RF MEASUREMENT REPORT

FCC ID:	HD5-EDA61K1
Applicant:	Honeywell International Inc
Product:	Mobile computer
Model No.:	EDA61K-1
Brand Name:	Honeywell
FCC Rule(s):	Part 2, 27 Section 27.50(h)(2) & 27.53(m)(4)(6)
Result:	Complies
Received Date:	2024-10-18
Test Date:	2024-11-21 ~ 2024-11-25

Reviewed By: Ada Zhang

Approved By: Robin Wu

ACCREDITED
TESTING LABORATORY
CERTIFICATE #3628.01

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.

Revision History

Report No.	Version	Description	Issue Date	Note
2410RSU065-U7	V01	Initial Report	2025-01-10	Valid

Note: This report is based on the original MRT report (report No.: 2010RSU078-U7) to do the following modifications:

1. LTE B7 duplexer in Pin-to-Pin change, Transmitter Output Power, Transmitter unwanted emissions (band-edge) and Radiated Spurious Emissions in the worst-case mode are evaluated.
2. Update applicant and manufacturer's name.

CONTENTS

1. General Information

1.1. Applicant

Honeywell International Inc

9680 Old Bailes Rd. Fort Mill, SC 29707 United States

1.2. Manufacturer

Honeywell International Inc

9680 Old Bailes Rd. Fort Mill, SC 29707 United States

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 Location (Suzhou - Wujiang)** Building 1, No.1 Xingdong Road, Wujiang, Suzhou, Jiangsu, People's Republic of China				
	Laboratory Accreditations				
	A2LA: 3628.01		CNAS: L10551		
	FCC: CN1166		ISED: CN0001		
	VCCI:	☐R-20025	☐G-20034	☐C-20020	☐T-20020
		☐R-20141	☐G-20134	☐C-20103	☐T-20104
☐	**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: 3261				
	FCC: 291082, TW3261		ISED: TW3261		

1.4. Product Information

Product Name	Mobile computer
Model No.	EDA61K-1
Brand Name	Honeywell
IMEI	990013864528661(Conducted) 990013864528703(Radiated)
Wi-Fi Specification	802.11a/b/g/n/ac
Bluetooth Specification	v4.1 Dual mode
NFC	13.56MHz
GNSS Specification	GPS/GLONASS/BDS
3GPP Specification	GSM 900/1800 WCDMA Band II/IV/V CDMA200 Band BC0/BC1 LTE Band 2/4/5/7/12/13/17/25/38/41
Antenna Specification	Refer to Section 1.6
Accessory	
Rechargeable Li-ion Battery	Model No.: CK65-BTSC Nominal Capacity: 7000mAh/25.2Wh Nominal Voltage: 3.6V
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 under Testing

E-UTRA Specification	
FDD TX Frequency Range	LTE Band 7: 2500 ~ 2570MHz
FDD RX Frequency Range	LTE Band 7: 2620 ~ 2690MHz
Support Bandwidth	LTE Band 7: 5MHz, 10MHz, 15MHz, 20MHz
Support Power Class	PC3
Modulation	QPSK, 16QAM

1.6. Description of Available Antennas

Technology	Frequency Range (MHz)	Antenna Type	Max Peak Gain (dBi)
LTE Band 7	2500 ~ 2570	Dipole	3.06
Note 1: All antenna information (Antenna type and Peak Gain) is provided by the manufacturer. Note 2: The typical antenna used to calculate the ERP (EIRP).			

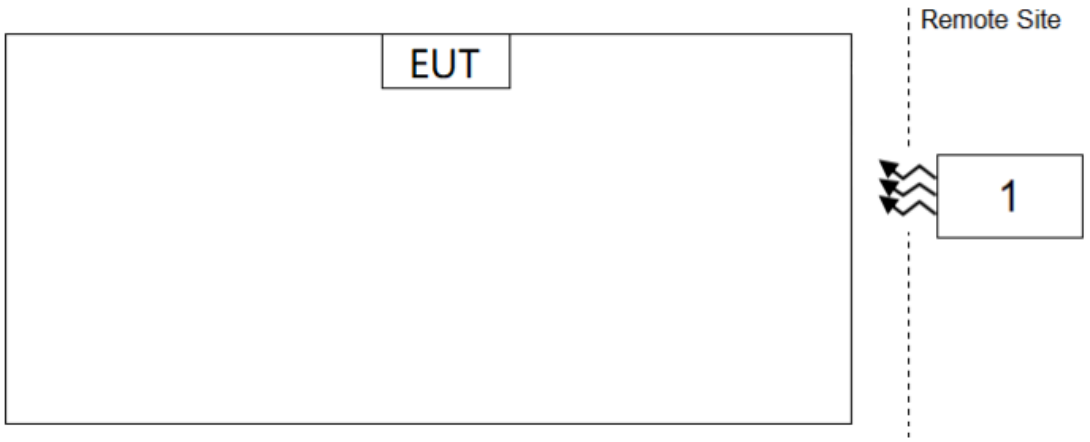
1.7. Test Methodology

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, Part 27
- 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

2. Test Configuration

2.1. Test System Connection Diagram



Product		Manufacturer	Model No.
1	Radio Communication Analyzer	Anritsu	MT8821C

2.2. Test Environment Condition

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

3. Measuring Instrument

Instrument	Manufacturer	Model No.	Asset No.	Cali. Interval	Cali. Due Date	Test Site
TRILOG Antenna	Schwarzbeck	VULB 9162	MRTSUE06022	1 year	2025-04-17	WZ-AC2
EMI Test Receiver	Agilent	N9038A	MRTSUE06125	1 year	2025-05-08	WZ-AC2
Horn Antenna	Schwarzbeck	BBHA 9120D	MRTSUE06171	1 year	2025-09-23	WZ-AC2
Preamplifier	Schwarzbeck	BBV 9718	MRTSUE06176	1 year	2025-05-06	WZ-AC2
Anechoic Chamber	RIKEN	WZ-AC2	MRTSUE06213	1 year	2025-04-18	WZ-AC2
Thermohygrometer	testo	608-H1	MRTSUE11263	1 year	2025-10-16	WZ-AC2
Horn Antenna	Schwarzbeck	BBHA 9170	MRTSUE06597	1 year	2025-11-03	WZ-AC2
Preamplifier	EMCI	EMC184045SE	MRTSUE06640	1 year	2025-01-11	WZ-AC2
Preamplifier	EMCI	EMC051845SE	MRTSUE06987	1 year	2025-09-06	WZ-AC2
Active Loop Antenna	Schwarzbeck	FMZB 1519-60 D	MRTSUE07076	1 year	2024-12-04	WZ-AC2
Radio Communication Analyzer	Anritsu	MT8821C	MRTSUE06960	1 year	2025-06-18	WZ-AC2
Thermohygrometer	testo	608-H1	MRTSUE06362	1 year	2025-02-04	WZ-SR6
Shielding Room	HUAMING	WZ-SR6	MRTSUE06443	N/A	N/A	WZ-SR6
Radio Communication Analyzer	Anritsu	MT8821C	MRTSUE06960	1 year	2025-06-18	WZ-SR6
Signal Analyzer	Keysight	N9010B	MRTSUE06607	1 year	2025-10-13	WZ-SR6
Directional Coupler	narda	4226-10	MRTSUE06562	1 year	2025-10-24	WZ-SR6
Attenuator	MVE	MVE2213	MRTSUE11093	1 year	2025-06-05	WZ-SR6
USB Power Sensor	Keysight	U2021XA	MRTSUE06446	1 year	2025-05-08	WZ-SR6

Software	Version	Function
Controller_MF 7802	1.02	RE Antenna & Turntable
e3	230711	RE & CE
UCTS	V 6.24.0705.0	license 3G & 4G & 5G

4. Decision Rules and Measurement Uncertainty

4.1. Decision Rules

The Decision Rule is based on Simple Acceptance in accordance with ISO Guide 98-4: 2012 Clause 8.2. (Measurement uncertainty is not taken into account when stating conformity with a specified requirement.)

4.2. 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.

Transmitter Spurious Emissions
Measurement Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): Coaxial: 9kHz~30MHz: 2.35dB Coplanar: 9kHz~30MHz: 2.37dB Horizontal: 30MHz~200MHz: 3.46dB 200MHz~1GHz: 3.78dB 1GHz~40GHz: 4.97dB Vertical: 30MHz~200MHz: 4.07dB 200MHz~1GHz: 5.28dB 1GHz~40GHz: 4.78dB
Transmitter Output Power
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 0.66dB

5. Test Result

5.1. Summary

FCC Part Section(s)	Test Description	Test Condition	Test Result
27.50(h)(2)	Transmitter Output Power	Conducted	Pass
2.1051, 27.53(m)(4)(6)	Transmitter unwanted emissions (band-edge)		Pass
2.1051, 27.53(m)(4)(6)	Transmitter Spurious Emissions	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 supported modulation types were evaluated. The worst-case emission of modulation was selected. Therefore, the Transmitter Output Power, Transmitter unwanted emissions (band-edge), Transmitter Spurious Emissions were presented the worst-case in the test report.
3) For radiated emission tests, every axis (X, Y, Z) was also verified. The test results shown in the following sections represent the worst-case emissions.

5.2. Transmitter Output Power Measurement

5.2.1. Test Limit

Band 7:

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.

5.2.2. Test Procedure

ANSI C63.26-2015 - Section 5.2.4.2

5.2.3. 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

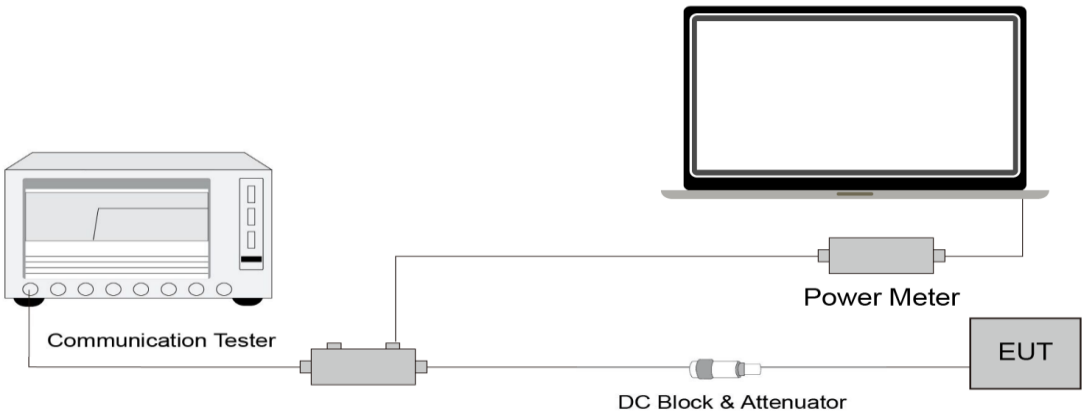
ERP or EIRP effective radiated power or equivalent isotropically radiated power, respectively (expressed in the same units as P_{Meas}, e.g., dBm or dBW)

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

5.2.4. Test Setup



5.2.5. Test Result

Refer to Appendix A.1.

5.3. Transmitter unwanted emissions (band-edge) Measurement

5.3.1. Test Limit

27.53(m)(4)

For mobile digital stations, the attenuation factor shall be not less than 40 + 10 log (P) dB on all frequencies between the channel edge and 5 megahertz from the channel edge, 43 + 10 log (P) dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and 55 + 10 log (P) dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less that 43 + 10 log (P) dB on all frequencies between 2490.5 MHz and 2496 MHz and 55 + 10 log (P) dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees.

5.3.2. Test Procedure

ANSI C63.26-2015 - Section 5.7

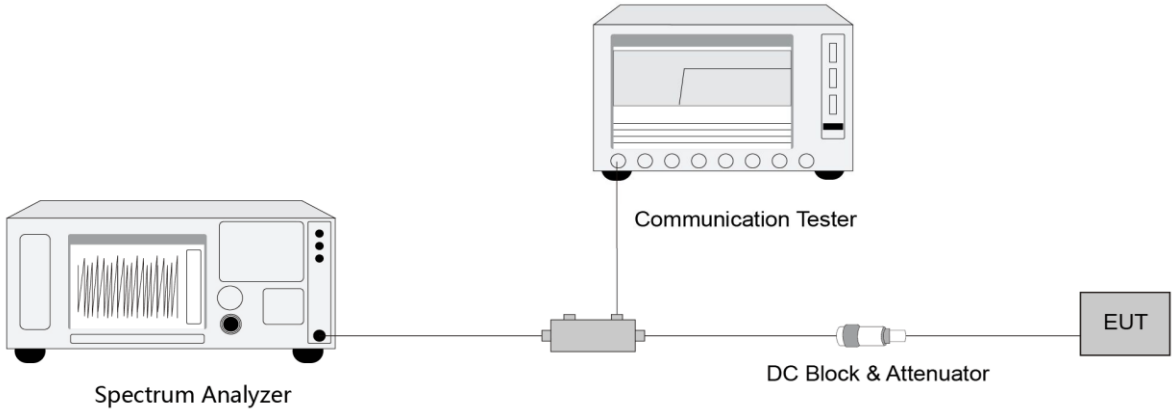
5.3.3. Test Setting

1. Set the analyzer frequency to Low or High channel
2. RBW = specified resolution bandwidth, 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 frequency block group, 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. If the EUT can be configured to transmit continuously, then set the trigger to free run
7. If the EUT cannot be configured to transmit continuously, then use a sweep trigger with the level set to enable triggering only on full power bursts and configure the EUT to transmit at full power for the entire duration of each sweep. Verify that the sweep time is less than or equal to the transmission burst duration. Time gating can also be used under similar constraints
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.

9. Compute the power by integrating the spectrum across the specified resolution bandwidth using the instrument's band or channel power measurement function, with the band/channel limits set equal to the specified resolution bandwidth, when using a measurement bandwidth smaller than the specified bandwidth. Otherwise, Use the peak marker function to determine the maximum amplitude level.

5.3.4. Test Setup



5.3.5. Test Result

Refer to Appendix A.2.

5.4. Radiated Spurious Emissions Measurement

5.4.1. Test Limit

For Band 7, the powerof any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 55 + 10 log(P) dB. The emission limit equal to -25dBm.

E (dBμV/m) = EIRP (dBm) - 20 log D + 104.8; where D is the measurement distance in meters. The emission limit equal to 70.3 dBμV/m.

5.4.2. Test Procedure

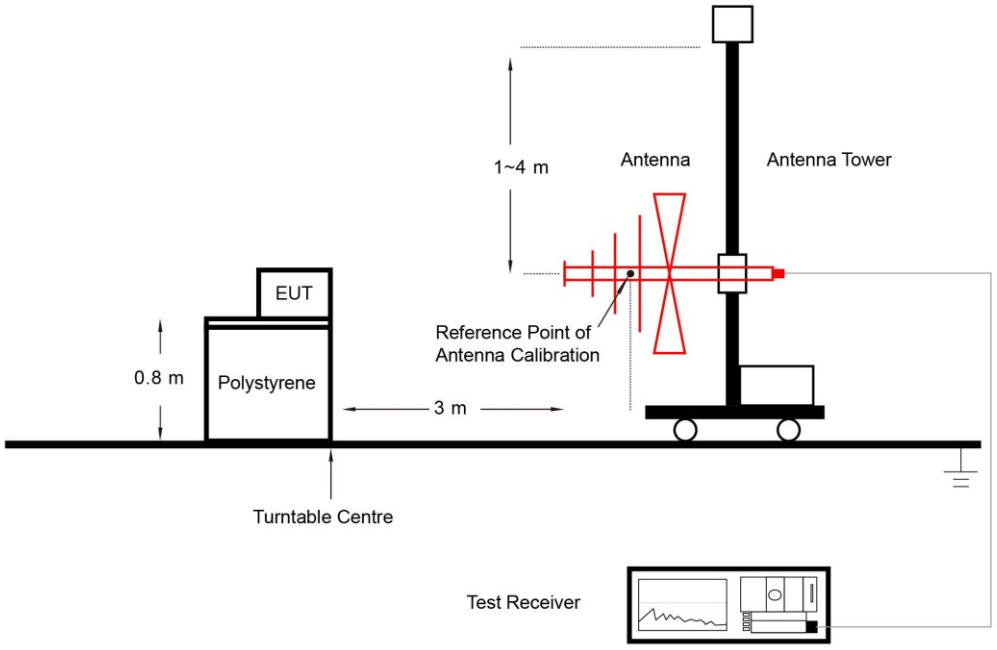
ANSI C63.26-2015 - Section 5.2.7 & 5.5

5.4.3. Test Setting

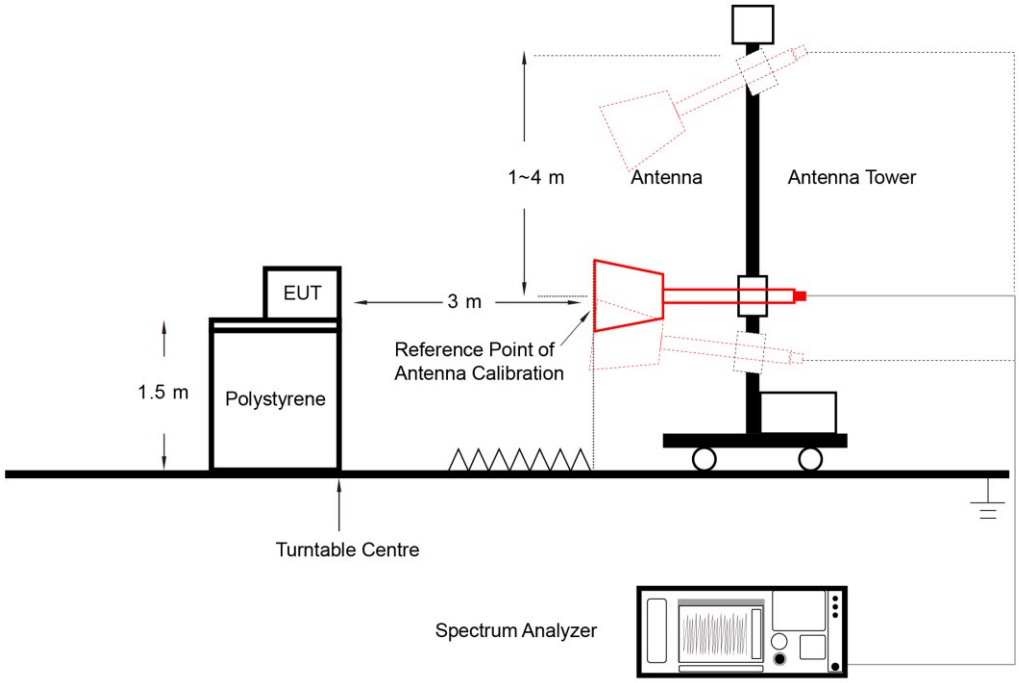
1. RBW = 120kHz or 1MHz
2. VBW ≥ 3*RBW
3. Sweep time ≥ 10 × (number of points in sweep) × (transmission symbol period)
4. Detector = CISPR quasi-peak / average detector (Below 1 GHz, compliance with the limits shall be demonstrated using a CISPR quasi-peak detector and the related measurement bandwidth. Above 1 GHz, compliance with the limits shall be demonstrated using a linear average detector with a minimum resolution bandwidth of 1 MHz.)
5. The trace was allowed to stabilize

5.4.4. Test Setup

Below 1GHz Test Setup:



Above 1GHz Test Setup:



5.4.5. Test Result

Refer to Appendix A.3.

Appendix A - Test Result

A.1 Transmitter Output Power Test Result

Test Site	WZ-SR6	Test Engineer	Edith Yu
Test Date	2024-11-21	Test Band	LTE Band 7

Channel Bandwidth (MHz)	Frequency (MHz)	RB Size	RB Offset	Output Power (dBm)	EIRP (dBm)	Limit (dBm)
QPSK						
5	2502.5	1	0	23.39	26.45	< 33.01
	2535.0			23.66	26.72	< 33.01
	2567.5			23.67	26.73	< 33.01
5	2502.5	1	12	23.56	26.62	< 33.01
	2535.0			23.87	26.93	< 33.01
	2567.5			23.96	27.02	< 33.01
5	2502.5	1	24	23.57	26.63	< 33.01
	2535.0			23.66	26.72	< 33.01
	2567.5			23.65	26.71	< 33.01
5	2502.5	25	0	22.70	25.76	< 33.01
	2535.0			22.73	25.79	< 33.01
	2567.5			22.80	25.86	< 33.01
10	2505.0	1	0	23.57	26.63	< 33.01
	2535.0			23.68	26.74	< 33.01
	2565.0			23.82	26.88	< 33.01
10	2505.0	1	24	24.12	27.18	< 33.01
	2535.0			24.04	27.10	< 33.01
	2565.0			24.03	27.09	< 33.01
10	2505.0	1	49	23.80	26.86	< 33.01
	2535.0			23.58	26.64	< 33.01
	2565.0			23.64	26.70	< 33.01
10	2505.0	50	0	22.87	25.93	< 33.01
	2535.0			22.91	25.97	< 33.01
	2565.0			22.98	26.04	< 33.01
Note: The EIRP (dBm) = Output Power (dBm) + Antenna Gain (dBi)						

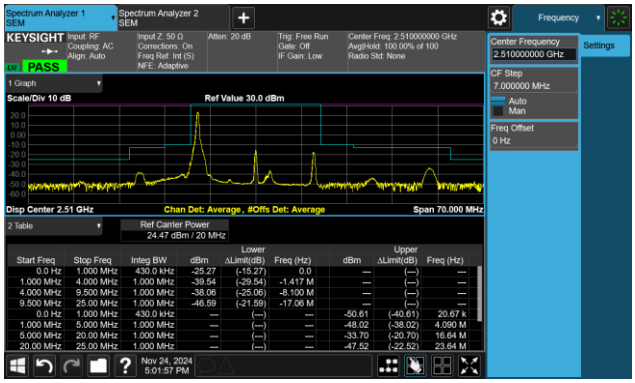
Channel Bandwidth (MHz)	Frequency (MHz)	RB Size	RB Offset	Output Power (dBm)	EIRP (dBm)	Limit (dBm)
QPSK						
15	2507.5	1	0	23.97	27.03	< 33.01
	2535.0			23.93	26.99	< 33.01
	2562.5			23.98	27.04	< 33.01
15	2507.5	1	37	24.10	27.16	< 33.01
	2535.0			24.00	27.06	< 33.01
	2562.5			24.13	27.19	< 33.01
15	2507.5	1	74	23.87	26.93	< 33.01
	2535.0			23.76	26.82	< 33.01
	2562.5			23.72	26.78	< 33.01
15	2507.5	75	0	22.93	25.99	< 33.01
	2535.0			22.99	26.05	< 33.01
	2562.5			23.00	26.06	< 33.01
20	2510.0	1	0	23.87	26.93	< 33.01
	2535.0			24.09	27.15	< 33.01
	2560.0			24.26	27.32	< 33.01
20	2510.0	1	49	24.27	27.33	< 33.01
	2535.0			24.02	27.08	< 33.01
	2560.0			23.97	27.03	< 33.01
20	2510.0	1	99	23.76	26.82	< 33.01
	2535.0			23.78	26.84	< 33.01
	2560.0			23.84	26.90	< 33.01
20	2510.0	100	0	23.00	26.06	< 33.01
	2535.0			23.04	26.10	< 33.01
	2560.0			23.04	26.10	< 33.01
Note: The EIRP (dBm) = Output Power (dBm) + Antenna Gain (dBi)						

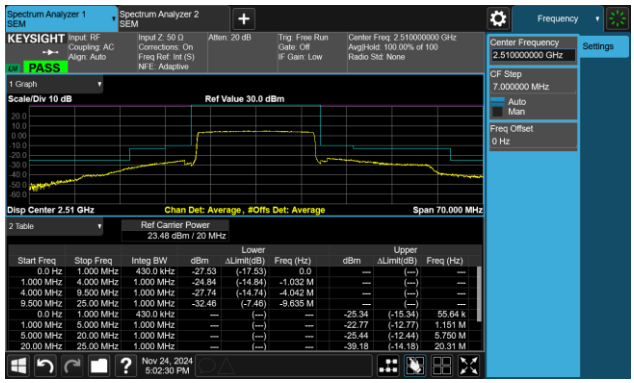
Channel Bandwidth (MHz)	Frequency (MHz)	RB Size	RB Offset	Output Power (dBm)	EIRP (dBm)	Limit (dBm)
16QAM						
5	2502.5	1	0	22.11	25.17	< 33.01
	2535.0			22.50	25.56	< 33.01
	2567.5			22.62	25.68	< 33.01
5	2502.5	1	12	22.61	25.67	< 33.01
	2535.0			22.98	26.04	< 33.01
	2567.5			22.58	25.64	< 33.01
5	2502.5	1	24	22.52	25.58	< 33.01
	2535.0			22.58	25.64	< 33.01
	2567.5			22.23	25.29	< 33.01
5	2502.5	25	0	21.72	24.78	< 33.01
	2535.0			21.83	24.89	< 33.01
	2567.5			21.70	24.76	< 33.01
10	2505.0	1	0	22.25	25.31	< 33.01
	2535.0			22.34	25.40	< 33.01
	2565.0			22.78	25.84	< 33.01
10	2505.0	1	24	22.73	25.79	< 33.01
	2535.0			22.70	25.76	< 33.01
	2565.0			22.33	25.39	< 33.01
10	2505.0	1	49	22.67	25.73	< 33.01
	2535.0			22.35	25.41	< 33.01
	2565.0			22.39	25.45	< 33.01
10	2505.0	50	0	21.96	25.02	< 33.01
	2535.0			21.90	24.96	< 33.01
	2565.0			21.93	24.99	< 33.01
Note: The EIRP (dBm) = Output Power (dBm) + Antenna Gain (dBi)						

Channel Bandwidth (MHz)	Frequency (MHz)	RB Size	RB Offset	Output Power (dBm)	EIRP (dBm)	Limit (dBm)
16QAM						
15	2507.5	1	0	22.06	25.12	< 33.01
	2535.0			22.78	25.84	< 33.01
	2562.5			22.81	25.87	< 33.01
15	2507.5	1	37	23.08	26.14	< 33.01
	2535.0			22.96	26.02	< 33.01
	2562.5			23.18	26.24	< 33.01
15	2507.5	1	74	22.49	25.55	< 33.01
	2535.0			22.68	25.74	< 33.01
	2562.5			22.47	25.53	< 33.01
15	2507.5	75	0	21.87	24.93	< 33.01
	2535.0			21.86	24.92	< 33.01
	2562.5			21.96	25.02	< 33.01
20	2510.0	1	0	22.07	25.13	< 33.01
	2535.0			22.06	25.12	< 33.01
	2560.0			22.12	25.18	< 33.01
20	2510.0	1	49	22.43	25.49	< 33.01
	2535.0			22.97	26.03	< 33.01
	2560.0			22.46	25.52	< 33.01
20	2510.0	1	99	22.41	25.47	< 33.01
	2535.0			22.42	25.48	< 33.01
	2560.0			22.01	25.07	< 33.01
20	2510.0	100	0	22.01	25.07	< 33.01
	2535.0			21.91	24.97	< 33.01
	2560.0			21.90	24.96	< 33.01
Note: The EIRP (dBm) = Output Power (dBm) + Antenna Gain (dBi)						

A.2 Transmitter unwanted emissions (band-edge) Test Result

Test Site	WZ-SR6	Test Engineer	Edith Yu
Test Date	2024-11-24	Test Band	LTE Band 7

20MHz Channel Bandwidth - 1RB	
Low Channel	
	

20MHz Channel Bandwidth - Full RB	
Low Channel	
	

A.3 Radiated Spurious Emissions Test Result

Test Site	WZ-AC2	Test Engineer	Lucas Wang
Test Date	2024-11-25	Test Band	LTE Band 7

Frequency (MHz)	Reading Level (dBμV)	Factor (dB/m)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
46.587	4.4	20.4	24.8	70.3	-45.5	Quasi-Peak	Horizontal
749.352	-3.8	29.8	26.0	70.3	-44.3	Quasi-Peak	Horizontal
45.908	13.6	20.3	33.9	70.3	-36.4	Quasi-Peak	Vertical
115.748	15.8	17.5	33.3	70.3	-37.0	Quasi-Peak	Vertical
5020.500	36.3	3.0	39.3	70.3	-31.0	Peak	Horizontal
11585.900	32.0	16.3	48.3	70.3	-22.0	Peak	Horizontal
2558.600	49.7	12.8	62.5	70.3	-7.8	Peak	Vertical
14032.200	32.2	18.8	51.0	70.3	-19.3	Peak	Vertical

Note1: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m)

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

Note2: The peak-detection value will always be equal to or greater than average-detection value. In a result, the peak-detection value measured by spectrum analyzer shall represent the worst-case results.

Note 3: The amplitude of Radiated transmitter spurious emissions (Frequency range from 9kHz to 30MHz and above 18GHz) is that proximity to ambient noise, which also are attenuated more than 20 dB below the permissible value. Therefore, the data is not presented in the report.

Appendix B - Test Setup Photograph

Refer to “2410RSU065-UT” file.

Appendix C - EUT Photograph

Refer to “2410RSU065-UE” file.

The End