

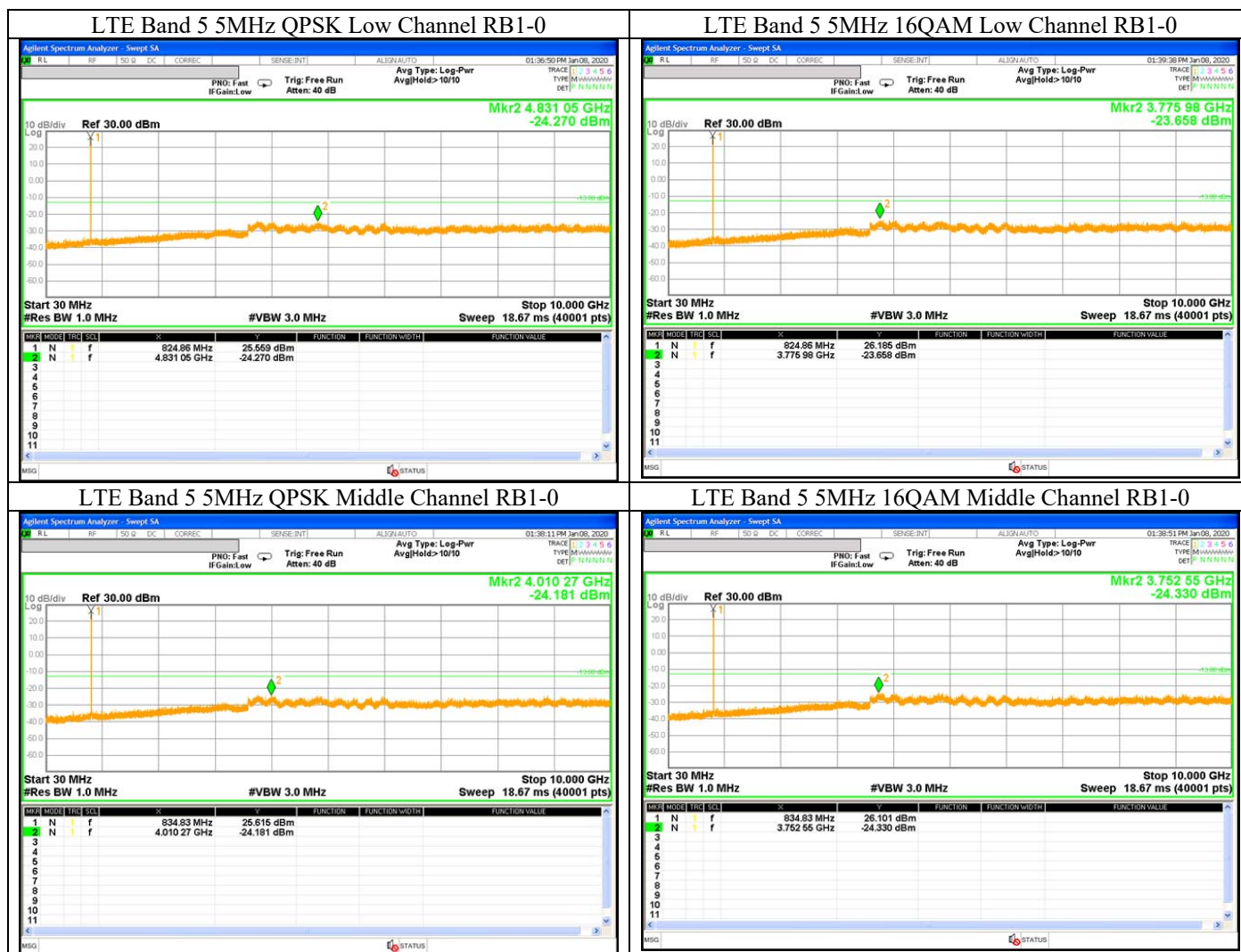
## Spurious Emission (Conducted)

Report No. 13274888H  
Test place Ise EMC Lab.  
Shielded Room No.6  
Date January 8, 2020  
Temperature / Humidity 23 deg. C / 54 % RH  
Engineer Yutaka Yoshida  
Mode LTE



## Spurious Emission (Conducted)

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Test place Ise EMC Lab.  
Shielded Room No.6  
Date January 8, 2020  
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Engineer Yutaka Yoshida  
Mode LTE



UL Japan, Inc.

Ise EMC Lab.

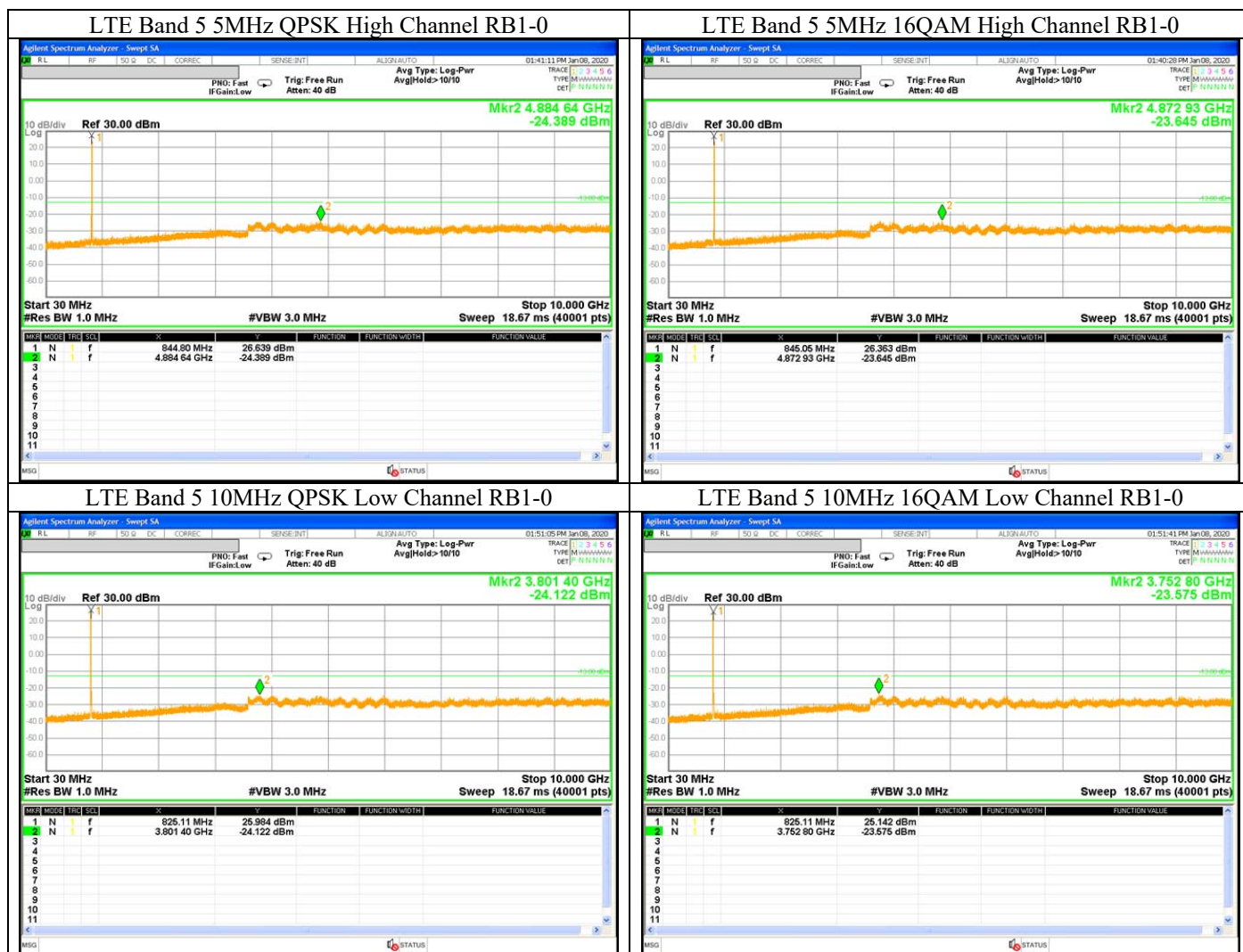
4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

Telephone : +81 596 24 8999

Facsimile : +81 596 24 8124

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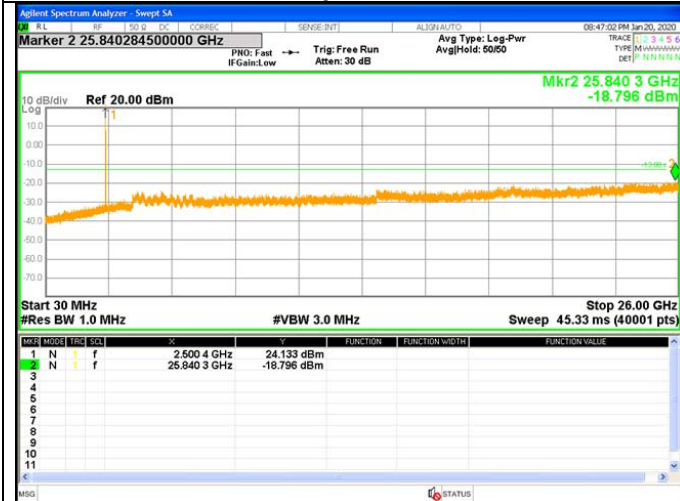
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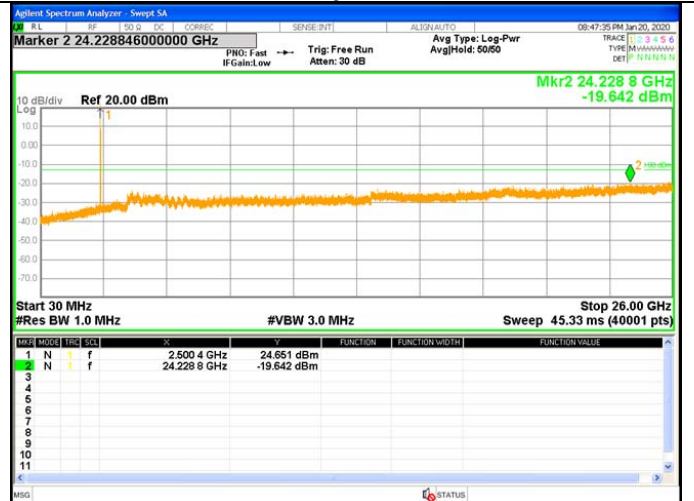
## Spurious Emission (Conducted)

Report No. 13274888H  
Test place Ise EMC Lab.  
Shielded Room No.6  
Date January 20, 2020  
Temperature / Humidity 22 deg. C / 45 % RH  
Engineer Tomohisa Nakagawa  
Mode LTE

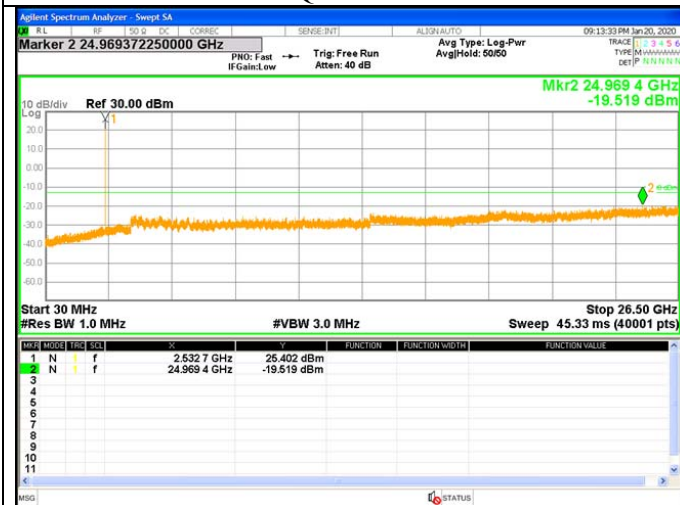
LTE Band 7 5MHz QPSK Low Channel RB1-0



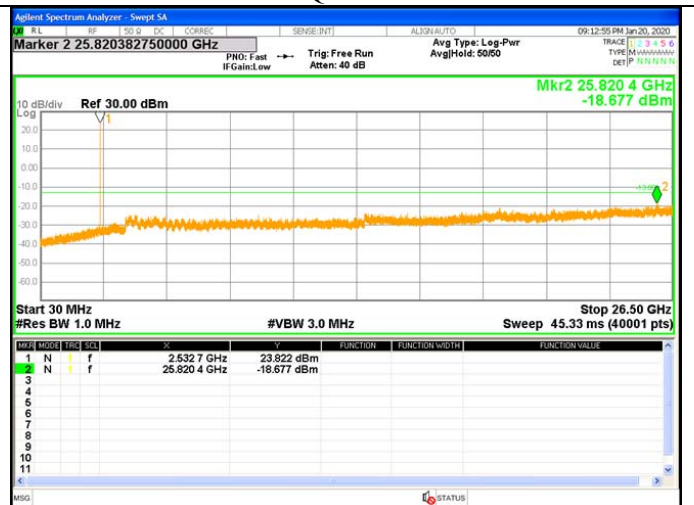
LTE Band 7 5MHz 16QAM Low Channel RB1-0



LTE Band 7 5MHz QPSK Middle Channel RB1-0



LTE Band 7 5MHz 16QAM Middle Channel RB1-0



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Shielded Room No.6  
Date January 20, 2020  
Temperature / Humidity 22 deg. C / 45 % RH  
Engineer Tomohisa Nakagawa  
Mode LTE



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Engineer Tomohisa Nakagawa  
Mode LTE



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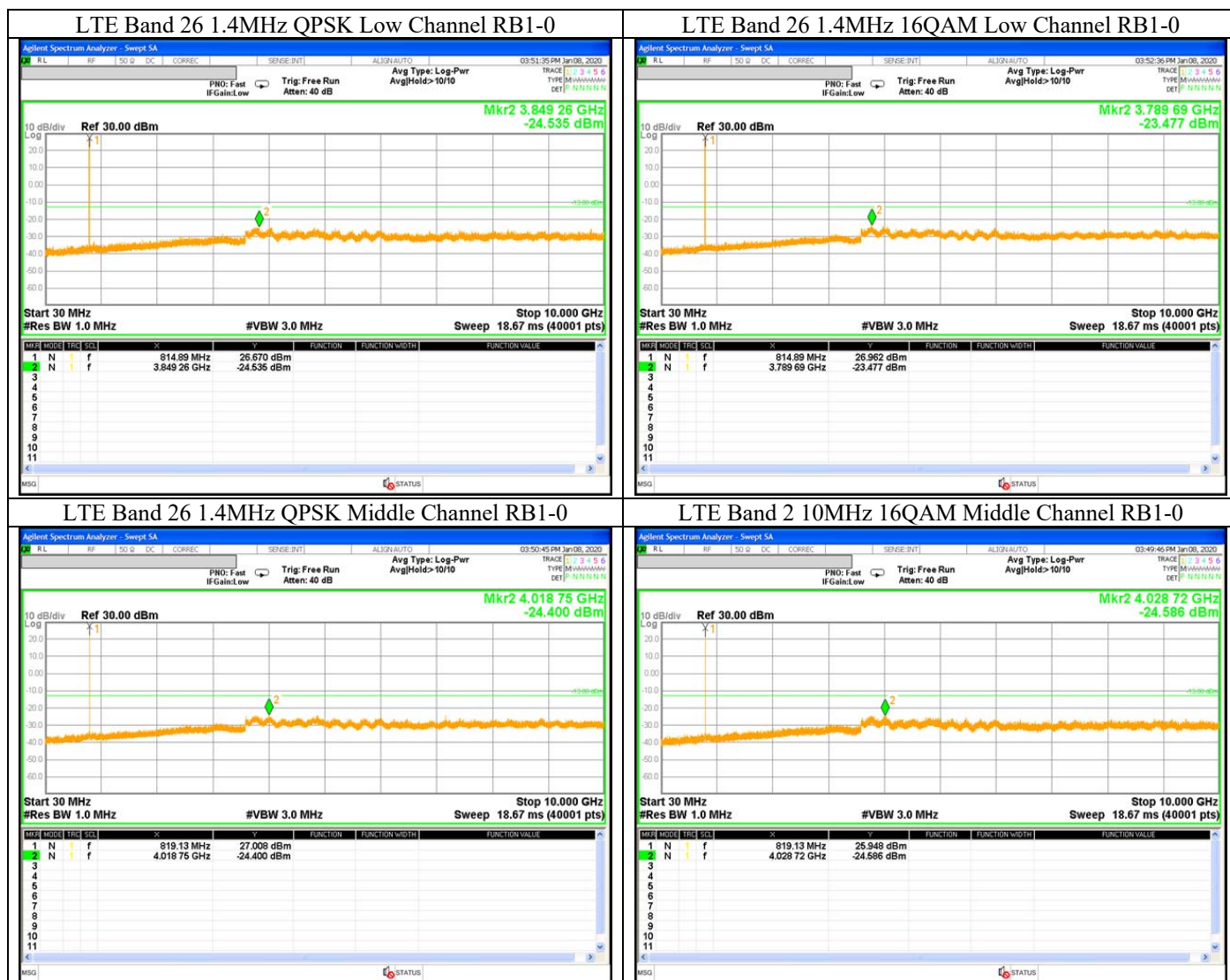
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Test place Ise EMC Lab.  
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Date January 8, 2020  
Temperature / Humidity 23 deg. C / 54 % RH  
Engineer Yutaka Yoshida  
Mode LTE



UL Japan, Inc.

Ise EMC Lab.

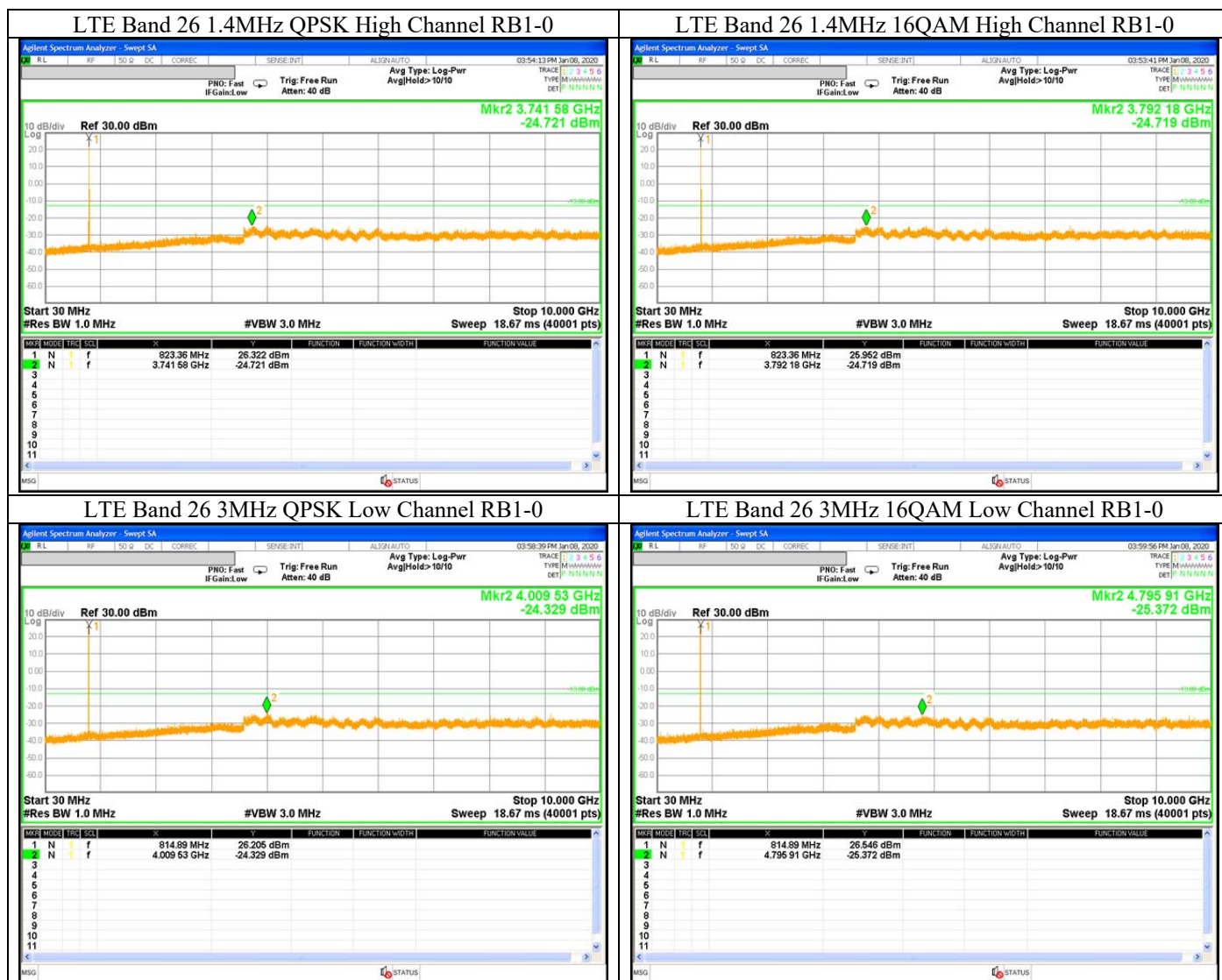
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Mode LTE



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Ise EMC Lab.

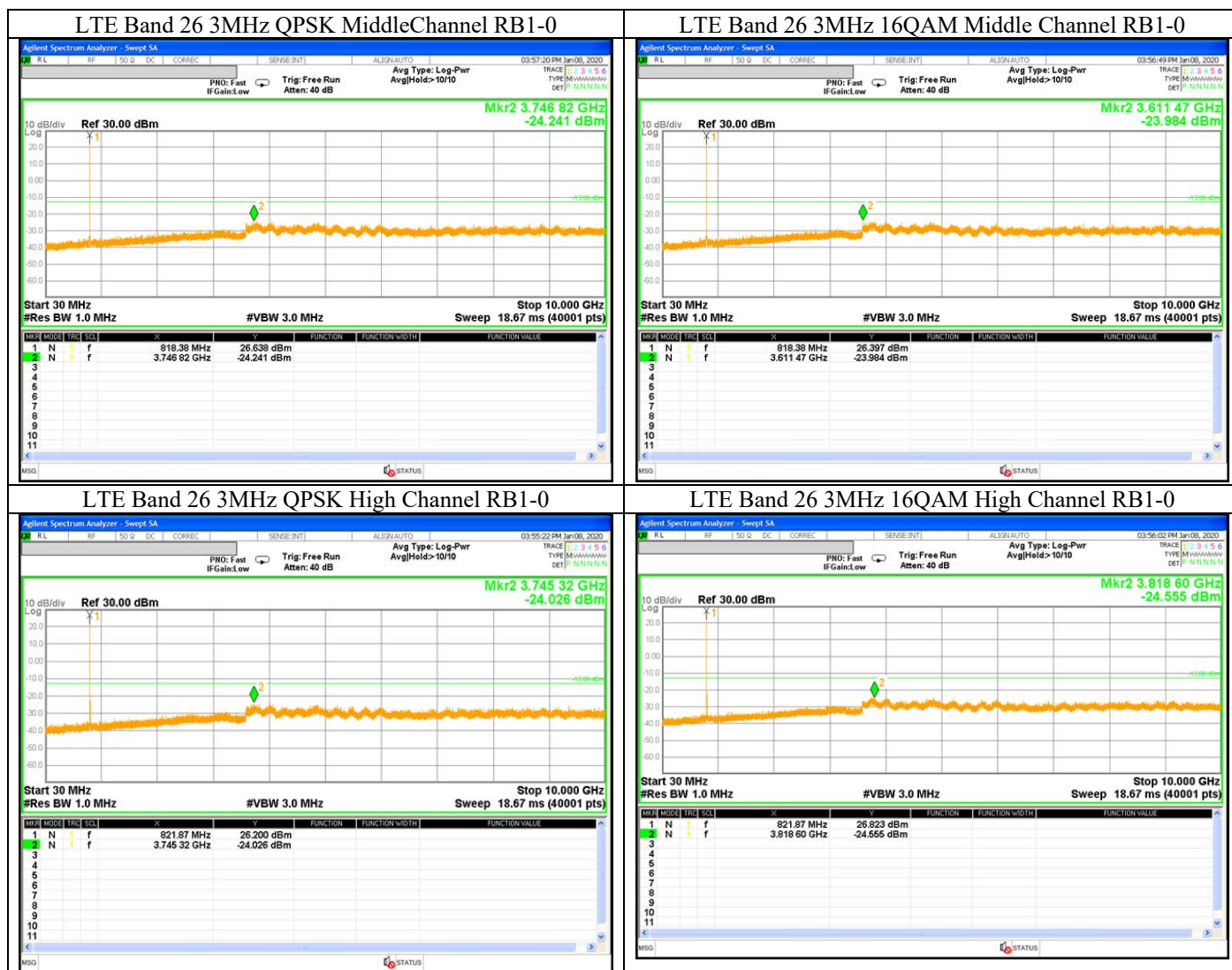
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Temperature / Humidity 23 deg. C / 54 % RH  
Engineer Yutaka Yoshida  
Mode LTE



## Spurious Emission (Conducted)

Report No. 13274888H  
Test place Ise EMC Lab.  
Shielded Room No.6  
Date January 8, 2020  
Temperature / Humidity 23 deg. C / 54 % RH  
Engineer Yutaka Yoshida  
Mode LTE



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## Spurious Emission (Radiated)

Report No. 13274888H  
Test place Ise EMC Lab.  
Semi Anechoic Chamber No.4  
Date March 12, 2020 No.2  
Temperature / Humidity 26 deg. C / 36 % RH March 14, 2020  
Engineer Akihiko Maeda Tomohisa Nakagawa  
(Below 1 GHz) (1 – 10 GHz)  
Mode GSM 850  
1Up GPRS, CS-1 MS power 5

### 824.2 MHz

| Polarity | Frequency [MHz] | Detector | Reading [dBuV] | Ant.Fac. [dB/m] | Loss [dB] | Gain [dB] | Result [dBuV/m] | Distance [m] | EIRP [dBm] | ERP [dBm] | Limit [dBm] | Margin [dB] | Remark |
|----------|-----------------|----------|----------------|-----------------|-----------|-----------|-----------------|--------------|------------|-----------|-------------|-------------|--------|
| Hori.    | 1648.400        | PK       | 77.6           | 25.1            | 5.0       | 35.7      | 71.9            | 3.0          | -23.4      | -25.5     | -13.0       | 12.5        |        |
| Hori.    | 2472.600        | PK       | 68.1           | 27.5            | 5.1       | 35.2      | 65.5            | 3.0          | -29.8      | -31.9     | -13.0       | 18.9        |        |
| Hori.    | 3296.800        | PK       | 62.0           | 28.2            | 5.4       | 34.7      | 60.9            | 3.0          | -34.4      | -36.5     | -13.0       | 23.5        |        |
| Hori.    | 4121.000        | PK       | 53.2           | 30.0            | 5.8       | 34.3      | 54.7            | 3.0          | -40.6      | -42.7     | -13.0       | 29.7        |        |
| Vert.    | 1648.400        | PK       | 81.6           | 25.1            | 5.0       | 35.7      | 75.9            | 3.0          | -19.3      | -21.5     | -13.0       | 8.5         |        |
| Vert.    | 2472.600        | PK       | 63.6           | 27.5            | 5.1       | 35.2      | 61.0            | 3.0          | -34.3      | -36.4     | -13.0       | 23.4        |        |
| Vert.    | 3296.800        | PK       | 61.4           | 28.2            | 5.4       | 34.7      | 60.2            | 3.0          | -35.0      | -37.2     | -13.0       | 24.2        |        |
| Vert.    | 4121.000        | PK       | 51.5           | 30.0            | 5.8       | 34.3      | 53.0            | 3.0          | -42.3      | -44.4     | -13.0       | 31.4        |        |

### 836.6 MHz

| Polarity | Frequency [MHz] | Detector | Reading [dBuV] | Ant.Fac. [dB/m] | Loss [dB] | Gain [dB] | Result [dBuV/m] | Distance [m] | EIRP [dBm] | ERP [dBm] | Limit [dBm] | Margin [dB] | Remark |
|----------|-----------------|----------|----------------|-----------------|-----------|-----------|-----------------|--------------|------------|-----------|-------------|-------------|--------|
| Hori.    | 1673.200        | PK       | 74.1           | 25.0            | 5.0       | 35.7      | 68.4            | 3.0          | -26.8      | -29.0     | -13.0       | 13.8        |        |
| Hori.    | 2509.800        | PK       | 59.3           | 27.5            | 5.1       | 35.2      | 56.7            | 3.0          | -38.5      | -40.7     | -13.0       | 25.5        |        |
| Hori.    | 3346.400        | PK       | 59.3           | 28.1            | 5.4       | 34.7      | 58.2            | 3.0          | -37.1      | -39.2     | -13.0       | 24.1        |        |
| Hori.    | 5019.600        | PK       | 56.6           | 31.8            | 6.3       | 34.5      | 60.3            | 3.0          | -35.0      | -37.2     | -13.0       | 22.0        |        |
| Vert.    | 1673.200        | PK       | 73.6           | 25.0            | 5.0       | 35.7      | 67.9            | 3.0          | -27.3      | -29.5     | -13.0       | 14.3        |        |
| Vert.    | 2509.800        | PK       | 56.2           | 27.5            | 5.1       | 35.2      | 53.6            | 3.0          | -41.7      | -43.8     | -13.0       | 28.7        |        |
| Vert.    | 3346.400        | PK       | 57.3           | 28.1            | 5.4       | 34.7      | 56.1            | 3.0          | -39.1      | -41.3     | -13.0       | 26.1        |        |
| Vert.    | 5019.600        | PK       | 54.5           | 31.8            | 6.3       | 34.5      | 58.2            | 3.0          | -37.1      | -39.2     | -13.0       | 24.1        |        |

### 848.8 MHz

| Polarity | Frequency [MHz] | Detector | Reading [dBuV] | Ant.Fac. [dB/m] | Loss [dB] | Gain [dB] | Result [dBuV/m] | Distance [m] | EIRP [dBm] | ERP [dBm] | Limit [dBm] | Margin [dB] | Remark |
|----------|-----------------|----------|----------------|-----------------|-----------|-----------|-----------------|--------------|------------|-----------|-------------|-------------|--------|
| Hori.    | 1697.600        | PK       | 66.6           | 25.0            | 5.0       | 35.7      | 61.0            | 3.0          | -34.3      | -36.4     | -13.0       | 21.3        |        |
| Hori.    | 2546.400        | PK       | 61.8           | 27.5            | 5.1       | 35.2      | 59.2            | 3.0          | -36.0      | -38.2     | -13.0       | 23.0        |        |
| Hori.    | 3395.200        | PK       | 65.7           | 28.3            | 5.5       | 34.7      | 64.7            | 3.0          | -30.6      | -32.7     | -13.0       | 17.6        |        |
| Hori.    | 4244.000        | PK       | 58.9           | 30.3            | 5.8       | 34.3      | 60.8            | 3.0          | -34.5      | -36.6     | -13.0       | 21.5        |        |
| Vert.    | 1697.600        | PK       | 67.6           | 25.0            | 5.0       | 35.7      | 61.9            | 3.0          | -33.4      | -35.5     | -13.0       | 20.4        |        |
| Vert.    | 2546.400        | PK       | 67.4           | 27.5            | 5.1       | 35.2      | 64.8            | 3.0          | -30.4      | -32.6     | -13.0       | 17.4        |        |
| Vert.    | 3395.200        | PK       | 60.4           | 28.3            | 5.5       | 34.7      | 59.4            | 3.0          | -35.8      | -38.0     | -13.0       | 22.8        |        |
| Vert.    | 4244.000        | PK       | 60.1           | 30.3            | 5.8       | 34.3      | 62.0            | 3.0          | -33.3      | -35.4     | -13.0       | 20.3        |        |

Result (E) = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier)

(Above 1GHz) EIRP = E + 20\*log(D) -104.8

(Below 1GHz) ERP =EIRP -2.15

\*Other frequency noises omitted in this report were not seen or had enough margin (more than 20 dB).

Distance factor: 1 GHz - 10 GHz 20log (3.75 m / 3.0 m) = 1.94 dB

## Spurious Emission (Radiated)

Report No. 13274888H  
Test place Ise EMC Lab.  
Semi Anechoic Chamber No.4  
Date March 12, 2020 No.2  
Temperature / Humidity 26 deg. C / 36 % RH March 14, 2020  
Engineer Akihiko Maeda Tomohisa Nakagawa  
(Below 1 GHz) (1 – 10 GHz)  
Mode GSM 850  
1Up EGPRS, MCS-5 MS power 5

### 824.2 MHz

| Polarity | Frequency [MHz] | Detector | Reading [dBuV] | Ant.Fac. [dB/m] | Loss [dB] | Gain [dB] | Result [dBuV/m] | Distance [m] | EIRP [dBm] | ERP [dBm] | Limit [dBm] | Margin [dB] | Remark |
|----------|-----------------|----------|----------------|-----------------|-----------|-----------|-----------------|--------------|------------|-----------|-------------|-------------|--------|
| Hori.    | 1648.400        | PK       | 75.9           | 25.1            | 5.0       | 35.7      | 70.2            | 3.0          | -25.0      | -27.2     | -13.0       | 14.2        |        |
| Hori.    | 2472.600        | PK       | 56.5           | 27.5            | 5.1       | 35.2      | 53.9            | 3.0          | -41.3      | -43.5     | -13.0       | 30.5        |        |
| Hori.    | 3296.800        | PK       | 51.5           | 28.2            | 5.4       | 34.7      | 50.3            | 3.0          | -44.9      | -47.1     | -13.0       | 34.1        |        |
| Hori.    | 4121.000        | PK       | 54.5           | 30.0            | 5.8       | 34.3      | 56.0            | 3.0          | -39.2      | -41.4     | -13.0       | 28.4        |        |
| Vert.    | 1648.400        | PK       | 72.9           | 25.1            | 5.0       | 35.7      | 67.2            | 3.0          | -28.0      | -30.2     | -13.0       | 17.2        |        |
| Vert.    | 2472.600        | PK       | 51.4           | 27.5            | 5.1       | 35.2      | 48.8            | 3.0          | -46.5      | -48.6     | -13.0       | 35.6        |        |
| Vert.    | 3296.800        | PK       | 56.5           | 28.2            | 5.4       | 34.7      | 55.4            | 3.0          | -39.9      | -42.0     | -13.0       | 29.0        |        |
| Vert.    | 4121.000        | PK       | 44.7           | 30.0            | 5.8       | 34.3      | 46.2            | 3.0          | -49.1      | -51.2     | -13.0       | 38.2        |        |

### 836.6 MHz

| Polarity | Frequency [MHz] | Detector | Reading [dBuV] | Ant.Fac. [dB/m] | Loss [dB] | Gain [dB] | Result [dBuV/m] | Distance [m] | EIRP [dBm] | ERP [dBm] | Limit [dBm] | Margin [dB] | Remark |
|----------|-----------------|----------|----------------|-----------------|-----------|-----------|-----------------|--------------|------------|-----------|-------------|-------------|--------|
| Hori.    | 1673.200        | PK       | 70.7           | 25.0            | 5.0       | 35.7      | 65.0            | 3.0          | -30.2      | -32.4     | -13.0       | 17.2        |        |
| Hori.    | 2509.800        | PK       | 55.8           | 27.5            | 5.1       | 35.2      | 53.2            | 3.0          | -42.1      | -44.2     | -13.0       | 29.1        |        |
| Hori.    | 3346.400        | PK       | 60.2           | 28.1            | 5.4       | 34.7      | 59.1            | 3.0          | -36.2      | -38.3     | -13.0       | 23.2        |        |
| Hori.    | 5019.600        | PK       | 55.0           | 31.8            | 6.3       | 34.5      | 58.6            | 3.0          | -36.6      | -38.8     | -13.0       | 23.6        |        |
| Vert.    | 1673.200        | PK       | 69.7           | 25.0            | 5.0       | 35.7      | 64.1            | 3.0          | -31.2      | -33.3     | -13.0       | 18.2        |        |
| Vert.    | 2509.800        | PK       | 55.1           | 27.5            | 5.1       | 35.2      | 52.5            | 3.0          | -42.7      | -44.9     | -13.0       | 29.7        |        |
| Vert.    | 3346.400        | PK       | 54.8           | 28.1            | 5.4       | 34.7      | 53.7            | 3.0          | -41.6      | -43.7     | -13.0       | 28.6        |        |
| Vert.    | 5019.600        | PK       | 50.1           | 31.8            | 6.3       | 34.5      | 53.7            | 3.0          | -41.6      | -43.7     | -13.0       | 28.6        |        |

### 848.8 MHz

| Polarity | Frequency [MHz] | Detector | Reading [dBuV] | Ant.Fac. [dB/m] | Loss [dB] | Gain [dB] | Result [dBuV/m] | Distance [m] | EIRP [dBm] | ERP [dBm] | Limit [dBm] | Margin [dB] | Remark |
|----------|-----------------|----------|----------------|-----------------|-----------|-----------|-----------------|--------------|------------|-----------|-------------|-------------|--------|
| Hori.    | 1697.600        | PK       | 68.8           | 25.0            | 5.0       | 35.7      | 63.1            | 3.0          | -32.1      | -34.3     | -13.0       | 19.1        |        |
| Hori.    | 2546.400        | PK       | 56.2           | 27.5            | 5.1       | 35.2      | 53.6            | 3.0          | -41.6      | -43.8     | -13.0       | 28.6        |        |
| Hori.    | 3395.200        | PK       | 60.8           | 28.3            | 5.5       | 34.7      | 59.8            | 3.0          | -35.5      | -37.6     | -13.0       | 22.5        |        |
| Hori.    | 4244.000        | PK       | 52.5           | 30.3            | 5.8       | 34.3      | 54.4            | 3.0          | -40.9      | -43.0     | -13.0       | 27.9        |        |
| Hori.    | 5092.800        | PK       | 53.6           | 32.0            | 6.3       | 34.4      | 57.5            | 3.0          | -37.7      | -39.9     | -13.0       | 24.7        |        |
| Vert.    | 1697.600        | PK       | 69.5           | 25.0            | 5.0       | 35.7      | 63.8            | 3.0          | -31.4      | -33.6     | -13.0       | 18.4        |        |
| Vert.    | 2546.400        | PK       | 49.9           | 27.5            | 5.1       | 35.2      | 47.3            | 3.0          | -48.0      | -50.1     | -13.0       | 35.0        |        |
| Vert.    | 3395.200        | PK       | 55.5           | 28.3            | 5.5       | 34.7      | 54.6            | 3.0          | -40.7      | -42.8     | -13.0       | 27.7        |        |
| Vert.    | 4244.000        | PK       | 47.7           | 30.3            | 5.8       | 34.3      | 49.5            | 3.0          | -45.7      | -47.9     | -13.0       | 32.7        |        |
| Vert.    | 5092.800        | PK       | 47.6           | 32.0            | 6.3       | 34.4      | 51.5            | 3.0          | -43.8      | -45.9     | -13.0       | 30.8        |        |

Result (E) = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier)

(Above 1GHz) EIRP = E + 20\*log(D) -104.8

(Below 1GHz) ERP =EIRP -2.15

\*Other frequency noises omitted in this report were not seen or had enough margin (more than 20 dB).

Distance factor: 1 GHz - 10 GHz 20log (3.75 m / 3.0 m) = 1.94 dB

## Spurious Emission (Radiated)

|                        |                                       |                                   |                                     |
|------------------------|---------------------------------------|-----------------------------------|-------------------------------------|
| Report No.             | 13274888H                             |                                   |                                     |
| Test place             | Ise EMC Lab.                          |                                   |                                     |
| Semi Anechoic Chamber  | No.4                                  | No.2                              | No.2                                |
| Date                   | March 12, 2020                        | March 14, 2020                    | March 15, 2020                      |
| Temperature / Humidity | 26 deg. C / 36 % RH                   | 19 deg. C / 42 % RH               | 19 deg. C / 38 % RH                 |
| Engineer               | Akihiko Maeda<br>(Below 1 GHz)        | Tomohisa Nakagawa<br>(1 – 10 GHz) | Tomohisa Nakagawa<br>(Above 10 GHz) |
| Mode                   | PCS 1900<br>1Up GPRS, CS-1 MS power 0 |                                   |                                     |

### 1850.2 MHz

| Polarity | Frequency<br>[MHz] | Detector | Reading<br>[dBuV] | Ant.Fac.<br>[dB/m] | Loss<br>[dB] | Gain<br>[dB] | Result<br>[dBuV/m] | Distance<br>[m] | EIRP<br>[dBm] | ERP<br>[dBm] | Limit<br>[dBm] | Margin<br>[dB] | Remark |
|----------|--------------------|----------|-------------------|--------------------|--------------|--------------|--------------------|-----------------|---------------|--------------|----------------|----------------|--------|
| Hori.    | 3700.400           | PK       | 51.2              | 29.3               | 7.1          | 34.4         | 53.1               | 3.0             | -42.2         | -44.3        | -13.0          | 29.2           |        |
| Hori.    | 5550.600           | PK       | 50.6              | 31.8               | 7.5          | 34.2         | 55.6               | 3.0             | -39.7         | -41.8        | -13.0          | 26.7           |        |
| Hori.    | 7400.800           | PK       | 58.0              | 36.2               | 8.5          | 34.4         | 68.4               | 3.0             | -26.9         | -29.1        | -13.0          | 13.9           |        |
| Hori.    | 9251.000           | PK       | 53.6              | 38.5               | 9.2          | 34.8         | 66.5               | 3.0             | -28.8         | -30.9        | -13.0          | 15.8           |        |
| Vert.    | 3700.400           | PK       | 48.6              | 29.3               | 7.1          | 34.4         | 50.5               | 3.0             | -44.8         | -46.9        | -13.0          | 31.8           |        |
| Vert.    | 5550.600           | PK       | 49.4              | 31.8               | 7.5          | 34.2         | 54.4               | 3.0             | -40.9         | -43.0        | -13.0          | 27.9           |        |
| Vert.    | 7400.800           | PK       | 54.6              | 36.2               | 8.5          | 34.4         | 65.0               | 3.0             | -30.3         | -32.4        | -13.0          | 17.3           |        |
| Vert.    | 9251.000           | PK       | 50.8              | 38.5               | 9.2          | 34.8         | 63.7               | 3.0             | -31.6         | -33.8        | -13.0          | 18.6           |        |

### 1880.0 MHz

| Polarity | Frequency<br>[MHz] | Detector | Reading<br>[dBuV] | Ant.Fac.<br>[dB/m] | Loss<br>[dB] | Gain<br>[dB] | Result<br>[dBuV/m] | Distance<br>[m] | EIRP<br>[dBm] | ERP<br>[dBm] | Limit<br>[dBm] | Margin<br>[dB] | Remark |
|----------|--------------------|----------|-------------------|--------------------|--------------|--------------|--------------------|-----------------|---------------|--------------|----------------|----------------|--------|
| Hori.    | 3760.000           | PK       | 55.1              | 29.4               | 7.1          | 34.4         | 57.1               | 3.0             | -38.1         | -40.3        | -13.0          | 25.1           |        |
| Hori.    | 5640.000           | PK       | 52.1              | 31.6               | 7.5          | 34.2         | 57.1               | 3.0             | -38.2         | -40.3        | -13.0          | 25.2           |        |
| Hori.    | 7520.000           | PK       | 57.3              | 36.2               | 8.6          | 34.5         | 67.6               | 3.0             | -27.6         | -29.8        | -13.0          | 14.6           |        |
| Hori.    | 9400.000           | PK       | 57.3              | 38.7               | 9.2          | 34.8         | 70.4               | 3.0             | -24.8         | -27.0        | -13.0          | 11.8           |        |
| Vert.    | 3760.000           | PK       | 48.8              | 29.4               | 7.1          | 34.4         | 50.9               | 3.0             | -44.4         | -46.5        | -13.0          | 31.4           |        |
| Vert.    | 5640.000           | PK       | 50.5              | 31.6               | 7.5          | 34.2         | 55.5               | 3.0             | -39.8         | -41.9        | -13.0          | 26.8           |        |
| Vert.    | 7520.000           | PK       | 56.8              | 36.2               | 8.6          | 34.5         | 67.1               | 3.0             | -28.1         | -30.3        | -13.0          | 15.1           |        |
| Vert.    | 9400.000           | PK       | 57.1              | 38.7               | 9.2          | 34.8         | 70.2               | 3.0             | -25.1         | -27.2        | -13.0          | 12.1           |        |

### 1909.8 MHz

| Polarity | Frequency<br>[MHz] | Detector | Reading<br>[dBuV] | Ant.Fac.<br>[dB/m] | Loss<br>[dB] | Gain<br>[dB] | Result<br>[dBuV/m] | Distance<br>[m] | EIRP<br>[dBm] | ERP<br>[dBm] | Limit<br>[dBm] | Margin<br>[dB] | Remark |
|----------|--------------------|----------|-------------------|--------------------|--------------|--------------|--------------------|-----------------|---------------|--------------|----------------|----------------|--------|
| Hori.    | 3819.600           | PK       | 54.5              | 29.6               | 7.0          | 34.4         | 56.8               | 3.0             | -38.5         | -40.6        | -13.0          | 25.5           |        |
| Hori.    | 5729.400           | PK       | 51.3              | 31.9               | 7.5          | 34.2         | 56.5               | 3.0             | -38.7         | -40.9        | -13.0          | 25.7           |        |
| Hori.    | 7639.200           | PK       | 54.7              | 35.9               | 8.6          | 34.5         | 64.7               | 3.0             | -30.6         | -32.7        | -13.0          | 17.6           |        |
| Hori.    | 9549.000           | PK       | 52.2              | 38.5               | 9.3          | 34.8         | 65.2               | 3.0             | -30.0         | -32.2        | -13.0          | 17.0           |        |
| Vert.    | 3819.600           | PK       | 48.8              | 29.6               | 7.0          | 34.4         | 51.0               | 3.0             | -44.3         | -46.4        | -13.0          | 31.3           |        |
| Vert.    | 5729.400           | PK       | 55.1              | 31.9               | 7.5          | 34.2         | 60.3               | 3.0             | -34.9         | -37.1        | -13.0          | 21.9           |        |
| Vert.    | 7639.200           | PK       | 53.5              | 35.9               | 8.6          | 34.5         | 63.5               | 3.0             | -31.8         | -34.0        | -13.0          | 18.8           |        |
| Vert.    | 9549.000           | PK       | 58.1              | 38.5               | 9.3          | 34.8         | 71.1               | 3.0             | -24.1         | -26.3        | -13.0          | 11.1           |        |

Result (E) = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier)

(Above 1GHz) EIRP = E + 20\*log(D) -104.8

(Below 1GHz) ERP =EIRP -2.15

\*Other frequency noises omitted in this report were not seen or had enough margin (more than 20 dB).

Distance factor:     1 GHz - 10 GHz    20log (3.75 m / 3.0 m) = 1.94 dB  
                             10 GHz - 26.5 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

## Spurious Emission (Radiated)

|                        |                                         |                                   |                                     |
|------------------------|-----------------------------------------|-----------------------------------|-------------------------------------|
| Report No.             | 13274888H                               |                                   |                                     |
| Test place             | Ise EMC Lab.                            |                                   |                                     |
| Semi Anechoic Chamber  | No.4                                    | No.2                              | No.2                                |
| Date                   | March 12, 2020                          | March 14, 2020                    | March 15, 2020                      |
| Temperature / Humidity | 26 deg. C / 36 % RH                     | 19 deg. C / 42 % RH               | 19 deg. C / 38 % RH                 |
| Engineer               | Akihiko Maeda<br>(Below 1 GHz)          | Tomohisa Nakagawa<br>(1 – 10 GHz) | Tomohisa Nakagawa<br>(Above 10 GHz) |
| Mode                   | PCS 1900<br>1Up EGPRS, MCS-5 MS power 0 |                                   |                                     |

### 1850.2 MHz

| Polarity | Frequency<br>[MHz] | Detector | Reading<br>[dBuV] | Ant.Fac.<br>[dB/m] | Loss<br>[dB] | Gain<br>[dB] | Result<br>[dBuV/m] | Distance<br>[m] | EIRP<br>[dBm] | ERP<br>[dBm] | Limit<br>[dBm] | Margin<br>[dB] | Remark |
|----------|--------------------|----------|-------------------|--------------------|--------------|--------------|--------------------|-----------------|---------------|--------------|----------------|----------------|--------|
| Hori.    | 3700.400           | PK       | 52.8              | 29.3               | 7.1          | 34.4         | 54.7               | 3.0             | -40.6         | -42.7        | -13.0          | 27.6           |        |
| Hori.    | 5550.600           | PK       | 53.8              | 31.8               | 7.5          | 34.2         | 58.9               | 3.0             | -36.4         | -38.5        | -13.0          | 23.4           |        |
| Hori.    | 7400.800           | PK       | 50.7              | 36.2               | 8.5          | 34.4         | 61.1               | 3.0             | -34.2         | -36.3        | -13.0          | 21.2           |        |
| Hori.    | 9251.000           | PK       | 47.4              | 38.5               | 9.2          | 34.8         | 60.3               | 3.0             | -35.0         | -37.1        | -13.0          | 22.0           |        |
| Vert.    | 3700.400           | PK       | 46.2              | 29.3               | 7.1          | 34.4         | 48.1               | 3.0             | -47.1         | -49.3        | -13.0          | 34.1           |        |
| Vert.    | 5550.600           | PK       | 44.5              | 31.8               | 7.5          | 34.2         | 49.5               | 3.0             | -45.8         | -47.9        | -13.0          | 32.8           |        |
| Vert.    | 7400.800           | PK       | 46.8              | 36.2               | 8.5          | 34.4         | 57.1               | 3.0             | -38.1         | -40.3        | -13.0          | 25.1           |        |
| Vert.    | 9251.000           | PK       | 47.9              | 38.5               | 9.2          | 34.8         | 60.7               | 3.0             | -34.5         | -36.7        | -13.0          | 21.5           |        |

### 1880.0 MHz

| Polarity | Frequency<br>[MHz] | Detector | Reading<br>[dBuV] | Ant.Fac.<br>[dB/m] | Loss<br>[dB] | Gain<br>[dB] | Result<br>[dBuV/m] | Distance<br>[m] | EIRP<br>[dBm] | ERP<br>[dBm] | Limit<br>[dBm] | Margin<br>[dB] | Remark |
|----------|--------------------|----------|-------------------|--------------------|--------------|--------------|--------------------|-----------------|---------------|--------------|----------------|----------------|--------|
| Hori.    | 3760.000           | PK       | 52.4              | 29.4               | 7.1          | 34.4         | 54.5               | 3.0             | -40.7         | -42.9        | -13.0          | 27.7           |        |
| Hori.    | 5640.000           | PK       | 45.5              | 31.6               | 7.5          | 34.2         | 50.4               | 3.0             | -44.8         | -47.0        | -13.0          | 31.8           |        |
| Hori.    | 7520.000           | PK       | 45.9              | 36.2               | 8.6          | 34.5         | 56.1               | 3.0             | -39.1         | -41.3        | -13.0          | 26.1           |        |
| Hori.    | 9400.000           | PK       | 44.6              | 38.7               | 9.2          | 34.8         | 57.7               | 3.0             | -37.5         | -39.7        | -13.0          | 24.5           |        |
| Vert.    | 3760.000           | PK       | 45.5              | 29.4               | 7.1          | 34.4         | 47.6               | 3.0             | -47.7         | -49.8        | -13.0          | 34.7           |        |
| Vert.    | 5640.000           | PK       | 44.8              | 31.6               | 7.5          | 34.2         | 49.8               | 3.0             | -45.5         | -47.7        | -13.0          | 32.5           |        |
| Vert.    | 7520.000           | PK       | 45.1              | 36.2               | 8.6          | 34.5         | 55.4               | 3.0             | -39.9         | -42.0        | -13.0          | 26.9           |        |
| Vert.    | 9400.000           | PK       | 46.0              | 38.7               | 9.2          | 34.8         | 59.1               | 3.0             | -36.2         | -38.3        | -13.0          | 23.2           |        |

### 1909.8 MHz

| Polarity | Frequency<br>[MHz] | Detector | Reading<br>[dBuV] | Ant.Fac.<br>[dB/m] | Loss<br>[dB] | Gain<br>[dB] | Result<br>[dBuV/m] | Distance<br>[m] | EIRP<br>[dBm] | ERP<br>[dBm] | Limit<br>[dBm] | Margin<br>[dB] | Remark |
|----------|--------------------|----------|-------------------|--------------------|--------------|--------------|--------------------|-----------------|---------------|--------------|----------------|----------------|--------|
| Hori.    | 3819.600           | PK       | 49.2              | 29.6               | 7.0          | 34.4         | 51.4               | 3.0             | -43.8         | -46.0        | -13.0          | 30.8           |        |
| Hori.    | 5729.400           | PK       | 45.7              | 31.9               | 7.5          | 34.2         | 51.0               | 3.0             | -44.3         | -46.4        | -13.0          | 31.3           |        |
| Hori.    | 7639.200           | PK       | 46.4              | 35.9               | 8.6          | 34.5         | 56.4               | 3.0             | -38.9         | -41.1        | -13.0          | 25.9           |        |
| Hori.    | 9549.000           | PK       | 47.1              | 38.5               | 9.3          | 34.8         | 60.1               | 3.0             | -35.2         | -37.3        | -13.0          | 22.2           |        |
| Vert.    | 3819.600           | PK       | 46.1              | 29.6               | 7.0          | 34.4         | 48.3               | 3.0             | -46.9         | -49.1        | -13.0          | 33.9           |        |
| Vert.    | 5729.400           | PK       | 45.6              | 31.9               | 7.5          | 34.2         | 50.8               | 3.0             | -44.4         | -46.6        | -13.0          | 31.4           |        |
| Vert.    | 7639.200           | PK       | 47.2              | 35.9               | 8.6          | 34.5         | 57.1               | 3.0             | -38.2         | -40.3        | -13.0          | 25.2           |        |
| Vert.    | 9549.000           | PK       | 46.3              | 38.5               | 9.3          | 34.8         | 59.3               | 3.0             | -36.0         | -38.2        | -13.0          | 23.0           |        |

Result (E) = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier)

(Above 1GHz) EIRP = E + 20\*log(D) -104.8

(Below 1GHz) ERP =EIRP -2.15

\*Other frequency noises omitted in this report were not seen or had enough margin (more than 20 dB).

Distance factor:     1 GHz - 10 GHz    20log (3.75 m / 3.0 m) = 1.94 dB  
                             10 GHz - 26.5 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

## Spurious Emission (Radiated)

|                        |                                                 |                                   |                                     |
|------------------------|-------------------------------------------------|-----------------------------------|-------------------------------------|
| Report No.             | 13274888H                                       |                                   |                                     |
| Test place             | Ise EMC Lab.                                    |                                   |                                     |
| Semi Anechoic Chamber  | No.2                                            | No.2                              | No.2                                |
| Date                   | December 12, 2019<br>(Night)                    | December 16, 2019<br>(Night)      | December 17, 2019<br>(Night)        |
| Temperature / Humidity | 21 deg. C / 31 % RH                             | 22 deg. C / 31 % RH               | 24 deg. C / 40 % RH                 |
| Engineer               | Yuta Moriya<br>(Below 1 GHz)                    | Yuichiro Yamazaki<br>(1 – 10 GHz) | Yuichiro Yamazaki<br>(Above 10 GHz) |
| Mode                   | Tx 1852.4 MHz (W-CDMA Band 2)<br>RMC, TPC All 1 |                                   |                                     |

| Polarity | Frequency | Detector | Reading | Ant.Fac. | Loss | Gain | Result<br>E | Distance<br>D | EIRP  | ERP   | Limit | Margin | Remark |
|----------|-----------|----------|---------|----------|------|------|-------------|---------------|-------|-------|-------|--------|--------|
|          | [MHz]     |          | [dBuV]  | [dB/m]   | [dB] | [dB] | [dBuV/m]    | [m]           | [dBm] | [dBm] | [dBm] | [dB]   |        |
| Hori.    | 3704.800  | PK       | 48.0    | 29.3     | 6.6  | 33.6 | 50.3        | 3.0           | -45.0 | -47.1 | -13.0 | 32.0   |        |
| Hori.    | 5557.200  | PK       | 58.8    | 31.7     | 6.7  | 33.2 | 64.0        | 3.0           | -31.2 | -33.4 | -13.0 | 18.2   |        |
| Hori.    | 7409.600  | PK       | 56.8    | 36.3     | 7.2  | 33.5 | 66.8        | 3.0           | -28.5 | -30.6 | -13.0 | 15.5   |        |
| Hori.    | 11114.400 | PK       | 44.3    | 39.8     | -3.2 | 33.2 | 47.7        | 3.0           | -47.5 | -49.7 | -13.0 | 34.5   |        |
| Vert.    | 3704.800  | PK       | 47.0    | 29.3     | 6.6  | 33.6 | 49.2        | 3.0           | -46.0 | -48.2 | -13.0 | 33.0   |        |
| Vert.    | 5557.200  | PK       | 59.9    | 31.7     | 6.7  | 33.2 | 65.1        | 3.0           | -30.2 | -32.3 | -13.0 | 17.2   |        |
| Vert.    | 7409.600  | PK       | 55.6    | 36.3     | 7.2  | 33.5 | 65.6        | 3.0           | -29.6 | -31.8 | -13.0 | 16.6   |        |
| Vert.    | 11114.400 | PK       | 44.7    | 39.8     | -3.2 | 33.2 | 48.1        | 3.0           | -47.1 | -49.3 | -13.0 | 34.1   |        |

Result (E) = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier)

(Above 1GHz) EIRP = E + 20\*log(D) -104.8

(Below 1GHz) ERP =EIRP -2.15

\*Other frequency noises omitted in this report were not seen or had enough margin (more than 20 dB).

Distance factor:      1 GHz - 10 GHz    20log (3.75 m / 3.0 m) = 1.94 dB  
10 GHz - 26.5 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

## Spurious Emission (Radiated)

|                        |                                                 |                                   |                                     |
|------------------------|-------------------------------------------------|-----------------------------------|-------------------------------------|
| Report No.             | 13274888H                                       |                                   |                                     |
| Test place             | Ise EMC Lab.                                    |                                   |                                     |
| Semi Anechoic Chamber  | No.2                                            | No.2                              | No.2                                |
| Date                   | December 12, 2019<br>(Night)                    | December 16, 2019<br>(Night)      | December 17, 2019<br>(Night)        |
| Temperature / Humidity | 21 deg. C / 31 % RH                             | 22 deg. C / 31 % RH               | 24 deg. C / 40 % RH                 |
| Engineer               | Yuta Moriya<br>(Below 1 GHz)                    | Yuichiro Yamazaki<br>(1 – 10 GHz) | Yuichiro Yamazaki<br>(Above 10 GHz) |
| Mode                   | Tx 1880.0 MHz (W-CDMA Band 2)<br>RMC, TPC All 1 |                                   |                                     |

| Polarity | Frequency | Detector | Reading | Ant.Fac. | Loss | Gain | Result<br>E | Distance<br>D | EIRP  | ERP   | Limit | Margin | Remark |
|----------|-----------|----------|---------|----------|------|------|-------------|---------------|-------|-------|-------|--------|--------|
|          | [MHz]     |          | [dBuV]  | [dB/m]   | [dB] | [dB] | [dBuV/m]    | [m]           | [dBm] | [dBm] | [dBm] | [dB]   |        |
| Hori.    | 3760.000  | PK       | 48.3    | 29.4     | 6.5  | 33.6 | 50.7        | 3.0           | -44.6 | -46.7 | -13.0 | 31.6   |        |
| Hori.    | 5640.000  | PK       | 56.2    | 31.6     | 6.8  | 33.3 | 61.4        | 3.0           | -33.9 | -36.1 | -13.0 | 20.9   |        |
| Hori.    | 7520.000  | PK       | 47.9    | 36.2     | 7.3  | 33.5 | 57.8        | 3.0           | -37.4 | -39.6 | -13.0 | 24.4   |        |
| Hori.    | 11280.000 | PK       | 45.0    | 39.9     | -3.1 | 33.1 | 48.6        | 3.0           | -46.6 | -48.8 | -13.0 | 33.6   |        |
| Vert.    | 3760.000  | PK       | 47.9    | 29.4     | 6.5  | 33.6 | 50.3        | 3.0           | -44.9 | -47.1 | -13.0 | 31.9   |        |
| Vert.    | 5640.000  | PK       | 60.5    | 31.6     | 6.8  | 33.3 | 65.6        | 3.0           | -29.7 | -31.8 | -13.0 | 16.7   |        |
| Vert.    | 7520.000  | PK       | 49.0    | 36.2     | 7.3  | 33.5 | 58.9        | 3.0           | -36.3 | -38.5 | -13.0 | 23.3   |        |
| Vert.    | 11280.000 | PK       | 46.1    | 39.9     | -3.1 | 33.1 | 49.7        | 3.0           | -45.5 | -47.7 | -13.0 | 32.5   |        |

Result (E) = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier)

(Above 1GHz) EIRP = E + 20\*log(D) -104.8

(Below 1GHz) ERP =EIRP -2.15

\*Other frequency noises omitted in this report were not seen or had enough margin (more than 20 dB).

Distance factor:      1 GHz - 10 GHz    20log (3.75 m / 3.0 m) = 1.94 dB  
                             10 GHz - 26.5 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

## Spurious Emission (Radiated)

|                        |                                                 |                                   |                                     |
|------------------------|-------------------------------------------------|-----------------------------------|-------------------------------------|
| Report No.             | 13274888H                                       |                                   |                                     |
| Test place             | Ise EMC Lab.                                    |                                   |                                     |
| Semi Anechoic Chamber  | No.2                                            | No.2                              | No.2                                |
| Date                   | December 12, 2019<br>(Night)                    | December 16, 2019<br>(Night)      | December 17, 2019<br>(Night)        |
| Temperature / Humidity | 21 deg. C / 31 % RH                             | 22 deg. C / 31 % RH               | 24 deg. C / 40 % RH                 |
| Engineer               | Yuta Moriya<br>(Below 1 GHz)                    | Yuichiro Yamazaki<br>(1 – 10 GHz) | Yuichiro Yamazaki<br>(Above 10 GHz) |
| Mode                   | Tx 1907.6 MHz (W-CDMA Band 2)<br>RMC, TPC All 1 |                                   |                                     |

| Polarity | Frequency | Detector | Reading | Ant.Fac. | Loss | Gain | Result   | Distance | EIRP  | ERP   | Limit | Margin | Remark |
|----------|-----------|----------|---------|----------|------|------|----------|----------|-------|-------|-------|--------|--------|
|          | [MHz]     |          | [dBuV]  | [dB/m]   | [dB] | [dB] | [dBuV/m] | [m]      | [dBm] | [dBm] | [dBm] | [dB]   |        |
| Hori.    | 3815.200  | PK       | 49.0    | 29.6     | 6.5  | 33.5 | 51.5     | 3.0      | -43.7 | -45.9 | -13.0 | 30.7   |        |
| Hori.    | 5722.800  | PK       | 59.3    | 31.9     | 6.8  | 33.3 | 64.6     | 3.0      | -30.6 | -32.8 | -13.0 | 17.6   |        |
| Hori.    | 7630.400  | PK       | 49.1    | 35.9     | 7.3  | 33.5 | 58.7     | 3.0      | -36.6 | -38.7 | -13.0 | 23.6   |        |
| Hori.    | 11445.600 | PK       | 44.6    | 40.1     | -3.0 | 33.1 | 48.5     | 3.0      | -46.7 | -48.9 | -13.0 | 33.7   |        |
| Vert.    | 3815.200  | PK       | 49.5    | 29.6     | 6.5  | 33.5 | 52.0     | 3.0      | -43.3 | -45.4 | -13.0 | 30.3   |        |
| Vert.    | 5722.800  | PK       | 65.2    | 31.9     | 6.8  | 33.3 | 70.5     | 3.0      | -24.7 | -26.9 | -13.0 | 11.7   |        |
| Vert.    | 7630.400  | PK       | 49.7    | 35.9     | 7.3  | 33.5 | 59.4     | 3.0      | -35.9 | -38.1 | -13.0 | 22.9   |        |
| Vert.    | 11445.600 | PK       | 44.4    | 40.1     | -3.0 | 33.1 | 48.4     | 3.0      | -46.8 | -49.0 | -13.0 | 33.8   |        |

Result (E) = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier)

(Above 1GHz) EIRP = E + 20\*log(D) -104.8

(Below 1GHz) ERP =EIRP -2.15

\*Other frequency noises omitted in this report were not seen or had enough margin (more than 20 dB).

Distance factor:      1 GHz - 10 GHz    20log (3.75 m / 3.0 m) = 1.94 dB  
10 GHz - 26.5 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

## Spurious Emission (Radiated)

Report No. 13274888H  
Test place Ise EMC Lab.  
Semi Anechoic Chamber No.2  
Date December 10, 2019 No.2  
December 16, 2019  
(Night)  
Temperature / Humidity 22 deg. C / 31 % RH 22 deg. C / 31 % RH  
Engineer Yuta Moriya Yuichiro Yamazaki  
(Below 1 GHz) (Above 1 GHz)  
Mode Tx 826.4 MHz (W-CDMA Band 5)  
RMC, TPC All 1

| Polarity | Frequency | Detector | Reading | Ant.Fac. | Loss | Gain | Result<br>E | Distance<br>D | EIRP  | ERP   | Limit | Margin | Remark |
|----------|-----------|----------|---------|----------|------|------|-------------|---------------|-------|-------|-------|--------|--------|
|          | [MHz]     |          | [dBuV]  | [dB/m]   | [dB] | [dB] | [dBuV/m]    | [m]           | [dBm] | [dBm] | [dBm] | [dB]   |        |
| Hori.    | 1652.800  | PK       | 68.0    | 25.1     | 5.2  | 34.7 | 63.6        | 3.0           | -31.7 | -33.8 | -13.0 | 18.7   |        |
| Hori.    | 2479.200  | PK       | 51.2    | 27.5     | 5.4  | 34.2 | 49.9        | 3.0           | -45.4 | -47.5 | -13.0 | 32.4   |        |
| Hori.    | 3305.600  | PK       | 48.1    | 28.2     | 5.7  | 33.9 | 48.1        | 3.0           | -47.2 | -49.3 | -13.0 | 34.2   |        |
| Hori.    | 4132.000  | PK       | 46.6    | 30.0     | 6.2  | 33.4 | 49.4        | 3.0           | -45.9 | -48.0 | -13.0 | 32.9   |        |
| Vert.    | 1652.800  | PK       | 66.8    | 25.1     | 5.2  | 34.7 | 62.4        | 3.0           | -32.9 | -35.0 | -13.0 | 19.9   |        |
| Vert.    | 2479.200  | PK       | 46.4    | 27.5     | 5.4  | 34.2 | 45.1        | 3.0           | -50.2 | -52.3 | -13.0 | 37.2   |        |
| Vert.    | 3305.600  | PK       | 47.0    | 28.2     | 5.7  | 33.9 | 47.0        | 3.0           | -48.3 | -50.4 | -13.0 | 35.3   |        |
| Vert.    | 4132.000  | PK       | 43.4    | 30.0     | 6.2  | 33.4 | 46.2        | 3.0           | -49.1 | -51.2 | -13.0 | 36.1   |        |

Result (E) = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier)

(Above 1GHz) EIRP = E + 20\*log(D) -104.8

(Below 1GHz) ERP =EIRP -2.15

\*Other frequency noises omitted in this report were not seen or had enough margin (more than 20 dB).

Distance factor: 1 GHz - 10 GHz 20log (3.75 m / 3.0 m) = 1.94 dB

## Spurious Emission (Radiated)

Report No. 13274888H  
Test place Ise EMC Lab.  
Semi Anechoic Chamber No.2  
Date December 10, 2019 No.2  
December 16, 2019  
(Night)  
Temperature / Humidity 22 deg. C / 31 % RH 22 deg. C / 31 % RH  
Engineer Yuta Moriya Yuichiro Yamazaki  
(Below 1 GHz) (Above 1 GHz)  
Mode Tx 836.6 MHz (W-CDMA Band 5)  
RMC, TPC All 1

| Polarity | Frequency | Detector | Reading | Ant.Fac. | Loss | Gain | Result<br>E | Distance<br>D | EIRP  | ERP   | Limit | Margin | Remark |
|----------|-----------|----------|---------|----------|------|------|-------------|---------------|-------|-------|-------|--------|--------|
|          | [MHz]     |          | [dBuV]  | [dB/m]   | [dB] | [dB] | [dBuV/m]    | [m]           | [dBm] | [dBm] | [dBm] | [dB]   |        |
| Hori.    | 1673.200  | PK       | 66.2    | 25.0     | 5.2  | 34.7 | 61.7        | 3.0           | -33.6 | -35.7 | -13.0 | 20.6   |        |
| Hori.    | 2509.800  | PK       | 49.5    | 27.5     | 5.4  | 34.2 | 48.2        | 3.0           | -47.1 | -49.2 | -13.0 | 34.1   |        |
| Hori.    | 3346.400  | PK       | 49.3    | 28.1     | 5.8  | 33.9 | 49.3        | 3.0           | -46.0 | -48.1 | -13.0 | 33.0   |        |
| Hori.    | 4183.000  | PK       | 47.1    | 30.2     | 6.2  | 33.4 | 50.1        | 3.0           | -45.2 | -47.3 | -13.0 | 32.2   |        |
| Vert.    | 1673.200  | PK       | 64.5    | 25.0     | 5.2  | 34.7 | 60.0        | 3.0           | -35.3 | -37.4 | -13.0 | 22.3   |        |
| Vert.    | 2509.800  | PK       | 47.0    | 27.5     | 5.4  | 34.2 | 45.7        | 3.0           | -49.6 | -51.7 | -13.0 | 36.6   |        |
| Vert.    | 3346.400  | PK       | 48.3    | 28.1     | 5.8  | 33.9 | 48.3        | 3.0           | -47.0 | -49.1 | -13.0 | 34.0   |        |
| Vert.    | 4183.000  | PK       | 42.7    | 30.2     | 6.2  | 33.4 | 45.7        | 3.0           | -49.6 | -51.7 | -13.0 | 36.6   |        |

Result (E) = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier)

(Above 1GHz) EIRP = E + 20\*log(D) -104.8

(Below 1GHz) ERP =EIRP -2.15

\*Other frequency noises omitted in this report were not seen or had enough margin (more than 20 dB).

Distance factor: 1 GHz - 10 GHz 20log (3.75 m / 3.0 m) = 1.94 dB

## Spurious Emission (Radiated)

Report No. 13274888H  
Test place Ise EMC Lab.  
Semi Anechoic Chamber No.2  
Date December 10, 2019 No.2  
December 16, 2019  
(Night)  
Temperature / Humidity 22 deg. C / 31 % RH 22 deg. C / 31 % RH  
Engineer Yuta Moriya Yuichiro Yamazaki  
(Below 1 GHz) (Above 1 GHz)  
Mode Tx 846.6 MHz (W-CDMA Band 5)  
RMC, TPC All 1

| Polarity | Frequency | Detector | Reading | Ant.Fac. | Loss | Gain | Result<br>E | Distance<br>D | EIRP  | ERP   | Limit | Margin | Remark |
|----------|-----------|----------|---------|----------|------|------|-------------|---------------|-------|-------|-------|--------|--------|
|          | [MHz]     |          | [dBuV]  | [dB/m]   | [dB] | [dB] | [dBuV/m]    | [m]           | [dBm] | [dBm] | [dBm] | [dB]   |        |
| Hori.    | 1693.200  | PK       | 62.2    | 25.0     | 5.2  | 34.7 | 57.7        | 3.0           | -37.6 | -39.7 | -13.0 | 24.6   |        |
| Hori.    | 2539.800  | PK       | 50.9    | 27.5     | 5.4  | 34.2 | 49.6        | 3.0           | -45.7 | -47.8 | -13.0 | 32.7   |        |
| Hori.    | 3386.400  | PK       | 48.0    | 28.2     | 5.8  | 33.8 | 48.2        | 3.0           | -47.1 | -49.2 | -13.0 | 34.1   |        |
| Hori.    | 4233.000  | PK       | 47.9    | 30.3     | 6.2  | 33.4 | 51.0        | 3.0           | -44.3 | -46.4 | -13.0 | 31.3   |        |
| Vert.    | 1693.200  | PK       | 62.8    | 25.0     | 5.2  | 34.7 | 58.3        | 3.0           | -37.0 | -39.1 | -13.0 | 24.0   |        |
| Vert.    | 2539.800  | PK       | 49.2    | 27.5     | 5.4  | 34.2 | 47.9        | 3.0           | -47.4 | -49.5 | -13.0 | 34.4   |        |
| Vert.    | 3386.400  | PK       | 46.7    | 28.2     | 5.8  | 33.8 | 46.9        | 3.0           | -48.4 | -50.5 | -13.0 | 35.4   |        |
| Vert.    | 4233.000  | PK       | 43.3    | 30.3     | 6.2  | 33.4 | 46.4        | 3.0           | -48.9 | -51.0 | -13.0 | 35.9   |        |

Result (E) = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier)

(Above 1GHz) EIRP = E + 20\*log(D) -104.8

(Below 1GHz) ERP =EIRP -2.15

\*Other frequency noises omitted in this report were not seen or had enough margin (more than 20 dB).

Distance factor: 1 GHz - 10 GHz 20log (3.75 m / 3.0 m) = 1.94 dB

## Spurious Emission (Radiated)

|                        |                                                                                  |                            |                                     |
|------------------------|----------------------------------------------------------------------------------|----------------------------|-------------------------------------|
| Report No.             | 13274888H                                                                        |                            |                                     |
| Test place             | Ise EMC Lab.                                                                     |                            |                                     |
| Semi Anechoic Chamber  | No.2                                                                             | No.2                       | No.2                                |
| Date                   | December 13, 2019                                                                | December 16, 2019<br>(Day) | December 17, 2019<br>(Night)        |
| Temperature / Humidity | 21 deg. C / 31 % RH                                                              | 24 deg. C / 33 % RH        | 24 deg. C / 40 % RH                 |
| Engineer               | Yuichiro Yamazaki<br>(Below 1 GHz)                                               | Junya Okuno<br>(1-10 GHz)  | Yuichiro Yamazaki<br>(Above 10 GHz) |
| Mode                   | Tx 1855.0 MHz (LTE Band 2)<br>BW:10MHz, RMC, TPC All 1, QPSK, RB Start1 - Num 24 |                            |                                     |

| Polarity | Frequency | Detector | Reading | Ant.Fac. | Loss | Gain | Result   | Distance | EIRP  | ERP   | Limit | Margin | Remark |
|----------|-----------|----------|---------|----------|------|------|----------|----------|-------|-------|-------|--------|--------|
|          | [MHz]     |          | [dBuV]  | [dB/m]   | [dB] | [dB] | [dBuV/m] | [m]      | [dBm] | [dBm] | [dBm] | [dB]   |        |
| Hori.    | 3710.000  | PK       | 52.2    | 29.3     | 6.6  | 33.6 | 54.5     | 3.0      | -40.8 | -42.9 | -13.0 | 27.8   |        |
| Hori.    | 5565.000  | PK       | 60.8    | 31.7     | 6.7  | 33.2 | 66.0     | 3.0      | -29.3 | -31.4 | -13.0 | 16.3   |        |
| Hori.    | 7420.000  | PK       | 63.0    | 36.3     | 7.2  | 33.5 | 73.0     | 3.0      | -22.3 | -24.4 | -13.0 | 9.3    |        |
| Hori.    | 9275.000  | PK       | 43.9    | 38.6     | 7.7  | 33.8 | 56.4     | 3.0      | -38.9 | -41.0 | -13.0 | 25.9   |        |
| Hori.    | 11130.000 | PK       | 47.6    | 39.8     | -3.2 | 33.2 | 51.0     | 3.0      | -44.3 | -46.4 | -13.0 | 31.3   |        |
| Hori.    | 12985.000 | PK       | 44.8    | 40.0     | -2.5 | 32.4 | 49.9     | 3.0      | -45.4 | -47.5 | -13.0 | 32.4   |        |
| Vert.    | 3710.000  | PK       | 48.5    | 29.3     | 6.6  | 33.6 | 50.8     | 3.0      | -44.5 | -46.6 | -13.0 | 31.5   |        |
| Vert.    | 5565.000  | PK       | 62.6    | 31.7     | 6.7  | 33.2 | 67.8     | 3.0      | -27.5 | -29.6 | -13.0 | 14.5   |        |
| Vert.    | 7420.000  | PK       | 62.4    | 36.3     | 7.2  | 33.5 | 72.4     | 3.0      | -22.9 | -25.0 | -13.0 | 9.9    |        |
| Vert.    | 9275.000  | PK       | 53.8    | 38.6     | 7.7  | 33.8 | 66.3     | 3.0      | -29.0 | -31.1 | -13.0 | 16.0   |        |
| Vert.    | 11130.000 | PK       | 49.3    | 39.8     | -3.2 | 33.2 | 52.7     | 3.0      | -42.6 | -44.7 | -13.0 | 29.6   |        |
| Vert.    | 12985.000 | PK       | 44.5    | 40.0     | -2.5 | 32.4 | 49.6     | 3.0      | -45.7 | -47.8 | -13.0 | 32.7   |        |

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier)

(Above 1GHz) EIRP=E+20\*log(D)-104.8

(Below 1GHz) ERP=EIRP-2.15

\*Other frequency noises omitted in this report were not seen or had enough margin (more than 20 dB).

Distance factor:      1 GHz - 10 GHz    20log (3.75 m / 3.0 m) = 1.94 dB  
10 GHz - 26.5 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

## Spurious Emission (Radiated)

|                        |                                                                                  |                            |                                     |
|------------------------|----------------------------------------------------------------------------------|----------------------------|-------------------------------------|
| Report No.             | 13274888H                                                                        |                            |                                     |
| Test place             | Ise EMC Lab.                                                                     |                            |                                     |
| Semi Anechoic Chamber  | No.2                                                                             | No.2                       | No.2                                |
| Date                   | December 13, 2019                                                                | December 16, 2019<br>(Day) | December 17, 2019<br>(Night)        |
| Temperature / Humidity | 21 deg. C / 31 % RH                                                              | 24 deg. C / 33 % RH        | 24 deg. C / 40 % RH                 |
| Engineer               | Yuichiro Yamazaki<br>(Below 1 GHz)                                               | Junya Okuno<br>(1-10 GHz)  | Yuichiro Yamazaki<br>(Above 10 GHz) |
| Mode                   | Tx 1880.0 MHz (LTE Band 2)<br>BW:10MHz, RMC, TPC All 1, QPSK, RB Start1 - Num 24 |                            |                                     |

| Polarity | Frequency<br>[MHz] | Detector | Reading<br>[dBuV] | Ant.Fac.<br>[dB/m] | Loss<br>[dB] | Gain<br>[dB] | Result<br>[dBuV/m] | Distance<br>D<br>[m] | EIRP<br>[dBm] | ERP<br>[dBm] | Limit<br>[dBm] | Margin<br>[dB] | Remark |
|----------|--------------------|----------|-------------------|--------------------|--------------|--------------|--------------------|----------------------|---------------|--------------|----------------|----------------|--------|
| Hori.    | 3760.000           | PK       | 52.1              | 29.4               | 6.5          | 33.6         | 54.4               | 3.0                  | -40.9         | -43.0        | -13.0          | 27.9           |        |
| Hori.    | 5640.000           | PK       | 70.1              | 31.6               | 6.8          | 33.3         | 75.2               | 3.0                  | -20.1         | -22.2        | -13.0          | 7.1            |        |
| Hori.    | 7520.000           | PK       | 65.9              | 36.2               | 7.3          | 33.5         | 75.9               | 3.0                  | -19.4         | -21.5        | -13.0          | 6.4            |        |
| Hori.    | 9400.000           | PK       | 45.6              | 38.7               | 7.7          | 33.8         | 58.2               | 3.0                  | -37.1         | -39.2        | -13.0          | 24.1           |        |
| Hori.    | 11280.000          | PK       | 56.8              | 39.9               | -3.1         | 33.1         | 60.5               | 3.0                  | -34.8         | -36.9        | -13.0          | 21.8           |        |
| Hori.    | 13160.000          | PK       | 44.5              | 39.8               | -2.5         | 32.3         | 49.5               | 3.0                  | -45.8         | -47.9        | -13.0          | 32.8           |        |
| Vert.    | 3760.000           | PK       | 50.9              | 29.4               | 6.5          | 33.6         | 53.2               | 3.0                  | -42.1         | -44.2        | -13.0          | 29.1           |        |
| Vert.    | 5640.000           | PK       | 71.5              | 31.6               | 6.8          | 33.3         | 76.6               | 3.0                  | -18.7         | -20.8        | -13.0          | 5.7            |        |
| Vert.    | 7520.000           | PK       | 65.5              | 36.2               | 7.3          | 33.5         | 75.5               | 3.0                  | -19.8         | -21.9        | -13.0          | 6.8            |        |
| Vert.    | 9400.000           | PK       | 54.2              | 38.7               | 7.7          | 33.8         | 66.8               | 3.0                  | -28.5         | -30.6        | -13.0          | 15.5           |        |
| Vert.    | 11280.000          | PK       | 52.2              | 39.9               | -3.1         | 33.1         | 55.9               | 3.0                  | -39.4         | -41.5        | -13.0          | 26.4           |        |
| Vert.    | 13160.000          | PK       | 50.1              | 39.8               | -2.5         | 32.3         | 55.1               | 3.0                  | -40.2         | -42.3        | -13.0          | 27.2           |        |

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier)

(Above 1GHz) EIRP=E+20\*log(D)-104.8

(Below 1GHz) ERP=EIRP-2.15

\*Other frequency noises omitted in this report were not seen or had enough margin (more than 20 dB).

Distance factor: 1 GHz - 10 GHz 20log (3.75 m / 3.0 m) = 1.94 dB  
10 GHz - 26.5 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

## Spurious Emission (Radiated)

|                        |                                                                                                                             |                            |                                     |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------|----------------------------|-------------------------------------|
| Report No.             | 13274888H                                                                                                                   |                            |                                     |
| Test place             | Ise EMC Lab.                                                                                                                |                            |                                     |
| Semi Anechoic Chamber  | No.2                                                                                                                        | No.2                       | No.2                                |
| Date                   | December 13, 2019                                                                                                           | December 16, 2019<br>(Day) | December 17, 2019<br>(Night)        |
| Temperature / Humidity | 21 deg. C / 31 % RH                                                                                                         | 24 deg. C / 33 % RH        | 24 deg. C / 40 % RH                 |
| Engineer               | Yuichiro Yamazaki<br>(Below 1 GHz)                                                                                          | Junya Okuno<br>(1-10 GHz)  | Yuichiro Yamazaki<br>(Above 10 GHz) |
| Mode                   | Tx 1905.0 MHz (LTE Band 2)<br>RMC, TPC All 1, QPSK, RB Start1 - Num 2<br>BW:10MHz, RMC, TPC All 1, QPSK, RB Start1 - Num 24 |                            |                                     |

| Polarity | Frequency | Detector | Reading | Ant.Fac. | Loss | Gain | Result   | Distance D | EIRP  | ERP   | Limit | Margin | Remark |
|----------|-----------|----------|---------|----------|------|------|----------|------------|-------|-------|-------|--------|--------|
|          | [MHz]     |          | [dBuV]  | [dB/m]   | [dB] | [dB] | [dBuV/m] | [m]        | [dBm] | [dBm] | [dBm] | [dB]   |        |
| Hori.    | 3810.000  | PK       | 52.5    | 29.6     | 6.5  | 33.5 | 55.1     | 3.0        | -40.2 | -42.3 | -13.0 | 27.2   |        |
| Hori.    | 5715.000  | PK       | 65.7    | 31.8     | 6.8  | 33.3 | 71.0     | 3.0        | -24.3 | -26.4 | -13.0 | 11.3   |        |
| Hori.    | 7620.000  | PK       | 58.7    | 35.9     | 7.3  | 33.5 | 68.4     | 3.0        | -26.9 | -29.0 | -13.0 | 13.9   |        |
| Hori.    | 9525.000  | PK       | 53.8    | 38.5     | 7.8  | 33.8 | 66.3     | 3.0        | -29.0 | -31.1 | -13.0 | 16.0   |        |
| Hori.    | 11430.000 | PK       | 54.5    | 40.1     | -3.1 | 33.1 | 58.4     | 3.0        | -36.9 | -39.0 | -13.0 | 23.9   |        |
| Hori.    | 13335.000 | PK       | 44.8    | 40.7     | -2.5 | 32.2 | 50.8     | 3.0        | -44.5 | -46.6 | -13.0 | 31.5   |        |
| Vert.    | 3810.000  | PK       | 49.0    | 29.6     | 6.5  | 33.5 | 51.6     | 3.0        | -43.7 | -45.8 | -13.0 | 30.7   |        |
| Vert.    | 5715.000  | PK       | 65.3    | 31.8     | 6.8  | 33.3 | 70.6     | 3.0        | -24.7 | -26.8 | -13.0 | 11.7   |        |
| Vert.    | 7620.000  | PK       | 58.2    | 35.9     | 7.3  | 33.5 | 67.9     | 3.0        | -27.4 | -29.5 | -13.0 | 14.4   |        |
| Vert.    | 9525.000  | PK       | 48.6    | 38.5     | 7.8  | 33.8 | 61.1     | 3.0        | -34.2 | -36.3 | -13.0 | 21.2   |        |
| Vert.    | 11430.000 | PK       | 54.2    | 40.1     | -3.1 | 33.1 | 58.1     | 3.0        | -37.2 | -39.3 | -13.0 | 24.2   |        |
| Vert.    | 13335.000 | PK       | 46.1    | 40.7     | -2.5 | 32.2 | 52.1     | 3.0        | -43.2 | -45.3 | -13.0 | 30.2   |        |

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier)

(Above 1GHz) EIRP=E+20\*log(D)-104.8

(Below 1GHz) ERP=EIRP-2.15

\*Other frequency noises omitted in this report were not seen or had enough margin (more than 20 dB).

Distance factor: 1 GHz - 10 GHz  $20\log(3.75\text{ m} / 3.0\text{ m}) = 1.94\text{ dB}$   
10 GHz - 26.5 GHz  $20\log(1.0\text{ m} / 3.0\text{ m}) = -9.5\text{ dB}$

## Spurious Emission (Radiated)

|                        |                                                    |                     |  |
|------------------------|----------------------------------------------------|---------------------|--|
| Report No.             | 13274888H                                          |                     |  |
| Test place             | Ise EMC Lab.                                       |                     |  |
| Semi Anechoic Chamber  | No.2                                               | No.2                |  |
| Date                   | December 12, 2019                                  | December 16, 2019   |  |
|                        | (Day)                                              | (Day)               |  |
| Temperature / Humidity | 21 deg. C / 31 % RH                                | 24 deg. C / 33 % RH |  |
| Engineer               | Junya Okuno                                        | Junya Okuno         |  |
|                        | (Below 1 GHz)                                      | (Above 1 GHz)       |  |
| Mode                   | Tx 826.5 MHz (LTE Band 5)                          |                     |  |
|                        | BW:10MHz, RMC, TPC All 1, QPSK, RB Start1 - Num 25 |                     |  |

| Polarity | Frequency | Detector | Reading | Ant.Fac. | Loss | Gain | Result<br>E | Distance<br>D | EIRP  | ERP   | Limit | Margin | Remark |
|----------|-----------|----------|---------|----------|------|------|-------------|---------------|-------|-------|-------|--------|--------|
|          | [MHz]     |          | [dBuV]  | [dB/m]   | [dB] | [dB] | [dBuV/m]    | [m]           | [dBm] | [dBm] | [dBm] | [dB]   |        |
| Hori.    | 1653.000  | PK       | 48.5    | 25.1     | 5.2  | 34.7 | 44.1        | 3.0           | -51.2 | -53.3 | -13.0 | 38.2   |        |
| Hori.    | 2479.500  | PK       | 59.4    | 27.5     | 5.4  | 34.2 | 58.1        | 3.0           | -37.2 | -39.3 | -13.0 | 24.2   |        |
| Hori.    | 3306.000  | PK       | 48.7    | 28.2     | 5.7  | 33.9 | 48.7        | 3.0           | -46.6 | -48.7 | -13.0 | 33.6   |        |
| Hori.    | 5785.500  | PK       | 45.0    | 32.1     | 6.9  | 33.3 | 50.7        | 3.0           | -44.6 | -46.7 | -13.0 | 31.6   |        |
| Vert.    | 1653.000  | PK       | 48.4    | 25.1     | 5.2  | 34.7 | 44.0        | 3.0           | -51.3 | -53.4 | -13.0 | 38.3   |        |
| Vert.    | 2479.500  | PK       | 52.5    | 27.5     | 5.4  | 34.2 | 51.2        | 3.0           | -44.1 | -46.2 | -13.0 | 31.1   |        |
| Vert.    | 3306.000  | PK       | 48.4    | 28.2     | 5.7  | 33.9 | 48.4        | 3.0           | -46.9 | -49.0 | -13.0 | 33.9   |        |
| Vert.    | 5785.500  | PK       | 44.2    | 32.1     | 6.9  | 33.3 | 49.9        | 3.0           | -45.4 | -47.5 | -13.0 | 32.4   |        |

Result (E) = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier)

(Above 1GHz) EIRP = E + 20\*log(D) -104.8

(Below 1GHz) ERP =EIRP -2.15

\*Other frequency noises omitted in this report were not seen or had enough margin (more than 20 dB).

Distance factor: 1 GHz - 10 GHz 20log (3.75 m / 3.0 m) = 1.94 dB

## Spurious Emission (Radiated)

|                        |                                                                                 |                                    |
|------------------------|---------------------------------------------------------------------------------|------------------------------------|
| Report No.             | 13274888H                                                                       |                                    |
| Test place             | Ise EMC Lab.                                                                    |                                    |
| Semi Anechoic Chamber  | No.2                                                                            | No.2                               |
| Date                   | December 12, 2019<br>(Day)                                                      | December 16, 2019<br>(Night)       |
| Temperature / Humidity | 21 deg. C / 31 % RH                                                             | 22 deg. C / 31 % RH                |
| Engineer               | Junya Okuno<br>(Below 1 GHz)                                                    | Yuichiro Yamazaki<br>(Above 1 GHz) |
| Mode                   | Tx 836.5 MHz (LTE Band 5)<br>BW:10MHz, RMC, TPC All 1, QPSK, RB Start1 - Num 25 |                                    |

| Polarity | Frequency | Detector | Reading | Ant.Fac. | Loss | Gain | Result   | Distance<br>D | EIRP  | ERP   | Limit | Margin | Remark |
|----------|-----------|----------|---------|----------|------|------|----------|---------------|-------|-------|-------|--------|--------|
|          | [MHz]     |          | [dBuV]  | [dB/m]   | [dB] | [dB] | [dBuV/m] | [m]           | [dBm] | [dBm] | [dBm] | [dB]   |        |
| Hori.    | 1673.000  | PK       | 66.8    | 25.0     | 5.2  | 34.7 | 62.3     | 3.0           | -33.0 | -35.1 | -13.0 | 20.0   |        |
| Hori.    | 2509.500  | PK       | 55.9    | 27.5     | 5.4  | 34.2 | 54.6     | 3.0           | -40.7 | -42.8 | -13.0 | 27.7   |        |
| Hori.    | 3346.000  | PK       | 56.9    | 28.1     | 5.8  | 33.9 | 56.9     | 3.0           | -38.4 | -40.5 | -13.0 | 25.4   |        |
| Hori.    | 4182.500  | PK       | 52.3    | 30.2     | 6.2  | 33.4 | 55.3     | 3.0           | -40.0 | -42.1 | -13.0 | 27.0   |        |
| Hori.    | 5019.000  | PK       | 47.0    | 31.8     | 6.5  | 33.5 | 51.8     | 3.0           | -43.5 | -45.6 | -13.0 | 30.5   |        |
| Hori.    | 5855.500  | PK       | 45.6    | 32.4     | 6.9  | 33.3 | 51.6     | 3.0           | -43.7 | -45.8 | -13.0 | 30.7   |        |
| Vert.    | 1673.000  | PK       | 67.3    | 25.0     | 5.2  | 34.7 | 62.8     | 3.0           | -32.5 | -34.6 | -13.0 | 19.5   |        |
| Vert.    | 2509.500  | PK       | 51.0    | 27.5     | 5.4  | 34.2 | 49.7     | 3.0           | -45.6 | -47.7 | -13.0 | 32.6   |        |
| Vert.    | 3346.000  | PK       | 55.5    | 28.1     | 5.8  | 33.9 | 55.5     | 3.0           | -39.8 | -41.9 | -13.0 | 26.8   |        |
| Vert.    | 4182.500  | PK       | 48.8    | 30.2     | 6.2  | 33.4 | 51.8     | 3.0           | -43.5 | -45.6 | -13.0 | 30.5   |        |
| Vert.    | 5019.000  | PK       | 43.1    | 31.8     | 6.5  | 33.5 | 47.9     | 3.0           | -47.4 | -49.5 | -13.0 | 34.4   |        |
| Vert.    | 5855.500  | PK       | 46.1    | 32.4     | 6.9  | 33.3 | 52.1     | 3.0           | -43.2 | -45.3 | -13.0 | 30.2   |        |

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier)

(Above 1GHz) EIRP=E+20\*log(D)-104.8

(Below 1GHz) ERP=EIRP-2.15

\*Other frequency noises omitted in this report were not seen or had enough margin (more than 20 dB).

Distance factor: 1 GHz - 10 GHz  $20\log(3.75\text{ m} / 3.0\text{ m}) = 1.94\text{ dB}$

## Spurious Emission (Radiated)

Report No. 13274888H  
Test place Ise EMC Lab.  
Semi Anechoic Chamber No.2  
Date December 12, 2019 No.2  
(Day) (Night)  
Temperature / Humidity 21 deg. C / 31 % RH 22 deg. C / 31 % RH  
Engineer Junya Okuno Yuichiro Yamazaki  
(Below 1 GHz) (Above 1 GHz)  
Mode Tx 846.5 MHz (LTE Band 5)  
BW:10MHz, RMC, TPC All 1, QPSK, RB Start1 - Num 25

| Polarity | Frequency | Detector | Reading | Ant.Fac. | Loss | Gain | Result   | Distance | EIRP  | ERP   | Limit | Margin | Remark |
|----------|-----------|----------|---------|----------|------|------|----------|----------|-------|-------|-------|--------|--------|
|          | [MHz]     |          | [dBuV]  | [dB/m]   | [dB] | [dB] | [dBuV/m] | [m]      | [dBm] | [dBm] | [dBm] | [dB]   |        |
| Hori.    | 1693.000  | PK       | 64.3    | 25.0     | 5.2  | 34.7 | 59.8     | 3.0      | -35.5 | -37.6 | -13.0 | 22.5   |        |
| Hori.    | 2539.500  | PK       | 54.0    | 27.5     | 5.4  | 34.2 | 52.7     | 3.0      | -42.6 | -44.7 | -13.0 | 29.6   |        |
| Hori.    | 3386.000  | PK       | 56.8    | 28.2     | 5.8  | 33.8 | 57.0     | 3.0      | -38.3 | -40.4 | -13.0 | 25.3   |        |
| Hori.    | 4232.500  | PK       | 50.1    | 30.3     | 6.2  | 33.4 | 53.2     | 3.0      | -42.1 | -44.2 | -13.0 | 29.1   |        |
| Hori.    | 5079.000  | PK       | 49.3    | 32.0     | 6.5  | 33.5 | 54.3     | 3.0      | -41.0 | -43.1 | -13.0 | 28.0   |        |
| Hori.    | 5925.500  | PK       | 46.7    | 32.4     | 6.9  | 33.3 | 52.7     | 3.0      | -42.6 | -44.7 | -13.0 | 29.6   |        |
| Vert.    | 1693.000  | PK       | 65.4    | 25.0     | 5.2  | 34.7 | 60.9     | 3.0      | -34.4 | -36.5 | -13.0 | 21.4   |        |
| Vert.    | 2539.500  | PK       | 53.3    | 27.5     | 5.4  | 34.2 | 52.0     | 3.0      | -43.3 | -45.4 | -13.0 | 30.3   |        |
| Vert.    | 3386.000  | PK       | 54.6    | 28.2     | 5.8  | 33.8 | 54.8     | 3.0      | -40.5 | -42.6 | -13.0 | 27.5   |        |
| Vert.    | 4232.500  | PK       | 47.8    | 30.3     | 6.2  | 33.4 | 50.9     | 3.0      | -44.4 | -46.5 | -13.0 | 31.4   |        |
| Vert.    | 5079.000  | PK       | 43.8    | 32.0     | 6.5  | 33.5 | 48.8     | 3.0      | -46.5 | -48.6 | -13.0 | 33.5   |        |
| Vert.    | 5925.500  | PK       | 48.2    | 32.4     | 6.9  | 33.3 | 54.2     | 3.0      | -41.1 | -43.2 | -13.0 | 28.1   |        |

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier)

(Above 1GHz) EIRP=E+20\*log(D)-104.8

(Below 1GHz) ERP=EIRP-2.15

\*Other frequency noises omitted in this report were not seen or had enough margin (more than 20 dB).

Distance factor: 1 GHz - 10 GHz  $20\log(3.75\text{ m} / 3.0\text{ m}) = 1.94\text{ dB}$

## Spurious Emission (Radiated)

Report No. 13274888H  
Test place Ise EMC Lab.  
Semi Anechoic Chamber No.2  
Date March 5, 2020  
(Night)  
Temperature / Humidity 24 deg. C / 33 % RH  
Engineer Yuta Moriya  
Mode Tx 2507.5 MHz (LTE Band 7)  
BW:20MHz, RMC, TPC All 1, QPSK, RB Start1 - Num 49

| Polarity | Frequency | Detector | Reading | Ant.Fac. | Loss | Gain | Result   | Distance<br>D | EIRP  | ERP   | Limit | Margin | Remark |
|----------|-----------|----------|---------|----------|------|------|----------|---------------|-------|-------|-------|--------|--------|
|          | [MHz]     |          | [dBuV]  | [dB/m]   | [dB] | [dB] | [dBuV/m] | [m]           | [dBm] | [dBm] | [dBm] | [dB]   |        |
| Hori.    | 5015.000  | PK       | 60.5    | 31.8     | 6.1  | 34.5 | 64.0     | 3.0           | -31.3 | -33.4 | -25.0 | 6.3    |        |
| Hori.    | 7522.500  | PK       | 60.6    | 36.2     | 6.9  | 34.5 | 69.2     | 3.0           | -26.0 | -28.2 | -25.0 | 1.0    |        |
| Hori.    | 10030.000 | PK       | 63.5    | 39.5     | -3.6 | 33.8 | 65.6     | 3.0           | -29.7 | -31.8 | -25.0 | 4.7    |        |
| Hori.    | 12537.500 | PK       | 46.1    | 38.9     | -2.6 | 32.7 | 49.7     | 3.0           | -45.5 | -47.7 | -25.0 | 20.5   |        |
| Hori.    | 15045.000 | PK       | 46.0    | 38.2     | -2.2 | 32.4 | 49.5     | 3.0           | -45.7 | -47.9 | -25.0 | 20.7   |        |
| Vert.    | 5015.000  | PK       | 62.1    | 31.8     | 6.1  | 34.5 | 65.6     | 3.0           | -29.7 | -31.8 | -25.0 | 4.7    |        |
| Vert.    | 7522.500  | PK       | 58.8    | 36.2     | 6.9  | 34.5 | 67.4     | 3.0           | -27.8 | -30.0 | -25.0 | 2.8    |        |
| Vert.    | 10030.000 | PK       | 64.1    | 39.5     | -3.6 | 33.8 | 66.2     | 3.0           | -29.0 | -31.2 | -25.0 | 4.0    |        |
| Vert.    | 12537.500 | PK       | 50.2    | 38.9     | -2.6 | 32.7 | 53.8     | 3.0           | -41.5 | -43.6 | -25.0 | 16.5   |        |
| Vert.    | 15045.000 | PK       | 45.6    | 38.2     | -2.2 | 32.4 | 49.2     | 3.0           | -46.1 | -48.2 | -25.0 | 21.1   |        |

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier)

(Above 1GHz) EIRP=E+20\*log(D)-104.8

(Below 1GHz) ERP=EIRP-2.15

\*Other frequency noises omitted in this report were not seen or had enough margin (more than 20 dB).

Distance factor: 1 GHz - 10 GHz 20log (3.75 m / 3.0 m) = 1.94 dB  
10 GHz - 26.5 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

## Spurious Emission (Radiated)

Report No. 13274888H  
Test place Ise EMC Lab.  
Semi Anechoic Chamber No.2  
Date March 5, 2020  
(Night)  
Temperature / Humidity 24 deg. C / 33 % RH  
Engineer Yuta Moriya  
Mode Tx 2535 MHz (LTE Band 7)  
BW:20MHz, RMC, TPC All 1, QPSK, RB Start1 - Num 49

| Polarity | Frequency | Detector | Reading | Ant.Fac. | Loss | Gain | Result<br>E | Distance<br>D | EIRP  | ERP   | Limit | Margin | Remark |
|----------|-----------|----------|---------|----------|------|------|-------------|---------------|-------|-------|-------|--------|--------|
|          | [MHz]     |          | [dBuV]  | [dB/m]   | [dB] | [dB] | [dBuV/m]    | [m]           | [dBm] | [dBm] | [dBm] | [dB]   |        |
| Hori.    | 5070.000  | PK       | 58.9    | 32.0     | 6.1  | 34.4 | 62.6        | 3.0           | -32.7 | -34.8 | -25.0 | 7.7    |        |
| Hori.    | 7605.000  | PK       | 59.6    | 35.9     | 7.0  | 34.5 | 68.0        | 3.0           | -27.3 | -29.4 | -25.0 | 2.3    |        |
| Hori.    | 10140.000 | PK       | 61.5    | 39.7     | -3.6 | 33.8 | 63.9        | 3.0           | -31.4 | -33.5 | -25.0 | 6.4    |        |
| Hori.    | 12675.000 | PK       | 45.9    | 39.5     | -2.6 | 32.6 | 50.1        | 3.0           | -45.1 | -47.3 | -25.0 | 20.1   |        |
| Hori.    | 15210.000 | PK       | 45.1    | 37.9     | -2.1 | 32.5 | 48.4        | 3.0           | -46.8 | -49.0 | -25.0 | 21.8   |        |
| Vert.    | 5070.000  | PK       | 59.3    | 32.0     | 6.1  | 34.4 | 63.0        | 3.0           | -32.2 | -34.4 | -25.0 | 7.2    |        |
| Vert.    | 7605.000  | PK       | 58.4    | 35.9     | 7.0  | 34.5 | 66.8        | 3.0           | -28.5 | -30.6 | -25.0 | 3.5    |        |
| Vert.    | 10140.000 | PK       | 67.1    | 39.7     | -3.6 | 33.8 | 69.5        | 3.0           | -25.8 | -27.9 | -25.0 | 0.8    |        |
| Vert.    | 12675.000 | PK       | 48.9    | 39.5     | -2.6 | 32.6 | 53.1        | 3.0           | -42.1 | -44.3 | -25.0 | 17.1   |        |
| Vert.    | 15210.000 | PK       | 45.1    | 37.9     | -2.1 | 32.5 | 48.4        | 3.0           | -46.8 | -49.0 | -25.0 | 21.8   |        |

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier)

(Above 1GHz) EIRP=E+20\*log(D)-104.8

(Below 1GHz) ERP=EIRP-2.15

\*Other frequency noises omitted in this report were not seen or had enough margin (more than 20 dB).

Distance factor: 1 GHz - 10 GHz 20log (3.75 m / 3.0 m) = 1.94 dB  
10 GHz - 26.5 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

## Spurious Emission (Radiated)

Report No. 13274888H  
Test place Ise EMC Lab.  
Semi Anechoic Chamber No.2  
Date March 5, 2020  
(Night)  
Temperature / Humidity 24 deg. C / 33 % RH  
Engineer Yuta Moriya  
Mode Tx 2562.5 MHz (LTE Band 7)  
BW:20MHz, RMC, TPC All 1, QPSK, RB Start1 - Num 49

| Polarity | Frequency<br>[MHz] | Detector | Reading<br>[dBuV] | Ant.Fac.<br>[dB/m] | Loss<br>[dB] | Gain<br>[dB] | Result<br>[dBuV/m] | Distance<br>[m] | EIRP<br>[dBm] | ERP<br>[dBm] | Limit<br>[dBm] | Margin<br>[dB] | Remark |
|----------|--------------------|----------|-------------------|--------------------|--------------|--------------|--------------------|-----------------|---------------|--------------|----------------|----------------|--------|
| Hori.    | 5125.000           | PK       | 56.3              | 32.0               | 6.2          | 34.4         | 60.0               | 3.0             | -35.2         | -37.4        | -25.0          | 10.2           |        |
| Hori.    | 7687.500           | PK       | 49.2              | 35.9               | 7.0          | 34.5         | 57.6               | 3.0             | -37.7         | -39.9        | -25.0          | 12.7           |        |
| Hori.    | 10250.000          | PK       | 57.0              | 40.1               | -3.5         | 33.7         | 59.9               | 3.0             | -35.3         | -37.5        | -25.0          | 10.3           |        |
| Hori.    | 12812.500          | PK       | 45.7              | 39.9               | -2.6         | 32.5         | 50.4               | 3.0             | -44.8         | -47.0        | -25.0          | 19.8           |        |
| Hori.    | 15375.000          | PK       | 45.3              | 37.3               | -2.0         | 32.6         | 47.9               | 3.0             | -47.4         | -49.5        | -25.0          | 22.4           |        |
| Vert.    | 5125.000           | PK       | 57.3              | 32.0               | 6.2          | 34.4         | 61.1               | 3.0             | -34.2         | -36.4        | -25.0          | 9.2            |        |
| Vert.    | 7687.500           | PK       | 49.9              | 35.9               | 7.0          | 34.5         | 58.2               | 3.0             | -37.0         | -39.2        | -25.0          | 12.0           |        |
| Vert.    | 10250.000          | PK       | 59.8              | 40.1               | -3.5         | 33.7         | 62.7               | 3.0             | -32.6         | -34.7        | -25.0          | 7.6            |        |
| Vert.    | 12812.500          | PK       | 46.5              | 39.9               | -2.6         | 32.5         | 51.3               | 3.0             | -44.0         | -46.2        | -25.0          | 19.0           |        |
| Vert.    | 15375.000          | PK       | 45.0              | 37.3               | -2.0         | 32.6         | 47.7               | 3.0             | -47.6         | -49.8        | -25.0          | 22.6           |        |

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier)

(Above 1GHz) EIRP=E+20\*log(D)-104.8

(Below 1GHz) ERP=EIRP-2.15

\*Other frequency noises omitted in this report were not seen or had enough margin (more than 20 dB).

Distance factor: 1 GHz - 10 GHz  $20\log(3.75\text{ m} / 3.0\text{ m}) = 1.94\text{ dB}$   
10 GHz - 26.5 GHz  $20\log(1.0\text{ m} / 3.0\text{ m}) = -9.5\text{ dB}$

## Spurious Emission (Radiated)

|                        |                                                   |                     |  |
|------------------------|---------------------------------------------------|---------------------|--|
| Report No.             | 13274888H                                         |                     |  |
| Test place             | Ise EMC Lab.                                      |                     |  |
| Semi Anechoic Chamber  | No.2                                              | No.2                |  |
| Date                   | December 13, 2019                                 | December 17, 2019   |  |
|                        |                                                   | (Day)               |  |
| Temperature / Humidity | 21 deg. C / 31 % RH                               | 24 deg. C / 35 % RH |  |
| Engineer               | Yuichiro Yamazaki                                 | Junya Okuno         |  |
|                        | (Below 1 GHz)                                     | (Above 1 GHz)       |  |
| Mode                   | Tx 816.5 MHz (LTE Band 26)                        |                     |  |
|                        | BW:5MHz, RMC, TPC All 1, QPSK, RB Start1 - Num 12 |                     |  |

| Polarity | Frequency | Detector | Reading | Ant.Fac. | Loss | Gain | Result   | Distance<br>D | EIRP  | ERP   | Limit | Margin | Remark |
|----------|-----------|----------|---------|----------|------|------|----------|---------------|-------|-------|-------|--------|--------|
|          | [MHz]     |          | [dBuV]  | [dB/m]   | [dB] | [dB] | [dBuV/m] | [m]           | [dBm] | [dBm] | [dBm] | [dB]   |        |
| Hori.    | 1633.000  | PK       | 62.2    | 25.1     | 5.2  | 34.8 | 57.7     | 3.0           | -37.6 | -39.7 | -13.0 | 24.6   |        |
| Hori.    | 2449.500  | PK       | 54.0    | 27.5     | 5.4  | 34.2 | 52.7     | 3.0           | -42.6 | -44.7 | -13.0 | 29.6   |        |
| Hori.    | 3266.000  | PK       | 51.8    | 28.3     | 5.7  | 33.9 | 51.9     | 3.0           | -43.4 | -45.5 | -13.0 | 30.4   |        |
| Hori.    | 4082.500  | PK       | 52.0    | 29.9     | 6.2  | 33.4 | 54.7     | 3.0           | -40.6 | -42.7 | -13.0 | 27.6   |        |
| Hori.    | 4899.000  | PK       | 45.7    | 31.5     | 6.4  | 33.5 | 50.1     | 3.0           | -45.2 | -47.3 | -13.0 | 32.2   |        |
| Hori.    | 5715.500  | PK       | 46.5    | 31.8     | 6.8  | 33.3 | 51.8     | 3.0           | -43.5 | -45.6 | -13.0 | 30.5   |        |
| Vert.    | 1633.000  | PK       | 49.6    | 25.1     | 5.2  | 34.8 | 45.1     | 3.0           | -50.2 | -52.3 | -13.0 | 37.2   |        |
| Vert.    | 2449.500  | PK       | 50.3    | 27.5     | 5.4  | 34.2 | 49.0     | 3.0           | -46.3 | -48.4 | -13.0 | 33.3   |        |
| Vert.    | 3266.000  | PK       | 47.9    | 28.3     | 5.7  | 33.9 | 48.0     | 3.0           | -47.3 | -49.4 | -13.0 | 34.3   |        |

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier)

(Above 1GHz) EIRP=E+20\*log(D)-104.8

(Below 1GHz) ERP=EIRP-2.15

\*Other frequency noises omitted in this report were not seen or had enough margin (more than 20 dB).

Distance factor: 1 GHz - 10 GHz  $20\log(3.75\text{ m} / 3.0\text{ m}) = 1.94\text{ dB}$

## Spurious Emission (Radiated)

Report No. 13274888H  
Test place Ise EMC Lab.  
Semi Anechoic Chamber No.2  
Date December 13, 2019 No.2  
December 17, 2019 (Day)  
Temperature / Humidity 21 deg. C / 31 % RH 24 deg. C / 35 % RH  
Engineer Yuichiro Yamazaki Junya Okuno  
(Below 1 GHz) (Above 1 GHz)  
Mode Tx 819.0 MHz (LTE Band 26)  
BW:10MHz, RMC, TPC All 1, QPSK, RB Start1 - Num 25

| Polarity | Frequency | Detector | Reading | Ant.Fac. | Loss | Gain | Result   | Distance | EIRP  | ERP   | Limit | Margin | Remark |
|----------|-----------|----------|---------|----------|------|------|----------|----------|-------|-------|-------|--------|--------|
|          | [MHz]     |          | [dBuV]  | [dB/m]   | [dB] | [dB] | [dBuV/m] | [m]      | [dBm] | [dBm] | [dBm] | [dB]   |        |
| Hori.    | 1638.000  | PK       | 63.6    | 25.1     | 5.2  | 34.8 | 59.1     | 3.0      | -36.2 | -38.3 | -13.0 | 23.2   |        |
| Hori.    | 2457.000  | PK       | 57.4    | 27.5     | 5.4  | 34.2 | 56.1     | 3.0      | -39.2 | -41.3 | -13.0 | 26.2   |        |
| Hori.    | 3276.000  | PK       | 51.5    | 28.3     | 5.7  | 33.9 | 51.6     | 3.0      | -43.7 | -45.8 | -13.0 | 30.7   |        |
| Hori.    | 4095.000  | PK       | 52.7    | 29.9     | 6.2  | 33.4 | 55.4     | 3.0      | -39.9 | -42.0 | -13.0 | 26.9   |        |
| Hori.    | 4914.000  | PK       | 50.2    | 31.5     | 6.5  | 33.5 | 54.7     | 3.0      | -40.6 | -42.7 | -13.0 | 27.6   |        |
| Hori.    | 5733.000  | PK       | 47.4    | 31.9     | 6.9  | 33.3 | 52.9     | 3.0      | -42.4 | -44.5 | -13.0 | 29.4   |        |
| Vert.    | 1638.000  | PK       | 58.9    | 25.1     | 5.2  | 34.8 | 54.4     | 3.0      | -40.9 | -43.0 | -13.0 | 27.9   |        |
| Vert.    | 2457.000  | PK       | 54.6    | 27.5     | 5.4  | 34.2 | 53.3     | 3.0      | -42.0 | -44.1 | -13.0 | 29.0   |        |
| Vert.    | 3276.000  | PK       | 52.1    | 28.3     | 5.7  | 33.9 | 52.2     | 3.0      | -43.1 | -45.2 | -13.0 | 30.1   |        |
| Vert.    | 4095.000  | PK       | 50.8    | 29.9     | 6.2  | 33.4 | 53.5     | 3.0      | -41.8 | -43.9 | -13.0 | 28.8   |        |
| Vert.    | 4914.000  | PK       | 47.5    | 31.5     | 6.5  | 33.5 | 52.0     | 3.0      | -43.3 | -45.4 | -13.0 | 30.3   |        |
| Vert.    | 5733.000  | PK       | 46.6    | 31.9     | 6.9  | 33.3 | 52.1     | 3.0      | -43.2 | -45.3 | -13.0 | 30.2   |        |

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier)

(Above 1GHz) EIRP=E+20\*log(D)-104.8

(Below 1GHz) ERP=EIRP-2.15

\*Other frequency noises omitted in this report were not seen or had enough margin (more than 20 dB).

Distance factor: 1 GHz - 10 GHz  $20\log(3.75\text{ m} / 3.0\text{ m}) = 1.94\text{ dB}$

## Spurious Emission (Radiated)

Report No. 13274888H  
Test place Ise EMC Lab.  
Semi Anechoic Chamber No.2  
Date December 13, 2019 No.2  
December 17, 2019  
(Day)  
Temperature / Humidity 21 deg. C / 31 % RH 24 deg. C / 35 % RH  
Engineer Yuichiro Yamazaki Junya Okuno  
(Below 1 GHz) (Above 1 GHz)  
Mode Tx 821.5 MHz (LTE Band 26)  
BW:5MHz, RMC, TPC All 1, QPSK, RB Start1 - Num 12

| Polarity | Frequency | Detector | Reading | Ant.Fac. | Loss | Gain | Result   | Distance | EIRP  | ERP   | Limit | Margin | Remark |
|----------|-----------|----------|---------|----------|------|------|----------|----------|-------|-------|-------|--------|--------|
|          | [MHz]     |          | [dBuV]  | [dB/m]   | [dB] | [dB] | [dBuV/m] | [m]      | [dBm] | [dBm] | [dBm] | [dB]   |        |
| Hori.    | 1643.000  | PK       | 60.2    | 25.1     | 5.2  | 34.7 | 55.8     | 3.0      | -39.5 | -41.6 | -13.0 | 26.5   |        |
| Hori.    | 2464.500  | PK       | 49.6    | 27.5     | 5.4  | 34.2 | 48.3     | 3.0      | -47.0 | -49.1 | -13.0 | 34.0   |        |
| Hori.    | 3286.000  | PK       | 50.9    | 28.2     | 5.7  | 33.9 | 50.9     | 3.0      | -44.4 | -46.5 | -13.0 | 31.4   |        |
| Hori.    | 4107.500  | PK       | 52.2    | 30.0     | 6.2  | 33.4 | 55.0     | 3.0      | -40.3 | -42.4 | -13.0 | 27.3   |        |
| Hori.    | 4929.000  | PK       | 51.8    | 31.6     | 6.5  | 33.5 | 56.4     | 3.0      | -38.9 | -41.0 | -13.0 | 25.9   |        |
| Hori.    | 5750.500  | PK       | 47.7    | 32.0     | 6.9  | 33.3 | 53.3     | 3.0      | -42.0 | -44.1 | -13.0 | 29.0   |        |
| Vert.    | 1643.000  | PK       | 60.4    | 25.1     | 5.2  | 34.7 | 56.0     | 3.0      | -39.3 | -41.4 | -13.0 | 26.3   |        |
| Vert.    | 2464.500  | PK       | 58.5    | 27.5     | 5.4  | 34.2 | 57.2     | 3.0      | -38.1 | -40.2 | -13.0 | 25.1   |        |
| Vert.    | 3286.000  | PK       | 50.0    | 28.2     | 5.7  | 33.9 | 50.0     | 3.0      | -45.3 | -47.4 | -13.0 | 32.3   |        |
| Vert.    | 4107.500  | PK       | 49.1    | 30.0     | 6.2  | 33.4 | 51.9     | 3.0      | -43.4 | -45.5 | -13.0 | 30.4   |        |
| Vert.    | 4929.000  | PK       | 47.9    | 31.6     | 6.5  | 33.5 | 52.5     | 3.0      | -42.8 | -44.9 | -13.0 | 29.8   |        |
| Vert.    | 5750.500  | PK       | 45.7    | 32.0     | 6.9  | 33.3 | 51.3     | 3.0      | -44.0 | -46.1 | -13.0 | 31.0   |        |

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier)

(Above 1GHz) EIRP=E+20\*log(D)-104.8

(Below 1GHz) ERP=EIRP-2.15

\*Other frequency noises omitted in this report were not seen or had enough margin (more than 20 dB).

Distance factor: 1 GHz - 10 GHz 20log (3.75 m / 3.0 m) = 1.94 dB  
10 GHz - 26.5 GHz 20log (1.0 m / 3.0 m) = -9.5 dB

### Frequency Stability(Temperature/Voltage Variation)

Report No. 13274888H  
Test place Ise EMC Lab.  
Measurement Room No.5  
Date March 17, 2020  
Temperature / Humidity 22 deg. C / 38 % RH  
Engineer Tomohisa Nakagawa  
Mode GSM

Tested Frequency: 836.6 [MHz]

| Temp<br>[deg. C] | Volt<br>[V] | Reading<br>Frequency Error |             | Result<br>[ppm] | Limit<br>[+/-ppm] |
|------------------|-------------|----------------------------|-------------|-----------------|-------------------|
|                  |             | [Hz]                       | [MHz]       |                 |                   |
| 50               | 3.80        | -18.64                     | -0.00001864 | - 0.0223        | 2.5               |
| 40               | 3.80        | -19.07                     | -0.00001907 | - 0.0228        | 2.5               |
| 30               | 3.80        | -17.63                     | -0.00001763 | - 0.0211        | 2.5               |
| 20               | 3.80        | -22.29                     | -0.00002229 | - 0.0266        | 2.5               |
| 10               | 3.80        | -16.69                     | -0.00001669 | - 0.0199        | 2.5               |
| 0                | 3.80        | -14.57                     | -0.00001457 | - 0.0174        | 2.5               |
| -10              | 3.80        | -13.73                     | -0.00001373 | - 0.0164        | 2.5               |
| -20              | 3.80        | -11.44                     | -0.00001144 | - 0.0137        | 2.5               |
| -30              | 3.80        | N/A *                      | -           | -               | 2.5               |

| Temp<br>[deg. C] | Volt<br>[V] | Reading<br>Frequency Error |             | Result<br>[ppm] | Limit<br>[+/-ppm] |
|------------------|-------------|----------------------------|-------------|-----------------|-------------------|
|                  |             | [Hz]                       | [MHz]       |                 |                   |
| 20               | 4.37        | -23.90                     | -0.00002390 | - 0.0286        | 2.5               |
| 20               | 3.80        | -20.80                     | -0.00002080 | - 0.0249        | 2.5               |
| 20               | 3.23        | -21.54                     | -0.00002154 | - 0.0257        | 2.5               |

Result = Frequency error[MHz] - Tested frequency[MHz] \* 10<sup>6</sup>

\*The temperature of the EUT was outside of its operating range, so the EUT did not work normally.

### Frequency Stability(Temperature/Voltage Variation)

Report No. 13274888H  
Test place Ise EMC Lab.  
Measurement Room No.5  
Date March 17, 2020  
Temperature / Humidity 22 deg. C / 38 % RH  
Engineer Tomohisa Nakagawa  
Mode GSM

Tested Frequency: 1880 [MHz]

| Temp<br>[deg. C] | Volt<br>[V] | Reading<br>Frequency Error |             | Result<br>[ppm] | Limit<br>[+/-ppm] |
|------------------|-------------|----------------------------|-------------|-----------------|-------------------|
|                  |             | [Hz]                       | [MHz]       |                 |                   |
| 50               | 3.80        | -35.13                     | -0.00003513 | - 0.0187        | 2.5               |
| 40               | 3.80        | -24.73                     | -0.00002473 | - 0.0132        | 2.5               |
| 30               | 3.80        | -27.26                     | -0.00002726 | - 0.0145        | 2.5               |
| 20               | 3.80        | -16.47                     | -0.00001647 | - 0.0088        | 2.5               |
| 10               | 3.80        | -15.64                     | -0.00001564 | - 0.0083        | 2.5               |
| 0                | 3.80        | -16.18                     | -0.00001618 | - 0.0086        | 2.5               |
| -10              | 3.80        | -21.02                     | -0.00002102 | - 0.0112        | 2.5               |
| -20              | 3.80        | -20.01                     | -0.00002001 | - 0.0106        | 2.5               |
| -30              | 3.80        | N/A*                       | -           | -               | 2.5               |

| Temp<br>[deg. C] | Volt<br>[V] | Reading<br>Frequency Error |             | Result<br>[ppm] | Limit<br>[+/-ppm] |
|------------------|-------------|----------------------------|-------------|-----------------|-------------------|
|                  |             | [Hz]                       | [MHz]       |                 |                   |
| 20               | 4.37        | -17.06                     | -0.00001706 | - 0.0091        | 2.5               |
| 20               | 3.80        | -16.63                     | -0.00001663 | - 0.0088        | 2.5               |
| 20               | 3.23        | -15.88                     | -0.00001588 | - 0.0084        | 2.5               |

Result = Frequency error[MHz] - Tested frequency[MHz] \* 10<sup>6</sup>

\*The temperature of the EUT was outside of its operating range, so the EUT did not work normally.

### Frequency Stability(Temperature/Voltage Variation)

Report No. 13274888H  
Test place Ise EMC Lab.  
Measurement Room No.6  
Date January 21, 2020  
Temperature / Humidity 24 deg. C / 33 % RH  
Engineer Takafumi Noguchi  
Mode Tx W-CDMA Band 2 (RMC 12.2 kbps), All Up Bits

Tested Frequency: 1880 [MHz]

| Temp<br>[deg. C] | Volt<br>[V] | Reading<br>Frequency Error |             | Result<br>[ppm] | Limit<br>[+/-ppm] |
|------------------|-------------|----------------------------|-------------|-----------------|-------------------|
|                  |             | [Hz]                       | [MHz]       |                 |                   |
| 50               | 3.80        | -19.24                     | -0.00001924 | - 0.0102        | 2.5               |
| 40               | 3.80        | -23.87                     | -0.00002387 | - 0.0127        | 2.5               |
| 30               | 3.80        | -19.27                     | -0.00001927 | - 0.0103        | 2.5               |
| 20               | 3.80        | -21.32                     | -0.00002132 | - 0.0113        | 2.5               |
| 10               | 3.80        | -17.55                     | -0.00001755 | - 0.0093        | 2.5               |
| 0                | 3.80        | -18.94                     | -0.00001894 | - 0.0101        | 2.5               |
| -10              | 3.80        | -17.46                     | -0.00001746 | - 0.0093        | 2.5               |
| -20              | 3.80        | -18.88                     | -0.00001888 | - 0.0100        | 2.5               |
| -30              | 3.80        | N/A *                      | -           | -               | 2.5               |

| Temp<br>[deg. C] | Volt<br>[V] | Reading<br>Frequency Error |             | Result<br>[ppm] | Limit<br>[+/-ppm] |
|------------------|-------------|----------------------------|-------------|-----------------|-------------------|
|                  |             | [Hz]                       | [MHz]       |                 |                   |
| 20               | 4.37        | -20.54                     | -0.00002054 | - 0.0109        | 2.5               |
| 20               | 3.80        | -21.32                     | -0.00002132 | - 0.0113        | 2.5               |
| 20               | 3.23        | -17.05                     | -0.00001705 | - 0.0091        | 2.5               |

Result = Frequency error[MHz] - Tested frequency[MHz] \* 10<sup>6</sup>

\*The temperature of the EUT was outside of its operating range, so the EUT did not work normally.

### Frequency Stability(Temperature/Voltage Variation)

Report No. 13274888H  
Test place Ise EMC Lab.  
Measurement Room No.6  
Date January 21, 2020  
Temperature / Humidity 24 deg. C / 33 % RH  
Engineer Takafumi Noguchi  
Mode Tx W-CDMA Band 5 (RMC 12.2 kbps), All Up Bits

Tested Frequency: 836.6 [MHz]

| Temp<br>[deg. C] | Volt<br>[V] | Reading<br>Frequency Error |             | Result<br>[ppm] | Limit<br>[+/-ppm] |
|------------------|-------------|----------------------------|-------------|-----------------|-------------------|
|                  |             | [Hz]                       | [MHz]       |                 |                   |
| 50               | 3.80        | -18.68                     | -0.00001868 | - 0.0223        | 2.5               |
| 40               | 3.80        | -18.11                     | -0.00001811 | - 0.0216        | 2.5               |
| 30               | 3.80        | -18.02                     | -0.00001802 | - 0.0215        | 2.5               |
| 20               | 3.80        | -21.32                     | -0.00002132 | - 0.0255        | 2.5               |
| 10               | 3.80        | -17.09                     | -0.00001709 | - 0.0204        | 2.5               |
| 0                | 3.80        | -14.84                     | -0.00001484 | - 0.0177        | 2.5               |
| -10              | 3.80        | -13.17                     | -0.00001317 | - 0.0157        | 2.5               |
| -20              | 3.80        | -12.15                     | -0.00001215 | - 0.0145        | 2.5               |
| -30              | 3.80        | N/A *                      | -           | -               | 2.5               |

| Temp<br>[deg. C] | Volt<br>[V] | Reading<br>Frequency Error |             | Result<br>[ppm] | Limit<br>[+/-ppm] |
|------------------|-------------|----------------------------|-------------|-----------------|-------------------|
|                  |             | [Hz]                       | [MHz]       |                 |                   |
| 20               | 4.37        | -23.71                     | -0.00002371 | - 0.0283        | 2.5               |
| 20               | 3.80        | -21.32                     | -0.00002132 | - 0.0255        | 2.5               |
| 20               | 3.23        | -21.15                     | -0.00002115 | - 0.0253        | 2.5               |

Result = Frequency error[MHz] - Tested frequency[MHz] \* 10<sup>6</sup>

\*The temperature of the EUT was outside of its operating range, so the EUT did not work normally.

### Frequency Stability(Temperature/Voltage Variation)

Report No. 13274888H  
Test place Ise EMC Lab.  
Measurement Room No.6  
Date January 21, 2020  
Temperature / Humidity 24 deg. C / 33 % RH  
Engineer Takafumi Noguchi  
Mode Tx LTE Band 2 (QPSK), BW 20MHz

Tested Frequency: 1880 [MHz]

| Temp<br>[deg. C] | Volt<br>[V] | Reading<br>Frequency Error |             | Result<br>[ppm] | Limit<br>[+/-ppm] |
|------------------|-------------|----------------------------|-------------|-----------------|-------------------|
|                  |             | [Hz]                       | [MHz]       |                 |                   |
| 50               | 3.80        | -35.68                     | -0.00003568 | - 0.0190        | 2.5               |
| 40               | 3.80        | -23.96                     | -0.00002396 | - 0.0127        | 2.5               |
| 30               | 3.80        | -28.15                     | -0.00002815 | - 0.0150        | 2.5               |
| 20               | 3.80        | -17.17                     | -0.00001717 | - 0.0091        | 2.5               |
| 10               | 3.80        | -15.56                     | -0.00001556 | - 0.0083        | 2.5               |
| 0                | 3.80        | -16.22                     | -0.00001622 | - 0.0086        | 2.5               |
| -10              | 3.80        | -20.48                     | -0.00002048 | - 0.0109        | 2.5               |
| -20              | 3.80        | -20.66                     | -0.00002066 | - 0.0110        | 2.5               |
| -30              | 3.80        | N/A*                       | -           | -               | 2.5               |

| Temp<br>[deg. C] | Volt<br>[V] | Reading<br>Frequency Error |             | Result<br>[ppm] | Limit<br>[+/-ppm] |
|------------------|-------------|----------------------------|-------------|-----------------|-------------------|
|                  |             | [Hz]                       | [MHz]       |                 |                   |
| 20               | 4.37        | -17.85                     | -0.00001785 | - 0.0095        | 2.5               |
| 20               | 3.80        | -17.17                     | -0.00001717 | - 0.0091        | 2.5               |
| 20               | 3.23        | -16.66                     | -0.00001666 | - 0.0089        | 2.5               |

Result = Frequency error[MHz] - Tested frequency[MHz] \* 10<sup>6</sup>

\*The temperature of the EUT was outside of its operating range, so the EUT did not work normally.

### Frequency Stability(Temperature/Voltage Variation)

Report No. 13274888H  
Test place Ise EMC Lab.  
Measurement Room No.6  
Date January 21, 2020  
Temperature / Humidity 24 deg. C / 33 % RH  
Engineer Takafumi Noguchi  
Mode Tx LTE Band 5 (QPSK), BW 10MHz

Tested Frequency: 836.5 [MHz]

| Temp<br>[deg. C] | Volt<br>[V] | Reading<br>Frequency Error |             | Result<br>[ppm] | Limit<br>[+/-ppm] |
|------------------|-------------|----------------------------|-------------|-----------------|-------------------|
|                  |             | [Hz]                       | [MHz]       |                 |                   |
| 50               | 3.80        | -15.42                     | -0.00001542 | - 0.0184        | 2.5               |
| 40               | 3.80        | -15.48                     | -0.00001548 | - 0.0185        | 2.5               |
| 30               | 3.80        | -14.09                     | -0.00001409 | - 0.0168        | 2.5               |
| 20               | 3.80        | -15.05                     | -0.00001505 | - 0.0180        | 2.5               |
| 10               | 3.80        | -12.23                     | -0.00001223 | - 0.0146        | 2.5               |
| 0                | 3.80        | -8.15                      | -0.00000815 | - 0.0097        | 2.5               |
| -10              | 3.80        | -12.16                     | -0.00001216 | - 0.0145        | 2.5               |
| -20              | 3.80        | -13.88                     | -0.00001388 | - 0.0166        | 2.5               |
| -30              | 3.80        | N/A*                       | -           | -               | 2.5               |

| Temp<br>[deg. C] | Volt<br>[V] | Reading<br>Frequency Error |             | Result<br>[ppm] | Limit<br>[+/-ppm] |
|------------------|-------------|----------------------------|-------------|-----------------|-------------------|
|                  |             | [Hz]                       | [MHz]       |                 |                   |
| 20               | 4.37        | -15.68                     | -0.00001568 | - 0.0187        | 2.5               |
| 20               | 3.80        | -15.05                     | -0.00001505 | - 0.0180        | 2.5               |
| 20               | 3.23        | -16.08                     | -0.00001608 | - 0.0192        | 2.5               |

Result = Frequency error[MHz] - Tested frequency[MHz] \* 10<sup>6</sup>

\*The temperature of the EUT was outside of its operating range, so the EUT did not work normally.

### Frequency Stability(Temperature/Voltage Variation)

Report No. 13274888H  
Test place Ise EMC Lab.  
Measurement Room No.6  
Date January 21, 2020  
Temperature / Humidity 24 deg. C / 33 % RH  
Engineer Takafumi Noguchi  
Mode Tx LTE Band 7 (QPSK), BW 20MHz

Tested Frequency: 2535 [MHz]

| Temp<br>[deg. C] | Volt<br>[V] | Reading<br>Frequency Error |             | Result<br>[ppm] | Limit<br>[+/-ppm] |
|------------------|-------------|----------------------------|-------------|-----------------|-------------------|
|                  |             | [Hz]                       | [MHz]       |                 |                   |
| 50               | 3.80        | -32.22                     | -0.00003222 | - 0.0127        | 2.5               |
| 40               | 3.80        | -27.39                     | -0.00002739 | - 0.0108        | 2.5               |
| 30               | 3.80        | -33.56                     | -0.00003356 | - 0.0132        | 2.5               |
| 20               | 3.80        | -23.98                     | -0.00002398 | - 0.0095        | 2.5               |
| 10               | 3.80        | -17.97                     | -0.00001797 | - 0.0071        | 2.5               |
| 0                | 3.80        | -14.54                     | -0.00001454 | - 0.0057        | 2.5               |
| -10              | 3.80        | -19.37                     | -0.00001937 | - 0.0076        | 2.5               |
| -20              | 3.80        | -25.61                     | -0.00002561 | - 0.0101        | 2.5               |
| -30              | 3.80        | N/A*                       | -           | -               | 2.5               |

| Temp<br>[deg. C] | Volt<br>[V] | Reading<br>Frequency Error |             | Result<br>[ppm] | Limit<br>[+/-ppm] |
|------------------|-------------|----------------------------|-------------|-----------------|-------------------|
|                  |             | [Hz]                       | [MHz]       |                 |                   |
| 20               | 4.37        | -24.36                     | -0.00002436 | - 0.0096        | 2.5               |
| 20               | 3.80        | -23.98                     | -0.00002398 | - 0.0095        | 2.5               |
| 20               | 3.23        | -25.21                     | -0.00002521 | - 0.0099        | 2.5               |

Result = Frequency error[MHz] - Tested frequency[MHz] \* 10<sup>6</sup>

\*The temperature of the EUT was outside of its operating range, so the EUT did not work normally.

### Frequency Stability(Temperature/Voltage Variation)

Report No. 13274888H  
Test place Ise EMC Lab.  
Measurement Room No.6  
Date January 21, 2020  
Temperature / Humidity 24 deg. C / 33 % RH  
Engineer Takafumi Noguchi  
Mode Tx LTE Band 26 (QPSK), BW 10MHz

Tested Frequency: 819 [MHz]

| Temp<br>[deg. C] | Volt<br>[V] | Reading<br>Frequency Error |             | Result<br>[ppm] | Limit<br>[+/-ppm] |
|------------------|-------------|----------------------------|-------------|-----------------|-------------------|
|                  |             | [Hz]                       | [MHz]       |                 |                   |
| 50               | 3.80        | -15.34                     | -0.00001534 | - 0.0187        | 2.5               |
| 40               | 3.80        | -14.29                     | -0.00001429 | - 0.0174        | 2.5               |
| 30               | 3.80        | -15.86                     | -0.00001586 | - 0.0194        | 2.5               |
| 20               | 3.80        | -15.34                     | -0.00001534 | - 0.0187        | 2.5               |
| 10               | 3.80        | -11.37                     | -0.00001137 | - 0.0139        | 2.5               |
| 0                | 3.80        | -10.17                     | -0.00001017 | - 0.0124        | 2.5               |
| -10              | 3.80        | -15.03                     | -0.00001503 | - 0.0184        | 2.5               |
| -20              | 3.80        | -16.72                     | -0.00001672 | - 0.0204        | 2.5               |
| -30              | 3.80        | N/A *                      | -           | -               | 2.5               |

| Temp<br>[deg. C] | Volt<br>[V] | Reading<br>Frequency Error |             | Result<br>[ppm] | Limit<br>[+/-ppm] |
|------------------|-------------|----------------------------|-------------|-----------------|-------------------|
|                  |             | [Hz]                       | [MHz]       |                 |                   |
| 20               | 4.37        | -13.44                     | -0.00001344 | - 0.0164        | 2.5               |
| 20               | 3.80        | -15.34                     | -0.00001534 | - 0.0187        | 2.5               |
| 20               | 3.23        | -15.63                     | -0.00001563 | - 0.0191        | 2.5               |

Result = Frequency error[MHz] - Tested frequency[MHz] \* 10<sup>6</sup>

\*The temperature of the EUT was outside of its operating range, so the EUT did not work normally.

## APPENDIX 2: Test instruments

### Test equipment used on December 10, 2019 to January 23, 2020 and April 15, 2020

| Test Name | Local Id      | Description                         | Manufacturer              | Model                        | Serial                          | Last Cal Date  | Interval |
|-----------|---------------|-------------------------------------|---------------------------|------------------------------|---------------------------------|----------------|----------|
| AT        | MCC-67        | Microwave Cable 1G-40GHz            | Suhner                    | SUCOFLEX102                  | 28635/2                         | 2019/04/03     | 12       |
| AT        | MMM-05        | Digital Tester                      | HIOKI                     | 3244                         | 30416616                        | 2019/05/21     | 12       |
| AT        | MOS-45        | Thermo-Hygrometer                   | Mother tool               | MT-893                       | -                               | -              | -        |
| AT        | MSA-14        | Spectrum Analyzer                   | AGILENT                   | E4440A                       | MY48250080                      | 2019/10/06     | 12       |
| AT        | MSA-17        | Spectrum Analyzer                   | KEYSIGHT                  | N9030A                       | US51350215                      | 2019/09/20     | 12       |
| AT        | SURC-01       | Radio Communication Analyzer        | ANRITSU                   | MT8820C                      | 6201274351                      | 2019/08/09     | 12       |
| AT        | MURC-05       | Wideband Radio Communication Tester | Rohde & Schwarz           | CMW500                       | 127576                          | 2019/12/09     | 12       |
| AT        | MPM-08        | Power Meter                         | ANRITSU                   | ML2495A                      | 6K00003338                      | 2019/10/03     | 12       |
| AT        | MPSE-11       | Power sensor                        | ANRITSU                   | MA2411B                      | 11737                           | 2019/10/03     | 12       |
| AT        | MAT-88        | Attenuator                          | Weinschel Associates      | WA56-10                      | 56100304                        | 2019/05/17     | 12       |
| AT        | MAT-86        | Attenuator                          | Weinschel Associates      | WA56-20                      | 56200213                        | 2019/05/17     | 12       |
| AT        | MHDC-30       | Directional Coupler                 | Agilent Technologies      | 87300B                       | MY39500119                      | 2020/02/13     | 12       |
| AT        | MCC-243       | Microwave Cable                     | Huber+Suhner              | SF102D/11PC24/11 PC24/1000mm | 537059/126EA                    | 2020/01/17     | 12       |
| AT / RE   | MAT-105       | Attenuator                          | HUBER+SUNER               | 6806 N-50-1                  | -                               | 2019/10/08     | 12       |
| AT / RE   | MAT-20        | Attenuator(10dB) (above1GHz)        | HIROSE ELECTRIC CO.,LTD.  | AT-110                       | -                               | 2019/12/09     | 12       |
| AT / RE   | MCC-38        | Coaxial Cable                       | UL Japan                  | -                            | -                               | 2019/11/12     | 12       |
| AT / RE   | MSA-19        | Signal Analyzer                     | Keysight Technologies Inc | N9030B                       | MY57143159                      | 2019/06/14     | 12       |
| AT / RE   | MURC-10       | Wideband Radio Communication Tester | Rohde & Schwarz           | CMW500                       | 165750                          | 2019/07/30     | 12       |
| RE        | COTS-MEMI     | EMI measurement program             | TSJ                       | TEPTO-DV                     | -                               | -              | -        |
| RE        | COTS-MEMI-02  | EMI measurement program             | TSJ                       | TEPTO-DV                     | -                               | -              | -        |
| RE        | MAEC-02       | AC2_Semi Anechoic Chamber(NSA)      | TDK                       | Semi Anechoic Chamber 3m     | DA-06902                        | 2018/06/29     | 24       |
| RE        | MAEC-02-SVSWR | AC2_Semi Anechoic Chamber(SVSWR)    | TDK                       | Semi Anechoic Chamber 3m     | DA-06902                        | 2019/04/01     | 24       |
| RE        | MAT-07        | Attenuator(6dB)                     | Weinschel Corp            | 2                            | BK7970                          | 2019/11/07     | 12       |
| RE        | MAT-67        | Attenuator                          | JFW Industries, Inc.      | 50FP-013H2 N                 | -                               | 2019/12/02     | 12       |
| RE        | MBA-08        | Biconical Antenna                   | Schwarzbeck               | VHA9103B+BBA9106             | 8031                            | 2019/08/23     | 12       |
| RE        | MCC-12        | Coaxial Cable                       | Fujikura/Agilent          | -                            | -                               | 2019/09/03     | 12       |
| RE        | MCC-176       | Microwave Cable                     | Junkosha                  | MMX221-00500DMSDMS           | 1502S303                        | 2019/03/05 *1) | 12       |
| RE        | MCC-216       | Microwave Cable                     | Junkosha                  | MWX221                       | 1604S253 (1 m) / 1608S087 (5 m) | 2019/08/06     | 12       |
| AT        | MCH-04        | Temperature and Humidity Chamber    | TABAI ESPEC               | PL-2KP                       | 14015723                        | 2019/08/02     | 12       |

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The expiration\*1) This test equipment was used for the tests before the expiration date of the calibration.

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Test item: RE: Radiated Emission test

AT: Antenna Terminal Conducted test

## UL Japan, Inc.

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**Test equipment used on December 10, 2019 to January 23, 2020**

| Test Name | Local Id | Description                         | Manufacturer      | Model        | Serial     | Last Cal Date | Interval |
|-----------|----------|-------------------------------------|-------------------|--------------|------------|---------------|----------|
| RE        | MHA-02   | Horn Antenna 18-26.5GHz             | EMCO              | 3160-09      | 1265       | 2019/10/08    | 12       |
| RE        | MHA-06   | Horn Antenna 1-18GHz                | Schwarzbeck       | BBHA9120D    | 254        | 2019/09/03    | 12       |
| RE        | MHF-06   | High Pass Filter 3.5-24GHz          | TOKIMEC           | TF323DCA     | 601        | 2019/05/17    | 12       |
| RE        | MHF-27   | High Pass Filter(1.1-10GHz)         | TOKYO KEIKI       | TF219CD1     | 1001       | 2020/01/09    | 12       |
| RE        | MJM-27   | Measure                             | KOMELON           | KMC-36       | -          | -             | -        |
| RE        | MLA-21   | Logperiodic Antenna(200-1000MHz)    | Schwarzbeck       | VUSLP9111B   | 9111B-190  | 2019/08/23    | 12       |
| RE        | MMM-01   | Digital Tester                      | Fluke Corporation | FLUKE 26-3   | 78030611   | 2019/08/20    | 12       |
| RE        | MOS-13   | Thermo-Hygrometer                   | CUSTOM            | CTH-180      | 1301       | 2020/01/07    | 12       |
| RE        | MOS-14   | Thermo-Hygrometer                   | CUSTOM            | CTH-201      | 1401       | 2020/01/07    | 12       |
| RE        | MOS-22   | Thermo-Hygrometer                   | CUSTOM            | CTH-201      | 0003       | -             | -        |
| RE        | MPA-09   | Pre Amplifier                       | AGILENT           | 8447D        | 2944A10845 | 2019/09/06    | 12       |
| RE        | MPA-10   | Pre Amplifier                       | AGILENT           | 8449B        | 3008A02142 | 2020/01/07    | 12       |
| RE        | MRF-02   | Band Rejection Filter(1850-1910MHz) | TOKYO KEIKI       | 1850-1910MHz | -          | 2019/10/02    | 12       |
| RE        | MRF-04   | Band Rejection Filter(824-849MHz)   | TOKYO KEIKI       | 824-849MHz   | -          | 2019/07/01    | 12       |
| RE        | MRF-11   | Band Rejection Filter(2500-2570MHz) | TOKYO KEIKI       | TF81ZRD1     | 1001       | 2020/01/07    | 12       |
| RE        | MSA-10   | Spectrum Analyzer                   | AGILENT           | E4448A       | MY46180655 | 2019/08/07    | 12       |
| RE        | MSA-15   | Spectrum Analyzer                   | AGILENT           | E4440A       | MY46187105 | 2019/10/09    | 12       |

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Test item: RE: Radiated Emission test

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# Test equipment used on March 5 to April 2, 2020

| Test Item | Local ID      | LIMS ID | Description                       | Manufacturer                  | Model                    | Serial                           | Last Calibration Date | Cal Int |
|-----------|---------------|---------|-----------------------------------|-------------------------------|--------------------------|----------------------------------|-----------------------|---------|
| RE        | MAEC-04       | 142011  | AC4_Semi Anechoic Chamber(NSA)    | TDK                           | Semi Anechoic Chamber 3m | DA-10005                         | 2018/06/28            | 24      |
| RE        | MOS-15        | 141562  | Thermo-Hygrometer                 | CUSTOM                        | CTH-201                  | 0010                             | 2020/01/07            | 12      |
| RE        | MMM-10        | 141545  | DIGITAL HiTESTER                  | Hioki                         | 3805                     | 51201148                         | 2020/01/06            | 12      |
| RE        | MJM-26        | 142227  | Measure                           | KOMELON                       | KMC-36                   | -                                | -                     | -       |
| RE        | COTS-MEMI-02  | 178648  | EMI measurement program           | TSJ                           | TEPTO-DV                 | -                                | -                     | -       |
| RE        | MAT-34        | 141331  | Attenuator(6dB)                   | TME                           | UFA-01                   | -                                | 2020/02/05            | 12      |
| RE        | MBA-05        | 141425  | Biconical Antenna                 | Schwarzbeck Mess - Elektronik | VHA9103+BBA9106          | 1302                             | 2019/08/24            | 12      |
| RE        | MCC-50        | 141397  | Coaxial Cable                     | UL Japan                      | -                        | -                                | 2020/03/24            | 12      |
| RE        | MLA-23        | 141267  | Logperiodic Antenna(200-1000MHz)  | Schwarzbeck Mess - Elektronik | VUSLP9111B               | 9111B-192                        | 2019/08/24            | 12      |
| RE        | MPA-14        | 141583  | Pre Amplifier                     | SONOMA INSTRUMENT             | 310                      | 260833                           | 2020/02/18            | 12      |
| RE        | MRF-04        | 141858  | Band Rejection Filter(824-849MHz) | TOKYO KEIKI                   | 824-849MHz               | -                                | 2019/07/01            | 12      |
| RE        | MCC-64        | 141327  | Coaxial Cable                     | UL Japan                      | -                        | -                                | 2020/02/04            | 12      |
| RE        | MCC-127       | 141220  | Coaxial Cable                     | UL Japan                      | -                        | -                                | 2019/07/05            | 12      |
| RE        | MSA-14        | 141901  | Spectrum Analyzer                 | Keysight Technologies Inc     | E4440A                   | MY48250080                       | 2019/10/06            | 12      |
| RE        | MAEC-02       | 142004  | AC2_Semi Anechoic Chamber(NSA)    | TDK                           | Semi Anechoic Chamber 3m | DA-06902                         | 2018/06/29            | 24      |
| RE        | MOS-41        | 192300  | Thermo-Hygrometer                 | CUSTOM                        | CTH-201                  | 0013                             | 2019/12/19            | 12      |
| RE        | MMM-01        | 141542  | Digital Tester                    | Fluke Corporation             | FLUKE 26-3               | 78030611                         | 2019/08/20            | 12      |
| RE        | MJM-27        | 142228  | Measure                           | KOMELON                       | KMC-36                   | -                                | -                     | -       |
| RE        | MHA-06        | 141512  | Horn Antenna 1-18GHz              | Schwarzbeck Mess - Elektronik | BBHA9120D                | 254                              | 2019/09/03            | 12      |
| RE        | MCC-216       | 141392  | Microwave Cable                   | Junkosha                      | MWX221                   | 1604S253(1 m) / 537073/126E(5 m) | 2020/02/18            | 12      |
| RE        | MPA-10        | 141579  | Pre Amplifier                     | Keysight Technologies Inc     | 8449B                    | 3008A02142                       | 2020/01/07            | 12      |
| RE        | MAEC-02-SVSWR | 142006  | AC2_Semi Anechoic Chamber(SVSWR)  | TDK                           | Semi Anechoic Chamber 3m | DA-06902                         | 2019/04/01            | 24      |
| RE        | MPA-11        | 141580  | MicroWave System Amplifier        | Keysight Technologies Inc     | 83017A                   | MY39500779                       | 2020/03/24            | 12      |
| RE        | MCC-231       | 177964  | Microwave Cable                   | Junkosha INC.                 | MMX221                   | 1901S329(1m)/1902S579(5m)        | 2020/03/02            | 12      |
| RE        | MHA-16        | 141513  | Horn Antenna 15-40GHz             | Schwarzbeck Mess - Elektronik | BBHA9170                 | BBHA9170306                      | 2019/10/08            | 12      |
| RE        | MSA-04        | 141885  | Spectrum Analyzer                 | Keysight Technologies Inc     | E4448A                   | US44300523                       | 2019/11/21            | 12      |

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