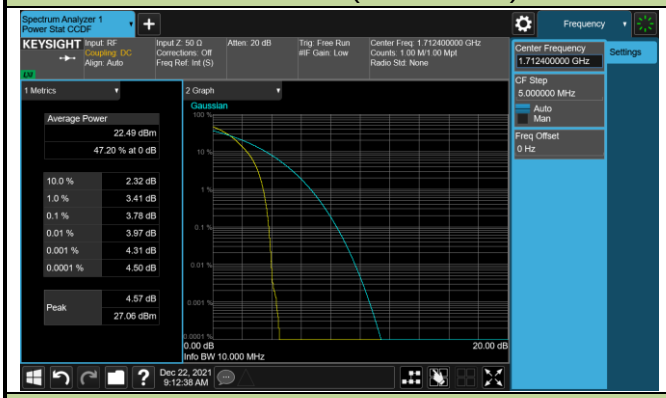
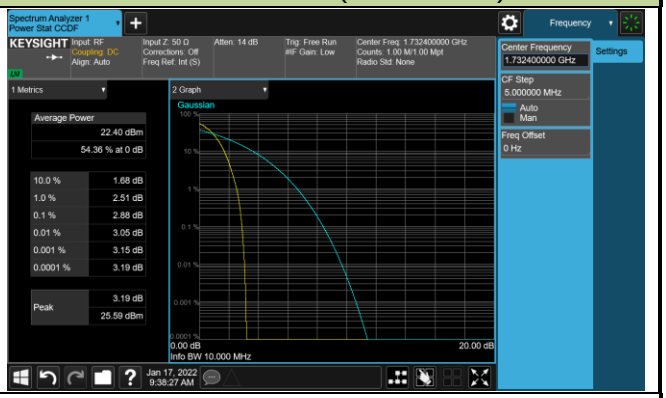
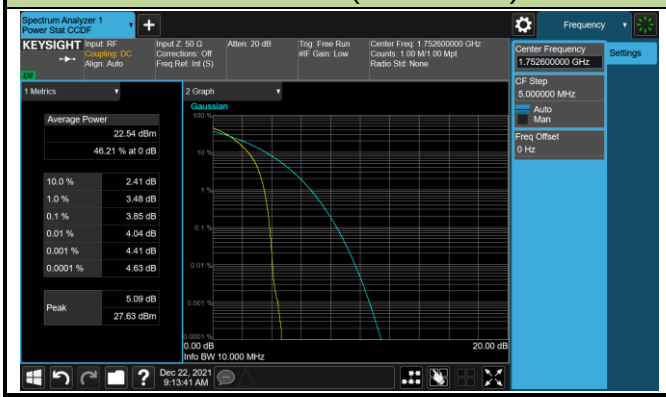
WCDMA Band II	
Channel 9262 (1852.4MHz)	Channel 9400 (1880.0MHz)
	
Channel 9538 (1907.6MHz)	
	
WCDMA Band IV	
Channel 1312 (1712.4MHz)	Channel 1412 (1732.4MHz)
	
Channel 1513 (1752.6MHz)	
	

WCDMA Band V	
Channel 4132 (826.4MHz)	Channel 4183 (836.4MHz)
	
Channel 4233 (846.6MHz)	
	

5.7. Conducted Spurious Emission Measurement

5.7.1.Test Limit

The level of the carrier and the various conducted spurious and harmonic frequencies is measured by means of a calibrated spectrum analyzer. The spectrum is scanned from the Low frequency generated in the equipment up to a frequency including its 10^{th} harmonic. All out of band emissions are measured with a spectrum analyzer connected to the antenna terminal of the EUT while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies. All data rates were investigated to determine the worst-case configuration. All modes of operation were investigated and the worst-case configuration results are reported in this section.

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.

5.7.2.Test Procedure

ANSI C63.26-2015 - Section 5.7

5.7.3.Test Setting

1. Set the analyzer frequency to low, mid, high channel.
2. RBW = 1MHz
3. VBW ≥ 3*RBW
4. Sweep time = auto
5. Detector = power averaging (rms)
6. Set sweep trigger to “free run.”
7. User gate triggered such that the analyzer only sweeps when the device is transmitting at full power.
8. Trace average at least 100 traces in power averaging (rms) mode if sweep is set to auto-couple. To accurately determine the average power over the on and off time of the transmitter, it can be necessary to increase the number of traces to be averaged above 100, or if using a manually configured sweep time, increase the sweep time.

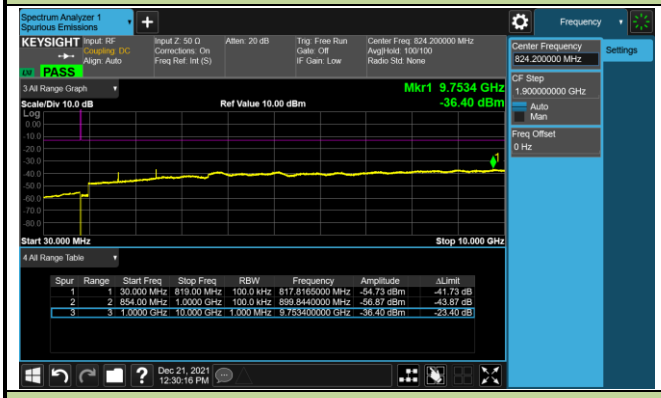
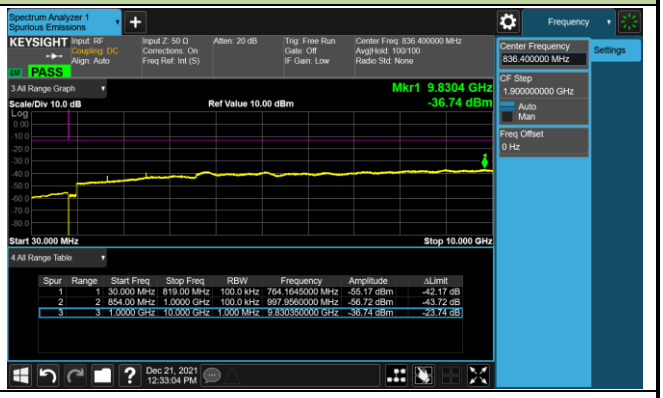
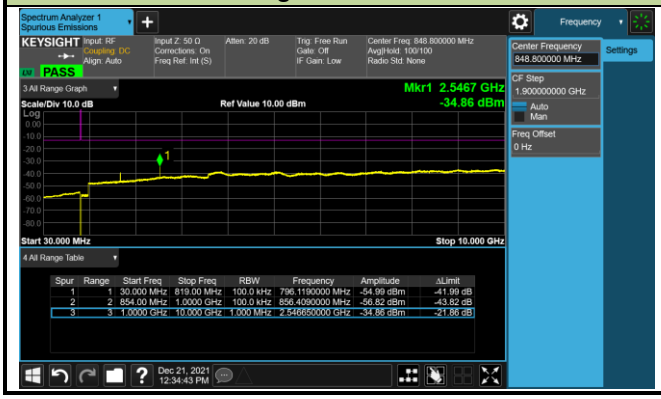
5.7.4.Test Setup

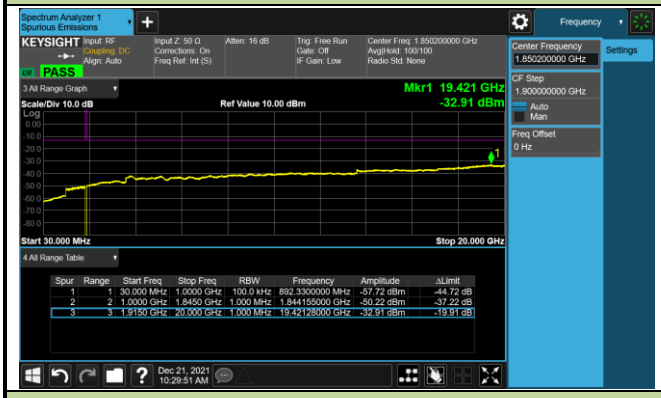
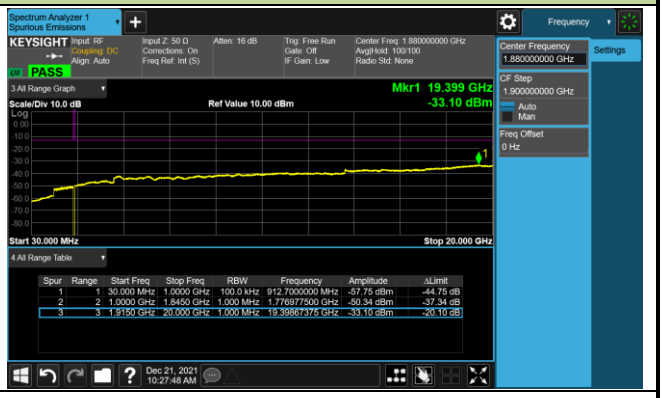
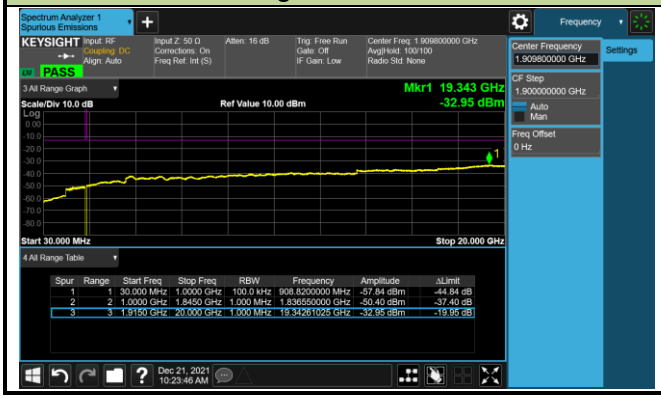
5.7.5.Test Result

Product	Mobile Computer	Test Site	SIP-SR1
Test Engineer	Candy Luo	Test Date	2021/12/21
Test Band	GSM 850, PCS 1900		

Mode	Frequency (MHz)	Frequency Range (MHz)	Max Spurious Emissions (dBm)	Limit (dBm)	Result
GSM 850	824.2	30 ~ 10000	-36.40	≤ -13.00	Pass
	836.4	30 ~ 10000	-36.74	≤ -13.00	Pass
	848.8	30 ~ 10000	-34.86	≤ -13.00	Pass
PCS 1900	1850.2	30 ~ 20000	-32.91	≤ -13.00	Pass
	1880.0	30 ~ 20000	-33.10	≤ -13.00	Pass
	1909.8	30 ~ 20000	-32.95	≤ -13.00	Pass

Note: Spurious emissions within 9kHz – 30MHz were found more than 20dB below limit line.

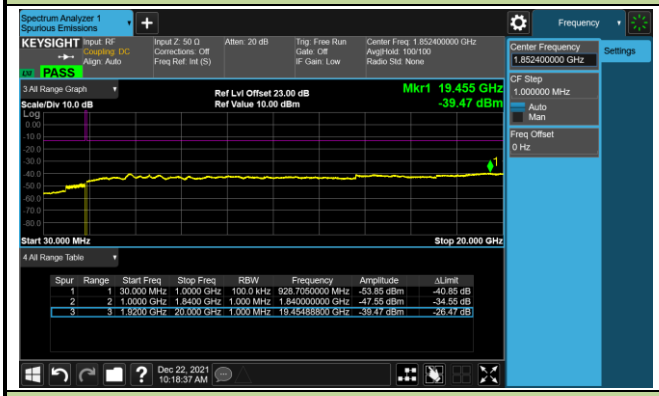
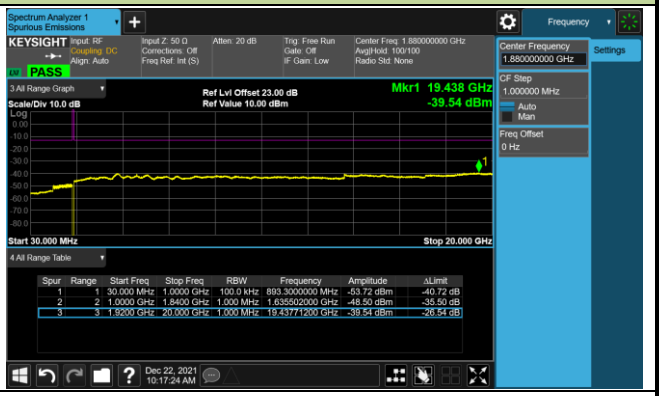
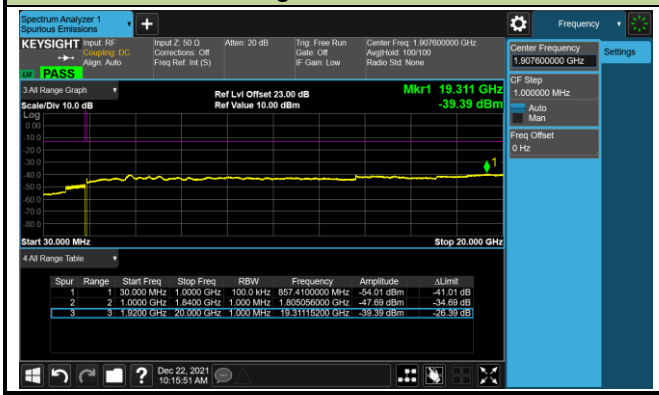
GSM 850	
Low Channel	Middle Channel
	
High Channel	
	

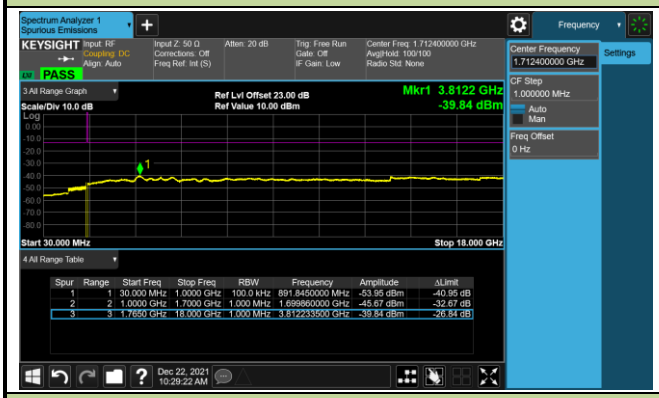
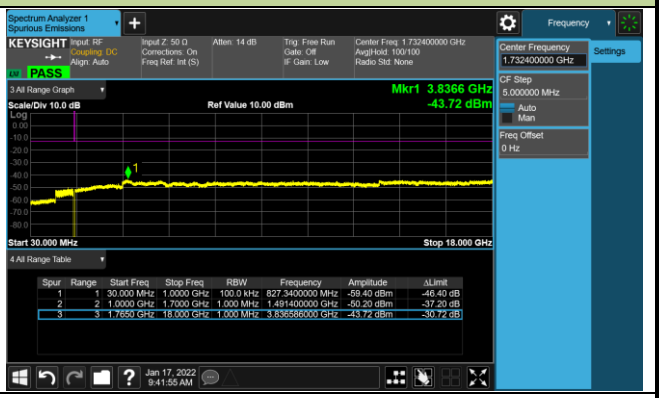
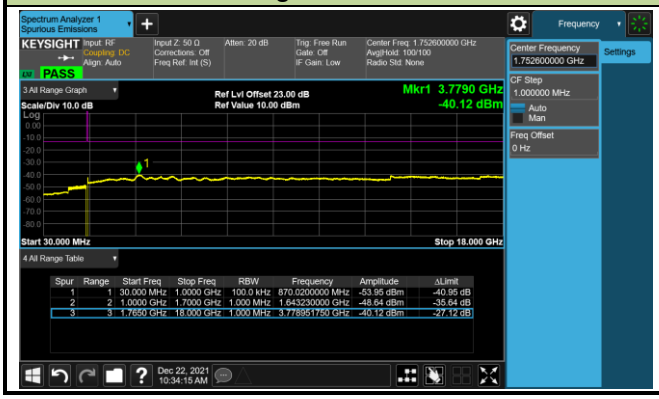
PCS 1900	
Low Channel	Middle Channel
	
High Channel	
	

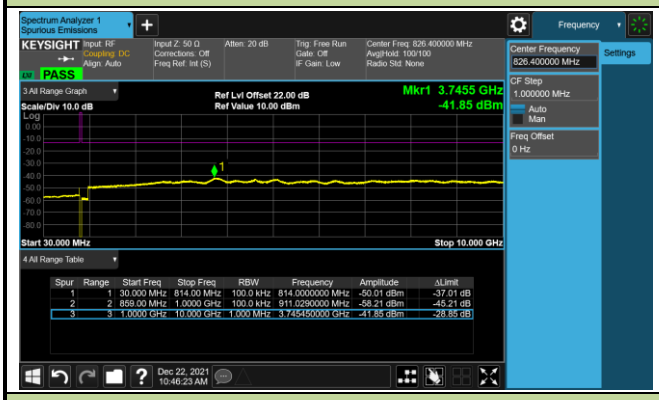
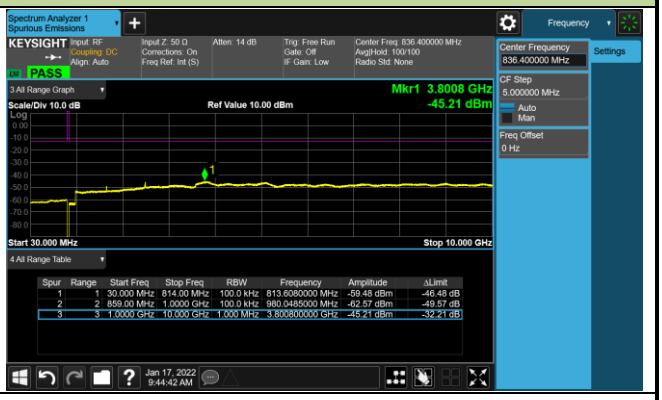
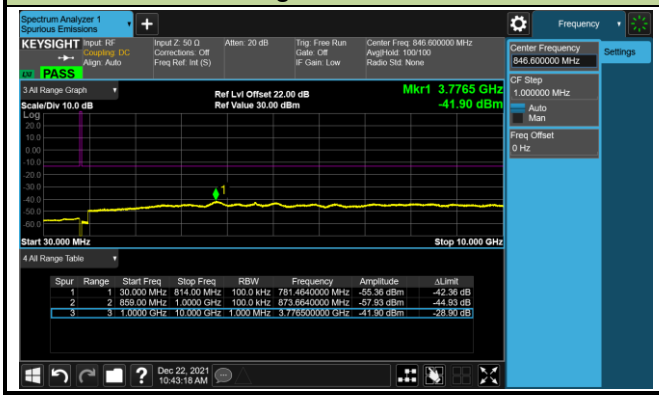
Product	Mobile Computer	Test Site	SIP-SR1
Test Engineer	Candy Luo	Test Date	2021/12/22 ~ 2022/01/17
Test Band	WCDMA Band II, IV, V		

Mode	Frequency (MHz)	Frequency Range (MHz)	Max Spurious Emissions (dBm)	Limit (dBm)	Result
WCDMA Band II	1852.4	30 ~ 20000	-39.47	≤ -13.00	Pass
	1880.0	30 ~ 20000	-39.54	≤ -13.00	Pass
	1907.6	30 ~ 20000	-39.39	≤ -13.00	Pass
WCDMA Band IV	1712.4	30 ~ 18000	-39.84	≤ -13.00	Pass
	1732.4	30 ~ 18000	-43.72	≤ -13.00	Pass
	1752.6	30 ~ 18000	-40.12	≤ -13.00	Pass
WCDMA Band V	826.4	30 ~ 10000	-41.85	≤ -13.00	Pass
	836.4	30 ~ 10000	-45.21	≤ -13.00	Pass
	846.6	30 ~ 10000	-41.90	≤ -13.00	Pass

Note: Spurious emissions within 9Khz – 30Mhz were found more than 20dB below limit line.

WCDMA Band II	
Low Channel	Middle Channel
	
High Channel	
	

WCDMA Band IV	
Low Channel	Middle Channel
	
High Channel	
	

WCDMA Band V	
Low Channel	Middle Channel
	
High Channel	
	

5.8. Radiated Spurious Emission Measurement

5.8.1.Test Limit

Out of band emissions: The powerof any emission outside of theauthorized operating frequency ranges must be attenuated below the transmitting power (P) by a factorof at least 43 + 10 log(P) dB. The emission limit equal to -13dBm.

E (dBμV/m) = EIRP (dBm) - 20 log D + 104.8; where D is the measurement distance in meters. The emission limit equal to 82.3dBμV/m.

5.8.2.Test Procedure

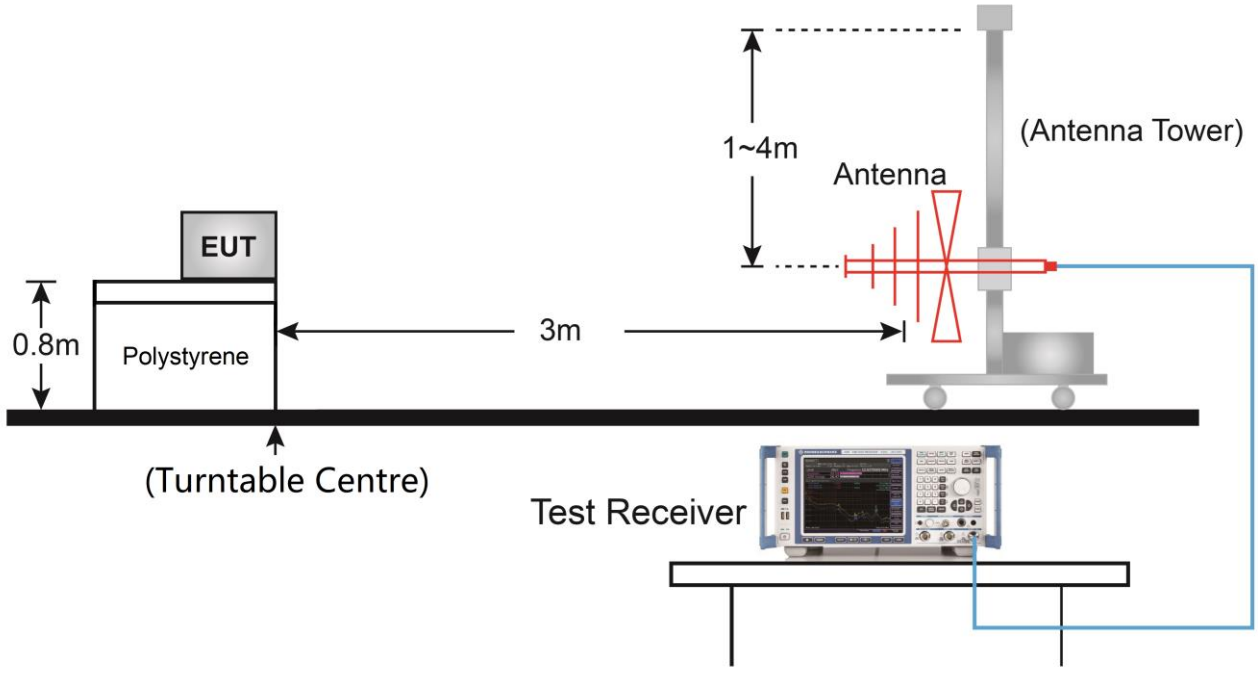
ANSI C63.26-2015 - Section 5.2.7 & 5.5

5.8.3.Test Setting

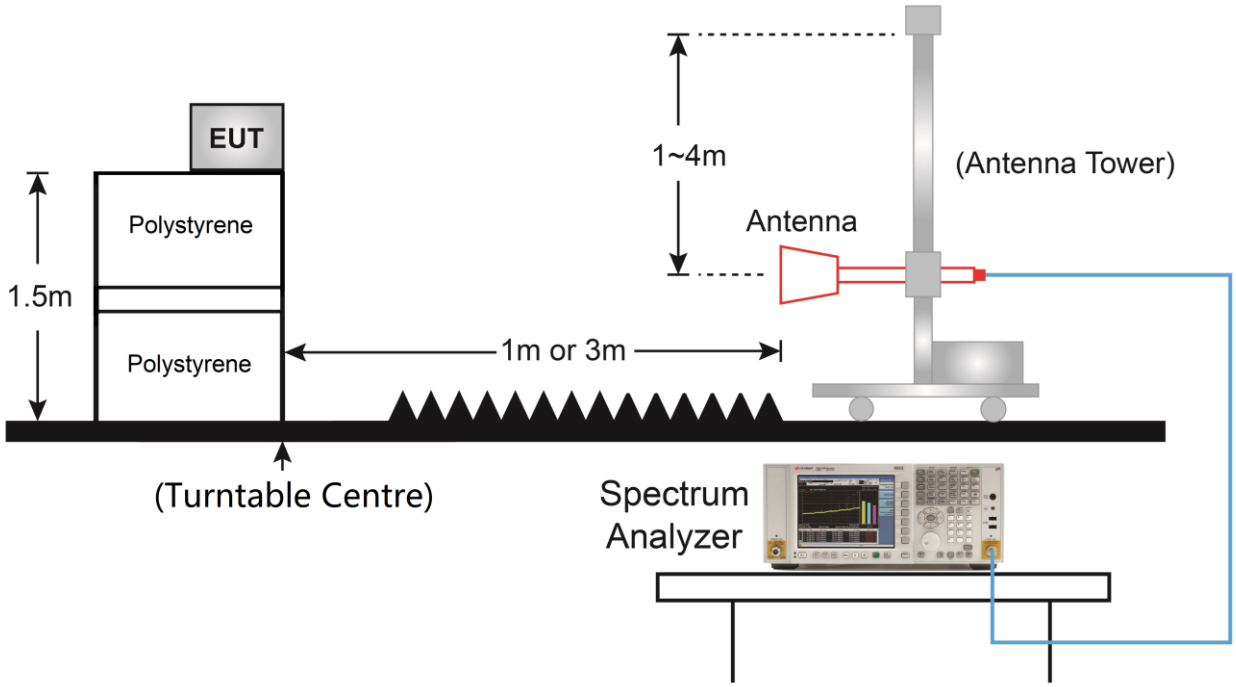
1. RBW = 1MHz
2. VBW ≥ 3*RBW
3. Sweep time ≥ 10 × (number of points in sweep) × (transmission symbol period)
4. Detector = Peak
5. Trace mode = max hold
6. The trace was allowed to stabilize

5.8.4.Test Setup

Below 1GHz Test Setup:



Above 1GHz Test Setup:



5.8.5.Test Result

Product	Mobile Computer	Test Site	SIP-AC3
Test Engineer	Allen Zou	Test Date	2021/12/23 ~ 2021/12/28
Test Band	GSM 850		

Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
Low Channel							
114.9	10.1	15.4	25.5	82.3	-56.8	Peak	Horizontal
177.0	11.5	17.1	28.6	82.3	-53.7	Peak	Horizontal
39.7	13.3	17.8	31.1	82.3	-51.2	Peak	Vertical
114.9	10.8	15.4	26.2	82.3	-56.1	Peak	Vertical
1649.0	72.1	-18.2	53.9	82.3	-28.4	Peak	Horizontal
2474.0	63.7	-14.8	48.9	82.3	-33.4	Peak	Horizontal
1649.0	61.8	-18.2	43.6	82.3	-38.7	Peak	Vertical
2474.0	59.9	-14.8	45.1	82.3	-37.2	Peak	Vertical
Middle Channel							
178.4	11.7	16.9	28.6	82.3	-53.7	Peak	Horizontal
293.8	4.9	18.4	23.3	82.3	-59.0	Peak	Horizontal
39.7	13.5	17.8	31.3	82.3	-51.0	Peak	Vertical
115.8	10.6	15.5	26.1	82.3	-56.2	Peak	Vertical
1671.0	68.6	-18.0	50.6	82.3	-31.7	Peak	Horizontal
2507.0	64.7	-14.7	50.0	82.3	-32.3	Peak	Horizontal
1671.0	61.3	-18.0	43.3	82.3	-39.0	Peak	Vertical
5147.0	53.6	-9.1	44.5	82.3	-37.8	Peak	Vertical
High Channel							
179.4	11.9	16.8	28.7	82.3	-53.6	Peak	Horizontal
998.1	7.7	30.0	37.7	82.3	-44.6	Peak	Horizontal
39.7	13.6	17.8	31.4	82.3	-50.9	Peak	Vertical
106.6	12.3	14.6	26.9	82.3	-55.4	Peak	Horizontal
1698.5	66.6	-17.9	48.7	82.3	-33.6	Peak	Horizontal
2545.5	69.9	-14.6	55.3	82.3	-27.0	Peak	Vertical
1698.5	60.4	-17.9	42.5	82.3	-39.8	Peak	Vertical
4245.0	52.7	-9.6	43.1	82.3	-39.2	Peak	Horizontal
Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB).							

Product	Mobile Computer	Test Site	SIP-AC3
Test Engineer	Allen Zou	Test Date	2021/12/23 ~ 2021/12/28
Test Band	PCS 1900		

Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
Low Channel							
176.5	10.3	17.1	27.4	82.3	-54.9	Peak	Horizontal
755.6	2.1	28.2	30.3	82.3	-52.0	Peak	Horizontal
39.7	12.2	17.8	30.0	82.3	-52.3	Peak	Vertical
114.9	11.6	15.4	27.0	82.3	-55.3	Peak	Vertical
5547.5	56.5	-8.9	47.6	82.3	-34.7	Peak	Horizontal
17464.5	46.8	4.9	51.7	82.3	-30.6	Peak	Horizontal
5547.5	51.5	-8.9	42.6	82.3	-39.7	Peak	Vertical
16895.0	46.1	4.6	50.7	82.3	-31.6	Peak	Vertical
Middle Channel							
176.5	10.7	17.1	27.8	82.3	-54.5	Peak	Horizontal
945.2	0.5	30.1	30.6	82.3	-51.7	Peak	Horizontal
39.2	12.4	17.8	30.2	82.3	-52.1	Peak	Vertical
47.9	10.7	18.2	28.9	82.3	-53.4	Peak	Vertical
5641.0	53.5	-8.8	44.7	82.3	-37.6	Peak	Horizontal
17932.0	46.0	5.5	51.5	82.3	-30.8	Peak	Horizontal
5641.0	53.6	-8.8	44.8	82.3	-37.5	Peak	Vertical
17787.5	46.8	5.5	52.3	82.3	-30.0	Peak	Vertical
High Channel							
173.1	9.8	17.5	27.3	82.3	-55.0	Peak	Horizontal
870.5	1.1	28.8	29.9	82.3	-52.4	Peak	Horizontal
39.2	12.5	17.8	30.3	82.3	-52.0	Peak	Vertical
114.9	11.4	15.4	26.8	82.3	-55.5	Peak	Vertical
5726.0	52.9	-8.8	44.1	82.3	-38.2	Peak	Horizontal
17762.0	46.8	5.6	52.4	82.3	-29.9	Peak	Horizontal
5726.0	52.6	-8.8	43.8	82.3	-38.5	Peak	Vertical
17762.0	45.8	5.6	51.4	82.3	-30.9	Peak	Vertical
Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB).							

Product	Mobile Computer	Test Site	SIP-AC3
Test Engineer	Allen Zou	Test Date	2021/12/23 ~ 2021/12/28
Test Band	WCDMA Band II		

Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
Low Channel							
176.0	10.0	17.2	27.2	82.3	-55.1	Peak	Horizontal
935.0	0.5	30.0	30.5	82.3	-51.8	Peak	Horizontal
39.2	13.0	17.8	30.8	82.3	-51.5	Peak	Vertical
47.9	12.5	18.2	30.7	82.3	-51.6	Peak	Vertical
3703.0	54.2	-10.7	43.5	82.3	-38.8	Peak	Horizontal
17685.5	46.4	5.4	51.8	82.3	-30.5	Peak	Horizontal
3703.0	55.1	-10.7	44.4	82.3	-37.9	Peak	Vertical
17371.0	46.6	5.0	51.6	82.3	-30.7	Peak	Vertical
Middle Channel							
176.5	10.7	17.1	27.8	82.3	-54.5	Peak	Horizontal
952.5	0.4	30.2	30.6	82.3	-51.7	Peak	Horizontal
39.2	12.3	17.8	30.1	82.3	-52.2	Peak	Vertical
47.9	13.7	18.2	31.9	82.3	-50.4	Peak	Vertical
3762.5	52.7	-10.6	42.1	82.3	-40.2	Peak	Horizontal
16580.5	47.4	4.2	51.6	82.3	-30.7	Peak	Horizontal
3762.5	54.5	-10.6	43.9	82.3	-38.4	Peak	Vertical
17473.0	46.3	5.0	51.3	82.3	-31.0	Peak	Vertical
High Channel							
177.9	10.4	16.9	27.3	82.3	-55.0	Peak	Horizontal
962.2	0.2	30.0	30.2	82.3	-52.1	Peak	Horizontal
39.2	12.9	17.8	30.7	82.3	-51.6	Peak	Vertical
47.9	11.7	18.2	29.9	82.3	-52.4	Peak	Vertical
3813.5	53.3	-10.5	42.8	82.3	-39.5	Peak	Horizontal
17940.5	46.3	5.4	51.7	82.3	-30.6	Peak	Horizontal
3813.5	56.9	-10.5	46.4	82.3	-35.9	Peak	Vertical
17932.0	45.9	5.5	51.4	82.3	-30.9	Peak	Vertical

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB).

Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m)

Product	Mobile Computer	Test Site	SIP-AC3
Test Engineer	Allen Zou	Test Date	2021/12/23 ~ 2021/12/28
Test Band	WCDMA Band IV		

Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
Low Channel							
176.5	10.3	17.1	27.4	82.3	-54.9	Peak	Horizontal
956.4	0.8	30.1	30.9	82.3	-51.4	Peak	Horizontal
39.2	12.8	17.8	30.6	82.3	-51.7	Peak	Vertical
47.9	13.2	18.2	31.4	82.3	-50.9	Peak	Vertical
14217.5	48.2	1.4	49.6	82.3	-32.7	Peak	Horizontal
17668.5	46.4	5.3	51.7	82.3	-30.6	Peak	Horizontal
8769.0	48.5	-4.0	44.5	82.3	-37.8	Peak	Vertical
17915.0	46.3	5.4	51.7	82.3	-30.6	Peak	Vertical
Middle Channel							
175.5	9.9	17.2	27.1	82.3	-55.2	Peak	Horizontal
881.2	2.0	29.2	31.2	82.3	-51.1	Peak	Horizontal
39.7	12.8	17.8	30.6	82.3	-51.7	Peak	Vertical
47.9	12.5	18.2	30.7	82.3	-51.6	Peak	Vertical
9041.0	49.1	-3.7	45.4	82.3	-36.9	Peak	Horizontal
16759.0	46.8	4.7	51.5	82.3	-30.8	Peak	Horizontal
6958.5	51.8	-7.0	44.8	82.3	-37.5	Peak	Vertical
17872.5	46.2	5.3	51.5	82.3	-30.8	Peak	Vertical
High Channel							
175.5	10.0	17.2	27.2	82.3	-55.1	Peak	Horizontal
927.7	0.6	29.9	30.5	82.3	-51.8	Peak	Horizontal
39.7	13.2	17.8	31.0	82.3	-51.3	Peak	Vertical
47.9	13.3	18.2	31.5	82.3	-50.8	Peak	Vertical
9610.5	48.9	-3.4	45.5	82.3	-36.8	Peak	Horizontal
17991.5	45.9	5.6	51.5	82.3	-30.8	Peak	Horizontal
8769.0	50.1	-4.0	46.1	82.3	-36.2	Peak	Vertical
17422.0	47.7	4.7	52.4	82.3	-29.9	Peak	Vertical

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB).

Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m)

Product	Mobile Computer	Test Site	SIP-AC3
Test Engineer	Allen Zou	Test Date	2021/12/23 ~ 2021/12/28
Test Band	WCDMA Band V		

Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
Low Channel							
179.4	12.7	16.8	29.5	82.3	-52.8	Peak	Horizontal
872.0	37.6	28.9	66.5	82.3	-15.8	Peak	Horizontal
39.7	14.5	17.8	32.3	82.3	-50.0	Peak	Vertical
871.5	36.0	28.9	64.9	82.3	-17.4	Peak	Vertical
1649.0	54.5	-18.2	36.3	82.3	-46.0	Peak	Horizontal
4382.5	50.8	-9.6	41.2	82.3	-41.1	Peak	Horizontal
3403.5	50.4	-11.4	39.0	82.3	-43.3	Peak	Vertical
4377.0	51.0	-9.6	41.4	82.3	-40.9	Peak	Vertical
Middle Channel							
176.0	12.9	17.2	30.1	82.3	-52.2	Peak	Horizontal
878.3	38.6	29.1	67.7	82.3	-14.6	Peak	Horizontal
39.7	14.5	17.8	32.3	82.3	-50.0	Peak	Vertical
881.2	34.4	29.2	63.6	82.3	-18.7	Peak	Vertical
1671.0	53.9	-18.0	35.9	82.3	-46.4	Peak	Horizontal
9140.0	48.9	-3.8	45.1	82.3	-37.2	Peak	Horizontal
2930.5	51.2	-13.2	38.0	82.3	-44.3	Peak	Vertical
4371.5	50.6	-9.6	41.0	82.3	-41.3	Peak	Vertical
High Channel							
173.6	12.8	17.4	30.2	82.3	-52.1	Peak	Horizontal
890.9	37.1	29.2	66.3	82.3	-16.0	Peak	Horizontal
39.7	15.2	17.8	33.0	82.3	-49.3	Peak	Vertical
890.4	34.4	29.2	63.6	82.3	-18.7	Peak	Vertical
1693.0	56.8	-17.9	38.9	82.3	-43.4	Peak	Horizontal
7352.5	51.0	-6.4	44.6	82.3	-37.7	Peak	Horizontal
5064.5	50.5	-9.1	41.4	82.3	-40.9	Peak	Vertical
7022.5	50.7	-6.9	43.8	82.3	-38.5	Peak	Vertical

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB).

Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m)

Appendix A - Test Setup Photograph

Refer to “2111RSU064-UT” file.

Appendix B - EUT Photograph

Refer to “2111RSU064-UE” file.

The End