

Partial FCC Test Report

(PART 90S)

Report No.: RF200522C02-9

FCC ID: S9E-EM7565

Test Model: EM7565

Received Date: May 22, 2020

Test Date: Jun. 09 ~ Jun. 30, 2020

Issued Date: Jul. 03, 2020

Applicant: Trimble Inc.

Address: 5475 Kellenburger Rd, Dayton, OH 45424

Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
Lin Kou Laboratories

Lab Address: No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan

Test Location: No.19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City
33383, Taiwan

FCC Registration /
Designation Number: 788550 / TW0003



This report is for your exclusive use. Any copying or replication of this report to or for any other person or entity, or use of our name or trademark, is permitted only with our prior written permission. This report sets forth our findings solely with respect to the test samples identified herein. The results set forth in this report are not indicative or representative of the quality or characteristics of the lot from which a test sample was taken or any similar or identical product unless specifically and expressly noted. Our report includes all of the tests requested by you and the results thereof based upon the information that you provided to us. You have 60 days from date of issuance of this report to notify us of any material error or omission caused by our negligence, provided, however, that such notice shall be in writing and shall specifically address the issue you wish to raise. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents. Unless specific mention, the uncertainty of measurement has been explicitly taken into account to declare the compliance or non-compliance to the specification..

Table of Contents

Release Control Record	3
1 Certificate of Conformity	4
2 Summary of Test Results.....	5
2.1 Measurement Uncertainty.....	5
2.2 Test Site and Instruments	6
3 General Information	7
3.1 General Description of EUT	7
3.2 Configuration of System under Test.....	8
3.3 Test Mode Applicability and Tested Channel Detail	8
3.4 General Description of Applied Standards and references.....	9
4 Test Types and Results	10
4.1 Output Power Measurement.....	10
4.1.1 Limits of Output Power Measurement	10
4.1.2 Test Procedures.....	10
4.1.3 Test Setup.....	11
4.1.4 Test Results	12
4.2 Radiated Emission Measurement.....	17
4.2.1 Limits of Radiated Emission Measurement	17
4.2.2 Test Procedure	17
4.2.3 Deviation from Test Standard	17
4.2.4 Test Setup.....	18
4.2.5 Test Results	19
5 Pictures of Test Arrangements.....	21
Appendix – Information of the Testing Laboratories	22

Release Control Record

Issue No.	Description	Date Issued
RF200522C02-9	Original Release	Jul. 03, 2020

1 Certificate of Conformity

Product: LTE/UMTS Wireless Module

Brand: AirPrime

Test Model: EM7565

Sample Status: Identical Prototype

Applicant: Trimble Inc.

Test Date: Jun. 09 ~ Jun. 30, 2020

Standards: FCC Part 90, Subpart I, S
FCC Part 2

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's RF characteristics under the conditions specified in this report.

Prepared by : Lena Wang , Date: Jul. 03, 2020
Lena Wang / Specialist

Approved by : Dylan Chiou , Date: Jul. 03, 2020
Dylan Chiou / Senior Project Engineer

2 Summary of Test Results

Applied Standard: FCC Part 90 & Part 2 (LTE 26)			
FCC Clause	Test Item	Result	Remarks
2.1046 90.635 (b)	Effective Radiated Power	Pass	Meet the requirement of limit.
2.1047	Modulation Characteristics	N/A	Refer to Note 1
2.1055 90.213	Frequency Stability	N/A	Refer to Note 1
2.1049 90.209	Occupied Bandwidth	N/A	Refer to Note 1
90.210	Emission Masks	N/A	Refer to Note 1
2.1051 90.691	Conducted Spurious Emissions	N/A	Refer to Note 1
2.1053 90.691	Radiated Spurious Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -26.42 dB at 36.79 MHz.

Note:

1. This report is a partial report, only test item of Effective Radiated Power and Radiated Spurious Emissions tests were performed for this report. Other testing data please refer to the SPORTON report no.: FG791919D for module (Brand: Sierra, Model: EM7565).
2. Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

2.1 Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

Measurement	Frequency	Expanded Uncertainty (k=2) (±)
Radiated Emissions up to 1 GHz	9 kHz ~ 30 MHz	3.04 dB
	30 MHz ~ 200 MHz	2.93 dB
	200 MHz ~ 1000 MHz	2.95 dB
Radiated Emissions above 1 GHz	1 GHz ~ 18 GHz	2.26 dB
	18 GHz ~ 40 GHz	1.94 dB

2.2 Test Site and Instruments

Description & Manufacturer	Model No.	Serial No.	Date of Calibration	Due Date of Calibration
Test Receiver Agilent	N9038A	MY51210203	Mar. 18, 2020	Mar. 17, 2021
Spectrum Analyzer Agilent	N9010A	MY52220314	Dec. 12, 2019	Dec. 11, 2020
Spectrum Analyzer ROHDE & SCHWARZ	FSU43	101261	Apr. 16, 2020	Apr. 15, 2021
Spectrum Analyzer ROHDE & SCHWARZ	FSW26	102023	Oct. 08, 2019	Oct. 07, 2020
HORN Antenna SCHWARZBECK	BBHA 9120D	9120D-969	Nov. 24, 2019	Nov. 23, 2020
BILOG Antenna SCHWARZBECK	VULB 9168	9168-472	Nov. 08, 2019	Nov. 07, 2020
BILOG Antenna SCHWARZBECK	VULB 9168	9168-171	Nov. 11, 2019	Nov. 10, 2020
Fixed Attenuator WOKEN	MDCS18N-10	MDCS18N-10-01	Apr. 14, 2020	Apr. 13, 2021
Loop Antenna	HLA 6121	45745	Jul. 01, 2019	Jun. 30, 2020
Preamplifier EMCI	EMC 012645	980115	Oct. 08, 2019	Oct. 07, 2020
Preamplifier EMCI	EMC 184045	980116	Oct. 08, 2019	Oct. 07, 2020
Preamplifier EMCI	EMC 330H	980112	Oct. 08, 2019	Oct. 07, 2020
RF Coaxial Cable HUBER+SUHNNER	EMC104-SM-SM-8000&3000	140811+170717	Oct. 08, 2019	Oct. 07, 2020
RF Coaxial Cable HUBER+SUHNNER	SUCOFLEX 104	EMC104-SM-SM-1000(140807)	Oct. 08, 2019	Oct. 07, 2020
RF Coaxial Cable WOKEN	8D-FB	Cable-Ch10-01	Oct. 08, 2019	Oct. 07, 2020
Software BV ADT	E3 6.120103	NA	NA	NA
Antenna Tower MF	MFA-440H	NA	NA	NA
Turn Table MF	MFT-201SS	NA	NA	NA
Antenna Tower & Turn Table Controller MF	MF-7802	NA	NA	NA
Radio Communication Analyzer Anritsu	MT8821C	6261786083	Jun. 27, 2019	Jun. 26, 2020
Spectrum Analyzer ROHDE & SCHWARZ	FSW43	101582	Mar. 31, 2020	Mar. 30, 2021

- Note: 1. The calibration interval of the above test instruments is 12 / 24 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in HwaYa Chamber 10.

3 General Information

3.1 General Description of EUT

Product	LTE/UMTS Wireless Module	
Brand	AirPrime	
Test Model	EM7565	
Status of EUT	Identical Prototype	
Power Supply Rating	5.0 Vdc (adapter)	
Modulation Type	LTE	QPSK, 16QAM, 64QAM
Frequency Range	LTE Band 26 (Channel Bandwidth: 1.4 MHz)	814.7 ~ 823.3 MHz
	LTE Band 26 (Channel Bandwidth: 3 MHz)	815.5 ~ 822.5 MHz
	LTE Band 26 (Channel Bandwidth: 5 MHz)	816.5 ~ 821.5 MHz
	LTE Band 26 (Channel Bandwidth: 10 MHz)	819 MHz
Max. ERP Power	LTE Band 26 (Channel Bandwidth: 1.4 MHz)	82.04 mW
	LTE Band 26 (Channel Bandwidth: 3 MHz)	86.70 mW
	LTE Band 26 (Channel Bandwidth: 5 MHz)	91.41 mW
	LTE Band 26 (Channel Bandwidth: 10 MHz)	95.72 mW
Antenna Type	Refer to Note as below	
Accessory Device	Refer to Note as below	
Data Cable Supplied	Refer to Note as below	

Note:

- The EUT is authorized for use in specific End-product. Please refer to below table for more details.

Product	Brand	Model
10" Handheld computer	Trimble Inc.	121800

- The End-product contains following accessory devices.

Product	Brand	Model	Description
Adapter	ADAPTER TECH	APD065T-A200	I/P: 100-240 Vac, 50/60 Hz, 1.6 A O/P: 5 Vdc, 3 A 1 meter, non-shielded cable, with ferrite core
POWER CORD	ADAPTER TECH	N/A	1.75 meter, non-shielded cable, w/o ferrite core

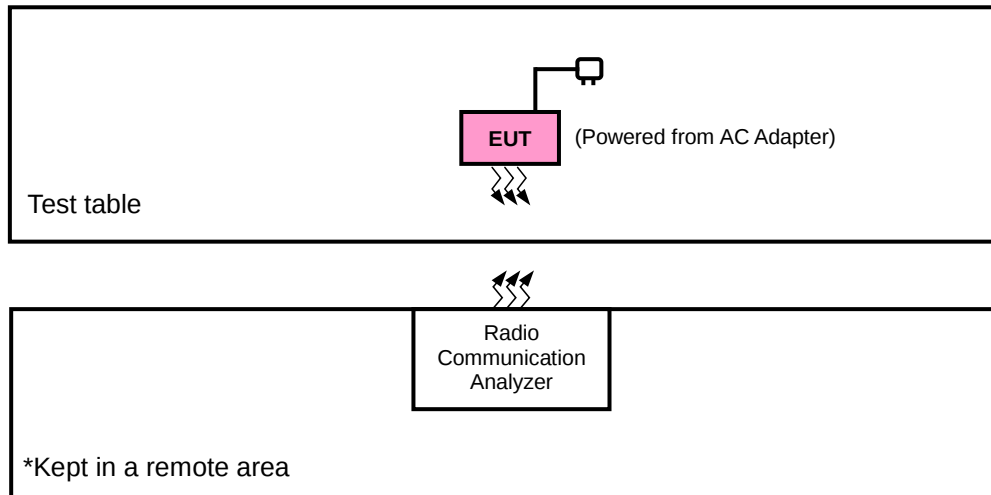
- The antenna information is listed as below.

Antenna Type		PIFA
Band		LTE
		26
Gain	Main	-2.13
	Aux.	-0.94

- The above Antenna information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications, the laboratory shall not be held responsible.
- The above EUT information is declared by manufacturer and for more detailed features description, please refers to the manufacturer's specifications or user's manual.

3.2 Configuration of System under Test

<Radiated Emission Test> & <E.R.P. Test>



3.3 Test Mode Applicability and Tested Channel Detail

Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates, XYZ axis, and antenna ports

The worst case was found when positioned as the table below. Following channel(s) was (were) selected for the final test as listed below:

Band	ERP	Radiated Emission
LTE Band 26	X-plane	X-axis

LTE Band 26

EUT Configure Mode	Test Item	Available Channel	Tested Channel	Channel Bandwidth	Modulation	Mode
-	ERP	26697 to 26783	26697, 26740, 26783	1.4 MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset
		26705 to 26775	26705, 26740, 26775	3 MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset
		26715 to 26765	26715, 26740, 26765	5 MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset
		26740	26740	10 MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset
-	Radiated Emission	26740	26740	10 MHz	QPSK	1 RB / 0 RB Offset

Note:

1. This device was tested under all bandwidths, RB configurations and modulations. The worst case was found in QPSK modulation. Therefore, only ERP, modulation characteristics, occupied bandwidth and peak to average ratio items had been tested under QPSK, 16QAM mode, the other items were performed under QPSK mode only.
2. For radiated emission above 1 GHz, according to 3GPP 36.521 Section 6.6.3.1.4, choose the lowest, 5 MHz & highest channel bandwidth for final test.
3. For radiated emissions below 1 GHz, select the worst radiated emission channel for final testing

Test Condition:

Test Item	Environmental Conditions	Input Power	Tested By
ERP	25 deg. C, 65 % RH	120 Vac, 60 Hz	Wayne Lin
Radiated Emission	25 deg. C, 65 % RH	120 Vac, 60 Hz	Tim Chen

3.4 General Description of Applied Standards and references

The EUT is a RF Product. According to the specifications of the manufacturer, it must comply with the requirements of the following standards and references:

Test Standard:

FCC 47 CFR Part 2

FCC 47 CFR Part 90

ANSI 63.26-2015

Note: All test items have been performed and recorded as per the above standards.

References Test Guidance:

KDB 971168 D01 Power Meas License Digital Systems v03r01

KDB 971168 D02 Misc Rev Approv License Devices v02r01

ANSI/TIA/EIA-603-E 2016

Note: All test items have been performed as a reference to the above KDB test guidance.

4 Test Types and Results

4.1 Output Power Measurement

4.1.1 Limits of Output Power Measurement

The maximum output power of the transmitter for mobile stations is 100 watts (20 dBw) ERP.

4.1.2 Test Procedures

EIRP / ERP Measurement:

- a. All measurements were done at low, middle and high operational frequency range. RBW and VBW is 10 MHz for LTE mode.
- b. Substitution method is used for E.I.R.P measurement. In the semi-anechoic chamber, EUT placed on the 0.8 m (below or equal 1 GHz) and/or 1.5 m (above 1 GHz) height of Turn Table, rotated the table around 360 degrees to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1 m to 4 m to find the maximum polar radiated power. The "Read Value" is the spectrum reading the maximum power value.
- c. The substitution horn antenna is substituted for EUT at the same position and signals generator export the CW signal to the substitution antenna via a tx cable. Rotated the Turn Table and moved receiving antenna to find the maximum radiation power. Adjust output power level of S.G to get a Value of spectrum reading equal to "Read Value" of step b. Record the power level of S.G.
- d. $EIRP = \text{Output power level of S.G} - \text{TX cable loss} + \text{Antenna gain of substitution horn}$. E.R.P power can be calculated form E.I.R.P power by subtracting the gain of dipole, $E.R.P \text{ power} = E.I.P.R \text{ power} - 2.15 \text{ dB}$.

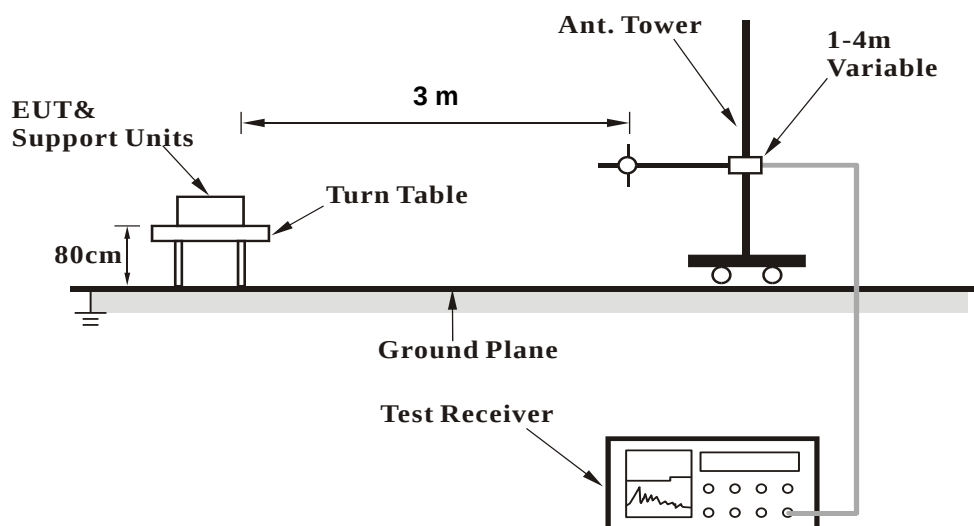
Conducted Power Measurement:

- a. The EUT was set up for the maximum power with LTE link data modulation and link up with simulator.
- b. Set the EUT to transmit under low, middle and high channel and record the power level shown on simulator.

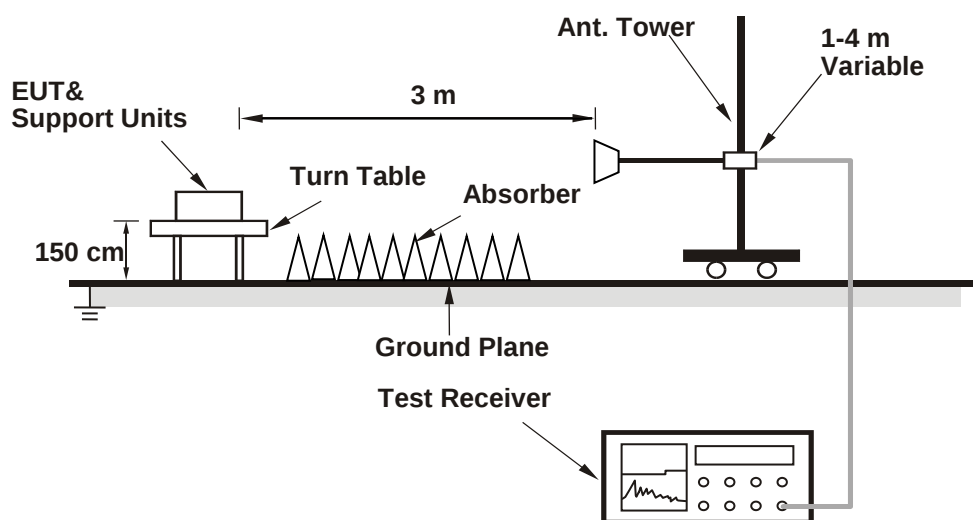
4.1.3 Test Setup

EIRP / ERP Measurement:

<Radiated Emission below or equal 1 GHz>

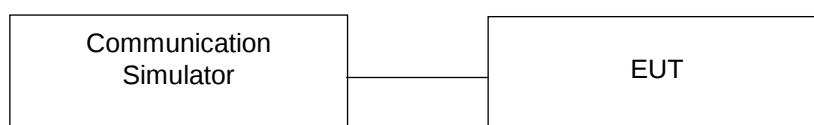


<Radiated Emission above 1 GHz>



For the actual test configuration, please refer to the attached file (Test Setup Photo).

Conducted Power Measurement:



4.1.4 Test Results

Conducted Output Power (dBm)

LTE Band 26															
BW	MCS Index	RB Size	RB Offset			Mid	3GPP MPR (dB)	BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
		Channel				26740				Channel		26715	26740	26765	
		Frequency (MHz)				819.0				Frequency (MHz)		816.5	819.0	821.5	
10M	QPSK	1	0			23.25	0	5M	QPSK	1	0	23.22	23.25	23.31	0
		1	24			23.24	0			1	12	23.09	23.24	23.27	0
		1	49			23.07	0			1	24	23.09	23.07	23.15	0
		25	0			22.35	1			12	0	22.30	22.35	22.42	1
		25	12			22.28	1			12	6	22.32	22.28	22.36	1
		25	25			22.26	1			12	13	22.24	22.26	22.31	1
	16QAM	50	0			22.27	1			25	0	22.16	22.27	22.34	1
		1	0			22.30	1		16QAM	1	0	22.28	22.30	22.39	1
		1	24			22.26	1			1	12	22.18	22.26	22.35	1
		1	49			22.26	1			1	24	22.30	22.26	22.34	1
		25	0			21.31	2			12	0	21.23	21.31	21.36	2
		25	12			21.34	2			12	6	21.28	21.34	21.34	2
	64QAM	25	25			21.22	2			12	13	21.22	21.22	21.28	2
		50	0			21.30	2			25	0	21.24	21.30	21.35	2
3M	QPSK	1	0			21.30	2	1.4M	QPSK	1	0	21.14	21.30	21.35	2
		1	24			21.29	2			1	12	21.17	21.29	21.30	2
		1	49			21.20	2			1	24	21.16	21.20	21.28	2
		25	0			20.27	3			12	0	20.29	20.27	20.37	3
		25	12			20.21	3			12	6	20.18	20.21	20.30	3
		25	25			20.18	3			12	13	20.11	20.18	20.28	3
	16QAM	50	0			20.27	3			25	0	20.15	20.27	20.32	3
		1	0			23.13	0		QPSK	1	0	23.15	23.18	23.29	0
		1	7			23.18	0			1	2	23.08	23.16	23.13	0
		1	14			23.01	0			1	5	23.01	23.07	23.03	0
		8	0			22.27	1			3	0	23.42	23.24	23.42	0
		8	3			22.26	1			3	1	23.27	23.17	23.34	0
	16QAM	8	7			22.24	1			3	3	23.21	23.14	23.19	0
		15	0			22.14	1			6	0	22.27	22.23	22.34	1
		1	0			22.27	1	16QAM	QPSK	1	0	22.19	22.27	22.31	1
		1	7			22.26	1			1	2	22.20	22.19	22.26	1
		1	14			22.18	1			1	5	22.16	22.13	22.31	1
		8	0			21.16	2			3	0	22.24	22.24	22.28	1
		8	3			21.21	2			3	1	22.27	22.27	22.29	1
		8	7			21.14	2			3	3	22.07	22.08	22.26	1
3M	64QAM	15	0			21.20	2			6	0	21.19	21.20	21.25	2
		1	0			21.23	2	64QAM	QPSK	1	0	21.25	21.29	21.27	2
		1	7			21.08	2			1	2	21.17	21.19	21.29	2
		1	14			21.22	2			1	5	21.14	21.05	21.25	2
		8	0			20.32	3			3	0	21.25	21.20	21.30	2
		8	3			20.06	3			3	1	21.12	21.21	21.27	2
	16QAM	8	7			20.18	3			3	3	21.12	21.03	21.24	2
		15	0			20.24	3			6	0	20.19	20.24	20.21	3

ERP Power (dBm)

LTE Band 26							
Channel Bandwidth: 1.4 MHz / QPSK							
Plane	Channel	Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	ERP (dBm)	ERP (mW)	Polarization (H/V)
X	26697	814.7	-20.04	32.01	11.97	15.74	H
	26740	819.0	-20.07	32.11	12.04	16.00	
	26783	823.3	-20.25	32.32	12.07	16.11	
	26697	814.7	-13.57	32.54	18.97	78.89	V
	26740	819.0	-13.40	32.51	19.11	81.47	
	26783	823.3	-13.37	32.51	19.14	82.04	
Channel Bandwidth: 1.4 MHz / 16QAM							
X	26697	814.7	-21.05	32.01	10.96	12.47	H
	26740	819.0	-21.04	32.11	11.07	12.79	
	26783	823.3	-21.07	32.32	11.25	13.34	
	26697	814.7	-14.49	32.54	18.05	63.83	V
	26740	819.0	-14.37	32.51	18.14	65.16	
	26783	823.3	-14.24	32.51	18.27	67.14	
Channel Bandwidth: 1.4 MHz / 64QAM							
X	26697	814.7	-22.08	32.01	9.93	9.84	H
	26740	819.0	-22.07	32.11	10.04	10.09	
	26783	823.3	-22.10	32.32	10.22	10.52	
	26697	814.7	-15.52	32.54	17.02	50.35	V
	26740	819.0	-15.40	32.51	17.11	51.40	
	26783	823.3	-15.27	32.51	17.24	52.97	

Note: ERP (dBm) = Reading (dBm) + Correction Factor (dB) – 2.15

LTE Band 26							
Channel Bandwidth: 3 MHz / QPSK							
Plane	Channel	Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	ERP (dBm)	ERP (mW)	Polarization (H/V)
X	26705	815.5	-19.81	32.02	12.21	16.63	H
	26740	819.0	-19.83	32.11	12.28	16.90	
	26775	822.5	-19.87	32.18	12.31	17.02	
	26705	815.5	-13.29	32.5	19.21	83.37	V
	26740	819.0	-13.16	32.51	19.35	86.10	
	26775	822.5	-13.09	32.47	19.38	86.70	
Channel Bandwidth: 3 MHz / 16QAM							
X	26705	815.5	-20.82	32.02	11.20	13.18	H
	26740	819.0	-20.80	32.11	11.31	13.52	
	26775	822.5	-20.69	32.18	11.49	14.09	
	26705	815.5	-14.21	32.5	18.29	67.45	V
	26740	819.0	-14.13	32.51	18.38	68.87	
	26775	822.5	-13.96	32.47	18.51	70.96	
Channel Bandwidth: 3 MHz / 64QAM							
X	26705	815.5	-21.83	32.02	10.19	10.45	H
	26740	819.0	-21.81	32.11	10.30	10.72	
	26775	822.5	-21.70	32.18	10.48	11.17	
	26705	815.5	-15.22	32.5	17.28	53.46	V
	26740	819.0	-15.14	32.51	17.37	54.58	
	26775	822.5	-14.97	32.47	17.50	56.23	

Note: ERP (dBm) = Reading (dBm) + Correction Factor (dB) – 2.15

LTE Band 26							
Channel Bandwidth: 5 MHz / QPSK							
Plane	Channel	Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	ERP (dBm)	ERP (mW)	Polarization (H/V)
X	26715	816.5	-19.60	32.04	12.44	17.54	H
	26740	819.0	-19.60	32.11	12.51	17.82	
	26765	821.5	-19.25	31.79	12.54	17.95	
	26715	816.5	-13.08	32.52	19.44	87.90	V
	26740	819.0	-12.93	32.51	19.58	90.78	
	26765	821.5	-12.56	32.17	19.61	91.41	
Channel Bandwidth: 5 MHz / 16QAM							
X	26715	816.5	-20.63	32.04	11.41	13.84	H
	26740	819.0	-20.59	32.11	11.52	14.19	
	26765	821.5	-20.09	31.79	11.70	14.79	
	26715	816.5	-14.02	32.52	18.50	70.79	V
	26740	819.0	-13.92	32.51	18.59	72.28	
	26765	821.5	-13.45	32.17	18.72	74.47	
Channel Bandwidth: 5 MHz / 64QAM							
X	26715	816.5	-21.61	32.04	10.43	11.04	H
	26740	819.0	-21.57	32.11	10.54	11.32	
	26765	821.5	-21.07	31.79	10.72	11.80	
	26715	816.5	-15.00	32.52	17.52	56.49	V
	26740	819.0	-14.90	32.51	17.61	57.68	
	26765	821.5	-14.43	32.17	17.74	59.43	

Note: ERP (dBm) = Reading (dBm) + Correction Factor (dB) – 2.15

LTE Band 26							
Channel Bandwidth: 10 MHz / QPSK							
Plane	Channel	Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	ERP (dBm)	ERP (mW)	Polarization (H/V)
X	26740	819.0	-19.37	32.11	12.74	18.79	H
	26740	819.0	-12.70	32.51	19.81	95.72	V
Channel Bandwidth: 10 MHz / 16QAM							
X	26740	819.0	-20.35	32.11	11.76	15.00	H
	26740	819.0	-13.68	32.51	18.83	76.38	V
Channel Bandwidth: 10 MHz / 64QAM							
X	26740	819.0	-21.37	32.11	10.74	11.86	H
	26740	819.0	-14.70	32.51	17.81	60.39	V

Note: ERP (dBm) = Reading (dBm) + Correction Factor (dB) – 2.15

4.2 Radiated Emission Measurement

4.2.1 Limits of Radiated Emission Measurement

- (1) The power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) by at least $43 + 10 \log (P)$ dB. The limit of emission is equal to -13 dBm.

4.2.2 Test Procedure

- a. Substitution method is used for E.I.R.P measurement. In the semi-anechoic chamber, EUT placed on the 0.8 m (below or equal 1 GHz) and/or 1.5 m (above 1 GHz) height of Turn Table, rotated the table around 360 degrees to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1 m to 4 m to find the maximum polar radiated power. The "Read Value" is the spectrum reading the maximum power value.
- b. The substitution horn antenna is substituted for EUT at the same position and signals generator export the CW signal to the substitution antenna via a TX cable. Rotated the Turn Table and moved receiving antenna to find the maximum radiation power. Adjust output power level of S.G to get a Value of spectrum reading equal to "Read Value" of step a. Record the power level of S.G.
- c. $EIRP = \text{Output power level of S.G} - \text{TX cable loss} + \text{Antenna gain of substitution horn}$.
- d. E.R.P power can be calculated form E.I.R.P power by subtracting the gain of dipole, $E.R.P \text{ power} = E.I.P.R \text{ power} - 2.15 \text{ dB}$.

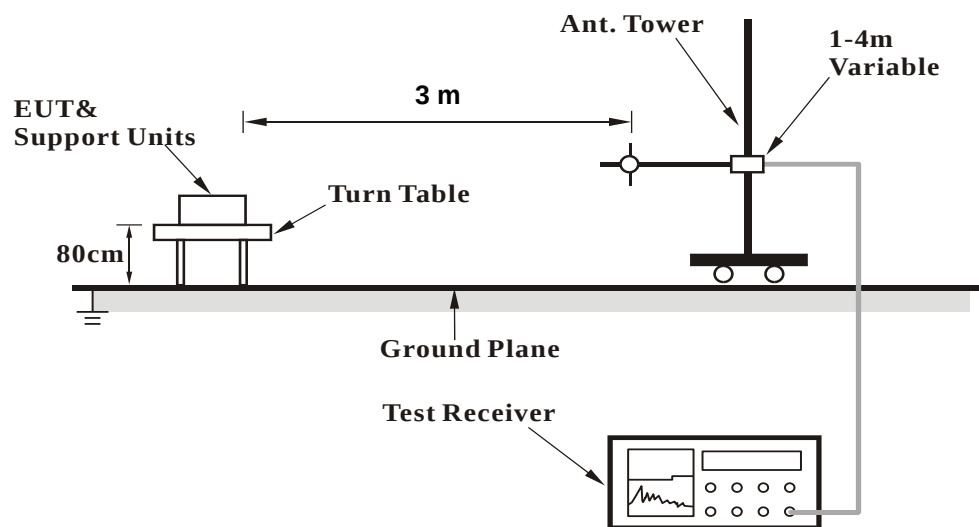
Note: The resolution bandwidth of spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz.

4.2.3 Deviation from Test Standard

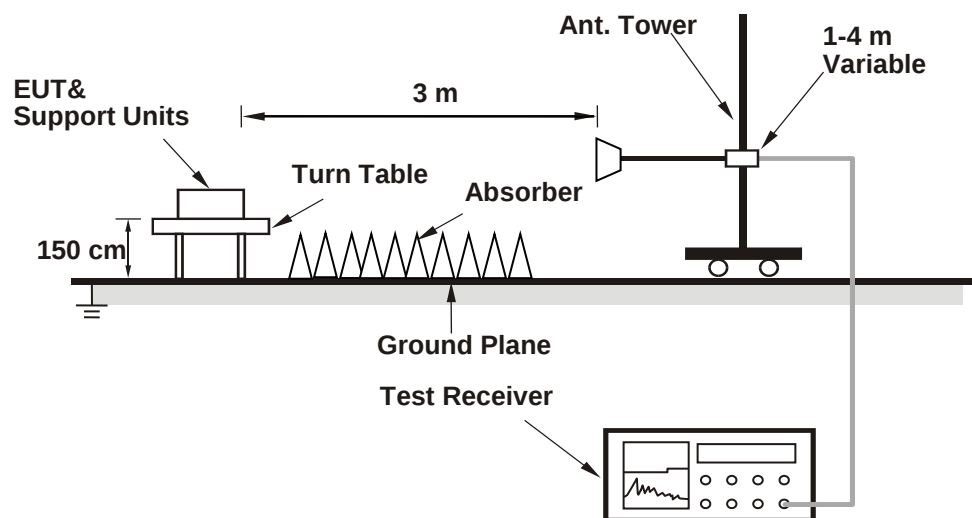
No deviation.

4.2.4 Test Setup

<Radiated Emission below or equal 1 GHz>



<Radiated Emission above 1 GHz>



For the actual test configuration, please refer to the attached file (Test Setup Photo).

4.2.5 Test Results

LTE Band 26

Channel Bandwidth: 10 MHz / QPSK

Lower Channel

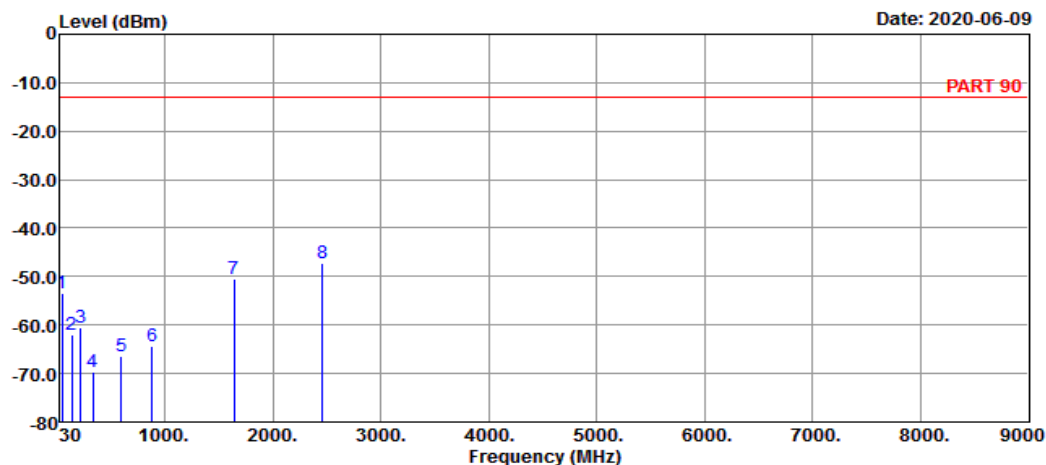


Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 5

Date: 2020-06-09



Site : 966 Chamber 5

Condition: PART 90 HORIZONTAL

Remak : LTE Band 26 QPSK_10M Link_L-CH

Tested by: tim-chen

	Freq	Level	Read Level	Limit Line	Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	44.55	-53.43	-51.44	-13.00	-1.99	-40.43	Peak
2	133.79	-62.08	-53.40	-13.00	-8.68	-49.08	Peak
3	221.09	-60.47	-53.31	-13.00	-7.16	-47.47	Peak
4	331.67	-69.65	-63.13	-13.00	-6.52	-56.65	Peak
5	595.51	-66.36	-65.41	-13.00	-0.95	-53.36	Peak
6	879.72	-64.37	-64.83	-13.00	0.46	-51.37	Peak
7	1638.00	-50.42	-35.63	-13.00	-14.79	-37.42	Peak
8 pp	2457.00	-47.10	-36.66	-13.00	-10.44	-34.10	Peak

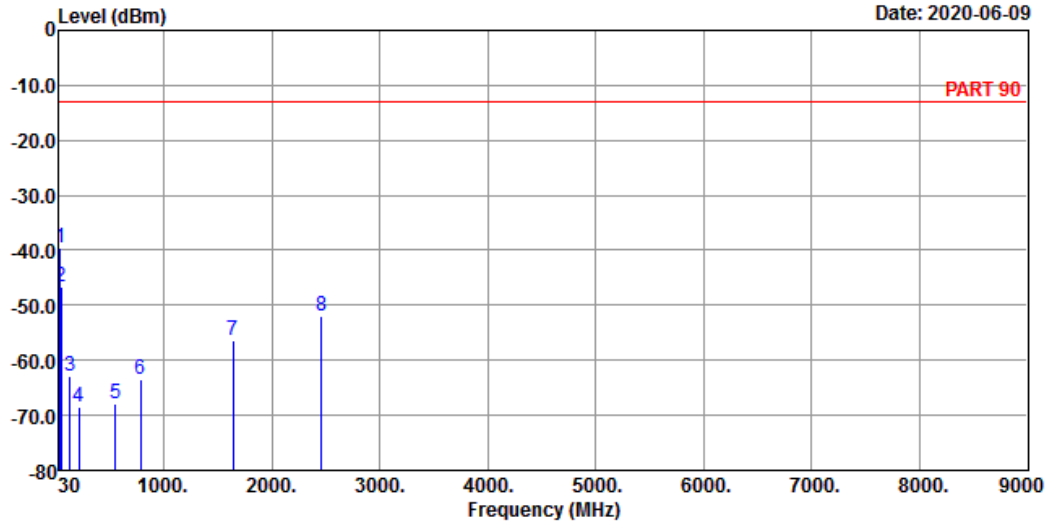


Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 6

Date: 2020-06-09



Site : 966 Chamber 5

Condition: PART 90 VERTICAL

Remak : LTE Band 26 QPSK_10M Link_L-CH

Tested by: tim-chen

	Freq	Level	Read Level	Limit	Over	
	MHz	dBm	dBm	dBm	dB	Limit Remark
1 pp	36.79	-39.42	-38.43	-13.00	-0.99	-26.42 Peak
2	45.52	-46.59	-44.09	-13.00	-2.50	-33.59 Peak
3	127.97	-63.01	-54.09	-13.00	-8.92	-50.01 Peak
4	209.45	-68.61	-60.98	-13.00	-7.63	-55.61 Peak
5	548.95	-67.97	-65.09	-13.00	-2.88	-54.97 Peak
6	784.66	-63.60	-64.38	-13.00	0.78	-50.60 Peak
7	1638.00	-56.27	-41.48	-13.00	-14.79	-43.27 Peak
8	2457.00	-52.00	-41.56	-13.00	-10.44	-39.00 Peak

5 Pictures of Test Arrangements

Please refer to the attached file (Test Setup Photo).

Appendix – Information of the Testing Laboratories

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are FCC recognized accredited test firms and accredited according to ISO/IEC 17025.

If you have any comments, please feel free to contact us at the following:

Lin Kou EMC/RF Lab

Tel: 886-2-26052180

Fax: 886-2-26051924

Hsin Chu EMC/RF/Telecom Lab

Tel: 886-3-6668565

Fax: 886-3-6668323

Hwa Ya EMC/RF/Safety Lab

Tel: 886-3-3183232

Fax: 886-3-3270892

Email: service.adt@tw.bureauveritas.com

Web Site: www.bureauveritas-adt.com

The address and road map of all our labs can be found in our web site also.

--- END ---