

## Co-location Report

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**FCC ID:** O3YARF

**IC:** 10744A-ARF

**APPLICANT:** DewertOkin GmbH

**Application Type:** Certification

**Product:** Okin Commander

**Model No.:** P1215

**Brand Name:** Okin

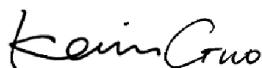
**FCC Classification:** Digital Transmission System (DTS)

**FCC Rule Part(s):** Part15 Subpart C (Section 15.247)

**IC Rule(s):** RSS-247 Issue 2, RSS-GEN Issue 5

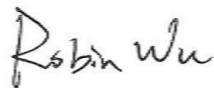
**Test Date:** November 26 ~ November 28, 2018

Reviewed By:



( Kevin Guo )

Approved By:



( 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.

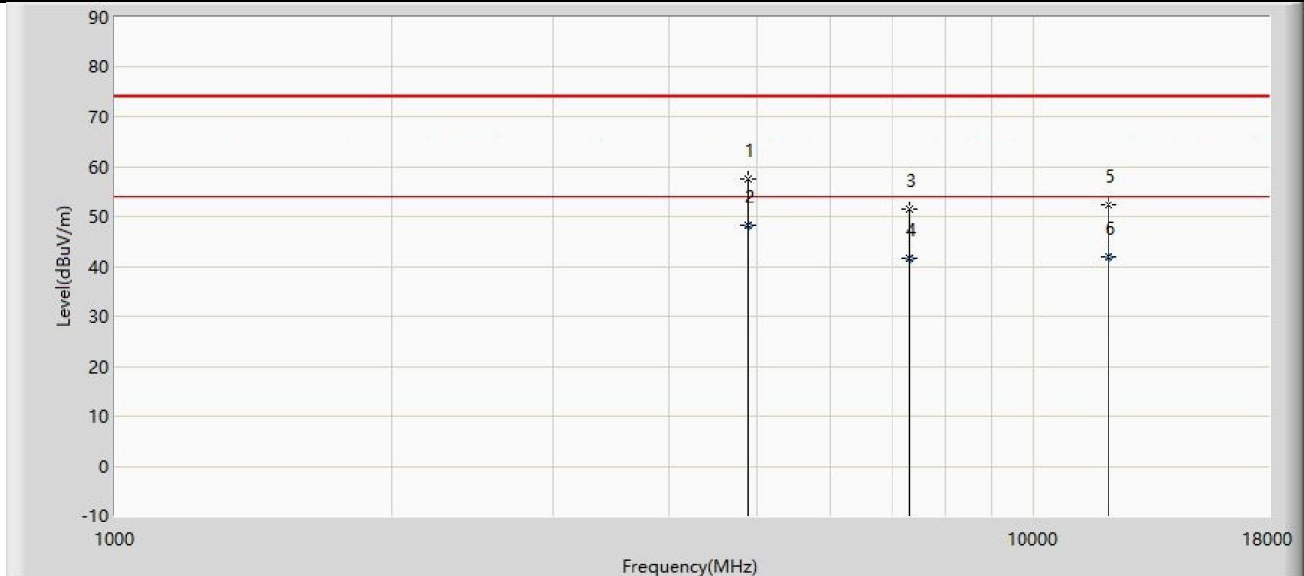
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## Revision History

| Report No.    | Version | Description    | Issue Date | Note  |
|---------------|---------|----------------|------------|-------|
| 1806RSU033-U3 | Rev. 01 | Initial Report | 11-30-2018 | Valid |
|               |         |                |            |       |

## 1. TEST RESULT of Radiated Emissions for Co-located

|                |                                                                                                                                |            |            |
|----------------|--------------------------------------------------------------------------------------------------------------------------------|------------|------------|
| Test Mode:     | OKIN 2.4G + Wi-Fi Transmit                                                                                                     | Test Site: | AC1        |
| Test Engineer: | Snake Ni                                                                                                                       | Polarity:  | Horizontal |
| Product:       | Okin Commander                                                                                                                 | Model No.: | P1215      |
| Remark:        | There is the ambient noise within frequency range 9kHz~30MHz and 18GHz~40GHz, the permissible value is not show in the report. |            |            |

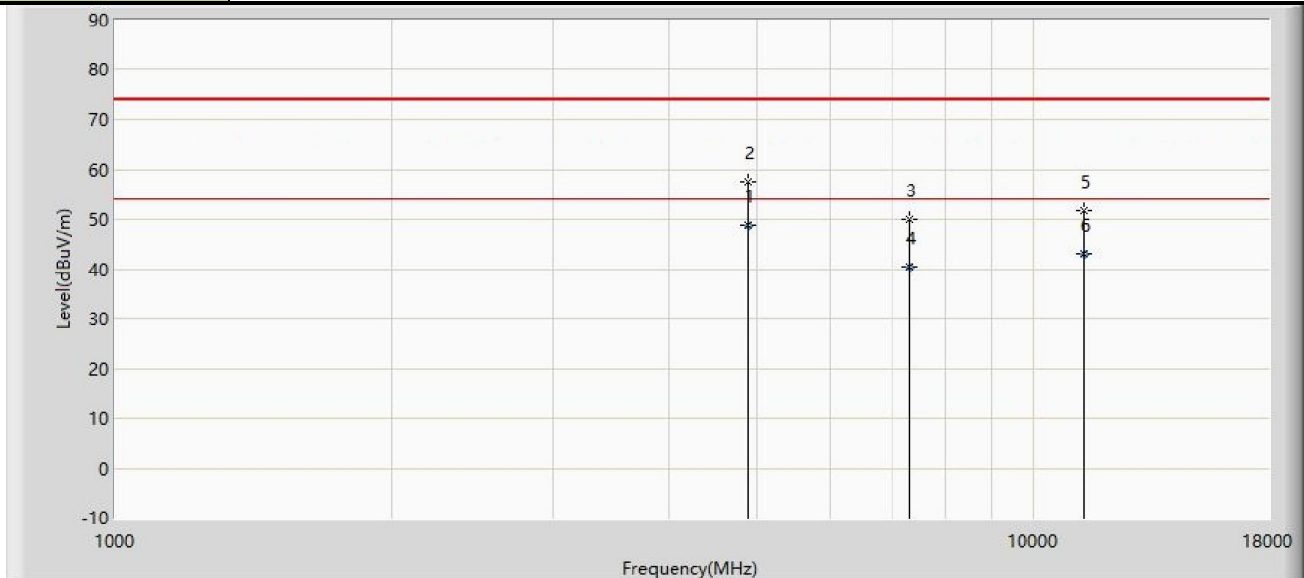


| No | Flag | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|----|------|------|-----------------|------------------------|----------------------|-----------------|----------------|-------------|------|
| 1  |      |      | 4884.500        | 57.526                 | 51.961               | -16.474         | 74.000         | 5.564       | PK   |
| 2  |      |      | 4884.510        | 48.275                 | 42.710               | -5.725          | 54.000         | 5.565       | AV   |
| 3  |      |      | 7324.000        | 51.483                 | 37.708               | -22.517         | 74.000         | 13.775      | PK   |
| 4  |      |      | 7324.100        | 41.466                 | 27.690               | -12.534         | 54.000         | 13.776      | AV   |
| 5  |      |      | 12067.000       | 52.289                 | 31.931               | -21.711         | 74.000         | 20.358      | PK   |
| 6  |      | *    | 12067.000       | 41.808                 | 21.450               | -12.192         | 54.000         | 20.358      | AV   |

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

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre\_Amplifier Gain (dB).

|                |                                                                                                                                |            |          |
|----------------|--------------------------------------------------------------------------------------------------------------------------------|------------|----------|
| Test Mode:     | OKIN 2.4G + Wi-Fi Transmit                                                                                                     | Test Site: | AC1      |
| Test Engineer: | Bacon Dong                                                                                                                     | Polarity:  | Vertical |
| Antenna Type:  | Okin Commander                                                                                                                 | Model No.: | P1215    |
| Remark:        | There is the ambient noise within frequency range 9kHz~30MHz and 18GHz~40GHz, the permissible value is not show in the report. |            |          |

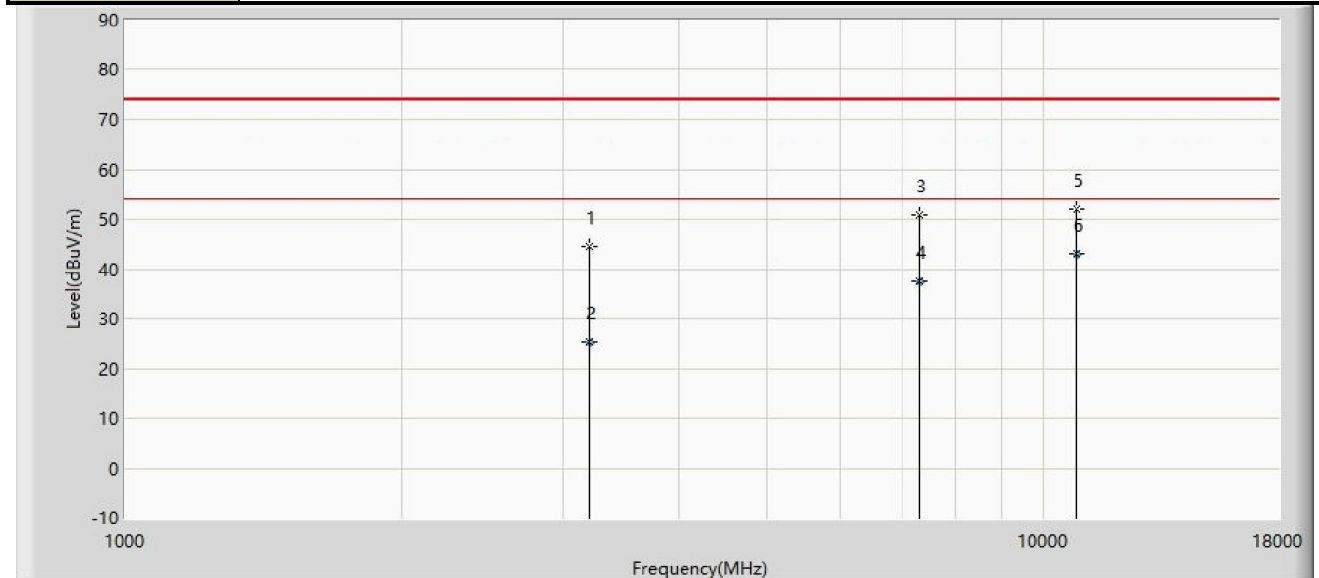


| No | Flag | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|----|------|------|-----------------|------------------------|----------------------|-----------------|----------------|-------------|------|
| 1  |      |      | 4882.975        | 48.873                 | 43.302               | -5.127          | 54.000         | 5.571       | AV   |
| 2  |      |      | 4884.500        | 57.535                 | 51.970               | -16.465         | 74.000         | 5.564       | PK   |
| 3  |      |      | 7324.000        | 49.882                 | 36.107               | -24.118         | 74.000         | 13.775      | PK   |
| 4  |      |      | 7324.300        | 40.558                 | 26.780               | -13.442         | 54.000         | 13.778      | AV   |
| 5  |      |      | 11336.000       | 51.766                 | 31.399               | -22.234         | 74.000         | 20.367      | PK   |
| 6  |      | *    | 11336.000       | 43.017                 | 22.650               | -10.983         | 54.000         | 20.367      | AV   |

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

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre\_Amplifier Gain (dB).

|                |                                                                                                                                |            |            |
|----------------|--------------------------------------------------------------------------------------------------------------------------------|------------|------------|
| Test Mode:     | OKIN 2.4G + BT Transmit                                                                                                        | Test Site: | AC1        |
| Test Engineer: | Bacon Dong                                                                                                                     | Polarity:  | Horizontal |
| Product:       | Okin Commander                                                                                                                 | Model No.: | P1215      |
| Remark:        | There is the ambient noise within frequency range 9kHz~30MHz and 18GHz~40GHz, the permissible value is not show in the report. |            |            |

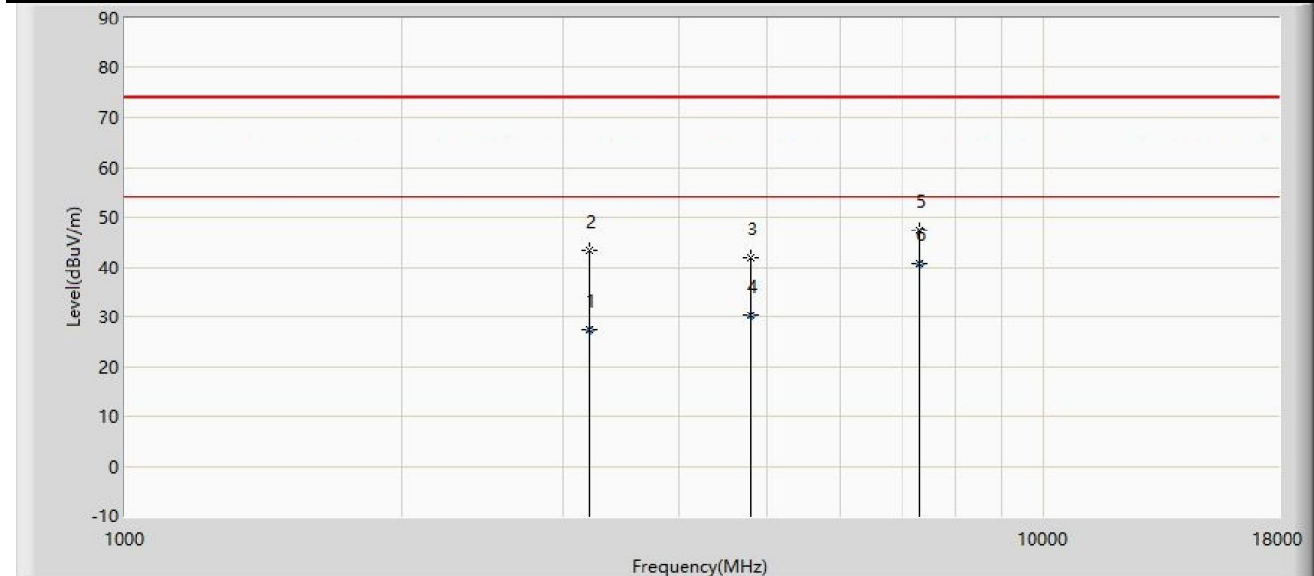


| No | Flag | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|----|------|------|-----------------|------------------------|----------------------|-----------------|----------------|-------------|------|
| 1  |      |      | 3201.500        | 44.360                 | 43.756               | -23.840         | 68.200         | 0.604       | PK   |
| 2  |      |      | 3201.500        | 25.294                 | 24.690               | -28.706         | 54.000         | 0.604       | AV   |
| 3  |      |      | 7324.000        | 50.993                 | 37.218               | -23.007         | 74.000         | 13.775      | PK   |
| 4  |      |      | 7324.200        | 37.427                 | 23.650               | -16.573         | 54.000         | 13.776      | AV   |
| 5  |      |      | 10860.000       | 52.160                 | 32.191               | -21.840         | 74.000         | 19.969      | PK   |
| 6  |      | *    | 10860.000       | 42.919                 | 22.950               | -11.081         | 54.000         | 19.969      | AV   |

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

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre\_Amplifier Gain (dB).

|                |                                                                                                                                |            |          |
|----------------|--------------------------------------------------------------------------------------------------------------------------------|------------|----------|
| Test Mode:     | OKIN 2.4G + BT Transmit                                                                                                        | Test Site: | AC1      |
| Test Engineer: | Bacon Dong                                                                                                                     | Polarity:  | Vertical |
| Antenna Type:  | Okin Commander                                                                                                                 | Model No.: | P1215    |
| Remark:        | There is the ambient noise within frequency range 9kHz~30MHz and 18GHz~40GHz, the permissible value is not show in the report. |            |          |

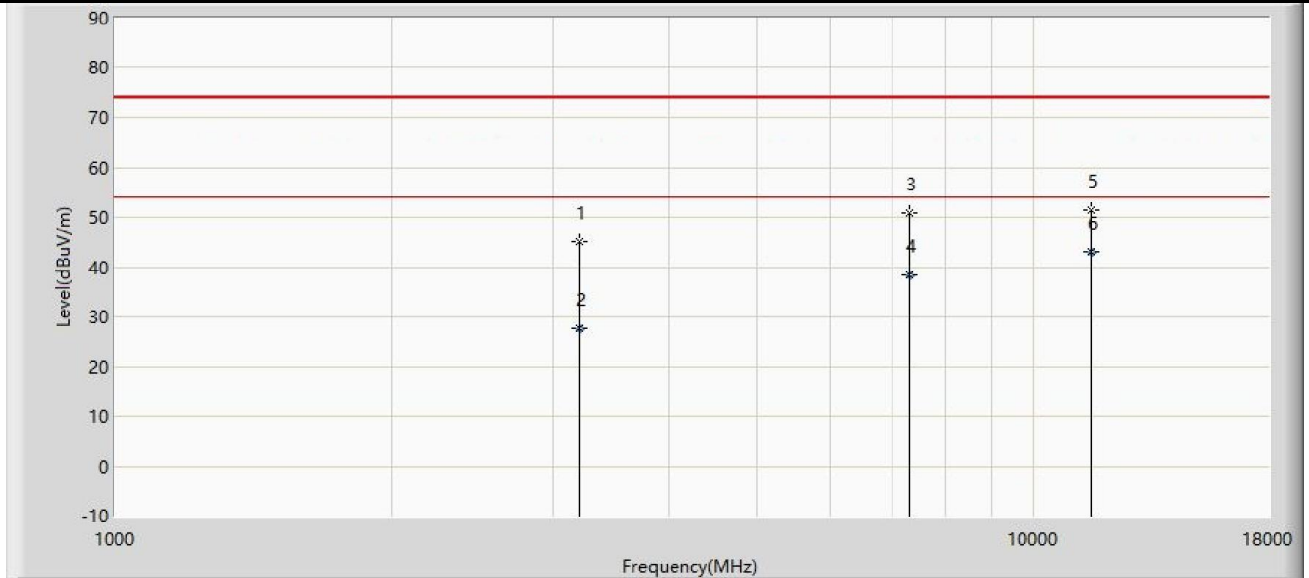


| No | Flag | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|----|------|------|-----------------|------------------------|----------------------|-----------------|----------------|-------------|------|
| 1  |      |      | 3201.200        | 27.534                 | 26.930               | -26.466         | 54.000         | 0.605       | AV   |
| 2  |      |      | 3201.500        | 43.290                 | 42.686               | -24.910         | 68.200         | 0.604       | PK   |
| 3  |      |      | 4799.500        | 41.783                 | 36.268               | -32.217         | 74.000         | 5.515       | PK   |
| 4  |      |      | 4799.500        | 30.325                 | 24.810               | -23.675         | 54.000         | 5.515       | AV   |
| 5  |      |      | 7324.000        | 47.517                 | 33.742               | -26.483         | 74.000         | 13.775      | PK   |
| 6  |      | *    | 7324.000        | 40.765                 | 26.990               | -13.235         | 54.000         | 13.775      | AV   |

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

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre\_Amplifier Gain (dB).

|                |                                                                                                                                |            |            |
|----------------|--------------------------------------------------------------------------------------------------------------------------------|------------|------------|
| Test Mode:     | OKIN 2.4G + BLE Transmit                                                                                                       | Test Site: | AC1        |
| Test Engineer: | Bacon Dong                                                                                                                     | Polarity:  | Horizontal |
| Product:       | Okin Commander                                                                                                                 | Model No.: | P1215      |
| Remark:        | There is the ambient noise within frequency range 9kHz~30MHz and 18GHz~40GHz, the permissible value is not show in the report. |            |            |

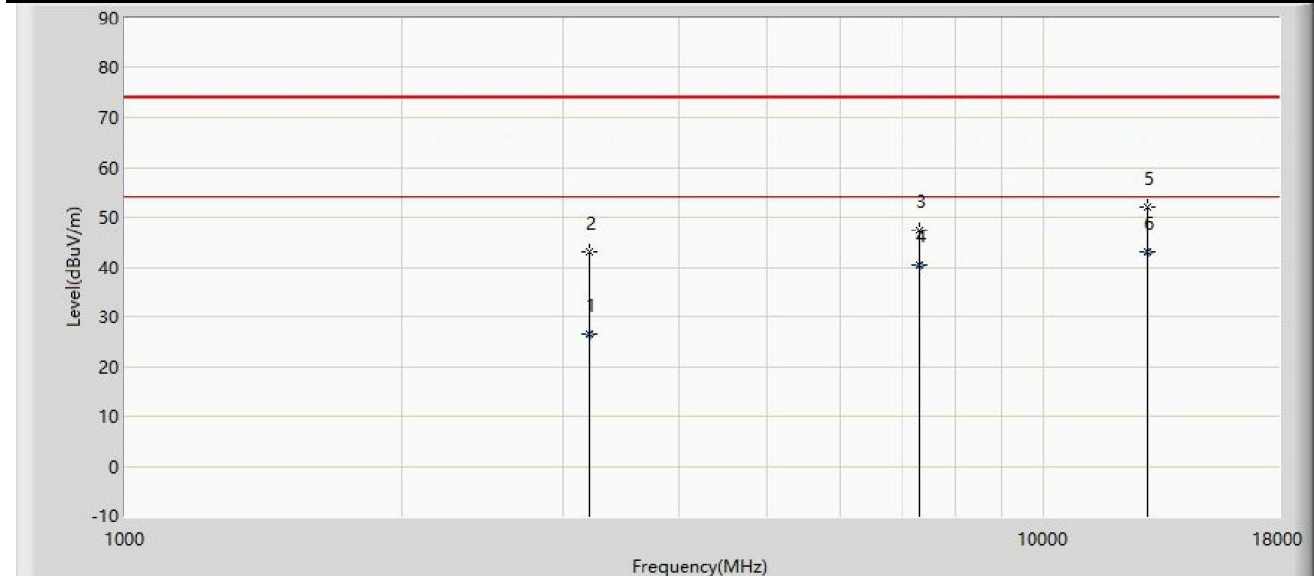


| No | Flag | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|----|------|------|-----------------|------------------------|----------------------|-----------------|----------------|-------------|------|
| 1  |      |      | 3201.500        | 45.022                 | 44.418               | -23.178         | 68.200         | 0.604       | PK   |
| 2  |      |      | 3201.600        | 27.583                 | 26.980               | -26.417         | 54.000         | 0.603       | AV   |
| 3  |      |      | 7324.000        | 50.811                 | 37.036               | -23.189         | 74.000         | 13.775      | PK   |
| 4  |      |      | 7324.100        | 38.406                 | 24.630               | -15.594         | 54.000         | 13.776      | AV   |
| 5  |      |      | 11540.000       | 51.477                 | 30.624               | -22.523         | 74.000         | 20.853      | PK   |
| 6  |      | *    | 11540.000       | 43.033                 | 22.180               | -10.967         | 54.000         | 20.853      | AV   |

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

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre\_Amplifier Gain (dB).

|                |                                                                                                                                |            |          |
|----------------|--------------------------------------------------------------------------------------------------------------------------------|------------|----------|
| Test Mode:     | OKIN 2.4G + BLE Transmit                                                                                                       | Test Site: | AC1      |
| Test Engineer: | Bacon Dong                                                                                                                     | Polarity:  | Vertical |
| Antenna Type:  | Okin Commander                                                                                                                 | Model No.: | P1215    |
| Remark:        | There is the ambient noise within frequency range 9kHz~30MHz and 18GHz~40GHz, the permissible value is not show in the report. |            |          |



| No | Flag | Mark | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor (dB) | Type |
|----|------|------|-----------------|------------------------|----------------------|-----------------|----------------|-------------|------|
| 1  |      |      | 3201.400        | 26.494                 | 25.890               | -27.506         | 54.000         | 0.604       | AV   |
| 2  |      |      | 3201.500        | 43.180                 | 42.576               | -25.020         | 68.200         | 0.604       | PK   |
| 3  |      |      | 7324.000        | 47.400                 | 33.625               | -26.600         | 74.000         | 13.775      | PK   |
| 4  |      |      | 7324.000        | 40.515                 | 26.740               | -13.485         | 54.000         | 13.775      | AV   |
| 5  |      |      | 12959.500       | 52.014                 | 30.745               | -16.186         | 68.200         | 21.270      | PK   |
| 6  |      | *    | 12959.500       | 43.119                 | 21.850               | -10.881         | 54.000         | 21.270      | AV   |

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

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre\_Amplifier Gain (dB).

The End

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

Refer to “1806RSU033-UT” file.

## **Appendix B - EUT Photograph**

Refer to "1806RSU033-UE" file