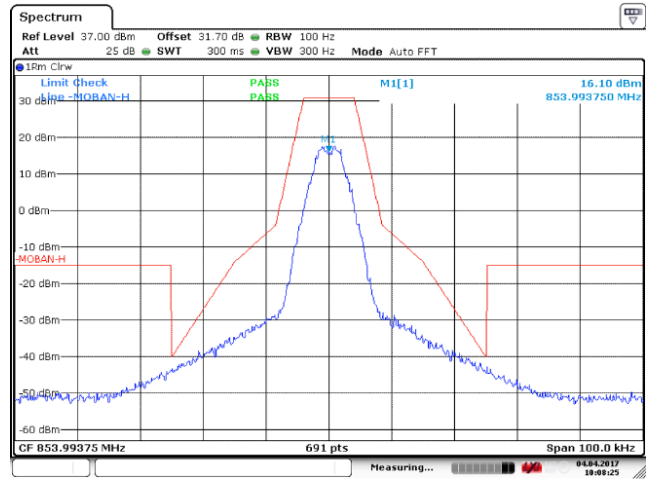
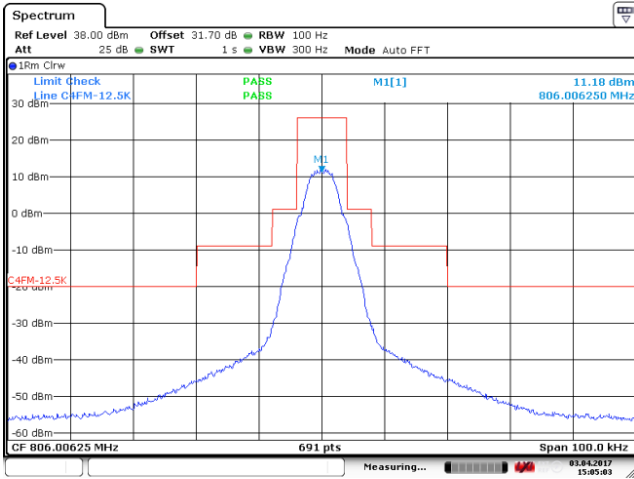


Mid Frequency: 852.50625MHz (Mask H)

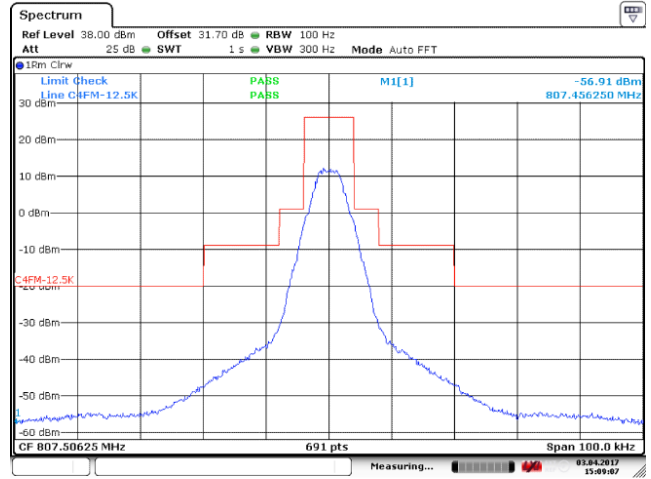


High Frequency: 853.99375MHz (Mask H)

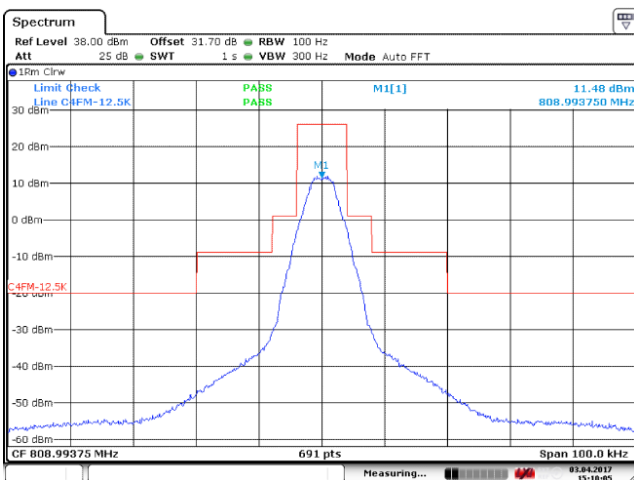
(2) Uplink



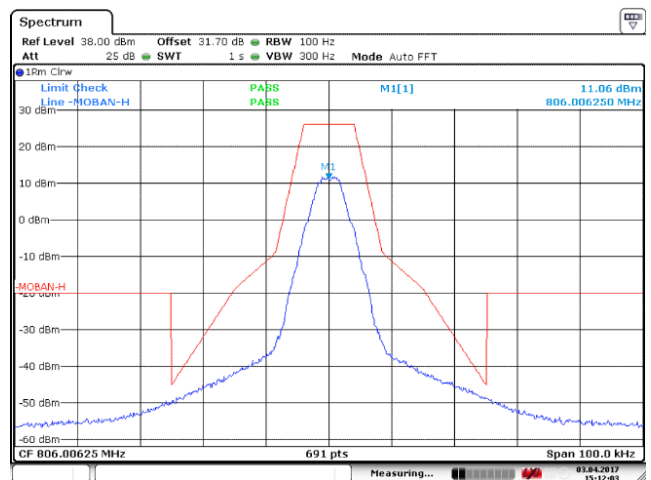
Low Frequency: 806.00625MHz (Mask B)



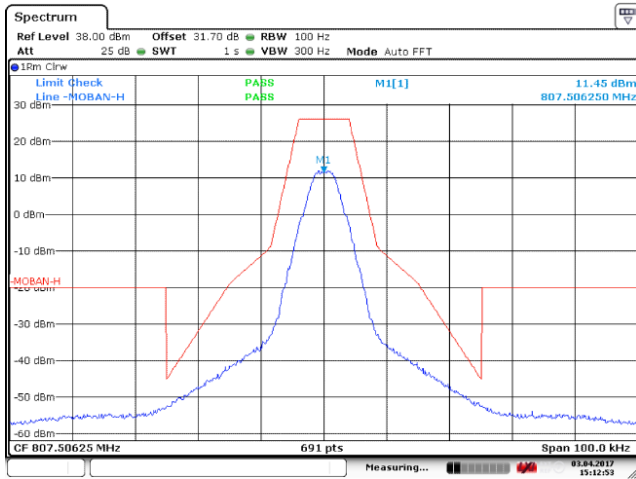
Mid Frequency: 807.50625MHz (Mask B)



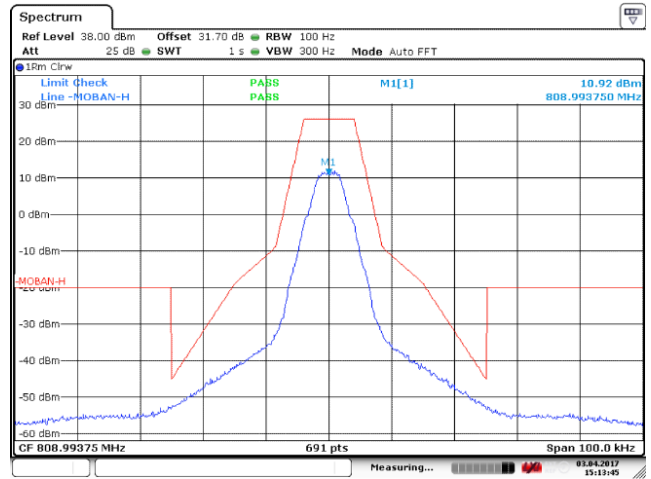
High Frequency: 808.99375MHz (Mask B)



Low Frequency: 806.00625MHz (Mask H)



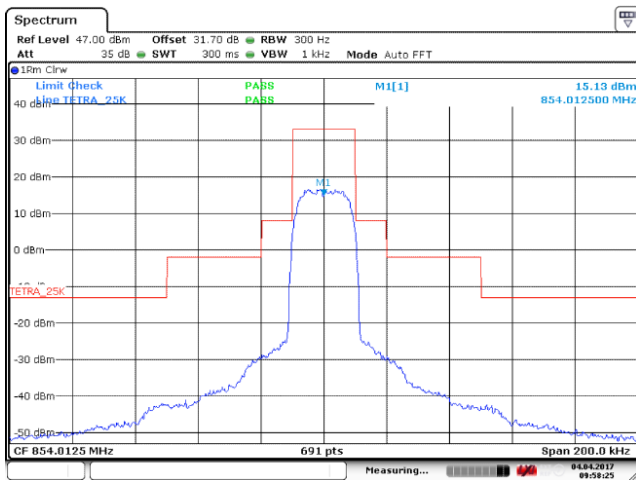
Mid Frequency: 807.50625MHz (Mask H)



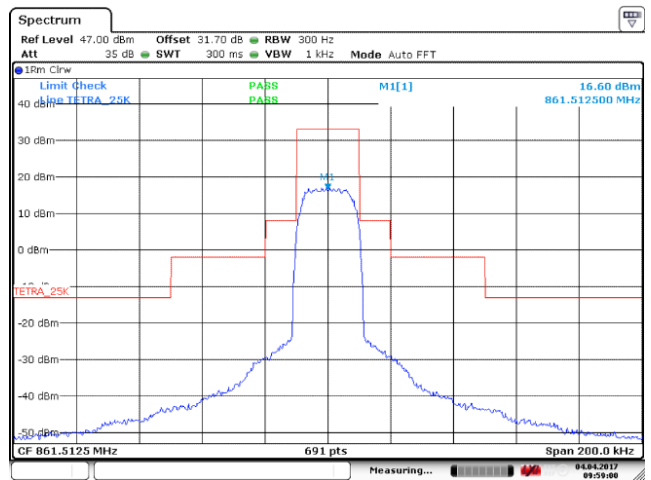
High Frequency: 808.99375MHz (Mask H)

### 6.3.5.2.2 Modulation signal: Tetra

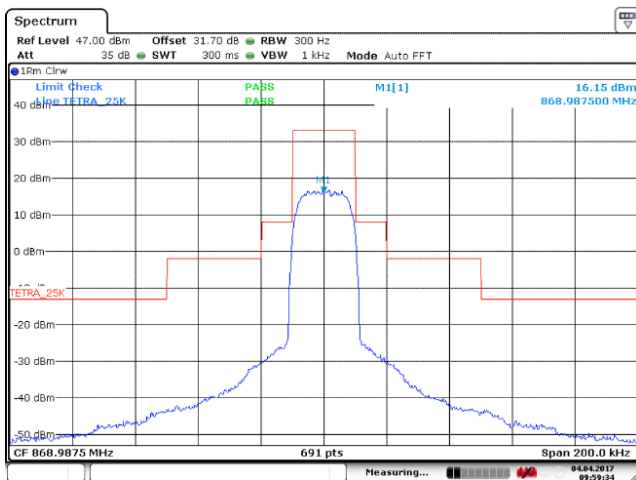
#### (1) Downlink



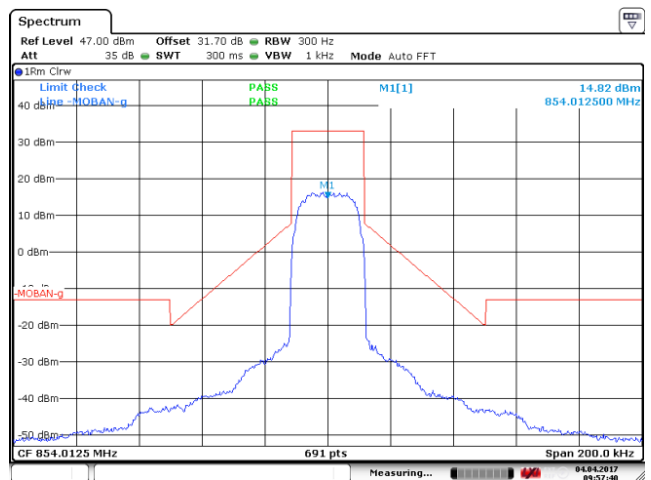
Low Frequency: 854.0125MHz (Mask B)



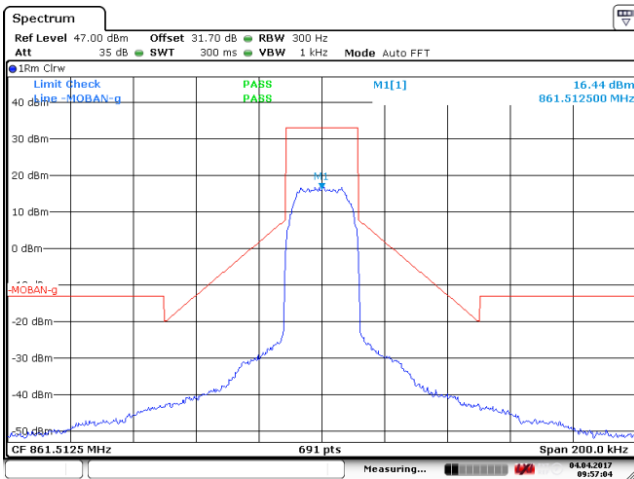
Mid Frequency: 861.5125MHz (Mask B)



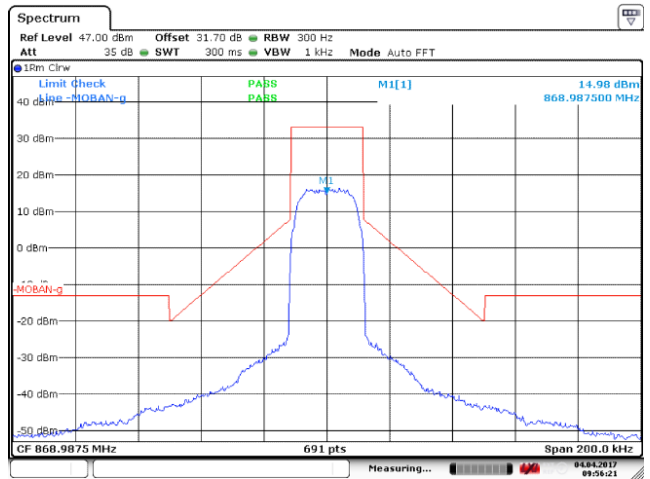
High Frequency: 868.9875MHz (Mask B)



Low Frequency: 854.0125MHz (Mask G)

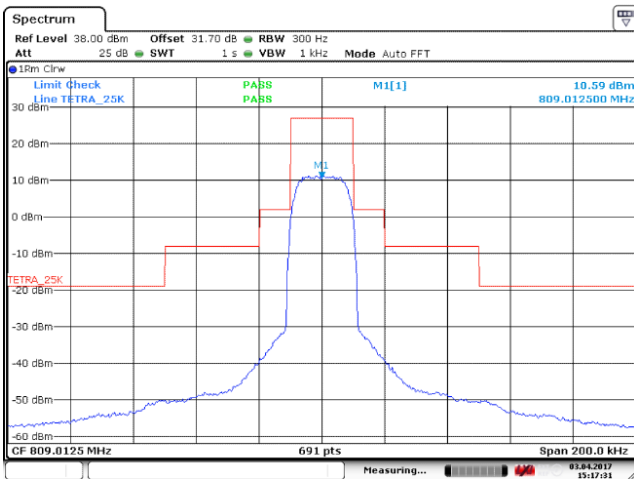


Mid Frequency: 861.5125MHz (Mask G)

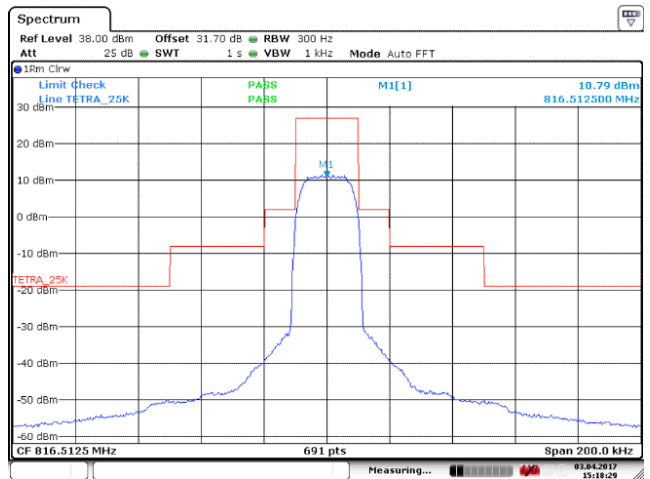


High Frequency: 868.9875MHz (Mask G)

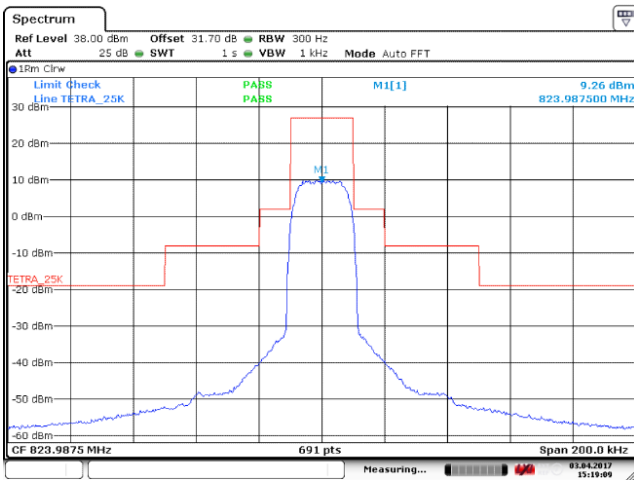
(2) Uplink



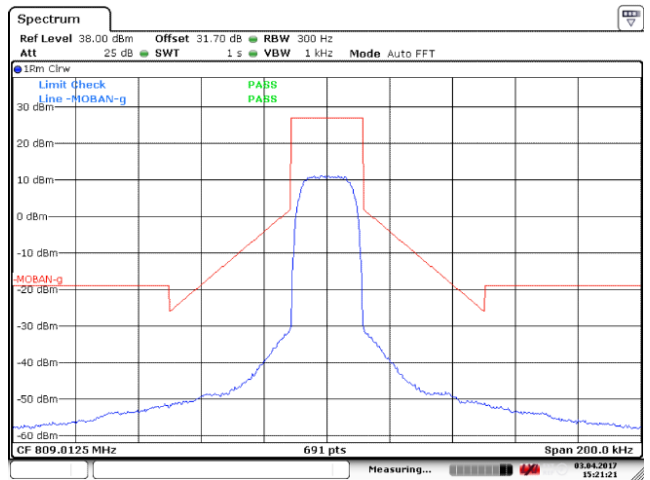
Low Frequency: 809.0125MHz (Mask B)



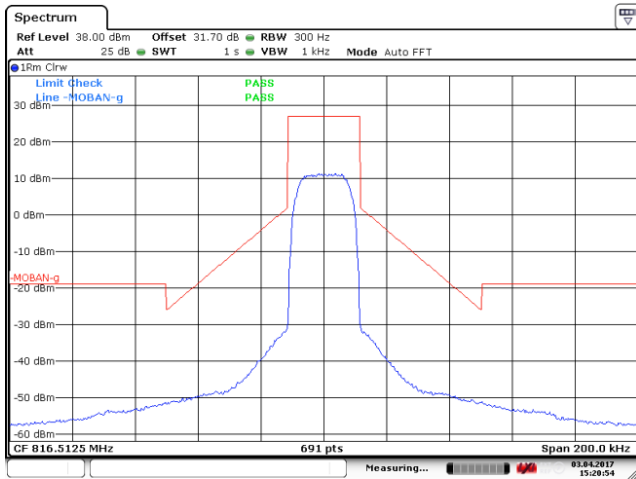
Mid Frequency: 816.5125MHz (Mask B)



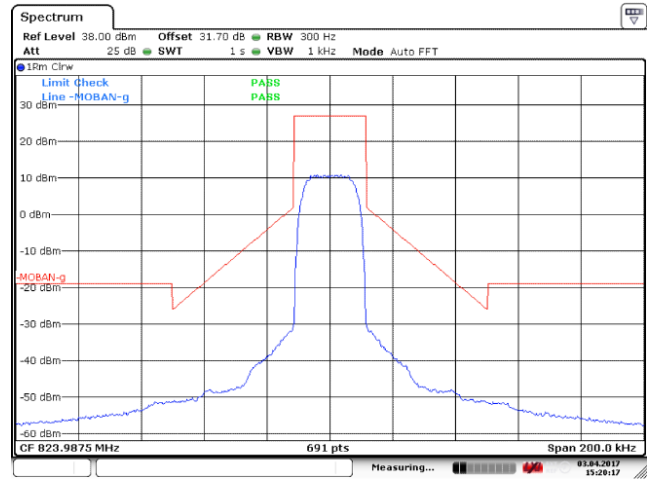
High Frequency: 823.9875MHz (Mask B)



Low Frequency: 809.0125MHz (Mask G)



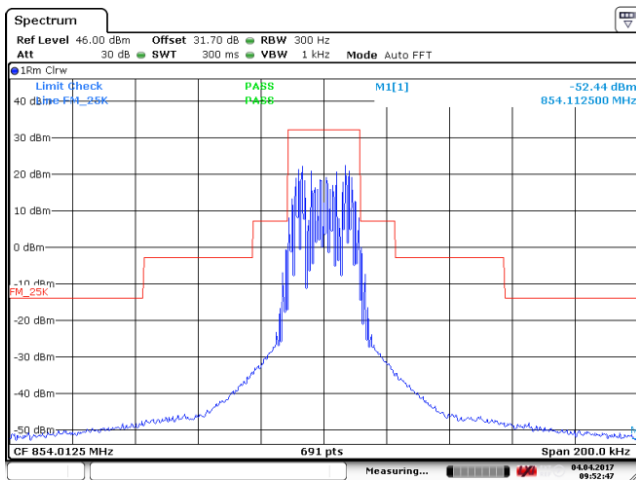
Mid Frequency: 816.5125MHz (Mask G)



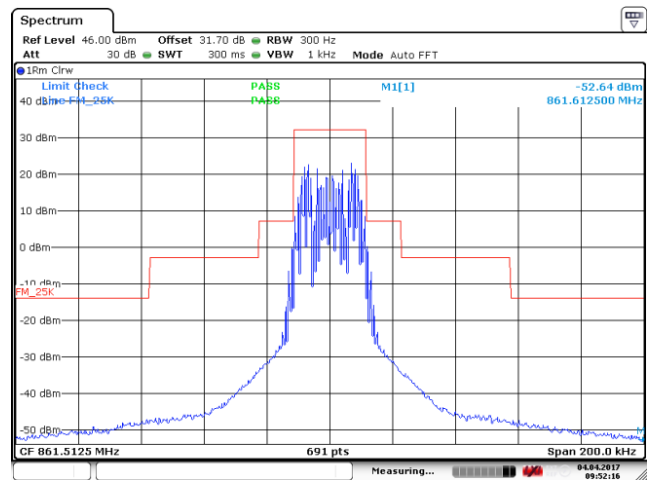
High Frequency: 823.9875MHz (Mask G)

### 6.3.5.2.3 Modulation signal: Analog FM(10kHz/1kHz)

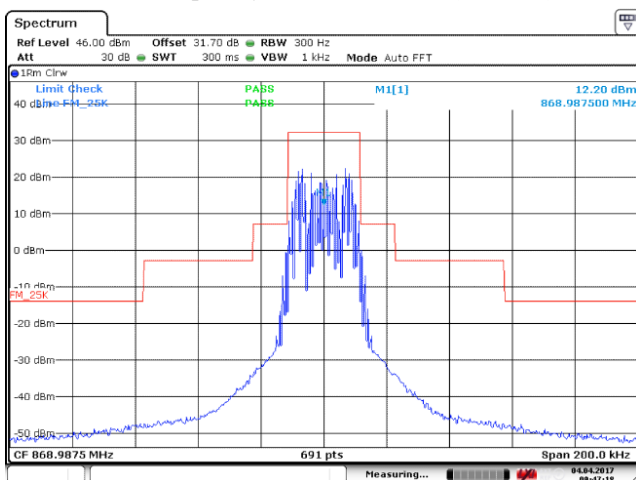
#### (1) Downlink



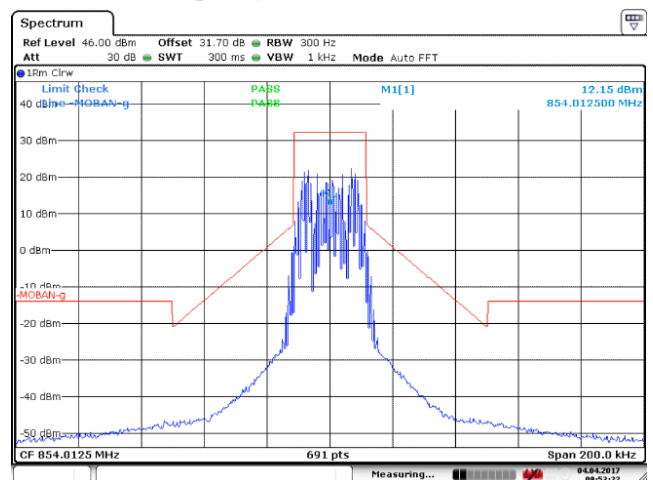
Low Frequency: 854.0125MHz (Mask B)



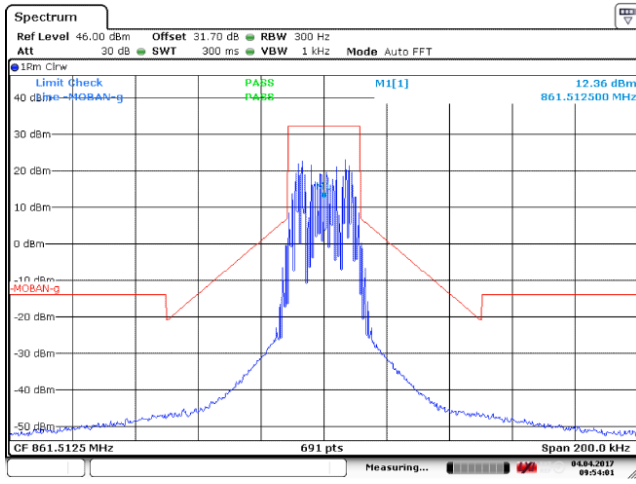
Mid Frequency: 861.5125MHz (Mask B)



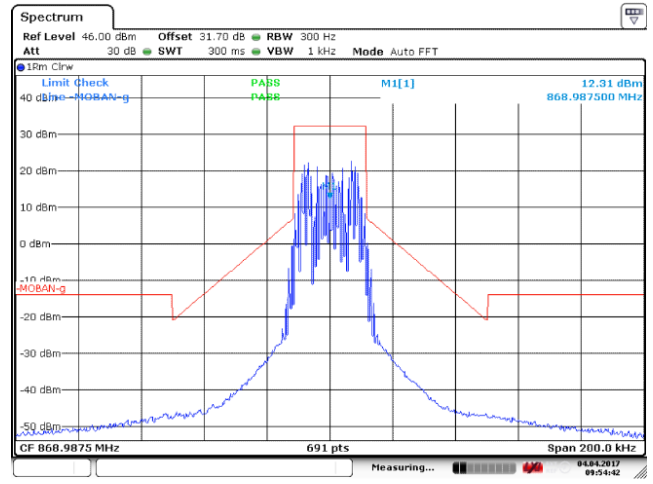
High Frequency: 868.9875MHz (Mask B)



Low Frequency: 854.0125MHz (Mask G)

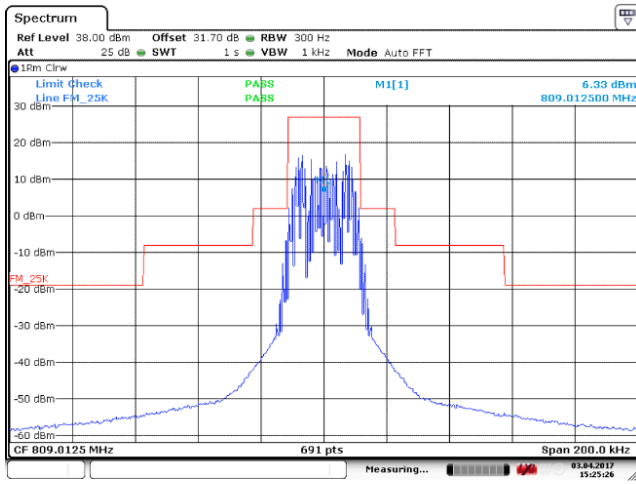


Mid Frequency: 861.5125MHz (Mask G)

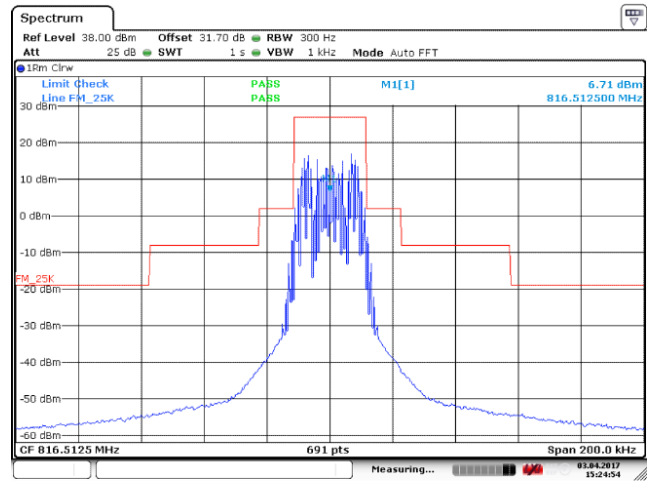


High Frequency: 868.9875MHz (Mask G)

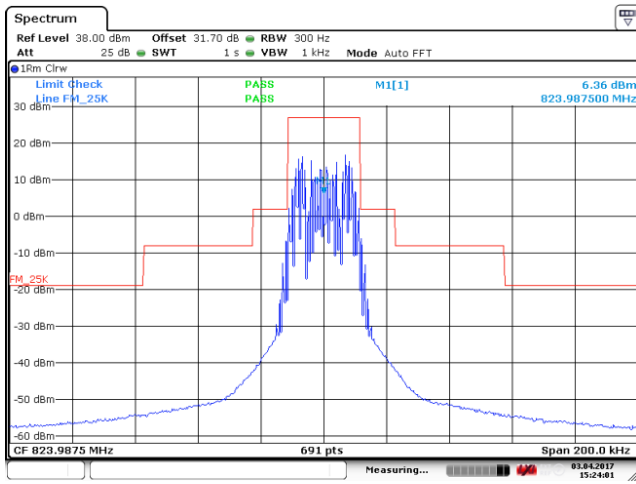
(2) Uplink



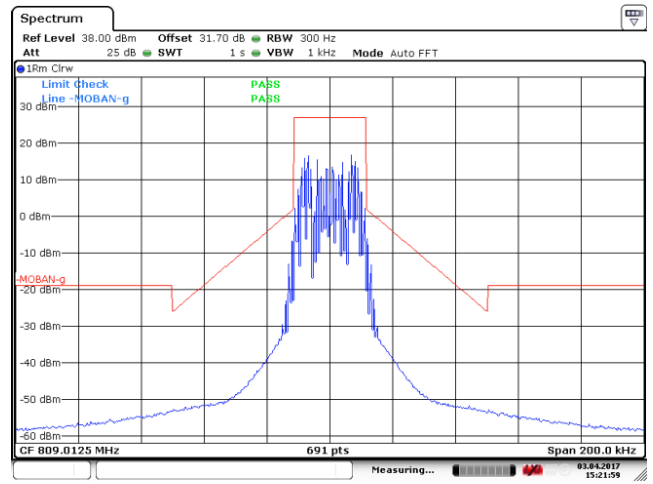
Low Frequency: 809.0125MHz (Mask B)



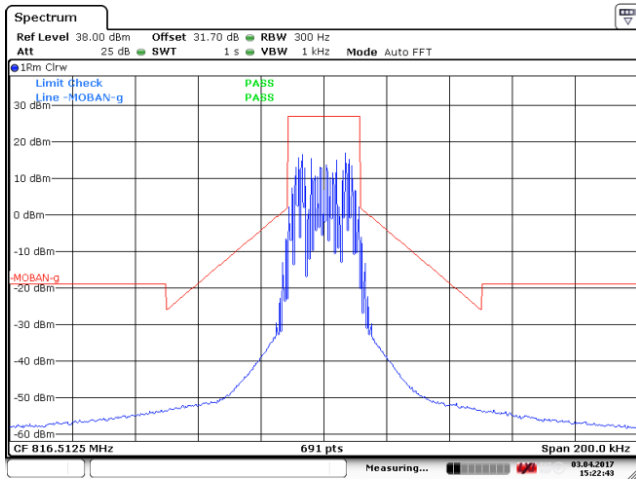
Mid Frequency: 816.5125MHz (Mask B)



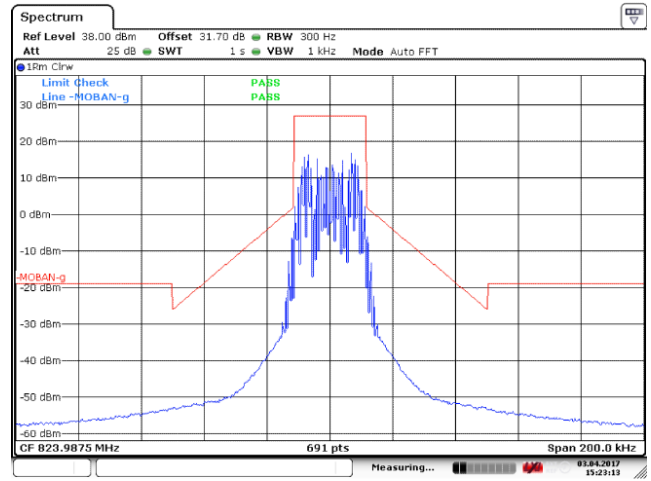
High Frequency: 823.9875MHz (Mask B)



Low Frequency: 809.0125MHz (Mask G)



Mid Frequency: 816.5125MHz (Mask G)



High Frequency: 823.9875MHz (Mask G)

### 6.4 Conducted spurious emissions

Test Date (yy-mm-dd): 2017-04-12 to 2017-04-15

Test environment: Normal

Ambient Temp 23.8°C~28.1°C, Humid 44%~59%, Atmospheric Pressure 101kpa

Power supply: AC 120V 50/60Hz  
DC -48V

Test Method: KDB 935210 D05 Indus Booster Basic Meas v01r01

Test Requirement: FCC part 90.219(e)(3)

#### 6.4.1 Limit

Specification test limits of spurious emissions from a signal booster are given in table 8

Table 8 Spurious emissions limits

| frequency range | Maximum level | Measurement bandwidth |
|-----------------|---------------|-----------------------|
| 9kHz~150kHz     | -13dBm        | 1kHz                  |
| 150kHz~30MHz    | -13dBm        | 10kHz                 |
| 30MHz~1000MHz   | -13dBm        | 100kHz                |
| 1000MHz~8600MHz | -13dBm        | 1MHz                  |

NOTE:

1. RF channels to be tested for single-carrier: Low frequency, Mid frequency and High frequency;
2. Modulation types are C4FM, Tetra, Analog FM(10kHz/1kHz) and LTE;

#### 6.4.2 Test configuration

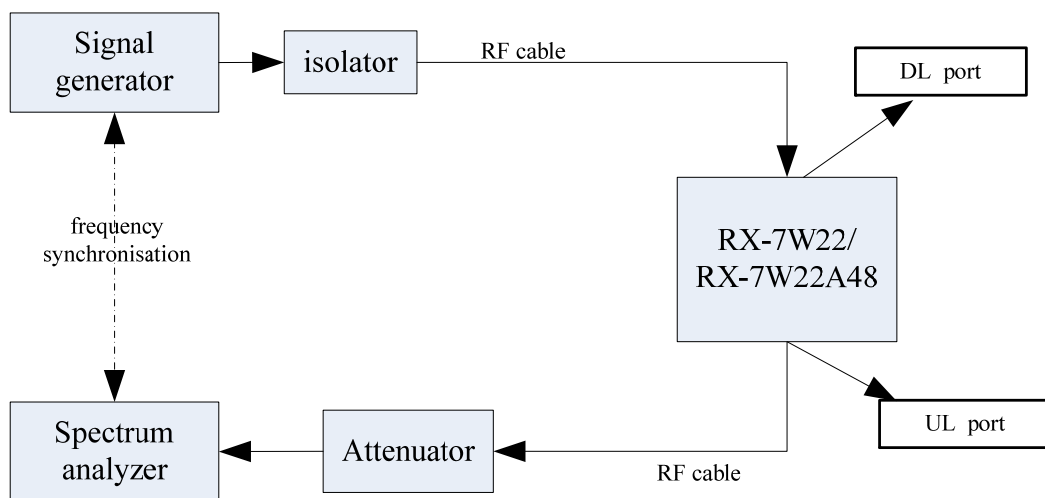


Figure 7: Conducted spurious emissions arrangement for Downlink

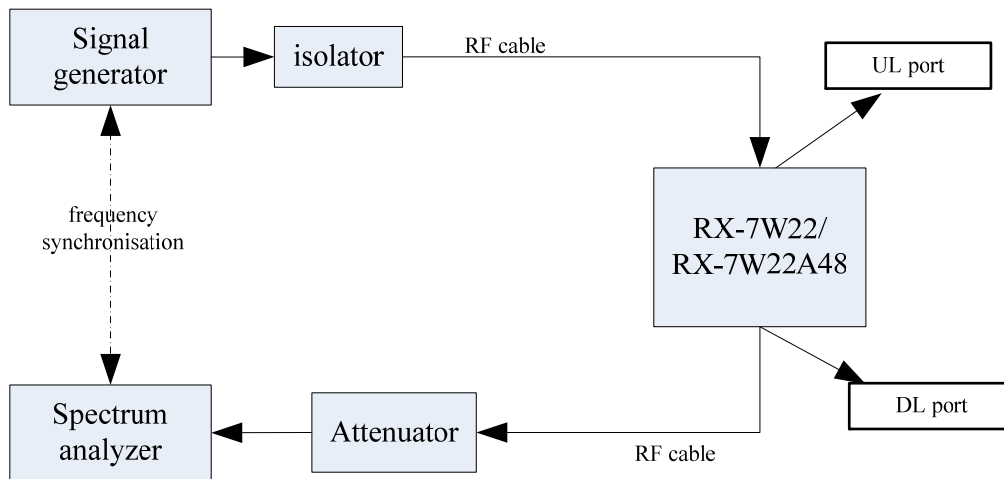


Figure 8: Conducted spurious emissions arrangement for Uplink

### 6.4.3 Test procedures

- (1) Connect the equipment as illustrated Figure 7 and Figure 8, when the output power is over the maximum value of the Spectrum Analyzer, add the attenuator to avoid destroying;
- (2) The signal generator should initially be configured to produce C4FM(Tetra , Analog FM or LTE) test signals;
- (3) Set the signal generator frequency to the center frequency of the EUT operating band;
- (4) Set the output power level so that the resultant signal is just below the AGC threshold and maximum gain;
- (5) Connect a spectrum analyzer to the output of the EUT, using appropriate attenuation as necessary;
- (6) Set the RBW = 100 kHz. (i.e., for 30 MHz to 1 GHz PLMRS and/or PSRS booster devices);
- (7) Set the VBW =  $3 \times$  RBW;
- (8) Set the Sweep time = auto-couple;
- (9) Set the detector to PEAK;
- (10) Set the spectrum analyzer start frequency to 30 MHz (or the lowest radio frequency signal generated in the EUT, without going below 9 kHz if the EUT has additional internal clock frequencies), and the stop frequency to 10 times the highest allowable frequency of the EUT passband;
- (11) Select MAX HOLD, and use the marker peak function to find the highest emission(s) outside the passband. (This could be either at a frequency lesser or greater than the passband frequencies.);
- (12) Capture a plot for inclusion in the test report;
- (13) Repeat steps (3) to (12) for each authorized frequency band/block of operation



## 6.4.4 Test Results

### 6.4.4.1 700MHz Band

#### 6.4.4.1.1 Modulation signal: LTE

| Frequency range                                               |                 | Max. Spurious Limit | RBW    | Max. Spurious mark Level (dBm) | Result |
|---------------------------------------------------------------|-----------------|---------------------|--------|--------------------------------|--------|
| 1). AC 120V, 50/60Hz                                          |                 |                     |        |                                |        |
| 1.1) Downlink transmit mode (Frequency range: 758MHz~768MHz)  |                 |                     |        |                                |        |
| frequency<br>763.0MHz                                         | 9kHz~150kHz     | -13dBm              | 1kHz   | -45.46                         | pass   |
|                                                               | 150kHz~30MHz    | -13dBm              | 10kHz  | -58.64                         | pass   |
|                                                               | 30MHz~1000MHz   | -13dBm              | 100kHz | -57.17                         | pass   |
|                                                               | 1000MHz~8600MHz | -13dBm              | 1MHz   | -44.65                         | pass   |
| 1.2). Uplink transmit mode(Frequency range: 788MHz~798MHz)    |                 |                     |        |                                |        |
| Low frequency<br>793.0MHz                                     | 9kHz~150kHz     | -13dBm              | 1kHz   | -42.17                         | pass   |
|                                                               | 150kHz~30MHz    | -13dBm              | 10kHz  | -40.18                         | pass   |
|                                                               | 30MHz~1000MHz   | -13dBm              | 100kHz | -60.73                         | pass   |
|                                                               | 1000MHz~8600MHz | -13dBm              | 1MHz   | -48.36                         | pass   |
| 2. DC -48V                                                    |                 |                     |        |                                |        |
| 2.1) Downlink transmit mode (Frequency range: 758MHz~768MHz)  |                 |                     |        |                                |        |
| Mid frequency<br>802.00625MHz                                 | 9kHz~150kHz     | -13dBm              | 1kHz   | -41.28                         | pass   |
|                                                               | 150kHz~30MHz    | -13dBm              | 10kHz  | -57.92                         | pass   |
|                                                               | 30MHz~1000MHz   | -13dBm              | 100kHz | -55.55                         | pass   |
|                                                               | 1000MHz~8600MHz | -13dBm              | 1MHz   | -43.76                         | pass   |
| 2.2). Uplink transmit mode(Frequency range: 788MHz~798MHz)    |                 |                     |        |                                |        |
| High frequency<br>804.99375MHz                                | 9kHz~150kHz     | -13dBm              | 1kHz   | -41.74                         | pass   |
|                                                               | 150kHz~30MHz    | -13dBm              | 10kHz  | -58.73                         | pass   |
|                                                               | 30MHz~1000MHz   | -13dBm              | 100kHz | -60.76                         | pass   |
|                                                               | 1000MHz~8600MHz | -13dBm              | 1MHz   | -43.02                         | pass   |
| Note:<br>1*--Margin= Maximum mark level- specification limit. |                 |                     |        |                                |        |

## 6.4.4.1.2 Modulation signal: C4FM

| Frequency range                                              |                 | Max. Spurious Limit | RBW    | Max. Spurious mark Level(dBm) | Result |
|--------------------------------------------------------------|-----------------|---------------------|--------|-------------------------------|--------|
| 1). AC 120V, 50/60Hz                                         |                 |                     |        |                               |        |
| 1.1) Downlink transmit mode (Frequency range: 769MHz~775MHz) |                 |                     |        |                               |        |
| Low frequency<br>769.00625MHz                                | 9kHz~150kHz     | -13dBm              | 1kHz   | -71.32                        | pass   |
|                                                              | 150kHz~30MHz    | -13dBm              | 10kHz  | -79.96                        | pass   |
|                                                              | 30MHz~1000MHz   | -13dBm              | 100kHz | -60.57                        | pass   |
|                                                              | 1000MHz~8600MHz | -13dBm              | 1MHz   | -41.02                        | pass   |
| Mid frequency<br>772.00625MHz                                | 9kHz~150kHz     | -13dBm              | 1kHz   | -71.50                        | pass   |
|                                                              | 150kHz~30MHz    | -13dBm              | 10kHz  | -81.31                        | pass   |
|                                                              | 30MHz~1000MHz   | -13dBm              | 100kHz | -60.42                        | pass   |
|                                                              | 1000MHz~8600MHz | -13dBm              | 1MHz   | -40.33                        | pass   |
| High frequency<br>774.99375MHz                               | 9kHz~150kHz     | -13dBm              | 1kHz   | -72.22                        | pass   |
|                                                              | 150kHz~30MHz    | -13dBm              | 10kHz  | -79.97                        | pass   |
|                                                              | 30MHz~1000MHz   | -13dBm              | 100kHz | -39.13                        | pass   |
|                                                              | 1000MHz~8600MHz | -13dBm              | 1MHz   | -41.04                        | pass   |
| 1.2) Uplink transmit mode(Frequency range: 799MHz~805MHz)    |                 |                     |        |                               |        |
| Low frequency<br>799.00625MHz                                | 9kHz~150kHz     | -13dBm              | 1kHz   | -81.13                        | pass   |
|                                                              | 150kHz~30MHz    | -13dBm              | 10kHz  | -81.50                        | pass   |
|                                                              | 30MHz~1000MHz   | -13dBm              | 100kHz | -64.95                        | pass   |
|                                                              | 1000MHz~8600MHz | -13dBm              | 1MHz   | -45.28                        | pass   |
| Mid frequency<br>802.00625MHz                                | 9kHz~150kHz     | -13dBm              | 1kHz   | -75.87                        | pass   |
|                                                              | 150kHz~30MHz    | -13dBm              | 10kHz  | -83.71                        | pass   |
|                                                              | 30MHz~1000MHz   | -13dBm              | 100kHz | -48.19                        | pass   |
|                                                              | 1000MHz~8600MHz | -13dBm              | 1MHz   | -43.48                        | pass   |
| High frequency<br>804.99375MHz                               | 9kHz~150kHz     | -13dBm              | 1kHz   | -75.61                        | pass   |
|                                                              | 150kHz~30MHz    | -13dBm              | 10kHz  | -77.82                        | pass   |

|                                                              |                 |        |        |        |      |
|--------------------------------------------------------------|-----------------|--------|--------|--------|------|
|                                                              | 30MHz~1000MHz   | -13dBm | 100kHz | -42.34 | pass |
|                                                              | 1000MHz~8600MHz | -13dBm | 1MHz   | -43.62 | pass |
| 2). DC -48V                                                  |                 |        |        |        |      |
| 2.1) Downlink transmit mode (Frequency range: 769MHz~775MHz) |                 |        |        |        |      |
| Low frequency<br>769.00625MHz                                | 9kHz~150kHz     | -13dBm | 1kHz   | -71.20 | pass |
|                                                              | 150kHz~30MHz    | -13dBm | 10kHz  | -71.03 | pass |
|                                                              | 30MHz~1000MHz   | -13dBm | 100kHz | -54.36 | pass |
|                                                              | 1000MHz~8600MHz | -13dBm | 1MHz   | -42.23 | pass |
| Mid frequency<br>772.00625MHz                                | 9kHz~150kHz     | -13dBm | 1kHz   | -65.71 | pass |
|                                                              | 150kHz~30MHz    | -13dBm | 10kHz  | -72.27 | pass |
|                                                              | 30MHz~1000MHz   | -13dBm | 100kHz | -54.93 | pass |
|                                                              | 1000MHz~8600MHz | -13dBm | 1MHz   | -40.84 | pass |
| High frequency<br>774.99375MHz                               | 9kHz~150kHz     | -13dBm | 1kHz   | -72.11 | pass |
|                                                              | 150kHz~30MHz    | -13dBm | 10kHz  | -72.45 | pass |
|                                                              | 30MHz~1000MHz   | -13dBm | 100kHz | -55.08 | pass |
|                                                              | 1000MHz~8600MHz | -13dBm | 1MHz   | -41.19 | pass |
| 2.2) Uplink transmit mode(Frequency range: 799MHz~805MHz)    |                 |        |        |        |      |
| Low frequency<br>799.00625MHz                                | 9kHz~150kHz     | -13dBm | 1kHz   | -81.43 | pass |
|                                                              | 150kHz~30MHz    | -13dBm | 10kHz  | -79.98 | pass |
|                                                              | 30MHz~1000MHz   | -13dBm | 100kHz | -64.64 | pass |
|                                                              | 1000MHz~8600MHz | -13dBm | 1MHz   | -59.05 | pass |
| Mid frequency<br>802.00625MHz                                | 9kHz~150kHz     | -13dBm | 1kHz   | -81.22 | pass |
|                                                              | 150kHz~30MHz    | -13dBm | 10kHz  | -82.33 | pass |
|                                                              | 30MHz~1000MHz   | -13dBm | 100kHz | -60.39 | pass |
|                                                              | 1000MHz~8600MHz | -13dBm | 1MHz   | -59.38 | pass |
| High frequency<br>804.99375MHz                               | 9kHz~150kHz     | -13dBm | 1kHz   | -80.41 | pass |

|                                                               |                 |        |        |        |      |
|---------------------------------------------------------------|-----------------|--------|--------|--------|------|
|                                                               | 150kHz~30MHz    | -13dBm | 10kHz  | -77.81 | pass |
|                                                               | 30MHz~1000MHz   | -13dBm | 100kHz | -46.67 | pass |
|                                                               | 1000MHz~8600MHz | -13dBm | 1MHz   | -58.84 | pass |
| Note:<br>1*--Margin= Maximum mark level- specification limit. |                 |        |        |        |      |

## 6.4.4.1.3 Modulation signal: Tetra

| Frequency range                                              | Max. Spurious Limit | RBW    | Max. Spurious mark Level(dBm) | Result |      |
|--------------------------------------------------------------|---------------------|--------|-------------------------------|--------|------|
| 1). AC 120V, 50/60Hz                                         |                     |        |                               |        |      |
| 1.1) Downlink transmit mode (Frequency range: 769MHz~775MHz) |                     |        |                               |        |      |
| Low frequency<br>769.0125MHz                                 | 9kHz~150kHz         | -13dBm | 1kHz                          | -71.24 | pass |
|                                                              | 150kHz~30MHz        | -13dBm | 10kHz                         | -82.17 | pass |
|                                                              | 30MHz~1000MHz       | -13dBm | 100kHz                        | -60.24 | pass |
|                                                              | 1000MHz~8600MHz     | -13dBm | 1MHz                          | -41.22 | pass |
| Mid frequency<br>772.0125MHz                                 | 9kHz~150kHz         | -13dBm | 1kHz                          | -71.34 | pass |
|                                                              | 150kHz~30MHz        | -13dBm | 10kHz                         | -80.62 | pass |
|                                                              | 30MHz~1000MHz       | -13dBm | 100kHz                        | -59.80 | pass |
|                                                              | 1000MHz~8600MHz     | -13dBm | 1MHz                          | -40.05 | pass |
| High frequency<br>774.9875MHz                                | 9kHz~150kHz         | -13dBm | 1kHz                          | -72.16 | pass |
|                                                              | 150kHz~30MHz        | -13dBm | 10kHz                         | -80.00 | pass |
|                                                              | 30MHz~1000MHz       | -13dBm | 100kHz                        | -40.00 | pass |
|                                                              | 1000MHz~8600MHz     | -13dBm | 1MHz                          | -40.61 | pass |
| 1.2) Uplink transmit mode(Frequency range: 799MHz~805MHz)    |                     |        |                               |        |      |
| Low frequency<br>799.0125MHz                                 | 9kHz~150kHz         | -13dBm | 1kHz                          | -80.51 | pass |
|                                                              | 150kHz~30MHz        | -13dBm | 10kHz                         | -78.30 | pass |
|                                                              | 30MHz~1000MHz       | -13dBm | 100kHz                        | -64.86 | pass |
|                                                              | 1000MHz~8600MHz     | -13dBm | 1MHz                          | -44.87 | pass |
| Mid frequency<br>802.0125MHz                                 | 9kHz~150kHz         | -13dBm | 1kHz                          | -75.45 | pass |

|                                                              |                 |        |        |        |      |
|--------------------------------------------------------------|-----------------|--------|--------|--------|------|
|                                                              | 150kHz~30MHz    | -13dBm | 10kHz  | -78.41 | pass |
|                                                              | 30MHz~1000MHz   | -13dBm | 100kHz | -47.27 | pass |
|                                                              | 1000MHz~8600MHz | -13dBm | 1MHz   | -43.31 | pass |
| High frequency<br>804.9875MHz                                | 9kHz~150kHz     | -13dBm | 1kHz   | -75.56 | pass |
|                                                              | 150kHz~30MHz    | -13dBm | 10kHz  | -77.61 | pass |
|                                                              | 30MHz~1000MHz   | -13dBm | 100kHz | -42.68 | pass |
|                                                              | 1000MHz~8600MHz | -13dBm | 1MHz   | -43.79 | pass |
| 2). DC -48V                                                  |                 |        |        |        |      |
| 2.1) Downlink transmit mode (Frequency range: 769MHz~775MHz) |                 |        |        |        |      |
| Low frequency<br>769.0125MHz                                 | 9kHz~150kHz     | -13dBm | 1kHz   | -71.24 | pass |
|                                                              | 150kHz~30MHz    | -13dBm | 10kHz  | -82.17 | pass |
|                                                              | 30MHz~1000MHz   | -13dBm | 100kHz | -60.24 | pass |
|                                                              | 1000MHz~8600MHz | -13dBm | 1MHz   | -41.22 | pass |
| Mid frequency<br>772.0125MHz                                 | 9kHz~150kHz     | -13dBm | 1kHz   | -71.34 | pass |
|                                                              | 150kHz~30MHz    | -13dBm | 10kHz  | -80.62 | pass |
|                                                              | 30MHz~1000MHz   | -13dBm | 100kHz | -59.80 | pass |
|                                                              | 1000MHz~8600MHz | -13dBm | 1MHz   | -40.05 | pass |
| High frequency<br>774.9875MHz                                | 9kHz~150kHz     | -13dBm | 1kHz   | -72.16 | pass |
|                                                              | 150kHz~30MHz    | -13dBm | 10kHz  | -80.00 | pass |
|                                                              | 30MHz~1000MHz   | -13dBm | 100kHz | -40.00 | pass |
|                                                              | 1000MHz~8600MHz | -13dBm | 1MHz   | -40.61 | pass |
| 2.2) Uplink transmit mode(Frequency range: 799MHz~805MHz)    |                 |        |        |        |      |
| Low frequency<br>799.0125MHz                                 | 9kHz~150kHz     | -13dBm | 1kHz   | -80.51 | pass |
|                                                              | 150kHz~30MHz    | -13dBm | 10kHz  | -78.30 | pass |
|                                                              | 30MHz~1000MHz   | -13dBm | 100kHz | -64.86 | pass |
|                                                              | 1000MHz~8600MHz | -13dBm | 1MHz   | -44.87 | pass |

|                                                               |                 |        |        |        |      |
|---------------------------------------------------------------|-----------------|--------|--------|--------|------|
| Mid frequency<br>802.0125MHz                                  | 9kHz~150kHz     | -13dBm | 1kHz   | -75.45 | pass |
|                                                               | 150kHz~30MHz    | -13dBm | 10kHz  | -78.41 | pass |
|                                                               | 30MHz~1000MHz   | -13dBm | 100kHz | -47.27 | pass |
|                                                               | 1000MHz~8600MHz | -13dBm | 1MHz   | -43.31 | pass |
| High frequency<br>804.9875MHz                                 | 9kHz~150kHz     | -13dBm | 1kHz   | -75.56 | pass |
|                                                               | 150kHz~30MHz    | -13dBm | 10kHz  | -77.61 | pass |
|                                                               | 30MHz~1000MHz   | -13dBm | 100kHz | -42.68 | pass |
|                                                               | 1000MHz~8600MHz | -13dBm | 1MHz   | -43.79 | pass |
| Note:<br>1*--Margin= Maximum mark level- specification limit. |                 |        |        |        |      |

## 6.4.4.1.4 Modulation signal: Analog FM(10kHz/1kHz)

| Frequency range                                              | Max. Spurious Limit | RBW    | Max. Spurious mark Level(dBm) | Result |      |
|--------------------------------------------------------------|---------------------|--------|-------------------------------|--------|------|
| 1). AC 120V, 50/60Hz                                         |                     |        |                               |        |      |
| 1.1) Downlink transmit mode (Frequency range: 769MHz~775MHz) |                     |        |                               |        |      |
| Low frequency<br>769.0125MHz                                 | 9kHz~150kHz         | -13dBm | 1kHz                          | -71.97 | pass |
|                                                              | 150kHz~30MHz        | -13dBm | 10kHz                         | -82.00 | pass |
|                                                              | 30MHz~1000MHz       | -13dBm | 100kHz                        | -60.62 | pass |
|                                                              | 1000MHz~8600MHz     | -13dBm | 1MHz                          | -40.80 | pass |
| Mid frequency<br>772.0125MHz                                 | 9kHz~150kHz         | -13dBm | 1kHz                          | -72.19 | pass |
|                                                              | 150kHz~30MHz        | -13dBm | 10kHz                         | -80.52 | pass |
|                                                              | 30MHz~1000MHz       | -13dBm | 100kHz                        | -60.40 | pass |
|                                                              | 1000MHz~8600MHz     | -13dBm | 1MHz                          | -40.63 | pass |
| High frequency<br>774.9875MHz                                | 9kHz~150kHz         | -13dBm | 1kHz                          | -71.92 | pass |
|                                                              | 150kHz~30MHz        | -13dBm | 10kHz                         | -81.85 | pass |
|                                                              | 30MHz~1000MHz       | -13dBm | 100kHz                        | -39.73 | pass |
|                                                              | 1000MHz~8600MHz     | -13dBm | 1MHz                          | -39.99 | pass |
| 1.2) Uplink transmit mode(Frequency range: 799MHz~805MHz)    |                     |        |                               |        |      |

|                                                              |                 |        |        |        |      |
|--------------------------------------------------------------|-----------------|--------|--------|--------|------|
| Low frequency<br>799.0125MHz                                 | 9kHz~150kHz     | -13dBm | 1kHz   | -79.46 | pass |
|                                                              | 150kHz~30MHz    | -13dBm | 10kHz  | -77.82 | pass |
|                                                              | 30MHz~1000MHz   | -13dBm | 100kHz | -65.49 | pass |
|                                                              | 1000MHz~8600MHz | -13dBm | 1MHz   | -44.66 | pass |
| Mid frequency<br>802.0125MHz                                 | 9kHz~150kHz     | -13dBm | 1kHz   | -74.87 | pass |
|                                                              | 150kHz~30MHz    | -13dBm | 10kHz  | -78.50 | pass |
|                                                              | 30MHz~1000MHz   | -13dBm | 100kHz | -47.82 | pass |
|                                                              | 1000MHz~8600MHz | -13dBm | 1MHz   | -42.95 | pass |
| High frequency<br>804.9875MHz                                | 9kHz~150kHz     | -13dBm | 1kHz   | -76.58 | pass |
|                                                              | 150kHz~30MHz    | -13dBm | 10kHz  | -77.24 | pass |
|                                                              | 30MHz~1000MHz   | -13dBm | 100kHz | -40.41 | pass |
|                                                              | 1000MHz~8600MHz | -13dBm | 1MHz   | -44.96 | pass |
| 2). DC -48V                                                  |                 |        |        |        |      |
| 2.1) Downlink transmit mode (Frequency range: 769MHz~775MHz) |                 |        |        |        |      |
| Low frequency<br>769.0125MHz                                 | 9kHz~150kHz     | -13dBm | 1kHz   | -70.30 | pass |
|                                                              | 150kHz~30MHz    | -13dBm | 10kHz  | -69.70 | pass |
|                                                              | 30MHz~1000MHz   | -13dBm | 100kHz | -55.26 | pass |
|                                                              | 1000MHz~8600MHz | -13dBm | 1MHz   | -42.21 | pass |
| Mid frequency<br>772.0125MHz                                 | 9kHz~150kHz     | -13dBm | 1kHz   | -71.75 | pass |
|                                                              | 150kHz~30MHz    | -13dBm | 10kHz  | -71.92 | pass |
|                                                              | 30MHz~1000MHz   | -13dBm | 100kHz | -55.63 | pass |
|                                                              | 1000MHz~8600MHz | -13dBm | 1MHz   | -40.69 | pass |
| High frequency<br>774.9875MHz                                | 9kHz~150kHz     | -13dBm | 1kHz   | -68.44 | pass |
|                                                              | 150kHz~30MHz    | -13dBm | 10kHz  | -71.02 | pass |
|                                                              | 30MHz~1000MHz   | -13dBm | 100kHz | -55.37 | pass |
|                                                              | 1000MHz~8600MHz | -13dBm | 1MHz   | -41.32 | pass |

| 2.2) Uplink transmit mode(Frequency range: 799MHz~805MHz)     |                 |        |        |        |      |
|---------------------------------------------------------------|-----------------|--------|--------|--------|------|
| Low frequency<br>799.0125MHz                                  | 9kHz~150kHz     | -13dBm | 1kHz   | -81.12 | pass |
|                                                               | 150kHz~30MHz    | -13dBm | 10kHz  | -78.26 | pass |
|                                                               | 30MHz~1000MHz   | -13dBm | 100kHz | -64.33 | pass |
|                                                               | 1000MHz~8600MHz | -13dBm | 1MHz   | -59.09 | pass |
| Mid frequency<br>802.0125MHz                                  | 9kHz~150kHz     | -13dBm | 1kHz   | -80.60 | pass |
|                                                               | 150kHz~30MHz    | -13dBm | 10kHz  | -77.80 | pass |
|                                                               | 30MHz~1000MHz   | -13dBm | 100kHz | -60.55 | pass |
|                                                               | 1000MHz~8600MHz | -13dBm | 1MHz   | -59.25 | pass |
| High frequency<br>804.9875MHz                                 | 9kHz~150kHz     | -13dBm | 1kHz   | -76.03 | pass |
|                                                               | 150kHz~30MHz    | -13dBm | 10kHz  | -77.72 | pass |
|                                                               | 30MHz~1000MHz   | -13dBm | 100kHz | -42.00 | pass |
|                                                               | 1000MHz~8600MHz | -13dBm | 1MHz   | -58.93 | pass |
| Note:<br>1*--Margin= Maximum mark level- specification limit. |                 |        |        |        |      |

#### 6.4.4.2 800MHz Band

##### 6.4.4.2.1 Modulation signal: C4FM

| Frequency range                                              | Max. Spurious Limit | RBW    | Max. Spurious mark Level(dBm) | Result |      |
|--------------------------------------------------------------|---------------------|--------|-------------------------------|--------|------|
| 1). AC 120V, 50/60Hz                                         |                     |        |                               |        |      |
| 1.1) Downlink transmit mode (Frequency range: 851MHz~869MHz) |                     |        |                               |        |      |
| Low frequency<br>851.00625MHz                                | 9kHz~150kHz         | -13dBm | 1kHz                          | -61.44 | pass |
|                                                              | 150kHz~30MHz        | -13dBm | 10kHz                         | -69.62 | pass |
|                                                              | 30MHz~1000MHz       | -13dBm | 100kHz                        | -56.08 | pass |
|                                                              | 1000MHz~8600MHz     | -13dBm | 1MHz                          | -41.91 | pass |
| Mid frequency<br>860.00625MHz                                | 9kHz~150kHz         | -13dBm | 1kHz                          | -62.03 | pass |
|                                                              | 150kHz~30MHz        | -13dBm | 10kHz                         | -69.84 | pass |
|                                                              | 30MHz~1000MHz       | -13dBm | 100kHz                        | -55.98 | pass |
|                                                              | 1000MHz~8600MHz     | -13dBm | 1MHz                          | -41.29 | pass |



|                                                              |                 |        |        |        |      |
|--------------------------------------------------------------|-----------------|--------|--------|--------|------|
| High frequency<br>868.99375MHz                               | 9kHz~150kHz     | -13dBm | 1kHz   | -62.07 | pass |
|                                                              | 150kHz~30MHz    | -13dBm | 10kHz  | -69.67 | pass |
|                                                              | 30MHz~1000MHz   | -13dBm | 100kHz | -56.05 | pass |
|                                                              | 1000MHz~8600MHz | -13dBm | 1MHz   | -43.09 | pass |
| 1.2) Uplink transmit mode(Frequency range: 806MHz~824MHz)    |                 |        |        |        |      |
| Low frequency<br>806.00625MHz                                | 9kHz~150kHz     | -13dBm | 1kHz   | -79.45 | pass |
|                                                              | 150kHz~30MHz    | -13dBm | 10kHz  | -73.88 | pass |
|                                                              | 30MHz~1000MHz   | -13dBm | 100kHz | -54.37 | pass |
|                                                              | 1000MHz~8600MHz | -13dBm | 1MHz   | -43.42 | pass |
| Mid frequency<br>815.00625MHz                                | 9kHz~150kHz     | -13dBm | 1kHz   | -79.41 | pass |
|                                                              | 150kHz~30MHz    | -13dBm | 10kHz  | -73.76 | pass |
|                                                              | 30MHz~1000MHz   | -13dBm | 100kHz | -53.47 | pass |
|                                                              | 1000MHz~8600MHz | -13dBm | 1MHz   | -43.17 | pass |
| High frequency<br>823.99375MHz                               | 9kHz~150kHz     | -13dBm | 1kHz   | -75.65 | pass |
|                                                              | 150kHz~30MHz    | -13dBm | 10kHz  | -73.50 | pass |
|                                                              | 30MHz~1000MHz   | -13dBm | 100kHz | -52.55 | pass |
|                                                              | 1000MHz~8600MHz | -13dBm | 1MHz   | -45.01 | pass |
| 2). DC -48V                                                  |                 |        |        |        |      |
| 2.1) Downlink transmit mode (Frequency range: 851MHz~869MHz) |                 |        |        |        |      |
| Low frequency<br>851.00625MHz                                | 9kHz~150kHz     | -13dBm | 1kHz   | -70.29 | pass |
|                                                              | 150kHz~30MHz    | -13dBm | 10kHz  | -70.40 | pass |
|                                                              | 30MHz~1000MHz   | -13dBm | 100kHz | -54.45 | pass |
|                                                              | 1000MHz~8600MHz | -13dBm | 1MHz   | -41.91 | pass |
| Mid frequency<br>860.00625MHz                                | 9kHz~150kHz     | -13dBm | 1kHz   | -71.82 | pass |
|                                                              | 150kHz~30MHz    | -13dBm | 10kHz  | -71.85 | pass |
|                                                              | 30MHz~1000MHz   | -13dBm | 100kHz | -55.18 | pass |
|                                                              | 1000MHz~8600MHz | -13dBm | 1MHz   | -41.84 | pass |
| High frequency                                               | 9kHz~150kHz     | -13dBm | 1kHz   | -72.25 | pass |

|                                                                  |                 |        |        |        |      |
|------------------------------------------------------------------|-----------------|--------|--------|--------|------|
| 868.99375MHz                                                     | 150kHz~30MHz    | -13dBm | 10kHz  | -70.82 | pass |
|                                                                  | 30MHz~1000MHz   | -13dBm | 100kHz | -55.03 | pass |
|                                                                  | 1000MHz~8600MHz | -13dBm | 1MHz   | -42.82 | pass |
| <b>2.2) Uplink transmit mode(Frequency range: 806MHz~824MHz)</b> |                 |        |        |        |      |
| Low frequency<br>806.00625MHz                                    | 9kHz~150kHz     | -13dBm | 1kHz   | -83.99 | pass |
|                                                                  | 150kHz~30MHz    | -13dBm | 10kHz  | -81.35 | pass |
|                                                                  | 30MHz~1000MHz   | -13dBm | 100kHz | -61.03 | pass |
|                                                                  | 1000MHz~8600MHz | -13dBm | 1MHz   | -44.25 | pass |
| Mid frequency<br>815.00625MHz                                    | 9kHz~150kHz     | -13dBm | 1kHz   | -84.26 | pass |
|                                                                  | 150kHz~30MHz    | -13dBm | 10kHz  | -84.50 | pass |
|                                                                  | 30MHz~1000MHz   | -13dBm | 100kHz | -60.12 | pass |
|                                                                  | 1000MHz~8600MHz | -13dBm | 1MHz   | -43.62 | pass |
| High frequency<br>823.99375MHz                                   | 9kHz~150kHz     | -13dBm | 1kHz   | -84.09 | pass |
|                                                                  | 150kHz~30MHz    | -13dBm | 10kHz  | -82.20 | pass |
|                                                                  | 30MHz~1000MHz   | -13dBm | 100kHz | -60.60 | pass |
|                                                                  | 1000MHz~8600MHz | -13dBm | 1MHz   | -44.49 | pass |
| Note:<br>1*--Margin= Maximum mark level- specification limit.    |                 |        |        |        |      |

## 6.4.4.2.2 Modulation signal: Tetra

| Frequency range                                                     | Max. Spurious Limit | RBW    | Max. Spurious mark Level(dBm) | Result |      |
|---------------------------------------------------------------------|---------------------|--------|-------------------------------|--------|------|
| 1). AC 120V, 50/60Hz                                                |                     |        |                               |        |      |
| <b>1.1) Downlink transmit mode (Frequency range: 851MHz~869MHz)</b> |                     |        |                               |        |      |
| Low frequency<br>851.0125MHz                                        | 9kHz~150kHz         | -13dBm | 1kHz                          | -60.67 | pass |
|                                                                     | 150kHz~30MHz        | -13dBm | 10kHz                         | -70.36 | pass |
|                                                                     | 30MHz~1000MHz       | -13dBm | 100kHz                        | -55.25 | pass |
|                                                                     | 1000MHz~8600MHz     | -13dBm | 1MHz                          | -42.35 | pass |
| Mid frequency<br>860.0125MHz                                        | 9kHz~150kHz         | -13dBm | 1kHz                          | -59.73 | pass |
|                                                                     | 150kHz~30MHz        | -13dBm | 10kHz                         | -70.55 | pass |

|                                                              |                 |        |        |        |      |
|--------------------------------------------------------------|-----------------|--------|--------|--------|------|
|                                                              | 30MHz~1000MHz   | -13dBm | 100kHz | -55.01 | pass |
|                                                              | 1000MHz~8600MHz | -13dBm | 1MHz   | -41.49 | pass |
| High frequency<br>868.9875MHz                                | 9kHz~150kHz     | -13dBm | 1kHz   | -62.19 | pass |
|                                                              | 150kHz~30MHz    | -13dBm | 10kHz  | -68.23 | pass |
|                                                              | 30MHz~1000MHz   | -13dBm | 100kHz | -54.99 | pass |
|                                                              | 1000MHz~8600MHz | -13dBm | 1MHz   | -43.57 | pass |
| 1.2) Uplink transmit mode(Frequency range: 806MHz~824MHz)    |                 |        |        |        |      |
| Low frequency<br>806.0125MHz                                 | 9kHz~150kHz     | -13dBm | 1kHz   | -79.07 | pass |
|                                                              | 150kHz~30MHz    | -13dBm | 10kHz  | -72.94 | pass |
|                                                              | 30MHz~1000MHz   | -13dBm | 100kHz | -54.69 | pass |
|                                                              | 1000MHz~8600MHz | -13dBm | 1MHz   | -44.10 | pass |
| Mid frequency<br>815.0125MHz                                 | 9kHz~150kHz     | -13dBm | 1kHz   | -80.02 | pass |
|                                                              | 150kHz~30MHz    | -13dBm | 10kHz  | -72.58 | pass |
|                                                              | 30MHz~1000MHz   | -13dBm | 100kHz | -55.03 | pass |
|                                                              | 1000MHz~8600MHz | -13dBm | 1MHz   | -42.63 | pass |
| High frequency<br>823.9875MHz                                | 9kHz~150kHz     | -13dBm | 1kHz   | -80.10 | pass |
|                                                              | 150kHz~30MHz    | -13dBm | 10kHz  | -73.49 | pass |
|                                                              | 30MHz~1000MHz   | -13dBm | 100kHz | -55.04 | pass |
|                                                              | 1000MHz~8600MHz | -13dBm | 1MHz   | -43.70 | pass |
| 2). DC -48V                                                  |                 |        |        |        |      |
| 2.1) Downlink transmit mode (Frequency range: 851MHz~869MHz) |                 |        |        |        |      |
| Low frequency<br>851.0125MHz                                 | 9kHz~150kHz     | -13dBm | 1kHz   | -72.16 | pass |
|                                                              | 150kHz~30MHz    | -13dBm | 10kHz  | -68.81 | pass |
|                                                              | 30MHz~1000MHz   | -13dBm | 100kHz | -55.33 | pass |
|                                                              | 1000MHz~8600MHz | -13dBm | 1MHz   | -41.84 | pass |
| Mid frequency<br>860.0125MHz                                 | 9kHz~150kHz     | -13dBm | 1kHz   | -72.74 | pass |
|                                                              | 150kHz~30MHz    | -13dBm | 10kHz  | -70.99 | pass |

|                                                                  |                 |        |        |        |      |
|------------------------------------------------------------------|-----------------|--------|--------|--------|------|
|                                                                  | 30MHz~1000MHz   | -13dBm | 100kHz | -54.95 | pass |
|                                                                  | 1000MHz~8600MHz | -13dBm | 1MHz   | -41.72 | pass |
| High frequency<br>868.9875MHz                                    | 9kHz~150kHz     | -13dBm | 1kHz   | -72.21 | pass |
|                                                                  | 150kHz~30MHz    | -13dBm | 10kHz  | -70.64 | pass |
|                                                                  | 30MHz~1000MHz   | -13dBm | 100kHz | -55.37 | pass |
|                                                                  | 1000MHz~8600MHz | -13dBm | 1MHz   | -43.01 | pass |
| <b>2.2) Uplink transmit mode(Frequency range: 806MHz~824MHz)</b> |                 |        |        |        |      |
| Low frequency<br>806.0125MHz                                     | 9kHz~150kHz     | -13dBm | 1kHz   | -84.16 | pass |
|                                                                  | 150kHz~30MHz    | -13dBm | 10kHz  | -83.76 | pass |
|                                                                  | 30MHz~1000MHz   | -13dBm | 100kHz | -60.37 | pass |
|                                                                  | 1000MHz~8600MHz | -13dBm | 1MHz   | -44.16 | pass |
| Mid frequency<br>815.0125MHz                                     | 9kHz~150kHz     | -13dBm | 1kHz   | -82.77 | pass |
|                                                                  | 150kHz~30MHz    | -13dBm | 10kHz  | -81.77 | pass |
|                                                                  | 30MHz~1000MHz   | -13dBm | 100kHz | -60.68 | pass |
|                                                                  | 1000MHz~8600MHz | -13dBm | 1MHz   | -44.25 | pass |
| High frequency<br>823.9875MHz                                    | 9kHz~150kHz     | -13dBm | 1kHz   | -84.61 | pass |
|                                                                  | 150kHz~30MHz    | -13dBm | 10kHz  | -83.26 | pass |
|                                                                  | 30MHz~1000MHz   | -13dBm | 100kHz | -60.78 | pass |
|                                                                  | 1000MHz~8600MHz | -13dBm | 1MHz   | -44.23 | pass |
| Note:<br>1*--Margin= Maximum mark level- specification limit.    |                 |        |        |        |      |

#### 6.4.4.2.3 Modulation signal: Analog FM(10kHz/1kHz)

| Frequency range                                              | Max. Spurious Limit | RBW    | Max. Spurious mark Level(dBm) | Result |      |
|--------------------------------------------------------------|---------------------|--------|-------------------------------|--------|------|
| 1). AC 120V, 50/60Hz                                         |                     |        |                               |        |      |
| 1.1) Downlink transmit mode (Frequency range: 851MHz~869MHz) |                     |        |                               |        |      |
| Low frequency<br>851.0125MHz                                 | 9kHz~150kHz         | -13dBm | 1kHz                          | -61.19 | pass |
|                                                              | 150kHz~30MHz        | -13dBm | 10kHz                         | -67.82 | pass |
|                                                              | 30MHz~1000MHz       | -13dBm | 100kHz                        | -55.68 | pass |

|                                                              |                 |        |        |        |      |
|--------------------------------------------------------------|-----------------|--------|--------|--------|------|
|                                                              | 1000MHz~8600MHz | -13dBm | 1MHz   | -41.89 | pass |
| Mid frequency<br>860.0125MHz                                 | 9kHz~150kHz     | -13dBm | 1kHz   | -62.21 | pass |
|                                                              | 150kHz~30MHz    | -13dBm | 10kHz  | -68.57 | pass |
|                                                              | 30MHz~1000MHz   | -13dBm | 100kHz | -55.04 | pass |
|                                                              | 1000MHz~8600MHz | -13dBm | 1MHz   | -41.33 | pass |
| High frequency<br>868.9875MHz                                | 9kHz~150kHz     | -13dBm | 1kHz   | -61.56 | pass |
|                                                              | 150kHz~30MHz    | -13dBm | 10kHz  | -67.97 | pass |
|                                                              | 30MHz~1000MHz   | -13dBm | 100kHz | -54.88 | pass |
|                                                              | 1000MHz~8600MHz | -13dBm | 1MHz   | -43.41 | pass |
| 1.2) Uplink transmit mode(Frequency range: 806MHz~824MHz)    |                 |        |        |        |      |
| Low frequency<br>806.0125MHz                                 | 9kHz~150kHz     | -13dBm | 1kHz   | -82.76 | pass |
|                                                              | 150kHz~30MHz    | -13dBm | 10kHz  | -82.87 | pass |
|                                                              | 30MHz~1000MHz   | -13dBm | 100kHz | -63.58 | pass |
|                                                              | 1000MHz~8600MHz | -13dBm | 1MHz   | -42.78 | pass |
| Mid frequency<br>815.0125MHz                                 | 9kHz~150kHz     | -13dBm | 1kHz   | -82.14 | pass |
|                                                              | 150kHz~30MHz    | -13dBm | 10kHz  | -83.33 | pass |
|                                                              | 30MHz~1000MHz   | -13dBm | 100kHz | -63.45 | pass |
|                                                              | 1000MHz~8600MHz | -13dBm | 1MHz   | -44.39 | pass |
| High frequency<br>823.9875MHz                                | 9kHz~150kHz     | -13dBm | 1kHz   | -81.93 | pass |
|                                                              | 150kHz~30MHz    | -13dBm | 10kHz  | -83.76 | pass |
|                                                              | 30MHz~1000MHz   | -13dBm | 100kHz | -63.26 | pass |
|                                                              | 1000MHz~8600MHz | -13dBm | 1MHz   | -44.28 | pass |
| 2). DC -48V                                                  |                 |        |        |        |      |
| 2.1) Downlink transmit mode (Frequency range: 851MHz~869MHz) |                 |        |        |        |      |
| Low frequency<br>851.0125MHz                                 | 9kHz~150kHz     | -13dBm | 1kHz   | -72.51 | pass |
|                                                              | 150kHz~30MHz    | -13dBm | 10kHz  | -71.05 | pass |

|                                                               |                 |        |        |        |      |
|---------------------------------------------------------------|-----------------|--------|--------|--------|------|
|                                                               | 30MHz~1000MHz   | -13dBm | 100kHz | -54.51 | pass |
|                                                               | 1000MHz~8600MHz | -13dBm | 1MHz   | -41.45 | pass |
| Mid frequency<br>860.0125MHz                                  | 9kHz~150kHz     | -13dBm | 1kHz   | -72.50 | pass |
|                                                               | 150kHz~30MHz    | -13dBm | 10kHz  | -71.57 | pass |
|                                                               | 30MHz~1000MHz   | -13dBm | 100kHz | -55.15 | pass |
|                                                               | 1000MHz~8600MHz | -13dBm | 1MHz   | -41.80 | pass |
| High frequency<br>868.9875MHz                                 | 9kHz~150kHz     | -13dBm | 1kHz   | -72.04 | pass |
|                                                               | 150kHz~30MHz    | -13dBm | 10kHz  | -70.27 | pass |
|                                                               | 30MHz~1000MHz   | -13dBm | 100kHz | -55.21 | pass |
|                                                               | 1000MHz~8600MHz | -13dBm | 1MHz   | -42.77 | pass |
| 2.2) Uplink transmit mode(Frequency range: 806MHz~824MHz)     |                 |        |        |        |      |
| Low frequency<br>806.0125MHz                                  | 9kHz~150kHz     | -13dBm | 1kHz   | -83.60 | pass |
|                                                               | 150kHz~30MHz    | -13dBm | 10kHz  | -82.79 | pass |
|                                                               | 30MHz~1000MHz   | -13dBm | 100kHz | -61.04 | pass |
|                                                               | 1000MHz~8600MHz | -13dBm | 1MHz   | -43.45 | pass |
| Mid frequency<br>815.0125MHz                                  | 9kHz~150kHz     | -13dBm | 1kHz   | -83.60 | pass |
|                                                               | 150kHz~30MHz    | -13dBm | 10kHz  | -81.37 | pass |
|                                                               | 30MHz~1000MHz   | -13dBm | 100kHz | -59.94 | pass |
|                                                               | 1000MHz~8600MHz | -13dBm | 1MHz   | -43.97 | pass |
| High frequency<br>823.9875MHz                                 | 9kHz~150kHz     | -13dBm | 1kHz   | -85.08 | pass |
|                                                               | 150kHz~30MHz    | -13dBm | 10kHz  | -83.22 | pass |
|                                                               | 30MHz~1000MHz   | -13dBm | 100kHz | -60.50 | pass |
|                                                               | 1000MHz~8600MHz | -13dBm | 1MHz   | -44.38 | pass |
| Note:<br>1*--Margin= Maximum mark level- specification limit. |                 |        |        |        |      |

### 6.5 Frequency stability

Test Date (yy-mm-dd): 2017-04-12 to 2017-04-15

Test environment: Normal

Ambient Temp 23.8°C~28.1°C, Humid 44%~59%, Atmospheric Pressure 101kpa

Power supply: AC 120V 50/60Hz

Test Method: KDB 935210 D05 Indus Booster Basic Meas v01r01

Test Requirement: FCC part 90.213 & part 90.539

#### 6.5.1 Limit

Unless noted elsewhere, transmitters used in the services governed by this part must have a minimum frequency stability as specified in the following table 9.

Table 9 Frequency stability limits

| frequency range(MHz) | Minimum Frequency Stability(ppm)                                   |
|----------------------|--------------------------------------------------------------------|
| 758-768/788~798      | ± 2.5                                                              |
| 769-775/799-805      | ± 1.5(Channel Bandwidth 12.5kHz)<br>± 2.5(Channel Bandwidth 25kHz) |
| 806-809/851-854      | ± 1.0                                                              |
| 809-824/854-869      | ± 1.5                                                              |

#### 6.5.2 Test configuration

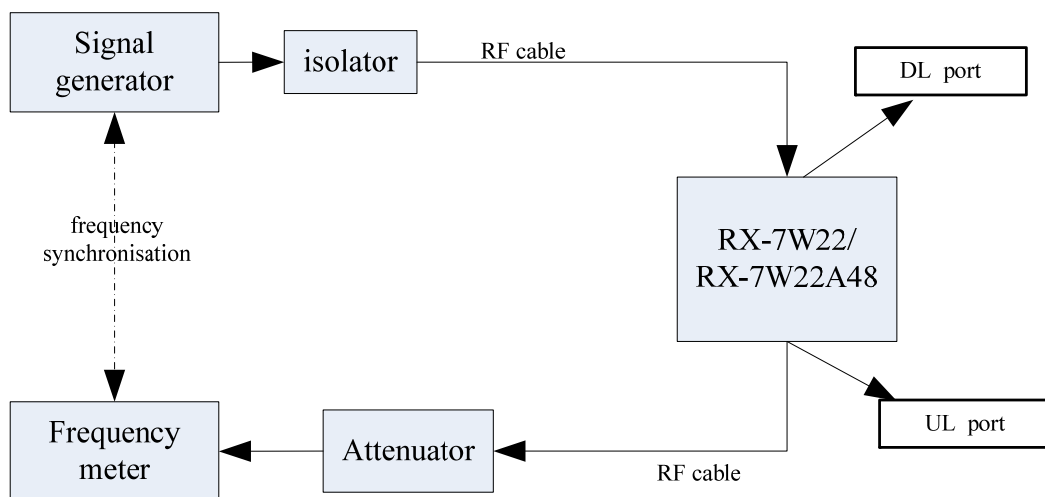


Figure 9: Frequency stability arrangement for Downlink

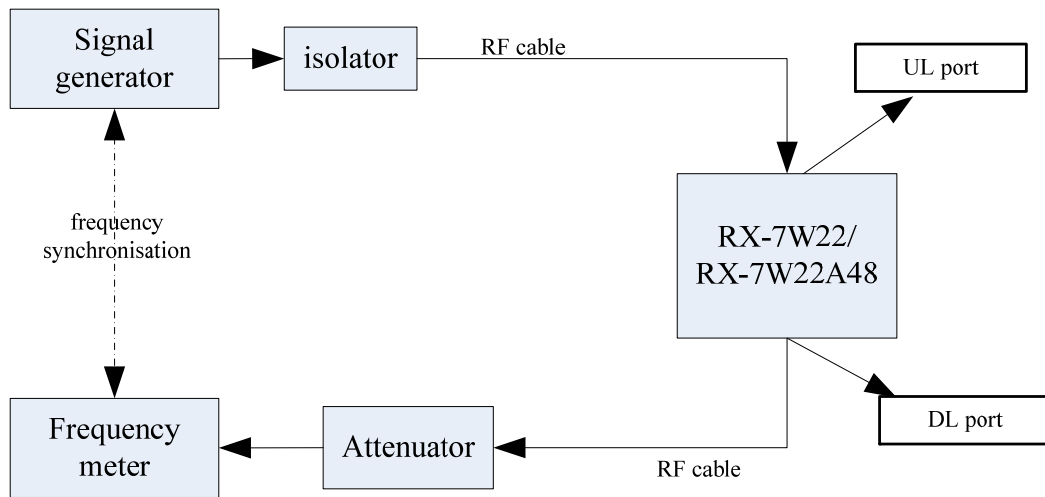


Figure 10: Frequency stability arrangement for Uplink

### 6.5.3 Test procedures

- (1) Connect the equipment as illustrated Figure 9 and Figure 10, when the output power is over the maximum value of the Spectrum Analyzer, add the attenuator to avoid destroying;
- (2) The signal generator should initially be configured to produce CW signals;
- (3) Set the signal generator frequency to the center frequency of the EUT operating band;
- (4) Keep signal source and frequency meter synchronization;
- (5) Record Output frequency value when level as the ALC threshold level;
- (6) Read the frequency at the relative temperature;
- (7) Vary the voltage from -15% nominal voltage to +15% voltage;
- (8) Repeat RF channels to be tested for single-carrier: Low frequency and High frequency;



## 6.5.4 Test Results

### 6.5.4.1 700MHz Band

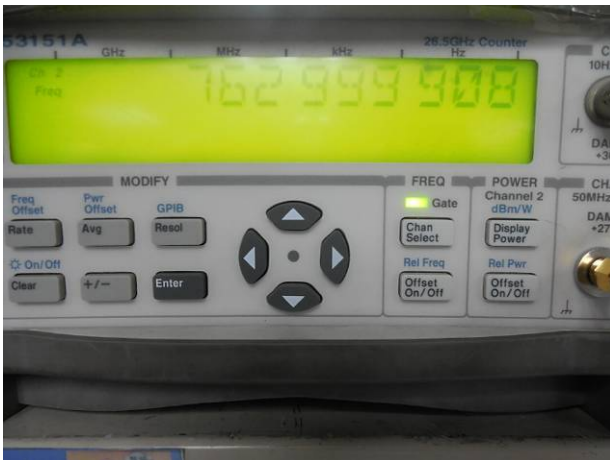
| Voltage                                            | Input carrier frequency(MHz) | Output carrier frequency(MHz) | Limit(ppm) | Frequency stability(ppm) | Result |
|----------------------------------------------------|------------------------------|-------------------------------|------------|--------------------------|--------|
| <b>1). Downlink Frequency range: 758MHz~768MHz</b> |                              |                               |            |                          |        |
| AC 102V(120*85%)                                   | 763.0                        | 762.999908                    | ±2.5       | -0.121                   | pass   |
| AC 120V                                            | 763.0                        | 762.999908                    | ±2.5       | -0.121                   | pass   |
| AC 138V(120*115%)                                  | 763.0                        | 762.999908                    | ±2.5       | -0.121                   | pass   |
| <b>Frequency range: 769MHz~775MHz</b>              |                              |                               |            |                          |        |
| AC 102V(120*85%)                                   | 772.0125                     | 772.012410                    | ±1.5       | -0.117                   | pass   |
| AC 120V                                            | 772.0125                     | 772.012410                    | ±1.5       | -0.117                   | pass   |
| AC 138V(120*115%)                                  | 772.0125                     | 772.012410                    | ±1.5       | -0.117                   | pass   |
| <b>2). Uplink Frequency range: 788MHz~798MHz</b>   |                              |                               |            |                          |        |
| AC 102V(120*85%)                                   | 793.0                        | 792.999900                    | ±2.5       | -0.126                   | pass   |
| AC 120V                                            | 793.0                        | 792.999900                    | ±2.5       | -0.126                   | pass   |
| AC 138V(120*115%)                                  | 793.0                        | 792.999900                    | ±2.5       | -0.126                   | pass   |
| <b>Frequency range: 799MHz~805MHz</b>              |                              |                               |            |                          |        |
| AC 102V(120*85%)                                   | 802.0125                     | 802.012401                    | ±1.5       | -0.123                   | pass   |
| AC 120V                                            | 802.0125                     | 802.012401                    | ±1.5       | -0.123                   | pass   |
| AC 138V(120*115%)                                  | 802.0125                     | 802.012401                    | ±1.5       | -0.123                   | pass   |

### 6.5.4.2 800MHz Band

| Voltage                                            | Input carrier frequency(MHz) | Output carrier frequency(MHz) | Limit(ppm) | Frequency stability(ppm) | Result |
|----------------------------------------------------|------------------------------|-------------------------------|------------|--------------------------|--------|
| <b>1). Downlink Frequency range: 851MHz~869MHz</b> |                              |                               |            |                          |        |
| AC 102V(120*85%)                                   | 860.0125                     | 860.012395                    | ±1.0       | -0.122                   | pass   |
| AC 120V                                            | 860.0125                     | 860.012395                    | ±1.0       | -0.122                   | pass   |
| AC 138V(120*115%)                                  | 860.0125                     | 860.012395                    | ±1.0       | -0.122                   | pass   |
| <b>2). Uplink Frequency range: 806MHz~824MHz</b>   |                              |                               |            |                          |        |
| AC 102V(120*85%)                                   | 815.0125                     | 815.012415                    | ±1.0       | -0.104                   | pass   |
| AC 120V                                            | 815.0125                     | 815.012415                    | ±1.0       | -0.104                   | pass   |
| AC 138V(120*115%)                                  | 815.0125                     | 815.012415                    | ±1.0       | -0.104                   | pass   |

### 6.5.5 Test screenshot

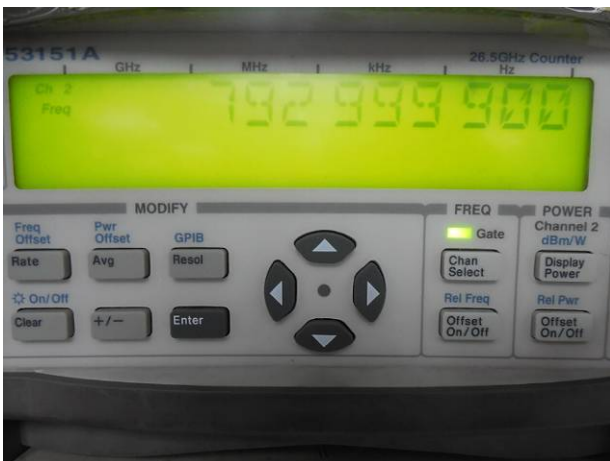
#### 6.5.5.1 700MHz Band



Mid Frequency: 763.0MHz



Mid Frequency: 772.0125MHz



Mid Frequency: 793.0MHz



Mid Frequency: 802.0125MHz

#### 6.5.5.2 800MHz Band



Downlink Frequency: 860.0125MHz



Uplink Frequency: 815.0125MHz

### 6.6 Noise figure

Test Date (yy-mm-dd): 2017-04-12 to 2017-04-15

Test environment: Normal

Ambient Temp 23.8°C~28.1°C, Humid 44%~59%, Atmospheric Pressure 101kpa

Power supply: AC 120V 50/60Hz

Test Method: KDB 935210 D05 Indus Booster Basic Meas v01r01

Test Requirement: FCC part 90.213 & part 90.539

#### 6.6.1 Limit

The noise figure limit of a signal booster must be given in table 10.

Table 10 Noise figure limits

| frequency range(MHz) | Max. Noise figure limit(dB) |
|----------------------|-----------------------------|
| 758-768/788~798      | 9                           |
| 769-775/799-805      | 9                           |
| 806-824/851-869      | 9                           |

#### 6.6.2 Test configuration

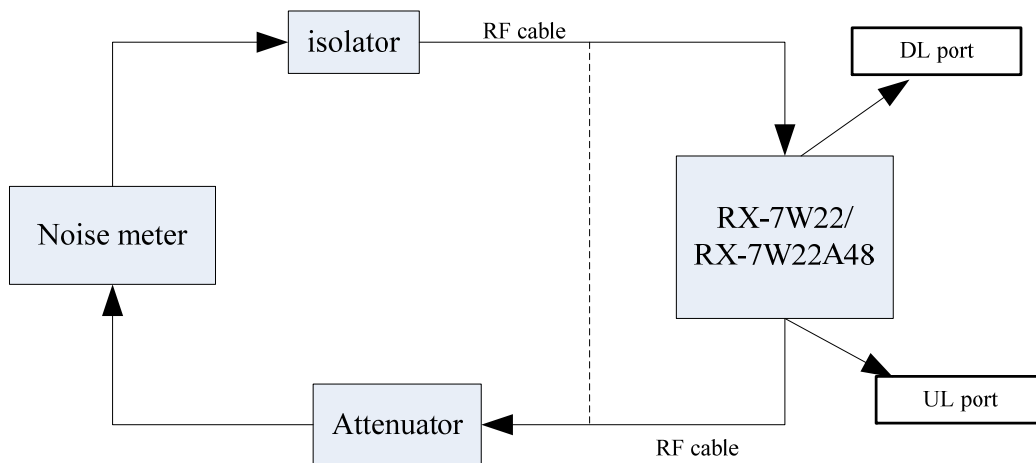


Figure 11: Noise figure arrangement for Downlink

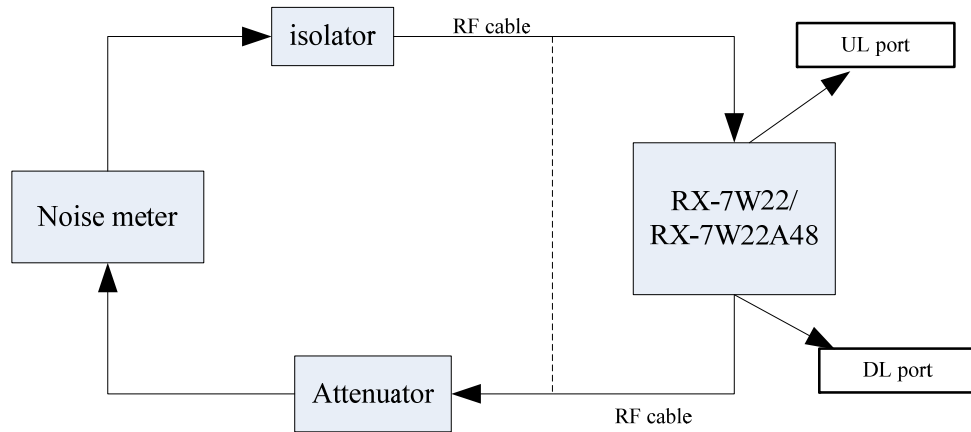


Figure 12: Noise figure arrangement for Uplink

### 6.6.3 Test procedures

- (1) Connect the equipment as illustrated Figure 11 and Figure 12, when the output power is over the maximum value of the Noise meter, add the attenuator to avoid destroying;
- (2) Set the signal generator frequency to the center frequency of the EUT operating band and maximum gain;
- (3) Set the relevant parameters and connect the dotted line to calibrate;
- (4) After calibrating , According to the solid line connecting and testing Noise figure and record data;
- (5) Repeat RF channels to be tested for single-carrier: Low frequency and High frequency Repeat steps (2) to (4);