



Report No.: SZEM190901806401

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## FCC REPORT

**Application No.:** SZEM1909018064  
**Applicant:** Decawave Limited  
**Address of Applicant:** Adelaide Chambers Peter Street, Dublin, D08 T6YA, Ireland  
**Manufacturer:** Decawave Limited  
**Address of Manufacturer:** Adelaide Chambers Peter Street, Dublin, D08 T6YA, Ireland  
**Equipment Under Test (EUT):**  
**EUT Name:** DWM1004C is a low cost UWB TDoA Tag  
**Model No.:** DWM1004C  
**FCC ID:** 2AQ33-DWM1004  
**Standard(s) :** 47 CFR Part 15, Subpart F  
**Date of Receipt:** 2019-09-02  
**Date of Test:** 2019-09-10 to 2019-10-11  
**Date of Issue:** 2019-11-01

|                     |              |
|---------------------|--------------|
| <b>Test Result:</b> | <b>Pass*</b> |
|---------------------|--------------|

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

Keny Xu

Keny Xu  
EMC Laboratory Manager



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

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## 1 Version

| Revision Record |         |            |          |          |
|-----------------|---------|------------|----------|----------|
| Version         | Chapter | Date       | Modifier | Remark   |
| 00              |         | 2019-11-01 |          | Original |
|                 |         |            |          |          |
|                 |         |            |          |          |

|                          |  |                                                                                     |  |
|--------------------------|--|-------------------------------------------------------------------------------------|--|
| Authorized for issue by: |  |                                                                                     |  |
|                          |  |   |  |
|                          |  | <hr/>                                                                               |  |
|                          |  | Calvin Weng /Project Engineer                                                       |  |
|                          |  |  |  |
|                          |  | <hr/>                                                                               |  |
|                          |  | Eric Fu /Reviewer                                                                   |  |





## 2 Test Summary

| Test Item                                           | Test Requirement                                       | Test method                         | Result |
|-----------------------------------------------------|--------------------------------------------------------|-------------------------------------|--------|
| Antenna Requirement                                 | 47 CFR Part 15 Subpart F Section 15.519 (a)(2)         | N/A                                 | PASS   |
| Conducted Emissions at AC Power Line (150kHz-30MHz) | 47 CFR Part 15, Subpart F 15.521(j)                    | ANSI C63.10 (2013) Section 6.2      | PASS   |
| UWB Bandwidth                                       | 47 CFR Part 15, Subpart F Section 15.503 (a)           | ANSI C63.10 (2013) Section10.1      | PASS   |
| Dwell Time                                          | 47 CFR Part 15, Subpart F Section 15.519 (a)(1)        | ANSI C63.10 (2013) Section7.8.4     | N/A    |
| Spurious Emissions                                  | 47 CFR Part 15, Subpart F Section 15.519 (c)(d)/15.209 | ANSI C63.10 (2013) Section10.2&10.3 | PASS   |
| EIRP                                                | 47 CFR Part 15, Subpart F Section 15.519 (e)           | ANSI C63.10 (2013) Section10.3      | PASS   |

N/A=Not applicable



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## 4 General Information

### 4.1 General Description of EUT

|                     |                                                                               |
|---------------------|-------------------------------------------------------------------------------|
| Name:               | DWM1004C is a low cost UWB TDoA Tag                                           |
| Model No.:          | DWM1004C                                                                      |
| Frequency Range:    | 3993.6MHz, 6489.6MHz                                                          |
| Modulation Type:    | PM                                                                            |
| Number of Channels: | 2                                                                             |
| Sample Type:        | Portable production                                                           |
| Antenna Type:       | Integral                                                                      |
| Antenna Gain:       | 2.73dBi for 3993.6MHz, 4.16dBi for 6489.6MHz                                  |
| Power Supply:       | For debug board: DC5V from USB port<br>For RF module: DC3.3V from debug board |

### 4.2 Description of Support Units

| Description     | Manufacturer | Model No. | S/N              |
|-----------------|--------------|-----------|------------------|
| Laptop          | Lenovo       | L480      | PF-1N6C3V        |
| Micro USB Cable | PHILIPS      | SWR2101   | REF. No.SEA0700  |
| Mouse           | Lenovo       | M-U0025-O | REF. No.:SEA2400 |
| Router          | NETGEAR      | DGN2200   | REF. No.SEA2200  |



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### 4.3 Measurement Uncertainty

| No. | Item                            | Measurement Uncertainty              |
|-----|---------------------------------|--------------------------------------|
| 1   | Radio Frequency                 | $\pm 7.25 \times 10^{-8}$            |
| 2   | Conduction emission             | $\pm 3.0\text{dB}$ (150kHz to 30MHz) |
| 3   | Occupied Bandwidth              | $\pm 3\%$                            |
| 4   | RF Radiated power               | $\pm 4.5\text{dB}$ (Below 1GHz)      |
|     |                                 | $\pm 4.8\text{dB}$ (Above 1GHz)      |
| 5   | Radiated Spurious emission test | $\pm 4.5\text{dB}$ (Below 1GHz)      |
|     |                                 | $\pm 4.8\text{dB}$ (Above 1GHz)      |
| 6   | Temperature test                | $\pm 1^\circ\text{C}$                |
| 7   | Supply voltages                 | $\pm 1.5\%$                          |

### 4.4 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen Branch E&E Lab,  
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518057.

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No tests were sub-contracted.



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## 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.

- Innovation, Science and Economic Development Canada

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

CAB identifier: CN0006.

IC#: 4620C.

## 4.6 Deviation from Standards

None

## 4.7 Abnormalities from Standard Conditions

None



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## 4.8 Equipment List

| Conducted Emissions at AC Power Line (150kHz-30MHz) |                  |                 |              |            |              |
|-----------------------------------------------------|------------------|-----------------|--------------|------------|--------------|
| Equipment                                           | Manufacturer     | Model No        | Inventory No | Cal Date   | Cal Due Date |
| Shielding Room                                      | ZhongYu Electron | GB-88           | SEM001-06    | 2019-06-13 | 2022-06-12   |
| Measurement Software                                | AUDIX            | e3 V8.2014-6-27 | N/A          | N/A        | N/A          |
| Coaxial Cable                                       | SGS              | N/A             | SEM024-01    | 2019-07-11 | 2020-07-10   |
| LISN                                                | Rohde & Schwarz  | ENV216          | SEM007-01    | 2018-09-25 | 2019-09-24   |
| LISN                                                | Rohde & Schwarz  | ENV216          | SEM007-01    | 2019-09-24 | 2020-09-23   |
| LISN                                                | ETS-LINDGREN     | 3816/2          | SEM007-02    | 2019-04-01 | 2020-03-31   |
| EMI Test Receiver                                   | Rohde & Schwarz  | ESCI            | SEM004-02    | 2019-04-01 | 2020-03-31   |

| RF conducted test                       |                         |                         |              |            |              |
|-----------------------------------------|-------------------------|-------------------------|--------------|------------|--------------|
| Equipment                               | Manufacturer            | Model No                | Inventory No | Cal Date   | Cal Due Date |
| Shielding Room                          | SAEMC                   | MSR733                  | SEM001-09    | 2019-06-13 | 2022-06-12   |
| DC Power Supply                         | ZhaoXin                 | RXN-305D                | SEM011-02    | 2018-09-25 | 2019-09-24   |
| DC Power Supply                         | ZhaoXin                 | RXN-305D                | SEM011-02    | 2019-09-24 | 2020-09-23   |
| Spectrum Analyzer                       | Rohde & Schwarz         | FSP                     | SEM004-06    | 2018-09-25 | 2019-09-24   |
| Spectrum Analyzer                       | Rohde & Schwarz         | FSP                     | SEM004-06    | 2019-09-24 | 2020-09-23   |
| Measurement Software                    | JS Tonscend             | JS1120-2<br>BT/WIFI V2. | N/A          | N/A        | N/A          |
| Coaxial Cable                           | SGS                     | N/A                     | SEM031-02    | 2019-07-11 | 2020-07-10   |
| Attenuator                              | Weinschel<br>Associates | WA41                    | SEM021-09    | N/A        | N/A          |
| Signal Generator                        | KEYSIGHT                | N5173B                  | SEM006-05    | 2018-09-25 | 2019-09-24   |
| Signal Generator                        | KEYSIGHT                | N5173B                  | SEM006-05    | 2019-09-24 | 2020-09-23   |
| Power Meter                             | Rohde & Schwarz         | NRVS                    | SEM014-02    | 2018-09-25 | 2019-09-24   |
| Power Meter                             | Rohde & Schwarz         | NRVS                    | SEM014-02    | 2019-09-24 | 2020-09-23   |
| Electric and Magnetic<br>Field Analyzer | Narda                   | NBM-<br>550/EHP-50F     | EMC2143      | 2018-02-07 | 2020-02-06   |



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|---------------------------------------|------------------------|---------|----------|------------|------------|
| Electric Field Probe<br>(100KHz-3GHz) | WANDEL &<br>GOLTERMANN | EMR-20  | EMC0907  | 2019-05-21 | 2020-05-20 |
| EMF Tester                            | Narda                  | ELT-400 | SZE039-4 | 2019-07-08 | 2020-07-07 |

| RE in Chamber                     |                          |                 |               |            |               |
|-----------------------------------|--------------------------|-----------------|---------------|------------|---------------|
| Test Equipment                    | Manufacturer             | Model No.       | Inventory No. | Cal. Date  | Cal. Due date |
| 3m Semi-Anechoic Chamber          | ETS-LINDGREN             | N/A             | SEM001-01     | 2017-08-05 | 2020-08-04    |
| MXE EMI Receiver<br>(20Hz-8.4GHz) | Agilent Technologies     | N9038A          | SEM004-05     | 2018-09-25 | 2019-09-24    |
| MXE EMI Receiver<br>(20Hz-8.4GHz) | Agilent Technologies     | N9038A          | SEM004-05     | 2019-09-24 | 2020-09-23    |
| BiConiLog Antenna<br>(26-3000MHz) | ETS-LINDGREN             | 3142C           | SEM003-01     | 2017-06-27 | 2020-06-26    |
| Pre-amplifier<br>(0.1-1300MHz)    | Agilent Technologies     | 8447D           | SEM005-01     | 2019-04-01 | 2020-03-31    |
| Measurement Software              | AUDIX                    | e3 V8.2014-6-27 | N/A           | N/A        | N/A           |
| Coaxial Cable                     | SGS                      | N/A             | SEM025-01     | 2019-07-11 | 2020-07-10    |
| 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     | 2019-07-11 | 2020-07-10    |
| EXA Spectrum Analyzer             | Agilent Technologies Inc | N9010A          | SEM004-12     | 2019-04-12 | 2020-04-11    |
| Horn Antenna<br>(1-18GHz)         | Rohde & Schwarz          | HF907           | SEM003-07     | 2018-04-13 | 2021-04-12    |
| Horn Antenna<br>(15GHz-40GHz)     | Schwarzbeck              | BBHA 9170       | SEM003-15     | 2017-10-17 | 2020-10-16    |



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|--------------------------------|------------------------------------------|-------------|-----------|------------|------------|
| Pre-Amplifier<br>(0.1-26.5GHz) | Compliance<br>Directions Systems<br>Inc. | PAP-0126    | SEM004-11 | 2018-11-12 | 2019-11-11 |
| Pre-amplifier<br>(18-26GHz)    | Rohde & Schwarz                          | CH14-H052   | SEM005-17 | 2019-04-01 | 2020-03-31 |
| Pre-amplifier<br>(26GHz-40GHz) | Compliance<br>Directions Systems<br>Inc. | PAP-2640-50 | SEM005-08 | 2019-04-01 | 2020-03-31 |
| DC Power Supply                | Zhao Xin                                 | RXN-305D    | SEM011-02 | 2018-09-25 | 2019-09-24 |
| DC Power Supply                | Zhao Xin                                 | RXN-305D    | SEM011-02 | 2019-09-24 | 2020-09-23 |
| Active Loop Antenna            | ETS-Lindgren                             | 6502        | SEM003-08 | 2017-08-22 | 2020-08-21 |

## General used equipment

| Equipment                          | Manufacturer                                   | Model No | Inventory No | Cal Date   | Cal Due Date |
|------------------------------------|------------------------------------------------|----------|--------------|------------|--------------|
| Humidity/ Temperature<br>Indicator | Shanghai<br>Meteorological<br>Industry Factory | ZJ1-2B   | SEM002-03    | 2018-09-27 | 2019-09-26   |
| Humidity/ Temperature<br>Indicator | Shanghai<br>Meteorological<br>Industry Factory | ZJ1-2B   | SEM002-03    | 2019-09-26 | 2020-09-25   |
| Humidity/ Temperature<br>Indicator | Shanghai<br>Meteorological<br>Industry Factory | ZJ1-2B   | SEM002-04    | 2018-09-27 | 2019-09-26   |
| Humidity/ Temperature<br>Indicator | Shanghai<br>Meteorological<br>Industry Factory | ZJ1-2B   | SEM002-04    | 2019-09-26 | 2020-09-25   |
| Humidity/ Temperature<br>Indicator | Mingle                                         | N/A      | SEM002-08    | 2018-09-27 | 2019-09-26   |
| Humidity/ Temperature<br>Indicator | Mingle                                         | N/A      | SEM002-08    | 2019-09-26 | 2020-09-25   |



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|           |                                                 |      |           |            |            |
|-----------|-------------------------------------------------|------|-----------|------------|------------|
| Barometer | Changchun<br>Meteorological<br>Industry Factory | DYM3 | SEM002-01 | 2019-04-04 | 2020-04-03 |
|-----------|-------------------------------------------------|------|-----------|------------|------------|



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## 5 Test results and Measurement Data

### 5.1 Antenna Requirement

|                                                                                                                                                                                                                                                                     |                                        |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
| <b>Standard requirement:</b>                                                                                                                                                                                                                                        | 47 CFR Part 15F Section 15.519(a2)     |
| 15.519 requirement:<br>The use of antennas mounted on outdoor structures, e.g., antennas mounted on the outside of a building or on a telephone pole, or any fixed outdoors infrastructure is prohibited. Antennas may be mounted only on the hand held UWB device. |                                        |
| <b>EUT Antenna:</b>                                                                                                                                                                                                                                                 | Please refer to interior photos of EUT |
| The antenna is integrated on the main PCB and no consideration of replacement. The best case gain of the antenna is 2.73dBi for 3993.6MHz, 4.16dBi for 6489.6MHz.                                                                                                   |                                        |

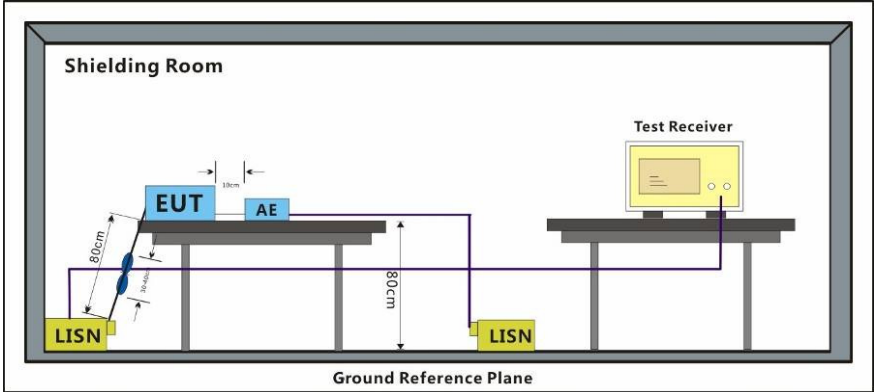


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## 5.2 Conducted Emissions at AC Power Line (150kHz-30MHz)

|                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                       |           |
|-------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------|
| Test Requirement: | 47 CFR Part 15, Subpart F 15.521(j)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                       |           |
| Test Method:      | ANSI C63.10 (2013) Section 6.2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                       |           |
| Test Setup:       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                       |           |
| Limit:            | Frequency of emission(MHz)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Conducted limit(dBμV) |           |
|                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Quasi-peak            | Average   |
|                   | 0.15-0.5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 66 to 56*             | 56 to 46* |
|                   | 0.5-5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 56                    | 46        |
|                   | 5-30                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 60                    | 50        |
|                   | *Decreases with the logarithm of the frequency.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                       |           |
| Test Procedure:   | <ol style="list-style-type: none"> <li>1) The mains terminal disturbance voltage test was conducted in a shielded room.</li> <li>2) The EUT was connected to AC power source through a LISN 1 (Line Impedance Stabilization Network) which provides a 50ohm/50 μ H + 5ohm linear impedance. The power cables of all other units of the EUT were connected to a second LISN 2, which was bonded to the ground reference plane in the same way as the LISN 1 for the unit being measured. A multiple socket outlet strip was used to connect multiple power cables to a single LISN provided the rating of the LISN was not exceeded.</li> <li>3) The tabletop EUT was placed upon a non-metallic table 0.8m above the ground reference plane. And for floor-standing arrangement, the EUT was placed on the horizontal ground reference plane,</li> <li>4) The test was performed with a vertical ground reference plane. The rear of the EUT shall be 0.4 m from the vertical ground reference plane. The vertical ground reference plane was bonded to the</li> </ol> |                       |           |



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|                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                        | <p>horizontal ground reference plane. The LISN 1 was placed 0.8 m from the boundary of the unit under test and bonded to a ground reference plane for LISNs mounted on top of the ground reference plane. This distance was between the closest points of the LISN 1 and the EUT. All other units of the EUT and associated equipment was at least 0.8 m from the LISN 2.</p> <p>5) In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10 on conducted measurement.</p> <p>Remark: LISN=Read Level+ Cable Loss+ LISN Factor</p> |
| Exploratory Test Mode: | a:TX mode_Keep the EUT in transmitting with modulation mode.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Instruments Used:      | Refer to section 4.8 for details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Test Results:          | Pass                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |



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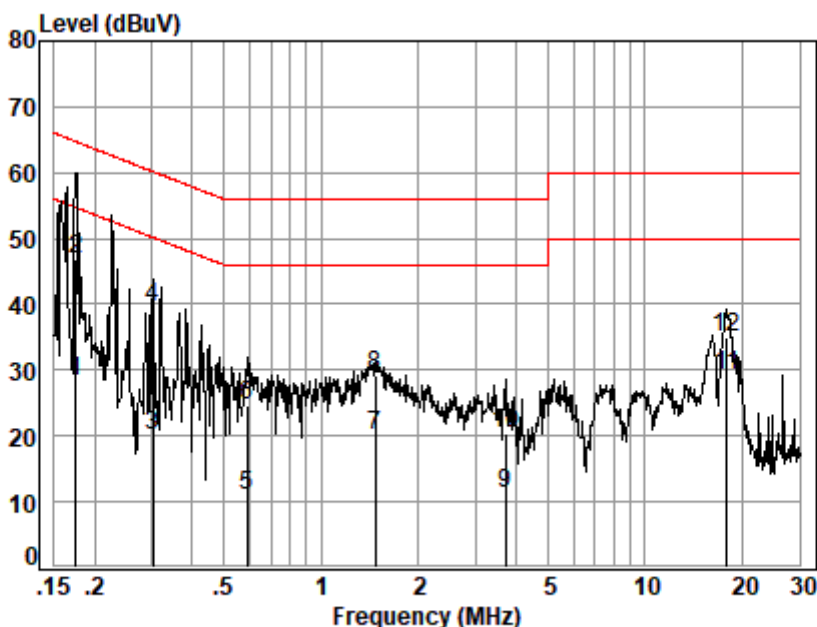
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Measurement Data

Mode:a; Line:Live Line



Site : Shielding Room

Condition: Line

Job No. : 18064CR

Test mode: a

|    | Freq  | Cable Loss | LISN Factor | Read Level | Level | Limit Line | Over Limit | Remark  |
|----|-------|------------|-------------|------------|-------|------------|------------|---------|
|    | MHz   | dB         | dB          | dBuV       | dBuV  | dBuV       | dB         |         |
| 1  | 0.17  | 0.02       | 9.66        | 18.72      | 28.40 | 54.72      | -26.32     | Average |
| 2  | 0.17  | 0.02       | 9.66        | 37.08      | 46.76 | 64.72      | -17.96     | QP      |
| 3  | 0.30  | 0.04       | 9.67        | 10.24      | 19.95 | 50.19      | -30.24     | Average |
| 4  | 0.30  | 0.04       | 9.67        | 29.83      | 39.54 | 60.19      | -20.65     | QP      |
| 5  | 0.59  | 0.07       | 9.67        | 1.25       | 10.99 | 46.00      | -35.01     | Average |
| 6  | 0.59  | 0.07       | 9.67        | 14.77      | 24.51 | 56.00      | -31.49     | QP      |
| 7  | 1.47  | 0.13       | 9.73        | 10.31      | 20.17 | 46.00      | -25.83     | Average |
| 8  | 1.47  | 0.13       | 9.73        | 19.28      | 29.14 | 56.00      | -26.86     | QP      |
| 9  | 3.70  | 0.16       | 9.72        | 1.37       | 11.25 | 46.00      | -34.75     | Average |
| 10 | 3.70  | 0.16       | 9.72        | 10.40      | 20.28 | 56.00      | -35.72     | QP      |
| 11 | 17.85 | 0.23       | 10.17       | 18.87      | 29.27 | 50.00      | -20.73     | Average |
| 12 | 17.85 | 0.23       | 10.17       | 24.55      | 34.95 | 60.00      | -25.05     | QP      |



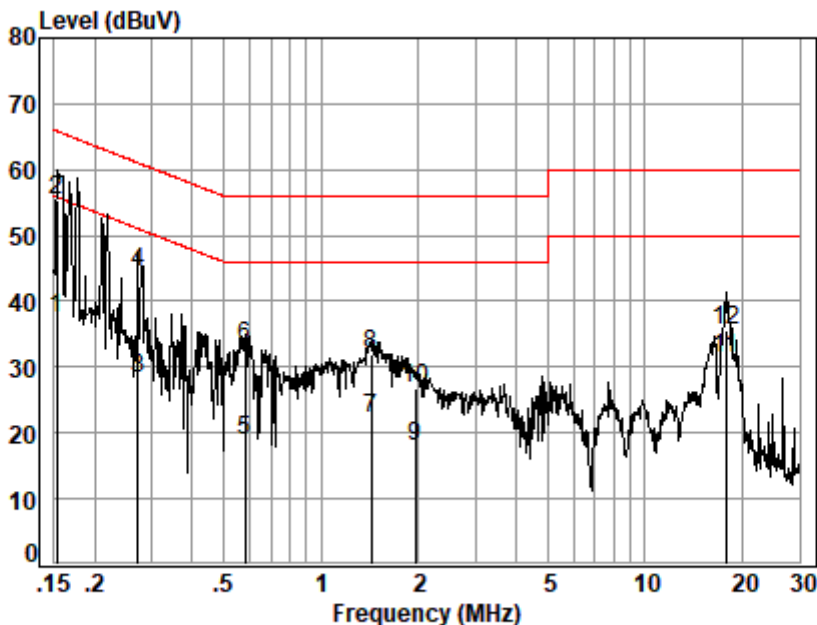
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Mode:a; Line:Neutral Line



Site : Shielding Room  
 Condition: Neutral  
 Job No. : 18064CR  
 Test mode: a

|    | Freq  | Cable Loss | LISN Factor | Read Level | Level | Limit Line | Over Limit | Remark  |
|----|-------|------------|-------------|------------|-------|------------|------------|---------|
|    | MHz   | dB         | dB          | dBuV       | dBuV  | dBuV       | dB         |         |
| 1  | 0.15  | 0.01       | 9.63        | 27.68      | 37.32 | 55.82      | -18.50     | Average |
| 2  | 0.15  | 0.01       | 9.63        | 45.64      | 55.28 | 65.82      | -10.54     | QP      |
| 3  | 0.27  | 0.03       | 9.64        | 18.71      | 28.38 | 51.07      | -22.69     | Average |
| 4  | 0.27  | 0.03       | 9.64        | 34.71      | 44.38 | 61.07      | -16.69     | QP      |
| 5  | 0.58  | 0.07       | 9.64        | 9.14       | 18.85 | 46.00      | -27.15     | Average |
| 6  | 0.58  | 0.07       | 9.64        | 23.52      | 33.23 | 56.00      | -22.77     | QP      |
| 7  | 1.43  | 0.13       | 9.70        | 12.43      | 22.26 | 46.00      | -23.74     | Average |
| 8  | 1.43  | 0.13       | 9.70        | 22.10      | 31.93 | 56.00      | -24.07     | QP      |
| 9  | 1.95  | 0.16       | 9.69        | 8.21       | 18.06 | 46.00      | -27.94     | Average |
| 10 | 1.95  | 0.16       | 9.69        | 16.78      | 26.63 | 56.00      | -29.37     | QP      |
| 11 | 17.75 | 0.23       | 10.22       | 20.88      | 31.33 | 50.00      | -18.67     | Average |
| 12 | 17.75 | 0.23       | 10.22       | 25.07      | 35.52 | 60.00      | -24.48     | QP      |



### 5.3 Radiated Spurious Emissions

|                                |                                                        |                                     |                   |            |                             |
|--------------------------------|--------------------------------------------------------|-------------------------------------|-------------------|------------|-----------------------------|
| Test Requirement:              | 47 CFR Part 15, Subpart F Section 15.519 (c)(d)/15.209 |                                     |                   |            |                             |
| Test Method:                   | ANSI C63.10: 2013 section 10.2 & 10.3                  |                                     |                   |            |                             |
| Test Site:                     | Measurement Distance: 3m (Semi-Anechoic Chamber)       |                                     |                   |            |                             |
| Receiver Setup:                | Frequency                                              | Detector                            | RBW               | VBW        | Remark                      |
|                                | 0.009MHz-0.090MHz                                      | Peak                                | 10kHz             | 30kHz      | Peak                        |
|                                | 0.009MHz-0.090MHz                                      | Average                             | 10kHz             | 30kHz      | Average                     |
|                                | 0.090MHz-0.110MHz                                      | Quasi-peak                          | 10kHz             | 30kHz      | Quasi-peak                  |
|                                | 0.110MHz-0.490MHz                                      | Peak                                | 10kHz             | 30kHz      | Peak                        |
|                                | 0.110MHz-0.490MHz                                      | Average                             | 10kHz             | 30kHz      | Average                     |
|                                | 0.490MHz-30MHz                                         | Quasi-peak                          | 10kHz             | 30kHz      | Quasi-peak                  |
|                                | 30MHz-960MHz                                           | Quasi-peak                          | 100 kHz           | 300kHz     | Quasi-peak                  |
| Limit:<br>(Spurious Emissions) | Above 960MHz                                           | RMS                                 | 1MHz              | 3MHz       | RMS                         |
|                                | Frequency                                              | Field strength<br>(microvolt/meter) | Limit<br>(dBuV/m) | Remark     | Measurement<br>distance (m) |
|                                | 0.009MHz-0.490MHz                                      | 2400/F(kHz)                         | -                 | -          | 300                         |
|                                | 0.490MHz-1.705MHz                                      | 24000/F(kHz)                        | -                 | -          | 30                          |
|                                | 1.705MHz-30MHz                                         | 30                                  | -                 | -          | 30                          |
|                                | 30MHz-88MHz                                            | 100                                 | 40.0              | Quasi-peak | 3                           |
|                                | 88MHz-216MHz                                           | 150                                 | 43.5              | Quasi-peak | 3                           |
|                                | 216MHz-960MHz                                          | 200                                 | 46.0              | Quasi-peak | 3                           |
|                                | 960MHz-1610MHz                                         | -75.3 dBm (EIRP,<br>RBW=1MHz)       |                   | RMS        | 3                           |
|                                | 1610MHz-1990MHz                                        | -63.3 dBm (EIRP,<br>RBW=1MHz)       |                   | RMS        | 3                           |
|                                | 1990MHz-3100MHz                                        | -61.3 dBm (EIRP,<br>RBW=1MHz)       |                   | RMS        | 3                           |
|                                | 3100MHz-10600MHz                                       | -41.3 dBm (EIRP,<br>RBW=1MHz)       |                   | RMS        | 3                           |
|                                | Above 10600MHz                                         | -61.3 dBm (EIRP,<br>RBW=1MHz)       |                   | RMS        | 3                           |
|                                | 1164MHz-1240MHz                                        | -85.3 dBm (EIRP,<br>RBW=1kHz)       |                   | RMS        | 3                           |
|                                | 1559MHz-1610MHz                                        | -85.3 dBm (EIRP,<br>RBW=1kHz)       |                   | RMS        | 3                           |



### Test Setup:

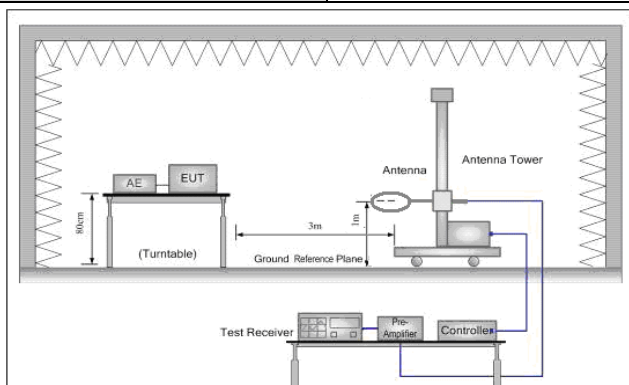


Figure 1. Below 30MHz

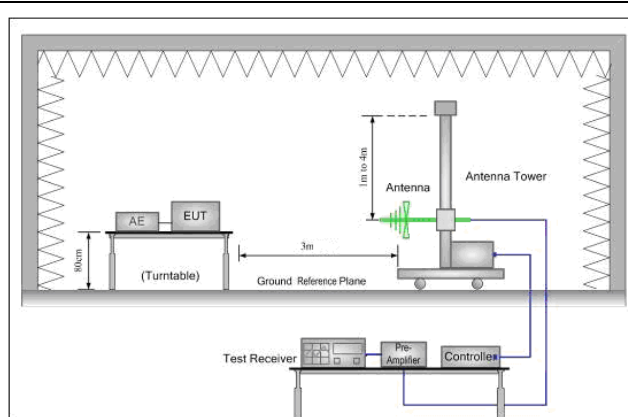


Figure 2. 30MHz to 1GHz

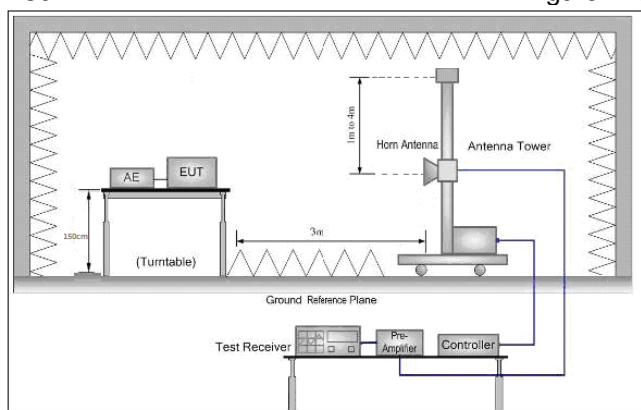


Figure 3. Above 1 GHz

### Test Procedure:

- 1) For below 1GHz, the EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- 2) For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- 3) The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- 4) 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.
- 5) For each suspected emission, the EUT was arranged to its worst case



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|                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                        | <p>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.</p> <p>6) The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.</p> <p>7) 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.</p> <p>8) Test the EUT in the lowest channel,the middle channel,the Highest channel</p> <p>9) The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode,And found the X axis positioning which it is worse case.</p> <p>10) Repeat above procedures until all frequencies measured was complete.</p> |
| Exploratory Test Mode: | a:TX mode_Keep the EUT in transmitting with modulation mode.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Final Test Mode:       | a:TX mode_Keep the EUT in transmitting with modulation mode.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Instruments Used:      | Refer to section 4.8 for details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Test Results:          | Pass                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

According to ANSI 63.10 Clause 10.3.9, the EIRP to field strength at a specified measurement distance of 3 m is below:

$$E \text{ (dBuV/m)} = \text{EIRP(dBm)} + 95.3$$

For peak power test, the spectrum analyzer was set to RBW=10MHz, VBW=10MHz, and add a conversion factor of  $20 \cdot \log(50\text{MHz}/10\text{MHz})=13.98$

Thus, the field strength limit for the test above 1GHz is below:

| Frequency        | Limit            |                         | Detector | Measurement Distance |
|------------------|------------------|-------------------------|----------|----------------------|
|                  | EIRP (dBm)       | Field Strength (dBuV/m) |          |                      |
| 960MHz-1610MHz   | -75.3 (RBW=1MHz) | 20.00                   | RMS      | 3                    |
| 1610MHz-1990MHz  | -63.3 (RBW=1MHz) | 32.00                   | RMS      | 3                    |
| 1990MHz-3100MHz  | -61.3 (RBW=1MHz) | 34.00                   | RMS      | 3                    |
| 3100MHz-10600MHz | -41.3 (RBW=1MHz) | 54.00                   | RMS      | 3                    |
| Above 10600MHz   | -61.3 (RBW=1MHz) | 34.00                   | RMS      | 3                    |
| 1164MHz-1240MHz  | -85.3 (RBW=1kHz) | 10.00                   | RMS      | 3                    |
| 1559MHz-1610MHz  | -85.3 (RBW=1kHz) | 10.00                   | RMS      | 3                    |



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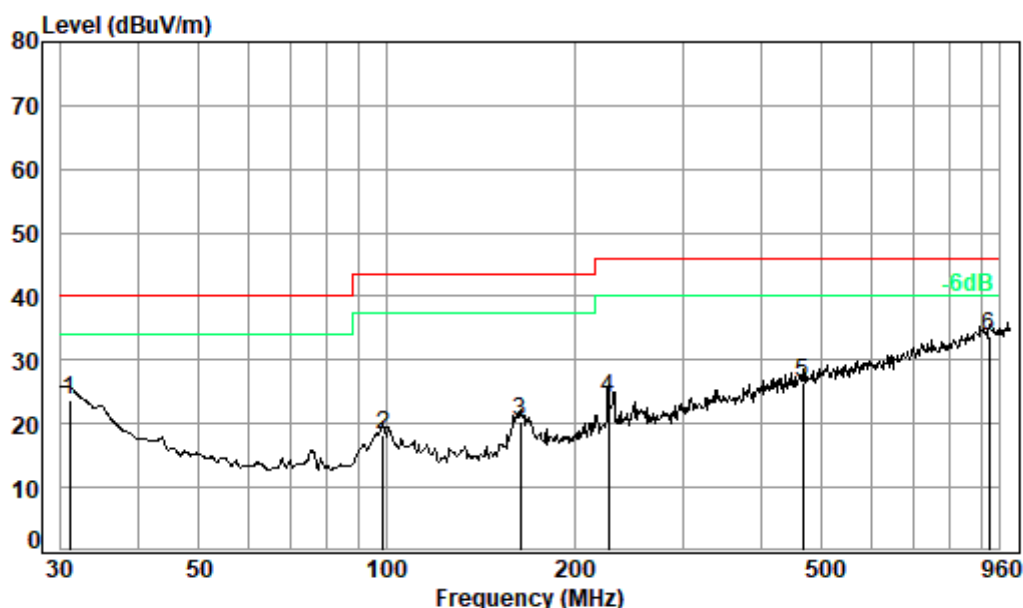


## Measurement Data

### 5.3.1.1 Spurious Emissions

| 30MHz~1GHz |              |
|------------|--------------|
| Test mode: | Transmitting |

Horizontal:



Condition: 3m HORIZONTAL

Job No. : 18064CR

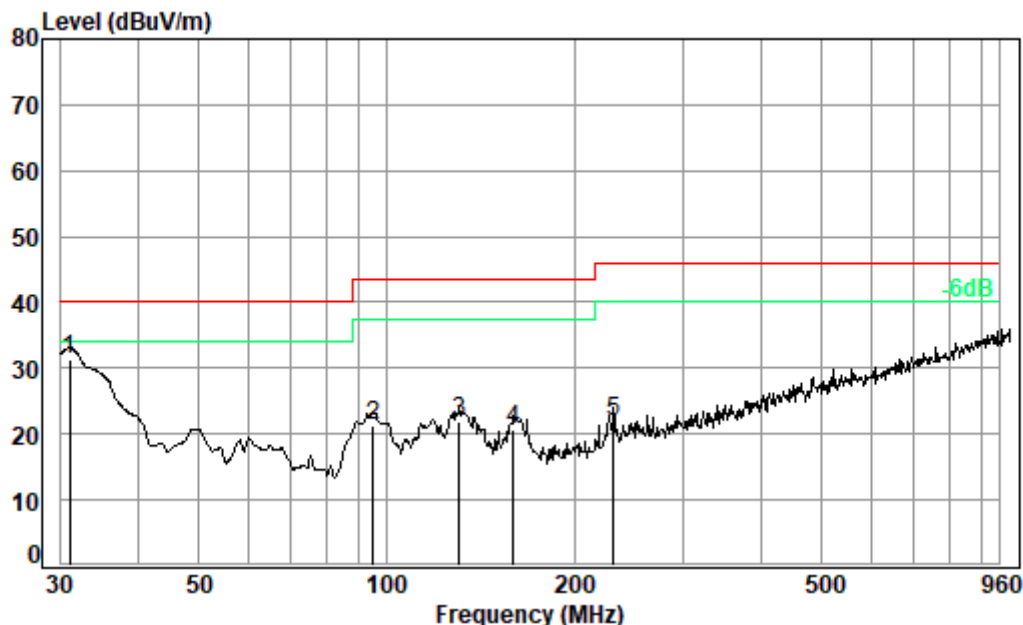
Test Mode: a

|      | Freq   | Cable | Ant    | Preamp | Read  | Limit  | Over   |
|------|--------|-------|--------|--------|-------|--------|--------|
|      | MHz    | Loss  | Factor | Factor | Level | Level  | Limit  |
|      | MHz    | dB    | dB/m   | dB     | dBuV  | dBuV/m | dBuV/m |
| 1    | 30.96  | 0.60  | 21.95  | 27.73  | 29.06 | 23.88  | 40.00  |
| 2    | 98.83  | 1.19  | 13.90  | 27.64  | 30.67 | 18.12  | 43.50  |
| 3    | 163.76 | 1.34  | 15.58  | 27.30  | 30.67 | 20.29  | 43.50  |
| 4    | 226.89 | 1.56  | 17.77  | 27.08  | 31.82 | 24.07  | 46.00  |
| 5    | 465.60 | 2.47  | 23.90  | 27.70  | 27.94 | 26.61  | 46.00  |
| 6 pp | 925.76 | 3.63  | 29.93  | 27.19  | 27.37 | 33.74  | 46.00  |



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Vertical:



Condition: 3m VERTICAL

Job No. : 18064CR

Test Mode: a

|      | Freq   | Cable Loss | Ant Factor | Preamp Factor | Read Level | Level  | Limit  | Over   |
|------|--------|------------|------------|---------------|------------|--------|--------|--------|
|      | MHz    | dB         | dB/m       | dB            | dBuV       | dBuV/m | dBuV/m | dB     |
| 1 pp | 30.96  | 0.60       | 21.95      | 27.73         | 36.44      | 31.26  | 40.00  | -8.74  |
| 2    | 95.09  | 1.15       | 13.57      | 27.64         | 34.15      | 21.23  | 43.50  | -22.27 |
| 3    | 130.84 | 1.28       | 13.44      | 27.46         | 34.63      | 21.89  | 43.50  | -21.61 |
| 4    | 159.78 | 1.34       | 15.48      | 27.32         | 31.16      | 20.66  | 43.50  | -22.84 |
| 5    | 230.91 | 1.58       | 18.09      | 27.07         | 29.28      | 21.88  | 46.00  | -24.12 |
| 6    | 972.34 | 3.67       | 30.17      | 27.01         | 27.20      | 34.03  | 54.00  | -19.97 |



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**Test Data:**

| Transmitting with modulation Mode at 3993.6MHz          |                       |                 |                          |                   |                |                     |                 |              |
|---------------------------------------------------------|-----------------------|-----------------|--------------------------|-------------------|----------------|---------------------|-----------------|--------------|
| Frequency (MHz)                                         | Antenna Factor (dB/m) | Cable Loss (dB) | Preamplifier Factor (dB) | Read Level (dBuV) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 1164MHz ≤ f ≤ 1240MHz & 1559MHz ≤ f ≤ 1610MHz           |                       |                 |                          |                   |                |                     |                 |              |
| 1200.53                                                 | 24.59                 | 4.42            | 40.48                    | 16.28             | 4.81           | 10.00               | -5.19           | Vertical     |
| 1565.12                                                 | 25.80                 | 5.48            | 40.71                    | 14.55             | 5.12           | 10.00               | -4.88           | Vertical     |
| 960MHz ≤ f ≤ 3100MHz (except for above frequency range) |                       |                 |                          |                   |                |                     |                 |              |
| 1334.39                                                 | 25.17                 | 4.92            | 40.59                    | 22.19             | 11.69          | 20.00               | -8.31           | Vertical     |
| 2924.91                                                 | 30.59                 | 2.82            | 41.37                    | 24.67             | 16.71          | 34.00               | -17.29          | Vertical     |
| f > 3100MHz                                             |                       |                 |                          |                   |                |                     |                 |              |
| 3948.41                                                 | 33.46                 | 6.93            | 42.69                    | 51.87             | 49.57          | 54.00               | -4.43           | Vertical     |
| 4123.76                                                 | 33.60                 | 7.13            | 42.89                    | 52.52             | 50.36          | 54.00               | -3.64           | Vertical     |
| 4227.16                                                 | 33.60                 | 7.25            | 43.01                    | 51.54             | 49.38          | 54.00               | -4.62           | Vertical     |
| 10671.00                                                | 35.78                 | 12.49           | 42.45                    | 23.35             | 29.17          | 34.00               | -4.83           | Vertical     |
| 12455.40                                                | 36.30                 | 12.93           | 43.44                    | 24.3              | 30.09          | 34.00               | -3.91           | Vertical     |
| 16016.20                                                | 37.71                 | 14.49           | 43.76                    | 22.14             | 30.58          | 34.00               | -3.42           | Vertical     |
| 1164MHz ≤ f ≤ 1240MHz & 1559MHz ≤ f ≤ 1610MHz           |                       |                 |                          |                   |                |                     |                 |              |
| 1199.40                                                 | 24.59                 | 4.41            | 40.45                    | 15.57             | 4.12           | 10.00               | -5.88           | Horizontal   |
| 1570.31                                                 | 25.77                 | 5.42            | 40.73                    | 14.93             | 5.39           | 10.00               | -4.61           | Horizontal   |
| 960MHz ≤ f ≤ 3100MHz (except for above frequency range) |                       |                 |                          |                   |                |                     |                 |              |
| 1345.66                                                 | 25.18                 | 4.90            | 40.57                    | 23.47             | 12.98          | 20.00               | -7.02           | Horizontal   |
| 2925.25                                                 | 30.61                 | 2.84            | 41.35                    | 25.36             | 17.46          | 34.00               | -16.54          | Horizontal   |
| f > 3100MHz                                             |                       |                 |                          |                   |                |                     |                 |              |
| 3902.56                                                 | 33.34                 | 6.88            | 42.64                    | 48.57             | 46.15          | 54.00               | -7.85           | Horizontal   |
| 4082.55                                                 | 33.60                 | 7.08            | 42.85                    | 47.83             | 45.66          | 54.00               | -8.34           | Horizontal   |
| 4305.90                                                 | 33.60                 | 7.34            | 43.10                    | 45.52             | 43.36          | 54.00               | -10.64          | Horizontal   |
| 10673.00                                                | 35.78                 | 12.49           | 42.45                    | 23.83             | 29.65          | 34.00               | -4.35           | Horizontal   |
| 12463.10                                                | 36.34                 | 12.90           | 43.37                    | 25.71             | 31.58          | 34.00               | -2.42           | Horizontal   |
| 16010.00                                                | 37.70                 | 14.45           | 43.71                    | 22.46             | 30.9           | 34.00               | -3.1            | Horizontal   |



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| Transmitting with modulation Mode at 6489.6MHz                 |                       |                 |                          |                   |                |                     |                 |              |
|----------------------------------------------------------------|-----------------------|-----------------|--------------------------|-------------------|----------------|---------------------|-----------------|--------------|
| Frequency (MHz)                                                | Antenna Factor (dB/m) | Cable Loss (dB) | Preamplifier Factor (dB) | Read Level (dBuV) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| <b>1164MHz ≤ f ≤ 1240MHz &amp; 1559MHz ≤ f ≤ 1610MHz</b>       |                       |                 |                          |                   |                |                     |                 |              |
| 1191.44                                                        | 24.60                 | 4.46            | 40.50                    | 14.50             | 3.07           | 10.00               | -6.93           | Vertical     |
| 1573.86                                                        | 25.90                 | 5.45            | 40.78                    | 15.44             | 6.01           | 10.00               | -3.99           | Vertical     |
| <b>960MHz ≤ f ≤ 3100MHz (except for above frequency range)</b> |                       |                 |                          |                   |                |                     |                 |              |
| 1338.41                                                        | 25.11                 | 4.95            | 40.61                    | 20.93             | 10.38          | 20.00               | -9.62           | Vertical     |
| 2919.49                                                        | 30.55                 | 2.87            | 41.36                    | 26.22             | 18.27          | 34.00               | -15.73          | Vertical     |
| <b>f &gt; 3100MHz</b>                                          |                       |                 |                          |                   |                |                     |                 |              |
| 6377.10                                                        | 35.00                 | 11.31           | 42.51                    | 49.67             | 53.47          | 54.00               | -0.53           | Vertical     |
| 6471.04                                                        | 35.08                 | 11.49           | 42.43                    | 49.38             | 53.52          | 54.00               | -0.48           | Vertical     |
| 6575.59                                                        | 35.32                 | 11.32           | 42.34                    | 48.01             | 52.31          | 54.00               | -1.69           | Vertical     |
| 10677.19                                                       | 35.79                 | 12.45           | 42.49                    | 25.23             | 30.97          | 34.00               | -3.03           | Vertical     |
| 12449.93                                                       | 36.28                 | 12.99           | 43.46                    | 22.69             | 28.50          | 34.00               | -5.50           | Vertical     |
| 16014.82                                                       | 37.77                 | 14.54           | 43.66                    | 21.23             | 29.87          | 34.00               | -4.13           | Vertical     |
| <b>1164MHz ≤ f ≤ 1240MHz &amp; 1559MHz ≤ f ≤ 1610MHz</b>       |                       |                 |                          |                   |                |                     |                 |              |
| 1197.09                                                        | 24.65                 | 4.33            | 40.45                    | 17.13             | 5.66           | 10.00               | -4.34           | Horizontal   |
| 1579.17                                                        | 25.74                 | 5.48            | 40.74                    | 13.95             | 4.44           | 10.00               | -5.56           | Horizontal   |
| <b>960MHz ≤ f ≤ 3100MHz (except for above frequency range)</b> |                       |                 |                          |                   |                |                     |                 |              |
| 1354.92                                                        | 25.14                 | 4.87            | 40.60                    | 24.24             | 13.64          | 20.00               | -6.36           | Horizontal   |
| 2929.16                                                        | 30.52                 | 2.81            | 41.35                    | 24.76             | 16.75          | 34.00               | -17.25          | Horizontal   |
| <b>f &gt; 3100MHz</b>                                          |                       |                 |                          |                   |                |                     |                 |              |
| 6317.41                                                        | 34.96                 | 11.19           | 42.56                    | 45.66             | 49.25          | 54.00               | -4.75           | Horizontal   |
| 6417.21                                                        | 35.04                 | 11.38           | 42.77                    | 46.05             | 49.7           | 54.00               | -4.3            | Horizontal   |
| 6548.16                                                        | 35.24                 | 11.40           | 42.37                    | 44.73             | 49.00          | 54.00               | -5.00           | Horizontal   |
| 10666.43                                                       | 35.73                 | 12.41           | 42.42                    | 22.70             | 28.41          | 34.00               | -5.59           | Horizontal   |
| 12464.12                                                       | 36.34                 | 12.98           | 43.32                    | 26.61             | 32.60          | 34.00               | -1.40           | Horizontal   |
| 16008.37                                                       | 37.69                 | 14.43           | 43.80                    | 21.54             | 29.86          | 34.00               | -4.14           | Horizontal   |

Remark:

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



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5.3.1.2 Peak Power

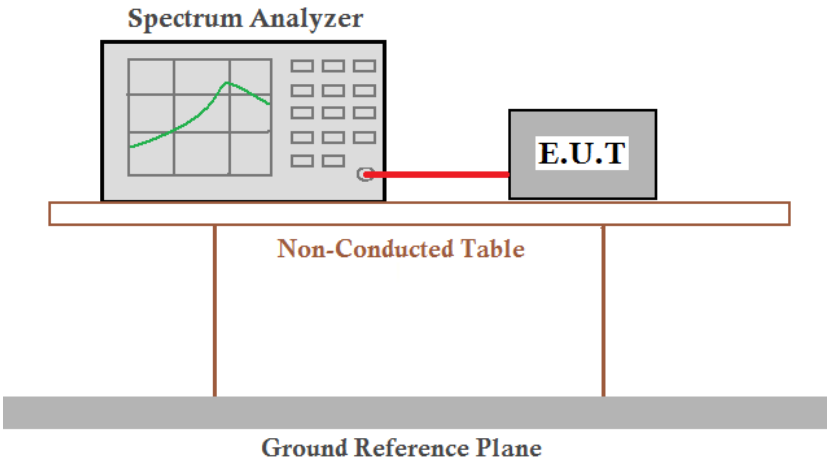
| Field Strength for fundamental @ RBW=10MHz |                       |                 |                    |                   |                |              |
|--------------------------------------------|-----------------------|-----------------|--------------------|-------------------|----------------|--------------|
| Frequency (MHz)                            | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Read Level (dBuV) | Level (dBuV/m) | Polarization |
| 3993.60                                    | 33.35                 | 6.89            | 42.64              | 78.86             | 76.46          | Horizontal   |
| 6489.60                                    | 35.24                 | 11.40           | 42.37              | 75.06             | 79.33          | Horizontal   |
| 3993.60                                    | 33.35                 | 6.89            | 42.64              | 75.77             | 73.37          | Vertical     |
| 6489.60                                    | 35.24                 | 11.40           | 42.37              | 72.25             | 76.52          | Vertical     |

| Caculated Field Strength of fundamental @ RBW=50MHz                                    |                                                                    |                                                                     |                |        |              |
|----------------------------------------------------------------------------------------|--------------------------------------------------------------------|---------------------------------------------------------------------|----------------|--------|--------------|
| Frequency (MHz)                                                                        | Measured Field Strength of fundamental (FS <sub>M</sub> ) (dBuV/m) | Caculated Field Strength of fundamental (FS <sub>C</sub> ) (dBuV/m) | Limit (dBuV/m) | Margin | Polarization |
| 3993.60                                                                                | 76.46                                                              | 90.44                                                               | 95.30          | -4.86  | Horizontal   |
| 6489.60                                                                                | 79.33                                                              | 93.31                                                               | 95.30          | -1.99  | Horizontal   |
| 3993.60                                                                                | 73.37                                                              | 87.35                                                               | 95.30          | -7.95  | Vertical     |
| 6489.60                                                                                | 76.52                                                              | 90.50                                                               | 95.30          | -4.80  | Vertical     |
| Note: FS <sub>C</sub> = FS <sub>M</sub> + 20log(50MHz/10MHz) = FS <sub>M</sub> + 13.98 |                                                                    |                                                                     |                |        |              |





## 5.4 UWB Bandwidth (10dB Bandwidth)

|                        |                                                                                     |
|------------------------|-------------------------------------------------------------------------------------|
| Test Requirement:      | 47 CFR Part 15F Section 15.503(a)                                                   |
| Test Method:           | ANSI C63.10:2013 section 10.1                                                       |
| Test Setup:            |  |
| Limit:                 | ≥500MHz                                                                             |
| Exploratory Test Mode: | a:TX mode_Keep the EUT in transmitting with modulation mode.                        |
| Instruments Used:      | Refer to section 4.8 for details                                                    |
| Test Results:          | Pass                                                                                |

## Measurement Data

| Test Frequency (MHz) | F <sub>L</sub> (MHz) | F <sub>H</sub> (MHz) | 10dB bandwidth (MHz) | Limit (MHz) | Results |
|----------------------|----------------------|----------------------|----------------------|-------------|---------|
| 3993.6               | 3579.32              | 4415.86              | 836.54               | ≥500MHz     | Pass    |
| 6489.6               | 6084.13              | 6896.63              | 812.50               | ≥500MHz     | Pass    |



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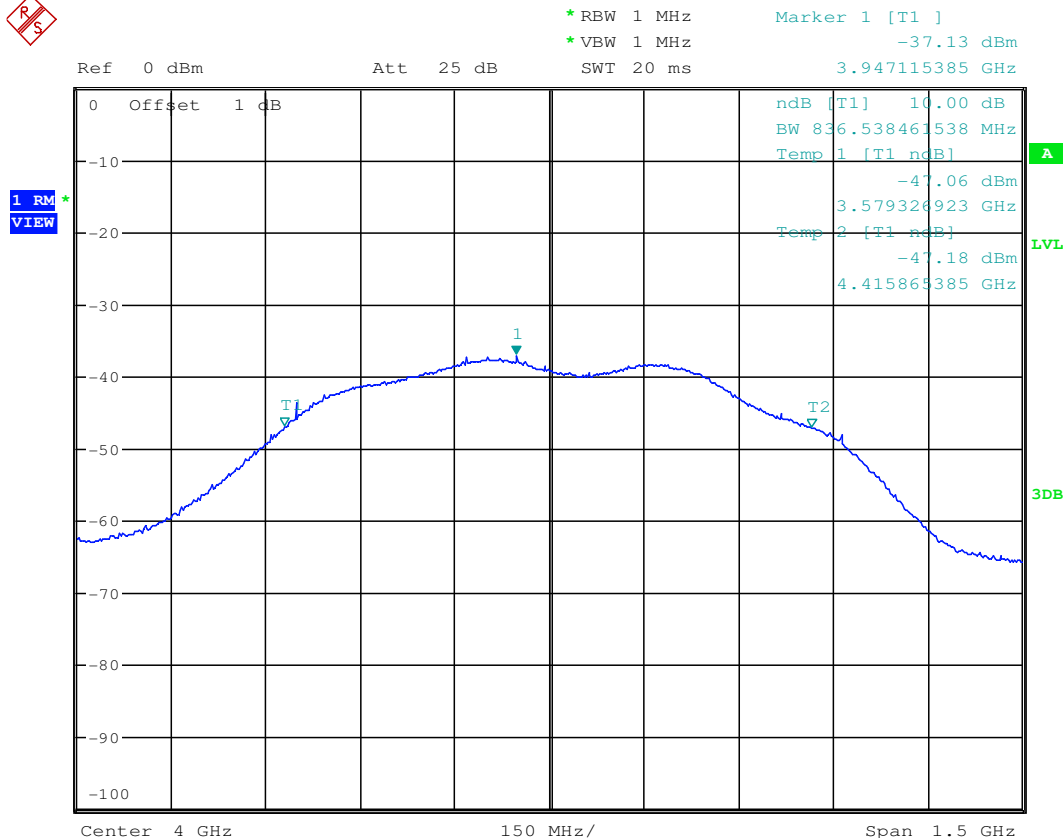
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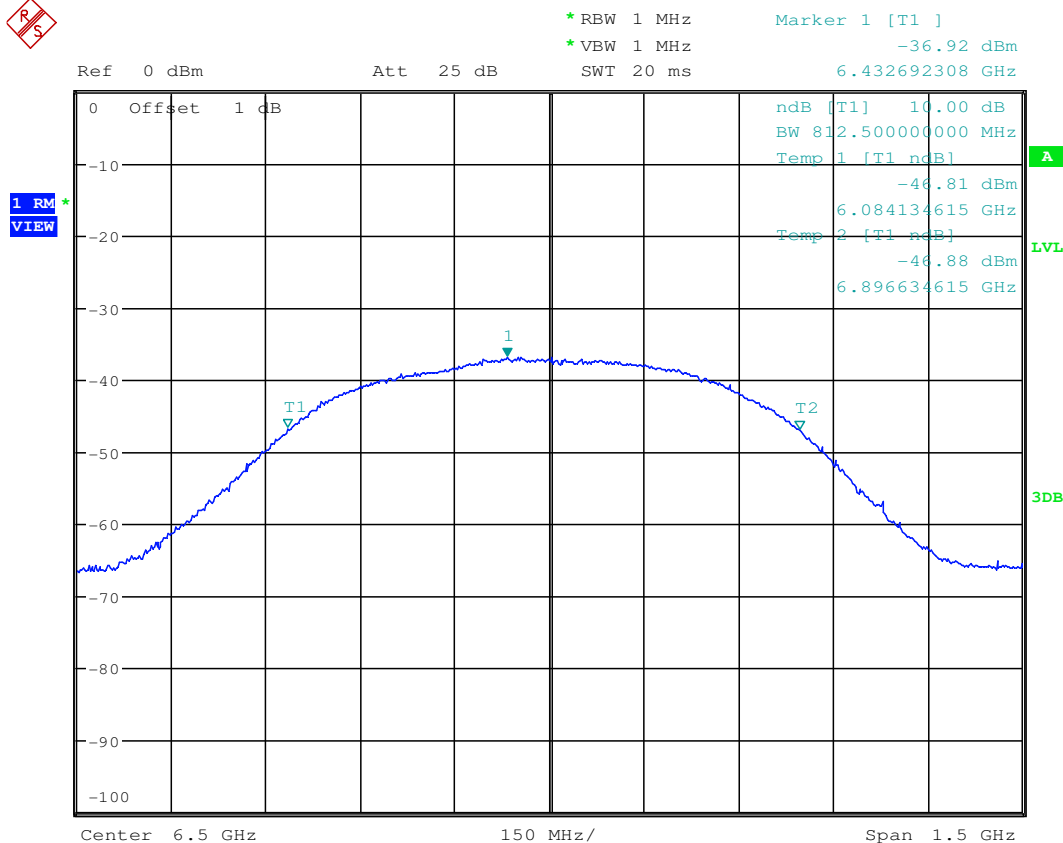
Test plot as follows:

|               |           |
|---------------|-----------|
| Test channel: | 3993.6MHz |
|---------------|-----------|



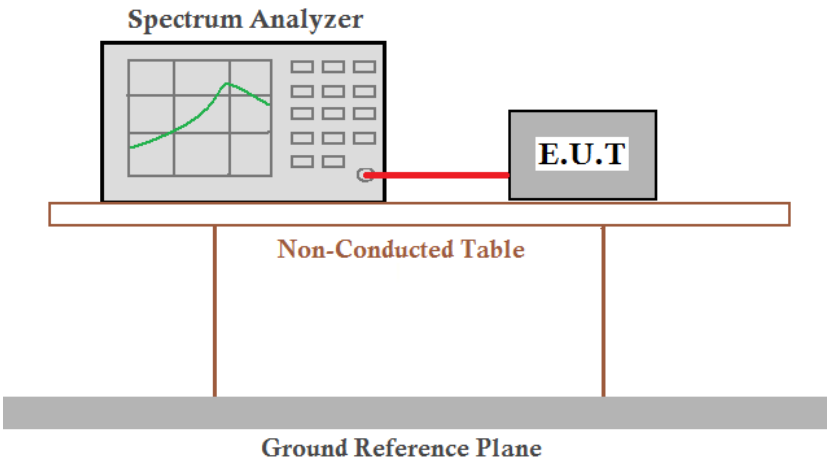


|               |           |
|---------------|-----------|
| Test channel: | 6489.6MHz |
|---------------|-----------|





## 5.5 Dwell Time

|                        |                                                                                                                                                                                    |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Test Requirement:      | 47 CFR Part 15F Section 15.519(a)(1)                                                                                                                                               |
| Test Method:           | ANSI C63.10:2013 section 7.8.4                                                                                                                                                     |
| Test Setup:            |                                                                                                 |
| Limit:                 | The UWB intentional radiator shall cease transmission within 10 seconds unless it receives an acknowledgement from the associated receiver that its transmission is being received |
| Exploratory Test Mode: | b.Normal operation mode                                                                                                                                                            |
| Instruments Used:      | Refer to section 4.8 for details                                                                                                                                                   |
| Test Results:          | N/A                                                                                                                                                                                |



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## 6 Photographs - EUT Test Setup

Please refer to test setup photos.

## 7 Photographs - EUT Constructional Details

Please refer to external photos and internal photos of EUT.

- End of the Report -



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