oct. 23, 2018, and testing was started from Oct. 30, 2018 and completed on Nov. 30, 2018. We, SPORTON INTERNATIONAL 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 variant report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, the test report shall not be reproduced except in full.

Approved by: Phoenix Chen

SPORTON INTERNATIONAL 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

Report Template No.: HE1-D1 Ver2.3

FCC ID: VUIUPWL6580

Page Number

: 1 of 25

Issued Date

: Jan. 24, 2019

Report Version

: 01





Table of Contents

| HIST | ORY OF THIS TEST REPORT | 3 |
|------|--|----|
| SUM | MARY OF TEST RESULT | 4 |
| 1 | GENERAL DESCRIPTION | 5 |
| 1.1 | Information | 5 |
| 1.2 | Testing Applied Standards | 7 |
| 1.3 | Testing Location Information | 7 |
| 1.4 | Measurement Uncertainty | 7 |
| 2 | TEST CONFIGURATION OF EUT | 8 |
| 2.1 | Test Condition | 8 |
| 2.2 | Test Channel Mode | 8 |
| 2.3 | The Worst Case Measurement Configuration | 9 |
| 2.4 | Accessories and Support Equipment | 10 |
| 2.5 | Test Setup Diagram | 11 |
| 3 | TRANSMITTER TEST RESULT | 13 |
| 3.1 | AC Power-line Conducted Emissions | 13 |
| 3.2 | Emission Bandwidth | 14 |
| 3.3 | Maximum Conducted Output Power | 15 |
| 3.4 | Peak Power Spectral Density | 17 |
| 3.5 | Unwanted Emissions | 19 |
| 3.6 | Test Equipment and Calibration Data | 24 |

APPENDIX A. TEST RESULTS OF AC POWER-LINE CONDUCTED EMISSIONS

APPENDIX B. TEST RESULTS OF EMISSION BANDWIDTH

APPENDIX C. TEST RESULTS OF MAXIMUM CONDUCTED OUTPUT POWER

APPENDIX D. TEST RESULTS OF PEAK POWER SPECTRAL DENSITY

APPENDIX E. TEST RESULTS OF UNWANTED EMISSIONS

APPENDIX F. TEST PHOTOS

PHOTOGRAPHS OF EUT V01

FAX: 886-3-3270973

Report Template No.: HE1-D1 Ver2.3

FCC ID: VUIUPWL6580

TEL: 886-3-3273456

Page Number

: 2 of 25

Issued Date

: Jan. 24, 2019

Report Version :

: 01



History of this test report

| Report No. | Version | Description | Issued Date |
|---------------|---------|-------------------------|---------------|
| FR272809-01AN | 01 | Initial issue of report | Jan. 24, 2019 |
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TEL: 886-3-3273456 Page Number : 3 of 25

FAX: 886-3-3270973 Issued Date : Jan. 24, 2019

Report Template No.: HE1-D1 Ver2.3 Report Version : 01



Summary of Test Result

| 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 | 15.407(a) | Emission Bandwidth | PASS | - |
| 3.3 | 15.407(a) | Maximum Conducted Output Power | PASS | - |
| 3.4 | 15.407(a) | Peak Power Spectral Density | PASS | - |
| 3.5 | 15.407(b) | Unwanted Emissions | PASS | - |

Declaration of Conformity:

The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.

Comments and explanations:

None

Reviewed by: Sam Tsai

Report Producer: Jenny Yang

TEL: 886-3-3273456 Page Number : 4 of 25 : Jan. 24, 2019 FAX: 886-3-3270973 Issued Date

Report Template No.: HE1-D1 Ver2.3 Report Version : 01



1 General Description

1.1 Information

1.1.1 RF General Information

| Frequency Range (MHz) | IEEE Std. 802.11 | Ch. Frequency (MHz) | Channel Number |
|-----------------------|------------------|---------------------|----------------|
| 5150-5250 | o n (UT20) | 5180-5240 | 36-48 [4] |
| 5725-5850 | a, n (HT20) | 5745-5825 | 149-165 [5] |
| 5150-5250 | n (UT40) | 5190-5230 | 38-46 [2] |
| 5725-5850 | n (HT40) | 5755-5795 | 151-159 [2] |

| Band | Mode | BWch (MHz) | Nant |
|---------------|--------------|------------|------|
| 5.15-5.25GHz | 802.11a | 20 | 3TX |
| 5.725-5.85GHz | 802.11a | 20 | 3TX |
| 5.15-5.25GHz | 802.11n HT20 | 20 | 3TX |
| 5.725-5.85GHz | 802.11n HT20 | 20 | 3TX |
| 5.15-5.25GHz | 802.11n HT40 | 40 | 3TX |
| 5.725-5.85GHz | 802.11n HT40 | 40 | 3TX |

Note:

- 11a, HT20 and HT40 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM modulation.
- BWch is the nominal channel bandwidth.

1.1.2 Antenna Information

| Ant. | Brand | Model Name | Antenna Type | Connector | Gain (dBi) |
|------|---------|--------------------------------|--------------|-----------|------------|
| 1 | Wanshih | Wanshih UC3WFI0057 PCB Antenna | | I-PEX | 1.99 |
| 2 | Wanshih | UC3WFI0058 | PCB Antenna | I-PEX | 2.08 |
| 3 | Wanshih | UC3WFI0090 | PCB Antenna | I-PEX | 2.03 |

Note 1: The EUT has three antennas.

For 5GHz function:

For IEEE 802.11 a/n mode (3TX/3RX)

Ant. 1, Ant. 2 and Ant. 3 could transmit/receive simultaneously.

TEL: 886-3-3273456 Page Number : 5 of 25
FAX: 886-3-3270973 Issued Date : Jan. 24, 2019

Report Template No.: HE1-D1 Ver2.3 Report Version : 01

FCC Test Report

EUT Information 1.1.3

| | Operational Condition | | | | | | |
|---|-----------------------|---------------|-----------|----------------------|----------|-------------|------------------------|
| EU1 | Power T | ype | Fro | m Switching Pow | er Supp | oly | |
| E117 | Γ Function | | | Outdoor | | | Indoor |
| EU | runction | 1 | | Fixed P2P | | \boxtimes | Client |
| Bea | mforming | Function | | With beamforming | ng 🛭 | \boxtimes | Without beamforming |
| TPC | Function | 1 | | With TPC Functi | ion | \boxtimes | Without TPC Function |
| | | | | T | ype of | EU | Т |
| | Stand-alo | ne | | | | | |
| | Combined | d (EUT where | e the | radio part is fully | integra | ted | within another device) |
| | Combined | d Equipment | - Bra | and Name / Mode | l No.: | | |
| \boxtimes | Plug-in ra | dio (EUT inte | ende | d for a variety of l | host sys | ster | ns) |
| Host System - Brand Name / Model No.: Equipment Name: Wireless Cable Modem Brand Name: CISCO Model No.: DPC3939 | | | ne: CISCO | | | | |
| | Other: | | | | | | |

1.1.4 Mode Test Duty Cycle

| Mode | DC | DCF(dB) | T(s) | VBW(Hz) ≥ 1/T |
|--------------|-------|---------|---------|---------------|
| 802.11a | 0.969 | 0.137 | 1.361m | 1k |
| 802.11n HT20 | 0.967 | 0.146 | 1.274m | 1k |
| 802.11n HT40 | 0.953 | 0.209 | 633.75u | 3k |

1.1.5 Table for Permissive Change

This product is an extension of original one reported under Sporton project number: FR272809Al and FR272809AN. Below is the table for the change of the product with respect to the original one.

| Modifications | Performance Checking |
|---|-------------------------------|
| Updated standard | |
| 11a mode was changed from 1TX to 3TX | All test items were evaluated |
| The EUT was limited to Wireless Cable Modem | |

TEL: 886-3-3273456 Page Number : 6 of 25 FAX: 886-3-3270973 Issued Date

Report Template No.: HE1-D1 Ver2.3

FCC ID: VUIUPWL6580

Report Version : 01

: Jan. 24, 2019

Report No.: FR272809-01AN



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
- ANSI C63.10-2013
- KDB 789033 D02 v02r01
- KDB 662911 D01 v02r01

Testing Location Information 1.3

| | Testing Location | | | | | | | |
|-------------|--|-----|---|-------------------------|---------|------|---------------------------------------|--|
| \boxtimes | HWA 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 | on No. | ΓW | 1190 with FCC. | |
| | JHUBEI | ADD | : | No.8, Ln. 724, Bo'ai St | , Zhube | ei (| City, Hsinchu County, Taiwan (R.O.C.) | |
| | TEL: 886-3-656-9065 FAX: 886-3-656-9085 | | | | | | | |
| | Test site Designation No. TW0006 with FCC. | | | | | | | |

| Test Condition | Test Site No. | Test Engineer | Test Environment | Test Date |
|----------------|---------------|---------------|------------------|-------------|
| AC Conduction | CO04-HY | Jeremy | 21°C / 59.8% | 30/Oct/2018 |
| RF Conducted | TH06-HY | Streak | 23.1°C / 61% | 30/Nov/2018 |
| Radiated | 03CH09-HY | Andy | 22.8°C / 59% | 29/Nov/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) | 3.54 dB | Confidence levels of 95% |
| Radiated Emission (9kHz ~ 30MHz) | 1.6 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% |

TEL: 886-3-3273456 Page Number : 7 of 25 FAX: 886-3-3270973 Issued Date : Jan. 24, 2019

Report Template No.: HE1-D1 Ver2.3 Report Version : 01



Test Configuration of EUT 2

2.1 **Test Condition**

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

2.2 **Test Channel Mode**

| Test Software | art |
|---------------|-----|
|---------------|-----|

| Mode | Power Setting |
|------------------------------|---------------|
| 802.11a_Nss1,(6Mbps)_3TX | - |
| 5180MHz | 19.5 |
| 5200MHz | 19.5 |
| 5240MHz | 19.5 |
| 5745MHz | 25 |
| 5785MHz | 28 |
| 5825MHz | 31.5 |
| 802.11n HT20_Nss1,(MCS0)_3TX | - |
| 5180MHz | 19.5 |
| 5200MHz | 19.5 |
| 5240MHz | 20 |
| 5745MHz | 25 |
| 5785MHz | 28 |
| 5825MHz | 31.5 |
| 802.11n HT40_Nss1,(MCS0)_3TX | - |
| 5190MHz | 15 |
| 5230MHz | 20.5 |
| 5755MHz | 24 |
| 5795MHz | 26 |

TEL: 886-3-3273456 Page Number : 8 of 25

FAX: 886-3-3270973 Issued Date : Jan. 24, 2019

Report Version Report Template No.: HE1-D1 Ver2.3 : 01



The Worst Case Measurement Configuration 2.3

| The 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 | Switching Power Supply mode |

| The Worst Case Mode for Following Conformance Tests | | |
|---|---|--|
| Tests Item | Emission Bandwidth Maximum Conducted Output Power Peak Power Spectral Density | |
| Test Condition | Conducted measurement at transmit chains | |

| Th | The Worst Case Mode for Following Conformance Tests | | |
|-----------------------------|--|--|--|
| Tests Item | Unwanted Emissions | | |
| Test Condition | Radiated measurement If EUT consist of multiple antenna assembly (multiple antenna are used in EUT regardless of spatial multiplexing MIMO configuration), the radiated test should be performed with highest antenna gain of each antenna type. | | |
| Operating Mode < 1GHz | CTX | | |
| 1 | Switching Power Supply mode | | |
| Operating Mode > 1GHz | CTX | | |
| | Y Plane | | |
| Orthogonal Planes of EUT | | | |
| Worst Planes of EUT | V | | |

| The Worst Case Mode for Following Conformance Tests | | |
|---|---|--|
| Tests Item | Tests Item Simultaneous Transmission Analysis | |
| Operating Mode CTX | | |
| 1 WLAN 2.4GHz+WLAN 5GHz+DECT | | |
| Refer to Sporton Test Report No.: FA272809-01 for Co-location RF Exposure Evaluation. | | |

TEL: 886-3-3273456 Page Number : 9 of 25 FAX: 886-3-3270973 Issued Date : Jan. 24, 2019

Report Template No.: HE1-D1 Ver2.3

FCC ID: VUIUPWL6580

Report Version : 01



2.4 Accessories and Support Equipment

| Accessories | | |
|---------------------|------------|---|
| In/Out door | | In door |
| AC Power Cord Cable | Power Cord | 1.8meter, Non-Shielded cable, w/o ferrite core |
| In/Out door | | In door |
| RJ45 Cable | Cable | 2.05meter, Non-Shielded cable, w/o ferrite core |

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

| | Support Equipment – AC Conduction | | | |
|-----|-----------------------------------|------------|------------|--------|
| No. | Equipment | Brand Name | Model Name | FCC ID |
| 1 | Notebook | DELL | E5540 | N/A |
| 2 | AC adapter for NB | DELL | LA90PS0-00 | N/A |

| | Support Equipment - RF Conducted | | | |
|-----|----------------------------------|------------|------------|--------|
| No. | Equipment | Brand Name | Model Name | FCC ID |
| 1 | Notebook | DELL | E5410 | DoC |
| 2 | Adapter for NB | DELL | HA65NM130 | DoC |

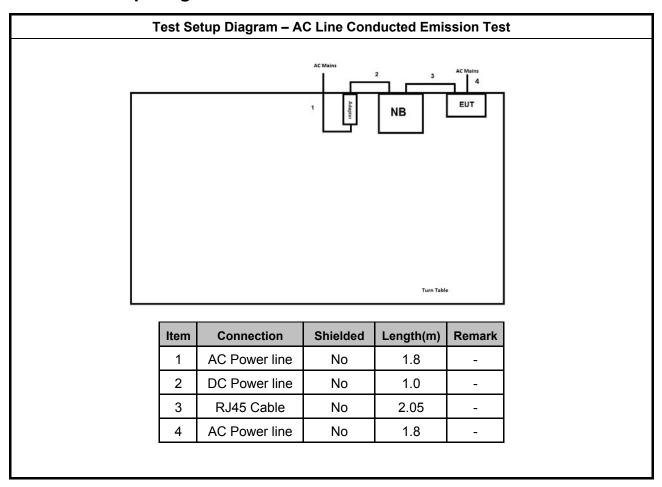
| | Support Equipment – Radiated Emission | | | | |
|-----|---------------------------------------|------------|------------|--------|--|
| No. | Equipment | Brand Name | Model Name | FCC ID | |
| 1 | Notebook | DELL | E5540 | N/A | |
| 2 | Adapter for NB | DELL | FA90PSO-00 | N/A | |

TEL: 886-3-3273456 Page Number : 10 of 25 FAX: 886-3-3270973 Issued Date : Jan. 24, 2019

Report Template No.: HE1-D1 Ver2.3 Report Version : 01



Test Setup Diagram 2.5

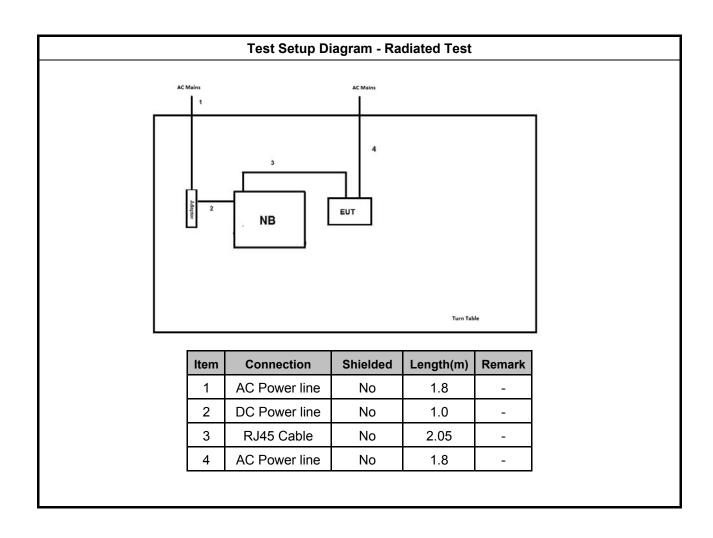


: 11 of 25 TEL: 886-3-3273456 Page Number FAX: 886-3-3270973 Issued Date : Jan. 24, 2019

Report Version

: 01

Report Template No.: HE1-D1 Ver2.3



TEL: 886-3-3273456 Page Number : 12 of 25 FAX: 886-3-3270973 Issued Date : Jan. 24, 2019

Report Template No.: HE1-D1 Ver2.3 Report Version : 01



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 | | |
|---|--------------------------------|--|
| Quasi-Peak | Average | |
| 66 - 56 * | 56 - 46 * | |
| 56 | 46 | |
| 60 | 50 | |
| | Quasi-Peak 66 - 56 * 56 | |

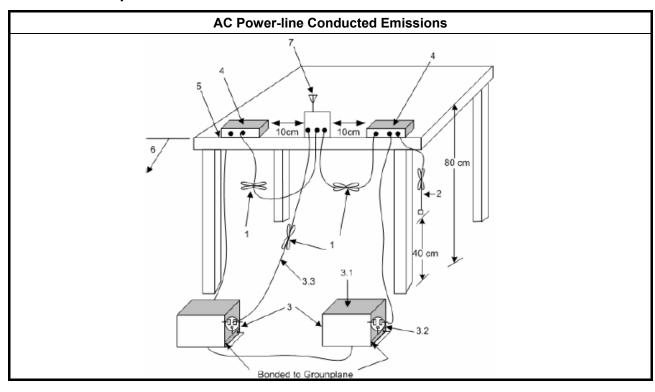
3.1.2 Measuring Instruments

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

3.1.3 **Test Procedures**

| | Test Method |
|-------------|--|
| \boxtimes | Refer as ANSI C63.10-2013, clause 6.2 for AC power-line conducted emissions. |

3.1.4 **Test Setup**



3.1.5 **Test Result of AC Power-line Conducted Emissions**

Refer as Appendix A

TEL: 886-3-3273456 Page Number : 13 of 25 FAX: 886-3-3270973 Issued Date : Jan. 24, 2019

Report Version

: 01

Report Template No.: HE1-D1 Ver2.3



3.2 Emission Bandwidth

3.2.1 Emission Bandwidth Limit

| Emission Bandwidth Limit | | | | | |
|---|----|--|--|--|--|
| UNII Devices | | | | | |
| For the 5.15-5.25 GHz band, N/A | | | | | |
| For the 5.25-5.35 GHz band, N/A | | | | | |
| ☐ For the 5.47-5.725 GHz band, N/A | | | | | |
| ☐ For the 5.725-5.85 GHz band, 6 dB emission bandwidth ≥ 500kHz | Z. | | | | |

Report No.: FR272809-01AN

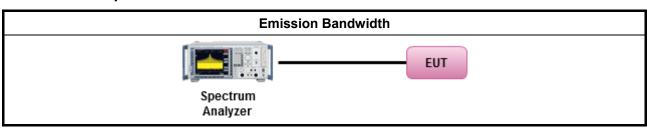
3.2.2 Measuring Instruments

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

3.2.3 Test Procedures

| | Test Method | | | | | | |
|---|--|--|--|--|--|--|--|
| • | For the emission bandwidth shall be measured using one of the options below: | | | | | | |
| | Refer as KDB 789033, clause C for EBW and clause D for OBW measurement. | | | | | | |
| | Refer as ANSI C63.10, clause 6.9.3 for occupied bandwidth testing. | | | | | | |
| | Refer as IC RSS-Gen, clause 6.7 for bandwidth testing. | | | | | | |

3.2.4 Test Setup



3.2.5 Test Result of Emission Bandwidth

Refer as Appendix B

TEL: 886-3-3273456 Page Number : 14 of 25
FAX: 886-3-3270973 Issued Date : Jan. 24, 2019

Report Template No.: HE1-D1 Ver2.3 Report Version : 01



Maximum Conducted Output Power 3.3

3.3.1 **Maximum Conducted Output Power Limit**

| | Maximum Conducted Output Power Limit | | | | | | |
|-------------|---|--|--|--|--|--|--|
| UN | UNII Devices | | | | | | |
| \boxtimes | For the 5.15-5.25 GHz band: | | | | | | |
| | • Outdoor AP: the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W. If G_{TX} > 6 dBi, then P_{Out} = 30 - (G_{TX} - 6). e.i.r.p. at any elevation angle above 30 degrees \leq 125mW [21dBm] | | | | | | |
| | Indoor AP: the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W. If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)$ | | | | | | |
| | Point-to-point AP: the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W If G_{TX} > 23 dBi, then P_{Out} = 30 - (G_{TX} - 23). | | | | | | |
| | Mobile or Portable Client: the maximum conducted output power (P_{Out}) shall not exceed the lesser of 250 mW. If G_{TX} > 6 dBi, then P_{Out} = 24 – (G_{TX} – 6). | | | | | | |
| | For the 5.25-5.35 GHz band, the maximum conducted output power (P_{Out}) shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in MHz. If G_{TX} > 6 dBi, then P_{Out} = 24 – (G_{TX} – 6). | | | | | | |
| | For the 5.47-5.725 GHz band, the maximum conducted output power (P_{Out}) shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in MHz. If G_{TX} > 6 dBi, then P_{Out} = 24 – (G_{TX} – 6). | | | | | | |
| \boxtimes | For the 5.725-5.85 GHz band: | | | | | | |
| | Point-to-multipoint systems (P2M): the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W. If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)$. | | | | | | |
| | Point-to-point systems (P2P): the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W. | | | | | | |
| | t = maximum conducted output power in dBm, t = the maximum transmitting antenna directional gain in dBi. | | | | | | |

TEL: 886-3-3273456 Page Number : 15 of 25 FAX: 886-3-3270973 Issued Date : Jan. 24, 2019

Report Version

: 01

Report Template No.: HE1-D1 Ver2.3



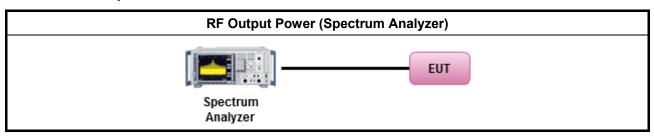
3.3.2 **Measuring Instruments**

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

3.3.3 **Test Procedures**

| | Test Method |
|---|---|
| • | Maximum Conducted Output Power |
| | Duty cycle ≥ 98% |
| ĺ | Refer as KDB 789033, clause E Method SA-2 (spectral trace averaging). |
| | Duty cycle < 98% |
| | Refer as KDB 789033, clause E Method SA-2 Alt. (RMS detection with slow sweep speed) |
| | Wideband RF power meter and average over on/off periods with duty factor |
| l | Refer as KDB 789033, clause E Method PM (using an RF average power meter). |
| • | For conducted measurement. |
| | If the EUT supports multiple transmit chains using options given below: Refer as KDB 662911, In-band power measurements. Using the measure-and-sum approach, measured all transmit ports individually. Sum the power (in linear power units e.g., mW) of all ports for each individual sample and save them. |
| | If multiple transmit chains, EIRP calculation could be following as methods: P_{total} = P₁ + P₂ + + P_n (calculated in linear unit [mW] and transfer to log unit [dBm]) EIRP_{total} = P_{total} + DG |

3.3.4 **Test Setup**



Test Result of Maximum Conducted Output Power 3.3.5

Refer as Appendix C

TEL: 886-3-3273456 Page Number : 16 of 25 FAX: 886-3-3270973 Issued Date : Jan. 24, 2019

Report Template No.: HE1-D1 Ver2.3 Report Version : 01



3.4 Peak Power Spectral Density

3.4.1 Peak Power Spectral Density Limit

| | Peak Power Spectral Density Limit | | | | | | | |
|-------------|--|--|--|--|--|--|--|--|
| UNI | UNII Devices | | | | | | | |
| \boxtimes | For the 5.15-5.25 GHz band: | | | | | | | |
| | Outdoor AP: the peak power spectral density (PPSD) shall not exceed the lesser of 17dBm/MHz. If G_{TX} > 6 dBi, then P_{Out} = 17 – (G_{TX} – 6). | | | | | | | |
| | Indoor AP: the peak power spectral density (PPSD) shall not exceed the lesser of 17dBm/MHz. If G _{TX} > 6 dBi, then P _{Out} = 17 − (G _{TX} − 6). | | | | | | | |
| | Point-to-point AP: the peak power spectral density (PPSD) shall not exceed the lesser of 17dBm/MHz. If $G_{TX} > 23$ dBi, then $P_{Out} = 17 - (G_{TX} - 23)$. | | | | | | | |
| | • Mobile or Portable Client: the peak power spectral density (PPSD) ≤ 11 dBm/MHz. If G _{TX} > 6 dBi, then PPSD= 11 – (G _{TX} – 6) | | | | | | | |
| | For the 5.25-5.35 GHz band, the peak power spectral density (PPSD) \leq 11 dBm/MHz. If $G_{TX} >$ 6 dBi, then PPSD= 11 – ($G_{TX} -$ 6). | | | | | | | |
| | For the 5.47-5.725 GHz band, the peak power spectral density (PPSD) \leq 11 dBm/MHz. If $G_{TX} >$ 6 dBi, then PPSD= 11 – ($G_{TX} -$ 6). | | | | | | | |
| \boxtimes | For the 5.725-5.85 GHz band: | | | | | | | |
| | Point-to-multipoint systems (P2M): the peak power spectral density (PPSD) \leq 30 dBm/500kHz. If $G_{TX} > 6$ dBi, then PPSD= $30 - (G_{TX} - 6)$. | | | | | | | |
| | Point-to-point systems (P2P): the peak power spectral density (PPSD) ≤ 30 dBm/500kHz. | | | | | | | |
| PPS | PPSD = peak power spectral density that he same method as used to determine the conducted output | | | | | | | |

power shall be used to determine the power spectral density. And power spectral density in dBm/MHz

Report No.: FR272809-01AN

3.4.2 Measuring Instruments

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

 G_{TX} = the maximum transmitting antenna directional gain in dBi.

TEL: 886-3-3273456 Page Number : 17 of 25
FAX: 886-3-3270973 Issued Date : Jan. 24, 2019

Report Version

: 01

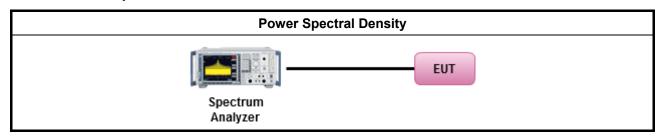
Report Template No.: HE1-D1 Ver2.3



3.4.3 **Test Procedures**

| | Test Method | | | | | | | |
|----------|---|--|--|--|--|--|--|--|
| • | Peak power spectral density procedures that the same method as used to determine the conducted output power shall be used to determine the peak power spectral density and use the peak search function on the spectrum analyzer to find the peak of the spectrum. For the peak power spectral density shall be measured using below options: | | | | | | | |
| | Refer as KDB 789033, F)5) power spectral density can be measured using resolution bandwidth < 1 MHz provided that the results are integrated over 1 MHz bandwidth | | | | | | | |
| | Duty cycle ≥ 98% | | | | | | | |
| | Refer as KDB 789033, clause E Method SA-2 (spectral trace averaging). | | | | | | | |
| | Duty cycle < 98% | | | | | | | |
| <u> </u> | Refer as KDB 789033, clause E Method SA-2 Alt. (RMS detection with slow sweep speed) | | | | | | | |
| • | For conducted measurement. | | | | | | | |
| | ■ If the EUT supports multiple transmit chains using options given below: | | | | | | | |
| | Measure and sum the spectra across the outputs. Refer as KDB 662911, In-band power spectral density (PSD). Sample all transmit ports simultaneously using a spectrum analyzer for each transmit port. Where the trace bin-by-bin of each transmit port summing can be performed. (i.e., in the first spectral bin of output 1 is summed with that in the first spectral bin of output 2 and that from the first spectral bin of output 3, and so on up to the NTX output to obtain the value for the first frequency bin of the summed spectrum.). Add up the amplitud (power) values for the different transmit chains and use this as the new data trace. | | | | | | | |
| | If multiple transmit chains, EIRP PPSD calculation could be following as methods: PPSD _{total} = PPSD ₁ + PPSD ₂ + + PPSD _n (calculated in linear unit [mW] and transfer to log unit [dBm]) EIRP _{total} = PPSD _{total} + DG | | | | | | | |

3.4.4 Test Setup



Test Result of Peak Power Spectral Density

Refer as Appendix D

TEL: 886-3-3273456 Page Number : 18 of 25 FAX: 886-3-3270973 Issued Date : Jan. 24, 2019

Report Template No.: HE1-D1 Ver2.3

FCC ID: VUIUPWL6580

Report Version : 01



3.5 **Unwanted Emissions**

3.5.1 Transmitter Radiated Unwanted Emissions Limit

| Unwanted emissions below 1 GHz and restricted band emissions above 1GHz limit | | | | | | | |
|---|-----------------------|---|-----|--|--|--|--|
| Frequency Range (MHz) | Field Strength (uV/m) | eld Strength (uV/m) Field Strength (dBuV/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 below 30 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

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.

TEL: 886-3-3273456 : 19 of 25 Page Number FAX: 886-3-3270973 Issued Date : Jan. 24, 2019

Report Template No.: HE1-D1 Ver2.3 Report Version : 01

| Un-restricted band emissions above 1GHz Limit | | | | | | |
|---|---|--|--|--|--|--|
| Operating Band Limit | | | | | | |
| 5.15 - 5.25 GHz | e.i.r.p27 dBm [68.2 dBuV/m@3m] | | | | | |
| 5.25 - 5.35 GHz e.i.r.p27 dBm [68.2 dBuV/m@3m] | | | | | | |
| 5.47 - 5.725 GHz e.i.r.p27 dBm [68.2 dBuV/m@3m] | | | | | | |
| 5.725 - 5.85 GHz | 5.650-5700 GHz: e.i.r.p27 ~ 10 dBm [68.2 ~ 105.2 dBuV/m@3m] 5.700-5720 GHz: e.i.r.p. 10 ~ 15.6 dBm [105.2 ~ 110.8 dBuV/m@3m] 5.720-5725 GHz: e.i.r.p. 15.6 ~ 27 dBm [110.8 ~ 122.2 dBuV/m@3m] 5.850-5.855 GHz: e.i.r.p. 27 ~ 15.6 dBm [122.2 ~ 110.8 dBuV/m@3m] 5.855-5.875 GHz: e.i.r.p. 15.6 ~ 10 dBm [110.8 ~ 105.2 dBuV/m@3m] 5.875-5.925 GHz: e.i.r.p. 10 ~ -27 dBm [105.2 ~ 68.2dBuV/m@3m] Other un-restricted band: e.i.r.p27 dBm [68.2 dBuV/m@3m] | | | | | |

Note 1: 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).

TEL: 886-3-3273456 Page Number : 20 of 25 FAX: 886-3-3270973 Issued Date : Jan. 24, 2019

Report Template No.: HE1-D1 Ver2.3 Report Version : 01

FCC Test Report No.: FR272809-01AN

3.5.2 Measuring Instruments

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

3.5.3 Test Procedures

Test Method

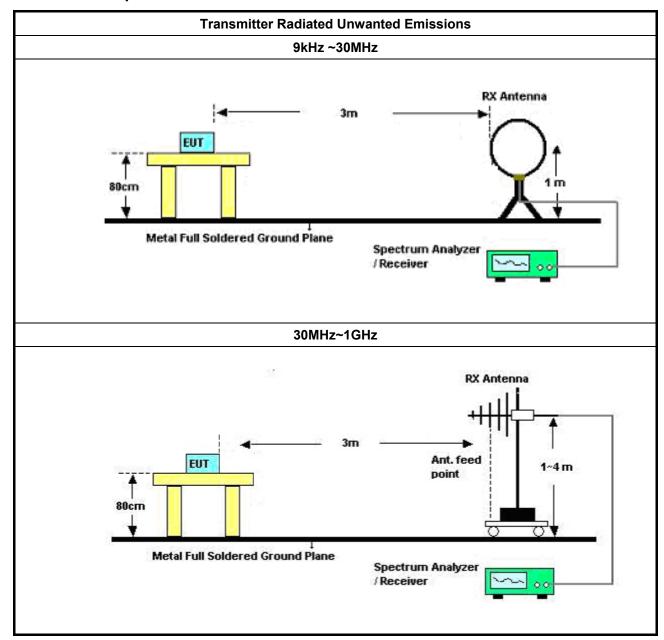
- Measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. Measurements shall not be performed at a distance greater than 30 m for frequencies above 30 MHz, unless it can be further demonstrated that measurements at a distance of 30 m or less are impractical. 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).
- The average emission levels shall be measured in [duty cycle ≥ 98 or duty factor].
- For the transmitter unwanted emissions shall be measured using following options below:
 - Refer as KDB 789033, clause G)2) for unwanted emissions into non-restricted bands.
 - Refer as KDB 789033, clause G)1) for unwanted emissions into restricted bands.
 - Refer as KDB 789033, G)6) Method VB (ANSI C63.10, clause 4.1.4.2.3), Reduced VBW.
 - Refer as KDB 789033, clause G)5) (ANSI C63.10, clause 4.1.4.2.2), measurement procedure peak limit.
- For radiated measurement.
 - Refer as ANSI C63.10, clause 6.4 for radiated emissions below 30 MHz and test distance is 3m.
 - Refer as ANSI C63.10, clause 6.5 for radiated emissions 30 MHz to 1 GHz and test distance is 3m.
 - Refer as ANSI C63.10, clause 6.6 for radiated emissions above 1GHz.
- The any unwanted emissions level shall not exceed the fundamental emission level.
- All amplitude of spurious emissions that are attenuated by more than 20 dB below the permissible value has no need to be reported.

TEL: 886-3-3273456 Page Number : 21 of 25 FAX: 886-3-3270973 Issued Date : Jan. 24, 2019

Report Template No.: HE1-D1 Ver2.3 Report Version : 01



3.5.4 Test Setup



TEL: 886-3-3273456 Page Number : 22 of 25
FAX: 886-3-3270973 Issued Date : Jan. 24, 2019

Report Version

: 01

Report Template No.: HE1-D1 Ver2.3

Above 1GHz

Spectrum Analyzer

Above 1GHz

Report No.: FR272809-01AN

3.5.5 Transmitter Unwanted Emissions (Below 30MHz)

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

3.5.6 Test Result of Transmitter Unwanted Emissions

Refer as Appendix E

TEL: 886-3-3273456 Page Number : 23 of 25
FAX: 886-3-3270973 Issued Date : Jan. 24, 2019

Report Version

: 01

Report Template No.: HE1-D1 Ver2.3



3.6 Test Equipment and Calibration Data

Instrument for AC Conduction

| | instrument for As Schiddelion | | | | | | |
|--------------------------------------|-------------------------------|-------------|------------|---------------------|---------------------|-------------------------|--|
| Instrument | Manufacturer | Model No. | Serial No. | Spec. | Calibration Date | Calibration Due Date | |
| EMC Receiver | R&S | ESR | 102051 | 9KHz ~ 3.6GHz | 03/May/2018 | 02/May/2019 | |
| LISN | R&S | ENV216 | 101295 | 9kHz ~ 30MHz | 17/Nov/2017 | 16/Nov/2018 | |
| RF Cable-CON | MTJ | RG142 | CB002-CO | 9kHz ~ 200MHz | 17/Sep/2018 | 16/Sep/2019 | |
| AC POWER | APC | AFC-11005G | F310050055 | 47Hz~63Hz 5~300V | NCR | NCR | |
| Impuls Begrenzer Pulse Limiter | SCHWARZBECK | VTSD 9561-F | 9561-F041 | 9 kHz ~ 30 MHz | 12/Oct/2018 | 11/Oct/2019 | |

Report No.: FR272809-01AN

NCR : Non-Calibration Require

Instrument for Conducted Test

| Instrument | Manufacturer | Model No. | Serial No. | Spec. | Calibration Date | Calibration Due Date |
|----------------------|--------------|-----------|---------------|----------------|---------------------|-------------------------|
| Spectrum Analyzer | R&S | FSV 40 | 101013 | 9kHz~40GHz | 29/Dec/2017 | 28/Dec/2018 |
| Signal Generator | Anritsu | MG3694C | 163401 | 10MHz~40GHz | 15/Jan/2018 | 14/Jan/2019 |
| Power Sensor | Anritsu | MA2411B | 0917017 | 300MHz ~ 40GHz | 05/Feb/2018 | 04/Feb/2019 |
| Power Meter | Anritsu | ML2495A | 0949003 | 300MHz ~ 40GHz | 05/Feb/2018 | 04/Feb/2019 |
| Cable 0.2m | HUBER | MY10710/4 | RF Cable - 01 | 30MHz~1G | 11/Jan/2018 | 10/Jan/2019 |
| Cable 0.2m | HUBER | MY10710/4 | RF Cable - 01 | 1G~18G | 11/Jan/2018 | 10/Jan/2019 |
| Cable 0.5m | HUBER | MY10715/4 | RF Cable - 06 | 30MHz~1G | 11/Jan/2018 | 10/Jan/2019 |

TEL: 886-3-3273456 Page Number : 24 of 25 FAX: 886-3-3270973 Issued Date : Jan. 24, 2019

Report Template No.: HE1-D1 Ver2.3 Report Version : 01



FCC Test Report

Report No.: FR272809-01AN

Instrument for Radiated Test

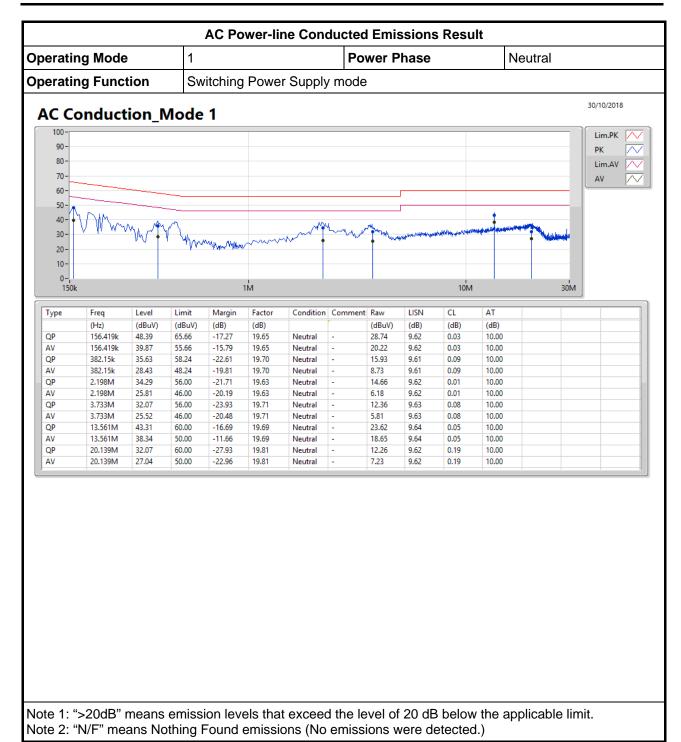
| Instrument | Manufacturer | Model No. | Serial No. | Spec. | Calibration Date | Calibration Due Date |
|--|--------------|--------------------------|-------------------------|----------------|---------------------|-------------------------|
| 3m Semi Anechoic Chamber | TDK | SAC-3M | 03CH09-HY | 30MHz ~ 1GHz | 23/Apr/2018 | 22/Apr/2019 |
| 3m Semi Anechoic Chamber | TDK | SAC-3M | 03CH09-HY | 1GHz ~ 18GHz | 14/Jun/2018 | 13/Jun/2019 |
| Microwave Preamplifier | Agilent | 8449B | 3008A02096 | 1GHz ~ 26.5GHz | 10/May/2018 | 09/May/2019 |
| Amplifier | EMC | EMC9135 | 980232 | 9KHz~1GHz | 27/Apr/2018 | 26/Apr/2019 |
| EXA Signal Analyzer | KEYSIGHT | N9010A | MY54200885 | 10Hz ~ 44GHz | 31/Jul/2018 | 30/Jul/2019 |
| Bilog Antenna & 5dB Attenuator | TESEQ & MTJ | CBL6111D & MTJ6102-05 | 35418 / 3 | 30MHz~1GHz | 02/Oct/2018 | 03/Oct/2019 |
| Double Ridged Guide Horn Antenna | SCHWARZBECK | BBHA 9120 D | BBHA9120 D 1534 | 1GHz~18GHz | 30/Apr/2018 | 29/Apr/2019 |
| Broadband Horn Antenna | SCHWARZBECK | BBHA 9170 | BBHA9170614 | 18GHz~40GHz | 09/Feb/2018 | 08/Feb/2019 |
| Preamplifier | MITEQ | TTA1840-35-HG | 1864481 | 18GHz ~ 40GHz | 24/Aug/2018 | 23/Aug/2019 |
| Loop Antenna | TESEQ | HLA 6120 | 31244 | 9k-30MHz | 29/Mar/2018 | 28/Mar/2019 |
| RF Cable-R03m | Jye Bao | RG142 | CB031 | 9kHz ~ 1GHz | 1/Feb/2018 | 31/Jan/2019 |
| RF Cable-high | HUBER+SUHNER | SUCOFLEX104 | SN 556626/4 + 556627 | 1GHz ~ 40GHz | 14/Mar/2018 | 13/Mar/2019 |

TEL: 886-3-3273456 Page Number : 25 of 25 FAX: 886-3-3270973 Issued Date : Jan. 24, 2019

Report Template No.: HE1-D1 Ver2.3 Report Version : 01



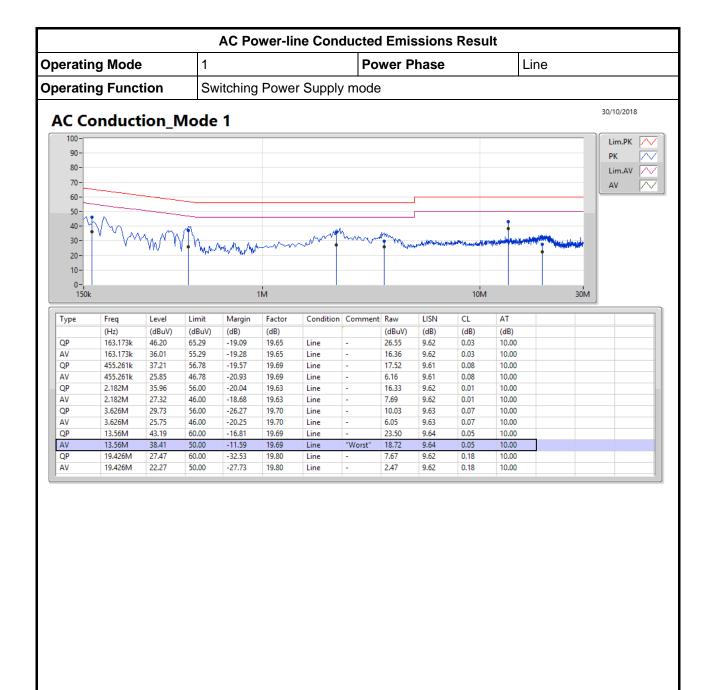
AC Power-line Conducted Emissions



TEL: 886-3-327-3456 Page Number: A1 of A2

FAX: 886-3-327-0973





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.)

TEL: 886-3-327-3456 Page Number : A2 of A2

FAX: 886-3-327-0973



Appendix B EBW Result

Summary

| Mode | Max-N dB | Max-OBW | ITU-Code | Min-N dB | Min-OBW |
|------------------------------|----------|---------|----------|----------|---------|
| | (Hz) | (Hz) | | (Hz) | (Hz) |
| 5.15-5.25GHz | - | - | - | - | - |
| 802.11a_Nss1,(6Mbps)_3TX | 24.525M | 16.515M | 16M5D1D | 22.275M | 16.452M |
| 802.11n HT20_Nss1,(MCS0)_3TX | 25.45M | 17.682M | 17M7D1D | 23.225M | 17.625M |
| 802.11n HT40_Nss1,(MCS0)_3TX | 61.1M | 36.345M | 36M3D1D | 45.6M | 36.157M |
| 5.725-5.85GHz | - | - | - | - | - |
| 802.11a_Nss1,(6Mbps)_3TX | 16.3M | 35.238M | 35M2D1D | 15.675M | 16.618M |
| 802.11n HT20_Nss1,(MCS0)_3TX | 17.55M | 36.142M | 36M1D1D | 15.5M | 17.725M |
| 802.11n HT40_Nss1,(MCS0)_3TX | 36.25M | 55.563M | 55M6D1D | 35.35M | 36.394M |

Max-N dB = Maximum 6dB down bandwidth for 5.725-5.85GHz band / Maximum 26dB down bandwidth for other band;

Max-OBW = Maximum 99% occupied bandwidth;
Min-N dB = Minimum 6dB down bandwidth for 5.725-5.85GHz band / Maximum 26dB down bandwidth for other band;

Min-OBW = Minimum 99% occupied bandwidth;

SPORTON INTERNATIONAL INC. Page No. : B1 of B8

TEL: 886-3-327-3456 FAX: 886-3-327-0973 272809-01



EBW Result Appendix B

Result

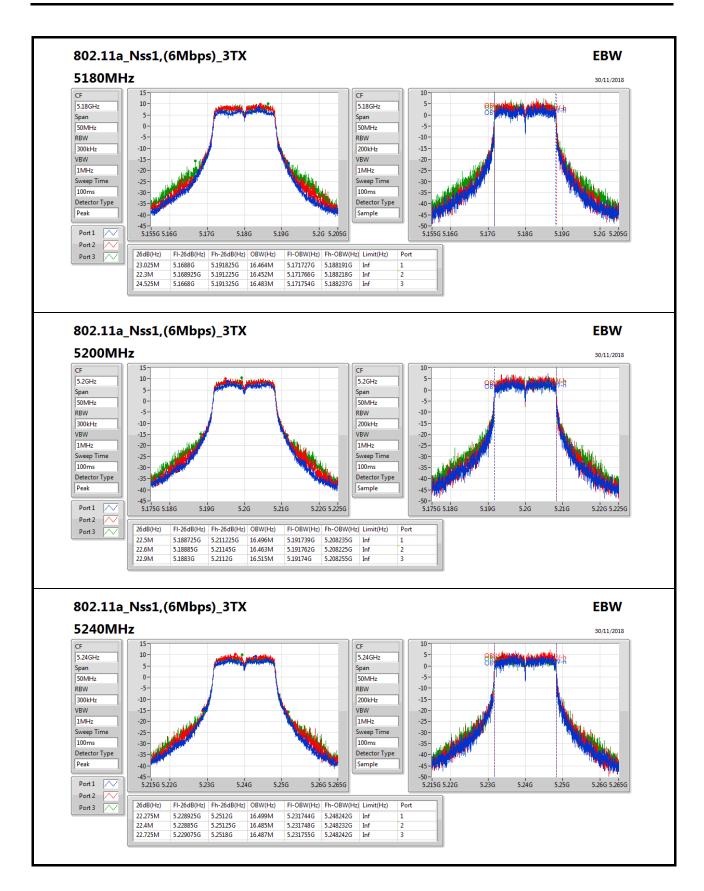
| Mode | Result | Limit | Port 1-N dB | Port 1-OBW | Port 2-N dB | Port 2-OBW | Port 3-N dB | Port 3-OBW |
|------------------------------|--------|-------|-------------|------------|-------------|------------|-------------|------------|
| | | (Hz) | (Hz) | (Hz) | (Hz) | (Hz) | (Hz) | (Hz) |
| 802.11a_Nss1,(6Mbps)_3TX | - | - | - | - | - | - | - | - |
| 5180MHz_TnomVnom | Pass | Inf | 23.025M | 16.464M | 22.3M | 16.452M | 24.525M | 16.483M |
| 5200MHz_TnomVnom | Pass | Inf | 22.5M | 16.496M | 22.6M | 16.463M | 22.9M | 16.515M |
| 5240MHz_TnomVnom | Pass | Inf | 22.275M | 16.499M | 22.4M | 16.485M | 22.725M | 16.487M |
| 5745MHz_TnomVnom | Pass | 500k | 16.275M | 19.516M | 16.3M | 16.618M | 16.3M | 19.001M |
| 5785MHz_TnomVnom | Pass | 500k | 15.875M | 30.124M | 16M | 21.508M | 16.025M | 26.513M |
| 5825MHz_TnomVnom | Pass | 500k | 16.3M | 35.238M | 15.675M | 28.395M | 16.275M | 32.952M |
| 802.11n HT20_Nss1,(MCS0)_3TX | - | - | - | - | - | - | - | - |
| 5180MHz_TnomVnom | Pass | Inf | 23.65M | 17.682M | 23.975M | 17.625M | 25.45M | 17.668M |
| 5200MHz_TnomVnom | Pass | Inf | 23.45M | 17.636M | 23.4M | 17.632M | 24.775M | 17.682M |
| 5240MHz_TnomVnom | Pass | Inf | 23.775M | 17.656M | 23.225M | 17.654M | 24.025M | 17.667M |
| 5745MHz_TnomVnom | Pass | 500k | 16.75M | 21.556M | 17.125M | 17.725M | 17.5M | 19.136M |
| 5785MHz_TnomVnom | Pass | 500k | 15.5M | 31.595M | 16.275M | 22.217M | 17.525M | 28.187M |
| 5825MHz_TnomVnom | Pass | 500k | 17.55M | 36.142M | 16.875M | 29.116M | 16.575M | 34.436M |
| 802.11n HT40_Nss1,(MCS0)_3TX | - | - | - | - | - | - | - | - |
| 5190MHz_TnomVnom | Pass | Inf | 47.2M | 36.157M | 46.65M | 36.277M | 45.6M | 36.285M |
| 5230MHz_TnomVnom | Pass | Inf | 48.75M | 36.207M | 53.7M | 36.278M | 61.1M | 36.345M |
| 5755MHz_TnomVnom | Pass | 500k | 35.85M | 37.038M | 36.05M | 36.394M | 36.25M | 36.477M |
| 5795MHz_TnomVnom | Pass | 500k | 35.35M | 55.563M | 36.05M | 36.602M | 36.25M | 43.216M |

Port X-N dB = Port X 6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band Port X-OBW = Port X 99% occupied bandwidth;

SPORTON INTERNATIONAL INC. Page No. : B2 of B8

TEL: 886-3-327-3456 FAX: 886-3-327-0973 272809-01

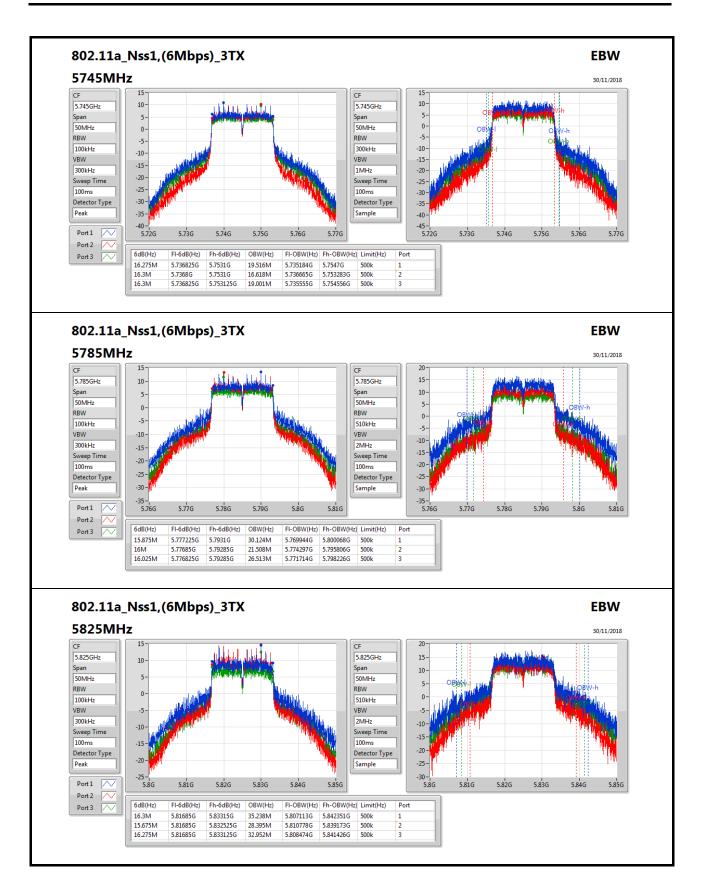




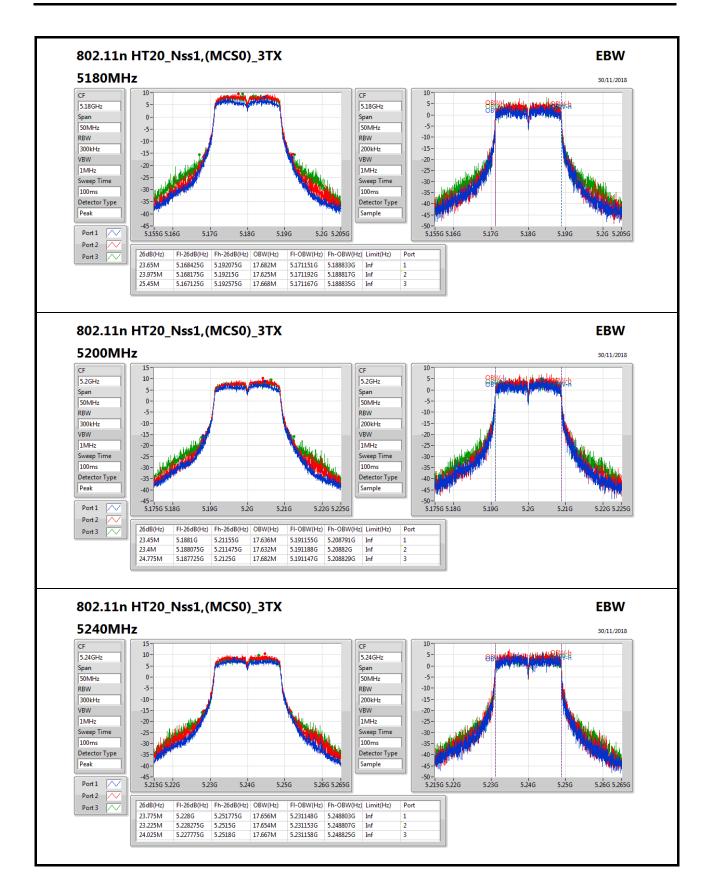
TEL: 886-3-327-3456 FAX: 886-3-327-0973

272809-01

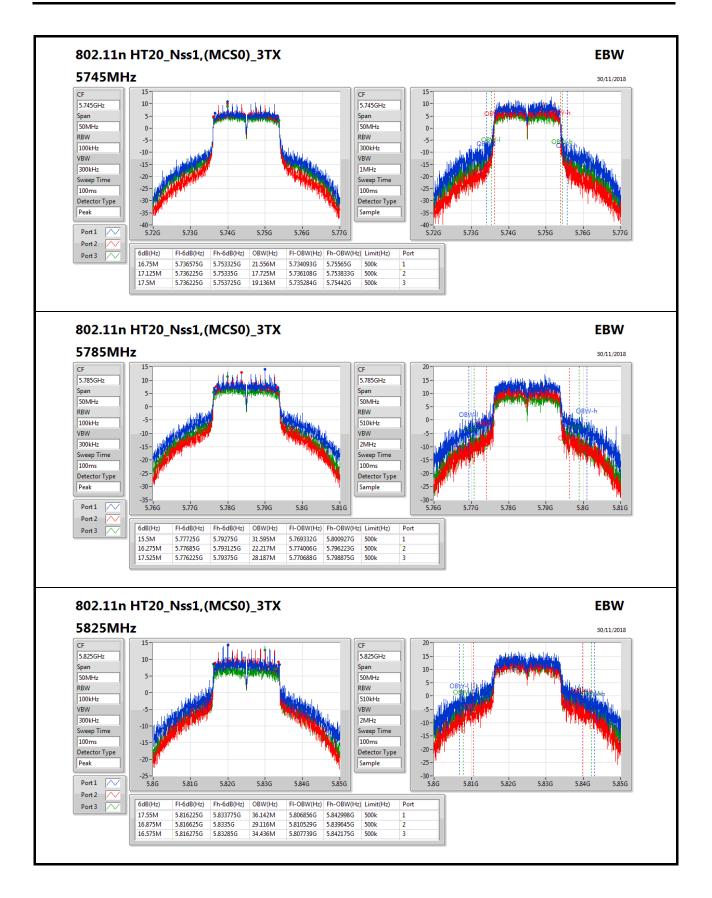




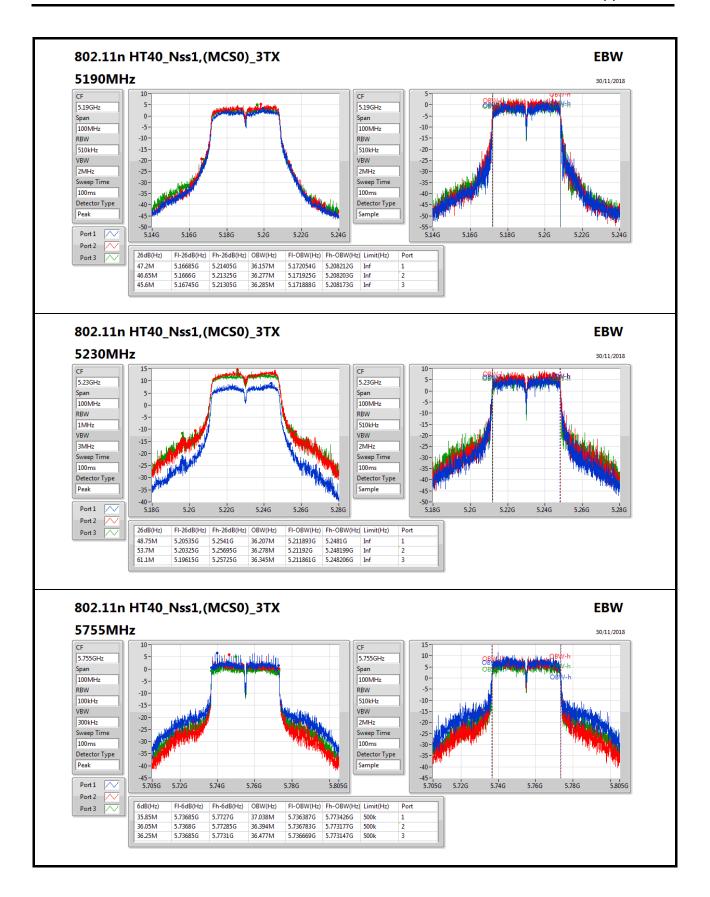






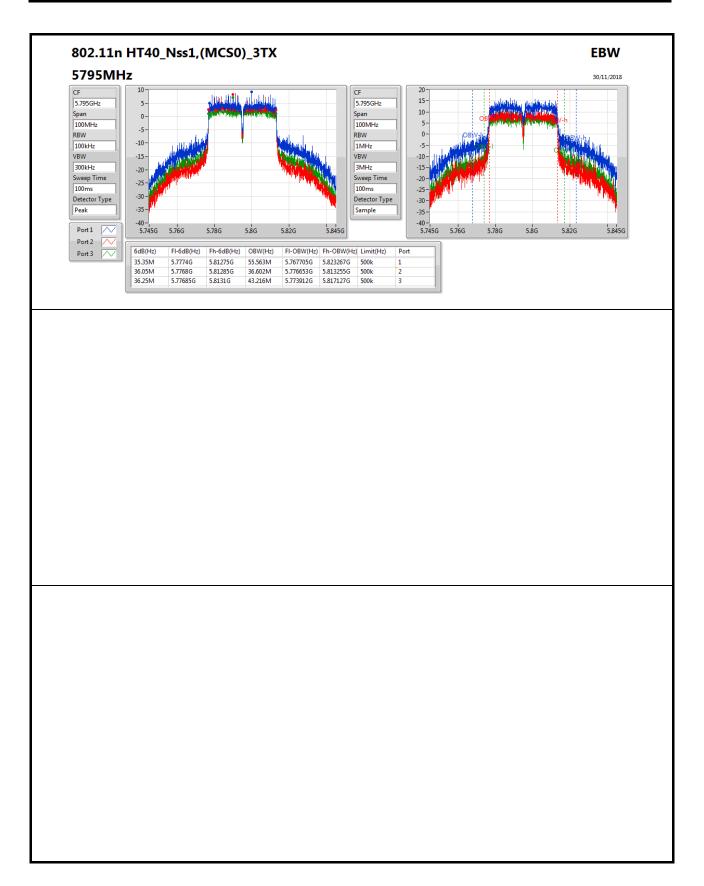






SPORTON LAB.

Appendix B



SPORTON INTERNATIONAL INC.

TEL: 886-3-327-3456 FAX: 886-3-327-0973 Page No. : B8 of B8

272809-01



Power Result Appendix C

Summary

| Mode | Total Power | Total Power | EIRP | EIRP |
|------------------------------|-------------|-------------|-------|---------|
| | (dBm) | (W) | (dBm) | (W) |
| 5.15-5.25GHz | - | - | - | - |
| 802.11a_Nss1,(6Mbps)_3TX | 23.18 | 0.20797 | 25.26 | 0.33574 |
| 802.11n HT20_Nss1,(MCS0)_3TX | 23.29 | 0.21330 | 25.37 | 0.34435 |
| 802.11n HT40_Nss1,(MCS0)_3TX | 23.96 | 0.24889 | 26.04 | 0.40179 |
| 5.725-5.85GHz | - | - | - | - |
| 802.11a_Nss1,(6Mbps)_3TX | 29.20 | 0.83176 | 31.28 | 1.34276 |
| 802.11n HT20_Nss1,(MCS0)_3TX | 29.18 | 0.82794 | 31.26 | 1.33660 |
| 802.11n HT40_Nss1,(MCS0)_3TX | 27.37 | 0.54576 | 29.45 | 0.88105 |

SPORTON INTERNATIONAL INC. Page No. : C1 of C2

TEL: 886-3-327-3456 FAX: 886-3-327-0973 272809-01



Power Result Appendix C

Result

| Mode | Result | DG | Port 1 | Port 2 | Port 3 | Total Power | Power Limit | EIRP | EIRP Limit |
|------------------------------|--------|-------|--------|--------|--------|-------------|-------------|-------|------------|
| | | (dBi) | (dBm) | (dBm) | (dBm) | (dBm) | (dBm) | (dBm) | (dBm) |
| 802.11a_Nss1,(6Mbps)_3TX | - | - | - | - | - | - | - | - | - |
| 5180MHz_TnomVnom | Pass | 2.08 | 17.06 | 18.85 | 18.54 | 22.99 | 24.00 | 25.07 | 30.00 |
| 5200MHz_TnomVnom | Pass | 2.08 | 17.51 | 18.99 | 18.59 | 23.18 | 24.00 | 25.26 | 30.00 |
| 5240MHz_TnomVnom | Pass | 2.08 | 17.48 | 19.02 | 18.14 | 23.03 | 24.00 | 25.11 | 30.00 |
| 5745MHz_TnomVnom | Pass | 2.08 | 22.12 | 22.10 | 20.98 | 26.54 | 30.00 | 28.62 | 36.00 |
| 5785MHz_TnomVnom | Pass | 2.08 | 24.19 | 24.22 | 22.50 | 28.48 | 30.00 | 30.56 | 36.00 |
| 5825MHz_TnomVnom | Pass | 2.08 | 24.65 | 25.28 | 23.06 | 29.20 | 30.00 | 31.28 | 36.00 |
| 802.11n HT20_Nss1,(MCS0)_3TX | - | - | - | - | - | - | - | - | - |
| 5180MHz_TnomVnom | Pass | 2.08 | 17.13 | 18.84 | 18.61 | 23.03 | 24.00 | 25.11 | 30.00 |
| 5200MHz_TnomVnom | Pass | 2.08 | 17.35 | 18.88 | 18.42 | 23.03 | 24.00 | 25.11 | 30.00 |
| 5240MHz_TnomVnom | Pass | 2.08 | 17.76 | 19.26 | 18.42 | 23.29 | 24.00 | 25.37 | 30.00 |
| 5745MHz_TnomVnom | Pass | 2.08 | 22.03 | 22.00 | 20.95 | 26.46 | 30.00 | 28.54 | 36.00 |
| 5785MHz_TnomVnom | Pass | 2.08 | 24.03 | 24.23 | 22.53 | 28.43 | 30.00 | 30.51 | 36.00 |
| 5825MHz_TnomVnom | Pass | 2.08 | 24.63 | 25.28 | 23.03 | 29.18 | 30.00 | 31.26 | 36.00 |
| 802.11n HT40_Nss1,(MCS0)_3TX | - | - | - | - | - | - | - | - | - |
| 5190MHz_TnomVnom | Pass | 2.08 | 12.48 | 14.42 | 13.63 | 18.35 | 24.00 | 20.43 | 30.00 |
| 5230MHz_TnomVnom | Pass | 2.08 | 18.45 | 20.01 | 18.97 | 23.96 | 24.00 | 26.04 | 30.00 |
| 5755MHz_TnomVnom | Pass | 2.08 | 21.35 | 20.93 | 19.79 | 25.51 | 30.00 | 27.59 | 36.00 |
| 5795MHz_TnomVnom | Pass | 2.08 | 23.39 | 22.73 | 21.48 | 27.37 | 30.00 | 29.45 | 36.00 |

DG = Directional Gain;**Port X** = Port X output power

SPORTON INTERNATIONAL INC. Page No. : C2 of C2

TEL: 886-3-327-3456 FAX: 886-3-327-0973 272809-01



PSD Result Appendix D

Summary

| Mode | PD | EIRP PD |
|------------------------------|-----------|-----------|
| | (dBm/RBW) | (dBm/RBW) |
| 5.15-5.25GHz | - | - |
| 802.11a_Nss1,(6Mbps)_3TX | 9.91 | 16.76 |
| 802.11n HT20_Nss1,(MCS0)_3TX | 9.77 | 16.62 |
| 802.11n HT40_Nss1,(MCS0)_3TX | 7.79 | 14.64 |
| 5.725-5.85GHz | - | - |
| 802.11a_Nss1,(6Mbps)_3TX | 13.49 | 20.34 |
| 802.11n HT20_Nss1,(MCS0)_3TX | 13.15 | 20.00 |
| 802.11n HT40_Nss1,(MCS0)_3TX | 9.22 | 16.07 |

RBW = 500kHz for 5.725-5.85GHz band / 1MHz for other band;

SPORTON INTERNATIONAL INC. Page No. : D1 of D8

TEL: 886-3-327-3456 FAX: 886-3-327-0973 272809-01



Appendix D **PSD Result**

Result

| Mode | Result | DG | Port 1 | Port 2 | Port 3 | PD | PD Limit | EIRP PD | EIRP PD Limit |
|------------------------------|--------|-------|-----------|-----------|-----------|-----------|-----------|-----------|------------------|
| | | (dBi) | (dBm/RBW) |
| 802.11a_Nss1,(6Mbps)_3TX | - | - | - | - | - | - | - | - | - |
| 5180MHz_TnomVnom | Pass | 6.85 | 4.28 | 5.92 | 5.22 | 9.87 | 10.15 | 16.72 | 17.00 |
| 5200MHz_TnomVnom | Pass | 6.85 | 4.50 | 5.78 | 5.30 | 9.91 | 10.15 | 16.76 | 17.00 |
| 5240MHz_TnomVnom | Pass | 6.85 | 4.33 | 5.69 | 4.73 | 9.63 | 10.15 | 16.48 | 17.00 |
| 5745MHz_TnomVnom | Pass | 6.85 | 7.22 | 7.59 | 6.36 | 11.65 | 29.15 | 18.50 | 36.00 |
| 5785MHz_TnomVnom | Pass | 6.85 | 8.63 | 8.69 | 7.52 | 12.89 | 29.15 | 19.74 | 36.00 |
| 5825MHz_TnomVnom | Pass | 6.85 | 8.91 | 9.73 | 7.42 | 13.49 | 29.15 | 20.34 | 36.00 |
| 802.11n HT20_Nss1,(MCS0)_3TX | - | - | - | - | - | - | - | - | - |
| 5180MHz_TnomVnom | Pass | 6.85 | 3.81 | 5.38 | 4.90 | 9.42 | 10.15 | 16.27 | 17.00 |
| 5200MHz_TnomVnom | Pass | 6.85 | 4.15 | 5.60 | 4.87 | 9.60 | 10.15 | 16.45 | 17.00 |
| 5240MHz_TnomVnom | Pass | 6.85 | 4.47 | 5.81 | 4.95 | 9.77 | 10.15 | 16.62 | 17.00 |
| 5745MHz_TnomVnom | Pass | 6.85 | 7.13 | 7.02 | 5.83 | 11.29 | 29.15 | 18.14 | 36.00 |
| 5785MHz_TnomVnom | Pass | 6.85 | 8.39 | 8.67 | 7.45 | 12.91 | 29.15 | 19.76 | 36.00 |
| 5825MHz_TnomVnom | Pass | 6.85 | 8.58 | 9.25 | 7.29 | 13.15 | 29.15 | 20.00 | 36.00 |
| 802.11n HT40_Nss1,(MCS0)_3TX | - | - | - | - | - | - | - | - | - |
| 5190MHz_TnomVnom | Pass | 6.85 | -3.55 | -1.89 | -2.65 | 2.04 | 10.15 | 8.89 | 17.00 |
| 5230MHz_TnomVnom | Pass | 6.85 | 2.54 | 3.97 | 2.76 | 7.79 | 10.15 | 14.64 | 17.00 |
| 5755MHz_TnomVnom | Pass | 6.85 | 4.05 | 4.18 | 3.24 | 8.52 | 29.15 | 15.37 | 36.00 |
| 5795MHz_TnomVnom | Pass | 6.85 | 4.93 | 4.91 | 3.87 | 9.22 | 29.15 | 16.07 | 36.00 |

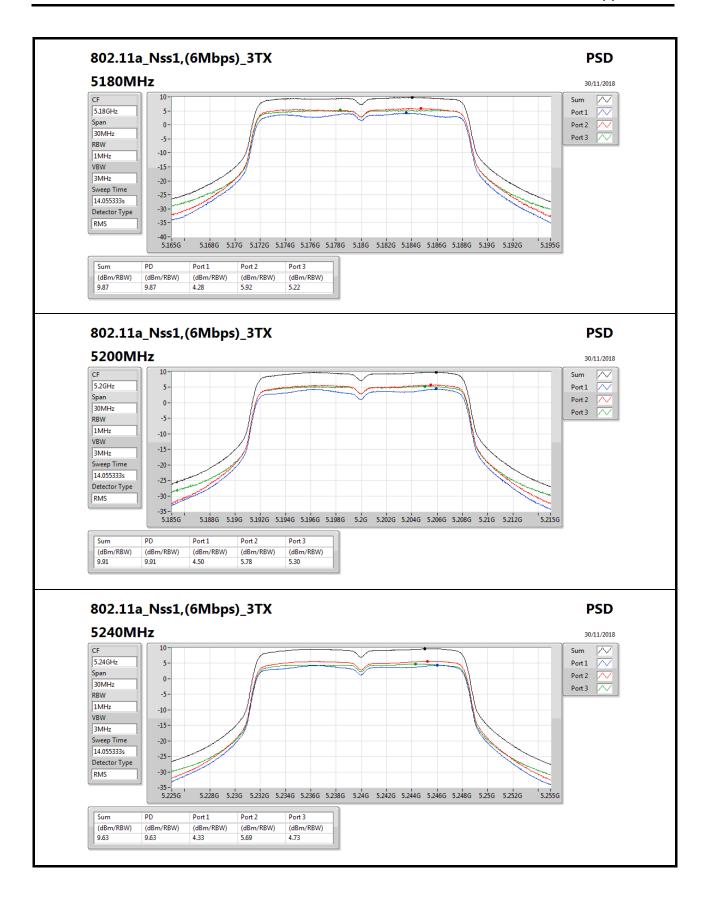
DG = Directional Gain; **RBW** = 500kHz for 5.725-5.85GHz band / 1MHz for other band; **PD** = trace bin-by-bin of each transmits port summing can be performed maximum power density; **Port X** = Port Xpower density;

SPORTON INTERNATIONAL INC. Page No. : D2 of D8

TEL: 886-3-327-3456 FAX: 886-3-327-0973 272809-01

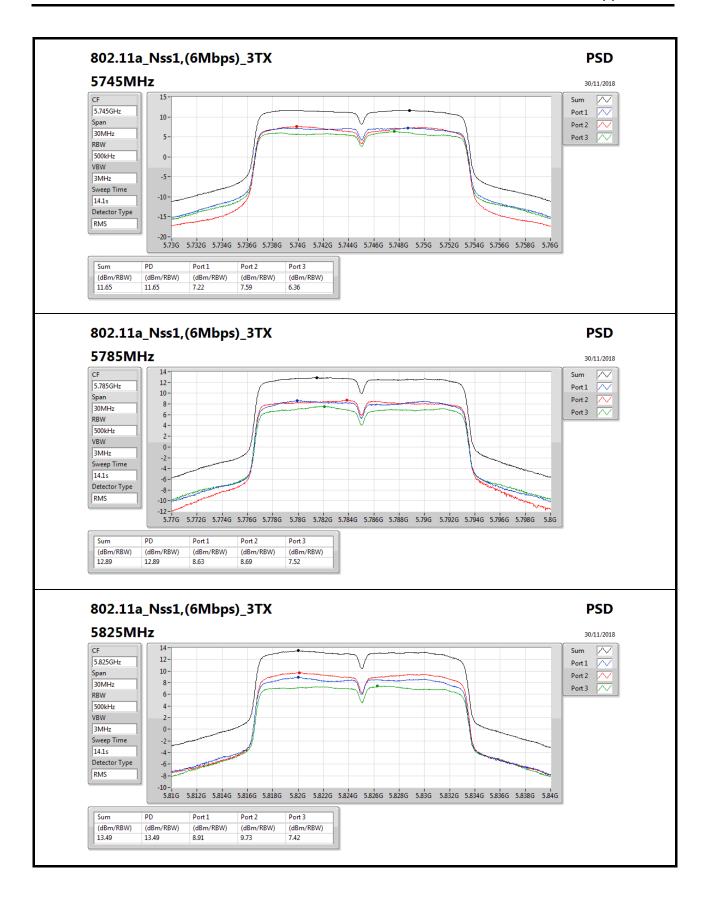


PSD Result

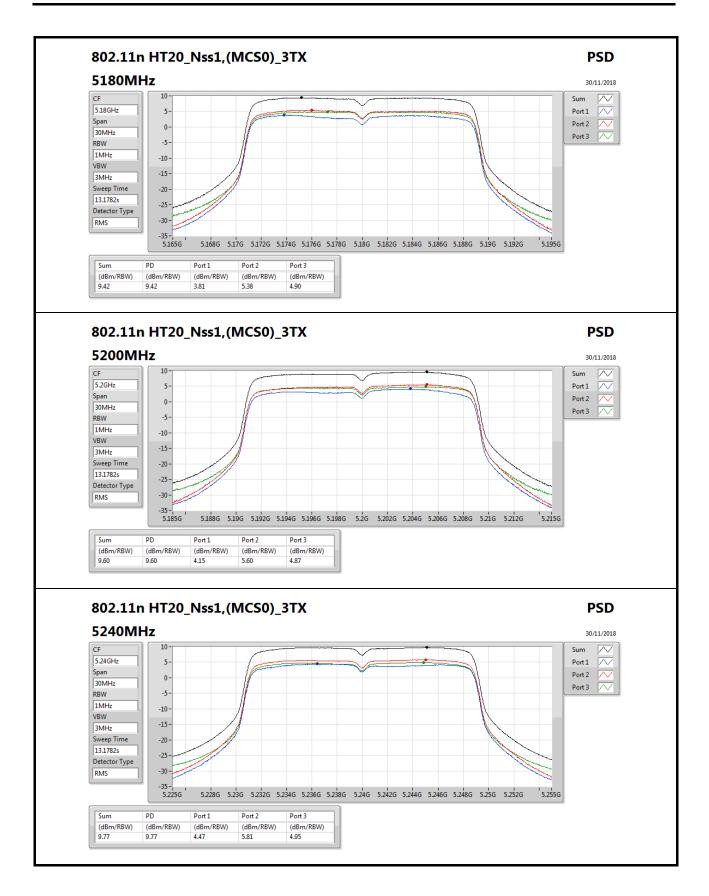


SPORTON INTERNATIONAL INC.



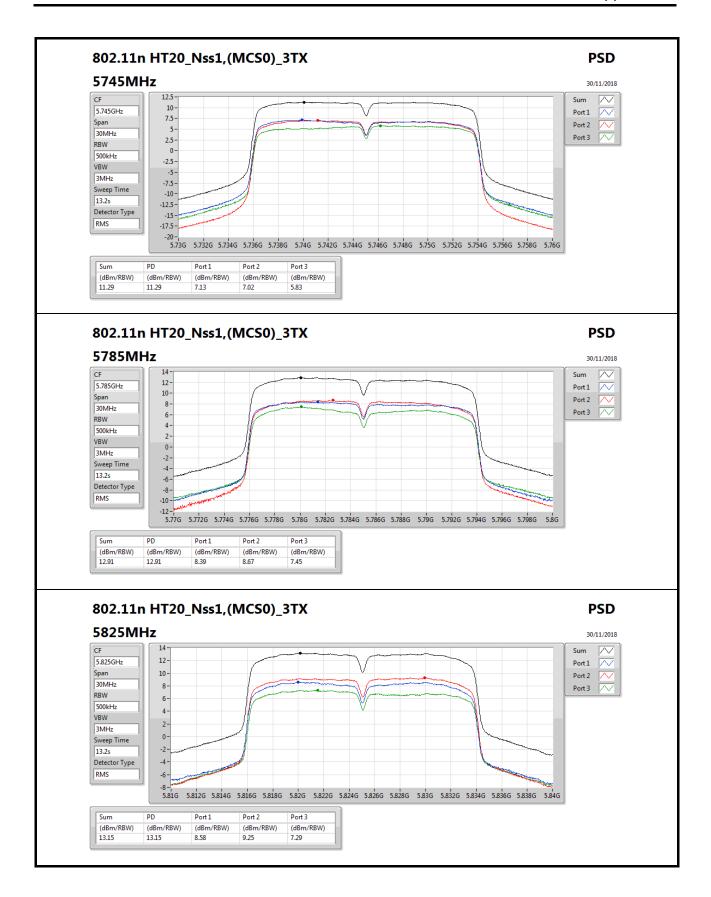




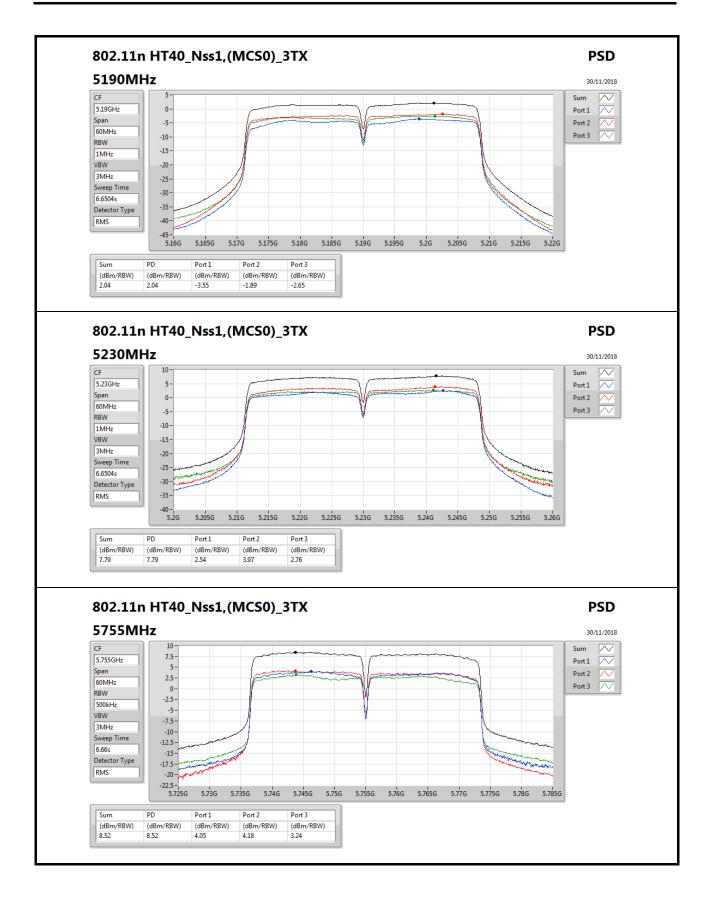


TEL: 886-3-327-3456 FAX: 886-3-327-0973 Page No. : D5 of D8

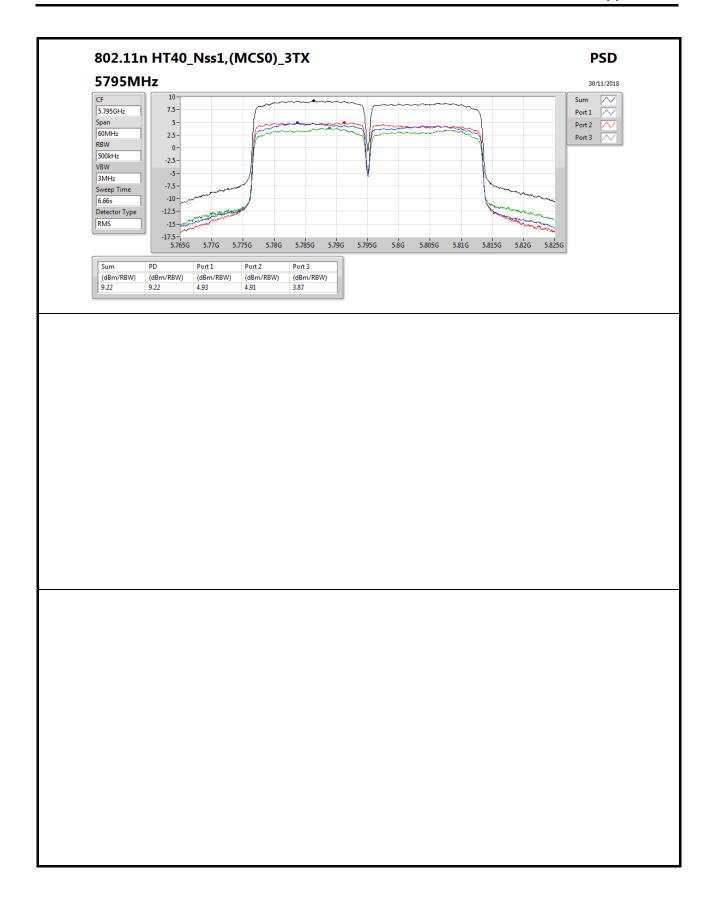








PSD Result Appendix D



SPORTON INTERNATIONAL INC.



RSE TX below 1GHz Result

Appendix E.1

Summary

| Mode | Result | Туре | Freq | Level | Limit | Margin | Factor | Dist | Condition | Azimuth | Height | Comments |
|------------------------------|--------|------|-------|----------|----------|--------|--------|------|-----------|---------|--------|----------|
| | | | (Hz) | (dBuV/m) | (dBuV/m) | (dB) | (dB) | (m) | | (°) | (m) | |
| 5.725-5.85GHz | - | - | - | - | - | - | - | - | - | - | - | - |
| 802.11n HT40_Nss1,(MCS0)_3TX | Pass | QP | 39.7M | 39.80 | 40.00 | -0.20 | -18.19 | 3 | Vertical | 360 | 1.00 | - |

SPORTON INTERNATIONAL INC. Page No. : E1 of E4

TEL: 886-3-327-3456 FAX: 886-3-327-0973 272809-01



RSE TX below 1GHz Result

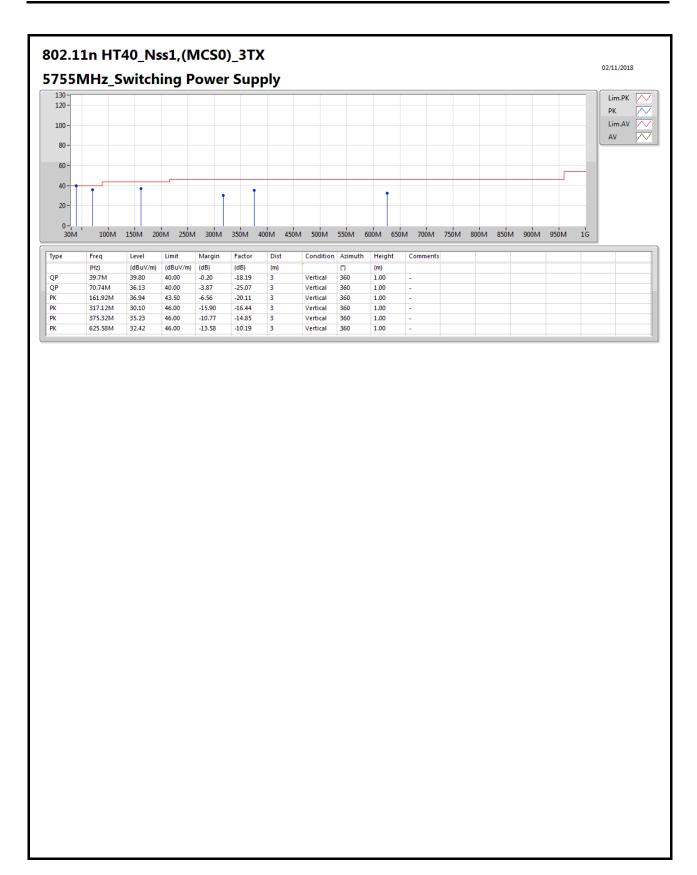
Appendix E.1

Result

| Mode | Result | Туре | Freq | Level | Limit | Margin | Factor | Dist | Condition | Azimuth | Height | Comments |
|------------------------------|--------|------|---------|----------|----------|--------|--------|------|------------|---------|--------|----------|
| | | | (Hz) | (dBuV/m) | (dBuV/m) | (dB) | (dB) | (m) | | (°) | (m) | |
| 802.11n HT40_Nss1,(MCS0)_3TX | - | - | - | - | - | - | - | - | - | - | - | - |
| 5755MHz | Pass | QP | 39.7M | 39.80 | 40.00 | -0.20 | -18.19 | 3 | Vertical | 360 | 1.00 | - |
| 5755MHz | Pass | QP | 70.74M | 36.13 | 40.00 | -3.87 | -25.07 | 3 | Vertical | 360 | 1.00 | - |
| 5755MHz | Pass | PK | 161.92M | 36.94 | 43.50 | -6.56 | -20.11 | 3 | Vertical | 360 | 1.00 | - |
| 5755MHz | Pass | PK | 317.12M | 30.10 | 46.00 | -15.90 | -16.44 | 3 | Vertical | 360 | 1.00 | - |
| 5755MHz | Pass | PK | 375.32M | 35.23 | 46.00 | -10.77 | -14.85 | 3 | Vertical | 360 | 1.00 | - |
| 5755MHz | Pass | PK | 625.58M | 32.42 | 46.00 | -13.58 | -10.19 | 3 | Vertical | 360 | 1.00 | - |
| 5755MHz | Pass | PK | 74.62M | 33.49 | 40.00 | -6.51 | -24.77 | 3 | Horizontal | 0 | 3.00 | - |
| 5755MHz | Pass | PK | 103.72M | 39.80 | 43.50 | -3.70 | -20.68 | 3 | Horizontal | 0 | 3.00 | - |
| 5755MHz | Pass | PK | 165.8M | 35.44 | 43.50 | -8.06 | -20.40 | 3 | Horizontal | 0 | 3.00 | - |
| 5755MHz | Pass | PK | 375.32M | 38.70 | 46.00 | -7.30 | -14.85 | 3 | Horizontal | 0 | 3.00 | - |
| 5755MHz | Pass | PK | 499.48M | 37.09 | 46.00 | -8.91 | -12.10 | 3 | Horizontal | 0 | 3.00 | - |
| 5755MHz | Pass | PK | 625.58M | 39.73 | 46.00 | -6.27 | -10.19 | 3 | Horizontal | 0 | 3.00 | - |

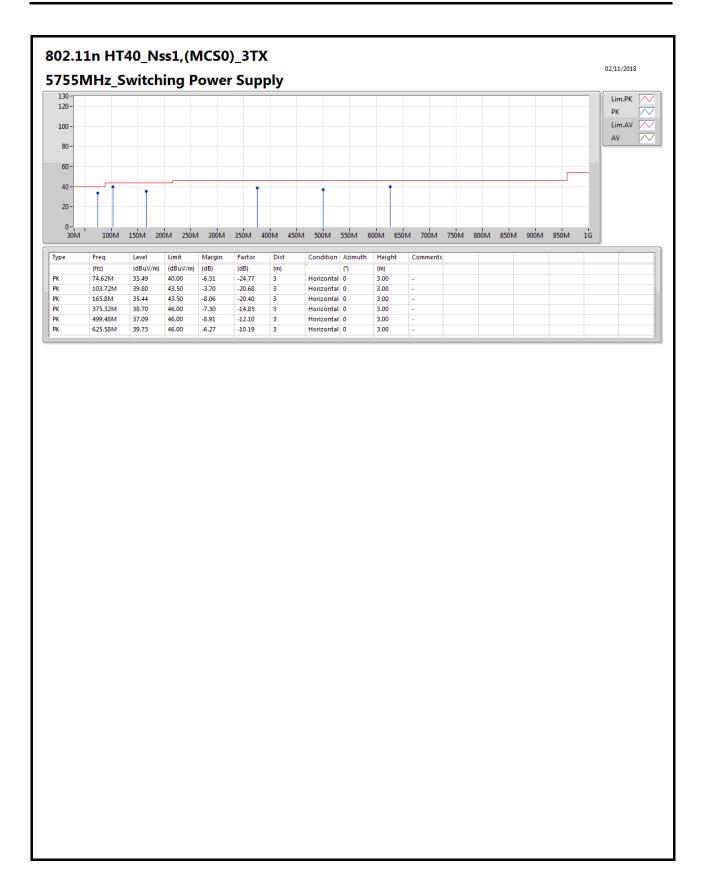
SPORTON INTERNATIONAL INC. Page No. : E2 of E4





TEL: 886-3-327-3456 FAX: 886-3-327-0973 Page No. : E3 of E4





TEL: 886-3-327-3456 FAX: 886-3-327-0973 Page No. : E4 of E4



Appendix E.2

272809-01

Summary

| Mode | Result | Туре | Freq | Level | Limit | Margin | Factor | Dist | Condition | Azimuth | Height | Comments |
|------------------------------|--------|------|-----------|----------|----------|--------|--------|------|------------|---------|--------|----------|
| | | | (Hz) | (dBuV/m) | (dBuV/m) | (dB) | (dB) | (m) | | (°) | (m) | |
| 5.15-5.25GHz | - | - | - | - | - | - | - | - | - | - | - | - |
| 802.11a_Nss1,(6Mbps)_3TX | Pass | AV | 5.1492G | 53.62 | 54.00 | -0.38 | 2.74 | 3 | Horizontal | 343 | 1.23 | - |
| 802.11n HT20_Nss1,(MCS0)_3TX | Pass | AV | 5.36G | 53.75 | 54.00 | -0.25 | 2.98 | 3 | Horizontal | 354 | 1.02 | - |
| 802.11n HT40_Nss1,(MCS0)_3TX | Pass | AV | 5.1476G | 53.31 | 54.00 | -0.69 | 2.74 | 3 | Horizontal | 335 | 1.48 | - |
| 5.725-5.85GHz | - | - | - | - | - | - | - | - | - | - | - | - |
| 802.11a_Nss1,(6Mbps)_3TX | Pass | AV | 11.49378G | 53.79 | 54.00 | -0.21 | 13.58 | 3 | Vertical | 256 | 2.57 | - |
| 802.11n HT20_Nss1,(MCS0)_3TX | Pass | AV | 11.4954G | 53.63 | 54.00 | -0.37 | 13.58 | 3 | Vertical | 256 | 2.32 | - |
| 802.11n HT40_Nss1,(MCS0)_3TX | Pass | PK | 5.641G | 67.63 | 68.20 | -0.57 | 3.43 | 3 | Horizontal | 352 | 2.32 | - |

SPORTON INTERNATIONAL INC. Page No. : E1 of E70



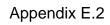
Appendix E.2

Result

| Result | _ | | | 1 | 1 | | 1 | | 1 | 1 | | |
|--------------------------|--------|------|-----------|----------|----------|----------------|--------|------|------------|---------|--------|----------|
| Mode | Result | Туре | Freq | Level | Limit | Margin | Factor | Dist | Condition | Azimuth | Height | Comments |
| | | | (Hz) | (dBuV/m) | (dBuV/m) | (dB) | (dB) | (m) | | (°) | (m) | |
| 802.11a_Nss1,(6Mbps)_3TX | - | - | - | - | - | - | - | - | - | - | - | - |
| 5180MHz | Pass | AV | 5.15G | 47.22 | 54.00 | -6.78 | 2.74 | 3 | Vertical | 130 | 1.50 | - |
| 5180MHz | Pass | AV | 5.1792G | 101.16 | Inf | -Inf | 2.78 | 3 | Vertical | 130 | 1.50 | - |
| 5180MHz | Pass | PK | 5.1492G | 64.17 | 74.00 | -9.83 | 2.74 | 3 | Vertical | 130 | 1.50 | - |
| 5180MHz | Pass | PK | 5.1808G | 110.85 | Inf | -Inf | 2.78 | 3 | Vertical | 130 | 1.50 | - |
| 5180MHz | Pass | AV | 5.15G | 51.73 | 54.00 | -2.27 | 2.74 | 3 | Horizontal | 357 | 1.01 | - |
| 5180MHz | Pass | AV | 5.186G | 106.06 | Inf | -Inf | 2.78 | 3 | Horizontal | 357 | 1.01 | - |
| 5180MHz | Pass | PK | 5.1478G | 65.57 | 74.00 | -8.43 | 2.74 | 3 | Horizontal | 357 | 1.01 | - |
| 5180MHz | Pass | PK | 5.1864G | 115.00 | Inf | -Inf | 2.78 | 3 | Horizontal | 357 | 1.01 | - |
| 5180MHz | Pass | AV | 10.36564G | 41.02 | 54.00 | -12.98 | 12.64 | 3 | Vertical | 254 | 2.35 | - |
| 5180MHz | Pass | PK | 10.35724G | 54.91 | 74.00 | -19.09 | 12.63 | 3 | Vertical | 254 | 2.35 | - |
| 5180MHz | Pass | AV | 10.36636G | 41.81 | 54.00 | -12.19 | 12.64 | 3 | Horizontal | 282 | 1.34 | - |
| 5180MHz | Pass | PK | 10.35658G | 55.20 | 74.00 | -18.80 | 12.63 | 3 | Horizontal | 282 | 1.34 | - |
| 5200MHz | Pass | AV | 5.1436G | 48.18 | 54.00 | -5.82 | 2.74 | 3 | Vertical | 123 | 1.70 | - |
| 5200MHz | Pass | AV | 5.2028G | 108.00 | Inf | -Inf | 2.80 | 3 | Vertical | 123 | 1.70 | - |
| 5200MHz | Pass | PK | 5.1444G | 66.58 | 74.00 | -7.42 | 2.74 | 3 | Vertical | 123 | 1.70 | - |
| 5200MHz | Pass | PK | 5.2028G | 117.08 | Inf | -Inf | 2.80 | 3 | Vertical | 123 | 1.70 | - |
| 5200MHz | Pass | AV | 5.1492G | 53.62 | 54.00 | -0.38 | 2.74 | 3 | Horizontal | 343 | 1.23 | - |
| 5200MHz | Pass | AV | 5.1984G | 111.69 | Inf | -Inf | 2.80 | 3 | Horizontal | 343 | 1.23 | - |
| 5200MHz | Pass | PK | 5.1476G | 68.20 | 74.00 | -5.80 | 2.74 | 3 | Horizontal | 343 | 1.23 | - |
| 5200MHz | Pass | PK | 5.1988G | 120.72 | Inf | -Inf | 2.80 | 3 | Horizontal | 343 | 1.23 | - |
| 5200MHz | Pass | AV | 10.3964G | 43.19 | 54.00 | -10.81 | 12.71 | 3 | Vertical | 264 | 1.57 | - |
| 5200MHz | Pass | PK | 10.39658G | 56.43 | 74.00 | -17.57 | 12.72 | 3 | Vertical | 264 | 1.57 | - |
| 5200MHz | Pass | AV | 10.39724G | 43.74 | 54.00 | -10.26 | 12.72 | 3 | Horizontal | 280 | 1.50 | - |
| 5200MHz | Pass | PK | 10.39694G | 56.57 | 74.00 | -17.43 | 12.72 | 3 | Horizontal | 280 | 1.50 | - |
| 5240MHz | Pass | AV | 5.12G | 48.32 | 54.00 | -5.68 | 2.70 | 3 | Vertical | 56 | 2.69 | - |
| 5240MHz | Pass | AV | 5.2436G | 110.21 | Inf | -Inf | 2.85 | 3 | Vertical | 56 | 2.69 | - |
| 5240MHz | Pass | AV | 5.354G | 47.52 | 54.00 | -6.48 | 2.97 | 3 | Vertical | 56 | 2.69 | - |
| 5240MHz | Pass | PK | 5.15G | 61.59 | 74.00 | -12.41 | 2.74 | 3 | Vertical | 56 | 2.69 | - |
| 5240MHz | Pass | PK | 5.2436G | 119.67 | Inf | -Inf | 2.85 | 3 | Vertical | 56 | 2.69 | - |
| 5240MHz | Pass | PK | 5.3546G | 58.77 | 74.00 | -15.23 | 2.97 | 3 | Vertical | 56 | 2.69 | - |
| 5240MHz | Pass | AV | 5.1482G | 50.52 | 54.00 | -3.48 | 2.74 | 3 | Horizontal | 356 | 1.01 | - |
| 5240MHz | Pass | AV | 5.2382G | 113.99 | Inf | -Inf | 2.84 | 3 | Horizontal | 356 | 1.01 | - |
| 5240MHz | Pass | AV | 5.36G | 52.05 | 54.00 | -1.95 | 2.98 | 3 | Horizontal | 356 | 1.01 | - |
| 5240MHz | Pass | PK | 5.1482G | 65.21 | 74.00 | -8.79 | 2.74 | 3 | Horizontal | 356 | 1.01 | - |
| 5240MHz | Pass | PK | 5.2382G | 123.82 | Inf | -Inf | 2.84 | 3 | Horizontal | 356 | 1.01 | - |
| 5240MHz | Pass | PK | 5.3774G | 63.71 | 74.00 | -10.29 | 3.00 | 3 | Horizontal | 356 | 1.01 | - |
| 5240MHz | Pass | AV | 10.48648G | 49.48 | 54.00 | -4.52 | 12.91 | 3 | Vertical | 271 | 1.50 | - |
| 5240MHz | Pass | PK | 10.47532G | 63.34 | 74.00 | -10.66 | 12.89 | 3 | Vertical | 271 | 1.50 | - |
| 5240MHz | Pass | AV | 10.47766G | 46.74 | 54.00 | -7.26 | 12.90 | 3 | Horizontal | 234 | 1.32 | - |
| 5240MHz | Pass | PK | 10.47886G | 60.26 | 74.00 | -13.74 | 12.90 | 3 | Horizontal | 234 | 1.32 | - |
| 5745MHz | Pass | AV | 5.7474G | 104.27 | Inf | -Inf | 3.63 | 3 | Vertical | 168 | 2.28 | - |
| 5745MHz | Pass | PK | 5.649G | 57.10 | 68.20 | -11.10 | 3.44 | 3 | Vertical | 168 | 2.28 | - |
| 5745MHz | Pass | PK | 5.7474G | 112.83 | Inf | -Inf | 3.63 | 3 | Vertical | 168 | 2.28 | |
| 5745MHz | Pass | PK | 5.9778G | 55.71 | 68.20 | -12.49 | 4.08 | 3 | Vertical | 168 | 2.28 | |
| 5745MHz | Pass | AV | 5.7426G | 109.97 | Inf | -12.47 -Inf | 3.62 | 3 | Horizontal | 357 | 1.74 | - |
| 5745MHz | Pass | PK | 5.5902G | 60.95 | 68.20 | -7.25 | 3.32 | 3 | Horizontal | 357 | 1.74 | |
| 5745MHz | Pass | PK | 5.7426G | 118.53 | Inf | -7.25 -Inf | 3.62 | 3 | Horizontal | 357 | 1.74 | |
| 0740WI⊓Z | rass | LV | J./420U | 110.33 | 1111 | -1111 | 3.02 | ٥ | HUNTAULI | 307 | 1.74 | |

SPORTON INTERNATIONAL INC.

TEL: 886-3-327-3456 FAX: 886-3-327-0973 Page No. : E2 of E70

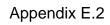




| Mode | Result | Туре | Freq | Level | Limit | Margin | Factor | Dist | Condition | Azimuth | Height | Comments |
|------------------------------|--------|------|-----------|----------|----------|--------|--------|------|------------|---------|--------|----------|
| | | | (Hz) | (dBuV/m) | (dBuV/m) | (dB) | (dB) | (m) | | (°) | (m) | |
| 5745MHz | Pass | PK | 5.9622G | 60.64 | 68.20 | -7.56 | 4.05 | 3 | Horizontal | 357 | 1.74 | - |
| 5745MHz | Pass | AV | 11.49378G | 53.79 | 54.00 | -0.21 | 13.58 | 3 | Vertical | 256 | 2.57 | - |
| 5745MHz | Pass | PK | 11.49282G | 66.63 | 74.00 | -7.37 | 13.58 | 3 | Vertical | 256 | 2.57 | - |
| 5745MHz | Pass | AV | 11.49354G | 51.21 | 54.00 | -2.79 | 13.58 | 3 | Horizontal | 286 | 1.44 | - |
| 5745MHz | Pass | PK | 11.48298G | 63.68 | 74.00 | -10.32 | 13.59 | 3 | Horizontal | 286 | 1.44 | - |
| 5785MHz | Pass | AV | 5.7874G | 105.20 | Inf | -Inf | 3.70 | 3 | Vertical | 170 | 1.42 | - |
| 5785MHz | Pass | PK | 5.6134G | 58.14 | 68.20 | -10.06 | 3.37 | 3 | Vertical | 170 | 1.42 | - |
| 5785MHz | Pass | PK | 5.7778G | 114.69 | Inf | -Inf | 3.68 | 3 | Vertical | 170 | 1.42 | - |
| 5785MHz | Pass | PK | 5.9242G | 58.66 | 68.79 | -10.13 | 3.98 | 3 | Vertical | 170 | 1.42 | - |
| 5785MHz | Pass | AV | 5.7826G | 112.56 | Inf | -Inf | 3.70 | 3 | Horizontal | 359 | 1.96 | - |
| 5785MHz | Pass | PK | 5.6362G | 61.48 | 68.20 | -6.72 | 3.42 | 3 | Horizontal | 359 | 1.96 | - |
| 5785MHz | Pass | PK | 5.7838G | 121.34 | Inf | -Inf | 3.70 | 3 | Horizontal | 359 | 1.96 | - |
| 5785MHz | Pass | PK | 5.965G | 60.29 | 68.20 | -7.91 | 4.06 | 3 | Horizontal | 359 | 1.96 | - |
| 5785MHz | Pass | AV | 11.57342G | 53.45 | 54.00 | -0.55 | 13.51 | 3 | Vertical | 274 | 2.88 | - |
| 5785MHz | Pass | PK | 11.56448G | 66.27 | 74.00 | -7.73 | 13.51 | 3 | Vertical | 274 | 2.88 | - |
| 5785MHz | Pass | AV | 11.49288G | 51.00 | 54.00 | -3.00 | 13.58 | 3 | Horizontal | 230 | 1.49 | - |
| 5785MHz | Pass | PK | 11.49342G | 63.90 | 74.00 | -10.10 | 13.58 | 3 | Horizontal | 230 | 1.49 | - |
| 5825MHz | Pass | AV | 5.8226G | 107.16 | Inf | -Inf | 3.78 | 3 | Vertical | 0 | 1.72 | - |
| 5825MHz | Pass | PK | 5.6162G | 58.83 | 68.20 | -9.37 | 3.37 | 3 | Vertical | 0 | 1.72 | - |
| 5825MHz | Pass | PK | 5.831G | 116.54 | Inf | -Inf | 3.79 | 3 | Vertical | 0 | 1.72 | - |
| 5825MHz | Pass | PK | 5.9258G | 58.70 | 68.20 | -9.50 | 3.99 | 3 | Vertical | 0 | 1.72 | - |
| 5825MHz | Pass | AV | 5.8238G | 113.84 | Inf | -Inf | 3.78 | 3 | Horizontal | 352 | 2.08 | - |
| 5825MHz | Pass | PK | 5.5586G | 63.83 | 68.20 | -4.37 | 3.25 | 3 | Horizontal | 352 | 2.08 | - |
| 5825MHz | Pass | PK | 5.8226G | 122.89 | Inf | -Inf | 3.78 | 3 | Horizontal | 352 | 2.08 | - |
| 5825MHz | Pass | PK | 5.927G | 67.70 | 68.20 | -0.50 | 3.99 | 3 | Horizontal | 352 | 2.08 | - |
| 5825MHz | Pass | AV | 11.65354G | 53.47 | 54.00 | -0.53 | 13.43 | 3 | Vertical | 266 | 1.87 | - |
| 5825MHz | Pass | PK | 11.6527G | 67.08 | 74.00 | -6.92 | 13.43 | 3 | Vertical | 266 | 1.87 | - |
| 5825MHz | Pass | AV | 11.65354G | 52.37 | 54.00 | -1.63 | 13.43 | 3 | Horizontal | 316 | 1.29 | - |
| 5825MHz | Pass | PK | 11.65312G | 64.87 | 74.00 | -9.13 | 13.43 | 3 | Horizontal | 316 | 1.29 | - |
| 802.11n HT20_Nss1,(MCS0)_3TX | - | - | - | - | - | - | - | - | - | - | - | - |
| 5180MHz | Pass | AV | 5.15G | 45.21 | 54.00 | -8.79 | 2.74 | 3 | Vertical | 130 | 1.50 | - |
| 5180MHz | Pass | AV | 5.1788G | 100.75 | Inf | -Inf | 2.78 | 3 | Vertical | 130 | 1.50 | - |
| 5180MHz | Pass | PK | 5.1494G | 62.14 | 74.00 | -11.86 | 2.74 | 3 | Vertical | 130 | 1.50 | - |
| 5180MHz | Pass | PK | 5.1788G | 110.48 | Inf | -Inf | 2.78 | 3 | Vertical | 130 | 1.50 | - |
| 5180MHz | Pass | AV | 5.15G | 52.89 | 54.00 | -1.11 | 2.74 | 3 | Horizontal | 357 | 1.01 | - |
| 5180MHz | Pass | AV | 5.1814G | 105.27 | Inf | -Inf | 2.78 | 3 | Horizontal | 357 | 1.01 | - |
| 5180MHz | Pass | PK | 5.1496G | 67.23 | 74.00 | -6.77 | 2.74 | 3 | Horizontal | 357 | 1.01 | - |
| 5180MHz | Pass | PK | 5.1816G | 114.25 | Inf | -Inf | 2.78 | 3 | Horizontal | 357 | 1.01 | - |
| 5180MHz | Pass | AV | 10.35856G | 40.83 | 54.00 | -13.17 | 12.63 | 3 | Vertical | 283 | 2.50 | - |
| 5180MHz | Pass | PK | 10.3633G | 53.16 | 74.00 | -20.84 | 12.64 | 3 | Vertical | 283 | 2.50 | - |
| 5180MHz | Pass | AV | 10.3546G | 41.43 | 54.00 | -12.57 | 12.63 | 3 | Horizontal | 279 | 1.34 | - |
| 5180MHz | Pass | PK | 10.35124G | 54.12 | 74.00 | -19.88 | 12.61 | 3 | Horizontal | 279 | 1.34 | - |
| 5200MHz | Pass | AV | 5.1476G | 49.75 | 54.00 | -4.25 | 2.74 | 3 | Vertical | 124 | 1.72 | - |
| 5200MHz | Pass | AV | 5.2056G | 108.22 | Inf | -Inf | 2.80 | 3 | Vertical | 124 | 1.72 | |
| 5200MHz | Pass | PK | 5.1464G | 66.26 | 74.00 | -7.74 | 2.74 | 3 | Vertical | 124 | 1.72 | - |
| 5200MHz | Pass | PK | 5.2044G | 117.61 | Inf | -Inf | 2.80 | 3 | Vertical | 124 | 1.72 | - |
| 5200MHz | Pass | AV | 5.1492G | 52.70 | 54.00 | -1.30 | 2.74 | 3 | Horizontal | 0 | 1.02 | - |
| 5200MHz | Pass | AV | 5.2068G | 109.98 | Inf | -Inf | 2.80 | 3 | Horizontal | 0 | 1.02 | |
| 5200MHz | Pass | PK | 5.1484G | 67.46 | 74.00 | -6.54 | 2.74 | 3 | Horizontal | 0 | 1.02 | - |

SPORTON INTERNATIONAL INC.

TEL: 886-3-327-3456 FAX: 886-3-327-0973 Page No. : E3 of E70





| Mode | Result | Туре | Freq | Level | Limit | Margin | Factor | Dist | Condition | Azimuth | Height | Comments |
|--------------------|--------|----------|-----------|-----------------|--------------|----------------|--------|------|----------------------|---------|--------|----------|
| | | , | (Hz) | (dBuV/m) | (dBuV/m) | (dB) | (dB) | (m) | | (°) | (m) | |
| 5200MHz | Pass | PK | 5.2068G | 119.40 | Inf | -Inf | 2.80 | 3 | Horizontal | 0 | 1.02 | - |
| 5200MHz | Pass | AV | 10.4012G | 42.80 | 54.00 | -11.20 | 12.73 | 3 | Vertical | 259 | 1.54 | - |
| 5200MHz | Pass | PK | 10.40006G | 55.53 | 74.00 | -18.47 | 12.73 | 3 | Vertical | 259 | 1.54 | - |
| 5200MHz | Pass | AV | 10.39394G | 43.46 | 54.00 | -10.54 | 12.71 | 3 | Horizontal | 279 | 1.26 | - |
| 5200MHz | Pass | PK | 10.3958G | 56.13 | 74.00 | -17.87 | 12.71 | 3 | Horizontal | 279 | 1.26 | - |
| 5240MHz | Pass | AV | 5.12G | 46.50 | 54.00 | -7.50 | 2.70 | 3 | Vertical | 135 | 1.54 | - |
| 5240MHz | Pass | AV | 5.2454G | 106.70 | Inf | -Inf | 2.85 | 3 | Vertical | 135 | 1.54 | - |
| 5240MHz | Pass | AV | 5.3642G | 46.22 | 54.00 | -7.78 | 2.98 | 3 | Vertical | 135 | 1.54 | - |
| 5240MHz | Pass | PK | 5.1278G | 58.23 | 74.00 | -15.77 | 2.72 | 3 | Vertical | 135 | 1.54 | - |
| 5240MHz | Pass | PK | 5.2442G | 115.97 | Inf | -Inf | 2.85 | 3 | Vertical | 135 | 1.54 | - |
| 5240MHz | Pass | PK | 5.3666G | 58.09 | 74.00 | -15.91 | 2.99 | 3 | Vertical | 135 | 1.54 | - |
| 5240MHz | Pass | AV | 5.12G | 50.01 | 54.00 | -3.99 | 2.70 | 3 | Horizontal | 354 | 1.02 | - |
| 5240MHz | Pass | AV | 5.2358G | 112.98 | Inf | -Inf | 2.84 | 3 | Horizontal | 354 | 1.02 | _ |
| 5240MHz | Pass | AV | 5.36G | 53.75 | 54.00 | -0.25 | 2.98 | 3 | Horizontal | 354 | 1.02 | _ |
| 5240MHz | Pass | PK | 5.1482G | 60.20 | 74.00 | -13.80 | 2.74 | 3 | Horizontal | 354 | 1.02 | - |
| 5240MHz | Pass | PK | 5.2358G | 121.86 | Inf | -13.00 -Inf | 2.84 | 3 | Horizontal | 354 | 1.02 | _ |
| 5240MHz | Pass | PK | 5.36G | 63.74 | 74.00 | -10.26 | 2.98 | 3 | Horizontal | 354 | 1.02 | _ |
| 5240MHz | Pass | AV | 10.48042G | 44.14 | 54.00 | -9.86 | 12.90 | 3 | Vertical | 270 | 1.50 | <u> </u> |
| 5240MHz | Pass | PK | 10.4803G | 57.47 | 74.00 | -16.53 | 12.90 | 3 | Vertical | 270 | 1.50 | _ |
| 5240MHz | Pass | AV | 10.47832G | 43.26 | 54.00 | -10.74 | 12.90 | 3 | Horizontal | 334 | 1.50 | - |
| 5240MHz | Pass | PK | 10.47832G | 56.04 | 74.00 | -17.96 | 12.90 | 3 | Horizontal | 334 | 1.50 | - |
| | | | | | | | | 3 | | | | - |
| 5745MHz 5745MHz | Pass | AV PK | 5.7486G | 105.22 58.63 | Inf 68.20 | -Inf -9.57 | 3.63 | 3 | Vertical Vertical | 166 | 1.70 | - |
| | Pass | PK | 5.5194G | | | | | | | 166 | | - |
| 5745MHz | Pass | | 5.7498G | 113.65 | Inf | -Inf | 3.63 | 3 | Vertical | 166 | 1.70 | - |
| 5745MHz | Pass | PK | 5.931G | 56.29 | 68.20 | -11.91 | 3.99 | 3 | Vertical | 166 | 1.70 | - |
| 5745MHz | Pass | AV | 5.7414G | 108.72 | Inf | -Inf | 3.62 | 3 | Horizontal | 1 | 1.72 | - |
| 5745MHz | Pass | PK | 5.6142G | 60.18 | 68.20 | -8.02 | 3.37 | 3 | Horizontal | 1 | 1.72 | - |
| 5745MHz | Pass | PK | 5.7426G | 117.69 | Inf | -Inf | 3.62 | 3 | Horizontal | 1 | 1.72 | - |
| 5745MHz | Pass | PK | 5.9802G | 59.86 | 68.20 | -8.34 | 4.09 | 3 | Horizontal | 1 | 1.72 | - |
| 5745MHz | Pass | AV | 11.4954G | 53.63 | 54.00 | -0.37 | 13.58 | 3 | Vertical | 256 | 2.32 | - |
| 5745MHz | Pass | PK | 11.49846G | 67.15 | 74.00 | -6.85 | 13.57 | 3 | Vertical | 256 | 2.32 | - |
| 5745MHz | Pass | AV | 11.4979G | 50.43 | 54.00 | -3.57 | 13.57 | 3 | Horizontal | 254 | 1.50 | - |
| 5745MHz | Pass | PK | 11.4983G | 64.46 | 74.00 | -9.54 | 13.57 | 3 | Horizontal | 254 | 1.50 | - |
| 5785MHz | Pass | AV | 5.7922G | 106.63 | Inf | -Inf | 3.71 | 3 | Vertical | 160 | 1.58 | - |
| 5785MHz | Pass | PK | 5.5774G | 58.79 | 68.20 | -9.41 | 3.29 | 3 | Vertical | 160 | 1.58 | - |
| 5785MHz | Pass | PK | 5.7898G | 115.56 | Inf | -Inf | 3.71 | 3 | Vertical | 160 | 1.58 | - |
| 5785MHz | Pass | PK | 5.9266G | 56.99 | 68.20 | -11.21 | 3.99 | 3 | Vertical | 160 | 1.58 | - |
| 5785MHz | Pass | AV | 5.7802G | 112.59 | Inf | -Inf | 3.69 | 3 | Horizontal | 348 | 2.40 | - |
| 5785MHz | Pass | PK | 5.6122G | 61.52 | 68.20 | -6.68 | 3.37 | 3 | Horizontal | 348 | 2.40 | - |
| 5785MHz | Pass | PK | 5.7814G | 121.72 | Inf | -Inf | 3.69 | 3 | Horizontal | 348 | 2.40 | - |
| 5785MHz | Pass | PK | 5.9458G | 60.03 | 68.20 | -8.17 | 4.02 | 3 | Horizontal | 348 | 2.40 | - |
| 5785MHz | Pass | AV | 11.57636G | 52.78 | 54.00 | -1.22 | 13.50 | 3 | Vertical | 259 | 1.91 | - |
| 5785MHz | Pass | PK | 11.57696G | 66.08 | 74.00 | -7.92 | 13.50 | 3 | Vertical | 259 | 1.91 | - |
| 5785MHz | Pass | AV | 11.5763G | 50.79 | 54.00 | -3.21 | 13.50 | 3 | Horizontal | 290 | 1.43 | - |
| 5785MHz | Pass | PK | 11.57852G | 64.05 | 74.00 | -9.95 | 13.50 | 3 | Horizontal | 290 | 1.43 | - |
| 5825MHz | Pass | AV | 5.8238G | 108.20 | Inf | -Inf | 3.78 | 3 | Vertical | 160 | 1.52 | - |
| 5825MHz | Pass | PK | 5.591G | 59.51 | 68.20 | -8.69 | 3.32 | 3 | Vertical | 160 | 1.52 | - |
| 5825MHz | Pass | PK | 5.8238G | 117.97 | Inf | -Inf | 3.78 | 3 | Vertical | 160 | 1.52 | - |
| 5825MHz | Pass | PK | 5.9318G | 59.83 | 68.20 | -8.37 | 3.99 | 3 | Vertical | 160 | 1.52 | - |

SPORTON INTERNATIONAL INC.

TEL: 886-3-327-3456 FAX: 886-3-327-0973 Page No. : E4 of E70





| Mode | Result | Туре | Freq | Level (dBul/m) | Limit (dBu\(/m) | Margin | Factor | Dist | Condition | Azimuth | Height | Comments |
|------------------------------|--------|----------|-----------------------|----------------|-----------------|------------------|----------------|------|--------------------------|---------|--------|----------|
| | _ | | (Hz) | (dBuV/m) | (dBuV/m) | (dB) | (dB) | (m) | | (°) | (m) | |
| 5825MHz | Pass | AV | 5.8178G | 111.57 | Inf | -Inf | 3.76 | 3 | Horizontal | 348 | 2.17 | - |
| 5825MHz | Pass | PK | 5.6234G | 62.59 | 68.20 | -5.61 | 3.39 | 3 | Horizontal | 348 | 2.17 | - |
| 5825MHz | Pass | PK | 5.8202G | 121.94 | Inf | -Inf | 3.77 | 3 | Horizontal | 348 | 2.17 | - |
| 5825MHz | Pass | PK | 5.9246G | 67.39 | 68.50 | -1.11 | 3.98 | 3 | Horizontal | 348 | 2.17 | - |
| 5825MHz | Pass | AV | 11.65654G | 51.91 | 54.00 | -2.09 | 13.42 | 3 | Vertical | 266 | 1.49 | - |
| 5825MHz | Pass | PK | 11.6551G | 64.58 | 74.00 | -9.42 | 13.42 | 3 | Vertical | 266 | 1.49 | - |
| 5825MHz | Pass | AV | 11.6563G | 49.44 | 54.00 | -4.56 | 13.42 | 3 | Horizontal | 319 | 1.43 | - |
| 5825MHz | Pass | PK | 11.65684G | 62.48 | 74.00 | -11.52 | 13.42 | 3 | Horizontal | 319 | 1.43 | - |
| 802.11n HT40_Nss1,(MCS0)_3TX | - | - | - | - | - | - | - | - | - | - | - | - |
| 5190MHz | Pass | PK | 5.1444G | 58.85 | 74.00 | -15.15 | 2.74 | 3 | Vertical | 133 | 1.62 | - |
| 5190MHz | Pass | AV | 5.15G | 46.47 | 54.00 | -7.53 | 2.74 | 3 | Vertical | 133 | 1.62 | - |
| 5190MHz | Pass | PK | 5.1988G | 103.67 | Inf | -Inf | 2.80 | 3 | Vertical | 133 | 1.62 | - |
| 5190MHz | Pass | AV | 5.2004G | 94.44 | Inf | -Inf | 2.80 | 3 | Vertical | 133 | 1.62 | - |
| 5190MHz | Pass | AV | 5.1476G | 53.31 | 54.00 | -0.69 | 2.74 | 3 | Horizontal | 335 | 1.48 | - |
| 5190MHz | Pass | AV | 5.204G | 97.78 | Inf | -Inf | 2.80 | 3 | Horizontal | 335 | 1.48 | - |
| 5190MHz | Pass | PK | 5.1448G | 67.79 | 74.00 | -6.21 | 2.74 | 3 | Horizontal | 335 | 1.48 | - |
| 5190MHz | Pass | PK | 5.1852G | 107.22 | Inf | -Inf | 2.78 | 3 | Horizontal | 335 | 1.48 | - |
| 5190MHz | Pass | AV | 10.37574G | 41.65 | 54.00 | -12.35 | 12.67 | 3 | Vertical | 25 | 1.50 | - |
| 5190MHz | Pass | PK | 10.37208G | 53.62 | 74.00 | -20.38 | 12.66 | 3 | Vertical | 25 | 1.50 | - |
| 5190MHz | Pass | AV | 10.38744G | 41.74 | 54.00 | -12.26 | 12.69 | 3 | Horizontal | 76 | 1.50 | - |
| 5190MHz | Pass | PK | 10.37412G | 53.94 | 74.00 | -20.06 | 12.66 | 3 | Horizontal | 76 | 1.50 | - |
| 5230MHz | Pass | AV | 5.1492G | 47.67 | 54.00 | -6.33 | 2.74 | 3 | Vertical | 58 | 1.60 | - |
| 5230MHz | Pass | AV | 5.2408G | 102.45 | Inf | -Inf | 2.84 | 3 | Vertical | 58 | 1.60 | - |
| 5230MHz | Pass | PK | 5.1436G | 59.97 | 74.00 | -14.03 | 2.74 | 3 | Vertical | 58 | 1.60 | - |
| 5230MHz | Pass | PK | 5.246G | 111.83 | Inf | -Inf | 2.85 | 3 | Vertical | 58 | 1.60 | - |
| 5230MHz | Pass | AV | 5.144G | 51.96 | 54.00 | -2.04 | 2.74 | 3 | Horizontal | 342 | 1.52 | - |
| 5230MHz | Pass | AV | 5.2428G | 106.23 | Inf | -Inf | 2.85 | 3 | Horizontal | 342 | 1.52 | _ |
| 5230MHz | Pass | PK | 5.1444G | 66.53 | 74.00 | -7.47 | 2.74 | 3 | Horizontal | 342 | 1.52 | |
| 5230MHz | Pass | PK | 5.224G | 115.17 | Inf | -Inf | 2.83 | 3 | Horizontal | 342 | 1.52 | _ |
| 5230MHz | Pass | AV | 10.4618G | 43.40 | 54.00 | -10.60 | 12.86 | 3 | Vertical | 272 | 1.50 | |
| 5230MHz | Pass | PK | 10.45172G | 55.58 | 74.00 | -18.42 | 12.83 | 3 | Vertical | 272 | 1.50 | _ |
| | _ | | | | | | | | | | | - |
| 5230MHz 5230MHz | Pass | AV PK | 10.45016G 10.4633G | 42.63 54.60 | 54.00 74.00 | -11.37 -19.40 | 12.83 12.86 | 3 | Horizontal Horizontal | 293 | 1.67 | |
| 5230MHz 5755MHz | | AV | 5.743G | | | | | 3 | | | | - |
| | Pass | | | 102.77 | Inf 49.20 | -Inf | 3.62 | | Vertical | 161 | 1.42 | - |
| 5755MHz | Pass | PK | 5.6338G | 59.15 | 68.20 | -9.05 | 3.41 | 3 | Vertical | 161 | 1.42 | - |
| 5755MHz | Pass | PK | 5.7634G | 111.26 | Inf | -Inf | 3.66 | 3 | Vertical | 161 | 1.42 | - |
| 5755MHz | Pass | PK | 5.9338G | 57.19 | 68.20 | -11.01 | 4.00 | 3 | Vertical | 161 | 1.42 | - |
| 5755MHz | Pass | AV | 5.7562G | 108.14 | Inf | -Inf | 3.65 | 3 | Horizontal | 352 | 2.32 | - |
| 5755MHz | Pass | PK | 5.641G | 67.63 | 68.20 | -0.57 | 3.43 | 3 | Horizontal | 352 | 2.32 | - |
| 5755MHz | Pass | PK | 5.7574G | 116.30 | Inf | -Inf | 3.65 | 3 | Horizontal | 352 | 2.32 | - |
| 5755MHz | Pass | PK | 5.9314G | 59.36 | 68.20 | -8.84 | 3.99 | 3 | Horizontal | 352 | 2.32 | - |
| 5755MHz | Pass | AV | 11.5157G | 50.14 | 54.00 | -3.86 | 13.55 | 3 | Vertical | 225 | 1.47 | - |
| 5755MHz | Pass | PK | 11.49638G | 62.73 | 74.00 | -11.27 | 13.58 | 3 | Vertical | 225 | 1.47 | - |
| 5755MHz | Pass | AV | 11.51744G | 48.02 | 54.00 | -5.98 | 13.55 | 3 | Horizontal | 284 | 1.78 | - |
| 5755MHz | Pass | PK | 11.51558G | 60.10 | 74.00 | -13.90 | 13.55 | 3 | Horizontal | 284 | 1.78 | - |
| 5795MHz | Pass | AV | 5.7842G | 103.43 | Inf | -Inf | 3.70 | 3 | Vertical | 171 | 1.54 | - |
| 5795MHz | Pass | PK | 5.5802G | 58.12 | 68.20 | -10.08 | 3.30 | 3 | Vertical | 171 | 1.54 | - |
| 5795MHz | Pass | PK | 5.7842G | 112.02 | Inf | -Inf | 3.70 | 3 | Vertical | 171 | 1.54 | - |
| 5795MHz | Pass | PK | 5.9258G | 58.96 | 68.20 | -9.24 | 3.99 | 3 | Vertical | 171 | 1.54 | - |

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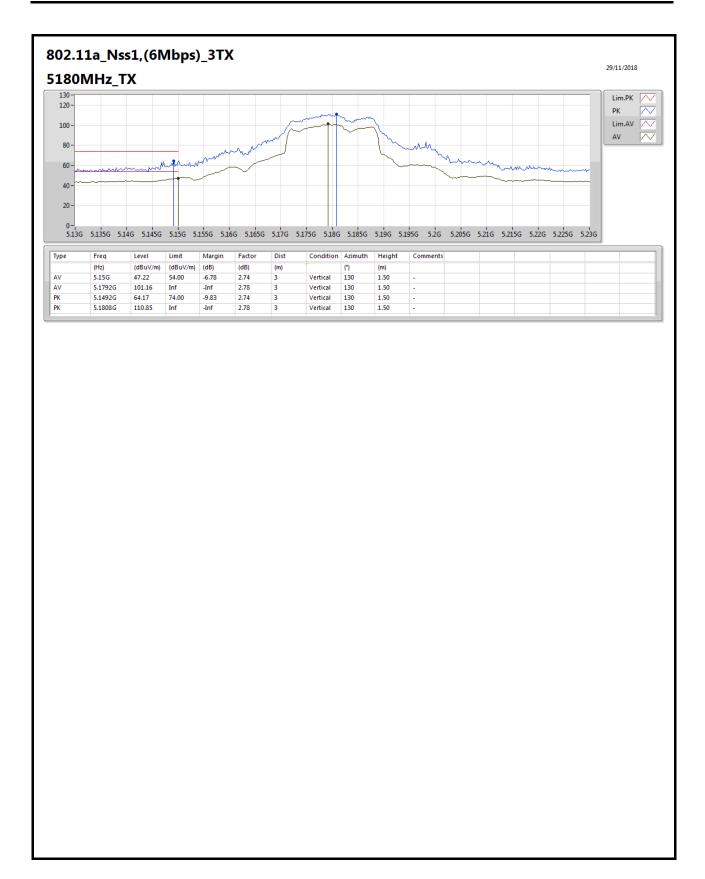
TEL: 886-3-327-3456 FAX: 886-3-327-0973 Page No. : E5 of E70



| Mode | Result | Туре | Freq | Level | Limit | Margin | Factor | Dist | Condition | Azimuth | Height | Comments |
|---------|--------|------|-----------|----------|----------|--------|--------|------|------------|---------|--------|----------|
| | | | (Hz) | (dBuV/m) | (dBuV/m) | (dB) | (dB) | (m) | | (°) | (m) | |
| 5795MHz | Pass | AV | 5.7962G | 109.32 | Inf | -Inf | 3.72 | 3 | Horizontal | 1 | 2.07 | - |
| 5795MHz | Pass | PK | 5.6414G | 64.33 | 68.20 | -3.87 | 3.43 | 3 | Horizontal | 1 | 2.07 | - |
| 5795MHz | Pass | PK | 5.7962G | 117.40 | Inf | -Inf | 3.72 | 3 | Horizontal | 1 | 2.07 | - |
| 5795MHz | Pass | PK | 5.9246G | 66.31 | 68.50 | -2.19 | 3.98 | 3 | Horizontal | 1 | 2.07 | - |
| 5795MHz | Pass | AV | 11.59606G | 49.99 | 54.00 | -4.01 | 13.49 | 3 | Vertical | 264 | 1.48 | - |
| 5795MHz | Pass | PK | 11.5948G | 61.38 | 74.00 | -12.62 | 13.49 | 3 | Vertical | 264 | 1.48 | - |
| 5795MHz | Pass | AV | 11.59606G | 47.53 | 54.00 | -6.47 | 13.49 | 3 | Horizontal | 290 | 1.87 | - |
| 5795MHz | Pass | PK | 11.59468G | 60.07 | 74.00 | -13.93 | 13.49 | 3 | Horizontal | 290 | 1.87 | - |

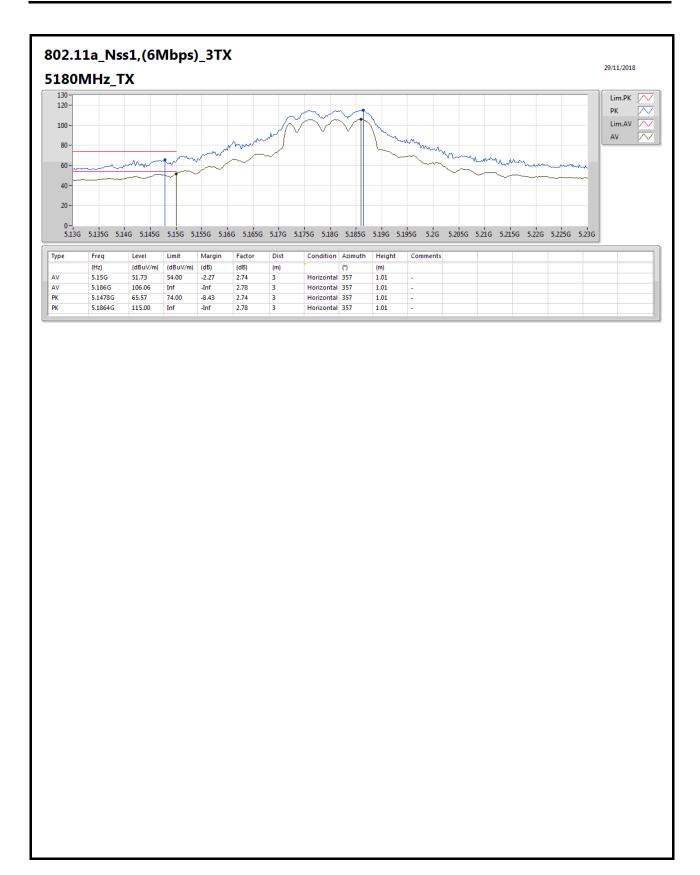
SPORTON INTERNATIONAL INC. Page No. : E6 of E70





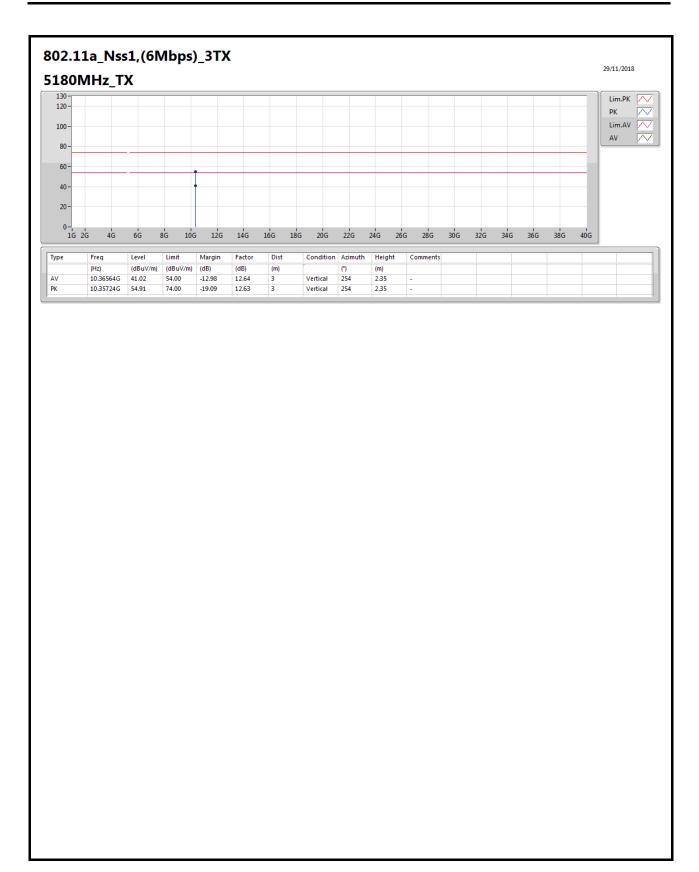
TEL: 886-3-327-3456 FAX: 886-3-327-0973 Page No. : E7 of E70





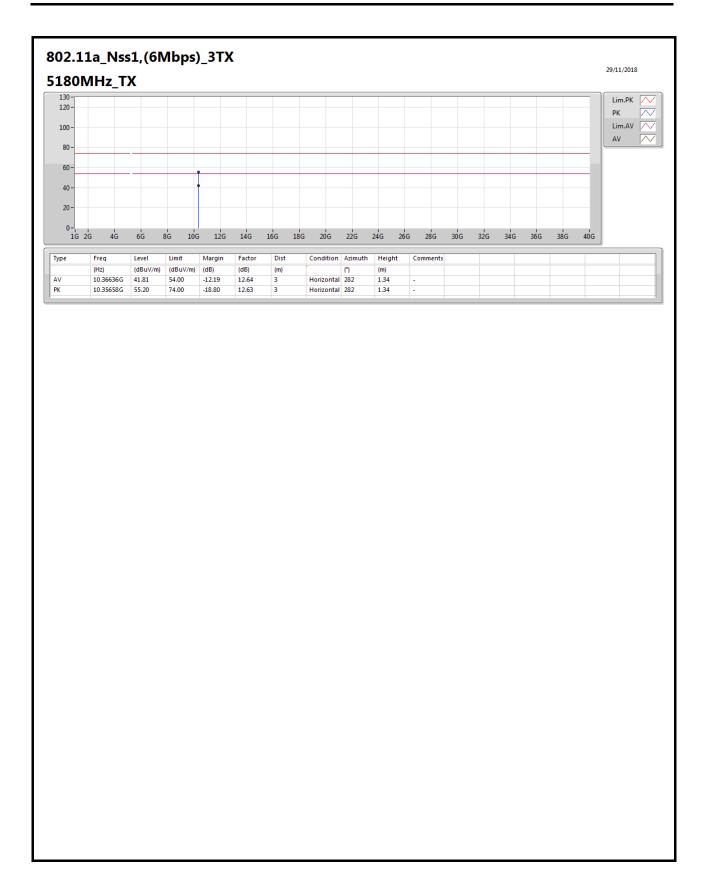
TEL: 886-3-327-3456 FAX: 886-3-327-0973 Page No. : E8 of E70





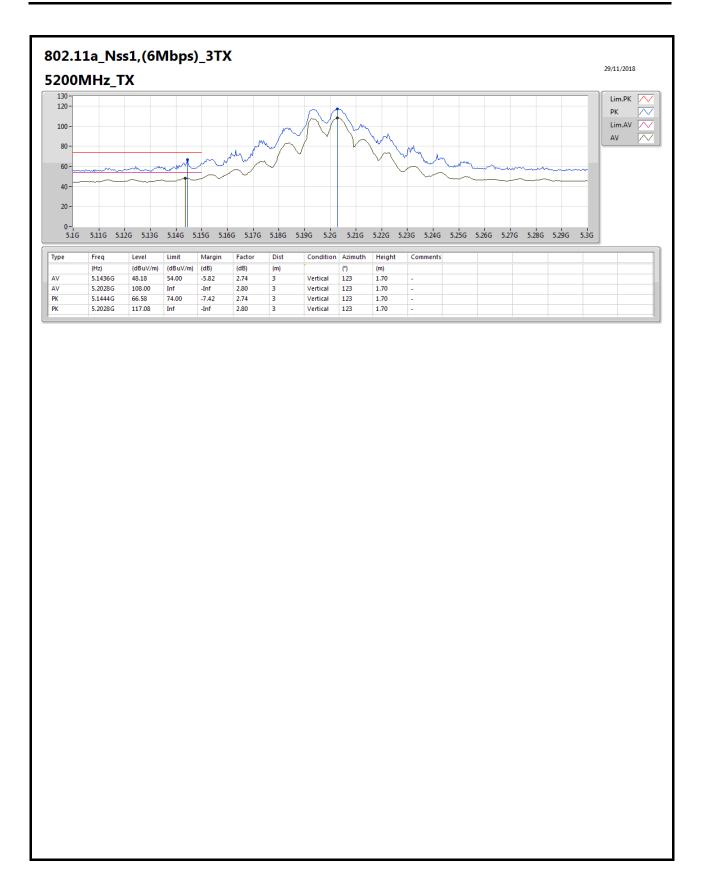
TEL: 886-3-327-3456 FAX: 886-3-327-0973 Page No. : E9 of E70





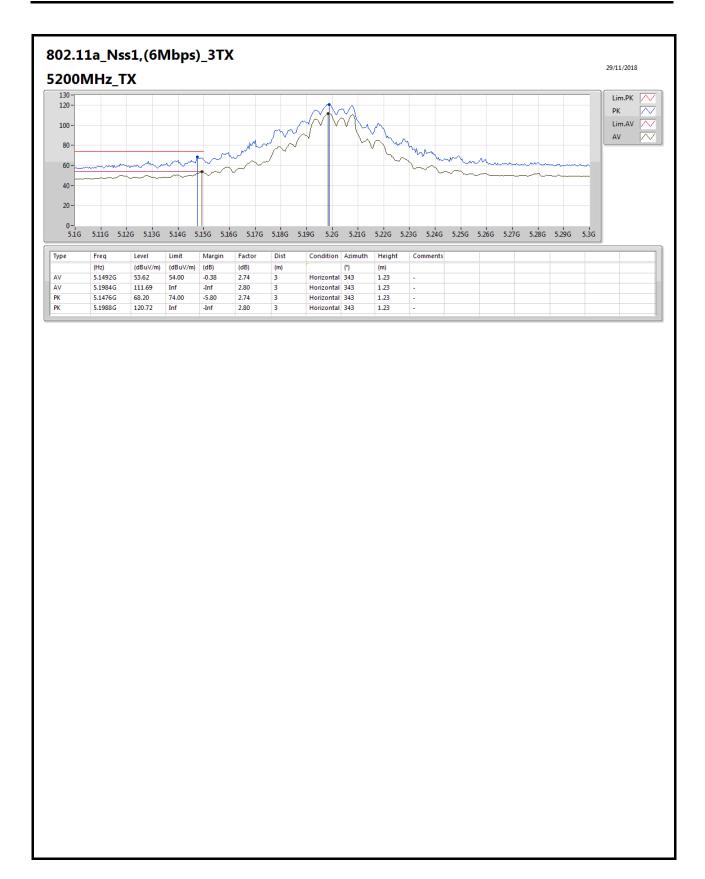
TEL: 886-3-327-3456 FAX: 886-3-327-0973 Page No. : E10 of E70





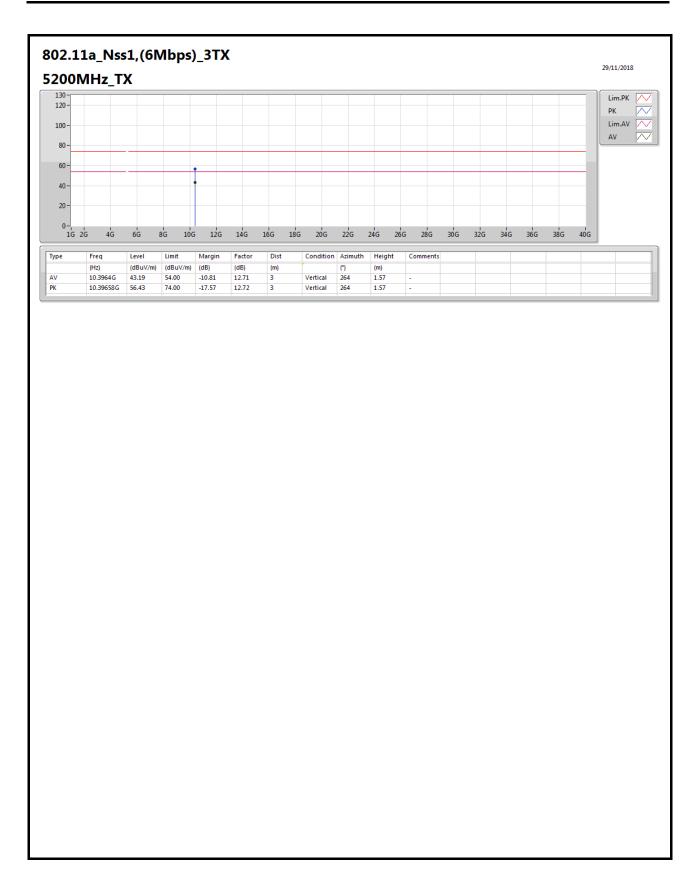
TEL: 886-3-327-3456 FAX: 886-3-327-0973 Page No. : E11 of E70





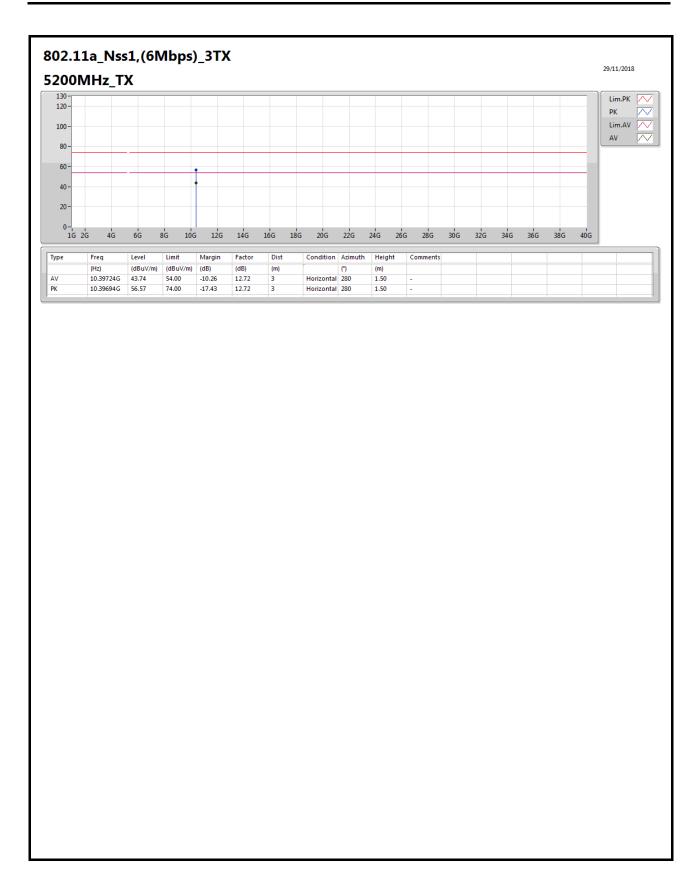
TEL: 886-3-327-3456 FAX: 886-3-327-0973 Page No. : E12 of E70





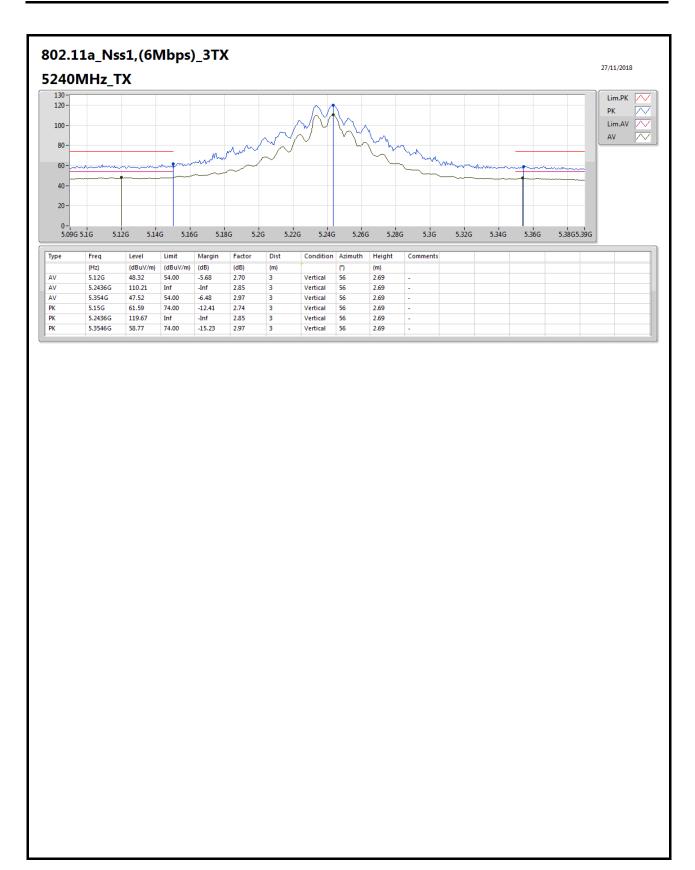
TEL: 886-3-327-3456 FAX: 886-3-327-0973 Page No. : E13 of E70





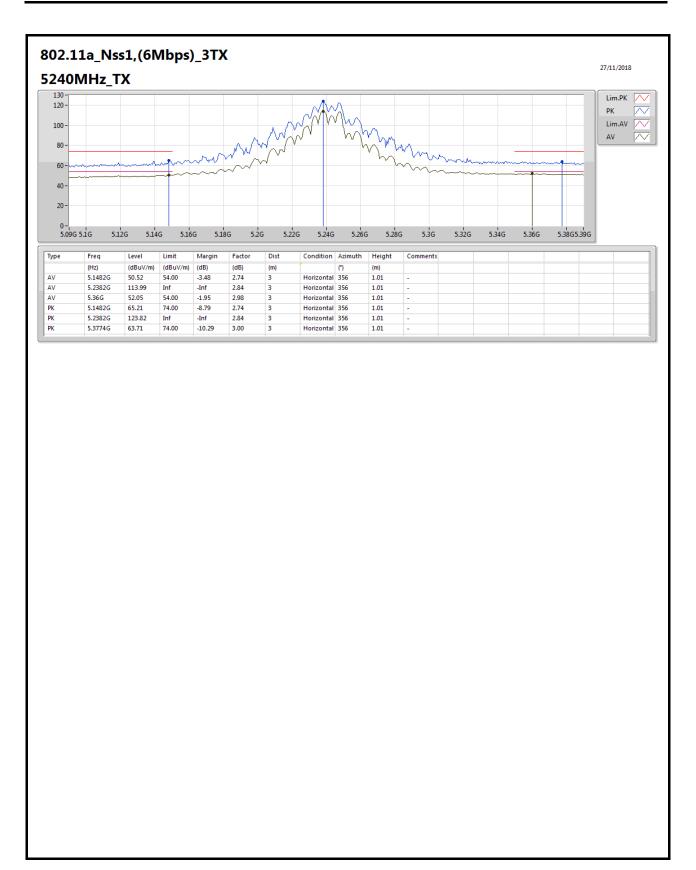
TEL: 886-3-327-3456 FAX: 886-3-327-0973 Page No. : E14 of E70





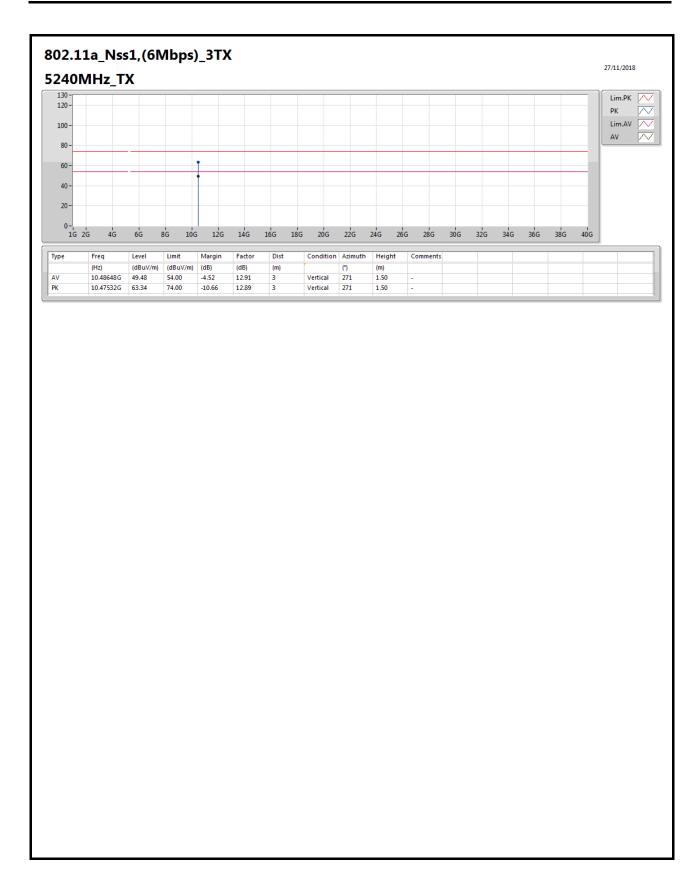
TEL: 886-3-327-3456 FAX: 886-3-327-0973 Page No. : E15 of E70





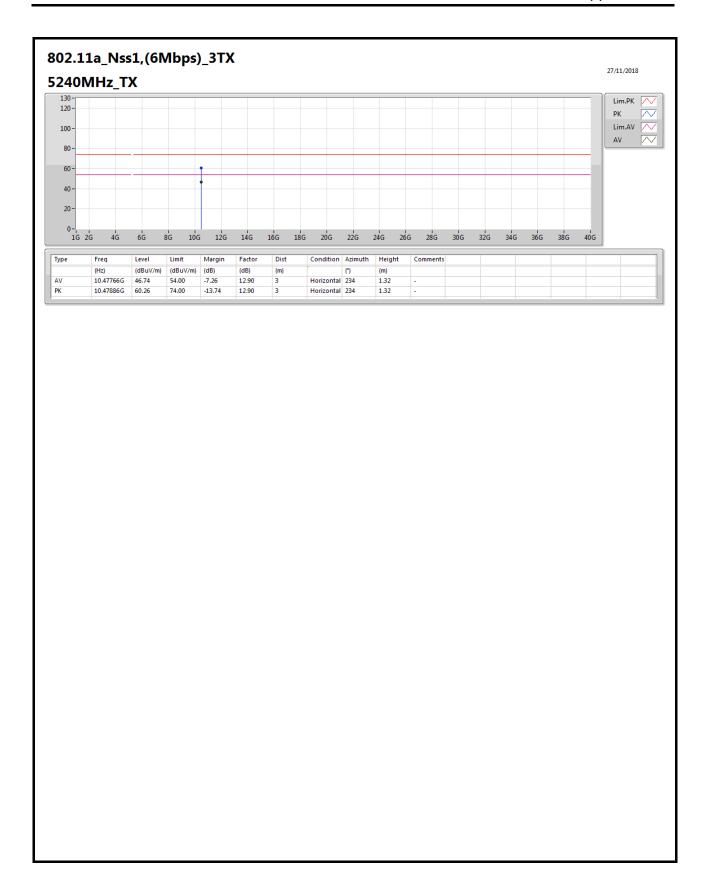
TEL: 886-3-327-3456 FAX: 886-3-327-0973 Page No. : E16 of E70





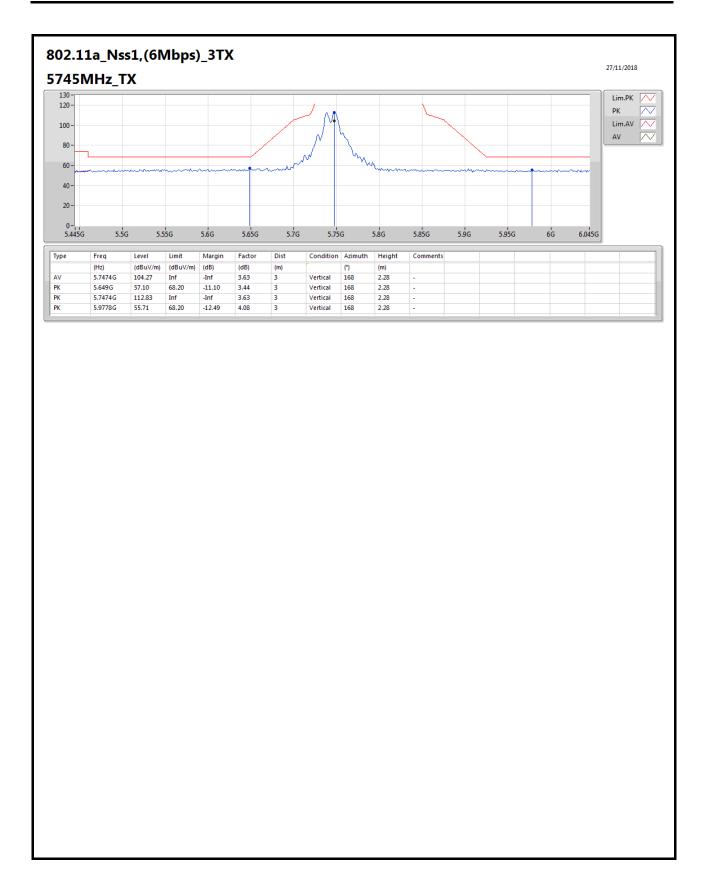
TEL: 886-3-327-3456 FAX: 886-3-327-0973 Page No. : E17 of E70





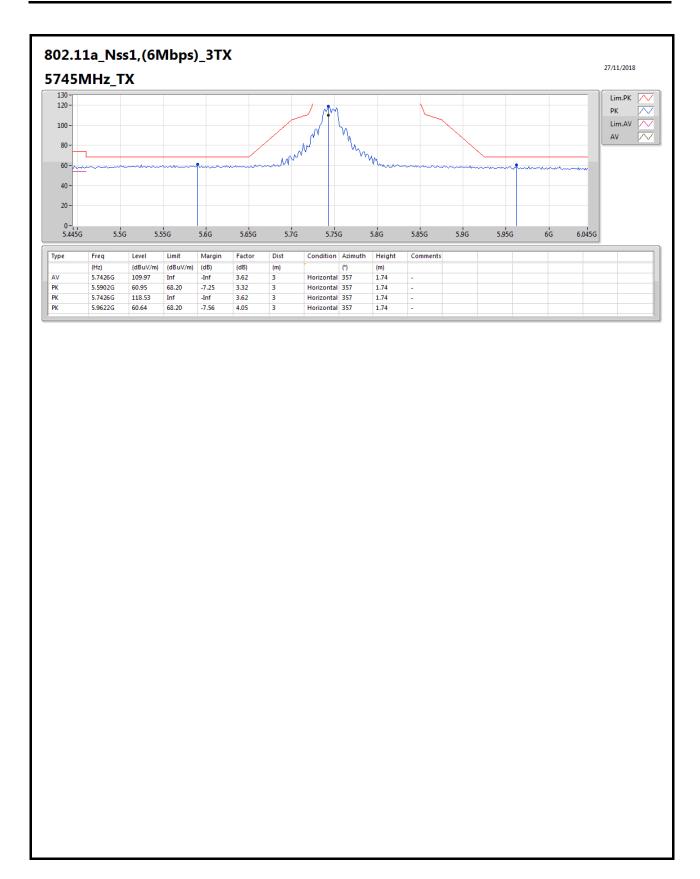
TEL: 886-3-327-3456 FAX: 886-3-327-0973 Page No. : E18 of E70





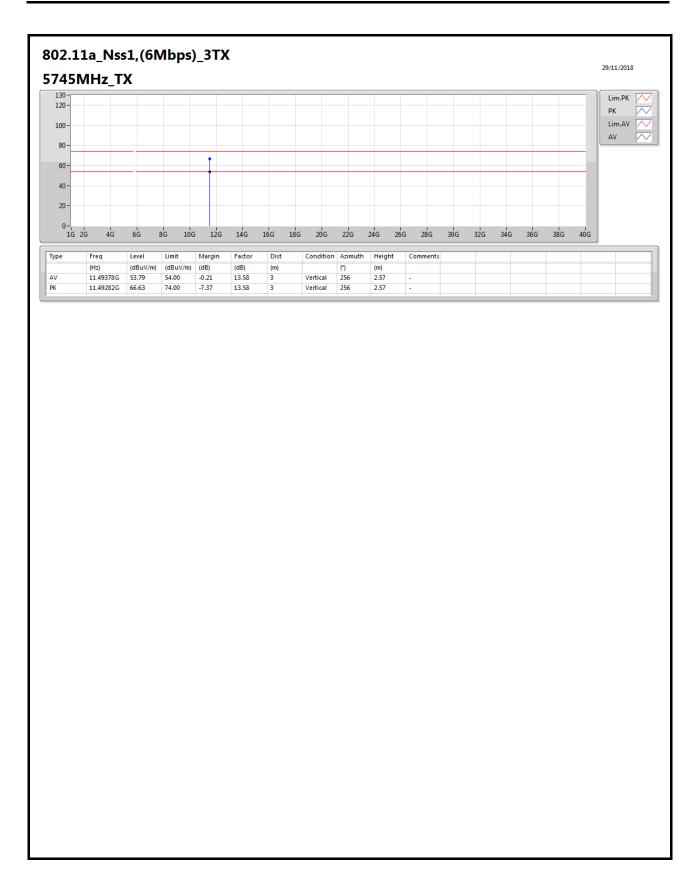
TEL: 886-3-327-3456 FAX: 886-3-327-0973 Page No. : E19 of E70





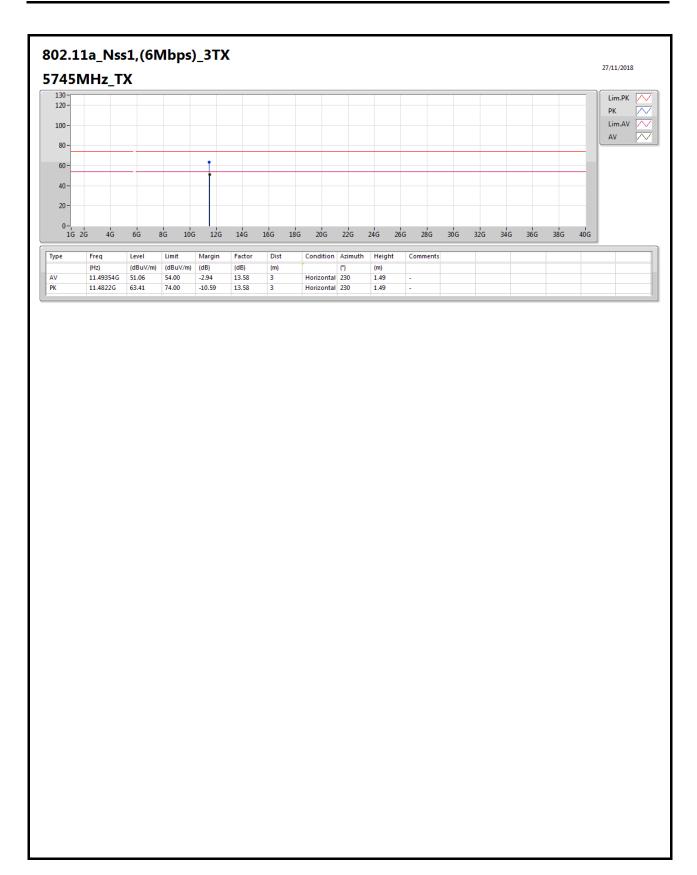
TEL: 886-3-327-3456 FAX: 886-3-327-0973 Page No. : E20 of E70





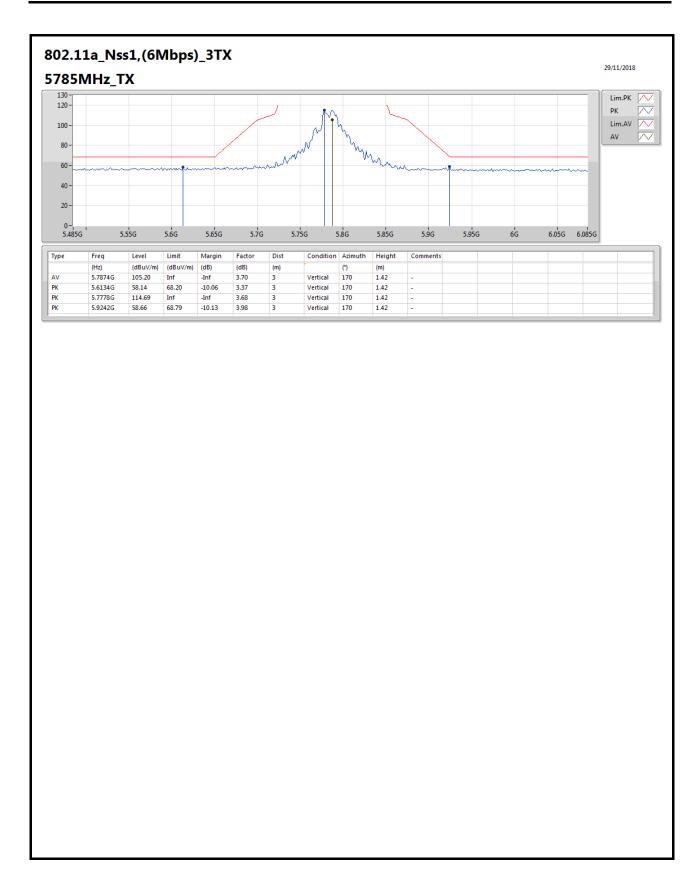
TEL: 886-3-327-3456 FAX: 886-3-327-0973 Page No. : E21 of E70





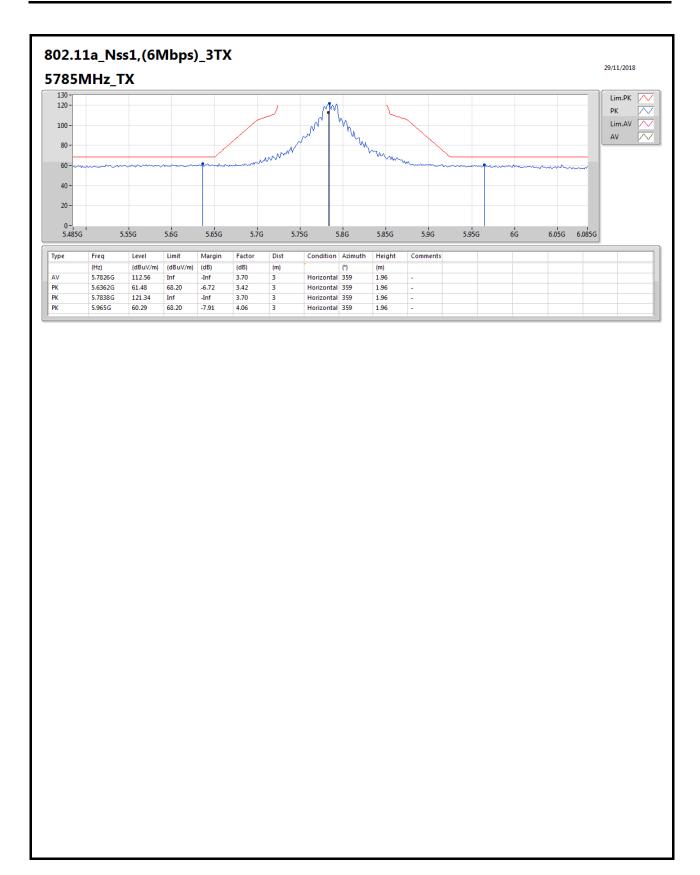
TEL: 886-3-327-3456 FAX: 886-3-327-0973 Page No. : E22 of E70





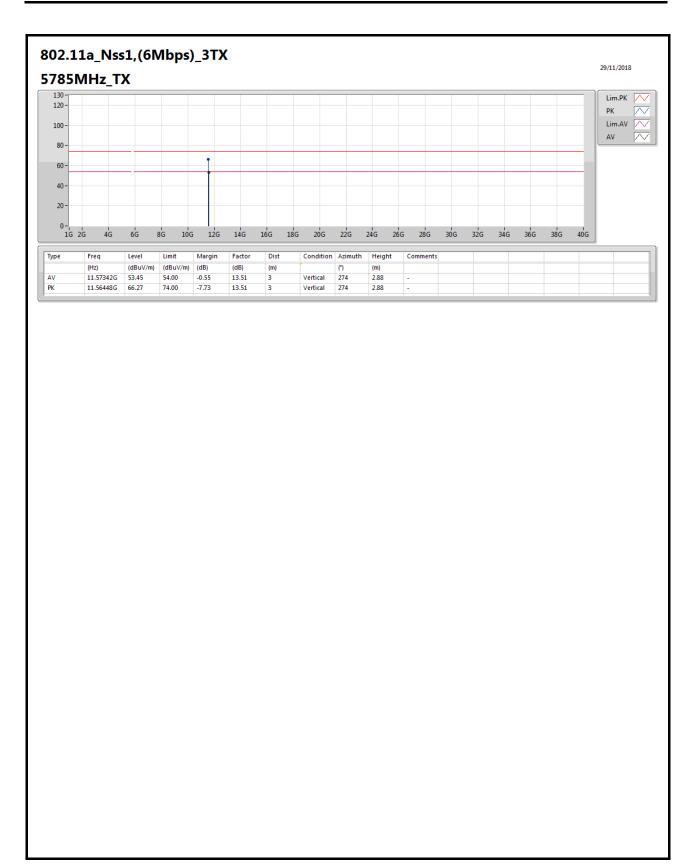
TEL: 886-3-327-3456 FAX: 886-3-327-0973 Page No. : E23 of E70





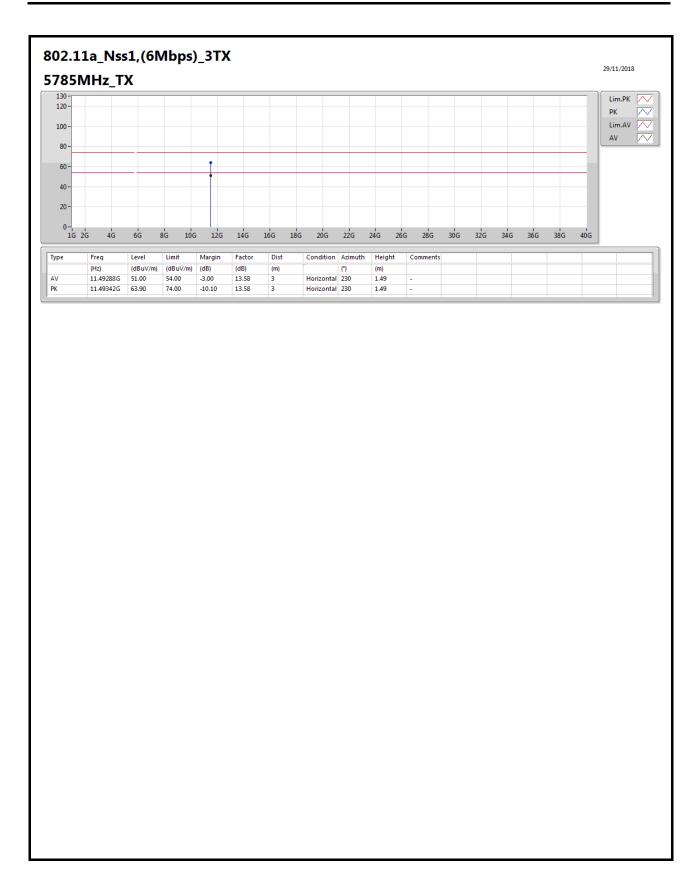
TEL: 886-3-327-3456 FAX: 886-3-327-0973 Page No. : E24 of E70





TEL: 886-3-327-3456 FAX: 886-3-327-0973 Page No. : E25 of E70

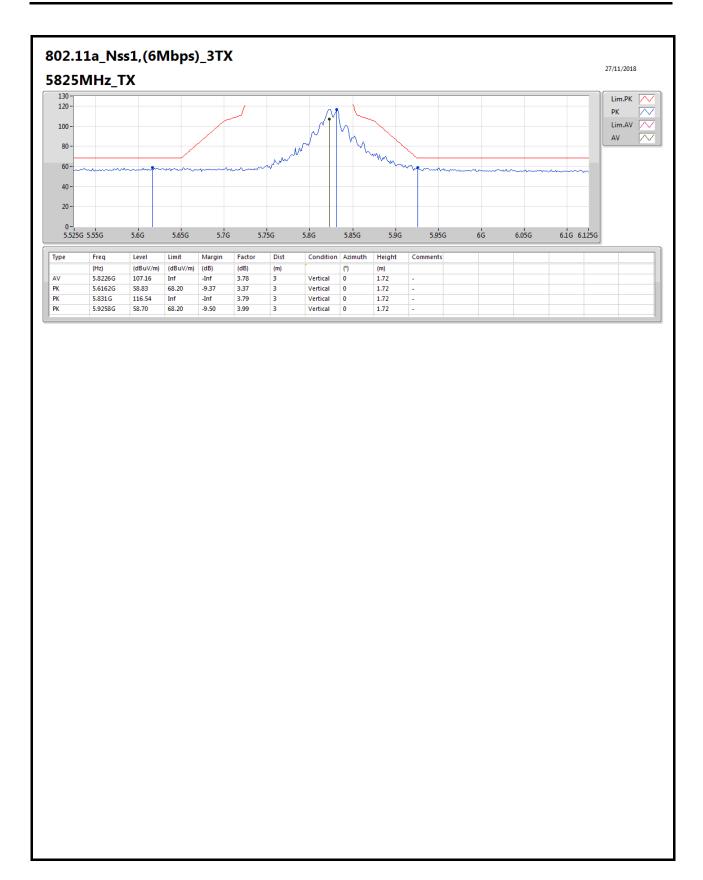




TEL: 886-3-327-3456 FAX: 886-3-327-0973 Page No. : E26 of E70

Page No. : E27 of E70



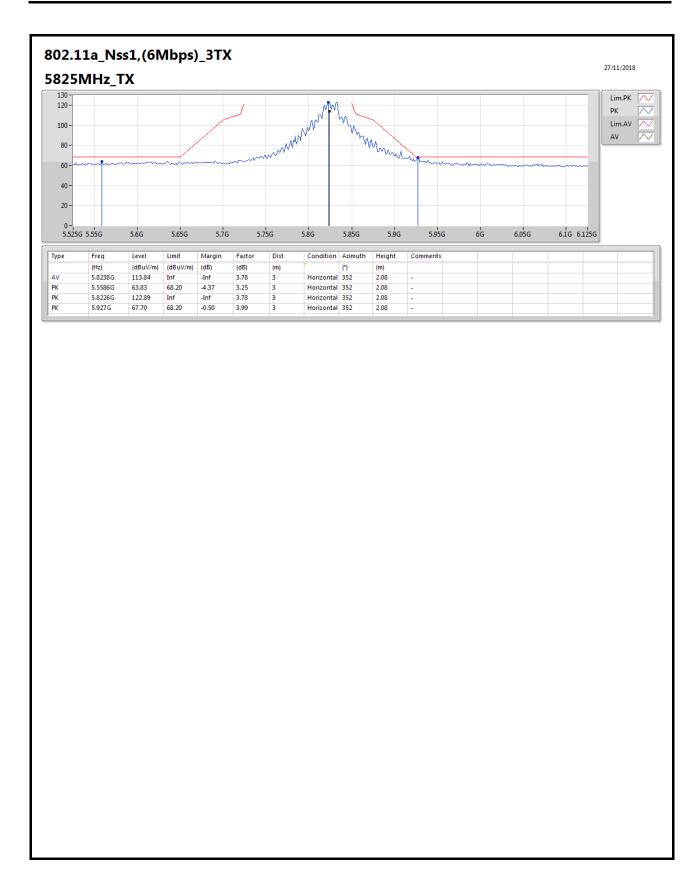


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TEL: 886-3-327-3456

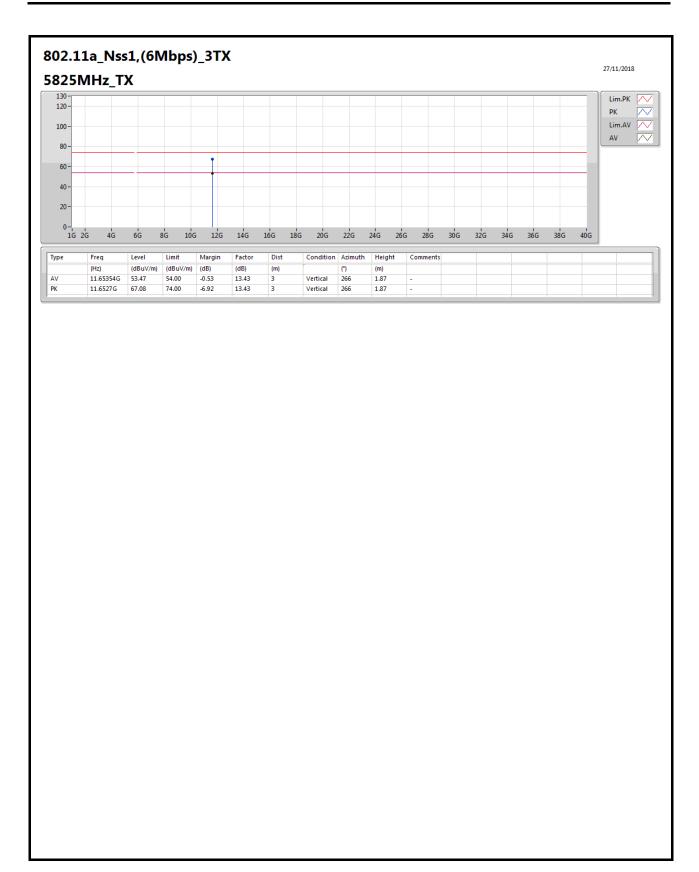
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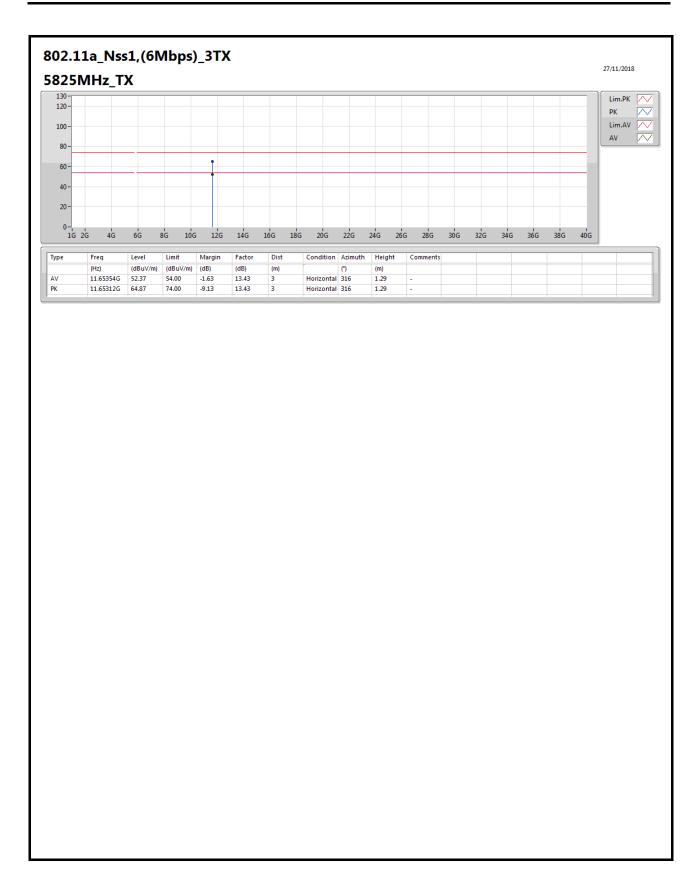
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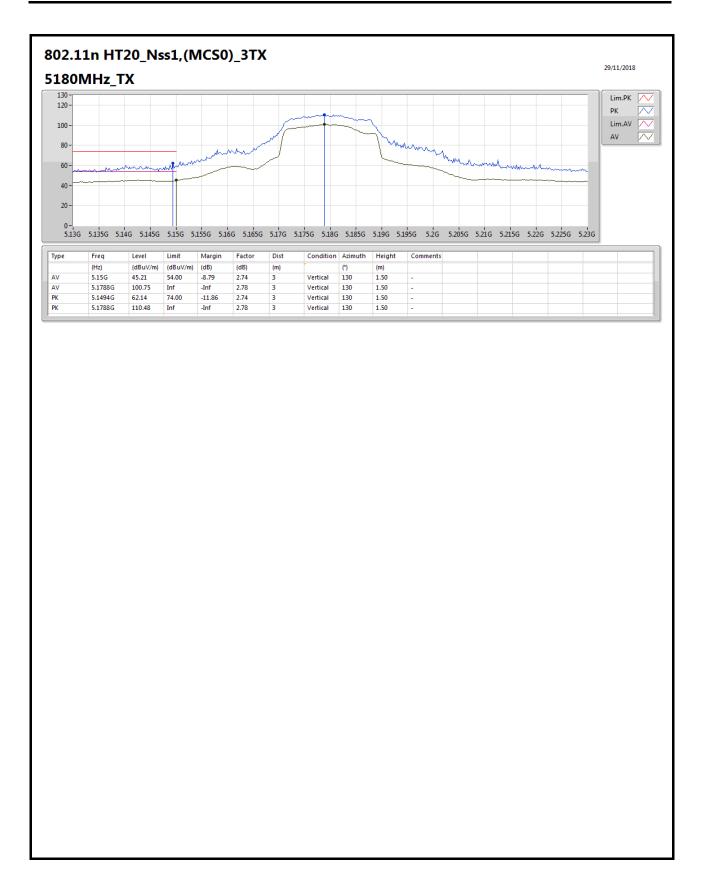
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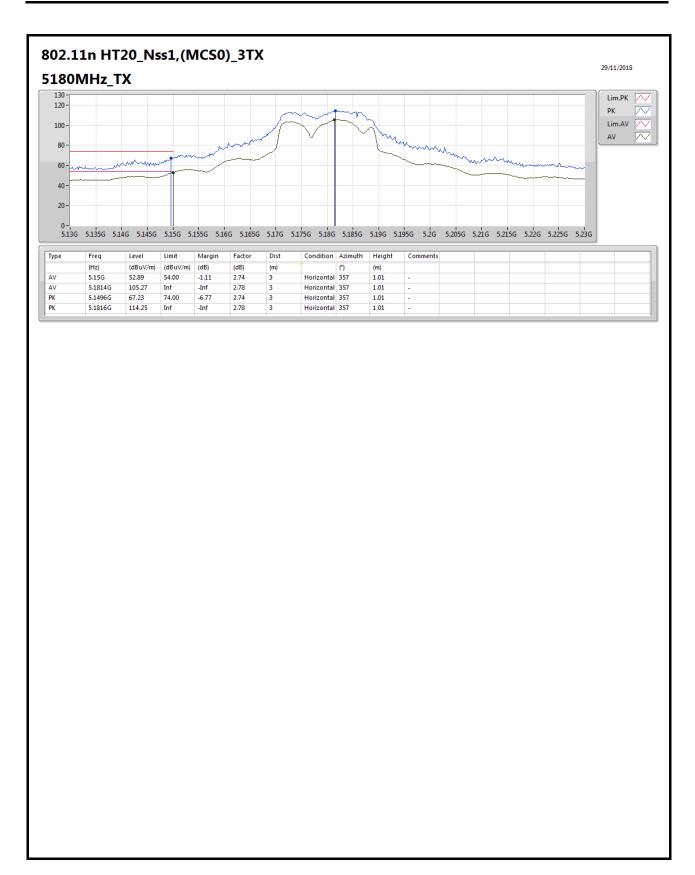
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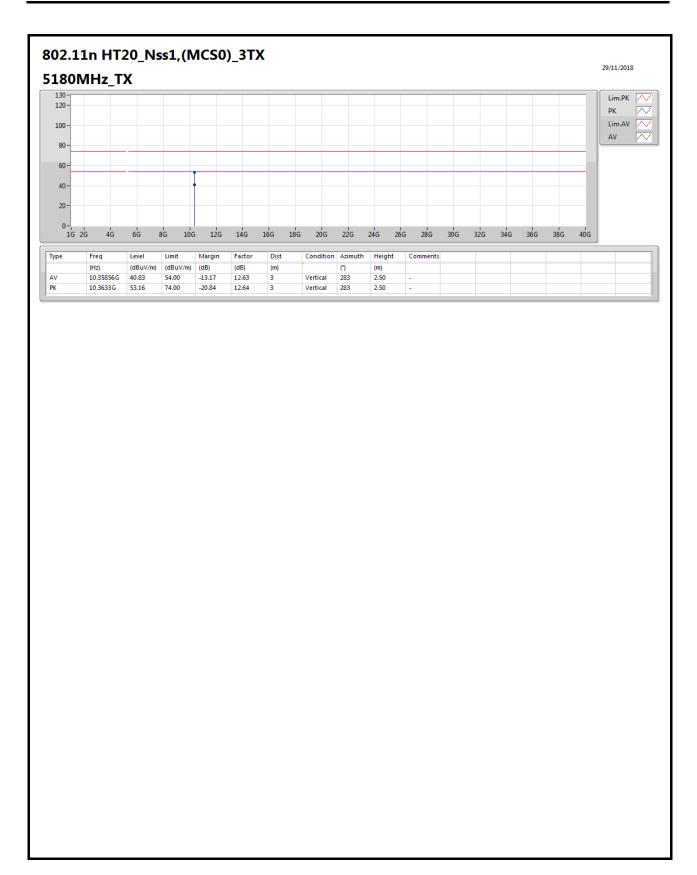
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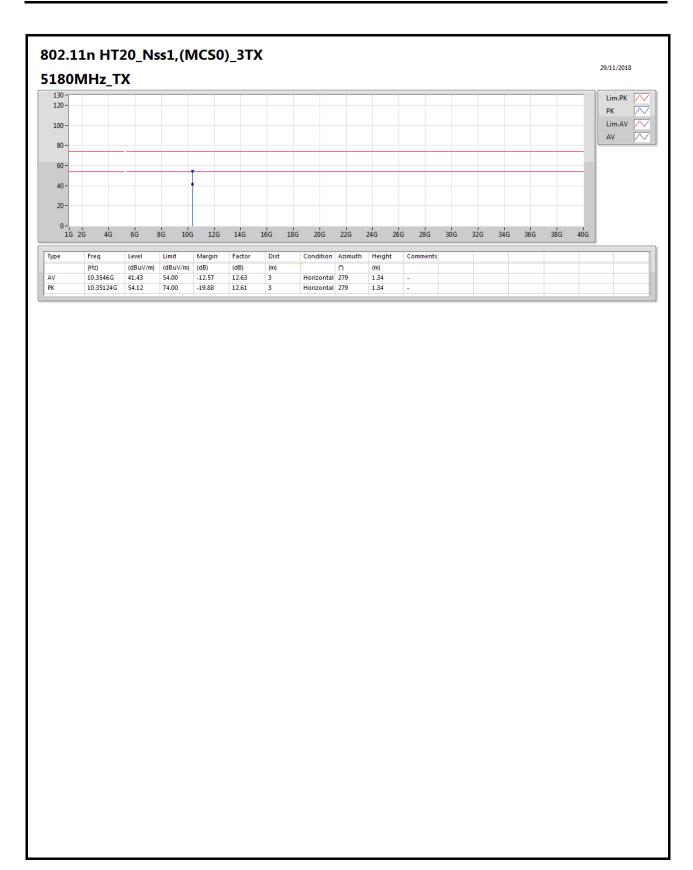
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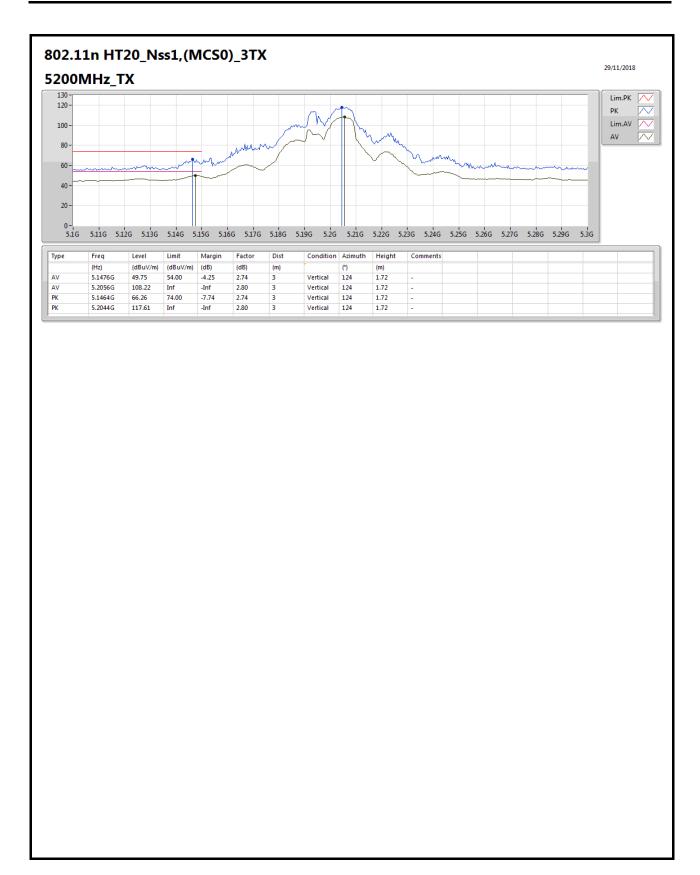
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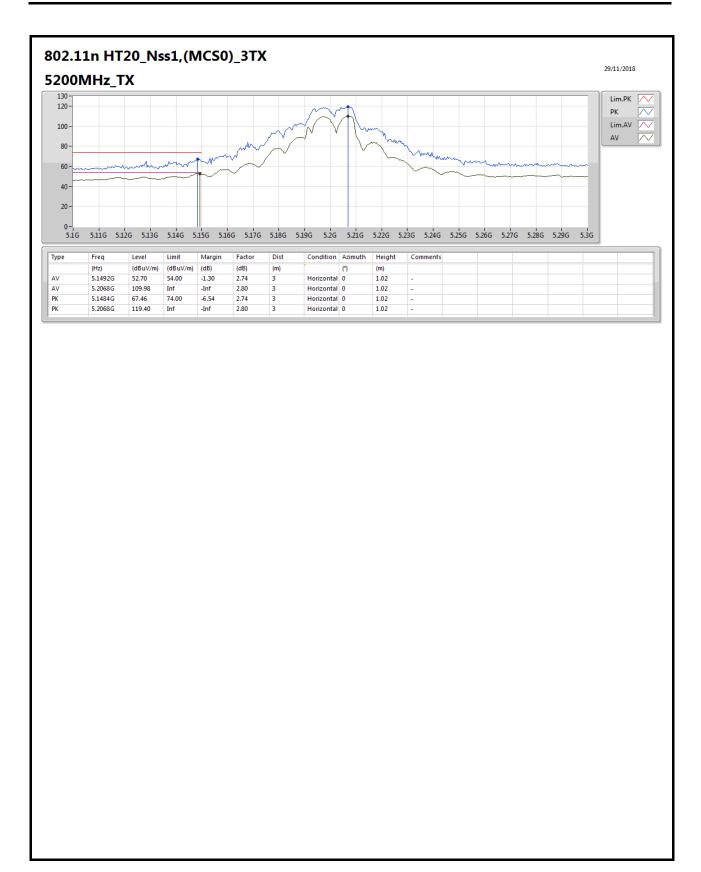
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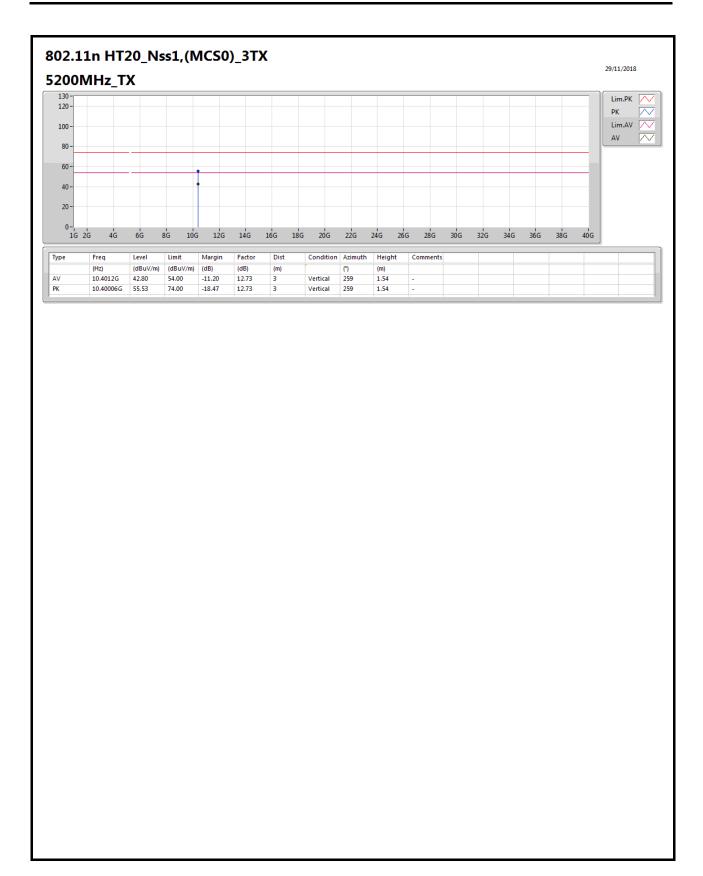
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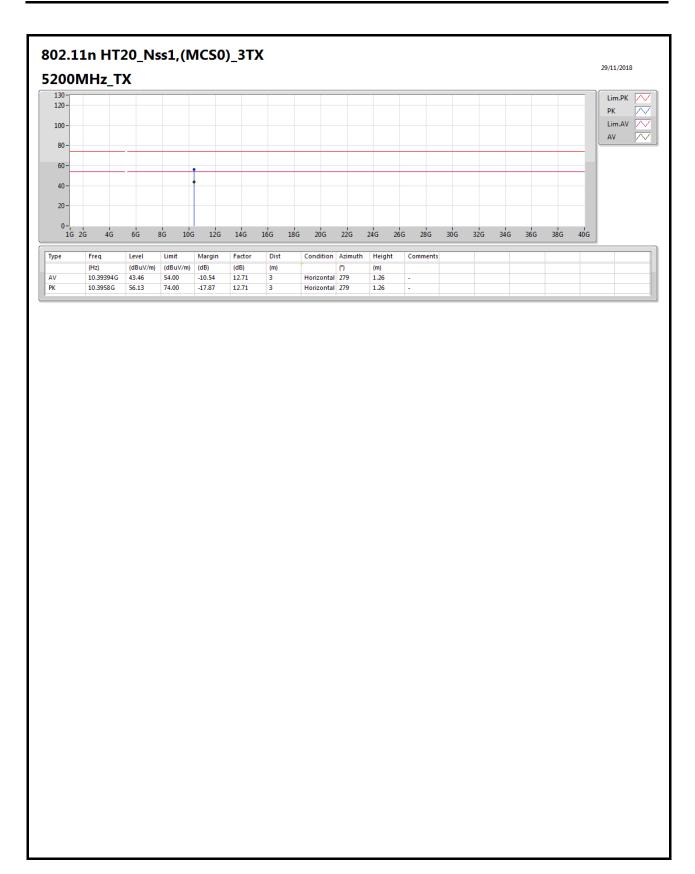
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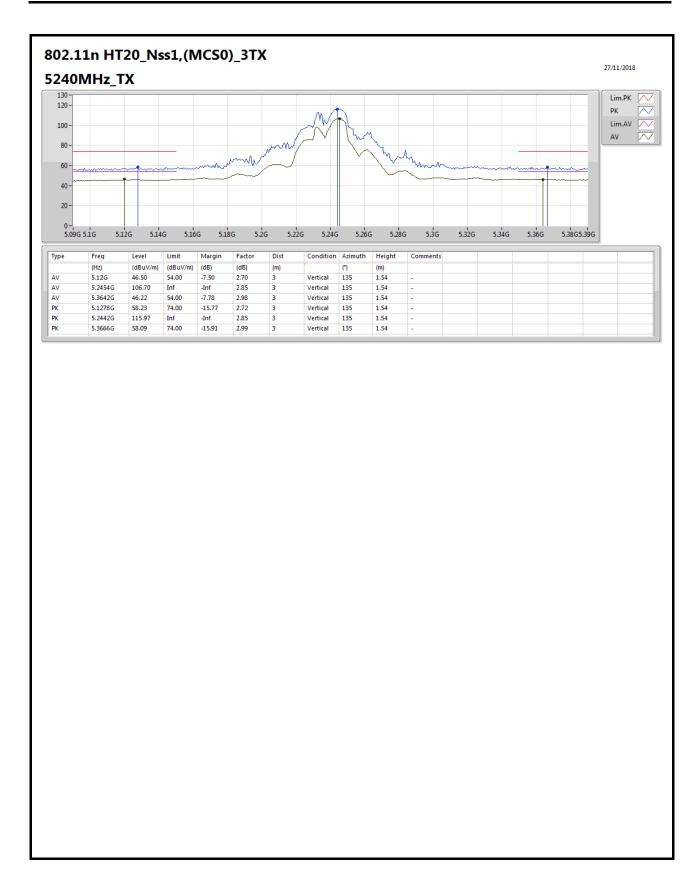
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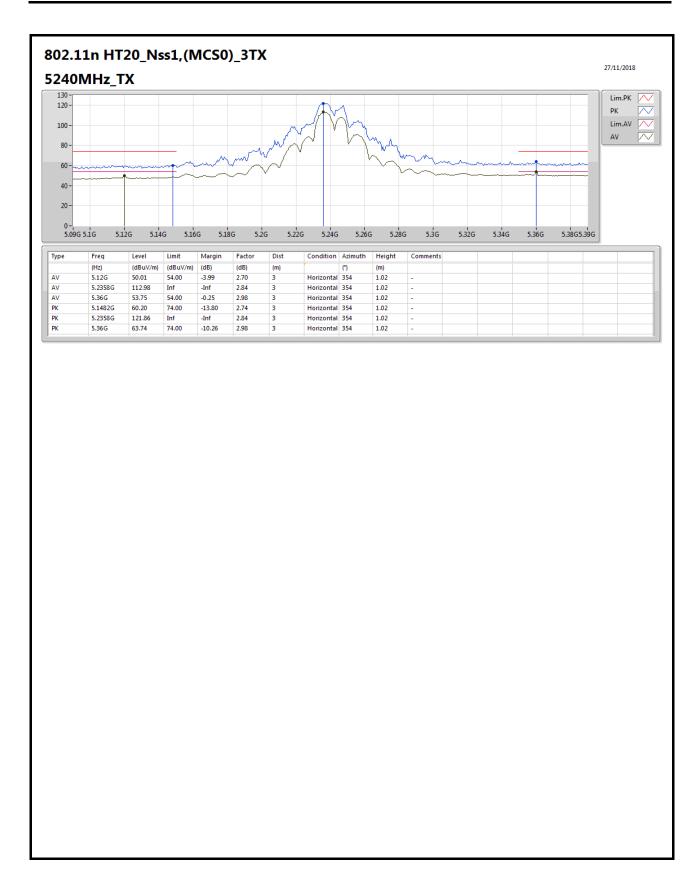
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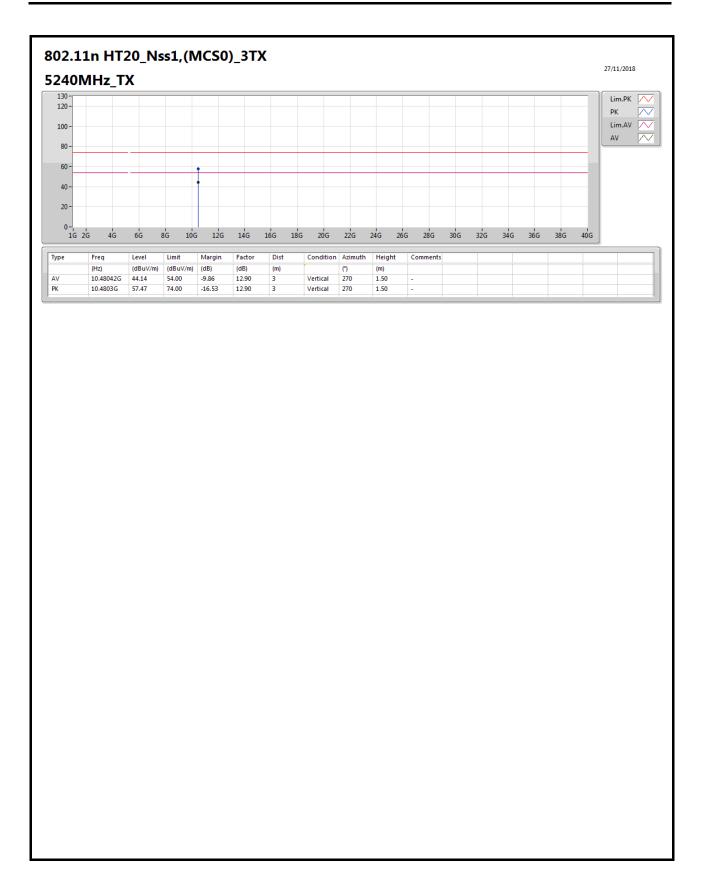
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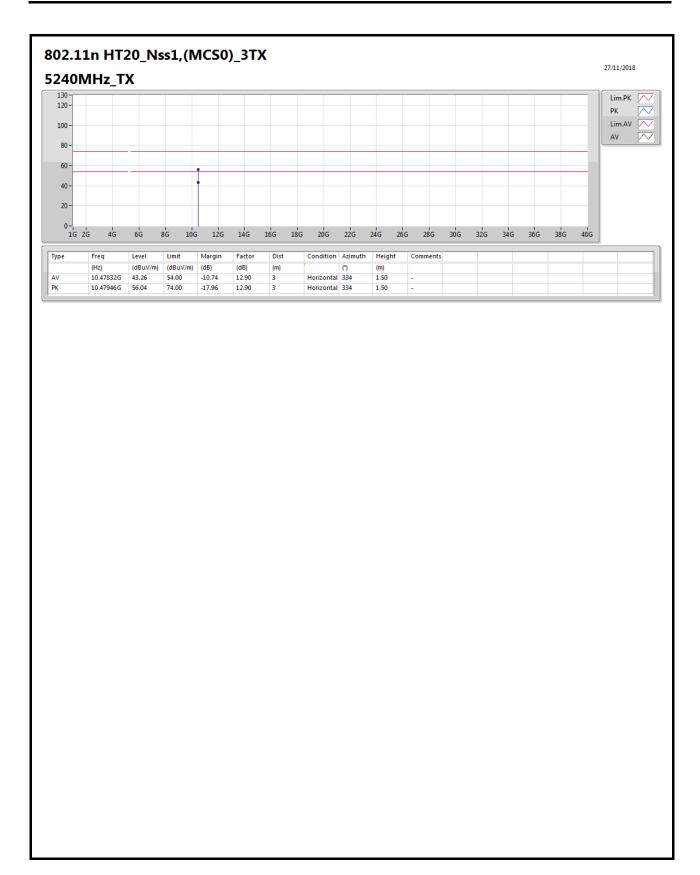
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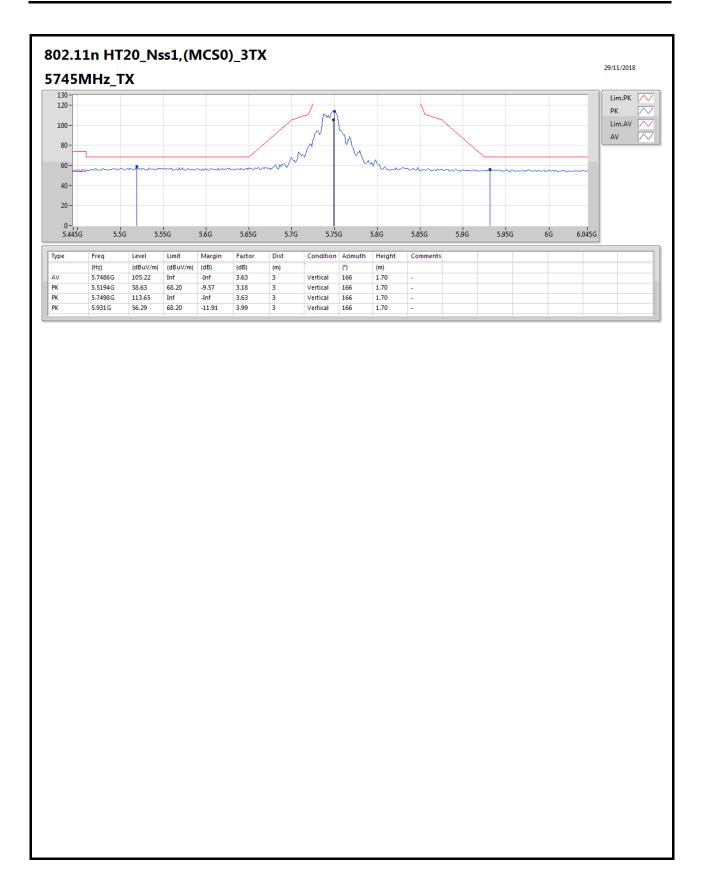
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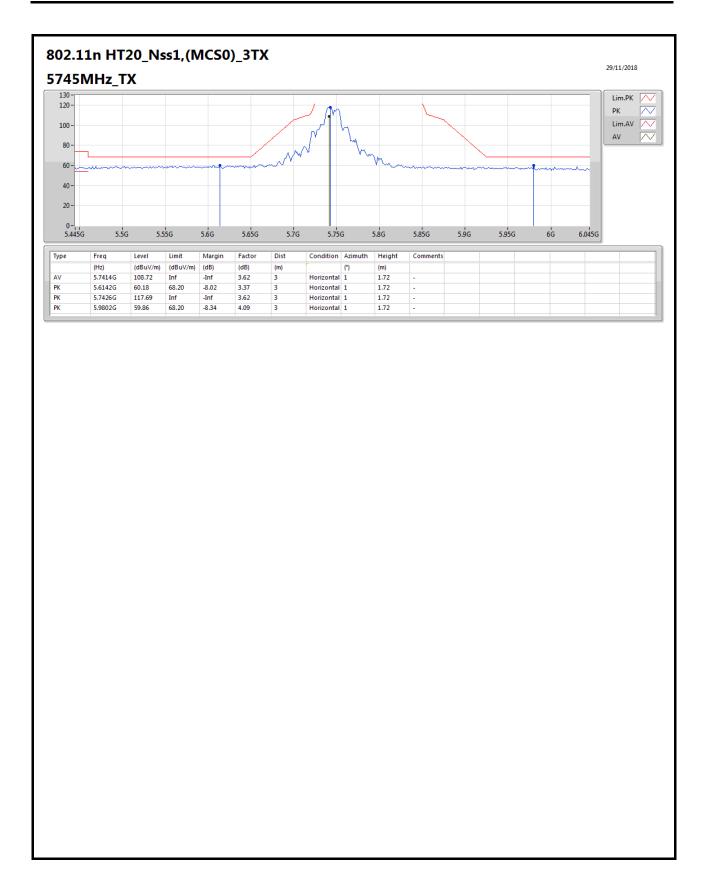
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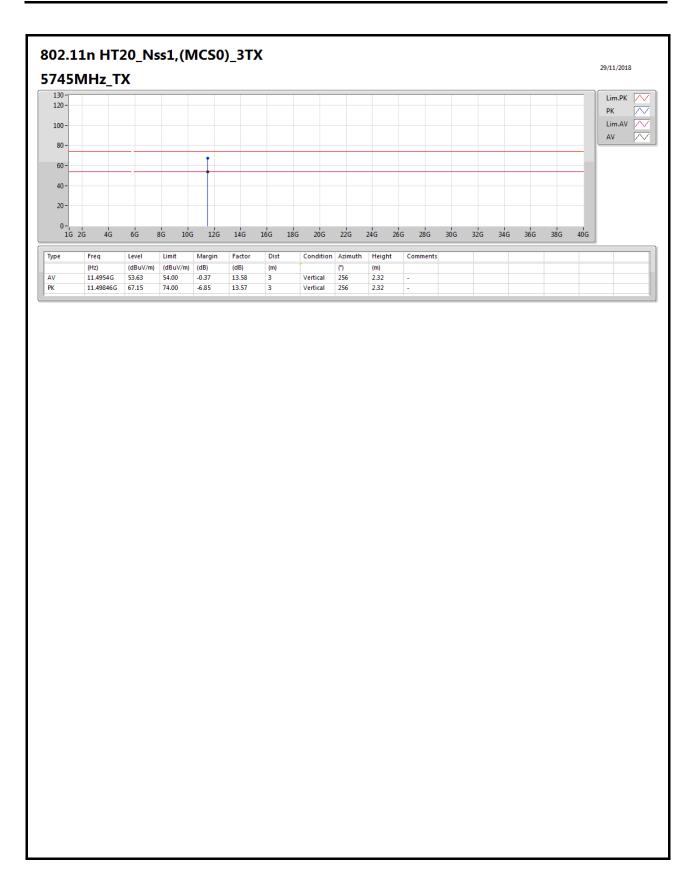
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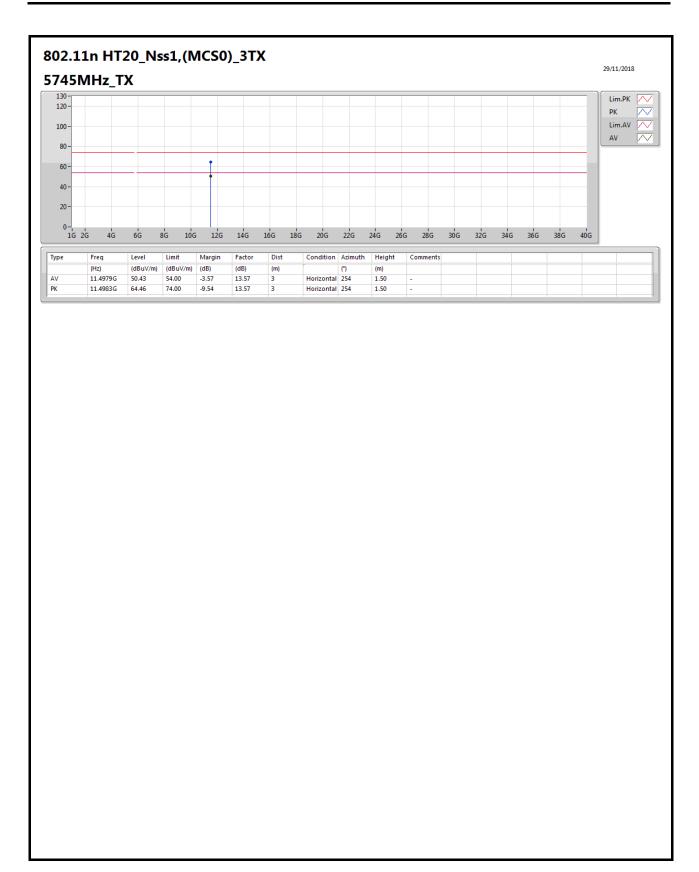
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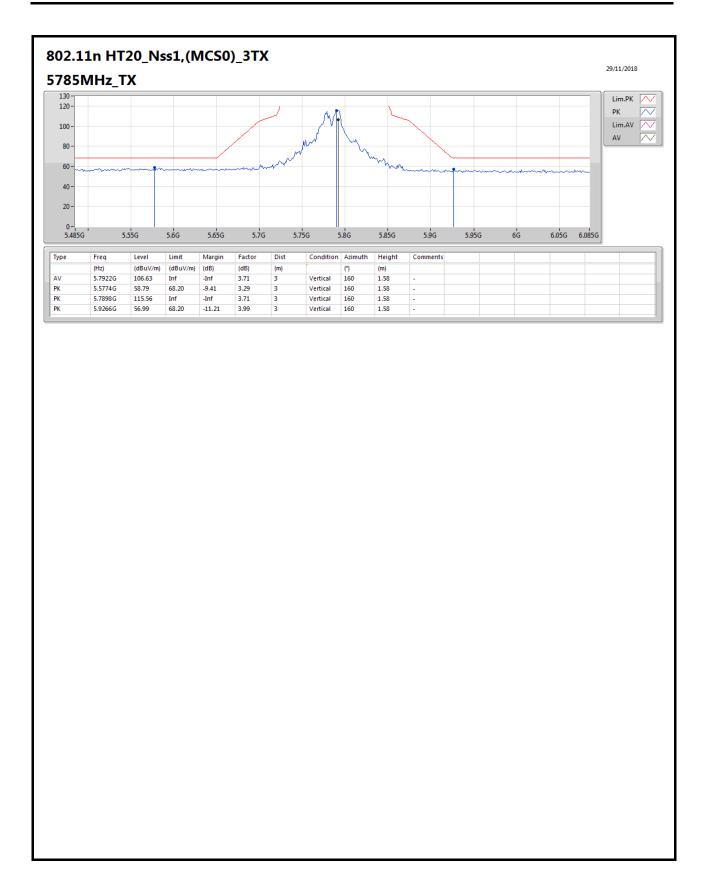
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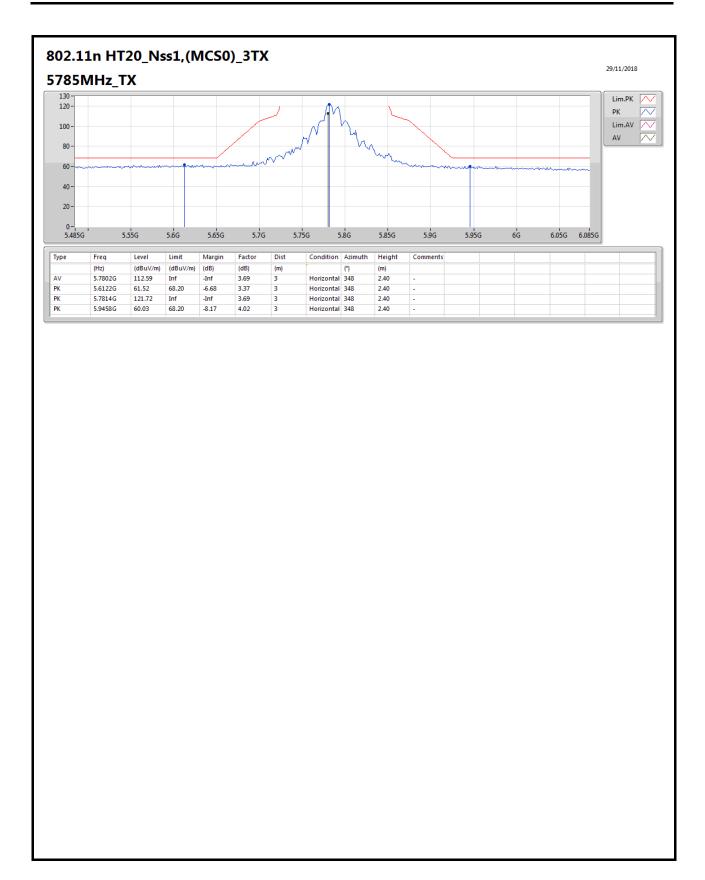
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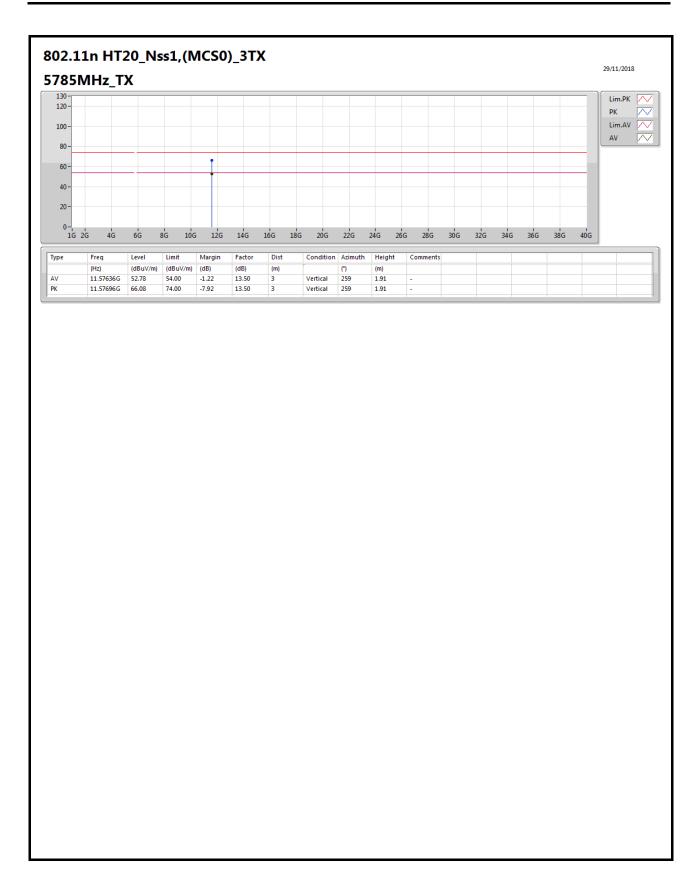
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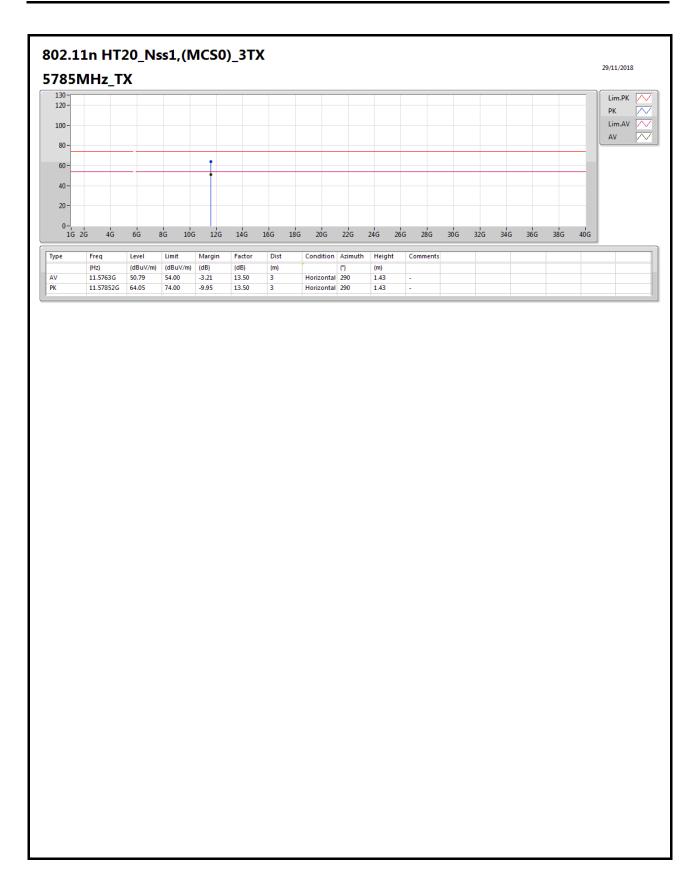
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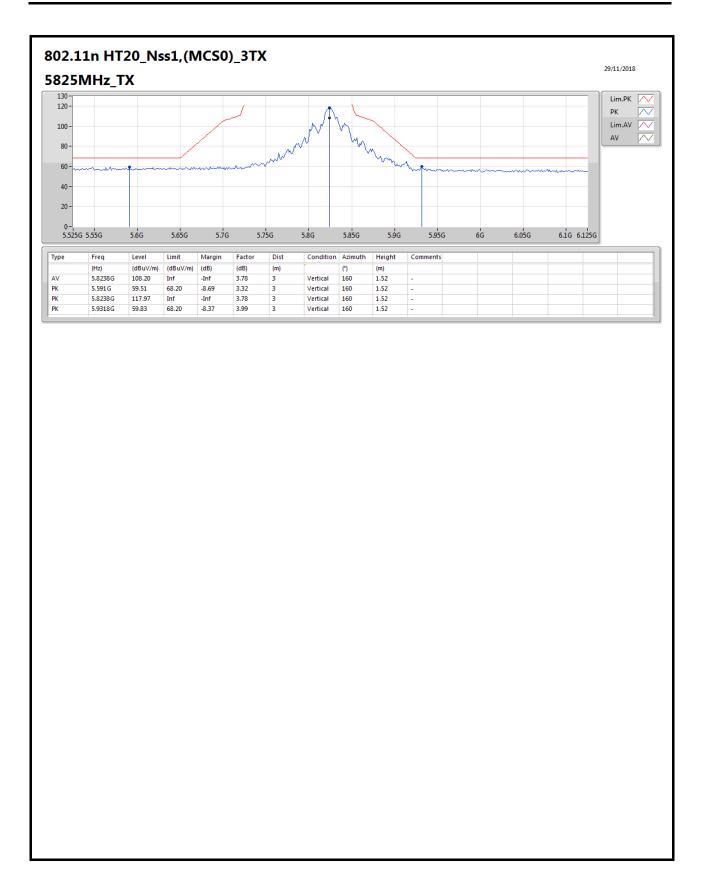
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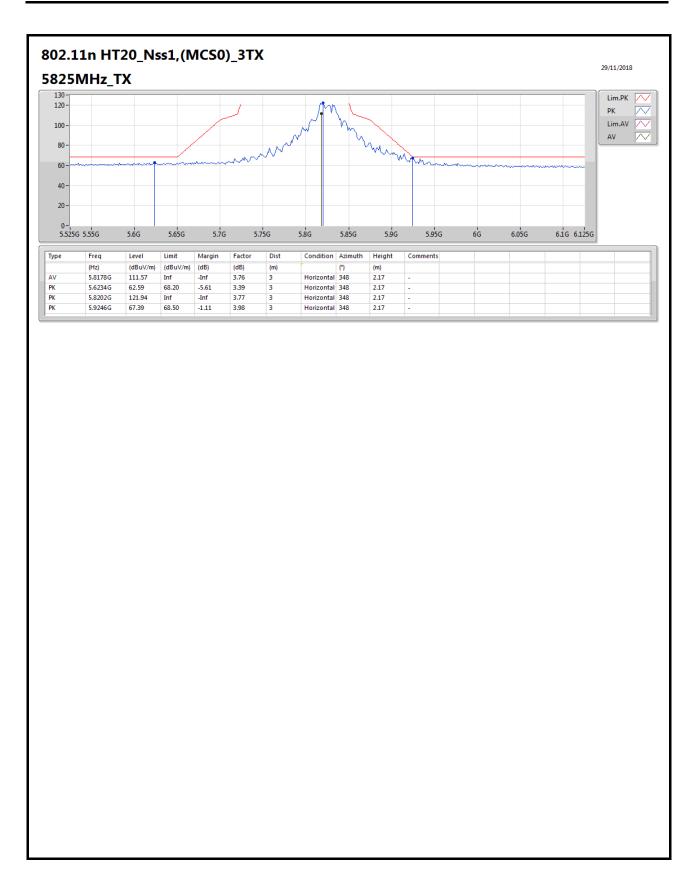
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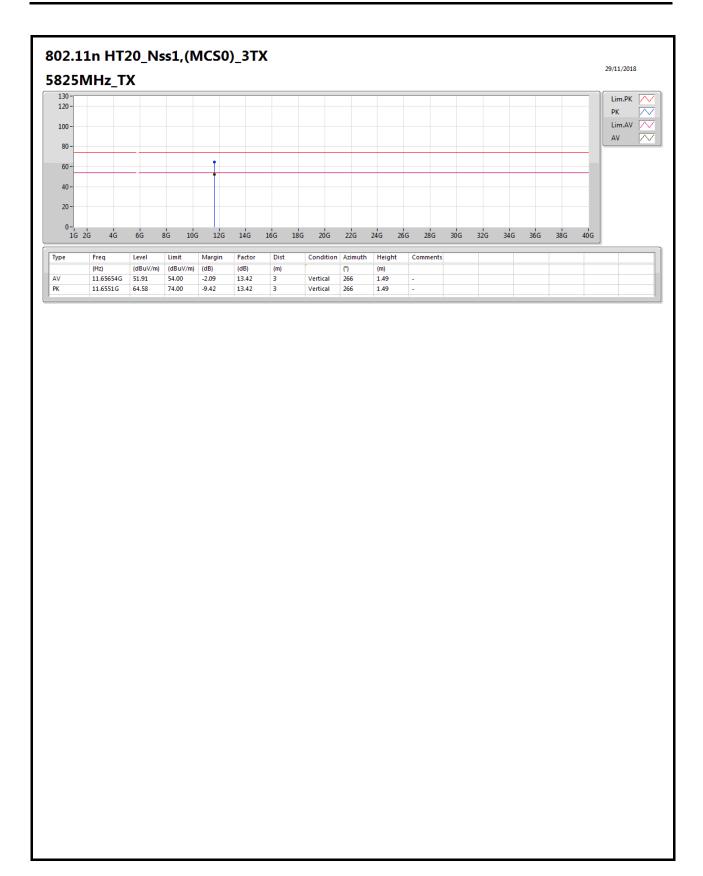
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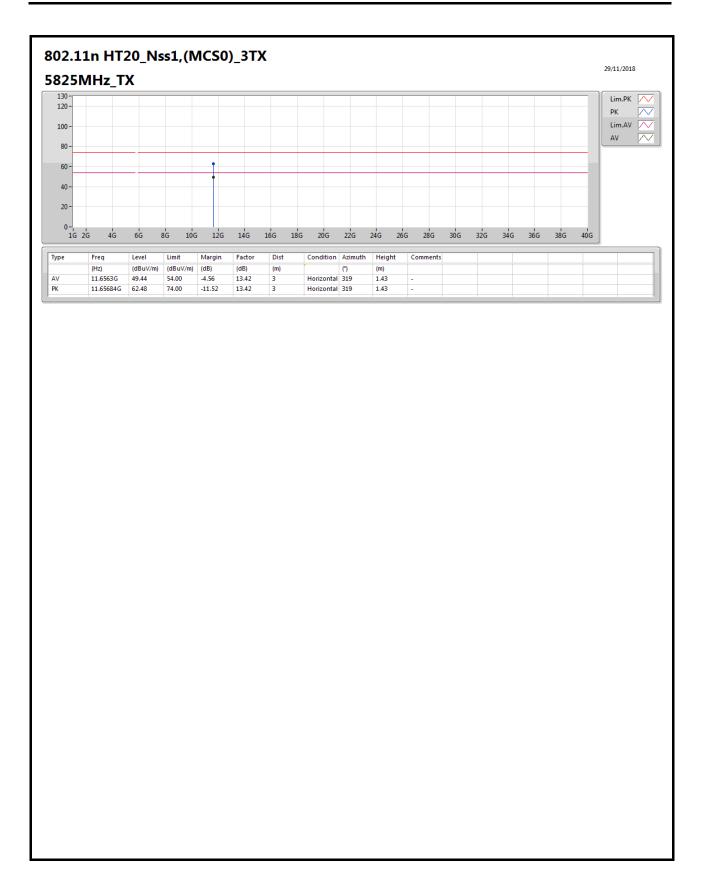
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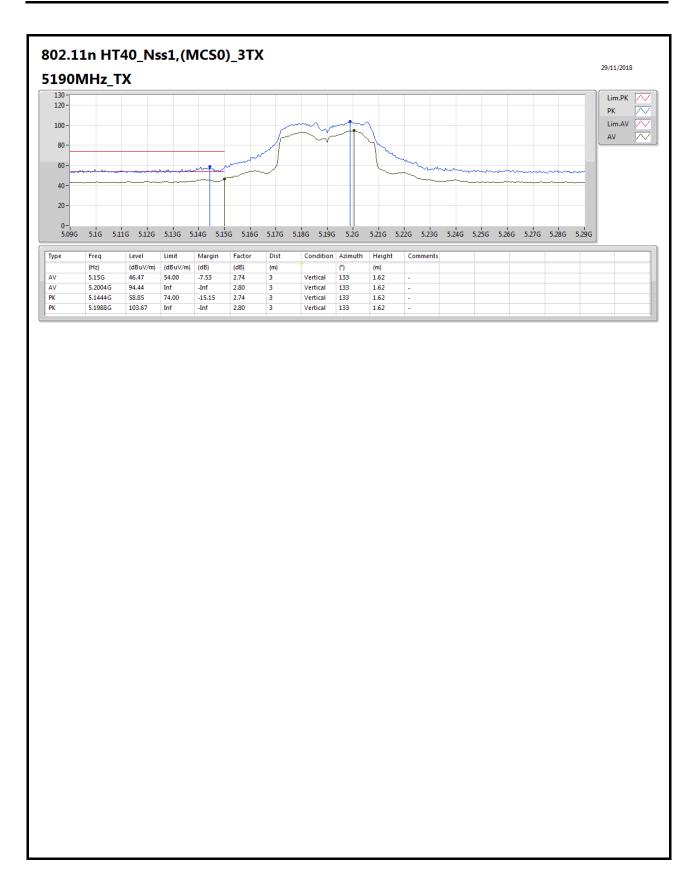
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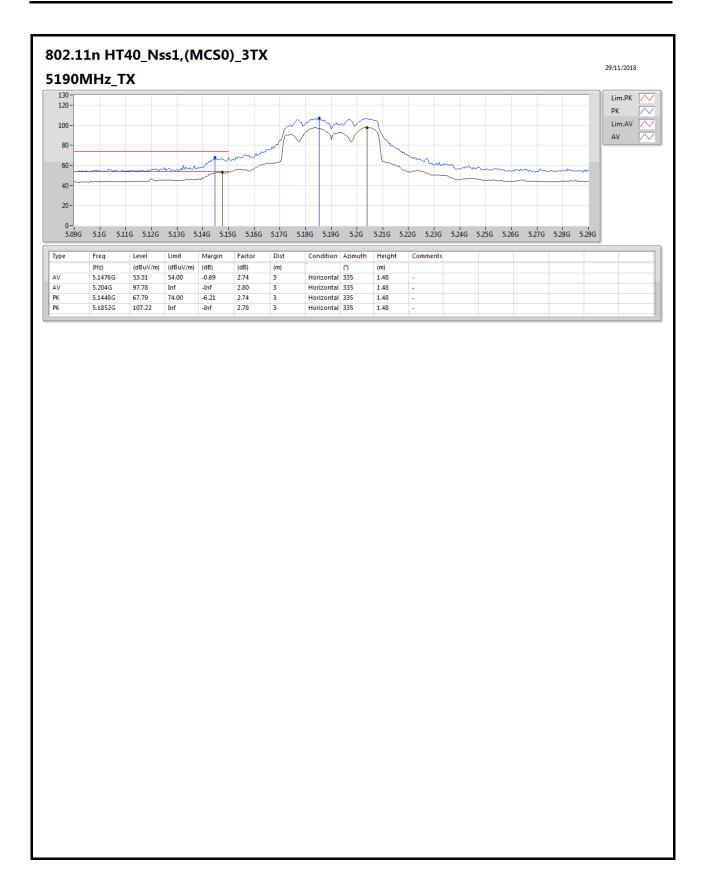
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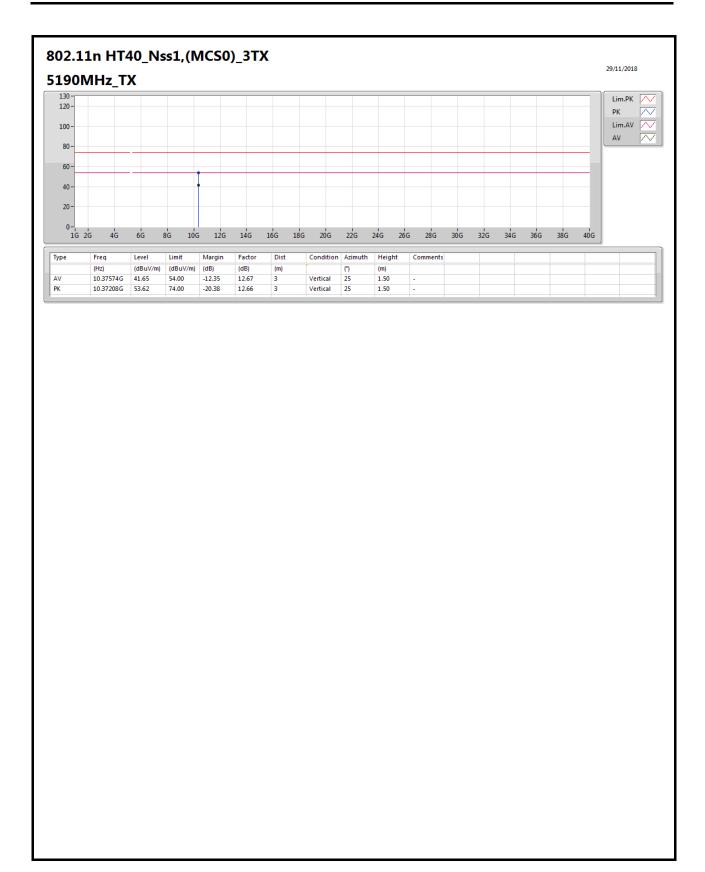
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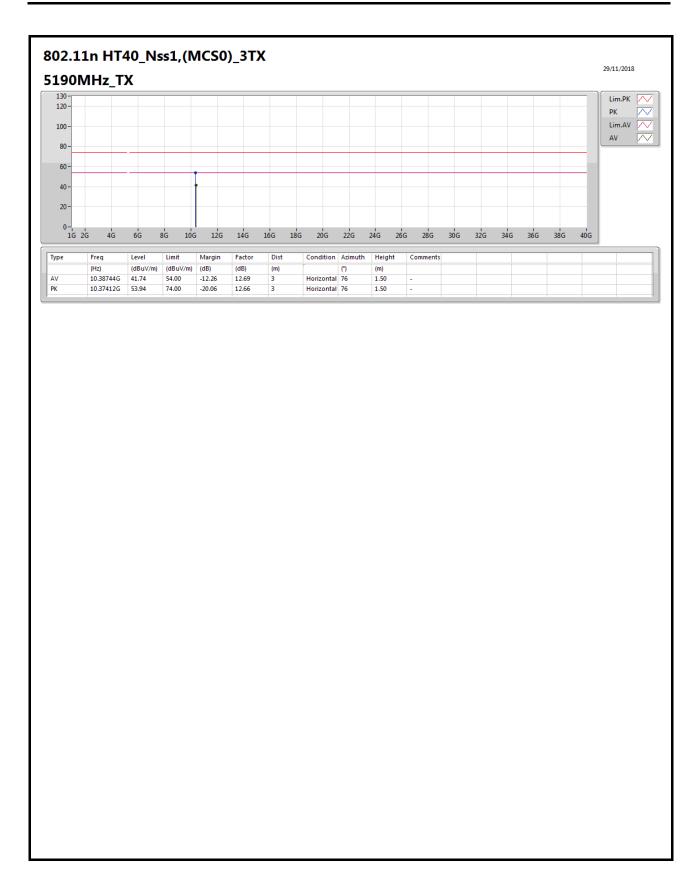
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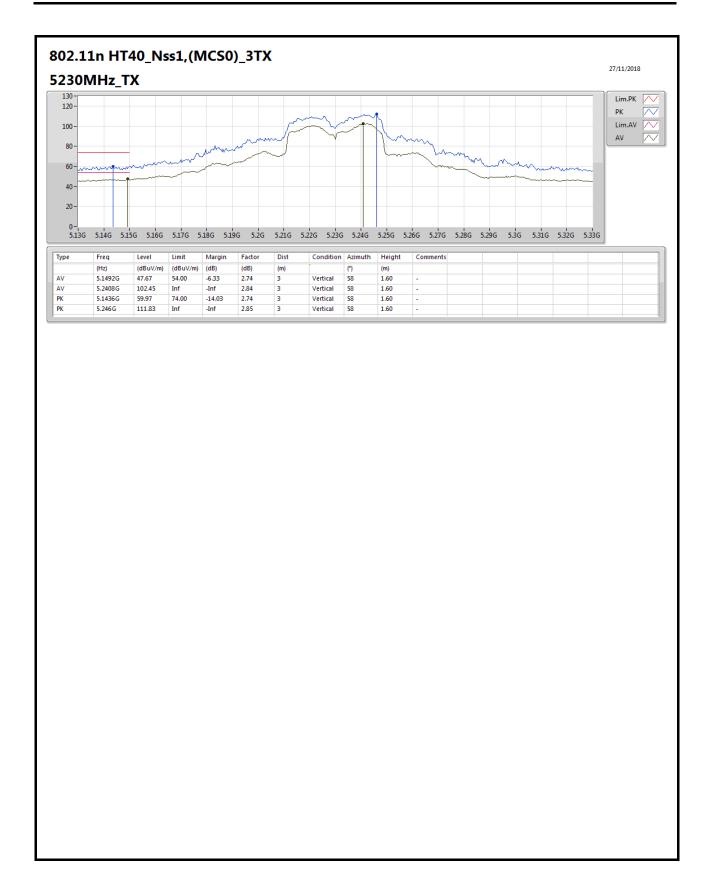
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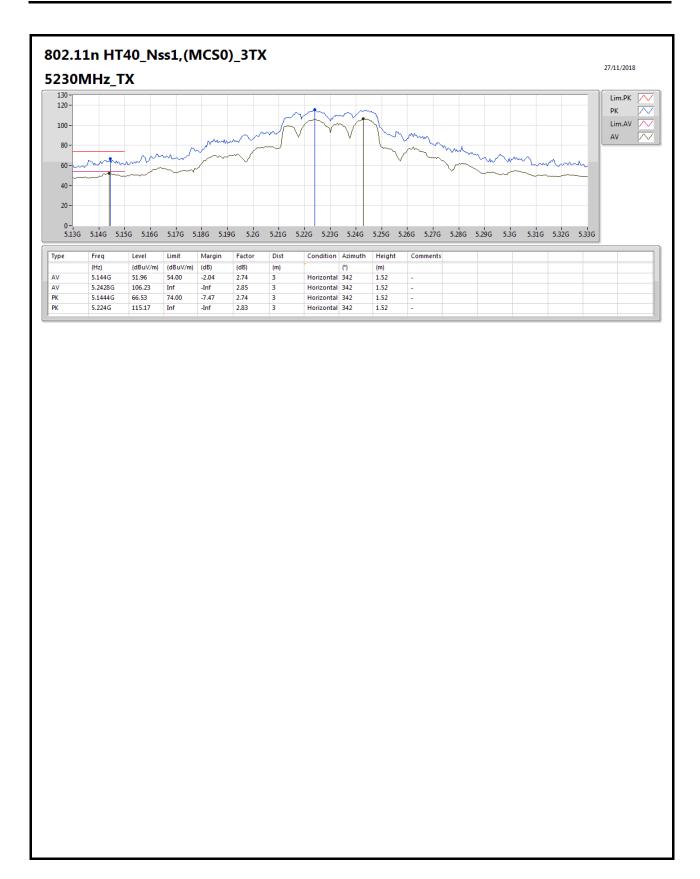
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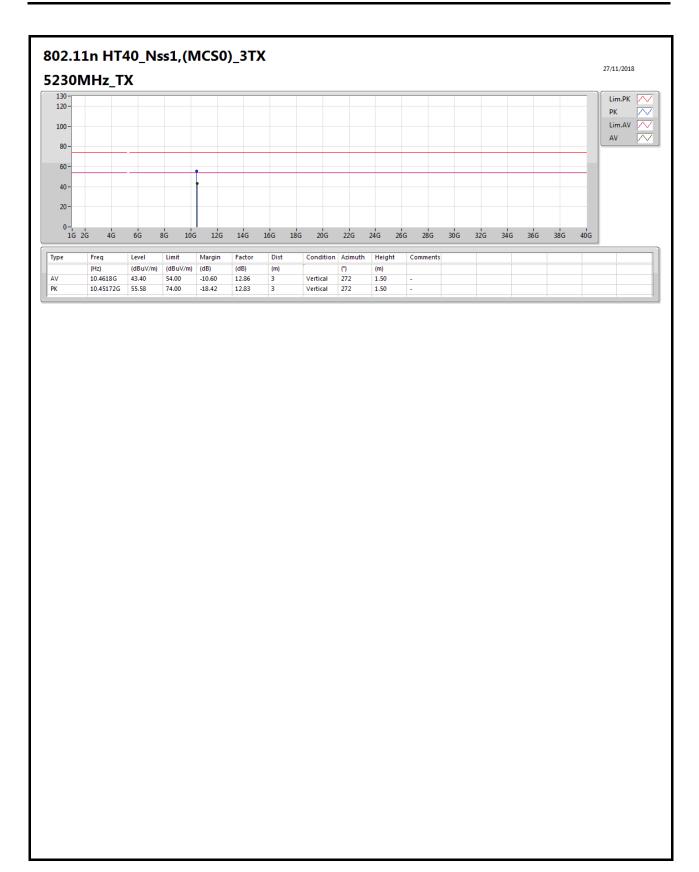
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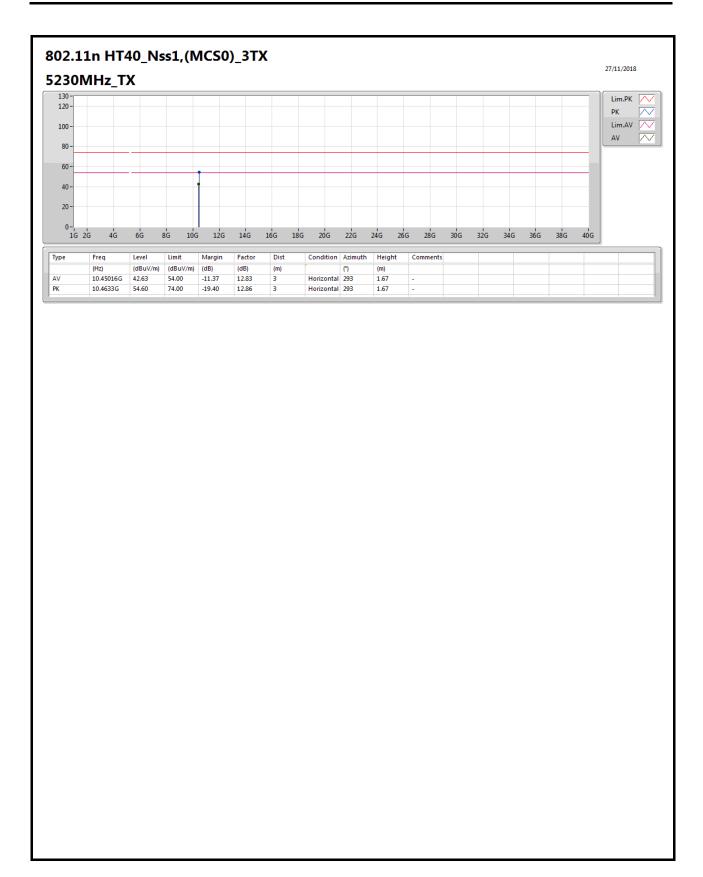
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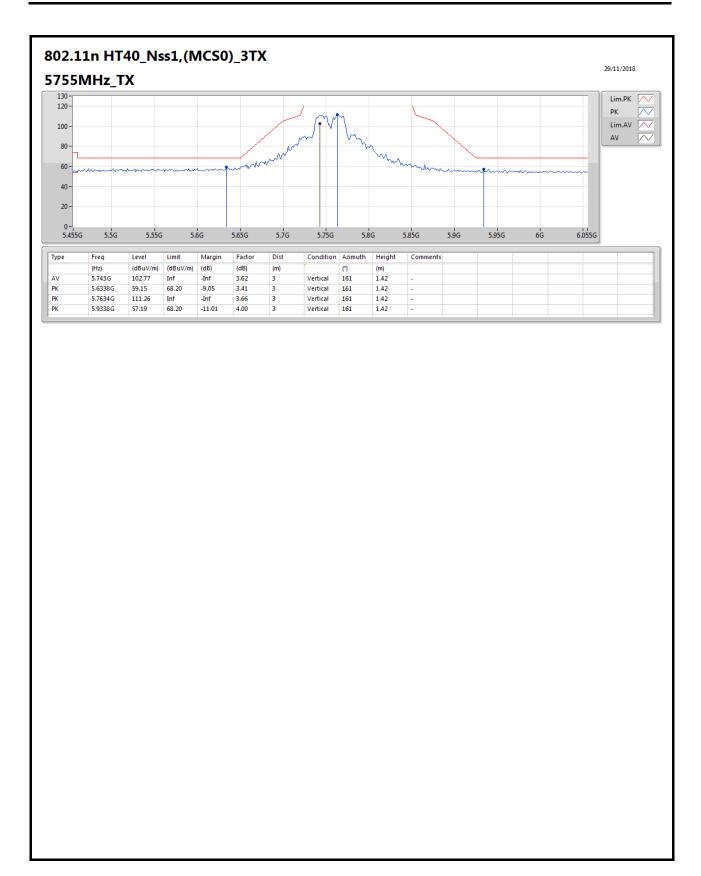
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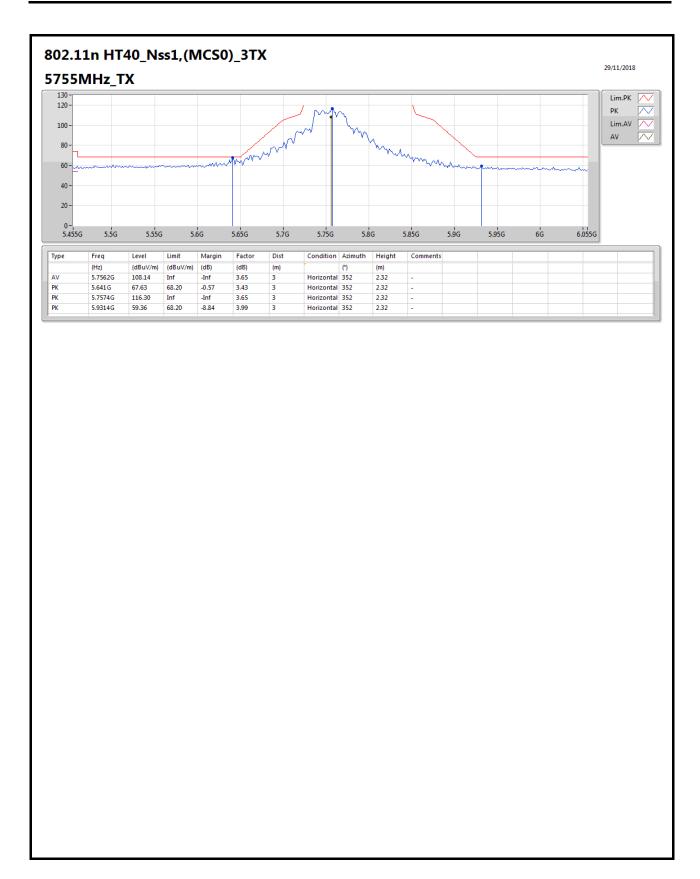
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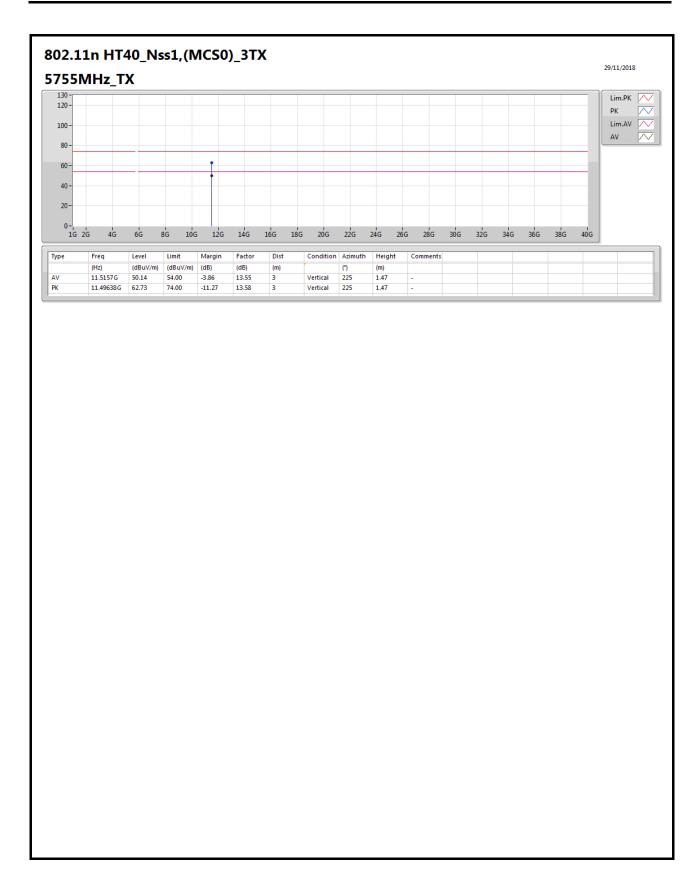
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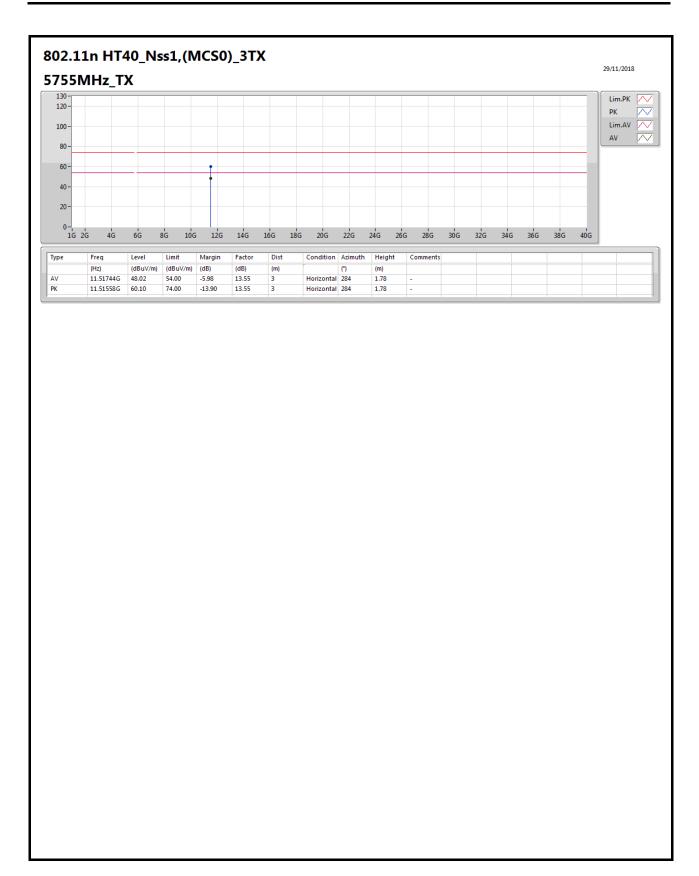
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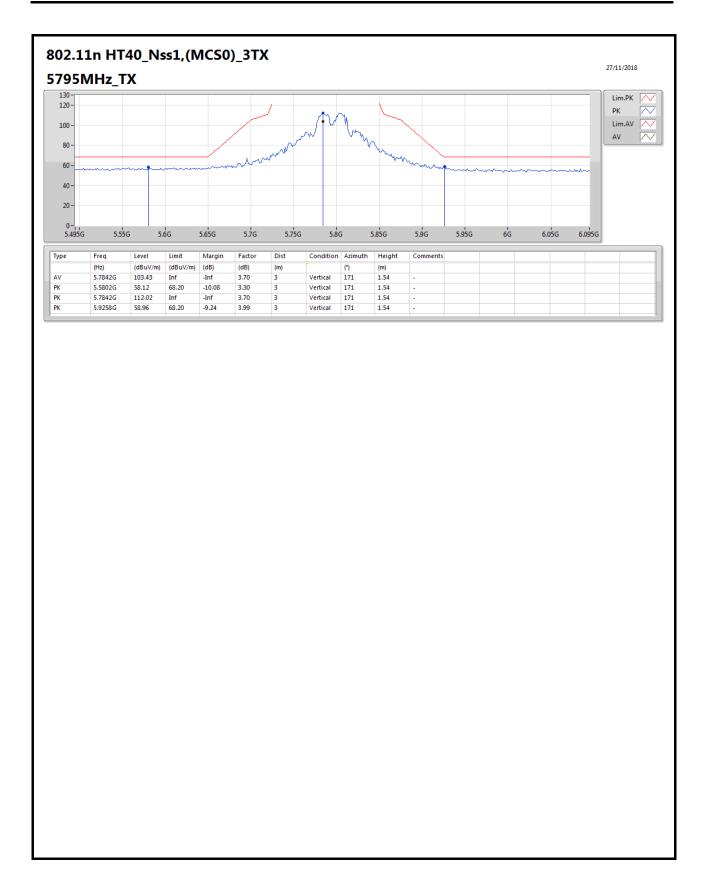
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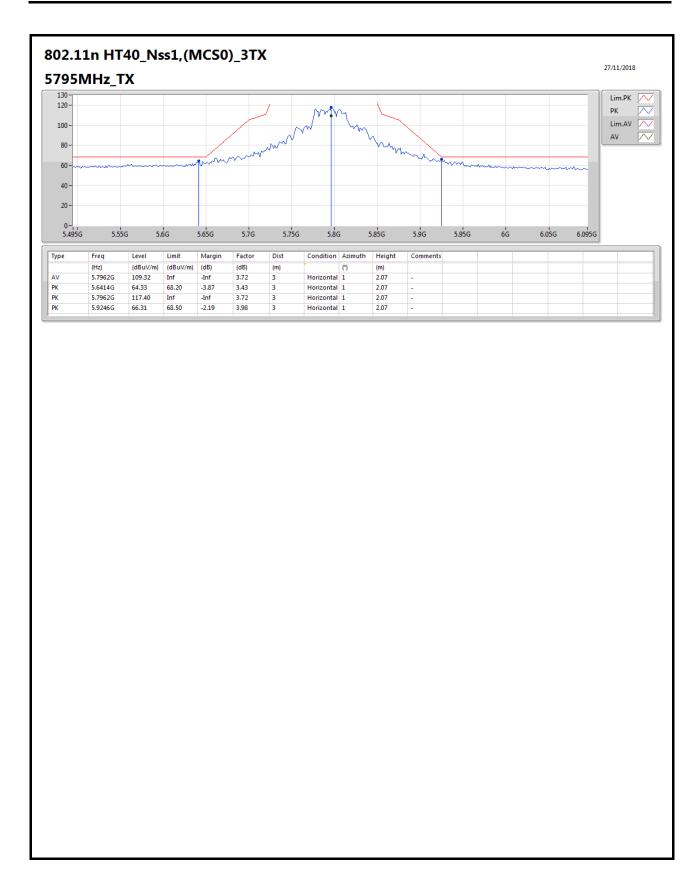
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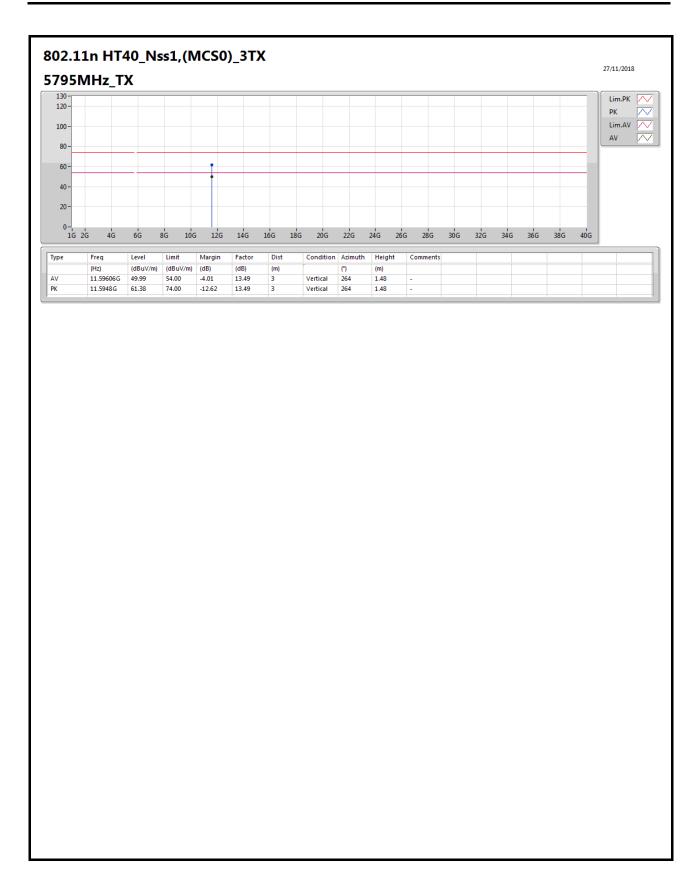
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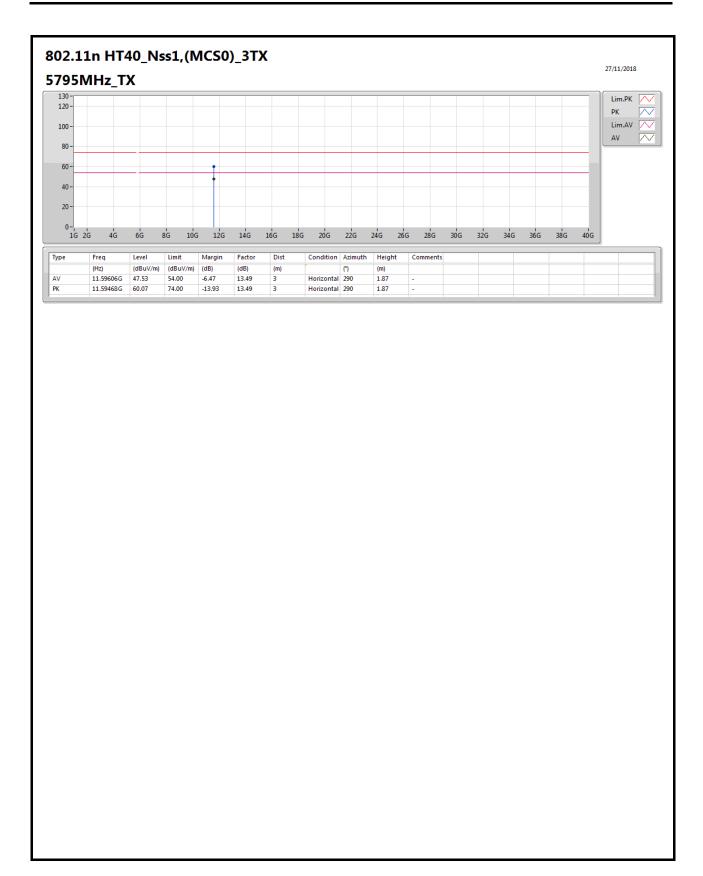
TEL: 886-3-327-3456 FAX: 886-3-327-0973 Page No. : E68 of E70





TEL: 886-3-327-3456 FAX: 886-3-327-0973 Page No. : E69 of E70





TEL: 886-3-327-3456 FAX: 886-3-327-0973 Page No. : E70 of E70