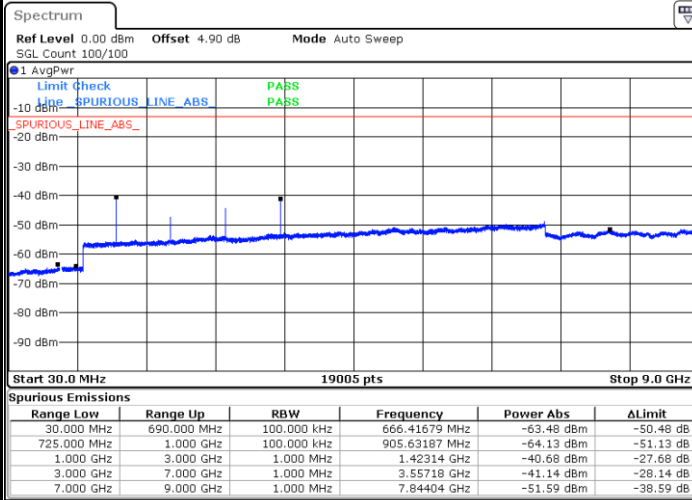




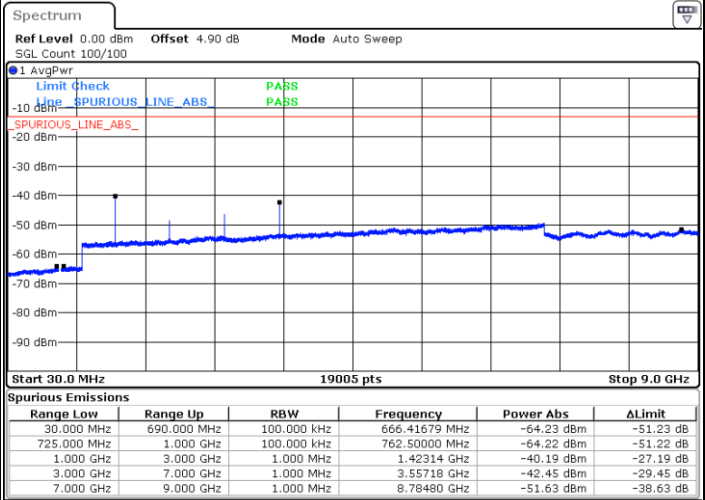
## LTE Band 12 / 5MHz

## Highest Channel / QPSK



Date: 9 NOV. 2019 12:39:58

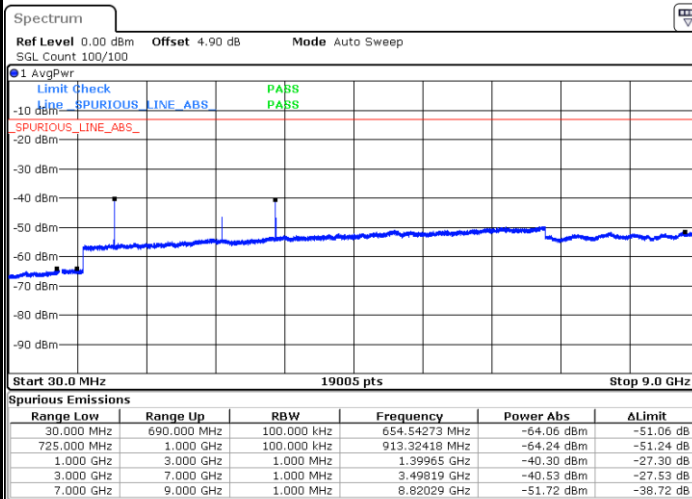
## Highest Channel / 16QAM



Date: 9 NOV. 2019 12:40:52

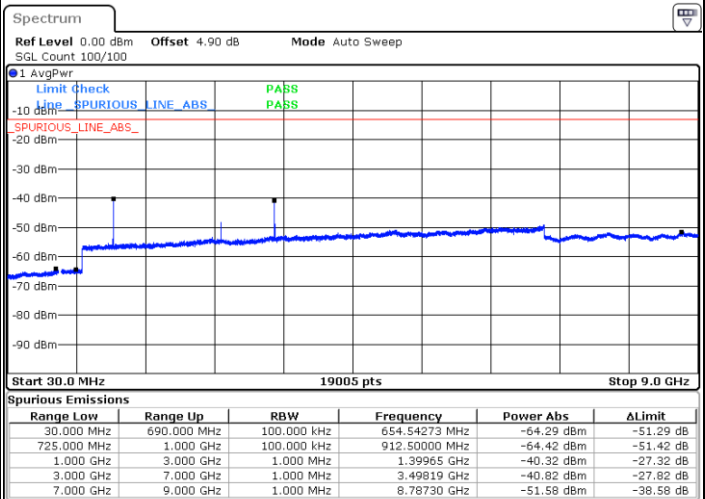
## LTE Band 12 / 10MHz

## Lowest Channel / QPSK



Date: 9 NOV. 2019 12:52:45

## Lowest Channel / 16QAM

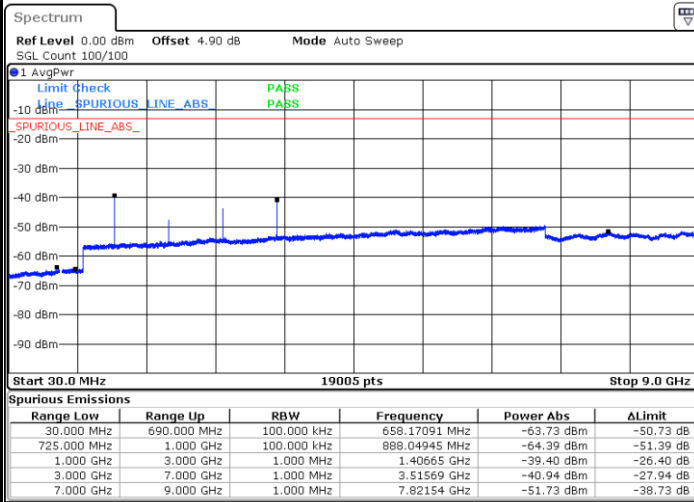


Date: 9 NOV. 2019 12:53:40



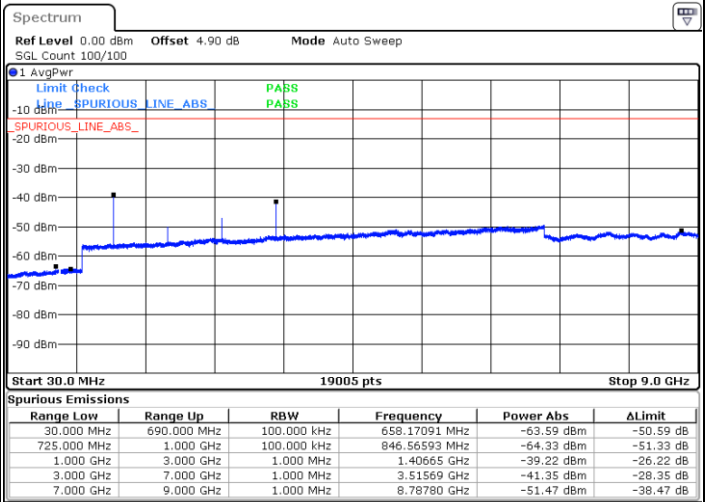
## LTE Band 12 / 10MHz

## Middle Channel / QPSK



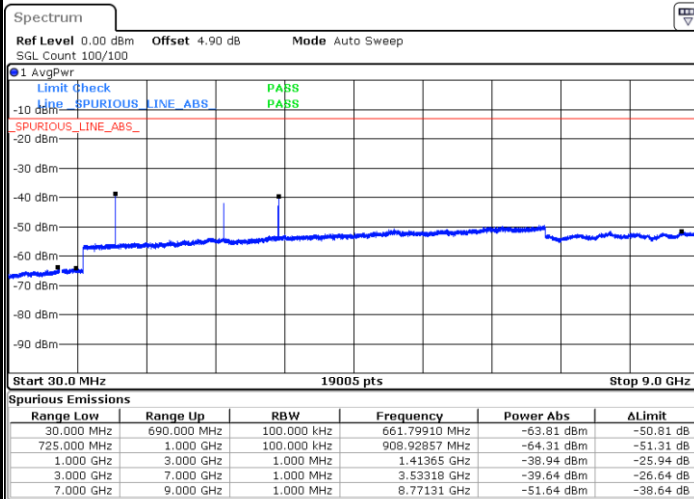
Date: 9 NOV. 2019 12:55:28

## Middle Channel / 16QAM



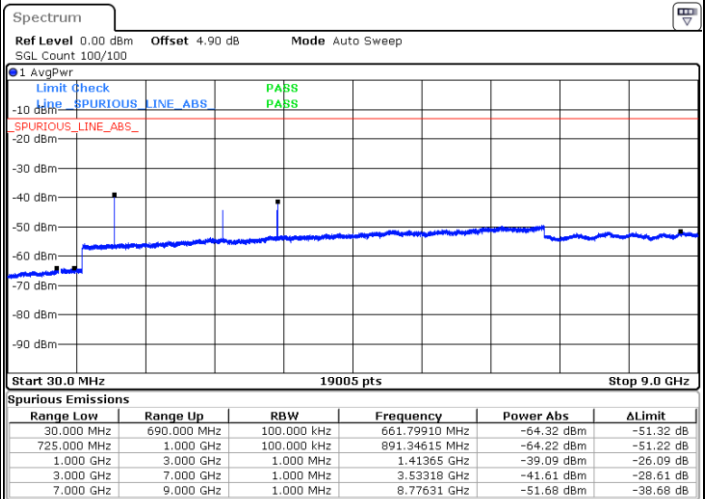
Date: 9 NOV. 2019 12:54:34

## Highest Channel / QPSK



Date: 9 NOV. 2019 12:56:22

## Highest Channel / 16QAM



Date: 9 NOV. 2019 12:57:16

## Frequency Stability

| Test Conditions  |                   | LTE Band 12 (QPSK) / Middle Channel | Limit   |
|------------------|-------------------|-------------------------------------|---------|
| Temperature (°C) | Voltage (Volt)    | BW 10MHz                            | Note 2. |
|                  |                   | Deviation (ppm)                     | Result  |
| 50               | Normal Voltage    | 0.0006                              | PASS    |
| 40               | Normal Voltage    | 0.0004                              |         |
| 30               | Normal Voltage    | 0.0015                              |         |
| 20(Ref.)         | Normal Voltage    | 0.0000                              |         |
| 10               | Normal Voltage    | 0.0005                              |         |
| 0                | Normal Voltage    | 0.0016                              |         |
| -10              | Normal Voltage    | 0.0021                              |         |
| -20              | Normal Voltage    | 0.0001                              |         |
| -30              | Normal Voltage    | 0.0020                              |         |
| 20               | Maximum Voltage   | 0.0003                              |         |
| 20               | Normal Voltage    | 0.0002                              |         |
| 20               | Battery End Point | 0.0018                              |         |

**Note:**

1. Normal Voltage =5 V. ; Battery End Point (BEP) =4.75 V. ; Maximum Voltage =5.25 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.



## Appendix B. Test Results of Radiated Test

### Radiated Spurious Emission

| LTE Band 2 / 20MHz / QPSK |                   |              |               |                   |                    |                      |                       |                    |
|---------------------------|-------------------|--------------|---------------|-------------------|--------------------|----------------------|-----------------------|--------------------|
| Channel                   | Frequency ( MHz ) | EIRP ( dBm ) | Limit ( dBm ) | Over Limit ( dB ) | S.G. Power ( dBm ) | TX Cable loss ( dB ) | TX Antenna Gain (dBi) | Polarization (H/V) |
| Lowest                    | 3702              | -56.79       | -13           | -43.79            | -69.05             | 2.641                | 14.90                 | H                  |
|                           | 5553              | -55.04       | -13           | -42.04            | -66.90             | 2.94                 | 14.80                 | H                  |
|                           | 7404              | -50.47       | -13           | -37.47            | -60.24             | 3.39                 | 13.16                 | H                  |
|                           | 3702              | -57.32       | -13           | -44.32            | -69.58             | 2.64                 | 14.90                 | V                  |
|                           | 5553              | -51.09       | -13           | -38.09            | -62.95             | 2.94                 | 14.80                 | V                  |
|                           | 7404              | -50.26       | -13           | -37.26            | -60.03             | 3.39                 | 13.16                 | V                  |
| Middle                    | 3741              | -56.41       | -13           | -43.41            | -68.67             | 2.641                | 14.90                 | H                  |
|                           | 5613              | -42.39       | -13           | -29.39            | -54.25             | 2.94                 | 14.80                 | H                  |
|                           | 7488              | -50.40       | -13           | -37.40            | -60.17             | 3.39                 | 13.16                 | H                  |
|                           | 3741              | -53.47       | -13           | -40.47            | -65.73             | 2.64                 | 14.90                 | V                  |
|                           | 5613              | -42.03       | -13           | -29.03            | -53.89             | 2.94                 | 14.80                 | V                  |
|                           | 7488              | -50.03       | -13           | -37.03            | -59.80             | 3.39                 | 13.16                 | V                  |
| Highest                   | 3783              | -57.17       | -13           | -44.17            | -69.43             | 2.641                | 14.90                 | H                  |
|                           | 5673              | -54.09       | -13           | -41.09            | -65.95             | 2.94                 | 14.80                 | H                  |
|                           | 7560              | -50.52       | -13           | -37.52            | -60.29             | 3.39                 | 13.16                 | H                  |
|                           | 3783              | -55.85       | -13           | -42.85            | -68.11             | 2.64                 | 14.90                 | V                  |
|                           | 5673              | -51.29       | -13           | -38.29            | -63.15             | 2.94                 | 14.80                 | V                  |
|                           | 7560              | -50.28       | -13           | -37.28            | -60.05             | 3.39                 | 13.16                 | V                  |

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.



| LTE Band 4 / 20MHz / QPSK |                      |                 |                  |                         |                          |                            |                             |                       |
|---------------------------|----------------------|-----------------|------------------|-------------------------|--------------------------|----------------------------|-----------------------------|-----------------------|
| Channel                   | Frequency<br>( MHz ) | EIRP<br>( dBm ) | Limit<br>( dBm ) | Over<br>Limit<br>( dB ) | S.G.<br>Power<br>( dBm ) | TX Cable<br>loss<br>( dB ) | TX Antenna<br>Gain<br>(dBi) | Polarization<br>(H/V) |
| Lowest                    | 3423                 | -60.24          | -13              | -47.24                  | -70.98                   | 2.604                      | 13.34                       | H                     |
|                           | 5133                 | -52.65          | -13              | -39.65                  | -63.16                   | 3.011                      | 13.52                       | H                     |
|                           | 6840                 | -53.79          | -13              | -40.79                  | -63.99                   | 3.271                      | 13.47                       | H                     |
|                           | 3423                 | -61.29          | -13              | -48.29                  | -72.03                   | 2.604                      | 13.34                       | V                     |
|                           | 5133                 | -54.04          | -13              | -41.04                  | -64.55                   | 3.011                      | 13.52                       | V                     |
|                           | 6840                 | -52.63          | -13              | -39.63                  | -62.83                   | 3.271                      | 13.47                       | V                     |
| Middle                    | 3447                 | -59.87          | -13              | -46.87                  | -70.61                   | 2.604                      | 13.34                       | H                     |
|                           | 5172                 | -51.34          | -13              | -38.34                  | -61.85                   | 3.011                      | 13.52                       | H                     |
|                           | 6900                 | -53.35          | -13              | -40.35                  | -63.55                   | 3.271                      | 13.47                       | H                     |
|                           | 3447                 | -61.22          | -13              | -48.22                  | -71.96                   | 2.604                      | 13.34                       | V                     |
|                           | 5172                 | -51.50          | -13              | -38.50                  | -62.01                   | 3.011                      | 13.52                       | V                     |
|                           | 6900                 | -53.01          | -13              | -40.01                  | -63.21                   | 3.271                      | 13.47                       | V                     |
| Highest                   | 3471                 | -60.64          | -13              | -47.64                  | -71.38                   | 2.604                      | 13.34                       | H                     |
|                           | 5208                 | -47.65          | -13              | -34.65                  | -58.16                   | 3.011                      | 13.52                       | H                     |
|                           | 6948                 | -52.53          | -13              | -39.53                  | -62.73                   | 3.271                      | 13.47                       | H                     |
|                           | 3471                 | -61.83          | -13              | -48.83                  | -72.57                   | 2.604                      | 13.34                       | V                     |
|                           | 5208                 | -50.90          | -13              | -37.90                  | -61.41                   | 3.011                      | 13.52                       | V                     |
|                           | 6948                 | -52.01          | -13              | -39.01                  | -62.21                   | 3.271                      | 13.47                       | V                     |

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.



| LTE Band 5 / 10MHz / QPSK |                   |             |               |                   |                    |                      |                       |                    |
|---------------------------|-------------------|-------------|---------------|-------------------|--------------------|----------------------|-----------------------|--------------------|
| Channel                   | Frequency ( MHz ) | ERP ( dBm ) | Limit ( dBm ) | Over Limit ( dB ) | S.G. Power ( dBm ) | TX Cable loss ( dB ) | TX Antenna Gain (dBi) | Polarization (H/V) |
| Lowest                    | 1650              | -48.69      | -13           | -35.69            | -55.66             | 1.58                 | 10.70                 | H                  |
|                           | 2474              | -38.58      | -13           | -25.58            | -46.83             | 2.102                | 12.50                 | H                  |
|                           | 3300              | -46.37      | -13           | -33.37            | -55.26             | 2.856                | 13.90                 | H                  |
|                           | 4122              | -55.64      | -13           | -42.64            | -64.10             | 2.689                | 13.30                 | H                  |
|                           | 1650              | -54.60      | -13           | -41.60            | -61.57             | 1.58                 | 10.70                 | V                  |
|                           | 2474              | -47.49      | -13           | -34.49            | -55.74             | 2.10                 | 12.50                 | V                  |
|                           | 3300              | -54.56      | -13           | -41.56            | -63.45             | 2.86                 | 13.90                 | V                  |
|                           | 4122              | -58.92      | -13           | -45.92            | -67.38             | 2.69                 | 13.30                 | V                  |
| Middle                    | 1664              | -46.16      | -13           | -33.16            | -53.13             | 1.58                 | 10.70                 | H                  |
|                           | 2496              | -35.00      | -13           | -22.00            | -43.25             | 2.102                | 12.50                 | H                  |
|                           | 3330              | -48.31      | -13           | -35.31            | -57.20             | 2.856                | 13.90                 | H                  |
|                           | 4160.45           | -56.21      | -13           | -43.21            | -64.67             | 2.689                | 13.30                 | H                  |
|                           | 1664              | -49.79      | -13           | -36.79            | -56.76             | 1.58                 | 10.70                 | V                  |
|                           | 2496              | -45.27      | -13           | -32.27            | -53.52             | 2.10                 | 12.50                 | V                  |
|                           | 3330              | -57.88      | -13           | -44.88            | -66.77             | 2.86                 | 13.90                 | V                  |
|                           | 4158              | -58.87      | -13           | -45.87            | -67.33             | 2.69                 | 13.30                 | V                  |
| Highest                   | 1680              | -50.90      | -13           | -37.90            | -57.87             | 1.58                 | 10.70                 | H                  |
|                           | 2518              | -41.42      | -13           | -28.42            | -49.67             | 2.102                | 12.50                 | H                  |
|                           | 3360              | -54.55      | -13           | -41.55            | -63.44             | 2.856                | 13.90                 | H                  |
|                           | 4200              | -58.86      | -13           | -45.86            | -67.32             | 2.689                | 13.30                 | H                  |
|                           | 1680              | -58.82      | -13           | -45.82            | -65.79             | 1.58                 | 10.70                 | V                  |
|                           | 2518              | -52.09      | -13           | -39.09            | -60.34             | 2.10                 | 12.50                 | V                  |
|                           | 3360              | -59.25      | -13           | -46.25            | -68.14             | 2.86                 | 13.90                 | V                  |
|                           | 4200              | -59.40      | -13           | -46.40            | -67.86             | 2.69                 | 13.30                 | V                  |

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.



| LTE Band 7 / 20MHz / QPSK |                      |                 |                  |                         |                          |                            |                             |                       |
|---------------------------|----------------------|-----------------|------------------|-------------------------|--------------------------|----------------------------|-----------------------------|-----------------------|
| Channel                   | Frequency<br>( MHz ) | EIRP<br>( dBm ) | Limit<br>( dBm ) | Over<br>Limit<br>( dB ) | S.G.<br>Power<br>( dBm ) | TX Cable<br>loss<br>( dB ) | TX Antenna<br>Gain<br>(dBi) | Polarization<br>(H/V) |
| Lowest                    | 5000                 | -48.41          | -25              | -23.41                  | -58.62                   | 3.03                       | 13.24                       | H                     |
|                           | 7504                 | -47.49          | -25              | -22.49                  | -56.94                   | 3.56                       | 13.01                       | H                     |
|                           | 10000                | -56.47          | -25              | -31.47                  | -65.99                   | 3.92                       | 13.44                       | H                     |
|                           | 5000                 | -53.84          | -25              | -28.84                  | -64.05                   | 3.03                       | 13.24                       | V                     |
|                           | 7504                 | -48.59          | -25              | -23.59                  | -58.04                   | 3.56                       | 13.01                       | V                     |
|                           | 10000                | -55.57          | -25              | -30.57                  | -65.09                   | 3.92                       | 13.44                       | V                     |
| Middle                    | 5052                 | -44.87          | -25              | -19.87                  | -55.08                   | 3.03                       | 13.24                       | H                     |
|                           | 7580                 | -42.18          | -25              | -17.18                  | -51.63                   | 3.56                       | 13.01                       | H                     |
|                           | 10100                | -56.53          | -25              | -31.53                  | -66.05                   | 3.92                       | 13.44                       | H                     |
|                           | 5052                 | -44.30          | -25              | -19.30                  | -54.51                   | 3.03                       | 13.24                       | V                     |
|                           | 7576                 | -39.49          | -25              | -14.49                  | -48.94                   | 3.56                       | 13.01                       | V                     |
|                           | 10100                | -57.23          | -25              | -32.23                  | -66.75                   | 3.92                       | 13.44                       | V                     |
| Highest                   | 5100                 | -54.33          | -25              | -29.33                  | -64.54                   | 3.03                       | 13.24                       | H                     |
|                           | 7652                 | -49.81          | -25              | -24.81                  | -59.26                   | 3.56                       | 13.01                       | H                     |
|                           | 10200                | -57.34          | -25              | -32.34                  | -66.86                   | 3.92                       | 13.44                       | H                     |
|                           | 5100                 | -51.95          | -25              | -26.95                  | -62.16                   | 3.03                       | 13.24                       | V                     |
|                           | 7652                 | -57.14          | -25              | -32.14                  | -66.59                   | 3.56                       | 13.01                       | V                     |
|                           | 10200                | -55.61          | -25              | -30.61                  | -65.13                   | 3.92                       | 13.44                       | V                     |

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.



| LTE Band 12 / 10MHz / QPSK |                      |                |                  |                         |                          |                            |                             |                       |
|----------------------------|----------------------|----------------|------------------|-------------------------|--------------------------|----------------------------|-----------------------------|-----------------------|
| Channel                    | Frequency<br>( MHz ) | ERP<br>( dBm ) | Limit<br>( dBm ) | Over<br>Limit<br>( dB ) | S.G.<br>Power<br>( dBm ) | TX Cable<br>loss<br>( dB ) | TX Antenna<br>Gain<br>(dBi) | Polarization<br>(H/V) |
| Lowest                     | 1400                 | -52.35         | -13              | -39.35                  | -59.32                   | 1.58                       | 10.70                       | H                     |
|                            | 2098                 | -59.59         | -13              | -46.59                  | -67.84                   | 2.102                      | 12.50                       | H                     |
|                            | 2798                 | -63.72         | -13              | -50.72                  | -72.61                   | 2.856                      | 13.90                       | H                     |
|                            | 3498                 | -62.78         | -13              | -49.78                  | -71.24                   | 2.689                      | 13.30                       | H                     |
|                            | 1400                 | -59.87         | -13              | -46.87                  | -66.84                   | 1.58                       | 10.70                       | V                     |
|                            | 2098                 | -60.91         | -13              | -47.91                  | -69.16                   | 2.10                       | 12.50                       | V                     |
|                            | 2798                 | -63.50         | -13              | -50.50                  | -72.39                   | 2.86                       | 13.90                       | V                     |
|                            | 3498                 | -63.58         | -13              | -50.58                  | -72.04                   | 2.69                       | 13.30                       | V                     |
| Middle                     | 1406                 | -57.37         | -13              | -44.37                  | -64.34                   | 1.58                       | 10.70                       | H                     |
|                            | 2110                 | -60.91         | -13              | -47.91                  | -69.16                   | 2.102                      | 12.50                       | H                     |
|                            | 2812                 | -63.74         | -13              | -50.74                  | -72.63                   | 2.856                      | 13.90                       | H                     |
|                            | 3516                 | -62.65         | -13              | -49.65                  | -71.11                   | 2.689                      | 13.30                       | H                     |
|                            | 1406                 | -63.69         | -13              | -50.69                  | -70.66                   | 1.58                       | 10.70                       | V                     |
|                            | 2110                 | -64.08         | -13              | -51.08                  | -72.33                   | 2.10                       | 12.50                       | V                     |
|                            | 2812                 | -64.11         | -13              | -51.11                  | -73.00                   | 2.86                       | 13.90                       | V                     |
|                            | 3516                 | -63.18         | -13              | -50.18                  | -71.64                   | 2.69                       | 13.30                       | V                     |
| Highest                    | 1414                 | -55.84         | -13              | -42.84                  | -62.81                   | 1.58                       | 10.70                       | H                     |
|                            | 2120                 | -56.57         | -13              | -43.57                  | -64.82                   | 2.102                      | 12.50                       | H                     |
|                            | 2826                 | -61.62         | -13              | -48.62                  | -70.51                   | 2.856                      | 13.90                       | H                     |
|                            | 3534                 | -61.73         | -13              | -48.73                  | -70.19                   | 2.689                      | 13.30                       | H                     |
|                            | 1414                 | -64.73         | -13              | -51.73                  | -71.70                   | 1.58                       | 10.70                       | V                     |
|                            | 2120                 | -58.40         | -13              | -45.40                  | -66.65                   | 2.10                       | 12.50                       | V                     |
|                            | 2826                 | -63.26         | -13              | -50.26                  | -72.15                   | 2.86                       | 13.90                       | V                     |
|                            | 3534                 | -63.01         | -13              | -50.01                  | -71.47                   | 2.69                       | 13.30                       | V                     |

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.