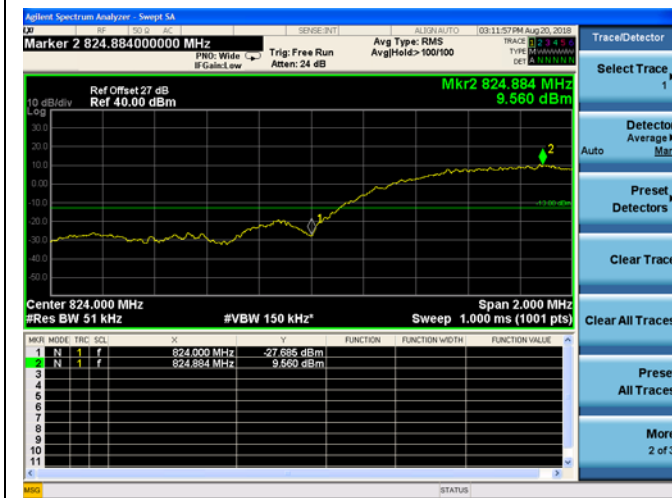




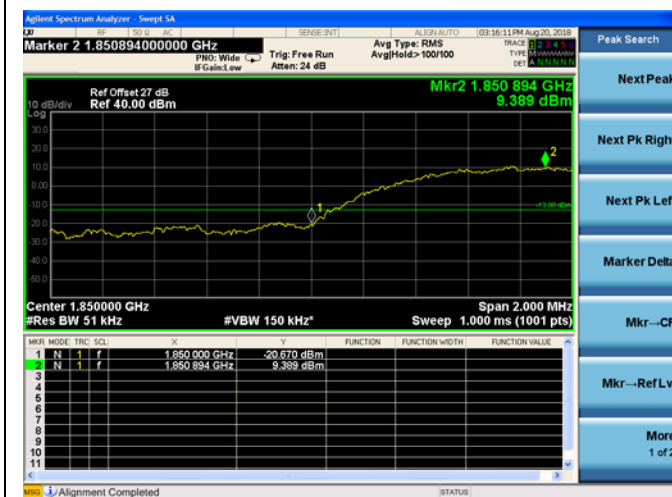
WCDMA 850MHz CH4132 826.4MHz



WCDMA 850MHz CH4233 846.6MHz



WCDMA 1900MHz CH9262 1852.4MHz



WCDMA 1900MHz CH9538 1907.6MHz



2.7. Transmitter Radiated Power (EIRP/ERP)

2.7.1. Requirement

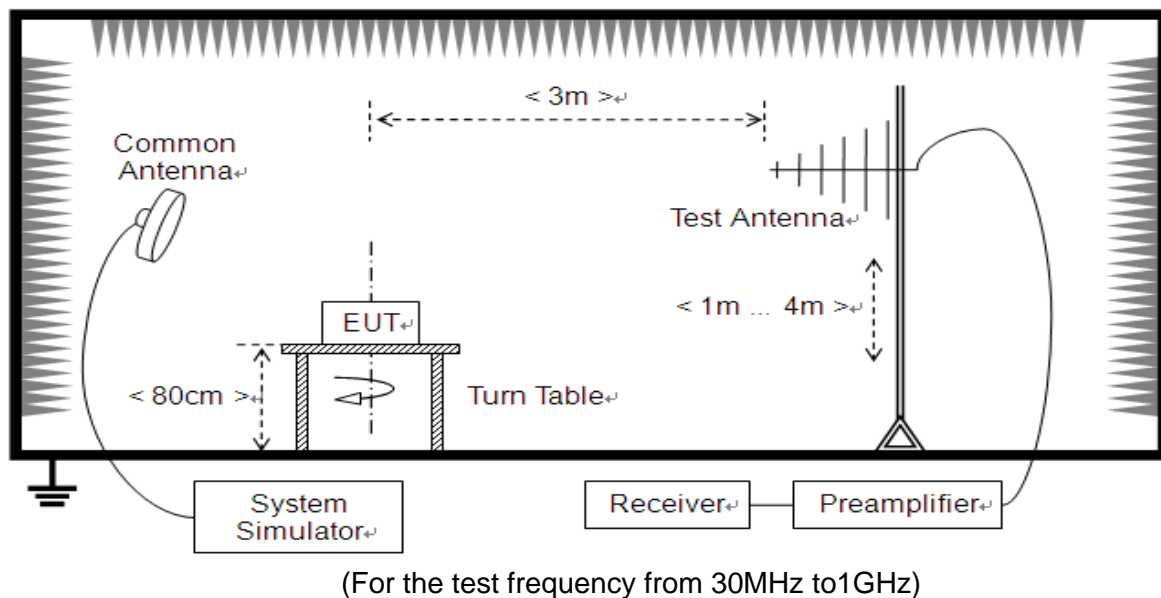
According to FCC section 22.913, the Effective Radiated Power (ERP) of mobile transmitters and auxiliary test transmitters must not exceed 7Watts.

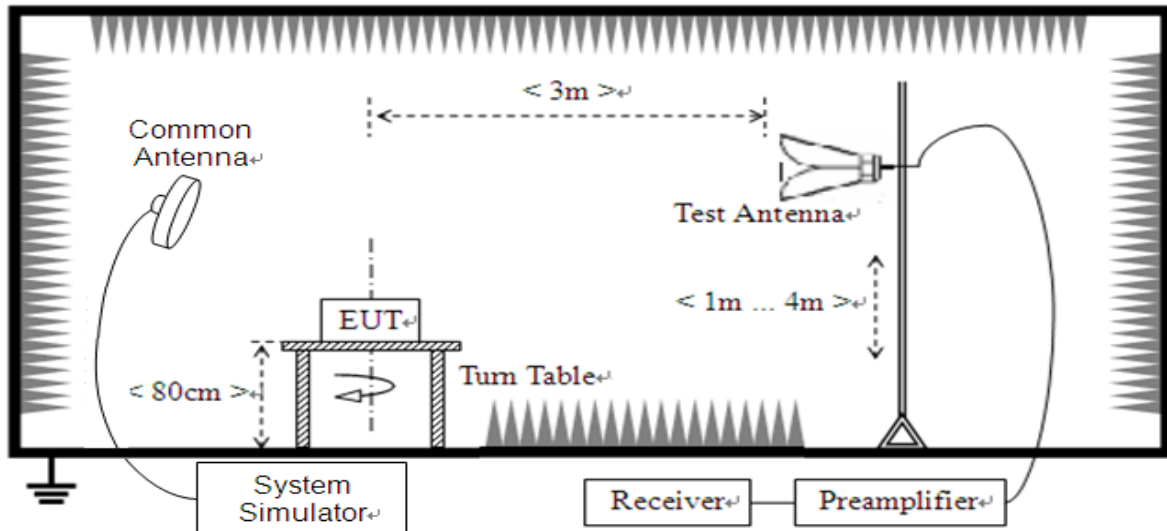
According to FCC section 24.232, the broadband PCS mobile station is limited to 2 Watts e.i.r.p. peak power.

According to FCC section 27.50, mobile, and portable (hand-held) stations is limited to 1 Watts e.i.r.p. peak power.

2.7.2. Test Description

Test Setup:





(For the test frequency above 1GHz)

The EUTs are located in a 3m Full-Anechoic Chamber; the cable loss, air loss and so on of the site as factors are pre-calibrated using the "Substitution" method, and calculated to correct the reading.

A call is established between the EUT and the SS via a Common Antenna. The EUT is commanded by the SS to operate at the maximum and minimum output power (i.e. GSM850MHz band Power Control Level (PCL) = 5/19 and Power Class = 4, GSM1900MHz band Power Control Level (PCL) = 0/15 and Power Class = 1), and only the test result of the maximum output power was recorded. Please refer to section 2.1.3 of this report.

- Step size (dB): 3dB

The Test Antenna is a Bi-Log one (used for 30MHz to 1GHz) or a Horn one (used for above 3GHz), it's located at the same height as the EUT. The Filters consists of Notch Filters and High Pass Filter.



2.7.3. Test Result

The Turn Table is actuated to turn from 0° to 360°, and both horizontal and vertical polarizations of the Test Antenna are used to find the maximum radiated power. The lowest, middle and highest channels are tested.

The substitution corrections are obtained as described below:

$$A_{\text{SUBST}} = P_{\text{SUBST_TX}} - P_{\text{SUBST_RX}} - L_{\text{SUBST_CABLES}} + G_{\text{SUBST_TX_ANT}}$$

$$A_{\text{TOT}} = L_{\text{CABLES}} + A_{\text{SUBST}}$$

Where A_{SUBST} is the final substitution correction including receive antenna gain.

$P_{\text{SUBST_TX}}$ is signal generator level,

$P_{\text{SUBST_RX}}$ is receiver level,

$L_{\text{SUBST_CABLES}}$ is cable losses including TX cable,

$G_{\text{SUBST_TX_ANT}}$ is substitution antenna gain.

A_{TOT} is total correction factor including cable loss and substitution correction

During the test, the data of A_{TOT} was added in the Test Spectrum Analyze, so Spectrum Analyze reading is the final values which contain the data of A_{TOT} .

GSM Test verdict:

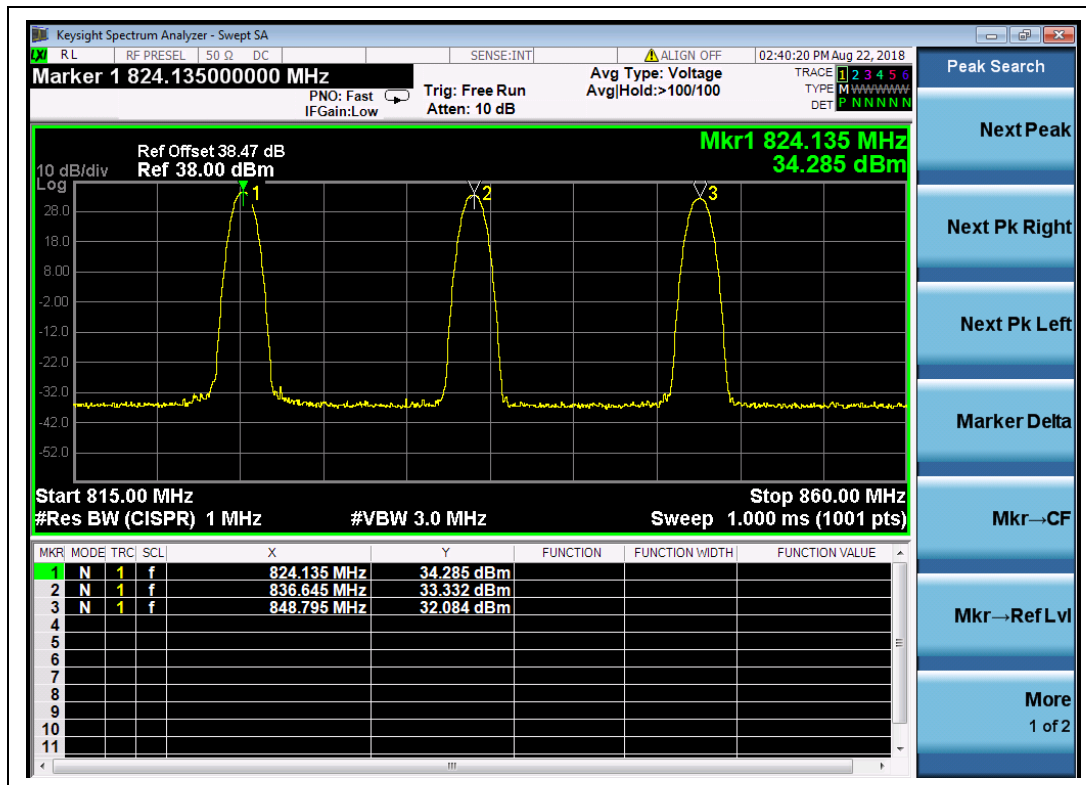
| Band | Channel | Frequency (MHz) | PCL | Measured ERP | | | Limit | | Verdict |
|------------------|---------|-----------------|-----|--------------|-------|--------------------------|-------|---|---------|
| | | | | dBm | W | Refer to Plot | dBm | W | |
| GPRS 850MHz | 128 | 824.20 | 5 | 34.29 | 2.685 | Plot A | 38.5 | 7 | PASS |
| | 190 | 836.60 | 5 | 33.33 | 2.153 | | | | PASS |
| | 251 | 848.80 | 5 | 32.08 | 1.614 | | | | PASS |
| EGPRS 850MHz | 128 | 824.20 | 5 | 33.54 | 2.259 | Plot B ^{Note 1} | 38.5 | 7 | PASS |
| | 190 | 836.60 | 5 | 32.30 | 1.698 | | | | PASS |
| | 251 | 848.80 | 5 | 32.38 | 1.730 | | | | PASS |
| GPRS 1900MHz | 512 | 1850.2 | 5 | 29.17 | 0.826 | Plot C | 33 | 2 | PASS |
| | 661 | 1880.0 | 5 | 28.87 | 0.771 | | | | PASS |
| | 810 | 1909.8 | 5 | 28.81 | 0.760 | | | | PASS |
| EGPRS 1900MHz | 512 | 1850.2 | 0 | 30.89 | 1.227 | Plot D ^{Note 1} | 33 | 2 | PASS |
| | 661 | 1880.0 | 0 | 30.71 | 1.178 | | | | PASS |
| | 810 | 1909.8 | 0 | 31.42 | 1.387 | | | | PASS |

Note 1: For the GPRS and EGPRS model, all the slots were tested and just the worst data were recorded in this report.

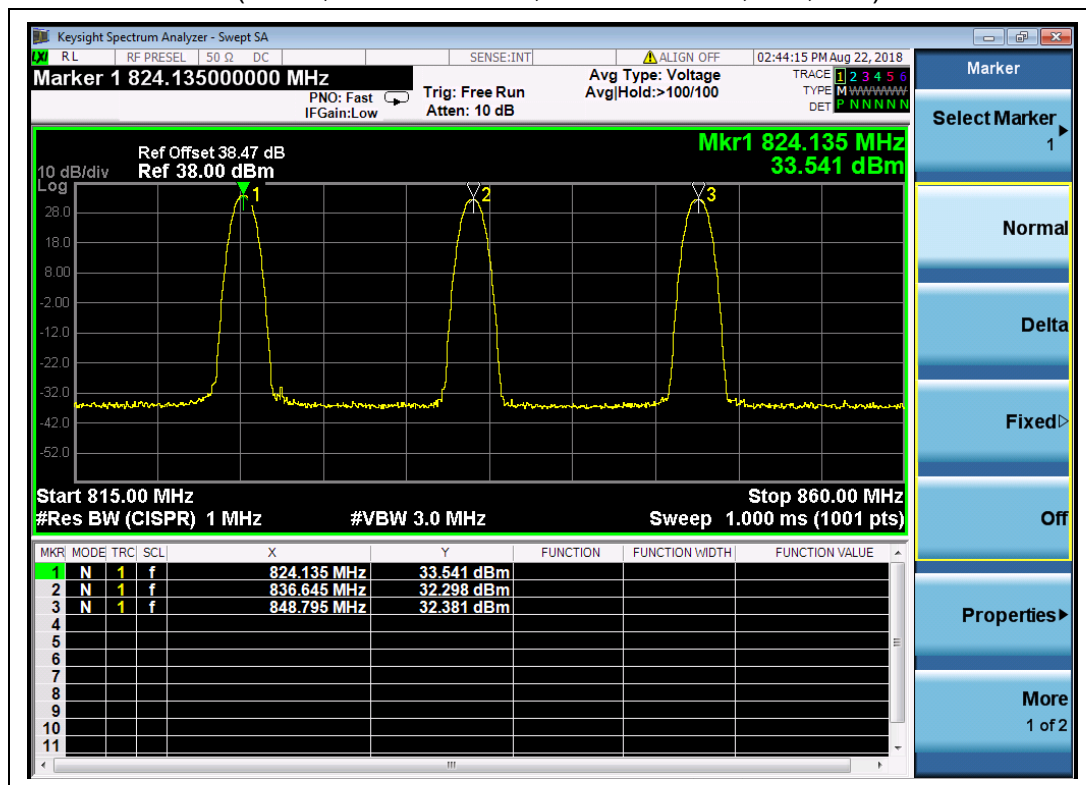
Note 2: Both horizontal and vertical polarizations of the test antenna are evaluated respectively, only the worst data (horizontal) were recorded in this report.



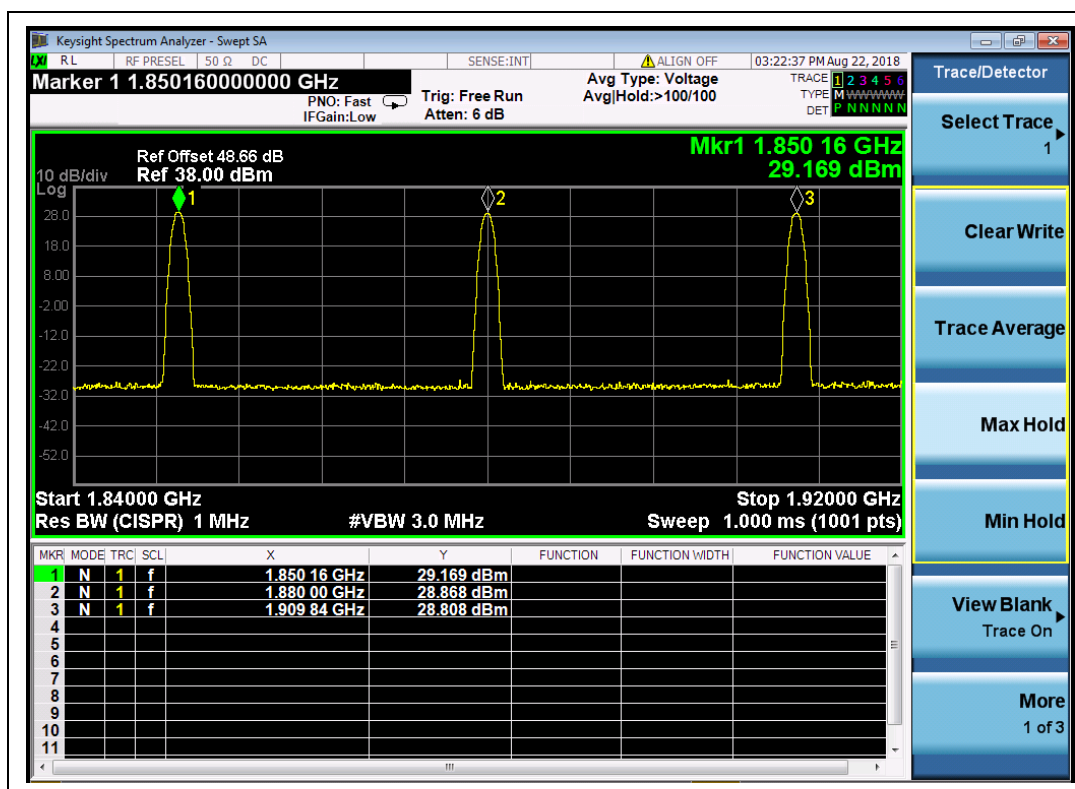
Test Plots:



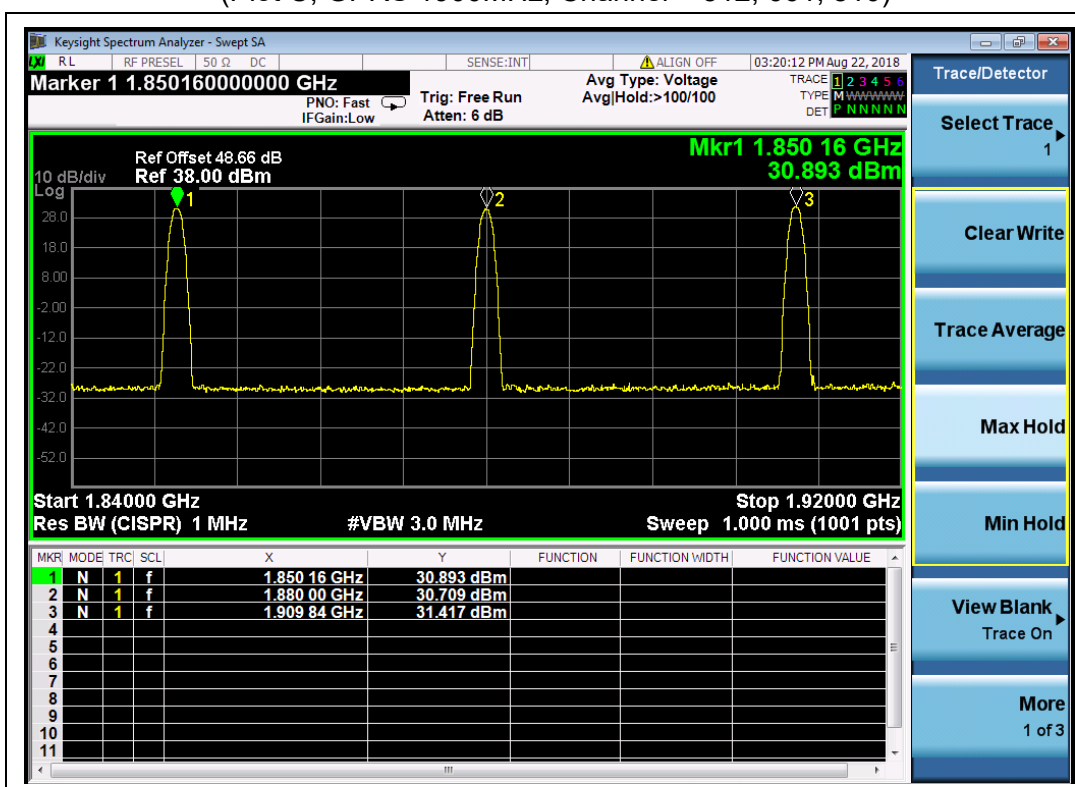
(Plot A, GPRS 850MHz, Channel = 128, 190, 251)



(Plot B, EGPRS 850MHz, Channel = 128, 190, 251)



(Plot C, GPRS 1900MHz, Channel = 512, 661, 810)



(Plot D, EGPRS 1900MHz, Channel = 512, 661, 810)

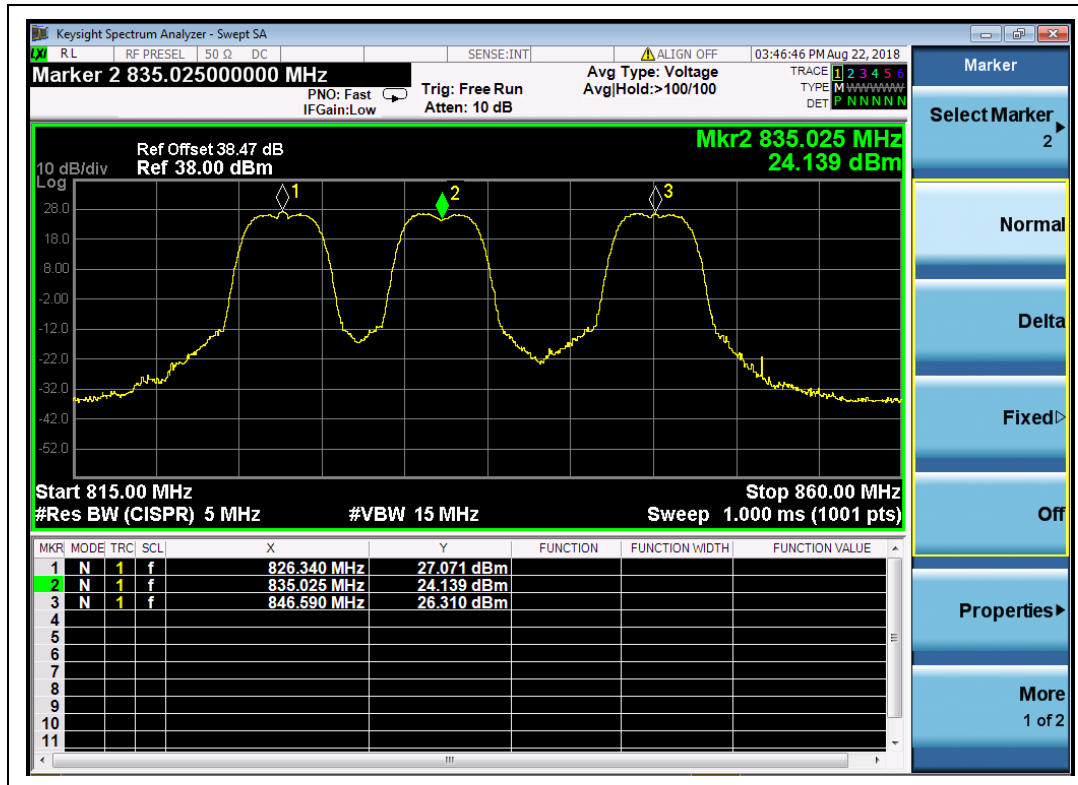


WCDMA Test verdict:

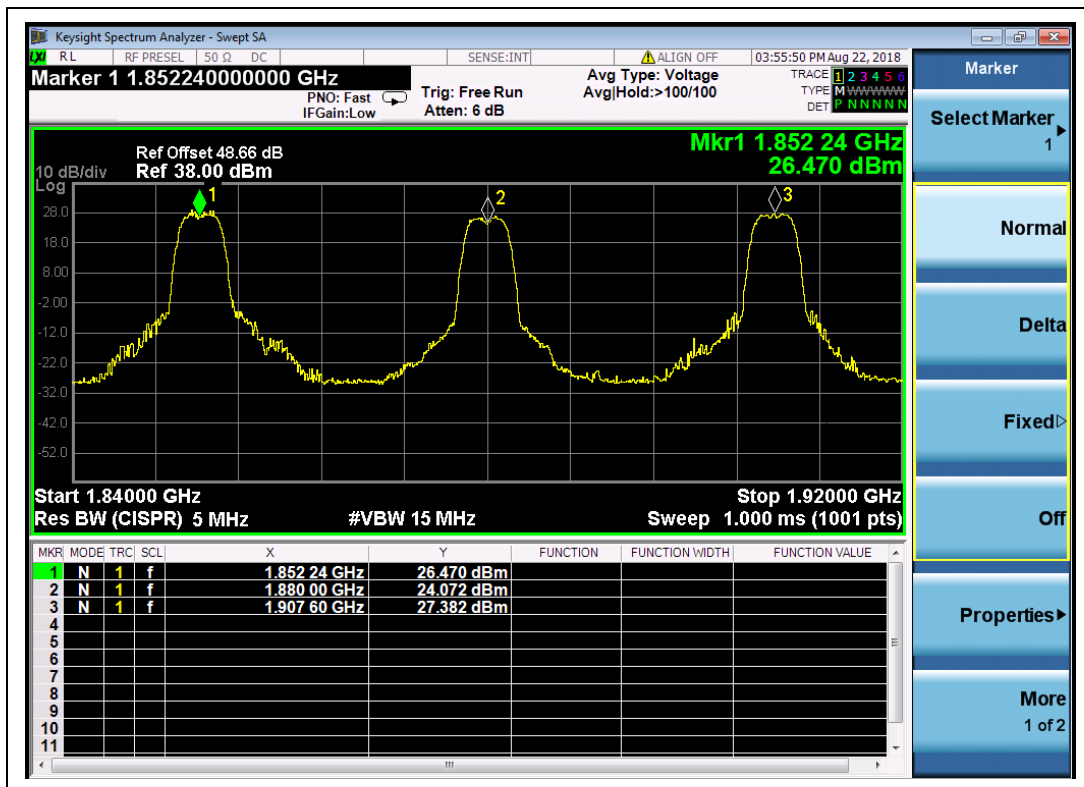
| Band | Channel | Frequency (MHz) | Measured ERP | | | Limit | | Verdict |
|---------------|---------|-----------------|--------------|-------|---------------|-------|---|---------|
| | | | dBm | W | Refer to Plot | dBm | W | |
| WCDMA 850MHz | 4132 | 826.4 | 27.07 | 0.509 | Plot E | 38.5 | 7 | PASS |
| | 4175 | 835.0 | 24.14 | 0.259 | | | | PASS |
| | 4233 | 846.6 | 26.31 | 0.428 | | | | PASS |
| WCDMA 1900MHz | 9262 | 1852.4 | 26.47 | 0.444 | Plot F | 33 | 2 | PASS |
| | 9400 | 1880.0 | 24.07 | 0.255 | | | | PASS |
| | 9538 | 1907.6 | 27.38 | 0.547 | | | | PASS |

Note 1: Both horizontal and vertical polarizations of the test antenna are evaluated respectively, only the worst data (horizontal) were recorded in this report.

Test Plot



(Plot E, WCDMA 850 MHz, Channel = 4132, 4175, 4233)



(Plot F, WCDMA 1900 MHz, Channel = 9262, 9400, 9538)

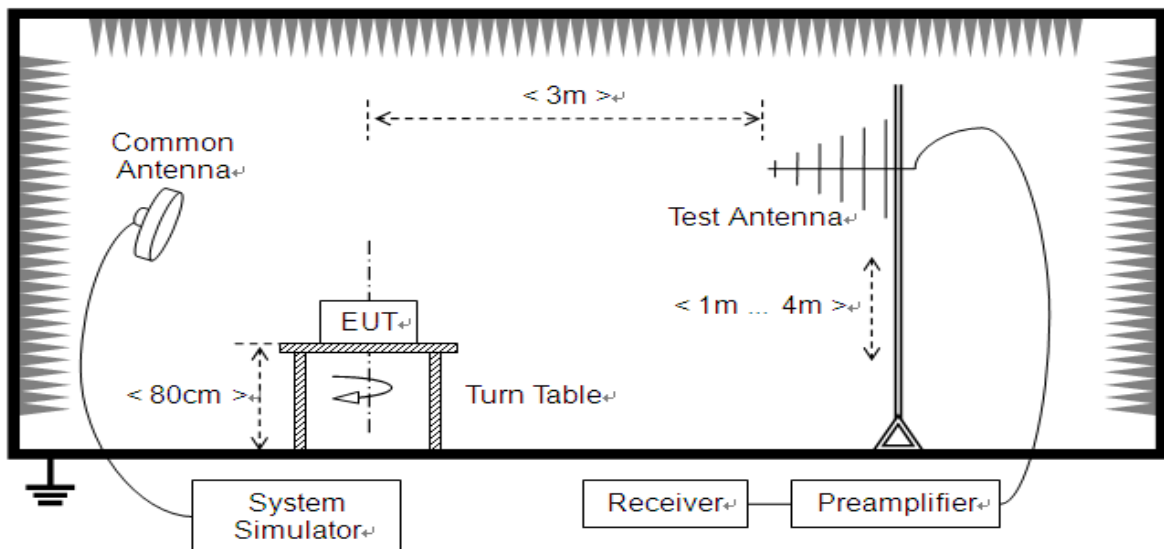
2.8. Radiated Out of Band Emissions

2.8.1. Requirement

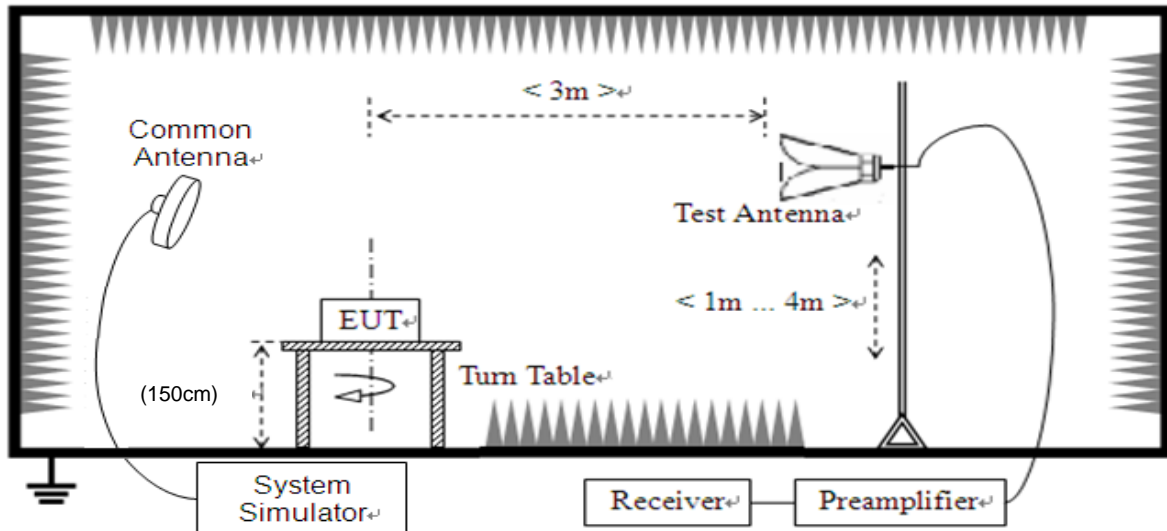
The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43+10*\log(P)$ dB. This calculated to be -13dBm.

2.8.2. Test Description

Test Setup:



(For the test frequency from 30MHz to 1GHz)



(For the test frequency above 1GHz)

The EUT is located in a 3m Full-Anechoic Chamber, the cable loss, air loss and so on of the site as factors are pre-calibrated using the "Substitution" method, and calculated to correct the reading.

A call is established between the EUT and the SS via a Common Antenna. The EUT is commanded by the SS to operate at the maximum and minimum output power (i.e. GSM850MHz band Power Control Level (PCL) = 5/19 and Power Class = 4, GSM1900MHz band Power Control Level (PCL) = 0/15 and Power Class = 1), and only the test result of the maximum output power was recorded. Please refer to section 2.1.3 of this report.

- Step size (dB): 3dB

The Test Antenna is a Bi-Log one (used for 30MHz to 1GHz) and a Horn one (used for above 3 GHz), it's located at the same height as the EUT. The Filters consists of Notch Filters and High Pass Filter.

Note: when doing measurements above 1GHz, the EUT has been within the 3dB cone width of the horn antenna during horizontal antenna.

2.8.3. Test Result

The measurement frequency range is from 30MHz to the 10th harmonic of the fundamental frequency. The Turn Table is actuated to turn from 0° to 360°, and both horizontal and vertical polarizations of the Test Antenna are used to find the maximum radiated power. The lowest, middle and highest channels are tested to verify the out of band emissions. The power of the EUT transmitting frequency should be ignored.

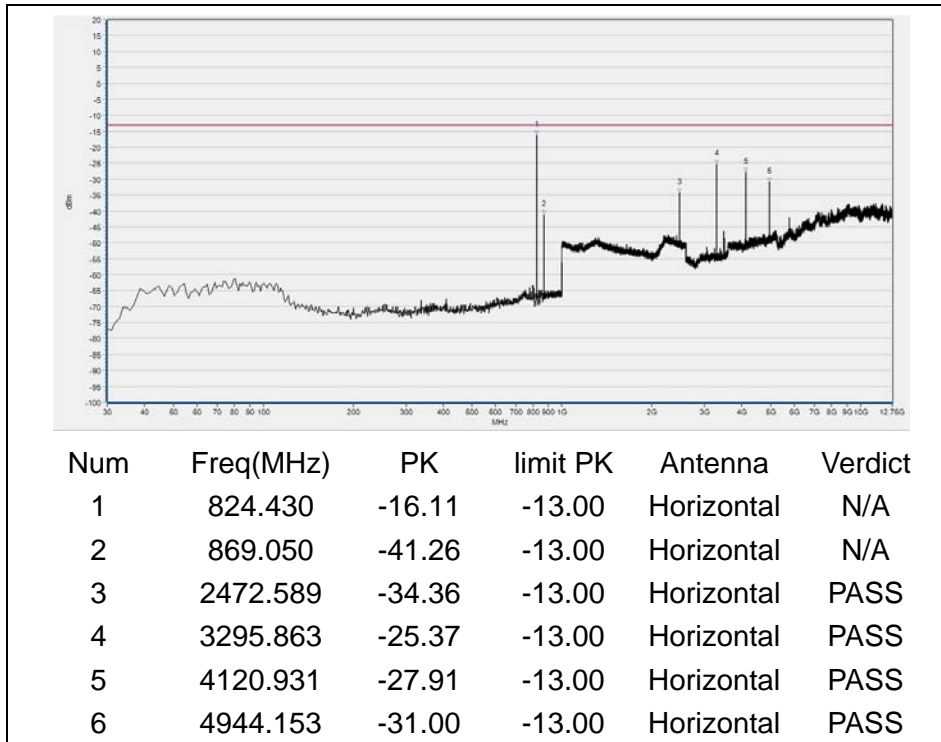
Note 1: All test mode and condition mentioned were considered and evaluated respectively by performing full test, only the worst data were recorded and reported.

Note 2: All Spurious Emission tests were performed in X, Y, Z axis direction. And only the worst axis test condition was recorded in this test report.

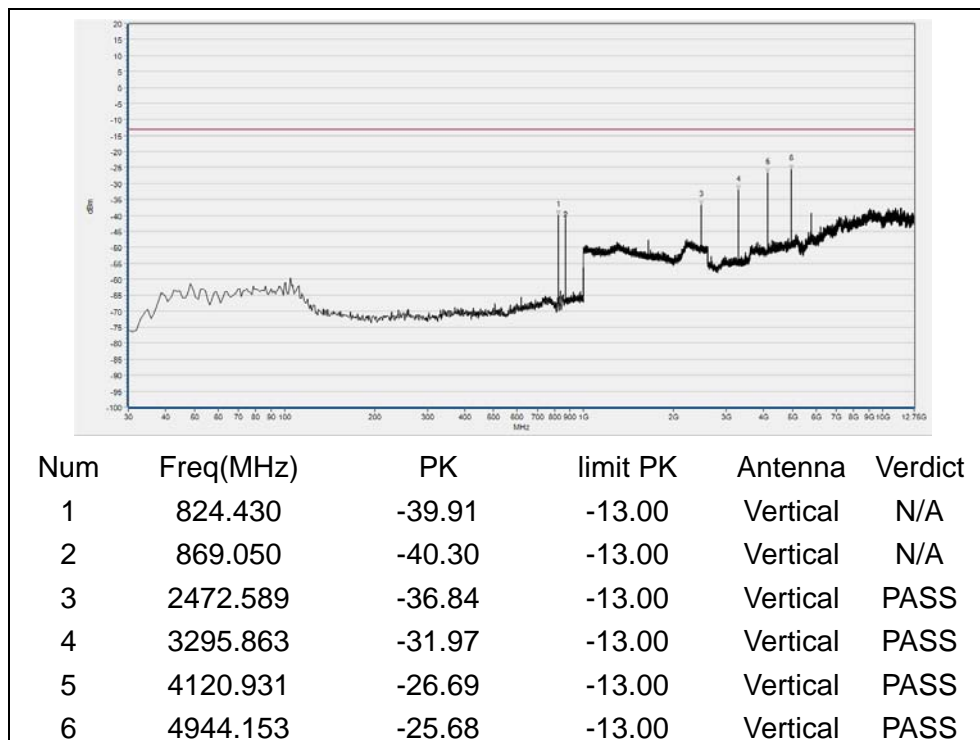
**A. Test Verdict:**

| Band | Channel | Frequency (MHz) | Measured Max. Spurious Emission (dBm) | | Refer to Plot | Limit (dBm) | Verdict |
|------------------|---------|--------------------|------------------------------------------|-----------------------------|---------------|----------------|---------|
| | | | Test Antenna Horizontal | Test Antenna Vertical | | | |
| GPRS 850MHz | 128 | 824.2 | < -25 | < -25 | Plot A1/A2 | -13 | PASS |
| | 190 | 836.6 | < -25 | < -25 | Plot A3/A4 | | PASS |
| | 251 | 848.8 | < -25 | < -25 | Plot A5/A6 | | PASS |
| GPRS 1900MHz | 512 | 1850.2 | < -25 | < -25 | Plot B1/B2 | -13 | PASS |
| | 661 | 1880.0 | < -25 | < -25 | Plot B3/B4 | | PASS |
| | 810 | 1909.8 | < -25 | < -25 | Plot B5/B6 | | PASS |
| EGPRS 850MHz | 128 | 824.2 | < -25 | < -25 | Plot C1/C2 | -13 | PASS |
| | 190 | 836.6 | < -25 | < -25 | Plot C3/C4 | | PASS |
| | 251 | 848.8 | < -25 | < -25 | Plot C5/C6 | | PASS |
| EGPRS 1900MHz | 512 | 1850.2 | < -25 | < -25 | Plot D1/D2 | -13 | PASS |
| | 661 | 1880.0 | < -25 | < -25 | Plot D3/D4 | | PASS |
| | 810 | 1909.8 | < -25 | < -25 | Plot D5/D6 | | PASS |
| WCDMA 850MHz | 4132 | 826.4 | < -25 | < -25 | Plot E1/E2 | -13 | PASS |
| | 4175 | 835.0 | < -25 | < -25 | Plot E3/E4 | | PASS |
| | 4233 | 846.6 | < -25 | < -25 | Plot E5/E6 | | PASS |
| WCDMA 1900MHz | 9262 | 1852.4 | < -25 | < -25 | Plot F1/G2 | -13 | PASS |
| | 9400 | 1880.0 | < -25 | < -25 | Plot F3/G4 | | PASS |
| | 9538 | 1907.6 | < -25 | < -25 | Plot F5/G6 | | PASS |

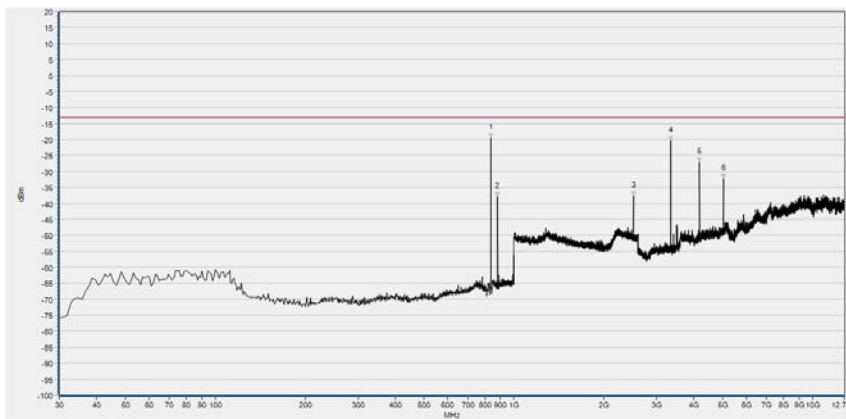
B. Test Plots



(Plot A1, GPRS 850MHz, Channel = 128, Horizontal)

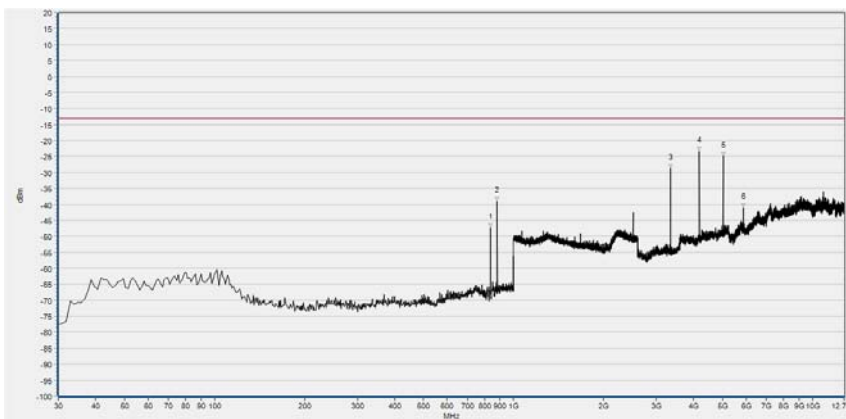


(Plot A2, GPRS 850MHz, Channel = 128, Vertical)



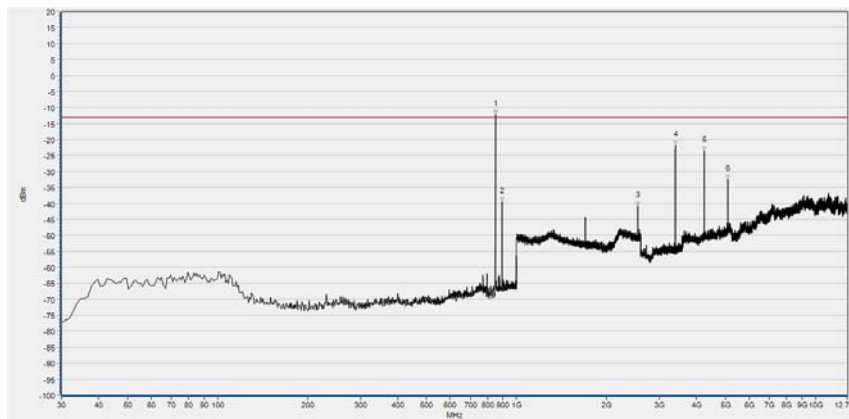
| Num | Freq(MHz) | PK | limit PK | Antenna | Verdict |
|-----|-----------|--------|----------|------------|---------|
| 1 | 836.070 | -19.65 | -13.00 | Horizontal | N/A |
| 2 | 881.660 | -37.86 | -13.00 | Horizontal | N/A |
| 3 | 2509.724 | -37.66 | -13.00 | Horizontal | PASS |
| 4 | 3345.699 | -20.44 | -13.00 | Horizontal | PASS |
| 5 | 4183.688 | -27.25 | -13.00 | Horizontal | PASS |
| 6 | 5019.831 | -32.27 | -13.00 | Horizontal | PASS |

(Plot A3, GPRS850MHz, Channel = 190, Horizontal)



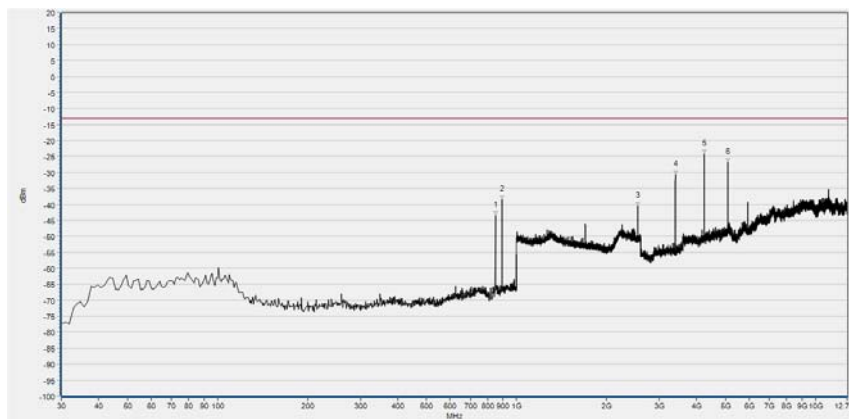
| Num | Freq(MHz) | PK | limit PK | Antenna | Verdict |
|-----|-----------|--------|----------|----------|---------|
| 1 | 837.040 | -47.28 | -13.00 | Vertical | N/A |
| 2 | 881.660 | -39.04 | -13.00 | Vertical | N/A |
| 3 | 3345.699 | -28.61 | -13.00 | Vertical | PASS |
| 4 | 4183.688 | -23.41 | -13.00 | Vertical | PASS |
| 5 | 5019.831 | -24.94 | -13.00 | Vertical | PASS |
| 6 | 5855.974 | -41.10 | -13.00 | Vertical | PASS |

(Plot A4, GPRS 850MHz, Channel = 190, Vertical)



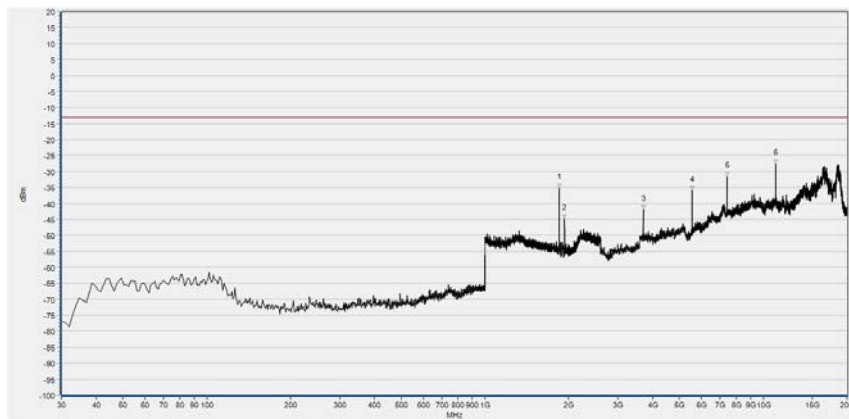
| Num | Freq(MHz) | PK | limit PK | Antenna | Verdict |
|-----|-----------|--------|----------|------------|---------|
| 1 | 848.680 | -12.11 | -13.00 | Horizontal | N/A |
| 2 | 893.300 | -39.37 | -13.00 | Horizontal | N/A |
| 3 | 2546.218 | -40.85 | -13.00 | Horizontal | PASS |
| 4 | 3395.536 | -21.85 | -13.00 | Horizontal | PASS |
| 5 | 4242.753 | -23.60 | -13.00 | Horizontal | PASS |
| 6 | 5091.817 | -32.49 | -13.00 | Horizontal | PASS |

(Plot A5, GPRS 850MHz, Channel = 251, Horizontal)



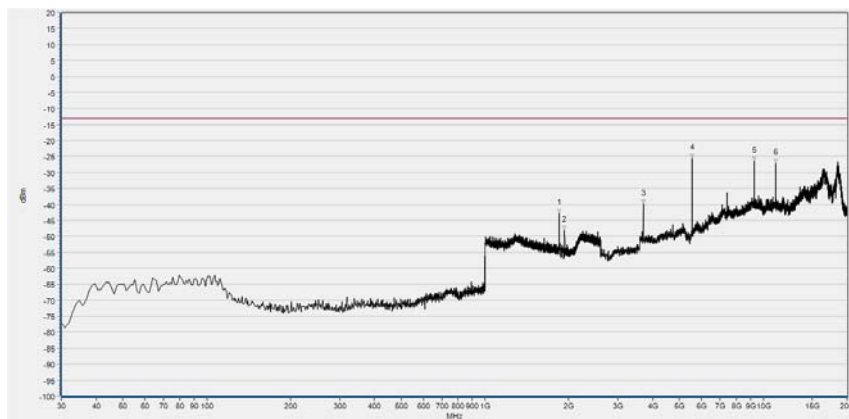
| Num | Freq(MHz) | PK | limit PK | Antenna | Verdict |
|-----|-----------|--------|----------|----------|---------|
| 1 | 848.680 | -43.45 | -13.00 | Vertical | N/A |
| 2 | 894.270 | -38.59 | -13.00 | Vertical | N/A |
| 3 | 2546.218 | -40.65 | -13.00 | Vertical | PASS |
| 4 | 3395.536 | -30.71 | -13.00 | Vertical | PASS |
| 5 | 4244.599 | -24.27 | -13.00 | Vertical | PASS |
| 6 | 5091.817 | -27.04 | -13.00 | Vertical | PASS |

(Plot A6, GPRS 850MHz, Channel = 251, Vertical)



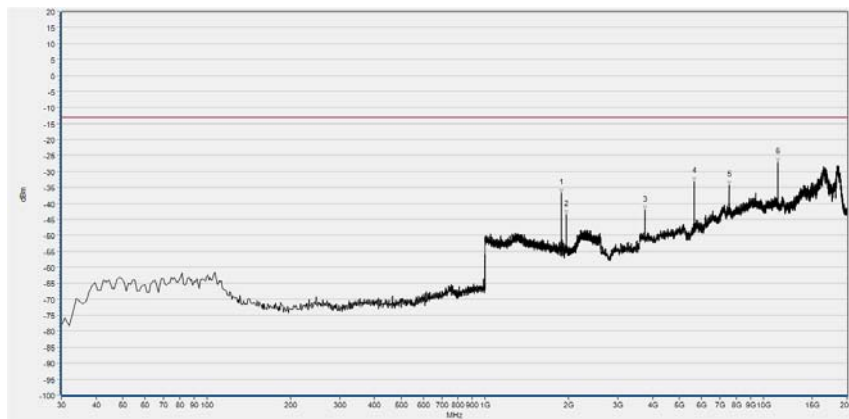
| Num | Freq(MHz) | PK | limit PK | Antenna | Verdict |
|-----|-----------|--------|----------|------------|---------|
| 1 | 1849.620 | -35.26 | -13.00 | Horizontal | N/A |
| 2 | 1930.292 | -44.87 | -13.00 | Horizontal | N/A |
| 3 | 3699.836 | -41.86 | -13.00 | Horizontal | PASS |
| 4 | 5549.191 | -35.91 | -13.00 | Horizontal | PASS |
| 5 | 7402.619 | -31.62 | -13.00 | Horizontal | PASS |
| 6 | 11101.328 | -27.63 | -13.00 | Horizontal | PASS |

(Plot B1, GPRS 1900MHz, Channel = 512, Horizontal)



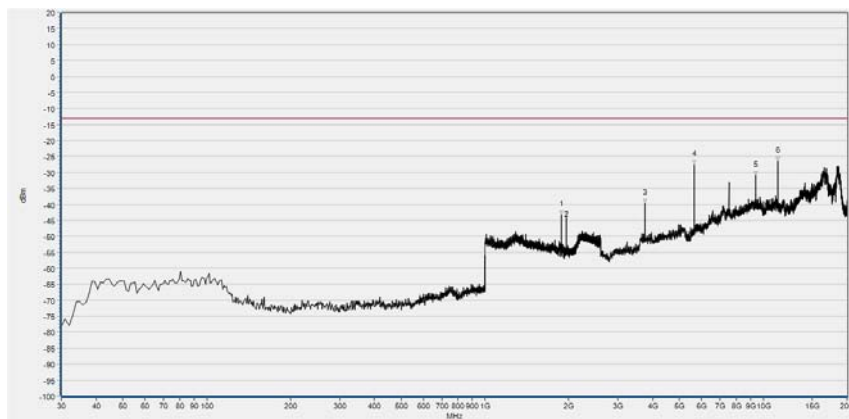
| Num | Freq(MHz) | PK | limit PK | Antenna | Verdict |
|-----|-----------|--------|----------|----------|---------|
| 1 | 1850.260 | -42.77 | -13.00 | Vertical | N/A |
| 2 | 1929.652 | -48.21 | -13.00 | Vertical | N/A |
| 3 | 3699.836 | -39.92 | -13.00 | Vertical | PASS |
| 4 | 5549.191 | -25.52 | -13.00 | Vertical | PASS |
| 5 | 9251.973 | -26.43 | -13.00 | Vertical | PASS |
| 6 | 11101.328 | -27.09 | -13.00 | Vertical | PASS |

(Plot B2, GPRS 1900MHz, Channel = 512, Vertical)



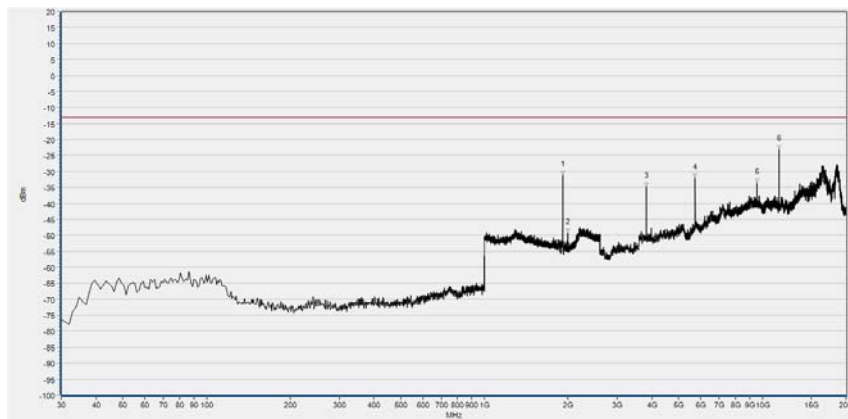
| Num | Freq(MHz) | PK | limit PK | Antenna | Verdict |
|-----|-----------|--------|----------|------------|---------|
| 1 | 1879.712 | -36.72 | -13.00 | Horizontal | N/A |
| 2 | 1959.744 | -43.55 | -13.00 | Horizontal | N/A |
| 3 | 3760.938 | -42.19 | -13.00 | Horizontal | PASS |
| 4 | 5638.807 | -33.26 | -13.00 | Horizontal | PASS |
| 5 | 7520.749 | -34.20 | -13.00 | Horizontal | PASS |
| 6 | 11280.560 | -27.25 | -13.00 | Horizontal | PASS |

(Plot B3, GPRS 1900MHz, Channel = 661, Horizontal)



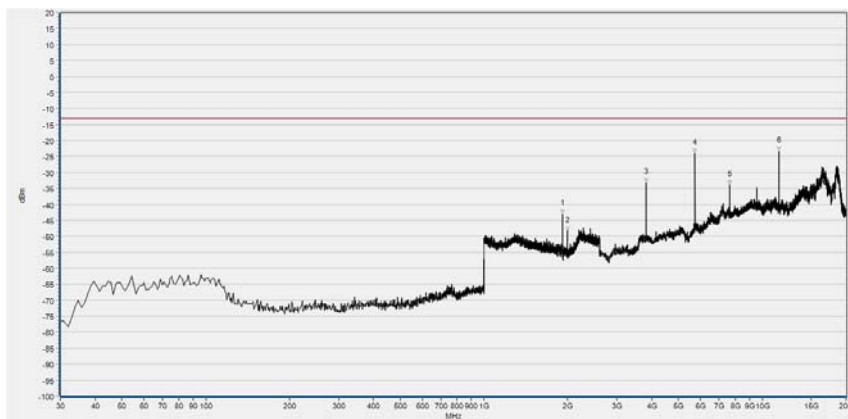
| Num | Freq(MHz) | PK | limit PK | Antenna | Verdict |
|-----|-----------|--------|----------|----------|---------|
| 1 | 1879.712 | -43.34 | -13.00 | Vertical | N/A |
| 2 | 1959.744 | -43.72 | -13.00 | Vertical | N/A |
| 3 | 3760.938 | -39.63 | -13.00 | Vertical | PASS |
| 4 | 5638.807 | -27.57 | -13.00 | Vertical | PASS |
| 5 | 9398.618 | -30.99 | -13.00 | Vertical | PASS |
| 6 | 11280.560 | -26.52 | -13.00 | Vertical | PASS |

(Plot B4, GPRS 1900MHz, Channel = 661, Vertical)



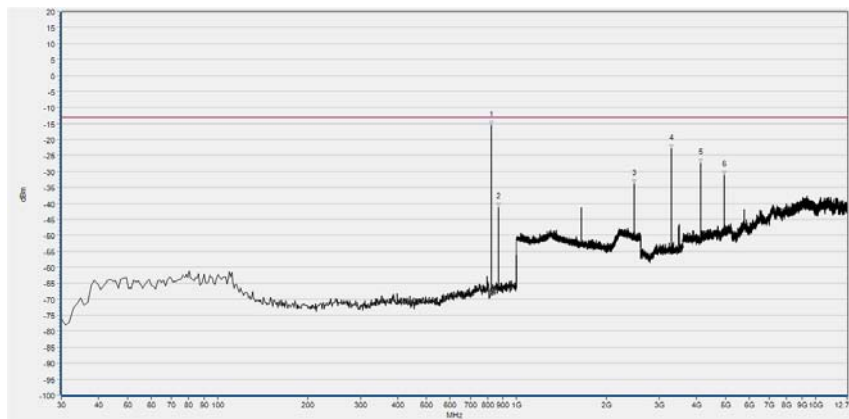
| Num | Freq(MHz) | PK | limit PK | Antenna | Verdict |
|-----|-----------|--------|----------|------------|---------|
| 1 | 1909.804 | -31.14 | -13.00 | Horizontal | N/A |
| 2 | 1989.836 | -49.36 | -13.00 | Horizontal | N/A |
| 3 | 3817.967 | -34.70 | -13.00 | Horizontal | PASS |
| 4 | 5728.423 | -32.02 | -13.00 | Horizontal | PASS |
| 5 | 9549.336 | -33.68 | -13.00 | Horizontal | PASS |
| 6 | 11459.793 | -23.24 | -13.00 | Horizontal | PASS |

(Plot B5, GPRS 1900MHz, Channel = 810, Horizontal)



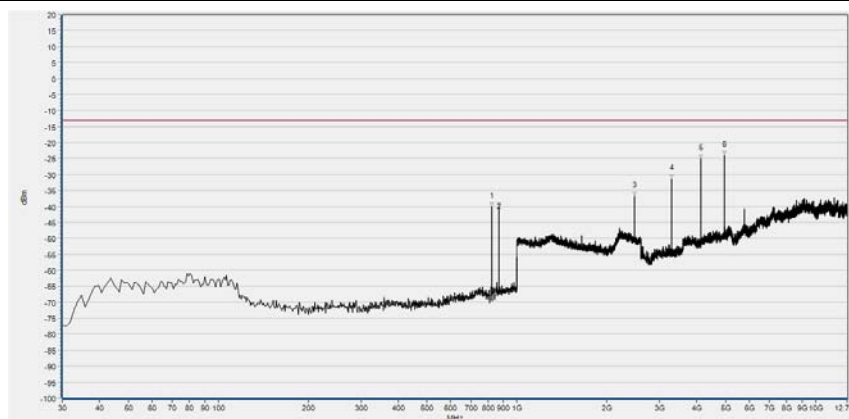
| Num | Freq(MHz) | PK | limit PK | Antenna | Verdict |
|-----|-----------|--------|----------|----------|---------|
| 1 | 1909.804 | -43.01 | -13.00 | Vertical | N/A |
| 2 | 1989.196 | -48.34 | -13.00 | Vertical | N/A |
| 3 | 3817.967 | -33.18 | -13.00 | Vertical | PASS |
| 4 | 5728.423 | -24.04 | -13.00 | Vertical | PASS |
| 5 | 7638.880 | -33.77 | -13.00 | Vertical | PASS |
| 6 | 11459.793 | -23.31 | -13.00 | Vertical | PASS |

(Plot B6, GPRS 1900MHz, Channel = 810, Vertical)



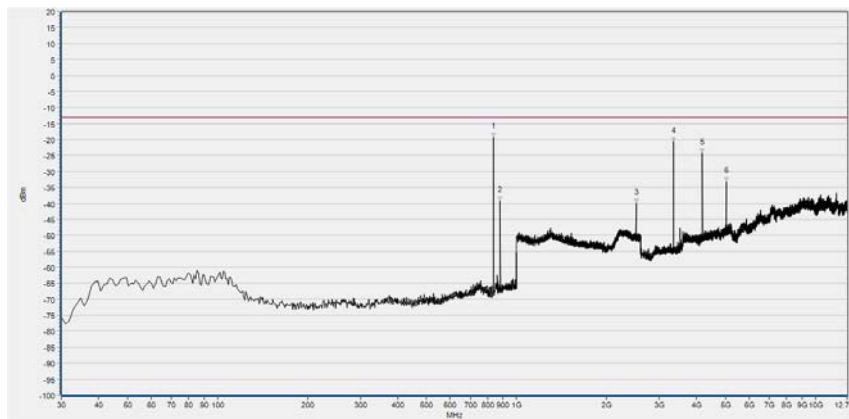
| Num | Freq(MHz) | PK | limit PK | Antenna | Verdict |
|-----|-----------|--------|----------|------------|---------|
| 1 | 824.430 | -15.59 | -13.00 | Horizontal | N/A |
| 2 | 869.050 | -41.30 | -13.00 | Horizontal | N/A |
| 3 | 2471.949 | -33.93 | -13.00 | Horizontal | PASS |
| 4 | 3295.863 | -22.91 | -13.00 | Horizontal | PASS |
| 5 | 4120.931 | -27.27 | -13.00 | Horizontal | PASS |
| 6 | 4944.153 | -31.11 | -13.00 | Horizontal | PASS |

(Plot C1, EGPRS 850MHz, Channel = 128, Horizontal)



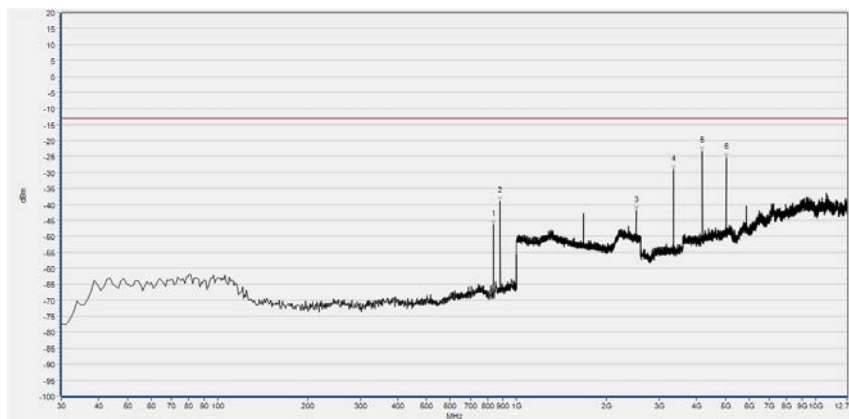
| Num | Freq(MHz) | PK | limit PK | Antenna | Verdict |
|-----|-----------|--------|----------|----------|---------|
| 1 | 824.430 | -40.09 | -13.00 | Vertical | N/A |
| 2 | 869.050 | -40.14 | -13.00 | Vertical | N/A |
| 3 | 2472.589 | -36.71 | -13.00 | Vertical | PASS |
| 4 | 3297.709 | -31.45 | -13.00 | Vertical | PASS |
| 5 | 4120.931 | -25.23 | -13.00 | Vertical | PASS |
| 6 | 4944.153 | -23.98 | -13.00 | Vertical | PASS |

(Plot C2, EGPRS 850MHz, Channel = 128, Vertical)



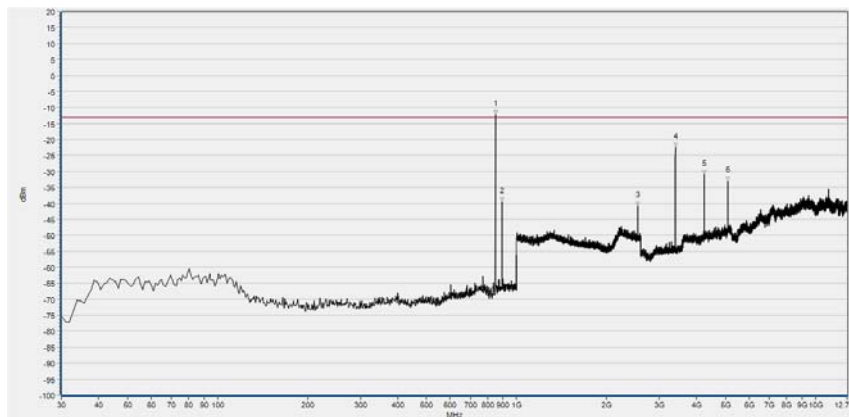
| Num | Freq(MHz) | PK | limit PK | Antenna | Verdict |
|-----|-----------|--------|----------|------------|---------|
| 1 | 837.040 | -19.40 | -13.00 | Horizontal | N/A |
| 2 | 881.660 | -39.12 | -13.00 | Horizontal | N/A |
| 3 | 2509.724 | -39.82 | -13.00 | Horizontal | PASS |
| 4 | 3345.699 | -20.76 | -13.00 | Horizontal | PASS |
| 5 | 4183.688 | -24.20 | -13.00 | Horizontal | PASS |
| 6 | 5019.831 | -33.23 | -13.00 | Horizontal | PASS |

(Plot C3, EGPRS 850MHz, Channel = 190, Horizontal)



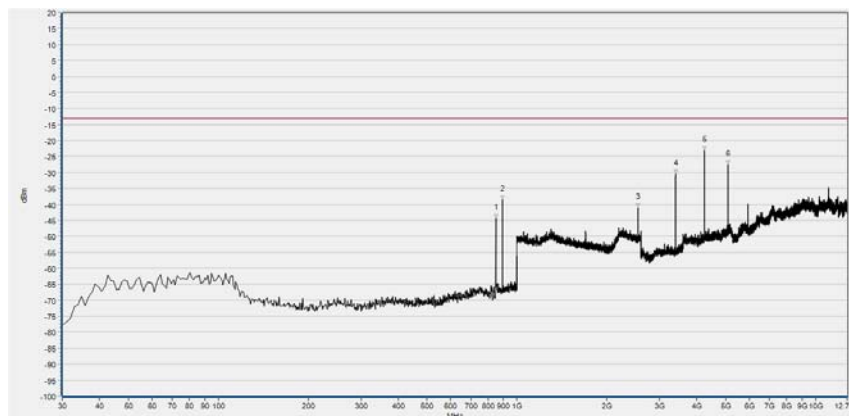
| Num | Freq(MHz) | PK | limit PK | Antenna | Verdict |
|-----|-----------|--------|----------|----------|---------|
| 1 | 837.040 | -46.48 | -13.00 | Vertical | N/A |
| 2 | 881.660 | -39.01 | -13.00 | Vertical | N/A |
| 3 | 2509.724 | -41.97 | -13.00 | Vertical | PASS |
| 4 | 3345.699 | -29.08 | -13.00 | Vertical | PASS |
| 5 | 4183.688 | -23.32 | -13.00 | Vertical | PASS |
| 6 | 5019.831 | -25.40 | -13.00 | Vertical | PASS |

(Plot C4, EGPRS 850MHz, Channel = 190, Vertical)



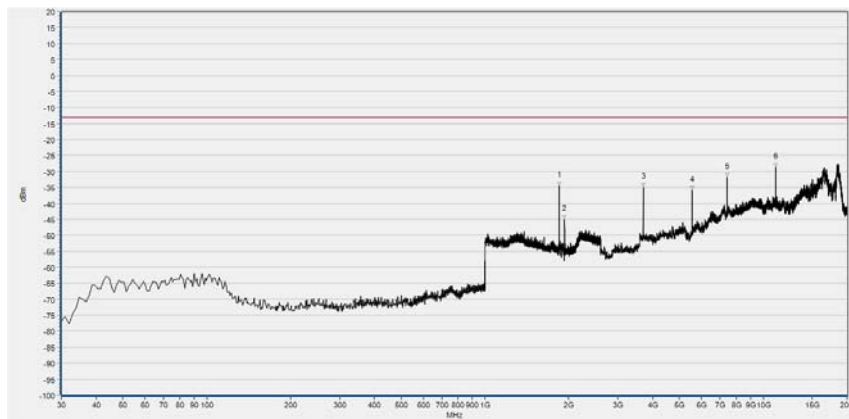
| Num | Freq(MHz) | PK | limit PK | Antenna | Verdict |
|-----|-----------|--------|----------|------------|---------|
| 1 | 848.680 | -12.27 | -13.00 | Horizontal | N/A |
| 2 | 893.300 | -39.43 | -13.00 | Horizontal | N/A |
| 3 | 2546.218 | -40.73 | -13.00 | Horizontal | PASS |
| 4 | 3395.536 | -22.42 | -13.00 | Horizontal | PASS |
| 5 | 4244.599 | -30.96 | -13.00 | Horizontal | PASS |
| 6 | 5093.662 | -32.95 | -13.00 | Horizontal | PASS |

(Plot C5, EGPRS 850MHz, Channel = 251, Horizontal)



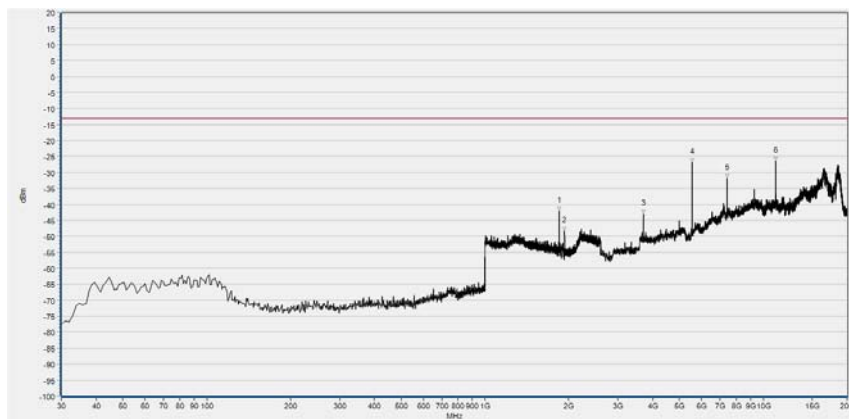
| Num | Freq(MHz) | PK | limit PK | Antenna | Verdict |
|-----|-----------|--------|----------|----------|---------|
| 1 | 848.680 | -44.34 | -13.00 | Vertical | N/A |
| 2 | 893.300 | -38.50 | -13.00 | Vertical | N/A |
| 3 | 2546.218 | -41.11 | -13.00 | Vertical | PASS |
| 4 | 3395.536 | -30.41 | -13.00 | Vertical | PASS |
| 5 | 4242.753 | -23.05 | -13.00 | Vertical | PASS |
| 6 | 5091.817 | -27.60 | -13.00 | Vertical | PASS |

(Plot C6, EGPRS 850MHz, Channel = 251, Vertical)



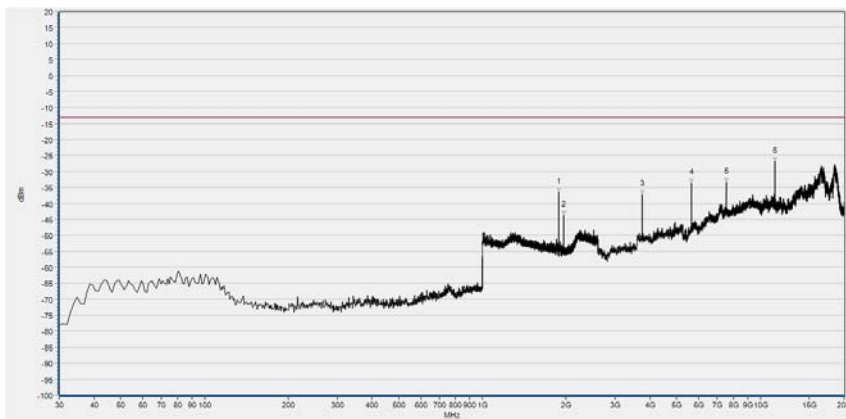
| Num | Freq(MHz) | PK | limit PK | Antenna | Verdict |
|-----|-----------|--------|----------|------------|---------|
| 1 | 1850.260 | -34.46 | -13.00 | Horizontal | N/A |
| 2 | 1930.292 | -44.95 | -13.00 | Horizontal | N/A |
| 3 | 3699.836 | -34.91 | -13.00 | Horizontal | PASS |
| 4 | 5549.191 | -35.86 | -13.00 | Horizontal | PASS |
| 5 | 7402.619 | -31.83 | -13.00 | Horizontal | PASS |
| 6 | 11101.328 | -28.71 | -13.00 | Horizontal | PASS |

(Plot D1, EGPRS 1900MHz, Channel = 512, Horizontal)



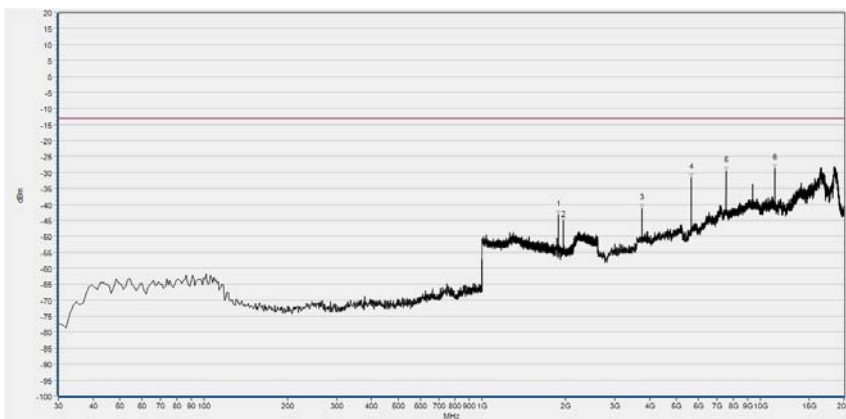
| Num | Freq(MHz) | PK | limit PK | Antenna | Verdict |
|-----|-----------|--------|----------|----------|---------|
| 1 | 1850.260 | -42.13 | -13.00 | Vertical | N/A |
| 2 | 1930.292 | -48.47 | -13.00 | Vertical | N/A |
| 3 | 3699.836 | -43.01 | -13.00 | Vertical | PASS |
| 4 | 5549.191 | -26.82 | -13.00 | Vertical | PASS |
| 5 | 7402.619 | -31.80 | -13.00 | Vertical | PASS |
| 6 | 11101.328 | -26.49 | -13.00 | Vertical | PASS |

(Plot D2, EGPRS 1900MHz, Channel = 512, Vertical)



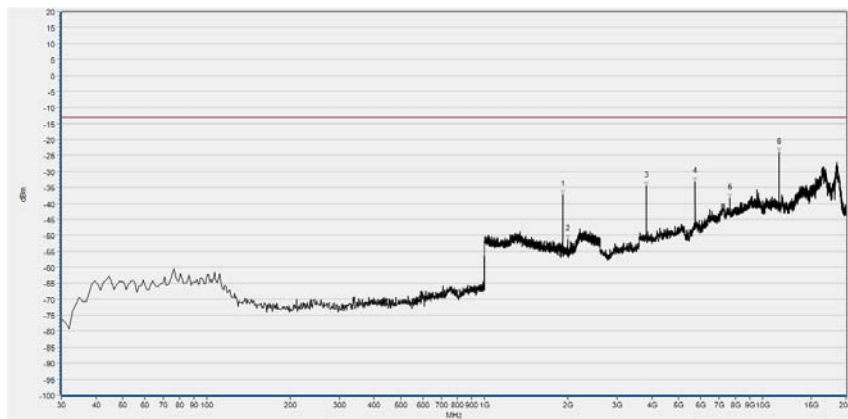
| Num | Freq(MHz) | PK | limit PK | Antenna | Verdict |
|-----|-----------|--------|----------|------------|---------|
| 1 | 1879.712 | -36.45 | -13.00 | Horizontal | N/A |
| 2 | 1959.744 | -43.76 | -13.00 | Horizontal | N/A |
| 3 | 3760.938 | -37.25 | -13.00 | Horizontal | PASS |
| 4 | 5638.807 | -33.66 | -13.00 | Horizontal | PASS |
| 5 | 7520.749 | -33.46 | -13.00 | Horizontal | PASS |
| 6 | 11280.560 | -26.98 | -13.00 | Horizontal | PASS |

(Plot D3, EGPRS 1900MHz, Channel = 661, Horizontal)



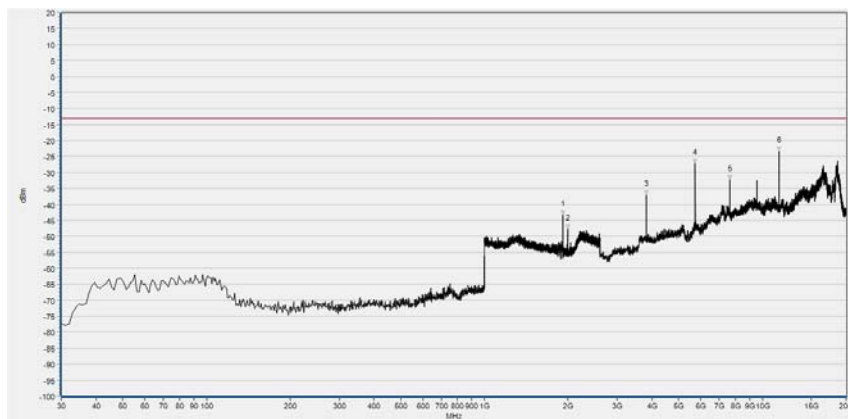
| Num | Freq(MHz) | PK | limit PK | Antenna | Verdict |
|-----|-----------|--------|----------|----------|---------|
| 1 | 1879.712 | -43.25 | -13.00 | Vertical | N/A |
| 2 | 1959.744 | -44.95 | -13.00 | Vertical | N/A |
| 3 | 3760.938 | -41.26 | -13.00 | Vertical | PASS |
| 4 | 5638.807 | -31.68 | -13.00 | Vertical | PASS |
| 5 | 7520.749 | -29.57 | -13.00 | Vertical | PASS |
| 6 | 11280.560 | -28.68 | -13.00 | Vertical | PASS |

(Plot D4, EGPRS 1900MHz, Channel = 661, Vertical)



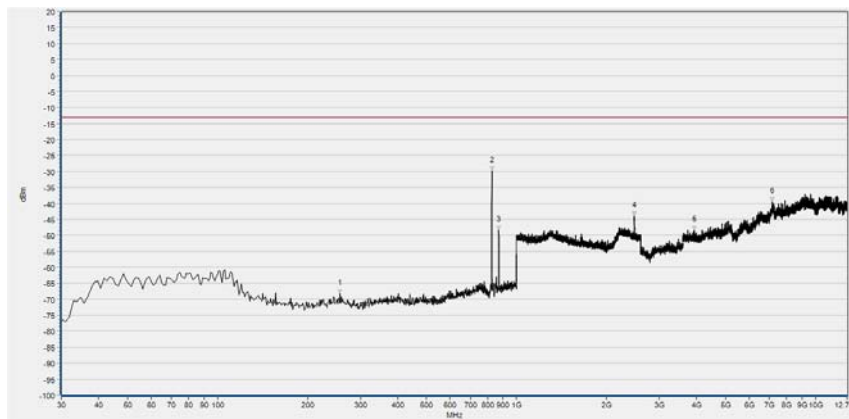
| Num | Freq(MHz) | PK | limit PK | Antenna | Verdict |
|-----|-----------|--------|----------|------------|---------|
| 1 | 1909.804 | -37.15 | -13.00 | Horizontal | N/A |
| 2 | 1989.196 | -51.18 | -13.00 | Horizontal | N/A |
| 3 | 3817.967 | -34.57 | -13.00 | Horizontal | PASS |
| 4 | 5728.423 | -33.21 | -13.00 | Horizontal | PASS |
| 5 | 7638.880 | -38.28 | -13.00 | Horizontal | PASS |
| 6 | 11459.793 | -24.10 | -13.00 | Horizontal | PASS |

(Plot D5, EGPRS 1900MHz, Channel = 810, Horizontal)



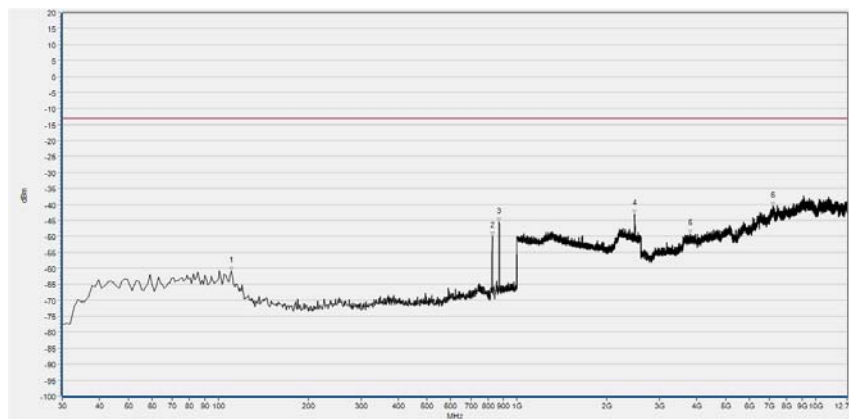
| Num | Freq(MHz) | PK | limit PK | Antenna | Verdict |
|-----|-----------|--------|----------|----------|---------|
| 1 | 1909.804 | -43.34 | -13.00 | Vertical | N/A |
| 2 | 1989.836 | -47.77 | -13.00 | Vertical | N/A |
| 3 | 3817.967 | -36.89 | -13.00 | Vertical | PASS |
| 4 | 5728.423 | -27.21 | -13.00 | Vertical | PASS |
| 5 | 7638.880 | -32.23 | -13.00 | Vertical | PASS |
| 6 | 11459.793 | -23.27 | -13.00 | Vertical | PASS |

(Plot D6, EGPRS 1900MHz, Channel = 810, Vertical)



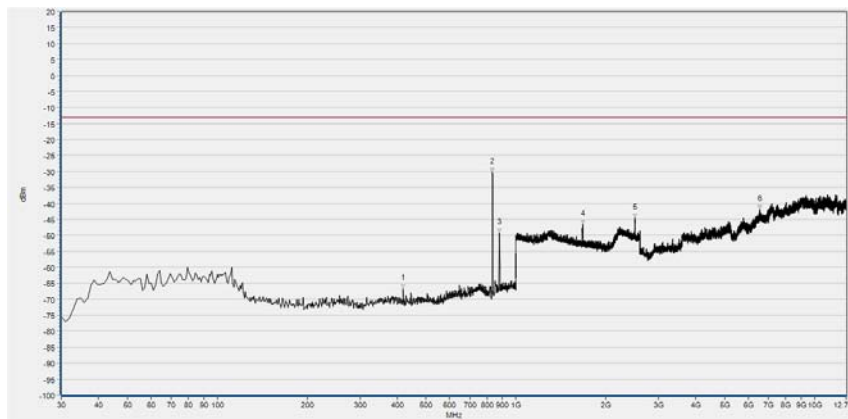
| Num | Freq(MHz) | PK | limit PK | Antenna | Verdict |
|-----|-----------|--------|----------|------------|---------|
| 1 | 256.980 | -68.30 | -13.00 | Horizontal | PASS |
| 2 | 827.340 | -29.78 | -13.00 | Horizontal | N/A |
| 3 | 870.020 | -48.32 | -13.00 | Horizontal | N/A |
| 4 | 2479.632 | -43.99 | -13.00 | Horizontal | PASS |
| 5 | 3938.198 | -48.28 | -13.00 | Horizontal | PASS |
| 6 | 7151.718 | -39.46 | -13.00 | Horizontal | PASS |

(Plot E1, WCDMA 850MHz, Channel = 4132, Horizontal)



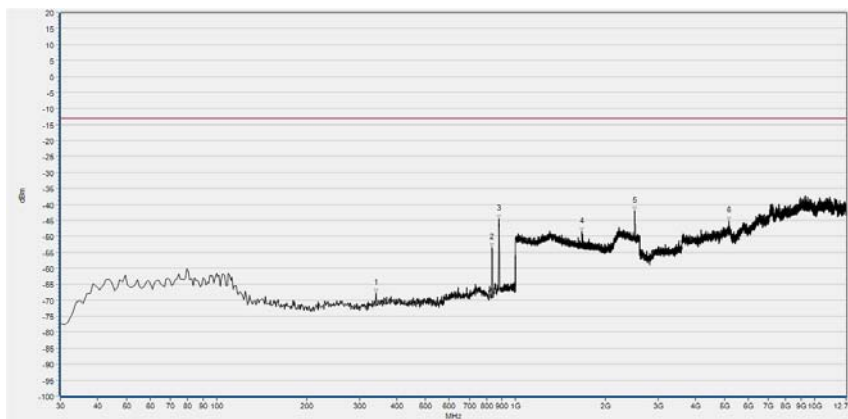
| Num | Freq(MHz) | PK | limit PK | Antenna | Verdict |
|-----|-----------|--------|----------|----------|---------|
| 1 | 110.510 | -60.89 | -13.00 | Vertical | PASS |
| 2 | 828.310 | -49.84 | -13.00 | Vertical | N/A |
| 3 | 871.960 | -45.55 | -13.00 | Vertical | N/A |
| 4 | 2478.351 | -42.93 | -13.00 | Vertical | PASS |
| 5 | 3801.609 | -49.35 | -13.00 | Vertical | PASS |
| 6 | 7177.560 | -40.63 | -13.00 | Vertical | PASS |

(Plot E2, WCDMA 850MHz, Channel = 4132, Vertical)



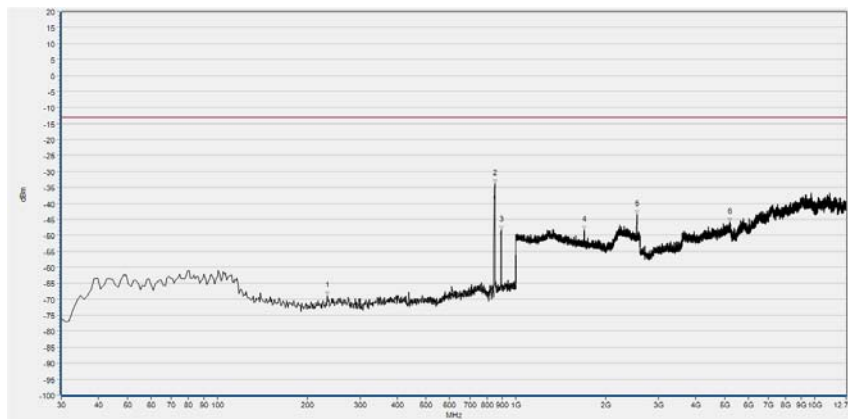
| Num | Freq(MHz) | PK | limit PK | Antenna | Verdict |
|-----|-----------|--------|----------|------------|---------|
| 1 | 418.970 | -66.69 | -13.00 | Horizontal | PASS |
| 2 | 834.130 | -30.31 | -13.00 | Horizontal | N/A |
| 3 | 881.660 | -49.20 | -13.00 | Horizontal | N/A |
| 4 | 1672.269 | -46.67 | -13.00 | Horizontal | PASS |
| 5 | 2505.242 | -44.48 | -13.00 | Horizontal | PASS |
| 6 | 6538.916 | -42.00 | -13.00 | Horizontal | PASS |

(Plot E3, WCDMA 850MHz, Channel = 4175, Horizontal)



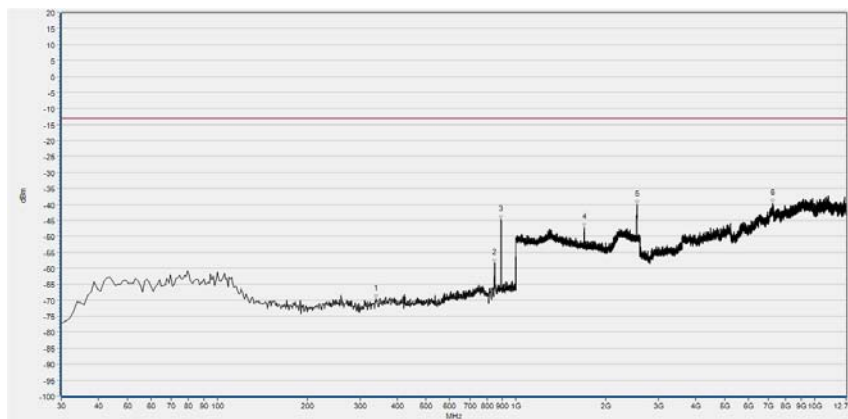
| Num | Freq(MHz) | PK | limit PK | Antenna | Verdict |
|-----|-----------|--------|----------|----------|---------|
| 1 | 341.370 | -67.87 | -13.00 | Vertical | PASS |
| 2 | 834.130 | -53.48 | -13.00 | Vertical | N/A |
| 3 | 880.690 | -44.54 | -13.00 | Vertical | N/A |
| 4 | 1667.787 | -48.61 | -13.00 | Vertical | PASS |
| 5 | 2504.602 | -42.10 | -13.00 | Vertical | PASS |
| 6 | 5165.648 | -45.14 | -13.00 | Vertical | PASS |

(Plot E4, WCDMA 850MHz, Channel = 4175, Vertical)



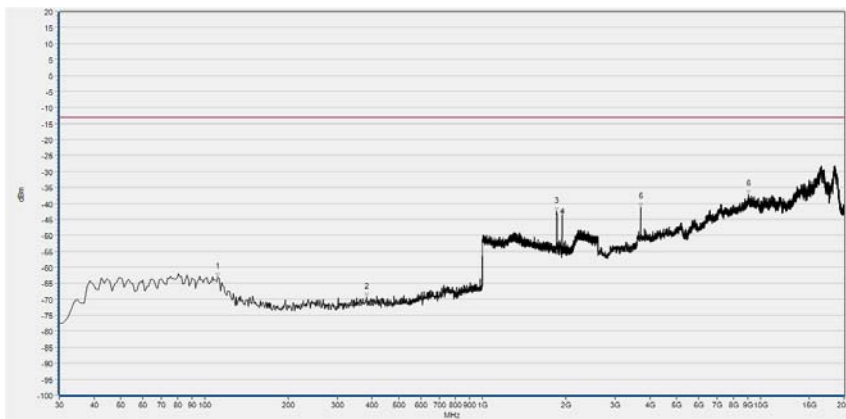
| Num | Freq(MHz) | PK | limit PK | Antenna | Verdict |
|-----|-----------|--------|----------|------------|---------|
| 1 | 233.700 | -68.96 | -13.00 | Horizontal | PASS |
| 2 | 848.680 | -33.77 | -13.00 | Horizontal | N/A |
| 3 | 893.300 | -48.31 | -13.00 | Horizontal | N/A |
| 4 | 1694.678 | -48.35 | -13.00 | Horizontal | PASS |
| 5 | 2539.176 | -43.49 | -13.00 | Horizontal | PASS |
| 6 | 5189.644 | -45.97 | -13.00 | Horizontal | PASS |

(Plot E5, WCDMA 850MHz, Channel = 4233, Horizontal)



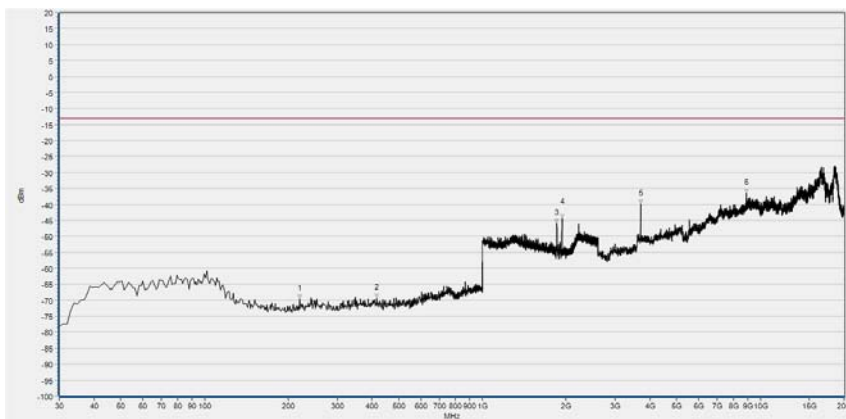
| Num | Freq(MHz) | PK | limit PK | Antenna | Verdict |
|-----|-----------|--------|----------|----------|---------|
| 1 | 340.400 | -69.54 | -13.00 | Vertical | PASS |
| 2 | 847.710 | -58.36 | -13.00 | Vertical | N/A |
| 3 | 891.360 | -44.90 | -13.00 | Vertical | N/A |
| 4 | 1694.678 | -47.30 | -13.00 | Vertical | PASS |
| 5 | 2539.816 | -40.02 | -13.00 | Vertical | PASS |
| 6 | 7218.167 | -39.77 | -13.00 | Vertical | PASS |

(Plot E6, WCDMA 850MHz, Channel = 4233, Vertical)



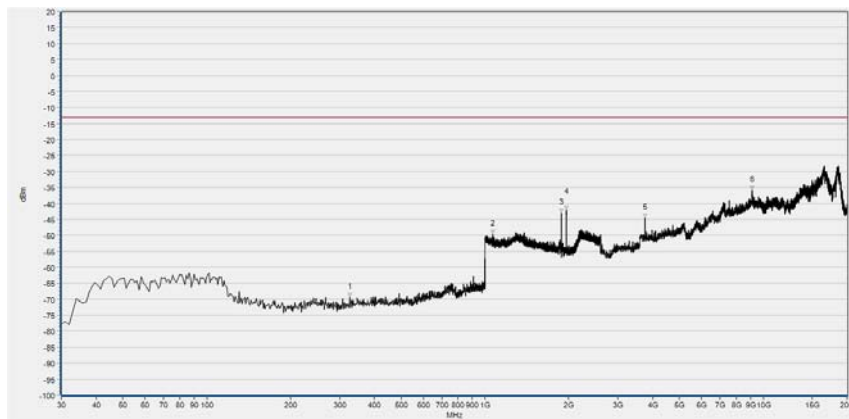
| Num | Freq(MHz) | PK | limit PK | Antenna | Verdict |
|-----|-----------|--------|----------|------------|---------|
| 1 | 111.480 | -63.22 | -13.00 | Horizontal | PASS |
| 2 | 383.080 | -69.44 | -13.00 | Horizontal | N/A |
| 3 | 1851.541 | -42.54 | -13.00 | Horizontal | N/A |
| 4 | 1933.493 | -43.47 | -13.00 | Horizontal | PASS |
| 5 | 3707.983 | -41.13 | -13.00 | Horizontal | PASS |
| 6 | 9040.153 | -37.19 | -13.00 | Horizontal | PASS |

(Plot G1, WCDMA 1900MHz, Channel = 9262, Horizontal)



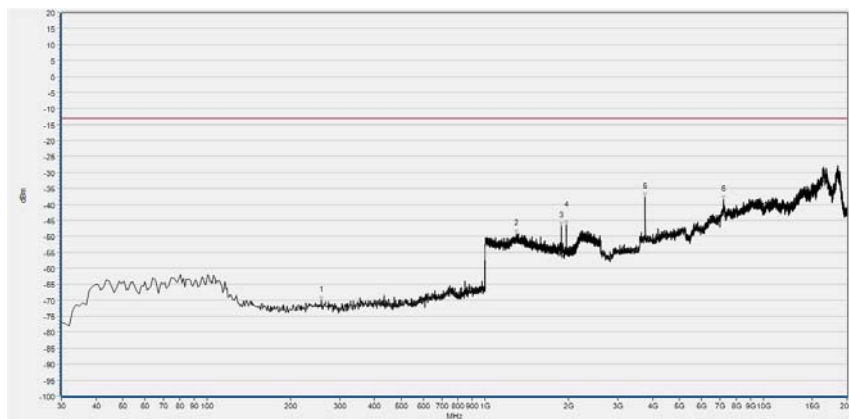
| Num | Freq(MHz) | PK | limit PK | Antenna | Verdict |
|-----|-----------|--------|----------|----------|---------|
| 1 | 220.120 | -69.71 | -13.00 | Vertical | PASS |
| 2 | 416.060 | -69.43 | -13.00 | Vertical | PASS |
| 3 | 1852.181 | -45.83 | -13.00 | Vertical | N/A |
| 4 | 1932.213 | -44.34 | -13.00 | Vertical | N/A |
| 5 | 3703.910 | -39.84 | -13.00 | Vertical | PASS |
| 6 | 8913.875 | -36.53 | -13.00 | Vertical | PASS |

(Plot G2, WCDMA 1900MHz, Channel = 9262, Vertical)



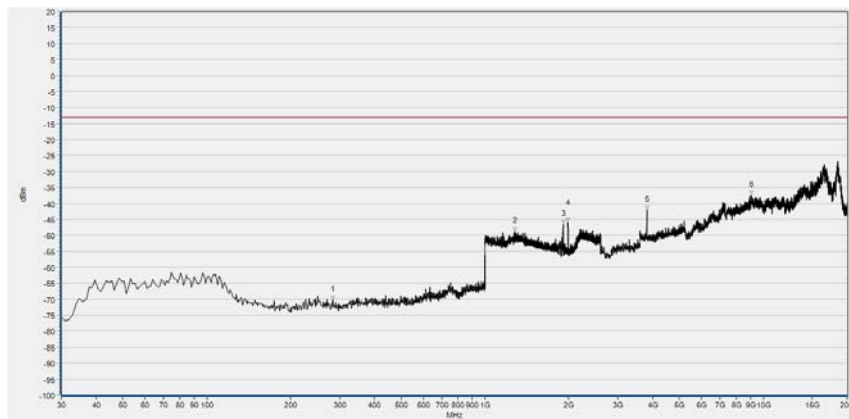
| Num | Freq(MHz) | PK | limit PK | Antenna | Verdict |
|-----|-----------|--------|----------|------------|---------|
| 1 | 325.850 | -69.45 | -13.00 | Horizontal | PASS |
| 2 | 1067.867 | -49.81 | -13.00 | Horizontal | PASS |
| 3 | 1878.431 | -43.11 | -13.00 | Horizontal | N/A |
| 4 | 1958.463 | -42.12 | -13.00 | Horizontal | N/A |
| 5 | 3756.865 | -44.52 | -13.00 | Horizontal | PASS |
| 6 | 9109.402 | -35.96 | -13.00 | Horizontal | PASS |

(Plot G3, WCDMA 1900MHz, Channel = 9400, Horizontal)



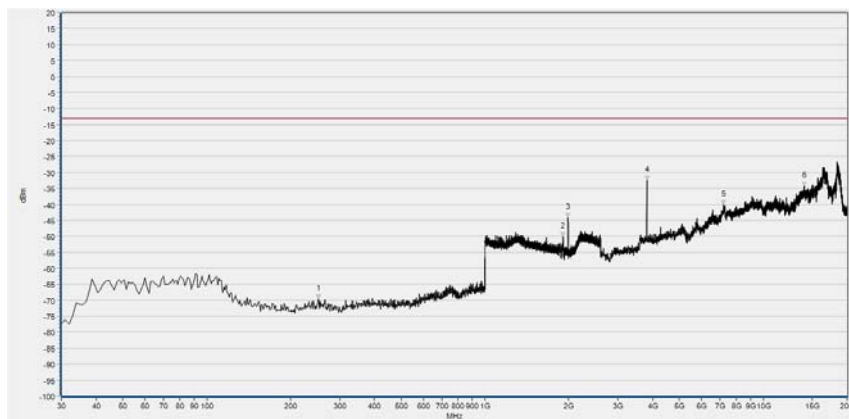
| Num | Freq(MHz) | PK | limit PK | Antenna | Verdict |
|-----|-----------|--------|----------|----------|---------|
| 1 | 257.950 | -69.98 | -13.00 | Vertical | PASS |
| 2 | 1293.237 | -49.37 | -13.00 | Vertical | PASS |
| 3 | 1878.431 | -46.92 | -13.00 | Vertical | N/A |
| 4 | 1960.384 | -46.33 | -13.00 | Vertical | N/A |
| 5 | 3756.865 | -37.60 | -13.00 | Vertical | PASS |
| 6 | 7178.578 | -38.51 | -13.00 | Vertical | PASS |

(Plot G4, WCDMA 1900MHz, Channel = 9400, Vertical)



| Num | Freq(MHz) | PK | limit PK | Antenna | Verdict |
|-----|-----------|--------|----------|------------|---------|
| 1 | 284.140 | -70.30 | -13.00 | Horizontal | PASS |
| 2 | 1277.871 | -48.73 | -13.00 | Horizontal | PASS |
| 3 | 1909.164 | -46.62 | -13.00 | Horizontal | N/A |
| 4 | 1988.555 | -45.86 | -13.00 | Horizontal | N/A |
| 5 | 3817.967 | -42.10 | -13.00 | Horizontal | PASS |
| 6 | 9060.520 | -37.33 | -13.00 | Horizontal | PASS |

(Plot G5, WCDMA 1900MHz, Channel = 9538, Horizontal)



| Num | Freq(MHz) | PK | limit PK | Antenna | Verdict |
|-----|-----------|--------|----------|----------|---------|
| 1 | 252.130 | -69.50 | -13.00 | Vertical | PASS |
| 2 | 1907.243 | -50.19 | -13.00 | Vertical | N/A |
| 3 | 1987.275 | -44.15 | -13.00 | Vertical | N/A |
| 4 | 3813.893 | -32.59 | -13.00 | Vertical | PASS |
| 5 | 7203.019 | -40.09 | -13.00 | Vertical | PASS |
| 6 | 13989.416 | -34.30 | -13.00 | Vertical | PASS |

(Plot G6, WCDMA 1900MHz, Channel = 9538, Vertical)



Annex A Test Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for test performed on the EUT as specified in CISPR 16-1-2:

| Test items | Uncertainty |
|-----------------------------|----------------------|
| Output Power | $\pm 2.22\text{dB}$ |
| Bandwidth | $\pm 5\%$ |
| Conducted Spurious Emission | $\pm 2.77\text{ dB}$ |
| Radiated Emission | $\pm 2.95\text{dB}$ |

This uncertainty represent an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k=2$



Annex B Testing Laboratory Information

1. Identification of the Responsible Testing Laboratory

| | |
|--------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| Company Name: | Shenzhen Morlab Communications Technology Co., Ltd. |
| Department: | Morlab Laboratory |
| Address: | FL.3, Building A, FeiYang Science Park, No.8 LongChang Road, Block 67, BaoAn District, ShenZhen, Guangdong Province, P. R. China |
| Responsible Test Lab Manager: | Mr. Su Feng |
| Telephone: | +86 755 36698555 |
| Facsimile: | +86 755 36698525 |

2. Identification of the Responsible Testing Location

| | |
|-----------------|----------------------------------------------------------------------------------------------------------------------------------|
| Name: | Shenzhen Morlab Communications Technology Co., Ltd. Morlab Laboratory |
| Address: | FL.3, Building A, FeiYang Science Park, No.8 LongChang Road, Block 67, BaoAn District, ShenZhen, Guangdong Province, P. R. China |

3. Facilities and Accreditations

All measurement facilities used to collect the measurement data are located at FL.3, Building A, FeiYang Science Park, Block 67, BaoAn District, Shenzhen, 518101 P. R. China. The test site is constructed in conformance with the requirements of ANSI C63.10-2013 and CISPR Publication 22; the FCC designation number is CN1192, the test firm registration number is 226174.



4. Test Equipments Utilized

4.1 Conducted Test Equipments

| Equipment Name | Serial No. | Type | Manufacturer | Cal. Date | Cal. Due |
|---------------------------|------------|-----------------|------------------------------------------------------------|------------|------------|
| Power Splitter | NW521 | 1506A | Weinschel | 2018.04.17 | 2019.04.16 |
| Attenuator 1 | (N/A.) | 10dB | Resnet | 2018.04.17 | 2019.04.16 |
| Attenuator 2 | (N/A.) | 3dB | Resnet | 2018.04.17 | 2019.04.16 |
| EXA Signal Analyzer | MY53470836 | N9010A | Agilent | 2017.12.03 | 2018.12.02 |
| Wireless synthesizer | MY48364176 | 8960 -E5515C | Agilent | 2018.04.17 | 2019.04.16 |
| RF cable (30MHz-26GHz) | CB01 | RF01 | Morlab | N/A | N/A |
| Coaxial cable | CB02 | RF02 | Morlab | N/A | N/A |
| SMA connector | CN01 | RF03 | HUBER-SUHNER | N/A | N/A |
| Temperature Chamber | (N/A) | HUT705P | CHONGQING HANBA EXPERIMENTAL EQUIPMENT CO.,LTD | 2018.04.17 | 2019.04.16 |

4.2 Auxiliary Test Equipment

| Equipment Name | Model No. | Brand Name | Manufacturer | Cal.Date | Cal. Due |
|----------------|-----------|------------|--------------|----------|----------|
| Computer | T430i | Think Pad | Lenovo | N/A | N/A |

4.3 List of Software Used

| Description | Manufacturer | Software Version |
|------------------|--------------|------------------|
| Test system | Tonscend | V2.6 |
| Power Panel | Agilent | V3.8 |
| MORLAB EMCR V1.2 | MORLAB | V 1.0 |

**4.4 Radiated Test Equipments**

| Equipment Name | Serial No. | Type | Manufacturer | Cal. Date | Cal. Due |
|--------------------------------------------|-------------------|-------------|---------------------|------------------|-----------------|
| Receiver | MY54130016 | N9038A | Agilent | 2018.05.08 | 2019.05.07 |
| Test Antenna - Bi-Log | 9163-519 | VULB 9163 | Schwarzbeck | 2018.05.08 | 2019.05.07 |
| Test Antenna - Horn | 9170C-531 | BBHA9170 | Schwarzbeck | 2017.09.13 | 2018.09.12 |
| Test Antenna - Loop | 1519-022 | FMZB1519 | Schwarzbeck | 2018.03.03 | 2019.03.02 |
| Test Antenna - Horn | 01774 | BBHA 9120D | Schwarzbeck | 2017.09.13 | 2018.09.12 |
| Coaxial cable (N male) (9KHz-30MHz) | CB04 | EMC04 | Morlab | N/A | N/A |
| Coaxial cable (N male) (30MHz-26GHz) | CB02 | EMC02 | Morlab | N/A | N/A |
| Coaxial cable (N male) (30MHz-26GHz) | CB03 | EMC03 | Morlab | N/A | N/A |
| 1-18GHz pre-Amplifier | MA02 | TS-PR18 | Rohde& Schwarz | 2018.05.08 | 2019.05.07 |
| 18-26.5GHz pre-Amplifier | MA03 | TS-PR18 | Rohde& Schwarz | 2018.05.08 | 2019.05.07 |
| Anechoic Chamber | N/A | 9m*6m*6m | CRT | 2017.11.19 | 2020.11.18 |

_____ END OF REPORT _____