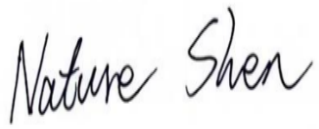
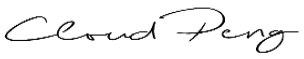
TEST REPORT

Application No.:	SUCR2506000571AT
Applicant:	Quectel Wireless Solutions Co., Ltd.
Address of Applicant:	Building 5, Shanghai Business Park Phase III (Area B), No.1016 Tianlin Road, Minhang District, Shanghai, China 200233
Manufacturer:	Quectel Wireless Solutions Co., Ltd.
Address of Manufacturer:	Building 5, Shanghai Business Park Phase III (Area B), No.1016 Tianlin Road, Minhang District, Shanghai, China 200233
EUT Description:	Multi-mode Smart LTE Module
Model No.:	SC200E-NA
Trade Mark:	Quectel
FCC ID:	XMR2022SC200ENA
Standards:	47 CFR Part 2.1091
	FCC KDB 447498 D01 v06
Date of Receipt:	June 20, 2025
Date of Issue:	July 21, 2025
Test Result:	**PASS***

* In the configuration tested, the EUT complied with the standards specified above.

Version

Revision Record			
Version	**Description**	***Date***	***Remark***
01	Original	July 21, 2025	/

Authorized for issue by:				
Tested By		 **Nature Shen / Project Manager**		
Approved By		 **Cloud Peng/Technical Manager**		

Contents

1 General Information

1.1 Client Information

Applicant:	Quectel Wireless Solutions Co., Ltd.
Address of Applicant:	Building 5, Shanghai Business Park Phase III (Area B), No.1016 Tianlin Road, Minhang District, Shanghai, China 200233
Manufacturer:	Quectel Wireless Solutions Co., Ltd.
Address of Manufacturer:	Building 5, Shanghai Business Park Phase III (Area B), No.1016 Tianlin Road, Minhang District, Shanghai, China 200233

1.2 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

• **A2LA (Certificate No. 6336.01)**

SGS-CSTC STANDARDS TECHNICAL SERVICES (SUZHOU) CO., LTD. is accredited by the American Association for Laboratory Accreditation(A2LA). Certificate No. 6336.01.

• **Innovation, Science and Economic Development Canada**

SGS-CSTC STANDARDS TECHNICAL SERVICES (SUZHOU) CO., LTD. has been recognized by ISED as an accredited testing laboratory.

CAB identifier: CN0120.

IC#: 27594.

• **FCC –Designation Number: CN1312**

SGS-CSTC STANDARDS TECHNICAL SERVICES (SUZHOU) CO., LTD. has been recognized as an accredited testing laboratory.

Designation Number: CN1312.

Test Firm Registration Number: 717327

1.3 General Description of EUT

EUT Description:	Multi-mode Smart LTE Module			
Model No.:	SC200E-NA			
Trade Mark:	Quectel			
Hardware Version:	LPDDR4X: R1.0 LPDDR3: R1.1			
Software Version:	LPDDR4X: SC200ENANAR12A03 LPDDR3: SC200ENATAR02A03			
Antenna Type:	☒ External, ☐ Integrated			
Antenna Gain*:	☒Provided by client			
	LTE Band 2:	1.59dBi	LTE Band 4:	2dBi
	LTE Band 5:	2.13dBi	LTE Band 7:	3dBi
	LTE Band 12:	3.26dBi	LTE Band 13:	3.63dBi
	LTE Band 14:	3.47dBi	LTE Band 17:	3.26dBi
	LTE Band 25:	1.59dBi	LTE Band 26:	2.13dBi
	LTE Band 41:	3dBi	LTE Band 66:	2dBi
	LTE Band 71:	1.13dBi	BT/BLE/2.4GWIFI:	0.47dBi
	5150MHz to 5250MHz:	-0.67dBi	5250MHz to 5350MHz:	-0.19dBi
	5470MHz to 5725MHz:	1.28dBi	5725MHz to 5850MHz:	1.1dBi

Note: *Since the above data and/or information is provided by the client relevant results or conclusions of this report are only made for these data and/or information, SGS is not responsible for the authenticity, integrity and results of the data and information and/or the validity of the conclusion.
Remark:
As above information is provided and confirmed by the applicant. SGS is not liable to the accuracy, suitability, reliability or/and integrity of the information.

2 RF Exposure Evaluation

2.1 RF Exposure Compliance Requirement

2.1.1 Limits

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm2)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposures				
0.3-3.0	614	1.63	*(100)	6
3.0-30	1842/f	4.89/f	*(900/f2)	6
30-300	61.4	0.163	1.0	6
300-1500	/	/	f/300	6
1500-100,000	/	/	5	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f2)	30
30-300	27.5	0.073	0.2	30
300-1500	/	/	f/1500	30
1500-100,000	/	/	1.0	30

F=frequency in MHz
*=Plane-wave equivalent power density
RF exposure compliance will need to be determined with respect to 1.1307(c) and (d) of the FCC rules. The emissions should be within the limits at 300kHz in Table 1 of 1.1310(use the 300kHz limits for 150kHz:614V/m,1.63A/m).

Friis Formula

Friis transmission formula: $Pd = (Pout*G)/(4* Pi * R^2)$

Where

Pd = power density in mW/cm2

Pout = output power to antenna in mW

G = gain of antenna in linear scale

Pi = 3.1416

R = distance between observation point and center of the radiator in cm

Pd id the limit of MPE, 1 mW/cm2 . If we know the maximum gain of the antenna and the total power input to the antenna, through the calculation, we will know the distance r where the MPE limit is reached.

2.1.2 Test Procedure

Software provided by client enabled the EUT to transmit data at lowest, middle and highest channel individually

2.1.3 EUT RF Exposure Evaluation

Antenna Gain: The maximum Gain measured in fully anechoic chamber is 2.0 / 2.0 in linear scale.
Output Power Into Antenna & RF Exposure Evaluation Distance:
This confirmed that the device comply with MPE limit.

Operating Band	Frequency (MHz)	Antenna Gain (dBi)	Max Conducted Average Output Power (dBm)	Output Power to Antenna (dBm)	EIRP(ERP) Limit (dBm)	Output Power to Antenna (mw)	Power Density at R = 20 cm (mW/cm2)	Limit (mW/cm2)	Gain according to EIRP (dBi)	Gain according to Pd (dBi)	Max Gain Allowed (dBi)	conclusion
LTE B2	1880	1.59	25.00	26.59	33.00	316.2278	0.0907	1.0000	8.00	12.01	8.00	Pass
LTE B4	1710.7	2.00	25.00	27.00	30.00	316.2278	0.0997	1.0000	5.00	12.01	5.00	Pass
LTE B5	824.70	2.13	25.00	24.98	38.45	316.2278	0.1027	0.5498	11.30	9.41	9.41	Pass
LTE B7	2502.50	3.00	25.00	28.00	33.00	316.2278	0.1255	1.0000	8.00	12.01	8.00	Pass
LTE B12	699.70	3.26	25.00	26.11	34.77	316.2278	0.1333	0.4665	7.62	8.70	7.62	Pass
LTE B13	779.50	3.63	25.00	26.48	34.77	316.2278	0.1451	0.5197	7.62	9.16	7.62	Pass
LTE B14	790.5	3.47	25.00	26.32	34.77	316.2278	0.1399	0.5270	7.62	9.23	7.62	Pass
LTE B17	706.5	3.26	25.00	26.11	34.77	316.2278	0.1333	0.4710	7.62	8.74	7.62	Pass
LTE B25	1850.7	1.59	25.00	26.59	33.00	316.2278	0.0907	1.0000	8.00	12.01	8.00	Pass
LTE B26(814-824)	814.7	2.13	25.00	24.98	50.00	316.2278	0.1027	0.5431	22.85	9.36	9.36	Pass
LTE B26(824-849)	824.7	2.13	25.00	24.98	38.45	316.2278	0.1027	0.5498	11.30	9.41	9.41	Pass
LTE B41	2498.5	3.00	25.00	28.00	33.00	316.2278	0.1255	1.0000	8.00	12.01	8.00	Pass
LTE B66	1710.7	2.00	25.00	27.00	30.00	316.2278	0.0997	1.0000	5.00	12.01	5.00	Pass
LTE B71	665.5	1.13	25.00	23.98	34.77	316.2278	0.0816	0.4437	7.62	8.48	7.62	Pass
BT	2402	0.47	10.00	10.47	30.00	10.0000	0.0022	1.0000	-	-	-	Pass
2.4GWIFI	2412	0.47	19.50	19.97	30.00	89.1251	0.0198	1.0000	-	-	-	Pass
5GWIFI	5320	1.28	18.50	19.78	30.00	70.7946	0.0189	1.0000	-	-	-	Pass

2.1.4 Exposure calculations for multiple sources

When a number of sources at different frequencies, and/or broadband sources, contribute to the total exposure, it becomes necessary to weigh each contribution relative to the MPE in accordance with the provisions of Table(A) and Table(B). To comply with the MPE, the fraction of the MPE in terms of E2, H2 (or power density) incurred within each frequency interval should be determined and the sum of all such fractions should not exceed unity.

In order to ensure compliance with the MPE for a controlled environment, the sum of the ratios of the power density to the corresponding MPE should not exceed unity. That is

$$\sum_{i=1}^{n} \frac{S_i}{MPE_i} \leq 1$$

The product also has multiple transmitters The Simultaneous Transmission Possibilities are as below:

Simultaneous Tx Combination	Configuration
1	LTE + Bluetooth
	LTE + WiFi 2.4G
	LTE + WiFi 5G
2	Bluetooth + WiFi 2.4G
	Bluetooth + WiFi 5G

No.	Mode	Power Density (W/cm2)	MPE Limit (W/cm2)	Result Ratio	Total Ratio	Limit	Result
1	LTE Band 12	0.1333	0.4665	0.2857	0.2879	1.00	Pass
	Bluetooth	0.0022	1.0000	0.0022			
	LTE Band 12	0.1333	0.4665	0.2857	0.3055	1.00	Pass
	WiFi 2.4G	0.0198	1.0000	0.0198			
	LTE Band 12	0.1333	0.4665	0.2857	0.3046	1.00	Pass
	WiFi 5G	0.0189	1.0000	0.0189			
2	Bluetooth	0.0022	1.0000	0.0022	0.0220	1.00	Pass
	WiFi 2.4G	0.0198	1.0000	0.0198			
	Bluetooth	0.0022	1.0000	0.0022	0.0211	1.00	Pass
	WiFi 5G	0.0189	1.0000	0.0189			

---End of Report---