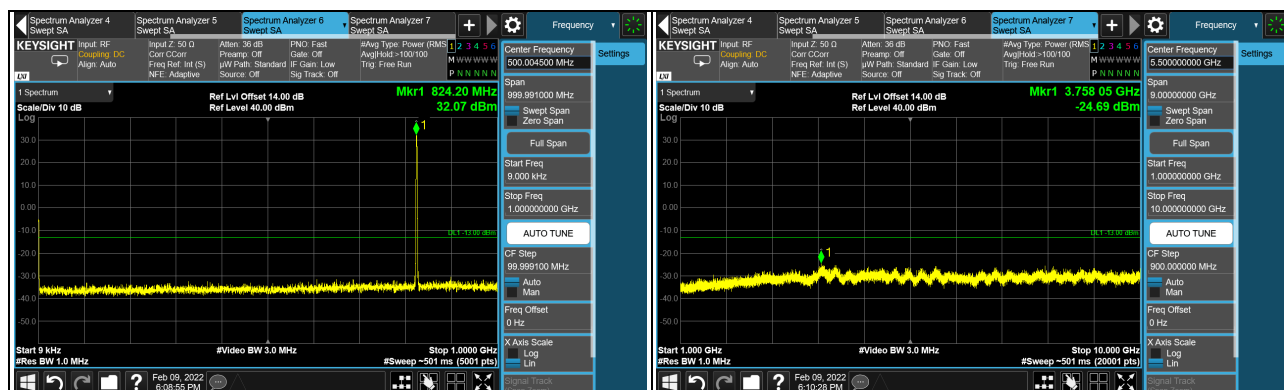
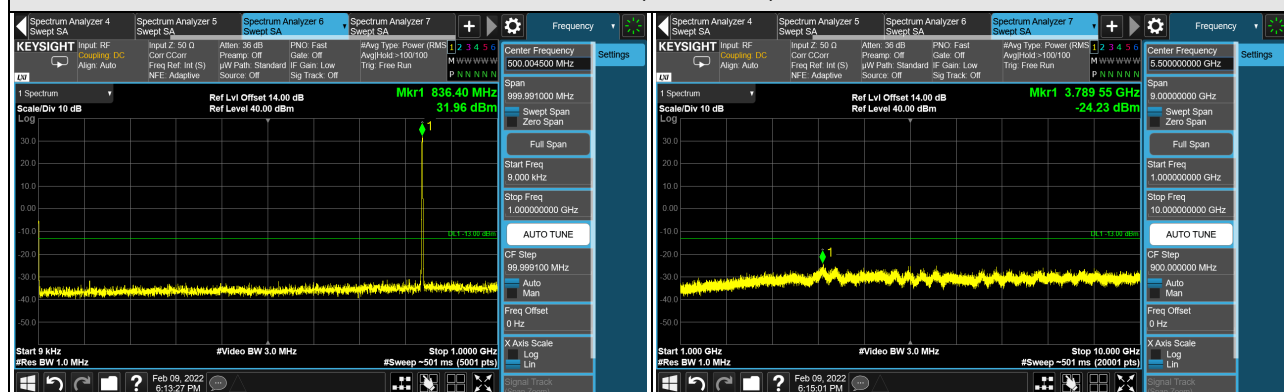


## 4.7.4 Test Results

### GPRS



CH 128 (824.2MHz)



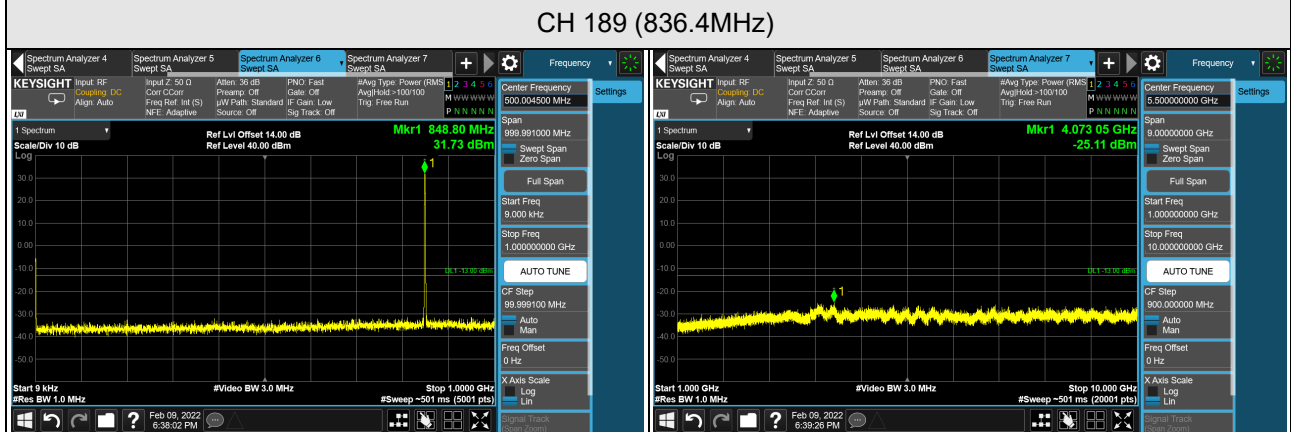
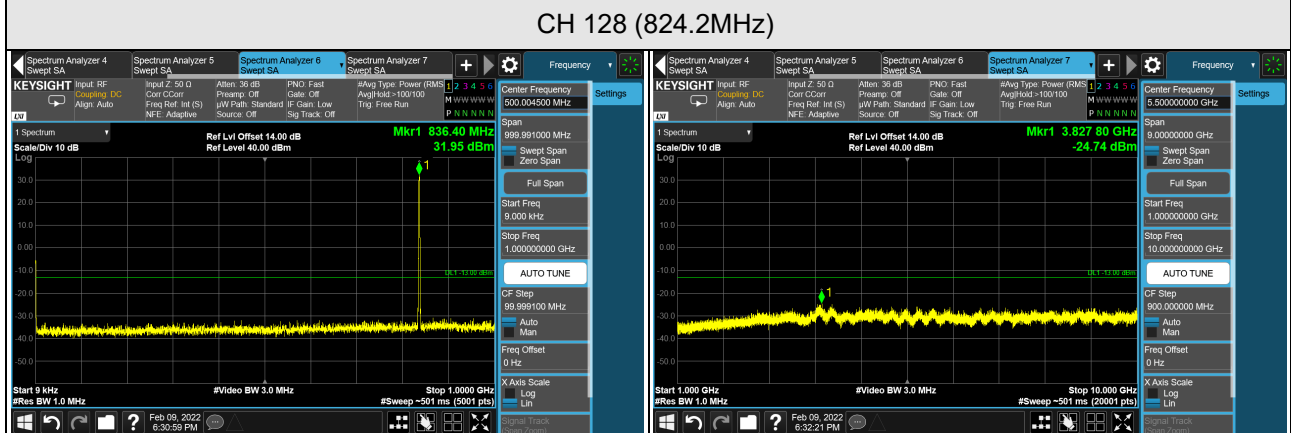
CH 189 (836.4MHz)



CH 251 (848.8MHz)

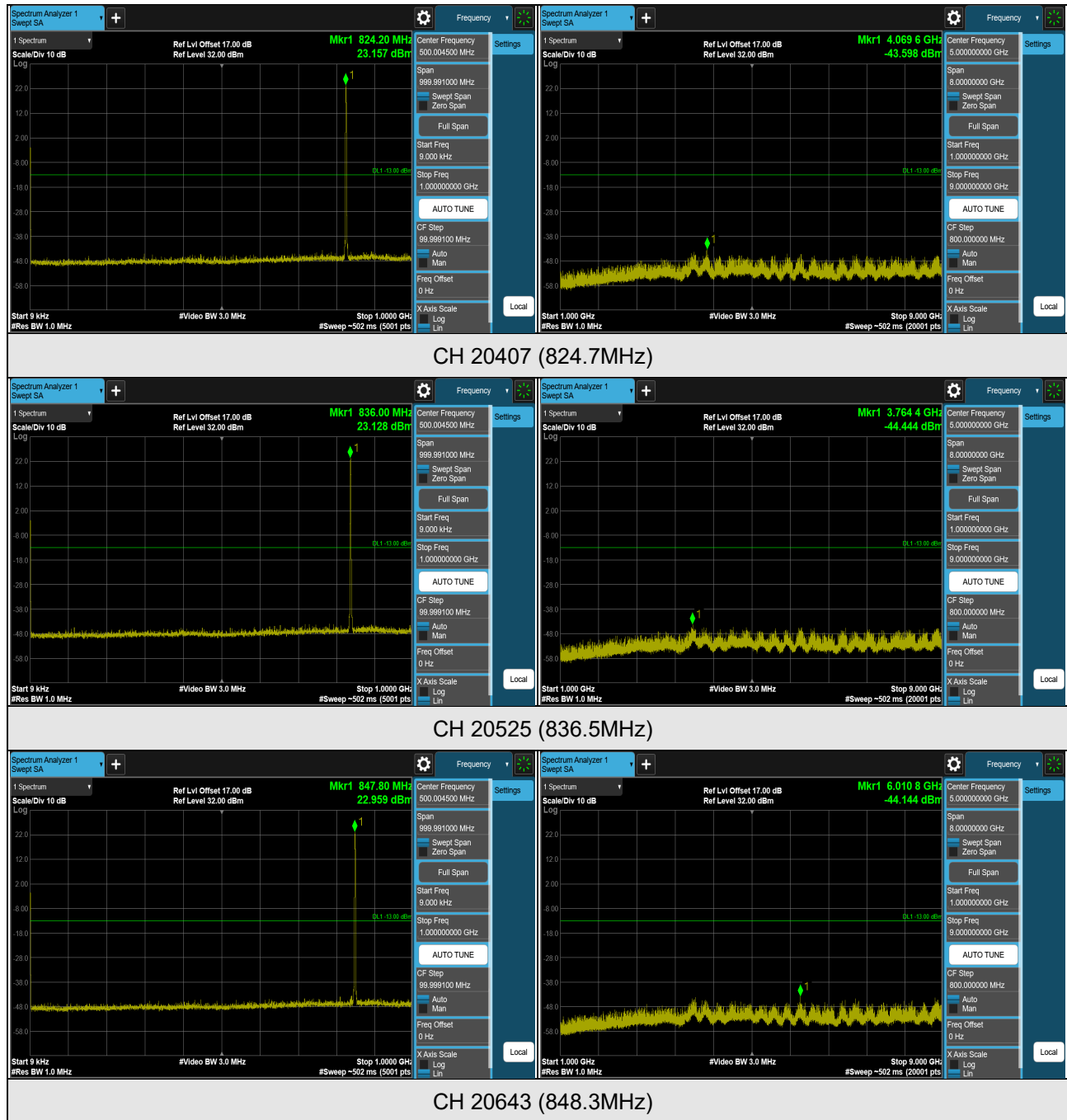
\*The 9KHz signal over the limit is from Spectrum.

## EDGE



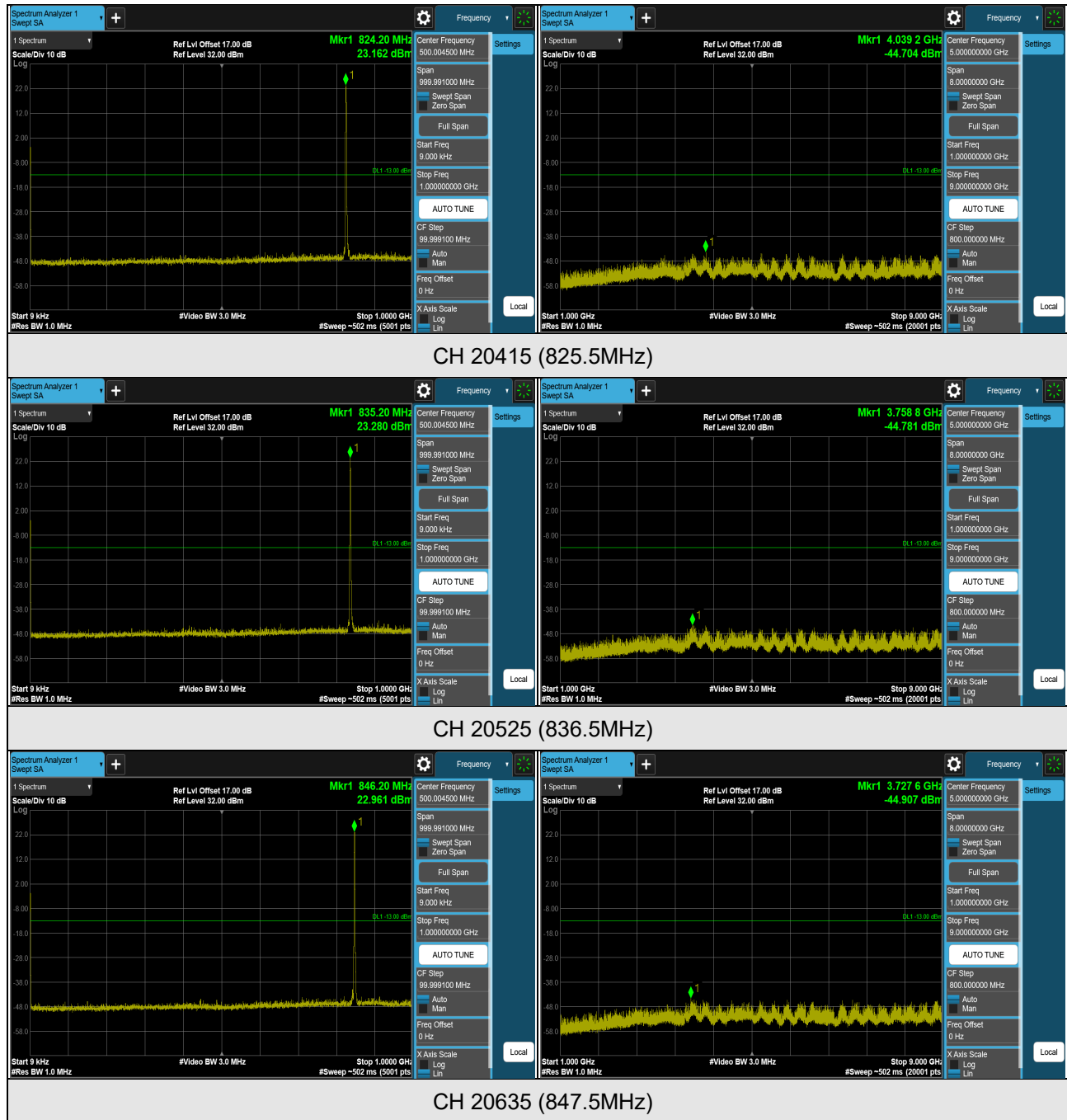
\*The 9kHz signal over the limit is from Spectrum.

## LTE Band 5 (Channel Bandwidth 1.4MHz)



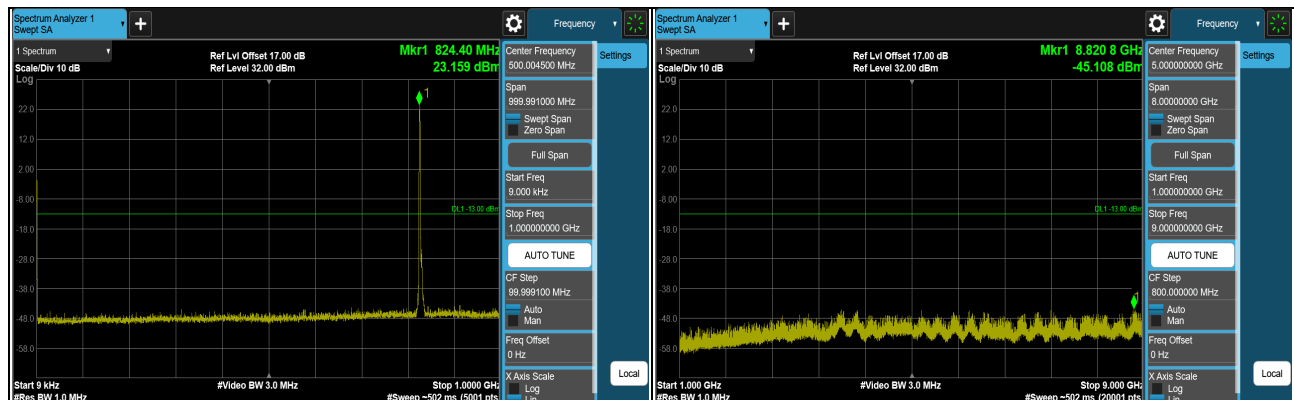
\*The 9kHz signal over the limit is from Spectrum.

## LTE Band 5 (Channel Bandwidth 3MHz)

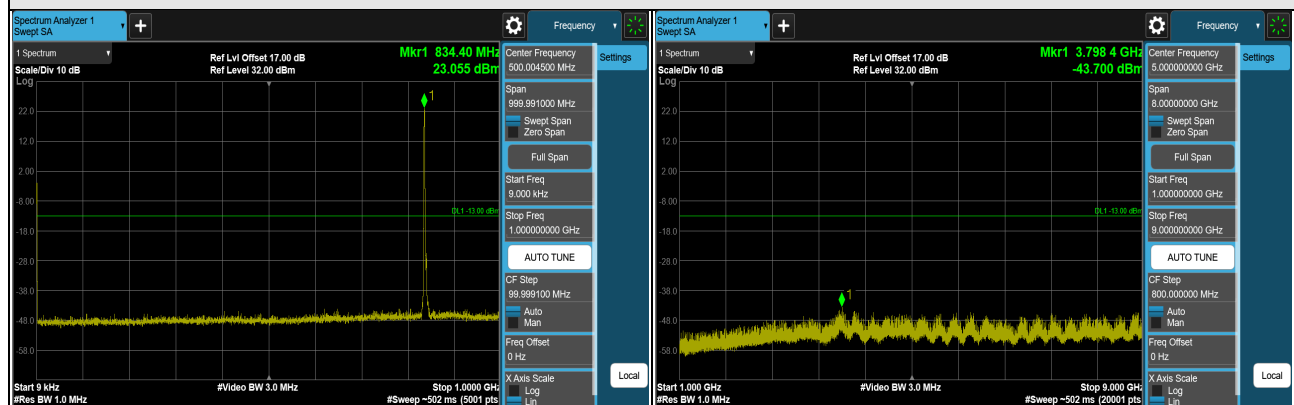


\*The 9kHz signal over the limit is from Spectrum.

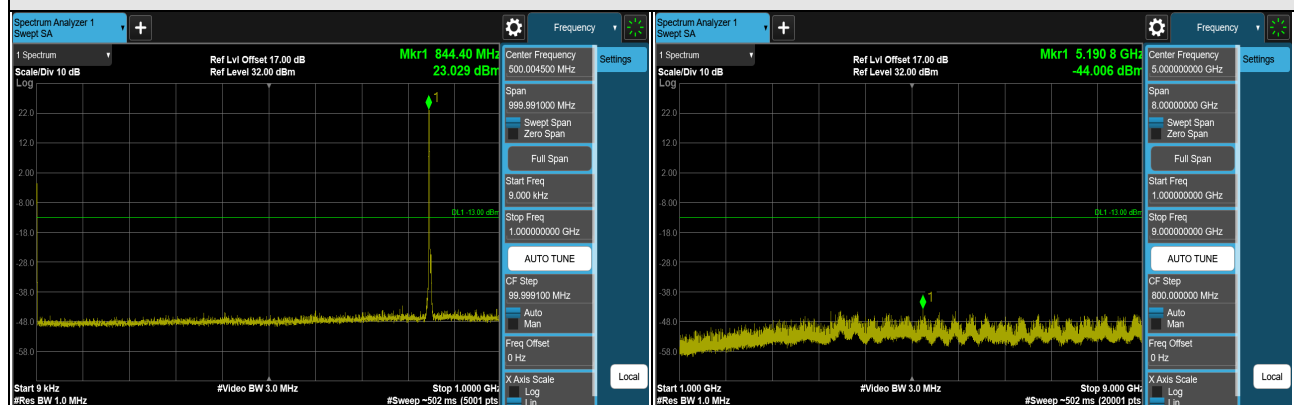
## LTE Band 5 (Channel Bandwidth 5MHz)



### CH 20425 (826.5MHz)



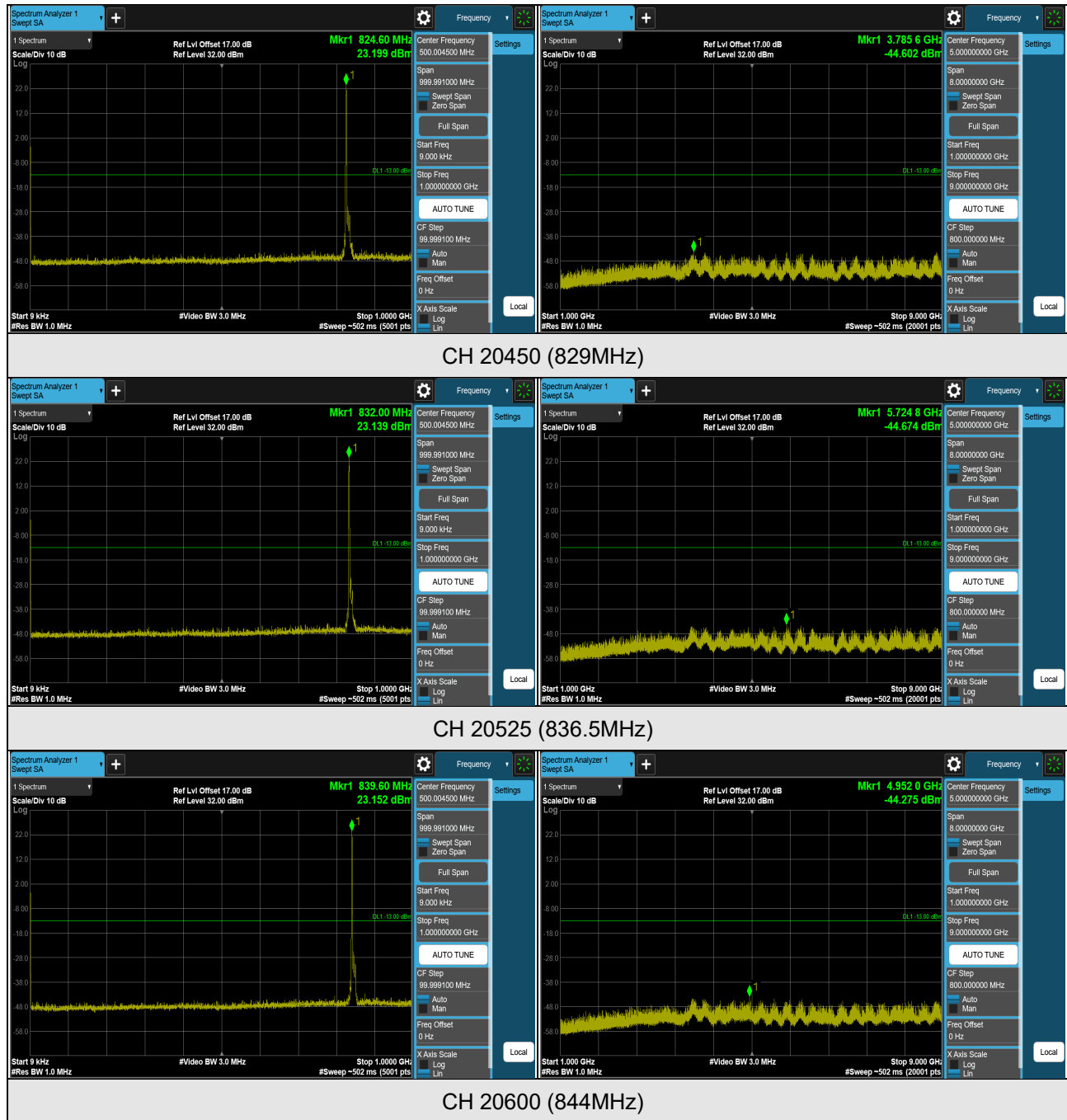
### CH 20525 (836.5MHz)



### CH 20625 (846.5MHz)

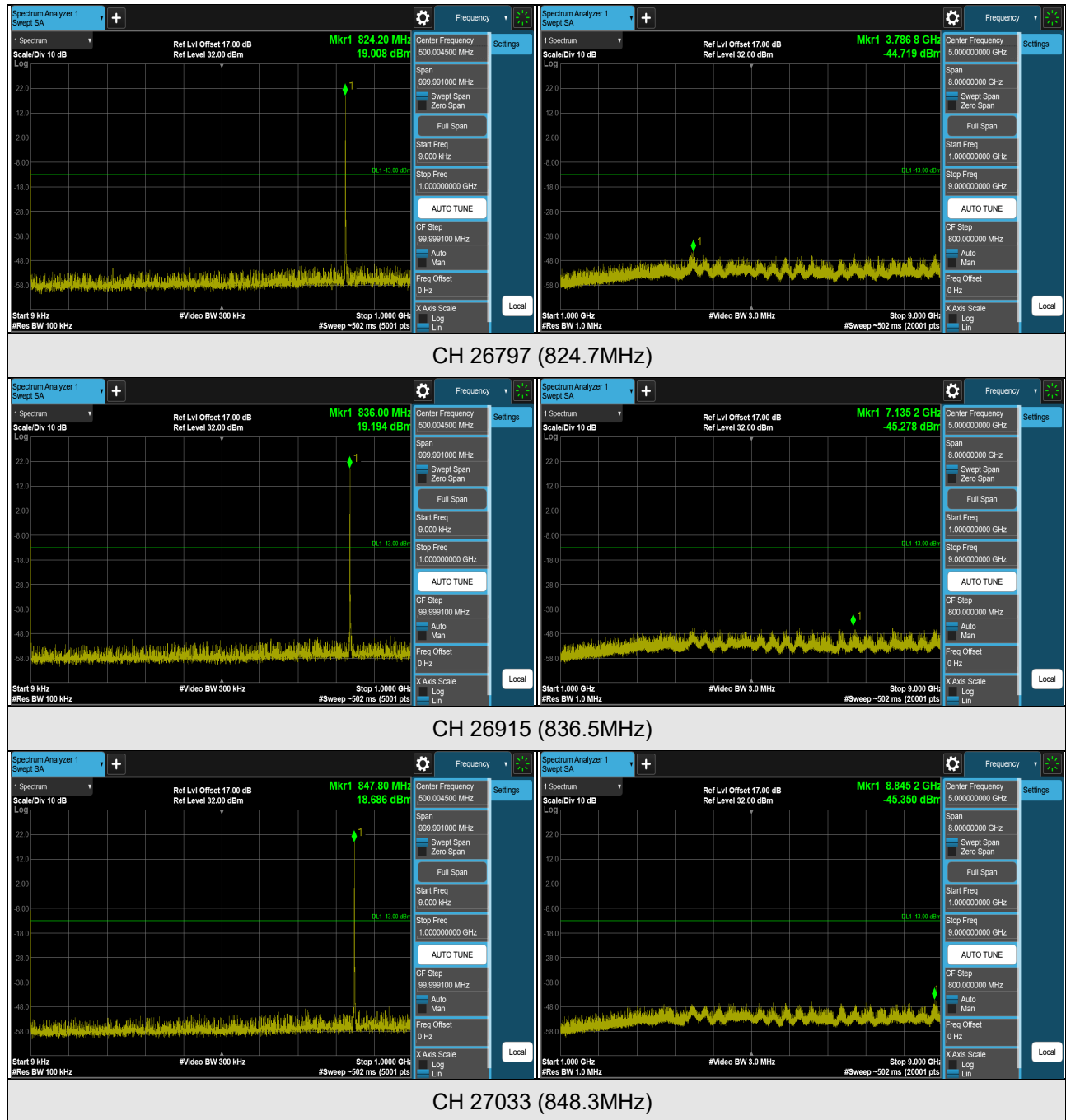
\*The 9kHz signal over the limit is from Spectrum.

## LTE Band 5 (Channel Bandwidth 10MHz)



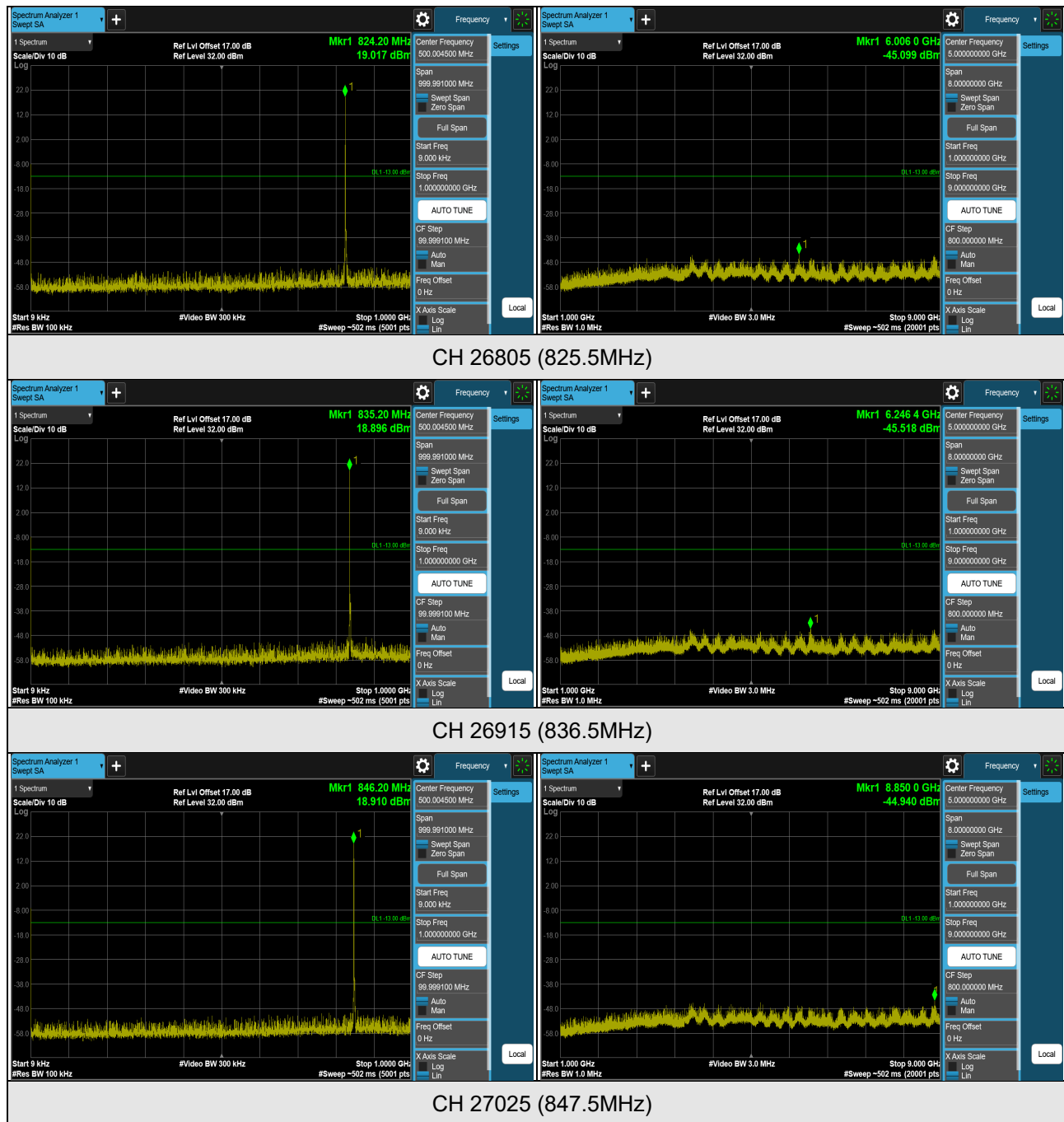
\*The 9kHz signal over the limit is from Spectrum.

## LTE Band 26 (Channel Bandwidth 1.4MHz)



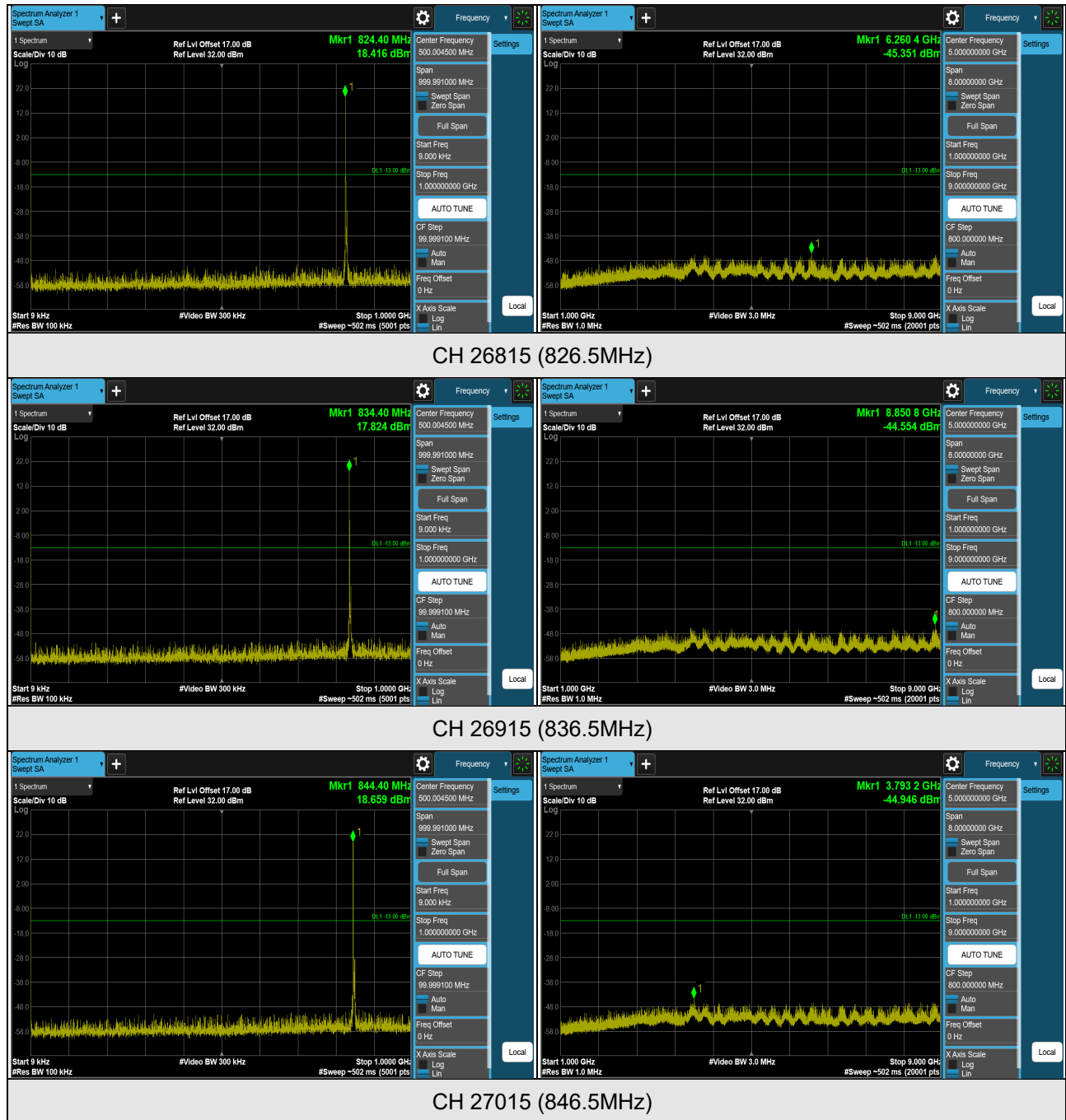
\*The 9kHz signal over the limit is from Spectrum.

## LTE Band 26 (Channel Bandwidth 3MHz)



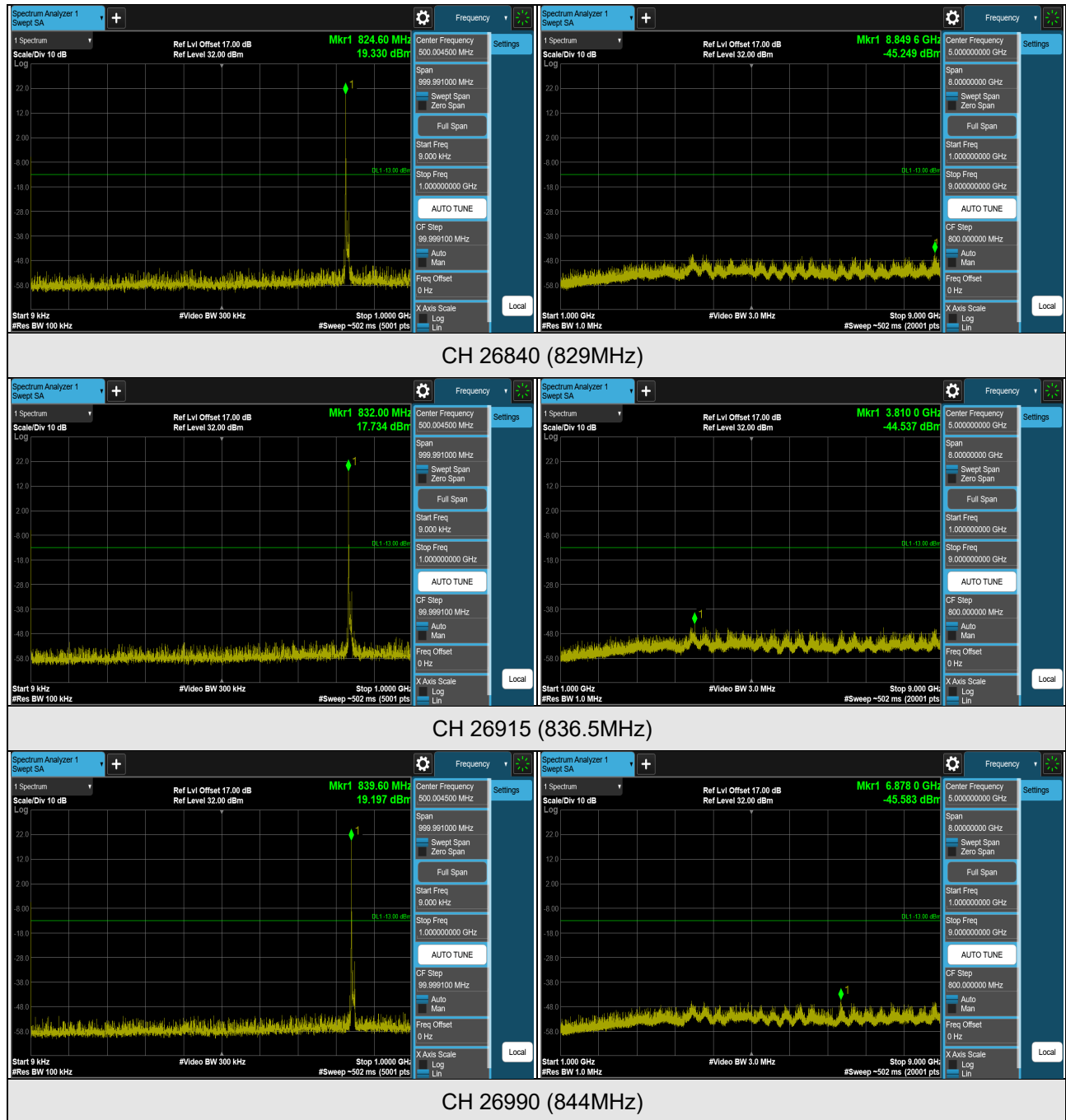
\*The 9kHz signal over the limit is from Spectrum.

## LTE Band 26 (Channel Bandwidth 5MHz)



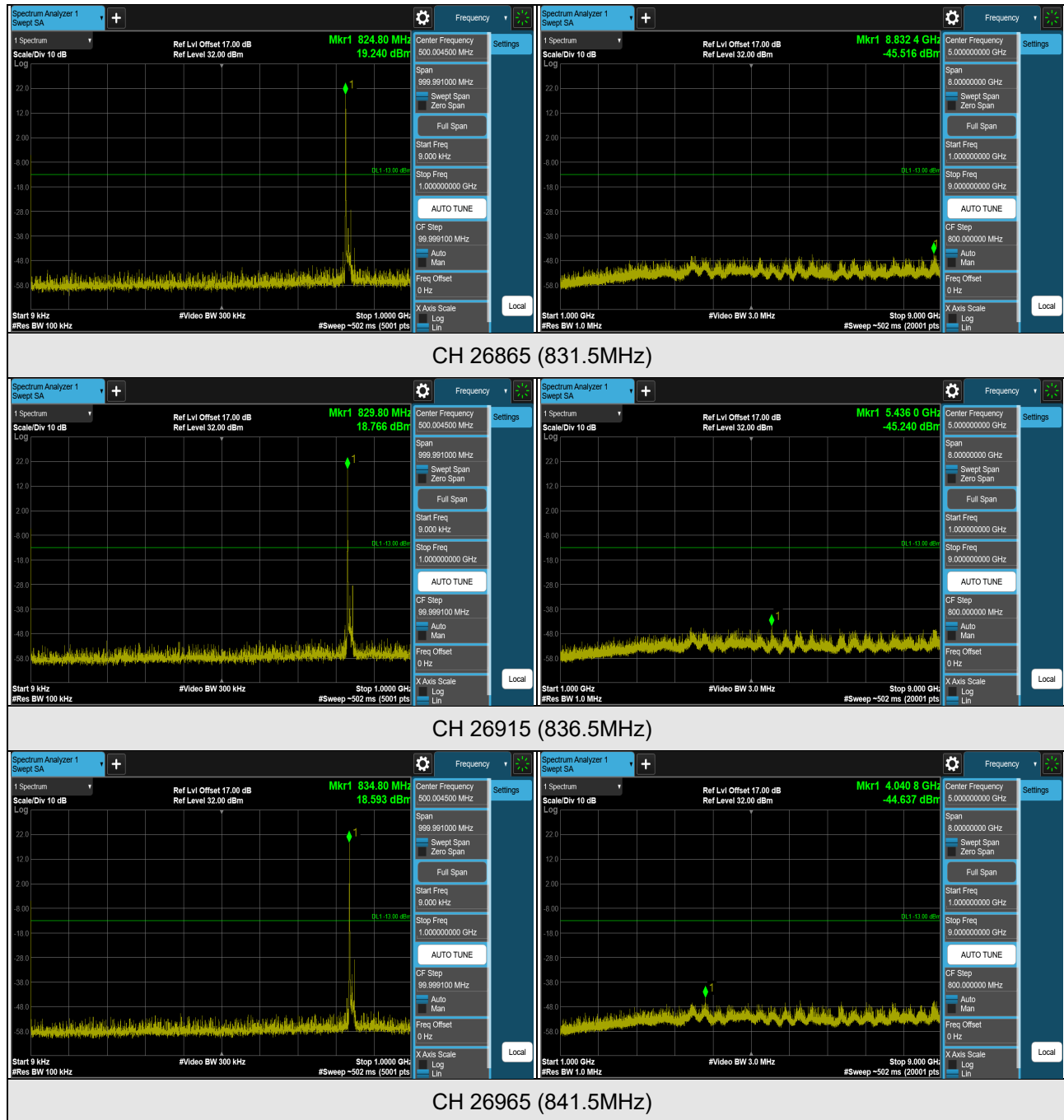
\*The 9kHz signal over the limit is from Spectrum.

## LTE Band 26 (Channel Bandwidth 10MHz)



\*The 9kHz signal over the limit is from Spectrum.

## LTE Band 26 (Channel Bandwidth 15MHz)



\*The 9kHz signal over the limit is from Spectrum.

## 4.8 Radiated Emission Measurement

### 4.8.1 Limits of Radiated Emission Measurement

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least  $43 + 10 \log(P)$  dB. The emission limit equal to  $-13\text{dBm}$ .

### 4.8.2 Test Procedure

- a. In the semi-anechoic chamber, EUT placed on the 0.8m (below or equal 1GHz) and/or 1.5m (above 1GHz) height of Turn Table, rotated the table around 360 degrees to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1m to 4m to find the maximum polar radiated power. The "Read Value" is the spectrum reading the maximum power value.
- b. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- c. Perform a field strength measurement and record the worse read value, is the field strength value via a spectrum reading obtained corrected for antenna factor, cable loss and pre-amplifier factor and then mathematically convert the measured field strength level to EIRP/ERP level.
- d. Following C63.26 section 5.5 and 5.2.7
  - $\text{EIRP (dBm)} = E (\text{dB}\mu\text{V/m}) + 20\log(D) - 104.8$ ; where D is the measurement distance (in the far field region) in m.
  - $\text{ERP (dBm)} = E (\text{dB}\mu\text{V/m}) + 20\log(D) - 104.8 - 2.15$ ; where D is the measurement distance (in the far field region) in m.

Note:

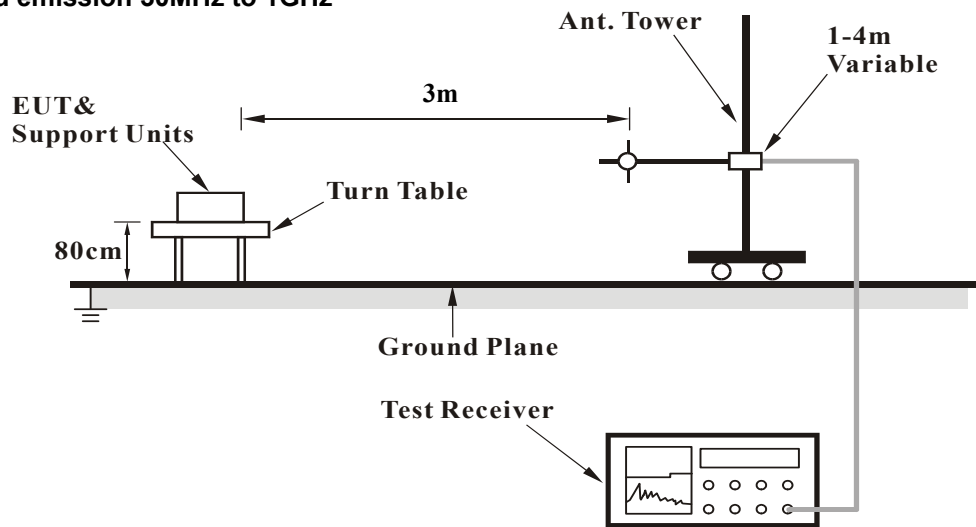
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1MHz/3MHz.
2. The emission levels were against the limit of frequency range 9 kHz ~ 30 MHz:  
The amplitude of spurious emissions attenuated more than 20 dB below the permissible value is not required to be report.

### 4.8.3 Deviation from Test Standard

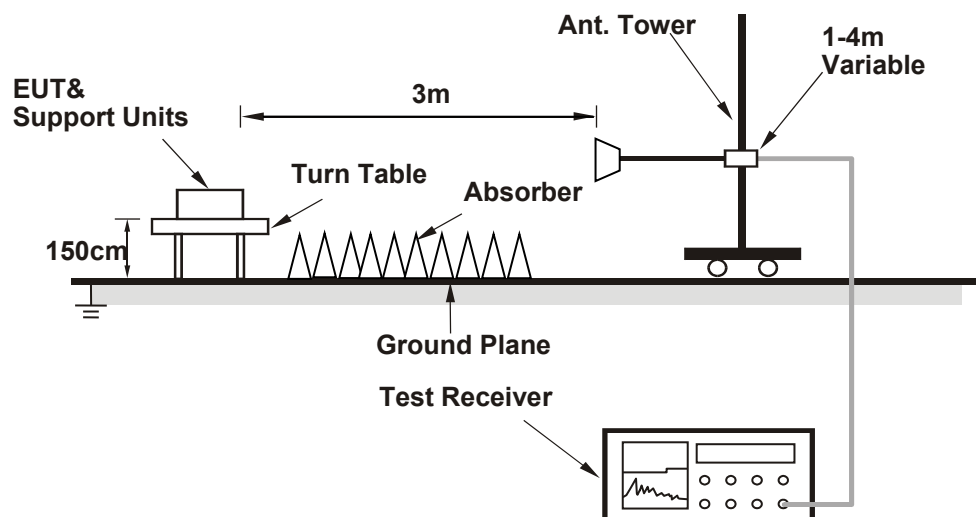
No deviation.

#### 4.8.4 Test Setup

For radiated emission 30MHz to 1GHz



For radiated emission above 1GHz



For the actual test configuration, please refer to the attached file (Test Setup Photo).

#### 4.8.5 Test Results

Below 1GHz

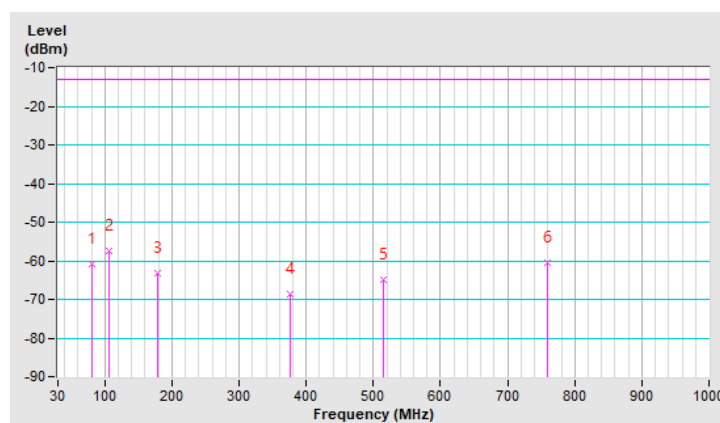
GPRS

|                          |                              |                 |                |
|--------------------------|------------------------------|-----------------|----------------|
| Mode                     | TX channel 128<br>(824.2MHz) | Frequency Range | Below 1000 MHz |
| Environmental Conditions | 22deg. C, 64%RH              | Input Power     | 4.0Vdc         |
| Tested By                | Vincent Chen                 |                 |                |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |           |             |             |                    |                      |                  |                          |
|------------------------------------------------------|-----------------|-----------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No                                                   | Frequency (MHz) | ERP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 81.26           | -60.86    | -13.00      | -47.86      | 2.32 H             | 54                   | 59.51            | -120.37                  |
| 2                                                    | 106.56          | -57.55    | -13.00      | -44.55      | 1.01 H             | 55                   | 60.49            | -118.04                  |
| 3                                                    | 178.35          | -63.28    | -13.00      | -50.28      | 2.43 H             | 65                   | 53.21            | -116.49                  |
| 4                                                    | 375.23          | -68.48    | -13.00      | -55.48      | 2.01 H             | 341                  | 43.67            | -112.15                  |
| 5                                                    | 514.29          | -64.92    | -13.00      | -51.92      | 3.21 H             | 11                   | 43.41            | -108.33                  |
| 6                                                    | 758.93          | -60.55    | -13.00      | -47.55      | 1.52 H             | 22                   | 42.53            | -103.08                  |

Remarks:

1.  $ERP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8 - 2.15$
3.  $Margin\ value = ERP - Limit\ value$
4. The other ERP levels were very low against the limit.

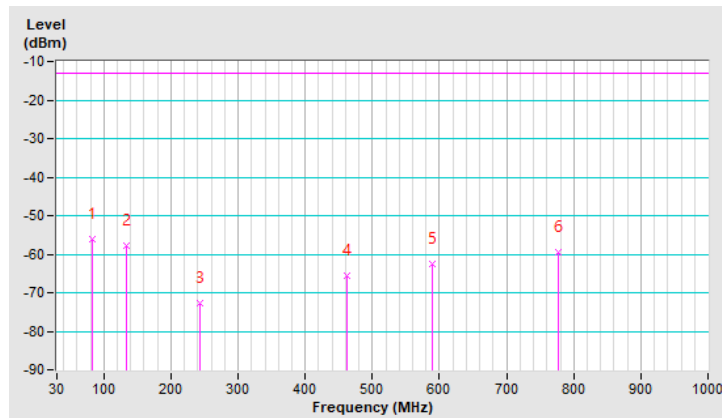


|                          |                              |                 |                |
|--------------------------|------------------------------|-----------------|----------------|
| Mode                     | TX channel 128<br>(824.2MHz) | Frequency Range | Below 1000 MHz |
| Environmental Conditions | 22deg. C, 64%RH              | Input Power     | 4.0Vdc         |
| Tested By                | Vincent Chen                 |                 |                |

| Antenna Polarity & Test Distance : Vertical at 3m |                    |              |                |                |                          |                            |                        |                                |
|---------------------------------------------------|--------------------|--------------|----------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| No                                                | Frequency<br>(MHz) | ERP<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV) | Correction<br>Factor<br>(dB/m) |
| 1                                                 | 83.26              | -56.10       | -13.00         | -43.10         | 2.14 V                   | 104                        | 64.49                  | -120.59                        |
| 2                                                 | 134.00             | -57.83       | -13.00         | -44.83         | 1.55 V                   | 232                        | 57.52                  | -115.35                        |
| 3                                                 | 242.62             | -72.59       | -13.00         | -59.59         | 2.32 V                   | 141                        | 44.51                  | -117.10                        |
| 4                                                 | 462.23             | -65.76       | -13.00         | -52.76         | 1.85 V                   | 223                        | 43.78                  | -109.54                        |
| 5                                                 | 589.67             | -62.71       | -13.00         | -49.71         | 2.84 V                   | 165                        | 43.59                  | -106.30                        |
| 6                                                 | 777.65             | -59.51       | -13.00         | -46.51         | 2.32 V                   | 157                        | 43.04                  | -102.55                        |

Remarks:

1.  $ERP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8 - 2.15$
3. Margin value = ERP – Limit value
4. The other ERP levels were very low against the limit.



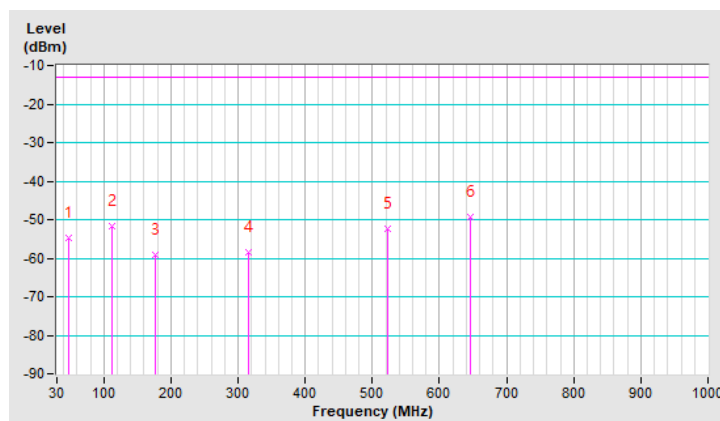
### LTE Band 5 (Channel Bandwidth 10MHz)

|                          |                                |                 |                |
|--------------------------|--------------------------------|-----------------|----------------|
| Mode                     | TX channel 20600<br>(844.0MHz) | Frequency Range | Below 1000 MHz |
| Environmental Conditions | 22deg. C, 64%RH                | Input Power     | 4.0Vdc         |
| Tested By                | Vincent Chen                   |                 |                |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                    |              |                |                |                          |                            |                        |                                |
|------------------------------------------------------|--------------------|--------------|----------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| No                                                   | Frequency<br>(MHz) | ERP<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV) | Correction<br>Factor<br>(dB/m) |
| 1                                                    | 47.46              | -54.87       | -13.00         | -41.87         | 1.26 H                   | 214                        | 55.20                  | -110.07                        |
| 2                                                    | 111.48             | -51.63       | -13.00         | -38.63         | 1.54 H                   | 74                         | 60.85                  | -112.48                        |
| 3                                                    | 177.44             | -59.03       | -13.00         | -46.03         | 1.89 H                   | 279                        | 52.34                  | -111.37                        |
| 4                                                    | 316.15             | -58.49       | -13.00         | -45.49         | 2.32 H                   | 164                        | 50.26                  | -108.75                        |
| 5                                                    | 523.73             | -52.22       | -13.00         | -39.22         | 1.04 H                   | 262                        | 50.85                  | -103.07                        |
| 6                                                    | 645.95             | -49.46       | -13.00         | -36.46         | 1.13 H                   | 50                         | 50.47                  | -99.93                         |

#### Remarks:

1.  $ERP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8 - 2.15$
3. Margin value = ERP – Limit value
4. The other ERP levels were very low against the limit.

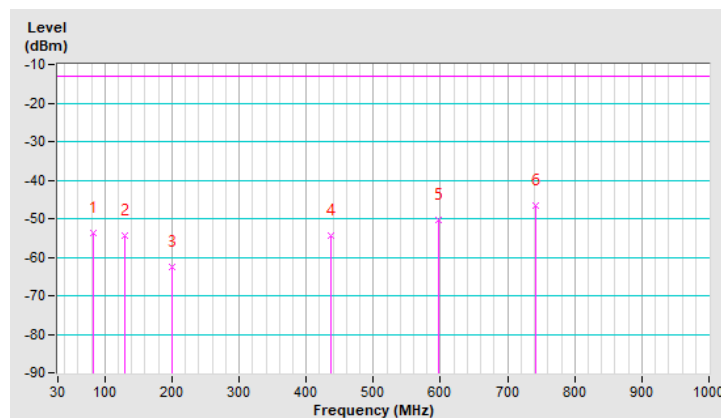


|                          |                                |                 |                |
|--------------------------|--------------------------------|-----------------|----------------|
| Mode                     | TX channel 20600<br>(844.0MHz) | Frequency Range | Below 1000 MHz |
| Environmental Conditions | 22deg. C, 64%RH                | Input Power     | 4.0Vdc         |
| Tested By                | Vincent Chen                   |                 |                |

| Antenna Polarity & Test Distance : Vertical at 3m |                    |              |                |                |                          |                            |                        |                                |
|---------------------------------------------------|--------------------|--------------|----------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| No                                                | Frequency<br>(MHz) | ERP<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV) | Correction<br>Factor<br>(dB/m) |
| 1                                                 | 82.38              | -53.71       | -13.00         | -40.71         | 1.32 V                   | 18                         | 61.72                  | -115.43                        |
| 2                                                 | 129.91             | -54.41       | -13.00         | -41.41         | 1.54 V                   | 30                         | 56.40                  | -110.81                        |
| 3                                                 | 199.75             | -62.51       | -13.00         | -49.51         | 1.78 V                   | 314                        | 50.97                  | -113.48                        |
| 4                                                 | 436.43             | -54.52       | -13.00         | -41.52         | 2.35 V                   | 150                        | 50.55                  | -105.07                        |
| 5                                                 | 597.45             | -50.20       | -13.00         | -37.20         | 1.96 V                   | 101                        | 50.80                  | -101.00                        |
| 6                                                 | 741.01             | -46.76       | -13.00         | -33.76         | 2.04 V                   | 324                        | 51.49                  | -98.25                         |

Remarks:

1.  $ERP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8 - 2.15$
3. Margin value = ERP – Limit value
4. The other ERP levels were very low against the limit.



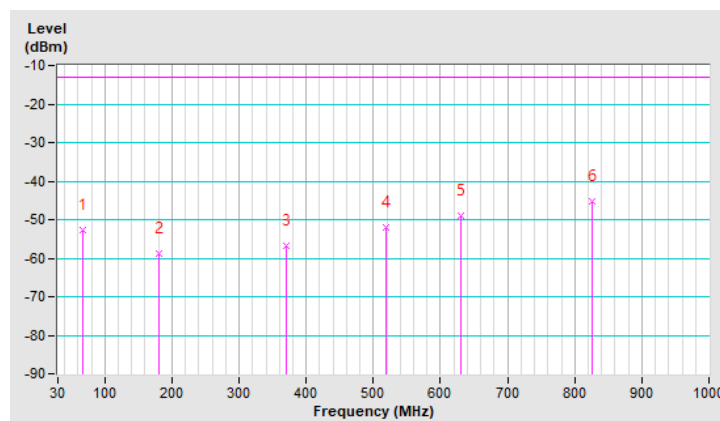
LTE Band 26 (Channel Bandwidth 5MHz)

|                          |                                |                 |                |
|--------------------------|--------------------------------|-----------------|----------------|
| Mode                     | TX channel 26815<br>(826.5MHz) | Frequency Range | Below 1000 MHz |
| Environmental Conditions | 22deg. C, 64%RH                | Input Power     | 4.0Vdc         |
| Tested By                | Vincent Chen                   |                 |                |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                    |              |                |                |                          |                            |                        |                                |
|------------------------------------------------------|--------------------|--------------|----------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| No                                                   | Frequency<br>(MHz) | ERP<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV) | Correction<br>Factor<br>(dB/m) |
| 1                                                    | 67.83              | -52.56       | -13.00         | -39.56         | 1.35 H                   | 25                         | 59.47                  | -112.03                        |
| 2                                                    | 180.35             | -58.79       | -13.00         | -45.79         | 2.45 H                   | 240                        | 52.98                  | -111.77                        |
| 3                                                    | 370.47             | -56.80       | -13.00         | -43.80         | 2.86 H                   | 320                        | 50.44                  | -107.24                        |
| 4                                                    | 518.88             | -51.88       | -13.00         | -38.88         | 1.96 H                   | 124                        | 51.27                  | -103.15                        |
| 5                                                    | 630.43             | -48.97       | -13.00         | -35.97         | 2.32 H                   | 9                          | 51.13                  | -100.10                        |
| 6                                                    | 825.40             | -45.42       | -13.00         | -32.42         | 1.05 H                   | 264                        | 51.14                  | -96.56                         |

Remarks:

1.  $ERP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8 - 2.15$
3.  $Margin\ value = ERP - Limit\ value$
4. The other ERP levels were very low against the limit.

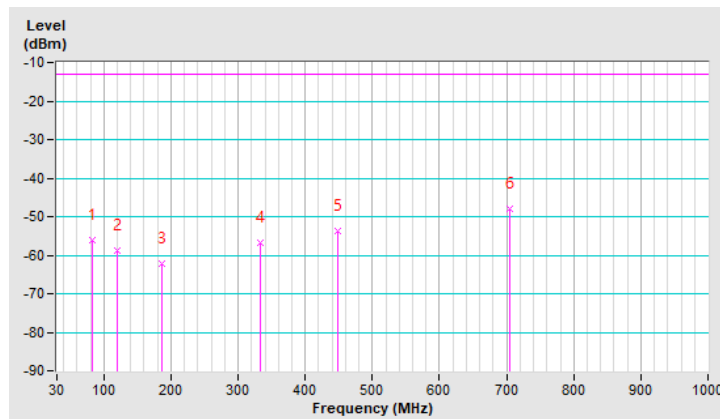


|                          |                                |                 |                |
|--------------------------|--------------------------------|-----------------|----------------|
| Mode                     | TX channel 26815<br>(826.5MHz) | Frequency Range | Below 1000 MHz |
| Environmental Conditions | 22deg. C, 64%RH                | Input Power     | 4.0Vdc         |
| Tested By                | Vincent Chen                   |                 |                |

| Antenna Polarity & Test Distance : Vertical at 3m |                    |              |                |                |                          |                            |                        |                                |
|---------------------------------------------------|--------------------|--------------|----------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| No                                                | Frequency<br>(MHz) | ERP<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV) | Correction<br>Factor<br>(dB/m) |
| 1                                                 | 82.38              | -55.96       | -13.00         | -42.96         | 2.13 V                   | 57                         | 59.47                  | -115.43                        |
| 2                                                 | 119.24             | -58.87       | -13.00         | -45.87         | 1.57 V                   | 2                          | 52.98                  | -111.85                        |
| 3                                                 | 187.14             | -62.09       | -13.00         | -49.09         | 1.83 V                   | 18                         | 50.44                  | -112.53                        |
| 4                                                 | 332.64             | -56.93       | -13.00         | -43.93         | 1.46 V                   | 109                        | 51.27                  | -108.20                        |
| 5                                                 | 449.04             | -53.68       | -13.00         | -40.68         | 2.36 V                   | 182                        | 51.13                  | -104.81                        |
| 6                                                 | 705.12             | -48.13       | -13.00         | -35.13         | 3.52 V                   | 53                         | 51.14                  | -99.27                         |

Remarks:

1.  $ERP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8 - 2.15$
3. Margin value = ERP – Limit value
4. The other ERP levels were very low against the limit.



Above 1GHz  
GPRS

|                          |                              |                 |              |
|--------------------------|------------------------------|-----------------|--------------|
| Mode                     | TX channel 128<br>(824.2MHz) | Frequency Range | 1GHz ~ 10GHz |
| Environmental Conditions | 22deg. C, 64%RH              | Input Power     | 4.0Vdc       |
| Tested By                | Vincent Chen                 |                 |              |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                    |              |                |                |                          |                            |                        |                                |
|------------------------------------------------------|--------------------|--------------|----------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| No                                                   | Frequency<br>(MHz) | ERP<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV) | Correction<br>Factor<br>(dB/m) |
| 1                                                    | 1648.40            | -43.14       | -13.00         | -30.14         | 3.49 H                   | 132                        | 79.06                  | -122.20                        |
| Antenna Polarity & Test Distance : Vertical at 3 m   |                    |              |                |                |                          |                            |                        |                                |
| No                                                   | Frequency<br>(MHz) | ERP<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV) | Correction<br>Factor<br>(dB/m) |
| 1                                                    | 1648.40            | -38.55       | -13.00         | -25.55         | 1.51 V                   | 192                        | 83.65                  | -122.20                        |

Remarks:

1.  $ERP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8 - 2.15$
3. Margin value = ERP – Limit value
4. The other ERP levels were very low against the limit.

|                          |                              |                 |              |
|--------------------------|------------------------------|-----------------|--------------|
| Mode                     | TX channel 189<br>(836.4MHz) | Frequency Range | 1GHz ~ 10GHz |
| Environmental Conditions | 22deg. C, 64%RH              | Input Power     | 4.0Vdc       |
| Tested By                | Vincent Chen                 |                 |              |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                    |              |                |                |                          |                            |                        |                                |
|------------------------------------------------------|--------------------|--------------|----------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| No                                                   | Frequency<br>(MHz) | ERP<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV) | Correction<br>Factor<br>(dB/m) |
| 1                                                    | 1672.80            | -47.85       | -13.00         | -34.85         | 1.51 H                   | 39                         | 74.34                  | -122.19                        |
| Antenna Polarity & Test Distance : Vertical at 3 m   |                    |              |                |                |                          |                            |                        |                                |
| No                                                   | Frequency<br>(MHz) | ERP<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV) | Correction<br>Factor<br>(dB/m) |
| 1                                                    | 1672.80            | -44.21       | -13.00         | -31.21         | 1.50 V                   | 137                        | 77.98                  | -122.19                        |

Remarks:

1.  $ERP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8 - 2.15$
3. Margin value = ERP – Limit value
4. The other ERP levels were very low against the limit.

|                          |                              |                 |              |
|--------------------------|------------------------------|-----------------|--------------|
| Mode                     | TX channel 251<br>(848.8MHz) | Frequency Range | 1GHz ~ 10GHz |
| Environmental Conditions | 22deg. C, 64%RH              | Input Power     | 4.0Vdc       |
| Tested By                | Vincent Chen                 |                 |              |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                    |              |                |                |                          |                            |                        |                                |
|------------------------------------------------------|--------------------|--------------|----------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| No                                                   | Frequency<br>(MHz) | ERP<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV) | Correction<br>Factor<br>(dB/m) |
| 1                                                    | 1697.60            | -51.39       | -13.00         | -38.39         | 1.50 H                   | 48                         | 70.80                  | -122.19                        |
| Antenna Polarity & Test Distance : Vertical at 3 m   |                    |              |                |                |                          |                            |                        |                                |
| No                                                   | Frequency<br>(MHz) | ERP<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV) | Correction<br>Factor<br>(dB/m) |
| 1                                                    | 1697.60            | -49.42       | -13.00         | -36.42         | 1.51 V                   | 145                        | 72.77                  | -122.19                        |

Remarks:

1.  $ERP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8 - 2.15$
3. Margin value = ERP – Limit value
4. The other ERP levels were very low against the limit.

### LTE Band 5 (Channel Bandwidth 1.4MHz)

|                          |                                |                 |             |
|--------------------------|--------------------------------|-----------------|-------------|
| Mode                     | TX channel 20407<br>(824.7MHz) | Frequency Range | 1GHz ~ 9GHz |
| Environmental Conditions | 22deg. C, 64%RH                | Input Power     | 4.0Vdc      |
| Tested By                | Vincent Chen                   |                 |             |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                    |              |                |                |                          |                            |                        |                                |
|------------------------------------------------------|--------------------|--------------|----------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| No                                                   | Frequency<br>(MHz) | ERP<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV) | Correction<br>Factor<br>(dB/m) |
| 1                                                    | 1649.40            | -63.01       | -13.00         | -50.01         | 2.13 H                   | 126                        | 59.19                  | -122.20                        |
| Antenna Polarity & Test Distance : Vertical at 3 m   |                    |              |                |                |                          |                            |                        |                                |
| No                                                   | Frequency<br>(MHz) | ERP<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV) | Correction<br>Factor<br>(dB/m) |
| 1                                                    | 1649.40            | -61.11       | -13.00         | -48.11         | 1.79 V                   | 231                        | 61.09                  | -122.20                        |

#### Remarks:

1.  $ERP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8 - 2.15$
3.  $Margin\ value = ERP - Limit\ value$
4. The other ERP levels were very low against the limit.

|                          |                                |                 |             |
|--------------------------|--------------------------------|-----------------|-------------|
| Mode                     | TX channel 20525<br>(836.5MHz) | Frequency Range | 1GHz ~ 9GHz |
| Environmental Conditions | 22deg. C, 64%RH                | Input Power     | 4.0Vdc      |
| Tested By                | Vincent Chen                   |                 |             |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                    |              |                |                |                          |                            |                        |                                |
|------------------------------------------------------|--------------------|--------------|----------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| No                                                   | Frequency<br>(MHz) | ERP<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV) | Correction<br>Factor<br>(dB/m) |
| 1                                                    | 1673.00            | -63.82       | -13.00         | -50.82         | 3.25 H                   | 36                         | 58.37                  | -122.19                        |
| Antenna Polarity & Test Distance : Vertical at 3 m   |                    |              |                |                |                          |                            |                        |                                |
| No                                                   | Frequency<br>(MHz) | ERP<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV) | Correction<br>Factor<br>(dB/m) |
| 1                                                    | 1673.00            | -62.36       | -13.00         | -49.36         | 3.31 V                   | 208                        | 59.83                  | -122.19                        |

#### Remarks:

1.  $ERP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8 - 2.15$
3.  $Margin\ value = ERP - Limit\ value$
4. The other ERP levels were very low against the limit.

|                          |                                |                 |             |
|--------------------------|--------------------------------|-----------------|-------------|
| Mode                     | TX channel 20643<br>(848.3MHz) | Frequency Range | 1GHz ~ 9GHz |
| Environmental Conditions | 22deg. C, 64%RH                | Input Power     | 4.0Vdc      |
| Tested By                | Vincent Chen                   |                 |             |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                    |              |                |                |                          |                            |                        |                                |
|------------------------------------------------------|--------------------|--------------|----------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| No                                                   | Frequency<br>(MHz) | ERP<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV) | Correction<br>Factor<br>(dB/m) |
| 1                                                    | 1696.60            | -61.64       | -13.00         | -48.64         | 3.30 H                   | 132                        | 60.55                  | -122.19                        |
| Antenna Polarity & Test Distance : Vertical at 3 m   |                    |              |                |                |                          |                            |                        |                                |
| No                                                   | Frequency<br>(MHz) | ERP<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV) | Correction<br>Factor<br>(dB/m) |
| 1                                                    | 1696.60            | -59.30       | -13.00         | -46.30         | 1.55 V                   | 181                        | 62.89                  | -122.19                        |

Remarks:

1.  $ERP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8 - 2.15$
3.  $Margin\ value = ERP - Limit\ value$
4. The other ERP levels were very low against the limit.

#### LTE Band 5 (Channel Bandwidth 5MHz)

|                          |                                |                 |             |
|--------------------------|--------------------------------|-----------------|-------------|
| Mode                     | TX channel 20425<br>(826.5MHz) | Frequency Range | 1GHz ~ 9GHz |
| Environmental Conditions | 22deg. C, 64%RH                | Input Power     | 4.0Vdc      |
| Tested By                | Vincent Chen                   |                 |             |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                    |              |                |                |                          |                            |                        |                                |
|------------------------------------------------------|--------------------|--------------|----------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| No                                                   | Frequency<br>(MHz) | ERP<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV) | Correction<br>Factor<br>(dB/m) |
| 1                                                    | 1653.00            | -62.65       | -13.00         | -49.65         | 2.08 H                   | 122                        | 59.55                  | -122.20                        |
| Antenna Polarity & Test Distance : Vertical at 3 m   |                    |              |                |                |                          |                            |                        |                                |
| No                                                   | Frequency<br>(MHz) | ERP<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV) | Correction<br>Factor<br>(dB/m) |
| 1                                                    | 1653.00            | -60.75       | -13.00         | -47.75         | 1.67 V                   | 224                        | 61.45                  | -122.20                        |

#### Remarks:

1.  $ERP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8 - 2.15$
3. Margin value = ERP – Limit value
4. The other ERP levels were very low against the limit.

|                          |                                |                 |             |
|--------------------------|--------------------------------|-----------------|-------------|
| Mode                     | TX channel 20525<br>(836.5MHz) | Frequency Range | 1GHz ~ 9GHz |
| Environmental Conditions | 22deg. C, 64%RH                | Input Power     | 4.0Vdc      |
| Tested By                | Vincent Chen                   |                 |             |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                    |              |                |                |                          |                            |                        |                                |
|------------------------------------------------------|--------------------|--------------|----------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| No                                                   | Frequency<br>(MHz) | ERP<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV) | Correction<br>Factor<br>(dB/m) |
| 1                                                    | 1673.00            | -63.33       | -13.00         | -50.33         | 3.36 H                   | 28                         | 58.86                  | -122.19                        |
| Antenna Polarity & Test Distance : Vertical at 3 m   |                    |              |                |                |                          |                            |                        |                                |
| No                                                   | Frequency<br>(MHz) | ERP<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV) | Correction<br>Factor<br>(dB/m) |
| 1                                                    | 1673.00            | -62.02       | -13.00         | -49.02         | 3.37 V                   | 204                        | 60.17                  | -122.19                        |

#### Remarks:

1.  $ERP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8 - 2.15$
3. Margin value = ERP – Limit value
4. The other ERP levels were very low against the limit.

|                          |                                |                 |             |
|--------------------------|--------------------------------|-----------------|-------------|
| Mode                     | TX channel 20625<br>(846.5MHz) | Frequency Range | 1GHz ~ 9GHz |
| Environmental Conditions | 22deg. C, 64%RH                | Input Power     | 4.0Vdc      |
| Tested By                | Vincent Chen                   |                 |             |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                    |              |                |                |                          |                            |                        |                                |
|------------------------------------------------------|--------------------|--------------|----------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| No                                                   | Frequency<br>(MHz) | ERP<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV) | Correction<br>Factor<br>(dB/m) |
| 1                                                    | 1693.00            | -61.21       | -13.00         | -48.21         | 3.27 H                   | 129                        | 60.98                  | -122.19                        |
| Antenna Polarity & Test Distance : Vertical at 3 m   |                    |              |                |                |                          |                            |                        |                                |
| No                                                   | Frequency<br>(MHz) | ERP<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV) | Correction<br>Factor<br>(dB/m) |
| 1                                                    | 1693.00            | -59.05       | -13.00         | -46.05         | 1.52 V                   | 177                        | 63.14                  | -122.19                        |

Remarks:

1.  $ERP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8 - 2.15$
3.  $Margin\ value = ERP - Limit\ value$
4. The other ERP levels were very low against the limit.

#### LTE Band 5 (Channel Bandwidth 10MHz)

|                          |                                |                 |             |
|--------------------------|--------------------------------|-----------------|-------------|
| Mode                     | TX channel 20450<br>(829.0MHz) | Frequency Range | 1GHz ~ 9GHz |
| Environmental Conditions | 22deg. C, 64%RH                | Input Power     | 4.0Vdc      |
| Tested By                | Vincent Chen                   |                 |             |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                    |              |                |                |                          |                            |                        |                                |
|------------------------------------------------------|--------------------|--------------|----------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| No                                                   | Frequency<br>(MHz) | ERP<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV) | Correction<br>Factor<br>(dB/m) |
| 1                                                    | 1658.00            | -62.38       | -13.00         | -49.38         | 2.04 H                   | 119                        | 59.82                  | -122.20                        |
| Antenna Polarity & Test Distance : Vertical at 3 m   |                    |              |                |                |                          |                            |                        |                                |
| No                                                   | Frequency<br>(MHz) | ERP<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV) | Correction<br>Factor<br>(dB/m) |
| 1                                                    | 1658.00            | -60.37       | -13.00         | -47.37         | 1.56 V                   | 223                        | 61.83                  | -122.20                        |

#### Remarks:

1.  $ERP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8 - 2.15$
3. Margin value = ERP – Limit value
4. The other ERP levels were very low against the limit.

|                          |                                |                 |             |
|--------------------------|--------------------------------|-----------------|-------------|
| Mode                     | TX channel 20525<br>(836.5MHz) | Frequency Range | 1GHz ~ 9GHz |
| Environmental Conditions | 22deg. C, 64%RH                | Input Power     | 4.0Vdc      |
| Tested By                | Vincent Chen                   |                 |             |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                    |              |                |                |                          |                            |                        |                                |
|------------------------------------------------------|--------------------|--------------|----------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| No                                                   | Frequency<br>(MHz) | ERP<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV) | Correction<br>Factor<br>(dB/m) |
| 1                                                    | 1673.00            | -62.94       | -13.00         | -49.94         | 3.50 H                   | 20                         | 59.25                  | -122.19                        |
| Antenna Polarity & Test Distance : Vertical at 3 m   |                    |              |                |                |                          |                            |                        |                                |
| No                                                   | Frequency<br>(MHz) | ERP<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV) | Correction<br>Factor<br>(dB/m) |
| 1                                                    | 1673.00            | -61.69       | -13.00         | -48.69         | 3.42 V                   | 198                        | 60.50                  | -122.19                        |

#### Remarks:

1.  $ERP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8 - 2.15$
3. Margin value = ERP – Limit value
4. The other ERP levels were very low against the limit.

|                          |                                |                 |             |
|--------------------------|--------------------------------|-----------------|-------------|
| Mode                     | TX channel 20600<br>(844.0MHz) | Frequency Range | 1GHz ~ 9GHz |
| Environmental Conditions | 22deg. C, 64%RH                | Input Power     | 4.0Vdc      |
| Tested By                | Vincent Chen                   |                 |             |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                    |              |                |                |                          |                            |                        |                                |
|------------------------------------------------------|--------------------|--------------|----------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| No                                                   | Frequency<br>(MHz) | ERP<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV) | Correction<br>Factor<br>(dB/m) |
| 1                                                    | 1688.00            | -60.88       | -13.00         | -47.88         | 3.31 H                   | 126                        | 61.32                  | -122.20                        |
| Antenna Polarity & Test Distance : Vertical at 3 m   |                    |              |                |                |                          |                            |                        |                                |
| No                                                   | Frequency<br>(MHz) | ERP<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV) | Correction<br>Factor<br>(dB/m) |
| 1                                                    | 1688.00            | -58.61       | -13.00         | -45.61         | 1.43 V                   | 173                        | 63.59                  | -122.20                        |

Remarks:

1.  $ERP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8 - 2.15$
3.  $Margin\ value = ERP - Limit\ value$
4. The other ERP levels were very low against the limit.

### LTE Band 26 (Channel Bandwidth 1.4MHz)

|                          |                                |                 |             |
|--------------------------|--------------------------------|-----------------|-------------|
| Mode                     | TX channel 26797<br>(824.7MHz) | Frequency Range | 1GHz ~ 9GHz |
| Environmental Conditions | 22deg. C, 64%RH                | Input Power     | 4.0Vdc      |
| Tested By                | Vincent Chen                   |                 |             |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                    |              |                |                |                          |                            |                        |                                |
|------------------------------------------------------|--------------------|--------------|----------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| No                                                   | Frequency<br>(MHz) | ERP<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV) | Correction<br>Factor<br>(dB/m) |
| 1                                                    | 1649.40            | -60.04       | -13.00         | -47.04         | 1.93 H                   | 132                        | 62.16                  | -122.20                        |
| Antenna Polarity & Test Distance : Vertical at 3 m   |                    |              |                |                |                          |                            |                        |                                |
| No                                                   | Frequency<br>(MHz) | ERP<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV) | Correction<br>Factor<br>(dB/m) |
| 1                                                    | 1649.40            | -67.07       | -13.00         | -54.07         | 1.65 V                   | 226                        | 55.13                  | -122.20                        |

#### Remarks:

1.  $ERP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8 - 2.15$
3.  $Margin\ value = ERP - Limit\ value$
4. The other ERP levels were very low against the limit.

|                          |                                |                 |             |
|--------------------------|--------------------------------|-----------------|-------------|
| Mode                     | TX channel 26915<br>(836.5MHz) | Frequency Range | 1GHz ~ 9GHz |
| Environmental Conditions | 22deg. C, 64%RH                | Input Power     | 4.0Vdc      |
| Tested By                | Vincent Chen                   |                 |             |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                    |              |                |                |                          |                            |                        |                                |
|------------------------------------------------------|--------------------|--------------|----------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| No                                                   | Frequency<br>(MHz) | ERP<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV) | Correction<br>Factor<br>(dB/m) |
| 1                                                    | 1673.00            | -58.34       | -13.00         | -45.34         | 2.06 H                   | 146                        | 63.85                  | -122.19                        |
| Antenna Polarity & Test Distance : Vertical at 3 m   |                    |              |                |                |                          |                            |                        |                                |
| No                                                   | Frequency<br>(MHz) | ERP<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV) | Correction<br>Factor<br>(dB/m) |
| 1                                                    | 1673.00            | -65.87       | -13.00         | -52.87         | 1.65 V                   | 204                        | 56.32                  | -122.19                        |

#### Remarks:

1.  $ERP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8 - 2.15$
3.  $Margin\ value = ERP - Limit\ value$
4. The other ERP levels were very low against the limit.

|                          |                                |                 |             |
|--------------------------|--------------------------------|-----------------|-------------|
| Mode                     | TX channel 27033<br>(848.3MHz) | Frequency Range | 1GHz ~ 9GHz |
| Environmental Conditions | 22deg. C, 64%RH                | Input Power     | 4.0Vdc      |
| Tested By                | Vincent Chen                   |                 |             |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                    |              |                |                |                          |                            |                        |                                |
|------------------------------------------------------|--------------------|--------------|----------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| No                                                   | Frequency<br>(MHz) | ERP<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV) | Correction<br>Factor<br>(dB/m) |
| 1                                                    | 1696.60            | -58.44       | -13.00         | -45.44         | 2.26 H                   | 133                        | 63.75                  | -122.19                        |
| Antenna Polarity & Test Distance : Vertical at 3 m   |                    |              |                |                |                          |                            |                        |                                |
| No                                                   | Frequency<br>(MHz) | ERP<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV) | Correction<br>Factor<br>(dB/m) |
| 1                                                    | 1696.60            | -66.93       | -13.00         | -53.93         | 1.62 V                   | 226                        | 55.26                  | -122.19                        |

Remarks:

1.  $ERP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8 - 2.15$
3.  $Margin\ value = ERP - Limit\ value$
4. The other ERP levels were very low against the limit.

### LTE Band 26 (Channel Bandwidth 5MHz)

|                          |                                |                 |             |
|--------------------------|--------------------------------|-----------------|-------------|
| Mode                     | TX channel 26815<br>(826.5MHz) | Frequency Range | 1GHz ~ 9GHz |
| Environmental Conditions | 22deg. C, 64%RH                | Input Power     | 4.0Vdc      |
| Tested By                | Vincent Chen                   |                 |             |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                    |              |                |                |                          |                            |                        |                                |
|------------------------------------------------------|--------------------|--------------|----------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| No                                                   | Frequency<br>(MHz) | ERP<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV) | Correction<br>Factor<br>(dB/m) |
| 1                                                    | 1653.00            | -58.42       | -13.00         | -45.42         | 2.03 H                   | 137                        | 63.78                  | -122.20                        |
| Antenna Polarity & Test Distance : Vertical at 3 m   |                    |              |                |                |                          |                            |                        |                                |
| No                                                   | Frequency<br>(MHz) | ERP<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV) | Correction<br>Factor<br>(dB/m) |
| 1                                                    | 1653.00            | -65.97       | -13.00         | -52.97         | 1.63 V                   | 195                        | 56.23                  | -122.20                        |

#### Remarks:

1.  $ERP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8 - 2.15$
3.  $Margin\ value = ERP - Limit\ value$
4. The other ERP levels were very low against the limit.

|                          |                                |                 |             |
|--------------------------|--------------------------------|-----------------|-------------|
| Mode                     | TX channel 26915<br>(836.5MHz) | Frequency Range | 1GHz ~ 9GHz |
| Environmental Conditions | 22deg. C, 64%RH                | Input Power     | 4.0Vdc      |
| Tested By                | Vincent Chen                   |                 |             |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                    |              |                |                |                          |                            |                        |                                |
|------------------------------------------------------|--------------------|--------------|----------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| No                                                   | Frequency<br>(MHz) | ERP<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV) | Correction<br>Factor<br>(dB/m) |
| 1                                                    | 1673.00            | -58.30       | -13.00         | -45.30         | 2.14 H                   | 146                        | 63.89                  | -122.19                        |
| Antenna Polarity & Test Distance : Vertical at 3 m   |                    |              |                |                |                          |                            |                        |                                |
| No                                                   | Frequency<br>(MHz) | ERP<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV) | Correction<br>Factor<br>(dB/m) |
| 1                                                    | 1673.00            | -65.83       | -13.00         | -52.83         | 1.74 V                   | 214                        | 56.36                  | -122.19                        |

#### Remarks:

1.  $ERP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8 - 2.15$
3.  $Margin\ value = ERP - Limit\ value$
4. The other ERP levels were very low against the limit.

|                          |                                |                 |             |
|--------------------------|--------------------------------|-----------------|-------------|
| Mode                     | TX channel 27015<br>(846.5MHz) | Frequency Range | 1GHz ~ 9GHz |
| Environmental Conditions | 22deg. C, 64%RH                | Input Power     | 4.0Vdc      |
| Tested By                | Vincent Chen                   |                 |             |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                    |              |                |                |                          |                            |                        |                                |
|------------------------------------------------------|--------------------|--------------|----------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| No                                                   | Frequency<br>(MHz) | ERP<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV) | Correction<br>Factor<br>(dB/m) |
| 1                                                    | 1693.00            | -58.38       | -13.00         | -45.38         | 1.93 H                   | 155                        | 63.81                  | -122.19                        |
| Antenna Polarity & Test Distance : Vertical at 3 m   |                    |              |                |                |                          |                            |                        |                                |
| No                                                   | Frequency<br>(MHz) | ERP<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV) | Correction<br>Factor<br>(dB/m) |
| 1                                                    | 1693.00            | -65.98       | -13.00         | -52.98         | 1.69 V                   | 188                        | 56.21                  | -122.19                        |

Remarks:

1.  $ERP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8 - 2.15$
3.  $Margin\ value = ERP - Limit\ value$
4. The other ERP levels were very low against the limit.

### LTE Band 26 (Channel Bandwidth 15MHz)

|                          |                                |                 |             |
|--------------------------|--------------------------------|-----------------|-------------|
| Mode                     | TX channel 26865<br>(831.5MHz) | Frequency Range | 1GHz ~ 9GHz |
| Environmental Conditions | 22deg. C, 64%RH                | Input Power     | 4.0Vdc      |
| Tested By                | Vincent Chen                   |                 |             |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                    |              |                |                |                          |                            |                        |                                |
|------------------------------------------------------|--------------------|--------------|----------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| No                                                   | Frequency<br>(MHz) | ERP<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV) | Correction<br>Factor<br>(dB/m) |
| 1                                                    | 1663.00            | -60.10       | -13.00         | -47.10         | 2.06 H                   | 154                        | 62.09                  | -122.19                        |
| Antenna Polarity & Test Distance : Vertical at 3 m   |                    |              |                |                |                          |                            |                        |                                |
| No                                                   | Frequency<br>(MHz) | ERP<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV) | Correction<br>Factor<br>(dB/m) |
| 1                                                    | 1663.00            | -66.00       | -13.00         | -53.00         | 1.62 V                   | 197                        | 56.19                  | -122.19                        |

#### Remarks:

1.  $ERP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8 - 2.15$
3. Margin value = ERP – Limit value
4. The other ERP levels were very low against the limit.

|                          |                                |                 |             |
|--------------------------|--------------------------------|-----------------|-------------|
| Mode                     | TX channel 26915<br>(836.5MHz) | Frequency Range | 1GHz ~ 9GHz |
| Environmental Conditions | 22deg. C, 64%RH                | Input Power     | 4.0Vdc      |
| Tested By                | Vincent Chen                   |                 |             |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                    |              |                |                |                          |                            |                        |                                |
|------------------------------------------------------|--------------------|--------------|----------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| No                                                   | Frequency<br>(MHz) | ERP<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV) | Correction<br>Factor<br>(dB/m) |
| 1                                                    | 1673.00            | -59.22       | -13.00         | -46.22         | 2.06 H                   | 164                        | 62.97                  | -122.19                        |
| Antenna Polarity & Test Distance : Vertical at 3 m   |                    |              |                |                |                          |                            |                        |                                |
| No                                                   | Frequency<br>(MHz) | ERP<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV) | Correction<br>Factor<br>(dB/m) |
| 1                                                    | 1673.00            | -66.32       | -13.00         | -53.32         | 1.62 V                   | 207                        | 55.87                  | -122.19                        |

#### Remarks:

1.  $ERP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8 - 2.15$
3. Margin value = ERP – Limit value
4. The other ERP levels were very low against the limit.

|                          |                                |                 |             |
|--------------------------|--------------------------------|-----------------|-------------|
| Mode                     | TX channel 26965<br>(841.5MHz) | Frequency Range | 1GHz ~ 9GHz |
| Environmental Conditions | 22deg. C, 64%RH                | Input Power     | 4.0Vdc      |
| Tested By                | Vincent Chen                   |                 |             |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                    |              |                |                |                          |                            |                        |                                |
|------------------------------------------------------|--------------------|--------------|----------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| No                                                   | Frequency<br>(MHz) | ERP<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV) | Correction<br>Factor<br>(dB/m) |
| 1                                                    | 1683.00            | -59.65       | -13.00         | -46.65         | 1.99 H                   | 132                        | 62.55                  | -122.20                        |
| Antenna Polarity & Test Distance : Vertical at 3 m   |                    |              |                |                |                          |                            |                        |                                |
| No                                                   | Frequency<br>(MHz) | ERP<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV) | Correction<br>Factor<br>(dB/m) |
| 1                                                    | 1683.00            | -66.78       | -13.00         | -53.78         | 1.63 V                   | 224                        | 55.42                  | -122.20                        |

Remarks:

1.  $ERP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8 - 2.15$
3.  $Margin\ value = ERP - Limit\ value$
4. The other ERP levels were very low against the limit.

## 5 Pictures of Test Arrangements

Please refer to the attached file (Test Setup Photo).

## Appendix – Information of the Testing Laboratories

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are FCC recognized accredited test firms and accredited and approved according to ISO/IEC 17025.

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The address and road map of all our labs can be found in our web site also.

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