



# MEASUREMENT REPORT

## FCC PART 15.249

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**FCC ID:** 2ARDMEDC211D  
**Application:** ShenZhen Easydetek Technology CO. LTD.  
**Application Type:** Certification  
**Product:** Microwave  
**Model No.:** EDC211D-A  
**Serial Model No.:** EDC211D-X ("X" means A-Z)  
**Brand Name:** Easy Detek  
**FCC Classification:** Part 15 low power transceiver, RX verified (DXT)  
**FCC Rule Part(s):** Part 15.249  
**Test Procedure(s):** ANSI C63.10 - 2013  
**Test Date:** December 16, 2020 ~ January 26, 2021

Reviewed By:

*Vincent Yu*

Vincent Yu

Approved By:

*Robin Wu*

Robin Wu



The test results relate only to the samples tested.

This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in ANSI C63.10-2013. Test results reported herein relate only to the item(s) tested.

The test report shall not be reproduced except in full without the written approval of MRT Technology (Suzhou) Co., Ltd.

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## Revision History

| Report No.    | Version | Description    | Issue Date | Note  |
|---------------|---------|----------------|------------|-------|
| 2007RSU072-U1 | Rev. 01 | Initial Report | 01-27-2021 | Valid |
|               |         |                |            |       |

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## 2. PRODUCT INFORMATION

### 2.1. Equipment Description

|                         |                                    |
|-------------------------|------------------------------------|
| Product Name            | Microwave                          |
| Model No.               | EDC211D-A                          |
| Serial Model No.        | EDC211D-X ("X" means A-Z) (Note 1) |
| Brand Name              | Easy Detek                         |
| Operation Temperature   | -20 ~ 70°C                         |
| Working Frequency Range | 5730MHz ~ 5870MHz                  |
| Antenna Type            | PCB Antenna                        |
| Antenna Gain            | 4dBi                               |
| Channel Number          | 512                                |

Note 1: It could be such as different infrared receiver, different photosensitive, different dip switch.

Note 2: All the above information is declared by manufacturer.

### 2.2. Frequency List

| Channel No. | 512      |          |          |          |          |                 |          |          |          |          |          |          |                 |
|-------------|----------|----------|----------|----------|----------|-----------------|----------|----------|----------|----------|----------|----------|-----------------|
| Unit        | MHz      |          |          |          |          |                 |          |          |          |          |          |          |                 |
| 5730.000    | 5740.686 | 5751.372 | 5762.058 | 5772.744 | 5783.430 | 5794.116        | 5804.802 | 5815.488 | 5826.174 | 5836.860 | 5847.546 | 5858.232 | 5868.918        |
| 5730.274    | 5740.960 | 5751.646 | 5762.332 | 5773.018 | 5783.704 | 5794.390        | 5805.076 | 5815.762 | 5826.448 | 5837.134 | 5847.820 | 5858.506 | 5869.192        |
| 5730.548    | 5741.234 | 5751.920 | 5762.606 | 5773.292 | 5783.978 | 5794.664        | 5805.350 | 5816.036 | 5826.722 | 5837.408 | 5848.094 | 5858.780 | 5869.466        |
| 5730.822    | 5741.508 | 5752.194 | 5762.880 | 5773.566 | 5784.252 | 5794.938        | 5805.624 | 5816.310 | 5826.996 | 5837.682 | 5848.368 | 5859.054 | 5869.740        |
| 5731.096    | 5741.782 | 5752.468 | 5763.154 | 5773.840 | 5784.526 | 5795.212        | 5805.898 | 5816.584 | 5827.270 | 5837.956 | 5848.642 | 5859.328 | <b>5870.000</b> |
| 5731.370    | 5742.056 | 5752.742 | 5763.428 | 5774.114 | 5784.800 | 5795.486        | 5806.172 | 5816.858 | 5827.544 | 5838.230 | 5848.916 | 5859.602 |                 |
| 5731.644    | 5742.330 | 5753.016 | 5763.702 | 5774.388 | 5785.074 | 5795.760        | 5806.446 | 5817.132 | 5827.818 | 5838.504 | 5849.190 | 5859.876 |                 |
| 5731.918    | 5742.604 | 5753.290 | 5763.976 | 5774.662 | 5785.348 | 5796.034        | 5806.720 | 5817.406 | 5828.092 | 5838.778 | 5849.464 | 5860.150 |                 |
| 5732.192    | 5742.878 | 5753.564 | 5764.250 | 5774.936 | 5785.622 | 5796.308        | 5806.994 | 5817.680 | 5828.366 | 5839.052 | 5849.738 | 5860.424 |                 |
| 5732.466    | 5743.152 | 5753.838 | 5764.524 | 5775.210 | 5785.896 | 5796.582        | 5807.268 | 5817.954 | 5828.640 | 5839.326 | 5850.012 | 5860.698 |                 |
| 5732.740    | 5743.426 | 5754.112 | 5764.798 | 5775.484 | 5786.170 | 5796.856        | 5807.542 | 5818.228 | 5828.914 | 5839.600 | 5850.286 | 5860.972 |                 |
| 5733.014    | 5743.700 | 5754.386 | 5765.072 | 5775.758 | 5786.444 | 5797.130        | 5807.816 | 5818.502 | 5829.188 | 5839.874 | 5850.560 | 5861.246 |                 |
| 5733.288    | 5743.974 | 5754.660 | 5765.346 | 5776.032 | 5786.718 | 5797.404        | 5808.090 | 5818.776 | 5829.462 | 5840.148 | 5850.834 | 5861.520 |                 |
| 5733.562    | 5744.248 | 5754.934 | 5765.620 | 5776.306 | 5786.992 | 5797.678        | 5808.364 | 5819.050 | 5829.736 | 5840.422 | 5851.108 | 5861.794 |                 |
| 5733.836    | 5744.522 | 5755.208 | 5765.894 | 5776.580 | 5787.266 | 5797.952        | 5808.638 | 5819.324 | 5830.010 | 5840.696 | 5851.382 | 5862.068 |                 |
| 5734.110    | 5744.796 | 5755.482 | 5766.168 | 5776.854 | 5787.540 | 5798.226        | 5808.912 | 5819.598 | 5830.284 | 5840.970 | 5851.656 | 5862.342 |                 |
| 5734.384    | 5745.070 | 5755.756 | 5766.442 | 5777.128 | 5787.814 | 5798.500        | 5809.186 | 5819.872 | 5830.558 | 5841.244 | 5851.930 | 5862.616 |                 |
| 5734.658    | 5745.344 | 5756.030 | 5766.716 | 5777.402 | 5788.088 | 5798.774        | 5809.460 | 5820.146 | 5830.832 | 5841.518 | 5852.204 | 5862.890 |                 |
| 5734.932    | 5745.618 | 5756.304 | 5766.990 | 5777.676 | 5788.362 | 5799.048        | 5809.734 | 5820.420 | 5831.106 | 5841.792 | 5852.478 | 5863.164 |                 |
| 5735.206    | 5745.892 | 5756.578 | 5767.264 | 5777.950 | 5788.636 | 5799.322        | 5810.008 | 5820.694 | 5831.380 | 5842.066 | 5852.752 | 5863.438 |                 |
| 5735.480    | 5746.166 | 5756.852 | 5767.538 | 5778.224 | 5788.910 | 5799.596        | 5810.282 | 5820.968 | 5831.654 | 5842.340 | 5853.026 | 5863.712 |                 |
| 5735.754    | 5746.440 | 5757.126 | 5767.812 | 5778.498 | 5789.184 | 5799.870        | 5810.556 | 5821.242 | 5831.928 | 5842.614 | 5853.300 | 5863.986 |                 |
| 5736.028    | 5746.714 | 5757.400 | 5768.086 | 5778.772 | 5789.458 | <b>5800.000</b> | 5810.830 | 5821.516 | 5832.202 | 5842.888 | 5853.574 | 5864.260 |                 |
| 5736.302    | 5746.988 | 5757.674 | 5768.360 | 5779.046 | 5789.732 | 5800.418        | 5811.104 | 5821.790 | 5832.476 | 5843.162 | 5853.848 | 5864.534 |                 |
| 5736.576    | 5747.262 | 5757.948 | 5768.634 | 5779.320 | 5790.006 | 5800.692        | 5811.378 | 5822.064 | 5832.750 | 5843.436 | 5854.122 | 5864.808 |                 |
| 5736.850    | 5747.536 | 5758.222 | 5768.908 | 5779.594 | 5790.280 | 5800.966        | 5811.652 | 5822.338 | 5833.024 | 5843.710 | 5854.396 | 5865.082 |                 |
| 5737.124    | 5747.810 | 5758.496 | 5769.182 | 5779.868 | 5790.554 | 5801.240        | 5811.926 | 5822.612 | 5833.298 | 5843.984 | 5854.670 | 5865.356 |                 |
| 5737.398    | 5748.084 | 5758.770 | 5769.456 | 5780.142 | 5790.828 | 5801.514        | 5812.200 | 5822.886 | 5833.572 | 5844.258 | 5854.944 | 5865.630 |                 |
| 5737.672    | 5748.358 | 5759.044 | 5769.730 | 5780.416 | 5791.102 | 5801.788        | 5812.474 | 5823.160 | 5833.846 | 5844.532 | 5855.218 | 5865.904 |                 |
| 5737.946    | 5748.632 | 5759.318 | 5770.004 | 5780.690 | 5791.376 | 5802.062        | 5812.748 | 5823.434 | 5834.120 | 5844.806 | 5855.492 | 5866.178 |                 |
| 5738.220    | 5748.906 | 5759.592 | 5770.278 | 5780.964 | 5791.650 | 5802.336        | 5813.022 | 5823.708 | 5834.394 | 5845.080 | 5855.766 | 5866.452 |                 |
| 5738.494    | 5749.180 | 5759.866 | 5770.552 | 5781.238 | 5791.924 | 5802.610        | 5813.296 | 5823.982 | 5834.668 | 5845.354 | 5856.040 | 5866.726 |                 |
| 5738.768    | 5749.454 | 5760.140 | 5770.826 | 5781.512 | 5792.198 | 5802.884        | 5813.570 | 5824.256 | 5834.942 | 5845.628 | 5856.314 | 5867.000 |                 |
| 5739.042    | 5749.728 | 5760.414 | 5771.100 | 5781.786 | 5792.472 | 5803.158        | 5813.844 | 5824.530 | 5835.216 | 5845.902 | 5856.588 | 5867.274 |                 |
| 5739.316    | 5750.002 | 5760.688 | 5771.374 | 5782.060 | 5792.746 | 5803.432        | 5814.118 | 5824.804 | 5835.490 | 5846.176 | 5856.862 | 5867.548 |                 |
| 5739.590    | 5750.276 | 5760.962 | 5771.648 | 5782.334 | 5793.020 | 5803.706        | 5814.392 | 5825.078 | 5835.764 | 5846.450 | 5857.136 | 5867.822 |                 |
| 5739.864    | 5750.550 | 5761.236 | 5771.922 | 5782.608 | 5793.294 | 5803.980        | 5814.666 | 5825.352 | 5836.038 | 5846.724 | 5857.410 | 5868.096 |                 |
| 5740.138    | 5750.824 | 5761.510 | 5772.196 | 5782.882 | 5793.568 | 5804.254        | 5814.940 | 5825.626 | 5836.312 | 5846.998 | 5857.684 | 5868.370 |                 |
| 5740.412    | 5751.098 | 5761.784 | 5772.470 | 5783.156 | 5793.842 | 5804.528        | 5815.214 | 5825.900 | 5836.586 | 5847.272 | 5857.958 | 5868.644 |                 |

### 2.3. Test Frequency

| Test Channel | Test Frequency |
|--------------|----------------|
| Low          | 5730 MHz       |
| Middle       | 5800 MHz       |
| High         | 5870 MHz       |

### 2.4. Test Mode

| Test Mode | Transmit |
|-----------|----------|
|           |          |

### 2.5. Test Environment Condition

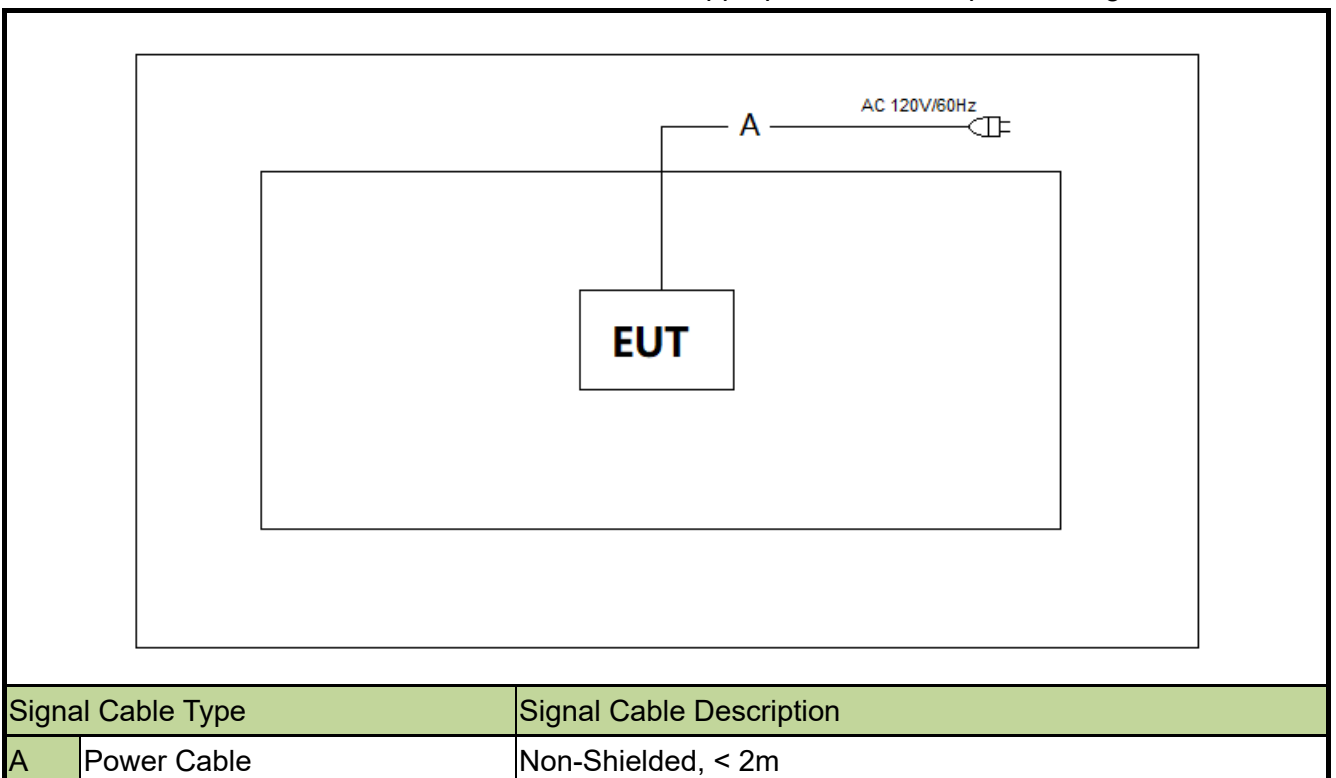
|                     |              |
|---------------------|--------------|
| Ambient Temperature | 15°C ~ 35°C  |
| Relative Humidity   | 20%RH ~75%RH |

### 2.6. Test Software

The EUT will be in transmitting mode after power supply.

### 2.7. Test Configuration

The ANSI C63.10: 2013 was used to reference the appropriate EUT setup for testing.



### 3. ANTENNA REQUIREMENTS

**Excerpt from §15.203 of the FCC Rules/Regulations:**

“An intentional radiator antenna shall be designed to ensure that no antenna other than that furnished by the responsible party can be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section.”

- The antenna of the EUT is **permanently attached**.
- There are no provisions for connection to an external antenna.

**Conclusion:**

This unit complies with the requirement of §15.203.



#### 4. TEST EQUIPMENT CALIBRATION DATE

##### Conducted Emission (WZ-SR2)

| Instrument                 | Manufacturer | Type No.    | Asset No.   | Cali. Interval | Cali. Due Date |
|----------------------------|--------------|-------------|-------------|----------------|----------------|
| EMI Test Receiver          | R&S          | ESR3        | MRTSUE06185 | 1 year         | 2021/01/18     |
|                            |              |             |             | 1 year         | 2022/01/12     |
| Two-Line V-Network         | R&S          | ENV216      | MRTSUE06002 | 1 year         | 2021/06/11     |
| Temperature Humidity Meter | testo        | 608-H1      | MRTSUE06404 | 1 year         | 2021/07/26     |
| Shielding Room             | MIX-BEP      | Chamber-SR2 | MRTSUE06215 | N/A            | N/A            |

##### Conducted Emission (SIP-SR2)

| Instrument         | Manufacturer | Type No. | Asset No.   | Cali. Interval | Cali. Due Date |
|--------------------|--------------|----------|-------------|----------------|----------------|
| EMI Test Receiver  | R&S          | ESR3     | MRTSUE06613 | 1 year         | 2021/07/02     |
| Two-Line V-Network | R&S          | ENV216   | MRTSUE06003 | 1 year         | 2021/06/11     |
| Thermal Hygrometer | testo        | 608-H1   | MRTSUE06621 | 1 year         | 2021/12/03     |

##### Radiated Emission (WZ-AC1)

| Instrument                 | Manufacturer | Type No.    | Asset No.   | Cali. Interval | Cali. Due Date |
|----------------------------|--------------|-------------|-------------|----------------|----------------|
| EMI Test Receiver          | R&S          | ESR7        | MRTSUE06001 | 1 year         | 2021/01/18     |
|                            |              |             |             | 1 year         | 2022/01/12     |
| PXA Signal Analyzer        | Keysight     | N9030B      | MRTSUE06395 | 1 year         | 2021/08/30     |
| Loop Antenna               | Schwarzbeck  | FMZB 1519   | MRTSUE06025 | 1 year         | 2021/10/22     |
| Bilog Period Antenna       | Schwarzbeck  | VULB 9168   | MRTSUE06172 | 1 year         | 2021/08/08     |
| Horn Antenna               | Schwarzbeck  | BBHA 9120D  | MRTSUE06023 | 1 year         | 2021/09/27     |
| Horn Antenna               | Schwarzbeck  | BBHA9170    | MRTSUE06597 | 1 year         | 2021/12/16     |
| Microwave System Amplifier | Agilent      | 83017A      | MRTSUE06076 | 1 year         | 2021/11/14     |
| Preamplifier               | Schwarzbeck  | BBV 9721    | MRTSUE06121 | 1 year         | 2021/06/11     |
| Temperature Humidity Meter | testo        | 608-H1      | MRTSUE06403 | 1 year         | 2021/07/26     |
| Anechoic Chamber           | TDK          | Chamber-AC1 | MRTSUE06212 | 1 year         | 2021/04/30     |

## Radiated Emission (WZ-AC2)

| Instrument                      | Manufacturer | Type No.    | Asset No.   | Cali. Interval | Cali. Due Date |
|---------------------------------|--------------|-------------|-------------|----------------|----------------|
| MXE EMI Receiver                | Keysight     | N9038A      | MRTSUE06125 | 1 year         | 2021/07/02     |
| Loop Antenna                    | Schwarzbeck  | FMZB 1519   | MRTSUE06025 | 1 year         | 2021/10/22     |
| Bilog Period Antenna            | Schwarzbeck  | VULB 9162   | MRTSUE06022 | 1 year         | 2021/05/26     |
| Broad-Band Horn Antenna         | Schwarzbeck  | BBHA 9120D  | MRTSUE06171 | 1 year         | 2021/10/25     |
| Horn Antenna                    | Schwarzbeck  | BBHA9170    | MRTSUE06597 | 1 year         | 2021/12/16     |
| Broadband Coaxial Pre-amplifier | Schwarzbeck  | BBV 9718    | MRTSUE06176 | 1 year         | 2021/11/14     |
| Pre-amplifier                   | Schwarzbeck  | BBV 9721    | MRTSUE06121 | 1 year         | 2021/06/11     |
| Temperature Humidity Meter      | Minggao      | ETH529      | MRTSUE06170 | 1 year         | 2021/12/14     |
| Anechoic Chamber                | RIKEN        | Chamber-AC2 | MRTSUE06213 | 1 year         | 2021/04/30     |

## Radiated Emission (SIP-AC1)

| Instrument                 | Manufacturer | Type No.    | Asset No.   | Cali. Interval | Cali. Due Date |
|----------------------------|--------------|-------------|-------------|----------------|----------------|
| EMI Test Receiver          | R&S          | ESR3        | MRTSUE06612 | 1 year         | 2021/07/02     |
| EXA Signal Analyzer        | Keysight     | N9010B      | MRTSUE06559 | 1 year         | 2021/07/23     |
| Loop Antenna               | Schwarzbeck  | FMZB 1519   | MRTSUE06025 | 1 year         | 2021/10/22     |
| Bilog Period Antenna       | Schwarzbeck  | VULB9168    | MRTSUE06645 | 1 year         | 2021/08/30     |
| Double Ridged Horn Antenna | R&S          | HF907       | MRTSUE06610 | 1 year         | 2021/08/30     |
| Pre-amplifier              | EMCI         | EMC051845SE | MRTSUE06600 | 1 year         | 2021/11/09     |
| Temperature Humidity Meter | testo        | 608-H1      | MRTSUE06620 | 1 year         | 2020/12/29     |
|                            |              |             |             | 1 year         | 2021/12/03     |
| Anechoic Chamber           | RIKEN        | SIP-AC1     | MRTSUE06554 | 1 year         | 2020/12/25     |
|                            |              |             |             | 1 year         | 2021/12/24     |

## Radiated Emission (SIP-AC2)

| Instrument                 | Manufacturer | Type No.    | Asset No.   | Cali. Interval | Cali. Due Date |
|----------------------------|--------------|-------------|-------------|----------------|----------------|
| EMI Test Receiver          | R&S          | ESR3        | MRTSUE06613 | 1 year         | 2021/07/02     |
| MXA Signal Analyzer        | Keysight     | N9020B      | MRTSUE06604 | 1 year         | 2021/09/26     |
| Loop Antenna               | Schwarzbeck  | FMZB 1519   | MRTSUE06025 | 1 year         | 2021/10/22     |
| Bilog Period Antenna       | Schwarzbeck  | VULB9168    | MRTSUE06646 | 1 year         | 2021/08/30     |
| Horn Antenna               | Schwarzbeck  | BBHA9120D   | MRTSUE06648 | 1 year         | 2021/11/26     |
| Horn Antenna               | Schwarzbeck  | BBHA9170    | MRTSUE06599 | 1 year         | 2021/11/26     |
| Preamplifier               | EMCI         | EMC051845SE | MRTSUE06644 | 1 year         | 2021/11/09     |
| Preamplifier               | EMCI         | EMC184045SE | MRTSUE06602 | 1 year         | 2021/10/12     |
| Temperature Humidity Meter | testo        | 608-H1      | MRTSUE06624 | 1 year         | 2020/12/29     |
|                            |              |             |             | 1 year         | 2021/12/03     |
| Anechoic Chamber           | RIKEN        | SIP-AC2     | MRTSUE06781 | 1 year         | 2020/12/25     |
|                            |              |             |             | 1 year         | 2021/12/24     |

## Radiated Emission (SIP-AC3)

| Instrument                 | Manufacturer | Type No.    | Asset No.   | Cali. Interval | Cali. Due Date |
|----------------------------|--------------|-------------|-------------|----------------|----------------|
| EMI Test Receiver          | R&S          | ESR3        | MRTSUE06612 | 1 year         | 2021/07/02     |
| EXA Signal Analyzer        | Keysight     | N9010B      | MRTSUE06559 | 1 year         | 2021/07/23     |
| Loop Antenna               | Schwarzbeck  | FMZB 1519   | MRTSUE06025 | 1 year         | 2021/10/22     |
| Bilog Period Antenna       | Schwarzbeck  | VULB9168    | MRTSUE06647 | 1 year         | 2021/08/08     |
| Double Ridged Horn Antenna | R&S          | HF907       | MRTSUE06611 | 1 year         | 2021/09/13     |
| Horn Antenna               | Schwarzbeck  | BBHA9170    | MRTSUE06598 | 1 year         | 2021/11/26     |
| Preamplifier               | EMCI         | EMC012645SE | MRTSUE06642 | 1 year         | 2021/01/16     |
| Preamplifier               | EMCI         | EMC184045SE | MRTSUE06641 | 1 year         | 2021/01/16     |
| Temperature Humidity Meter | testo        | 608-H1      | MRTSUE06622 | 1 year         | 2020/12/29     |
|                            |              |             |             | 1 year         | 2021/12/03     |
| Anechoic Chamber           | RIKEN        | SIP-AC3     | MRTSUE06782 | 1 year         | 2020/12/25     |
|                            |              |             |             | 1 year         | 2021/12/24     |

## Conducted Test Equipment (WZ-TR3)

| Instrument                             | Manufacturer | Type No.    | Asset No.   | Cali. Interval | Cali. Due Date |
|--|--------------|-------------|-------------|----------------|----------------|
| EXA Signal Analyzer                    | Agilent      | N9020A      | MRTSUE06106 | 1 year         | 2021/04/14     |
| EXA Signal Analyzer                    | Keysight     | N9010B      | MRTSUE06607 | 1 year         | 2021/01/08     |
| Signal Analyzer                        | R&S          | FSV40       | MRTSUE06218 | 1 year         | 2021/04/14     |
| Power Meter                            | Agilent      | U2021XA     | MRTSUE06030 | 1 year         | 2021/10/22     |
| USB wideband power sensor              | Keysight     | U2021XA     | MRTSUE06446 | 1 year         | 2021/06/11     |
| USB wideband power sensor              | Keysight     | U2021XA     | MRTSUE06447 | 1 year         | 2021/06/11     |
| Bluetooth Test Set                     | Anritsu      | MT8852B-042 | MRTSUE06389 | 1 year         | 2021/06/11     |
| Audio Analyzer                         | Agilent      | U8903B      | MRTSUE06143 | 1 year         | 2021/06/11     |
| Modulation Analyzer                    | HP           | HP8901A     | MRTSUE06098 | 1 year         | 2021/09/26     |
| Wideband Radio<br>Communication Tester | R&S          | CMW 500     | MRTSUE06243 | 1 year         | 2021/10/20     |
| DC Power Supply                        | GWINSTEK     | DPS-3303C   | MRTSUE06064 | N/A            | N/A            |
| Temperature & Humidity<br>Chamber      | BAOYT        | BYH-150CL   | MRTSUE06051 | 1 year         | 2021/10/22     |
| Temperature Humidity Meter             | testo        | 608-H1      | MRTSUE06401 | 1 year         | 2021/07/26     |

## Conducted Test Equipment (SIP-SR5)

| Instrument                             | Manufacturer | Type No.    | Asset No.   | Cali. Interval | Cali. Due Date |
|--|--------------|-------------|-------------|----------------|----------------|
| Signal Analyzer                        | R&S          | FSV40       | MRTSUE06218 | 1 year         | 2021/04/14     |
| PXA Signal Analyzer                    | Keysight     | N9030B      | MRTSUE06395 | 1 year         | 2021/08/30     |
| USB wideband power sensor              | Agilent      | U2021XA     | MRTSUE06595 | 1 year         | 2021/09/26     |
| USB wideband power sensor              | Agilent      | U2021XA     | MRTSUE06596 | 1 year         | 2021/09/26     |
| Wideband Radio<br>Communication Tester | R&S          | CMW 500     | MRTSUE06243 | 1 year         | 2021/10/20     |
| Bluetooth Test Set                     | Anritsu      | MT8852B-042 | MRTSUE06389 | 1 year         | 2021/06/11     |
| Temperature Chamber                    | BAOYT        | BYG-408CS   | MRTSUE06847 | 1 year         | 2021/03/31     |
| Temperature Humidity Meter             | testo        | 622         | MRTSUE06629 | 1 year         | 2020/12/30     |
|  |              |             |             | 1 year         | 2021/11/25     |

| Software     | Version | Function          |
|--------------|---------|-------------------|
| EMI Software | V3      | EMI Test Software |

## 5. MEASUREMENT UNCERTAINTY

Where relevant, the following test uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of  $k = 2$ .

| AC Conducted Emission Measurement  |
|--|
| Measurement Uncertainty for a Level of Confidence of 95% ( $U=2Uc(y)$ ):<br>9kHz~150kHz: 3.74dB<br>150kHz~30MHz: 3.44dB  |
| Radiated Disturbance   |
| Measurement Uncertainty for a Level of Confidence of 95% ( $U=2Uc(y)$ ):<br>Horizontal: 30MHz~300MHz: 5.04dB<br>300MHz~1GHz: 4.95dB<br>1GHz~40GHz: 6.40dB<br>Vertical: 30MHz~300MHz: 5.24dB<br>300MHz~1GHz: 6.03dB<br>1GHz~40GHz: 6.40dB |
| Occupied Bandwidth   |
| Measurement Uncertainty for a Level of Confidence of 95% ( $U=2Uc(y)$ ):<br>0.28%  |

## 6. TEST RESULT

### 6.1. Summary

| FCC Part Section(s) | Test Description  | Test Limit   | Test Condition | Test Result | Reference         |
|---------------------|---|--|----------------|-------------|-------------------|
| 15.207              | AC Conducted Emissions<br>150kHz - 30MHz                                      | < FCC 15.207 limits  | Line Conducted | Pass        | Section 6.2       |
| 15.209<br>15.249    | General Field Strength Limits (Restricted Bands and Radiated Emission Limits) | Emissions in restricted bands must meet the radiated limits detailed in 15.209 | Radiated       | Pass        | Section 6.3 & 6.4 |
| 15.215(c)           | 20dB Spectrum Bandwidth   | 20 dB bandwidth of the emission in the specific band                           |                | Pass        | Section 6.5       |

**Notes:**

1. All modes of operation and data rates were investigated. For radiated emission test, every axis (X, Y, Z) was also verified. The test results shown in the following sections represent the worst-case emissions.
2. The analyzer plots shown in this section were all taken with an offset into the analyzer. The offset was used to account for the losses of the cables and attenuators used as part of the system to connect the EUT to the analyzer at all frequencies of interest.

## 6.2. Conducted Emission

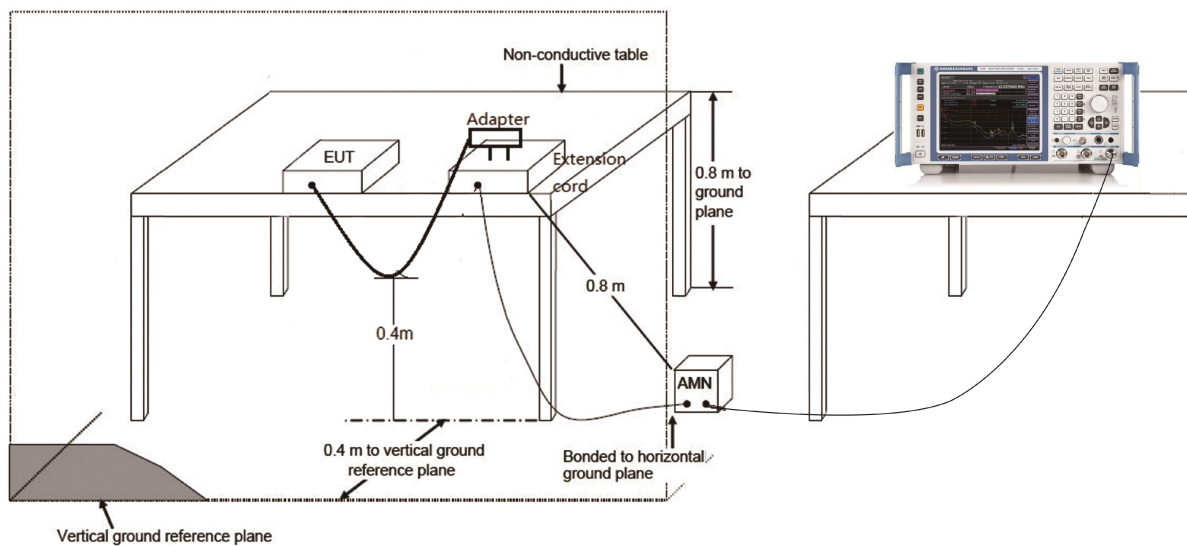
### 6.2.1. Test Limit

| FCC Part 15.207 Limits |                    |                    |
|------------------------|--------------------|--------------------|
| Frequency<br>(MHz)     | QP<br>(dB $\mu$ V) | AV<br>(dB $\mu$ V) |
| 0.15 ~ 0.50            | 66 ~ 56            | 56 ~ 46            |
| 0.50 ~ 5.0             | 56                 | 46                 |
| 5.0 ~ 30               | 60                 | 50                 |

Note 1: The lower limit shall apply at the transition frequencies.

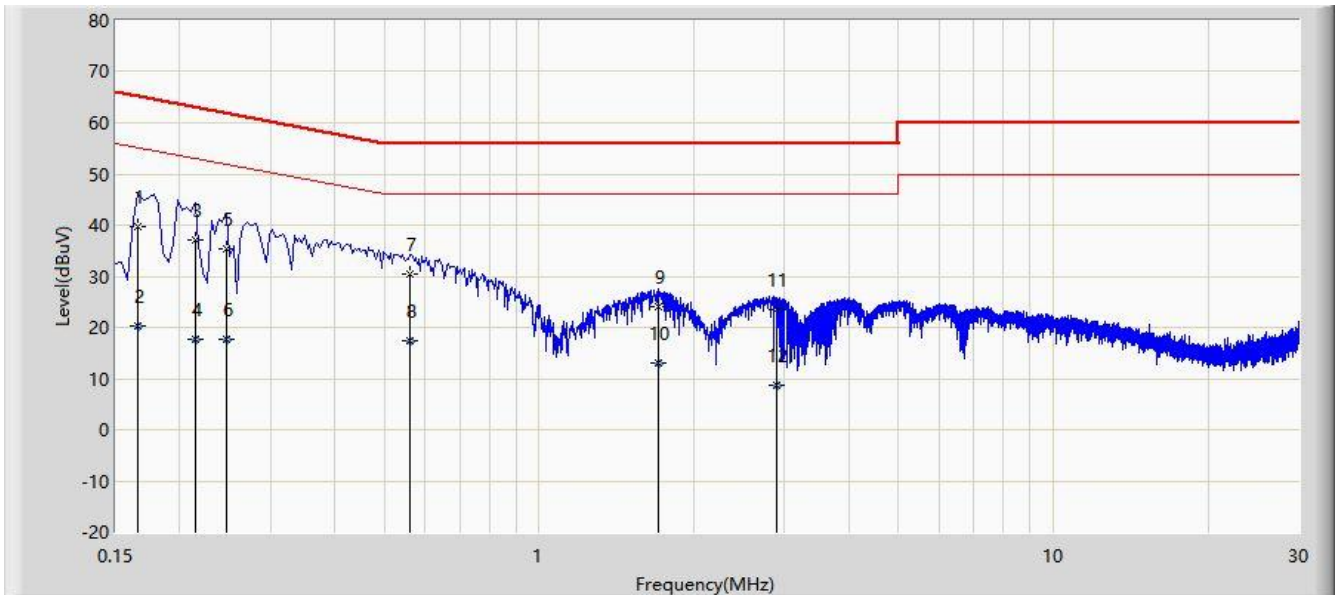
Note 2: The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.5MHz.

### 6.2.2. Test Setup



### 6.2.3. Test Result

|  |                          |
|--|--------------------------|
| Site: WZ-SR2                           | Time: 2020/12/21 - 13:58 |
| Limit: FCC_Part15.207_CE_AC Power      | Engineer: Buter Shi      |
| Probe: ENV216_101683_Filter On         | Polarity: Line           |
| EUT: Microwave                         | Power: AC 120V/60Hz      |
| Test Mode: Transmit at Channel 5800MHz |                          |



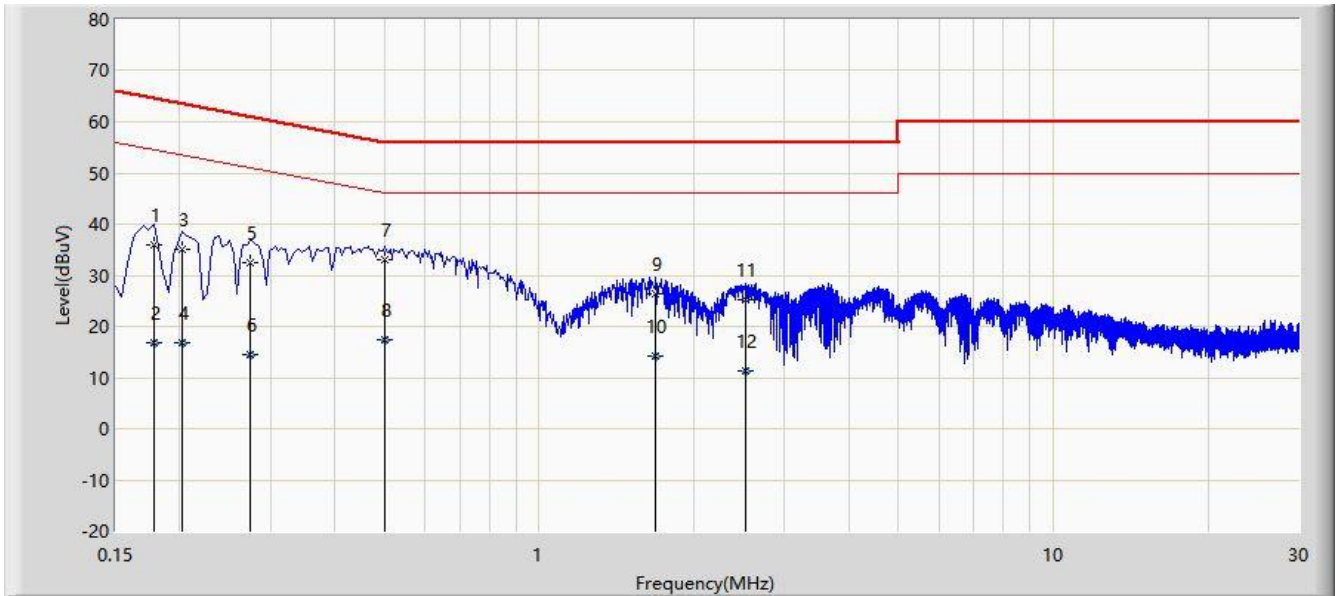
| No | Flag | Mark | Frequency (MHz) | Measure Level (dBμV) | Reading Level (dBμV) | Margin (dB) | Limit (dBμV) | Factor (dB) | Type |
|----|------|------|-----------------|----------------------|----------------------|-------------|--------------|-------------|------|
| 1  |      |      | 0.166           | 39.697               | 30.079               | -25.461     | 65.158       | 9.617       | QP   |
| 2  |      |      | 0.166           | 20.310               | 10.693               | -34.848     | 55.158       | 9.617       | AV   |
| 3  |      |      | 0.214           | 37.122               | 27.482               | -25.927     | 63.049       | 9.640       | QP   |
| 4  |      |      | 0.214           | 17.781               | 8.141                | -35.268     | 53.049       | 9.640       | AV   |
| 5  |      |      | 0.246           | 35.366               | 25.723               | -26.526     | 61.891       | 9.642       | QP   |
| 6  |      |      | 0.246           | 17.751               | 8.109                | -34.140     | 51.891       | 9.642       | AV   |
| 7  |      | *    | 0.562           | 30.556               | 20.856               | -25.444     | 56.000       | 9.700       | QP   |
| 8  |      |      | 0.562           | 17.345               | 7.645                | -28.655     | 46.000       | 9.700       | AV   |
| 9  |      |      | 1.702           | 23.949               | 14.189               | -32.051     | 56.000       | 9.760       | QP   |
| 10 |      |      | 1.702           | 12.955               | 3.195                | -33.045     | 46.000       | 9.760       | AV   |
| 11 |      |      | 2.902           | 23.592               | 13.802               | -32.408     | 56.000       | 9.790       | QP   |
| 12 |      |      | 2.902           | 8.718                | -1.072               | -37.282     | 46.000       | 9.790       | AV   |

Note: Measure Level (dBμV) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + LISN Factor (dB)



|  |                          |
|--|--------------------------|
| Site: WZ-SR2                           | Time: 2020/12/21 - 14:03 |
| Limit: FCC_Part15.207_CE_AC Power      | Engineer: Buter Shi      |
| Probe: ENV216_101683_Filter On         | Polarity: Neutral        |
| EUT: Microwave                         | Power: AC 120V/60Hz      |
| Test Mode: Transmit at Channel 5800MHz |                          |



| No | Flag | Mark | Frequency (MHz) | Measure Level (dB $\mu$ V) | Reading Level (dB $\mu$ V) | Margin (dB) | Limit (dB $\mu$ V) | Factor (dB) | Type |
|----|------|------|-----------------|----------------------------|----------------------------|-------------|--------------------|-------------|------|
| 1  |      |      | 0.178           | 35.886                     | 26.271                     | -28.692     | 64.578             | 9.615       | QP   |
| 2  |      |      | 0.178           | 16.892                     | 7.276                      | -37.686     | 54.578             | 9.615       | AV   |
| 3  |      |      | 0.202           | 34.970                     | 25.343                     | -28.557     | 63.528             | 9.627       | QP   |
| 4  |      |      | 0.202           | 16.753                     | 7.126                      | -36.775     | 53.528             | 9.627       | AV   |
| 5  |      |      | 0.274           | 32.395                     | 22.747                     | -28.601     | 60.996             | 9.648       | QP   |
| 6  |      |      | 0.274           | 14.481                     | 4.832                      | -36.515     | 50.996             | 9.648       | AV   |
| 7  |      | *    | 0.502           | 33.067                     | 23.377                     | -22.933     | 56.000             | 9.690       | QP   |
| 8  |      |      | 0.502           | 17.527                     | 7.837                      | -28.473     | 46.000             | 9.690       | AV   |
| 9  |      |      | 1.686           | 26.374                     | 16.614                     | -29.626     | 56.000             | 9.760       | QP   |
| 10 |      |      | 1.686           | 14.062                     | 4.302                      | -31.938     | 46.000             | 9.760       | AV   |
| 11 |      |      | 2.518           | 25.215                     | 15.435                     | -30.785     | 56.000             | 9.780       | QP   |
| 12 |      |      | 2.518           | 11.445                     | 1.665                      | -34.555     | 46.000             | 9.780       | AV   |

Note: Measure Level (dB $\mu$ V) = Reading Level (dB $\mu$ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + LISN Factor (dB)

### 6.3. Radiated Emission

#### 6.3.1. Test Limit

| FCC Part 15.249 Limits      |                                      |  |
|-----------------------------|--------------------------------------|--|
| Fundamental Frequency (MHz) | Field Strength of Fundamental (mV/m) | Field Strength of Harmonics ( $\mu$ V/m) |
| 902 ~ 908                   | 50                                   | 500                                      |
| 2400 ~ 2483.5               | 50                                   | 500                                      |
| 5725 ~ 5875                 | 50                                   | 500                                      |
| 24000 ~ 24250               | 250                                  | 2500                                     |

Note: FCC Part 15.249 (d), Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50dB below the level of the fundamental or to the general radiated emission limits in §15.209, whichever is the lesser attenuation.

| FCC Part 15.209 Limits |                             |                          |
|------------------------|-----------------------------|--------------------------|
| Frequency (MHz)        | Field Strength ( $\mu$ V/m) | Measurement Distance (m) |
| 0.009 ~ 0.490          | 2400/F(kHz)                 | 300                      |
| 0.490 ~ 1.705          | 24000/F(kHz)                | 30                       |
| 1.705 ~ 30.0           | 30                          | 30                       |
| 30 ~ 88                | 100**                       | 3                        |
| 88 ~ 216               | 150**                       | 3                        |
| 216 ~ 960              | 200**                       | 3                        |
| Above 960              | 500                         | 3                        |

Note 1: The lower limit shall apply at the transition frequency.  
 Note 2: Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.  
 Note 3: E field strength (dB $\mu$ V/m) = 20 log E field strength ( $\mu$ V/m).

### 6.3.2. Test Procedure Used

ANSI C63.10-2013 Section 6.3 (General Requirements)

ANSI C63.10-2013 Section 6.4 (Standard test method below 30MHz)

ANSI C63.10-2013 Section 6.5 (Standard test method above 30MHz to 1GHz)

ANSI C63.10-2013 Section 6.6 (Standard test method above 1GHz)

### 6.3.3. Test Setting

**Table 1 - RBW as a function of frequency**

| Frequency     | RBW           |
|---------------|---------------|
| 9 ~ 150 kHz   | 200 ~ 300 Hz  |
| 0.15 ~ 30 MHz | 9 ~ 10 kHz    |
| 30 ~ 1000 MHz | 100 ~ 120 kHz |
| > 1000MHz     | 1MHz          |

#### **Quasi-Peak Measurements below 1GHz**

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. Span was set greater than 1MHz
3. RBW = as specified in Table 1
4. Detector = CISPR quasi-peak
5. Sweep time = auto couple
6. Trace was allowed to stabilize

#### **Peak Measurements above 1GHz**

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW = 3MHz
4. Detector = peak
5. Sweep time = auto couple

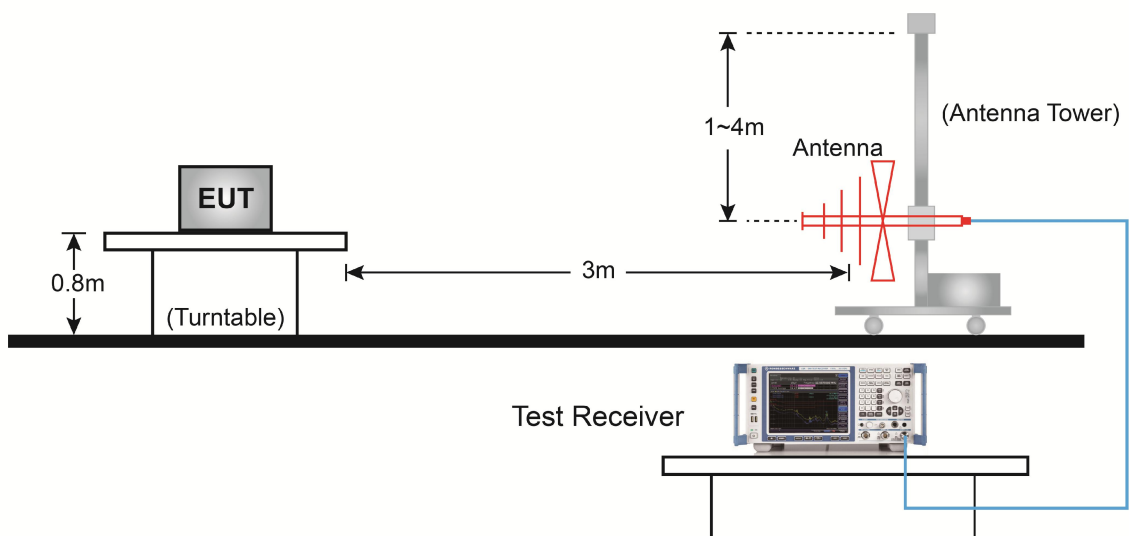
6. Trace mode = max hold
7. Trace was allowed to stabilize

#### **Average Measurements above 1GHz (Method VB)**

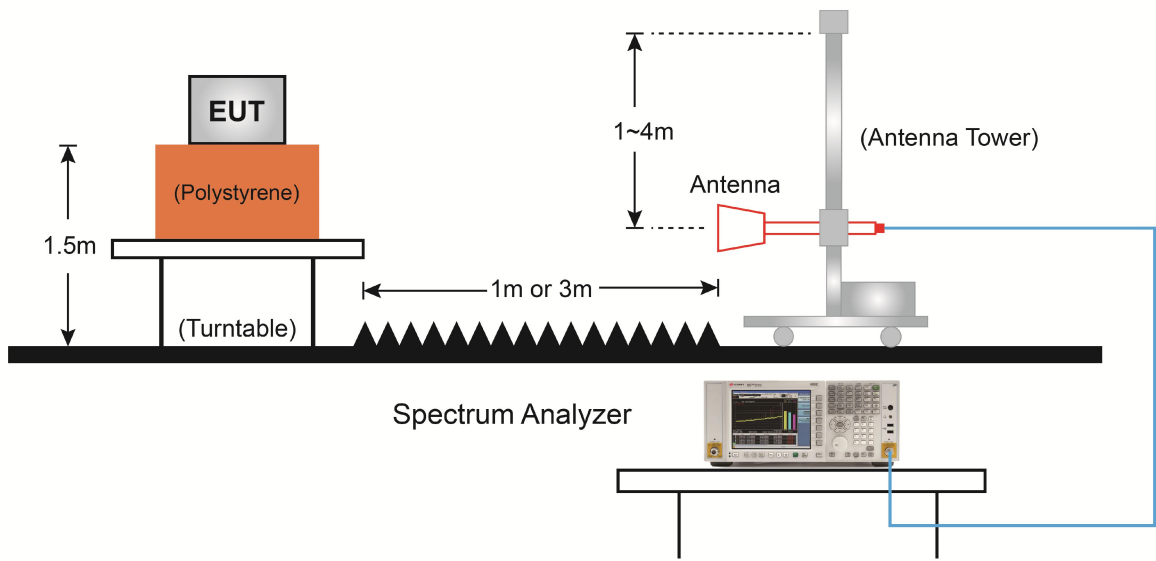
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW = 10 Hz.
4. Detector = Peak
5. Sweep time = auto
6. Trace mode = max hold
7. Trace was allowed to stabilize

#### **6.3.4. Test Setup**

Below 1GHz Test Setup:



Above 1GHz Test Setup:



**6.3.5. Test Result**

|           |                               |               |            |
|-----------|-------------------------------|---------------|------------|
| Product   | Microwave                     | Test Engineer | Hyde Yu    |
| Test Site | WZ-AC1                        | Test Date     | 2020/12/16 |
| Remark    | Fundamental Radiated Emission |               |            |

| Frequency (MHz) | Reading Level (dB $\mu$ V) | Factor (dB) | Measure Level (dB $\mu$ V/m) | Limit (dB $\mu$ V/m) | Margin (dB) | Detector | Polarization |
|-----------------|----------------------------|-------------|------------------------------|----------------------|-------------|----------|--------------|
| 5730            | 67.1                       | 6.1         | 73.2                         | 114.0                | -40.8       | PK       | Horizontal   |
|                 | 61.0                       | 6.1         | 67.1                         | 94.0                 | -26.9       | AV       | Horizontal   |
|                 | 62.9                       | 6.1         | 69.0                         | 114.0                | -45.0       | PK       | Vertical     |
|                 | 60.3                       | 6.1         | 66.4                         | 94.0                 | -27.6       | AV       | Vertical     |
| 5800            | 66.8                       | 6.3         | 73.1                         | 114.0                | -40.9       | PK       | Horizontal   |
|                 | 60.8                       | 6.3         | 67.1                         | 94.0                 | -26.9       | AV       | Horizontal   |
|                 | 62.5                       | 6.3         | 68.8                         | 114.0                | -45.2       | PK       | Vertical     |
|                 | 60.1                       | 6.3         | 66.4                         | 94.0                 | -27.6       | AV       | Vertical     |
| 5870            | 66.2                       | 6.5         | 72.7                         | 114.0                | -41.3       | PK       | Horizontal   |
|                 | 64.3                       | 6.5         | 70.8                         | 94.0                 | -23.2       | AV       | Horizontal   |
|                 | 58.7                       | 6.5         | 65.2                         | 114.0                | -48.8       | PK       | Vertical     |
|                 | 54.7                       | 6.5         | 61.2                         | 94.0                 | -32.8       | AV       | Vertical     |

Note: Peak Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

|           |                             |               |            |
|-----------|-----------------------------|---------------|------------|
| Product   | Microwave                   | Test Engineer | Hyde Yu    |
| Test Site | WZ-AC1                      | Test Date     | 2020/12/16 |
| Remark    | Radiated Emission - 5730MHz |               |            |

| Frequency (MHz) | Reading Level (dB $\mu$ V) | Factor (dB) | Measure Level (dB $\mu$ V/m) | Limit (dB $\mu$ V/m) | Margin (dB) | Detector | Polarization |
|-----------------|----------------------------|-------------|------------------------------|----------------------|-------------|----------|--------------|
| 7545.0          | 37.7                       | 10.3        | 48.0                         | 74.0                 | -26.0       | Peak     | Horizontal   |
| 8233.5          | 37.1                       | 11.0        | 48.1                         | 74.0                 | -25.9       | Peak     | Horizontal   |
| 8854.0          | 36.7                       | 11.7        | 48.4                         | 74.0                 | -25.6       | Peak     | Horizontal   |
| 9772.0          | 36.1                       | 14.2        | 50.3                         | 74.0                 | -23.7       | Peak     | Horizontal   |
| 7468.5          | 37.7                       | 10.4        | 48.1                         | 74.0                 | -25.9       | Peak     | Vertical     |
| 8352.5          | 36.2                       | 10.7        | 46.9                         | 74.0                 | -27.1       | Peak     | Vertical     |
| 8896.5          | 37.1                       | 12.0        | 49.1                         | 74.0                 | -24.9       | Peak     | Vertical     |
| 9721.0          | 35.4                       | 14.2        | 49.6                         | 74.0                 | -24.4       | Peak     | Vertical     |

Note 1: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre Amplifier Gain (dB)

Note 2: Average measurement was not performed when the peak level lower than average limit.

|           |                             |               |            |
|-----------|-----------------------------|---------------|------------|
| Product   | Microwave                   | Test Engineer | Hyde Yu    |
| Test Site | WZ-AC1                      | Test Date     | 2020/12/16 |
| Remark    | Radiated Emission - 5800MHz |               |            |

| Frequency (MHz) | Reading Level (dB $\mu$ V) | Factor (dB) | Measure Level (dB $\mu$ V/m) | Limit (dB $\mu$ V/m) | Margin (dB) | Detector | Polarization |
|-----------------|----------------------------|-------------|------------------------------|----------------------|-------------|----------|--------------|
| 8361.0          | 35.5                       | 10.6        | 46.1                         | 74.0                 | -27.9       | Peak     | Horizontal   |
| 11600.0         | 39.0                       | 15.4        | 54.4                         | 74.0                 | -19.6       | Peak     | Horizontal   |
| 11600.0         | 34.6                       | 15.4        | 50.0                         | 54.0                 | -4.0        | Average  | Horizontal   |
| 13010.5         | 34.8                       | 14.8        | 49.6                         | 74.0                 | -24.4       | Peak     | Horizontal   |
| 13605.5         | 34.7                       | 15.7        | 50.4                         | 74.0                 | -23.6       | Peak     | Horizontal   |
| 7494.0          | 37.4                       | 10.3        | 47.7                         | 74.0                 | -26.3       | Peak     | Vertical     |
| 8395.0          | 37.4                       | 10.9        | 48.3                         | 74.0                 | -25.7       | Peak     | Vertical     |
| 10001.5         | 34.2                       | 14.3        | 48.5                         | 74.0                 | -25.5       | Peak     | Vertical     |
| 12993.5         | 35.4                       | 14.8        | 50.2                         | 74.0                 | -23.8       | Peak     | Vertical     |

Note 1: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre Amplifier Gain (dB)

Note 2: Average measurement was not performed when the peak level lower than average limit.



|           |                             |               |            |
|-----------|-----------------------------|---------------|------------|
| Product   | Microwave                   | Test Engineer | Hyde Yu    |
| Test Site | WZ-AC1                      | Test Date     | 2020/12/16 |
| Remark    | Radiated Emission - 5870MHz |               |            |

| Frequency (MHz) | Reading Level (dB $\mu$ V) | Factor (dB) | Measure Level (dB $\mu$ V/m) | Limit (dB $\mu$ V/m) | Margin (dB) | Detector | Polarization |
|-----------------|----------------------------|-------------|------------------------------|----------------------|-------------|----------|--------------|
| 7426.0          | 37.4                       | 10.0        | 47.4                         | 74.0                 | -26.6       | Peak     | Horizontal   |
| 11744.0         | 40.4                       | 14.8        | 55.2                         | 74.0                 | -18.8       | Peak     | Horizontal   |
| 11740.0         | 34.9                       | 14.8        | 49.7                         | 54.0                 | -4.3        | Average  | Horizontal   |
| 13852.0         | 34.6                       | 16.6        | 51.2                         | 74.0                 | -22.8       | Peak     | Horizontal   |
| 16529.5         | 35.0                       | 16.1        | 51.1                         | 74.0                 | -22.9       | Peak     | Horizontal   |
| 7494.0          | 37.4                       | 10.3        | 47.7                         | 74.0                 | -26.3       | Peak     | Vertical     |
| 11744.0         | 37.8                       | 14.9        | 52.7                         | 74.0                 | -21.3       | Peak     | Vertical     |
| 13095.5         | 33.8                       | 14.7        | 48.5                         | 74.0                 | -25.5       | Peak     | Vertical     |
| 16283.0         | 34.2                       | 15.1        | 49.3                         | 74.0                 | -24.7       | Peak     | Vertical     |

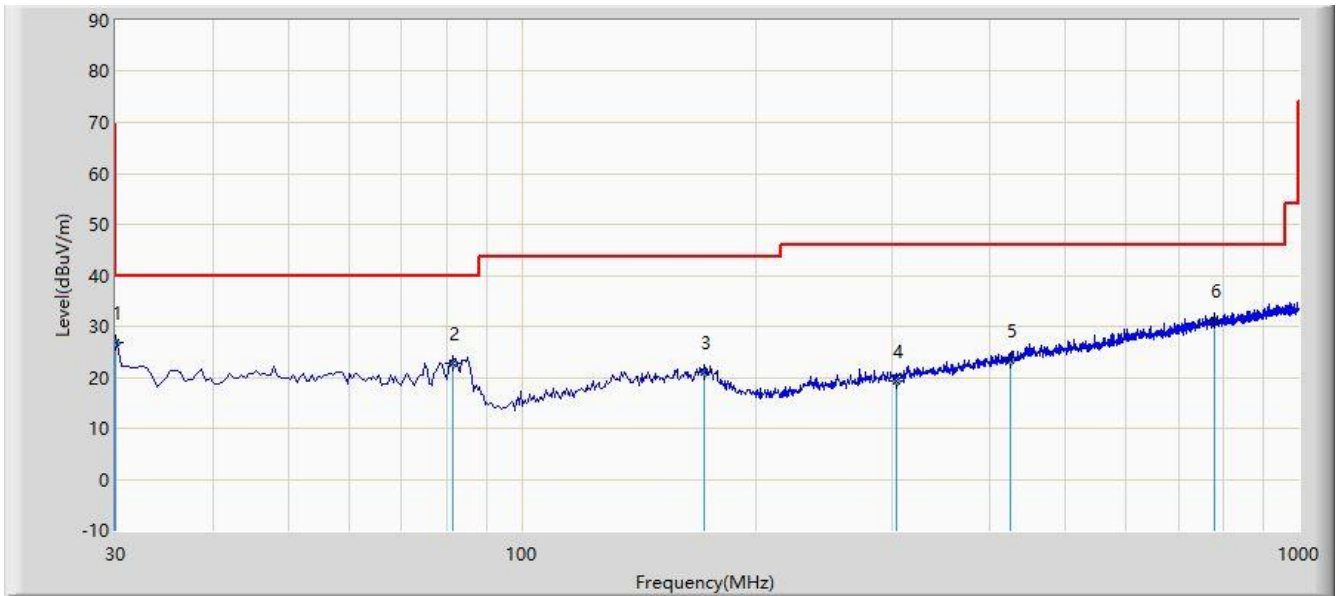
Note 1: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre Amplifier Gain (dB)

Note 2: Average measurement was not performed when the peak level lower than average limit.

**The Worst Case of Radiated Emission below 1GHz:**

|  |                       |
|--|-----------------------|
| Site: WZ-AC1                           | Time: 2020/12/16      |
| Limit: FCC_Part15.209_RE(3m)           | Engineer: Antony Yang |
| Probe: WZ-AC1_VULB 9168 _30-1000MHz    | Polarity: Horizontal  |
| EUT: Microwave                         | Power: AC 120V/60Hz   |
| Test Mode: Transmit at Channel 5800MHz |                       |



| No | Flag | Mark | Frequency (MHz) | Measure Level (dB $\mu$ V/m) | Reading Level (dB $\mu$ V) | Margin (dB) | Limit (dB $\mu$ V/m) | Factor (dB) | Type |
|----|------|------|-----------------|------------------------------|----------------------------|-------------|----------------------|-------------|------|
| 1  |      | *    | 30.000          | 26.771                       | 10.200                     | -13.229     | 40.000               | 16.571      | QP   |
| 2  |      |      | 81.410          | 22.744                       | 9.510                      | -17.256     | 40.000               | 13.234      | QP   |
| 3  |      |      | 171.620         | 21.088                       | 3.600                      | -22.412     | 43.500               | 17.488      | QP   |
| 4  |      |      | 303.540         | 19.266                       | 0.500                      | -26.734     | 46.000               | 18.766      | QP   |
| 5  |      |      | 424.790         | 23.330                       | 1.500                      | -22.670     | 46.000               | 21.830      | QP   |
| 6  |      |      | 777.385         | 31.176                       | 2.500                      | -14.824     | 46.000               | 28.676      | QP   |

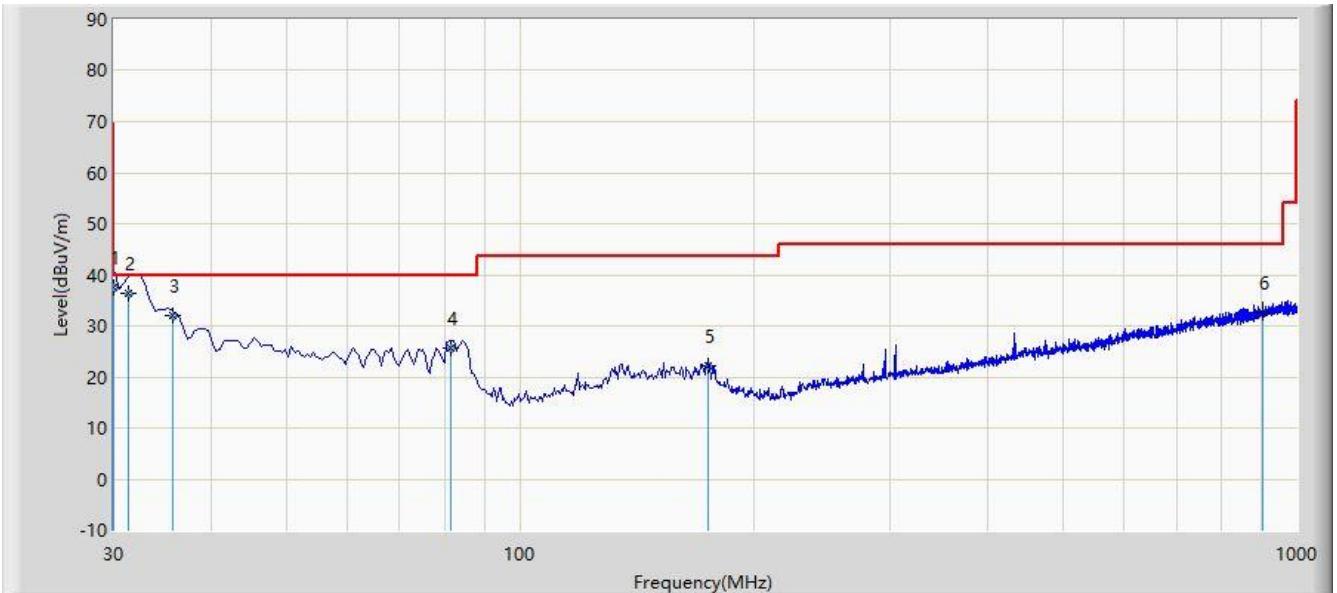
Note 1: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Note 2: The amplitude of radiated emissions (frequency range from 9kHz to 30MHz and 18GHz to 40GHz) is that proximity to ambient noise, which also are attenuated more than 20 dB below the permissible value.

Therefore, the data is not presented in the report.

|  |                       |
|--|-----------------------|
| Site: WZ-AC1                           | Time: 2020/12/16      |
| Limit: FCC_Part15.209_RE(3m)           | Engineer: Antony Yang |
| Probe: WZ-AC1_VULB 9168 _30-1000MHz    | Polarity: Horizontal  |
| EUT: Microwave                         | Power: AC 120V/60Hz   |
| Test Mode: Transmit at Channel 5800MHz |                       |



| No | Flag | Mark | Frequency (MHz) | Measure Level (dB $\mu$ V/m) | Reading Level (dB $\mu$ V) | Margin (dB) | Limit (dB $\mu$ V/m) | Factor (dB) | Type |
|----|------|------|-----------------|------------------------------|----------------------------|-------------|----------------------|-------------|------|
| 1  |      | *    | 30.000          | 37.671                       | 21.100                     | -2.329      | 40.000               | 16.571      | QP   |
| 2  |      |      | 31.357          | 36.241                       | 19.600                     | -3.759      | 40.000               | 16.641      | QP   |
| 3  |      |      | 35.820          | 32.111                       | 15.100                     | -7.889      | 40.000               | 17.011      | QP   |
| 4  |      |      | 81.410          | 25.534                       | 12.300                     | -14.466     | 40.000               | 13.234      | QP   |
| 5  |      |      | 175.100         | 22.139                       | 4.960                      | -21.361     | 43.500               | 17.179      | QP   |
| 6  |      |      | 904.940         | 32.576                       | 2.540                      | -13.424     | 46.000               | 30.036      | QP   |

Note 1: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Note 2: The amplitude of radiated emissions (frequency range from 9kHz to 30MHz and 18GHz to 40GHz) is that proximity to ambient noise, which also are attenuated more than 20 dB below the permissible value.

Therefore, the data is not presented in the report.

## 6.4. Radiated Restricted Band Edge Measurement

### 6.4.1. Test Limit

#### **For 15.205 requirement:**

Radiated emissions which fall in the restricted bands, as defined in Section 15.205(a) of FCC part 15, must also comply with the radiated emission limits specified in Section 15.209(a).

| Frequency<br>(MHz)         | Frequency<br>(MHz)    | Frequency<br>(MHz) | Frequency<br>(GHz) |
|----------------------------|-----------------------|--------------------|--------------------|
| 0.090 - 0.110              | 16.42 - 16.423        | 399.9 - 410        | 4.5 - 5.15         |
| <sup>1</sup> 0.495 - 0.505 | 16.69475 - 16.69525   | 608 - 614          | 5.35 - 5.46        |
| 2.1735 - 2.1905            | 16.80425 - 16.80475   | 960 - 1240         | 7.25 - 7.75        |
| 4.125 - 4.128              | 25.5 - 25.67          | 1300 - 1427        | 8.025 - 8.5        |
| 4.17725 - 4.17775          | 37.5 - 38.25          | 1435 - 1626.5      | 9.0 - 9.2          |
| 4.20725 - 4.20775          | 73 - 74.6             | 1645.5 - 1646.5    | 9.3 - 9.5          |
| 6.215 - 6.218              | 74.8 - 75.2           | 1660 - 1710        | 10.6 - 12.7        |
| 6.26775 - 6.26825          | 108 - 121.94          | 1718.8 - 1722.2    | 13.25 - 13.4       |
| 6.31175 - 6.31225          | 123 - 138             | 2200 - 2300        | 14.47 - 14.5       |
| 8.291 - 8.294              | 149.9 - 150.05        | 2310 - 2390        | 15.35 - 16.2       |
| 8.362 - 8.366              | 156.52475 - 156.52525 | 2483.5 - 2500      | 17.7 - 21.4        |
| 8.37625 - 8.38675          | 156.7 - 156.9         | 2690 - 2900        | 22.01 - 23.12      |
| 8.41425 - 8.41475          | 162.0125 - 167.17     | 3260 - 3267        | 23.6 - 24.0        |
| 12.29 - 12.293             | 167.72 - 173.2        | 3332 - 3339        | 31.2 - 31.8        |
| 12.51975 - 12.52025        | 240 - 285             | 3345.8 - 3358      | 36.43 - 36.5       |
| 12.57675 - 12.57725        | 322 - 335.4           | 3600 - 4400        | ( <sup>2</sup> )   |
| 13.36 - 13.41              | --                    | --                 | --                 |

All out of band emissions appearing in a restricted band as specified in Section 15.205 of the Title 47 CFR must not exceed the limits shown in Table per Section 15.209.

| FCC Part 15.209 Limits |                                    |                          |
|------------------------|------------------------------------|--------------------------|
| Frequency (MHz)        | Field Strength ( $\mu\text{V/m}$ ) | Measurement Distance (m) |
| 0.009 ~ 0.490          | 2400/F(kHz)                        | 300                      |
| 0.490 ~ 1.705          | 24000/F(kHz)                       | 30                       |
| 1.705 ~ 30.0           | 30                                 | 30                       |
| 30 ~ 88                | 100**                              | 3                        |
| 88 ~ 216               | 150                                | 3                        |
| 216 ~ 960              | 200                                | 3                        |
| Above 960              | 500                                | 3                        |

#### 6.4.2. Test Procedure Used

ANSI C63.10-2013 Section 6.3 (General Requirements)

ANSI C63.10-2013 Section 6.6 (Standard test method above 1GHz)

ANSI C63.10-2013 Section 6.10.5 (Restricted-band band-edge measurements)

#### 6.4.3. Test Setting

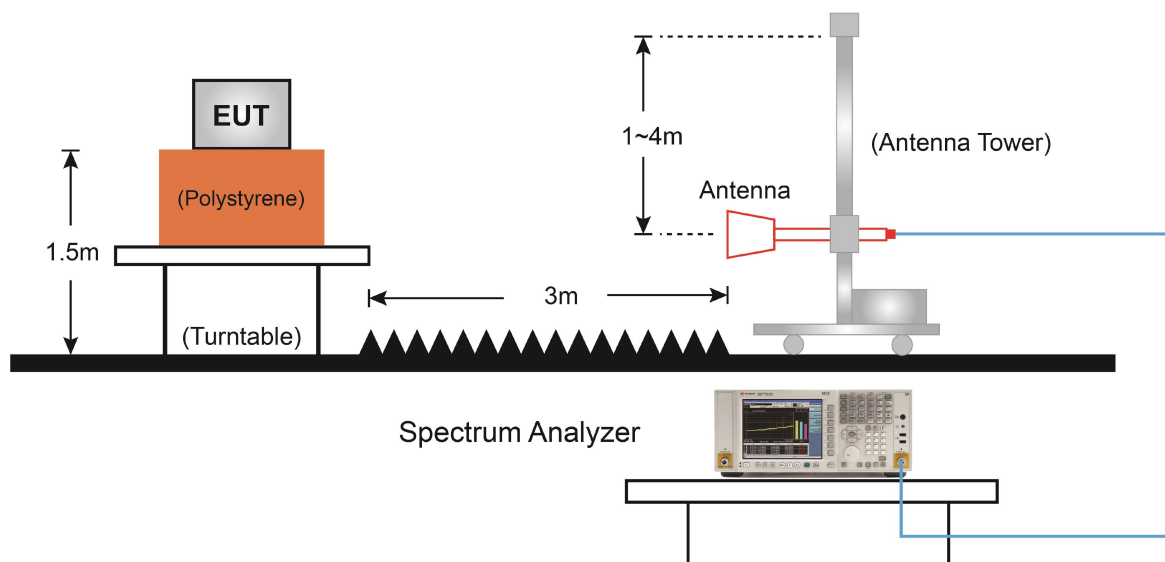
##### Peak Field Strength Measurements

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW = 3MHz
4. Detector = peak
5. Sweep time = auto couple
6. Trace mode = max hold
7. Trace was allowed to stabilize

### Average Field Strength Measurements

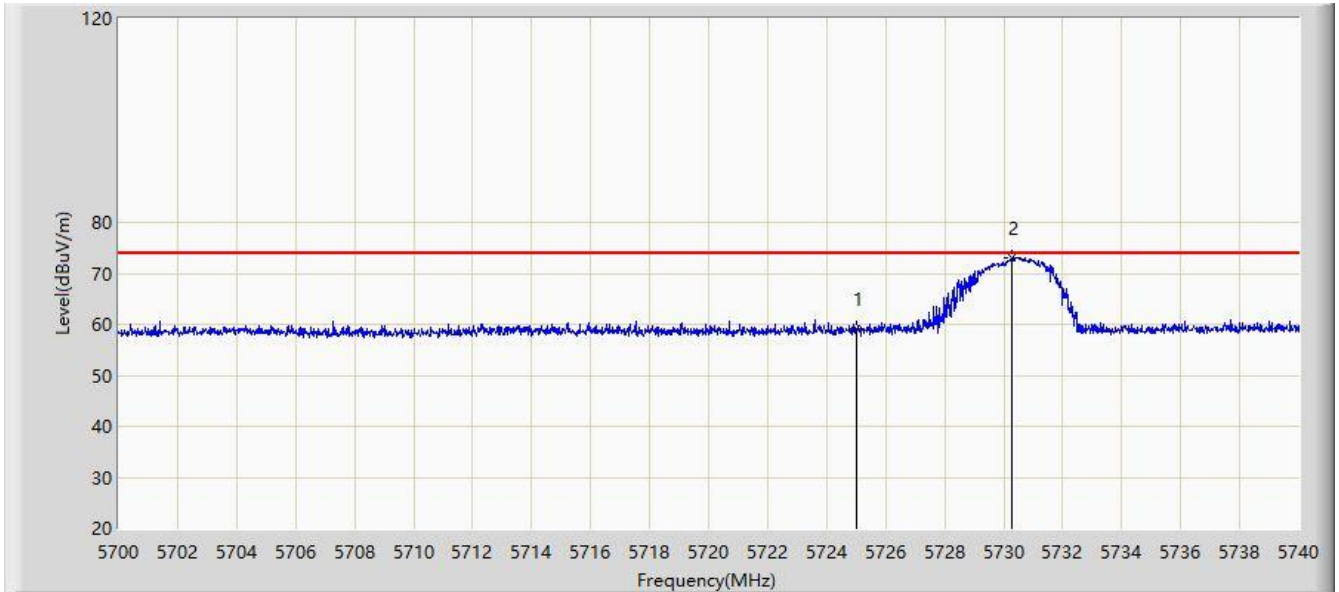
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW  $\geq 1/T$
4. As an alternative, the instrument may be set to linear detector mode. Ensure that video filtering is applied in linear voltage domain (rather than in a log or dB domain). Some instruments require linear display mode in order to accomplish this. Others have a setting for Average-VBW Type, which can be set to "Voltage" regardless of the display mode
5. Detector = Peak
6. Sweep time = auto
7. Trace mode = max hold
8. Allow max hold to run for at least 50 times (1/duty cycle) traces

#### 6.4.4. Test Setup



### 6.4.5. Test Result

|  |                          |
|--|--------------------------|
| Site: WZ-AC1                           | Time: 2020/12/16 - 01:00 |
| Limit: FCC_Part15_Band Edge(3m)        | Engineer: Antony Yang    |
| Probe: WZ-AC1_BBHA9120D_1-18GHz        | Polarity: Horizontal     |
| EUT: Microwave                         | Power: AC 120V/60Hz      |
| Test Mode: Transmit at Channel 5730MHz |                          |

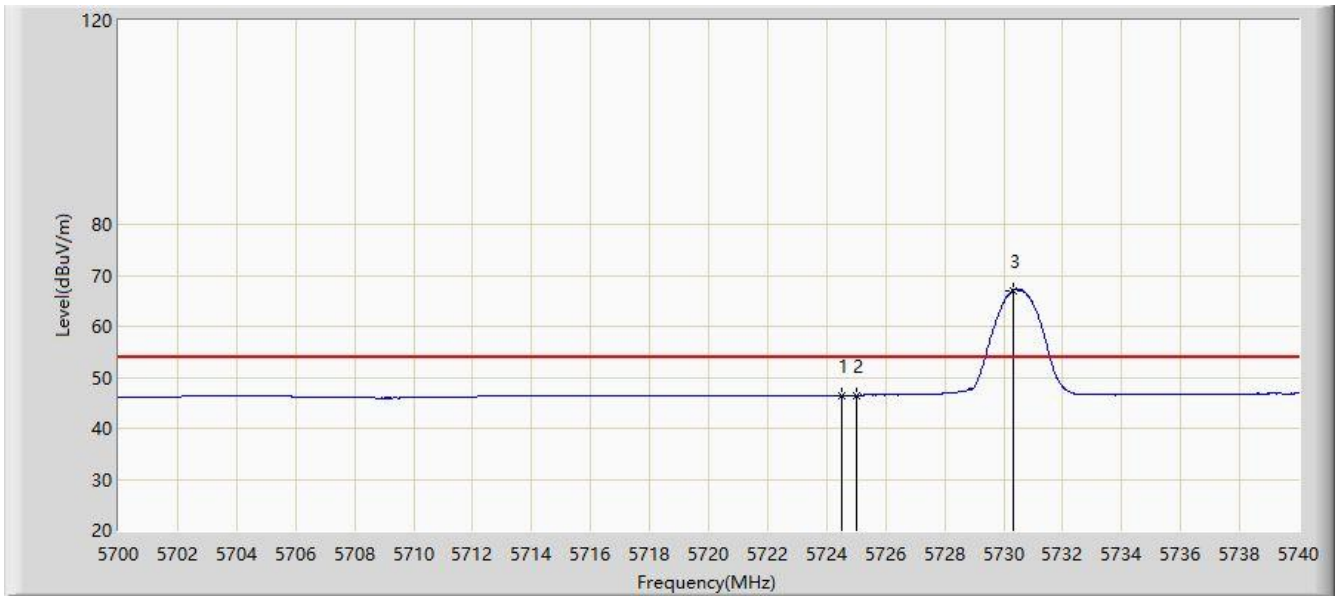


| No | Flag | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Margin (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|----|------|------|-----------------|------------------------|----------------------|-------------|----------------|-------------|------|
| 1  |      |      | 5725.000        | 59.228                 | 53.247               | -14.772     | 74.000         | 5.981       | PK   |
| 2  |      | *    | 5730.300        | 73.176                 | 67.088               | -40.824     | 114.000        | 6.088       | PK   |

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

|  |                          |
|--|--------------------------|
| Site: WZ-AC1                           | Time: 2020/12/16 - 01:22 |
| Limit: FCC_Part15_Band Edge(3m)        | Engineer: Antony Yang    |
| Probe: WZ-AC1_BBHA9120D_1-18GHz        | Polarity: Horizontal     |
| EUT: Microwave                         | Power: AC 120V/60Hz      |
| Test Mode: Transmit at Channel 5730MHz |                          |



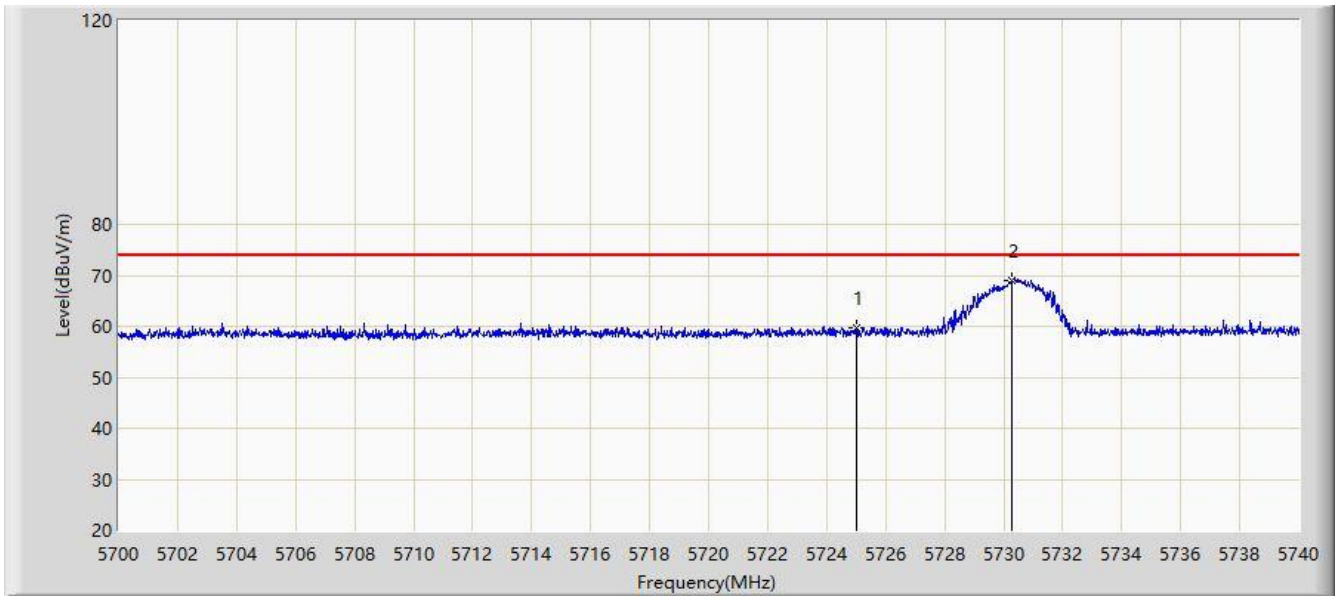
| No | Flag | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Margin (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|----|------|------|-----------------|------------------------|----------------------|-------------|----------------|-------------|------|
| 1  |      |      | 5724.520        | 46.512                 | 40.537               | -7.488      | 54.000         | 5.975       | AV   |
| 2  |      |      | 5725.000        | 46.509                 | 40.528               | -7.491      | 54.000         | 5.981       | AV   |
| 3  |      | *    | 5730.320        | 67.069                 | 60.981               | -26.931     | 94.000         | 6.088       | AV   |

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)



|  |                          |
|--|--------------------------|
| Site: WZ-AC1                           | Time: 2020/12/16 - 01:26 |
| Limit: FCC_Part15_Band Edge(3m)        | Engineer: Antony Yang    |
| Probe: WZ-AC1_BBHA9120D_1-18GHz        | Polarity: Vertical       |
| EUT: Microwave                         | Power: AC 120V/60Hz      |
| Test Mode: Transmit at Channel 5730MHz |                          |

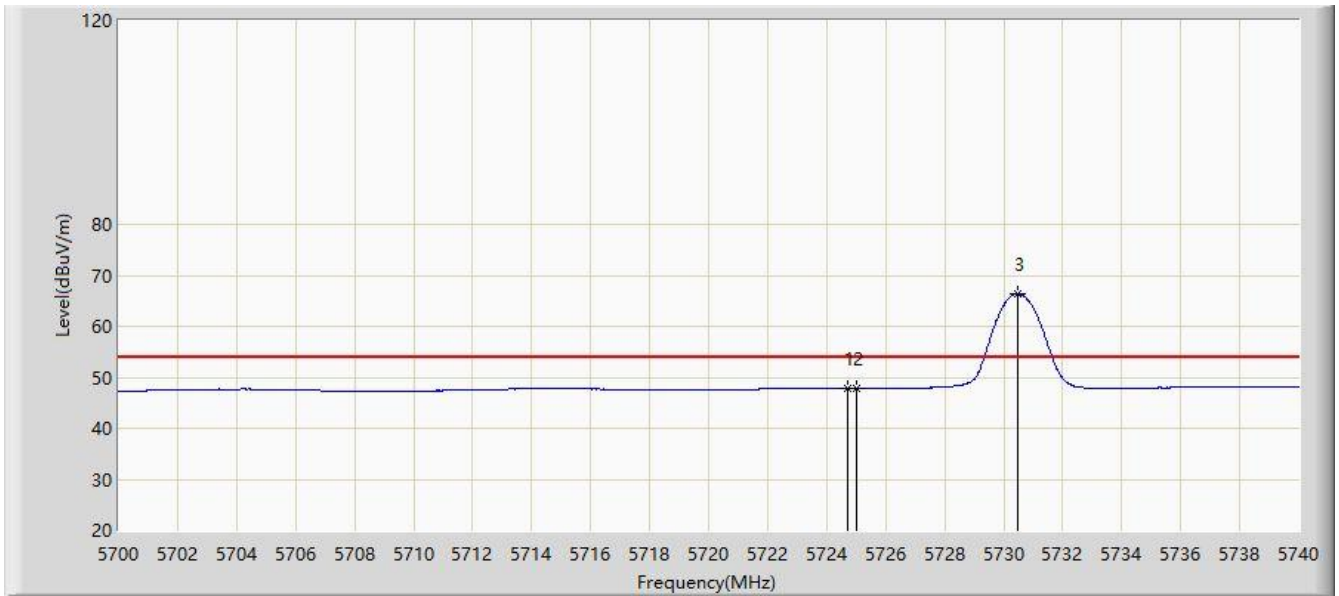


| No | Flag | Mark | Frequency (MHz) | Measure Level (dB $\mu$ V/m) | Reading Level (dB $\mu$ V) | Margin (dB) | Limit (dB $\mu$ V/m) | Factor (dB) | Type |
|----|------|------|-----------------|------------------------------|----------------------------|-------------|----------------------|-------------|------|
| 1  |      |      | 5725.000        | 59.649                       | 53.668                     | -14.351     | 74.000               | 5.981       | PK   |
| 2  |      | *    | 5730.260        | 68.976                       | 62.889                     | -45.024     | 114.000              | 6.088       | PK   |

Note: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

|  |                          |
|--|--------------------------|
| Site: WZ-AC1                           | Time: 2020/12/16 - 01:28 |
| Limit: FCC_Part15_Band Edge(3m)        | Engineer: Antony Yang    |
| Probe: WZ-AC1_BBHA9120D_1-18GHz        | Polarity: Vertical       |
| EUT: Microwave                         | Power: AC 120V/60Hz      |
| Test Mode: Transmit at Channel 5730MHz |                          |

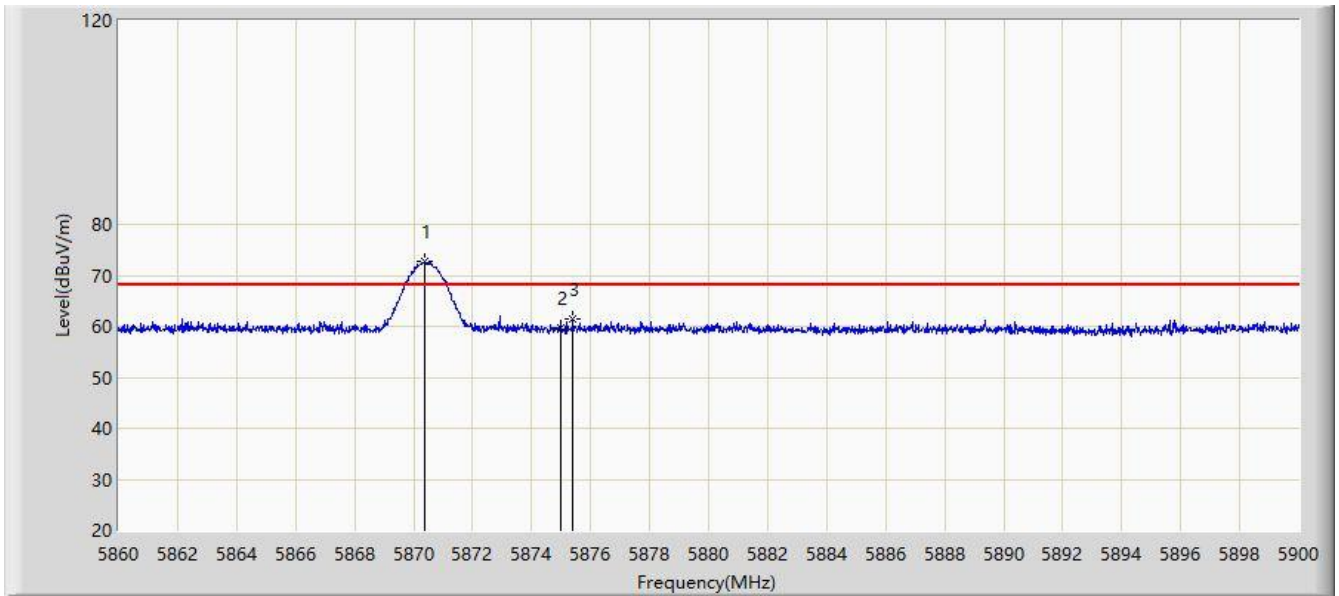


| No | Flag | Mark | Frequency (MHz) | Measure Level (dB $\mu$ V/m) | Reading Level (dB $\mu$ V) | Margin (dB) | Limit (dB $\mu$ V/m) | Factor (dB) | Type |
|----|------|------|-----------------|------------------------------|----------------------------|-------------|----------------------|-------------|------|
| 1  |      |      | 5724.700        | 47.851                       | 41.874                     | -6.149      | 54.000               | 5.977       | AV   |
| 2  |      |      | 5725.000        | 47.846                       | 41.865                     | -6.154      | 54.000               | 5.981       | AV   |
| 3  |      | *    | 5730.480        | 66.372                       | 60.280                     | -27.628     | 94.000               | 6.091       | AV   |

Note: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

|  |                          |
|--|--------------------------|
| Site: WZ-AC1                           | Time: 2020/12/16 - 01:42 |
| Limit: FCC_Part15_Band Edge(3m)        | Engineer: Antony Yang    |
| Probe: WZ-AC1_BBHA9120D_1-18GHz        | Polarity: Horizontal     |
| EUT: Microwave                         | Power: AC 120V/60Hz      |
| Test Mode: Transmit at Channel 5870MHz |                          |

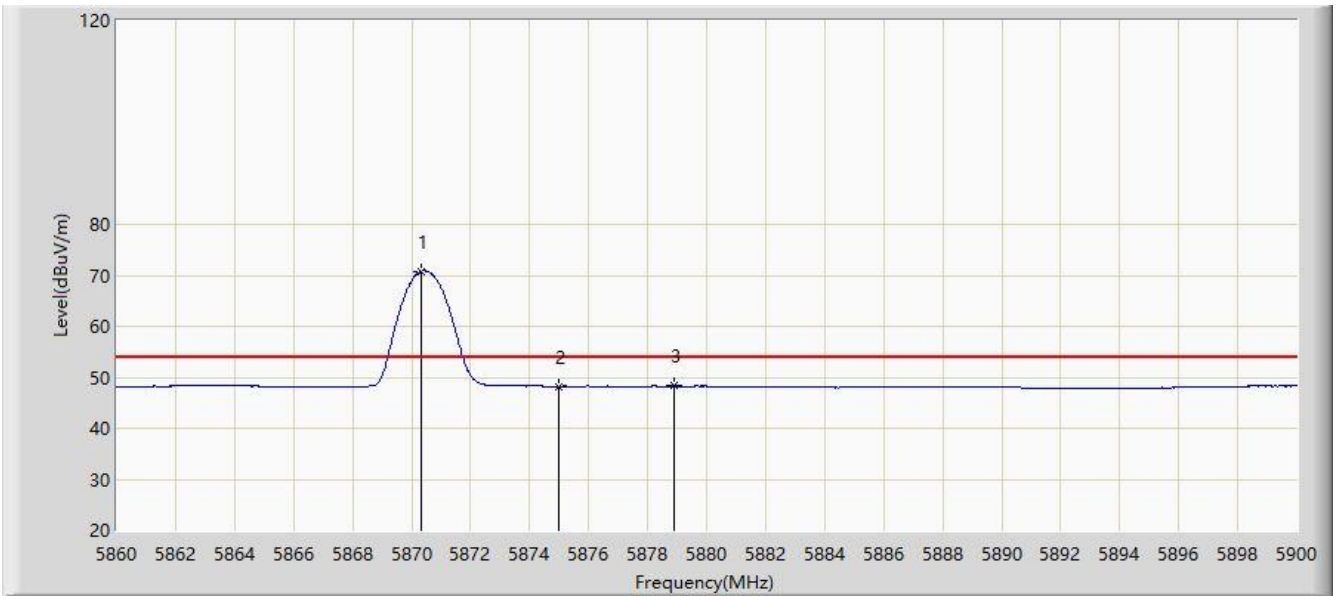


| No | Flag | Mark | Frequency (MHz) | Measure Level (dB $\mu$ V/m) | Reading Level (dB $\mu$ V) | Margin (dB) | Limit (dB $\mu$ V/m) | Factor (dB) | Type |
|----|------|------|-----------------|------------------------------|----------------------------|-------------|----------------------|-------------|------|
| 1  |      | *    | 5870.360        | 72.685                       | 66.197                     | -41.315     | 114.000              | 6.488       | PK   |
| 2  |      |      | 5875.000        | 59.710                       | 53.246                     | -14.290     | 74.000               | 6.464       | PK   |
| 3  |      |      | 5875.400        | 61.330                       | 54.868                     | -12.670     | 74.000               | 6.462       | PK   |

Note: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

|  |                          |
|--|--------------------------|
| Site: WZ-AC1                           | Time: 2020/12/16 - 01:44 |
| Limit: FCC_Part15_Band Edge(3m)        | Engineer: Antony Yang    |
| Probe: WZ-AC1_BBHA9120D_1-18GHz        | Polarity: Horizontal     |
| EUT: Microwave                         | Power: AC 120V/60Hz      |
| Test Mode: Transmit at Channel 5870MHz |                          |

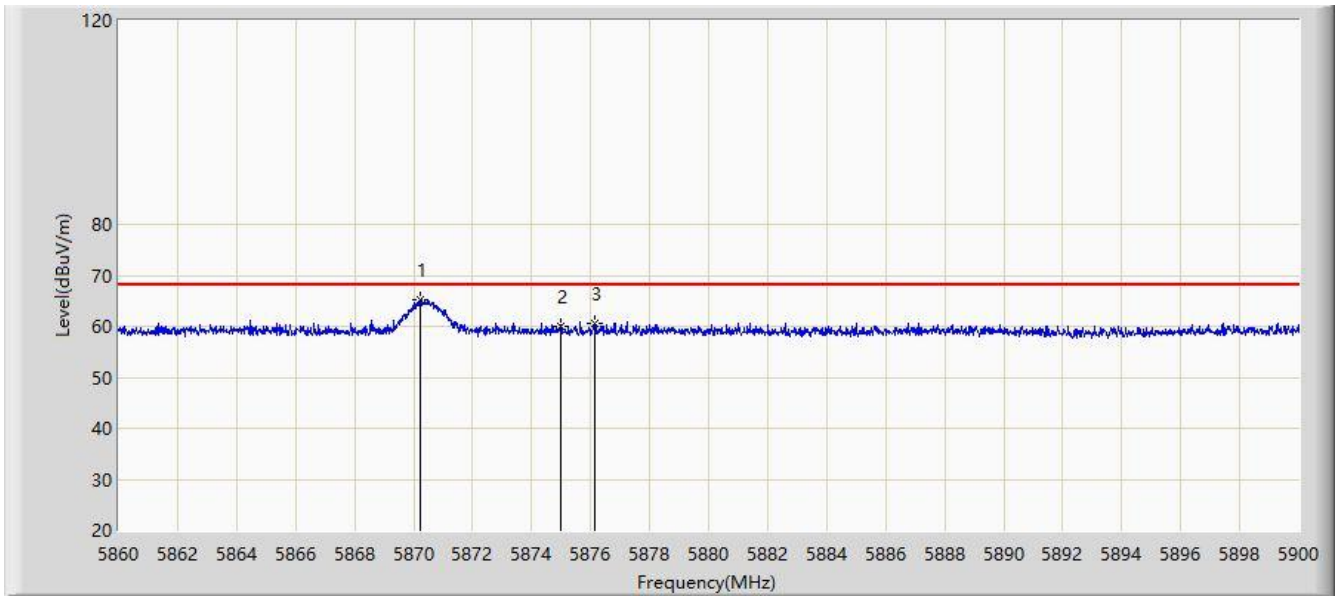


| No | Flag | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Margin (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|----|------|------|-----------------|------------------------|----------------------|-------------|----------------|-------------|------|
| 1  |      | *    | 5870.320        | 70.803                 | 64.314               | -23.197     | 94.000         | 6.488       | AV   |
| 2  |      |      | 5875.000        | 48.234                 | 41.770               | -5.766      | 54.000         | 6.464       | AV   |
| 3  |      |      | 5878.900        | 48.293                 | 41.849               | -5.707      | 54.000         | 6.444       | AV   |

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

|  |                          |
|--|--------------------------|
| Site: WZ-AC1                           | Time: 2020/12/16 - 01:45 |
| Limit: FCC_Part15_Band Edge(3m)        | Engineer: Antony Yang    |
| Probe: WZ-AC1_BBHA9120D_1-18GHz        | Polarity: Vertical       |
| EUT: Microwave                         | Power: AC 120V/60Hz      |
| Test Mode: Transmit at Channel 5870MHz |                          |

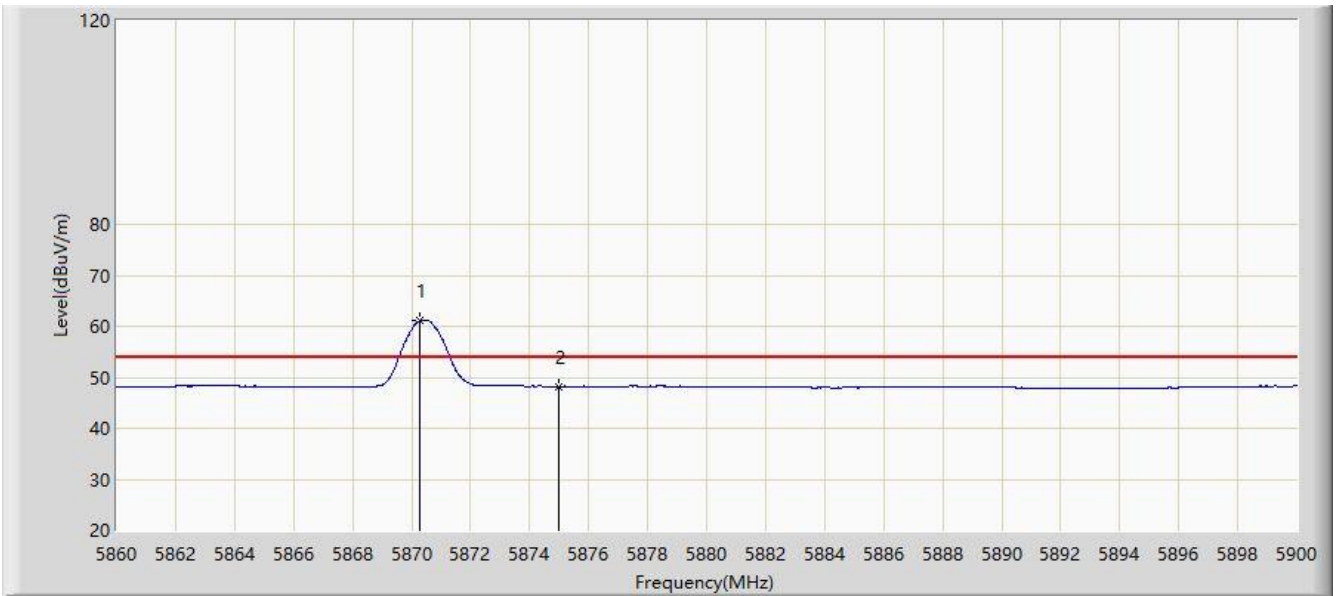


| No | Flag | Mark | Frequency (MHz) | Measure Level (dB $\mu$ V/m) | Reading Level (dB $\mu$ V) | Margin (dB) | Limit (dB $\mu$ V/m) | Factor (dB) | Type |
|----|------|------|-----------------|------------------------------|----------------------------|-------------|----------------------|-------------|------|
| 1  |      | *    | 5870.240        | 65.222                       | 58.733                     | -48.778     | 114.000              | 6.489       | PK   |
| 2  |      |      | 5875.000        | 59.988                       | 53.524                     | -14.012     | 74.000               | 6.464       | PK   |
| 3  |      |      | 5876.160        | 60.542                       | 54.084                     | -13.458     | 74.000               | 6.458       | PK   |

Note: Measure Level (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

|  |                          |
|--|--------------------------|
| Site: WZ-AC1                           | Time: 2020/12/16 - 01:46 |
| Limit: FCC_Part15_Band Edge(3m)        | Engineer: Antony Yang    |
| Probe: WZ-AC1_BBHA9120D_1-18GHz        | Polarity: Vertical       |
| EUT: Microwave                         | Power: AC 120V/60Hz      |
| Test Mode: Transmit at Channel 5870MHz |                          |



| No | Flag | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Margin (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|----|------|------|-----------------|------------------------|----------------------|-------------|----------------|-------------|------|
| 1  |      | *    | 5870.280        | 61.178                 | 54.689               | -32.822     | 94.000         | 6.489       | AV   |
| 2  |      |      | 5875.000        | 48.240                 | 41.776               | -5.760      | 54.000         | 6.464       | AV   |

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

## **6.5. 20dB Spectrum Bandwidth Measurement**

### **6.5.1. Test Limit**

Intentional radiators must be designed to ensure that the 20 dB bandwidth of the emission in the specific band (5725~5875MHz).

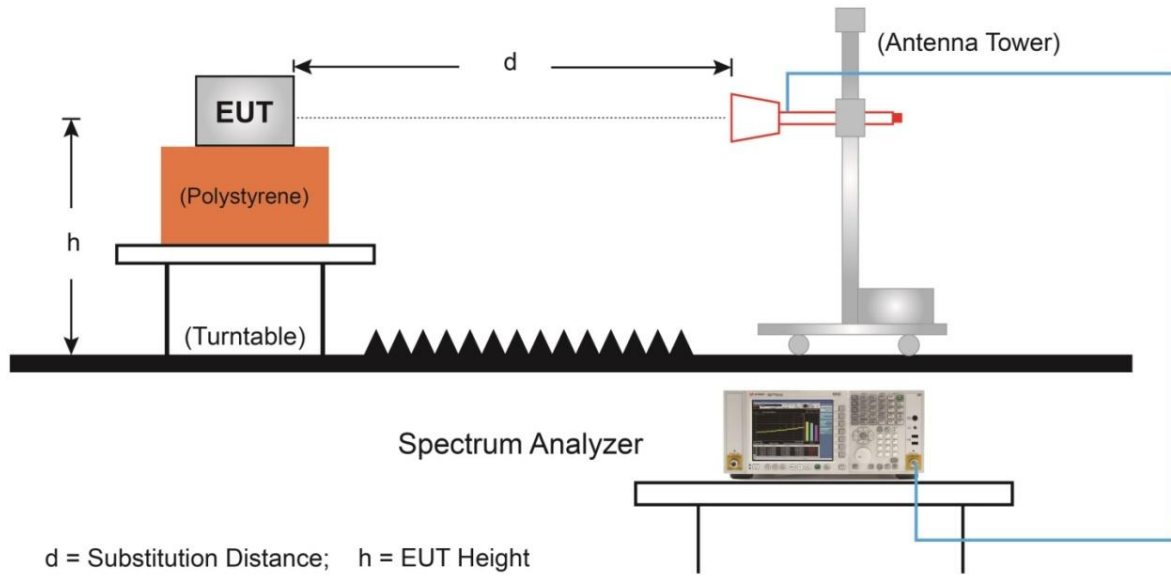
### **6.5.2. Test Procedure used**

ANSI C63.10-2013 Section 6.9.2

### **6.5.3. Test Setting**

1. Set RBW  $\geq$  1% to 5% of the OBW
2. VBW = Approximately three times RBW
3. Span = Approximately 2 to 5 times the OBW, centered on a hopping channel
4. Detector = Peak
5. Trace mode = Max hold
6. Sweep = Auto couple
7. Allow the trace to stabilize
8. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 20 dB relative to the maximum level measured in the fundamental emission.

### 6.5.4. Test Setup

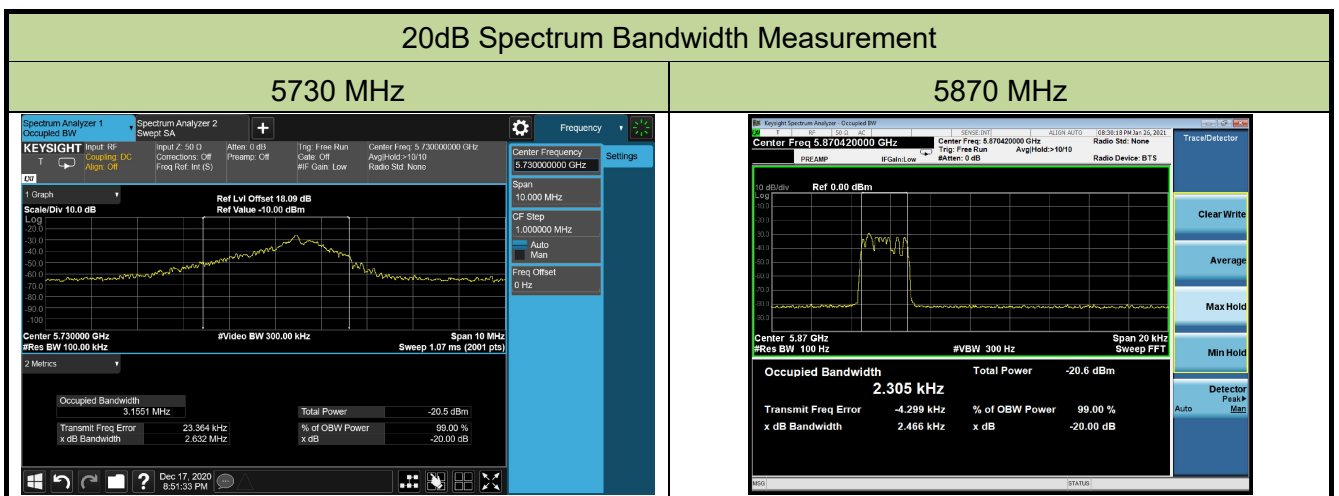




### 6.5.5. Test Result

|           |           |               |                       |
|-----------|-----------|---------------|-----------------------|
| Product   | Microwave | Test Engineer | Bruce Wang            |
| Test Site | WZ-AC1    | Test Date     | 2020/12/17~2021/01/26 |

| Frequency (MHz) | 20dB Bandwidth (kHz) | Low Frequency Range (MHz) | High Frequency Range (MHz) | Limit (MHz) | Result |
|-----------------|----------------------|---------------------------|----------------------------|-------------|--------|
| 5730            | 2632                 | 5728.6840                 | --                         | > 5725      | Pass   |
| 5870            | 2.466                | --                        | 5870.0012                  | < 5875      | Pass   |



## 7. CONCLUSION

The data collected relate only the item(s) tested and show that this device is in compliance with Part 15C of the FCC Rules.

————— The End —————

## **Appendix A - Test Setup Photograph**

Refer to "2007RSU072-UT" file.

## **Appendix B - EUT Photograph**

Refer to "2007RSU072-UE" file.