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TEST REPORT

| Application No.: | SZEM1807006006CR |
|---------------------------|--|
| Applicant: | SZ DJI TECHNOLOGY CO., LTD |
| Address of Applicant: | 14th floor, West Wing, Skyworth Semiconductor Design Building NO.18 Gaoxin South 4th Ave, Nanshan District, Shenzhen, China |
| Manufacturer: | SZ DJI TECHNOLOGY CO., LTD |
| Address of Manufacturer: | 4th floor, West Wing, Skyworth Semiconductor Design Building NO.18 Gaoxin South 4th Ave, Nanshan District, Shenzhen, China |
| Factory: | SZ DJI TECHNOLOGY CO., LTD |
| Address of Factory: | 4th floor, West Wing, Skyworth Semiconductor Design Building NO.18 Gaoxin South 4th Ave, Nanshan District, Shenzhen, China |
| Equipment Under Test (EUT |): |
| EUT Name: | Mavic 2 Enterprise |
| Model No.: | L1ZE |
| Trade mark: | DJI |
| FCC ID: | SS3-L1ZE1807 |
| Standard(s) : | 47 CFR Part 15, Subpart E 15.407 |
| Date of Receipt: | 2018-07-09 |
| Date of Test: | 2018-07-13 to 2018-07-28 |
| Date of Issue: | 2018-08-03 |
| Test Result: | Pass* |

* In the configuration tested, the EUT complied with the standards specified above.



EMC Laboratory Manager

The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards. Any mention of SGS International Electrical Approvals or testing done by SGS International Electrical Approvals in connection with, distribution or use of the product described in this report must be approved by SGS International Electrical Approvals in writing.

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| | Revision Record | | | | | | | |
|---------|---------------------------------|------------|--|----------|--|--|--|--|
| Version | on Chapter Date Modifier Remark | | | | | | | |
| 01 | | 2018-08-03 | | Original | | | | |
| | | | | | | | | |
| | | | | | | | | |

| Authorized for issue by: | | |
|--------------------------|----------------------------|--|
| | Hank Yan | |
| | Hank Yan /Project Engineer | |
| | Feric Fu | |
| | Eric Fu /Reviewer | |



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2 Test Summary

In this report, below test items refer to the granted FCC ID: SS3-L1Z1805. Since the RF part of the product (L1ZE) is same to the referred granted product (L1Z), the only difference is on the GPS board. Compare to L1Z, the GPS board on L1ZE active ADS-B function (receiver only) and add an extended micro-USB port which used to connect to accessories. The applicant takes full responsibility that the test data as referenced in this report represents compliance for the new FCC ID.

| Referenced FCC ID: SS3-L1Z1805 | | | |
|--------------------------------|------------------------|--|--|
| Equipment class: | NII | | |
| Rule parts: | 15E | | |
| Frequency Bands: | 5728.5MHz ~ 5846.5MHz; | | |
| | 5730.5MHz ~ 5844.5MHz; | | |
| | 5735.5MHz ~ 5839.5MHz | | |
| Report Title: | Test Report | | |
| Exhibit type: | Test Report | | |

Information of the referenced FCC ID is below:

| Radio Spectrum Technical Requirement | | | | | | |
|--------------------------------------|---|--------|--|--------|--|--|
| Item | Standard | Method | Requirement | Result | | |
| Antenna Requirement | 47 CFR Part 15, Subpart E 15.407; RSS-Gen | N/A | 47 CFR Part 15, Subpart C 15.203; RSS-Gen Section 6.8 | Pass | | |
| Transmission in the Absence of Data | 47 CFR Part 15, Subpart E 15.407; RSS-247 | N/A | 47 CFR Part 15, Subpart E 15.407 (c); RSS-247 Section 6.4(a) | Pass | | |

N/A: Not applicable

| Radio Spectrum Matter Part | | | | | | | |
|---|-------------------------------------|-----------------------------------|---|--------|--|--|--|
| Item | Standard | Method | Requirement | Result | | | |
| 99% Bandwidth | 47 CFR Part 15, Subpart E 15.407 | ANSI C63.10 Section 6.9.3 | ANSI C63.10 Section 12.4 | Pass | | | |
| Minimum 6 dB bandwidth (5.725- 5.85 GHz band) | 47 CFR Part 15, Subpart E 15.407 | KDB 789033 D02 Section C.2 | 47 CFR Part 15, Subpart E 15.407 (e) | Pass | | | |
| Maximum Conducted output power | 47 CFR Part 15, Subpart E 15.407 | ANSI C63.10 Section 12.3 | 47 CFR Part 15, Subpart E 15.407 (a) | Pass | | | |
| Peak Power spectrum density | 47 CFR Part 15, Subpart E 15.407 | ANSI C63.10 Section 12.5 | 47 CFR Part 15, Subpart E 15.407 (a) | Pass | | | |
| Radiated Emissions | 47 CFR Part 15, Subpart E 15.407 | ANSI C63.10 Section 12.7.3 | 47 CFR Part 15, Subpart E 15.209 & 15.407(b) | Pass | | | |
| Radiated Emissions which fall in the restricted bands | 47 CFR Part 15, Subpart E 15.407 | ANSI C63.10 Section 12.7.2 | 47 CFR Part 15, Subpart E 15.209 & 15.407(b) | Pass | | | |
| Frequency Stability | 47 CFR Part 15, Subpart E 15.407 | ANSI C63.10 (2013) Section 6.8 | 47 CFR Part 15, Subpart C 15.407 (g) | Pass | | | |

N/A: Not applicable



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The spot-check was performed on below items based on worst-case results reported in the original FCC ID filing.

| Radio Spectrum Matter Part | | | | | | | | |
|-----------------------------------|-------------------------------------|-----------------------------|---|--------|--|--|--|--|
| Item | Standard | Method | Requirement | Result | | | | |
| Maximum Conducted output power | 47 CFR Part 15, Subpart E 15.407 | KDB 789033 D02 II E | 47 CFR Part 15, Subpart C 15.407 (a) | Pass | | | | |
| Peak Power spectrum density | 47 CFR Part 15, Subpart E 15.407 | ANSI C63.10 Section 12.5 | 47 CFR Part 15, Subpart E 15.407 (a) | Pass | | | | |
| Radiated Emissions | 47 CFR Part 15, Subpart E 15.407 | KDB 789033 D02 II G | 47 CFR Part 15, Subpart C 15.209 & 15.407(b) | Pass | | | | |



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4 General Information

4.1 Details of E.U.T.

| Power supply: | DC 15.4V, 3850mAh Li-Po Battery |
|-----------------------------------|--|
| Operation Frequency: | 1.4M BW: 5728.5MHz ~ 5846.5MHz; |
| | 10M BW: 5730.5MHz ~ 5844.5MHz; |
| | 20M BW: 5735.5MHz ~ 5839.5MHz |
| Number of Channels: | 1.4M BW: 60; |
| | 10M BW: 115; |
| | 20M BW: 105 |
| Modulation Type: | OFDM |
| Channel Spacing: | 1.4M BW: 2MHz; |
| | 10M BW: 1MHz; |
| | 20M BW: 1MHz |
| Antenna Type: | PCB Antenna |
| Antenna Gain: | 4dBi |
| Channel Spacing: Antenna Type: | OFDM 1.4M BW: 2MHz; 10M BW: 1MHz; 20M BW: 1MHz PCB Antenna |

| Channel List for 1.4MHz BW | | | | | | | | |
|----------------------------|---|---------|--------------------|---------|--------------------|---------|--------------------|--|
| Channel | Frequency (MHz) | Channel | Frequency (MHz) | Channel | Frequency (MHz) | Channel | Frequency (MHz) | |
| 1 | 5728.5 | 16 | 5758.5 | 31 | 5788.5 | 46 | 5818.5 | |
| 2 | 5730.5 | 17 | 5760.5 | 32 | 5790.5 | 47 | 5820.5 | |
| 3 | 5732.5 | 18 | 5762.5 | 33 | 5792.5 | 48 | 5822.5 | |
| 4 | 5734.5 | 19 | 5764.5 | 34 | 5794.5 | 49 | 5824.5 | |
| 5 | 5736.5 | 20 | 5766.5 | 35 | 5796.5 | 50 | 5826.5 | |
| 6 | 5738.5 | 21 | 5768.5 | 36 | 5798.5 | 51 | 5828.5 | |
| 7 | 5740.5 | 22 | 5770.5 | 37 | 5800.5 | 52 | 5830.5 | |
| 8 | 5742.5 | 23 | 5772.5 | 38 | 5802.5 | 53 | 5832.5 | |
| 9 | 5744.5 | 24 | 5774.5 | 39 | 5804.5 | 54 | 5834.5 | |
| 10 | 5746.5 | 25 | 5776.5 | 40 | 5806.5 | 55 | 5836.5 | |
| 11 | 5748.5 | 26 | 5778.5 | 41 | 5808.5 | 56 | 5838.5 | |
| 12 | 5750.5 | 27 | 5780.5 | 42 | 5810.5 | 57 | 5840.5 | |
| 13 | 5752.5 | 28 | 5782.5 | 43 | 5812.5 | 58 | 5842.5 | |
| 14 | 5754.5 | 29 | 5784.5 | 44 | 5814.5 | 59 | 5844.5 | |
| 15 | 5756.5 | 30 | 5786.5 | 45 | 5816.5 | 60 | 5846.5 | |
| Note: The hi | Note: The highlight frequencies are chosen to do all of the test. | | | | | | | |



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| Channel List for 10MHz BW | | | | | | | |
|---|--------------------|---------|--------------------|---------|--------------------|---------|--------------------|
| Channel | Frequency (MHz) | Channel | Frequency (MHz) | Channel | Frequency (MHz) | Channel | Frequency (MHz) |
| 1 | 5730.5 | 30 | 5759.5 | 59 | 5788.5 | 88 | 5817.5 |
| 2 | 5731.5 | 31 | 5760.5 | 60 | 5789.5 | 89 | 5818.5 |
| 3 | 5732.5 | 32 | 5761.5 | 61 | 5790.5 | 90 | 5819.5 |
| 4 | 5733.5 | 33 | 5762.5 | 62 | 5791.5 | 91 | 5820.5 |
| 5 | 5734.5 | 34 | 5763.5 | 63 | 5792.5 | 92 | 5821.5 |
| 6 | 5735.5 | 35 | 5764.5 | 64 | 5793.5 | 93 | 5822.5 |
| 7 | 5736.5 | 36 | 5765.5 | 65 | 5794.5 | 94 | 5823.5 |
| 8 | 5737.5 | 37 | 5766.5 | 66 | 5795.5 | 95 | 5824.5 |
| 9 | 5738.5 | 38 | 5767.5 | 67 | 5796.5 | 96 | 5825.5 |
| 10 | 5739.5 | 39 | 5768.5 | 68 | 5797.5 | 97 | 5826.5 |
| 11 | 5740.5 | 40 | 5769.5 | 69 | 5798.5 | 98 | 5827.5 |
| 12 | 5741.5 | 41 | 5770.5 | 70 | 5799.5 | 99 | 5828.5 |
| 13 | 5742.5 | 42 | 5771.5 | 71 | 5800.5 | 100 | 5829.5 |
| 14 | 5743.5 | 43 | 5772.5 | 72 | 5801.5 | 101 | 5830.5 |
| 15 | 5744.5 | 44 | 5773.5 | 73 | 5802.5 | 102 | 5831.5 |
| 16 | 5745.5 | 45 | 5774.5 | 74 | 5803.5 | 103 | 5832.5 |
| 17 | 5746.5 | 46 | 5775.5 | 75 | 5804.5 | 104 | 5833.5 |
| 18 | 5747.5 | 47 | 5776.5 | 76 | 5805.5 | 105 | 5834.5 |
| 19 | 5748.5 | 48 | 5777.5 | 77 | 5806.5 | 106 | 5835.5 |
| 20 | 5749.5 | 49 | 5778.5 | 78 | 5807.5 | 107 | 5836.5 |
| 21 | 5750.5 | 50 | 5779.5 | 79 | 5808.5 | 108 | 5837.5 |
| 22 | 5751.5 | 51 | 5780.5 | 80 | 5809.5 | 109 | 5838.5 |
| 23 | 5752.5 | 52 | 5781.5 | 81 | 5810.5 | 110 | 5839.5 |
| 24 | 5753.5 | 53 | 5782.5 | 82 | 5811.5 | 111 | 5840.5 |
| 25 | 5754.5 | 54 | 5783.5 | 83 | 5812.5 | 112 | 5841.5 |
| 26 | 5755.5 | 55 | 5784.5 | 84 | 5813.5 | 113 | 5842.5 |
| 27 | 5756.5 | 56 | 5785.5 | 85 | 5814.5 | 114 | 5843.5 |
| 28 | 5757.5 | 57 | 5786.5 | 86 | 5815.5 | 115 | 5844.5 |
| 29 | 5758.5 | 58 | 5787.5 | 87 | 5816.5 | | |
| Note: The highlight frequencies are chosen to do all of the test. | | | | | | | |



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| Channel | Frequency (MHz) | Channel | Frequency (MHz) | Channel | Frequency (MHz) | Channel | Frequency (MHz) |
|---------|--------------------|---------|--------------------|---------|--------------------|---------|--------------------|
| 1 | 5735.5 | 28 | 5762.5 | 55 | 5789.5 | 82 | 5816.5 |
| 2 | 5736.5 | 29 | 5763.5 | 56 | 5790.5 | 83 | 5817.5 |
| 3 | 5737.5 | 30 | 5764.5 | 57 | 5791.5 | 84 | 5818.5 |
| 4 | 5738.5 | 31 | 5765.5 | 58 | 5792.5 | 85 | 5819.5 |
| 5 | 5739.5 | 32 | 5766.5 | 59 | 5793.5 | 86 | 5820.5 |
| 6 | 5740.5 | 33 | 5767.5 | 60 | 5794.5 | 87 | 5821.5 |
| 7 | 5741.5 | 34 | 5768.5 | 61 | 5795.5 | 88 | 5822.5 |
| 8 | 5742.5 | 35 | 5769.5 | 62 | 5796.5 | 89 | 5823.5 |
| 9 | 5743.5 | 36 | 5770.5 | 63 | 5797.5 | 90 | 5824.5 |
| 10 | 5744.5 | 37 | 5771.5 | 64 | 5798.5 | 91 | 5825.5 |
| 11 | 5745.5 | 38 | 5772.5 | 65 | 5799.5 | 92 | 5826.5 |
| 12 | 5746.5 | 39 | 5773.5 | 66 | 5800.5 | 93 | 5827.5 |
| 13 | 5747.5 | 40 | 5774.5 | 67 | 5801.5 | 94 | 5828.5 |
| 14 | 5748.5 | 41 | 5775.5 | 68 | 5802.5 | 95 | 5829.5 |
| 15 | 5749.5 | 42 | 5776.5 | 69 | 5803.5 | 96 | 5830.5 |
| 16 | 5750.5 | 43 | 5777.5 | 70 | 5804.5 | 97 | 5831.5 |
| 17 | 5751.5 | 44 | 5778.5 | 71 | 5805.5 | 98 | 5832.5 |
| 18 | 5752.5 | 45 | 5779.5 | 72 | 5806.5 | 99 | 5833.5 |
| 19 | 5753.5 | 46 | 5780.5 | 73 | 5807.5 | 100 | 5834.5 |
| 20 | 5754.5 | 47 | 5781.5 | 74 | 5808.5 | 101 | 5835.5 |
| 21 | 5755.5 | 48 | 5782.5 | 75 | 5809.5 | 102 | 5836.5 |
| 22 | 5756.5 | 49 | 5783.5 | 76 | 5810.5 | 103 | 5837.5 |
| 23 | 5757.5 | 50 | 5784.5 | 77 | 5811.5 | 104 | 5838.5 |
| 24 | 5758.5 | 51 | 5785.5 | 78 | 5812.5 | 105 | 5839.5 |
| 25 | 5759.5 | 52 | 5786.5 | 79 | 5813.5 | | |
| 26 | 5760.5 | 53 | 5787.5 | 80 | 5814.5 | | |
| 27 | 5761.5 | 54 | 5788.5 | 81 | 5815.5 | | |

Note: The highlight frequencies are chosen to do all of the test.

4.2 Description of Support Units

The EUT has been tested as an independent unit.



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4.3 Measurement Uncertainty

| No. | Item | Measurement Uncertainty |
|-----|---------------------------------|---------------------------|
| 1 | Radio Frequency | ± 7.25 x 10 ⁻⁸ |
| 2 | Duty cycle | ± 0.37% |
| 3 | Occupied Bandwidth | ± 3% |
| 4 | RF conducted power | ± 0.75dB |
| 5 | RF power density | ± 2.84dB |
| 6 | Conducted Spurious emissions | ± 0.75dB |
| 7 | DE Dedicted newer | ± 4.5dB (below 1GHz) |
| / | RF Radiated power | ± 4.8dB (above 1GHz) |
| 8 | Dedicted Sourieus emission test | ± 4.5dB (Below 1GHz) |
| 0 | Radiated Spurious emission test | ± 4.8dB (Above 1GHz) |
| 9 | Temperature test | ± 1 °C |
| 10 | Humidity test | ± 3% |
| 11 | Supply voltages | ± 1.5% |
| 12 | Time | ± 3% |



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4.4 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen Branch

No. 1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, Guangdong, China. 518057.

Tel: +86 755 2601 2053 Fax: +86 755 2671 0594

No tests were sub-contracted.

4.5 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

CNAS (No. CNAS L2929)

CNAS has accredited SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch EMC

Lab to ISO/IEC 17025:2005 General Requirements for the Competence of Testing and Calibration Laboratories (CNAS-CL01 Accreditation Criteria for the Competence of Testing and Calibration Laboratories) for the competence in the field of testing.

A2LA (Certificate No. 3816.01)

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory is accredited by the American Association for Laboratory Accreditation(A2LA). Certificate No. 3816.01.

• VCCI

The 3m Fully-anechoic chamber for above 1GHz, 10m Semi-anechoic chamber for below 1GHz, Shielded Room for Mains Port Conducted Interference Measurement and Telecommunication Port Conducted Interference Measurement of SGS-CSTC Standards Technical Services Co., Ltd. have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: G-20026, R-14188, C-12383 and T-11153 respectively.

FCC – Designation Number: CN1178

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been recognized as an accredited testing laboratory.

Designation Number: CN1178. Test Firm Registration Number: 406779.

Industry Canada (IC)

Two 3m Semi-anechoic chambers and the 10m Semi-anechoic chamber of SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch EMC Lab have been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 4620C-1, 4620C-2, 4620C-3.

4.6 Deviation from Standards

None

4.7 Abnormalities from Standard Conditions

None



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5 Equipment List

| Maximum Conducted output power | | | | | | | | | |
|--------------------------------|----------------------|-------------------------|-----------------------|------------|--------------|--|--|--|--|
| Equipment | Manufacturer | Model No | Model No Inventory No | | Cal Due Date | | | | |
| DC Power Supply | ZhaoXin | RXN-305D | SEM011-02 | 2017-09-27 | 2018-09-26 | | | | |
| Spectrum Analyzer | Rohde & Schwarz | FSU43 | SEM004-08 | 2018-04-02 | 2019-04-01 | | | | |
| Measurement Software | JS Tonscend | JS1120-2 BT/WIFI V2. | N/A | N/A | N/A | | | | |
| Coaxial Cable | SGS | N/A | SEM031-01 | 2018-07-12 | 2019-07-11 | | | | |
| Attenuator | Weinschel Associates | WA41 | SEM021-09 | N/A | N/A | | | | |
| Signal Generator | KEYSIGHT | N5173B | SEM006-05 | 2017-09-27 | 2018-09-26 | | | | |
| Power Meter | Rohde & Schwarz | NRVS | SEM014-02 | 2017-09-27 | 2018-09-26 | | | | |

| Peak Power spectrum density | | | | | | | | | |
|-----------------------------|----------------------|-------------------------|--------------|------------|--------------|--|--|--|--|
| Equipment | Manufacturer | Model No | Inventory No | Cal Date | Cal Due Date | | | | |
| DC Power Supply | ZhaoXin | RXN-305D | SEM011-02 | 2017-09-27 | 2018-09-26 | | | | |
| Spectrum Analyzer | Rohde & Schwarz | FSU43 | SEM004-08 | 2018-04-02 | 2019-04-01 | | | | |
| Measurement Software | JS Tonscend | JS1120-2 BT/WIFI V2. | N/A | N/A | N/A | | | | |
| Coaxial Cable | SGS | N/A | SEM031-01 | 2018-07-12 | 2019-07-11 | | | | |
| Attenuator | Weinschel Associates | WA41 | SEM021-09 | N/A | N/A | | | | |
| Signal Generator | KEYSIGHT | N5173B | SEM006-05 | 2017-09-27 | 2018-09-26 | | | | |
| Power Meter | Rohde & Schwarz | NRVS | SEM014-02 | 2017-09-27 | 2018-09-26 | | | | |



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| Radiated Spurious Emissions | | | | | | | | | |
|--|--|-----------------------|--------------|------------|--------------|--|--|--|--|
| Equipment | Manufacturer | Model No | Inventory No | Cal Date | Cal Due Date | | | | |
| 3m Semi-Anechoic Chamber | AUDIX | N/A | SEM001-02 | 2018-03-13 | 2021-03-12 | | | | |
| Measurement Software | AUDIX | e3 V8.2014-6- 27 | N/A | N/A | N/A | | | | |
| Coaxial Cable | SGS | N/A | SEM026-01 | 2018-07-12 | 2019-07-11 | | | | |
| Spectrum Analyzer | Rohde & Schwarz | FSU43 | SEM004-08 | 2018-04-02 | 2019-04-01 | | | | |
| BiConiLog Antenna (26- 3000MHz) | ETS-Lindgren | 3142C | SEM003-01 | 2017-06-27 | 2020-06-26 | | | | |
| Horn Antenna (1- 18GHz) | Rohde & Schwarz | HF907 | SEM003-07 | 2018-04-13 | 2021-04-12 | | | | |
| Horn Antenna(15GHz- 40GHz) | Schwarzbeck | BBHA 9170 | SEM003-15 | 2017-10-17 | 2020-10-16 | | | | |
| Pre-amplifier (0.1- 1300MHz) | HP | 8447D | SEM005-02 | 2017-09-27 | 2018-09-26 | | | | |
| Low Noise Amplifier(100MHz- 18GHz) | Black Diamond Series | BDLNA-0118- 352810 | SEM005-05 | 2017-09-27 | 2018-09-27 | | | | |
| Pre-amplifier(18-26GHz) | Rohde & Schwarz | CH14-H052 | SEM005-17 | 2018-04-02 | 2019-04-01 | | | | |
| Pre-amplifier(26GHz- 40GHz) | Compliance Directions Systems Inc. | PAP-2640-50 | SEM005-08 | 2018-04-02 | 2019-04-01 | | | | |
| DC Power Supply | Zhao Xin | RXN-305D | SEM011-02 | 2017-09-27 | 2018-09-26 | | | | |
| Active Loop Antenna | ETS-Lindgren | 6502 | SEM003-08 | 2017-08-22 | 2020-08-21 | | | | |
| Band filter | N/A | N/A | SEM023-01 | N/A | N/A | | | | |

| General used equipment | | | | | | | | |
|------------------------------------|---|---------------|--------------|------------|--------------|--|--|--|
| Equipment | Manufacturer | Model No | Inventory No | Cal Date | Cal Due Date | | | |
| Humidity/ Temperature Indicator | Shanghai Meteorological Industry Factory | ZJ1-2B | SEM002-03 | 2017-09-29 | 2018-09-28 | | | |
| Humidity/ Temperature Indicator | Shanghai Meteorological Industry Factory | ZJ1-2B SEM002 | | 2017-09-29 | 2018-09-28 | | | |
| Humidity/ Temperature Mingle | | N/A | SEM002-08 | 2017-09-29 | 2018-09-28 | | | |
| Barometer | Changchun Meteorological Industry Factory | DYM3 | SEM002-01 | 2018-04-08 | 2019-04-07 | | | |



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6 Radio Spectrum Matter Test Results

6.1 Maximum Conducted output power

| Test Requirement | 47 CFR Part 15, Subpart C 15.407 (a) |
|------------------|--------------------------------------|
| Test Method: | KDB 789033 D02 II E |
| Limit: | |

| Frequenc | y band(MHz) | Limit | | | |
|----------|--|--|--|--|--|
| E1E0 E | 250 | ≤1W(30dBm) for master device | | | |
| 5150-5 | 250 | ≤250mW(24dBm) for client device | | | |
| 5250-5 | 350 | ≤250mW(24dBm) for client device or 11dBm+10logB* | | | |
| 5470-5 | 725 | ≤250mW(24dBm) for client device or 11dBm+10logB* | | | |
| 5725-5 | 850 | ≤1W(30dBm) | | | |
| Remark: | * Where B is the 26dB emission bandwidth in MHz. | | | | |
| | The maximum conducted output power must be measured over any interval of continuous transmission using instrumentation calibrated in terms of an rms-equivalent voltage. | | | | |



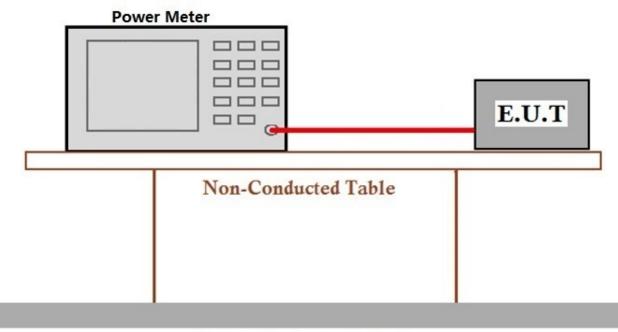
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6.1.1 E.U.T. Operation

Operating Environment:

Temperature:22.4 °CHumidity:52.4 % RHAtmospheric Pressure:1005mbarTest modeb:TX mode_Keep the EUT in continuously transmitting mode with modulation.P Test Seture Disarram

6.1.2 Test Setup Diagram



Ground Reference Plane

6.1.3 Measurement Procedure and Data

The detailed test data see: Appendix 15.407



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6.2 Peak Power spectrum density

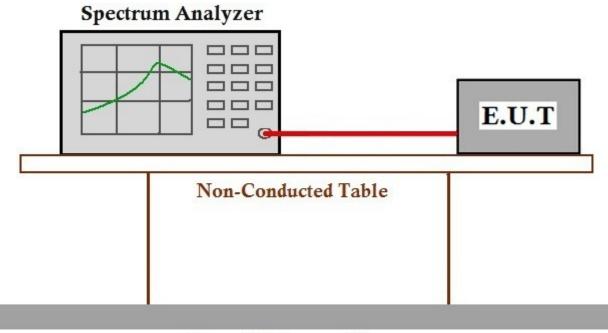
| Test Requirement | 47 CFR Part 15, Subpart E 15.407 (a) | | |
|---------------------|--|--|--|
| Test Method: | ANSI C63.10 Section 12.5 | | |
| Limit: | | | |
| Frequency band(MHz) | Limit | | |
| 5150-5250 | ≤ 17dBm/MHz for master device (FCC) | | |
| | \leq 11dBm/MHz for client device (FCC) | | |
| | e.i.r.p. spectral density ≤ 10dBm/MHz (IC) | | |
| 5250-5350 | ≤ 11dBm/MHz | | |
| 5470-5725 | ≤ 11dBm/MHz | | |
| 5725-5850 | ≤ 30dBm/500kHz | | |
| | | | |

6.2.1 E.U.T. Operation

Operating Environment:

Temperature:25.1 °CHumidity:58.9 % RHAtmospheric Pressure:1010mbarTest modeb:TX mode_Keep the EUT in continuously transmitting mode with modulation.

6.2.2 Test Setup Diagram



Ground Reference Plane

6.2.3 Measurement Procedure and Data

The detailed test data see: Appendix 15.407



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6.3 Radiated Emissions

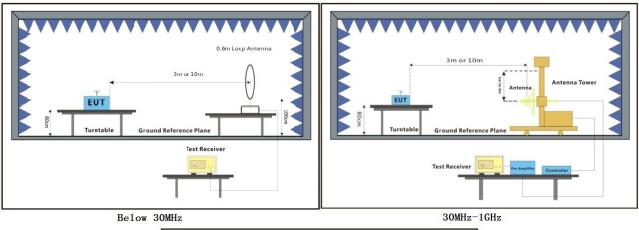
Test Requirement47 CFR Part 15, Subpart C 15.209 & 15.407(b)Test Method:KDB 789033 D02 II GMeasurement Distance:3m

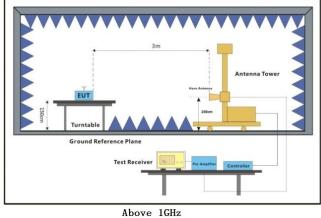
6.3.1 E.U.T. Operation

Operating Environment:

Temperature:24.8 °CHumidity:57.6 % RHAtmospheric Pressure:1005mbarTest modeb: TX mode_Keep the EUT in continuously transmitting mode with modulation.

6.3.2 Test Setup Diagram







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6.3.3 Measurement Procedure and Data

a. For below 1GHz, the EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 or 10 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.

b. For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.

c. The EUT was set 3 or 10 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

d. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

e. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

f. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

g. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

h. Test the EUT in the lowest channel, the middle channel, the Highest channel.

i. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case.

j. Repeat above procedures until all frequencies measured was complete.

Remark:

1. Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor

2. For emission below 1GHz, through the pre-scan found the worst case is the lowest channel of 802.11a. Only the worst case is recorded in the report.

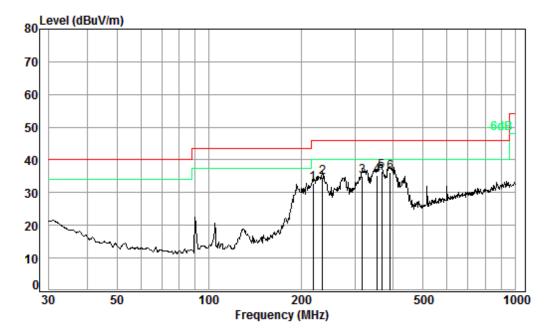
3. Scan from 9kHz to 40GHz, the disturbance above 18GHz and below 30MHz was very low. The points marked on above plots are the highest emissions could be found when testing, so only above points had been displayed. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need not be reported.

4. As shown in this section, for frequencies above 1GHz, the field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. For the emissions whose peak level is lower than the average limit, only the peak measurement is shown in the report.



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Mode:b; Polarization:Horizontal; Bandwidth:1.4MHz; Channel:5788.5MHz



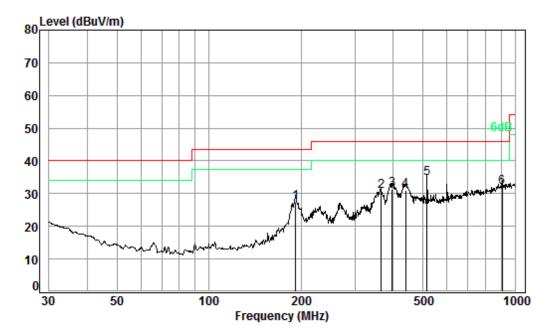
Condition: 3m HORIZONTAL Job No. : 06006CR Test mode: b

| Fre | | | Preamp Factor | | | | Over Limit |
|--|--|----------------------------------|--|----------------------------------|----------------------------------|----------------------------------|-------------------------------------|
| MH | dB | dB/m | dB | dBuV | dBuV/m | dBuV/m | dB |
| 1 219.00 2 234.99 3 316.59 4 354.10 5 pp 366.80 6 390.7 | 1.60 1.95 2.07 2.11 | 18.41 20.12 21.22 21.56 | 27.53 27.53 27.58 27.65 27.67 27.72 | 42.11 40.55 39.54 40.64 | 34.59 35.04 35.18 36.64 | 46.00 46.00 46.00 46.00 | -11.41 -10.96 -10.82 -9.36 |



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Mode:b; Polarization:Vertical; Bandwidth:1.4MHz; Channel:5788.5MHz



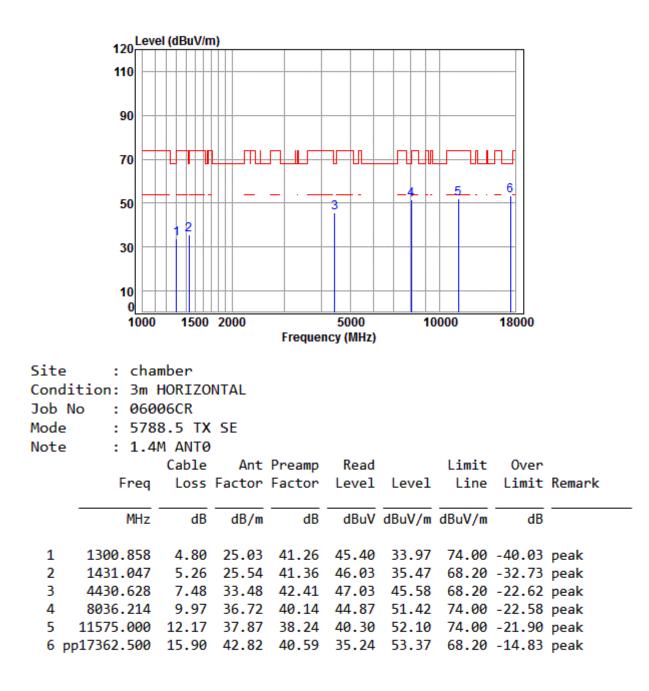
Condition: 3m VERTICAL Job No. : 06006CR Test mode: b

| | | Cable | Ant | Preamp | Read | | Limit | 0ver |
|------|--------|-------|--------|--------|-------|--------|--------|--------|
| | Freq | Loss | Factor | Factor | Level | Level | Line | Limit |
| | MHz | dB | dB/m | dB | dBuV | dBuV/m | dBuV/m | dB |
| 1 | 191.75 | 1.39 | 16.26 | 27.53 | 37.26 | 27.38 | 43.50 | -16.12 |
| 2 | 365.54 | 2.10 | 21.52 | 27.67 | 34.74 | 30.69 | 46.00 | -15.31 |
| 3 | 396.24 | 2.19 | 22.31 | 27.73 | 34.53 | 31.30 | 46.00 | -14.70 |
| 4 | 438.66 | 2.37 | 23.31 | 27.79 | 33.15 | 31.04 | 46.00 | -14.96 |
| 5 pp | 515.44 | 2.62 | 24.93 | 27.85 | 34.96 | 34.66 | 46.00 | -11.34 |
| 6 | 906.48 | 3.61 | 29.83 | 27.06 | 25.65 | 32.03 | 46.00 | -13.97 |



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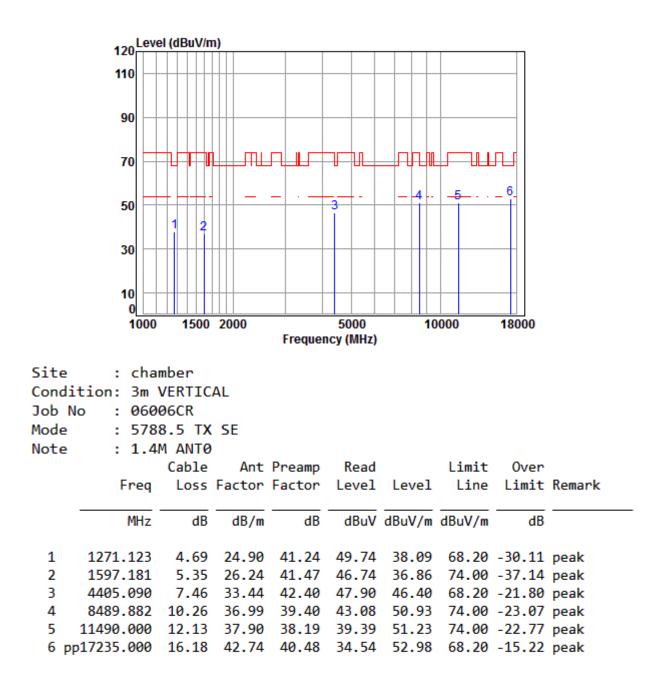
Mode:b; Polarization:Horizontal; Bandwidth:1.4MHz; Channel:5788.5MHz





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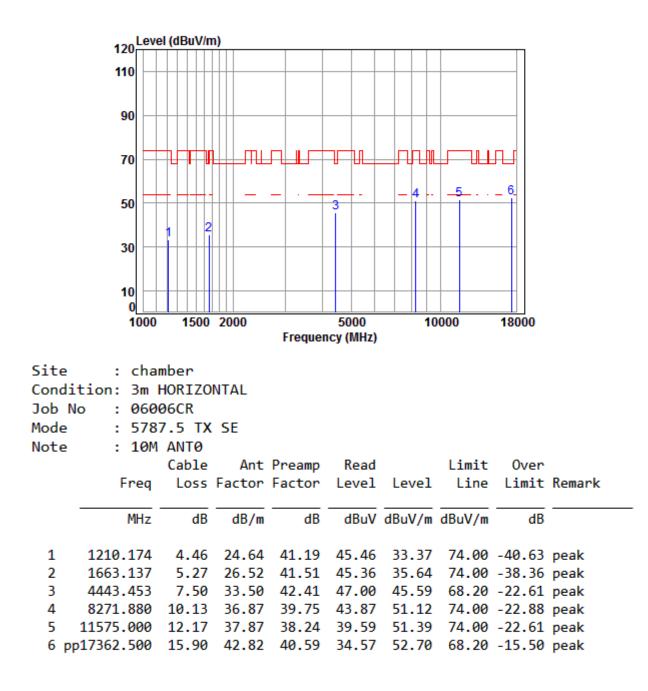
Mode:b; Polarization:Vertical; Bandwidth:1.4MHz; Channel:5788.5MHz





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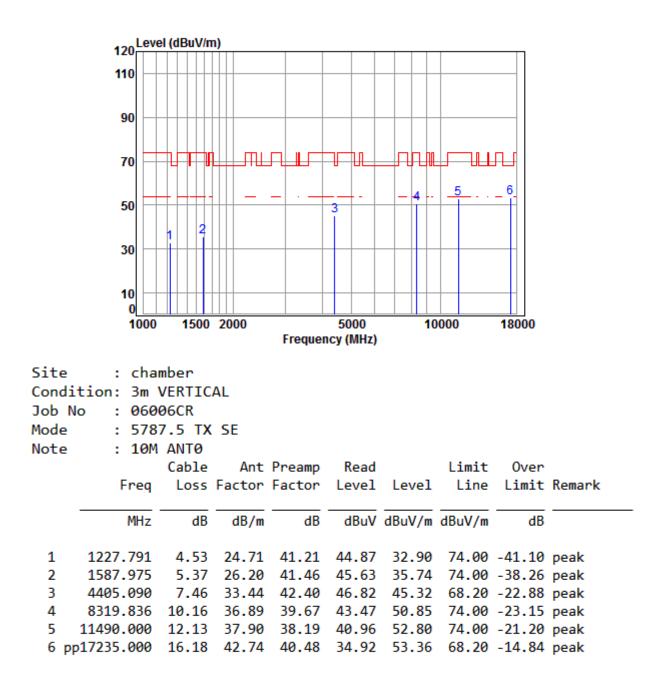
Mode:b; Polarization:Horizontal; Bandwidth:10MHz; Channel:5787.5MHz





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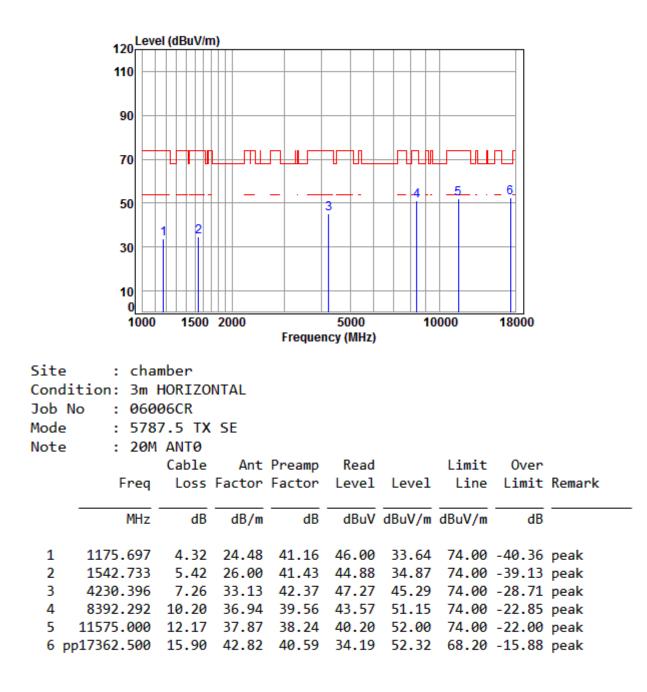
Mode:b; Polarization:Vertical; Bandwidth:10MHz; Channel:5787.5MHz





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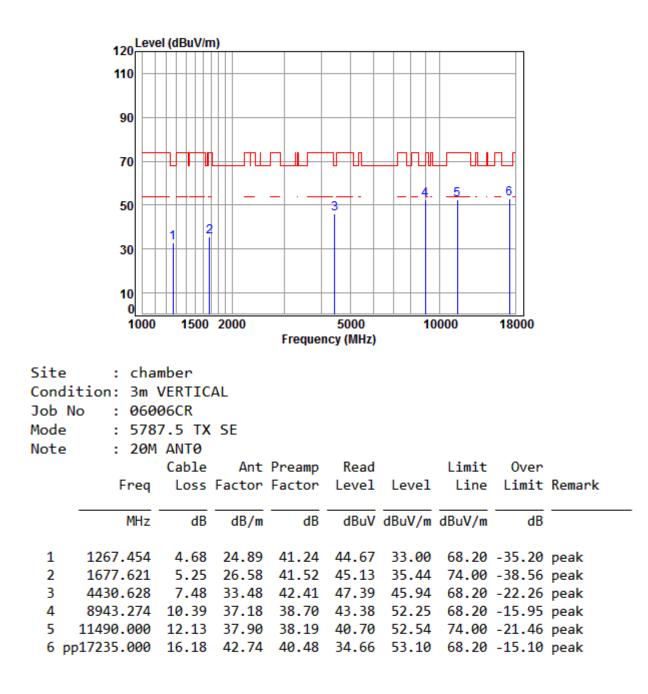
Mode:b; Polarization:Horizontal; Bandwidth:20MHz; Channel:5787.5MHz





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Mode:b; Polarization:Vertical; Bandwidth:20MHz; Channel:5787.5MHz





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7 Photographs

7.1 Test Setup

Please refer to setup photos.

7.2 EUT Constructional Details (EUT Photos)

Please refer to external and internal photos.



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8 Appendix

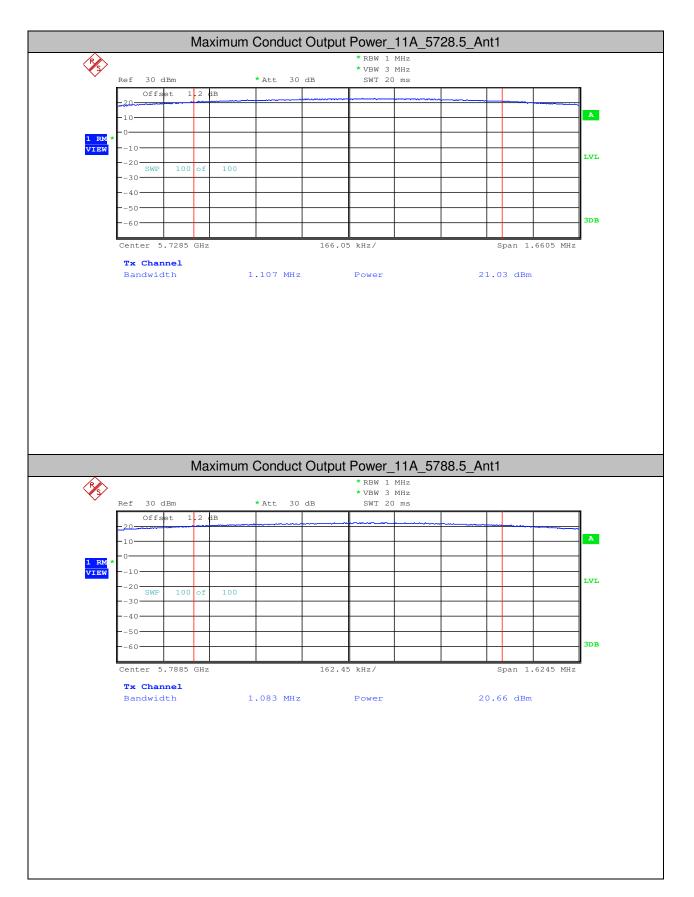
8.1 Appendix 15.407

1.Maximum Conduct Output Power

| Test Mode | Test Channel | Ant | Power [dBm] | Limit [dBm] | Verdict |
|--------------|-----------------|------|----------------|----------------|---------|
| 1.4MHz BW | 5728.5 | Ant1 | 21.03 | <30.00 | PASS |
| 1.4MHz BW | 5788.5 | Ant1 | 20.66 | <30.00 | PASS |
| 1.4MHz BW | 5846.5 | Ant1 | 21.66 | <30.00 | PASS |
| 20MHz BW | 5735.5 | Ant1 | 21.80 | <30.00 | PASS |
| 20MHz BW | 5787.5 | Ant1 | 22.27 | <30.00 | PASS |
| 20MHz BW | 5839.5 | Ant1 | 22.28 | <30.00 | PASS |
| 10MHz BW | 5730.5 | Ant1 | 21.57 | <30.00 | PASS |
| 10MHz BW | 5787.5 | Ant1 | 22.65 | <30.00 | PASS |
| 10MHz BW | 5844.5 | Ant1 | 22.56 | <30.00 | PASS |

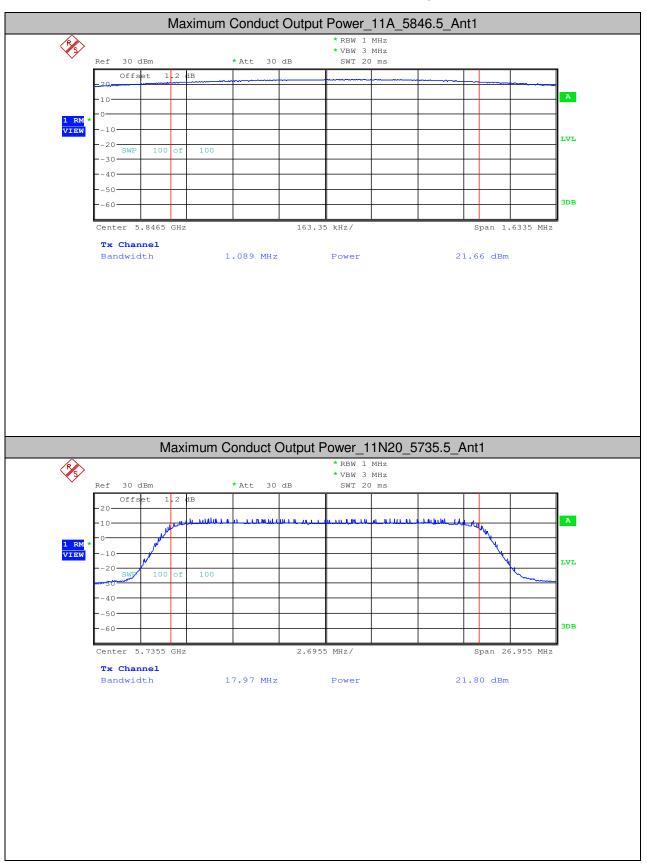


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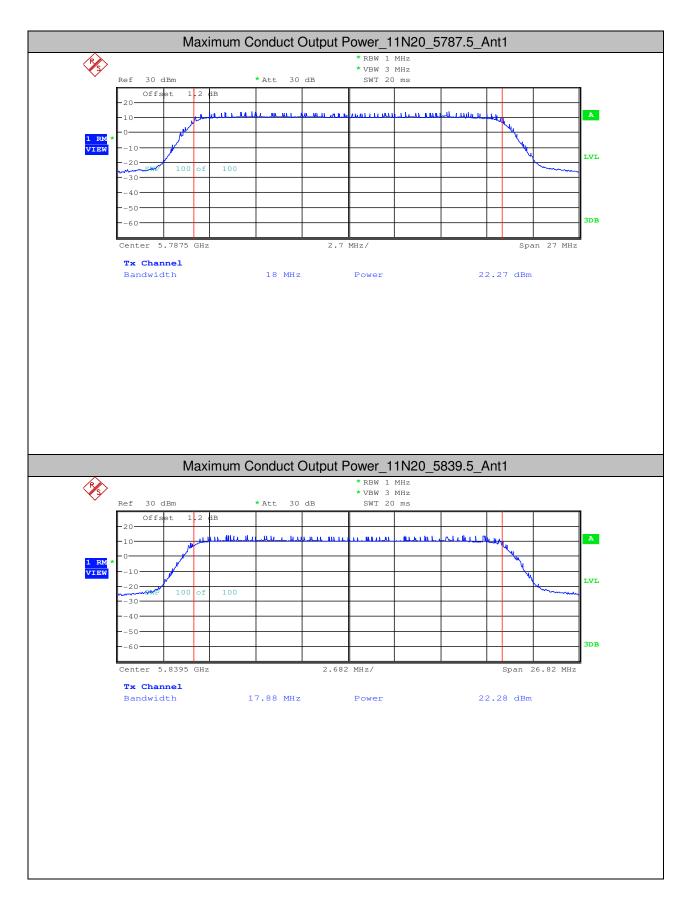


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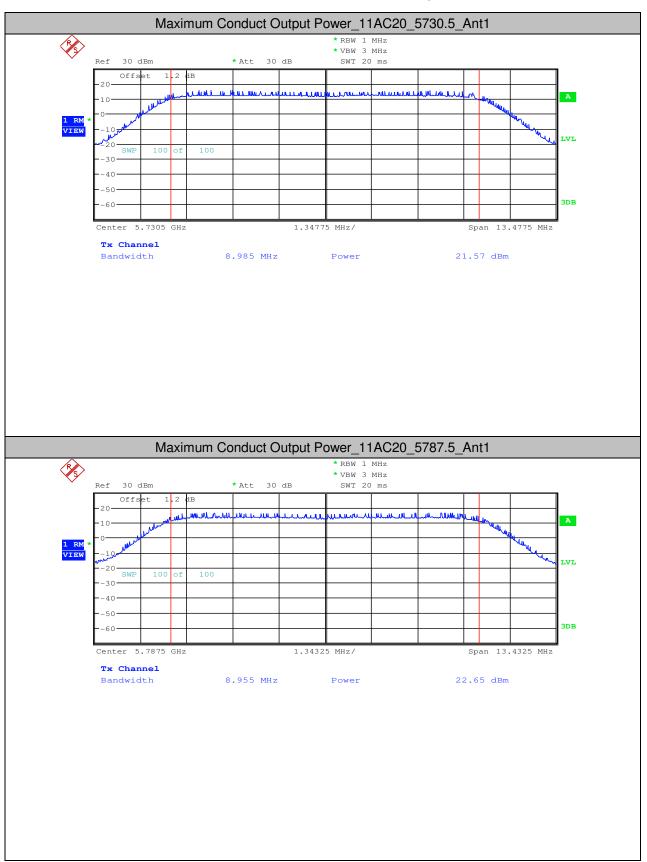


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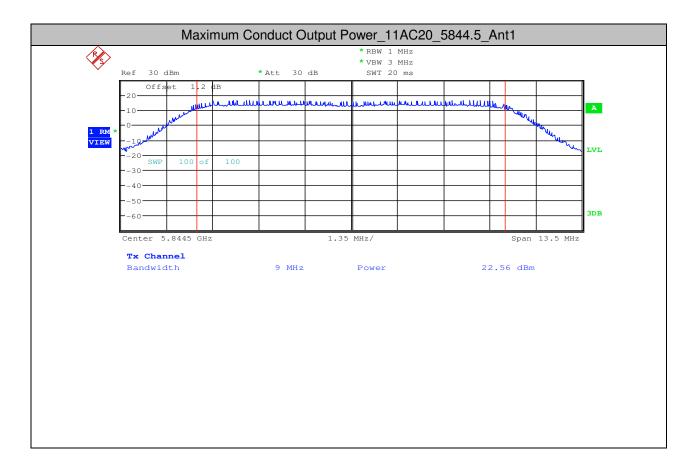


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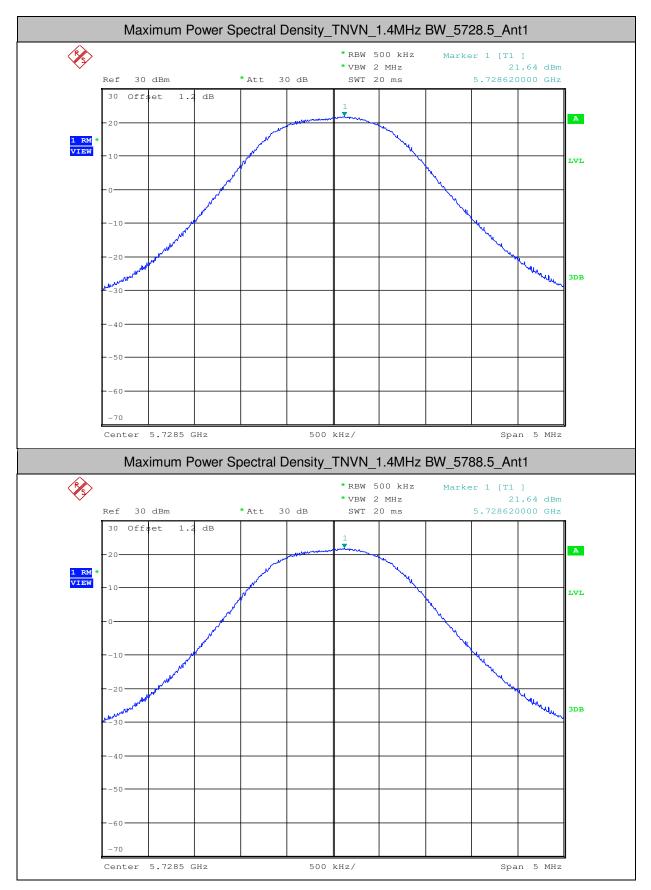
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2.Maximum Power Spectral Density

| Test Mode | Test Channel | Ant | Level [dBm/500 kHz] | 10log(1/x) Factor[dB] | 10log(500k Hz/RBW) Factor [dB] | PSD [dBm/500 kHz] | Limit [dBm/500 kHz] | Verdict |
|-----------|--------------|------|---------------------------|--------------------------|--------------------------------------|-------------------------|---------------------------|---------|
| 1.4MHz BW | 5728.5 | Ant1 | 21.64 | 0 | 0 | 21.64 | <30.00 | PASS |
| 1.4MHz BW | 5788.5 | Ant1 | 21.37 | 0 | 0 | 21.37 | <30.00 | PASS |
| 1.4MHz BW | 5846.5 | Ant1 | 22.28 | 0 | 0 | 22.28 | <30.00 | PASS |
| 20MHz BW | 5735.5 | Ant1 | 11.81 | 0 | 0 | 11.81 | <30.00 | PASS |
| 20MHz BW | 5787.5 | Ant1 | 12.11 | 0 | 0 | 12.11 | <30.00 | PASS |
| 20MHz BW | 5839.5 | Ant1 | 12.14 | 0 | 0 | 12.14 | <30.00 | PASS |
| 10MHz BW | 5730.5 | Ant1 | 14.14 | 0 | 0 | 14.14 | <30.00 | PASS |
| 10MHz BW | 5787.5 | Ant1 | 15.34 | 0 | 0 | 15.34 | <30.00 | PASS |
| 10MHz BW | 5844.5 | Ant1 | 15.42 | 0 | 0 | 15.42 | <30.00 | PASS |

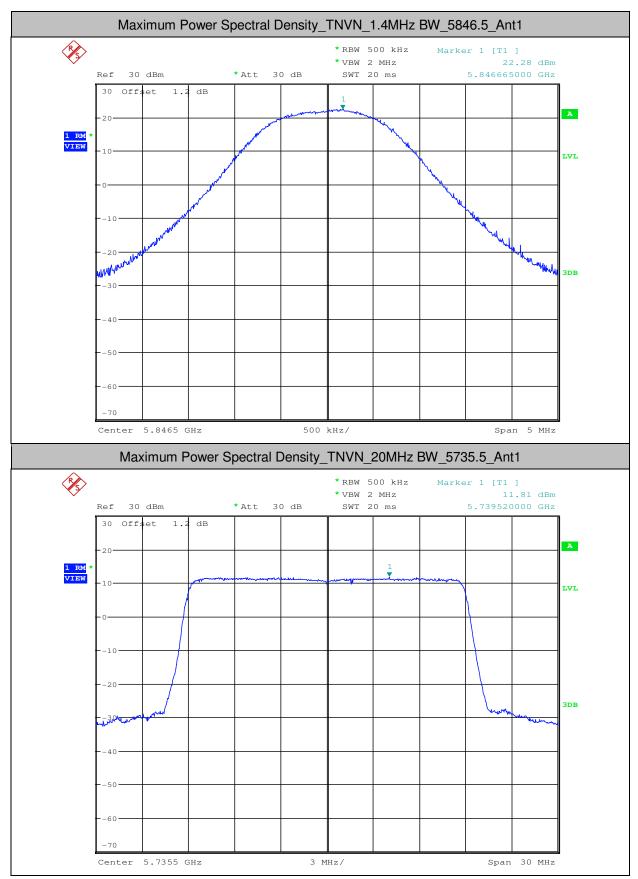


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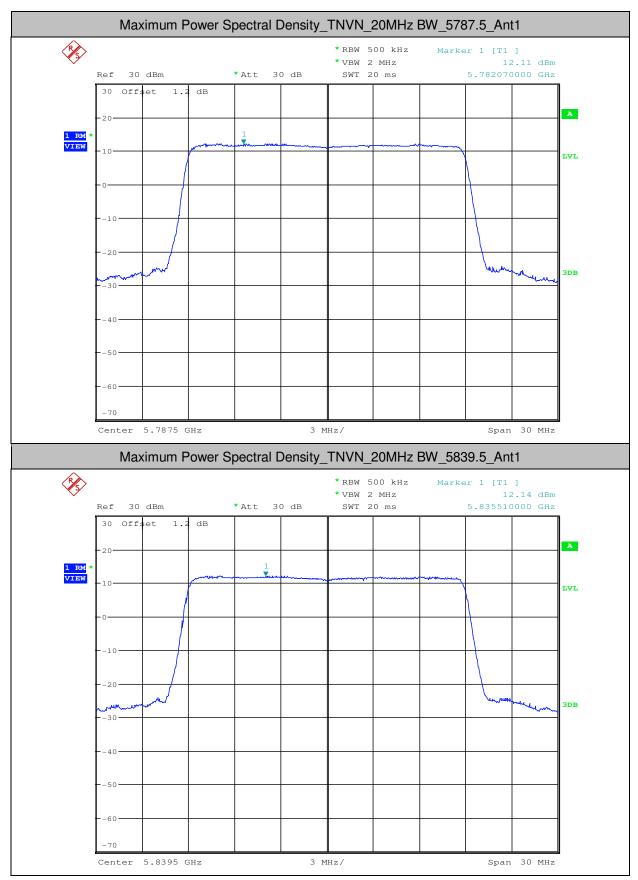


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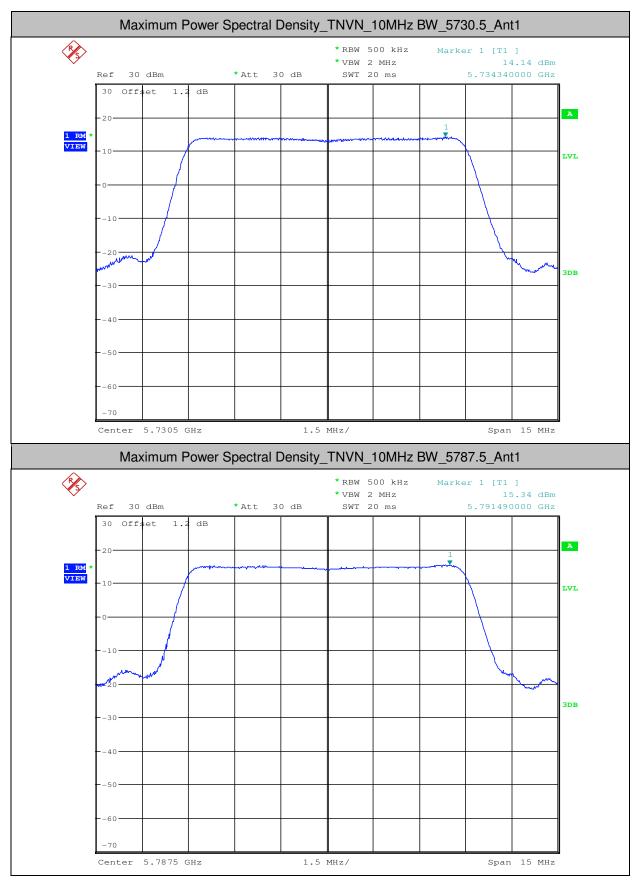


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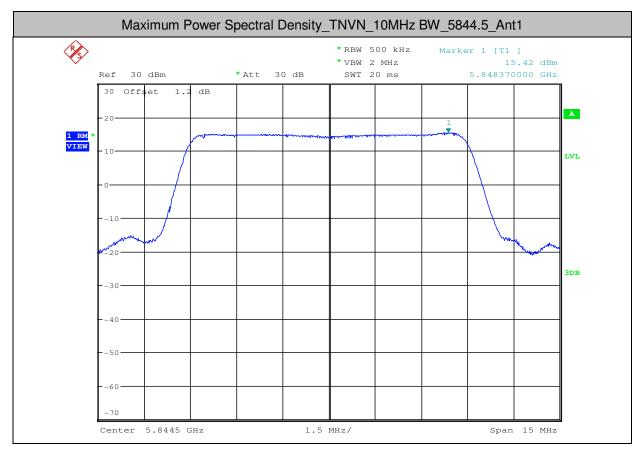


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- End of the Report -