RF MEASUREMENT REPORT

FCC ID:	XMR202205EC200UAU
Applicant:	Quectel Wireless Solutions Co., Ltd
Product:	LTE Module
Model No.:	EC200U-AU
Brand Name:	Quectel
FCC Classification:	PCS Licensed Transmitter (PCB)
FCC Rule Part(s):	Part 2, 22 (H), 24 (E)
Test Date:	March 16 ~ 28, 2022

Reviewed By: Sunny Sun

Approved By: Robin Wu

The test results relate only to the samples tested.
This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in ANSI C63.26-2015. Test results reported herein relate only to the item(s) tested.
The test report shall not be reproduced except in full without the written approval of MRT Technology (Suzhou) Co., Ltd.

Revision History

Report No.	Version	Description	Issue Date	Note
2203RSU034-U1	Rev. 01	Initial Report	04-13-2022	Valid

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1. General Information

1.1. Applicant

Quectel Wireless Solutions Co., Ltd

Building 5, Shanghai Business Park Phase III (Area B), No.1016 Tianlin Road, Minhang District, Shanghai, China 200233

1.2. Manufacturer

Quectel Wireless Solutions Co., Ltd

Building 5, Shanghai Business Park Phase III (Area B), No.1016 Tianlin Road, Minhang District, Shanghai, China 200233

1.3. Testing Facility

☒	**Test Site - MRT Suzhou Laboratory**	
	Laboratory Location (Suzhou - Wuzhong)	
	D8 Building, No.2 Tian'edang Rd., Wuzhong Economic Development Zone, Suzhou, China	
	Laboratory Location (Suzhou - SIP)	
	4b Building, Liando U Valley, No.200 Xingpu Rd., Shengpu Town, Suzhou Industrial Park, China	
	Laboratory Accreditations	
	A2LA: 3628.01	CNAS: L10551
	FCC: CN1166	ISED: CN0001
	VCCI: R-20025, G-20034, C-20020, T-20020	
☐	**Test Site - MRT Shenzhen Laboratory**	
	Laboratory Location (Shenzhen)	
	1G, Building A, Junxiangda Building, Zhongshanyuan Road West, Nanshan District, Shenzhen, China	
	Laboratory Accreditations	
	A2LA: 3628.02	CNAS: L10551
	FCC: CN1284	ISED: CN0105
☐	**Test Site - MRT Taiwan Laboratory**	
	Laboratory Location (Taiwan)	
	No. 38, Fuxing 2nd Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.)	
	Laboratory Accreditations	
	TAF: L3261-190725	
	FCC: 291082, TW3261	ISED: TW3261

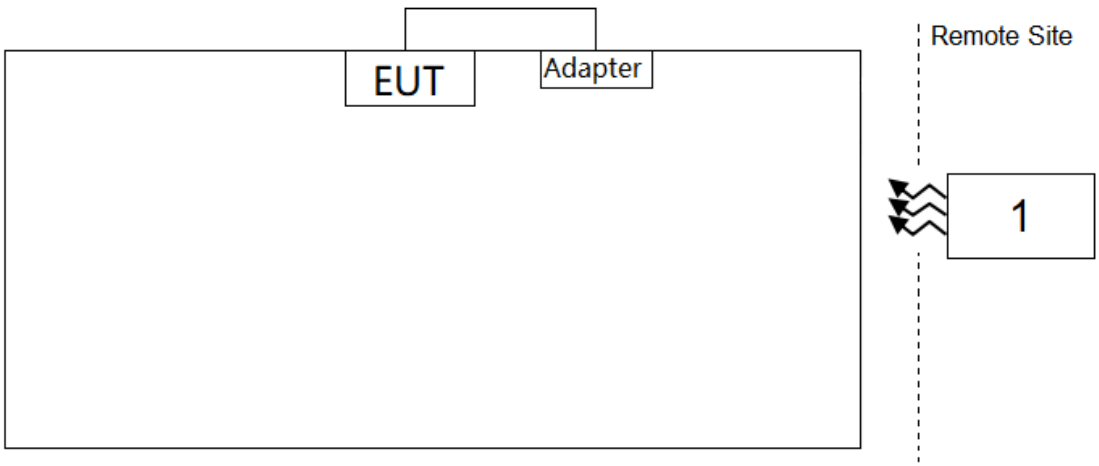
1.4. Product Information

Product Name	LTE Module
Model No.	EC200U-AU
IMEI	Conducted Measurement: 867869060001682 Radiated Measurement: 867869060001626
Wi-Fi Specification	802.11b Rx Scan
Bluetooth Specification	V4.2 BR/EDR
GSM Specification	GSM 850/1900
LTE Specification	LTE Band 2/4/5/7/38/41/66
Working Voltage	3.3 ~ 4.3Vdc, 3.8Vdc Typ.
Remark: The information of EUT was provided by the manufacturer, and the accuracy of the information shall be the responsibility of the manufacturer.	

1.5. Radio Specification

T_X Frequency Range	GSM 850:824 ~ 849MHz PCS 1900: 1850 ~ 1910MHz
R_X Frequency Range	GSM 850: 869 ~ 894MHz PCS 1900: 1930 ~ 1990MHz
Modulation	GMSK
Antenna Information	Dipole Antenna; GSM 850: 2.53dBi; PCS 1900: 1.59dBi
Remark: 1. For other features of this EUT, test report will be issued separately; 2. This typical antenna is only used to calculate the ERP or EIRP.	

1.6. Configuration of Tested System



Product		Manufacturer	Model No.
1	Wideband Radio Communication Tester	R&S	CMW 500

1.7. Test Methodology

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- ANSI C63.26:2015
- FCC CFR 47 Part 2, 22, 24
- FCC KDB 971168 D01 v03r01: Power Meas License Digital Systems
- FCC KDB 971168 D02 v02r01: Misc Rev Approv License Devices
- FCC KDB 412172 D01 v01r01: Determining ERP and EIRP

1.8. Test Environment Condition

Ambient Temperature	15 ~ 35°C
Relative Humidity	20 ~ 75%RH

2. Test Equipment Calibration Date

Instrument Name	Manufacturer	Model No.	Asset No.	Cali. Interval	Cal. Due Date	Test Site
Communication Tester	R&S	CMU 200	MRTSUE06009	1 year	2022/9/7	SIP-SR1
Communication Tester	R&S	CMW500	MRTSUE06243	1 year	2022/10/10	SIP-SR1
Signal Generator	Keysight	E8257D	MRTSUE06453	1 year	2022/6/24	SIP-SR1
Thermohygrometer	testo	622	MRTSUE06629	1 year	2022/11/2	SIP-SR1
Signal Generator	Keysight	E8257D	MRTSUE06904	1 year	2022/11/23	SIP-SR1
DC POWER MODULE	Keysight	N6743B	MRTSUE06905	/	/	SIP-SR1
DC POWER MODULE	Keysight	N6743B	MRTSUE06906	/	/	SIP-SR1
Low-Profile Modular Power System Mainframe	Keysight	N6700C	MRTSUE06907	/	/	SIP-SR1
Signal Analyzer	Keysight	N9021B	MRTSUE06915	1 year	2022/12/19	SIP-SR1
Temperature Chamber	BAOYT	BYG-80CL	MRTSUE06932	1 year	2023/3/16	SIP-SR1
Shielding Room	MIX-BEP	SIP-SR1	MRTSUE06948	/	/	SIP-SR1
TRILOG Antenna	Schwarzbeck	VULB 9162	MRTSUE06022	1 year	2022/5/24	WZ-AC2
Loop Antenna	Schwarzbeck	FMZB 1519	MRTSUE06025	1 year	2022/10/28	WZ-AC2
EMI Test Receiver	Agilent	N9038A	MRTSUE06125	1 year	2022/6/24	WZ-AC2
Thermohygrometer	Mingle	ETH529	MRTSUE06170	1 year	2022/12/1	WZ-AC2
Horn Antenna	Schwarzbeck	BBHA 9120D	MRTSUE06171	1 year	2022/10/21	WZ-AC2
Preamplifier	Schwarzbeck	BBV 9718	MRTSUE06176	1 year	2022/11/12	WZ-AC2
Anechoic Chamber	RIKEN	WZ-AC2	MRTSUE06213	1 year	2022/4/29	WZ-AC2
Horn Antenna	ETS	3117	MRTSUE06257	1 year	2022/9/25	WZ-AC2
Horn Antenna	Schwarzbeck	BBHA 9170	MRTSUE06597	1 year	2022/12/1	WZ-AC2
Preamplifier	EMCI	EMC184045SE	MRTSUE06640	1 year	2023/1/13	WZ-AC2
Preamplifier	EMCI	EMC051845SE	MRTSUE06987	1 year	2022/9/9	WZ-AC2
Thermohygrometer	testo	Testo 608-H1	MRTSUE11038	1 year	2022/11/11	WZ-AC2

Software	Version	Function
EMI Software	V3	EMI Test Software

3. Measurement Uncertainty

Where relevant, the following test uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Radiated Spurious Emissions
Measurement Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): Horizontal: 9kHz ~ 300MHz: 5.04dB 300MHz ~ 1GHz: 4.95dB 1GHz ~ 40GHz: 6.40dB Vertical: 9kHz ~ 300MHz: 5.24dB 300MHz ~ 1GHz: 6.03dB 1GHz ~ 40GHz: 6.40dB
Conducted Spurious Emissions
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 0.78dB
Output Power
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 1.13dB
Occupied Bandwidth
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 0.28%
Frequency Stability
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 76.2Hz

4. Test Result

4.1. Summary

FCC Section(s)	Test Description	Test Condition	Verdict
2.1049	Occupied Bandwidth	Conducted	Pass
2.1055, 22.355, 24.235	Frequency Stability		Pass
22.913(a)(5)	Equivalent Radiated Power (B5)		Pass
24.232(c)	Equivalent Isotropic Radiated Power (B2)		Pass
2.1051, 22.917(a), 24.238(a)	Band Edge		Pass
2.1051, 22.917(a), 24.238(a)	Peak to Average Ratio		Pass
24.232(d)	Spurious Emission		Pass
2.1053, 22.917(a), 24.238(a)	Spurious Emission	Radiated	Pass

Notes:

1) The analyzer plots shown in this section were all taken with a correction table loaded into the analyzer. The correction table was used to account for the losses of the cables and attenuators used as part of the system to connect the EUT to the analyzer at all frequencies of interest.
2) All modes of operation and data rates were investigated. For radiated emission test, every axis (X, Y, Z) was also verified. The test results shown in the following sections represent the worst-case emissions.
3) All supported modulation types were evaluated. The worst-case emission of modulation was selected. Therefore, the Frequency Stability, Channel Band Edge, Radiated & Conducted Spurious Emission were presented worst-case in the test report.

4.2. Occupied Bandwidth Measurement

4.2.1. Test Limit

The occupied bandwidth, that is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 percent of the total mean power radiated by a given emission shall be measured.

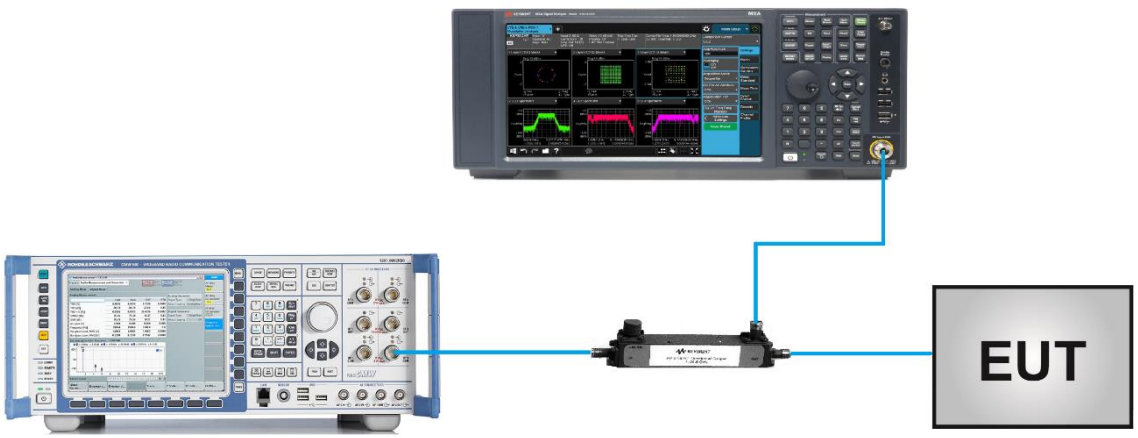
4.2.2. Test Procedure

ANSI C63.26-2015 - Section 5.4

4.2.3. Test Setting

1. Set center frequency to the nominal EUT channel center frequency
2. RBW = The nominal RBW shall be in the range of 1% to 5% of the anticipated OBW
3. VBW ≥ 3 × RBW
4. Detector = Peak
5. Trace mode = max hold
6. Sweep = auto couple
7. Allow the trace to stabilize
8. Use the 99% power bandwidth function of the instrument and report the measured bandwidth.

4.2.4. Test Setup



4.2.5. Test Result

Refer to Appendix A.1.

4.3. Frequency Stability Measurement

4.3.1. Test Limit

The frequency stability shall be measured by variation of ambient temperature and variation of primary supply voltage to ensure that the fundamental emission stays within the authorized frequency block. The frequency stability of the transmitter shall be maintained within ±0.00025% (±2.5ppm) of the center frequency.

4.3.2. Test Procedure

ANSI C63.26-2015 - Section 5.6

4.3.3. Test Setting

Frequency Stability Under Temperature Variations:

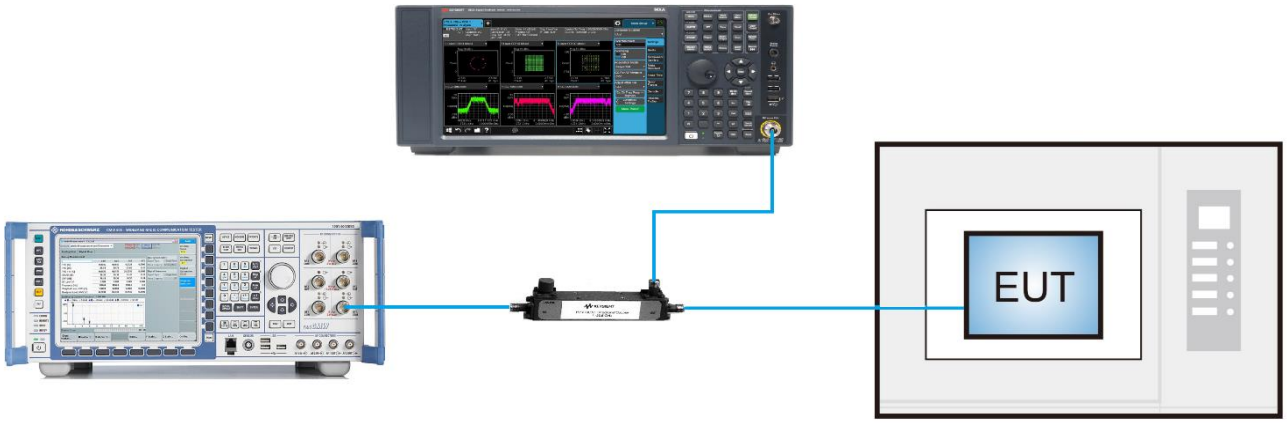
The equipment under test was connected to an external AC or DC power supply and input rated voltage. RF output was connected to a frequency counter or spectrum analyzer via feed through attenuators. The EUT was placed inside the temperature chamber. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and measure EUT 20°C operating frequency as reference frequency. Turn EUT off and set the chamber temperature to High. After the temperature stabilized for approximately 30 minutes recorded the frequency. Repeat step measure with 10°C decreased per stage until the Low temperature reached.

Frequency Stability Under Voltage Variations:

Set chamber temperature to 20°C. Use a variable AC power supply / DC power source to power the EUT and set the voltage to rated voltage. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and recorded the frequency.

Reduce the input voltage to specify extreme voltage variation (±15%) and endpoint, recordthe maximum frequency change.

4.3.4. Test Setup



4.3.5. Test Result

Refer to Appendix A.2.

4.4. Equivalent Isotropically Radiated Power Measurement

4.4.1. Test Limit

Band 2:

Mobile and portable stations are limited to 2 watts EIRP and the equipment must employ a means for limiting power to the minimum necessary for successful communications.

Band 5:

The ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 watts.

4.4.2. Test Procedure

ANSI C63.26-2015 - Section 5.2

4.4.3. Test Setting

Average power measurements were performed only when the EUT was transmitting at its maximum power control level using a broadband power meter with a pulse sensor. The power meter implemented triggering and gating capabilities which were set up such that power measurements were recorded only during the ON time of the transmitter.

The relevant equation for determining the maximum ERP or EIRP from the measured RF output power is given in Equation (1) as follows:

ERP or EIRP = P_{Meas} + G_T

where

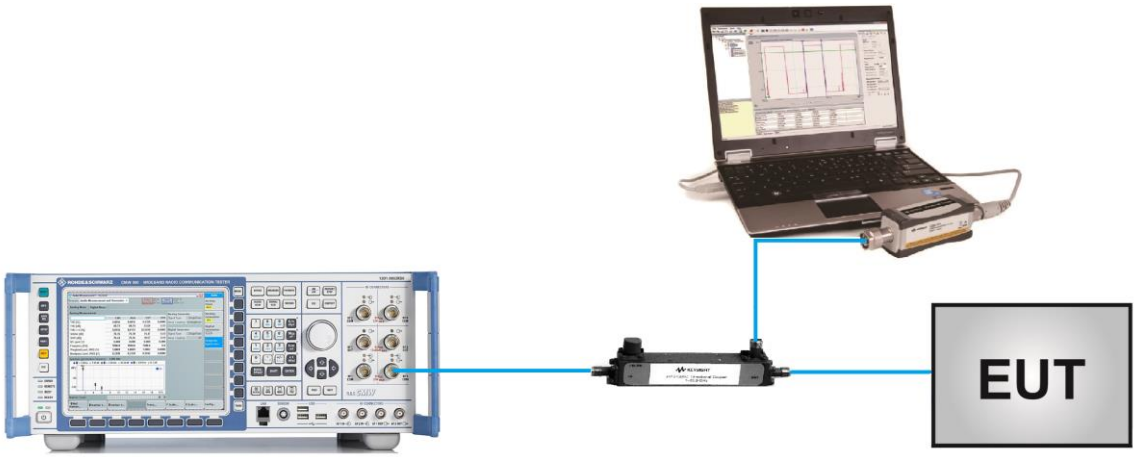
ERP or EIRP effective radiated power or equivalent isotropically radiated power, respectively (expressed in the same units as P_{Meas}, e.g., dBm or dBW)

P_{Meas} measured transmitter output power or PSD, in dBm or dBW

G_T gain of the transmitting antenna, in dBd (ERP) or dBi (EIRP)

ERP = EIRP -2.15

4.4.4. Test Setup



4.4.5. Test Result

Refer to Appendix A.3.

4.5. Band Edge Measurement

4.5.1. Test Limit

For operations in the 824 ~ 849 MHz, 1850 ~ 1910 MHz, 1930 ~ 1990 MHz, 698 ~ 746 MHz and 1710 ~ 1755 MHz, the FCC limit is 43 + 10log10(P[$_{Watts}$]) dB below the transmitter power P(Watts) in a 1 MHz bandwidth. However, in the 1MHz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

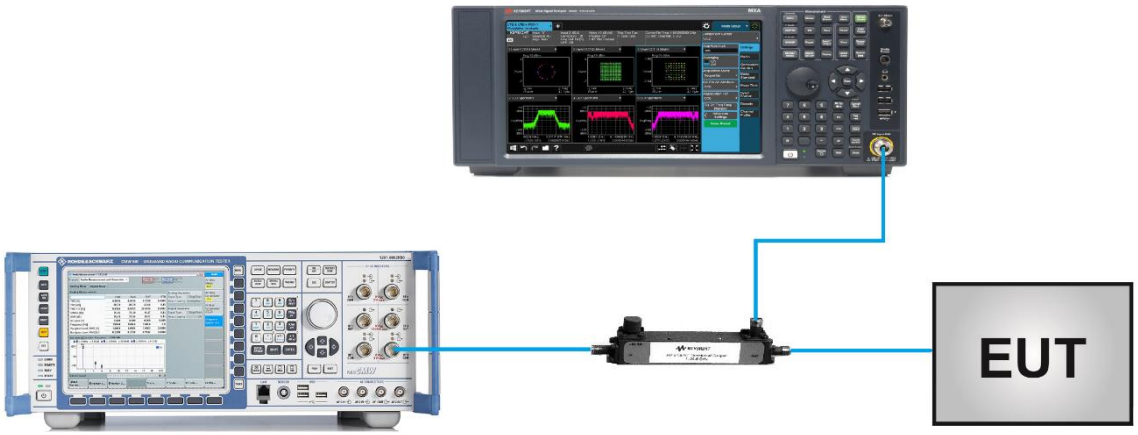
4.5.2. Test Procedure

ANSI C63.26-2015 - Section 5.7

4.5.3. Test Setting

1. Set the analyzer frequency to low or high channel
2. RBW ≥ The nominal RBW shall be in the range of 1% of the anticipated OBW (in the 1MHz band immediately outside and adjacent to the band edge). For improvement of the accuracy in the measurement of the average power of a noise-like emission, a RBW narrower than the specified reference bandwidth can be used (generally limited to no less than 1% of the OBW), provided that a subsequent integration is performed over the full required measurement bandwidth. This integration should be performed using the spectrum analyzer’s band power functions.
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.

4.5.4. Test Setup



4.5.5. Test Result

Refer to Appendix A.4.

4.6. Peak to Average Ratio Measurement

4.6.1. Test Limit

A peak to average ratio measurement is performed at the conducted port of the EUT. The spectrum analyzers Complementary Cumulative Distribution Function (CCDF) measurement profile is used to determine the largest deviation between the average and the peak power of the EUT in a given bandwidth. The CCDF curve shows how much time the peak waveform spends at or above a given average power level. The percent of time the signal spends at or above the level defines the probability for that particular power level.

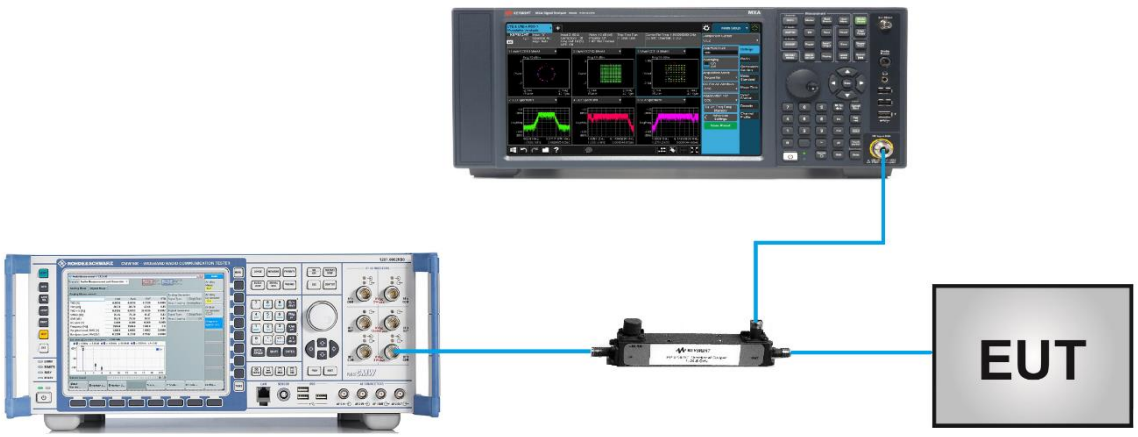
4.6.2. Test Procedure

ANSI C63.26-2015 - Section 5.2.3.4 (CCDF).

4.6.3. Test Setting

1. Set the resolution / measurement bandwidth ≥ signal's occupied bandwidth
2. Set the number of counts to a value that stabilizes the measured CCDF curve
3. Record the maximum PARR level associated with a probability of 0.1%

4.6.4. Test Setup



4.6.5. Test Result

Refer to Appendix A.5.

4.7. Conducted Spurious Emission Measurement

4.7.1. 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 10th 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.

4.7.2. Test Procedure

ANSI C63.26-2015 - Section 5.7

4.7.3. 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.

4.7.4. Test Setup

4.7.5. Test Result

Refer to Appendix A.6.

4.8. Radiated Spurious Emission Measurement

4.8.1. 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.

4.8.2. Test Procedure

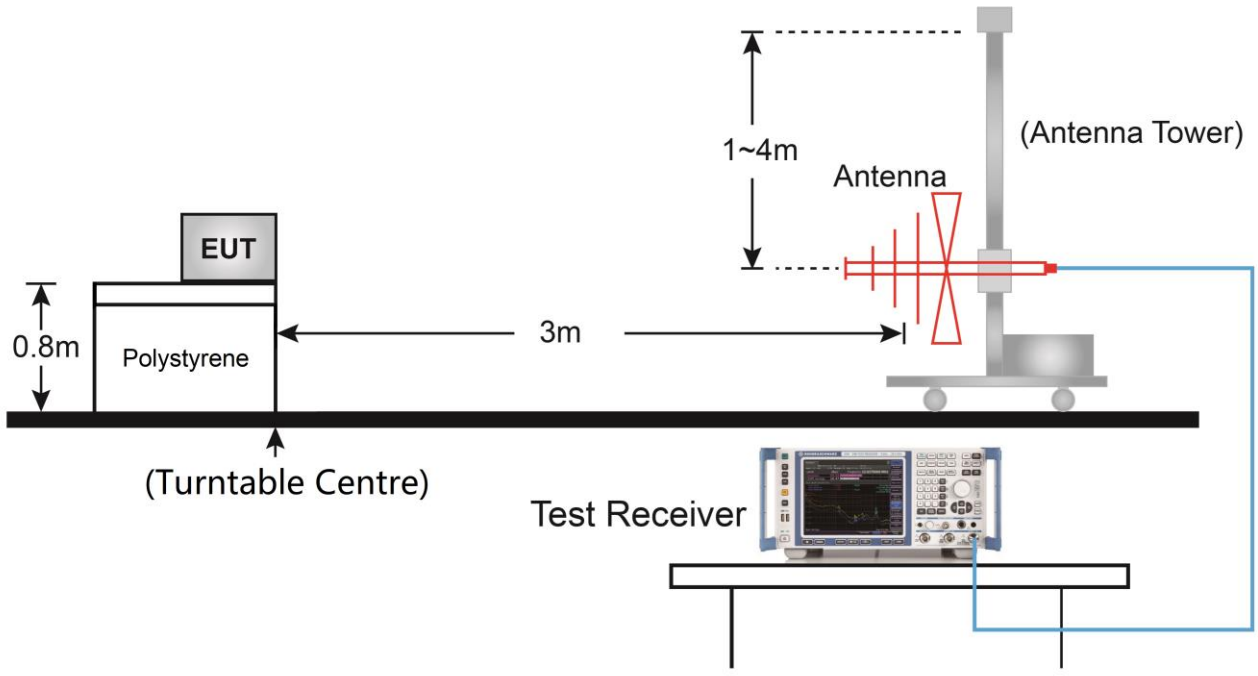
ANSI C63.26-2015 - Section 5.2.7 & 5.5

4.8.3. Test Setting

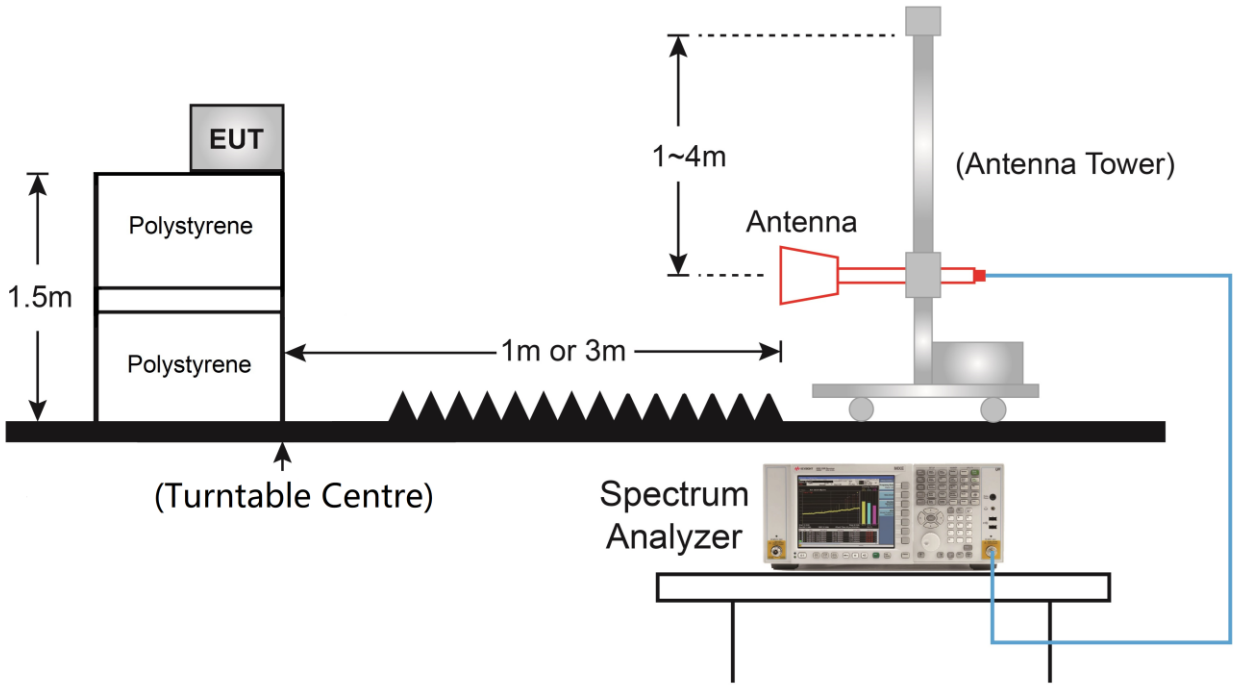
1. RBW = 1MHz
2. VBW ≥ 3*RBW
3. Sweep time ≥ 10 × (number of points in sweep) × (transmission symbol period)
4. Detector = Peak
5. Trace mode = max hold
6. The trace was allowed to stabilize

4.8.4. Test Setup

Below 1GHz Test Setup:



Above 1GHz Test Setup:



4.8.5. Test Result

Refer to Appendix A.7.

Appendix A - Test Result

A.1 Occupied Bandwidth Test Result

Test Site	SIP-SR1	Test Engineer	Candy Luo
Test Band	GSM 850	Test Date	2022/03/17

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	824.2	0.237
Middle	836.4	0.240
High	848.8	0.236

99% Bandwidth

Low Channel

Middle Channel

High Channel

Test Site	SIP-SR1	Test Engineer	Candy Luo
Test Band	PCS 1900	Test Date	2022/03/17

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	1850.2	0.236
Middle	1880.0	0.238
High	1909.8	0.238

99% Bandwidth

Low Channel

Middle Channel

High Channel

A.2 Frequency Stability Test Result

Test Site	SIP-SR1	Test Engineer	Candy Luo
Test Band	GSM 850	Test Date	2022/03/24

Power (Vdc)	Temp. (°C)	Frequency Tolerance (ppm)
3.80	- 30	-0.0336
	- 20	-0.0245
	- 10	-0.0190
	0	-0.0108
	+ 10	0.0086
	+ 20	0.0091
	+ 30	0.0094
	+ 40	0.0079
	+ 50	0.0074
4.30	+ 20	0.0069
3.30	+ 20	0.0072

Test Site	SIP-SR1	Test Engineer	Candy Luo
Test Band	PCS 1900	Test Date	2022/03/24

Power (Vdc)	Temp. (°C)	Frequency Tolerance (ppm)
3.80	- 30	0.0177
	- 20	0.0091
	- 10	-0.0105
	0	-0.0132
	+ 10	-0.0124
	+ 20	-0.0122
	+ 30	-0.0134
	+ 40	-0.0142
	+ 50	-0.0150
4.30	+ 20	-0.0162
3.30	+ 20	-0.0148

A.3 Equivalent Isotropically Radiated Power Test Result

Test Site	SIP-SR1	Test Engineer	Candy Luo
Test Band	GSM 850	Test Date	2022/03/25

Mode	Slot	Conducted Power (dBm)			Antenna Gain (dBi)	ERP (dBm)		
		GSM 850 Channel				GSM 850 Channel		
		128	189	251		128	189	251
GSM	-	32.65	32.72	32.78	2.53	33.03	33.10	33.16
GPRS	1	32.65	32.72	32.79	2.53	33.03	33.10	33.17
	2	31.01	31.14	31.30	2.53	31.39	31.52	31.68
	3	28.78	28.91	29.13	2.53	29.16	29.29	29.51
	4	26.59	26.82	27.02	2.53	26.97	27.20	27.40
Limit	38.45dBm							

Note: The ERP (dBm) = Output Power (dBm) + Antenna Gain (dBi) - 2.15

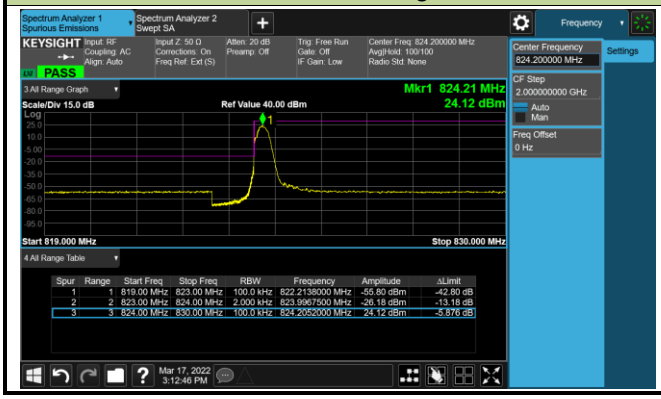
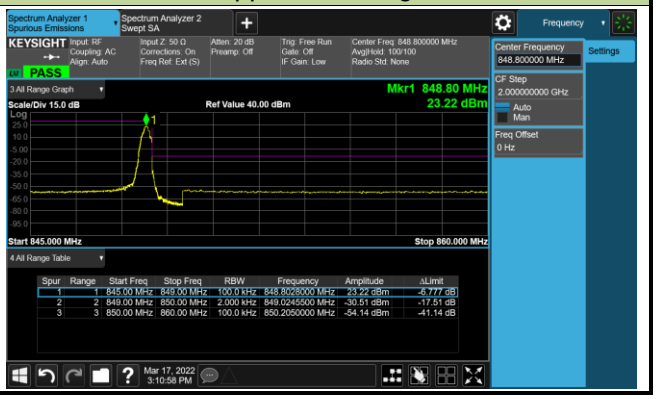
Test Site	SIP-SR1	Test Engineer	Candy Luo
Test Band	PCS 1900	Test Date	2022/03/25

Mode	Slot	Conducted Power (dBm)			Antenna Gain (dBi)	EIRP (dBm)		
		DCS 1900 Channel				DCS 1900 Channel		
		512	661	810		512	661	810
GSM	-	29.65	29.56	29.68	1.59	31.24	31.15	31.27
GPRS	1	29.67	29.60	29.71	1.59	31.26	31.19	31.30
	2	28.14	28.07	28.22	1.59	29.73	29.66	29.81
	3	26.08	26.14	26.10	1.59	27.67	27.73	27.69
	4	23.91	23.90	23.92	1.59	25.50	25.49	25.51
Limit	33.01dBm							

Note: The EIRP (dBm) = Output Power (dBm) + Antenna Gain (dBi)

A.4 Band Edge Measurement Test Result

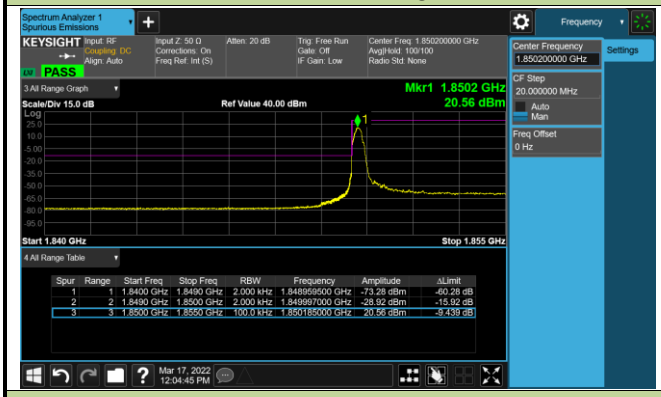
Test Site	SIP-SR1	Test Engineer	Candy Luo
Test Band	GSM 850	Test Date	2022/03/17

Lower Band Edge	Upper Band Edge
	

Test Site	SIP-SR1	Test Engineer	Candy Luo
Test Band	PCS 1900	Test Date	2022/03/17

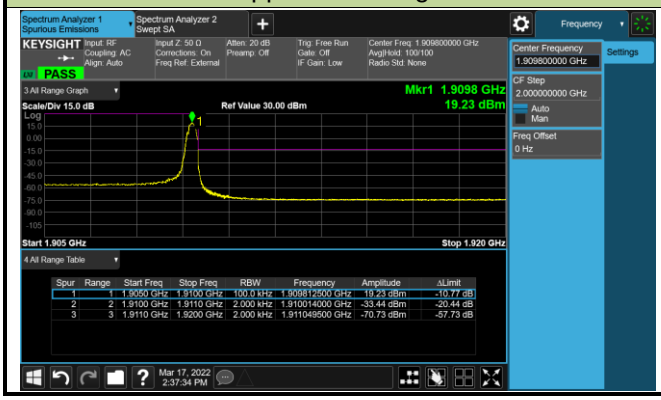
PCS 1900

Lower Band Edge

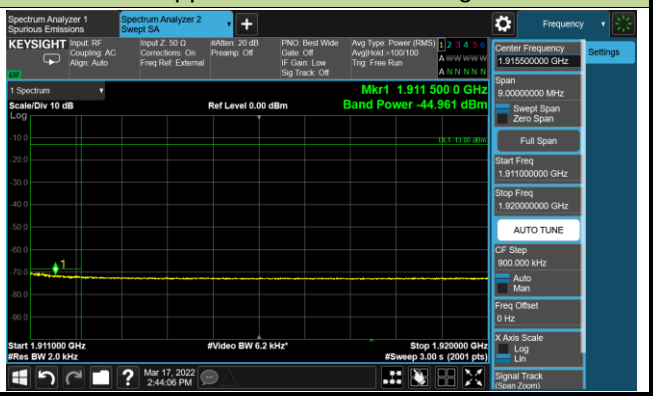


Lower Extended Band Edge

Upper Band Edge



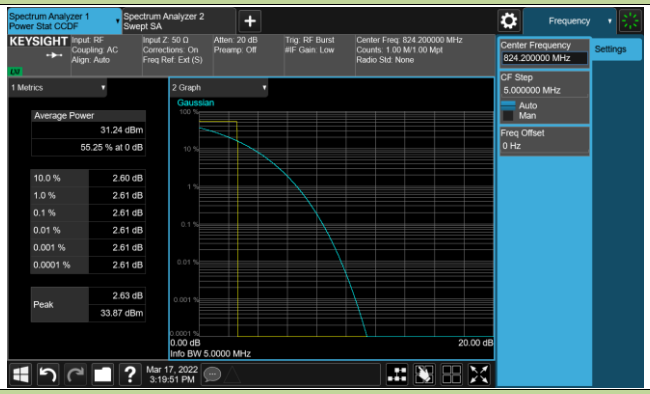
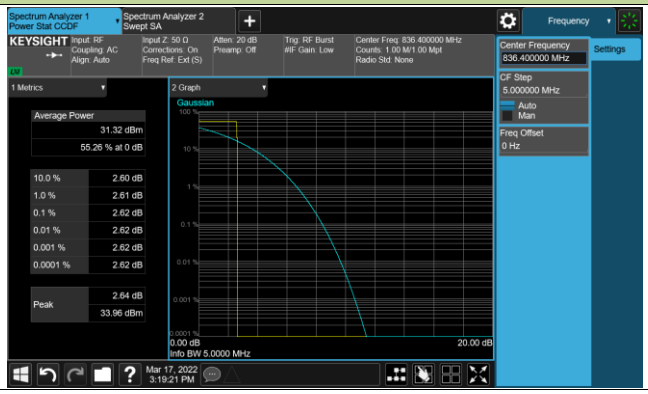
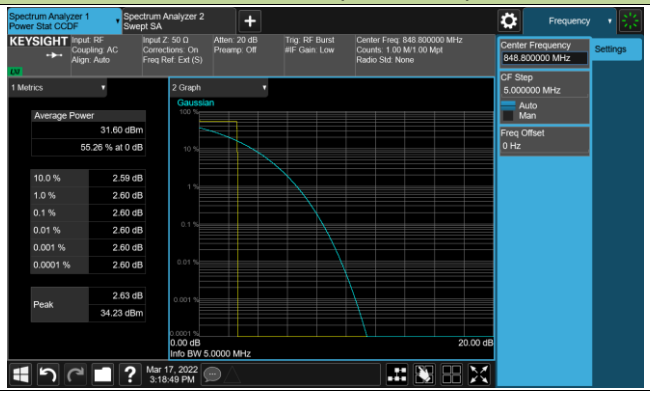
Upper Extended Band Edge

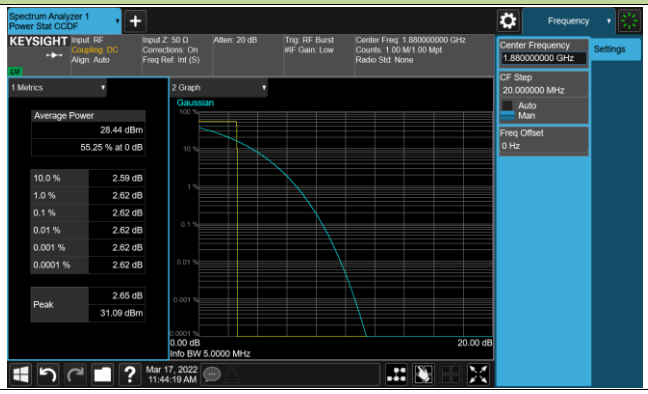


A.5 Peak to Average Ratio Test Result

Test Site	SIP-SR1	Test Engineer	Candy Luo
Test Band	GSM 850, PCS 1900	Test Date	2022/03/17

Channel No.	Frequency (MHz)	Channel Bandwidth (kHz)	Peak to Average Ratio (dB)	Limit (dB)	Result
GSM 850					
128	824.2	200	2.61	≤ 13.00	Pass
189	836.4	200	2.62	≤ 13.00	Pass
251	848.8	200	2.60	≤ 13.00	Pass
PCS 1900					
512	1850.2	200	2.62	≤ 13.00	Pass
661	1880.0	200	2.62	≤ 13.00	Pass
810	1909.8	200	2.63	≤ 13.00	Pass

GSM 850	
Channel 128 (824.2MHz)	Channel 189 (836.4MHz)
	
Channel 254 (848.8MHz)	
	

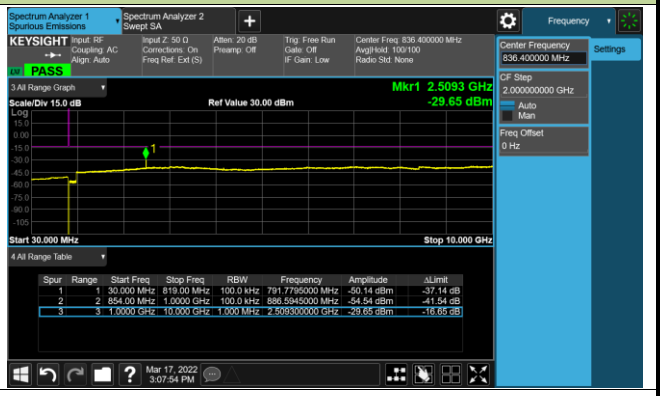
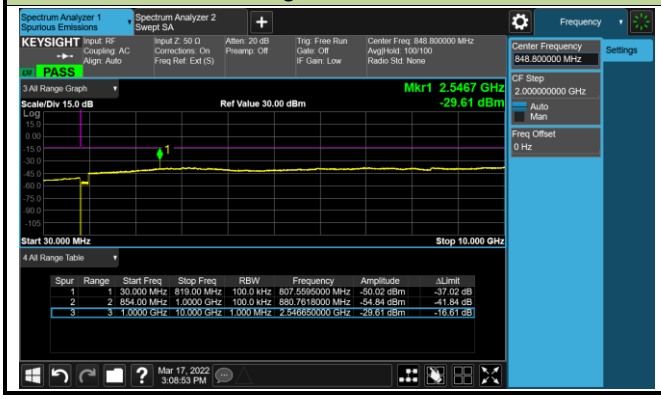
PCS 1900	
Channel 512 (1850.2MHz)	Channel 661 (1880.0MHz)
	
Channel 810 (1909.8MHz)	
	

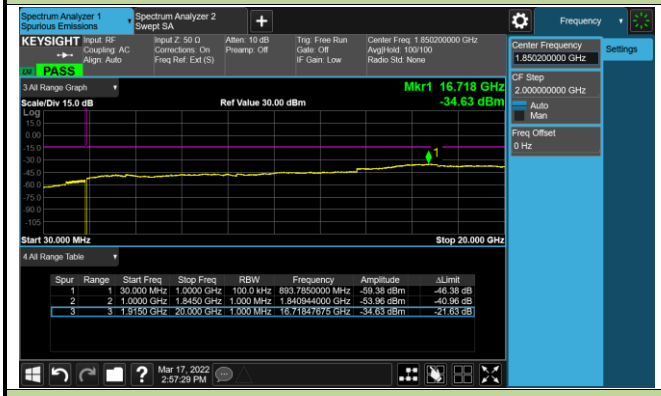
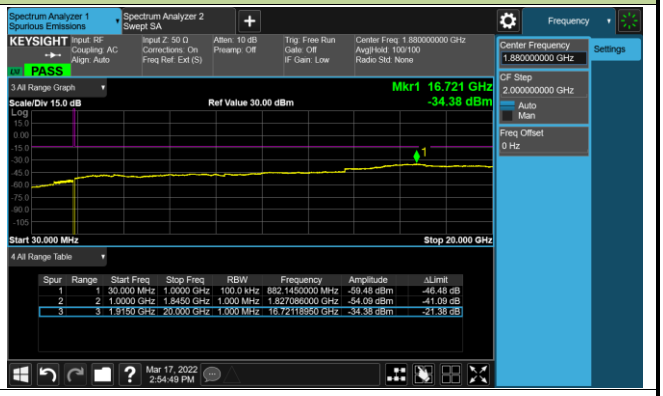
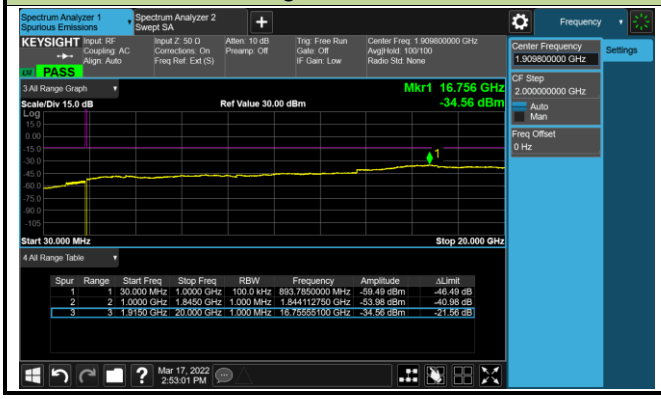
A.6 Conducted Spurious Emission Test Result

Test Site	SIP-SR1	Test Engineer	Candy Luo
Test Band	GSM 850, PCS 1900	Test Date	2022/03/17

Mode	Frequency (MHz)	Frequency Range (MHz)	Max Spurious Emissions (dBm)	Limit (dBm)	Result
GSM 850	824.2	30 ~ 10000	-31.46	≤ -13.00	Pass
	836.4	30 ~ 10000	-29.65	≤ -13.00	Pass
	848.8	30 ~ 10000	-29.61	≤ -13.00	Pass
PCS 1900	1850.2	30 ~ 20000	-34.63	≤ -13.00	Pass
	1880.0	30 ~ 20000	-34.38	≤ -13.00	Pass
	1909.8	30 ~ 20000	-34.56	≤ -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	
	

A.7 Radiated Spurious Emission Test Result

Test Site	WZ-AC2	Test Engineer	Hyde Yu
Test Band	GSM 850	Test Date	2022/03/20 ~ 2022/03/22

Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
Low Channel							
156.59	21.10	15.48	36.58	82.30	-45.72	Peak	Horizontal
923.37	4.69	31.50	36.19	82.30	-46.11	Peak	Horizontal
44.07	14.92	20.35	35.27	82.30	-47.03	Peak	Vertical
151.25	23.46	15.20	38.66	82.30	-43.64	Peak	Vertical
3295.00	54.37	-1.62	52.75	82.30	-29.55	Peak	Horizontal
4119.50	50.20	1.23	51.43	82.30	-30.87	Peak	Horizontal
2470.50	55.75	-2.14	53.61	82.30	-28.69	Peak	Vertical
4119.50	56.19	1.23	57.42	82.30	-24.88	Peak	Vertical
Middle Channel							
151.25	23.05	15.20	38.25	82.30	-44.05	Peak	Horizontal
491.24	6.53	25.06	31.59	82.30	-50.71	Peak	Horizontal
48.92	14.24	20.56	34.80	82.30	-47.50	Peak	Vertical
148.34	25.45	15.06	40.51	82.30	-41.79	Peak	Vertical
2513.00	50.36	-2.14	48.22	82.30	-34.08	Peak	Horizontal
3346.00	53.72	-1.59	52.13	82.30	-30.17	Peak	Horizontal
2513.00	56.84	-2.14	54.70	82.30	-27.60	Peak	Vertical
4179.00	58.05	1.47	59.52	82.30	-22.78	Peak	Vertical
High Channel							
151.74	23.36	15.22	38.58	82.30	-43.72	Peak	Horizontal
494.15	7.10	25.09	32.19	82.30	-50.11	Peak	Horizontal
150.28	25.22	15.15	40.37	82.30	-41.93	Peak	Vertical
434.01	10.77	23.70	34.47	82.30	-47.83	Peak	Horizontal
2547.00	51.96	-2.24	49.72	82.30	-32.58	Peak	Horizontal
3397.00	54.97	-1.30	53.67	82.30	-28.63	Peak	Vertical
2547.00	57.21	-2.24	54.97	82.30	-27.33	Peak	Vertical
4247.00	58.72	1.63	60.35	82.30	-21.95	Peak	Horizontal

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

Test Site	WZ-AC2	Test Engineer	Hyde Yu
Test Band	PCS 1900	Test Date	2022/03/20 ~ 2022/03/22

Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
Low Channel							
152.71	22.34	15.27	37.61	82.30	-44.69	Peak	Horizontal
903.00	4.47	31.46	35.93	82.30	-46.37	Peak	Horizontal
152.71	22.51	15.27	37.78	82.30	-44.52	Peak	Vertical
434.01	12.02	23.70	35.72	82.30	-46.58	Peak	Vertical
3703.00	42.04	-0.10	41.94	82.30	-40.36	Peak	Horizontal
5547.50	42.02	4.23	46.25	82.30	-36.05	Peak	Horizontal
5547.50	51.11	4.23	55.34	82.30	-26.96	Peak	Vertical
7400.50	36.41	11.65	48.06	82.30	-34.24	Peak	Vertical
Middle Channel							
153.68	20.27	15.32	35.59	82.30	-46.71	Peak	Horizontal
474.26	8.65	24.48	33.13	82.30	-49.17	Peak	Horizontal
153.68	22.63	15.32	37.95	82.30	-44.35	Peak	Vertical
434.01	12.33	23.70	36.03	82.30	-46.27	Peak	Vertical
3762.50	48.13	0.03	48.16	82.30	-34.14	Peak	Horizontal
5641.00	39.62	4.69	44.31	82.30	-37.99	Peak	Horizontal
3762.50	49.63	0.03	49.66	82.30	-32.64	Peak	Vertical
5641.00	52.66	4.69	57.35	82.30	-24.95	Peak	Vertical
High Channel							
149.80	21.18	15.13	36.31	82.30	-45.99	Peak	Horizontal
474.75	7.91	24.49	32.40	82.30	-49.90	Peak	Horizontal
150.28	22.92	15.15	38.07	82.30	-44.23	Peak	Vertical
434.01	14.34	23.70	38.04	82.30	-44.26	Peak	Vertical
3822.00	46.34	0.20	46.54	82.30	-35.76	Peak	Horizontal
5726.00	39.36	5.39	44.75	82.30	-37.55	Peak	Horizontal
3822.00	49.69	0.20	49.89	82.30	-32.41	Peak	Vertical
5726.00	51.09	5.39	56.48	82.30	-25.82	Peak	Vertical
Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB).							

Appendix B - Test Setup Photograph

Refer to “2203RSU034-UT” file.

Appendix C - EUT Photograph

Refer to “2203RSU034-UE” file.

The End